UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 9501
4 – 21 January 1995

CalCOFI Cruise 9504
6 – 22 April 1995

SIO Reference 95-33
25 December 1995

UNIVERSITY OF CALIFORNIA, SAN DIEGO

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LA JOLLA, CALIFORNIA 92093-0227

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Approved for distribution:

Edward A. Frieman, Director

CONTENTS

Introduction 3

Literature Cited 6

CalCOFI Cruise 9501

Personnel 7

List of Figures 8

Tabulated Rosette Cast Data 19

Tabulated Primary Productivity Data 48

Tabulated Macrozooplankton Data 51

CalCOFI Cruise 9504

List of Figures 52

Personnel 63

Tabulated Rosette Cast Data 64

Tabulated Primary Productivity Data 91

Tabulated Macrozooplankton Data 94

Cruises 9501 and 9504 Avifauna

List of Figures 95

INTRODUCTION

The data in this report were collected during cruises 9501* and 9504 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the NOAA ship RV *David Starr Jordan* and RV *New Horizon* of Scripps Institution of Oceanography, University of California, San Diego. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the Marine Life Research Group (MLRG) at Scripps Institution of Oceanography (SIO). MLRG contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from CalCOFI cruises 9501 and 9504 were collected and processed by personnel of the Marine Life Research Group and the Southwest Fisheries Science Center. Volunteers and other SIO staff members also assisted in the collection of data and chemical analyses at sea.

STANDARD PROCEDURES

Rosette Cast Data

At each station on cruises 9501 and 9504 a Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument was deployed with a 24-place General Oceanics rosette. The rosette was equipped with 24 ten-liter plastic (PVC) bottles. The CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Pressures and temperatures assigned to the water sample data were derived from the CTD signals recorded just prior to the bottle trip. Pressures have been converted to depths by the Saunders (1981) pressure-to-depth conversion technique. CTD temperatures reported with the bottle data have been rounded to the nearest hundredth of a degree Celsius. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-a and phaeopigments were determined at sea within the top 200 meters, bottom depth permitting.

Salinity samples were collected from all rosette bottles and analyzed at sea using a Guildline model 8400A Autosal salinometer. The results were compared with the CTD salinity in order to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with substandard seawater. Periodic checks on the conductivity of the substandard were made by comparison with IAPSO Standard Seawater batch PI22 on cruise 9501 and batch PI27 on cruise 9504. Salinity values have been calculated from the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and were reported to three decimal places, provided that accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities were reported to two decimal places.

Dissolved oxygen was determined by the Winkler method, as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). Percent oxygen saturation was calculated from the equations of Weiss (1970).

Silicate, phosphate, nitrate and nitrite nutrients were determined at sea using an automated analyzer. The procedures used are similar to those described in Atlas *et al.* (1971).

Samples for chlorophyll-a and phaeopigments were filtered onto GF/F filters. The pigments were extracted with a cold extraction technique in 90% acetone (Venrick and Hayward, 1984), and the fluorescence determined before and after acidification with a Turner Designs fluorometer (Yentsch and Menzel, 1963; Holm-Hansen *et al.* 1965).

Evaluation of the data involved comparisons with the CTD cast profiles, adjacent stations and consideration of the variation of a property as a function of density or depth and the relationships with other properties (Klein, 1973). Estimates of precision of the standard techniques are given in SIO, 1991.

* The first two digits represent the year and the last digits the month of the cruise.

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN), from the standard rosette cast. Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the up rosette cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. The ten-liter bottles were equipped with epoxy-coated springs and Viton O-rings. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 10 uCi of ^{14}C as $NaHC0_3$ (200 |il of 50 |iCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al.* 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HC1 was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation fluor were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-a and phaeopigments were determined from all rosette productivity bottles.

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505 mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 meters to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Only one sample of each pair was retained and preserved. The biomass, as wet displacement volume, after removal of large (>5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al.* (1972).

Avifauna Observations

On cruises 9501 and 9504 seabirds were counted within a 300 meter wide strip off to one side of the ship. Counts were made while underway between stations during periods of daylight. These counts were summed over 20 nautical mile (nm) intervals, or the distance between consecutive stations, whichever was less. Included at the end of this report are individual maps of the most numerous bird species (individuals/nm).

TABULATED DATA

Rosette Cast Data

The time reported is the Coordinated Universal Time (UTC) of the first rosette bottle trip on the up cast. The rosette bottles tripped on the up cast are reported as cast 2, where cast 1 is considered to be the down CTD cast. The sample number reported is the cast number followed by a two digit rosette bottle number. Bottom depths, determined acoustically, have been corrected using British Admiralty Tables (Carter, 1980) and are reported in meters. Weather conditions have been coded using WMO code 4501. Secchi depths and Forel water color scales are also reported for most daylight stations.

Observed data from individual CTD/rosette trip levels are interpolated and reported for standard depths. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (UNESCO, 1981, b). Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), and dynamic height or geopotential anomaly are included with both observed and interpolated standard depth levels.

On stations where primary productivity samples were drawn from six of the rosette bottles, a footnote appears after each productivity depth sampled. The corresponding primary productivity data are reported in a separate section following the tabulated rosette cast data.

Primary Productivity Data

In addition to the normal hydrographic data also reported in the rosette cast data section, the tabulated data include: the *in situ* light levels at which the samples were collected, the uptake from each of the replicate light bottles, uptake 1 and uptake 2, (which have been corrected for dark uptake by subtracting the dark value), the mean of the two uptake values and the dark uptake. The uptake values are totals for the incubation period. Also shown are the times of LAN, civil twilight, and the value of the mean uptake integrated from the surface to the deepest sample, assuming the shallowest value continues to the surface and that negative values (when dark uptake exceeds light uptake) are zero. The uptake data have been presented to two significant digits (values <1.00) or one decimal (values >1.00). Precision of the higher production values may not warrant all of the digits presented. Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

Macrozooplankton Data

Macrozooplankton biomass volumes are tabulated as total biomass volume (cm^3/ $1000m^3$ strained) and as the total volume minus the volume of larger organisms under the heading "Small." Tow times are given in local PST (+8) time.

FOOTNOTES

In addition to footnotes, special notations are used without footnotes because the meaning is always the same.

D: CTD salinity value listed in place of normal ship-board salinity analysis.
ISL: After a depth value indicates that this is an interpolated or extrapolated standard level.
U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

DATA AVAILABILITY

At the present time the physical and chemical data presented in this report are available over the internet via the Nemo Oceanographic Server. The historical CalCOFI data from 1949 to present resides at the Nemo location. To access these data telnet to nemo.ucsd.edu and login with username "info". CalCOFI data reports from 1990 to the present are also currently available on the World Wide Web at http://www-mlrg.ucsd.edu/calcofi/. The physical and chemical data in this report will be submitted to the National Oceanographic Data Center (NODC) and will eventually be available through that service.

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PERSONNEL

CalCOFI Cruise 9501

SHIP'S CAPTAIN

James M. Herkelrath, *RV David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Griffith, David A. (Chief Scientist)	Fishery Biologist, NMFS	1,11
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Beaupre, Marie-Claude	Staff Research Associate, SIO	1,11
Boyd, Kenneth R.	Volunteer	I
Chin, Ryan C.	Volunteer	1,11
Cummings, Sherry L.	Staff Research Associate, SIO	1,11
Dotson, Ronald C.	Fishery Biologist, NMFS	I.II
Gruber, Dennis W.	Marine Technician, SIO	1,11
Hays, Amy E.	Biological Technician, NMFS	1,11
Osgood, Kenric E.	Post Graduate Researcher, SIO	II
Reitsch, G. Alan	Field Biologist, University of Washington	1,11
Renger, Edward H.	Staff Research Associate, SIO	1,11
Wilkinson, James R.	Programmer/Analyst, SIO	1,11

Leg I: San Diego to Port San Luis, Ca., 4 - 20 Jan., 1995
Leg II: Port San Luis to San Diego, Ca., 20-21 Jan., 1995

FIGURES

Cruise 9501

1. CalCOFI Cruise 9501, track and station positions.

2. Horizontal distribution of dynamic height anomaly (0 over 500m). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).

3. Horizontal distributions at 10 meters: A) chlorophyll-a; B) potential density; C) temperature; and D) salinity.

4. Horizontal distributions at 200 meters: A) dynamic height anomaly (200 over 500 m); B) potential density; C) temperature; and D) salinity.

5. Sections along CalCOFI line 90 (vertical exaggeration, 1000): A) potential density; B) temperature; C) salinity; D) silicate; E) nitrate; F) phosphate; G) chlorophyll-a; H) oxygen saturation; I) oxygen; J) nitrite; and K) phaeopigments.

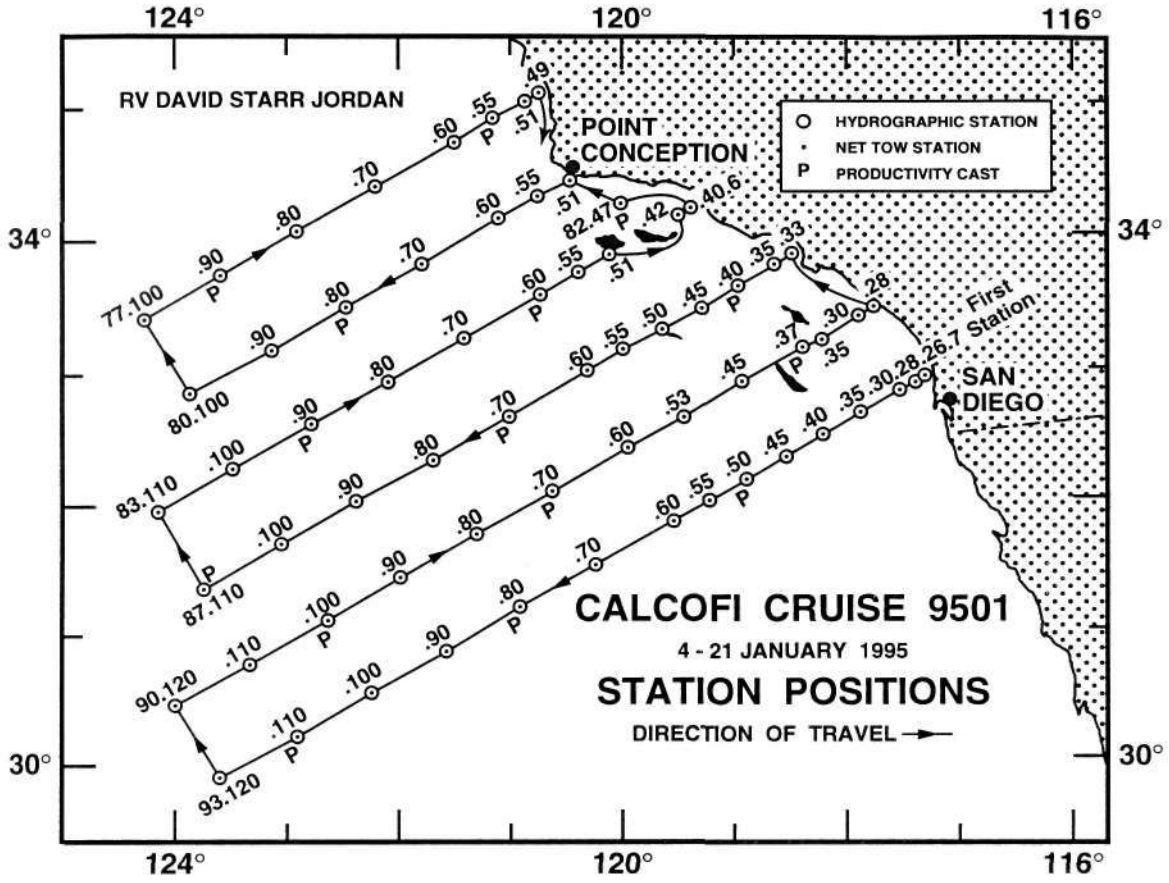


FIGURE 1

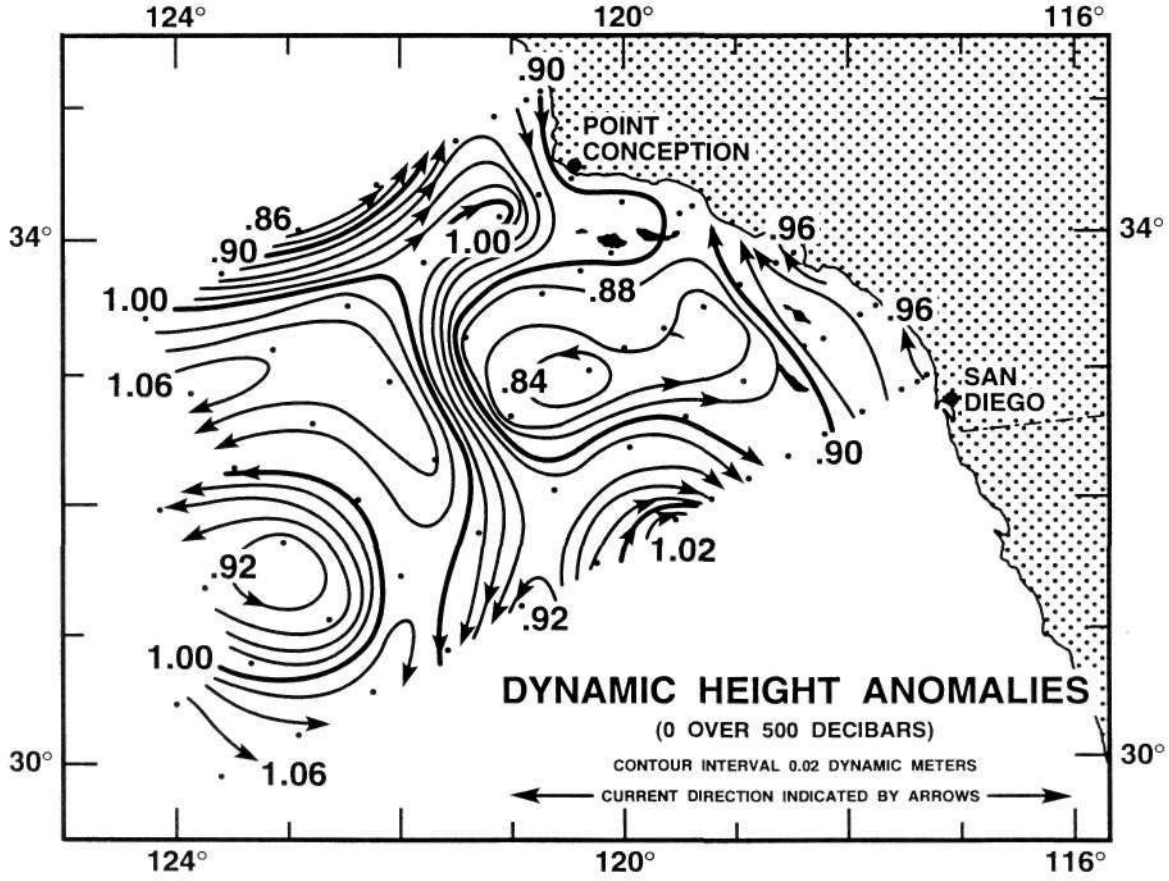


FIGURE 2

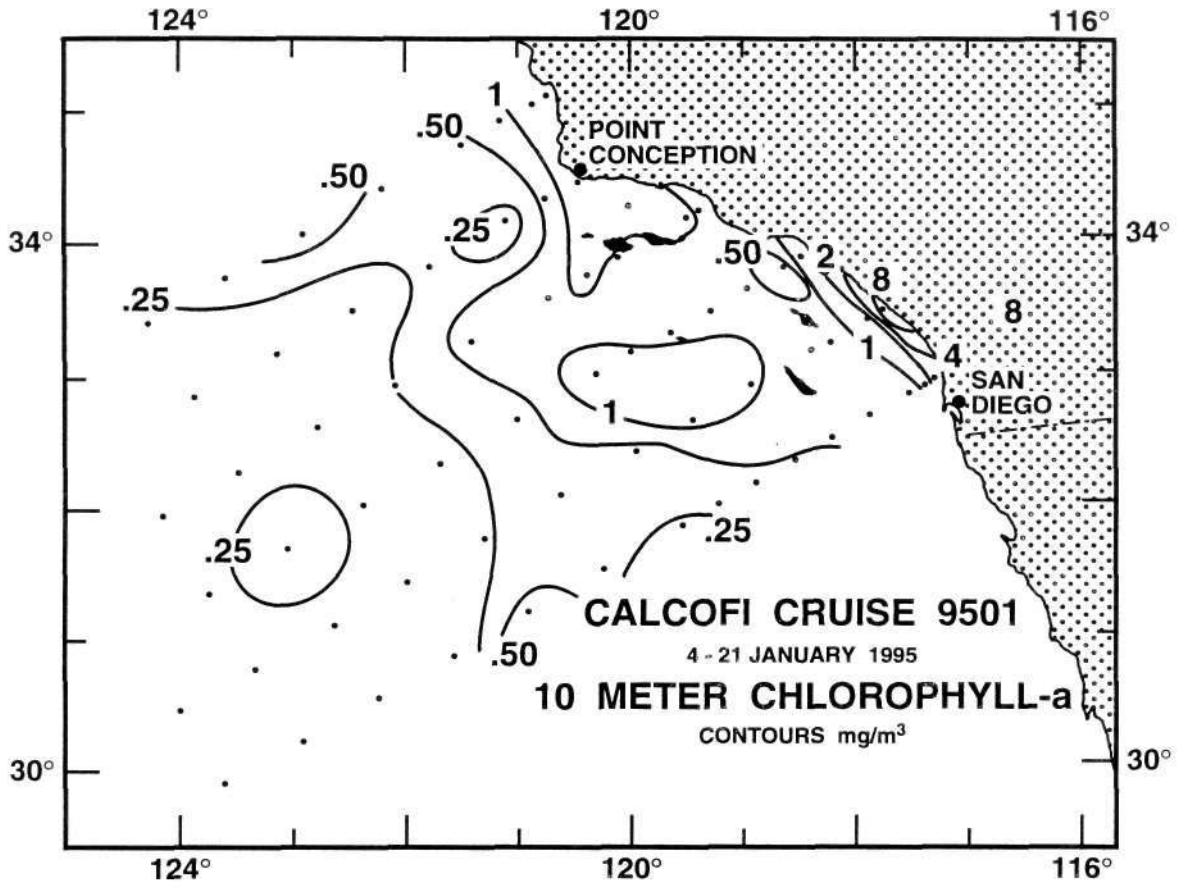


FIGURE 3A

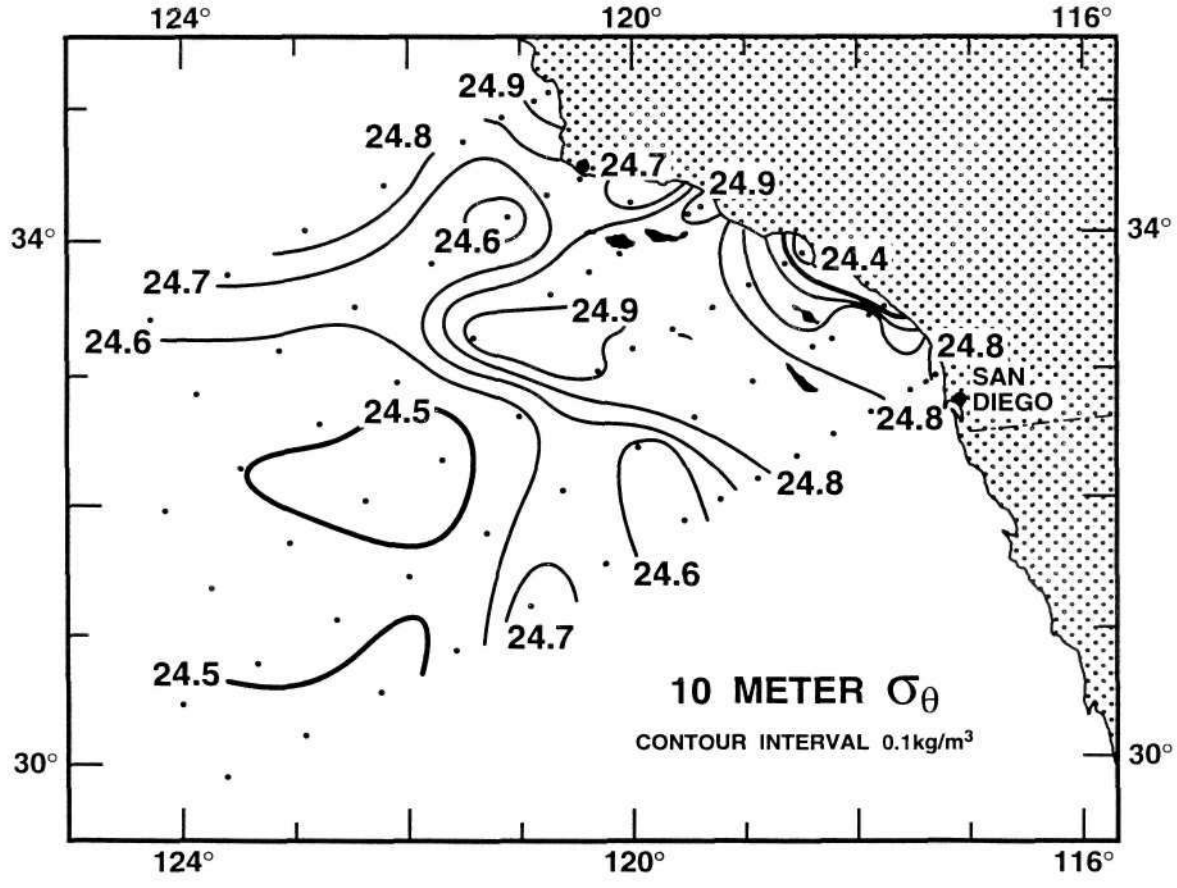


FIGURE 3B

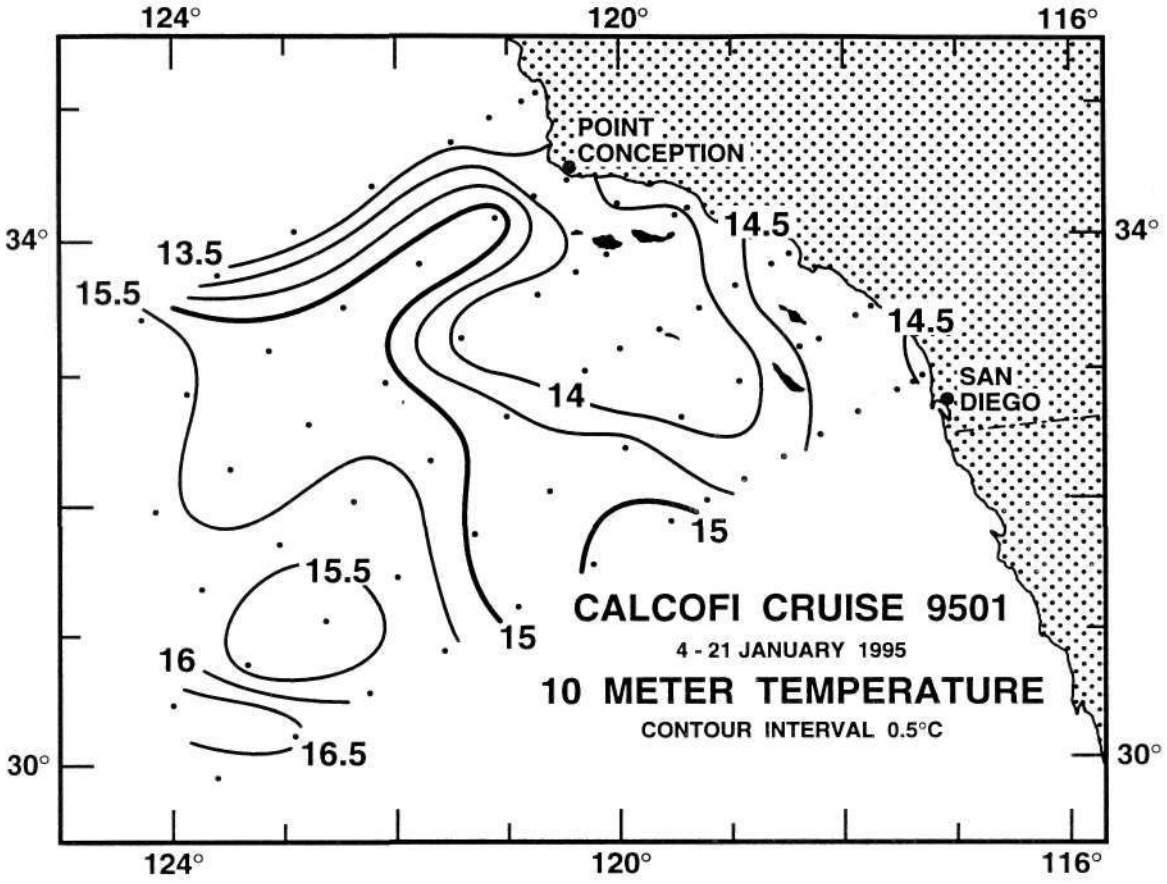


FIGURE 3C

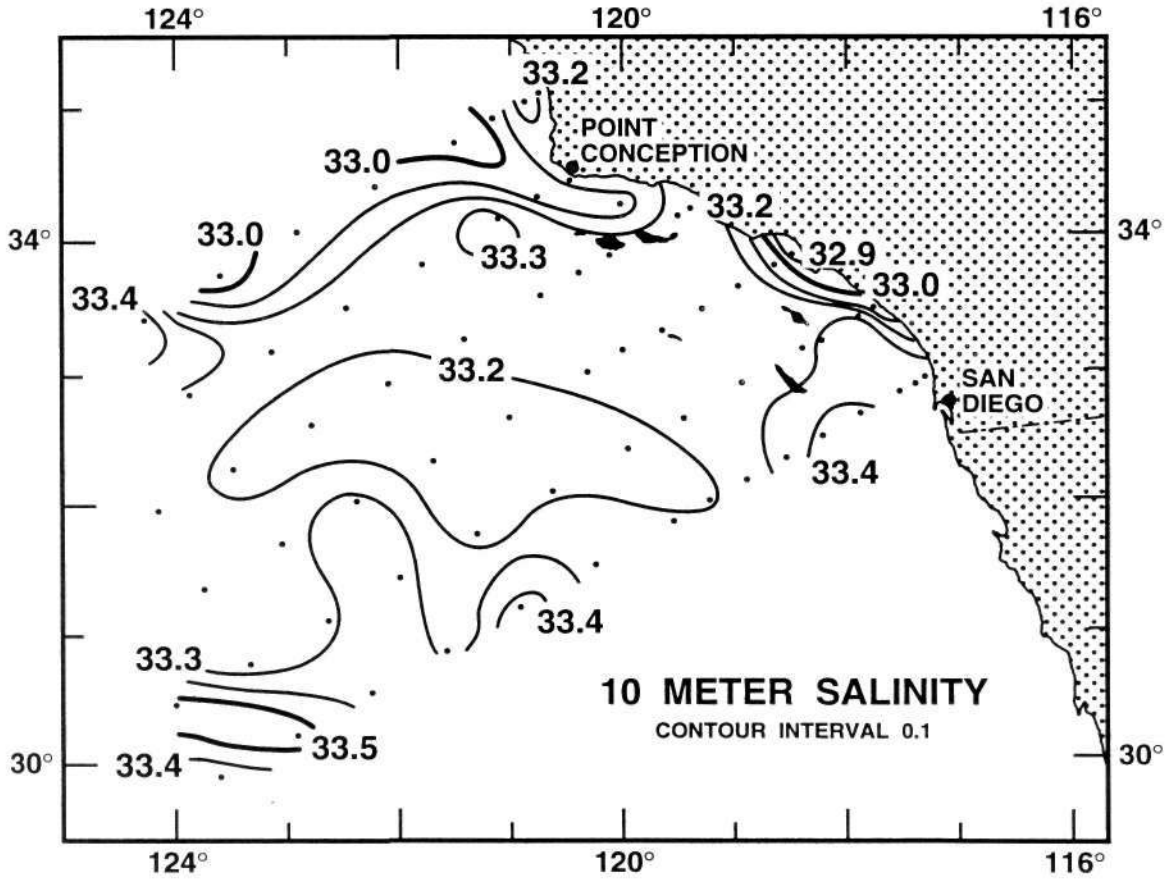


FIGURE 3D

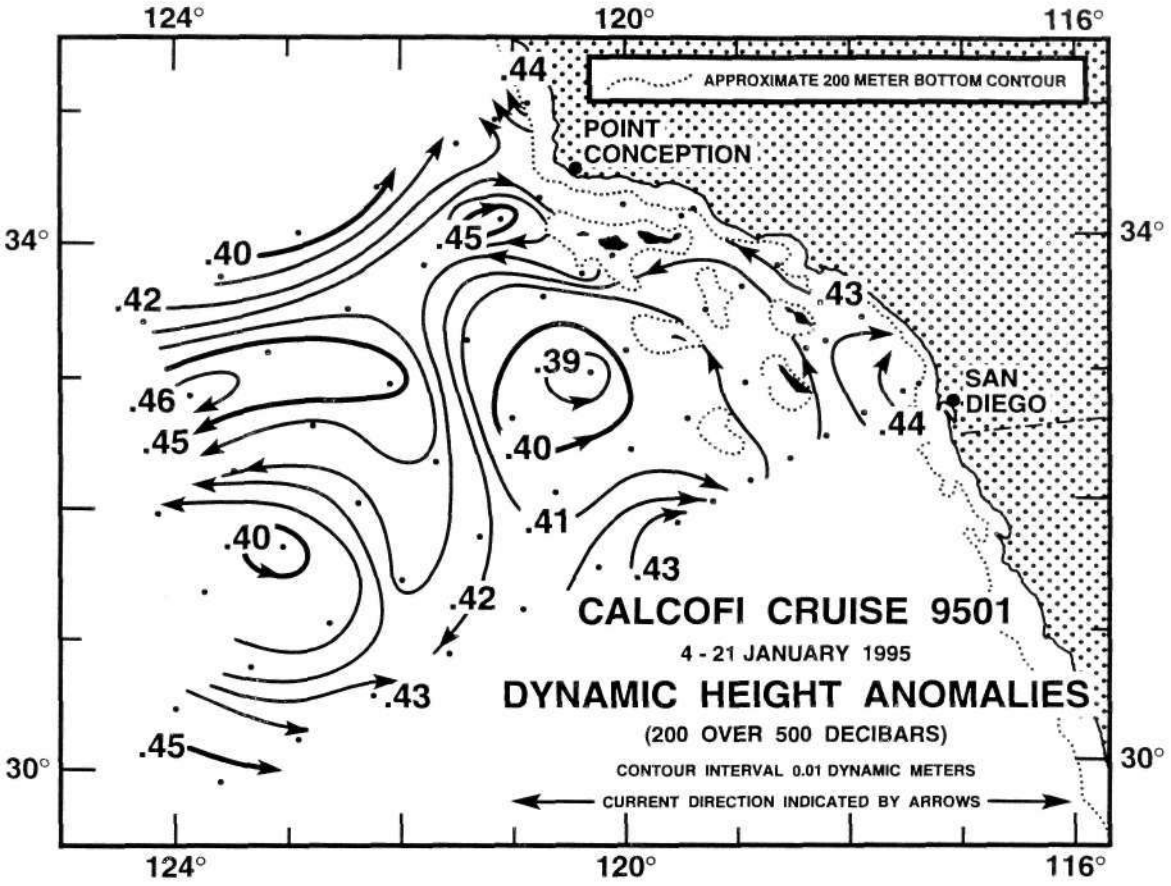


FIGURE 4A

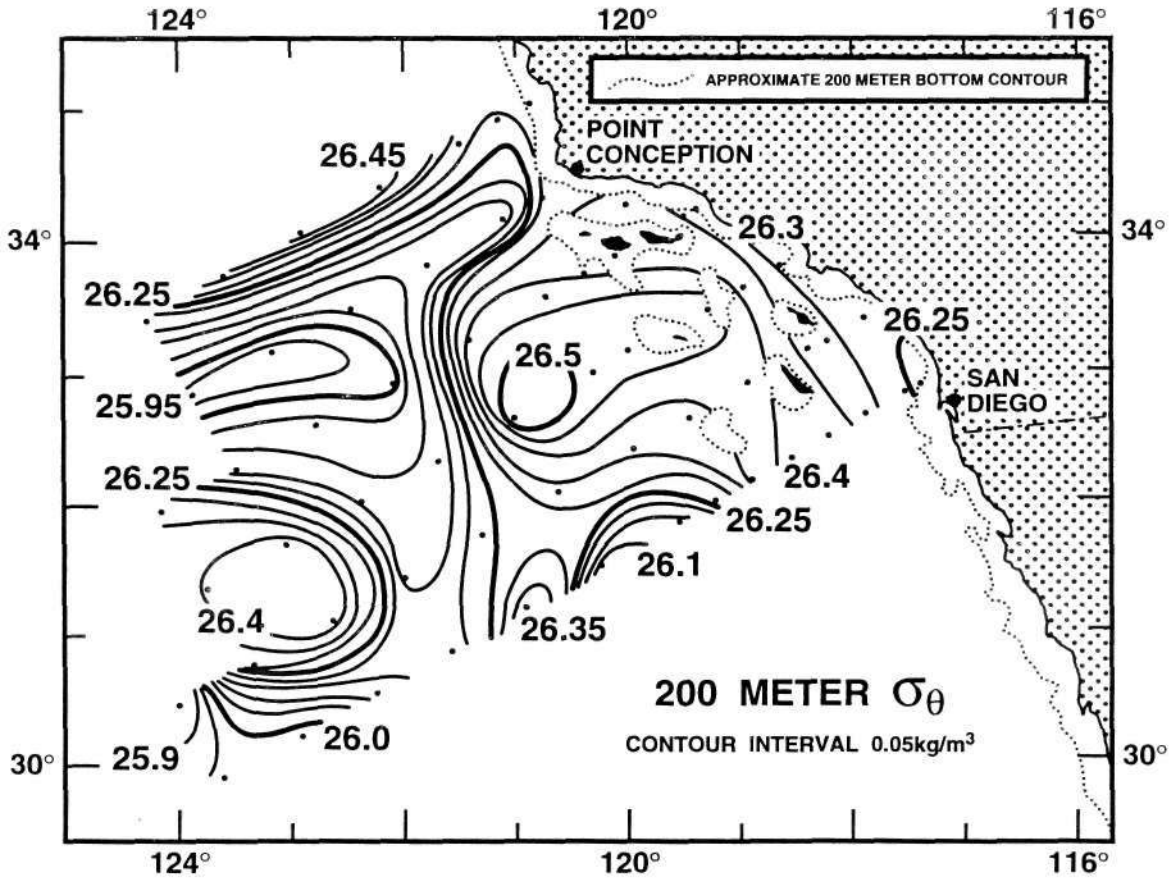


FIGURE 4B

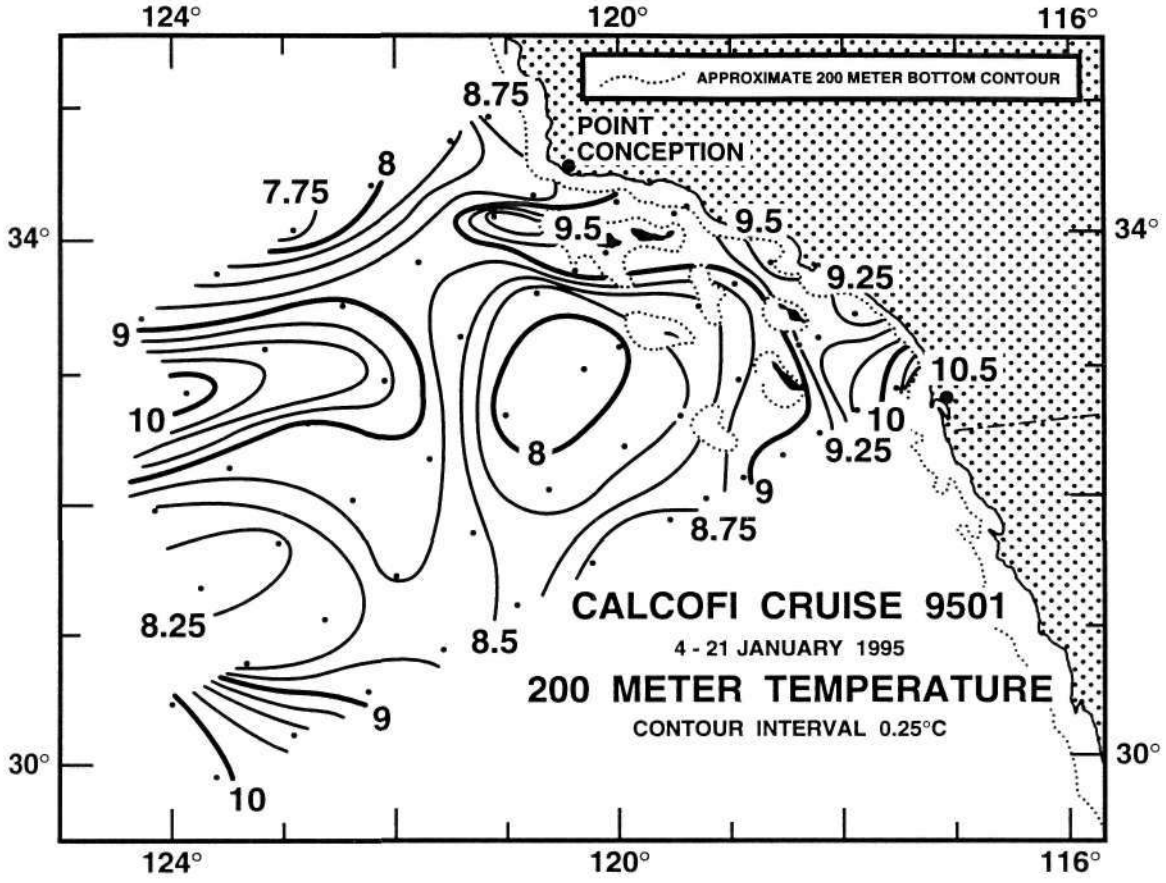


FIGURE 4C

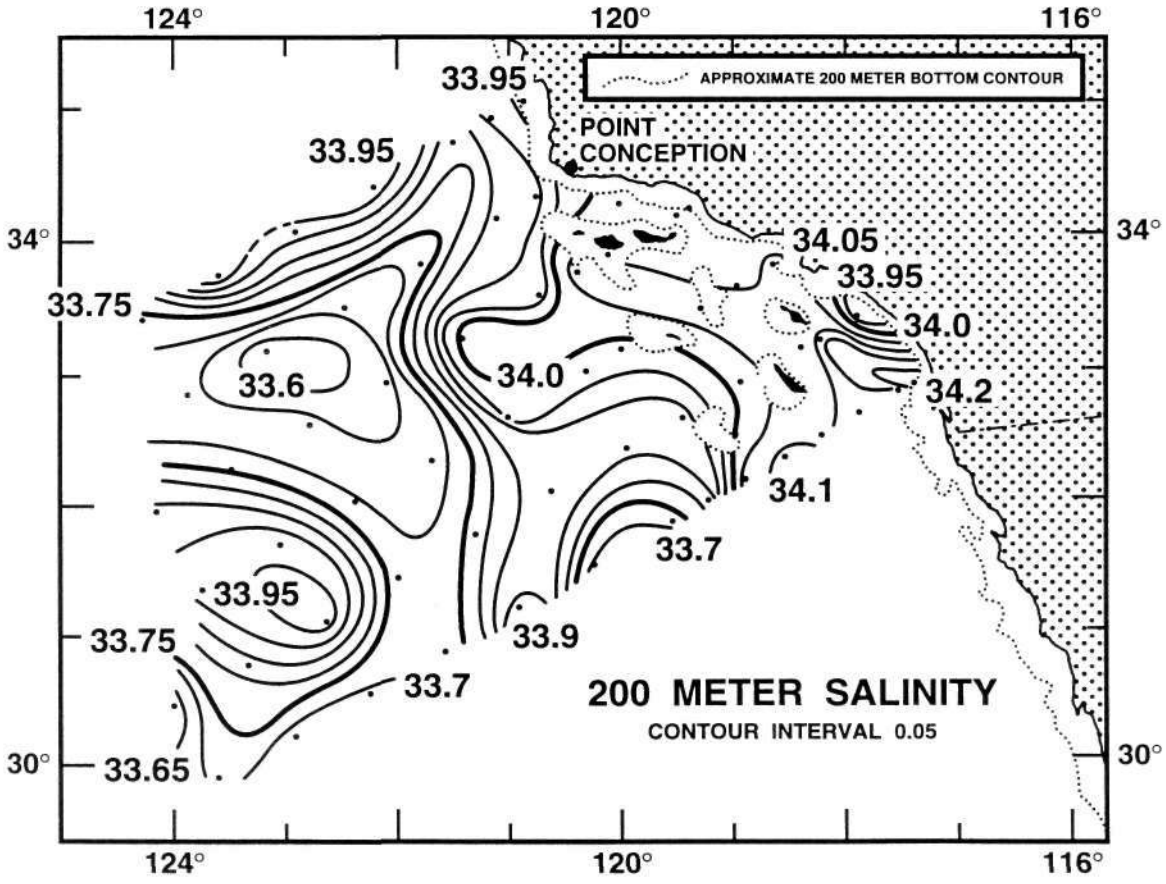


FIGURE 4D

CALCOFI CRUISE 9501

9 - 12 JANUARY 1995

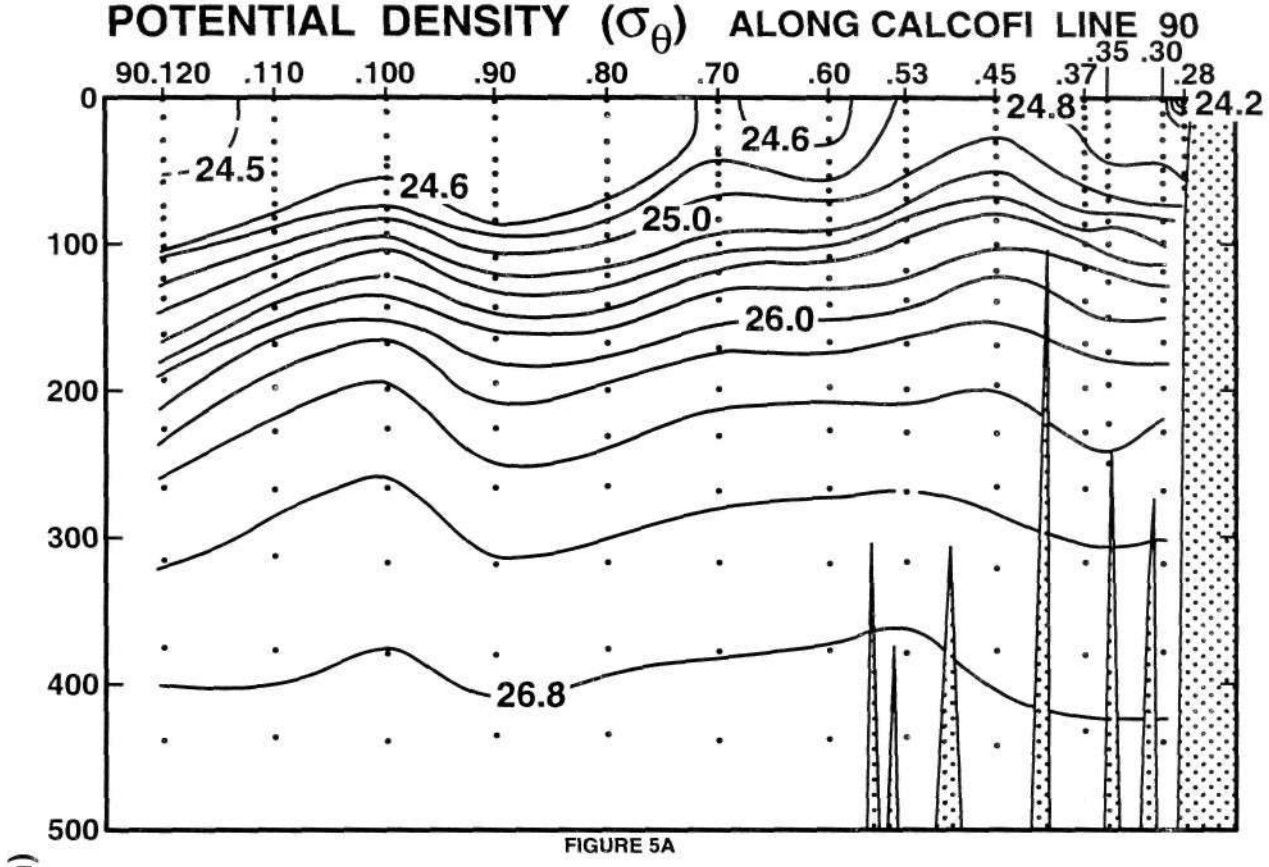


FIGURE 5A

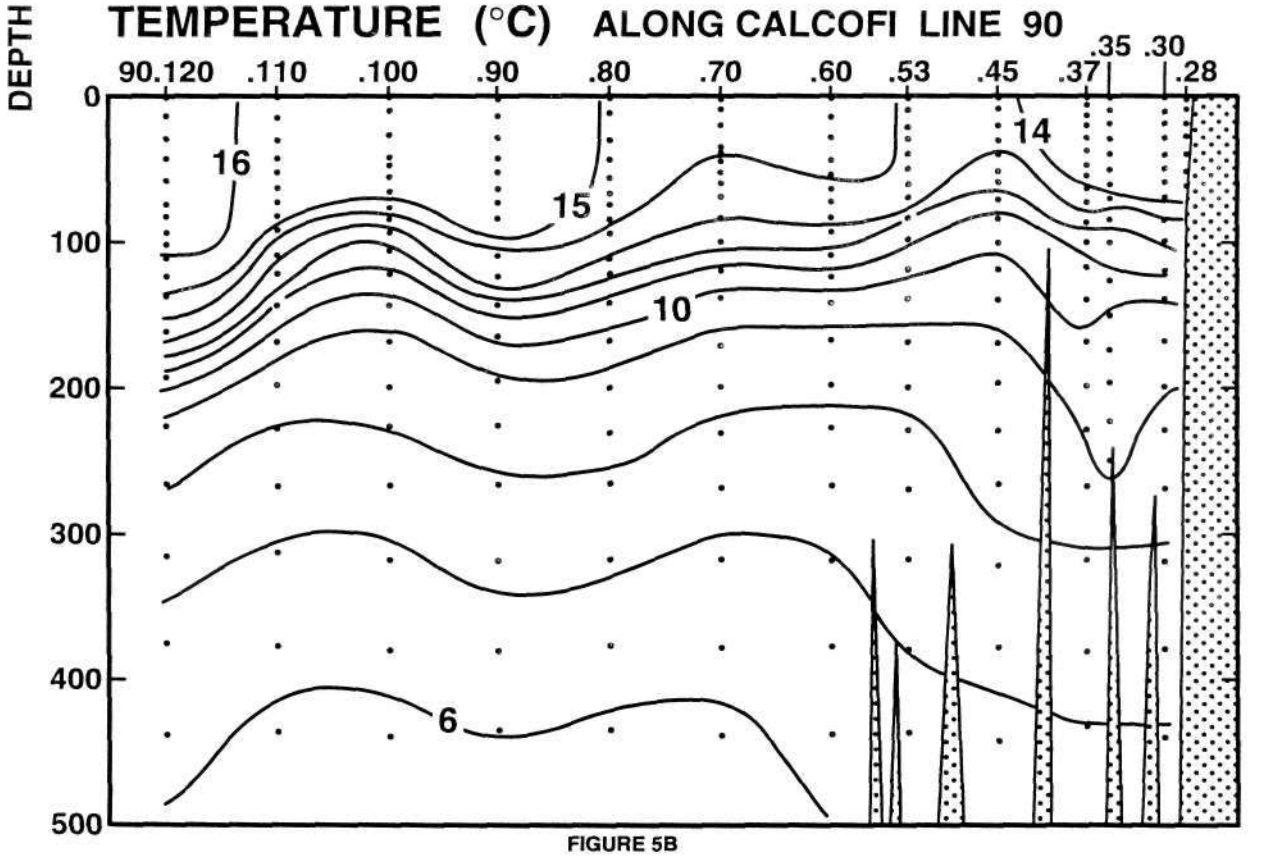


FIGURE 5B

CALCOFI CRUISE 9501

9 - 12 JANUARY 1995

SALINITY ALONG CALCOFI LINE 90

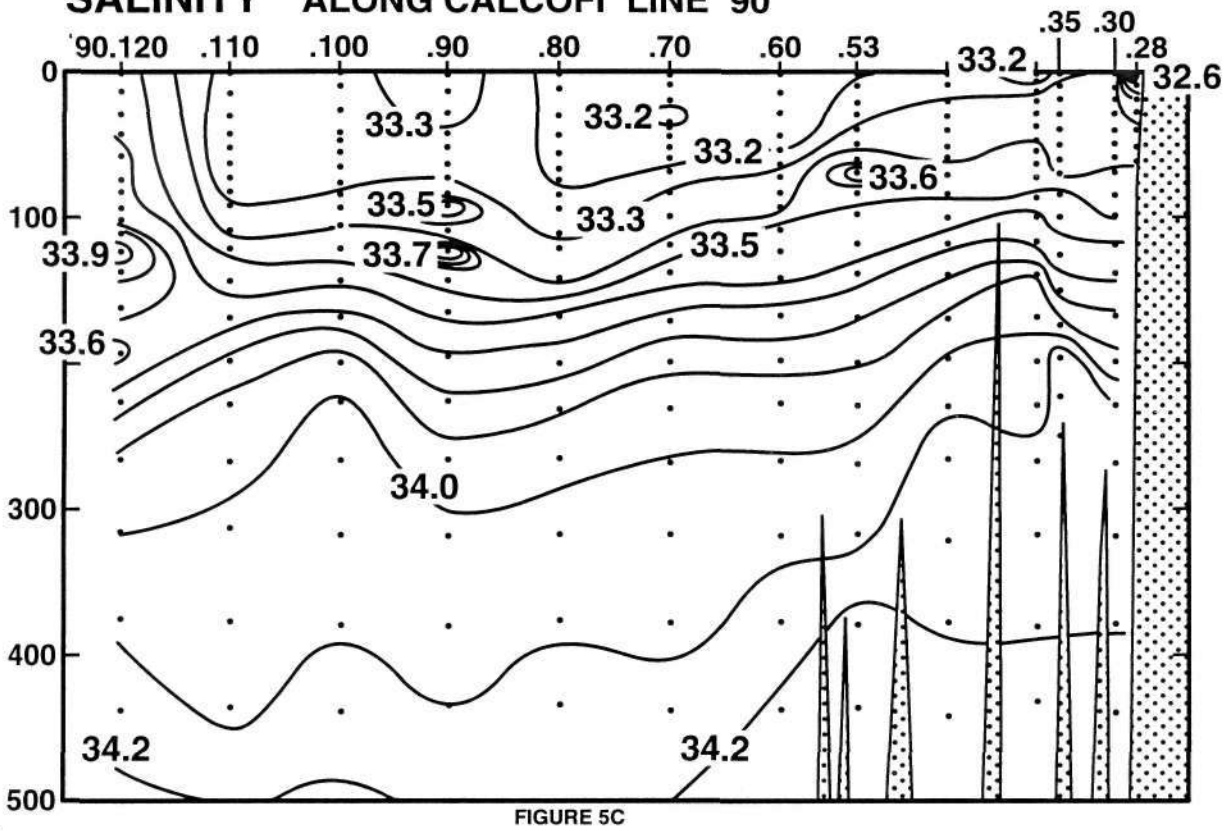


FIGURE 5C

SILICATE (μM/l) ALONG CALCOFI LINE 90

DEPTH (m)

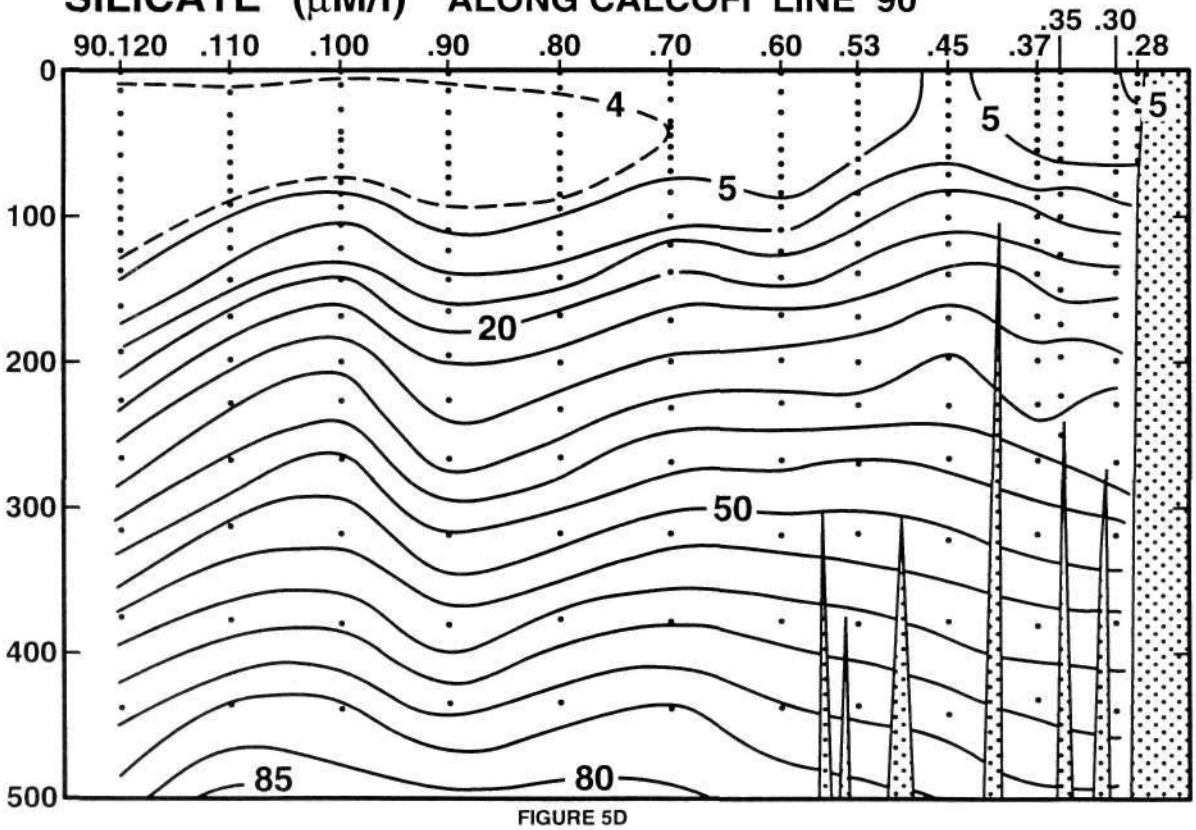


FIGURE 5D

CALCOFI CRUISE 9501

9 - 12 JANUARY 1995

NITRATE (μM/l) ALONG CALCOFI LINE 90

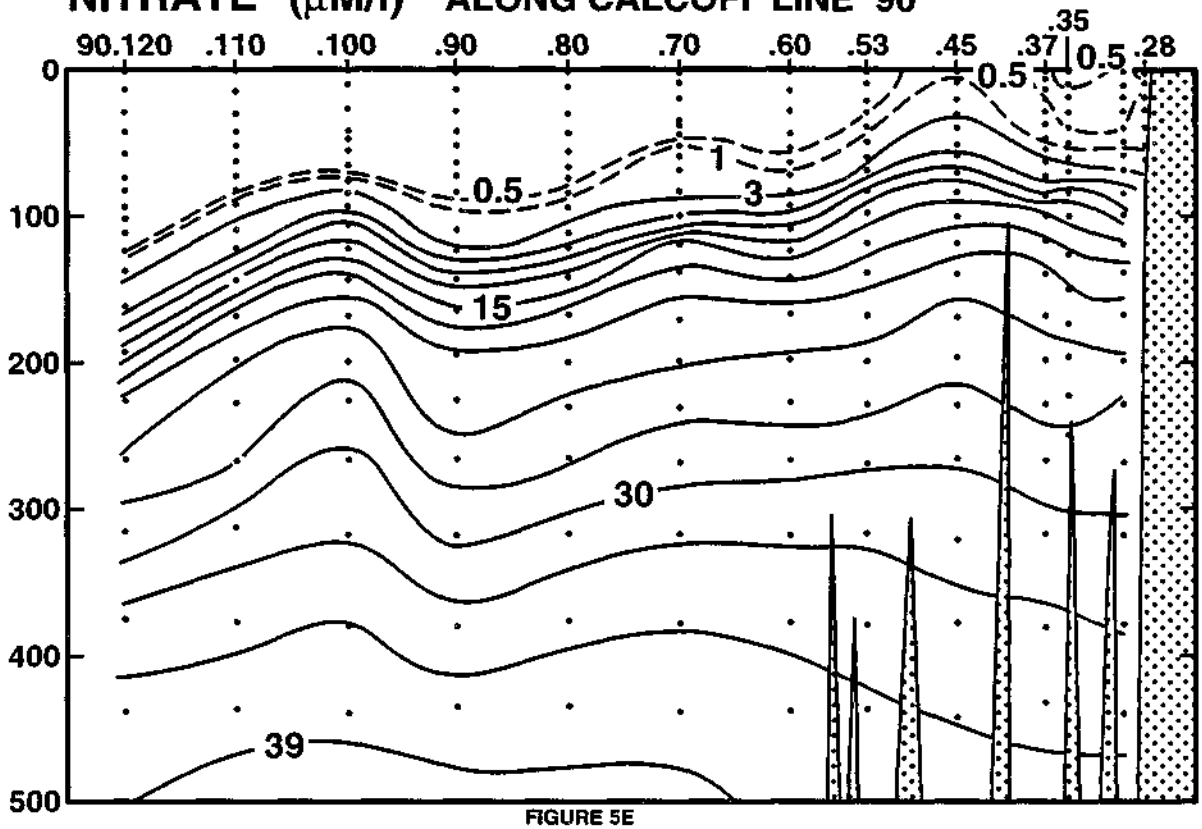


FIGURE 5E

DEPTH (m)

PHOSPHATE (μM/l) ALONG CALCOFI LINE 90

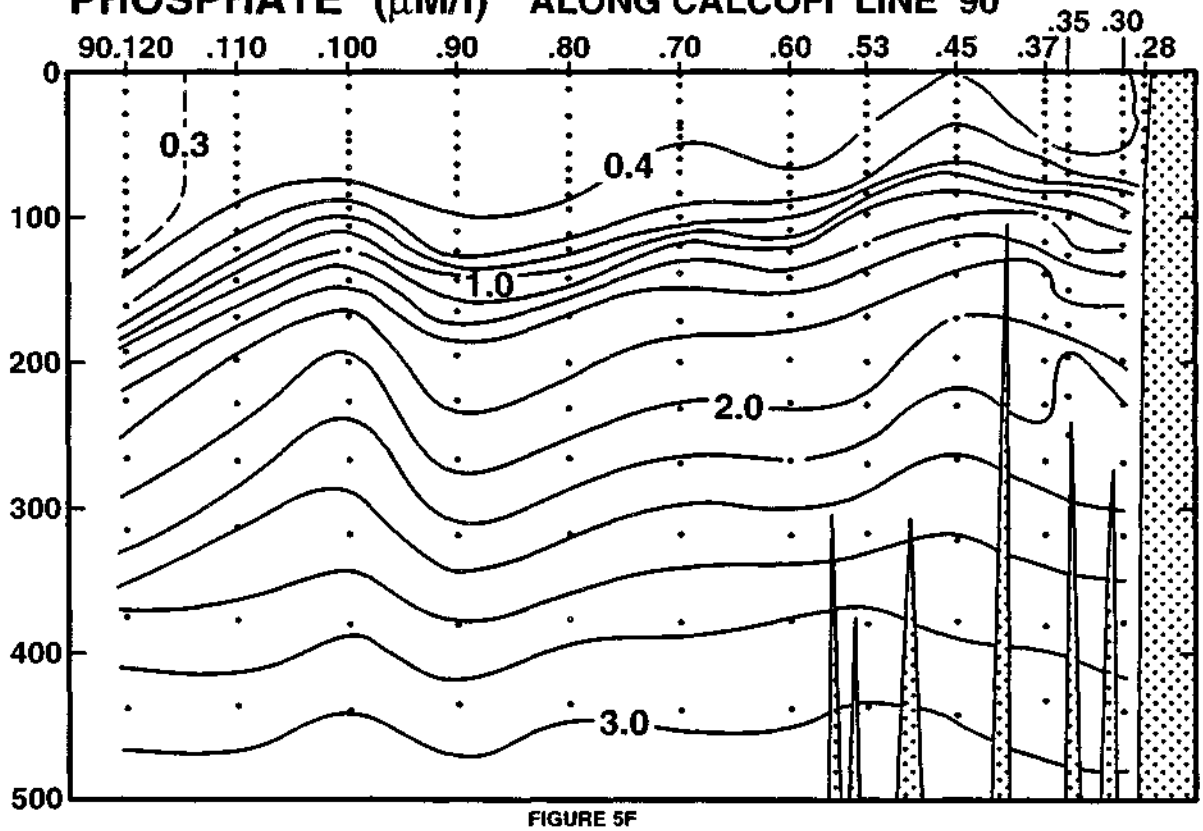


FIGURE 5F

CALCOFI CRUISE 9501

9 - 12 JANUARY 1995

CHLOROPHYLL-a (µg/l) ALONG CALCOFI LINE 90

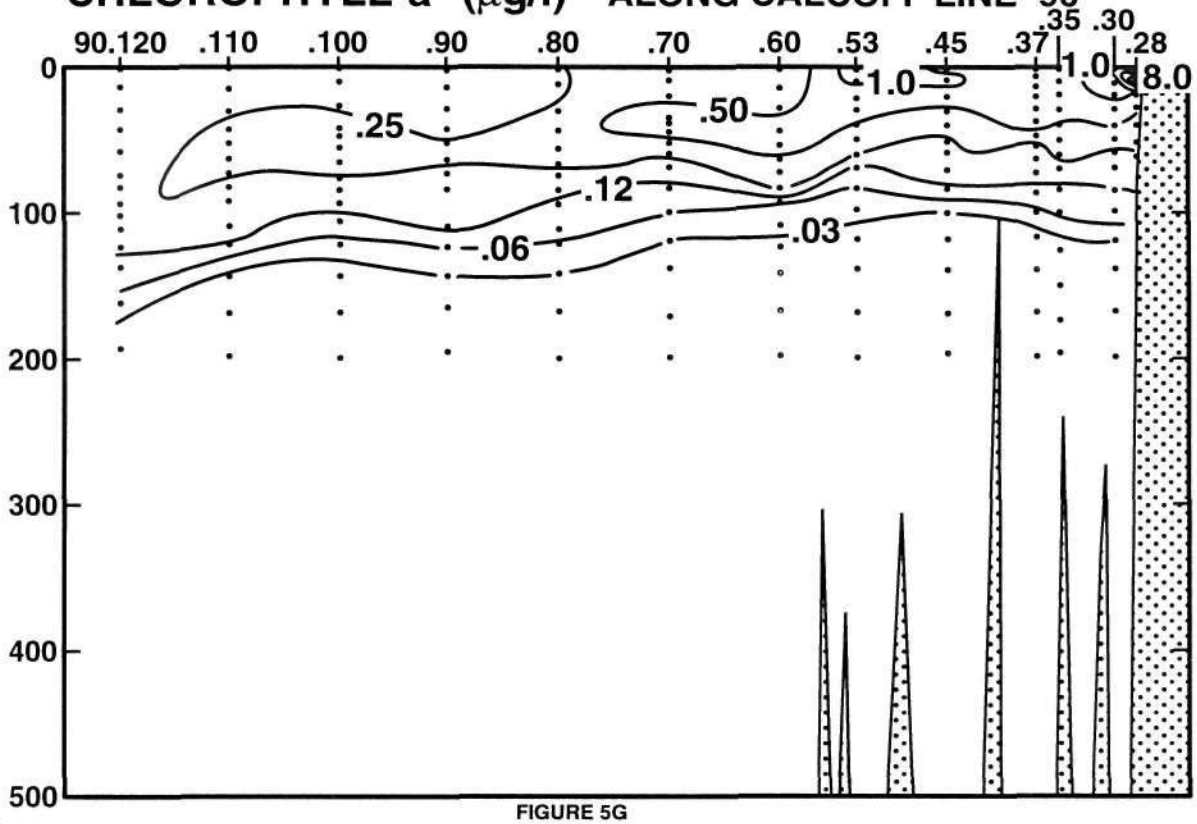


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

DEPTH (m)

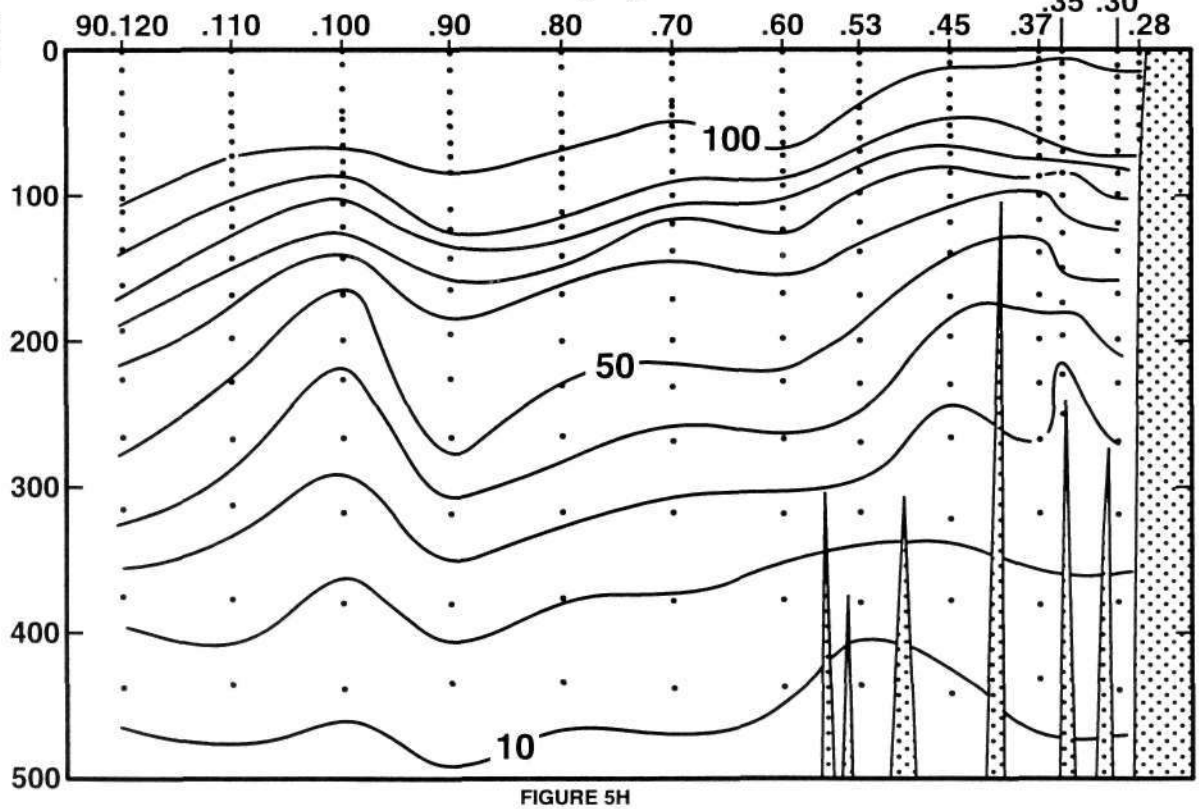


FIGURE 5H

CALCOFI CRUISE 9501

9 - 12 JANUARY 1995

OXYGEN (ml/l) ALONG CALCOFI LINE 90

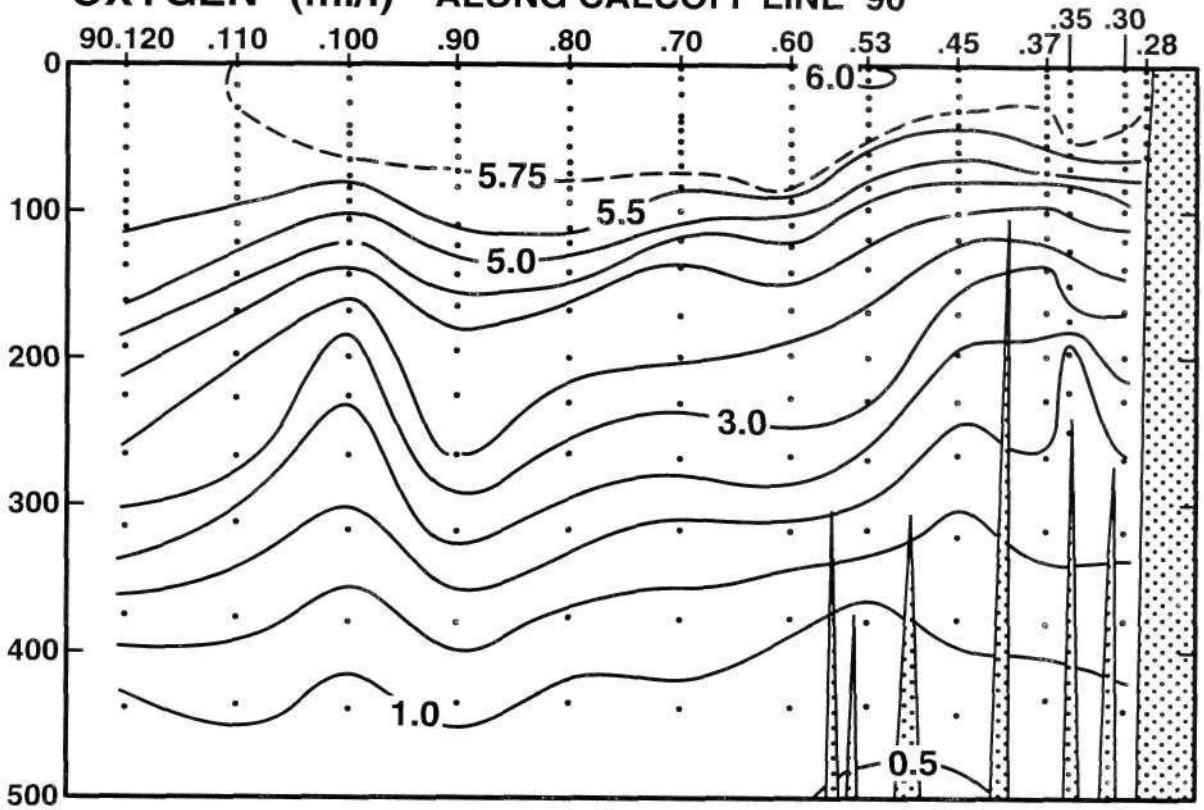


FIGURE 5I

NITRITE (µM/l) ALONG CALCOFI LINE 90

DEPTH (m)

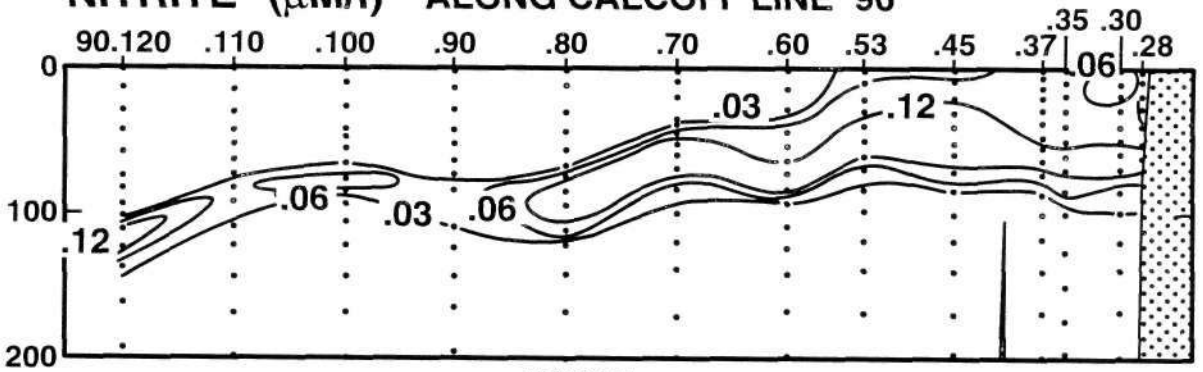


FIGURE 5J

PHAEOPIGMENTS (µg/l) ALONG CALCOFI LINE 90

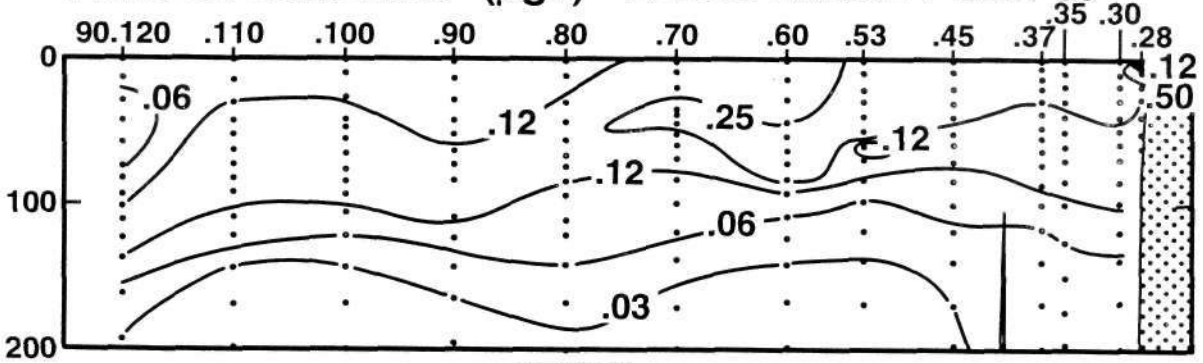


FIGURE 5K

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 77 49

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
35 :i.3 N	120 46 .7 W	21/01/95	0000 UTC	64 m	130 11 kn	170 04 05i	1	1015.0 mb	12..3 C	11..2 C	07m 04	6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uN/ I	N03 uM/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.34	13.34	33.192	24.925	301 .9	0.000	5.97	100.3	6.4	0.53	1 .7	0.24	1 .87	0.37	0	
1		13.34	13.34	33.192	24.925	301 .9	0.003	5.97	100.3	6.4	0.53	1 .7	0.24	1 .87	0.37	1	201
5		13.33	13.33	33.193	24.928	301 .7	0.015	5.93	99.6	6.4	0.54	1 .7	0.23	1 .44	0.35	5	202
10	ISL	13.33	13.33	33.191	24.927	302.0	0.030	5.94	99.8	6.3	0.54	1 .7	0.23	1 .44	0.36	10	
11		13.33	13.33	33.191	24.927	302.0	0.033	5.94	99.8	6.3	0.54	1 .7	0.23	1 .44	0.36	1 1	203
20	ISL	13.02	13.02	33.309	25.080	287.7	0.060	5.41	90.4	8.9	0.76	4.4	0.36	0.61	0.30	20	
21		12.98	12.98	33.325	25.101	285.8	0.063	5.34	89. 1	9.2	0.79	4.8	0.38	0.51	0.29	21	204
30		12.71	12.71	33.384	25.199	276.6	0.088	5.07	84.2	10.6	0.91	6.7	0.38	0.25	0.26	30	205
41		12.48	12.47	33.421	25.273	269.9	0.118	4.83	79.8	11.8	1 .00	8.0	0.38	0.18	0.28	41	206
49		11 .99	11 .98	33.472	25.406	257.4	0.139	4.54	74.3	14.0	1.13	10.2	0.35	0.15	0.28	49	207

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 77 51

LATITUDE	LONGITUDE	OAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
35 1 .3 N	120 55 .2 W	20/01/95	2051 UTC	243 m	140 20 kn	150 05 16>	5	1014.0 mb	12 .0 C	11..6 C	12m 03	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uM/ I	N03 UN/ I	N02 UM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.38	13.38	33.229	24.946	299.9	0.000	6.02	101.3	5.5	0.45	1 .2	0.20	1 .90	0.48	0	
2		13.38	13.38	33.229	24.946	300.0	0.006	6.02	101.3	5.5	0.45	1 .2	0.20	1 .90	0.48	2	201
10		13.37	13.37	33.231	24.950	299.8	0.030	6.04	101.6	5 .0	0.46	1 .3	0.20	1.45	0.44	10	202
20		13.38	13.38	33.233	24.950	300.1	0.060	6.01	101.1	5.0	0.45	1 .3	0.20	1 .39	0. 46	20	203
30		13.38	13.38	33.233	24.950	300.4	0.090	6.07	102. 1	5.0	0.46	1 .3	0.20	1 .37	0.48	30	204
40		13.38	13.37	33.235	24.952	300.5	0.120	6.02	101 .3	4.9	0.46	1 .3	0.21	1.18	0.41	40	205
49		13.38	13.37	33.235	24.952	300.7	0.147	6.01	101.1	5 .1	0.47	1 .3	0.21	1 .07	0.48	49	206
50	ISL	13.37	13.36	33.235	24.954	300.5	0.150	6.01	101.1	5.1	0.47	1 .3	0.21	1 .06	0.48	50	
59		13.32	13.31	33.236	24.965	299.7	0.177	5 .99	100.6	4.7	0.46	1 .3	0.19	0.85	0.41	59	207
70		12.43	12.42	33.405	25.271	270.8	0.208	5 .06	83.5	9.6	0.86	7.2	0.35	0.16	0.20	70	208
75	ISL	11.76	11 .75	33.466	25.445	254.3	0.222	4.62	75.2	12.5	1 .08	10.6	0.26	0.12	0.15	75	
85		10.54	10.53	33.575	25.749	225.5	0.246	3.88	61 .6	17.9	1 .47	16.6	0.04	0.05	0.10	85	209
100	ISL	10.09	10.08	33.673	25.903	211.1	0.278	3.44	54.1	21 .4	1 .66	19.5	0.03	0.02	0.07	101	
101		10.09	10.08	33.677	25.906	210.8	0.280	3.43	53.9	21 .5	1 .66	19.6	0.03	0.02	0.07	102	210
125		9.61	9.60	33.781 I>	26.068	195.9	0.329	3.08	47.9	26.5	1 .85	22 .1	0.03	0.02	0.09	126	211
150		9.25	9.23	33.867	26.194	184.3	0.377	2.83	43.7	29.0	1 .96	23.9	0.05	0.01	0.05	151	212
174		8.98	8.96	33.915	26.275	177.1	0.420	2 .68	41 .2	31 .4	2.03	25.1	0.10	0.00	0.04	175	213
200		8.95	8.93	33.957	26.313	174.0	0.466	2.52	38.7	32.9	2.10	25.7	0.05	0.00	0.04	201	214
224		8.64	8.62	34.036	26.424	163.8	0.506	2.19	33.4	38.0	2.24	27.5	0.04	0.01	0.06	225	215

RV DAVID STARR JORDAN CALCOFI CRUISE 9501I STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 53 .9 N	121 11 .4 W	20/01/95	1801 UTC	565 m	130 37 kn	150 08 06	6	1014.1 mb	12 .7 C	12 . 1 C	11m 03	8/8	CU

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uM/ I	N03 UM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.27	13.27	33.021	24.807	313.1	0.000	6.07	101.8	4 .6	0.38	0.4	0.05	0.58	0.21	0	
2	A	13.27	13.27	33.021	24.807	313.2	0.006	6.07	101.8	4.6	0.38	0.4	0.05	0.58	0.21	2	201
6	A	13.26	13.26	33.021	24.809	313.1	0.019	6.07	101 .7	4.4	0.38	0.3	0.05	0.59	0.19	6	202
10	ISL	13.26	13.26	33.021	24.809	313.2	0.031	6.06	101.6	4.4	0.38	0.3	0.05	0.60	0.21	10	
14	A	13.26	13.26	33.022	24.810	313.2	0.044	6.05	101.4	4.3	0.38	0.3	0.05	0.60	0.23	14	203
20	ISL	13.27	13.27	33.024	24.810	313.4	0.063	6.08	101.9	4.3	0.37	0.3	0.05	0.61	0.23	20	
22	A	13.27	13.27	33.025	24.811	313.4	0.069	6.09	102.1	4.3	0.37	0.3	0.05	0.61	0.23	22	204
30	A	13.27	13.27	33.024	24.810	313.6	0.094	6.07	101.7	4.2	0.38	0.4	0.05	0.61	0.24	30	205
39	A	13.24	13.23	33.030	24.821	312.8	0.122	6.06	101.5	4.2	0.39	0.4	0.07	0.55	0.24	39	206
50		12.69	12.68	33.084	24.971	298.8	0.156	5.93	98.2	5.0	0.51	1 .9	0.22	0.24	0.18	50	207
60		12.80	12 .79	33.323	25.135	283.5	0.185	5.51	91 .6	5 .9	0.59	3.8	0.08	0.12	0.11	60	208
68		12.65	12.64	33.399	25.224	275.3	0.207	5.33	88.4	6.7	0.65	5 . 1	0.03	0.07	0.08	68	209
75	ISL	12.23	12.22	33.401	25.306	267.6	0.226	5.21	85.6	8.0	0.76	6.7	0.03	0.07	0.08	75	
84		11 .65	11 .64	33.383	25.401	258.7	0.250	5 .04	81 .8	9.9	0.92	9.0	0.03	0.06	0.07	84	210
100		11.25	11.24	33.431	25.512	248.5	0.291	4.56	73.4	12.9	1.14	12.1	0.03	0.06	0.09	100	21 1
119		10.69	10.68	33.533	25.691	231 .8	0.336	4.02	64.0	17.1	1 .40	15.8	0.03	0.04	0.08	120	212
125	ISL	10.36	10.35	33.549	25.761	225.2	0.350	3.97	62.7	18.2	1 .46	16.8	0.03	0.04	0.08	126	
138		9.65	9.63	33.580	25.904	211.7	0.378	3.91	60.8	20.3	1 .58	18.6	0.02	0.03	0.07	139	213
150	ISL	9.34	9.32	33.602	25.972	205.4	0.403	3.83	59.2	21 .8	1 .66	19.8	0.02	0.02	0.06	151	
167		9.13	9.11	33.657	26.049	198.4	0.438	3.62	55 .7	24.1	1 .76	21.3	0.02	0.01	0.04	168	214
198		8.96	8.94	33.918	26.281	177.0	0.496	2.75	42.2	31 .3	2.03	24.8	0.02	0.00	0.04	199	215
200	ISL	8.94	8.92	33.929	26.293	175.9	0.499	2.71	41.6	31 .7	2.05	25.0	0.02			201	
231		8.61	8.59	34.054	26.443	162.2	0.552	2.17	33.1	38.1	2.26	27.7	0.02			232	216
250	ISL	8.47	8.44	34.087	26.490	157.9	0. 582	2.03	30.9	40.8	2.33	28.7	0.02			251	
266		8.34	8.31	34.099 D	26.520	155.4	0.607									268	217
300	ISL	7.92	7.89	34.110	26.591	149.0	0.659	1 .83	27.5	46.5	2.46	30.5	0.02			302	
316		7.72	7.69	34.111	26.622	146.3	0.683	1 .81	27.0	48.0	2.48	30.8	0.02			318	218
376		7.2*	7.20	34.142	26.715	138.1	0.768	1 .40	20.7	55.5	2.66	33.0	0.02			378	219
400	ISL	7.05	7.01	34.152	26.749	135.1	0.801	1 .24	18.2	59.3	2.74	33.7	0.02			403	
436		6.78	6.74	34.171	26.801	130.5	0.848	1 .01	14.8	65.3	2.87	34.7	0.02			439	220
500	ISL	6.32	6.27	34.228	26.908	120.9	0.929	0.64	9.3	75.0	3.05	36.8	0.03			503	
516		6.20	6.15	34.243	26.935	118.4	0.948	0.55	7.9	77.4	3.09	37.3	0.03			520	221

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 95011 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIRE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 43.7 N	121 33.1 W	20/01/95	1433 UTC	905 in	170 20 kn			1013.5 mb	13.3 C	11.2 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/I	P04 uN/I	N03 uM/l	N02 uN/l	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	13.43	13.43	32.959	24.727	320.8	0.000	6.04	101.5	4.6	0.36	0.0	0.00	0.45	0.17	0	
1		13.43	13.43	32.959	24.727	320.8	0.003	6.04	101.5	4.6	0.36	0.0	0.00	0.45	0.17	1	201
10		13.43	13.43	32.959	24.727	321.0	0.032	6.01	101.0	4.2	0.34	0.0	0.00	0.46	0.17	10	202
20		13.43	13.43	32.959	24.728	321.2	0.064	6.02	101.2	4.0	0.34	0.0	0.00	0.45	0.18	20	203
29		13.43	13.43	32.960	24.729	321.4	0.093	6.02	101.2	3.8	0.34	0.0	0.01	0.45	0.18	29	204
30	ISL	13.43	13.43	32.960	24.729	321.4	0.096	6.02	101.2	3.8	0.34	0.0	0.01	0.45	0.18	30	
40		13.43	13.42	32.959	24.728	321.7	0.128	6.03	101.4	3.8	0.34	0.0	0.01	0.45	0.17	40	205
50		13.43	13.42	32.959	24.729	322.0	0.161	6.02	101.2	3.8	0.34	0.0	0.01	0.45	0.19	50	206
60		13.42	13.41	32.972	24.741	321.1	0.193	5.99	100.7	3.8	0.36	0.3	0.04	0.39	0.17	60	207
70		13.34	13.33	33.256	24.977	298.9	0.224	5.69	95.6	4.6	0.66 U	2.0	0.11	0.14	0.13	70	208
75	ISL	13.30	13.29	33.312	25.028	294.1	0.239	5.63	94.6	4.7	0.43	2.3	0.09	0.13	0.13	75	
85		13.23	13.22	33.360	25.080	289.5	0.268	5.58	93.6	4.9	0.50	2.7	0.02	0.10	0.12	85	209
99		12.59	12.58	33.327	25.180	280.2	0.308	5.44	90.0	6.0	0.63	4.6	0.01	0.07	0.07	99	210
100	ISL	12.51	12.50	33.327	25.196	278.7	0.311	5.41	89.4	6.3	0.65	5.0	0.01	0.07	0.07	100	
121		10.80	10.79	33.383	25.555	244.8	0.365	4.58	73.0	13.4	1.22	13.5	0.01	0.04	0.06	122	211
125	ISL	10.56	10.55	33.406	25.615	239.1	0.375	4.43	70.2	14.7	1.30	14.8	0.01	0.04	0.06	126	
140		9.80	9.78	33.506	25.822	219.6	0.410	3.95	61.6	19.3	1.56	18.7	0.01	0.02	0.06	141	212
150	ISL	9.30	9.28	33.580	25.961	206.4	0.431	3.79	58.5	22.2	1.67	20.5	0.01	0.01	0.05	151	
168		8.60	8.58	33.704	26.169	186.9	0.466	3.67	55.8	26.3	1.78	22.5	0.01	0.00	0.02	169	213
198		8.24	8.22	33.819	26.314	173.5	0.520	3.63	54.8	29.1	1.83	23.4	0.01	0.01	0.01	199	214
200	ISL	8.23	8.21	33.834	26.327	172.3	0.524	3.55	53.6	29.7	1.85	23.7	0.01			201	
228		8.11	8.09	34.026	26.496	156.8	0.570	2.42	36.5	38.8	2.22	27.9	0.01			229	215
250	ISL	7.96	7.93	34.067	26.551	151.9	0.604	2.25	33.8	42.2	2.32	29.1	0.01			251	
268		7.83	7.80	34.071	26.573	150.0	0.631	2.12	31.7	44.0	2.35	29.5	0.01			270	216
300	ISL	7.64	7.61	34.102	26.626	145.5	0.678	1.86	27.7	47.8	2.48	30.8	0.02			302	
320		7.52	7.49	34.122	26.659	142.7	0.707	1.67	24.8	50.4	2.57	31.6	0.02			322	217
375		7.10	7.06	34.192	26.774	132.4	0.783	1.04	15.3	60.0	2.80	34.2	0.02			377	218
400	ISL	6.91	6.87	34.210	26.814	128.8	0.815	0.88	12.9	63.5	2.88	34.6	0.02			403	
439		6.60	6.56	34.224	26.867	124.1	0.865	0.72	10.5	68.6	2.98	35.2	0.02			442	219
500	ISL	6.01	5.97	34.221	26.942	117.4	0.938	0.57	8.2	77.1	3.09	38.0	0.02			503	
513		5.89	5.85	34.221	26.957	116.0	0.954	0.54	7.7	78.9	3.11	38.6	0.02			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 95011 STATION 77 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 23:.3 N	122 15.2 W	20/01/95	0513 UTC	4019 in	160 11 kn			1014.7 mb	13.1 C	11.5 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/I	P04 UN/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0	ISL	13.02	13.02	33.042	24.873	306.9	0.000	6.11	101.9	5.1	0.41	0.7	0.06	0.43	0.15	0	
2		13.02	13.02	33.042	24.873	306.9	0.006	6.11	101.9	5.1	0.41	0.7	0.06	0.43	0.15	2	201
10	ISL	13.03	13.03	33.043	24.872	307.2	0.031	6.13	102.3	4.9	0.41	0.7	0.06	0.46	0.15	10	
11		13.03	13.03	33.043	24.872	307.2	0.034	6.13	102.3	4.9	0.41	0.7	0.06	0.46	0.15	11	202
20		13.04	13.04	33.057	24.881	306.6	0.061	6.20	103.5	4.8	0.41	0.8	0.07	0.57	0.24	20	203
30		13.05	13.05	33.101	24.914	303.8	0.092	6.16	102.8	4.8	0.43	1.1	0.09	0.74	0.30	30	204
40		12.87	12.86	33.152	24.989	296.9	0.122	5.93	98.6	5.1	0.51	1.9	0.21	0.38	0.29	40	205
50		12.57	12.56	33.249	25.123	284.4	0.151	5.71	94.4	6.2	0.64	4.2	0.28	0.20	0.17	50	206
61		12.24	12.23	33.296	25.223	275.2	0.182	5.50	90.4	7.4	0.77	6.4	0.06	0.13	0.17	61	207
69		11.29	11.28	33.340	25.433	255.2	0.203	4.91	79.1	11.6	1.09	11.4	0.03	0.05	0.11	69	208
75	ISL	10.77	10.76	33.348	25.532	245.9	0.218	4.73	75.3	13.5	1.22	13.5	0.03	0.04	0.09	75	
84		10.18	10.17	33.365	25.647	235.0	0.240	4.57	71.8	15.9	1.36	15.6	0.03	0.03	0.08	84	209
100	ISL	9.47	9.46	33.520	25.886	212.6	0.275	3.88	60.1	21.5	1.66	20.3	0.02	0.01	0.06	101	
101		9.44	9.43	33.531	25.900	211.3	0.278	3.84	59.5	21.8	1.68	20.6	0.02	0.01	0.06	102	210
118		9.27	9.26	33.657	26.026	199.6	0.313	3.36	51.9	24.9	1.82	22.6	0.02	0.01	0.06	119	211
125	ISL	9.18	9.17	33.698	26.073	195.3	0.326	3.26	50.2	26.0	1.86	23.2	0.02	0.01	0.06	126	
137		9.00	8.99	33.762	26.151	188.0	0.349	3.12	47.9	27.9	1.93	24.0	0.01	0.01	0.05	138	212
150	ISL	8.82	8.80	33.840	26.241	179.8	0.373	2.90	44.4	30.3	2.01	25.1	0.01	0.01	0.05	151	
171		8.50	8.48	33.942	26.371	167.8	0.410	2.61	39.7	34.3	2.12	26.7	0.02	0.00	0.04	172	213
197		8.01	7.99	33.987	26.480	157.7	0.452	2.55	38.3	38.9	2.20	28.1	0.01	0.00	0.03	198	214
200	ISL	7.95	7.93	33.987	26.489	156.9	0.457	2.58	38.7	39.1	2.20	28.1	0.01			201	
228		7.44	7.42	33.979	26.557	150.7	0.500	2.86	42.4	41.3	2.16	28.1	0.01			229	215
250	ISL	7.15	7.13	33.987	26.604	146.5	0.533	2.74	40.4	44.9	2.23	29.2	0.02			251	
269		6.95	6.92	33.999	26.641	143.1	0.560	2.52	37.0	48.5	2.33	30.4	0.02			271	216
300	ISL	6.70	6.67	34.020	26.691	138.7	0.604	2.11	30.8	53.9	2.48	32.3	0.02			302	
317		6.59	6.56	34.034	26.717	136.4	0.627	1.86	27.1	56.8	2.57	33.3	0.02			319	217
377		6.24	6.21	34.100	26.815	127.8	0.706	1.13	16.3	67.5	2.85	36.6	0.01			379	218
400	ISL	6.03	6.00	34.106	26.847	124.9	0.735	1.00	14.4	71.6	2.92	37.5	0.01			403	
443		5.62	5.58	34.114	26.904	119.6	0.788	0.86	12.2	79.0	3.01	38.9	0.01			446	219
500	ISL	5.20	5.16	34.152	26.985	112.3	0.854	0.68	9.6	87.4	3.12	40.0	0.02			503	
508		5.14	5.10	34.157	26.996	111.3	0.863	0.65	9.1	88.6	3.14	40.2	0.02			512	220

RV DAVID STARR JORDAN | CALCOFI CRUISE 9501 | STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 3.4 N	122 56 .7 U	19/01/95	2332	UTC	4232 m	150	07 kn	280 04 05•	1	1016.0 mb	13..8 C	12..0 C	1 5m 03	5/8	CI

DEPTH m		TEMP DES C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/ I	N02 uM/ l	CHL-A ug/ I	PHAEO ug/ L	PRES db	SAMP
0	ISL	13.32	13.32	33.054	24.823	311.7	0.000	6.15	103.2	5.5	0.42	0.8	0.07	0.53	0.13	0	
2		13.32	13.32	33.054	24.823	311.7	0.006	6.15	103.2	5.5	0.42	0.8	0.07	0.53	0.13	2	201
9		13.10	13.10	33.058	24.870	307.4	0.028	6.19	103.4	5 .2	0.41	0.8	0.07	0.63	0.19	9	202
10	ISL	13.09	13.09	33.058	24.872	307.2	0.031	6.19	103.4	5.2	0.41	0.8	0.07	0.65	0.19	10	
20		13.03	13.03	33.060	24.885	306.2	0.062	6.14	102 .4	5.1	0.41	0.8	0.07	0.79	0.23	20	203
30		12.97	12.97	33.067	24.903	304.8	0.092	6.12	102 .0	5.1	0.43	1 .2	0.11	0.78	0.34	30	204
39		12.85	12.84	33.110	24.960	299.6	0.119	6.03	100.2	5.3	0.47	1 .7	0.17	0.50	0.27	39	205
SO		12.78	12.77	33.149	25.004	295.7	0.152	5.98	99.3	5.6	0.50	2 . 1	0.21	0.41	0.27	50	206
59		12.56	12.55	33.235	25.114	285.5	0.178	5.79	95.7	6.6	0.62	3.8	0.27	0.31	0.23	59	207
69		11.61	11 .60	33.334	25.370	261 .2	0.206	5.06	82.0	10.3	0.96	9. 5	0.05	0.11	0.12	69	208
75	ISL	11.22	11.21	33.359	25.461	252.7	0.221	4.84	77.8	11.5	1 .06	11.3	0.04	0.11	0.13	75	
85		10.66	10.65	33.390	25.584	241 .2	0.246	4.58	72.8	13.7	1 .21	13.6	0.03	0.10	0.14	85	209
99		9.74	9.73	33.499	25.826	218.3	0.278	3.96	61 .7	20.0	1 .57	19.0	0.02	0.03	0.06	99	210
100	ISL	9.70	9.69	33.508	25.839	217.1	0.280	3.92	61 .0	20.4	1 .59	19.3	0.02	0.03	0.06	100	
119		9.14	9.13	33.659	26.048	197.5	0.319	3.37	51.9	25.6	1 .84	22.8	0.02	0.01	0.05	120	211
125	ISL	8.89	8.88	33.687	26.110	191.7	0.331	3.45	52.8	26.7	1 .83	23. 1	0.02	0.01	0.04	126	
139		8.37	8.36	33.746	26.236	179.8	0.357	3.66	55.4	28.8	1 .82	23.4	0.02	0.00	0.03	140	212
150	ISL	8.33	8.31	33.821	26.301	173.9	0.377	3.37	51 .0	31 .1	1 .91	24.6	0.02	0.00	0.03	151	
169		8.27	8.25	33.907	26.378	166.9	0.409	2.82	42.6	34.6	2.08	26.7	0.02	0.00	0.03	170	213
199		7.74	7.72	33.930	26.475	158.1	0.458	3.13	46.7	36.9	2 .04	26.7	0.02	0.00	0.02	200	214
200	ISL	7.74	7.72	33.935	26.479	157.7	0.459	3.10	46.3	37.1	2.05	26.8	0.02			201	
228		7.78	7.76	34.053	26.566	150.0	0.502	2.19	32.8	44.2	2.34	29.9	0.02			229	215
250	ISL	7.59	7.57	34.074	26.610	146.1	0.535	2.08	31 .0	46. 1	2.41	30.6	0.02			251	
269		7.38	7.35	34.075	26.641	143.4	0.562	1 .99	29.5	47.3	2.43	30.9	0.02			271	216
300	ISL	7.21	7.18	34.115	26.697	138.5	0.606	1 .61	23.8	53.1	2.59	32.6	0.02			302	
317		7.09	7.06	34.132	26.727	135.9	0.629	1 .39	20.5	57.1	2 .68	33.8	0.02			319	217
377		5.95	5.92	34.101	26.853	123.9	0.707	0.99	14.2	72.0	2.93	37.9	0.02			379	218
400	ISL	5.74	5.71	34.114	26.889	120.6	0.736	0.86	12.3	75.9	2 .99	38.7	0.02			403	
438		5.53	5.49	34.144	26.939	116.2	0.781	0.68	9.7	81 .2	3.07	39.6	0.02			441	219
500	ISL	5.18	5.14	34.179	27.008	110.1	0.851	0.50	7.0	88.9	3.17	40.8	0.02			503	
512		5.11	5.07	34.186	27.022	108.8	0.864	0.46	6.5	90.4	3.19	41.0	0.02			516	220

RV DAVID STARR JORDAN | CALCOFI CRUISE 9501I | STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 43.2 N	123 37 .7 W	19/01/95	1743	UTC	4234 m	110	08 kn	200 06 10	1	1019.0 mb	13..4 C	1 1 .4 C	23m 02	6/8	CC

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uM/ L	N03 uM/ I	N02 uM/ L	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.62	13.62	32.976	24.702	323.2	0.000	6.01	101.5	4.3	0.34	0. 1	0.00	0.36	0.13	0	
2	A	13.62	13.62	32.976	24.702	323.2	0.006	6.01	101.5	4.3	0.34	0. 1	0.00	0.36	0.13	2	201
10	ISL	13.61	13.61	32.975	24.703	323.3	0.032	6.02	101.6	4 .2	0.33	0. 1	0.00	0.37	0.14	10	
13	A	13.61	13.61	32.976	24.704	323.3	0.042	6.02	101 .6	4 . 1	0.33	0. 1	0.00	0.37	0.14	13	202
20	ISL	13.63	13.63	32.985	24.707	323.2	0.065	6.01	101.5	4.0	0.33	0. 1	0.00	0. 39	0.15	20	
29	A	13.66	13.66	32.999	24.712	323.0	0.094	5 .99	101.2	4.0	0.33	0.0	0.00	0. 42	0.16	29	203
30	ISL	13.66	13.66	32.999	24.712	323.0	0.097	5.99	101.2	4.0	0.33	0.0	0.00	0.42	0.16	30	
44	A	13.68	13.67	33.005	24.713	323.3	0.142	5 .98	101.1	4.0	0.33	0.0	0.01	0.44	0.17	44	204
50	ISL	13.69	13.68	33.008	24.714	323.4	0.162	5.97	100.9	3.9	0.33	0.0	0.01	0.44	0.19	50	
51		13.69	13.68	33.009	24.715	323.3	0.165	5.97	100.9	3.9	0.33	0.0	0.01	0.44	0.19	51	205
59	A	13.70	13.69	33.013	24.716	323.5	0.191	5.97	101.0	3.8	0.32	0.0	0.01	0.40	0.17	59	206
66		13.70	13.69	33.012	24.715	323.7	0.213	5.97	100.9	3.8	0.33	0.0	0.01	0.40	0.17	66	207
74		13.31	13.30	32.989	24.776	318.1	0.239	5.93	99.4	3.9	0.38	0.4	0.08	0.23	0.16	74	208
75	ISL	13.22	13.21	32.996	24.800	315.9	0.242	5.93	99.3	4.0	0.39	0.6	0.10	0.21	0.16	75	
83	A	12.44	12.43	33.077	25.015	295.5	0.267	5.87	96.7	5 .0	0.51	2 .2	0.20	0.12	0.12	83	209
94		11 .90	11.89	33.170	25.189	279. 1	0.298	5 .64	91 .9	6.2	0.60	4. 1	0.03	0.08	0.09	94	210
100	ISL	11.54	11.53	33.203	25.282	270.4	0.315	5.51	89. 1	7.5	0.71	5.9	0.03	0.07	0.08	100	
109		10.96	10.95	33.250	25.423	257.1	0.338	5.27	84.2	10.0	0.91	8.9	0.02	0.05	0.07	1 10	211
123		10.10	10.09	33.353	25.652	235.4	0.373	4 . 78	75 .0	14.1	1.19	13.4	0.01	0.03	0.05	124	212
125	ISL	10.03	10.02	33.374	25.680	232.8	0.378	4 .67	73.2	14.9	1 .24	14.2	0.01	0.03	0.05	126	
144		9.48	9.46	33.561	25.917	210.5	0.420	3. 68	57.0	22 .1	1 .69	20.9	0.01	0.01	0.05	145	213
150	ISL	9.26	9.24	33.592	25.977	204.9	0.432	3.60	55.5	23.3	1 .75	21.8	0.01	0.01	0.05	151	
168		8.69	8.67	33.679	26.135	190.0	0.468	3.48	53.0	26.3	1 .84	23.2	0.01	0.00	0.04	169	214
198		8.40	8.38	33.947	26.390	166.4	0.521	2.64	40.0	34.5	2.11	26.9	0.01	0.00	0.03	199	215
200	ISL	8.37	8.35	33.956	26.402	165.3	0.525	2.61	39.5	34.9	2.12	27.1	0.01			201	
228		8.02	8.00	34.035	26.517	154.8	0.569	2.29	34.4	40.0	2.26	28.8	0.01			229	216
250	ISL	7.82	7.80	34.068	26.572	149.8	0.603	2.09	31 .3	43.4	2.35	29.9	0.01			251	
269		7.65	7.62	34.083	26.609	146.6	0.631	1 .94	28.9	46.2	2.42	30.7	0.01			271	217
300	ISL	7.28	7.25	34.092	26.669	141.2	0.676	1 .73	25.6	51.0	2.53	32.2	0.01			302	
318		7.06	7.03	34.094	26.701	138.3	0.701	1 .61	23.7	53.8	2 .59	33.1	0.01			320	218
376		6.55	6.52	34.121	26.792	130.2	0.779	1.17	17.0	63.0	2 .80	35 . 7	0.01			378	219
400	ISL	6.41	6.37	34.138	26.824	127.4	0.810	1 .02	14.8	66.0	2.86	36.4	0.01			403	
437		6.21	6.17	34.163	26.870	123.5	0.856	0.81	11.7	70.7	2 .95	37.4	0.01			440	220
500	ISL	5.70	5 .66	34.193	26.958	115.5	0.931	0.56	8.0	81 .0	3.09	39.3	0.01			503	
511		5.61	5.57	34.198	26.973	114.1	0.944	0.52	7.4	82.8	3.12	39.6	0.01			514	221

A) PRIMAR1' PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 77 100

LATITUDE	LONGITUDE	DAY/nO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 23 .5 N	124 19 .0 W	19/01/95	1208 UTC	4538 m	160 06 kn			1019.8 mb	13,.0 C	12., 1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/ I	P04 uH/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.59	15.59	33.425	24.629	330.1	0.000	5.68	100. 1	4.0	0.26	0.1	0.00	0.17	0.08	0	
3		15.59	15.59	33.425	24.629	330.2	0.010	5.68	100.1	4.0	0.26	0.1	0.00	0.17	0.08	3	201
10	ISL	15.59	15.59	33.425	24.629	330.4	0.033	5.69	100.2	4.0	0.26	0.1	0.00	0.17	0.07	10	
15		15.59	15.59	33.425	24.630	330.5	0.050	5.69	100.2	3.9	0.26	0.1	0.00	0.17	0.06	15	202
20	ISL	15.59	15.59	33.426	24.630	330.6	0.066	5.69	100.2	3.8	0.26	0.1	0.00	0.18	0.07	20	
30		15.60	15 .60	33.427	24.629	331 .0	0.099	5.69	100.3	3.7	0.26	0.1	0.00	0.19	0.09	30	203
45		15.60	15.59	33.427	24.630	331 .4	0.149	5.70	100.4	3.7	0.26	0. 1	0.00	0.18	0.06	45	204
50	ISL	15.60	15.59	33.426	24.629	331 .6	0.165	5.70	100.4	3.7	0.26	0.1	0.00	0.18	0.07	50	
60		15.60	15.59	33.425	24.629	332.0	0. 199	5.70	100.4	3.6	0.26	0.1	0.00	0.17	0.08	60	205
75		15.60	15.59	33.424	24.629	332.5	0.248	5.69	100.2	3.5	0.26	0. 1	0.00	0.18	0.07	75	206
86		15.58	15.57	33.421	24.631	332.6	0.285	5.69	100.2	3.5	0.26	0.1	0.00	0.21	0.10	86	207
95		15.33	15.32	33.530	24.771	319.6	0.314	5.67	99.4	3.6	0.28	0.2	0.09	0.24	0.19	95	208
100	ISL	15.23	15.21	33.603	24.849	312.3	0.330	5 .66	99. 1	3.6	0.28	0.3	0.10	0.24	0.21	100	
106		15.02	15.00	33.675	24.950	302.7	0.349	5.65	98.5	3.7	0.29	0.5	0.12	0.24	0.23	106	209
115		14.32	14.30	33.697	25.117	287.0	0.375	5.57	95 .8	3.9	0.31	1 .0	0.04	0.15	0.15	116	210
125	ISL	14.08	14.06	33.735	25.197	279.6	0.403	5.48	93.8	4.2	0.35	1 .6	0.01	0.08	0.08	126	
126		14.06	14.04	33.737	25.203	279.1	0.406	5.47	93.6	4.2	0.35	1 .7	0.01	0.08	0.08	127	211
141		13.26	13.24	33.685	25.327	267.6	0.447	5.30	89.2	5.4	0.48	3.6	0.01	0.05	0.06	142	212
150	ISL	12.06	12.04	33.557	25.461	254.7	0.471	4.90	80.3	9.3	0.83	8.5	0.01	0.04	0.05	151	
164		10.15	10.13	33.419	25.696	232.2	0.505	4.29	67.4	16.0	1 .40	16.5	0.01	0.02	0.04	165	213
193		8.99	8.97	33.693	26.100	194.0	0.567	4.32	66.3	21 .0	1 .49	18.8	0.01	0.00	0.01	194	214
200	ISL	8.81	8.79	33.729	26.156	188.7	0.580	4.29	65.6	22.3	1 .52	19.4	0.01			201	
228		8.27	8.25	33.824	26.314	174.1	0.631	4.07	61 .5	27.5	1 .68	21 .7	0.01			229	215
250	ISL	7.89	7.87	33.890	26.422	164.0	0.668	3.83	57.4	31 .5	1 .80	23.5	0.01			251	
269		7.60	7.57	33.936	26.500	156.8	0.699	3.55	52.8	35.3	1 .91	25.2	0.01			270	216
300	ISL	7.25	7.22	33.985	26.589	148.7	0.746	2.83	41 .8	42.9	2.18	28.6	0.01			302	
320		7.04	7.01	34.005	26.634	144.7	0.775	2.37	34.8	48.0	2.35	30.8	0.01			322	217
379		6.29	6.26	34.032	26.755	133.5	0.857	1 .70	24.6	61 .0	2.65	34.9	0.01			381	218
400	ISL	6.05	6.02	34.036	26.789	130.4	0.885	1 .57	22.5	64.9	2.72	35.8	0.01			402	
434		5.72	5.68	34.047	26.839	125.8	0.928	1 .38	19.7	70.6	2.82	37. 1	0.01			437	219
500	ISL	5.44	5.40	34.125	26.935	117.3	1 .009	0.82	11.6	80.8	3.03	39.3	0.01			503	
511		5.39	5.35	34.138	26.952	115.8	1 .022	0.73	10.3	82.5	3.06	39.7	0.01			514	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 26i.9 N	120 31 .3 W	17/01/95	2156 UTC	73 m	010 06 kn	270 01 08	1	1019.8 mb	14 ..3 C	9..8 C	03m 04.	7/8	AC

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 UM/ I	N02 UN/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	14.02	14.02	33.133	24.741	319.4	0.000	5.97	101 .7	7.1	0.56	1 . 1	0.26	4.12	0.34	0	
1		14 .02	14.02	33. 133	24.741	319.4	0.003	5.97	101.7	7. 1	0.56	1 . 1	0.26	4.12	0.34	1	201
6		13.98	13.98	33.132	24.749	318.9	0.019	5.94	101.1	6.8	0.56	1 . 1	0.27	2 .06	0.18	6	202
10	ISL	13.94	13.94	33.131	24.756	318.2	0.032	5 .91	100.5	6.7	0.56	1 .2	0.27	1 .79	0. 36	10	
1 1		13.93	13.93	33.131	24.759	318.1	0.035	5.90	100.3	6.7	0.56	1 .2	0.27	1 .72	0.41	1 1	203
20		13.91	13.91	33.137	24.768	317.5	0.064	5.85	99.4	6.6	0.58	1 .2	0.28	0.70	0.26	20	204
30		13.97	13.97	33.183	24.791	315.5	0.095	5 .81	98.9	6. 1	0. 54	1 .2	0.27	0.52	0.23	30	205
40		13.68	13.67	33.292	24.935	302.1	0.126	5 .48	92. 8	7. 1	0.67	2.8	0.33	0.28	0.22	40	206
50		13.10	13.09	33.384	25.123	284.4	0.156	5.09	85.2	9.3	0.81	5 .7	0.31	0.18	0.27	50	207
60		12.91	12.90	33.412	25.183	279.0	0.184	4.97	82.9	10.1	0.86	6.7	0.28	0.17	0.27	60	208

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 80 55

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 IS1.9 N	120 47 .7 W	18/01/95	0111 UTC	752 m	330 16 kn	320 03 06	1	1021.1 mb	12 .4 C	9.,0 C		4/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uN/l	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.67	13.67	33.059	24.756	318.0	0.000	6.02	101.8	4.5	0.35	0.3	0.05	0.55	0.20	0	
2		13.67	13.67	33.059	24.756	318.1	0.006	6.02	101.8	4.5	0.35	0.3	0.05	0.55	0.20	2	201
10	ISL	13.68	13.68	33.059	24.754	318.5	0.032	6.02	101.8	4.3	0.35	0.3	0.05	0.56	0.19	10	
16		13.68	13.68	33.060	24.755	318.5	0.051	6.02	101.8	4.2	0.35	0.3	0.05	0.57	0.19	16	202
20	ISL	13.68	13.68	33.060	24.755	318.6	0.064	6.02	101.8	4 .2	0.35	0.3	0.05	0. 56	0.19	20	
30		13.68	13.68	33.061	24.756	318.8	0.096	6.02	101.8	4 . 1	0.36	0.3	0.05	0.55	0.20	30	203
45		13.59	13.58	33.093	24.800	315.1	0.143	6.02	101.6	4.2	0.37	0.4	0.08	0.64	0.23	45	204
50	ISL	13.70	13.69	33.131	24.807	314.6	0.159	5.99	101.4	4.2	0.38	0. 5	0.09	0.60	0.24	50	
54		13.81	13.80	33.169	24.814	314.0	0.171	5.93	100.6	4.2	0.38	0.6	0.10	0.57	0.25	54	205
65		14.11	14.10	33.527	25.029	293.9	0.205	5.50	94.1	4.5	0.40	1 .9	0.05	0.13	0.14	65	206
74		13.39	13.38	33.466	25. 129	284.5	0.231	5.42	91 .3	5.5	0.51	3.2	0.02	0.11	0.10	74	207
75	ISL	13.26	13.25	33.433	25.146	283.0	0.234	5.42	91 . 1	5.7	0.53	3.5	0.02	0.11	0.10	75	
83		12.37	12.36	33.379	25.263	271 .9	0.256	5.36	88.3	7. 1	0.69	5 . 7	0.02	0.07	0.09	83	208
93		12.24	12.23	33.460	25.351	263.8	0.283	5.12	84.2	7.9	0.74	6.9	0.02	0.06	0.06	93	209
100	ISL	12.06	12.05	33.494	25.411	258.2	0.301	5.02	82.3	8.5	0.78	7.7	0.02	0.05	0.05	100	
111		11.53	11 .52	33.511	25.523	247.7	0.329	4.87	78.9	10.2	0.91	9.5	0.02	0.03	0.04	112	210
124		10.43	10.42	33.487	25.700	230.9	0.360	4.54	71 .8	13.9	1.19	13.7	0.01	0.03	0.03	125	211
125	ISL	10.35	10.34	33.490	25.716	229.4	0.362	4.50	71 .1	14.4	1 .22	14.1	0.01	0.03	0.03	126	
144		9.30	9.28	33.603	25.979	204.6	0.403	3.66	56.5	23.0	1 .71	21 .2	0.01	0.01	0.04	145	212
150	ISL	9.27	9.25	33.666	26.033	199. 5	0.416	3.46	53.4	24.4	1 .78	22.1	0.03	0.01	0.04	151	
167		9.17	9.15	33.794	26.150	188.8	0.449	3.06	47.2	27. 1	1 .89	23. 1	0.08	0.01	0.03	168	213
199		8.60	8.58	33.888	26.313	173.7	0. 507	2.96	45. 1	31 .8	1 .99	25. 1	0.02	0.04	0.04	200	214
200	ISL	8.59	8.57	33.890	26.317	173.5	0.508	2.96	45.1	31 .9	1 .99	25.1	0.02			* 201	
229		8.25	8.23	33.952	26.417	164.3	0.557	2 .80	42.3	35.2	2 .06	26.4	0.02		٢"٦	230	215
250	ISL	8.06	8.03	34.006	26.488	157.9	0.591	2.59	39.0	38.6	2.16	27.6	0.01			251	
269		7.89	7.86	34.052	26.550	152.3	0.621	2 .36	35.4	42.1	2.26	28.7	0.01			271	216
300	ISL	7.58	7.55	34.099	26.632	144.9	0.667	1 .95	29.0	48.1	2.43	30.6	0.01			302	
318		7.41	7.38	34.119	26.672	141.3	0.692	1 .72	25.5	51.4	2.53	31 .7	0.01			320	217
400	ISL	7.05	7.01	34.192	26.781	132.1	0.805	1 .05	15.5	60.8	2.80	34.4	0.01			403	
406		7.02	6.98	34.193	26.786	131.7	0.812	1 .03	15.1	61 .3	2.81	34.5	0.01			409	218
438		6.74	6.70	34. 179	26.813	129.4	0.854	0.99	14.5	64.4	2.87	35.5	0.01			441	219
500	ISL	5.74	5.70	34.128	26.901	120.8	0.932	0.86	12.3	75.9	3.00	38.4	0.01			503	
508		5.61	5.57	34.123	26.913	119.6	0.941	0.84	11.9	77.4	3.02	38.8	0.01			511	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 8.9 N	121 9.0 W	18/01/95	0531 UTC	2173 in	350	10 kn			1022.9 mb	12 7 C	10.1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 UH/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.46	15.46	33.326	24.582	334.6	0.000	5.72	100.5	4.1	0.30	0.0	0.00	0.21	0.08	0	
2		15.46	15.46	33.326	24.582	334.7	0.007	5.72	100.5	4.1	0.30	0.0	0.00	0.21	0.08	2	201
10	ISL	15.46	15.46	33.326	24.582	334.9	0.033	5.72	100.5	4.0	0.30	0.0	0.00	0.20	0.09	10	
14		15.46	15.46	33.326	24.582	335.0	0.047	5.72	100.5	3.9	0.30	0.0	0.00	0.20	0.09	14	202
20	ISL	15.46	15.46	33.326	24.582	335.2	0.067	5.73	100.6	3.8	0.30	0.0	0.00	0.20	0.09	20	
29		15.47	15.47	33.325	24.580	335.7	0.097	5.74	100.8	3.7	0.30	0.0	0.00	0.20	0.09	29	203
30	ISL	15.47	15.47	33.325	24.580	335.7	0.101	5.74	100.8	3.7	0.30	0.0	0.00	0.20	0.09	30	
45		15.47	15.46	33.325	24.580	336.1	0.151	5.74	100.8	3.7	0.30	0.0	0.00	0.21	0.08	45	204
50	ISL	15.47	15.46	33.325	24.580	336.3	0.168	5.72	100.5	3.7	0.30	0.0	0.00	0.19	0.08	50	
56		15.47	15.46	33.325	24.581	336.4	0.188	5.71	100.3	3.6	0.30	0.0	0.00	0.18	0.07	56	205
64		15.45	15.44	33.320	24.581	336.6	0.215	5.74	100.8	3.6	0.30	0.0	0.01	0.21	0.09	64	206
74		14.64	14.63	33.218	24.679	327.5	0.248	5.76	99.4	3.6	0.35	0.2	0.10	0.20	0.12	74	207
75	ISL	14.59	14.58	33.216	24.688	326.7	0.251	5.76	99.3	3.6	0.36	0.2	0.12	0.19	0.12	75	
83		14.34	14.33	33.258	24.773	318.8	0.277	5.73	98.3	3.7	0.38	0.5	0.28	0.14	0.11	83	208
93		14.44	14.43	33.471	24.917	305.4	0.308	5.68	97.8	3.8	0.34	0.7	0.20	0.13	0.13	93	209
100	ISL	13.97	13.96	33.502	25.039	293.9	0.329	5.53	94.3	4.7	0.42	2.1	0.10	0.10	0.10	100	
107		13.35	13.34	33.495	25.161	282.4	0.349	5.35	90.1	5.8	0.54	3.9	0.02	0.06	0.07	107	210
124		12.31	12.29	33.516	25.381	261.7	0.396	5.04	83.0	8.0	0.76	7.2	0.02	0.05	0.05	125	211
125	ISL	12.21	12.19	33.512	25.397	260.2	0.398	5.00	82.2	8.4	0.79	7.6	0.02	0.05	0.05	126	
145		10.35	10.33	33.484	25.712	230.3	0.447	4.20	66.3	16.6	1.37	15.9	0.02	0.04	0.06	146	212
150	ISL	10.12	10.10	33.521	25.780	223.8	0.459	4.01	63.0	18.3	1.47	17.2	0.02	0.03	0.06	151	
170		9.67	9.65	33.703	25.998	203.5	0.501	3.38	52.6	23.8	1.73	20.9	0.01	0.01	0.05	171	213
199		9.53	9.51	33.862	26.146	190.1	0.559	2.91	45.2	28.0	1.92	23.2	0.01	0.01	0.05	200	214
200	ISL	9.51	9.49	33.864	26.150	189.6	0.560	2.90	45.1	28.1	1.92	23.3	0.01			201	
232		8.81	8.79	33.913	26.301	175.7	0.619	2.82	43.1	31.6	2.02	25.0	0.01			233	215
250	ISL	8.61	8.58	33.965	26.373	169.1	0.650	2.69	41.0	34.0	2.09	26.0	0.01			251	
270		8.45	8.42	34.021	26.442	162.9	0.683	2.53	38.4	36.7	2.16	27.0	0.01			272	216
300	ISL	8.12	8.09	34.060	26.523	155.6	0.731	2.33	35.1	40.5	2.26	28.4	0.01			302	
315		7.93	7.90	34.066	26.556	152.6	0.754	2.26	33.9	42.5	2.30	29.1	0.01			317	217
376		6.93	6.89	34.026	26.666	142.4	0.844	2.20	32.3	51.4	2.43	31.8	0.01			378	218
400	ISL	6.66	6.62	34.028	26.704	139.0	0.878	2.05	29.9	55.3	2.51	33.0	0.01			402	
437		6.34	6.30	34.044	26.759	134.0	0.928	1.74	25.2	61.2	2.64	34.8	0.01			440	219
500	ISL	6.02	5.98	34.095	26.841	126.8	1.010	1.18	16.9	70.0	2.86	37.3	0.02			503	
514		5.95	5.91	34.106	26.858	125.3	1.028	1.05	15.0	72.0	2.91	37.8	0.02			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 48.9 N	121 50.5 W	18/01/95	1136 UTC	3623 m	320	08 kn			1023.0 mb	12.6 C	10.1 C			

DEPTH in		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN raL/L	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/i	PHAEO ug/l	PRES db	SAMP
0	ISL	15.05	15.05	33.253	24.615	331.4	0.000	5.77	100.5	4.2	0.30	0.0	0.00	0.29	0.11	0	
3		15.05	15.05	33.253	24.615	331.5	0.010	5.77	100.5	4.2	0.30	0.0	0.00	0.29	0.11	3	201
10	ISL	15.06	15.06	33.252	24.613	332.0	0.033	5.77	100.5	4.1	0.30	0.0	0.00	0.28	0.11	10	
15		15.06	15.06	33.252	24.613	332.1	0.050	5.77	100.5	4.0	0.30	0.0	0.00	0.28	0.11	15	202
20	ISL	15.06	15.06	33.252	24.613	332.2	0.066	5.77	100.5	3.9	0.30	0.0	0.00	0.28	0.11	20	
28		15.06	15.06	33.251	24.612	332.5	0.093	5.78	100.6	3.8	0.30	0.0	0.00	0.29	0.12	28	203
30	ISL	15.06	15.06	33.251	24.613	332.6	0.100	5.78	100.6	3.8	0.30	0.0	0.00	0.29	0.12	30	
45		15.06	15.05	33.252	24.614	332.9	0.150	5.78	100.6	3.6	0.30	0.0	0.00	0.29	0.11	45	204
50	ISL	15.04	15.03	33.249	24.616	332.8	0.166	5.77	100.4	3.5	0.30	0.0	0.01	0.28	0.15	50	
53		15.02	15.01	33.248	24.620	332.6	0.176	5.77	100.4	3.5	0.30	0.0	0.01	0.27	0.17	53	205
64		14.49	14.48	33.209	24.703	324.9	0.212	5.77	99.3	3.6	0.34	0.2	0.10	0.24	0.13	64	206
74		14.19	14.18	33.182	24.746	321.1	0.245	5.80	99.2	3.7	0.36	0.4	0.13	0.26	0.16	74	207
75	ISL	14.13	14.12	33.178	24.755	320.2	0.248	5.80	99.0	3.7	0.36	0.4	0.14	0.27	0.17	75	
83		13.58	13.57	33.180	24.870	309.4	0.273	5.83	98.4	4.3	0.43	1.2	0.20	0.30	0.20	83	208
94		13.10	13.09	33.363	25.108	287.0	0.306	5.42	90.7	6.5	0.64	4.3	0.35	0.20	0.18	94	209
100	ISL	12.91	12.90	33.411	25.183	280.0	0.323	5.16	86.0	7.8	0.75	6.0	0.28	0.17	0.18	100	
111		12.55	12.54	33.458	25.290	270.1	0.353	4.68	77.5	10.2	0.95	8.9	0.10	0.13	0.17	112	210
125		11.83	11.81	33.524	25.478	252.4	0.390	4.16	67.8	13.1	1.18	12.5	0.03	0.09	0.11	126	211
146		11.14	11.12	33.664	25.714	230.4	0.440	3.45	55.5	18.2	1.51	17.1	0.03	0.04	0.07	147	212
150	ISL	10.93	10.91	33.667	25.754	226.6	0.449	3.46	55.4	19.0	1.54	17.7	0.02	0.03	0.07	151	
167		10.00	9.98	33.661	25.910	211.9	0.487	3.48	54.6	21.8	1.64	19.5	0.00	0.02	0.05	168	213
200		8.80	8.78	33.702	26.137	190.6	0.553	3.53	53.9	25.7	1.79	22.6	0.00	0.00	0.03	201	214
231		8.10	8.08	33.840	26.352	170.5	0.609	3.41	51.3	32.0	1.91	24.9	0.00			232	215
250	ISL	7.83	7.81	33.899	26.438	162.5	0.641	3.41	51.0	34.1	1.92	25.2	0.00			251	
269		7.63	7.60	33.941	26.500	156.8	0.671	3.42	50.9	36.1	1.94	25.5	0.00			271	216
300	ISL	7.35	7.32	33.981	26.572	150.4	0.719	2.94	43.5	41.3	2.12	27.9	0.00			302	
319		7.19	7.16	33.996	26.606	147.4	0.747	2.56	37.8	45.2	2.26	29.8	0.00			321	217
376		6.54	6.51	34.055	26.741	135.0	0.827	1.61	23.4	58.9	2.63	34.5	0.00			378	218
400	ISL	6.27	6.23	34.066	26.785	131.0	0.859	1.40	20.2	63.9	2.73	35.8	0.00			403	
438		5.88	5.84	34.081	26.846	125.3	0.908	1.17	16.7	71.1	2.86	37.4	0.00			441	219
500	ISL	5.46	5.42	34.130	26.937	117.1	0.983	0.78	11.1	81.1	3.03	39.4	0.00			503	
514		5.37	5.33	34.142	26.957	115.3	1.000	0.69	9.8	83.3	3.07	39.8	0.00			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501I STATION 80 80

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 29 .3 N	122 31 .7 W	18/01/95	1754 UTC	3969 in	330 06 kn	350 06 09	1	1025.9 mb	14.,0 C	11 .8 C	29m 01	6/8	CU

DEPTH ·		TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uH/ I	N03 uH/l	N02 UN/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.05	15.05	33.253	24.615	331 .4	0.000	5.78	100.6	4.0	0.30	0.0	0.00	0.19	0.08	0	
2	A	15.05	15.05	33.253	24.615	331 .5	0.007	5.78	100.6	4.0	0.30	0.0	0.00	0.19	0.08	2	201
10	ISL	15.04	15.04	33.250	24.615	331 .7	0.033	5.79	100.8	3.9	0.30	0.0	0.00	0.20	0.08	10	
15	A	15.03	15.03	33.249	24.617	331 .7	0.050	5.79	100.8	3.8	0.30	0.0	0.00	0.20	0.08	15	202
20	ISL	15.00	15.00	33.244	24.620	331 .6	0.066	5.79	100.7	3.7	0.30	0.0	0.00	0.20	0.08	20	
26		14.97	14.97	33.238	24.622	331 .6	0.086	5.78	100.5	3.6	0.30	0.0	0.00	0.21	0.09	26	203
30	ISL	14.97	14.97	33.238	24.622	331 .7	0.099	5.78	100.5	3.6	0.30	0.0	0.00	0.22	0.09	30	
36	A	14.97	14.96	33.237	24.621	331 .9	0.119	5.79	100.6	3.6	0.30	0.0	0.00	0.23	0.09	36	204
45		14.96	14.95	33.236	24.623	332.0	0.149	5.79	100.6	3.5	0.30	0.0	0.00	0.23	0.09	45	205
50	ISL	14.95	14.94	33.233	24.623	332.2	0.166	5.78	100.4	3.4	0.30	0.0	0.00	0.23	0.09	50	
57	A	14.94	14.93	33.232	24.625	332.2	0.189	5.78	100.4	3.4	0.30	0.0	0.00	0.23	0.09	57	206
66		14.96	14.95	33.233	24.621	332.8	0.219	5.79	100.6	3.4	0.30	0.0	0.00	0.23	0.10	66	207
74	A	14.93	14.92	33.226	24.623	332.9	0.246	5.78	100.4	3.4	0.30	0.0	0.00	0.24	0.10	74	208
75	ISL	14.90	14.89	33.218	24.623	332.9	0.249	5.78	100.3	3.4	0.30	0.0	0.00	0.24	0.10	75	
84		14.50	14.49	33.161	24.665	329.1	0.279	5.81	100.0	3.3	0.32	0.0	0.04	0.23	0.12	84	209
94		14.12	14.11	33.205	24.779	318.5	0.311	5.78	98.7	3.6	0.35	0.3	0.20	0.18	0.13	94	210
100	ISL	13.97	13.96	33.326	24.904	306.8	0.330	5.72	97.4	3.9	0.37	1 .0	0.16	0.13	0.13	100	
103	A	13.90	13.89	33.391	24.968	300.7	0.339	5.67	96.5	4. 1	0.39	1 .4	0.12	0.11	0.12	103	211
113		13.62	13.60	33.498	25.109	287.6	0.368	5.42	91 .8	5.1	0.47	2.8	0.02	0.09	0.09	114	212
123		12.76	12.74	33.414	25.215	277.5	0.397	5.23	86.9	6.5	0.62	5.0	0.01	0.07	0.08	124	213
125	ISL	12.59	12.57	33.412	25.247	274.5	0.402	5.18	85.8	6.9	0.66	5.6	0.01	0.07	0.08	126	
143		11.26	11.24	33.466	25.538	247.0	0.449	4.71	75.8	10.8	0.99	10.6	0.01	0.03	0.05	144	214
150	ISL	10. 94	10.92	33.498	25.620	239.3	0.466	4.54	72.6	12.3	1.10	12.2	0.01	0.03	0.04	151	
168		10.29	10.27	33.576	25.795	222.9	0.508	4.20	66.3	15.9	1 .32	15.6	0.01	0.03	0.03	169	215
199		9.07	9.05	33.651	26.055	198.5	0.573	4.04	62.1	21 .3	1 .56	19.5	0.01	0.01	0.01	200	216
200	ISL	9.04	9.02	33.656	26.063	197.7	0.575	4.03	61 .9	21 .5	1 .57	19.6	0.01			201	
231		8.19	8.17	33.804	26.310	174.5	0.633	3.65	55.0	29.2	1 .83	23.7	0.01			232	217
250	ISL	7.89	7.87	33.882	26.416	164.6	0.665	3.39	50.8	33.0	1 .94	25.3	0.01			251	
269		7.68	7.65	33.942	26.494	157.5	0.696	3.14	46.8	36.4	2.03	26.6	0.01			270	218
300	ISL	7.35	7.32	33.979	26.570	150.6	0.743	2.87	42.5	41 .6	2.15	28.4	0.01			302	
321		7.13	7.10	33.984	26.605	147.5	0.775	2.70	39.8	45.1	2.23	29.5	0.01			323	219
376		6.41	6.38	34.004	26.718	137. 1	0.853	2.12	30.7	70.2 U	2.84 U	37.2 U	0.01 U			378	220
400	ISL	6.19	6.15	34.026	26.764	132.9	0.885	1 .78	25.6	61 .6	2.64	34.8	0.01			402	
440		5.89	5 .85	34.070	26.836	126.3	0.937	1 .24	17.7	70.3	2.85	37.2	0.01			443	221
500	ISL	5.45	5.41	34.130	26.938	117.0	1.010	0.76	10.8	81 .6	3.05	39.4	0.01			503	
513		5.35	5.31	34.143	26.960	115.0	1 .025	0.65	9.2	84.0	3.09	39.9	0.01			516	222

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 95011 STATION 80 90

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 9.1 N	123 13 .0 W	19/01/95	0020 UTC	4223 m	060 06 kn	350 03 06	1	1023.1 mb	13.. 5 C	12.0 C	28m 01	6/8	AC

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uM/ I	N03 UN/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.37	15.37	33.267	24.556	337.0	0.000									0	
2		15.37	15.37	33.267	24.556	337.1	0.007									2	224
10	ISL	15.25	15.25	33.270	24.585	334.6	0.034									10	
15		15.16	15.16	33.272	24.606	332.7	0.050	5.76	100.5	4.1	0.29	0.0	0.00	0.21	0.09	15	201
20	ISL	15.15	15.15	33.272	24.609	332 .6	0.067	5.77	100.7	4.0	0.29	0.0	0.00	0.22	0.09	20	
30		15.12	15.12	33.273	24.616	332.2	0. 100	5.78	100.8	3.9	0.29	0.0	0.00	0.23	0.09	30	202
45		15.11	15.10	33.272	24.618	332.5	0.150	5 .77	100.6	3.9	0.29	0.0	0.00	0.23	0.11	45	203
50	ISL	15.11	15.10	33.272	24.619	332.6	0.167	5.78	100.8	3.8	0.29	0.0	0.00	0.24	0.11	50	
59		15.10	15.09	33.272	24.621	332.6	0. 197	5.79	100.9	3.7	0.29	0.0	0.00	0.26	0.11	59	204
74		15.10	15.09	33.274	24.623	332.9	0.246	5.78	100.7	3.7	0.29	0.0	0.00	0.27	0.12	74	205
75	ISL	15.10	15.09	33.274	24.623	332.9	0.250	5.78	100.7	3.7	0.29	0.0	0.00	0.27	0.12	75	
85		15.10	15.09	33.273	24.623	333.3	0.283	5.76	100.4	3.6	0.29	0.0	0.00	0.27	0.12	85	206
95		15.10	15.09	33.274	24.624	333.5	0.316	5.77	100.5	3.6	0.29	0.0	0.00	0.27	0.11	95	207
100	ISL	15.10	15.08	33.273	24.623	333.7	0.333	5.77	100.5	3.5	0.29	0.0	0.00	0.27	0.11	100	
105		15.09	15.07	33.272	24.625	333.7	0.350	5.77	100.5	3.4	0.29	0.0	0.00	0.26	0.11	105	208
114		15.02	15.00	33.268	24.637	332.8	0.380	5.78	100.5	3.4	0.29	0.0	0.02	0.24	0.12	114	209
124		14.22	14.20	33.317	24.845	313.1	0.412	5.75	98.4	3.9	0.35	0.6	0.17	0.15	0.14	125	211
125	ISL	14.15	14.13	33.327	24.868	311.0	0.415	5.74	98. 1	4.0	0.35	0.7	0.17	0.14	0.14	126	
138		13.29	13.27	33.456	25.144	284.9	0.454	5.55	93.3	5.0	0.44	2.4	0.03	0.08	0.08	139	212
150	ISL	12.57	12.55	33.514	25.331	267.3	0.487	5.26	87.1	6.8	0.61	5.1	0.02	0.04	0.05	151	
164		11 .75	11 .73	33.541	25.507	250.6	0.523	4.86	79.1	9.7	0.87	9.0	0.01	0.02	0.04	165	213
195		9.82	9.80	33.555	25 .858	217.3	0.596	4.01	62.6	18.6	1 .47	17.8	0.01	0.01	0.02	196	214
200	ISL	9.58	9.56	33.583	25.919	211.5	0.607	3.89	60.4	20.1	1 .55	18.9	0.01			201	
228		8.57	8.55	33.758	26.217	183.4	0.662	3.41	51 .8	27.5	1 .84	23.4	0.01			229	215
250	ISL	8.16	8.13	33.833	26.338	172.2	0.701	3.45	52.0	30. 1	1 .85	23.8	0.01			251	
268		7.95	7.92	33.874	26.401	166.4	0.731	3.49	52.3	31 .7	1 .86	24.2	0.01			269	216
300	ISL	7.61	7.58	33.950	26.510	156.4	0.783	3.22	47.9	37.1	1 .99	26.1	0.01			302	
319		7.43	7.40	33.984	26.563	151.6	0.812	2.98	44.2	40.9	2.10	27.6	0.01			321	217
378		6.73	6.70	34.026	26.693	139.7	0.898	2.12	30.9	53.4	2.45	32.2	0.01			380	218
400	ISL	6.49	6.45	34.032	26.730	136.4	0.929	1 .91	27.7	57.7	2.55	33.5	0.01			402	
437		6.10	6.06	34.042	26.788	131.0	0.978	1 .63	23.4	64.8	2.70	35.5	0.01			440	219
500	ISL	5.54	5 .50	34.081	26.888	121 .8	1 .058	1.14	16.2	76.8	2.91	38.2	0.01			503	
515		5.41	5.37	34.091	26.912	119.6	1 .076	1 .02	14.4	79.6	2 .96	38.8	0.01			518	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501I STATION 100 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	AMT	TYPE
32 49'.0 N	123 54 .5 U	19/01/95	0617	UTC	4343 m	140	07 kn			1022.0 mb	13..3 C	11..9 C		CLD	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/ I	N02 UN/ I	CHL-A ug/l	PHAEO US /l	PRES db	SAMP
0	ISL	15.55	15.55	33.273	24.521	340.4	0.000	5.73	100.8	3.9	0.29	0.0	0.00	0.18	0.	0	
1		15.55	15.55	33.273	24.521	340.4	0.003	5.73	100.8	3.9	0.29	0.0	0.00	0.18	0.,09	1	201
10	ISL	15.56	15.56	33.276	24.521	340.7	0.034	5.74	101.0	3.9	0.29	0.0	0.00	0.18	0. 09	10	
15		15.56	15.56	33.277	24.522	340.7	0.051	5.74	101.0	3.8	0.29	0.0	0.00	0.18	0..09	1 5	202
20	ISL	15.56	15.56	33.276	24.522	340.9	0.068	5.73	100.8	3.7	0.29	0.0	0.00	0.19	0..09	20	
30		15.55	15.55	33.272	24.521	341 .3	0.102	5 .71	100.4	3.6	0.29	0.0	0.00	0.20	0.,09	30	203
44		15.54	15.53	33.271	24.523	341 .5	0.150	5.75	101.1	3.6	0.29	0.0	0.00	0.20	0.. 10	44	204
50	ISL	15.53	15.52	33.272	24.526	341 .4	0.171	5.74	100.9	3.6	0.29	0.0	0.00	0.21	0..09	50	
60		15.52	15.51	33.272	24.529	341 .5	0.205	5.73	100.7	3.6	0.29	0.0	0.00	0.22	0..09	60	205
75		15.51	15.50	33.264 D	24.526	342.3	0.256	5.75	101.0	3.5	0.29	0.0	0.00	0.23	0.. 10	75	206
84		15.50	15.49	33.263	24.527	342.4	0.287	5.73	100.6	3.5	0.29	0.0	0.00	0.23	0.. 10	84	207
93		15.52	15.51	33.291	24.545	341 .0	0.318	5.71	100.4	3.4	0.29	0.0	0.02	0.21	0., 1 1	93	208
100	ISL	15.43	15.41	33.445	24.683	328.0	0.341	5 .64	99.0	3.5	0.29	0.2	0.12	0.15	0.. 1 1	100	
104		15.32	15.30	33.550	24.789	318.1	0.354	5.60	98.2	3.6	0.29	0.4	0.17	0.12	0.. 12	104	209
114		14.80	14.78				0.384	5.53	96. 1	3.9	0.33	1 .2	0.05	0. 09	0..12	1 14	210
125		14.79	14.77	33.875	25.155	283.8	0.416	5.35	93.0	4.5	0.35	1 .9	0.02	0.06	0.. 10	126	211
138		14.22	14.20	33.837	25.247	275.3	0.452	5.22	89.7	5.0	0.44	3.3	0.02	0.04	0..06	139	212
150	ISL	13.51	13.49	33.792	25.359	264.8	0.485	5.10	86.3	6.1	0.56	4 .9	0.02	0.03	0..05	151	
164		12.56	12.54	33.737	25.506	251 .0	0.521	4.93	81 .7	8.2	0.73	7.3	0.01	0.02	0..04	165	213
195		10.21	10.19	33.637	25.856	217.6	0.594	4 .33	68.2	15.7	1 .26	15.0	0.01	0.01	0.,04	196	214
200	ISL	10.01	9.99	33.651	25.901	213.4	0.604	4 .06	63. 7	17.7	1 .39	16.7	0.01		.02	201	
230		9.22	9.19	33.772	26.126	192 .4	0.665	2 .74	42.3	28.2	1 .99	25.0	0.01			231	215
250	ISL	8.73	8.70	33.822	26.243	181.5	0.703	3.21	49.0	28.4	1 .90	24.2	0.01			251	
268		8.34	8.31	33.860	26.332	173.1	0.735	3.82	57.8	28.6	1 .74	22.5	0.01			269	216
300	ISL	7.86	7.83	33.932	26.460	161.3	0.788	3.50	52 .4	34. 1	1 .89	24 .8	0.01			302	
319		7.64	7.61	33.968	26.521	155.8	0.818	3.08	45.9	38.4	2 .05	27.0	0.01			321	217
378		6.93	6.89	34.014	26.657	143.3	0.906	2.33	34.2	50.2	2.37	31.4	0.01			380	218
400	ISL	6.62	6.58	34.014	26.698	139.4	0.938	2.17	31 .6	54.4	2.45	32 . 6	0.01			402	
436		6.15	6.11	34.018	26.763	133.4	0.987	1 .90	27.3	61.4	2 .59	34.5	0.01			439	219
500	ISL	5.77	5.73	34.105	26.880	122.9	1 .069	1 .04	14.8	74.5	2.93	38. 1	0.01			503	
511		5.70	5 .66	34.120	26.900	121.0	1 .082	0.89	12.7	76.8	2 .99	38.7	0.01			514	220

RV DAVID STARR JORDAN CALCOFI CRUISE 950'I STATION 47 82

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	AMT	TYPE
34 *Ui.6 H*	120 1 .5 W	17/01/95	1758	UTC	577 m	340	08 kn	310 03 06	0	1019.1 mb	12 .8 C	9 .3 C	08m 04	CLD	8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	14.09	14.09	33.039	24.654	327.7	0.000	5.92	100.9							0	
1	A,B	14.09	14.09	31.101 U			0.003	5 .92	100.9	5.9	0.46	1 . 1	0.25	1 .82	0,	1	201
5	B	14.09	14.09	33.039	24.654	327.8	0.016	5.92	100.9	5.7	0.45	1 .0	0.25	1 .70	0..31	5	202
10	8	14.07	14.07	33.041	24.660	327.4	0.033	5.91	100.7	5.6	0.46	1 .1	0.26	1 .39	0,.30	10	203
15	B	14.10	14.10	33.056	24.666	327.0	0.049	5.87	100.1	5.3	0.46	1 .0	0.28	0.99	0..25	15	204
20	B	14.14	14.14	33.088	24.682	325.6	0.065	5.82	99.4	5.2	0.46	1 . 1	0.30	0.68	0..28	20	205
29	B	14.24	14.24	33.209	24.755	318.9	0.094	5.69	97.4	4 .9	0.47	1 . 1	0.43	0.21	0 .26	29	206
30	ISL	14.24	14.24	33.215	24.760	318.5	0.098	5 .68	97.2	4.9	0.47	1 . 1	0.43	0.20	0 . 14	30	
39		14.23	14.22	33.252	24.791	315.8	0.126	5.65	96.7	4.9	0.49	1 . 1	0.45	0.15	0 . 14	39	207
49		14.19	14.18	33.265	24.809	314.4	0.158	5 .60	95 .8	5.0	0.50	1 .3	0.45	0.14	0 . 14	49	208
50	ISL	14.16	14.15	33.271	24 .820	313.3	0.161	5.57	95.2	5.1	0.51	1 .5	0. 44	0.14	0.. 13	50	
59		13.76	13.75	33.340	24.956	300.6	0. 188	5.23	88.7	6.8	0.67	4. 1	0.31	0.12	0.. 13	59	209
69		13.30	13.29	33.415	25.108	286.4	0.218	4 .87	81.9	8.3	0.81	6.7	0.06	0.09	0 . 13	69	210
75	ISL	12.79	12.78	33.466	25.249	273.1	0.235	4. 56	75.9	10.3	0.96	9.0	0.05	0.08	0 . 1 1	75	
84		12.00	11.99	33. 544	25.461	253.1	0.258	4.09	67.0	13.8	1.21	12.5	0.03	0.07	0,. 12	84	21 1
100		11.23	11 .22	33.640	25.678	232.7	0.297	3.55	57.2	18.3	1 .48	16.3	0.03	0.04	0 . 14	100	212
125	ISL	10.01	10.00	33.835	26.043	198.3	0.351	2 .87	45.1	25.9	1 .86	21.7	0.02	0.01	0,. 10	126	
133		9.69	9.68	33.893	26.142	189.0	0.367	2 .71	42 .3	28.1	1 . 95	23.1	0.02	0.01	0 .07	134	213
150	ISL	9.41	9.39	33.951	26.234	180.6	0.398	2 .55	39.6	30.6	2 .03	24.4	0.02	0.01	0 .07	151	
168		9.29	9.27	33.983	26.279	176.7	0.430	2.45	37.9	32 .4	2.08	25.1	0.02	0.01	0 .05	169	214
200	ISL	9.05	9.03	34.037	26.360	169.6	0.485	2.09	32.2	36.0	2.27	26.8	0.01	0.01	0 .04	201	
208		9.00	8.98	34.049	26.377	168.1	0.499	1 .99	30.6	37.0	2.32	27.2	0.01	0.01	0 .06	209	215
250	ISL	8.60	8.57	34.119	26.495	157.5	0.567	1 .42	21 .6	44.9	2 .51	29.7	0.02		.06	251	
259		8.51	8.48	34.132	26.520	155.4	0.581	1 .31	19.9	46.7	2 .55	30.2	0.02			261	216
300	ISL	8.13	8.10	34.167	26.605	147.8	0.644	1 .01	15.2	52.9	2 .71	31 .9	0.02			302	
308		8.06	8.03	34.171	26.619	146.6	0.655	0.97	14.6	54.0	2 .74	32.2	0.02			310	217
357		7.68	7.64	34.184	26.685	141.0	0.726	0.78	11.6	59.9	2 .85	33 .0	0.01			359	218
400	ISL	7.17	7.13	34.197	26.768	133.4	0.785	0.56	8.3	69.9	3.02	33.6	0.01			403	
405		7.11	7.07	34.198	26.777	132.6	0.791	0.53	7.8	71 .1	3.04	33.6	0.01			408	219
455		6.66	6.62	34.208	26.847	126.4	0.856	0.33	4 .8	80.8	3.16	33.3	0.01			458	220
500	ISL	6.50	6.45	34.224	26.881	123.6	0.912	0.11	1 .6	91 .7	3.32	30.7	0.01			503	
511		6.48	6.43	34.227	26.886	123.3	0.926	0.06	0.9	95 .0	3.39	29.4	0.01			515	221
546		6.38	6.33	34.228	26.901	122.4	0.969	0.01	0. 1	108. 5	3.76	22 .0	0.01			550	222
566		6.37	6.32	34.228	26.902	122.5	0.994	0.00	0.0	113.5	3.96	18.1	0.01			570	223
570		6.37	6.32	34.227	26.901	122.6	0.998	0.03	0.4	113.4	3.96	18.1	0.01			574	224

A) SANTA BARBARA BASIN STATION.
B> PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 40

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE 1
34 13.5 N	119 24.6 W	17/01/95	1057 UTC	33 in	300	12 kn			1017.1 mb	12.,8 C	8..8 C				

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/ L	P04 uH/ I	N03 UH/l	N02 uH/l	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAHP	
0	ISL	14.06	14.06	33.291	24.855	308.6	0.000	5.79	98.8	5.2	0.43	1 .2	0. 12	0.84	0.33	0		
2		14.06	14.06	33.291	24.855	308.6	0.006	5.79	98.8	5.2	0.43	1 .2	0.12	0.84	0.33	2	201	
5		14.06	14.06	33.293	24.857	308.6	0.015	5.76	98.3	5.0	0.43	1 .2	0.12	0.85	0.36	5	202	I
10		14.07	14.07	33.294	24.855	308.8	0.031	5.77	98.5	4.9	0.43	1 .2	0.12	0.88	0.34	10	203	I
15		14.02	14.02	33.301	24.871	307.5	0.046	5.76	98.2	4.8	0.43	1 .3	0.12	0.81	0.33	15	204	
20	ISL	13.47	13.47	33.312	24.993	296.0	0.061	5.68	95.8	5.1	0.48	1 .9	0.15	0.70	0.30	20		
21		13.35	13.35	33.318	25.021	293.3	0.064	5.67	95.4	5.2	0.49	2.0	0.16	0.67	0.29	21	205	
29		12.91	12.91	33.450	25.211	275.4	0.087	4.73	78.9	9.8	0.96	7.9	0.16	0.16	0.24	29	206	

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 42

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
34 10.7 N	119 30.3 U	17/01/95	0841 UTC	125 m	300	12 kn			1017.2 mb	12..8 C	9..8 C				

DEPTH in		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/ I	P04 uH/ I	N03 uH/ I	N02 uH/l	CHL-A ug/l	PHAEO ug/ I	PRES db	SAHP
0	ISL	13.62	13.62	33.260	24.921	302.3	0.000	5.79	97.9	6.3	0.48	1 .9	0.13	1 .27	0.45	0	
2		13.62	13.62	33.260	24.921	302.3	0.006	5.79	97.9	6.3	0.48	1 .9	0.13	1 .27	0.45	2	201
10		13.62	13.62	33.260	24.922	302.5	0.030	5.78	97.7	5.9	0.48	1 .8	0.13	1 .32	0.44	10	202
20		13.62	13.62	33.262	24.924	302.6	0.060	5.77	97.6	5 .8	0.48	1 .9	0.13	1 .27	0.45	20	203
30	ISL	13.47	13.47	33.327	25.004	295.2	0.090	5.42	91 .4	6.5	0.60	3.7	0.16	0.59	0.27	30	
31		13.45	13.45	33.342	25.020	293.7	0.093	5.36	90.4	6.6	0.62	4.0	0.16	0.51	0.25	31	204
41		12.75	12.74	33.472	25.260	271 . 1	0.122	4.51	75.0	10.1	0.96	8.6	0.04	0.09	0.13	41	205
50	ISL	12.43	12.42	33.516	25.357	262.1	0.146	4.24	70.0	12.0	1 .08	10.6	0.02	0.08	0.12	50	
51		12.41	12.40	33.518	25.362	261 .7	0.148	4.23	69.8	12. 1	1 .09	10.7	0.02	0.08	0.12	51	206
60		12.16	12.15	33.540	25.427	255.7	0.171	4.11	67.5	13.1	1.18	11.9	0.02	0.07	0.13	60	207
70		1 1 .93	11 .92	33.532	25.464	252.4	0. 197	4.12	67.3	13.8	1.19	12.4	0.02	0.07	0.16	70	208
75	ISL	11 .74	11 .73	33.550	25.514	247.8	0.209	4.01	65.3	14.7	1 .25	13.3	0.02	0.06	0.15	75	
85		11 .36	11 .35	33.599	25.622	237.7	0.234	3.73	60.3	16.6	1 .39	15.2	0.02	0.04	0.11	85	209
100	ISL	11.04	11 .03	33.650	25.720	228.7	0.269	3.47	55.7	18.8	1 .52	17.0	0.02	0.03	0.09	101	
101		1 1 .02	11.01	33.654	25.726	228. 1	0.271	3.45	55.3	18.9	1 .53	17.1	0.02	0.03	0.09	102	210
120		10.49	10.48	33.758	25.901	211.8	0.313	3.04	48.2	23.1	1 .76	19.8	0.06	0.02	0.11	121	211

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 51

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 52 .7 N	120 7.9 W	17/01/95	0212 UTC	95 m	290	25 kn			1018.0 mb	12..6 C	10..3 C				

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uH/l	N03 UH/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAHP
0	ISL	13.88	13.88	33.252	24.862	307.9	0.000	5.66	96.2	6.5	0.57	2.4	0.18	0.81	0.27	0	
3		13.88	13.88	33.252	24.862	308.0	0.009	5.66	96.2	6.5	0.57	2.4	0.18	0.81	0.27	3	201
10	ISL	13.88	13.88	33.250	24.861	308.3	0.031	5.68	96.6	6.3	0.57	2 .3	0.18	0.81	0.28	10	
11		13.88	13.88	33.250	24.861	308.3	0.034	5.68	96.6	6.3	0.57	2.3	0.18	0.81	0.28	1 1	202
20		13.89	13.89	33.272	24.876	307.1	0.062	5 .60	95.2	6.1	0.57	2.6	0.19	0.70	0.27	20	203
30		13.76	13.76	33.330	24.948	300.6	0.092	5.38	91 .3	6.4	0.62	3.4	0.20	0.40	0.22	30	204
39		13.44	13.43	33.323	25.008	295. 1	0.119	5.20	87.6	7.8	0.76	4.8	0.19	0.33	0.25	39	205
50	ISL	13.33	13.32	33.341	25.044	291 .9	0.151	5.16	86.8	8.2	0.81	5.3	0.19	0.31	0.28	50	
51		13.32	13.31	33.343	25.048	291 .6	0.154	5.16	86.7	8.2	0.82	5 .4	0.19	0.31	0.28	51	206
62		12.23	12.22	33.537	25.411	257.2	0. 184	4.13	67.9	12.6	1.18	11.6	0.09	0.09	0.15	62	207
68		1 1 .80	11.79	33.594	25.537	245.4	0.199	3.79	61 .8	15.3	1 .34	14.1	0.08	0.05	0.13	68	208
75	ISL	11.71	1 1 . 70	33.605	25.562	243.2	0.216	3.74	60.9	15.8	1 .37	14.5	0.08	0.05	0.13	75	
84		11.59	11.58	33.619	25.595	240.2	0.238	3.68	59.7	16.4	1.41	15.1	0.07	0.05	0.12	84	209

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 55

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 4<,.9 N	120 24 .7 W	16/01/95	2202 UTC	993 m	310	17 kn	310 08 06	1	1018.1 mb	13..1 C	11 .5 C	15m 03		4/8	CU

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uH/ I	N03 uH/ I	N02 uH/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAHP
0	ISL	13.99	13.99	33.250	24.838	310.2	0.000	6.11	104. 1	4.6	0.37	0.2	0.03	1 .67	0.39	0	
1		13.99	13.99	33.250	24.838	310.2	0.003	6.11	104.1	4.6	0.37	0.2	0.03	1 .67	0.39	1	201
9		13.99	13.99	33.250	24.838	310.4	0.028	6.12	104.3	4.4	0.35	0.2	0.03	1.17	0.37	9	202
10	ISL	13.99	13.99	33.250	24.838	310.5	0.031	6.12	104.3	4.4	0.35	0.2	0.03	1.16	0.37	10	
20		13.99	13.99	33.251	24.839	310.7	0.062	6.11	104 . 1	4.3	0.36	0.2	0.03	1 .01	0.37	20	203
29		13.99	13.99	33.250	24.839	311.0	0.090	6.12	104.3	4.3	0.36	0.2	0.03	0.94	0.32	29	204
30	ISL	13.97	13.97	33.254	24.846	310.3	0.093	6.10	103.9	4.3	0.36	0.2	0.04	0.89	0.31	30	
39		13.60	13.59	33.304	24.961	299.6	0.121	5.85	98.9	4.3	0.42	1 .2	0.15	0.40	0.26	39	205
50		12 .89	12.88	33.364	25.149	281 .9	0.153	5.41	90.2	6.6	0.64	4.7	0.16	0.14	0.15	50	206
59		12.44	12.43	33.379	25.249	272.7	0.178	5.17	85.3	8.1	0.77	6.8	0.08	0.14	0.13	59	207
70		11.86	11.85	33.466	25.426	256.0	0.207	4.56	74.4	11.4	1 .04	10.7	0.06	0.14	0.13	70	208
75	ISL	11.71	1 1 .70	33.500	25.481	250.9	0.219	4.31	70.1	12.7	1.14	12. 1	0.05	0.12	0.12	75	
83		11.43	1 1 . 42	33.543	25.566	243.0	0.239	4.01	64.9	14.7	1 .27	14.0	0.03	0.07	0.11	83	209
98		10.19	10.18	33.592	25.823	218.7	0.274	3.85	60.6	18.6	1 .47	17.2	0.02	0.04	0.07	98	210
100	ISL	10.16	10.15	33.622	25.851	216.0	0.278	3.79	59.7	19.3	1.51	17.7	0.02	0.04	0.07	100	
119		9.84	9.83	33.815	26.056	196.9	0.317	3.09	48.4	25.1	1 .82	21.6	0.04	0.01	0.05	120	211
125	ISL	9.88	9.87	33.860	26.085	194 .4	0.329	2.92	45 .7	26. 1	1 .88	22 .2	0.04	0.02	0.05	126	
137		9.97	9.95	33.931	26.125	190.8	0.352	2.64	41 .5	27.5	1 .96	23.0	0.04	0.03	0.05	138	212
150	ISL	9.81	9.79	33.980	26.191	184.8	0.377	2.49	39.0	29.4	2 .03	23.9	0.03	0.03	0.05	151	
169		9.44	9.42	34.023	26.286	176. 1	0.411	2.40	37.3	32.0	2.10	25. 1	0.02	0.01	0.04	170	213
198		9.04	9.02	34.068	26.386	167.1	0.461	2.27	34.9	35.3	2.17	26.4	0.03	0.00	0.03	199	214
200	ISL	9.01	8.99	34.067	26.390	166.7	0.464	2.27	34.9	35.5	2.17	26.5	0.03			201	
229		8.61	8. 59	34.054	26.443	162. 1	0.512	2.29	34.9	37.6	2.21	27.3	0.02			230	215
250	ISL	8.50	8.47	34.072	26.474	159.5	0.545	2.20	33.5	39.0	2.25	27.8	0.02			251	
269		8.42	8.39	34.097	26.506	156.8	0.575	2 .06	31 .3	40.7	2 .31	28.4	0.02			271	216
300	ISL	8.11	8.08	34.139	26.586	149.6	0.623	1 .75	26.4	45.7	2.46	30.1	0.01			302	
313		7.98	7.95	34.157	26.620	146.6	0.642	1 .62	24.4	48.0	2.52	30.8	0.01			315	217
379		7.61	7.57	34.203	26.711	138.9	0.736	1 .20	17.9	54.8	2.70	32.7	0.01			381	218
400	ISL	7.47	7.43	34.206	26.733	137.0	0.765	1.13	16.8	56.8	2 .74	33.2	0.01			403	
437		7.20	7.16	34.209	26.774	133.5	0.815	1 .02	15.1	60.4	2.82	34.2	0.01			440	219
500	ISL	6.77	6.72	34.244	26.861	125.9	0.897	0.72	10.5	68.0	2.96	36.0	0.01			503	
511		6.69	6.64	34.251	26.877	124.4	0.911	0.67	9.8	69.3	2 .99	36.3	0.01			515	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 34.5 N	120 45.3 W	16/01/95	1757	UTC 1400 m	310 21 kn	320 08 05i 1		1019.5 mb	14.,3 C	11.,2 C	14m 03	5/8	CU

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/ I	P04 uM/ I	N03 uM/L	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.86	13.86	33.266	24.877	306.5	0.000	5.99	101 .8	4.2	0.36	0.4	0.07	0.60	0.31	0	
2	A	13.86	13.86	33.266	24.877	306.5	0.006	5.99	101 .8	4.2	0.36	0.4	0.07	0.60	0.31	2	201
a	A	13.85	13.85	33.267	24.880	306.4	0.025	5.98	101 .6	3.9	0.37	0.4	0.07	0.62	0.26	8	202
10	ISL	13.85	13.85	33.267	24.880	306.5	0.031	5.98	101.6	3.9	0.37	0.4	0.07	0.62	0.26	10	
18	A	13.85	13.85	33.266	24.880	306.8	0.055	5 .98	101 .6	3.9	0.35	0.4	0.07	0.62	0.25	18	203
20	ISL	13.85	13.85	33.266	24.880	306.8	0.061	5.98	101 .6	3.9	0.35	0.4	0.07	0.62	0.26	20	
27	A	13.86	13.86	33.266	24.878	307.2	0.083	5.97	101 .5	3.7	0.35	0.4	0.07	0.61	0.29	27	204
30	ISL	13.86	13.86	33.267	24.879	307.2	0.092	5.97	101.5	3.7	0.35	0.4	0.07	0.60	0.29	30	
36	A	13.85	13.84	33.267	24.881	307.1	0.110	5 .97	101.4	3.7	0.35	0.4	0.08	0. 59	0.27	36	205
43		13.83	13.82	33.274	24.891	306.4	0.132	5.94	100.9	3.5	0.37	0.5	0.10	0.51	0.25	43	206
49	A	13.61	13.60	33.324	24.974	298.6	0.150	5.79	97.9	4.2	0.45	1 .4	0.24	0.31	0.26	49	207
50	ISL	13.55	13.54	33.329	24.990	297.1	0.153	5.75	97.1	4.4	0.47	1 .7	0.23	0.29	0.25	50	
60		12.89	12.88	33.363	25.149	282.2	0.182	5.38	89.6	6.4	0.64	4.8	0.08	0.15	0.17	60	208
68		12.55	12.54	33.380	25.228	274.8	0.204	5 .20	86.0	7.6	0.74	6.3	0.05	0.11	0.13	68	209
75	ISL	12.06	12.03	33.388	25.328	265.4	0.223	5.00	81 .9	9.2	0.87	8.2	0.04	0.08	0.11	75	
84		11 .34	11 .33	33.409	25.478	251.3	0.246	4.72	76. 1	11.7	1 .05	11.0	0.03	0.06	0.09	84	210
98		10.39	10.38	33.496	25.714	229.1	0.280	4.27	67.5	15.8	1 .32	15.2	0.02	0.04	0.06	98	211
100	ISL	10.28	10.27	33.507	25.741	226.5	0.285	4.23	66.7	16.3	1 .35	15.7	0.02	0.04	0.06	100	
118		9.49	9.48	33.599	25.945	207.3	0.324	3.96	61.4	20.5	1 .54	18.9	0.02	0.01	0.05	1 19	212
125	ISL	9.27	9.26	33.633	26.007	201 .5	0.338	3.86	59.6	22.1	1 .61	19.9	0.02	0.01	0.04	126	
134		9.03	9.02	33.675	26.078	194.9	0.356	3.74	57.4	24.0	1 .69	21 .1	0.01	0.01	0.03	135	213
150	ISL	8.68	8.66	33.746	26.189	184.6	0.386	3.60	54.9	26.9	1 .78	22.6	0.01	0.01	0.03	1 51	
167		8.39	8.37	33.814	26.287	175.6	0.417	3.48	52.7	29.6	1 .85	23.8	0.01	0.00	0.02	168	214
200	ISL	8.04	8.02	33.927	26.428	162.6	0.473	3.27	49.2	34.2	1 .97	25.3	0.01	0.00	0.02	201	
203		8.02	8.00	33.935	26.438	161.8	0.477	3.24	48.7	34.6	1 .98	25.4	0.01	0.00	0.02	204	215
230		7.86	7.84	33.995	26.509	155.5	0.520	2.68	40.1	39.8	2.16	27.8	0.01			231	216
250	ISL	7.59	7.57	34.012	26.561	150.7	0.551	2.51	37.4	42 .8	2 .24	29.0	0.01			251	
272		7.32	7.29	34.031	26.615	145.9	0. 584	2.35	34.8	45.9	2.32	30.0	0.01			274	217
300	ISL	7.35	7.32	34.107	26.671	141.1	0.624	1 .84	27.3	50.5	2 .50	31 .5	0.01			302	
322		7.42	7.39	34.162	26.703	138.3	0.654	1 .43	21 .2	54.2	2.65	32.6	0.01			324	218
377		7.04	7.00	34.218	26.802	129.7	0.728	0.93	13.7	62.5	2 .85	34.7	0.01			379	219
400	ISL	6.85	6.81	34.228	26.836	126.7	0.758	0.83	12.2	65.5	2 .91	35.4	0.01			403	
438		6.54	6.50	34.239	26.887	122.2	0.805	0. 71	10.3	70.2	3.00	36.5	0.01			441	220
500	ISL	6.10	6.06	34.265	26.965	115.3	0.879	0.51	7.3	77.5	3.11	38.2	0.01			503	
516		5.99	5.94	34.272	26.984	113.5	0.897	0.46	6.6	79.4	3.14	38.6	0.01			520	221

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 950'I STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 14.7 N	121 26 .7 W	16/01/95	0740	UTC 3799 m	290 20 kn			1019.4 mb	12 .5 C	10 .7 C			

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uM/ I	N03 uH/ L	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.63	13.63	33.279	24.934	301 .0	0.000	5.97	101.0	4.8	0.41	0.9	0.09	0.70	0.39	0	
3		13.63	13.63	33.279	24.934	301 . 1	0.009	5 .97	101.0	4.8	0.41	0.9	0.09	0.70	0.39	3	201
10	ISL	13.63	13.63	33.277	24.933	301 .4	0.030	5.98	101 .2	4.5	0.41	0.9	0.09	0. 72	0.36	10	
12		13.63	13.63	33.277	24.933	301 .5	0.036	5.98	101 .2	4.4	0.41	0.9	0.09	0.73	0.35	12	202
20	ISL	13.63	13.63	33.278	24.934	301 .6	0.060	5 .98	101.2	4.3	0.41	0.9	0.09	0.75	0.36	20	
22		13.63	13.63	33.278	24.934	301 .7	0.066	5 .98	101.2	4.3	0.41	0.9	0.09	0.75	0.36	22	203
30	ISL	13.63	13.63	33.279	24.935	301 .8	0.090	5.98	101.1	4.3	0.41	0.9	0.09	0.73	0.34	30	
32		13.63	13.63	33.279	24.935	301 .8	0.096	5.98	101 . 1	4.3	0.41	0.9	0.09	0. 73	0.34	32	204
41		13.64	13.63	33.279	24.933	302 .3	0.124	5 .98	101.2	4 .2	0.40	0.9	0.09	0.76	0.40	41	205
50	ISL	13.53	13.52	33.297	24.970	299.0	0.151	5 .86	98.9	4.6	0.45	1 .5	0.14	0. 56	0.41	50	
53		13.49	13.48	33.316	24.993	297.0	0.160	5 .80	97.8	4.9	0.48	1 .9	0.17	0.46	0.42	53	206
59		13.22	13.21	33.326	25.055	291 .2	0. 177	5 .65	94.8	5.6	0.54	2.9	0.22	0.28	0.27	59	207
71		12.43	12.42	33.363	25.238	273.9	0.211	5.19	85 .6	8.3	0.77	6.7	0.07	0.13	0.15	71	208
75	ISL	12.14	12.13	33.385	25.311	267.1	0.222	5 .03	82.5	9.3	0.85	8.0	0.05	0.11	0.13	75	
84		11.47	11 .46	33.442	25.480	251 .2	0.245	4.66	75 .4	11.9	1 .05	11.0	0.02	0.08	0.11	84	209
100	ISL	10.23	10.22	33.535	25.771	223.6	0.283	4.01	63.2	18.2	1 .44	16.9	0.02	0.04	0.07	100	
101		10.16	10.15	33.542	25.789	222.0	0.286	3.97	62 .5	18.6	1 .46	17.3	0.02	0.04	0.07	101	210
117		9.29	9.28	33.666	26.030	199.2	0.319	3.54	54.7	24.2	1 .72	21.2	0.02	0.01	0.06	118	211
125	ISL	9.22	9.21	33.735	26.095	193.2	0.335	3.34	51.5	26.0	1 .80	22 .3	0.02	0.01	0.06	126	
141		9.07	9.05	33.815	26.182	185.2	0.365	3.08	47.4	28.7	1 .90	23.5	0.01	0.01	0.06	142	212
150	ISL	8.81	8.79	33.832	26.236	180.2	0.382	3.14	48.0	29.9	1 .92	24 .0	0.01	0.01	0.05	151	
166		8.42	8.40	33.863	26.321	172.3	0.410	3.20	48.5	31 .8	1 .95	24.7	0.01	0.00	0.04	167	213
192		8.74	8.72	34.030	26.403	165.2	0.454	2.42	37.0	35.9	2.17	26.6	0.01	0.00	0.04	193	214
200	ISL	8.61	8.59	34.028	26.422	163.5	0.467	2.47	37.6	36.4	2.16	26.7	0.01			201	
225		8.03	8.01	33.991	26.481	138.1	0.507	2.77	41.7	38.0	2.12	27.0	0.00			226	215
250	ISL	7.85	7.83	34.046	26.551	151.9	0.546	2.39	35.8	42.5	2.36	28.7	0.00			251	
266		7.76	7.73	34.083	26.593	148.1	0.570	2.08	31 .1	45.8	2.52	30.0	0.00			268	216
300	ISL	7.09	7.06	34.053	26.665	141.5	0.619	2.08	30.6	51.6	2.49	31 .7	0.00			302	
317		6.73	6.70	34.030	26.695	138.6	0.643	2.08	30.4	54.5	2 .48	32.4	0.00			319	217
375		6.16	6.13	34.053	26.788	130.2	0.721	1 .53	22.0	64.9	2.72	35.5	0.00			377	218
400	ISL	5.94	5 .91	34.062	26.823	127.0	0.753	1 .35	19.3	69.0	2.80	36.6	0.00			403	
438		5.64	5 .60	34.081	26.876	122.3	0.800	1.10	15.6	75.0	2 .92	38.0	0.00			441	219
500	ISL	5.29	5.25	34.149	26.972	113.6	0.874	0.70	9.9	85.0	3.09	39.9	0.00			503	
517		5.19	5.15	34.168	26.999	111.2	0.893	0. 59	8.3	87.8	3.14	40.4	0.00			521	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 83 80

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 54.5 N	122 7.4 W	16/01/95	0104	UTC	4181 m	310	19 kn	290 09 OCI	1	1020.1 mb	13.,3 C	10..3 C		4/8	CU

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 UN/ I	N03 uM/ I	N02 uN/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.11	15.11	33.155	24.527	339.8	0.000	5.80	101 .0							0	
5		15.11	15.11	33.154	24.526	340.0	0.017	5.83	101.6	4.3	0.32	0. 1	0.00	0.26	0.12	5	201
10	ISL	15.11	15.11	33.134	24.526	340.2	0.034	5.81	101 .2	4.3	0.32	0.1	0.00	0.25	0.11	10	
16		15.11	15.11	33.155	24.527	340.3	0.054	5.77	100.5	4.2	0.31	0.1	0.00	0.23	0.10	16	202
20	ISL	15.11	15.11	33.155	24.527	340.4	0.068	5.77	100.5	4. 1	0.31	0.1	0.00	0.23	0.10	20	
30	ISL	15.11	15.11	33.154	24.527	340.7	0.102	5.77	100.5	4.0	0.31	0.1	0.00	0.24	0.11	30	
31		15.11	15.11	33.154	24.527	340.7	0.105	5.77	100.5	4.0	0.31	0.1	0.00	0.24	0.11	31	203
45		15.12	15.11	33.155	24.526	341 .3	0.153	5.79	100.9	3.9	0.31	0.1	0.00	0.26	0.14	45	204
50	ISL	15.12	15.11	33.155	24.526	341 .4	0. 170	5.82	101.4	3.9	0.31	0.1	0.00	0.26	0.13	50	
54		15.12	15.11	33.154	24.526	341 .6	0.184	5.84	101 .7	3.9	0.31	0. 1	0.00	0.25	0.12	54	205
66		15.12	15.11	33.154	24.526	341 .9	0.225	5.81	101 .2	3.8	0.31	0.1	0.00	0.24	0.11	66	206
75		15.11	15.10	33.154	24.528	341 .9	0.256	5.80	101 .0	3.8	0.31	0.0	0.00	0.26	0. 12	75	207
82		15.07	15.06	33.158	24.540	341 .0	0.280	5.79	100.8	3.6	0.32	0.0	0.01	0.23	0.14	82	208
92		14.72	14.71	33.178	24.631	332.6	0.313	5.77	99.7	3.7	0.36	0.2	0.19	0.10	0.09	92	209
100	ISL	14.35	14.34	33.214	24.738	322.6	0.340	5.76	98.8	3.8	0.39	0.6	0.15	0.08	0.08	100	
110		13.83	13.81	33.260	24.882	309.1	0.371	5.72	97.1	4.2	0.42	1 .4	0.09	0.05	0.07	1 10	210
122		13.17	13.15	33.288	25.037	294.5	0.407	5.60	93.8	5.1	0.48	2 .4	0.03	0.05	0.06	123	211
125	ISL	13.03	13.01	33.295	25.070	291 .4	0.416	5.56	92.9	5.3	0.50	2.8	0.03	0.05	0.06	126	
143		12.16	12.14	33.346	25.279	271 .9	0.467	5.28	86.6	7.6	0.72	6.0	0.02	0.04	0.05	144	212
150	ISL	11 .70	11 .68	33.381	25.392	261 .2	0.485	5.10	82.9	9.2	0.84	8.0	0.01	0.03	0.04	151	
170		10.43	10.41	33.494	25.707	231 .4	0.535	4.57	72.3	15.1	1 .25	14.4	0.00	0.01	0.03	171	213
198		9.39	9.37	33.607	25.969	206.7	0.596	4.15	64.2	25.6	1 .85	23.1	0.01	0.00	0.02	199	2 U
200	ISL	9.34	9.32	33.615	25.983	205.3	0.600	4.11	63.5	26.0	1 .86	23.2	0.01			201	
226		8.78	8.76	33.719	26.154	189.5	0.652	3.66	55.9	28.8	1 .94	24.6	0.00			227	215
250	ISL	8.32	8.29	33.821	26.304	175.4	0.695	3.62	54.7	30.6	1 .90	24 .4	0.00			251	
268		8.02	7. 99	33.889	26.403	166.3	0.726	3.59	53.9	32.2	1 .87	24.3	0.00			269	216
300	ISL	7.58	7.55	33.954	26.518	155.7	0.778	3.30	49. 1	37.5	1 .98	26.1	0.00			302	
319		7.36	7.33	33.978	26.568	151.1	0.807	3.03	44.9	41.5	2.09	27.7	0.00			321	217
376		6.75	6.72	34.046 I)	26.706	138.5	0.889	1 .84	26.9	55.6	2.56	33.3	0.00			378	218
400	ISL	6.55	6.51	34.060	26.744	135.1	0.922	1 .60	23.3	59.8	2.66	34.6	0.00			402	
435		6.30	6.26	34.077	26.790	131.0	0.969	1 .37	19.8	65. 1	2.77	35.9	0.00			438	219
500	ISL	5.83	5.79	34.131	26.893	121.7	1 .051	0.88	12.6	75.8	3.00	38.3	0.00			503	
507		5.78	5.74	34.137	26.904	120.7	1 .059	0.83	11.8	76.9	3.02	38.6	0.00			510	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 83 90

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 *lt*>.5 N	122 48 .6 W	15/01/95	1822	UTC	4275 m	310	24 kn	280 08 05	1	1019.7 mb	14,.1 C	11 .7 C	27m 01	3/8	CU

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/l	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.10	15.10	33.155	24.529	339.6	0.000	5.81	101 .2	4.2	0.32	0. 1	0.00	0.23	0.09	0	
1	A	15.10	15.10	33.155	24.529	339.6	0.003	5.81	101 .2	4.2	0.32	0.1	0.00	0.23	0.09	1	201
10	ISL	15.09	15.09	33.154	24.531	339.8	0.034	5.81	101.2	4 . 1	0.31	0. 1	0.00	0.24	0.09	10	
14	A	15 .09	15 .09	33.154	24.531	339.9	0.048	5.81	101 .2	4.0	0.30	0.1	0.00	0.24	0.09	14	202
20	ISL	15.10	15.10	33.154	24.529	340.2	0.068	5.80	101.0	3.9	0.30	0.0	0.00	0.24	0.08	20	
23		15.10	15.10	33.154	24.529	340.3	0.078	5.80	101 .0	3.8	0.30	0.0	0.00	0.24	0.08	23	203
30	ISL	15.10	15.10	33.154	24.529	340.5	0.102	5.81	101 .2	3.7	0.30	0.0	0.00	0.24	0.09	30	
35	A	15.09	15.08	33.154	24.531	340.4	0.119	5.81	101 .2	3.7	0.30	0.0	0.00	0.24	0.10	35	204
44		15.08	15.07	33.133	24.533	340.5	0.150	5.80	101 .0	3.7	0.30	0.0	0.00	0.28	0.10	44	205
50	ISL	15.07	15.06	33. 150	24.533	340.7	0.170	5.80	100.9	3.6	0.30	0.1	0.00	0.28	0.11	50	
54	A	15.06	15.05	33.148	24.534	340.8	0.184	5 .80	100.9	3.5	0.30	0.1	0.00	0.29	0.12	54	206
61		14 .92	14.91	33.141	24.559	338.6	0.208	5.81	100.8	3.5	0.31	0.1	0.00	0.34	0.17	61	207
71	A	14.71	14.70	33.153	24.614	333.7	0.241	5.78	99.9	3.5	0.33	0.1	0.04	0.30	0.17	71	208
75	ISL	14.54	14.53	33.158	24.654	329.9	0.254	5.78	99.5	3.5	0.35	0. 1	0.09	0.27	0.16	75	
80		14.31	14.30	33.166	24.709	324.8	0.271	5.79	99.2	3.5	0.37	0.2	0.18	0.22	0.14	80	209
88		14.06	14.05	33.181	24.772	318.9	0.297	5.77	98.4	3.6	0.41	0.5	0.33	0.15	0.12	88	210
96	A	13.90	13.89	33.203	24.823	314.3	0.322	5.75	97.7	3.6	0.42	0.8	0.38	0.10	0.11	96	211
100	ISL	13.75	13.74	33.217	24.865	310.5	0.334	5.73	97. 1	3.7	0.43	1.0	0.30	0.09	0.10	100	
112		13.16	13.14	33.273	25.027	295.2	0.371	5.60	93.8	4.7	0.47	2 .2	0.03	0.07	0.07	112	212
125		12.44	12.42	33.354	25.231	276.0	0.408	5.33	88.0	6.5	0.64	4.9	0.01	0.05	0.05	126	213
147		11.17	11.15	33.388	25.494	251 .3	0.466	4.88	78.4	10.4	0.97	10.2	0.01	0.04	0.05	148	214
150	ISL	11 .03	11.01	33.403	25.530	247.8	0.473	4.82	77.2	10.9	1 .01	10.8	0.01	0.04	0.05	151	
171		10.15	10.13	33.529	25.782	224.2	0.523	4.45	70.0	15.0	1 .26	14.8	0.01	0.02	0.03	172	215
199		9.01	8.99	33.668	26.077	196.3	0.582	3.93	60.3	22.6	1 .62	20.5	0.01	0.00	0.02	200	216
200	ISL	8.98	8.96	33.672	26.085	195.5	0.584	3.92	60.1	22.8	1 .63	20.6	0.01			201	
230		8.40	8.38	33.793	26.270	178.4	0.640	3.67	55.6	27.8	1 .77	23.0	0.00			231	217
250	ISL	8.11	8.08	33.877	26.380	168.2	0.674	3.43	51.6	31 .7	1 .88	24.5	0.00			251	
270		7.86	7.83	33.948	26.472	159.6	0.707	3.16	47.3	35.8	1 .99	26.1	0.00			271	218
300	ISL	7.49	7.46	33.993	26.561	151.5	0.754	2.74	40.7	42.0	2.18	28.6	0.00			302	
320		7.26	7.23	34.008	26.606	147.5	0.784	2.45	36.2	46.1	2.30	30.2	0.00			322	219
380		6.66	6.63	34.073	26.739	135.3	0.869	1 .64	23.9	58. 1	2.62	34.0	0.00			382	220
400	ISL	6.48	6.44	34.087	26.774	132.2	0.895	1 .49	21 .6	61 .3	2.69	34.7	0.00			402	
439		6.16	6.12	34.113 D	26.837	126.6	0.946									442	221
500	ISL	5. 81	5.77	34.170	26.926	118.6	1 .021	0.74	10.6	77.3	3.01	38.4	0.00			503	
517		5.71	5.67	34.186	26.951	116.3	1 .041	0.61	8.7	80.0	3.07	39.0	0.00			520	222

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 83 100

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT TYPE
32 U.8 N	123 29.8 W	15/01/95	0813 UTC	4130 in	280 25 kn			1019.6 fflb	15.,0 C	11..5 C			

DEPTH in		TENP DES C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/ I	P04 UN/ I	N03 UN/ I	N02 uN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	15.24	15.24	33.154	24.498	342.6	0.000	5.77	100.8	4.3	0.32	0.0	0.00	0.18	0.08	0	
1		15.24	15.24	33.154	24.498	342.6	0.003	5.77	100.8	4.3	0.32	0.0	0.00	0.18	0.08	1	201
10	ISL	15.24	15.24	33.156	24.500	342.7	0.034	5.78	101.0	4.2	0.32	0.0	0.00	0.18	0.07	10	
16		15.24	15.24	33.158	24.501	342.8	0.055	5.78	101 .0	4.2	0.32	0.0	0.00	0.18	0.07	16	202
20	ISL	15.33	15.33	33.195	24.510	342.0	0.069	5.77	101.0	4.1	0.32	0.0	0.00	0.20	0.08	20	
30		15.55	15.55	33.287	24.533	340.2	0.103	5.73	100.8	3.9	0.31	0.0	0.00	0.24	0.13	30	203
44		15.52	15.51	33.288	24.541	339.9	0.150	5.71	100.4	3.9	0.32	0.0	0.00	0.28	0.17	44	204
50	ISL	15.48	15.47	33.290	24.551	339.0	0.171	5.70	100.1	3.8	0.32	0.0	0.01	0.28	0.16	50	
53		15.45	15.44	33.292	24.560	338.4	0.181	5.70	100.1	3.8	0.32	0.0	0.02	0.28	0.16	53	205
64		15.32	15.31	33.299	24.594	335 .4	0.218	5.70	99.8	3.8	0.33	0. 1	0.05	0.23	0.15	64	206
75		15.16	15.15	33.336	24.658	329.7	0.254	5.68	99.1	3.7	0.34	0.3	0.12	0.21	0.15	75	207
84		15.06	15.05	33.371	24.707	325.2	0.284	5.64	98.3	3.8	0.35	0.4	0.18			84	208
95		14.82	14.81	33.512	24.868	310.2	0.319	5.57	96.7	4. 1	0.36	1 .0	0.11	0.15	0.17	95	209
100	ISL	14.40	14.39	33.488	24.939	303.5	0.334	5.54	95.3	4.4	0.39	1 .5	0.07	0.13	0.15	100	
109		13.63	13.61	33.435	25.058	292.3	0.361	5.45	92.3	5.0	0.47	2.6	0.02	0.10	0.12	109	210
124		13.33	13.31	33.573	25.226	276.7	0.404	5.16	86.9	6.2	0.58	4.5	0.02	0.06	0.07	125	211
125	ISL	13.26	13.24	33.570	25.237	275.6	0.406	5.14	86.4	6.4	0.59	4.7	0.02	0.06	0.07	126	
146		11.45	11.43	33.457	25.497	251 .1	0.462	4.78	77.3	10.7	0.96	10.0	0.01	0.03	0.05	147	212
150	ISL	11.20	11.18	33.459	25.544	246.6	0.472	4.69	75.4	11.6	1 .03	11.0	0.01	0.03	0.04	151	
168		10.23	10.21	33.517	25.759	226.3	0.514	4.27	67.3	16.1	1 .32	15.5	0.01	0.01	0.02	169	213
199		8.85	8.83	33.719	26.142	190. 1	0.579	3.82	58.4	24.5	1 .67	21.0	0.00	0.00	0.01	200	214
200	ISL	8.82	8.80	33.724	26.151	189.3	0.581	3.81	58.2	24 .7	1 .68	21 .1	0.00			201	
230		8.28	8.26	33.864	26.344	171.3	0.635	3.35	50.6	31 .4	1 .90	24 .4	0.00			231	215
250	ISL	8.14	8.11	33.947	26.430	163.4	0.668	2.92	44.0	35 .4	2 .04	26.3	0.00			251	
269		8.03	8.00	34.007	26.494	157.7	0.699	2.54	38.2	39.0	2.16	27.9	0.00			270	216
300	ISL	7.55	7.52	34.034	26.585	149.3	0.746	2.31	34.4	44.8	2.30	29.8	0.00			302	
317		7.26	7.23	34.035	26.627	145.4	0.771	2.23	32.9	48.0	2.36	30.7	0.00			319	217
377		6.59	6.56	34.069	26.745	134.6	0.855	1 .59	23.1	59.9	2 .64	34.4	0.00			379	218
400	ISL	6.36	6.32	34.078	26.783	131.3	0.886	1 .39	20.1	63.8	2 .73	35.6	0.00			402	
439		6.01	5.97	34.094	26.840	126.0	0.936	1 .09	15.6	70. 1	2.87	37.3	0.00			442	219
500	ISL	5.60	5.56	34.143	26.930	117.9	1.011	0.73	10.4	79.9	3.04	39. 1	0.00			503	
516		5.49	5.45	34.156	26.954	115.8	1 .029	0.63	8.9	82 .5	3.09	39.6	0.00			519	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501l STATION 83 1 10

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOH	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT TYPE
31 54.5 N	124 10.5 W	15/01/95	0137 UTC	4167 m	280 15 kn	260 05 06	1	1018.1 mb	16,.4 C	14.0 C		4/8	CI

DEPTH m		TENP DEG C	POT TEHP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uN/ I	P04 uN/ I	N03 utt/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SANP
0	ISL	15.58	15.58	33.274	24.515	340.9	0.000	5.76	101.4	4.2	0.32	0.0	0.00	0.17	0.07	0	
2		15.58	15.58	33.274	24.515	341 .0	0.007	5.76	101 .4	4.2	0.32	0.0	0.00	0.17	0.07	2	201
10	ISL	15.59	15.59	33.276	24.515	341.3	0.034	5.77	101 .6	4. 1	0.31	0.0	0.00	0.17	0.07	10	
15		15.59	15.59	33.278	24.516	341.3	0.051	5.77	101.6	4.1	0.31	0.0	0.00	0.17	0.07	15	202
20	ISL	15.59	15.59	33.282	24.520	341.1	0.068	5.77	101.6	4. 1	0.31	0.0	0.00	0.19	0.08	20	
29		15.60	15 .60	33.294	24.527	340.7	0.099	5.76	101.4	4.0	0.31	0.0	0.00	0.22	0.11	29	203
30	ISL	15.59	15.59	33.293	24.529	340.6	0.102	5.76	101.4	4 .0	0.31	0.0	0.00	0.22	0.11	30	
44		15.44	15.43	33.274	24.548	339.2	0.150	5.78	101 .4	3.8	0.32	0.0	0.00	0.25	0.13	44	204
50	ISL	15.41	15.40	33.276	24.556	338.6	0. 170	5 .76	101.0	3.8	0.32	0.0	0.01	0.30	0.16	50	
54		15.39	15.38	33.280	24.564	338.0	0. 184	5.74	100.6	3.8	0.32	0.0	0.01	0.32	0.17	54	205
63		15.32	15.31	33.295	24.591	335.7	0.214	5.75	100.7	3.8	0.33	0.0	0.02	0.26	0.16	63	206
74		15.17	15.16	33.371	24.682	327.3	0.251	5.66	98.8	3.7	0.34	0.2	0.18	0.25	0.20	74	207
75	ISL	15.09	15.08	33.361	24.692	326.4	0.254	5.65	98.5	3.8	0.36	0.4	0.17	0.24	0.20	75	
83		14.39	14.38	33.309	24.802	316.0	0.280	5.52	94.8	4.9	0.48	2.1	0.09	0.16	0.17	83	208
94		13.80	13.79	33.555	25.115	286.5	0.313	5.39	91 .6	5.4	0. 48	3.0	0.03	0.12	0.13	94	209
100	ISL	13.46	13.45	33.558	25.187	279.8	0.330	5.34	90.1	6. 1	0.55	3.5	0.03	0.10	0.11	100	
109		12.73	12 .72	33.493	25.282	270.8	0.354	5.17	85.9	7.2	0.65	5.5	0.02	0.08	0.09	109	210
124		10.42	10.41	33.461	25.682	232.7	0.392	4.29	67.8	15.5	1 .32	15.3	0.01	0.04	0.06	125	211
125	ISL	10.39	10.38	33.472	25.696	231 .4	0.395	4.29	67.8	15.7	1 .32	15.4	0.01	0.04	0.06	126	
145		9.87	9.85	33.580	25.868	215.3	0.439	4.27	66.8	17.5	1 .37	16.5	0.01	0.01	0.03	146	212
150	ISL	9.65	9.63	33.605	25.924	210.0	0.450	4.14	64.4	19.1	1 .45	17.7	0.01	0.01	0.03	151	
167		8.93	8.91	33.692	26.108	192.7	0.484	3.63	55.6	25.1	1 .75	22.0	0.01	0.00	0.02	168	213
199		8.38	8.36	33.874	26.336	171.5	0.542	3.12	47.3	31 .8	1 .96	25.2	0.00	0.00	0.02	200	214
200	ISL	8.37	8.35	33.878	26.341	171.1	0.544	3.11	47. 1	32.0	1 .96	25.3	0.00			201	
226		8.00	7.98	33.950	26.453	160.8	0.587	2.92	43.9	36.2	2.05	26.7	0.00			227	215
250	ISL	7.69	7.67	33.982	26.523	154.3	0.625	2.82	42 .1	39.7	2.13	27.7	0.00			251	
268		7.45	7.42	33.994	26.568	150.4	0.652	2.72	40.4	42 .6	2.19	28.6	0.00			269	216
300	ISL	6.94	6.91	34.014	26.654	142.3	0.699	2.35	34.5	49.7	2.35	31 .0	0.00			302	
317		6.69	6.66	34 .024	26.696	138.5	0.723	2.11	30.8	53.8	2 .45	32.4	0.00			319	217
376		6.16	6.13	34.079	26.809	128.3	0.802	1 .29	18.6	65 .8	2 .79	36.3	0.00			378	218
400	ISL	5.96	5.93	34.095	26.847	124.8	0.832	1.11	15.9	70.5	2 .88	37.4	0.00			402	
436		5.72	5 .68	34. 122	26.898	120.2	0.876	0.92	13.1	76.6	2.98	38.5	0.00			439	219
500	ISL	5 .65	5 .61	34.208	26.976	113.7	0.951	0.56	8.0	82.4	3.11	39.4	0.00			503	
508		5 .64	5 .60	34 .219	26.986	112.9	0.960	0.51	7.3	83. 1	3.13	39.5	0.00			51 1	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 33

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 53.4 N	118 29.3 W	12/01/95	0947 UTC	55 in	130	07 kn			1017.7 mb	13..6 C	12..2 C				

DEPTH ID	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 uH/ I	N03 uH/ I	N02 uH/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.59	14.59	32.791	24.358	355.9	0.000	5.72	98.4	6.0	0.55	1 .3	0.16	1 .91	0.31	0	
2	14.59	14.59	32.791	24.358	356.0	0.007	5.72	98.4	6.0	0.55	1 .3	0.16	1 .91	0.31	2	201
5	14.60	14 .60	32.806	24.367	355.2	0.018	5.72	98.4	5.9	0.55	1 .3	0.15	1 .95	0.33	5	202
10 ISL	14.61	14.61	32.843	24.394	352.8	0.035	5.70	98. 1	5.6	0.53	1 .2	0.14	1 .77	0.31	10	
11	14.61	14.61	32.851	24.400	352.2	0.039	5.70	98. 1	5.5	0. 53	1 .2	0.14	1 .74	0.30	1 1	203
20	14.60	14 .60	32.918	24.454	347.3	0.070	5.71	98.3	5.2	0.51	1 .1	0.13	0.56	0.23	20	204
30	14.62	14.62	32.983	24.500	343.2	0. 105	5.71	98.4	4.8	0.47	0.8	0.12	0.43	0.22	30	205
41	14.55	14.54	33.110	24.614	332.8	0.142	5.59	96.2	5.0	0.54	0.9	0.20	0.31	0.23	41	206
49	14.50	14.49	33.268	24.746	320.4	0.168	5.48	94.3	5.3	0.56	1 .3	0.18	0.20	0.32	49	207

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 35

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 49.2 N	118 38.0 W	12/01/95	1205 UTC	706 m	090	15 kn			1016.4 mb	12 ..6 C	12,.5 C				

DEPTH m	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/ I	P04 uH/ I	N03 uH/ I	N02 uH/l	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0 ISL	14.65	14.65	32.959	24.475	344.8	0.000	5.68	97.9	5.8	0.52	1 .0	0.13	1 .31	0.26	0	
1	14.65	14.65	32.959	24.475	344.8	0.003	5.68	97.9	5.8	0.52	1 .0	0.13	1 .31	0.26	1	201
10	14.60	14.60	33.081	24.580	335. 1	0.034	5.65	97.4	5.2	0.50	0.7	0.15	0.38	0.19	10	202
20	14.60	14.60	33.133	24.620	331 .5	0.067	5.65	97.4	5.1	0.49	0.7	0.16	0.33	0.19	20	203
30 ISL	14.62	14.62	33.195	24.664	327.7	0.100	5.69	98.2	4.7	0.44	0.7	0.14	0.31	0.20	30	
31	14.62	14.62	33.203	24.670	327.1	0. 104	5.69	98.2	4.7	0.44	0.7	0.14	0.31	0.20	31	204
40	14.56	14.55	33.300	24.758	319.0	0. 133	5.62	96.9	4.6	0.43	0.7	0.18	0.24	0.19	40	205
50 ISL	14.41	14.40	33.289	24.781	317.0	0.164	5.47	94.0	5. 1	0.53	1 .4	0.23	0.19	0.20	50	
51	14.40	14.39	33.286	24.781	317.1	0.168	5.46	93.8	5.2	0.54	1 .5	0.24	0.19	0.20	51	206
60	14.34	14.33	33.312	24.814	314.2	0.196	5.43	93.2	5.3	0.54	1 .8	0.28	0.16	0.21	60	207
69	13.80	13.79	33.417	25.008	296.0	0.224	4.98	84.6	7. 1	0.71	4.9	0.38	0.13	0.16	69	208
75 ISL	13.41	13.40	33.458	25.119	285.5	0.241	4.72	79.6	8.4	0.83	6.7	0.28	0.11	0.14	75	
85	12.72	12.71	33.526	25.309	267.6	0.269	4.20	69.8	11.5	1 .08	10.2	0.05	0.26 U	0.41 U	85	209
100	11.55	11.54	33.725	25.686	232.0	0.306	3.00	48.7	19.4	1 .62	17.8	0.02	0.03	0.08	100	210
120	11.14	11.13	33.794	25.814	220.2	0.351	2.75	44.3	22.2	1 .78	19.8	0.01	0.01	0.06	121	211
125 ISL	10.89	10.87	33.760	25.833	218.5	0.362	2.93	46.9	21.9	1 .75	19.7	0.01	0.01	0.06	126	
140	10.22	10.20	33.684	25.890	213.2	0.395	3.40	53.6	21 .3	1 .66	19.5	0.01	0.02	0.05	141	212
150 ISL	10.33	10.31	33.803	25.964	206.4	0.416	3.02	47.8	23.3	1 .79	20.8	0.01	0.01	0.05	151	
170	10.64	10.62	34.079	26.126	191.7	0.455	2.06	32.9	28.3	2.11	24.0	0.01	0.00	0.04	171	213
199	9.56	9.54	34.050	26.288	176.6	0.509	2.34	36.4	31 .5	2.11	25.3	0.01	0.00	0.03	200	214
200 ISL	9.56	9.54	34.055	26.292	176.3	0.511	2.33	36.3	31 .6	2.11	25.3	0.01			201	
228	9.52	9.49	34.168	26.387	167.8	0.559	1 .91	29.7	35.3	2.26	26.7	0.01			229	215
250 ISL	9.18	9.15	34.192	26.461	161.1	0.595	1 .83	28.3	38.3	2.34	27.6	0.01			251	
270	8.80	8.77	34.187	26.518	155.9	0.627	1 .75	26.8	40.7	2.38	28.4	0.01			272	216
300 ISL	8.39	8.36	34.159	26.560	152.3	0.673	1 .77	26.9	42.9	2.41	29.3	0.01			302	
316	8.20	8.17	34.144	26.577	150.8	0.697	1 .78	26.9	44.1	2.42	29.7	0.01			318	217
378	7.55	7.51	34.176	26.698	140.0	0.787	1 .36	20.2	52 .9	2 .64	32.3	0.01			380	218
400 ISL	7.35	7.31	34.194	26.741	136.2	0.818	1.16	17.2	56.5	2 .73	33.4	0.01			403	
437	7.03	6.99	34.227	26.812	129.8	0.867	0.84	12.4	62.6	2 .88	35.0	0.01			440	219
500 ISL	6.58	6.53	34.273	26.909	121 .1	0.946	0.53	7.7	71 .6	3.04	36.6	0.01			503	
510	6.51	6.46	34.281	26.925	119.7	0.958	0.48	7.0	73.0	3.07	36.9	0.01			513	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 40I

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 39<.6 N	118 58.8 W	12/01/95	1814 UTC	781 m	070	18 kn	070 04 05	5	1018.8 mb	14 .7 C	14 .2 C	22m	02	8/8	AC

DEPTH m	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/ I	P04 uH/l	N03 uH/l	N02 uH/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0 ISL	14.43	14.43	33.237	24.736	319.9	0.000	5.86	100.7	4.6	0.36	0.4	0.03	0.57	0.24	0	
1 A	14.43	14.43	33.237	24.736	320.0	0.003	5.86	100.7	4.6	0.36	0.4	0.03	0.57	0.24	1	201 |
10 ISL	14.46	14.46	33.250	24.740	319.8	0.032	5.85	100.6	4.4	0.36	0.3	0.03	0.56	0.25	10	
11 A	14.46	14.46	33.251	24.740	319.8	0.035	5 .85	100.6	4.4	0.36	0.3	0.03	0.56	0.25	11	202
19	14.59	14.59	33.347	24.787	315.6	0.061	5.78	99.8	4.1	0.36	0.4	0.04	0.57	0.29	19	203
20 ISL	14.57	14.57	33.347	24.792	315.2	0.064	5.78	99.7	4. 1	0.36	0.4	0.04	0.56	0.29	20	
27 A	14.39	14.39	33.327	24.814	313.2	0.086	5.81	99.8	4.0	0.36	0.4	0.06	0.44	0.26	27	204
30 ISL	14.35	14.35	33.325	24.821	312.7	0.095	5.81	99.8	4.0	0.37	0.5	0.07	0.39	0.24	30	
36	14.23	14.22	33.317	24.841	311.0	0.114	5 .80	99.3	4. 1	0.38	0.6	0.08	0.30	0.20	36	205
42 A	13.94	13.93	33.287	24.878	307.6	0.132	5.82	99. 1	4.3	0.39	0.7	0.10	0.26	0.17	42	*20i*
49	13.97	13.96	33.299	24.881	307.5	0.154	5.74	97.8	4.5	0.42	1 .2	0.12	0.20	0.15	49	207
50 ISL	13.95	13.94	33.315	24.898	305.9	0.157	5 .68	96.7	4.6	0.44	1 .5	0.13	0.19	0.15	50	
57 A	13.71	13.70	33.430	25.036	293.0	0.178	5.23	88.7	6.0	0.59	3.7	0.15	0.15	0.15	57	208
67	13.08	13.07	33.446	25.176	279.9	0.207	4.81	80.5	8.0	0.81	6.9	0.06	0.16	0.17	67	209
75 ISL	12.60	12.59	33.452	25.275	270.6	0.229	4.64	76.9	9.5	0.91	8.6	0.03	0.12	0.14	75	
78 A	12.40	12.39	33.453	25.314	266.9	0.237	4.61	76.1	10.0	0.94	9.2	0.03	0.10	0.13	78	210
88	11.51	11.50	33.446	25 .476	251.7	0.263	4.55	73.7	12.0	1 .07	11.3	0.02	0.06	0.09	88	211
98	1 1 .00	10.99	33.461	25.580	241 .9	0.287	4.43	70.9	13.6	1.17	13.0	0.02	0.05	0.08	98	212
100 ISL	10.90	10.89	33.466	25.601	239.9	0.292	4.40	70.3	14.0	1.19	13.4	0.02	0.05	0.08	100	
1 18	10.11	10.10	33.546	25.801	221 .2	0.334	4.05	63.6	18.0	1 .43	16.8	0.01	0.02	0.05	1 19	213
125 ISL	9.88	9.87	33.602	25.883	213.5	0.349	3.84	60.1	20.0	1 .53	18.3	0.01	0.02	0.05	126	
139	9.52	9.50	33.728	26.041	198.7	0.378	3.38	52.5	24.2	1 .72	21.0	0.01	0.02	0.05	140	214
150 ISL	9.33	9.31	33.823	26.147	188.8	0.399	3.06	47.3	27.1	1 .85	22.7	0.01	0.01	0.05	151	
168	9.12	9.10	33.951	26.281	176.4	0.432	2.65	40.8	31 .0	2.02	24.7	0.01	0.00	0. 04	169	215
199	8.81	8.79	34.032	26.394	166.3	0.485	2.42	37.1	34.3	2.13	26.2	0.01	0.00	0.03	200	216
200 ISL	8.81	8.79	34.035	26.396	166.0	0.487	2.41	36.9	34.4	2.14	26.3	0.01			201	
227	8.73	8.71	34. 115	26.472	159.4	0.531	2 .07	31 .7	38.2	2.27	27.7	0.01			228	217
250 ISL	8.42	8.39	3 4.129	26.531	154.1	0.567	1 .95	29.6	41 .2	2.34	28.8	0.01			251	
269	8.14	8.11	34. 128	26.573	150.3	0.596	1 .88	28.4	43.6	2.38	29.6	0.01			271	218
300 ISL	7.92	7.89	34.151	26.624	145.9	0.641	1 .67	25.1	46.8	2.47	30.6	0.01			302	
317	7.83	7.80	34.165	26.648	143.9	0.666	1 .54	23.1	48.7	2.53	31 .2	0.01			319	219
378	7.27	7.23	34.208	26.763	133.7	0.751	1 .03	15.2	58.1	2.78	33.9	0.01			380	220
400 ISL	7.15	7.11	34.221	26.790	131.3	0.780	0.88	13.0	60.4	2.84	34.5	0.01			403	
438	6.96	6.92	34.243	26.834	127.7	0.829	0.68	10.0	64. 1	2.92	35.3	0.01			441	221
500 ISL	6.58	6.53	34.279	26.914	120.6	0.906	0.49	7.1	71 .8	3.04	36.7	0.01			503	
514	6.50	6.45	34.287	26.931	119.2	0.923	0.45	6.5	73.6	3.07	37.0	0.01			518	222

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 87 45

LATITUDE	L0N6ITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL.	CLD	AHT	TYPE
33 29>.3 N	119 19.0 W	12/01/95	2134 UTC	1637 m	330 06 kn	190 05 07	4	1018.1 mb	15.0 C	14.6 C	19m 03		7/8	ST

DEPTH m		TEMP DES C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uH/l	P04 uH/l	N03 uH/I	N02 UN/I	CHL-A ug/I	PHAEO ug/L	PRES db	SAHP
0	ISL	13.85	13.85	33.134	24.777	316.0	0.000	6.03	102.4	4.7	0.41	1.2	0.09	1.12	0.31	0	
1		13.85	13.85	33.134	24.777	316.0	0.003	6.03	102.4	4.7	0.41	1.2	0.09	1.12	0.31	1	201
9		13.68	13.68	33.217	24.876	306.8	0.028	6.01	101.7	4.4	0.41	1.2	0.09	0.90	0.43	9	202
10	ISL	13.67	13.67	33.228	24.887	305.8	0.031	6.00	101.5	4.4	0.41	1.2	0.09	0.88	0.43	10	
19		13.57	13.57	33.310	24.971	298.1	0.058	5.89	99.5	4.6	0.44	1.6	0.10	0.73	0.43	19	203
20	ISL	13.56	13.56	33.313	24.975	297.7	0.061	5.88	99.3	4.6	0.44	1.6	0.10	0.71	0.43	20	
30		13.34	13.34	33.330	25.033	292.5	0.091	5.73	96.4	5.5	0.51	2.6	0.12	0.55	0.39	30	204
40		12.76	12.75	33.361	25.172	279.5	0.119	5.37	89.2	7.5	0.68	5.2	0.16	0.38	0.33	40	205
49		12.24	12.23	33.403	25.305	267.0	0.144	4.96	81.6	9.9	0.88	8.2	0.15	0.22	0.22	49	206
50	ISL	12.17	12.16	33.409	25.323	265.3	0.147	4.91	80.6	10.3	0.91	8.6	0.14	0.21	0.22	50	
60		11.45	11.44	33.472	25.506	248.1	0.172	4.42	71.5	14.0	1.16	12.7	0.07	0.16	0.18	60	207
69		10.84	10.83	33.512	25.647	234.8	0.194	4.13	65.9	16.5	1.32	15.0	0.04	0.13	0.19	69	208
75	ISL	10.48	10.47	33.546	25.737	226.4	0.208	3.97	62.9	18.2	1.42	16.5	0.03	0.09	0.15	75	
84		10.05	10.04	33.595	25.849	215.9	0.228	3.79	59.5	20.5	1.54	18.3	0.02	0.04	0.08	84	209
100		9.70	9.69	33.643	25.945	207.0	0.262	3.61	56.3	22.3	1.64	19.8	0.01	0.02	0.08	101	210
119		9.32	9.31	33.728	26.073	195.2	0.300	3.36	51.9	25.4	1.78	21.8	0.01	0.01	0.05	120	21 1
125	ISL	9.18	9.17	33.767	26.126	190.2	0.311	3.26	50.3	26.8	1.83	22.5	0.01	0.01	0.05	126	
137		8.94	8.93	33.847	26.227	180.8	0.334	3.05	46.8	29.5	1.92	23.9	0.01	0.00	0.04	138	212
150	ISL	8.82	8.80	33.908	26.294	174.7	0.357	2.85	43.6	31.7	2.00	24.9	0.01	0.00	0.03	151	
169		8.73	8.71	33.974	26.360	168.8	0.389	2.60	39.7	34.3	2.09	25.9	0.01	0.00	0.03	170	213
199		8.47	8.45	34.055	26.464	159.4	0.439	2.31	35.1	38.5	2.22	27.6	0.01	0.00	0.03	200	214
200	ISL	8.46	8.44	34.057	26.467	159.1	0.440	2.30	34.9	38.6	2.22	27.6	0.01			201	
228		8.34	8.32	34.106	26.525	154.2	0.484	1.99	30.2	41.9	2.34	28.8	0.01			229	215
250	ISL	8.23	8.20	34.135	26.564	150.8	0.518	1.80	27.2	44.2	2.42	29.7	0.01			251	
268		8.13	8.10	34.154	26.594	148.2	0.545	1.66	25.0	46.2	2.48	30.4	0.01			270	216
300	ISL	7.85	7.82	34.180	26.657	142.8	0.591	1.41	21.1	50.4	2.60	31.6	0.01			302	
316		7.71	7.68	34.191	26.686	140.2	0.614	1.30	19.4	52.5	2.65	32.2	0.01			318	217
381		7.36	7.32	34.226	26.764	133.6	0.703	0.95	14.1	58.7	2.80	33.9	0.01			383	218
400	ISL	7.24	7.20	34.236	26.789	131.5	0.728	0.86	12.7	60.8	2.85	34.4	0.01			403	
440		6.97	6.93	34.256	26.843	126.8	0.780	0.70	10.3	65.5	2.95	35.4	0.01			443	219
500	ISL	6.60	6.55	34.280	26.912	120.8	0.854	0.51	7.4	72.2	3.05	36.7	0.01			503	
509		6.54	6.49	34.284	26.923	119.9	0.865	0.48	7.0	73.2	3.07	36.9	0.01			513	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 87 50

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 1S1.4 N	119 39.8 W	13/01/95	0139 UTC	79 m	290 12 kn			1019.5 mb	14..6 C	14.0 C				

DEPTH D		TEHP DES C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uH/I	P04 uH/I	N03 uH/l	N02 UH/l	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	13.90	13.90	33.264	24.867	307.4	0.000	5.99	101.9	5.2	0.44	0.9	0.09	0.71	0.24	0	
2		13.90	13.90	33.264	24.867	307.5	0.006	5.99	101.9	5.2	0.44	0.9	0.09	0.71	0.24	2	201
10		13.76	13.76	33.268	24.899	304.6	0.031	6.02	102.1	4.7	0.43	0.8	0.09	0.71	0.24	10	202
20	ISL	13.67	13.67	33.281	24.928	302.2	0.061	5.97	101.1	4.6	0.43	0.8	0.11	0.66	0.31	20	
21		13.66	13.66	33.283	24.932	301.9	0.064	5.96	100.9	4.6	0.43	0.8	0.11	0.66	0.32	21	203
29		13.58	13.58	33.297	24.959	299.5	0.088	5.95	100.5	4.4	0.43	0.8	0.14	0.53	0.31	29	204
30	ISL	13.57	13.57	33.300	24.963	299.1	0.091	5.95	100.5	4.4	0.43	0.8	0.15	0.50	0.31	30	
40		13.44	13.43	33.334	25.016	294.3	0.121	5.86	98.8	4.7	0.46	1.4	0.19	0.28	0.28	40	205
50		13.27	13.26	33.352	25.065	290.0	0.150	5.64	94.7	5.7	0.55	2.6	0.18	0.26	0.22	50	206
60		13.27	13.26	33.351	25.064	290.3	0.179	5.62	94.4	5.7	0.56	2.6	0.16	0.26	0.23	60	207
68		13.25	13.24	33.356	25.072	289.8	0.202	5.54	93.0	5.9	0.60	3.0	0.16	0.23	0.22	68	208

RV DAVID STARR JORDAN CALCOFI CRUISE 9501I STATION 87 55

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 9.7 N	120 0.5 U	13/01/95	0512 UTC	1184 m	270 06 kn			1021.1 mb	13.3 C	13.3 C				

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/I	P04 uH/l	N03 uH/I	N02 uH/l	CHL-A ug/I	PHAEO ug/I	PRES db	SAHP
0	ISL	13.87	13.87	33.222	24.841	309.9	0.000	6.03	102.5	4.4	0.36	0.3	0.06	1.01	0.41	0	
3		13.87	13.87	33.222	24.841	310.0	0.009	6.03	102.5	4.4	0.36	0.3	0.06	1.01	0.41	3	201
10		13.87	13.87	33.221	24.840	310.2	0.031	6.05	102.8	4.3	0.36	0.3	0.06	1.05	0.40	10	202
20		13.86	13.86	33.226	24.847	309.9	0.062	6.03	102.4	4.1	0.36	0.3	0.06	0.87	0.35	20	203
30		13.83	13.83	33.240	24.864	308.6	0.093	6.02	102.2	4.0	0.37	0.3	0.08	0.81	0.43	30	204
41		13.61	13.60	33.311	24.964	299.3	0.126	5.84	98.8	4.6	0.44	1.1	0.22	0.34	0.31	41	205
48		13.44	13.43	33.336	25.018	294.4	0.147	5.71	96.2	5.1	0.49	2.0	0.27	0.25	0.26	48	206
50	ISL	13.31	13.30	33.340	25.047	291.6	0.153	5.65	95.0	5.4	0.52	2.5	0.25	0.23	0.25	50	
60		12.61	12.60	33.356	25.198	277.5	0.181	5.32	88.1	7.4	0.70	5.5	0.09	0.15	0.21	60	207
68		12.23	12.22	33.373	25.284	269.5	0.203	5.05	83.0	9.0	0.83	7.5	0.05	0.10	0.15	68	208
75	ISL	11.71	11.70	33.380	25.387	259.8	0.222	4.87	79.2	10.5	0.95	9.4	0.03	0.07	0.13	75	
85		10.95	10.94	33.403	25.543	245.1	0.247	4.62	73.9	13.0	1.12	12.2	0.02	0.05	0.11	85	209
100		10.19	10.18	33.493	25.746	226.0	0.282	4.07	64.1	17.4	1.42	16.7	0.01	0.04	0.09	100	210
118		9.12	9.11	33.684	26.071	195.3	0.320	3.68	56.6	24.1	1.69	21.2	0.01	0.01	0.04	1 19	211
125	ISL	8.95	8.94	33.721	26.127	190.1	0.334	3.61	55.3	25.4	1.74	22.0	0.01	0.01	0.04	126	
140		8.75	8.74	33.773	26.199	183.5	0.362	3.49	53.3	27.4	1.82	22.9	0.01	0.01	0.03	141	212
150	ISL	8.58	8.56	33.820	26.262	177.6	0.380	3.35	51.0	29.2	1.88	23.7	0.01	0.01	0.03	1 51	
170		8.28	8.26	33.903	26.373	167.4	0.414	3.07	46.4	32.8	1.98	25.3	0.00	0.00	0.03	171	213
200		7.98	7.96	33.965	26.467	158.9	0.463	2.89	43.4	37.3	2.08	26.9	0.00	0.00	0.02	201	214
229		7.76	7.74	34.021	26.544	152.1	0.508	2.53	37.8	41.8	2.22	28.8	0.00			230	215
250	ISL	7.58	7.56	34.039	26.584	148.6	0.540	2.37	35.3	44.2	2.29	29.6	0.00			251	
270		7.40	7.37	34.048	26.617	145.7	0.569	2.25	33.4	46.4	2.35	30.3	0.00			272	216
300	ISL	7.13	7.10	34.058	26.663	141.7	0.613	2.01	29.6	51.1	2.46	31.9	0.00			302	
317		6.98	6.95	34.065	26.689	139.3	0.636	1.85	27.2	54.0	2.53	32.8	0.00			319	217
376		6.59	6.56	34.134	26.797	129.8	0.716	1.18	17.2	63.8	2.79	35.6	0.00			378	218
400	ISL	6.68	6.64	34.185	26.825	127.6	0.747	0.96	14.0	65.4	2.88	35.9	0.00			403	
432		6.78	6.74	34.246	26.860	124.9	0.787	0.73	10.7	67.4	2.97	36.2	0.00			435	219
500	ISL	6.06	6.02	34.239	26.949	116.7	0.869	0.58	8.3	77.7	3.08	38.5	0.00			503	
510		5.95	5.91	34.239	26.963	115.4	0.881	0.56	8.0	79.2	3.10	38.8	0.00			514	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 59.8 N	120 20.7 W	13/01/95	0927	UTC	710 m	210	04 kn			1021.1 mb	14..3 C	14..3 C			

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uN/l	P04 uN/ I	N03 uN/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.75	13.75	33.243	24.882	306.0	0.000	6.06	102.7	4.2	0.37	0.6	0.07	1 .24	0.46	0	
2		13.75	13.75	33.243	24.882	306. 1	0.006	6.06	102.7	4.2	0.37	0.6	0.07	1 .24	0.46	2	201
10	ISL	13.72	13.72	33.262	24.903	304.3	0.031	6.04	102.3	3.9	0.38	0.6	0.08	1.14	0.40	10	
11		13.71	13.71	33.266	24.908	303.8	0.034	6.03	102.2	3.9	0.38	0.6	0.08	1.11	0.39	1 1	202
19		13.64	13.64	33.304	24.952	299.9	0.058	5.95	100.7	3.9	0.40	0.7	0.12	0.75	0.37	19	203
20	ISL	13.64	13.64	33.306	24.953	299.8	0.061	5.95	100.7	3.9	0.40	0.7	0.12	0.72	0.36	20	
30	ISL	13.59	13.59	33.317	24.972	298.2	0.091	5.91	99.9	4.2	0.42	1 .0	0.16	0.53	0.30	30	
31		13.58	13.58	33.318	24.975	298.0	0.094	5.91	99.9	4.2	0.42	1 .1	0.16	0.52	0.29	31	204
40		13.40	13.39	33.341	25.030	293.0	0.120	5.76	97.0	4.8	0.48	1 .9	0.23	0.37	0.29	40	205
50		13.26	13.25	33.356	25.070	289.5	0.149	5.65	94.9	5.5	0.54	2.7	0.23	0.36	0.31	50	206
60		12.02	12.01	33.401	25.346	263.4	0.177	4.95	81 .0	9.8	0.89	8.5	0.06	0.21	0.27	60	207
69		10.85	10.84	33.466	25.610	238.4	0.200	4.31	68.8	14.9	1 .26	14.2	0.02	0.09	0.15	69	208
75	ISL	10.44	10.43	33.504	25.711	228.8	0.214	4.05	64.1	17.2	1 .40	16.3	0.02	0.08	0.15	75	
85		10.08	10.07	33.551	25.809	219.7	0.236	3.84	60.3	19.6	1 .52	18.1	0.01	0.05	0.15	85	209
99		9.76	9.75	33.584	25.889	212.4	0.266	3.84	59.9	20.8	1 .56	18.8	0.01	0.03	0.09	99	210
100	ISL	9.75	9.74	33.588	25.893	211.9	0.268	3.82	59.6	20.9	1 .57	18.9	0.01	0.03	0.09	100	
120		9.41	9.40	33.691	26.030	199.3	0.309	3.37	52.2	24.5	1 .76	21 .6	0.01	0.02	0.09	121	211
125	ISL	9.22	9.21	33.726	26.088	193.9	0.319	3.31	51 .1	25.9	1 .80	22.3	0.01	0.02	0.08	126	
139		8.69	8.68	33.821	26.246	179.0	0.345	3.21	49.0	29.6	1 .89	24.1	0.01	0.01	0.04	140	212
150	ISL	8.48	8.46	33.847	26.299	174.2	0.365	3.32	50.4	30.3	1 .89	24. 1	0.01	0.01	0.04	151	
176		8.20	8.18	33.877	26.365	168.3	0.409	3.51	53.0	31 .5	1 .87	24.2		0.01	0.03	177	213
200	ISL	7.88	7.86	33.964	26.481	157.6	0.448	3.06	45.9	36.6	2.02	26.4	0.00	0.00	0.01	201	
201		7.87	7.85	33.968	26.486	157.2	0.450	3.03	45 .4	36.8	2.03	26.5		0.00	0.01	202	214
230		7.75	7.73	34.050	26.568	149.8	0.495	2.34	35.0	43.2	2.29	29.3	0.00			231	215
250	ISL	7.61	7.59	34.084	26.615	145.6	0.524	2.01	30.0	47. 1	2.41	30.7	0.00			251	
268		7.47	7.44	34.108	26.654	142 .2	0.550	1 .76	26.1	50.3	2.50	31 .7	0.00			270	216
300	ISL	7.30	7.27	34.162	26.721	136.3	0.595	1 .32	19.5	55.7	2.67	33.3	0.00			302	
320		7.16	7.13	34.188	26.761	132.7	0.621	1 .09	16.1	59.2	2.77	34.2	0.00			322	217
376		6.33	6.30	34.191	26.876	122.1	0.693	0.78	11.3	70.7	2.97	37.2	0.00			378	218
400	ISL	6.11	6.07	34.194	26.906	119.4	0.722	0.70	10.1	74.1	3.02	38.0	0.00			403	
434		5 .89	5.85	34.204	26.942	116.3	0.762	0.61	8.7	78.0	3.08	38.8	0.00			437	219
500	ISL	5.70	5.66	34.258	27.009	110.6	0.837	0.41	5 .8	83.5	3.17	39.7	0.00			503	
511		5.67	5.63	34.267	27.020	109.7	0.849	0.38	5.4	84.4	3.19	39.8	0.00			515	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 39.3 N	121 1 .8 W	13/01/95	1807	UTC	4122 m	180	07 kn	230 04 0[illegible]	4	1024.4 mb	15 .6 C	15 .4 C	23m 02	8/8	

DEPTH in		TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uH/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.00	15.00	33.129	24.531	339.5	0.000	5.87	102.0	4.8	0.31	0.1	0.00	0.33	0.13	0	
2	A	15 .00	15 .00	33.129	24.531	339.5	0.007	5.87	102.0	4.8	0.31	0.1	0.00	0.33	0.13	2	201
8		14.90	14.90	33.128	24.552	337.7	0.027	5.86	101 .6	4.5	0.31	0.1	0.00	0.35	0.13	8	202
10	ISL	14.73	14.73	33.127	24.587	334.4	0.034	5.88	101.6	4 .4	0.31	0. 1	0.00	0.39	0.14	10	
13	A	14.45	14.45	33.129	24.649	328.6	0.044	5 .92	101 .7	4.4	0.32	0.1	0.01	0.48	0.17	13	203
20	ISL	14.12	14.12	33.158	24.740	320. 1	0.066	5.95	101.6	4.4	0.34	0.3	0.03	0.78	0.32	20	
21		14.08	14.08	33. 166	24.755	318.7	0.070	5.95	101 .5	4.4	0.35	0.3	0.03	0.81	0.34	21	204
30	A	13.63	13.63	33.292	24.945	300.8	0.098	5.84	98.8	4.6	0.43	1 .3	0.09	0.58	0.37	30	20!
35		13.49	13.49	33.329	25.002	295.5	0.112	5.84	98.5	4.3	0.45	1 .5	0.11	0.55	0.47	35	206
45	A	13.31	13.30	33.355	25.059	290.4	0. 142	5.80	97.5	4.4	0.49	2.0	0.14	0.45	0.43	45	207
50	ISL	12 .90	12.89	33.372	25.153	281 .5	0.156	5.57	92.8	6.3	0.62	4.0	0.20	0.42	0.42	50	
52		12.73	12.72	33.381	25.194	277.7	0.162	5.45	90.5	7.2	0.68	5.0	0.23	0.40	0.41	52	208
59	A	12.40	12.39	33.431	25.297	268.1	0.181	5.02	82.8	9.7	0.86	7.8	0.26	0.31	0.38	59	209
69		11.21	11 .20	33.494	25.567	242.5	0.206	4.28	68.9	14.9	1 .22	13.7	0.09	0.18	0.25	69	210
75	ISL	10.74	10.73	33.537	25.684	231 .4	0.220	4.01	63.9	17.2	1 .37	16.0	0.04	0.12	0.19	75	
81	A	10.37	10.36	33.576	25.779	222.5	0.234	3.82	60.4	19.1	1 .49	17.7	0.02	0.08	0.14	81	211
99		9.49	9.48	33.647	25.982	203.4	0.272	3.60	55.8	22.6	1 .66	20.3	0.01	0.02	0.09	99	212
100	ISL	9.46	9.45	33.651	25.990	202.7	0.274	3.59	55.6	22 .8	1 .67	20.4	0.01	0.02	0.09	100	
119		8.93	8.92	33.735	26.141	188.7	0.312	3.42	52.4	26.4	1 .81	22.8	0.01	0.01	0.05	120	213
125	ISL	8.77	8.76	33.763	26.188	184.3	0.323	3.40	51.9	27.5	1 .84	23.3	0.01	0.01	0.05	126	
139		8.45	8.44	33.822	26.284	175.4	0.348	3.37	51 . 1	29.7	1 .88	24.1	0.00	0.00	0.05	140	2H
150	ISL	8.30	8.28	33.852	26.330	171.1	0.367	3.34	50.5	30.8	1 .90	24.5	0.00	0.00	0.05	151	
167		8.13	8.11	33.891	26.386	166.1	0.396	3.30	49.7	32.6	1 .93	25.1	0.00	0.00	0.04	168	215
198		7.77	7.75	33.977	26.507	155.0	0.445	2 .86	42.8	38.7	2.11	27.4	0.00	0.00	0.03	199	216
200	ISL	7.76	7.74	33.980	26.511	154.7	0.449	2.84	42 .4	39.0	2.12	27.5	0.00			201	
228		7.56	7.54	34.003	26.558	150.6	0.491	2.64	39.3	42.1	2.19	28.7	0.00			229	217
250	ISL	7.35	7.33	34.017	26.599	147.0	0.524	2.48	36.7	45.2	2.26	29.8	0.00			251	
267		7.16	7.13	34.027	26.634	143.9	0.549	2.34	34.5	47.9	2.33	30.7	0.00			269	21!
300	ISL	6.75	6.72	34.043	26.703	137.6	0.595	1 .99	29.1	54.3	2.49	32.8	0.00			302	
317		6. 55	6.52	34.051	26.736	134.6	0.618	1 .80	26.2	57.7	2.58	33.8	0.00			319	219
377		6.07	6.04	34.086	26.826	126.6	0.697	1 .26	18.1	67.5	2.81	36.6	0.00			379	220
400	ISL	5.94	5 .91	34.114	26.865	123.1	0.725	1 .04	14.9	71 .3	2.90	37.5	0.00			403	
442		5.77	5.73	34.176	26.935	116.9	0.776	0.68	9.7	77.5	3.05	38.9	0.00			445	221
500	ISL	5.71	5.67	34.265	27.013	110.3	0.842	0.41	5.8	82.7	3.15	39.5	0.00			503	
514		5.70	5.66	34.287	27.032	108.6	0.857	0.35	5.0	84.0	3.18	39.7	0.00			518	222

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 87 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 19.2 N	121 43.0 W	13/01/95	2337	UTC	4122 in	210	09 kn	230 01 06	1	1021.9 mb	16.3 C	15.6 C	22m 01	6/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/ l	P04 uH/l	N03 UN/1	N02 uM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.41	15.41	33.126	24.439	348.2	0.000	5.79	101 .5	4.5	0.32	0.0	0.00	0.20	0.07	0	
2		15.41	15.41	33.126	24.439	348.3	0.007	5.79	101.5	4.5	0.32	0.0	0.00	0.20	0.07	2	201
10	ISL	15.29	15.29	33.130	24.469	345.7	0.035	5.80	101 .4	4.4	0.31	0.0	0.00	0.20	0.08	10	
15		15.20	15.20	33.134	24.491	343.7	0.052	5.81	101 .4	4.3	0.31	0.0	0.00	0.20	0.08	15	202
20	ISL	15.16	15.16	33.135	24.501	342.9	0.069	5.81	101 .3	4.3	0.31	0.0	0.00	0.20	0.08	20	
30		15.12	15.12	33.135	24.510	342.3	0.103	5.81	101 .2	4.3	0.31	0.0	0.00	0.22	0.09	30	203
44		15.11	15.10	33.139	24.516	342.2	0.151	5.80	101.0	4.2	0.31	0.0	0.00	0.26	0.11	44	204
50	ISL	15.11	15.10	33.1*2	24.518	342.1	0.172	5.79	100.8	4.1	0.31	0.0	0.00	0.28	0.12	50	
55		15.11	15.10	33.144	24.520	342.1	0.189	5.79	100.8	4.0	0.31	0.0	0.00	0.29	0.12	55	205
65		15.10	15.09	33.144	24.523	342.2	0.223	5.79	100.8	4.0	0.31	0.0	0.00	0.29	0.12	65	206
75		15.09	15.08	33.154	24.533	341 .5	0.257	5.79	100.8	4.0	0.31	0.0	0.00	0.31	0.14	75	207
85		15.05	15.04	33.158	24.545	340.7	0.291	5.75	100.0	4.0	0.31	0.0	0.01	0.26	0.13	85	208
92		14.69	14.68	33.178	24.638	332.0	0.315	5.75	99.3	4.0	0.35	0.1	0.16	0.13	0.10	92	209
100	ISL	14.32	14.31	33.217	24.746	321 .8	0.341	5.74	98.4	4.1	0.38	0.4	0.21	0.13	0.10	100	
108		13.97	13.95	33.262	24.854	311 .7	0.366	5.73	97.6	4 .3	0.40	0.9	0.26	0.12	0.10	108	210
124		13.20	13.18	33.346	25.076	290.9	0.415	5.75	96.4	5.1	0.46	2 .0	0.19	0.11	0.10	125	211
125	ISL	13.16	13.14	33.343	25.082	290.4	0.418	5 .74	96.2	5.1	0.46	2.1	0.18	0.11	0.10	126	
144		12.32	12.30	33.270	25.189	280.5	0.472	5.61	92.3	6.6	0.64	4.7	0.06	0.06	0.08	145	212
150	ISL	11 .84	11 .82	33.286	25.292	270.7	0.488	5.37	87.5	8.3	0.78	6.8	0.04	0.05	0.07	151	
167		10.42	10.40	33.391	25.628	238.7	0.532	4.59	72.5	14.2	1.21	13.6	0.01	0.02	0.04	168	213
198		8.81	8.79	33.642	26.088	195.1	0. 599	3.77	57.6	24.8	1 .72	21 .7	0.00	0.01	0.01	199	214
200	ISL	8.76	8.74	33.657	26.108	193.3	0.603	3.75	57.2	25.2	1 .73	21.9	0.00			201	
228		8.29	8.27	33.831	26.316	173.9	0.654	3.58	54. 1	29.7	1 .83	23.6	0.00			229	215
250	ISL	8.09	8.06	33.880	26.385	167.7	0.692	3.46	52.1	31 .2	1 .87	24.2	0.00			251	
270		7.93	7.90	33.90	26.425	164.2	0.725	3.32	49.8	32.9	1 .92	24.9	0.00			271	216
300	ISL	7.55	7.52	33.971	26.536	154.0	0.773	2.91	43.3	40.2	2.09	27.5	0.00			302	
317		7.33	7.30	34.010	26.598	148.3	0.798	2 .63	38.9	44.9	2.21	29.2	0.00			319	217
377		6.86	6.82	34.089	26.725	136.8	0.884	1 .64	24.0	56.7	2.59	33.4	0.00			379	218
400	ISL	6.72	6.68	34.123	26.771	132.7	0.915	1 .35	19.7	61 .0	2.71	34 .7	0.00			402	
436		6.50	6.46	34.170	26.838	126.8	0.962	0.99	14.4	67.2	2 .88	36.3	0.00			439	219
500	ISL	6.00	5.96	34.212	26.936	117.9	1 .040	0.65	9.3	76.5	3.05	38.3	0.00			503	
516		5.88	5.84	34.223	26.959	115.7	1 .059	0.56	8.0	78.8	3.09	38.8	0.00			519	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 59.8 N	122 23.7 W	14/01/95	0558	UTC	4089 m	200	08 kn			1022.5 mb	16,2 C	15,4 C			

DEPTH D		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 uM/l	N03 uM/ l	N02 uM/L	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0	ISL	15.85	15.85	33.302	24.476	344 .6	0.000	5.75	101.8	4.5	0.31	0.1	0.00	0.13	0.06	0	
2		15.85	15.85	33.302	24.476	344.7	0.007	5.75	101.8	4.5	0.31	0. 1	0.00	0.13	0.06	2	201
10	ISL	15.78	15.78	33.300	24.491	343.6	0.034	5 .74	101.4	4.3	0.30	0. 1	0.00	0.15	0.06	10	
15		15.73	15.73	33.300	24.502	342.6	0.052	5. 74	101 .3	4 .1	0.30	0. 1	0.00	0.16	0.06	15	202
20	ISL	15.72	15.72	33.305	24.509	342.2	0.069	5 .74	101 .3	4 .1	0.30	0. 1	0.00	0.17	0.07	20	
30	ISL	15.70	15.70	33.309	24.516	341 .8	0. 103	5 .74	101.3	4. 1	0.30	0.0	0.00	0.19	0.09	30	
31		15.70	15.70	33.309	24.516	341.8	0.106	5 .74	101.3	4. 1	0.30	0.0	0.00	0.19	0.09	31	203
44		15.69	15.68	33.310	24.520	341 .9	0.151	5 .74	101.3	3.9	0.30	0.0	0.00	0.23	0.10	44	204
50	ISL	15.69	15.68	33.311	24.521	342.0	0.171	5 .71	100.7	3.9	0.30	0.0	0.00	0.24	0.11	50	
54		15.69	15 .68	33.311	24.521	342 . 1	0.185	5.70	100.5	3.9	0.30	0.0	0.00	0.25	0.11	54	205
65		15.69	15.68	33.315	24.524	342 . 1	0.223	5 .73	101.1	3.7	0. 30	0.0	0.00	0.27	0.12	65	206
73		15.59	15.58	33.330	24.558	339.1	0.250	5.71	100.5	3.7	0.30	0.0	0.01	0.26	0.14	73	207
75	ISL	15.50	15.49	33.335	24.582	336.9	0.257	5.71	100.3	3.7	0.30	0.0	0.03	0.25	0.15	75	
84		15.02	15.01	33.377	24.720	324.0	0.286	5 .68	98.9	4.0	0.33	0.4	0.13	0.21	0.16	84	208
94		14.56	14.55	33.479	24.898	307.3	0.318	5.61	96.8	4 .4	0.37	1 .2	0.07	0.16	0.15	94	209
100	ISL	14.50	14.49	33.581	24.989	298.8	0.336	5.52	95.2	4.7	0.38	1 .6	0.04	0.14	0.14	100	
109		14.41	14.39	33.709	25.107	287.8	0.362	5.38	92.7	5 .1	0.41	2.2	0.02	0.11	0.12	109	210
125		13.60	13.58	33.671	25.247	274.8	0.407	5.21	88.3	6.2	0.52	3.9	0.01	0.07	0.09	126	211
145		11.61	11.59	33.574	25.558	245.2	0.459	4.74	77.0	10.7	0.94	9.9	0.01	0.02	0.04	146	212
150	ISL	11.20	11.18	33.564	25.625	238.9	0.472	4.63	74.5	12.1	1 .04	11.4	0.01	0.02	0.04	1 51	
169		9.93	9.91	33.569	25.850	217.6	0.515	4.25	66.5	17.4	1 .38	16.4	0.00	0.01	0.03	170	213
199		8.94	8.92	33.698	26.112	193.0	0.577	3.92	60.1	23.5	1 .63	20.5	0.00	0.00	0.01	200	214
200	ISL	8.91	8.89	33.704	26.121	192 . 1	0.578	3.91	59.9	23.7	1 .64	20.6	0.00			201	
229		8.26	8.24	33.876	26.356	170.1	0.631	3.66	55.3	30.2	1 .81	23.3	0.00			230	215
250	ISL	8.02	7.99	33.947	26.448	161.7	0.666	3.22	48.4	34.8	1 .97	25.6	0.00			251	
270		7.85	7.82	33.988	26.505	156.5	0.698	2.78	41 .6	39.1	2.13	27.7	0.00			271	216
300	ISL	7.47	7.44	34 .030	26.593	148.5	0.743	2.38	35.3	45.3	2.30	29.9	0.00			302	
315		7.27	7.24	34.042	26.631	145.0	0.765	2.23	33.0	48.4	2.37	30.9	0.00			317	217
377		6.44	6.41	34.056	26.755	133.6	0.852	1 .64	23.8	61 .1	2.66	34.8	0.00			379	218
400	ISL	6.23	6.19	34.072	26.795	130.0	0.882	1 .40	20.2	65.5	2.77	36.0	0.00			402	
438		5.94	5 .90	34. 103	26.856	124.4	0.930	1 .05	15.0	72.5	2.92	37.8	0.00			441	219
500	ISL	5.50	5 .46	34.152	26.949	116.0	1 .005	0.70	9.9	82.6	3.08	39.8	0.00			503	
504		5.47	5.43	34.155	26.955	115.5	1.010	0.68	9.6	83.2	3.09	39.9	0.00			507	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 87 100

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 39'.8 N	123 4.3 W	14/01/95	1218 UTC	4137 m	210 12 kn			1019.4 mb	16..3 C	15..6 C			

DEPTH m		TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uM/l	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.52	15.52	33.299	24.548	337.8	0.000	5.78	101 .6	4.1	0.34	0.0	0.00	0.38	0.13	0	
2		15.52	15.52	33.299	24.548	337.9	0.007	5.78	101.6	4.1	0.34	0.0	0.00	0.38	0.13	2	201
10	ISL	15.52	15.52	33.299	24.548	338.1	0.034	5.79	101.8	4.0	0.33	0.0	0.00	0.39	0.15	10	
11		15.52	15.52	33.299	24.548	338.1	0.037	5.79	101.8	4.0	0.33	0.0	0.00	0.39	0.15	11	202
20		15.47	15.47	33.305	24.564	336.9	0.068	5.79	101.7	3.9	0.33	0.0	0.00	0.43	0.15	20	203
30	ISL	15.36	15.36	33.301	24.586	335.2	0.101	5.79	101 .5	3.9	0.34	0.0	0.00	0.44	0.19	30	
31		15.35	15.35	33.301	24.588	335.0	0.105	5.79	101 .4	3.9	0.34	0.0	0.00	0.44	0.20	31	204
41		15.29	15.28	33.317	24.614	332.8	0. 138	5.75	100.6	3.7	0.34	0. 1	0.01	0.44	0.22	41	205
50	ISL	15.26	15.25	33.329	24.630	331 .6	0.168	5.73	100.2	3.6	0.34	0.2	0.01	0.39	0.23	50	
51		15.26	15.25	33.330	24.630	331 .5	0.171	5.73	100.2	3.6	0.34	0.2	0.01	0.38	0.23	51	206
60		15.17	15.16	33.342	24.660	329.0	0.201	5.71	99.7	3.6	0.36	0.3	0.03	0.29	0.18	60	207
70		15.16	15.15	33.350	24.668	328.5	0.234	5.68	99.2	3.6	0.37	0.4	0.04	0.23	0.14	70	208
75	ISL	14.58	14.57	33.350	24.793	316.7	0.250	5 .40	93.2	5.0	0.53	2.8	0.04	0.22	0.16	75	
85		12.96	12.95	33.370	25.141	283.6	0.280	4.73	78.9	9.2	0.92	8.8	0.04	0.21	0.21	85	209
100	ISL	10.69	10.68	33.456	25.631	237.1	0.319	4.17	66.3	15.8	1 .34	15.3	0.01	0.09	0.10	100	
101		10.56	10.55	33.464	25.659	234.3	0.321	4.14	65.7	16.2	1 .36	15.7	0.01	0.08	0.09	101	210
120		9.62	9.61	33.594	25.920	209.8	0.363	3.61	56.1	22. 1	1 .66	20.4	0.01	0.03	0.04	121	211
125	ISL	9.41	9.40	33.629	25.982	204.0	0.374	3.51	54.3	23.6	1 .72	21 .5	0.01	0.02	0.04	126	
139		8.92	8.91	33.718	26.130	190.1	0.401	3.28	50.3	27.2	1 .86	23.9	0.00	0.01	0.03	140	212
150	ISL	8.73	8.71	33.768	26.199	183.7	0.422	3.15	48.1	29.0	1 .92	24.4	0.00	0.00	0.03	151	
170		8.55	8.53	33.840	26.283	176.1	0.458	2 .98	45.3	31 .4	1 .99	25.2	0.00	0.00	0.03	171	213
198		8.21	8.19	33.938	26.412	164.2	0.506	2.81	42.4	35.3	2.07	26.6	0.00	0.00	0.04	199	214
200	ISL	8.19	8.17	33.943	26.419	163.6	0.509	2.79	42.1	35.6	2.08	26.7	0.00			201	
230		7.83	7.81	34.007	26.523	154.2	0.557	2.52	37.7	40.6	2.20	28.4	0.00			231	215
250	ISL	7.58	7.56	34.029	26.576	149.3	0.587	2.36	35.1	44. 1	2.28	29.5	0.00			251	
269		7.36	7.33	34.043	26.619	145.5	0.615	2.21	32.7	47.5	2.35	30.6	0.00			271	216
300	ISL	7.10	7.07	34.074	26.680	140.1	0.659	1 .87	27.5	52.8	2.50	32.2	0.00			302	
319		6.95	6.92	34.091	26.714	137.0	0.685	1 .65	24.2	56. 1	2.59	33.2	0.00			321	217
377		6.32	6.29	34.131	26.830	126.5	0.762	1 .06	15.3	67.8	2.87	36.4	0.00			379	218
400	ISL	6.12	6.08	34.142	26.864	123.4	0.791	0.91	13.1	71 .4	2.94	37.3	0.00			403	
440		5.84	5.80	34.162	26.915	118.8	0.8*39	0.72	10.3	77.0	3.03	38.6	0.00			443	219
500	ISL	5.55	5.51	34.213	26.992	112.1	0.908	0.49	7.0	84.5	3.15	39.8	0.00			503	
513		5.49	5.45	34.224	27.008	110.7	0.923	0.44	6.2	86.1	3.17	40.1	0.00			516	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 87 110

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 19.4 N	123 44 .5 W	14/01/95	1843 UTC	4011 m	220 11 kn	230 04 05	2	1020.5 mb	17,.0 C	16,.3 C	25m 01	8/8	SC

DEPTH in		TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	15.56	15.56	33.274	24.520	340.5	0.000	5.76	101 .3	4.2	0.32	0.0	0.00	0.19	0.09	0	
1	A	15.56	15.56	33.274	24.520	340.5	0.003	5.76	101.3	4.2	0.32	0.0	0.00	0.19	0.09	1	201
10	ISL	15.56	15.56	33.274	24.520	340.8	0.034	5 . 77	101.5	4 .0	0.32	0.0	0.00	0.20	0.07	10	
14	A	15.56	15.56	33.274	24.520	340.9	0.048	5.78	101.7	3.9	0.32	0.0	0.00	0.20	0.07	14	202
20	ISL	15.47	15.47	33.274	24.540	339.2	0.068	5.78	101.5	3.9	0.32	0.0	0.00	0.22	0.10	20	
3 0	ISL	15.33	15.33	33.274	24.571	336.5	0.102	5.79	101.4	3.9	0.32	0.0	0.00	0.27	0.14	30	
31	A	15.31	15.31	33.274	24.576	336.1	0.105	5.79	101.3	3.9	0.32	0.0	0.00	0.28	0.15	31	203
38		15.28	15.27	33.273	24.582	335.8	0.129	5.78	101.1	3.8	0.32	0.0	0.00	0.34	0.16	38	204
49	A	15.24	15.23	33.274	24.592	335.1	0.166	5.77	100.8	3.7	0.32	0.0	0.00	0.39	0.21	49	205
50	ISL	15.23	15.22	33.275	24.595	334.9	0. 169	5.77	100.8	3.7	0.32	0.0	0.00	0.39	0.21	50	
56		15.19	15.18	33.284	24.611	333.6	0. 189	5.76	100.6	3.7	0.33	0.0	0.01	0.35	0.23	56	206
66	A	15.12	15.11	33.287	24.628	332.2	0.222	5.72	99.7	3.5	0.34	0.2	0.03	0.27	0.17	66	207
74		15.10	15.09	33.352	24.683	327.2	0.249	5.66	98.7	3.5	0.39	0.6	0.05	0.24	0.14	74	208
75	ISL	14.98	14.97	33.347	24.705	325.1	0.252	5 .64	98. 1	3.6	0.40	0.8	0.06	0.24	0.15	75	
81		14.00	13.99	33.315	24.888	307.7	0.271	5.45	92.9	4 .9	0.51	2.6	0.12	0.25	0.20	81	209
89	A	12.41	12.40	33.362	25.242	274.1	0.294	4.93	81 .3	8.4	0.83	7.7	0.02	0.18	0.18	89	210
99		11 .42	11.41	33.374	25.437	255.6	0.321	4.71	76.1	11.0	1 .02	10.6	0.02	0.12	0.12	99	211
100	ISL	11.31	11 .30	33.378	25.460	253.4	0.323	4.67	75.3	11.4	1 .05	11.0	0.02	0.11	0.11	100	
108		10.48	10.47	33.428	25.645	235.8	0.343	4.36	69.0	14.8	1 .27	14.5	0.01	0.06	0.07	108	212
124		9.71	9.70	33.547	25.868	214.8	0.379	3.84	59.8	20.3	1 .59	19.2	0.01	0.03	0.04	125	213
125	ISL	9.68	9.67	33.554	25.879	213.8	0.381	3.81	59.3	20.6	1 .60	19.4	0.01	0.03	0.04	126	
144		9.16	9.14	33.682	26.063	196.6	0.420	3.36	51 .7	25.3	1 .81	22.6	0.01	0.01	0.04	145	214
150	ISL	9.02	9.00	33.722	26.117	191 .5	0.432	3.25	49.9	26.8	1 .86	23.4	0.01	0.01	0.04	151	
169		8.62	8.60	33.831	26.265	177.8	0.467	2 .99	45.5	30.8	1 .98	25.2	0.00	0.00	0.02	170	215
199		8.17	8.15	33.918	26.402	165.2	0.518	2.93	44.2	34.5	2.04	26.2	0.00	0.00	0.02	200	216
200	ISL	8.16	8.14	33.920	26.405	164.9	0.520	2.93	44.2	34.6	2.04	26.2	0.00			201	
228		7.84	7.82	33.980	26.500	156.3	0.565	2.78	41.6	38.8	2.12	27.6	0.00			229	217
250	ISL	7.56	7.54	34.016	26.569	150.0	0.598	2.50	37.2	43.5	2.24	29.2	0.00			251	
268		7.34	7.31	34.037	26.617	145.6	0.625	2.25	33.3	47.5	2.35	30.5	0.00			269	218
300	ISL	7.00	6.97	34.052	26.676	140.3	0.671	1 .98	29. 1	52.7	2.48	32.2	0.00			302	
318		6.83	6.80	34.057	26.703	137.9	0.696	1 .84	26.9	55.5	2.55	33.0	0.00			320	219
377		6.28	6.25	34.106	26.815	127.8	0.774	1.16	16.8	67.4	2.85	36.4	0.00			379	220
400	ISL	6.10	6.06	34.125	26.853	124.4	0.803	0.99	14.2	71 .4	2 .92	37.3	0.00			402	
435		5 .85	5.81	34.156	26.909	119.3	0.846	0.78	11 .2	77.0	3.00	38.4	0.00			438	221
500	ISL	5.50	5 .46	34.217	27.001	111.2	0.921	0.50	7.1	85.8	3.12	39.9	0.00			503	
515		5.42	5.38	34.231	27.022	109.3	0.937	0.43	6.1	87.8	3.15	40.2	0.00			518	222

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 28

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 29.1 N	117 46.3 W	12/01/95	0321 UTC	72 m	180	05 kn			1017.2 mb	14.8 C	14.4 C				

DEPTH m		TEHP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UM/l	P04 uH/l	N03 uH/l	N02 UN/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAHP
0	ISL	14.84	14.84	32.558	24.125	378.1	0.000	5 .90	101.9	9.7	0.59	0.8	0.11	1 .30	0.07	0	
2		14.84	14.84	32.558	24.125	378.2	0.008	5.90	101.9	9.7	0.59	0.8	0.11	1 .30	0.07	2	201
10		14.77	14.77	33.020	24.496	343.0	0.036	5.90	102.0	6.5	0.41	0.2	0.06	10.73	0.72	10	202
19		14.76	14.76	33.215	24.649	328.8	0.067	5.72	99.0	5.3	0.47	0.6	0.12	0.73	0.30	19	203
20	ISL	14.75	14.75	33.226	24.660	327.8	0.070	5.72	99.0	5.2	0.47	0.6	0.12	0.71	0.30	20	
29		14.67	14.67	33.283	24.721	322.2	0.099	5.75	99.4	4.8	0.44	0.7	0.12	0.53	0.25	29	204
30	ISL	14.66	14.66	33.287	24.726	321 .7	0.102	5.75	99.3	4.8	0.44	0.7	0.12	0.52	0.25	30	
40		14.58	14.57	33.310	24.761	318.7	0.134	5.74	99.0	4.5	0.41	0.7	0.08	0.46	0.22	40	205
50	ISL	14.60	14.59	33.320	24.765	318.6	0. 166	5.73	98.9	4.2	0.41	0.7	0.08	0.49	0.23	50	
51		14.60	14.59	33.321	24.766	318.6	0.169	5.73	98.9	4.2	0.41	0.7	0.08	0.49	0.23	51	206
62		14.31	14.30	33.382	24.875	308.5	0.204	5.52	94 .7	4.9	0.50	1 .8	0.18	0.20	0.16	62	207

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 30

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 2[illegible]3 N	117 54.3 W	12/01/95	0032 UTC	614 in	260	09 kn	250 03 05	1	1015.3 mb	15 .0 C	14.7 C		7/8		ST

DEPTH n		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UH/l	P04 uH/ l	N03 uH/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAHP
0	ISL	14.72	14.72	33.337	24.751	318.5	0.000	5.88	101.7	4.8	0.37	0.3	0.04	2 .75	0.40	0	
1		14.72	14.72	33.337	24.751	318.5	0.003	5.88	101.7	4.8	0.37	0.3	0.04	2.75	0.40	1	201
10		14.69	14.69	33.337	24.758	318.1	0.032	5.86	101.3	4.6	0.36	0.3	0.05	1 .45	0. 32	10	202
20		14.66	14.66	33.337	24.765	317.8	0.064	5.76	99. 5	4.4	0.37	0.4	0.06	1.11	0.33	20	203
30		14.66	14.66	33.338	24.766	318.0	0.095	5.78	99.9	4.3	0.37	0.4	0.06	0.88	0.34	30	204
41		14.63	14.62	33.336	24.786	316.3	0.130	5.79	100.0	4.4	0.38	0.5	0.07	0.51	0.26	41	205
50		14.55	14.54	33.368	24.813	314.1	0.159	5.69	98. 1	4.5	0.39	0.8	0.11	0.35	0.23	50	206
60		14.34	14.33	33.382	24.868	309. 1	0. 190	5.60	96.2	4.6	0.44	1 .4	0.16	0.21	0.17	60	207
69		14.06	14.05	33.405	24.945	302.0	0.217	5.34	91 .2	5 .7	0.54	3.0	0.13	0.15	0.16	69	208
75	ISL	13.68	13.67	33.421	25.036	293.5	0.235	5.12	86.8	6.8	0.65	4.7	0.10	0.13	0.16	75	
85		12.96	12.95	33.450	25.203	277.7	0.264	4.75	79.3	8.9	0.84	7.6	0.05	0.12	0.15	85	209
99		12.18	12.17	33.490	25.385	260.6	0.301	4.37	71 .8	11.4	1 .05	10.7	0.03	0.09	0.14	99	210
100	ISL	12.12	12.11	33.496	25.401	259.1	0.304	4 .34	71 .2	11.6	1 .07	11.0	0.03	0.09	0.14	100	
119		11 .07	11 .06	33.603	25.678	233.1	0.351	3.82	61 .3	16.4	1 .38	15.6	0.01	0.03	0.08	120	211
125	ISL	10.73	10.72	33.619	25.751	226.2	0.365	3.75	59.8	17.8	1 .45	16.7	0.01	0.03	0.07	126	
138		10.07	10.05	33.654	25.892	212.9	0.393	3.63	57.0	20.6	1 .58	18.8	0.01	0.02	0.05	139	212
150	ISL	9.68	9.66	33.720	26.009	202.0	0.418	3.41	53.1	23.4	1 .70	20.7	0.01	0.02	0.05	1 51	
168		9.32	9.30	33.826	26.151	188.8	0.453	3.07	47.5	27.2	1 .86	22.9	0.01	0.01	0.04	169	213
200		9.10	9.08	33.938	26.274	177.7	0.512	2.79	43.0	30.6	1 .99	24.6	0.01	0.00	0.03	201	214
229		8.76	8.74	34.100	26.455	161.0	0. 561	2.21	33.8	37.3	2.21	27.3	0.01			230	215
250	ISL	8.61	8.58	34.135	26.506	156.5	0. 594	2 .06	31 .4	40.4	2.30	28.4	0.01			251	
269		8.48	8.45	34.138	26.529	154.7	0.624	2 .00	30.4	37.4 U	2.22 1J	27.2 1J	0.01 U			271	216
300	ISL	8.13	8.10	34.150	26.592	149.1	0.671	1 .78	26.9	46.3	2 .46	30.3	0.01			302	
319		7.91	7.88	34.155	26.629	145.8	0.699	1 .64	24.6	48.0	2 .50	30.7	0.01			321	217
378		7.44	7.40	34.191	26.725	137.3	0.782	1 .25	18.6	55.6	2.69	32.8	0.01			380	218
400	ISL	7.25	7.21	34.203	26.762	134.1	0.812	1 .09	16.1	58.6	2.77	33.7	0.01			403	
438		6.95	6.91	34.224	26.820	128.9	0.862	0.84	12.3	63.9	2.89	35.2	0.00			441	219
500	ISL	6.58	6.53	34.270	26.907	121.3	0.940	0. 54	7.9	71 .9	3.05	36.8	0.01			503	
510		6.52	6.47	34.278	26.921	120.1	0.952	0.49	7.1	73.2	3.07	37.0	0.01			513	220

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RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 35

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROHETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
33 1[illegible]5.4 N	118 14.9 W	11/01/95	2030 UTC	260 m	250	10 kn	270 05 07	4	1016.4 mb	1 5.2 C	15.0 C	20m 03	8/8		ST

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uH/ l	P04 UN/ l	N03 UN/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAHP
0	ISL	14.56	14.56	33.245	24.714	322.0	0.000	5.82	100.3	4.7	0.38	0.6	0.08	0.81	0.26	0	
1		14.56	14.56	33.245	24.714	322.0	0.003	5.82	100.3	4.7	0.38	0.6	0.08	0.81	0.26	1	201
10	ISL	14.55	14.55	33.317	24.772	316.7	0.032	5.78	99.7	4.5	0.37	0.5	0.08	0.69	0.28	10	
11		14.55	14.55	33.326	24.779	316.1	0.035	5 .78	99.7	4.5	0.37	0.5	0.08	0.67	0.28	1 1	202
20		14.55	14.55	33.329	24.782	316.1	0.064	5.77	99.5	4.2	0.36	0.5	0.08	0.59	0.25	20	203
30		14.55	14.55	33.335	24.787	316.0	0.095	5.77	99.5	4. 1	0.36	0.4	0.09	0.51	0.25	30	204
40		14.54	14.53	33.340	24.793	315.6	0.127	5.77	99.5	3.9	0.36	0.5	0.09	0.49	0.25	40	205
50	ISL	14.51	14.50	33.349	24.807	314.6	0.158	5.75	99.1	4.0	0.39	0.7	0.10	0.42	0.24	50	
51		14.51	14.50	33.351	24 .808	314.5	0.161	5.75	99. 1	4.0	0.39	0.7	0.10	0.41	0.24	51	206
61		14.31	14.30	33.356	24.855	310.4	0. 193	5.58	95.7	4.7	0.46	1 .8	0.14	0.31	0.18	61	207
71		13.61	13.60	33.379	25.017	295. 1	0.223	5.29	89.5	6.4	0.62	4.1	0.14	0.20	0.15	71	208
75	ISL	13.16	13.15	33.418	25.138	283.7	0.235	4 .97	83.3	8.2	0.78	6.3	0.12	0.16	0.14	75	
84		12.20	12.19	33.513	25.399	259.0	0.259	4.26	70.0	12.2	1.12	11.4	0.07	0.09	0.13	84	209
100		11 .62	11.61	33.535	25.525	247.3	0.299	4 .02	65.3	14.1	1 .25	13.7	0.02	0.07	0.11	100	210
125	ISL	10.54	10.53	33.644	25.804	221 .2	0.358	3.56	56.5	19.4	1 .56	18.1	0.01	0.02	0.06	126	
127		10.46	10.45	33.655	25 .826	219.1	0.362	3.52	55.8	19.9	1 .58	18.4	0.01	0.02	0.06	128	211
150	ISL	9.94	9.92	33.757	25.995	203. 5	0.411	3.24	50.8	23.6	1 .74	20.9	0.01	0.01	0.04	151	
151		9.93	9.91	33.762	26.000	202 .9	0.413	3.23	50.6	23.8	1 .75	21 .0	0.01	0.01	0.04	152	212
175		9.72	9.70	33.941	26.176	186.8	0.460	2.73	42 .6	28.4	1 .95	23.4	0.02	0.00	0.04	176	213
197		9.95	9.93	34.160	26.309	174.8	0.500	1 .93	30.3	32.9	2.22	25.8	0.02	0.00	0.03	198	214
200	ISL	9.93	9.91	34.163	26.314	174.3	0.505	1 .93	30.3	33.1	2.22	25 .8	0.02			201	
| 224		9.78	9.73	34.167	26.343	172.0	0.546	1 .90	29.8	33.9	2.25	26.2	0.02			225	215
1250		9.27	9.24	34.177	26.435	163.6	0.590	1 .91	29.6	36.8	2.30	27. 1	0.02			251	216

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 37

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
33 11 .2 N	118 23 .3 W	11/01/95	1840 UTC	1177 in	180 06 kn	280 06 07	6	1016.8 mb	14..9 C	14..9 C	24m 03	8/8	AC

DEPTH in		TENP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/ I	P04 uH/l	N03 uM/l	N02 uH/l	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	14.54	14.54	33.151	24.646	328.5	0.000	5.83	100.4	4.7	0.37	0.4	0.07	1 .00	0.26	0	
1	A	14.54	14.54	33.151	24.646	328.5	0.003	5.83	100.4	4.7	0.37	0.4	0.07	1 .00	0.26	1	201
6		14.53	14.53	33.188	24.677	325.7	0.020	5.82	100.2	4.3	0.37	0.4	0.07	0.88	0.30	6	202
10	ISL	14.54	14.54	33.228	24.706	323.1	0.033	5.81	100. 1	4.2	0.37	0.4	0.07	0.83	0.31	10	
14	A	14.56	14.56	33.275	24.738	320.1	0.045	5.79	99.8	4.1	0.37	0.4	0.07	0.80	0.31	14	203
20	ISL	14.61	14.61	33.352	24.787	315.7	0.065	5.76	99.5	4. 1	0.39	0.6	0.07	0.75	0.30	20	
21		14.62	14.62	33.363	24.793	315.1	0.068	5.76	99.5	4. 1	0.39	0.6	0.07	0.74	0.30	21	204
29	A	14.62	14.62	33.375	24.803	314.4	0.093	5.75	99.3	4.0	0.39	0.6	0.07	0.68	0.25	29	205
30	ISL	14.62	14.62	33.376	24.803	314.4	0.096	5.75	99.3	4.0	0.39	0.6	0.07	0.67	0.25	30	
38		14.63	14.62	33.382	24.806	314.3	0.121	5.73	99.0	4.0	0.39	0.7	0.07	0.59	0.24	38	206
47	A	14.61	14.60	33.393	24.819	313.4	0.149	5.69	98.3	4. 1	0.40	0.8	0.09	0.45	0.24	47	207
SO	ISL	14.57	14.56	33.402	24.835	312.0	0.159	5.65	97.5	4.2	0.41	1 .0	0.11	0.36	0.21	50	
55		14.41	14.40	33.415	24.879	307.9	0. 174	5.54	95 .3	4.6	0.46	1 .6	0.13	0.22	0.16	55	208
63	A	13.80	13.79	33.413	25.005	296.1	0.198	5.23	88.8	6.0	0.61	3.9	0.13	0.14	0.13	63	209
73		13.47	13.46	33.442	25.095	287.8	0.228	5 .00	84.4	7.1	0.72	5.4	0.09	0.15	0.15	73	210
75	ISL	13.35	13.34	33.451	25.126	284.9	0.233	4.90	82.5	7.6	0.76	6.0	0.08	0.14	0.15	75	
87	A	12.44	12.43	33.523	25.361	262.7	0.266	4.25	70.2	11.3	1 .08	10.5	0.03	0.09	0.13	87	211
99		11 .30	11.29	33.615	25.646	235.7	0.296	3.69	59.5	16.3	1 .41	15.7	0.02	0.05	0.08	99	212
100	ISL	11.23	11 .22	33.617	25.660	234.4	0.298	3.68	59.3	16.5	1 .42	15.9	0.02	0.05	0.08	100	
118		10.44	10.43	33.652	25.827	218.8	0.339	3.62	57.3	19.3	1 .55	18.1	0.01	0.02	0.06	119	213
125	ISL	10.46	10.45	33.727	25.882	213.7	0.354	3.30	52.3	21 .1	1 .66	19.3	0.01	0.02	0.06	126	
140		10.61	10.59	33.894	25.987	204.2	0.386	2.61	41 .6	24.7	1 .90	21 .7	0.01	0.01	0.05	141	214
150	ISL	10.42	10.40	33.924	26.043	199.0	0.406	2.62	41.5	25.7	1 .92	22.4	0.01	0.01	0.05	151	
169		9.93	9.91	33.942	26.141	190.0	0.443	2.64	41 .4	27.1	1 .96	23.1	0.01	0.00	0.04	170	215
199		9.44	9.42	34.060	26.315	174.0	0.497	2.35	36.5	31 .6	2.12	25.3	0.01	0.00	0.04	200	216
200	ISL	9.43	9.41	34.060	26.317	173.8	0.499	2.35	36.5	31 .7	2.12	25.3	0.01			201	
229		9.05	9.03	34.053	26.373	168.9	0.549	2.38	36.6	33.9	2.14	26.0	0.01			230	217
250	ISL	8.66	8.63	34.086	26.460	160.9	0.584	2.19	33.4	37.9	2.24	27.4	0.01			251	
268		8.33	8.30	34.120	26.538	153.7	0.612	1 .99	30.2	41 .7	2.34	28.7	0.01			270	218
300	ISL	8.03	8.00	34.139	26.598	148.4	0.660	1 .80	27.1	45.7	2.44	30. 1	0.01			302	
318		7.90	7.87	34. 144	26.621	146.5	0.687	1 .70	25.5	47.7	2 .49	30.7	0.01			320	219
380		7.31	7.27	34.193	26.745	135.4	0.774	1.15	17.0	57.5	2.75	33.5	0.01			382	220
400	ISL	7.18	7.14	34.205	26.773	133.0	0.801	1 .02	15.1	59.8	2 .81	34.2	0.01			403	
431		7.00	6.96	34.222	26.812	129.6	0.842	0.86	12.6	63.1	2 .89	35.1	0.01			434	221
500	ISL	6.58	6.53	34.269	26.906	121.4	0.928	0.56	8.2	70.9	3.04	36.8	0.00			503	
520		6.46	6.41	34.283	26.933	119.0	0.952	0.47	6.8	73.1	3.08	37.3	0.00			524	222

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 45

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 5(i.3 N	118 56 .8 W	11/01/95	1254 UTC	1713 *m*	180 08 kn			1014.9 mb	15,.2 C	14,.5 C			

DEPTH m		TENP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.91	13.91	33.240	24.847	309.4	0.000	5.92	100.7	5.2	0.40	0.9	0.05	0.92	0.37	0	
2		13.91	13.91	33.240	24.847	309.4	0.006	5.92	100.7	5.2	0.40	0.9	0.05	0.92	0.37	2	201
10	ISL	13.87	13.87	33.252	24.864	308.0	0.031	5 .91	100.4	5. 1	0.41	1 .2	0.06	1 .06	0.35	10	
11		13.86	13.86	33.257	24.870	307.4	0.034	5 .91	100.4	5.1	0.41	1 .2	0.06	1 .07	0.34	1 1	20!
20	ISL	13.67	13.67	33.298	24.941	300.9	0.061	5.87	99.4	5.3	0.47	1 .6	0.09	0.65	0.29	20	
21		13.64	13.64	33.303	24.951	300.0	0.064	5.86	99.2	5.3	0.48	1 .7	0.09	0.60	0.28	21	20!
30	ISL	13.25	13.25	33.313	25.038	292.0	0.091	5.77	96.9	5.7	0.51	2.6	0.14	0.47	0.27	30	
31		13.20	13.20	33.314	25.049	291 .0	0.094	5.75	96.4	5.8	0.52	2.7	0.15	0.46	0.27	31	204
40		12.85	12.84	33.360	25.154	281 .2	0.120	5.51	91 .7	7.3	0.66	4.6	0.18	0.63	0.28	40	205
50	ISL	12.69	12.68	33.381	25.202	276.9	0.148	5.35	88.8	7.7	0.70	5.4	0.20	0.26	0.19	50	
51		12.68	12.67	33.382	25.204	276.7	0.150	5.34	88.6	7.7	0.70	5.5	0.20	0.22	0.18	51	204
59		12.41	12.40	33.391	25.264	271 .2	0.172	5.21	86.0	8.7	0.77	6.6	0.20	0.24	0.17	59	207
71		11.53	11 .52	33.435	25.463	252.4	0.204	4.73	76.6	12.0	1 .02	10.6	0.11	0.17	0.15	71	20!
75	ISL	11 .23	11 .22	33.451	25.530	246.1	0.214	4.61	74.2	13.1	1 .09	11.7	0.08	0.15	0.12	75	
85		10.60	10.59	33.493	25.675	232.5	0.238	4.35	69.1	15.5	1 .25	14.2	0.03	0.10	0.04	85	20!
100		10.26	10.25	33.557	25.784	222.5	0.272	4.01	63.2	18.1	1 .42	16.7	0.02	0.03	0.09	100	210
119		9.66	9.65	33.681	25.981	204.0	0.312	3.59	55.9	22. 1	1 .64	20.0	0.01	0.01	0.05	120	211
125	ISL	9.51	9.50	33.718	26.035	199.0	0.324	3.48	54.0	23.4	1 .70	20.8	0.01	0.01	0.04	126	
139		9.22	9.20	33.796	26.143	188.9	0.351	3.26	50.3	26.2	1 .81	22.3	0.01	0.00	0.03	140	21!
150	ISL	9.08	9.06	33.847	26.206	183.2	0.372	3.07	47.2	28.2	1 .88	23.3	0.01	0.00	0.03	151	
170		8.92	8.90	33.927	26.294	175.2	0.408	2.76	42.3	31 .4	2.00	24.9	0.01	0.00	0.03	171	21J
197		8.73	8.71	34.020	26.397	165.9	0.454	2.46	37.6	35.1	2.14	26.4	0.01	0.00	0.03	198	21(
200	ISL	8.71	8.69	34.027	26.405	165. 1	0.459	2.43	37.1	35.4	2.15	26.5	0.01			201	
230		8.51	8.49	34.083	26.481	158.5	0.507	2.17	33.0	38.7	2.25	27.8	0.01			231	215
250	ISL	8.42	8.39	34.122	26.525	154.6	0.539	1 .92	29.2	41 .4	2.34	28.8	0.01			251	
265		8.33	8 .30	34.147	26.559	151.7	0.562	1 .73	26.2	43.6	2.41	29.6	0.01			267	21(
300	ISL	7.88	7.85	34.163	26.639	144.5	0.613	1.51	22.7	48.7	2.54	31 .2	0.01			302	
322		7.58	7.55	34.164	26.683	140.4	0.645	1 .42	21 .2	51 .8	2.61	32.1	0.01			324	217
377		7.18	7.14	34.180	26.753	134.5	0.720	1.16	17.1	58.3	2.74	33.7	0.01			379	211
400	ISL	7.05	7.01	34.211	26.796	130.7	0.751	0.95	14.0	61 .8	2.83	34.5	0.01			403	
442		6.83	6.79	34.268	26.871	124.0	0.804	0.59	8.6	68. 1	2.99	35.9	0.01			445	21)
500	ISL	6.48	6.43	34.287	26.933	118.7	0.875	0.45	6.5	73.7	3.09	37.1	0.01			503	
514		6.40	6.35	34.292	26.948	117.5	0.891	0.42	6. 1	75.0	3.11	37.4	0.01			518	221

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL.	CLD	AHT	TYPE
32 38.9 N	119 29.2 W	11/01/95	0422 UTC	1315 in	200	13 kn			1014.1 mb	15.0 C	14.3 C				

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 uH/l	N03 uH/l	N02 uH/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.87	13.87	33.189	24.815	312.4	0.000	6.00	101 .9	4.5	0.37	0.3	0.05	1 .09	0.31	0	
2		13.87	13.87	33.189	2*.815	312.4	0.006	6.00	101.9	4.5	0.37	0.3	0.05	1 .09	0.31	2	201
10		13.87	13.87	33.214	24.835	310.8	0.031	6.01	102.1	4.3	0.37	0.3	0.06	1 .04	0.35	10	202
20	ISL	13.89	13.89	33.2*9	2*.858	308.8	0.062	5.99	101.8	4. 1	0.37	0.4	0.08	0.89	0.35	20	
22		13.89	13.89	33.255	24.863	308.5	0.068	5.98	101.7	4. 1	0.37	0.4	0.08	0.85	0.35	22	203
30		13.89	13.89	33.267	24.872	307.8	0.093	5.95	101 .2	4.0	0.37	0.5	0.09	0.68	0.31	30	204
39		13.80	13.79	33.307	24.922	303.3	0.120	5.87	99.7	4.3	0.40	0.9	0.16	0.48	0.30	39	205
50		13.82	13.81	33.339	24.943	301 .6	0.154	5.80	98.5	**	0.41	1 .1	0.16	0.38	0.30	50	206
60		13.80	13.79	33.482	25.058	291 .0	0.183	5.48	93.1	5.2	0.49	2.6	0.12	0.25	0.11	60	207
70		13.82	13.81	33.602	25.147	282.8	0.212	5.24	89.1	5.6	0.51	3.3	0.05	0.12	0.15	70	208
75	ISL	13.16	13.15	33.545	25.237	274.3	0.226	5.09	85.4	7. 1	0.65	5.3	0.03	0.09	0.14	75	
84		11.80	11 .79	33.435	25.414	257.5	0.250	4.78	77.9	10.3	0.95	9.6	0.02	0.06	0.10	8*	209
98		11.14	11.13	33.520	25.601	2*0.0	0.285	4.29	68.9	13.8	1 .21	13.3	0.01	0.0*	0.06	98	210
100	ISL	11 .04	11 .03	33.523	25.621	238.1	0.290	4.25	68. 1	14.2	1 .23	13.7	0.01	0.0*	0.06	100	
119		10.21	10.20	33.541	25.780	223.2	0.333	4.0*	63.6	17.5	1 .42	16.5	0.01	0.02	0.05	120	211
125	ISL	10.01	10.00	33.568	25.835	218.1	0.347	3.95	61 .9	18.7	1 .48	17.5	0.01	0.02	0.04	126	
139		9.60	9.58	33.645	25.963	206.1	0.376	3.75	58.3	21 .6	1.61	19.6	0.01	0.01	0.03	140	212
150	ISL	9.21	9.19	33.70*	26.073	195.8	0.398	3.64	56. 1	2*.1	1 .70	21 .1	0.01	0.01	0.02	151	
169		8.61	8.59	33.797	26.240	180.1	0.434	3.48	53.0	28.2	1 .83	23.1	0.01	0.00	0.02	170	213
200		8.22	8.20	33.885	26.369	168.*	0.488	3.26	49.2	32.2	1 .93	24.8	0.01	0.00	0.02	201	214
229		7.91	7.89	33.947	26.464	159.7	0.536	3.06	45 .9	36.2	2.03	26.3	0.01			230	215
250	ISL	7.62	7.60	33.991	26.541	152.7	0.568	2.72	40.5	41 .2	2.17	28.2	0.01			251	
268		7.39	7.36	34.025	26.600	1*7.2	0.595	2.39	35.4	45 .6	2 .30	29.8	0.01			270	216
300	ISL	7.16	7.13	34.061	26.661	1*1.8	0.6*2	1 .99	29.3	50.6	2.46	31 .6	0.01			302	
317		7.09	7.06	34.082	26.688	139.6	0.666	1 .79	26.4	52.9	2.54	32 .4	0.01			319	217
380		7.03	6.99	34.246	26.826	127.5	0.750	0.75	11.0	63.6	2.92	35. 1	0.01			382	218
400	ISL	6.94	6.90	34.259	26.8*9	125.6	0.775	0.70	10.3	65.6	2 .97	35.6	0.01			403	
436		6.72	6.68	34.265	26.88*	122.7	0.820	0.60	8.8	68.7	3.01	36.3	0.01			439	219
500	ISL	6.28	6.24	3*.293	26.96*	115.6	0.896	0.44	6.4	76.4	3.12	37.8	0.01			503	
516		6.17	6. 12	34.300	26.98*	113.8	0.91*	0.40	5.8	78.3	3.15	38.2	0.01			520	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 25i'.1 N	119 57.4 W	10/01/95	2312 UTC	1632 in	230	10 kn	250 06 07	5	1011.9 mb	14.1 C	14. 1 C	16m	03	8/8	ST

DEPTH in		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 uH/l	N03 uH/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.91	14.91	33.113	2*.538	338.8	0.000	5 .86	101.7	4.5	0.32	0.0	0.00	0.37	0.14	0	
1		14.91	14.91	33.113	2*.538	338.8	0.003	5 .86	101.7	4. 5	0.32	0.0	0.00	0.37	0.14	1	201
10	ISL	14.92	14.92	33.146	24.561	336.8	0.03*	5 .86	101.7	4.4	0.32	0.0	0.00	0.37	0.14	10	
14		14.92	14.92	33.165	24.576	335.6	0.047	5 .86	101.7	4 .3	0.32	0.0	0.00	0.37	0.14	14	202
20	ISL	14.91	14.91	33. 171	24.583	335. 1	0.067	5.84	101.3	4.2	0.32	0.0	0.00	0.37	0.14	20	
29		14.89	14.89	33.180	24.594	334.2	0.097	5.83	101.1	4.2	0.32	0.0	0.00	0.37	0.1*	29	203
30	ISL	14.84	14.84	33.178	24.604	333.4	0.101	5.83	101.0	4.2	0.32	0.0	0.00	0.38	0.15	30	
44		14.17	14.16	33.166	24.737	321 .1	0.147	5 .90	100.8	4.2	0.36	0.3	0.07	0. 56	0.25	44	204
50	ISL	14.06	14.05	33.187	24.776	317.5	0. 166	5 .92	101.0	4. 1	0.37	0.4	0.07	0.57	0.26	50	
53		14.03	14.02	33.200	24.792	316.1	0.175	5 .93	101.1	4 .1	0.37	0. 4	0.07	0.57	0.26	53	205
64		13.87	13.86	33.251	24.865	309.4	0.210	5.93	100.8	4 .1	0.38	0.6	0.09	0.47	0.27	64	206
73		13.59	13.58	33.364	25.010	295 .9	0.237	5 .88	99.4	4.4	0.45	1 .3	0.19	0.31	0.26	73	207
75	ISL	13.58	13.57	33.374	25.020	295.0	0.243	5.88	99.4	4.4	0. 45	1 .4	0.20	0.31	0.26	75	
84		13.37	13.36	33.384	25.070	290.4	0.269	5 .86	98.6	4.6	0.47	1 .8	0.25	0.27	0.27	84	208
93		12.47	12.46	33.375	25.241	274.3	0.295	5.29	87.4	7.5	0.71	5 .8	0.02	0.06	0.11	93	209
100	ISL	12.16	12.15	33.460	25.366	262.5	0.313	5.01	82 .3	8.7	0.80	7.5	0.02	0.05	0.09	100	
109		11 .82	11.81	33.570	25.515	248.5	0.336	4 .77	77.8	10.0	0.90	9.3	0.01	0. 04	0.06	109	210
124		10.48	10.47	33.544	25.736	227.5	0.372	4.48	71 .0	14.5	1 .21	13.8	0.01	0.02	0.0*	125	21 1
125	ISL	10.42	10.41	33.545	25.747	226.5	0.374	4.46	70.6	14.8	1 .23	14.1	0.01	0.02	0.0*	126	
142		9.57	9.55	33.594	25 .928	209.4	0.411	4.18	64.9	19.3	1 .46	17.8	0.00	0.01	0.03	143	212
150	ISL	9.27	9.25	33.634	26.008	201 .9	0.428	4.03	62.2	21 .5	1 .56	19.3	0.00	0.01	0.03	151	
168		8.75	8.73	33.732	26.167	187.0	0.463	3.71	56.6	25.9	1 .75	22.0	0.00	0.00	0.02	169	213
198		8.25	8.23	33.855	26.341	171.0	0.517	3.40	51.3	31 .0	1 .89	24.4	0.00	0.00	0.02	199	214
200	ISL	8.21	8.19	33.862	26.352	169.9	0.520	3.40	51.3	31 .3	1 .90	24.5	0.00			201	
227		7.75	7.73	33.948	26.488	157.4	0. 564	3.31	49.4	36.2	1 .97	25.7	0.00			228	215
250	ISL	7.50	7.48	33.988	26.555	151.2	0.600	2 .99	44.4	*0.7	2.09	27.5	0.00			251	
267		7.36	7.33	34.008	26.591	148.0	0.625	2.69	39.8	44.0	2.20	28.9	0.00			269	216
300	ISL	7.09	7.06	34.043	26.657	142.2	0.673	2.18	32.1	50.2	2.40	31 .3	0.00			302	
318		6.96	6.93	34.062	26.690	139.3	0.698	1 .91	28.0	53.4	2 .51	32.5	0.00			320	217
376		6.69	6. 66	3*.162	26.806	129.1	0.776	1.10	16.1	63.3	2.81	35.3	0.00			378	218
400	ISL	6.59	6.55	3*.189	26.840	126.1	0.807	0.93	13.5	66.3	2 .89	36.1	0.00			403	
436		6.42	6.38	34.217	26.885	122.2	0.851	0.77	11.2	70.4	2.98	37.0	0.00			439	219
500	ISL	5.97	5.93	34.24*	26.965	115.1	0.927	0.52	7.5	78.6	3.09	38.6	0.00			503	
511		5.89	5.85	34.249	26.979	113.9	0. 940	0.48	6.9	80.0	3.11	38.9	0.00			514	220

RV DAVID STARR JORDAN — CALCOFI CRUISE 95011 — STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 5.6 N	120 39.1 W	10/01/95	1808	UTC	3809 m	170	20 kn	170 06 08	2	1013.5 mb	16..3 C	15..8 C	17m 02	8/8	AC

DEPTH m		TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.89	14.89	33.198	24.608	332.1	0.000	5.85	101.5	4.4	0.32	0.0	0.00	0.41	0.13	0	
1	A	14.89	14.89	33.198	24.608	332.2	0.003	5.85	101.5	4.4	0.32	0.0	0.00	0.41	0.13	1	201
10	A	14.88	14.88	33.197	24.609	332.3	0.033	5.85	101.5	4.3	0.30	0.0	0.00	0.41	0.14	10	202
20	ISL	14.89	14.89	33.198	24.608	332.7	0.066	5.84	101.3	4.1	0.31	0.0	0.00	0.41	0.15	20	
21	A	14.89	14.89	33.198	24.608	332.7	0.070	5.84	101.3	4.1	0.31	0.0	0.00	0.41	0.15	21	203
30	ISL	14.43	14.43	33.203	24.710	323.2	0.099	5.92	101.7	4.1	0.32	0.1	0.01	0.69	0.28	30	
34	A	14.21	14.21	33.203	24.757	318.9	0.112	5.95	101.8	4.1	0.33	0.2	0.02	0.81	0.35	34	204
39		14.07	14.06	33.194	24.779	316.9	0.128	5.95	101.5	4.0	0.34	0.2	0.03	0.84	0.39	39	205
45	A	13.78	13.77	33.162	24.814	313.7	0.147	5.93	100.5	4.2	0.37	0.4	0.09	0.55	0.27	45	206
SO	ISL	13.55	13.54	33.165	24.864	309.1	0.163	5.92	99.9	4.4	0.40	0.7	0.14	0.39	0.22	50	
54		13.39	13.38	33.171	24.901	305.7	0.175	5.91	99.4	4.5	0.43	1.0	0.17	0.31	0.20	54	207
60	A	13.25	13.24	33.152	24.914	304.6	0.193	5.90	98.9	4.7	0.45	1.2	0.20	0.26	0.18	60	208
69		13.16	13.15	33.255	25.012	295.5	0.220	5.80	97.1	4.9	0.47	1.7	0.20	0.21	0.15	69	209
75	ISL	13.10	13.09	33.274	25.039	293.1	0.238	5.71	95.5	5.1	0.49	2.0	0.13	0.16	0.12	75	
84		13.00	12.99	33.302	25.081	289.4	0.264	5.55	92.7	5.6	0.51	2.8	0.03	0.08	0.09	84	210
100		12.11	12.10	33.334	25.278	270.9	0.309	5.25	86.0	7.7	0.72	6.1	0.03	0.06	0.07	100	211
120		10.50	10.49	33.452	25.661	234.6	0.359	4.25	67.3	16.2	1.35	15.7	0.01	0.03	0.07	121	212
125	ISL	10.25	10.24	33.475	25.722	228.9	0.371	4.14	65.2	17.4	1.42	16.8	0.01	0.02	0.06	126	
139		9.72	9.70	33.537	25.859	216.0	0.402	3.96	61.7	20.0	1.54	18.5	0.01	0.01	0.04	140	213
150	ISL	9.30	9.28	33.606	25.982	204.5	0.425	3.83	59.1	22.5	1.63	20.0	0.01	0.01	0.03	151	
172		8.63	8.61	33.746	26.197	184.3	0.468	3.65	55.6	27.0	1.77	22.5	0.00	0.00	0.02	173	214
200		8.22	8.20	33.860	26.349	170.2	0.518	3.55	53.6	30.6	1.84	23.7	0.00	0.00	0.02	201	215
230		7.86	7.84	33.947	26.471	159.0	0.567	3.11	46.6	36.2	2.02	26.2	0.00			231	216
250	ISL	7.62	7.60	33.983	26.534	153.3	0.598	2.85	42.5	40.2	2.13	27.7	0.00			251	
269		7.39	7.36	34.006	26.585	148.6	0.627	2.61	38.7	44.1	2.24	29.1	0.00			271	217
300	ISL	7.03	7.00	34.034	26.658	142.1	0.672	2.18	32.0	50.7	2.42	31.5	0.00			302	
317		6.84	6.81	34.045	26.692	138.9	0.696	1.95	28.5	54.2	2.51	32.7	0.00			319	218
377		6.23	6.20	34.074	26.796	129.5	0.776	1.36	19.6	65.0	2.76	35.9	0.00			379	219
400	ISL	6.04	6.01	34.092	26.835	126.1	0.806	1.17	16.8	69.2	2.85	36.9	0.00			402	
438		5.79	5.75	34.128	26.895	120.7	0.853	0.89	12.7	75.4	2.97	38.2	0.00			441	220
500	ISL	5.64	5.60	34.198	26.969	114.3	0.926	0.58	8.3	81.7	3.08	39.3	0.00			503	
515		5.60	5.56	34.215	26.987	112.7	0.943	0.50	7.1	83.2	3.11	39.6	0.00			518	221

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501I — STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 4!1.1 N	121 19.3 W	10/01/95	0802	UTC	3754 m	180	28 kn			1015.0 mb	15.8 C	15,.2 C			

DEPTH "		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ial/l	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/l	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	14.96	14.96	33.142	24.549	337.7	0.000	5.80	100.7	4.4	0.32	0.0	0.00	0.25	0.11	0	
1		14.96	14.96	33.142	24.549	337.7	0.003	5.80	100.7	4.4	0.32	0.0	0.00	0.25	0.11	1	201
10	ISL	14.96	14.96	33.142	24.550	338.0	0.034	5.81	100.9	4.2	0.31	0.1	0.00	0.24	0.10	10	
16		14.96	14.96	33.142	24.550	338.1	0.054	5.81	100.9	4.0	0.31	0.1	0.00	0.24	0.10	16	2 02
20	ISL	14.94	14.94	33.142	24.554	337.8	0.068	5.81	100.9	4.0	0.31	0.1	0.00	0.25	0.10	20	
30	ISL	14.88	14.88	33.144	24.569	336.7	0.101	5.81	100.7	3.9	0.32	0.1	0.00	0.29	0.12	30	
32		14.87	14.87	33.144	24.571	336.6	0.108	5.81	100.7	3.9	0.32	0.1	0.00	0.30	0.13	32	203
44		14.82	14.81	33.147	24.585	335.6	0.148	5.80	100.4	3.7	0.32	0.0	0.00	0.36	0.17	44	204
50	ISL	14.81	14.80	33.147	24.587	335.6	0.169	5.80	100.4	3.7	0.32	0.0	0.00	0.34	0.17	50	
57		14.80	14.79	33.146	24.589	335.6	0.192	5.80	100.4	3.7	0.32	0.1	0.00	0.30	0.16	57	205
68		14.77	14.76	33.146	24.595	335.3	0.229	5.79	100.2	3.7	0.32	0.0	0.02	0.26	0.14	68	206
75		14.66	14.65	33.155	24.626	332.6	0.252	5.78	99.8	3.7	0.29	0.2	0.08	0.19	0.12	75	207
85		14.25	14.24	33.268	24.800	316.3	0.2B5	5.72	98.0	3.9	0.38	0.7	0.23	0.13	0.12	85	208
96		13.45	13.44	33.263	24.961	301.1	0.319	5.71	96.2	4.7	0.45	1.7	0.18	0.08	0.11	96	209
100	ISL	13.26	13.25	33.259	24.996	297.9	0.331	5.71	95.8	4.9	0.47	1.9	0.17	0.08	0.11	100	
113		12.68	12.66	33.276	25.124	286.0	0.369	5.69	94.3	5.9	0.58	3.6	0.14	0.08	0.11	113	210
122		12.08	12.06	33.343	25.291	270.2	0.394	5.24	85.8	7.7	0.74	6.5	0.02	0.05	0.09	123	211
125	ISL	11.86	11.84	33.351	25.338	265.7	0.402	5.14	83.8	8.4	0.80	7.5	0.02	0.04	0.08	126	
142		10.71	10.69	33.391	25.577	243.1	0.445	4.65	74.0	12.8	1.13	12.6	0.02	0.03	0.06	143	212
150	ISL	10.33	10.31	33.455	25.693	232.2	0.464	4.32	68.2	15.5	1.30	15.0	0.01	0.02	0.05	151	
169		9.62	9.60	33.619	25.940	208.9	0.506	3.67	57.1	21.6	1.62	19.8	0.00	0.01	0.04	170	213
200	ISL	8.59	8.57	33.753	26.209	183.6	0.567	3.71	56.4	26.1	1.75	22.3	0.00	0.00	0.02	201	
201		8.56	8.54	33.756	26.216	183.0	0.569	3.71	56.4	26.2	1.75	22.3	0.00	0.00	0.02	202	214
231		8.28	8.26	33.893	26.367	169.2	0.621	3.29	49.7	31.0	1.91	24.6	0.00			232	215
250	ISL	8.08	8.05	33.946	26.438	162.6	0.653	3.07	46.2	34.2	1.99	25.9	0.00			251	
265		7.91	7.88	33.976	26.487	158.2	0.677	2.91	43.6	36.9	2.06	26.9	0.00			266	21«
300	ISL	7.38	7.35	34.022	26.600	147.8	0.730	2.45	36.3	44.7	2.26	29.7	0.00			302	
318		7.10	7.07	34.038	26.651	143.0	0.757	2.20	32.4	49.0	2.37	31.2	0.00			320	217
377		6.45	6.42	34.090	26.780	131.2	0.838	1.40	20.3	62.1	2.73	35.3	0.00			379	21!
400	ISL	6.22	6.18	34.112	26.828	126.9	0.867	1.15	16.6	67.0	2.84	36.6	0.00			402	
435		5.92	5.88	34.146	26.893	120.9	0.911	0.85	12.2	73.7	2.97	38.1	0.00			438	219
500	ISL	5.62	5.58	34.199	26.972	114.0	0.987	0.56	8.0	81.2	3.09	39.5	0.00			503	
514		5.56	5.52	34.211	26.989	112.5	1.003	0.50	7.1	82.8	3.11	39.8	0.00			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 25.4 NI	121 59.7 W	10/01/95	0128	UTC	3818 m	170	25 kn	160 06 0i	1	1014.8 inb	16.5 C	16.0 C		4/8	AC

DEPTH D	TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UN/ l	P04 UM/ l	N03 UM/ l	N02 uM/l	CHL-A ug/L	PHAEO ug/ l	PRES db	SAMP
0 ISL	15.85	15.85	33.342	24.507	341 .7	0.000	5.75	101 .8	4.1	0.30	0.0	0.00	0.16	0.06	0	
3	15.85	15.85	33.342	24.507	341 .8	0.010	5.75	101.8	4.1	0.30	0.0	0.00	0.16	0.06	3	201
10 ISL	15.84	15.84	33.342	24.510	341.8	0.034	5.73	101.4	4 .0	0.30	0.0	0.00	0.16	0.07	10	
15	15.83	15.83	33.342	24.512	341 .7	0.051	5.72	101 .2	3.9	0.30	0.0	0.00	0.16	0.07	15	202
20 ISL	15.81	15.81	33.341	24.516	341 .5	0.068	5.72	101.2	3.9	0.30	0.0	0.00	0.17	0.07	20	
30	15.78	15.78	33.343	24.525	341 .0	0.102	5.73	101 .3	3.8	0.30	0.0	0.00	0.18	0.07	30	203
(5	15.51	15.50	33.288	24.543	339.7	0.154	5.75	101.0	3.8	0.32	0.0	0.00	0.18	0.08	45	204
50 ISL	15.50	15.49	33.289	24.546	339.5	0. 170	5.74	100.9	3.6	0.31	0.0	0.00	0.22	0.09	50	
53	15.50	15.49	33.288	24.545	339.7	0.181	5.73	100.7	3.5	0.31	0.0	0.00	0.25	0.10	53	205
64	15.47	15.46	33.281	24.547	339.9	0.218	5.76	101 .1	3.5	0.31	0.0	0.00	0.25	0.13	64	206
74	15.50	15.49	33.300	24.555	339.4	0.252	5.75	101 .0	3.5	0.31	0.0	0.01	0.24	0.12	74	207
75 ISL	15.51	15.50	33.306	24.558	339.2	0.255	5.75	101.1	3.5	0.31	0.0	0.01	0.24	0.12	75	
14	15.57	15.56	33.363	24.589	336.6	0.286	5.70	100.3	3.5	0.31	0.1	0.04	0.22	0.14	84	208
93	15.28	15.27	33.53 Di	24.782	318.4	0.315									93	209
100 ISL	14.51	14.50	33.458	24 .892	308.0	0.337	5.64	97.2	4.3	0.39	1.1	0.03	0.17	0.14	100	
110	13.55	13.53	33.371	25.025	295.5	0.367	5.56	93.9	4.9	0.45	2 .0	0.03	0.13	0.14	1 10	210
124	13.99	13.97	33.726	25.209	278.5	0.408	5.29	90.4	5.4	0.46	3.2	0.02	0.06	0.07	125	21 1
125 ISL	13.89	13.87	33.719	25.224	277.0	0.410	5.26	89.7	5.6	0.48	3.5	0.02	0.06	0.07	126	
145	11.24	11 .22	33.476	25.549	246.0	0.463	4.71	75.8	11.7	1 .03	11.1	0.02	0.03	0.05	146	212
150 ISL	10.89	10.87	33.489	25.622	239.1	0.475	4.62	73.8	12.8	1.10	12.2	0.02	0.02	0.04	151	
166	10.12	10.10	33.588	25.833	219.2	0.511	4.37	68.7	16.0	1 .29	15.2	0.00	0.01	0. 03	167	213
196	8.94	8.92	33.702	26.115	192.6	0.573	3.72	57.0	24.5	1 .71	21.4	0.00	0.00	0.02	197	214
200 ISL	8.85	8.83	33.718	26.142	190.1	0. 581	3.72	56.9	25.1	1 .72	21.7	0.00			201	
226	8.45	8.43	33.814	26.279	177.5	0.629	3.71	56.3	27.8	1 .77	22 .7	0.00			227	21 5
250 ISL	8.10	8.07	33.890	26.391	167.1	0.670	3.63	54 .6	30.9	1 .83	23.7	0.00			251	
266	7.89	7.86	33.932	26.455	161 .2	0.696	3.51	52.6	33.4	1 .88	24 .6	0.00			267	216
300 ISL	7.52	7. 49	33.993	26.557	151.9	0.749	2.94	43.7	40.7	2.10	27.6	0.00			302	
319	7.33	7.30	34.016	26.602	147.8	0.778	2.57	38.0	45.2	2.24	29.5	0.00			321	217
380	6.61	6. 58	34.060	26.736	135.6	0.864	1 .69	24.6	58.1	2.61	34.0	0.00			382	218
400 ISL	6.40	6.36	34.073	26.774	132.2	0.891	1 .47	21 .3	62.1	2.71	35.2	0.00			402	
436	6.04	6.00	34.100	26.841	125.9	0.938	1.14	16.4	69.1	2 .87	37. 1	0.00			439	219
500 ISL	5.53	5.49	34.164	26.955	115.5	1.015	0.70	9.9	81 .0	3.07	39.3	0.00			503	
510	5.45	5.41	34.174	26.973	113.8	1 .026	0.63	8.9	82 .9	3.10	39.7	0.00			513	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 100

LATITUDE	LONGITUDE	DAY/PIO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 5.5 N	122 39.5 W	09/01/95	1911	UTC	4006 m	170	18 kn	170 05 05	1	1018.2 mb	17.4 C	16.5 C	22m 01	7/8	AC

DEPTH D	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ral/l	OXY PCT	SI03 uM/ l	P04 uM/L	N03 uM/ l	N02 uM/ l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAMP
0 ISL	15.40	15.40	33.281	24.560	336.6	0.000	5.77	101.2	4. 1	0.32	0. 1	0.00	0.21	0.08	0	
1 A	15.40	15.40	33.281	24.560	336.7	0.003	5.77	101.2	4. 1	0.32	0. 1	0.00	0.21	0.08	1	201
10 ISL	15.39	15.39	33.281	24.563	336.7	0.034	5.78	101.3	3.9	0.32	0. 1	0.00	0.21	0.09	10	
12 A	15.39	15.39	33.281	24.563	336.8	0.040	5.78	101.3	3.8	0.32	0. 1	0.00	0.21	0.09	12	202
20 ISL	15.33	15.33	33.282	24.577	335.7	0.067	5.79	101.4	3.8	0.32	0.0	0.00	0.22	0.10	20	
27 A	15.27	15.27	33.284	24.592	334.4	0.091	5.79	101.3	3.8	0.32	0.0	0.00	0.24	0.11	27	203
30 ISL	15.27	15.27	33.284	24.592	334.5	0.101	5.79	101 .3	3.8	0.32	0.0	0.00	0.25	0.12	30	
43 A	15.26	15.25	33.286	24.596	334.5	0.144	5.78	101.1	3.7	0.32	0.0	0.00	0.31	0.16	43	204
49	15.25	15.24	33.286	24.599	334.5	0.164	5.76	100.7	3.7	0.32	0.0	0.00	0.34	0.17	49	205
50 ISL	15.25	15.24	33.286	24.599	334.5	0. 168	5.76	100.7	3.7	0.32	0.0	0.00	0.34	0.17	50	
56 A	15.24	15.23	33.286	24.601	334.5	0.188	5.77	100.8	3.5	0.31	0.0	0.00	0.32	0.17	56	206
67	15.15	15.14	33.284	24.620	333.0	0.224	5.75	100.3	3.5	0.33	0.1	0.03	0.28	0.17	67	207
75 ISL	14.62	14.61	33.275	24.727	323.0	0.251	5.69	98.2	4.0	0.38	0.7	0.09	0.26	0.19	75	
79 A	14.17	14.16	33.279	24.825	313.7	0.263	5.61	95.9	4.2	0.43	1 .5	0.10	0.24	0.20	79	208
85	13.18	13.17	33.315	25.055	291 .9	0.282	5.39	90.3	5.7	0.57	3.7	0.03	0.19	0.23	85	209
94	12.56	12.55	33.340	25.196	278.6	0.307	5 .21	86.2	6.9	0.67	5 .4	0.02	0.14	0.17	94	210
100 ISL	12.11	12.10	33.367	25.303	268.5	0.324	5.05	82 .8	8.2	0.78	7.2	0.01	0.11	0.13	100	
108	11 .52	11.51	33.400	25.439	255.7	0.345	4 .83	78.2	10.2	0.95	9.7	0.01	0.07	0.08	108	21 1
123	10.66	10.65	33.411	25.601	240.4	0.382	4.50	71 .5	13.5	1 .20	13.5	0.01	0.05	0.06	124	212
125 ISL	10.55	10.54	33.422	25.629	237.8	0.387	4.44	70.4	14.1	1.24	14.1	0.01	0.05	0.06	126	
145	9.56	9. 54	33.573	25.914	210.9	0.432	3.84	59.6	20.4	1 .59	19.5	0.01	0.01	0.03	146	213
150 ISL	9.36	9.34	33.613	25.978	204.9	0.442	3.71	57.4	21.9	1 .66	20.5	0.01	0.01	0.03	151	
171	8.73	8.71	33.774	26.204	183.7	0.483	3.25	49.6	27.9	1 .88	23.8	0.00	0.00	0.02	172	214
200	8.33	8.31	33.958	26.410	164.6	0.533	2.74	41 .5	34.7	2.07	26.6	0.00	0.00	0.02	201	215
228	8.03	8.01	34.011	26.496	156.7	0.578	2.57	38.7	38.4	2.16	27.9	0.00			229	216
250 ISL	7.66	7.64	34 .026	26.562	150.7	0.612	2 .40	35.8	42.7	2.26	29.4	0.00			251	
268	7.35	7.32	34.032	26.611	146.1	0.639	2.25	33.3	46.3	2.34	30.6	0.00			269	217
300 ISL	7.05	7.02	34 .047	26.665	141.4	0.685	2 .02	29.7	51.0	2.45	32.0	0.00			302	
319	6.91	6.88	34.055	26.691	139.2	0.711	1 .88	27.6	53.7	2.51	32.8	0.00			321	218
381	6.29	6.26	34.091	26.802	129.1	0.795	1 .29	18.6	64 .9	2 .78	36. 1	0.00			383	219
400 ISL	6.10	6.06	34.107	26.839	125.7	0.819	1.12	16.1	68.8	2 .86	37.0	0.00			402	
439	5.77	5.73	34.146	26.911	119.1	0.866	0.81	11.6	76.4	3.00	38.6	0.00			442	220
500 ISL	5.56	5.52	34.213	26.990	112.2	0.937	0.50	7. 1	83.5	3.13	39.7	0.00			503	
516	5.51	5 .47	34.231	27.011	110.4	0.955	0.42	6.0	85.3	3.16	40.0	0.00			519	221

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
30 45.3 N	123 20.0 W	09/01/95	1257 UTC	4019 in	190 14 kn			1016.0 mb	16.9 C	16.2 C				

DEPTH in		TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/L	P04 UM/ l	N03 uM/ l	N02 uN/L	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0		15.43	15.43	33.253	24.532	339.3	0.000	5.75	100.9	4.2	0.32	0.1	0.00	0.22	0.09	0	201
10	ISL	15.42	15.42	33.253	24.535	339.4	0.034	5.76	101.0	4.0	0.32	0.1	0.00	0.21	0.10	10	
15		15.42	15.42	33.253	24.535	339.5	0.051	5.76	101 .0	3.9	0.32	0.1	0.00	0.21	0.10	15	202
20	ISL	15.40	15.40	33.254	24.540	339.2	0.068	5.76	101.0	3.9	0.32	0.1	0.00	0.21	0.10	20	
30		15.37	15.37	33.259	24.551	338.4	0.102	5.75	100.8	3.8	0.32	0.1	0.00	0.23	0.12	30	203
45		15.34	15.33	33.270	24.567	337.4	0.152	5.74	100.5	3.7	0.32	0.1	0.00	0.30	0.16	45	204
50	ISL	15.33	15.32	33.271	24.570	337.3	0.169	5.73	100.3	3.6	0.32	0.1	0.00	0.31	0.15	50	
54		15.33	15.32	33.271	24.570	337.4	0.183	5.73	100.3	3.6	0.32	0.1	0.00	0.32	0.15	54	205
64		15.32	15.31	33.270	24.572	337.5	0.217	5.74	100.5	3.5	0.32	0.1	0.00	0.30	0.17	64	206
74		15.28	15.27	33.269	24.580	337.0	0.250	5.72	100.0	3.5	0.32	0.2	0.01	0.25	0.16	74	207
75	ISL	15.27	15.26	33.269	24.582	336.9	0.254	5.72	100.0	3.5	0.32	0.2	0.01	0.24	0.16	75	
84		15.15	15.14	33.272	24.611	334.4	0.284	5.70	99.4	3.5	0.35	0.4	0.05	0.19	0.15	84	208
94		14.03	14 .02	33.302	24.872	309.6	0.316	5.58	95.2	4.7	0.44	1 .8	0.05	0.16	0.22	94	209
100	ISL	13.58	13.57	33.325	24.983	299.2	0.334	5.48	92.6	5.3	0.50	2.7	0.04	0.14	0.21	100	
111		13.04	13.02	33.385	25.138	284.7	0.366	5.28	88.3	6.2	0.60	4.4	0.02	0.23 U	0.05 U	1 11	210
123		12.76	12.74	33.489	25.274	272.0	0.400	5.08	84.5	7.2	0.67	5. 9	0.01	0.06	0.08	124	211
125	ISL	12.62	12.60	33.498	25.308	268.8	0.405	5.04	83.6	7.6	0.70	6.4	0.01	0.06	0.07	126	
144		10.95	10.93	33.555	25.663	235.1	0.453	4.62	73.9	12.5	1 .07	12.0	0.01	0.02	0.03	145	212
150	ISL	10.48	10.46	33.571	25.758	226.1	0.467	4.47	70.8	14.5	1.19	13.9	0.01	0.01	0.02	151	
170		9.20	9.18	33.643	26.027	200.5	0.510	4.01	61 .8	21 .6	1 .56	19.5	0.00	0.00	0.01	171	213
199		8.34	8.32	33.827	26.305	174.4	0.564	3.57	54.0	29.8	1 .83	23.6	0.00	0.00	0.01	200	214
200	ISL	8.32	8.30	33.831	26.311	173.8	0.566	3.56	53.8	30.0	1 .84	23.7	0.00			201	
230		7.94	7.92	33.929	26.445	161.5	0.616	3.30	49.5	35.0	1 .96	25.5	0.00			231	215
250	ISL	7.70	7.68	33.957	26.502	156.4	0.648	3.25	48.5	37.6	2.00	26.2	0.00			251	
268		7.48	7.45	33.971	26.545	152.5	0.676	3.16	46.9	40.3	2.05	27.0	0.00			269	216
300	ISL	7.10	7.07	34.006	26.626	145.1	0.723	2.56	37.7	48.0	2.28	30.1	0.00			302	
315		6.92	6.89	34.020	26.662	141.8	0.745	2.25	33.0	51 .8	2.40	31 .6	0.00			317	217
377		6.23	6.20	34.034	26.765	132.5	0.830	1 .72	24.8	62.8	2 .64	34.9	0.00			379	218
400	ISL	5.98	5.95	34.046	26.806	128.7	0.860	1 .49	21.4	67.7	2.74	36.2	0.00			402	
436		5.65	5.61	34.077	26.871	122.7	0.905	1.14	16.2	75.2	2 .90	38.1	0.00			439	219
500	ISL	5.37	5.33	34.178	26.985	112.5	0.980	0.60	8.5	85.6	3.11	40.0	0.00			503	
510		5.33	5.29	34.194	27.003	110.9	0.992	0.52	7.3	87.2	3.14	40.3	0.00			513	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 90 120

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIRE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
30 25.3 N	123 59.9 W	09/01/95	0653 UTC	4226 m	190 16 kn			1018.5 mb	17.4 C	16.9 C				

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uN/ l	P04 uM/ l	N03 uM/l	N02 uM/l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAHP
0	ISL	16.67	16.67	33.518	24.455	346.7	0.000	5 .60	100.9	4.2	0.28	0.0	0.00	0.13	0.07	0	
2		16.67	16.67	33.518	24.455	346.7	0.007	5.60	100.9	4.2	0.28	0.0	0.00	0.13	0.07	2	201
10	ISL	16.66	16.66	33.517	24.457	346.8	0.035	5.61	101 .0	4.0	0.28	0.0	0.00	0.13	0.06	10	
15		16.66	16.66	33.517	24.457	347.0	0.052	5 .61	101.0	3.9	0.28	0.0	0.00	0.13	0.06	15	202
20	ISL	16.67	16.67	33.521	24.458	347.0	0.069	5.61	101.0	3.9	0.28	0.0	0.00	0.13	0.06	20	
30	ISL	16.68	16.68	33.529	24.462	347.0	0. 104	5.60	100.9	3.9	0.27	0.0	0.00	0.13	0.06	30	
31		16.68	16.67	33.530	24.463	346.9	0. 108	5 .60	100.9	3.9	0.27	0.0	0.00	0.13	0.06	31	203
45		16.76	16.75	33.597	24.497	344 .2	0.156	5 .60	101.1	3.7	0.27	0.0	0.00	0.13	0.04	45	20*
50	ISL	16.77	16.76	33.601	24.497	344.3	0.173	5 .60	101 .1	3.7	0.27	0.0	0.00	0.13	0.04	50	
59		16.78	16.77	33.608	24.501	344 .3	0.204	5.60	101.1	3.7	0.27	0.0	0.00	0.14	0.05	59	20!
75	ISL	16.75	16.74	33.607	24.508	344.2	0.259	5.58	100.7	3.6	0.27	0.0	0.00	0.18	0.06	75	
76		16.75	16.74	33.607	24.508	344.2	0.263	5.58	100.7	3.6	0.27	0.0	0.00	0.18	0.06	76	206
84		16.74	16.73	33.603	24.507	344.5	0.290	5 .60	101.0	3.6	0.26	0.0	0.00	0.20	0.08	84	207
95		16.73	16.71	33.604	24.511	344.5	0.328	5.57	100.5	3.5	0.26	0.0	0.00	0.21	0.08	95	201
100	ISL	16.76	16.74	33.615	24.512	344.5	0.345	5.59	100.9	3.5	0.26	0.0	0.00	0.20	0.09	100	
103		16.77	16.75	33.621	24.515	344.4	0.356	5.60	101.1	3.5	0.26	0.0	0.00	0.20	0.09	103	209
114		15.91	15.89	33.804	24.853	312.4	0.392	5.53	98.2	3.6	0.27	0.3	0.14	0.20	0.19	1 14	210
125		15.96	15.94	33.993	24.987	300.0	0.425	5.44	96.9	3.6	0.25	0.5	0.14	0.14	0.14	126	211
139		14.86	14.84	33.804	25.086	290.9	0.467	5.31	92.4	4 .5	0.38	2.0	0.04	0.09	0.12	140	212
150	ISL	14.20	14.18	33.769	25.199	280.2	0.498	5.20	89.2	5.2	0.46	3.3	0.03	0.06	0.09	151	
163		13.39	13.37	33.761	25.360	265. 1	0.534	5.03	84.9	6.7	0.59	5.3	0.01	0.04	0.05	164	213
195		10.36	10.34	33.599	25.801	222.9	0.612	4.38	69.2	15.1	1 .24	14.7	0.01	0.01	0.03	196	211
200	ISL	10.05	10.03	33.613	25.865	216.9	0.623	4.28	67.2	16.6	1 .32	15.9	0.01			201	
228		8.85	8.83	33.750	26.167	188.3	0.679	3.80	58.1	24.5	1 .67	21 .2	0.00			229	215
250	ISL	8.31	8.28	33.855	26.333	172.8	0.719	3.59	54.3	29.1	1 .80	23.3	0.00			251	
267		8.03	8.00	33.923	26.428	163.9	0.748	3.46	52.0	32.3	1 .87	24.4	0.00			268	21*
300	ISL	7.56	7.53	33.981	26.542	153.4	0.800	3.12	46.4	39.1	2.03	26.9	0.00			302	
317		7.36	7.33	33.997	26.583	149.6	0.826	2.89	42.8	42.8	2.13	28.2	0.00			319	217
377		6.74	6.71	34.087	26.740	135.3	0.911	1 .62	23.7	57.5	2.62	33.8	0.00			379	21!
400	ISL	6.55	6.51	34.119	26.790	130.7	0.942	1 .28	18.6	62.0	2.75	35.3	0.00			402	
438		6.29	6.25	34.167	26.863	124.2	0.990	0.87	12.6	68.5	2.92	37. 1	0.00			441	219
500	ISL	5 .93	5 .89	34.225	26.955	116.0	1 .065	0.54	7.7	77.5	3.09	38.8	0.00			503	
508		5 .88	5.84	34.233	26.967	114.9	1 .074	0.50	7.2	78.7	3.11	39.0	0.00			511	220

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RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
32 57.7 N	117 18.8 W	04/01/95	2016	UTC	93 m	130	17 kn	150 04 04»	5	1015.1 mb	13,.2 C	11 .9 C	13m 04	8/8	NS

DEPTH H	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/ l	P04 uM/ l	N03 ufl/ l	N02 uM/ l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.396	24.894	304.8	0.000	6.05	103.8	4.8	0.41	0.2	0.03	2.33	0.31	0	
1	14.26	14.26	33.396	24.894	304.9	0.003	6.05	103.8	4.8	0.41	0.2	0.03	2.33	0.31	1	201
6	14.29	14.29	33.396	24.888	305.6	0.018	6.06	104.0	4.5	0.39	0.1	0.03	2.97	0.33	6	202
10 ISL	14.30	14.30	33.400	24.889	305.6	0.031	6.06	104.0	4.4	0.40	0.1	0.03	2 .51	0.32	10	
12	14.30	14.30	33.401	24.890	305.6	0.037	6.06	104.0	4.3	0.40	0.1	0.03	2.18	0.31	12	203
20 ISL	14.32	14.32	33.405	24.889	305.9	0.061	6.04	103.7	4.2	0.39	0.2	0.03	1 .97	0.30	20	
22	14.32	14.32	33.406	24.890	305.9	0.067	6.03	103.5	4.2	0.39	0.2	0.03	1 .94	0.30	22	204
30 ISL	14.24	14.24	33.410	24.910	304.2	0.092	6.00	102.9	4.2	0.41	0.2	0.05	1 .06	0.27	30	
31	14.23	14.23	33.411	24.913	303.9	0.095	5 .99	102.7	4.2	0.41	0.2	0.05	0.95	0.27	31	205
41	14.08	14.07	33.420	24.952	300.6	0.125	5.84	99.8	4.7	0.47	0.6	0.13	0.52	0.26	41	206
50 ISL	14.02	14.01	33.427	24.970	299.1	0.152	5.73	97.8	4.9	0.49	0.9	0.17	0.48	0.26	50	
51	14.01	14.00	33.428	24.973	298.8	0.155	5.72	97.6	4.9	0.49	0.9	0.17	0.48	0.26	51	207
61	13.89	13.88	33.438	25.005	296.0	0.185	5.53	94. 1	5.2	0.57	1 .5	0.23	0.38	0.31	61	208
70	13.84	13.83	33.445	25.021	294.7	0.211	5.45	92.7	5.5	0.59	1 .8	0.25	0.33	0.31	70	209

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 28

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 55.4 N	117 23.3 V	05/01/95	2036	UTC	563 m	270	24 kn	270 08 OSi	1	1015.2 mb	15 .0 C	13,.3 C	15m 03	6/8	CU

DEPTH D	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 uM/ l	N03 uM/ l	N02 UN/ l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.62	14.62	33.361	24.791	314.7	0.000	5.96	102.9	5.3	0.38	0.3	0.02	1 .32	0.28	0	
1	14.62	14.62	33.361	24.791	314.7	0.003	5.96	102.9	5.3	0.38	0.3	0.02	1 .32	0.28	1	201
10	14.61	14.61	33.357	24.790	315.0	0.031	5.94	102.6	4.9	0.37	0.2	0.02	1 .06	0.26	10	202
20	14.60	14.60	33.360	24.795	314.9	0.063	5.94	102 .5	4.8	0.37	0.2	0.02	0.95	0.28	20	203
30	14.53	14.53	33.363	24.813	313.5	0.094	5.90	101.7	4.7	0.39	0.3	0.04	0.86	0.28	30	204
39	14.45	14.44	33.378	24.841	311 .0	0.122	5 .86	100.9	4.7	0.40	0.3	0.06	0.63	0.27	39	205
50	13.84	13.83	33.426	25.006	295.6	0.156	5 .44	92.5	5.6	0.57	2 .2	0.23	0.22	0.19	50	206
61	13.24	13.23	33.473	25.165	280.8	0.188	4.76	80.0	8. 5	0.85	6.8	0.07	0.13	0.16	61	207
70	13.06	13.05	33.482	25.208	276.9	0.213	4.58	76.6	9.2	0.92	7.9	0.05	0.13	0.16	70	208
75 ISL	12.95	12.94	33.489	25.235	274.4	0.226	4.49	75.0	9.7	0.96	8.5	0.04	0.12	0.16	75	
86	12.68	12 .67	33.511	25.305	268.0	0.256	4.28	71 .1	11.0	1 .07	9.9	0.02	0. 09	0.15	86	209
99	12.32	12.31	33.555	25.409	258.4	0.291	3.99	65.8	12.8	1.21	12.1	0.02	0.08	0.14	99	210
100 ISL	12.30	12.29	33.559	25.416	257.8	0.293	3.96	65.2	12.9	1 .22	12.3	0.02	0.08	0.14	100	
118	11 .97	11.95	33.645	25.546	245.8	0.338	3.42	56.0	15.9	1 .45	15.3	0.02	0.05	0.11	119	211
125 ISL	11 .73	11.71	33.688	25.624	238.5	0.355	3.19	52.0	17.6	1 .56	16.7	0.02	0.04	0.10	126	
140	11 .26	11.24	33.800	25.798	222.3	0.390	2.69	43.4	21 .6	1 .79	19.7	0.01	0.02	0.07	141	212
150 ISL	11.15	11.13	33.903	25.898	213.0	0.412	2.35	37.9	24.1	1 .93	21 .3	0.01	0.01	0.06	151	
166	11 .08	11 .06	34.061	26.034	200.5	0.445	1 .89	30.4	27.4	2.12	23.3	0.01	0.01	0.04	167	213
200 ISL	10.70	10.68	34.208	26.217	183.8	0.510	1 .71	27.3	30.7	2.24	25.2	0.01	0.00	0.04	201	
203	10.64	10.62	34.210	26.229	182.7	0.516	1 .69	27.0	30.9	2.25	25.3	0.01	0.00	0.04	204	214
232	9.68	9.65	34.142	26.340	172.4	0.567	1 .99	31 .1	33.0	2.24	26.0	0.01			233	215
250 ISL	9.39	9.36	34.151	26.395	167.4	0.598	1 .97	30.6	34.6	2.27	26.5	0.01			251	
273	9.14	9.11	34.174	26.454	162.2	0.636	1 .90	29.3	36.9	2.32	27.3	0.01			275	216
300 ISL	8.69	8.66	34.165	26.518	156.4	0.679	2.07	31 .6	39.6	2.36	28. 1	0.01			302	
308	8.55	8.52	34.161	26.537	154.7	0.691	2.11	32. 1	40. 5	2.38	28.4	0.01			310	217
371	7.76	7.72	34.193	26.681	141.7	0.784	1 .39	20.8	51 .0	2.61	31.8	0.01			373	218
400 ISL	7.47	7.43	34.191	26.721	138.1	0.825	1 .26	18.7	54.4	2.69	32.8	0.01			403	
433	7.18	7.14	34.191	26.763	134.5	0.870	1.15	17.0	58.1	2.77	33.7	0.01			436	219
500 ISL	6.63	6.58	34.248	26.883	123.6	0.956	0.68	9.9	68.7	3.01	36.2	0.01			503	
512	6.53	6.48	34.258	26.904	121.7	0.971	0.60	8.7	70.6	3.05	36.7	0.01			515	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 50.9 N	117 31.7 W	05/01/95	2330	UTC	829 m	280	18 kn	280 07 0<>	1	1016.1 mb	15 .5 C	12,.6 C	16m 03	4/8	CU

DEPTH in	TEP1P DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ L	OXY PCT	SI03 UN/ l	P04 uM/ l	N03 uM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0 ISL	14.88	14.88	33.351	24.728	320.7	0.000	5.83	101.2	4 .6	0.35	0. 1	0.02	0.57	0.20	0	
1	14.88	14.88	33.351	24.728	320.7	0.003	5.83	101.2	4.6	0.35	0. 1	0.02	0.57	0.20	1	224
10	14.87	14.87	33.353	24.732	320.6	0.032	5.81	100.8	4.4	0.34	0. 1	0.02	0.55	0.20	10	202
19	14.88	14.88	33.352	24.729	321 .2	0.061	5.81	100.9	4.3	0.34	0.2	0.02	0. 52	0.20	19	203
20 ISL	14.88	14.88	33.352	24.729	321 .2	0.064	5.81	100.9	4.3	0.34	0.2	0.02	0.52	0.20	20	
29	14.86	14.86	33.352	24.734	321 .0	0.093	5.83	101.2	4. 1	0.34	0.2	0.02	0.54	0.19	29	204
30 ISL	14.86	14.86	33.352	24.734	321 .0	0.096	5.83	101.2	4. 1	0.34	0.2	0.02	0.55	0.19	30	
39	14.80	14.79	33.356	24.750	319.8	0.125	5.85	101.4	3.9	0.35	0.2	0.03	0.61	0.23	39	205
50	14.58	14.57	33.384	24.819	313.5	0. 160	5.77	99.6	4.0	0.39	0.4	0.10	0.37	0.23	50	206
60	14.16	14.15	33.419	24.935	302.7	0.191	5.52	94 .5	5.0	0.51	1 .6	0.29	0.37	0.26	60	207
70	13.44	13.43	33.459	25.114	285 .9	0.220	5.02	84.7	7.0	0.74	5. 1	0.16	0.19	0.20	70	208
75 ISL	13.07	13.06	33.476	25.201	277.7	0.234	4.74	79.3	8.6	0.87	7. 1	0.10	0.14	0.18	75	
85	12.46	12.45	33.525	25.359	262 .9	0.261	4.18	69.1	11.8	1.13	11.0	0.02	0.09	0.14	85	209
98	12.20	12.19	33.641	25.499	249.9	0.295	3.53	58. 1	14.8	1 .38	14.3	0.02	0.05	0.12	98	210
100 ISL	12.13	12.12	33.653	25.521	247.8	0.300	3.46	56.8	15.3	1 .41	14.8	0.02	0.05	0.12	100	
118	11.56	11.55	33.753	25.706	230.6	0.343	2.90	47.1	19.8	1 .68	18.3	0.01	0.03	0.09	119	211
125 ISL	11.50	11.48	33.804	25.757	225.9	0.359	2.64	42 .8	21.4	1 .78	19.4	0.01	0.02	0.08	126	
139	11 .38	11.36	33.896	25.851	217.3	0.390	2 .25	36.4	24.0	1 .94	21.2	0.01	0.01	0.06	140	212
150 ISL	10.97	10.95	33.916	25.941	208.9	0.413	2.36	37.9	24 .8	1 .94	21.9	0.01	0.00	0.05	151	
170	10.24	10.22	33.952	26.097	194.4	0.453	2.63	41 .5	25.9	1 .94	22.7	0.01	0.00	0.04	171	213
200	10.23	10.21	34.149	26.253	180.3	0.510	1 .93	30.5	31 .1	2.19	25.2	0.00	0.00	0.04	201	214
230	9.56	9.53	34.147	26.364	170.1	0.562	2.01	31 .3	33.8	2.24	26.2	0.00			231	215
250 ISL	9.34	9.31	34.165	26.414	165.6	0. 596	1 .95	30.2	35 .7	2.28	26.8	0.00			251	
267	9.20	9.17	34.185	26.453	162 .2	0.624	1 .86	28.8	37.4	2.33	27.4	0.00			269	216
300 ISL	8.84	8.81	34.224	26.541	154.3	0.676	1 .61	24.7	41.2	2 .44	28. 7	0.00			302	
317	8.65	8.62	34.240	26.584	150.6	0.702	1 .48	22.6	43.3	2.50	29.4	0.00			319	217
378	7.98	7.94	34.243	26.688	141.3	0.791	1.17	17.6	50.6	2 .68	31 .6	0.00			380	218
400 ISL	7.62	7.58	34.218	26.721	138.2	0.822	1.16	17.3	53.8	2.71	32.5	0.00			403	
437	7.07	7.03	34.186	26.774	133.4	0.872	1.15	16.9	59.2	2.77	34. 1	0.00			440	219
500 ISL	6.75	6.70	34.257	26.874	124.6	0.953	0.69	10.1	67.7	2 .98	36. 1	0.00			503	
511	6. 70	6.65	34.269	26.890	123.2	0.967	0.61	8.9	69.2	3.02	36.4	0.00			514	220

RV DAVID STARR JORDAN | CALCOFI CRUISE 9501 | STATION 93 35

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 41.2 N	117 52.4 W	06/01/95	0440 UTC	631 m	290	20 kn			1018.5 mb	14 .5 C	12 .0 C				

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/ l	P04 uM/ l	N03 uM/ l	N02 uH/l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAMP
0	ISL	14.67	14.67	33.407	24.816	312.3	0.000	5.71	98.7	5.2	0.41	0.7	0.06	0.39	0.04	0	
1		14.67	14.67	33.407	24.816	312.3	0.003	5.71	98.7	5.2	0.41	0.7	0.06	0.39	0.04	1	201
10	ISL	14.67	14.67	33.407	24.816	312.6	0.031	5.73	99.1	4.9	0.41	0.7	0.06	0.60	0.20	10	
11		14.67	14.67	33.407	24.816	312.6	0.034	5.73	99.1	4.9	0.41	0.7	0.06	0.63	0.22	11	202
20	ISL	14.67	14.67	33.407	24.816	312.8	0.063	5.71	98.7	4 .8	0.40	0.7	0.06	0.57	0.22	20	
21		14.67	14.67	33.407	24.816	312.9	0.066	5.71	98.7	4.8	0.40	0.7	0.06	0.56	0.22	21	203
30	ISL	14.66	14.66	33.408	24.820	312.8	0.094	5.76	99.6	4.7	0.40	0.7	0.06	0.55	0.23	30	
31		14.66	14.66	33.408	24.820	312.9	0.097	5.76	99.6	4.7	0.40	0.7	0.06	0.55	0.23	31	204
39		14.58	14.57	33.410	24.839	311.3	0.122	5.70	98.4	4.7	0.41	0.9	0.06	0.50	0.23	39	205
50		14.01	14.00	33.431	24.975	298.6	0.155	5.31	90.6	6.0	0.59	3.2	0.08	0.29	0.26	50	206
61		12.85	12 .84	33.456	25.229	274.6	0.187	4.67	77.8	9.2	0.89	7.8	0.04	0.18	0.23	61	207
68		12.74	12.73	33.518	25.298	268.2	0.206	4.36	72.5	10.8	1 .04	9.7	0.02	0.13	0.19	68	20S
75	ISL	12.53	12.52	33.585	25.391	259.5	0.224	3.90	64.6	13.3	1 .22	12.1	0.02	0.09	0.16	75	
85		12.17	12.16	33.669	25.526	247.0	0.250	3.29	54.1	16.7	1 .46	15.2	0.02	0.05	0.13	85	20!
100		11 .69	11 .68	33.732	25.665	234.0	0.286	3.03	49.3	19.2	1 .62	17.6	0.01	0.03	0.10	100	210
121		11 .05	11 .04	33.856	25.879	214.1	0.333	2.54	40.8	23.4	1 .88	20.9	0.00	0.01	0.06	122	211
125	ISL	11 .06	11 .04	33.883	25.898	212.4	0.341	2.46	39.5	24.0	1 .91	21 .3	0.00	0.01	0.06	126	
139		11 .08	11 .06	33.955	25.951	207.7	0.371	2.21	35.6	25.6	2.01	22.3	0.00	0.01	0.06	140	212
150	ISL	11 .04	11 .02	34.009	26.000	203.3	0.393	2.04	32.8	26.8	2.08	23.1	0.00	0.01	0.05	151	
169		10.97	10.95	34.124	26.103	194.0	0.431	1 .88	30.2	28.9	2.18	24.3	0.00	0.00	0.04	170	213
199		9.80	9.78	34.139	26.318	173.9	0.486	2.04	32.0	32.4	2.20	25.7	0.00	0.01	0.03	200	214
200	ISL	9.80	9.78	34.144	26.321	173.6	0.488	2 .03	31 .8	32.5	2.21	25.8	0.00			201	
227		9.73	9.70	34.245	26.412	165.5	0.534	1 .61	25.2	36.3	2.38	27.3	0.15	U		228	215
250	ISL	9.38	9.35	34.237	26.464	160.9	0.571	1 .69	26.2	38.0	2.39	27.8	0.00			251	
269		9.00	8.97	34.206	26.501	157.6	0.602	1 .76	27.1	39.4	2.39	28.1	0.00			271	216
300	ISL	8.41	8.38	34.191	26.582	150.2	0.649	1 .66	25.2	43.9	2 .46	29.6	0.00			302	
320		8.09	8.06	34.188	26.628	146.0	0.679	1 .55	23.4	46.9	2.52	30.6	0.00			322	217
379		7.76	7.72	34.204	26.690	141.0	0.764	1 .32	19.7	51 .5	2.63	32.0	0.00			381	218
400	ISL	7.64	7.60	34.218	26.718	138.5	0.793	1.18	17.6	53.8	2.70	32.7	0.00			403	
438		7.39	7.35	34.243	26.774	133.7	0.845	0.93	13.8	58.5	2.82	33.9	0.00			441	219
500	ISL	6.89	6.84	34.252	26.851	126.9	0.926	0.72	10.6	65 .9	2.96	35.8	0.00			503	
508		6.82	6.77	34.253	26.862	126.0	0.936	0.69	10.1	66.9	2 .98	36.0	0.00			511	220

4

RV DAVID STARR JORDAN | CALCOFI CRUISE 9501 | STATION 93 40

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 30.8 N	118 13.0 W	06/01/95	0912 UTC	1626 m	290	14 kn			1019.3 mb	13.8 C	1 1.3 C				

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UN/ l	P04 uM/l	N03 uM/ l	N02 uN/l	CHL-A ug/ l	PHAEO ug/l	PRES db	SABP
0	ISL	14.66	14.66	33.424	24.831	310.9	0.000	5.68	98.2	4.6	0.43	0.8	0.04	0.51	0.21	0	
2		14.66	14.66	33.424	24.831	310.9	0.006	5.68	98.2	4.6	0.43	0.8	0.04	0.51	0.21	2	201
10		14.65	14.65	33.425	24.834	310.8	0.031	5 .69	98.4	4.4	0.41	0.8	0.04	0.53	0.22	10	202
19		14.66	14.66	33.425	24.832	311.3	0.059	5.69	98.4	4.3	0.40	0.8	0.04	0.51	0.20	19	20!
20	ISL	14.66	14.66	33.423	24.833	311.3	0.062	5.69	98.4	4.3	0.40	0.8	0.04	0.51	0.20	20	
30	ISL	14 .66	14.66	33.425	24.833	311.6	0.093	5.69	98.4	4.2	0.40	0.8	0.04	0.50	0.20	30	
31		14.66	14.66	33.425	24.833	311.6	0.096	5.69	98.4	4.2	0.40	0.8	0.04	0.50	0.20	31	204
40		14.65	14.64	33.425	24.835	311.6	0.125	5.67	98.0	4.2	0.41	0.9	0.04	0.48	0.20	40	205
49		13.43	13.42	33.461	25.117	285 .0	0.151	4.82	81 .3	7.6	0. 79	6.3	0.07	0.34	0.26	49	206
50	ISL	13.31	13.30	33.464	25. 143	282.5	0. 154	4.76	80.1	7.9	0.82	6.8	0.07	0.32	0.26	50	
60		12.31	12.30	33.495	25.364	261 .8	0.181	4.35	71 .7	11.1	1 .08	10.8	0.03	0.17	0.19	60	207
69		11 .66	11 .65	33.540	25.521	246.9	0.204	4.05	65 .8	13.7	1 .25	13.3	0.02	0.10	0.14	69	20!
75	ISL	11.43	11 .42	33.558	25.577	241 .7	0.219	3.94	63.7	14.6	1 .31	14.2	0.02	0.08	0.12	75	
85		11.19	11.18	33.582	25.640	236.0	0.243	3.83	61 .6	15.6	1 .37	15.2	0.01	0.06	0.10	85	209
100		10.86	10.85	33.636	25 .741	226.6	0.278	3.61	57.7	18.1	1 .51	17.2	0.01	0.03	0.07	100	210
119		9.95	9. 94	33.738	25.978	204.4	0.318	3.33	52.2	22.2	1 .71	20.3	0.00	0.01	0.04	120	211
125	ISL	9.79	9. 78	33.766	26.026	199.9	0.331	3.27	51.1	23.3	1 .75	21 .0	0.00	0.01	0.04	126	
141		9.51	9.49	33.834	26.126	190.7	0.362	3.11	48.3	25.9	1 .84	22 .4	0.00	0.01	0.03	142	212
150	ISL	9.37	9.35	33.876	26.182	185.5	0.379	2.99	46.3	27.2	1 .89	23 .1	0.00	0.01	0.03	151	
170		9.15	9.13	33.964	26.286	176.0	0.415	2.71	41.8	29.9	2.00	24.4	0.00	0.00	0.03	171	213
199		9.08	9.06	34.062	26.375	168.2	0.465	2.39	36.8	34 .1	2.14	26.1	0.00	0.00	0.02	200	214
200	ISL	9.07	9.05	34.065	26.379	167.8	0.467	2.38	36.7	34.2	2.15	26.2	0.00			201	
228		8.87	8.85	34.143	26.472	159.5	0.512	2.01	30.8	37.8	2.28	27.4	0.01			229	215
250	ISL	8.67	8.64	34.160	26.517	155.6	0.547	1 .91	29.2	39.8	2.33	28.2	0.01			251	
268		8.47	8.44	34.160	26.548	152.9	0.575	1 .86	28.3	41.6	2.36	28.8	0.00			270	216
300	ISL	8.02	7.99	34.161	26.617	146.7	0.623	1 .68	25.3	46.6	2.47	30.4	0.00			302	
318		7.77	7.74	34.162	26.654	143.2	0.649	1 .56	23.3	49.5	2.54	31 .3	0.00			320	217
378		7.38	7.34	34.200	26.741	135.8	0.732	1.14	16.9	56.2	2.72	33.2	0.00			380	211
400	ISL	7.20	7.16	34.207	26.772	133.1	0.762	1 .03	15.2	58.9	2 .78	34.0	0.00			403	
437		6.89	6.85	34.217	26.823	128.6	0.810	0.87	12.8	63.6	2.88	35.3	0.00			440	219
500	ISL	6.41	6.36	34.254	26.917	120.2	0.889	0.58	8.4	72.0	3.04	37.3	0.00			503	
514		6.30	6.25	34.262	26.937	118.3	0.906	0.51	7.4	73.9	3.08	37.7	0.00			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 45

LATITUDE	L0N6ITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 21.0 N	118 33.0 W	06/01/95	1332	UTC	1309 m	280	05 kn			1019.7 mb	13.6 C	11.1 C			

DEPTH H	TEMP DE3 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.353	24.861	308.0	0.000	5.83	100.0	4.6	0.39	0.6	0.05	0.45	0.18	0	
2	14.26	14.26	33.353	24 .861	308.1	0.006	5.83	100.0	4.6	0.39	0.6	0.05	0.45	0.18	2	201
10 ISL	14.27	14.27	33.353	24.859	308.5	0.031	5.82	99.8	4.5	0.38	0.6	0.05	0.44	0.18	10	
15	14.27	14.27	33.352	24.859	308.7	0.046	5.81	99.6	4 .4	0.38	0.6	0.05	0.44	0.18	15	202
20 ISL	14.28	14.28	33.355	24.859	308.8	0.062	5.80	99.5	4.4	0.38	0.6	0.05	0.45	0.17	20	
30	14.31	14.31	33.361	24.858	309.2	0.093	5.79	99.4	4.4	0.38	0.6	0.05	0.46	0.16	30	203
47	14.32	14.31	33.363	24.858	309.7	0.145	5.79	99.4	4.3	0.42	0.6	0.05	0.46	0.16	47	204
50 ISL	14.32	14.31	33.363	24.858	309.8	0.154	5 .79	99.4	4.2	0.42	0.6	0.05	0.44	0.16	50	
54	14.32	14.31	33.364	24.859	309.8	0.167	5.80	99.5	4 .2	0.42	0.6	0.05	0. 42	0.17	54	205
65	14.17	14.16	33.385	24.906	305.6	0.201	5.66	96.9	4.5	0.44	1 .4	0.08	0.35	0.16	65	206
75 ISL	13.04	13.03	33.458	25.193	278.4	0.230	4.89	81 .8	8.2	0.80	6.7	0.06	0.22	0.21	75	
76	12.89	12.88	33.467	25.230	274.9	0.233	4.80	80.0	8.7	0.85	7.4	0.06	0.20	0.21	76	207
84	11 .68	11.67	33.534	25.513	248.1	0.254	4.21	68.4	12.7	1.16	12.4	0.02	0.09	0.14	84	208
94	11 .30	11.29	33.568	25.609	239. 1	0.278	4.02	64.8	14.7	1 .30	14.4	0.01	0.06	0.10	94	209
100 ISL	10.99	10.98	33.598	25.688	231 .7	0.292	3.88	62.2	16.2	1 .39	15.7	0.01	0.04	0.08	100	
111	10.40	10.39	33.665	25.844	217.0	0.317	3.61	57.1	19.0	1 .55	17.9	0.01	0.02	0.06	112	210
125	9.83	9.82	33.762	26.017	200.8	0.346	3.27	51 .1	22.2	1 .72	20.4	0.00	0.01	0.04	126	211
143	9.47	9.45	33.825	26.125	190.8	0.381	3.20	49.7	25.1	1 .82	22.0	0.00	0.00	0.03	144	212
150 ISL	9.49	9.47	33.873	26.160	187.7	0.395	3.05	47.4	26.2	1 .88	22.7	0.00	0.00	0.03	151	
170	9.55	9.53	34.000	26.250	179.6	0.431	2.56	39.8	29.3	2 .04	24.4	0.00	0.00	0.04	171	213
198	9.23	9.21	34.101	26.381	167.6	0.480	2 .23	34.5	33.7	2.18	26.2	0.00	0.00	0.03	199	214
200 ISL	9.21	9.19	34.105	26.388	167.0	0.483	2.21	34.2	34.0	2.19	26.3	0.00			201	
229	8.91	8.89	34.152	26.473	159.4	0.531	2 .00	30.7	37.4	2.28	27.5	0.00			230	215
250 ISL	8.81	8.78	34.191	26.519	155.4	0. 564	1 .78	27.3	39.7	2.37	28.4	0.00			251	
268	8.68	8.65	34.213	26.557	152.1	0.591	1 .61	24.6	41.9	2 .44	29.2	0.00			270	216
300 ISL	8.04	8.01	34.183	26.631	145.3	0.639	1 .58	23.8	47.0	2.52	30.7	0.00			302	
318	7.65	7.62	34.161	26.671	141.6	0.665	1 .56	23.3	50.1	2.56	31 .6	0.00			320	217
378	6.95	6.91	34.177	26.782	131.5	0.747	1.13	16.6	59.9	2 .78	34. 5	0.00			380	218
400 ISL	6.80	6.76	34.187	26.811	129.1	0. 775	1 .00	14.6	62.5	2.84	35.2	0.00			403	
436	6.60	6.56	34.207	26.854	125.4	0.821	0.82	11.9	66.3	2.93	36.1	0.00	"^		439	219
500 ISL	6.21	6.17	34.255	26.943	117.5	0.899	0.54	7.8	74.1	3.08	37.9	0.00			503	
516	6.11	6.06	34.268	26.966	115.4	0.917	0.47	6.8	76.1	3.12	38.3	0.00			519	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 10.9 N	118 53.8 W	06/01/95	1810	UTC	1470 in	160	11 kn	190 05 07'	1	1021.5 mb	15 .2 C	12.6 C	22m 03	3/8	CS

DEPTH in	TENP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/l	P04 uM/l	N03 uM/L	N02 uM/t	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.246	24.778	315.9	0.000	5 .89	100.9	4 .7	0.36	0.3	0.04	0. 44	0.16	0	
2 A	14.26	14.26	33.246	24.778	315.9	0.006	5 .89	100.9	4.7	0.36	0.3	0.04	0.44	0.16	2	201
10 ISL	14.22	14.22	33.245	24.786	315.4	0.032	5.90	101.0	4.4	0.36	0.3	0.04	0.45	0.17	10	
11 A	14.21	14.21	33.245	24.788	315.2	0.035	5 .90	101.0	4.4	0.36	0.3	0.04	0 .45	0.17	11	202
20	14.19	14.19	33.248	24.795	314.9	0.063	5 .90	100.9	4. 1	0.36	0.3	0.04	0.47	0.19	20	203
27 A	14.19	14.19	33.255	24.801	314.5	0.085	5.91	101.1	4. 1	0.36	0.3	0.05	0. 49	0.18	27	204
30 ISL	14.18	14.18	33.253	24.801	314.5	0.095	5 .91	101.1	4. 1	0.36	0.3	0.05	0.48	0.18	30	
36	14.17	14.16	33.250	24.801	314.7	0.113	5.90	100.9	4.0	0.37	0.3	0.05	0.47	0.17	36	205
42 A	14.17	14.16	33.252	24.803	314.7	0.132	5.90	100.9	3.9	0.36	0.4	0.05	0.48	0.17	42	206
50 ISL	14.14	14.13	33.259	24.815	313.8	0.157	5.88	100. 5	3.9	0.37	0. 5	0.08	0.43	0.19	50	
51	14.14	14.13	33.260	24.816	313.8	0.161	5 .88	100.5	3.9	0.37	0.5	0.08	0.42	0.19	51	207
58 A	14.10	14.09	33.269	24.831	312.5	0. 183	5.85	99.9	3.9	0.38	0. 6	0.10	0.41	0.18	58	208
66	13.97	13.96	33.290	24.875	308.6	0.207	5.82	99. 1	4 .0	0.41	1. 1	0.14	0.33	0.21	66	209
75 ISL	13.17	13.16	33.361	25.092	288.0	0.234	5,52	92.5	5.8	0.58	3.8	0.10	0.15	0.20	75	
77 A	12.94	12.93	33.376	25.150	282.6	0.240	5.43	90.6	6.3	0.63	4.6	0.09	0.11	0.20	77	210
89	11.57	11.56	33.363	25.400	258.8	0.272	5.01	81 .2	9.4	0.89	8.6	0.03	0.07	0.09	89	211
99	11 .00	10.99	33.405	25.536	246. 1	0.298	4.67	74.8	12.3	1.11	11.9	0.01	0.05	0.06	99	212
100 ISL	10.94	10.93	33.414	25.554	244.4	0.300	4.62	73.9	12.7	1.14	12.3	0.01	0.05	0.06	100	
119	9.88	9.87	33.593	25.876	214.0	0.344	3.81	59.6	19.9	1 .56	18.8	0.02	0.02	0.05	120	213
125 ISL	9.71	9.70	33.621	25.926	209.3	0.356	3.77	58.7	20.8	1 .60	19.5	0.02	0.02	0.05	126	
138	9.48	9.46	33.672	26.004	202.2	0.383	3.69	57.2	22 .0	1 .65	20.2	0.01	0.01	0.06	139	214
150 ISL	9.26	9.24	33.756	26.106	192.7	0.407	3.50	54 .0	24 .4	1 .74	21.5	0.01	0.01	0.05	151	
171	8.99	8.97	33.917	26.275	177.0	0.446	3.04	46.7	29.1	1 .92	24.0	0.00	0.00	0.03	172	215
200	8.94	8.92	34.092	26.420	163.8	0.495	2.30	35.3	34.9	2.18	26.7	0.00	0.00	0.02	201	216
227	8.65	8.63	34.105	26.476	158.9	0.539	2.16	33.0	37.4	2.26	27.7	0.00			228	217
250 ISL	8.37	8.34	34.137	26.545	152.7	0.574	1 .86	28.2	41 .6	2 .38	29.2	0.00			251	
269	8.13	8.10	34.166	26.604	147.4	0.603	1 .59	24.0	45.5	2.49	30.5	0.00			271	218
300 ISL	7.80	7.77	34.196	26.677	140.9	0.648	1 .32	19.8	50.7	2 .63	32.0	0.00			302	
320	7.60	7.57	34.210	26.717	137.3	0.675	1.18	17.6	53.8	2.71	32 .9	0.00			322	219
378	7.05	7.01	34.244	26.822	127.9	0.752	0.81	11.9	62.4	2 .91	35.2	0.00			380	220
400 ISL	6.88	6.84	34.258	26.856	124.9	0.780	0.68	10.0	65 .4	2 .97	35 .9	0.00			403	
437	6.59	6.55	34.277	26.910	120.0	0.825	0.51	7.4	70.3	3.05	37.0	0.00			440	221
500 ISL	5 .99	5 .95	34.277	26.988	112.9	0.899	0.42	6.0	78.0	3.14	38.7	0.00			503	
511	5.89	5.85	34.278	27.002	111.7	0.911	0.40	5.7	79.3	3.16	39.0	0.00			514	222

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 0.7 N	119 14.1 W	06/01/95	2301 UTC	1594 in	170 10 kn	270 08 08	1	1019.0 mb	15.7 C	13.3 C	18m 03	3/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 uM/l	N03 uM/l	N02 UN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	14.74	14.74	33.184	24.629	330.1	0.000	5.91	102.2	4.4	0.36	0.1	0.01	0.44	0.14	0	
1		14.74	14.74	33.184	24.629	330.1	0.003	5.91	102.2	4.4	0.36	0.1	0.01	0.44	0.14	1	201
10		14.63	14.63	33.184	24.653	328.1	0.033	5.90	101.8	4.2	0.33	0.1	0.02	0.42	0.14	10	202
20		14.59	14.59	33.204	24.677	326.1	0.066	5.86	101.0	4.0	0.34	0.2	0.03	0.46	0.17	20	203
30		14.43	14.43	33.234	24.734	320.9	0.098	5.90	101.4	3.7	0.35	0.3	0.05	0.57	0.23	30	204
40		14.34	14.33	33.237	24.756	319.2	0.130	5.90	101.2	3.7	0.35	0.3	0.06	0.67	0.24	40	205
49		14.26	14.25	33.250	24.783	316.9	0.159	5.90	101.1	3.6	0.35	0.4	0.07	0.63	0.25	49	206
50	ISL	14.26	14.25	33.253	24.785	316.7	0.162	5.90	101.1	3.6	0.35	0.4	0.07	0.62	0.25	50	
58		14.18	14.17	33.260	24.808	314.7	0.187	5.91	101.1	3.6	0.36	0.4	0.09	0.57	0.26	58	207
68		13.82	13.81	33.353	24.954	301.0	0.218	5.86	99.5	3.7	0.40	1.0	0.18	0.50	0.28	68	208
75	ISL	13.72	13.71	33.377	24.994	297.5	0.239	5.79	98.2	3.9	0.43	1.4	0.20	0.44	0.26	75	
84		13.56	13.55	33.379	25.028	294.4	0.265	5.67	95.8	4.5	0.48	2.2	0.23	0.34	0.24	84	209
98		12.86	12.85	33.368	25.160	282.2	0.306	5.45	90.8	6.2	0.62	4.4	0.10	0.14	0.14	98	210
100	ISL	12.71	12.70	33.380	25.198	278.6	0.311	5.34	88.6	6.8	0.67	5.2	0.09	0.12	0.13	100	
118		11.45	11.44	33.532	25.554	244.9	0.359	4.24	68.6	13.0	1.19	13.2	0.01	0.05	0.09	119	211
125	ISL	11.17	11.15	33.578	25.641	236.8	0.375	3.96	63.7	14.9	1.33	15.1	0.01	0.04	0.08	126	
138		10.73	10.71	33.639	25.767	225.0	0.405	3.63	57.9	17.9	1.51	17.6	0.01	0.02	0.06	139	212
150	ISL	10.10	10.08	33.652	25.886	213.8	0.432	3.69	58.0	19.7	1.59	19.1	0.01	0.02	0.05	151	
168		9.22	9.20	33.670	26.045	198.8	0.469	3.79	58.4	22.2	1.66	20.6	0.00	0.01	0.03	169	213
198		8.66	8.64	33.818	26.249	179.8	0.526	3.36	51.2	28.0	1.86	23.7	0.00	0.00	0.02	199	214
200	ISL	8.62	8.60	33.823	26.259	178.9	0.529	3.37	51.3	28.2	1.86	23.8	0.00			201	
228		8.10	8.08	33.879	26.382	167.5	0.578	3.44	51.8	31.2	1.90	24.9	0.00			229	215
250	ISL	7.81	7.79	33.949	26.480	158.5	0.614	3.07	45.9	36.2	2.05	26.9	0.00			251	
268		7.62	7.59	34.004	26.551	152.0	0.642	2.68	39.9	40.7	2.19	28.7	0.00			269	216
300	ISL	7.34	7.31	34.047	26.625	145.4	0.689	2.26	33.5	46.5	2.35	30.8	0.00			302	
317		7.23	7.20	34.064	26.654	142.8	0.714	2.05	30.3	49.2	2.43	31.7	0.00			319	217
379		7.02	6.98	34.186	26.780	131.8	0.799	1.10	16.2	59.1	2.78	34.6	0.00			381	21!
400	ISL	6.88	6.84	34.209	26.817	128.5	0.826	0.91	13.3	62.6	2.87	35.5	0.00			402	
437		6.59	6.55	34.235	26.877	123.2	0.873	0.70	10.2	68.4	3.00	36.8	0.00			440	219
500	ISL	6.13	6.09	34.246	26.946	117.1	0.948	0.55	7.9	74.9	3.08	38.2	0.00			503	
511		6.05	6.00	34.248	26.958	116.0	0.961	0.52	7.5	76.0	3.09	38.5	0.00			514	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
31 50.6 N	119 34.0 y	07/01/95	0356 UTC	1781 m	140 20 kn			1017.8 mb	15.0 C	13.7 C			

DEPTH m		TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.38	15.38	33.297	24.577	335.0	0.000	5.76	101.0	4.6	0.33	0.1	0.00	0.21	0.14	0	
2		15.38	15.38	33.297	24.577	335.1	0.007	5.76	101.0	4.6	0.33	0.1	0.00	0.21	0.14	2	201
10	ISL	15.36	15.36	33.293	24.579	335.2	0.034	5.77	101.1	4.4	0.32	0.1	0.00	0.23	0.13	10	
16		15.33	15.33	33.287	24.581	335.2	0.054	5.78	101.2	4.3	0.32	0.1	0.00	0.24	0.12	16	202
20	ISL	15.31	15.31	33.280	24.580	335.4	0.067	5.78	101.2	4.3	0.32	0.1	0.00	0.24	0.12	20	
29		15.24	15.24	33.265	24.584	335.3	0.097	5.78	101.0	4.2	0.32	0.1	0.00	0.25	0.12	29	203
30	ISL	15.23	15.23	33.263	24.585	335.2	0.101	5.78	101.0	4.2	0.32	0.1	0.00	0.25	0.12	30	
44		15.12	15.11	33.250	24.599	334.3	0.147	5.82	101.5	4.1	0.32	0.0	0.00	0.09	IJ 0.56 U	44	204
50	ISL	15.11	15.10	33.253	24.604	334.0	0.167	5.80	101.1	4.0	0.32	0.0	0.00	0.27	0.15	50	
54		15.11	15.10	33.254	24.605	334.0	0.181	5.78	100.7	4.0	0.32	0.0	0.00	0.27	0.15	54	205
64		15.11	15.10	33.256	24.607	334.2	0.214	5.78	100.7	3.9	0.32	0.0	0.01	0.28	0.15	64	206
75		15.11	15.10	33.251	24.603	334.8	0.251	5.80	101.1	3.9	0.31	0.0	0.01	0.29	0.15	75	207
86		15.11	15.10	33.250	24.603	335.2	0.288	5.77	100.6	3.8	0.32	0.0	0.01	0.27	0.14	86	20!
92		15.11	15.10	33.252	24.604	335.2	0.308	5.78	100.7	3.8	0.32	0.0	0.01	0.29	0.13	92	209
100	ISL	14.94	14.93	33.318	24.692	327.1	0.335	5.71	99.2	4.0	0.33	0.2	0.05	0.25	0.15	100	
110		14.73	14.71	33.488	24.869	310.5	0.366	5.55	96.1	4.3	0.39	1.1	0.09	0.16	0.17	110	210
124		13.55	13.53	33.525	25.144	284.5	0.408	5.27	89.1	5.9	0.56	3.8	0.02	0.08	0.09	125	211
125	ISL	13.47	13.45	33.521	25.157	283.3	0.411	5.25	88.6	6.0	0.57	4.0	0.02	0.08	0.09	126	
147		11.83	11.81	33.437	25.411	259.3	0.471	4.90	79.9	9.5	0.90	8.8	0.01	0.04	0.05	148	212
150	ISL	11.61	11.59	33.443	25.457	255.0	0.478	4.85	78.7	10.1	0.94	9.5	0.01	0.03	0.05	151	
164		10.67	10.65	33.497	25.667	235.0	0.513	4.57	72.7	13.1	1.15	12.9	0.01	0.01	0.07	165	213
200		8.91	8.89	33.708	26.124	191.8	0.589	3.69	56.5	24.4	1.71	21.6	0.00	0.00	0.02	201	214
228		8.43	8.41	33.845	26.306	174.9	0.641	3.42	51.9	29.3	1.86	24.0	0.00			229	215
250	ISL	8.20	8.17	33.938	26.414	165.0	0.678	3.01	45.4	33.8	2.01	26.0	0.00			251	
267		8.06	8.03	33.996	26.481	158.9	0.706	2.68	40.3	37.5	2.12	27.4	0.00			268	216
300	ISL	7.68	7.65	34.053	26.582	149.7	0.757	2.31	34.5	44.1	2.29	29.6	0.00			302	
318		7.46	7.43	34.071	26.627	145.6	0.783	2.13	31.6	47.7	2.38	30.7	0.00			320	217
377		6.84	6.80	34.141	26.769	132.7	0.865	1.31	19.2	59.2	2.72	34.4	0.00			379	21!
400	ISL	6.76	6.72	34.164	26.798	130.2	0.895	1.13	16.5	61.7	2.80	35.1	0.00			402	
438		6.68	6.64	34.201	26.838	126.9	0.944	0.91	13.3	64.9	2.91	35.9	0.00			441	219
500	ISL	6.39	6.34	34.265	26.928	119.1	1.021	0.55	8.0	71.8	3.07	37.5	0.00			503	
514		6.32	6.27	34.279	26.948	117.3	1.037	0.47	6.8	73.4	3.10	37.9	0.00			517	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 30.9 N	120 15.2 W	07/01/95	1143	UTC	3931 m	160	20 kn			1016.2 mb	15.9 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/L	P04 uM/l	N03 UN/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.01	15.01	33.245	24.618	331.2	0.000	5.78	100.5	5.0	0.35	0.1	0.01	0.28	0.12	0	
2	15.01	15.01	33.245	24.618	331.2	0.007	5.78	100.5	5.0	0.35	0.1	0.01	0.28	0.12	2	201
10 ISL	15.01	15.01	33.244	24.617	331.5	0.033	5.78	100.5	4.9	0.34	0.1	0.01	0.27	0.13	10	
15	15.01	15.01	33.244	24.618	331.7	0.050	5.78	100.5	4.8	0.34	0.1	0.01	0.27	0.13	15	202
20 ISL	15.01	15.01	33.244	24.618	331.8	0.066	5.78	100.5	4.7	0.34	0.1	0.01	0.28	0.13	20	
30	15.00	15.00	33.245	24.621	331.8	0.099	5.78	100.5	4.6	0.33	0.1	0.01	0.29	0.12	30	203
45	15.01	15.00	33.245	24.619	332.4	0.149	5.78	100.5	4.3	0.33	0.0	0.01	0.27	0.13	45	204
50 ISL	15.02	15.01	33.245	24.617	332.7	0.166	5.78	100.6	4.2	0.33	0.0	0.01	0.28	0.13	50	
55	15.02	15.01	33.245	24.617	332.9	0.183	5.78	100.6	4.2	0.33	0.0	0.01	0.28	0.13	55	205
65	15.02	15.01	33.246	24.619	333.1	0.216	5.78	100.5	4.1	0.34	0.0	0.01	0.27	0.13	65	206
74	15.05	15.04	33.265	24.627	332.5	0.246	5.75	100.1	4.0	0.33	0.1	0.03	0.25	0.14	74	207
75 ISL	15.02	15.01	33.265	24.634	331.9	0.249	5.75	100.0	4.0	0.33	0.1	0.04	0.25	0.14	75	
84	14.59	14.58	33.270	24.730	323.0	0.279	5.70	98.3	4.2	0.38	0.4	0.15	0.19	0.14	84	208
94	13.99	13.98	33.316	24.891	307.8	0.310	5.63	95.9	4.8	0.45	1.5	0.24	0.12	0.11	94	209
100 ISL	13.76	13.75	33.337	24.955	301.8	0.328	5.57	94.5	4.9	0.47	1.9	0.21	0.09	0.09	100	
111	13.40	13.38	33.379	25.061	292.0	0.361	5.46	91.9	5.6	0.54	3.1	0.10	0.07	0.08	111	210
123	12.85	12.83	33.455	25.230	276.2	0.395	4.93	82.1	8.2	0.77	6.6	0.03	0.09	0.11	124	211
125 ISL	12.69	12.67	33.464	25.268	272.6	0.401	4.84	80.3	8.8	0.82	7.3	0.03	0.09	0.11	126	
143	11.14	11.12	33.524	25.605	240.6	0.447	4.22	67.8	14.4	1.23	13.6	0.01	0.03	0.06	144	212
150 ISL	10.64	10.62	33.534	25.701	231.5	0.463	4.19	66.6	15.9	1.32	15.1	0.01	0.02	0.05	151	
161	9.65	9.63	33.558	25.888	213.9	0.503	4.11	63.9	19.2	1.48	17.8	0.01	0.01	0.03	169	213
199	8.95	8.93	33.667	26.086	195.4	0.567	3.77	57.8	24.3	1.71	21.1	0.01	0.00	0.02	200	214
200 ISL	8.92	8.90	33.675	26.097	194.4	0.569	3.75	57.4	24.6	1.72	21.2	0.01			201	
227	8.20	8.18	33.890	26.376	168.1	0.618	3.27	49.3	32.3	1.92	24.8	0.01			228	215
250 ISL	7.90	7.87	33.993	26.502	156.5	0.655	2.79	41.8	38.2	2.11	27.2	0.01			251	
268	7.75	7.72	34.038	26.559	151.3	0.683	2.45	36.6	42.3	2.25	28.8	0.01			269	216
300 ISL	7.47	7.44	34.075	26.629	145.1	0.730	2.09	31.0	47.6	2.39	30.7	0.00			302	
320	7.29	7.26	34.080	26.658	142.6	0.759	1.93	28.5	50.5	2.46	31.6	0.00			322	217
379	6.57	6.54	34.090	26.765	132.8	0.840	1.46	21.2	61.0	2.69	34.6	0.00			381	218
400 ISL	6.44	6.40	34.103	26.792	130.5	0.868	1.30	18.9	63.7	2.76	35.4	0.00			402	
438	6.30	6.26	34.136	26.837	126.7	0.917	1.03	14.9	68.1	2.87	36.5	0.00			441	219
500 ISL	6.08	6.04	34.208	26.922	119.2	0.993	0.66	9.5	75.0	3.04	37.8	0.00			503	
515	6.03	5.98	34.226	26.943	117.4	1.011	0.57	8.2	76.7	3.08	38.1	0.00			518	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 10.7 N	120 55.4 W	07/01/95	1859	UTC	3827 in	190	04 kn	220 06 05	5	1019.3 mb	15.1 C	14.9 C	20m 02	8/8	SC

DEPTH in	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0 ISL	15.00	15.00	33.397	24.737	319.8	0.000	5.82	101.3	4.9	0.34	0.1	0.01	0.49	0.20	0	
1 A	15.00	15.00	33.397	24.737	319.8	0.003	5.82	101.3	4.9	0.34	0.1	0.01	0.49	0.20	1	201
10 ISL	14.93	14.93	33.409	24.762	317.8	0.032	5.81	101.0	4.7	0.33	0.1	0.01	0.52	0.22	10	
11 A	14.92	14.92	33.411	24.766	317.4	0.035	5.81	101.0	4.7	0.33	0.1	0.01	0.53	0.22	11	202
18	14.91	14.91	33.412	24.769	317.3	0.057	5.79	100.6	4.5	0.33	0.1	0.01	0.55	0.22	18	203
20 ISL	14.91	14.91	33.412	24.769	317.4	0.064	5.79	100.6	4.4	0.33	0.1	0.01	0.56	0.22	20	
25 A	14.91	14.91	33.412	24.769	317.5	0.080	5.80	100.8	4.3	0.33	0.1	0.01	0.58	0.23	25	204
30 ISL	14.91	14.91	33.412	24.769	317.7	0.095	5.80	100.8	4.2	0.34	0.2	0.01	0.60	0.24	30	
33	14.90	14.90	33.413	24.772	317.5	0.105	5.80	100.8	4.1	0.34	0.2	0.01	0.61	0.24	33	205
39 A	14.88	14.87	33.415	24.778	317.1	0.124	5.79	100.6	4.0	0.33	0.2	0.01	0.58	0.24	39	206
50 ISL	14.71	14.70	33.424	24.822	313.2	0.159	5.66	98.0	4.4	0.39	0.8	0.06	0.43	0.23	50	
53 A	14.66	14.65	33.426	24.834	312.1	0.168	5.63	97.3	4.5	0.41	1.0	0.07	0.38	0.23	53	207
63	13.78	13.77	33.455	25.041	292.6	0.198	5.14	87.3	6.6	0.63	4.2	0.08	0.22	0.26	63	208
72 A	12.61	12.60	33.529	25.332	265.1	0.223	4.20	69.6	11.3	1.08	10.5	0.02	0.13	0.18	72	209
75 ISL	12.45	12.44	33.511	25.349	263.5	0.231	4.22	69.7	11.5	1.08	10.7	0.02	0.12	0.18	75	
83	12.23	12.22	33.510	25.391	259.7	0.252	4.26	70.1	11.9	1.09	11.2	0.02	0.10	0.17	83	210
99	11.48	11.47	33.572	25.579	242.1	0.292	3.91	63.3	14.9	1.30	14.2	0.01	0.05	0.10	99	211
100 ISL	11.43	11.42	33.573	25.589	241.1	0.295	3.90	63.1	15.0	1.31	14.3	0.01	0.05	0.10	100	
119	10.52	10.51	33.604	25.776	223.7	0.339	3.83	60.8	17.8	1.44	16.8	0.01	0.02	0.06	120	212
125 ISL	10.37	10.36	33.634	25.825	219.1	0.352	3.72	58.8	18.8	1.50	17.6	0.01	0.02	0.05	126	
139	10.09	10.07	33.709	25.932	209.2	0.382	3.44	54.1	21.3	1.64	19.5	0.00	0.01	0.04	140	213
150 ISL	9.73	9.71	33.743	26.019	201.1	0.405	3.41	53.2	23.0	1.70	20.6	0.00	0.01	0.04	151	
168	9.13	9.11	33.793	26.156	188.3	0.440	3.35	51.6	25.8	1.78	22.2	0.00	0.00	0.04	169	214
197	8.42	8.40	33.909	26.357	169.5	0.492	3.16	47.9	31.8	1.92	24.7	0.00	0.00	0.02	198	215
200 ISL	8.39	8.37	33.915	26.367	168.6	0.497	3.15	47.7	32.1	1.93	24.8	0.00			201	
226	8.20	8.18	33.952	26.425	163.5	0.540	3.01	45.4	34.5	2.00	25.7	0.00			227	216
250 ISL	7.96	7.93	34.002	26.500	156.7	0.578	2.75	41.3	38.4	2.10	27.2	0.00			251	
267	7.77	7.74	34.037	26.555	151.7	0.605	2.52	37.7	41.7	2.19	28.5	0.00			268	217
300 ISL	7.39	7.36	34.074	26.639	144.1	0.653	2.08	30.8	48.4	2.39	30.9	0.00			302	
317	7.19	7.16	34.087	26.678	140.6	0.678	1.86	27.4	51.9	2.49	32.1	0.00			319	218
377	6.57	6.54	34.127	26.794	130.1	0.759	1.24	18.0	63.0	2.76	35.2	0.00			379	219
400 ISL	6.41	6.37	34.148	26.832	126.7	0.788	1.05	15.2	66.5	2.84	36.1	0.00			402	
437	6.19	6.15	34.183	26.888	121.7	0.834	0.79	11.4	71.5	2.96	37.4	0.00			440	220
500 ISL	5.88	5.84	34.231	26.966	114.9	0.909	0.54	7.7	78.5	3.09	38.8	0.00			503	
513	5.81	5.77	34.241	26.982	113.5	0.924	0.49	7.0	79.9	3.12	39.1	0.00			516	221

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 950"I STATION 93 90

LATITUDE	L0N6ITUDE	DAY/HO/YR	CAST TIHE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
30 50.7 N	121 35.4 W	08/01/95	0122 UTC	4099 m	200 07 kn			1017.5 mb	15_6 C	15_7 C			

DEPTH m	TEHP OEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN mt/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.64	15.64	33.285	24.510	341 .4	0.000	5.76	101.5	5.0	0.32	0.0	0.00	0.16	0.06	0	
1	15.64	15.64	33.285	24.510	341 .4	0.003	5.76	101 .5	5.0	0.32	0.0	0.00	0.16	0.06	1	201
10 ISL	15.59	15.59	33.294	24.529	340.0	0.034	5.76	101.4	4.8	0.31	0.0	0.00	0.16	0.07	10	
15	15.55	15.55	33.300	24.542	338.8	0.051	5.76	101 .3	4.7	0.31	0.0	0.00	0.17	0.08	15	202
20 ISL	15.53	15.53	33.296	24.544	338.8	0.068	5.76	101 .3	4.7	0.31	0.0	0.00	0.18	0.09	20	
30	15.51	15.51	33.290	24.544	339.1	0.102	5.75	101 .1	4.6	0.31	0.0	0.00	0.19	0.12	30	203
46	15.45	15.44	33.279	24.549	339.1	0.156	5 .80	101.8	4.5	0.32	0. 1	0.01	0.22	0.12	46	204
50 ISL	15.43	15.42	33.275	24.551	339.1	0.170	5.77	101 .2	4.3	0.32	0.1	0.01	0.21	0.11	50	
54	15.40	15 .39	33.270	24.554	338.9	0.183	5.75	100.8	4.2	0.32	0.0	0.00	0.20	0.10	54	205
65	15.32	15.31	33.259	24.563	338.4	0.221	5.78	101 .2	4.2	0.32	0.0	0.00	0.26	0.15	65	206
75	15.29	15.28	33.258	24.569	338.1	0.254	5.77	100.9	4.0	0.32	0.1	0.01	0.24	0.13	75	207
83	15.26	15.25	33.280	24.593	336.1	0.281	5.74	100.4	4.0	0.33	0.1	0.04	0.20	0.13	83	208
93	14.90	14.89	33.391	24.757	320.7	0.314	5 .68	98.6	4.3	0.36	0.7	0.16	0.17	0.14	93	209
100 ISL	14.49	14.48	33.473	24.908	306.5	0.336	5.57	96.0	4 .7	0.39	1 .4	0.12	0.13	0.14	100	
109	13.90	13.88	33.558	25.098	288.6	0.363	5.40	92.0	5.3	0.45	2 .4	0.02	0.09	0.13	109	210
125	13.01	12.99	33.581	25.296	270.0	0.408	5.16	86.3	6.8	0.59	4.7	0.01	0.06	0.07	126	211
145	11 .67	11.65	33.540	25.521	248.8	0.459	4.80	78.0	10.3	0.91	9.4	0.01	0.03	0.04	146	212
150 ISL	11 .28	11 .26	33.541	25.593	242.0	0.472	4.69	75.6	11.7	1 .01	10.9	0.01	0.02	0.04	151	
170	9.85	9.83	33.590	25.880	214.7	0.517	4.25	66.4	17.7	1 .38	16.6	0.00	0.01	0.03	171	213
198	8.72	8.70	33.727	26.169	187.5	0.574	3.75	57.2	25 .7	1 .73	21 .9	0.00	0.00	0.02	199	214
200 ISL	8.68	8.66	33.742	26.187	185.8	0.577	3.71	56.5	26.2	1 .75	22.2	0.00			201	
229	8.35	8.33	33.940	26.393	166.7	0.629	3.12	47.2	33.0	1 .96	25.2	0.00			230	215
250 ISL	8.13	8.10	34.013	26.483	158.4	0.663	2.70	40.7	37.7	2.12	27.2	0.00			251	
266	7.96	7.93	34.046	26.535	153.7	0.688	2.41	36.2	41 .1	2.23	28.5	0.00			267	216
300 ISL	7.60	7.57	34.096	26.627	145.4	0.739	1 .96	29.2	47.3	2 .42	30.7	0.00			302	
317	7.40	7.37	34.108	26.665	141.9	0.763	1 .80	26.7	30.3	2.50	31 .6	0.00			319	217
378	6.53	6.50	34.097	26.775	131.8	0.846	1 .43	20.8	61 .7	2.71	34.9	0.00			380	218
400 ISL	6.34	6.30	34. 115	26.815	128.2	0.875	1 .23	17.8	65.8	2.80	36.0	0.00			402	
437	6.09	6.05	34.156	26.879	122.4	0.921	0.89	12.8	72.1	2.95	37.6	0.00			440	219
500 ISL	5.78	5.74	34.221	26.970	114.4	0.996	0.55	7.9	79.9	3.10	39.1	0.00			503	
515	5.71	5.67	34.237	26.991	112.5	1.013	0.47	6.7	81 .8	3.14	39.5	0.00			518	220

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 100

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 3Cl.9 N	122 15.1 W	08/01/95	0742 UTC	4166 m	200 14 kn			1019.0 mb	16.9 C	16.6 C			

DEPTH ID	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uH/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	15.78	15.78	33.279	24.474	344.8	0.000	5.70	100.7	4.6	0.31	0.0	0.00	0.20	0.03	0	201
10 ISL	15 .83	15 .83	33.315	24.491	343.5	0.034	5.69	100.7	4 .4	0.30	0.0	0.00	0.17	0.05	10	
15	15.86	15.86	33.333	24.499	343.0	0.052	5.69	100.7	4.3	0.30	0.0	0.00	0.15	0.06	15	202
20 ISL	15.86	15 .86	33.338	24.503	342.8	0.069	5.69	100.7	4.3	0.30	0.0	0.00	0.15	0.07	20	
29	15.85	15.85	33.343	24.509	342.5	0.100	5.70	100.9	4 .2	0.30	0.0	0.00	0.15	0.09	29	203
30 ISL	15.85	15.85	33.343	24.509	342 .5	0.103	5.70	100.9	4.2	0.30	0.0	0.00	0.15	0.09	30	
45	15.84	15.83	33.340	24.509	342 .9	0.154	5.69	100.7	4.0	0.30	0.0	0.00	0.18	0.08	45	20*
50 ISL	15.84	15.83	33.339	24.509	343.1	0.172	5.69	100.7	4.0	0.30	0.0	0.00	0.19	0.08	50	
58	15.83	15.82	33.338	24.511	343.2	0.199	5.69	100.7	3.9	0.30	0.0	0.00	0.19	0.08	58	205
74	15.79	15.78	33.330	24.514	343.4	0.254	5.71	100.9	3.8	0.30	0.0	0.00	0.19	0.10	74	206
75 ISL	15.78	15.77	33.328	24.515	343.3	0.257	5.71	100.9	3.8	0.30	0.0	0.00	0.19	0.10	75	
84	15.67	15.66	33.305	24.522	342.9	0.288	5.71	100.7	3.8	0.31	0.0	0.00	0.23	0.11	84	207
94	15.46	15.45	33.284	24.553	340.3	0.322	5.69	99.9	3.8	0.32	0.0	0.02	0.22	0.13	94	20!
100 ISL	15.34	15.32	33.375	24.649	331 .2	0.343	5.69	99.7	3.9	0.32	0.1	0.11	0.22	0.16	100	
106	15.15	15.13	33.460	24.756	321 .2	0.362	5.70	99.5	4.0	0.32	0.3	0.18	0.21	0.19	106	209
1 14	14.70	14.68	33.429	24.830	314.4	0.388	5.65	97.7	4. 1	0.36	0.8	0.12	0.20	0.18	114	210
123	13.84	13.82	33.432	25.013	297.0	0.415	5.54	94.2	5.0	0.43	1 .9	0.03	0.12	0.13	124	211
125 ISL	13.56	13.54	33.413	25.055	293.0	0.421	5.48	92.6	5.5	0.48	2.6	0.03	0.11	0.12	126	
140	11.68	11 .66	33.318	25.346	265.2	0.463	5.01	81 .3	9. 1	0.85	8.0	0.01	0.05	0.08	141	21!
150 ISL	11.35	11 .33	33.454	25.513	249.6	0.489	4.87	78.6	10.0	0.92	9.4	0.01	0.03	0.05	151	
163	11.18	11.16	33.658	25.702	231 .9	0.520	4.73	76.1	11.5	0.98	10.9	0.01	0.01	0.03	164	213
191	9.18	9.16	33.662	26.046	199.2	0.580	4.03	62.1	21 .6	1 .57	19.5	0.00	0.00	0.02	192	2U
200 ISL	8.89	8.87	33.694	26.116	192.5	0.598	3.91	59.8	23.5	1 .65	20.8	0.00			201	
229	8.44	8.42	33.815	26.281	177.3	0.651	3.66	55.5	28.1	1 .78	22.8	0.00			230	215
250 ISL	8.14	8.11	33.891	26.386	167.6	0.688	3.51	52.9	31 .5	1 .86	24.1	0.00			251	
266	7.93	7.90	33.938	26.454	161.3	0.714	3.39	50.8	34.2	1 .92	25.1	0.00			267	216
300 ISL	7.38	7.35	33.982	26.568	150.8	0.767	3.02	44.7	41 .4	2 .09	27.6	0.00			302	
319	7.08	7.05	33.995	26.620	145.9	0.795	2.76	40.6	45.9	2.21	29.2	0.00			321	217
377	6.48	6.45	34.064	26.756	133.6	0.876	1 .64	23.8	60.6	2.65	34.3	0.00			379	211
400 ISL	6.36	6.32	34.099	26.799	129.7	0.907	1 .32	19.1	64.3	2.78	35.6	0.00			402	
437	6.19	6.15	34.148	26.860	124.3	0.954	0.93	13.4	69.3	2.93	37.1	0.00			440	219
500 ISL	5.67	5 .63	34.164	26.938	117.2	1 .030	0.69	9.8	79.5	3.06	39.0	0.00			503	
512	5 .57	5.53	34.168	26.954	115.8	1 .044	0.65	9.2	81 .5	3.09	39.4	0.00			515	220

1 RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
30 11.4 ftl	122 55.1 W	08/01/95	1808	UTC	4032 m	200	15 kn	210 06 06	1	1020.3 mb	17..8 C	17.1 C	30m 01	7/8	SC

DEPTH in	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/ l	P04 uM/ l	N03 UM/L	N02 uM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.77	16.77	33.531	24.442	347.9	0.000	5.61	101.2	4.4	0.28	0.0	0.00	0.13	0.05	0	
2 A	16.77	16.77	33.531	24.442	348.0	0.007	5.61	101.2	4.4	0.28	0.0	0.00	0.13	0.05	2	201
10 ISL	16.76	16.76	33.531	24.445	348.0	0.035	5 .61	101.2	4.3	0.28	0.0	0.00	0.13	0.05	10	
17 A	16.75	16.75	33.531	24.447	348.0	0.059	5.61	101 .2	4.2	0.28	0.0	0.00	0.13	0.05	17	202
20 ISL	16.71	16.71	33.528	24.454	347.4	0.070	5.61	101.1	4. 1	0.28	0.0	0.00	0.13	0.05	20	
27	16.61	16.61	33.520	24.472	346.0	0.094	5.62	101.1	4.0	0.27	0.0	0.00	0.13	0.05	27	203
30 ISL	16.59	16.59	33.515	24.472	346.0	0. 104	5.63	101.2	4.0	0.27	0.0	0.00	0.13	0.05	30	
38 A	16.56	16.55	33.511	24.477	345.9	0.132	5.65	101.5	3.9	0.27	0.0	0.00	0.15	0.05	38	204
47	16.55	16.54	33.508	24.477	346. 1	0.163	5.62	101 .0	3.7	0.27	0.0	0.00	0.17	0.07	47	205
SO ISL	16.55	16.54	33.508	24.477	346.2	0.173	5.62	101.0	3.7	0.27	0.0	0.00	0.17	0.07	50	
58 A	16.55	16.54	33.510	24.479	346.3	0.201	5.64	101.3	3.7	0.27	0.0	0.00	0.17	0.06	58	206
67	16.56	16.55	33.515	24.481	346.4	0.232	5.62	101 .0	3.6	0.27	0.0	0.00	0.18	0.06	67	207
75 ISL	16.33	16.32	33.469	24.499	344.9	0.260	5.63	100.7	3.5	0.28	0.0	0.00	0.21	0.09	75	
78 A	16.26	16.25	33.460	24.508	344.2	0.270	5 .64	100.7	3.5	0.28	0.0	0.00	0.22	0.11	78	208
86	16.38	16.37	33.532	24.536	341.8	0.298	5.63	100.8	3.5	0.27	0.0	0.01	0.22	0.13	86	209
96	15.83	15.81	33.880	24.929	304.6	0.330	5.54	98.3	3.6	0.26	0.4	0.13	0.20	0.22	96	210
100 ISL	15.65	15.63	33.895	24.981	299.8	0.342	5.51	97.4	3.8	0.27	0.6	0.11	0.18	0.20	100	
107 A	15.14	15.12	33.800	25.021	296.1	0.363	5 .46	95.5	4.2	0.32	1 .1	0.07	0.13	0.14	107	211
113	14.31	14.29	33.648	25.082	290.3	0.381	5.45	93.7	4.7	0.40	1 .9	0.02	0.08	0.10	113	212
123	14.81	14.79	33.858	25.137	285.5	0.409	5.31	92.3	4.6	0.39	2.3	0.03	0.09	0.12	124	213
125 ISL	14.75	14.73	33.866	25.157	283.7	0.415	5.30	92 .0	4.7	0.40	2 .4	0.03	0.09	0.11	126	
139	13.89	13.87	33.813	25.297	270.5	0.454	5.24	89.4	5.5	0.48	3.6	0.02	0.04	0.06	140	214
150 ISL	13.27	13.25	33.771	25.392	261 .7	0.483	5.10	85 .9	6.5	0.59	5 .2	0.02	0.04	0. 05	151	
164	12 .38	12 .36	33.713	25.522	249.4	0.519	4.87	80.4	8. 5	0.78	7.9	0.01	0.03	0.04	165	215
192	10.00	9.98	33.638	25.893	214.1	0.584	4.40	69.0	15.9	1 .29	15.4	0.00	0.01	0.02	193	216
200 ISL	9.59	9. 57	33.657	25.976	206.2	0.601	4.21	65 .4	18.2	1 .42	17.3	0.00			201	
228	8.66	8.64	33.770	26.212	183.9	0.655	3.56	54.2	26.3	1 .79	22 .7	0.00			229	217
250 ISL	8.19	8.16	33.876	26.367	169.4	0.694	3.25	49.0	31 .7	1 .95	25.1	0.00			251	
272	7.87	7.84	33.967	26.486	158.4	0.730	3.01	45. 1	36.5	2.05	26. 7	0.00			273	218
300 ISL	7.53	7.50	34.010	26.569	150.8	0.773	2.72	40.4	41.7	2.19	28.5	0.00			302	
317	7.36	7.33	34.020	26.601	147.9	0.799	2.54	37.6	44.8	2.27	29.5	0.00			319	219
378	6.67	6.64	34.062	26.729	136.3	0.886	1 .80	26.2	57.3	2.59	33.5	0.00			380	220
400 ISL	6.51	6.47	34.086	26.770	132.6	0.915	1 .53	22 .2	61 .1	2.69	34.7	0.00			402	
442	6.25	6.21	34.131	26.839	126.4	0.970	1 .07	15.4	67.8	2.87	36.6	0.00			445	221
500 ISL	5.76	5 .72	34.163	26.927	118.5	1.041	0.75	10.7	77.3	3.03	38.6	0.00			503	
516	5.62	5.58	34.173	26.952	116.1	1 .059	0.66	9.4	79.9	3.08	39.2	0.00			519	222

*) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9501 STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
29 51.4 N	123 35.0 W	09/01/95	0028	UTC	4113 m	190	10 kn	280 10 10	1	1018.9 mb	17..7 C	17.1 C	32m 01	7/8	SC

DEPTH in	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 UN/L	P04 uM/ l	N03 uM/L	N02 uM/ l	CHL-A ug/ l	PHAEO ug/L	PRES db	SAMP
0 ISL	16.38	16.38	33.362	24 .402	351 .7	0.000	5.69	101.8							0	
2	16.38	16.38	33.373 L1			0.007	5.69	101.8	4.3	0.29	0.0	0.00	0.14	0.05	2	201
10 ISL	16.37	16.37	33.362	24.405	351 .8	0.035	5.69	101 .8	4. 1	0.30	0.0	0.00	0.13	0.05	10	
15	16.37	16.37	33.362	24.405	351 .9	0.053	5.69	101.8	4.0	0.30	0.0	0.00	0.13	0.05	1 5	202
20 ISL	16.32	16.32	33.359	24.414	351 .2	0.070	5 .68	101.5	4.0	0.30	0.0	0.00	0.13	0.05	20	
30	16.21	16.21	33.355	24.437	349.4	0.105	5 .67	101.1	3.9	0.29	0.0	0.00	0.14	0.06	30	203
45	16.18	16.17	33.373	24.458	347.8	0.158	5.71	101.7	3.8	0.29	0.0	0.00	0.17	0.07	45	204
50 ISL	16.19	16.18	33.376	24.458	348.0	0.175	5.70	101.6	3.8	0.29	0.0	0.00	0.18	0.07	50	
60	16.20	16.19	33.383	24.462	348.0	0.210	5 .67	101.1	3.8	0.29	0.0	0.00	0.20	0.08	60	205
73	16.20	16.19	33.388	24.466	348.0	0.255	5.71	101.8	3.8	0.28	0.0	0.00	0.23	0.10	73	206
75 ISL	16.21	16.20	33.390	24.465	348. 1	0.262	5.71	101.8	3.8	0.28	0.0	0.00	0.23	0.10	75	
82	16.22	16.21	33.396	24.468	348.1	0.286	5.70	101.6	3.6	0.29	0.0	0.00	0.22	0.09	82	207
94	16.19	16.18	33.398	24.477	347.6	0.328	5.67	101.1	3.6	0.29	0.0	0.00	0.22	0.11	94	208
100 ISL	16.01	15 .99	33.393	24.514	344.3	0.349	5 .66	100.5	3.6	0.29	0.0	0.03	0.20	0.12	100	
104	15.83	15.81	33.410	24.568	339.2	0.363	5 .66	100.2	3.6	0.30	0.0	0.06	0.18	0.13	104	209
114	15.12	15.10	33.618	24.885	309.2	0.395	5.56	97. 1	3.9	0.33	0.8	0.09	0.16	0.20	1 14	210
124	14.85	14.83	33.662	24.978	300.7	0.426	5.46	94.9	4.5	0.35	1 .3	0.03	0.12	0.14	124	211
125 ISL	14 .83	14.81	33.668	24.987	299.8	0.429	5.45	94.7	4.5	0.35	1 .3	0.03	0.12	0.14	125	
140	14.20	14.18	33.716	25.158	283.8	0.472	5.29	90.7	5 .3	0.44	2 .8	0.01	0.07	0.08	141	212
150 ISL	13.09	13.07	33.622	25.312	269.2	0.500	5.11	85 .6	7.3	0.63	5 .6	0.01	0.05	0.06	151	
167	11.17	11.15	33.503	25.584	243.2	0.543	4.71	75 .7	11.8	1 .01	11.1	0.01	0.03	0.04	168	213
192	10.33	10.31	33.715	25.897	213.8	0.601	3.94	62.3	18.4	1 .42	16.5	0.00	0.01	0.03	193	214
200 ISL	10.05	10.03	33.753	25.974	206.5	0.617	3.84	60.3	20.1	1 .50	17.7	0.00			201	
230	9.21	9.18	33.847	26.186	186.7	0.676	3.65	56.3	25.0	1 .67	21.0	0.00			231	215
250 ISL	9.10	9.07	33.897	26.243	181.6	0.713	3.50	53.9	26.6	1 .74	22.0	0.00			251	
270	9.03	9.00	33.945	26.292	177.4	0.749	3.27	50.3	29.0	1 .83	23.0	0.00			271	216
300 ISL	8.34	8.31	34.053	26.484	159.4	0.800	2.56	38.8	39.0	2.14	27.0	0.00			302	
320	7.85	7.82	34.122	26.611	147.4	0.830	2 .07	31 .0	46.2	2 .36	29. 7	0.00			322	217
376	7.45	7.41	34.169	26.707	139. 1	0.911	1 .43	21.2	55.1	2.63	32 .7	0.00			378	218
400 ISL	7.12	7.08	34.170	26.754	134.7	0.943	1 .25	18.4	59.8	2 .72	34.0	0.00			402	
442	6.49	6.45	34.167	26.837	126.9	0.998	1 .01	14.7	68.3	2 .87	36.2	0.00			445	219
500 ISL	5 .86	5.82	34.187	26.933	117.9	1 .069	0. 70	10.0	78.9	3.04	38.7	0.00			' 503	
503	5 .83	5 .79	34.188	26.938	117.5	1 .073	0.68	9.7	79.4	3.05	38.8	0.00			5 06	220

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 7501 — STATION 77 55

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 53.9 N	121 11.4 U	20/ 1/95	1801 UTC	11 m	03	215 - 1746 PST	1216 PST	1746 PST	144.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uM/l	N03 uN/l	N02 UN/I	CHL jg/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE 2	mg C /m3) MEAN	DARK
2	13.27	33.021	24.807	6.07	101.8	4.6	0.38	0.4	0.05	0.58	0.21	76. A	8.1	8.4	8.3	0.04
6	13.26	33.021	24.809	6.07	101.7	4.4	0.38	0.3	0.05	0.59	0.19	43.	8.7	8.7	8.7	0.04
14	13.26	33.022	24.810	6.05	101.4	4.3	0.38	0.3	0.05	0.60	0.23	14.	5.0	5.1	5.1	0.04
22	13.27	33.025	24.811	6.09	102.1	4.3	0.37	0.3	0.05	0.61	0.23	4.6	1.7	1.8	1.7	0.04
30	13.27	33.024	24.810	6.07	101.7	4.2	0.38	0.4	0.05	0.61	0.24	1.5	0.61	0.57	0.59	0.05
39	13.24	33.030	24.821	6.06	101.5	4.2	0.39	0.4	0.07	0.55	0.24	0.43	0.03	0.02	0.03	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE »501 — STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIKE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	INTEGRATED VALUE
33 43.2 N	123 37.7 W	19/ 1/95	1743 UTC	23 m	02	1224 - 1757 PST	1226 PST	1757 PST	165.6 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGNA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/l	N03 uM/l	N02 uH/I	CHL jg/l	PHAEO ug/I	LIGHT PCT	1	UPTAKE 2	mg C/m3) NEAN	DARK
2	13.62	32.976	24.702	6.01	101.5	4.3	0.34	0.1	0.00	0.36	0.13	88. A	1.8	1.7	1.7	0.04
13	13.61	32.976	24.704	6.02	101.6	4.1	0.33	0.1	0.00	0.37	0.14	42.	3.8	4.0	3.9	0.04
29	13.66	32.999	24.712	5.99	101.2	4.0	0.33	0.0	0.00	0.42	0.16	14.	3.4	3.5	3.4	0.04
44	13.68	33.005	24.713	5.98	101.1	4.0	0.33	0.0	0.01	0.44	0.17	5.3	1.9	2.0	2.0	0.03
51	13.69	33.009	24.715	5.97	100.9	3.9	0.33	0.0	0.01	0.44	0.19					
59	13.70	33.013	24.716	5.97	101.0	3.8	0.32	0.0	0.01	0.40	0.17	1.9	0.90	0.86	0.88	0.01
66	13.70	33.012	24.715	5.97	100.9	3.8	0.33	0.0	0.01	0.40	0.17					
74	13.31	32.989	24.776	5.93	99.4	3.9	0.38	0.4	0.08	0.23	0.16					
S3	12 .44	33.077	25.015	5.87	96.7	5.0	0.51	2.2	0.20	0.12	0.12	0.39	0.03	0.04	0.03	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 80 80

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29 3 N	122 31.7 W	18/ 1/95	1754 UTC	29 m	01	1220 - 1758 PST	1220 PST	1758 PST	122.6 mg C/m2

DEPTH in	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uM/l	N03 uN/I	N02 uH/l	CHL jg/l	PHAEO ug/I	LIGHT PCT	1	UPTAKE 2	mg C/m3) MEAN	DARK
2	15 .05	33.253	24.615	5.78	100.6	4.0	0.30	0.0	0.00	0.19	0.08	90. A	0.84	0.89	0.87	0.03
15	15.03	33.249	24.617	5.79	100.8	3.8	0.30	0.0	0.00	0.20	0.08	45.	2.3	2.2	2.2	0.04
26	14 .97	33.238	24.622	5.78	100.5	3.6	0.30	0.0	0.00	0.21	0.09					
36	14.97	33.237	24.621	5.79	100.6	3.6	0.30	0.0	0.00	0.23	0.09	15.	2.1	2.1	2.1	0.03
45	14.96	33.236	24.623	5.79	100.6	3.5	0.30	0.0	0.00	0.23	0.09					
57	14.94	33.232	24.625	5.78	100.4	3.4	0.30	0.0	0.00	0.23	0.09	4.9	1.2	1.1	1.2	0.03
66	14.96	33.233	24.621	5.79	100.6	3.4	0.30	0.0	0.00	0.23	0.10					
74	14.93	33.226	24.623	5.78	100.4	3.4	0.30	0.0	0.00	0.24	0.10	2.0	0.45	0.47	0.46	0.02
84	14.50	33.161	24.665	5.81	100.0	3.3	0.32	0.0	0.04	0.23	0.12					
94	14.12	33.205	24.779	5.78	98.7	3.6	0.35	0.3	0.20	0.18	0.13					
103	13.90	33.391	24.968	5.67	96.5	4.1	0.39	1.4	0.12	0.11	0.12	0.43	0.03	0.02	0.02	0.01

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 82 47

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 16 6 N	120 1.5 U	17/ 1/95	1758 UTC	8 m	04	1210 - 1745 PST	1210 PST	1745 PST	171.2 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGNA THETA	DISS 02 ml/l	OXY PCT	SI03 UH/l	P04 uH/l	N03 uH/l	N02 UN/I	CHL ug/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE 2	(mg C/m3) NEAN	DARK
1	14.09	31.101 U	23.158 U	5.92	100.9	5.9	0.46		0.25	1.82	0.31	83.	15.3	18.9	17.1	0.18
5	14.09	33.039	24.654	5.92	100.9	5.7	0.45	1.0	0.25	1.70	0.30	38.	17.8	19.2	18.5	0.14
10	14.07	33.041	24.660	5.91	100.7	5.6	0.46		0.26	1.39	0.25	15.	7.3	8.1	7.7	0.12
15	14.10	33.056	24.666	5.87	100.1	5.3	0.46	1.0	0.28	0.99	0.28	5.6	2.3	2.2	2.2	0.06
20	14.14	33.088	24.682	5.82	99.4	5.2	0.46		0.30	0.68	0.26	2.2	0.56	0.64	0.60	0.05
29	14.24	33.209	24.755	5.69	97.4	4.9	0.47		0.43	0.21	0.14	0.38	0.01	0.03	0.02	0.04

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 34.5 N	120 45.3 U	16/ 1/95	1757 UTC	14 m	03	1213 - 1744 PST	1213 PST	1744 PST	212.8 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGNA THETA	DISS 02 ml/l	OXY PCT	SI03 UN/I	P04 uH/l	N03 uH/I	N02 uH/l	CHL ug/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE 2	C mg C/m3) NEAN	DARK
2	13.86	33.266	24.877	5.99	101.8	4.2	0.36	0.4	0.07	0.60	0.31	80. A	6.6	4.9	5.7	0.08
8	13.85	33.267	24.880	5.98	101.6	3.9	0.37	0.4	0.07	0.62	0.26	42.	10.8	10.9	10.8	0.08
18	13.85	33.266	24.880	5.98	101.6	3.9	0.35	0.4	0.07	0.62	0.25	14.	6.8	6.6	6.7	0.07
27	13.86	33.266	24.878	5.97	101.5	3.7	0.35	0.4	0.07	0.61	0.29	5.2	2.7	2.5	2.6	0.07
36	13.85	33.267	24.881	5.97	101.4	3.7	0.35	0.4	0.08	0.59	0.27	1.9	0.94	0.98	0.96	0.05
43	13.83	33.274	24.891	5.94	100.9	3.5	0.37	0.5	0.10	0.51	0.25					
49	13.61	33.324	24.974	5.79	97.9	4.2	0.45	1.4	0.24	0.31	0.26	0.46	0.04	0.03	0.04	0.03

A) INCUBATION LIGHT INTENSITIES WERE 92, 42, 15, 4 8, 1.8, 0.39 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 83 90

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	NCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 34.5 N	122 48.6 W	15/ 1/95	1822 UTC	27 m	01	1220 - 1749 PST	1220 PST	1749 PST	120.8 mg C/m2

DEPTH D	TEHP DEG C	SALINITY	SIGNA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/ l	P04 UN/ l	N03 UN/ l	N02 uM/ l	CHL jg/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE C mg C/m3) 2	MEAN	DARK
1	15.10	33.155	24.529	5.81	101.2	4.2	0.32	0.1	0.00	0.23	0.09	94. A	0.42	0.36	0.39	0.04
14	15.09	33.154	24.531	5.81	101.2	4.0	0.30	0.1	0.00	0.24	0.09	45.	2 .4	2 .3	2 .3	0.04
23	15.10	33.154	24.529	5.80	101 .0	3.8	0.30	0.0	0.00	0.24	0.08					
35	15.09	33.154	24.531	5.81	101.2	3.7	0.30	0.0	0.00	0.24	0.10	14.	2.0	2 .0	2 .0	0.04
44	15.08	33.153	24.533	5.80	101.0	3.7	0.30	0.0	0.00	0.28	0.10					
54	15.06	33.148	24.534	5.80	100.9	3.5	0.30	0.1	0.00	0.29	0.12	4.6	1 .2	1 .1	1 .2	0.04
61	14.92	33.141	24.559	5.81	100.8	3.5	0.31	0.1	0.00	0.34	0.17					
71	14.71	33.153	24.614	5.78	99.9	3.5	0.33	0. 1	0.04	0.30	0.17	1 .8	0.75	0.85	0.80	0.02
BO	14.31	33.166	24.709	5.79	99.2	3.5	0.37	0.2	0.18	0.22	0.14					
88	14.06	33.181	24.772	5.77	98.4	3.6	0.41	0.5	0.33	0.15	0.12					
96	13.90	33.203	24.823	5.75	97.7	3.6	0.42	0.8	0.38	0.10	0.11	0.43	0.03	0.03	0.03	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 40

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 39.6 N	118 58.8 W	12/ 1/95	1814 UTC	22 m	02	1200 - 1737 PST	1204 PST	1737 PST	306.5 mg C/m2

DEPTH •	TEHP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/l	N03 UN/ l	N02 uM/ l	CHL jg/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE (mg C/m3) 2	MEAN	DARK
1	14.43	33.237	24.736	5.86	100.7	4.6	0.36	0.4	0.03	0.57	0.24	93. A	8.8	9 .4	9 .1	0.06
11	14.46	33.251	24.740	5.85	100.6	4.4	0.36	0.3	0.03	0.56	0.25	46.	12.1	11.3	11.7	0.06
19	14.59	33.347	24.787	5.78	99.8	4. 1	0.36	0.4	0.04	0.57	0.29					
27	14.39	33.327	24.814	5.81	99.8	4.0	0.36	0.4	0.06	0.44	0.26	15.	4.7	4 .9	4.8	0.04
36	14.23	33.317	24.841	5.80	99.3	4.1	0.38	0.6	0.08	0.30	0.20					
42	13.94	33.287	24.878	5.82	99. 1	4.3	0.39	0.7	0.10	0.26	0.17	5.3	1 .3	1 .3	1 .3	0.02
49	13.97	33.299	24.881	5.74	97.8	4.5	0.42	1 .2	0.12	0.20	0.15					
57	13.71	33.430	25.036	5.23	88.7	6.0	0.59	3.7	0.15	0.15	0.15	1 .9	0.31	0.31	0.31	0.03
67	13.08	33.446	25.176	4.81	80.5	8.0	0.81	6.9	0.06	0.16	0.17					
78	12.40	33.453	25.314	4.61	76.1	10.0	0.94	9.2	0.03	0.10	0.13	0.43	0.03	0.03	0.03	0.01

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	NCUBATION TIHE	LAN	CIVIL	INTEGRATED VALUE
32 39.3 N	121 1.8 W	13/ 1/95	1807 UTC	23 m	02	1213 - 1748 PST	1213 PST	1748 PST	276.3 mg C/m2

DEPTH n	TEHP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uM/ l	N03 uM/ l	N02 uH/ l	CHL jg/ l	PHAEO ug/l	LIGHT PCT	1	UPTAKE (mg C/m3) 2	HEAN	DARK
2	15.00	33.129	24.531	5.87	102.0	4.8	0.31	0. 1	0.00	0.33	0.13	88. A	3. 1	3.1	3. 1	0.07
1	14.90	33.128	24.552	5.86	101.6	4.5	0.31	0.1	0.00	0.35	0.13					
13	14.45	33.129	24.649	5.92	101.7	4.4	0.32	0. 1	0.01	0.48	0.17	42.	7.8	7.9	7.9	0.13
21	14.08	33.166	24.755	5.95	101.5	4.4	0.35	0.3	0.03	0.81	0.34					
30	13.63	33.292	24.945	5.84	98.8	4.6	0.43	1 .3	0.09	0.58	0.37	14.	6.4	6.2	6.3	0.05
35	13.49	33.329	25.002	5.84	98.5	4.3	0.45	1 .5	0.11	0.55	0.47					
45	13.31	33.355	25.059	5.80	97.5	4.4	0.49	2.0	0.14	0.45	0.43	5.0	2.1	2.0	2.1	0.04
52	12.73	33.381	25.194	5.45	90.5	7.2	0.68	5.0	0.23	0.40	0.41					
59	12.40	33.431	25.297	5 .02	82.8	9.7	0.86	7.8	0.26	0.31	0.38	1 .9	0. 62	0.61	0.61	0.04
69	11.21	33.494	25.567	4.28	68.9	14.9	1 .22	13.7	0.09	0.18	0.25					
11	10.37	33.576	25.779	3.82	60.4	19.1	1 .49	17.7	0.02	0.08	0.14	0.45	0.02	0.02	0.02	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 87 110

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	SECCHI	FOREL	[NCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 19.4 N	123 44.5 W	14/ 1/95	1843 UTC	25 m	01	223 - 1801 PST	1224 PST	1801 PST	138.8 mg C/m2

DEPTH D	TEHP DEG C	SALINITY	SIGNA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/ l	P04 uH/ l	N03 UN/ l	N02 uM/ l	CHL ug/i	PHAEO ug/ l	LIGHT PCT	1	UPTAKE (mg C/m3) 2	MEAN	DARK
1	15.56	33.274	24.520	5.76	101.3	4.2	0.32	0.0	0.00	0.19	0.09	94. A	2.8	2.6	2.7	0.04
14	15.56	33.274	24.520	5.78	101.7	3.9	0.32	0.0	0.00	0.20	0.07	42.	2.7	2.9	2.8	0.07
31	15.31	33.274	24.576	5.79	101.3	3.9	0.32	0.0	0.00	0.28	0.15	15.	2.3	2.3	2 .3	0.06
38	15.28	33.273	24.582	5.78	101 .1	3.8	0.32	0.0	0.00	0.34	0.16					
49	15.24	33.274	24.592	5.77	100.8	3.7	0.32	0.0	0.00	0.39	0.21	4 .9	1 .6	1 .5	1 .5	0.02
56	15.19	33.284	24.611	5.76	100.6	3.7	0.33	0.0	0.01	0.35	0.23					
66	15.12	33.287	24 .628	5.72	99.7	3.5	0.34	0.2	0.03	0.27	0.17	1 .7	0.46	0.51	0.48	0.03
74	15.10	33.352	24.683	5.66	98.7	3.5	0.39	0.6	0.05	0.24	0.14					
81	14.00	33.315	24.888	5.45	92.9	4.9	0.51	2.6	0.12	0.25	0.20					
89	12.41	33.362	25.242	4.93	81 .3	8.4	0.83	7.7	0.02	0.18	0.18	0.42	0.04	0.04	0.04	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 37

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 11.2 N	118 23.3 W	11/ 1/95	1840 UTC	24 m	03	1202 - 1735 PST	1202 PST	1730 PST	364.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uM/ l	N03 uM/ l	N02 uH/ l	CHL ug/l	PHAEO ug/l	LIGHT PCT	1	UPTAKE (mg C/m3) 2	HEAN	DARK
1	14.54	33.151	24.646	5.83	100.4	4 .7	0.37	0.4	0.07	1 .00	0.26	94. A	16.1	15.6	15.9	0.07
6	14.53	33.188	24.677	5.82	100.2	4.3	0.37	0.4	0.07	0.88	0.30					
14	14.56	33.275	24.738	5 .79	99.8	4. 1	0.37	0.4	0.07	0.80	0.31	41 .	11.0	11.2	11.1	0.05
21	14.62	33.363	24.793	5.76	99. 5	4. 1	0.39	0.6	0.07	0.74	0.30					
29	14.62	33.375	24.803	5 .75	99.3	4.0	0.39	0.6	0.07	0.68	0.25	16.	4.1	4 .3	4 .2	0.04
38	14.63	33.382	24.806	5.73	99.0	4.0	0.39	0.7	0.07	0.59	0.24					
47	14.61	33.393	24.819	5.69	98.3	4. 1	0.40	0.8	0.09	0.45	0.24	4 .9	1 .0	1 .1	1 .0	0.02
55	14.41	33.415	24.879	5 .54	95.3	4 .6	0.46	1 .6	0.13	0.22	0.16					
63	13.80	33.413	25.005	5.23	88.8	6.0	0.61	3.9	0.13	0.14	0.13	1 .8	0.17	0.16	0.17	0.02
73	13.47	33.442	25.095	5.00	84.4	7. 1	0.72	5.4	0.09	0.15	0.15					
87	12.44	33.523	25.361	4.25	70.2	11.3	1 .08	10.5	0.03	0.09	0.13	0.38	0.02	0.01	0.01	0.01

A) INCUBATION LIGHT INTENSITIES WERE 92, 42, 15,4 8, 1.8, 0.39 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
32 5.6 N	120 39.1 U	10/ 1/95	1808 UTC	17 m	02	I205 - 1743 PST	1210 PST	1740 PST	49.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uH/ I	N03 uM/l	N02 uM/ I	CHL ijg/ I	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.89	33.198	24.608	5.85	101.5	4.4	0.32	0.0	0.00	0.41	0.13	91 . A	3.2	3.9	3.5	0.04
10	14.88	33.197	24.609	5.85	101.5	4.3	0.30	0.0	0.00	0.41	0.14	41 .	1 .9	1 .9	1 .9	0.04
21	14.89	33.198	24.608	5.84	101.3	4.1	0.31	0.0	0.00	0.41	0.15	15.	0.53	0.51	0.52	0.05
34	14.21	33.203	24.757	5.95	101 .8	4.1	0.33	0.2	0.02	0.81	0.35	4 .6	0.31	0.31	0.31	0.04
39	14.07	33.194	24.779	5.95	101.5	4.0	0.34	0.2	0.03	0.84	0.39					
45	13.78	33.162	24.814	5.93	100.5	4.2	0.37	0.4	0.09	0.55	0.27	1 .7	0.09	0.09	0.09	0.02
54	13.39	33.171	24.901	5.91	99.4	4.5	0.43	1 .0	0.17	0.31	0.20					
60	13.25	33.152	24.914	5.90	98.9	4.7	0.45	1 .2	0.20	0.26	0.18	0.44	0.00	0.00	0.00	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9501 — STATION 90 100

LATITUDE	LONGITUDE	DAY/flO/YR	CAST TINE	SECCHI	FOREL	1INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.5 N	122 39.5 W	9/ 1/95	1911 UTC	22 m	01	1216 - 1749 PST	1218 PST	1747 PST	94.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uN/l	N03 uM/l	N02 uH/l	CHL iLig/l	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	15.40	33.281	24.560	5.77	101.2	4.1	0.32	0.1	0.00	0.21	0.08	93. A	2.9	2 .9	2.9	0.07
12	15.39	33.281	24.563	5.78	101.3	3.8	0.32	0.1	0.00	0.21	0.09	43.	2.9	2.7	2.8	0.06
27	15.27	33.284	24.592	5.79	101 .3	3.8	0.32	0.0	0.00	0.24	0.11	15 .	1 .5	1 .5	1 .5	0.08
43	15.26	33.286	24.596	5.78	101.1	3.7	0.32	0.0	0.00	0.31	0.16	5.0	0.71	0. 70	0.71	0.05
49	15.25	33.286	24.599	5.76	100.7	3.7	0.32	0.0	0.00	0.34	0.17					
56	15.24	33.286	24.601	5.77	100.8	3.5	0.31	0.0	0.00	0.32	0.17	2.0	0.31	0.30	0.31	0.04
67	15.15	33.284	24.620	5.75	100.3	3.5	0.33	0. 1	0.03	0.28	0.17					
79	14.17	33.279	24.825	5.61	95.9	4.2	0.43	1 .5	0.10	0.24	0.20	0.40	0.05	0.04	0.04	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE <>501 — STATION 93 50

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 10..9 N	118 53.8 W	6/ 1/95	1810 UTC	22 m	03	1202 - 1739 PST	1202 PST	1734 PST	192.1 mg C/m2

DEPTH in	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uM/ I	N03 UN/ I	N02 uM/l	CHL ijg/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.26	33.246	24.778	5.89	100.9	4.7	0.36	0.3	0.04	0.44	0.16	87. A	1 .6	1 .6	1 .6	0.05
11	14.21	33.245	24.788	5.90	101.0	4.4	0.36	0.3	0.04	0.45	0.17	46.	4.7	5.0	4.8	0.07
20	14.19	33.248	24.795	5.90	100.9	4.1	0.36	0.3	0.04	0.47	0.19					
27	14.19	33.255	24.801	5.91	101.1	4.1	0.36	0.3	0.05	0.49	0.18	15 .	4.2	4 .4	4.3	0.06
36	14.17	33.250	24.801	5.90	100.9	4.0	0.37	0.3	0.05	0.47	0.17					
42	14.17	33.252	24.803	5.90	100.9	3.9	0.36	0.4	0.05	0.48	0.17	5.3	2.5	2.4	2.5	0.03
51	14.14	33.260	24.816	5.88	100.5	3.9	0.37	0.5	0.08	0.42	0.19					
58	14.10	33.269	24.831	5.85	99.9	3.9	0.38	0.6	0.10	0.41	0.18	1 .7	0.92	0.92	0.92	0.03
66	13.97	33.290	24.875	5.82	99.1	4.0	0.41	1 .1	0.14	0.33	0.21					
77	12.94	33.376	25.150	5.43	90.6	6.3	0.63	4 .6	0.09	0.11	0.20	0.46	0.02	0.03	0.02	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE '?501 — STATION 93 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 10..7 N	120 55.4 W	7/ 1/95	1859 UTC	20 m	02	1210 - 1749 PST	1210 PST	1747 PST	224.5 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/l	P04 uH/ I	N03 UM/l	N02 UN/ I	CHL ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	15.00	33.397	24.737	5.82	101.3	4.9	0.34	0.1	0.01	0.49	0.20	93. A	7.0	7.0	7.0	0.06
11	14.92	33.411	24.766	5.81	101.0	4.7	0.33	0.1	0.01	0.53	0.22	43.	7.2	7.3	7.3	0.09
18	14.91	33.412	24.769	5.79	100.6	4.5	0.33	0.1	0.01	0.55	0.22					
25	14.91	33.412	24.769	5.80	100.8	4.3	0.33	0.1	0.01	0.58	0.23	15.	4.6	4.5	4.6	0.06
33	14.90	33.413	24.772	5.80	100.8	4. 1	0.34	0.2	0.01	0.61	0.24					
39	14.88	33.415	24.778	5.79	100.6	4.0	0.33	0.2	0.01	0.58	0.24	5.0	1 .6	1 .6	1 .6	0.03
53	14.66	33.426	24.834	5.63	97.3	4.5	0.41	1 .0	0.07	0.38	0.23	1 .7	0.48	0.48	0.48	0.02
63	13.78	33.455	25.041	5.14	87.3	6.6	0.63	4.2	0.08	0.22	0.26					
72	12.61	33.529	25.332	4.20	69.6	11.3	1 .08	10.5	0.02	0.13	0.18	0.40	0.02	0.03	0.02	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE '9501 — STATION 93 110

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 11 .4 N	122 55.1 W	8/ 1/95	1808 UTC	30 m	01	1217 - 1747 PST	1219 PST	1747 PST	67.5 mg C/m2

DEPTH in	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/ I	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.77	33.531	24.442	5.61	101.2	4.4	0.28	0.0	0.00	0.13	0.05	90. A	0.78	0.78	0.78	0.05
17	16.75	33.531	24.447	5.61	101.2	4.2	0.28	0.0	0.00	0.13	0.05	42.	1 .2	1 .2	1 .2	0.05
27	16.61	33.520	24.472	5.62	101.1	4.0	0.27	0.0	0.00	0.13	0.05					
38	16.56	33.511	24.477	5.65	101.5	3.9	0.27	0.0	0.00	0.15	0.05	14.	1 .0	0.96	0.98	0.04
47	16.55	33.508	24.477	5.62	101.0	3.7	0.27	0.0	0.00	0.17	0.07					
58	16.55	33.510	24.479	5.64	101.3	3.7	0.27	0.0	0.00	0.17	0.06	5.1	0.48	0.48	0.48	0.02
67	16.56	33.515	24.481	5 .62	101.0	3.6	0.27	0.0	0.00	0.18	0.06					
78	16.26	33.460	24.508	5.64	100.7	3.5	0.28	0.0	0.00	0.22	0.11	1 .8	0.32	0.35	0.34	0.00
86	16.38	33.532	24.536	5.63	100.8	3.5	0.27	0.0	0.01	0.22	0.13					
96	15.83	33.880	24 .929	5.54	98.3	3.6	0.26	0.4	0.13	0.20	0.22					
107	15.14	33.800	25.021	5.46	95.5	4.2	0.32	1 . 1	0.07	0. 13	0.14	0.42	0.02	0.03	0.03	0.01

A) INCUBATION LIGHT INTENSITIES WERE 92, 42, 15, 4..8, 1.8, 0.39 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Small (cm^3)
77	49	35 05.0	120 46.4	01/20	1641	1647	142	52	35	35
77	51	35 01.0	120 54.9	01/20	1353	1415	440	212	89	89
77	60	34 43.4	121 32.1	01/20	0421	0443	478	198	40	40
77	70	34 23.9	122 15.1	01/19	2217	2239	440	214	139	139
77	80	34 03.6	122 56.4	01/19	1635	1657	450	210	31	31
77	90	33 43.5	123 37.0	01/19	1044	1106	438	216	30	30
77	100	33 23.7	124 18.2	01/19	0508	0530	442	210	127	34
80	51	34 26.4	120 31.4	01/17	1442	1449	143	63	49	49
80	55	34 18.6	120 46.9	01/17	1828	1850	425	209	61	61
80	60	34 08.3	121 09.1	01/17	2235	2257	462	211	84	84
80	70	33 48.7	121 50.9	01/18	0444	0506	428	210	54	37
80	80	33 30.2	122 31.0	01/18	1057	1118	442	210	27	27
80	90	33 09.1	123 13.0	01/18	1725	1746	426	207	99	99
80	100	32 49.5	123 54.7	01/18	2310	2331	440	212	41	41
82	47	34 16.6	120 02.2	01/17	0739	0801	436	210	55	55
83	40.6	34 13.4	119 24.8	01/17	0338	0341	58	22	85	85
83	42	34 11.1	119 30.2	01/17	0155	0205	200	91	65	65
83	51	33 52.2	120 07.4	01/16	1904	1913	205	78	29	29
83	55	33 44.8	120 24.6	01/16	1538	1600	455	214	64	64
83	60	33 34.5	120 45.2	01/16	0810	0832	398	212	101	73
83	70	33 14.2	121 26.7	01/16	0117	0139	441	212	77	77
83	80	32 54.3	122 07.7	01/15	1807	1829	459	213	26	26
83	90	32 34.4	122 49.4	01/15	0712	0734	509	210	20	20
83	100	32 14.7	123 31.3	01/15	0118	0140	498	204	56	56
83	110	31 53.9	124 10.9	01/14	1838	1900	456	209	53	53
87	33	33 53.2	118 29.7	01/12	0236	0241	122	46	41	41
87	35	33 49.3	11838.1	01/12	0512	0534	412	197	24	24
87	40	33 40.0	118 58.5	01/12	0827	0848	454	211	24	24
87	45	33 29.4	119 19.3	01/12	1450	1512	437	214	46	46
87	50	33 18.9	119 40.2	01/12	1830	1835	116	49	86	86
87	55	33 10.2	120 01.8	01/12	2220	2242	459	215	87	87
87	60	32 59.8	120 20.5	01/13	0241	0303	444	214	65	65
87	70	32 39.5	121 02.4	01/13	0809	0830	427	211	54	54
87	80	32 18.7	121 43.0	01/13	1641	1703	423	219	33	33
87	90	32 00.7	122 24.3	01/13	2254	2316	440	210	39	39
87	100	31 39.8	123 04.8	01/14	0521	0543	435	218	39	39
87	IIO	31 19.0	123 44.4	01/14	1148	1210	458	213	44	44
90	30	33 25.1	117 54.7	01/11	1738	1800	463	1%	39	39
90	35	33 15.4	118 14.7	01/11	1337	1359	418	200	22	22
90	37	33 10.7	118 22.8	01/11	0927	0948	439	211	32	32
90	45	32 55.0	118 56.0	01/11	0250	0312	467	204	34	34
90	53	32 38.5	119 29.8	01/10	2131	2152	425	210	80	64
90	60	32 24.8	119 55.9	01/10	1636	1658	483	208	37	37
90	70	32 05.6	120 36.8	01/10	0653	0715	483	196	25	25
90	80	31 44.8	121 18.9	01/10	0121	0143	452	219	51	51
90	90	31 25.8	121 59.9	01/09	1837	1859	485	207	31	31
90	100	31 05.5	122 39.4	01/09	1216	1238	470	204	17	17
90	110	30 45.4	123 19.0	01/09	0558	0620	466	208	52	52
90	120	30 25.3	123 59.6	01/09	0006	0029	369	211	30	30
93	26.7	32 57.9	117 18.8	01/04	1410	1418	175	67	63	63
93	28	32 54.7	117 23.8	01/05	0956	1018	449	216	29	29
93	30	32 50.5	11731.2	01/05	1705	1727	459	211	26	26
93	35	32 40.7	117 53.7	01/05	2156	2217	465	211	75	60
93	40	32 30.9	118 14.0	01/06	0232	0254	462	210	45	45
93	45	32 21.2	118 33.5	01/06	0649	0710	442	214	27	27
93	50	32 11.3	118 53.4	01/06	1129	1150	446	212	83	83
93	55	32 00.3	119 12.6	01/06	1626	1647	461	208	33	33
93	60	31 49.9	119 32.9	01/06	2111	2132	433	212	90	58
93	70	3131.2	120 15.2	01/07	0458	0519	474	203	32	32
93	80	31 10.5	120 56.1	01/07	1159	1221	470	212	19	19
93	90	30 50.3	121 36.0	01/07	1825	1847	482	208	42	42
93	100	30 30.4	122 14.6	01/08	0048	0110	472	212	152	152
93	IIO	30 10.4	122 54.5	01/08	0616	0638	440	212	23	23
93	120	29 51.3	123 35.9	01/08	1733	1755	479	198	25	25

FIGURES

Cruise 9504

1. CalCOFI Cruise 9504, track and station positions.

2. Horizontal distribution of dynamic height anomaly (0 over 500m). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).

3. Horizontal distributions at 10 meters: A) chlorophyll-a; B) potential density; C) temperature; and D) salinity.

4. Horizontal distributions at 200 meters: A) dynamic height anomaly (200 over 500 m); B) potential density; C) temperature; and D) salinity.

5. Sections along CalCOFI line 90 (vertical exaggeration, 1000): A) potential density; B) temperature; C) salinity; D) silicate; E) nitrate; F) phosphate; G) chlorophyll-a; H) oxygen saturation; I) oxygen; J) nitrite; and K) phaeopigments.

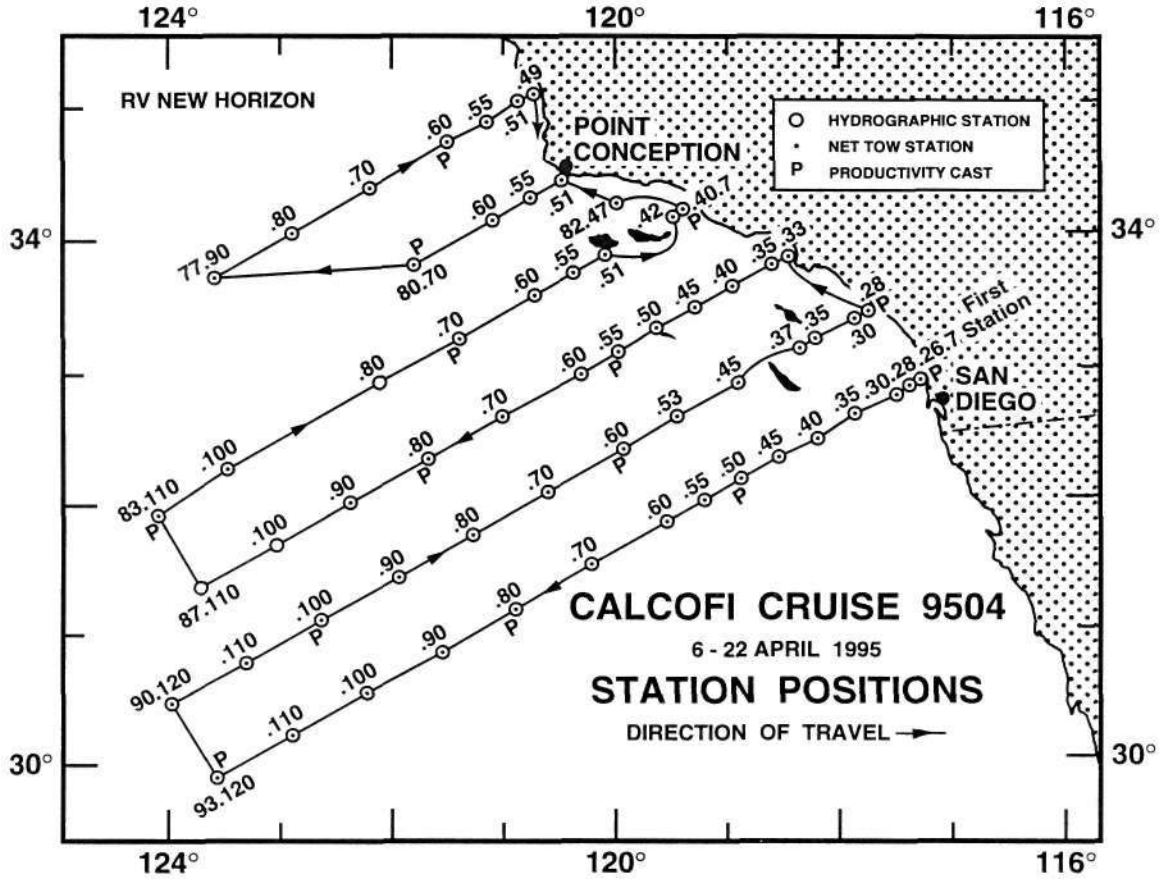


FIGURE 1

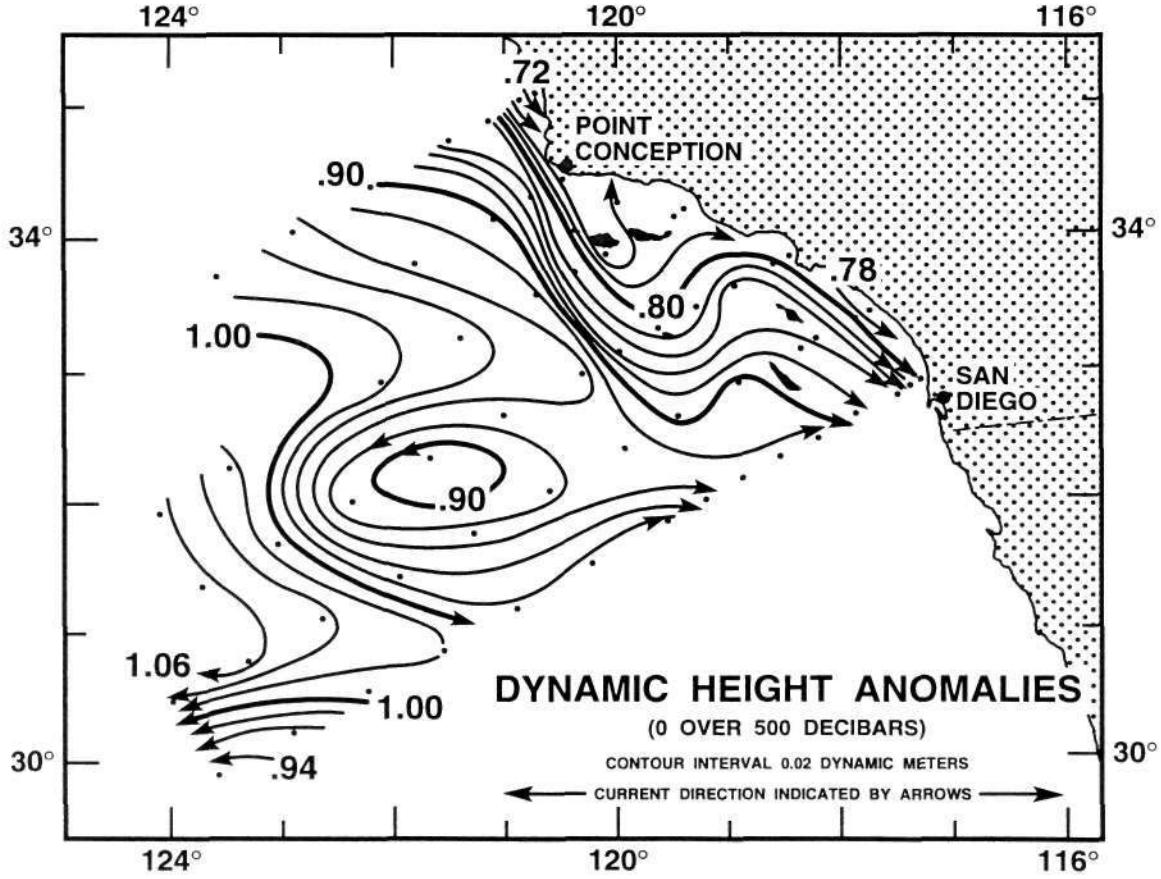


FIGURE 2

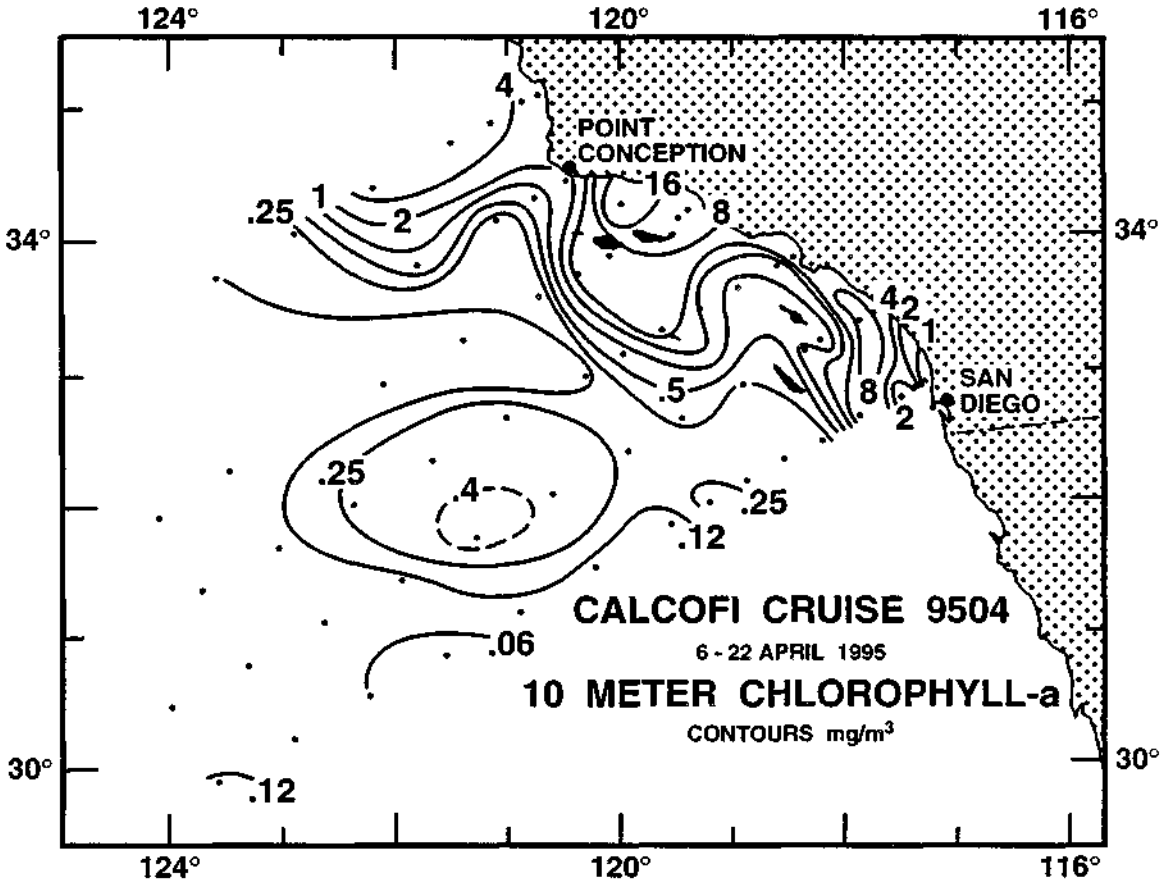


FIGURE 3A

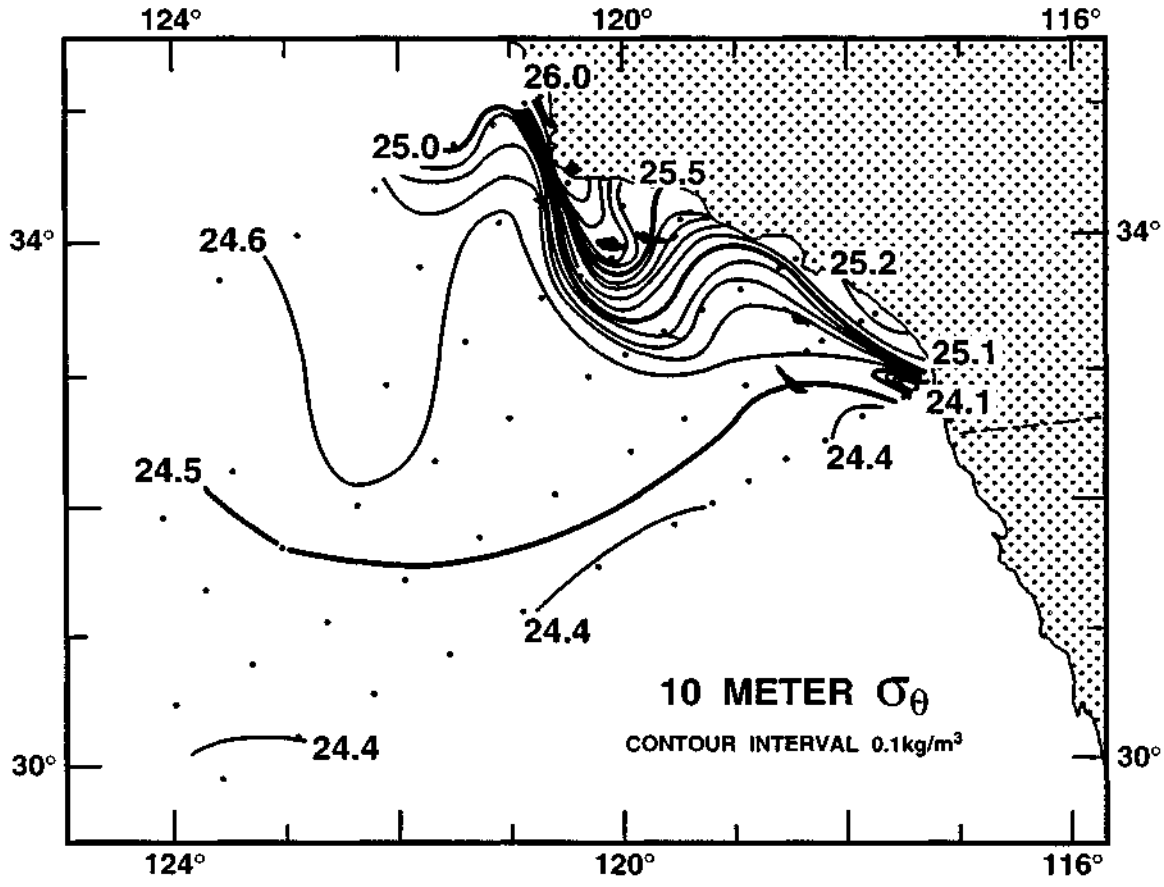


FIGURE 3B

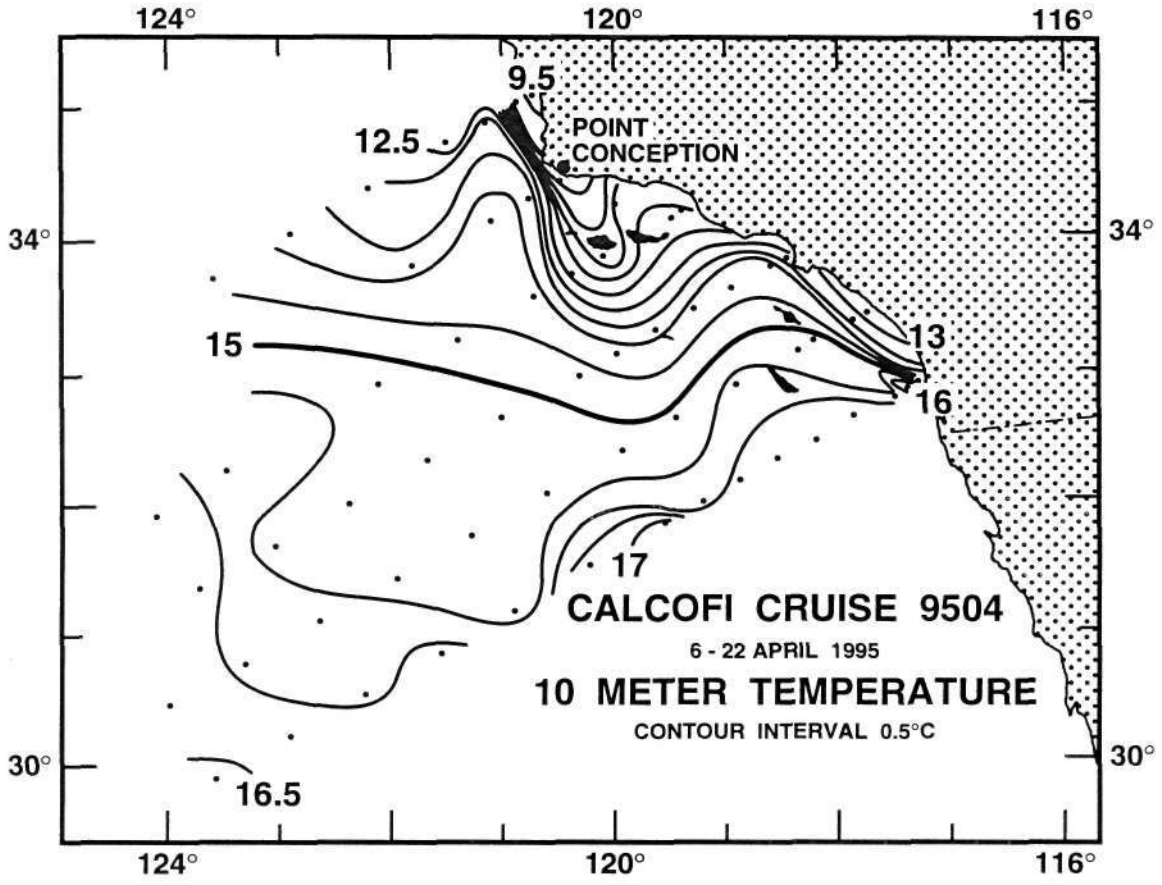


FIGURE 3C

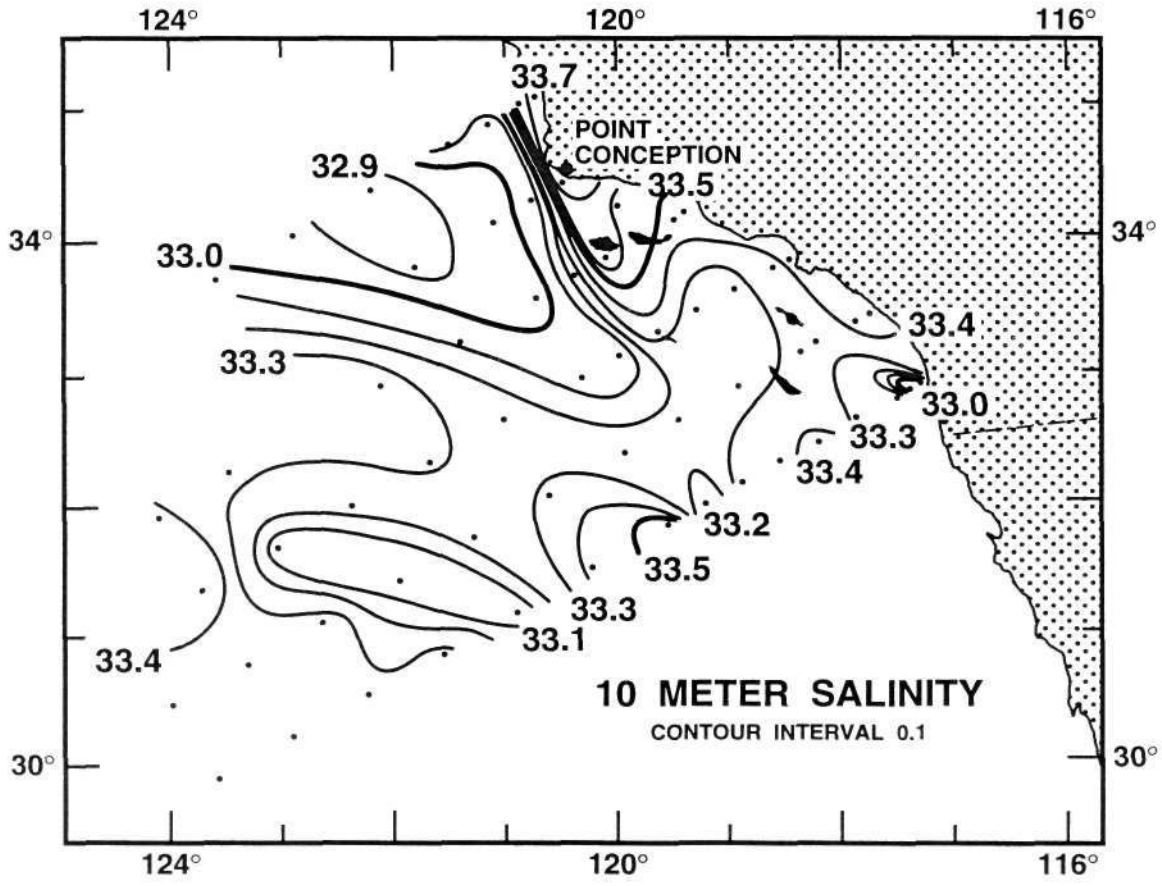


FIGURE 3D

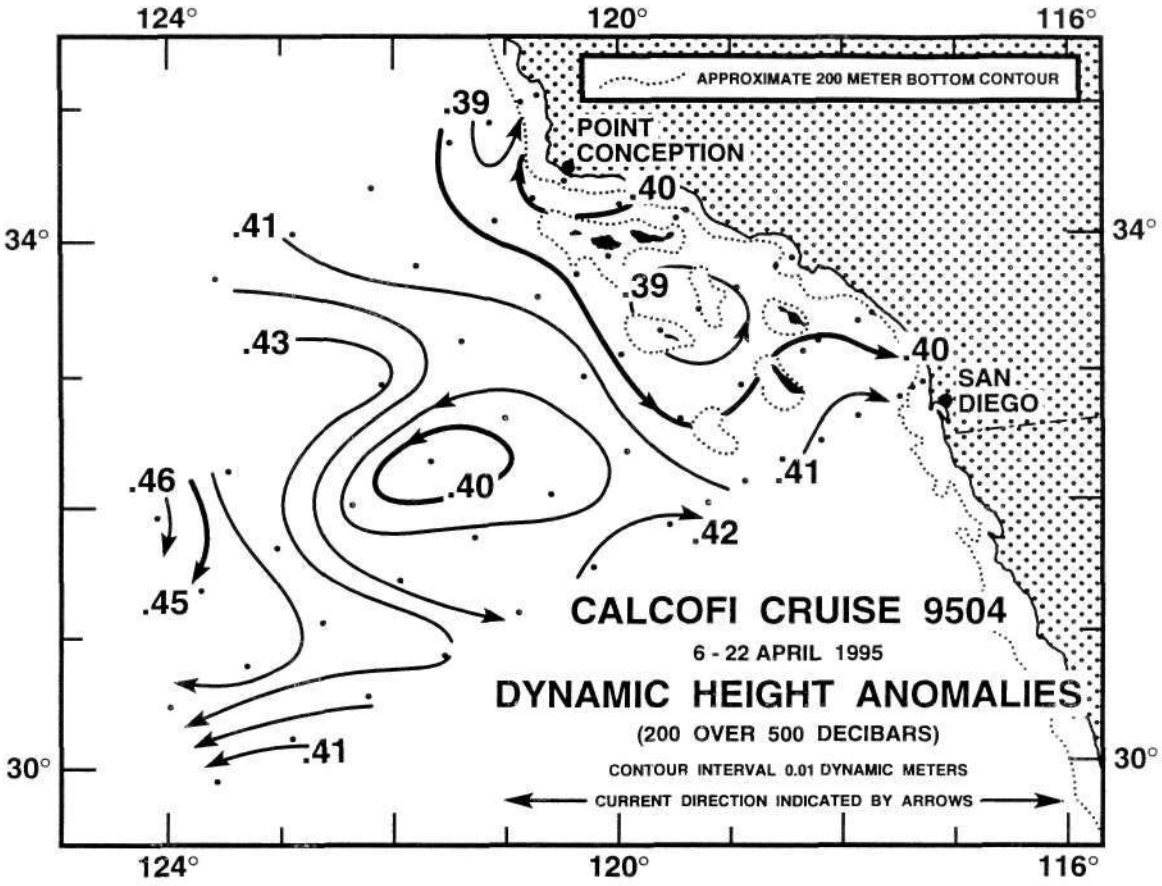


FIGURE 4A

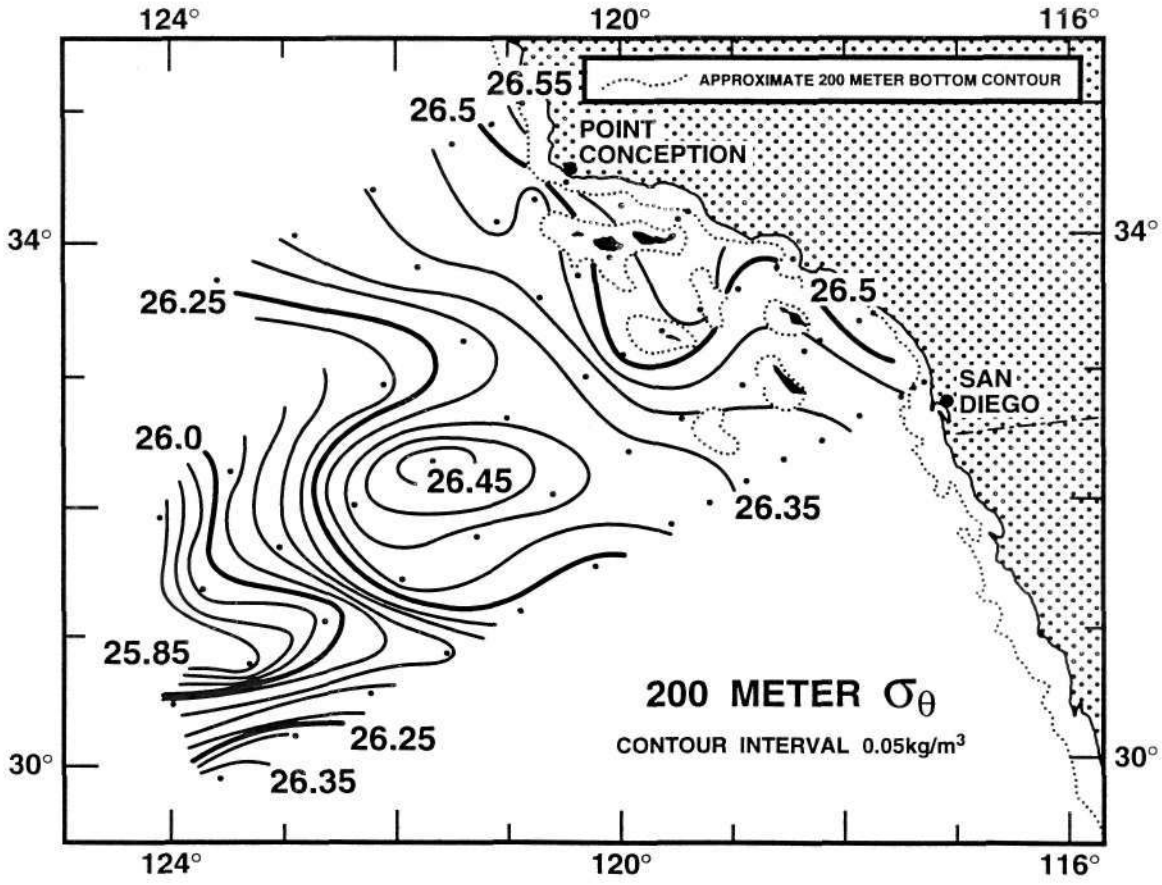


FIGURE 4B

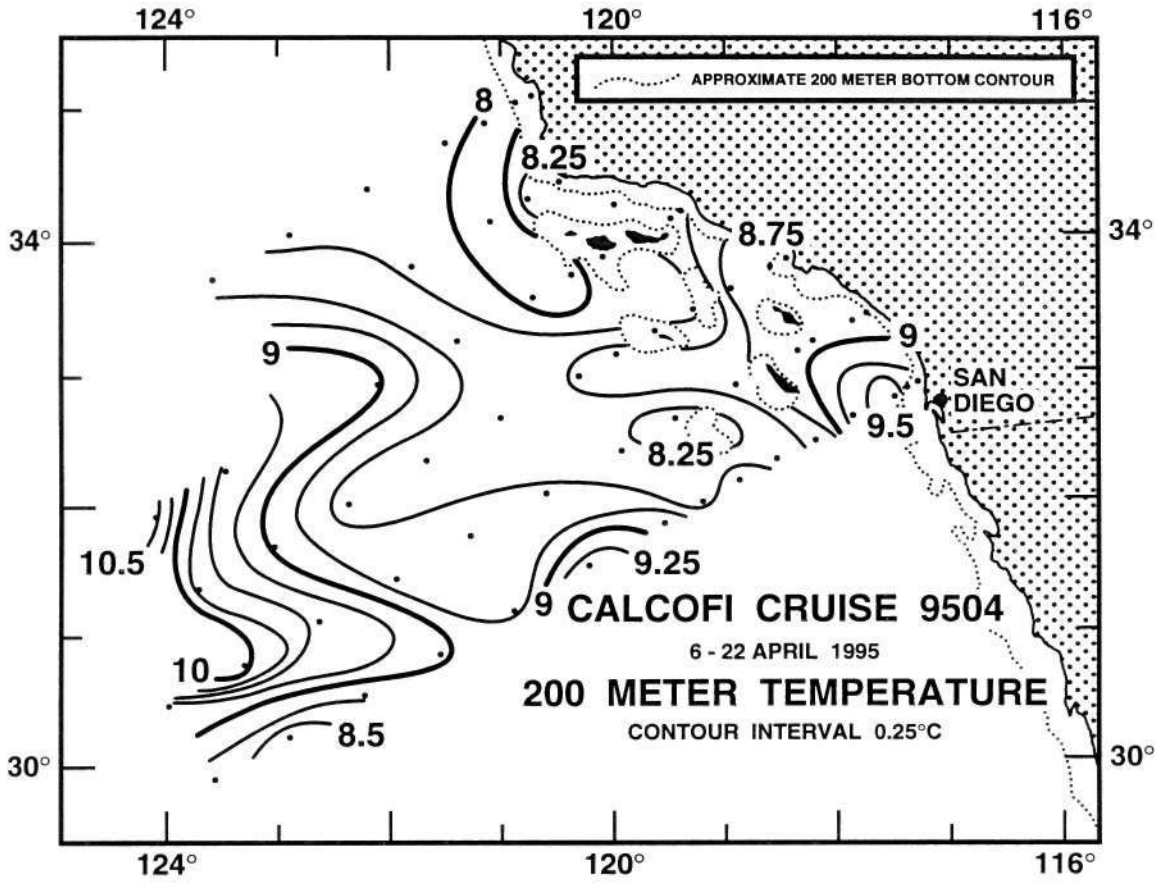


FIGURE 4C

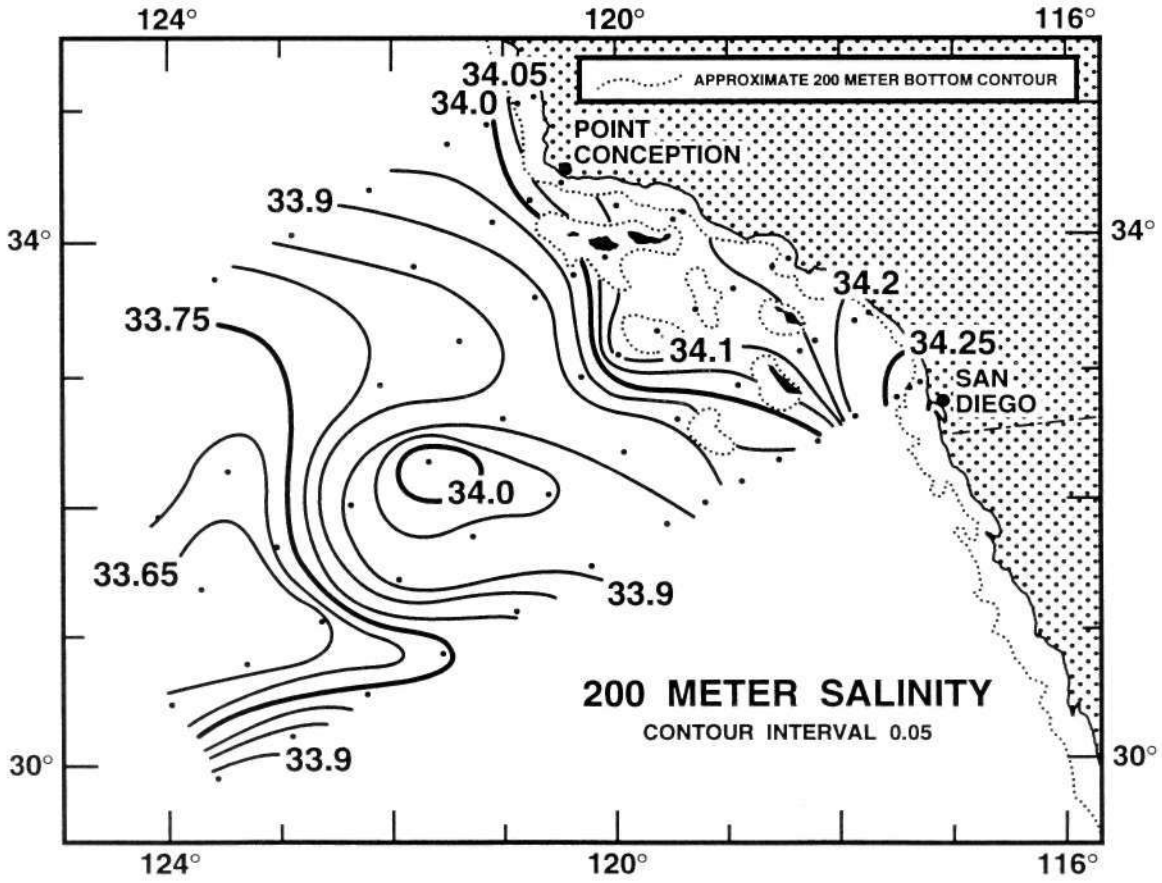


FIGURE 4D

CALCOFI CRUISE 9504

10 - 12 APRIL 1995

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

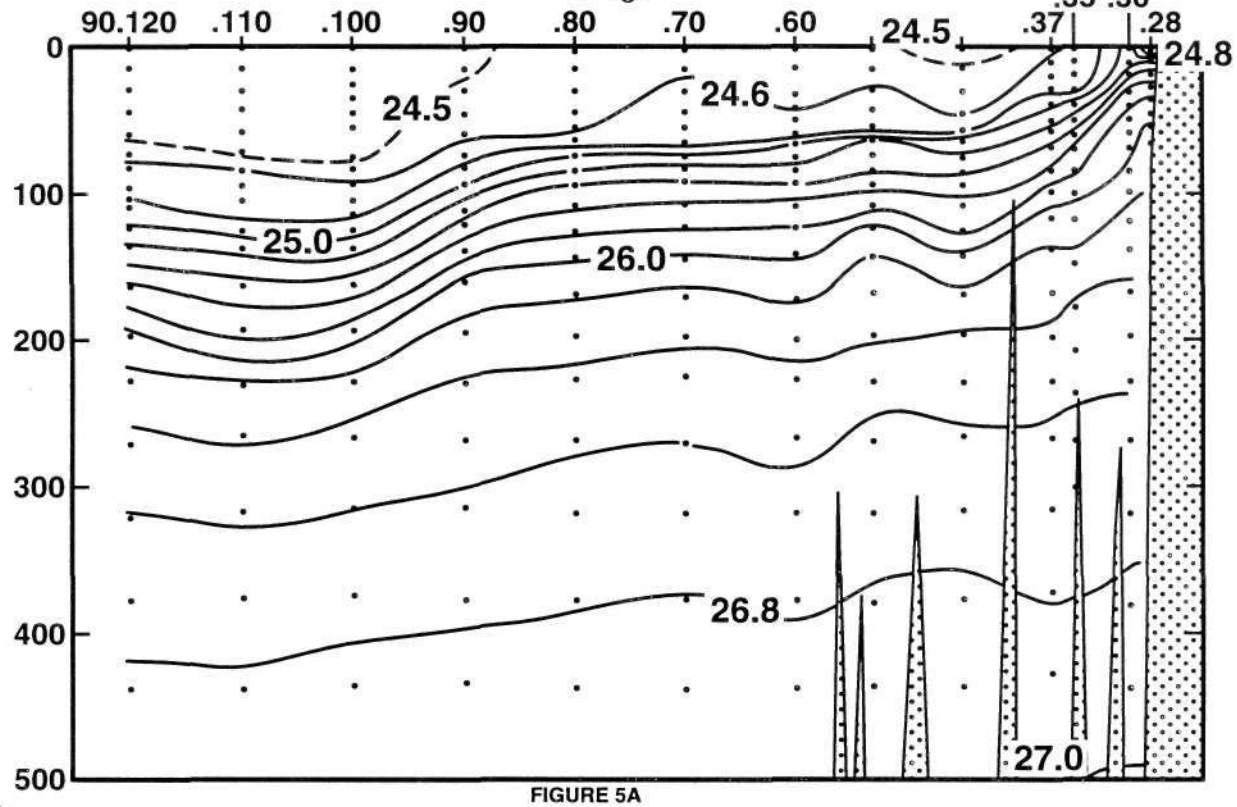


FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

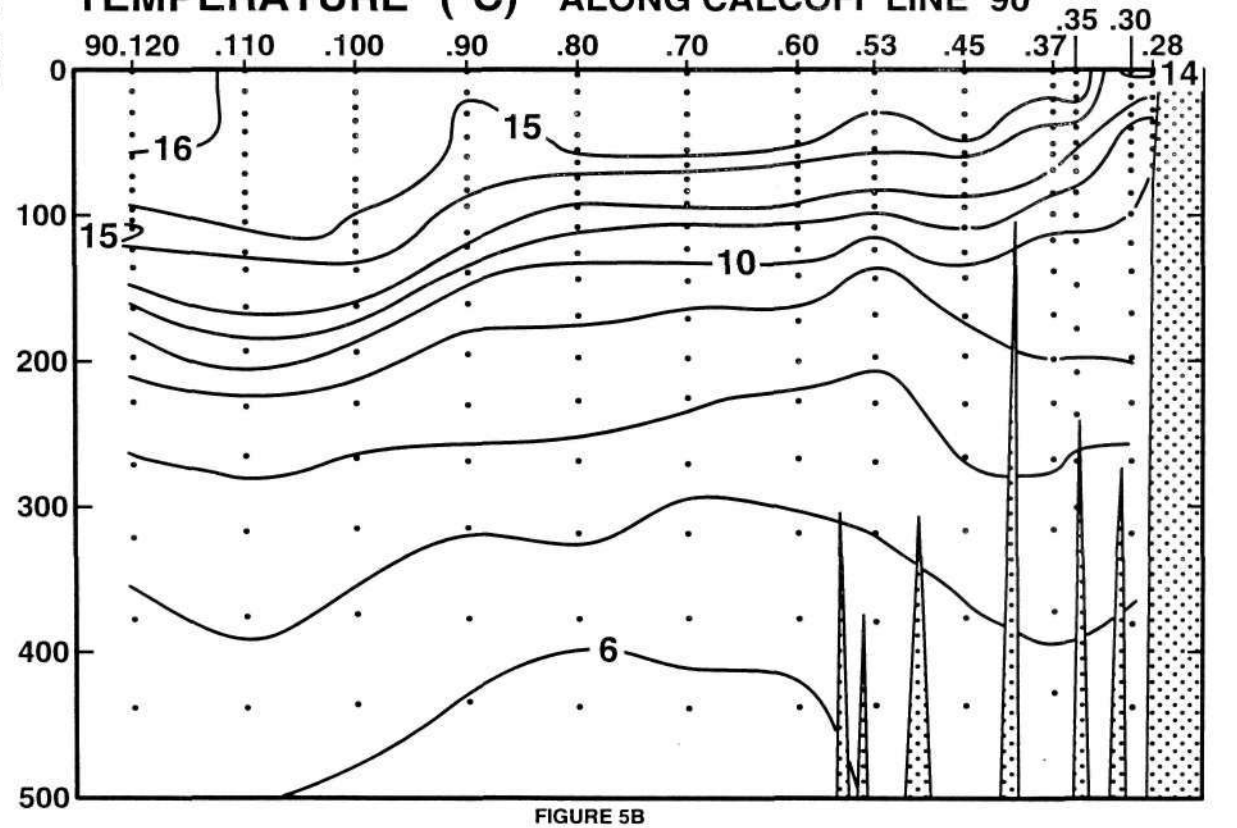


FIGURE 5B

CALCOFI CRUISE 9504

10 - 12 APRIL 1995

SALINITY ALONG CALCOFI LINE 90

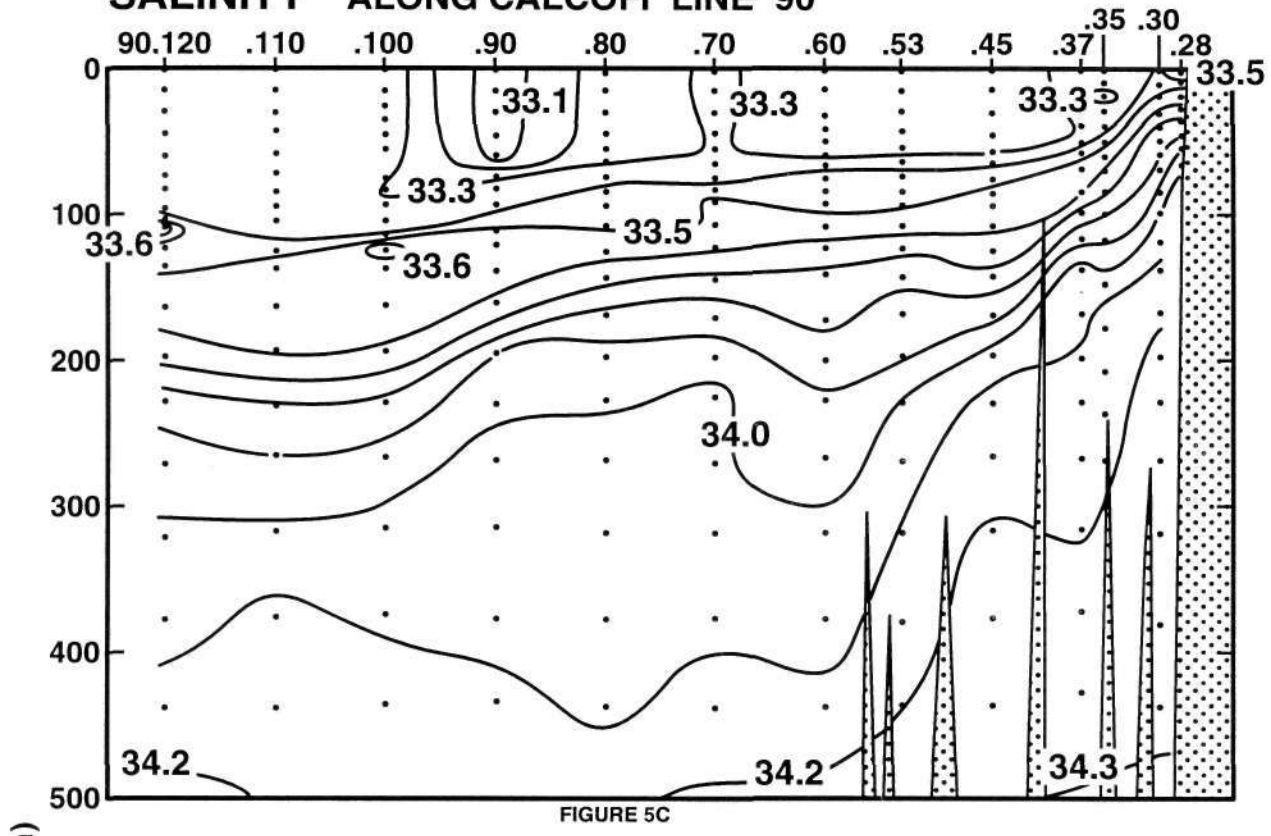


FIGURE 5C

SILICATE (μM/l) ALONG CALCOFI LINE 90

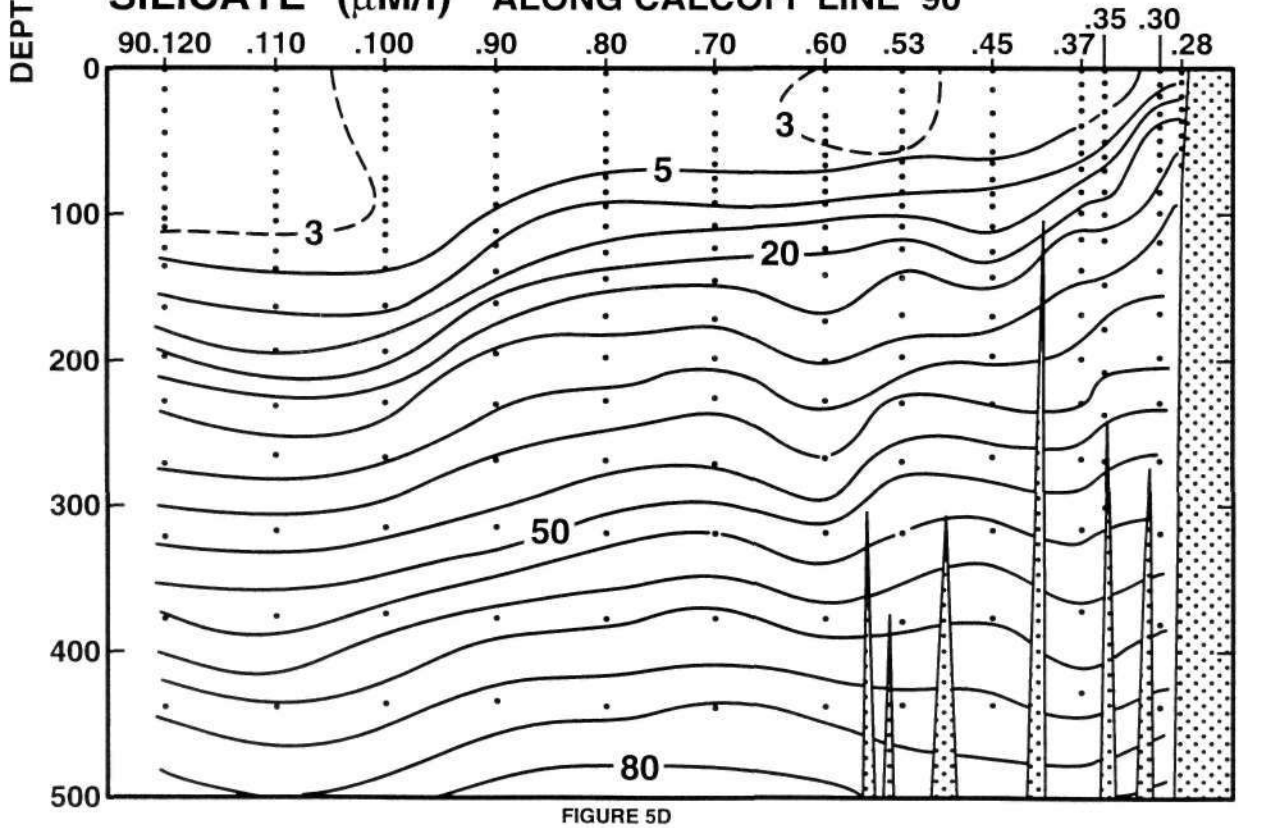


FIGURE 5D

CALCOFI CRUISE 9504

10 - 12 APRIL 1995

NITRATE (μM/l) ALONG CALCOFI LINE 90

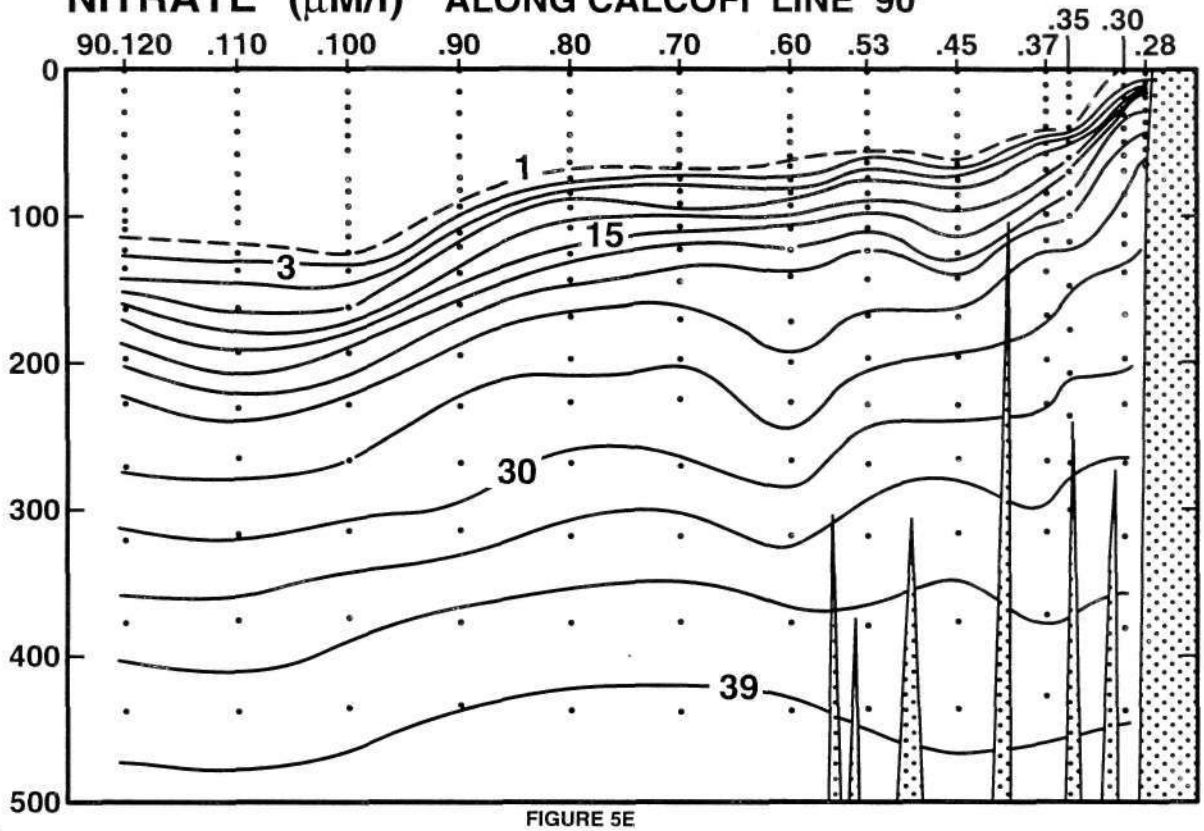


FIGURE 5E

PHOSPHATE (μM/l) ALONG CALCOFI LINE 90

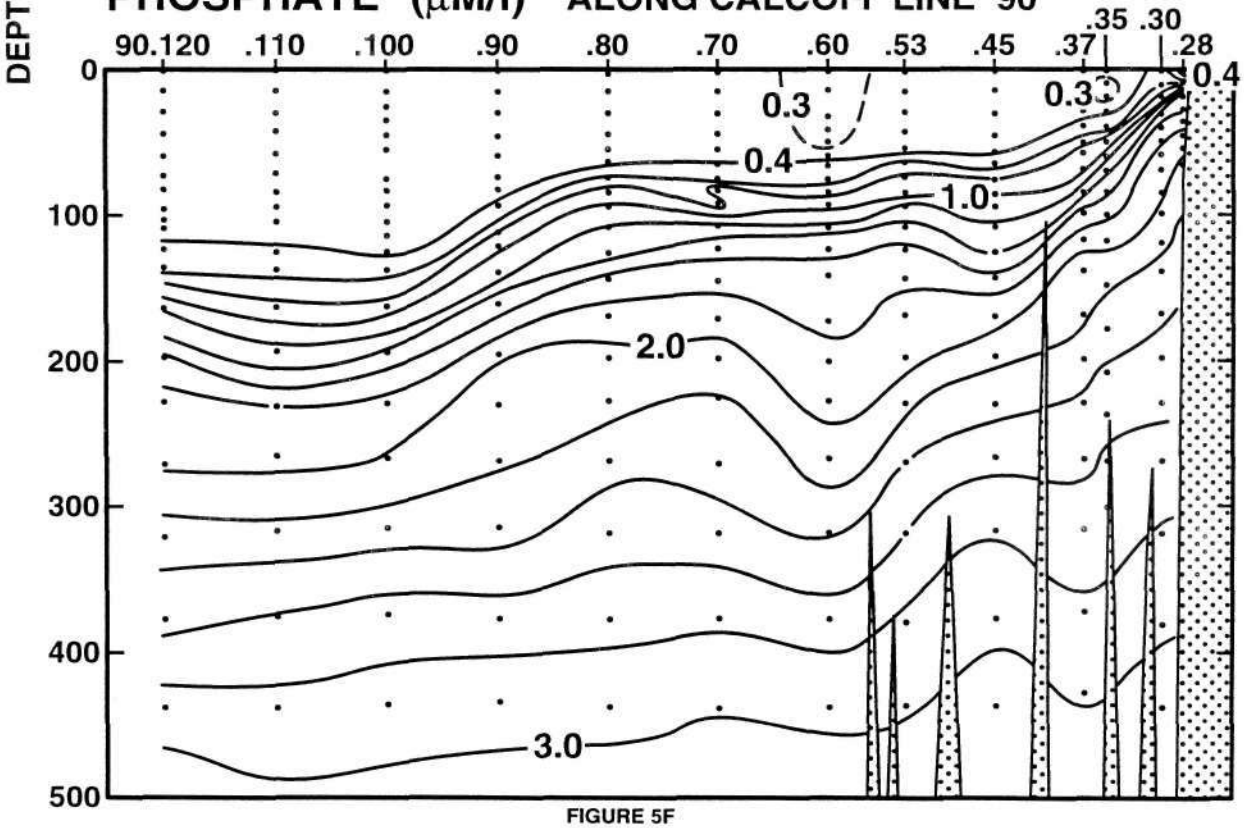


FIGURE 5F

CALCOFI CRUISE 9504

10 - 12 APRIL 1995

CHLOROPHYLL-a (μg/l) ALONG CALCOFI LINE 90

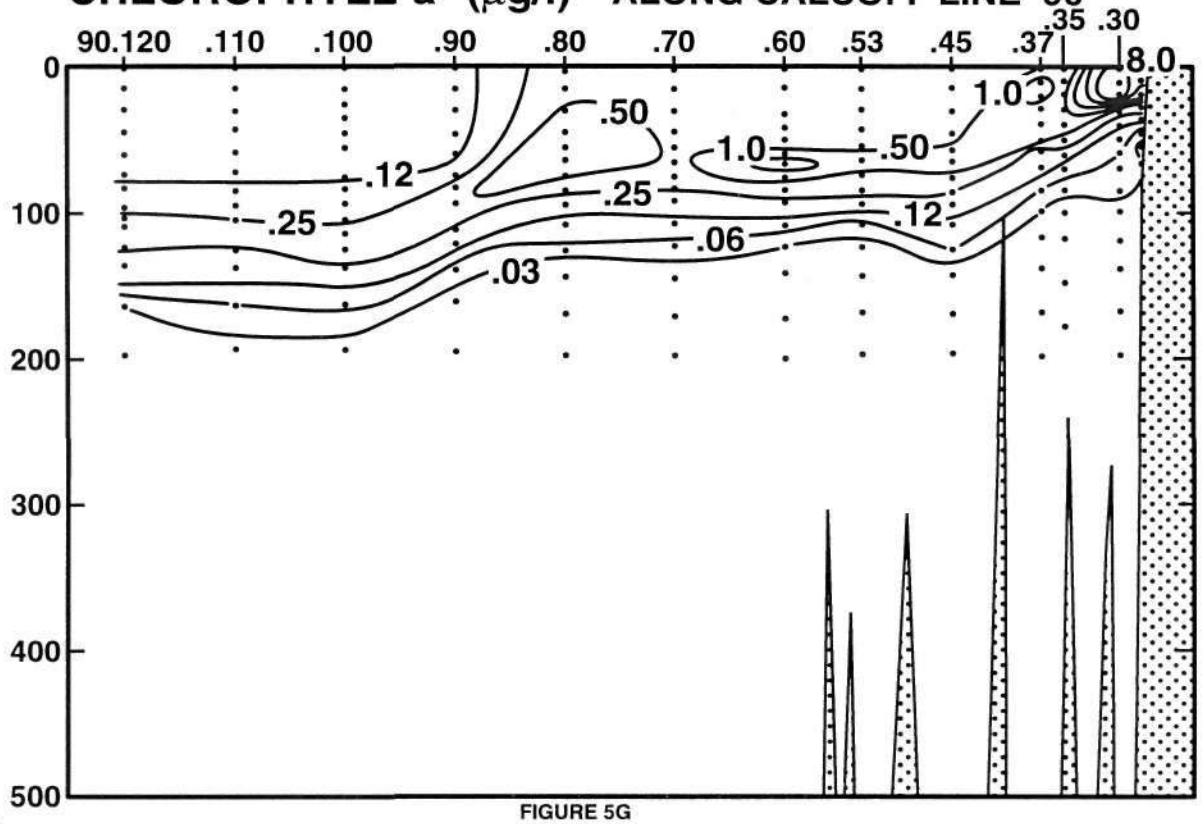


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

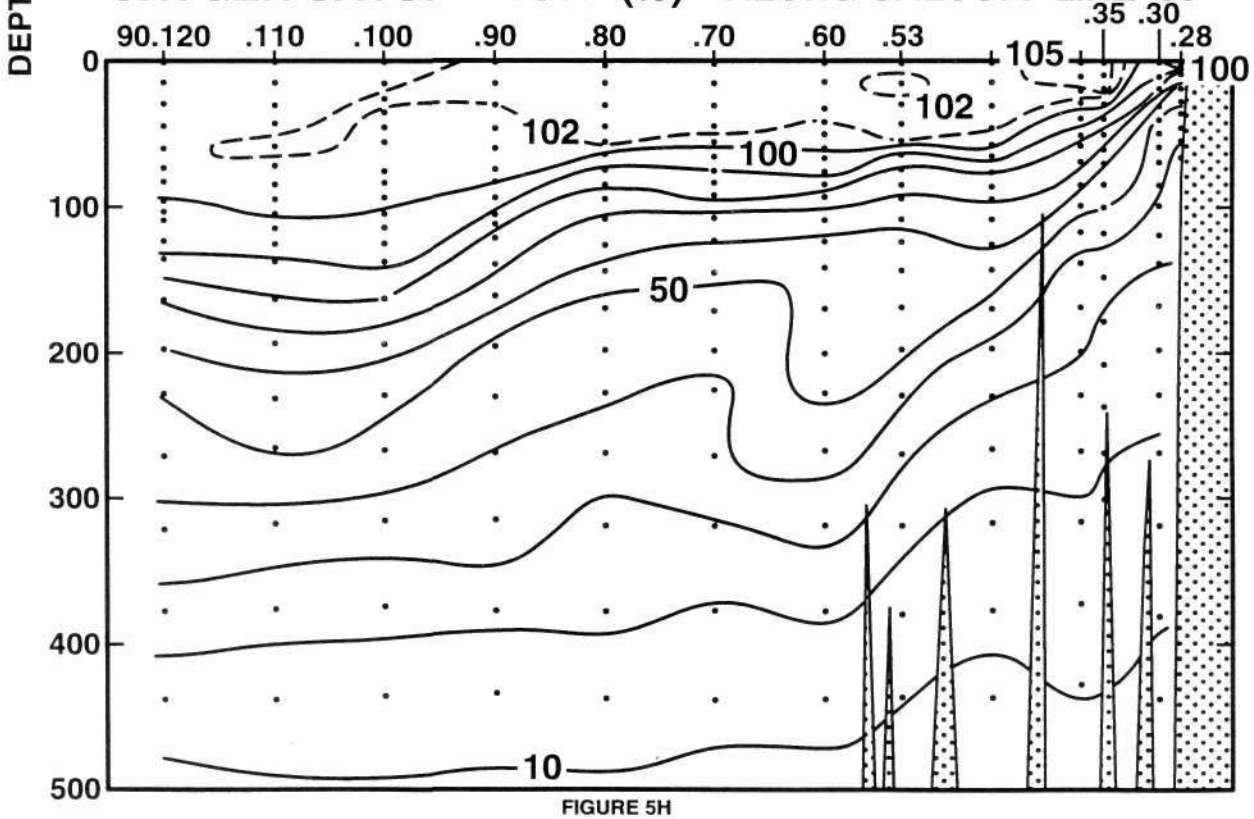


FIGURE 5H

CALCOFI CRUISE 9504

10 - 12 APRIL 1995

OXYGEN (ml/l) ALONG CALCOFI LINE 90

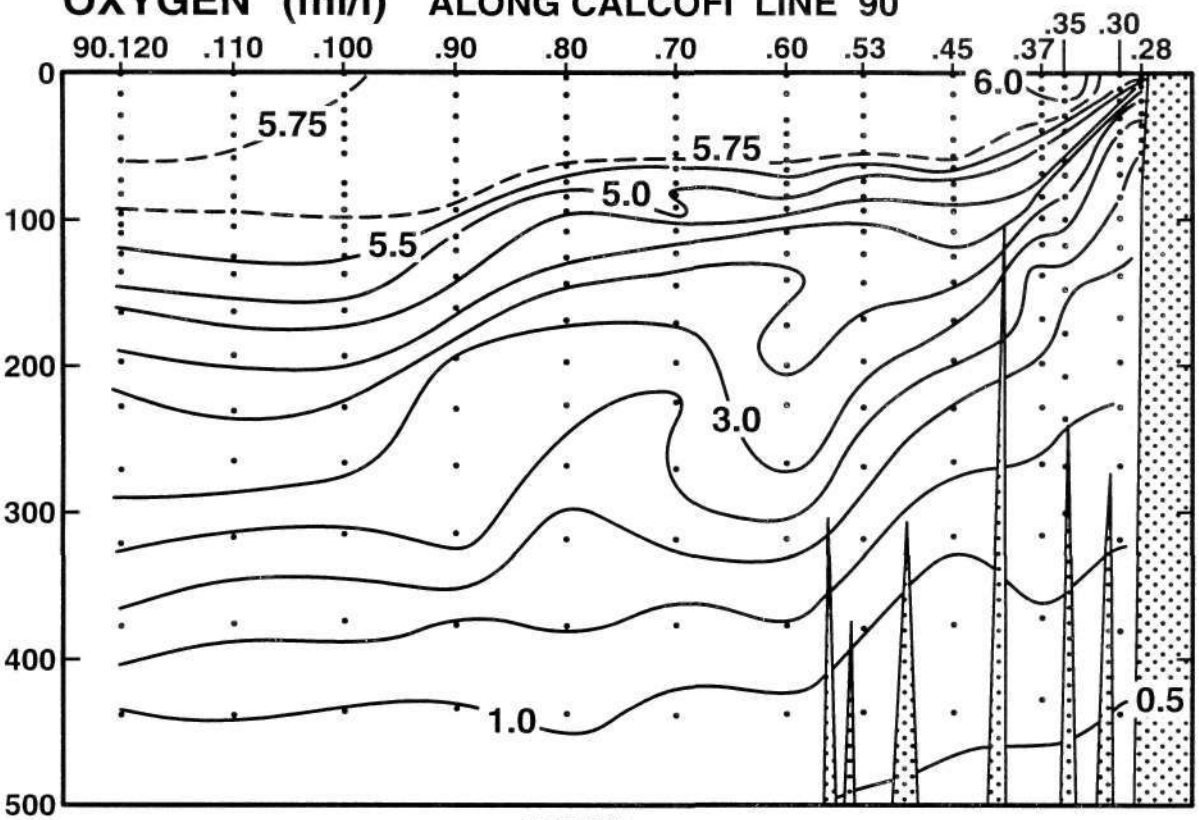


FIGURE 5I

NITRITE (µM/l) ALONG CALCOFI LINE 90

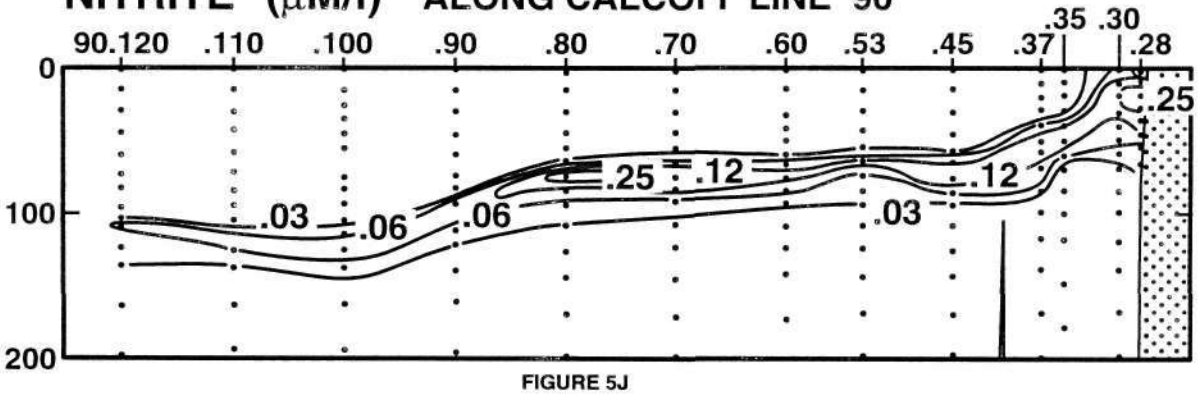


FIGURE 5J

PHAEOPIGMENTS (µg/l) ALONG CALCOFI LINE 90

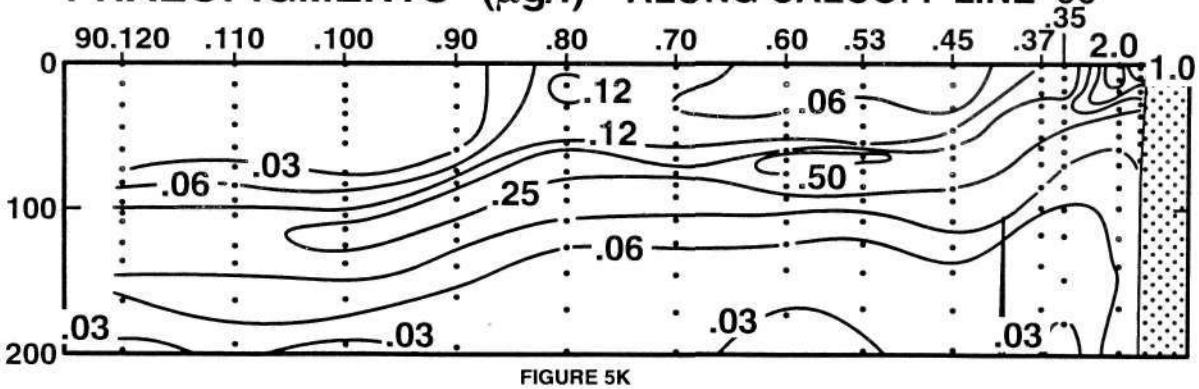


FIGURE 5K

PERSONNEL

CalCOFI Cruise 9504

SHIP'S CAPTAIN

Albert Arsenault, *RV New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Renger, Edward H. (Chief Scientist)	Staff Research Associate, SIO
Adams, Michelle L.	Volunteer
Barwell-Clarke, Janet E.	Research Technician, IOS, Sidney B.C.
Collier, Jackie L.	Postdoctoral Fellow, SIO
Cummings, Sherry L.	Staff Research Associate, SIO
Fournier-Sicre, Vincent	Programmer/Analyst, SIO
Goericke, Ralf	Assistant Research Oceanographer, SIO
Gruber, Dennis W.	Marine Technician, SIO
Hamm, David E.	Volunteer
Hays, Amy E.	Biological Technician, NMFS
Nishimoto, Robert N.	Fishery Biologist, NMFS
Olaizola, Miguel	Postdoctoral Fellow, SIO
Reitsch, G. Alan	Field Biologist, University of Washington
Wilkinson, James R.	Programmer/Analyst, SIO
Zafiriou, Oliver C.	Senior Scientist, WHOI

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 45

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
35 5.4 N	120 46 5 W	20/04/95	1241 UTC	68 in	330	09 kn			1016.9 mb	9 4 C	8 0 C			

DEPTH in		TEHP DE6 C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 UN/ l	N03 uM/ l	N02 uH/ l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAHP
0	ISL	9.49	9.49	33.747	26.059	194.1	0.000	4 .40	68.3	24.9	1 .77	21 .0	0.15	3.34	0.75	0	
1		9.49	9.49	33.747	26.059	194. 1	0.002	4.40	68.3	24.9	1 .77	21 .0	0.15	3.34	0.75	1	218
10		9.49	9.49	33.749	26.060	194.2	0.019	4.35	67.5	25.1	1 .77	21 .1	0.16	3.01	0.68	10	219
19		9.41	9.41	33.772	26.092	191.4	0.037	4.14	64.2	26.1	1 .82	21 .9	0.13	2.50	0.57	19	220
20	ISL	9.40	9.40	33.773	26.094	191 .2	0.039	4.11	63.7	26.2	1 .82	21.9	0.13	2.49	0.56	20	
30		9.24	9.24	33.801	26.142	186.8	0.058	3.65	56.4	26.8	1 .85	22.7	0.09	2.41	0.45	30	221
40		8.89	8.89	33.890	26.267	175.1	0.076	2.83	43.4	30.5	2.04	25.6	0.04	0.07	0.16	40	222
50		8.83	8.82	33.898	26.283	173.8	0.093	2.82	43.2	30.9	2.06	25.9	0.04	0.07	0.13	50	223
60		8.64	8.63	33.928 D	26.336	168.9	0.110									60	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 51

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
35 1.7 N	120 55 5 W	20/04/95	1444 UTC	256 m	360	12 kn	360 06 05	4	1017.5 mb	10 2 C	9 0 C	14m	04	

DEPTH m		TEHP DEC C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uH/l	P04 uH/l	N03 uH/ l	N02 uH/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SABP
0	ISL	9.92	9.92	33.610	25.880	211.0	0.000	4 .74	74.2	18.3	1 .47	17.2	0.10	3.68	0.64	0	
2		9.92	9.92	33.610	25.880	211.1	0.004	4.74	74.2	18.3	1 .47	17.2	0.10	3.68	0.64	2	210
10	ISL	9.91	9.91	33.611	25.883	211.0	0.021	4.73	74.1	18.4	1 .46	17.3	0.09	3.69	0.57	10	
14		9.91	9.91	33.611	25.883	211.1	0.030	4.73	74.1	18.5	1 .46	17.4	0.09	3.70	0.54	14	211
20	ISL	9.91	9.91	33.613	25.885	211.0	0.042	4.72	73.9	18.5	1 .46	17.4	0.09	3.63	0. 59	20	
30		9.91	9.91	33.615	25.887	211.1	0.063	4.71	73.7	18.6	1 .47	17.3	0.10	3.53	0.67	30	212
44		9.89	9.89	33.613	25.889	211 .2	0.093	4.70	73.5	18.7	1 .47	17.5	0.10	3.60	0.52	44	213
50	ISL	9.89	9.88	33.614	25.890	211.3	0. 106	4.71	73.7	18.7	1 .48	17.5	0.10	3.62	0. 56	50	
54		9.89	9.88	33.615	25.890	211.3	0.114	4.71	73.7	18.7	1 .49	17.5	0.10	3.63	0.60	54	214
65		9.73	9.72	33.620	25.921	208.6	0.137	4.31	67.2	19.9	1 .57	18.9	0.08	2.52	0.61	65	215
74		9.52	9.51	33.632	25.965	204.5	0.156	3.86	59.9	21.4	1 .66	20.4	0.06	0.89	0.28	74	216
75	ISL	9.51	9.50	33.634	25.968	204.3	0.158	3.83	59.4	21 .5	1 .67	20.5	0.06	0.82	0.28	75	
83		9.41	9.40	33.654	26.000	201 .4	0.174	3.68	57.0	22.4	1 .71	21.3	0.05	0.51	0.28	83	217
94		8.98	8.97	33.690	26.097	192.3	0.196	3.61	55.4	24.3	1 .78	22.5	0.03	0.15	0.16	95	218
100	ISL	8.81	8.80	33.723	26.150	187.4	0.207	3.55	54.3	25.5	1 .82	23.2	0.02	0.10	0.15	101	
108		8.64	8.63	33.773	26.216	181.3	0.222	3.45	52.5	27.3	1 .87	24.2	0.02	0.04	0.14	109	219
124		8.37	8.36	33.870	26.333	170.4	0.250	3.21	48.6	30.7	1 .98	25.7	0.02	0.03	0.17	125	220
125	ISL	8.36	8.35	33.875	26.339	169.9	0.252	3.19	48.3	30.9	1 .99	25.8	0.02	0.03	0.17	126	
143		8.23	8.22	33.946	26.414	163.0	0.282	2.88	43.5	34.2	2.09	27.2	0.01	0.02	0.09	144	221
150	ISL	8.23	8.21	33.966	26.430	161.6	0.293	2.78	42.0	34.9	2.12	27.5	0.01	0.02	0.09	151	
170		8.21	8.19	34.012	26.469	158.3	0.325	2.52	38.1	37.1	2.20	28.4	0.02	0.04	0.10	171	222
200	ISL	7.92	7.90	34.077	26.564	149.8	0.371	2.05	30.8	43.5	2.39	30.6	0.03	0.03	0.09	201	
202		7.89	7.87	34.081	26.572	149. 1	0.374	2.02	30.3	43.9	2.40	30.7	0.03	0.03	0.09	203	223
230		7.28	7.26	34.134 D	26.701	137.0	0.414									231	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 55

LATITUDE	LONGITUDE	DAY/HO/YR	CAST 1IKE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 52.4 N	121 12.0 W	20/04/95	2245 UTC	563 at	310	26 kn	320 03 04	0	1017.1 mb	12.5 C	9 7 C	11m	05	0/8

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGHA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uH/ l	P04 uH/ l	N03 uH/l	N02 uH/ l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAMP
0	ISL	13.04	13.04	33.017	24.850	309.1	0.000	6.25	104.3	3.2	0.43	0.6	0.05	4.87	1 .58	0	
2		1,3.04	13.04	33.017	24.850	309. 1	0.006	6.25	104.3	3.2	0.43	0.6	0.05	4.87	1 .58	2	205
9		13.05	13.05	33.018	24.849	309.4	0.028	6.28	104.8	3.1	0.43	0.6	0.05	5.21	1 .63	9	206
10	ISL	13.05	13.05	33.018	24.849	309.4	0.031	6.27	104.6	3.1	0.43	0.6	0.05	5.21	1 .58	10	
19		13.01	13.01	33.020	24.858	308.8	0.059	6.22	103.7	3.1	0.46	0.7	0.05	5.21	1.12	19	207
20	ISL	12.96	12.96	33.024	24.871	307.5	0.062	6.19	103.1	3.2	0.47	0.9	0.05	5.19	1.12	20	
30		12.47	12.47	33.093	25.020	293.6	0.092	5.91	97.5	4.4	0.57	2.9	0.08	4.87	1 .24	30	20!
39		12 .32	12.31	33.177	25.114	284.9	0.118	5.91	97.2	4.6	0.63	3.8	0.10	4.62	1.15	39	20!
50		11 .93	11 .92	33.225	25.226	274.5	0.149	5 .44	88.8	8.0	0.90	7.1	0.14	2.70	1.16	50	210
59		11 .09	11.08	33.359	25.484	250.2	0.172	4.86	77.9	12.9	1 .20	12.3	0.17	0.70	0.62	59	211
69		10.51	10.50	33.444	25.652	234.3	0.197	4.39	69.6	15.3	1 .37	15.6	0.07	0.39	0.46	69	212
75	ISL	10.32	10.31	33.465	25.701	229.8	0.210	4.26	67.2	16.0	1 .42	16.5	0.06	0.29	0.40	75	
84		10.09	10.08	33.488	25.758	224.5	0.231	4.13	64.9	17.1	1 .48	17.6	0.04	0.20	0.33	84	215
100		9. 50	9.49	33.583	25.931	208.4	0.266	3.74	58.0	21.1	1 .70	20.9	0.04	0.07	0.28	101	214
119		8.98	8.97	33.759	26.152	187.6	0.303	3.24	49.7	26.5	1 .89	24.0	0.03	0.05	0.17	120	215
125	ISL	8.85	8.84	33.795	26.201	183. 1	0.314	3.16	48.4	27.6	1 .94	24.6	0.03	0.04	0.15	126	
138		8.62	8.61	33.854	26.283	175.5	0.338	3.04	46.3	29.6	2.01	25.5	0.03	0.03	0.13	139	216
150	ISL	8.46	8.44	33.896	26.340	170.2	0.358	2.97	45.1	31 .2	2.04	26.2	0.03	0.02	0.13	151	
168		8.25	8.23	33.941	26.408	164. 1	0.388	2.89	43.7	33.5	2.07	27.0	0.02	0.01	0.12	169	217
196		7.81	7.79	33.989	26.511	154.7	0.433	2.77	41 .4	38.1	2.15	28.6	0.01	0.01	0.12	197	211
200	ISL	7.77	7.75	33.996	26.522	153.6	0.439	2.72	40.7	38.8	2.17	28.9	0.01			201	
226		7.55	7.53	34.035	26.585	148.1	0.478	2.36	35.1	42.9	2.33	30.6	0.01			227	219
250	ISL	7.33	7.31	34.054	26.631	143.9	0.513	2.14	31 .7	46.4	2.42	31 .9	0.01			252	
267		7.16	7.13	34.060	26.660	141.4	0.538	2.02	29.8	48.9	2.47	32.7	0.01			269	220
300	ISL	6.73	6.70	34.059	26.718	136.2	0.584	1 .79	26. 1	54.7	2.58	34.6	0.00			302	
317		6.53	6.50	34.061	26.746	133.6	0.606	1 .66	24.1	57.7	2 .64	35.5	0.00			319	221
378		6.23	6.20	34.135	26.844	125.0	0.685	1 .07	15.4	67.4	2.87	37.9	0.00			381	222
400	ISL	6.13	6.09	34.163	26.879	121.9	0.712	0.92	13.2	70.5	2.94	38.4	0.00			403	
437		5.94	5 .90	34.207	26.938	116.7	0.757	0.67	9.6	75.8	3.06	39.3	0.00			440	223
500	ISL	5.45	5.41	34 .248	27.031	108.2	0.827									504	
519		5.30	5.26	34.261 D	27.060	105.6	0.848									523	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 60

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
34 44.5 N	121 32 9 W	20/04/95	1901 UTC	832 m	340	25 kn	340 02 04	1	1017.8 mb	13 7 C	12 0 C	09m 05	6/8	SC

DEPTH in	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uM/I	P04 UN/ I	N03 uH/ I	N02 UN/ I	CHL-A ug/ I	PHAEO ug/I	PRES db	SAMP
0 ISL	12.25	12.25	33.101	25.068	288.3	0.000	6.3ft	104.1	3.8	0.57	2 .4	0.11	6.59	1 .27	0	
2 A	12.25	12.25	33.101	25.068	288.4	0.006	6.34	104. 1	3.8	0.57	2.4	0.11	6.59	1 .27	2	203
5 *	12.24	12.24	33.103	25.071	288.1	0.014	6.34	104.1	3.9	0.55	2 .4	0.12	6.24	1 .33	5	204
10 ISL	12.23	12.23	33.106	25.076	287.8	0.029	6.32	103.7	4.0	0.56	2 .5	0.12	6.24	1.14	10	
12 A	12.22	12.22	33.107	25.078	287.6	0.035	6.31	103.5	4.0	0.57	2.6	0.12	6.24	1 .05	12	205
19 A	12.17	12.17	33.11ft	25.09ft	286.4	0.055	6.19	101.4	4.4	0.61	3.1	0.12	6.05	1.13	19	206
20 ISL	12.17	12.17	33.114	25.094	286.4	0.058	6.16	101 .0	4.4	0.61	3.2	0.12	6.04	1 .20	20	
23 A	12.15	12.15	33.113	25.097	286.1	0.066	6.08	99.6	4.4	0.62	3. 5	0.12	5.85	1 .39	23	207
30 ISL	12.00	12.00	33.229	25.215	275.1	0.086	6.02	98.4	5.0	0.69	4. 1	0.10	3.38	0.98	30	
33 A	11 .92	11.92	33.285	25.274	269.6	0.094	5.99	97.8	5.3	0.72	4.3	0.09	2.27	0.73	33	208
43	11 .83	11 .82	33.299	25.302	267.1	0.121	6.01	97.9	5.2	0.73	4.4	0.09	2.41	0.88	43	209
50 ISL	11 .60	11.59	33.315	25.357	262.1	0.139	5.93	96. 1	6.2	0.80	5.6	0. 10	3.90	1.17	50	
53	11 .48	11.47	33.322	25.384	259.5	0.147	5.90	95.4	7.0	0.85	6.4	0.10	4. 54	1 .29	53	210
62	11.15	11.14	33.338	25.456	252.8	0. 170	5.33	85.6	10.7	1 .07	10.1	0.12	4.75	1 .39	62	211
73	10.60	10.59	33.458	25.647	234.9	0. 197	4.23	67.2	15.4	1 .38	15.8	0.15	0.54	0.63	73	212
75 ISL	10.44	10.43	33.469	25.684	231 .4	0.202	4.14	65.5	16.1	1 .43	16.7	0.13	0.46	0.53	75	
84	9.80	9.79	33.516	25.829	217.8	0.222	3.90	60.9	19.0	1 .59	19.7	0.02	0.10	0.22	84	213
98	9.57	9.56	33.657	25.977	203.9	0.251	3.55	55.2	22.3	1 .71	21.2	0.02	0.03	0.11	99	214
100 ISL	9.53	9.52	33.671	25.995	202.3	0.255	3.50	54.3	22.7	1 .73	21 .4	0.02	0.03	0.11	101	
119	9.22	9.21	33.765	26.119	190.9	0.293	3.16	48.8	26.1	1 .86	23.6	0.01	0.01	0.10	120	215
125 ISL	9.15	9.14	33.783	26.144	188.6	0.304	3.10	47.8	26.8	1 .89	24.0	0.01	0.01	0.13	126	
138	9.02	9.01	33.816	26.191	184.4	0.328	2 .99	45 .9	28.3	1 .94	24.8	0.01	0.02	0.18	139	216
150 ISL	8.89	8.87	33.856	26.243	179.6	0.350	2.85	43.7	30.0	2.00	25.6	0.01	0.02	0.15	151	
169	8.67	8.65	33.919	26.326	172.0	0.384	2.64	40. 3	32.9	2.09	26.9	0.00	0.01	0.08	170	217
198	8.21	8.19	33.987	26.450	160.6	0.432	2.49	37.6	37.1	2.19	28.6	0.00	0.01	0.06	199	218
200 ISL	8.18	8.16	33.991	26.458	159.9	0.435	2.48	37.4	37.4	2.20	28.7	0.00			201	
227	7.81	7.79	34.032	26.545	152.0	0.477	2.32	34.7	41 .7	2.30	30.0	0.00			228	219
250 ISL	7.65	7.63	34.046	26.580	149.0	0.512	2.23	33.3	43.6	2.34	30.7	0.00			252	
267	7.56	7.53	3ft.052	26.597	147.6	0.537	2.14	31 .8	45.0	2.38	31 .3	0.00			269	220
300 ISL	7.23	7.20	3ft.081	26.667	141.3	0.585	1 .77	26.1	50.7	2.53	33.4	0.00			302	
317	7.05	7.02	34.099	26.706	137.8	0.608	1 .56	22.9	54.1	2.62	34.5	0.00			319	221
375	6.68	6.65	34.17«	26.816	128.0	0.685	1 .00	14.6	64.0	2.86	36.8	0.00			377	222
400 ISL	6.30	6.26	34.163	26.858	124.2	0.717	0.91	13.2	68.8	2.92	38.1	0.00			403	
436	5.75	5.71	34. 141	26.910	119.2	0.761	0.79	11.3	75.7	3.01	39.9	0.00			439	223
500 ISL	5.38	5.34	34.181	26.987	112.3	0.835									504	
517	5.28	5.2ft	34.192 D	27.007	110.5	0.854									521	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 23.4 N	122 15 1 W	20/04/95	1152 UTC	4020 *m*	290	13 kn			1017.5 mb	13 3 C	12 3 C			

DEPTH n	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/ I	N02 uH/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0 ISL	13.01	13.01	32.812	24.697	323.6	0.000	6.23	103.7	2.4	0.35	0.0	0.00	4.35	1.10	0	
1	13.01	13.01	32.812	24.697	323.6	0.003	6.23	103.7	2.4	0.35	0.0	0.00	4.35	1.10	1	202
10 ISL	13.02	13.02	32.812	24.695	324.1	0.032	6.23	103.8	2.4	0.34	0.0	0.00	4.32	1 .01	10	
15	13.02	13.02	32.812	24.695	324.2	0.049	6.23	103.8	2.4	0.34	0.0	0.00	4.29	0.95	15	203
20 ISL	13.02	13.02	32.812	24.695	324.3	0.065	6.23	103.8	2.4	0.35	0.0	0.00	4.25	0. 92	20	
30	13.02	13.02	32.813	24.697	324.5	0.097	6.22	103.6	2.4	0.36	0.0	0.00	4.18	0.89	30	207
44	13.02	13.01	32.816	24.699	324.6	0.143	6.18	102.9	2.4	0.36	0.0	0.00	4.21	0.88	44	208
50 ISL	13.05	13.04	32.827	24.702	324.5	0.162	6.17	102.8	2.5	0.37	0.0	0.01	3.89	0.89	50	
53	13.06	13.05	32.832	24.704	324.4	0.172	6.17	102.8	2.5	0.37	0.0	0.01	3.73	0.90	53	209
64	12.79	12.78	33.125	24.984	298.0	0.206	5.70	94.6	4.6	0.59	2.6	0.11	0. 66	0.67	64	210
75	12.43	12.42	33.231	25.136	283.7	0.238	5 .44	89.7	6.3	0.70	4.9	0.17	0.53	0.41	75	21 1
84	11.59	11.58	33.340	25.379	260.8	0.263	5.02	81 .4	9.1	0.94	9. 1	0.15	0.26	0.31	84	212
93	11.18	11.17	33.401	25.501	249.3	0.286	4.79	77.0	10.9	1 .06	11.4	0.10	0.20	0.28	93	213
100 ISL	10.77	10.76	33.427	25.594	240.6	0.303	4.60	73.3	12.9	1.19	13.6	0.07	0.15	0.23	100	
108	10.29	10.28	33.455	25.699	230.7	0.322	4.36	68.7	15.4	1 .35	16.1	0.04	0.11	0.18	109	214
124	9.58	9.57	33.560	25.900	211.8	0.357	3.80	59.0	20.6	1 .62	20.3	0.02	0.06	0.15	125	215
125 ISL	9.55	9.54	33.568	25.911	210.7	0.359	3.77	58.5	20.8	1 .63	20.5	0.02	0.06	0.15	126	
145	9.19	9.17	33.713	26.083	194.7	0.400	3.39	52.2	25.0	1 .79	22 .8	0.01	0.04	0.15	146	216
150 ISL	9.09	9.07	33.741	26.121	191 .2	0.409	3.31	50.9	25.9	1 .83	23.4	0.01	0.04	0.15	151	
169	8.71	8.69	33.828	26.249	179.3	0.444	3.08	47.0	29.2	1 .95	25.3	0.01	0.04	0.13	170	217
198	8.20	8.18	33.92ft	26.402	165.1	0.494	2.99	45.1	33.3	2.02	26.6	0.00	0.02	0.07	199	218
200 ISL	8.18	8.16	33.931	26.411	164 .4	0.498	2.96	44.7	33.7	2 .03	26.8	0.00			201	
228	7.95	7.93	34.017	26.513	155.1	0.542	2.47	37.1	39.3	2.20	29.2	0.00			229	219
250 ISL	7.75	7.73	34.042	26.562	150.8	0.576	2.29	34.2	42 .4	2.28	30.3	0.00			251	
268	7.56	7.53	34 .051	26.597	147.7	0.603	2.18	32.4	44.9	2.34	31 .1	0.00			270	220
300 ISL	7.16	7.13	34.079	26.675	140.5	0.649	1 .80	26.5	51.5	2.52	33.3	0.00			302	
318	6.93	6.90	34.092	26.717	136.7	0.674	1 .58	23.2	55.4	2.62	34.6	0.00			320	221
377	6.32	6.29	34.113	26.815	127.8	0.752	1.11	16.1	65.9	2 .82	37.6	0.00			379	222
400 ISL	6.18	6.1ft	34.131	26.848	125.0	0.781	0.98	14.1	68.9	2 .88	38.2	0.00			403	
436	5.99	5.95	34.160	26.895	120.8	0.825	0.78	11.2	73.7	2.97	39.2	0.00			439	223
500 ISL	5 .55	5.51	34.196	26.978	113.3	0.900									503	
518	5 .43	5.39	3ft.206 D	27.001	111.3	0.920									522	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 3.3 N	122 56..7 W	20/04/95	0602 UTC	4236 n	320	21 kn			1020.5 mb	13..3 C	10..9 C			

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 UN/l	N02 UN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAHP
0	ISL	13.84	13.84	32.917	24.611	331 .8	0.000	6.00	101.7	3.0	0.36	0.1	0.00	0.16	0.05	0	
3		13.84	13.84	32.917	24.611	331 .8	0.010	6.00	101.7	3.0	0.36	0.1	0.00	0.16	0.05	3	2 02
10	ISL	13.84	13.84	32.917	24.612	332.0	0.033	5 .99	101.5	3.0	0.36	0.1	0.00	0.17	0.04	10	
15		13.84	13.84	32.917	24.612	332.2	0.050	5.99	101.5	3.0	0.36	0. 1	0.00	0.17	0.04	15	203
20	ISL	13.84	13.84	32.917	24.612	332.3	0.066	6.00	101 .7	3.0	0.36	0.1	0.00	0.17	0.04	20	
30	ISL	13.84	13.84	32.916	24.611	332.6	0.100	6.01	101.9	3.0	0.37	0. 1	0.00	0.16	0.04	30	
32		13.84	13.84	32.916	24.612	332.7	0.106	6.01	101.9	3.0	0.37	0. 1	0.00	0.16	0.04	32	205
45		13.85	13.84	32.916	24.610	333.2	0.150	5.99	101 .5	3.0	0.37	0. 1	0.00	0.15	0.05	45	206
50	ISL	13.85	13.84	32.917	24.611	333.2	0.166	5.99	101 .5	3.0	0.37	0. 1	0.00	0.15	0.05	50	
59		13.85	13.84	32.919	24.613	333.3	0.196	5.98	101 .4	3.0	0.37	0.1	0.00	0.16	0.05	59	207
75		13.38	13.37	32.942	24.726	322.9	0.249	6.03	101 .2	3.2	0.39	0. 1	0.00	0.28	0.14	75	201
85		12.66	12.65	33.076	24.972	299.7	0.280	5.79	95.8	4.4	0.54	2.0	0.10	0.48	0.36	85	209
95		12.20	12.19	33.127	25.100	287.7	0.309	5.55	91 .0	5.9	0.69	4 .6	0.13	0.38	0.33	95	210
100	ISL	11 .79	11 .78	33.162	25 .204	277.8	0.323	5.39	87.6	7.2	0.80	6.5	0.09	0.32	0.30	100	
103		11.54	11.53	33.183	25.266	271 .9	0.332	5.30	85.7	8.0	0.87	7.6	0.07	0.28	0.28	103	211
115		11.01	11 .00	33.214	25.386	260.7	0.364	5.15	82.4	9.6	0.97	9.4	0.04	0.24	0.25	116	212
124		10.60	10.59	33.349	25.563	244.0	0.386	4.65	73.8	12.7	1 .23	13.7	0.02	0.16	0.16	125	213
125	ISL	10.55	10.54	33.360	25.581	242.4	0.389	4.60	72.9	13.1	1 .25	14.1	0.02	0.15	0.15	126	
139		9.84	9.82	33.482	25.797	222.0	0.421	4.13	64.5	17.7	1 .53	18.6	0.01	0.05	0.07	140	214
150	ISL	9.34	9.32	33.582	25.957	206.9	0.445	3.99	61 .6	20.3	1 .63	20.3	0.01	0.03	0.06	151	
164		8.82	8.80	33.700	26.132	190.4	0.473	3.89	59.5	23.3	1 .70	21.7	0.01	0.00	0.04	165	215
194		8.23	8.21	33.870	26.355	169.5	0.527	3.21	48.5	31 .6	1 .99	26.2	0.00	0.00	0.03	195	216
200	ISL	8.12	8.10	33.883	26.382	167.0	0.537	3.28	49.4	32.1	1 .98	26.1	0.00			201	
227		7.71	7.69	33.917	26.469	159.1	0.581	3.58	53.4	33.8	1 .94	25.8	0.00			228	217
250	ISL	7.54	7.52	33.971	26.536	153.0	0.617	3.02	44.9	38.9	2.13	28.3	0.00			251	
268		7.42	7.39	34.008	26.583	148.9	0.644	2.49	36.9	43.4	2.31	30.7	0.00			270	211
300	ISL	6.98	6.95	34.016	26.650	142.7	0.690	2.35	34.5	48.6	2 .41	32.3	0.00			302	
320		6.68	6.65	34.011	26.687	139.3	0.719	2.26	32 .9	51 .7	2.45	33.0	0.00			322	219
375		6.07	6.04	34.033	26.784	130.5	0.793	1 .62	23.3	63.4	2.73	36.8	0.00			377	220
400	ISL	5.86	5.83	34.048	26.822	127.1	0.825	1 .39	19.9	68.0	2.82	38.1	0.00			403	
433		5.64	5.60	34.075	26.871	122.7	0.866	1.11	15.8	73.5	2.93	39.4	0.00			436	221
500	ISL	5.34	5.30	34.162	26.976	113.3	0.945	0.62	8.8	83.8	3.12	41 .4	0.00			503	
518		5.26	5.22	34.186	27.005	110.7	0.965	0.49	6.9	86.6	3.17	41 .9	0.00			522	22!

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 77 90

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIDE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 42i.3 N	123 38..2 W	19/04/95	2329 UTC	4123 m	320	21 kn	320 08 04	2	1020.6 mb	14..3 C	11..8 C	31m 01	8/8	SC

DEPTH m		TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SADP
0	ISL	14.31	14.31	33.018	24.592	333.6	0.000	5 .93	101.6	3.1	0.35	0.1	0.00	0.11	0.02	0	
3		14.31	14.31	33.018	24.592	333.7	0.010	5.93	101 .6	3. 1	0.35	0. 1	0.00	0.11	0.02	3	204
10	ISL	14.31	14.31	33.018	24.592	333.9	0.033	5.92	101.4	3. 1	0.35	0.1	0.00	0.12	0.03	10	
16		14.32	14.32	33.018	24.590	334.2	0.053	5.92	101.4	3.1	0.35	0. 1	0.00	0.13	0.03	16	205
20	ISL	14.32	14.32	33.018	24.590	334.3	0.067	5.93	101.6	3.1	0.35	0. 1	0.00	0.13	0.03	20	
30	ISL	14.32	14.32	33.017	24.590	334.7	0. 100	5.94	101 .7	3.1	0.34	0. 1	0.00	0.13	0.02	30	
31		14 .32	14.32	33.017	24.590	334.7	0. 104	5 .94	101.7	3.1	0.34	0. 1	0.00	0.13	0.02	31	206
44		14.34	14.33	33.029	24.595	334.5	0.147	5.91	101.3	3.0	0.35	0. 1	0.00	0.11	0.02	44	208
50	ISL	14 .36	14.35	33.039	24.599	334.4	0.167	5.91	101.3	3.0	0.35	0. 1	0.00	0.11	0.02	50	
60		14.40	14.39	33.058	24.606	334.0	0.201	5.91	101 .4	3.0	0.34	0. 1	0.00	0.12	0.03	60	209
73		14.39	14.38	33.077	24.623	332.8	0.244	5.92	101 .6	2.9	0.34	0.0	0.00	0.14	0.04	73	210
75	ISL	14.32	14.31	33.090	24.648	330.5	0.251	5.92	101 .4	2.9	0.34	0.0	0.00	0.16	0.06	75	
81		14.05	14.04	33.138	24.741	321 .7	0.270	5.90	100.6	3.1	0.34	0.0	0.00	0.26	0.13	81	211
94		13.50	13.49	33.266	24.953	301 .8	0.311	5.81	98.0	3.7	0.40	0.7	0.03	0.61	0.44	94	212
100	ISL	13.15	13.14	33.280	25.034	294.2	0.329	5.68	95.1	4 .5	0.50	2. 1	0.08	0.61	0.45	100	
104		12.88	12 .87	33.284	25.091	288.9	0.340	5.58	92.9	5.1	0.57	3.3	0.10	0.61	0.45	104	213
114		12.01	12.00	33.321	25.287	270.4	0.368	5.32	87.0	7.1	0.73	6. 1	0.07	0.34	0.32	115	214
122		11.28	11.26	33.285	25.393	260.3	0.389	5.13	82 .6	8.9	0.91	8.9	0.04	0.30	0.28	123	215
125	ISL	11.01	10.99	33.295	25.449	254.9	0.397	5.03	80.5	9.9	0.98	10.1	0.03	0.26	0.24	126	
137		10.08	10.06	33.378	25.675	233.5	0.426	4.61	72.3	14.4	1 .26	14.8	0.02	0.10	0.09	138	216
150	ISL	9.59	9. 57	33.453	25.815	220.3	0.456	4.26	66.1	17.8	1 .47	18.1	0.01	0.06	0.07	151	
163		9.32	9.30	33.526	25.916	210.9	0.484	3.97	61 .3	20.7	1 .62	20.4	0.01	0.03	0.05	164	21?
200	ISL	8.45	8.43	33.791	26.260	178.7	0.556	3.37	51.1	28.9	1 .91	25.2	0.00	0.01	0.04	201	
213		8.23	8.21	33.866	26.353	170.1	0.579	3.30	49.8	30.9	1 .94	25.9	0.00	0.00	0.03	214	218
227		8.07	8.05	33.899	26.402	165.6	0.602	3.37	50.7	31 .9	1 .93	25.9	0.01			228	21)
250	ISL	7.69	7.67	33.941	26.491	157.4	0.639	3.31	49.4	35.6	1 .98	26.9	0.00			251	
266		7.41	7.38	33.962	26.548	152.1	0.664	3.21	47.6	38.7	2 .04	27.9	0.00			267	220
300	ISL	6.95	6.92	33.971	26.619	145.7	0.715	3.06	44.9	44.0	2.14	29.5	0.00			302	
315		6.79	6.76	33.972	26.642	143.7	0.736	2.93	42.8	46.5	2.20	30.4	0.00			317	221
377		6.37	6.34	34.051	26.760	133.1	0.822	1 .60	23.2	60.1	2.67	36.1	0.00			379	222
400	ISL	6.15	6.11	34.062	26.797	129.7	0.852	1 .38	19.9	64.4	2.76	37.4	0.00			403	
441		5.75	5.71	34.074	26.857	124.2	0.905	1.16	16.5	71 .6	2.87	39.1	0.00			444	223
500	ISL	5.27	5.23	34.108	26.942	116.4	0.976	0.86	12.1	81 .3	3.02	41 .0	0.00			503	
515		5.15	5.11	34.117	26.963	114.5	0.993	0.78	11.0	83.8	3.06	41 .5	0.00			518	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 80 51

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 26.8 N	120 31 9 W	18/04/95	0245 UTC	82 in	310	07 kn	340 05 06	1	1018.7 ab	11 1 C	10 0 C		4/8	AC

DEPTH in	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/l	P04 uM/ l	N03 uM/l	N02 uM/ l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAMP
0 ISL	10.26	10.26	33.791	25.964	203.1	0.000	4.02	63.5	25.4	1 .80	21 .1	0.17	2.05	0.31	0	
2	10.26	10.26	33.791	25.964	203.1	0.004	4.02	63.5	25.4	1 .80	21 .1	0.17	2.05	0.31	2	217
10 ISL	10.23	10.23	33.800	25.976	202.1	0.020	3.88	61 .2	25.7	1 .84	21 .5	0.18	1 .95	0.27	10	
11	10.23	10.23	33.801	25.977	202.1	0.022	3.86	60.9	25.8	1 .85	21.6	0.18	1 .93	0.27	11	218
20	10.22	10.22	33.803	25.981	202.0	0.040	3.85	60.8	26.0	1 .84	21 .6	0.18	1 .82	0.43	20	219
30	10.20	10.20	33.806	25.987	201 .6	0.061	3.82	60.3	26.1	1 .85	21.8	0.18	1 .83	0.35	30	220
41	10.19	10.19	33.810	25.992	201 .4	0.083	3.84	60.6	26.5	1 .86	21 .8	0.18	1 .83	0.31	41	221
SO ISL	10.18	10.17	33.810	25.994	201 .4	0.101	3.84	60.5	26.3	1 .85	21.8	0.18	1 .82	0.34	50	
51	10.18	10.17	33.810	25.994	201 .4	0.103	3.84	60.5	26.3	1 .85	21 .8	0.18	1 .82	0.34	51	222
61	10.11	10.10	33.817	26.011	200.0	0.123	3.74	58.9	26.7	1 .88	22.2	0.18	1 .58	0.34	61	223
72	9.48	9.47	33.925	26.201	182.1	0.144	2.43	37.8	31 .8	2.12	25.5	0.11	0.32	0.39	72	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 18.6 N	120 48 8 V	18/04/95	0558 UTC	774 m	280	04 kn			1018.2 mb	12 8 C	1 1 4 C			

DEPTH m	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 uM/ l	N03 uM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0 ISL	13.93	13.93	33.024	24.676	325.7	0.000	6.01	102 .1	3.2	0.39	0.0	0.01	0.68	0.22	0	
1	13.93	13.93	33.024	24.676	325.7	0.003	6.01	102 .1	3.2	0.39	0.0	0.01	0.68	0.22	1	202
9	13.93	13.93	33.021	24.673	326 .1	0.029	6.04	102.6	3.2	0.38	0.0	0.01	0.69	0.21	9	203
10 ISL	13.93	13.93	33.021	24.673	326.1	0.033	6.04	102.6	3.2	0.38	0.0	0.01	0.69	0.21	10	
18	13.92	13.92	33.025	24.679	325.9	0.059	6.00	101.9	3.2	0.38	0.0	0.01	0.67	0.21	18	204
20 ISL	13.90	13.90	33.030	24.687	325.1	0.065	6.00	101.9	3.2	0.38	0. 1	0.01	0.69	0.22	20	
29	13.62	13.62	33.072	24.777	316.8	0.094	5.95	100.5	3.7	0.43	0. 7	0.03	1 .02	0.31	29	205
30 ISL	13.56	13.56	33.079	24.794	315.2	0.097	5.95	100.4	3.7	0.44	0.8	0.03	1.16	0.33	30	
39	12.80	12.79	33.155	25.005	295.4	0.125	5.79	96.2	4.7	0.58	3.1	0.08	2 .05	0.47	39	206
50	11 .39	11.38	33.259	25.351	262.5	0.155	5.16	83.2	9.4	0.93	9.0	0.12	0.45	0.28	50	207
60	10.72	10.71	33.281	25.488	249.7	0.181	4.96	78.9	11.5	1 .08	11.4	0.07	0.29	0.22	60	208
70	10.41	10.40	33.540	25.744	225 .6	0.205	3.99	63.1	17.4	1 .44	16.8	0.03	0.13	0.10	70	209
75 ISL	10.26	10.25	33.593	25.811	219.3	0.216	3.79	59.8	18.9	1 .53	18.2	0.03	0.11	0.10	75	
85	9.98	9.97	33.654	25.906	210.4	0.237	3.56	55.8	21 .4	1 .65	20.1	0.03	0.08	0.09	85	210
98	9.67	9.66	33.800	26.072	194.9	0.264	2 .99	46.6	26.5	1 .90	23.0	0.09	0.21	0.17	98	211
100 ISL	9.66	9.65	33.815	26.086	193.7	0.268	2.94	45.8	26.9	1 .92	23.3	0.09	0.21	0.17	101	
120	9.60	9. 59	33.886	26.151	187.9	0.306	2 .60	40.5	29.0	2 .03	24 .7	0.04	0.17	0.19	121	212
125 ISL	9.55	9.54	33.898	26.169	186.3	0.315	2 .54	39.5	29.6	2.05	25.0	0.04	0.16	0.18	126	
137	9.42	9.40	33.922	26.209	182.7	0.337	2.43	37.7	31 .1	2 .09	25.6	0.04	0.15	0.17	138	213
150 ISL	9.34	9.32	33.958	26.251	179.0	0.361	2.31	35.8	32.1	2.14	26.3	0.03	0.15	0.18	151	
167	9.19	9.17	33.998	26.306	174.0	0.391	2.23	34.4	33.3	2.19	27. 1	0.02	0.16	0.18	168	214
199	8.43	8.41	34.016	26.440	161.7	0.444	2.40	36.4	36.9	2.22	28.4	0.02	0.05	0.10	200	215
200 ISL	8.42	8.40	34.018	26.443	161.4	0.446	2.39	36.3	37.0	2.22	28.4	0.02			201	
230	8.15	8.13	34.077	26.530	153.6	0.493	2.12	32.0	41 .5	2.35	29.9	0.02			231	216
250 ISL	7.91	7.88	34.092	26.578	149.3	0.524	1 .96	29.4	44.9	2.43	31 .0	0.02			252	
270	7.65	7.62	34.098	26.621	145.5	0.553	1 .83	27.3	48.2	2.51	32.1	0.02			272	217
300 ISL	7.29	7.26	34.103	26.676	140.5	0.596	1 .68	24.9	52.4	2.59	33.5	0.01			302	
321	7.06	7.03	34.106	26.711	137.4	0.625	1 .59	23.4	55.1	2 .64	34.3	0.01			323	218
379	6.61	6.58	34.131	26.792	130.3	0.703	1 .23	17.9	62 .6	2 .80	36.5	0.01			381	219
400 ISL	6.45	6.41	34.148	26.826	127.2	0.730	1 .07	15.5	65 .8	2 .87	37.3	0.01			403	
437	6.20	6.16	34.182	26.886	121.9	0.776	0.79	11.4	71 .4	2 .98	38.6	0.01			440	220
500 ISL	5 .98	5 .94	34.239	26.959	115.7	0.851	0.53	7.6	78.4	3.11	39.7	0.01			503	
512	5.94	5.90	34.250	26.973	114.5	0.865	0.48	6.9	79.7	3.14	39.9	0.01			516	221

RV NEW HORIZON CALCOFI CRUISE 950< STATION 80 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 9.1 N	121 9 2 W	18/04/95	0939 UTC	2200 m	340	10 kn			1015.0 mb	13 4 C	12 9 C			

DEPTH in	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 UN/ l	N03 uM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0 ISL	14.10	14.10	32.961	24.592	333.6	0.000	5.95	101.4	2.7	0.37	0.0	0.00	0.21	0.05	0	
1	14.10	14.10	32.961	24.592	333.7	0.003	5.95	101.4	2.7	0.37	0.0	0.00	0.21	0.05	1	201
10 ISL	14.11	14.11	32.960	24.589	334.2	0.033	5 .98	102 .0	2.7	0.36	0.0	0.00	0.20	0.05	10	
14	14.11	14.11	32.959	24.589	334.3	0.047	5 .99	102.1	2 .7	0.36	0.0	0.00	0.19	0.05	14	206
20 ISL	14.11	14.11	32.960	24.589	334.4	0.067	5 .99	102.1	2.7	0.36	0.0	0.00	0.19	0.05	20	
30	14.12	14.12	32.964	24.591	334.6	0. 100	5.97	101.8	2 .7	0.36	0.0	0.00	0.18	0.05	30	207
44	14.13	14.12	32.968	24.592	334 .8	0.147	5.98	102.0	2.8	0.37	0.0	0.00	0.20	0.04	44	208
50 ISL	14.13	14.12	32.967	24.592	335.1	0.167	5.98	102.0	2.8	0.37	0.0	0.00	0.20	0.04	50	
55	14.13	14.12	32.967	24.592	335.2	0.184	5 .98	102.0	2.8	0.37	0.0	0.00	0.20	0.04	55	209
64	13.12	13.11	32.985	24.811	314.5	0.213	6.05	101 .1	3.2	0.41	0. 1	0.01	0.45	0.26	64	210
73	12.81	12.80	33.108	24.967	299.8	0.241	5 .80	96.3	4 .1	0.52	1 .8	0.06	0. 45	0.32	73	211
75 ISL	12.77	12.76	33.129	24.991	297.6	0.247	5.75	95.4	4.2	0.54	2.2	0.07	0.45	0.33	75	
84	12.56	12.55	33.215	25.099	287.5	0.273	5.52	91 .3	5 .1	0.66	4.4	0.10	0.42	0.35	84	212
94	12.00	11.99	33.325	25.291	269.4	0.301	5.20	85.0	7 .1	0.83	7.6	0.09	0.33	0.31	94	213
100 ISL	11.57	11.56	33.346	25.387	260.3	0.317	5.04	81 .7	8.4	0.93	9.4	0.07	0.28	0.26	100	
110	10.72	10.71	33.372	25.560	244.0	0.342	4.77	75.9	11.4	1.13	12.6	0.03	0.19	0.17	111	214
123	9.45	9.44	33.490	25.866	214.9	0.372	4.29	66.4	18.1	1 .49	18.2	0.01	0.06	0.06	124	215
125 ISL	9.40	9.39	33.509	25 .889	212.8	0.376	4.26	65 .9	18.6	1.51	18.6	0.01	0.06	0 .06	126	
144	8.94	8.92	33.567	26.008	201 .7	0.416	4.08	62.5	21.8	1 .64	20.8	0.01	0.03	0.04	145	216
150 ISL	8.86	8.84	33.603	26.049	197.9	0.428	3.94	60.2	23.0	1 .70	21.7	0.01	0.02	0.04	1 51	
169	8.61	8.59	33.730	26.188	185.1	0.464	3.47	52.8	27.1	1 .88	24.5	0.00	0.01	0.03	170	217
200 ISL	7.90	7.88	33.939	26.458	159.7	0.517	3.14	47.1	34.8	2.04	27.2	0.00	0.00	0.02	201	
201	7.88	7.86	33.944	26.465	159.1	0.519	3.13	46.9	35.1	2 .04	27.3	0.00	0.00	0.02	202	218
228	7.44	7.42	33.985	26.561	150.3	0.561	2 .80	41 .5	41.1	2 .20	29.6	0.00			229	219
250 ISL	7.20	7.18	33.992	26.601	146.8	0.593	2.64	38.9	44.3	2 .28	30.8	0.00			251	
269	7.05	7.02	33.998	26.626	144.6	0.621	2.47	36.3	46.9	2 .34	31 .7	0.00			271	220
300 ISL	6.97	6.94	34.068	26.693	138.7	0.665	1 .86	27.3	52.9	2.55	33.7	0.00			302	
321	6.89	6.86	34.111	26.738	134.8	0.694	1 .46	21.4	57.3	2 .69	35. 1	0.00			323	221
375	6.03	6.00	34.076	26.823	126.8	0.764	1 .27	18.2	67.6	2 .84	38.0	0.00			377	222
400 ISL	5.85	5 .82	34.098	26.863	123.2	0.796	1 .05	15.0	72.0	2.93	39. 1	0.00			403	
429	5.73	5 .69	34.138	26.910	119.1	0.831	0.78	11.1	76.6	3.04	40. 1	0.01			432	223
500 ISL	5 .64	5 .60	34.253	27.012	110.2	0.912	0.45	6.4	83.3	3.17	40.9	0.01			503	
517	5.62	5 .58	34.280	27.036	108.2	0.931	0.37	5.3	84.9	3.20	41.1	0.01			521	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 80 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
33 49.4 N	121 50.5 W	18/04/95	1819	UTC	3631 in	360	30 kn	360 10 05i	5	1017.0 mb	12 .4 C	10 .6 C	15m 02	8/8	SC

DEPTH n	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UH/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.57	13.57	32.898	24.652	327.9	0.000	6.06	102.1	2.5	0.36	0.1	0.00	0.59	0.20	0	
4 A	13.57	13.57	32.898	24.652	328.0	0.013	6.06	102.1	2.5	0.36	0. 1	0.00	0.59	0.20	4	202
9 A	13.57	13.57	32.898	24.652	328.2	0.030	6.05	102.0	2.4	0.36	0. 1	0.00	0.60	0.20	9	203
10 ISL	13.57	13.57	32.898	24.652	328.2	0.033	6.05	102.0	2.4	0.36	0.1	0.00	0.60	0.20	10	
20 A	13.57	13.57	32.894	24.649	328.7	0.066	6.05	102.0	2.5	0.37	0.1	0.00	0.60	0.19	20	205
29 A	13.57	13.57	32.895	24.650	328.9	0.095	6.05	102.0	2.5	0.36	0. 1	0.00	0.62	0.20	29	206
30 ISL	13.57	13.57	32.895	24.650	328.9	0.099	6.05	102.0	2.5	0.36	0.1	0.00	0.62	0.20	30	
40 A	13.57	13.56	32.894	24.650	329.2	0.131	6.04	101.8	2.5	0.36	0. 1	0.00	0.59	0.23	40	207
48	13.56	13.55	32.897	24.654	329.0	0.158	6.03	101 .6	2.5	0.36	0.1	0.00	0.60	0.23	48	208
50 ISL	13.56	13.55	32.897	24.654	329.0	0.164	6.03	101.6	2.5	0.36	0.1	0.00	0.60	0.24	50	
55 A	13.57	13.56	32.897	24.652	329.4	0.181	6.03	101 .6	2.5	0.36	0. 1	0.00	0.60	0.25	55	209
67	13.16	13.15	32.976	24.796	316.0	0.220	6.04	101.0	3.2	0.40	0. 1	0.01	0.39	0.17	67	210
75	13.09	13.08	32.969	24.805	315.4	0.245	6.04	100.8	3.2	0.40	0.1	0.01	0.47	0.21	75	211
83	12.58	12.57	33.028	24.950	301 .7	0.269	5.89	97.3	4.2	0.55	1 .5	0.08	0.48	0.31	83	212
95	11 .98	11.97	33.228	25.220	276.2	0.304	5.32	86.9	6.9	0.79	6.4	0.11	0.28	0.29	95	213
100 ISL	11 .78	11 .77	33.312	25.322	266.6	0.318	5.11	83.1	8.1	0.88	8.3	0.09	0.24	0.25	100	
108	11 .39	11 .38	33.423	25.480	251 .7	0.338	4.81	77.7	10.2	1 .03	11.1	0.04	0.20	0.18	108	214
123	10.11	10.10	33.495	25.761	225.1	0.374	4.43	69.6	14.9	1 .31	15.5	0.01	0.08	0.07	124	215
125 ISL	10.00	9.99	33.505	25.787	222.6	0.379	4.37	68.5	15.5	1 .35	16.1	0.01	0.07	0.06	126	
143	9.30	9.28	33.600	25.977	204.8	0.417	3.95	61 .0	20.7	1 .61	20.4	0.01	0.02	0.03	144	216
150 ISL	9.07	9.05	33.646	26.050	197.9	0.431	3.97	61 .0	21 .7	1 .63	20.9	0.01	0.01	0.03	151	
170	8.56	8.54	33.774	26.230	181.1	0.469	4 .04	61 .4	24.5	1 .66	21 .8	0.00	0.00	0.02	171	217
200 ISL	8.09	8.07	33.892	26.394	166.0	0.521	3.16	47.6	33.0	2.01	26.7	0.00	0.01	0.04	201	
201	8.08	8.06	33.895	26.397	165.6	0.523	3.13	47.1	33.3	2.02	26.9	0.00	0.01	0.04	202	218
228	7.87	7.85	33.961	26.481	158.1	0.567	2.88	43.1	37.0	2.11	28.3	0.00			229	219
250 ISL	7.55	7.53	33.980	26.542	152.5	0.601	2.83	42.1	40.1	2.16	29.2	0.00			251	
271	7.20	7.17	33.987	26.597	147.5	0.632	2.77	40.9	43.5	2.22	30.2	0.00			273	220
300 ISL	6.78	6.75	34.004	26.668	140.9	0.674	2.38	34.8	50.2	2 .38	32.5	0.00			302	
321	6.51	6.48	34.016	26.713	136.8	0.703	2.05	29.8	55.3	2.51	34.3	0.00			323	221
381	5.99	5.96	34.047	26.805	128.5	0.783	1 .43	20.5	66.0	2.77	37.6	0.00			383	222
400 ISL	5.89	5.86	34.067	26.834	126.0	0.807	1 .24	17.7	69.2	2.85	38.4	0.00			403	
435	5.74	5.70	34.107	26.884	121.6	0.850	0.93	13.3	74.6	2.97	39.7	0.00			438	223
500 ISL	5.47	5.43	34.158	26.958	115.2	0.927	0.65	9.2	81 .8	3.09	41.0	0.00			503	
515	5.41	5.37	34.170	26.974	113.7	0.944	0.58	8.2	83.4	3.12	41 .3	0.00			519	224

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 16.6 N	120 2.0 W	17/04/95	2156	UTC	580 in	280	24 kn	290 04 04	2	1018.9 mb	13 .3 C	11 .1 C	05m 10	8/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/l	P04 uH/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0 ISL	11.71	11.71	33.599	25.556	241 .9	0.000	7.06	114.9	5.0	0.42	1 .1	0.08	22.32	4.86	0	
1 A	11.71	11.71	33.599	25.556	241 .9	0.002	7.06	114.9	5.0	0. 42	1 .1	0.08	22.32	4. 86	1	201
10	11 .72	11 .72	33.599	25.554	242.3	0.024	7.06	115.0	4.9	0.42	1 .1	0.07	22 .32	4 .66	10	202
20	11.45	11.45	33.603	25.607	237.5	0.048	6.32	102.3	6.9	0.64	4.3	0.10	19.65	4.93	20	203
29	9.92	9.92	33.746	25.987	201 .5	0.068	3.06	48.0	24.6	1 .79	22.1	0.12	0.91	1 .02	29	204
30 ISL	9.91	9.91	33.752	25.994	200.9	0.070	3.04	47.6	24.8	1 .80	22.2	0.12	0.86	0.99	30	
40	9.76	9.76	33.809	26.063	194.5	0.090	2.79	43.6	26.7	1 .91	23.3	0.08	0.31	0.65	40	205
50	9.72	9.71	33.845	26.098	191.4	0. 109	2.64	41.2	27.8	1 .96	24.0	0.07	0.26	0.43	50	206
59	9.59	9.58	33.869	26.139	187.8	0.126	2.59	40.3	28.7	1 .99	24.5	0.07	0.21	0.52	59	207
70	9.41	9.40	33.876	26.174	184.6	0.147	2 .68	41 .6	29.1	1 .99	24.8	0.05	0.17	0.36	70	201
75 ISL	9.32	9.31	33.887	26.197	182.5	0.156	2.67	41 .3	29.7	2.01	25. 1	0.05	0.15	0.46	75	
84	9.19	9.18	33.912	26.238	178.8	0. 172	2 .60	40. 1	30.8	2.05	25.7	0.05	0.12	0.66	84	20?
99	9.07	9.06	33.951	26.288	174.4	0. 199	2.47	38.0	31 .9	2.09	26.3	0.04	0.12	0.56	100	210
100 ISL	9.06	9.05	33.956	26.293	173.9	0.200	2.45	37.7	32.1	2.10	26.4	0.04	0.12	0.54	101	
119	8.91	8.90	34.039	26.382	165.8	0.233	2.07	31 .8	36.0	2.23	28.2	0.02	0.12	0.27	120	211
125 ISL	8.90	8.89	34.047	26.390	165.2	0.242	2.03	31 .2	36.5	2 .25	28.4	0.02	0.12	0.28	126	
138	8.87	8.86	34.056	26.402	164.3	0.264	1 .97	30.2	37.2	2.27	28.7	0.02	0.12	0.30	139	21!
150 ISL	8.75	8.73	34.074	26.435	161.3	0.283	1 .85	28.3	38.9	2.32	29.3	0.02	0.10	0.28	151	
169	8.53	8.51	34.102	26.491	156.3	0.314	1 .65	25.1	41.9	2.41	30.3	0.02	0.07	0.23	170	21!
198	8.30	8.28	34.128	26.547	151.5	0.358	1 .43	21 .7	45.8	2.51	31 .5	0.01	0.06	0.24	199	214
200 ISL	8.28	8.26	34.129	26.551	151.1	0.361	1 .42	21 .5	46. 1	2.52	31 .6	0.01			201	
228	7.99	7.97	34.144	26.607	146.3	0.403	1 .33	20.0	50.1	2.59	32.3	0.01			229	215
250 ISL	7.86	7.83	34.156	26.636	143.9	0.435	1 .18	17.7	52.5	2.65	33.0	0.01			252	
267	7.76	7. 73	34.164	26.657	142 .1	0.459	1 .04	15.6	54.6	2.70	33.5	0.01			269	216
300 ISL	7.39	7.36	34.178	26.721	136.4	0.505	0.80	11.9	61 .6	2.84	34.5	0.01			302	
315	7.22	7.19	34.184	26.750	133.8	0.525	0.71	10.5	64.8	2 .90	34.8	0.01			317	217
376	6.89	6.85	34.193	26.803	129.5	0.606	0.62	9.1	70.6	2 .98	35.1	0.01			379	218
400 ISL	6.77	6.73	34.202	26.827	127.5	0.636	0.45	6.6	76. 1	3.06	34.4	0.01			403	
437	6.61	6.57	34.215	26.859	124.9	0.683	0.17	2.5	85 .4	3.21	32.6	0.00			440	219
500 ISL	6.49	6.44	34.224	26.882	123.5	0.761	0.04	0.6	97.6	3.38	26.4	0.00			504	
509	6.47	6.42	34.225	26.886	123.3	0.772	0.02	0.3	99.3	3.41	26.2	0.00			513	220
539	6.36	6.31	34.227	26.902	122.1	0.809	0.33	4.8	87.9	3.25	31 .1	0.00			543	221
567	6.28	6.23	34.231	26.916	121.1	0.843	0.43	6.2	83.2	3.19	34.3	0.09			571	222
574	6.28	6.23	34.231	26.916	121 .2	0.852	0.40	5.8	83.8	3.51	34.3	0.16			578	223
578 B	6.28	6.23	34.230	26.915	121.3	0.857	0.29	4.2	89.8		33.4	0.45			582	224

A) SANTA BARBARA BASIN STATION.
B) CAST TOUCHED BOTTOM, MUD IN WATER SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 950< STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 34.9 N	120 45 6 W	17/04/95	0016 UTC	1421 m	320	25 kn	330 07 05	1	1012.6 mb	12 3 C	10 6 C	23m 01	6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.17	14.17	32.989	24.599	333.0	0.000	5.96	101.8	2.7	0.37	0.2	0.00	0.20	0.05	0	
2		14.17	14.17	32.989	24.599	333.0	0.007	5.96	101.8	2.7	0.37	0.2	0.00	0.20	0.05	2	202
10	ISL	14.18	14.18	32.988	24.596	333.5	0.033	5.97	102.0	2.7	0.37	0.2	0.00	0.22	0.05	10	
15		14.18	14.18	32.988	24.596	333.6	0.050	5 .97	101.9	2.7	0.37	0.2	0.00	0.23	0.05	15	203
20	ISL	14.18	14.18	32.988	24.597	333.8	0.067	5.97	101 .9	2.7	0.37	0.2	0.00	0.23	0.05	20	
30	ISL	14.18	14.18	32.989	24.598	333.9	0.100	5.96	101 .8	2.7	0.37	0.2	0.00	0.22	0.06	30	
31		14.18	14.18	32.989	24.598	334.0	0.103	5.96	101 .8	2.7	0.37	0.2	0.00	0.22	0.06	31	207
46		14.14	14.13	32.992	24.609	333.3	0.153	5.95	101.5	2.7	0.37	0.2	0.00	0.23	0.05	46	208
50	ISL	14.14	14.13	32.994	24.610	333.3	0.167	5.95	101.5	2.7	0.37	0.2	0.00	0.23	0.05	50	
56		14.13	14.12	32.996	24.614	333.1	0. 187	5.96	101.7	2.8	0.37	0.2	0.00	0.23	0.05	56	209
66		14.10	14.09	32.997	24.621	332.7	0.220	5.96	101 .6	2.7	0.38	0. 1	0.00	0.25	0.07	66	210
74		13.27	13.26	33.172	24.926	303.8	0.246	5.74	96.3	3.8	0.51	1 .7	0.05	0.44	0.28	74	211
75	ISL	13.20	13.19	33.187	24.952	301 .4	0.249	5.72	95.8	3.9	0.52	1 .9	0.05	0.43	0.28	75	
85		12.62	12.61	33.280	25.138	283.9	0.278	5.52	91 .4	5.1	0.60	3.8	0.08	0.38	0.30	85	212
95		12.03	12.02	33.314	25.277	270.8	0.306	5.31	86.9	6.8	0.74	6.1	0.08	0.31	0.29	95	213
100	ISL	11 .73	11 .72	33.325	25.342	264.7	0.319	5.19	84 .4	7.8	0.82	7.5	0.07	0.26	0.26	100	
108		11.24	11 .23	33.338	25.441	255.3	0.340	5.00	80.4	9.5	0.96	9.9	0.05	0.19	0.20	108	214
122		10.28	10.27	33.348	25.618	238.7	0.374	4.73	74.5	13.2	1.19	13.4	0.02	0.10	0.12	123	215
125	ISL	10.14	10.13	33.376	25.663	234.4	0.381	4.63	72.7	14.1	1 .25	14.3	0.02	0.09	0.11	126	
141		9.57	9.55	33.559	25.901	212.0	0.417	4.09	63.5	19.2	1 .53	19.1	0.01	0.03	0.07	142	216
150	ISL	9.24	9.22	33.634	26.013	201 .5	0.436	3.84	59.2	22.0	1 .66	21.2	0.01	0.02	0.06	151	
170		8.59	8.57	33.764	26.217	182 .3	0.474	3.45	52.5	27.5	1 .86	24 .5	0.00	0.00	0.05	171	217
198		7.97	7.95	33.885	26.406	164.7	0.523	3.44	51.6	32.3	1 .93	26.0	0.00	0.00	0.04	199	218
200	ISL	7.94	7.92	33.891	26.415	163.9	0.526	3.42	51.3	32.7	1 .94	26.2	0.00			201	
228		7.63	7.61	33.955	26.510	155.2	0.571	3.04	45.3	38.0	2 .09	28.3	0.00			229	219
250	ISL	7.46	7.44	33.977	26.552	151.5	0.604	2.89	42.9	40.5	2.15	29.2	0.00			251	
267		7.33	7.30	33.986	26.578	149.3	0.630	2.77	41 .0	42 .4	2.20	29.9	0.00			269	220
300	ISL	6.94	6.91	34.017	26.657	142.1	0.678	2.27	33.3	49.7	2.40	32.5	0.00			302	
319		6.71	6.68	34.033	26.700	138.1	0.705	1 .97	28.7	54.2	2.52	34.1	0.00			321	221
377		6.18	6.15	34.058	26.790	130.1	0.782	1 .49	21.5	63.7	2.73	37.0	0.00			379	222
400	ISL	5.95	5.92	34.069	26.828	126.6	0.812	1 .31	18.8	68.1	2.81	38.1	0.00			403	
439		5.60	5.56	34.094	26.891	120.8	0.860	1 .02	14.5	75.6	2.94	39.8	0.00			442	223
500	ISL	5.27	5.23	34.155	26.979	112.9	0.932	0.64	9.0	85.3	3.09	41 .6	0.00			503	
515		5.19	5.15	34.170	27.000	111.0	0.948	0.55	7.7	87.7	3.13	42 .0	0.00			519	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 83 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 1 5.2 N	121 27 0 W	16/04/95	1827 UTC	3800 m	310	22 kn	310 07 05	1	1011.5 mb	11.9 C	10 2 C	28m 01	6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uN/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.57	14.57	33.064	24.573	335.5	0.000	5 .88	101.3	2.8	0.33	0.4	0.00	0.10	0.03	0	
2	A	14.57	14.57	33.064	24.573	335.5	0.007	5 .88	101 .3	2 .8	0.33	0.4	0.00	0.10	0.03	2	202
10	ISL	14.56	14.56	33.064	24.575	335.5	0.034	5.88	101.2	2.8	0.33	0.4	0.00	0.10	0.03	10	
17	A	14.56	14.56	33.063	24.574	335.8	0.057	5.88	101.2	2.8	0.33	0.3	0.00	0.10	0.03	17	203
20	ISL	14.56	14.56	33.063	24.575	335.9	0.067	5 .88	101.2	2.8	0.33	0.3	0.00	0.10	0.03	20	
27		14.57	14.57	33.062	24.572	336.3	0.091	5.88	101 .3	2.8	0.33	0.3	0.00	0.11	0.03	27	205
30	ISL	14.57	14.57	33.062	24.572	336.4	0.101	5 .88	101.3	2.8	0.33	0.3	0.00	0.11	0.03	30	
36	A	14.56	14.55	33.062	24.574	336.4	0.121	5 .89	101 .4	2.8	0.33	0.3	0.00	0.11	0.03	36	206
44		14.56	14.55	33.062	24.575	336.6	0.148	5.87	101 .1	2.8	0.32	0.3	0.00	0.11	0.03	44	207
50	ISL	14.56	14.55	33.061	24.574	336.8	0.168	5.88	101.2	2.8	0.33	0.3	0.00	0.11	0.03	50	
53	A	14.56	14.55	33.061	24.574	336.9	0. 178	5.88	101.2	2.8	0.33	0.3	0.00	0.11	0.03	53	208
66		14.56	14.55	33.061	24.574	337.2	0.222	5 .88	101 .2	2.8	0.32	0.2	0.00	0.11	0.03	66	209
72	A	14.49	14.48	33.064	24.592	335.7	0.242	5.87	100.9	2.7	0.33	0.2	0.00	0.13	0.04	72	210
75	ISL	14.31	14.30	33.121	24.674	328.0	0.252	5.84	100.1	2.8	0.35	0.4	0.01	0.21	0.11	75	
83		13.68	13.67	33.287	24.932	303.5	0.277	5.72	96.8	3.5	0.42	1 .2	0.04	0.40	0.30	83	211
92		13.11	13.10	33.320	25.073	290.3	0.304	5.59	93.5	4.6	0.51	2.8	0.07	0.37	0.33	92	212
100	ISL	12.57	12.56	33.347	25.200	278.4	0.327	5 .41	89.5	5.7	0.63	4.6	0.07	0.32	0.28	100	
101	A	12.53	12.52	33.359	25.217	276.8	0.330	5.39	89.1	5.8	0.64	4.8	0.07	0.31	0.27	101	213
109		12.91	12.90	33.628	25.351	264.3	0.351	5.22	87.2	5.7	0.60	4.9	0.05	0.23	0.24	109	214
125	ISL	12.48	12.46	33.647	25 .450	255.2	0.393	5.11	84.6	6.5	0.66	6.0	0.04	0.17	0.18	126	
127		12.43	12.41	33.643	25.457	254.6	0.398	5.10	84.3	6.6	0.67	6.3	0.04	0.17	0.17	128	215
145		11.10	11 .08	33.561	25.641	237.3	0.442	4.74	76. 1	11.1	1 .01	11.5	0.02	0.08	0.08	146	216
150	ISL	10.68	10.66	33.568	25.721	229.7	0.454	4.62	73.5	12.9	1.12	13.2	0.01	0.06	0.06	151	
169		9.26	9.24	33.654	26.026	200.6	0.495	4.16	64.2	19.8	1 .50	19.3	0.00	0.01	0.02	170	217
199		8.41	8.39	33.814	26.284	176.4	0.551	3.63	55.0	27.8	1 .81	24.1	0.00	0.00	0.03	200	218
200	ISL	8.39	8.37	33.818	26.291	175.8	0.553	3.63	55.0	27.9	1 .81	24.1	0.00			201	
229		8.05	8.03	33.903	26.409	165.0	0.602	3.59	54.0	31 .2	1 .86	25.0	0.00			230	219
250	ISL	7.87	7.85	33.951	26.473	159.2	0.637	3.17	47.5	35.2	2.01	27.1	0.00			251	
265		7.76	7.73	33.980	26.512	155.7	0.660	2.80	41 .8	38.4	2.14	28.9	0.00			266	220
300	ISL	7.43	7.40	34.044	26.610	146.9	0.713	2.22	32.9	45.8	2.35	31 .7	0.00			302	
318		7.26	7.23	34.072	26.656	142 .7	0.739	1 .97	29. 1	49.6	2.45	32.9	0.00			320	221
375		6.78	6.75	34.140	26.776	131.9	0.817	1 .24	18.1	60.6	2.76	36.2	0.00			377	222
400	ISL	6.59	6.55	34.165	26.821	127.9	0.850	1 .02	14.8	64.9	2.86	37.3	0.00			402	
436		6.32	6.28	34.197	26.882	122.4	0.895	0.77	11.1	70.7	2 .98	38.7	0.00			439	223
500	ISL	5.85	5 .81	34.233	26.971	114.4	0.971	0.51	7.3	79.7	3.09	40.5	0.00			503	
516		5.73	5.69	34.243	26.994	112.3	0.989	0.45	6.4	82.0	3.12	40.9	0.00			519	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 54.6 ntl	122 9.4 W	16/04/95	1242	UTC	4188 m	320	30 kn			1011.3 mb	11.0 C	9.8 C			

DEPTH in	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/l	P04 uM/l	N03 UM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/L	PRES db	SAMP
0 ISL	15.44	15.44	33.398	24.642	328.9	0.000	5.76	101.2	2.7	0.31	0.0		0.09	0.03	0	
1	15.44	15.44	33.398	24.642	328.9	0.003	5.76	101.2	2.7	0.31	0.0		0.09	0.03	1	201
10 ISL	15.44	15.44	33.394	24.639	329.5	0.033	5.77	101.3	2.7	0.31	0.0		0.08	0.02	10	
14	15.44	15.44	33.391	24.637	329.8	0.046	5.78	101.5	2.7	0.31	0.0		0.08	0.02	14	206
20 ISL	15.44	15.44	33.389	24.635	330.1	0.066	5.78	101.5	2.7	0.31	0.0		0.08	0.02	20	
30	15.43	15.43	33.386	24.635	330.4	0.099	5.77	101.3	2.7	0.31	0.0		0.08	0.02	30	207
45	15.43	15.42	33.385	24.635	330.9	0.149	5.76	101.1	2.7	0.30	0.0		0.08	0.02	45	208
50 ISL	15.43	15.42	33.385	24.635	331.0	0.165	5.77	101.3	2.7	0.30	0.0		0.08	0.02	50	
59	15.43	15.42	33.385	24.636	331.3	0.195	5.78	101.5	2.7	0.30	0.0		0.08	0.02	59	209
74	15.43	15.42	33.386	24.637	331.6	0.245	5.77	101.3	2.6	0.30	0.0	0.00	0.08	0.02	74	210
75 ISL	15.43	15.42	33.388	24.639	331.5	0.248	5.77	101.3	2.6	0.30	0.0	0.00	0.08	0.02	75	
15	15.39	15.38	33.407	24.662	329.5	0.281	5.77	101.2	2.6	0.30	0.0	0.00	0.11	0.04	85	211
93	14.86	14.85	33.555	24.892	307.8	0.306	5.63	97.8	2.9	0.34	0.3	0.04	0.35	0.26	93	212
100 ISL	14.59	14.58	33.578	24.968	300.8	0.328	5.57	96.2	3.1	0.38	0.9	0.06	0.36	0.27	100	
104	14.46	14.44	33.584	25.000	297.8	0.340	5.54	95.5	3.2	0.40	1.3	0.07	0.37	0.27	104	213
113	14.11	14.09	33.701	25.164	282.4	0.366	5.42	92.8	4.0	0.44	2.3	0.07	0.28	0.27	113	214
123	13.75	13.73	33.741	25.270	272.6	0.394	5.29	89.9	4.5	0.50	3.4	0.05	0.22	0.20	124	215
125 ISL	13.57	13.55	33.731	25.299	269.8	0.399	5.25	88.9	4.8	0.53	3.8	0.05	0.21	0.18	126	
140	11.96	11.94	33.628	25.535	247.4	0.438	4.95	81.0	8.0	0.81	8.1	0.02	0.10	0.08	141	216
150 ISL	10.97	10.95	33.589	25.686	233.1	0.462	4.77	76.4	10.9	1.02	11.3	0.02	0.06	0.05	151	
165	9.80	9.78	33.585	25.884	214.2	0.495	4.45	69.5	15.7	1.32	16.1	0.01	0.02	0.03	166	217
195	9.18	9.16	33.770	26.130	191.3	0.556	3.34	51.5	25.2	1.81	22.9	0.00	0.00	0.02	196	218
200 ISL	9.09	9.07	33.801	26.169	187.7	0.566	3.22	49.5	26.5	1.86	23.6	0.00			201	
233	8.59	8.57	33.973	26.382	167.9	0.624	2.66	40.5	33.6	2.10	27.0	0.00			234	219
250 ISL	8.39	8.36	34.021	26.451	161.6	0.652	2.48	37.6	36.6	2.19	28.2	0.00			251	
267	8.21	8.18	34.052	26.502	157.0	0.679	2.33	35.2	39.2	2.26	29.2	0.00			268	220
300 ISL	7.88	7.85	34.086	26.578	150.2	0.730	2.07	31.0	43.7	2.38	30.8	0.00			302	
316	7.72	7.69	34.094	26.608	147.5	0.754	1.95	29.1	46.0	2.43	31.5	0.00			318	221
383	6.84	6.80	34.122	26.754	134.2	0.848	1.37	20.1	58.7	2.71	35.6	0.00			385	222
400 ISL	6.67	6.63	34.125	26.779	131.9	0.871	1.27	18.5	61.3	2.76	36.3	0.00			402	
442	6.29	6.25	34.134	26.837	126.7	0.925	1.06	15.3	67.3	2.86	37.9	0.00			445	223
500 ISL	5.83	5.79	34.160	26.916	119.6	0.997	0.77	11.0	76.3	3.01	39.8	0.00			503	
517	5.69	5.65	34.168	26.939	117.4	1.017	0.68	9.7	78.9	3.06	40.4	0.00			520	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 83 100

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 15.1 N	123 31.2 W	16/04/95	0116	UTC	4116 in	290	17 kn	300 08 05	1	1016.0 mb	14.0 C	12.5 C	26m 01	5/8	SC

BERTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 UN/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	15.86	15.86	33.381	24.535	339.1	0.000	5.75	101.8	2.7	0.31	0.0	0.00	0.08	0.02	0	202
10 ISL	15.87	15.87	33.380	24.532	339.6	0.034	5.74	101.7	2.7	0.32	0.0	0.00	0.08	0.01	10	
17	15.87	15.87	33.380	24.532	339.8	0.058	5.74	101.7	2.7	0.32	0.0	0.00	0.08	0.01	17	203
20 ISL	15.87	15.87	33.380	24.533	339.9	0.068	5.74	101.7	2.7	0.32	0.0	0.00	0.08	0.01	20	
30 ISL	15.87	15.87	33.379	24.532	340.3	0.102	5.75	101.8	2.7	0.31	0.0	0.00	0.08	0.01	30	
31	15.87	15.87	33.379	24.532	340.3	0.105	5.75	101.8	2.7	0.31	0.0	0.00	0.08	0.01	31	204
45	15.87	15.86	33.378	24.532	340.8	0.153	5.74	101.7	2.7	0.31	0.0	0.00	0.08	0.02	45	206
50 ISL	15.87	15.86	33.378	24.532	340.9	0.170	5.74	101.7	2.7	0.31	0.0	0.00	0.08	0.02	50	
62	15.87	15.86	33.378	24.533	341.2	0.211	5.73	101.5	2.7	0.31	0.0	0.00	0.08	0.01	62	207
75 ISL	15.86	15.85	33.382	24.538	341.1	0.255	5.75	101.8	2.7	0.31	0.0	0.00	0.09	0.02	75	
77	15.86	15.85	33.382	24.538	341.2	0.262	5.75	101.8	2.7	0.31	0.0	0.00	0.09	0.02	77	208
87	15.86	15.85	33.382	24.539	341.5	0.296	5.75	101.8	2.8	0.31	0.0	0.00	0.10	0.02	87	209
94	15.54	15.53	33.523	24.719	324.5	0.320	5.69	100.2	2.8	0.31	0.0	0.00	0.21	0.11	94	210
100 ISL	15.24	15.22	33.567	24.819	315.1	0.339	5.63	98.6	2.9	0.33	0.1	0.03	0.34	0.24	100	
106	14.94	14.92	33.582	24.896	307.9	0.357	5.56	96.8	3.2	0.37	0.5	0.06	0.43	0.34	106	211
115	14.50	14.48	33.623	25.022	296.1	0.385	5.44	93.8	3.7	0.43	1.7	0.08	0.36	0.32	115	212
124	13.99	13.97	33.570	25.089	289.9	0.411	5.37	91.6	4.3	0.50	2.7	0.05	0.33	0.28	125	213
125 ISL	13.90	13.88	33.566	25.104	288.5	0.414	5.35	91.1	4.4	0.51	2.9	0.05	0.32	0.27	126	
137	12.78	12.76	33.543	25.312	268.8	0.447	5.13	85.4	6.1	0.66	5.2	0.03	0.19	0.18	138	214
150 ISL	12.03	12.01	33.561	25.470	253.9	0.481	4.93	80.8	7.9	0.81	7.7	0.02	0.10	0.10	151	
161	11.53	11.51	33.584	25.581	243.4	0.509	4.78	77.5	9.7	0.94	9.9	0.01	0.05	0.06	162	215
193	9.64	9.62	33.623	25.941	209.4	0.581	4.35	67.7	17.2	1.38	17.0	0.01	0.01	0.03	194	216
200 ISL	9.36	9.34	33.658	26.014	202.5	0.596	4.17	64.5	19.4	1.49	18.6	0.01			201	
234	8.40	8.38	33.842	26.308	174.8	0.660	3.44	52.1	29.3	1.88	24.7	0.01			235	217
250 ISL	8.10	8.07	33.893	26.394	166.9	0.687	3.47	52.2	31.7	1.90	25.2	0.01			251	
269	7.81	7.78	33.935	26.469	159.9	0.718	3.50	52.3	34.1	1.92	25.7	0.01			270	218
300 ISL	7.40	7.37	33.966	26.553	152.2	0.766	3.27	48.5	39.1	2.04	27.5	0.00			302	
320	7.17	7.14	33.976	26.593	148.6	0.796	3.00	44.2	42.9	2.15	29.1	0.00			322	219
379	6.57	6.54	34.043	26.728	136.3	0.881	1.77	25.7	57.3	2.60	35.0	0.00			381	220
400 ISL	6.37	6.33	34.065	26.771	132.4	0.909	1.48	21.4	62.0	2.71	36.4	0.00			402	
436	6.05	6.01	34.099	26.839	126.1	0.955	1.11	15.9	69.5	2.86	38.3	0.00			439	221
500 ISL	5.55	5.51	34.143	26.936	117.3	1.033	0.75	10.6	80.4	3.04	40.8	0.00			503	
513	5.45	5.41	34.152	26.955	115.5	1.048	0.68	9.6	82.6	3.08	41.3	0.00			516	222

RV NEW HORIZON CALCOFI CRUISE 950< STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 53.8 N	124 9.4 W	15/04/95	1921	UTC	4206 m	320	20 kn	320 07 0%	1	1021.1 mb	15.2 C	12.7 C	29m 01	5/8	SC

DEPTH m		TEMP DES C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	OYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uH/l	N02 uN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.24	16.24	33.411	24.472	345.1	0.000	5.70	101.7	2.9	0.32	0.1	0.00	0.07	0.01	0	
2	A	16.24	16.24	33.411	24.472	345.1	0.007	5.70	101.7	2.9	0.32	0.1	0.00	0.07	0.01	2	204
10	ISL	16.24	16.24	33.408	24.470	345.6	0.035	5.70	101.7	2.9	0.32	0.1	0.00	0.07	0.01	10	
18	A	16.25	16.25	33.405	24.466	346.2	0.062	5.70	101.7	2.9	0.31	0.1	0.00	0.08	0.01	18	205
20	ISL	16.25	16.25	33.405	24.466	346.3	0.069	5.70	101.7	2.9	0.31	0.1	0.00	0.08	0.01	20	
30	ISL	16.25	16.25	33.406	24.467	346.5	0.104	5.70	101.7	2.8	0.30	0.1	0.00	0.08	0.01	30	
37	A	16.25	16.24	33.407	24.468	346.6	0.128	5.70	101.7	2.7	0.30	0.1	0.00	0.08	0.01	37	207
47		16.25	16.24	33.408	24.469	346.9	0.163	5.69	101.5	2.7	0.30	0.1	0.00	0.08	0.01	47	208
50	ISL	16.25	16.24	33.409	24.470	346.9	0.173	5.69	101.5	2.7	0.30	0.1	0.00	0.08	0.01	50	
56	A	16.26	16.25	33.410	24.469	347.2	0.194	5.70	101.7	2.7	0.30	0.1	0.00	0.07	0.02	56	209
75	ISL	16.26	16.25	33.412	24.471	347.6	0.260	5.70	101.7	2.6	0.31	0.1	0.00	0.08	0.02	75	
77	A	16.26	16.25	33.412	24.471	347.7	0.267	5.70	101.7	2.6	0.31	0.1	0.00	0.08	0.02	77	210
83		16.12	16.11	33.441	24.525	342.6	0.288	5.71	101.7	2.6	0.31	0.1	0.00	0.14	0.04	83	211
93		15.88	15.87	33.588	24.693	327.0	0.321	5.69	100.9	2.7	0.29	0.1	0.00	0.18	0.07	93	212
100	ISL	15.10	15.08	33.475	24.779	318.9	0.344	5.71	99.6	3.0	0.33	0.1	0.01	0.50	0.26	100	
105	A	14.73	14.71	33.446	24.836	313.5	0.359	5.72	99.0	3.1	0.36	0.1	0.01	0.68	0.39	105	213
115		15.89	15.87	33.953	24.972	301.1	0.390	5.42	96.3	2.9	0.30	0.5	0.05	0.40	0.32	115	214
123		15.93	15.91	34.011	25.008	298.0	0.414	5.36	95.4	2.9	0.30	0.7	0.07	0.36	0.33	124	215
125	ISL	15.91	15.89	34.027	25.025	296.5	0.420	5.34	95.0	2.9	0.30	0.8	0.07	0.35	0.32	126	
137		15.60	15.58	34.097	25.149	285.0	0.455	5.24	92.7	3.2	0.33	1.7	0.07	0.28	0.23	138	216
150	ISL	14.87	14.85	34.085	25.300	270.8	0.491	5.11	89.1	3.9	0.42	3.1	0.05	0.19	0.16	151	
163		13.87	13.85	34.011	25.455	256.2	0.525	4.96	84.7	5.4	0.56	5.2	0.02	0.11	0.10	164	217
193		10.93	10.91	33.709	25.787	224.5	0.598	4.52	72.4	12.4	1.10	13.1	0.00	0.02	0.03	194	218
200	ISL	10.61	10.59	33.706	25.841	219.3	0.613	4.48	71.2	13.3	1.16	14.0	0.00			201	
227		9.84	9.81	33.772	26.025	202.2	0.670	4.39	68.7	16.8	1.33	16.6	0.00			228	219
250	ISL	9.01	8.98	33.839	26.212	184.5	0.714	4.21	64.7	22.0	1.52	19.7	0.00			251	
271		8.34	8.31	33.903	26.366	170.0	0.752	3.95	59.8	27.5	1.70	22.6	0.00			272	220
300	ISL	7.83	7.80	33.961	26.487	158.7	0.799	3.36	50.3	34.8	1.95	26.3	0.00			302	
311		7.69	7.66	33.977	26.521	155.7	0.817	3.12	46.5	37.5	2.04	27.6	0.00			313	221
372		6.92	6.89	34.038	26.677	141.3	0.907	2.16	31.7	51.3	2.45	33.0	0.00			374	222
400	ISL	6.60	6.56	34.064	26.740	135.5	0.946	1.74	25.3	57.8	2.62	35.1	0.00			402	
437		6.23	6.19	34.096	26.814	128.7	0.995	1.27	18.3	65.8	2.82	37.5	0.00			440	223
500	ISL	5.78	5.74	34.140	26.906	120.4	1.073	0.86	12.3	75.6	2.99	39.7	0.00			503	
513		5.69	5.65	34.149	26.924	118.8	1.089	0.78	11.1	77.6	3.03	40.2	0.00			516	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 53.2 N	118 29.4 W	13/04/95	0106	UTC	57 m		00 kn	00	1	1015.8 mb	15.7 C	14.9 C	07m 07	5/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 UM/L	N02 uN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.37	14.37	33.385	24.863	307.9	0.000	6.55	112.6	3.8	0.35	0.2	0.03	5.95	1.17	0	
1		14.37	14.37	33.385	24.863	307.9	0.003	6.55	112.6	3.8	0.35	0.2	0.03	5.95	1.17	1	218
5		14.09	14.09	33.392	24.927	301.9	0.015	6.46	110.4	4.3	0.38	0.3	0.05	6.39	1.18	5	219
10		13.31	13.31	33.416	25.105	285.1	0.030	5.59	94.0	7.0	0.61	2.8	0.12	5.95	1.57	10	220
19		12.84	12.84	33.485	25.252	271.3	0.055	4.78	79.6	10.4	0.90	6.8	0.22	5.75	1.54	19	221
20	ISL	12.76	12.76	33.490	25.272	269.5	0.058	4.68	77.8	10.9	0.94	7.4	0.23	5.41	1.48	20	
30		11.96	11.96	33.551	25.473	250.6	0.084	3.75	61.4	15.9	1.39	12.9	0.31	1.76	0.87	30	222
40		11.26	11.26	33.652	25.680	231.0	0.108	3.07	49.5	20.1	1.70	17.1	0.33	0.80	0.82	40	223
50	ISL	11.18	11.17	33.725	25.752	224.5	0.131	2.72	43.8	22.7	1.85	19.2	0.33	0.55	0.67	50	
51		11.17	11.16	33.732	25.759	223.8	0.133	2.68	43.2	23.0	1.86	19.4	0.33	0.52	0.66	51	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 49.4 N	118 37.6 W	13/04/95	0317	UTC	644 m	180	02 kn			1015.6 mb	15.0 C	14.1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 ult/l	P04 uN/l	N03 UN/l	N02 UN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.75	14.75	33.357	24.760	317.6	0.000	6.54	113.3	2.2	0.24	0.1	0.00	1.49	0.22	0	
1		14.75	14.75	33.357	24.760	317.6	0.003	6.54	113.2	2.2	0.24	0.1	0.00	1.49	0.22	1	203
9		14.14	14.14	33.355	24.888	305.7	0.028	6.29	107.6	3.2	0.29	0.1	0.00	1.72	0.40	9	204
10	ISL	14.07	14.07	33.356	24.903	304.3	0.031	6.19	105.7	3.5	0.31	0.2	0.01	1.74	0.44	10	
19		13.30	13.30	33.387	25.085	287.2	0.058	5.20	87.4	7.4	0.63	2.6	0.11	1.91	0.64	19	205
20	ISL	13.16	13.16	33.395	25.119	284.0	0.061	5.10	85.5	7.9	0.68	3.4	0.13	1.79	0.61	20	
29		12.03	12.03	33.483	25.407	256.8	0.085	4.40	72.1	11.6	1.07	10.7	0.23	0.59	0.31	29	206
30	ISL	11.99	11.99	33.490	25.420	255.6	0.088	4.36	71.3	11.8	1.09	11.1	0.22	0.56	0.30	30	
39		11.80	11.80	33.544	25.497	248.5	0.110	4.13	67.3	13.2	1.20	13.0	0.09	0.34 A	0.25 A	39	207
49		11.20	11.19	33.605	25.655	233.7	0.134	3.82	61.5	15.7	1.36	15.3	0.05	0.18	0.19	49	208
50	ISL	11.13	11.12	33.608	25.670	232.2	0.137	3.82	61.4	15.9	1.37	15.5	0.05	0.17	0.19	50	
59		10.67	10.66	33.648	25.783	221.7	0.157	3.68	58.6	18.3	1.50	17.6	0.04	0.13	0.17	59	209
69		10.69	10.68	33.754	25.862	214.4	0.179	2.91	46.4	21.8	1.75	20.6	0.09	0.15	0.20	69	210
75	ISL	10.50	10.49	33.772	25.909	210.0	0.192	2.95	46.8	22.6	1.77	21.2	0.07	0.16	0.20	75	
84		10.15	10.14	33.795	25.988	202.7	0.210	3.01	47.4	23.5	1.80	21.8	0.02	0.17	0.19	84	211
99		9.94	9.93	33.939	26.136	189.0	0.240	2.41	37.8	28.1	2.02	24.6	0.01	0.06	0.13	100	212
100	ISL	9.93	9.92	33.944	26.141	188.4	0.241	2.40	37.7	28.2	2.03	24.7	0.01	0.06	0.13	101	
118		9.80	9.79	33.993	26.202	183.1	0.275	2.26	35.4	29.8	2.11	25.5	0.01	0.07	0.17	119	213
125	ISL	9.75	9.74	34.012	26.225	181.0	0.288	2.20	34.4	30.4	2.14	25.8	0.01	0.06	0.15	126	
140		9.63	9.61	34.056	26.280	176.1	0.314	2.08	32.4	31.9	2.19	26.5	0.02	0.05	0.10	141	214
150	ISL	9.50	9.48	34.095	26.332	171.4	0.332	1.98	30.8	33.4	2.24	27.2	0.02	0.04	0.10	151	
168		9.24	9.22	34.156	26.422	163.1	0.362	1.83	28.3	36.2	2.32	28.3	0.01	0.04	0.09	169	215
199		8.86	8.84	34.174	26.497	156.5	0.411	1.73	26.5	39.3	2.39	29.4	0.00	0.04	0.06	200	216
200	ISL	8.85	8.83	34.175	26.500	156.3	0.413	1.73	26.5	39.4	2.39	29.4	0.00			201	
227		8.64	8.62	34.192	26.546	152.3	0.455	1.63	24.9	42.0	2.45	30.3	0.00			228	217
250	ISL	8.32	8.29	34.199	26.601	147.4	0.489	1.53	23.2	44.9	2.51	31.2	0.00			252	
268		8.06	8.03	34.202	26.643	143.7	0.515	1.44	21.7	47.4	2.56	32.0	0.00			270	218
300	ISL	7.71	7.68	34.200	26.693	139.3	0.561	1.28	19.1	51.7	2.65	33.3	0.00			302	
316		7.56	7.53	34.200	26.715	137.4	0.583	1.20	17.9	53.9	2.70	34.0	0.00			318	219
376		7.11	7.07	34.229	26.801	129.8	0.663	0.87	12.8	61.7	2.86	36.1	0.00			378	220
400	ISL	6.91	6.87	34.247	26.843	126.1	0.694	0.72	10.6	65.3	2.93	37.0	0.00			403	
436		6.61	6.57	34.276	26.907	120.4	0.738	0.53	7.7	71.0	3.03	38.1	0.00			439	221
500	ISL	6.13	6.09	34.311	26.998	112.3	0.812	0.38	5.5	80.7	3.14	38.9	0.01			504	
523		5.96	5.91	34.325	27.030	109.3	0.838	0.33	4.7	84.2	3.18	39.2	0.01			527	222

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 40

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 39.4 N	118 58..7 W	13/04/95	0708	UTC	755 ill	270	12 kn			1017.6 mb	14..3 C	13..7 C				

DEPTH ID		TEMP DEG C	POT TEMP DEC• C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UH/l	P04 UN/ l	N03 uM/l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0	ISL	14.86	14..86	33..282	24.679	325.4	0.000	6.08	105.5	4.0	0.32	0.1	0.00	0.58	0.18	0	
1		14.86	14..86	33..282	24.679	325.4	0.003	6.08	105.5	4.0	0.32	0.1	0.00	0.58	0.18	1	203
10		14.29	14..29	33..263	24.786	313.5	0.032	6.03	103.4	3.9	0.34	0. 1	0.00	0.73	0.35	10	204
20		14.23	14..23	33..265	24.800	314.4	0.064	5.96	102 . 1	3.9	0.34	0. 1	0.01	0.81	0.38	20	205
30		14.02	14..02	33..302	24.873	307.8	0.095	5.64	96.2	4.9	0.44	0.6	0.06	0.99	0.43	30	206
40		13.42	13..41	33..386	25.060	290.1	0.125	5.04	84 .9	7. 1	0.66	4.0	0.28	0.72	0.36	40	207
50		12.85	12..84	33..431	25.209	276.2	0.153	4 .78	79.6	8.8	0.81	6.5	0.34	0.51	0.31	50	208
59		12.43	12..42	33..460	25.313	266.5	0.177	4 .76	78.6	9.2	0.88	8.3	0.22	0.35	0.31	59	209
69		11.83	11 .82	33..507	25.464	252.4	0.203	4 .60	75.0	10.4	0.99	10.2	0.12	0.25	0.25	69	210
75	ISL	11.43	11 ..42	33..515	25.544	244.9	0.218	4.58	74.1	11.0	1 .04	11.1	0.09	0.21	0.22	75	
85		10.73	10..72	33..534	25.684	231 .7	0.242	4.46	71 .0	13.0	1.17	13.4	0.06	0.15	0.18	85	211
99		9.73	9.,72	33..639	25.937	207.8	0.273	3.79	59.1	20.3	1 .59	19.6	0.02	0.04	0.08	99	212
100	ISL	9.73	9.,72	33..655	25.949	206.6	0.275	3.74	58.3	20.7	1.61	19.9	0.02	0.04	0.08	100	
111		9.66	9..65	33..865	26.125	190.3	0.311	2.90	45.2	26.3	1 .90	23.5	0.01	0.01	0.06	119	213
125	ISL	9.58	9.,57	33..905	26.170	186.2	0.324	2.77	43.1	27.5	1 .95	24.3	0.01	0.01	0.06	126	
138		9.42	9.,40	33..951	26.232	180.6	0.348	2.64	41 .0	29.3	2.02	25.2	0.01	0.01	0.05	139	214
150	ISL	9.30	9..28	33..996	26.287	175.6	0.369	2.49	38.5	31 .0	2.08	26.1	0.01	0.01	0.05	151	
170		9.12	9..10	34..059	26.365	168.5	0.403	2.25	34.7	33.9	2.18	27.3	0.01	0.01	0.05	171	215
199		8.90	8. 88	34..129	26.456	160.4	0.451	1 .91	29.3	38.2	2 .33	28.8	0.02	0.01	0.05	200	216
200	ISL	8.88	8..86	34..131	26.460	160.0	0.453	1 .90	29.2	38.4	2.34	28.9	0.02			201	
226		8.30	8..28	34..176	26.585	148.4	0.493	1 .57	23.8	44.7	2 .49	31 .1	0.01			227	217
250	ISL	7.96	7.,93	34.. 190	26.648	142.8	0.528	1 .41	21 .2	48.7	2.58	32.3	0.00			251	
268		7.78	7.,75	34..192	26.676	140.3	0.553	1 .33	19.9	51 .1	2 .64	33.0	0.00			270	218
300	ISL	7.47	7..44	34..202	26.729	135.7	0.597	1.14	16.9	55.4	2 .74	34.2	0.00			302	
316		7.33	7..30	34..208	26.753	133.5	0.619	1 .05	15.6	57.5	2.78	34.8	0.00			318	219
378		6.87	6..83	34..240	26.843	125.7	0.699	0.74	10.8	65.2	2.94	36.8	0.00			380	220
400	ISL	6.71	6..67	34..253	26.875	122.9	0.727	0.64	9.3	68.2	2 .99	37.4	0.00			403	
436		6.47	6..43	34..272	26.922	118.8	0.770	0.51	7.4	72.7	3.06	38.3	0.00			439	221
500	ISL	6.21	6..17	34..294	26.974	114.6	0.845	0.41	5.9	77.4	3.12	39.2	0.00			503	
521		6.12	6..07	34..301	26.991	113.1	0.869	0.38	5.5	79.0	3.14	39.5	0.00			525	222

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29.5 N	119 19.. 1 W	13/04/95	1048	UTC	1645 m	290	07 kn			1016.5 mb	14 .3 C	13..4 C				

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 uM/ l	N03 uM/ l	N02 uM/l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0	ISL	14.74	14..74	33..241	24.673	325.9	0.000	6.20	107.3	2.0	0.29	0.1	0.00	0.98	0.22	0	
1		14.74	14..74	33 .241	24.673	325.9	0.003	6.20	107.3	2.0	0.29	0. 1	0.00	0.98	0.22	1	205
10		14.38	14..38	33..256	24.761	317.8	0.032	6.27	107.7	1 .7	0.29	0.1	0.01	1 .94	0.38	10	206
20		14.00	14..00	33 .259	24.843	310.3	0.064	5.97	101.7	2.5	0.36	0. 1	0.02	2.17	0.75	20	207
28		13.82	13..82	33 .246	24.870	307.9	0.088	5.87	99.7	3.4	0.42	0.7	0.05	1 .32	0.62	28	208
30	ISL	13.80	13..80	33 .252	24.879	307. 1	0.095	5.81	98.6	3.7	0.44	0.9	0.08	1.12	0.55	30	
39		13.37	13..36	33..31 1	25.013	294.7	0.122	5.34	89.9	6. 1	0.62	3.4	0.21	0.47	0.32	39	209
49		11 .80	11 .79	33 .445	25.421	256.0	0.149	4.52	73.6	11.9	1 .05	10.5	0.29	0.37	0.48	49	210
50	ISL	11 .72	11 .71	33 .452	25.441	254. 1	0.152	4.48	72.9	12 .2	1 .07	10.9	0.28	0.35	0.47	50	
59		11.28	11 .27	33 .506	25.564	242.6	0.174	4.25	68.5	14.2	1 .22	13.5	0.15	0.20	0.35	59	211
69		10.90	10..89	33 .610	25.713	228.6	0.198	3.90	62 .4	16.6	1 .39	16.0	0.07	0.09	0.20	69	212
75	ISL	10.51	10,.50	33 .682	25.838	216.8	0.211	3.60	57.1	19.5	1 .54	18.2	0.05	0.05	0.15	75	
83		9.95	9 .94	33 .766	25.999	201 .6	0.228	3.27	51 .3	23.3	1 .73	21.0	0.03	0.03	0.11	83	213
99		9.14	9 .13	33 .806	26.163	186.2	0.259	3.30	50.8	26.5	1 .84	23.3	0.01	0.02	0.08	100	214
100	ISL	9.13	9,. 12	33 .816	26.172	185.3	0.261	3.27	50.4	26.8	1 .85	23.5	0.01	0.02	0.08	101	
118		8.94	8..93	33 .950	26.308	172 .8	0.293	2.71	41.6	31 .6	2.03	25.9	0.01	0.01	0.06	119	215
125	ISL	8.93	8 .92	33 .993	26.343	169.6	0.305	2.55	39. 1	32.8	2.09	26.5	0.01	0.01	0.06	126	
138		8.92	8 .91	34 .051	26.390	165.4	0.327	2.34	35.9	34.4	2.18	27.4	0.01	0.01	0.05	139	216
150	ISL	8.85	8 .83	34 .071	26.417	163. 1	0.346	2.27	34.8	35.4	2.21	27.8	0.01	0.01	0.05	151	
168		8. 69	8 .67	34 .082	26.451	160.2	0.375	2.21	33.8	37.1	2 .24	28.3	0.01	0.01	0.05	169	217
197		8.27	8 .25	34 . 129	26.553	150.9	0.420	1 .92	29. 1	42 .0	2.37	30.2	0.01	0.01	0.04	198	218
200	ISL	8.23	8 .21	34 . 132	26.561	150.2	0.425	1 .90	28.7	42.5	2 .38	30.3	0.01			201	
228		7.90	7 .88	34 . 151	26.625	144.5	0.466	1 .72	25.8	46.9	2 .49	31 .7	0.01			229	219
250	ISL	7.67	7 .65	34 . 179	26.681	139.4	0.497	1 .44	21 .5	51 .3	2 .61	33.1	0.01			252	
267		7.51	7 .48	34 .200	26.721	135.9	0.521	1 .23	18.3	54.6	2 .69	34.1	0.01			269	220
300	ISL	7.24	7 .21	34 .210	26.767	131.9	0.565	1 .06	15.7	58.5	2 .77	35.2	0.01			302	
316		7.13	7 . 10	34 .211	26.784	130.5	0.586	1 .01	14.9	59.9	2 .80	35.6	0.01			318	221
376		6.79	6 .76	34 .236	26.851	124.9	0.663	0.78	11.4	65 .8	2 .93	37.1	0.01			378	222
400	ISL	6.64	6 .60	34 .251	26.883	122.1	0.692	0.68	9.9	68.8	2 .98	37.7	0.01			403	
437		6.40	6 .36	34 .274	26.933	117.7	0.737	0.53	7.7	73.4	3.05	38.7	0.01			440	223
500	ISL	6.07	6 .03	34 .302	26.998	112.1	0.809	0.40	5.8	79.2	3.14	39.9	0.01			504	
518		5 .98	5 .93	34 .31 1	27.017	110.5	0.829	0.36	5.2	80.9	3.16	40.2	0.01			522	224

RV NEW H0RI20N CALCOFI CRUISE 9504 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 19.6 N	119 40.2 W	13/04/95	1518	UTC	80 m	290	14 kn	290 02 01	1	1018.0 mb	14 0 C	13 7 C	09m 05	1/8	CC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	13.89	13.89	33.294	24.892	305.0	0.000	6.29	107.0	2.3	0.36	0.1	0.00	3.82	0.63	0	
1		13.89	13.89	33.294	24.892	305.0	0.003	6.29	107.0	2.3	0.36	0.1	0.00	3.82	0.63	1	217
10		13.65	13.65	33.325	24.966	298.3	0.030	6.19	104.8	3.0	0.42	0.2	0.02	4.13	0.92	10	218
19		13.55	13.55	33.360	25.013	294.0	0.057	5.78	97.7	4.9	0.54	1 .4	0.06	1 .49	0.67	19	219
20	ISL	13.48	13.48	33.362	25.029	292.5	0.060	5.73	96.7	5.2	0.56	1 .8	0.07	1 .34	0.64	20	
29		12.71	12.71	33.383	25.199	276.6	0.085	5.26	87.3	7.8	0.79	5.4	0.13	0.66	0.43	29	220
30	ISL	12.65	12.65	33.385	25.212	275.4	0.088	5.22	86.6	8.0	0.81	5.7	0.14	0.62	0.43	30	
39		12.15	12.14	33.413	25.330	264.4	Q.112	4.88	80.1	9.7	0.96	8.4	0.17	0.44	0.40	39	221
49		11 .47	11.46	33.498	25.523	246.2	0.138	4.32	69.9	13.7	1 .21	12.7	0.16	0.28	0.42	49	222
50	ISL	11 .42	11.41	33.505	25.537	244.9	0.140	4.28	69.2	14.0	1 .23	13.0	0.16	0.27	0.42	50	
59		11 .03	11 .02	33.558	25.649	234.4	0.162	4.03	64.6	16.2	1 .35	15.0	0.12	0.22	0.39	59	223
69		10.77	10.76	33.595	25.724	227.5	0.185	3.85	61 .4	17.8	1 .46	16.6	0.12	0.20	0.39	69	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 8.7 N	120 0.7 W	13/04/95	1854	UTC	1219 m	270	08 kn	270 01 02	1	1019.0 mb	15 7 C	15 0 C	17m 02	1/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	OYN HT	OXYGEN ml/ l	OXY PCT	SI03 UN/ l	P04 uN/ l	N03 uM/l	N02 uM/ l	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	14.48	14.48	33.048	24.579	334.8	0.000	5.96	102.4	2 .8	0.36	0.2	0.00	0.26	0.05	0	
2	B	14.48	14.48	33.048	24.579	334.9	0.007	5.96	102.4	2.8	0.36	0.2	0.00	0.26	0.05	2	203
10	ISL	14.27	14.27	33.058	24.631	330.1	0.033	6.01	102 .9	2 .8	0.35	0.1	0.00	0.61	0.16	10	
11	B	14.23	14.23	33.062	24.643	329.1	0.037	6.02	103.0	2.8	0.35	0.1	0.00	0.65	0.17	11	204
20	B	13.70	13.70	33.135	24.809	313.5	0.066	6.14	103.9	2 .3	0.38	0.3	0.02	2 .90	0.77	20	205
30	ISL	13.44	13.44	33.161	24.882	306.8	0.097	6.04	101.7	2.9	0.44	1 .0	0.04	3.02	1.15	30	
33	B	13.37	13.37	33. 166	24.900	305.2	0. 106	5 .98	100.5	3.2	0.46	1 .3	0.04	3.06	1 .21	33	206
43	B	12.90	12.89	33.222	25.037	292.4	0.136	5.81	96.8	4. 1	0.55	2.8	0.06	3.96	1 .27	43	207
50	ISL	12.44	12.43	33.257	25.154	281 .4	0.156	5.55	91 .6	5 .6	0.67	4.8	0.08	2.61	0.80	50	
51		12.38	12.37	33.261	25.168	280.1	0.158	5.51	90.8	5 .8	0.69	5. 1	0.08	2.36	0.73	51	208
62	B	11.95	11 .94	33.281	25.266	271 .0	0.189	5 .29	86.4	7.0	0.79	6.7	0.08	0. 84	0. 50	62	209
71		11.58	11.57	33.308	25.355	262.7	0.213	5.15	83.4	8.1	0.87	8.2	0.06	0.37	0.40	71	210
75	ISL	11 .22	11.21	33.319	25.429	255.7	0.223	5.06	81 .4	9.3	0.94	9.5	0.05	0.26	0.32	75	
84		10.46	10.45	33.371	25.604	239.2	0.245	4.75	75. 1	12.6	1.14	12.9	0.03	0.13	0.17	84	211
99		10.35	10.34	33.583	25.788	222.0	0.280	3.84	60. 7	18.4	1 .48	17.8	0.02	0.08 A	0.13 A	99	212
100	ISL	10.32	10.31	33.589	25.798	221 .1	0.282	3.81	60.2	18.7	1 .49	18.0	0.02	0.08	0.13	100	
118		9.63	9.62	33.668	25.976	204.4	0.321	3.51	54.6	22.6	1 .70	21 .1	0.02	0.06	0.13	119	213
125	ISL	9.39	9.38	33.723	26.058	196.7	0.335	3.36	52.0	24.5	1 .78	22.3	0.02	0.06	0.16	126	
140		8.95	8.94	33.843	26.223	181.3	0.363	3.05	46.8	28.5	1 .93	24.7	0.02	0.05	0.21	141	214
150	ISL	8.72	8.70	33.896	26.300	174. 1	0.381	2.91	44.4	30.8	2 .00	25.8	0.02	0.04	0.18	151	
168		8.47	8.45	33.975	26.401	164.8	0.411	2 .64	40. 1	34.5	2.10	27.4	0.01	0.03	0.11	169	215
197		8.53	8.51	34.114	26.501	155.9	0.458	1 .97	30.0	39.6	2.32	29.4	0.01	0.03	0.08	198	216
200	ISL	8. 50	8.48	34.119	26.510	155.1	0.462	1 .94	29.5	40.1	2.33	29.6	0.01	0.03	0.08	201	
230		8.12	8.10	34.134	26.580	148.9	0.508	1 .76	26.5	44.3	2.43	30.9	0.01	0.03	0.12	231	217
250	ISL	7.87	7.84	34.133	26.616	145.7	0.537	1 .72	25.8	46.7	2 .47	31 .7	0.00	0.03	0.12	251	
267		7.67	7.64	34. 133	26.645	143.1	0.562	1 .68	25.1	48.7	2.51	32.3	0.00	0.03	0.12	269	218
300	ISL	7.40	7.37	34.166	26.710	137.4	0.608	1 .37	20.3	53.8	2 .64	33.8	0.00			302	
316		7.28	7.25	34.181	26.739	134.9	0.630	1 .21	17.9	56.5	2.71	34.6	0.00			318	219
379		6.51	6.48	34.163	26.830	126.6	0.712	0.98	14.2	67.0	2.87	37.4	0.00			381	220
400	ISL	6.38	6.34	34.192	26.870	123.0	0.739	0.83	12.0	69.9	2.93	38. 1	0.00			403	
434		6.23	6.19	34 .244	26.931	117.7	0.780	0.59	8.5	73.9	3.02	38.9	0.00			437	221
500	ISL	6.00	5.96	34.271	26.982	113.5	0.856	0.46	6.6	78.8	3.10	39.8	0.00			503	
513		5.95	5.91	34.276	26.993	112.7	0.871	0.44	6.3	79.8	3.12	40.0	0.00			517	222

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGNENT CALCULATED WITH ASSUMED ACID RATIO LEVELS.
B) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 950< STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 59.0 N	120 21 3 W	13/04/95	2252	UTC	789 m	300	20 kn	320 04 04	1	1019.2 mb	14 9 C	12.9 C	32m 01	4/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/ l	N03 UN/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAHP
0	ISL	14.69	14.69	33.008	24.504	342.0	0.000	5.91	102.0	3. 1	0.38	0. 1	0.00	0.09	0.01	0	
2		14.69	14 .69	33.008	24.504	342.1	0.007	5 .91	102 .0	3.1	0.38	0.1	0.00	0.09	0.01	2	203
10	ISL	14.67	14.67	33.009	24.509	341 .8	0.034	5.93	102 .3	3.0	0.39	0.1	0.00	0.10	0.03	10	
15		14.65	14.65	33.010	24.514	341 .5	0.051	5.94	102.4	3.0	0.40	0. 1	0.00	0.11	0.04	15	205
20	ISL	14.60	14.60	33.009	24.524	340.6	0.068	5.94	102.3	3.0	0.40	0. 1	0.00	0.11	0.03	20	
30		14.51	14.51	33.008	24.543	339.2	0. 102	5.92	101.8	3.0	0.40	0. 1	0.00	0.11	0.02	30	206
44		14.48	14.47	33.009	24.551	338.8	0.150	5.91	101.6	3.0	0.41	0. 1	0.00	0.14	0.03	44	207
50	ISL	14.45	14.44	33.023	24.568	337.4	0.170	5.93	101 .8	2.9	0.42	0. 1	0.00	0.19	0.06	50	
53		14.43	14.42	33.031	24.578	336. 5	0. 180	5.94	102.0	2 .9	0.43	0.1	0.00	0.21	0.07	53	20!
64		14.33	14.32	33.060	24.622	332.6	0.217	5.94	101 .8	2.9	0.44	0. 1	0.00	0.27	0.09	64	209
75	ISL	13.75	13.74	33.227	24.871	309.1	0.252	5.89	99.8	3.4	0.48	0.5	0.02	0.75	0.47	75	
76		13.68	13.67	33.246	24.901	306.4	0.255	5.88	99.5	3.4	0.48	0.5	0.02	0.78	0.50	76	210
85		12.97	12.96	33.396	25.159	281 .9	0.282	5.41	90.3	5.4	0.71	3.9	0.10	0.51	0.41	85	211
96		12 .36	12.35	33.429	25.304	268.4	0.312	5.00	82.4	8. 1	0.94	7.7	0.05	0.29	0.28	96	212
100	ISL	12 .00	11 .99	33.431	25.374	261 .7	0.323	4.96	81 .1	8.6	0.94	8.5	0.04	0.24	0.24	100	
109		11.20	11.19	33.443	25.530	246.9	0.346	4.86	78.2	10.0	0.95	10.1	0.02	0.17	0.16	109	213
125	ISL	10.47	10.46	33.531	25.728	228.4	0.384	4.11	65.1	15.8	1 .34	16.0	0.01	0.06	0.09	126	
127		10.41	10.40	33.545	25.749	226.4	0.388	4.01	63.4	16.6	1 .40	16.8	0.01	0.05	0.09	128	214
145		9.91	9.89	33.659	25.923	210.1	0.427	3.64	57.0	20.4	1 .61	19.9	0.01	0.01	0.04	146	215
150	ISL	9.81	9.79	33.671	25.949	207.7	0.438	3.60	56.2	21 .0	1 .64	20.4	0.01	0.01	0.04	151	
165		9.52	9.50	33.704	26.023	200.9	0.469	3.50	54.3	22 .8	1 .70	21.5	0.01	0.01	0.04	166	216
200		8.62	8.60	33.948	26.357	169.6	0.533	2.80	42.7	32 .6	2 .03	26.4	0.01	0.00	0.03	201	217
231		8.26	8.24	34.013	26.464	160.0	0.584	2 .60	39.3	36.9	2.14	28.1	0.00			232	218
250	ISL	8.03	8.00	34.055	26.531	153.8	0.614	2.32	34.9	40.6	2.25	29.5	0.00			251	
268		7.84	7.81	34.091	26.588	148.7	0.641	2.04	30.6	44. 1	2.36	30.8	0.00			270	219
300	ISL	7.64	7.61	34 . 124	26.643	143.9	0.688	1 .75	26.1	48. 1	2 .48	32.1	0.00			302	
317		7. 56	7.53	34.135	26.663	142.2	0.713	1 .63	24.3	49.9	2.53	32.7	0.00			319	220
377		7.14	7.10	34.185	26.763	133.5	0.795	1.14	16.8	58.4	2.75	35.2	0.00			379	221
400	ISL	6.90	6.86	34.202	26.809	129.3	0.826	0.95	13.9	62.7	2.84	36.4	0.00			403	
439		6. 50	6.46	34.230	26.885	122.4	0.875	0.69	10.0	69.9	2 .97	38.2	0.00			442	222
500	ISL	6.13	6.09	34.262	26.959	115.9	0.947	0.54	7.8	76.8	3.08	39.5	0.00			503	
511		6.06	6.01	34.268	26.973	114.7	0.960	0.51	7.3	78.0	3.10	39.7	0.00			514	223

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIRE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
32 39.7 N	121 2.6 W	14/04/95	0816	UTC	3761 in	340	21 kn			1021.3 nb	14.0 C	11.5 C				

DEPTH D	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/L	P04 uM/l	N03 uM/l	N02 UN/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.32	15.32	33.275	24.573	335.4	0.000	5.83	102.1	2.9	0.35	0.1	0.00	0.29	0.07	0	
1	15.32	15.32	33.275	24.573	335.4	0.003	5.83	102.1	2.9	0.35	0.1	0.00	0.29	0.07	1	201
10 ISL	15.33	15.33	33.274	24.571	336.0	0.034	5.89	103.1	2.8	0.33	0.1	0.00	0.28	0.07	10	
15	15.33	15.33	33.274	24.571	336.1	0.050			2.8	0.32	0.1	0.00	0.27	0.07	15	202
20 ISL	15.33	15.33	33.274	24.571	336.2	0.067	5.94	104.0	2.8	0.32	0.1	0.00	0.27	0.07	20	
29	15.33	15.33	33.275	24.572	336.4	0.097	6.16 U	107.9 U	2.7	0.32	0.1	0.00	0.27	0.06	29	203
30 ISL	15.33	15.33	33.275	24.572	336.4	0.101	5.99	104.9	2.7	0.32	0.1	0.00	0.27	0.06	30	
44	15.33	15.32	33.279	24.576	336.5	0.148	6.05	105.9	2.7	0.34	0.1	0.00	0.29	0.07	44	204
50 ISL	15.28	15.27	33.289	24.594	334.9	0.168	6.02	105.3	2.7	0.33	0.1	0.00	0.36	0.10	50	
54	15.25	15.24	33.295	24.606	334.0	0.181	6.00	104.9	2.7	0.33	0.1	0.00	0.40	0.12	54	205
64	15.23	15.22	33.295	24.610	333.8	0.215	5.99	104.7	2.6	0.33	0.1	0.00	0.38	0.14	64	206
74	14.18	14.17	33.319	24.854	310.8	0.247	5.82	99.6	3.9	0.46	1.2	0.08	0.90	0.44	74	207
75 ISL	13.98	13.97	33.328	24.902	306.2	0.250	5.74	97.8	4.3	0.50	1.8	0.08	0.88	0.43	75	
83	12.48	12.47	33.412	25.267	271.5	0.273	5.06	83.6	7.7	0.83	7.1	0.08	0.57	0.39	83	208
94	11.82	11.81	33.459	25.429	256.3	0.302	4.71	76.8	10.5	1.04	10.7	0.04	0.31	0.26	94	209
100 ISL	11.47	11.46	33.491	25.518	247.9	0.317	4.51	73.0	12.0	1.14	12.4	0.03	0.21	0.18	100	
108	11.04	11.03	33.536	25.631	237.3	0.337	4.24	68.0	14.0	1.28	14.6	0.02	0.11	0.09	108	210
124	10.30	10.29	33.614	25.822	219.4	0.373	3.78	59.7	18.6	1.56	18.6	0.01	0.04	0.06	125	211
125 ISL	10.26	10.25	33.619	25.832	218.4	0.376	3.76	59.3	18.8	1.57	18.8	0.01	0.04	0.06	126	
144	9.66	9.64	33.705	26.000	202.7	0.416	3.45	53.7	22.8	1.75	21.6	0.01	0.01	0.04	145	212
150 ISL	9.46	9.44	33.727	26.051	198.0	0.428	3.47	53.8	23.7	1.78	22.1	0.01	0.01	0.04	151	
168	8.92	8.90	33.784	26.182	185.7	0.462	3.51	53.8	25.9	1.83	23.2	0.01	0.01	0.03	169	213
198	8.46	8.44	33.855	26.309	174.1	0.516	3.49	53.0	29.0	1.89	24.5	0.01	0.00	0.03	199	214
200 ISL	8.42	8.40	33.861	26.320	173.1	0.520	3.49	52.9	29.3	1.90	24.6	0.01			201	
227	7.92	7.90	33.933	26.451	160.9	0.565	3.39	50.8	33.6	1.98	26.2	0.01			228	215
250 ISL	7.52	7.50	33.963	26.533	153.4	0.601	3.22	47.8	38.0	2.08	27.8	0.01			251	
267	7.25	7.22	33.977	26.582	148.8	0.626	3.04	44.9	41.6	2.17	29.1	0.01			269	216
300 ISL	6.87	6.84	34.005	26.657	142.1	0.674	2.52	36.9	48.7	2.37	31.8	0.00			302	
318	6.71	6.68	34.021	26.691	139.0	0.700	2.20	32.1	52.6	2.48	33.3	0.00			320	217
378	6.32	6.29	34.112	26.815	127.9	0.780	1.17	16.9	65.3	2.86	37.5	0.01			380	218
400 ISL	6.29	6.25	34.149	26.848	125.0	0.808	0.96	13.9	67.9	2.94	38.1	0.01			403	
439	6.26	6.22	34.206	26.897	120.9	0.856	0.71	10.3	71.6	3.04	38.7	0.00			442	219
500 ISL	5.94	5.90	34.241	26.966	115.0	0.928	0.52	7.5	78.1	3.14	39.9	0.00			503	
514	5.87	5.83	34.249	26.981	113.6	0.944	0.48	6.9	79.6	3.16	40.2	0.00			517	220

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
32 19.5 N	121 43.2 W	14/04/95	1915	UTC	3987 m	330	24 kn	340 05 04	2	1022.3 mb	15.0 C	11.9 C	17m 02		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/L	N02 uM/L	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.38	15.38	33.312	24.589	333.9	0.000	6.03	105.7	2.5	0.33	0.1	0.00	0.27	0.07	0	
3 A	15.38	15.38	33.312	24.589	334.0	0.010	6.03	105.7	2.5	0.33	0.1	0.00	0.27	0.07	3	403
10 ISL	15.38	15.38	33.312	24.589	334.2	0.033	5.96	104.5	2.5	0.33	0.1	0.00	0.28	0.08	10	
11 A	15.38	15.38	33.312	24.589	334.2	0.037	5.95	104.3	2.5	0.33	0.1	0.00	0.28	0.08	11	404
20 ISL	15.38	15.38	33.312	24.589	334.5	0.067	5.91	103.6	2.4	0.33	0.1	0.00	0.27	0.07	20	
21 A	15.38	15.38	33.312	24.589	334.5	0.070	5.91	103.6	2.4	0.33	0.1	0.00	0.27	0.07	21	406
30 ISL	15.38	15.38	33.312	24.590	334.8	0.100	5.87	102.9	2.5	0.33	0.1	0.00	0.27	0.07	30	
35 A	15.38	15.37	33.312	24.590	334.9	0.117	5.85	102.6	2.5	0.33	0.1	0.00	0.27	0.07	35	407
45 A	15.38	15.37	33.311	24.589	335.3	0.151	5.86	102.7	2.5	0.33	0.1	0.00	0.31	0.08	45	408
50 ISL	15.37	15.36	33.311	24.592	335.2	0.167	5.85	102.5	2.5	0.34	0.1	0.00	0.32	0.09	50	
52	15.37	15.36	33.311	24.592	335.2	0.174	5.84	102.4	2.5	0.34	0.1	0.00	0.32	0.09	52	409
61 A	15.07	15.06	33.312	24.658	329.1	0.204			2.5	0.34	0.0	0.47	0.38	0.13	61	410
72	12.69	12.68	33.387	25.207	277.0	0.237	5.25	87.1	7.1	0.77	6.1	0.15	0.96	0.64	72	411
75 ISL	12.29	12.28	33.407	25.299	268.2	0.245	5.05	83.1	8.5	0.88	7.9	0.12	0.86	0.60	75	
83	11.47	11.46	33.453	25.488	250.3	0.266	4.53	73.3	11.9	1.14	12.4	0.08	0.43	0.38	83	412
92	10.66	10.65	33.506	25.675	232.7	0.288	4.18	66.5	15.0	1.34	15.7	0.03	0.21	0.22	92	413
100 ISL	10.14	10.13	33.569	25.813	219.6	0.306	3.91	61.5	18.1	1.51	18.3	0.02	0.10	0.12	100	
107	9.81	9.80	33.625	25.912	210.3	0.321	3.70	57.8	20.5	1.63	20.1	0.01	0.04	0.06	107	414
123	9.48	9.47	33.727	26.047	197.8	0.354	3.38	52.4	23.8	1.78	22.2	0.01	0.01	0.05	124	415
125 ISL	9.43	9.42	33.736	26.062	196.4	0.358	3.36	52.1	24.1	1.79	22.4	0.01	0.01	0.05	126	
143	9.02	9.00	33.809	26.185	185.0	0.392	3.18	48.9	27.1	1.88	24.0	0.01	0.01	0.04	144	416
150 ISL	8.86	8.84	33.844	26.238	180.1	0.405	3.10	47.5	28.5	1.92	24.7	0.01	0.01	0.04	151	
171	8.46	8.44	33.947	26.381	166.8	0.441	2.84	43.1	32.8	2.05	26.6	0.01	0.00	0.04	172	417
198	8.29	8.27	34.047	26.485	157.3	0.485	2.46	37.2	37.7	2.20	28.3	0.00	0.00	0.03	199	418
200 ISL	8.28	8.26	34.050	26.489	157.0	0.488	2.45	37.1	37.9	2.21	28.4	0.00			201	
230	8.01	7.99	34.071	26.547	152.0	0.534	2.27	34.1	41.4	2.29	29.8	0.00			231	419
250 ISL	7.73	7.71	34.082	26.596	147.5	0.564	2.10	31.4	44.9	2.38	31.0	0.00			251	
272	7.41	7.38	34.095	26.653	142.4	0.596	1.89	28.0	49.2	2.48	32.4	0.00			274	420
300 ISL	7.11	7.08	34.121	26.715	136.7	0.635	1.56	23.0	54.4	2.61	34.0	0.00			302	
317	6.94	6.91	34.134	26.749	133.7	0.658	1.38	20.3	57.5	2.69	34.9	0.00			319	421
376	6.17	6.14	34.114	26.835	125.8	0.735	1.12	16.1	68.1	2.86	37.9	0.00			378	422
400 ISL	6.14	6.10	34.140	26.860	123.8	0.765	0.97	14.0	70.4	2.92	38.5	0.00			403	
434	6.09	6.05	34.175	26.894	121.0	0.806	0.76	10.9	73.0	2.99	39.0	0.00			437	423
500 ISL	5.81	5.77	34.233	26.976	113.9	0.884	0.52	7.4	79.8	3.10	40.1	0.00			503	
515	5.75	5.71	34.246	26.994	112.3	0.901	0.46	6.6	81.4	3.13	40.4	0.00			519	424

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 90I

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AHT	TYPE
31 59.7 N	122 24.5 W	15/04/95	0103 UTC	4108 m	330	28 kn	350 08 0i	1	1019.6 nb	13.0 C	10.7 C	15m 01	6/8	SC

DEPTH in	TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uH/ l	P04 uM/l	N03 uM/l	N02 uN/l	CHL-A ug/l	PHAEO ug/ l	PRES db	SAMP
0 ISL	15.23	15.23	33.274	24.592	333.6	0.000	5.88	102.8	3.2	0.36	0.1	0.00	0.28	0.08	0	
3	15.23	15.23	33.274	24.592	333.7	0.010	5 .88	102.8	3.2	0.36	0.1	0.00	0.28	0.08	3	202
10 ISL	15.24	15.24	33.276	24.592	333.9	0.033	5.88	102.8	3.2	0.36	0.1	0.00	0.27	0.08	10	
15	15.24	15.24	33.277	24.593	334.0	0.050	5.88	102.8	3.2	0.36	0.1	0.00	0.26	0.08	15	203
20 ISL	15.24	15.24	33.276	24.592	334.2	0.067	5.88	102.8	3.2	0.36	0.1	0.00	0.26	0.08	20	
30	15.23	15.23	33.273	24.592	334.5	0. 100	5.87	102.6	3.2	0.36	0. 1	0.00	0.27	0.07	30	204
45	15.22	15.21	33.273	24.595	334.7	0.150	5.86	102.4	3.1	0.34	0.1	0.00	0.31	0.10	45	206
50 ISL	15.20	15.19	33.273	24.600	334.4	0. 167	5.85	102.2	3.1	0.33	0.1	0.00	0.32	0.11	50	
53	15.18	15.17	33.273	24.604	334.1	0.177	5.84	101.9	3. 1	0.33	0. 1	0.00	0.33	0.11	53	207
65	14.38	14.37	33.301	24.798	316.0	0.216	5.72	98.3	4.0	0.44	1 .3	0.04	0.72	0.31	65	208
74	12.35	12.34	33.399	25.282	269.9	0.243	4.90	80.7	8.7	0.89	8.3	0.28	0.70	0.47	74	209
75 ISL	12.33	12.32	33.401	25.287	269.4	0.245	4.88	80.4	8.9	0.90	8.4	0.28	0.69	0.47	75	
83	12.14	12.13	33.416 Di	25.335	265.0	0.267	4.76	78.1	9.6	0.96	9.4	0.24	0.60	0.45	83	210
92	11 .70	11 .69	33.446	25.441	255.1	0.290	4.52	73.5	11.3	1 .08	11.5	0.14	0.44	0.39	92	211
100 ISL	11 .29	11.28	33.481	25.543	245.5	0.310	4.30	69.3	13.1	1 .20	13.5	0.07	0.32	0.30	100	
110	10.74	10.73	33.530	25.680	232.7	0.334	4.04	64.4	15.7	1 .36	16.1	0.01	0.19	0.19	110	212
122	10.00	9.99	33.593	25.856	216.0	0.361	3.76	59.0	19.3	1 .56	19.2	0.01	0.06	0.10	123	213
125 ISL	9.87	9.86	33.606	25.888	213.0	0.367	3.71	58.0	20.0	1 .60	19.8	0.01	0.05	0.09	126	
145	9.25	9.23	33.690	26.055	197.4	0.408	3.44	53.1	24.0	1 .77	22.6	0.01	0.02	0.06	146	214
150 ISL	9.12	9.10	33.719	26.099	193.3	0.418	3.37	51 .9	25.1	1 .81	23.2	0.01	0.01	0.05	151	
166	8.78	8.76	33.809	26.223	181 .7	0.448	3.18	48.6	28.4	1 .92	24.8	0.01	0.00	0.04	167	215
197	8.36	8.34	33.919	26.374	167.8	0.502	3.02	45 .7	32.4	2.00	26.4	0.01	0.00	0.04	198	216
200 ISL	8.32	8.30	33.927	26.387	166.7	0.507	3.00	45.4	32.9	2.01	26.6	0.01			201	
230	7.94	7.92	33.992	26.495	156.9	0.556	2.72	40.8	38.0	2.14	28.6	0.00			231	217
250 ISL	7.74	7.72	34.026	26.551	151.8	0.587	2.47	36.9	41 .4	2.24	30.0	0.00			251	
268	7.56	7.53	34.049	26.595	147.8	0.614	2.24	33.3	44.5	2.34	31 .2	0.00			270	218
300 ISL	7.18	7.15	34.068	26.664	141.6	0.660	1 .92	28.3	50.5	2.48	33.1	0.00			302	
319	6.98	6.95	34.080	26.701	138.3	0.687	1 .73	25.4	54.1	2.56	34.2	0.00			321	219
375	6.70	6.67	34. 180	26.818	127.8	0.761	0.97	14.2	63.5	2.85	36.9	0.01			377	220
400 ISL	6.47	6.43	34.190	26.857	124.4	0.793	0.83	12.1	67.5	2.93	37.9	0.01			403	
435	6.15	6.11	34.195	26.903	120.3	0.835	0.72	10.4	72.8	3.01	39.1	0.00			438	221
500 ISL	5 .80	5.76	34.249	26.990	112.6	0.911	0.46	6.6	80.8	3.14	40.6	0.00			503	
511	5.74	5.70	34.258	27.004	111.3	0.923	0.42	6.0	82.2	3.16	40.9	0.00			514	222

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 87 100i

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
31 39.6 N	123 4.9 W	15/04/95	0658 UTC	4169 m	340	30 kn			1020.4 mb	13.6 C	10.3 C			

DEPTH in	TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uH/l	N03 uH/l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/ l	PRES db	SAMP
0 ISL	15.01	15.01	33.095	24.502	342 .2	0.000	5.86	101 .8	2.8	0.34	0.0	0.00	0.11	0.01	0	
2	15.01	15.01	33.095	24.502	342.2	0.007	5.86	101.8	2.8	0.34	0.0	0.00	0.11	0.01	2	202
10 ISL	15.01	15.01	33.092	24.500	342.7	0.034	5.87	102.0	2.8	0.34	0.0	0.00	0.11	0.01	10	
15	15.01	15.01	33.090	24.499	343.0	0.051	5.87	102.0	2.8	0.34	0.0	0.00	0.11	0.01	15	203
20 ISL	15.01	15.01	33.093	24.501	342.9	0.069	5.87	102.0	2.8	0.34	0.0	0.00	0.11	0.01	20	
30	15.01	15.01	33.098	24.505	342.8	0.103	5.87	102.0	2.8	0.34	0.0	0.00	0.11	0.02	30	204
46	15.02	15.01	33.091	24.499	343.9	0.158	5 .88	102.2	2.7	0.34	0.0	0.00	0.11	0.02	46	206
50 ISL	15.03	15.02	33.109	24.510	342.9	0.171	5.87	102. 1	2.7	0.34	0.0	0.00	0.11	0.02	50	
61	15.10	15.09	33.178	24.549	339.6	0.209	5.83	101 .5	2.7	0.32	0.0	0.00	0.10	0.01	61	207
74	15.22	15.21	33.272	24.595	335.6	0.253	5.80	101 .3	2.7	0.31	0.0	0.00	0.13	0.03	74	208
75 ISL	15.22	15.21	33.291	24.610	334.2	0.256	5.80	101.3	2.7	0.31	0.0	0.00	0.14	0.03	75	
84	15.07	15.06	33.469	24.780	318.3	0.286	5.78	100.8	2.7	0.29	0.0	0.00	0.23	0.09	84	209
92	14.75	14.74	33.580	24.935	303.7	0.310	5 .73	99.3	2.8	0.30	0.0	0.00	0.41	0.24	92	210
100 ISL	14.18	14.17	33.519	25.009	296.8	0.335	5.67	97. 1	3.3	0.37	0.9	0.03	0.41	0.31	100	
107	13.82	13.80	33.481	25.054	292 .6	0.355	5.60	95.2	3.8	0.43	1 .8	0.07	0.41	0.33	107	211
115	13.96	13.94	33.636	25.146	284.2	0.378	5 .46	93.2	4.0	0.45	2 .3	0.09	0.39	0.35	115	212
125 ISL	13.60	13.58	33.605	25.196	279.7	0.406	5.40	91 .4	4.5	0.51	3.0	0.10	0.35	0.29	126	
129	13.31	13.29	33.562	25.221	277.3	0.418	5.38	90.5	4.9	0.55	3.6	0.10	0.23 U	0.19 U	130	213
136	12.67	12.65	33.528	25.322	267.8	0.437			6.1	0.66	5.5	0.06	0.29	0.20	137	214
150 ISL	11.56	11 .54	33.514	25.521	248.9	0.473	4.79	77.7	9.8	0.96	10.2	0.04	0.17	0.11	151	
164	10.63	10.61	33.543	25.710	231 .0	0.506	4.33	68.8	14.0	1 .27	14.8	0.01	0.05	0.05	165	215
193	9.13	9.11	33.671	26.061	197.8	0.569	3.90	60.0	21 .8	1 .65	21 .0	0.00	0.00	0.02	194	216
200 ISL	8.94	8.92	33.707	26.119	192.3	0.582	3.80	58.2	23.3	1 .71	21 .9	0.00			201	
230	8.47	8.45	33.848	26.302	175.3	0.637	3.45	52.4	28.7	1 .87	24.5	0.00			231	217
250 ISL	8.20	8.17	33.918	26.398	166.5	0.672	3.28	49.5	32.0	1 .95	25.8	0.00			251	
268	7.97	7.94	33.964	26.469	160.0	0.701	3.15	47.3	35.0	2.01	26.8	0.00			269	218
300 ISL	7.49	7.46	33.997	26.565	151.2	0.751	2.87	42 .6	40.8	2.16	29.0	0.00			302	
315	7.27	7.24	34.002	26.600	148.0	0.773	2.72	40.2	43.7	2.23	30.1	0.00			317	219
380	6.49	6.46	34.040	26.736	135.5	0.865	1 .84	26.7	57.6	2.59	35.1	0.00			382	220
400 ISL	6.30	6.26	34.060	26.776	131.8	0.892	1 .57	22.7	61 .9	2.70	36.4	0.00			402	
439	5 .99	5.95	34.103	26.850	125.1	0.942	1.10	15.8	69.8	2.89	38.5	0.00			442	221
500 ISL	5.63	5.59	34.172	26.950	116.1	1.016	0.72	10.2	79.7	3.07	40.5	0.00			503	
509	5.58	5.54	34.182	26.964	114.9	1 .026	0.66	9.4	81 .2	3.10	40.8	0.00			512	222

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 19.7 N	123 45..3 W	15/04/95	1238	UTC	3998 m	340	30 kn			1019.5 mb	13..2 C	11 ..2 C				

DEPTH it		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/l	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	16.20	16.20	33.423	24.490	343.3	0.000	5.86	104.5	2.5	0.28	0.0	0.00	0.08	0.02	0	
1	A	16.20	16.20	33.423	24.490	343.3	0.003	5.86	104.5	2.5	0.28	0.0	0.00	0.08	0.02	1	302
10	ISL	16.22	16.22	33.422	24.485	344. 1	0.034	5.82	103.8	2.5	0.28	0.0	0.00	0.08	0.02	10	
15		16.23	16.23	33.421	24.482	344.5	0.052	5.79	103.3	2.5	0.28	0.0	0.00	0.08	0.02	1 5	204
20	ISL	16.23	16.23	33.422	24.483	344.6	0.069	5.79	103.3	2.5	0.28	0.0	0.00	0.08	0.02	20	
30		16.24	16.24	33.423	24.482	345.1	0.103									30	205
46		16.21	16.20	33.421	24.488	345.0	0.159	5.78	103. 1	2 .5	0.28	0.0	0.00	0.08	0.02	46	206
50	ISL	16.22	16.21	33.421	24.486	345.3	0.172	5.77	102.9	2.5	0.28	0.0	0.00	0.08	0.02	50	
59		16.23	16.22	33.420	24.483	345 .9	0.203	5.75	102.6	2 .5	0.28	0.0	0.00	0.08	0.02	59	208
75		16.00	15.99	33.356	24.487	346.0	0.259	5.78	102.6	2.5	0.28	0.0	0.00	0.10	0.03	75	209
85		15.49	15.48	33.295	24.554	339.9	0.293	5.84	102.6	2.5	0.29	0.0	0.00	0.15	0.04	85	210
92		15.23	15.22	33.308	24.621	333.6	0.317	5.79	101.2	2.6	0.30	0.0	0.00	0.20	0.08	92	211
100	ISL	15.03	15.01	33.315	24.671	329.2	0.343	5.77	100.4	2.7	0.31	0.0	0.00	0.24	0.11	100	
103		14.97	14.95	33.318	24.686	327.8	0.353	5.77	100.3	2 .8	0.31	0.0	0.00	0.26	0.13	103	212
1U		14.75	14.73	33.347	24.756	321 .4	0.389	5.72	99.0	3.0	0.34	0.1	0.03	0.34	0.23	1 14	213
124		14.26	14.24	33.390	24.893	308.5	0.420	5.63	96.5	3.1	0.38	0.7	0.07	0.31	0.23	125	214
125	ISL	14.22	14.20	33.399	24.909	307. 1	0.423	5.61	96. 1	3.2	0.39	0.8	0.07	0.30	0.23	126	
140		13.54	13.52	33.540	25.158	283.7	0.468	5.32	89.9	4.8	0.54	3.7	0.03	0.21	0.17	141	215
150	ISL	13.07	13.05	33.574	25.279	272.3	0.495	5.12	85 .7	5.9	0.65	5 .5	0.02	0.16	0.14	151	
170		11.91	11 .89	33.584	25.511	250.5	0.548	4.68	76.5	9.5	0.94	10.0	0.01	0.09	0.10	171	216
194		9.86	9.84	33.610	25.894	213.9	0.603	3.99	62.4	17.8	1 .47	18.1	0.00	0.01	0.03	195	217
200	ISL	9.56	9.54	33.637	25.965	207.2	0.616	3.90	60.6	19.5	1 .55	19.4	0.00	0.01	0.03	201	
228		8.76	8.74	33.788	26.211	184.1	0.671	3.54	54.1	26.3	1 .79	23.3	0.00	0.00	0.03	229	218
250	ISL	8.67	8.64	33.918	26.327	173.5	0.710	3.07	46.8	30.3	1 .95	25.4	0.00			251	
268		8.60	8.57	33.990	26.395	167.4	0.741	2.72	41 .4	33.2	2 .06	26.7	0.00			269	219
300	ISL	7.98	7.95	34.027	26.517	156.0	0.793	2.58	38.8	39.0	2.17	28.7	0.00			302	
319		7.58	7.55	34.030	26.578	150.3	0.822	2.54	37.8	42 .6	2.23	29.8	0.00			321	220
382		7.04	7.00	34.108	26.716	137.9	0.912	1 .61	23.7	54.7	2 .60	34.1	0.00			384	221
400	ISL	6.93	6.89	34.128	26.747	135.2	0.937	1.41	20.7	57.6	2.68	35 .0	0.00			402	
431		6.74	6.70	34.157	26.796	130.9	0.978	1.12	16.4	62.3	2.80	36.3	0.00			434	222
500	ISL	6.15	6.11	34.188	26.898	121.7	1 .065	0.75	10.8	72.7	2 .99	38.8	0.00			503	
515		6.02	5.97	34.195	26.920	119.6	1 .084	0.67	9.6	74.9	3.03	39.4	0.00			518	223

A) 1 METER NISKIN FAILED. WATER FOR SAMPLE DATA REPORTED HERE COLLECTED BY' BUCKET.

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29.1 N	117 46..3 W	12/04/95	1853	UTC	72 m	290	03 kn	290 01 *Ot*>	1	1017.0 mb	17..0 C	15.. 5 C	07m 06		7/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uM/l	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	14.97	14.97	33.344	24.703	323.1	0.000	5.91	102.8	6.5	0.27	0.1	0.01	3.62	0.61	0	
1	A	14.97	14.97	33.344	24.703	323.1	0.003	5.91	102.8	6.5	0.27	0.1	0.01	3.62	0. 61	1	215
4	A	14.25	14.25	33.362	24.870	307.3	0.013	5.58	95.6	7.0	0.34	0. 1	0.01	3.36	0. 84	4	216
9	A	12.96	12.96	33.450	25.201	275.9	0.027	4.60	76.8	8.2	0.75	3.3	0.18	6.39	1 .52	9	217
10	ISL	12.77	12.77	33.465	25.250	271 .2	0.030	4.41	73.4	8.9	0.86	4.9	0.24	6.27	1 .48	10	
U	A	12.21	12.21	33.516	25.398	257.3	0.041	3.78	62.2	11.8	1 .26	11.0	0.42	4.57	1.11	14	218
18	A	12.02	12.02	33.545	25.456	251 .8	0.051	3.53	57.8	14.2	1 .44	13.6	0.43	2 .27	0.73	18	219
20	ISL	11.88	11.88	33.564	25.497	247.9	0.056	3.47	56.7	15.1	1 .49	14.6	0.40	1 .57	0.60	20	
26	A	11.43	11.43	33.628	25.631	235.4	0.070	3.34	54. 1	17.2	1 .57	17.0	0.29	0.43	0.34	26	220
30	ISL	11.14	11.14	33.673	25.718	227.2	0.080	3.19	51 .3	18.6	1 .65	18.4	0.23	0.31	0.26	30	
36		10.78	10.78	33.734	25.830	216.7	0.093	2.96	47.3	20.4	1 .76	20.0	0.15	0.13	0.20	36	221
45		10.61	10.60	33.795	25.908	209.5	0.112	2.76	43.9	22.1	1 .83	21.3	0.10	0.05	0.09	45	222
50	ISL	10.42	10.41	33.836	25.973	203.4	0.122	2 .69	42 .6	23.2	1 .87	22.2	0.08	0.04	0.08	50	
54		10.27	10.26	33.873	26.027	198.3	0.130	2.63	41.6	24.3	1 .92	23.0	0.06	0.03	0.08	54	223
65		10.10	10.09	33.993	26.150	186.9	0. 152	2.25	35.5	27.9	2.13	24.7	0.05	0.04	0.13	65	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 90 30I

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 25. 1 N	117 53.9 W	12/04/95	1551	UTC	623 m	130	05 kn	130 01 *01.*	1	1014.9 mb	15 .5 C	14 .7 C	05m 08		7/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uN/l	P04 uH/l	N03 uM/ I	N02 uM/l	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	13.52	13.52	33.419	25.065	288.6	0.000	5 .67	95 .8	5.2	0.47	1 .1	0.07	9.93	2.06	0	
1		13.52	13.52	33.419	25.065	288.6	0.003	5.67	95 .8	5.2	0.47	1 .1	0.07	9.93	2 .06	1	202
9		13.28	13.28	33.451	25.138	281 .9	0.026	5.50	92.5	6.6	0.60	2.4	0.12	10.27	2 .39	9	203
10	ISL	13.23	13.23	33.455	25.151	280.7	0.029	5.47	91 .9	6.9	0.62	2.8	0.13	10.07	2 .35	10	
20		12.47	12.47	33.516	25.348	262.2	0.056	4 .81	79.5	11.1	0.97	8.6	0.21	8.06	1 .49	20	204
30		11 .09	11 .09	33.654	25.712	227.7	0.080	3.36	54 .0	18.3	1 .55	17.7	0.16	0.29	0.41	30	205
40		10.93	10.93	33.720	25.793	220.3	0. 103	3.05	48.9	20.0	1 .68	19.6	0.07	0.14	0.17	40	206
49		10.77	10.76	33.766	25.857	214.4	0.122	2 .86	45.7	21.3	1 .80	20.6	0.08	0.09	0.15	49	207
50	ISL	10.76	10.75	33.770	25.862	214.0	0.124	2.85	45.5	21.4	1 .80	20.7	0.08	0.09	0.15	50	
60		10.61	10.60	33.798	25.910	209.6	0.145	2 .80	44.6	22.4	1 .82	21 .5	0.04	0.06	0.12	60	208
70		10.21	10.20	33.802	25.983	202.9	0.166	2.91	45.9	23.6	1 .84	22 . 1	0.02	0.05	0.11	70	209
75	ISL	10.19	10.18	33.838	26.014	200.0	0.176	2.82	44.5	24.3	1 .89	22.6	0.02	0.04	0.10	75	
84		10.14	10.13	33.900	26.071	194.8	0. 194	2.58	40.7	25.7	1 .98	23.6	0.02	0.03	0.08	84	210
99		10.00	9.99	33.994	26.169	185.8	0.222	2.34	36.8	28.0	2.08	25.1	0.02	0.03	0.07	100	211
100	ISL	9.99	9.98	33.997	26.173	185.5	0.224	2.33	36.6	28. 1	2.08	25.2	0.02	0.03	0.07	101	
119		9.75	9.74	34.042	26.249	178.7	0.259	2.21	34.6	30.2	2.15	26.0	0.01	0.02	0.08	120	212
125	ISL	9.71	9.70	34.070	26.277	176. 1	0.270	2.14	33.4	31 .0	2.19	26.4	0.01	0.02	0.07	126	
138		9.62	9.60	34.130	26.339	170. 5	0.292	1 .97	30.7	32.9	2.27	27.3	0.01	0.02	0.06	139	213
150	ISL	9.51	9.49	34.163	26.383	166. 5	0.312	1 .84	28.6	34.5	2 .32	27.9	0.01	0.02	0.06	151	
168		9.32	9.30	34.192	26.437	161.7	0.342	1 .69	26.2	36.6	2.38	28.7	0.01	0.01	0.06	169	214
197		9.01	8.99	34.210	26.502	156.1	0.388	1 .62	24.9	39.3	2 .44	29.5	0.01	0.01	0.07	198	215
200	ISL	8.97	8.95	34.210	26.508	155.5	0.393	1 .61	24.8	39.7	2.45	29.6	0.01			201	
228		8.51	8.49	34 .211	26.581	149.0	0.435	1 . 50	22.8	43.7	2.55	30.9	0.01			229	216
250	ISL	8.14	8.11	34.207	26.634	144.2	0.467	1 .39	21.0	47.5	2.62	32.1	0.00			252	
268		7.86	7.83	34.204	26.674	140.6	0.493	1 .29	19.3	50.5	2 .68	33.1	0.00			270	217
300	ISL	7.53	7.50	34.210	26.726	135.9	0. 537	1.13	16.8	54.5	2.77	34 .3	0.00			302	
319		7.38	7.35	34.215	26.752	133.8	0. 563	1 .04	15.4	56.7	2.82	34.9	0.00			321	218
381		6.89	6.85	34.235	26.836	126.4	0.644	0.75	11.0	64.6	2.97	36.8	0.00			384	219
400	ISL	6.74	6.70	34 .248	26.867	123.7	0.667	0.65	9.5	67.3	3.02	37.5	0.00			403	
438		6.44	6.40	34.275	26.928	118.2	0.713	0.48	7.0	72.7	3.10	38.8	0.00			441	220
500	ISL	6.04	6.00	34.311	27.009	111.1	0.784	0. 33	4.7	80.7	3.19	39.8	0.00			504	
510		5 .98	5 .94	34.317	27.021	110.0	0.795	0. 30	4.3	82.0	3.21	40.0	0.00			514	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 35

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 15.2 N	118 15 0 W	12/04/95	1159 UTC	318 in	260 02 kn			1014.5 mb	15 1 C	14 9 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.26	15.26	33.305	24.609	332.0	0.000	6.07	106.2	4.6	0.32	0.2	0.00	0.76	0.13	0	
1		15.26	15.26	33.305	24.610	332 .0	0.003	6.07	106.2	4.6	0.32	0.2	0.00	0.76	0.13	1	204
10		15.23	15.23	33.307	24.618	331 .4	0.033	6.06	105.9	4.6	0.29	0.2	0. 00	0.70	0.13	10	209
18		15.16	15.16	33.299	24.627	330.8	0.060	6.05	105.6	4 .7	0.29	0.2	0.00	0.81	0.21	18	210
20	ISL	15.14	15.14	33.299	24.632	330.4	0.066	6.03	105.2	4 .7	0.29	0.2	0. 00	0.82	0.22	20	
29		14.77	14.77	33.313	24.723	322.0	0.096	5.81	100.6	4.9	0.36	0.2	0.01	0. 86	0.27	29	211
30	ISL	14.66	14.66	33.316	24.749	319.6	0.099	5 .76	99.5	5 .0	0.37	0.2	0.01	0.86	0.27	30	
39		13.57	13.56	33.364	25.013	294 .6	0.126	5.24	88.6	6.0	0.54	0.3	0.08	0.89	0.28	39	212
50		12.69	12.68	33.490	25.286	268.9	0.157	4.71	78.2	8.7	0.90	8.0	0.21	0.32	0.24	50	213
60		11.75	11.74	33.542	25.505	248.2	0.183	4 .29	69.9	11.4	1.12	11.5	0.08	0.20	0.17	60	214
68		11.46	11.45	33.596	25 .601	239.3	0.203	3.90	63.1	14.6	1 .33	14.6	0.03	0.10	0.13	68	215
75	ISL	11.24	11.23	33.632	25.669	232.9	0.219	3. 70	59.6	16.4	1 .44	16.3	0.03	0.06	0.10	75	
84		10.95	10.94	33.675	25.755	224.9	0.240	3.53	56.5	18.3	1.55	17.9	0.02	0.04	0.07	84	216
99		10.36	10.35	33.770	25.933	208.3	0.272	3.18	50.3	21 .9	1 .75	20.7	0.01	0.02	0.06	99	217
100	ISL	10.32	10.31	33.776	25.944	207.2	0.275	3.16	50.0	22 .1	1 .76	20.9	0.01	0.02	0.06	100	
118		9.81	9.80	33.879	26.111	191.7	0.310	2 .83	44 .3	26 .1	1 .94	23.6	0.01	0.01	0.04	1 19	218
125	ISL	9.81	9.80	33.926	26.148	188.3	0.324	2 .68	41.9	27.1	2.00	24.3	0.01	0.01	0.04	126	
148		9.81	9. 79	34.043	26.240	180.1	0.366	2.22	34.8	30.1	2.15	26.0	0.01	0.01	0.03	149	219
150	ISL	9.78	9.76	34.052	26.252	179.1	0.370	2.19	34.3	30.5	2.16	26.2	0.01	0.01	0.03	151	
178		9.27	9.25	34.148	26.411	164.4	0.418	1 .87	29.0	35.4	2 .33	28.2	0.02	0.00	0.03	179	220
200	ISL	8. 95	8 .93	34.181	26.489	157.4	0.453	1 .73	26.6	38.5	2.39	29.3	0.01	0.00	0.02	201	
208		8.84	8.82	34.187	26.511	155.4	0.466	1 .69	25.9	39.6	2.41	29. 6	0.01	0.00	0.02	209	221
237		8.39	8.37	34.193	26.585	148.7	0.510	1 .56	23.7	43.9	2.53	31.2	0.01			238	222
250	ISL	8.20	8.17	34.193	26.614	146.1	0.529	1 .50	22 .7	46 .1	2.57	31.8	0.01			251	
269		7. 94	7.91	34.194	26.654	142.5	0.556	1 .40	21.0	49.2	2 .62	32 .5	0.01			271	223
300	ISL	7.62	7.59	34.200	26.706	138.0	0.600	1.25	18.6	53.6	2 .72	33.8	0. 02			302	
301		7.61	7.58	34.200	26.707	137.9	0.601	1.24	18.5	53. 7	2 .72	33. 8	0.02			303	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 37

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 11.2 N	118 23 4 W	12/04/95	0922 UTC	1177 m	290 05 kn			1014.7 mb	16 0 C	15 0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uH/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.58	15.58	33.313	24.545	338. 1	0 ,000	6.03	106.1	4.7	0.31	0.4	0.00	0.41	0.11	0	
1		15.58	15.58	33.313	24.545	338.1	0.003	6.03	106.1	4.7	0.31	0.4	0.00	0.41	0.11	1	202
10		15.21	15.21	33.313	24.627	330.6	0.033	6.02	105.2	4.7	0.31	0.3	0.00	1 .02	0.19	10	207
20		14.96	14.96	33.306	24.676	326.2	0.066	5 .98	104.0	4.7	0.31	0.3	0.00	1 .02	0.25	20	20!
29		14.64	14.64	33.305	24.745	320.0	0.095	5.85	101.0	4 .8	0.32	0.3	0.00	0 .75	0.25	29	209
30	ISL	14.57	14.57	33.303	24.758	318.7	0.099	5 .84	100. 7	4 .8	0.33	0.3	0.00	0.75	0.26	30	
39		13.81	13.80	33.301	24.915	303.9	0.127	5 .65	95 .9	4.9	0.45	0.5	0.04	0.81	0.31	39	210
50		12 .80	12 .79	33.390	25.187	278.3	0.159	5 .08	84 .5	7.4	0.76	5 .6	0.23	0 .57	0.32	50	211
58		12.49	12.48	33.494	25 .328	265.1	0. 180	4.64	76.7	9.7	0.94	9. 1	0.14	0.23	0.22	58	212
69		11.95	11.94	33.530	25 .459	252.8	0.209	4 .62	75 .5	10.4	0.99	10.2	0.10	0.16	0.23	69	213
75	ISL	11.60	11.59	33.540	25.532	246.0	0.224	4 .42	71 .7	12.1	1.12	12.1	0.07	0.12	0.20	75	
84		11.08	11.07	33.574	25.653	234.6	0.245	4 .00	64.2	15.5	1 .36	15.4	0.04	0.07	0.13	84	214
99		10.46	10.45	33.738	25.890	212.4	0.279	3.29	52 .2	21.0	1 .70	19.9	0.01	0.03	0.07	99	215
100	ISL	10.42	10.41	33.747	25.904	211.0	0.281	3.26	51.6	21.3	1 .72	20.2	0.01	0.03	0.07	100	
117		9.83	9.82	33.877	26.106	192 .1	0.315	2 .88	45 .1	26.2	1 .94	23.5	0.01	0.01	0.04	1 18	216
125	ISL	9.83	9.82	33.944	26.159	187.3	0.331	2 .67	41.8	27.6	2 .01	24.4	0.01	0.01	0.04	126	
138		9.82	9.80	34.017	26.218	182 .0	0.355	2.39	37.4	29.3	2.10	25.3	0.01	0.01	0.03	139	217
150	ISL	9.62	9.60	34.030	26.261	178.1	0.376	2.39	37.3	30. 6	2.12	25.9	0.01	0.01	0.03	151	
168		9.26	9.24	34.031	26.321	172.7	0.408	2 .40	37. 1	32.4	2.14	26.6	0.00	0.01	0.04	169	21!
198		9.00	8.98	34.128	26.439	162 .0	0.458	1 .98	30.5	36.8	2.31	28.5	0.00	0.00	0.04	199	219
200	ISL	8.99	8.97	34. 132	26.444	161.6	0.461	1 .97	30.3	37.0	2.32	28.6	0. 00			201	
227		8. 78	8.76	34.172	26.509	155.9	0. 504	1 .85	28.3	39.7	2.41	29.6	0.00			228	220
250	ISL	8.38	8.35	34.185	26.581	149.3	0.539	1 .64	24.9	44. 1	2.50	31 .0	0.00			251	
268		8.06	8.03	34.189	26.632	144.6	0.566	1 .48	22 .3	47.6	2.57	32 .1	0.00			270	221
300	ISL	7.78	7.75	34.195	26.679	140.6	0.611	1 .34	20. 1	51 .2	2.65	33.2	0.00			302	
316		7.67	7. 64	34.197	26.696	139.2	0.634	1 .28	19.1	52.7	2.69	33.6	0.00			318	222
372		7.14	7.10	34.214	26.785	131.3	0.709	0. 96	14.2	60.3	2.85	35 .8	0.00			374	223
400	ISL	6.95	6. 91	34.228	26.823	128.1	0.746	0.85	12.5	63.5	2 .91	36.6	0.00			403	
428		6.77	6.73	34.243	26.859	124.9	0.781	0.73	10.7	66.7	2.97	37.4	0.00			431	224

RV NEW HORIZON CALCOFI CRUISE 950< STATION 90 45

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
32 55.1 N	118 56.1 W	12/04/95	0434 UTC	1695 in	330 05 kn			1014.7 mb	15..5 C	14..0 C				

DEPTH m	TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uM/I	P04 uM/L	N03 uM/I	N02 UM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.95	15.95	33.267	24.427	349.3	0.000	5.83	103.4	3.7	0.33	0.2	0.00	0.16	0.03	0	
1	15.95	15.95	33.267	24.427	349.4	0.003	5.83	103.4	3.7	0.33	0.2	0.00	0.16	0.03	1	202
10 ISL	15.58	15.58	33.264	24.508	342.0	0.035	5.86	103.1	3.7	0.33	0.1	0.00	0.25	0.04	10	
14	15.36	15 .36	33.262	24.553	337.6	0.048	5 .88	103.0	3.7	0.33	0. 1	0.00	0.29	0.04	14	204
20 ISL	15.33	15.33	33.261	24.561	337.2	0.068	5 .88	103.0	3.7	0.33	0.1	0.00	0.26	0.04	20	
30	15.27	15.27	33.260	24.574	336.3	0.102	5.87	102.6	3.6	0.33	0.1	0.00	0.20	0.05	30	205
44	15.22	15.21	33.259	24.584	335.7	0.149	5.87	102.5	3.6	0.33	0. 1	0.00	0.23	0.09	44	206
50 ISL	15 .00	14.99	33.272	24.642	330.3	0.169	5.84	101 .6	3.8	0.34	0.2	0.01	0.38	0.16	50	
55	14.63	14.62	33.295	24.740	321 .2	0.185	5.82	100.5	4. 1	0.35	0.2	0.01	0.52 A	0.22 A	55	207
64	13.34	13.33	33.392	25.082	288.7	0.213	5.60	94.2	5.2	0.49	1 .4	0.11	0.68	0.32	64	208
75	12.77	12 .76	33.473	25.258	272.2	0.244	4.91	81 .7	8. 1	0.80	6.8	0.22	0.47	0.31	75	209
84	12.29	12.28	33.510	25.380	260.8	0.268	4.61	75.9	10.2	0.98	9.5	0.07	0.29	0.28	84	210
94	11 .63	11 .62	33.551	25.536	246. 1	0.293	4 .42	71 .8	11.9	1 .10	11.8	0.03	0.18	0.20	94	21 1
100 ISL	11.36	11 .35	33.567	25.598	240.3	0.308	4.34	70. 1	12.9	1.16	12.8	0.03	0.14	0.18	100	
108	11 .08	11 .07	33.585	25.662	234.3	0.327	4.24	68. 1	14.1	1 .24	13.9	0.02	0.11	0.16	108	212
124	10.62	10.61	33.624	25.774	224.0	0.363	3.96	63.0	16.7	1 .39	16.3	0.01	0.06	0.09	125	213
125 ISL	10.56	10.55	33.629	25.789	222.6	0.366	3.94	62 .6	17.0	1 .41	16.6	0.01	0.06	0.09	126	
143	9.54	9.52	33.736	26.044	198.5	0.403	3.53	54.8	23.3	1 .71	21.4	0.01	0.01	0.04	144	214
150 ISL	9.33	9.31	33.771	26.106	192.7	0.417	3.41	52.7	24.9	1 .78	22.4	0.01	0.01	0.04	151	
168	9.02	9.00	33.857	26.223	181.9	0.451	3.13	48. 1	28.2	1 .91	24.3	0.01	0.00	0.03	169	215
197	8.72	8.70	34.027	26.404	165.2	0.501	2.53	38.7	34.6	2.15	27.2	0.00	0.00	0.03	198	216
200 ISL	8.71	8.69	34.041	26.416	164.1	0.506	2.47	37.7	35.1	2.17	27.4	0.00			201	
228	8.61	8. 59	34.136	26.507	156.0	0.551	2.00	30.5	39.7	2 .34	29.3	0.00			229	217
250 ISL	8.30	8.27	34.165	26.577	149.6	0.585	1 .74	26.4	44.2	2.47	30.8	0.00			251	
267	8.00	7.97	34.174	26.629	144.9	0.610	1 .57	23.6	47.8	2.56	32.0	0.00			269	218
300 ISL	7.49	7.46	34.195	26.720	136.5	0.656	1 .25	18.6	54.6	2.72	34.1	0.00			302	
316	7.28	7.25	34.204	26.757	133.1	0.678	1.12	16.6	57.5	2.79	35.0	0.00			318	219
376	6.93	6.89	34 .240	26.835	126.5	0.755	0.77	11.3	64.6	2.95	36.9	0.00			378	220
400 ISL	6.78	6.74	34.250	26.863	124.1	0.786	0.68	9.9	67.4	3.00	37.5	0.00			403	
436	6.55	6.51	34.264	26.905	120.5	0.830	0.57	8.3	71 .3	3.06	38.4	0.00			439	221
500 ISL	6.21	6.17	34.293	26.973	114.7	0.905	0.43	6.2	77.4	3.14	39.6	0.00			503	
520	6.11	6.06	34.302	26.993	112.9	0.928	0.38	5 .5	79.3	3.17	40.0	0.00			524	222

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGHENT CALCULATED WITH ASSUMED ACID RATIO :INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 53

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 39.3 N	119 29.2 W	11/04/95	2311 UTC	1320 in	320 14 kn	320 04 05	0	1015.0 mb	16..3 C	14 .8 C	23m 02		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/L	PRES db	SAMP
0 ISL	15.37	15.37	33.227	24.525	340.0	0.000	5 .86	102.7	2.4	0.33	0.3	0.00	0.23	0.05	0	
1	15.37	15.37	33.227	24.525	340.0	0.003	5 .86	102.7	2.4	0.33	0.3	0.00	0.23	0.05	1	203
10 ISL	15.17	15.17	33.216	24.561	336.9	0.034	5.85	102 . 1	2.3	0.33	0.3	0.00	0.26	0.06	10	
15	15.03	15.03	33.210	24.587	334.5	0.051	5.85	101.8	2 .3	0.33	0.3	0.00	0.28	0.06	15	205
20 ISL	1 5 .02	15 .02	33.218	24.595	333.9	0.067	5 .86	101.9	2 .3	0.33	0.3	0.00	0.30	0.06	20	
29	15.00	15 .00	33.220	24.602	333.6	0.097	5.88	102.2	2.4	0.33	0.2	0.00	0.32	0.06	29	206
30 ISL	15 .00	15.00	33.220	24.602	333.6	0.101	5.88	102.2	2 .4	0.33	0.2	0.00	0.32	0.06	30	
43	14 .97	14.96	33.221	24.609	333.3	0.144	5 .90	102 .5	2 .4	0.33	0.2	0.00	0.31	0.08	43	207
50 ISL	14.86	14.85	33.220	24.632	331 .3	0. 167	5 . 89	102 . 1	2.3	0.33	0.2	0.00	0.34	0.09	50	
54	14.80	14.79	33.220	24.646	330. 1	0.181	5 .89	102 .0	2.3	0.33	0.2	0.00	0.35	0.10	54	208
64	12.56	12.55	33.369	25.218	275.7	0.211	5.26	87.0	5 .7	0.68	5.2	0.13	0.75	0.57	64	209
74	12.25	12.24	33.419	25.316	266.6	0.238	4.80	78.9	8.3	0.90	8.8	0.06	0.42	0.35	74	210
75 ISL	12.23	12.22	33.421	25.322	266.1	0.241	4.78	78.6	8.4	0.91	8.9	0.06	0.41	0.35	75	
84	11.93	11 .92	33.442	25.395	259.3	0.264	4.65	76.0	9.5	0.99	10.2	0.05	0.32	0.32	84	211
94	11.17	11.16	33.496	25.577	242 .2	0.289	4.26	68.5	12.9	1 .22	14.1	0.03	0.15	0.15	94	212
100 ISL	10.81	10.80	33.527	25.665	233.8	0.304	4.11	65.6	14.7	1 .33	15.8	0.02	0.09	0.11	100	
108	10.36	10.35	33.572	25.778	223.2	0.322	3.95	62 .4	17.1	1 .45	17.7	0.02	0.05	0.09	109	213
124	9.30	9.29	33.687	26.045	198.0	0.356	3.65	56.4	22.4	1 .68	21 .5	0.02	0.01	0.05	125	214
125 ISL	9.25	9.24	33.692	26.057	196.8	0.358	3.65	56.3	22.6	1 .69	21 .6	0.02	0.01	0.05	126	
143	8.71	8.69	33.766	26.200	183.5	0.392	3.62	55.2	25.3	1 .77	23.0	0.02	0.00	0.03	144	215
150 ISL	8.64	8.62	33.792	26.231	180.6	0.405	3.57	54 .4	26.2	1 .80	23.4	0.02	0.00	0.03	151	
169	8.55	8.53	33.851	26.292	175.2	0.438	3.42	52.0	28.4	1 .85	24.3	0.01	0.00	0.03	170	216
197	8.23	8.21	33.897	26.377	167.6	0.486	3.42	51.6	30.9	1 .89	25.2	0.01	0.00	0.03	198	217
200 ISL	8.17	8.15	33.907	26.394	166.0	0.491	3.36	50.7	31 .8	1 .91	25 .6	0.01			201	
227	7.61	7.59	34 .000	26.549	151.5	0.534	2 .74	40.8	40.7	2.16	29.2	0.01			228	218
250 ISL	7.40	7.38	34.043	26.613	145.7	0.568	2.35	34 .8	45 .4	2.31	31 .0	0.01			251	
268	7.31	7.28	34.063	26.641	143.3	0.594	2.10	31 .1	48. 1	2 .40	32.0	0.01			270	219
300 ISL	7.13	7.10	34.093	26.691	139.1	0.640	1 .77	26. 1	52 .6	2.53	33.6	0.01			302	
318	7.03	7.00	34.108	26.716	136.8	0.664	1.61	23. 7	55.0	2 .60	34.3	0.01			320	220
378	6.69	6.66	34.177	26.817	128.0	0.744	1 .02	14.9	64 . 1	2.84	36.7	0.00			380	221
400 ISL	6.51	6.47	34.185	26.848	125.3	0.772	0.89	12.9	67.2	2 .90	37.6	0.00			403	
437	6.22	6.18	34.199	26.897	120.9	0.817	0.73	10.5	71 .9	2.98	38.8	0.00			440	222
500 ISL	6.04	6.00	34.269	26.976	114.2	0.891	0.47	6.8	78.0	3.11	39.8	0.00			503	
515	6.00	5.95	34.286	26.994	112.6	0.908	0.41	5 .9	79.4	3.14	40. 1	0.00			519	223

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 6Cl

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 25.4 N	119 57.6 W	11/04/95	1812	UTC	875 m	340	15 kn	340 04 04	1	1016.8 mb	16.3 C	15.0 C	26m	02	1/8 CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.24	15.24	33.257	24.577	335.0	0.000	5.85	102.2	3.0	0.28	0.1	0.00	0.23	0.06	0	
1	A	15.24	15.24	33.257	24.577	335.1	0.003	5.85	102.2	3.0	0.28	0.1	0.00	0.23	0.06	1	203
10	ISL	15.19	15.19	33.254	24.586	334.5	0.033	5.86	102.3	2.9	0.29	0.1	0.00	0.23	0.05	10	
14	A	15.16	15.16	33.253	24.592	334.1	0.047	5.86	102.2	2.9	0.29	0.1	0.00	0.23	0.05	14	205
20	ISL	15.14	15.14	33.252	24.596	333.9	0.067	5.86	102.2	2.9	0.29	0.1	0.00	0.24	0.05	20	
30	ISL	15.13	15.13	33.251	24.597	334.0	0.100	5.86	102.2	2.9	0.29	0.1	0.00	0.25	0.06	30	
33	A	15.13	15.13	33.251	24.597	334.1	0.110	5.86	102.2	2.9	0.29	0.1	0.00	0.25	0.06	33	206
41		15.12	15.11	33.250	24.599	334.2	0.137	5.85	102.0	2.9	0.29	0.1	0.00	0.24	0.07	41	207
50	A	15.11	15.10	33.254	24.605	333.9	0.167	5.84	101.8	2.9	0.29	0.1	0.00	0.27	0.09	50	208
59		14.37	14.36	33.269	24.775	317.9	0.196	5.87	100.8	3.3	0.32	0.1	0.00	0.52	0.22	59	209
67	A	13.52	13.51	33.381	25.037	293.1	0.221	5.59	94.4	4.5	0.45	1.5	0.11	1.05	0.62	67	210
75	ISL	13.24	13.23	33.428	25.130	284.5	0.244	5.40	90.7	5.4	0.54	3.3	0.12	0.75	0.51	75	
76		13.21	13.20	33.430	25.138	283.8	0.247	5.38	90.3	5.5	0.55	3.6	0.12	0.69	0.50	76	211
85		12.35	12.34	33.449	25.321	266.4	0.272	5.02	82.7	7.6	0.75	6.9	0.07	0.37	0.32	85	212
94	A	11.92	11.91	33.472	25.420	257.1	0.295	4.66	76.1	10.2	0.96	10.2	0.03	0.22	0.20	94	213
100	ISL	11.48	11.47	33.504	25.527	247.1	0.310	4.38	70.9	12.5	1.12	12.6	0.02	0.15	0.14	100	
109		10.82	10.81	33.559	25.688	231.8	0.332	3.99	63.7	15.8	1.34	15.9	0.01	0.07	0.08	109	214
124		10.25	10.24	33.609	25.826	218.9	0.366	3.69	58.2	18.8	1.53	18.6	0.01	0.03	0.06	125	215
125	ISL	10.22	10.21	33.615	25.836	218.0	0.368	3.66	57.7	19.1	1.54	18.8	0.01	0.03	0.06	126	
143		9.74	9.72	33.719	25.998	202.9	0.406	3.32	51.8	23.3	1.74	21.7	0.00	0.01	0.04	144	216
150	ISL	9.49	9.47	33.732	26.050	198.1	0.420	3.40	52.8	23.9	1.74	21.9	0.00	0.01	0.04	151	
169		8.85	8.83	33.752	26.168	187.1	0.456	3.72	56.9	25.0	1.73	22.4	0.00	0.00	0.03	170	217
200		8.26	8.24	33.862	26.345	170.6	0.512	3.56	53.8	29.7	1.85	24.5	0.00	0.00	0.02	201	218
228		7.91	7.89	33.925	26.446	161.4	0.558	3.43	51.4	33.6	1.93	25.9	0.00			229	219
250	ISL	7.66	7.64	33.957	26.508	155.8	0.593	3.25	48.4	36.9	2.01	27.1	0.00			251	
268		7.45	7.42	33.977	26.554	151.6	0.621	3.05	45.3	40.0	2.09	28.3	0.00			270	220
300	ISL	7.06	7.03	34.004	26.630	144.7	0.668	2.57	37.8	47.0	2.28	31.1	0.00			302	
317		6.86	6.83	34.016	26.667	141.4	0.693	2.30	33.7	50.9	2.39	32.6	0.00			319	221
378		6.28	6.25	34.064	26.782	131.0	0.776	1.49	21.5	63.2	2.72	36.7	0.00			380	222
400	ISL	6.12	6.08	34.084	26.818	127.7	0.804	1.26	18.1	67.2	2.82	37.8	0.00			403	
437		5.89	5.85	34.124	26.879	122.2	0.850	0.93	13.3	73.3	2.96	39.3	0.00			440	223
500	ISL	5.68	5.64	34.217	26.979	113.4	0.924	0.53	7.6	81.6	3.11	40.8	0.00			503	
515		5.63	5.59	34.239	27.003	111.3	0.941	0.44	6.3	83.6	3.14	41.1	0.00			518	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 70l

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 5.3 N	120 38.4 W	11/04/95	1125	UTC	3818 m	330	18 kn			1014.5 mb	14.5 C	13.3 C			

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uH/l	P04 UM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.31	15.31	33.309	24.602	332.7	0.000	5.84	102.2	3.1	0.32	0.1	0.00	0.39	0.08	0	
1		15.31	15.31	33.309	24.602	332.7	0.003	5.84	102.2	3.1	0.32	0.1	0.00	0.39	0.08	1	201
10	ISL	15.32	15.32	33.307	24.598	333.3	0.033	5.85	102.4	3.1	0.32	0.1	0.00	0.36	0.07	10	
15		15.32	15.32	33.305	24.597	333.6	0.050	5.85	102.4	3.1	0.32	0.1	0.00	0.33	0.07	15	202
20	ISL	15.31	15.31	33.305	24.599	333.5	0.067	5.85	102.4	3.1	0.32	0.1	0.00	0.31	0.06	20	
30		15.29	15.29	33.306	24.605	333.3	0.100	5.85	102.4	3.1	0.32	0.1	0.00	0.29	0.06	30	203
44		15.26	15.25	33.304	24.610	333.2	0.147	5.86	102.5	3.1	0.32	0.1	0.00	0.33	0.08	44	204
50	ISL	15.22	15.21	33.303	24.618	332.6	0.167	5.84	102.0	3.1	0.32	0.1	0.00	0.34	0.09	50	
55		15.19	15.18	33.302	24.624	332.2	0.183	5.83	101.8	3.1	0.32	0.1	0.00	0.35	0.11	55	205
65		14.59	14.58	33.314	24.763	319.2	0.216	5.50	94.9	4.2	0.42	0.1	0.06	0.48	0.21	65	206
75		13.07	13.06	33.391	25.135	283.9	0.246	5.37	89.8	5.5	0.58	3.7	0.20	0.34	0.25	75	207
83		12.51	12.50	33.407	25.257	272.4	0.268	4.98	82.3	8.0	0.81	7.4	0.18	0.27	0.20	83	208
92		12.26	12.25	33.534	25.404	258.7	0.292	5.08	83.6	7.6	0.73	7.0	0.07	0.19	0.23	92	209
100	ISL	11.60	11.59	33.528	25.523	247.4	0.312	4.68	76.0	10.7	0.97	10.6	0.04	0.14	0.17	100	
107		10.97	10.96	33.504	25.619	238.4	0.329	4.24	67.9	14.3	1.25	14.6	0.02	0.10	0.10	107	210
122		10.32	10.31	33.586	25.796	221.7	0.364	3.87	61.1	18.6	1.51	18.5	0.01	0.05	0.07	123	211
125	ISL	10.21	10.20	33.604	25.829	218.7	0.371	3.79	59.7	19.3	1.55	19.1	0.01	0.04	0.06	126	
145		9.59	9.57	33.725	26.028	200.1	0.412	3.35	52.1	23.7	1.75	22.1	0.01	0.01	0.03	146	212
150	ISL	9.43	9.41	33.752	26.075	195.7	0.422	3.28	50.8	24.8	1.79	22.7	0.01	0.01	0.03	151	
170		8.87	8.85	33.848	26.240	180.3	0.460	3.07	47.0	29.0	1.94	24.9	0.01	0.00	0.03	171	213
198		8.53	8.51	33.949	26.372	168.2	0.509	2.83	43.0	33.3	2.06	26.8	0.01	0.00	0.04	199	214
200	ISL	8.50	8.48	33.956	26.382	167.2	0.512	2.80	42.6	33.7	2.07	27.0	0.01			201	
225		8.15	8.13	34.025	26.490	157.4	0.553	2.49	37.6	38.7	2.21	28.8	0.00			226	215
250	ISL	7.67	7.65	34.021	26.557	151.2	0.591	2.58	38.5	42.0	2.23	29.6	0.00			251	
267		7.34	7.31	34.005	26.592	148.0	0.617	2.67	39.5	44.1	2.24	30.1	0.00			269	216
300	ISL	6.85	6.82	34.013	26.666	141.2	0.664	2.33	34.1	50.8	2.40	32.5	0.00			302	
319		6.63	6.60	34.025	26.705	137.6	0.691	2.05	29.8	55.0	2.51	34.0	0.00			321	217
375		6.19	6.16	34.078	26.804	128.7	0.765	1.38	19.9	65.6	2.77	37.4	0.00			377	218
400	ISL	6.03	6.00	34.098	26.841	125.5	0.797	1.16	16.7	69.7	2.86	38.4	0.00			403	
438		5.83	5.79	34.131	26.892	121.0	0.844	0.88	12.6	75.3	2.97	39.6	0.00			441	219
500	ISL	5.62	5.58	34.214	26.984	112.9	0.916	0.53	7.5	82.6	3.12	41.0	0.00			503	
516		5.57	5.53	34.235	27.007	110.9	0.934	0.44	6.3	84.5	3.16	41.3	0.00			519	220

RV NEW HORIZON CALCOFI CRUISE 9504 (STATION 90 80

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
31 45.3 N	121 18..9 W	11/04/95	0535 UTC	3712 m	340	17 kn			1017.3 mb	14 ..9 C	13..1 C				

DEPTH in		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 uM/ I	N02 UN/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	15.32	15.32	33.257	24.559	336.7	0.000	5.96	104.3	3.9	0.31	0.0	0.00	0.50	0.09	0	
3		15.32	15.32	33.257	24.560	336.8	0.010	5.96	104.3	3.9	0.31	0.0	0.00	0.50	0.09	3	202
10	ISL	15.32	15.32	33.257	24.560	337.0	0.034	5.93	103.8	3.9	0.31	0.0	0.00	0.48	0.11	10	
15		15.32	15.32	33.258	24.561	337.1	0.051	5.90	103.3	3.9	0.31	0.0	0.00	0.47	0.13	15	203
20	ISL	15.32	15.32	33.258	24.561	337.2	0.067	5.91	103.5	3.9	0.31	0.0	0.00	0.48	0.12	20	
29		15.32	15.32	33.258	24.561	337.5	0.098	5.93	103.8	3.9	0.31	0.0	0.00	0.50	0.10	29	204
30	ISL	15.32	15.32	33.258	24.561	337.5	0.101	5.93	103.8	3.9	0.31	0.0	0.00	0.50	0.10	30	
45		15.32	15.31	33.258	24.562	337.9	0.152	5.94	104.0	3.9	0.31	0.0	0.00	0.55	0.10	45	205
50	ISL	15.29	15.28	33.262	24.572	337.1	0.169	5.93	103.7	3.9	0.31	0.0	0.00	0.65	0.11	50	
54		15.27	15.26	33.266	24.579	336.5	0.182	5.90	103.2	3.9	0.31	0.0	0.00	0.71	0.12	54	206
64		14.66	14.65	33.265	24.710	324.2	0.215	5.73	99.0	3.9	0.35	0.0	0.01	0.57	0.27	64	207
74		13.51	13.50	33.364	25.026	294.3	0.246	5.23	88.3	5.9	0.61	2.2	0.31	0.55	0.27	74	208
75	ISL	13.43	13.42	33.373	25.049	292.2	0.249	5.19	87.5	6.1	0.64	2.7	0.30	0.53	0.27	75	
85		12.7*	12.73	33.441	25.239	274.3	0.277	4.82	80.1	8.6	0.87	7.7	0.11	0.29	0.22	85	209
95		11.84	11.83	33.448	25.417	257.5	0.304	4.55	74.2	11.3	1.06	11.1	0.05	0.14	0.15	95	210
100	ISL	11.56	11.55	33.465	25.482	251.4	0.317	4.44	72.0	12.4	1.14	12.4	0.04	0.12	0.14	100	
108		11.19	11.18	33.496	25.573	242.8	0.336	4.31	69.3	13.8	1.23	13.9	0.03	0.10	0.12	108	211
125	ISL	10.27	10.26	33.540	25.769	224.4	0.376	4.37	68.9	15.7	1.31	15.6	0.01	0.04	0.06	126	
126		10.22	10.21	33.543	25.780	223.4	0.378	4.37	68.8	15.8	1.32	15.7	0.01	0.04	0.06	127	212
144		9.58	9.56	33.677	25.992	203.5	0.417	3.59	55.8	22.4	1.68	20.9	0.01	0.01	0.03	145	213
150	ISL	9.44	9.42	33.721	26.049	198.1	0.429	3.42	53.0	24.1	1.76	22.0	0.01	0.01	0.03	151	
169		9.10	9.08	33.840	26.197	184.4	0.465	3.06	47.1	28.1	1.93	24.4	0.01	0.01	0.03	170	214
197		8.73	8.71	33.933	26.329	172.3	0.515	2.87	43.8	31.9	2.03	26.2	0.00	0.00	0.03	198	215
200	ISL	8.68	8.66	33.939	26.341	171.2	0.520	2.86	43.6	32.3	2.04	26.3	0.00			201	
227		8.22	8.20	33.985	26.448	161.4	0.565	2.75	41.5	36.0	2.12	27.7	0.00			228	216
250	ISL	7.99	7.96	34.037	26.523	154.6	0.602	2.51	37.7	40.2	2.25	29.3	0.00			251	
268		7.84	7.81	34.071	26.572	150.2	0.629	2.30	34.5	43.7	2.35	30.6	0.00			269	217
300	ISL	7.42	7.39	34.085	26.644	143.7	0.676	2.00	29.7	49.5	2.47	32.5	0.00			302	
318		7.15	7.12	34.081	26.678	140.5	0.702	1.86	27.4	52.8	2.53	33.5	0.00			320	218
378		6.10	6.07	34.051	26.794	129.6	0.783	1.53	22.0	64.9	2.74	37.2	0.00			380	219
400	ISL	5.90	5.87	34.055	26.823	127.0	0.811	1.40	20.0	68.3	2.80	38.1	0.00			402	
438		5.68	5.64	34.079	26.869	122.9	0.858	1.16	16.5	73.8	2.91	39.3	0.00			441	220
500	ISL	5.39	5.35	34.168	26.975	113.4	0.932	0.66	9.3	84.2	3.09	41.3	0.00			503	
517		5.31	5.27	34.192	27.004	110.9	0.951	0.52	7.3	87.0	3.14	41.9	0.00			520	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AHT	TYPE
31 25.3 N	121 59,.0 W	10/04/95	2335 UTC	3771 in	360	15 kn	020 06 04	1	1018.1 mb	15 .8 C	14..2 C			3/8	CI

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/l	P04 uM/ L	N03 uH/l	N02 uM/ L	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	15.03	15.03	33.084	24.489	343.4	0.000	5.87	102.1	3.3	0.34	0.1	0.00	0.10	0.02	0	
1		15.03	15.03	33.084	24.489	343.4	0.003	5.87	102.1	3.3	0.34	0.1	0.00	0.10	0.02	1	203
10	ISL	15.02	15.02	33.083	24.491	343.5	0.034	5.90	102.6	3.3	0.34	0.1	0.00	0.11	0.02	10	
16		15.01	15.01	33.083	24.494	343.5	0.055	5.92	102.9	3.3	0.34	0.1	0.00	0.11	0.02	16	205
20	ISL	14.99	14.99	33.083	24.498	343.2	0.069	5.91	102.7	3.3	0.34	0.1	0.00	0.11	0.02	20	
30		14.93	14.93	33.084	24.512	342.1	0.103	5.88	102.0	3.3	0.34	0.1	0.00	0.10	0.02	30	206
46		14.93	14.92	33.087	24.515	342.4	0.158	5.86	101.7	3.3	0.34	0.1	0.00	0.11	0.01	46	207
50	ISL	14.92	14.91	33.087	24.517	342.2	0.171	5.86	101.6	3.3	0.34	0.1	0.00	0.11	0.01	50	
60		14.91	14.90	33.087	24.520	342.3	0.206	5.87	101.8	3.2	0.34	0.1	0.00	0.10	0.03	60	208
74		14.48	14.47	33.245	24.734	322.3	0.252	5.88	101.2	3.2	0.34	0.1	0.00	0.18	0.07	74	209
75	ISL	14.48	14.47	33.258	24.744	321.4	0.255	5.88	101.2	3.2	0.34	0.1	0.00	0.20	0.08	75	
83		14.45	14.44	33.372	24.838	312.6	0.281	5.83	100.3	3.2	0.34	0.1	0.00	0.33	0.20	83	210
94		13.31	13.30	33.330	25.041	293.5	0.314	5.71	96.0	4.2	0.45	1.6	0.06	0.46	0.31	94	211
100	ISL	13.00	12.99	33.394	25.152	283.0	0.331	5.53	92.4	5.0	0.53	3.1	0.07	0.40	0.28	100	
105		12.80	12.79	33.460	25.243	274.5	0.345	5.32	88.5	5.9	0.63	4.7	0.07	0.32	0.26	105	212
112		12.40	12.39	33.518	25.365	262.9	0.364	4.91	81.0	8.0	0.82	7.8	0.04	0.23	0.20	112	213
122		11.79	11.77	33.532	25.492	251.0	0.390	4.66	75.9	10.2	0.98	10.4	0.03	0.14	0.14	123	214
125	ISL	11.57	11.55	33.533	25.533	247.1	0.397	4.64	75.3	10.6	1.01	11.0	0.03	0.12	0.13	126	
139		10.54	10.52	33.548	25.729	228.6	0.431	4.56	72.3	13.0	1.16	13.5	0.02	0.05	0.09	140	215
150	ISL	9.83	9.81	33.587	25.880	214.2	0.455	4.34	67.8	16.6	1.35	16.6	0.01	0.03	0.07	151	
161		9.26	9.24	33.644	26.018	201.2	0.478	4.05	62.5	20.6	1.56	19.8	0.01	0.01	0.05	162	216
195		8.74	8.72	33.900	26.301	174.9	0.542	2.96	45.2	30.6	1.99	25.8	0.01	0.00 U	0.35 U	196	217
200	ISL	8.70	8.68	33.920	26.323	172.9	0.550	2.92	44.6	31.3	2.02	26.2	0.01			201	
230		8.42	8.40	33.987	26.419	164.3	0.601	2.69	40.8	34.7	2.11	27.5	0.01			231	218
250	ISL	8.08	8.05	34.009	26.488	158.0	0.633	2.68	40.4	37.6	2.16	28.4	0.00			251	
268		7.75	7.72	34.017	26.543	152.9	0.661	2.67	39.9	40.3	2.19	29.1	0.00			269	219
300	ISL	7.28	7.25	34.010	26.604	147.3	0.709	2.66	39.3	44.1	2.23	30.1	0.00			302	
314		7.09	7.06	34.007	26.629	145.1	0.730	2.65	39.0	46.1	2.26	30.7	0.00			316	220
376		6.37	6.34	34.072	26.776	131.5	0.815	1.48	21.4	62.0	2.71	36.5	0.00			378	221
400	ISL	6.20	6.16	34.094	26.816	128.0	0.847	1.23	17.7	66.2	2.81	37.7	0.00			402	
437		5.97	5.93	34.125	26.870	123.2	0.893	0.97	13.9	71.8	2.92	39.0	0.00			440	222
500	ISL	5.51	5.47	34.172	26.964	114.6	0.968	0.65	9.2	82.2	3.08	40.9	0.00			503	
513		5.41	5.37	34.182	26.984	112.8	0.983	0.58	8.2	84.3	3.11	41.3	0.00			516	223

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 100

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 5.3 N	122 40 0 W	10/04/95	1757	UTC	3966 in	350	17 kn	350 08 05	2	1019.0 mb	14 9 C	13 6 C	29m 01		2/8	CC

DEPTH m	TEMP DE6 C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 UN/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAHP
0 ISL	15.93	15.93	33.321	24.473	345.0	0.000	5.74	101.8	3.4	0.30	0.1	0.00	0.08	0.02	0	
1 A	15.93	15.93	33.321	24.473	345.0	0.003	5.74	101 .8	3.4	0.30	0.1	0.00	0.08	0.02	1	203
10 ISL	15.93	15.93	33.320	24.473	345.3	0.035	5.74	101.8	3.4	0.30	0.1	0.00	0.08	0.02	10	
16 A	15.93	15.93	33.320	24.473	345.5	0.055	5.75	101 .9	3.4	0.30	0.1	0.00	0.08	0.02	16	205
20 ISL	15.93	15.93	33.321	24.474	345.5	0.069	5.75	101.9	3.4	0.30	0.1	0.00	0.08	0.02	20	
26	15.93	15.93	33.321	24.474	345.7	0.090	5.76	102.1	3.3	0.30	0.1	0.00	0.08	0.01	26	206
30 ISL	15.92	15.92	33.321	24.476	345.6	0.104	5.75	101.9	3.3	0.30	0.1	0.00	0.08	0.01	30	
35 A	15.91	15.90	33.320	24.478	345.6	0.121	5.73	101.5	3.3	0.30	0.1	0.00	0.08	0.02	35	207
45	15.91	15.90	33.320	24.478	345.9	0.155	5.73	101.5	3.2	0.30	0.1	0.00	0.08	0.02	45	208
50 ISL	15.91	15.90	33.322	24.480	345.9	0.173	5 .74	101.7	3.2	0.30	0. 1	0.00	0.08	0.02	50	
56 A	15 .90	15.89	33.324	24.484	345.7	0.194	5.75	101 .9	3.2	0.30	0.1	0.00	0.08	0.02	56	209
75 A	15.82	15.81	33.316	24.497	345.1	0.259	5.74	101.5	3.1	0.30	0.1	0.00	0.09	0.02	75	210
83	15.48	15.47	33.294	24.556	339.7	0.287	5.78	101.5	3. 1	0.30	0.1	0.00	0.16	0.05	83	211
94	15.30	15.29	33.312	24.609	334.9	0.324	5.76	100.8	3.0	0.30	0.1	0.00	0.18	0.07	94	212
100 ISL	15.09	15.07	33.308	24.652	330.9	0.344	5.75	100.2	3.0	0.30	0.1	0.00	0.20	0.09	100	
105 A	14.92	14.90	33.320	24.698	326.6	0.360	5.74	99.7	3.1	0.31	0.1	0.00	0.21	0.13	105	213
114	14.85	14.83	33.430	24.799	317.4	0.389	5 .66	98.2	3.3	0.34	0.4	0.05	0.46	0.28	1 14	214
125	14.99	14.97	33.622	24.917	306.5	0.423	5.53	96.3	3.4	0.36	0.8	0.10	0.36	0.27	126	215
138	13.65	13.63	33.529	25.127	286.6	0.462	5.37	91 .0	4 .8	0.52	3.3	0.04	0.23	0.21	139	216
150 ISL	12.63	12.61	33.510	25.316	268.7	0.495	5.15	85.4	6.4	0.68	5.9	0.03	0.18	0.17	151	
163	11 .67	11 .65	33.526	25.510	250.3	0.529	4.86	79.0	8.8	0.88	9.1	0.01	0.18	U-0.02 U	164	217
194	9.69	9.67	33.606	25.919	211.5	0.600	4.10	63.8	18.6	1 .48	18.6	0.00	0.01	0.02	195	218
200 ISL	9.41	9.39	33.642	25.993	204.4	0.613	3.97	61 .5	20.5	1 .56	19.9	0.00			201	
229	8.45	8.43	33.825	26.287	176.7	0.668	3.47	52.6	28.6	1 .85	24.5	0.00			230	219
250 ISL	8.14	8.11	33.907	26.399	166.4	0.704	3.25	49.0	32.3	1 .96	26. 1	0.00			251	
266	8.00	7.97	33.951	26.454	161.4	0.730	3.11	46.7	34.8	2.03	27.0	0.00			267	22D
300 ISL	7.61	7.58	34.013	26.560	151.7	0.784	2.65	39.5	41 .4	2.21	29.6	0.00			302	
314	7.45	7.42	34.029	26.596	148.5	0.805	2 .44	36.2	44.3	2.29	30.7	0.00			316	221
374	6.74	6.71	34.090	26.742	135.1	0.890	1 .63	23.8	58.0	2.67	35.4	0.00			376	222
400 ISL	6.53	6. 49	34 . 116	26.791	130.7	0.924	1 .33	19.3	62 .6	2.79	36.7	0.00			402	
436	6.29	6.25	34.148	26.848	125.6	0.970	0.99	14.3	68. 1	2.91	38. 1	0.00			439	223
500 ISL	5.90	5.86	34.189	26.930	118.3	1 .049	0.67	9.6	76.8	3.06	39.9	0.00			503	
519	5.79	5.75	34.201	26.953	116.3	1 .071	0.58	8.3	79.4	3.10	40.4	0.00			522	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 90 110

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
30 45.3 N	123 20 0 W	10/04/95	0929	UTC	4019 in	360	18 kn			1019.5 mb	14 0 C	13 0 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.96	15 .96	33.316	24 .462	346.0	0.000	5.75	102.0	2.6	0.31	0.0	0.00	0.06	0.01	0	
2	15 .96	15.96	33.316	24.463	346.0	0.007	5.75	102 .0	2 .6	0.31	0.0	0.00	0.06	0.01	2	201
10 ISL	15.97	15.97	33.316	24.461	346.5	0.035	5.74	101.8	2.6	0.31	0.0	0.00	0.06	0.01	10	
15	15.97	15.97	33.315	24.460	346.7	0.052	5.74	101.8	2.6	0.31	0.0	0.00	0.06	0.01	15	202
20 ISL	15.97	15.97	33.315	24.460	346.8	0.069	5.74	101.8	2 .6	0.31	0.0	0.00	0.06	0.01	20	
30	15.98	15.98	33.314	24.457	347.4	0.104	5.74	101 .8	2.6	0.31	0.0	0.00	0.06	0.01	30	203
44	15.98	15.97	33.314	24 .458	347.8	0. 153	5.74	101.8	2.6	0.31	0.0	0.00	0.06	0.02	44	204
50 ISL	15.97	15.96	33.314	24.460	347.7	0.174	5.75	102.0	2.6	0.31	0.0	0.00	0.06	0.02	50	
59	15.95	15.94	33.313	24.464	347.6	0.205	5.76	102.1	2.6	0.31	0.0	0.00	0.06	0.02	59	205
72	15.81	15.80	33.309	24.493	345.3	0.250	5.76	101 .8	2.6	0.31	0.0	0.00	0.10	0.04	72	206
75 ISL	15.71	1 5.70	33.312	24.518	343.0	0.260	5.75	101 .5	2 .6	0.31	0.0	0.00	0.11	0.05	75	
85	15.40	15.39	33.334	24.604	335.1	0.294	5.74	100.7	2.6	0.31	0.0	0.00	0.14	0.07	85	207
95	15.34	15.33	33.378	24.651	330.9	0.327	5.75	100.7	2.6	0.31	0.0	0.00	0.19	0.09	95	201
100 ISL	15.27	15.25	33.374	24.664	329.8	0.344	5.74	100.4	2.6	0.32	0.0	0.00	0.22	0.12	100	
105	15.15	15.13	33.366	24.684	328.1	0.360	5.74	100.2	2 .7	0.33	0.0	0.00	0.25	0.16	105	209
116	14.70	14.68	33.390	24.800	317.3	0.396	5.63	97.4	3.0	0.37	0.5	0.06	0.30	0.22	116	210
125 ISL	14.27	14.25	33.455	24.941	304.0	0.424	5.52	94.7	3.4	0.44	1 .6	0.06	0.24	0.19	126	
126	14.22	14.20	33.464	24.959	302.3	0.427	5.51	94.4	3.5	0.45	1 .8	0.06	0.23	0.18	127	211
138	13.54	13.52	33.560	25.174	282.1	0.462	5.28	89.3	4.8	0.56	4.0	0.03	0.17	0.15	139	212
150 ISL	12.84	12.82	33.575	25.325	267.9	0.495	5.09	84.8	6.2	0.68	6.0	0.02	0.11	0.12	151	
164	12 .04	12.02	33.556	25.465	254.7	0.531	4.87	79.8	8.3	0.85	8.5	0.01	0.06	0.08	165	213
194	10.56	10.54	33.570	25 .744	228.4	0.604	4.28	67.9	14.8	1 .29	15.2	0.01	0.02	0.04	195	214
200 ISL	10.21	10.19	33.603	25.830	220.2	0.617	4.15	65.4	16.8	1 .39	16.7	0.01			201	
231	8.68	8.66	33.803	26.235	181.8	0.680	3.57	54.4	26.5	1 .80	23.4	0.00			232	215
250 ISL	8.33	8.30	33.864	26.337	172 .4	0.713	3.46	52.3	29.5	1 .88	24.9	0.00			251	
265	8.19	8.16	33.896	26.383	168.2	0.739	3.39	51.1	31 .4	1 .91	25.5	0.00			266	216
300 ISL	7.83	7.80	33.990	26.510	156.6	0.796	2.83	42 .4	38.5	2.12	28.4	0.00			302	
318	7.67	7.64	34.032	26.567	151.4	0.823	2.48	37.0	42 .4	2.24	29.9	0.00			320	217
376	7.17	7.13	34.117	26.705	139.0	0.908	1 .60	23.6	53.8	2 .60	34.0	0.00			378	211
400 ISL	6.92	6.88	34.136	26.754	134.5	0.941	1 .34	19.7	58.4	2.72	35.4	0.00			402	
439	6.53	6.49	34.159	26.825	128.0	0.992	1 .02	14.8	65 .4	2.87	37.3	0.00			442	219
500 ISL	6.05	6.01	34.194	26.915	119.9	1 .067	0.69	9.9	74.7	3.03	39.4	0.00			503	
514	5.94	5.90	34.202	26.935	118.0	1 .084	0.62	8.9	76.8	3.07	39.9	0.00			517	220

RV NEW HORIZON CALCOFI CRUISE 950* STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
JO 25.7 N	124 1 ..1 W	10/04/95	0253 UTC	4216 m	350 27 kn	360 10 04	1	1020.7 mb	14 ,.8 C	13..4 C		2/8	SC

DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAEO	PRES	SAMP
"	DEG C	DEG C		THETA			nil/ I	PCT	uM/l	uM/ I	uM/ I	uM/ I	ug/l	ug/l	db	
0 ISL	16.09	16.09	33.340	24.452	347.0	0.000	5.73	101 .9	2.9	0.32	0.0	0.00	0.06	0.01	0	
2	16.09	16.09	33.340	24.452	347.1	0.007	5.73	101.9	2 .9	0.32	0.0	0.00	0.06	0.01	2	202
10 ISL	16.10	16.10	33.338	24.448	347.7	0.035	5.72	101 .8	2.9	0.32	0.0	0.00	0.06	0.01	10	
15	16.11	16.11	33.336	24.444	348.2	0.052	5.72	101.8	2 .9	0.32	0.0	0.00	0.06	0.01	15	203
20 ISL	16.11	16.11	33.336	24.445	348.3	0.070	5.72	101.8	2.9	0.32	0.0	0.00	0.06	0.01	20	
30	16.11	16.11	33.336	24.445	348.6	0.104	5.72	101.8	2 .9	0.32	0.0	0.00	0.06	0.01	30	204
45	16.11	16.10	33.343	24.451	348.5	0.157	5.72	101.8	2.9	0.31	0.0	0.00	0.06	0.02	45	205
50 ISL	16.09	16.08	33.345	24.457	348.1	0.174	5.73	101 .9	2.9	0.31	0.0	0.00	0.07	0.02	50	
61	15.93	15.92	33.341	24.491	345.2	0.212	5.75	101.9	2.9	0.31	0.0	0.00	0.09	0.02	61	206
74	15.49	15.48	33.313	24.568	338.2	0.257	5.79	101.7	2.9	0.31	0.0	0.00	0.11	0.03	74	207
75 ISL	15.46	15.45	33.317	24.577	337.3	0.260	5.79	101.7	2.9	0.31	0.0	0.00	0.11	0.03	75	
83	15.25	15.24	33.349	24.648	330.8	0.287	5.78	101.1	2 .9	0.31	0.0	0.00	0.13	0.04	83	208
97	14.95	14.94	33.359	24.722	324.2	0.333	5.74	99.8	2.9	0.31	0.0	0.00	0.17	0.09	97	209
100 ISL	14.94	14.93	33.390	24.748	321 .8	0.342	5.71	99.2	2.9	0.31	0.0	0.01	0.24	0.15	100	
105	14.92	14.90	33.454	24.802	316.8	0.358	5.65	98.2	2.9	0.32	0.1	0.03	0.33	0.23	105	210
110	15.12	15.10	33.601	24.872	310.4	0.374	5.56	97.1	2.9	0.34	0.5	0.08	0.30	0.22	1 10	211
124	13.89	13.87	33.496	25.052	293.4	0.416	5.46	92.9	4.0	0.46	2.2	0.04	0.28	0.19	125	212
125 ISL	13.81	13.79	33.493	25.066	292.0	0.419	5.45	92.6	4.1	0.47	2.3	0.04	0.27	0.19	126	
137	12.91	12.89	33.480	25.238	275 .9	0.453	5.33	88.9	5 .3	0.58	4.2	0.03	0.19	0.18	138	213
150 ISL	11 .87	11 .85	33.493	25.447	256.0	0.488	4.93	80.4	8.6	0.85	8.4	0.02	0.11	0.12	151	
165	10.77	10.75	33.536	25.680	233.9	0.524	4.41	70.3	13.2	1 .20	13.8	0.00	0.03	0.05	166	214
199	9.19	9.17	33.671	26.051	198.8	0.598	3.86	59.5	22.0	1 .64	20.9	0.00	0.00	0.02	200	215
200 ISL	9.17	9.15	33.677	26.059	198.1	0.600	3.84	59.1	22 .2	1 .65	21.1	0.00			201	
229	8.64	8.62	33.853	26.280	177.5	0.654	3.30	50.3	28.7	1 .89	24.6	0.00			230	216
250 ISL	8.25	8.22	33.913	26.387	167.6	0.691	3.27	49.4	31 .8	1 .94	25.7	0.00			251	
272	7.89	7.86	33.947	26.467	160.2	0.727	3.24	48.5	34.8	1 .98	26.6	0.00			273	217
300 ISL	7.56	7.53	33.991	26.550	152.6	0.771	2 .87	42.7	40.1	2.14	28.8	0.00			302	
322	7.34	7.31	34.016	26.601	148.0	0.804	2.52	37.3	44.6	2.28	30.7	0.00			324	218
378	6.75	6.72	34.053	26.712	138.0	0.884	1 .88	27.5	55 .3	2.55	34 .4	0.00			380	219
400 ISL	6.53	6.49	34.082	26.764	133.2	0.914	1 .54	22.4	60.5	2.69	35.9	0.00			402	
438	6.22	6.18	34.142	26.852	125.2	0.963	0.99	14.3	69.0	2 .91	38.2	0.00			441	220
500 ISL	6.06	6.02	34.235	26.946	117.0	1 .038	0.56	8.1	76.1	3.09	39.6	0.00			503	
511	6.03	5.99	34.252	26.964	115.5	1 .050	0.48	6.9	77.4	3.12	39.8	0.00			514	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 57.3 N	117 18..4 W	06/04/95	1849 UTC	68 *m*	00 kn	00	2	1015.0 mb	16,.3 C	15..2 C	11m 05	8/8	SC

DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAEO	PRES	SAMP
m	DEG C	DEG C		THETA			ml/ I	PCT	uM/ I	uM/l	uM/ I	uM/ I	ug/l	ug/ I	db	
0 ISL	16.67	16.67	33.023	24.075	382.9	0.000	6.53	117.3	7.3	0.15	0.0	0.01	1 .77	0.48	0	
1 A	16.67	16.67	33.023	24.075	382.9	0.004	6.53	117.3	7.3	0.15	0.0	0.01	1 .77	0.48	1	217
6 A	14.06	14.06	33.024	24.649	328.4	0.022	5.00	85.2	8.1	0.31	0.0	0.01	0.96	0.44	6	218
10 ISL	13.54	13.54	33.288	24.960	298.9	0.034	4.28	72.3	9.1	0.54	0.6	0.04	0.96	0.40	10	
14 A	13.02	13.02	33.425	25.170	279.0	0.046	3.86	64.5	10.4	0.80	1 .1	0.13	0.96	0.34	14	219
20 ISL	12.50	12.50	33.508	25.336	263.3	0.062	3.58	59.2	12.6	1.14	7.7	0.44	0. 46	0.24	20	
22 A	12.34	12.34	33. 515	25.372	259.9	0.067	3.55	58.5	13.4	1 .24	10.2	0.53	0.28	0.20	22	220
29 A	11 .70	11 .70	33.584	25.547	243.5	0.085	3.37	54.8	15.9	1 .45	15.4	0.48	0.14	0.11	29	221
30 ISL	11.61	11.61	33.597	25.573	241 .0	0.087	3.35	54 .4	16.3	1 .48	15.9	0.43	0.13	0.11	30	
39 A	10.99	10.99	33.711	25.775	222 .0	0.108	3.14	50.4	20.0	1 .67	19.2	0.03	0.05	0.08	39	222
49	10.73	10.72	33.767	25.865	213.7	0. 130	2.96	47.2	21.9	1 .78	20.8	0.03	0.02	0.06	49	223
50 ISL	10.73	10.72	33.773	25.870	213.3	0. 132	2 .92	46.6	22 .1	1 .79	20.9	0.05	0.02	0.06	50	
59	10.73	10.72	33.830	25.914	209.2	0.151	2. 58	41 .2	23.9	1 .90	21.8	0.18	0.02	0.10	59	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 54.4 N	117 23,.9 W	06/04/95	2152 UTC	565 *m*	290 03 kn	280 01 04	1	1014.4 mb	17,.0 C	14.. 1 C	11m 05	5/8	CU

DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAEO	PRES	SAMP
m	DEG C	DEG C		THETA			ml/ I	PCT	uM/l	uH/l	uM/ I	uM/ I	ug/ I	ug/l	db	
0 ISL	17.77	17.77	32.970	23.775	411.5	0.000	6.96	127.6	9.0	0.10	0.2	0.00	1.21	0.36	0	
1	17.77	17.77	32.970	23.775	411.6	0.004	6.96	127.6	9.0	0.10	0.2	0.00	1.21	0.36	1	202
9	16.92	16.92	32.973	23.979	392.3	0.036	6.82	123.0	8.6	0.11	0.2	0.00	2.73	1 .25	9	203
10 ISL	16.62	16.62	32.998	24.068	383.9	0.040	6.58	118.0	8.6	0.13	0.2	0.00	2.62	1 .20	10	
19	13.87	13.87	33.300	24.902	304.7	0.071	4.18	71 .1	8.2	0.43	0.1	0.04	0.97	0.40	19	204
20 ISL	13.72	13.72	33.320	24.948	300.3	0.074	4.04	68.5	8.4	0.48	0.3	0.07	0.87	0.36	20	
30	12.77	12.77	33.451	25.240	272.8	0.103	3.30	54.9	11.5	1 .02	2 .6	0.33	0.30	0.12	30	205
39	11 .90	11 .90	33.566	25.496	248.6	0.126	3.21	52.5	14.9	1 .40	14.2	0.18	0.07	0.06	39	206
48	11.79	11 .78	33.627	25.564	242.3	0.148	3.13	51.0	16.5	1 .52	16.7	0.03	0.04	0.07	48	207
50 ISL	11 .68	11 .67	33.642	25.596	239.3	0.153	3.10	50.4	17.0	1 .55	17.2	0.03	0.04	0.07	50	
58	11.19	11.18	33.712	25.740	225.8	0.172	2 .94	47.4	19.1	1 .67	19.1	0.02	0.02	0.08	58	208
69	10.73	10.72	33.831	25.915	209.4	0.196	2 .65	42.3	22.7	1 .86	21 .8	0.02	0.01	0.06	69	209
75 ISL	10.57	10.56	33.866	25.971	204.2	0.208	2.62	41 .7	24.0	1 .91	22.6	0.02	0.01	0.06	75	
84	10.34	10.33	33.893	26.032	198.6	0.226	2 .58	40.8	25 .2	1 .95	23.3	0.02	0.01	0.05	84	210
99	9.81	9.80	33.901	26.128	189.7	0.255	2.70	42 .2	26.2	1 .95	23.9	0.02	0.01	0.07	100	211
100 ISL	9.80	9.79	33.904	26.132	189.3	0.257	2.70	42 .2	26.3	1 .95	23.9	0.02	0.01	0.07	101	
120	9.59	9.58	33.951	26.204	182 .9	0.294	2.62	40.8	28.4	2.02	24.9	0.01	0.01	0.04	121	212
125 ISL	9.61	9.60	33.981	26.224	181.1	0.304	2.52	39.3	29.1	2.05	25.3	0.01	0.01	0.04	126	
137	9.66	9.64	34.061	26.279	176.2	0.325	2.24	35.0	30.9	2.14	26.2	0.01	0.01	0.05	138	213
150 ISL	9.60	9.58	34.124	26.338	170.8	0.348	2.03	31 .7	32.8	2.22	27.1	0.01	0.01	0.05	151	
168	9.46	9.44	34.190	26.413	164.1	0.378	1 .79	27.8	35.4	2.32	28.1	0.01	0.01	0.04	169	214
198	9.32	9.30	34.260	26.491	157.3	0.426	1 .46	22.6	38.9	2.45	29.3	0.01	0.01	0.06	199	215
200 ISL	9.28	9.26	34.256	26.494	157.0	0.429	1 .48	22.9	39.0	2.45	29.3	0.01			201	
229	8.67	8.65	34. 181	26.533	153.6	0.474	1 .77	27.0	40.5	2.39	29.8	0.00			230	216
250 ISL	8.54	8.51	34.197	26.566	150.9	0.506	1 .63	24.8	42.4	2.45	30.4	0.00			251	
269	8.48	8.45	34.225	26.597	148.2	0.534	1 .43	21 .8	44 .5	2.53	31 .1	0.00			271	217
300 ISL	8.10	8.07	34.223	26.654	143.2	0.580	1 .28	19.3	48.6	2.62	32.3	0.00			302	
316	7.87	7.84	34.219	26.685	140.4	0.602	1 .22	18.3	51 .0	2 .66	33 .0	0.00			318	218
378	7.07	7.03	34.235	26.812	128.9	0.686	0.85	12.5	62.1	2.87	36.0	0.00			380	219
400 ISL	6.86	6.82	34.242	26.846	125.8	0.714	0.74	10.8	65 .1	2.93	36.8	0.00			403	
437	6.57	6.53	34.257	26.897	121.3	0.760	0.58	8.4	69.7	3.01	38.0	0.00			440	220
500 ISL	6.17	6.13	34.296	26.981	113.9	0.834	0.39	5 .6	77.7	3.12	39.2	0.00			503	
515	6.08	6.03	34.306	27.000	112.2	0.851	0.35	5.0	79.6	3.15	39.5	0.00			519	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 30

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 50.2 N	117 31 2 W	07/04/95	0126 UTC	832 m	290 10 kn	320 01 05	1	1013.5 mb	15 8 C	14 9 C		5/8	CU

DEPTH m		TEMP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UN/ l	P04 uH/ l	N03 uM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.27	16.27	33.286	24.369	354.9	0.000	6.26	111.7	4.0	0.24	0.0	0.00	0.87	0.18	0	
1		16.27	16.27	33.286	24.369	354.9	0.004	6.26	111.7	4.0	0.24	0.0	0.00	0.87	0.18	1	202
10		15.52	15.52	33.262	24.520	340.8	0.035	6.21	109.1	4.7	0.23	0.0	0.00	1 .40	0.25	10	203
20		14.86	14.86	33.248	24.653	328.4	0.068	5.91	102.5	5.5	0.26	0.0	0.00	1 .09	0.42	20	204
30		14.27	14.27	33.296	24.816	313.2	0.100	5.47	93.8	5.7	0.39	0.0	0.01	0.99	0.39	30	205
40		13.60	13.59	33.349	24.995	296.3	0.131	5.34	90.3	5.5	0.49	0.0	0.01	0.75	0.25	40	206
50		12.46	12.45	33.480	25.323	265.4	0.159	4.61	76.2	9.5	0.96	8.5	0.15	0.42	0.34	50	207
60		11 .84	11 .83	33.528	25.478	250.8	0.185	4.22	68.8	12.7	1.15	12.4	0.05	0.21	0.23	60	208
68		11 .26	11.25	33.615	25.652	234.4	0.204	3.65	58.8	16.6	1 .43	16.2	0.02	0.08	0.12	68	209
75	ISL	10.98	10.97	33.647	25.728	227.3	0.220	3.49	55.9	18.1	1 .52	17.8	0.02	0.06	0.10	75	
84		10.81	10.80	33.687	25.789	221 .7	0.241	3.36	53.7	19.3	1 .59	19.0	0.02	0.03	0.07	84	210
98		10.78	10.77	33.861	25.930	208.6	0.271	2.64	42.2	23.0	1 .85	21.9	0.01	0.01	0.05	98	211
100	ISL	10.73	10.72	33.866	25.943	207.4	0.275	2.65	42.3	23.2	1 .85	22.1	0.01	0.01	0.05	100	
119		10.14	10.13	33.875	26.052	197.4	0.313	2.78	43.8	24.9	1 .89	23.0	0.01	0.01	0.04	120	212
125	ISL	10.02	10.01	33.906	26.097	193.2	0.325	2.71	42.6	25.9	1 .93	23.6	0.01	0.01	0.04	126	
138		9.84	9.82	33.988	26.192	184.5	0.350	2.49	39.0	28.3	2.03	24.9	0.01	0.01	0.04	139	213
150	ISL	9.76	9.74	34.060	26.261	178.1	0.371	2.25	35.2	30.4	2.12	26.0	0.01	0.01	0.04	151	
169		9.70	9.68	34.160	26.350	170.1	0.404	1 .89	29.5	33.5	2.25	27.4	0.01	0.01	0.04	170	214
198		9.64	9.62	34.253	26.433	162.9	0.453	1 .54	24.1	36.7	2.39	28.5	0.01	0.01	0.04	199	215
200	ISL	9.62	9.60	34.254	26.437	162.5	0.456	1 .54	24.0	36.9	2.39	28.6	0.01			201	
227		9.18	9.16	34.243	26.501	156.9	0.499	1 .50	23.2	39.7	2.44	29.6	0.01			228	216
250	ISL	8.74	8.71	34.226	26.558	151.7	0.535	1 .49	22.8	42.6	2.48	30.5	0.01			251	
269		8.38	8.35	34.214	26.604	147.5	0.563	1 .47	22.3	45.1	2.52	31 .3	0.01			271	217
300	ISL	7.97	7.94	34.208	26.661	142.4	0.608	1 .37	20.6	49.1	2.60	32.5	0.00			302	
319		7.77	7.74	34.209	26.691	139.8	0.635	1 .29	19.3	51 .5	2.65	33.2	0.00			321	218
379		7.22	7.18	34.221	26.780	132.0	0.716	0.96	14.2	59.3	2.81	35.4	0.00			381	219
400	ISL	6.98	6.94	34.233	26.823	128.1	0.744	0.82	12.1	63.2	2.88	36.4	0.00			403	
437		6.59	6.55	34.258	26.895	121.5	0.790	0.60	8.7	70.0	3.00	38.0	0.00			440	220
500	ISL	6.22	6.18	34.292	26.971	114.8	0.864	0.42	6. 1	77.2	3.10	39.4	0.00			503	
516		6.12	6.07	34.301	26.991	113.1	0.882	0.37	5.3	79.0	3.12	39.7	0.00			520	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 35

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPf
32 40.9 N	117 52 5 W	07/04/95	0531 UTC	615 ill	300 10 kn			1014.9 mb	15 7 C	13 1 C			

DEPTH m		TEHP DEG C	POT TEHP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/ l	N03 uM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/L	PRES db	SAHP
0	ISL	16.80	16.80	33.281	24.243	366.9	0.000	6.83	123.1	2.7	0.07	0.1	0.00	1 .09	0.13	0	
1		16.80	16.80	33.281	24.243	366.9	0.004	6.83	123.1	2.7	0.07	0. 1	0.00	1 .09	0.13	1	202
10		16.37	16.37	33.275	24.338	358.1	0.036	6.76	120.8	2.7	0.07	0. 1	0.00	7.75	0.45	10	203
20		15.96	15.96	33.263	24.422	350.4	0.072	6.37	112.9	3.2	0.13	0. 1	0.00	1 .77	0.35	20	204
30		15.33	15.33	33.269	24.568	336.9	0.106	6.03	105.6	4. 1	0.22	0. 1	0.00	0.92	0.35	30	205
41		13.56	13.55	33.367	25.017	294.2	0.141	4.99	84.3	5.9	0.52	0.1	0.03	0.72	0.24	41	206
50		13.13	13.12	33.402	25.131	283.6	0. 167	4.72	79.1	6.9	0.61	0. 1	0.03	0.77	0.25	50	207
59		12.59	12.58	33.470	25.290	268.7	0.192	4.15	68.8	9.6	0.85	0. 1	0.03	0.51	0.20	59	208
70		12.12	12.11	33.519	25.418	256.7	0.221	3.92	64.3	11.9	1.11	7.4	0.06	0. 38	0.12	70	209
75	ISL	11.92	11.91	33.537	25.470	251 .9	0.233	3.87	63.2	12.7	1 .20	10.5	0.05	0.25	0.10	75	
83		11.59	11.58	33.577	25.563	243.3	0.253	3.75	60.9	14.4	1 .33	14.7	0.03	0.06	0.08	83	210
99		10.81	10.80	33.748	25.837	217.5	0.290	3.08	49.2	20.6	1 .70	20.0	0.01	0.01	0.04	99	211
100	ISL	10.78	10.77	33.752	25.845	216.7	0.292	3.07	49.0	20.8	1 .71	20. 1	0.01	0.01	0.04	100	
119		10.28	10.27	33.813	25.980	204.3	0.332	2.93	46.3	23.3	1 .82	21.9	0.01	0.01	0.04	120	212
125	ISL	10.07	10.06	33.854	26.048	197.9	0.344	2.84	44.7	24.8	1 .88	22.8	0.01	0.01	0.04	126	
138		9.67	9.65	33.947	26.188	184.8	0.369	2.62	40.9	28.2	2.01	24.7	0.00	0.01	0.03	139	213
150	ISL	9.61	9.59	34.011	26.248	179.4	0.391	2.47	38.5	29.8	2.07	25.6	0.00	0.01	0.03	151	
168		9.53	9.51	34.059	26.299	174 .9	0.423	2.25	35.0	31 .5	2.14	26.4	0.00	0.00	0.04	169	214
197		9.46	9. 44	34.200	26.421	163.9	0.472	1 .75	27.2	35.8	2.33	28.3	0.00	0.00	0.03	198	215
200	ISL	9.41	9.39	34.201	26.430	163.1	0.477	1 .76	27.3	36.1	2.34	28.4	0.00			201	
229		8.84	8.82	34.177	26.503	156.5	0.523	1 .82	27.9	39.2	2.37	29.3	0.00			230	216
250	ISL	8.60	8.57	34.182	26.545	152.9	0.556	1 .73	26.4	41 .5	2.42	30.1	0.00			251	
267		8.45	8.42	34.190	26.574	150.3	0.581	1 .63	24.8	43.4	2.46	30.7	0.00			269	217
300	ISL	8.09	8.06	34.196	26.634	145.1	0.630	1 .45	21 .9	47.3	2.55	32.0	0.00			302	
318		7.88	7.85	34.199	26.667	142.1	0.656	1 .35	20.3	49.8	2.61	32.7	0.00			320	218
377		7.13	7.09	34.222	26.793	130.7	0.736	0.94	13.9	60.4	2.83	35.6	0.00			379	219
400	ISL	6.94	6.90	34.229	26.825	127.8	0.766	0.82	12.0	63.3	2.89	36.4	0.00			403	
435		6.70	6.66	34.241	26.867	124.2	0.810	0.67	9.8	67.2	2.96	37.5	0.00			438	220
500	ISL	6.34	6.29	34.280	26.946	117.3	0.889	0.48	7.0	74.4	3.08	38.9	0.00			503	
521		6.22	6.17	34.293	26.972	115.1	0.913	0.42	6. 1	76.7	3.12	39.4	0.00			525	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 50

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 11.0 N	118 53 9 W	07/04/95	1841 UTC	1470 D	310 06 kn	310 03 03	1	1018.5 mb	16 9 C	14 5 C	30m 01	2/8	ST

DEPTH I*	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/1	P04 uH/ I	N03 uM/ I	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.42	16.42	33.365	24.395	352.4	0.000	5.73	102.6	2.9	0.33	0.2	0.00	0.14	0.03	0	
1 A	16.42	16.42	33.365	24.395	352.4	0.004	5.73	102.6	2.9	0.33	0.2	0.00	0.14	0.03	1	204
10 ISL	16.29	16.29	33.362	24.423	350.0	0.035	5.74	102.5	2.8	0.33	0.2	0.00	0.14	0.03	10	
17 A	16.17	16.17	33.359	24.449	347.8	0.060	5.75	102.4	2.8	0.33	0.2	0.00	0.15	0.03	17	205
20 ISL	16.17	16.17	33.358	24.448	348.0	0.070	5.74	102.3	2 .8	0.33	0.2	0.00	0.15	0.03	20	
26	16.16	16.16	33.356	24.449	348.1	0.091	5.74	102.2	2.8	0.33	0.2	0.00	0.16	0.03	26	206
30 ISL	16.09	16.09	33.350	24.460	347.1	0.105	5.75	102 .3	2.8	0.33	0.2	0.00	0.17	0.04	30	
37 A	15.81	15.80	33.319	24.500	343.6	0.129	5.80	102.6	2.8	0.33	0.2	0.00	0.19	0.05	37	207
47	14.96	14.95	33.212	24.605	333.8	0.163	5.94	103.2	3.0	0.34	0.2	0.00	0.24	0.08	47	208
50 ISL	14.82	14.81	33.184	24.613	333.1	0.173	5.95	103.1	3.0	0.34	0.2	0.00	0.24	0.09	50	
58 A	14.57	14.56	33.171	24.657	329.1	0.199	5.97	102.9	3.2	0.35	0.2	0.00	0.25	0.10	58	209
68	14.38	14.37	33.356	24.840	312.0	0.231	5.78	99.3	3.6	0.40	0.5	0.03	0.67	0.48	68	210
75 ISL	13.88	13.87	33.397	24.976	299.2	0.253	5.54	94.2	4.5	0.53	2.1	0.12	0.68	0.49	75	
78 A	13.65	13.64	33.403	25.028	294.3	0.262	5.44	92.1	4.9	0.59	2.9	0.15	0.68	0.50	78	211
87	13.30	13.29	33.426	25.117	286.0	0.288	5.22	87.8	6.1	0.68	4.5	0.16	0.54	0.44	87	212
96	12.73	12.72	33.461	25.257	272.9	0.313	4.91	81 .6	7.6	0.84	7.2	0.14	0.34	0.36	96	213
100 ISL	12.47	12.46	33.474	25.318	267.2	0.324	4.80	79.3	8.7	0.90	8.3	0.11	0.29	0.32	100	
109 A	11 .79	11 .78	33.504	25.470	252.8	0.347	4.55	74.1	11.8	1 .07	11.0	0.05	0.20	0.23	109	214
123	10.35	10.34	33.583	25.789	222.5	0.380	3.94	62.3	17.0	1 .47	17.4	0.01	0.05	0.10	124	215
125 ISL	10.23	10.22	33.597	25.820	219.5	0.385	3.88	61 .2	17.6	1 .51	18.0	0.01	0.05	0.09	126	
143	9.53	9.51	33.720	26.034	199.5	0.423	3.51	54.5	22.5	1 .75	21.4	0.01	0.01	0.04	144	216
150 ISL	9.37	9.35	33.765	26.095	193.8	0.436	3.39	52.5	24.1	1 .81	22 .4	0.01	0.01	0.04	151	
168	9.10	9.08	33.861	26.214	182.8	0.470	3.13	48.2	27.7	1 .92	24.2	0.01	0.00	0.03	169	217
197	8.68	8.66	33.938	26.340	171 .2	0.522	2.92	44 .6	31 .3	2.01	26.0	0.01	0.00	0.02	198	218
200 ISL	8.64	8.62	33.947	26.354	170.0	0.527	2.90	44.2	31 .8	2 .03	26.2	0.01			201	
228	8.24	8.22	34.018	26.471	159.3	0.573	2.67	40.4	36.9	2.17	28.2	0.01			229	219
250 ISL	7.90	7.87	34.032	26.532	153.6	0.607	2.55	38.2	40.1	2.24	29.3	0.00			251	
267	7.65	7.62	34.038	26.573	149.9	0.633	2.42	36.1	42.8	2.30	30.2	0.00			268	220
300 ISL	7.30	7.27	34.092	26.666	141.5	0.681	1 .86	27.5	50.3	2.50	32.8	0.00			302	
318	7.15	7.12	34.123	26.712	137.4	0.706	1 .54	22.7	54.4	2.62	34.2	0.00			320	221
378	6.78	6.74	34.170	26.800	129.7	0.786	1 .07	15.6	62.1	2.83	36.6	0.00			380	222
400 ISL	6.65	6.61	34.187	26.831	127.0	0.815	0.93	13.6	64.8	2.89	37.3	0.00			402	
437	6.43	6.39	34.217	26.884	122.3	0.861	0.73	10.6	69.4	2.99	38.3	0.00			440	223
500 ISL	6.03	5.99	34.276	26.983	113.5	0.935	0.45	6.5	78.1	3.13	40.2	0.00			503	
515	5.93	5.88	34.290	27.006	111.4	0.952	0.38	5.4	80.2	3.16	40.6	0.00			518	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 55

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 0.9 N	119 13 7 W	07/04/95	2316 UTC	1581 m	300 11 kn	300 03 06	1	1017.7 mb	17 8 C	15 5 C	30m 02	2/8	CI

DEPTH m	TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 UN/ I	P04 uH/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAHP
0 ISL	15.89	15.89	33.177	24.371	354 .6	0.000	5.84	103.4	3.1	0.32	0.0	0.00	0.22	0.02	0	
2	15.89	15 .89	33.177	24.371	354.7	0.007	5.84	103.4	3. 1	0.32	0.0	0.00	0.22	0.02	2	205
10 ISL	15.70	15.70	33.162	24.403	352.0	0.035	5.87	103.5	3.1	0.32	0.0	0.00	0.30	0.02	10	
15	15.52	15.52	33.151	24.434	349.1	0.053	5.89	103.5	3. 1	0.32	0.0	0.00	0.34	0.03	15	206
20 ISL	15.40	15.40	33.149	24.459	346.9	0.070	5.91	103.6	3.1	0.32	0.0	0.00	0.30	0.04	20	
29	15.22	15.22	33.151	24.501	343.2	0.101	5.93	103.5	3.0	0.32	0.0	0.00	0.21	0.05	29	207
30 ISL	15.21	15.21	33.151	24.503	343.0	0.105	5.93	103.5	3.0	0.32	0.0	0.00	0.21	0.05	30	
43	15.12	15.11	33.156	24.527	341 .1	0.149	5.92	103.1	3.0	0.32	0.0	0.00	0.29	0.06	43	208
50 ISL	15.02	15.01	33.170	24.559	338.2	0.173	5.90	102.6	2 .9	0.32	0.0	0.00	0.35	0.09	50	
54	14.97	14.96	33.179	24.577	336.6	0.187	5 .90	102.5	2.9	0.32	0.0	0.00	0.39	0.12	54	209
62	14.41	14.40	33.235	24.740	321 .3	0.213	5.94	102.1	3.1	0.33	0.0	0.00	0.43	0.19	62	210
74	13.85	13.84	33.327	24.928	303.7	0.250	5.74	97.5	3.7	0.43	0.5	0.06	0.81	0.50	74	211
75 ISL	13.77	13.76	33.330	24.947	301 .9	0.253	5.71	96.9	3.8	0.44	0.8	0.07	0.79	0.50	75	
84	13.02	13.01	33.356	25.118	285.8	0.280	5.35	89.4	5.4	0.61	4 .0	0.13	0.50	0.46	84	212
94	12.28	12.27	33.418	25.310	267.7	0.307	4.88	80.3	8.6	0.86	8.3	0.05	0.25	0.27	94	213
100 ISL	11 .88	11 .87	33.444	25.406	258.6	0.323	4.68	76.4	10.2	0.98	10.3	0.04	0.18	0.22	100	
109	11 .35	11 .34	33.475	25.528	247.2	0.346	4.47	72.1	12.3	1.13	12.6	0.02	0.12	0.17	109	2H
124	10.72	10.71	33.522	25.677	233.2	0.382	4.30	68.5	14.5	1 .27	14.9	0.01	0.05	0.09	125	215
125 ISL	10.67	10.66	33.527	25.690	232.0	0.384	4.28	68.1	14.7	1 .28	15.1	0.01	0.05	0.09	126	
142	9.88	9.86	33.629	25.905	211.8	0.422	3.86	60.4	19.4	1 .54	19.2	0.01	0.03	0.06	143	216
150 ISL	9.49	9.47	33.680	26.009	202.0	0.439	3.73	57.9	21 .7	1 .63	20.7	0.01	0.02	0.05	151	
168	8.77	8.75	33.785	26.206	183.4	0.473	3.52	53.8	26.2	1 .79	23.3	0.01	0.00	0.04	169	217
199	8.41	8.39	33.879	26.335	171.6	0.528	3.39	51 .4	30.0	1 .89	24.8	0.01	0.00	0.03	200	218
200 ISL	8.39	8.37	33.882	26.341	171.1	0.530	3.38	51 .2	30.2	1 .89	24.9	0.01			201	
226	8.00	7.98	33.965	26.465	159.7	0.573	3.02	45.4	35.3	2.04	27. 1	0.01			227	219
250 ISL	7.78	7.76	34.020	26.540	152.8	0.611	2.66	39.8	39.8	2.18	29.0	0.01			251	
276	7.54	7.51	34.054	26.602	147.3	0.650	2.30	34.2	44.7	2.33	30.9	0.00			278	220
300 ISL	7.16	7.13	34.053	26.655	142 .4	0.684	2 .09	30.8	49.5	2 .44	32.5	0.00			302	
315	6.94	6.91	34.051	26.684	139.8	0.706	1 .96	28.7	52.4	2 .50	33.5	0.00			317	221
377	6.73	6.70	34.148	26.789	130.6	0.789	1.14	16.6	62.7	2 .81	36.6	0.00			379	222
400 ISL	6.61	6.57	34.169	26.822	127.8	0.819	0.97	14.1	65.6	2.89	37.3	0.00			402	
437	6.39	6.35	34.198	26.874	123.2	0.866	0.77	11.2	69.7	2.98	38.2	0.00			440	223
500 ISL	6.06	6.02	34.252	26.960	115.7	0.941	0.51	7.3	77.1	3.10	39.7	0.00			503	
518	5.97	5.92	34.268	26.984	113.6	0.961	0.43	6.2	79.2	3.14	40. 1	0.00			521	224

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 60

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 50.6 N	119 34..4 W	08/04/95	0312 UTC	1790 n	300	15 kn			1017.3 mb	17..0 C	15..9 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mi/ I	OXY PCT	SI03 uM/l	P04 uM/ L	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ L	PRES db	SAMP
0	ISL	17.13	17.13	33.556	24.376	354.2	0.000	5.61	102.0	2.9	0.32	0.0	0.00	0.08	0.01	0	
2		17.13	17.13	33.556	24.377	354.2	0.007	5.61	102.0	2.9	0.32	0.0	0.00	0.08	0.01	2	202
10	ISL	17.09	17.09	33.555	24.385	353.6	0.035	5.62	102. 1	2.9	0.32	0.0	0.00	0.08	0.02	10	
15		17.05	17.05	33.553	24.394	353.0	0.053	5.63	102.2	2.9	0.32	0.0	0.00	0.08	0.02	15	203
20	ISL	17.00	17.00	33.552	24.405	352.1	0.071	5.63	102.1	2.9	0.32	0.0	0.00	0.08	0.02	20	
30		16.90	16.90	33.548	24.426	350.5	0. 106	5.62	101 .7	2.8	0.32	0.0	0.00	0.08	0.02	30	204
45		16.84	16.83	33.539	24.433	350.2	0.158	5.64	101 .9	2.8	0.32	0.0	0.00	0.09	0.02	45	205
50	ISL	16.83	16.82	33.540	24.437	350.1	0.176	5.64	101.9	2.8	0.32	0.0	0.00	0.11	0.03	50	
60		16.81	16.80	33.543	24.444	349.7	0.211	5.63	101.7	2.8	0.32	0.0	0.00	0.15	0.05	60	206
74		15.81	15.80	33.427	24.584	336.7	0.259	5.74	101.6	2.9	0.33	0.0	0.00	0.24	0.08	74	207
75	ISL	15.67	15.66	33.423	24.612	334.0	0.262	5.73	101 .1	3.0	0.34	0.0	0.00	0.27	0.10	75	
84		14.52	14.51	33.433	24.870	309.6	0.291	5.58	96.2	4.1	0.44	0.7	0.05	0.48	0.29	84	208
94		14.27	14.26	33.522	24.992	298.3	0.322	5.28	90.6	4.8	0.54	2.3	0.10	0.50	0.37	94	209
100	ISL	13.78	13.77	33.564	25.127	285.6	0.339	5.01	85.1	6.0	0.67	4.5	0.09	0.42	0.34	100	
105		13.28	13.27	33.589	25.248	274.1	0.353	4.78	80.4	7.3	0.79	6.6	0.07	0.33	0.29	105	210
114		12.41	12.39	33.593	25.422	257.6	0.377	4.52	74.7	9.5	0.97	9.7	0.04	0.19	0.23	1 14	211
125		11 .72	11 .70	33.607	25.563	244.3	0.405	4.23	68.9	11.9	1.15	12.5	0.02	0.14	0.19	126	212
138		10.73	10.71	33.634	25.763	225.4	0.435	3.88	61 .8	16.2	1.41	16.6	0.01	0.09	0.10	139	213
150	ISL	10.13	10.11	33.664	25.890	213.4	0.462	3.77	59.3	18.6	1 .53	18.6	0.00	0.05	0.06	151	
163		9.67	9.65	33.707	26.001	203.1	0.489	3.70	57.6	20.8	1 .61	20.0	0.00	0.02	0.04	164	214
194		8.92	8.90	33.895	26.269	178.0	0.548	3.16	48.5	28.4	1 .89	24.4	0.00	0.01	0.04	195	215
200	ISL	8.80	8.78	33.912	26.301	175.0	0.558	3.13	47.9	29.4	1 .91	24 .8	0.00			201	
228		8.31	8.29	33.962	26.416	164.4	0.606	3.05	46.2	33.5	2 .00	26.4	0.00			229	216
250	ISL	8.02	7.99	33. 999	26.489	157.8	0.641	2.80	42 . 1	37.3	2.11	28.1	0.00			251	
268		7.85	7.82	34.031	26.539	153.3	0.669	2.53	37.9	40.5	2.21	29.4	0.00			269	217
300	ISL	7.79	7.76	34. 110	26.610	147.1	0.717	1 .97	29.5	45.5	2.41	31 .2	0.00			302	
317		7.78	7.75	34.149	26.643	144.3	0.742	1 .68	25.1	48.0	2 .51	32.0	0.00			319	218
376		7.28	7.24	34.196	26.752	134 .7	0.824	1.12	16.6	57.1	2.75	34.7	0.00			378	219
400	ISL	7.08	7.04	34.212	26.792	131.0	0.856	0.95	14.0	60.6	2.83	35.7	0.00			402	
438		6.75	6.71	34.233	26.854	125.5	0.905	0.73	10.7	66.1	2.94	37. 1	0.00			441	220
500	ISL	6.15	6.11	34.249	26.946	117.1	0.980	0.52	7.5	75.4	3.07	39.3	0.00			503	
517		5.99	5.94	34.254	26.970	114.9	1 .000	0.46	6.6	78.0	3.11	39.9	0.00			520	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 30.8 N	120 14 .8 W	08/04/95	0851 UTC	3931 in	310	14 kn			1019.0 mb	15 .5 C	16 .0 C			

DEPTH ID		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/l	P04 uM/ I	N03 UN/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.68	16.68	33.430	24.385	353.3	0.000	5 .66	101.9	2.4	0.32	0.0	0.00	0.10	0.02	0	
1		16.68	16.68	33.430	24.385	353.3	0.004	5 .66	101.9	2.4	0.32	0.0	0.00	0.10	0.02	1	201
10	ISL	16.64	16.64	33.431	24.396	352 .7	0.035	5 .67	102 .0	2.3	0.32	0.0	0.00	0.10	0.02	10	
13		16.61	16.61	33.428	24.400	352.3	0.046	5.68	102 . 1	2.3	0.32	0.0	0.00	0.10	0.02	13	202
20	ISL	16.49	16.49	33.399	24.406	352.0	0.071	5.71	102.4	2.3	0.32	0.0	0.00	0.11	0.02	20	
29		16.31	16.31	33.360	24.418	351 .1	0.102	5 .74	102.5	2.3	0.32	0.0	0.00	0.12	0.03	29	203
30	ISL	16.30	16.30	33.359	24.419	351 .0	0.106	5.74	102.5	2.3	0.32	0.0	0.00	0.12	0.03	30	
44		16.11	16.10	33.357	24.462	347.5	0.155	5 .75	102.3	2.3	0.32	0. 1	0.00	0.13	0.03	44	204
50	ISL	15.66	15.65	33.267	24 .494	344.6	0.175	5.83	102.7	2.4	0.32	0.1	0.00	0.14	0.04	50	
59		15.00	14.99	33.143	24.543	340.0	0.206	5 .94	103.2	2.6	0.32	0. 1	0.00	0.17	0.05	59	205
74		14.84	14.83	33.186	24.611	334.0	0.257	5.93	102 .7	2.6	0.33	0. 1	0.00	0.22	0.07	74	206
75	ISL	14.79	14.78	33.193	24.628	332. 5	0.260	5 .92	102 .5	2.6	0.33	0. 1	0.00	0.22	0.08	75	
83		14.40	14 .39	33.270	24.770	319.1	0.286	5 .84	100.3	2.7	0.35	0. 1	0.00	0.22	0.14	83	207
94		14.07	14.06	33.413	24.950	302.3	0.320	5 .58	95 .3	3.6	0.43	0.8	0.08	0.52	0.31	94	208
100	ISL	13.77	13.76	33.449	25.040	293.8	0.338	5 . 44	92.4	4.2	0. 50	2 .2	0.09	0.45	0.29	100	
104		13.52	13.51	33.465	25.103	287.9	0.350	5.33	90.0	4.7	0.57	3.5	0.10	0.37	0.28	104	209
113		12.73	12.71	33.509	25.295	269.8	0.375	4.95	82.3	7.0	0.77	7.0	0.05	0.24	0.22	113	210
124		12.12	12.10	33.506	25.410	258.9	0.404	4.65	76.3	8.9	0.95	9.8	0.03	0.17	0.20	125	211
125	ISL	12.06	12.04	33.509	25.423	257.7	0.407	4.62	75.7	9.1	0.97	10.1	0.03	0.16	0.20	126	
139		11.19	11.17	33.579	25.639	237.4	0.441	4.18	67. 3	12.8	1 .24	14. 3	0.02	0.10	0.14	140	212
150	ISL	10.64	10.62	33.633	25.778	224.2	0.467	3.90	62.0	15.6	1 .41	16.9	0.01	0.07	0.11	151	
164		10.08	10.06	33.704	25.930	209.9	0.497	3.60	56.6	19.1	1.58	19.7	0.01	0.05	0.08	165	213
192		9.40	9.38	33.868	26.171	187.4	0.553	3.10	48.0	25.6	1 .84	23.9	0.01	0.01	0.04	193	214
200	ISL	9.27	9.25	33.907	26.223	182.6	0.567	3.00	46.4	27. 1	1 .89	24.7	0.01			201	
227		8.85	8.83	34.007	26.368	169.2	0.615	2.75	42. 1	31.9	2.01	26.6	0.01			228	215
250	ISL	8.37	8.34	34.041	26.469	159.8	0.653	2 .61	39.6	36.3	2.11	28.2	0.00			251	
268		8.00	7.97	34.052	26.534	153.9	0.681	2.50	37.6	39.7	2.19	29.3	0.00			269	216
300	ISL	7.55	7.52	34.069	26.613	146.7	0.729	2.22	33.0	45.3	2.34	31 .0	0.00			302	
316		7.36	7.33	34.076	26.645	143.8	0.752	2.05	30.4	48.2	2.42	31 .9	0.00			318	217
377		6.69	6.66	34.127	26.778	131.7	0.836	1 .30	19.0	60.5	2 .74	35.8	0.00			379	218
400	ISL	6.46	6.42	34.139	26.818	128.0	0.866	1.11	16.1	64.8	2.82	37.0	0.00			402	
437		6.12	6.08	34.156	26.876	122.8	0.913	0.87	12.5	71 .3	2 .92	38.6	0.00			440	219
500	ISL	5.71	5.67	34.196	26.959	115.4	0.988	0.59	8.4	80.2	3.11	40.3	0.00			503	
516		5.61	5.57	34.207	26.980	113.5	1 .006	0.52	7.4	82.4	3.16	40.7	0.00			519	220

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 80I

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIRE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 10.2 N	120 56..0 W	08/04/95	1756 UTC	3848 I*	310 16 kn	310 04 03	1	1020.5 mb	16,.8 C	14,.9 C	30m 01	3/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uH/ I	P04 UN/ I	N03 UN/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISt	15.49	15.49	33.097	24.399	352.0	0.000	5.83	102.3	3.2	0.34	0.0	0.00	0.11	0.02	0	
1	A	15.49	15.49	33.097	24.399	352.0	0.004	5.83	102.3	3.2	0.34	0.0	0.00	0.11	0.02	1	203
10	ISL	15.47	15.47	33.097	24.404	351 .9	0.035	5.83	102.3	3.1	0.35	0.0	0.00	0.11	0.03	10	
16	A	15.46	15.46	33.097	24.406	351 .8	0.056	5.83	102.2	3.1	0.35	0.0	0.00	0.11	0.03	16	204
20	ISL	15.39	15.39	33.096	24.421	350.5	0.070	5.84	102.3	3.1	0.35	0.0	0.00	0.12	0.03	20	
26		15.28	15.28	33.094	24.444	348.6	0.091	5.85	102.2	3.1	0.35	0.0	0.00	0.13	0.02	26	205
30	ISL	15.21	15.21	33.094	24.459	347.2	0.105	5.87	102.4	3.1	0.35	0.0	0.00	0.13	0.02	30	
37	A	15.11	15.10	33.098	24.484	345.0	0.129	5.89	102.6	3.2	0.35	0.0	0.00	0.14	0.03	37	206
47		15.08	15.07	33.123	24.510	342.8	0.164	5.89	102.5	3.2	0.34	0.0	0.00	0.16	0.04	47	207
SO	ISL	15.07	15.06	33.147	24.531	340.9	0.174	5.87	102.2	3.2	0.34	0.0	0.00	0.15	0.04	50	
58	A	14.98	14.97	33.213	24.602	334.5	0.201	5.84	101.5	3.1	0.34	0.0	0.00	0.12	0.04	58	208
67		14.67	14.66	33.252 D	24.698	325.5	0.231	5.86	101 .2	3.1	0.32	0.0	0.00	0.15	0.05	67	209
75	ISL	14.71	14.70	33.355	24.770	319.0	0.257	5.81	100.5	3.1	0.33	0.0	0.00	0.18	0.08	75	
77	A	14.72	14.71	33.376	24.784	317.7	0.263	5.80	100.4	3.1	0.33	0.0	0.00	0.19	0.09	77	210
87		14.60	14.59	33.395	24.824	314.1	0.295	5.79	100.0	3.2	0.34	0.0	0.00	0.28	0.16	87	211
97		14.28	14.27	33.572	25.029	294.9	0.325	5.56	95.5	3.6	0.39	1 .0	0.07	0.37	0.24	97	212
100	ISL	14.00	13.99	33.575	25.090	289.1	0.334	5.49	93.7	4.0	0.43	1 .7	0.07	0.31	0.21	100	
108	A	13.25	13.24	33.556	25.228	276.0	0.356	5.31	89.2	5.3	0.56	3.8	0.06	0.16	0.15	108	213
116		12.98	12.96	33.579	25.300	269.4	0.378	5.14	85.9	6.3	0.67	5.3	0.04	0.25	0.22	116	2U
12*		12.65	12.63	33.587	25.371	262.8	0.399	5.11	84.8	6.9	0.69	6.0	0.03	0.21	0.18	125	215
125	ISL	12.59	12.57	33.587	25.383	261 .7	0.402	5.10	84.6	7.0	0.70	6.2	0.03	0.20	0.17	126	
138		11 .74	11 .72	33.586	25.543	246.5	0.435	4.84	78.8	9.3	0.90	9.2	0.02	0.10	0.08	139	216
150	ISL	10.83	10.81	33.591	25.712	230.5	0.464	4.38	69.9	13.8	1 .21	13.9	0.01	0.04	0.06	151	
16*		9.85	9.83	33.619	25.902	212.5	0.495	3.86	60.3	19.5	1 .56	19.2	0.00	0.01	0.03	165	217
195		8.75	8.73	33.777	26.203	184.2	0.556	3.58	54.7	26.2	1 .80	23.1	0.00	0.00	0.04	196	218
200	ISL	8.64	8.62	33.808	26.245	180.3	0.565	3.50	53.3	27.4	1 .84	23.7	0.00			201	
227		8.19	8.17	33.956	26.429	163.1	0.612	3.02	45.6	34.1	2.03	26.7	0.00			228	219
250	ISL	7.91	7.88	34.020	26.521	154.7	0.648	2.65	39.7	39.0	2.18	28.7	0.00			251	
268		7.73	7.70	34.046	26.568	150.5	0.676	2.39	35.7	42.4	2.28	30.0	0.00			269	220
300	ISL	7.43	7.40	34.069	26.630	145.0	0.723	2.10	31 .2	47.2	2.41	31 .7	0.00			302	
318		7.27	7.24	34.077	26.659	142.5	0.749	1 .95	28.8	49.8	2.48	32.6	0.00			320	221
377		6.77	6. 74	34.150	26.785	131.0	0.830	1.19	17.4	61 .2	2.80	36.0	0.00			379	222
400	ISL	6.49	6.45	34.150	26.823	127.6	0.859	1 .05	15.2	65.5	2 .88	37.2	0.00			402	
438		6.05	6.01	34. 149	26.879	122.4	0.907	0.89	12.8	72.0	2.97	38.9	0.00			441	223
500	ISL	5.82	5.78	34.218	26.963	115.1	0.980	0.57	8.1	79.2	3.12	40.2	0.00			503	
519		5.75	5.71	34.239	26.988	112.9	1 .002	0.47	6.7	81 .4	3.16	40.6	0.00			522	224

A) PRIMARY PRODUCTIVITY SAMPLES HERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
30 50.2 N	121 35 .2 W	08/04/95	2310 UTC	4083 in	340 24 kn	340 05 04	1	1021.9 mb	16..2 C	13..4 C	33m 01	4/8	SC

DEPTH m		TENP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uH/ I	N03 uM/ I	N02 UN/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	16.12	16.12	33.323	24.432	348.9	0.000	5.73	102 .0	2.5	0.31	0. 1	0.00	0.06	0.01	0	
2		16.12	16.12	33.323	24.432	349.0	0.007	5.73	102.0	2.5	0.31	0. 1	0.00	0.06	0.01	2	202
10	ISL	16.12	16.12	33.322	24.431	349.2	0.035	5.72	101 .8	2.6	0.31	0.1	0.00	0.05	0.01	10	
16		16.12	16.12	33.322	24.431	349.4	0.056	5.72	101 .8	2 .6	0.31	0. 1	0.00	0.05	0.01	16	203
20	ISL	16.09	16.09	33.324	24.440	348.8	0.070	5.73	101.9	2.6	0.31	0. 1	0.00	0.05	0.01	20	
29		15.99	15 .99	33.330	24.467	346.4	0.101	5 .76	102.2	2.6	0.32	0. 1	0.00	0.05	0.01	29	204
30	ISL	15.97	15.97	33.330	24.472	346.0	0.105	5.76	102.2	2 .6	0.32	0. 1	0.00	0.05	0.01	30	
43		15.71	15 . 70	33.331	24.531	340.7	0.149	5.77	101 .8	2.6	0.31	0. 1	0.00	0.07	0.01	43	205
50	ISL	15.66	15.65	33.338	24.548	339.4	0. 173	5.77	101.7	2.6	0.30	0. 1	0.00	0.08	0.01	50	
58		15.62	15.61	33.349	24.566	337.9	0.200	5.76	101.5	2.6	0.30	0. 1	0.00	0.10	0.02	58	206
73		15.40	15.39	33.372	24.633	332.0	0.250	5.77	101.2	2.6	0.31	0. 1	0.00	0.14	0.05	73	207
75	ISL	15.39	15.38	33.390	24.649	330.5	0.257	5.76	101 .0	2.6	0.31	0. 1	0.00	0.14	0.05	75	
85		15.36	15.35	33.489	24.732	322.9	0.290	5.73	100.5	2.6	0.29	0.1	0.00	0.16	0.08	85	208
94		15.28	15.27	33.554	24.800	316.7	0.318	5.71	100.0	2 .7	0.29	0.0	0.00	0.22	0.15	94	209
100	ISL	14.72	14.71	33.523	24.898	307.5	0.337	5.62	97.3	3.2	0.36	0.7	0.02	0.33	0.23	100	
105		14.29	14.27	33.516	24.984	299.4	0.352	5.52	94.8	3.6	0.42	1 .5	0.04	0.40	0.30	105	210
112		14.35	14.33	33.633	25.062	292.2	0.373	5.42	93.2	3.9	0.44	2.1	0.05	0.35	0.34	112	211
123		13.83	13.81	33.610	25.152	283.8	0.405	5.28	89.8	4.8	0.53	3.5	0.03	0.28	0.29	124	212
125	ISL	13.66	13.64	33.598	25.178	281 .4	0.410	5.25	89.0	5.0	0.55	3.9	0.03	0.26	0.27	126	
138		12.45	12.43	33.531	25.367	263.5	0.446	5.05	83.4	7. 1	0.75	6.7	0.02	0.15	0.15	139	213
150	ISL	11 .52	11 .50	33.522	25.535	247.6	0.476	4.73	76.6	10.0	0.98	10.3	0.01	0.08	0.08	151	
164		10.62	10.60	33.549	25.717	230.3	0.510	4.33	68.8	13.9	1 .25	14.6	0.01	0.03	0.04	165	2U
194		9.36	9.34	33.674	26.026	201 .2	0.575	3.77	58.3	21 .8	1 .65	20.8	0.00	0.00	0.02	195	215
200	ISL	9.21	9.19	33.707	26.076	196.5	0.587	3.67	56.6	23.0	1 .70	21.6	0.00			201	
227		8.73	8.71	33.846	26.261	179.3	0.637	3.30	50.4	28.0	1 .88	24.3	0.00			228	216
250	ISL	8.40	8.37	33.930	26.378	168.5	0.677	3.10	47.0	32.0	1 .99	26.0	0.00			251	
267		8.17	8.14	33.974	26.447	162.2	0.705	2.96	44.6	35.0	2 .06	27. 1	0.00			268	217
300	ISL	7.58	7.55	34.021	26.571	150.7	0.757	2.57	38.3	42.4	2 .23	29.7	0.00			302	
319		7.25	7.22	34.035	26.628	145.3	0.785	2.34	34.6	46.7	2 .33	31 .2	0.00			321	218
378		6.59	6.56	34.075	26.750	134.2	0.868	1 .72	25.0	57.8	2 .61	35.0	0.00			380	219
400	ISL	6.39	6.35	34.094	26.792	130.5	0.897	1 .45	21 .0	62.4	2.72	36.3	0.00			402	
437		6.10	6.06	34.126	26.854	124.8	0.944	1 .04	15.0	69.8	2 .89	38.3	0.00			440	220
500	ISL	5.68	5 .64	34.176	26.947	116.5	1 .020	0.68	9.7	79.4	3.06	40.3	0.00			503	
513		5.59	5.55	34.186	26.966	114.8	1 .035	0.61	8.7	81 .4	3.09	40.7	0.00			516	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 100

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 31.2 N	122 16..2 W	09/04/95	0527 UTC	4188 in	350 27 kn			1023.1 mb	13.,9 C	12.. 1 C			

DEPTH ID	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 UN/I	N02 uM/I	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0 ISL	15.90	15 .90	33.308	24.470	345 .3	0.000	5.75	101.9							0	
7	15.90	15.90	33.309	24.471	345.4	0.024	5.75	101.9	2.7	0.31	0.0	0.00	0.06	0.01	7	202
10 ISL	15.90	15.90	33.308	24.470	345.6	0.035	5.75	101 .9	2.7	0.31	0.0	0.00	0.06	0.01	10	
U	15.90	15.90	33.307	24.469	345.7	0.048	5.75	101.9	2.7	0.31	0.0	0.00	0.06	0.01	14	203
20 ISL	15.90	15.90	33.307	24.470	345.9	0.069	5.75	101.9	2 .7	0.31	0.0	0.00	0.06	0.01	20	
29	15.91	15.91	33.307	24.468	346.4	0.100	5.75	101.9	2.8	0.31	0.0	0.00	0.06	0.01	29	204
30 ISL	15.91	15.91	33.307	24.468	346.4	0.104	5.75	101.9	2.8	0.31	0.0	0.00	0.06	0.01	30	
44	15.91	15.90	33.308	24.469	346.7	0.152	5.76	102.0	2.8	0.31	0.0	0.00	0.06	0.01	44	205
50 ISL	15.85	15.84	33.308	24.483	345.6	0.173	5.76	101.9	2.8	0.31	0.0	0.00	0.07	0.01	50	
59	15.68	15.67	33.308	24.521	342.2	0.204	5.77	101 .8	2.8	0.31	0.0	0.00	0.08	0.01	59	206
74	15.15	15.14	33.314	24.643	331 .0	0.254	5.79	101 .0	2.8	0.31	0.0	0.00	0.11	0.03	74	207
75 ISL	15.14	15.13	33.318	24.648	330.5	0.258	5.79	101 .0	2.8	0.31	0.0	0.00	0.11	0.03	75	
85	15.05	15.04	33.375	24.712	324.8	0.291	5.76	100.3	2.8	0.31	0.0		0.17	0.09	85	208
93	15.16	15.15	33.536	24.812	315.5	0.316	5.69	99.4	2.8	0.29	0.0	0.00	0.27	0.17	93	209
100 ISL	14.97	14.95	33.583	24.890	308.3	0.338	5.64	98.2	2.9	0.31	0.2	0.03	0.37	0.26	100	
104	14.78	14.76	33.586	24.934	304.2	0.350	5.61	97.3	3.1	0.34	0.4	0.05	0.40	0.29	104	210
112	14.35	14.33	33.582	25.022	295.9	0.374	5.52	94.9	3.6	0.41	1 .4	0.08	0.34	0.26	112	211
124	13.26	13.24	33.541	25.215	277.7	0.409	5.30	89.1	4.9	0.55	3.8	0.05	0.33	0.24	125	212
125 ISL	13.17	13.15	33.539	25.231	276.2	0.411	5.27	88.4	5.1	0.57	4 .1	0.05	0.32	0.23	126	
139	12.02	12.00	33.524	25.443	256.2	0.449	4.82	78.9	8.4	0.88	8.9		0.13	0.14	140	213
150 ISL	11.31	11.29	33.520	25.571	244.0	0.476	4 .56	73.5	10.9	1 .07	11.8	0.04	0.09	0.09	151	
166	10.43	10.41	33.542	25.744	227.7	0.514	4.28	67.7	14.8	1 .30	15.4		0.03	0. 04	167	214
197	8.84	8.82	33.739	26.159	188.4	0.578	3.89	59.5	23.7	1 .67	21.6		0.00	0.02	198	215
200 ISL	8.81	8.79	33.764	26.184	186.1	0.584	3.82	58.4	24.4	1 .70	22.1	0.01			201	
230	8.55	8.53	33.924	26.350	170.9	0.638	3.06	46.5	31 .0	1 .96	25.7	0.00			231	216
250 ISL	8.29	8.26	33.994	26.445	162.2	0.671	2.74	41.4	35.2	2.09	27.5	0.00			251	
270	8.03	8.00	34.041	26.521	155.2	0.703	2.50	37.6	39.2	2.20	28.9	0.00			271	217
300 ISL	7.73	7.70	34.079	26.595	148.5	0.748	2.17	32.4	44.2	2.34	30.8	0.00			302	
317	7.58	7.55	34.093	26.628	145.6	0.773	1 .99	29.6	46.9	2.42	31 .8	0.00			319	218
378	7.01	6.97	34.170	26.769	132 .9	0.858	1.21	17.8	58. 1	2 .75	35 .3	0.00			380	219
400 ISL	6.80	6.76	34.183	26.808	129.3	0.887	1 .02	14.9	62.0	2.84	36.4	0.00			402	
436	6.48	6.44	34.202	26.866	124.1	0.933	0.77	11.2	67.9	2.95	37.9	0.00			439	220
500 ISL	6.06	6.02	34.262	26.968	115.0	1 .009	0.47	6.8	76.9	3.09	39.8	0.00			503	
508	6.01	5 .97	34.270	26.980	113.8	1 .018	0.43	6.2	78.0	3.11	40.0	0.00			51 1	221

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 1 10

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 10.9 N	122 55 .6 W	09/04/95	1130 UTC		360 28 kn			1022.0 mb	14.. 1 C	13.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/l	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0 ISL	16.36	16.36	33.357	24.403	351 .6	0.000	5.74	102.6	3. 1	0.32	0.0	0.00			0	
1	16.36	16.36	33.357	24.403	351 .6	0.004	5 .74	102.6	3. 1	0.32	0.0	0.00	0.00 U	0.00 U	1	201
10 ISL	16.36	16.36	33.356	24.403	352.0	0.035	5 .73	102.5	3.0	0.32	0.0	0.00			10	
15	16.36	16.36	33.356	24.403	352.1	0.053	5.72	102.3	3.0	0.32	0.0	0.00	0.22 U	0.04 U	15	202
20 ISL	16.36	16.36	33.356	24.403	352.3	0.070	5.72	102.3	3.0	0.32	0.0	0.00			20	
30	16.37	16.37	33.356	24.401	352.8	0.106	5.72	102 .3	3.0	0.32	0.0	0.00	0.11	0.03	30	203
46	15.56	15.55	33.243	24.497	344. 1	0.161	5 .86	103. 1	3.0	0.32	0.0	0.00	0.14	0.04	46	204
50 ISL	15.41	15.40	33.273	24.554	338.8	0.175	5.86	102.8	3.0	0.33	0.0	0.00	0.17	0.05	50	
55	15.21	15.20	33.323	24.636	331 .1	0. 192	5 .86	102.4	3.0	0.34	0.0	0.00	0.22	0.07	55	205
66	14.45	14.44	33.399	24.858	310.2	0.227	5.75	99.0	3.2	0.37	0.0	0.01	0.32	0.20	66	206
74	14.11	14.10	33.448	24.968	300.0	0.251	5.45	93.2	4.3	0.52	1 .9	0.15	0.43	0.37	74	207
75 ISL	14.06	14.05	33.448	24.978	299.0	0.254	5.44	92.9	4.4	0.53	2.0	0.15	0.43	0.37	75	
83	13.61	13.60	33.436	25.062	291 .2	0.278	5.35	90.5	5.0	0.60	2.8	0.15	0.41	0.33	83	208
93	12.71	12.70	33.451	25.253	273.2	0.306	4.92	81 .7	7.4	0.83	7.0	0.06	0.27	0.21	93	209
100 ISL	12.30	12.29	33.501	25.371	262.0	0.325	4 .86	80.0	8.1	0.86	8.0	0.04	0.18	0.15	100	
107	1 1 .96	11 .95	33.551	25.474	252.3	0.343	4.82	78.8	8.8	0.89	8.7	0.03	0.12	0.11	107	210
123	10.97	10.96	33.571	25.671	233.8	0.382	4.12	66.0	14.0	1 .30	14.6	0.01	0.08	0.10	124	211
125 ISL	10.86	10.84	33.578	25.696	231 .5	0.387	4 .06	64.9	14.6	1 .34	15.1	0.01	0.07	0.10	126	
147	9.90	9.88	33.670	25.933	209.2	0.435	3.67	57.4	20.0	1 .61	19.5	0.01	0.01	0.05	148	212
150 ISL	9.82	9.80	33.683	25.957	207.0	0.441	3.63	56.7	20.5	1 .64	19.9	0.01	0.01	0.05	1 51	
163	9.50	9.48	33.738	26.053	198. 1	0.468	3.48	54.0	22.6	1 .73	21.3	0.00	0.00	0.03	164	213
199	8.45	8.43	33.843	26.301	174.8	0.535	3.60	54.6	27.8	1 .81	23.2	0.00	0.00	0.01	200	214
200 ISL	8.43	8.41	33.847	26.307	174.3	0.536	3.60	54.6	28.0	1 .81	23.3	0.00			201	
228	8.00	7.98	33.937	26.443	161.8	0.584	3.42	51.4	32.9	1 .92	25.3	0.00			229	215
250 ISL	7.69	7.67	33.981	26.523	154.4	0.618	3.09	46. 1	37.8	2 .06	27.4	0.00			251	
268	7.46	7.43	34.005	26.575	149.7	0.646	2.78	41 .3	42.0	2.19	29. 1	0.00			269	216
300 ISL	7.13	7.10	34.034	26.644	143.4	0.693	2.34	34.5	48.1	2.37	31 .5	0.00			302	
319	6.97	6.94	34.047	26.676	140.6	0.720	2.10	30.8	51.5	2.47	32.7	0.00			321	217
378	6.53	6. 50	34.104	26.781	131.3	0.800	1 .37	19.9	61 .7	2.76	36.1	0.00			380	218
400 ISL	6.35	6.31	34.128	26.824	127.4	0.828	1.14	16.5	66.0	2.86	37.3	0.00			402	
438	6.07	6.03	34.171	26.894	121.1	0.875	0.80	11.5	73.0	3.02	39 . 1	0.00			441	219
500 ISL	5.77	5.73	34.241	26.987	112.8	0.948	0.49	7.0	81 .0	3.16	40. 5	0.00			503	
515	5.70	5 .66	34.258	27.009	110.8	0.965	0.41	5.8	82.9	3.19	40.9	0.00			518	220

RV NEW HORIZON CALCOFI CRUISE 9504 STATION 93 120

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
29 51 .3 N	123 35 .7 W	09/04/95	1838 UTC	4099 in	360 26 kn	100 08 04		1023.5 mb	15..9 C	14..0 C	26m 01	3/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uM/l	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAHP
0	ISL	16.52	16.52	33*. 381	24.385	353.4	0.000	5.71	102.4	2.5	0.32	0.2	0.00	0.12	0.02	0	
4	A	16.52	16.52	33.381	24.385	353.5	0.014	5.71	102 .4	2.5	0.32	0.2	0.00	0.12	0.02	4	203
10	ISL	16.51	16.51	33.381	24.387	353.4	0.035	5.72	102.6	2.6	0.32	0.2	0.00	0.12	0.03	10	
15	A	16.51	16.51	33.381	24.388	353.6	0.053	5.72	102.6	2 .6	0.32	0.2	0.00	0.12	0.03	15	205
20	ISL	16.51	16.51	33.380	24.387	353.8	0.071	5.72	102.6	2.6	0.32	0.2	0.00	0.12	0.03	20	
30	ISL	16.51	16.51	33.379	24.386	354.2	0.106	5.72	102.6	2.6	0.32	0.2	0.00	0.13	0.02	30	
32	A	16.51	16.50	33.379	24.387	354.2	0.113	5.72	102.6	2.6	0.32	0.2	0.00	0.13	0.02	32	206
42		16.47	16.46	33.378	24.395	353.7	0.149	5.69	102.0	2.6	0.32	0.2	0.00	0.13	0.03	42	207
50	ISL	16.00	15.99	33.362	24.490	344.9	0.177	5.78	102.6	2.5	0.32	0.2	0.00	0.19	0.06	50	
52	A	15.80	15.79	33.361	24.535	340.7	0.183	5.80	102.6	2.5	0.32	0.2	0.00	0.20	0.07	52	208
59		14.72	14.71	33.394	24.797	315.9	0.206	5.77	99.9	3.0	0.38	0.2	0.00	0.21	0.09	59	209
68	A	14.23	14.22	33.408	24.912	305.1	0.234	5.63	96.5	2.6	0.43	0.2	0.00	0.28	0.17	68	210
75	ISL	13.63	13.62	33.418	25.044	292.7	0.255	5.30	89.7	4. 1	0.60	2.9	0.10	1 .09	0.68	75	
78		13.37	13.36	33.431	25.106	286.8	0.264	5.14	86.5	5.0	0.68	4.3	0.15	1 .43	0.90	78	211
86		12.93	12.92	33.516 D	25.260	272.3	0.286									86	212
96	A	12.30	12.29	33.521	25.386	260.5	0.313	4.62	76.1	9.2	0.95	9.4	0.06	0.25	0.33	96	213
100	ISL	12.02	12.01	33.526	25.444	255.1	0.323	4.55	74.5	10.0	1 .00	10.4	0.05	0.21	0.26	100	
108		11.45	11 .44	33.541	25.561	244.0	0.343	4.43	71 .7	11.7	1.11	12.3	0.03	0.12	0.16	108	214
124		10.51	10.50	33.577	25.757	225.6	0.381	4.03	63.9	15.9	1 .39	16.5	0.02	0.05	0.09	125	215
125	ISL	10.46	10.45	33.581	25.768	224.5	0.383	4 .01	63.5	16.2	1.41	16.8	0.02	0.05	0.09	126	
143		9.64	9.62	33.673	25.979	204.7	0.422	3.65	56.8	21 .5	1 .66	20.8	0.02	0.01	0.03	144	216
150	ISL	9.47	9.45	33.708	26.034	199.6	0.436	3.55	55.1	22.8	1 .72	21.6	0.02	0.01	0.03	151	
169		9.17	9.15	33.799	26.154	188.5	0.473	3.31	51.0	25.6	1 .82	23.2	0.01	0.00	0.04	170	217
200	ISL	8.61	8.59	33.941	26.353	170.0	0.528	2.95	44.9	31 .6	1 .99	26.0	0.01	0.00	0.03	201	
201		8.59	8.57	33.945	26.360	169.4	0.530	2 .94	44.8	31 .8	2.00	26.1	0.01	0.00	0.03	202	218
230		8.25	8.23	34.022	26.472	159.2	0.578	2.60	39.3	36.7	2.14	28.2	0.01			231	219
250	ISL	8.06	8.03	34.061	26.531	153.8	0.609	2.36	35.5	40.1	2.24	29.4	0.01			251	
268		7.90	7.87	34.089	26.577	149.7	0.636	2.14	32.1	43.2	2.34	30.4	0.01			269	220
300	ISL	7.58	7.55	34.127	26.654	142.8	0.683	1 .76	26.2	48.9	2.52	32.4	0.01			302	
317		7.40	7.37	34.140	26.690	139.6	0.707	1 .57	23.3	52.0	2.61	33.4	0.01			319	221
378		6.58	6.55	34.150	26.811	128.5	0.789	1.10	16.0	63.8	2 .84	36.9	0.01			380	222
400	ISL	6.40	6.36	34.166	26.847	125.2	0.817	0.94	13.6	67.3	2 .91	37.8	0.01			402	
435		6.18	6.14	34.194	26.898	120.7	0.860	0.73	10.5	72.3	3.01	38.9	0.01			438	223
500	ISL	5.74	5.70	34.231	26.983	113.1	0.936	0.50	7.1	81 .0	3.14	40.6	0.01			503	
514		5.65	5.61	34.239	27.000	111.6	0.951	0.45	6.4	82.9	3.17	41.0	0.01			517	224

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

PRIHARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 77 60

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIKE	SECCHI	FOREL	INCUBATION TIKE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 44.5 N	121 32.9 W	20/ 4/95	1901 UTC	9 m	05	1206 - 1907 PST	1205 PST	1906 PST	1382.5 mg C/m2

DEPTH ffl	TEHP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I.	OXY PCT	SI03 uH/l	P04 uH/ I	N03 ufl/ I	N02 ufl/ I	CHL ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
2	12.25	33.101	25.068	6.34	104.1	3.8	0.57	2.4	0.11	6.59	1.27	71. A	18.6	17.0	17.8	0.24
5	12.24	33.103	25.071	6.34	104.1	3.9	0.55	2.4	0.12	6.24	1.33	43.	88.3	92.4	90.4	0.24
12	12.22	33.107	25.078	6.31	103.5	4.0	0.57	2.6	0.12	6.24	1.05	13.	76.6	80.3	78.4	0.24
19	12.17	33.114	25.094	6.19	101.4	4.4	0.61	3.1	0.12	6.05	1.13	3.9	44.5	41.0	42.8	0.16
23	12.15	33.113	25.097	6.08	99.6	4.4	0.62	3.5	0.12	5.85	1.39	2.0	10.6	12.6	11.6	0.14
33	11.92	33.285	25.274	5.99	97.8	5.3	0.72	4.3	0.09	2.27	0.73	0.36	0.60	0.51	0.56	0.08

RV NEW HORIZON — CALCOFI CRUISE 9504 ! — STATION 80 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.4 N	121 50.5 W	18/ 4/95	1819 UTC	15 m	02	1205 - 1908 PST	1206 PST	1908 PST	178.4 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/ I	N03 uH/l	N02 ufl/ I	CHL ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
4	13.57	32.898	24.652	6.06	102.1	2.5	0.36	0.1	0.00	0.59	0.20	66. A	0.37	1.1	0.74	0.10
9	13.57	32.898	24.652	6.05	102.0	2.4	0.36	0.1	0.00	0.60	0.20	40.	2.0	8.5	5.3	0.09
20	13.57	32.894	24.649	6.05	102.0	2.5	0.37	0.1	0.00	0.60	0.19	13.	6.9	7.4	7.2	0.09
29	13.57	32.895	24.650	6.05	102.0	2.5	0.36	0.1	0.00	0.62	0.20	5.1	3.9	3.8	3.9	0.10
40	13.57	32.894	24.650	6.04	101.8	2.5	0.36	0.1	0.00	0.59	0.23	1.7	1.6	1.5	1.5	0.14
48	13.56	32.897	24.654	6.03	101.6	2.5	0.36	0.1	0.00	0.60	0.23					
55	13.57	32.897	24.652	6.03	101.6	2.5	0.36	0.1	0.00	0.60	0.25	0.36	0.08	0.10	0.09	0.10

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 83 40.7

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 14.0 N	119 25.5 W	17/ 4/95	1825 UTC	6 m	07	1159 - 1902 PST	1158 PST	1901 PST	1278.0 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/ I	P04 uH/l	N03 UH/l	N02 uH/l	CHL ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
1	12.02	33.475	25.402	5.83	95.5	6.3	0.68	5.0	0.15	9.54	0.75	77. A	73.1	78.2	75.6	0.27
3	11.99	33.477	25.409	5.80	94.9	6.3	0.67	5.0	0.15	8.90	1.11	46.	109.0	109.4	109.2	0.28
8	11.88	33.484	25.435	5.66	92.4	6.9	0.71	5.7	0.16	9.98	0.99	13.	101.9	108.0	104.9	0.21
13	11.84	33.485	25.443	5.57	90.9	6.9	0.72	6.1	0.16	9.64	1.33	3.6	43.4	44.3	43.9	0.21
16	11.84	33.485	25.443	5.54	90.4	6.9	0.73	6.1	0.16	10.27	1.26	1.7	9.7	10.8	10.3	0.26
21	11.80	33.485	25.451	5.47	89.2	7.0	0.75	6.5	0.16	9.88	1.20	0.46	1.4	1.2	1.3	0.17

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 83 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.2 N	121 27.0 W	16/ 4/95	1827 UTC	28 m	01	1206 - 1859 PST	1206 PST	1859 PST	75.5 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 UH/ I	P04 UH/l	N03 uN/l	N02 ufl/ I	CHL ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
2	14.57	33.064	24.573	5.88	101.3	2.8	0.33	0.4	0.00	0.10	0.03	90. A	0.11	0.10	0.11	0.05
17	14.56	33.063	24.574	5.88	101.2	2.8	0.33	0.3	0.00	0.10	0.03	39.	1.5	1.5	1.5	0.04
27	14.57	33.062	24.572	5.88	101.3	2.8	0.33	0.3	0.00	0.11	0.03					
36	14.56	33.062	24.574	5.89	101.4	2.8	0.33	0.3	0.00	0.11	0.03	14.	1.3	1.3	1.3	0.04
44	14.56	33.062	24.575	5.87	101.1	2.8	0.32	0.3	0.00	0.11	0.03					
53	14.56	33.061	24.574	5.88	101.2	2.8	0.33	0.3	0.00	0.11	0.03	5.5	0.70	0.69	0.69	0.05
66	14.56	33.061	24.574	5.88	101.2	2.8	0.32	0.2	0.00	0.11	0.03					
72	14.49	33.064	24.592	5.87	100.9	2.7	0.33	0.2	0.00	0.13	0.04	1.9	0.36	0.41	0.39	0.03
83	13.68	33.287	24.932	5.72	96.8	3.5	0.42	1.2	0.04	0.40	0.30					
92	13.11	33.320	25.073	5.59	93.5	4.6	0.51	2.8	0.07	0.37	0.33					
101	12.53	33.359	25.217	5.39	89.1	5.8	0.64	4.8	0.07	0.31	0.27	0.39	0.24	0.29	0.26	0.02

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 83 110

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 53.8 N	124 9.4 W	15/ 4/95	1921 UTC	29 m	01	1217 - 1907 PST	1217 PST	1907 PST	58.7 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/ I	OXY PCT	SI03 uH/l	P04 ufl/ I	N03 ufl/ I	N02 ufl/ I	CHL ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3> 1	2	HEAN	DARK
2	16.24	33.411	24.472	5.70	101.7	2.9	0.32	0.1	0.00	0.07	0.01	90. A	0.29	0.23	0.26	0.04
18	16.25	33.405	24.466	5.70	101.7	2.9	0.31	0.1	0.00	0.08	0.01	39.	1.2	1.2	1.2	0.05
37	16.25	33.407	24.468	5.70	101.7	2.7	0.30	0.1	0.00	0.08	0.01	14.	1.0	1.0	1.0	0.06
47	16.25	33.408	24.469	5.69	101.5	2.7	0.30	0.1	0.00	0.08	0.01					
56	16.26	33.410	24.469	5.70	101.7	2.7	0.30	0.1	0.00	0.07	0.02	5.2	0.44	0.49	0.46	0.05
77	16.26	33.412	24.471	5.70	101.7	2.6	0.31	0.1	0.00	0.08	0.02	1.7	0.15	0.13	0.14	0.05
83	16.12	33.441	24.525	5.71	101.7	2.6	0.31	0.1	0.00	0.14	0.04					
93	15.88	33.588	24.693	5.69	100.9	2.7	0.29	0.1	0.00	0.18	0.07					
105	14.73	33.446	24.836	5.72	99.0	3.1	0.36	0.1	0.01	0.68	0.39	0.39	0.22	0.28	0.25	0.04

A) INCUBATION LIGHT INTENSITIES WERE 93, 41, 14, 5 0, 1.8, 0.37 PERCENT RESPECTIVELY.

PRIHARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 87 55

LATITUDt	LONGITUDE	OAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 8.7 N	120 0.7 W	13/ 4/95	1854 UTC	17 m	02	1200 - 1858 PST	1201 PST	1855 PST	934.7 mg C/m2

DEPTH in	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/ I	N03 UN/ I	N02 UN/ I	CHL <ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE iCmg C/m3) 1	2	MEAN	DARK
2	14.48	33.048	24.579	5.96	102.4	2.8	0.36	0.2	0.00	0.26	0.05	83. A	3.1	2.7	2 .9	0.06
11	14.23	33.062	24.643	6.02	103.0	2.8	0.35	0. 1	0.00	0.65	0.17	37.	11.4	11.4	11.4	0.11
20	13.70	33.135	24.809	6.14	103.9	2.3	0.38	0.3	0.02	2.90	0.77	16.	38.3	41 .6	39.9	0.22
33	13.37	33.166	24.900	5.98	100.5	3.2	0.46	1 .3	0.04	3.06	1 .21	5.1	24 .9	23.7	24.3	0.11
43	12 .90	33.222	25.037	5.81	96.8	4. 1	0.55	2.8	0.06	3.96	1 .27	2.1	6. 7	6.0	6.3	0.09
51	12.38	33.261	25.168	5.51	90.8	5.8	0.69	5.1	0.08	2.36	0.73					
62	11 .95	33.281	25.266	5.29	86.4	7.0	0.79	6.7	0.08	0.84	0.50	0.37	0.34	0.40	0.37	0.03

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 87 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 19.5 N	121 43.2 U	14/ 4/95	1915 UTC	17 m	02	1209 - 1902 PST	1207 PST	1902 PST	140.5 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/ I	N03 uH/l	N02 uH/ I	CHL ijg/l	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	15.38	33.312	24.589	6.03	105.7	2.5	0.33	0.1	0.00	0.27	0.07	76. A	1 .6	1 .6	1 .6	0.10
11	15.38	33.312	24.589	5.95	104.3	2.5	0.33	0. 1	0.00	0.28	0.08	37.	5.1	5 .2	5 .1	0.10
21	15.38	33.312	24.589	5.91	103.6	2.4	0.33	0.1	0.00	0.27	0.07	15 .	4.0	4.2	4 .1	0.11
35	15.38	33.312	24.590	5.85	102 .6	2.5	0.33	0. 1	0.00	0.27	0.07	4.2	2.1	2.2	2.1	0.10
45	15.38	33.311	24.589	5.86	102.7	2.5	0.33	0.1	0.00	0.31	0.08	1 .7	0.69	0.58	0.64	0.08
52	15.37	33.311	24.592	5.84	102.4	2.5	0.34	0. 1	0.00	0.32	0.09					
61	15.07	33.312	24 .658			2.5	0.34	0.0	0.47	0.38	0.13	0.41	0.08	0.08	0.08	0.06

RV NEW- HORIZON — CALCOFI CRUISE 9504 — STATION 90 28

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.1 N	117 46.3 W	12/ 4/95	1853 UTC	7 m	06	1152 - 1849 PST	1152 PST	1849 PST	1164.5 mg C/m2

DEPTH •	TEMP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/1	P04 urn/1	N03 uH/ I	N02 uH/ I	CHL ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
1	14.97	33.344	24.703	5.91	102.8	6.5	0.27	0.1	0.01	3.62	0.61	80. A	38.6	38.8	38.7	0.66
4	14.25	33.362	24.870	5.58	95.6	7.0	0.34	0.1	0.01	3.36	0.84	42.	112.7	80.5	96.6	0.89
9	12.96	33.450	25.201	4.60	76.8	8.2	0.75	3.3	0.18	6.39	1 .52	14.	95.2	94.7	94 .9	0.41
14	12.21	33.516	25.398	3.78	62.2	11.8	1 .26	11.0	0.42	4.57	1.11	4.6	36. 1	40.7	38.4	0.20
18	12.02	33.545	25.456	3.53	57.8	14.2	1 .44	13.6	0.43	2.27	0.73	1 .9	5.6	5.3	5.5	0.11
26	11 .43	33.628	25.631	3.34	54.1	17.2	1 .57	17.0	0.29	0.43	0.34	0.33	0.24	0.28	0.26	0.07

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 90 60

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.4 N	119 57.6 W	11/ 4/95	1812 UTC	26 m	02	1201 - 1848 PST	1201 PST	1848 PST	282.7 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 uH/l	P04 uH/ I	N03 uH/ I	N02 UH/l	CHL ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	15.24	33.257	24.577	5.85	102.2	3.0	0.28	0.1	0.00	0.23	0.06	94. A	1 . 1	1 .0	1 .0	0.06
14	15.16	33.253	24.592	5.86	102.2	2.9	0.29	0.1	0.00	0.23	0.05	44 .	4 .5	4.3	4.4	0.07
33	15.13	33.251	24.597	5.86	102.2	2.9	0.29	0. 1	0.00	0.25	0.06	14.	3.8	3.8	3.8	0.07
41	15.12	33.250	24.599	5.85	102 .0	2.9	0.29	0.1	0.00	0.24	0.07					
50	15.11	33.254	24.605	5.84	101.8	2.9	0.29	0.1	0.00	0.27	0.09	5.2	2.5	2 .4	2.4	0.05
59	14.37	33.269	24.775	5.87	100.8	3.3	0.32	0.1	0.00	0.52	0.22					
67	13.52	33.381	25.037	5.59	94.4	4.5	0.45	1 .5	0.11	1 .05	0.62	1 .9	4.6	3.9	4.2	0.05
76	13.21	33.430	25.138	5.38	90.3	5.5	0.55	3.6	0.12	0.69	0.50					
85	12.35	33.449	25.321	5.02	82.7	7.6	0.75	6.9	0.07	0.37	0.32					
94	11 .92	33.472	25 .420	4.66	76. 1	10.2	0.96	10.2	0.03	0.22	0.20	0.39	0.23	0.24	0.24	0.01

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 90 100

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIHE	SECCHI	FOREL	INCUBATION TIHE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.3 N	122 40.0 W	10/ 4/95	1757 UTC	29 m	01	1212 - 1858 PST	1212 PST	1858 PST	51.0 mg C/m2

DEPTH m	TEHP DEG C	SALINITY	SIGHA THETA	DISS 02 ml/l	OXY PCT	SI03 UH/ i	P04 uH/l	N03 uH/ I	N02 uH/ I	CHL ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	HEAN	DARK
1	15.93	33.321	24.473	5.74	101.8	3.4	0.30	0. 1	0.00	0.08	0.02	95. A	0.15	0.16	0.15	0.05
16	15.93	33.320	24.473	5.75	101.9	3.4	0.30	0. 1	0.00	0.08	0.02	43.	1 .1	1 .1	1 .1	0.06
26	15.93	33.321	24.474	5.76	102.1	3.3	0.30	0.1	0.00	0.08	0.01					
35	15.91	33.320	24.478	5.73	101.5	3.3	0.30	0. 1	0.00	0.08	0.02	16.	0.86	0.88	0.87	0.06
45	15.91	33.320	24.478	5.73	101.5	3.2	0.30	0.1	0.00	0.08	0.02					
56	15.90	33.324	24.484	5.75	101.9	3.2	0.30	0.1	0.00	0.08	0.02	5.2	0.47	0.45	0.46	0.05
75	15.82	33.316	24.497	5.74	101.5	3. 1	0.30	0. 1	0.00	0.09	0.02	1 .9	0.16	0.13	0.15	0.06
83	15.48	33.294	24.556	5.78	101.5	3.1	0.30	0.1	0.00	0.16	0.05					
94	15.30	33.312	24.609	5.76	100.8	3.0	0.30	0. 1	0.00	0.18	0.07					
105	14.92	33.320	24.698	5.74	99.7	3. 1	0.31	0.1	0.00	0.21	0.13	0.39	0.05	0.05	0.05	0.04

A) INCUBATION LIGHT INTENSITIES WERE 93, 41, 14, 5..0, 1.8, 0.37 PERCENT RESPECTIVELY.

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PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE '7504 — STATION 93 26.7

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TINE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57..3 N	117 18.4 W	6/ 4/95	1849 UTC	11 m	05	1154 - 1840 PST	1152 PST	1838 PST	318.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/ I	CHL ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE t mg C/m3) 1	2	MEAN	DARK
1	16.67	33.023	24.075	6.53	117.3	7.3	0.15	0.0	0.01	1 .77	0.48	87. A	12.8	11.7	12.3	0.41
6	14.06	33.024	24.649	5 .00	85.2	8.1	0.31	0.0	0.01	0.96	0.44	43.	18.7	18.4	18.5	0.25
14	13.02	33.425	25.170	3.86	64.5	10.4	0.80	1 .1	0.13	0.96	0.34	14.	16.6	16.2	16.4	0.21
22	12.34	33.515	25.372	3.55	58.5	13.4	1 .24	10.2	0.53	0.28	0.20	4.6	2.5	2 .7	2 .6	0.09
29	11 .70	33.584	25.547	3.37	54.8	15.9	1 .45	15.4	0.48	0.14	0.11	1 .7	0.46	0.48	0.47	0.11
39	10.99	33.711	25.775	3.14	50.4	20.0	1 .67	19.2	0.03	0.05	0.08	0.43	0.05	0.04	0.04	0.02

RV NEW HORIZON — CALCOFI CRUISE 9504 — STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 11 ..0 N	118 53.9 W	7/ 4/95	1841 UTC	30 m	01	1157 - 1848 PST	1158 PST	1846 PST	285.3 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 UN/1	P04 uM/l	N03 uH/l	N02 uM/ I	CHL iug/ I	PHAEO ug/L	LIGHT PCT	UPTAKE i(mg C/m3) 1	2	MEAN	DARK
1	16.42	33.365	24.395	5.73	102.6	2.9	0.33	0.2	0.00	0.14	0.03	95. A	1 .5	1 .4	1 .5	0.05
17	16.17	33.359	24.449	5.75	102.4	2.8	0.33	0.2	0.00	0.15	0.03	42 .	3.9	3. 7	3.8	0.10
26	16.16	33.356	24.449	5.74	102.2	2.8	0.33	0.2	0.00	0.16	0.03					
37	15.81	33.319	24.500	5.80	102 .6	2.8	0.33	0.2	0.00	0.19	0.05	15 .	3.0	3.0	3.0	0.10
47	14.96	33.212	24.605	5.94	103.2	3.0	0.34	0.2	0.00	0.24	0.08					
58	14.57	33.171	24.657	5 .97	102 .9	3.2	0.35	0.2	0.00	0.25	0.10	5 .1	3.4	3.3	3.3	0.08
68	14.38	33.356	24.840	5.78	99.3	3.6	0.40	0.5	0.03	0.67	0.48					
78	13.65	33.403	25.028	5 .44	92.1	4.9	0.59	2.9	0.15	0.68	0.50	1 .8	2.6	2 .7	2.7	0.04
87	13.30	33.426	25.117	5.22	87.8	6.1	0.68	4.5	0.16	0. 54	0.44					
96	12 .73	33.461	25.257	4.91	81 .6	7.6	0.84	7.2	0.14	0.34	0.36					
109	11 .79	33.504	25.470	4.55	74.1	11.8	1 .07	11.0	0.05	0.20	0.23	0.38	0.34	0.37	0.35	0.01

RV NEW HORIZON — CALCOFI CRUISE '7504 — STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 10..2 N	120 56.0 W	8/ 4/95	1756 UTC	30 m	01	1205 - 1855 PST	1206 PST	1854 PST	145.5 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/ I	CHL ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE iJmg C/m3) 1	2	MEAN	DARK
1	15.49	33.097	24.399	5.83	102.3	3.2	0.34	0.0	0.00	0.11	0.02	95 . A	1 .4	1 .5	1 .5	0.05
16	15.46	33.097	24.406	5.83	102.2	3.1	0.35	0.0	0.00	0.11	0.03	44.	2.7	2 .7	2 .7	0.04
26	15.28	33.094	24.444	5 .85	102.2	3.1	0.35	0.0	0.00	0.13	0.02					
37	15.11	33.098	24.484	5 .89	102 .6	3.2	0.35	0.0	0.00	0.14	0.03	15 .	1 .9	2 .0	1 .9	0.08
47	15.08	33.123	24.510	5 .89	102.5	3.2	0.34	0.0	0.00	0.16	0.04					
58	14.98	33.213	24.602	5.84	101.5	3 .1	0.34	0.0	0.00	0.12	0.04	5 .1	1 .0	1 .0	1 .0	0.06
67	14.67	33.252 D	24.698	5 .86	101.2	3.1	0.32	0.0	0.00	0.15	0.05					
77	14. 72	33.376	24.784	5.80	100.4	3 .1	0.33	0.0	0.00	0.19	0.09	1 .9	0.81	0.77	0.79	0.03
87	14.60	33.395	24.824	5.79	100.0	3.2	0.34	0.0	0.00	0.28	0.16					
97	14.28	33.572	25.029	5.56	95.5	3.6	0.39	1 .0	0.07	0.37	0.24					
108	13.25	33.556	25.228	5.31	89.2	5.3	0.56	3.8	0.06	0.16	0.15	0.40	0.28	0.30	0.29	0.01

RV NEW HORIZON — CALCOFI CRUISE '?504 — STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
29 51,.3 N	123 35.7 W	9/ 4/95	1838 UTC	26 m	01	1217 - 1903 PST	1216 PST	1903 PST	137.3 mg C/m2

DEPTH m	TENP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 uM/l	P04 UN/ I	N03 uM/l	N02 uM/ I	CHL ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
4	16.52	33.381	24.385	5.71	102.4	2.5	0.32	0.2	0.00	0.12	0.02	79. A	0.45	0.59	0.52	0.04
15	16.51	33.381	24.388	5.72	102 .6	2.6	0.32	0.2	0.00	0.12	0.03	41 .	2.7	2.7	2 .7	0.04
32	16.51	33.379	24.387	5.72	102.6	2.6	0.32	0.2	0.00	0.13	0.02	15 .	2.1	2.1	2 .1	0.07
42	16.47	33.378	24.395	5.69	102 .0	2 .6	0.32	0.2	0.00	0.13	0.03					
52	15 .80	33.361	24.535	5.80	102.6	2.5	0.32	0.2	0.00	0.20	0.07	4.6	1 .7	1 .7	1 .7	0.03
59	14.72	33.394	24.797	5 .77	99.9	3.0	0.38	0.2	0.00	0.21	0.09					
68	14.23	33.408	24.912	5.63	96.5	2.6	0.43	0.2	0.00	0.28	0.17	1 .8	0.93	1 .0	0.99	0.04
78	13.37	33.431	25.106	5.14	86. 5	5.0	0.68	4.3	0.15	1 .43	0.90					
86	12.93	33.516 D	25.260													
96	12 .30	33.521	25.386	4.62	76.1	9.2	0.95	9.4	0.06	0.25	0.33	0.35	0.25	0.23	0.24	0.01

A) INCUBATION LIGHT INTENSITIES WERE 93, 41, 14, 5.0, 1.8., 0.37 PERCENT RESPECTIVELY.

1

CalCOFI Cruise 9504

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
77	49	35 05.6	120 47.3	04/21	0530	0536	136	47	88	88
77	51	35 01.1	120 56.7	04/21	0816	0837	487	204	113	113
77	60	34 43.9	121 32.9	04/20	1010	1031	513	165	84	84
77	70	34 23.1	122 16.1	04/20	0503	0525	503	199	155	155
77	80	34 03.9	122 57.8	04/19	2306	2328	470	197	26	26
77	90	33 43.8	123 38.5	04/19	1710	1733	471	202	21	21
80	51	34 27.1	120 32.7	04/17	2002	2009	171	50	994	117
80	55	34 18.3	120 50.4	04/17	2313	2335	485	202	43	43
80	60	34 09.8	121 09.6	04/18	0254	0315	428	207	33	33
82	47	34 16.5	120 03.2	04/17	1529	1550	457	197	131	131
83	40.7	34 14.2	119 26.3	04/17	0915	0920	81	26	223	223
83	42	34 11.1	119 32.2	04/17	0732	0743	224	103	295	295
83	51	33 53.3	120 09.6	04/17	0119	0128	200	64	580	580
83	55	33 44.3	120 25.1	04/16	2205	2226	478	205	50	50
83	60	33 34.9	120 47.0	04/16	1735	1758	524	172	27	27
83	100	32 15.2	123 32.6	04/15	1829	1852	487	192	25	25
83	110	31 54.6	124 09.6	04/15	1228	1249	543	205	15	15
87	33	33 52.0	118 29.5	04/12	1808	1814	145	46	165	165
87	35	33 48.6	118 37.6	04/12	2036	2057	412	205	109	109
87	40	33 39.3	118 59.8	04/13	0011	0033	424	204	90	90
87	45	33 30.0	119 19.6	04/13	0412	0435	469	206	89	89
87	50	33 19.9	11941.0	04/13	0810	0819	177	79	209	209
87	55	33 06.6	120 01.4	04/13	1219	1241	514	167	43	43
87	60	32 58.8	120 21.6	04/13	1628	1650	456	206	22	22
87	70	32 40.2	121 03.6	04/14	0125	0148	489	194	49	49
87	80	32 19.6	121 42.9	04/14	0817	0839	496	210	26	26
87	90	31 59.9	122 25.7	04/14	1756	1819	464	214	56	56
90	28	33 29.1	117 46.9	04/12	1201	1223	439	198	116	116
90	30	33 24.8	117 52.2	04/12	0929	0951	458	192	39	39
90	35	33 14.9	118 15.7	04/12	0503	0525	412	216	95	95
90	37	33 11.4	118 23.7	04/12	0235	0257	413	190	46	46
90	45	32 55.2	118 56.9	04/11	2135	2156	408	213	44	44
90	53	32 40.1	119 28.7	04/11	1453	1515	453	195	26	26
90	60	32 26.6	119 57.6	04/11	1152	1214	434	205	28	28
90	70	32 06.5	120 39.4	04/11	0451	0515	491	207	51	51
90	80	3146.2	121 19.4	04/10	2238	2300	440	213	66	66
90	90	31 26.1	121 58.3	04/10	1710	1731	435	210	16	16
90	100	31 05.3	122 39.7	04/10	0720	0744	470	214	17	17
90	110	30 45.4	123 20.8	04/10	0217	0239	507	193	22	22
90	120	30 26.6	124 02.2	04/09	1947	2008	488	207	25	25
93	26.7	32 56.8	117 19.2	04/06	1220	1242	405	214	64	64
93	28	32 54.1	117 24.0	04/06	1519	1540	384	206	39	39
93	30	32 50.1	11731.9	04/06	1850	1913	433	208	48	48
93	35	32 41.0	117 53.2	04/06	2259	2320	391	210	79	79
93	40	32 30.4	118 13.5	04/07	0319	0341	430	212	33	33
93	45	32 22.0	118 34.5	04/07	0755	0816	411	210	24	24
93	50	32 11.3	118 54.7	04/07	1209	1231	422	204	26	26
93	55	32 00.7	119 13.6	04/07	1626	1648	425	210	33	33
93	60	31 50.4	119 35.4	04/07	2022	2044	424	213	35	35
93	70	31 31.0	120 15.0	04/08	0203	0224	423	211	31	31
93	80	31 10.8	120 55.2	04/08	0709	0731	427	207	16	16
93	90	30 50.6	121 36.0	04/08	1620	1643	466	209	19	19
93	100	30 32.2	122 17.3	04/08	2235	2256	470	209	28	28
93	110	30 11.7	122 56.1	04/09	0427	0451	474	212	27	27
93	120	29 52.6	123 37.4	04/09	1221	1243	488	199	29	29

FIGURES

Avifauna Observations

CalCOFI Cruise 9501

la. Western Gull distribution.

lb. California Gull distribution.

lc. Leach's Storm-Petrel distribution.

Id. Black-footed Albatross distribution.

le. Cassin's Auklet distribution.

If. Northern Fulmar distribution.

CalCOFI Cruise 9504

2a. Western Gull distribution.

2b. Sooty Shearwater distribution.

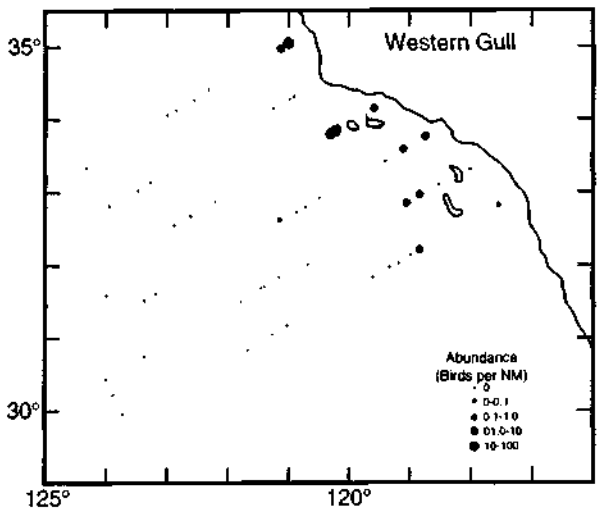
2c. Pacific Loon distribution.

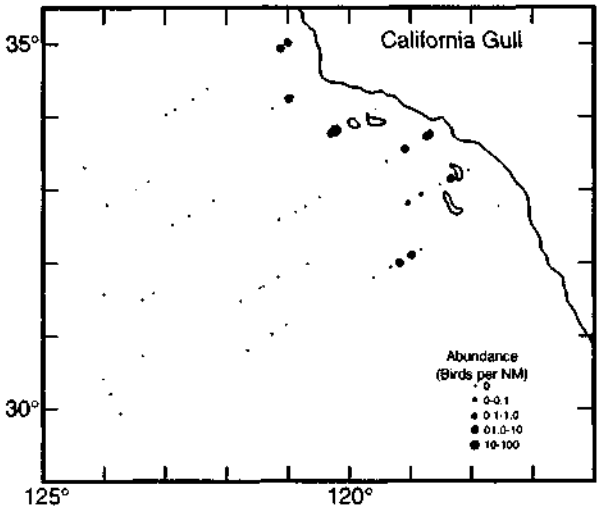
2d. Black-footed Albatross distribution.

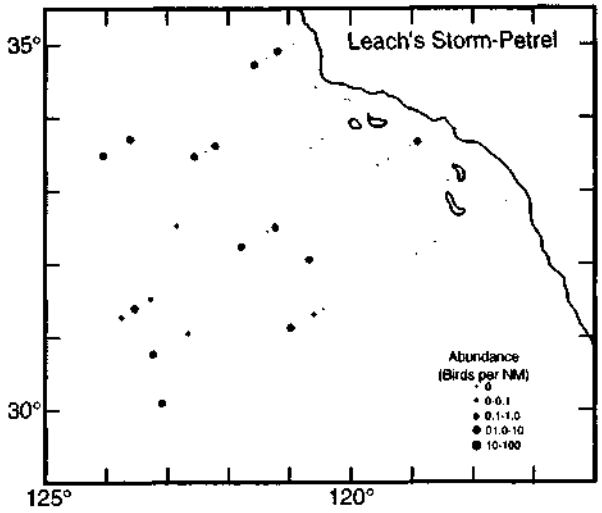
2e. Red Phalarope distribution.

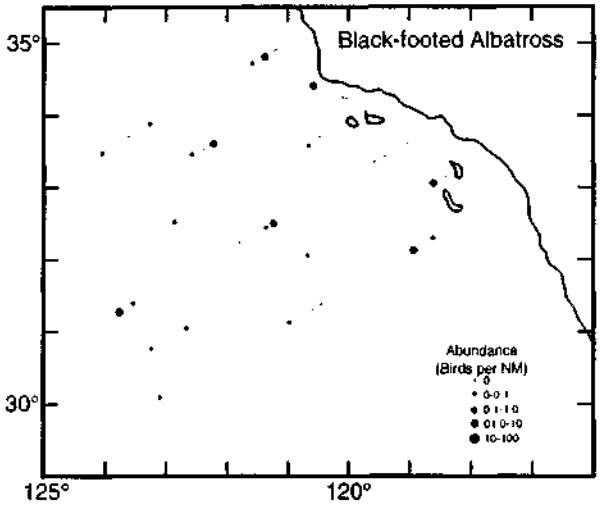
2f. Red-necked Phalarope distribution.

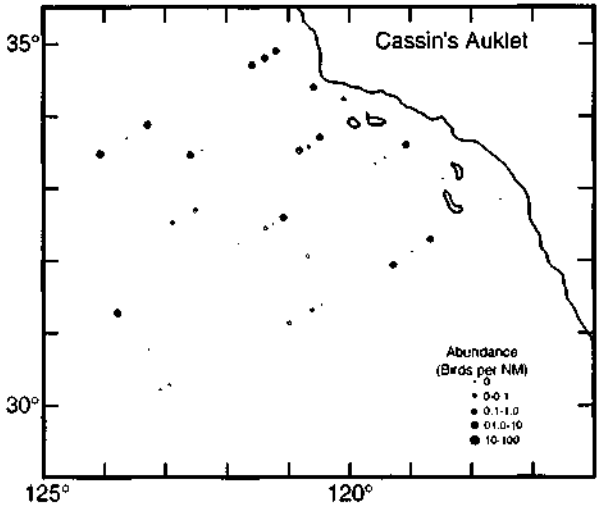
CalCOFI Cruise 9501

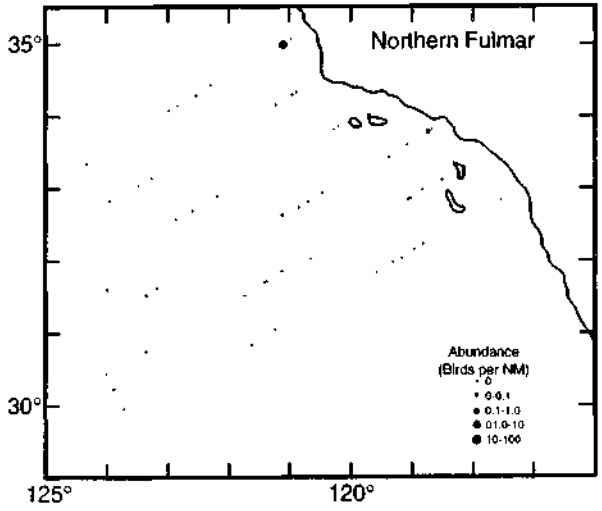












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