UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 9507
6 - 23 July 1995

CalCOFI Cruise 9510
6 - 28 October 1995

SIO Reference 96-11
1 August 1996

Approved for distribution:



Edward A. Frieman, Director

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INTRODUCTION

The data in this report were collected during cruises 9507* and 9510 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 9507 and 9510 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 9507 and 9510 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. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. 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 8410 Portasal 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 PI27. 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 at.* (1971).

Samples for chlorophyll-a and phaeopigments were filtered onto Whatman 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 at.* 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 arc 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). Primary production was estimated from 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 ^{4}C as $NaHC0_3$ (200 ul of 50 uCi/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

Sea birds 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).

Ancillary Programs

Several ancillary programs produced data on these cruises which are not presented in this report. These programs include:

1) *Underway Data.* Continuous near surface measurements of temperature, salinity and chlorophyll fluorescence were made from water pumped through the ship, and the data are logged at one minute intervals.

2) *ADCP.* Acoustic Doppler Current Profiler data were recorded continuously along the ship's cruise track.

3) *Bio-optics.* Bio-optical profiles were measured almost daily using a variety of sensors. In addition the bio-optics program included cyanobacteria microscopic counts by epifluorescence, phycoerythrin pigment concentration determined by fluorescence spectroscopy, soluble and particulate absorption and fluorescence spectra, and experiments on the photo-oxidative loss of soluble and particulate absorption and fluorescence spectra.

4) *Pigment studies.* These included measurement of ^{14}C incorporation into pigments in incubated samples, phytoplankton pigment analyses of euphotic zone samples using high performance liquid chromatography, phytoplankton fluorescence measurements before and after DCMU addition, and nutrient enrichment experiments to assess changes in phytoplankton fluorescence, source-specific nitrogen uptake rates, and phytoplankton population changes as indicated by pigment concentrations.

5) *Benthic sampling.* On cruise 9510 bottom samples were taken at four sites. Samples were preserved for subsequent analysis of benthic foraminifera, organic carbon analysis, and other faunal and geochemical analyses.

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. Multiple bottles tripped at the same depth to provide water for ancillary programs are not used in the calculation of standard depth data. 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 /1000m 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.

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PERSONNEL

CalCOFI Cruise 9507

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	**I, II**
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Cummings, Sherry L.	Staff Research Associate, SIO	I, II
Dotson, Ronald C.	Fishery Biologist, NMFS	I, II
Gruber, Dennis W.	Marine Technician, SIO	I, II
Hays, Amy E.	Biological Technician, NMFS	I, II
Mitchell, B. Greg	Associate Research Biologist, SIO	I
Nisly, Barry J.	Development Engineer, SIO	I, II
Osgood, Kenric E.	Post Graduate Researcher, SIO	II
Ramirez, Fernando	Staff Research Associate, SIO	I.II
Renger, Edward H.	Staff Research Associate, SIO	I.II
Sharpe, Timothy J.	Volunteer	I
Veit, Richard R.	Research Scientist, University of Washington	I.II
Whynott, Douglas V.	Journalist, San Diego Reader	II
Wilkinson, James R.	Programmer/Analyst, SIO	I.II

Leg I: San Diego to Port San Luis, Ca., 6-21 July, 1995
Leg II: Port San Luis to San Diego, Ca., 21-23 July, 1995

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 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.

FIGURES

Cruise 9507

1. CalCOFI Cruise 9507, 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 87 (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.

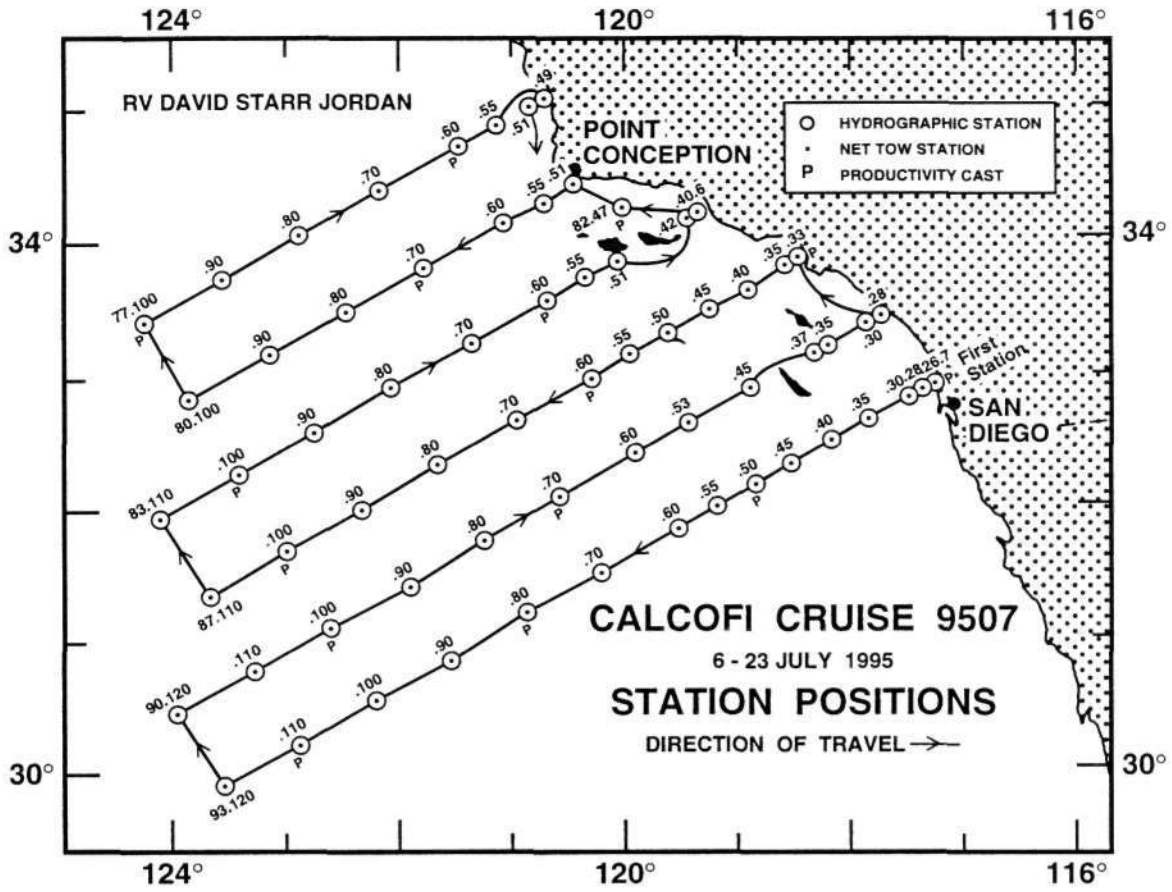


FIGURE 1

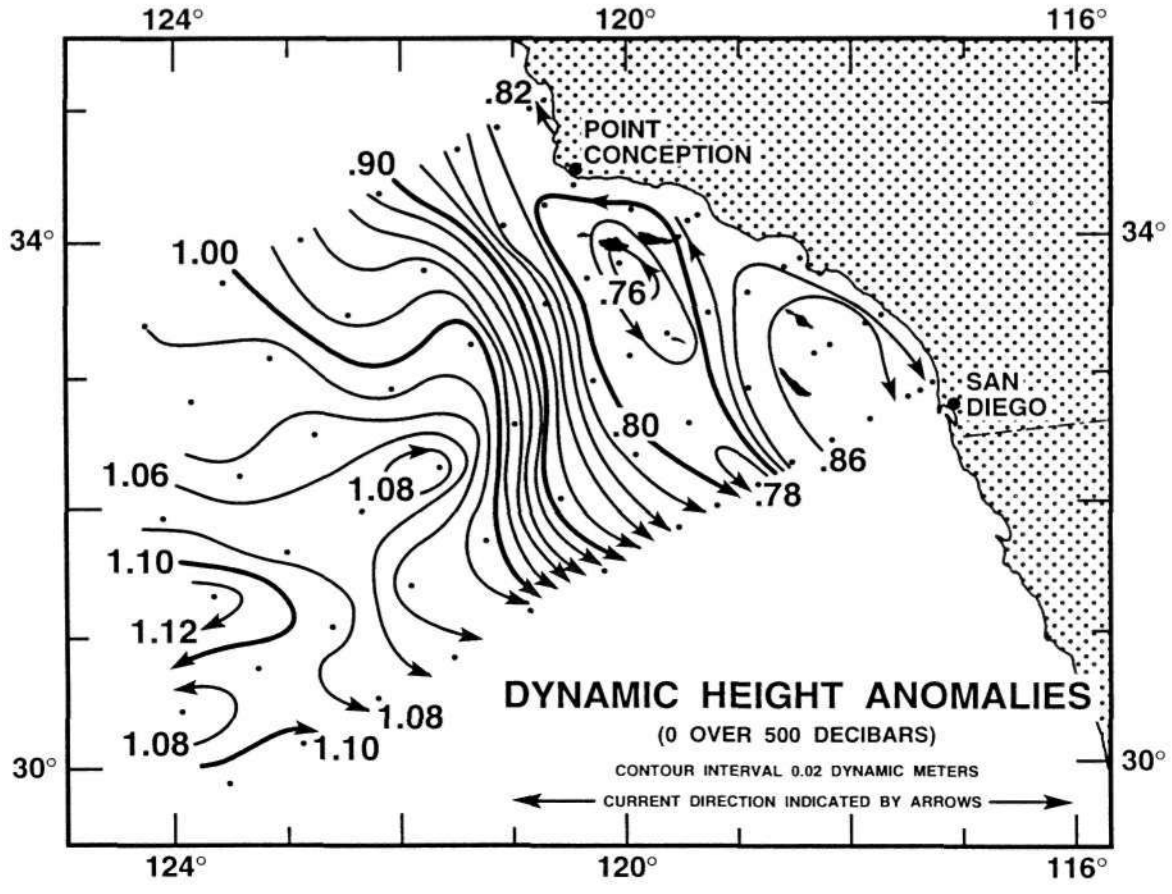


FIGURE 2

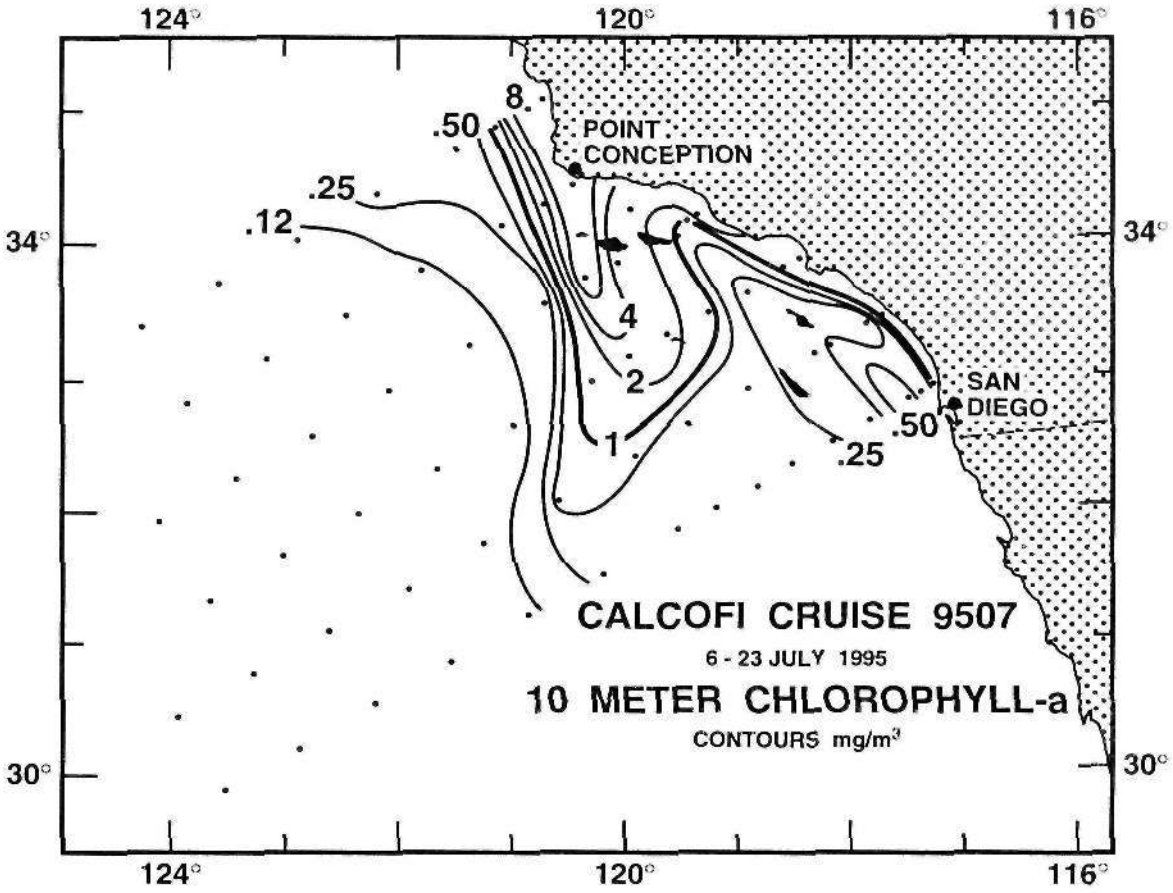


FIGURE 3A

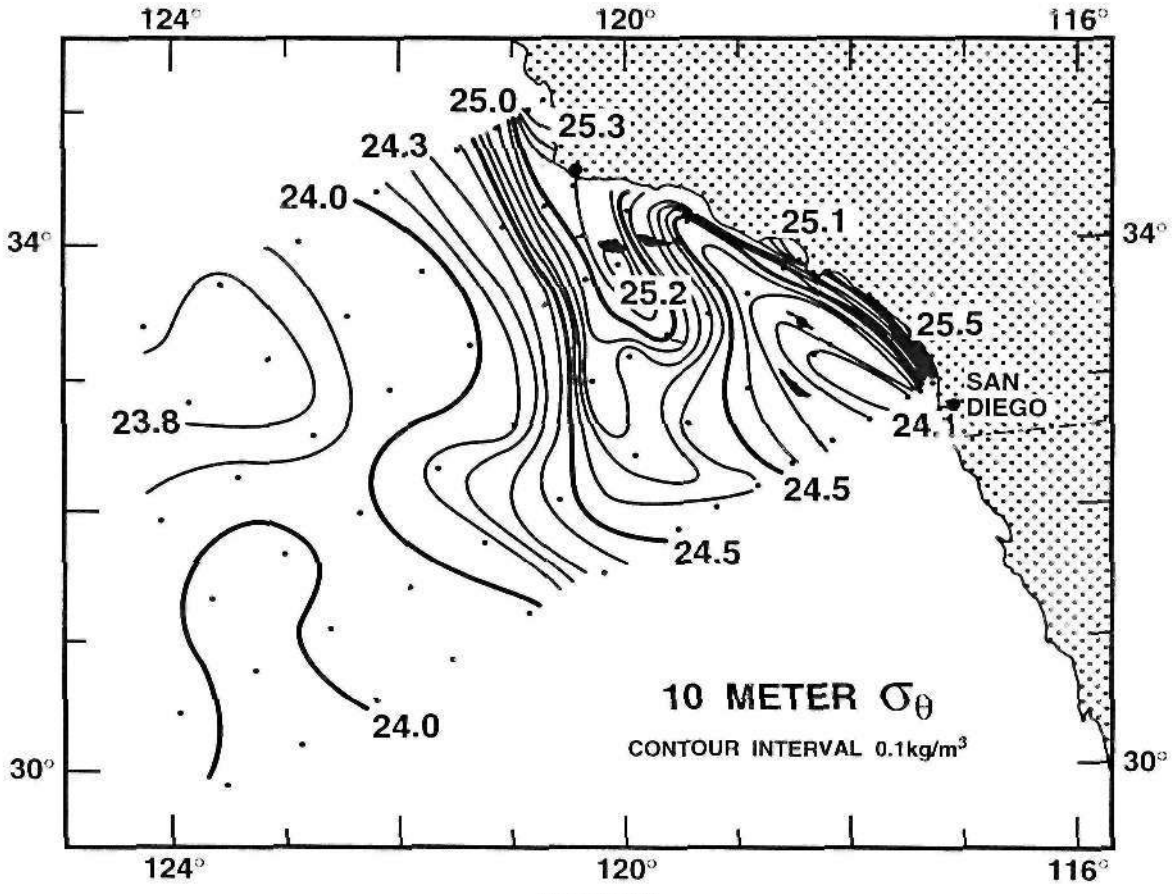


FIGURE 3B

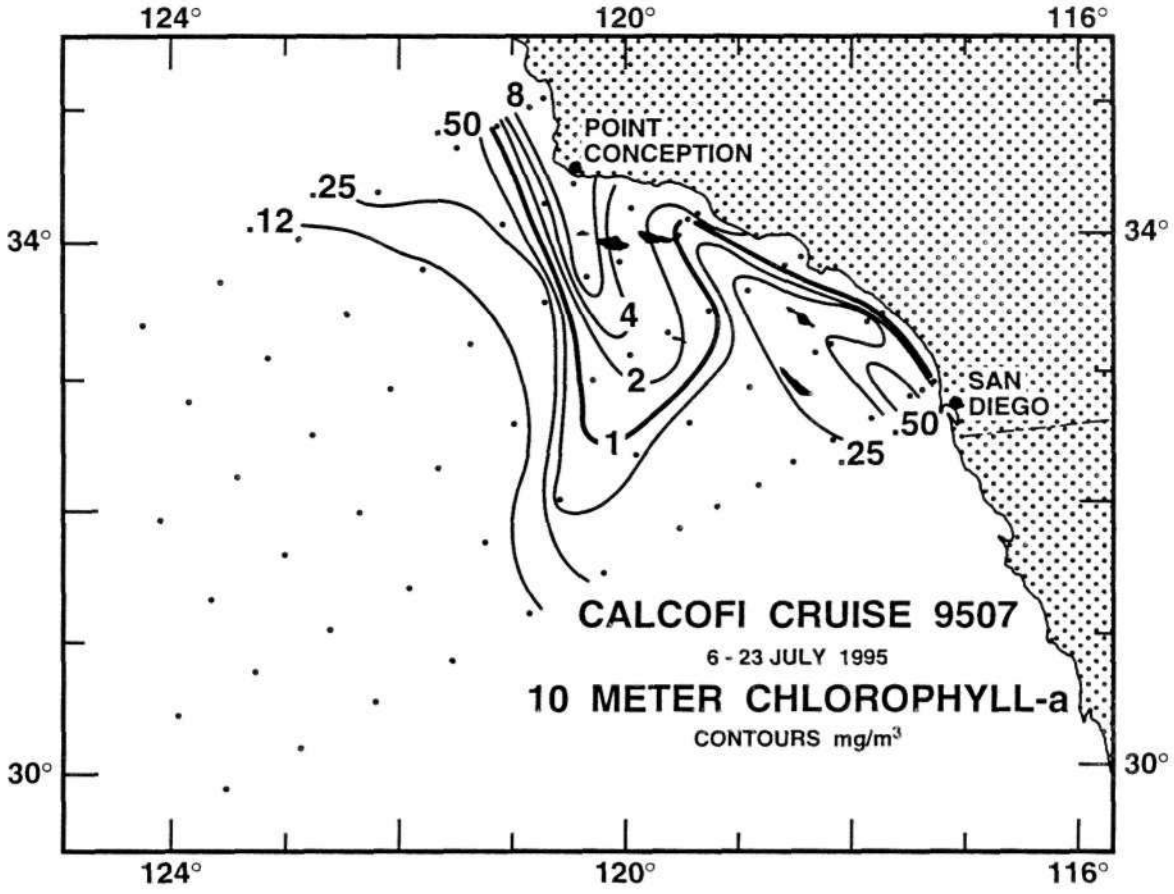


FIGURE 3A

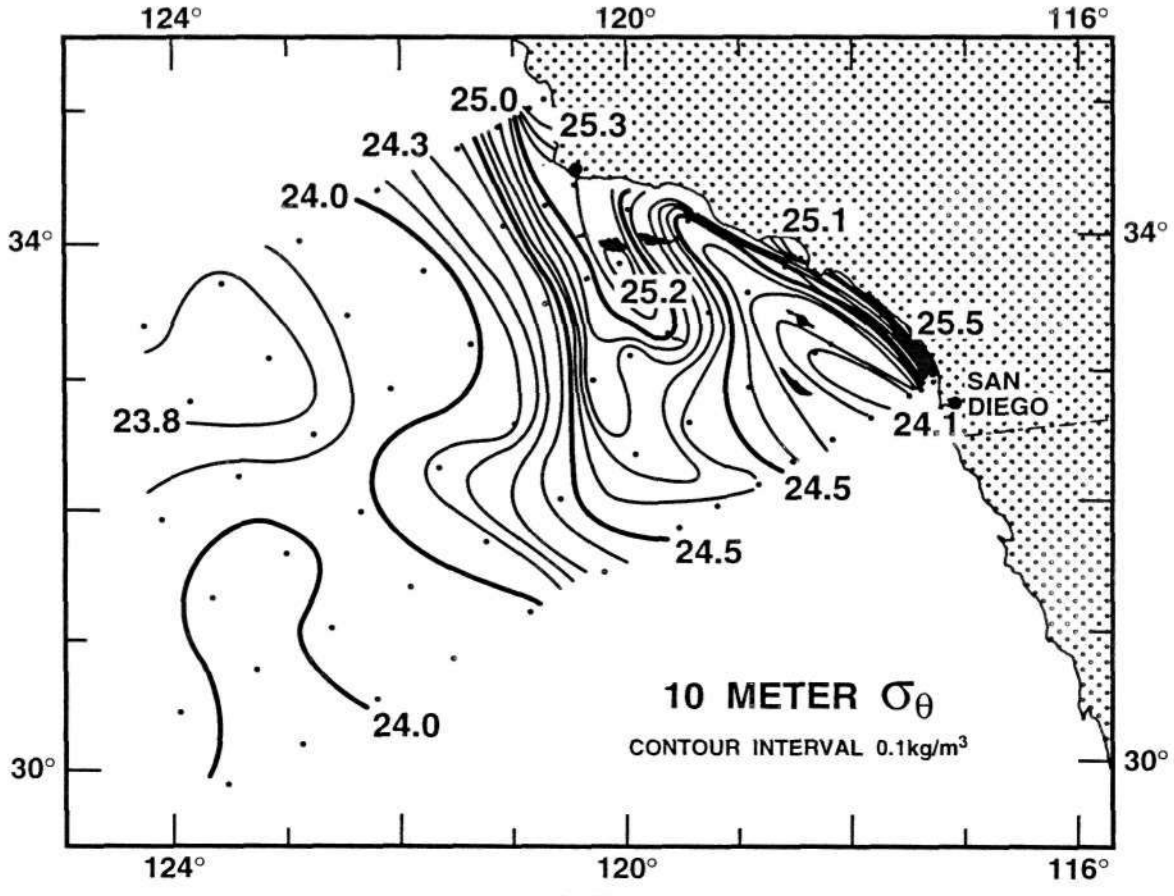


FIGURE 3B

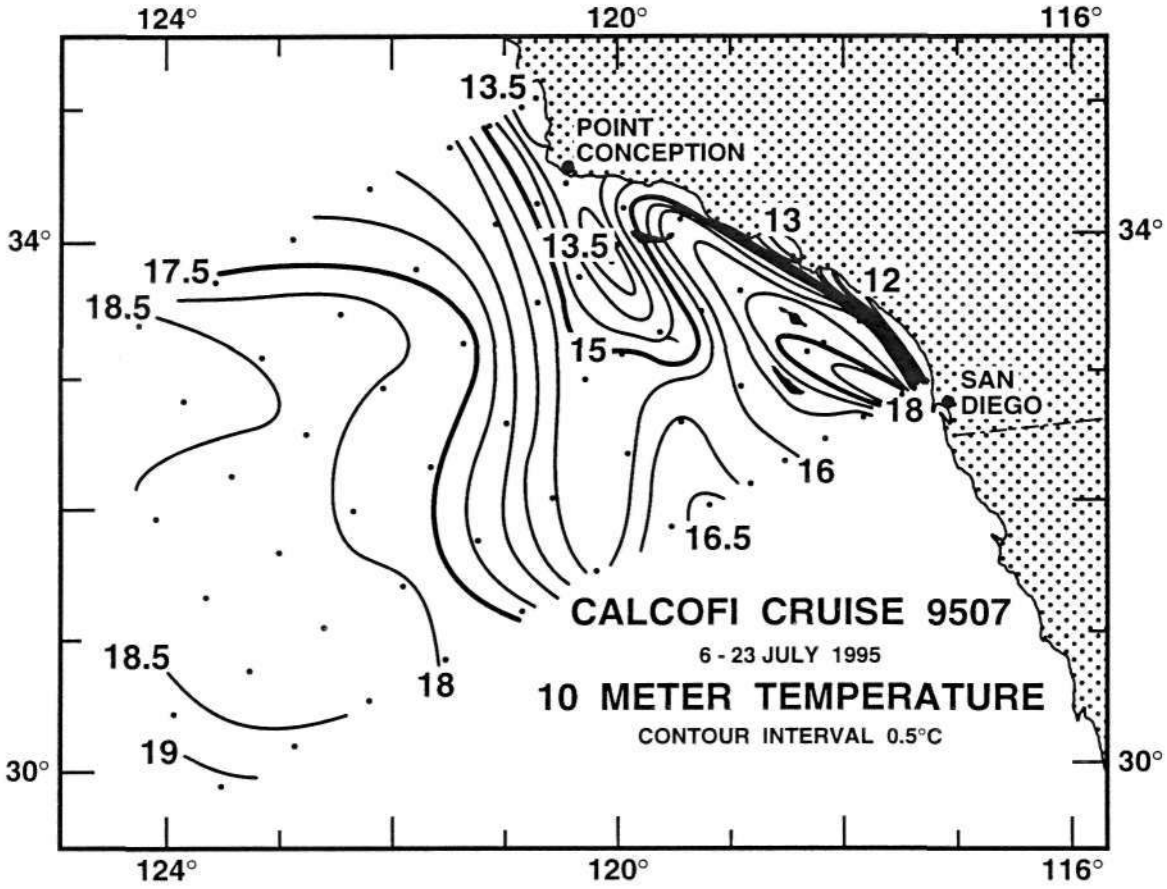


FIGURE 3C

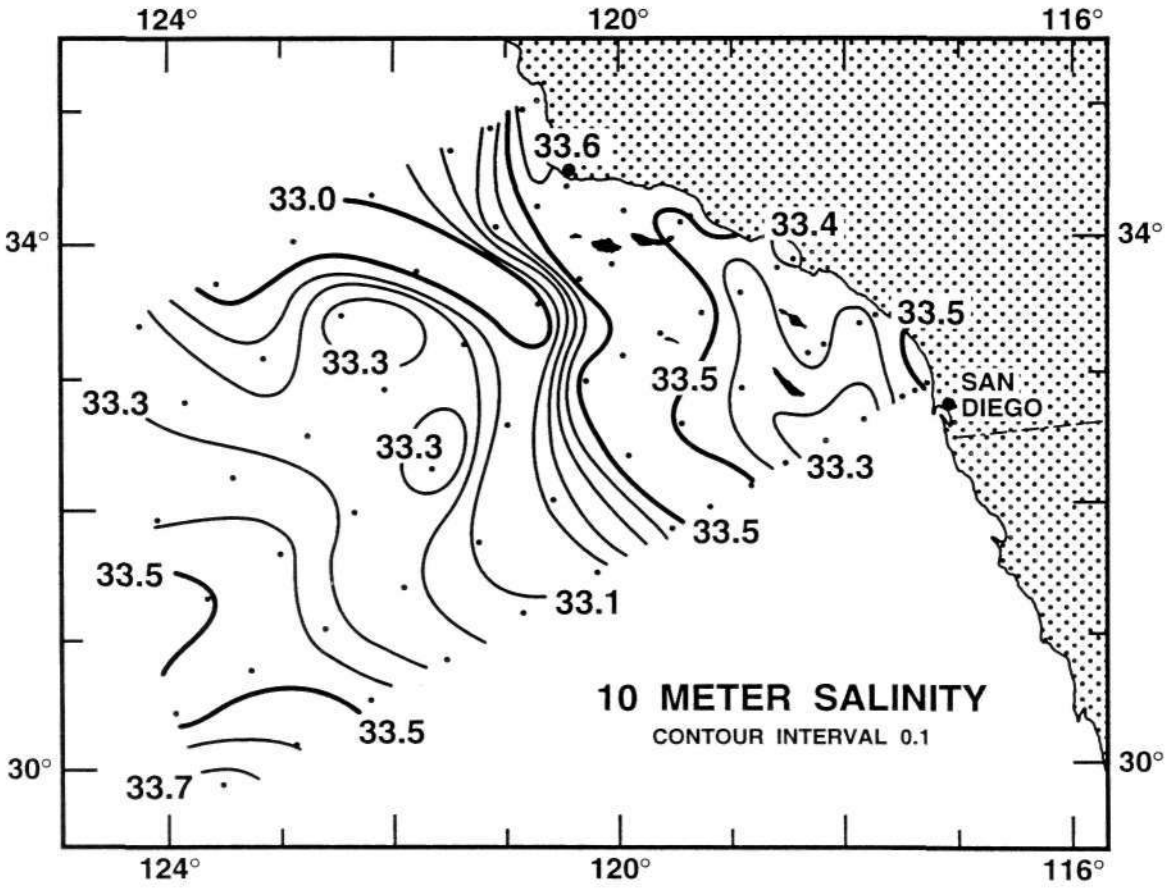


FIGURE 3D

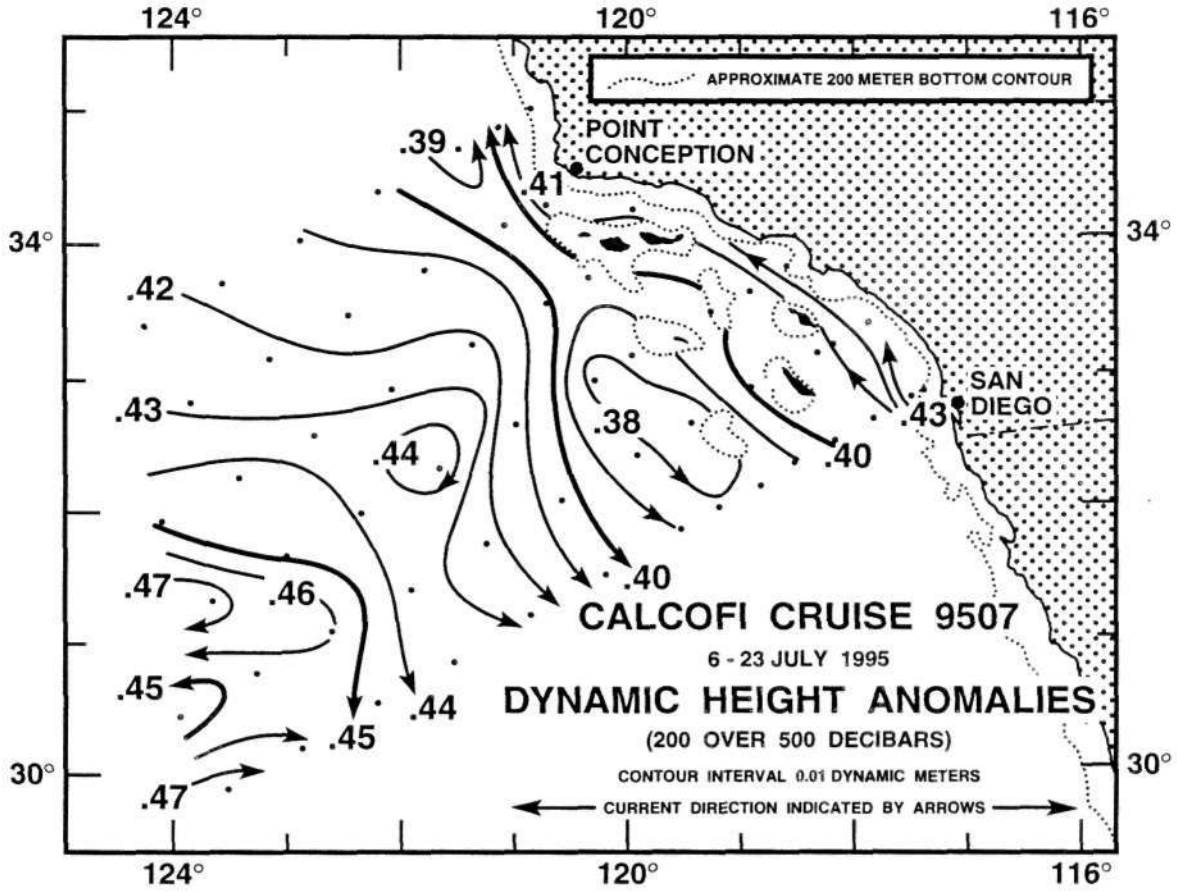


FIGURE 4A

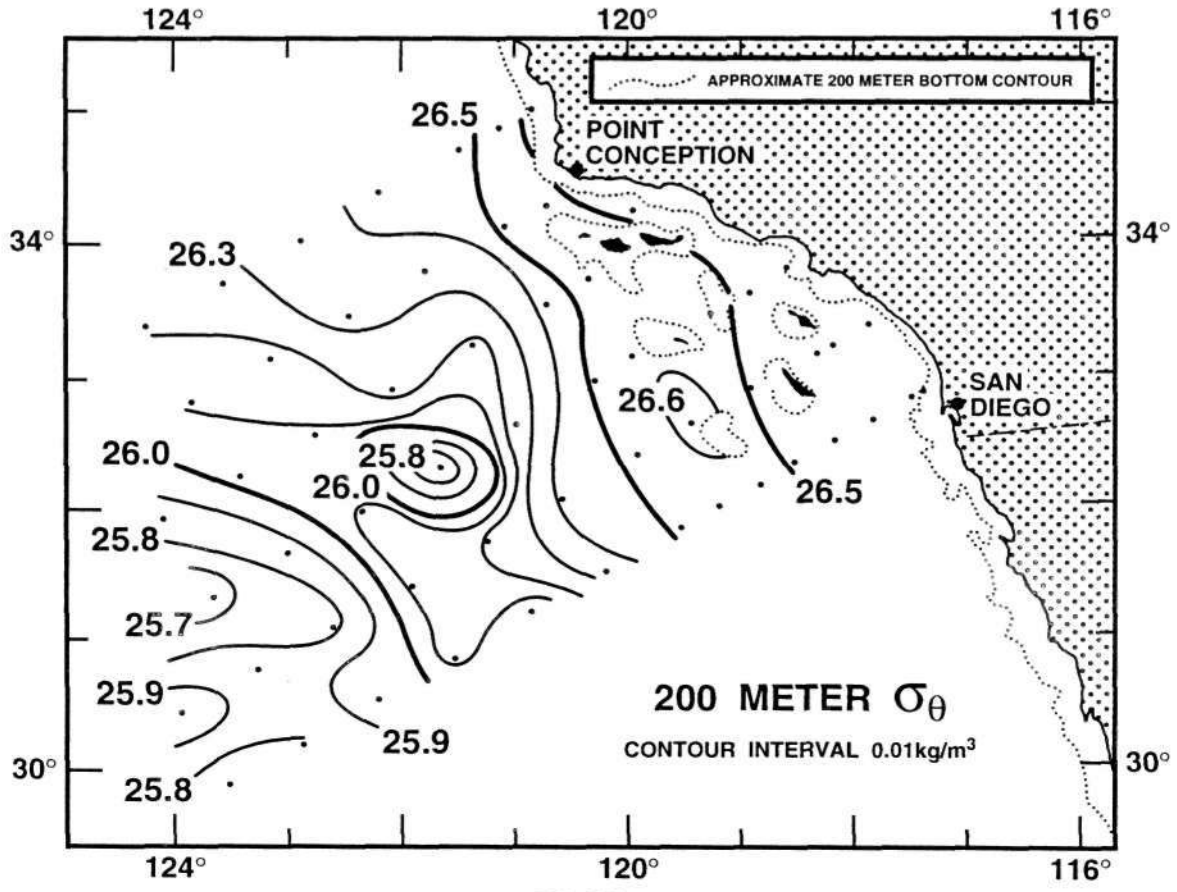


FIGURE 4B

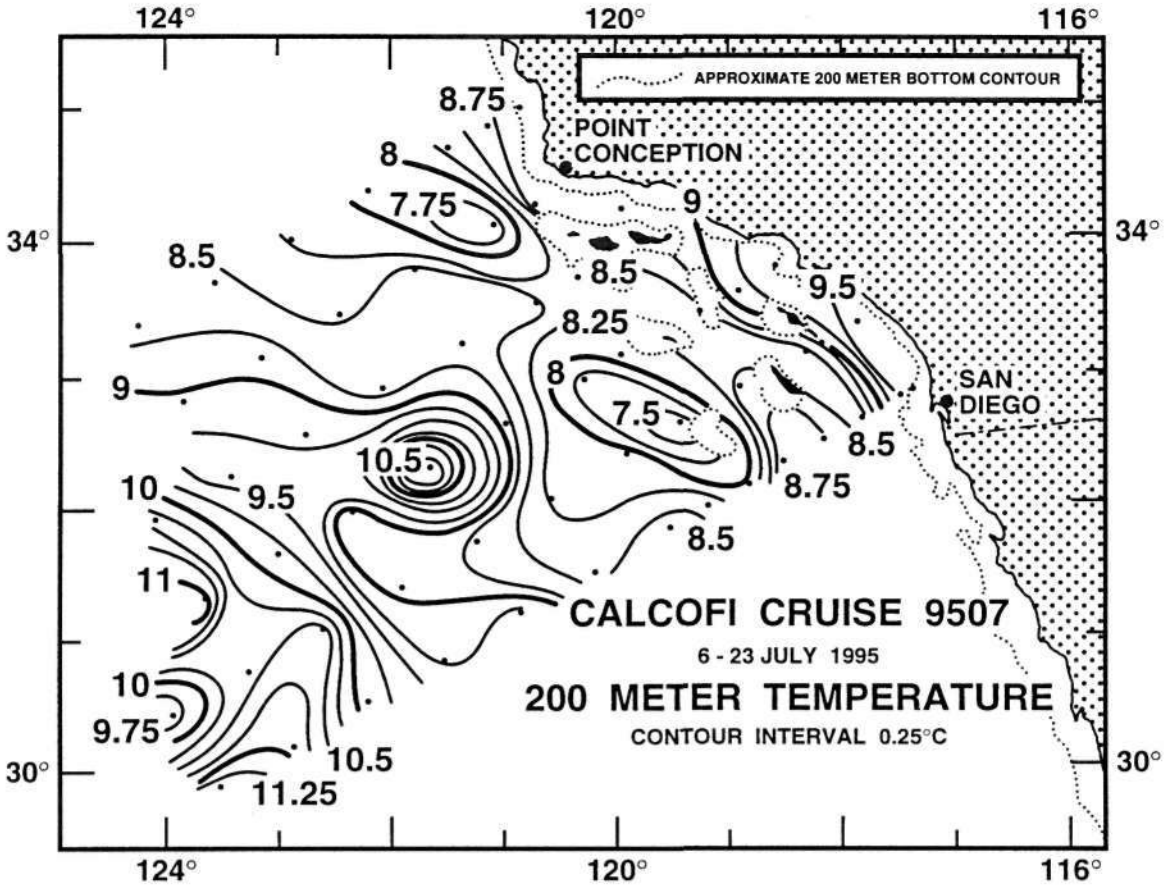


FIGURE 4C

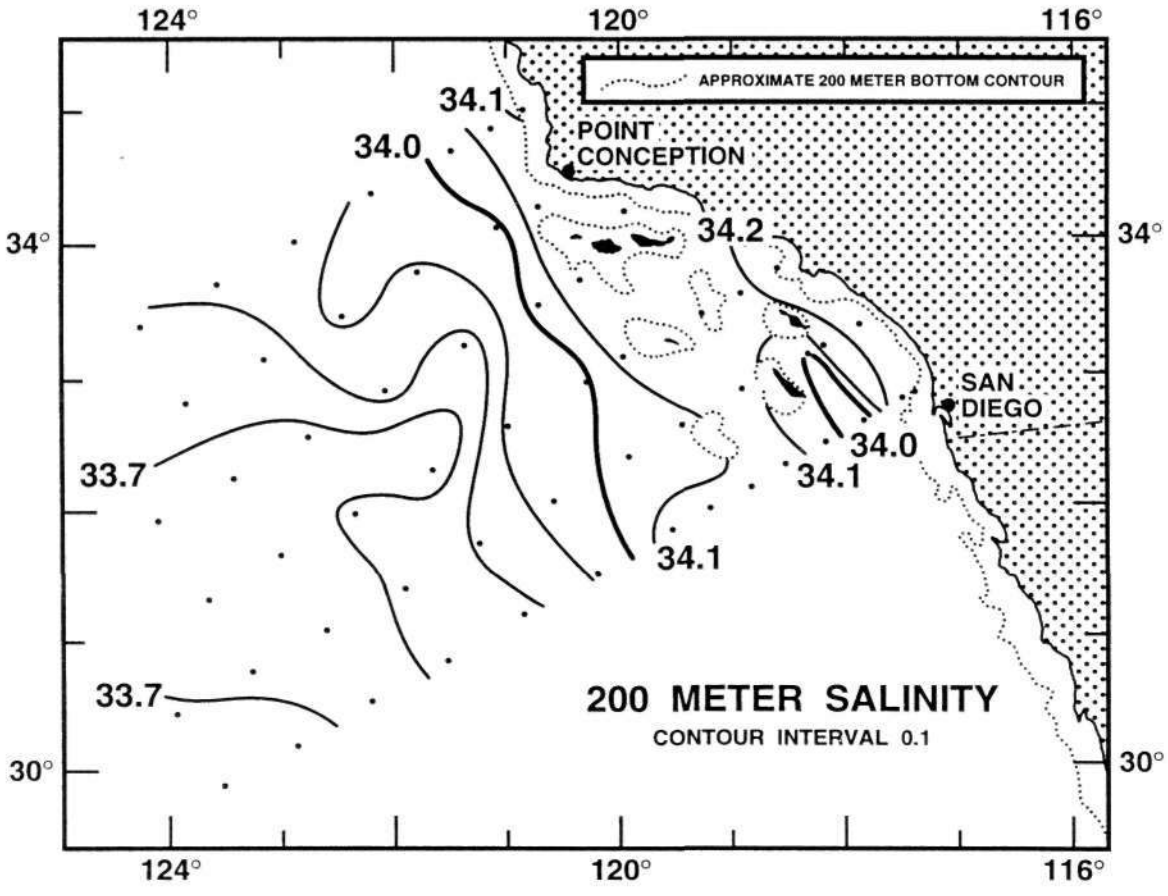


FIGURE 4D

CALCOFI CRUISE 9507

13 - 16 JULY 1995

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 87

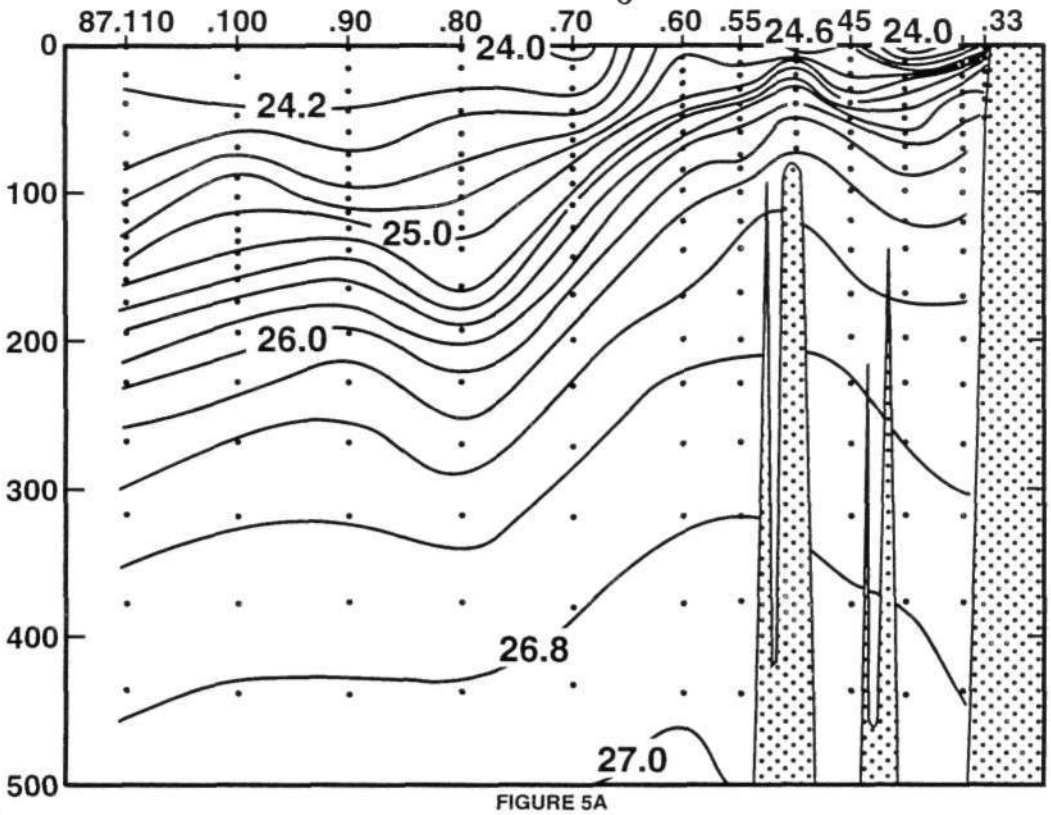


FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 87

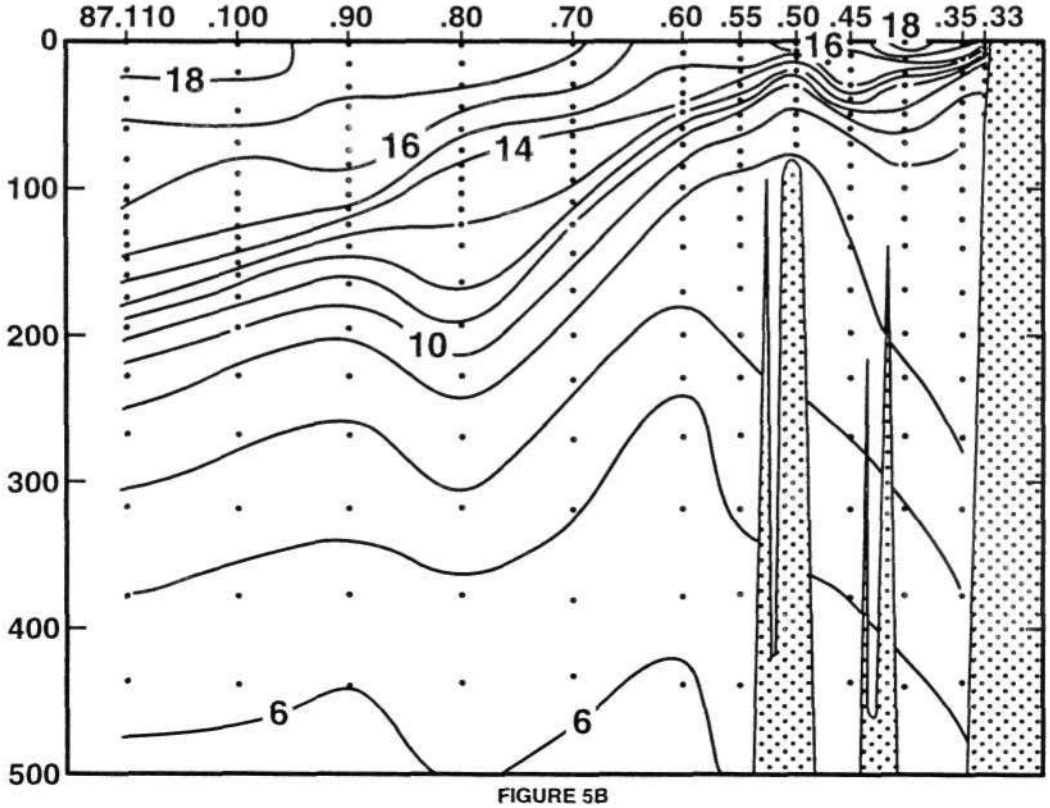


FIGURE 5B

CALCOFI CRUISE 9507

13 - 16 JULY 1995

SALINITY ALONG CALCOFI LINE 87

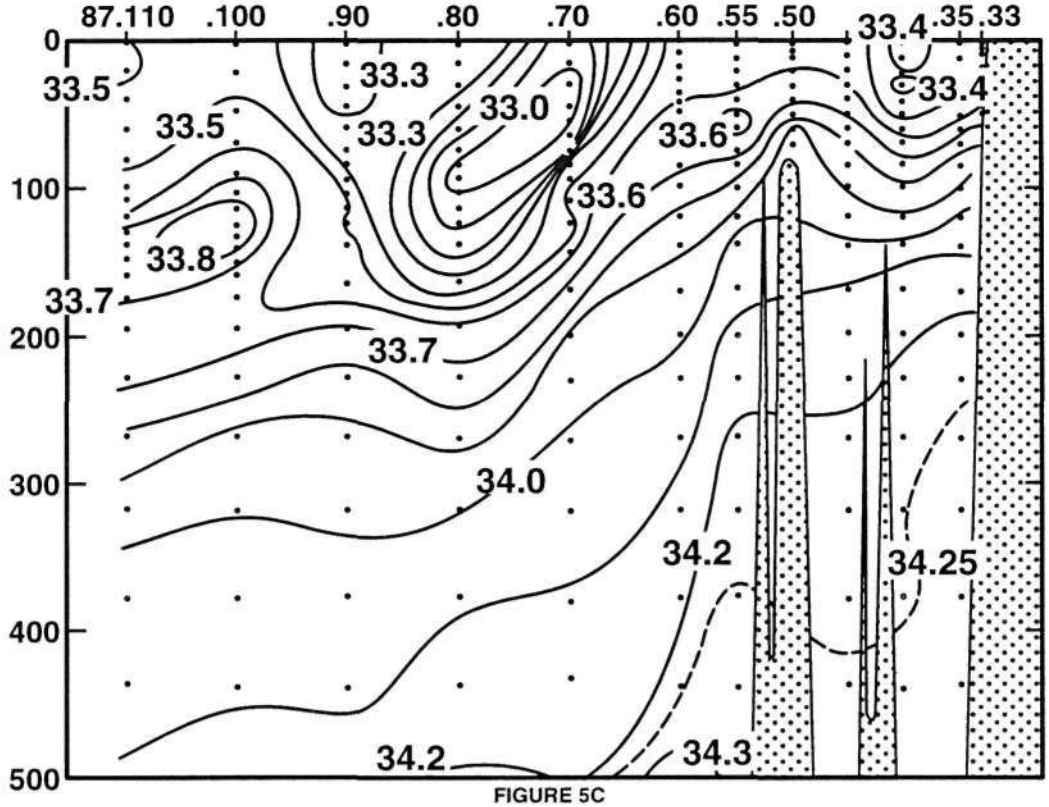


FIGURE 5C

DEPTH (m)

SILICATE (μM/l) ALONG CALCOFI LINE 87

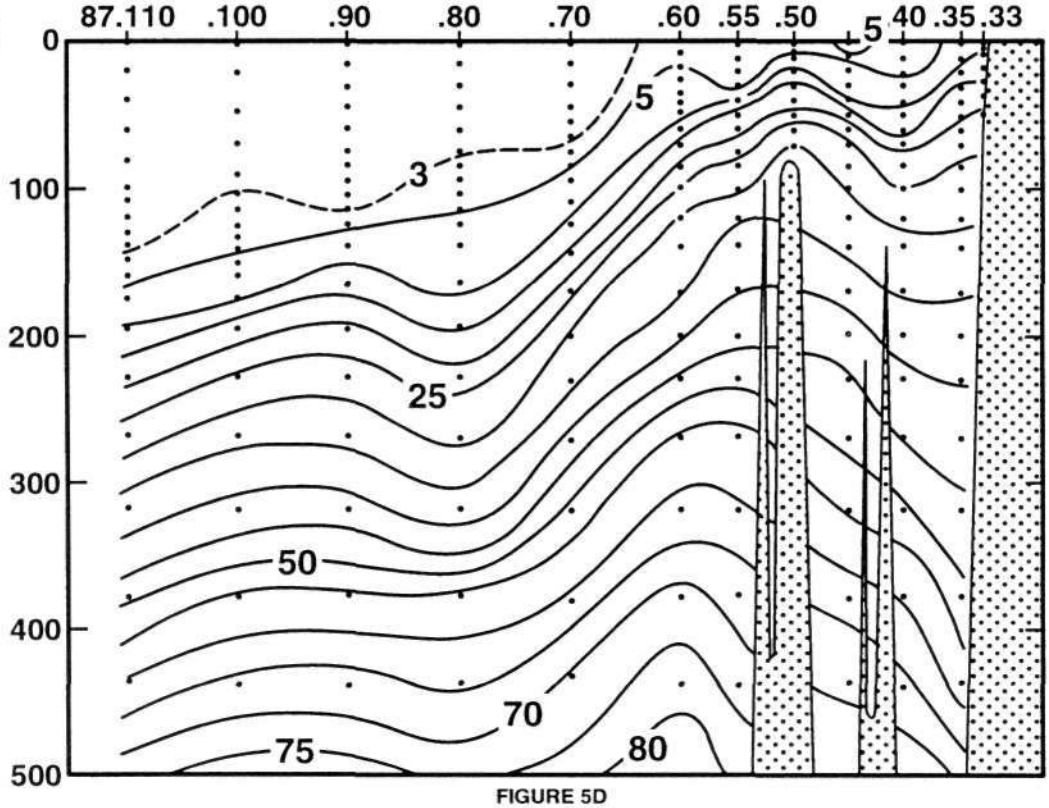


FIGURE 5D

CALCOFI CRUISE 9507

13 - 16 JULY 1995

NITRATE (μM/l) ALONG CALCOFI LINE 87

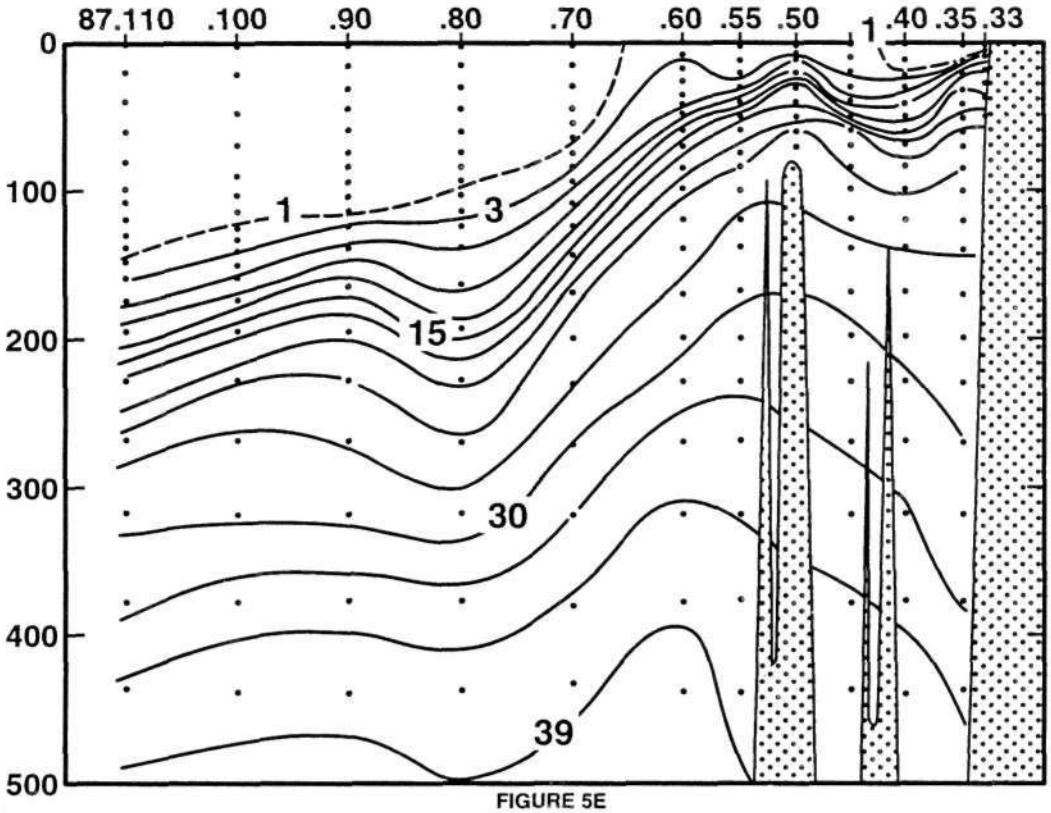


FIGURE 5E

DEPTH (m)

PHOSPHATE (μM/l) ALONG CALCOFI LINE 87

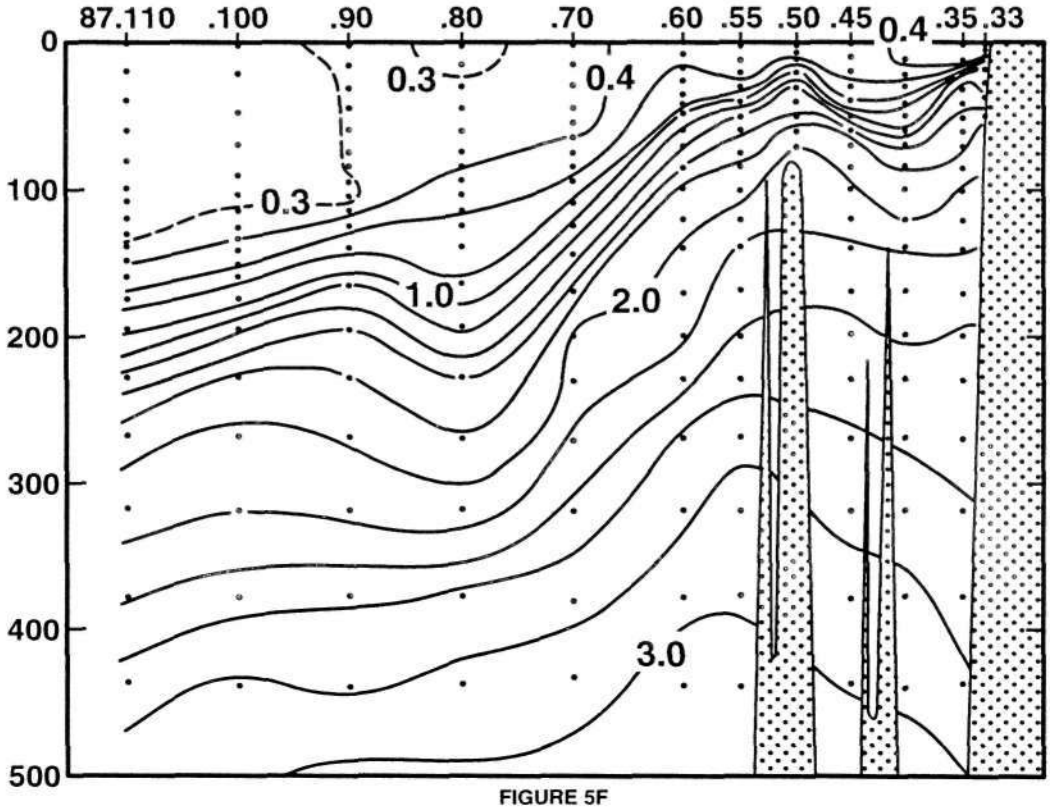


FIGURE 5F

CALCOFI CRUISE 9507

13 - 16 JULY 1995

CHLOROPHYLL-a (μg/l)) ALONG CALCOFI LINE 87

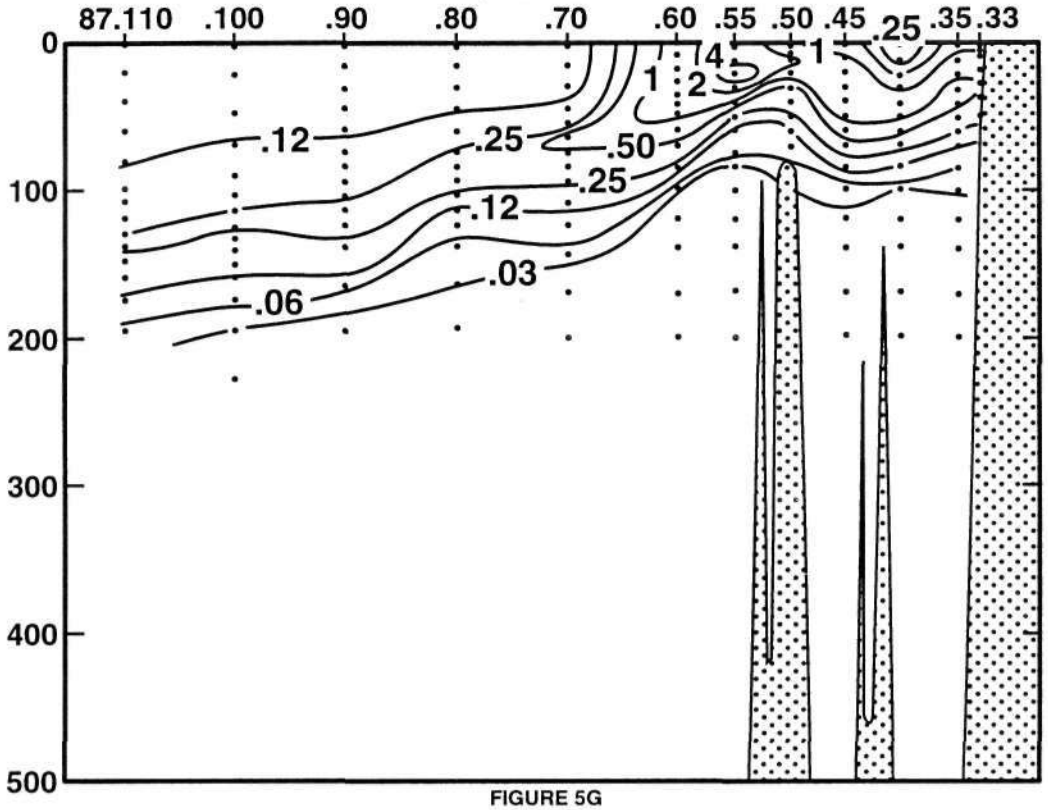


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 87

DEPTH (m)

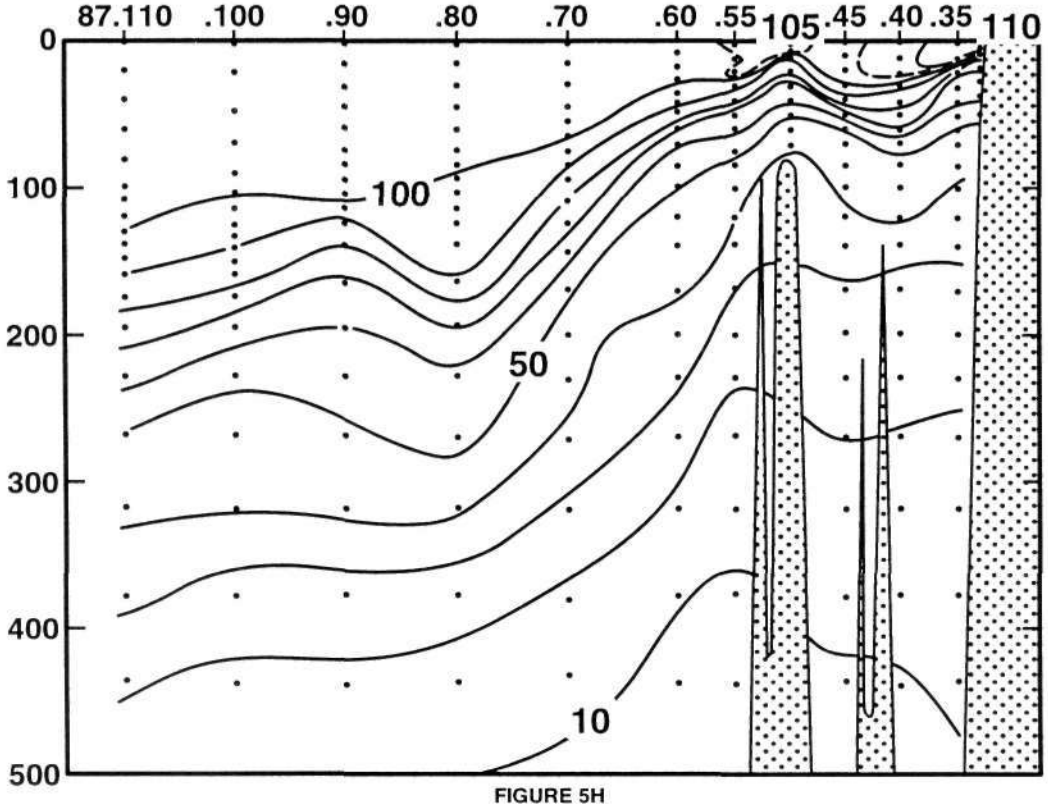


FIGURE 5H

CALCOFI CRUISE 9507

13 - 16 JULY 1995

OXYGEN (ml/l) ALONG CALCOFI LINE 87

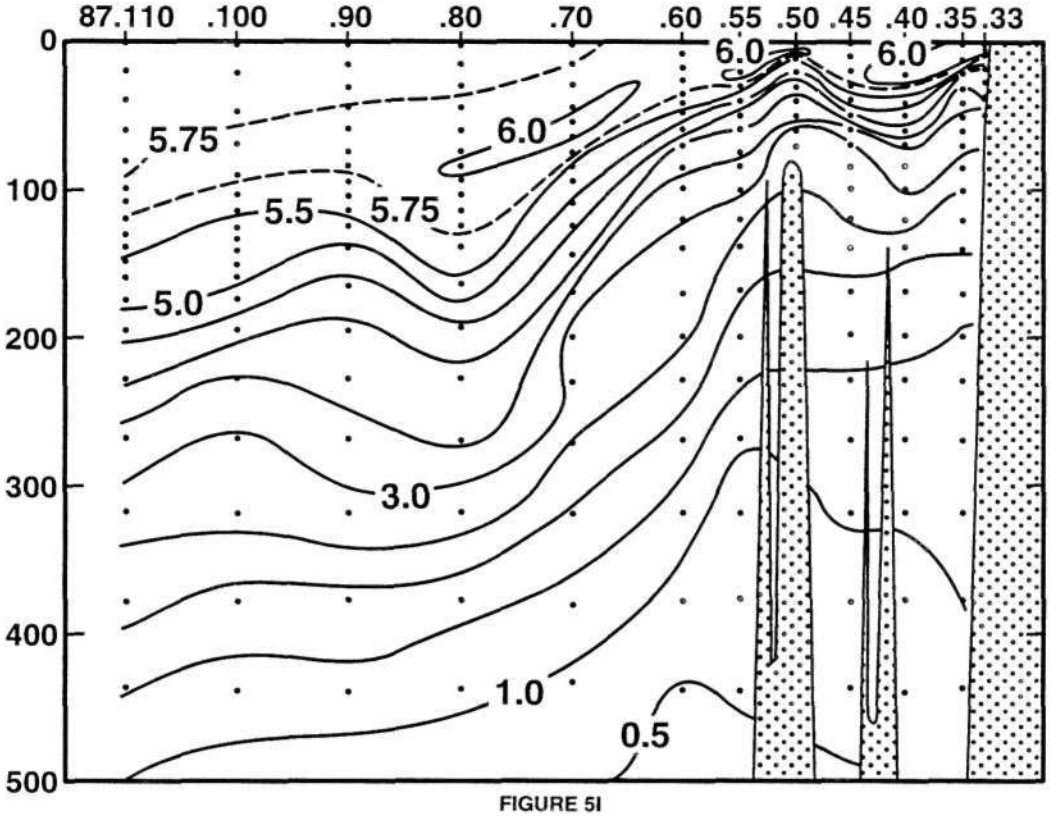


FIGURE 5I

DEPTH (m)

NITRITE (μM/l) ALONG CALCOFI LINE 87

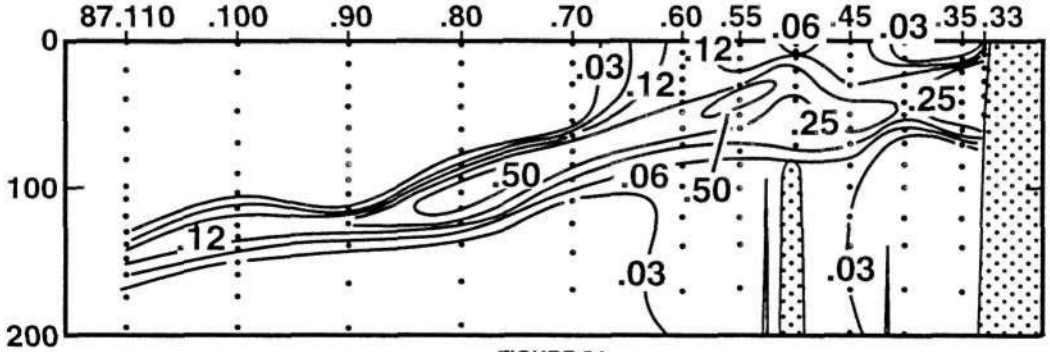


FIGURE 5J

PHAEOPIGMENTS (μg/l) ALONG CALCOFI LINE 87

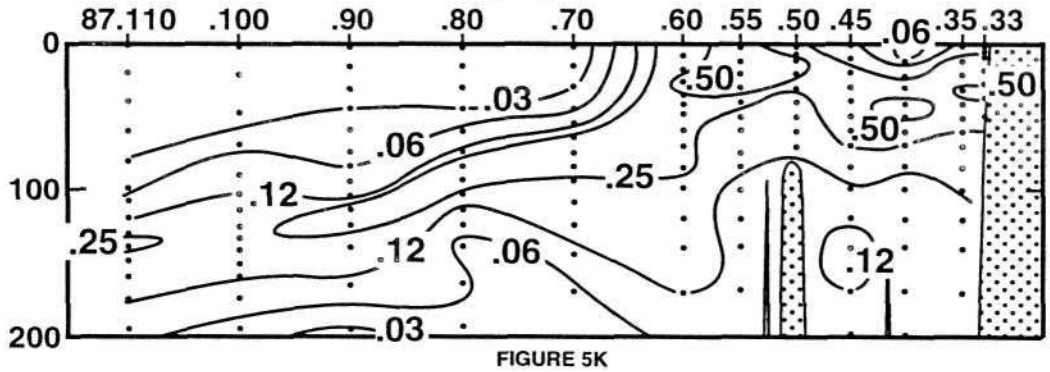


FIGURE 5K

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 49

LATITUDE	LONGITUDE	OAY/BO/YR	CAST TIKE	BOTTOB	WIND SPEED	WAVES	UEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
35 5.4 N	120 46.6 W	22/07/95	0626 UTC	69 m	290 09 tn			1018.3 mb	15.2 C	14.. 9 C			

DEPTH m	TEBP DEG C	POT TEP1P DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uB/I	P04 u«/I	N03 uB/I	N02 uB/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.14	13.14	33.697	25.356	260.9	0.000	6.46	108.5	7.4	0.62	4.8	0.22	7.98	2.13	0	
1	13.14	13.14	33.697	25.356	260.9	0.003	6.46	108.5	7.4	0.62	4.8	0.22	7.98	2.13	1	208
5	13.14	13.14	33.697	25.356	261.0	0.013	6.47	108.6	7.4	0.62	4.8	0.22	7.98	2.13	5	207
10	13.14	13.14	33.697	25.357	261.1	0.026	6.48	108.8	7.3	0.62	4.8	0.22	8.19	2.11	10	206
20	11.75	11.75	33.724	25.646	233.8	0.051	4.74	77.3	15.1	1.25	12.5	0.33	7.67	2.07	20	205
30	10.76	10.76	33.769	25.861	213.6	0.073	3.41	54.4	22.8	1.74	19.3	0.38	0.96	0.94	30	204
40	10.63	10.63	33.777	25.890	211.1	0.094	3.24	51.6	24.1	1.78	20.2	0.37	0.67	0.94	40	203
50	10.51	10.50	33.305	25.933	207.2	0.115	3.05	48.4	25.6	1.85	21.2	0.40	0.51	0.81	50	202
59	10.36	10.35	33.S30	25.979	203.1	0.134	2.84	45.0	28.5	1.96	22.2	0.39	0.45	0.92	59	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 51

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIRE	BOTTOB	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
35 1.3 N	120 55.0 W	22/07/95	0148 UTC	237 m	300 08 tn	280 01 04	0	1017.4 mb	16.3 C	15.7 C	04m 11	0/8	

DEPTH m	TEBP DEG C	POT TEBP DEG C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UP,/I	P04 UN/I	N03 uM/I	N02 uN/I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0 ISL	14.12	14.12	33.663	25.130	282.4	0.000	8.23	141.0	1.5	0.32	0.1	0.02	7.41	2.39	0	
1	14.12	14.12	33.663	25.130	282.5	0.003	8.23	141.0	1.5	0.32	0.1	0.02	7.41	2.39	1	216
10	13.09	13.09	33.650	25.330	263.6	0.027	7.07	118.5	2.7	0.53	1.3	0.08	14.06	3.90	10	215
20	11.10	11.10	33.699	25.745	224.4	0.052	4.34	69.8	16.3	1.37	15.1	0.29	5.10	1.53	20	214
30	10.36	10.36	33.739	25.907	209.2	0.073	3.38	53.5	22.4	1.73	20.8	0.18	0.69	0.64	30	213
40	10.24	10.24	33.757	25.942	206.1	0.094	3.24	51.1	23.4	1.78	21.5	0.11	0.40	0.79	40	212
50	9.96	9.95	33.804	26.026	198.3	0.114	2.97	46.6	25.5	1.88	23.0	0.05	0.32	0.57	50	211
60	9.94	9.93	33.808	26.033	197.9	0.134	2.93	46.0	25.6	1.89	23.1	0.05	0.33	0.49	60	210
69	9.92	9.91	33.812	26.040	197.4	0.152	2.92	45.8	25.7	1.98	23.3	0.05	0.30	0.44	69	209
75 ISL	9.90	9.89	33.815	26.045	197.0	0.164	2.90	45.4	25.8	1.95	23.3	0.05	0.29	0.45	75	
84	9.88	9.87	33.820	26.053	196.5	0.182	2.84	44.5	26.0	1.90	23.4	0.04	0.29	0.47	84	208
99	9.66	9.65	33.872	26.130	189.4	0.211	2.61	40.7	28.3	2.01	24.7	0.03	0.25	0.38	100	207
100 ISL	9.65	9.64	33.875	26.134	189.1	0.212	2.60	40.5	28.4	2.02	24.8	0.03	0.24	0.38	101	
119	9.50	9.49	33.926	26.199	183.3	0.248	2.41	37.5	30.2	2.09	25.9	0.02	0.14	0.39	120	206
125 ISL	9.46	9.45	33.937	26.214	182.0	0.259	2.37	36.8	30.6	2.11	26.1	0.02	0.12	0.37	126	
139	9.38	9.36	33.964	26.249	179.0	0.284	2.27	35.2	31.4	2.14	26.6	0.02	0.09	0.34	140	205
150 ISL	9.31	9.29	34.000	26.288	175.4	0.304	2.18	33.8	32.4	2.18	27.2	0.01	0.08	0.34	151	
153	9.26	9.24	34.025	26.316	172.9	0.317	2.11	32.6	33.3	2.21	27.6	0.01	0.08	0.35	159	204
180	9.05	9.03	34.061	26.378	167.4	0.355	1.90	29.3	36.1	2.30	28.7	0.03	0.05	0.31	181	203
199	8.99	8.97	34.079	26.402	165.5	0.387	1.84	28.3	36.9	2.32	29.4	0.03	0.04	0.21	200	202
200 ISL	8.98	8.96	34.080	26.405	165.3	0.388	1.83	28.1	37.0	2.32	29.4	0.03			201	
220	8.88	8.36	34.102	26.438	162.5	0.421	1.71	26.2	38.9	2.40	29.5	0.04			221	201

RV DAVItI STARR JORDAN CALCOFI CRUISE 9507 STATION 77 55

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TINE	BOTTOB	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
34 53.2 N	121 12.0 W	21/07/95	2202 UTC	560 in	310 10 kn	310 02 04	2	1019.0 mb	IS.6 C	16..8 C	16m 03	8/8	ST

DEPTH m	TENP DEG C	POT TEBP DEG C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UB/I	P04 uN/I	N03 uB/I	N02 uB/I	CHL-A ug/I	PHAEO ug/I	PRES db	SABP
0 ISL	15.67	15.67	33.408	24.598	333.0	0.000	6.11	107.8	1.8	0.49	1.6	0.10	0.61	0.23	0	
1	15.67	15.67	33.408	24.598	333.0	0.003	6.11	107.8	1.8	0.49	1.6	0.10	0.61	0.23	1	220
10	14.60	14.60	33.352	24.739	315.2	0.033	6.19	106.9	2.5	0.53	2.2	0.14	1.16	0.41	10	219
20	13.03	13.03	33.385	25.137	282.3	0.062	6.02	100.6	4.6	0.69	4.3	0.20	1.90	0.79	20	218
30	11.70	11.70	33.233	25.274	269.4	0.090	5.41	87.8	8.7	0.91	8.1	0.31	1.35	0.67	30	217
40	11.65	11.64	33.456	25.457	252.3	0.116	5.39	87.5	9.2	0.99	9.1	0.26	2.42	0.96	40	216
50	10.33	10.32	33.443	25.682	231.0	0.140	4.26	67.2	15.8	1.37	16.0	0.10	0.28	0.19	50	215
60	10.24	10.23	33.623	25.338	216.4	0.163	3.73	58.8	20.2	1.61	19.4	0.17	0.22	0.28	60	214
70	10.15	10.14	33.729	25.936	207.3	0.184	3.38	53.2	22.4	1.71	20.7	0.25	0.19	0.24	70	213
75 ISL	10.03	10.02	33.760	25.980	203.2	0.194	3.24	50.9	23.4	1.77	21.5	0.20	0.17	0.22	75	
85	9.75	9.74	33.810	26.067	195.2	0.214	2.98	46.5	25.5	1.S3	23.2	0.08	0.12	0.19	85	212
100	9.45	9.44	33.916	26.199	182.9	0.242	2.59	40.2	28.8	2.03	25.4	0.05	0.04	0.15	101	211
120	9.22	9.21	33.983	26.289	174.7	0.278	2.38	36.8	31.3	2.13	26.4	0.05	0.05	0.16	121	210
125 ISL	9.19	9.18	33.999	26.306	173.2	0.287	2.34	36.1	31.8	2.15	26.6	0.05	0.05	0.15	126	
140	9.12	9.10	34.042	26.352	169.2	0.312	2.24	34.5	33.3	2.20	27.3	0.04	0.03	0.14	141	209
150 ISL	9.07	9.05	34.070	26.382	166.5	0.329	2.13	32.a	34.3	2.24	27.7	0.03	0.02	0.16	151	
170	8.96	8.94	34.117	26.436	161.7	0.362	1.90	29.2	36.5	2.31	28.6	0.03	0.02	0.20	171	208
200	8.73	8.71	34.160	26.507	155.6	0.410	1.64	25.1	40.0	2.42	29.9	0.05	0.02	0.13	201	207
229	8.41	8.39	34.193	26.582	143.8	0.454	1.43	21.7	43.9	2.52	31.1	0.05			230	206
250 ISL	8.24	8.21	34.202	26.615	146.0	0.485	1.34	20.3	45.9	2.57	31.7	0.05			252	
269	8.09	8.06	34.206	26.641	143.8	0.512	1.28	19.3	47.6	2.61	32.2	0.04			271	205
300 ISL	7.78	7.75	34.218	26.697	138.9	0.556	1.14	17.1	51.9	2.70	33.4	0.03			302	
318	7.60	7.57	34.223	26.727	136.3	0.581	1.05	15.7	54.6	2.75	34.1	0.03			320	204
375	7.12	7.08	34.222	26.794	130.5	0.657	0.31	11.9	62.7	2.89	35.2	0.02			378	203
400 ISL	7.06	7.02	34.227	26.307	129.7	0.689	0.81	11.9	62.8	2.89	35.6	0.02			403	
437	7.00	6.96	34.234	26.821	128.8	0.737	0.30	11.8	63.0	2.90	36.1	0.03			440	202
500 ISL	6.62	6.57	34.231	26.871	124.7	0.817	0.70	10.2	68.1	2.97	37.3	0.02			504	
512	6.55	6.50	34.231	26.880	124.0	0.832	0.68	9.9	69.1	2.98	37.5	0.02			516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	MIND	SPEED	UAVES	UEA	BAROMETER	DRY	yET	SECCHI/FOREL	CLD AMT	TYPE
34 43.4 N	121 32.6 y	21/07/95	1902 UTC	930 m	320	1 1 kn	290 03 08I	2	1020.1 mb	18 .5 C	17..0 C	23m 02	8/8	ST

DEPTH m		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 »»/I	N02 JN/I	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0	ISL	16.28	16.28	33.1S5	24.289	362 . 5	0.000	5 . 91	105.4	1 .3	0. 40	0 . 3	0 . 03	0.25	0.09	0	
1	A	16.28	16.28	33.185	24.289	362 . 5	0.004	5 . 91	105.4	1 .3	0. 40	0 . 3	0.03	0.25	0.09	1	222
7		16.16	16.16	33.206	24.333	358. 5	0.025	5 . 93	105.5	1 .3	0. 39	0.4	0.03	0.27	0.11	7	221
10	ISL	16.16	16.16	33.208	24.334	35S. 5	0 . 036	5 .93	105.5	1 .3	0. 39	0.4	0.03	0.28	0.11	10	
14	A	16.17	16.17	33.211	24.335	358 .6	0 . 050	5 . 93	105.6	1 . 3	0. 40	0.4	0. 03	0.31	0.11	14	220
20	ISL	16.01	16.01	33.436	24.544	338.8	0.071	6 .03	107.1	1 . 4	0.42	0.4	0.03	0. 38	0.17	20	
22		15.93	15.93	33.513	24.621	331 .5	0.078	6. 06	107.5	1 . 5	0. 43	0.4	0. 03	0. 40	0.20	22	219
30	ISL	15.61	15.61	33.530	24.707	323.7	0.104	6 .00	105.8	1 . 5	0.47	0 . 7	0 . 05	0.47	0.30	30	
31	A	15.53	15.53	33.519	24.716	322 .8	0.107	5 . 99	105.5	1 . 5	0. 48	0 . 7	0.05	0.48	0.31	31	218
38		14.38	14.37	33.437	24.902	305.2	0.129	6.02	103.5	1 .6	0.61	2.3	0.14	0.72	0 . 39	38	217
46	A	11.80	11.79	33.290	25.300	267.3	0.152	5. 52	89.8	6 . 4	0. 99	8.4	0. 30	0 . 45	0 . 30	46	216
50	ISL	11.59	11.58	33.370	25.401	257.8	0.163	5 . 34	86 .6	9 . 7	1.15	10.6	0.44	0.37	0.21	50	
S3		11.44	11.43	33.396	25.449	253.3	0.170	5 .23	84.5	12.0	1 .24	12.0	0.54	0.33	0.15	53	21 5
61	A	11 .02	11.01	33.420	25.543	244.5	0.190	4 .93	79 . 0	14.6	1 . 32	14.3	0. 57	0.25	0.15	61	214
73		9.90	9.89	33.459	25.767	223.4	0.218	4.14	64.7	18.3	1.50	18.2	0 .03	0.17	0.17	73	213
75	ISL	9 .87	9.86	33.472	25.782	221 .9	0.223	4 .09	63. 9	18.5	1 .52	18.5	0.03	0.17	0.17	75	
85	A	9.73	9. 72	33.503	25.830	217.6	0.245	3 . 97	61 .9	19.3	1 . 58	19.4	0.03	0.16	0.14	85	212
100		9.32	9 .31	33.593	25.968	204.8	0.277	3 . 75	57.9	21.7	1 . 67	21.3	0 .03	0.09	0.10	101	21 1
120		8.86	8 . 85	33.717	26.138	188.9	0.316	3 . 44	52 .6	25 .5	1 . 82	23.7	0.02	0.02	0.05	121	210
125	ISL	8 .76	8 . 75	33.739	26.171	185.9	0.325	3.42	52 .2	26.2	1 . 84	24.0	0.02	0.02	0 . 05	126	
140		8.51	8. 50	33.797	26.255	178.1	0.353	3.35	50 .9	28.3	1 . 89	24 . 9	0.02	0.01	0 .04	1 41	209
150	ISL	8. 43	8.41	33.835	26.297	174.3	0 . 370	3.22	48. 8	29.7	1 . 94	25.6	0.02	0.01	0.04	151	
169		8. 35	8. 33	33.910	26.368	167.9	0 . 403	2 . 89	43.8	32 .6	2 .04	27.0	0.01	0.00	0.04	1 70	208
200		8.29	8.27	34.061	26.496	156.3	0.453	2.26	34.2	38 . 8	2.25	29.1	0.01	0.00	0.05	201	207
229		7 . 38	7.36	33.998	26.580	148.5	0.497	2 .74	40 .6	42 .2	2.19	29.6	0.01			230	206
250	ISL	7.13	7.11	34.015	26.628	144.1	0.528	2 .46	36.2	46. 5	2 .30	31.1	0.01			252	
267		7. 04	7 . 01	34.043	26.663	141.1	0.552	2 .09	30.7	50.2	2 . 43	32 . 5	0.01			269	205
300	ISL	6.79	6. 76	34.080	26.727	135.4	0.598	1 .65	24 .1	55.9	2.59	34 . 5	0.00			302	
318		6.65	6. 62	34.095	26.757	132.7	0. 622	1 . 46	21 .3	58.7	2 .66	35.5	0. 00			320	204
378		6. 05	6.02	34.095	26.836	125.7	0. 699	1.14	16.4	68. 3	2 .84	38 .2	0. 00			380	203
400	ISL	5.92	5 .89	34.119	26.871	122.5	0.727	0 . 97	13.9	71 . 7	2.91	39 . 0	0.00			403	
437		5 . 74	5 .70	34.166	26.931	117.2	0. 771	0 . 69	9 .a	77.3	3 . 03	40 . 1	0. 00			440	202
500	ISL	5.31	5 .27	34.216	27.023	108.9	0. 842	0.45	6. 4	87.2	3.15	41 . 7	0.00			504	
512		5.23	5.19	34.226	27.040	107.3	0.855	0. 40	5.6	89 . 1	3.17	42 . 0	0. 00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM 'rHESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 23,3 N	122 14.6 y	21/07/95	1143 UTC	4013 m	340	1 1 kn			1018.9 mb	1 7.8 C	16.. 7 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN i»L/ 1	OXY PCT	SI03 uM/I	P04 uM/I	N03 UM/I	N02 UM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.99	16.99	33.055	24.025	387 . 6	0.000	5.82	105.2	1 . 7	0.37	0 . 3	0.01	0.18	0.07	0	
1		16.99	16.99	33.055	24.025	387.7	0 . 004	5 .82	105.2	1 . 7	0.37	0.3	0.01	0.18	0.07	1	220
10		16.91	16.91	33.053	24.043	386.3	0 . 039	5 . 83	105.2	1 .6	0.37	0.3	0.01	0.26	0.09	10	219
20		16.18	16.18	33.065	24.220	369.7	0.077	5 .92	105.3	1 .8	0 . 33	0.1	0. 00	0.19	0. 07	20	218
30		15.21	15.21	32.994	24.382	354 .5	0.113	5 .97	104.1	1 .9	0 . 34	0.1	O. 00	0.22	0 , OS	30	217
40		13.68	13.67	32.843	24.588	335 .1	0.147	6.16	104,0	1 .9	0. 38	0.1	O .00	0.26	0.11	40	216
50		13.24	13.23	32.887	24.711	323.6	0.180	6.11	102.3	2 . 1	0. 43	0 . 4	0,0 2	0. 34	0.19	50	21 5
60		13.06	13.05	33.007	24.840	311.6	0.212	5 .98	9 9.8	2 . 4	0.55	1 . 6	0.11	0.31	0.23	60	214
70		12.25	12.24	33.007	24.997	296.9	0.242	5 .70	93 . 5	4 . 4	0. 62	3.0	0- 47	0.25	0.20	70	21 3
75	ISL	11.85	11.84	33.050	25.105	286.6	0.257	5 . 48	89 . 2	6.2	0 . 74	5 .2	0 . 35	0.21	0.19	75	
84		11.24	11.23	33.174	25.313	266.9	0.282	5 .05	81 .2	9.7	0 . 98	9.6	0 . 03	0.15	0.17	84	212
99		10.70	10.69	33.455	25.628	237.3	0 . 320	4.41	70 .2	13.2	1.23	14.3	0 . 03	0.09	0.13	99	21 1
100	I SL	10.66	10.65	33.462	25.641	236.1	0 .322	4 .38	69 . 6	13.4	1.24	14.5	0. 03	0. 09	0.13	100	
1 19		9.82	9.81	33.518	25.828	218.6	0.365	4 .02	62 . 8	18.0	1 - 50	18.4	0. 02	0. 05	0.08	1 20	210
125	ISL	9 .56	9.55	33.556	25.900	211.8	0. 378	3. 90	60. 5	19.7	1.58	19.7	0.02	0 . 04	0.07	126	
140		8 . 98	8 . 97	33.660	26.075	195.3	0 . 409	3.62	55.5	23.7	1 . 77	22 . 7	0.01	0 .01	0.04	141	209
1 50	ISL	8 .74	8 . 72	33.717	26.157	187.7	0.428	3.44	52 . 5	26.0	1 . S5	24.1	0.01	0.01	0.04	1 51	
170		8 . 40	8.38	33.812	26.284	175.9	0.464	3.24	49 . 1	29.4	1 . 94	25.6	0. 00	0.00	0. 03	171	208
199		8 .00	7.98	33.904	26.416	163.7	0.513	3 . 50	52 .6	31 .6	1 . 90	25 .3	0.01	0.00	0.02	200	207
200	ISL	7. 99	7.97	33.908	26.421	163.3	0.515	3.47	52 . 1	31.9	1.91	25.4	0.01			201	
229		7. 79	7 . 77	34.011	26.531	153.3	0.561	2 . 47	36 . 9	40. 1	2.25	29.7	0.01			230	206
250	ISL	7. 67	7 .65	34.051	26.581	149.0	0.593	2.13	31.8	43 . 8	2 .37	31.1	0.01			251	
271		7. 52	7 . 49	34.072	26.619	145.6	0.624	1 . 96	29.1	46 . 7	2.45	32 .0	0. 00			273	205
300	ISL	7.21	7.18	34.084	26.672	140.8	0 . 665	1 . 75	25.8	51.4	2.55	33. 4	0. 00			302	
318		6 .99	6. 96	34.086	26.704	137.9	0 .690	1 .64	24 . 1	54 . 4	2.61	34 . 3	0. 00			320	204
377		6.34	6.31	34.113	26.813	128.1	0. 769	1.13	16.3	65 . 1	2 . 83	37. 5	0.00			379	203
400	ISL	6.13	6. 09	34.121	26.846	125.0	0.798	1 . 00	14.4	68.9	2 .90	38 . 4	0.00			403	
438		5.84	5 . 80	34.138	26.896	120.6	0.844	0.81	11.6	74 .9	2 .99	39 . 7	0.00			441	202
500	ISL	5 .48	5 . 44	34.197	26.987	112.4	0.917	0.51	7 .2	83 .9	3.13	41 . 3	0. 00			503	
513		5 .40	5 . 36	34.210	27.007	110.6	0.931	0.45	6 . 4	85 . 8	3.16	41.6	0. 00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 80

LATITUDE	LONGITUDE	DAY/RO/YR	CAST	TIRE	BOTTOR	WIND	SPEED	HAVES	YEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ART	TYPE
34 3.3 N	122 56 .5 W	21/07/95	0539	UTC	4232 m	310	09 kn			1019.7 mb	18 .5 C	17.1 C				

DEPTH n		TERP OEG C	POT TERP OEG C	SALINITY	SIGRA THETA	SVA	DYN HT	OXYGEN m L / L	OXY PCT	SI03 uR/ L	P04 UR/ I	N03 uR/ I	N02 UR/ L	CHL-A ug/ I	PHAEO ug/ L	PRES db	SARP
0	ISL	17.61	17.61	52.930	23.782	410.8	0. 000	5 .73	104.7	2 .4	0 . 34	0.0	0.00	0.08	0 . 02	0	
1		17.61	17.61	32 .930	23.783	410.8	0. 004	5 . 73	104.7	2 .4	0 . 34	0.0	0.00	0.08	0. 02	1	220
10	ISL	17.05	17.05	32.952	23.933	396 . 8	0. 040	5 . 80	104.9	2 .4	0 . 33	0 . 1	0.00	0.10	0 . 03	10	
15		16.63	16.63	32.982	24.054	385 . 4	0. 060	5 . 85	104.9	2 .4	0 . 32	0 . 1	0 .00	0.11	0 . 04	1 5	219
20	ISL	16.47	16.47	33.035	24.131	378 .2	0. 079	5 .85	104.6	2 .4	0 . 32	0 . 1	0.00	0.12	0 . 04	20	
30		16.28	16.28	33.131	24.249	367 . 3	0.116	5 . 86	104.5	2 . 5	0.31	0 . 1	0.00	0.14	0 . 04	30	218
45		16.02	16.01	33.126	24.304	362 . 4	0.171	5 . 88	104.3	2 . 5	0.31	0 . 1	0 .00	0.17	0 . 05	45	217
50	ISL	15.80	15.79	33.111	24.343	358.9	0.189	5 .89	104.0	2 . 5	0 . 32	0 . 1	0 . 00	0.18	0 . 06	50	
55		15.62	15.61	33.113	24.384	355.1	0 .207	5 .89	103.6	2 . 5	0 . 32	0 . 1	0. 00	0.18	0 . 07	55	216
64		15.71	15.70	33.224	24 . 450	349.2	0.239	5 . 82	102.6	2 . 5	0.31	0 . 1	0.00	0.24	0 . 09	64	21 5
74		14.11	14.10	33 . 042	24.654	329.8	0.273	6.01	102.5	2 .8	0 . 36	0 . 1	0 .01	0.28	0.14	74	214
75	ISL	14.00	13.99	33 .043	24.678	327.6	0.276	6 .00	102.1	2 .9	0 . 36	0 . 1	0.02	0.29	0.14	75	
13		13.27	13.26	33.095	24.867	309 .7	0 . 301	5 .96	99.9	3 . 6	0 . 42	0.3	0.12	0. 35	0.20	83	213
93		12.36	12.35	33.159	25.094	288.2	0.331	5.62	92 . 5	5 .4	0 . 62	3 . 5	0.13	0 .30	0. 34	93	212
100	ISL	11.67	11.66	33.153	25.219	276.4	0.351	5 .39	87.4	7 . 5	0 . 79	6 .3	0 .09	0.24	0. 30	100	
109		10.87	10.86	33.169	25.376	261.5	0.375	5 .06	80.7	10.7	1.01	10.2	0.02	0.16	0.19	109	21 1
124		10.04	10.03	33.410	25.707	230.2	0.412	4.28	67.1	16.5	1 . 38	16.3	0.01	0 . 04	0.07	125	210
125	ISL	9.99	9 . 98	33.420	25 .723	228.7	0.414	4.25	66.6	16.9	1 . 40	16.6	0.01	0 . 04	0.07	1 26	
143		9.28	9.26	33.551	25.942	208. 1	0.454	3 . 84	59.2	22 . 9	1.71	21.5	0.01	0.01	0.07	1 44	209
150	ISL	9.07	9.05	33.603	26.016	201 . 1	0. 468	3 . 69	56.7	24.4	1 . 78	22 . 7	0.01	0.01	0.06	1 51	
168		8.65	8 . 63	33.723	26.176	186.2	0.503	3 .38	51.5	27.3	1 . 88	24.6	0.01	0 . 00	0.04	1 69	208
198		8.26	8.24	33.849	26.334	171.6	0.557	3.17	47 . 9	31.4	1 . 98	26 .3	0. 01	0.00	0 . 03	1 99	207
200	ISL	8.24	8.22	33.857	26.344	170.7	0.560	3.15	47 . 6	31.7	1.99	26.4	0.01			201	
228		7. 98	7. 96	33.942	26.450	161.1	0. 606	2 . 90	43 . 5	35 . 5	2 .09	27.9	0. 00			229	206
250	ISL	7.67	7.65	33.970	26.517	154.9	0.641	2 . 86	42 . 6	38 . 4	2.14	28. 6	0 . 00			251	
268		7. 40	7.37	33.982	26.565	150.6	0. 669	2 . 83	41.9	41.0	2.18	29. 3	0 . 00			270	205
300	ISL	7.04	7.01	34.007	26.635	144.2	0.716	2 . 48	36 . 5	46. 7	2 .33	31 . 4	0. 00			302	
318		6. 83	6. 80	34.016	26.671	141.0	0. 742	2.25	32 . 9	50. 4	2 . 42	32 . 7	0 . 00			320	204
378		5 .91	5 .88	34.013	26.788	130.0	0.823	1 . 76	25.2	64 . 1	2 . 67	36. 5	0 . 00			380	203
400	ISL	5.86	5 .83	34.056	26.829	126.5	0.851	1 . 44	20.6	68.2	2 . 78	37. 7	0.00			403	
437		5 .77	5 . 73	34.123	26.893	120.8	0.S97	0 . 92	13.1	74 . 1	2 . 95	39. 4	0 . 00			440	202
500	ISL	5 .70	5 .66	34.221	26.980	113.4	0.971	0 . 53	7 . 6	80.7	3.10	40. 5	0. 00			503	
512		5 .69	5 . 65	34.239	26.995	112.1	0. 984	0.46	6 . 6	82 .0	3.13	40. 7	0 .00			51 5	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 77 90

LATITUDE	LONGITUDE	DAY/RO/YR	CAST	TIRE	BOTTOR	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ART	TYPE
33 43.3 N	123 38.0 W	20/07/95	2346	UTC	4151 en	310	06 <kn	320 01 05i	2	1020.3 mb	20 .9 C	18.. 5 C	30m 01		8/8	ST

DEPTH m		TERP DEG C	POT TERP DEG C	SALINITY	SIGRA THETA	SVA	DYN HT	OXYGEN ml / L	OXY PCT	SI03 UR/ L	P04 uR/ I	N03 uR/ I	N02 uR/ I	CHL-A ug/L	PHAEO ug/ I	PRES db	SARP
0	ISL	18.26	18.26	32.948	23 . 639	424.5	0 . 000	5 . 67	104.9	2 . 7	0. 33	0.2	0.00	0.11	0.02	0	
1		18.26	18.26	32.948	23.639	424.5	0 . 004	5 . 67	104.9	2 . 7	0 . 33	0.2	0.00	0.11	0.02	1	220
10	ISL	17.56	17.56	32.922	23 . 789	410.5	0 . 042	5 .74	104.8	2 . 7	0 . 33	0.2	0.00	0.10	0.03	10	
15		17.02	17.02	32.909	23.907	399 . 4	0 . 062	5 . 79	104.6	2 . 7	0 . 33	0 . 2	0.00	0.10	0 . 03	1 5	21 9
20	ISL	16.78	16.78	32.908	23.962	394 . 3	0 . 082	5 .82	104.6	2 . 7	0 . 33	0 . 2	0.00	0.11	0. 03	20	
30		16.45	16.45	32.935	24.059	385 . 3	0.121	5 .86	104.7	2 . 8	0 . 33	0.2	0.00	0.13	0.04	30	21 8
45		15.93	15.92	33.075	24.286	364 .2	0.177	5.92	104.8	2 .7	0 . 32	0 . 2	0.00	0.17	0.05	45	217
50	ISL	15.13	15.12	32.942	24.360	357.2	0.195	6.01	104.6	2 . 5	0 . 34	0 . 2	0.00	0.21	0 . 07	50	
54		14.50	14-49	32.838	24.415	352.1	0 .209	6.08	104.4	2 . 3	0 . 36	0 . 2	0.00	0.24	0 .09	54	21 6
64		14.02	14.01	32.836	24.514	342 .9	0.244	6.12	104.1	2 .2	0. 37	0 . 2	0.00	0.29	0.13	64	21 5
74		13.41	13.40	32.858	24.655	329 . 6	0 .278	6.15	103.3	2 . 3	0.41	0 . 1	0.01	0 . 39	0.21	74	21 4
75	ISL	13.37	13.36	32.860	24.665	328.7	0.281	6.14	103.0	2 . 3	0 . 42	0 . 2	0.02	0 . 38	0.21	75	
84		13.01	13.00	32.894	24 . 763	319.6	0.310	6 .03	100.4	2 .2	0 . 49	0.7	0.10	0.23	0.16	84	21 3
94		12.26	12.25	32.974	24.970	300 .0	0.341	5 . 77	94 .6	4 . 4	0 . 62	3 . 0	0. 52	0.19	0.16	94	212
100	ISL	12.01	12.00	33.oaa	25 . 043	293.1	0 . 359	5.65	92 .2	5 . 3	0. 68	4 . 1	0.40	0.17	0.16	100	
1 10		11 .73	11.72	33.092	25.161	282.1	0 . 388	5 . 40	87.6	7 . 0	0. 79	6 . 3	0. 06	0.14	0.15	1 10	21 1
125		11.28	11.26	33.388	25.473	252.7	0.428	4 . 76	76.7	10.9	1 . 06	11.5	0.04	0 . 09	0.13	126	210
144		10.41	10.39	33.473	25.693	232.0	0.474	4 . 32	68.3	13.8	1 . 32	15.7	0. 03	0 .06	0.09	145	209
150	ISL	10.12	10.10	33.500	25.764	225.4	0.488	4.16	65 . 4	15.7	1 . 42	17.3	0. 03	0.05	0 . 08	1 51	
169		9 . 31	9.29	33.601	25.977	205 . 3	0.529	3 . 72	57.4	22.0	1 . 70	21.7	0.01	0. 02	0.04	170	208
199		8 . 56	8.54	33.821	26 .267	178.1	0.586	3 . 50	53.2	27.6	1 . 83	24.2	0.00	0 . 00	0.02	200	207
200	ISL	8 . 54	8. 52	33.826	26.274	177.5	0.588	3.49	53 .0	27.8	1 . 83	24.3	0. 00			201	
229		7. 96	7.94	33.919	26.434	162.6	0.637	3.24	48.6	33 . 6	1 . 99	26.8	0.00			230	206
250	ISL	7.70	7. 68	33.966	26.510	155.7	0.671	2 . 93	43.7	37 . 9	2.12	28.5	0.00			251	
268		7.53	7. 50	33.997	26.558	151.3	0.698	2 . 64	39 .2	41.5	2.22	29.9	0 .00			269	205
300	ISL	7.29	7 .26	34.053	26 . 637	144.2	0.745	2.16	31 . 9	47 . 5	2 . 37	32 . 0	0.00			302	
318		7.16	7.13	34.076	26 . 673	141.0	0.771	1 . 92	28.3	50.8	2 . 45	33 . 0	0.00			320	204
377		6. 50	6 . 47	34.088	26.772	132.0	0.852	1.43	20.8	60 . 9	2 . 70	36. 1	0.00			379	203
400	I SL	6 .22	6.18	34.093	26.813	128.3	0 . 882	1.23	17.7	65.6	2 . 80	37 . 5	0. 00			402	
437		5 . 81	5 . 77	34.105	26.874	122.6	0.928	0 . 95	13.6	72 . 9	2 . 93	39 . 5	0.00			440	202
500	ISL	5 . 39	5.35	34.140	26.953	115.5	1 .003	0. 70	9 . 9	82 . 1	3 . 06	41.1	0.00			503	
51 5		5 .29	5.25	34.149	26.972	113.8	1.020	0. 64	9 .0	84 . 3	3 . 09	41.5	0. 00			518	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	yIND SPEED	UAVES	yEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 23.5 N	124 19.4 V	20/07/95	1824 UTC	4509 m	310 05 kn	320 02 08	2	1021.0 mb	20 .. 0 C	18, 0 C	40m 01	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	D YN HT	OXYGEN ml/I	OXY PCT	SI03 uM/L	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/t	PRES db	SAMP
0 ISL	19.03	19.03	33.218	23.653	423.1	0.000	5.49	103.3	2.6	0.30	0.1	0.00	0.11	0.02	0	
2 A	19.03	19.03	33.218	23.653	423.2	0.008	5.49	103.3	2.6	0.30	0.1	0.00	0.11	0.02	2	222
10 ISL	18.54	18.54	33.261	23.809	408.6	0.042	5.53	103.1	2.6	0.29	0.1	0.00	0.10	0.02	10	
14	18.24	18.24	33.288	23.904	399.7	0.058	5.55	102.9	2.6	0.29	0.1	0.00	0.09	0.02	14	221
20 ISL	18.20	18.20	33.297	23.921	398.3	0.082	5.55	102.8	2.6	0.29	0.1	0.00	0.09	0.02	20	
25 A	18.14	18.14	33.291	23.931	397.5	0.102	5.55	102.7	2.6	0.29	0.1	0.00	0.09	0.02	25	220
30 ISL	17.69	17.68	33.255	24.013	389,8	0.121	5.63	103.3	2.6	0.29	0.1	0.00	0.10	0.02	30	
to	16.74	16.73	33.207	24.202	372.1	0.160	5.SO	104.4	2.6	0.30	0.1	0.00	0.12	0.03	40	219
50 ISL	16.58	16.57	33.278	24.294	363.7	0,196	5.78	103.7	2.6	0.30	0.1	0.00	0.12	0.03	50	
53 A	16.53	16.52	33.296	24.319	361.4	0.207	5.77	103.5	2.6	0.30	0.1	0.00	0.12	0.03	53	218
68	14.95	14.94	33.166	24.572	337.6	0.260	5.96	103.5	3.0	0.33	0.1	0.00	0.17	0.07	68	217
75 ISL	14.83	14.82	33.284	24.689	326.6	0.283	5.95	103.1	3.1	0,31	0.1	0.00	0.16	0.08	75	
81 A	14.78	14.77	33.384	24.777	318.4	0.302	5.95	103.1	3.1	0.29	0.1	0.00	0.16	0.08	81	216
90	14.24	14.23	33.359	24.873	309.5	0.330	5.91	101.3	3.2	0.31	0.1	0.00	0.19	0.14	90	215
98	14.05	14.04	33.348	24.904	306.7	0.355	5,88	100.3	3.1	0.32	0.1	0.00	0.24	0.23	98	214
100 ISL	13.97	13.96	33.362	24.931	304.2	0.361	5.84	99.5	3.3	0.33	0.2	0.02	0.24	0.23	100	
106 A	13.78	13.76	33.433	25.026	295.4	0.379	5,69	96.6	3.9	0.38	0.8	0.08	0.25	0.23	106	213
117	13.95	13.93	33.640	25.151	2S3.8	0.411	5.48	93.5	4.2	0.41	1.6	0.20	0.24	0.25	117	212
125 ISL	13.24	13.22	33.606	25.269	272.6	0.433	5.36	90.1	5.2	0.53	3.6	0.11	0.21	0.21	126	
126	13.10	13.08	33.595	25.289	270.8	0.436	5.33	89.3	5.3	0.56	4.0	0.10	0.20	0.20	127	211
136	11.26	11.24	33.494	25.560	244.8	0.462	4.63	74.6	11.6	1.OS	12.0	0.03	0.12	0.13	137	210
147 A	10.41	10.39	33.573	25.771	224.7	0.488	4.47	70.7	14.3	1.23	14.6	0.01	0.06	0.08	148	209
150 ISL	10.22	10.20	33.583	25.812	220.9	0.494	4.40	69.3	15.2	1.28	15.4	0.01	0.05	0.07	151	
170	9.31	9.29	33.635	26.003	202.8	0.537	3.93	60.7	20.8	1.59	20,2	0.00	0.02	0.05	171	208
194	3.80	8.78	33.760	26.182	186.2	0.583	3.50	53.5	25.6	1.79	23.3	0.00	0.01	0.02	195	207
200 ISL	8.70	8.68	33.787	26.219	182.8	0.594	3,44	52.5	26.6	1.83	23.S	0.00			201	
229	8.26	8.24	33.896	26.372	168.6	0.645	3 20	48,3	31.5	1.9?	25.9	0,00			230	206
250 ISL	7.97	7.94	33.950	26.458	160.7	0.680	2.99	44.9	35.2	2.07	27.4	0.00			251	
269	7.72	7.69	33.983	26.520	155.0	0.710	2.80	41.8	38.6	2.15	28.6	0.00			270	205
300 ISL	7.32	7.29	34.009	26.598	147.9	0.757	2.57	38.0	44.1	2.28	30.4	0.00			302	
318	7.10	7.07	34.016	26.634	144.6	0.783	2,43	35.8	47.3	2.35	31.4	0.00			320	204
377	6.46	6.43	34.053	26.750	134.1	0.865	1.69	24.5	58.7	2.62	35.4	0.00			379	203
400 ISL	6.25	6.21	34.064	26.786	130.9	0.896	1.49	21.5	62.7	2.72	36.6	0.00			402	
437	5.95	5.91	34.083	26.839	126.0	0.943	1.21	17.3	68.8	2.86	38.2	0.00			440	202
500 ISL	5.47	5.43	34.137	26.941	116.7	1.020	0.80	11.3	79.5	3.05	40.4	0.00			503	
515	5.34	5.32	34.150	26.965	114 6	1.037	0.70	9,9	82.0	3.10	40.9	0.00			513	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 30 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	yIND SPEED	WAVES	yEA	BAROMETER	DR1	WET	SECCHI/FOREL	CLD AMT	TYPE
34 27.4 N	120 31.3 U	18/07/95	2239 UTC	67 m	290 18 kn	300 02 03	1	1014.5 mb	16.1 C	15.1 C	07m 10	1/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	D YN HT	OXYGEN mL/L	OXY PCT	SI03 UM/I	P04 uM/I	N03 uM/I	N02 uM/l	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0 ISL	15.15	15.15	33.543	24.817	312 2	0.000	6,71	117.3	3.8	0.32	0.4	0.03	5.51	1.17	0	
1	15.15	15.15	33.543	24 817	312.2	0.003	6 71	117 3	3 8	0 32	0.4	0.03	5.51	1.17	1	208
1	15.21	15.21	33.542	24.303 «	313.5	0.003									1	209
5	15.17	15,17	33.543	24.813	312.8	0.016	6,68	116.S	3.9	0,33	0.5	0.04	5.36	1.26	5	207
10	13.95	13.95	33 542	25.072	288.2	0.031	6,30	107,4	7.3	0.52	1.9	0.11	8.19	1.49	10	206
20	13,22	13 22	33.537	25.217	274.7	0.059	5,71	95 9	9.6	0.69	4.1	0.15	6.18	1.30	20	205
30	12.95	12.95	33.567	25.294	267.6	0,086	5.15	86.0	10.5	0.91	7.7	0.27	3.27	1.03	30	204
41	11.68	11.67	33.608	25.569	2416	0.114	4.15	67.5	15.1	1.31	13.7	0.41	0.96	0.64	41	203
50	11.10	11.09	33.621	25.685	230.8	0.135	3.72	59.8	17,6	1.48	16.7	0.34	0.62	0.50	50	202
61	10.66	10.65	33.713	25.335	216.7	0.160	3.28	52.2	22.7	1 72	19.2	0.35	0.45	0.58	61	201

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	yAVES	UEA	BAROMETER	DRY	yET	SECCHI/FOREL	CLD AMT	TYPE
34 17'.9 N	120 47.2 y	19/07/95	0330 UTC	730 m	310 12 kn	340 02 08	1	1013.8 mb	17.2 C	16.1 C		6/8	CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	S103 uM/I	P04 UM/I	N03 uM/I	N02 UM/I	CHL-A ug/l	PHAEO ug/I	PRES db	SAMP
0 ISL	15.40	15.40	33.571	24.784	315.4	0.000	6.39	112.3	3.4	0.39	0.7	0.06	3.87	0.83	0	
1	15.40	15.40	33.571	24.784	315.4	0.003	6 39	112.3	3.4	0,39	0.7	0.06	3.37	0.S3	1	220
9	14.84	14.84	33.593	24.923	302.4	0.028	6.94	120.6	1.7	0.31	0.3	0.02	4.44	1.29	9	219
10 ISL	14.67	14.67	33.596	24.962	298.7	0.031	6.88	119.1	2.0	0.35	0.8	0.03	4.42	1.27	10	
19	12.87	12.87	33.635	25.362	260.8	0.056	5.77	96.3	7.5	0.87	7.7	0.21	3.73	1.11	19	213
20 ISL	12.68	12.63	33.638	25.402	257.1	0.059	5.58	92.7	8.4	0.93	8.6	0.23	3.58	1.10	20	
29	11.27	11.27	33.676	25.697	229.2	0.081	4.01	64.7	15.8	1.41	15.4	0.35	2.21	0.94	29	217
30 ISL	11.20	11.20	33.681	25.714	227.6	0.083	3.97	64.0	16.3	1.44	15.8	0.35	2.09	0.91	30	
40	10.80	10.80	33.730	25.323	217.4	0.105	3,57	57.0	19.6	1.61	18.6	0.28	1.21	0.63	40	216
49	10.56	10.55	33.765	25.893	211.0	0.124	3.36	53.4	21.7	1.71	20.1	0.28	0.90	0.57	49	215
50 ISL	10.48	10.47	33.770	25.911	209.3	0.126	3.32	52.7	22.1	1.73	20.4	0.27	0.83	0.54	50	
59	9,75	9.74	33.818	26.072	194-1	0.145	2.93	45.8	25.8	1 89	23.2	0-16	0.23	0.26	59	214
69	9.49	9.48	33.872	26.158	186.2	0.164	2.76	42.9	27.6	1.96	24.4	0.07	0.10	0.16	69	213
75 ISL	9.39	9.38	33.912	26.205	181.8	0.175	2.60	40.3	29.1	2.03	25.3	0.07	0.08	0.16	75	
84	9.28	9.27	33.965	26.265	176.3	0.191	2.37	36.7	31.3	2.12	26.4	0.07	0.06	0.16	84	212
99	9.11	9.10	34.002	26.321	171.2	0.217	2.28	35.1	32.9	2.17	26.9	0.09	0.08	0.16	100	211
100 ISL	9.10	9.09	34.005	26.325	170.9	0.219	2.27	35.0	33.0	2.17	26.9	0.09	0.08	0.16	101	
119	9.03	9.02	34.050	26.372	166.8	0.251	2.10	32.3	34.7	2.25	27.8	0.11	0.04	0.13	120	210
125 ISL	9.01	9.00	34.060	26.383	165.9	0.261	2.06	31.7	35.0	2.26	28.0	0.11	0.04	0.13	126	
139	8.97	8.96	34.082	26.407	163.9	0.284	1.96	30.1	35.7	2.29	28.3	0.10	0.03	0.12	140	209
150 ISL	9.00	8.98	34.109	26.423	162.5	0.302	1 88	28.9	36.1	2.31	28.6	0,07	0.02	0.10	151	
168	9.04	9.02	34.153	26.452	160.2	0.331	1-75	27.0	37.0	2.35	29.0	0.03	0.02	0.08	169	208
198	8.86	8.84	34.196	26.514	154.8	0.378	156	23.9	39.S	2.44	29.9	0.03	0.03	0.09	199	207
200 ISL	8.84	8.82	34.197	26.518	154 5	0.381	1.55	23.8	40.0	2.44	30.0	0.03			201	
228	8.62	8.60	34.204	26.559	151.1	0.424	1.48	22,6	42.1	2.49	30.6	0.02			229	206
250 ISL	8.45	8.42	34.196	26.579	149.6	0.457	1.42	21.6	43.9	2.52	31.1	0.02			252	
268	8.32	3.29	34.189	26.593	148.5	0.484	1.37	20.8	45.4	2.55	31.5	0.02			270	205
300 ISL	8.09	8.06	34.205	26.641	144.4	0.531	1.31	19.8	48.1	2.61	32.3	0.02			302	
318	7.97	7.94	34.216	26.668	142.1	0.556	1.27	19.1	49.6	2.64	32.7	0.02			320	204
377	7.57	7.53	34.217	26.727	137.2	0.639	1.08	16.1	54.4	2.73	34.0	0.02			380	203
400 ISL	7.37	7.33	34.223	26.761	134.3	0.670	0.98	14.5	57.2	2.78	34.8	0.02			403	
437	7.04	7.00	34.236	26.817	129.3	0.719	0.82	12.1	62.3	2.87	36.0	0.02			440	202
500 ISL	6.59	6.54	34.251	26.891	122.9	0.798	0.59	8.6	71.0	3.01	37.1	0.01			504	
512	6.50	6.45	34.254	26.905	121.6	0.813	0.55	8.0	72.6	3.04	37.3	0.01			516	201

IV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 80 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIRE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
34 9.1 N	121 9.0 U	19/07/95	0719 UTC	2187 in	310	08 kn			1016.1 mb	16..9 C	16.0 C				

DEPTH m	TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN MT	OXYGEN ml/l	OXY PCT	SI03 JA/ l	P04 UN/ l	N03 ufl/ l	N02 uM/L	CHL-A ug/L	PHAEO ug/L	PRES db	SAMP
0 ISL	16.17	16.17	33.316	24.415	350.5	0.000	5.99	106.7	1.9	0. 43	0.7	0.06	0.29	0..12	0	
1	16.17	16.17	33.316	24.415	350. 5	0 .004	5 .99	106.7	1.9	0.43	0.7	0 .06	0.29	0..12	1	220
10	16.17	16.17	33.326	24.423	350.0	0 .035	5 .98	106.5	1 .9	0.43	0.7	0.05	0.30	0..13	10	219
20	15.60	15.60	33.516	24.698	324.2	0 .069	6.07	107.0	2 .2	0. 46	0. 4	0 . 05	0.32	0..20	20	218
29	14.34	14.34	33.467	24.933	302.0	0.097	5.97	102 . 6	2.2	0.65	2.5	0.15	0.41	0 .21	29	217
30 ISL	14.09	14.09	33.452	24.974	298.1	0 . 100	5.92	101.2	2 .6	0 .68	2.9	0.17	0.41	0 .21	30	
40	11.81	11.80	33 . 350	25.345	263.0	0.128	5.42	88 .3	7.4	0 . 99	8.0	0.31	0.32	0 . 1 7	40	216
41	11.25	11.24	33.361	25 . 456	252 . 5	0.149	5.19	83.5	11.3	1 .20	11.6	0.34	0 . 22	0..1 3	48	215
50 ISL	11.12	11.11	33.351	25.472	251.1	0.154	5.11	82 .0	11.9	1.21	12.1	0.30	0.21	0..1 3	50	
59	10.58	10.57	33.334	25.554	243.4	0.176	4.68	74 .2	14.2	1 .25	14.0	0.10	0.16	0.. 12	59	21 4
69	9.96	9.95	33.461	25.759	224.1	0.199	4 .23	66.2	18.6	1 .50	18.0	0.04	0.08	0.. 13	69	213
75 ISL	9.86	9.85	33.483	25.793	221.0	0.213	4.14	64 .7	19.5	1 .53	18.8	0.04	0.06	0.. 12	75	
84	9.79	9.78	33.501	25.819	218.7	0.232	4.06	63 .3	20 . 0	1 .57	19.2	0.05	0.05	0..1 1	84	212
99	9.31	9.30	33.628	25.996	202.0	0.264	3.68	56. 8	22 . 4	1 .70	21.5	0. 03	0.02	0..09	100	21 1
100 ISL	9.29	9.28	33.635	26.005	201.2	0.266	3 .67	56.7	22 . 5	1 . 70	21.6	0.03	0.02	0..09	101	
118	9.06	9 . 05	33.730	26.117	191.0	0. 301	3 .49	53.6	24.6	1 .77	22.7	0. 02	0.01	0.. 05	1 19	210
125 ISL	8.95	8 . 94	33.753	26.152	187.7	0.315	3 . 37	51.7	25.8	1 . 82	23.4	0 . 02	0.01	0 . 05	126	
139	8.72	a. 71	33.793 0	26.219	181.5	0.340									140	209
150 ISL	8.57	8.55	33.845	26.284	175.6	0.360	3 .03	46 . 1	30.3	1 .98	25 .6	0 . 01	0.01	*a* .05	1 51	
US	8.32	8. 30	33.922	26.382	166.5	0.391	2 . 88	43 .6	33.4	2 .07	27.0	0.01	0.01	*0*.. 05	169	208
198	7.72	7 . 70	33 . 958	26.500	155.7	0.439	3.14	46 . 9	36.3	2 .05	27.3	0.01	0.01	*0* . 04	199	207
200 ISL	7.70	7.68	33.961	26.505	155.3	0.442	3.12	46 . 6	36.7	2 .06	27.4	0.01			201	
228	7.46	7 . 44	34.007	26.576	148.9	0.485	2 . 64	39.2	42 .4	2.23	29.9	0.01			229	206
250 ISL	7.23	7.21	34 . 026	26 . 623	144.7	0.517	2 . 37	35 .0	46 .3	2 . 34	31.3	0 .00			252	
268	7.04	7.01	34.038	26.659	141.4	0.543	2.17	31.9	49.3	2 .42	32 .3	0.00			270	205
300 ISL	6.80	6.77	34.064	26.713	136.7	0.587	1 .78	26.0	54.6	2.57	34.1	0.00			302	
318	6.66	6.63	34.074	26.739	134.4	0.612	1 . 59	23.2	57.5	2 . 65	35 .1	0.00			320	204
377	6.03	6.00	34.063	26.813	127.8	0. 689	1 .32	19.0	66 .0	2 .80	37.7	0.00			379	203
400 ISL	5.92	5 .89	34.094	26.851	124.4	0.718	1.11	15.9	69.7	2 .88	38 . 6	0.00			403	
437	5.83	5 . 79	34.154	26.910	119.2	0 . 763	0. 77	11.0	75 . 1	3 .00	39.7	0.00			440	202
500 ISL	5.68	5 . 64	34.214	26.977	113.6	0 . 837	0. 53	7.6	80 . 8	3.11	40. 6	0.00			504	
513	5 .65	5.61	34.226	26.990	112.5	0.851	0.48	6 .8	82 .0	3.13	40. 3	0 .00			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 80 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
33 49.1 N	121 51.3 y	19/07/95	1815 UTC	3642 in	310	07 kn	320 02 05	2	1019.0 mb	18.0 C	16.. 5 C	31m 01		8/8	ST

DEPTH in	TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN • L/l	OXY PCT	SI03 uN/ l	P04 uN/L	N03 UN/ l	N02 UN/ l	CHL-A ug/l	PHAEO ug/L	PRES db	SANP
0 ISL	17.59	17.59	32 . 946	23.800	409.2	0.000	5 .67	103.6	2 .4	0 . 33	0. 1	0.00	0.12	0 . 02	0	
2 A	17.59	17.59	32.946	23.800	409. 2	0. 008	5 .67	103.6	2 .4	0. 33	0 . 1	0.00	0.12	0 . 02	2	221
10 ISL	17.28	17.28	32.998	23.914	398 . 6	0. 040	5 .69	103.4	2 . 3	0. 33	0 . 1	0.00	0.11	0 .02	10	
19 A	16.85	16.85	33.080	24.078	383 .2	0. 076	5 . 73	103.3	2 .2	0.32	0 . 1	0.00	0.11	0.03	19	220
20 ISL	16.84	16.84	33.085	24.084	382 . 7	0 . 080	5.73	103.3	2 .2	0.32	0 . 1	0. 00	0.11	0.03	20	
30	16.75	16.75	33.131	24.141	377 . 6	0.118	5 .74	103.3	2 .2	0.31	0 . 1	0 . 00	0.13	0.04	30	219
42 A	16.87	16.86	33 . 356	24.286	364 .2	0.162	5 . 73	103.5	2 .2	0.30	0 . 1	0 . 00	0.14	0.04	42	218
50 ISL	16.77	16.76	33.356	24.309	362 .2	0.191	5.72	103.1	2 .2	0.31	0 . 1	0. 00	0.15	0.05	50	
53	16.73	16.72	33.363	24.324	360 . 9	0 .202	5 .71	102.8	2 .2	0.31	0 . 1	0 . 00	0.16	0.05	53	217
63 A	15.70	15.69	33.290	24.503	344 . 1	0.237	5 .80	102.3	2 .4	0.31	0 . 1	0 .00	0.21	0.08	63	216
73	14.42	14.41	33.244	24.745	321.1	0.270	5 .85	100.5	3 . 1	0.35	0 . 1	0 . 00	0.25	0.13	73	215
75 ISL	14.25	14.24	33.255	24.790	317.0	0.277	5 .83	99 .8	3.2	0.36	0. 3	0 . 02	0.27	0.16	75	
83 A	13.73	13.72	33 .333	24.958	301.1	0 .302	5 .65	95 . 8	3 . 9	0.45	0. 9	0.10	0.34	0.28	83	214
93	13.21	13.20	33.472	25.171	281.1	0.331	5.21	87 .4	5 .7	0.65	4 .6	0.15	0.31	0.28	93	21 3
100 ISL	12.76	12.75	33.496	25.278	271.0	0 . 350	5 .00	83 . 1	7.0	0. 76	6.7	0.08	0.25	0.23	100	
104	12.50	12.49	33.496	25.329	266.2	0.361	4 . 90	81.0	7.8	0 . 82	7. 7	0.04	0.22	0.20	104	212
115 A	11.89	11.88	33.498	25.447	255 .2	0.389	4 . 70	76.7	9.6	0. 97	10.1	0.03	0.17	0.18	1 15	21 1
124	11.31	11.29	33.575	25.613	239.4	0.412	4.49	72 . 4	11.8	1.10	12.4	0.02	0 .08	0.12	125	210
125 ISL	11.24	11.22	33.577	25.628	238.1	0.414	4.46	71.8	12.1	1.12	12.7	0.02	0.08	0.12	126	
139	10.30	10.28	33.586	25.800	221.8	0.446	4 . 04	63.8	16.7	1.41	17.0	0.01	0.04	0.07	140	209
150 ISL	9.76	9.74	33.639	25.932	209.3	0 . 470	3 . 78	59.0	20.0	1 . 59	19.7	0.01	0.02	0 .05	1 51	
164	9.24	9.22	33.726	26.085	194.9	0.498	3 . 50	54.0	23.7	1 . 77	22 . 4	0.01	0.00	0. 03	165	208
194	8.60	8. 58	33.882	26.309	174.1	0.554	3 . 08	46.9	30 . 1	1 . 97	25 .5	0.00	0.00	0 . 02	195	207
200 ISL	8. 50	8.48	33.898	26.337	171.5	0.564	3 . 08	46 . 8	30 . 8	1 . 98	25.8	0.00			201	
229	8.10	8.08	33 . 946	26.435	162.6	0.612	3 . 07	46 .2	33 . 9	2 . 03	26.8	0.00			230	206
250 ISL	7. 82	7 .80	33.985	26.507	156.0	0.646	2 . 84	42 . 5	37 . 6	2.13	28.3	0.00			251	
268	7 . 59	7 . 56	34.014	26.563	150.8	0.673	2.59	38. 6	41.3	2 .23	29.7	0.00			269	205
300 I SL	7.16	7.13	34.037	26.642	143.6	0.721	2.21	32.6	47 . 8	2 . 40	32 .0	0.00			302	
320	6.91	6 . 88	34.045	26.683	139.9	0 . 749	1 . 99	29.2	51.9	2 . 50	33.4	0. 00			322	204
377	6. 33	6 . 30	34.074	26.783	130.8	0.826	1.45	21.0	62 . 3	2 . 74	36.5	0.00			379	203
400 ISL	6.13	6 .09	34.088	26.820	127.5	0.856	1.25	18.0	66 . 3	2 . 82	37 . 6	0. 00			403	
437	5 .87	5 . 83	34.116	26.875	122.6	0.902	0 . 97	13.9	72 .2	2 . 94	39.1	0 . 00			440	202
500 ISL	5 .66	5 .62	34.195	26.964	114.8	0. 977	0.59	8 .4	79 . 9	3.18	40. 7	0. 00			503	
514	5 .61	5.57	34.213	26.985	113.0	0 .993	0 . 50	7.1	81.6	3 . 23	41.0	0 . 00			517	201

A) PRINARY PRODUCTIVITY SANPLES WERE TAKEN FRON THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 950? STATION 80 80

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 2S'. 1 N	122 31 .9 V	19/07/95	2315 UTC	3977 a	320 06 kn	310 03 1C1	2	1019.3 mb	19 .2 C	17.. 5 C	32m 01	8/8	ST

DEPTH m		TENP DEG C	POT TENP DEC C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 uN/L	N03 uN/I	N02 UN/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	18.69	18.69	33.386	23.867	402.7	0. 000	5.54	103.7	2 .4	0 .30	0.3	0.00	0.11	0 . 02	0	
1		18.69	1S . 69	33.386	23.867	402 .8	0 .004	5.54	103.7	2 .4	0.30	0.3	0.00	0.11	0 . 02	1	220
10	ISL	18.21	18.21	33.371	23.975	392 .8	0 .040	5 .57	103.3	2 . 4	0.30	0.2	0.00	0.10	0.02	10	
15		17.86	17.86	33.362	24.054	385 .5	0.059	5 . 60	103.1	2 . 4	0.30	0.2	0 . 00	0.09	0.02	1 5	219
20	ISL	17.82	17.82	33.359	24.061	384. 9	0 . 079	5 . 60	103.0	2.4	0.30	0.2	0.00	0.09	0.02	20	
30		17.75	17.74	33.353	24.074	384 .0	0.117	5.61	103.1	2 .4	0. 30	0.2	0.00	0.10	0 . 02	30	218
45		17.43	17.42	33.353	24.151	377.2	0.174	5 .65	103.2	2 . 4	0. 30	0.2	0.00	0.15	0.03	45	217
50	ISL	17.22	17.21	33.360	24.207	372 .0	0.193	5 . 69	103.5	2 . 4	0.30	0.2	0 . 00	0.16	0.04	50	
60		16.61	16.60	33.364	24.353	358.3	0.229	5.76	103.5	2 .3	0.30	0.2	0.00	0.19	0. 06	60	216
74		15.21	15.20	33.317	24.632	332.1	0.278	5.82	101.7	3.0	0 . 34	0.2	0.00	0.31	0.14	74	215
75	ISL	15.12	15.11	33.316	24.651	330.3	0.281	5 . 82	101.5	3 . 0	0.34	0.2	0. 00	0.31	0.14	75	
85		14.07	14.06	33.317	24.875	309 . 1	0.313	5 . 85	99 . 9	2 . 8	0.34	0.2	0 . 00	0.29	0.12	85	214
95		12.51	12.50	33.356	25.218	276.5	0. 342	5.11	84.5	7.2	0 . 76	6 .2	0.14	0.37	0.27	95	213
100	ISL	12.09	12.08	33.408	25.339	265.1	0.356	4 . 85	79.5	8. 8	0. 90	8. 5	0.12	0.31	0.25	100	
105		11.80	11.79	33.460	25.434	256. 1	0 . 369	4 . 65	75 .8	10.0	1 .01	10.3	0. 07	0.24	0 .20	105	212
1 15		11.26	11.25	33.511	25. 572	243.1	0.394	4.46	71 . 8	11.8	1.11	12.4	0 . 05	0.16	0.18	1 15	21 1
125		10.51	10.50	33.519	25.711	229.9	0.417	4.13	65 . 5	15.9	1 . 37	16.5	0.02	0.09	0.13	126	210
139		9. 68	9.66	33.621	25.932	209. 1	0 . 448	3.73	58.1	20.9	1 . 62	20.5	0.01	0 . 02	0.05	140	209
150	ISL	9.23	9.21	33.696	26.063	196.7	0.470	3.58	55.2	23.6	1 . 72	22 .2	0.01	0 .01	0.05	1 51	
164		8.83	8.81	33.778	26.191	184.8	0 .497	3 . 47	53 .1	26.2	1 .80	23.6	0.01	0.00	0. 04	165	208
194		8.45	8 . 43	33.893	26.340	171.1	0.551	3 . OS	46 . 7	31.1	1 . 97	26.1	0 .00	0. 00	0 . 03	195	207
200	ISL	8 .40	8.38	33.910	26.361	169.2	0.561	3.02	45.8	31.9	1 . 99	26.4	0.00			201	
229		8.18	8.16	33.971	26.443	161.9	0. 609	2 . 79	42 . 1	35 .6	2 . 09	27.8	0. 00			230	206
250	ISL	7.91	7.88	34.005	26.510	155.8	0 . 642	2 . 64	39.6	38 . 8	2.16	28.9	0.01			251	
268		7. 63	7 .60	34.023	26.565	150.7	0. 670	2.54	37. 9	41.8	2.22	29.8	0 . 01			269	205
300	ISL	7.05	7 . 02	34.014	26.639	143.8	0.717	2.45	36 . 0	47.4	2 .32	31.4	0. 01			302	
319		6. 74	6. 71	34.007	26.676	140.4	0.744	2 . 36	34 . 4	51.0	2 .39	32.4	0.01			321	204
379		6 .34	6.31	34.076	26 . 784	130.9	0.825	1 .36	19.7	63 . 0	2 .74	36.8	0. 00			381	203
400	ISL	6 .07	6.04	34.080	26.821	127.3	0.852	1.20	17.2	67 . 5	2.82	38 . 0	0. 00			402	
438		5 .58	5.54	34.084	26.885	121.3	0 . 900	1 . 03	14.6	75 . 1	2 .92	39 . 7	0.00			441	202
500	ISL	5 .20	5.16	34.117	26.957	114.9	0.973	0 . 76	10.7	83.9	3 .04	41.5	0. 00			503	
514		5.11	5 .07	34.125	26.974	113.4	0. 989	0. 70	9. 8	85.9	3.07	41.9	0. 00			51 7	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	80TT0M	VIND SPEED	VA VES	VEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
33 9'.0 N	123 13 .1 «	20/07/95	0512 UTC	4225 m	010 05 kn			1019.9 mb	19 .0 C	17 . 3 C				

DEPTH ffl		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	S 103 uM/ I	P04 uM/ I	N03 ufl/ I	N02 uM/ I	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0	ISL	18.80	18.80	33.172	23.676	421.0	0.000	5 . 56	104.1	2 . 6	0.29	0 . 1	0. 00	0.11	0. 03	0	
1		13.80	18.80	33. 172	23.676	421.0	0. 004	5. 56	104.1	2 . 6	0. 29	0 . 1	0. 00	0.11	0 .03	1	220
10	ISL	18.43	18.43	3 3.168	23 . 765	412.8	0. 042	5.59	103.9	2 . 6	0.29	0 . 1	0.00	0.12	0.03	10	
14		18.21	18.21	33.166	23.818	407.9	0 . 058	5.61	103.9	2 . 6	0.29	0 . 1	0. 00	0.12	0.03	14	219
20	ISL	18.12	18.12	33.153	23.831	406 . 9	0.083	5 . 60	103.5	2 . 6	0.29	0 . 1	0. 00	0.11	0. 03	20	
29		17.97	17.97	33.154	23.868	403 . 6	0.119	5 . 59	103.0	2 . 6	0.29	0 . 1	0. 00	0.10	0.02	29	218
30	ISL	17.92	17.91	3 3 16 3	23.887	401.8	0.123	5 . 60	10 3.1	2 . 6	0.29	0 . 1	0.00	0.10	0.02	30	
45		17.03	17.02	3 3.313	24.215	371.0	0.181	5 . 76	104.3	2 . 8	0.28	0 . 1	0. 00	0.10	0.03	45	217
SO	ISL	16.89	16.88	33.343	24.271	365 .8	0.199	5 . 78	104.4	2 .8	0.28	0 . 1	0 . 00	0.11	0.03	50	
60		16,46	16.45	33.370	24.392	354 . 6	0.235	5 . 82	104.3	2 . 8	0. 29	a. 1	0 . 00	0.13	0.04	60	216
74		14.80	14.79	33.356	24.751	320. 7	0.283	5 . 96	103.3	3 . 3	0.29	0 . 1	0.00	0.16	0.06	74	21 5
75	ISL	14.73	14.72	33.348	24.760	319.9	0.286	5 .96	103.1	3. 3	0.29	0 . 1	0 . 0 0	0.16	0.06	75	
34		14.35	14.34	33.306	24.808	315.5	0.315	5 . 96	102.3	3.3	0.31	0 . 1	0. 00	0.17	0.10	84	214
94		14.30	14.29	33.426	24.912	305 . 9	0. 346	5 . 87	100.7	3.4	0.31	0 . 1	0.00	0.21	0.19	94	21 3
100	ISL	14.12	14.11	33.483	24.994	298.3	0. 364	5 . 74	98 .2	3 . 8	0. 35	0.4	0 . 08	0. 26	0.23	100	
104		13.94	13.93	33.506	25.049	293. 1	0 . 376	5 . 65	96 . 3	4 . 2	0.39	0 . 8	0.13	0.28	0.25	104	212
1 14		13.27	13.25	33.478	25.164	282.3	0.404	5 . 46	91.8	4 . 9	0. 52	3 .0	0.14	0.26	0.26	1 14	21 1
124		12.51	12.49	33.470	25.307	268 . 8	0. 432	5.25	86 . 8	6. 8	0 .68	5 . 7	0.05	0.19	0.19	125	210
125	I SL	12.45	12.43	33.471	25.320	267.6	0. 435	5.23	86 . 4	7. 0	0 . 69	5 .9	0. 05	0.19	0.19	126	
138		11.70	11.68	33.494	25.479	252.6	0. 468	5 . 02	81 . 6	9. 1	0 . 86	8 . 8	0 .03	0.14	0.15	139	209
1 50	ISL	11.02	11.00	33.523	25 .626	238.8	0. 498	4 . 76	76.3	11.5	1 .04	11.7	0 .02	0.10	0.11	151	
163		10.33	10.31	33.566	25.780	224.2	0.528	4.45	70 .3	14.5	1.24	14.8	0. 01	0.06	0. 08	164	208
193		9.12	9.10	33.716	26-097	194.3	0 . 591	3. 77	58.0	23.0	1.66	21.5	0.00	0.02	0. 03	194	207
200	ISL	8.91	8.S9	33-753	26.160	188.5	0. 604	3 .68	56 . 4	24,8	1 . 73	22.5	0.00			201	
228		8.2 5	8.23	33.881	26.362	169.6	0.654	3.41	5 1.5	31 .0	1 . 91	2 5.4	0.00			229	206
250	ISL	7.90	7 . 87	33.940	26.460	160.5	0.691	3.24	48 . 6	34 . 9	1 .99	26.7	0 . 0 0			251	
268		7. 67	7 . 64	33.971	26.518	155.2	0.719	3 . 09	46 . 1	37.9	2 .05	27.7	0 . 0 0			269	205
300	ISL	7.25	7.22	34.006	26.605	147.2	0. 767	2 . 63	38. 8	44 . 6	2 -24	30. 4	0. 00			302	
317		7. 04	7.01	34.016	26.642	143.8	0 . 792	2 . 37	34 .8	48. 3	2 . 35	31 .9	0 .00			319	204
377		6.41	6 . 38	34.046	26.751	134.0	0. 875	1 . 72	24 .9	59.4	2 . 63	35.4	0.00			379	203
400	ISL	6.17	6.13	34.052	26.787	130.7	0 . 906	1.53	22 . 0	63.6	2 ,72	36 . 6	0.00			402	
437		5 . 83	5 . 79	34.064	26.839	125.9	0.953	1.27	18.1	70.1	2.84	38. 4	0. 00			440	202
500	ISL	5 . 49	5 . 45	34.119	26.924	118.3	1 .030	0. 85	12.0	79 . 1	3.01	40.4	0 , 00			503	
512		5 .42	5 . 38	34.130	26.942	116.8	1.044	0 . 77	10.9	80.8	3 . 04	40.8	0.00			51 5	201

8V DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	UEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 49.2 N	123 54.6 V	20/07/95	1105 UTC	4350 m	270	06 kn			1019.2 mb	18.6 C	17.7 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	S103 uM/I	P04 UK/I	N03 uM/L	N02 uM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.24	19.24	33.338	23.692	419.5	0.000	5.46	103.2	2.7	0.29	0.1	0.00	0.13	0.03	0	
1	19.24	19.24	33.338	23.692	419.5	0.004	5.46	103.2	2.7	0.29	0.1	0.00	0.13	0.03	1	221
10 ISL	18.81	18.81	33.273	23.751	414.2	0.042	5.50	103.1	2.7	0.29	0.1	0.00	0.12	0.03	10	
20	18.04	18.04	33.203	23.888	401.4	0.082	5.58	103.0	2.6	0.29	0.1	0.00	0.11	0.02	20	220
30 ISL	17.48	17.47	33.262	24.069	384.5	0.122	5.66	103.4	2.7	0.29	0.1	0.00	0.11	0.02	30	
40	16.90	16.89	33.335	24.263	366.3	0.159	5.74	103.7	2.7	0.29	0.1	0.00	0.10	0.03	40	219
50 ISL	16.16	16.15	33.318	24.420	351.6	0.195	5.84	104.0	2.9	0.30	0.1	0.00	0.11	0.03	50	
60	15.49	15.48	33.304	24.560	338.5	0.230	5.93	104.2	3.1	0.30	0.1	0.00	0.13	0.04	60	218
75 ISL	14.95	14.94	33.396	24.750	320.9	0.279	5.95	103.5	3.2	0.29	0.1	0.00	0.14	0.05	75	
80	14.84	14.83	33.431	24.800	316.2	0.295	5.96	103.4	3.2	0.28	0.1	0.00	0.14	0.06	80	217
100	14.48	14.47	33.471	24.909	306.4	0.357	5.88	101.3	3.2	0.27	0.1	0.00	0.19	0.10	100	216
109	14.47	14.45	33.578	24.994	298.6	0.385	5.73	98.8	3.3	0.29	0.1	0.02	0.23	0.22	109	215
120	13.89	13.87	33.605	25.136	285.3	0.417	5.52	94.0	4.3	0.40	1.5	0.19	0.20	0.25	121	214
125 ISL	13.00	12.98	33.490	25.227	276.5	0.431	5.39	90.1	5.7	0.55	3.7	0.14	0.20	0.21	126	
129	12.28	12.26	33.406	25.302	269.4	0.442	5.27	86.7	6.9	0.68	5.7	0.08	0.19	0.18	130	213
139	11.61	11.59	33.436	25.451	255.3	0.468	4.93	80.o	9.3	0.91	9.2	0.03	0.14	0.15	140	212
149	11.54	11.52	33.638	25.621	239.4	0.493	4.92	79.8	9.3	0.86	9.3	0.02	0.09	0.13	150	211
150 ISL	11.52	11.50	33.644	25.629	238.6	0.495	4.91	79.6	9.4	0.87	9.4	0.02	0.09	0.13	151	
159	11.18	11.16	33.643	25.691	232.9	0.516	4.78	76.9	11.0	0.98	11.1	0.01	0.06	0.09	160	210
174	9.85	9.83	33.572	25.866	216.2	0.550	4.35	68.0	16.5	1.35	16.5	0.01	0.03	0.04	175	209
194	9.26	9,24	33.700	26.063	197.7	0.591	4.13	63.7	20.4	1.52	19.4	0.01	0.01	0.02	195	203
200 ISL	9.08	9.06	33.735	26.119	192.4	0.603	3.94	60.6	22.3	1.61	20.7	0.01			201	
229	8.33	8.31	33.876	26.346	171.1	0.656	3.00	45.4	31.6	2.00	26.5	0.00			230	207
250 ISL	8.01	7.98	33.947	26.449	161.5	0.691	2.79	41.9	35.9	2.11	28.2	0.00			251	
268	7.80	7.77	33.989	26.513	155.7	0.719	2.73	40.8	39.0	2.15	28.9	0.00			269	206
300 ISL	7.35	7.32	34.017	26.600	147.7	0.768	2.50	37.0	44.8	2.27	30.7	0.00			302	
318	7.11	7.08	34.023	26.638	144.3	0.794	2.35	34.6	48.1	2.34	31.7	0.00			320	205
377	6.53	6.50	34.069	26.753	133.9	0.876	1.56	22.7	59.8	2.66	35.8	0.00			379	204
400 ISL	6.26	6.22	34.074	26.792	130.2	0.906	1.39	20.1	64.4	2.75	37.0	0.00			402	
438	5.84	5.80	34.081	26.851	124.8	0.955	1.18	16.9	71.6	2.86	38.7	0.00			441	203
500 ISL	5.43	5.39	34.121	26.933	117.4	1.030	0.83	11.7	80.3	3.01	40.5	0.00			503	
513	5.35	5.31	34.130	26.950	115.9	1.045	0.76	10.7	82.1	3.04	40.9	0.00			516	202

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	UAVES	UEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 16.4 N	120 I.2 «	18/07/95	1826 UTC	576 m	220	07 kn	250 01 04	4	1015.1 mb	15.7 C	15.6 C	11m 06	7/8	ST

DEPTH m	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 UM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0 ISL	16.48	16.48	33.569	24.538	338.7	0.000	6.34	113.8	3.0	0.30	0.3	0.02	1.59	0.50	0	
1 A,B	16.48	16.48	33.569	24.538	338.8	0.003	6.34	113.8	3.0	0.30	0.3	0.02	1.59	0.50	1	224
7 B	15.57	15.57	33.574	24.748	319.0	0.023	6.49	114.4	3.6	0.34	0.4	0.04	2.23	0.66	7	223
10 ISL	14.92	14.92	33.587	24.901	304.5	0.032	6.30	109.6	5.1	0.47	2.0	0.08	2.38	0.82	10	
15 B	13.80	13.80	33.608	25.154	280.5	0.047	5.77	98.1	8.1	0.73	5.6	0.15	2.64	1.02	15	222
20 ISL	12.86	12.86	33.595	25.333	263.6	0.061	5.10	85.1	10.5	0.95	8.3	0.23	2.02	0.89	20	
22 B	12.57	12.57	33.592	25.388	258.5	0.066	4.86	80.6	11.4	1.02	9.9	0.25	1.74	0.81	22	221
29 B	12.20	12.20	33.652	25,505	247.4	0.084	4.69	77.2	13.6	1.18	11.3	0.26	1.64	0.70	29	220
30 ISL	12.08	12.08	33.656	25.531	245.0	0.086	4.62	75.3	14.1	1.21	12.3	0.26	1.55	0.67	30	
41 B	10.68	10.68	33.690	25.813	218.4	0.112	3.73	59.4	19.2	1.56	17.9	0.23	0.50	0.38	41	219
50	10.10	10.09	33.733	25.947	205.8	0.131	3.35	52.7	21.9	1.76	20.6	0.11	0.20	0.21	50	218
60	9.73	9.72	33.790	26.054	195.9	0.151	3.07	47.9	24.7	1.83	22.7	0.04	0.10	0.19	60	217
70	9.72	9.71	33.817	26.077	193.9	0.170	2.97	46.4	25.3	1.86	23.2	0.05	0.09	0.18	70	216
75 ISL	9.64	9.63	33.853	26.118	190.1	0.180	2.32	43.9	26.6	1.92	23.9	0.04	0.07	0.18	75	
85	9.48	9.47	33.948	26.219	180.7	0.198	2.43	37.8	29.9	2.08	25.7	0.03	0.04	0.17	85	215
100	9.47	9.46	34.109	26.347	168.9	0.225	1.82	28.3	33.9	2.28	27.9	0.06	0.01	0.13	101	214
119	9.47	9.46	34.154	26.382	165.9	0.256	1.66	25.8	35.0	2.33	28.4	0.06	0.01	0.09	120	213
125 ISL	9.47	9.46	34.166	26.392	165.2	0.266	1.61	25.0	35.3	2.35	28.5	0.06	0.01	0.09	126	
139	9.48	9.46	34.192	26.411	163.7	0.289	1.52	23.7	36.0	2.38	28.7	0.07	0.00	0.10	140	212
150 ISL	9.32	9.30	34.180	26.428	162.2	0.307	1.53	23.7	36.8	2.39	29.0	0.06	0.00	0.11	151	
169	8.99	8.97	34.150	26.457	159.7	0.338	1.54	23.7	38.4	2.41	29.7	0.03	0.01	0.12	170	211
199	8.85	8.83	34.167 0	26.493	156.9	0.385									200	210
200 ISL	8.84	8.82	34.168	26.496	156.7	0.387	1.42	21.8	41.0	2.47	30.6	0.02			201	
228	8.66	8.64	34.184	26.537	153.2	0.430	1.28	19.5	43.4	2.53	31.2	0.01			229	209
250 ISL	8.52	8.49	34.187	26.561	151.3	0.464	1.25	19.0	45.2	2.56	31.6	0.01			252	
269	8.37	8.34	34.185	26.583	149.5	0.492	1.21	13.4	47.3	2.60	32.0	0.01			271	208
300 ISL	7.92	7.89	34.179	26.646	143.9	0.538	1.04	15.6	53.6	2.72	33.3	0.01			302	
319	7.62	7.59	34.177	26.688	140.0	0.565	0.92	13.7	57.3	2.80	34.1	0.01			321	207
378	7.04	7.00	34.198	26.787	131.2	0.645	0.67	9.9	66.9	2.95	35.1	0.01			381	206
400 ISL	6.91	6.87	34.201	26.807	129.5	0.673	0.58	8.5	70.2	3.01	34.9	0.01			403	
436	6.73	6.69	34.205	26.835	127.3	0.720	0.44	6.4	76.0	3.10	34.5	0.01			439	205
500 ISL	6.38	6.33	34.227	26,899	121.8	0.799	0.22	3.2	89.0	3.29	32.1	0.01			504	
511	6.34	6.29	34.230	26.907	121.2	0.813	0.19	2.3	90.4	3.31	31.8	0.01			515	204
535	6.30	6.25	34.232	26.914	120.8	0.842	0.17	2.5	89.8	3.30	32.3	0.01			539	203
564	6.27	6.22	34.234	26.920	120.7	0.877	0.13	1.9	92.9	3.46	31.9	0.02			568	202
570	6.27	6.22	34.239	26.924	120.4	0.884	0.13	1.9	93.2	3.48	31.8	0.05			574	201

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

RV DAVIC1 STARR JORDAN CALCOFI CRUISE 9507 STATION S3 40.6

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
34 13.5 N	119 24.7 U	18/07/95	1108	UTC	37 in	290 05 tn			1014.0 mb	15.1 C	15.'1 C				

DEPTH m		TENP PEG t	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	OYN HT	OXYGEN ml/I	OXY PCT	SI03 UN/L	P04 uN/I	N03 UN/I	N02 UN/I	CHL-A ug/I	PHAEO ug/I	PRES db	SANP
0	ISL	16.92	16.92	33.508	24.389	352.9	0.000	6.11	110.6	3.0	0.27	0.3	0.01	1.13	0. 34	0	
1		16.92	16.92	33.508	24.389	353.0	0 .004	6.11	110.6	3.0	0.27	0 .3	0.01	1.13	0 .34	1	205
6		16.12	16.12	33.507	24.573	335 .6	0.021	5 .96	106.2	4 .9	0.41	1 .3	0.05	1 .84	0.50	6	204
10		14.90	14. 90	33.516	24.851	309.3	0.034	5 .74	99 .8	6 .2	0. 54	3 .0	0 .09	2 .46	0. 70	10	203
20		13.01	13.01	33.539	25.260	270.6	0.063	5 .04	84 .3	10.4	0. 87	7.5	0.21	2.16	0. 82	20	202
30		12.21	12.21	33.557	25.430	254.6	0.089	4 .39	72 .2	14.4	1.19	11.3	0. 34	1 .48	0. 59	30	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	BIND	SPEED	WAVES	UEA	BAROMETER	DRY	UET	SECCHI/FOREL	CLD	ANT	TYPE
34 10 .9 N	119 30.6 W	18/07/95	0913	UTC	110 m	300	06 kn			1014.1 • b 1	5 .3 C	15 .3 C				

DEPTH m		TEMP DEG C	POT TEF1P DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 UM/L	N02 UM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.97	16.97	33.484	24.359	355 .S	0.000	5 .99	108.5	4.3	0 .33	0.2	0.01	0.49	0.24	0	
1		16.97	16.97	33.484	24.359	355 .9	0.004	5 .99	108.5	4 .3	0.33	0 .2	0.01	0.49	0.24	1	210
10		16.47	16.47	33.487	24.478	344 .8	0.035	6 .06	108.7	4.3	0.37	0.2	0.02	1 .00	0.36	10	209
20		14.60	14.60	33.522	24.920	303. 0	0.067	5 .35	92 .5	8. 4	0. 70	5 .1	0.15	2.03	0. 74	20	208
30		12.54	12.54	33 .543	25 .356	261 .7	0.096	4 .69	77. 7	12.1	1 .05	10.0	0.34	2 .03	0. 83	30	207
40		11.79	11.78	33.551	25.505	247.8	0.121	4.21	68 .6	14.1	1 .27	13.4	0.45	0.94	0 .65	40	206
50		11.44	11.43	33.567	25.582	240.6	0.146	4 .02	65 .0	14.9	1 .35	14.9	0 .44	0.73	0.52	50	205
60		10.85	10.84	33.637	25.743	225.5	0.169	3 .59	57.4	18.3	1.55	18.3	0.20	0. 38	0 .34	60	204
70		9.84	9. S3	33.734	25.992	202.0	0.190	3.25	50.8	22.5	1 .76	21.9	0.03	0.09	0.13	70	203
75	ISL	9.84	9 . 83	33.826	26.064	195.2	0 .200	2 .94	46.0	24.5	1 .87	23 .2	0. 03	0 .07	0.13	75	
84		9. 85	9.84	33.922	26.137	isa. 5	0.217	2 .42	37.9	27.3	2 .03	24.9	0.02	0.03	0.12	84	202
99		9.84	9 . 83	33.968	26.175	185.2	0.246	2.21	34 .6	28.8	2.11	25 .8	0. 03	0.02	0.10	100	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 51

LATITUDE	LONGITUDE	OAY/MO/YR	CAST	TIME	BOTTOM	KIND	SPEED	WAVES	UEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 52 .4 N	120 7.1 V	18/07/95	0313	UTC	98 in	290	14 kn	280 02 08	1	1013.9 mb	16 •,7 C	16,.0 C			4/8	AC

DEPTH in		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	OYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 UM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.39	14.39	33.533	24.973	297.4	0.000	5 .68	97 .7	7.5	0 .68	4 .7	0.11	2 .34	0. 68	0	
1		14.39	14.39	33.533	24.973	297.4	0. 003	5 .68	97. 7	7 .5	0.68	4 .7	0.11	2.34	0.68	1	211
1		14.43	14.43	33.534	24.965	298.1	0.003									1	212
5		14.15	14.15	33.534	25 .024	292.6	0.015	5 .64	96 .6	7 .7	0.70	4 .9	0.11	2 .29	0.67	5	210
10		13.28	13.28	33.532	25.201	275.9	0.029	5.46	91.8	8 .6	0. 79	6.4	0.15	2 .08	0.78	10	209
20		11.20	11.20	33.581	25.636	234 .8	0.055	4.31	69 .4	14.4	1.28	14.2	0.17	0. 72	0. 43	20	208
30		10.71	10.71	33.628	25.760	223.2	0. 077	3.93	62 .6	17.2	1 .44	16.9	0.13	0. 44	0.29	30	207
40		10.48	10.48	33.645	25.S13	218.3	0.100	3.75	59.5	18.5	1.52	18.0	0.11	0. 37	0.26	40	206
50		10,09	10.08	33.743	25 .957	204 .9	0.121	3.31	52 .1	23.0	1 .72	20.8	0.10	0.27	0.25	50	205
60		9 .99	9. 98	33.787	26.008	200.2	0.141	3.15	49.5	24 .5	1 .79	21.7	0.12	0.26	0.25	60	204
70		9.80	9.79	33.842	26 . 083	193.3	0.161	2 .93	45.8	27.1	1 .89	23.0	0.11	0.19	0.22	70	203
75	ISL	9. 76	9.75	33.849	26.095	192.3	0.170	2 .89	45 .2	27.3	1.91	23.2	0.10	0.18	0.21	75	
80		9.74	9.73	33.852	26.101	191.8	0.180	2 .88	45.0	27.5	1 .92	23.3	0.10	0.17	0.20	80	202
90		9.68	9. 67	33.867	26.123	190.0	0.199	2.83	44 .1	27. 7	1 .94	23.7	0.10	0.15	0.18	90	201

RV DAVIEI STARR JORDAN CALCOFI CRUISE 9507 STATION S3 55

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TINE	BOTTON	WIND	SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
33 44.8 N	120 24.5 W	17/07/95	2239	UTC	932 m	300	09 kn	300 03 08	1	1016.0 mb	19 .3 C	17 .. 7 C	08m 04		4/8	AC

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 uN/ I	N03 U«/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	15.67	15.67	33.529	24.691	324.2	0.000	6 .97	123.1	1 .1	0.22	0.2	0.00	2 .29	0.69	0	
1		15.67	15.67	33.529	24.691	324 .2	0 .003	6. 97	123.1	1 .1	0 .22	0.2	0.00	2.29	0 .69	1	220
1		15.71	15.71	33.529	24.682	325 .0	0 .003									1	221
10		14.37	14.37	33.539	24.982	296 .8	0.031	6. 64	114.2	1 .8	0.35	0 .5	0.02	9.22	2.79	10	219
20		13.69	13.69	33.553	25.134	282.6	0 .060	5 .98	101.4	4 .0	0. 60	3 .7	0 .09	8. 34	3.13	20	218
30		12.09	12.09	33.594	25.481	249. 7	0.037	4.67	76 .6	12.8	1.12	11.3	0.19	2 .07	1.11	30	217
40		11.36	11.36	33.638	25.651	233.8	0.111	4 .09	66 .1	16.5	1 .36	15.3	0.27	0. 75	0. 45	40	216
50		11.20	11.19	33.654	25.693	230. 0	0.134	3.96	63 .8	17.6	1 .42	16.1	0.31	0.61	0.43	50	215
60		10.40	10.39	33.737	25.399	210.6	0.156	3 .40	53.8	22 .5	1 .70	20.3	0. 32	0.31	0. 35	60	214
70		9.88	9.87	33.777	26.019	199.4	0.177	3.16	49.5	24.9	1 .82	22 .6	0.16	0.17	0.21	70	213
75	ISL	9 .74	9. 73	33.782	26.046	196.9	0.187	3.13	48 .9	25 .4	1 .85	23.0	0.11	0.13	0.18	75	
85		9.56	9 . 55	33.795	26.0S6	193.3	0.206	3 .08	47.9	26.4	1 .90	23.5	0.06	0 .09	0.15	85	212
99		9 .28	9.27	33.878	26.197	183.0	0.232	2 .74	42 ,4	29.4	2 .01	25.3	0.09	0.04	0.11	100	211
100	ISL	9.27	9.26	33.381	26.201	182.7	0.234	2.73	42.2	29. 5	2 .02	25.4	0. 09	0. 04	0.11	101	
T19		9.09	9.08	3 3.939	26.275	176.0	0.263	2.54	39.1	31 .6	2.10	26 .3	0.13	0. 02	0.11	120	210
125	ISL	9.03	9 .02	33.969	26 .308	172.9	0.279	2 .44	37.5	32.6	2.14	26.8	0.12	0.02	0.11	126	
139		8 .88	8 .87	34.040	26.388	165.6	0. 303	2 .20	33. 7	35. 1	2.22	27.9	0.09	0. 01	0.11	140	209
150	ISL	8.77	8. 75	34.075	26.433	161.6	0.321	2 .08	31 .8	36.6	2.27	28 .6	0. 07	0.01	0.10	1 51	
170		8. 57	8.55	34.120	26.500	155.6	0. 352	1 .90	29.0	39 .4	2 .35	29.6	0. 04	0.01	0.08	171	203
199		8. 30	8.23	34.181	26.589	147.6	0. 396	1.51	22 .9	44 .3	2.50	31.3	0 .05	0.01	0.07	200	207
200	ISL	8.29	8.27	34.182	26.591	147.4	0. 398	1 .50	22.7	44.4	2 .50	31.3	0. 05			201	
228		a. 11	8.09	34.193	26.627	144.4	0.439	1 .37	20.7	47 .2	2.59	32 .1	0.05			229	206
250	ISL	7.90	7.87	34.200	26.664	141.2	0. 470	1.27	19.1	49.9	2 .64	32.8	0.05			252	
268		7. 73	7. 70	34.205	26.693	138.7	0.495	1.19	17.8	52 .0	2 .68	33.4	0.04			270	205
300	ISL	7. 62	7.59	34.215	26.718	136.9	0.539	1.11	16.6	53.8	2 .72	33 .8	0. 03			302	
318		7. 57	7. 54	34.220	26.729	136.1	0 . 564	1 .06	15.8	54.3	2 .75	34 .0	0. 03			320	204
377		7.01	6. 97	34.233	26.822	127.8	0. 642	0 .78	11.5	63 .0	2.91	36.2	0.02			380	203
400	ISL	6.83	6 .79	34.248	26.855	124.9	0.671	0. 69	10.1	65 .9	2 .96	36.8	0. 02			403	
438		6. 58	6. 54	34.264	26.901	120.9	0.717	0.57	8. 3	70. 3	3.03	37. 7	0.01			441	202
500	ISL	6.23	6.19	34.270	26.952	116.6	0. 791	0. 47	6.8	75 .4	3.10	39. 1	0. 01			504	
511		6.17	6.12	34.271	26.961	115.9	0. 804	0.45	6. 5	76. 3	3.11	39. 3	0.01			515	201

IV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIKE	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 34.0 N	120 AS.9 W	17/07/95	1844 UTC	1565 *m*	310	09 kn	310 02 08I	1	1017.1 mb	17.9 C	17.1 C	25m 02	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	S103 uM/L	P04 uM/ l	N03 UK/L	N02 «« / l	CHL-A ug/L	PHAEO u_g/l	PRES db	SAMP
0 ISL	15.87	15.87	32.958	24.207	370.3	0 .000	5 .94	104.9	2 .0	0. 36	0 .2	0.00	0.16	0.04	0	
1	15.90	15.90	32.958	24.201	370.9	0.004									1	222
1 A	15.87	15.87	32.958	24.208	'370.3	0.004	5 .94	104.9	2 .0	0. 36	0.2	0.00	0.16	0.04	1	221
S	15.58	15.58	32.958	24.272	364 .3	0.029	5 .96	104.7	2 .0	0 .35	0 .2	0.00	0.18	0.05	8	220
10 ISL	15.42	15.42	32.980	24.325	359. 4	0.037	6 .00	105.1	1 .9	0.36	0.2	0.00	0.20	0.07	10	
16 A	15.08	15.08	33.098	24.490	343 .8	0.058	6.10	106.2	1 .5	0.39	0 .3	0.02	0. 32	0.14	16	219
20 ISL	15.29	15.29	33.247	24.559	337. 4	0.071	6 .06	106.0	1 .5	0.42	0. 7	0.04	0.51	0.19	20	
25	15.53	15.53	33.391	24.617	332 . 0	0.088	6 .00	105.6	1 .4	0.45	1 .1	0. 06	0. 69	0.24	25	218
30 ISL	15.24	15.24	33.334	24.637	330.2	0.105	6.01	105.1	1 .6	0.45	1 .0	0.06	0 . 56	0.23	30	
34 A	14.81	14.80	33.237	24.656	328.5	0.118	6 .04	104.6	1 .8	0.45	0. 8	0.05	0.44	0.22	34	21 7
42	13.62	13.61	33.093	24.793	315.6	0.144	6 .06	102.4	2 .6	0.46	0. 7	0.06	0.59	0.25	42	216
SO A	12.19	12.18	33.080	25.064	289.9	0.168	5 .63	92 .3	5 .2	0.65	3 .5	0.36	0.38	0.26	50	21 5
59	11.76	11.75	33.124	25.179	279.2	0.193	5 .33	86 . 6	7. 6	0.82	7.0	0.16	0.29	0.23	59	214
67 A	11.70	11.69	33.282	25.313	266 . 6	0.215	5 .07	S2 .3	9 .0	0.93	9 .2	0 . 05	0.18	0.17	67	213
75 ISL	11.60	11.59	33.420	25.439	254.9	0.236	4 .78	77 .5	10.0	0.99	10.5	0. 04	0.15	0.18	75	
80	11.54	11.53	33.512	25.521	247.1	0.249	4. 60	74 . 6	10.9	1 .04	11.5	0.03	0.14	0.18	80	212
93 A	10.15	10.14	33.533	25.783	222.3	0.279	4.15	65 . 3	16.3	1 .38	16.8	0. 02	0 .06	0.10	93	21 1
100 ISL	10.00	9 .99	33.609	25.868	214.4	0.294	3 .88	60 .9	19.0	1.53	19.0	0 . 02	0. 05	0.10	1 00	
119	9 .59	9.58	33.723	26.026	1 99 .a	0. 334	3.24	50.4	25.0	1 .84	23.2	0 .02	0. 04	0.09	120	210
125 ISL	9.40	9 . 39	33.757	26.083	194.4	0.346	3.14	48.6	26. 3	1 .89	24 . 0	0.02	0.03	0.11	126	
139	9.03	9 . 02	33.831	26.201	183.4	0 . 372	2 .93	45.0	28.8	1 .98	25.4	0 .01	0.02	0.14	1 40	209
150 ISL	9.03	9.01	33.908	26.261	177.9	0. 392	2 .62	40 . 3	31.0	2 .07	26.5	0 . 01	0.01	0.13	1 51	
169	9.04	9 . 02	34.001	26.333	171.5	0.425	2.15	33.1	34.1	2.20	28.0	0 .01	0.01	0.10	1 70	208
199	8.67	8. 65	34.038	26.420	163.7	0 . 475	2.18	33.3	36 . 3	2.23	28. 6	0.01	0.01	0 .09	200	207
200 ISL	8. 65	8 . 63	34 .038	26.423	163.4	0.477	2.19	33 . 4	36 .3	2 .23	28.6	0.01			201	
229	8.14	8.12	34.022	26.489	157.5	0.524	2 .50	37.7	38 . 1	2.18	28.8	0.01			230	206
250 ISL	7. 74	7. 72	34.025	26.550	151.9	0.556	2.41	36.0	41.7	2.24	29.8	0.01			251	
268	7.40	7. 37	34.031	26.604	146.9	0.583	2 .33	34 . 5	45.4	2.31	31 .0	0.01			270	205
300 ISL	6.90	6. 87	34.028	26.671	140.8	0. 629	2.15	31.5	50.9	2 .43	32 .8	0 . 00			302	
318	6.67	6.64	34.030	26.703	137.8	0 . 654	2 .00	29.1	54 .2	2.50	33.9	0 . 00			320	204
378	6.11	6.08	34.102	26.833	125.9	0. 733	1.15	16.5	68.0	2 .83	38.0	0 . 00			380	203
tOO ISL	5 .98	5 .95	34.119	26.864	123.3	0.761	0 . 99	14.2	71 . 1	2 .90	38. 7	0 . 00			403	
438	5 .80	5 . 76	34.145	26.907	119.5	0.807	0 . 81	11.6	75 . 5	2 .98	39. 6	0 . 00			441	202
500 ISL	5.44	5 . 40	34.200	26.995	111.7	0. 878	0 . 53	7 .5	84 . 1	3.10	41.3	0 . 00			503	
516	5 .35	5.31	34.214	27.016	109.7	0 . 896	0. 46	6.5	86 .3	3.13	41.7	0 . 00			520	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 14.9 N	121 26.3 U	17/07/95	1 154 UTC	3795 *m*	240	05 kn			1015.5 mb	17.5 c	16.6 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 UM/ I	N03 uM/ I	N02 uM/L	CHL-A ug/ I	PHAEO ug/L	PRES db	SAMP
0 ISL	17.99	17.99	33.281	23.959	393.9	0 .000	5.55	102.4	2 .2	0 .30	0 .2	0.00	0.10	0.02	0	
1	17.99	17.99	33.281	23.959	393.9	0 .004	5.55	102.4	2 .2	0 .30	0 .2	0.00	0.10	0.02	1	221
10 ISL	17.90	17.90	33.298	23.995	390 . 9	0 . 039	5.56	102.4	2 .3	0. 30	0 .2	0.00	0.10	0.03	10	
15	17.83	17.83	33.311	24.022	388 . 5	0 . 059	5.56	102.3	2 .3	0 .30	0. 2	0.00	0.10	0.03	1 5	220
20 ISL	17.79	17.79	33.314	24.034	387 . 5	0 .078	5 .56	102.2	2 .2	0 .30	0 .2	0.00	0.10	0.03	20	
30	17.70	17.69	33.320	24.061	385.3	0.117	5.57	102.2	2 .1	0.29	0 .2	0.00	0.10	0.02	30	21 9
45	16.70	16.69	33.316	24.295	363 . 4	0.173	5 .75	103.5	2 .3	0.29	0.2	0.00	0.10	0.03	45	21 8
50 ISL	16.36	16.35	33.307	24.366	356.7	0.191	5 .82	104.0	2 .4	0.29	0. 2	0 .00	0.11	0.03	50	
65	15.32	15.31	33.295	24.591	335.7	0.243	5 .95	104.2	2 .8	0.29	0.2	0 .00	0. 13	0.05	65	215
75	14.63	14.62	33.317	24.757	320.1	0.276	5 .94	102.6	2. a	0. 30	0. 2	0.00	0.18	0.08	75	214
85	14.34	14.33	33.392	24.877	309 . 0	0 . 307	5.85	100.5	3 .1	0.31	0 .2	0.00	0.25	0.16	35	213
95	14.23	14.22	33.516	24.996	297.9	0 . 337	5 .69	97.6	3 .4	0. 34	0 .3	0.04	0.35	0. 32	95	212
100 ISL	14.02	14.01	33.510	25.035	294.3	0 . 352	5 .62	95 . 9	3 .7	0. 39	0 .9	0.12	0 . 35	0.31	100	
104	13.81	13.80	33.496	25.068	291.3	0 . 364	5.55	94.3	4 .1	0. 44	1 .5	0.18	0 . 35	0.30	1 04	21 7
115	13.13	13.11	33.516	25.221	276.9	0 . 395	5.31	89 . 0	5 .3	0.58	3 .9	0.21	0 . 34	0.31	1 15	21 1
125 ISL	12.52	12.50	33.508	25.335	266.2	0 . 422	4.99	82 . 6	7 .7	0.79	7. 4	0.15	0.26	0.26	126	
126	12.46	12.44	33.506 D	25.346	265.2	0.425									127	225
144	10.80	10.78	33.496	25.643	236 . 9	0 . 470	4.35	69 . 4	13.4	1.23	14.5	0.01	0.09	0.13	145	209
150 ISL	10.46	10.44	33.531	25.730	228.7	0.484	4.16	65.9	15.2	1 .34	16.2	0.01	0 .06	0.10	1 51	
163	9.89	9.87	33.618	25.895	213.2	0.513	3.83	59. 9	18.9	1 .54	19.2	0.00	0 . 02	0.05	1 64	208
194	8.80	8. 78	33.706	26.140	190.2	0.575	3 . 65	55.8	24.8	1 .76	23.1	0.00	0 . 00	0.03	195	207
200 ISL	8.69	8.67	33.736	26.181	186.4	0.587	3 .62	55.2	25.6	1 .78	23.5	0.00			201	
230	8. 33	8.31	33.886	26 . 354	170.4	0. 640	3 .39	51.3	30 . 0	1 .88	25.1	0.00			231	206
250 ISL	8.02	7 . 99	33.955	26.454	161.1	0. 673	3.10	46.6	34 . 6	2 .00	26.9	0.00			251	
268	7 . 75	7 . 72	34.000	26 . 529	154.1	0. 702	2 . 81	42.0	39.0	2.12	28.6	0.00			269	205
300 ISL	7 . 36	7 . 33	34.041	26.618	146.1	0.750	2 . 35	34 .8	45.7	2 .32	31.1	0.00			302	
317	7.18	7.15	34.051	26.651	143.1	0.774	2.14	31.6	48 . 9	2.41	32 . 3	0.00			319	204
379	6.53	6.50	34.067	26 . 752	134.0	0.860	1.61	23.4	58.9	2 .64	35 . 6	0.00			381	203
400 ISL	6.33	6.29	34.083	26.791	130.5	0 . 888	1 . 39	20.1	63 . 1	2 .73	36 . 8	0.00			402	
437	6.01	5 .97	34.115	26.857	124.4	0 . 935	1 .02	14.6	70 . 3	2 . 89	38 . 8	0. 00			440	202
500 ISL	5 .66	5 .62	34.164	26.940	117.1	1.011	0. 69	9. a	78 . 6	3.04	40 . 5	0. 00			503	
510	5 .61	5 . 57	34.172	26.952	116.0	1.023	0. 64	9 . 1	79 . 9	3 . 06	40 . 8	0. 00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 80

LATITUPE	LONGITUDE	DAY/NO/YR	CAST TIKE	BOTTON	WIND SPEED	VAVES	WEA	BARONETER	DRY yET	SECCHI/FOREL	CLD ANT	TYPE
32 54.6 N	122 7.6 U	17/07/95	0618 UTC	4184 *m*	330 04 kn			1016.4 • b	17.9 C 16.1 C			

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DTN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 UN/I	N03 UN/L	N02 UN/L	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	18.21	18.21	33.294	23.916	398.1	0.000	5.58	103.4	2.5	0.29	0.1	0.00	0.10	0.02	0	
1		18.20	18.20	33.294.	23.918	397.9	0.004									1	221
1		18.21	18.21	33.294	23.916	398.1	0.004	5.58	103.4	2.5	0.29	0.1	0.00	0.10	0.02	1	220
10	ISL	18.00	18.00	33.275	23.953	394.9	0.040	5.59	103.1	2.5	0.29	0.1	0.00	0.09	0.02	10	
15		17.85	17.85	33.273	23.988	391.7	0.059	5.59	102.9	2.5	0.29	0.1	0.00	0.09	0.02	15	219
20	ISL	17.83	17.83	33.306	24.018	389.0	0.079	5.59	102.8	2.5	0.29	0.1	0.00	0.09	0.02	20	
29		17.79	17.79	33.388	24.091	382.4	0.114	5.60	103.0	2.4	0.30	0.1	0.00	0.09	0.03	29	218
30	ISL	17.74	17.73	33.390	24.105	381.1	0.117	5.61	103.1	2.4	0.30	0.1	0.00	0.09	0.03	30	
44		17.01	17.00	33.393	24.281	364.7	0.170	5.73	103.8	2.4	0.30	0.1	0.00	0.15	0.03	44	217
50	ISL	16.88	16.87	33.394	24.313	361.9	0.191	5.74	103.7	2.5	0.30	0.1	0.00	0.14	0.03	50	
59		16.60	16.59	33.377	24.365	357.2	0.224	5.77	103.7	2.6	0.30	0.1	0.00	0.13	0.04	59	216
74		15.32	15.31	33.280	24.580	337.1	0.276	5.92	103.6	2.8	0.32	0.1	0.00	0.20	0.07	74	215
75	ISL	15.21	15.20	33.280	24.604	334.8	0.279	5.91	103.2	2.8	0.32	0.1	0.00	0.20	0.08	75	
84		14.36	14.35	33.298 D	24.800	316.3	0.308									84	214
94		14.05	14,04	33.321	24.883	308.6	0.340	5.80	99.0	3.6	0.37	0.2	0.03	0.35	0.25	94	213
100	ISL	13.50	13.49	33.338	25.009	296.7	0.358	5.64	95.2	4.5	0.48	1.7	0.11	0.49	0.09	100	
104		13.09	13.08	33.360	25.108	287.3	0.370	5.51	92.2	5.2	0.56	2.9	0.15	0.54	0.01	104	212
114		12.40	12.38	33.475	25.332	266.1	0.397	5.17	85.3	6.7	0.75	6.4	0.05	0.21	0.30	114	211
124		11.72	11.70	33.518	25.494	250.9	0.423	4.87	79.2	9.2	0.91	9.6	0.03	0.14	0.21	125	210
125	ISL	11.64	11.62	33.520	25.510	249.3	0.426	4.83	78.4	9.5	0.93	10.0	0.03	0.13	0.20	126	
138		10.69	10.67	33.538	25.695	231.8	0.457	4.31	68.6	14.3	1.27	15.0	0.01	0.08	0.14	139	209
150	ISL	9.96	9.94	33.584	25.856	216.6	0.484	3.99	62.5	18.0	1.48	18.3	0.01	0.04	0.08	151	
163		9.36	9.34	33.652	26.008	202.2	0.511	3.72	57.5	21.6	1.64	20.9	O.Oi	0.02	0.04	164	203
193		8.82	8.80	33.828	26.232	181.4	0.569	3.19	48.8	28.3	1.90	24.7	O.OO	0.00	0.04	194	207
200	ISL	8.72	8.70	33.856	26.270	177.9	0.581	3.12	47.6	29.4	1.93	25.2	0.00			201	
228		8.38	8.36	33.938	26.387	167.3	0.629	2.91	44.1	33.0	2.03	26.8	0.00			229	206
250	ISL	8.19	8.16	33.984	26.452	161.4	0.666	2.75	41.5	35.6	2.11	27.8	0.00			251	
267		8.05	8.02	34.010	26.493	157.7	0.693	2.61	39.3	37.8	2.17	28.6	0.00			268	205
300	ISL	7.70	7.67	34.052	26.578	150.1	0.743	2.26	33.7	43.3	2.32	30.6	0.00			302	
318		7.48	7.45	34.068	26.622	146.1	0.770	2.06	30.6	46.7	2.40	31.8	0.00			320	204
377		6.60	6.57	34.090	26.761	133.2	0.833	1.50	21.8	59.8	2.68	35.7	0.00			379	203
400	ISL	6.37	6.33	34.103	26.801	129.5	0.883	1.30	18.8	63.9	2.77	36.9	0.00			402	
436		6.09	6.05	34.128	26.857	124.5	0.928	1.01	14.5	69.7	2.89	38.4	0.00			439	202
500	ISL	5.64	5.60	34.182	26.956	115.5	1.005	0.64	9.1	80.1	3.07	40.5	0.00			503	
512		5.55	5.51	34.192	26.975	113.8	1.019	0.57	8.1	82.0	3.10	40.9	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 83 90

LATITUDE	LONGITUDE	OAY/HO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BARONETER	DRY WET	SECCHI/FOREL	CLD ANT	TYPE
32 34.4 N	122 48.5 V	16/07/95	2345 UTC	4176 *m*	150 06 kn	240 04 05	1	1015.5 mb	20.0 C 17.0 C	41m 01	6/8	CC

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN MT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 uN/I	N03 UN/I	N02 UN/I	CHL-A ug/I	PHAEO ug/l	PRES db	SANP
0	ISL	18.77	18.77	33.249	23.742	414.6	0.000	5.57	104.3	2.6	0.30	0.2	0.00	0.08	0.01	0	
1		18.79	18.79	33.250	23.738	415.1	0.004									1	221
1		18,77	18.77	33.249	23.742	414,7	0.004	5.57	104.3	2.6	0.30	0.2	0.00	0.08	0.01	1	220
10	ISL	18.43	18.43	33.232	23.814	408.1	0.041	5.58	103.8	2.6	0.30	0.2	0.00	0.08	0.01	10	
20		17.83	17.83	33.234	23.963	394.3	0.081	5.60	103.0	2.6	0.30	0.2	0.00	0.08	0.02	20	219
30	ISL	17.33	17.33	33.319	24.149	376.9	0.120	5.68	103,5	2.5	0.30	0.2	0.00	0,08	0.03	30	
40		16.92	16.91	33.405	24.312	361.7	0.157	5,76	104.2	2.5	0.30	0.2	0.00	0.08	0.03	40	218
50	ISL	16.77	16.76	33.410	24.351	358.2	0.193	5.75	103.7	2.5	0.30	0.2	0.00	0.09	0.03	50	
59		16.66	16.65	33.400	24.369	356.8	0.225	5.75	103,4	2.6	0.30	0.2	0.00	0.10	0.03	59	217
75	ISL	16.09	16.08	33.425	24.520	342.9	0.281	5,83	103.7	2.7	0.29	0.2	0.00	0.13	0.04	75	
80		15.92	15.91	33.447	24.575	337.8	0.298	5.85	103.7	2.7	0.29	0.2	0.00	0.14	0.05	80	216
99		15.70	15.68	35.641	24.774	319.4	0.360	5.78	102.2	2.7	0.26	0.2	0.00	0.19	0.09	99	215
100	ISL	15.68	15.66	33.643	24.780	318.9	0.364	5.78	102.1	2.7	0.26	0.2	0.00	0.19	0.09	100	
109		15.54	15.52	33.690	24.848	312.7	0.392	5.72	100.8	2.8	0.27	0.2	0.00	0.21	0.13	109	214
119		14.76	14.74	33.724	25.045	294.1	0.422	5.52	95.8	3.0	0.34	0.5	0.11	0.29	0.22	119	213
125	ISL	14.20	14.18	33.710	25.153	283.9	0.440	5.40	92.6	3.9	0.43	1.6	0.13	0.27	0.23	126	
130		13.70	13.68	33.683	25.236	276.0	0.454	5.29	89.8	4.9	0.52	3.1	0.14	0.24	0.24	131	212
139		12.76	12.74	33.612	25.369	263.4	0.478	5.06	84.2	7.0	0.72	6.7	0.02	0.17	0.19	140	211
149		11.66	11.64	33.559	25.537	247.3	0.503	4.74	77.0	9.8	0.97	10.6	0.02	0.10	0.13	150	210
150	ISL	11.56	11.54	33.554	25.552	245.9	0.506	4.70	76.2	10.2	1.00	11.0	0.02	0.10	0.13	151	
159		10.84	10.82	33.530	25.663	235.4	0.528	4.41	70.4	13.2	1.21	14.2	0.01	0.09	0.13	160	209
173		10.31	10.29	33.579	25.794	223.1	0.560	4.22	66.6	15.4	1.33	16.3	0.01	0.05	0.09	174	208
193		9.49	9.47	33.648	25.985	205.1	0.603	3.94	61.1	19.a	1.56	19.8	0.00	0.01	0.04	194	207
200	ISL	9.23	9.21	33.690	26.060	198.1	0.617	3.86	59.5	21.6	1.62	20.8	0.00			201	
228		8.36	8.34	33.854	26.324	173.2	0.669	3.62	54,8	28.4	1.81	24.1	0.00			229	206
250	ISL	7.99	7.96	33.911	26.424	163.9	0.706	3.56	53.5	31.5	1.88	25.3	0.00			251	
269		7.77	7.74	33.936	26.476	159,2	0.736	3.49	52.1	34.1	1.93	26.1	0.00			270	205
300	ISL	7.30	7.27	33.973	26.572	150.3	0.784	3.05	45.1	41.0	2.12	28.9	0.00			302	
318		7.05	7.02	33.991	26.621	145.8	0.811	2.73	40.1	45.3	2.24	30.6	0.00			320	204
379		6.53	6.50	34.058	26.745	134.7	0.897	1.74	25.3	58.2	2.61	35.1	0.00			381	203
400	ISL	6.38	6.34	34.079	26.781	131.4	0.925	1.48	21.4	62.0	2.71	36.3	0.00			402	
438		6.13	6.09	34.114	26.841	126.1	0.973	1.09	15,7	68.4	2.86	38.2	0.00			441	202
500	ISL	5.76	5.72	34.169	26.931	118.0	1.049	0.72	10.3	77.2	3.03	40.1	0.00			503	
516		5.66	5.62	34.183	26.955	115.9	1.068	0.63	9.0	79.5	3.07	40.6	0.00			519	201

RV DAVID STARS JORDAN — CALCOFI CRUISE 9507 — STATION 83 100

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIKE	BOTTOK	HIND	SPEED	VAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 15.0 N	123 29.2 y	16/07/95	1829 UTC	4192 m	300	05 kn	340 04 07	2	1016.1 mb	17.7 C	16.0 C	42m 01	8/8		ST

DEPTH •	TENP DEG C	POT TEPIP DEO C	SALINITY	SIGPIA THETA	SVA	DYN HT	OXYGEN mL/ I	OXY PCT	S 103 UN/ I	P04 uH/ I	N03 UN/ I	N02 UN/ I	CHL-A ug/ I	PHAEO ug/L	PRES db	SANP
0 ISL	18.17	18.17	33 .307	23.935	396.2	0.000	5 .52	102 .2	2 .4	0.29	0.2	0.00	0 . 07	0.01	0	
2 A	18.17	18.17	33..307	23 .935	396.3	0.008	5 .52	102.2	2 .4	0.29	0.2	0.00	0. 07	0.01	2	222
2	18.18	18.18	33..308	23.934	396.4	0.008									2	223
10 ISL	18.11	18.11	33..306	23.950	395 .2	0.040	5.53	102.3	2 .1	0.29	0.2	0.00	0 .OS	0.02	10	
14	18.08	18.08	33 .305	23.956	394 .7	0.055	5.53	102.2	1 .9	0.29	0.2	0.00	0 . 09	0.02	1 4	221
20 ISL	17.60	17.60	53 .343	24.102	381 .0	0.079	5.61	102.8	2 .2	0.29	0.2	0.00	0.10	0.02	20	
26 A	17.10	17.10	33 . 386	24.254	366. 7	0.101	5 .69	103.2	2 .5	0.29	0. 2	0.00	0.10	0.02	26	220
30 ISL	16.98	16.98	33 .398	24.292	363 .2	0.116	5 .70	103.2	2 .5	0.29	0.2	0.00	0.09	0.02	30	
40	16.79	16.78	33..407	24.344	358.6	0.152	5 .72	103.2	2 .5	0 .29	0 .2	0.00	0.08	0.02	40	219
50 ISL	16.39	16.38	33..400	24.431	350. 6	0.187	5 .74	102.7	2 .2	0.29	0.2	0.00	0.10	0.03	50	
55 A	16.14	16.13	33..396	24.485	345 . 6	0 .205	5 .76	102.6	2 .1	0.29	0.2	0. 00	0.12	0 . 04	55	218
71	15.24	15.23	33..421	24.706	325.0	0.258	5 .94	103.9	2 .8	0.27	0.2	0 . 00	0.15	0. 05	71	217
75 ISL	15.23	15.22	33..458	24.736	322 .2	0 .271	5.93	103.7	2 .8	0.27	0 .2	0 . 00	0.16	0.05	75	
13 A	15.21	15.20	33 .518	24.787	317.6	0.297	5 .88	102.8	2 .8	0.26	0.2	0. 00	0.17	0.07	83	216
93	14.77	14.76	33 .483	24.856	311.3	0.328	5 .83	101.0	2 .9	0.28	0.2	0.00	0.19	0.11	93	21 5
100 ISL	14.69	14.68	33 .542	24.919	305. 5	0.350	5 .77	99 . 9	2 .8	0.29	0.2	0.00	0.20	0.15	100	
102	14.69	14.67	33 .562	24 .934	304 . 1	0.356	5 .75	99 . 5	2 .8	0.29	0.2	0.00	0.20	0.16	102	214
IIO A	14.62	14.60	33.. 598	24.977	300 .2	0. 380	5 .67	98.0	3 .3	0.31	0.2	0.03	0.25	0.19	1 10	213
122	14.59	14.57	33..771	25.118	287 . 3	0.415	5 .48	94 . 8	3 .5	0 . 35	1 . 0	0.20	0.25	0.19	123	212
125 ISL	14.32	14.30	33 .746	25.156	283.7	0.424	5.45	93 .7	3 .8	0. 38	1 .5	0.18	0.24	0.19	126	
132	13.57	13.55	33 .671	25.253	274.4	0.443	5 .37	90.9	4 .6	0 . 48	3 .1	0.11	0.20	0.19	133	21 1
144	12.71	12.69	33 .695	25.443	256.4	0.475	5 .05	84 . 0	6 .7	0. 69	6 .7	0. 03	0.12	0.14	145	210
150 ISL	12.12	12.10	33..649	25.521	249.0	0 . 490	4 .96	81 . 4	8 .2	0 . 81	8 . 5	0. 02	0.10	0.14	1 51	
154 A	11 .72	11.70	33..615	25.570	244.4	0 . 500	4 .90	79.8	9 .3	0. 89	9 .7	0 . 02	0 . 09	0.14	155	209
174	10.31	10.29	33..600	25.810	221.6	0 . 547	4.35	6S . 7	14.7	1.26	15.4	0.01	0.04	0. 07	1 75	208
193	9.53	9.51	33..647	25.977	205.9	0 . 588	3. 88	60. 2	20. 1	1 . 56	20 .0	0.01	0.02	0. 05	194	207
200 ISL	9.29	9.27	33..680	26.042	199.7	0 . 602	3.75	57. 9	21.9	1 .64	21.2	0.01	0.02	0.04	201	
221	8.54	8. 52	33 .826	26.275	178.0	0.655	3 . 36	51.1	28.5	1 .87	24 . 8	0 .00	0.00	0.02	229	206
250 ISL	8.21	8.18	33 .905	26 .387	167.6	0.693	3 .09	46 . 6	32 . 5	1 . 99	26 . 7	0 . 00			251	
269	8.01	7.98	33 .954	26.455	161.3	0.724	2 .89	43 . 4	35 . 5	2 .07	27.9	0 .00			270	205
300 ISL	7.64	7.61	34 .000	26.546	153.1	0.773	2 .64	39 . 3	40 . 5	2 .20	29.7	0.00			302	
319	7.42	7. 39	34 .015	26 . 589	149.2	0.801	2 .49	36.9	43 .7	2 .27	30.7	0.00			321	204
378	6. 78	6. 75	34 .050	26.705	138.6	0.886	1 .83	26.7	54 . 8	2.54	34 . 4	0.00			380	203
400 ISL	6.55	6.51	34 .072	26.753	134.2	0.916	1 .54	22 . 4	59.6	2 .66	35.9	0.00			402	
439	6.18	6.14	34 .110	26.832	127.0	0. 966	1 .09	15.7	67 . 7	2 . 86	38 12	0.00			441	202
500 ISL	5 .63	5 . 59	34 .141	26.925	118.4	1 . 042	0. 78	11.1	78 . 3	3 .02	40. 3	0.00			503	
513	5.51	5 .47	34 , 148	26.945	116.6	1 .057	0.71	10.1	80 . 5	3.05	40. a	0. 00			516	201

A) PRINARY PRODUCTIVITY SANPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 83 1 10

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND	SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
31 54.7 N	124 10.0 y	16/07/95	0933 UTC	4213 in	310	06 kn			1014.9 mb	18.'1 C	16.6 C				

DEPTH m	TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	S 103 UN/ I	P04 u«/ I	N03 uN/ I	N02 UN/ t	CHL-A ug/ L	PHAEO ug/L	PRES db	SANP
0	18.45	18.45	33.396	23.934	396. 3	0. 000	5.50	102.4	2.5	0 . 30	0 . 3	0.01	0.09	0 . 02	0	220
1	18.46	18.46	33.396	23.932	396. 6	0. 004									1	221
10 ISL	18.44	13.44	33 .398	23.939	396 .2	0. 040	5 .50	102.4	2 .5	0. 31	0 . 3	0. 01	0.09	0 . 02	1 0	
20	18.42	18.42	33.400	23.946	395 . 9	0.079	5.50	102.4	2 .5	0.32	0 . 3	0.01	0.08	0 . 02	20	219
30 ISL	17.91	17.90	33.449	24.109	380 . 7	0.118	5 .60	103.3	2 .5	0.29	0 . 3	0.01	0.08	0 .02	30	
40	17.37	17.36	33.512	24.287	364 . 0	0.155	5 .70	104.0	2 .5	0.26	0 . 3	0.01	0.09	0 . 02	40	218
50 ISL	17.21	17.20	33.571	24.371	356.4	0.191	5 .72	104.1	2 .5	0.25	0 . 3	0.01	0.10	0.02	50	
60	17.06	17.05	33.613	24.439	350.2	0 .227	5 .73	104.0	2 .5	0.25	0.2	0.01	0.12	0.03	60	217
75 ISL	16.30	16.29	33.612	24.615	333 . 9	0.278	5 .82	104.1	2 .6	0.25	0.2	0.01	0.13	0.04	75	
80	16.03	16.02	33.611	24.676	328.2	0.295	5 .85	104.1	2 .7	0.25	0. 2	0 . 01	0.14	0.04	80	216
99	15.56	15.54	33.681	24.836	313.5	0.355	5 .79	102.1	2 .8	0.24	0.2	0.01	0.18	0.09	99	21 5
100 ISL	15.54	15.52	33.687	24.845	312.7	0.359	5 .78	101.9	2 .8	0.24	0. 2	0.01	0.18	0.09	100	
IIO	15.34	15.32	33.752	24.940	303.9	0 . 389	5 .70	100.1	2 .3	0.25	0.2	0.01	0.19	0.15	1 10	214
120	15.29	15.27	33.818	25.002	298.3	0.420	5 .63	98 . 8	2 .9	0.25	0.2	0.02	0.28	0.25	120	21 3
125 ISL	15.18	15-16	33.851	25.052	293.7	0 .434	5.56	97 . 4	3 .0	0.27	0. 3	0.12	0.28	0.26	126	
129	15.05	15.03	33.867	25.093	290.0	0.446	5 .50	96 . 1	3 .1	0. 30	0 . 5	0.20	0.28	0.26	1 30	212
139	14.60	14.58	33.829	25.161	283.7	0.475	5 .39	93 . 3	3 . a	0 . 37	1 . 6	0.25	0.22	0.23	140	21 1
149	14.29	14.27	33.885	25.270	273.5	0.503	5.25	90 . 3	4 .4	0 . 44	3 .1	0.06	0.16	0.16	1 50	210
150 ISL	14.25	14.23	33.886	25.279	272.7	0.505	5.24	90 . 1	4 .5	0. 45	3 .3	0.06	0.16	0.16	1 51	
158	13.84	13.82	33.869 D	25.352	265.9	0.527									1 59	209
174	12.07	12.05	33.730	25.594	242.7	0.568	4 .92	SO. 7	8 .2	0 . 80	8 .4	0. 02	0.07	0.10	175	208
193	10.70	10.68	33.638	25.773	225.7	0.612	4 .65	74 .0	12.5	1 .22	12.9	0. 01	0.04	0 . 06	194	207
200 ISL	10.27	10.25	33.637	25.846	218.7	0.628	4 .49	70 .8	14.5	1 .33	14.8	0 .01			201	
229	8.93	8.91	33.725	26.135	191.4	0.687	3 . 76	57.6	23.5	1 .69	22 . 0	0 . 00			230	206
250 ISL	8.44	8.41	33.855	26.297	176.2	0.726	3.23	49.0	29.4	1 .91	25.5	0 . 00			251	
268	8.18	8.15	33 . 928	26.410	165.7	0.756	2 .84	42 .8	34 .0	2 .07	27.7	0 . 00			269	205
300 I SL	7 . 71	7 . 68	34.007	26.541	153.6	0.808	2.45	36.6	40. 7	2.24	30.2	0 .00			302	
319	7.47	7.44	34.031	26.594	148.7	0.836	2.29	34 . 0	44 . 3	2 .32	31 .3	0. 00			321	204
380	6. 76	6 . 72	34.073	26.726	136.7	0.923	1 .65	24.1	56.3	2 .62	35 .0	0 .00			382	203
400 ISL	6.51	6 . 47	34.073	26.759	133.6	0.950	1.55	22 . 5	59.8	2 .68	35 .8	0 .00			402	
437	6.11	6 . 07	34.076	26.814	128.6	0 . 999	1.40	20 . 1	65 . 7	2 . 78	37.0	0.00			440	202
500 ISL	5 . 78	5 . 74	34.135	26.902	120.8	1 .077	0. 89	12.7	74 . 9	2.97	39.6	0 .00			503	
51 1	5 . 72	5 .68	34.145	26.917	119.4	1.091	0 . SO	11.4	76 . 5	3 .00	40.0	0.00			514	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 33

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	80TT0N	WIND SPEED	VAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 53.a N	118 29.7 U	13/07/95	1854 UTC	55 Ht	210 08 kn	240 02 06	0	1013.8 mb	18..8 C	18.. 0 C	13m 05	0/8	

DEPTH m		TEHP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 UN/ I	P04 uN/ L	N03 UN/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	16.28	16.28	33.472	24.510	341.5	0.000	6.28	112.2	7.0	0.31	0.2	0.01	0.89	0.21	0	
1		16.35	16.35	33.472	24.494	343.0	0.003									1	208
1	A	16.28	16.28	33.472	24.510	341.5	0.003	6.28	112.2	7.0	0.31	0.2	0.01	0.89	0.21	1	207
4		15.96	15.96	33.471	24.582	334.7	0.014	6.34	112.6	7.2	0.33	0.2	0.02	1.01	0.23	4	206
8	A	13.43	13.43	33.460	25.115	284.1	0.026	5.42	91.4	10.5	0.82	5.9	0.22	1.25	0.34	8	205
10	ISL	12.97	12.97	33.464	25.210	275.1	0.032	5.13	85.7	11.4	0.96	7.7	0.25	1.44	0.44	10	
17	A	11.65	11.65	33.472	25.469	250.6	0.050	4.53	73.6	12.9	1.22	11.6	0.36	1.82	0.68	17	204
20	ISL	11.58	11.58	33.512	25.513	246.5	0.057	4.36	70.7	13.4	1.27	12.6	0.36	1.56	0.53	20	
26	A	11.43	11.43	33.525	25.550	243.0	0.072	4.15	67.1	14.4	1.33	13.8	0.36	0.86	0.30	26	203
30	ISL	11.25	11.25	33.530	25.587	239.6	0.082	4.10	66.1	15.0	1.36	14.3	0.34	0.62	0.26	30	
35	A	11.00	11.00	33.537	25.638	234.9	0.094	4.03	64.6	16.1	1.41	15.0	0.32	0.44	0.22	35	202
49	A	10.41	10.40	33.638	25.820	217.9	0.125	3.30	52.2	21.8	1.78	18.9	0.34	0.28	0.38	49	201

A) PRINARY PRODUCTIVITY SANPLES WERE TAKEN FRON THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 35

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	MIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 4S'.5 N	118 37.8 W	13/07/95	2100 UTC	643 mt	230 09 kn	250 02 05	0	1013.3 mb	20..8 C	19.1 C	13m 03	0/8	

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	S 103 UN/ I	P04 uN/ I	N03 uN/ l	N02 UN/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SANP
0	ISL	17.84	17.84	33.476	24.145	376.2	0.000	6.07	111.8	5.8	0.30	0.2	0.01	0.66	0.13	0	
1		17.84	17.84	33.476	24.145	376.2	0.004	6.07	111.8	5.8	0.30	0.2	0.01	0.66	0.13	1	220
1		17.73	17.73	33.476	24.172	373.7	0.004									1	221
10		15.75	15.75	33.470	24.628	330.5	0.035	6.38	112.8	6.6	0.33	0.2	0.02	1.49	0.36	10	219
20		12.08	12.08	33.479	25.394	257.8	0.065	4.41	72.3	13.4	1.29	11.2	0.33	1.08	0.27	20	218
30		11.15	11.15	33.498	25.580	240.3	0.090	3.94	63.3	15.8	1.49	14.7	0.38	0.58	0.22	30	217
40		10.89	10.89	33.536	25.656	233.3	0.113	3.76	60.1	16.9	1.56	16.1	0.41	0.56	0.27	40	216
50		10.64	10.63	33.592	25.744	225.1	0.136	3.40	54.1	19.1	1.66	18.8	0.47	0.40	0.26	50	215
60		10.22	10.21	33.692	25.895	211.0	0.158	3.16	49.8	21.3	1.75	21.1	0.22	0.22	0.25	60	214
70		10.00	9.99	33.748	25.976	203.5	0.179	3.20	50.2	22.4	1.77	21.3	0.03	0.12	0.16	70	213
75	ISL	9.93	9.92	33.791	26.021	199.3	0.189	3.04	47.7	23.6	1.83	22.2	0.03	0.09	0.15	75	
85		9.87	9.86	33.873	26.096	192.4	0.209	2.66	41.7	26.1	1.96	24.0	0.02	0.06	0.13	85	212
100		9.90	9.89	33.919	26.127	189.8	0.237	2.49	39.0	27.3	2.02	24.6	0.02	0.04	0.14	101	211
120		9.88	9.87	34.027	26.215	181.9	0.274	2.19	34.3	29.5	2.13	25.8	0.01	0.01	0.08	121	210
125	ISL	9.84	9.83	34.043	26.234	180.2	0.283	2.15	33.7	30.0	2.15	26.1	0.01	0.01	0.08	126	
140		9.68	9.66	34.081	26.291	175.1	0.310	2.06	32.2	31.6	2.20	26.8	0.01	0.01	0.08	141	209
150	ISL	9.61	9.59	34.112	26.327	171.9	0.327	1.96	30.6	32.6	2.24	27.2	0.02	0.01	0.07	151	
170		9.50	9.48	34.171	26.392	166.1	0.361	1.74	27.1	34.6	2.31	28.0	0.03	0.01	0.06	171	208
199		9.40	9.38	34.234	26.458	160.5	0.409	1.42	22.1	37.7	2.43	29.2	0.04	O.OO	0.07	200	207
200	ISL	9.39	9.37	34.235	26.460	160.2	0.410	1.42	22.1	37.8	2.43	29.2	0.04			201	
229		9.15	9.12	34.240	26.503	156.7	0.456	1.40	21.6	39.6	2.47	29.7	0.01			230	206
250	ISL	9.14	9.11	34.255	26.517	155.8	0.489	1.32	20.4	40.4	2.50	29.8	0.02			252	
269		9.11	9.08	34,267	26.532	154.8	0.518	1.24	19.1	41.2	2.53	30.0	0.02			271	205
300	ISL	8.72	8.69	34.260	26.588	149.8	0.566	1.20	18.4	44.3	2.59	31.0	0.02			302	
318		8.45	8.42	34.253	26.625	146.6	0.592	1.18	17.9	46.3	2.62	31.7	0.02			320	204
377		7.96	7.92	34.253	26.699	140.2	0.677	1.03	15.5	51.3	2.70	32.9	0.01			379	203
400	ISL	7.76	7.72	34.255	26.730	137.6	0.709	0.95	14.2	53.8	2.75	33.6	O.Oi			403	
437		7.41	7.37	34.259	26.784	132.8	0.759	0.81	12.0	58.5	2.84	34.9	0.01			440	202
500	ISL	6.64	6.59	34.272	26.901	122.0	0.839	0.56	8.2	69.8	3.01	37.8	0.01			503	
514		6.47	6.42	34.276	26.926	119.6	0.856	0.50	7.3	72.3	3.05	38.4	0.01			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 40

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	80TTON	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD AN1	TYPE
33 38.5 N	118 57.7 W	14/07/95	0228 UTC	594 m	240 08 kn	250 01 04	0	1011.5 mb	19.**i c i a**	.3 C	19m 02	0/8	

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	S 103 UN/ I	P04 UN/ I	N03 UN/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	18.35	18.35	33.380	23.947	395.1	0.000	5.72	106.3	3.7	0.31	0.1	0.00	0.12	0.03	0	
1		18.36	18.36	33.380	23.944	395.4	0.004									1	221
1		18.35	18.35	33.380	23.947	395.1	0.004	5.72	106.3	3.7	0.31	0.1	0.00	0.12	0-03	1	220
10		16.78	16.78	33.358	24.307	361.1	0.038	6.05	109.1	4.2	0.33	0.1	0.00	0.19	0.06	10	219
20		14.05	14.05	33.402	24.943	300.7	0.071	6.41	109.4	4.5	0.47	1.2	0.09	0.65	0.23	20	218
29		12.73	12.73	33.379	25.192	277.3	0.097	5.74	95.3	7.4	0.70	5.3	0.18	0.82	0.33	29	217
30	ISL	12.64	12.64	33.385	25.214	275.2	0.100	5.67	94.0	7.7	0.73	5.7	0.18	0.86	0.35	30	
40		12.10	12.09	33.457	25.373	260.3	0.127	5.08	83.3	9.7	0.94	**a.9**	0.20	1.17	0.54	40	216
49		11.85	11.84	33.487	25.444	253.8	0.150	4.81	78.5	10.8	1.03	10.3	0.20	1.02	0.51	49	215
50	ISL	11.78	11.77	33.492	25.461	252.2	0.152	4,76	77.5	11.0	1.05	10.7	0.19	0.98	0.49	50	
59		11.11	11.10	33.552	25.630	236.2	0.174	4,26	68.4	14.1	1.29	14.7	0.06	0.57	0.33	59	214
69		10.49	10.48	33.644	25.811	219.2	0.197	3.54	56.1	18.9	1.57	19.0	0.02	0.29	0.25	69	213
75	ISL	10.26	10.25	33.687	25.884	212.3	0.210	3,27	51.6	20.9	1.69	20.6	0.02	0.18	0.20	75	
83		10.04	10.03	33.734	25.959	205.4	0.227	3.05	47.9	22.8	1.79	22.0	0.01	0.09	0.15	83	212
99		9.58	9.57	33.803	26.089	193.3	0.259	3.03	47.1	25.4	1.87	23.4	0.01	0.03	0.09	100	211
100	ISL	9.57	9.56	33.809	26.096	192.7	0.261	3.02	47.0	25.5	1.88	23.5	0.01	0.03	0.09	101	
119		9.43	9.42	33.904	26.193	183.8	0.296	2.70	41.9	28.3	2.00	25.0	0.01	0.01	0.07	120	210
125	ISL	9.45	9.44	33.955	26.230	180.5	0.307	2.52	39.1	29.5	2.06	25.6	0.01	0.01	0.08	126	
138		9.53	9.51	34.063	26.302	174.0	0.330	2.13	33.2	31.9	2.19	26.8	0.01	0.01	0.09	139	209
150	ISL	9.55	9.53	34.113	26.338	170.8	0.351	1.92	29.9	33.1	2.25	27.5	0.01	0.01	0.09	151	
168		9.57	9.55	34.166	26.376	167.6	0.381	1.75	27.3	34.4	2.31	28.1	0.01	0.01	0.09	169	208
198		9.24	9.22	34.190	26.449	161.2	0.431	1.67	25.8	37.1	2.37	28.9	0.02	0.00	0.07	199	207
200	ISL	9.21	9.19	34.194	26.457	160.5	0.434	1.65	25.5	37.4	2.38	29.0	0.02			201	
228		8.83	8.81	34.242	26.556	151.5	0.478	1.38	21.2	42.1	2.50	30.3	0.02			229	206
250	ISL	8.65	8.62	34.244	26.586	149.0	0.511	1.32	20.2	43.7	2.54	30.9	0.03			252	
268		8.53	8.50	34.237	26.599	148.1	0.537	1.30	19.8	44.8	2.56	31.3	0.04			270	205
300	ISL	8.20	8.17	34.245	26.656	143.1	0.584	1.15	17.4	48.6	2.65	32.4	0.02			302	
318		7.99	7.96	34.250	26.691	139.9	0.609	1.06	15.9	51.1	2.70	33.1	0.01			320	204
377		7.29	7.25	34.244	26.788	131.3	0.689	0.85	12.6	59.5	2.83	35.4	0.01			379	203
400	ISL	7.10	7.06	34.249	26.819	128.6	0.719	0.77	11.3	62.1	2.88	36.1	0.01			403	
439		6.84	6.80	34.260	26.864	124.7	0.769	0.64	9.4	66.2	2.96	37.2	0.00			442	202
500	ISL	6.44	6.39	34.275	26.929	119.0	0.843	0.50	7.3	72.8	3.10	38.6	0.00			503	
515		6.34	6.29	34.279	26.946	117.6	0.861	0.46	6.7	74.4	3.14	39.0	0.00			519	201

«V DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	BOTTON	MIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 29.6 N	119 19.2 y	14/07/95	0622 UTC	1652 m	220	08 kn			1012.0 mb	17.1 C	16..6 C			

DEPTH HI	TEMP DEE C	POT TEMP DEC C	SALINITY	S IGNA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI03 UN/I	P0« UN/I	N03 u«/I	NOZ UN/I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0 ISL	16.16	16.16	33.586	24.625	330.5	0.000	5.82	103.8	5.5	0.54	2.7	0.09	0.75	0.19	0	
1	16.16	16.16	33.586	24.625	330.5	0.003	5.82	103.8	5.5	0.54	2.7	0.09	0.75	0.19	1	220
9	15.58	15.58	33.588	24.757	318.2	0.029	5.86	103.3	4.9	0.54	2.7	0.10	1.14	0.23	9	219
10 ISL	15.56	15.56	33.588	24.762	317.8	0.032	5.86	103.3	4.9	0.54	2.7	0.10	1.15	0.24	10	
19	15.49	15.49	33.589	24.778	316.5	0.061	5.89	103.7	4.8	0.54	2.6	0.10	1.25	0.29	19	218
20 ISL	15.47	15.47	33.590	24.783	316.0	0.064	5.88	103.4	4.9	0.55	2.7	0.10	1.25	0.29	20	
29	14.98	14.98	33.600	24.899	305.3	0.092	5.71	99.5	6.5	0.65	4.1	0.12	1.25	0.29	29	217
30 ISL	14.85	14.85	33.603	24.929	302.4	0.095	5.69	98.9	6.8	0.66	4.3	0.12	1.27	0.29	30	
39	13.35	13.34	33.640	25.271	270.1	0.121	5.31	89.5	10.2	0.87	7.7	0.18	1.36	0.36	39	216
49	11.39	11.38	33.692	25.688	230.5	0.146	4.26	68.9	16.9	1.32	14.3	0.35	1.01	0.46	49	215
30 ISL	11.24	11.23	33.700	25.722	227.3	0.148	4.14	66.8	17.7	1.37	15.1	0.35	0.98	0.46	50	
59	10.26	10.25	33.767	25.947	206.1	0.168	3.22	50.8	23.8	1.75	21.1	0.35	0.68	0.37	59	214
69	9.93	9.92	33.800	26.028	198.5	0.188	2.98	46.7	25.6	1.86	22.9	0.14	0.34	0.26	69	213
75 ISL	9.77	9.76	33.808	26.062	195.5	0.200	2.97	46.4	26.1	1.88	23.4	0.08	0.23	0.22	75	
84	9.56	9.55	33.822	26.107	191.3	0.217	2.95	45.9	26.9	1.90	23.9	0.05	0.13	0.17	84	212
99	9.25	9.24	33.887	26.209	181.9	0.245	2.73	42.2	29.9	2.01	25.5	0.03	0.05	0.12	100	211
100 ISL	9.24	9.23	33.891	26.214	181.5	0.247	2.72	42.0	30.0	2.01	25.6	0.03	0.05	0.12	101	
119	9.09	9.08	33.954	26.287	174.8	0.281	2.51	38.7	31.4	2.10	26.5	0.03	0.02	0.11	120	210
125 ISL	9.05	9.04	33.969	26.305	173.2	0.291	2.46	37.9	32.0	2.14	26.7	0.03	0.02	0.13	126	
139	8.97	8.96	34.003	26.345	169.7	0.315	2.33	35.8	33.5	2.24	27.3	0.03	0.02	0.16	140	209
150 ISL	8.91	8.89	34.041	26.384	166.2	0.334	2.18	33.5	35.0	2.29	27.9	0.03	0.02	0.15	151	
169	8.78	8.76	34.102	26.453	160.1	0.365	1.91	29.2	37.8	2.35	29.1	0.03	0.02	0.12	170	208
198	8.45	8.43	34.145	26.538	152.4	0.410	1.65	25.1	42.2	2.45	30.6	0.03	0.02	0.09	199	207
200 ISL	8.44	8.42	34.149	26.543	152.0	0.413	1.64	24.9	42.4	2.46	30.7	0.03			201	
229	8.27	8.25	34.195	26.605	146.6	0.456	1.48	22.4	45.5	2.53	31.5	0.05			230	206
250 ISL	8.15	8.12	34.204	26.630	144.5	0.487	1.40	21.1	47.2	2.57	32.0	0.05			252	
269	8.02	7.99	34.203	26.649	143.0	0.514	1.34	20.2	48.7	2.61	32.5	0.05			271	205
300 ISL	7.72	7.69	34.203	26.694	139.2	0.558	1.20	17.9	52.4	2.68	33.5	0.04			302	
319	7.53	7.50	34.205	26.723	136.6	0.584	1.10	16.4	54.9	2.73	34.2	0.03			321	204
378	7.03	6.99	34.232	26.815	128.5	0.662	0.81	11.9	62.6	2.89	36.1	0.01			380	203
400 ISL	6.89	6.85	34.243	26.843	126.1	0.690	0.73	10.7	65.2	2.93	36.7	0.01			403	
437	6.71	6.67	34.259	26.880	123.0	0.737	0.63	9.2	69.1	2.98	37.5	0.01			440	202
500 ISL	6.48	6.43	34.278	26.926	119.4	0.813	0.48	7.0	73.5	3.07	38.1	0.01			503	
515	6.43	6.38	34.283	26.937	118.5	0.831	0.45	6.5	74.5	3.09	38.3	0.01			519	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIRE	BOTTON	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
33 19'.5 N	119 40.0 W	14/07/95	1010 UTC	79 m	250	07 kn			1011.9 **mb**	**16.**.8 C	15.3 C			

DEPTH m	TEMP DEG C	POT TEMP OEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	S103 uM/I	P04 uM/I	N03 uFl/I	N02 UN/I	CHL-A ug/l	PHAEO ug/I	PRES db	SAMP
0 ISL	16.46	16.46	33.514	24.501	342.3	0.000	5.88	105.5	4.6	0.42	1.1	0.05	1.07	0.28	0	
2	16.46	16.46	33.514	24.501	342.4	0.007	5.88	105.5	4.6	0.42	1.1	0.05	1.07	0.28	2	209
6	15.55	15.55	33.537	24.724	321.2	0.020	6.01	105.9	4.3	0.41	1.1	0.05	1.62	0.38	6	208
10	14.19	14.19	33.567	25.041	291.2	0.032	5.50	94.3	7.8	0.72	5.7	0.17	2.23	0.60	10	207
20	12.72	12.72	33.611	25.373	259.8	0.060	4.86	80.3	11.9	1.06	10.6	0.30	1.18	0.56	20	206
30	10.95	10.95	33.660	25.742	224.9	0.084	4.04	64.7	17.8	1.45	16.8	0.26	0.45	0.27	30	205
40	10.66	10.66	33.668	25.800	219.6	0.106	3.92	62.4	18.8	1.50	17.9	0.24	0.34	0.20	40	204
50	9.56	9.55	33.784	26.077	193.4	0.127	3.55	55.2	22.3	1.66	20.3	0.18	0.24	0.17	50	203
60	9.48	9.47	33.903	26.183	183.6	0.146	2.70	41.9	29.9	1.99	24.8	0.13	0.08	0.15	60	202
70	9.47	9.46	33.902	26.184	183.7	0.164	2.67	41.5	30.0	2.00	25.0	0.13	0.08	0.13	70	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 !I.5 N	120 0.5 W	14/07/95	1336 UTC	1187 in	310	10 kn	290 05 08	1	1012.8 mb	15.5 C	15.2 C	09m 05	2/8	CU

DEPTH m	TEMP DEG C	POT TEMP OEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/I	P04 UN/I	N03 uM/I	N02 UM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0 ISL	15.34	15.34	33.553	24.783	315.4	0.000	5.99	105.1	4.9	0.51	2.2	0.11	3.20	0.65	0	
2	15.34	15.34	33.553	24.7S3	315.5	0.006	5.99	105.1	4.9	0.51	2.2	0.11	3.20	0.65	2	220
10 ISL	15.33	15.33	33.553	24.786	315.5	0.032	5.98	104.9	4.9	0.51	2.3	0.11	3.12	0.55	10	
11	15.33	15.33	33.553	24.786	315.5	0.035	5.98	104.9	4.9	0.51	2.3	0.11	3.11	0.55	11	219
20	14.77	14.77	33.561	24.914	303.6	0.063	6.17	107.0	2.6	0.50	2.0	0.11	4.30	0.91	20	218
30	13.79	13.79	33.588	25.141	282.2	0.092	5.69	96.7	4.4	0.73	5.3	0.24	2.39	0.88	30	217
40	12.16	12.15	33.613	25.483	249.8	0.118	4.91	80.7	11.1	1.15	11.2	0.51	0.72	0.39	40	216
50	10.47	10.46	33.598	25.778	221.9	0.142	4.14	65.6	17.6	1.48	17.7	0.47	0.22	0.19	50	215
59	10.16	10.15	33.598	25.832	217.0	0.162	4.00	63.0	18.9	1.53	18.8	0.25	0.11	0.15	59	214
75	9.65	9.64	33.664	25.969	204.2	0.195	3.57	55.6	22.4	1.70	21.5	0.08	0.07	0.14	75	213
84	9.13	9.12	33.751	26.121	189.9	0.213	3.23	49.7	26.6	1.85	24.0	0.03	0.03	0.12	34	212
100	8.70	8.69	33.836	26.256	177.3	0.243	3.09	47.1	29.8	1.94	25.4	0.03	0.02	0.12	101	211
120	8.52	8.51	33.953	26.375	166.3	0.277	2.64	40.1	34.5	2.11	27.4	0.03	0.02	0.12	121	210
125 ISL	a.52	8.51	33.982	26.398	164.3	0.285	2.52	38.3	35.4	2.14	27.8	0.03	0.02	0.11	126	
138	a.52	8.51	34.041	26.445	160.1	0.306	2.24	34.1	37.4	2.22	23.7	0.03	0.01	0.10	139	209
150 ISL	a.50	8.48	34.064	26.466	158.3	0.325	2.12	32.2	38.4	2.27	29.1	0.03	0.01	0.10	151	
168	a.42	8.40	34.078	26.490	156.4	0.354	2.03	30.8	39.6	2.32	29.5	0.04	0.01	0.11	169	203
199	8.16	8.14	34.119	26.561	150.1	0.401	1.79	27.0	43.2	2.41	30.9	0.05	0.02	0.09	200	207
200 ISL	8.15	8.13	34.120	26.564	149.9	0.403	1.78	26.9	43.3	2.41	30.9	0.05			201	
229	7.86	7.84	34.164	26.642	142.9	0.445	1.51	22.6	48.1	2.54	32.2	0.03			230	206
250 ISL	7.63	7.61	34.197	26.701	137.5	0.475	1.25	18.7	52.4	2.66	33.5	0.02			252	
268	7.45	7.42	34.221	26.746	133.5	0.499	1.04	15.5	55.9	2.75	34.5	0.02			270	205
300 ISL	7.23	7.20	34.230	26.785	130.3	0.541	0.91	13.5	59.5	2.82	35.4	0.02			302	
317	7.14	7.11	34.230	26.797	129.3	0.563	o.as	13.0	60.9	2.34	35.7	0.02			319	204
376	6.76	6.73	34.253	D 26.868	123.3	0.638									378	203
400 ISL	6.64	6.60	34.261	26.891	121.4	0.667	0.63	9.2	69.3	3.03	37.3	0.01			403	
438	6.46	6.42	34.274	26.925	118.5	0.713	0.53	7.7	73.0	3.10	38.0	0.01			441	202
500 ISL	6.16	6.12	34.295	26.981	113.8	0.785	0.43	6.2	78.6	3.12	39.3	0.01			504	
512	6.10	6.05	34.299	26.992	112.9	0.798	0.41	5.9	79.7	3.12	39.6	0.01			516	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 60

LATITUDE	LONGITUDE	OAY/NO/YR	CAST TINE	BOTTON	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 58I.9 N	120 21 .4 W	14/07/95	1813 UTC	789 in	020	05 kn	320 03 05	4	1013.5 mb	15 .5 C	15 . 5 C	13m 04	8/8	

DEPTH m		TENP DEG C	POT TENP DEO C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 UN/ I	N03 UN/ I	N02 UN/ I	CHL-A ug/l	PHAEO us/ I	PRES db	SANP
0	ISL	15.41	15.41	33.574	24 . 784	315.4	0.000	5 .97	104.9	3 .9	0. 54	2 . 6	0.13	1 . 39	0 . 34	0	
1	A	15.41	15.41	33.574	24.784	315.4	0. 003	5.97	104.9	3 . 9	0. 54	2 .6	0.13	1 . 39	0.34	1	221
1		15.41	15.41	33.574	24.784	315.4	0.003									1	222
8	A	15.26	15.26	33.574	24.817	312.5	0.025	5.96	104.4	4 . 0	0. 54	2 .8	0.13	1.53	0.41	8	220
10	ISL	15.20	15.20	33.575	24.831	311.2	0.031	5 . 94	103.9	4 .3	0. 56	3 . 0	0.13	1.49	0. 42	10	
17	A	14.99	14.99	33.578	24.879	306.8	0. 053	5 . 84	101.8	5 . 3	0. 62	3. 6	0.15	1 . 32	0.44	1 7	219
20	ISL	14.95	14.95	33.579	24 . 889	306. 0	0.062	5 . 82	101.3	5.5	0.63	3. 7	0.15	1 . 33	0. 48	20	
26	A	14.89	14.89	33.581	24.904	304 .8	0.081	5 . 78	100.5	5.6	0.65	3 .9	0.16	1 . 34	0. 54	26	218
30	ISL	14.84	14.84	33.588	24 .920	303.3	0.093	5 . 75	99 . 9	5 . 7	0.67	4 . 1	0.17	1 .21	0.52	30	
35	A	14.65	14.64	33.596	24.967	299.0	0.108	5.70	98.6	5 .9	0.71	4 .6	0.18	1 . 05	0.49	35	217
41		14.10	14.09	33.602	25.088	287.6	0.125	5 . 65	96.7	6.0	0.77	5 . 4	0.21	1 .05	0.49	41	216
48	A	12.87	12.86	33.615	25.348	263.0	0.145	5.25	87.6	8. 4	1 .03	8. 9	0. 37	1 . 06	0.51	48	215
50	ISL	12.66	12.65	33 . 620	25.393	258.7	0.150	5.15	85.5	9.2	1 .08	9. 7	0 . 40	1 .03	0. 49	50	
59		11.86	11.85	33.643	25.563	242 . 7	0.172	4 . 67	76.3	13.0	1.26	12.7	0.49	0.81	0 . 37	59	214
70		10.49	10.48	33.686	25.844	Z16 . 1	0.198	3 . 79	60.1					0. 38	0.26	70	213
75	ISL	10.14	10.13	33.681	25.900	210.8	0.208	3.73	58.7	19.2	1.55	18.0	0.36	0.30	0.27	75	
85		9.67	9 .66	33.671	25.971	204 .2	0.229	3 .60	56.1					0.21	0.28	85	212
99		9. 04	9. 03	33.741	26.128	189.5	0.257	3.28	50.4	26. 5	1.85	23.9	0.04	0.03	0.12	99	21 1
100	ISL	9.02	9.01	33.746	26.135	188.8	0.258	3.26	50. 1	26.7	1 . 86	24 .0	0. 04	0 .03	0.12	101	
120		8 . 73	8 . 72	33.835	26.250	178.2	0.295	3 .00	45 . 8	30.2	1 .96	25.8	0.04	0.02	0.12	121	210
125	ISL	8. 68	8.67	33.851	26.271	176.4	0. 304	2.95	45.0	30 . 9	1 . 98	26.1	0. 04	0 . 02	0.13	126	
139		8 .54	8. 53	33.888	26.322	171.8	0.328	2 .84	43.2	32.4	2 .04	26.6	0 . 05	0.02	0.15	140	209
150	ISL	8.41	8.39	33.905	26.355	1 68.S	0.347	2 .87	43.5	33.1	2 . 04	26.8	0.05	0 . 02	0.14	1 51	
170		8.14	8.12	33.932	26.417	163.2	0. 380	2.91	43 . 9	34 . 7	2 .04	27.2	0. 04	0.02	0.12	171	208
199		7. 69	7. 67	33.992	26.531	152.8	0.426	2 .60	38. 8	39. 8	2.18	29.1	0.03	0 . 02	0.10	200	207
200	ISL	7.67	7.65	33.993	26.534	152.4	0. 428	2 .59	38 .6	40.0	2.18	29.2	0.03			201	
229		7.16	7.14	34.028	26.634	143.2	0.471	2.31	34.1	46 .2	2.34	31.3	0. 03			230	206
250	ISL	6.91	6 .89	34.055	26.690	138.2	0 . 500	1 . 97	28 . 9	51.9	2 .49	33 . 3	0.02			251	
269		6 . 75	6.73	34.078	26.730	134.6	0.526	1 .66	24.2	56 .6	2 . 62	34 .9	0.02			271	205
300	ISL	6.65	6.62	34.105	26,765	131.7	0.567	1 .39	20.3	60. 1	2.71	35. 9	0.02			302	
319		6.61	6. 58	34.120	26.782	130.3	0. 592	1 .27	18.5	61 .7	2.75	36.3	0.02			321	204
378		6.16	6.13	34.180	26.889	120.8	0. 666	0.79	11.4	71 . B	2.97	3S . 8	0.02			380	203
400	ISL	6.07	6 .04	34 .204	26.919	118.1	0 .693	0. 66	9 . 5	74 . 5	3.02	39 . 3	0.02			403	
438		5. 95	5.91	34.247	26.969	113.9	0.737	0.49	7.0	78.4	3.08	39.9	0. 01			441	202
500	ISL	5 . 71	5.67	34.320	27.057	106.1	0.805	0 . 30	4 . 3	84 .8	3.18	40. 3	0. 01			503	
513		5 .66	5 . 62	34.336	27.076	104.5	0.819	0.26	3. 7	86 . 1	3.20	41.0	0.01			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	WIND	SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 38 . 9 N	121 1 , 7 W	14/07/95	0012 UTC	3799 *m*	310	10 kn	330 03 *Oti*	1	1013.1 mb	18..5 C	17..5 C	30m 01	5/8	CU

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 UN/ I	P04 UN/ I	N03 UN/ I	N02 UN/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	17.17	17.17	33.023	23.958	394 . 0	0.000	5 . 72	103.7	1 . B	0.33	0. 1	0. 0 0	0. 08	0.02	0	
2		17.17	17.17	33.023	23.958	394. 1	0. 008	5 . 72	103.7	1 .8	0.33	0. 1	0. 00	0.08	0. 02	2	220
2		17.15	17.15	33.023	23.963	393 .6	0.008									2	221
10	ISL	16.80	16.80	33.022	24.045	386 . 1	0.039	5 . 74	103.3	1 .8	0. 33	0.0	0.00	0. 09	0.02	10	
15		16.50	16.50	33.019	24.112	379. 9	0 .058	5 .76	103.1	1 . 8	0.33	0. 0	0 .00	0.10	0.02	1 5	219
20	ISL	16.46	16.46	33.008	24.113	379 . 9	0.077	5 . 76	103.0	1 . 9	0.33	0.0	0.00	0.10	0.02	20	
29		16.35	16.35	32.986	24.121	379 . 4	0.111	5 . 79	103.3	2 . 1	0 . 33	0.0	0 . 00	0.10	0.03	29	218
30	ISL	16.30	16.30	32.983	24.131	378. 5	0.115	5 . SO	103.4	2 . 1	0.33	0.0	0.00	0.10	0.03	30	
44		15.31	15.30	32.970	24.342	358. 8	0.167	5 . 97	104.3	2 .4	0. 33	0.0	0. 00	0.14	0. 05	44	217
50	ISL	14.79	14.78	32.983	24.465	347.2	0.188	6.02	104.1	2 . 5	0.34	a. o	0.00	0.17	0.07	50	
54		14.43	14.42	32.997	24.552	339 . 0	0.202	6 . 04	103.7	2.5	0 . 34	0.0	0. 00	0.21	0. 09	54	216
64		13 .62	13.61	33.042	24.755	319.9	0.235	6.00	101.3	2 . 8	0.42	0. 4	0.07	0.51	0.28	64	215
74		12.91	12.90	33.089	24.933	303 . 1	0.266	5 . 78	96 . 2	4 . 1	0.54	1 .6	a. 38	0.40	0 . 36	74	214
75	ISL	12.97	12.96	33.130	24.953	301.2	0.269	5 . 73	95 . 5	4 .2	0.54	1 . 7	0.37	0. 39	0.35	75	
84		13.60	13.59	33.488	25.104	287.2	0.295	5 .34	90. 4	4 .9	0 . 54	2 .9	0.28	0.31	0.28	84	213
94		13.18	13.17	33.482	25.184	279.8	0.324	5 .23	87 . 7	5 . 6	0.63	4 . 6	0.12	0.27	0.25	94	212
100	ISL	12.79	12.78	33 . 497	25.273	271.4	0 . 340	5 . 09	84 . 7	6.6	0 . 72	6.2	0. 07	0.22	0.22	100	
109		12.12	12.11	33.513	25.415	258.1	0.364	4 . 85	79 . 6	8. 6	0. 87	8. 9	0.03	0.15	0.18	109	211
124		10.98	10.96	33.455 D	25.579	242.6	0. 402									125	210
125	ISL	10.94	10.92	33.459	25.589	241.6	0 . 404	4.51	72.1	11.8	1.10	12.6	0. 02	0.08	0.14	126	
144		10.31	10.29	33.579	25.793	222 .5	0. 448	4.11	64 . 9	16.3	1 .37	16.7	0.01	0. 04	0.10	145	209
150	ISL	10.02	10.00	33.613	25.869	215.4	0.461	3. 97	62 . 3	18.1	1 . 46	18.2	0.01	0.03	0 .08	151	
169		9.20	9.18	33.723	26.090	194.6	0.500	3 . 49	53 . 8	24 . 0	1 .74	22 . 5	0. 00	0.00	0. 04	1 70	208
1 99		8.83	8.81	33.904	26.290	176.0	0.556	2 . 73	41.8	31.2	2 .03	26. 3	0. 01	0.01	0.10	200	207
200	ISL	8 .81	8. 79	33.906	26.295	175.6	0.558	2 . 73	41.8	31.3	2 .03	26. 3	0. 01			201	
230		8. 18	8.16	33.950	26.426	163.5	0. 608	2 . 97	44.8	34 . 1	2 . 03	27.0	0.01			231	206
250	ISL	7.85	7.83	33.987	26.504	156.3	0 . 640	2 - 77	41.5	38.2	2.13	28.5	0 01			251	
271		7 . 56	7.53	34.023	26.575	149.8	0. 672	2 . 46	36 . 6	42 . 9	2.27	30. 3	0.01			272	205
300	ISL	7.25	7 .22	34.047	26 . 638	144.1	0.715	2.17	32 . 1	47.8	2 .39	32 , 0	0.01			302	
319		7.08	7.05	34.057	26.669	141.3	0 . 742	1 . 98	29.1	50.9	2 .46	33.0	o. oi			321	204
381		6.53	6. 50	34.113	26.788	130.6	0.827	1.28	18.6	62 .4	2 . 75	36. 4	0 . 01			383	203
400	ISL	6. 38	6. 34	34.128	26 . 820	127.8	0.851	1.13	16.4	65 .6	2 .82	37. 3	o.oi			402	
432		6.15	6.11	34.151	26.868	123.5	0. 891	0. 93	13.4	70. 4	2 . 91	38. 5	0.00			435	202
500	ISL	5.85	5 . 81	34.199	26.944	116.9	0.973	0 . 64	9.2	77.8	3 .06	40.0	0.00			503	
511		5 . 80	5 .76	34.207	26.957	115.8	0. 986	0.59	8 . 4	79. 0	3.08	40. 3	0.00			514	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 SO

LATITUDE	LONGITUDE	DAY/RO/YR	CAST TIRE	BOTTOH	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ART	TYPE
32 19.1 N	121 42.5 V	15/07/95	0646 UTC	4028 *m*	340	08 kn			1013.9 mb	16.9 C	16.. 4 C				

tEPTH 1	TERP DEG C	POT TERP DEG C	SALINITY	SIGRA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 UR/ I	P04 uR/ I	N03 uR/ I	N02 uR/ 1	CHL-A ug/L	PHAEO ug/L	PRES db	SARP
0 1SL	17.5*	17.56	33.353	24.119	378.7	0.000	5.61	102.7	2 .3	0.29	0 .1	0.00	0.09	0.02	0	
2	17.56	17.56	33.353	24.119	378.8	0.008	5 .61	102.7	2 .3	0.29	0. 1	0. 00	0.09	0.02	2	220
10 ISL	17.55	17.55	33.353	24.121	378.8	0.038	5 .60	102.5	2 .3	0.29	0 .1	0. 00	0.10	0.01	10	
15	17.54	17.54	33.353	24.124	378 .7	0. 057	5 .59	102.3	2.3	0.29	0. 1	0 .00	0.10	0.01	15	219
20 ISL	17.48	17.48	33.352	24.138	377. 6	0 .076	5 .60	102 .3	2.3	0.29	0. 1	0. 00	0.10	0. 01	20	
30	17.15	17.15	33.333	24.202	371 .8	0.113	5.65	102 .6	2.3	0.31	0. 1	0.00	0 .09	0. 02	30	218
44	16.08	16.07	33.243 D	24.381	355.1	0.164	5 .84	103.8	2 .3	0 .34	0 .1	0.00	0.10	0.03	44	217
50 ISL	15.75	15.74	33.210	24.430	350.6	0.185	5 .88	103.8	2.5	0. 34	0 .1	0.00	0.13	0.05	50	
60	15.27	15.26	33.152	24.492	345 .0	0.220	5.92	103.4	2 .8	0.33	0 .1	0. 00	0.20	0.08	60	216
74	14.60	14.59	33.056	24.562	338 .6	0.268	5 .97	102.9	2 .9	0.34	0. 1	0 .00	0.26	0.13	74	215
75 ISL	14.52	14.51	33.045	24.571	337.8	0.271	5.98	102 .8	2.9	0. 34	0 .1	0.01	0.29	0.16	75	
84	13.89	13.88	32.971	24.645	330.9	0.301	6 .03	102.3	3.2	0. 39	0.3	0.06	0 .48	0.39	84	214
94	13.67	13.66	32.986	24.702	325.7	0.334	5 .87	99 .2	3.5	0 .46	0 .7	0.37	0.35	0.39	94	213
100 ISL	13.50	13.49	33.012	24.757	320.7	0.354	5 .83	98.2	3 .9	0.49	1 .1	0.69	0.27	0.25	100	
103	13.42	13.41	33.027	24.785	318.1	0.363	5.82	97.8	4 .1	0.51	1 .3	0.84	0.23	0.17	103	212
in	13.16	13.14	33.061	24.863	310.9	0 .398	5.81	97.2	4 .9	0. 57	2 .3	0.92	0.10	0.09	1 14	211
124	12.98	12.96	33.088 D	24.920	305 .7	0.429									125	210
125 ISL	12.95	12.93	33.091	24.928	304 .9	0.432	5 .77	96.1	6 .1	0.65	4 .0	0.54	0.07	0 .07	126	
13!	12.52	12.50	33.138	25.048	293.7	0.471	5 .68	93.8	7 .4	0.74	5 .9	0.01	0.04	0. 05	139	209
150 ISL	12.51	12.49	33.202	25.100	289.1	0. 506	5.61	92 .6	7 .7	0 .76	6 .5	0 .01	0.04	0.05	1 51	
164	12.49	12.47	33.305	25.184	281.5	0.545	5 .44	89 .8	8 .3	0.81	7 .3	0.01	0 .03	0.06	165	208
193	10.99	10.97	33.603	25.694	233.3	0.620	4.45	71.3	13.3	1.18	13.7	0.01	0 .03	0.06	194	207
200 ISL	10.62	10.60	33.635	25.7S4	224 .8	0. 636	4.28	68.0	15.0	1.27	15.3	0.01			201	
228	9.34	9.31	33.722	26 .068	198.0	0. 695	3.82	59.1	22 .0	1 .60	20 .7	0.00			229	206
250 ISL	8.75	8. 72	33.813	26.232	182.5	0 .737	3.68	56.2	26.0	1 .73	22 .8	0. 00			251	
269	8.41	8. 38	33.886	26.342	172.3	0 .771	3. 58	54 .3	29 .1	1 .81	24 .1	0. 00			270	205
300 ISL	8.03	8.00	33.965	26.461	161.3	0.823	3.11	46 .8	34.9	2 .01	26.8	0. 00			302	
318	7.85	7.82	33.999	26.515	156.5	0.851	2 .77	41.5	38 .8	2.14	28 .5	0.00			320	204
377	6.87	6.83	34.094	26.728	136.6	0.938	1 .60	23.4	56.3	2 .63	34 .6	0.00			379	203
(00 ISL	6.68	6 .64	34.110	26.766	133.1	0.969	1 .39	20.3	60 .1	2 .75	35 .8	0.00			402	
437	6.47	6. 43	34.131	26.811	129.3	1.017	1.16	16.8	64.7	2 .88	37 .1	0.00			440	202
500 ISL	6.17	6.13	34.203	26.907	120.8	1 .096	0.73	10.5	73 .1	3.01	39.0	0. 00			503	
510	6.12	6.07	34.215	26.923	119.4	1.108	0.66	9 .5	74 .4	3.03	39 .3	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 90

LATITUDE	LONGITUDE	DAY/RO/YR	CAST TIRE	BOTTOR	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ART	TYPE
31 59.2 N	122 23.6 W	15/07/95	1249 UTC	4116 in	350	07 kn	320 03 06	2	1014.0 mb	17..0 C	16 .3 C			8/8	ST

DEPTH in	TERP DEG C	POT TERP DEG C	SALINITY	SIGRA THETA	SVA	DYN HT	OXYGEN • L/I	OXY PCT	SI03 uR/ L	P04 uR/ t	N03 UR/ I	N02 uR/ I	CHL-A ug/L	PHAEO ug/L	PRES db	SARP
0 ISL	17.80	17.80	33.250	23.982	391 .8	0.000	5 .57	102.4	2 .3	0.31	0 .1	0.00	0.09	0.02	0	
2	17.80	17.80	33.250	23.982	391 .8	0.008	5 .57	102.4	2 .3	0.31	0 .1	0.00	0.09	0.02	2	220
10 ISL	17.80	17.80	33.250	23.982	392 .1	0. 039	5 .56	102.2	2 .3	0.30	0 .1	0.00	0.09	0.02	10	
15	17.80	17.80	33.250	23.982	392 .2	0.059	5 .56	102.2	2 .3	0.30	0 .1	0. 00	0.09	0.02	1 5	219
20 ISL	17.80	17.80	33.262	23.992	391.5	0.078	5.56	102.2	2.2	0.30	0.1	0 .00	0.09	0 .02	20	
30 ISL	17.79	17.78	33.286	24.013	389. 8	0.117	5.57	102.4	2.1	0.31	0. 1	0 .00	0.08	0 .02	30	
31	17.79	17.78	33.288	24.015	389. 7	0.121	5.57	102.4	2 .1	0.31	0 .1	0.00	0.08	0. 02	31	218
44	16.57	16.56	33.250	24.274	365 .3	0.170	5 .77	103.5	2.2	0 .30	0. 1	0.00	0.09	0.03	44	217
50 ISL	16.56	16.55	33.299	24.314	361.7	0.192	5 .76	103.4	2 .2	0.31	0. 1	0 .00	0.10	0.03	50	
59	16.55	16.54	33.327	24.339	359.7	0.225	5 .74	103.0	2 .2	0 .33	0 .1	0.00	0.11	0.04	59	216
74	16.33	16.32	33.369 D	24 .422	352.2	0.278									74	215
75 ISL	16.32	16.31	33.369	24.424	352 .0	0.282	5 .75	102.7	2 .2	0 .32	0. 1	0.00	0.13	0.05	75	
84	16.24	16.23	33.366	24 .440	350.8	0.313	5 .76	102.7	2 .3	0.30	0 .1	0.00	0.15	0.06	84	214
94	15.72	15.71	33.410	24.592	336.6	0. 348	5 .82	102.8	2 .4	0.29	0. 1	0.00	0.18	0.08	94	213
100 ISL	15.52	15.50	33.428	24.650	331 .2	0. 368	5 .83	102.5	2 .5	0.28	0. 1	0.00	0.20	0.09	100	
104	15.38	15.36	33.442	24.692	327.3	0.381	5 .83	102.3	2 .6	0.28	0 .1	0. 00	0.21	0.10	104	212
113	14.82	14.80	33.508	24.865	311.0	0.410	5 .68	98 .6	2 .8	0.33	0.2	0. 00	0. 35	0.26	1 13	211
124	13.52	13.50	33.497	25.128	286.0	0 .442	5.28	89 .2	4.7	0.55	3.2	0.25	0. 36	0.29	124	210
125 ISL	13.44	13.42	33.500	25.147	284.3	0,445	5.25	88 .5	4.9	0.57	3 .5	0.24	0.35	0.29	126	
139	12.51	12.49	33.544	25.365	263 .7	0.484	4 .92	81.4	7.3	0 .79	7 .7	0.04	0.18	0 .20	140	209
150 ISL	11.75	11.73	33.533	25.501	250.9	0.512	4 .66	75.9	9 .8	0 .98	10.7	0.03	0.11	0.15	151	
165	10.77	10.75	33.525	25.672	234.7	0. 548	4 .34	69 .2	13.6	1.23	14.5	0.01	0 .07	0.10	166	208
195	9.16	9.14	33.702	26 .080	196.0	0.613	3 .90	60 .1	21.6	1 .60	20 .6	0.01	0.01	0.03	196	207
200 ISL	8. 99	8 .97	33.728	26.127	191.5	0.623	3 .86	59.2	22.7	1 .64	21.3	0. 01			201	
228	8. 34	8 .32	33.848	26.322	173.3	0. 674	3 .67	55.5	28 .3	1 .80	24.0	0. 01			229	206
250 ISL	8.05	8 .02	33.902	26.408	165.5	0.711	3.46	52 .0	31.7	1 .90	25.6	0. 00			251	
268	7.87	7 .84	33.930	26.457	161.1	0.740	3.29	49.3	34 .2	1 .98	26.7	0. 00			269	205
300 ISL	7.50	7.47	33.969	26.541	153.4	0.791	3 .06	45.4	39 .0	2.10	28 .4	0 .00			302	
318	7.29	7.26	33.985	26.583	149.6	0.818	2 .90	42 .9	42 .1	2.18	29 .5	0. 00			320	204
377	6.59	6.56	34.033	26.717	137.3	0.903	1 .88	27.3	55.8	2.56	34 .6	0.00			379	203
400 ISL	6.36	6 .32	34.044	26.756	133.8	0.934	1 .64	23 .7	60 .3	2 .66	36 .0	0.00			402	
439	6.02	5 .98	34.069	26.819	128.0	0.985	1 .32	18.9	67 .4	2 .79	37 .9	0.00			442	202
500 ISL	5 .67	5 .63	34.159	26.934	117.6	1 .060	0. 73	10.4	78.3	3.02	40.2	0.00			503	
512	5 .60	5.56	34.177	26.957	115.5	1 .074	0. 61	8 .7	SO.5	3 .06	40 .6	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 100

LATITUDE	LONGITUDE	OAY/NO/YR	CAST TIKE	aOTTON	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
31 3SI.6 N	123 4.3 U	15/07/95	1846 UTC	4126 *m*	330 07 kn	340 04 07'	2	1015.4 mb	18..0 C	17.3 C	34m 01	8/8	ST

DEPTH m	TENP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	D YN HT	OXYGEN ml/I	OXY PCT	SI03 UN/t	P04 UN/I	N03 UN/I	N02 UN/L	CHL-A ug/I	PHAEO ug/l	PRES db	SANP
0 ISL	18.19	18.19	33.469	24.054	384.9	0.000	5.52	102.4	2.8	0.29	0.3	0.00	0.07	0.02	0	
2 A	18.19	18.19	33.469	24.054	384.9	0.008	5.52	102.4	2.8	0.29	0.3	0.00	0.07	0.02	2	220
2	18.19	18.19	33.466	24.052	385.1	0.008									2	221
10 ISL	18.17	18.17	33.468	24.059	384.8	0.038	5.52	102.3	2.8	0.29	0.3	0.00	0.07	0.02	10	
20 ISL	18.15	18.15	33.467	24.063	384.7	0.077	5.53	102.5	2.8	0.29	0.3	0.00	0.08	0.02	20	
21 A	18.15	18.15	33.467	24.064	384.7	0.081	5.53	102.5	2.8	0.29	0.3	0.00	0.08	0.02	21	219
30 ISL	17.96	17.95	33.480	24.120	379.6	0.115	5.58	103.0	2.8	0.28	0.3	0.00	0.08	0.02	30	
47 A	17.42	17.41	33.518	24.280	364.9	0.178	5.69	104.0	2.8	0.27	0.2	0.00	0.09	0.02	47	218
50 ISL	17.31	17.30	33.525	24.312	362.0	0.189	5.71	104.1	2.8	0.27	0.2	0.00	0.09	0.02	50	
69 A	16.50	16.49	33.583	24.547	340.2	0.256	5.81	104.3	2.9	0.26	0.2	0.00	0.13	0.04	69	217
75 ISL	16.17	16.16	33.604	24.639	331.6	0.276	5.30	103.5	2.9	0.26	0.2	0.00	0.14	0.05	75	
90 A	15.53	15.52	33.671	24.835	313.3	0.325	5.77	101.7	2.9	0.25	0.2	0.00	0.16	0.09	90	216
100 ISL	15.46	15.44	33.730	24.896	307.8	0.356	5.71	100.5	3.0	0.25	0.2	0.00	0.17	0.11	100	
103	15.46	15.44	33.749	24.911	306.5	0.365	5.69	100.2	3.0	0.25	0.2	0.00	0.17	0.12	103	215
114	15.29	15.27	33.823 D	25.006	297.8	0.398									114	214
125 A	15.01	14.99	33.872	25.105	288.6	0.430	5.36	93.6	3.8	0.36	1.4	0.20	0.25	0.21	126	213
133	14.73	14.71	33.865	25.160	283.6	0.453	5.30	92.0	4.0	0.40	2.1	0.15	0.22	0.21	134	212
141	14.27	14.25	33.811	25.217	278.3	0.476	5.27	90.6	4.7	0.46	3.0	0.08	0.19	0.17	142	211
150	13.39	13.37	33.701	25.313	269.2	0.500	5.22	88.1	5.7	0.57	4.6	0.03	0.14	0.15	151	210
159	12.72	12.70	33.680	25.430	258.1	0.524	5.05	84.0	7.0	0.70	6.7	0.02	0.11	0.13	160	209
174	11.63	11.61	33.637	25.604	241.6	0.562	4.82	78.3	9.8	0.91	10.1	0.01	0.07	0.09	175	208
194	10.08	10.06	33.613	25.860	217.3	0.607	4.15	65.2	16.8	1.38	16.9	0.01	0.03	0.04	195	207
200 ISL	9.76	9.74	33.629	25.926	211.0	0.620	4.00	62.4	18.6	1.48	18.5	0.01	0.03	0.04	201	
228	8.78	8.76	33.751	26.179	187.1	0.676	3.45	52.7	26.1	1.82	23.8	0.00	0.01	0.02	229	206
250 ISL	8.37	8.34	33.853	26.322	173.8	0.716	3.14	47.5	30.8	1.97	26.1	0.00			251	
268	8.15	8.12	33.924	26.411	165.6	0.746	2.96	44.6	34.1	2.04	27.3	0.00			269	205
300 ISL	7.71	7.68	33.982	26.521	155.4	0.798	2.81	41.9	38.9	2.14	28.8	0.00			302	
319	7.46	7.43	33.998	26.570	151.0	0.827	2.72	40.4	41.9	2.20	29.7	0.00			321	204
378	6.76	6.73	34.051	26.709	138.3	0.912	1.83	26.7	55.6	2.55	34.5	0.00			380	203
400 ISL	6,53	6.49	34.064	26.750	134.5	0.942	1.59	23.1	59.8	2.66	35.9	0.00			402	
438	6.19	6.15	34.087	26.812	128.9	0.992	1.25	18.0	66.4	2.81	37.8	0.00			441	202
500 ISL	5.79	5.75	34.141	26.906	120.5	1.069	0.81	11.6	75.9	2.98	39.9	0.00			503	
516	5.69	5.65	34.155	26.929	118.4	1.089	0.70	10.0	78.3	3.03	40.4	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 87 110

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
31 19.0 N	123 44.2 u	16/07/95	0319 UTC	4102 m	310 06 kn	340 07 07'	2	1014.0 mb	20.2 C	17.9 C	30m 01	a/8	ST

DEPTH m	TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN in (, / L	OXY PCT	SI03 UN/L	P04 uN/I	N03 UN/I	N02 UN/I	CHL-A ug/I	PHAEO ug/L	PRES db	SANP
0 ISL	18.44	18.44	33.500	24.016	388.5	0.000	5.53	103.0	2.5	0.28	0.0	0.00	0.07	0.02	0	
1	18.44	18.44	33.500	24.016	388.5	0.004	5.53	103.0	2.5	0.28	0.0	0.00	0.07	0.02	1	220
1	18.44	18.44	33.500	24.016	388.5	0.004									1	221
10 ISL	18.39	18.39	33.502	24.031	387.5	0.039	5.53	102.9	2.5	0.28	0.0	0.00	0.09	0.02	10	
19	18.33	18.33	33.503	24.047	386.3	0.074	5.52	102.6	2.5	0.28	0.0	0.00	0.11	0.02	19	219
20 ISL	18.27	18.27	33.503	24.062	384.9	0 077	5.53	102.7	2.5	0.28	0.0	0.00	0.11	0.02	20	
30 ISL	17.71	17.70	33.498	24.195	372.5	0.115	5.64	103.6	2.5	0.28	0.0	0.00	0.10	0.02	30	
39	17.18	17.17	33.496	24.320	360.9	0.148	5.74	104.4	2.5	0.28	0.0	0.00	0.09	0.02	39	218
50 ISL	17.07	17.06	33.494	24.345	358.8	0..188	5.75	104.3	2.6	0.23	0.0	0.00	0.09	0.02	50	
60	16.97	16.96	33.492	24.367	357.0	0.224	5.75	104,1	2.6	0.28	0.0	0.00	0.09	0.02	60	217
75 ISL	16.88	16.87	33.488	24.386	355.7	0.277	5.74	103.8	2.1	0.23	0.1	0.00	0.10	0.03	75	
80	16.84	16.83	33.489	24.396	354.9	0.295	5.74	103.7	2.0	0.23	0.1	0.00	0.11	0.03	80	216
99	16.48	16.46	33.519	24.504	345.3	0.361	5.76	103,3	2.1	0.23	0.1	0.00	0.17	0.04	99	215
100 ISL	16.44	16.42	33.519	24.513	344.4	0.365	5.77	103.4	2.1	0.28	0.1	0.00	0.17	0.04	100	
108	16.10	16.08	33.532	24.601	336.3	0.392	5.80	103.3	2.5	0.28	0.1	0.00	0.17	0.07	108	214
119	15.83	15.81	33.607	24.720	325.3	0.429	5.74	101.7	2.5	0.27	0.1	0.00	0.18	0.11	119	213
125 ISL	15.80	15.78	33.678	24.781	319.6	0.448	5.70	101.0	2.4	0.28	0.1	0.00	0.21	0.16	125	
129	15.78	15.76	33.723	24.820	316.0	0.461	5.67	100.4	2.4	0.28	0.1	0.00	0.24	0.20	130	212
138	15.55	15.53	33.774	24.911	307.6	0.489	5.59	98.6	2.3	0.31	0.1	0.06	0.29	0.27	139	211
148	14.94	14.92	33.749	25.026	296.8	0.519	5.46	95.1	3.3	0.37	**1.1**	0.14	0.22	0.20	149	210
150 ISL	14.81	14.79	33.748	25.054	294.2	0.525	5.43	94.3	3.5	0.39	1.4	0.13	0.21	0.19	151	
159	14.21	14.19	33.746	25.180	282.4	0.551	5.28	90.6	4.2	0.47	2.9	0.07	0.16	0.17	160	209
174	13.28	13.26	33.702	25.337	267.6	0.592	5.10	85.8	5.9	0.64	5.6	0.02	0.10	0.13	175	208
195	11.56	11.54	33.621	25.605	242.0	0.645	4.70	76.2	10.1	0.93	10.9	0.01	0.05	0.08	196	207
200 ISL	11.21	11.19	33.619	25.667	236.1	0.657	4.60	74.1	11.4	1.06	12.2	0.01			201	
228	9.62	9.59	33.671	25.982	206.2	0.719	4.06	63.1	19.0	1.48	18.8	0.00			229	206
250 ISL	8.92	8.89	33.749	26.156	189.8	0.763	3.62	55.5	24.4	1.73	22.6	0.00			251	
267	8.57	8.54	33.815	26.262	179.9	0.794	3.31	50.3	28.3	1.83	24.9	0.00			268	205
300 ISL	8.07	a.04	33.930	26.428	164.5	0.851	2.95	44.4	34.5	2.05	27.5	0.00			302	
317	7.88	7.85	33.977	26.493	158.5	0.879	2.81	42.1	37.4	2.11	28.4	0.00			319	204
378	7.01	6.97	34.030	26.658	143.2	0.971	2.22	32.6	49.3	2.39	32.5	0.00			380	203
400 ISL	6.77	6.73	34.043	26.701	139.3	1.002	1.97	28.8	53.5	2.49	33.9	0.00			402	
436	6.42	6.38	34.062	26.763	133.7	1.051	1.56	22.6	60.3	2.66	36.1	0.00			439	202
500 ISL	5.81	5.77	34.110	26.879	123.0	1.133	1.00	14.3	73.0	2.96	39.3	0.00			503	
512	5.70	5.66	34.119	26.899	121,1	1.148	0.90	12.8	75.4	3.02	39.9	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 28

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TINE	BOTTOB	HIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
33 28.9 N	117 45.9 y	13/07/95	1146 UTC	63 in	IIO 10 kn			1012.8 mb	16..5 C	16.1 C			

DEPTH m	TEBP DES C	POT TEBP DES C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UB/L	P04 UN/I	N03 UN/L	N02 uB/L	CHL-A ug/l	PHAEO ug/L	PRES db	SABP
0 ISL	17.06	17.06	33.417	24.286	362.7	0.000	6.35	115.2	5.9	0.33	0.2	0.01	2.21	0.57	0	
1	17.06	17.06	33.417	24.286	362.8	0.004	6.35	115.2	5.9	0.33	0.2	0.01	2.21	0.57	1	207
S	15.35	15.35	33.452	24.703	323.2	0.017	6.14	107.7	6.2	0.42	0.2	0.02	4.47	0.48	5	206
10	11.86	11.86	33.476	25.433	253.9	0.032	4.85	79.1	11.7	1.07	9.6	0.31	1.12	0.50	10	205
20	10.95	10.95	33.524	25.636	234.7	0.056	4.35	69.6	13.9	1.29	14.5	0.14	0.38	0.17	20	204
30	10.46	10.46	33.604	25.784	220.8	0.079	3.87	61.3	18.0	1.49	17.5	0.25	0.73	0.36	30	203
41	10.18	10.18	33.650	25.869	213.1	0.103	3.53	55.6	20.6	1.59	19.7	0.21	0.46	0.33	41	202
50 ISL	10.08	10.07	33.665	25.897	210.5	0.122	3.45	54.2	21.2	1.68	20.2	0.19	0.34	0.28	50	
S1	10.07	10.06	33.667	25.901	210.2	0.124	3.44	54.1	21.3	1.69	20.2	0.19	0.33	0.28	51	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 30

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	BOTTOB	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
33 25.1 «	117 54.5 y	13/07/95	0904 UTC	610 m	130 04 kn			1012.5 mb	18.0 C	17.1 C			

DEPTH m	TEBP DEG C	POT TEBP DEG C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 UB/L	P04 uN/L	N03 ufl/L	N02 uB/L	CHL-A ug/l	PHAEO ug/L	PRES db	SABP
0 ISL	18.87	18.87	33.466	23.883	401.2	0.000	5.65	106.1	3.9	0.29	0.2	0.00	0.13	0.05	0	
1	18.87	18.87	33.466	23.883	401.2	0.004	5.65	106.1	3.9	0.29	0.2	0.00	0.13	0.05	1	220
10 ISL	16.78	16.78	33.370	24.316	360.2	0.038	6.09	109.8	3.7	0.35	0.2	0.01	0.20	0.07	10	
15	15.18	15.18	33.338	24.653	328.3	0.055	6.35	110.9	3.6	0.38	0.2	0.02	0.26	0.08	15	219
20 ISL	14.41	14.41	33.355	24.832	311.4	0.071	6.30	108.3	4.2	0.47	1.0	0.10	0.31	0.11	20	
30	13.36	13.36	33.410	25.091	286.9	0.101	5.93	99.8	6.2	0.70	3.6	0.24	0.43	0.21	30	218
(5	12.20	12.19	33.467	25.362	261.4	0.143	5.13	84.3	10.4	1.04	10.1	0.17	0.67	0.42	45	217
50 ISL	11.65	11.64	33.482	25.477	250.6	0.155	4.78	77.6	11.8	1.16	12.3	0.09	0.48	0.30	50	
54	11.25	11.24	33.497	25.562	242.6	0.165	4.54	73.1	12.7	1.23	13.7	0.03	0.32	0.20	54	216
65	10.79	10.78	33.548	25.684	231.2	0.191	4.35	69.4	14.0	1.26	14.7	0.01	0.33	0.25	65	215
75	10.23	10.22	33.619	25.837	216.9	0.214	3.94	62.1	17.7	1.46	17.6	0.01	0.28	0.23	75	214
85	9.89	9.88	33.714	25.968	204.5	0.235	3.60	56.4	21.1	1.64	20.2	0.00	0.05	0.09	85	213
94	9.92	9.91	33.799	26.030	198.9	0.253	3.08	48.3	24.0	1.80	22.3	0.00	0.03	0.07	94	212
100 ISL	10.03	10.02	33.874	26.070	195.2	0.265	2.58	40.6	26.4	1.95	23.9	0.00	0.02	0.08	101	
109	10.17	10.16	33.974	26.125	190.3	0.282	1.94	30.6	29.6	2.14	25.8	0.00	0.02	0.09	110	211
124	10.04	10.03	34.020	26.183	185.1	0.310	1.90	29.9	30.8	2.19	26.3	0.00	0.01	0.09	125	210
125 ISL	10.03	10.02	34.024	26.188	184.7	0.312	1.89	29.7	30.9	2.19	26.4	0.00	0.01	0.09	126	
144	9.92	9.90	34.094	26.261	178.1	0.347	1.70	26.7	32.6	2.26	27.3	0.00	0.01	0.09	145	209
150 ISL	9.89	9.87	34.113	26.281	176.3	0.357	1.67	26.2	33.0	2.28	27.5	0.00	0.01	0.09	151	
168	9.78	9.76	34.163	26.339	171.2	0.388	1.61	25.2	34.1	2.31	27.9	0.00	0.01	0.08	169	208
198	9.59	9.57	34.213	26.410	165.0	0.439	1.61	25.1	35.3	2.34	28.3	0.04	0.01	0.07	199	207
200 ISL	9.59	9.57	34.218	26.414	164.7	0.442	1.59	24.8	35.5	2.35	28.4	0.04			201	
228	9.52	9.49	34.284	26.478	159.3	0.488	1.28	19.9	38.5	2.46	29.4	0.08			229	206
250 ISL	9.30	9.27	34.303	26.529	154.8	0.522	1.17	18.1	40.8	2.54	30.0	0.06			251	
26S	9.09	9.06	34.310	26.568	151.3	0.550	1.10	17.0	42.7	2.60	30.5	0.03			270	205
300 ISL	8.82	8.79	34.338	26.634	145.6	0.597	0.85	13.0	46.4	2.69	31.4	0.01			302	
J18	8.66	8.63	34.346	26.665	142.9	0.623	0.73	11.2	48.5	2.73	32.0	0.00			320	204
376	7.82	7.78	34.276	26.738	136.5	0.704	0.87	13.0	53.9	2.76	33.8	0.00			378	203
400 ISL	7.61	7.57	34.283	26.774	133.3	0.736	0.77	11.5	56.8	2.82	34.5	0.00			403	
436	7.36	7.32	34.304	26.826	128.7	0.784	0.57	8.5	61.3	2.93	35.6	0.00			439	202
500 ISL	6.89	6.84	34.302	26.891	123.2	0.864	0.48	7.0	67.5	3.01	37.3	0.00			503	
511	6.81	6.76	34.302	26.902	122.3	0.878	0.46	6.7	68.6	3.02	37.6	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 35

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	BOTTOB	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
33 11.2 N	118 14.8 W	13/07/95	0507 UTC	274 m	260 10 kn			1012.8 mb	17..9 C	16,8 C			

DEPTH m	TEBP DEG C	POT TEBP DEG C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UB/I	P04 UB/L	N03 uB/I	N02 UB/I	CHL-A ug/I	PHAEO ug/l	PRES db	SABP
0 ISL	18.05	18.05	33.321	23.975	392.4	0.000	5.77	106.6	3.3	0.34	0.2	0.00	0.15	0.04	0	
1	18.05	18.05	33.321	23.975	392.4	0.004	5.77	106.6	3.3	0.34	0.2	0.00	0.15	0.04	1	216
10	17.19	17.19	33.411	24.251	366.4	0.038	5.99	108.9	3.3	0.34	0.2	0.01	0.26	0.08	10	215
20	14.24	14.24	33.402	24.904	304.5	0.072	6.17	105.8	3.5	0.52	2.0	0.11	0.52	0.22	20	214
29	13.61	13.61	33.430	25.056	290.3	0.098	6.08	102.9	3.6	0.63	3.2	0.18	0.70	0.26	29	213
30 ISL	13.54	13.54	33.425	25.066	289.3	0.101	6.07	102.6	3.9	0.64	3.4	0.20	0.69	0.27	30	
40	12.95	12.94	33.379	25.149	281.7	0.130	5.82	97.1	6.8	0.75	5.3	0.43	0.59	0.37	40	212
49	12.60	12.59	33.435	25.261	271.2	0.155	5.33	88.3	8.1	0.85	7.2	0.46	0.75	0.51	49	211
50 ISL	12.56	12.55	33.439	25.272	270.2	0.157	5.30	87.8	8.3	0.86	7.5	0.42	0.72	0.50	50	
60	12.00	11.99	33.466	25.400	258.3	0.184	4.96	81.2	10.4	1.02	10.6	0.05	0.30	0.27	60	210
70	11.02	11.01	33.506	25.611	238.3	0.209	4.42	70.8	13.7	1.27	14.4	0.03	0.11	0.11	70	209
75 ISL	10.80	10.79	33.527	25.666	233.2	0.220	4.31	68.8	14.4	1.31	15.1	0.03	0.09	0.10	75	
85	10.54	10.53	33.577	25.751	225.3	0.243	4.16	66.0	15.7	1.37	16.1	0.02	0.06	0.08	85	208
99	10.00	9.99	33.687	25.929	208.6	0.274	3.63	57.0	20.2	1.62	20.0	0.01	0.02	0.07	99	207
100 ISL	9.98	9.97	33.693	25.937	207.8	0.276	3.60	56.5	20.4	1.63	20.2	0.01	0.02	0.07	100	
120	9.68	9.67	33.769	26.047	197.8	0.316	3.25	50.7	23.7	1.79	22.4	0.01	0.01	0.06	121	206
125 ISL	9.50	9.49	33.781	26.086	194.2	0.326	3.27	50.8	24.6	1.81	22.8	0.01	0.01	0.06	126	
141	8.90	8.88	33.817	26.210	182.5	0.356	3.33	51.0	27.3	1.85	24.0	0.01	0.00	0.06	142	205
150 ISL	8.62	8.60	33.831	26.265	177.4	0.373	3.30	50.3	28.5	1.88	24.5	0.01	0.00	0.05	151	
170	8.33	8.31	33.904	26.367	168.0	0.407	3.22	48.7	31.6	1.94	25.8	0.01	0.00	0.04	171	204
197	8.96	8.94	34.177	26.484	157.8	0.451	1.81	27.8	37.9	2.35	29.0	0.02	0.00	0.04	198	203
200 ISL	8.95	8.93	34.180	26.488	157.5	0.456	1.80	27.7	38.1	2.35	29.0	0.02			201	
232	8.88	8.86	34.195	26.511	155.9	0.506	1.69	25.9	39.4	2.40	29.4	0.03			233	202
250 ISL	8.68	8.65	34.219	26.561	151.4	0.534	1.48	22.6	42.5	2.49	30.4	0.03			251	
273	8.42	8.39	34.251	26.627	145.5	0.568	1.21	18.4	46.5	2.60	31.7	0.02			275	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	MIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
33 10.8 N	118 21.5 W	13/07/95	0221 UTC	1161 n	280	14 kn	280 03 06	0	1012.4 mb	20.2 C	18..0 C	15m	02		0/8

DEPTH m		TEMP DEC C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/t	OXY PCT	SI03 uM/I	P04 UN/I	N03 UN/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	18.35	18.35	33.435	23.989	391.1	0.000	5.74	106.7	3.2	0.30	0.1	0.00	0.14	0.04	0	
1		18.34	18.34	33.431	23.988	391.2	0.004									1	221
1		18.35	18.35	33.435	23.989	391.1	0.004	5.74	106.7	3.2	0.30	0.1	0.00	0.14	0.04	1	220
10	ISL	17.88	17.88	33.424	24.096	381.2	0.039	5.81	107.1	2.8	0.31	0.1	0.00	0.21	0.05	10	
14		17.42	17.42	33.417	24.202	371.3	0.054	5.87	107.2	2.6	0.32	0.1	0.00	0.26	0.06	14	219
20	ISL	16.21	16.21	33.418	24.485	344.5	0.075	6.05	107.9	2.7	0.37	0.5	0.03	0.34	0.09	20	
30		14.16	14.16	33.456	24.962	299.2	0.107	6.22	106.5	2.9	0.51	1.8	0.12	0.47	0.18	30	218
44		13.09	13.08	33.478	25.198	277.1	0.148	5.66	94.8	6.1	0.84	5.5	0.36	0.55	0.47	44	217
50	ISL	12.63	12.62	33.477	25.288	268.7	0.164	5.38	89.2	8.2	0.93	7.5	0.65	0.54	0.44	50	
55		12.31	12.30	33.474	25.347	263.2	0.177	5.17	85.2	9.7	0.98	9.0	0.76	0.54	0.38	55	216
64		12.02	12.01	33.467	25.397	258.6	0.201	4.92	80.5	10.3	1.03	10.6	0.12	0.41	0.30	64	215
74		11.15	11.14	33.479	25.566	242.6	0.226	4.51	72.5	13.0	1.23	13.9	0.04	0.16	0.18	74	214
75	ISL	11.11	11.10	33.486	25.579	241.5	0.228	4.48	71.9	13.3	1.25	14.2	0.04	0.15	0.17	75	
85		10.87	10.86	33.557	25.677	232.3	0.252	4.28	68.4	15.4	1.36	15.9	0.03	0.08	0.09	85	213
95		10.64	10.63	33.570	25.728	227.7	0.275	4.19	66.6	15.5	1.34	15.8	0.03	0.06	0.09	95	212
100	ISL	10.47	10.46	33.589	25.772	223.6	0.286	4.09	64.8	16.4	1.39	16.6	0.03	0.05	0.09	100	
107		10.21	10.20	33.629	25.848	216.5	0.302	3.90	61.5	18.2	1.49	18.1	0.02	0.04	0.08	108	211
123		9.60	9.59	33.764	26.056	197.0	0.335	3.30	51.3	23.7	1.76	22.3	0.01	0.02	0.06	124	210
125	ISL	9.57	9.56	33.778	26.072	195.5	0.339	3.24	50.4	24.2	1.78	22.6	0.01	0.02	0.06	126	
144		9 33	9.31	33.874	26.187	184.9	0.375	2.89	44.7	27.5	1.93	24.5	0.01	0.01	0.06	145	209
150	ISL	9.16	9.14	33.884	26.222	181.7	0.386	2.91	44.9	28.3	1.94	24.8	0.01	0.01	0.06	151	
174		8.50	8.48	33.912	26.347	170.0	0.428	3.04	46.2	31.4	1.98	26.0	0.02	0.00	0.05	175	208
200		8.30	8.28	34.000	26.447	161.0	0.471	2.61	39.5	35.9	2.13	27.9	0.02	0.00	0.05	201	207
228		8.04	8.02	34.058	26.532	153.4	0.515	2.29	34.5	40.6	2.27	29.6	0.03			229	206
250	ISL	7.92	7.89	34.101	26.583	148.8	0.548	2.01	30.2	43.7	2.38	30.7	0.03			251	
270		7.83	7.80	34.136	26.625	145.2	0.578	1.75	26.2	46.4	2.47	31.6	0.02			272	205
300	ISL	7.66	7.63	34.176	26.681	140.3	0.621	1.43	21.3	50.8	2.60	32.9	0.01			302	
321		7.53	7.50	34.197	26.717	137.3	0.650	1.23	18.3	53.9	2.68	33.8	0.01			323	204
382		7.03	6.99	34.237	26.819	128.2	0.731	0.80	11.8	62.2	2.88	36.1	0.01			384	203
400	ISL	6.88	6.84	34.240	26.842	126.2	0.754	0.74	10.9	64.4	2.92	36.7	0.01			403	
432		6.64	6.60	34.243	26.877	123.2	0.794	0.67	9.8	67.9	2.98	37.6	0.00			435	202
500	ISL	6.38	6.33	34.276	26.938	118.2	0.876	0.49	7.1	73.2	3.07	38.7	0.00			503	
511		6.34	6.29	34.282	26.948	117.3	0.889	0.46	6,7	74.1	3.09	38.9	0.00			515	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 45

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 56.3 N	118 55.8 V	12/07/95	2013 UTC	1699 a	300	14 kn	290 05 06	0	1015,4 nib	18.2 C	16.3 C	14m	03		0/8

DEPTH in		TENP 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 UN/i	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0	ISL	16.45	16.45	33.369	24.392	352.7	0.000	5.99	107.3	1.8	0.38	0.2	0.00	0.30	0.07	0	
1		16.45	16.45	33.369	24.392	352.7	0.004	5.99	107.3	i.8	0.38	0.2	0.00	0.30	0.07	1	220
2		16.44	16.44	33.369	24.394	352.6	0.007									2	221
10		16.38	16.38	33.367	24.406	351.6	0.035	6.00	107.3	1.9	0.54 U	0.2	0.00	0.30	0.07	10	219
20		15.68	15.68	33.339	24.544	338.9	0.070	6.04	106.5	2.1	0.42	0.4	0.02	0.37	0.10	20	218
30		12.91	12.91	33.501	25.251	271.7	0.100	5.66	94.4	6.2	0.85	6.2	0.34	0.88	0.45	30	217
40		12.30	12.29	33.489	25.360	261.5	0.127	5.33	87.8	8.4	1.09	8.3	0.58	1.00	0.50	40	216
50		11.86	11.85	33.503	25.455	252.8	0.153	5.02	81.9	10.8	1.15	10.6	0.84	0.60	0.32	50	215
60		11.49	11.48	33.543	25.554	243.5	0.177	4.68	75.8	13,4	1.29	13.6	0.68	0.24	0.17	60	214
70		11.09	11.08	33.556	25.637	235.8	0.201	4.28	68.7	15.4	1.40	16.1	0.05	0.18	0.17	70	213
75	ISL	10.70	10.69	33.566	25.714	228.6	0.213	4.16	66.2	16.3	1.44	17.0	0.04	0.13	0.14	75	
85		9.92	9.91	33.603	25.877	213.2	0.235	4.00	62.6	18.2	1.51	18.4	0.03	0.04	0.08	85	212
100		9.36	9.35	33.695	26.041	197.9	0.266	3.78	58.5	21.8	1.66	20.9	0.02	0.02	0.06	100	211
120		9.00	8.99	33.837	26.210	182.2	0.304	3.17	48.7	27.3	1.90	24.4	0.03	0.01	0.06	121	210
125	ISL	9.01	9.00	33.872	26.236	179.8	0.313	3.03	46.6	28.1	1.94	24.9	0.03	0.01	0.06	126	
138		9.09	9.08	33.944	26.280	175.9	0,336	2.69	41.4	29.9	2.04	25.9	0.02	0.01	0.07	139	209
150	ISL	9.12	9.10	34.005	26.323	172.1	0.357	2.41	37.2	31.5	2.14	26.7	0.02	0.01	0.07	151	
169		9.16	9.14	34.096	26.388	166.3	0.389	2.08	32.1	34.0	2.26	27.7	0.03	0.01	0.07	170	208
199		8.67	8.65	34.119	26.484	157.7	0.438	1.99	30.4	37.8	2.31	29.0	0.02	0.00	0.05	200	207
200	ISL	8,67	8.65	34.122	26.486	157.5	0.439	1.98	30.2	37.9	2.31	29.0	0.02			201	
229		8.64	8.62	34.192	26.546	152.3	0.484	1.57	24.0	41.4	2.46	30.3	0.02			230	206
250	ISL	8.48	a.45	34.198	26.576	149.9	0.516	1.53	23.3	43.1	2.50	30.8	0.03			251	
267		8.31	8.28	34.192	26.597	148.1	0.541	1.50	22.7	44.5	2.52	31.2	0.04			269	205
300	ISL	7.94	7.91	34.196	26.656	142.9	0.589	1.37	20.6	48.4	2.60	32.3	0.03			302	
318		7.75	7.72	34.202	26.689	140.0	0.615	1.27	19.0	50.8	2.65	33.0	0.03			320	204
380		7.34	7.30	34.254	26.789	131,3	0.699	0.82	12.2	58.9	2.85	35,2	0.01			382	203
400	ISL	7.13	7 09	34.259	26.823	128.3	0.725	0.72	10.6	62.1	2.91	36.0	0.01			403	
437		6.73	6.69	34.265	26.882	122.8	0.771	0.58	8.5	67.8	3.01	37.5	0.01			440	202
500	ISL	6.32	6.27	34.289	26.956	116.4	0.847	0.45	6.5	75.0	3.11	38.8	0.01			503	
513		6.23	6.18	34.294	26.971	115.0	0.862	0.42	6.1	76,5	3.13	39.1	0.01			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 53

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	BIND	SPEED	UAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 39.2 *H*	119 28.5 W	12/07/95	1322	UTC	1299 *m*	310	29 kn	310 06 06	0	1015.1 mb	15.6 C	15.0 C	14m 03	0/8	

OEPTH n	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGPiA THETA	SWA	DYN HT	OXYGEN • 1/ I	OXY PCT	SI03 uM/ L	P04 uP>/ L	N03 UP,/ I	N02 un/ L	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0 ISL	16.03	16.03	33.481	24.573	335 .4	0.000	5 .88	104.5	3 .4	0 .43	0.8	0.04	0 .36	0.10	0	
2	16.03	16.03	33.481	24.573	335 .4	0.007	5 .88	104.5	3 .4	0 .43	0.8	.0.0 4	0 .36	0.10	2	220
10	16.01	16.01	33.480	24.578	335.3	0. 034	5 .88	104.5	3 .4	0 .43	0. 8	0.0 4	0 .34	0.13	10	219
19	16.02	16.02	33.480	24.576	335.8	0. 064	5 .89	104.7	3 .4	0. 43	0 .8	0.04	0.33	0.11	19	218
20 ISL	15.84	15.84	33.475	24.612	332 .3	0 .067	5 .89	104.3	3 .4	0. 44	1 .0	0.05	0. 39	0.14	20	
30 ISL	13.65	13.65	33.476	25.083	287 .7	0 .098	5 .87	99.5	3 .9	0.71	4 .6	0.23	0. 89	0.42	30	
31	13.39	13.39	33.4S3	25.141	282.2	0.101	5 .87	98 .9	3.9	0.75	5 .1	0.25	0.93	0. 45	31	217
41	11.95	11.94	33.616	25.525	245.8	0.127	4 .80	78 .5	11.4	1.23	10.8	0.51	0 .49	0. 33	41	216
50	11.40	11.39	33.615	25.626	236.4	0.149	4 .48	72 .4	14.3	1 .36	13.5	0.60	0. 45	0.27	50	215
60	11 .09	11.08	33.610	25.679	231 .6	0.172	4 .35	69.9	15.5	1 .43	14.9	0.60	0. 35	0.26	60	214
70	10.39	10.38	33.618	25.808	219.5	0.195	4.00	63.3	18.7	1 .57	18.4	0.43	0.13	0.19	70	213
7S ISL	10.18	10.17	33.631	25.854	215.2	0 .206	3.84	60.5	20 .1	1 .64	19.6	0.28	0.11	0.18	75	
:S	9.80	9. 79	33.678	25.955	205.8	0 .227	3.55	55.5	22 .9	1 .76	21.6	0 .03	0.07	0.16	85	212
100	8.92	8.91	33.824	26.212	181.5	0.256	3.23	49 .5	27 .4	1 .88	24 .1	0 .04	0.01	0 .09	101	21 1
118	8.86	8 .85	33.966	26.333	170.4	0.288	2.65	40 .6	31.9	2 .08	26.4	0 .05	0.01	0.10	1 19	210
125 ISL	8.76	8 .75	34.004	26 . 378	166.2	0.299	2.51	38 .4	33.6	2.14	27 .1	0 .04	0. 01	0.09	126	
131	8.56	8.55	34.055	26 . 449	159.7	0.321	2.31	35 .2	36 .4	2.23	28 .2	0 .02	0 .01	0.06	139	209
150 ISL	8.46	8. 44	34.084	26 . 488	156.3	0.340	2.18	33 .1	38 .0	2 .28	28.8	0 .02	0.01	0.07	1 51	
170	8.24	8.22	34.100	26.534	152.2	0.370	2 .04	30 .9	40.8	2 .34	29.8	0.02	0 .01	0.08	171	208
198	7.49	7.47	34 .075	26.625	143.8	0.412	1 .96	29 .1	47 .6	2.46	31.9	0.07	0.01	0.10	199	207
200 ISL	7.50	7.48	34 .079	26.626	143.7	0.415	1 .93	28.7	47 .8	2.47	31.9	0.07			201	
229	7.69	7.67	34.145	26.651	141.9	0.456	1 .54	23.0	49 .9	2.59	32 .1	0.08			230	206
250 ISL	7.40	7.38	34.149	26.696	137.9	0.485	1.41	20.9	53.3	2 .66	33 .3	0. 06			252	
269	7.08	7.05	34.146	26.739	134.0	0.511	1 .34	19.7	56.5	2 .72	34 .6	0. 03			271	205
300 ISL	6.94	6.91	34.172	26.779	130.6	0.552	1.14	16.7	59.6	2.79	35 .6	0. 01			302	
320	6.91	6 .88	34.192	26.799	129.0	0. 578	1 .01	14.8	61.3	2.83	36.0	0 .01			322	204
381	6.59	6 .56	34.241	26.881	121.9	0.655	0. 66	9 .6	68 .3	3 .00	37 .7	0 .00			383	203
(00 ISL	6.51	6. 47	34.250	26.899	120.5	0.678	0. 60	8.7	69.9	3 .03	38 .1	0.00			403	
«36	6.35	6.31	34.266	26.933	117.6	0.721	0.52	7 .5	73.0	3 .07	38.7	0.00			439	202
500 ISL	5.90	5 .86	34.313	27 .028	109.1	0.793	0 .34	4 .9	81 .9	3.18	40.2	0.00			503	
509	5.84	5 .80	34.320	27.041	107.9	0. 803	0 .32	4.6	83 .1	3.19	40.4	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 25.1 N	119 57.5 y	12/07/95	0748	UTC	877 *m*	310	18 kn	320 08 06	0	1016.1 mb	18.2 C	16.1 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uM/ L	P04 lilt/ I	N03 uM/ I	N02 UM/ L	CHL-A ug/ L	PHAEO ug/L	PRES db	SAMP
0 ISL	15.30	15.30	33 . 548	24.788	315.0	0. 000	5 .91	103.6	3 .3	0.49	1 .9	0.09	0. 54	0.16	0	
2	15.30	15.30	33.548	24.788	315.0	0. 006	5 .91	103.6	3 .3	0.49	1 .9	0.09	0. 54	0.16	2	220
10	15.31	15.31	33.548	24.786	315.5	0 .032	5 .91	103.6	3. 3	0.54 U	1 .9	0.09	0. 54	0.16	10	219
20	15.31	15.31	33.550	24.788	315.6	0 .063	5 .92	103.8	3 .3	0.47	1 .9	0 .09	0. 59	0.16	20	218
30	15.13	15.13	33.542	24 . 822	312.7	0.094	5 .90	103.1	3.9	0.50	2 .2	0. 09	0.60	0.19	30	217
38	12.22	12.22	33.552	25.424	255.4	0.117	4 .99	82 .1					0. 84	0.42	38	216
50	11.00	10.99	33.615	25.699	229.5	0.146	3 .88	62 .2	15.7	1 .36	15.9	0.26	0 .69	0. 33	50	215
60	10.52	10.51	33.636	25.800	220. 1	0.169	3. 76	59.7	18.2	1.51	18.3	0 .07	0. 36	0.21	60	214
70	10.04	10.03	33.696	25.929	208.0	0.190	3 .47	54.5	21.5	1 .72	20.4	0.03	0.18	0.17	70	213
75 ISL	9.89	9 .88	33.740	25.988	202 .4	0.200	3 .26	51.0	22.9	1 .79	21.5	0.03	0 .1!	0.15	75	
84	9. 73	9 .72	33.818 0	26.076	194.3	0.218	2.91	45.4	24.9	1 .88	23.3	0.03	0 .08	0.12	84	212
100	9. 61	9 .60	33.887	26.150	187.6	0.249	2 .70	42 .1	27.1	1 .97	24.7	0.02	0. 04	0.09	1 01	211
1 19	9. 34	9 .33	33.951	26.245	178.9	0.284	2.59	40 .1	29.2	2.25 U	25.7	0.02	0.02	0.08	120	210
125 ISL	9.28	9.27	33.963	26.264	177.2	0.294	2 .57	39 .8	29.7	2 .05	25.9	0.02	0 .02	0. 08	126	
139	9.11	9 .09	33.984	26.308	173.3	0.319	2.55	39.3	31.1	2 .08	26.4	0.02	0.01	0. 07	140	209
150 ISL	8 .81	8 .79	34.002	26.370	167,6	0. 338	2.54	38 .9	33 .2	2.11	27 .1	0.02	0.01	0 .06	1 51	
169	8.28	8.26	34.035	26.477	157.6	0.369	2 .48	37 .5	37 .0	2.17	28.4	0.02	0. 01	0 .05	1 70	208
199	8 .03	a .01	34.079	26.549	151.2	0.415	2 .22	33.4	41.1	2.29	29.9	0.02	0.01	0 .06	200	207
200 ISL	8.01	7 .99	34.078	26.552	15 1.0	0.416	2.22	33 .4	41.2	2 .29	29.9	0. 02			201	
234	7 .53	7.51	34.067	26.613	145.5	0. 467	2.16	32 .1	45.7	2 .37	31 .4	0 .02			235	206
250 ISL	7.55	7 .53	34.106	26.641	143.2	0.490	1 .90	28.3	47 .7	2 .46	32 .1	0 .02			251	
266	7 .57	7.54	34.146	26.670	140.7	0.513	1 .59	23.7	49.8	2.55	32 .8	0 .01			268	205
300 ISL	7 .38	7 .35	34.194	26.735	135.0	0.559	1.18	17.5	55.0	2 .71	34 .4	0.01			302	
322	7.19	7.16	34.213	26.777	131.3	0.589	0.99	14.6	58.5	2 .80	35 .4	0.01			324	204
377	6 .71	6 .68	34.254	26.875	122.5	0 .659	0.64	9 .3	67.2	2 .98	37 .5	0.00			379	205
400 ISL	6.57	6.53	34.263	26.901	120.3	0 .686	0.57	8 .3	69 .5	3.01	38 .0	0.00			403	
438	6 .37	6 .33	34.275	26.938	117.3	0 .732	0.50	7 .2	72 .9	3 .05	38 .7	0.00			441	202
500 ISL	5.99	5 .95	34.305	27.010	110.9	0 .802	0. 36	5 .2	79 .7	3.16	40 .1	0. 00			503	
509	5 .93	5 .89	34.310	27.022	109.8	0.812	0.34	4 .9	80.7	3.18	40 .3	0. 00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 70

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	80TT0N	WIN!1 SPEED	WAVES	UEA	BAR0N6TER	DRY	MET	SECCHI/FOREL	CLD ANT TYPE
32 •i .0 N	120 38.1 W	11/07/95	1821 UTC	3814 in	330 20 tn	320 08 06>	0	1018.0 nib	17.2 C	16..2 C	16m 03	1 3/8

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 UN/I	N03 UN/I	N02 UN/I	CHL-A ug/l	PHAEO ug/l	PRES db	SANP
0	ISL	15.56	15.56	33.185	24.451	347.0	0. 000	6 . 09	107.1	2 . 5	0 . 40	0.4	0.04	0. 43	0.11	0	
2	A	15.56	15.56	33.185	24.451	347. 1	0.007	6 . 09	107.1	2 . 5	0.4 0	0.4	0. 04	0 . 43	0.11	2	222
2		15.56	15.56	33,185	24.451	347 . 1	0.007									2	223
10	A	15.54	15.54	33.186	24.457	346. 8	0. 035	6.07	106.7	2 . 5	0.41	0. 4	0.04	0.52	0.13	10	221
20	ISL	15.49	15.49	33.194	24.474	345.5	0 .069	6 . 09	106.9	2 . 4	0.41	0.5	0.05	0. 51	0.14	20	
22	A	15.48	15.48	33.198	24.479	345.0	0.076	6 . 09	106.9	2 . 4	0.41	0.5	0.05	0.51	0.14	22	220
30	ISL	15.46	15.46	33.227	24.506	342 .7	0.104	6 .09	106.9	2 .4	0.42	0. 6	0. 05	0.47	0.14	30	
32	A	15.46	15.46	33.234	24.512	342 .2	0.111	6.09	106.9	2 .4	0. 42	0.6	0.05	0.46	0.14	32	219
43	A	13.28	13.27	33.240	24.976	298.3	0.146	6.17	103.6	3.6	0. 65	3. 6	0.23	0.73	0.37	43	218
50	ISL	12.82	12.81	33.285	25.102	286.4	0.166	5 .93	98 .6	5 . 4	0.80	5 . 6	0.29	0. 73	0.41	50	
51		12.78	12.77	33.292	25.115	285.2	0.169	5 . 89	97 .9	5 . 7	0.82	5 . 9	0 . 30	0. 73	0.41	51	217
59	A	12.34	12.33	33.328	25.228	274 .6	0.192	5 . 54	91 .2	7. 1	0 . 89	7.2	0.35	0.64	0. 40	59	216
68		12.32	12.31	33.485	25.354	262 .8	0.216	5 .62	92 .6	6.2	0 . 98	6. 9	0.31	0 . 38	0 .29	68	215
75	ISL	11.90	11.89	33.517	25.458	253.1	0.234	5 .30	86 . 6	9 . 5	1 .09	9.1	0 . 39	0.22	0.19	75	
76		11.83	11.82	33.518	25.472	251.7	0.236	5 .24	85.5	10.1	1.11	9.5	0. 40	0.20	0.18	76	214
85		11.52	11.51	33.544	25.550	244 . 5	0.259	4.81	77.9	12.6	1 .23	12.2	0.41	0.17	0.19	85	213
94		11.05	11.04	33.575	25.660	234.3	0.280	4.49	72 .0	15.5	1.41	15.4	0. 43	0.12	0.15	94	212
100	ISL	10.71	10.70	33.614	25 . 750	225.7	0.294	4.22	67.2	18.0	1 . 54	17.7	0.28	0. 09	0.14	100	
IIO		10.18	10.17	33.672	25.887	212.8	0.316	3 . 83	60.3	21.4	1 . 69	20. 7	0.01	0 . 06	0.13	111	21 1
124		9.60	9 . 59	33.680	25.990	203.2	0.345	3.71	57. 7	21.6	1 .66	20. 8	0 . 02	0.05	0.11	125	210
125	ISL	9 .56	9.55	33.682	25.999	202 . 4	0.347	3.71	57 .6	21.7	1 . 66	20.9	0.02	0.05	0.11	126	
144		8. 95	8. 93	33.744	26.145	188.7	0 . 384	3.61	55.4	24.6	1 . 74	22 . 5	0.01	0. 01	0 . 08	1 45	209
150	ISL	8. 83	8 .81	33.767	26.182	185.3	0 . 395	3.48	53.2	26.0	1 .80	23.3	0.01	0.01	0 .08	1 51	
170		8.55	8 . 53	33.843	26.285	175.8	0 .432	3.02	45.9	30. 4	1 .98	26.0	0.01	0.01	0.08	171	208
199		8.22	8.20	33.921	26.397	165.7	0.481	2 .91	43 . 9	33.8	2 . 05	27.2	0.01	0.01	0 . 07	200	207
200	ISL	8.21	8.19	33.923	26.400	165.4	0. 483	2 .90	43.8	33 .9	2 . 05	27.2	0.01			201	
229		7.87	7.85	33.981	26.496	156.7	0 . 529	2.71	40.6	37.8	2.15	28.6	0.01			230	206
250	ISL	7.51	7 .49	33.990	26.556	151.2	0. 562	2 .69	40. 0	41.2	2.19	29.5	0.01			251	
268		7.19	7.16	33.993	26.603	146.8	0. 589	2 .65	39. 1	44 .4	2 . 24	30 . 3	0. 01			270	205
300	ISL	6.81	6. 78	34.021	26.677	140.1	0.634	2.21	32 .3	51.2	2 . 44	32.8	0. 01			302	
320		6.63	6.60	34.044	26.720	136.2	0. 662	1 . 87	27.2	55 . 6	2 . 58	34 . 4	0. 01			322	204
379		6.32	6.29	34.126	26.826	126.9	0.740	1.11	16.1	66. 3	2 .86	37.4	0 .00			381	203
400	ISL	6.24	6 .20	34.150	26.855	124.3	0.766	0. 94	13.6	68.9	2 . 94	38.1	0.00			403	
440		6 .09	6. 05	34.187	26.904	120.2	0.815	0. 72	10.4	73 . 3	3.06	39. 1	0. 00			443	202
500	ISL	5 . 69	5 . 65	34.219	26.979	113.4	0. 885	0 . 50	7. 1	81.1	3.13	40. 6	0.00			503	
512		5 .61	5.57	34.225	26.994	112.1	0.899	0. 46	6 .5	82 . 7	3.15	40. 9	0.00			515	201

A) PRINARY PRODUCTIVITY SANPLES WERE TAKEN FRON THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 80

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD ANT TYPE
31 45.0 N	121 18.4 W	11/07/95	1036 UTC	3562 m	330 20 kn			1017.1 mb	16.8 C	16 0 C		

DEPTH HI		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uN/I	P04 uN/L	N03 UN/I	N02 UN/I	CHL-A ug/I	PHAEO ug/l	PRES db	SANP
0	ISL	16.89	16.89	33.067	24.058	384 . 5	0 .000	5 .69	102.6	2 .3	0.32	0.2	0. 00	0.09	0.02	0	
1		16.89	16.89	33.067	24.058	384 . 6	0.004	5 .69	102.6	2 .3	0.32	0. 2	0 . 00	0. 09	0.02	1	220
10	ISL	16.90	16.90	33.067	24.056	385 . 1	0. 038	5 .69	10 2.7	2 . 3	0.32	0.1	0.00	0. 09	0.01	10	
15		16.90	16.90	3 3.067	24.056	385 .2	0 .058	5 . 69	102 . 7	2 .3	0 . 32	0.1	0.00	0.0 9	0.01	1 5	219
20	ISL	16.89	16.89	33.112	24.093	381 .8	0.077	5 . 69	102,7	2 .3	0.31	0.1	0 . 00	0.09	0. 01	20	
30	ISL	16.86	16.86	33.231	24.192	372 . 7	0.115	5 . 70	102.8	2 . 3	0.30	0.1	0.00	0. 09	0.02	30	
31		16.86	16.85	33.245	24.203	371.7	0.118	5 .70	102.9	2 . 3	0 . 30	0.1	0.00	0.09	0.02	31	218
47		16.51	16.50	33.314	24.337	359.4	0. 177	5 . 73	102 . 7	2 . 4	0. 30	0.2	0 . 00	0.09	0. 03	47	217
50	ISL	16.39	16.38	33.302	24.356	357. 8	0.188	5.75	102.8	2 . 4	0.30	0.2	0.00	0.10	0 .04	50	
64		15.73	15.72	33.262	24.475	346 . S	0.237	5.81	102.5	2 . 4	0. 32	0.2	0.00	0.17	0.07	64	216
74		15.27	15.26	33.324	24.624	332 . 8	0.271	5 . 79	101.3	2 .6	0 . 32	0.1	0. 00	0.22	0.17	74	215
75	ISL	15.25	15.24	33.338	24.640	331 . 4	0.274	5 .78	101.1	2 .6	0.32	0.1	0. 00	0 .23	0.18	75	
84		15.06	15.05	33.463	24 . 778	318.5	0.303	5 .70	99. 4	2 . 9	0.33	0 . 1	0.00	0.28	0.25	84	214
94		14. 70	14.69	33.514	24.895	307. 6	0.335	5.55	96.1	3.1	0. 38	0.5	0.18	0.37	0.36	94	213
100	ISL	14.37	14.36	33.550	24.993	298 . 4	0.353	5 . 43	93 . 4	3. 7	0 . 45	1 . 5	0.19	0.33	0. 30	100	
104		14.13	14.11	33.568	25 .057	292.3	0. 365	5 . 35	91.6	4 .2	0 . 50	2 3	0.19	0.28	0.25	104	212
1 14		13.63	13.61	33.549	25.146	284.1	0 . 394	5.18	87 . 7	5 . 3	0.61	4 . 3	0.17	0.22	0.23	1 14	21 1
125		12.08	12.06	33.469	25.389	261.0	0 .424	4.78	78.3	8 . 9	0.92	9.3	0.03	0.15	0.19	126	210
139		11.25	11.23	33.515	25.578	243. 1	0.459	4.35	70.1	12.6	1.18	13.4	0. 03	0. 08	0.12	140	209
150	ISL	10.59	10.57	33.556	25.727	229.0	0. 485	4 . 09	64 . 9	15.5	1 . 35	16.2	0.02	0, 05	0.09	1 51	
164		9 .86	9. 84	33.617	25.899	212.8	0.516	3. 82	59.7	19.1	1 . 53	19.1	0.00	0, 03	0.06	165	208
195		8. 97	8.95	33.786	26.176	18 6.9	0.578	3. 35	51.4	26.1	1 . 82	23.5	o. oo	0.00	0. 04	196	207
200	ISL	8 .87	8. 85	33.809	26.210	183.7	0 . 587	3. 30	50. 5	27.0	1 . 85	24 . 0	0 .00			201	
229		8.38	8 . 36	33.916	26.370	168.9	0. 638	3.10	47 . 0	31 . 7	1 . 97	26.0	0.00			230	206
250	ISL	8.07	8.04	33.961	26 . 452	161.4	0.673	2 . 97	44 . 7	35.0	2 .05	27.3	o. oo			251	
270		7.80	7. 77	33.988	26.513	155.8	0. 704	2 . 83	42 .3	38.2	2.12	28. 4	0. 00			271	205
300	ISL	7,47	7.44	34.018	26.584	149.4	0 . 750	2.51	37. 3	43.3	2.25	30.4	0 .00			302	
320		7.26	7.23	34.032	26.625	145.7	0 . 780	2 .27	33 . 5	46.8	2 . 35	31.7	o. oo			322	204
379		6.61	6. 58	34.070	26.744	134.9	0.863	1.6 1	23.4	58.2	2 .67	35 . 4	0. 00			381	203
400	ISL	6 .43	6 . 39	34.096	26.788	130.8	0.890	1 .36	19.7	62 . 4	2 . 76	36.6	0. 00			402	
439		6.15	6.11	34.145	26.863	124.0	0. 940	0 . 95	13.7	69.9	2 . 90	38. 5	0.00			442	202
500	ISL	5 . 75	5.71	34.191	26.950	116.3	1.013	0.64	9. 1	78. 7	3.08	40. 3	0.00			503	
519		5 .62	5 . 58	34.206	26.978	113.7	1 .035	0.54	7. 7	81 .4	3.13	40. 9	o. oo			522	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	yET	SECCHI/FOREL	CLD AMT	TYPE
31 24.4 »	121 58.4 W	11/07/95	0250 UTC	3984 in	340	19 kn	350 06 0(i	1	1017.9 mb	17.9 C	17.. 0 C		1/8	CU

DEPTH n	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DTN HT	OXYGEN ml/ l	OXY PCT	S 103 UM/L	P04 uM/ l	N03 UM/ l	N02 UM/ l	CHL-A ug/l	PHAEO ug/L	PRES db	SAMP
0 I:L	18.06	18.06	33.257	23.924	397 .3	0 .000	5.57	102.9	2 .6	0.31	0.0	0. 00	0.08	0 .02	0	
2	18.06	18.06	33.257	23.924	397 .4	0.008	5.57	102.9	2 .6	0.31	0.0	0 .00	0.08	0 .02	2	222
2	18.05	18.05	33.257	23.926	397.1	0 .008									2	223
ID ISL	18.02	18.02	33.256	23.933	396. 7	0.040	5.58	103.0	2.5	0.30	0.0	0 .00	0.08	0 .02	10	
15	18.00	18.00	33.256	23.938	396.4	0.060	5 .59	103.1	2.5	0. 30	0.0	0.00	0.08	0 .02	1 5	221
20 ISL	17.49	17.49	33.247	24.055	385 .5	0.079	5 .65	103.2	2.5	0.30	0.0	0.00	0 .08	0. 02	20	
29	16.55	16.55	33.241	24.271	365 .1	0.113	5 .75	103.1	2.5	0.31	0. 1	0.00	0 .08	0. 02	29	220
30 ISL	16.54	16.54	33.242	24 .274	364 .9	0.117	5 .75	103.1	2.5	0.31	0. 1	0 .00	0 .08	0.02	30	
44	16.39	16.38	33.258	24.322	360. 8	0.167	5 .75	102.8	2.5	0.31	0. 1	0 .00	0 .09	0.03	44	219
50 ISL	16.36	16.35	33.289	24.353	358. 1	0.189	5 .76	102.9	2.5	0.31	0. 1	0 .00	0.10	0.03	50	
59	16.25	16.24	33.333	24.412	352 .7	0.221	5 .78	103.1	2 .6	0.31	0. 1	0 .00	0.11	0.04	59	218
75	15.63	15.62	33.328	24 . 548	340 .1	0.276	5 .80	102.2	2 .7	0.31	0. 1	0. 00	0.23	0.09	75	217
95	15.19	15.18	33.408	24.707	325 .3	0.310	5 .79	101.2	2 .7	0.31	0. 1	0 .00	0.19	0.16	85	216
94	14.93	14.92	33.506	24 .839	312 .9	0.338	5 .67	98 .6	2 .9	0 .34	0. 1	0.01	0.41	0. 31	94	215
100 ISL	14.66	14.65	33.554	24.934	304 .0	0.357	5 .56	96 .2	3 .5	0 .39	0.6	0.12	0 .37	0. 30	100	
104	14.43	14.41	33.573	24.998	298 .0	0.369	5 .47	94 .2	4 .0	0 .43	1 .2	0.19	0 .34	0.30	1 04	214
114	13.58	13.56	33.549	25.156	283 .1	0.398	5 .24	88 .7	5 .4	0.59	3 .8	0.23	0.23	0.25	1 14	213
125	12.51	12.49	33.558	25.376	262 .3	0.428	5 .07	83 .9	7 .8	0.81	7 .9	0.03	0.12	0.17	126	212
139	11.38	11.36	33.517	25.556	245 .3	0.463	4 .59	74 .1	11.1	1 .07	11.8	0.02	0 .08	0.13	140	211
130 ISL	10.75	10.73	33.529	25.678	233 .7	0 .490	4 .34	69 .1	13.7	1.24	14.4	0.01	0.06	0 .09	1 51	
1 66	10.07	10.05	33.579	25.834	219 .0	0 .526	4.10	64 .4	17 .3	1.43	17 .5	0. 01	0.03	0 .05	167	210
193	9.19	9.17	33.687	26 . 063	197 .5	0 .582	3 .88	59 .8	21 .9	1 .62	20 .8	0 .01	0.01	0 .03	194	209
200 ISL	9.00	8 .98	33.714	26.115	192 .7	0 .596	3 .SO	58 .3	23 .3	1 .67	21 .6	0. 01	0.01	0 .03	201	
225	8.43	8.41	33.810	26.279	177 .4	0 .642	3 .57	54 .1	28 .0	1 .83	24 .1	0.01	0 .00	0 .03	226	208
250 ISL	8.07	8.04	33.898	26.402	166 .0	0.685	3 .56	53 .5	31 .2	1 .87	25 .0	0 .01	0.00	0 .02	251	
260	7.96	7 .93	33.930	26.444	162 .2	0 .701	3 .56	53 .4	32 .6	1 .89	25 .3	0.01	0.00	0 .02	261	207
300 ISL	7.57	7.54	34.031	26.580	149 .8	0 .764	2 .61	38 .8	42 .4	2 .23	29 .6	0. 01			302	
320	7.41	7 .38	34.067	26.631	145 .2	0 .793	2 .05	30 .4	47 .7	2 .42	32 .0	0. 01			322	206
37!	6.93	6 .89	34.126	26.745	135 .0	0 .875	1 .40	20 .5	57 .6	2 .69	35 .0	0. 00			380	205
400 ISL	6.66	6 .62	34.131	26.785	131 .3	0 .904	1 .24	18 .1	61 .8	2 .77	36 .1	0. 00			402	
435	6.24	6 .20	34.138	26.846	125 .7	0 .949	1 .04	15 .0	68 .2	2 .88	37 .8	0 .00			438	204
500 ISL	5 .82	5 .78	34.187	26.938	117 .5	1 .028	0 .67	9 .6	77 .5	3 .04	39 .9	0 .00			503	
515	5 .72	5 .68	34.199	26.960	115 .4	1 .045	0 .59	8 .4	79 .7	3 .08	40 .4	0 .00			518	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 1 00

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 'i.7 N	122 39.7 W	10/07/95	1901 UTC	3977 m	350	14 kn	350 06 05	1	1020.1 mb	18 .9 C	17.. 2 C	28m 02	1 /8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	D YN HT	OXYGEN ml/ l	OXY PCT	S 103 uM/ l	P04 uM/ l	N03 UM/ l	N02 uM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.23	18.23	33.327	23.936	396.2	0.000	5.55	102.9	2.3	0 .32	0. 2	0.00	0 .08	0.01	0	
1	18.22	18.22	33.327	23.938	395 .9	0. 004									1	222
1 A	18.23	18.23	33.327	23.936	396.2	0.004	5.55	102.9	2.3	0.32	0.2	0.00	0 .08	0.01	1	221
10 ISL	18.14	18.14	33.330	23.961	394 .1	0.040	5 .56	102.9	2 .3	0.31	0. 2	0.00	0 .08	0.01	10	
18 A	18.06	18.06	33.332	23.982	392 .4	0.071	5 .57	102.9	2 .3	0.29	0.2	0.00	0.08	0.01	1 8	220
20 ISL	17.95	17.95	33 . 344	24.018	389.0	0.079	5.58	102.9	2 .3	0.29	0.2	0.00	0 .08	0.01	20	
30 ISL	17.40	17.40	33.409	24.201	371 .9	0.117	5 .66	103.3	2 .4	0.28	0. 2	0.00	0 .07	0. 02	30	
38 A	16.96	16.95	33 . 463	24.347	358.3	0.146	5.71	103.4	2.5	0.28	0.2	0.00	0 .06	0 .02	38	219
50 ISL	16.80	16.79	33.473	24.392	354 .3	0.189	5.71	103.1	2.5	0.28	0. 2	0.00	0 .08	0.02	50	
57 A	16.76	16.75	33 . 471	24 . 400	353.8	0.214	5 .71	103.0	2.5	0.28	0. 2	0.00	0.10	0 .03	57	218
74 A	16.38	16.37	33.502	24.513	343 .6	0.273	5 .78	103.5	2.5	0.28	0.2	0.00	0.15	0 .06	74	217
75 ISL	16.35	16.34	33.503	24 . 520	342 .9	0.276	5 .78	103.4	2.5	0.28	0 .2	0. 00	0.15	0 .06	75	
90	15.92	15.91	33.506	24.621	333 .8	0.327	5 .77	102.4	2.5	0.28	0 .2	0 .00	0.16	0 .07	90	216
100 ISL	15.67	15.65	33 . 504	24.676	328 .8	0. 360	5 .73	101.1	2.4	0.29	0. 1	0. 00	0.17	0.11	100	
104 A	15.55	15.53	33 . 507	24.705	326 .2	0.373	5.71	100.5	2.4	0 .30	0. 1	0 .00	0.18	0.13	1 04	215
112	15.24	15.22	33.533	24 . 793	317.9	0. 399	5 .64	98 .7	2 .7	0.31	0. 1	0 .00	0.25	0 .20	1 12	214
120	14.85	14.83	33.589	24.921	305 .9	0.424	5 .49	95 .4	3 .2	0.37	0. 6	0.17	0. 31	0.23	120	213
125 ISL	14.68	14.66	33.612	24 . 976	300.a	0.439	5.43	94 .0	3 .4	0.40	1 .1	0.19	0.29	0 .22	125	
130	14.54	14.52	33.633	25 .022	296.6	0.454	5 .38	92 .9	3 .6	0. 42	1 .6	0.21	0.26	0 .22	131	212
140	14.27	14.25	33.691	25.124	287.1	0. 483	5.29	90 .9	4 .1	0.47	2 .9	0 .08	0.22	0.21	141	211
150	13.77	13.75	33.722	25.252	275.1	0.511	5.16	87 .7	4 .9	0.55	4 .5	0 .03	0.14	0. 17	1 51	210
160	13.30	13.28	33.738	25.360	264.9	0.538	5 .03	84 .7	5 .9	0.64	5 .9	0 .02	0.10	0.12	161	209
175	12.33	12.31	33.675	25.502	251.6	0.577	4 .86	80 .2	8 .0	0. 80	8. 4	0.01	0. 06	0. 07	176	208
194	10.94	10.92	33.610	25.708	231.9	0.623	4 .54	72 .7	12.1	1.10	12.9	0.01	0. 03	0.05	1 95	207
200 ISL	10.56	10.54	33.613	25.778	225.4	0. 637	4 .38	69 .5	13.9	1.21	14.6	0.01	0 .02	0.04	201	
229	9.12	9.10	33.700	26.085	196.2	0 .698	3 .72	57 .2	22 .5	1 .67	21 .6	0 .00	0. 00	0.02	230	206
250 ISL	8. 54	8.51	33.798	26.253	180.4	0 .737	3 .74	56 .8	26 .2	1 .76	23 .2	0 .00			251	
268	8.23	3 .20	33.881	26.365	170.0	0. 769	3 .76	56 .8	28 .8	1 .78	23 .8	0.00			269	205
300 ISL	7 .84	7 .81	33.969	26.492	158 .3	0.821	3 .27	48 .9	35 .1	1 .98	26 .6	0.00			302	
318	7 .68	7 .65	34.000	26.540	154.0	0.850	2 .92	43 .6	38 .9	2 .10	28 .2	0 .00			320	204
379	6.96	6 .92	34.046	26.678	141 .4	0 .940	2 .13	31 .3	51 .2	2 .42	32 .7	0 .00			381	203
400 ISL	6.64	6 .60	34.046	26.721	137 .3	0 .969	1 .90	27 .7	55 .8	2 .53	34 .2	0.00			402	
437	6.11	6 .07	34.047	26.791	130 .8	1 .019	1 .54	22 .1	63 .7	2 .70	36 .7	0.00			440	202
500 ISL	5 .64	5 .60	34.104	26.895	121 .3	1 .098	1 .00	14 .2	75 .1	2 .93	39 .4	0.00			503	
514	5 .53	5 .49	34.117	26.918	119 .2	1 .115	0 .88	12 .5	77 .6	2 .98	40 .0	0 .00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 110

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLO	ANT	TYPE
30 AS; .0 N	123 19.8 W	10/07/95	1234 UTC	4009 m	360 17 kn			1018.8 mb	17.9 C	17.0 C				

DEPTH m		TENP DEG C	POT TENP DEO C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 UN/I	N03 UN/I	N02 UN/L	CHL-A ug/I	PHAEO ug/L	PRES db	SANP
0	ISL	18.29	18.29	33.487	24.043	385.9	0.000	5.53	102.7	2.6	0.29	0.2	0.00	0.07	0.01	0	
1		18.29	18.29	33.487	24.044	385.9	0.004	5.53	102.7	2.6	0.29	0.2	0.00	0.07	0.01	1	220
10	ISL	18.30	18.30	33.487	24.042	386.4	0.039	5.52	102.6	2.6	0.29	0.2	0.00	0.07	0.01	10	
16		18.30	18.30	33.487	24.042	386.6	0.062	5.52	102.6	2.6	0.29	0.2	0.00	0.07	0.01	16	219
20	ISL	18.23	18.23	33.533	24.094	381.8	0.077	5.54	102.8	2.5	0.28	0.2	0.00	0.07	0.01	20	
30		18.04	18.03	33.648	24.229	369.3	0.115	5.59	103.5	2.4	0.27	0.2	0.00	0.07	0.01	30	218
44		17.87	17.86	33.650	24.273	365.6	0.166	5.60	103.3	2.4	0.26	0.3	0.00	0.09	0.02	44	217
50	ISL	17.48	17.47	33.588	24.320	361.3	0.188	5.65	103.4	2.4	0.26	0.3	0.00	0.09	0.02	50	
59		16.80	16.79	33.490	24.406	353.3	0.220	5.75	103.8	2.5	0.27	0.3	0.00	0.09	0.03	59	216
75		15.94	15.93	33.445	24.569	338.2	0.275	5.85	103.8	2.5	0.27	0.3	0.00	0.12	0.04	75	215
85		15.91	15.90	33.485	24.607	334.9	0.309	5.81	103.0	2.5	0.27	0.2	0.00	0.14	0.05	85	214
95		15.71	15.70	33.475	24.644	331.7	0.342	5.81	102.6	2.5	0.27	0.2	0.00	0.14	0.06	95	213
100	ISL	15.60	15.58	33.496	24.685	327.9	0.359	5.79	102.0	2.5	0.27	0.2	0.00	0.16	0.07	100	
104		15.50	15.48	33.517	24.723	324.4	0.372	5.76	101.3	2.5	0.28	0.2	0.00	0.17	0.09	104	212
114		15.21	15.19	33.551	24.814	316.0	0.404	5.69	99.5	2.6	0.30	0.2	0.00	0.18	0.16	114	211
124		14.88	14.86	33.590	24.916	306.5	0.435	5.59	97.2	3.0	0.33	0.3	0.04	0.26	0.19	124	210
125	ISL	14.86	14.84	33.598	24.926	305.6	0.438	5.58	96.9	3.0	0.33	0.3	0.06	0.26	0.19	125	
138		14.56	14.54	33.694	25.065	292.7	0.477	5.40	93.3	3.6	0.41	1.4	0.26	0.22	0.17	139	209
150	ISL	13.83	13.81	33.699	25.222	278.0	0.511	5.19	88.3	4.9	0.54	3.8	0.19	0.16	0.15	151	
164		12.76	12.74	33.673	25.417	259.5	0.549	4.93	82.1	7.0	0.73	7.3	0.02	0.09	0.12	165	208
195		10.62	10.60	33.674	25.815	221.8	0.624	4.35	69.2	13.6	1.20	14.6	0.01	0.03	0.04	196	207
200	ISL	10.36	10.34	33.680	25.864	217.1	0.634	4.26	67.4	14.9	1.27	15.7	0.01			201	
227		9.28	9.26	33.740	26.091	195.6	0.690	3.79	58.5	21.8	1.61	20.8	0.00			228	206
250	ISL	8.71	8.68	33.852	26.269	179.0	0.733	3.44	52.5	27.2	1.80	23.8	0.00			251	
268		8.40	8.37	33.939	26.385	168.2	0.765	3.20	48.5	31.2	1.91	25.5	0.00			269	205
300	ISL	7.93	7.90	34.003	26.506	157.1	0.817	2.88	43.2	37.1	2.07	27.9	0.00			302	
321		7.66	7.63	34.021	26.560	152.2	0.849	2.67	39.8	41.0	2.16	29.2	0.00			323	204
378		6.85	6.81	34.073	26.714	137.9	0.932	1.85	27.1	54.5	2.52	33.8	0.00			380	203
400	ISL	6.69	6.65	34.096	26.754	134.3	0.962	1.58	23.0	58.4	2.63	35.1	0.00			402	
434		6.49	6.45	34.130	26.807	129.6	1.007	1.21	17.6	63.7	2.78	36.7	0.00			437	202
500	ISL	5.99	5.95	34.172	26.905	120.7	1.089	0.79	11.3	73.7	2.99	39.1	0.00			503	
517		5.86	5.82	34.183	26.930	118.5	1.109	0.68	9.7	76.3	3.05	39.7	0.00			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 90 120

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
30 25 0 *H*	123 59.7 W	10/07/95	0613 UTC	4226 m	350 16 kn			1020.0 mb	18.'I C	17.0 C				

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	S103 UN/I	P04 uN/I	N03 uN/I	N02 uN/I	CHL-A ug/l	PHAEO ug/I	PRES db	SAMP
0	ISL	18.54	18.54	33.429	23.937	396.0	0.000	5.51	102.8	2.8	0.29	0.3	0.00	0.07	0.01	0	
1		18.54	18.54	33.429	23.937	396.1	0.004	5.51	102.8	2.8	0.29	0.3	0.00	0.07	0.01	1	220
10	ISL	18.51	18.51	33.430	23.946	395.6	0.040	5.52	103.0	2.8	0.29	0.3	0.00	0.07	0.01	10	
19		18.49	18.49	33.430	23.951	395.4	0.075	5.52	102.9	2.8	0.29	0.3	0.00	0.07	0.02	19	219
20	ISL	18.44	18.44	33.427	23.961	394.4	0.079	5.53	103.0	2.8	0.29	0.3	0.00	0.07	0.02	20	
30	ISL	17.89	17.88	33.394	24.071	384.3	0.118	5.62	103.6	2.8	0.29	0.3	0.00	0.07	0.02	30	
39		17.33	17.32	33.368	24.187	373.6	0.152	5.72	104.2	2.a	0.29	0.3	0.00	0.08	0.02	39	218
50	ISL	16.94	16.93	33.375	24.284	364.6	0.193	5.78	104.5	2.6	0.30	0.3	0.00	0.09	0.02	50	
59		16.66	16.65	33.389	24.361	357.6	0.225	5.82	104.7	2,4	0.30	0.3	0.00	0.10	0.03	59	217
75	ISL	15.97	15.96	33.406	24.532	341.7	0.281	5.85	103.8	2.7	0.30	0.2	0.00	0.11	0.04	75	
79		15.82	15.81	33.413	24.571	338.1	0.295	5 86	103.7	2.8	0.30	0.2	0.00	0.12	0.04	79	216
99		15.52	15.50	33.481	24.691	327.3	0.361	5.79	101.9	2.8	0.30	0.3	0.00	0.18	0.10	99	215
100	ISL	15.50	15.48	33.489	24.702	326.3	0.365	5.78	101.7	2.8	0.30	0.3	0.00	0.18	0.11	100	
108		15.23	15.21	33.557	24.814	315.8	0.390	5.70	99.8	2.6	0.31	0.3	0.00	0.19	0.20	IOS	214
118		14.45	14.43	33.657	25.059	292.6	0.421	5.44	93.8	3.7	0.40	1.2	0.24	0.25	0.23	118	213
125	ISL	14.10	14.08	33.669	25.142	284.9	0.441	5.37	91.9	4.3	0.45	2.3	0.19	0.22	0.22	125	
128		13.96	13.94	33.667	25.170	282.3	0.449	5.34	91.1	4.6	0.48	2.9	0.17	0.20	0.22	129	212
139		13.22	13.20	33.672	25.325	267.7	0.480	5.14	86.4	6.0	0.62	5.4	0.02	0.13	0.19	140	211
149		12.35	12.33	33.659	25.485	252.5	0.506	4.92	81.2	7.9	0.77	7.9	0.02	0.08	0.15	150	210
150	ISL	12.26	12.24	33.652	25.497	251.4	0.508	4.89	80.5	8.2	0.79	8.3	0.02	0.08	0.14	151	
158		11.60	11.58	33.594	25.576	243.9	0.528	4.68	76.0	10.5	0.99	11.1	0.01	0.08	0.09	159	209
173		10.89	10.87	33.586	25.698	232.4	0.564	4.42	70.7	13.1	1.18	13.8	0.01	0.05	0.06	174	208
193		10.04	10.02	33.675	25.915	212.0	0.608	4.23	66.4	16.8	1.37	16.9	0.00	0.02	0.03	194	207
200	ISL	9.74	9.72	33.707	25.990	204.9	0.623	4.11	64.1	18.7	1.46	18.3	0.00			201	
229		8.71	8.69	33.835	26.255	179.9	0.679	3.58	54.6	27.0	1.79	23.5	0.00			230	206
250	ISL	8.36	8.33	33.917	26.374	168.9	0.715	3.29	49.8	31.2	1.93	25.6	0.00			251	
267		8.19	8.16	33.970	26.441	162.8	0.743	3.08	46.5	34.1	2.01	26.7	0.00			268	205
300	ISL	7.86	7.83	34.024	26.533	154.5	0.796	2.74	41.0	39.0	2.14	28.7	0.00			302	
317		7.69	7.66	34.038	26.568	151.3	0.822	2.56	38.2	41.8	2.21	29.7	0.00			319	204
377		6.72	6.69	34.077	26.734	135.8	0.908	1.69	24.7	56.8	2.61	35.0	0.00			379	203
400	ISL	6.50	6.46	34.087	26.772	132.4	0.939	1.47	21.3	60.7	2.70	36.2	0.00			402	
436		6.28	6.24	34.111	26.820	128.2	0.986	1.19	17.2	65.7	2.81	37.6	0.00			439	202
500	ISL	6.13	6.09	34.220	26.926	119.0	1.065	0.63	9.1	73.7	3.04	39.2	0.00			503	
516		6.09	6.04	34.247	26.952	116.7	1.084	0.49	7.1	75.7	3.10	39.6	0.00			519	201

IV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIKE	BOTTOM	HIND	SPEED	WAVES	VEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 57.3 N	117 15.4 W	06/07/95	1829	UTC	71 in	240	11 kn	260 02 05	1	1016.2 mb	20..0 C	19,.0 C	07m 05	5/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN r»L/ /	OX Y PCT	SI03 uM/L	P04 UP./1	N03 UP./1	N02 UP./1	CHL-A ug/I	PHAEO ug/ /	PRES db	SAMP
0 ISL	19.89	19.89	33.499	23.647	423.7	0.000	6.29	120.4	4.4	0.29	0.0	0.01	3.97	0.44	0	
1 A	19.89	19.89	33.499	23.647	423.7	0.004	6.29	120.4	4.4	0.29	0.0	0.01	3.97	0.44	1	210
1	19.82	19.82	33.500	23.666	421.9	0.004									1	211
4 A	18.74	18.74	33.495	23.938	596.1	0.017	6.10	114.3	5.3	0.45	0.3	0.02	1.81	0.44	4	209
9 A	11.77	11.77	33.549	25.506	246.9	0.033	4.26	69.4	15.0	1.24	11.2	0.43	1.53	0.82	9	208
10 ISL	11.61	11.61	33.554	25.540	243.7	0.035	4.18	67.9	15.4	1.33	12.6	0.42	1.46	0.79	10	
14 A	10.99	10.99	33.578	25.671	231.3	0.045	3.85	61.7	16.9	1.55	16.2	0.39	1.16	0.58	14	207
19 A	10.52	10.52	33.604	25.774	221.6	0.056	3.74	59.3	17.9	1.55	17.6	0.25	0.87	0.44	19	206
20 ISL	10.45	10.45	33.613	25.793	219.8	0.058	3.70	58.6	18.2	1.56	18.0	0.22	0.78	0.40	20	
26 A	10.15	10.15	33.662	25.883	211.4	0.071	3.50	55.1	20.2	1.65	19.8	0.08	0.30	0.23	26	205
30 ISL	10.13	10.13	33.678	25.899	210.0	0.079	3.46	54.5	20.5	1.68	20.1	0.10	0.31	0.22	30	
34	10.10	10.10	33.681	25.906	209.3	0.088	3.41	53.6	20.8	1.75	20.3	0.13	0.31	0.22	34	204
42	10.02	10.02	33.727	25.956	204.8	0.104	3.01	47.3	23.1	2.13	22.3	0.15	0.20	0.19	42	203
50 ISL	9.96	9.95	33.746	25.981	202.6	0.121	2.79	43.8	24.8	2.01	23.3	0.20	0.13	0.17	50	
52	9.95	9.94	33.748	25.984	202.3	0.125	2.75	43.1	25.1	1.95	23.4	0.21	0.12	0.17	52	202
63	9.92	9.91	33.758	25.997	201.3	0.147	2.60	40.7	26.4	2.02	23.8	0.24	0.11	0.16	63	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 28

LATITUDE	LONGITUDE	OAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVE5	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ABT	TYPE
32 54.8 N	117 23.8 W	06/07/95	2246	UTC	626 m	260	09 kn	270 02 05	2	1016.8 mb	18.8 C	18.3 C	20m 02	8/8	CI

DEPTH ffl	TEHP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OX Y PCT	SI03 uM/L	P04 uM/I	N03 UM/I	N02 uM/L	CHL-A ug/L	PHAEO ug/L	PRES db	SAMP
0 ISL	18.72	18.72	33.476	23.928	396.9	0.000	5.87	109.9	3.7	0.31	0.0	0.00	0.29	0.09	0	
1	18.72	18.72	33.476	23.928	396.9	0.004	5.87	109.9	3.7	0.31	0.0	0.00	0.29	0.09	1	220
1	18.73	18.73	33.475	23.925	397.2	0.004									1	221
10	16.36	16.36	33.431	24.460	346.5	0.037	6.33	113.2	4.4	0.32	0.1	0.00	0.27	0.09	10	219
20	12.33	12.33	33.455	25.328	264.1	0.068	5.61	92.5	8.4	0.74	4.9	0.15	1.36	0.55	20	218
30	11.41	11.41	33.526	25.555	242.7	0.093	4.52	73.1	12.4	1.20	12.2	0.29	1.01	0.56	30	217
40	10.92	10.92	33.587	25.691	230.0	0.117	3.86	61.8	16.0	1.45	16.3	0.09	0.67	0.45	40	216
50	10.48	10.47	33.634	25.805	219.4	0.139	3.59	56.9	18.5	1.59	18.6	0.04	0.48	0.33	50	215
60	9.92	9.91	33.643	25.907	209.3	0.161	3.74	58.6	19.8	1.62	19.4	0.03	0.13	0.17	60	214
70	9.99	9.98	33.739	25.971	204.0	0.182	3.13	49.1	22.8	1.81	21.8	0.02	0.10	0.13	70	213
75 ISL	9.92	9.91	33.770	26.007	200.7	0.192	3.06	48.0	23.6	1.85	22.3	0.02	0.07	0.11	75	
85	9.81	9.80	33.840	26.080	193.9	0.211	2.97	46.5	24.9	1.91	22.9	0.02	0.03	0.08	85	212
99	10.17	10.16	34.019	26.159	186.8	0.238	2.22	35.0	28.3	2.13	25.1	0.02	0.02	0.06	100	211
100 ISL	10.17	10.16	34.022	26.162	186.6	0.240	2.22	35.0	28.4	2.13	25.1	0.02	0.02	0.06	101	
119	9.89	9.88	34.028	26.214	182.0	0.275	2.15	33.7	29.8	2.16	25.8	0.02	0.01	0.09	120	210
125 ISL	9.83	9.82	34.037	26.231	180.4	0.286	2.13	33.4	30.2	2.17	26.0	0.02	0.01	0.09	126	
140	9.74	9.72	34.073	26.275	176.6	0.313	2.06	32.2	31.4	2.22	26.6	0.02	0.01	0.07	141	209
150 ISL	9.73	9.71	34.118	26.312	173.4	0.330	1.93	30.2	32.5	2.26	27.1	0.02	0.01	0.07	151	
169	9.71	9.69	34.196	26.376	167.6	0.362	1.64	25.6	34.6	2.35	27.9	0.02	0.00	0.06	170	208
199	9.64	9.62	34.242	26.425	163.7	0.412	1.35	21.1	36.9	2.47	28.8	0.02	0.00	0.08	200	207
200 ISL	9.63	9.61	34.243	26.427	163.5	0.414	1.35	21.1	37.0	2.47	28.8	0.02			201	
229	9.28	9.25	34.254	26.493	157.7	0.460	1.38	21.4	39.1	2.50	29.4	0.02			230	206
250 ISL	9.15	9.12	34.271	26.528	154.8	0.493	1.26	19.5	40.7	2.54	29.9	0.02			252	
267	9.06	9.03	34.285	26.554	152.7	0.519	1.15	17.7	42.1	2.57	30.3	0.02			269	205
300 ISL	8.81	8.78	34.294	26.601	148.7	0.569	1.06	16.3	44.7	2.64	31.0	0.01			302	
318	8.68	8.65	34.296	26.623	146.9	0.596	1.02	15.6	46.1	2.67	31.4	0.01			320	204
378	8.34	8.30	34.315	26.691	141.4	0.682	0.81	12.3	50.3	2.76	32.4	0.01			380	203
400 ISL	8.21	8.17	34.318	26.713	139.6	0.713	0.76	11.5	51.8	2.83	32.8	0.01			403	
439	7.93	7.89	34.316	26.754	136.2	0.767	0.68	10.2	54.9	2.95	33.7	0.01			442	202
500 ISL	7.22	7.17	34.287	26.834	129.0	0.848	0.61	9.0	62.8	3.08	35.9	0.01			503	
516	7.03	6.98	34.281	26.855	127.0	0.868	0.59	8.7	64.9	3.11	36.5	0.01			520	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 50I.6N	117 32.1 W	07/07/95	0225	UTC	859 m	290	06 kn	290 02 08	2	1015,0 mb	18.1 C	17,.2 C		8/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/I	OX Y PCT	S 103 uM/L	P04 uM/I	N03 UM/I	N02 uN/l	CHL-A ug/L	PHAEO ug/I	PRES db	SAMP
0 ISL	19.12	19.12	33.493	23.840	405.3	0.000	5.84	110.2	3.9	0.25	0.1	0.01	0.33	0.09	0	
1	19.12	19.12	33.493	23.841	405.3	0.004	5.84	110.2	3.9	0.25	0.1	0.01	0.33	0.09	1	220
10	18.37	18.37	33.475	24.015	389.0	0.040	5.98	111.3	4.1	0,27	0.1	0.01	0.79	0.21	10	219
20	13.96	13.96	33.431	24.984	296.8	0.074	6.53	111.3	5.a	0.45	0.3	0.02	0.79	0.29	20	218
30	12.23	12.23	33.473	25.361	261.2	0.102	5.51	90.6	8.3	0.84	6.0	0.15	1.28	0.53	30	217
40	11.63	11.62	33.510	25.502	248.0	0.127	4.72	76.7	11.5	1.09	10.9	0.26			40	216
50	11.17	11.16	33.548	25.616	237.4	0.152	4.28	68.8	13.9	1.28	14.0	0.23	0.73	0.54	50	215
60	10.56	10.55	33.624	25.783	221.6	0.175	3.67	58.3	18.1	1.58	18.1	0.07	0.40	0.31	60	214
69	10.05	10.04	33.70S	25.936	207.2	0.194	3.27	51.4	21.7	1.74	21.1	0.03	0.19	0.20	69	213
75 ISL	9.87	9.86	33.752	26.001	201.2	0.206	3.16	49.5	23.2	1.79	22.0	0.03	0.13	0.16	75	
85	9.75	9.74	33.819	26.074	194.5	0.226	3.02	47.2	25.2	1.87	22.9	0.02	0.09	0.12	85	212
100	9.75	9.74	33.933	26.163	186.4	0.255	2.51	39.2	28.3	2.19	24.8	0.02	0.03	0.09	101	211
119	9.64	9.63	34.080	26.296	174.1	0.289	1.97	30.7	32.2	2.26	27.2	0.04	0.04	0.08	120	210
125 ISL	9.68	9.67	34.107	26.311	172.9	0.299	1.85	28.9	32.9	2.29	27.5	0.04	0.04	0.09	126	
139	9.77	9.75	34.156	26.335	171.0	0.323	1.62	25.4	34.3	2.37	28.0	0.04	0.04	0.11	140	209
150 ISL	9.74	9.72	34.201	26.375	167.4	0.342	1.44	22.5	35.7	2.43	28.5	0.05	0.04	0.10	151	
168	9.62	9.60	34.262	26.443	161.3	0.371	1.23	19.2	37.8	2.52	29.3	0.06	0.05	0.09	169	208
197	9.45	9.43	34.289	26.493	157.2	0.418	1.17	18.2	39.9	2.57	29.8	0.04	0.18 U	0.09 U	198	207
200 ISL	9.43	9.41	34.289	26.496	156.9	0.422	1.17	18.2	40.0	2.58	29.8	0.04			201	
228	9.26	9.23	34.289	26.524	154.8	0.466	1.14	17.7	41.2	2.65	30.1	0.04			229	206
250 ISL	9.23	9.20	34.303	26.540	153.7	0.500	1.06	16.4	42.1	2.64	30.3	0.03			251	
268	9.20	9.17	34.315	26.555	152.7	0.527	0.99	15.3	43.0	2.63	30.5	0.03			270	205
300 ISL	8.98	8.95	34.317	26.592	149.7	0.576	0.95	14.6	44.9	2.67	31.0	0.03			302	
317	8.85	8.82	34.316	26.612	148.0	0.601	0.94	14.4	46.0	2.71	31.3	0.03			319	204
377	8.59	a.55	34.335	26.668	143.7	0.689	0.77	11.7	49.1	2.85	32.1	0.02			379	203
400 ISL	8.36	8.32	34.325	26.696	141.3	0.721	0.77	11.7	51.2	2.89	32.7	0.02			403	
435	7.93	7.89	34.303	26.744	137.1	0.770	0.76	11.4	55.1	2.93	33.9	0.01			438	202
500 ISL	7.01	6.96	34.269	26.848	127.3	0.856	0.73	10.7	64.8	2.99	36.7	0.01			503	
513	6.83	6.78	34.264	26.869	125.4	0.873	0.72	10.5	66.7	3.00	37.2	0.01			517	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 35

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	VEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 4C1.8 N	117 52.7 W	07/07/95	0634 UTC	603 in	310 08 kn			1015.1 mb	16..8 C	16.. 5 C				

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	OYN HT	OXYGEN ml/I	OXY PCT	SI03 uN/I	P04 UN/L	N03 uN/l	N02 UN/I	CHL-A ug/I	PHAEO ug/l	PRES db	SANP
0	ISL	17.47	17.47	33.190	24.015	388.6	0.000	5.79	105.7	3.2	0.34	0.1	0.00	0.19	0.05	0	
1		17.47	17.47	33.190	24.015	398.6	0.004	5.79	105.7	3.2	0.34	0.1	0.00	0.19	0.05	1	220
9		16.60	16.60	33.218 '	24.241	367.3	0.034	5.92	106.3	3.4	0.35	0.1	0.00	0.16	0.05	9	219
10	ISL	16.47	16.47	33.222	24.275	364.2	0.038	5.95	106.5	3.4	0.35	0.1	0.00	0.17	0.05	10	
20		15.16	15.16	33.266	24.602	333.3	0.073	6.21	108.4	3.6	0.36	0.1	0.01	0.31	0.10	20	218
29		14.32	14.32	33.312	24.818	313.0	0.102	6.26	107.4	3.5	0.40	0.4	0.06	0.72	0.27	29	217
30	ISL	14.29	14.29	33.314	24.825	312.3	0.105	6.25	107.2	3.6	0.40	0.5	0.07	0.78	0.29	30	
40		14.00	13.99	33.345	24.910	304.5	0.136	6.10	104.0	4.1	0.44	1.1	0.12	1.10	0.44	40	216
49		13.28	13.27	33.435	25.127	284.1	0.162	5.58	93.8	6.2	0.66	4.3	0.38	0.75	0.53	49	215
50	ISL	13.21	13.20	33.441	25.146	282.3	0.165	5.53	92.8	6.3	0.68	4.6	0.37	0.70	0.52	50	
59		12.60	12.59	33.481	25.297	268.1	0.190	5.12	84,9	7.6	0.81	7.3	0.20	0.34	0.41	59	214
69		11.83	11.82	33.516	25.471	251.7	0.216	4.76	77.6	10.1	1.00	10.4	0.07	0.23	0.22	69	213
75	ISL	11.51	11.50	33.520	25.533	245.9	0.231	4.64	75.2	11.3	1.09	11.8	0.05	0.19	0.17	75	
83		11.17	11.16	33.524	25.598	239.9	0.250	4.52	72.7	12.8	1.20	13.4	0.03	0.15	0.15	83	212
99		10.53	10.52	33.580	25.755	225.2	0.287	4.23	67.1	15.5	1.34	15.9	0.02	0.08	0.10	99	211
100	ISL	10.50	10.49	33.583	25.763	224.5	0.290	4.21	66.7	15.7	1.35	16.1	0.02	0.08	0.10	100	
119		9.89	9.88	33.663	25.929	209.0	0.331	3.80	59.5	20.6	1.61	19.7	0.01	0.03	0.07	120	210
125	ISL	9.68	9.67	33.702	25.995	202.9	0.343	3.63	56.6	22.3	1.68	20.9	0.01	0.02	0.07	126	
139		9.24	9.22	33.793	26.137	189.5	0.371	3.27	50.5	26.0	1.83	23.4	0.01	0.01	0.07	140	209
150	ISL	8.99	8.97	33.840	26.214	182.3	0.391	3.16	48.5	28.0	1.89	24.5	0.01	0.01	0.07	151	
168		8.68	8.66	33.898	26.308	173.7	0.423	3.07	46.8	30.7	1.97	25.6	0.01	0.01	0.07	169	208
198		8.27	8.25	33.990	26.444	161.3	0.473	2.69	40.7	36.2	2.19	27.9	0.01	0.03	0.06	199	207
200	ISL	8.25	8.23	33.994	26.450	160.7	0.477	2.68	40.5	36.4	2.20	28.0	0.01			201	
229		8.02	8.00	34.035	26.517	154.8	0.522	2.52	37.9	39.4	2.25	29.1	0.01			230	206
250	ISL	7.78	7.76	34.065	26.576	149.5	0.554	2.26	33.8	43.4	2.34	30.4	0.01			251	
267		7.59	7.56	34.087	26.621	145.4	0.579	2.03	30.2	46.9	2.43	31.6	0.01			269	205
300	ISL	7.33	7.30	34.126	26.689	139.4	0.626	1.67	24.7	52.2	2.59	33.3	0.01			302	
317		7.20	7.17	34.140	26.718	136.8	0.650	1.51	22.3	54.8	2.66	34.1	0.01			319	204
377		6.58	6.55	34.145	26.807	128.9	0.729	1.12	16.3	64.1	2.87	36.9	0.01			379	203
400	ISL	6.47	6.43	34.166	26.838	126.2	0.759	0.97	14.1	67.0	2.93	37.6	0.01			403	
437		6.36	6.32	34.207	26.885	122.2	0.805	0.75	10.9	71.1	3.02	38.4	0.01			440	202
500	ISL	6.07	6.03	34.273	26.975	114.3	0.879	0.44	6.3	77.7	3.16	39.8	0.00			503	
511		6.02	5.98	34.285	26.991	112.9	0.892	0.39	5.6	78.9	3.18	40.1	0.00			514	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 40

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
32 30I.8 N	118 12.8 U	07/07/95	1043 UTC	1654 in	320 06 kn			1014.3 mb	16..2 C	16..2 C				

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGHA THETA	SVA	OYN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 UN/I	N03 UN/I	N02 uN/L	CHL-A u_a/i	PHAEO ug/I	PRES db	SAHP
0	ISL	17.25	17.25	33.244	24.109	379.7	0.000	5.80	105.5	3.6	0.35	0.2	0.00	0.23	0.06	0	
1		17.25	17.25	33.244	24.109	379.7	0.004	5.80	105.5	3.6	0.35	0.2	0.00	0.23	0.06	1	220
10	ISL	16.43	16.43	33.231	24.291	362.7	0.037	5.97	106.8	3.8	0.36	0.2	0.01	0.27	0.0a	10	
16		15.53	15.53	33.235	24.497	343.2	0.058	6.10	107.2	3.9	0.37	0.2	0.01	0.29	0.10	16	219
20	ISL	14.94	14.94	33.251	24.638	329.8	0.072	6.06	105.3	4.3	0.40	0.5	0.09	0.38	0.16	20	
30		13.63	13.63	33.323	24.969	298.6	0.103	5.95	100.7	5.2	0.52	1.9	0.28	0.71	0.36	30	213
44		13.03	13.02	33.450	25.188	278.1	0.144	5.37	89.8	5.7	0.71	5.1	0.25	1.39	0.67	44	217
50	ISL	12.61	12.60	33.443	25.265	270.9	0.160	5.19	86.0	7.4	0.82	7.3	0.14	0.92	0.48	50	
54		12.34	12.33	33.436	25.312	266.5	0.171	5.09	83.9	8.7	0.90	8.7	0.06	0.54	0.32	54	216
64		11.90	11.89	33.486	25.434	255.1	0.197	4.84	79.0	10.6	1.06	11.0	0.02	0.18	0.17	64	215
74		11.36	11.35	33.526	25.565	242.8	0.222	4,57	73.a	11.9	1.13	12.6	0.03	0.12	0.13	74	214
75	ISL	11.31	11.30	33.530	25.577	241.7	0.224	4.55	73.4	12.1	1.14	12.8	0.03	0.12	0.13	75	
84		10.89	10.88	33.564	25.679	232.1	0.246	4.35	69.5	14.2	1.28	14.8	0.02	0.OS	0.09	84	213
95		10.44	10.43	33.591	25.779	222.8	0.271	4.18	66.2	16.2	1.38	16.6	0.02	0.05	0.09	95	212
100	ISL	10.26	10.25	33.615	25.829	218.2	0.282	4.07	64.2	17.5	1.45	17.5	0.02	0.04	0.09	100	
110		9.99	9.98	33.673	25.920	209.7	0.303	3.77	59.1	20.1	1.59	19.5	0.01	0.03	0.08	111	211
124		9.82	9.81	33.760	26.017	200.8	0.332	3.21	50.2	23.3	1.78	22.1	0.01	0.01	0.07	125	210
125	ISL	9.81	9.80	33.768	26.025	200.0	0.334	3.17	49.6	23.5	1.80	22.3	0.01	0.01	0.07	126	
145		9.59	9.57	33.923	26.182	185.4	0.372	2.61	40.6	28.1	2.oa	25.1	0.01	0.01	0.07	146	209
150	ISL	9.52	9.50	33.951	26.216	182.4	0.381	2.54	39.5	29.0	2.11	25.5	0.01	0.01	0.07	151	
170		9.23	9.21	34.030	26.325	172.4	0.417	2.38	36.8	32.0	2.17	26.7	0.01	0.01	0.08	171	208
199		8.78	8.76	34.074	26.431	162.7	0.466	2.32	35.5	35.6	2.27	27.8	0.01	0.01	0.07	200	207
200	ISL	8.76	8.74	34.073	26.434	162.5	0.467	2.32	35.5	35.7	2.27	27.8	0.01			201	
228		8.12	8.10	34.057	26.519	154.6	0.512	2.39	36.0	39.3	2.32	29.0	0.01			229	206
250	ISL	7.92	7.89	34.091	26.576	149.6	0.545	2.14	32.1	43.3	2.40	30.4	0.01			251	
268		7.81	7.78	34.125	26.619	145.8	0.572	1.87	28.0	46.8	2.48	31.6	0.01			270	205
300	ISL	7.42	7.39	34.143	26.689	139.4	0.617	1.53	22.7	52.7	2.63	33.5	0.00			302	
317		7.20	7.17	34.148	26.724	136.2	0.641	1.38	20.4	55.6	2.71	34.4	0.00			319	204
377		6.71	6.68	34.181	26.818	127.9	0.720	0.96	14.0	64.3	2.88	36.a	0.00			379	203
400	ISL	6.52	6.48	34.194	26.854	124.7	0.749	0.84	12.2	67.4	2.93	37.6	0.00			403	
436		6.26	6.22	34.218	26.907	120.0	0.793	0.67	9.7	72.0	3.01	38.8	0.00			439	202
500	ISL	6.04	6.00	34.287	26.990	112.9	0.868	0.41	5.9	78.5	3,17	39.9	0.00			503	
516		5.99	5.94	34.304	27.010	111.1	0.885	0.35	5.0	80.1	3.21	40.2	0.00			520	201

RV DAVID STARR JORDAN | CALCOFI CRUISE 9507 | STATION 93 45

LATITUDE	LONGITUDE	OAY/MO/YR	CAST TIKE	BOTTOM	UIND SPEED	UAVES	UEA	BAROMETER	DRY	UET	SECCHI/FOREL	CLD ANT	TYPE
32 21.2 N	118 33.7 y	07/07/95	1446 UTC	1350 •	170 04 kn	250 01 07	2	1016.9 1Kb	16_0 C	16_0 C	22m 02	8/8	ST

DEPTH •	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN .1/1	OXY PCT	SI03 uM/ I	P04 un/1	N03 UM/1	N02 uM/ L	CHL-A ug/ I	PHAEO ug/ I	PRES db	SANP
0 ISL	16.32	16.32	33.288	24.359	355 .8	0 .000	5 .89	105.2	3.5	0.37	0.2	0. 01	0 .40	0.10	0	
1	16.32	16.32	33.288	24.359	355 . S	0 .004	5 .89	105.2	3 .5	0.37	0.2	0.01	0 .40	0.10	1	220
10 ISL	15.99	15.99	33.339	24.474	345 .2	0.035	5 .95	105.6	3 . 1	0. 40	0.3	0.03	0 . 38	0.11	10	
15	15.70	15.70	33.378	24 . 569	336.3	0.052	5 . 99	105.7	2 . 9	0 . 44	0. 5	0.05	0.37	0.12	1 5	219
20 ISL	15.53	15.53	33.398	24 . 622	331 .3	0.069	6 . 01	105.7	2 .9	0 . 47	0. 7	0. 06	0.38	0.13	20	
30	14.98	14.98	33.416	24.757	318.8	0.101	6.06	105.5	3 . 0	0.57	1 . 5	0. 09	0.40	0.14	30	21 8
43	12.99	12 .98	33.414	25.168	280.0	0.146	5 .76	96.2	5 .9	0.89	5 .0	0. 33	0. 78	0.41	45	21 7
50 ISL	12.64	12.63	33.427	25.247	272 . 6	0.160	5 .66	93 .9	6 . 6	0.95	6 . 0	0. 34	0.68	0 . 37	50	
55	12.37	12.36	33.450	25.317	266 . 0	0.174	5.50	90.7	7 . 7	1 .01	7.2	0 . 36	0. 53	0. 31	55	216
65	11.89	11.88	33.540	25.478	250.9	0.199	4 .84	79 . 1	13.1	1 .26	11.8	0 . 56	0.32	0.23	65	21 5
7*	11.16	11.15	33.548	25.618	237.7	0.221	4 . 40	70.8	15.2	1 .36	15.3	0.06	0.18	0.17	74	214
75 ISL	11.07	11.06	33.550	25 . 636	236.0	0.224	4 . 35	69 . 8	15.4	1 .38	15.6	0 .06	0.17	0.16	75	
14	10.28	10.27	33.583	25.800	220. 5	0.244	4 . 03	63 . 6	17.2	1.51	17.4	0.04	0.09	0.11	84	213
94	9.67	9. 66	33.634	25.942	207. 1	0.266	3 . 96	61.7	19.9	1 .56	19.4	0.02	0. 04	0.10	94	212
100 ISL	9. 48	9.47	33.651	25.987	203 . 0	0.278	3. 91	60. 6	20.6	1 . 58	19.9	0. 02	0.04	0 . 09	100	
IIO	9. 30	9.29	33.693	26.049	197.3	0 .298	3.83	59.2	22 . 0	1 . 65	20. 7	0 . 03	0.03	0. 03	111	21 1
125 ISL	9.09	9 .08	33.849	26.205	182.7	0.326	3. 09	47 . 6	28.1	1 .93	24 . 3	0 .02	0 . 02	0.09	126	
126	9.08	9 . 07	33.861	26.216	181.7	0.328	3 . 03	46.6	28.5	1.95	24 .6	0 . 02	0 .02	0. 09	127	210
146	9.01	8. 99	34.010	26.344	170.0	0.363	2.48	38 . 1	32 . 7	2.13	26.8	0.03	0.01	0.10	147	209
150 ISL	8.98	8. 96	34.021	26.358	168.8	0. 370	2.45	37.7	33 . 1	2.14	27.0	0.03	0.01	0.10	1 51	
168	8.85	8.83	34.051	26.402	164.9	0. 400	2 . 39	36.6	34 . 5	2.16	27.6	0. 02	0.01	0 .08	169	208
199	8 .86	8.84	34.167	26.492	157.0	0. 450	1 . 78	27.3	39 . 1	2 .37	29.3	0 . 02	0.01	0 .08	200	207
200 ISL	8.84	8.82	34.166	26 . 494	156.8	0.452	1 . 78	27.3	39 .2	2 . 37	29.3	0 . 02			201	
230	8.09	8.07	34.130	26.581	148.8	0.498	1 . 94	29 2	43. 4	2 . 39	30. 5	0 . 03			231	206
250 ISL	7.86	7.83	34.147	26.629	144.5	0.527	1 . 73	25.9	46 . 9	2 .48	31.6	0 .02			251	
270	7.74	7.71	34.178	26.671	140.8	0.555	1 . 43	21.4	50 . 5	2 . 59	32 . 8	0.01			272	205
300 ISL	7.62	7.59	34.227	26.727	136.0	0 . 597	1 .08	16.1	54.7	2 .73	34 .0	0.01			302	
320	7. 50	7.47	34.250	26.762	132.9	0.624	0.90	13.4	57.4	2 .81	34 . 7	0.01			322	204
378	6.53	6.50	34.199	26.856	124.2	0.698	0.82	11.9	67 .6	2 . 91	37.7	0.01			380	203
400 ISL	6.4 0	6.36	34.221	26.891	121.1	0.725	0. 70	10.1	70. 5	2 . 96	38 .3	0.01			403	
439	6.27	6.23	34.271	26.947	116.2	0. 772	0 . 47	6 .8	74 . 9	3 . 05	39. 1	0.00			442	202
500 ISL	5 .92	5 . 88	34.296	27.012	110.6	0.841	0 . 39	5 . 6	SO . 8	3.24	40.3	0. 00			503	
513	5.85	5 .81	34.301	27.025	109.5	0.855	0 . 37	5.3	82 . 1	3.28	40 . 6	0 .00			51 7	201

RV DAVID STARR JORDAN | CALCOFI CRUISE 9507 | STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	UIND SPEED	WAVES	UEA	8AR0METER	DRY	UET	SECCHI/FOREL	CLD AMT	TYPE
32 r1.0 N	118 53.2 U	07/07/95	1911 UTC	1457 *m*	210 06 kn	290 02 07	2	1017.8 mb	17.2 C	16_5 C	15m 03	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN fiil/L	OXY PCT	S I03 uM/ L	P04 UM/ I	N03 uM/ I	N02 UM/ I	CHL-A ug/L	PHAEO ug/t	PRES db	SAMP
0 ISL	16.72	16.72	33.574	24.486	343 . 7	0. 000	5 .32	105.0	4 .0	0. 36	0. 1	0 .00	0.52	0.14	0	
1 A	16.72	16.72	33.574	24 . 487	343 . 7	0 . 003	5 . 82	105.0	4 .0	0. 36	0. 1	0.00	0 . 52	0.14	1	220
1	16.76	16.76	33.574	24.477	344 . 6	0 .003									1	221
9 A	16.14	16.14	33.571	24.618	331.4	0 .030	5 . S2	103.8	4 . 1	0 . 36	0. 1	0.00	0.44	0.14	9	219
10 ISL	15.92	15.92	33.566	24.664	327.1	0 .034	5 . 82	103.3	4 . 2	0.37	0 . 2	0. 01	0.45	0.15	10	
20 A	13.44	13.44	33.542	25.177	278.5	0.064	5 . 79	97. 7	5 . 7	0. 63	3. 5	0.11	0. 67	0.33	20	218
30 A	11.93	11.93	33.553	25.430	249.9	0. 090	4 . 77	78. 0	12.3	1 . 06	10.7	0.29	0.81	0.55	30	217
40 A	10.88	10.88	33.642	25.741	225.3	0.114	3.33	61.3	17.0	1.41	16.3	0 .22	0 . 63	0.37	40	216
48	10.45	10.44	33.670	25.838	216.2	0.132	3.53	55.9	19.7	1,56	19.2	0 .07	0.49	0 . 33	48	21 5
50 ISL	10.41	10.40	33.673	25.847	215.3	0.136	3.50	55.4	19.9	1,56	19.5	0.07	0.47	0. 32	50	
56 A	10.32	10.31	33.682	25.870	213.3	0.149	3 .47	54.8	20. 4	1.58	19.8	0.08	0-43	0.28	56	214
70	9.93	9 . 92	33 . 724	25.969	204 . 1	0 17 8	3 .33	52.2	22 .9	1,66	21.2	0.02	0.16	0.14	70	213
75 ISL	9 . 74	9 . 73	33.741	26.014	199.9	0.188	3.29	51.3	23.8	1 . 69	21.8	0. 02	0.11	0.14	75	
85	9. 38	9 . 37	33.785	26.108	191.2	0 . 208	3.19	49,4	25.7	1.75	23.1	0. 03	0.05	0.13	85	212
100	9.17	9.16	33.889	26.223	180.5	0.236	2 . 87	44.3	23.9	1.91	24.9	0. 02	0.03	0 . 09	101	21 1
120	9.10	9 . 09	3 3.996	26.318	171.9	0.271	2.52	38 . 8	32 . 0	2 . 00	26.4	0. 01	0.01	0 . 09	121	210
125 ISL	9 .00	8.99	34.014	26.349	169.1	0.230	2 . 48	38 . 1	32 . 9	2 .06	26.7	0 . 01	0. 01	0 . 09	1 26	
139	8 . 68	8 . 67	34.050	26.427	161.9	0.303	2.41	36 . 8	35.2	2.24	27.6	0.01	0.01	0. 09	1 40	209
150 ISL	8 . 52	8 . 50	34.063	26.462	158.7	0.320	2 . 37	36 . 1	36 . 8	2 . 34	28.1	0.01	0.01	0.08	1 51	
170	8 . 30	8.28	3 4.075	26.505	154.9	0.352	2 . 30	34 . 3	39 . 3	2.44	23.3	0.01	0.01	0. 07	1 71	208
200	8 .03	8.01	34.101	26.567	149.6	0 . 397	2 . 07	31.2	42.6	2 .40	30. 1	0.01	0.01	0.06	201	207
230	7 . 68	7 . 66	34.121	26.634	143.6	0.441	1,81	27.0	47.7	2 . 61	31.8	0.01			231	206
250 ISL	7.53	7.51	34.145	26.675	140.0	0.470	1-53	23.5	50.9	2 . 63	32 . 8	0. 01			252	
268	7.41	7 . 38	34.165	26.708	137.1	0.495	1 . 39	20.6	53.6	2.65	33 . 6	0.01			270	205
300 ISL	7.12	7 . 09	34.173	26.755	133.0	0.538	1 . 20	17.7	58.0	2 .73	34 . 9	0. 00			302	
319	6 . 95	6 . 92	34.177	26.782	130.6	0.563	1.11	16.3	60 . 4	2 . 79	35.6	0 . 00			321	204
377	6 . 67	6 . 64	34.236	26.867	123.3	0 . 637	0 . 69	10.1	67 . 5	3 . 00	37 . 3	0. 00			379	203
400 ISL	6.47	6 . 43	34.246	26.901	120.2	0 . 665	0.61	8.9	70 . 6	3 . 04	38 . 1	0. 00			403	
435	6.17	6.13	34.256	26.948	116.0	0 . 706	0 . 54	7 .8	75 . 3	3 . 07	39 . 2	0. 00			438	202
500 ISL	5 .85	5.81	34.283	27.014	110.3	0 . 779	0 . 33	5 .4	82 . 0	3.16	40.4	0 . 00			503	
513	5 . 78	5 . 74	34.295	27.029	109.1	0 . 794	0.35	5 . 0	S3 . 3	3,18	40.6	0 . 00			51 7	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 55

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTOM	MIND SPEED	HAVES	UEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
32 1.0 N	119 13.6 W	07/07/95	2359 UTC	1575 *m*	290 05 kn	290 02 08	2	1015.3 mb	18.1 C	16.. 8 C	25m 02	8/8	ST

DEPTH in		TENP PES t	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	OTN HT	OXYGEN ml/I	OXY PCT	SI03 UN/I	P04 uN/I	N03 UN/I	N02 UN/L	CHL-A ug/I	PHAEO ug/l	PRES db	SANP
0	ISL	16.86	16.86	33.557	24.441	348.0	0.000	5.86	106.0	3.0	0.37	0.2	0.01	0.42	0.11	0	
1		16.85	16.85	33.557	24.443	347.8	0.003									1	221
1		16.86	16.86	33.557	24.441	348.1	0.003	5.86	106.0	3.0	0.37	0.2	0.01	0.42	0.11	1	220
10		16.58	16.58	33.552	24.502	342.5	0.035	5.86	105.4	2.9	0.38	0.3	0.01	0.40	0.11	10	219
20		16.23	16.23	33.544	24.577	335.7	0.068	5.89	105.2	2.9	0.42	0.6	0.03	0.33	0.15	20	218
30		14.35	14.35	33.578	25.017	294.1	0.100	6.22	107.0	2.6	0.53	1.6	0.07	0.47	0.24	30	217
39		13.33	13.32	33.592	25.238	273.2	0.125	5.95	100.2	4.4	0.74	4.0	0.14	0.63	0.52	39	216
49		12.21	12.20	33.575	25.444	253.8	0.152	5.11	84.1	10.6	1.15	9.0	0.32	0.44	0.30	49	215
50	ISL	12.11	12.10	33.576	25.464	251.9	0.154	5.04	82.7	11.2	1.18	9.5	0.35	0.41	0.28	50	
60		11.27	11.26	33.590	25.631	236.2	0.179	4.49	72.4	15.7	1.40	13.8	0.57	0.13	0.11	60	214
70		10.78	10.77	33.576	25.708	229.1	0.202	4.36	69.5	17.3	1.47	16.0	0.65	0.14	0.16	70	213
75	ISL	10.52	10.51	33.603	25.774	222.8	0.213	4.12	65.4	18.8	1.54	17.7	0.44	0.11	0.15	75	
84		10.06	10.05	33.669	25.905	210.6	0.233	3.66	57.5	21.7	1.68	20.6	0.03	0.06	0.12	84	212
100		9.40	9.39	33.749	26.077	194.5	0.265	3.40	52.7	25.3	1.80	22.7	0.02	0.03	0.13	100	211
121		8.74	8.73	33.816	26.234	179.8	0.305	3.43	52.4	27.8	1.84	23.9	0.03	0.01	0.10	122	210
125	ISL	8.72	8.71	33.840	26.256	177.8	0.312	3.36	51.3	28.5	1.87	24.3	0.03	0.01	0.10	126	
139		8.65	8.64	33.912	26.324	171.7	0.336	3.02	46.0	31.1	1.99	25.7	0.02	0.01	0.09	140	209
150	ISL	8.70	8.68	33.985	26.373	167.2	0.355	2.70	41.2	33.1	2.08	26.7	0.02	0.01	0.09	151	
168		8.77	8.75	34.088	26.443	160.9	0.384	2.23	34.1	36.3	2.21	28.2	0.03	0.01	0.08	169	208
199		8.45	8.43	34.138	26.532	153.0	0.433	1.93	29.3	40.9	2.34	29.7	0.03	0.01	0.07	200	207
200	ISL	8.44	8.42	34.140	26.536	152.7	0.434	1.92	29.2	41.0	2.34	29.8	0.03			201	
230		8.22	8.20	34.189	26.608	146.3	0.479	1.56	23.6	45.4	2.49	31.4	0.02			231	206
250	ISL	7.97	7.94	34.210	26.662	141.4	0.508	1.33	20.0	49.4	2.60	32.5	0.01			251	
269		7.71	7.68	34.223	26.710	137.0	0.535	1.14	17.0	53.3	2.69	33.6	0.01			271	205
300	ISL	7.30	7.27	34.230	26.775	131.2	0.576	0.96	14.2	58.6	2.80	35.1	0.00			302	
318		7.09	7.06	34.230	26.804	128.6	0.600	0.89	13.1	61.3	2.85	35.3	0.00			320	204
378		6.64	6.61	34.240	26.874	122.6	0.675	0.67	9.8	68.0	2.97	37.6	0.00			380	203
400	ISL	6.45	6.41	34.249	26.906	119.7	0.702	0.59	8.6	71.0	3.02	38.3	0.00			403	
438		6.14	6.10	34.269	26.962	114.7	0.746	0.47	6.8	76.1	3.09	39.5	0.00			441	202
500	ISL	5.86	5.82	34.312	27.032	108.7	0.815	0.34	4.9	82.2	3.17	40.6	0.00			503	
512		5.80	5.76	34.320	27.046	107.4	0.828	0.31	4.4	83.4	3.19	40.8	0.00			516	201

RV DAVIE1 STARR JORDAN CALCOFI CRUISE 9507 STATION 93 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TINE	BOTTON	WIND SPEED	WAVES	WEA	BARONETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE
31 50.6 N	119 34.0 W	08/07/95	0506 UTC	1803 m	230 05 kn			1016.0 mb	16.8 C	15.9 C				

DEPTH m		TENP DEG C	POT TENP DEG C	SALINITY	SIGNA THETA	SVA	D YN HT	OXYGEN ml/I	OXY PCT	SI03 uN/I	P04 UN/I	N03 UN/I	N02 UN/I	CHL-A ug/l	PHAEO ug/I	PRES db	SANP
0	ISL	17.20	17.20	33.504	24.320	339.5	0.000	5.85	106.4	3.7	0.40	0.5	0 02	0.31	0.08	0	
1		17.20	17.20	33.504	24.320	359.6	0.004	5.85	106.4	3.7	0.40	0.5	0.02	0.31	0.08	1	220
10		16.26	16.26	33.486	24.525	340.3	0.035	5.91	105.6	3.6	0.48	1.4	0.06	0.31	0.08	10	219
19		15.58	15.58	33.537	24.718	322.2	0.065	6.06	106.8	3.5	0.51	1.7	0.08	0.83 U	0.21 U	19	218
20	ISL	15.57	15.57	33.540	24.723	321.8	0.068	6.07	107.0	3.5	0.51	1.7	0.08	0.42	0.12	20	
30		15.26	15.26	33.539	24.791	315.6	0.100	6.11	107.0	3.5	0.54	2.2	0,10	0.59	0.20	30	217
39		13.81	13.80	33.513	25.079	288.4	0.127	6.15	104.6	3.8	0.64	3.5	0.16	0.76	0.33	39	216
49		13,08	13.07	33.558	25.262	271.2	0.155	6.03	101.0	4.7	0.79	5.0	0.24	0.79	0.51	49	215
50	ISL	13.01	13.00	33.553	25.272	270.2	0.158	5 98	100.0	5.2	0.81	5.3	0.26	0.79	0.51	50	
59		12.32	12.31	33.504	25.369	261.2	0.182	5.38	88.7	9.8	0.98	8.5	0.39	0.72	0.44	59	214
69		11.51	11.50	33.544	25.552	244.0	0.207	4.61	74.7	13.2	1.22	12.8	0.28	0.55	0.41	69	213
75	ISL	11.04	11.03	33.583	25.667	233.1	0.221	4 22	67.7	15.4	1.35	15.3	0.18	0.48	0.35	75	
84		10.45	10.44	33,646	25.820	218.7	0.242	3.75	59.4	18.5	1.53	18.4	0.04	0.37	0.25	84	212
99		9.89	9.88	33.722	25.975	204.2	0.273	3.32	52.0	22.3	1.73	21.4	0.02	0.14	0.14	99	211
100	ISL	9.85	9.84	33.727	25.985	203.2	0.275	3.31	51.8	22.6	1.74	21.6	0.02	0.13	0.14	100	
118		9.23	9.22	33.830	26.168	186,2	0.310	3.11	48.0	27.0	1.91	24.0	0.01	0.03	0.09	119	210
125	ISL	9.22	9.21	33.878	26.207	182.6	0.323	2.97	45.9	28.3	1.96	24.7	0.01	0.03	0.09	126	
138		9.20	9.18	33.947	26.264	177.4	0.347	2.69	41.5	30.5	2.04	25.8	0.01	0.02	0.09	139	209
150	ISL	9.03	9.01	33.998	26.332	171.2	0.368	2.53	38.9	32.6	2.10	26.7	0.01	0.02	0.10	151	
168		8.75	8.73	34.060	26.425	162.7	0.398	2.34	35.8	35.6	2.18	27.8	0.02	0.01	0.12	169	208
198		8.62	8.60	34.141	26.509	155.3	0.445	1.92	29.3	39.7	2.33	29.2	0.02	0.01	0.07	199	207
200	ISL	8.60	8.58	34.144	26.514	154.8	0.449	1.90	29.0	40.0	2.34	29.3	0.02			201	
228		8.32	8.30	34.171	26.579	149.1	0.491	1.68	25.5	43.9	2.48	30.7	0.02			229	206
250	ISL	8.06	8.03	34.177	26.623	145.2	0.523	1.54	23.2	47.0	2.56	31,7	0.02			251	
269		7.83	7.80	34.178	26.657	142.1	0.551	1.43	21.4	49.8	2.62	32.5	0.02			271	205
300	ISL	7.45	7.42	34.185	26.718	136.7	0.594	1.24	18.4	54.6	2.71	33.9	0.01			302	
319		7.24	7.21	34.193	26.754	133.4	0.620	1.12	16.6	57.6	2.76	34.8	0.00			321	204
377		6.79	6.75	34.238	26.852	124.8	0.695	0.74	10.8	66.4	2.93	37.0	0,00			379	203
400	ISL	6.59	6.55	34.246	26.885	121.8	0.723	0.65	9.5	69.4	2.99	37.8	0.00			403	
439		6.26	6.22	34.259	26.939	117.0	0.769	0.53	7.7	74.2	3.07	38.9	0.00			442	202
500	ISL	5.91	5.87	34.308	27.023	109.6	0.839	0.37	5.3	81.7	3.17	40.2	0.00			503	
513		5.84	5.80	34.319	27.040	108.1	0.853	0.33	4.7	83.3	3.19	40.5	0.00			517	201

IV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 70

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	UAVES	WEA	BAROMETER	DRY	yET	SECCHI/FOREL	CLD AMT	TYPE
!1 30.5 N	120 14.5 y	08/07/95	1117	UTC	3924 in	240	03 kn			1016.0 mb	15.. 3 C	15.2 C			

OEPTH II	TEMP DEG C	POT TENP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ l	OXY PCT	SI03 uM/ l	P04 uN/ l	N03 u«/ l	N02 UM/ l	CHL-A ug/ l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.23	16.23	33.074	24.215	369.5	0.000	6.00	106.S	3 .2	0.39	0.6	0.04	0.28	0.09	0	
1	16.23	16.23	33.074	24.215	369 .5	0. 004	6.00	106.8	3.2	0. 39	0.6	0.04	0.28	0.09	1	220
' 10	15.42	15.42	33.008	24.346	357.3	0. 036	6.01	105.3	3.0	0. 34	0 .2	0. 01	0.29	0.09	10	219
20 ISL	15.27	15.27	33.018	24.387	353.8	0.072	5 .97	104.2	2 .8	0.32	0. 1	0. 00	0.23	0 . 06	20	
21	15.25	15.25	33.017	24.391	353.4	0 .075	5.96	104.0	2.8	0.32	0. 1	0 . 00	0.22	0 . 06	21	218
30 ISL	15.28	15.28	33.126	24.468	346.3	0.107	5.91	103.3	2 .9	0.32	0. 1	0 . 00	0.21	0 . 08	30	
31	15.28	15.28	33.140	24.479	345.3	0.110	5.91	103.3	2 .9	0.32	0. 1	0.00	0.21	0. OS	31	217
40	14.40	14.39	33.004	24.563	337. 5	0.141	6.10	104.6	2 .9	0.35	0.2	0 .02	0. 47	0.20	40	216
49	13.56	13.55	33.068	24.786	316.4	0.171	6.14	103.6	3 .0	0 . 44	0.9	0 .08	0.55	0. 33	49	215
SO ISL	13.49	13.48	33.082	24.812	314.1	0.174	6.14	103.4	3 .0	0 . 45	1 . 1	0.09	0.56	0.34	50	
59	12.98	12.97	33.197	25 .002	296. 1	0.201	6 .04	100.7	4 .2	0.61	3 .0	0.22	0 . 60	0. 38	59	214
69	12.48	12.47	33.209	25.109	286 . 1	0.230	5 .76	95 . 1	7 .8	0 . 84	6.3	0.34	0 . 34	0.29	69	213
75 ISL	12.35	12.34	33.219	25.142	283.2	0.247	5 .72	94. 1	8 .9	0.91	7 . 1	0.36	0.24	0.25	75	
15	12.21	12.20	33.279	25.216	276.4	0.275	5 . 66	92 . 9	9 .8	0 . 97	8 .5	0.39	0.14	0.20	85	212
99	11.90	11.89	33.516	25.458	253.7	0.312	4. 74	77.4	10.8	1.01	10.6	0.11	0.12	0.17	99	211
100 ISL	11.85	11.84	33.523	25.473	252.3	0.315	4 .71	76. 8	11.0	1 .03	10.9	0.11	0.12	0.17	100	
120	10.67	10.66	33.573	25.726	228.5	0 . 363	4 .32	68. 7	16.6	1 . 40	16.3	0.17	0.05	0.10	121	210
125 ISL	10.41	10.40	33.577	25.774	224.0	0 . 374	4.20	66.4	17.5	1.45	17.2	0.13	0.04	0 . 09	126	
139	9.76	9 . 74	33.599	25.901	212.0	0 . 405	3 . S7	60.4	19.9	1.55	19.4	0. 01	0.03	0 . 07	140	209
150 ISL	9.39	9 . 37	33.662	26.011	201.7	0.428	3.69	57.1	22 .2	1 .65	21.0	0.01	0.02	0 . 06	151	
170	8.87	8 . 35	33.794	26.197	184.3	0 . 466	3.45	52 .8	26.6	1 . 80	23.4	0.01	0.01	0 . 04	171	208
199	8.26	8.24	33.90S	26.381	167.2	0.517	3.23	48. 8	32. 1	1 .92	25.8	0.01	0 .00	0.03	200	207
200 ISL	8.24	8.22	33.911	26.386	166.7	0.519	3.22	48. 6	32. 3	1 .93	25.9	0.01			201	
230	7.85	7.83	33.986	26.503	156.0	0.567	2. 82	42 .2	38.1	2.10	28.3	0 .00			231	206
250 ISL	7.61	7. 59	34.014	26 . 560	150.8	0.598	2 . 60	38.7	41.6	2.21	29 .6	0.00			251	
269	7. 40	7.37	34.032	26 .604	146.9	0.626	2 .39	35 . 4	45.0	2 . 30	30.8	0.00			271	205
300 ISL	7.08	7.05	34.061	26.672	140.8	0.671	2 .00	29.4	51.0	2.45	32 .9	0.00			302	
318	6.91	6 . 88	34.075	26.707	137.7	0. 696	1 .78	26. 1	54.5	2.53	34 . 0	0.00			320	204
376	6.40	6 . 37	34.110	26.803	129.1	0. 773	1 .23	17.8	64 . 4	2 . 77	36.9	0.00			378	203
(00 ISL	6.25	6.21	34.142	26.848	125.0	0. 804	1 .00	14.4	68 . 6	2 . 90	37.9	0. 00			402	
43S	6.06	6 . 02	34.195	26.914	119.2	0. 850	0 .68	9.8	74 . 6	3 .07	39 .2	0.00			441	202
500 ISL	5 .82	5 . 78	34.251	26.989	112.7	0. 922	0 . 46	6.6	80 . 9	3.11	40 . 3	0. 00			503	
514	5 .76	5 . 72	34.264	27.007	111.1	0. 938	0.41	5 .9	82 . 3	3.12	40 . 6	0. 00			517	201

•V DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TINE	BOTTOM	yINO	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 1-1.8 N	120 55.2 y	08/07/95	1822	UTC	3812 *m*	330	10 kn	330 02 05;	2	1017.5 mb	17.6 C	16.. 9 C	34m 01	8/8	ST

DEPTH *m*	TENP 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	17.51	17.51	33.126	23.957	394 .2	0 .000	5 .63	102.8	3.2	0.31	0.2	0.00	0 .09	0.02	0	
2 A	17.51	17.51	33.126	23.957	394 .3	0.008	5 . 63	102.8	3.2	0.31	0 .2	0.00	0. 09	0 .02	2	221
2	17.50	17.50	33.129	23.961	393.8	0.008									2	222
10 ISL	17.41	17.41	33.136	23.988	391 . 5	0.039	5 .64	102.3	3 . 1	0 . 30	0 .2	0.00	0.10	0.02	10	
11	17.39	17.39	33.138	23.995	390.9	0.043	5 .64	102 . 8	3 . 1	0 . 30	0 .2	0. 00	0.10	0 .02	11	220
20 ISL	17.04	17.04	33.146	24.084	382 . 7	0.078	5 . 68	102.8	2 .9	0 . 30	0 .2	0.00	0.10	0. 03	20	
22 A	16.93	16.93	33.149	24.112	380. 1	0 .086	5 .69	102 . 8	2 .9	0 . 30	0 .2	0. 00	0.10	0 .03	22	219
30 ISL	16.41	16.41	33.175	24.253	366.9	0.116	5 . 77	103.2	2 .9	0.31	0 .2	0. 00	0.11	0 . 03	30	
33	16.22	16.21	33.183	24.302	362 .3	0.126	5 . 80	103.3	2 .9	0.31	0 .2	0. 00	0.12	0 . 03	33	213
47 A	15.33	15.82	33.137	24.356	357.6	0.177	5 . 84	103.2	3 .0	0.31	0 .2	0. 00	0.14	0 . 05	47	217
50 ISL	15.71	15.70	33.131	24 . 378	355.6	0.188	5 . 86	103.3	2 .8	0.31	0.2	0. 00	0.15	0 . 06	50	
58	15.31	15.30	33.112	24 . 452	348.7	0.216	5 . 92	103.5	2.4	0.31	0. 1	0. 00	0.19	0 . 08	58	216
69	14.52	14.51	33.059 D	24.582	336.6	0.253									69	215
75 ISL	14.60	14.59	33.126	24.616	333. 5	0.274	5 . 89	101.5	2 .7	0. 33	0.2	0.00	0.28	0.21	75	
80	14.67	14.66	33.182	24.645	330.9	0.290	5 . S3	101.5	2 .9	0. 34	0.2	0.00	0.31	0.25	80	214
91 A	14.50	14.49	33.298	24.771	319.3	0.326	5 . 73	98. 7	3 .0	0.37	0. 1	0.19	0 . 37	0 .29	91	213
100 ISL	14.39	14.33	33.418	24 . 837	308. 5	0.354	5.58	95 .9	3 . 5	0. 42	0. 8	0.25	0.26	0.23	100	
103	14.32	14.31	33.453	24.932	304 .2	0. 363	5 . 52	94.8	3 .7	0.44	1 .2	0.27	0.21	0.20	103	212
115	13.67	13.65	33.594	25.173	231.6	0. 398	5.19	38.0	5 .2	0. 58	4 . 1	0.11	0.16	0.17	115	211
125 A	13.27	13.25	33.600	25.259	273.6	0.426	5 . 03	84 . 6	6 . 3	0. 70	5 .8	0.04	0.12	0.15	126	210
139	12.51	12.49	33.615	25 . 420	253.5	0.463	4.31	79 . 6	8 .0	0.87	8 .2	0.02	0 . 09	0.12	140	209
150 ISL	11.74	11.72	33.606	25.559	245.3	0.491	4.57	74 . 4	10.4	1 . 05	11.0	0.01	0 . 06	0.09	151	
165	10.71	10.69	33.603	25.743	227.9	0.527	4.24	67. 5	14.3	1 . 30	14.9	0.00	0 . 02	0.05	166	208
194	9.51	9.49	33.695	26.018	202 .0	0.589	3 . 77	58.5	20.9	1.68	20.2	0.00	0.01	0.03	195	207
200 ISL	9.29	9.27	33.724	26 .077	196.5	0.601	3 . 69	57.0	22 . 4	1 .74	21.1	0. 00	0.01	0.03	201	
228	8.49	8.47	33 . 359	26.308	174.8	0.653	3 . 36	51.0	29.2	1 .93	24. 7	0.00	0 .00	0.03	229	206
250 ISL	8.18	3.15	33.932	26.412	165.1	0 .690	3.13	47.2	33 . 1	2 . 01	26.3	0. 00			251	
269	7 .99	7 . 96	33.978	26.477	159.3	0.721	2 . 91	43 .7	36 . 4	2 .08	27. 5	0.00			270	205
300 ISL	7 . 53	7.50	34.032	26.586	149.2	0 . 769	2.43	36. 1	43.8	2 . 32	30. 4	0.00			302	
318	7.27	7.24	34.054	26.641	144.2	0. 795	2.14	31.6	48 . 3	2.46	32 . 0	0.00			320	204
380	6 . 67	6 . 64	34.110	26.767	132.7	0 .881	1 . 36	19.8	60 . 4	2 . 72	35.8	0.00			382	203
400 ISL	6.53	6. 49	34.133	26.308	129.0	0 . 907	1.13	16.4	63 . 9	2 .81	36 . 8	0.00			402	
438	6.30	6.26	34.188	26 . 878	122.3	0.955	0. 77	11.1	69 . 9	2 .97	38 . 3	0.00			441	202
500 ISL	5 .95	5.91	34.229	26.955	116.0	1.029	0. 52	7.5	77 . 5	3 .09	39. 8	0.00			503	
511	5 .89	5.85	34.237	26.969	114.8	1 .042	0.48	6 .9	78 . 9	3.11	40.1	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 90

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	BOTTOM	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE
30 50.2 N	121 35.0 W	09/07/95	0142 UTC	4086 «	350 06 kn	330 02 0i	2	1016.6 mb	19..0 C	17.2 C	30m 01	8/8	ST

DEPTH m		TEBP DEG C	POT TEBP DEG C	SALINITY	SIGBA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uB/I	P04 uN/I	N03 uB/I	N02 uB/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.16	18.16	33.239	23.886	400.9	0.000	5.60	103.6	3.1	0.30	0.2	0.00	o.oa	0.01	0	
1		18.16	18.16	33.239	23.886	401.0	0.004	5.60	103.6	3.1	0.30	0.2	0.00	0.08	0.01	1	220
1		18.16	18.16	33.239	23.886	401.0	0.004									1	221
10	ISL	17.98	17.98	33.241	23.932	396.9	0.040	5.62	103.6	3.0	0.30	0.2	0.00	0.09	0.01	10	
15		17.78	17.78	33.241	23.980	392.4	0.060	5.63	103.4	3.0	0.30	0.2	0.00	0.09	0.01	15	219
20	ISL	17.50	17.50	33.237	24.045	386.5	0.079	5.67	103.6	3.0	0.30	0.2	0.00	0.09	0.01	20	
30		16.96	16.96	33.232	24.169	374.9	0.117	5.75	104.0	2.9	0.30	0.2	0.00	0.08	0.02	30	218
44		16.72	16.71	33.234	24.227	369.8	0.169	5.76	103.6	2.9	0.30	0.2	0.00	0.08	0.02	44	217
50	ISL	16.55	16.54	33.231	24.280	365.0	0.191	5.79	103.8	2.9	0.30	0.2	0.00	0.10	0.03	50	
59		16.32	16.31	33.278	24.354	358.2	0.224	5.82	103.9	2.8	0.30	0.2	0.00	0.12	0.04	59	216
74		16.17	16.16	33.294	24.401	354.2	0.277	5.78	102.9	2.9	0.30	0.2	0.00	0.13	0.04	74	215
75	ISL	16.16	16.15	33.293	24.402	354.1	0.281	5.78	102.9	2.9	0.30	0.2	0.00	0.14	0.04	75	
34		15.99	15.98	33.300	24.446	350.2	0.313	5.81	103.1	2.9	0.31	0.2	0.00	0.18	0.09	84	214
93		15.49	15.48	33.360	24.604	335.3	0.343	5.79	101.7	3.0	0.31	0.2	0.00	0.18	0.14	93	213
100	ISL	15.44	15.42	33.562	24.771	319.7	0.366	5.74	100.9	3.1	0.31	0.2	0.01	0.28	0.23	100	
104		15.40	15.38	33.676	24.868	310.6	0.379	5.68	99.8	3.2	0.31	0.2	0.02	0.33	0.27	104	212
114		14.66	14.64	33.719	25.062	292.3	0.409	5.36	92.8	4.2	0.42	1.7	0.31	0.23	0.28	114	211
125		13.28	13.26	33.603	25.259	273.6	0.440	5.16	86.8	6.1	0.63	5.1	0.05	0.16	0.16	125	210
140		12.38	12.36	33.599	25.433	257.3	0.480	4.87	80.4	8.2	0.82	8.4	0.01	0.08	0.14	141	209
150	ISL	11.72	11.70	33.593	25.553	245.9	0.505	4.72	76.8	10.0	0.95	10.5	0.01	0.06	0.12	151	
164		10.81	10.79	33.599	25.722	229.9	0.539	4.49	71.7	13.0	1.15	13.6	0.01	0.04	0.08	165	208
195		9.28	9.26	33.706	26.064	197.6	0.605	3.75	57.9	22.2	1.64	21.0	0.00	0.01	0.03	196	207
200	ISL	9.14	9.12	33.733	26.108	193.5	0.615	3.74	57.6	23.1	1.67	21.5	0.00			201	
229		8.59	8.57	33.880	26.309	174.7	0.668	3.66	55.7	27.6	1.76	23.4	0.00			230	206
250	ISL	8.24	8.21	33.933	26.404	165.9	0.704	3.43	51.8	31.5	1.87	25.2	0.00			251	
268		7.97	7.94	33.961	26.467	160.2	0.733	3.19	47.9	34.9	1.98	26.7	0.00			269	205
300	ISL	7.55	7.52	34.002	26.560	151.7	0.783	2.81	41.8	40.7	2.14	29.0	0.00			302	
317		7.36	7.33	34.020	26.601	147.9	0.808	2.59	38.4	44.0	2.23	30.2	0.00			319	204
377		6.76	6.73	34.090	26.739	135.4	0.893	1.57	22.9	57.5	2.62	35.1	0.00			379	203
400	ISL	6.55	6.51	34.112	26.785	131.3	0.924	1.31	19.0	62.0	2.73	36.4	0.00			402	
437		6.25	6.21	34.147	26.852	125.2	0.972	0.99	14.3	68.3	2.88	38.1	0.00			440	202
500	ISL	5.99	5.95	34.211	26.936	117.8	1.048	0.63	9.0	75.7	3.04	39.7	0.00			503	
510		5.95	5.91	34.221	26.949	116.7	1.060	0.57	8.2	76.9	3.06	39.9	0.00			513	201

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 100

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	BOTTOB	WIND SPEED	WAVES	WEA	BAROBETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 30.8 N	122 15.3 y	0 9/07/95	0739 UTC	4170 m	350 07 kn			1018.8 mb	18.0 C	16..3 C			

DEPTH m		TEBP DEG C	POT TEBP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uB/I	P04 uB/I	N03 UB/I	N02 uB/I	CHL-A ug/l	PHAEO ug/I	PRES db	SABP
0	ISL	18.41	18.41	33.376	23.929	396.8	0.000	5.51	102.5	2.5	0.28	0.2	0.00	0.08	0.01	0	
1		18.41	18.41	33.376	23.929	396.8	0.004	5.51	102.5	2.5	0.28	0.2	0.00	0.08	0.01	1	220
10	ISL	18.45	18.45	33.456	23.981	392.2	0.039	5.50	102.5	2.6	0.27	0.2	0.00	0.07	0.01	10	
15		18.47	18.47	33.531	24.033	387.4	0.059	5.50	102.6	2.6	0.26	0,2	0.00	0.07	0.01	15	219
20	ISL	18.24	18.24	33.540	24.097	381.5	0.078	5.52	102.5	2.6	0.26	0.2	0.00	0.07	0.01	20	
30		17.67	17.66	33.519	24.220	370.1	0.116	5.59	102.6	2.6	0.27	0.2	0.00	0.07	0.01	30	218
45		17.08	17,07	33.451	24.309	362.1	0.171	5.68	103.1	2.6	0.28	0.2	0.00	0.08	0.02	45	217
50	ISL	17.00	16.99	33.444	24.323	360.9	0.189	5.68	102.9	2.6	0.28	0.2	0.00	0.08	0.02	50	
60		16.81	16.80	33.441	24.366	357.2	0.225	5.70	102.9	2.7	0.29	0.2	0.00	0.08	0.02	60	216
74		16.06	16.05	33.452	24.547	340.3	0.273	5.83	103.7	2.8	0.28	0.2	0.00	0.12	0.03	74	215
75	ISL	16.02	16.01	33.447	24.552	339.8	0.277	5.83	103.6	2.8	0.28	0.2	0.00	0.12	0.03	75	
84		15.71	15.70	33.409	24.593	336.2	0.307	5.85	103.3	2.7	0.28	0.1	0.00	0.13	0.04	84	214
94		15.51	15.50	33.439	24.661	330.0	0.341	5.79	101.8	2.7	0.29	0.1	0.00	0.15	0.06	94	213
100	ISL	15.34	15.32	33.465	24.719	324.6	0.360	5.76	101.0	2.8	0.29	0.1	0.00	0.17	0.10	100	
104		15.24	15.22	33.490 D	24.760	320.8	0.373									104	212
114		15.14	15.12	33.601	24.868	310.9	0.405	5.64	98.6	2.9	0.30	0.1	0.00	0.23	0.21	114	211
124		14.83	14.81	33.674	24.991	299.4	0.435	5.49	95.4	3.3	0.35	0.6	0.14	0.29	0.24	124	210
125	ISL	14.82	14.80	33.686	25.003	298.3	0.438	5.47	95.0	3.3	0.35	0.7	0.14	0.29	0.24	125	
139		14.70	14.68	33.862	25.165	283.3	0.479	5.23	90.7	4.1	0.42	2.0	0.14	0.18	0.23	140	209
150	ISL	13.77	13.75	33.796	25.309	269.6	0.509	5.04	85.7	5.6	0.57	4.6	0.08	0.13	0.19	151	
163		12.41	12.39	33.665	25.479	253.5	0.543	4.83	79.8	8.0	0.79	8.2	0.01	0.09	0.14	164	208
194		10.31	10.29	33.621	25.827	220.4	0.617	4.33	68.4	15.0	1.26	15.4	0.01	0.02	0.04	195	207
200	ISL	9.95	9.93	33.644	25.906	213.0	0.630	4.20	65.8	17.1	1.36	17.0	0.01			201	
228		8.64	8.62	33.790	26.231	182.1	0.685	3.69	56.2	26.0	1.73	23.0	0.00			229	206
250	ISL	8.19	8.16	33.863	26.357	170.4	0.724	3.74	56.4	28.7	1.76	23.7	0.00			251	
269		7.99	7.96	33.909	26.423	164.4	0.756	3.78	56.8	30.6	1.79	24.3	0.00			270	205
300	ISL	7.59	7.56	33.976	26.534	154.2	0.805	3.14	46.7	38.0	2.03	27.6	0.00			302	
318		7.40	7.37	34.008	26.586	149.4	0.832	2.66	39.4	42.7	2.20	29.8	0.00			320	204
378		6.97	6.93	34.096	26.716	137.8	0.919	1.61	23.6	54.8	2.59	34.3	0.00			380	203
400	ISL	6.78	6.74	34.120	26.761	133.7	0.948	1.34	19.6	59.1	2.70	35.6	0.00			402	
439		6.44	6.40	34.155	26.834	127.1	0.999	0.99	14.4	66.0	2.85	37.4	0.00			442	202
500	ISL	6.04	6.00	34.193	26.916	119.8	1.075	0.69	9.9	74.1	2.99	39.2	0.00			503	
513		5.96	5.92	34.201	26.932	118.4	1.090	0,63	9.0	75.8	3.02	39.6	0.00			516	201

IV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 110

LATITUDE	LONGITUDE	DAY/NO/YR	CAST	TIME	BOTTOM	MIND	SPEED	yAVES	UEA	BAROMETER	DRY	MET	SECCHI/FOREL	CLD AMT	TYPE
3D 9.6 K	122 54.7 U	09/07/95	1812	UTC	4107 m	350	12 kn	320 03 04	1	1019.5 mb	19..5 C	17.8 C	37m 01	1/S	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SI03 uA/l	P04 uM/l	N03 uM/l	N02 UM/l	CHL-A ug/l	PHAEO ug/L	PRES db	SAMP
0 ISL	18.66	18.66	33.583	24.025	387.7	0.000	5.50	103.0	2.6	0.27	0.1	0.00			0	
1	18.66	18.66	33.583	24.025	387.7	0.004									1	223
1 A	18.66	18.66	33.583	24.025	387.7	0.004	5.50	103.0	2.6	0.27	0.1	0.00			1	222
10 ISL	18.57	18.57	33.581	24.046	386.0	0.039	5.51	103.0	2.6	0.27	0.1	0.00			10	
20 ISL	18.48	18.48	33.579	24.068	384.3	0.077	5.53	103.2	2.6	0.27	0.1	0.00			20	
23 A	18.45	18.45	33.578	24.074	383.8	0.089	5.53	103.1	2.6	0.27	0.1	0.00			23	221
30 ISL	18.06	18.05	33.542	24.143	377.4	0.115	5.59	103.4	2.6	0.27	0.1	0.00			30	
36	17.77	17.76	33.529	24.204	371.8	0.138	5.63	103.6	2.6	0.27	0.1	0.00	0.07	0.01	36	220
50 A	17.94	17.93	33.670	24.271	365.9	0.189	5.60	103.4	2.5	0.26	0.1	0.00	0.09	0.02	50	219
62	16.37	16.36	33.404	24.439	350.2	0.232	5.83	104.3	2.6	0.29	0.1	0.00	0.09	0.03	62	218
75 A	16.06	16.05	33.399	24.506	344.2	0.278	5.83	103.6	2.6	0.30	0.1	0.00	0.11	0.05	75	217
!7	15.79	15.78	33.404	24.571	338.3	0.319	5.81	102.7	2.6	0.30	0.1	0.00	0.14	0.05	87	216
99 A	15.73	15.71	33.492	24.653	331.0	0.359	5.75	101.6	2.4	0.30	0.1	0.00	0.17	0.07	99	215
100 ISL	15.70	15.68	33.486	24.655	330.8	0.362	5.75	101.5	2.4	0.30	0.1	0.00	0.17	0.08	100	
110	15.33	15.31	33.437	24.699	326.8	0.395	5.71	100.1	2.7	0.31	0.1	0.00	0.18	0.15	110	214
120	15.13	15.11	33.517	24.805	317.0	0.427	5.65	98.7	2.9	0.32	0.1	0.00	0.23	0.19	120	213
125 ISL	15.42	15.40	33.656	24.849	313.1	0.443	5.61	98.6	3.0	0.33	0.3	0.06	0.23	0.21	125	
121	15.52	15.50	33.719 D	24.875	310.7	0.452									129	212
136 A	14.70	14.68	33.583	24.949	303.7	0.477	5.49	95.1	3.4	0.38	0.8	0.17	0.23	0.22	137	211
148	13.93	13.91	33.591	25.118	287.8	0.512	5.31	90.5	4.5	0.51	3.1	0.11	0.17	0.20	149	210
150 ISL	13.76	13.74	33.600	25.160	283.8	0.518	5.25	89.2	4.9	0.55	3.a	0.09	0.15	0.19	151	
159	13.09	13.07	33.661	25.343	266.5	0.543	4.98	83.5	6.7	0.71	6.5	0.02	0.09	0.12	160	209
174	12.77	12.75	33.804	25.517	250.3	0.581	4.86	81.0	7.5	0.74	7.6	0.01	0.06	0.09	175	208
192	11.52	11.50	33.757	25.718	231.2	0.625	4.57	74.1	10.8	1.01	11.5	0.01	0.03	0.04	193	207
200 ISL	10.99	10.97	33.738	25.799	223.5	0.643	4.42	70.9	13.0	1.15	13.6	0.01	0.02	0.04	201	
229	9.38	9.35	33.731 D	26.068	197.9	0.704	3.91	60.5	21.7	1.60	20.4	0.00	0.00	0.02	230	206
250 ISL	8.70	8.67	33.818	26.244	181.3	0.744	3.66	55.a	26.4	1.75	23.1	0.00			251	
269	8.29	8.26	33.909	26.378	168.8	0.777	3.47	52.5	30.2	1.84	24.8	0.00			270	205
300 ISL	7.83	7.80	33.979	26.502	157.4	0.828	3.12	46.7	36.2	2.00	27.2	0.00			302	
320	7.63	7.60	34.004	26.550	153.0	0.859	2.88	42.9	39.9	2.11	28.6	0.00			322	204
378	7.11	7.07	34.059	26.667	142.5	0.944	2.04	30.0	50.4	2.49	32.7	0.00			380	203
400 ISL	6.85	6.81	34.085	26.724	137.3	0.975	1.70	24.9	55.7	2.62	34.4	0.00			402	
439	6.41	6.37	34.131	26.819	128.5	1.027	1.16	16.8	64.8	2.82	37.2	0.00			442	202
500 ISL	6.06	6.02	34.175	26.899	121.4	1.103	0.79	11.4	72.7	3.06	39.1	0.00			503	
512	5.99	5.95	34.184	26.915	120.0	1.118	0.72	10.3	74.2	3.11	39.5	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 9507 STATION 93 120

LATITUDE	LONGITUDE	DAY/HO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	yEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
29 50.8 N	123 34.9 V	09/07/95	2332	UTC	4090 m	020	12 kn	020 04 05	1	1019.2 mb	20..3 C	18..0 C	36m 01	2/8	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	»02 uM/l	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0 ISL	19.23	19.23	33.748	24.007	389.4	0.000	5.45	103.2	2.8	0.28	0.3	0.00	0.06	0.01	0	
1	19.23	19.23	33.748	24.007	389.4	0.004	5.45	103.2	2.8	0.28	0.3	0.00	0.06	0.01	1	220
2	19.24	19.24	33.747	24.004	389.7	0.008									2	221
10 ISL	19.11	19.11	33.735	24.028	387.7	0.039	5.46	103.2	2.5	0.29	0.3	0.00	0.06	0.01	10	
20	18.87	18.87	33.715	24.074	383.7	0.077	5.47	102.9	2.1	0.30	0.3	0.00	0.06	0.02	20	219
30 ISL	18.63	18.62	33.704	24.126	379.1	0.116	5.50	103.0	2.4	0.30	0.3	0.00	0.06	0.01	30	
40	18.34	18.33	33.695	24.192	373.2	0.153	5.55	103.3	2.8	0.29	0.3	0.00	0.06	0.01	40	218
50 ISL	18.02	18.01	33.686	24.264	366.6	0.190	5.61	103.8	2.7	0.28	0.3	0.00	0.08	0.02	50	
60	17.64	17.63	33.679	24.351	358.6	0.226	5.66	104.0	2.5	0.27	0.3	0.00	0.10	0.03	60	217
75 I SL	16.86	16.85	33.664	24.526	342.4	0.279	5.67	102.6	2.7	0.29	0.3	0.00	0.15	0.07	75	
80	16.66	16.65	33.676	24.582	337.2	0.296	5.67	102.2	2.8	0.30	0.3	0.00	0.16	0.08	80	216
100	16.82	16.80	33.921	24.733	323.5	0.362	5.56	100.6	2.6	0.25	0.3	0.00	0.19	0.12	100	215
110	16.66	16.64	34.005	24.S35	314.1	0.394	5.50	99.3	2.8	0.26	0.3	0.00	0.19	0.17	110	214
120	16.37	16.35	34.042	24.931	305.3	0.425	5.43	97.5	3.1	0.25	0.3	0.02	0.26	0.24	120	213
125 ISL	16.28	16.26	34.083	24.984	300.5	0.440	5.35	95.9	3.3	0.27	0.4	0.12	0.18	0.19	125	
130	16.13	16.11	34.113	25.041	295.1	0.455	5.27	94.2	3.4	0.30	0.7	0.21	0.11	0.14	131	212
140	15.41	15.39	34.060	25.163	283.7	0.484	5.22	92.0	3.7	0.37	1.9	0.17	0.21	0.23	141	211
150	14.47	14.45	33.974	25.301	270.7	0.512	5.01	86.6	5.2	0.51	4.3	0.02	0.17	0.23	151	210
159	14.21	14.19	33.958	25.344	266.8	0.536	4.97	85.4	5.6	0.57	5.1	0.02	0.05	0.06	160	209
174	12.96	12.94	33.879	25.538	248.4	0.574	4.79	80.2	7.8	0.76	7.9	0.01	0.09	0.12	175	208
194	11.60	11.58	33.777	25.719	231.2	0.622	4.59	74.6	11.0	0.99	11.4	0.01	0.02	0.04	195	207
200 ISL	11.23	11.21	33.758	25.772	226.2	0.636	4.52	72.9	12.1	1.07	12.5	0.01			201	
228	9.77	9.74	33.737	26.009	203.7	0.696	4.22	65.9	18.0	1.40	17.4	0.00			229	206
250 ISL	8.99	8.96	33.811	26.193	186.3	0.739	4.00	61.4	23.1	1.61	20.4	0.00			251	
268	8.54	8.51	33.886	26.322	174.2	0.772	3.83	58.2	27.0	1.74	22.4	0.00			269	205
300 ISL	8.10	8.07	33.951	26.440	163.4	0.826	3.54	53.3	32.0	1.87	24.6	0.00			302	
319	7.92	7.89	33.973	26.484	159.4	0.856	3.35	50.2	34.8	1.94	25.7	0.00			321	204
376	7.09	7.05	34.019	26.639	145.1	0.943	2.54	37.4	47.2	2.29	30.4	0.00			378	203
400 ISL	6.75	6.71	34.033	26.696	139.8	0.977	2.19	32.0	52.9	2.46	32.4	0.00			402	
439	6.28	6.24	34.059	26.779	132.1	1.030	1.65	23.8	61.9	2.72	35.4	0.00			442	202
500 ISL	5.91	5.87	34.136	26.887	122.4	1.108	1.01	14.5	72.4	2.92	38.2	0.00			503	
514	5.83	5.79	34.154	26.911	120.2	1.125	0.86	12.3	74.8	2.97	38.8	0.00			517	201

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 77 60

LATITUDE	LONGITUDE	DAY/NO/YR	CAST TIBE	SECCHI	FOREL	INCUBATION TIBE	LAN	CIVIL TUILIGHT	INTEGRATED VALUE
34 43 .4 N	121 32.6 V	21/7/95	1 902 UTC	23 m	02	1210 - 1941 PST	1212 PST	1942 PST	5 83.9 mg C/m2

DEPTH m	TEBP OEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OX Y PCT	SI03 uB/ I	P04 iI*1 I	N03 uB/ I	N02 u«/ I	CHL-A ug/L	PHAEO ug/ I	LIGHT PCT	UPTAKE C mg C/m3) 1	2	BEAN	DARK
1	16.28	33.185	24.289	5.91	105.4	1 .3	0 .40	0.3	0 . 03	0.25	0 . 09	94 . A	8 . 4	8 . 6	8 . 5	0.18
7	16.16	33.206	24.333	5 . 93	105.5	1 .3	0.39	0 . 4	0 . 03	0.27	0.11					
14	16.17	33.211	24.335	5 . 93	105.6	1 . 3	0 . 40	0 . 4	0.03	0.31	0.11	39.	13.1	12.7	12.9	0,18
22	15.93	33.513	24.621	**6 . 06**	107.5	1 . 5	0.43	0 . 4	0 . 03	0 . 40	0.20					
31	15.53	33.519	24.716	5 . 99	105.5	1 . 5	0 . 48	0 . 7	0 . 05	0 . 48	0.31	1 3 .	14,2	13.5	13.9	0.16
38	14.38	33.437	24.902	6 . 02	103.5	1 . 6	0.61	2 . 3	0.14	0.72	0 . 39					
46	11.80	33.290	25.300	5.52	89.8	6 . 4	0 . 99	8 . 4	0 . 30	0 . 45	0 . 30	4 . 6	5 , 4	5 . 2	5 . 3	0 .08
53	11.44	33.396	25.449	5 .23	84 . 5	12,0	1.24	12.0	0.54	0.33	0.15					
61	11.02	33.420	25.543	4 . 93	79 . 0	14.6	1.32	14,3	0.57	0.25	0.15	1 , 7	1 . 3	1 2	1 . 2	0 12
73	9. 90	33.459	25.767	4.14	64 . 7	18.3	1 .50	18.2	0.03	0.17	0.17					
85	9 . 73	33.503	25.830	3 . 97	61.9	19.3	1.58	19.4	0 . 03	0.16	0.14	0 . 34	0.10	0.11	0.11	0.06

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 77 1 00

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	SECCHI	FOREL	INCUBATION TIBE	LAN	CIVIL	INTEGRATED VALUE
33 23 .. 5 N 1 24 19.4 W		20/7/95	1824 UTC	40 m	01	1223 - 1950 PST	1223 PST	1950 PST	2 4 6.1 mg C/m2

DEPTH m	TEflP DEG C	SALINITY	S I GBA THETA	DISS 02 ml/ I	OXY PCT	S I 03 uB/ I	P04 uB/ I	N03 uB/ I	N02 uB/ I	CHL-A ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE C mg C / m3) 1	2	BEAN	DARK
2	19.03	33.218	23.653	5 . 49	103.3	2 . 6	0.30	0 . 1	0 . 00	0.11	0.02	93 . A	3 . 8	4 . 0	3 . 9	0.21
1 4	18.24	33.288	23.904	5.55	102.9	2 . 6	0.29	0 . 1	0 . 00	0 . 09	0 . 02					
25	18.14	33.291	23.931	5.55	102.7	2 . 6	0.29	0 . 1	0 . 00	0 . 09	0 . 02	38 .	3 . 0	2 . 8	2 , 9	0.15
40	16.74	33.207	24.202	5.80	104.4	2 . 6	0. 30	0 . 1	0 . 00	0.12	0 . 03					
53	16.53	33.296	24.319	5 . 77	103.5	2 . 6	0 . 30	0 . 1	0 . 00	0.12	0 . 03	1 3 .	1 . 8	1 . 8	1 . 8	0.17
68	14.95	33.166	24.572	5 . 96	103.5	3 . 0	0 , 33	0 . 1	0 . 00	0.17	0 . 07					
81	14.78	33.384	24.777	5 . 95	103.1	3 . 1	0.29	0 . 1	0 . 00	0.16	0 . 08	4 . 5	1 . 3	1 . 4	1 . 3	0 . 06
90	14.24	33.359	24.873	5 . 91	101,3	3 .2	0.31	0 . 1	**0. 00**	0.19	0.14					
98	14.05	33.348	24.904	5 . 88	100.3	3 . 1	0 . 32	0 . 1	0 . 00	0.24	0.23					
106	13.78	33.433	25.026	5 . 69	96 . 6	3.9	0 . 38	0 . 8	0 . 08	0.25	0.23	1 . 7	1 . 1	0 , 99	1 . 0	0,11
1 17	13.95	33.640	25.151	5 . 48	93 . 5	4 . 2	0.41	1 . 6	0.20	0.24	0.25					
126	13.10	33.595	25.289	5 . 33	89 . 3	5 . 3	0.56	4 , 0	0.10	0.20	0.20					
136	11.26	33.494	25.560	4 . 63	74 .6	11.6	1 . 08	12.0	0 . 03	0.12	0.13					
147	10.41	33.573	25.771	4. 47	70 . 7	14.3	1.23	14.6	0.01	0. 06	0 . 08	0 . 35	0.11	0 . 06	0 .08	0 . 05

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIBE	SECCHI	FOREL	INCUBATION TIBE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49 1 N	121 51.3 U	19/ 7/95	1815 UTC	31 m	01	1212 - 1947 PST	12 13 PST	1947 PST	221.6 mg C/m2

DEPTH m	TEBP DEG C	SALINITY	SIGBA THETA	DISS 02 rnl / t	OXY PCT	S 103 ud.'l	P04 uB/ L	N03 uB/ I	N02 uB/ I	CHL-A ug/ I	PHAEO ug/l	LIGHT PCT	UPTAKE I;mg C / m3) 1	2	BEAN	DARK
2	17.59	32.946	23.800	5 67	103,6	2 . 4	0 . 33	0 . 1	0 . 00	0.12	0 - 02	91 . A	5 . 5	5 . 4	5 5	0.11
19	16.85	33 . 080	24.078	5 73	103.3	2 . 2	0 32	0 . 1	0 . 00	0,11	0 03	39 .	3 7	3 . 7	3 , 7	0.12
30	16.75	33.131	24.141	5 . 74	103.3	2 . 2	0.31	0. 1	0 . 00	0.13	0.04					
42	16.87	33.356	24.286	5 . 73	103.5	2 . 2	0 . 30	0 . 1	0 . 00	0.14	0 04	1 2 .	2 0	2 , 1	2 . 0	0.14
53	16.73	33.363	24.324	5.71	102.8	2 . 2	0.31	0 . 1	0.00	0.16	0 . 05					
63	15.70	33.290	24.503	5 . SO	102.3	2 .4	0.31	0 . 1	0 . 00	0.21	0 . 08	4 . 4	1 . 2	1 . 2	1 .2	0.07
73	14.42	33.244	24.745	5 . 85	100.5	3 . 1	0.35	0 . 1	0. 00	0.25	0.13					
83	13.73	33.333	24.958	5 . 65	95 . 8	3 . 9	0.45	0 . 9	0.10	0. 34	0.28	1 . 6	0. 70	0. 79	0. 75	0.07
93	13.21	33.472	25.171	5,21	87 . 4	5 . 7	0.65	4 . 6	0.15	0.31	0.28					
104	12.50	33.496	25.329	4 . 90	81.0	7 . 8	0 . 82	7 . 7	0 . 04	0.22	0.20					
1 1 5	11.89	33.498	25.447	4 . 70	76 . 7	9.6	0 . 97	10.1	0 . 03	0.17	0.18	0 34	0.15	0 .08	0.11	0 .07

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 82 47

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	SECCHI	FOREL	INCUBATION TIBE	LAN	CIVIL TUILIGHT	INTEGRATED VALUE
34 16.4 N	120 1 . 2 U	18/7/95	1826 UTC	1 1 m	06	1205 - 1942 PST	1206 PST	1942 PST	1494.2 mg C/m2

DEPTH m	TEBP DEG C	SALINITY	SIGBA THETA	DISS 02 mL/L	OXY PCT	SI03 uB/ L	P04 uB/ I	N03 uB/ I	N02 uB/ I	CHL-A ug/l	PHAEO ug/ t	LIGHT PCT	UPTAKE (mg C/m3) 1	2	BEAN	DARK
1	16.48	33.569	24.538	6.34	113.8	3 . 0	0 . 30	0 . 3	0 . 02	1.59	0.50	87 . A	57.2	57.4	57.3	0.34
7	15.57	33.574	24 . 748	6.49	114.4	3 . 6	0 , 34	0 . 4	0 . 04	2 . 23	0 . 66	38	87. 3	81.8	84 . 5	0. 40
1 5	13.80	33 . 608	25.154	5.77	98.1	8 . 1	0 , 73	5 . 6	0.15	2 . 64	1 .02	12	63 , 3	62 , 5	62 . 9	0. 30
22	12.57	33.592	25.388	4.86	80.6	11.4	1 . 02	9. 9	0.25	1 . 74	0.81	4 6	21.1	18,7	19.9	0.14
29	12.20	33.652	25.505	4.69	77.2	13.6	1.18	11.8	0.26	1.64	0 . 70	1 . 7	6 . 5	6 . 1	6 .3	0.17
41	10.68	33.690	25.813	3.73	59.4	19.2	1.56	17.9	0.23	0.50	0. 38	0. 33	0 . 46	0.41	0.44	0.13

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 83 60

LATITUDE	LONGITUDE	DAY/BO/YR	CAST TIBE	SECCHI	FOREL	INCUBATION TIBE	LAN	CIVIL TUILIGHT	INTEGRATED VALUE
33 34 ..0 N	1 20 45.9 W	17/7/95	1844 UTC	25 m	02	1208 - 1941 PST	1209 PST	1941 PST	483.3 mg C/m2

DEPTH m	TEBP DEG C	SALINITY	SIGBA THETA	DISS 02 ml/1	OXY PCT	S 103 uB/ I	P04 uB/ I	N03 uB/ I	N02 uB/ I	CHL-A ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE Itmg C/m3) 1	2	BEAN	DARK
1	15.87	32.958	24.208	5.94	104.9	2 . 0	0.36	0 . 2	0 . 00	0.16	0 . 04	94 . A	6 . 2	5 . 6	5 . 9	0.09
8	15.58	32.958	24.272	5.96	104.7	2 . 0	0.35	0 , 2	0 . 00	0-18	0 . 05					
16	15.08	33.098	24.490	6.10	106.2	1 , 5	0.39	0 . 3	0 . 02	0 . 32	0.14	37.	13.5	13.4	13.4	0.15
25	15.53	33.391	24.617	6.00	105.6	1 . 4	0.45	1 . 1	0 .06	0.69	0.24					
34	14.81	33.237	24.656	6.04	104.6	1 . 8	0.45	0 . 8	0.05	0 . 44	0.22	12 .	7.9	9.6	8 . 7	0.12
42	13.62	33.093	24.793	6.06	102.4	2 . 6	0 . 46	0 . 7	0 . 06	0.59	0,25					
50	12.19	33.080	25.064	5.63	92.3	5 . 2	0.65	3 . 5	0 . 36	0 . 38	0.26	4 . 6	2 .8	2 . 9	2 . 9	0.06
59	11.76	33.124	25.179	5.33	86.6	7 . 6	0 . 82	7 . 0	0.16	0.29	0.23					
67	11.70	33.282	25.313	5.07	82.3	9 . 0	0. 93	9 . 2	0. 05	0.18	0.17	1 . 6	0. 73	0,6 9	0. 71	0.08
80	11.54	33.512	25.521	4.60	74.6	10.9	1 .04	11.5	0. 03	0.14	0.18					
93	10.15	33.533	25.783	4.15	65.3	16.3	1 . 38	16. a	0. 02	0 . 06	0.10	0 . 33	0 . 07	0.08	0.08	0.06

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.5, 1.7, 0.34 PERCENT RESPECTIVELY.

RV DAVID STARS JORDAN — CALCOFI CRUISE 9507 — STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TINE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 15.•ON	121 29.2 U	16/7/95	1329 UTC	42 m	01	1159 - 1946 PST	1220 PST	1947 PST	2 4 6.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 ijM/I	N03 u«/L	N02 uH/I	CHL.-A ug/L	PHAEO ug/l	LIGHT PCT	UPTAKE C mgC/m3) 1	2	BEAN	DARK
2	18.17	33.307	23.935	5.52	102 .2	2.4	0.29	0.2	0. 00	0.07	0.01	93. A	2.8	2.9	2.8	0.12
14	13.08	33.305	23.956	5.53	102.2	1.9	0.29	0 .2	0 .00	0. 09	0.02					
26	17.10	33.386	24.254	5 .69	103.2	2 .5	0.29	0 .2	0 .00	0.10	0.02	39.	2.8	2 .8	2 .8	0.13
40	16.79	33.407	24.344	5 .72	103.2	2 .5	0.29	0 .2	0 .00	0 .08	0 .02					
55	16.14	33.396	24.485	5 .76	102.6	2 .1	0.29	0 .2	0 .00	0.12	0 .04	13 .	1 .8	1 .9	1 .9	0.14
71	15.24	33.421	24.706	5 .94	103.9	2 .8	0.27	0.2	0 .00	0.15	0. 05					
!3	15.21	33.513	24.787	5.88	102.8	2 .8	0.26	0 .2	0 .00	0.17	0. 07	4 .8	1 .4	1 .4	1 .4	0.04
93	14.77	33.483	24 .856	5.83	101.0	2 .9	0.28	0 .2	0 .00	0.19	0.11					
10!	14.69	33.562	24.934	5.75	99. 5	2 .3	0.29	0 .2	0. 00	0 .20	0.16					
110	14.62	33.598	24.977	5 .67	98 .0	3 .3	0.31	0 .2	0.03	0.25	0.19	1 .8	1 .1	1 .1	1 .1	0. 07
122	14.59	33.771	25.118	5 .48	94 .8	3 .5	0 .35	1 .0	0.20	0.25	0.19					
132	13.57	33.671	25.253	5 .37	90. 9	4 .6	0 .48	3 .1	0.11	0.20	0.19					
U;	12.71	33.695	25.443	5 .05	84.0	6.7	0.69	6 .7	0 .03	0.12	0.14					
154	11.72	33.615	25.570	4 .90	79. 8	9 .3	0 .89	9 .7	0 .02	0.09	0.14	0.36	0.06	0.07	0.06	0 .04

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TINE	LAN	CIVIL
33 53..3 N	118 29.7 U	13/ 7/95	1854 UTC	1 3 m	05	1159 - 1937 PST	1200 PST	1937 PST

927.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 j»l/I	OXY PCT	S103 uM/I	P04 iin/1	N03 uM/I	N02 uM/L	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.28	33.472	24.5 10	6.28	112.2	7.0	0.31	0 .2	0.01	0.89	0.21	89. A	34 .4	34 .8	34 .6	0 .34
4	15.96	33.471	24.582	6.34	112.6	7 .2	0 .33	0 .2	0 .02	1.01	0.23					
3	13.43	33.460	25.115	5 .42	91.4	10.5	0 .82	5 .9	0.22	1.25	0 .34	39 .	40 .5	39 .9	40.2	0.31
17	11.65	33.472	25.469	4.53	73 .6	12.9	1 .22	11.6	0 .36	1 .82	0.68	13.	37 .7	38 .6	38.2	0 .36
26	11.43	33.525	25.550	4.15	67.1	14.4	1 .33	13.8	0.36	0 .86	0.30	4 .6	8 .3	8 .8	8 .5	0.16
35	11.00	33.537	25.638	4 .03	64 .6	16.1	1.41	15.0	0.32	0 .44	0.22	1 .6	2 .6	2 .4	2 .5	0.12
49	10.41	33.638	25 .820	3. 30	52.2	21.8	1 .78	18.9	0 .34	0.28	0 .38	0.31	0.19	0.11	0.15	0.15

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL
32 58.9 N	120 21.4 y	14/7/95	1813 UTC	1 3 m	0 4	1205 - 1942 PST	1206 PST	1942 PST

960.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 • l/l	OXY PCT	S 103 uM/I	P04 u«/L	N03 uM/I	N02 uM/I	CHL-A ug/L	PHAEO ug/l	LIGHT PCT	UPTAKE C mgC/m3) 1	2	MEAN	DARK
1	15.41	33.574	24.784	5 .97	104.9	3 .9	0.54	2 .6	0.13	1 .39	0 .34	89 . A	38 .2	36. 6	37 .4	0.20
8	15.26	33.574	24.817	5 .96	104.4	4 .0	0.54	2 .8	0.13	1.53	0.41	39 .	51.7	46 .5	49 .1	0.20
17	14.99	33.578	24.879	5 .84	101.8	5 .3	0 .62	3 .6	0.15	1 .32	0.44	13 .	28.1	25.2	26 .6	0.15
26	14.89	33.581	24.904	5 .78	100.5	5 .6	0 .65	3 .9	0.16	1 .34	0.54	4 .6	12.2	12.6	12.4	0.12
35	14.65	33.596	24.967	5 .70	98 .6	5 .9	0.71	4 .6	0.18	1 .05	0 .49	1 .6	4. 3	4 .1	4 .2	0.13
41	14.10	33.602	25.088	5 .65	96.7	6.0	0 .77	5 .4	0.21	1 .05	0 .49					
48	12.87	33.615	25.348	5.25	87 .6	8 .4	1 .03	8 .9	0 .37	1 .06	0.51	0 .35	0 .40	0 .33	0. 37	0.13

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 87 1 00

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 39 6 N	123 4.3 W	15/7/95	1846 UTC	34 m	01	1219 - 1947 PST	12 18 PST	1948 PST	14 2.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	S 103 uH/I	P04 uM/I	N03 uM/I	N02 UM/I	CHL-A ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE <'mg C/m3) 1	2	MEAN	DARK
2	13.19	33.469	24.054	5.52	102.4	2 .8	0.29	0 .3	0 .00	0 .07	0 .02	91 . A	2 .7	2 .8	2 .8	0 .08
21	18.15	33.467	24.064	5.53	102.5	2 .8	0.29	0 .3	0 .00	0 .08	0 .02	39 .	2 .5	2 .6	2 .5	0.23
47	17.42	33.518	24.280	5 .69	104.0	2 .8	0.27	0 .2	0 .00	0 .09	0 .02	12 .	1 .1	1 .2	1 .2	0.16
69	16.50	33.583	24.547	5.81	104.3	2 .9	0.26	0 .2	0 .00	0,13	0 .04	4 .4	0 .65	0 .63	0. 64	0 .08
90	15.53	33.671	24.835	5 .77	101.7	2 .9	0.25	0 .2	0 .00	0.16	0 .09	1 .7	0. 34	0.31	0. 32	0 .05
103	15.46	33.749	24.911	5 .69	100.2	3 .0	0.25	0 .2	0 .00	0.17	0.12					
1 14	15.29	33.823 D	25.006													
1 25	15.01	33.872	25.105	5 .36	93.6	3 .a	0 .36	1 .4	0.20	0.25	0.21	0.35	0.14	0.14	0.14	0 .06

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL
32 5 .0 N	120 38.1 W	11/ 7/95	1821 UTC	16 m	03	1206 - 1938 PST	1208 PST	1938 PST

503.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 nnl/I	OXY PCT	SI03 uM/I	P04 Ul/ I	N03 1jM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.56	33.185	24.451	6 .09	107.1	2 .5	0 .40	0 .4	0 .04	0. 43	0.11	83 . A	9 .3	8 .3	8 .8	0.16
10	15.54	33.186	24.457	6 .07	106.7	2 .5	0.41	0 .4	0 .04	0.52	0.13	38 .	16.6	16.3	16.4	0.20
22	15.48	33.198	24.479	6. 09	106.9	2 .4	0.41	0 .5	0 .05	0.51	0.14	12 .	13.0	12.5	12.8	0.19
32	15.46	33.234	24.512	6 .09	106.9	2 .4	0 .42	0 .6	0.05	0 .46	0.14	4 .6	6 .8	6 .6	6 .7	0.14
43	13.28	33.240	24.976	6.17	103.6	3 .6	0 .65	3 .6	0.23	0. 73	0. 37	1 .6	5 .4	5 .4	5 .4	0.10
51	12.78	33.292	25.115	5 .89	97 .9	5 .7	0. 82	5 .9	0 .30	0 .73	0.41					
59	12.34	33.328	25.228	5.54	91 .2	7 .1	0. 89	7 .2	0.35	0. 64	0.40	0.35	0 .37	0 .33	0.35	0.10

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.5, 1.7, 0.34 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TINE	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 4 .. 7 N	122 39.7 U	10/ 7/95	1901 UTC	28 m	02	1214 - 1943 PST	1216 PST	1943 PST	125.6 mg C/m2

DEPTH m	TEMP OEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/ I	P04 ijM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	18.23	33.327	23.936	5.55	102 .9	2 .3	0.32	0.2	0 . 00	0 . 08	0.01	95 . A	2 .0	2 . 1	2 .0	0.10
18	18.06	33.332	23.982	5.57	102.9	2 .3	0 . 29	0 . 2	0 .00	0 . 08	0.01	37 .	2 .8	2 . 9	2 . 9	0.10
38	16.96	33.463	24.347	5 .71	103.4	2 . 5	0.28	0 . 2	0.00	0.06	0.02	12 .	1 .2	1 . 3	1 . 3	0.12
57	16.76	33.471	24.400	5.71	103.0	2 .5	0.28	0.2	0 . 00	0.10	0 . 03	4 . 4	0. 79	0.81	0 . 80	0.15
74	16.38	33.502	24.513	5 . 78	103.5	2 . 5	0.28	0 . 2	0. 00	0.15	0 . 06	1 . 7	0. 49	0.53	0.51	0.14
90	15.92	33.506	24.621	5 . 77	102.4	2 . 5	0.28	0 . 2	0 . 00	0.16	0 .07					
104	15.55	33.507	24 . 705	5 .71	100.5	2 . 4	0.30	0 . 1	0 . 00	0.18	0.13	0.33	0.10	0.06	0 .08	0. 08

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 93 26.7

LATITUDE	LONGITUDE	DAY/HO/YR	CAST TIKE	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57 .. 3 N	117 18.4 U	6/ 7/95	1829 UTC	7 m	05	1156 - 1931 PST	1154 PST	1932 PST	1009.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uH/ I	P04 u»;i	N03 uM/I	N02 uH/ I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE C mg C/m3> 1	2	MEAN	DARK
1	19.89	33.499	23.647	6.29	120.4	4 .4	0.29	0 . 0	0.01	3 .97	0 . 44	80 . A	238.7	192.7	215.7	0. 99
4	18.74	33.495	23.938	6.10	114.3	5 .3	0 . 45	0 . 3	0 . 02	1.81	0 . 44	42 .	66 . 2	67 . 3	66 . 8	0.51
9	11.77	33.549	25.506	4.26	69. 4	15.0	1.24	11.2	0 . 43	1.53	0 . 82	14 .	31 .2	30 . 8	31 .0	0.29
14	10.99	33.578	25.671	3.85	61.7	16.9	1.55	16.2	0 . 39	1.16	0.58	4 . 6	7 . 4	7.2	7 . 3	0.15
19	10.52	33.604	25.774	3,74	59.3	17.9	1.55	17.6	0.25	0.87	0 . 44	1 . 6	1 . 9	2 . 0	1 . 9	0. 08
26	10.15	33.662	25 . 883	3.50	55.1	20.2	1 . 65	19.8	0 . 08	0 . 30	0.23	0 . 33	0 . 04	0 . 05	0 . 04	0 . 06

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 1 1 ..0 N	118 53.2 W	7/7/95	1911 UTC	15 m	03	1208 - 1936 PST	1201 PST	1936 PST	440.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 UN/ I	P04 uM/ I	N03 uM/I	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
1	16.72	33.574	24.487	5 . 82	105.0	4.0	0 . 36	0 . 1	0 . 00	0.52	0.14	90 . A	16.5	16.4	16.4	0.15
9	16.14	33.571	24.618	5 . 82	103.8	4 . 1	0 . 36	0. 1	0 . 00	0.44	0.14	40 .	13.1	13.0	13.0	0.17
20	13.44	33.542	25 17 7	5 . 79	97 . 7	5 .7	0 . 63	3 . 5	0.11	0 . 67	0 . 33	13 .	11.7	12.3	12.0	0.13
30	11.93	33.553	25 480	4.77	78.0	12.3	1 . 06	10.7	0.29	0.81	0.55	4 . 6	7 . 7	8 . 1	7 . 9	0.10
40	10.88	33 .642	25.741	3 .83	61.3	17.0	1.41	16.3	0.22	0 . 63	0 . 37	1 7	2 . 2	2 . 3	2 . 2	0. 08
48	10.45	33 . 670	25.838	3. 53	55.9	19.7	1.56	19.2	0 . 07	0 , 49	0 . 33					
56	10.32	33.682	25 . 870	3.47	54.8	20 . 4	1.58	19.8	0 . 08	0 . 43	0.28	0 52	0.14	0.15	0.14	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
31 11 .. 8 N	120 55.2 W	8/ 7/95	1822 UTC	34 m	01	1206 - 1946 PST	1209 PST	1942 PST	273.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/ I	N02 uH/ I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
2	17.51	33.126	23.957	5 .63	102.8	3 .2	0.31	0. 2	0 . 00	0 . 09	0.02	91 . A	3 . 9	3.9	3.9	0.05
11	17.39	33.138	23.995	5 . 64	10 2 8	3 . 1	0.30	0. 2	0 . 00	0.10	0 . 02					
22	16.93	33.149	24.112	5 . 69	102.8	2 . 9	0. 30	0 . 2	0 .00	0.10	0 . 03	37.	3 , 6	3 .6	3 , 6	0.10
33	16.22	33.183	24.302	5 .80	103, 3	2 . 9	0.31	0 . 2	0 .00	0.12	0 . 03					
47	15.83	33.137	24.356	5 . 34	103.2	3 . 0	0.31	0 .2	0 . 00	0.14	0 . 05	12 .	2 . 4	2 .5	2 . 5	0.10
58	15.31	33.112	24.452	5 .92	103.5	2 . 4	0.31	0 . 1	0 . 00	0.19	0 . 08					
69	14.52	33.059 D	24.582													
80	14.67	33.182	24.645	5 . 88	101.5	2 . 9	0.34	0 . 2	0 . 00	0. 31	0.25					
91	14.50	33.298	24.771	5 . 73	98 . 7	3.0	0.37	0 . 1	0.19	0.37	0.29	1 . 6	1 . 5	1 . 5	1 . 5	0.04
103	14.32	33.458	24.932	5.52	94 . 8	3 . 7	0. 44	1 . 2	0.27	0.21	0.20					
115	13.67	33.594	25.173	5.19	88 .0	5 . 2	0.58	4 . 1	0,11	0.16	0.17					
125	13.27	33.600	25.259	5 . 03	84 . 6	6 . 3	0 . 70	5 . 8	0. 04	0.12	0.15	0 . 35	0. 06	0. 08	0. 07	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 9507 — STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
30 9..6 N	122 54.7 W	9/ 7/95	1812 UTC	37 m	01	1215-1946 PST	1217 PST	1946 PST	168.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	18.66	33.583	24.025	5.50	103.0	2 . 6	0.27	0 . 1	0 . 00			96. A	1 . 8	1 . 8	1 . 8	0.05
23	18.45	33.578	24.074	5.53	103.1	2 . 6	0.27	0. 1	0 . 00			39 .	2 . 3	2 . 4	2 . 4	0.24
36	17.77	33.529	24.204	5 .63	103.6	2 . 6	0.27	0 . 1	0 . 00	0 . 07	0 .01					
50	17.94	33.670	24.271	5 . 60	103.4	2 . 5	0.26	0 . 1	0 . 00	0 . 09	0 .02	13 .	1 .6	1 . 6	1 . 6	0.11
62	16.37	33.404	24.439	5 . 83	104.3	2 . 6	0.29	0 . 1	0 . 00	0 . 09	0 .03					
75	16.06	33.399	24.506	5 . 83	103.6	2 . 6	0 . 30	0 . 1	0 . 00	0.11	0 . 05	4 . 5	0 . 91	0. 90	0. 91	0.12
87	15.79	33.404	24.571	5.81	102.7	2 . 6	0 . 30	0 . 1	0 . 00	0.14	0 . 05					
99	15.73	33.492	24.653	5 . 75	101.6	2 . 4	0 . 30	0. 1	0 . 00	0.17	0 . 07	1 . 6	0 . 70	0. 66	0.68	0.08
110	15.33	33.437	24.699	5.71	100.1	2 . 7	0.31	0 . 1	0. 00	0.18	0.15					
120	15.13	33.517	24.805	5 . 65	98 . 7	2 . 9	0 . 32	0 . 1	0 . 00	0.23	0.19					
128	15.52	33.719 D	24.875													
136	14.70	33.583	24.949	5 . 49	95 . 1	3 . 4	0 . 38	0 . 8	0.17	0.23	0.22	0 . 35	0.18	0.19	0.19	0.06

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.5, 1.7, 0.34 PERCENT RESPECTIVELY.

CalCOFI Cruise 9507

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	End	Water Volume Strained (m)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm)	Small (cm)
77	49	35 05.5	120 47.3	07/21	2309	2316	121	63	708	198
77	51	35 01.6	120 55.5	07/21	1847	1909	410	212	188	188
77	55	34 53.1	121 12.9	07/21	1517	1538	389	209	157	157
77	60	34 43.7	121 33.5	07/21	0951	1013	381	212	192	192
77	70	34 23.3	122 14.4	07/21	0450	0512	380	214	152	152
77	80	34 03.1	122 57.2	07/20	2239	2300	401	212	62	62
77	90	33 43.6	123 38.7	07/20	1646	1708	388	210	59	59
77	100	33 23.7	124 20.2	07/20	0920	0942	401	207	37	37
80	51	34 27.5	120 31.3	07/18	1552	1558	118	53	179	43
80	55	34 18.3	120 47.7	07/18	2033	2055	388	211	222	222
80	60	34 09.9	121 09.8	07/19	0025	0046	387	216	401	401
80	70	33 49.1	121 51.0	07/19	0926	0948	407	209	54	54
80	80	33 29.3	122 32.2	07/19	1620	1642	404	210	49	49
80	90	33 09.5	123 13.0	07/19	2212	2234	369	211	49	49
80	100	32 49.5	123 55.2	07/20	0404	0426	403	207	27	27
82	47	34 16.1	120 01.8	07/18	0920	0942	382	212	131	131
83	40.6	34 12.8	11925.1	07/18	0350	0354	72	26	139	139
83	42	34 11.4	11931.5	07/18	0201	0211	180	101	205	205
83	51	33 51.9	120 07.6	07/17	2006	2017	206	104	97	97
83	55	33 44.6	120 23.3	07/17	1632	1654	398	214	334	334
83	60	33 34.6	120 45.5	07/17	0945	1006	382	211	118	118
83	70	33 15.7	121 26.2	07/17	0500	0522	412	209	49	49
83	80	32 55.4	122 07.4	07/16	2320	2341	407	210	54	54
83	90	32 34.4	122 48.1	07/16	1737	1758	403	214	27	27
83	100	32 15.1	123 29.4	07/16	0850	0911	420	205	31	31
83	110	31 55.1	124 09.9	07/16	0242	0303	416	209	36	36
87	33	33 53.3	118 29.5	07/13	1136	1141	128	41	70	70
87	35	33 49.7	118 37.0	07/13	1450	1511	400	212	85	85
87	40	33 37.7	118 58.2	07/13	1939	2001	403	209	174	174
87	45	33 29.9	119 20.2	07/13	2333	2355	386	212	228	228
87	50	33 19.7	119 40.6	07/14	0302	0310	144	68	264	264
87	55	33 10.5	12001.3	07/14	0641	0702	401	204	190	190
87	60	32 58.8	120 22.7	07/14	1120	1141	398	214	181	181
87	70	32 37.1	121 01.3	07/14	1757	1819	393	215	56	56
87	80	32 19.5	121 42.8	07/14	2351	0013	396	213	48	48
87	90	31 59.4	122 23.9	07/15	0549	0611	413	214	61	61
87	100	31 40.2	123 05.4	07/15	1249	1310	419	210	29	29
87	110	31 19.2	123 44.7	07/15	2019	2041	417	211	74	74
90	28	33 28.8	117 46.2	07/13	0428	0435	103	68	117	117
90	30	33 25.0	11754.1	07/13	0215	0236	404	212	144	144
90	35	33 15.3	118 14.7	07/12	2206	2228	397	211	121	121
90	37	33 10.8	11821.4	07/12	1930	1952	400	212	198	198
90	45	32 56.3	118 56.5	07/12	1330	1351	409	212	42	42
90	53	32 39.6	119 28.6	07/12	0636	0658	409	224	132	132
90	60	32 25.0	119 57.8	07/12	0109	0130	408	211	86	86
90	70	32 05.2	120 38.8	07/11	0917	0939	415	214	94	94
90	80	31 44.8	121 18.2	07/11	0346	0407	420	210	36	36
90	90	31 24.6	121 58.1	07/10	1951	2013	419	213	26	26
90	100	31 04.8	122 39.4	07/10	1235	1257	404	213	25	25
90	IIO	30 45.4	123 19.4	07/10	0531	0552	419	216	19	19
90	120	30 25.3	123 59.8	07/09	2312	2334	411	212	22	22
93	26.7	32 56.9	117 18.1	07/06	1235	1241	111	47	108	108
93	28	32 54.0	11723.8	07/06	1644	1706	393	213	53	53
93	30	32 49.8	117 32.8	07/06	1948	2009	410	207	154	154
93	35	3241.1	117 53.7	07/06	2351	0013	394	219	117	117
93	40	3231.2	118 13.3	07/07	0352	0414	396	215	96	96
93	45	32 22.2	11833.9	07/07	0801	0823	380	211	121	121
93	50	32 11.5	11853.1	07/07	1251	1312	390	219	77	77
93	55	32 01.0	119 12.8	07/07	1750	1812	389	221	139	139
93	60	31 50.5	119 34.0	07/07	2215	2236	400	212	188	188
93	70	31 29.6	120 14.9	07/08	0425	0446	397	212	108	108
93	80	31 11.4	120 55.3	07/08	0925	0946	411	214	32	32
93	90	30 50.0	121 35.0	07/08	1848	1909	404	213	25	25
93	100	3031.0	122 15.1	07/09	0038	0059	407	212	27	27
93	IIO	30 11.1	122 55.7	07/09	0821	0843	406	216	12	12
93	120	29 50.7	123 34.7	07/09	1710	1732	415	216	19	19

FIGURES

Cruise 9510

1. CalCOFI Cruise 9510, 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 87 (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.

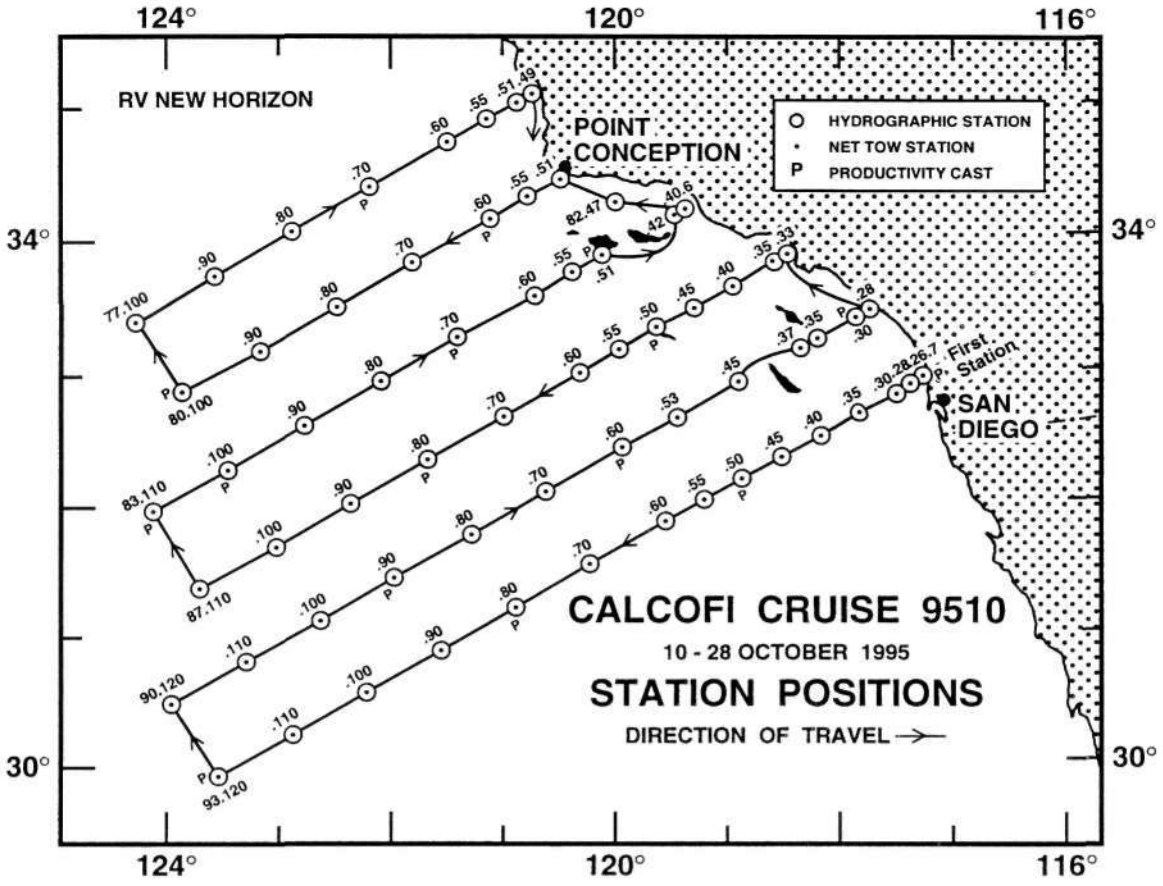


FIGURE 1

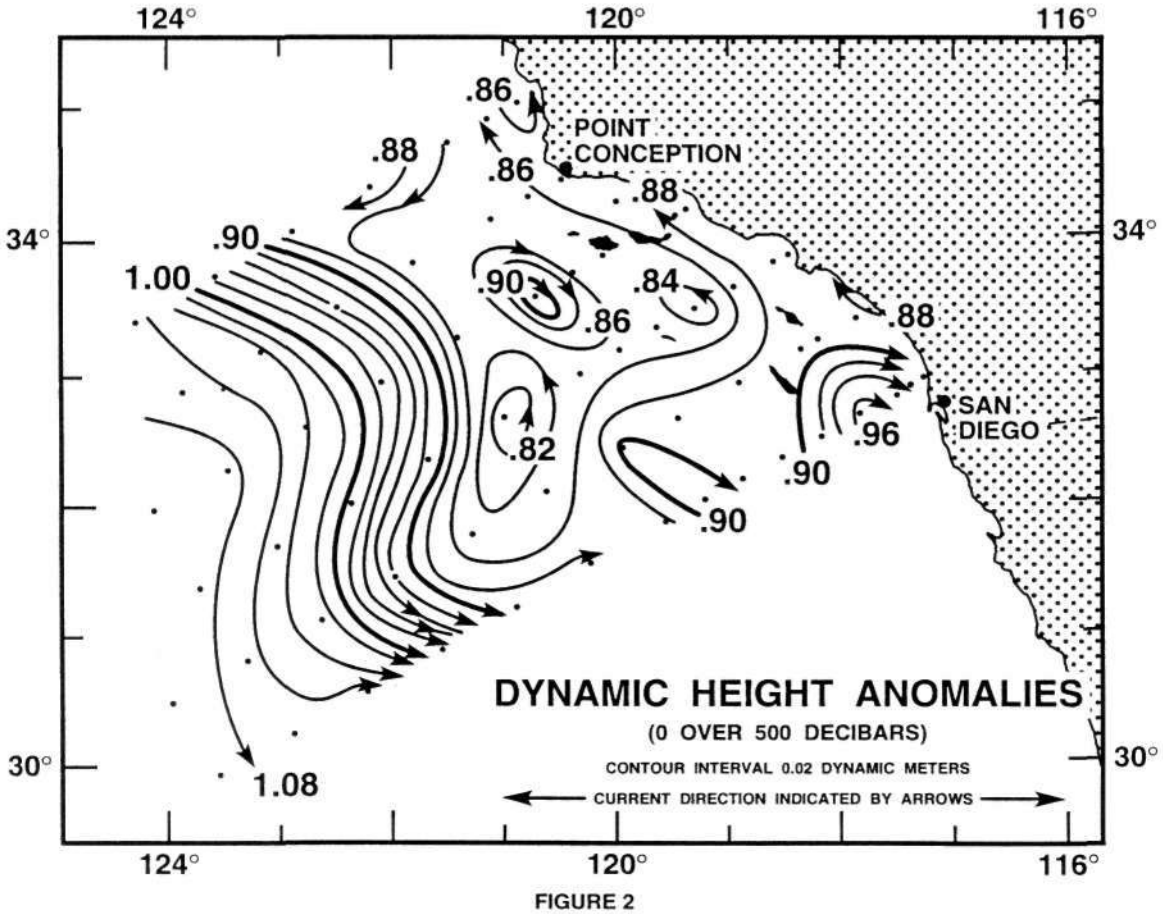


FIGURE 2

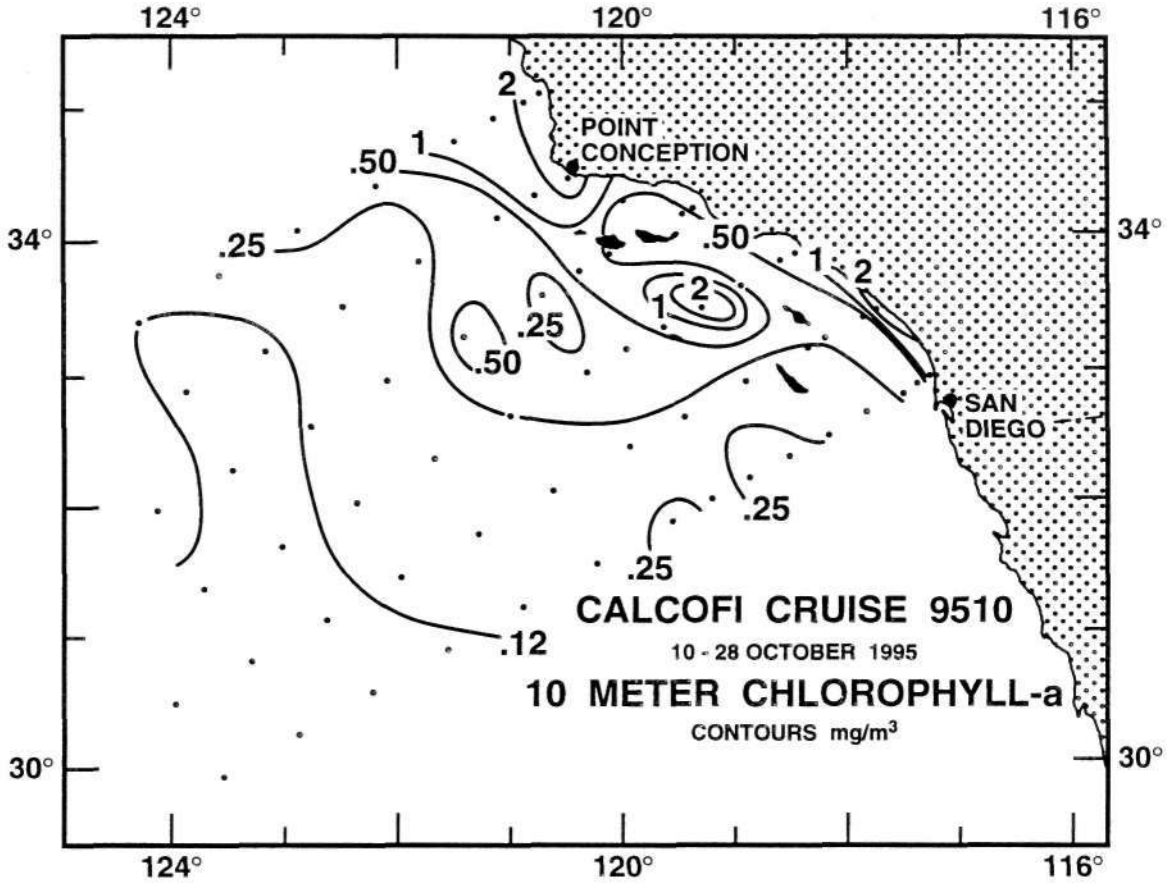


FIGURE 3A

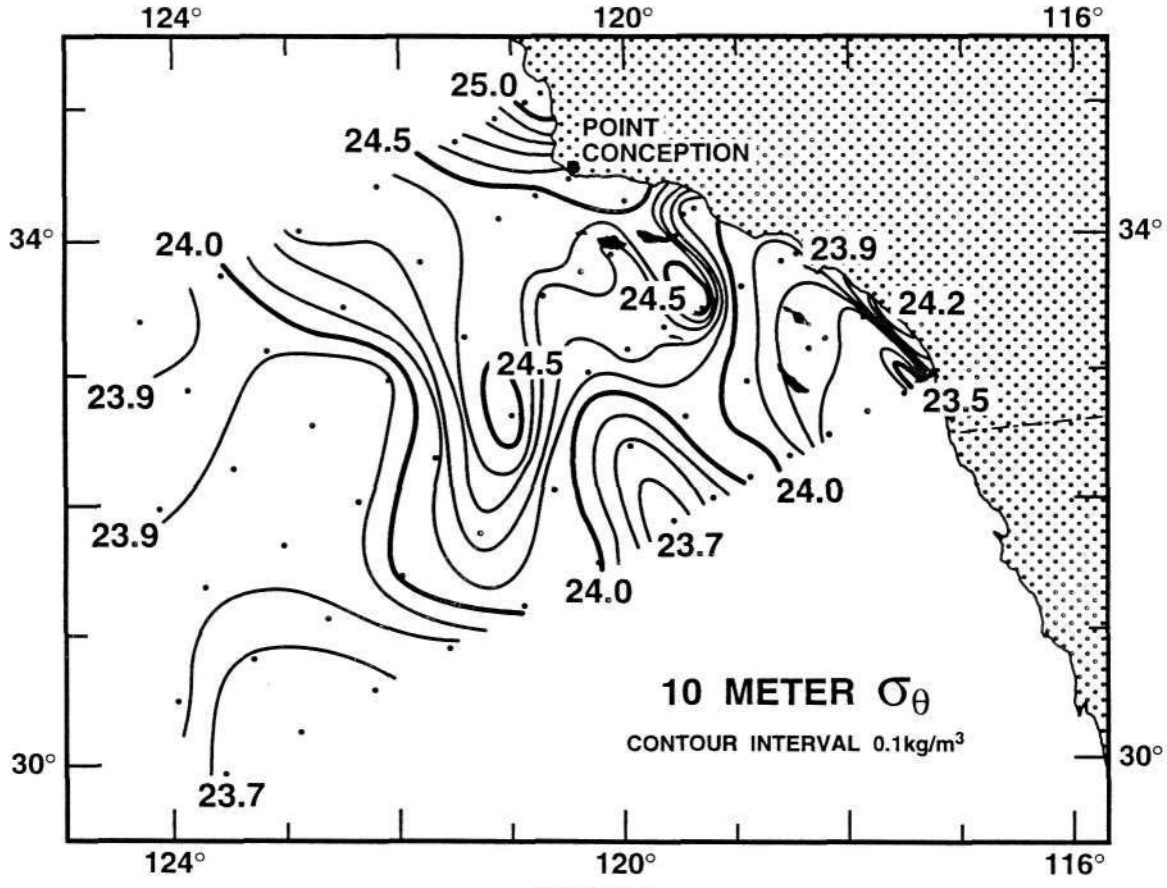


FIGURE 3B

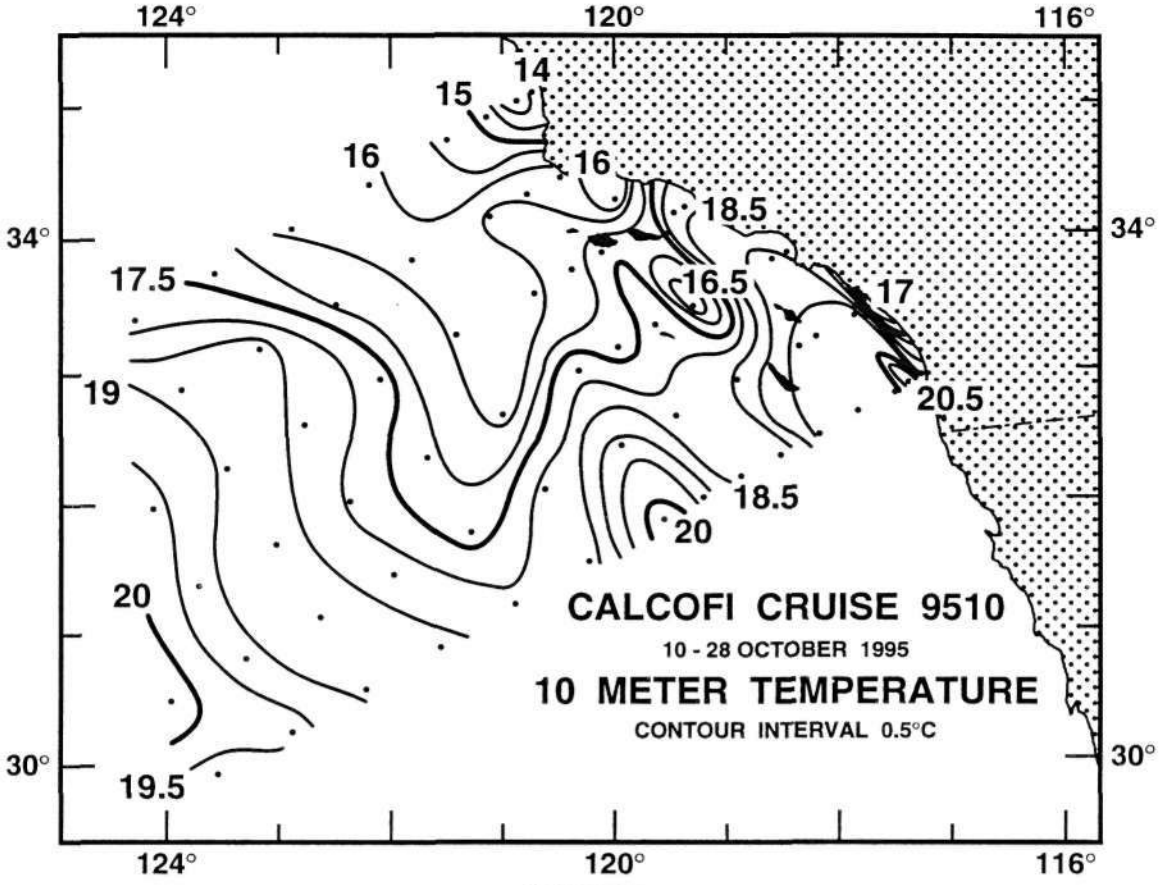


FIGURE 3C

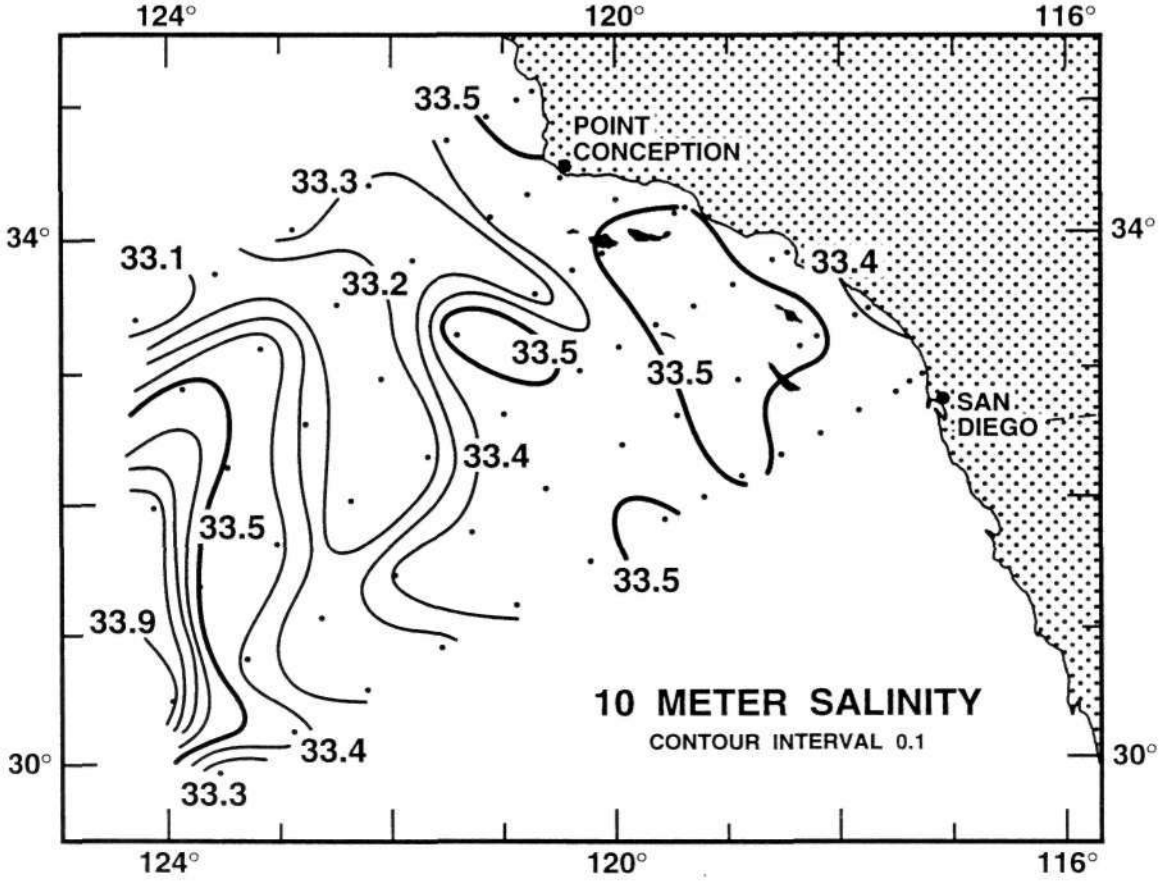


FIGURE 3D

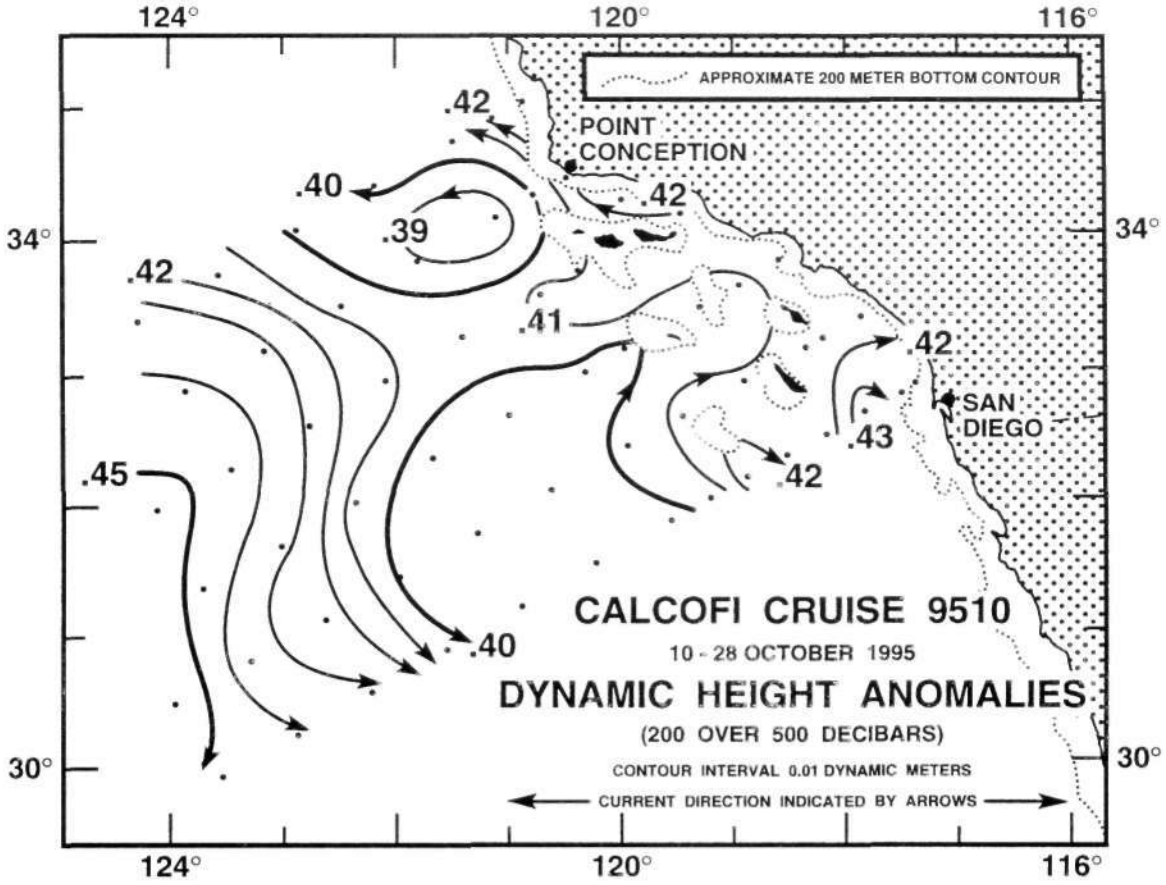


FIGURE 4A

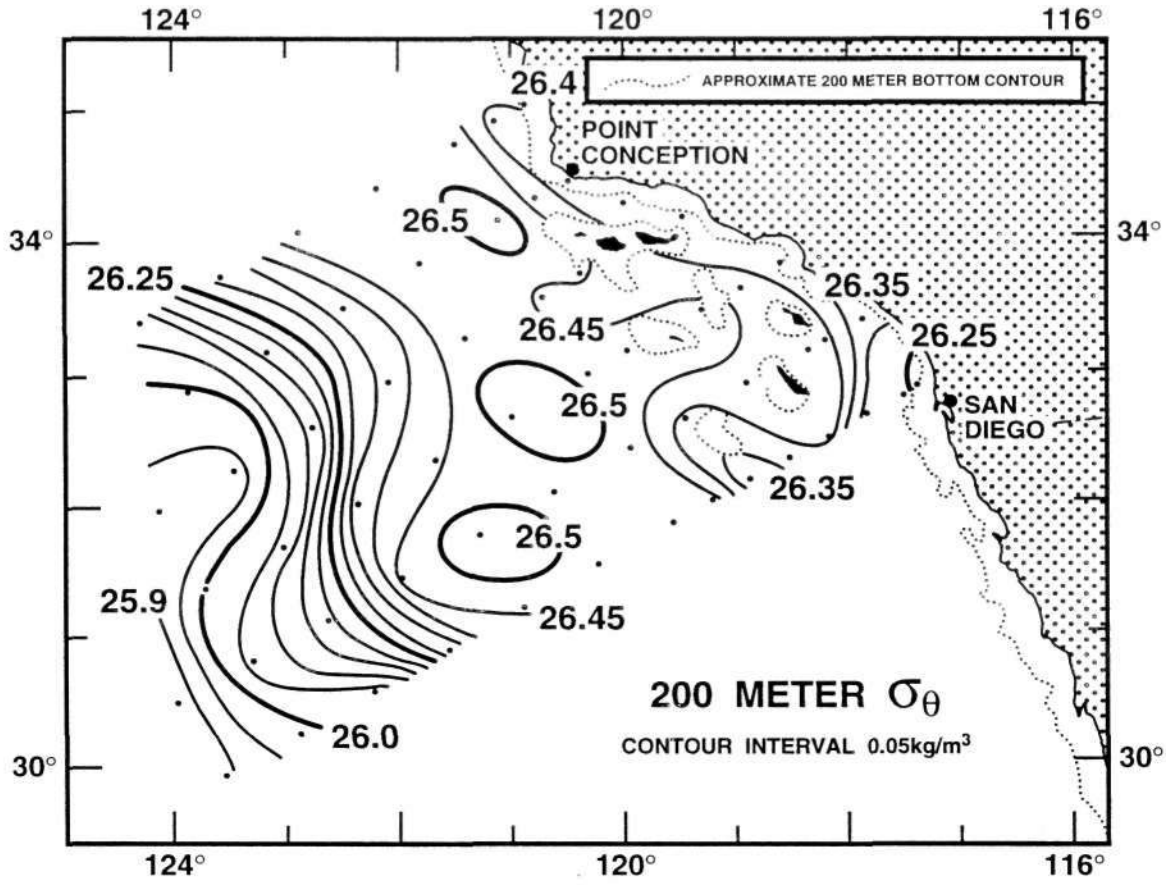


FIGURE 4B

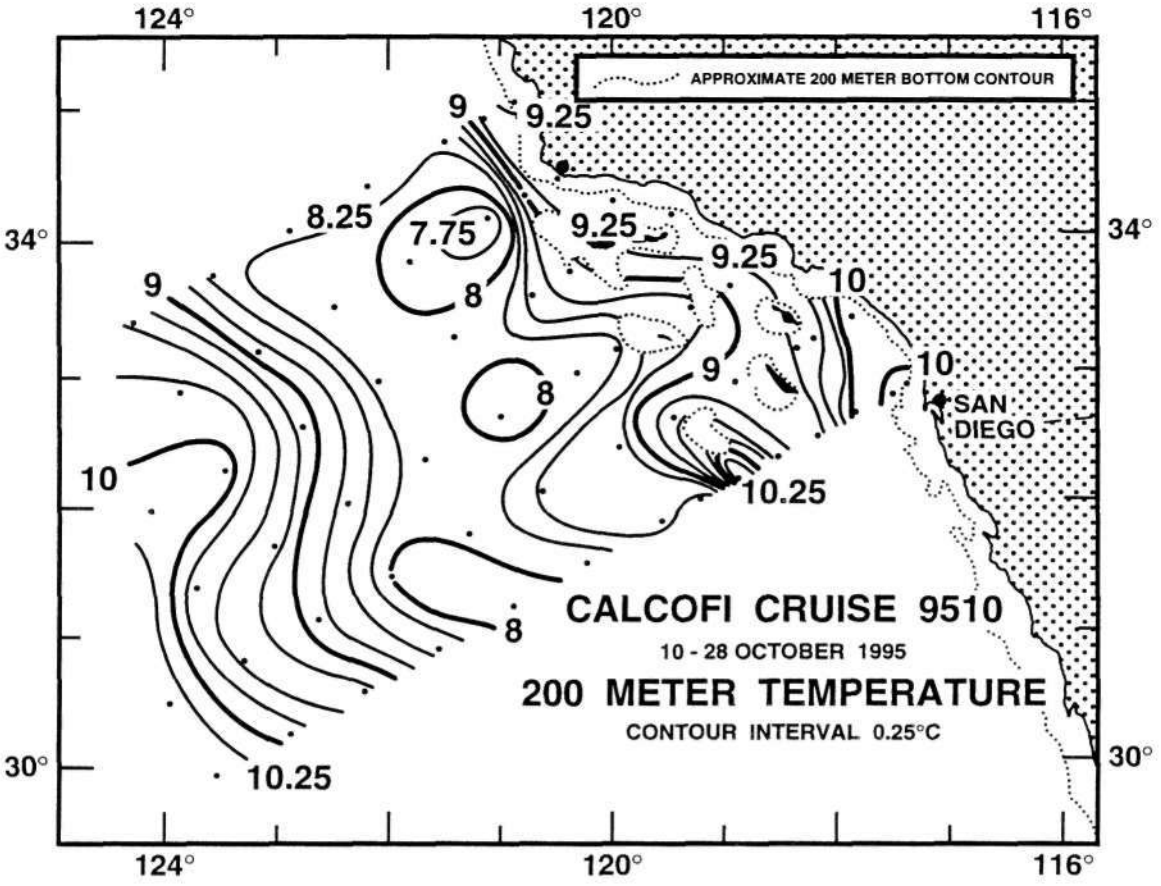


FIGURE 4C

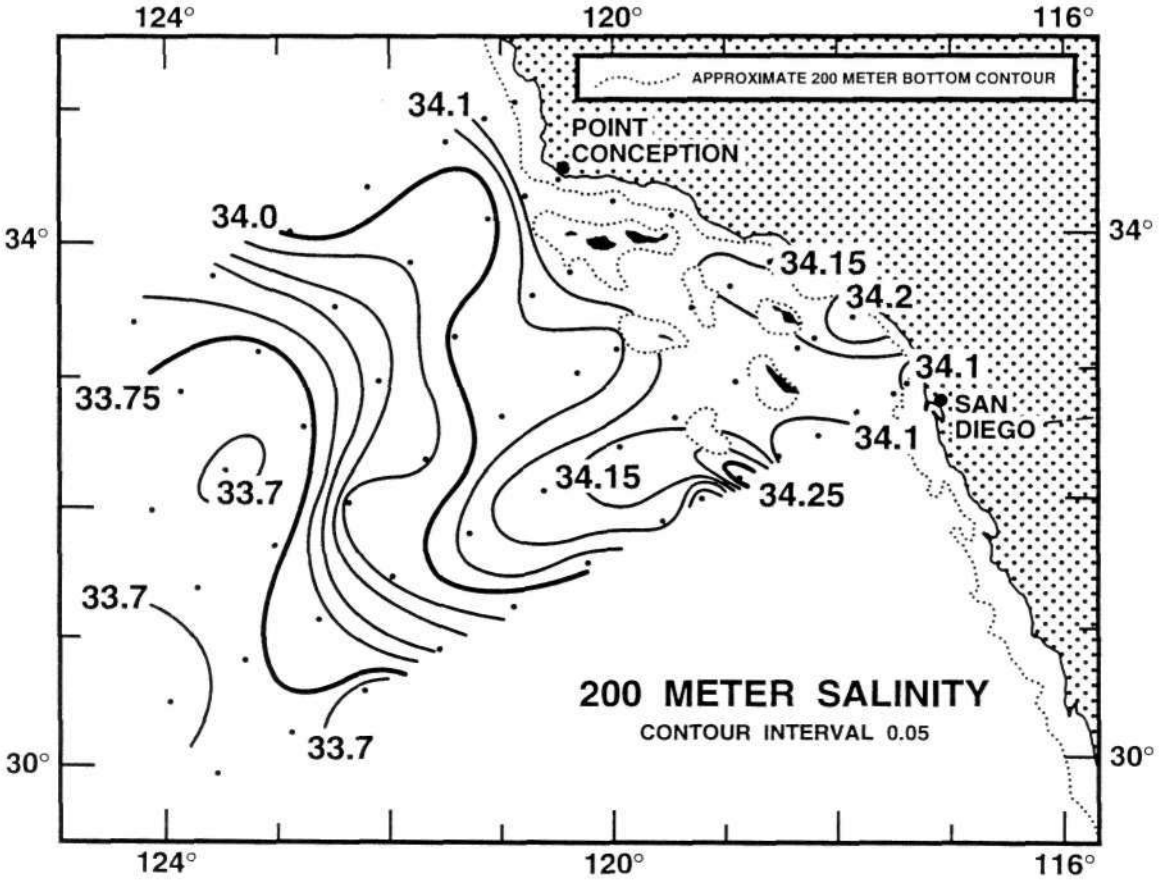


FIGURE 4D

CALCOFI CRUISE 9510

19 - 21 OCTOBER 1995

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 87

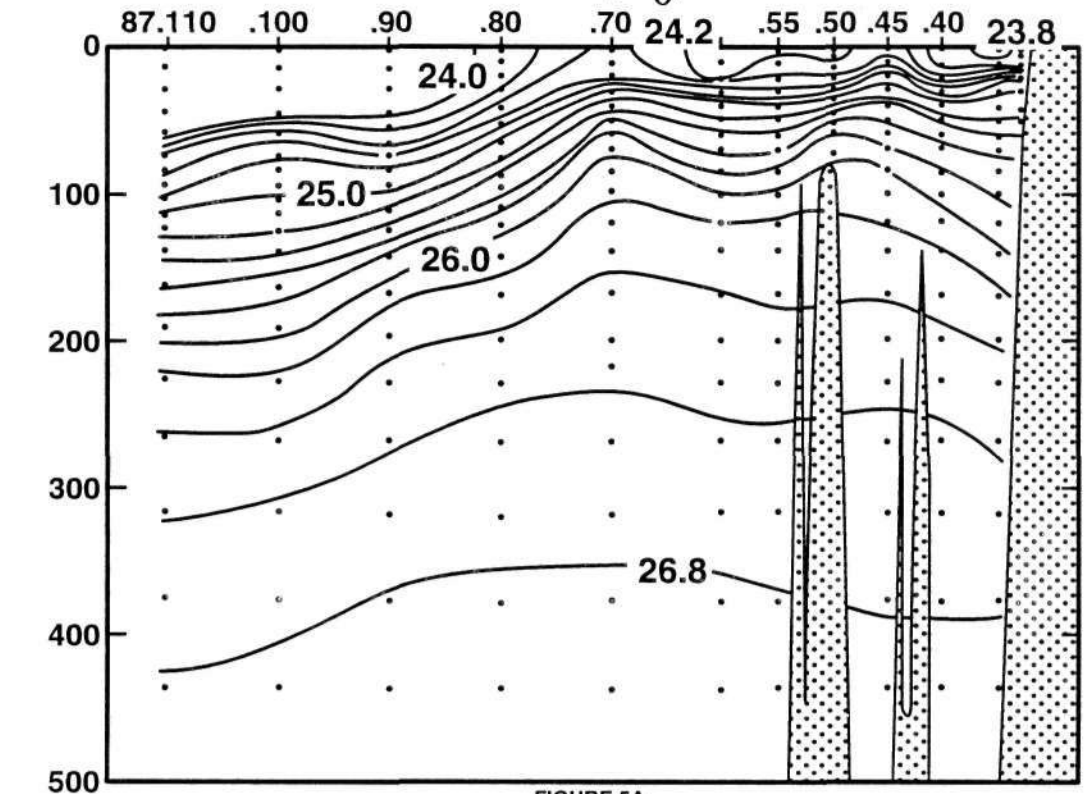


FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 87

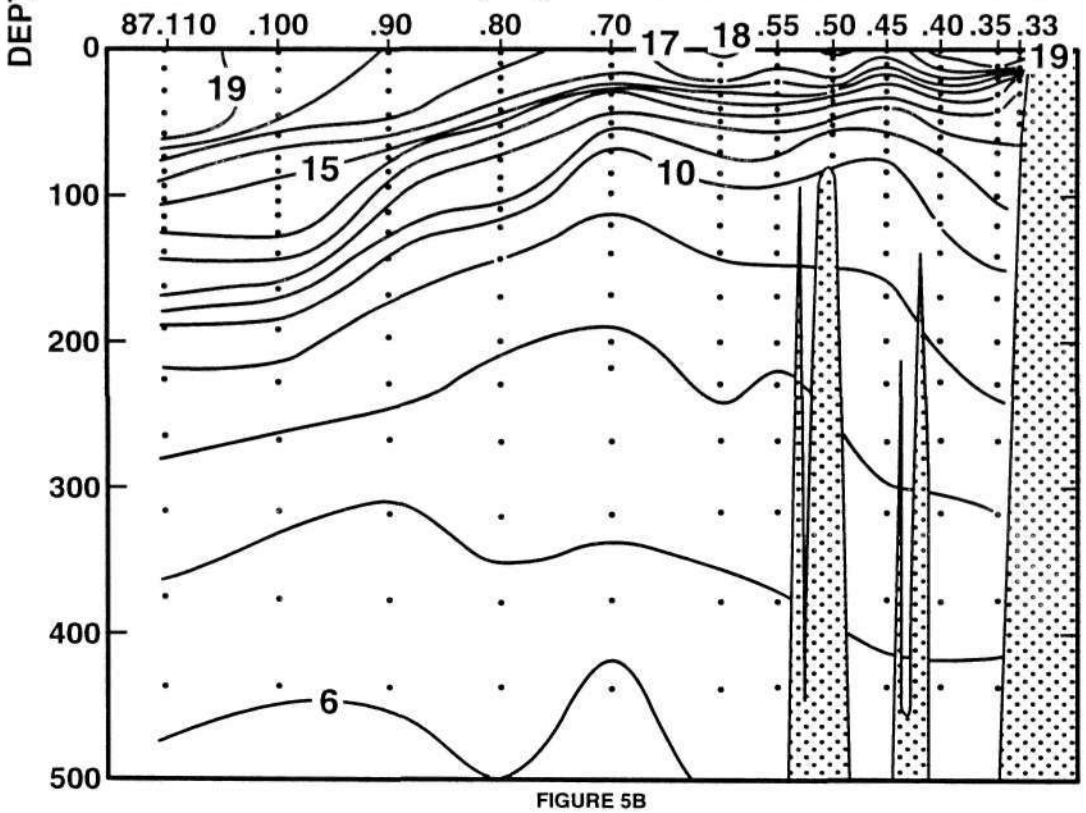


FIGURE 5B

CALCOFI CRUISE 9510

19 - 21 OCTOBER 1995

SALINITY ALONG CALCOFI LINE 87

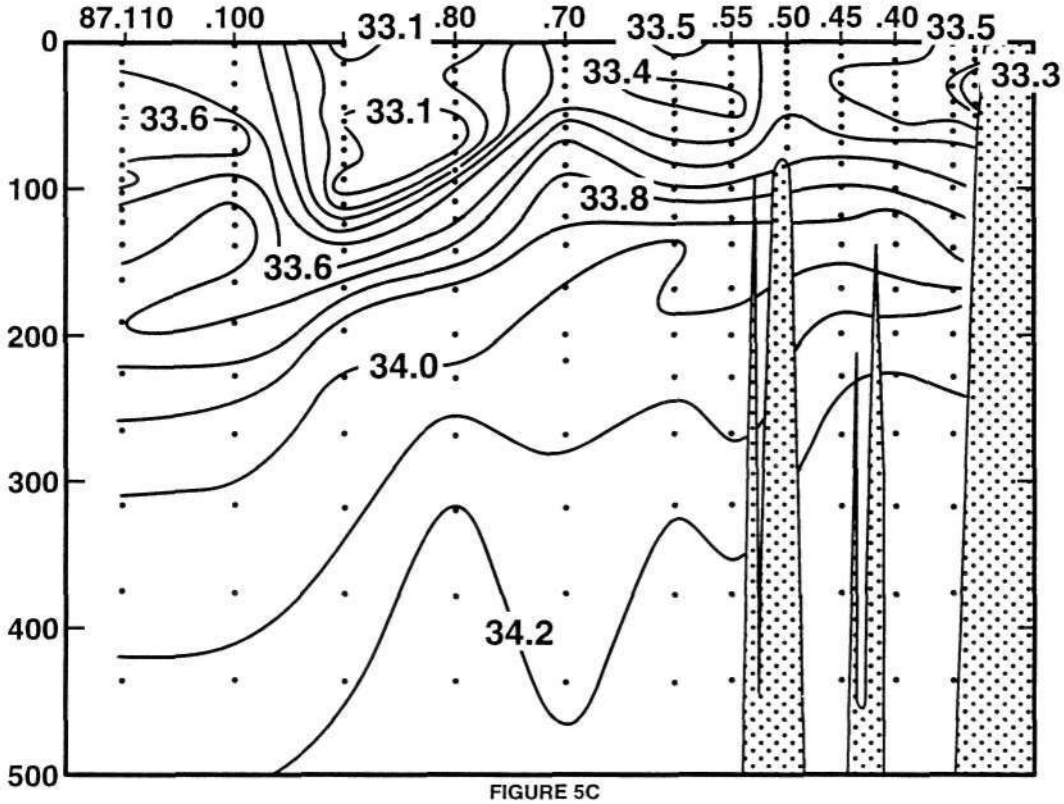


FIGURE 5C

SILICATE (μM/l) ALONG CALCOFI LINE 87

DEPTH (m)

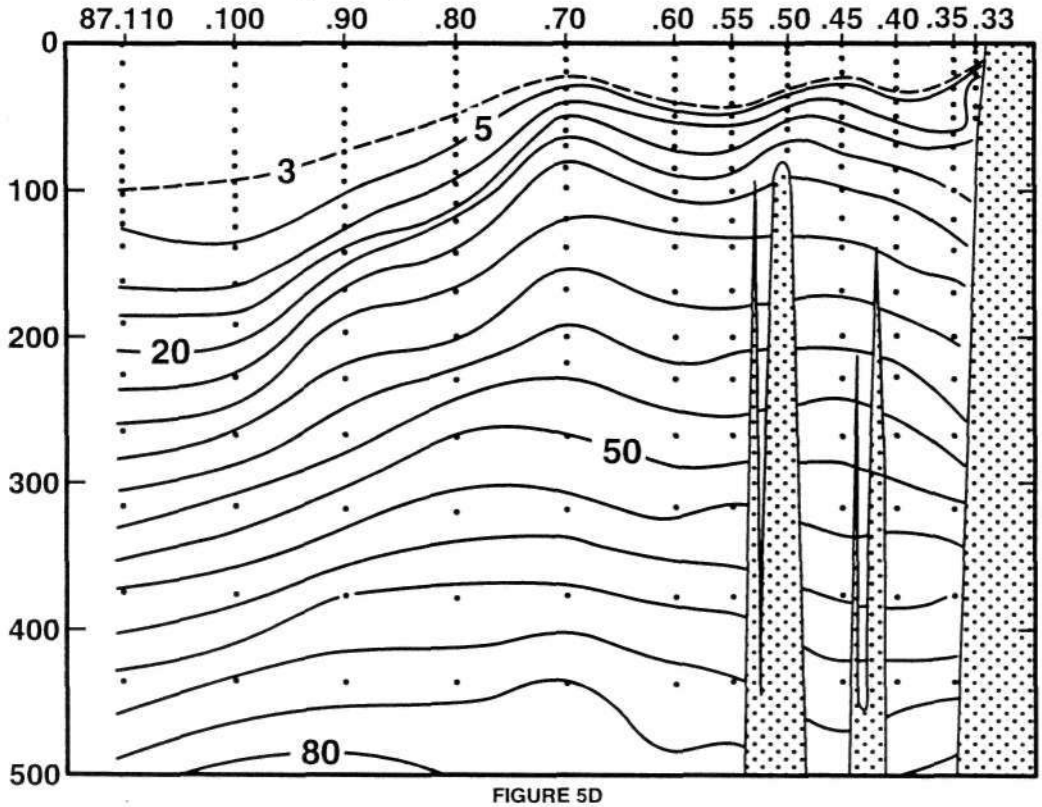


FIGURE 5D

CALCOFI CRUISE 9510

19 - 21 OCTOBER 1995

NITRATE (μM/l) ALONG CALCOFI LINE 87

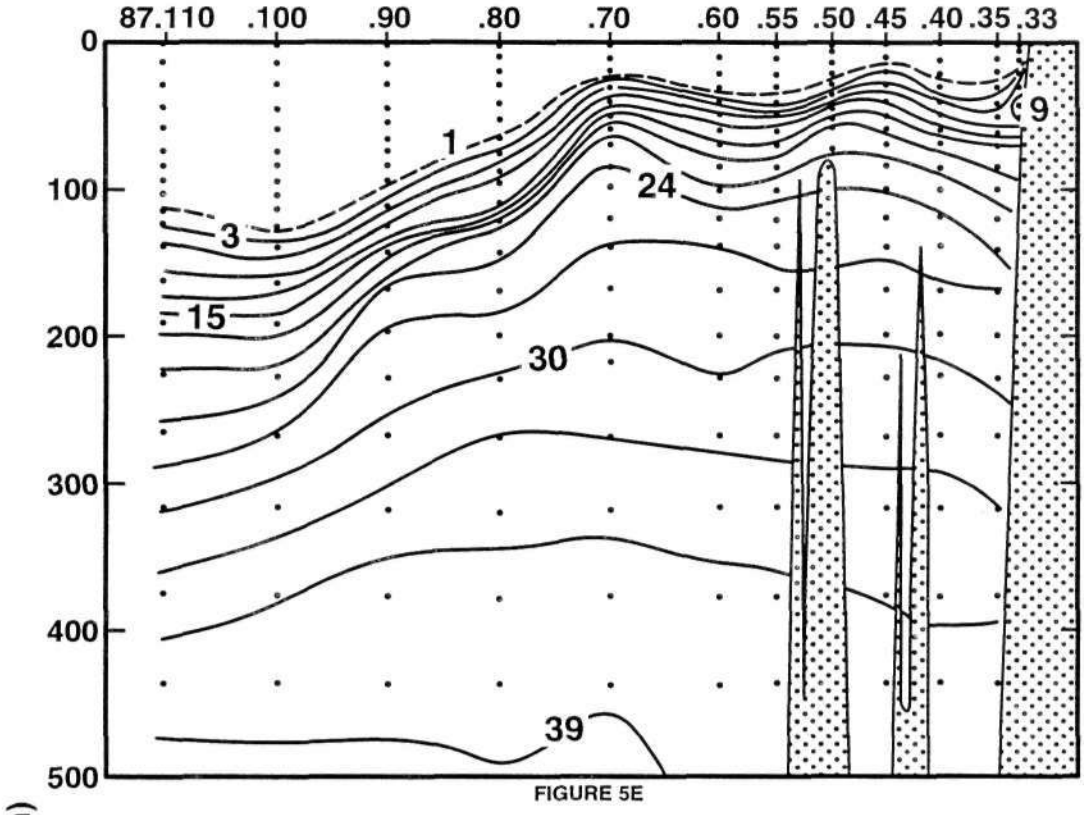


FIGURE 5E

DEPTH (m)

PHOSPHATE (μM/l) ALONG CALCOFI LINE 87

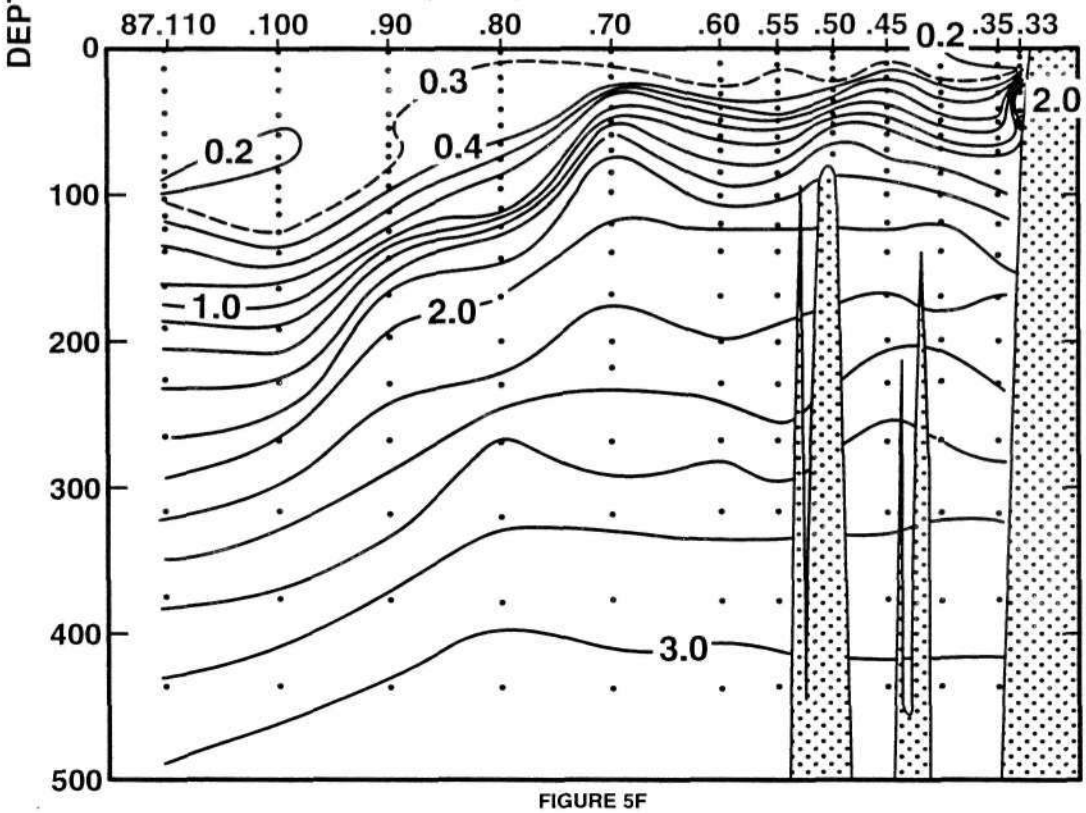


FIGURE 5F

CALCOFI CRUISE 9510

19 - 21 OCTOBER 1995

CHLOROPHYLL-a (μg/l)) ALONG CALCOFI LINE 87

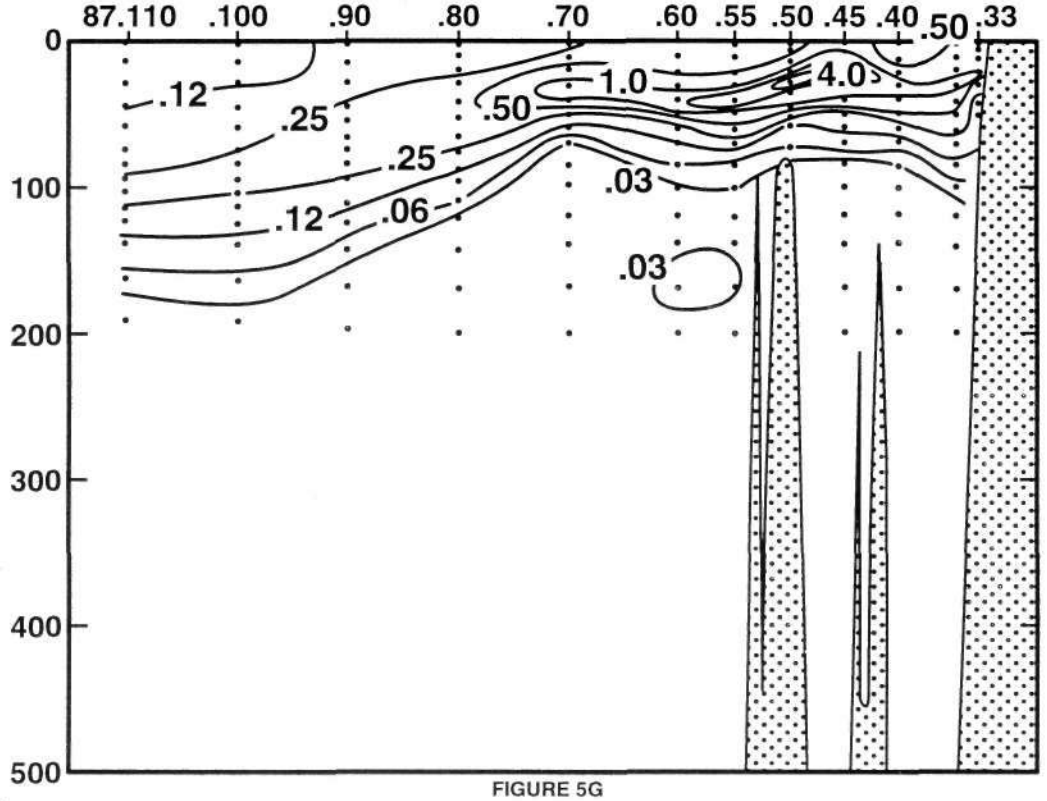


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 87

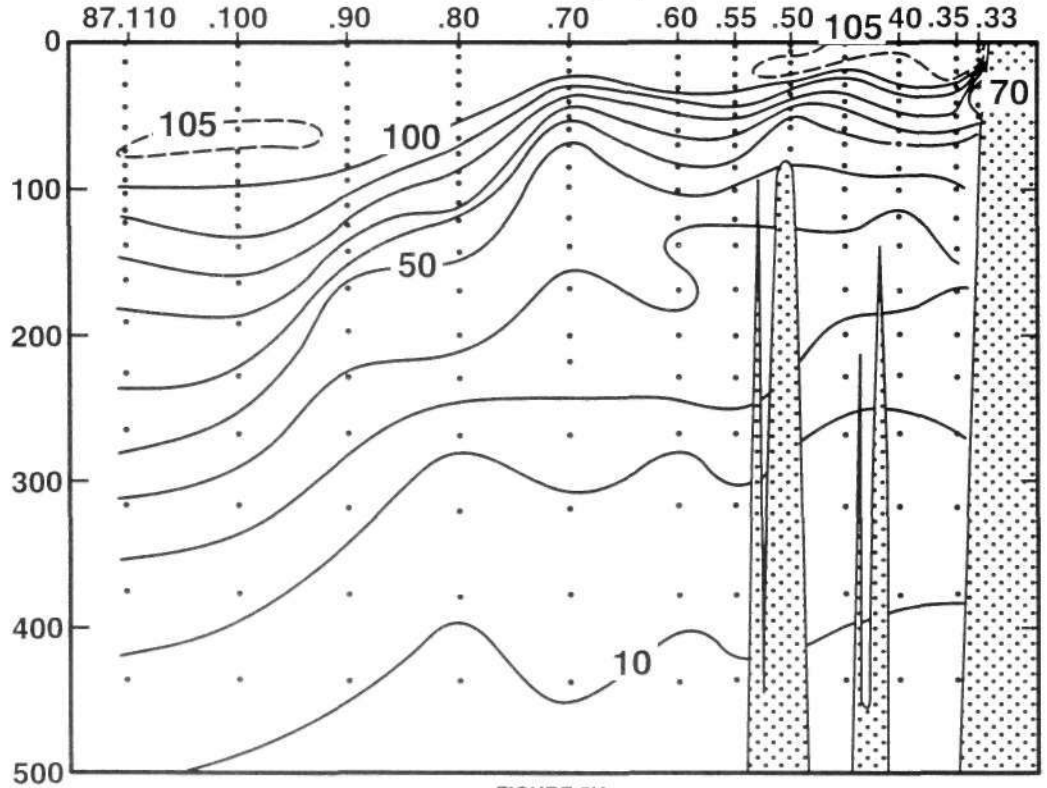


FIGURE 5H

CALCOFI CRUISE 9510

19 - 21 OCTOBER 1995

OXYGEN (ml/l) ALONG CALCOFI LINE 87

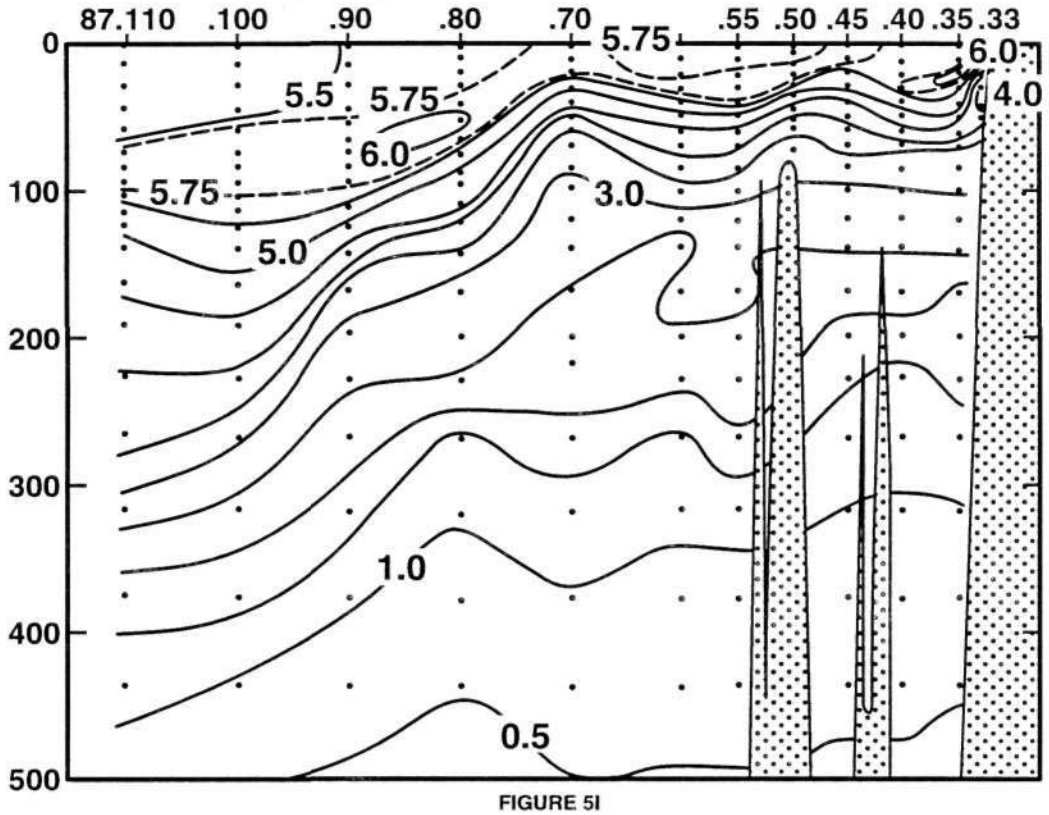


FIGURE 5I

DEPTH (m)

NITRITE (μM/l) ALONG CALCOFI LINE 87

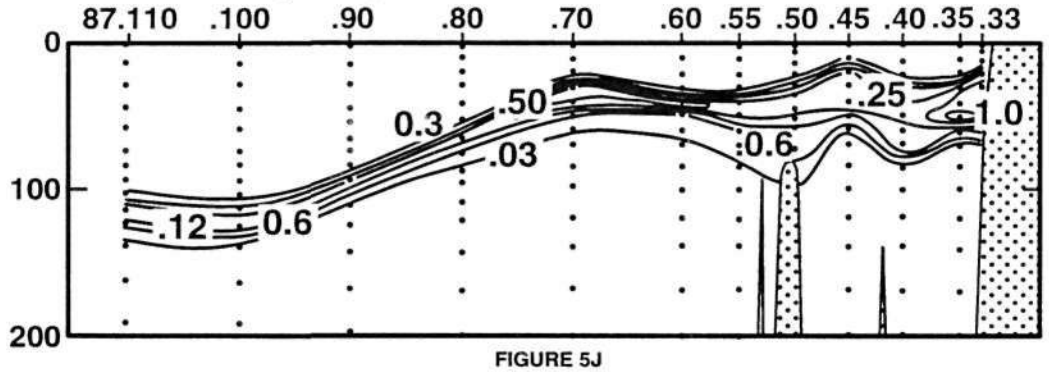


FIGURE 5J

PHAEOPIGMENTS (μg/l) ALONG CALCOFI LINE 87

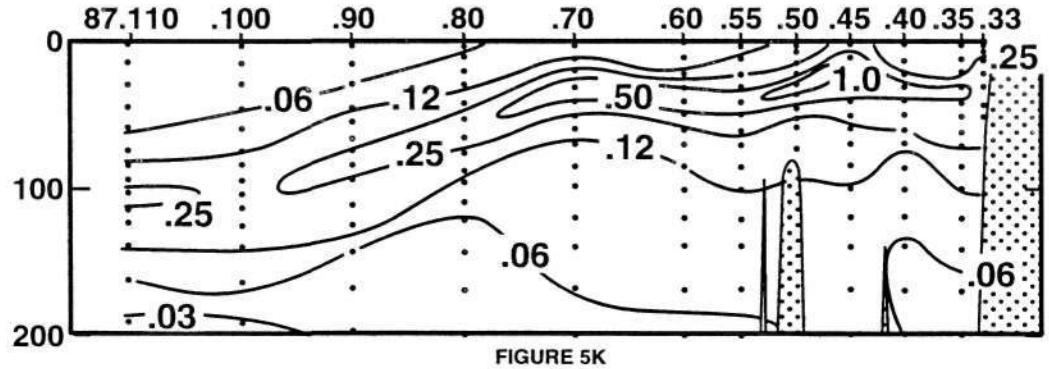


FIGURE 5K

PERSONNEL

CalCOFI Cruise 9510

SHIP'S CAPTAIN

Curtis Duane Johnson, *RV New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Renger, Edward H. (Chief Scientist)	Staff Research Associate, SIO
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS
Collier, Jackie L.	Postdoctoral Fellow, SIO
Dotson, Ronald C.	Fishery Biologist, NMFS
Fournier-Sicre, Vincent	Programmer/Analyst, SIO
Griffith, David A.	Fishery Biologist, NMFS
Gruber, Denis W.	Marine Technician, SIO
Hays, Amy E.	Biological Technician, NMFS
Nisly, Barry J.	Development Engineer, SIO
Olaizola, Miguel	Postdoctoral Fellow, SIO
Pillard, Eugene G.	Marine Technician, SIO
Ramirez. Fernando	Staff Research Associate. SIO
Rathburn. Anthony E.	Post Graduate Researcher. SIO
Veit. Richard R.	Research Scientist. University of Washington
Whitehead, Kenia L.	Graduate Student, UCSD
Wilkinson. James R.	Programmer/Analyst. SIO

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
35 5.4 N	120 46..6 W	27/10/95	1421 UTC	67 m	320 12 kn	300 03 05	0	1011.1 mb	14.8 C	14.5 C		0/8	

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	14.14	14.14	33.521	25.016	293.3	0.000	5.47	93.6	5.3	0.64	4.3	0.19	2.27	0.61	0	
1		14.14	14.14	33.521	25.016	293.3	0.003	5.47	93.6	5.3	0.64	4.3	0.19	2.27	0.61	1	208
5		14.15	14.15	33.523	25.015	293.5	0.015	5.47	93.7	5.3	0.63	4.4	0.19	2.34	0.60	5	207
9		14.06	14.06	33.525	25.036	291.6	0.026	5.41	92.5	5.8	0.67	4.6	0.20	2.12	0.75	9	206
10	ISL	14.04	14.04	33.526	25.041	291.2	0.029	5.39	92.1	5.9	0.68	4.7	0.20	2.13	0.73	10	
20		13.72	13.72	33.543	25.120	283.9	0.058	5.15	87.4	7.9	0.79	6.4	0.23	2.20	0.43	20	205
30		13.10	13.10	33.577	25.272	269.7	0.086	4.70	78.8	11.8	1.00	9.2	0.30	1.38	0.70	30	204
39		12.24	12.23	33.601	25.459	252.2	0.109	4.05	66.7	14.5	1.27	13.2	0.30	0.25	0.27	39	203
50		11.95	11.94	33.622	25.530	245.6	0.137	3.82	62.5	16.9	1.39	14.4	0.36	0.53	0.59	50	202
57		11.78	11.77	33.650	25.584	240.7	0.154	3.59	58.5	18.8	1.51	15.9	0.34	0.32	0.52	57	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
35 1.4 N	120 55,.3 W	27/10/95	1146 UTC	244 m	320 22 kn			1011.4 mb	14..5 C	14..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	14.06	14.06	33.526	25.036	291.3	0.000	5.50	94.0	5.6	0.64	4.3	0.20	2.22	0.52	0	
2		14.06	14.06	33.526	25.036	291.4	0.006	5.50	94.0	5.6	0.64	4.3	0.20	2.22	0.52	2	215
10	ISL	13.92	13.92	33.530	25.069	288.5	0.029	5.36	91.4	6.3	0.70	5.1	0.22	2.01	0.64	10	
11		13.89	13.89	33.531	25.076	287.9	0.032	5.34	91.0	6.4	0.71	5.2	0.22	1.98	0.66	11	214
20		13.64	13.64	33.539	25.134	282.6	0.058	5.18	87.8	7.4	0.79	6.4	0.24	2.02	0.73	20	213
30		12.87	12.87	33.569	25.311	265.9	0.085	4.56	76.1	11.1	1.05	10.1	0.29	1.09	0.62	30	212
40		11.77	11.76	33.625	25.566	241.9	0.110	3.82	62.3	15.5	1.38	15.3	0.17	0.58	0.49	40	211
50		11.58	11.57	33.642	25.614	237.6	0.134	3.64	59.1	16.6	1.44	16.4	0.15	0.50	0.44	50	210
61		11.10	11.09	33.681	25.732	226.6	0.160	3.37	54.2	18.6	1.59	18.5	0.06	0.38	0.40	61	209
70		10.82	10.81	33.714	25.808	219.6	0.180	3.18	50.8	20.4	1.67	19.9	0.04	0.31	0.33	70	208
75	ISL	10.69	10.68	33.738	25.850	215.7	0.191	3.06	48.8	21.4	1.73	20.7	0.04	0.27	0.30	75	
86		10.47	10.46	33.789	25.928	208.5	0.214	2.82	44.7	23.4	1.84	22.1	0.03	0.20	0.26	86	207
99		10.30	10.29	33.824	25.985	203.3	0.241	2.67	42.2	25.1	1.92	23.1	0.03	0.17	0.28	100	206
100	ISL	10.29	10.28	33.827	25.989	203.0	0.243	2.66	42.0	25.2	1.93	23.2	0.03	0.17	0.28	101	
120		10.06	10.05	33.887	26.075	195.2	0.283	2.39	37.6	28.0	2.04	24.6	0.04	0.11	0.24	121	205
125	ISL	9.96	9.95	33.911	26.111	191.9	0.292	2.30	36.1	29.1	2.09	25.1	0.05	0.11	0.24	126	
139		9.71	9.69	33.974	26.202	183.5	0.319	2.06	32.2	32.0	2.21	26.5	0.10	0.10	0.25	140	204
150	ISL	9.64	9.62	33.991	26.227	181.3	0.339	1.99	31.0	33.0	2.25	26.9	0.12	0.10	0.25	151	
168		9.55	9.53	34.009	26.257	178.9	0.371	1.92	29.9	34.1	2.29	27.3	0.14	0.10	0.24	169	203
197		9.09	9.07	34.100	26.403	165.5	0.421	1.65	25.4	38.1	2.43	29.3	0.12	0.08	0.25	198	202
200	ISL	9.06	9.04	34.102	26.409	164.9	0.426	1.64	25.3	38.4	2.44	29.4	0.12			201	
229		8.75	8.73	34.125	26.476	159.0	0.473	1.58	24.2	41.1	2.51	30.3	0.13			230	201

RV NEW HORIZON CALCOFI CRUISE 9510 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;.6 N	121 12,.1 W	27/10/95	0825 UTC	563 m	340 12 kn			1012.9 mb	15..4 C	15..3 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	SAHP
0	ISL	14.93	14.93	33.508	24.838	310.2	0.000	5.92	103.0	1.6	0.35	0.1	0.01	1.50	0.47	0	
2		14.93	14.93	33.508	24.838	310.3	0.006	5.92	103.0	1.6	0.35	0.1	0.01	1.50	0.47	2	220
10	ISL	14.92	14.92	33.509	24.841	310.2	0.031	5.94	103.3	1.5	0.34	0.1	0.01	1.48	0.44	10	
11		14.92	14.92	33.509	24.841	310.2	0.034	5.94	103.3	1.5	0.34	0.1	0.01	1.48	0.44	11	219
20		14.43	14.43	33.511	24.948	300.3	0.062	5.73	98.7	1.5	0.34	0.1	0.01	1.76	0.51	20	218
30		12.91	12.91	33.475	25.231	273.6	0.090	4.87	81.2	1.6	0.36	0.2	0.04	1.25	0.58	30	217
41		12.65	12.64	33.512	25.311	266.3	0.120	4.60	76.3	5.1	0.60	3.6	0.17	0.98	0.60	41	216
50		12.58	12.57	33.542	25.348	263.0	0.144	4.44	73.6	7.1	0.76	6.0	0.19	0.94	0.55	50	215
60		11.60	11.59	33.602	25.580	241.1	0.169	3.84	62.4	9.1	0.91	8.9	0.09	0.63	0.56	60	214
70		10.80	10.79	33.660	25.770	223.2	0.192	3.49	55.7	12.8	1.19	13.7	0.03	0.40	0.39	70	213
75	ISL	10.73	10.72	33.691	25.806	219.8	0.203	3.40	54.2	14.8	1.32	15.7	0.02	0.38	0.34	75	
85		10.58	10.57	33.707	25.845	216.4	0.225	3.26	51.8	18.6	1.53	19.0	0.01	0.34	0.28	85	212
99		10.33	10.32	33.776	25.942	207.4	0.255	2.99	47.3	22.5	1.71	21.8	0.01	0.26	0.25	100	211
100	ISL	10.30	10.29	33.786	25.955	206.2	0.257	2.95	46.6	22.9	1.73	22.0	0.01	0.25	0.25	101	
118		9.82	9.81	33.946	26.162	186.9	0.292	2.32	36.3	28.9	1.98	25.6	0.01	0.16	0.22	119	210
125	ISL	9.79	9.78	33.953	26.172	186.0	0.305	2.30	36.0	30.6	2.03	26.3	0.01	0.14	0.20	126	
139		9.72	9.70	33.967	26.195	184.1	0.331	2.25	35.1	33.1	2.09	27.2	0.01	0.11	0.15	140	209
150	ISL	9.65	9.63	33.998	26.231	180.9	0.351	2.13	33.2	33.7	2.11	27.4	0.01	0.11	0.15	151	
169		9.52	9.50	34.057	26.299	174.9	0.385	1.90	29.6	34.2	2.14	27.6	0.01	0.11	0.14	170	208
198		9.37	9.35	34.111	26.366	169.1	0.435	1.72	26.7	37.3	2.22	28.8	0.01	0.07	0.14	199	207
200	ISL	9.37	9.35	34.114	26.369	168.9	0.438	1.71	26.5	37.6	2.23	28.9	0.01			201	
228		9.21	9.18	34.135	26.411	165.4	0.485	1.65	25.5	41.4	2.35	30.4	0.01			229	206
250	ISL	8.78	8.75	34.127	26.474	159.7	0.521	1.73	26.5	43.5	2.39	31.1	0.01			252	
270		8.36	8.33	34.121	26.534	154.1	0.552	1.79	27.1	45.5	2.43	31.6	0.01			272	205
300	ISL	8.10	8.07	34.148	26.595	148.8	0.598	1.62	24.4	49.9	2.54	33.0	0.01			302	
318		7.97	7.94	34.163	26.626	146.1	0.624	1.48	22.2	52.8	2.62	33.9	0.01			320	204
378		6.89	6.85	34.121	26.746	134.9	0.709	1.32	19.3	62.7	2.84	36.8	0.00			380	203
400	ISL	6.65	6.61	34.123	26.780	131.8	0.738	1.22	17.8	66.8	2.91	37.8	0.00			403	
438		6.34	6.30	34.140	26.835	126.9	0.787	1.02	14.8	73.8	3.01	39.3	0.01			441	202
500	ISL	5.84	5.80	34.198	26.944	116.9	0.863	0.64	9.2	82.2	3.12	41.1	0.01			504	
516		5.71	5.67	34.214	26.973	114.2	0.881	0.54	7.7	84.4	3.15	41.6	0.01			520	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 43.3 N	121 33,.4 W	27/10/95	0015 UTC	957 m	340 25 kn			1014.3 mb	15 ..8 C	15 .3 C			

DEPTH i"		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 .44	15.44	33.418	24.657	327.4	0.000	5 .90	103.6	3.1	0.41	0.9	0.09	1 .60	0.42	0	
1		15.44	15.44	33.418	24.657	327.5	0.003	5 .90	103.6	3.1	0.41	0.9	0.09	1 .60	0.42	1	220
10		15.42	15.42	33.418	24 .662	327.3	0.033	5 .89	103.4	3.0	0. 41	0.9	0.09	1 .46	0. 67	10	219
20		15.31	15.31	33.421	24.689	325.0	0.065	5.93	103.9	4.3	0.53	2 .4	0.16	1 .76	0. 40	20	218
30		14.90	14.90	33.400	24.762	318.3	0.098	5.93	103.0	7.7	0. 90	8.2	0.28	2 .32	0.62	30	217
41		12.65	12.64	33. 148	25 .029	293. 1	0.131	5 .65	93.6	9.6	1 .02	10.0	0.25	0. 96	0.56	41	216
50		11.89	11.88	33. 130	25.159	280.9	0.157	5 .45	88.8	10.6	1 .08	11.0	0.21	0.69	0.49	50	215
59		11.52	11.51	33.219	25.297	267.9	0.182	5.03	81.3	14.4	1 .37	15.4	0. 09	0.31	0.28	59	214
70		11.04	11 .03	33.388	25.515	247.4	0.210	4.45	71 .3	18.3	1 .58	18.9	0.04	0.11	0.12	70	213
75	ISL	10.73	10.72	33.448	25.617	237.8	0.222	4.22	67.2	19.1	1 .62	19.5	0.04	0.09	0.11	75	
85		10.13	10.12	33.543	25.794	221 .1	0.245	3.85	60.5	20.1	1 .67	20.2	0.03	0.04	0.08	85	212
100		9.55	9.54	33.622	25.953	206.2	0.277	3.54	55 .0	22.4	1 .80	21 .8	0.02	0.02	0.06	101	211
120		9.03	9.02	33.839	26.207	182.5	0.316	2.89	44.4	28.6	2.10	25.5	0.01	0.01	0.06	121	210
125	ISL	8.88	8.87	33.872	26.256	177.8	0.325	2.86	43.8	28.8	2.11	25.7	0.01	0.01	0.06	126	
139		8.51	8.50	33.934	26.362	167.9	0.349	2.76	42.0	29.5	2.15	26.1	0.01	0.01	0.05	140	209
150	ISL	8.49	8.47	33.944	26.373	167.1	0.368	2.73	41 .5	30.7	2.20	26.7	0.01	0.01	0.05	151	
170		8.45	8.43	33.961	26.393	165.6	0.401	2 .67	40.5	33.0	2.29	27.8	0.01	0.00	0.05	171	208
200		8.29	8.27	34.021	26.465	159.3	0.450	2.43	36.8	35.2	2 .39	28.8	0.01	0.01	0 .05	201	207
230		8.09	8.07	34.075	26.538	152.9	0.496	2.10	31 .6	36.5	2.42	29.3	0.01			231	206
250	ISL	7.84	7 .82	34.079	26.578	149.3	0.527	2 .04	30.6	39.2	2 . 44	30.0	0.01			252	
265		7. 65	7.62	34.076	26 .603	147.0	0.549	2 .01	30.0	41 .5	2 . 46	30.6	0.01			267	205
300	ISL	7.37	7.34	34.096	26.659	142 .2	0. 600	1 .76	26. 1	45.3	2.56	31.9	0.01			302	
318		7.23	7.20	34.107	26. 688	139.7	0.625	1 .61	23.8	47 .4	2.62	32 .6	0.01			320	204
378		6.55	6. 52	34.117	26. 789	130.6	0.706	1 .22	17.7	59.3	2.76	35 .4	0. 02			380	203
400	ISL	6. 30	6.26	34.124	26 .827	127.1	0.734	1 .07	15.5	62.2	2.82	36.3	0. 02			403	
438		5 . 91	5.87	34.138	26.888	121.5	0.782	0.85	12.2	67.2	2 .92	37.8	0.01			441	202
500	ISL	5 .41	5 .37	34. 151	26.959	114.9	0.855	0.65	9.2	80.3	3.13	40.0	0.01			504	
51 1		5 .32	5 .28	34.154	26.972	113.8	0.867	0.61	8.6	82.6	3.17	40. 4	0. 01			515	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 23i.3 N	122 14..8 W	26/10/95	1745 UTC	4015 m	350 25 kn	340 06 07	1	1018.9 mb	16..5 C	15 .9 C	17m 02	3/8	SC

DEPTH n.		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/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.26	16.26	33.245	24.340	357.6	0.000	5.73	102 .2	1 .9	0.33	0.0	0 .00	0.26	0. 09	0	
2		16.26	16.26	33.246	24.341	357.6	0. 007									2	222
2	A	16.26	16.26	33.245	24.340	357.7	0.007	5 .73	102.2	1 . 9	0.33	0.0	0. 00	0.26	0 .09	2	221
10	ISL	16.26	16.26	33.244	24.339	358.0	0.036	5 .73	102.2	1 . 9	0.32	0. 0	0. 00	0.26	0.10	10	
1 1	A	16.26	16.26	33.244	24 .339	358.0	0 .039	5 .73	102.2	1 . 9	0.32	0.0	0. 00	0.26	0.10	1 1	220
20	ISL	16,23	16.23	33.245	24.347	357.6	0.072	5 .74	102 .3	1 .6	0.32	0.0	0.00	0.27	0.11	20	
21	A	16.23	16.23	33.245	24.347	357.6	0. 075	5 .74	102.3	1 .6	0 .32	0. 0	0 . 00	0.27	0.11	21	21 9
27		15 .70	15.70	33.230	24.456	347 . 5	0. 096	5 .83	102.8	1 .6	0. 34	0. 0	0. 00	0.40	0.19	27	218
30	ISL	15.51	15.51	33.217	24.488	344.5	0.107	5 .85	102.8	1 .9	0.34	0.0	0. 00	0.48	0.23	30	
33	A	15.30	15.29	33.200	24.521	341.4	0.117	5 .87	102 . 7	2 .2	0 .34	0.0	0.00	0.56	0.26	33	21 7
45	A	13.66	13.65	33.104	24.794	315.7	0.156	5 .96	100.8	3.4	0.43	0 . 6	0.09	0.73	0.39	45	216
50	ISL	13.24	13.23	33.143	24.909	304 .8	0.172	5 .76	96. 6	4 . 4	0.55	2 .7	0.12	0.61	0 . 39	50	
52		13.12	13.11	33.162	24.948	301 .2	0.178	5 . 68	95 .0	4. 8	0. 60	3 . 6	0.13	0.55	0. 39	52	21 5
61	A	12.86	12.85	33.193	25 .023	294.2	0.205	5 .55	92.3	5 .5	0. 68	4 . 9	0.07	0 . 47	0. 36	61	214
70		12.33	12.32	33.326	25 .229	274.8	0.230	5 .05	83. 1	8. 1	0. 90	8.8	0.02	0.23	0.21	70	213
75	ISL	11.89	11.88	33.403	25 .372	261 .3	0.244	4 .69	76. 5	10.6	1 .07	11.5	0.02	0.15	0.16	75	
86		1 1 .00	10.99	33.548	25.647	235.2	0.271	3.97	63 . 6	15.8	1 .40	16.6	0.01	0. 05	0.11	86	212
100		10.58	10.57	33.624	25.781	222.8	0.303	3. 62	57.5	18.5	1 .57	19.0	0. 01	0.03	0. 08	100	21 1
1 18		9. 65	9.64	33.764	26 .048	197.7	0.341	3. 08	48 .0	24.9	1 . 85	23.4	0.01	0.01	0. 06	1 19	210
125	ISL	9.51	9.50	33.816	26.112	191.7	0.355	2 .89	44 . 9	26.7	1 . 93	24.4	0.01	0.01	0. 06	126	
138		9. 34	9.32	33.891	26.198	183.7	0.379	2 .63	40. 7	29.2	2 . 04	25 . 7	0.00	0.01	0 .06	139	209
150	ISL	9.04	9.02	33.904	26.256	178.4	0.401	2.72	41 .8	30.3	2 .05	26. 1	0.00	0.01	0 . 06	151	
169		8.60	8 . 58	3 3.909	26.329	171.7	0.434	2,90	44.2	31 .7	2 . 06	26.5	0.01	0 .00	0.05	170	208
196		8. 46	8. 44	34.016	26 . 435	162.1	0.479	2.42	36.8	35 .9	2 .23	28 .3	0.00	0. 00	0. 05	197	207
200	ISL	8. 44	8.42	34.031	26.450	160.8	0.485	2.34	35 .5	36.7	2 .26	28.6	0.00			201	
229		8.25	8.23	34. 111	26.542	152.5	0.531	1 .87	28.3	42.0	2 . 44	30.7	0. 00			230	206
250	ISL	7.92	7.89	34.104	26 . 586	148.6	0.563	1 .90	28.5	44. 5	2 .47	31 .4	0.00			251	
268		7. 63	7.60	34.090	26.617	145.8	0.589	1 .92	28.6	46 . 5	2 .48	31.9	0. 00			270	205
300	ISL	7. 47	7. 44	34.132	26. 674	140.9	0.635	1 .55	23.0	51.1	2.62	33. 4	0. 00			302	
31 9		7.41	7.38	34.162	26.706	138.1	0.661	1 .29	19.1	53.9	2.72	34.3	0. 00			321	204
377		6 .89	6.85	34.189	26.800	129.8	0.739	0.94	13.8	62. 1	2 .96	36.4	0.00			379	203
400	ISL	6 .42	6.38	34.148	26.830	126.8	0.769	0. 96	13.9	66. 8	3.01	37 .7	0.00			403	
437		5 .72	5 .68	34.096	26.878	122.2	0.815	1 .01	14.4	74.2	3.07	39. 7	0 .00			440	202
500	ISL	5 .72	5 . 68	34.222	26.978	113.6	0.889	0.56	8.0	80.8	3.21	40 .7	0.00			503	
525		5 .72	5 . 67	34.272	27.018	110.2	0.917	0.38	5 .4	83 .4	3.26	41.1	0.00			529	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 2>.2 N	122 56.7 W	26/10/95	1039	UTC	4237 m	340	22 kn			1019.5 mb	16..0 C	15.2 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	16.28	16.28	33.309	24.384	353.4	0.000	5.76	102.8	1.3	0.33	0.0	0.00	0.26	0.08	0	
1		16.28	16.28	33.309	24.384	353.4	0.004	5.76	102.8	1.3	0.33	0.0	0.00	0.26	0.08	1	220
10	ISL	16.28	16.28	33.309	24.385	353.7	0.035	5.76	102.8	1.3	0.33	0.0	0,00	0.26	0.08	10	
15		16.28	16.28	33.309	24.385	353.8	0.053	5.76	102.8	1.3	0.33	0.0	0.00	0.26	0.08	15	219
20	ISL	16.25	16.25	33.313	24.395	353.0	0.071	5.76	102.7	1.2	0.33	0.0	0.00	0.29	0.10	20	
30		16.20	16.20	33.321	24.413	351.6	0.106	5.77	102.8	0.9	0.33	0.0	0.00	0.36	0.13	30	218
44		14.09	14.08	33.301	24.858	309.6	0.152	5.80	99.0	0.6	0.51	1.5	0.38	3.30	0.86	44	217
50	ISL	13.00	12.99	33.355	25.121	284.6	0.170	5.14	85.8	4.9	0.80	6.5	0.28	1.81	0.67	50	
54		12.28	12.27	33.388	25.286	268.9	0.181	4.70	77.3	8.1	0.99	10.0	0.18	0.63	0.48	54	216
65		10.70	10.69	33.334	25.533	245.5	0.209	4.61	73.3	12.4	1'.17	13.5	0.04	0.14	0.18	65	215
73		10.36	10.35	33.479	25.705	229.3	0.228	4.11	64.9	16.6	1.41	17.2	0.03	0.06	0.10	73	214
75	ISL	10.32	10.31	33.515	25.740	226.1	0.233	3.98	62.8	17.5	1.46	18.0	0.03	0.05	0.10	75	
83		10.18	10.17	33.631	25.855	215.3	0.251	3.53	55.6	20.2	1.63	20.5	0.02	0.03	0.08	83	213
95		9.76	9.75	33.681	25.964	205.1	0.276	3.36	52.4	22.5	1.74	22.2	0.03	0.02	0.07	95	212
100	ISL	9.59	9.58	33.697	26.005	201.3	0.286	3.32	51.6	23.4	1.77	22.7	0.03	0.02	0.07	100	
111		9.27	9.26	33.734	26.086	193.8	0.308	3.25	50.2	25.2	1.83	23.7	0.02	0.02	0.07	112	211
124		9.01	9.00	33.793	26.174	185.6	0.332	3.13	48.1	27.1	1.90	24.8	0.02	0.01	0.06	125	210
125	ISL	8.98	8.97	33.795	26.180	185.1	0.334	3.13	48.0	27.3	1.90	24.9	0.02	0.01	0.06	126	
142		8.58	8.57	33.825	26.266	177.1	0.365	3.10	47.2	30.1	1.98	26.1	0.02	0.01	0.05	143	209
150	ISL	8.57	8.55	33.867	26.301	174.0	0.379	2.93	44.6	31.4	2.04	26.7	0.02	0.01	0.05	151	
168		8.56	8.54	33.950	26.368	168.0	0.410	2.50	38.0	34.0	2.16	28.1	0.01	0.01	0.04	169	208
197		8.32	8.30	34.017	26.457	160.0	0.457	2.30	34.8	37.7	2.26	29.5	0.01	0.01	0.04	198	207
200	ISL	8.28	8.26	34.020	26.466	159.2	0.462	2.30	34.8	38.1	2.27	29.6	0.01			201	
228		7.82	7.80	34.032	26.544	152.1	0.506	2.31	34.6	41.5	2.31	30.5	0.01			229	206
250	ISL	7.48	7.46	34.034	26.594	147.5	0.539	2.25	33.4	44.7	2.37	31.5	0.01			251	
268		7.22	7.19	34.033	26.630	144.3	0.565	2.16	31.9	47.5	2.43	32.4	0.01			270	205
300	ISL	6.77	6.74	34.031	26.691	138.8	0.610	1.95	28.5	53.3	2.55	34.2	0.00			302	
317		6.57	6.54	34.033	26.719	136.2	0.634	1.82	26.5	56.4	2.62	35.1	0.00			319	204
377		6,15	6.12	34.075	26.807	128.4	0.713	1.25	18.0	66.4	2.85	37.9	0.00			379	203
400	ISL	5.95	5.92	34.091	26.845	125.0	0.742	1.08	15.5	70.7	2.93	38.9	0.00			403	
436		5.66	5.62	34.117	26.902	119.8	0.786	0.85	12.1	77.0	3.03	40.3	0.00			439	202
500	ISL	5.39	5.35	34.170	26.977	113.3	0.861	0.58	8.2	84.1	3.16	41.5	0.00			503	
515		5.33	5.29	34.182	26.993	111.8	0.878	0.52	7.3	85.8	3.19	41.8	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 43i.4 N	123 38..0 W	26/10/95	0514	UTC	4154 m	310	11 kn			1021.4 mb	17.1 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 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.33	17.33	33.123	23.997	390.3	0.000	5.61	102.1	2.8	0.30	0.0	0.00	0.14	0.04	0	
1		17.33	17.33	33.123	23.997	390.3	0.004	5.61	102.1	2.8	0.30	0.0	0.00	0.14	0.04	1	220
10		17.36	17.36	33.125	23.992	391,1	0.039	5.60	102.0	2.8	0.29	0.0	0.00	0.14	0.04	10	219
20		17.20	17.20	33.103	24.013	389.4	0.078	5.62	102.0	2.6	0.29	0.0	0.00	0.14	0.04	20	218
30		15,95	15.95	33.085	24.288	363.5	0.116	5.92	104.8	2.6	0.31	0.0	0.00	0.29	0.13	30	217
40		15.56	15.55	33.133	24.412	352.0	0.152	5.94	104.4	2.3	0.34	0.1	0.01	0.43	0.19	40	216
50		14,89	14.88	33.122	24.551	339.1	0.186	5.98	103.7	2.8	0.33	0.1	0.02	0.46	0.25	50	215
60		14.24	14.23	33,142	24.704	324.7	0.219	6.09	104.2	3.2	0.29	0.0	0.00	0.40	0.23	60	214
70		13.29	13.28	33.120	24.882	307.9	0.251	5.96	100.0	3.6	0.33	0.0	0.01	0.33	0.28	70	213
75	ISL	12.93	12.92	33.119	24,952	301.3	0.266	5.90	98.2	3.7	0.35	0.2	0.08	0.29	0.26	75	
85		12.38	12.37	33.134	25,071	290.2	0.296	5.77	95.0	4.2	0.42	1.1	0.19	0.21	0.20	85	212
100		11.82	11.81	33.194	25.223	276.0	0.338	5.43	88.4	6.2	0.61	4.5	0.03	0.13	0.14	100	211
119		10.75	10.74	33.331	25.523	247.7	0.388	4.87	77.5	11.0	0.98	10.8	0.02	0.08	0.09	120	210
125	ISL	10.50	10.49	33.367	25.595	241.0	0.403	4.73	74.9	12.4	1.07	12.4	0.02	0.06	0.08	126	
139		9.97	9.95	33.448	25.748	226.6	0.435	4.43	69.4	15.8	1.27	15.6	0.01	0.03	0.05	140	209
150	ISL	9.53	9.51	33.523	25.880	214.2	0.460	4.19	65.0	19.0	1.44	18.2	0.01	0.02	0.04	151	
169		8.87	8.85	33.656	26.089	194.5	0.498	3.78	57.8	24.5	1.71	22.2	0.01	0.01	0.03	170	208
199		8.27	8.25	33.836	26.323	172.7	0.553	3.14	47.4	32.0	1.99	26.5	0.00	0.00	0.03	200	207
200	ISL	8.25	8.23	33.840	26.329	172.2	0.555	3.14	47.4	32.1	1.99	26.5	0.00			201	
228		7.79	7.77	33.917	26.458	160,2	0.602	3.25	48.6	35.3	2.00	27.0	0.00			229	206
250	ISL	7.50	7.48	33.958	26.532	153.4	0.636	2.98	44.3	39.5	2.12	28.6	0,00			251	
268		7.30	7.27	33.984	26.581	149.0	0.663	2.67	39.5	43.3	2.24	30.2	0.00			270	205
300	ISL	7.06	7.03	34.023	26.645	143.3	0.710	2.20	32.4	48.9	2.42	32.4	0.00			302	
318		6.93	6.90	34.038	26.675	140.7	0.736	1.96	28.7	52.0	2.51	33.5	0.00			320	204
377		6.32	6.29	34.056	26.770	132.1	0.816	1.45	21.0	62.5	2.73	36.7	0.00			379	203
400	ISL	6.09	6.06	34.067	26.809	128.6	0.846	1.26	18.1	66.8	2.82	37.8	0.00			403	
438		5.74	5.70	34.090	26.871	122.9	0.894	0.98	14.0	74.0	2.97	39.5	0.00			441	202
500	ISL	5.32	5.28	34.150	26.969	113.9	0.967	0.62	8.8	84.8	3.14	41.4	0.00			503	
521		5.18	5.14	34.171	27.002	110.9	0.991	0.50	7.0	88.5	3.20	42.0	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 2 3.2 N	124 19 6 W	25/10/95	2313	UTC	4479 m	320	1 1 kn	340 05 10	1	1022.0 mb	18 2 C	17 5 C	25m 01	2/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 u*/ I	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.89	17.89	33.068	23.821	407.2	0.000	5.54	101.9	2.5	0.29	0.0	0.00	0.11	0.03	0	
2		17.89	17.89	33.068	23.821	407.2	0.008	5.54	101.9	2.5	0.29	0.0	0.00	0.11	0.03	2	220
2		17.90	17 .90	33.067	23.818	407.5	0.008									2	221
10	ISL	17.74	17.74	33.068	23.857	404.0	0.041	5 .55	101.8	2 . 4	0.27	0.0	0.00	0.12	0.04	10	
15		17.58	17.58	33.067	23.895	400.5	0.061	5 .56	101.6	2 .4	0.26	0.0	0.00	0.13	0.04	15	219
20	ISL	17.40	17.40	33.059	23.932	397.2	0.081	5 . 60	102.0	2 .4	0.26	0.0	0. 00	0.16	0.06	20	
30		17.09	17.09	33.049	23.998	391 .2	0.120	5 .67	102.7	2.4	0.28	0. 0	0. 00	0.23	0.09	30	218
45		16. 96	16.95	33.075	24.049	386.8	0.178	5 .67	102.4	2 .3	0.29	0.0	0.00	0.29	0.10	45	217
50	ISL	16.91	16.90	33.074	24.060	385.9	0.198	5.68	102.5	2.3	0.28	0.0	0.00	0.32	0.12	50	
60		16.72	16.71	33.075	24.106	381 .9	0.236	5.70	102.5	2.3	0.27	0.0	0.00	0. 36	0.15	60	216
74		16.11	16.10	33.110	24.273	366.4	0.289	5 .78	102 .7	2.2	0.29	0.0	0.00	0. 34	0.16	74	215
75	ISL	16.11	16.10	33.115	24.277	366 . 1	0.292	5.79	102.9	2.2	0.29	0.0	0.00	0.34	0.16	75	
85		15.71	15.70	33.145	24.390	355.5	0.328	5.85	103.1	2.2	0.30	0.0	0.01	0.33	0.17	85	214
95		13.94	13.93	33. 125	24.754	320.8	0.362	6.22	105.8	3.1	0.27	0.0	0.00	0.22	0.14	95	213
100	ISL	13.59	13.58	33.119	24.821	314.5	0.378	6.18	104.3	3.2	0.28	0. 1	0.00	0.20	0.15	100	
105		13.39	13.38	33.115	24.859	311.1	0.394	6.06	101.9	3.3	0.30	0. 1	0.01	0.19	0.16	105	212
115		12.76	12.74	33. 137	25.001	297.7	0.424	5.81	96.4	4 .0	0.38	0.6	0.14	0.17	0.17	1 1 5	211
125		12 .98	12.96	33.340	25.115	287.2	0.453	5.53	92 .3	4. 8	0. 44	2 .3	0.13	0.15	0.18	126	210
140		12 .42	12.40	33.566	25.400	260.4	0.494	4.98	82 .3	7. 7	0. 71	7. 4	0.02	0.10	0.13	1 41	209
150	ISL	1 1 .67	11.65	33.584	25 .555	245.7	0.520	4.72	76.7	10.2	0. 89	10.4	0.01	0.07	0.12	1 51	
164		10.59	10.57	33.572	25.740	228. 1	0.553	4.52	71 .8	13.4	1.10	13.6	0.00	0.04	0.10	165	208
194		9.71	9. 69	33.745	26.024	201 .5	0.617	4.72	73.6	15.5	1.14	15.0	0.00	0.01	0.03	195	207
200	ISL	9. 48	9.46	33.765	26.078	196 . 5	0. 629	4. 52	70 . 1	17.7	1.25	16.6	0 . 00			201	
228		8. 49	8. 47	33.840	26.293	176.2	0. 681	3 .45	52 .4	28.6	1 .82	2 4,5	0.00			229	206
250	ISL	8.10	8. 07	33 . 907	26.405	165.8	0.719	3.30	49. 7	32 .8	1 .91	25 .8	0 .00			251	
268		7.87	7.84	33.952	26.474	159.4	0.748	3.17	47.5	35 .0	1 .99	26.9	0 . 00			269	205
300	ISL	7.36	7.33	33.978	26.568	150.8	0.798	3.04	45 .0	38 . 9	2.11	28.6	0. 00			302	
318		7.08	7.05	33.980	26.609	147.0	0.825	2 .94	43.2	41.5	2.18	29.6	0.00			320	204
378		6.16	6.13	34.004	26.750	133.9	0.909	2.07	29.8	58.6	2.56	35.0	0 .00			380	203
400	ISL	5 . 94	5.91	34.014	26.786	130.6	0.938	1 . 86	26.6	62 . 9	2 .66	36.3	0.00			402	
438		5.66	5.62	34.037	26.838	125.8	0.987	1 .54	21.9	69. 5	2.81	38 .0	0. 00			441	202
500	ISL	5.31	5.27	34. 105	26.935	117.1	1 .062	0.93	13.1	81 .0	3.05	40.6	0.00			503	
518		5.21	5.17	34.125	26.962	114.6	1 .083	0.75	10.6	84 .4	3.12	41 . 4	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 27 .2 N	120 31 8 W	24/10/95	0921	UTC	74 m	290	03 kn			1015.8 mb	19 2 C	16 7 C			

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	16 .93	16.93	33.496	24.378	354.1	0.000	6.04	109.3	1 . 7	0.29	0. 1	0.01	2 . 09	0.53	0	
1		16.93	16.93	33.496	24.378	354. 1	0. 004	6 . 04	109.3	1 . 7	0.29	0. 1	0.01	2 . 09	0.53	1	224
5		16.25	16.25	33.487	24.528	339.9	0.017									5	209
5		15.99	15 .99	33.488	24.588	334 .2	0.017									5	213
5		15 .95	15.95	33 .488	24.597	333.3	0.017									5	21 7
5		16.13	16.13	33.487	24.556	337.2	0.017									5	221
5		16.18	16.18	33 . 487	24.544	338 .3	0.017									5	210
5		15.94	15.94	33.488	24.599	333 . 1	0.017									5	21 5
5		16.24	16.24	33.487	24.531	339.6	0.017	6.04	107.8	1 . 7	0.29	0.0	0.01	2.17	0.59	5	208
5		15 . 90	15 .90	33.488	24.608	332 .2	0.017									5	214
5		16.07	16.07	33.487	24.569	335 .9	0.017									5	219
5		16.10	16.10	33.487	24.562	336. 6	0.017									5	21 8
5		16.28	16.28	33.495	24.527	339.9	0.017									5	21 1
5		16.15	16.15	33.488	24.552	337.6	0.017									5	222
5		16.32	16.32	33.489	24.514	341.2	0.017									5	212
6		16.12	16.12	33.487	24.558	337. 1	0.021									6	223
6		15 .93	15 .93	33.488	24.602	332 .9	0.021									6	216
6		16.12	16.12	33 . 487	24.558	337. 1	0.021									6	220
10		16.28	16.28	33.489	24.523	340.5	0.034	6.03	107.7	1 .7	0.31	0.2	0.02	3.59	0 . 85	10	207
20	ISL	13.96	13.96	33.500	25.038	291.8	0.066	5 . 09	86 . 8	6. 7	0.76	5 . 8	0.31	1 . 87	0.72	20	
21		13.68	13.68	33.506	25.100	285 . 9	0.069	4. 97	84.3	7.4	0. 82	6 . 5	0.34	1.56	0.71	21	206
30		12.64	12.64	33.537	25.332	264.0	0.094	4.35	72.2	11.8	1.11	10.4	0.33	0.60	0.47	30	205
41		12.40	12.39	33.550	25.388	258.9	0.122	4.29	70.8	11.9	1.15	11.5	0.22	0.54	0. 46	41	204
50		12.00	11.99	33.577	25.486	249.8	0.145	4.01	65 .7	13.8	1.28	13.5	0.14	0.21	0.60	50	203
59		11.23	11.22	33.648	25.683	231 .2	0.167	3.55	57.2	17.5	1.50	17.4	0.04	0.13	0.19	59	202
64		11.17	11.16	33.665	25.707	229.0	0.178	3 .46	55.7	18.5	1 .55	17.7	0 .05	0. 03	0 . 39	64	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 1 S1.2 N	120 49.1 W	24/10/95	1221	UTC	826 m	330	13 kn			1015.9 mb	16.2 C	15.7 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	16.34	16.34	33.466	24.491	343.2	0.000	5 .98	107.0	0.6	0.28	0.0	0.01	1.51	0. 63	0	
1		16.34	16.34	33.466	24.491	343.2	0.003	5 .98	107.0	0.6	0.28	0 .0	0.01	1.51	0. 63	1	220
10		16.34	16.34	33.466	24.492	343.5	0 .034	5 .96	106.6	0.6	0.26	0.0	0.01	1 .44	0.53	10	219
19		16.26	16.26	33.473	24.516	341 .5	0.065	5 .95	106.3	0.5	0.28	0 .2	0.01	1 .62	0. 96	19	218
20	ISL	16.15	16.15	33.474	24.542	339.1	0.069	5 .94	105.9	0.6	0.29	0.2	0.01	1 .79	1 .01	20	
30		14.93	14.93	33.489	24.824	312.4	0.101	5 .86	101.9	2 .1	0. 44	1 .2	0 .09	3.15	1.25	30	217
40		14.32	14.31	33.490	24.955	300.2	0. 132	5 .35	91 .9	4.5	0.65	4.3	0.21	2 .07	0.90	40	216
50		13.21	13.20	33.503	25.193	277.7	0.161	4.83	81 .1	7.8	0.91	8.3	0.29	1.17	0. 88	50	215
60		11 .72	11.71	33.595	25.552	243.7	0. 187	3.99	65.0	14.1	1 .30	14.6	0.06	0.20	0.30	60	214
69		11.21	11.20	33.648	25.687	231 .1	0.208	3.59	57.8	17.1	1 .49	17.2	0.04	0.12	0.23	69	213
75	ISL	10.98	10.97	33.682	25 .755	224.8	0.222	3.37	54.0	19.5	1 .60	18.6	0.03	0.09	0.20	75	
84		10.72	10.71	33.730	25.839	217.0	0.242	3.10	49. 4	22.7	1 .73	20. 4	0.0 3	0.07	0.17	84	212
100		10.38	10.37	33.809	25.960	205.8	0.275	2 .72	43. 1	24.9	1 .88	22 .7	0.02	0.04	0.16	100	211
119		9. 90	9.89	33.917	26.126	190.3	0.313	2.41	37.8	27.8	2.06	25. 1	0.01	0.01	0.11	120	210
125	ISL	9. 89	9.88	33.942	26.147	188.5	0.324	2.29	35.9	28.7	2.11	25.6	0.01	0.01	0.10	126	
139		9.87	9.85	33.979	26 . 180	185.7	0.351	2.05	32. 1	30.6	2.20	26.4	0.01	0.01	0.09	140	209
150	ISL	9.75	9.73	34.009	26.223	181.7	0.371	2.03	31 .7	31 .5	2 .23	26.8	0.01	0.01	0.09	151	
167		9.51	9. 49	3 4.052	26.297	175.1	0.401	1 .99	31 .0	32 .9	2 .26	27.5	0.01	0.01	0.09	168	208
199		9. 05	9.03	34.124	26.428	163. 1	0.455	1 .64	25.3	37.9	2.42	29.6	0.02	0.01	0 , 06	200	207
200	ISL	9,01	8.99	34. 121	26.432	162 .7	0.457	1 .67	25 .7	38.0	2 .42	29.6	0.02			201	
229		7.83	7.81	34.050	26.556	150.9	0.502	2 .34	35.0	42.0	2.32	30.1	0.04			230	206
250	ISL	7.98	7.95	34.135	26.601	147.2	0.534	1 .83	27.5	45.3	2.49	31 .3	0.13			251	
268		8.11	8.08	34.189	26.625	145.4	0.560	1 .26	19.0	48.0	2 .66	32.5	0.19			270	205
300	ISL	7 .68	7.65	34.155	26.662	142.2	0.606	1 .39	20.8	50.6	2 .65	33.3	0.13			302	
320		7.32	7.29	34.123	26.688	139.8	0.634	1 .57	23.2	52 .4	2 .64	33.7	0.06			322	204
379		6.97	6.93	34.231	26.822	127.8	0.713	0.76	11.2	64.3	2 .97	36.8	0.01			381	203
400	ISL	6.79	6.75	34.236	26.851	125.3	0.740	0.71	10.4	6 7.0	3.02	37.5	0.01			403	
438		6.44	6 .40	34.230	26.893	121.5	0.787	0.63	9. 1	71 .2	3.07	38. 4	0. 00			441	202
500	ISL	5 .99	5 .95	34.254	26.970	114.7	0.860	0.47	6.7	78.9	3.18	40. 0	0.00			503	
514		5 .89	5 .85	34.260	26.987	113.1	0.876	0.44	6.3	80.6	3.21	40.4	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 6Cl

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 5'.3 N	121 9.3 W	24/10/95	1758	UTC	2217 m	350	1 0 kn	330 05 07'	0	1017.6 mb	16.8 C	16.2 C	18m	04	0/8

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	SAHP
0	ISL	16.65	16.65	33.429	24.391	352 .7	0.000	5 .72	102.9	0.6	0.31	0 .0	0. 00	0 .32	0.12	0	
1	A	16.65	16.65	33.429	24.391	352 .8	0. 004	5 .72	102 .9	0.6	0.31	0.0	0. 00	0.32	0,12	1	222
2		16.65	16.65	33.429	24.391	352.8	0.007									2	223
10	A	16.57	16.57	33.429	24.410	351.3	0 . 035	5 .72	102.8	0.6	0. 30	0. 0	0.00	0.34	0.10	10	221
20	ISL	16.54	16.54	33.427	24,416	351.0	0 . 070	5 .72	102.7	0.6	0.29	0. 0	0 . 00	0. 32	0.11	20	
22	A	16.54	16.54	33.426	24.415	351.2	0.077	5.72	102.7	0.6	0.29	0. 0	0. 00	0.32	0.11	22	220
30	ISL	16.48	16.48	33.419	24.424	350. 6	0.105	5.71	102.4	0.6	0 .30	0 .0	0.00	0 .33	0.12	30	
36	A	16.44	16.43	33.413	24.429	350.3	0.126	5.71	102.3	0.5	0.30	0.0	0.00	0. 34	0.13	36	219
47		14.40	14.39	33.326	24.812	314.0	0.163									47	218
47	A	14.42	14.41	33.327	24.809	314.4	0.163	5 .85	100.6	0.4	0 . 44	0.6	0.16	2 .07	0.64	47	217
50	ISL	13.60	13.59	33.356	25.001	296.1	0. 172	5 .40	91 .3	3.4	0. 67	4 .4	0.13	1 .47	0.52	50	
55		12.27	12.26	33.426	25.318	266.0	0.186	4 .60	75 .7	9.0	1 .05	11.1	0. 07	0.30	0.25	55	216
64	A	10.87	10.86	33.466	25.606	238.6	0.209	4.23	67.6	14.2	1 .30	15.3	0.0 3	0.09	0.14	64	215
75		10.05	10.04	33.479	25 .758	224.3	0.234	4.12	64.6	16.6	1 .41	17.0	0.02	0.06	0.13	75	214
84		9.80	9.79	33.579	25 .878	213.1	0.254	3.74	58.4	20.5	1 .60	20. 1	0.01	0.09	0.03	84	213
94		9. 60	9.59	33.658	25 .973	204.3	0.275	3.47	54.0	22.6	1 .71	21.8	0.01	0.03	0.06	94	212
100	ISL	9. 49	9.48	33.701	26.024	199.5	0.287	3. 34	51.8	23.7	1 .76	22 .7	0.01	0.03	0.06	100	
109		9 .30	9.29	33.758	26.100	192 .4	0.305	3.18	49.2	25 .4	1 .84	23.8	0.01	0.02	0.06	110	211
124		8. 75	8 . 74	33.838	26.250	178.4	0.332	3.05	46.6	29.3	1 .97	25 .6	0.01	0.01	0.05	125	210
125	ISL	8.72	8 . 71	33.841	26.257	177.7	0.334	3.05	46 .6	29.5	1 .98	25 .7	0.01	0.01	0.05	126	
145		8.22	8.21	33.886	26.369	167.4	0 .369	3.01	45 .4	32 .7	2 .05	27.0	0.01	0.01	0.04	146	209
150	ISL	8.13	8.11	33.900	26.393	165. 1	0.377	2.98	44.9	33.6	2 .07	27.3	0.01	0.01	0.04	151	
1 69		7.87	7.85	33.948	26.469	158.1	0.408	2.84	42 .5	36.6	2.14	28.4	0.01	0.01	0.04	170	208
200		7.53	7.51	33.985	26.548	151.1	0. 456	2.76	41 .0	40.0	2.21	29.3	0.01	0.01	0.05	201	207
229		7.25	7.23	34.017 D	26.613	145.3	0.499									230	206
250	ISL	7.07	7.05	34.043	26.659	141.2	0.529	2.11	31 .0	49.5	2.48	32.6	0.00			251	
268		6.96	6.94	34.070	26.695	138.0	0.554	1 .80	26.4	53.1	2 .59	33.9	0.00			270	205
300	ISL	6.96	6.93	34.139	26.750	133.3	0.597	1 .31	19.2	57.7	2 .76	35 .2	0.00			302	
316		6.96	6 . 93	34.171	26. 776	131.2	0.618	1.10	16.2	59.8	2 .84	35 .8	0.00			318	204
378		6.39	6.36	34.195	26.871	122.7	0.697	0.78	11.3	68.7	3.01	38.0	0.00			380	203
400	ISL	6.21	6.17	34.191	26.891	120.9	0.724	0. 74	10.7	71 .2	3.05	38.7	0.00			403	
437		5 .97	5.93	34. 183	26.916	118.9	0.768	0.71	10.2	74. 8	3.09	39.6	0.00			440	202
500	ISL	5 .77	5 . 73	34.202	26.956	115.7	0.842	0.57	8. 1	78.8	3.15	40 .3	0.00			503	
51 5		5 . 72	5 . 68	34.207	26.967	114.9	0.859	0.54	7. 7	79.8	3.16	40.5	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 49. 1 N	121 50,.6 W	24/10/95	2241	UTC	3630 m	340	15 kn	330 04 0«i	0	1018.0 mb	16.. 1 C	15.6 C	20m 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/L	P04 un/L	N03 uM/L	N02 uM/I	CHL-A ug/L	PHAEO ug/L	PRES db	SAMP
0	ISL	16.61	16.61	33.263	24.273	364.0	0.000	5 .71	102 .6	1 .8	0.33	0.0	0 .00	0.21	0.05	0	
2		16.61	16.61	33.263	24.273	364. 1	0.007									2	221
2		16.61	16.61	33.263	24.273	364. 1	0.007	5 .71	102 .6	1 .8	0.33	0.0	0. 00	0.21	0.05	2	220
10	ISL	16.47	16.47	33.269	24.311	360. 8	0.036	5.73	102.6	1 . 6	0.33	0.0	0.00	0.22	0.07	10	
11		16.44	16.44	33.270	24.318	360. 1	0 . 040	5 .73	102 .6	1 . 6	0.33	0.0	0.00	0 . 22	0.07	1 1	219
20		16.19	16.19	33.262	24.370	355 .5	0.072	5.74	102.2	1 . 6	0.33	0.0	0.00	0.31	0 .07	20	218
30		14.46	14.46	33.215	24.713	322.9	0. 106	5 .98	102.8	1 . 5	0.37	0.0	0.01	1.19	0.55	30	217
40		12.91	12 . 90	33. 117	24.954	300.2	0.137	5 .88	97.9	3.2	0. 49	1 . 1	0.19	0.93	0.54	40	216
50		11 .62	11.61	33. 173	25 .243	272 . 9	0. 166	5.32	86.2	6.5	0.74	6.0	0.19	0. 42	0.33	50	215
61		11.12	11.11	33.223	25.372	260. 8	0.195	4.97	79.7	9.5	0.97	10.1	0.03	0.22	0.23	61	214
71		10.34	10.33	33.383	25.634	236.1	0.220	4.42	69.7	14.6	1 .29	15.5	0.02	0.09	0.10	71	213
75	ISL	10.16	10.15	33.419	25.692	230.6	0.229	4.29	67.4	15.9	1 .36	16.7	0.02	0.08	0.09	75	
85		9.86	9.85	33.481	25.791	221 .3	0.252	4.05	63.3	18.4	1 . 50	18.7	0.01	0.05	0.07	85	212
100		9.46	9.45	33.589	25.942	207.3	0.284	3.62	56.1	22.4	1 .71	22.0	0.01	0.03	0.05	100	21 1
120		8.99	8.98	33.724	26.123	190.4	0.324	3.13	48.0	27.3	1 .92	25 . 1	0.01	0.01	0.04	121	210
125	ISL	8.90	8.89	33.753	26.160	187.0	0.333	3.05	46.7	28.3	1 .96	25 .6	0.01	0.01	0.04	126	
139		8.69	8.68	33.821	26.246	179.0	0.359	2 .88	43.9	30.5	2 .04	26.6	0.01	0.01	0.05	140	209
150	ISL	8.54	8.52	33.855	26.296	174.4	0.378	2.86	43.5	31 .6	2 .07	27. 1	0 .01	0.01	0.04	151	
169		8.30	8.28	33.896	26.365	168.2	0.411	2.82	42.6	33.2	2 .09	27.6	0.01	0.00	0.03	170	208
199		7.85	7.83	33.951	26.475	158.1	0.460	2.78	41 .6	37.6	2.16	28.6	0. 00	0.01	0.04	200	207
200	ISL	7. 84	7.82	33.953	26.478	157.8	0. 461	2 .78	41.6	37.7	2.16	28.6	0.00			201	
229		7.63	7.61	34,002	26.548	151.7	0.506	2 .52	37.6	41 .2	2.27	30.0	0.00			230	206
250	ISL	7.51	7.49	34.053	26.605	146.5	0.538	2.10	31 .2	45 .6	2 .42	31.6	0.00			251	
269		7.3 5	7 . 32	34 .089	26.656	141.9	0.565	1 .74	25.8	50.0	2.55	33. 1	0 .00			271	205
300	ISL	6 . 82	6.79	34.073	26.717	136.3	0.608	1 .60	23.4	55.7	2 .65	34 .8	0.00			302	
318		6.50	6 . 47	34.057	26.747	133.5	0.632	1 .58	22.9	58.9	2.69	35 .7	0.00			320	204
377		6.01	5 .98	34.103	26.847	124.5	0.709	1 .02	14.6	69.9	2 .95	38.7	0. 00			379	203
400	ISL	5.83	5 . 80	34.119	26.882	121.4	0.737	0.89	12.7	73.8	3.02	39.5	0.00			403	
437		5.54	5 . 50	34.141	26.935	116.6	0.781	0.73	10.4	79.8	3.10	40 . 6	0.00			440	202
500	ISL	5.10	5 .06	34. 169	27.010	109.8	0.852	0.55	7.7	89.3	3.20	42.2	0.00			503	
515		5 .00	4. 96	34.176	27.027	108.3	0.869	0.51	7.1	91 . 6	3.22	42 .6	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29'. 0 N	122 32,,0 W	25/10/95	0438	UTC	3985 m	350	15 kn			1019.5 mb	16.,2 C	15,.2 C				

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN niL/l	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/L	N02 uM/I	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0	ISL	16.81	16.81	33.183	24.165	374.3	0.000	5 .68	102.4					0.19	0 . 06	0	
2		16.81	16.81	33.183	24.166	374.3	0.007	5 . 68	102.4					0.19	0. 06	2	220
10	I SL	16. 82	16.82	33.178	24. 160	375 . 1	0.037	5 .69	102 .6					0.18	0. 06	10	
1 5		16.82	16.82	33.174	24.157	375 . 6	0.056	5 .69	102.6	2 .2	0 . 32	0.0	0. 00	0.18	0 . 06	1 5	219
20	ISL	16.81	16.81	33.176	24.161	375 . 4	0.075	5 .69	102 .5	2 .2	0.32	0.0	0.00	0.18	0 .06	20	
30		16.80	16.80	33.180	24.167	375 . 1	0.113	5 .68	102.3	2 .2	0.32	0.0	0 .00	0.19	0. 06	30	21 8
45		15.49	15 .48	33. 130	24.426	350.8	0.167	6. 00	105 .3	2 . 6	0.31	0.0	0.00	0.31	0.14	45	217
50	ISL	14.97	14.96	33.110	24.524	341 .6	0.184	6.09	105.8	2 .9	0.31	0.0	0.00	0.33	0.17	50	
55		14.41	14.40	33.097	24.634	331 .3	0.201	6.12	105.1	3.2	0. 30	0.0	0. 00	0.34	0.21	55	216
65		13.18	13.17	33. 120	24.903	305.7	0.233	5 . 89	98 .6	3 .9	0.38	0.0	0.01	0.35	0 .36	65	215
75		12.49	12.48	33.217	25.114	285.9	0.263	5.50	90.8	5 . 5	0.56	3.0	0.15	0.27	0.28	75	214
85		11.85	11.84	33.333	25 .325	266.0	0.290	5.03	82 .0	8.2	0 .82	8.0	0. 02	0.14	0.15	85	21 3
95		11.50	11.49	33.379	25.426	256.6	0.316	5 .06	81.9	8.8	0. 83	8.5	0.02	0.12	0.12	95	212
100	ISL	11.21	11.20	33.382	25.481	251.4	0.329	4.99	80.2	9. 7	0. 89	9. 5	0.02	0.10	0.11	100	
1 10		10.54	10.53	33.394	25.609	239. 4	0.353	4. 76	75 .4	12.3	1 . 06	12.3	0.01	0 . 06	0 .08	1 10	21 1
125		9.58	9.57	33.510	25.861	215.5	0. 388	4.29	66.6	18.1	1.41	17.7	0.01	0. 02	0. 04	126	210
145		9.10	9.08	33.657	26.053	197.5	0.429	3.74	57.5	22.9	1 . 67	21.8	0.00	0.01	0. 03	146	209
150	ISL	9 . 01	8 . 99	33.682	26.087	194.4	0. 439	3.71	56.9	23. 5	1 . 69	22.2	0.00	0.01	0. 03	151	
170		8.70	8.68	33.765	26.201	183.9	0.477	3.64	55 .5	25 .6	1 . 76	23.4	0.00	0.01	0.02	171	208
200	ISL	8.13	8.11	33.886	26.383	167.0	0.529	3.06	46. 1	32.5	2 .02	27. 1	0.00	0.00	0.02	201	
201		8.11	8.09	33.890	26.389	166.4	0.531	3.04	45 .8	32 . 7	2 .03	27.2	0 .00	0. 00	0 . 02	202	207
230		7. 70	7. 68	33.962	26.506	155.6	0.578	2.96	44.2	37.6	2.10	28.2	0.00			231	206
250	ISL	7.50	7 . 48	33.998	26.563	150.5	0.608	2 .71	40.3	41.4	2.20	29.6	0.00			251	
270		7.32	7.29	34.021	26.607	146.6	0.638	2.42	35 .8	45 .2	2 .31	31 . 1	0.00			272	205
300	ISL	6. 94	6. 91	34.024	26.662	141.6	0.681	2.19	32. 1	50.4	2.43	32.8	0.00			302	
319		6 . 69	6 . 66	34.022	26.694	138.7	0.708	2 .05	29.9	53.7	2.51	33.9	0.00			321	204
379		6.10	6.07	34.071	26.810	128.1	0. 788	1 .29	18.6	66.0	2 .82	37.8	0.00			381	203
400	ISL	5 .95	5.92	34.085	26 .840	125.4	0.814	1.12	16.1	69. 3	2 .90	38.7	0.00			403	
433		5 . 74	5 .70	34.112	26 .888	121.2	0.861	0.89	12.7	74. 6	3.01	39. 9	0. 00			441	202
500	ISL	5.52	5 .48	34.181	26.970	114.1	0.934	0.56	7.9	82 . 4	3.15	41 .2	0.00			503	
518		5 . 46	5 .42	34.201	26.993	112.1	0.955	0.46	6.5	84.7	3.19	41.6	0.00			522	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 S1.3 N	123 13..4 W	25/10/95	1018 UTC	4226 m	340 16 kn			1019.6 mb	16,,8 C	16.. 3 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/I	P04 uM/l	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	18.70	18.70	33.442	23.907	398.9	0.000	5 .43	101.6	2 .4	0.24	0.0	0 .00	0.10	0. 03	0	
2		18.70	18.70	33.442	23.907	399.0	0.008	5 .43	101.6	2.4	0.24	0.0	0 .00	0.10	0.03	2	220
10	ISL	18.70	18.70	33.442	23.908	399.2	0.040	5 .44	101.8	2 .4	0.24	0.0	0.00	0.10	0.03	10	
16		18.71	18.71	33.443	23.906	399.6	0.064	5 .44	101.8	2 .4	0.24	0.0	0. 00	0.10	0.03	16	219
20	ISL	18.71	18.71	33.443	23.906	399.7	0.080	5.43	101.7	2.4	0.25	0.0	0.00	0.10	0.03	20	
30	ISL	18. 72	18.71	33.444	23.905	400.2	0.120	5 .41	101.3	2 .4	0.26	0.0	0.00	0.10	0. 03	30	
31		18.72	18.71	33.444	23.905	400.2	0.124	5.41	101.3	2.4	0.26	0.0	0.00	0.10	0.03	31	218
45		18.72	18.71	33.444	23.906	400.7	0. 180	5 .41	101.3	2.3	0.24	0.0	0.00	0.10	0.03	45	217
50	ISL	18.34	18.33	33.471 .	24.021	389.8	0.200	5.52	102 .6	2 .3	0.23	0.0	0.00	0.12	0.04	50	
60		17.33	17.32	33.518	24.302	363.3	0.237	5.78	105.4	2 .4	0.21	0.0	0.00	0.18	0.06	60	216
75		15.95	15.94	33.450	24.570	338. 1	0.290	5.99	106.3	2 .6	0.22	0.0	0.00	0.22	0.10	75	215
86		14.82	14.81	33.349	24.742	321.9	0.326	5 .97	103.5	2.8	0.26	0.0	0.00	0.24	0.16	86	214
94		14.47	14.46	33.415	24.867	310.2	0.352	5 .87	101.1	3.0	0.26	0.0	0.00	0.28	0.25	94	213
100	ISL	14.39	14.38	33.495	24.946	302.8	0.370	5.82	100. 1	3. 1	0.26	0.1	0.03	0.29	0.25	100	
105		14.33	14.31	33.555	25 .005	297.3	0.385	5 .75	98.8	3.2	0.26	0.1	0.06	0.29	0.25	105	212
113		13.54	13.52	33.465	25.099	288.5	0.408	5 .46	92.3	4.7	0.46	2.4	0.12	0.26	0.25	1 13	211
125		12.38	12.36	33.449	25.316	267.9	0.442	5.13	84.6	6.9	0.71	6.3	0.02	0.16	0.16	126	210
139		11.46	11.44	33. 505	25 .532	247.5	0.478	4.85	78.5	9.4	0.92	9.7	0.01	0.10	0.11	140	209
150	ISL	10.88	10.86	33.541	25.664	235.1	0.504	4.68	74.8	11.5	1 .05	12.1	0.01	0.07	0.09	151	
164		10.24	10.22	33.586	25.811	221.3	0.536	4.45	70. 1	14.7	1.21	15.1	0.01	0.04	0.07	165	208
193		9.04	9.02	33.709	26.105	193.6	0.596	3.67	56.4	23.5	1 .69	22.2	0.00	0.01	0.03	194	207
200	ISL	8.84	8.82	33.747	26.166	187.9	0.610	3.65	55 .8	25 .0	1 .74	23.0	0.00			201	
228		8.23	8.21	33.885	26.368	169.0	0.660	3.55	53.6	30.0	1 .84	24.8	0.00			229	206
250	ISL	7.94	7.91	33.935	26.450	161.4	0.696	3.39	50.9	33.2	1 .93	26.1	0.00			251	
268		7.75	7.72	33 .956	26.495	157.4	0.725	3.22	48.1	35.8	2 .01	27.1	0.00			269	205
300	ISL	7.39	7.36	33.988	26.572	150.5	0.774	2.86	42.4	41 .6	2.16	29.3	0.00			302	
318		7.18	7.15	34.000 t1	26.611	146.9	0. 801									320	204
378		6.45	6.42	34.024	26.728	136. 1	0.886	1 .92	27.8	57.2	2.53	34.7	0.00			380	203
400	ISL	6.21	6.17	34.036	26.769	132.4	0.915	1 .69	24 .4	61.6	2 .64	36. 1	0.00			402	
438		5 .86	5 .82	34.061	26.833	126.5	0.964	1 .32	18.9	68.9	2.83	38.2	0.00			441	202
500	ISL	5 .53	5 .49	34.124	26.924	118.5	1 .040	0.84	11,9	78.4	3.04	40.3	0.00			503	
516		5 .44	5 .40	34.140	26.947	116.3	1 .059	0.71	10.1	80.8	3.09	40.9	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 80 10C1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 45>. 9 N	123 55 ,0 W	25/10/95	1810 UTC	4305 m	360 18 kn	360 03 04	2	1022 .0 mb	18.. 1 C	17.3 C	32m 01	8/8	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 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.73	18.73	33.516	23.956	394.2	0 .000	5 .40	101.2					0.11	0.03	0	
1		18.73	18.73	33.515	23.956	394 .3	0. 004									1	223
2	A	18.73	18.73	33.516	23.956	394 .3	0. 008	5 .40	101.2					0.11	0. 03	2	222
10	ISL	18.73	18.73	33.516	23.957	394 .5	0.039	5 .39	101.0					0.11	0. 03	10	
19	A	18.72	18.72	33.516	23.960	394.6	0.075	5 .39	101.0	2.2	0.23	0.0	0.00	0.11	0.03	19	221
20	ISL	18.72	18.72	33. 516	23.960	394.6	0 .079	5 .39	101.0	2.2	0.23	0.0	0.00	0.11	0.03	20	
30		18.71	18.70	33.513	23.960	394.9	0.118	5 .40	101.1	2 .2	0.23	0.0	0.00	0.11	0 . 03	30	220
40	A	18.72	18.71	33.515	23.960	395 .3	0.158	5 .39	101.0	2 .2	0.22	0.0	0. 00	0.11	0. 03	40	219
50	ISL	18.74	18.73	33.522	23.961	395 . 6	0. 197	5 .40	101.2	2 .2	0.23	0.0	0.00	0.12	0.03	50	
52		18,74	18. 73	33.523	23.961	395 .6	0.205	5 . 40	101.2	2 .2	0.23	0.0	0.00	0.12	0 .03	52	218
61	A	18.76	18.75	33.536	23.967	395 .4	0.241	5 . 40	101.2	2.2	0.22	0.0	0.00	0.13	0.03	61	217
74		16.26	16.25	33.588	24.606	334.7	0.288	5.94	106. 1	2.5	0.20	0.0	0.00	0.17	0.07	74	214
75	ISL	16.14	16.13	33.585	24.631	332.3	0.292	5.94	105.9	2 .5	0.20	0.0	0.00	0.18	0.08	75	
83	A	15 .48	15.47	33.581	24.776	318.7	0.318	5.85	102.9	2.6	0.22	0.0	0.00	0.24	0.14	83	215
94		15 .33	15 .32	33.725	24.921	305 .3	0.352	5.82	102 .2	2.5	0.18	0.0	0.00	0.28	0.23	94	213
94		15.33	15.32	33.725	24.921	305.3	0.352									94	214
100	ISL	15.19	15.17	33.756	24.976	300.2	0.370	5 .80	101.5	2 .5	0.19	0.0	0.00	0.26	0.24	100	
104		15 .06	15.04	33.759	25.006	297.4	0.382	5 .78	100.9	2.6	0.19	0.0	0.00	0.24	0.25	104	212
1 14	A	14.59	14.57	33.709	25.069	291 .6	0.412	5.70	98.6	2 .9	0.22	0.0	0 .07	0.22	0.24	114	211
124		14.54	14.52	33.800	25.151	284.2	0.440	5 .59	96.6	3.0	0.25	0.2	0.20	0.16	0.16	125	210
125	ISL	14.47	14.45	33.800	25 . 166	282.8	0.443	5 .57	96. 1	3.1	0.26	0.4	0.19	0.16	0.16	126	
139		13.27	13.25	33.763	25 .385	262.0	0.481	5.30	89.2	4.6	0.43	3.4	0.01	0.10	0.13	140	209
150	ISL	12.75	12.73	33.776	25.499	251.4	0.510	5.19	86.4	5.4	0.51	4.9	0. 01	0.08	0.11	151	
163		12.23	12.21	33.792	25.612	240.8	0.542	5.11	84.2	6.6	0.61	6.5	0.01	0.06	0.08	164	208
194		10.13	10.11	33.725	25.939	209.8	0.611	4.81	75.7	13.0	1 .04	13.2	0.00	0.02	0.03	195	207
200	ISL	9.86	9.84	33.739	25 .995	204.5	0.624	4.76	74.5	14.5	1.11	14.4	0.00			201	
231		8.82	8.80	33.843	26.245	181.0	0.684	4. 44	67. 9	22 .3	1 .44	19.6	0.00			232	206
250	ISL	8.37	8.34	33.883	26.345	171.6	0.717	4.20	63.6	26.3	1 .60	21 .9	0.00			251	
271		7.98	7.95	33.919	26.432	163.5	0.752	3.87	58. 1	30.8	1 .77	24.1	0.00			272	205
300	ISL	7.56	7.53	33.972	26.535	154.0	0.798	3.17	47. 1	38.2	2 .03	27.7	0.00			302	
31 8		7.34	7.31	34.000	26.588	149.2	0.826	2 .73	40.4	42 .8	2.19	29.8	0. 00			320	204
376		6.65	6 .62	34.046	26.719	137. 1	0.909	1 .92	28.0	55.2	2 .54	34.3	0.00			378	203
400	ISL	6.33	6.29	34.041	26.757	133.6	0.941	1 .76	25 .4	59.8	2 .63	35 .6	0.00			402	
438		5 .87	5 .83	34.036	26.812	128.5	0.991	1 .54	22.0	66.8	2.76	37.4	0.00			441	202
500	ISL	5 . 47	5 .43	34.105	26.916	119.1	1 . 068	0. 94	13.3	78. 0	3. 01	40 . 1	0.00			503	
513		5 .39	5 .35	34.120	26.937	117.2	1 .083	0. 81	11.5	80.4	3.06	40 .7	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951C 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 1.6 W	24/10/95	0514 UTC	578 m	220 04 kn			1015.6 mb	18 1 C	17 0 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 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	17.99	17.99	33.505	24.131	377.6	0.000	5 .94	109.7	1 .7	0.21	0.0	0.00	0.36	0.09	0	
2	A	17.99	17.99	33.505	24.131	377.6	0.008	5.94	109.7	1 .7	0.21	0.0	0.00	0.36	0.09	2	224
10		15 .86	15.86	33.444	24.584	334.7	0.036	6.15	109.0	2 .6	0.31	0.0	0 .00	0. 45	0.16	10	223
20		14.26	14.26	33.463	24.947	300.4	0.068	5 .60	96. 1	4.6	0.55	2.4	0.18	1.15	0 . 47	20	222
30		13.17	13.17	33.501	25. 199	276.6	0.097	4 .91	82 .4	7.5	0. 87	7.4	0.59	0.57	0 .32	30	221
41		11.65	11.64	33.604	25.572	241.4	0.125	3 . 89	63.2	14.5	1 .33	14.9	0 .05	0.17	0.17	41	220
49		11.13	11.12	33.683	25 .728	226.7	0. 144	3.23	52 .0	19.0	1 .62	18.6	0.02	0.07	0.14	49	219
50	ISL	11.10	11.09	33.689	25.738	225.7	0.146	3.18	51.1	19.3	1 .64	18.8	0.02	0.07	0.13	50	
60		10.92	10.91	33.738	25.809	219.3	0.168	2 .90	46. 4	21.2	1 .79	20. 3	0.02	0.04	0.08	60	218
70		10.79	10.78	33.786	25.870	213.7	0. 190	2 .68	42. 8	23.0	1 . 89	21.5	0.01	0 .04	0.10	70	217
75	ISL	10.77	10.76	33.804	25.887	212.2	0.201	2.59	41.4	23.6	1 .92	21 .9	0.01	0.03	0.09	75	
85		10.70	10.69	33.831	25.921	209.2	0.222	2 .48	39.6	24.5	1 .97	22.5	0.01	0.02	0.06	85	216
100		10.27	10.26	33.853	26.013	200.7	0.252	2.49	39.3	26. 1	2 .02	23 .5	0. 01	0. 02	0.06	101	21 5
120		9. 96	9.95	33.974	26.160	187.1	0.291	2 .01	31 .6	29.7	2.24	26.3	0.01	0 .01	0.12	121	214
125	ISL	9. 90	9.89	33.988	26.181	185.2	0.301	1 .96	30.7	30.2	2 .26	26.6	0.01	0.01	0.11	126	
140		9.78	9. 76	34.014	26.222	181.7	0.328	1 .87	29.3	31 .3	2 .30	27.0	0.01	0.01	0.06	141	213
150	ISL	9.74	9.72	34.029	26.241	180.1	0.346	1 .82	28.5	31 .9	2.32	27.3	0.01	0.01	0.06	151	
170		9.67	9.65	34.058	26.275	177.2	0.382	1 .72	26.9	33.1	2.37	27.9	0.01	0.01	0.05	171	212
199		9.48	9. 46	34. 121	26.356	170.1	0.432	1 .43	22 .2	35 .7	2 .49	29. 4	0.01	0.01	0.04	200	21 1
200	ISL	9.47	9.45	34. 123	26.359	169.8	0. 434	1 .42	22 . 1	35.8	2 .49	29.4	0 .01			201	
228		9.23	9.20	34.157	26.426	164.0	0.481	1.21	18.7	39. 1	2 . 56	30.6	0 .01			229	210
250	ISL	8.96	8 .93	34. 174	26.482	15 9,0	0.516	1 .09	16.8	42 .2	2.62 .	31 .4	0.01			252	
268		8.73	8.70	34.182	26.525	155.2	0.545	1 .02	15.6	44.3	2 .67	32 .0	0.01			270	209
300	ISL	8.35	8.32	34.181	26.583	150.1	0.593	1 . 02	15.5	48 .3	2,71	32 . 7	0.01			302	
318		8.14	8.11	34.177	26.612	147.5	0.620	1 . 02	15.4	50.6	2 .74	33. 1	0.01			320	208
377		7.36	7.32	34.184	26.731	136.7	0. 704	0.71	10.5	63.9	3.00	34.5	0.01			379	207
400	ISL	7.08	7.04	34.190	26.775	132 .7	0.735	0.58	8 .5	69.3	3.10	34.5	0.01			403	
438		6. 69	6.65	34.203	26.839	126.9	0. 784	0.36	5 .3	78.2	3.25	34 . 5	0 . 01			441	206
500	ISL	6.38	6.33	34.224	26.897	122.0	0.861	0.07	1 .0	91 .2	3 . 44	31.7	0 .00			503	
513		6.35	6.30	34.227	26.903	121.6	0 . 877	0.03	0 .4	95. 1	3.52	31.1	0. 00			517	205
537		6.31	6.26	34.228	26.909	121.3	0. 906	0.00	0. 0	106.6	3. 81	27.3	0.01			541	204
563		6.31	6.26	34.229	26.911	121.6	0.938	-0.01	-0. 1	112.0	4. 05	25 . 1	0.14			567	203
568		6.31	6.26	34.229	26.911	121.6	0.944	0.00	0.0	112.3	4. 09	25 .0	0.14			572	202
573		6.31	6.26	34.228	26.910	121.8	0.950	0.01	0. 1	112.3	4 .07	25.0	0.15			577	201

A) SANTA BARBARA BASIN STATION .

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 83 40 .6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 13. 5 N	119 24 .5 W	24/10/95	0108 UTC	33 m	010 02 kn	280 01 04	1	1014.7 mb	20 4 C	17 3 C		2/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ L	OXY PCT	S103 uM/ I	P04 uM/I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.70	18.70	33.510	23.959	393. 9	0 . 000	5 .96	111.6	0.8	0.19	0 . 1	0. 00	0 . 65	0.18	0	
1		18.82	18.82	33.512	23.931	396.7	0.004									1	207
1		18.70	18.70	33.510	23.959	394 . 0	0 . 004	5 .96	111.6	0.8	0.19	0 . 1	0.00	0. 65	0.18	1	206
5		18.51	18.51	33.505	24 .003	389. 9	0.020	6.14	114.6	1 . 0	0.16	0 . 1	0. 00	0. 69	0 . 20	5	205
10		18.33	18.33	33.500	24.044	386.2	0.039	6.22	115.7	0. 9	0.16	0 . 1	0.00	0.81	0.21	10	204
15		18.16	18.16	33.503	24.088	382.1	0.058	6.18	114.5	0.7	0.16	0 . 1	0.00	0.93	0.25	15	203
20		18.10	18.10	33.502	24. 102	381 . 0	0 . 077	6.12	113.3	0.7	0.17	0.0	0.00	0.83	0.28	20	202
27		17.37	17.37	33.479	24 .262	366.0	0.103	6 .04	110.2	1 . 1	0.23	0.0	0. 00	0. 82	0.29	27	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 10.6 N	119 30.7 W	23/10/95	2220 UTC	155 m	320 04 kn	280 01 05	1	1014.3 mb	1 9 9 C	17 0 C	21m 03	3/8	AC

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	18.67	18.67	33.505	23.963	393.6	0.000	5 .79	108.4	1 .5	0.20	0. 0	0.00	0. 36	0.15	0	
2		18.67	18.67	33.505	23.963	393. 6	0.008	5 . 79	108.4	1 .5	0 .20	0. 0	0.00	0.36	0.15	2	21 2
2		18.72	18.72	33.507	23.952	394.7	0.008									2	213
10		18.43	18.43	33.508	24.025	388.0	0.039	5 .82	108.4	1 .4	0.19	0.0	0.0 0	0. 45	0.18	10	21 1
20		15 .64	15 .64	33.442	24.632	330.5	0.075	5.93	104.6	3.4	0. 40	0, 7	0.07	1 .24	0.49	20	210
30		13.85	13.85	33.455	25.026	293.2	0.106	5.41	92 . 0	5 .2	0. 60	3 . 3	0.25	0. 89	0.47	30	209
41		12.48	12.47	33.563	25.383	259.4	0. 137	4.35	72.0	11.2	1 .07	11.2	0.25	0.30	0.26	41	208
50	ISL	12.17	12.16	33.587	25.461	252 .2	0. 160	4.10	67.4	12.9	1.19	12.9	0.22	0.26	0.29	50	
51		12.16	12.15	33.588	25.464	251.9	0. 162	4.09	67.2	13.0	1.19	12.9	0.21	0.26	0.29	51	207
60		11.89	11.88	33.603	25.527	246.2	0.185	3.89	63.6	14.3	1 .28	14.3	0.15	0.20	0.24	60	206
70		11.52	11.51	33.647	25.630	236.6	0.209	3.50	56.8	16.6	1 .44	16.8	0.07	0.15	0.21	70	205
75	ISL	11.37	11.36	33 . 669	25 .674	232.4	0.220	3.35	54.2	17.9	1.51	17.7	0. 07	0.12	0.19	75	
85		11.13	11.12	33.711	25.751	225.4	0. 243	3.12	50.2	20.3	1 . 64	19.1	0.06	0 .08	0.17	85	204
100		10.87	10.86	33.758	25.834	217.8	0.277	2 .85	45 .6	22.2	1 . 78	20.7	0. 04	0.06	0.19	100	203
1 19		10.66	10.65	33.813	25.914	210.6	0.317	2 .61	41.6	24.1	1 .87	22 .2	0 .04	0 .03	0.12	120	202
125	ISL	10.59	10.58	33.837	25.945	207.8	0.330	2 . 52	40. 1	25 .0	1 .92	22.7	0.04	0.03	0.11	126	
140		10.42	10.40	33.896	26.021	200.9	0.361	2.28	36.2	27.1	2 .03	24.1	0.05	0. 03	0.10	141	201

RV NEW HORIZON CALCOFI CRUISE 951C STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 53.2 N	120 8 7 W	23/10/95	1743 UTC	88 m	130 02 kn	130 01 02	0	1015.4 mb	19 2 C	18 5 C	24m	03	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/l	CHL-A ug/l	PHAEO ug/I	PRES db	SAMP
0	ISL	17.72	17.72	33.504	24.196	371.4	0.000	5.68	104.4	1.8	0.23	0.1	0.00	0.40	0.11	0	
1		17.75	17.75	33.505	24.189	372.0	0.004									1	21 1
2	A	17.72	17.72	33.504	24.196	371.5	0.007	5.68	104.4	1.8	0.23	0.1	0.00	0.40	0.11	2	210
8		17.55	17.55	33.502	24.235	367.9	0.030	5.68	104.0	1.6	0.23	0.1	0.00	0.42	0.13	8	209
10	ISL	17.47	17.47	33.501	24.254	366.2	0.037	5.68	103.9	1.6	0.23	0.1	0.01	0.47	0.15	10	
15	A	17.27	17.27	33.500	24.301	361.9	0.055	5.66	103.1	1.7	0.25	0.3	0.02	0.63	0.20	15	208
20	ISL	17.15	17.15	33.500	24.330	359.3	0.073	5.65	102.7	1.8	0.27	0.4	0.03	0.71	0.22	20	
22		17.11	17.11	33.500	24.339	358.5	0.080	5.64	102.4	1.9	0.28	0.5	0.03	0.74	0.23	22	207
30	A	17.02	17.02	33.503	24.363	356.5	0.109	5.61	101.7	2.0	0.31	0.7	0.04	0.84	0.25	30	206
39		15.99	15.98	33.521	24.615	332.7	0.140	5.25	93.3	4.6	0.53	3.5	0.10	0.87	0.40	39	205
46	A	13.34	13.33	33.564	25.214	275.6	0.161	4.49	75.6	10.7	0.98	10.0	0.17	0.49	0.36	46	204
50	ISL	12.34	12.33	33.591	25.432	255.0	0.172	4.16	68.6	13.3	1.18	12.8	0.16	0.32	0.29	50	
54		11.69	11.68	33.612	25.571	241.8	0.182	3.92	63.8	15.1	1.32	14.8	0.15	0.19	0.23	54	203
63	A	11.45	11.44	33.639	25.636	235.8	0.203	3.71	60.1	16.6	1,41	16.1	0.14	0.13	0.21	63	202
75	ISL	11.35	11.34	33.658	25.670	232.9	0.231	3.61	58.3	17.5	1.47	16.7	0.14	0.14	0.21	75	
76		11.34	11.33	33.660	25.673	232.6	0.234	3.60	58.2	17.6	1.47	16.7	0.14	0.14	0.21	76	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951C STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 4<.8 N	120 24 7 W	23/10/95	0828 UTC	983 m	010 08 kn			1013.1 mb	16 5 C	16 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 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	16.91	16.91	33.497	24.383	353.5	0.000	5.75	104.0	0.6	0.30	0.1	0.00	0.60	0.21	0	
2		16.91	16.91	33.497	24.383	353.6	0.007	5.75	104.0	0.6	0.30	0.1	0.00	0.60	0.21	2	220
10		16.86	16.86	33.498	24.396	352.6	0.035	5.74	103.7	0.5	0.29	0.1	0.00	0.65	0.22	10	219
19		16.82	16.82	33.494	24.402	352.3	0.067	5.75	103.8	0.5	0.31	0.1	0.00	0.76	0.29	19	218
20	ISL	16.68	16.68	33.482	24.426	350.1	0.071	5.77	103.9	0.5	0.32	0.1	0.00	0.90	0.32	20	
30		14.79	14.79	33.369	24.762	318.3	0.104	5.92	102.6	0.4	0.48	0.4	0.19	2.01	0.55	30	217
40		13.14	13.13	33.386	25.117	284.8	0.134	5.26	88.1	4.9	0.76	5.9	0.78	0.77	0.45	40	216
49		12.01	12.00	33.434	25.373	260.6	0.159	4.52	74.0	10.5	1.10	12.1	0.05	0.21	0.21	49	215
50	ISL	11.96	11.95	33.447	25.392	258.7	0.161	4.47	73.1	10.9	1.12	12.5	0.05	0.22	0.21	50	
60		11.62	11.61	33.568	25.550	243.9	0.186	4.07	66.1	14.0	1.28	15.2	0.07	0.31	0.29	60	214
70		10.88	10.87	33.600	25.709	229.0	0.210	3.76	60.1	16.9	1.46	17.8	0.01	0.12	0.17	70	213
75	ISL	10.74	10.73	33.607	25.739	226.2	0.221	3.71	59.1	17.5	1.49	18.4	0,01	0.10	0.15	75	
85		10.56	10.55	33.650	25.804	220.2	0.244	3.53	56.1	19.2	1.58	19.5	0.01	0.06	0.12	85	212
99		10.00	9.99	33.859	26.063	195.8	0.273	2.70	42.4	25,6	2.03	23.7	0.00	0.01	0.06	99	211
100	ISL	9.97	9.96	33.868	26.075	194.7	0.275	2.66	41.8	25.9	2.03	23.9	0.00	0.01	0.06	100	
118		9.68	9.67	33.975	26,208	182.5	0.309	2.27	35.4	29.8	2.10	26.0	0.00	0.00	0.06	119	210
125	ISL	9.62	9.61	34.001	26.238	179.8	0.321	2.20	34.3	30.6	2.14	26.4	0.00	0.00	0.06	126	
138		9.53	9.51	34.035	26.280	176.1	0.345	2.11	32.8	31.8	2.21	27.0	0.00	0.00	0.07	139	209
150	ISL	9.44	9.42	34.062	26.316	172.9	0.366	1.99	30.9	33.1	2.25	27.6	0.00	0.00	0.07	151	
170		9.27	9.25	34.097	26.371	168.0	0.400	1.82	28.2	35.2	2.30	28,4	0.00	0.00	0.06	171	208
199		8.95	8.93	34.140	26.456	160.4	0.447	1.74	26.7	37.8	2.37	29.4	0.00	0.00	0.06	200	207
200	ISL	8.94	8.92	34.142	26.459	160.1	0.449	1.73	26.6	37.9	2.37	29.4	0.00			201	
228		8.65	8.63	34.185	26.539	153.0	0.493	1.52	23.2	41.9	2.49	30.7	0.00			229	206
250	ISL	8.44	8.41	34.203	26.586	148.9	0.526	1.35	20.5	44.8	2.60	31.6	0.00			251	
268		8.28	8.25	34.212	26.617	146.2	0.552	1.22	18.5	47.0	2.68	32.3	0.00			270	205
300	ISL	8.02	7.99	34.225	26.667	141.9	0.599	1.07	16.1	50.4	2.75	33.3	0.00			302	
319		7.86	7.83	34.229	26.694	139.6	0.625	1.01	15.1	52.3	2.78	33.8	0.00			321	204
377		7.30	7.26	34.216	26.765	133.5	0.704	0.93	13.8	58.3	2.86	35.4	0.00			379	203
400	ISL	6.85	6.81	34.184	26.802	130.0	0.735	0.93	13.6	62.5	2.89	36.6	0.00			403	
436		6.17	6.13	34.147	26.862	124.1	0.780	0.92	13.3	69.3	2.94	38.4	0.00			439	202
500	ISL	5.88	5.84	34.213	26.951	116.3	0.857	0.57	8.2	77.7	3.11	40.1	0.00			503	
521		5.78	5.74	34.235	26.981	113.6	0.882	0.46	6.6	80.5	3.16	40.6	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 951C STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 33.7 N	120 45 2 W	23/10/95	0151 UTC	1451 *m*	330 10 kn	310 08 12	0	1011.7 mb	16 8 C	1 5 9 C		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	16.63	16.63	33.217	24.233	367.8	0.000	5.72	102.7	2.6	0.31	0.0	0.00	0.20	0 .06	0	
	2		16.63	16.63	33.217	24.233	367.9	0.007	5.72	102.7	2.6	0.31	0.0	0.00	0.20	0.06	2	220
	10	ISL	16.48	16.48	33.217	24 .268	364 .8	0.037	5 .74	102 .8	2 .5	0.31	0.0	0.00	0.20	0.06	10	
	15		16.30	16.30	33.210	24.304	361.5	0.055	5 .75	102.6	2 .5	0.31	0.0	0.00	0 .20	0.07	15	219
	20	ISL	16.11	16.11	33. 183	24.327	359.5	0.073	5 .81	103.3	2 .6	0.31	0.0	0.00	0.21	0.07	20	
	30		15.42	15 .42	33.124	24.436	349. 4	0.108	5 .93	103.9	3.0	0.30	0.0	0.00	0.22	0.10	30	218
	45		13.30	13.29	33. 119	24.878	307.6	0.158	6.01	100.9	3.8	0.33	0.0	0.00	0.31	0.21	45	217
	50	ISL	13.03	13.02	33.131	24. 941	301 .7	0. 173	5.95	99.3	4.0	0.34	0.2	0.03	0.37	0.27	50	
•	55		12.82	12.81	33.133	24.984	297.7	0.188	5 .87	97.5	4.2	0.37	0.3	0.08	0.41	0.32	55	216
	65		12 .02	12.01	33.064	25.084	288.4	0.217	5 .73	93.6	5 .2	0.52	2.2	0.22	0.38	0.35	65	215
	75		11.17	11.16	33. 174	25.326	265.6	0.245	5.13	82.3	9.0	0.87	8.6	0.03	0.19	0.20	75	214
	35		10.77	10.76	33.330	25.518	247.4	0.270	4.77	75 .9	11.8	1 .04	11.7	0.02	0.11	0.13	85	213
	95		10.37	10.36	33.406	25.647	235.3	0.295	4.47	70.6	14.6	1 .22	14.7	0.02	0.08	0.12	95	212
	100	ISL	10.18	10.17	33.505	25 .757	225 .0	0.306	4 .07	64.0	17.6	1 .40	17.3	0.02	0.06	0.10	100	
	110		9.80	9.79	33.698	25.971	204.8	0.328	3.29	51.4	23.5	1 .74	22.3	0.01	0.03	0.06	1 1 1	21 1
	124		9.24	9.23	33.759	26.111	191.7	0.355	3.15	48.6	26.3	1 .86	24.3	0.01	0.01	0.05	125	210
	125	ISL	9.24	9.23	33.768	26.118	191.1	0.357	3.12	48.2	26.5	1 .87	24.4	0.01	0.01	0.05	126	
	144		9.20	9.18	33.903	26. 230	180.8	0.393	2 .64	40.7	30.2	2.04	26.1	0.01	0. 01	0 .06	145	209
	150	ISL	9.07	9.05	33.921	26.265	177.6	0.403	2 .64	40.6	31 . 1	2 .06	26.5	0.01	0.01	0.06	1 51	
	170		8.63	8.61	33.961	26.366	168.3	0.438	2.63	40.1	33.8	2.10	27.5	0.01	0.01	0. 05	1 71	208
	199		8.75	8.73	34.079	26.440	161.9	0. 486	2 .05	31.4	37. 1	2 .26	28.9	0.00	0.01	0.06	200	207
	200	ISL	8.73	8.71	34.077	26.442	161.7	0. 487	2 .06	31 .5	37.2	2 .26	28.9	0.00			201	
	229		7 . 98	7.96	34.019	26.510	155.4	0. 533	2.50	37. 6	39. 4	2 .20	29.3	0 .01			230	206
	250	ISL	8 .06	8.03	34.085	26.550	152.0	0.566	2 . 08	31.3	42 . 1	2 .35	30.4	0 .01			251	
	268		8 . 20	8.17	34.154	26.584	149.3	0.593	1 .60	24.2	44.8	2.50	31.5	0 .00			270	205
	300	ISL	7.77	7.74	34.157	26.650	143.3	0.640	1 .48	22 . 1	49.8	2.61	33. 1	0.00			302	
	318		7.46	7.43	34. 145	26.686	140.1	0.665	1 .42	21.1	52 .4	2 .64	33.9	0. 00			320	204
	378		7.16	7.12	34.172	26.750	134.8	0. 748	1.12	16.5	57.9	2.79	35 .4	0. 00			380	203
	400	ISL	6.98	6.94	34.187	26.786	131.5	0. 777	0.98	14.4	61 . 1	2 . 86	36.2	0. 00			403	
	437		6. 66	6.62	34.215	26.852	125.6	0.824	0.74	10.8	66 .8	2 .98	37.6	0.00			440	202
	500	ISL	6.31	6.26	34.264	26.937	118.1	0.901	0.47	6. 8	73.7	3.11	39. 1	0.00			503	
	517		6.22	6.17	34.277	26.959	116.2	0.921	0.40	5 .8	75.5	3.15	39.5	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 951C 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 . 8 N	121 26 8 W	22/10/95	1828 UTC	3800 m	340 15 kn	340 10 OS	0	1012.5 mb	17 8 C	1 6 0 C	1 3m 04	0/8	

	DEPTH m		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 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/L	PRES db	SAMP
	0	ISL	16.50	16.50	33.513	24.491	343.3	0.000	5 .75	103.2	1 . 1	0.29	0.0	0.00	0. 66	0.19	0	
	1	A	16.50	16.50	33.513	24.491	343.3	0.003	5.75	103.2	1 . 1	0.29	0.0	0.00	0 . 66	0.19	1	221
	1		16.50	16.50	33.513	24.491	343 . 3	0 .003									1	222
	7	A	16.51	16.51	33.513	24.489	343.7	0.024	5 .75	103.2	1 . 0	0.31	0. 0	0. 00	0. 63	0.21	7	220
	10	ISL	16.50	16.50	33.515	24.493	343.4	0.034	5 . 75	103 .2	0.9	0.30	0.0	0 .00	0 . 65	0.21	10	
	1 6	A	16.45	16.45	33.512	24.502	342 . 7	0.055	5.76	103.3	0.9	0.29	0.0	0 .00	0. 68	0.22	1 6	219
	20	ISL	16.39	16.39	33.496	24.504	342 .7	0 . 069	5. 76	103.1	1 .0	0.31	0. 1	0.01	0.81	0.25	20	
	25	A	16.32	16.32	33.477	24.505	342 .7	0.086	5 .77	103.2	1 . 1	0.33	0.2	0.02	1 . 03	0.29	25	218
	30	ISL	13.88	13.88	33.289	24.891	305 .9	0. 102	5 .60	95 .2	3.3	0.54	2 .5	0.22	1 .36	0.51	30	
	33	A	12.31	12.31	33.216	25.146	281.7	0.111	5 . 46	89.8	4. 9	0 . 69	4. 2	0. 34	1 . 49	0 . 63	33	217
	47	A	11.44	11.43	33.342	25.407	257.2	0.149	4 .68	75.6	10.8	1 . 03	11.1	0.10	0.26	0.25	47	216
	50	ISL	11.27	11.26	33.385	25.471	251.2	0.156	4 . 50	72 .5	12.0	1.11	12.5	0. 07	0.23	0.22	50	
	53		11.13	11.12	33.426	25.528	245.8	0.164	4.34	69. 7	13.1	1.19	13.8	0.05	0.21	0.21	53	215
	59		10.99	10.98	33.482	25.597	239.4	0.178	4.12	66. 0	14.7	1 .29	15.4	0 .04	0.15	0.19	59	214
	69		10.36	10.35	33.562	25.770	223. 1	0.201	3.77	59.6	18.0	1 .47	18.3	0 .02	0.08	0.13	69	213
	75	ISL	10.24	10.23	33.589	25.811	219.3	0.215	3.65	57.5	19.0	1.54	19.2	0.01	0 . 06	0.12	75	
	86		10.11	10.10	33.629	25.865	214.4	0.238	3.51	55 .2	20.4	1 . 62	20.3	0.01	0.05	0.11	86	212
	100		9. 56	9.55	33.710	26.020	199.9	0.267	3.36	52 .2	23.3	1 .73	22.3	0.00	0.01	0.06	100	21 1
	121		8 .99	8. 98	33.801	26.183	184.7	0.308	3.14	48 .2	27.3	1 .88	24.4	0.00	0 . 00	0 .05	122	210
	125	ISL	8 .90	8. 89	33.816	26.209	182 .3	0.315	3.12	47 . 8	27.9	1 . 90	24.7	0 . 00	0. 00	0 .05	126	
	139		8.65	8. 64	33.867	26.288	175.0	0.340	3. 04	46.3	29.8	1 .95	25.5	0. 00	0. 00	0 .05	1 40	209
	150	ISL	8.51	8 . 49	33.907	26.341	170. 1	0.359	2.94	44 . 7	31.4	1 .99	26.2	0. 00	0. 00	0 .05	151	
	169		8. 34	8.32	33.967	26.415	163.5	0.391	2.74	41 .5	34.2	2.07	27.3	0.00	0.00	0.04	170	208
	199		8.12	8.10	34.019	26.489	156.9	0.439	2 .52	38.0	37.7	2.18	28.6	0. 00	0.00	0 .03	200	207
	200	ISL	8.12	8.10	34.022	26.491	156.7	0.440	2.50	37.7	37 . 8	2.19	28.7	0 .00			201	
	230		8.13	8.11	34.102	26.553	151.4	0.487	1 . 98	29.9	41.9	2 .36	30.3	0.00			231	206
	250	ISL	8.04	8.01	34.122	26.582	149.0	0.517	1.81	27.2	43.9	2 .42	31.0	0 . 00			251	
	267		7 . 94	7. 91	34.132	26.605	147.1	0.542	1 . 69	25.4	45 . 6	2 .47	31 .6	0 .00			269	205
	300	ISL	7.78	7.75	34.178	26.665	141.9	0. 590	1 . 32	19.8	50. 3	2 .63	33. 1	0 . 00			302	
	317		7.68	7.65	34.200	26.697	139.1	0.613	1.14	17.0	52 .9	2.71	33.9	0.00			31 9	204
	381		7 .06	7.02	34.226	26.806	129.4	0.699	0.81	11.9	62 . 1	2 . 89	36.3	0 . 00			383	203
	400	ISL	6. 89	6.85	34.232	26.834	126.9	0.724	0. 74	10.9	64 . 6	2 .93	36 . 9	0 .00			403	
	431		6. 64	6. 60	34.240	26.874	123.4	0.763	0. 64	9.3	68 . 5	2 . 99	37.9	0.00			434	202
	500	ISL	6.13	6.09	34.254	26.953	116.5	0.845	0.51	7.3	76.4	3.12	39.6	0.00			503	
	517		6 . 00	5 .95	34.258	26.972	114.7	0.865	0. 48	6 . 9	78 . 4	3.15	40. 0	0. 00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLEI	AMT	TYPE
32 55.0 N	122 8.0 W	22/10/95	1229	UTC	4078 m	330	23 kn			1011.6 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 uM/l	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.84	17.84	33.126	23.877	401.8	0.000	5.53	101.6	2.7	0.29	0.1	0.00	0.14	0.04	0	
2		17.84	17.84	33.126	23.877	401.8	0.008	5.53	101.6	2.7	0.29	0.1	0.00	0.14	0.04	2	224
10	ISL	17.85	17.85	33.125	23.874	402.4	0.040	5.53	101.7	2.7	0.29	0.1	0.00	0.13	0.04	10	
16		17.86	17.86	33.125	23.872	402.8	0.064	5.53	101.7	2.6	0.29	0.1	0.00	0.13	0.04	16	223
20	ISL	17.85	17.85	33.126	23.876	402.6	0.080	5.54	101.8	2.5	0.29	0.1	0.00	0.13	0.04	20	
29		17.83	17.83	33.127	23.882	402.3	0.117	5.57	102.3	2.4	0.29	0.1	0.00	0.16	0.05	29	218
30	ISL	17.76	17.75	33.127	23.898	400.8	0.121	5.59	102.6	2.4	0.29	0.1	0.00	0.17	0.06	30	
31		17.80	17.79	33.124	23.887	401.9	0.125									31	219
31		17.73	17.72	33.125	23.904	400.2	0.125									31	220
31		17.53	17.52	33.120	23.948	396.0	0.125									31	221
31		17.39	17.38	33.123	23.984	392.6	0.125									31	222
44		16.35	16.34	33.149	24.247	367.9	0.175	5.87	104.8	2.4	0.29	0.0	0.00	0.29	0.14	44	217
50	ISL	15.70	15.69	33.178	24.416	351.9	0.196	5.96	105.1	2.8	0.28	0.0	0.00	0.28	0.17	50	
54		15.26	15.25	33.191	24.524	341.8	0.210	6.01	105.0	3.1	0.27	0.0	0.00	0.27	0.18	54	216
64		14.23	14.22	33.140	24.705	324.7	0.243	6.08	104.0	3.3	0.29	0.0	0.00	0.29	0.21	64	215
72		13.66	13.65	33.204	24.872	309.0	0.269	5.94	100.5	3.5	0.31	0.0	0.02	0.25	0.23	72	214
75	ISL	13.68	13.67	33.259	24.911	305.4	0.278	5.87	99.4	3.5	0.32	0.2	0.06	0.24	0.23	75	
85		13.74	13.73	33.413	25.018	295.5	0.308	5.63	95.5	3.9	0.36	0.7	0.17	0.21	0.22	85	213
100	ISL	13.06	13.05	33.510	25.230	275.6	0.351	5.28	88.4	6.0	0.57	4.5	0.05	0.14	0.15	100	
101		12.97	12.96	33.509	25.247	274.0	0.354	5.25	87.7	6.2	0.59	4.9	0.04	0.14	0.15	101	212
107		12.18	12.17	33.476	25.375	261.9	0.370	4,98	81.8	8.1	0.76	7.7	0.02	0.11	0.14	107	211
122		10.66	10.65	33.431	25.617	238.9	0.407	4.53	72.0	13.9	1.17	14.2	0.01	0.04	0.08	123	210
125	ISL	10.45	10.44	33.437	25.658	235.0	0.414	4.47	70.7	14.7	1.22	15.1	0.01	0.04	0.07	126	
146		9.42	9.40	33.539	25.910	211.2	0.461	4.06	62.8	20.0	1.52	19.7	0.01	0.01	0.05	147	209
150	ISL	9.27	9.25	33.566	25.955	207.0	0.469	3.94	60.8	21.2	1.58	20.6	0.01	0.01	0.05	151	
168		8.72	8.70	33.697	26.145	189.2	0.505	3.46	52.8	26.4	1.82	24.1	0.01	0.00	0.03	169	208
198		8.24	8.22	33.878	26.360	169.1	0.559	3.20	48.3	31.5	1.95	26.2	0.00	0.00	0.03	199	207
200	ISL	8.22	8.20	33.885	26.369	168.4	0.562	3.20	48.3	31.7	1.95	26.3	0.00			201	
227		7.92	7.90	33.942	26.458	160.2	0.607	3.21	48.1	34.7	1.97	26.9	0.00			228	206
250	ISL	7.63	7.61	33.972	26.524	154.2	0.643	3.02	45.0	38.6	2.07	28.3	0.00			251	
266		7.43	7.40	33.987	26.565	150.6	0.667	2.83	42.0	41.6	2.16	29.4	0.00			267	205
300	ISL	7.13	7.10	34.018	26.631	144.6	0.717	2.41	35.5	47.2	2.33	31.6	0.00			302	
318		6.99	6.96	34.030	26.660	142.1	0.743	2.18	32.0	50.2	2.42	32.8	0.00			320	204
378		6.34	6.31	34.048	26.761	132.9	0.826	1.59	23.0	61.2	2.68	36.2	0.00			380	203
400	ISL	6.15	6.11	34.068	26.802	129.2	0.855	1.37	19.7	65.5	2.78	37.4	0.00			402	
436		5.86	5.82	34.104	26.867	123.3	0.900	1.03	14.7	72.5	2.94	39.3	0.00			439	202
500	ISL	5.37	5.33	34.142	26.957	115.1	0.976	0.68	9.6	83.0	3.09	41.4	0.00			503	
523		5.19	5.15	34.156	26.989	112.1	1.002	0.56	7.9	86.8	3.15	42.1	0.00			527	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 34..5 N	122 49.2 W	22/10/95	0543	UTC	4258 m	330	25 kn			1015.1 mb	16.7 C	15.1 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	18.42	18.42	33.222	23.809	408.3	0.000	5.44	101.2	3.4	0.27	0.0	0.00	0.14	0.04	0	
1		18.42	18.42	33.222	23.809	408.3	0.004	5.44	101.2	3.4	0.27	0.0	0.00	0.14	0.04	1	220
10	ISL	18.42	18.42	33.222	23.809	408.6	0.041	5.44	101.2	3.3	0.27	0.0	0.00	0.13	0.03	10	
16		18.43	18.43	33.221	23.806	409.1	0.065	5.44	101.2	3.2	0.27	0.0	0.00	0.13	0.03	16	219
20	ISL	18.43	18.43	33.221	23.806	409.2	0.082	5.44	101.2	3.1	0.27	0.0	0.00	0.13	0.03	20	
30	ISL	18.44	18,43	33.220	23.804	409.8	0.123	5.45	101.4	2.9	0.27	0.0	0.00	0.13	0.03	30	
31		18.44	18.43	33.220	23.804	409.9	0.127	5.45	101.4	2.9	0.27	0.0	0.00	0.13	0.03	31	218
44		18.44	18.43	33.220	23.804	410.3	0.180	5.45	101.4	2.8	0.26	0.0	0.00	0.21	0.09	44	217
50	ISL	18.05	18.04	33.382	24.024	389.5	0.204	5.64	104.2	2.9	0.24	0.0	0.00	0.23	0.13	50	
61		16.82	16.81	33.604	24.489	345.5	0.245	5-98	108.1	3.2	0.21	0.0	0.00	0.26	0.19	61	216
74		14.69	14.68	33.307	24.737	322.0	0.288	6.00	103.7	3.3	0.26	0.0	0.00	0.32	0.19	74	215
75	ISL	14.61	14.60	33.304	24.751	320.6	0.291	5.99	103.4	3.3	0.26	0.0	0.00	0.32	0.19	75	
85		14.21	14.20	33.358	24.878	308.9	0.323	5.90	101.0	3.6	0.28	0.1	0.02	0.27	0.22	85	214
95		14.36	14.35	33.514	24.967	300.7	0.353	5.81	99.9	3.5	0.25	0.1	0.04	0.20	0.19	95	213
100	ISL	14.15	14.14	33.499	25.000	297.7	0.368	5.77	98.8	3.6	0.26	0.3	0.08	0.18	0.18	100	
104		14.01	14.00	33.495	25.026	295.3	0.380	5.74	98.0	3.7	0.29	0.4	0.11	0.17	0.18	104	212
114		14.41	14.39	33.731	25.125	286.3	0.409	5.61	96.7	3.7	0.44	0.5	0.16	0.16	0.17	114	211
125		14.15	14.13	33.852	25.273	272.5	0.440	5.39	92.4	4.2	0.39	1.7	0.08	0.07	0.20	126	210
139		13.19	13.17	33.776	25.411	259.5	0.477	5.24	88.1	5.6	0.48	4.1	0.02	0.08	0.12	140	209
150	ISL	12.02	12.00	33.684	25.568	244.6	0.505	5.01	82.1	8.4	0.71	7.7	0.02	0.06	0.09	151	
163		10.66	10.64	33.611	25.758	226.4	0.535	4.73	75.3	12.3	1.02	12.2	0.01	0.03	0.07	164	208
193		9.35	9.33	33.705	26.052	198.7	0.599	4.43	68.5	18.8	1.34	17.7	0.00	0.01	0.02	194	207
200	ISL	9.14	9.12	33.736	26.110	193.3	0.613	4.34	66.8	20.4	1.41	18.8	0.00			201	
228		8.48	8.46	33.859	26.310	174.6	0.664	3.89	59.0	26.9	1.68	22.7	0.00			229	206
250	ISL	8.03	8.00	33.929	26.432	163.2	0.701	3.43	51.6	32.8	1.91	25.7	0.00			251	
268		7.73	7.70	33.973	26.511	155.9	0.730	3.03	45.2	37.6	2.09	27.9	0.00			269	205
300	ISL	7.36	7.33	34.026	26.606	147.2	0.779	2.42	35.8	44.7	2.31	31.0	0.00			302	
319		7.18	7.15	34.047	26.648	143.4	0.806	2.11	31.1	48.6	2.42	32.5	0.00			321	204
380	A	6.51	6.48	34.060 U	26.749 U	134.3 U	0.890 U	1.64 U	23.81	58.4 U	2.67 U	35.5 U	0.00 U			382	203
400	ISL	6.31	6.27	34.094	26.802	129.4	0.917	1.32	19.1	64.0	2.79	37.2	0.00			402	
438		5.97	5.93	34.107	26.856	124.5	0.965	1.10	15.8	70.2	2.92	38.7	0.00			441	202
500	ISL	5.62	5.58	34.151	26.934	117.6	1.040	0.72	10.2	78.7	3.09	40.6	0.00			503	
512		5.55	5.51	34.160	26.950	116.2	1.054	0.65	9.2	80.4	3.12	41.0	0.00			515	201

A) WATER SAMPLES MAY HAVE BEEN1 CONTAMINATED. BOTTLE TOP NOT COMPLETELY SEALED.

j LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 14.8 N	123 29.8 W	21/10/95	2305 UTC	4142 m	340 19 kn	340 06 05	1	1016.5 mb	18.0 C	16..8 C	26m 01	5/8	SC

I DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/I	P04 uM/t	N03 uM/I	N02 uM/L	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0	ISL	18.97	18.97	33.491	23.877	401 .8	0. 000	5.39	101.4	2 .6	0.23	0.0	0.00	0.11	0.02	0	
1		18.97	18.97	33.491	23.877	401.8	0.004	5 .39	101.4	2.6	0.23	0.0	0.00	0.11	0.02	1	220
1		18.97	18.97	33.492	23.878	401 .7	0.004									1	221
10	ISL	18.98	18.98	33.492	23.876	402 . 3	0.040	5 .38	101.3	2 .6	0.23	0.0	0.00	0.11	0.03	10	
15		18 .98	18.98	33.493	23.877	402 . 4	0.060	5 .38	101.3	2 .6	0.23	0.0	0.00	0.11	0.03	15	219
20	ISL	18.97	18.97	33.491	23.878	402 . 4	0.080	5 .38	101.3	2 .5	0.23	0.0	0.00	0.11	0.03	20	
30	ISL	18.96	18.95	33.492	23.882	402 . 4	0.121	5 .39	101.4	2 .4	0.23	0.0	0.00	0.12	0.03	30	
31		18.96	18.95	33.492	23.882	402.5	0.125	5.39	101.4	2.4	0.23	0.0	0.00	0.12	0 .03	31	21 8
45		18.99	18.98	33.513	23.891	402.1	0.181	5.16	97.2	2.4	0.23	0.0	0.00	0.14	0.05	45	217
50	ISL	18. 93	18.92	33.520	23.911	400.3	0.201	5.20	97. 8	2.4	0.23	0.0	0.00	0.15	0.05	50	
60		18.82	18.81	33.534	23.950	397.0	0.241	5.41	101.5	2.4	0.23	0.0	0.00	0.18	0.05	60	216
75		15.95	15.94	33.454	24.573	337.8	0.296	5.98	106.1	2.8	0.21	0.0	0.00	0.23	0. 09	75	215
85		15.29	15.28	33.524	24.774	318.9	0.329	5.93	103.9	2.8	0.21	0.0	0.00	0.29	0.16	85	214
94		15.11	15.10	33.592	24.866	310.4	0.357	5 .84	102 .0	2.9	0.21	0.0	0.00	0.28	0.25	94	213
100	ISL	15.03	15.01	33.632	24.915	305.9	0.376	5 .78	100.8	2.9	0.22	0.0	0.01	0.27	0.26	100	
105		14.94	14.92	33.662	24.958	302.0	0.391	5.73	99.8	2.9	0.22	0.0	0.01	0.25	0.26	105	212
114		14.64	14.62	33.714	25 .063	292.3	0.418	5.60	96.9	3.1	0.25	0.2	0.13	0.19	0.21	1 14	21 1
125		14.30	14.28	33.790	25.194	280.0	0.449	5 .42	93.2	3. 6	0.31	1 .0	0.15	0.16	0.19	126	210
140		14.03	14.01	33.813	25 .268	273.3	0.491	5.31	90. 8	4.1	0.37	2.3	0 .03	0.13	0.15	141	209
150	ISL	13.52	13.50	33.790	25 .356	265.2	0.518	5.22	88.3	4.8	0 .45	3.7	0.02	0.11	0.13	151	
165		12.53	12.51	33.740	25.514	250.3	0.556	5 .04	83.5	6 . 7	0.61	6.4	0.01	0.07	0.09	166	208
193		10.60	10.58	33.691	25.831	220.1	0.622	4.59	73 .0	12.8	1 .06	13.2	0 .01	0. 02	0 .03	194	207
200	ISL	10.18	10.16	33.699	25.910	212.7	0.637	4. 42	69. 6	15.1	1.19	15.2	0.01			201	
231		8.73	8.71	33.788	26.216	183.7	0.699	3. 67	56.0	25 .5	1 . 72	23.0	0.00			232	206
250	ISL	8.32	8.29	33.866	26.340	172 . 1	0.732	3.30	49.9	30.2	1 . 90	25 .5	0. 00			251	
269		8.07	8. 04	33.937	26.433	163.5	0.764	2 . 99	45 .0	34.3	2 .03	27.2	0.00			270	205
300	ISL	7.64	7.61	33.992	26.539	153.7	0.813	2 .69	40.1	40.1	2.18	29.3	0.00			302	
319		7.41	7.38	34.009	26.586	149.5	0.842	2 .54	37 . 7	43 . 4	2 .25	30 . 4	0.00			321	204
377		6.74	6.71	34.049	26.710	138.1	0.926	1 .87	27 .3	54.9	2 .56	34.3	0.00			379	203
400	ISL	6.54	6.50	34.064	26.748	134.7	0.957									402	
443		6.21	6.17	34.091 D	26.813	128.9	1.014									446	202
500	ISL	5.70	5.66	34.134	26.911	119.8	1 .085									503	
510		5.61	5 .57	34.142 D	26.928	118.2	1 .097									513	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 55 .6 N	124 10..4 W	21/10/95	1746 UTC	4197 m	020 1 7 kn	020 04 05	1	1019.0 mb	18 .,3 C	17., 8 C	29m 01	7/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/I	OXY PCT	SI03 uM/t	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0	ISL	19.80	19. 80	33.824	23.918	397.8	0. 000	5.28	101.1	2.6	0.19	0. 1	0.00	0.14	0.04	0	
2	A	19.80	19.80	33.824	23.918	397 . 9	0. 008	5.28	101.1	2 . 6	0.19	0 . 1	0 . 00	0.14	0 . 04	2	221
2		19.80	19.80	33.824	23.918	397 . 9	0.008									2	222
10	ISL	19.80	19.80	33.825	23.920	398.1	0.040	5 .27	100.9	2 . 6	0.19	0.1	0. 00	0.14	0. 04	10	
17	A	19.81	19.81	33.827	23.919	398. 4	0.068	5.27	101.0	2 .6	0.19	0.0	0 . 00	0.14	0. 04	1 7	220
20	ISL	19.81	19.81	33.826	23.918	398. 6	0.080	5 .27	101.0	2.4	0.19	0.0	0.00	0.14	0.04	20	
27		19.81	19.81	33.824	23.917	399.0	0.108	5 .28	101.1	2 .0	0.20	0.0	0.00	0.14	0. 04	27	219
30	ISL	19.81	19.80	33.825	23.918	399.0	0.120	5.28	101.1	2 .2	0.20	0.0	0. 00	0.14	0. 04	30	
34	A	19.82	19.81	33 . 826	23.916	399.3	0.135	5 .27	101.0	2 .6	0.19	0.0	0.00	0.14	0. 04	34	218
47		19.80	19.79	33.831	23.926	398 .9	0. 187	5 .28	101.1	2 .6	0.18	0.0	0.00	0.14	0. 04	47	217
50	ISL	19.69	19.68	33.826	23.951	396 . 6	0. 199	5 .30	101.3	2 .6	0.18	0.0	0.00	0.17	0. 05	50	
57	A	19.44	19.43	33.815	24.007	391 .5	0.227	5 . 42	103.1	2 . 5	0.19	0.0	0.00	0.23	0. 08	57	21 6
65		17.65	17.64	33.674	24.345	359.4	0.257	5 .78	106.2	2 .7	0.19	0.0	0.00	0.25	0.11	65	215
75	ISL	16.61	16.60	33.573	24.514	343.5	0.292	5 . 77	103.8	2 .7	0.22	0.0	0 .00	0.27	0.16	75	
76	A	16.56	16.55	33.571	24.524	342 . 6	0.295	5 . 77	103.7	2.7	0.22	0 .0	0.00	0.27	0.16	76	214
85		16.34	16.33	33.681	24.660	330.0	0.326	5 . 76	103.1	2 . 7	0.20	0 .0	0.00	0.28	0.18	85	213
94		16.49	16.47	33.875	24.774	319.4	0.355	5 .79	104. 1	2 .7	0.15	0.0	0.00	0.26	0.16	94	212
100	ISL	16.29	16.27	33.874	24.820	315.2	0.374	5 .77	103.3	2. 4	0.17	0.0	0.00	0.23	0.18	100	
101	A	16.24	16.22	33.868	24.827	314.6	0.377	5 .77	103.2	2 . 3	0.17	0 .0	0 .00	0.23	0.18	1 01	21 1
121		14.94	14.92	33.773	25.044	294.3	0. 438	5.61	97 . 7	2 . 9	0. 23	0 .3	0 .09	0.16	0.16	121	210
125	ISL	14.69	14.67	33.755	25.084	290.6	0. 450	5 .50	95 .3	3 .3	0 . 29	1 . 0	0 .08	0.15	0.15	125	
1 44		13.52	13.50	33.693	25.281	272.1	0.503	4.95	83.7	6.0	0. 59	5 .4	0.02	0.09	0.12	145	209
150	ISL	13.19	13.17	33.689	25.344	266.2	0.519	4 . 85	81 .5	6 . 7	0 .66	6. 5	0.01	0.08	0.11	1 51	
1 68		12.18	12.16	33.693	25.545	247.3	0.566	4 .64	76 . 3	9 .3	0 .85	9. 7	0.00	0. 05	0.08	169	208
199		10.22	10.20	33.713	25.914	212.3	0.637	4.25	67 .0	16.2	1 .26	16.1	0 .00	0.01	0.02	200	207
200	ISL	10.16	10.14	33.716	25.927	211.1	0.639	4.24	66. 8	16.5	1 .27	16.3	0.00			201	
228		8. 88	8 .86	33.811	26.210	184.2	0.694	3 . 90	59.7	24.1	1 .61	21.6	0 .00			229	206
250	I SL	8 .43	8 . 40	33.874	26.329	173.1	0 . 734	3.71	56.3	27.9	1 . 74	23.6	0 .00			251	
266		8.24	8.21	33.910	26.386	167.9	0.761	3.57	53.9	30.3	1.81	24.6	0.00			267	205
300	ISL	7.7 2	7. 69	33.964	26.506	156.9	0.816	3.20	47.8	36 . 8	1 . 99	27.2	0 .00			302	
316		7 .49	7 . 46	33.982	26.553	152.6	0.841	3.00	44 . 5	40 . 1	2 .08	28.4	0 .00			318	204
377		6 . 76	6. 73	34.028	26.691	140.0	0. 930	2.12	31.0	53.1	2 .46	33 . 4	0.00			379	203
400	ISL	6.47	6.43	34.027	26.728	136.5	0.962	1 . 94	28.1	57.4	2.56	34.8	0.00			402	
436		6 .07	6.03	34.028	26.781	131.7	1.010	1.71	24.6	63.7	2 .70	36.7	0.00			439	202
500	ISL	5 .79	5 .75	34.101	26.874	123.4	1 .092	1 .06	15.1	73.2	2 . 96	39.3	0. 00			503	
515		5 . 72	5 . 68	34.118	26.896	121.5	1.110	0 . 91	13.0	75 . 4	3 . 02	39. 9	0. 00			51 8	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 87 33

LATITUDE	LONSITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLC1	AMT	TYPE
33 53i.2 N	118 29.8 W	19/10/95	0249	UTC	58 m		00 kn			1014.4 mb	18.0 C	17.0 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	19.10	19.10	33.479	23.835	405.8	0.000	5.77	108.9	2.7	0.15	0.0	0.00	0.69	0.23	0	
1	A	19.10	19.10	33.479	23.835	405.8	0.004	5.77	108.9	2.7	0.15	0.0	0.00	0.69	0.23	1	207
5		19.09	19.09	33.477	23.836	405.9	0.020	5.77	108.8	2.5	0.15	0.0	0.00	0.72	0.21	5	206
10	ISL	18.87	18.87	33.468	23.885	401.4	0.040	5.81	109.1	2.5	0.16	0.0	0.00	0.75	0.25	10	
11		18.83	18.83	33.466	23.894	400.6	0.044	5.82	109.2	2.5	0.16	0.0	0.00	0.76	0.26	11	205
20		13.84	13.84	33.268	24.883	306.5	0.076	4.90	83.2	9.5	1.24	5.1	0.47	1.01	0.45	20	204
30		13.01	13.01	33.225	25,017	293.9	0.106	3.96	66.1	13.1	1.81	8.5	0.79	0.38	0.25	30	203
41		12.69	12.68	33.217	25.074	288.8	0.138	3.68	61.0	14.8	2.06	10.2	0.80	0.15	0.26	41	202
50	ISL	12.84	12.83	33.430	25.210	276.1	0.164	4.27	71.1	11.0	1.29	8.3	0.98	0.20	0.27	50	
51		12.86	12.85	33.454	25.225	274.7	0.167	4.34	72.3	10.6	1.20	8.1	1.00	0.21	0.27	51	201

A) UNUSUAL PROFILES AND ODD N03/P04 RATIOS MAY BE DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.

RV NEW HORIZON CALCOFI CRUISE 9510 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'.2 N	118 37,6 W	19/10/95	0439	UTC	659 m		00 kn			1015.2 mb	18.2 C	17,2 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	19.30	19.30	33.490	23.792	409.8	0.000	5.64	106.8	2 1	0.17	0.0	0.00	0.52	0.17	0	
1		19.30	19.30	33.490	23.792	409.9	0.004	5.64	106.8	2.1	0.17	0.0	0.00	0.52	0.17	1	220
10		19.16	19.16	33.483	23.823	407.3	0.041	5.67	107.1	2.0	0.20	0.0	0.00	0,55	0.18	10	219
19		16.00	16.00	33.406	24.523	340.8	0.075	6.15	109.2	1.9	0.31	0.0	0.02	0.62	0.22	19	218
20	ISL	15.76	15.76	33.403	24.575	335.9	0.078	6.12	108.2	2.2	0.34	0.1	0.06	0.67	0.26	20	
30		14.08	14.08	33.397	24.933	302.0	0.110	5.54	94.6	5.2	0.64	2.1	0.50	1.08	0.64	30	217
40		13.28	13.27	33.433	25.125	284.0	0.139	5.19	87.2	6.0	0.77	4.3	0.84	0.76	0.48	40	216
50		12.82	12.81	33.483	25.255	271.8	0.167	4.68	77.9	7.8	0.95	7.9	1.22	0.41	0.36	50	215
60		12.27	12.26	33.533	25.401	258.2	0.193	4.22	69.5	10.3	1.12	11.8	0.07	0.30	0.31	60	214
70		11.73	11.72	33.625	25.574	241.9	0.218	3.58	58.3	15.1	1.38	15.7	0.02	0.17	0.25	70	213
75	ISL	11.62	11.61	33.649	25.613	238.3	0.230	3.40	55.2	16.4	1.45	16.7	0.02	0.13	0.22	75	
85		11.48	11.47	33.676	25.660	234.1	0.254	3.20	51.9	18.0	1.54	17.9	0.01	0.09	0.17	85	212
98		11.18	11.17	33.708	25.740	226.8	0.284	3.04	49.0	19.8	1.64	19.2	0.01	0.05	0.12	98	211
100	ISL	11.13	11.12	33.718	25.757	225.2	0.289	2.99	48.1	20.2	1.67	19.5	0.01	0.04	0.11	100	
119		10.63	10.62	33.814	25.920	210.0	0.330	2.56	40.8	24.0	1.90	22.4	0.01	0.01	0.07	120	210
125	ISL	10.49	10.48	33.828	25.956	206.7	0.342	2.56	40.6	24.5	1.92	22.8	0.01	0.01	0.07	126	
140		10.19	10.17	33.866	26.037	199.3	0.373	2.56	40.4	25.8	1.96	23.5	0.01	0.01	0.07	141	209
150	ISL	10.03	10.01	33.934	26.118	191.8	0.392	2.34	36.8	27.7	2.05	24.7	0.01	0,01	0.06	151	
170		9.76	9.74	34.074	26.273	177.5	0.429	1.86	29.1	31.8	2.24	27.2	0.01	0.00	0.05	171	208
199		9.41	9.39	34.142	26.384	167.4	0.479	1.70	26.4	34.7	2.33	28.5	0.01	0.01	0.05	200	207
200	ISL	9.40	9.38	34.144	26.387	167.2	0.481	1.70	26.4	34.8	2.33	28.5	0.01			201	
229		9.13	9.10	34.180	26.460	160.8	0,529	1.62	25.0	37.4	2.39	29.4	0.01			230	2C6
250	ISL	8.85	8.82	34.208	26.526	154.8	0,562	1.47	22.6	40.1	2.47	30.3	0.01			251	
268		8.59	8.56	34,230	26.584	149.5	0.589	1.31	20.0	42.8	2.55	31.1	0.01			270	205
300	ISL	8.20	8.17	34.252	26.661	142.6	0.636	1.06	16.0	48.3	2.69	32.5	0.01			302	
318		8.00	7.97	34.259	26.697	139.4	0.661	0.94	14.1	51,4	2.77	33.2	0.01			320	204
377		7.40	7.36	34.268	26.792	131.0	0.741	0.69	10.2	60.0	2.92	35.6	0.01			379	203
400	ISL	7.15	7.11	34.268	26.827	127.9	0.771	0.63	9.3	63.4	2.98	36.4	0.01			403	
437		6.76	6.72	34.271	26.883	122.8	0.817	0.54	7.9	68.7	3.06	37.5	0.01			440	202
500	ISL	6.25	6.21	34.296	26.970	115.0	0.892	0.37	5.3	77.4	3.19	38.8	0.00			503	
517		6.11	6.06	34.303	26.994	112.8	0.911	0.32	4.6	79.7	3.22	39.2	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 87 40

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 35>.4 N	118 58.7 W	19/10/95	0821	UTC	745 m		00 kn			1015.9 mb	18,8 C	17,1 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	19.30	19.30	33.513	23.810	408.2	0.000	5.55	105.1	2.3	0.20	0.1	0.00	0.30	0.13	0	
2		19.30	19.30	33.513	23.810	408.2	0.008	5.55	105,1	2.3	0.20	0.1	0.00	0.30	0.13	2	224
10	ISL	18.79	18.79	33.510	23.937	396.4	0.040	5.58	104.7	2.0	0.23	0.0	0.00	0.34	0.13	10	
11		18.30	18.30	33.507	24.057	385.0	0.044									11	222
11		18.46	18.46	33.509	24.019	388.6	0.044									11	221
11		18.67	18.67	33.508	23.966	393.7	0.044	5.58	104.4	1.9	0.24	0.0	0.00	0.34	0.13	11	219
11		18.59	18.59	33.509	23.986	391.7	0.044									11	220
11		18.20	18.20	33.508	24.082	382.6	0.044									11	223
20		17.00	17.00	33.466	24.339	358.4	0.077	5.74	104.0	1.2	0.30	0.1	0.01	0.65	0.28	20	218
30		14.90	14.90	33.439	24.792	315.5	0.111	5.75	99.9	2.3	0.49	2.2	0.13	1.70	0.64	30	217
40		13.29	13.28	33.453	25.138	282.7	0.141	5.21	87.6	6.2	0.75	6.1	0.26	0.70	0.48	40	216
50		12.45	12.44	33.487	25.330	264.7	0.168	4.75	78.5	8.7	0.95	9.6	0.26	0.34	0.29	50	215
60		11.70	11.69	33.539	25.512	247.5	0.194	4.23	68.8	12.5	1.19	13.6	0.20	0.17	0.25	60	214
69		11.08	11.07	33.640	25.704	229.4	0.215	3.62	58.1	16.8	1.44	17.1	0.19	0.08	0.13	69	213
75	ISL	10.89	10.88	33.680	25.769	223.4	0.229	3.40	54.4	18.6	1.55	18.6	0.12	0.05	0.11	75	
85		10.70	10.69	33.726	25.839	217.0	0.251	3.17	50.5	20.8	1.68	20.4	0.01	0.03	0.09	85	212
100		10.30	10.29	33.795	25.962	205.5	0.283	2.88	45.5	23.5	1.82	22.2	0.01	0.03	0.09	100	211
119		10,11	10.10	33.920	26.093	193.5	0.320	2.46	38.7	27.4	2.02	24.3	0.01	0.01	0.06	120	210
125	ISL	9.94	9.93	33.928	26.128	190.3	0.332	2.47	38.8	28.0	2.02	24.7	0.02	0.01	0.06	126	
139		9.50	9.48	33.931	26.203	183.3	0.358	2.55	39.6	29.0	2.02	25.4	0.03	0.01	0.06	HO	209
150	ISL	9.27	9.25	33.955	26.260	178.1	0.378	2.52	39.0	30.3	2.05	26.0	0.02	0.01	0.06	151	
169		9.06	9.04	34.017	26.342	170.6	0.411	2.33	35.9	32.8	2.14	27.2	0.01	0.00	0.05	170	208
198		9.16	9.14	34.149	26.430	163.0	0.460	1.72	26.6	36.8	2.36	29.0	0.01	0.00	0.06	199	207
200	ISL	9.14	9.12	34.154	26.437	162.3	0.463	1.69	26.1	37.2	2.37	29.1	0.01			201	
227		8.82	8.80	34.203	26.527	154.3	0.506	1.38	21.2	41.9	2.51	30.6	0.01			228	206
250	ISL	8.53	8.50	34.223	26.588	148.8	0.540	1.30	19.8	44.5	2.57	31.4	0.00			251	
268		8.32	8.29	34.232	26.627	145.3	0.567	1.26	19.1	46.4	2.60	32.0	0.00			270	205
300	ISL	8.01	'7.98	34.251	26.689	139.8	0.612	1.02	15.4	50.9	2.72	33.3	0.00			302	
317		7.87	7.84	34.260	26.717	137.4	0.636	0.89	13.4	53.3	2.79	34.0	0.00			319	204
378		7.43	7.39	34.274	26.792	131.0	0.718	0.71	10.5	59.1	2.93	35.5	0.00			380	203
400	ISL	7.20	7.16	34.273	26.824	128.2	0.746	0.66	9.8	62.2	2.98	36.2	0.00			403	
436		6.83	6.79	34.271	26.874	123.7	0.792	0.58	8.5	67.5	3.05	37.4	0.00			439	202
500	ISL	6.43	6.38	34.289	26.942	117.9	0.869	0.46	6.7	74.2	3.14	38.5	0.00			503	
525		6.28	6.23	34.296	26.967	115.7	0.898	0.41	5.9	76.8	3.18	38.9	0.00			529	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 29.4 N	119 19 .8 W	19/10/95	1209 UTC	1645 m	140 04 kn			1015.8 mb	17..7 C	16..8 C			

DEPTH m		TEMP DES C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 u«/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	17.17	17.17	33.548	24 .361	355.6	0.000	5.85	106.4	0.9	0.27	0.0	0.00	0.91	0 . 36	0	
1		17.17	17.17	33.548 D	24.361	355 .7	0 .004	5 .85	106.4	0.9	0.27	0.0	0.00	0.91	0.36	1	222
9		16.70	16.70	33.536	24.462	346. 3	0.032	5 . 90	106.3	0. 6	0 . 32	0. 5	0 . 03	2.51	0. 98	9	219
9		16.80	16.80	33.540	24.442	348.2	0.032									9	221
9		16.77	16.77	33.538	24.448	347. 7	0.032									9	220
10	ISL	16.49	16.49	33.529	24 . 506	342 .2	0.035	5 . 86	105.2	0. 7	0 . 35	0. 8	0 .06	2 .47	0. 98	10	
19		14.46	14.46	33.489	24.924	302.5	0 .064	5 .39	92 . 9	2 . 9	0.65	4.4	0.33	2.12	0.94	19	218
20	ISL	14.36	14.36	33.488	24.945	300.6	0.067	5 .36	92 .2	3.2	0.67	4.7	0.35	2.08	0.93	20	
29		13.65	13.65	33.492	25.095	286. 5	0.094	5.05	85 .6	5 .9	0. 84	7. 3	0. 44	1 . 66	0.75	29	217
30	ISL	13.49	13.49	33.495	25.130	283.2	0.096	5 .00	84.4	6.3	0.87	7.7	0. 43	1 .59	0.72	30	
40		12.00	1 1 .99	33.541	25.458	252.3	0.123	4.48	73.3	10.7	1.13	12.2	0.35	0.81	0.42	40	216
50		11.51	11.50	33.554	25 .559	242.8	0. 148	4.13	66.9	13.9	1.29	15.3	0 .09	0.22	0.28	50	215
59		10.89	10.88	33.594	25.702	229.4	0.169	3.85	61 .6	16.6	1 .43	17.5	0.03	0.14	0.21	59	214
69		10.50	10.49	33.639	25.806	219.7	0. 192	3.67	58.2	18.8	1.55	19.2	0.02	0.08	0.18	69	213
75	ISL	10.18	10.17	33.677	25.890	211.8	0.205	3.50	55.1	20.7	1 .63	20.5	0.02	0.05	0.19	75	
84		9.75	9.74	33.738	26.010	200.5	0.223	3.24	50.6	23.4	1 .74	22.3	0. 01	0.02	0.19	84	212
99		9.61	9.60	33.812	26.092	193 . 1	0.253	2 .98	46.4	25 .7	1 .87	23.7	0.01	0.01	0.11	100	211
100	ISL	9.60	9.59	33.816	26.096	192.6	0.255	2.97	46.2	25.8	1 .88	23.8	0.01	0.01	0.11	101	
118		9.43	9.42	33.890	26.182	184.8	0.289	2.75	42.7	28.0	1 . 97	25 .0	0. 01	0.01	0.07	1 19	210
125	ISL	9.35	9.34	33.920	26.219	181.5	0.301	2.67	41 .4	29.1	2.01	25 .6	0.01	0.01	0.07	126	
139		9.19	9.17	33.975	26.288	175 .2	0.326	2.51	38.8	31 .4	2 .09	26.6	0.02	0.01	0.07	140	209
150	ISL	9.08	9.06	34.006	26.330	171.4	0.345	2 .40	37.0	32.8	2.14	27.2	0.02	0.01	0.07	151	
168		8.92	8 . 90	34.052	26.392	165.9	0.376	2 . 22	34.1	34.8	2 .22	28.0	0.01	0.01	0 .07	169	208
199		8.75	8.73	34.145	26.492	157.0	0.426	1 . 80	27.5	38.9	2 .38	29.6	0.01	0.01	0 .07	200	207
200	ISL	8.74	8.72	34.146	26.494	156.8	0.427	1 .79	27.4	39.1	2 .38	29.7	0.01			201	
228		8.35	8 .33	34.177	26.579	149.1	0. 470	1 . 60	24.3	43.7	2.51	31 . 1	0. 02			229	206
250	ISL	8.34	8.31	34.222	26.616	146.0	0.503	1 . 31	19.9	46.0	2 .61	31.9	0.01			252	
269		8.34	8.31	34.251	26 .639	144.2	0.530	1 .07	16.2	47 . 7	2 . 68	32 . 5	0.01			271	205
300	ISL	7.98	7.95	34.248	26.691	139.6	0.574	1 .02	15.3	51.3	2.74	33.5	0.04			302	
317		7.75	7.72	34.240	26.719	137.2	0. 598	1 .00	15.0	53.3	2 . 76	34.0	0. 06			319	204
376		7 .32	7 . 28	34.255	26.793	130.9	0.677	0. 76	11.3	59.6	2 .92	35 . 9	0.01			378	203
400	ISL	7.15	7.11	34.267	26.826	127.9	0.708	0.67	9.9	62 .3	2 . 98	36.5	0.01			403	
436		6.89	6.85	34.283	26.875	123.7	0.753	0.56	8.2	66.4	3.05	37.3	0.00			439	202
500	ISL	6.45	6. 40	34.290	26.940	118.1	0.830	0.46	6.7	73.2	3.15	38.7	0.00			503	
521		6.31	6.26	34.293	26.960	116.2	0.855	0.43	6 .2	75 .4	3.18	39.1	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 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'.5 N	119 39.. 8 W	19/10/95	1824 UTC	79 m	120 04 kn	340 03 07'	2	1017.8 mb	18..3 C	16. 1 C	23n 02	8/8	ST

DEPTH m		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/l	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	18.01	18.01	33.528	24.144	376 . 4	0. 000	5.56	102.8	1 .0	0.27	0 . 0	0. 00	0 . 44	0.16	0	
1	A	18.01	18.01	33.528	24.144	376 . 4	0.004	5.56	102.8	1 . 0	0.27	0 . 0	0 .00	0.44	0.16	1	21 1
2		18.05	18.05	33.532	24.137	377. 1	0. 008									2	212
6		17.87	17.87	33.526	24.176	373.4	0.023	5.61	103.4	0 . 9	0.28	0 .0	0 .00	0 . 46	0.16	6	210
10	ISL	17.73	17.73	33.529	24.213	370 . 1	0.037	5 .68	104.4	0. 7	0.26	0 .0	0 . 00	0.54	0.20	10	
13	A	17.57	17.57	33.531	24.253	366.4	0.048	5 . 75	105.4	0 . 6	0.25	0 . 0	0 . 00	0 . 66	0.24	1 3	209
20		16.94	16.94	33.534	24 .405	352.1	0. 074	5 . 95	107.7	0 . 4	0.25	0 .0	0 . 00	1.26	0 . 37	20	208
28		15 .42	15 .42	33.535	24.752	319.2	0.100									28	207
28	A	15.40	15 .40	33.536	24.758	318.7	0.100	5 . 57	97 . 8	1 .5	0. 55	2 . 9	0 .08	6.61	1.61	28	206
30	ISL	14.89	14.89	33.536	24.869	308 . 2	0.107	5 . 37	93 . 3	2 . 8	0 . 64	4 . 2	0.14	5 .72	1.46	30	
36		13.41	13.41	33.550	25.189	277.8	0.124	4. 75	80. 1	7. 5	0. 91	8.6	0.29	1.81	0.69	36	205
45	A	12.13	12.12	33.583	25 . 466	251.6	0.148	4.14	68. 0	12.9	1 .24	14.0	0.27	0.55	0.32	45	204
50	ISL	11.46	11.45	33.609	25.611	237.9	0.160	3.87	62 .7	15.6	1 . 38	16.4	0.18	0.28	0.25	50	
53		11.10	11.09	33.626	25.689	230.5	0.167	3.73	59.9	17.1	1 . 46	17.6	0.13	0.21	0.22	53	203
59	A	10.60	10.59	33.658	25.803	219.8	0.181	3.51	55.8	19.8	1.59	19.5	0,11	0 . 08	0.14	59	202
71		10.54	10.53	33.668	25 .821	218.3	0.207	3. 46	54.9	20.3	1 .63	20.0	0.10	0.06	0.14	71	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951cI STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	8AR0METER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 9'.7 N	120 0..2 W	19/10/95	2314 UTC	1191 m	300 01 kn	310 02 07'	1	1018.4 mb	18 ,. 0 C	16.1 C	21m 03	5/8	SC

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	17.84	17.84	33.486	24.153	375 .5	0.000	5 .59	103.0	1 .2	0.29	0. 1	0.00	0.34	0.08	0	
2		17.84	17.84	33.486	24.153	375 .5	0. 008	5.59	103.0	1 .2	0 .29	0. 1	0.00	0.34	0. 08	2	220
2		18.11	18.11	33.486	24.087	381 .8	0.008									2	221
10		17.29	17.29	33.470	24.273	364 . 4	0.037	5 .66	103.1	0 . 9	0.29	0.0	0.00	0.39	0.13	10	219
20	ISL	16.53	16.53	33.438	24.427	350.0	0.073	5 .81	104.3	0.5	0.32	0.0	0.00	0.55	0.24	20	
21		16.44	16.44	33.435	24.445	348.3	0.077	5 .82	104.3	0. 5	0.32	0.0	0.00	0.57	0.25	21	218
30		15.48	15.48	33.415	24 .647	329.3	0.107	5 .91	103 .9	0. 4	0. 35	0 . 1	0.02	0. 83	0.39	30	217
40		13.49	13.48	33.370	25.034	292.7	0.138	5 .63	95 .0	1 .6	0.55	2 .6	0.36	2.14	0. 76	40	216
49		12.50	12.49	33.383	25.240	273.2	0.164	4 . 86	80. 3	8 .1	0. 94	9. 1	0.31	0 . 65	0. 36	49	215
50	ISL	12.42	12.41	33.388	25 .259	271 . 4	0.166	4.80	79.2	8.5	0.97	9.6	0.29	0. 63	0.35	50	
60		11.79	11.78	33.455	25.431	255.3	0. 193	4.39	71 .5	11.6	1.16	13.1	0 . 06	0. 42	0.27	60	214
70		11.20	11.19	33.534	25.600	239.3	0.217	4 . 06	65.3	14.4	1 .32	15.9	0.05	0.14	0.17	70	213
75	ISL	10.86	10.85	33.566	25.686	231.3	0.229	3 .90	62 . 3	16.1	1.41	17.3	0. 04	0.11	0.16	75	
85		10.24	10.23	33.629	25.843	216.5	0.252	3 . 58	56.5	19.5	1.58	20.0	0. 02	0.05	0.14	85	212
100		9. 68	9.67	33.738	26.022	199.7	0.283	3.16	49.3	23.9	1 . 79	22.9	0. 02	0. 03	0.12	100	21 1
120		9.28	9.27	33.894	26.210	182.2	0.321	2 .68	41.4	29.0	2 .00	25 .6	0.01	0. 02	0.07	121	210
125	ISL	9.25	9.24	33.912	26.229	180.5	0 .330	2 .62	40.5	29.6	2 .03	25 .9	0.01	0. 02	0.07	126	
139		9.18	9.16	33.938	26.261	177.8	0.355	2 .53	39.0	30.7	2 .08	26.5	0.02	0.02	0.08	1 40	209
150	ISL	8 . 99	8. 97	33.948	26 .299	174.3	0 .374	2.55	39.2	31.6	2 . 09	26.8	0.02	0. 02	0 .08	1 51	
169		8.61	8.59	33.965	26.372	167.7	0 .407	2.59	39. 5	33 . 6	2.11	27.5	0.01	0 .03	0 .07	170	208
200		8.20	8.18	34.045	26.497	156.2	0.457	2.23	33.7	38. 9	2 .28	29.7	0. 01	0.01	0.05	201	207
229		7 . 92	7 . 90	34.060	26.551	151.5	0. 502	2.15	32 . 3	42 . 0	2 . 32	30.6	0. 01			230	206
250	ISL	7 . 67	7.65	34 .065	26.592	147.9	0.533	2 .08	31.0	44 . 6	2 . 37	31.4	0.01			251	
268		7 . 48	7. 45	34.077	26.629	144.6	0.560	1 .96	29.1	47.2	2 .44	32 .2	0.01			270	205
300	ISL	7 . 38	7 . 35	34.149	26.700	138.4	0. 605	1 .42	21.1	52.6	2 . 63	33 . 9	0.01			302	
317		7 . 36	7 . 33	34.189	26.734	135.4	0.628	1.12	16.6	55.5	2 . 74	34 . 8	0. 01			31 9	204
378		6 . 97	6.93	34.215	26.810	129.0	0.709	0.83	12.2	62 .4	2 . 91	36 . 7	0.00			380	203
400	I SL	6 . 78	6 . 74	34.224	26.843	126.0	0. 737	0 . 75	11.0	65 . 6	2 . 97	37. 4	0 .00			403	
436		6 . 47	6 . 43	34.238	26 .895	121.3	0 . 781	0. 63	9. 1	70. 9	3.05	38 . 4	0.00			439	202
500	ISL	6.09	6 . 05	34.264	26.965	115.2	0.857	0. 49	7. 1	77.5	3.15	39.8	0.00			503	
515		6 . 00	5 . 95	34.270	26.982	113.8	0.874	0 . 46	6. 6	79. 1	3.17	40. 1	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 55>.4 N	120 21.0 W	20/10/95	0608	UTC	719 m	330	02 kn			1020.7 mb	17.0 C	15„3 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	18.09	18.09	33.508	24.109	379.7	0.000	5.59	103.5	1.6	0.23	0.1	0.00	0.28	0.08	0	
1		18.09	18.09	33.508	24.109	379.7	0.004	5.59	103.5	1.6	0.23	0.1	0.00	0.28	0.08	1	220
10		17.93	17.93	33.497	24.140	377.1	0.038	5.62	103.7	1.5	0.24	0.1	0.00	0.28	0.10	10	219
20		17.66	17.66	33.490	24.200	371.7	0.075	5.67	104.1	1.5	0.25	0.1	0.00	0.35	0.13	20	218
30	ISL	15.25	15.25	33.386	24.675	326.6	0.110	5.95	104.1	1.4	0.35	0.1	0.03	0.88	0.57	30	
31		14.97	14.97	33.379	24,731	321.3	0.113	5.96	103.7	1.4	0.36	0.1	0.03	0.96	0.62	31	217
40		13.29	13.28	33.391	25.090	287.3	0.141	5.31	89.2	3.5	0.73	5.6	0.59	1.99	0.71	40	216
50		12.32	12.31	33.421	25.304	267.1	0.169	4.76	78.4	9.0	0.99	10.5	0.06	0.72	0.40	50	215
60		11.53	11.52	33.471	25.491	249.5	0.194	4.40	71.3	12.3	1.16	13.7	0.04	0.19	0.22	60	214
70		11.12	11.11	33,506	25.593	240.0	0.219	4.15	66.7	14.3	1.28	15.6	0.02	0.12	0.17	70	213
75	ISL	10.89	10.88	33.536	25.657	234.0	0.231	4.00	63.9	15.6	1.35	16.8	0.01	0.10	0.15	75	
85		10.40	10.39	33.607	25.798	220.8	0.253	3.69	58.4	18.6	1.51	19.2	0.01	0.06	0,12	85	212
100		9.54	9.53	33.721	26.032	198.8	0.285	3.29	51.1	23.3	1.73	22.3	0.01	0.02	0.08	100	211
120		9.31	9.30	33.889	26.201	183.1	0.323	2.70	41.8	28.8	1.98	25.4	0.01	0.01	0.08	121	210
125	ISL	9.29	9.28	33.927	26.234	180.1	0.332	2.56	39.6	29.9	2.04	25.9	0.01	0.01	0.08	126	
139		9.18	9.16	34.005	26.313	172.8	0.357	2.29	35.4	32.3	2.15	27.0	0.01	0.01	0.07	140	209
150	ISL	8.90	8.88	33.999	26.353	169.2	0.376	2.40	36.8	33.1	2.14	27.3	0.01	0.03	0.07	151	
170		8.36	8.34	33.963	26.408	164.1	0.409	2.69	40.8	34.3	2.08	27.5	0.01	0.05	0.07	171	208
200		8.10	8.08	34.025	26.497	156.2	0.457	2.41	36.3	38.4	2.21	29.1	0.01	0.01	0.05	201	207
229		8.09	8.07	34.078	26.540	152.6	0.502	2.09	31.5	41.0	2.33	30.1	0.00			230	206
250	ISL	7.96	7.93	34.124	26.596	147.7	0.533	1.75	26.3	44.6	2.46	31.5	0.00			251	
268		7.81	7.78	34.159	26.646	143.2	0.560	1.46	21.9	48.0	2.57	32.7	0.00			270	205
300	ISL	7.57	7.54	34.186	26.702	138.3	0.605	1.20	17.9	52.2	2.69	33.9	0.00			302	
318		7.42	7.39	34.194	26.730	135.9	0.629	1.11	16.5	54.5	2.74	34,4	0.00			320	204
378		6.81	6.77	34.225	26.839	126.0	0.708	0.75	11.0	64.6	2.94	36.9	0.00			380	203
400	ISL	6.64	6.60	34.232	26.868	123.5	0.735	0.68	9.9	67.3	2.99	37.5	0.00			403	
438		6.41	6.37	34.242	26.906	120.3	0.782	0.60	8.7	71.1	3.07	38.4	0.00			441	202
500	ISL	6.13	6.09	34.259	26.956	116.1	0.855	0.48	6.9	76.3	3.15	39.4	0.00			503	
521		6.04	5.99	34.265	26.973	114.8	0.879	0.44	6.3	78.1	3.18	39.7	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 7C1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 35'.3 N	121 2.3 W	20/10/95	1143	UTC	3764 m	200	02 kn			1019.6 mb	16.4 C	15„1 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	16.39	16.39	33.476	24.488	343.6	0.000	5.79	103.7	0.9	0.29	0.0	0.00	0.24	0.09	0	
2		16.39	16.39	33.476	24.488	343.6	0.007	5.79	103.7	0.9	0.29	0.0	0.00	0.24	0.09	2	224
10	ISL	16.29	16.29	33.477	24.512	341.6	0.034	5.79	103.5	2.3	0.30	0.0	0.00	0.25	0.13	10	
11		16.26	16.26	33.476	24.518	341.0	0.038	5.79	103.4	2.5	0.30	0.0	0.00	0.25	0.13	11	223
20		16.04	16.04	33.459	24.555	337.8	0.068									20	222
20		15.91	15.91	33.418	24.553	338.0	0.068	5.87	104.1	0.9	0.33	0.1	0.02	0.68	0.35	20	218
21		15.88	15.88	33.446	24.581	335.3	0.072									21	219
21		15.95	15.95	33.452	24.570	336.4	0.072									21	220
21		16.01	16.01	33.457	24.560	337.3	0.072									21	221
30	ISL	13.27	13.27	33.408	25.107	285.4	0.100	5.12	86.0	6.1	0.80	6.6	0.62	1.81	0.75	30	
31		12.99	12.99	33.415	25.169	279.6	0.102	5.03	84.0	6.8	0.85	7.4	0.67	1.89	0.78	31	217
41		12.27	12.26	33.473	25.354	262.2	0.130	4.52	74.4	10.2	1.08	11.4	0.33	0.89	0.45	41	216
50	ISL	11.22	11.21	33.580	25.632	235.9	0.152	3.86	62.2	15.7	1.41	16.8	0.06	0.25	0.26	50	
51		11.10	11.09	33.592	25.663	232.9	0.154	3.79	60.9	16.3	1.44	17.4	0.04	0.20	0.24	51	215
60		10.37	10.36	33.640	25.829	217.3	0.175	3.50	55.4	19.9	1.61	20.1	0.03	0.07	0.13	60	214
70		9.92	9.91	33.717	25.965	204.5	0.196	3.17	49.7	23.0	1.77	22.4	0.02	0.03	0.11	70	213
75	ISL	9.77	9.76	33.741	26.009	200.4	0.206	3.10	48.4	24.0	1.82	23.1	0.02	0.03	0.11	75	
36		9.50	9.49	33.780	26.084	193.5	0.227	3.02	46.9	25.9	1.89	24.2	0.01	0.02	0.10	86	212
98		9.18	9.17	33.825	26.171	185.4	0.250	2.93	45.2	28.0	1.94	25.1	0.01	0.01	0.09	98	211
100	ISL	9.15	9.14	33.832	26.182	184.5	0.254	2.91	44.8	28.2	1.95	25.2	0.01	0.01	0.09	101	
120		8.91	8.90	33.894	26.269	176.6	0.290	2.79	42.8	30.3	2.01	26.2	0.01	0.01	0.09	121	210
125	ISL	8.81	8.80	33.907	26.295	174.2	0.299	2.79	42.7	31.0	2.02	26.4	0.01	0.01	0.09	126	
139		8.52	8.51	33.940	26.365	167.6	0.323	2.80	42.6	32.9	2.06	27.1	0.01	0.02	0.08	140	209
150	ISL	8.41	8.39	33.968	26.404	164.1	0.341	2.69	40.8	34.5	2.11	27.7	0.01	0.02	0.07	151	
168		8.27	8.25	34.007	26.456	159.5	0.370	2.49	37.7	37.1	2.18	28.7	0.01	0.01	0.06	169	208
200		7.88	7.86	34.036	26.538	152.2	0.420	2.37	35.5	40.8	2.26	29.9	0.01	0.01	0.05	201	207
218		7.77	7.75	34.061	26.574	149.1	0.447	2.20	32.9	43.4	2.34	30.8	0.01			219	206
250	ISL	7.43	7.41	34.073	26.632	143.9	0.494	2.02	30.0	47.7	2.44	32.2	0.01			251	
269		7.24	7.21	34.080	26.665	141.1	0.521	1.90	28.1	50.3	2.50	33.0	0.01			271	205
300	ISL	7.20	7.17	34.140	26.718	136.5	0.564	1.44	21.3	54.8	2.67	34.5	0.00			302	
320		7.16	7.13	34.175	26.751	133.7	0.591	1.15	17.0	57.8	2.78	35.4	0.00			322	204
378		6.43	6.40	34.157	26.836	126.0	0.666	0.97	14.1	67.0	2.94	37.8	0.00			380	203
400	ISL	6.20	6.16	34.157	26.866	123.3	0.694	0.89	12.8	70.2	2.98	38.6	0.00			403	
438		5.90	5.86	34.168	26.913	119.1	0.740	0.75	10.7	75.3	3.05	39.8	0.00			441	202
500	ISL	5.72	5.68	34.232	26.986	112.8	0.812	0.50	7.1	81.7	3.16	40.7	0.00			503	
517		5.67	5.63	34.250	27.007	111.0	0.831	0.43	6.1	83.4	3.19	41.0	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 19.2 N	121 43.2 W	20/10/95	1808 UTC	4055 m	220 02 kn	310 02 06	2	1020.7 mb	17..5 C	15 .5 C	34m 01	8/8	ST

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	17.26	17.26	33.186	24.062	384.1	0.000	5 .61	102.0	2 .0	0.30	0.0	0.00	0.15	0.04	0	
2		17.26	17.26	33.196	24.070	383.5	0.008									2	223
2	A	17.26	17.26	33.186	24.062	384.2	0.008	5 .61	102.0	2.0	0.30	0.0	0 .00	0.15	0 .04	2	222
10		17.10	17.10	33. 183	24.098	381 .0	0.038	5.61	101.7	2 .0	0.30	0 . 1	0.00	0.14	0.10	10	221
20	A	16.91	16.91	33.209	24.163	375 .2	0.076	5.65	102.0	1 .6	0.30	0.0	0.00	0.21	0.09	20	220
30		16.65	16.65	33.203	24.219	370.1	0.113	5 . 68	102.1	1 .7	0.31	0.0	0.00	0.29	0.11	30	219
42	A	15 .73	15 .72	33.172	24.405	352.8	0.157	5.84	103.0	1 .7	0.32	0.0	0.00	0. 42	0.22	42	218
50	ISL	14.42	14.41	33.096	24.630	331 .4	0. 184	6.00	103.0	2.6	0.32	0.0	0.00	0. 40	0.26	50	
54		13.72	13.71	33.064	24.751	320.0	0.197	6.05	102.4	3.2	0.32	0.0	0.00	0.39	0.28	54	216
54		13.74	13.73	33.063	24.746	320.4	0.197									54	217
66	A	12.27	12.26	33.050	25 .026	293.9	0.234	5.80	95.2	4.3	0.45	1 .3	0.15	0.35	0.33	66	215
75	ISL	11.84	11.83	33.102	25 .147	282.6	0.260	5.54	90 . 1	5 .7	0.58	3.7	0.07	0.26	0.24	75	
77		11 .79	11.78	33.124	25.174	280.1	0.266	5.47	88.9	6.1	0.61	4.3	0.04	0.24	0.22	77	214
89	A	11.45	11.44	33.374	25.431	255.9	0.298	4.94	79.8	9.0	0.85	8.8	0.02	0.13	0.13	89	213
97		11.31	11 .30	33.430	25.500	249.5	0.318	4.83	77.9	10.1	0. 91	10.2	0.01	0.09	0.11	97	212
100	ISL	11.27	11.26	33.468	25 .537	246.1	0.325	4.80	77.3	10.4	0.93	10.6	0.01	0.08	0.11	100	
110		10.90	10.89	33.579	25.690	231 .8	0.349	4.70	75 .2	11.6	0.99	11.9	0.01	0.06	0.09	1 10	21 1
122	A	9.56	9.55	33.595	25.931	208.8	0.376	3.80	59.0	20.3	1 .57	20. 4	0.00	0. 02	0.04	123	210
125	ISL	9. 49	9.48	33.626	25.966	205.5	0.382	3. 75	58.2	21.4	1 . 60	20.8	0.00	0. 02	0 . 04	126	
144		9. 01	8.99	33.722	26.119	191.3	0.420	3.44	52 .8	25.3	1 . 78	23.5	0.00	0. 01	0 .04	1 45	209
150	ISL	8.97	8. 95	33.773	26.165	187.0	0.431	3.27	50.2	26.6	1 . 84	24.3	0. 00	0. 01	0. 04	151	
170		8. 86	8. 84	33.919	26.297	174.9	0.467	2 .78	42 .6	30.6	2 . 00	26.3	0 . 00	0. 00	0.04	171	208
200		8.18	8.16	33.948	26.424	163.1	0.518	2 . 87	43. 3	34.6	2 . 05	27.6	0.00	0. 00	0. 04	201	207
230		7.6 6	7 . 64	34.024	26.561	150.5	0.565	2.45	36.5	42 .0	2 .25	30.3	0. 00			231	206
250	ISL	7.66	7 .64	34.103	26.623	144.9	0. 594	1 .92	28 .6	46 . 5	2 . 44	31 .9	0. 00			251	
270		7.67	7 .64	34.162	26.668	141.0	0.623	1.41	21.1	50.4	2.61	33. 3	0.00			272	205
300	ISL	7.53	7.50	34.195	26.715	137. 1	0. 665	1.14	17.0	54. 1	2.73	34.4	0.00			302	
321		7.37	7.34	34.201	26.742	134.7	0.693	1 .07	15.9	56.3	2.78	35 .0	0.00			323	204
380		6.80	6. 76	34.229	26.844	125.6	0.770	0.74	10.8	65 .5	2 .97	37.2	0.00			382	203
400	ISL	6.65	6. 61	34.243	26.875	122.9	0 .795	0.65	9. 5	68. 3	3.03	37 .8	0 .00			403	
438		6.39	6.35	34.269	26.930	118.0	0.841	0.52	7. 5	73. 1	3.12	38. 9	0.00			441	202
500	ISL	6.03	5 . 99	34.292	26.995	112.4	0.912	0.39	5 .6	79.7	3.19	40. 1	0 .00			503	
513		5 .95	5 .91	34.297	27.009	111.1	0.927	0.36	5.2	81.1	3.21	40.4	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 57'.3 N	122 23., 8 W	20/10/95	2303 UTC	4123 m	310 03 kn	320 04 08	1	1019.1 mb	18 ,.3 C	15.. 5 C	31m 01	7/8	SC

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	17.99	17.99	33 .097	23.819	407 . 4	0 . 000	5.51	101.5	2 . 4	0.28	0. 0	0. 00	0.13	0 . 04	0	
1		17.99	17.99	33.097	23.819	407 . 4	0. 004	5.51	101.5	2 .4	0.28	0. 0	0. 00	0.13	0. 04	1	220
2		17.96	17.96	33.097	23.826	406.7	0. 008									2	221
10	ISL	17.89	17.89	33.100	23.846	405 . 1	0.041	5.51	101.4	2 .4	0.28	0. 1	0.00	0.13	0.04	1 0	
15		17.82	17.82	33.102	23.864	403.5	0.061	5 .52	101.4	2 .4	0.28	0. 1	0. 00	0.13	0.04	15	219
20	ISL	17.81	17.81	33.105	23.869	403.2	0.081	5 . 53	101.6	2 .4	0.28	0. 1	0.00	0.15	0.04	20	
30		17.78	17.77	33.108	23 .879	402 .6	0.121	5 .55	101.9	2.3	0.29	0 . 1	0.00	0.20	0.06	30	21 8
45		17.43	17.42	33.105	23.961	395 .3	0.181	5 .61	102.3	2 .2	0.29	0. 1	0 .00	0. 28	0.11	45	217
50	ISL	16.95	16 . 94	33.100	24.071	384.9	0.201	5 .68	102.6	2.2	0.30	0. 1	0.00	0.30	0.14	50	
55		16.43	16.42	33.098	24.190	373.7	0.220	5 .77	103.1	2 .1	0.30	0 . 1	0.00	0.32	0.16	55	216
66		15.59	15.58	33.113	24.391	354.8	0.260	5 .96	104.8	2 .6	0.27	0 . 1	0.00	0. 33	0.19	66	215
75		14.30	14.29	33.155	24.702	325.3	0.290	5 .99	102.6	3 .1	0.28	0. 1	0.00	0 .33	0.27	75	214
85		13.40	13.39	33.102	24. 846	311.7	0. 322	5 .98	100.5	3.4	0.31	0 . 1	0.00	0.28	0.28	85	213
95		12.55	12.54	33.038	24.964	300 .7	0.353	5 . 90	97 . 4	3 .9	0. 38	0. 4	0.12	0.25	0.22	95	212
100	ISL	12.22	12.21	33.049	25.036	293.9	0. 368	5 .75	94 .3	4 . 7	0. 46	1 .7	0.10	0 .22	0.19	100	
1 1 1		11.70	11.69	33.147	25.209	277.6	0 . 399	5 . 36	87 .0	6 . 8	0. 66	5 .3	0.02	0.14	0.15	1 1 1	21 1
125		11.38	11.36	33.387	25.454	254.5	0.436	4 . 95	79. 9	9.6	0.87	9. 4	0. 01	0.08	0.15	126	210
144		9. 98	9. 96	33.529	25.810	220.9	0. 481	4.06	63 .6	17.5	1 . 42	17.9	0.00	0 .04	0 .06	145	209
150	ISL	9. 69	9.67	33.590	25.906	211.8	0.494	3.81	59.3	19.9	1.55	19.8	0.00	0 .03	0.06	1 51	
169		9.07	9.05	33.778	26.153	188.5	0.532	3.17	48. 7	26.6	1 . 85	24.3	0.02	0.01	0.05	170	208
198		8. 67	8 .65	33.948	26.350	170.3	0.584	2 .68	40. 9	32 .9	2 .06	27. 3	0.00	0.00	0. 04	199	207
200	ISL	8. 65	8 .63	33.954	26.357	169.6	0.588	2.67	40.7	33. 1	2.07	27.4	0.00			201	
229		8. 33	8.31	34.005	26 .447	161.6	0.636	2.62	39. 7	36.0	2.13	28.2	0.00			230	206
250	ISL	7.99	7 .96	34.040	26.525	154.3	0.669	2.40	36 . 1	39.7	2 .23	29. 5	0.00			251	
269		7 .66	7. 63	34.065	26.593	148.1	0. 698	2.17	32 .4	43.6	2 .33	30. 9	0 .00			270	205
300	ISL	7.18	7.15	34.068	26.664	141.6	0.743	1 .95	28.8	49.7	2 .45	32 . 9	0.00			302	
319		6 .93	6 . 90	34.067	26.698	138.5	0. 769	1 .82	26.7	53.5	2 .53	34. 1	0.00			321	204
378		6. 49	6 . 46	34.135	26.811	128.4	0. 848	1 .09	15.8	65 .0	2 .86	37.5	0.00			380	203
400	ISL	6 . 33	6.29	34.153	26.846	125.3	0. 876	0. 93	13.5	68.2	2 .93	38 . 2	0.00			402	
438		6 .08	6 .04	34.183	26.902	120.3	0.923	0.73	10.5	73. 1	3 .03	39.2	0.00			441	202
500	ISL	5 .83	5 . 79	34.250	26.987	112.9	0.995	0. 45	6 .4	80.7	3.16	40 . 6	0. 00			503	
516		5 . 76	5 .72	34.268	27.010	110.9	1.013	0. 38	5 .4	82 . 6	3.19	41.0	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 3?'.2 N	123 4 .2 W	21/10/95	0505	UTC	4134 m	290	04 kn			1019.8 mb	17.. 1 C	14.8 C				

DEPTH m		TEMP DES 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/t	PHAEO ug/l	PRES db	SAMP
0	ISL	18.87	18.87	33.458	23.877	401.8	0.000	5 .40	101.4	2 .8	0.24	0 . 1	0.00	0.10	0.03	0	
2		18.87	18.87	33.458	23.877	401 .9	0. 008	5 .40	101.4	2 .8	0.24	0 . 1	0.00	0.10	0.03	2	220
10	ISL	18.86	18.86	33.456	23.878	402.0	0.040	5 .39	101.2	2.8	0.23	0 . 1	0.00	0.11	0.03	10	
15		18.85	18.85	33.455	23.880	402.0	0 .060	5 .39	101.2	2 .8	0.23	0 . 1	0.00	0.11	0. 03	15	219
20	ISL	18.84	18.84	33.455	23.883	401 .9	0.080	5 .39	101.2	2 .8	0.23	0.1	0.00	0.11	0.03	20	
30		18.82	18.81	33.456	23.889	401.7	0.121	5 .40	101.3	2 . 7	0.24	0 . 1	0.00	0.12	0 .04	30	218
46		18.64	18.63	33.483	23.956	395.9	0.184	5.42	101.4	2 .8	0.23	0 . 1	0.00	0.15	0.06	46	217
50	ISL	18.06	18.05	33.521	24.128	379.6	0.200	5.59	103.4	2 .9	0.21	0 . 1	0.00	0.17	0.06	50	
60		16.48	16.47	33.623	24.582	336.5	0.236	6.00	107.7	3.0	0.18	0.1	0.00	0.21	0.08	60	216
75		15.52	15.51	33.610	24.790	317.1	0.285	5 .92	104.3	3.0	0.19	0 . 1	0.00	0.25	0.12	75	215
85		15 .07	15.06	33.587	24.871	309.7	0.316	5 .86	102 .3	3.0	0.21	0 . 1	0.00	0.28	0.19	85	214
95		14.93	14.92	33.609	24.919	305.4	0.347	5 .83	101.5	3.0	0.21	0 . 1	0.00	0.26	0.21	95	213
100	ISL	14.85	14.84	33.642	24.962	301 .5	0.362	5 .77	100.3	3.0	0.21	0.1	0.01	0.26	0.22	100	
105		14.77	14.75	33.677	25 .006	297.4	0.377	5.71	99. 1	3.1	0.2 2	0 . 1	0.02	0.25	0.23	105	212
115		14.69	14.67	33.713	25.051	293.4	0.406	5 .64	97.7	3.2	0.23	0.2	0.07	0.21	0.21	115	211
125		14.27	14.25	33.785	25.196	279.8	0.435	5.46	93.8	3.8	0.30	0.9	0.15	0.16	0.17	126	210
140		13.26	13.24	33.773	25.395	261 . 1	0.476	5 .26	88 .5	5 .2	0.46	3.7	0.02	0.10	0.13	141	209
150	ISL	12.45	12.43	33.728	25.520	249.3	0.501	5.12	84.7	6.8	0.60	6.0	0.02	0. 08	0 10	1 51	
165		11.26	11.24	33.668	25.696	232.6	0.537	4.90	79.0	9.9	0.84	9. 8	0.01	0.05	0.07	166	208
194		9. 69	9.67	33.701	25 .993	204.4	0.601	4 .38	68.2	17.4	1 .28	16.9	0.00	0.01	0.02	195	207
200	ISL	9.45	9.43	33.724	26.051	199.0	0.613	4.31	66.8	18.9	1 .35	18.0	0.00			201	
229		8.56	8.54	33.847	26.288	176.7	0.667	3.93	59.8	26 . 1	1 . 64	22.2	0.00			230	206
250	ISL	8.19	8.16	33.914	26.397	166.6	0.703	3 .46	52.2	31 .2	1 . 84	25.1	0.00			251	
269		7.95	7.92	33.960	26.469	160.0	0.734	3.03	45 .5	35 .8	2.01	27. 4	0.00			270	205
300	ISL	7.47	7 . 44	34.005	26.574	150.3	0.783	2.56	38.0	43.2	2.2 3	30 .4	0.00			302	
317		7.22	7.19	34.020	26.621	146.0	0.808	2.35	34.7	47.1	2 .33	31 .7	0 .00			319	204
378		6.46	6.43	34.057	26.753	133.8	0.893	1 .60	23.2	59.9	2 .65	35 .8	0 .00			380	203
400	ISL	6.29	6.25	34.085	26.797	129.8	0.922	1 .34	19.4	64.2	2 .77	37.0	0.00			402	
437		6.06	6.02	34.131	26.863	123.9	0. 969	0.95	13.7	70.9	2 . 94	38. 8	0.00			440	202
500	ISL	5 .59	5 .55	34.164	26.948	116.2	1 .045	0.66	9. 4	80. 7	3.09	40.7	0,0 0			503	
522		5 . 42	5 .38	34.177	26.979	113.4	1 .070	0.56	7.9	84. 1	3.14	41.4	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 87 1 1c1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 19i.4 N	123 45,, 0 W	21/10/95	1022	UTC	4006 m	320	08 kn			1019.1 mb	17 . 9 C	15 . 9 C				

DEPTH ">		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ t	PRES db	SAMP
0	ISL	19.08	19.08	33.476	23.838	405 . 5	0 .000	5 .36	101.1	2.5	0.23	0 .0	0. 00	0.10	0. 03	0	
2		19.08	19.08	33.476	23.838	405 . 6	0. 008	5 .36	101.1	2 .5	0.23	0.0	0.00	0.10	0.03	2	220
10	ISL	19.11	19.11	33 . 484	23.837	406 . 0	0.041	5 .37	101.3	2 . 5	0.23	0.0	0.00	0.10	0 . 03	10	
1 4		19.13	19.13	33.491	23.837	406 . 1	0.057	5 .37	101.4	2 . 5	0.23	0 .0	0 .00	0.10	0. 03	1 4	219
20	ISL	19.16	19.16	33.502	23.838	406 . 2	0.081	5 .37	101.4	2 . 5	0.23	0.0	0.00	0.10	0.03	20	
30		19.21	19.20	33.523	23.842	406 .2	0.122	5 .37	101.5	2 .5	0.22	0.0	0.00	0.10	0 . 03	30	218
45		19.29	19.28	33.561	23.851	405 . 9	0.183	5.36	101.5	2.5	0.22	0. 0	0.00	0.12	0. 04	45	217
50	ISL	19.27	19.26	33.580	23.871	404.2	0.203	5.37	101.7	2 .5	0.22	0.0	0.00	0.13	0.04	50	
59		19.23	19.22	33.615	23 .908	401 .0	0.239	5 .38	101.8	2 .5	0.22	0.0	0. 00	0.15	0.05	59	216
74		17.23	17.22	33.667	24.441	350.6	0.296	5 .80	105 .7	2.6	0.21	0. 0	0.00	0.22	0.10	74	215
75	ISL	17.14	17.13	33.660	24.457	349. 1	0.299	5 .80	105 .5	2 .6	0.21	0.0	0.00	0.22	0.10	75	
85		16.43	16.42	33.599	24.576	337. 9	0. 333	5 . 78	103.6	2 . 7	0.23	0 .0	0.00	0.23	0.13	85	214
94		15 .94	15 .93	33.643	24.722	324.3	0.363	5 .84	103.7	2 .8	0.19	0.0	0.00	0.26	0.14	94	213
100	ISL	15.45	15 .43	33.597	24.796	317.3	0.382	5 .72	100.6	2 .9	0.24	0. 1	0.02	0.28	0.22	100	
105		15.07	15.05	33. 565	24.855	311.8	0.398	5 .57	97.2	3.1	0.30	0. 1	0.04	0.29	0.28	105	212
115		14. 73	14.71	33.663	25 .004	297. 9	0.429	5 .34	92 .6	3 . 9	0.38	1 .1	0.19	0.23	0.24	1 15	211
124		14.16	14.14	33.642	25.109	288.0	0.455	5.16	88. 4	4 . 7	0. 47	2 . 9	0. 07	0.17	0.18	124	210
125	ISL	14.09	14.07	33.640	25.122	286.8	0.458	5.14	87. 9	4 .8	0 . 48	3 . 1	0.06	0.16	0.18	125	
139		13.23	13.21	33.633	25 .293	270.8	0. 497	4 . 90	82 .4	6.6	0. 65	6 .2	0.01	0,10	0.13	140	209
150	ISL	12.77	12 .75	33.689	25.427	258.2	0.526	4.78	79. 6	7. 7	0. 72	7.8	0.01	0. 07	0.10	151	
164		12.17	12.15	33.757	25 .596	242 .3	0.561	4 .63	76.2	9. 5	0. 83	9. 8	0.01	0.04	0.06	165	208
193		9. 98	9.96	33.700	25 .944	209. 2	0.627	4.17	65.4	17.1	1 .32	17.0	0.00	0.01	0.02	194	207
200	ISL	9. 68	9. 66	33.717	26.008	203.2	0.641	4.12	64.2	18.5	1 .39	18.1	0.00			201	
228		8.90	8.88	33.814	26.209	184.3	0.695	3 .98	61.0	23. 5	1 .57	21.2	0.00			229	206
250	ISL	8.44	8.41	33.875	26.328	173.2	0.735	3 .81	57.8	27.7	1 .70	23.2	0.00			251	
268		8.13	8.10	33.918	26.409	165.7	0.765	3.61	54.4	31.4	1.81	24.8	0.00			269	205
300	ISL	7.59	7.56	33.979	26.536	153.9	0.816	3.03	45 .1	39.3	2 .06	28.2	0.00			302	
317		7.35	7.32	34.006	26.592	148.8	0.842	2 . 69	39.8	43. 5	2.19	29.9	0 .00			319	204
377		6.88	6.84	34.078	26.714	137.9	0.928	1 .73	25.3	55.6	2.58	34.4	0.00			379	203
400	ISL	6.66	6.62	34.092	26.755	134.2	0.959	1 .50	21 .9	59.7	2 .68	35 . 7	0.00			402	
437		6.30	6.26	34.110	26.816	128.6	1 .008	1 .20	17.3	66.0	2 .82	37.5	0.00			440	202
500	ISL	5.77	5 .73	34.151	26.916	119.5	1 .086	0. 77	11.0	76 . 7	3 .03	40.0	0.00			503	
520		5.60	5 .56	34.165	26.948	116.5	1.110	0.64	9. 1	80. 1	3.10	40.8	0.00			523	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 29.0 N	117 46 4 W	18/10/95	2111 UTC	91 m	00 kn	00	2	1013.4 mb			08m 06	8/8	ST

DEPTH m		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 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/I	PRES db	SAMP
0	ISL	18.74	18.74	33.375	23.846	404.7	0.000	6.90	129.2	4.2	0.20	0.0	0.02	8.16	1.32	0	
2		18.74	18.74	33.375	23.846	404.8	0.008	6.90	129.2	4.2	0.20	0.0	0.02	8.16	1.32	2	210
2		18.75	18.75	33.375	23.844	405.0	0.008									2	211
6		18.11	18.11	33.391	24.015	388.9	0.024	6.90	127.7	3.8	0.22	0.0	0.02	2.45	0.65	6	209
10	ISL	16.95	16.95	33.398	24.298	361.9	0.039	6.41	116.0	4.0	0.27	0.0	0.02	2.06	0.50	10	
11		16.62	16.62	33.399	24.376	354.6	0.043	6.27	112.7	4.0	0.29	0.0	0.02	1.96	0.46	11	208
20	ISL	13.92	13.92	33.374	24.949	300.2	0.072	5.97	101.6	5.7	0.64	2.2	0.22	0.94	0.41	20	
21		13.68	13.68	33.375	24.999	295.5	0.075	5.94	100.6	5.9	0.68	2.6	0.24	0.84	0.41	21	207
30		13.07	13.07	33.476	25.200	276.6	0.101	4.86	81.4	6.7	0.80	5.8	0.30	0.59	0.61	30	206
40		12.07	12.06	33.565	25.463	251.7	0.127	3.87	63.5	12.6	1.19	12.7	0.06	0.28	0.31	40	205
50		11.58	11.57	33.580	25.566	242.1	0.152	3.88	63.0	14.5	1.31	15.1	0.05	0.19	0.23	50	204
60		11.40	11.39	33.662	25.663	233.2	0.176	3.33	53.9	17.5	1.51	17.6	0.03	0.08	0.13	60	203
70		11.25	11.24	33.695	25.716	228.3	0.199	3.15	50.8	19.1	1.60	18.5	0.04	0.05	0.12	70	202
75	ISL	11.15	11.14	33.712	25.748	225.5	0.210	3.04	48.9	20.0	1.66	19.1	0.05	0.05	0.13	75	
84		10.98	10.97	33.743	25.803	220.4	0.230	2.85	45.7	21.6	1.78	20.1	0.06	0.04	0.15	84	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 2S.2 N	117 54 2 W	18/10/95	1836 UTC	615 m	290 01 kn	00	2	1014.0 mb	19 4 C	18 0 C	26m 02	8/8	ST

DEPTH m		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 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/I	PRES db	SAMP
0	ISL	19.74	19.74	33.490	23.679	420.6	0.000	5.50	105.0	2.3	0.21	0.0	0.01	0.31	0.07	0	
1	A	19.74	19.74	33.490	23.679	420.7	0.004	5.50	105.0	2.3	0.21	0.0	0.01	0.31	0.07	1	222
2		19.75	19.75	33.491	23.677	420.9	0.008									2	224
2		19.76	19.76	33.491	23.675	421.1	0.008									2	223
7		19.70	19.70	33.488	23.688	420.0	0.029	5.52	105.3	1.9	0.21	0.0	0.01	0.36	0.06	7	221
10	ISL	19.67	19.67	33.488	23.696	419.4	0.042	5.51	105.1	1.9	0.21	0.0	0.01	0.38	0.07	10	
15	A	19.62	19.62	33.487	23.709	418.4	0.063	5.50	104.8	1.9	0.21	0.0	0.01	0.39	0.10	15	220
20	ISL	18.66	18.66	33.452	23.926	397.8	0.083	5.80	108.5	2.1	0.22	0.0	0.01	0.38	0.12	20	
25		17.25	17.25	33.411	24.238	368.2	0.103	6.09	110.8	2.3	0.22	0.1	0.01	0.38	0.14	25	219
30	ISL	15.52	15.52	33.371	24.604	333.4	0.120	6.05	106.4	2.5	0.27	0.1	0.01	0.47	0.29	30	
34	A	14.24	14.24	33.365	24.875	307.6	0.133	6.01	103.0	2.7	0.35	0.1	0.01	0.55	0.43	34	218
44		12.89	12.88	33.424	25.196	277.3	0.162									44	217
44	A	12.82	12.81	33.427	25.212	275.8	0.162	5.13	85.4	6.1	0.72	5.2	0.28	0.58	0.62	44	216
50	ISL	12.15	12.14	26.352	19.859	787.4	0.194	4.47	70.2	10.2	1.03	10.6	0.13	0.38	0.41	50	
52		11.93	11.92	33.516	25.452	253.1	0.204	4.25	69.5	11.6	1.13	12.4	0.07	0.30	0.33	52	215
62		11.59	11.58	33.663	25.629	236.4	0.229	3.26	52.9	17.2	1.49	17.2	0.03	0.09	0.15	62	214
70	A	11.35	11.34	33.725	25.722	227.9	0.247	2.89	46.7	20.1	1.67	19.2	0.01	0.04	0.09	70	213
75	ISL	11.27	11.26	33.744	25.751	225.2	0.259	2.84	45.8	20.8	1.72	19.8	0.01	0.04	0.09	75	
84		11.15	11.14	33.763	25.788	221.9	0.279	2.74	44.1	21.5	1.77	20.5	0.01	0.03	0.08	84	212
97	A	10.86	10.85	33.790	25.861	215.2	0.307	2.65	42.4	23.1	1.83	21.5	0.01	0.01	0.07	97	211
100	ISL	10.80	10.79	33.810	25.887	212.8	0.314	2.56	40.9	23.7	1.87	22.0	0.01	0.01	0.07	100	
119		10.49	10.48	33.941	26.044	198.3	0.353	1.98	31.5		2.13	24.9	0.01	0.01	0.06	120	210
125	ISL	10.38	10.37	33.960	26.078	195.2	0.365	1.95	30.9	28.0	2.16	25.5	0.01	0.01	0.06	126	
138		10.18	10.16	33.990	26.136	189.9	0.390	1.88	29.7	30.1	2.18	26.3	0.01	0.00	0.05	139	209
150	ISL	10.15	10.13	34.027	26.170	186.9	0.412	1.80	28.4	30.8	2.22	26.8	0.01	0.00	0.05	151	
169		10.09	10.07	34.072	26.216	183.0	0.447	1.66	26.2	31.6	2.28	27.3	0.01	0.01	0.04	170	208
199		10.25	10.23	34.220	26.305	175.3	0.501	1.37	21.7	33.7	2.39	28.0	0.01	0.00	0.04	200	207
200	ISL	10.22	10.20	34.219	26.309	174.9	0.503	1.38	21.8	33.8	2.39	28.0	0.01			201	
228		9.32	9.29	34.176	26.426	164.1	0.550	1.75	27.1	36.0	2.34	28.6	0.02			229	206
250	ISL	9.01	8.98	34.207	26.500	157.3	0.586	1.58	24.3	39.1	2.42	29.7	0.02			251	
268		8.86	8.83	34.242	26.552	152.7	0.614	1.33	20.4	42.0	2.52	30.7	0.01			270	205
300	ISL	8.45	8.42	34.260	26.630	145.7	0.661	1.12	17.0	46.8	2.64	32.1	0.01			302	
318		8.21	8.18	34.263	26.669	142.2	0.687	1.03	15.6	49.6	2.71	32.9	0.01			320	204
377		7.47	7.43	34.272	26.785	131.7	0.768	0.73	10.9	59.4	2.91	35.6	0.00			379	203
400	ISL	7.17	7.13	34.274	26.829	127.7	0.798	0.64	9.4	63.0	2.97	36.4	a.00			403	
439		6.67	6.63	34.280	26.902	120.9	0.846	0.51	7.4	69.2	3.06	37.7	0.00			442	202
500	ISL	6.06	6.02	34.313	27.008	111.2	0.917	0.33	4.7	79.9	3.23	39.9	0.00			503	
518		5.88	5.83	34.324	27.039	108.3	0.937	0.28	4.0	83.1	3.28	40.6	0.00			522	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI. CRUISE 9510 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 15 .1 N	118 15 .0 W	18/10/95	1223	UTC	314 D		00 kn			1011.6 mb	18 .2 C	17,.5 C				

DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAEO	PRES	SAMP
in		DEG C	DEG C		THETA			ml/l	PCT	uM/ I	uM/ I	uM/ I	uM/ I	ug/l	ug/l	db	
0	ISL	19.66	19.66	33.515	23.719	416.9	0 .000	5 .48	104.5	2 .3	0.20	0.0	0.00	0.28	0.07	0	
1		19.66	19.66	33.515	23.719	416.9	0.004	5 . 48	104.5	2.3	0.20	0.0	0.00	0. 28	0.07	1	224
9		19.59	19.59	33.511	23.734	415.7	0.037									9	223
10		19.59	19.59	33.511	23.734	415.7	0.042									10	220
10		19.55	19.55	33.510	23.744	414.8	0.042	5.52	105 .0	2.3	0.20	0.0	0.00	0.27	0.07	10	216
10		19.56	19.56	33.511	23.742	415.0	0.042									10	219
10		19.59	19.59	33.512	23.735	415.7	0.042									10	222
10		19.57	19.57	33.511	23.740	415.3	0.042									10	217
10		19.59	19.59	33.511	23.734	415.7	0.042									10	221
10		19.57	19.57	3 3.510	23.739	415.3	0.042									10	218
20		17.43	17.43	33.439	24.216	370.1	0.081	5 .94	108.5	1 .8	0.26	0.0	0.00	0. 40	0.13	20	215
30		15.15	15.15	33.376	24.689	325 .3	0.116	6.27	109. 5	2.4	0.32	0.0	0.00	0.57	0.30	30	214
40		13.24	13.23	33.392	25.101	286.2	0. 146	5 .34	89.7	5.8	0.62	3.6	0.19	0.81	0.57	40	213
50		12.67	12.66	33.441	25 .252	272. 1	0. 174	4. 85	80.5	8.0	0.83	7. 4	0.16	0.42	0.40	50	212
60		12.12	12.11	33.495	25.400	258.3	0.201	4.47	73.3	10.6	1 .04	11.1	0.08	0.27	0.30	60	211
69		11 .90	11.89	33.534	25.472	251.7	0.224	4.23	69.1	12.1	1.14	12.6	0.06	0.20	0.22	69	210
75	ISL	11.57	11.56	33.570	25.561	243.3	0.238	4.01	65 .1	13.8	1 .25	14.4	0.05	0.14	0.18	75	
85		1 1 .00	10.99	33.633	25.713	228.9	0.262	3. 67	58.8	16.9	1 .45	17.4	0.03	0.06	0.11	85	209
100		10.57	10.56	33.700	25 .842	217.0	0.296	3.39	53.9	20.0	1 .61	19.6	0.02	0.01	0. 02	100	208
119		10.00	9.99	33.793	26.012	201 . 1	0.335	3.02	47. 4	24.2	1.81	22.7	0.03	0.01	0.05	120	207
125	ISL	9.76	9.75	33.799	26.057	196.9	0.347	3.09	48.3	24.7	1 .81	23.0	0.03	0.01	0.05	126	
139		9.31	9.29	33.826	26.152	188.1	0.374	3.20	49.5	26.0	1 .83	23.6	0.02	0.01	0.04	140	206
150	ISL	9.36	9.34	33.929	26.225	181.5	0.394	2 .74	42 .4	28.7	1 .99	25.1	0.02	0.01	0 . 04	1 51	
168		9.60	9. 58	34.1 10	26.327	172 .2	0.426	1 . 86	29.0	33.3	2.27	27.7	0.02	0.01	0 .05	169	205
198		9.31	9.29	34.191	26.439	162.2	0.476	1 . 62	25 . 1	36.9	2 . 40	29.1	0.02	0.01	0. 05	199	204
200	ISL	9.29	9.27	34.194	26.444	161.7	0 .480	1 .60	24.8	37. 1	2.41	29.2	0.02			201	
228		9.00	8.98	34.219	2 6.511	155.9	0.524	1.41	21.7	40.0	2.51	30.2	0.02			229	203
250	ISL	8.86	8.83	34.230	26.542	153.3	0.558	1 .31	20. 1	41 . 7	2 .55	30.7	0.03			251	
267		8 .77	8.74	34.235	26.560	151.8	0.584	1 .26	19.3	42.9	2 .58	31.0	0.04			269	202
300	ISL	8.57	8.54	34.243	26.598	148.8	0.634	1.18	18.0	45 .4	2 .64	31.8	0.04			302	
305		8.54	8.51	34.244	26.604	148.4	0. 641	1.17	17.8	45 . 8	2.65	31 .9	0.04			307	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 1 1 .2 N	118 23 .2 W	18/10/95	0927	UTC	1077 m	270	04 kn			1012.3 mb	18..4 C	17.. 5 C				

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/ I	UN/ I	uM/ I	ug/l	ug/l	db	
0	ISL	19.59	19.59	33.514	23. 736	415.2	0 .000	5.51	104.9	2 .3	0.21	0.0	0. 00	0.22	0. 06	0	
2		19.59	19.59	33,514	23. 736	415.3	0.008	5.51	104.9	2.3	0.21	0.0	0.00	0.22	0. 06	2	224
10		19.59	19.59	33.512	23.735	415.7	0. 042	5 . 53	105 .3	9.0 U	0.21	0.0	0.00	0.21	0.06	10	223
20		19.40	19.40	33.505	23.779	411.9	0 . 083									20	220
20		18.99	18.99	33.497	23.877	402 . 5	0. 083	5.59	105.2	2 .5	0.21	0 . 0	0 . 00	0.20	0 .06	20	218
20		19.41	19.41	33.505	23.777	412.1	0.083									20	222
20		19.42	19.42	33.505	23.774	412.3	0 .083									20	221
20		19.37	19.37	33.505	23.787	411.1	0.083									20	219
30	ISL	15.63	15.63	33.337	24.554	338.2	0.120	6.20	109.3	2.8	0.29	0.0	0.00	0.37	0.18	30	
31		15.27	15.27	33.329	24.627	331 .2	0.124	6.24	109.2	2 .8	0.30	0.0	0.00	0 . 40	0.21	31	217
40		13.76	13.75	33.384	24.990	296 . 9	0.152	5 .64	95.7	4.5	0.47	1 .2	0.11	0.86	0.63	40	216
50		12 .75	12.74	33.465	25.255	271.8	0.180	4.73	78.6	7.9	0.81	6.3	0.19	0,39	0. 43	50	215
59		11 .87	11.86	33.536	25 .479	250.7	0.204	4.26	69.5	12.2	1.12	12.7	0.04	0.20	0.24	59	214
70		11.36	11.35	33.594	25.618	237.7	0.231	3.89	62.8	15.0	1 .30	15.4	0.02	0.10	0.15	70	213
75	ISL	11.14	11.13	33.625	25.682	231 .7	0.243	3.71	59.7	16.6	1 .40	16.7	0.01	0.07	0.15	75	
84		10.79	10.78	33.678	25.786	222.0	0.263	3.42	54.6	19.2	1.56	18.9	0.01	0 .04	0.17	84	212
99		10.44	10.43	33.740	25.895	211.9	0.296	3.13	49.6	21.8	1 .69	20.9	0.01	0.03	0.07	99	211
100	ISL	10.42	10.41	33.744	25.902	211.3	0.298	3.12	49.4	22.0	1 .70	21.0	0.01	0. 03	0.07	100	
119		10.00	9.99	33.818	26.032	199.3	0.337	2 . 89	45.4	24.9	1 . 84	23.0	0.01	0.01	0. 06	120	210
125	ISL	9. 92	9.91	33.844	26.066	196.2	0.348	2 .80	43.9	25.8	1 .88	23.5	0.01	0.01	0.06	126	
139		9. 77	9.75	33.908	26.141	189.3	0.375	2 .59	40.5	27.9	1 .97	24.7	0.01	0.01	0.05	140	209
150	ISL	9. 67	9.65	33.961	26.199	184.0	0.396	2 .41	37.6	29.5	2.05	25.6	0.01	0.01	0.05	151	
168		9.52	9.50	34.042	26.287	176.0	0.428	2.14	33.3	31 .9	2.17	26.9	0.01	0.00	0.05	169	208
199		9.29	9.27	34. 146	26.407	165 .2	0.481	1 .82	28.2	36.0	2.31	28.5	0.01	0.00	0.05	200	207
200	ISL	9.28	9.26	34.149	26.411	164.9	0.483	1 .81	28.0	36.2	2.32	28.6	0.01			201	
227		8. 94	8. 92	34.203	26.508	156.1	0.526	1 .52	23.4	40. 1	2.45	29.9	0.01			228	206
250	ISL	8. 79	8. 76	34.227	26.551	152.4	0.562	1 .38	21.1	42.3	2 .53	30.6	0.01			251	
268		8. 69	8. 66	34.237	26.574	150.5	0.589	1 .30	19.9	43.8	2.57	31 .0	0.01			270	205
300	ISL	8.43	8.40	34.250	26.625	146.2	0 . 636	1.17	17.8	46.7	2 .64	31 .8	0.01			302	
316		8.28	8.25	34.254	26.651	143.9	0.660	1.10	16.7	48.3	2.67	32.3	0.01			318	204
377		7.57	7.53	34.273	26.771	133. 1	0. 744	0.76	11.3	57.5	2.89	34.8	0.01			379	203
400	ISL	7.32	7.28	34.275	26.809	129.7	0.774	0.67	9.9	60.8	2 . 95	35 .7	0.01			403	
436		6.96	6.92	34.277	26.861	125.1	0.820	0.55	8 . 1	65 .8	3.04	36.9	0.00			439	202
500	ISL	6. 47	6.42	34.294	26. 940	118.1	0.898	0.40	5 .8	73.4	3.14	38 .7	0.00			503	
524		6.29	6.24	34.301	26.969	115.4	0.926	0.35	5 . 1	76.2	3.18	39.4	0.00			528	201

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 5?i . 1 N	118 56 .0 W	18/10/95	0435	UTC	1696 m	200	05 kn			1012.6 mb	17..5 C	17..0 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 uM/ 1	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	19.05	19.05	33.520	23.879	401 .6	0.000	5.50	103.7	2 .4	0.23	0.0	0.00	0.22	0.06	0	
2		19.05	19.05	33. 520	23.879	401 .7	0.008	5 .50	103.7	2.4	0.23	0.0	0.00	0.22	0.06	2	220
10		18.81	18.81	33.515	23.936	396.5	0.040	5.51	103.4	2.2	0.23	0. 0	0 . 00	0.19	0.09	10	219
20		17.29	17.29	33.479	24.280	364.0	0.078	5 .75	104.8	1 . 7	0.28	0.0	0.00	0.31	0.14	20	218
30		16.20	16.20	33.441	24.505	342.9	0.113	5 .88	104.9	1 .4	0.33	0. 1	0.01	1 .03	0.39	30	217
40		14.11	14.10	33.400	24.930	302 .6	0.146	5 .82	99.5	3.7	0. 48	1 .8	0.15	0.68	0 .39	40	216
50		12.70	12.69	33.423	25 .232	274 .0	0. 174	4.93	81 .9	8.3	0. 88	8.8	0.28	0.51	0. 39	50	215
60		12.14	12.13	33.497	25.397	258.5	0.201	4.54	74.5	10.9	1 .04	11.5	0.04	0.07	0.39	60	214
70		11.49	11.48	33.566	25.572	242.0	0.226	4.07	65 .9	14.3	1 .26	14.8	0.03	0.12	0.16	70	213
75	ISL	11.22	11.21	33.606	25.653	234.5	0.238	3.82	61 .5	16.1	1 .37	16.4	0.03	0.10	0.14	75	
85		10.78	10.77	33.684	25.792	221 .4	0.261	3.39	54. 1	19.4	1 .57	19.1	0.02	0.04	0.09	85	212
100		10.40	10.39	33.770	25.926	209.0	0.293	3.03	48.0	22.6	1 .75	21.4	0.02	0.02	0.07	100	21 1
120		10.09	10.08	33.867	26.055	197.2	0.334	2.63	41 .4	26.1	1 .92	23.6	0.01	0.02	0.04	121	210
125	ISL	9. 96	9.95	33.888	26.093	193.6	0.343	2.58	40.5	26.9	1 .95	24. 1	0.01	0.02	0.04	126	
139		9.62	9.60	33.947	26.196	184.0	0.370	2.47	38.5	29.2	2 .03	25.5	0.01	0.01	0.05	140	209
150	ISL	9.53	9.51	34.013	26.263	177.9	0.390	2.26	35.2	31 . 1	2.12	26.5	0.01	0.01	0.05	1 51	
170		9.45	9.43	34.115	26.356	169.5	0.425	1 .90	29.5	34.3	2.27	27.8	0.01	0.01	0.04	171	208
199		9.09	9.07	34.138	26.433	162 .7	0.473	1 .85	28.5	36.9	2 .33	28 . 7	0.01	0 . 00	0.04	200	207
200	ISL	9.08	9.06	34.140	26.436	162.4	0.474	1 . 84	28.4	37.0	2 .33	28.7	0.01			201	
229		8. 72	8. 70	34. 178	26.523	154.6	0.520	1 .65	25.2	40.8	2 .44	30 . 1	0.02			230	206
250	ISL	8.36	8.33	34.177	26.578	149.6	0.552	1 .56	23.7	43.8	2.50	31 .2	0.02			251	
269		8.06	8. 03	34.173	26.620	145.8	0.580	1 .48	22.3	46 .4	2 .55	32 . 1	0.02			271	205
300	ISL	7.88	7.85	34.198	26.666	141.9	0.625	1 .25	18.8	49. 8	2.66	33 . 1	0. 02			302	
318		7.83	7. 80	34.215	26.687	140.2	0.650	1.11	16.6	51.7	2.72	33.6	0.02			320	204
378		7.42	7.38	34.249	26.774	132.7	0. 732	0.80	11.9	58.3	2 . 88	35 .2	0.02			380	203
400	ISL	7.24	7.20	34.256	26.805	130.0	0.761	0.71	10.5	60.8	2 . 93	35 .9	0.02			403	
437		6.92	6.88	34.266	26.857	125.4	0.808	0.59	8 . 7	65 . 4	3. 02	37 . 1	0. 02			440	202
500	ISL	6.37	6.32	34.290	26.950	117.0	0. 885	0.41	5 .9	74.5	3.16	39 . 0	0.02			503	
522		6.18	6.13	34.299	26.982	114.1	0.910	0.35	5.0	77.7	3.21	39.7	0.02			526	201

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 35i . 3 N	119 29..2 W	17/10/95	2311	UTC	1317 m	330	04 kn	310 04 OS!	1	1011.5 mb	16..9 C	16..0 C	22m 02	4/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ L	P04 uB/l	N03 uM/ L	N02 uM/ I	CHL-A ug/ L	PHAEO ug/L	PRES db	SAMP
0	ISL	18.56	18.56	33.497	23.984	391 . 5	0. 000	5.58	104.2.	2 .2	0.22	0 . 1	0.00	0.22	0.05	0	
2		18.56	18.56	33.497	23.984	391.6	0. 008	5 .58	104.2	2 . 2	0.22	0.1	0.00	0.22	0.05	2	220
2		18.54	18.54	33.497	23.989	391 . 1	0 .008									2	221
1 0	ISL	18.42	18.42	33.494	24.017	388 . 8	0 . 039	5.59	104.1	2 .2	0.22	0 . 1	0. 00	0.24	0. 06	1 0	
1 1		18.40	18.40	33.494	24.022	388.3	0.043	5.59	104. 1	2 .2	0.22	0 . 1	0 .00	0.25	0 . 06	1 1	21 9
20		17.74	17.74	33.464	24.161	375.4	0 .077	5 . 74	105.5	2 . 1	0.25	0 . 1	0 . 00	0.34	0 . 09	20	218
30	I SL	15.37	15.37	33.394	24.655	328.5	0.112	6.20	108.7	2 . 6	0.31	0 . 1	0.00	0.65	0.30	30	
31		15.11	15.11	33.392	24.710	323.3	0.116	6.23	108.7	2 . 7	0.32	0 . 1	0 .00	0.69	0.33	31	21 7
40		13.79	13.78	33.432	25 .021	293.9	0.144	5 .79	98.3	3.0	0. 45	1 .0	0,07	1.12	0. 80	40	216
50	ISL	12 .72	12.71	33.490	25.280	269.4	0. 172	4.91	81 .6	7.4	0.83	7.3	0.18	0.49	0.47	50	
51		12.63	12.62	33.497	25.303	267.3	0. 174	4.81	79. 8	8.0	0.87	8 . 1	0.19	0.41	0.42	51	215
61		12.00	11.99	33.572	25.482	250.5	0.200	4. 05	66.3	12.9	1.19	13.5	0. 04	0.23	0.28	61	214
70		11.94	1 1 . 93	33.666	25.567	242.6	0.222	3 .40	55 .6	15.6	1 . 40	16.1	0.03	0.14	0.18	70	21 3
75	ISL	11.78	11 . 77	33.701	25 .624	237.3	0.234	3.19	52.0	17.0	1 .49	17.4	0. 02	0.10	0.15	75	
85		11.32	11.31	33.747	25 .745	226.0	0.258	2 .97	48 .0	19.5	1 . 64	19.5	0.01	0. 05	0.11	85	212
100		10.54	10.53	33.780	25.909	210.6	0.290	2 .85	45 .3	23.1	1 .78	21.7	0.01	0. 03	0.10	1 00	21 1
120		10.30	10.29	33.977	26.105	192.5	0.331	2.14	33.9	28.8	2.10	25 .2	0. 00	0 . 01	0.05	121	210
1 25	ISL	10.27	10.26	34.006	26.133	189.9	0.340	2 .06	32 .6	29.5	2.14	25 .6	0 .00	0. 01	0 .05	126	
139		10.16	10.14	34.060	26.194	184.4	0.366	1 . 94	30 . 6	30.8	2.19	26.3	0.00	0.01	0. 05	140	209
1 50	ISL	9. 98	9.96	34.071	26.233	180.9	0.387	1 .96	30.8	31.4	2 .20	26.6	0.00	0.01	0. 05	151	
170		9. 64	9.62	34.075	26.293	175.5	0.422	2 .04	31 .8	32 . 4	2.21	27 . 1	0.01	0.00	0 . 05	171	208
200		9.42	9. 40	34. 133	26.375	168.3	0.474	1 .84	28.6	35 .2	2 .30	28.2	0.01	0.01	0 . 05	201	207
229		8.87	8.85	34.144	26.473	159.4	0.521	1 .82	27.9	38.7	2.34	29 . 3	0.01			230	206
250	ISL	8.72	8. 69	34.171	26.518	155.5	0.554	1 . 69	25 .8	40. 9	2.41	30 . 0	0 .01			251	
268		8 .60	8.57	34.193	26 . 554	152.4	0.582	1 .55	23.6	43.0	2 .49	30.7	0.01			270	205
300	ISL	8.01	7. 98	34.197	26.646	143.8	0.629	1 .33	20.0	49.3	2.62	32 . 7	0.01			302	
320		7.63	7.60	34.197	26.702	138.7	0.658	1.19	17.8	53.4	2.70	34 .0	0.01			322	204
379		7.20	7.16	34.238	26.796	130.5	0. 737	0.81	12.0	61.0	2 . 90	36 .0	0.01			381	203
400	ISL	7. 04	7.00	34.242	26.822	128.3	0.764	0. 74	10.9	63.5	2 .95	36.6	0.01			403	
438		6. 76	6.72	34.245	26.862	124.7	0.812	0.65	9.5	67.8	3.02	37.6	0.00			441	202
500	ISL	6 .32	6.27	34.268	26.939	118.0	0.888	0. 48	6. 9	74.8	3.11	39. 1	0.00			503	
511		6.24	6.19	34.272	26.953	116.7	0.900	0. 45	6. 5	76. 1	3.13	39.4	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 60[1]

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 25 .4 N	119 57..6 W	17/10/95	1817	UTC	873 m	020	12 kn	350 05 OE!	2	1012.8 mb	18..1 C	17..3 C	24m 01	8/8	ST

DEPTH m		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 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	19.24	19.24	33.459	23.784	410.7	0.000	5 .43	102.7	2 . 1	0.24	0 . 1	0.00	0.19	0.03	0	
2	A	19.24	19.24	33.459	23.784	410.7	0 .008	5 .43	102.7	2 . 1	0.24	0.1	0.00	0.19	0.03	2	221
2		19.24	19.24	33.459	23.784	410.7	0 .008									2	222
10	ISL	19.23	19.23	33.459	23.787	410.7	0.041	5 .43	102.7	2.0	0.24	0 . 1	0.00	0.19	0.04	10	
14	A	19.23	19.23	33.459	23.787	410.8	0.058	5 .43	102.7	2 .0	0.24	0.1	0.00	0.19	0.04	14	220
20	ISL	18.68	18.68	33.426	23.901	400.2	0.082	5.51	103.1	2.0	0.24	0 . 1	0.00	0.26	0.06	20	
30	ISL	17.39	17.39	33.371	24. 174	374.5	0.121	5 .69	103.8	2.2	0.25	0 . 1	0.00	0. 42	0.11	30	
31	A	17.24	17.23	33.366	24.206	371 .5	0.124	5.71	103.9	2.2	0.25	0 . 1	0.00	0. 44	0.12	31	219
46	A	15.20	15.19	33.352	24.660	328.5	0. 177	6.01	105.0	2.6	0.33	0 . 1	0.00	0.62	0.30	46	218
54		14.19	14.18	33.421	24.930	303.0	0.202									54	217
50	ISL	14.67	14.66	33.385	24.800	315.3	0.190	5 .78	99.9	2 .9	0.40	0.6	0.05	0.76	0.39	50	
54		14.16	14.15	33.428	24.941	301 .9	0.202	5 .44	93.1	3.6	0.50	1 .0	0.11	0. 82	0. 44	54	216
62	A	13.20	13.19	33.518	25 .207	276.7	0.225	4.53	76.0	7.0	0.85	6. 4	0.28	0.33	0.30	62	215
74		12.05	12 .04	33.555	25 .460	252.9	0.257	4.14	67.9	11.5	1.11	11.9	0.07	0.18	0 .20	74	214
75	ISL	11.91	11.90	33.555	25.486	250.4	0.259	4.12	67.3	12.0	1.14	12.5	0.07	0.17	0.19	75	
86	A	10.61	10.60	33.563	25.728	227.5	0.286	3.99	63.4	16.9	1 .39	17.4	0.02	0.09	0.12	86	213
94		10.40	10.39	33.581	25 .778	222.9	0.304	'3.90	61 .7	17.9	1 .47	18.3	0.01	0.10	0.08	94	212
100	ISL	10.17	10.16	33.609	25.839	217.1	0.317	3.77	59.3	19.3	1 .54	19.4	0.01	0.08	0.07	100	
109		9.80	9.79	33.657	25.939	207.8	0.336	3.57	55.8	21.6	1 .65	21 .1	0.01	0. 04	0.06	109	211
125		9.35	9.34	33.726	26.067	195.9	0.368	3.42	52 .9	24.1	1 .75	22.7	0.00	0.04	0.04	126	210
145		9.03	9.01	33.784	26.164	187.0	0.407	3.43	52.7	25 .6	1 .76	23.2	0.00	0.03	0.04	146	209
150	ISL	8.96	8.94	33.807	26.193	184.3	0.416	3.37	51.7	26.4	1 .79	23.6	0.00	0.03	0.0 4	151	
169		8.78	8.76	33.920	26.310	173.6	0.450	2.97	45 .4	30.3	1 .95	25 .6	0.00	0.05	0. 05	170	208
199		8.89	8. 87	34.162	26.483	157.8	0.500	1 .76	27.0	38.6	2.36	29.4	0.00	0.03	0.05	200	207
200	ISL	8.88	8 . 86	34. 166	26. 488	157.4	0.501	1 . 74	26.7	38.8	2. 37	29.5	0.00			201	
229		8.59	8.57	34.215	26.572	149.9	0.546	1 .48	22.6	43.1	2.5 2	30.8	0.00			230	206
250	ISL	8.37	8.34	34.210	26.602	147.3	0.577	1 . 42	21.5	45 .0	2 .56	31 .5	0.00			251	
269		8.20	8.17	34.199	26.619	146.0	0.605	1 .38	20.9	46.3	2 .58	32 .0	0.00			271	205
300	ISL	8. 04	8.01	34.221	26.661	142.5	0.650	1 .22	18.4	48. 9	2 .65	32 .7	0 .00			302	
318		7.95	7.92	34.238	26.688	140.2	0.675	1.10	16.5	50.7	2.70	33.2	0 . 00			320	204
378		7.32	7.28	34.274	26.808	129.5	0.756	0. 69	10.2	60.7	2 .94	35 .9	0.00			380	203
400	ISL	7.08	7.04	34.277	26.844	126.2	0.784	0.60	8.8	63.7	3.00	36.7	0.00			403	
437		6 .68	6.64	34.279	26.900	121.1	0.830	0.50	7.3	68.7	3 .09	38.0	0.00			440	202
500	ISL	6.07	6.03	34.285	26 .984	113.4	0.904	0.38	5.5	78.1	3.19	40.0	0.00			503	
517		5.91	5 .86	34.288	27.007	111.3	0.923	0.35	5.0	80.7	3.22	40.6	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 «..9 N	120 38,. 6 W	17/10/95	0543	UTC	3828 m	320	22 kn			1015.1 mb	17 ..2 C	15., 7 C			

DEPTH m		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 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/l	PRES db	SAMP
0	ISL	18.31	18.31	33.486	24.038	386 . 4	0 . 000	5.56	103.3	2 . 1	0.24	0 .0	0. 00	0.21	0 .05	0	
1		18.31	18.31	33.486	24.038	386.5	0 . 004	5 .56	103.3	2.1	0.24	0.0	0.00	0.21	0 .05	1	220
10		18.32	18.32	33 . 486	24.036	387.0	0.039	5 .55	103.2	2. 1	0.24	0.0	0.00	0.20	0.05	10	219
20		17.37	17.37	33.460	24.247	367.2	0. 076	5 .72	104.4	1 .7	0.26	0.0	0 .00	0.32	0.11	20	218
30		14.51	14.51	33.347	24. 805	314.3	0.110	6.01	103.6	2.0	0.37	0.0	0 .00	0.63	0.4 6	30	217
40		13.69	13.68	33.402	25.018	294.2	0.141	5 .56	94 .2	3.8	0.54	2 .4	0.25	0.83	0.61	40	216
50		12.60	12.59	33.485	25.300	267.6	0.169	4. 92	81 .6	7. 1	0.83	7. 7	0.13	0.31	0.32	50	215
60		11.88	11.87	33.567	25.501	248.7	0.195	4.14	67. 6	11.9	1.17	12.9	0. 03	0.17	0.23	60	214
70		11.39	11.38	33.587	25.607	238.7	0.219	3.98	64.3	14.0	1 .27	14.8	0.02	0.10	0.18	70	213
75	ISL	11.04	11.03	33.614	25 .691	230.8	0.231	3.84	61 .6	15.7	1 .37	16.4	0.02	0.07	0.15	75	
84		10.48	10.47	33.674	25.837	217.1	0.251	3.56	56.4	18.8	1 .55	19.1	0.01	0.04	0.10	84	212
99		10.21	10.20	33.757	25.948	206.8	0.283	3.16	49. 8	21.8	1.71	21.3	0.01	0.02	0.08	99	211
100	ISL	10.20	10.19	33.768	25.958	205 . 9	0.285	3.12	49.2	22. 1	1 .73	21.5	0. 01	0.02	0.08	100	
120		9. 96	9.95	33.975	26.161	187.1	0.324	2.37	37.2	27.9	2.05	25 . 1	0.00	0.01	0.06	121	210
125	ISL	9.87	9. 86	33.995	26.192	184.2	0.333	2 .29	35.9	28.7	2.08	25.6	0 .00	0.01	0.06	126	
138		9.64	9. 62	34 .026	26,255	178.5	0.357	2.18	34.0	30. 5	2.14	26.5	0. 00	0.00	0. 06	139	209
150	ISL	9.43	9. 41	34.065	26.320	172.5	0 .378	2 .07	32.1	32.4	2.20	27.2	0.00	0.00	0.06	151	
169		9.14	9.12	34.117	26.408	164.5	0.410	1 . 94	29. 9	35.2	2 .27	28.1	0.00	0.00	0.05	170	208
198		8.88	8.86	34.142	26 .469	159.2	0.457	1 . 85	28.4	37.7	2 .34	29.2	0 .00	0.00	0.05	199	207
200	ISL	8.86	8.84	34.145	26,474	158.7	0.460	1 .83	28.1	38.0	2 .35	29.3	0.00			201	
228		8.50	8. 48	34. 189	26.565	150.5	0.503	1 .55	23.6	42.4	2 .47	30.8	0.00			229	206
250	ISL	8.14	8.11	34.188	26.619	145.6	0.536	1 . 47	22.2	46.0	2.54	31 .8	0.00			251	
268		7 .86	7.83	34.181	26.656	142 .3	0. 562	1 .43	21.4	48.7	2 .59	32 .6	0 .00			270	205
300	I SL	7.61	7. 58	34.197	26.705	138.1	0.607	1 .22	18.2	52.5	2 . 70	33.8	0. 00			302	
318		7.50	7.47	34.207	26.729	136. 1	0.631	1.10	16.4	54.5	2.76	34.4	0.00			320	204
381		6.72	6 .68	34.197 D	26 . 829	126.9	0.714	0.87	12.7	64. 1	2.94	37.3	0. 00			383	203
400	ISL	6.51	6. 47	34.196	26.856	124.5	0.738	0.80	11.6	67.0	2 .99	38.0	0.00			403	
437		6.15	6.11	34.199 D	26.906	120.0	0. 783	0. 67	9.7	72 . 3	3 .07	39.3	0. 00			440	202
500	ISL	5 .79	5 .75	34.236	26.981	113.4	0.857	0. 48	6.9	8 0.1	3.17	40. 7	0.00			503	
515		5 .70	5 .66	34.245	26.999	111.8	0.874	0.43	6. 1	81.9	3.20	41.0	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLDI AMT	TYPE
31 3i .3 N	122 39 .8 W	16/10/95	1052 UTC	3987 m	300 1 1 kn			1019.0 mb	19 .8 C	17.. 4 C			

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMF
0	ISL	18.85	18.85	33.245	23.719	416.8	0.000	5.45	102.2	2.1	0.26	0.1	0.00	0.10	0.03	0	
2		18.85	18.85	33.245	23.719	416.9	0.008	5 .45	102.2	2. 1	0.26	0.1	0.00	0.10	0.03	2	22C
10	ISL	18.76	18.76	33.246	23.743	414.9	0.042	5 .45	102 .0	2 . 1	0.26	0.1	0.00	0.10	0.02	10	
1 5		18.69	18.69	33.246	23.761	413.4	0.062	5.45	101.9	2 . 1	0.26	0.1	0.00	0.10	0.02	1 5	21?
20	ISL	18.67	18.67	33.246	23.766	413.1	0.083	5.46	102.0	2 .1	0.26	0.1	0.00	0.10	0.03	20	
30		18.63	18.62	33.245	23.776	412.5	0.124	5 .48	102.3	2.1	0.26	0.1	0.00	0.12	0.04	30	218
45		17.90	17.89	33.346	24.033	388.5	0.184	5 .72	105 .4	2.5	0.23	0.1	0.00	0.18	0.05	45	217
50	ISL	17.37	17.36	33.398	24.200	372.6	0.203	5.82	106.2	2.6	0.22	0.1	0.00	0.18	0.06	50	
60		16.25	16.24	33.486	24.529	341 .5	0.239	5 .99	106.9	2.9	0.20	0.1	0.00	0.19	0.07	60	216
74		15.24	15.23	33.465	24.740	321 .8	0.286	5 .98	104.6	3. 1	0.22	0.1	0.00	0.23	0.19	74	215
75	ISL	15.22	15 .. 21	33.472	24.749	320.9	0.289	5 .97	104.4	3. 1	0.22	0.1	0.00	0.24	0.19	75	
84		15.11	15.10	33.548	24.832	313.3	0.317	5 .90	103.0	3. 1	0.20	0.1	0.00	0.29	0.18	84	214
95		14.84	14.83	33.602	24.933	304. 1	0.351	5.79	100.6	3.0	0.22	0.1	0.00	0.26	0.23	95	213
100	ISL	14.79	14.78	33.627	24.963	301 .3	0.366	5.75	99.8	3.0	0.22	0. 1	0.01	0.23	0.22	100	
104		14.74	14.72	33.647	24.989	299.0	0.378	5.71	99.0	3.0	0.22	0.1	0.02	0.21	0.20	104	212
1 14		14.48	14.46	33.697	25.083	290.2	0.408	5 .62	97.0	3.2	0.26	0.2	0.13	0.17	0.20	1 14	211
124		13.60	13.58	33.606	25.197	279.6	0.436	5 .44	92.1	4.5	0.40	2 .4	0.12	0.14	0.16	124	210
125	ISL	13.53	13.51	33.603	25.208	278.4	0.439	5 .42	91 .6	4 .6	0.41	2.6	0.11	0.14	0.16	125	
139		12.56	12.54	33,595	25.395	260.9	0.477	5.17	85.7	6.6	0.62	6.0	0.01	0. 09	0.14	140	209
150	ISL	1 1 .63	11.61	33.592	25.569	244.4	0.505	4.86	78.9	9.6	0.86	9.8	0.01	0.06	0.10	151	
164		10.48	10.46	33.613	25.791	223.3	0.537	4.41	69.9	14.3	1.19	14.8	0.01	0.04	0 .05	165	208
195		8.90	8.88	33.755	26.163	188.1	0.601	3.54	54.2	25 .4	1 .75	23.3	0.00	0.00	0.02	196	207
200	ISL	8.77	8.75	33.776	26.199	184.6	0.610	3.47	53.0	26.5	1 .79	23.9	0.00			201	
228		8.30	8 . 28	33.874	26.349	170.8	0.660	3.27	49.4	30.9	1 .90	25.9	0.00			229	206
250	ISL	7. 99	7.96	33.932	26.441	162.4	0.697	3.19	47.9	34.0	1 .97	26. 9	0 .00			251	
267		7.77	7. 74	33.965	26.499	157.0	0.724	3.11	46.5	36.6	2.03	27.7	0.00			268	205
300	ISL	7.24	7.21	33.993	26.597	148.0	0.774	2.75	40.6	43.8	2 .22	30.2	0.00			302	
317		7.00	6.97	34.004	26.638	144.1	0. 799	2 .50	36.7	47.7	2.33	31 .6	0.00			319	204
376		6.67	6 . 64	34.097	26.757	133.6	0.881	1 .44	21.0	59.2	2.72	35 .8	0.00			378	203
400	ISL	6 . 45	6.41	34.117	26.802	129.5	0.913	1.19	17.3	63.8	2 .83	37.2	0.00			402	
437		6.10	6 .06	34.141	26.866	123.7	0.960	0.93	13.4	70.6	2 .96	38.9	0.00			440	202
500	ISL	5 .67	5 .63	34.193	26.961	115.1	1 .035	0.60	8.5	80. 1	3.13	40.8	0.00			503	
522		5.52	5 .48	34.212	26.995	112.1	1 .060	0. 49	7.0	83.4	3.19	41.4	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 1 10

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 45i .0 N	12 3 19.,9 W	16/10/95	0518 UTC	4012 m	300 03 kn			1020.7 mb	19..7 C	18.,6 C			

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	19.20	19.20	33.298	23.671	421.4	0 .000	5 . 40	102.0	2 . 6	0.25	0 .0	0 . 00	0. 08	0 . 02	0	
1		19.20	19.20	33.298	23.671	421.4	0 . 004	5 . 40	102.0	2 .6	0.25	0 . 0	0. 00	0. 08	0.02	1	220
2		19.21	19.21	33.297	23.668	421.8	0 . 008									2	221
10	ISL	19.11	19.11	33.302	23.698	419.3	0 . 042	5.41	102.0	2 .7	0.25	0.0	0.00	0 . 08	0 . 02	10	
15		19.05	19.05	33.305	23.715	417.8	0. 063	5. 41	101.9	2 . 7	0.25	0. 0	0 . 00	0.08	0.02	15	219
20	ISL	19.02	19.02	33.305	23.723	417.2	0.084	5.41	101.8	2.6	0.25	0.0	0.00	0.08	0.02	20	
30		18.99	18 . 98	33.303	23.730	416.9	0.126	5.41	101.7	2 .4	0.25	0.0	0.00	0.09	0 . 03	30	218
46		18.92	18.91	33.301	23.746	415.9	0.192	5 .42	101.8	2.5	0.25	0.0	0.00	0.12	0.03	46	217
50	ISL	18.43	18.42	33.353	23 .909	400. 5	0.209	5.55	103.3	2 .6	0.24	0.0	0.00	0.13	0.04	50	
60		17.04	17.03	33.489	24.349	358.8	0.246	5 .89	106.8	2 . 9	0.21	0.0	0.00	0.16	0.06	60	216
75		15 .87	15.86	33.462	24.598	335 .5	0.299	5 .93	105.1	2 .9	0.22	0.0	0.00	0.23	0.10	75	215
85		15.52	15.51	33.483	24.692	326.7	0.332	5 . 90	103.8	2.9	0.22	0.0	0.00	0.23	0.16	85	214
95		15.25	15.24	33.479	24.749	321.6	0.364	5 . 80	101.5	3. 1	0.25	0.0	0.00	0.22	0.20	95	213
100	ISL	15 .03	15.01	33.502	24.815	315.4	0.380	5 .72	99. 7	3.3	0.27	0. 1	0. 01	0.21	0.27	100	
105		14.79	14.77	33.535	24.892	308.2	0.396	5 .62	97.5	3.5	0.30	0. 1	0.02	0.21	0.32	105	212
115		14.30	14.28	33.613	25.057	292.8	0.426	5.39	92 .6	4 . 1	0.38	1 .2	0.28	0.22	0.22	115	211
124		13.83	13.81	33.679	25.206	278.7	0.451	5 .27	89. 7	4.8	0. 45	3.3	0.05	0.14	0.18	124	210
125	ISL	13.77	13.75	33.680	25.219	277.5	0. 454	5.26	89.4	4 .9	0.46	3.5	0.05	0.14	0.18	125	
139		12.86	12 .84	33.656	25.384	262 .0	0. 492	5 .05	84.2	6. 7	0.62	6.2	0.01	0.10	0.12	140	209
150	ISL	11.89	11 .87	33.642	25 .559	245 . 4	0.520	4.83	78.9	9. 1	0.80	9.2	0.01	0.07	0.08	151	
164		10.72	10.70	33.644	25.773	225 .0	0.553	4.59	73. 1	12.4	1 .03	12.8	0.00	0.03	0.05	165	208
194		9.57	9.55	33.706	26.017	202 . 1	0.617	4 . 48	69.6	16.8	1 .25	16.6	0.00	0.01	0.02	195	207
200	ISL	9.33	9.31	33.737	26.080	196.2	0.629	4. 38	67.7	18.7	1 .33	17.8	0.00			201	
229		8.33	8.31	33.889	26.356	170.2	0. 682	3.89	58. 9	28.2	1 .69	23.2	0.00			230	206
250	ISL	7.94	7. 91	33.932	26.448	161.6	0.717	3.84	57.6	31 .3	1 .76	24.4	0.00			251	
268		7.71	7 .68	33.947	26.493	157.5	0.745	3. 78	56. 4	33.5	1 .79	25 . 1	0.00			269	205
300	ISL	7.25	7.22	33.979	26.584	149.2	0. 795	3.13	46.2	41.1	2 .04	28.6	0.00			302	
317		7.04	7.01	33.994	26.625	145.4	0.820	2 .72	40.0	45 .5	2 .20	30.7	0.00			319	204
378		6.56	6.53	34.056	26.739	135.2	0.905	1 .69	24.6	58.2	2 .60	35.6	0.00			380	203
400	ISL	6 . 34	6 . 30	34.060	26.771	132.3	0.935	1 . 52	22.0	61 .7	2 .68	36.7	0.00			402	
438		5 .97	5 .93	34.067	26.824	127.5	0.984	1 .33	19.1	67.4	2 .80	38.2	0.00			441	202
500	ISL	5 .59	5.55	34.126	26.918	119.1	1 .060	0.87	12.4	77.7	3.02	40.4	0.00			503	
522		5 .45	5.41	34.148	26.952	115.9	1 .086	0.70	9. 9	81 .3	3.10	41 .2	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 25.0 N	124 0..2 W	15/10/95	2309 UTC	3999 m	270 09 kn	320 04 08	1	1019.2 mb	21 .3 C	18 . 0 C	38m 01	2/8	CI

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	20.34	20 .34	33.911	23.843	405 .0	0.000	5 .29	102.4	2 .2	0.20	0.0	0.00	0.07	0.01	0	
1		20.34	20.34	33.911	23.843	405 . 1	0.004	5 .29	102 .4	2 .2	0.20	0.0	0.00	0 .07	0.01	1	220
1		20.35	20.35	33.911	23.840	405 .3	0.004									1	221
10	ISL	20.16	20.16	33.905	23.886	401 .3	0.040	5.29	102.0	2.2	0 .20	0.0	0.00	0 .07	0.02	10	
16		20.01	20.01	33.900	23.922	398. 1	0.064	5 .29	101.8	2 .2	0 . 20	0.0	0.00	0. 08	0.02	16	219
20	ISL	20.00	20.00	33.902	23.927	397.8	0.080	5.29	101.7	2.2	0.20	0.0	0.00	0. 08	0.02	20	
30		19.99	19.98	33.906	23.933	397.6	0.120	5.28	101.5	2 . 1	0. 20	0.0	0 .00	0. 09	0.02	30	218
45		1 9.94	19.93	33.898	23 .940	397.4	0.180	5.29	101.6	2 . 1	0.20	0.0	0.00	0.13	0.05	45	217
50	ISL	19.26	19.25	33.829	24.064	385 .8	0. 199	5 .45	103.3	2 . 1	0.20	0.0	0 .00	0.15	0 .07	50	
60		17.72	17.71	33.691	24.341	359.6	0.236	5 .78	106.3	2.2	0.21	0.0	0. 00	0.19	0.09	60	216
75		16.50	16.49	33.601	24.561	339.0	0.289	5.76	103.4	2.3	0.23	0.0	0.00	0.19	0.09	75	215
85		16.74	16.73	33.720	24.597	336.0	0.323	5.71	103.1	2.3	0.22	0.0	0.00	0.19	0.12	85	214
95		16.91	16.89	33.917	24.709	325 .7	0.356	5 .60	101.5	2 .2	0.20	0.0	0.00	0.22	0.22	95	213
100	ISL	16.90	16.88	34.056	24.818	315.5	0.372	5 .55	100.7	2 .2	0.18	0.0	0.00	0.24	0.26	100	
105		16.88	16.86	34.188	24.924	305 .6	0.387	5 .50	99.8	2 .2	0.16	0.0	0.01	0.26	0.28	105	212
115		16.70	16.68	34.226	24.996	299.0	0.418	5 .35	96.8	2 .2	0.20	0 . 1	0.15	0.22	0.25	115	21 1
125		16.43	16.41	34.234	25.065	292 .7	0.447	5 .23	94 . 1	2.4	0.23	0.6	0.12	0.16	0.19	125	210
139		15.93	15.91	34.255	25.196	280.6	0.487	5.18	92 .3	2 .6	0.25	1 .3	0 .03	0.09	0.16	140	209
150	ISL	15.37	15.35	34.204	25.283	272 .6	0.518	5.14	90.6	3.4	0.30	2 . 1	0 .02	0. 07	0.12	1 51	
165		14.27	14.25	34.063	25.412	260.5	0.558	5.01	86.2	4 .5	0. 45	4 .3	0.01	0.05	0.06	166	208
194		10.73	10.71	33.675	25.796	223.5	0.628	4.33	69.0	13.4	1.14	14.3	0.00	0.02	0.04	195	207
200	ISL	10.34	10.32	33.684	25.871	216.4	0. 641	4 .29	67 .8	14.8	1.21	15.5	0.00			201	
229		9.24	9.21	33.832	26.170	188.2	0. 700	4.20	64. 8	20.5	1 .42	19.2	0.00			230	206
250	ISL	8 .68	8. 65	33.881	26.297	176.4	0.738	3.98	60. 7	24.8	1 . 59	21.7	0. 00			251	
268		8.33	8.30	33.909	26.372	169.4	0.769	3.75	56.7	28.5	1 .72	23.6	0.00			269	205
300	ISL	7. 87	7.84	33.964	26 .484	159.1	0.822	3.33	49. 9	34 . 6	1 .93	26 . 4	0.00			302	
319		7.67	7. 6 4	33.992	26.535	154.4	0.851	3.06	45 .6	38.2	2 .04	27. 9	0 .00			321	204
380		7.07	7.03	34.051	26.667	142 .5	0.942	2.14	31 .5	49.8	2 .40	32 .6	0 .00			382	203
400	ISL	6. 84	6. 80	34.071	26.714	138.2	0.970	1 .83	26.8	54.5	2 .53	34.2	0 . 00			402	
439		6 .41	6.37	34.107	26.800	130.3	1 .022	1 .30	18.8	63.3	2.77	36. 9	0.00			442	202
500	ISL	5.89	5 .85	34.131	26.885	122.5	1.100	0. 91	13.0	72.9	2 .96	39. 4	0 . 00			503	
515		5.76	5 .72	34. 137	26.906	120.6	1.118	0.82	11.7	75 .2	3.01	40. 0	0. 00			518	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 26 .7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 57'.5 N	117 18..3 W	12/10/95	1818 UTC	66 m	340 05 kn	340 01 02!	2	1013.3 mb	19 .8 C	18,. 2 C	10m 04	8/8	ST

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/ I	PRES db	SAMP
0	ISL	20.31	20.31	33.494	23.533	434.6	0 . 000	5 .61	108.3	2 .6	0.16	0. 0	0.00	1 . 05	0.28	0	
2	A	20.31	20.31	33.494	23.533	434. 6	0.009	5 .61	108.3	2 .6	0.16	0.0	0 .00	1 . 05	0.28	2	208
2		20.31	20.31	33.492	23.532	434. 8	0 . 009									2	209
5	A	20.29	20.29	33.492	23.537	434 .4	0.022	5 . 62	108.4	2.6	0.16	0 .0	0 . 00	0.91	0.25	5	207
10	ISL	18.18	18.18	33.428	24.026	387 .9	0. 042	5 . 78	107.1	2.8	0.19	0 . 0	0. 00	1.29	0.54	10	
1 1	A	17.63	17.63	33.415	24.150	376.2	0.046	5 .82	106.7	2 .9	0.20	0.0	0 . 00	1 .38	0 . 60	1 1	206
19	A	14.60	14.60	33.242	24.704	323. 5	0.074	6.18	106.6	3.0	0.33	0 . 1	0 . 00	0 . 87	0.31	1 9	205
20	ISL	14.46	14.46	33.248	24 . 738	320.3	0.077	6.16	106.0	3 . 1	0. 34	0 . 1	0.01	0 . 87	0.31	20	
25	A	14.12	14.12	33.311	24.859	309 . 0	0.093	5 .88	100.5	4.0	0.41	0 . 3	0. 06	0.84	0.32	25	204
30	I SL	13.81	13.81	33.387	24.982	297.4	0.108	5 . 35	90 . 9	5 . 3	0.57	1 . 1	0.21	0.66	0 . 34	30	
36	A	13.46	13.45	33.472	25.119	284.5	0.126	4.67	78 . 8	7 . 1	0 . 78	3 . 1	0 . 36	0.41	0 . 36	36	203
46		12.73	12.72	33.550	25 .325	265.1	0.153	4.01	66 . 7	10.5	1 .05	9 . 3	0.28	0.24	0 . 36	46	202
50	ISL	12.62	12.61	33.571	25 .362	261 .6	0.164	3. 87	64 . 2	11.4	1.11	10.5	0.22	0.22	0.32	50	
56		12.46	12.45	33.602	25.418	256.5	0.179	3. 66	60 . 5	12.7	1.20	12.2	0.13	0.18	0.26	56	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 54. . 6 N	117 23..8 W	12/10/95	2044 UTC	604 m	280 09 kn	280 01 07	1	1011.9 mb	20..7 C	18,,0 C	22m 02	2/8	CS

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	20.73	20.73	33.504	23.429	444. 5	0.000	5.53	107.6	2 .2	0.14	0. 1	0.00	0.33	0.09	0	
2		20.73	20. 73	33.504	23.429	444. 6	0.009	5 .53	107.6	2 .2	0.14	0. 1	0.00	0.33	0 .09	2	220
2		20.75	20.75	33.506	23.426	444.9	0.009									2	221
10		20.51	20.51	33.495	23.482	439.9	0.044	5.58	108 . 1	2 .2	0.14	0. 1	0.00	0.38	0.12	10	219
20		15.44	15.44	33.227	24.511	342.0	0.083	6.33	111.1	2 .2	0.26	0. 1	0.00	0. 49	0.19	20	218
30		14.45	14.45	33.189	24.695	324 . 6	0.117	6.14	105.6	2 .6	0.31	0. 1	0.00	0.58	0.26	30	217
40		13.85	13.84	33.278	24.889	306.4	0.148	5 .93	100.8	3.2	0.37	0.4	0.02	1 . 01	0.71	40	216
50		13.45	13.44	33.412	25.075	289.0	0.178	5.27	88. 9	3.9	0.56	2 .8	0.20	0.66	0 . 64	50	21 5
60		13.13	13.12	33.574	25.265	271 .2	0.206	4.39	73.6	6. 1	0. 86	5 .5	0. 47	0. 40	0. 42	60	214
69		12.69	12.68	33.646	25.407	257.8	0.230	3.74	62.2	10.3	1.13	11.4	0.26	0.25	0.36	69	213
75	ISL	12.19	12.18	33.602	25 .470	252.0	0.245	3. 88	63 .8	11.7	1.18	13.1	0.15	0.21	0.32	75	
85		11.39	11.38	33.527	25.561	243.5	0.270	4.20	67.9	13.4	1.21	14.5	0.04	0.17	0.26	85	212
100		11 .02	11.01	33.661	25 .732	227. 5	0.305	3.28	52 .6	18.1	1.51	18.3	0.02	0. 06	0.13	100	21 1
1 1 9		11.00	10.99	33.804	25.847	217.1	0.347	2.55	40. 9	22 .9	1 .85	21.6	0.01	0.02	0 .08	120	210
125	ISL	10.91	10.89	33.831	25.885	213.6	0. 360	2 . 42	38.8	24.0	1 .91	22 .3	0.01	0.02	0 .08	126	
1 39		10.69	10.67	33.886	25 .966	206. 1	0.390	2.20	35. 1	26.0	2.02	23.7	0.01	0.01	0.07	140	209
1 50	ISL	10.62	10.60	33.948	26.027	200.6	0.412	1 . 99	31.7	27.7	2.11	24.6	0.01	0.01	0.07	1 51	
169		10.50	10.48	34.04	26.120	192.2	0. 449	1 .73	27.5	30. 1	2 .22	25.8	0.01	0.00	0 .06	170	208
198		10.02	10.00	34.061	26.220	183.3	0.504	1 .78	28.0	31 .0	2 .22	26.9	0.01	0 . 00	0 .05	1 99	207
200	ISL	10.00	9. 98	34.066	26.227	182.6	0.508	1 . 78	28.0	31 . 1	2 .22	27.0	0.01			201	
228		9 . 69	9. 66	34.149	26.344	172.0	0.557	1 . 65	25 .8	33.8	2 .32	28.2	0.01			229	206
250	ISL	9.37	9 . 34	34.194	26 . 432	163.9	0.594	1.51	23.4	36.7	2 .40	29.2	0.00			251	
268		9.10	9 . 07	34.221	26.497	158.0	0.623	1 .39	21.4	39.3	2 .47	30 .0	0.00			270	205
300	ISL	8.65	8 .62	34.247	26.589	149.7	0. 672	1 .22	18.6	43 .8	2 .58	31.3	0.01			302	
318		8. 42	8 . 39	34.255	26.631	145.9	0.699	1.13	17.2	46 .2	2 . 64	32 .0	0 .01			320	204
378		7 . 84	7.80	34.275	26.734	136.9	0. 784	0. 84	12.6	53.6	2.81	33.9	0.00			380	203
400	ISL	7.54	7 . 50	34.282	26.783	132.4	0.813	0.71	10.6	57. 6	2 . 89	35.0	0.00			403	
440		7 . 00	6 . 96	34.293	26 .868	124.5	0. 865	0.51	7 . 5	65 .0	3 .03	36.9	0 .00			443	202
500	ISL	6.41	6 .36	34 .301	26.954	116.7	0 . 937	0. 43	6 .2	73.5	3.15	38.8	0 . 00			503	
51 3		6.28	6.23	34.303	26.972	115.0	0. 952	0.41	5 . 9	75 .4	3.17	39.2	0.00			51 6	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 3C)

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 5CI. 4 N	117 31 .8 W	13/10/95	0126	UTC	855 m	280	09 kn			1011.4 mb	19,.4 C	18,, 1 C				

DEPTH D		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 uM/ I	N02 uM/ I	CHL-A ug/L	PHAEO ug/l	PRES db	SAMP
0	ISL	20.26	20.26	33.522	23.568	431.3	0. 000	5 .55	107.0	2.0	0.18	0.0	0.00	0.28	0 .09	0	
1		20.26	20.26	33.522	23.568	431 .3	0.004	5.55	107.0	2 .0	0.18	0.0	0.00	0.28	0.09	1	220
10	ISL	19.89	19.89	33.490	23.641	424.7	0.043	5.63	107.8	2.0	0.20	0. 1	0.00	0.29	0.09	10	
14		19.72	19.72	33.476	23.674	421.6	0.060	5 .67	108.2	2.0	0.21	0. 1	0.00	0.29	0 .09	14	21 9
20	ISL	18.70	18.70	33.414	23 .887	401.6	0.084	5 .96	111.5	2 .1	0.22	0. 1	0.00	0.36	0.13	20	
30		16.56	16.56	33.314	24.325	360.0	0.123	6.36	114.1	2 .2	0.25	0. 1	0.00	0.53	0.20	30	218
45		13.48	13.47	33.220	24.920	303.6	0.172	5 .91	99.6	4.0	0.41	0.9	0.07	0.85	0.68	45	217
50	ISL	13.11	13.10	33.263	25 .028	293.5	0. 187	5.61	93.9	5 . 1	0 .54	3. 1	0.21	0.71	0.62	50	
54		12.95	12.94	33.301	25.089	287.8	0. 199	5.39	89.9	5 .9	0.64	5 .0	0.31	0.58	0.55	54	216
65		12.69	12.68	33.350	25.178	279.5	0.230	5.16	85.6	7.2	0.75	7.1	0.30	0.41	0.47	65	215
75		11.85	11.84	33.461	25 .424	256.3	0.257	4.55	74.2	10.8	1 .04	11.8	0.07	0.22	0.30	75	214
85		11.54	11.53	33.588	25.581	241.6	0.282	3.76	61.0	15.0	1 .32	15.6	0.03	0.13	0.19	85	213
95		11 .08	11.07	33.699	25.751	225 .6	0.305	3.21	51 .6	18.8	1 .57	18.9	0.02	0.05	0.10	95	212
100	ISL	11 .06	11.05	33.753	25.796	221 .4	0.316	2.91	46.7	20.7	1 .69	20. 1	0.02	0.04	0.09	100	
109		11 .03	11.02	33.807	25.844	217.1	0.336	2 .49	40.0	23.3	1 .85	21.5	0.01	0.02	0. 08	109	21 1
124		10.83	10.82	33.823	25 .892	212.8	0.368	2.55	40. 8	23.5	1 .86	22.0	0.01	0.02	0.07	125	210
125	ISL	10.81	10.79	33.823	25.896	212.5	0.370	2.55	40. 8	23.5	1 .86	22 . 1	0.01	0.02	0.07	126	
145		10.45	10.43	33.839	25 .972	205 .7	0.412	2.50	39.7	24.5	1 .91	23.3	0.01	0.01	0.07	1 46	209
150	ISL	10.40	10.38	33.851	25.990	204. 1	0.422	2.43	38.5	25 .0	1 .94	23.7	0.01	0.01	0.0 7	151	
170		10.25	10.23	33.929	26.077	196.2	0.462	2 .08	32.9	27.8	2.10	25.3	0.01	0.01	0. 06	171	208
199		9.85	9.83	34.114	26.290	176.6	0.517	1 .65	25.9	32.6	2 .31	27.9	0.01	0.00	0.05	200	207
200	ISL	9.84	9.82	34. 117	26.294	176.2	0.518	1 .64	25.7	32.7	2 .31	27.9	0.01			201	
229		9.56	9.53	34.175	26.386	168.0	0.568	1 .53	23.8	35.2	2 .37	28.9	0.00			230	206
250	ISL	9.28	9.25	34.206	26.456	161.6	0. 603	1 .42	22.0	37.7	2 . 44	29.7	0.00			251	
268		9. 03	9.00	34.226	26.512	156.6	0.631	1 .33	20.5	40.0	2.50	30.4	0.01			270	205
300	ISL	8.65	8.62	34.245	26.587	149.9	0.680	1.21	18.5	43. 6	2.59	31 .4	0.02			302	
318		8.44	8.41	34.251	26.625	146.5	0.707	1.14	17.3	45 .8	2 . 64	32 .0	0.03			320	204
377		7.65	7.61	34.285	26 . 769	133.3	0.790	0.72	10.8	56.4	2 .89	34 . 8	0.01			379	203
400	ISL	7 , 40	7.36	34.288	26.808	129.9	0.820	0.63	9.4	59.5	2 .95	35 .6	0.01			403	
437		7.04	7.00	34.288	26.858	125.4	0. 867	0.54	7, 9	64 . 0	3.02	36.7	0.00			440	202
500	ISL	6. 43	6.38	34.292	26.944	117.7	0. 944	0.40	5 .8	72.9	3.14	38. 8	0.00			503	
513		6.31	6.26	34.294	26.961	116.1	0.959	0.37	5.4	74.7	3.17	39.2	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 4CI. 8 N	117 52 .3 W	13/10/95	0507	UTC	622 m	330	04 kn			1012.1 mb	19.. 0 C	17. 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 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/L	PRES db	SAMP
0	ISL	20.01	20.01	33.486	23.606	427.6	0.000	5 .38	103.2	1 .9	0.23	0.0	0.00	0.17	0. 05	0	
1		20.01	20.01	33.486	23.606	427.7	0 . 004	5 . 38	103.2	1 . 9	0.23	0 . 0	0. 00	0.17	0 . 05	1	220
10	ISL	19.86	19.86	33.486	23.646	424.2	0.043	5 . 40	103.3	1 . 8	0.23	0 . 0	0. 00	0.17	0 . 05	10	
1 5		19.78	19.78	33.486	23.667	422 .4	0. 064	5 .41	103.4	1 . 8	0.23	0.0	0.00	0.17	0.05	15	219
20	ISL	19.41	19.41	33.453	23.737	415.9	0. 085	5 .50	104.3	1 .8	0.23	0.0	0 .00	0.18	0 .06	20	
30	ISL	18.25	18.24	33.355	23.954	395 .5	0.125	5 . 71	105.9	1 .7	0.25	0.0	0 . 00	0.23	0.08	30	
31		18.10	18.09	33.344	23.982	392 .8	0.129	5 .73	106. 0	1 .7	0.25	0.0	0.00	0 .2 4	0. 08	31	218
45		15.47	15 .46	33.196	24.481	345 .6	0.181	5 .98	104.9	2 .2	0. 30	0. 1	0.00	0.35	0.18	45	217
50	ISL	14.57	14.56	33.293	24.751	320.0	0. 198	5 .58	96.2	3.5	0. 44	1 . 4	0.06	0.58	0. 40	50	
55		13.84	13.83	33.410	24.994	296 .9	0.213	5.10	86.7	5 . 1	0. 60	2.9	0.12	0 . 77	0. 60	55	216
65		13.32	13.31	33.504	25.173	280. 1	0.242	4. 45	74.9	7.5	0.82	5 .6	0.15	0.55	0.60	65	215
74		12.63	12.62	33.590	25.376	261.0	0.266	3.68	61 .1	11.7	1.16	11.4	0.04	0.29	0 .35	74	214
75	ISL	12.53	12.52	33.596	25.400	258.7	0.269	3.63	60. 1	12.1	1.19	12.0	0.04	0.27	0. 33	75	
85		11.66	11.65	33.664	25.618	238. 1	0 .294	3.21	52.2	16.7	1 .50	16.9	0.03	0.08	0.14	85	213
95		11.25	11.24	33.775	25.779	223.0	0.317	2.54	41.0	21.8	1 . 79	20. 4	0.01	0.03	0.10	95	212
100	ISL	11.14	11.13	33.802	25.820	219.2	0.328	2.47	39.8	23.0	1 .86	21.2	0.01	0.03	0.09	100	
1 10		11.02	11.01	33.827	25.861	215.5	0.349	2.32	37.3	24.2	1 .92	21.9	0.01	0.02	0 .08	1 10	211
124		10.94	10.92	33.851	25.895	212.6	0.379	2.19	35. 1	25.3	2.00	22.6	0.01	0.01	0. 08	125	210
125	ISL	10.93	10.91	33.854	25.899	212. 3	0.382	2.18	34.9	25.4	2.00	22.7	0.01	0.01	0.08	126	
144		10.69	10.67	33.913	25 . 988	204.2	0.421	2.08	33.2	26.9	2.07	23.8	0.01	0.01	0.07	145	209
150	ISL	10.58	10.56	33.937	26.026	200.7	0.433	2 .06	32.8	27.4	2 .09	24.2	0.01	0.01	0.07	151	
169		10.27	10.25	34.016	26.141	190.1	0. 470	2 .02	31 .9	28.9	2.15	25.3	0.01	0.01	0. 06	170	208
199		10.11	10.09	34.128	26.257	179.8	0.526	1 . 90	30.0	30.7	2 .20	26.5	0.01	0.01	0.05	200	207
200	ISL	10.11	10.09	34.130	26.258	179.7	0.528	1 .89	29.8	30.7	2 .20	26.5	0.01			201	
229		9. 97	9 . 94	34.174	26.317	174.7	0.579	1 .68	26.4	32 .4	2 .29	27.3	0.00			230	206
250	ISL	9.61	9.58	34.216	26.410	166.2	0.615	1.55	24.2	35 .2	2 .37	28.4	0.00			251	
269		9.23	9.20	34.253	26.501	157.7	0. 646	1 .43	22. 1	38.2	2 .45	29.5	0.00			271	205
300	ISL	8. 82	8.79	34.286	26.593	149.4	0.693	1.19	18.2	42.7	2 .58	30.8	0.00			302	
317		8.63	8 . 60	34.293	26.628	146.3	0.718	1 . 07	16.3	45 .0	2.65	31 .4	0.00			319	204
377		7.90	7.86	34.267	26.719	138.3	0. 804	0. 96	14.4	51.5	2.76	33.5	0.00			379	203
400	ISL	7 . 69	7 . 65	34.269	26.751	135.5	0.835	0.86	12.9	54. 1	2 .82	34.2	0.00			402	
438		7.36	7.32	34.279	26.807	130.6	0.886	0.68	10.1	58.8	2.93	35 .4	0.00			441	202
500	ISL	6.75	6 . 70	34.295	26.904	121.8	0. 964	0.48	7.0	67 .8	3.07	37.7	0.00			503	
523		6.52	6 . 47	34.303	26.941	118.4	0.992	0.40	5.8	71 .2	3.12	38.5	0.00			527	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 31I .0 N	118 13..3 W	13/10/95	0859	UTC	1599 m	00 kn			1011.4 mb	18 .7 C	17..3 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 uM/ I	N03 uM/ I	N02 uM/l	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	19.73	19.73	33.478	23.673	421.3	0.000	5 .40	103.1	1 .8	0.23	0. 1	0.00	0.19	0 .05	0	
1		19.73	19.73	33.478	23.673	421 .3	0.004	5.40	103. 1	1 .8	0.23	0. 1	0.00	0.19	0. 05	1	220
1		19.74	19.74	33.479	23.671	421.5	0.004									1	221
10	ISL	19.65	19.65	33.470	23.688	420.2	0.042	5 .42	103.3	1 . 8	0.23	0. 1	0 .00	0.21	0. 06	10	
15		19.61	19.61	33.466	23.695	419.7	0.063	5 .43	103.4	1 .8	0.23	0. 1	0.00	0.22	0.07	15	219
20	ISL	18.37	18.37	33.349	23.919	398.5	0.084	5 .70	106.0	1 .9	0.25	0. 1	0. 00	0.28	0 .09	20	
30		15.49	15.49	33.205	24.483	344. 9	0.121	6.03	105.9	2 .2	0.30	0. 1	0.00	0.40	0.19	30	218
45		13.08	13.07	33.447	25.176	279.3	0.168	4.71	78.8	6. 7	0.77	5.5	0.28	0.50	0.53	45	217
50	ISL	12.82	12.81	33.551	25.308	266.8	0.181	3.82	63.6	10.5	1 .05	9.1	0.15	0.34	0.41	50	
54		12.69	12.68	33.621	25.388	259.3	0. 192	3.19	53.0	13.4	1 .26	12.0	0.03	0.20	0.29	54	216
65		12.09	12.08	33.662	25 .535	245.5	0.219	3.04	49.9	16.4	1 .47	16.0	0.02	0.12	0.19	65	215
75		11 .80	11 .79	33.701	25 .620	237.7	0.244	2.85	46.5	18.3	1 .60	17.8	0.01	0.07	0.15	75	214
84		11.53	11.52	33.737	25.698	230.4	0.265	2.68	43.5	20.3	1 .73	19.3	0.01	0 .04	0.11	84	213
95		11 .03	11 .02	33.749	25 .799	221.1	0.290	2.86	45 .9	21.0	1 .73	20. 1	0.01	0.03	0.09	95	212
100	ISL	10.94	10. 93	33.787	25 .844	216.9	0.300	2.73	43.8	22 .2	1 . 80	20.8	0.01	0.03	0. 09	100	
108		10.86	10.85	33.859	25.915	210.3	0.318	2.43	38.9	24.4	1 . 94	22 . 1	0.01	0. 02	0. 08	109	21 1
124		10.66	10.65	33.963	26.031	199. 6	0.350	2.01	32 . 1	28.3	2.14	24.0	0 . 01	0. 02	0.07	125	210
125	ISL	10.66	10.65	33.968	26.035	199.3	0.352	1 . 99	31 .7	28.4	2.15	24. 1	0. 01	0 . 02	0.07	126	
143		10.50	10.48	34.027	26.110	192 .6	0.388	1 .80	28. 6	30.1	2 .24	25.2	0.01	0.02	0.07	1 44	209
150	ISL	10.25	10.23	34.025	26.151	188.7	0. 401	1 . 91	30.2	30.2	2.22	25.5	0.01	0. 02	0. 07	1 51	
168		9.55	9.5 3	34.015	26.261	178.4	0 .434	2 .27	35 .3	30.4	2.14	26.3	0.01	0.01	0.05	169	208
197		9.01	8.99	34.071	26.393	166.4	0. 484	2 .25	34.6	33.9	2.21	27.5	0. 01	0.01	0 . 04	1 98	207
200	ISL	9.03	9.01	34.089	26. 404	165.4	0. 489	2.18	33.6	34. 4	2 .24	27.7	0.01			201	
227		9.32	9.29	34.246	26.481	158.9	0. 533	1 . 48	23.0	38. 4	2 .47	29.3	0.00			228	206
250	ISL	9. 09	9.06	34.257	26.527	154.9	0.569	1 . 44	22 .2	40.5	2.50	30.0	0. 00			251	
268		8.80	8.77	34.238	26.558	152.1	0.596	1 .40	21.5	42 .0	2 .52	30.4	0. 00			270	205
300	ISL	8. 43	8.40	34.253	26.627	145.9	0. 644	1.21	18.4	46.0	2 .62	31 .6	0 .00			302	
318		8.23	8.20	34.263	26. 666	142.5	0.670	1 .09	16.5	48.6	2 .68	32.3	0. 00			320	204
378		7.48	7. 44	34.269	26.781	132. 1	0. 753	0. 74	11.0	58. 0	2 .89	35.0	0.00			380	203
400	ISL	7.28	7.24	34.273	26.813	129.3	0.781	0.67	9.9	60.6	2 .94	35 .7	0.00			403	
436		6.98	6.94	34.280	26.860	125.1	0.827	0.58	8.5	64 .6	3.02	36.8	0.00			439	202
500	ISL	6.45	6.40	34.293	26.942	117.9	0. 905	0.40	5 .8	72.3	3.15	38.7	0.00			503	
520		6.29	6.24	34.298	26.967	115.6	0. 928	0.35	5 . 1	74. 7	3.19	39.3	0.00			524	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 2CI. 7 N	118 33., 4 W	13/10/95	1336	UTC	1361 *m*	00 kn			1011.4 mb	18.. 0 C	16. 9 C	21m	01	

DEPTH m		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 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.72	18.72	33.485	23.935	396.2	0. 000	5.56	104.1	1 .9	0.22	0. 1	0.00	0.26	0 . 06	0	
1		18.72	18.72	33.485	23.935	396 . 3	0 .004	5.56	104.1	1 . 9	0.22	0 . 1	0 .00	0.26	0 . 06	1	220
1		18.72	18.72	33.485	23.935	396 . 3	0.004									1	221
10	ISL	18.46	18.46	33.472	23.990	391 . 3	0.039	5 .61	104.6	1 .8	0.23	0. 1	0.00	0.28	0 .09	1 0	
1 5		18.31	18.31	33.465	24 . 022	388 .4	0.059	5 .68	105.6	1 .7	0.23	0 . 1	0.00	0.29	0.10	15	21 9
20	ISL	17.25	17.25	33.429	24.251	366 .7	0.078	5.81	105.8	2.0	0.27	0 .2	0 .00	0.49	0.22	20	
29		15.16	15.16	33.399	24.705	323.8	0.109	5 . 99	104.6	2 .8	0.36	0. 7	0. 03	0.82	0.44	29	218
30	ISL	15.02	15.02	33.398	24.734	321.0	0.112	5 .97	104.0	2 .9	0.36	0.9	0 . 04	0.81	0 . 44	30	
45		13.44	13.43	33.425	25.087	287.8	0.158	5 . 60	94 , 4	4.6	0. 57	3.5	0.16	0. 66	0.51	45	21 7
50	ISL	12.89	12.88	33.463	25 .226	274.6	0.172	5 .06	84. 4	7.5	0.81	7.3	0.11	0 . 44	0.38	50	
55		12.38	12.37	33.502	25 .355	262.4	0.185	4.53	74.7	10.4	1 . 05	11.0	0.05	0.22	0.25	55	216
66		11.66	11.65	33.545	25 .525	246.5	0.213	4.21	68 . 4	12.7	1.19	13.9	0. 02	0.12	0.17	66	21 5
75		11.18	11.17	33.649	25.693	230.6	0.235	3.57	57.5	16.8	1 .46	17.5	0.03	0 . 06	0.13	75	214
84		10.75	10.74	33.685	25.798	220.8	0.255	3.38	53.9	18.8	1 .55	19.0	0 . 02	0. 04	0.11	84	213
95		10.58	10.57	33.699	25 .839	217.2	0.279	3.35	53.2	19.8	1 .60	19.8	0 . 02	0 . 03	0.10	95	212
100	ISL	10.50	10.49	33.726	25.874	213.9	0.290	3.23	51.3	20.7	1 .65	20 . 4	0.02	0 .03	0 .09	100	
109		10.35	10.34	33.779	25.942	207.7	0. 309	2 . 99	47.3	22 .3	1 .75	21.6	0.02	0.02	0.08	1 1 0	21 1
124		10.16	10.15	33.812	26.000	202 .4	0.340	2 .88	45 .4	23.8	1.81	22 .6	0.01	0.02	0. 08	125	210
125	ISL	10.12	10.11	33.817	26.011	201 . 4	0.342	2.87	45.2	24.0	1 .82	22 . 7	0.01	0.02	0 . 08	126	
144		9.38	9.36	33.910	26.207	183.1	0. 378	2.69	41 .7	28.6	1 .97	25 .3	0.01	0.01	0.06	145	209
1 50	ISL	9. 35	9.33	33.934	26.230	180.9	0.389	2 .65	41.0	29. 1	1 .99	25.6	0.01	0.01	0.06	151	
169		9.26	9.24	33.961	26.266	177.9	0.423	2.52	39.0	30. 1	2.03	26. 1	0.01	0. 01	0.06	170	208
199		9.26	9.24	34.086	26.365	169.2	0.475	2.13	33.0	33.4	2 .23	27.6	0.01	0 .00	0.06	200	207
200	ISL	9.25	9.23	34.091	26.370	168.7	0.477	2.11	32.6	33.6	2 .24	27.7	0.01			201	
229		8 . 94	8.92	34.203	26 . 508	156.1	0.524	1.61	24.7	39.0	2 .42	29.6	0.00			230	206
250	ISL	8. 54	8.51	34.195	26.564	151.0	0.556	1 . 60	24.4	42.0	2.47	30.5	0. 00			251	
268		8 .22	8.19	34.172	26.595	148.2	0.583	1 . 60	24.2	44.2	2 .49	31 .2	0.00			270	205
300	ISL	8 . 04	8.01	34.196	26.641	144.3	0. 630	1 .38	20.8	47. 4	2 . 60	32 .3	0. 00			302	
318		7 . 99	7. 96	34.217	26. 665	142.4	0.656	1 .23	18.5	49. 1	2 . 66	32 .9	0. 00			320	204
378		7. 55	7.51	34.253	26.759	134.3	0.739	0. 87	13.0	56.3	2 .83	34.7	0.00			380	203
400	ISL	7 . 34	7.30	34.266	26.799	130.7	0.768	0. 75	11.1	59.6	2 . 90	35 .5	0.00			403	
438		6. 96	6 .92	34.287	26 . 869	124.4	0.816	0.57	8. 4	65 . 4	3.02	37.0	0 .00			441	202
500	ISL	6.39	6 .34	34.303	26.958	116.3	0.891	0.40	5 . 8	73. 7	3.15	39. 0	0. 00			503	
520		6.21	6.16	34.309	26.986	113.7	0.914	0. 34	4. 9	76. 4	3.19	39.6	0. 00			524	201

RV NEW HORIZON CALCOFI CRUISE 951C1 STATION 93 50I

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 11.0 N	118 53..5 W	13/10/95	1756 UTC	1465 m	020 01 kn	290 06 1C1	2	1013.6 mb	19..2 C	17., 4 C	22m 01	8/8	ST

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	18.52	18.52	33.514	24.007	389.4	0.000	5.47	102.1	1.5	0.25	0.2	0.00	0.27	0.07	0	
1	A	18.52	18.52	33.514	24.007	389.4	0.004	5.47	102.1	1.5	0.25	0.2	0.00	0.27	0.07	1	222
1		18.56	18.56	33.516	23.999	390.2	0.004									1	223
10	ISL	18.20	18.20	33.507	24.081	382.6	0.039	5.58	103.5	1.2	0.27	0.1	0.00	0.28	0.08	10	
13	A	18.02	18.02	33.502	24.122	378.9	0.050	5.63	104.1	1.1	0.27	0.1	0.00	0.28	0.09	13	221
20	ISL	17.62	17.62	33.482	24.204	371.3	0.076	5.71	104.7	1.0	0.26	0.1	0.00	0.31	0.11	20	
21		17.55	17.55	33.479	24.218	370.0	0.080	5.72	104.8	1.0	0.26	0.1	0.00	0.32	0.12	21	220
28	A	16.95	16.95	33.459	24.346	358.0	0.106	5.82	105.3	0.9	0.27	0.1	0.00	0.38	0.19	28	219
30	ISL	16.11	16.11	33.387	24.484	344.8	0.113	5.85	104.1	1.4	0.29	0.3	0.01	0.48	0.26	30	
35		13.93	13.93	33.257	24.857	309.4	0.129	5.91	100.6	3.2	0.39	0.9	0.05	0.70	0.44	35	218
43	A	12.96	12.95	33.362	25.134	283.2	0.153	5.28	88.1	6.1	0.66	5.1	0.19	0.65	0.57	43	216
43		12.97	12.96	33.359	25.130	283.6	0.153									43	217
50		12.67	12.66	33.421	25.236	273.6	0.172	5.00	83.0	7.5	0.78	7.2	0.18	0.54	0.49	50	215
56	A	11.97	11.96	33.573	25.488	249.7	0.188	4.24	69.4	12.2	1.14	12.5	0.10	0.31	0.35	56	214
75	ISL	10.64	10.63	33.849	25.945	206.7	0.231	2.52	40.1	24.4	1.89	22.5	0.04	0.10	0.12	75	
80	A	10.50	10.49	33.882	25.995	202.0	0.241	2.25	35.7	26.6	2.00	23.7	0.02	0.04	0.10	80	213
90		10.44	10.43	33.937	26.049	197.1	0.261	1.94	30.8	28.8	2.13	25.1	0.01	0.02	0.09	90	212
98		10.39	10.38	34.026	26.127	189.9	0.277	1.46	23.2	32.0	2.32	26.9	0.01	0.01	0.09	98	211
100	ISL	10.39	10.38	34.044	26.141	188.6	0.281	1.38	21.9	32.5	2.35	27.2	0.01	0.01	0.09	100	
119		10.41	10.40	34.152	26.222	181.3	0.316	1.02	16.2	34.9	2.49	28.4	0.01	0.00	0.08	120	210
125	ISL	10.41	10.40	34.170	26.236	180.1	0.327	1.01	16.0	35.0	2.50	28.5	0.01	0.00	0.08	126	
140		10.39	10.37	34.196	26.260	178.2	0.353	0.97	15.4	35.2	2.51	28.6	0.01	0,00	0.07	141	209
150	ISL	10.39	10.37	34.206	26.269	177.7	0.371	0.97	15.4	35.3	2.51	28.6	0.01	0.00	0.07	151	
168		10.39	10.37	34.224	26.283	176.7	0.403	0.96	15.2	35.4	2.51	28.7	0.01	0.00	0.06	169	208
199		10.32	10.30	34.282	26.341	171.9	0.457	0.95	15.1	35.8	2.52	28.9	0.01	0.00	0.06	200	207
200	ISL	10.32	10.30	34.284	26.343	171.8	0.459	0.95	15.1	35.8	2.52	28.9	0.01			201	
228		10.21	10.18	34.337	26.403	166.6	0.506	0.95	15.0	36.7	2.56	29.0	0.00			229	206
250	ISL	10.11	10.08	34.364	26.442	163.4	0.543	0.91	14.4	37.4	2.59	29,2	0.00			251	
269		9.93	9.90	34.370	26.478	160.4	0.573	0.88	13.8	38.6	2.61	29.6	0.00			271	205
300	ISL	9.19	9.16	34.331	26.569	151.9	0.622	0.95	14.7	42.8	2.65	30.7	0.00			302	
317		8.73	8.70	34.304	26.621	147.0	0.647	0.99	15.2	45.6	2.67	31.5	0.00			319	204
378		7.67	7.63	34.261	26.748	135.4	0.733	0.87	13.0	54.6	2.81	34.3	0.00			380	203
400	ISL	7.43	7.39	34.266	26.786	132.0	0.763	0.78	11.6	57.6	2.87	35.1	0.00			403	
440		7.09	7.05	34.285	26.849	126.4	0.814	0.59	8.7	63.0	2.98	36.3	0.00			443	202
500	ISL	6.55	6.50	34.308	26.941	118.1	0.888	0.41	6.0	71.9	3.13	38.4	0.00			503	
518		6.39	6.34	34.316	26.968	115.6	0.909	0.35	5.1	74.6	3.18	39.0	0.00			522	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951CI STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 1.1 N	119 14,.4 W	13/10/95	2214 UTC	1583 m	180 04 kn	320 06 09I	1	1012.5 mb	20.. 0 C	17.9 C	31m 01	3/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/1	OXY PCT	SI03 uM/ /	P04 uM/I	N03 uH/l	N02 uM/I	CHL-A ug/I	PHAEO ug/L	PRES db	SAMP
0	ISL	19.76	19.76	33.480	23.666	421.9	0.000	5.39	103.0	1.9	0.22	0.1	0.00	0.17	0.04	0	
1		19.76	19.76	33.480	23.666	421.9	0.004	5.39	103.0	1.9	0.22	0.1	0.00	0.17	0.04	1	220
2		19.51	19.51	33.478	23.730	415.9	0.008									2	221
10	ISL	19.32	19.32	33.453	23.759	413.4	0.042	5.48	103.8	1.9	0.23	0.1	0.00	0.19	0.05	10	
15		18.71	18.71	33.411	23.882	401.9	0.062	5.53	103.5	1.9	0.23	0.1	0.00	0.20	0.06	15	219
20	ISL	17.53	17.53	33.322	24.103	380.9	0.082	5.72	104.6	2.1	0.25	0.1	0.00	0.27	0.10	20	
30		15.22	15.22	33.202	24.540	339.5	0.118	6.05	105.7	2.6	0.30	0.1	0.00	0.45	0.23	30	218
45		14.49	14.48	33.227	24.717	323.1	0.167	5.95	102.4	3.0	0.35	0.4	0.03	0.80	0.49	45	217
50	ISL	14.09	14.08	33.261	24.827	312.7	0.183	5.84	99.7	3.6	0.40	1.2	0.06	0.78	0.51	50	
55		13.67	13.66	33.302	24.945	301.5	0.198	5.67	96.0	4.4	0.48	2.3	0.09	0.77	0.54	55	216
65		12.95	12.94	33.379	25.150	282.3	0.228	5.04	84.1	6.5	0.70	5.5	0.16	0.47	0.40	65	215
75		12.17	12.16	33.532	25.419	256.8	0.255	4.29	70.5	10.5	1.02	11.1	0.06	0.22	0.26	75	214
85		11.91	11.90	33.608	25.528	246.7	0.280	3.69	60.3	13.2	1.26	14.2	0.06	0.19	0.16	85	213
95		11.29	11.28	33.614	25.647	235.6	0.304	3.73	60.2	15.2	1.35	16.0	0.04	0.10	0.13	95	212
100	ISL	10.79	10.78	33.617	25.738	226.9	0.315	3.75	59.8	16.7	1.41	17.3	0.03	0.10	0.12	100	
110		9.86	9.85	33.641	25.917	210.0	0.337	3.78	59.1	19.7	1.54	19.8	0.01	0.10	0.11	110	211
124		9.38	9.37	33.707	26.047	197.8	0.366	3.59	55.6	22.5	1.66	21.7	0.01	0.03	0.05	125	210
125	ISL	9.35	9.34	33.712	26.056	196.9	0.368	3.58	55.4	22.7	1.67	21.8	0.01	0.03	0.05	126	
144		8.84	8.82	33.806	26.211	182.5	0.404	3.46	52.9	26.2	1.77	23.5	0.01	0.03	0.05	145	209
150	ISL	8.76	8.74	33.843	26.253	178.6	0.415	3.33	50.9	27.6	1.82	24.2	0.01	0.03	0.05	151	
170		8.60	8.58	33.957	26.367	168.1	0.449	2.86	43.6	32.1	2.00	26.4	0.00	0.03	0.05	171	208
200		8.41	8.39	34.041	26.463	159.6	0.499	2.43	36.9	36.4	2.16	28.2	0.00	0.04	0.06	201	207
229		8.36	8.34	34.107	26.522	154.5	0.544	2.04	30.9	39.7	2.31	29.6	0.00			230	206
250	ISL	8.11	8.08	34.142	26.588	148.5	0.576	1.76	26.5	43.7	2.44	31.0	0.00			251	
269		7.87	7.84	34.169	26.645	143.4	0.604	1.53	22.9	47.5	2.55	32.2	0.00			271	205
300	ISL	7.73	7.70	34.211	26.698	138.7	0.647	1.21	18.1	51.3	2.69	33.3	0.00			302	
319		7.67	7.64	34.231	26.723	136.7	0.674	1.05	15.7	53.2	2.75	33.8	0.00			321	204
380		7.24	7.20	34.247	26.798	130.4	0.755	0.79	11.7	59.5	2.88	35.6	0.00			382	203
400	ISL	7.06	7.02	34.259	26.832	127.3	0.781	0.70	10.3	62.3	2.94	36.3	0.00			403	
439		6.72	6.68	34.286	26.900	121.2	0.829	0.54	7.9	67.9	3.05	37.7	0.00			442	202
500	ISL	6.30	6.25	34.315	26.979	114.2	0.901	0.35	5.1	75.3	3.17	39.1	0.00			503	
511		6.22	6.17	34.320	26.993	112.9	0.913	0.31	4.5	76.6	3.19	39.4	0.00			514	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 5C1.9 N	119 34..6 W	14/10/95	0236	UTC	1845 m	180	03 kn			1013.4 mb	18 ..7 C	17..0 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/l	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	PRES db	SAMP
0	ISL	20.17	20.17	33.567	23.626	425.8	0.000	5 .43	104.6	2 .0	0.18	0.0	0.00	0.27	0.07	0	
1		20.17	20.17	33.567	23.626	425.8	0.004	5 .43	104.6	2 .0	0.18	0.0	0.00	0.27	0.07	1	220
10		20.18	20.18	33.565	23.622	426 . 5	0. 043	5 .43	104.6	1 .9	0.18	0.0	0.00	0.27	0.08	10	219
20	ISL	20.13	20.13	33.563	23.634	425 .7	0.085	5.45	104.9	1 . 9	0.18	0.0	0.00	0. 30	0.09	20	
21		20.12	20.12	33.563	23.637	425.5	0.089	5.45	104.8	1 . 9	0.18	0.0	0.00	0. 30	0.09	21	218
30		17.29	17.29	33.498	24.295	362 .9	0.125	6.92	126.1	1 . 5	0.18	0.0	0. 00	0.63	0.29	30	217
40		14.09	14.08	33.500	25.011	294 .9	0.158	6.20	106.0	2.7	0.43	0.9	0.05	1.14	0.68	40	216
50		12.56	12.55	33.546	25.355	262 .3	0.186	5.11	84.7	6.0	0.79	5 .3	0.17	0. 60	0.50	50	215
61		11.63	11 .62	33.588	25 .563	242.7	0.213	4.20	68.2	11.1	1.17	11.6	0.12	0.27	0.28	61	214
70		10.71	10.70	33.629	25.761	224.0	0.234	3.62	57.7	17.3	1 .49	17.8	0.02	0.07	0.13	70	213
75	ISL	10.41	10.40	33.633	25.817	218.8	0.246	3.64	57.6	18.7	1 .52	18.5	0.02	0.06	0.12	75	
85		10.03	10.02	33.638	25.885	212.4	0.267	3.67	57.6	19.9	1 .57	19.9	0.01	0.04	0.09	85	212
100		9.58	9.57	33.717	26.022	199.7	0.298	3.44	53. 5	22.7	1 . 69	21 .8	0.01	0.02	0.07	100	21 1
119		9.23	9.22	33.828	26.166	186.3	0.335	3.15	48.6	25.9	1 . 82	23.6	0.01	0. 01	0.05	120	210
125	ISL	9.15	9.14	33.853	26.199	183.4	0.346	3.08	47.5	26.8	1 .85	24.0	0.01	0.01	0.05	126	
139		9. 00	8. 99	33.903	26.262	177.6	0.371	2.93	45.0	28.7	1 .92	25 .0	0. 00	0.01	0.05	140	209
150	ISL	8. 90	8.88	33.947	26.312	173.0	0.390	2.76	42.3	30. 5	1 . 99	25 .9	0.00	0.01	0. 05	151	
169		8.75	8.73	34.020	26.393	165.7	0.423	2 . 44	37 .3	33.6	2.12	27.4	0.00	0. 00	0.05	170	208
199		8.54	8.52	34. 1 11	26.498	156.3	0.471	2 .05	31 .2	38. 1	2 .28	29.0	0.00	0.01	0.04	200	207
200	ISL	8.54	8.52	34.115	26.501	156.0	0.472	2 .03	30 . 9	38.2	2.29	29. 1	0. 00			201	
229		8.66	8.64	34.224	26.568	150.3	0.517	1 .45	22.2	42 . 0	2 .47	30.5	0.00			230	206
250	ISL	8 . 46	8. 43	34.239	26.611	146.5	0.548	1 .28	19.5	45 . 0	2.56	31 .5	0. 00			251	
270		8.18	8.15	34.234	26.650	143.1	0.577	1 .20	18.1	48. 0	2.63	32 . 4	0. 00			272	205
300	ISL	7. 78	7.75	34.241	2 6.715	137.2	0.619	1 .01	15.1	52 .7	2 .74	33. 8	0.00			302	
320		7.53	7.50	34.248	26.757	133.4	0.646	0.88	13.1	55.8	2.81	34.6	0 .00			322	204
378		7.12	7.08	34.283	26.843	126.0	0.721	0.58	8. 6	62. 9	2 .97	36.4	0.00			380	203
400	ISL	6.92	6.88	34.286	26.873	123.4	0.749	0.52	7.6	65.7	3 .01	37. 1	0 .00			403	
435		6.60	6.56	34.290	26.919	119.2	0.791	0.44	6.4	70. 1	3.07	38.2	0. 00			438	202
500	ISL	6.14	6.10	34.318	27.002	111.9	0.866	0.31	4.5	77.5	3.19	39. 8	0.00			503	
518		6.01	5.96	34.327	27.026	109.7	0.886	0.27	3.9	79.6	3.22	40.2	0.00			522	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 31 . 1 N	120 15.. 1 W	14/10/95	0816	UTC	3934 m	1 80	03 kn			1015.1 mb	17..8 C	15,. 4 C				

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/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	18.41	18.41	33.472	24.002	389.8	0.000	5 . 49	102 .2	1 .3	0.27	0. 1	0.00	0.17	0.05	0	
2		18.41	18.41	33.472	24.002	389. 9	0.008	5 . 49	102.2	1 . 3	0.27	0. 1	0. 00	0.17	0.05	2	220
2		18.41	18.41	33.471	24.002	390. 0	0. 008									2	221
10	ISL	18.42	18.42	33.471	24.000	390. 4	0 . 039	5 . 49	102.2	1 . 3	0.27	0. 1	0 . 00	0.17	0 . 05	1 0	
1 5		18.42	18.42	33.471	24.000	390. 6	0.059	5 . 49	102.2	1 . 3	0. 27	0. 1	0 . 00	0.17	0 . 06	1 5	219
20	ISL	18.39	18.39	33.471	24.007	390.0	0. 078	5 .50	102.4	1 .3	0.26	0. 1	0. 00	0.19	0.07	20	
29		18.33	18.32	33.472	24.023	388 . 8	0.113	5 .52	102.6	1 .3	0.25	0. 1	0. 00	0.22	0 . 08	29	218
30	ISL	18.09	18.08	33.448	24.064	385 . 0	0.117	5 .59	103.4	1 .3	0.26	0. 1	0.00	0.26	0.11	30	
45		14.10	14.09	33.243	24.811	314.1	0.169	6.17	105.3	0.7	0. 37	0. 1	0.02	0. 74	0.53	45	217
50	ISL	13.37	13.36	33.319	25.019	294. 3	0.185	5 .71	96 . 1	3.4	0.59	3.7	0.27	0. 60	0 . 47	50	
54		12.95	12.94	33.385	25.154	281.6	0.196	5 .30	88. 4	5 . 8	0.77	6.7	0.45	0. 46	0 . 40	54	21 6
64		12.29	12.28	33.412	25.303	267.6	0.224	4 . 95	81.5	8 . 6	0 . 92	9. 6	0.31	0.28	0.35	64	21 5
74		11.53	11.52	33.485	25.502	248.8	0.249	4.41	71 .5	13.0	1.18	14.2	0.04	0.17	0.23	74	214
75	ISL	11.45	11.44	33.491	25.521	247.0	0.252	4.37	70. 7	13.3	1 . 20	14.5	0.04	0.16	0.22	75	
84		10.81	10.80	33.535	25.671	232.9	0.273	4.10	65 . 4	15.7	1 . 35	16.9	0 .02	0.12	0.18	84	213
95		10.41	10.40	33.576	25.773	223.4	0.299	3.87	61 .2	17.8	1 . 48	18.8	0.02	0.08	0.15	95	212
100	ISL	10.17	10.16	33.606	25 .837	217.4	0.310	3.74	58.9	19.2	1 .55	19.9	0.02	0.06	0.12	100	
109		9.78	9 . 77	33.661	25.946	207.2	0.329	3.51	54.8	21.8	1 .67	21.7	0.01	0 . 04	0.07	109	21 1
123		9.52	9.51	33.711	26.028	199.6	0.357	3.28	50.9	24.0	1 . 76	23.2	0.01	0.02	0. 06	1 24	21 0
125	ISL	9.45	9. 44	33.723	26 .049	197.7	0. 361	3.25	50.4	24.5	1 . 78	23.5	0.01	0.02	0 . 06	126	
145		8.73	8 . 71	33.849	26.262	177.6	0.399	2 .95	45 .0	29.7	1 . 95	26.0	0.00	0.00	0.05	1 46	209
150	ISL	8. 68	8.66	33.875	26.290	175 .0	0.408	2 .90	44.2	30.4	1 . 97	26.3	0.00	0.00	0.05	1 51	
169		8.57	8.55	33.949	26.365	168.2	0.440	2 .78	42 .3	32 .5	2 .03	26.9	0.00	0. 00	0 .05	170	208
197		8.07	8 . 05	33.996	26.478	157.9	0.486	2 .67	40. 2	36.8	2.12	28.5	0.00	0 .00	0 . 04	198	207
200	ISL	8 .05	8.03	34.004	26.487	157.1	0.490	2.62	39. 4	37.3	2.14	28.7	0.00			201	
229		7.92	7.90	34.072	26.560	150.6	0.535	2.16	32.4	42 .0	2 .31	30.5	0.00			230	206
250	ISL	7.61	7.59	34.069	26.603	146.8	0.566	2 .08	31.0	45 .0	2.37	31 .6	0.00			251	
268		7.32	7.29	34.058	26.636	143.8	0.592	2 . 06	30.5	47.6	2 .41	32 .4	0 .00			270	205
300	ISL	6 . 99	6. 96	34.071	26.692	138.8	0.638	1 .79	26.3	52 . 7	2.53	34.0	0.00			302	
319		6. 82	6. 79	34.084	26.726	135.8	0.664	1 . 60	23. 4	55 .9	2 .61	35.0	0. 00			321	204
377		6.26	6.23	34.119	26.828	126.6	0.740	1 .07	15.5	66 . 6	2 . 86	37 .9	0.00			379	203
400	ISL	6.13	6.09	34.140	26.861	123.6	0.769	0.91	13.1	69. 9	2 .94	38.7	0.00			403	
437		5.96	5 .92	34.177	26.912	119.2	0.814	0. 69	9. 9	74.7	3.05	39.7	0 . 00			440	202
500	ISL	5 .63	5 .59	34.236	27.000	111.4	0.886	0. 44	6 . 3	82 .0	3.17	41.0	0 . 00			503	
510		5.58	5.54	34.245	27.014	110.2	0.897	0. 40	5 . 7	83 .2	3.19	41.2	0 . 00			513	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 1CI. 9 N	120 55 .2 W	14/10/95	1816	UTC	3827 m	270	04 kn	310 06 07	1	1017.2 mb	18,.9 C	16 ,.0 C	36m 01	2/8	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 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ L	PRES db	SAMP
0	ISL	18.54	18.54	33.444	23 . 949	394.9	0.000	5 .45	101.7	1 .3	0.28	0 . 1	0.00	0.17	0.05	0	
1		18.59	18.59	33.445	23.937	396.1	0.004									1	223
1	A	18.54	18.54	33.444	23.949	395.0	0.004	5 .45	101.7	1 .3	0.28	0 . 1	0.00	0.17	0.05	1	222
9		18.25	18.25	33.440	24.018	388. 7	0.035			1 .3	0.28	0 . 1	0. 00	0.17	0.06	9	221
10	ISL	18.24	18.24	33.440	24.020	388.5	0.039	5 .46	101.3	1 .3	0 . 28	0 . 1	0.00	0.17	0.06	10	
20	A	18.19	18.19	33.437	24.031	387.8	0.078	5 . 48	101.6	1 .3	0 . 28	0 . 1	0. 00	0.18	0.06	20	220
30		18,12	18.11	33.435	24.047	386.6	0.117	5 .48	101.4	1 .3	0.28	0 . 1	0.00	0.20	0.07	30	219
44	A	15.33	15 .32	33.392	24.663	328.2	0. 167	6.03	105.7	1 .9	0.36	0.6	0.04	0 .62	0. 53	44	218
54		13,40	13.39	33.281	24.984	297.8	0.198									54	217
50	ISL	14.20	14.19	33.332	24.859	309.7	0. 186	5.82	99.6	2.7	0.48	1 .9	0.36	1.16	0.55	50	
55		13.34	13.33	33.298	25.009	295 .4	0.201	5.53	93.0	3.3	0.60	3.4	0.53	1 .34	0.56	55	216
62		12.39	12.38	33.332	25.222	275.3	0.221	5.11	84.2	6.8	0.73	6.4	0.18	0.36	0.30	62	215
70	A	11,85	11 .84	33.455	25.420	256.6	0.242	4.57	74.5	10.4	1 .08	12.1	0.04	0. 48	0.34	70	214
75	ISL	11.38	11 .37	33.499	25.540	245.2	0.255	4.30	69.5	12.8	1 .23	14.6	0.03	0.33	0.26	75	
82		10.81	10.80	33.532	25 .668	233. 1	0.272	4. 04	64.5	15.5	1 .35	16.7	0,02	0,07	0.14	82	213
93	A	10.58	10.57	33.533	25.710	229.4	0.297	4.00	63.5	16.1	1 .38	17.2	0.02	0.08	0.16	93	212
100	ISL	10,35	10.34	33.567	25.776	223.2	0.313	3.88	61 .3	17.4	1.45	18.3	0.02	0.06	0.14	100	
111		9. 9 5	9.94	33.638	25.899	211.6	0.337	3.63	56.9	20. 1	1 .59	20.4	0.02	0.03	0.09	1 1 1	21 1
125	ISL	9.56	9.55	33,700	26.013	201 .1	0.366	3.36	52,2	23.0	1 .72	22.5	0.01	0.02	0.07	126	
129	A	9.45	9. 44	33.720	26.046	198.0	0.374	3.28	50.9	23.9	1 . 76	23. 1	0.01	0.02	0. 07	130	210
144		8.88	8.86	33.836	26.228	180.9	0.402	2.99	45 .8	28.3	1 .92	25 .3	0.01	0.01	0.05	145	209
150	ISL	8.77	8.75	33.862	26.266	177.4	0.413	2 .93	44. 8	29.3	1 .95	25.7	0. 01	0. 01	0.05	151	
170		8.54	8.52	33.914	26.343	170.4	0.448	2 .84	43.2	31 .8	2 . 02	26 .7	0. 01	0.00	0.05	1 71	208
200		7.97	7.95	33.984	2 6.484	157.4	0.497	2 .69	40.4	37.2	2.13	28.6	0. 00	0.00	0 .04	201	207
229		7.66	7. 64	34 . 034	26.568	149.7	0.541	2 .35	35 . 1	42 .3	2.29	30.5	0.00			230	206
250	ISL	7.59	7.57	34.087	26.620	145.1	0.572	1 . 96	29.2	45 .9	2 .43	31.7	0.00			251	
267		7.53	7. 50	34.124	2 6.658	141.8	0.597	1 .66	24.7	48.9	2 .54	32 .7	0.00			269	205
300	ISL	7.12	7 . 09	34.127	2 6,719	136.4	0.643	1 .42	20.9	54.8	2.67	34.5	0.00			302	
318		6.86	6.83	34. 1 19	26.748	133.7	0.667	1 .35	19.8	57.9	2.72	35 .4	0.00			320	204
377		6.33	6.30	34.148	26,842	125.3	0.743	0.94	13.6	67.5	2.92	37.9	0.00			379	203
400	ISL	6.18	6.14	34. 170	26.879	122.1	0.772	0.79	11.4	71 .0	2 .99	38.7	0.00			403	
438		5 .97	5.93	34.211	26.938	116.8	0.817	0.57	8.2	76.3	3.10	39.8	0.00			441	202
500	ISL	5 .69	5 .65	34.267	27.017	109.8	0.887	0.38	5.4	82 .9	3.19	41.0	0 .00			503	
518		5 .61	5.57	34.283	27.040	107.9	0.907	0.33	4.7	84.8	3.21	41.3	0. 00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 951C) STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 5CI. 8 N	121 35 . 4 W	14/10/95	2301	UTC	4104 m	200	03 kn	290 05 Of1	0	1016.3 mb	20 . 0 C	17. 0 C	43m 01	0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/ I	OXY PCT	SI03 uM/ I	P04 U«/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/ I	PRES db	SAMP
0	ISL	19.00	19.00	33.250	23.685	420. 1	0. 000	5 .45	102 .5	2 .2	0.26	0.0	0 . 00	0 . 09	0. 02	0	
2		19.00	19.00	33.250	23.685	420. 1	0. 008	5.45	102.5	2 .2	0.26	0 . 0	0.00	0. 09	0. 02	2	220
2		18.86	18.86	33.246	23.718	417.1	0 .008									2	221
10	ISL	18.72	18.72	33.237	23.746	414.6	0.042	5 . 46	102 . 1	2.2	0.27	0.0	0.00	0.10	0.03	10	
15		18.51	18.51	33.228	23.792	410.5	0.062	5 .46	101.7	2 .2	0.27	0.0	0.00	0.10	0 . 03	15	219
20	ISL	18.52	18.52	33.232	23.792	410.6	0.083	5 . 46	101.7	2 .2	0.27	0.0	0.00	0.10	0. 03	20	
30	ISL	18.53	18.52	33.240	23.797	410.5	0.124	5.45	101.6	2.1	0.26	0.0	0.00	0.11	0.04	30	
31		18.53	18.52	33.241	23.797	410.5	0.128	5 .45	101.6	2 . 1	0.26	0.0	0.00	0.11	0 .04	31	218
45		18.55	18.54	33.253	23.802	410.5	0.185	5 . 44	101.4	2. 1	0.26	0.0	0.00	0.13	0 .04	45	217
50	ISL	17.98	17.97	33.327	23.999	391 .9	0.206	5 .62	103.7	2.3	0.24	0.0	0.00	0.16	0.05	50	
60		16.60	16.59	33.483	24.447	349. 4	0.243	5 . 98	107.5	2.7	0.20	0.0	0.00	0.22	0.08	60	216
74		15.25	15.24	33.487	24.754	320. 4	0.289	5 .96	104.3	2.8	0.21	0.0	0. 00	0.27	0.14	74	215
75	ISL	15.20	15.19	33.486	24.765	319.5	0.293	5 . 96	104.2	2.8	0.21	0.0	0.00	0.27	0.14	75	
85		14.79	14.78	33.477	24.847	311.9	0.324	5 . 90	102 .3	2.9	0.23	0.0	0,00	0.27	0.19	85	214
95		14.20	14.19	33.494	24.985	298.9	0.355	5 . 79	99.2	3. 1	0.27	0.3	0. 05	0.31	0.23	95	213
100	ISL	13.50	13.49	33.383	25.044	293.4	0.370	5 .69	96 .0	3.7	0.36	1 .2	0. 08	0.29	0.22	100	
106		12.60	12.59	33.238	25.110	287.1	0.387	5.56	92.0	4.7	0.48	2.6	0.10	0.25	0.21	106	212
1 16		11.56	11.55	33.141	25.230	275.6	0.415	5.38	87.0	6.4	0.65	5 .4	0.02	0.16	0.16	1 16	211
124		11 .37	1 1 .35	33.401	25.467	253.3	0.436	4 .85	78.3	9.6	0.90	9.9	0.02	0.09	0.12	124	210
125	ISL	11 .34	11 .32	33.420	25 .487	251.4	0.439	4. 84	78. 1	9.8	0. 91	10.2	0.02	0.09	0.12	125	
139		10.83	10,81	33.572	25.697	231 .7	0.473	4.66	74.4	11.8	1 .02	12.2	0.01	0.05	0. 09	140	209
150	ISL	10.10	10.08	33.635	25.873	215.1	0. 497	4.36	68.5	15.6	1 .24	15.6	0.00	0.03	0.07	151	
165		9.12	9.10	33.695	26.080	195 .4	0.528	3.91	60.2	21 .3	1 .55	20.4	0.00	0.01	0.04	166	208
194		8.50	8 . 48	33.827	26.281	176.7	0.582	3.36	51.0	28. 1	1 . 83	24 .6	0.00	0 .00	0.04	195	207
200	ISL	8.37	8.35	33. 853	26.321	172 .9	0. 592	3.31	50. 1	29.5	1 . 86	25 .2	0.00			201	
229		7.77	7.75	33.956	26.491	157.1	0.640	3.12	46. 6	35 .9	2 .00	27.4	0.00			230	206
250	ISL	7.43	7.41	33.986	26.564	150.4	0.673	2 .86	42 .4	40. 5	2.12	29.1	0.00			251	
269		7.17	7.14	34.000	26.611	146.0	0.701	2 .59	38.2	44 .6	2.23	30.6	0 . 00			270	205
300	ISL	6 .85	6.82	34.034	26 .682	139.6	0. 745	2.10	30.7	51.6	2 .44	33. 1	0. 00			302	
319		6.69	6.66	34.055	26.720	136.2	0.771	1 . 80	26.2	55 .6	2.57	34.5	0.00			321	204
378		6.33	6. 30	34,117	26.817	127.7	0. 849	1.16	16.8	64.5	2 .82	37. 1	0.00			380	203
400	ISL	6.25	6.21	34. 150	26.854	124.5	0. 877	0.95	13.7	67.9	2.91	37.9	0.00			402	
439		6.10	6. 06	34.204	26.916	119.0	0.924	0. 64	9.2	73.7	3.05	39.1	0.00			442	202
500	ISL	5 .74	5 .70	34.232	26.984	113.1	0. 995	0. 47	6 . 7	80.5	3.16	40.4	0.00			503	
513		5 . 66	5 .62	34.238 D	26.998	111.8	1.010	0. 43	6.1	82 .0	3.18	40.7	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 30.8 N	122 15 .4 W	15/10/95	0504 UTC	4156 m	180 05 kn			1018.4 mb	19..5 C	18..0 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 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	19.04	19.04	33.228	23.658	422 .6	0.000	5 .40	101.6	2.2	0.26	0. 1	0.00	0.09	0.02	0	
1		19.04	19.04	33.228	23.658	422 .7	0.004	5.40	101.6	2 .2	0.26	0. 1	0 .00	0.09	0.02	1	220
10	ISL	18.95	18.95	33.221	23.676	421 .3	0.042	5.41	101.6	2.2	0.26	0.0	0. 00	0.09	0. 03	10	
15		18.89	18.89	33.217	23 .688	420.3	0.063	5.41	101.5	2 .2	0. 26	0.0	0.00	0 .09	0.03	15	219
20	ISL	18.88	18.88	33.218	23.692	420.2	0.084	5.41	101.5	2.2	0.26	0.0	0.00	0.09	0.03	20	
30		18.87	18.86	33.216	23.693	420.4	0.126	5 .42	101.6	2.1	0.26	0.0	0. 00	0.10	0. 02	30	21 8
45		18.80	18.79	33.218	23.713	419.0	0. 189	5.42	101.5	2 . 1	0.26	0.0	0.00	0.09	0 .03	45	217
50	ISL	18.27	18.26	33.280	23.892	402.1	0.210	5.57	103.3	2.2	0.25	0.0	0.00	0.12	0.04	50	
60		16.99	16.98	33.420	24.307	362.7	0.248	5.88	106.5	2 .5	0.23	0.0	0.00	0.18	0.07	60	216
75		15.54	15.53	33.472	24.679	327.7	0. 300	5 .93	104.4	2.7	0.23	0. 1	0.00	0.23	0.13	75	215
85		15.15	15.14	33.454	24.751	321 .1	0.332	5.91	103.2	3.0	0.23	0. 1	0.00	0. 24	0.18	85	214
95		14.92	14.91	33.510	24.845	312.4	0.364	5 . 86	101.9	2.9	0.22	0.1	0.00	0.26	0.21	95	213
100	ISL	14.93	14.92	33.563	24.883	308.9	0.379	5 .79	100.7	2.9	0.23	0. 1	0.02	0.24	0.20	100	
105		14.94	14. 92	33.616	24.922	305.4	0.395	5.71	99.4	2 .9	0.24	0. 1	0.05	0.21	0 .20	105	212
115		15.17	15.15	33.799	25.014	297. 1	0.425	5.55	97.2	2 .9	0.23	0. 2	0.11	0.19	0.18	115	21 1
125		15.16	15.14	33.875	25.075	291 .6	0.454	5 .45	95 .4	3. 1	0.25	0.4	0.15	0.17	0.19	125	210
140		14.16	14.14	33.851	25 .271	273. 1	0.497	5 .20	89.2	4 .4	0.41	3 . 1	0.03	0.11	0.16	141	209
150	ISL	13.25	13.23	33.774	25.398	261 . 1	0.523	4. 99	84.0	6.4	0. 60	6.0	0 .02	0. 08	0.13	151	
164		1 1 .92	11.90	33.670	25.576	244.2	0.559	4. 68	76.5	10.0	0. 89	10.4	0.01	0.04	0.08	165	208
194		9. 69	9. 67	33.667	25.967	206.9	0.626	4.11	64. 0	18.2	1 . 40	18.2	0.00	0.01	0 . 03	195	207
200	ISL	9. 43	9.41	33.688	26.026	201.4	0.639	3.99	61.8	19.8	1 .48	19.4	0.00			201	
229		8.61	8.59	33.810	26.251	180.2	0. 694	3.52	53.6	27.0	1 . 79	23.9	0.00			230	206
250	ISL	8.27	8.24	33.877	26.356	170.5	0.731	3.36	50.8	30.4	1 . 88	25.4	0.00			251	
268		8.05	8. 02	33.924	26.426	164.1	0.761	3.24	48 .7	33.2	1 .94	26.4	0 .00			269	205
300	ISL	7.55	7.52	33.992	26.552	152.4	0.812	2 .75	40. 9	40.8	2.17	29.4	0.00			302	
317		7.30	7.27	34.020	26.610	147.1	0.837	2 .46	36.4	45 . 1	2 .30	31 .0	0.00			319	204
377		6.78	6.75	34.079	26.728	136.4	0.922	1 .63	23.8	56.4	2 .65	35 .0	0 .00			379	203
400	ISL	6.50	6 .46	34.090	26.774	132.2	0.953	1 .40	20.3	61 .2	2 . 77	36. 4	0.00			402	
437		6. 06	6.02	34.108	26.845	125.6	1 .001	1.10	15.8	68.8	2 .93	38.4	0.00			440	202
500	ISL	5 .65	5 .61	34.174	26.949	116.2	1 .077	0.68	9.7	79.3	3.13	40.6	0.00			503	
524		5 . 49	5 .45	34.200	26.989	112.6	1.104	0.52	7.4	83.3	3.20	41.4	0.00			527	201

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 93 1 10

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 1CI. 5 N	122 55 ,.4 W	15/10/95	1032 UTC	4270 m	190 06 kn			1018.5 mb	19..8 C	18..3 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 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/l	PRES db	SAMP
0	ISL	19.65	19.65	33.469	23.687	420.0	0.000	5 .36	102.2	2 .3	0.22	0.2		0 . 08	0 . 03	0	
1		19.65	19.65	33.469	23.687	420.0	0.004	5 .36	102.2	2.3	0.22	0.2		0. 08	0.03	1	220
10	ISL	19.66	19.66	33.472	23.687	420.3	0.042	5 . 34	101.8	2 .4	0.22	0.2		0.09	0 . 03	10	
16		19.66	19.66	33.475	23.689	420.3	0.067	5 .33	101.6	2 . 4	0.22	0.2		0 . 09	0.03	1 6	21 9
20	ISL	19.65	19.65	33.471	23.689	420.5	0.084	5.33	101.6	2 . 4	0.22	0.2		0. 09	0 . 03	20	
30		19.61	19.60	33.458	23.690	420 .8	0.126	5 .34	101.7	2 .4	0.22	0.2		0 . 08	0 . 03	30	218
45		19.54	19.53	33.487	23.731	417.4	0.189	5 .39	102. 5	2 . 4	0.21	0.2		0.11	0. 03	45	217
50	ISL	18.76	18.75	33.570	23.992	392 .6	0.209	5 .58	104.6	2. 5	0.19	0.2		0.12	0.04	50	
59		17.23	17.22	33.734	24.492	345 .2	0.242	5 .91	107.7	2 . 8	0.16	0.2		0.14	0.05	59	216
75	ISL	16.24	16.23	33.746	24.732	322.7	0.296	5 .84	104.4	2.8	0.18	0.2		0.19	0. 08	75	
76		16.18	16.17	33.735	24.737	322.2	0.299	5 . 84	104.3	2 .8	0.18	0.2		0.19	0 . 08	76	215
84		15.17	15.16	33.591	24.852	311.4	0.324	5 . 91	103.3	2 .9	0.19	0.2		0.23	0.12	84	214
94		15.06	15.05	33.647	24.920	305 .3	0.355	5 .83	101.7	2.9	0.19	0.2		0.25	0.20	94	213
100	ISL	15.03	15.01	33.692	24.961	301 .5	0.373	5 .78	100.8	2 .9	0.19	0.2		0.26	0.23	100	
104		15.02	15.00	33.723	24.987	299.2	0.385	5 .75	100.3	2 . 9	0.19	0.2		0.26	0.24	104	212
1 1 5		15.05	15 .03	33.798	25.039	294.6	0.418	5 .72	99. 9	2 .9	0.19	0.2		0.23	0.22	1 1 5	21 1
124		14.91	14.89	33.856	25.114	287.7	0.444	5.56	96 . 9	3. 1	0.21	0.3		0.21	0.20	124	210
125	ISL	14.89	14.87	33.862	25.123	286.9	0.447	5.55	96.6	3 . 1	0.21	0. 4		0.20	0.20	125	
138		14.38	14.36	33.897	25.260	274.2	0. 484	5 .37	92.6	3.7	0.31	1 .9		0.13	0.17	139	209
150	ISL	13.31	13.29	33.820	25 ,422	258.9	0.516	5 .22	88. 0	5 .2	0 . 47	4.4		0.08	0.14	1 51	
163		12.03	12.01	33.727	25.599	241.9	0.548	5 .05	82 .8	7. 6	0.67	7.7		0. 05	0.10	164	208
195		10.23	10.21	33.726	25.922	211.4	0.621	4.42	69.7	15.2	1.18	15.5		0.01	0.03	196	207
200	ISL	9. 97	9. 95	33.733	25.972	206.7	0.631	4.31	67.6	16.7	1 .26	16.7				201	
228		8 . 79	8. 77	33.798	26.214	183.8	0.686	3.76	57.5	24.7	1 .64	22 .5				229	206
250	ISL	8.34	8.31	33.872	26.341	171.9	0.725	3.43	51.9	29.5	1 .81	25 .0				251	
268		8.11	8.08	33.929	26.421	164.6	0.755	3.20	48.2	33. 1	1 . 91	26.5				269	205
300	ISL	7.63	7.60	33.990	26.539	153.7	0.806	2 .78	41.4	39.9	2.11	29.3				302	
318		7.37	7.34	34.013	26.594	148.6	0.833	2 .54	37.6	43.9	2 .22	30.7				320	204
377		6.58	6.55	34.060	26. 740	135.2	0.917	1 . 69	24.6	57.8	2.58	35 .4				379	203
400	ISL	6.37	6.33	34.081	26.784	131.1	0.948	1 .43	20.7	62.3	2 .69	36.7				402	
438		6.10	6.06	34. 118	26.848	125.4	0.997	1 .08	15.5	68 .9	2 . 85	38 . 4				441	202
500	ISL	5 . 74	5 . 70	34.181	26.943	116.9	1 .072	0.67	9.6	77 . 9	3.02	40 .4				503	
513		5 . 66	5 .62	34.194	26. 964	115.0	1 .087	0.59	8. 4	79. 8	3.06	40. 8				516	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
29 5 .0 N	123 34 9 W	15/10/95	1811	UTC	4126 m	270	04 kn	270 02 05	2	1019.6 mb	20 5 C	1 7 8 C	45m 01	8/8	CC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN «l/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	19.20	19.20	33.254	23.638	424.6	0.000	5.39	101.7	2.3	0.27	0.0	0.00	0.09	0.02	0	
1		19.31	19.31	33.254	23.610	427.3	0.004									1	223
2	A	19.20	19.20	33.254	23.638	424.7	0.009	5.39	101.7	2.3	0.27	0.0	0.00	0.09	0.02	2	222
10	ISL	19.09	19.09	33.250	23.663	422.6	0.042	5.40	101.7	2.3	0.26	0.0	0.00	0.10	0.02	10	
13		19.04	19.04	33.248	23.674	421.6	0.055	5.40	101.6	2.3	0.26	0.0	0.00	0.10	0.02	13	221
20	ISL	19.00	19.00	33.245	23.682	421.1	0.085	5.40	101.5	2.3	0.25	0.0	0.00	0.10	0.03	20	
25	A	18.99	18.99	33.244	23.684	421.1	0.106	5.40	101.5	2.3	0.25	0.0	0.00	0.10	0.04	25	220
30	ISL	18.97	18.96	33.243	23.689	420.8	0.127	5.40	101.5	2.3	0.25	0.0	0.00	0.11	0.04	30	
40		18.94	18.93	33.240	23.695	420.6	0.169	5.41	101.6	2.3	0.26	0.0	0.00	0.15	0.04	40	219
50	ISL	18.49	18.48	33.650	24.121	380.3	0.209	5.64	105.3	2.4	0.21	0.0	0.00	0.18	0.06	50	
55	A	18.15	18.14	33.841	24.351	358.5	0.227	5.75	106.8	2.4	0.18	0.0	0.00	0.19	0.07	55	218
70		16.66	16.65	33.675	24.581	337.0	0.279	5.75	103.6	2.5	0.21	0.0	0.00	0.23	0.11	70	217
75	ISL	16.48	16.47	33.716	24.654	330.2	0.296	5.81	104.3	2.6	0.19	0.0	0.00	0.24	0.12	75	
77		16.42	16.41	33.734	24.682	327.6	0.303	5.84	104.8	2.7	0.18	0.0	0.00	0.25	0.12	77	216
87	A	15.74	15.73	33.708	24.816	315.0	0.335	5.85	103.5	2.8	0.18	0.0	0.00	0.26	0.17	87	215
97		15.57	15.56	33,766	24.899	307.4	0.366									97	214
97		15.56	15.55	33.762	24.898	307.5	0.366	5.81	102.5	2.7	0.18	0.0	0.00	0.25	0.25	97	213
100	ISL	15.48	15.46	33.774	24.926	305.0	0.375	5.79	102.0	2.7	0.18	0.0	0.01	0.25	0.24	100	
107		15.36	15.34	33.817	24.985	299.5	0.396	5.71	100.3	2.7	0.19	0.0	0.02	0.25	0.23	107	212
117	A	15.57	15.55	33.964	25.052	293.5	0.426	5.50	97.1	2.5	0.23	0.2	0.14	0.20	0.19	117	211
124		15.35	15.33	33.959	25.098	289.4	0.446	5.48	96.4	2.8	0.23	0.3	0.14	0.16	0.17	124	210
125	ISL	15.32	15.30	33.962	25.107	288.6	0.449	5.46	96.0	2.9	0.24	0.4	0.13	0.15	0.17	125	
138		14.71	14.69	33.995	25.265	273.8	0.486	5.16	89.6	4.0	0.37	2.7	0.02	0.10	0.12	139	209
150	ISL	13.68	13.66	33.924	25.427	258.5	0.518	5.03	85.5	5.4	0.51	4.8	0.01	0.06	0.09	151	
160	A	12.75	12.73	33.848	25.555	246.3	0.543	4.95	82.5	6.8	0.63	6.7	0.01	0.04	0.08	161	208
199		10.41	10.39	33.717	25.885	215.1	0.633	4.48	70.9	14.2	1.14	14.4	0.00	0.01	0.03	200	207
200	ISL	10.35	10.33	33.719	25.897	214.0	0.635	4.46	70.5	14.5	1.16	14.6	0.00			201	
228		8.98	8.96	33.804	26.189	186.3	0.691	4.03	61.8	22.7	1.54	20.7	0.00			229	206
250	ISL	8.42	8.39	33.868	26.326	173.4	0.731	3.78	57.3	27.4	1.71	23.3	0.00			251	
268		8.14	8.11	33.914	26.404	166.2	0.761	3.56	53.6	30.8	1.82	24.8	0.00			269	205
300	ISL	7.71	7.68	33.985	26.524	155.2	0.813	2.98	44.5	37.9	2.07	27.9	0.00			302	
320		7.50	7.47	34.020	26.582	149.9	0.843	2.60	38.6	42.5	2.22	29.8	0.00			322	204
377		6.87	6.83	34.081	26.718	137.5	0.925	1.71	25.0	55.1	2.62	34.3	0.00			379	203
400	ISL	6.67	6.63	34.107	26.765	133.2	0.956	1.42	20.7	59.5	2.74	35.7	0.00			402	
438		6.37	6.33	34.144	26.834	127.0	1.006	1.04	15.1	66.3	2.90	37.6	0.00			441	202
500	ISL	5.83	5.79	34.168	26.922	119.0	1.082	0.71	10.2	76.1	3,10	39.9	0.00			503	
513		5.72	5.68	34.173	26.940	117.4	1.097	0.64	9.1	78.2	3.14	40.4	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
34 23..3 N	122 14.8 W	26/10/95	1745 UTC	17 m	02	1148 - 1747 PST	1 153 PST	1745 PST	217.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 ufl/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
2	16.26	33.245	24 .340	5 .73	102 .2	1 . 9	0.33	0.0	0.00	0.26	0.09	83 . A	0.95	0. 95	0.95	0. 07
11	16.26	33.244	24.339	5 .73	102.2	1 . 9	0.32	0.0	0.00	0.26	0.10	37.	5.2	5 . 2	5 .2	0. 08
21	16.23	33.245	24.347	5 .74	102.3	1 .6	0.32	0.0	0.00	0.27	0.11	1 5 .	5 .0	4. 6	4. 8	0.08
27	15 .70	33.230	24.456	5 .83	102.8	1 .6	0.34	0.0	0.00	0.40	0.19					
33	15.30	33.200	24.521	5 .87	102.7	2.2	0.34	0.0	0.00	0.56	0.26	5 . 1	5 . 1	5 .3	5 .2	0.07
45	13.66	33.104	24.794	5.96	100.8	3.4	0.43	0.6	0.09	0.73	0.39	1 .7	3.6	2.9	3.2	0.04
52	13.12	33.162	24.948	5.68	95 .0	4.8	0.60	3.6	0.13	0.55	0.39					
61	12.86	33.193	25.023	5.55	92.3	5 . 5	0.68	4.9	0.07	0. 47	0.36	0.41	0.26	0.26	0.26	0. 03

RV NEW HORIZON CALCOFI CRUISE '9510 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 9.3 N	121 9.3 W	24/10/95	1758 UTC	18 m	04	1153 - 1755 PST	1149 PST	1750 PST	290.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 »l/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/I	LIGHT PCT	UPTAKE <mg C/m3) 1	2	MEAN	DARK
1	16.65	33.429	24.391	5.72	102.9	0.6	0.31	0.0	0.00	0.32	0.12	92 . A	3.9	3.9	3.9	0.13
10	16.57	33.429	24.410	5 .72	102 .8	0. 6	0.30	0.0	0.00	0.34	0.10	43 .	7. 6	7.6	7.6	0.16
22	16.54	33.426	24.415	5 .72	102 .7	0.6	0.29	0.0	0.00	0.32	0.11	1 5 .	5 . 9	5.6	5 .8	0.15
36	16.44	33.413	24.429	5 .71	102.3	0.5	0.30	0.0	0.00	0.34	0.13	4 .6	3.4	3.5	3.5	0.11
47	14.42	33.327	24.809	5.85	100.6	0.4	0.44	0.6	0.16	2.07	0 . 64	1 .8	5 . 3	4.8	5 .0	0. 35
55	12.27	33.426	25.318	4.60	75.7	9.0	1 .05	11.1	0.07	0.30	0.25					
64	10.87	33.466	25.606	4.23	67.6	14.2	1 .30	15.3	0.03	0.09	0.14	0. 43	0.01	0.02	0.01	0.03

RV NEW HORIZON CALCOFI CRUISE '?5 1 0 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 49.9 N	1 23 55.0 W	25/10/95	1810 UTC	32 m	01	1158 - 1755 PST	1200 PST	1757 PST	90.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.73	33.516	23.956	5 . 40	101.2					0.11	0 . 03	91 . A	1 . 4	1 . 4	1 . 4	0 . 04
1 9	18.72	33.516	23.960	5 .39	101.0	2 .2	0.23	0.0	0.00	0.11	0 . 03	40.	1 . 7	1 .8	1 . a	0.05
30	18.71	33.513	23.960	5 . 40	101.1	2 .2	0.23	0.0	0.00	0.11	0 . 03					
40	18.72	33.515	23.960	5.39	101.0	2 .2	0.22	0.0	0.00	0.11	0.03	1 5 .	1 . 1	0 . 95	1 . 0	0. 06
52	18.74	33.523	23.961	5 . 40	101.2	2 .2	0.23	0.0	0 .00	0.12	0.03					
61	18.76	33.536	23.967	5 . 40	101.2	2.2	0. 22	0.0	0 . 00	0.13	0.03	5 .4	0.55	0.58	0.56	0. 05
74	16.26	33.588	24.606	5 .94	106.1	2 . 5	0.20	0.0	0. 00	0.17	0.07					
83	15.48	33.581	24.776	5 .85	102.9	2 .6	0.22	0.0	0.00	0.24	0.14	1 .9	0.32	0.26	0.29	0 . 05
94	15.33	33.725	24.921	5 .82	102.2	2 . 5	0.18	0.0	0.00	0.28	0.23					
104	15.06	33.759	25.006	5 . 78	100.9	2.6	0.19	0.0	0.00	0.24	0.25					
1 14	14.59	33.709	25 .069	5 . 70	98 . 6	2 . 9	0.22	0.0	0.07	0.22	0.24	0. 42	0 . 05	0.05	0.05	0.01

RV NEW HORIZON CALCOFI CRUISE '?510 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 53 ,2 N	120 8.7 W	23/10/95	1743 UTC	24 m	03	1147- 1750 PST	1145 PST	1747 PST	771 .2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/I	PHAEO ug/I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.72	33.504	24.196	5 . 68	104.4	1 .8	0.23	0 . 1	0.00	0. 40	0.11	88. A	13.4	13.4	13.4	0. 08
8	17.55	33.502	24.235	5 .68	104.0	1 .6	0.23	0 . 1	0.00	0. 42	0.13					
1 5	17.27	33.500	24.301	5 .66	103. 1	1 . 7	0.25	0.3	0.02	0.63	0.20	38.	19.7	27.5	23.6	0.13
22	17.11	33.500	24.339	5 .64	102 .4	1 . 9	0.28	0.5	0.03	0. 74	0.23					
30	17.02	33.503	24.363	5 .61	101.7	2 .0	0.31	0.7	0.04	0. 84	0.25	1 5 .	16.9	16.1	16.5	0.12
39	15 .99	33.521	24.615	5.25	93.3	4.6	0.53	3.5	0.10	0.87	0. 40					
46	13.34	33 . 564	25.214	4. 49	75 .6	10.7	0 .98	10.0	0.17	0.49	0.36	5 . 3	4 .0	4 . 1	4 . 1	0.07
54	11.69	33.612	25.571	3.92	63. 8	15.1	1 .32	14.8	0.15	0.19	0.23					
63	11.45	33.639	25.636	3.71	60. 1	16.6	1.41	16.1	0.14	0.13	0.21	1 . 8	0. 40	0 . 42	0.41	0. 06

A) INCUBATION LIGHT INTENSITIES WERE 97, 41 , 15, 5.7, 1.8,. 0.42 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 9510 — STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 14.8 N	121 26.8 W	22/10/95	1828 UTC	13 n	04	1155 - 1754 PST	1150 PST	1745 PST	453.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 u«/I	N03 uM/l	N02 uM/I	CHL-A ug/l	PHAEO ug/I	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.50	33.513	24.491	5.75	103.2	1.1	0.29	0.0	0.00	0.66	0.19	89. A	6.6	6.6	6.6	0.12
7	16.51	33.513	24.489	5.75	103.2	1.0	0.31	0.0	0.00	0.63	0.21	44.	16.9	17.0	17.0	0.15
16	16.45	33.512	24.502	5.76	103.3	0.9	0.29	0.0	0.00	0.68	0.22	15.	15.8	14.8	15.3	0.17
25	16.32	33.477	24.505	5.77	103.2	1.1	0.33	0.2	0.02	1.03	0.29	5.2	11.2	11.9	11.5	0.10
33	12.31	33.216	25.146	5.46	89.8	4.9	0.69	4.2	0.34	1.49	0.63	2.0	6.2	5.2	5.7	0.12
47	11.44	33.342	25.407	4.68	75.6	10.8	1.03	11.1	0.10	0.26	0.25	0.39	0.15	0.16	0.16	0.04

RV NEW HORIZON — CALCOFI CRUISE 9510 — STATION 83 1 10

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
31 55.6 N	124 10.4 W	21/10/95	1746 UTC	29 m	01	1157 - 1802 PST	1202 PST	1757 PST	127.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/I	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
2	19.80	33.824	23.918	5.28	101.1	2.6	0.19	0.1	0.00	0.14	0.04	90. A	0.64	0.64	0.64	0.03
17	19.81	33.827	23.919	5.27	101.0	2.6	0.19	0.0	0.00	0.14	0.04	41.	2.3	2.2	2.2	0.04
27	19.81	33.824	23.917	5.28	101.1	2.0	0.20	0.0	0.00	0.14	0.04					
34	19.82	33.826	23.916	5.27	101.0	2.6	0.19	0.0	0.00	0.14	0.04	17.	1.8	1.7	1.8	0.05
47	19.80	33.831	23.926	5.28	101.1	2.6	0.18	0.0	0.00	0.14	0.04					
57	19.44	33.815	24.007	5.42	103.1	2.5	0.19	0.0	0.00	0.23	0.08	4.9	1.5	1.6	1.6	0.03
65	17.65	33.674	24.345	5.78	106.2	2.7	0.19	0.0	0.00	0.25	0.11					
76	16.56	33.571	24.524	5.77	103.7	2.7	0.22	0.0	0.00	0.27	0.16	1.8	0.72	0.70	0.71	0.04
85	16.34	33.681	24.660	5.76	103.1	2.7	0.20	0.0	0.00	0.28	0.18					
94	16.49	33.875	24.774	5.79	104.1	2.7	0.15	0.0	0.00	0.26	0.16					
101	16.24	33.868	24.827	5.77	103.2	2.3	0.17	0.0	0.00	0.23	0.18	0.48	0.11	0.10	0.10	0.02

RV NEW HORIZON — CALCOFI CRUISE ?510 — STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.5 N	1 19 39.8 W	19/10/95	1824 UTC	23 m	02	201 - 1747 PST	1144 PST	1747 PST	1259.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	S IGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/I	LIGHT PCT	UPTAKE mg C/m3) 1	2	MEAN	DARK
1	18.01	33.528	24.144	5.56	102.8	1.0	0.27	0.0	0.00	0.44	0.16	94. A	9.7	9.9	9.8	0.06
6	17.87	33.526	24.176	5.61	103.4	0.9	0.28	0.0	0.00	0.46	0.16					
13	17.57	33.531	24.253	5.75	105.4	0.6	0.25	0.0	0.00	0.66	0.24	42.	14.9	15.8	15.3	0.16
20	16.94	33.534	24.405	5.95	107.7	0.4	0.25	0.0	0.00	1.26	0.37					
28	15.40	33.536	24.758	5.57	97.8	1.5	0.55	2.9	0.08	6.61	1.61	15.	59.5	58.3	59.0	0.29
36	13.41	33.550	25.189	4.75	80.1	7.5	0.91	8.6	0.29	1.81	0.69					
45	12.13	33.583	25.466	4.14	68.0	12.9	1.24	14.0	0.27	0.55	0.32	5.0	2.4	2.5	2.5	0.06
53	11.10	33.626	25.689	3.73	59.9	17.1	1.46	17.6	0.13	0.21	0.22					
59	10.60	33.658	25.803	3.51	55.8	19.8	1.59	19.5	0.11	0.08	0.14	1.9	0.18	0.17	0.18	0.06

RV NEW HORIZON — CALCOFI CRUISE J510 — STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TINE	LAN	CIVIL	
32 19.2 N	121 43.2 W	20/10/95	1808 UTC	34 m	01	1153 - 1754 PST	1149 PST	1754 PST	267.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/I	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/l	N02 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE mg C/m3) 1	2	MEAN	DARK
2	17.26	33.186	24.062	5.61	102.0	2.0	0.30	0.0	0.00	0.15	0.04	91 . A	2.9	2.9	2.9	0.05
10	17.10	33.183	24.098	5.61	101.7	2.0	0.30	0.1	0.00	0.14	0.10					
20	16.91	33.209	24.163	5.65	102.0	1.6	0.30	0.0	0.00	0.21	0.09	41.	4.1	4.1	4.1	0.07
30	16.65	33.203	24.219	5.68	102.1	1.7	0.31	0.0	0.00	0.29	0.11					
42	15.73	33.172	24.405	5.84	103.0	1.7	0.32	0.0	0.00	0.42	0.22	15.	4.6	4.3	4.5	0.06
54	13.72	33.064	24.751	6.05	102.4	3.2	0.32	0.0	0.00	0.39	0.28					
66	12.27	33.050	25.026	5.80	95.2	4.3	0.45	1.3	0.15	0.35	0.33	5.1	1.8	1.8	1.8	0.03
77	11.79	33.124	25.174	5.47	88.9	6.1	0.61	4.3	0.04	0.24	0.22					
89	11.45	33.374	25.431	4.94	79.8	9.0	0.85	8.8	0.02	0.13	0.13	1.8	0.26	0.28	0.27	0.02
97	11.31	33.430	25.500	4.83	77.9	10.1	0.91	10.2	0.01	0.09	0.11					
110	10.90	33.579	25.690	4.70	75.2	11.6	0.99	11.9	0.01	0.06	0.09					
122	9.56	33.595	25.931	3.80	59.0	20.3	1.57	20.4	0.00	0.02	0.04	0.41	0.01	0.01	0.01	0.01

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15,5 7, 1.8, 0.42 PERCENT RESPECTIVELY.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25..2 N	117 54.2 W	18/10/95	1836 UTC	26 m	02	1145 - 1748 PST	1137 PST	1744 PST	358.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/I	P04 uM/I	N03 uM/I	N02 uM/I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	19.74	33.490	23.679	5 .50	105.0	2.3	0.21	0.0	0.01	0.31	0.07	94 . A	8 . 8	8.6	8. 7	0 .09
2	19.75	33.491	23.677													
2	19.76	33.491	23.675													
7	19.70	33.488	23.688	5 .52	105.3	1 .9	0.21	0.0	0 .01	0.36	0.06					
15	19.62	33.487	23.709	5 .50	104.8	1 .9	0.21	0.0	0.01	0.39	0.10	41 .	8.6	8.3	8.5	0. 07
25	17.25	33.411	24.238	6.09	110.8	2.3	0.22	0. 1	0.01	0.38	0.14					
34	14.24	33.365	24.875	6.01	103.0	2.7	0.35	0. 1	0.01	0.55	0.43	13 .	7. 1	6 .3	6.7	0.10
44	12 .89	33.424	25.196													
44	12.82	33.427	25.212	5.13	85 .4	6. 1	0.72	5 .2	0.28	0.58	0. 62	7. 4	2 .7	2 .9	2.8	0 . 08
52	11 .93	33.516	25 .452	4.25	69.5	11.6	1.13	12.4	0.07	0.30	0.33					
62	11.59	33.663	25.629	3.26	52 .9	17.2	1 .49	17.2	0.03	0.09	0.15					
70	11.35	33.725	25.722	2 .89	46.7	20.1	1 .67	19.2	0.01	0.04	0.09	1 . 6	0.04	0.03	0.04	0.06
84	11.15	33.763	25.788	2 .74	44. 1	21.5	1 .77	20.5	0. 01	0.03	0.08					
97	10.86	33.790	25.861	2.65	42 .4	23. 1	1 .83	21.5	0.01	0.01	0.07	0.33	-0.01	-0.01	-0. 01	0.03

RV NEW HORIZON CALCOFI CRUISE 9510 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.4 N	119 57.6 W	17/10/95	1817 UTC	24 m	01	1143 - 1747 PST	1145 PST	1748 PST	280.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 uM/ I	P04 uM/l	N03 uM/ I	N02 uM/ I	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
2	19.24	33.459	23.784	5 .43	102.7	2 . 1	0.24	0. 1	0.00	0.19	0.03	88. A	3.3	3.8	3.5	0.05
14	19.23	33.459	23.787	5 .43	102.7	2 .0	0.24	0. 1	0.00	0.19	0.04	41 .	3.9	4. 4	4.2	0.05
31	17.24	33.366	24 .206	5 .71	103.9	2 .2	0.25	0. 1	0. 00	0.44	0.12	14 .	6 . 6	6.9	6 . 7	0.10
46	15.20	33.352	24.660	6.01	105.0	2.6	0. 33	0. 1	0.00	0. 62	0 .30	5 .3	3.8	4 . 8	4.3	0.07
54	14.16	33.428	24.941	5 . 44	93. 1	3.6	0. 50	1 .0	0.11	0.82	0.44					
62	13.20	33.518	25.207	4.53	76.0	7.0	0.85	6 .4	0.28	0.33	0.30	1 . 9	1 . 0	0.75	0.88	0.04
74	12.05	33.555	25.460	4.14	67. 9	11.5	1.11	11.9	0.07	0.18	0.20					
36	10.61	33.563	25.728	3.99	63. 4	16.9	1 .39	17.4	0.02	0.09	0.12	0.41	0. 03	0 .02	0.03	0 .02

RV NEW HORIZON CALCOFI CRUISE '9510 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 24 .8 N	121 59.7 W	16/10/95	1804 UTC	23 m	01	1155 - 1753 PST	1154 PST	1756 PST	276.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/l	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uN/l	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE 'C mg C/m3) 1	2	MEAN	DARK
1	18.26	33.434	24.010	5 .48	101.7	1 .6	0.27	0. 1	0.00	0.19	0 . 05	94 . A	0. 90	1 . 5	1 .2	0 . 03
13	18.24	33.432	24.014	5.49	101.9	1 .7	0.28	0. 1	0.00	0.18	0 . 05	42 .	4 . 5	4.3	4 . 4	0. 05
28	18.01	33.418	24.061	5.50	101.6	1 .5	0.27	0. 1	0.00	0.25	0. 08	15 .	4.0	3. 5	3 . 8	0. 07
45	15.86	33.274	24.454	5 .87	103.9	1 .6	0.31	0. 1	0.00	0.53	0. 36	5 . 0	5 .3	5 .3	5 .3	0.05
52	14.76	33.242	24.671	5 . 95	103.0	2.2	0.36	0.2	0.05	0.74	0. 62					
60	13.99	33.285	24.866	5 .72	97.5	2 . 9	0. 50	1 .8	0. 45	0.86	0. 60	1 . 8	3 . 9	2 .9	3 . 4	0.05
67	12.83	33.316	25.124	5.21	86. 7	6. 1	0.74	6 .4	0. 06	0. 63	0.50					
74	12.36	33.375	25 .261	4.97	81.9	7.5	0. 84	8.2	0 .03	0.21	0.29					
81	11.89	33.398	25.368	4. 73	77.2	9.5	0. 97	10.3	0.02	0.18	0.22	0.45	0.16	0.17	0.17	0 . 02

RV NEW HORIZON CALCOFI CRUISE '9510 STATION 93 26.7

LATITUDE	ILONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL	
32 57..5 N	117 18.3 W	12/10/95	1818 UTC	10 m	04	1130 - 1757 PST	1136 PST	1747 PST	659.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 ml/ I	OXY PCT	SI03 uM/ I	P04 uM/ I	N03 uM/ I	N02 uM/ I	CHL-A ug/ I	PHAEO ug/ I	LIGHT PCT	UPTAKE C mg C/m3) 1	2	MEAN	DARK
2	20.31	33.494	23.533	5 .61	108.3	2 .6	0.16	0.0	0.00	1 .05	0.28	74. A	28.0	18.9	23.4	0.22
5	20.29	33.492	23.537	5 .62	108.4	2.6	0.16	0.0	0.00	0.91	0.25	46.	45 . 0	42 . 8	43.9	0.27
11	17.63	33.415	24.150	5 . 82	106.7	2.9	0.20	0.0	0. 00	1 .38	0.60	18.	39.7	41.0	40 .3	0.27
19	14.60	33.242	24.704	6.18	106.6	3.0	0.33	0. 1	0.00	0.87	0.31	5 . 4	9.8	9.8	9.8	0.07
25	14.12	33.311	24.859	5 . 88	100.5	4 .0	0.41	0.3	0.06	0.84	0.32	2 .2	3.6	3.0	3.3	0.06
36	13.46	33.472	25.119	4 . 67	78. 8	7. 1	0. 78	3 . 1	0.36	0.41	0. 36	0. 40	0.28	0.29	0.28	0.06

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8,. 0.42 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 9510 — STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 11..0 N	118 53.5 W	13/10/95	1756 UTC	22 m	01	1145 - 1754 PST	1142 PST	1752 PST	350.7 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 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE iC mg C/m3) 1	2	MEAN	DARK
1	18.52	33.514	24.007	5.47	102.1	1.5	0.25	0.2	0.00	0.27	0.07	93.A	5.6	5.5	5.5	0.12
13	18.02	33.502	24.122	5.63	104.1	1.1	0.27	0.1	0.00	0.28	0.09	40.	7.6	7.3	7.4	0.15
21	17.55	33.479	24.218	5.72	104.8	1.0	0.26	0.1	0.00	0.32	0.12					
28	16.95	33.459	24.346	5.82	105.3	0.9	0.27	0.1	0.00	0.38	0.19	14.	7.1	7.5	7.3	0.11
35	13.93	33.257	24.857	5.91	100.6	3.2	0.39	0.9	0.05	0.70	0.44					
43	12.96	33.362	25.134	5.28	88.1	6.1	0.66	5.1	0.19	0.65	0.57	5.0	5.6	5.7	5.6	0.04
50	12.67	33.421	25.236	5.00	83.0	7.5	0.78	7.2	0.18	0.54	0.49					
56	11.97	33.573	25.488	4.24	69.4	12.2	1.14	12.5	0.10	0.31	0.35	2.0	1.1	1.4	1.3	0.04
SO	10.50	33.882	25.995	2.25	35.7	26.6	2.00	23.7	0.02	0.04	0.10	0.38	0.02	0.03	0.03	0.02

RV NEW HORIZON — CALCOFI CRUISE '9510 — STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 10..9 N	120 55.2 W	14/10/95	1816 UTC	36 m	01	1153 - 1803 PST	1150 PST	1801 PST	400.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS 02 nl/L	OXY PCT	SI03 uM/L	P04 uM/1	N03 uM/l	N02 uM/I	CHL-A ug/L	PHAEO ug/l	LIGHT PCT	UPTAKE iC mg C/m3) 1	2	MEAN	DARK
1	18.54	33.444	23.949	5.45	101.7	1.3	0.28	0.1	0.00	0.17	0.05	96.A	2.1	1.8	1.9	0.04
9	18.25	33.440	24.018			1.3	0.28	0.1	0.00	0.17	0.06					
20	18.19	33.437	24.031	5.48	101.6	1.3	0.28	0.1	0.00	0.18	0.06	43.	3.9	3.7	3.8	0.11
30	18.12	33.435	24.047	5.48	101.4	1.3	0.28	0.1	0.00	0.20	0.07					
44	15.33	33.392	24.663	6.03	105.7	1.9	0.36	0.6	0.04	0.62	0.53	15.	8.9	9.1	9.0	0.09
55	13.34	33.298	25.009	5.53	93.0	3.3	0.60	3.4	0.53	1.34	0.56					
62	12.39	33.332	25.222	5.11	84.2	6.8	0.73	6.4	0.18	0.36	0.30					
70	11.85	33.455	25.420	4.57	74.5	10.4	1.08	12.1	0.04	0.48	0.34	5.1	2.8	2.6	2.7	0.03
82	10.81	33.532	25.668	4.04	64.5	15.5	1.35	16.7	0.02	0.07	0.14					
93	10.58	33.533	25.710	4.00	63.5	16.1	1.38	17.2	0.02	0.08	0.16	1.9	0.25	0.27	0.26	0.02
111	9.95	33.638	25.899	3.63	56.9	20.1	1.59	20.4	0.02	0.03	0.09					
129	9.45	33.720	26.046	3.28	50.9	23.9	1.76	23.1	0.01	0.02	0.07	0.41	0.02	0.01	0.02	0.01

RV NEW HORIZON — CALCOFI CRUISE '9510 — STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
29 51 .0 N	123 34.9 W	15/10/95	1811 UTC	45 m	01	1203 - 1814 PST	1200 PST	1811 PST	241.4 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 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE iImg C/m3) 1	2	MEAN	DARK
2	19.20	33.254	23.638	5.39	101.7	2.3	0.27	0.0	0.00	0.09	0.02	93.A	1.3	1.2	1.3	0.05
13	19.04	33.248	23.674	5.40	101.6	2.3	0.26	0.0	0.00	0.10	0.02					
25	18.99	33.244	23.684	5.40	101.5	2.3	0.25	0.0	0.00	0.10	0.04	43.	2.2	2.1	2.2	0.10
40	18.94	33.240	23.695	5.41	101.6	2.3	0.26	0.0	0.00	0.15	0.04					
55	18.15	33.841	24.351	5.75	106.8	2.4	0.18	0.0	0.00	0.19	0.07	15.	2.3	2.3	2.3	0.08
70	16.66	33.675	24.581	5.75	103.6	2.5	0.21	0.0	0.00	0.23	0.11					
77	16.42	33.734	24.682	5.84	104.8	2.7	0.18	0.0	0.00	0.25	0.12					
87	15.74	33.708	24.816	5.85	103.5	2.8	0.18	0.0	0.00	0.26	0.17	5.1	2.0	1.9	2.0	0.04
97	15.56	33.762	24.898	5.81	102.5	2.7	0.18	0.0	0.00	0.25	0.25					
107	15.36	33.817	24.985	5.71	100.3	2.7	0.19	0.0	0.02	0.25	0.23					
117	15.57	33.964	25.052	5.50	97.1	2.5	0.23	0.2	0.14	0.20	0.19	1.8	0.92	0.79	0.86	0.02
124	15.35	33.959	25.098	5.48	96.4	2.8	0.23	0.3	0.14	0.16	0.17					
138	14.71	33.995	25.265	5.16	89.6	4.0	0.37	2.7	0.02	0.10	0.12					
160	12.75	33.848	25.555	4.95	82.5	6.8	0.63	6.7	0.01	0.04	0.08	0.43	0.04	0.04	0.04	0.01

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8,. 0.42 PERCENT RESPECTIVELY.

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)	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 05.3	120 47.2	10/27	0703	0710	134	58	97	97
77	51	35 01.7	120 56.5	10/27	0435	0457	423	204	1243	38
77	55	34 54.3	121 13.1	10/27	0125	0146	455	194	103	103
77	60	34 43.7	121 34.7	10/26	1922	1944	438	214	105	105
77	70	34 23.5	122 14.8	10/26	1110	1132	457	217	42	42
77	80	34 03.1	122 57.7	10/26	0336	0357	448	209	127	127
77	90	33 43.5	123 38.6	10/25	2212	2234	459	213	59	59
77	100	33 22.7	124 20.0	10/25	1642	1704	475	204	59	59
80	51	34 27.8	120 33.1	10/24	0215	0222	156	54	64	64
80	55	34 19.6	120 50.2	10/24	0525	0546	420	212	74	74
80	60	34 09.6	121 09.5	10/24	0827	0848	437	213	46	46
80	70	33 49.8	121 51.6	10/24	1609	1631	450	197	104	104
80	80	33 29.3	122 32.4	10/24	2141	2203	453	211	55	55
80	90	33 10.1	123 13.6	10/25	0317	0339	468	205	26	26
80	100	32 49.4	123 54.5	10/25	0920	0942	476	210	15	15
82	47	34 17.0	120 02.1	10/23	2226	2248	433	213	106	106
83	40.6	34 13.2	119 25.2	10/23	1755	1759	72	25	83	83
83	42	34 10.2	11931.4	10/23	1540	1559	372	206	38	38
83	51	33 53.1	120 08.9	10/23	0832	0842	213	89	47	47
83	55	33 45.4	120 25.1	10/23	0136	0157	443	203	88	88
83	60	33 33.5	120 46.0	10/22	1858	1920	462	204	67	67
83	70	33 15.5	121 27.7	10/22	1217	1238	465	207	54	54
83	80	32 55.6	122 08.5	10/22	0530	0551	502	206	32	32
83	90	32 34.8	122 49.7	10/21	2257	2319	502	208	32	32
83	100	32 15.8	123 31.4	10/21	1640	1700	460	192	22	22
83	110	31 55.2	124 10.3	10/21	0853	0914	461	211	50	50
87	33	33 52.8	118 30.6	10/18	1930	1936	113	50	27	27
87	35	33 49.3	118 37.7	10/18	2144	2206	445	209	92	92
87	40	33 39.7	118 59.4	10/19	0125	0147	444	188	54	54
87	45	33 29.7	11921.0	10/19	0514	0536	440	201	168	168
87	50	33 19.5	119 40.7	10/19	0942	0950	154	71	195	195
87	55	33 10.5	119 59.5	10/19	1703	1724	453	208	135	135
87	60	32 59.7	120 21.4	10/19	2315	2336	439	218	130	130
87	70	32 39.5	121 03.9	10/20	0447	0509	465	195	144	144
87	80	32 19.4	121 43.0	10/20	0907	0928	476	211	63	63
87	90	31 59.0	122 25.2	10/20	1655	1716	461	195	76	76
87	100	31 39.4	123 04.2	10/20	2203	2225	462	209	30	30
87	110	31 19.4	123 45.9	10/21	0320	0341	451	208	38	38
90	28	33 29.0	117 46.4	10/18	1247	1254	156	68	26	26
90	30	33 25.1	117 53.8	10/18	0903	0925	439	208	32	32
90	35	33 15.3	118 14.7	10/18	0524	0546	443	202	23	23
90	37	33 11.2	118 24.0	10/18	0232	0253	449	190	65	65
90	45	32 55.7	118 56.4	10/17	2142	2204	434	204	88	88
90	53	32 39.7	119 29.7	10/17	1653	1715	458	197	68	68
90	60	32 25.9	119 57.6	10/17	1150	1212	472	189	45	34
90	70	32 05.3	120 39.5	10/16	2258	2320	478	208	48	48
90	80	3145.5	121 19.0	10/16	1703	1725	455	210	84	84
90	90	31 25.0	121 59.8	10/16	0903	0925	486	202	68	68
90	100	31 08.4	122 40.7	10/16	0351	0413	451	201	29	29
90	110	30 44.9	123 20.5	10/15	2221	2243	477	211	105	23
90	120	30 24.4	124 00.2	10/15	1647	1709	464	210	13	13
93	26.7	32 57.8	117 18.5	10/12	1134	1140	133	55	45	45
93	28	32 53.7	117 25.3	10/12	1532	1554	488	204	27	27
93	30	32 49.5	11732.1	10/12	1835	1857	465	203	221	221
93	35	3241.1	117 52.6	10/12	2213	2235	448	213	36	36
93	40	3231.7	118 15.0	10/13	0215	0237	474	196	57	57
93	45	32 20.8	118 34.0	10/13	0654	0716	448	206	36	36
93	50	32 11.5	118 54.0	10/13	1130	1151	467	201	88	88
93	55	32 02.2	119 15.6	10/13	1552	1614	441	187	41	41
93	60	31 51.3	119 35.4	10/13	1944	2006	449	209	67	67
93	70	31 32.0	120 15.6	10/14	0130	0152	477	198	94	50
93	80	31 11.0	120 55.3	10/14	0854	0915	473	203	53	53
93	90	30 50.6	121 34.6	10/14	1636	1658	424	206	24	24
93	100	30 31.4	122 15.7	10/14	2203	2225	483	213	35	35
93	110	30 09.6	122 55.3	10/15	0333	0354	446	212	40	40
93	120	29 50.9	123 35.2	10/15	0840	0901	468	212	26	26

FIGURES

Avifauna Observations

CalCOFI Cruise 9507

1a. Leach's Storm-Petrel distribution.

1b. Cook's Petrel distribution.

1c. Sooty Shearwater distribution.

1d. Pink-footed Shearwater distribution.

1e. Western Gull distribution.

1f. Red-necked Phalarope distribution.

CalCOFI Cruise 9510

2a. Leach's Storm-Petrel distribution.

2b. Northern Fulmar distribution.

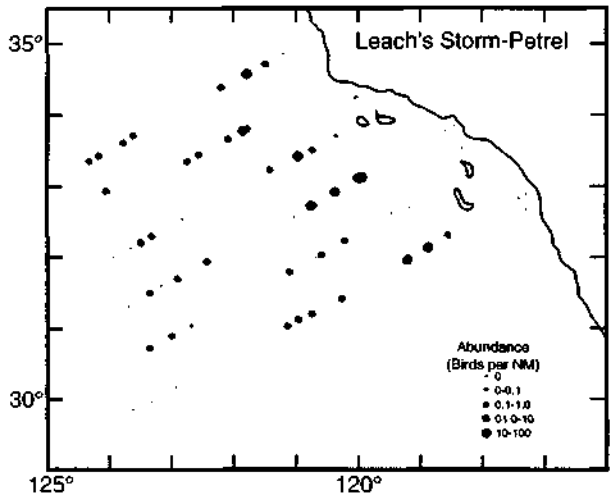
2c. Sooty Shearwater distribution.

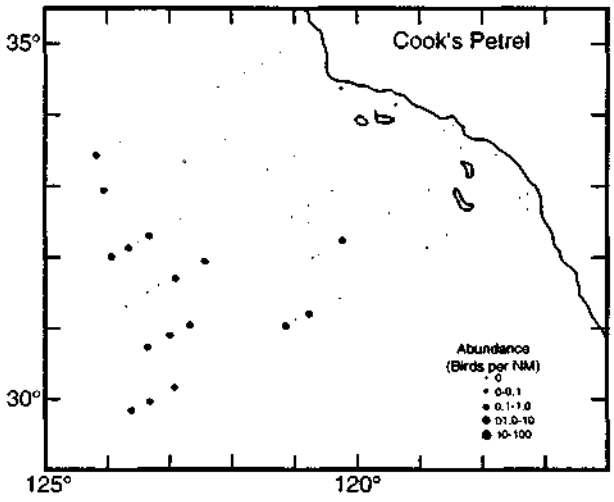
2d. Pink-footed Shearwater distribution.

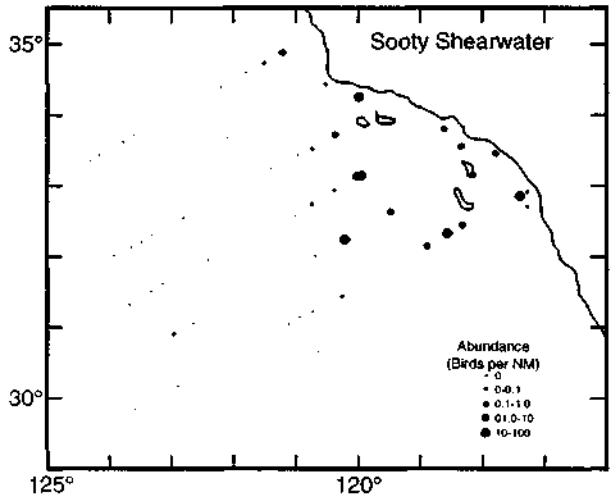
2e. Western Gull distribution.

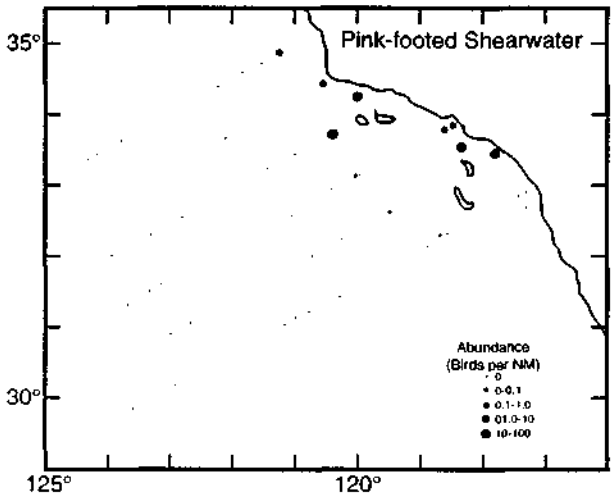
2f. Heerman's Gull distribution.

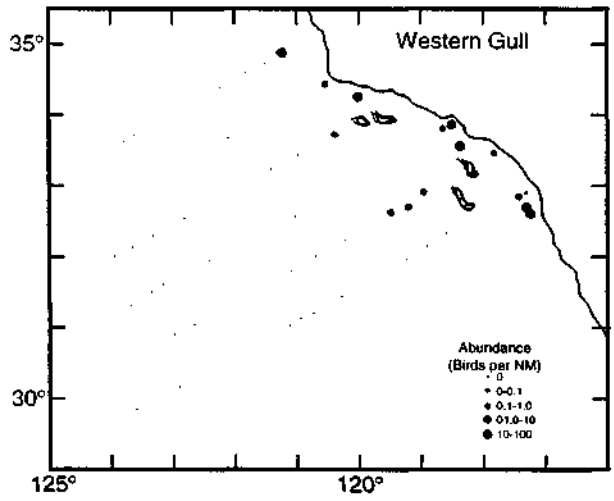
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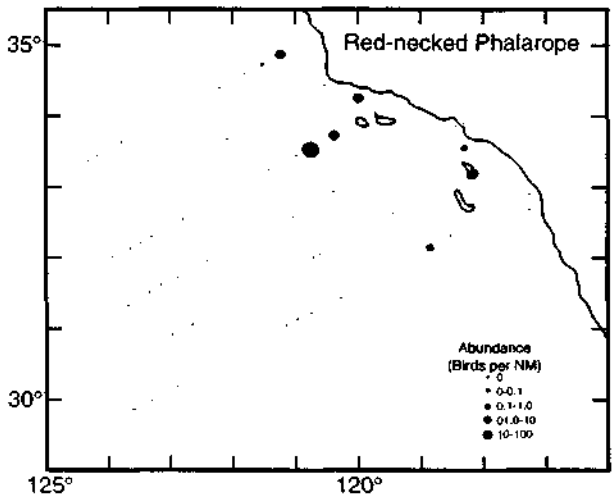












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