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SCRIPPS INSTITUTION OF OCEANOGRAPHY
LA JOLLA, CALIFORNIA 92093-0227**

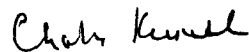
PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

**CalCOFI Cruise 9608
7 - 25 August 1996**

**CalCOFI Cruise 9610
10 October - 2 November 1996**

**SIO Reference 98 - 11
16 May 1998**

Approved for distribution:



Charles F. Kennel, Director

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INTRODUCTION

The data in this report were collected during cruises 9608* and 9610 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon* and the RV *Roger Revelle* of Scripps Institution of Oceanography, University of California, San Diego. Cruise 9610 was the maiden scientific voyage of RV *Roger Revelle*. This expedition size ship accommodated a larger than usual scientific party and numerous extra projects. 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 9608 and 9610 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

CTD/Rosette Cast Data

At each station on cruises 9608 and 9610 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 20-24 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. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. 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.

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 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 P127. Salinity values have been calculated using 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 samples were collected in calibrated 100 ml iodine flasks, allowing at least 200% overflow. The dissolved oxygen samples were analyzed at sea by the Winkler method, as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). Percent oxygen saturation was calculated from the equations of Weiss (1970).

Silicate, phosphate, nitrate and nitrite nutrients were determined at sea using an automated analyzer. The procedures used are similar to those described in Atlas *et al.* (1971). On cruise 9610 standard CalCOFI CTD/rosette casts were modified and additional casts taken to investigate the detailed distribution of nutrients in the mixed layer above the nutricline. At all stations four extra depths in the upper 30 meters were sampled. On five stations of Line 93 and all stations of Line 90 except 90.30 and 90.28, a second nutrient sample was drawn from rosette bottle

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

sampling depths less than about 130 m; these samples were analyzed on a second Autoanalyzer set up for increased sensitivity at low nutrient levels. This Autoanalyzer was also used on samples from CTD/rosette casts taken every 4 hours in the upper 125 m at two 24-hour stations, 93.50 and 90.120, and special CTD/rosette casts to 125 m at three Line 90 stations.

Samples for chlorophyll-*a* and phaeopigments were collected in calibrated 138 ml polyethylene bottles and 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 al.*, 1965).

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

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the up rosette cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. The ten-liter bottles were equipped with epoxy-coated springs and Viton O-rings. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 10 μCi of ^{14}C as NaHCO_3 (200 μl of 50 $\mu\text{Ci/ml}$ 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% HCl 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 were logged at one-minute intervals.

- 2) *ADCP*. Acoustic Doppler Current Profiler data were recorded continuously along the ship's cruise track.
- 3) *Bio-optics*. On cruise 9608 apparent and inherent optical properties of the top 300 meters of the water column were measured daily with a bio-optical profiling package. Water samples obtained from the CTD/rosette cast were analyzed for determination of absorption by particulate detrital and soluble material, and HPLC determination of plant pigments. On cruise 9610 samples were collected and analyzed for particulate organic carbon and particulate size distribution. Also on cruise 9610 measurements were made of water leaving radiance and aerosol optical thickness for calibration of current satellite ocean color sensors, namely the Japanese Ocean Color and Temperature Sensor (OCTS) and the French Polarization and Directionality of the Earth Reflectance (POLDER) instrument. In addition measurements were made of atmospheric optics and ocean spectral reflectance by deploying radiosondes and coordinating overflights of the NASA/JPL AVIRIS hyperspectral radiometer on the ER2 aircraft.
- 4) *Carbon Monoxide Cycling*. On cruise 9610 the rate of microbial oxidation of CO was measured in a variety of samples from the mixed layer at 18 stations. Measurements were also made of the relative rate of photogeneration of CO upon irradiation of filtered (0.2 μ m) and unfiltered mixed-layer water samples by a solar simulator at 12 stations. At 8 stations an 'optical buoy' was used to measure depth integrated CO production *in situ*.
- 5) *Benthic Sampling*. Bottom samples were collected from the same two sites on each cruise using a multicoring sampler as part of a series of samples for the study of the temporal variation in living benthic foraminiferal assemblages in the California Current system. These sediment cores were subsampled in 1 cm and 0.5 cm sections and either preserved in formalin or frozen for subsequent faunal and geochemical analyses.
- 6) *Pigment studies*. These studies on each cruise included measurement of ¹⁴C 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.
- 7) *Mesoscale Zooplankton Structure*. On cruise 9610 a suite of techniques including molecular genetics, enzyme biochemistry, and bio-acoustics were used to examine the mechanisms that define the boundaries of zooplankton species distributions in the California Current. Particular interest was focused on how neritic zooplankton species maintain persistent population concentrations in coastal regions, despite the highly advective field.
- 8) *Diversity and Distributions of Cyanobacterial Populations*. On cruise 9610 marine *Synechococcus*, *Prochlorococcus*, and eukaryotic algae populations were studied in water samples from the upper 120 meters at selected stations using the FACSORT Flow Cytometer. Gluteraldehyde fixed samples were also prepared to compare the effects of fixation on the fluorescence signatures of the cell types. To study some of the physiological properties of the marine cyanobacteria, culture enrichments were prepared at sea using the same water samples mentioned above. Isolated cultures will be maintained and evaluated in the laboratory.

TABULATED DATA

CTD/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.

Except for the special nutrient enrichment casts, 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, 1981b). 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 cruise 9608 a contamination problem occurred with the Autoanalyzer which erroneously elevated some of the deep nitrite concentrations. The elevated values have not been included in this report.

Nutrient samples drawn on cruise 9610 from four stations on Line 93 and all stations on Line 90, except 90.30 and 90.28, are reported in the table entitled High Resolution Nutrients. The usual nutrient samples collected from the CTD/rosette casts on these stations are also reported in this table for direct comparison to the high resolution measurements.

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

FOOTNOTES

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

- D: CTD salinity value listed in place of normal shipboard 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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FIGURES

Cruise 9608

1. CalCOFI Cruise 9608, 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 93 (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.

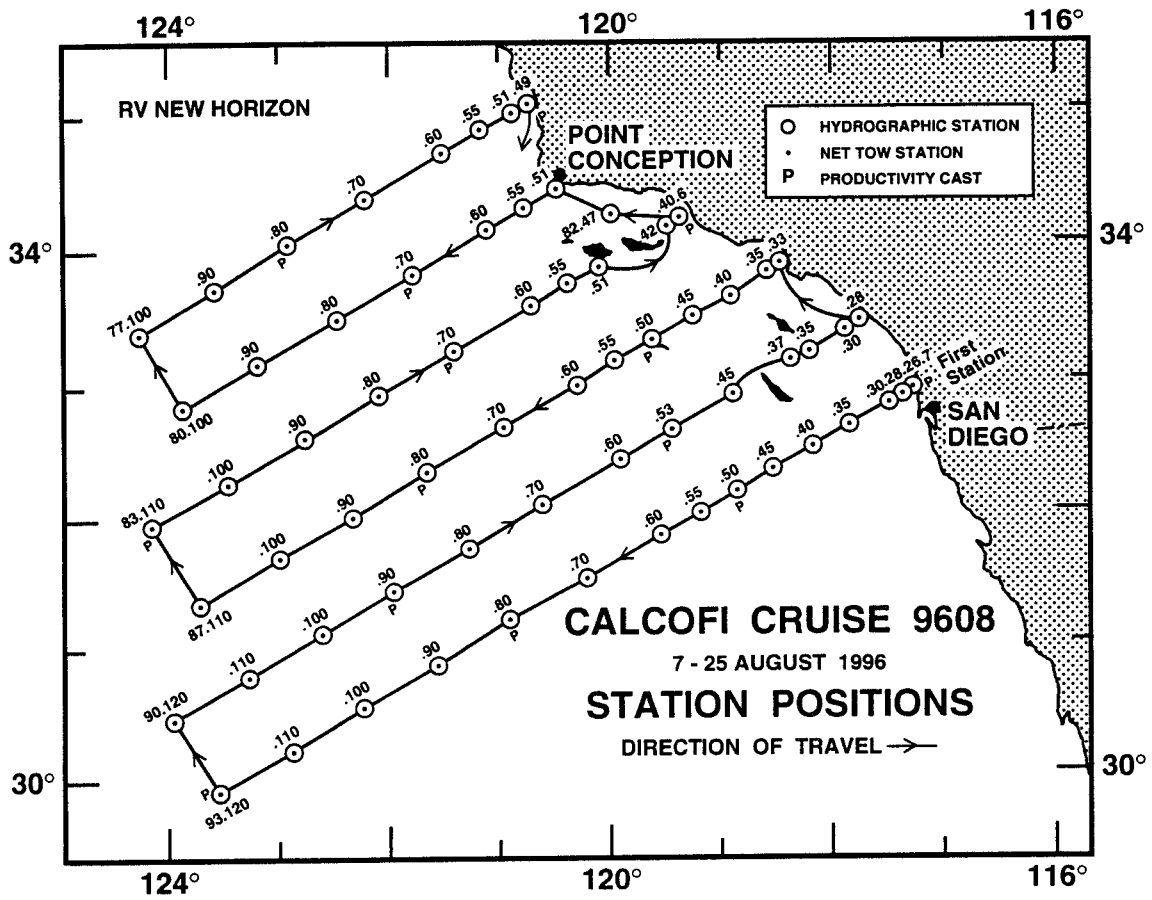


FIGURE 1

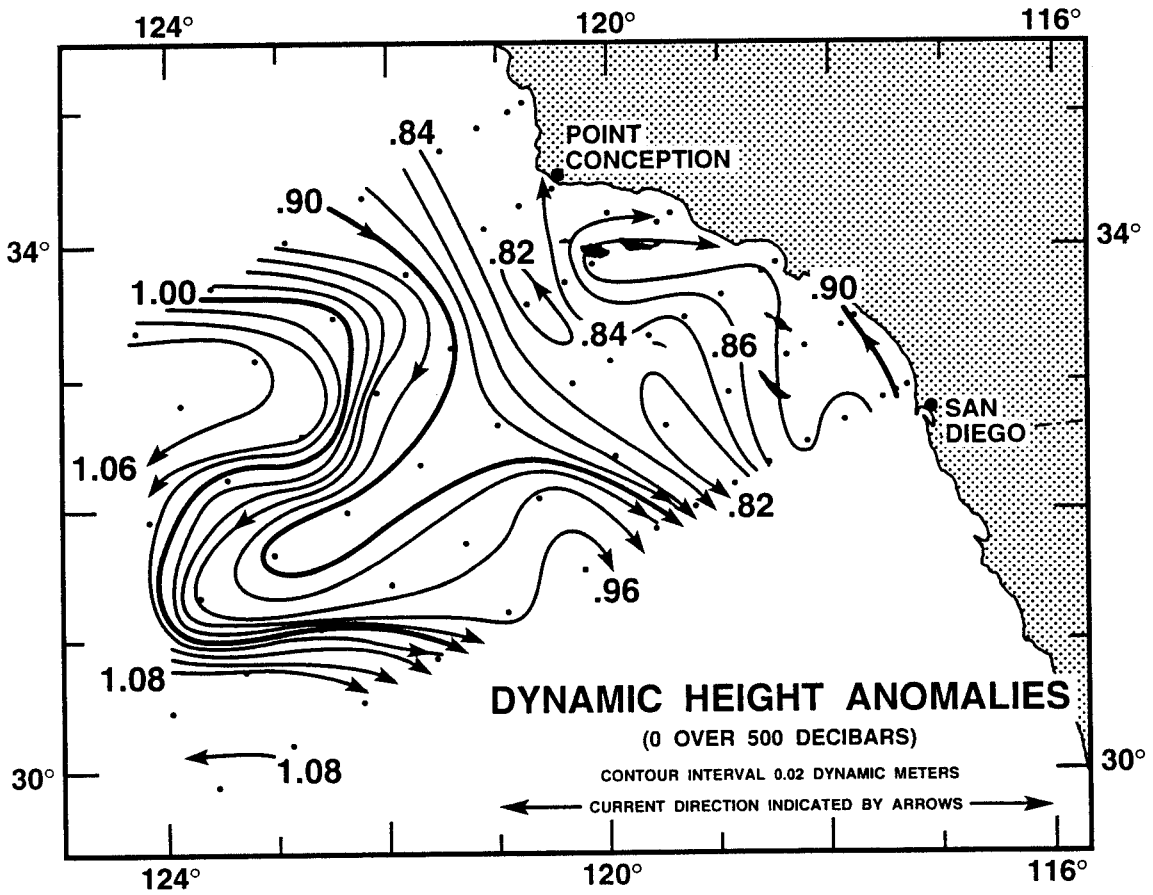


FIGURE 2

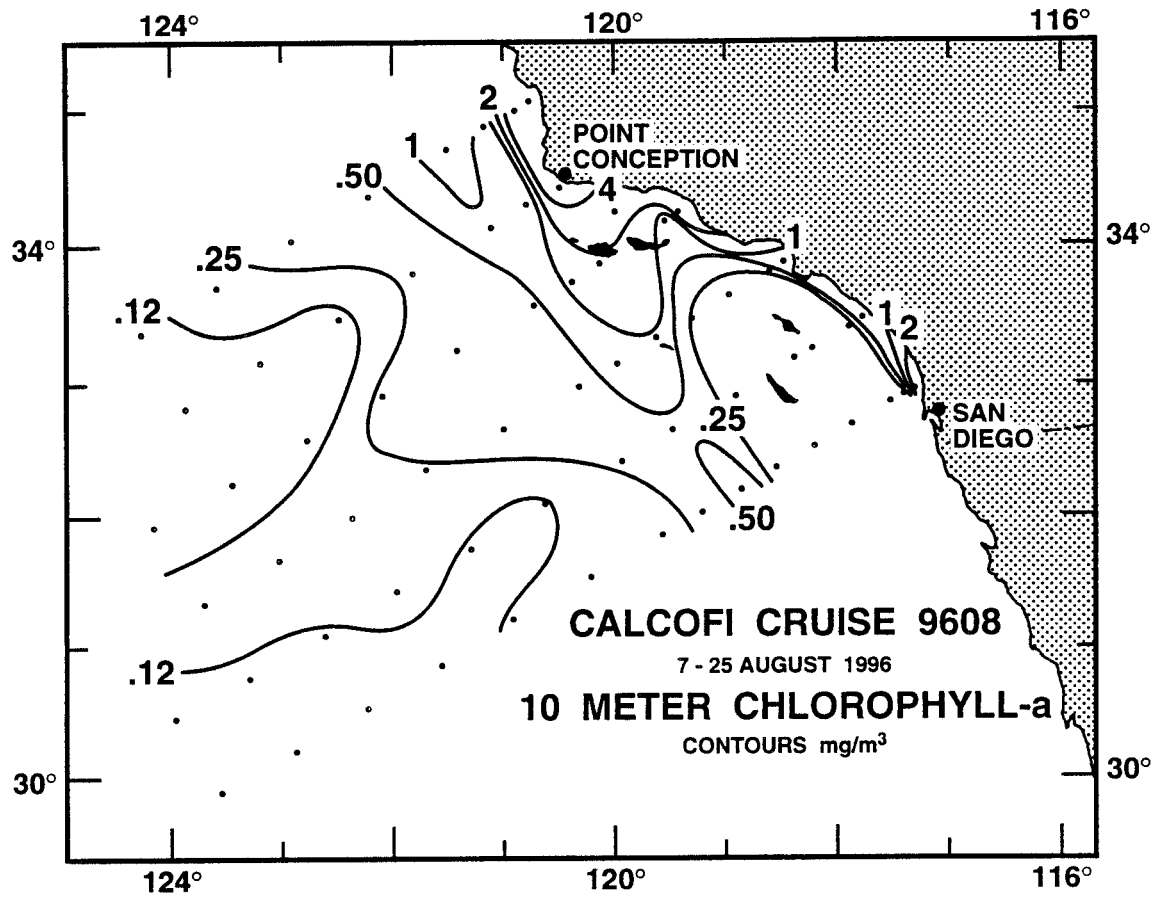


FIGURE 3A

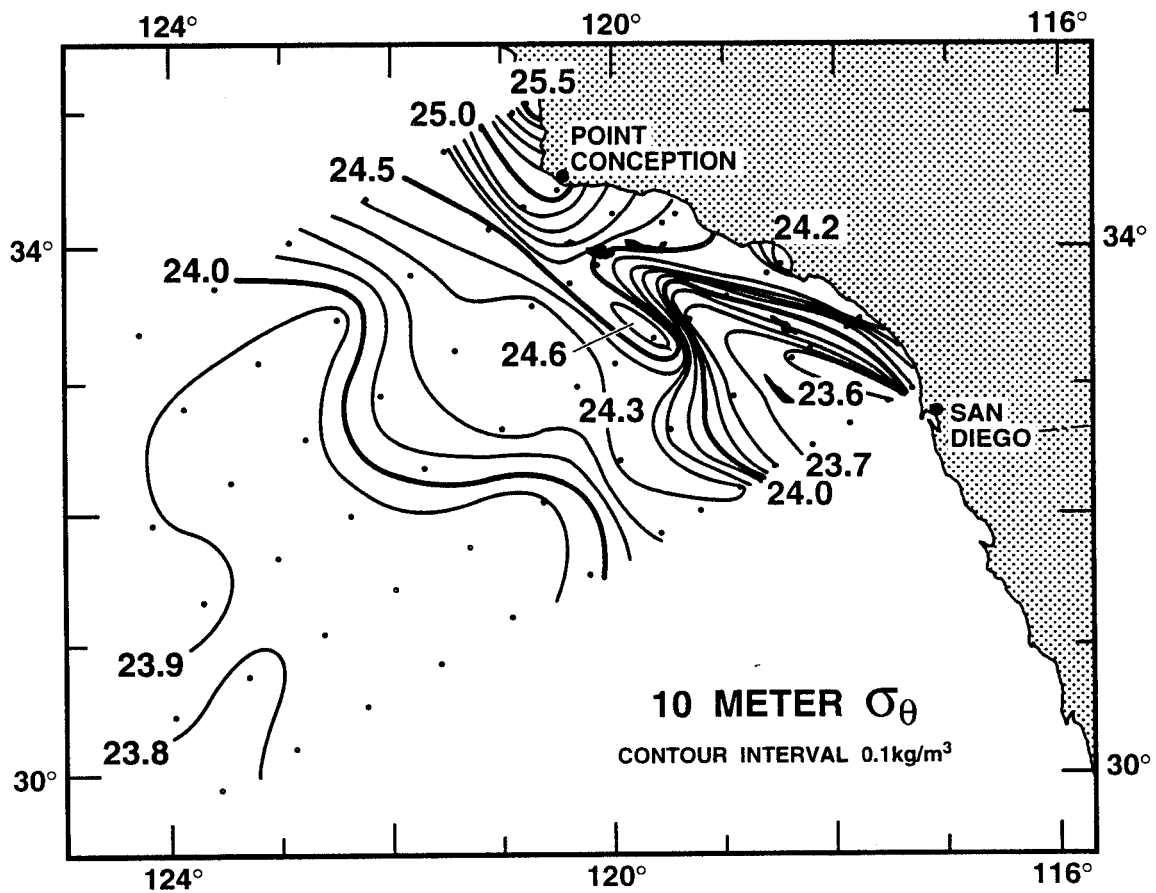


FIGURE 3B

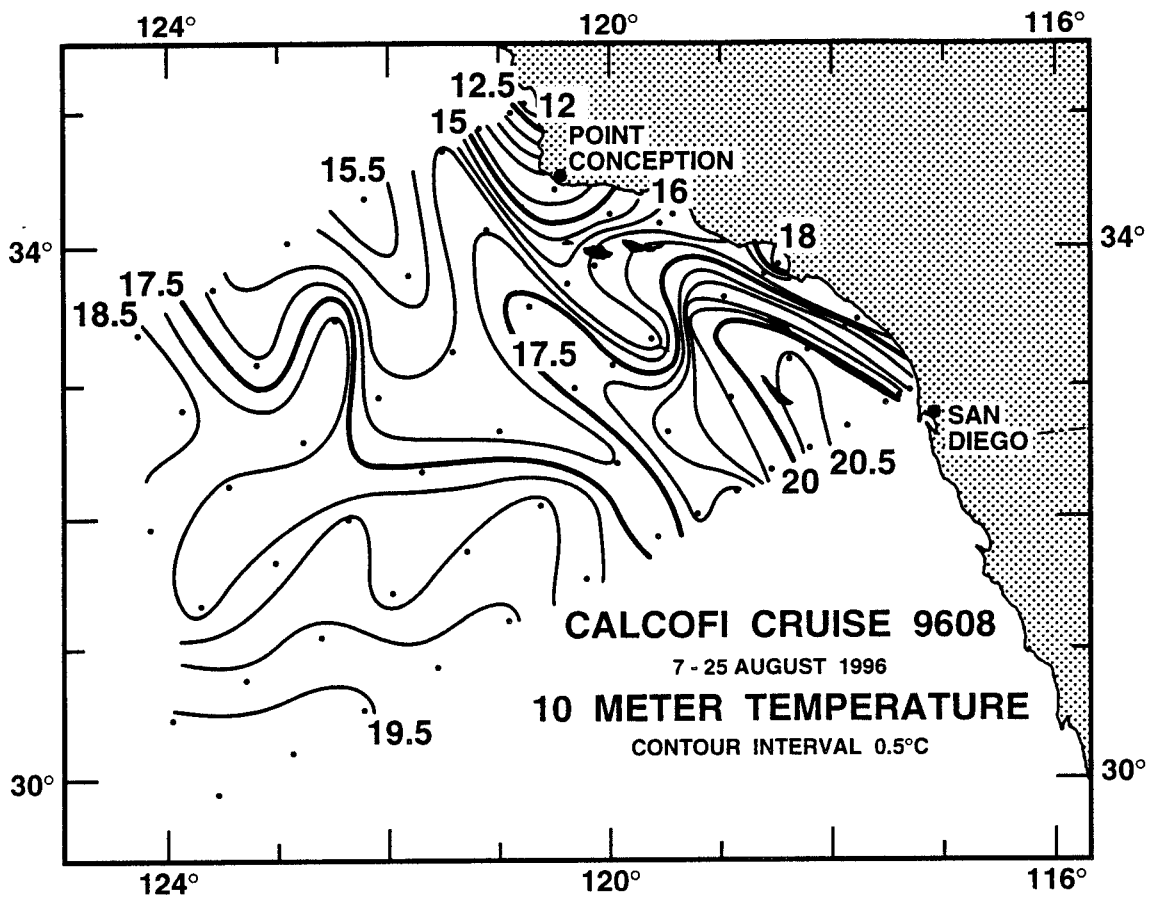


FIGURE 3C

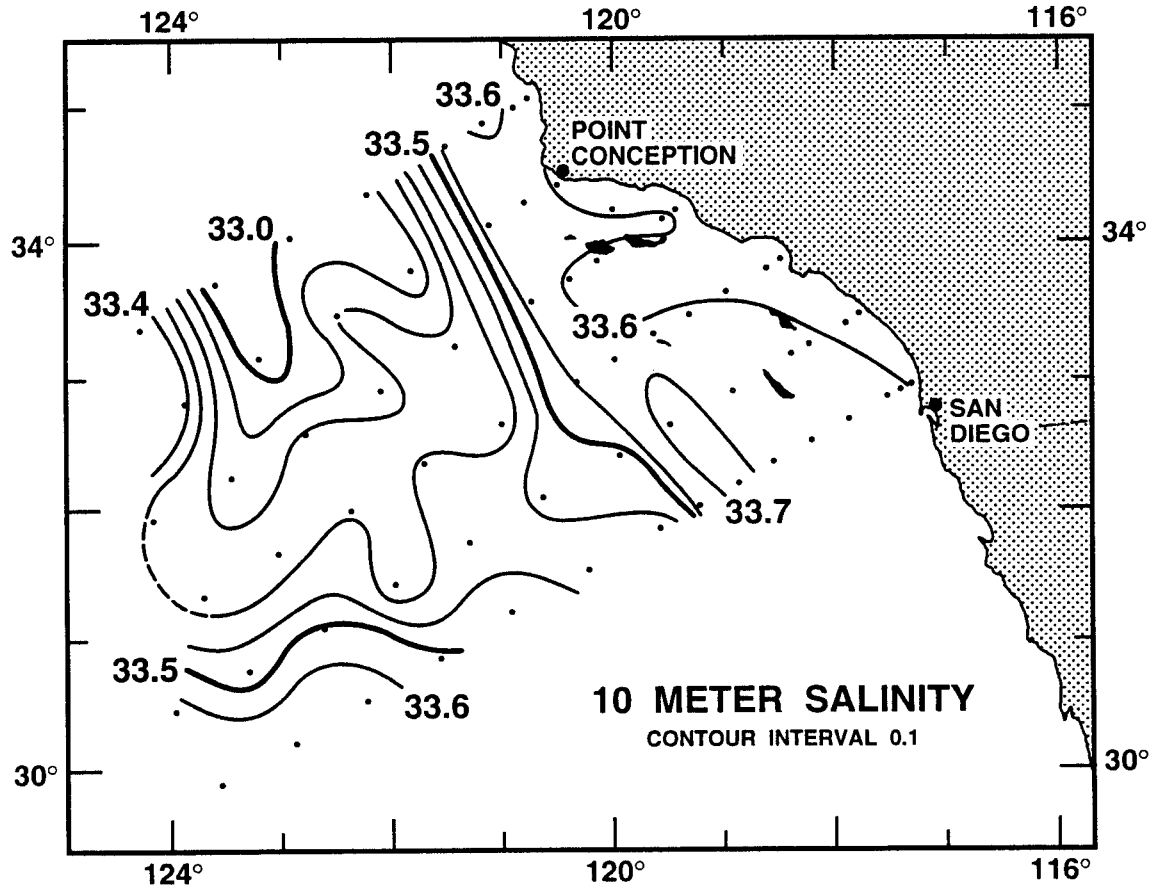


FIGURE 3D

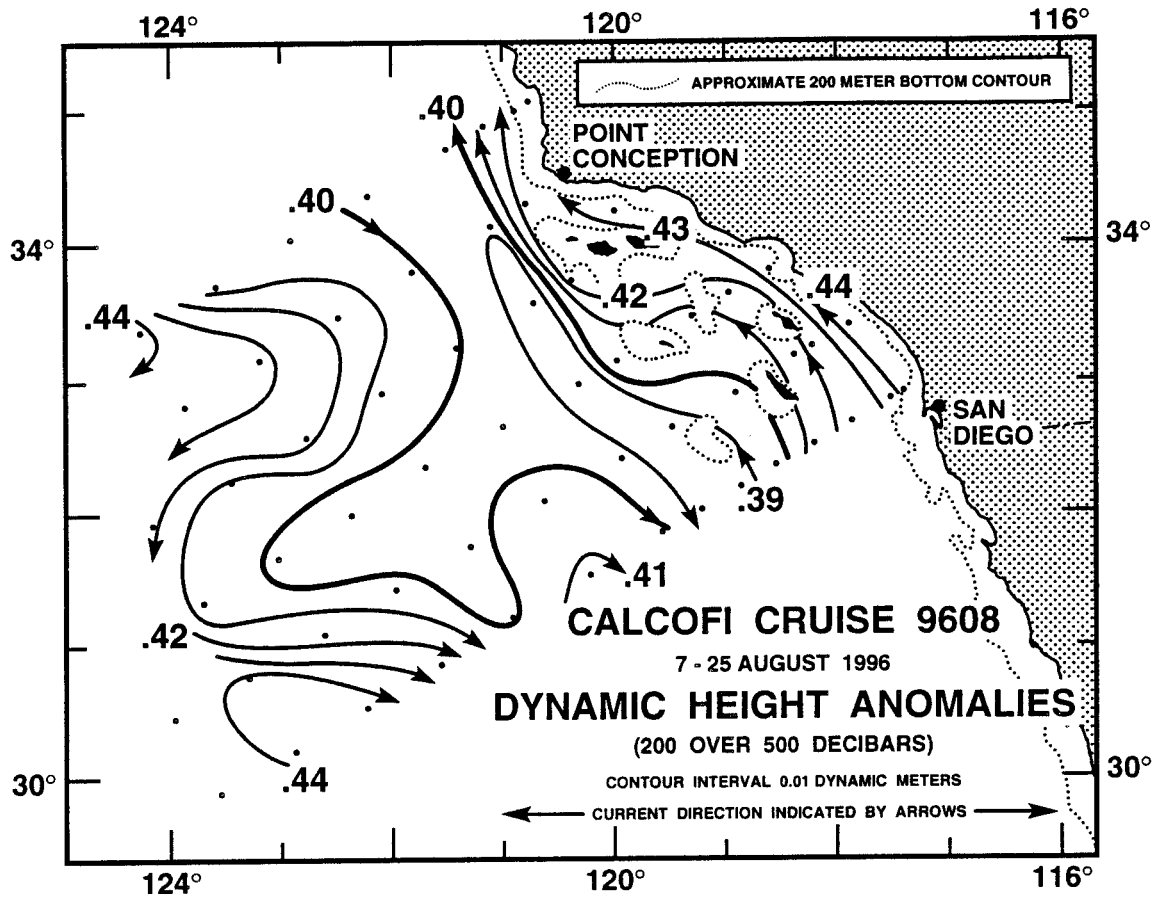


FIGURE 4A

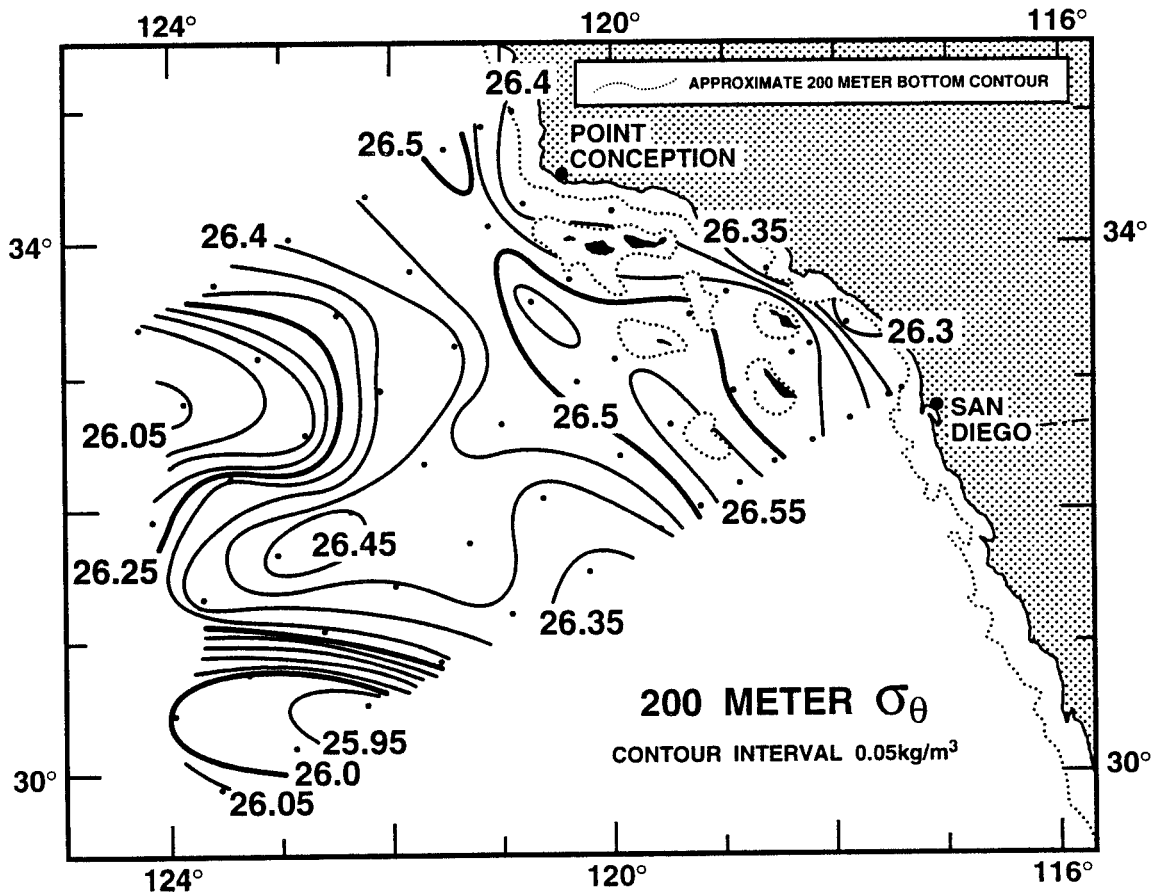


FIGURE 4B

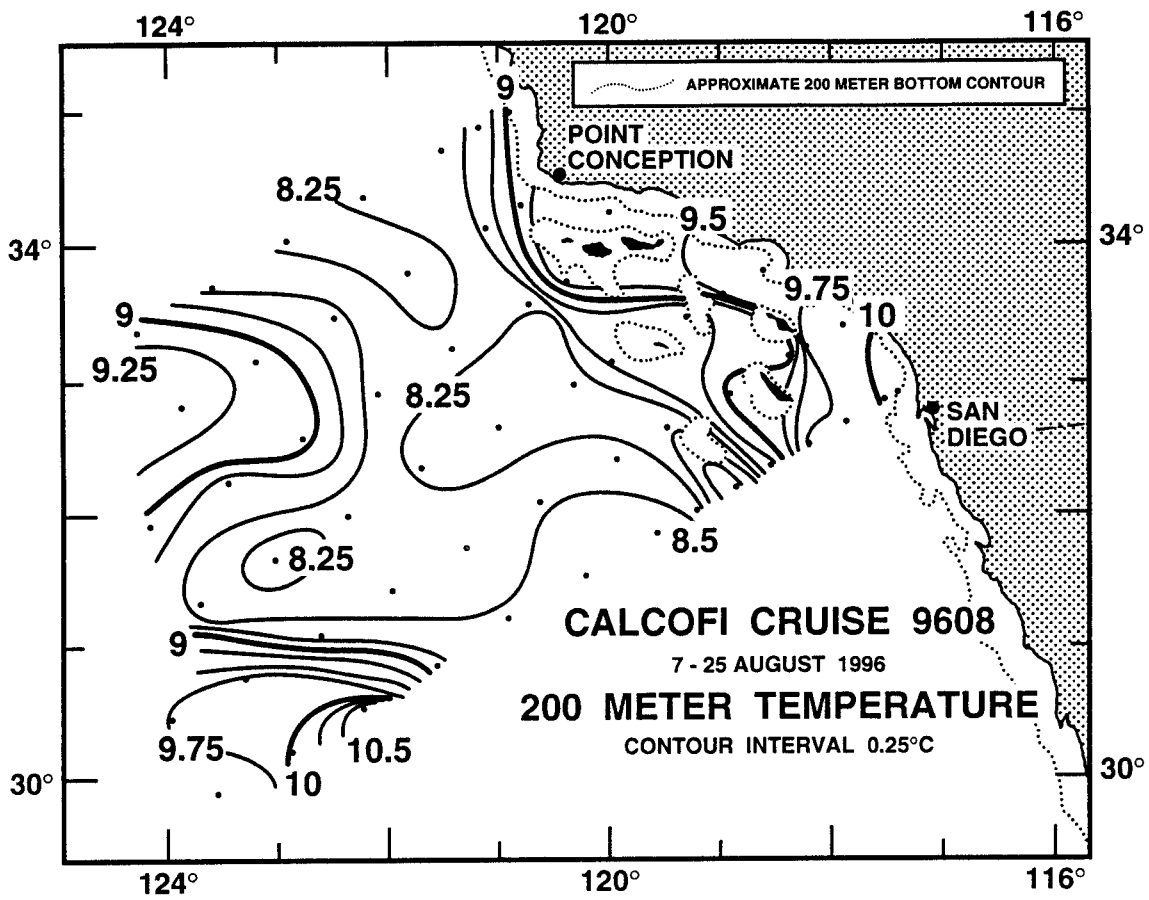


FIGURE 4C

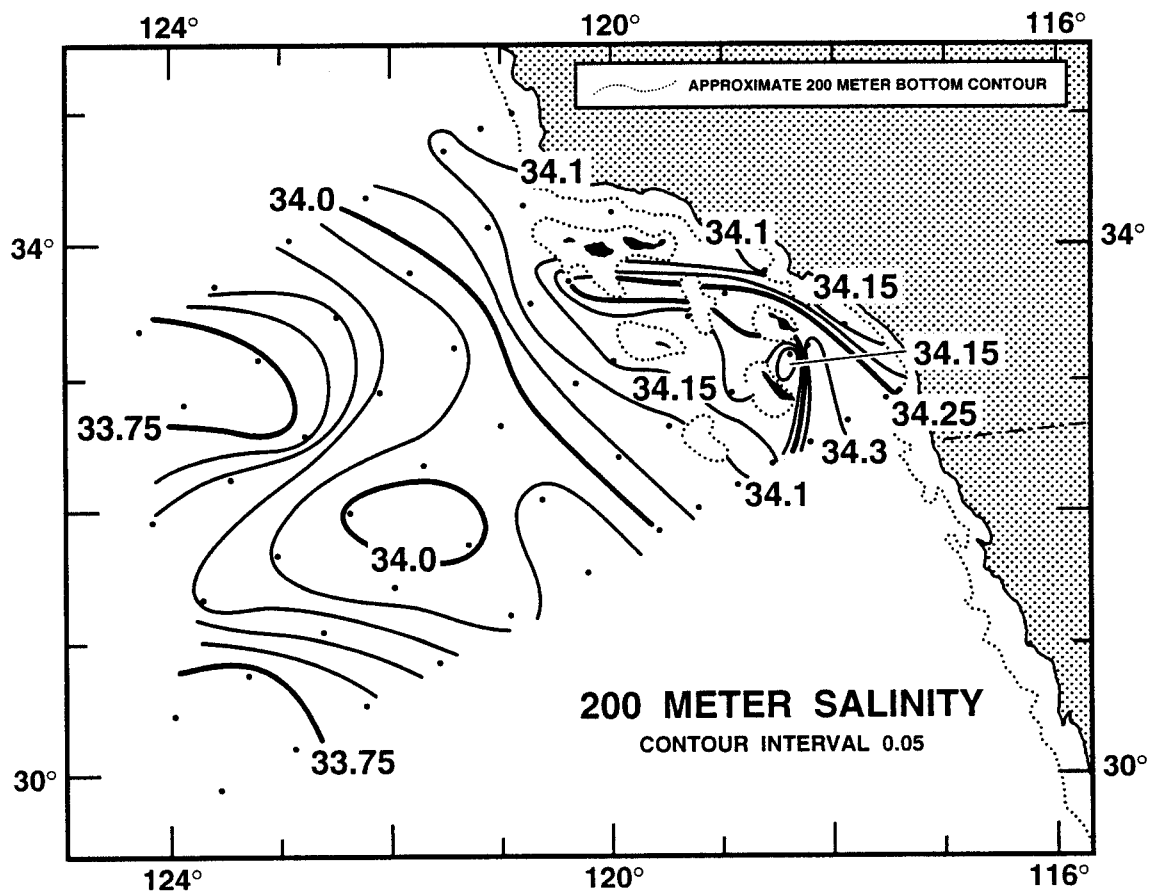


FIGURE 4D

CALCOFI CRUISE 9608

7 - 10 AUGUST 1996

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 93

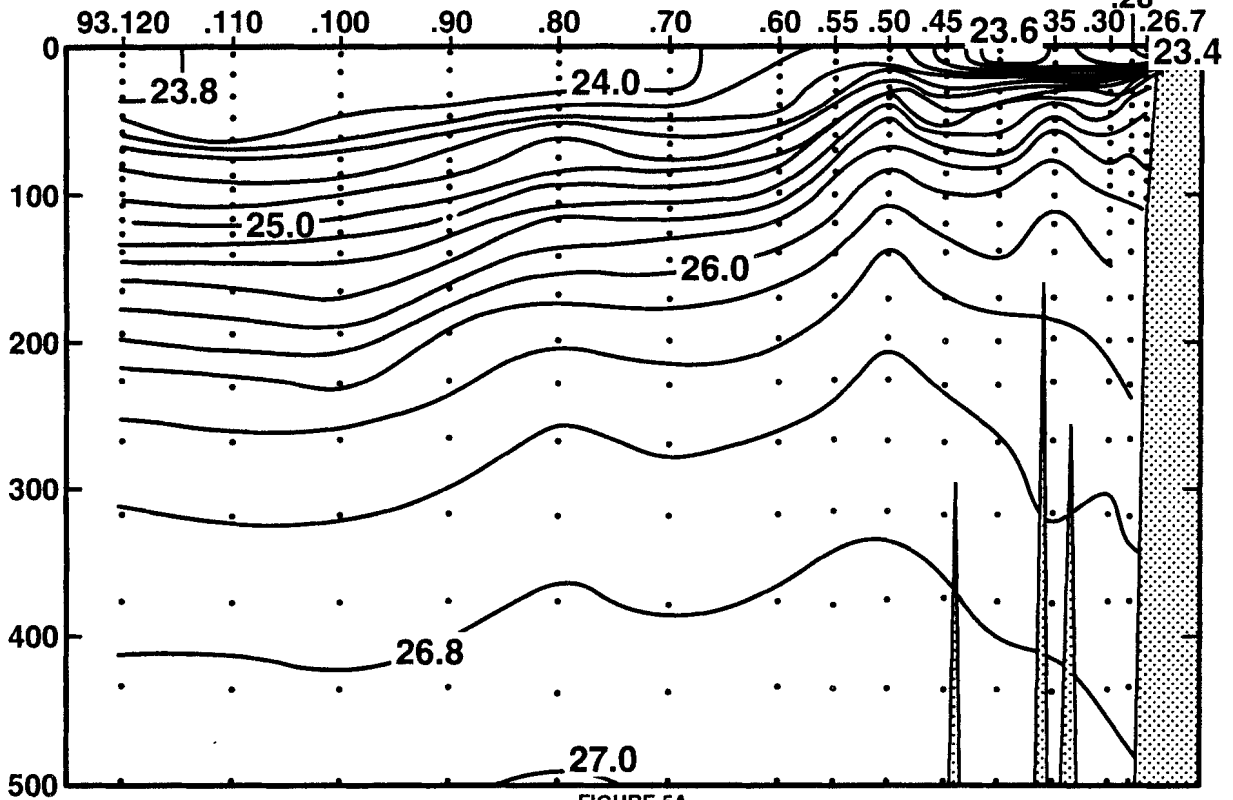


FIGURE 5A

DEPTH (m)

TEMPERATURE (°C) ALONG CALCOFI LINE 93

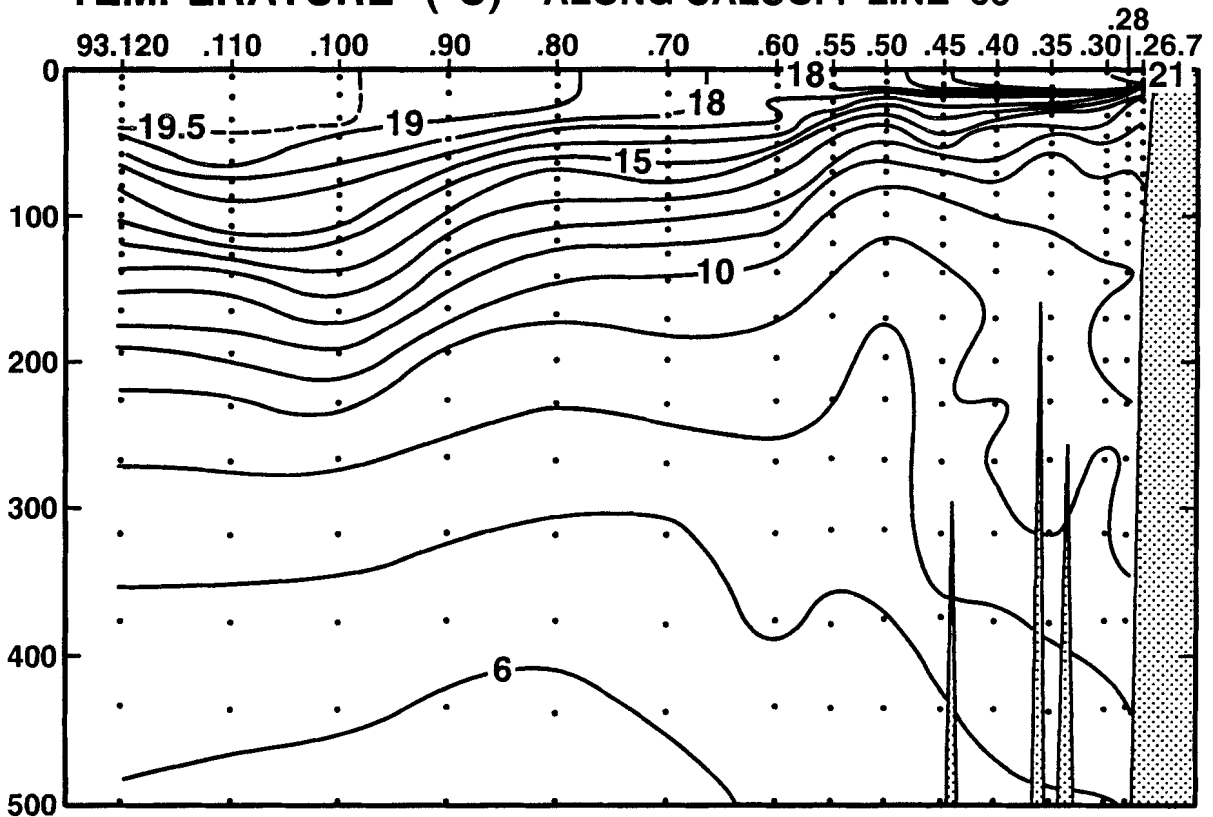


FIGURE 5B

CALCOFI CRUISE 9608

7 - 10 AUGUST 1996

SALINITY ALONG CALCOFI LINE 93

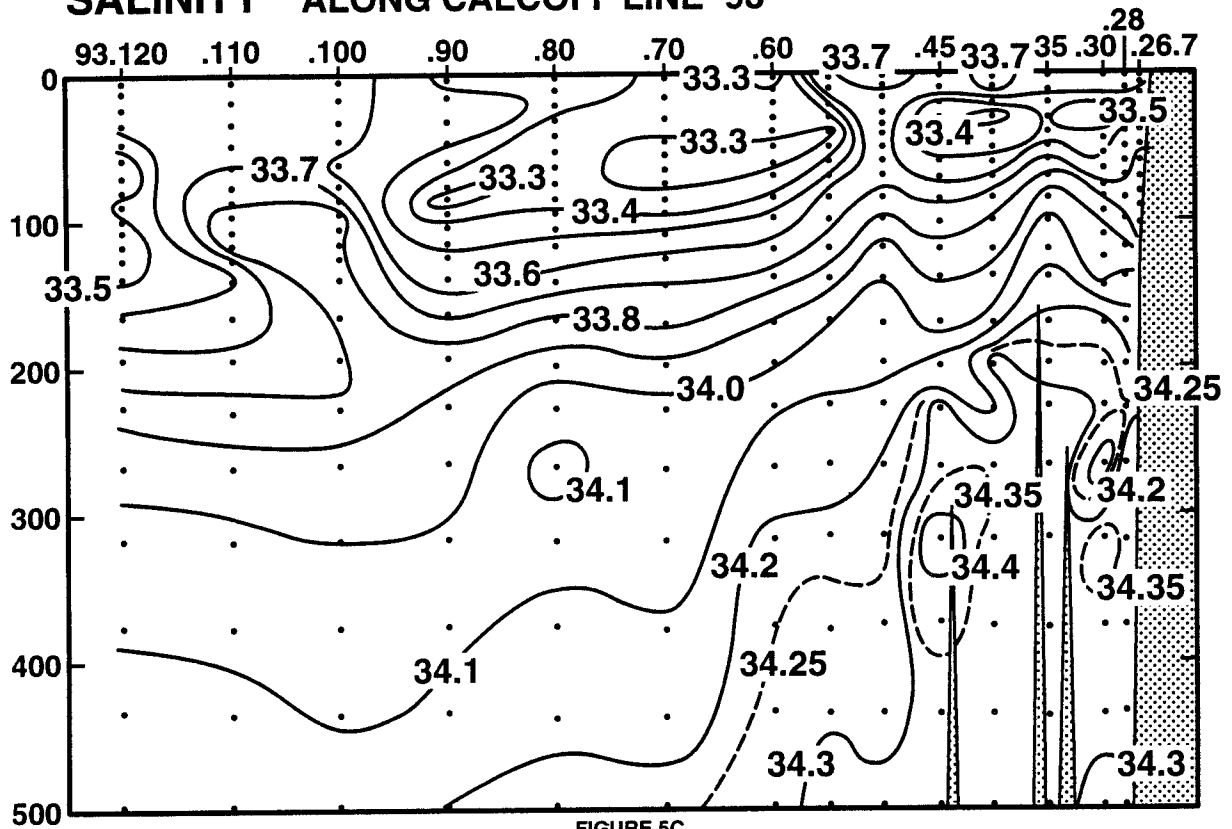


FIGURE 5C

DEPTH (m)

SILICATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

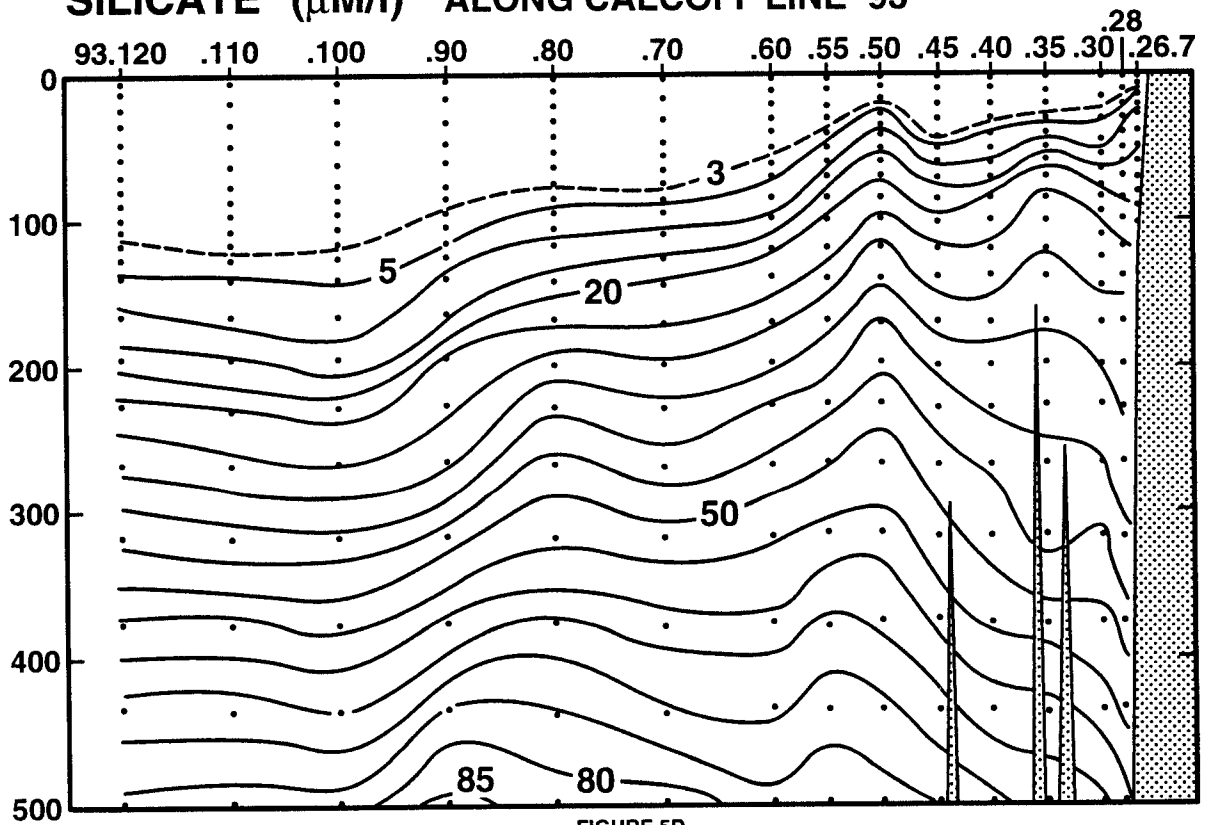


FIGURE 5D

CALCOFI CRUISE 9608

7 - 10 AUGUST 1996

NITRATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

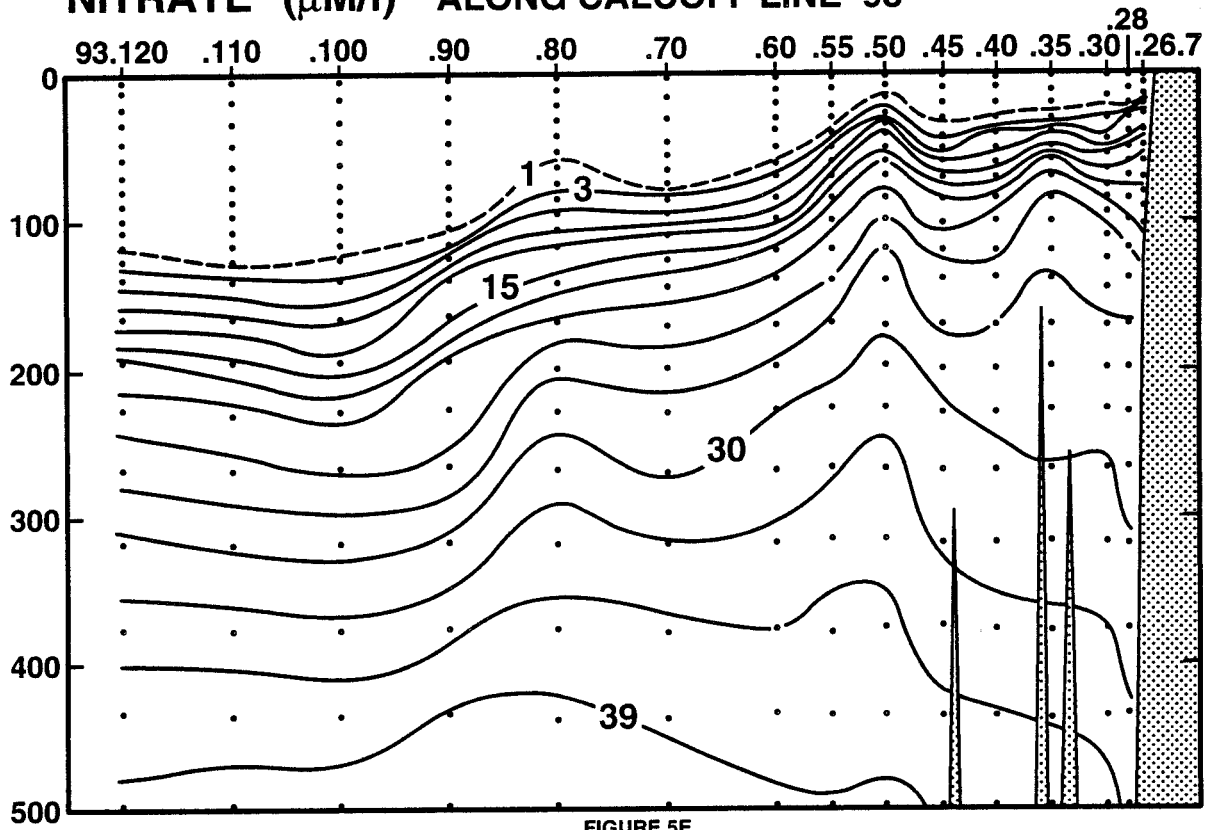


FIGURE 5E

DEPTH (m)

PHOSPHATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

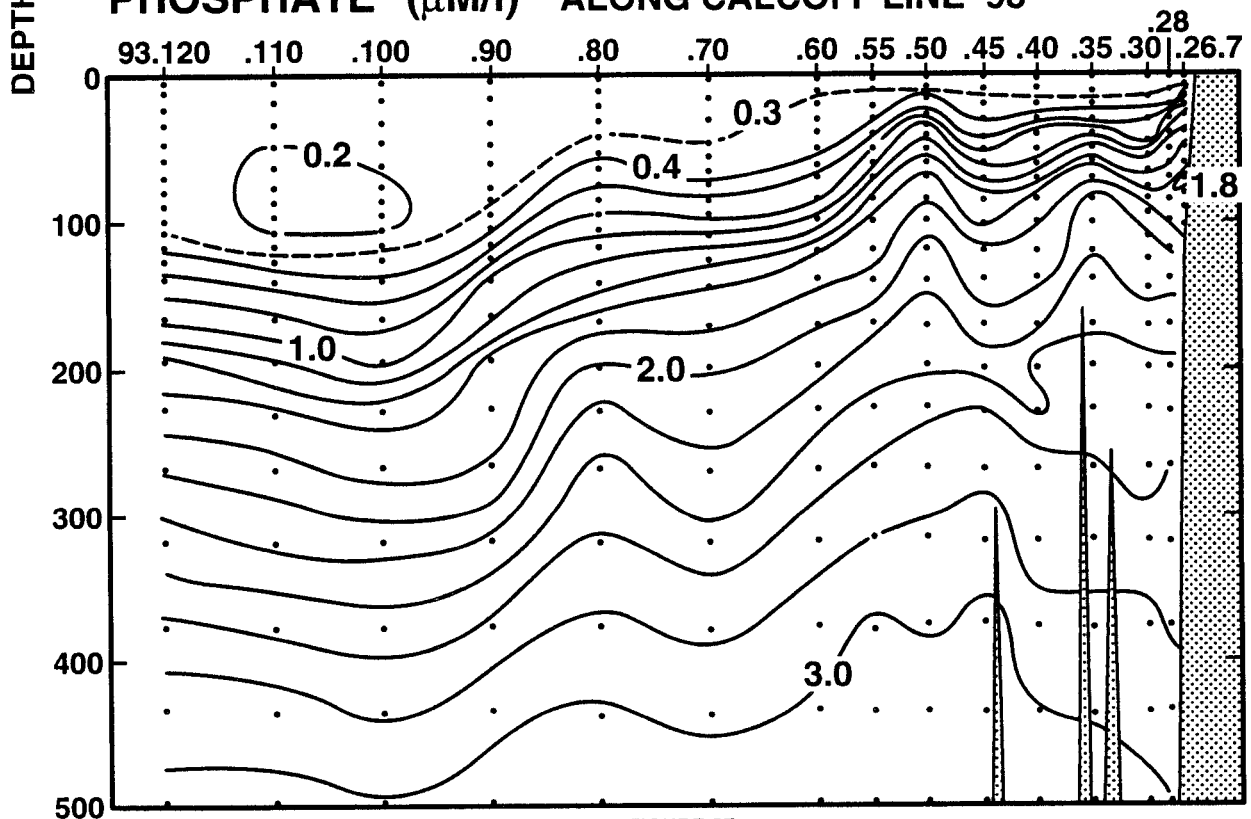


FIGURE 5F

CALCOFI CRUISE 9608

7 - 10 AUGUST 1996

CHLOROPHYLL-a ($\mu\text{g/l}$) ALONG CALCOFI LINE 93

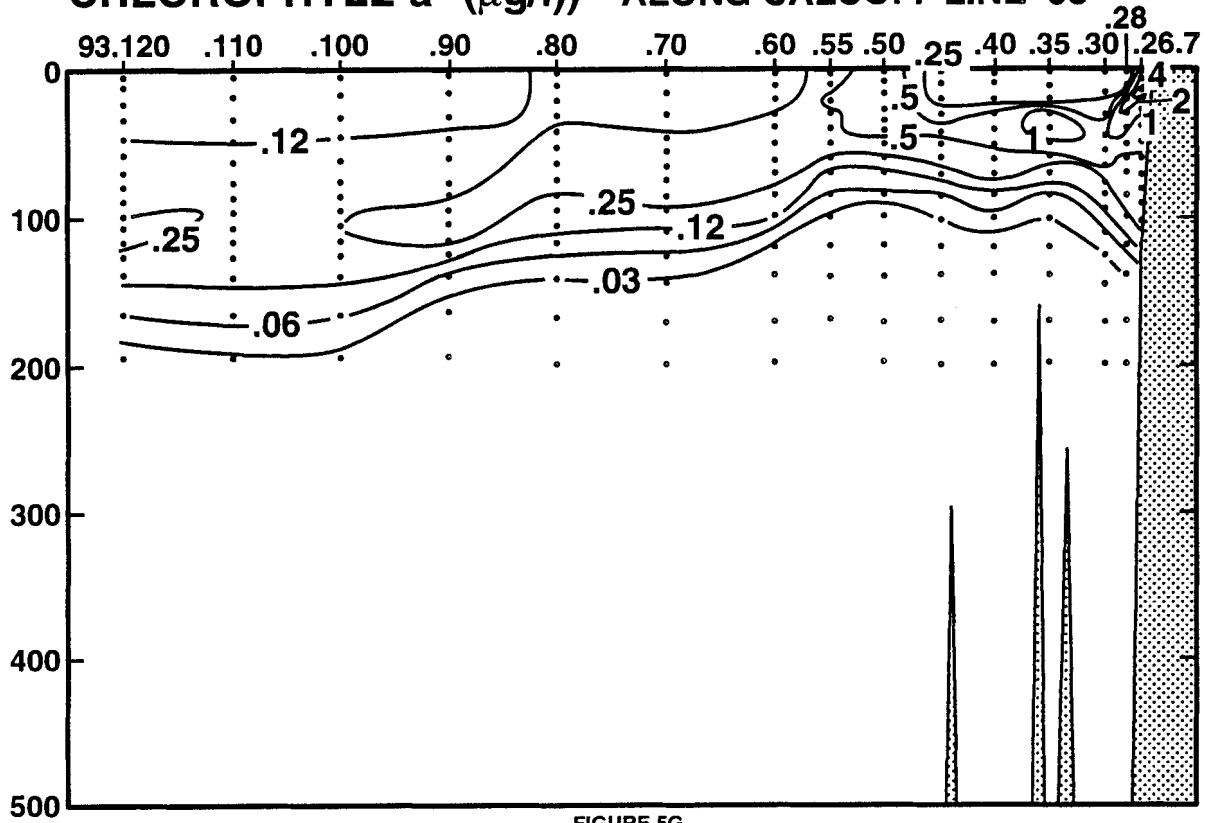


FIGURE 5G

DEPTH (m)

OXYGEN SATURATION (%) ALONG CALCOFI LINE 93

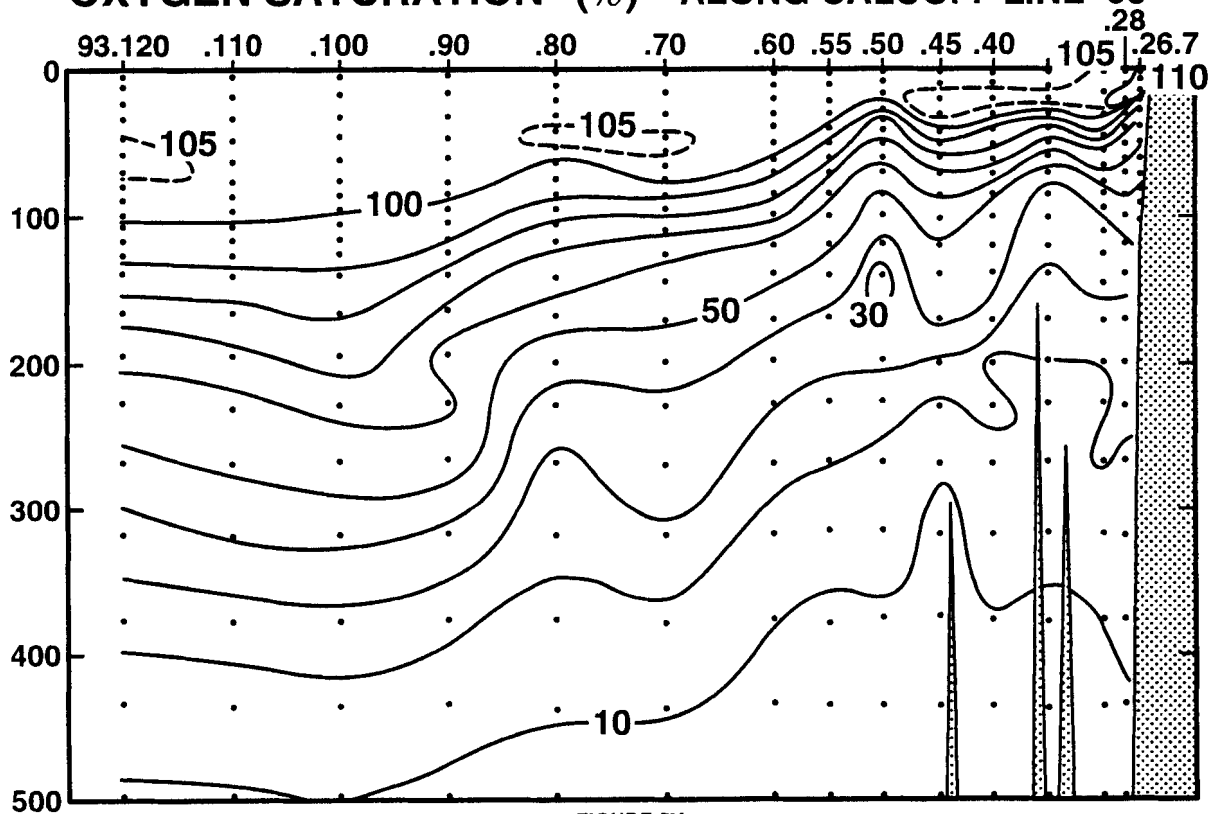


FIGURE 5H

CALCOFI CRUISE 9608

7 - 10 AUGUST 1996

OXYGEN (ml/l) ALONG CALCOFI LINE 93

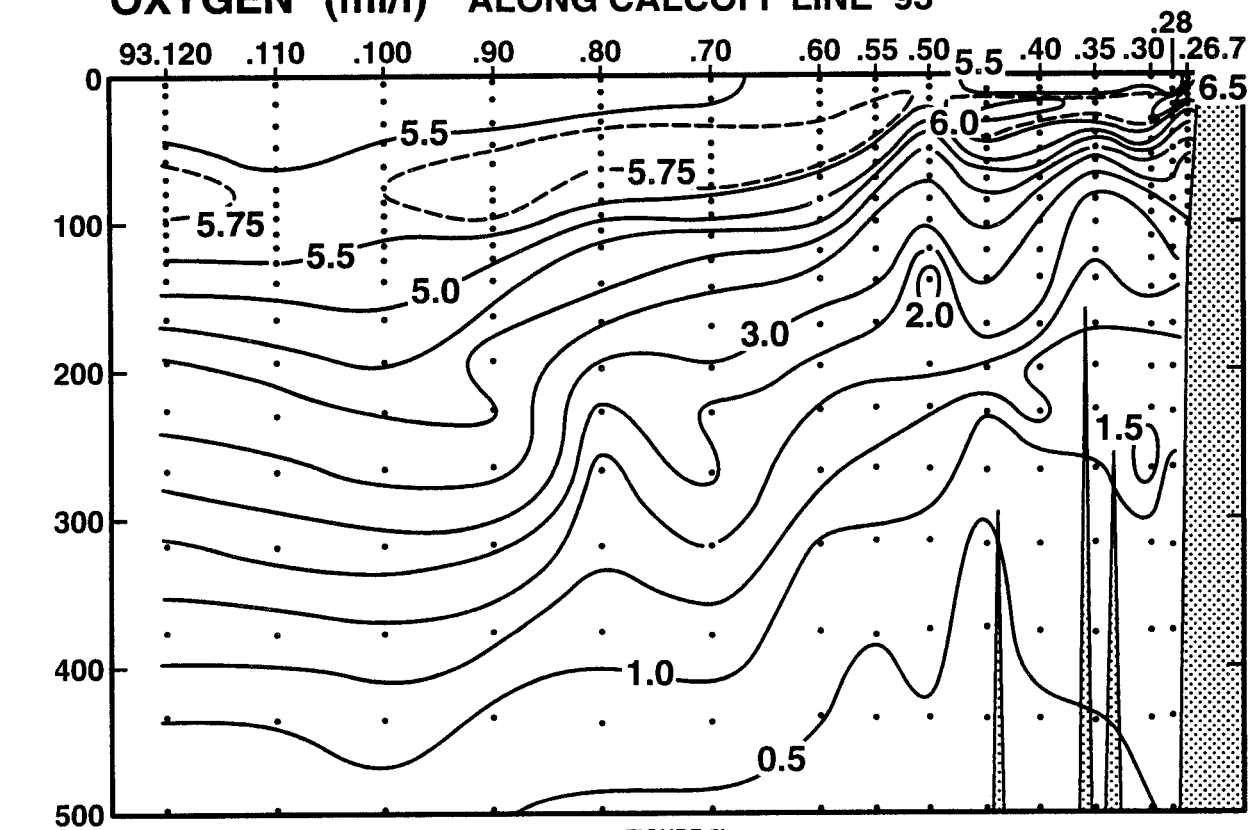


FIGURE 5I

NITRITE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

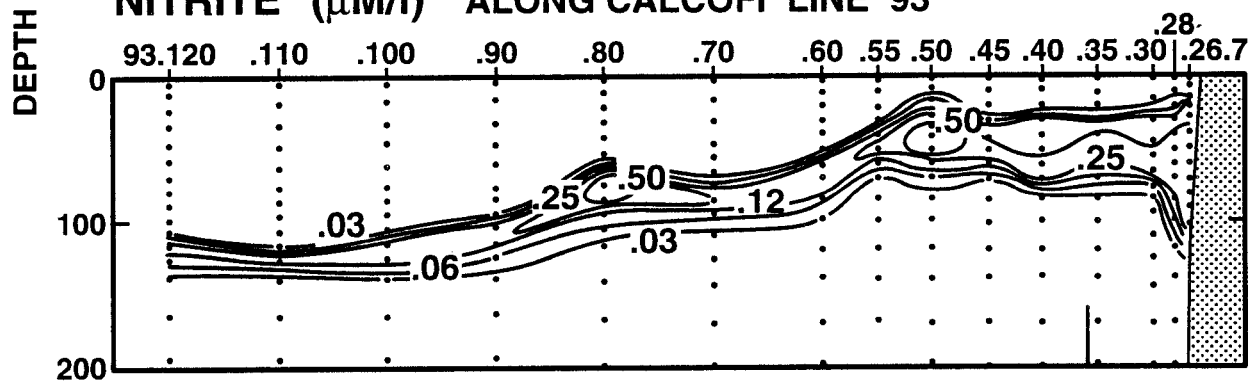


FIGURE 5J

PHAEOPIGMENTS ($\mu\text{g/l}$) ALONG CALCOFI LINE 93

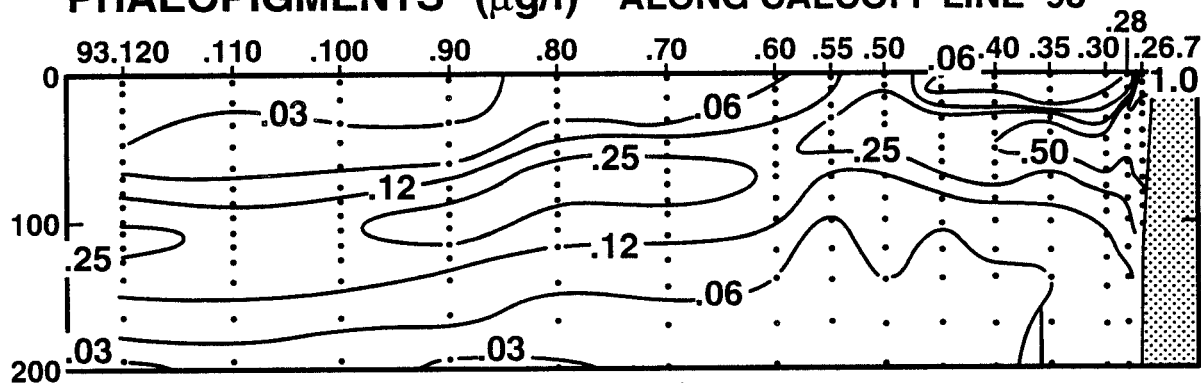


FIGURE 5K

PERSONNEL

CalCOFI Cruise 9608

SHIP'S CAPTAIN

David B. Murline, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Renger, Edward H. (Chief Scientist)	Staff Research Associate, SIO	1,2
Abramenkoff, Dmitry N.	Fishery Biologist, NMFS	1,2
Bichnevicius, Berzas J.	Laboratory Assistant, SIO	1
Beaupre, Marie-Claude C.	Staff Research Associate, SIO	1,2
Cheng, Scott C.	Laboratory Assistant, SIO	1
Fruetel, Debra L.	Volunteer	2
Griffith, David A.	Fishery Biologist, NMFS	1
Gruber, Dennis W.	Marine Technician, SIO	1,2
Hays, Amy E.	Biological Technician, NMFS	1,2
Hyrenbach, David K.	Graduate Student, SIO	1,2
McGinnis, Jean L.	Staff Research Associate, SIO	2
Mortyn, Graham P.	Graduate Student, SIO	2
Nguyen, Truc H.	Laboratory Assistant, SIO	1,2
Olaizola, Miguel	Post Doctoral Fellow, SIO	1,2
Ramirez, Fernando	Staff Research Associate, SIO	1,2
Rathburn, Anthony E.	Post Graduate Researcher, SIO	2
Shankle, Amy M.	Graduate Student, SIO	1,2
Tashiro, Mari	Volunteer	2
Venrick, Elizabeth L.	Research Oceanographer, SIO	1,2
Wilkinson, James R.	Programmer/Analyst, SIO	1,2

Leg 1: San Diego to Port San Luis, Ca., 7 Aug. - 22 Aug., 1996

Leg 2: Port San Luis, to San Diego, Ca., 22 Aug. - 24 Aug., 1996

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
35 5.3 N	120 46.7 W	22/08/96	1844	UTC	69 m	340 06 kn	340 04 04	2	1013.2 mb	13.6 C	13.1 C	08m 06		8/8	ST	
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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	12.53	12.53	33.698	25.477	249.4	0.000	5.00	82.9	15.4	1.06	11.5	0.48	5.89	1.05	0	
2 A	12.53	12.53	33.698	25.477	249.4	0.005	5.00	82.9	15.4	1.06	11.5	0.48	5.89	1.05	2	211
2	12.55	12.55	33.698	25.473	249.8	0.005									2	212
4	12.41	12.41	33.701	25.503	247.1	0.010									4	210
5	12.36	12.36	33.701	25.512	246.2	0.012									5	209
5 A	12.21	12.21	33.697	25.538	243.7	0.012	4.93	81.2	15.5	1.09	11.8	0.50	6.16	1.07	5	208
10 ISL	11.99	11.99	33.698	25.581	239.8	0.025	4.34	71.1	17.2	1.27	14.0	0.51	4.78	1.00	10	
11 A	11.98	11.98	33.698	25.583	239.7	0.027	4.22	69.1	17.5	1.31	14.5	0.51	4.46	0.98	11	207
16 A	11.96	11.96	33.699	25.587	239.3	0.039	4.15	68.0	17.3	1.32	14.7	0.49	4.47	0.91	16	206
20 ISL	11.87	11.87	33.702	25.606	237.6	0.048	4.09	66.8	17.4	1.34	14.9	0.47	4.13	0.92	20	
22 A	11.82	11.82	33.704	25.617	236.6	0.053	4.06	66.3	17.5	1.35	15.1	0.47	3.90	0.92	22	205
30 ISL	11.68	11.68	33.720	25.656	233.1	0.072	3.85	62.7	19.2	1.43	15.9	0.51	3.11	1.16	30	
31 A	11.66	11.66	33.722	25.661	232.6	0.074	3.82	62.2	19.5	1.44	16.0	0.52	3.00	1.18	31	204
40	11.30	11.30	33.732	25.735	225.8	0.095	3.37	54.4	21.9	1.62	18.1	0.51	1.63	0.88	40	203
50	10.71	10.70	33.762	25.865	213.7	0.117	2.75	43.9	25.9	1.84	21.3	0.55	0.47	1.02	50	202
61	10.52	10.51	33.782 D	25.913	209.3	0.140	2.74 U	43.5U	25.9 U	1.83 U	21.3 U	0.54 U	0.58 U	0.98 U	61	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
35 1.3 N	120 55.2 W	22/08/96	1513	UTC	244 m	340 14 kn	340 06 05	4	1011.9 mb	12.5 C	12.3 C	07m 05		8/8		
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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	12.98	12.98	33.636	25.341	262.3	0.000	5.44	91.0	6.4	0.70	7.2	0.35	8.17	1.20	0	
2	12.98	12.98	33.638	25.342	262.2	0.005									2	216
2	12.98	12.98	33.634	25.341	262.4	0.005	5.44	91.0	6.4	0.70	7.2	0.35	8.17	1.20	2	215
10 ISL	12.98	12.98	33.637	25.342	262.5	0.026	5.44	91.0	6.5	0.71	7.2	0.36	7.93	1.34	10	
11	12.98	12.98	33.637	25.342	262.5	0.029	5.44	91.0	6.5	0.71	7.2	0.36	7.90	1.35	11	214
20 ISL	12.53	12.53	33.640	25.433	254.1	0.052	4.75	78.7	9.9	0.98	9.9	0.46	4.66	0.92	20	
21	12.45	12.45	33.642	25.450	252.5	0.055	4.64	76.7	10.5	1.02	10.4	0.47	4.20	0.86	21	213
30	11.30	11.30	33.693	25.705	228.5	0.076	3.40	54.9	18.1	1.54	17.3	0.50	0.40	0.60	30	212
40	10.96	10.96	33.726	25.792	220.4	0.099	3.12	50.0	20.5	1.68	19.5	0.41	0.19	0.42	40	211
50	10.64	10.63	33.768	25.881	212.1	0.120	2.80	44.6	22.8	1.78	21.2	0.43	0.11	0.44	50	210
61	10.38	10.37	33.809	25.959	205.0	0.143	2.61	41.3	24.6	1.88	22.3	0.55	0.11	0.41	61	209
70	10.20	10.19	33.838	26.012	200.1	0.162	2.55	40.2	25.6	1.93	22.9	0.47	0.09	0.46	70	208
75 ISL	10.11	10.10	33.854	26.040	197.5	0.171	2.52	39.7	26.1	1.95	23.3	0.45	0.09	0.42	75	
85	9.96	9.95	33.880	26.086	193.4	0.191	2.47	38.8	27.0	1.99	24.0	0.40	0.08	0.34	85	207
100	9.86	9.85	33.902	26.120	190.4	0.220	2.34	36.7	28.2	2.04	24.9	0.40	0.06	0.40	101	206
120	9.76	9.75	33.957	26.180	185.1	0.257	2.18	34.1	29.5	2.12	25.9	0.40	0.06	0.32	121	205
125 ISL	9.70	9.69	33.963	26.195	183.8	0.267	2.15	33.6	30.1	2.14	26.1	0.40	0.06	0.33	126	
135	9.56	9.54	33.972	26.225	181.1	0.285	2.11	32.8	31.3	2.18	26.5	0.40	0.05	0.35	136	204
150 ISL	9.41	9.39	33.996	26.269	177.3	0.312	2.03	31.5	32.9	2.23	27.1	0.40	0.06	0.34	151	
169	9.27	9.25	34.027	26.316	173.2	0.345	1.93	29.9	34.5	2.27	27.8	0.40	0.08	0.31	170	203
199	9.10	9.08	34.051	26.363	169.3	0.396	1.85	28.5	36.0	2.33	28.5	0.40	0.04	0.27	200	202
200 ISL	9.09	9.07	34.054	26.367	169.0	0.398	1.84	28.4	36.2	2.34	28.6	0.40	0.04	0.27	201	
237	8.61	8.58	34.152	26.520	155.0	0.458	1.30	19.8	44.9	2.60	30.7	0.40	0.04	0.27	238	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
34 53.5 N	121 11.8 W	22/08/96	1126	UTC	562 m	340 22 kn			1011.2 mb	13.9 C	13.3 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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.07	14.07	33.564	25.064	288.7	0.000	5.62	96.1	4.6	0.70	4.8	0.22	0.66	0.25	0	
1	14.07	14.07	33.564	25.064	288.7	0.003	5.62	96.1	4.6	0.70	4.8	0.22	0.66	0.25	1	224
10	14.07	14.07	33.561	25.062	289.2	0.029	5.62	96.1	4.6	0.69	4.8	0.22	0.65	0.23	10	219
10	14.07	14.07	33.561	25.062	289.2	0.029									10	221
10	14.07	14.07	33.562	25.062	289.1	0.029									10	220
11	14.07	14.07	33.565	25.065	288.9	0.032									11	223
11	14.07	14.07	33.563	25.063	289.1	0.032									11	222
20	14.06	14.06	33.563 D	25.066	289.1	0.058	5.62	96.1	4.6	0.69	4.8	0.22	0.75	0.26	20	218
30	12.32	12.32	33.654	25.484	249.5	0.085	4.15	68.5	12.8	1.23	12.3	0.49	0.69	0.51	30	217
39	11.53	11.53	33.672	25.647	234.2	0.107	3.57	57.9	17.0	1.49	16.7	0.47	0.41	0.41	39	216
50 ISL	11.45	11.44	33.693	25.678	231.5	0.132	3.50	56.7	17.6	1.52	17.1	0.49	0.38	0.51	50	
51	11.44	11.43	33.692	25.679	231.5	0.134	3.49	56.5	17.6	1.52	17.1	0.49	0.38	0.52	51	215
60	11.01	11.00	33.728	25.785	221.5	0.155	3.16	50.7	20.1	1.66	19.3	0.49	0.18	0.50	60	214
71	10.47	10.46	33.780	25.921	208.8	0.178	2.79	44.3	23.1	1.82	22.1	0.28	0.13	0.45	71	213
75 ISL	10.35	10.34	33.798	25.956	205.6	0.187	2.71	42.9	23.9	1.84	22.6	0.40	0.12	0.49	75	
86	10.11	10.10	33.841	26.030	198.7	0.209	2.58	40.6	25.7	1.93	23.5	0.40	0.09	0.58	86	212
99	9.85	9.84	33.884	26.108	191.6	0.234	2.52	39.5	27.0	1.98	24.5	0.40	0.08	0.37	100	211
100 ISL	9.83	9.82	33.886	26.113	191.1	0.236	2.52	39.4	27.1	1.98	24.5	0.40	0.08	0.37	101	
120	9.49	9.48	33.923	26.198	183.4	0.274	2.57	39.9	28.6	2.02	25.3	0.40	0.05	0.31	121	210
125 ISL	9.42															

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ART	TYPE			
34 43.8 N	121 33.3 W	22/08/96	0704 UTC	894 m	330 23 kn			1013.2 mb	15.2 c	14.7 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.55	16.55	33.638	24.575	335.2	0.000	5.76	103.6	1.0	0.30	0.1	0.02	1.40	0.46	0	
2	16.55	16.55	33.638	24.575	335.3	0.007	5.76	103.6	1.0	0.30	0.1	0.02	1.40	0.46	2	220
10	16.55	16.55	33.641	24.578	335.3	0.034	5.76	103.6	1.0	0.30	0.1	0.02	1.42	0.50	10	219
20 ISL	16.53	16.53	33.639	24.581	335.3	0.067	5.76	103.5	1.0	0.30	0.1	0.02	1.46	0.39	20	
21	16.53	16.53	33.639	24.581	335.3	0.070	5.76	103.5	1.0	0.30	0.1	0.02	1.46	0.38	21	218
30 ISL	16.39	16.39	33.632	24.609	333.0	0.100	5.76	103.2	1.3	0.32	0.3	0.04	1.50	0.48	30	
31	16.38	16.38	33.631	24.610	332.9	0.104	5.76	103.2	1.3	0.32	0.3	0.04	1.50	0.49	31	217
41	12.38	12.37	33.541	25.385	259.2	0.133	4.75	78.4	10.8	1.18	12.8	0.36	0.57	0.39	41	216
49	11.71	11.70	33.551	25.520	246.5	0.154	4.59	74.7	12.6	1.29	14.6	0.20	0.34	0.26	49	215
50 ISL	11.64	11.63	33.555	25.536	245.0	0.156	4.55	73.9	13.0	1.31	14.9	0.19	0.31	0.25	50	
60	11.04	11.03	33.602	25.682	231.4	0.180	4.04	64.8	16.9	1.51	18.4	0.11	0.10	0.14	60	214
69	10.60	10.59	33.651	25.798	220.5	0.200	3.62	57.5	19.8	1.64	20.3		0.06	0.12	69	213
75 ISL	10.41	10.40	33.668	25.844	216.2	0.213	3.44	54.5	20.9	1.69	21.0		0.05	0.12	75	
86	10.15	10.14	33.690	25.906	210.5	0.237	3.23	50.9	22.1	1.74	22.0		0.04	0.13	86	212
100	9.79	9.78	33.731	25.999	202.0	0.266	3.04	47.5	23.9	1.81	23.3		0.02	0.12	101	211
120	9.23	9.22	33.827	26.165	186.4	0.305	2.94	45.4	27.3	1.91	24.7		0.02	0.13	121	210
125 ISL	9.11	9.10	33.841	26.196	183.7	0.314	2.96	45.6	27.8	1.92	24.9		0.02	0.12	126	
138	8.83	8.82	33.874	26.266	177.2	0.337	3.00	45.9	29.1	1.93	25.3		0.01	0.09	139	209
150 ISL	8.66	8.64	33.914	26.324	171.9	0.358	2.89	44.1	30.9	1.99	26.1		0.01	0.09	151	
168	8.49	8.47	33.981	26.403	164.7	0.388	2.58	39.2	34.1	2.11	27.6		0.01	0.08	169	208
199	8.33	8.31	34.108	26.527	153.4	0.438	1.86	28.2	40.8	2.37	30.2		0.01	0.07	200	207
200 ISL	8.33	8.31	34.110	26.529	153.3	0.439	1.85	28.0	40.9	2.37	30.2				201	
229	8.19	8.17	34.138	26.572	149.6	0.483	1.62	24.5	43.7	2.47	31.2				230	206
250 ISL	8.05	8.02	34.183	26.629	144.6	0.514	1.35	20.3	47.2	2.59	32.3				252	
267	7.92	7.89	34.218	26.676	140.4	0.538	1.13	17.0	50.1	2.69	33.2				269	205
300 ISL	7.68	7.65	34.238	26.727	136.0	0.584	0.94	14.0	54.0	2.78	34.2				302	
318	7.55	7.52	34.240	26.747	134.3	0.608	0.88	13.1	55.9	2.82	34.6				320	204
377	7.08	7.04	34.269	26.837	126.5	0.685	0.61	9.0	63.3	2.97	36.4				379	203
400 ISL	6.91	6.87	34.271	26.862	124.3	0.714	0.56	8.2	65.8	3.01	37.0				403	
444	6.60	6.56	34.274	26.907	120.5	0.768	0.50	7.3	70.3	3.08	38.1				447	202
500 ISL	6.28	6.24	34.292	26.963	115.6	0.834	0.38	5.5	75.9	3.15	39.1				504	
508	6.24	6.19	34.295	26.971	115.0	0.843	0.36	5.2	76.7	3.16	39.3				512	201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ART	TYPE			
34 23.4 N	122 15.0 W	22/08/96	0019 UTC	4335 m	320 22 kn	310 10 08	2	1013.9 mb	16.2 c	15.1 c	19m	02	8/8 ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.11	15.11	33.074	24.464	345.8	0.000	5.96	103.8	2.0	0.40	0.7	0.05	0.36	0.12	0	
3	15.11	15.11	33.074	24.464	345.9	0.010	5.96	103.8	2.0	0.40	0.7	0.05	0.36	0.12	3	220
4	15.11	15.11	33.075	24.465	345.8	0.014									4	221
10 ISL	15.11	15.11	33.073	24.464	346.1	0.035	5.97	104.0	2.0	0.39	0.7	0.05	0.37	0.11	10	
15	15.11	15.11	33.073	24.464	346.3	0.052	5.98	104.1	2.0	0.39	0.7	0.05	0.38	0.10	15	219
20 ISL	15.07	15.07	33.083	24.481	344.8	0.069	5.98	104.0	2.0	0.39	0.7	0.06	0.37	0.11	20	
30 ISL	14.98	14.98	33.104	24.517	341.7	0.104	5.97	103.7	1.9	0.40	0.8	0.07	0.35	0.12	30	
31	14.97	14.97	33.106	24.520	341.4	0.107	5.97	103.7	1.9	0.40	0.8	0.07	0.35	0.12	31	218
45	12.97	12.96	32.981	24.837	311.5	0.153	5.91	98.4	2.7	0.50	1.4	0.18	0.42	0.27	45	217
50 ISL	12.45	12.44	32.944	24.909	304.7	0.168	5.88	96.8	2.8	0.51	1.6	0.16	0.53	0.34	50	
55	12.04	12.03	32.925	24.972	298.8	0.183	5.83	95.2	2.9	0.54	2.1	0.14	0.61	0.39	55	216
66	11.63	11.62	33.001	25.107	286.1	0.215	5.63	91.1	4.7	0.71	4.9	0.20	0.45	0.33	66	215
73	11.12	11.11	33.086	25.266	271.2	0.235	5.41	86.7	6.8	0.86	7.7	0.17	0.30	0.24	73	214
75 ISL	10.96	10.95	33.110	25.313	266.7	0.240	5.34	85.3	7.7	0.90	8.5	0.17	0.27	0.22	75	
85	10.36	10.35	33.237	25.517	247.5	0.266	4.93	77.8	12.1	1.12	12.4	0.14	0.16	0.15	85	213
94	10.24	10.23	33.372	25.642	235.7	0.288	4.53	71.3	15.1	1.31	15.3		0.11	0.12	94	212
100 ISL	10.11	10.10	33.449	25.725	228.0	0.302	4.30	67.5	16.4	1.38	16.6		0.09	0.11	100	
110	9.85	9.84	33.555	25.851	216.2	0.324	3.95	61.7	18.5	1.49	18.5		0.07	0.09	111	211
125	9.37	9.36	33.665	26.016	200.7	0.355	3.51	54.3	23.8	1.76	22.4		0.03	0.06	126	210
145	8.98	8.96	33.789	26.176	185.9	0.394	3.12	47.9	27.5	1.91	24.8		0.01	0.06	146	209
150 ISL	8.88	8.86	33.814	26.211	182.6	0.403	3.07	47.0	28.4	1.93	25.2		0.01	0.06	151	
168	8.56	8.54	33.896	26.325	172.0	0.435	2.88	43.8	31.4	2.02	26.5		0.01	0.06	169	208
200	8.45	8.43	34.046	26.460	159.8	0.488	2.16	32.8	37.2	2.27	29.1		0.00	0.08	201	207
229	8.06	8.04	34.057	26.528	153.7	0.533	2.18	32.8	40.3	2.32	29.9				230	206
250 ISL	7.53	7.51	34.027	26.582	148.7	0.565	2.36	35.1	43.3	2.33	30.5				251	
266	7.12	7.09	34.005	26.622	145.0	0.589	2.45	36.1	45.9	2.34	31.1				268	205
300 ISL	6.77	6.74	34.026	26.687	139.2	0.637	2.06	30.1	52.2	2.50	33.3				302	
316	6.67	6.64	34.043	26.714	136.8	0.659	1.80	26.2	55.3	2.60	34.5				318	204
379	5.94	5.91	34.056	26.818	127.2	0.742	1.29	18.5	67.2	2.86	38.0				381	203
400 ISL	5.81	5.78	34.076	26.851	124.3	0.769	1.12	16.0	70.4	2.93	38.8				403	
442	5.60	5.56	34.121	26.912	118.9	0.820	0.82	11.7	76.6	3.06	40.2				445	202
500 ISL	5.20	5.16	34.158	26.989	111.9	0.887	0.58	8.2								

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
34 3.9 N	122 57.4 W	21/08/96	1820	UTC	4238 m	340 25 kn	340 08 04	2	1017.6 mb	17.8 c	16.4 c	17m 02	8/8		ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.26	16.26	33.043	24.185	372.4	0.000	5.86	104.4	1.4	0.34	0.3	0.03	0.39	0.09	0	
2	16.26	16.26	33.057	24.195	371.5	0.007									2	222
2 A	16.26	16.26	33.043	24.185	372.5	0.007	5.86	104.4	1.4	0.34	0.3	0.03	0.39	0.09	2	221
10 ISL	16.25	16.25	33.044	24.188	372.4	0.037	5.86	104.4	1.4	0.35	0.3	0.03	0.40	0.09	10	
11 A	16.25	16.25	33.044	24.188	372.5	0.041	5.86	104.4	1.4	0.35	0.3	0.03	0.40	0.09	11	220
20 ISL	16.23	16.23	33.039	24.189	372.7	0.074	5.86	104.3	1.3	0.35	0.3	0.03	0.41	0.09	20	
22 A	16.22	16.22	33.038	24.191	372.6	0.082	5.86	104.3	1.3	0.35	0.3	0.03	0.42	0.09	22	219
30 ISL	15.83	15.83	33.098	24.325	360.0	0.111	6.01	106.2	1.4	0.41	1.1	0.05	0.47	0.13	30	
35 A	15.39	15.38	33.115	24.436	349.6	0.129	6.09	106.7	1.5	0.44	1.5	0.08	0.52	0.15	35	218
46 A	13.73	13.72	32.961	24.669	327.5	0.166	6.04	102.2	1.9	0.44	1.0	0.23	0.64	0.34	46	217
50 ISL	13.24	13.25	32.944	24.751	319.8	0.179	5.99	100.3	2.3	0.45	1.2	0.24	0.59	0.37	50	
57	12.58	12.57	32.943	24.884	307.3	0.201	5.88	97.1	3.1	0.50	1.5	0.26	0.46	0.39	57	216
64 A	12.06	12.05	32.960	24.996	296.8	0.222	5.73	93.6	3.8	0.60	3.0	0.24	0.39	0.40	64	215
73	11.83	11.82	33.023	25.088	288.2	0.249	5.58	90.7	4.9	0.70	4.8	0.25	0.30	0.34	73	214
75 ISL	11.78	11.77	33.050	25.118	285.4	0.254	5.52	89.7	5.4	0.74	5.5	0.24	0.28	0.32	75	
84	11.41	11.40	33.158	25.270	271.1	0.279	5.28	85.1	7.5	0.89	8.3	0.21	0.23	0.24	84	213
95	10.55	10.54	33.175	25.436	255.4	0.308	5.34	84.5	8.6	0.98	9.9	0.19	0.18	0.26	95	212
100 ISL	10.27	10.26	33.255	25.546	245.0	0.321	5.07	79.8	11.4	1.14	12.5	0.15	0.21	0.10	100	
109	9.87	9.86	33.422	25.744	226.3	0.342	4.45	69.5	17.1	1.44	17.4	0.09	0.12	0.11	109	211
124	9.37	9.36	33.572	25.943	207.6	0.375	3.86	59.7	22.1	1.67	21.1	0.04	0.10	0.12	124	210
125 ISL	9.35	9.34	33.579	25.952	206.8	0.377	3.84	59.3	22.3	1.68	21.3	0.04	0.10	0.12	125	
145	9.00	8.98	33.692	26.097	193.4	0.417	3.54	54.3	26.1	1.84	23.8	0.02	0.07	0.14	145	209
150 ISL	8.92	8.90	33.726	26.136	189.7	0.426	3.42	52.4	27.0	1.88	24.3	0.02	0.07	0.15	150	
169	8.61	8.59	33.841	26.275	176.9	0.461	2.99	45.5	30.2	1.99	26.1	0.01	0.06	0.17	169	208
198	8.19	8.17	33.923	26.403	165.1	0.511	2.82	42.5	34.7	2.10	27.9	0.00	0.08	0.19	198	207
200 ISL	8.16	8.14	33.928	26.411	164.3	0.514	2.82	42.5	34.9	2.10	28.0				200	
230	7.76	7.74	33.988	26.518	154.6	0.562	2.76	41.2	38.1	2.16	28.7				230	206
250 ISL	7.41	7.39	33.998	26.576	149.2	0.592	2.65	39.3	41.7	2.23	29.9				250	
270	7.09	7.06	34.001	26.623	144.9	0.622	2.50	36.8	45.6	2.32	31.2				270	205
300 ISL	6.82	6.79	34.019	26.674	140.4	0.664	2.19	32.0	50.5	2.46	32.9				300	
320	6.69	6.66	34.033	26.703	137.8	0.692	1.95	28.4	53.7	2.55	34.0				320	204
375	6.20	6.17	34.074	26.800	129.1	0.766	1.31	18.9	64.1	2.82	37.3				375	203
400 ISL	5.93	5.90	34.079	26.838	125.6	0.797	1.16	16.6	68.8	2.91	38.5				400	
439	5.55	5.51	34.088	26.892	120.7	0.845	0.99	14.1	75.7	3.01	40.0				439	202
500 ISL	5.23	5.19	34.142	26.973	113.4	0.917	0.67	9.4	84.3	3.13	41.5				500	
512	5.17	5.13	34.153	26.989	112.0	0.930	0.61	8.6	86.0	3.15	41.8				512	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 43.4 N	123 38.2 W	21/08/96	0945	UTC	4124 m	340 20 kn			1018.2 mb	17.4 c	16.6 c					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.64	16.64	32.916	24.000	390.0	0.000	5.75	103.1	1.6	0.31	0.0	0.00	0.19	0.04	0	
2	16.64	16.64	32.916	24.000	390.1	0.008	5.75	103.1	1.6	0.31	0.0	0.00	0.19	0.04	2	220
10 ISL	16.65	16.65	32.915	23.997	390.6	0.039	5.75	103.1	1.5	0.32	0.0	0.00	0.18	0.05	10	
15	16.65	16.65	32.915	23.997	390.8	0.059	5.75	103.1	1.5	0.32	0.0	0.00	0.18	0.05	15	219
20 ISL	16.63	16.63	32.915	24.002	390.5	0.078	5.75	103.1	1.5	0.32	0.0	0.00	0.18	0.05	20	
30 ISL	16.59	16.59	32.914	24.011	390.0	0.117	5.76	103.2	1.5	0.31	0.0	0.00	0.18	0.05	30	
31	16.59	16.59	32.914	24.011	390.0	0.121	5.76	103.2	1.5	0.31	0.0	0.00	0.18	0.05	31	218
45	16.36	16.35	32.914	24.064	385.3	0.175	5.81	103.6	1.5	0.31	0.0	0.00	0.28	0.08	45	217
50 ISL	15.91	15.90	32.904	24.159	376.5	0.194	5.88	103.9	1.6	0.32	0.1	0.00	0.37	0.14	50	
55	15.35	15.34	32.894	24.275	365.5	0.213	5.96	104.2	1.7	0.33	0.1	0.01	0.44	0.19	55	216
66	14.03	14.02	32.888	24.552	339.3	0.252	6.05	102.9	1.8	0.36	0.0	0.03	0.38	0.21	66	215
75 ISL	13.12	13.11	32.935	24.772	318.4	0.281	5.91	98.7	2.4	0.46	1.0	0.30	0.39	0.23	75	
76	13.03	13.02	32.942	24.796	316.2	0.284	5.89	98.2	2.5	0.47	1.2	0.32	0.39	0.23	76	214
86	12.49	12.48	32.997	24.943	302.3	0.315	5.72	94.3	3.8	0.57	2.8	0.11	0.33	0.22	86	213
95	11.95	11.94	33.068	25.101	287.5	0.342	5.48	89.3	5.8	0.72	5.4	0.09	0.20	0.17	95	212
100 ISL	11.75	11.74	33.117	25.176	280.4	0.356	5.36	87.0	6.7	0.78	6.5	0.16	0.16	0.10	100	
111	11.31	11.30	33.226	25.342	264.9	0.386	5.05	81.3	9.0	0.93	9.1	0.11	0.14	0.11	111	211
125	10.49	10.48	33.346	25.580	242.4	0.422	4.53	71.7	13.6	1.20	14.0	0.05	0.08	0.12	125	210
145	9.71	9.69	33.517	25.845	217.4	0.468	3.91	60.9	20.3	1.55	19.4	0.01	0.05	0.16	145	209
150 ISL	9.53	9.51	33.561	25.909	211.4	0.478	3.79	58.8	21.6	1.62	20.5	0.01	0.05	0.15	150	
170	8.94	8.92	33.721	26.129	190.8	0.519	3.41	52.3	26.0	1.81	23.7	0.01	0.04	0.17	170	208
199	8.47	8.45	33.859	26.311	174.0	0.571	3.13	47.5	30.4	1.95	25.9	0.00	0.04	0.17	199	207
200 ISL	8.45	8.43	33.863	26.317	173.4	0.573	3.12	47.3	30.6	1.96	26.0				200	
230	7.95	7.93	33.966	26.473	158.9	0.623	2.80	42.0	36.5	2.11	28.2				230	206
250 ISL	7.74	7.72	33.998	26.529	153.9	0.654	2.63	39.3	39.5	2.19	29.2				250	
266	7.56	7.53	34.009	26.564	150.8	0.679	2.52	37.5	41.9	2.24	29.9				266	205
300 ISL	6.87	6.84	34.003	26.655	142.2	0.728	2.41	35.3	48.6	2.35	31.8				300	
318	6.51	6.48	33.999	26.700	138.0	0.754	2.32	33.7	52.5	2.42	33.0				318	204
379	5.99	5.96	34.050	26.807	128.3	0.835	1.38	19.8	65.8	2.78	37.6				379	203
400 ISL	5.82	5.79	34.062	26.838	125.5	0.861	1.21	17.3	69.5	2.86	38.6				400	
438	5.53	5.49	34.083	26.891	120.8	0.908	0.99	14.0	75.6	2.96	40.0				438	202
500 ISL	5.20	5.16	34.132	26.969	113.8	0.981	0.67	9.4	84.8	3.11	41.7				500	
513	5.13	5.09	34.142	26.985	112.3	0.996	0.60	8.4	86.7	3.14	42.0				513	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 23.3 N	124 19.4 W	21/08/96	0333	UTC	4392 m	340	22 kn	340 04 04	2	1019.0 mb	19.5 C	18.0 C		8/8		SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	18.70	18.70	33.466	23.926	397.1	0.000	5.43	101.7	2.1	0.25	0.0	0.00	0.08	0.02	0	
2	18.70	18.70	33.468	23.927	397.1	0.008									2	221
3	18.70	18.70	33.466	23.926	397.2	0.012	5.43	101.7	2.1	0.25	0.0	0.00	0.08	0.02	3	220
10 ISL	18.70	18.70	33.466	23.926	397.4	0.040	5.44	101.8	2.1	0.24	0.1	0.00	0.09	0.02	10	
15	18.71	18.71	33.466	23.924	397.9	0.060	5.44	101.9	2.1	0.24	0.1	0.00	0.09	0.02	15	219
20 ISL	18.71	18.71	33.464	23.922	398.2	0.080	5.44	101.9	2.1	0.24	0.1	0.00	0.09	0.02	20	
30 ISL	18.72	18.71	33.463	23.920	398.8	0.119	5.43	101.7	2.0	0.24	0.1	0.00	0.09	0.02	30	
31	18.72	18.71	33.463	23.920	398.8	0.123	5.43	101.7	2.0	0.24	0.1	0.00	0.09	0.02	31	218
46	18.69	18.68	33.466	23.930	398.4	0.183	5.44	101.8	2.0	0.23	0.1	0.00	0.09	0.02	46	217
50 ISL	18.65	18.64	33.463	23.938	397.8	0.199	5.45	101.9	2.0	0.23	0.1	0.00	0.10	0.02	50	
60	18.55	18.54	33.455	23.957	396.3	0.239	5.46	101.9	2.0	0.23	0.1	0.00	0.13	0.03	60	216
75	15.41	15.40	33.187	24.488	345.8	0.294	5.97	104.6	2.3	0.27	0.0	0.00	0.18	0.08	75	215
85	14.29	14.28	33.043	24.618	333.6	0.328	6.06	103.7	2.2	0.31	0.0	0.00	0.20	0.10	85	214
95	13.85	13.84	33.134	24.780	318.4	0.361	5.94	100.8	2.5	0.30	0.0	0.00	0.24	0.22	95	213
100 ISL	13.66	13.65	33.203	24.872	309.7	0.377	5.84	98.8	2.9	0.33	0.2	0.04	0.29	0.27	100	
105	13.42	13.41	33.269	24.972	300.3	0.392	5.74	96.6	3.4	0.37	0.3	0.10	0.33	0.30	105	212
115	12.65	12.63	33.338	25.178	280.9	0.421	5.55	92.0	4.5	0.48	2.1	0.19	0.27	0.26	115	211
124	12.34	12.32	33.449	25.324	267.2	0.446	5.34	88.0	5.5	0.56	4.3	0.04	0.19	0.22	125	210
125 ISL	12.28	12.26	33.452	25.338	265.9	0.448	5.32	87.6	5.7	0.57	4.5		0.18	0.22	126	
140	11.35	11.33	33.459	25.516	249.0	0.487	5.03	81.2	8.5	0.79	8.2		0.11	0.16	141	209
150 ISL	10.97	10.95	33.508	25.623	239.0	0.511	4.72	75.6	10.9	0.96	11.0		0.08	0.13	151	
165	10.51	10.49	33.596	25.772	225.0	0.546	4.27	67.7	14.6	1.21	15.1		0.06	0.08	166	208
192	9.43	9.41	33.696	26.032	200.6	0.604	3.87	60.0	20.7	1.53	20.0		0.01	0.03	193	207
200 ISL	9.21	9.19	33.731	26.095	194.7	0.619	3.76	58.0	22.4	1.60	21.2				201	
227	8.64	8.62	33.841	26.271	178.3	0.670	3.42	52.1	27.6	1.80	24.2				228	206
250 ISL	8.29	8.26	33.904	26.374	168.8	0.710	3.26	49.3	30.8	1.90	25.7				251	
268	8.05	8.02	33.939	26.438	163.0	0.740	3.14	47.2	33.3	1.97	26.6				269	205
300 ISL	7.59	7.56	33.984	26.540	153.6	0.790	2.82	42.0	39.4	2.12	28.8				302	
317	7.35	7.32	34.000	26.587	149.3	0.816	2.62	38.8	42.9	2.20	30.0				319	204
379	6.63	6.60	34.038	26.716	137.5	0.905	1.87	27.2	54.7	2.53	34.2				381	203
400 ISL	6.44	6.40	34.056	26.755	133.9	0.933	1.61	23.3	58.8	2.64	35.5				402	
442	6.11	6.07	34.092	26.826	127.5	0.988	1.14	16.4	66.8	2.85	37.9				445	202
500 ISL	5.63	5.59	34.136	26.921	118.8	1.060	0.78	11.1	77.1	3.02	40.1				503	
517	5.49	5.45	34.149	26.948	116.3	1.080	0.67	9.5	80.1	3.07	40.8				520	201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 27.0 N	120 31.8 W	19/08/96	0435	UTC	75 m	320	21 kn			1012.0 mb	14.3 C	13.2 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	14.34	14.34	33.597	25.032	291.7	0.000	5.76	99.1	3.0	0.52	3.2	0.13	4.66	1.66	0	
2	14.30	14.30	33.597	25.041	290.9	0.006									2	208
2	14.34	14.34	33.597	25.033	291.7	0.006	5.76	99.1	3.0	0.52	3.2	0.13	4.66	1.66	2	207
10	14.37	14.37	33.597	25.026	292.5	0.029	5.78	99.5	2.9	0.52	3.0	0.13	4.73	1.60	10	206
20	13.82	13.82	33.591	25.137	282.3	0.058	5.43	92.4	5.1	0.66	4.9	0.17	3.36	1.15	20	205
30 ISL	11.57	11.57	33.651	25.623	236.3	0.084	3.89	63.2	15.5	1.31	14.8	0.33	0.55	0.32	30	
31	11.35	11.35	33.662	25.672	231.6	0.086	3.74	60.4	16.6	1.38	15.8	0.34	0.30	0.25	31	204
41	10.83	10.83	33.718	25.809	218.8	0.109	3.35	53.5	19.6	1.57	18.7	0.24	0.17	0.29	41	203
50 ISL	10.58	10.57	33.767	25.891	211.2	0.128	3.08	49.0	21.5	1.69	20.4	0.18	0.16	0.29	50	
51	10.56	10.55	33.771	25.898	210.6	0.130	3.06	48.6	21.7	1.70	20.5	0.18	0.16	0.29	51	202
61	10.51	10.50	33.773	25.908	209.8	0.151	3.03	48.1	22.3	1.72	20.7	0.20	0.17	0.39	61	201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 19.3 N	120 48.6 W	19/08/96	0733	UTC	745 m	320	20 kn			1012.6 mb	14.8 C	13.3 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	14.69	14.69	33.618	24.974	297.2	0.000	5.68	98.4	3.5	0.58	3.5	0.14	0.91	0.39	0	
2	14.69	14.69	33.619	24.975	297.2	0.006									2	221
3	14.69	14.69	33.618	24.974	297.3	0.009	5.68	98.4	3.5	0.58	3.5	0.14	0.91	0.39	3	220
10 ISL	14.69	14.69	33.619	24.975	297.4	0.030	5.66	98.0	3.5	0.58	3.5	0.14	0.93	0.43	10	
11	14.69	14.69	33.619	24.975	297.4	0.033	5.66	98.0	3.5	0.58	3.5	0.14	0.94	0.44	11	219
20	14.58	14.58	33.619	24.999	295.4	0.059	5.62	97.1	3.8	0.59	3.6	0.15	1.01	0.47	20	218
30 ISL	13.35	13.35	33.642	25.272	269.7	0.088	4.85	81.7	8.8	0.91	8.4	0.21	0.91	0.61	30	
31	13.17	13.17	33.646	25.312	266.0	0.090	4.74	79.6	9.6	0.96	9.1	0.22	0.90	0.61	31	217
40	11.12	11.12	33.691	25.736	225.7	0.112	3.61	58.1	18.1	1.47	17.2	0.29	0.30	0.34	40	216
50 ISL	10.60	10.59	33.745	25.870	213.1	0.134	3.28	52.2	20.7	1.63	19.7	0.24	0.20	0.31	50	
51	10.55	10.54	33.738	25.874	212.8	0.137	3.27	52.0	20.8	1.63	19.8	0.23	0.19	0.31	51	215
60	10.29	10.28	33.802	25.969	204.0	0.155	3.05	48.2	22.7	1.73	21.3	0.18	0.14	0.24	60	214
70	10.11	10.10	33.887	26.066	195.0	0.175	2.64	41.6	25.2	1.89	23.4	0.12	0.08	0.19	70	213
75 ISL	10.10	10.09	33.916	26.090	192.8	0.185	2.53	39.8	25.9	1.93	23.9		0.07	0.16	75	
86	10.08	10.07	33.955	26.125	189.8	0.206	2.39	37.6	26.9	1.99	24.5		0.05	0.13	86	212
99	9.95	9.94	34.000	26.182	184.6	0.230	2.25	35.3	28.4	2.07	25.4		0.04	0.16	100	211
100 ISL	9.94	9.93	34.001	26.184	184.4	0.232	2.25	35.3	28.5	2.07	25.5		0.04	0.16	101	
120	9.65	9.64	34.007	26.238	179.7	0.269	2.18	34.0	30.4	2.12	26.3		0.04	0.18	121	210
125 ISL	9.61	9.60	34.016	26.251	178.5	0.278	2.15	33.5	30.8	2.14	26.5		0.04	0.17	126	
139	9.52	9.50	34.046	26.290	175.1	0.302	2.04	31.7	31.8	2.19	27.0		0.03	0.14	140	209
150 ISL	9.46	9.44	34.068	26.317	172.7	0.321	1.95	30.3	32.7	2.23						

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
34 9.0 N	121 9.4 W	19/08/96	1307 UTC	2210 m	330 14 kn			1014.6 mb	15.7 C	14.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.00	17.00	33.632	24.465	345.7	0.000	5.75	104.3	0.8	0.28	0.0	0.00	0.83	0.21		0
1	17.00	17.00	33.632	24.465	345.7	0.003	5.75	104.3	0.8	0.28	0.0	0.00	0.83	0.21		1 220
1	17.00	17.00	33.632	24.465	345.7	0.003										1 221
10 ISL	17.00	17.00	33.634	24.467	345.8	0.035	5.76	104.5	0.7	0.28	0.0	0.00	0.82	0.21		10
11	17.00	17.00	33.634	24.467	345.9	0.038	5.76	104.5	0.7	0.28	0.0	0.00	0.82	0.21		11 219
20 ISL	17.01	17.01	33.633	24.465	346.4	0.069	5.76	104.5	0.8	0.28	0.0	0.00	0.85	0.22		20
21	17.01	17.01	33.633	24.465	346.5	0.073	5.76	104.5	0.8	0.28	0.0	0.00	0.85	0.22		21 218
30 ISL	14.69	14.69	33.606	24.966	298.9	0.102	5.54	96.0	2.6	0.57	2.7	0.10	1.08	0.45		30
31	14.40	14.40	33.607	25.028	293.0	0.105	5.52	95.0	3.0	0.61	3.2	0.12	1.09	0.47		31 217
41	12.96	12.95	33.619	25.333	264.2	0.133	4.53	75.7	10.6	1.07	9.8	0.35	0.68	0.43		41 216
50 ISL	11.95	11.94	33.650	25.552	243.6	0.155	4.00	65.5	14.4	1.34	14.5	0.49	0.31	0.29		50
51	11.85	11.84	33.654	25.574	241.5	0.158	3.95	64.5	14.7	1.36	15.0	0.49	0.28	0.27		51 215
60	10.85	10.84	33.698	25.790	221.0	0.179	3.44	55.0	19.0	1.57	19.1	0.24	0.18	0.26		60 214
70	10.27	10.26	33.758	25.938	207.1	0.200	3.09	48.8	22.3	1.72	21.5	0.16	0.09	0.18		70 213
75 ISL	10.11	10.10	33.770	25.975	203.7	0.210	3.01	47.4	23.2	1.76	22.2	0.16	0.07	0.16		75
84	9.90	9.89	33.780	26.018	199.8	0.228	2.93	45.9	24.2	1.82	23.1	0.15	0.05	0.14		84 212
100	9.45	9.44	33.804	26.111	191.2	0.260	2.86	44.4	26.2	1.92	24.7	0.13	0.02	0.10		101 211
120	9.24	9.23	33.887	26.211	182.1	0.297	2.69	41.6	28.6	2.01	25.5		0.02	0.13		121 210
125 ISL	9.19	9.18	33.907	26.234	180.0	0.306	2.63	40.6	29.3	2.03	25.8		0.02	0.13		126
139	9.05	9.03	33.958	26.297	174.3	0.331	2.47	38.0	31.2	2.09	26.7		0.01	0.12		140 209
150 ISL	8.97	8.95	33.988	26.333	171.1	0.350	2.36	36.3	32.4	2.14	27.2		0.01	0.11		151
169	8.85	8.83	34.029	26.385	166.5	0.382	2.20	33.7	34.3	2.21	28.1		0.01	0.10		170 208
199	8.57	8.55	34.079	26.468	159.1	0.431	1.96	29.9	38.0	2.31	29.5		0.01	0.08		200 207
200 ISL	8.57	8.55	34.083	26.471	158.8	0.432	1.94	29.6	38.2	2.32	29.6					201
231	8.44	8.42	34.191	26.576	149.5	0.480	1.38	21.0	43.5	2.55	31.4					232 206
250 ISL	8.21	8.18	34.198	26.617	145.9	0.508	1.34	20.3	45.8	2.60	32.1					252
270	7.94	7.91	34.188	26.649	143.0	0.537	1.29	19.4	48.0	2.62	32.7					272 205
300 ISL	7.62	7.59	34.197	26.703	138.2	0.579	1.17	17.5	51.9	2.70	33.7					302
320	7.44	7.41	34.207	26.737	135.2	0.607	1.07	15.9	54.6	2.76	34.4					322 204
379	7.03	6.99	34.254	26.832	126.9	0.684	0.67	9.9	62.9	2.96	36.4					381 203
400 ISL	6.78	6.74	34.267	26.877	122.8	0.710	0.56	8.2	67.0	3.03	37.4					403
439	6.31	6.27	34.289	26.956	115.4	0.757	0.40	5.8	74.6	3.15	39.1					442 202
500 ISL	5.82	5.78	34.323	27.046	107.3	0.825	0.29	4.1	83.0	3.23	40.6					504
510	5.74	5.70	34.329	27.061	106.0	0.835	0.27	3.9	84.4	3.24	40.9					514 201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 49.2 N	121 50.8 W	19/08/96	1819 UTC	3633 m	340 15 kn	350 06 04	2	1018.4 mb	17.0 C	15.9 C	21m	02	8/8 ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.81	15.81	33.009	24.260	365.3	0.000	5.90	104.1	1.3	0.34	0.2	0.02	0.25	0.06		0
2 A	15.81	15.81	33.009	24.260	365.3	0.007	5.90	104.1	1.3	0.34	0.2	0.02	0.25	0.06		2 223
2	15.81	15.81	33.009	24.260	365.3	0.007										2 224
7	15.78	15.78	33.012	24.249	364.6	0.026	5.91	104.3	1.3	0.34	0.2	0.02	0.26	0.07		7 222
10 ISL	15.72	15.72	33.024	24.292	362.5	0.036	5.93	104.5	1.3	0.35	0.2	0.02	0.28	0.07		10
13 A	15.65	15.65	33.037	24.318	360.2	0.047	5.95	104.7	1.3	0.36	0.3	0.03	0.29	0.07		13 221
20	15.59	15.59	33.042	24.335	358.7	0.072	5.95	104.6	1.2	0.37	0.4	0.03	0.27	0.08		20 220
27 A	15.48	15.48	33.052	24.367	355.8	0.097	5.96	104.5	1.2	0.37	0.5	0.03	0.30	0.09		27 219
30 ISL	15.38	15.38	33.049	24.387	354.1	0.108	5.97	104.5	1.3	0.37	0.5	0.03	0.32	0.11		30
36	14.97	14.96	33.037	24.467	346.6	0.129	6.02	104.5	1.5	0.37	0.5	0.03	0.34	0.14		36 218
43 A	13.97	13.96	33.027	24.671	327.3	0.153	6.10	103.7	1.9	0.33	0.0	0.01	0.33	0.15		43 217
50	12.64	12.63	32.979	24.900	305.6	0.175	6.01	99.4	2.1	0.41	0.4	0.13	0.37	0.25		50 216
57 A	12.08	12.07	32.919	24.960	300.0	0.196	5.91	96.5	2.1	0.47	1.0	0.21	0.35	0.23		57 215
67	11.42	11.41	32.916	25.080	288.8	0.226	5.74	92.5	3.3	0.62	3.3	0.10	0.31	0.25		67 214
75 ISL	11.01	11.00	32.970	25.195	277.9	0.248	5.58	89.1	5.2	0.74	5.4	0.10	0.14	0.14		75
80 A	10.88	10.87	33.040	25.273	270.6	0.262	5.43	86.5	6.6	0.82	7.0	0.10	0.06	0.09		80 213
91	11.22	11.21	33.324	25.434	255.7	0.291	4.89	78.6	10.0	1.08	11.5		0.28	0.28		91 212
100	10.45	10.44	33.408	25.635	236.6	0.313	4.45	70.4	13.8	1.24	14.5		0.10	0.14		100 211
119	9.63	9.62	33.635	25.950	206.9	0.355	3.66	56.9	22.4	1.69	21.6		0.03	0.06		120 210
125 ISL	9.45	9.44	33.691	26.024	200.0	0.367	3.46	53.6	24.1	1.77	22.9		0.02	0.06		126
138	9.14	9.13	33.792	26.153	188.0	0.393	3.09	47.6	26.9	1.89	24.7		0.01	0.07		139 209
150 ISL	8.95	8.93	33.862	26.238	180.1	0.415	2.80	43.0	29.4	2.00	26.1		0.01	0.07		151
169	8.69	8.67	33.931	26.333	171.4	0.448	2.55	38.9	32.5	2.11	27.4		0.01	0.08		170 208
198	8.09	8.07	33.955	26.443	161.2	0.496	2.89	43.5	34.7	2.07	27.7		0.01	0.06		199 207
200 ISL	8.06	8.04	33.957	26.449	160.7	0.499	2.89	43.5	34.9	2.07	27.8					201
228	7.71	7.69	33.989	26.526	153.8	0.543	2.67	39.9	38.9	2.18	29.3					229 206
250 ISL	7.52	7.50	34.013	26.572	149.6	0.577	2.45	36.4	42.1	2.28	30.6					251
270	7.34	7.31	34.030	26.611	146.2	0.606	2.24	33.2	45.2	2.37	31.7					272 205
300 ISL	6.94	6.91	34.038	26.673	140.6	0.649	1.99	29.2	51.0	2.49	33.4					302

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 32.2 W	20/08/96	0045	UTC	3999 m	330	18 kn	320 06 05	1	1017.6 mb	17.3 C	15.4 C	22m 01	7/8		ST
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	db	
0 ISL	18.02	18.02	33.193	23.885	401.0	0.000	5.51	101.7	1.8	0.27	0.0	0.00	0.09	0.02		0
2	18.02	18.02	33.196	23.887	400.9	0.008										2 221
2	18.02	18.02	33.193	23.885	401.1	0.008	5.51 A	101.7	1.8	0.27	0.0	0.00	0.09	0.02		2 220
10 ISL	18.06	18.06	33.200	23.881	401.8	0.040	5.52	101.9	1.9	0.27	0.0	0.00	0.10	0.03		10
15	18.08	18.08	33.202	23.878	402.2	0.060	5.52	102.0	1.9	0.27	0.0	0.00	0.10	0.03		15 219
20 ISL	18.23	18.23	33.247	23.876	402.6	0.080	5.50	101.9	1.9	0.27	0.0	0.00	0.10	0.03		20
28	18.48	18.48	33.320	23.870	403.4	0.113	5.47	101.9	2.0	0.26	0.0	0.00	0.11	0.02		28 218
30 ISL	18.48	18.47	33.330	23.878	402.8	0.121	5.47	101.9	2.0	0.26	0.0	0.00	0.11	0.02		30
46	18.52	18.51	33.411	23.930	398.3	0.185	5.45	101.6	2.1	0.24	0.1	0.00	0.10	0.02		46 217
50 ISL	18.00	17.99	33.418	24.064	385.7	0.200	5.55	102.5	2.2	0.24	0.1	0.00	0.12	0.03		50
60	16.46	16.45	33.413	24.425	351.5	0.237	5.82	104.3	2.3	0.24	0.1	0.00	0.18	0.07		60 216
75	14.90	14.89	33.285	24.675	328.0	0.288	5.88	102.1	2.4	0.27	0.0	0.00	0.19	0.15		75 215
85	13.95	13.94	33.243	24.843	312.1	0.320	5.88	100.1	2.8	0.32	0.1	0.00	0.21	0.22		85 214
95	12.94	12.93	33.370	25.145	283.5	0.350	5.47	91.2	4.5	0.50	1.9	0.22	0.23	0.26		95 213
100 ISL	12.49	12.48	33.360	25.225	275.9	0.364	5.33	88.1	5.6	0.60	3.9	0.17	0.21	0.25		100
104	12.12	12.11	33.341	25.281	270.6	0.375	5.23	85.7	6.6	0.69	5.6	0.10	0.18	0.25		104 212
115	10.97	10.96	33.350	25.499	250.0	0.404	4.95	79.2	9.3	0.90	9.3	0.07	0.14	0.22		115 211
125 ISL	10.55	10.54	33.431	25.636	237.1	0.428	4.67	74.0	11.8	1.07	12.1		0.10	0.17		126
126	10.53	10.52	33.441	25.647	236.1	0.430	4.64	73.5	12.1	1.09	12.3		0.10	0.16		127 210
139	10.09	10.07	33.537	25.797	222.0	0.460	4.37	68.6	15.0	1.25	15.2		0.06	0.10		140 209
150 ISL	9.76	9.74	33.598	25.901	212.3	0.484	4.18	65.2	17.2	1.37	17.2		0.04	0.06		151
165	9.35	9.33	33.673	26.026	200.6	0.515	3.96	61.2	20.2	1.51	19.5		0.02	0.03		166 208
192	8.71	8.69	33.822	26.245	180.2	0.566	3.65	55.7	26.2	1.73	23.0		0.00	0.02		193 207
200 ISL	8.60	8.58	33.847	26.281	176.8	0.581	3.59	54.6	27.2	1.77	23.6					201
229	8.26	8.24	33.905	26.379	168.0	0.631	3.42	51.7	30.4	1.87	25.1					230 206
250 ISL	7.88	7.86	33.942	26.464	160.0	0.665	3.30	49.4	33.9	1.95	26.4					251
269	7.53	7.50	33.970	26.537	153.3	0.695	3.16	47.0	37.4	2.03	27.6					270 205
300 ISL	7.16	7.13	33.993	26.608	146.9	0.741	2.82	41.6	42.9	2.17	29.7					302
328	6.89	6.86	34.010	26.658	142.4	0.782	2.41	35.3	48.6	2.33	31.9					330 204
378	6.37	6.34	34.073	26.777	131.5	0.850	1.38	20.0	61.5	2.73	36.7					380 203
400 ISL	6.18	6.14	34.089	26.815	128.1	0.879	1.16	16.7	65.8	2.83	37.9					402
432	5.92	5.88	34.109	26.863	123.7	0.919	0.96	13.8	71.4	2.93	39.2					435 202
500 ISL	5.45	5.41	34.162	26.963	114.6	1.000	0.61	8.6	82.2	3.10	41.2					503
518	5.33	5.29	34.177	26.990	112.2	1.021	0.52	7.3	85.1	3.14	41.7					521 201

A) BURET ASSUMED TO HAVE BEEN MISREAD BY 0.1 ML, OXYGEN VALUE CORRECTED BY 0.73 ML/L.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 9.4 N	123 13.5 W	20/08/96	0728	UTC	4224 m	350	19 kn			1018.9 mb	16.7 C	15.0 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	db	
0 ISL	17.11	17.11	32.922	23.895	400.1	0.000	5.64	102.1	1.9	0.29	0.0	0.00	0.12	0.02		0
2	17.11	17.11	32.922	23.895	400.1	0.008	5.64	102.1	1.9	0.29	0.0	0.00	0.12	0.02		2 221
3	17.10	17.10	32.922	23.898	399.9	0.012										3
10 ISL	17.10	17.10	32.918	23.895	400.4	0.040	5.65	102.2	1.8	0.29	0.0	0.00	0.11	0.03		10
16	17.08	17.08	32.914	23.897	400.4	0.064	5.66	102.4	1.8	0.29	0.0	0.00	0.11	0.03		16 219
20 ISL	17.07	17.07	32.912	23.898	400.5	0.080	5.66	102.4	1.8	0.29	0.0	0.00	0.11	0.03		20
30	17.04	17.04	32.906	23.900	400.5	0.120	5.66	102.3	1.8	0.29	0.0	0.00	0.12	0.03		30 218
46	17.03	17.02	32.901	23.899	401.1	0.184	5.66	102.3	1.8	0.29	0.0	0.00	0.12	0.03		46 217
50 ISL	17.23	17.22	33.013	23.938	397.6	0.200	5.66	102.7	1.9	0.28	0.0	0.00	0.13	0.03		50
61	17.63	17.62	33.331	24.087	383.8	0.243	5.65	103.5	2.2	0.26	0.0	0.00	0.15	0.05		61 216
75	16.92	16.91	33.382	24.295	364.4	0.296	5.79	104.7	2.4	0.24	0.0	0.00	0.19	0.08		75 215
85	16.24	16.23	33.392	24.460	348.9	0.331	5.83	104.0	2.5	0.24	0.0	0.00	0.22	0.13		85 214
94	15.18	15.17	33.373	24.682	327.9	0.362	5.83	101.8	2.6	0.26	0.0	0.00	0.25	0.19		94 213
100 ISL	14.84	14.83	33.383	24.764	320.2	0.381	5.79	100.4	2.7	0.28	0.0	0.01	0.25	0.24		100
105	14.64	14.62	33.398	24.819	315.2	0.397	5.75	99.3	2.7	0.29	0.0	0.01	0.24	0.26		105 212
115	14.10	14.08	33.438	24.964	301.6	0.428	5.65	96.6	3.4	0.32	0.1	0.11	0.26	0.23		115 211
123	13.38	13.36	33.421	25.098	288.9	0.451	5.54	93.3	4.3	0.41	1.0	0.25	0.22	0.21		123 210
125 ISL	13.26	13.24	33.427	25.127	286.1	0.457	5.50	92.4	4.5	0.43	1.4	0.22	0.21	0.21		126
139	12.50	12.48	33.496	25.330	267.0	0.496	5.13	84.8	6.5	0.63	5.4	0.05	0.15	0.17		140 209
150 ISL	11.53	11.51	33.537	25.544	246.7	0.524	4.74	76.8	10.2	0.90	9.9		0.10	0.13		151
163	10.40	10.38	33.591	25.787	223.5	0.555	4.28	67.7	15.1	1.23	15.2		0.05	0.08		164 208
194	9.33	9.31	33.709	26.058	198.1	0.620	3.68	56.9	22.2	1.61	21.0		0.02	0.03		195 207
200 ISL	9.18	9.16	33.736	26.104	193.9	0.632	3.63	55.9	23.3	1.65	21.7					201
228	8.62	8.60	33.852	26.283	177.2	0.684	3.50	53.3	27.8	1.78	23.9					229 206
250 ISL	8.20	8.17	33.914	26.395	166.8	0.722	3.46	52.2	30.9	1.84	25.1					251
269	7.87	7.84	33.953	26.475	159.4	0.753	3.39	50.8	33.8	1.89	26.0					270 205
300 ISL	7.49	7.46	33.996	26.564	151.3	0.801	2.96	44.0	39.8	2.08	28.4					302
317	7.30	7.27	34.009	26.601	147.9	0.826	2.67	39.5	43.5	2.20	29.9					319 204
378	6.33	6.30	34.026	26.745	134.4	0.912	1.85	26.7	58.3	2.58	35.1					380 203
400 ISL	6.19	6.15	34.053	26.785	130.9	0.942	1.55	22.3	62.4	2.70	36.5					402
437	6.04	6.00	34.104	26.845	125.6	0.989	1.10	15.8	68.5	2.86	38.3					440 202
500 ISL	5.68	5.64	34.159	26.933	117.8	1.066	0.70	10.0	78.0	3.03	40.3					503
518	5.58	5.54	34.175	26.958	115.5	1.087	0.59	8.4	80.7	3.08	40.9					521 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 49.2 N	123 54.8 W	20/08/96	2140	UTC	4346 m	350	22 kn	350 06 04	1	1020.0 mb	19.2 c	16.8 c	30m 01	6/8		SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.72	18.72	33.421	23.886	400.9	0.000	5.46	102.2	1.7	0.26	0.0	0.00	0.09	0.02	0	
2	18.72	18.72	33.421	23.886	401.0	0.008	5.46	102.2	1.7	0.26	0.0	0.00	0.09	0.02	2	220
2	18.72	18.72	33.423	23.888	400.8	0.008									2	221
2	18.71	18.71	33.421	23.889	400.7	0.008									2	222
10 ISL	18.71	18.71	33.421	23.889	401.0	0.040	5.45	102.0	1.7	0.26	0.0	0.00	0.09	0.01	10	
15	18.70	18.70	33.421	23.892	400.9	0.060	5.45	102.0	1.7	0.26	0.0	0.00	0.09	0.01	15	219
20 ISL	18.69	18.69	33.420	23.894	400.9	0.080	5.45	102.0	1.7	0.26	0.0	0.00	0.09	0.01	20	
30	18.65	18.64	33.418	23.903	400.4	0.120	5.46	102.1	1.8	0.25	0.0	0.00	0.10	0.01	30	218
45	18.59	18.58	33.414	23.915	399.7	0.180	5.48	102.3	1.8	0.25	0.0	0.00	0.11	0.02	45	217
50 ISL	18.20	18.19	33.383	23.988	392.9	0.200	5.55	102.9	1.8	0.25	0.0	0.00	0.12	0.03	50	
60	17.14	17.13	33.291	24.173	375.5	0.238	5.71	103.6	1.8	0.26	0.0	0.00	0.16	0.04	60	216
73	15.61	15.60	33.124	24.396	354.6	0.286	5.88	103.4	1.8	0.31	0.0	0.00	0.26	0.14	73	215
75 ISL	15.48	15.47	33.106	24.411	353.2	0.293	5.90	103.5	1.8	0.31	0.0	0.00	0.28	0.16	75	
84	15.10	15.09	33.075	24.470	347.8	0.325	5.94	103.4	1.9	0.32	0.0	0.01	0.36	0.24	84	214
94	14.87	14.86	33.183	24.603	335.4	0.359	5.89	102.1	2.2	0.33	0.0	0.03	0.34	0.30	94	213
100 ISL	14.70	14.69	33.346	24.766	320.1	0.378	5.80	100.3	2.5	0.31	0.0	0.02	0.28	0.30	100	
103	14.59	14.57	33.421	24.847	312.4	0.388	5.75	99.3	2.7	0.30	0.0	0.02	0.25	0.30	103	212
114	13.97	13.95	33.417	24.974	300.5	0.422	5.66	96.5	3.1	0.37	0.5	0.15	0.25	0.23	114	211
125 ISL	13.30	13.28	33.472	25.154	283.6	0.454	5.44	91.5	4.3	0.49	2.6	0.15	0.17	0.18	125	
126	13.24	13.22	33.478	25.170	282.0	0.457	5.41	90.9	4.5	0.51	2.9	0.15	0.16	0.18	126	210
136	12.61	12.59	33.524	25.330	267.0	0.484	5.12	84.9	6.5	0.72	6.7	0.08	0.08	0.11	136	209
150 ISL	11.74	11.72	33.549	25.515	249.5	0.520	4.70	76.5	9.8	0.97	10.7	0.05	0.05	0.08	150	
167	10.78	10.76	33.572	25.707	231.4	0.561	4.26	67.9	13.9	1.23	14.5	0.02	0.02	0.05	167	208
193	9.65	9.63	33.668	25.974	206.2	0.618	3.87	60.2	19.6	1.52	19.4	0.02	0.02	0.05	193	207
200 ISL	9.40	9.38	33.706	26.045	199.6	0.632	3.78	58.5	21.3	1.59	20.5				200	
228	8.60	8.58	33.855	26.288	176.7	0.685	3.48	53.0	27.7	1.80	24.0				228	206
250 ISL	8.23	8.20	33.919	26.395	166.8	0.723	3.40	51.3	30.7	1.87	25.3				250	
269	7.99	7.96	33.951	26.456	161.3	0.754	3.35	50.3	33.1	1.91	26.0				269	205
300 ISL	7.49	7.46	33.979	26.550	152.5	0.802	3.08	45.7	39.0	2.05	28.1				300	
319	7.20	7.17	33.988	26.598	148.1	0.831	2.85	42.0	43.0	2.16	29.5				319	204
376	6.51	6.48	34.028	26.724	136.6	0.912	1.95	28.3	55.7	2.53	34.3				376	203
400 ISL	6.26	6.22	34.041	26.766	132.7	0.944	1.65	23.8	60.6	2.66	36.0				400	
439	5.92	5.88	34.066	26.829	126.9	0.995	1.25	17.9	68.0	2.83	38.2				439	202
500 ISL	5.57	5.53	34.126	26.920	118.8	1.070	0.81	11.5	77.6	3.01	40.3				500	
513	5.50	5.46	34.139	26.939	117.1	1.085	0.72	10.2	79.7	3.05	40.7				513	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 16.4 N	120 1.4 W	18/08/96	2305	UTC	577 m	280	17 kn	280 03 04	0	1013.4 mb	16.2 c	15.0 c	8m 05	0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.40	16.40	33.580	24.565	336.2	0.000	6.51	116.7	0.2	0.21	0.1	0.00	2.22	0.71	0	
2 A	16.40	16.40	33.580	24.565	336.3	0.007	6.51	116.7	0.2	0.21	0.1	0.00	2.22	0.71	2	224
10	15.42	15.42	33.579	24.786	315.5	0.033	6.62	116.3	0.5	0.21	0.1	0.01	3.14	1.06	10	223
20	13.20	13.20	33.581	25.255	271.1	0.062	4.86	81.6	8.6	0.86	7.7	0.25	5.34	1.86	20	222
30	12.13	12.13	33.610	25.486	249.3	0.088	4.27	70.1	12.7	1.13	11.9	0.34	1.26	0.82	30	221
40	11.59	11.58	33.638	25.609	237.8	0.112	3.93	63.8	15.0	1.29	14.5	0.36	0.54	0.40	40	220
50	11.37	11.36	33.662	25.668	232.4	0.136	3.77	60.9	16.2	1.37	15.7	0.35	0.37	0.45	50	219
59	11.23	11.22	33.674	25.703	229.3	0.157	3.66	59.0	17.1	1.42	16.6	0.31	0.32	0.34	59	218
70	10.64	10.63	33.734	25.855	215.0	0.181	3.25	51.7	20.0	1.60	19.5	0.16	0.22	0.28	70	217
75 ISL	10.51	10.50	33.752	25.892	211.6	0.192	3.16	50.2	20.9	1.65	20.2	0.16	0.19	0.27	75	
84	10.37	10.36	33.783	25.941	207.2	0.211	3.03	48.0	22.4	1.73	21.1	0.15	0.14	0.26	84	216
99	10.06	10.05	33.858	26.052	196.9	0.241	2.71	42.6	25.0	1.87	23.0	0.12	0.09	0.18	100	215
100 ISL	10.03	10.02	33.861	26.060	196.2	0.243	2.70	42.4	25.2	1.88	23.1	0.12	0.09	0.18	101	
119	9.66	9.65	33.920	26.168	186.3	0.279	2.43	37.9	28.7	2.02	25.2	0.13	0.05	0.19	120	214
125 ISL	9.70	9.69	33.958	26.191	184.2	0.290	2.30	35.9	29.3	2.06	25.7	0.12	0.05	0.18	125	
138	9.84	9.82	34.041	26.233	180.6	0.314	2.02	31.7	30.2	2.14	26.5	0.09	0.04	0.15	138	213
150 ISL	9.80	9.78	34.067	26.260	178.3	0.336	1.90	29.7	30.9	2.18	26.9		0.04	0.15	150	
168	9.74	9.72	34.102	26.298	175.1	0.367	1.82	28.5	32.0	2.23	27.3		0.03	0.15	168	212
198	9.37	9.35	34.137	26.387	167.1	0.419	1.66	25.8	35.0	2.31	28.6		0.02	0.14	198	211
200 ISL	9.36	9.34	34.141	26.391	166.7	0.422	1.64	25.4	35.2	2.32	28.7				200	
229	9.23	9.20	34.196	26.456	161.2	0.470	1.44	22.3	37.4	2.42	29.4				229	210
250 ISL	9.11	9.08	34.194	26.474	159.8	0.503	1.38	21.3	38.4	2.45	29.9				250	
268	8.97	8.94	34.183	26.488	158.8	0.532	1.34	20.6	39.7	2.48	30.4				268	209
300 ISL	8.58	8.55	34.192	26.557	152.7	0.582	1.11	16.9	44.9	2.60	31.9				300	
317	8.35	8.32	34.199	26.597	149.0	0.608	0.98	14.9	48.3	2.68	32.7				317	208
377	7.62	7.58	34.197	26.704	139.4	0.694	0.71	10.6	59.1	2.89	34.7				377	207
400 ISL	7.39	7.35	34.201	26.741	136.2	0.726	0.47	7.0	62.6	2.95	34.9				400	
436	7.07	7.03	34.209	26.792	131.7	0.774	0.11	1.6	69.0	3.05	35.3				436	206
500 ISL	6.50	6.45	34.219	26.877	124.0	0.856	0.07	1.0	88.2	3.28	32.5				500	
525	6.35	6.30	34.221	26.899	122.2	0.887	0.05	0.7	96.7	3.41	30.3				525	205
545	6.32	6.27	34.221	26.903	122.1	0.911	0.02	0.3	102.9	3.55	27.9				545	204
561	6.30	6.25	34.220	26.905	122.1	0.931	0.02	0.3	110.2	3.75	24.6				561	203
565	6.30	6.25	34.221	26.905	122.1	0.935	0.02	0.3	111.1	3.78	24.6				565	202
570	6.31	6.26	34.224	26.907	122.0	0.942	0.01	0.1	111.3	3.78	24.5				570	201

A) SANTA BARBARA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
34 13.6 N	119 24.6 W	18/08/96	1839 UTC	34 m	310 06 kn	360 03 04	2	1014.1 mb	18.0 c	17.2 c	12m 04	8/8		ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	ug/L
0 ISL	17.53	17.53	33.611	24.323	359.2	0.000	6.26	114.7	0.3	0.12	0.1	0.00	2.03	0.50	0	
2	17.53	17.53	33.611	24.323	359.3	0.007									2	208
2 A	17.53	17.53	33.611	24.323	359.3	0.007	6.26	114.7	0.3	0.12	0.1	0.00	2.03	0.50	2	207
8	17.26	17.26	33.608	24.386	353.5	0.029									8	205
8	17.11	17.11	33.606	24.420	350.3	0.029									8	206
8 A	17.24	17.24	33.608	24.391	353.1	0.029	6.22	113.3	0.3	0.13	0.1	0.00	2.27	0.57	8	204
10 ISL	16.43	16.43	33.581	24.559	337.1	0.035	6.02	107.9	1.1	0.19	0.3	0.02	3.82	0.93	10	
16 A	13.75	13.75	33.543	25.114	284.4	0.054	5.23	88.8	4.8	0.48	2.3	0.18	7.57	1.84	16	203
20 ISL	12.87	12.87	33.545	25.293	267.5	0.065	4.69	78.2	8.4	0.78	5.6	0.41	5.00	1.37	20	
25 A	12.35	12.35	33.551	25.398	257.5	0.078	4.16	68.6	12.3	1.12	9.5	0.69	1.01	0.58	25	202
30 A	12.22	12.22	33.561	25.431	254.5	0.091	4.00	65.8	13.4	1.23	10.8	0.78	0.66	0.49	30	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
34 10.5 N	119 30.8 W	18/08/96	1621 UTC	170 m	330 01 kn	360 04 04	2	1013.6 mb	17.0 c	16.0 c	12m 03	8/8		ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	ug/L
0 ISL	16.97	16.97	33.605	24.452	347.0	0.000	6.49	117.6	0.0	0.17	0.1	0.00	0.75	0.28	0	
2	16.97	16.97	33.605	24.452	347.0	0.007	6.49	117.6	0.0	0.17	0.1	0.00	0.75	0.28	2	213
3	16.97	16.97	33.606	24.453	347.0	0.010									3	214
10	16.46	16.46	33.605	24.571	336.0	0.034	6.58	118.1	0.2	0.21	0.1	0.00	0.89	0.30	10	212
20	13.38	13.38	33.595	25.230	273.5	0.065	5.27	88.9	5.1	0.67	3.8	0.29	7.72	2.74	20	211
30	11.93	11.93	33.562	25.487	249.2	0.091	3.78	61.8	14.5	1.31	12.3	0.94	0.89	0.57	30	210
40	11.61	11.60	33.594	25.571	241.4	0.115	3.72	60.4	15.5	1.37	14.2	0.90	0.53	0.42	40	209
50	11.24	11.23	33.626	25.644	232.8	0.139	3.40	54.8	17.4	1.53	17.0	0.99	0.39	0.32	50	208
59	11.08	11.07	33.652	25.713	228.3	0.160	3.41	54.8	17.5	1.50	17.8	0.52	0.27	0.31	59	207
69	10.88	10.87	33.676	25.768	223.4	0.182	3.32	53.1	18.0	1.55	18.6	0.24	0.24	0.32	69	206
75 ISL	10.81	10.80	33.688	25.790	221.4	0.196	3.26	52.1	18.5	1.58	19.1	0.19	0.22	0.30	75	
84	10.67	10.66	33.724	25.843	216.6	0.216	3.12	49.7	19.9	1.65	20.2	0.12	0.19	0.28	84	205
99	10.14	10.13	33.881	26.057	196.5	0.247	2.59	40.8	25.2	1.93	23.7		0.07	0.14	100	204
100 ISL	10.13	10.12	33.889	26.065	195.8	0.248	2.57	40.5	25.4	1.94	23.8		0.07	0.14	101	
119	10.01	10.00	33.951	26.134	189.6	0.285	2.35	36.9	27.4	2.05	25.0		0.03	0.11	120	203
125 ISL	10.01	10.00	33.954	26.136	189.5	0.296	2.32	36.5	27.5	2.05	25.1		0.03	0.11	126	
140	10.01	9.99	33.961	26.142	189.3	0.325	2.28	35.8	27.8	2.05	25.2		0.04	0.12	141	202
150 ISL	9.99	9.97	33.976	26.157	188.1	0.344	2.24	35.2	28.1	2.07	25.4		0.03	0.12	151	
159	9.98	9.96	33.989	26.169	187.1	0.361	2.21	34.7	28.4	2.09	25.6		0.03	0.12	160	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 52.7 N	120 9.3 W	18/08/96	1001 UTC	115 m	320 30 kn			1011.3 mb	15.2 c	14.3 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	ug/L
0 ISL	18.25	18.23	33.595	24.141	376.6	0.000	5.99	111.2	1.5	0.23	0.0	0.01	1.38	0.40	0	
2	18.23	18.23	33.595	24.141	376.7	0.008	5.99	111.2	1.5	0.23	0.0	0.01	1.38	0.40	2	218
3	18.21	18.21	33.593	24.144	376.4	0.011									3	219
6	18.16	18.16	33.594	24.158	375.2	0.023									6	213
7	18.10	18.10	33.590	24.169	374.2	0.026									7	211
7	18.17	18.17	33.590	24.152	375.8	0.026									7	216
7	18.06	18.06	33.583	24.174	375.7	0.026	6.04	111.8	2.0	0.27	0.1	0.01	1.25	0.41	7	210
7	18.17	18.17	33.594	24.155	375.5	0.026									7	214
7	18.07	18.07	33.593	24.179	373.2	0.026									7	212
7	18.11	18.11	33.589	24.166	374.5	0.026									7	217
7	18.09	18.09	33.588	24.170	374.1	0.026									7	215
10 ISL	16.95	16.95	33.562	24.424	350.0	0.037	6.01	108.9	2.8	0.33	0.7	0.03	1.36	0.55	10	
12	16.14	16.14	33.556	24.607	332.6	0.044	5.98	106.6	3.4	0.38	1.1	0.05	1.46	0.66	12	209
20 ISL	15.44	15.44	33.550	24.759	318.3	0.070	5.86	103.0	4.5	0.46	2.1	0.08	1.85	0.72	20	
22	15.26	15.26	33.550	24.799	314.6	0.076	5.80	101.6	4.8	0.48	2.4	0.09	1.89	0.73	22	208
30	14.29	14.29	33.554	25.011	294.6	0.101	5.28	90.7	7.4	0.72	5.6	0.17	1.42	0.67	30	207
41	12.45	12.44	33.517	25.353	262.2	0.131	4.81	79.5	9.6	0.96	9.4	0.27	0.63	0.42	41	206
50	11.80	11.79	33.635	25.568	242.0	0.154	4.03	65.7	14.8	1.26	14.1	0.24	0.52	0.47	50	205
61	10.79	10.78	33.749	25.840	216.3	0.179	3.21	51.3	20.2	1.62	19.4	0.17	0.21	0.26	61	204
71	10.62	10.61	33.790	25.902	210.6	0.201	3.03	48.2	21.8	1.71	20.5	0.15	0.19	0.21	71	203
75 ISL	10.61	10.60	33.792	25.906	210.4	0.209	3.03	48.2	21.8	1.72	20.5	0.15	0.18	0.21	75	
87	10.58	10.57	33.797	25.915	209.7	0.234	3.01	47.9	22.0	1.73	20.7	0.15	0.16	0.21	87	202
100 ISL	10.53	10.52	33.803	25.929	208.7	0.261	2.97	47.2	22.2	1.74	21.0	0.14	0.15	0.20	101	
107	10.51	10.50	33.806	25.935	208.3	0.276	2.95	46.8	22.3	1.75	21.1	0.14	0.15	0.19	108	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 44.5 N	120 25.1 W	18/08/96	0555	UTC	962 m	320	23 kn			1013.0 mb	16.1 c	15.2 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.44	16.44	33.570	24.548	337.8	0.000	5.83	104.6	2.1	0.35	0.7	0.04	1.26	0.46	0	
2	16.44	16.44	33.570	24.548	337.9	0.007									2	221
3	16.44	16.44	33.570	24.548	337.9	0.010	5.83	104.6	2.1	0.35	0.7	0.04	1.26	0.46	3	220
10 ISL	16.48	16.48	33.570	24.539	339.0	0.034	5.83	104.6	2.1	0.33	0.7	0.04	1.27	0.42	10	
11	16.48	16.48	33.570	24.539	339.0	0.037	5.83	104.6	2.1	0.33	0.7	0.04	1.27	0.41	11	219
20	16.29	16.29	33.568	24.582	335.2	0.068	5.82	104.1	2.4	0.36	0.8	0.05	1.34	0.45	20	218
30	14.97	14.97	33.556	24.867	308.3	0.100	5.54	96.5	4.6	0.53	3.4	0.12	1.29	0.48	30	217
40	12.59	12.58	33.536	25.341	263.4	0.128	4.91	81.4	9.3	0.90	8.6	0.24	0.91	0.61	40	216
50 ISL	11.60	11.59	33.572	25.556	243.1	0.154	4.20	68.2	13.1	1.18	13.4	0.19	0.47	0.43	50	
51	11.55	11.54	33.577	25.569	241.9	0.156	4.13	67.0	13.5	1.20	13.8	0.18	0.43	0.40	51	215
61	10.98	10.97	33.667	25.743	225.6	0.179	3.57	57.2	17.2	1.45	17.5	0.08	0.30	0.27	61	214
70	10.87	10.86	33.691	25.781	222.1	0.200	3.45	55.2	18.0	1.50	18.3	0.07	0.25	0.24	70	213
75 ISL	10.69	10.68	33.718	25.834	217.2	0.211	3.33	53.1	19.2	1.56	19.2	0.06	0.21	0.22	75	
84	10.33	10.32	33.781	25.946	206.7	0.230	3.08	48.7	21.8	1.70	21.2	0.05	0.13	0.18	84	212
100	9.91	9.90	33.912	26.120	190.5	0.261	2.64	41.4	26.3	1.94	24.0	0.05	0.13	0.13	101	211
118	9.74	9.73	34.088	26.286	175.1	0.294			31.1	2.18	26.9	0.01	0.08	0.08	119	210
125 ISL	9.68	9.67	34.124	26.324	171.6	0.306	2.00	31.2	32.3	2.23	27.4	0.01	0.08	0.08	126	
139	9.55	9.53	34.171	26.383	166.3	0.330	1.71	26.6	34.1	2.31	28.0	0.01	0.08	0.08	140	209
150 ISL	9.45	9.43	34.205	26.426	162.5	0.348	1.54	23.9	35.8	2.38	28.6	0.01	0.07	0.07	151	
166	9.33	9.31	34.241	26.474	158.2	0.374	1.36	21.1	37.8	2.45	29.4	0.01	0.06	0.06	167	208
197	9.33	9.31	34.251	26.482	158.1	0.423	1.32	20.5	38.3	2.47	29.6	0.01	0.05	0.05	198	207
200 ISL	9.31	9.29	34.250	26.485	157.9	0.428	1.32	20.5	38.4	2.47	29.6				201	
228	9.10	9.08	34.238	26.510	156.0	0.472	1.33	20.5	39.6	2.52	30.0				229	206
250 ISL	8.90	8.87	34.242	26.545	153.0	0.506	1.27	19.5	41.3	2.54	30.6				252	
267	8.75	8.72	34.249	26.574	150.5	0.531	1.21	18.5	42.8	2.56	31.1				269	205
300 ISL	8.55	8.52	34.260	26.615	147.2	0.580	1.11	16.9	45.0	2.62	31.8				302	
318	8.44	8.41	34.265	26.635	145.5	0.607	1.06	16.1	46.3	2.66	32.1				320	204
381	7.90	7.86	34.257	26.711	139.1	0.696	0.92	13.8	52.5	2.77	33.7				383	203
400 ISL	7.75	7.71	34.258	26.734	137.2	0.723	0.86	12.9	54.3	2.81	34.2				403	
436	7.45	7.41	34.261	26.780	133.2	0.771	0.75	11.1	57.9	2.88	35.2				439	202
500 ISL	6.81	6.76	34.269	26.875	124.5	0.854	0.54	7.9	66.9	3.01	37.4				503	
513	6.68	6.63	34.271	26.895	122.8	0.870	0.50	7.3	68.7	3.04	37.9				517	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 34.7 N	120 45.2 W	18/08/96	0104	UTC	1361 m	320	18 kn	340 05 05	1	1014.1 mb	17.4 c	16.1 c	11m	02	6/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.82	17.82	33.626	24.265	364.8	0.000	5.72	105.4	1.4	0.27	0.0	0.00	0.47	0.13	0	
2	17.82	17.82	33.626	24.265	364.9	0.007	5.72	105.4	1.4	0.27	0.0	0.00	0.47	0.13	2	220
3	17.83	17.83	33.626	24.262	365.1	0.011									3	221
10	17.82	17.82	33.628	24.267	365.0	0.036	5.72	105.4	1.3	0.27	0.0	0.00	0.47	0.13	10	219
20	15.66	15.66	33.583	24.736	320.6	0.071	6.10	107.7	1.5	0.32	0.2	0.02	1.32	0.48	20	218
30	14.88	14.88	33.551	24.883	306.9	0.102	5.86	101.9	3.0	0.48	1.8	0.09	1.60	0.64	30	217
41	12.65	12.64	33.538	25.331	264.4	0.134	4.91	81.5	9.3	0.99	8.9	0.32	0.54	0.35	41	216
50	11.37	11.36	33.425	25.484	249.9	0.157	4.69	75.7	12.6	1.21	13.5	0.18	0.27	0.26	50	215
59	10.95	10.94	33.581	25.681	231.4	0.178	4.08	65.3	16.9	1.48	17.8	0.09	0.11	0.16	59	214
70	10.11	10.10	33.638	25.872	213.4	0.203	3.60	56.6	19.9	1.60	20.1	0.07	0.08	0.14	70	213
75 ISL	10.05	10.04	33.695	25.926	208.3	0.213	3.39	53.3	21.3	1.66	21.0	0.06	0.07	0.13	75	
85	9.93	9.92	33.777	26.011	200.5	0.234	3.05	47.8	24.1	1.79	22.7	0.04	0.06	0.13	85	212
99	9.56	9.55	33.845	26.125	189.9	0.261	2.78	43.2	27.1	1.93	24.5		0.04	0.13	99	211
100 ISL	9.54	9.53	33.847	26.130	189.4	0.263	2.77	43.1	27.2	1.93	24.6		0.04	0.13	101	
119	9.25	9.24	33.888	26.210	182.2	0.298	2.68	41.4	29.0	1.99	25.4		0.02	0.10	120	210
125 ISL	9.14	9.13	33.916	26.250	178.5	0.309	2.61	40.2	30.0	2.03	25.9		0.02	0.10	126	
139	8.90	8.89	33.985	26.342	170.0	0.334	2.43	37.3	32.7	2.12	27.0		0.01	0.09	140	209
150 ISL	8.78	8.76	34.022	26.390	165.6	0.352	2.31	35.3	34.4	2.18	27.7		0.01	0.08	151	
168	8.61	8.59	34.069	26.453	159.9	0.381	2.10	32.0	37.0	2.27	28.8		0.01	0.07	169	208
199	8.27	8.25	34.140	26.561	150.2	0.429	1.68	25.4	42.5	2.44	31.0		0.01	0.06	200	207
200 ISL	8.26	8.24	34.142	26.564	149.9	0.431	1.67	25.3	42.7	2.45	31.1				201	
228	8.00	7.98	34.183	26.636	143.5	0.472	1.32	19.9	47.6	2.60	32.5				229	206
250 ISL	7.71	7.69	34.208	26.698	137.8	0.503	1.10	16.4	52.1	2.71	33.7				252	
268	7.48	7.45	34.225	26.745	133.6	0.527	0.96	14.3	55.5	2.79	34.5				270	205
300 ISL	7.32	7.29	34.254	26.791	129.7	0.569	0.76	11.3	59.1	2.88	35.4				302	
319	7.27	7.24	34.267	26.808	128.4	0.594	0.67	9.9	60.7	2.92	35.8				321	204
376	6.94	6.90	34.272	26.859	124.3	0.666	0.57	8.4	65.4	2.99	36.9				378	203
400 ISL	6.81	6.77	34.277	26.880	122.5	0.696	0.53	7.8	67.5	3.03	37.3				403	
436	6.60	6.56	34.286	26.916	119.5	0.739	0.46	6.7	70.9	3.09	38.0				439	202
500 ISL	6.20	6.16	34.305	26.984	113.6	0.814	0.33	4.8	77.4	3.16	39.5				504	
523	6.05	6.00	34.313	27.010	111.4	0.840	0.29	4.2	79.8	3.19	40.0				527	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE		
33 15.1 N	121 27.2 W	17/08/96	1845 UTC	3802 m	320 14 kn	340 06 04	2	1016.6 mb	17.3 C	16.2 C	19m 02		8/8	ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	16.57	16.57	33.229	24.256	365.6	0.000	5.86	105.1	1.6	0.35	0.3	0.02	0.36	0.10	0	
2	16.56	16.56	33.229	24.259	365.4	0.007									2	223
2	16.56	16.56	33.228	24.258	365.5	0.007									2	224
2 A	16.57	16.57	33.229	24.256	365.7	0.007	5.86	105.1	1.6	0.35	0.3	0.02	0.36	0.10	2	222
10 ISL	16.56	16.56	33.232	24.261	365.5	0.037	5.84	104.8	1.6	0.39	0.3	0.02	0.37	0.10	10	
12 A	16.55	16.55	33.233	24.265	365.2	0.044	5.84	104.7	1.6	0.39	0.3	0.02	0.37	0.10	12	221
19	16.54	16.54	33.235	24.269	365.0	0.069	5.86	105.1	1.6	0.32	0.2	0.02	0.42	0.12	19	220
20 ISL	16.26	16.26	33.196	24.303	361.8	0.073	5.90	105.2	1.7	0.32	0.2	0.02	0.43	0.13	20	
25 A	14.72	14.72	33.019	24.507	342.5	0.091	6.12	105.7	2.0	0.33	0.2	0.02	0.48	0.22	25	219
30 ISL	14.14	14.14	33.021	24.631	330.8	0.107	6.09	103.9	2.1	0.38	0.8	0.06	0.60	0.31	30	
33	13.98	13.98	33.051	24.687	325.5	0.117	6.08	103.4	2.2	0.42	1.2	0.09	0.66	0.35	33	218
39 A	13.45	13.44	33.061	24.803	314.6	0.137	5.97	100.5	2.4	0.48	1.9	0.17	0.62	0.35	39	217
45	13.27	13.26	33.080	24.854	309.9	0.155	5.94	99.6	2.6	0.51	2.3	0.21	0.65	0.40	45	216
50 ISL	13.34	13.33	33.118	24.870	308.5	0.171	5.91	99.3	2.7	0.53	2.5	0.23	0.62	0.38	50	
52 A	13.38	13.37	33.138	24.877	307.9	0.177	5.90	99.2	2.7	0.54	2.7	0.24	0.60	0.36	52	215
61	13.24	13.23	33.270	25.007	295.7	0.204	5.79	97.1	3.7	0.67	4.4	0.40	0.43	0.29	61	214
73 A	11.55	11.54	33.183	25.264	271.4	0.238	5.37	86.9	7.3	0.90	8.8	0.27	0.25	0.23	73	213
75 ISL	11.42	11.41	33.193	25.295	268.5	0.243	5.33	86.0	7.9	0.94	9.5	0.24	0.23	0.21	75	
87	11.00	10.99	33.299	25.453	253.7	0.275	5.08	81.3	11.2	1.12	12.6	0.07	0.12	0.13	87	212
100	10.65	10.64	33.421	25.610	239.0	0.307	4.63	73.6	12.8	1.14	13.4		0.10	0.14	100	211
119	10.13	10.12	33.591	25.833	218.2	0.350	4.10	64.5	16.9	1.36	17.1		0.04	0.06	120	210
125 ISL	9.88	9.87	33.622	25.899	212.0	0.363	3.91	61.2	19.2	1.48	18.9		0.03	0.06	126	
139	9.32	9.30	33.680	26.036	199.1	0.392	3.52	54.4	24.3	1.75	22.8		0.01	0.06	140	209
150 ISL	9.08	9.06	33.729	26.113	191.9	0.413	3.35	51.5	26.3	1.80	24.2		0.01	0.07	151	
168	8.82	8.80	33.806	26.215	182.6	0.447	3.21	49.1	28.3	1.88	25.1		0.01	0.07	169	208
199	8.30	8.28	33.923	26.386	166.7	0.501	3.19	48.2	31.7	1.93	26.1		0.00	0.04	200	207
200 ISL	8.28	8.26	33.925	26.391	166.3	0.503	3.18	48.1	31.9	1.93	26.2				201	
230	7.75	7.73	33.987	26.518	154.5	0.551	2.87	42.9	38.1	2.10	28.4				231	206
250 ISL	7.56	7.54	34.028	26.578	149.1	0.581	2.48	36.9	42.5	2.25	30.2				251	
268	7.41	7.38	34.054	26.620	145.3	0.608	2.14	31.7	46.3	2.37	31.8				270	205
300 ISL	6.93	6.90	34.047	26.682	139.7	0.654	1.98	29.0	51.7	2.49	33.5				302	
318	6.66	6.63	34.039	26.712	137.0	0.678	1.93	28.1	54.5	2.54	34.2				320	204
378	6.25	6.22	34.092	26.808	128.5	0.758	1.25	18.0	64.7	2.80	37.4				380	203
400 ISL	6.15	6.11	34.124	26.846	125.1	0.786	1.02	14.7	68.0	2.89	38.2				403	
438	5.99	5.95	34.179	26.910	119.4	0.832	0.69	9.9	73.5	3.03	39.4				441	202
500 ISL	5.61	5.57	34.231	26.999	111.5	0.904	0.45	6.4	82.8	3.16	41.1				503	
509	5.55	5.51	34.239	27.012	110.3	0.914	0.42	6.0	84.1	3.18	41.3				512	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE		
32 54.6 N	122 7.7 W	17/08/96	1258 UTC	4184 m	330 08 kn			1016.5 mb	16.8 C	15.8 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	16.70	16.70	33.115	24.139	376.8	0.000	5.79	104.1	1.4	0.34	0.5	0.03	0.33	0.09	0	
1	16.70	16.70	33.114	24.138	376.9	0.004									1	221
2	16.70	16.70	33.115	24.139	376.9	0.008	5.79	104.1	1.4	0.34	0.5	0.03	0.33	0.09	2	220
10 ISL	16.60	16.60	33.116	24.163	374.8	0.038	5.80	104.1	1.4	0.35	0.5	0.03	0.32	0.08	10	
15	16.54	16.54	33.117	24.178	373.6	0.056	5.81	104.1	1.5	0.35	0.5	0.03	0.32	0.08	15	219
20 ISL	16.23	16.23	33.139	24.266	365.3	0.075	5.87	104.6	1.6	0.38	0.8	0.05	0.33	0.10	20	
30 ISL	15.48	15.48	33.171	24.459	347.2	0.110	5.98	105.0	1.8	0.42	1.3	0.07	0.34	0.14	30	
31	15.39	15.39	33.174	24.481	345.1	0.114	5.99	104.9	1.8	0.42	1.3	0.07	0.34	0.14	31	218
45	14.45	14.44	33.105	24.631	331.2	0.161	6.01	103.3	3.0	0.29	0.0	0.00	0.21	0.12	45	217
50 ISL	14.22	14.21	33.097	24.673	327.3	0.178	6.01	102.8	2.7	0.30	0.0	0.00	0.22	0.13	50	
55	13.98	13.97	33.087	24.716	323.4	0.194	6.01	102.3	2.3	0.32	0.0	0.00	0.24	0.15	55	216
65	13.34	13.33	33.031	24.803	315.3	0.226	6.01	100.9	2.6	0.35	0.1	0.02	0.33	0.20	65	215
75	12.09	12.08	32.927	24.965	300.0	0.257	5.90	96.4	2.1	0.47	0.9	0.23	0.41	0.29	75	214
85	11.92	11.91	33.245	25.244	273.7	0.285	5.28	86.1	6.7	0.72	5.8	0.19	0.24	0.25	85	213
95	11.20	11.19	33.308	25.425	256.6	0.312	4.90	78.7	9.3	0.92	9.4	0.07	0.17	0.19	95	212
100 ISL	10.96	10.95	33.342	25.494	250.1	0.325	4.74	75.8	10.5	1.00	10.9	0.07	0.15	0.18	100	
109	10.58	10.57	33.417	25.620	238.3	0.346	4.47	70.9	12.9	1.15	13.5	0.06	0.11	0.16	109	211
125	9.80	9.79	33.620	25.911	210.8	0.382	3.99	62.3	18.4	1.44	18.4		0.04	0.06	126	210
145	9.54	9.52	33.690	26.009	201.9	0.424	3.77	58.6	20.4	1.55	20.1		0.02	0.04	146	209
150 ISL	9.40	9.38	33.721	26.056	197.5	0.434	3.78	58.5	21.3	1.57	20.5		0.01	0.03	151	
169	8.85	8.83	33.838	26.235	180.7	0.470	3.80	58.2	24.6	1.64	22.0		0.00	0.02	170	208
199	8.39	8.37	33.914	26.366	168.7	0.522	3.89	59.0	27.6	1.67	22.9		0.00	0.02	200	207
200 ISL	8.38	8.36	33.915	26.368	168.5	0.524	3.89	58.9	27.7	1.67	22.9				201	
230	7.93	7.91	33.946	26.460	160.1	0.573	3.73	55.9	31.7	1.78	24.5				231	206
250 ISL	7.62	7.60	33.962	26.518	154.8	0.604	3.45	51.4	35.5	1.92	26.4				251	
268	7.36	7.33	33.977	26.567	150.4	0.632	3.12	46.2	39.5	2.06	28.3				270	205
300 ISL	7.00	6.97														

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 34.8 N	122 49.0 W	17/08/96	0703 UTC	4280 m	350 17 kn			1016.2 mb	17.6 C	16.8 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.24	18.24	33.269	23.889	400.6	0.000	5.50	102.0	2.0	0.27	0.0	0.00	0.09	0.02	0	
1	18.24	18.24	33.269	23.889	400.6	0.004	5.50	102.0	2.0	0.27	0.0	0.00	0.09	0.02	1	224
10 ISL	18.24	18.24	33.271	23.891	400.8	0.040	5.50	102.0	2.0	0.27	0.0	0.00	0.10	0.02	10	
15	18.24	18.24	33.270	23.891	401.0	0.060									15	223
16	18.24	18.24	33.272	23.892	400.9	0.064	5.50	102.0	2.0	0.27	0.0	0.00	0.10	0.02	16	222
20 ISL	18.18	18.18	33.275	23.909	399.4	0.080	5.51	102.0	2.0	0.27	0.0	0.00	0.10	0.02	20	
30	18.03	18.02	33.285	23.954	395.5	0.120	5.53	102.1	2.0	0.26	0.0	0.00	0.10	0.02	30	220
30	18.01	18.00	33.285	23.959	395.0	0.120									30	221
45	17.98	17.97	33.304	23.981	393.4	0.179	5.53	102.0	2.0	0.26	0.0	0.00	0.11	0.03	45	218
46	17.98	17.97	33.306	23.983	393.3	0.183									46	219
50 ISL	17.93	17.92	33.303	23.993	392.5	0.199	5.53	101.9	2.0	0.26	0.0	0.00	0.11	0.03	50	
60	17.84	17.83	33.300	24.013	390.9	0.238	5.54	101.9	2.0	0.26	0.0	0.00	0.12	0.04	60	217
75	16.46	16.45	33.239	24.292	364.6	0.294	5.78	103.5	2.0	0.26	0.0	0.00	0.23	0.12	75	216
85	15.41	15.40	33.145	24.456	349.2	0.330	5.97	104.6	2.1	0.27	0.0	0.00	0.24	0.12	85	214
86	15.27	15.26	33.136	24.480	346.9	0.334									86	215
95	14.14	14.13	33.132	24.718	324.3	0.364	5.93	101.2	2.6	0.33	0.1	0.02	0.27	0.19	95	213
100 ISL	13.83	13.82	33.119	24.772	319.2	0.380	5.92	100.4	2.7	0.34	0.1	0.02	0.26	0.19	100	
105	13.58	13.57	33.111	24.817	315.1	0.396	5.91	99.7	2.9	0.36	0.1	0.03	0.25	0.18	105	212
116	12.67	12.65	33.165	25.040	294.0	0.429	5.70	94.4	4.3	0.49	1.6	0.23	0.23	0.21	116	211
124	12.08	12.06	33.275	25.238	275.2	0.452	5.44	89.0	5.7	0.61	4.3	0.13	0.18	0.19	124	210
125 ISL	12.05	12.03	33.286	25.252	273.9	0.455	5.42	88.7	5.8	0.62	4.5	0.12	0.18	0.19	125	
140	11.72	11.70	33.432	25.427	257.6	0.495	5.17	84.1	7.1	0.71	6.7	0.04	0.13	0.15	141	209
150 ISL	11.18	11.16	33.541	25.611	240.2	0.520	4.83	77.7	10.1	0.90	10.1		0.09	0.11	151	
165	10.29	10.27	33.684	25.879	214.9	0.554	4.28	67.6	15.5	1.24	15.7		0.03	0.05	166	208
195	9.23	9.21	33.749	26.106	193.6	0.615	3.54	54.6	24.0	1.70	22.3		0.01	0.03	196	207
200 ISL	9.08	9.06	33.771	26.147	189.7	0.625	3.55	54.6	24.8	1.71	22.7				201	
229	8.38	8.36	33.902	26.359	170.0	0.677	3.62	54.8	28.8	1.77	24.1				230	206
250 ISL	8.05	8.02	33.957	26.451	161.4	0.712	3.28	49.3	33.1	1.93	26.2				251	
272	7.76	7.73	33.992	26.522	155.0	0.746	2.84	42.4	38.1	2.12	28.5				273	205
300 ISL	7.34	7.31	34.016	26.601	147.7	0.789	2.51	37.2	43.9	2.27	30.6				302	
317	7.09	7.06	34.025	26.643	143.8	0.813	2.33	34.3	47.4	2.35	31.7				319	204
375	6.43	6.40	34.066	26.764	132.7	0.894	1.60	23.2	59.2	2.68	35.8				377	203
400 ISL	6.19	6.15	34.085	26.810	128.5	0.926	1.31	18.9	64.5	2.81	37.3				402	
434	5.92	5.88	34.115	26.868	123.2	0.969	0.98	14.0	71.1	2.95	38.9				437	202
500 ISL	5.69	5.65	34.191	26.957	115.5	1.048	0.61	8.7	78.9	3.10	40.4				503	
515	5.64	5.60	34.209	26.978	113.7	1.065	0.53	7.5	80.7	3.14	40.8				518	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 14.6 N	123 30.0 W	17/08/96	0015 UTC	4142 m	010 10 kn	010 4 3 2		1016.6 mb	18.7 C	17.4 C	28m	1	8/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.99	17.99	33.104	23.824	406.8	0.000	5.57	102.7	1.7	0.29	0.0	0.00	0.09	0.02	0	
1	17.99	17.99	33.104	23.824	406.9	0.004	5.57	102.7	1.7	0.29	0.0	0.00	0.09	0.02	1	220
2	17.98	17.98	33.106	23.828	406.5	0.008									2	221
10 ISL	17.88	17.88	33.106	23.853	404.4	0.041	5.59	102.8	1.8	0.28	0.0	0.00	0.10	0.02	10	
16	17.80	17.80	33.107	23.873	402.7	0.065	5.60	102.8	1.8	0.28	0.0	0.00	0.11	0.03	16	219
20 ISL	17.60	17.60	33.107	23.921	398.2	0.081	5.64	103.2	1.8	0.28	0.0	0.00	0.12	0.03	20	
30	16.96	16.96	33.104	24.071	384.3	0.120	5.76	104.1	1.8	0.28	0.0	0.00	0.18	0.04	30	218
45	15.84	15.83	33.088	24.316	361.4	0.176	5.95	105.1	1.7	0.32	0.0	0.01	0.37	0.14	45	217
50 ISL	15.64	15.63	33.100	24.370	356.4	0.194	5.95	104.7	1.7	0.33	0.2	0.02	0.43	0.17	50	
54	15.50	15.49	33.109	24.408	352.8	0.208	5.94	104.3	1.7	0.34	0.4	0.02	0.48	0.19	54	216
65	15.04	15.05	33.108	24.504	344.0	0.246	6.04	105.1	1.9	0.33	0.3	0.02	0.55	0.27	65	215
75	14.44	14.43	33.124	24.649	330.4	0.280	5.97	102.6	2.3	0.43	0.9	0.11	0.49	0.31	75	214
84	13.68	13.67	33.104	24.791	317.0	0.309	5.92	100.1	2.6	0.43	0.9	0.17	0.47	0.35	84	213
94	12.88	12.87	33.164	24.997	297.5	0.340	5.70	94.8	4.1	0.53	2.5	0.18	0.41	0.36	94	212
100 ISL	12.51	12.50	33.199	25.097	288.2	0.357	5.62	92.8	4.6	0.57	3.3	0.17	0.35	0.34	100	
109	12.01	12.00	33.262	25.241	274.6	0.383	5.44	88.9	5.9	0.68	5.2	0.14	0.24	0.27	109	211
124	11.12	11.10	33.419	25.526	247.6	0.422	4.76	76.4	11.8	1.13	13.0	0.03	0.08	0.11	125	210
125 ISL	11.06	11.04	33.429	25.545	245.9	0.424	4.72	75.7	12.1	1.15	13.3		0.08	0.11	126	
144	10.07	10.05	33.602	25.852	216.9	0.468	4.07	63.9	17.3	1.40	17.6		0.03	0.07	145	209
150 ISL	9.83	9.81	33.646	25.926	209.9	0.481	4.00	62.5	18.4	1.44	18.4		0.02	0.06	151	
169	9.25	9.23	33.761	26.111	192.5	0.519	3.83	59.1	21.8	1.56	20.5		0.01	0.04	170	208
199	8.66	8.64	33.886	26.303	174.8	0.575	2.95	45.0	30.3	1.98	26.2		0.00	0.05	200	207
200 ISL	8.64	8.62	33.889	26.308	174.3	0.576	2.95	45.0	30.4	1.98	26.3				201	
228	8.16	8.14	33.959	26.436	162.5	0.623	2.93	44.2	33.9	2.05	27.3				229	206
250 ISL	7.75	7.73	33.991	26.522	154.5	0.658	2.83	42.3	37.9	2.12	28.5				251	
268	7.44	7.41	34.008	26.580	149.2	0.686	2.69	39.9	41.7	2.19	29.6				269	205
300 ISL	7.00	6.97	34.029	26.658	142.0	0.732	2.29	33.6	48.6	2.38	32.1				302	
318	6.80	6.77	34.039	26.693	138.8	0.757	2.03	29.7	52.5	2.49	33.5				320	204
378	6.31	6.28	34.094	26.802	129.1	0.838	1.31	18.9	63.1	2.78	36.9				380	203
400 ISL	6.21	6.17	34.131	26.844	125.4	0.866	1.05	15.1	66.7	2.88	37.9				402	
437	6.07	6.03	34.190	26.909	119.6	0.911	0.69	9.9	72.4	3.03	39.2				440	202
500 ISL	5.63	5.59	34.219	26.987	112.6	0.984	0.48	6.8	81.6	3.15	40.9				503	
523	5.47	5.43	34.230	27.015	110.1	1.010	0.40	5.7	84.9	3.19	41.5				526	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 55.3 N	124 12.0 W	16/08/96	1807 UTC	4211 m	350 15 kn	350 08 04	1	1016.9 mb	20.8 c	19.1 c	34m 02	3/8		AC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA	uM/L		mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.26	18.26	33.281	23.893	400.2	0.000	5.52	102.4	1.8	0.28	0.0	0.00	0.09	0.02	0	
3 A	18.26	18.26	33.281	23.893	400.3	0.012	5.52	102.4	1.8	0.28	0.0	0.00	0.09	0.02	3	222
3	18.28	18.28	33.282	23.889	400.7	0.012									3	223
10 ISL	18.22	18.22	33.281	23.904	399.6	0.040	5.49	101.7	1.8	0.27	0.0	0.00	0.09	0.03	10	
11	18.22	18.22	33.279	23.902	399.8	0.044	5.49	101.7	1.8	0.27	0.0	0.00	0.09	0.03	11	221
20 ISL	18.04	18.04	33.275	23.943	396.1	0.080	5.51	101.7	1.8	0.27	0.0	0.00	0.11	0.03	20	
21 A	18.02	18.02	33.274	23.948	395.8	0.084	5.51	101.7	1.8	0.27	0.0	0.00	0.11	0.03	21	220
30 ISL	17.83	17.82	33.264	23.986	392.4	0.119	5.56	102.2	1.8	0.27	0.0	0.00	0.13	0.04	30	
33	17.73	17.72	33.255	24.004	390.8	0.131	5.59	102.6	1.8	0.27	0.0	0.00	0.14	0.04	33	219
45 A	17.01	17.00	33.159	24.102	381.8	0.177	5.75	104.0	1.7	0.28	0.0	0.00	0.20	0.07	45	218
50 ISL	17.01	17.00	33.202	24.135	378.8	0.196	5.70	103.1	1.8	0.27	0.0	0.00	0.22	0.09	50	
53	17.01	17.00	33.239	24.164	376.2	0.208	5.68	102.8	1.8	0.27	0.0	0.00	0.23	0.10	53	217
60	16.17	16.16	33.157	24.295	365.9	0.234	5.84	103.9	1.8	0.28	0.0	0.00	0.31	0.16	60	216
69 A	15.42	15.41	33.189	24.487	345.7	0.266	5.97	104.7	2.0	0.28	0.0	0.00	0.29	0.17	69	215
75 ISL	14.89	14.88	33.173	24.591	336.0	0.286	5.95	103.2	2.3	0.31	0.0	0.01	0.32	0.27	75	
79	14.55	14.54	33.155	24.650	330.5	0.299	5.93	102.1	2.5	0.33	0.0	0.02	0.35	0.33	79	214
91 A	13.65	13.64	33.112	24.803	316.0	0.338	5.89	99.5	2.7	0.38	0.4	0.13	0.33	0.26	91	213
100 ISL	13.28	13.27	33.122	24.886	308.3	0.366	5.82	97.6	3.3	0.48	1.8	0.15	0.30	0.25	100	
104	13.15	13.14	33.138	24.924	304.8	0.378	5.77	96.5	3.7	0.53	2.5	0.16	0.28	0.25	104	212
116	12.60	12.58	33.232	25.105	287.8	0.414	5.55	91.8	4.9	0.61	3.9	0.06	0.19	0.20	116	211
125 ISL	11.97	11.95	33.286	25.267	272.5	0.439	5.35	87.4	7.2	0.84	7.9	0.11	0.14	0.14	125	
130 A	11.62	11.60	33.320	25.359	265.8	0.453	5.21	84.5	8.6	0.97	10.3	0.08	0.11	0.11	130	210
145	11.02	11.00	33.480	25.592	241.9	0.491	4.61	73.9	12.2	1.14	13.2	0.07	0.10	0.10	145	209
150 ISL	10.78	10.76	33.524	25.669	234.6	0.502	4.46	71.1	13.4	1.20	14.2	0.06	0.09	0.09	150	
169	9.88	9.86	33.671	25.938	209.2	0.545	4.01	62.7	18.2	1.42	18.0	0.01	0.05	0.05	169	208
199	8.99	8.97	33.848	26.221	182.6	0.603	3.42	52.5	25.8	1.76	23.3	0.00	0.03	0.03	199	207
200 ISL	8.97	8.95	33.851	26.227	182.1	0.605	3.42	52.5	25.9	1.76	23.3				200	
229	8.43	8.41	33.930	26.373	168.6	0.656	3.53	53.5	29.0	1.80	24.2				229	206
250 ISL	8.18	8.15	33.995	26.462	160.5	0.691	2.99	45.1	34.2	2.01	26.8				250	
267	7.98	7.95	34.035	26.523	154.9	0.717	2.51	37.7	38.8	2.20	29.1				267	205
300 ISL	7.31	7.28	34.026	26.613	146.5	0.767	2.48	36.7	44.8	2.29	30.9				300	
317	6.96	6.93	34.013	26.651	142.9	0.792	2.46	36.1	47.6	2.32	31.5				317	204
376	6.41	6.38	34.068	26.768	132.3	0.873	1.56	22.6	60.2	2.70	36.0				376	203
400 ISL	6.33	6.29	34.104	26.807	128.9	0.904	1.26	18.2	63.8	2.81	37.0				400	202
437	6.26	6.22	34.161	26.862	124.3	0.951	0.88	12.7	68.6	2.95	38.2				437	202
500 ISL	5.93	5.89	34.235	26.963	115.3	1.027	0.49	7.0	77.7	3.12	40.1				500	201
508	5.89	5.85	34.243	26.976	114.1	1.036	0.44	6.3	78.8	3.14	40.3				508	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 53.3 N	118 29.5 W	13/08/96	2315 UTC	57 m	240 05 kn	240 02 03	1	1011.8 mb	22.5 c	21.5 c	13m 04	1/8		CU		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA	uM/L		mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.52	19.52	33.570	23.797	409.4	0.000	6.14	116.8	4.2	0.23	0.0	0.00	0.75	0.17	0	
2	19.52	19.52	33.570	23.797	409.5	0.008	6.14	116.8	4.2	0.23	0.0	0.00	0.75	0.17	2	207
2	19.64	19.64	33.572	23.768	412.3	0.008									2	208
4	18.82	18.82	33.566	23.972	392.8	0.016	6.23	117.0	4.4	0.24	0.0	0.00	0.70	0.17	4	206
10	18.20	18.20	33.563	24.124	378.6	0.039	6.40	118.8	4.6	0.22	0.0	0.00	0.75	0.19	10	205
20	13.49	13.49	33.479	25.118	284.1	0.073	4.53	76.5	9.9	0.68	2.3	0.14	1.22	0.29	20	204
30	11.97	11.97	33.419	25.368	260.5	0.100	3.52	57.6	17.4 A	1.78 A	12.2 A	0.67 A	0.33	0.23	30	203
39	11.25	11.25	33.632	25.667	232.3	0.122	3.42	55.1	16.9	1.51	16.4	0.63	0.21	0.30	39	202
50	10.85	10.84	33.694	25.787	221.1	0.147	3.05	48.8	19.7	1.65	19.1	0.52	0.14	0.37	50	201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 49.4 N	118 38.0 W	14/08/96	0135 UTC	691 m	290 09 kn	300 02 05	1	1011.2 mb	21.7 c	20.0 c	16m 03	3/8		ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA	uM/L		mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.13	20.13	33.588	23.652	423.2	0.000	6.09	117.2	3.2	0.21	0.0	0.00	0.34	0.08	0	
2	20.13	20.13	33.589	23.653	423.2	0.008									2	221
2	20.13	20.13	33.588	23.652	423.3	0.008	6.09	117.2	3.2	0.21	0.0	0.00	0.34	0.08	2	220
10	16.68	16.68	33.531	24.463	346.2	0.039	6.50	117.1	2.3	0.28	0.0	0.00	0.26	0.07	10	219
20	13.50	13.50	33.521	25.148	281.2	0.071	6.28	106.1	6.3	0.41	0.3	0.02	0.98	0.44	20	218
30	12.40	12.40	33.518	25.363	261.0	0.098	4.47	73.8	11.4	0.98	7.5	0.42	1.02	0.56	30	217
40	11.97	11.96	33.535	25.458	252.2	0.123	4.15	67.9	13.3	1.20	10.6	0.50	0.80	0.47	40	216
50	11.23	11.22	33.593	25.640	235.1	0.148	4.04	65.1	14.4	1.25	14.5	0.25	0.59	0.53	50	215
60	10.95	10.94	33.680	25.758	224.1	0.171	3.50	56.1	17.4	1.45	17.6	0.09	0.35	0.37	60	214
70	10.64	10.63	33.752	25.869	213.7	0.193	3.15	50.1	20.3	1.63	20.1	0.07	0.24	0.26	70	213
75 ISL	10.48	10.47	33.788	25.925	208.5	0.203	2.96	47.0	21.8	1.71	21.3		0.18	0.21	75	
85	10.23	10.22	33.847	26.015	200.2	0.224	2.66	42.0	24.1	1.84	23.0		0.08	0.15	85	212
97	10.18	10.17	33.876	26.046	197.5	0.247	2.57	40.5	24.9	1.89	23.5		0.08	0.15	97	211
100 ISL	10.16	10.15	33.885	26.057	196.5	0.253	2.53	39.9	25.2	1.91	23.7		0.07	0.15	100	
120	10.03	10.02	33.951	26.130	189.9	0.292	2.27	35.7	27.5	2.02	25.0		0.03	0.11	120	210
125 ISL	10.02	10.01	33.965	26.143	188.9	0.301	2.22	34.9	27.9	2.04	25.2		0.03	0.11	125	
139	9.99	9.97	34.005	26.180	185.7	0.328	2.09	32.9	28.7	2.11	25.8		0.02	0.11	139	209
150 ISL	10.05	10.03	34.044	26.200	184.0	0.348	1.92	30.2	29.4	2.16	26.3		0.02	0.10	150	
169	10.11	10.09	34.097	26.232	181.5	0.383	1.71	27.0								

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 39.0 N	118 58.7 W	14/08/96	0530	UTC	705 m	200	08 kn			1013.6 mb	20.3 c	19.6 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.96	20.96	33.635	23.467	440.9	0.000	5.50	107.5	2.3	0.26	0.0	0.00	0.15	0.05		0
2	20.97	20.97	33.633	23.463	441.4	0.009										2 221
2	20.96	20.96	33.635	23.467	441.0	0.009	5.50	107.5	2.3	0.26	0.0	0.00	0.15	0.05		2 220
10 ISL	18.57	18.57	33.579	24.045	386.1	0.042	5.89	110.1	2.6	0.26	0.0	0.00	0.18	0.08		10
11	18.18	18.18	33.574	24.138	377.3	0.046	5.96	110.6	2.7	0.26	0.0	0.00	0.18	0.08		11 219
20	16.76	16.76	33.525	24.440	348.7	0.078	6.61	119.3	3.3	0.28	0.0	0.00	0.21	0.10		20 218
30	14.62	14.62	33.515	24.911	304.2	0.111	6.45	111.5	4.1	0.36	0.0	0.00	0.36	0.26		30 217
40	12.58	12.57	33.515	25.327	264.8	0.139	5.02	83.2	8.8	0.85	8.0	0.21	0.73	0.45		40 216
50	11.80	11.79	33.578	25.524	246.2	0.165	4.26	69.5	12.4	1.14	12.5	0.34	0.58	0.48		50 215
60	11.09	11.08	33.647	25.708	228.9	0.189	3.72	59.8	16.1	1.37	16.3	0.21	0.34	0.31		60 214
70	10.79	10.78	33.674	25.782	222.0	0.211	3.56	56.8	17.6	1.47	17.8	0.14	0.29	0.29		70 213
75 ISL	10.66	10.65	33.694	25.821	218.4	0.222	3.45	54.9	18.5	1.52	18.6	0.12	0.28	0.30		75
85	10.40	10.39	33.748	25.908	210.3	0.244	3.20	50.7	20.6	1.63	20.4	0.09	0.27	0.31		85 212
99	9.98	9.97	33.856	26.064	195.7	0.272	2.83	44.4	24.8	1.84	23.0		0.06	0.16		99 211
100 ISL	9.96	9.95	33.863	26.073	194.9	0.274	2.81	44.1	25.0	1.85	23.1		0.06	0.16		100
120	9.64	9.63	33.983	26.221	181.3	0.312	2.45	38.2	28.9	2.02	25.4		0.02	0.11		121 210
125 ISL	9.64	9.63	34.015	26.246	179.0	0.321	2.33	36.3	29.7	2.07	25.8		0.02	0.10		126
141	9.65	9.63	34.097	26.308	173.4	0.349	1.97	30.8	32.0	2.20	26.9		0.01	0.09		142 209
150 ISL	9.68	9.66	34.140	26.337	170.9	0.364	1.80	28.1	32.9	2.26	27.4		0.01	0.09		151
170	9.72	9.70	34.215	26.390	166.4	0.398	1.53	23.9	34.7	2.35	28.2		0.01	0.09		171 208
199	9.51	9.49	34.255	26.456	160.7	0.446	1.39	21.6	37.3	2.43	29.1		0.01	0.06		200 207
200 ISL	9.50	9.48	34.255	26.458	160.5	0.447	1.39	21.6	37.4	2.43	29.1					201
228	9.10	9.08	34.251	26.520	155.1	0.491	1.31	20.2	39.8	2.49	30.0					229 206
250 ISL	8.93	8.90	34.273	26.565	151.2	0.525	1.19	18.3	42.0	2.55	30.6					251
268	8.80	8.77	34.291	26.599	148.2	0.552	1.09	16.7	44.0	2.60	31.1					270 205
300 ISL	8.35	8.32	34.274	26.656	143.2	0.599	1.00	15.2	48.1	2.67	32.3					302
319	8.06	8.03	34.260	26.689	140.2	0.626	0.95	14.3	50.7	2.71	33.1					321 204
380	7.42	7.38	34.273	26.793	131.0	0.708	0.72	10.7	58.4	2.88	35.4					382 203
400 ISL	7.33	7.29	34.273	26.806	130.0	0.734	0.68	10.1	59.6	2.90	35.7					403
439	7.20	7.16	34.273	26.824	128.8	0.785	0.63	9.3	61.7	2.93	36.0					442 202
500 ISL	6.81	6.76	34.290	26.892	123.0	0.862	0.48	7.0	67.6	3.03	37.5					503
509	6.75	6.70	34.293	26.903	122.1	0.873	0.46	6.7	68.5	3.05	37.7					513 201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29.2 N	119 19.5 W	14/08/96	0917	UTC	1626 m	230	04 kn			1014.4 mb	19.1 c	18.3 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.30	20.30	33.637	23.645	423.9	0.000	5.49	106.0	1.8	0.26	0.0	0.00	0.17	0.07		0
1	20.31	20.31	33.637	23.642	424.2	0.004										1 221
2	20.30	20.30	33.637	23.645	424.0	0.008	5.49	106.0	1.8	0.26	0.0	0.00	0.17	0.07		2 220
10	19.78	19.78	33.615	23.765	412.9	0.042	5.69	108.8	1.8	0.26	0.0	0.00	0.18	0.07		10 219
20	15.25	15.25	33.529	24.785	315.9	0.078	6.23	109.1	3.0	0.34	0.2	0.02	0.31	0.11		20 218
30	13.76	13.76	33.500	25.079	288.1	0.109	5.97	101.4	5.2	0.54	2.8	0.13	0.57	0.30		30 217
40	12.97	12.96	33.522	25.256	271.5	0.137	5.25	87.7	8.0	0.81	7.1	0.34	0.73	0.44		40 216
50	12.21	12.20	33.551	25.426	255.5	0.163	4.65	76.5	11.3	1.10	12.0	0.17	0.76	0.45		50 215
61	11.55	11.54	33.589	25.579	241.2	0.190	4.12	66.8	14.4	1.29	15.5	0.07	0.41	0.30		61 214
70	10.85	10.84	33.608	25.720	227.9	0.211	3.83	61.2	16.8	1.40	17.4	0.05	0.21	0.22		70 213
75 ISL	10.64	10.63	33.614	25.762	224.0	0.223	3.76	59.8	17.5	1.43	17.9		0.15	0.20		75
86	10.35	10.34	33.660	25.848	216.0	0.247	3.55	56.1	19.2	1.53	19.3		0.09	0.17		86 212
100	10.01	10.00	33.852	26.056	196.6	0.276	2.79	43.8	24.5	1.89	23.3		0.03	0.08		100 211
120	9.66	9.65	34.014	26.242	179.3	0.313	2.32	36.2	29.5	2.07	25.9		0.01	0.07		121 210
125 ISL	9.61	9.60	34.053	26.280	175.8	0.322	2.19	34.1	30.6	2.12	26.5		0.01	0.07		126
139	9.47	9.45	34.139	26.371	167.4	0.346	1.88	29.2	33.4	2.24	27.8		0.01	0.08		140 209
150 ISL	9.28	9.26	34.153	26.413	163.6	0.364	1.83	28.3	35.0	2.26	28.5		0.01	0.09		151
170	8.92	8.90	34.143	26.463	159.2	0.397	1.73	26.6	37.3	2.29	29.3		0.01	0.09		171 208
199	8.67	8.65	34.164	26.519	154.3	0.442	1.57	24.0	40.2	2.38	30.5		0.01	0.08		200 207
200 ISL	8.66	8.64	34.165	26.521	154.1	0.444	1.56	23.8	40.3	2.38	30.5					201
229	8.50	8.48	34.211	26.583	148.8	0.488	1.31	19.9	43.6	2.53	31.6					230 206
250 ISL	8.48	8.45	34.254	26.620	145.7	0.519	1.11	16.9	45.3	2.62	32.0					251
269	8.45	8.42	34.286	26.650	143.2	0.546	0.96	14.6	46.8	2.68	32.2					271 205
300 ISL	8.20	8.17	34.284	26.687	140.2	0.590	0.91	13.8	49.6	2.74	33.0					302
319	8.02	7.99	34.272	26.704	138.8	0.616	0.88	13.3	51.4	2.76	33.5					321 204
379	7.57	7.53	34.263	26.764	133.9	0.698	0.79	11.8	56.6	2.85	35.0					381 203
400 ISL	7.42	7.38	34.267	26.788	131.8	0.726	0.73	10.8	58.7	2.89	35.5					403
438	7.16	7.12	34.278	26.834	127.8	0.775	0.61	9.0	62.6	2.96	36.4					441 202
500 ISL	6.85	6.80	34.289	26.886	123.6	0.853	0.49	7.2	67.5	3.04	37.5					503
517	6.76	6.71	34.292	26.901	122.4	0.874	0.46	6.7	68.9	3.06	37.8					521 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 19.6 N	119 39.2 W	14/08/96	1847 UTC	78 m	210 03 kn	290 04 04	1	1015.6 mb	20.3 C	20.0 C	15m 03	3/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.77	18.77	33.629	24.033	386.9	0.000	5.74	107.7	1.3	0.27	0.1	0.00	0.51	0.15	0	
2 A	18.77	18.77	33.629	24.033	387.0	0.008	5.74	107.7	1.3	0.27	0.1	0.00	0.51	0.15	2	209
2	18.51	18.51	33.630	24.099	380.7	0.008									2	210
10 A	16.05	16.05	33.612	24.670	326.5	0.036	5.69	101.3	3.6	0.48	2.5	0.09	0.96	0.37	10	208
20 A	14.57	14.57	33.622	25.004	295.0	0.067	5.28	91.2	7.1	0.80	6.2	0.17	1.03	0.43	20	207
30 A	12.58	12.58	33.527	25.356	263.6	0.095	4.82	79.9	9.9	1.01	10.6	0.24	0.61	0.34	30	206
40 A	11.69	11.68	33.556	25.527	245.6	0.121	4.36	70.9	12.9	1.22	13.9	0.19	0.40	0.34	40	205
48	11.51	11.50	33.554	25.559	242.8	0.140	4.31	69.8	13.4	1.25	14.4	0.14	0.38	0.34	48	204
50 ISL	11.31	11.30	33.571	25.609	238.1	0.145	4.18	67.4	14.4	1.30	15.3	0.12	0.33	0.33	50	204
56 A	10.68	10.67	33.636	25.772	222.7	0.159	3.74	59.6	17.8	1.48	18.2	0.05	0.19	0.27	56	203
64	10.42	10.41	33.696	25.864	214.1	0.176	3.43	54.3	19.8	1.60	19.8	0.05	0.15	0.19	64	202
70	10.34	10.33	33.724	25.900	210.8	0.189	3.31	52.3	20.8	1.65	20.3	0.07	0.13	0.19	70	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 9.2 N	120 0.3 W	14/08/96	2203 UTC	1215 m	290 06 kn	320 04 06	2	1015.5 mb	20.0 C	19.1 C	13m 04	8/8	AS			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.26	19.26	33.668	23.938	395.9	0.000	5.67	107.4	1.3	0.27	0.1	0.00	0.22	0.05	0	
1	19.26	19.26	33.668	23.939	395.9	0.004	5.67	107.4	1.3	0.27	0.1	0.00	0.22	0.05	1	220
2	19.40	19.40	33.670	23.904	399.3	0.008									2	221
10	17.52	17.52	33.626	24.338	358.2	0.038	5.93	108.6	1.5	0.30	0.2	0.03	0.73	0.19	10	219
20	16.53	16.53	33.593	24.546	338.7	0.073	6.02	108.2	1.7	0.37	1.0	0.11	0.90	0.27	20	218
29	13.81	13.81	33.501	25.070	289.0	0.101	5.72	97.2	3.7	0.62	4.2	0.33	0.59	0.28	29	217
30 ISL	13.65	13.65	33.495	25.098	286.3	0.104	5.69	96.4	3.9	0.64	4.4	0.33	0.59	0.29	30	217
38	12.70	12.69	33.670	25.268	270.3	0.126	5.32	88.4	5.9	0.78	6.5	0.34	0.59	0.34	38	216
49	11.18	11.17	33.551	25.616	237.3	0.154	4.25	68.4	13.3	1.21	14.1	0.11	0.38	0.35	49	215
50 ISL	11.12	11.11	33.556	25.631	235.9	0.157	4.21	67.6	13.6	1.23	14.4	0.11	0.37	0.34	50	215
60	10.80	10.79	33.595	25.719	227.8	0.180	3.96	63.2	15.8	1.36	16.3	0.07	0.26	0.22	60	214
70	10.40	10.39	33.633	25.818	218.5	0.202	3.72	58.9	17.8	1.47	18.1	0.06	0.15	0.16	70	213
75 ISL	10.29	10.28	33.648	25.849	215.7	0.213	3.65	57.6	18.4	1.50	18.6	0.06	0.12	0.17	75	213
86	10.07	10.06	33.694	25.922	208.9	0.236	3.49	54.9	20.2	1.58	19.9	0.05	0.07	0.18	86	212
100	9.50	9.49	33.808	26.106	191.7	0.265	3.04	47.2	25.5	1.84	23.5		0.02	0.09	101	211
119	9.09	9.08	33.908	26.251	178.3	0.300	2.72	41.9	29.5	1.98	25.6		0.01	0.07	120	210
125 ISL	9.00	8.99	33.930	26.283	175.4	0.310	2.66	40.9	30.4	2.01	26.1		0.01	0.07	126	210
139	8.83	8.82	33.972	26.343	169.9	0.334	2.54	38.9	32.2	2.08	26.9		0.01	0.07	140	209
150 ISL	8.73	8.71	34.000	26.380	166.5	0.353	2.46	37.6	33.4	2.11	27.4		0.01	0.07	151	209
169	8.61	8.59	34.049	26.438	161.4	0.384	2.28	34.8	35.5	2.18	28.2		0.00	0.07	170	208
199	8.56	8.54	34.152	26.527	153.6	0.431	1.75	26.7	39.5	2.37	29.8		0.00	0.05	200	207
200 ISL	8.56	8.54	34.156	26.530	153.3	0.433	1.73	26.4	39.7	2.38	29.9				201	207
229	8.50	8.48	34.252	26.615	145.8	0.476	1.20	18.3	44.2	2.56	31.3				230	206
250 ISL	8.37	8.34	34.269	26.648	143.0	0.507	1.05	15.9	46.9	2.65	32.1				251	206
269	8.23	8.20	34.267	26.668	141.4	0.534	1.01	15.3	48.8	2.70	32.6				271	205
300 ISL	8.08	8.05	34.266	26.690	139.8	0.577	0.96	14.5	50.2	2.73	33.1				302	205
318	7.99	7.96	34.263	26.702	139.0	0.602	0.94	14.1	50.9	2.74	33.3				320	204
377	7.42	7.38	34.249	26.774	132.7	0.682	0.81	12.0	57.6	2.84	35.1				379	203
400 ISL	7.23	7.19	34.257	26.807	129.8	0.713	0.73	10.8	60.4	2.89	35.8				403	203
437	6.93	6.89	34.275	26.863	124.8	0.760	0.59	8.7	65.2	2.98	36.8				440	202
500 ISL	6.38	6.33	34.296	26.954	116.7	0.836	0.43	6.2	74.5	3.11	38.7				503	202
525	6.16	6.11	34.306	26.990	113.4	0.865	0.37	5.3	78.2	3.16	39.4				529	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 59.1 N	120 21.3 W	15/08/96	0251 UTC	776 m	320 18 kn	320 04 03	1	1013.2 mb	17.6 C	17.0 C		6/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.96	17.96	33.630	24.234	367.7	0.000	5.76	106.4	0.8	0.28	0.0	0.00	0.35	0.11	0	
1	17.96	17.96	33.630	24.234	367.8	0.004	5.76	106.4	0.8	0.28	0.0	0.00	0.35	0.11	1	220
2	17.97	17.97	33.634	24.235	367.7	0.007									2	221
10 ISL	17.91	17.91	33.628	24.245	367.0	0.037	5.78	106.7	0.8	0.27	0.0	0.00	0.35	0.11	10	219
11	17.91	17.91	33.628	24.245	367.1	0.040	5.78	106.7	0.8	0.27	0.0	0.00	0.35	0.11	11	219
20 ISL	17.26	17.26	33.603	24.383	354.3	0.073	5.89	107.4	1.0	0.30	0.0	0.00	0.46	0.17	20	218
21	17.19	17.19	33.600	24.397	352.9	0.076	5.90	107.4	1.0	0.30	0.0	0.00	0.48	0.18	21	218
30	14.30	14.30	33.560	25.013	294.4	0.106	5.67	94.0	5.0	0.72	5.6	0.40	0.83	0.41	30	217
39	13.36	13.35	33.492	25.155	281.1	0.131	5.41	91.1	6.0	0.80	6.8	0.41	0.70	0.44	39	216
50	12.16	12.15	33.558	25.441	254.1	0.161	4.65	76.4	10.8	1.14	12.3	0.40	0.44	0.34	50	215
60	11.71	11.70	33.523	25.498	248.9	0.186	4.43	72.1	12.3	1.20	13.5	0.12	0.39	0.38	60	214
71	11.18	11.17	33.594	25.651	234.6	0.213	4.02	64.7	15.3	1.36	16.2	0.09	0.25	0.23	71	213
75 ISL	10.88	10.87	33.626	25.729	227.2	0.222	3.83	61.2	16.9	1.44	17.5	0.07	0.20	0.19	75	213
84	10.24	10.23	33.698	25.897	211.4	0.242	3.42	54.0	20.5	1.61	20.2	0.03	0.10	0.14	84	212
100	9.83	9.82														

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 39.4 N	121 2.4 W	15/08/96	0846	UTC	3748 m	330 13 kn			1014.4 mb	16.8 c	16.2 c					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.83	16.83	33.259	24.219	369.2	0.000	5.84	105.3	1.1	0.31	0.0	0.01	0.40	0.10		0
1	16.83	16.83	33.259	24.219	369.2	0.004	5.84	105.3	1.1	0.31	0.0	0.01	0.40	0.10		1 224
10	16.84	16.84	33.260	24.218	369.6	0.037										10 222
10	16.84	16.84	33.259	24.217	369.7	0.037										10 223
10	16.84	16.84	33.261	24.219	369.5	0.037										10 221
10	16.84	16.84	33.259	24.217	369.7	0.037	5.84	105.4	1.1	0.31	0.0	0.01	0.38	0.10		10 219
10	16.84	16.84	33.259	24.217	369.7	0.037										10 220
20	16.79	16.79	33.267	24.235	368.3	0.074	5.87	105.8	1.1	0.31	0.0	0.01	0.38	0.11		20 218
30	16.16	16.16	33.591	24.630	331.0	0.109	6.03	107.6	0.5	0.29	0.0	0.00	0.56	0.28		30 217
40	14.69	14.68	33.373	24.787	316.3	0.141	5.95	102.9	1.7	0.43	1.2	0.13	0.91	0.47		40 216
50	13.34	13.33	33.189	24.924	303.3	0.172	5.78	97.1	3.5	0.58	2.6	0.30	0.77	0.51		50 215
60	12.77	12.76	33.311	25.132	283.8	0.201	5.42	90.1	5.2	0.77	6.6	0.37	0.38	0.34		60 214
71	12.01	12.00	33.438	25.376	260.8	0.231	4.95	81.0	8.4	1.00	10.6	0.09	0.17	0.22		71 213
75 ISL	11.68	11.67	33.462	25.457	253.2	0.242	4.77	77.5	9.9	1.06	11.8	0.08	0.13	0.18		75
85	10.89	10.88	33.508	25.636	236.3	0.266	4.35	69.5	13.7	1.22	14.6	0.04	0.07	0.10		85 212
100	10.08	10.07	33.602	25.849	216.2	0.300	3.80	59.7	18.6	1.50	18.8		0.03	0.06		100 211
121	9.51	9.50	33.729	26.043	198.1	0.344	3.31	51.4	23.5	1.74	22.3		0.01	0.05		122 210
125 ISL	9.41	9.40	33.751	26.077	195.0	0.351	3.25	50.4	24.3	1.77	22.8		0.01	0.05		126
140	9.07	9.05	33.824	26.189	184.6	0.380	3.10	47.7	27.1	1.86	24.4		0.01	0.05		141 209
150 ISL	8.90	8.88	33.859	26.243	179.6	0.398	3.10	47.5	28.2	1.89	24.9		0.01	0.05		151
170	8.59	8.57	33.910	26.332	171.5	0.433	3.09	47.0	30.2	1.93	25.6		0.00	0.04		171 208
200	8.02	8.00	33.969	26.464	159.2	0.483	3.07	46.2	34.7	1.99	26.9		0.00	0.04		201 207
230	7.54	7.52	33.988	26.549	151.5	0.529	2.96	44.0	39.3	2.09	28.4					231 206
250 ISL	7.41	7.39	34.020	26.593	147.6	0.559	2.60	38.6	43.1	2.23	30.0					251
268	7.34	7.31	34.052	26.629	144.5	0.586	2.21	32.7	46.5	2.36	31.5					270 205
300 ISL	7.18	7.15	34.098	26.688	139.4	0.631	1.72	25.4	51.7	2.54	33.4					302
319	7.07	7.04	34.120	26.720	136.5	0.657	1.48	21.8	54.7	2.63	34.4					321 204
379	6.56	6.53	34.163	26.824	127.3	0.736	0.95	13.8	64.4	2.87	37.2					381 203
400 ISL	6.41	6.37	34.181	26.858	124.3	0.763	0.80	11.6	67.6	2.94	37.9					403
438	6.15	6.11	34.213	26.917	119.0	0.809	0.59	8.5	73.3	3.05	39.1					441 202
500 ISL	5.68	5.64	34.257	27.011	110.5	0.880	0.39	5.6	82.8	3.17	40.8					503
516	5.56	5.52	34.269	27.035	108.2	0.898	0.34	4.8	85.2	3.20	41.3					520 201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 20.7 N	121 43.9 W	15/08/96	1751	UTC	4035 m	030 06 kn	040 06 04	2	1016.1 mb	17.2 c	16.9 c	20m	02	8/8	ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.08	18.08	33.321	23.968	393.1	0.000	5.62	103.9	1.1	0.28	0.0	0.00	0.20	0.06		0
2	18.07	18.07	33.324	23.973	392.7	0.008										2 224
2 A	18.08	18.08	33.321	23.968	393.2	0.008	5.62	103.9	1.1	0.28	0.0	0.00	0.20	0.06		2 223
8	18.03	18.03	33.320	23.980	392.2	0.031	5.60	103.4	1.2	0.28	0.0	0.00	0.21	0.05		8 222
10 ISL	17.83	17.83	33.330	24.036	386.9	0.039	5.65	104.0	1.2	0.28	0.0	0.00	0.23	0.06		10
13 A	17.51	17.51	33.347	24.126	378.4	0.051	5.72	104.6	1.3	0.28	0.0	0.00	0.25	0.08		13 221
20	17.17	17.17	33.357	24.215	370.2	0.077	5.76	104.6	1.4	0.28	0.0	0.00	0.27	0.09		20 220
27 A	16.60	16.60	33.360	24.351	357.4	0.102	5.83	104.7	1.4	0.28	0.0	0.01	0.30	0.10		27 219
30 ISL	15.95	15.95	33.309	24.460	347.1	0.113	6.04	107.1	1.6	0.29	0.0	0.01	0.43	0.19		30
34	15.07	15.06	33.257	24.615	332.4	0.127	6.30	109.7	1.8	0.33	0.0	0.02	0.61	0.33		34 218
41 A	14.34	14.33	33.326	24.825	312.7	0.149	6.19	106.3	1.7	0.45	1.6	0.16	0.68	0.51		41 217
49	13.74	13.73	33.332	24.954	300.6	0.174	5.79	98.2	2.6	0.62	3.3	0.50	0.50	0.47		49 216
50 ISL	13.68	13.67	33.333	24.967	299.3	0.177	5.77	97.7	2.7	0.63	3.5	0.56	0.49	0.46		50
53 A	13.51	13.50	33.336	25.004	295.9	0.186	5.70	96.2	2.9	0.67	4.2	0.71	0.45	0.43		53 215
65	12.63	12.62	33.402	25.230	274.6	0.220	5.27	87.4	5.5	0.91	8.9	0.20	0.24	0.26		65 214
75 ISL	11.85	11.84	33.446	25.413	257.4	0.246	4.76	77.6	9.8	1.06	11.5	0.07	0.15	0.16		75
76 A	11.78	11.77	33.450	25.429	255.9	0.249	4.71	76.7	10.2	1.07	11.7	0.06	0.14	0.15		76 213
88	11.19	11.18	33.497	25.573	242.3	0.279	4.43	71.3	12.4	1.15	13.2		0.10	0.12		88 212
99	10.56	10.55	33.559	25.734	227.3	0.305	4.12	65.4	15.6	1.33	16.0		0.07	0.09		99 211
100 ISL	10.51	10.50	33.564	25.746	226.1	0.307	4.09	64.8	15.9	1.35	16.3		0.07	0.09		100
119	9.76	9.75	33.664	25.952	206.8	0.348	3.56	55.6	21.2	1.62	20.5		0.03	0.06		120 210
125 ISL	9.57	9.56	33.701	26.012	201.2	0.360	3.48	54.1	22.6	1.68	21.4		0.02	0.06		126
139	9.21	9.19	33.784	26.135	189.7	0.388	3.37	52.0	25.3	1.78	23.0		0.01	0.05		140 209
150 ISL	8.98	8.96	33.834	26.211	182.6	0.408	3.26	50.0	27.1	1.84	24.0		0.01	0.05		151
169	8.65	8.63	33.900	26.315	173.1	0.442	3.08	47.0	29.8	1.93	25.4		0.01	0.05		170 208
200	8.20	8.18	33.970	26.438	161.7	0.494	2.89	43.6	34.2	2.05	27.3		0.00	0.06		201 207
227	7.74	7.72	33.998	26.529	153.5	0.536	2.83	42.3	38.6	2.12	28.4					228 206
250 ISL	7.44	7.42	34.028	26.595	147.4	0.571	2.43	36.1	44.0	2.29	30.5					251
267	7.23	7.20	34.047	26.640	143.3	0.596	2.10	31.0	48.2	2.42	32.2					269 205
300 ISL	6.74	6.71	34.047	26.707	137.2	0.642	1.85	27.0	54.4	2.55	34.2					302
317	6.51	6.48	34.047	26.738	134.4	0.665	1.76	25.6	57.4	2.61	35.0					319 204
377	6.10	6.07	34.125	26.853	124.1	0.743	1.00	14.4	69.2	2.92	38.3					379 203
400 ISL	6.04	6.01	34.150	26.880	121.7	0.771	0.84	12.1	71.7	2.98	38.9					403
438	5.97	5.93	34.187	26.919	118.6	0.817	0.65	9.3	75.1	3.06	39.5					441 202
500 ISL	5.71	5.67	34.247	26.999	111.6	0.888	0.43	6.1	82.2	3.17	40.6					503
520	5.63	5.59	34.267	27.025	109.3	0.910	0.36	5.1	84.5	3.21	41.0					526 201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 59.4 N	122 23.9 W	15/08/96	2240 UTC	4158 m	330 15 kn	340 05 05	1	1014.5 mb	19.7 C	18.6 C	21m 02	1/8		CI		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	18.79	18.79	33.307	23.782	410.9	0.000	5.51	103.2	1.1	0.28	0.0	0.00	0.17	0.04	0	
3	18.79	18.79	33.307	23.782	411.0	0.012	5.51	103.2	1.1	0.28	0.0	0.00	0.17	0.04	3	220
3	18.80	18.80	33.306	23.779	411.3	0.012									3	221
10 ISL	18.52	18.52	33.299	23.843	405.3	0.041	5.54	103.3	1.2	0.28	0.0	0.00	0.20	0.05	10	
16	18.28	18.28	33.293	23.898	400.3	0.065	5.57	103.3	1.2	0.28	0.0	0.00	0.22	0.06	16	219
20 ISL	17.46	17.46	33.269	24.079	383.2	0.081	5.78	105.5	1.1	0.29	0.0	0.00	0.28	0.12	20	
30	15.29	15.29	33.244	24.557	337.9	0.117	6.27	109.7	1.0	0.33	0.0	0.01	0.43	0.28	30	218
45	14.14	14.13	33.253	24.810	314.1	0.166	6.03	103.0	1.8	0.45	1.3	0.17	0.40	0.33	45	217
50 ISL	13.58	13.57	33.278	24.945	301.4	0.181	5.84	98.7	2.6	0.57	3.2	0.37	0.53	0.48	50	
55	13.07	13.06	33.309	25.071	289.5	0.196	5.65	94.5	3.5	0.68	5.0	0.52	0.56	0.50	55	216
65	12.69	12.68	33.353	25.180	279.3	0.224	5.41	89.8	4.8	0.72	5.9	0.26	0.49	0.45	65	215
75	11.98	11.97	33.463	25.402	258.5	0.251	4.83	79.0	8.4	0.91	9.5	0.05	0.23	0.22	75	214
84	11.29	11.28	33.527	25.579	241.7	0.274	4.55	73.4	11.0	1.04	11.8		0.14	0.16	84	213
95	10.91	10.90	33.565	25.677	232.6	0.300	4.33	69.3	13.2	1.18	14.0		0.09	0.12	95	212
100 ISL	10.67	10.66	33.587	25.736	227.1	0.311	4.23	67.3	14.4	1.24	15.1		0.07	0.11	100	
110	10.16	10.15	33.639	25.865	215.0	0.333	4.06	63.9	17.0	1.37	17.3		0.05	0.08	110	211
124	9.56	9.55	33.730	26.036	198.9	0.362	3.86	60.0	20.4	1.53	19.8		0.02	0.04	125	210
125 ISL	9.53	9.52	33.737	26.047	197.9	0.364	3.84	59.6	20.7	1.54	20.0		0.02	0.04	126	
142	9.10	9.08	33.836	26.194	184.2	0.397	3.41	52.5	25.4	1.75	23.1		0.00	0.04	143	209
150 ISL	8.98	8.96	33.868	26.238	180.1	0.411	3.23	49.6	27.2	1.83	24.2		0.00	0.04	151	
167	8.79	8.77	33.923	26.311	173.5	0.441	2.90	44.4	30.4	1.97	25.9		0.00	0.04	168	208
199	8.40	8.38	34.024	26.451	160.7	0.495	2.48	37.6	36.0	2.17	28.3		0.00	0.04	200	207
200 ISL	8.39	8.37	34.027	26.455	160.3	0.497	2.46	37.3	36.2	2.18	28.4				201	
227	8.08	8.06	34.083	26.546	152.1	0.539	2.10	31.6	41.2	2.33	30.3				228	206
250 ISL	7.51	7.49	34.068	26.617	145.4	0.573	2.14	31.8	45.7	2.37	31.5				251	
268	7.06	7.03	34.049	26.665	140.9	0.599	2.20	32.4	49.1	2.40	32.3				270	205
300 ISL	6.73	6.70	34.063	26.721	135.9	0.643	1.87	27.3	54.7	2.54	34.2				302	
318	6.64	6.61	34.077	26.744	133.9	0.667	1.63	23.7	57.6	2.63	35.2				320	204
378	6.27	6.24	34.118	26.826	126.8	0.745	1.15	16.6	66.0	2.84	37.6				380	203
400 ISL	6.18	6.14	34.149	26.862	123.6	0.773	0.96	13.8	69.1	2.92	38.4				403	
437	6.05	6.01	34.205	26.923	118.3	0.818	0.67	9.6	74.3	3.04	39.5				440	202
500 ISL	5.72	5.68	34.266	27.013	110.3	0.890	0.41	5.8	82.6	3.17	41.0				503	
519	5.62	5.58	34.285	27.040	107.8	0.910	0.33	4.7	85.1	3.21	41.4				523	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 40.0 N	123 4.4 W	16/08/96	0433 UTC	4144 m	360 12 kn			1015.4 mb	19.0 C	18.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0 ISL	18.51	18.51	33.273	23.825	406.7	0.000	5.55	103.4	1.5	0.31	0.0	0.00	0.15	0.04	0	
2	18.50	18.50	33.275	23.830	406.4	0.008									2	221
2	18.51	18.51	33.273	23.826	406.8	0.008	5.55	103.4	1.5	0.31	0.0	0.00	0.15	0.04	2	220
10	18.37	18.37	33.277	23.864	403.4	0.041	5.57	103.5	1.5	0.30	0.0	0.00	0.15	0.04	10	219
20 ISL	17.39	17.39	33.242	24.075	383.6	0.080	5.79	105.6	1.6	0.31	0.0	0.00	0.20	0.06	20	
21	17.24	17.24	33.236	24.106	380.6	0.084	5.82	105.8	1.6	0.31	0.0	0.00	0.20	0.06	21	218
30	15.38	15.38	33.162	24.474	345.8	0.116	6.25	109.5	2.0	0.33	0.0	0.00	0.43	0.20	30	217
41	15.06	15.05	33.360	24.697	324.9	0.153	6.07	105.8	1.8	0.42	1.1	0.10	0.63	0.41	41	216
50	13.88	13.87	33.301	24.901	305.6	0.182	5.86	99.6	2.4	0.57	2.7	0.15	0.48	0.33	50	215
59	13.11	13.10	33.367	25.108	286.1	0.208	5.49	91.9	4.2	0.67	4.2	0.42	0.37	0.31	59	214
70	12.50	12.49	33.387	25.244	273.4	0.239	5.29	87.4	5.5	0.87	7.6	0.40	0.21	0.18	70	213
75 ISL	12.20	12.19	33.416	25.323	265.9	0.253	5.09	83.6	7.1	0.97	9.5	0.27	0.15	0.14	75	
85	11.56	11.55	33.485	25.497	249.6	0.278			11.1	1.17	13.3	0.02	0.06	0.09	85	212
100	10.52	10.51	33.565	25.745	226.2	0.314	3.96	62.8	16.9	1.43	17.6		0.02	0.07	100	211
119	9.62	9.61	33.727	26.024	199.9	0.354	3.44	53.5	22.4	1.66	21.4		0.01	0.06	120	210
125 ISL	9.44	9.43	33.761	26.080	194.7	0.366	3.41	52.9	23.6	1.70	22.1		0.01	0.05	126	
140	9.10	9.08	33.826	26.186	184.9	0.395	3.32	51.1	25.9	1.76	23.1		0.00	0.04	141	209
150 ISL	8.86	8.84	33.864	26.254	178.6	0.413	3.41	52.2	26.9	1.75	23.2		0.00	0.04	151	
169	8.44	8.42	33.919	26.362	168.5	0.446	3.66	55.5	28.4	1.74	23.5		0.00	0.04	170	208
199	8.01	7.99	33.949	26.450	160.5	0.495	3.87	58.2	30.6	1.73	23.7		0.00	0.03	200	207
200 ISL	8.00	7.98	33.951	26.453	160.3	0.497	3.84	57.7	30.9	1.74	23.8				201	
229	7.68	7.66	33.997	26.536	152.7	0.542	2.90	43.3	38.8	2.09	28.2				230	206
250 ISL	7.30	7.28	33.989	26.584	148.4	0.574	2.97	43.9	41.8	2.11	29.0				251	
268	6.97	6.95	33.978	26.621	145.0	0.600	3.03	44.5	44.0	2.12	29.3				270	205
300 ISL	6.65	6.62	34.001	26.683	139.4	0.646	2.51	36.6	50.6	2.33	32.0				302	
317	6.54	6.51	34.021	26.713	136.7	0.669	2.14	31.1	54.4	2.47	33.6				319	204
376	6.16	6.13	34.098	26.824	126.9	0.747	1.21	17.4	65.9	2.81	37.5				378	203
400 ISL	5.98	5.95	34.121	26.865	123.1	0.777	1.00	14.3	70.1	2.90	38.5				403	
442	5.68	5.64	34.154	26.929	117.4	0.828	0.77	11.0	76.9	3.02	39.9				445	202
500 ISL	5.34	5.30	34.192	27.000	111.0	0.894	0.53	7.5	85.2	3.14	41.4				503	
512	5.27	5.23	34.200	27.015	109.7	0.907	0.48	6.8	86.9	3.1						

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
31 19.4 N	123 44.8 W	16/08/96	1016	UTC	4002 m	350 07 kn			1015.6 mb	18.6 c	18.1 c					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.21	18.21	33.292	23.914	398.2	0.000	5.60	103.8	1.4	0.29	0.0	0.00	0.17	0.05	0	
1	18.21	18.21	33.290	23.913	398.4	0.004										1 221
2	18.21	18.21	33.292	23.914	398.3	0.008	5.60	103.8	1.4	0.29	0.0	0.00	0.17	0.05	2	220
10	17.99	17.99	33.271	23.952	395.0	0.040	5.63	103.9	1.4	0.29	0.0	0.01	0.19	0.05	10	219
20	17.64	17.64	33.322	24.076	383.4	0.079	5.76	105.6	1.0	0.29	0.0	0.01	0.26	0.08	20	218
30	16.52	16.52	33.174	24.227	369.4	0.116	5.93	106.3	1.7	0.30	0.0	0.01	0.35	0.13	30	217
41	16.10	16.09	33.218	24.357	357.3	0.156	6.04	107.4	1.6	0.32	0.0	0.01	0.50	0.25	41	216
50	15.11	15.10	33.425	24.736	321.4	0.187	6.03	105.2	1.1	0.45	1.5	0.11	0.62	0.50	50	215
60	14.38	14.37	33.424	24.892	306.8	0.218	5.94	102.1	1.3	0.57	2.7	0.21	0.50	0.43	60	214
70	13.85	13.84	33.452	25.025	294.4	0.248	5.77	98.1	1.6	0.70	3.7	0.38	0.34	0.31	70	213
75 ISL	13.51	13.50	33.455	25.097	287.7	0.263	5.63	95.1	2.1	0.78	5.3	0.41	0.27	0.25	75	
85	12.81	12.80	33.459	25.240	274.2	0.291	5.30	88.2	4.2	0.95	9.2	0.47	0.15	0.15	85	212
100	11.90	11.89	33.497	25.444	255.1	0.331	4.76	77.7	10.3	1.18	13.2	0.04	0.06	0.09	100	211
120	10.58	10.57	33.587	25.752	226.0	0.379	3.97	63.0	16.2	1.38	16.9		0.03	0.08	121	210
125 ISL	10.36	10.35	33.615	25.812	220.3	0.390	3.87	61.2	17.4	1.43	17.7		0.02	0.07	126	
141	9.77	9.75	33.708	25.985	204.2	0.424	3.65	57.0	20.9	1.57	20.0		0.01	0.05	142	209
150 ISL	9.45	9.43	33.763	26.080	195.2	0.442	3.52	54.6	23.2	1.66	21.4		0.01	0.05	151	
169	8.87	8.85	33.864	26.252	179.1	0.477	3.29	50.4	27.6	1.84	24.0		0.00	0.04	170	208
199	8.36	8.34	33.939	26.390	166.4	0.529	3.12	47.3	32.0	1.95	25.7		0.00	0.04	200	207
200 ISL	8.35	8.33	33.940	26.392	166.2	0.531	3.12	47.2	32.1	1.95	25.7				201	
230	7.93	7.91	33.970	26.479	158.3	0.579	3.07	46.1	35.2	2.01	27.0				231	206
250 ISL	7.66	7.64	33.988	26.532	153.5	0.611	2.93	43.7	38.3	2.09	28.1				251	
268	7.43	7.40	34.004	26.578	149.3	0.638	2.75	40.8	41.5	2.19	29.2				269	205
300 ISL	7.09	7.06	34.035	26.650	142.8	0.685	2.25	33.1	48.1	2.39	31.8				302	
318	6.91	6.88	34.050	26.687	139.5	0.710	1.96	28.7	51.9	2.50	33.3				320	204
378	6.28	6.25	34.069	26.786	130.6	0.791	1.48	21.4	62.4	2.74	36.4				380	203
400 ISL	6.04	6.01	34.085	26.829	126.6	0.819	1.26	18.1	67.2	2.84	37.7				402	
437	5.67	5.63	34.118	26.901	119.9	0.865	0.92	13.1	75.1	2.99	39.6				440	202
500 ISL	5.32	5.28	34.173	26.987	112.2	0.938	0.61	8.6	84.1	3.13	41.3				503	
521	5.21	5.17	34.192	27.016	109.7	0.961	0.50	7.0	87.1	3.18	41.8				524	201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 29.3 N	117 46.6 W	13/08/96	1805	UTC	91 m	330 04 kn	310 01 05	1	1013.1 mb	21.6 c	21.2 c	10m 04			6/8 ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.83	19.83	33.525	23.683	420.3	0.000	6.14	117.5	4.8	0.26	0.0	0.01	0.73	0.22	0	
1	19.83	19.83	33.525	23.683	420.4	0.008	6.14	117.5	4.8	0.26	0.0	0.01	0.73	0.22	2	211
2	19.86	19.86	33.526	23.676	421.1	0.008										2 212
6	18.07	18.07	33.565	24.142	376.7	0.024	6.48	119.9	3.2	0.26	0.0	0.01	0.51	0.15	6	210
10 ISL	16.86	16.86	33.544	24.431	349.3	0.039	6.48	117.2	3.5	0.29	0.0	0.01	0.72	0.29	10	
13	16.17	16.17	33.534	24.583	334.9	0.049	6.48	115.6	3.8	0.31	0.0	0.01	0.97	0.43	13	209
20	14.78	14.78	33.527	24.885	306.3	0.072	6.69	116.0	4.8	0.31	0.0	0.01	1.25	0.51	20	208
27	13.14	13.14	33.558	25.234	273.2	0.092	5.64	94.6	7.7	0.56	2.0	0.11	2.20	1.13	27	207
30 ISL	12.70	12.70	33.558	25.336	263.6	0.100	5.17	85.9	9.2	0.72	4.3	0.21	1.96	1.10	30	
38	11.99	11.99	33.606	25.510	247.2	0.120	4.20	68.8	12.6	1.11	10.5	0.48	0.85	0.77	38	206
46	11.72	11.71	33.614	25.567	242.0	0.140	3.92	63.8	14.0	1.25	12.3	0.60	0.46	0.64	46	205
50 ISL	11.61	11.60	33.627	25.597	239.2	0.150	3.78	61.4	14.8	1.31	13.3	0.61	0.39	0.56	50	
55	11.47	11.46	33.648	25.639	235.3	0.161	3.63	58.8	15.8	1.37	14.5	0.62	0.35	0.47	55	204
65	11.09	11.08	33.694	25.744	225.5	0.184	3.41	54.8	17.4	1.48	17.2	0.37	0.28	0.37	65	203
75	10.88	10.87	33.735	25.814	219.1	0.207	3.08	49.3	19.5	1.61	19.4	0.25	0.20	0.29	75	202
85	10.79	10.78	33.760	25.849	216.0	0.228	2.87	45.8	20.8	1.70	20.5	0.26	0.17	0.32	85	201

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 25.2 N	117 54.3 W	13/08/96	1220	UTC	611 m	00 kn			1011.6 mb	20.5 c	20.0 c	26m 03				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.29	20.29	33.607	23.625	425.9	0.000	5.72	110.4	3.1	0.23	0.0	0.00	0.19	0.06	0	
2	20.29	20.29	33.607	23.625	425.9	0.009	5.72	110.4	3.1	0.23	0.0	0.00	0.19	0.06	2	220
10 ISL	18.29	18.29	33.551	24.093	381.5	0.041	6.08	113.0	2.3	0.26	0.0	0.00	0.20	0.07	10	
11	17.92	17.92	33.544	24.178	373.4	0.045	6.14	113.3	2.2	0.27	0.0	0.00	0.20	0.07	11	219
20 ISL	15.24	15.24	33.476	24.746	319.6	0.076	6.59	115.3	2.5	0.32	0.0	0.00	0.22	0.11	20	
21	14.95	14.95	33.473	24.807	313.8	0.079	6.60	114.8	2.5	0.33	0.0	0.00	0.22	0.11	21	218
30 ISL	12.74	12.74	33.521	25.300	267.0	0.105	5.61	93.3	6.6	0.64	4.6	0.12	1.07	0.81	30	
31	12.54	12.54	33.531	25.346	262.6	0.108	5.44	90.1	7.3	0.69	5.4	0.14	1.15	0.87	31	217
40	11.50	11.49	33.637	25.625	236.3	0.130	3.86	62.6	14.4	1.26	13.9	0.46	0.66	0.51	40	216
50	11.09	11.08	33.738	25.778	221.9	0.153	3.08	49.5	19.0	1.58	18.7	0.17	0.24	0.34	50	215
60	10.94	10.93	33.773	25.833	217.0	0.175	2.74	43.9	21.1	1.70	20.3	0.16	0.16	0.24	60	214
70	10.86	10.85	33.814	25.879	212.9	0.197	2.54	40.6	22.7	1.80	21.5	0.09	0.11	0.20	70	213
75 ISL	10.76	10.75	33.826	25.906	2											

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 15.2 N	118 15.1 W	13/08/96	0833 UTC	306 m	280 09 kn			1011.7 mb	20.4 C	19.8 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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.26	20.26	33.633	23.652	423.2	0.000	5.51	106.3	1.8	0.26	0.0	0.00	0.17	0.07	0	
2	20.26	20.26	33.633	23.652	423.3	0.008	5.51	106.3	1.8	0.26	0.0	0.00	0.17	0.07	2	223
10	20.21	20.21	33.632	23.665	422.4	0.042									10	221
10	20.20	20.20	33.632	23.668	422.1	0.042									10	222
10	20.21	20.21	33.633	23.666	422.3	0.042									10	219
10	20.20	20.20	33.633	23.669	422.0	0.042									10	220
10	20.21	20.21	33.633	23.666	422.3	0.042									10	218
10	20.09	20.09	33.633	23.698	419.3	0.042	5.53	106.4	1.8	0.26	0.0	0.00	0.18	0.14	10	216
10	20.17	20.17	33.633	23.677	421.3	0.042									10	217
20	16.15	16.15	33.511	24.570	336.4	0.080	6.27	111.8	2.3	0.32	0.0	0.00	0.33	0.20	20	215
30	14.08	14.08	33.474	24.993	296.3	0.112	5.94	101.5	4.0	0.57	3.2	0.29	0.45	0.22	30	214
40	13.04	13.03	33.520	25.240	273.0	0.140	5.17	86.5	8.3	0.86	8.1	0.27	0.53	0.31	40	213
50	12.24	12.23	33.540	25.411	256.9	0.167	4.67	76.8	10.9	1.08	11.7	0.27	0.44	0.31	50	212
60	11.60	11.59	33.551	25.540	244.9	0.192	4.29	69.6	12.9	1.21	14.0	0.16	0.34	0.29	60	211
71	10.84	10.83	33.615	25.727	227.2	0.218	3.77	60.2	16.8	1.41	17.1	0.11	0.20	0.23	71	210
75 ISL	10.67	10.66	33.648	25.783	222.0	0.227	3.60	57.3	17.8	1.47	18.0	0.10	0.18	0.22	75	
85	10.40	10.39	33.741	25.903	210.8	0.248	3.21	50.8	20.2	1.61	20.1	0.08	0.14	0.21	85	209
100	10.15	10.14	33.890	26.062	196.0	0.279	2.63	41.5	24.9	1.89	23.6	0.03	0.04	0.11	100	208
121	9.74	9.73	33.921	26.156	187.5	0.319	2.57	40.2	27.2	1.95	24.6	0.02	0.01	0.09	122	207
125 ISL	9.81	9.80	33.968	26.181	185.2	0.327	2.38	37.3	28.2	2.01	25.1	0.02	0.01	0.09	126	
140	10.14	10.12	34.160	26.275	176.7	0.354	1.63	25.7	31.9	2.27	27.1	0.02	0.01	0.07	141	206
150 ISL	10.09	10.07	34.203	26.318	172.9	0.371	1.53	24.1	33.1	2.33	27.7	0.02	0.01	0.07	151	
170	10.00	9.98	34.265	26.382	167.3	0.405	1.33	20.9	34.6	2.39	28.3	0.02	0.00	0.06	171	205
200	9.80	9.78	34.345	26.479	158.7	0.454	1.00	15.7	38.0	2.54	29.2	0.02	0.01	0.05	201	204
229	9.61	9.58	34.316	26.488	158.4	0.500	1.07	16.7	38.7	2.52	29.4	0.02			230	203
250 ISL	9.33	9.30	34.289	26.513	156.3	0.533	1.15	17.8	39.8	2.53	29.8	0.02			251	
269	9.07	9.04	34.269	26.540	154.0	0.563	1.19	18.4	41.0	2.53	30.3	0.03			271	202
294	8.85	8.82	34.263	26.570	151.5	0.601	1.15	17.6	42.7	2.57	30.7	0.04			296	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 10.9 N	118 23.6 W	13/08/96	0520 UTC	1174 m	280 11 kn			1011.9 mb	20.3 C	19.4 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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.94	20.94	33.668	23.498	438.0	0.000	5.40	105.5	1.6	0.25	0.0	0.00	0.17	0.08	0	
2	20.94	20.94	33.668	23.498	438.0	0.009	5.40	105.5	1.6	0.25	0.0	0.00	0.17	0.08	2	220
2	20.94	20.94	33.668	23.498	438.0	0.009									2	221
10 ISL	20.69	20.69	33.663	23.562	432.3	0.044	5.44	105.8	1.5	0.25	0.0	0.00	0.18	0.08	10	
15	20.54	20.54	33.660	23.599	428.8	0.065	5.46	105.9	1.5	0.25	0.0	0.00	0.19	0.08	15	219
20 ISL	19.30	19.30	33.600	23.877	402.5	0.086	5.81	110.1	1.8	0.27	0.0	0.00	0.30	0.14	20	
30	16.24	16.24	33.517	24.554	338.2	0.123	6.28	112.1	2.3	0.31	0.0	0.00	0.54	0.29	30	218
45	12.65	12.64	33.536	25.329	264.6	0.168	4.95	82.2	8.0	0.85	7.7	0.25	0.59	0.38	45	217
50 ISL	12.30	12.29	33.558	25.414	256.7	0.181	4.67	77.0	9.5	0.94	9.2	0.30	0.57	0.42	50	
54	12.14	12.13	33.573	25.456	252.8	0.191	4.48	73.6	10.7	1.01	10.4	0.31	0.54	0.45	54	216
65	11.39	11.38	33.619	25.632	236.3	0.218	3.89	62.9	14.0	1.25	14.6	0.17	0.39	0.42	65	215
75	10.82	10.81	33.682	25.783	222.0	0.241	3.47	55.4	17.6	1.48	17.9	0.06	0.22	0.29	75	214
85	10.43	10.42	33.744	25.900	211.1	0.263	3.19	50.5	20.3	1.63	20.3	0.03	0.09	0.17	85	213
94	10.10	10.09	33.786	25.989	202.8	0.281	3.05	48.0	22.4	1.73	21.7	0.02	0.05	0.10	94	212
100 ISL	10.12	10.11	33.836	26.025	199.5	0.294	2.87	45.2	23.4	1.80	22.4	0.02	0.03	0.09	100	
109	10.17	10.16	33.904	26.070	195.5	0.311	2.64	41.6	24.6	1.88	23.3	0.02	0.02	0.08	110	211
124	9.59	9.58	33.909	26.171	186.1	0.340	2.77	43.1	26.5	1.92	24.2	0.01	0.01	0.07	125	210
125 ISL	9.59	9.58	33.915	26.176	185.7	0.342	2.76	43.0	26.6	1.93	24.3	0.01	0.01	0.07	126	
144	9.51	9.49	34.010	26.264	177.7	0.376	2.43	37.8	29.4	2.06	25.7	0.01	0.01	0.05	145	209
150 ISL	9.42	9.40	34.021	26.287	175.6	0.387	2.40	37.3	30.1	2.08	26.0	0.01	0.01	0.05	151	
169	9.10	9.08	34.047	26.359	169.0	0.420	2.33	35.9	32.1	2.13	27.0	0.01	0.01	0.05	170	208
198	8.94	8.92	34.141	26.459	160.2	0.467	1.94	29.8	36.1	2.28	28.5	0.01	0.00	0.05	199	207
200 ISL	8.92	8.90	34.144	26.464	159.7	0.471	1.93	29.6	36.3	2.29	28.6	0.01			201	
228	8.78	8.76	34.181	26.516	155.3	0.515	1.73	26.5	39.1	2.39	29.4	0.01			229	206
250 ISL	8.90	8.87	34.259	26.558	151.8	0.548	1.34	20.6	41.3	2.52	30.1	0.01			251	
268	9.00	8.97	34.322	26.592	149.0	0.575	1.01	15.6	43.1	2.63	30.6	0.01			270	205
300 ISL	8.82	8.79	34.344	26.638	145.2	0.623	0.81	12.4	45.8	2.71	31.4	0.01			302	
317	8.65	8.62	34.339	26.661	143.2	0.647	0.78	11.9	47.3	2.73	31.8	0.01			319	204
379	8.02	7.98	34.330	26.751	135.5	0.733	0.62	9.3	53.8	2.87	33.6	0.01			381	203
400 ISL	7.76	7.72	34.318	26.780	132.9	0.762	0.59	8.8	56.3	2.91	34.4	0.01			403	
439	7.30	7.26	34.297	26.829	128.4	0.813	0.55	8.1	61.0	2.97	35.8	0.01			442	202
500 ISL	6.77	6.72	34.302	26.907	121.6	0.889	0.44	6.4	68.1	3.07	37.5	0.01			503	
513	6.66	6.61	34.304	26.923	120.1	0.905	0.42	6.1	69.6	3.09	37.9	0.01			517	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 55.1 N	118 56.3 W	12/08/96	2328	UTC	1689 m	290	14 kn	300 03 03	1	1011.3 mb	20.2 c	19.0 c	17m 03		5/8	CU
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.04	20.04	33.668	23.737	415.2	0.000	5.42	104.2	1.5	0.25	0.0	0.00	0.17	0.04		0
2	20.04	20.04	33.668	23.737	415.2	0.008	5.42	104.2	1.5	0.25	0.0	0.00	0.17	0.04		2
2	20.01	20.01	33.669	23.746	414.4	0.008										2
10	19.91	19.91	33.663	23.767	412.6	0.041	5.43	104.1	1.5	0.25	0.0	0.00	0.17	0.04		10
20	16.48	16.48	33.551	24.525	340.6	0.079	6.16	110.5	1.1	0.31	0.0	0.02	0.57	0.28		20
30	13.83	13.83	33.438	25.017	294.0	0.111	5.77	98.1	3.2	0.63	4.1	0.44	0.68	0.48		30
39	13.66	13.65	33.447	25.059	290.3	0.137	5.65	95.7	3.6	0.69	5.0	0.49	0.66	0.51		39
50	12.62	12.61	33.478	25.290	268.5	0.168	5.00	82.9	7.1	0.99	10.0	0.10	0.59	0.49		50
59	12.10	12.09	33.489	25.399	258.3	0.192	4.74	77.7	9.2	0.98	10.1	0.08	0.39	0.34		59
69	10.99	10.98	33.551	25.651	234.5	0.216	4.14	66.3	14.2	1.27	15.2	0.03	0.13	0.17		69
75 ISL	10.71	10.70	33.578	25.722	227.9	0.230	4.04	64.3	15.2	1.33	16.2	0.03	0.11	0.15		75
84	10.49	10.48	33.615	25.789	221.6	0.250	3.97	62.9	16.3	1.38	16.9	0.03	0.09	0.12		84
99	9.85	9.84	33.715	25.976	204.1	0.282	3.44	53.8	21.5	1.65	20.9	0.02	0.04	0.08		99
100 ISL	9.82	9.81	33.720	25.985	203.3	0.284	3.43	53.6	21.7	1.66	21.0	0.02	0.04	0.08		100
119	9.37	9.36	33.806	26.126	190.2	0.322	3.25	50.3	24.6	1.78	22.8	0.01	0.01	0.04		119
125 ISL	9.22	9.21	33.835	26.173	185.8	0.333	3.14	48.5	26.2	1.84	23.6	0.01	0.01	0.04		125
139	8.93	8.92	33.909	26.278	176.1	0.358	2.83	43.4	29.9	1.98	25.6	0.01	0.01	0.05		139
150 ISL	8.90	8.88	33.993	26.348	169.6	0.377	2.60	39.9	32.1	2.07	26.6	0.01	0.01	0.05		150
170	8.85	8.83	34.106	26.445	160.8	0.410	2.17	33.3	35.2	2.22	28.0	0.01	0.00	0.04		170
200	9.09	9.07	34.221	26.498	156.6	0.458	1.54	23.8	38.5	2.42	29.4	0.01	0.00	0.04		200
229	8.15	8.13	34.118	26.563	150.5	0.502	1.92	29.0	41.7	2.39	30.3	0.01				229
250 ISL	8.07	8.04	34.152	26.601	147.2	0.534	1.70	25.6	44.7	2.48	31.4	0.01				250
269	8.00	7.97	34.181	26.635	144.4	0.561	1.37	20.6	47.6	2.59	32.5	0.01				269
300 ISL	7.75	7.72	34.211	26.696	139.0	0.605	1.09	16.3	52.1	2.71	33.7	0.01				300
316	7.60	7.57	34.222	26.726	136.3	0.627	0.99	14.8	54.4	2.76	34.3	0.01				316
379	7.06	7.02	34.244	26.820	128.1	0.711	0.73	10.7	62.2	2.91	36.3	0.01				379
400 ISL	6.96	6.92	34.263	26.849	125.6	0.737	0.62	9.1	64.4	2.97	36.8	0.01				400
437	6.78	6.74	34.296	26.900	121.2	0.783	0.44	6.4	68.4	3.07	37.6	0.01				437
500 ISL	6.25	6.21	34.308	26.980	114.1	0.857	0.32	4.6	76.4	3.16	39.3	0.00				500
511	6.16	6.11	34.311	26.994	112.8	0.870	0.30	4.3	77.8	3.18	39.6	0.00				511

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 39.0 N	119 30.1 W	12/08/96	1844	UTC	799 m	280	10 kn	280 02 05	1	1013.6 mb	19.9 c	18.8 c	14m 03		6/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.93	18.93	33.753	24.087	381.7	0.000	5.53	104.2	1.5	0.25	0.0	0.00	0.36	0.09		0
2	18.93	18.93	33.755	24.089	381.7	0.008										2
2 A	18.93	18.93	33.753	24.087	381.8	0.008	5.53	104.2	1.5	0.25	0.0	0.00	0.36	0.09		2
9 A	18.69	18.69	33.758	24.152	375.9	0.034	5.53	103.7	1.5	0.25	0.0	0.00	0.37	0.10		9
10 ISL	18.65	18.65	33.756	24.160	375.1	0.038	5.54	103.8	1.5	0.25	0.0	0.00	0.46	0.13		10
19 A	17.73	17.73	33.714	24.355	356.9	0.071	5.59	102.9	1.7	0.28	0.2	0.01	1.24	0.38		19
20 ISL	17.51	17.51	33.710	24.405	352.1	0.074	5.57	102.1	2.0	0.31	0.6	0.02	1.21	0.39		20
28 A	15.26	15.26	33.684	24.902	305.0	0.101	5.15	90.3	6.3	0.68	5.5	0.17	0.95	0.45		28
30 ISL	14.46	14.46	33.679	25.071	288.9	0.107	4.89	84.3	8.3	0.83	7.7	0.23	0.82	0.41		30
37 A	12.00	12.00	33.703	25.583	240.2	0.125	4.00	65.6	14.8	1.32	15.0	0.35	0.38	0.25		37
45	11.26	11.25	33.715	25.730	226.5	0.144	3.58	57.8	17.8	1.50	18.1	0.20	0.26	0.23		45
50 ISL	10.89	10.88	33.726	25.805	219.4	0.155	3.39	54.3	19.5	1.59	19.6	0.11	0.22	0.20		50
54 A	10.66	10.65	33.734	25.851	215.0	0.164	3.28	52.2	20.5	1.65	20.5	0.05	0.19	0.18		54
60	10.48	10.47	33.737	25.885	212.0	0.176	3.23	51.2	21.3	1.68	20.9	0.04	0.16	0.16		60
69	10.04	10.03	33.773	25.989	202.3	0.195	3.00	47.1	23.9	1.80	22.7	0.03	0.09	0.14		69
75 ISL	9.85	9.84	33.793	26.036	197.9	0.207	2.92	45.7	25.0	1.84	23.4	0.02	0.06	0.13		75
84	9.67	9.66	33.819	26.087	193.2	0.225	2.85	44.4	26.2	1.88	24.0	0.02	0.04	0.11		84
100	9.50	9.49	33.858	26.146	188.0	0.255	2.77	43.0	27.4	1.94	24.7	0.03	0.03	0.11		100
118	9.08	9.07	33.970	26.301	173.5	0.288	2.34	36.0	32.1	2.12	27.1	0.02	0.01	0.07		118
125 ISL	8.94	8.93	33.990	26.339	170.0	0.300	2.34	35.9	33.1	2.15	27.5	0.02	0.01	0.07		125
138	8.70	8.69	34.011	26.393	165.0	0.322	2.33	35.6	34.5	2.17	28.0	0.02	0.00	0.08		138
150 ISL	8.52	8.50	34.027	26.434	161.4	0.341	2.31	35.1	35.7	2.19	28.4	0.02	0.00	0.07		150
169	8.29	8.27	34.049	26.486	156.7	0.371	2.27	34.4	37.8	2.23	29.0	0.02	0.00	0.04		169
199	8.02	8.00	34.091	26.560	150.1	0.417	2.00	30.1	42.1	2.35	30.5	0.02	0.00	0.04		199
200 ISL	8.01	7.99	34.092	26.563	149.9	0.419	1.99	29.9	42.3	2.35	30.6	0.02				200
228	7.67	7.65	34.120	26.635	143.5	0.460	1.70	25.4	47.2	2.48	32.2	0.02				228
250 ISL	7.55	7.53	34.135	26.664	141.0	0.491	1.57	23.4	49.2	2.54	32.8	0.02				250
267	7.47	7.44	34.144	26.683	139.5	0.515	1.49	22.1	50.6	2.58	33.2	0.02				267
300 ISL	7.18	7.15	34.163	26.739	134.5	0.560	1.25	18.5	55.3	2.70	34.5	0.02				300
317	7.03	7.00	34.176	26.770	131.8	0.583	1.12	16.5	57.9	2.76	35.2	0.02				317
376	6.81	6.77	34.255	26.863	123.8	0.658	0.65	9.5	65.5	2.98	37.1	0.01				376
400 ISL	6.70	6.66	34.267	26.887	121.7	0.688	0.55	8.0	67.6	3.02	37.6	0.01				400
436	6.52	6.48	34.277	26.920	119.1	0.731	0.46	6.7	70.6	3.07	38.2	0.01				436
500 ISL	6.16															

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 57.3 W	12/08/96	1259	UTC	912 m	290	08 kn			1013.1 mb	16.5 C	16.2 C	14m	03		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	17.92	17.92	33.664	24.270	364.3	0.000	5.59	103.2	1.4	0.28	0.0	0.00	0.37	0.14	0	
2	17.92	17.92	33.664	24.270	364.4	0.007	5.59	103.2	1.4	0.28	0.0	0.00	0.37	0.14	2	220
10 ISL	17.01	17.01	33.481	24.348	357.2	0.036	5.74	104.0	1.5	0.30	0.0	0.00	0.26	0.10	10	
11	16.86	16.86	33.454	24.362	355.9	0.040	5.76	104.1	1.5	0.30	0.0	0.00	0.25	0.10	11	219
20 ISL	16.24	16.24	33.431	24.488	344.2	0.071	5.87	104.8	1.6	0.33	0.1	0.02	0.43	0.20	20	
21	16.19	16.19	33.433	24.501	343.0	0.075	5.88	104.8	1.6	0.33	0.1	0.02	0.46	0.22	21	218
30	15.62	15.62	33.392	24.598	334.0	0.105	5.91	104.2	1.9	0.36	0.4	0.05	0.63	0.31	30	217
41	13.07	13.06	33.341	25.096	286.8	0.139	5.48	91.7	4.5	0.69	5.1	0.40	0.56	0.40	41	216
50	12.41	12.40	33.433	25.296	267.9	0.164	5.14	84.8	7.0	0.99	10.1	0.10	0.36	0.29	50	215
61	12.14	12.13	33.532	25.425	255.9	0.193	5.02	82.4	9.5	1.19	12.8	0.20	0.23	0.20	61	214
70	11.55	11.54	33.558	25.555	243.7	0.216	4.54	73.6	13.1	1.35	15.7	0.03	0.18	0.16	70	213
75 ISL	11.18	11.17	33.594	25.651	234.7	0.227	4.16	66.9	15.6	1.45	17.5	0.03	0.14	0.14	75	
85	10.53	10.52	33.672	25.826	218.1	0.250	3.47	55.1	20.1	1.64	20.5	0.03	0.08	0.10	85	212
99	10.14	10.13	33.713	25.926	208.9	0.280	3.19	50.2	22.2	1.75	22.1	0.02	0.05	0.10	99	211
100 ISL	10.10	10.09	33.720	25.938	207.8	0.282	3.17	49.9	22.5	1.76	22.2	0.02	0.05	0.10	100	
119	9.44	9.43	33.854	26.153	187.7	0.320	2.82	43.7	27.3	1.92	24.5	0.01	0.02	0.08	120	210
125 ISL	9.36	9.35	33.881	26.187	184.5	0.331	2.74	42.4	28.1	1.96	25.0	0.01	0.02	0.08	126	
140	9.22	9.20	33.932	26.250	178.9	0.358	2.56	39.5	29.8	2.03	25.9	0.01	0.01	0.08	141	209
150 ISL	9.05	9.03	33.968	26.305	173.8	0.376	2.44	37.5	31.6	2.09	26.7	0.01	0.01	0.08	151	
170	8.71	8.69	34.026	26.404	164.6	0.410	2.28	34.8	35.0	2.18	28.0	0.01	0.00	0.07	171	208
199	8.36	8.34	34.047	26.475	158.4	0.456	2.28	34.6	37.2	2.22	28.9	0.02	0.00	0.05	200	207
200 ISL	8.35	8.33	34.048	26.477	158.2	0.458	2.28	34.6	37.3	2.22	28.9	0.02	0.00	0.05	201	
229	7.97	7.95	34.071	26.552	151.4	0.503	2.12	31.9	41.5	2.31	30.1	0.03	0.00	0.05	230	206
250 ISL	7.76	7.74	34.115	26.618	145.5	0.534	1.75	26.2	46.4	2.46	31.7	0.03	0.00	0.05	251	
269	7.60	7.57	34.156	26.673	140.5	0.561	1.39	20.7	50.7	2.61	33.2	0.03	0.00	0.05	271	205
300 ISL	7.41	7.38	34.184	26.723	136.2	0.604	1.15	17.1	54.3	2.72	34.3	0.02	0.00	0.05	302	
319	7.30	7.27	34.194	26.747	134.2	0.630	1.06	15.7	56.0	2.76	34.7	0.02	0.00	0.05	321	204
378	6.78	6.74	34.236	26.852	124.8	0.706	0.67	9.8	64.8	2.95	36.9	0.01	0.00	0.05	380	203
400 ISL	6.59	6.55	34.252	26.890	121.4	0.733	0.56	8.2	68.4	3.01	37.7	0.01	0.00	0.05	403	
438	6.29	6.25	34.279	26.951	115.9	0.778	0.40	5.8	74.2	3.10	39.0	0.01	0.00	0.05	441	202
500 ISL	5.92	5.88	34.310	27.023	109.6	0.848	0.30	4.3	80.8	3.19	40.4	0.01	0.00	0.05	503	
524	5.78	5.73	34.323	27.051	107.1	0.874	0.26	3.7	83.3	3.22	40.9	0.01	0.00	0.05	528	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 5.1 N	120 38.7 W	12/08/96	0604	UTC	3812 m	320	09 kn			1013.5 mb	17.8 C	16.8 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	18.85	18.85	33.450	23.876	401.9	0.000	5.43	101.9	1.9	0.27	0.0	0.00	0.10	0.03	0	
2	18.85	18.85	33.450	23.876	402.0	0.008									2	221
10 ISL	18.85	18.85	33.450	23.876	402.0	0.008	5.43	101.9	1.9	0.27	0.0	0.00	0.10	0.03	2	220
15	18.82	18.82	33.450	23.884	401.7	0.040	5.44	102.1	1.9	0.27	0.0	0.00	0.11	0.03	10	
20 ISL	18.82	18.82	33.450	23.884	401.7	0.040	5.44	102.1	1.9	0.27	0.0	0.00	0.11	0.03	15	219
30	18.37	18.37	33.391	23.951	395.4	0.080	5.56	103.4	1.8	0.28	0.0	0.00	0.14	0.04	20	
44	17.10	17.10	33.250	24.150	376.7	0.119	5.85	106.1	1.6	0.29	0.0	0.00	0.22	0.08	30	218
44	15.11	15.10	33.119	24.500	343.7	0.169	6.07	105.7	2.2	0.31	0.0	0.00	0.30	0.17	44	217
50 ISL	14.83	14.82	33.131	24.570	337.2	0.190	6.09	105.5	2.2	0.33	0.0	0.01	0.36	0.22	50	
54	14.71	14.70	33.148	24.609	333.6	0.203	6.10	105.4	2.2	0.35	0.0	0.01	0.40	0.26	54	216
65	14.07	14.06	33.192	24.778	317.7	0.239	5.94	101.3	2.9	0.43	1.0	0.13	0.47	0.38	65	215
75	13.69	13.68	33.287	24.930	303.5	0.270	5.72	96.9	3.4	0.50	1.9	0.38	0.48	0.43	75	214
85	13.28	13.27	33.314	25.034	293.8	0.300	5.60	94.0	3.8	0.59	3.4	0.55	0.36	0.39	85	213
95	12.51	12.50	33.410	25.260	272.5	0.328	5.20	86.0	6.4	0.72	6.0	0.04	0.25	0.27	95	212
100 ISL	12.18	12.17	33.455	25.358	263.2	0.342	5.00	82.1	7.7	0.80	7.6	0.03	0.21	0.23	100	
109	11.69	11.68	33.522	25.502	249.7	0.365	4.67	75.9	9.9	0.95	10.3	0.02	0.16	0.18	109	211
123	11.22	11.20	33.573	25.628	238.0	0.399	4.23	68.1	13.0	1.17	13.5	0.03	0.13	0.18	124	210
125 ISL	11.10	11.08	33.584	25.658	235.1	0.403	4.17	67.0	13.6	1.21	14.1	0.03	0.12	0.17	126	
144	9.90	9.88	33.695	25.953	207.3	0.446	3.73	58.4	19.5	1.52	19.2	0.01	0.04	0.08	145	209
150 ISL	9.64	9.62	33.722	26.017	201.2	0.458	3.66	57.0	20.9	1.58	20.2	0.01	0.03	0.07	151	
169	9.05	9.03	33.798	26.172	186.7	0.495	3.49	53.6	25.0	1.74	22.7	0.01	0.01	0.04	170	208
199	8.51	8.49	33.931	26.361	169.2	0.548	3.05	46.4	31.2	1.97	25.9	0.00	0.00	0.03	200	207
200 ISL	8.49	8.47	33.933	26.366	168.8	0.550	3.05	46.3	31.4	1.97	26.0	0.00	0.00	0.03	201	
229	7.91	7.89	33.989	26.497	156.6	0.597	2.92	43.8	36.6	2.07	27.6	0.00	0.00	0.03	230	206
250 ISL	7.89	7.86	34.065	26.560	151.0	0.629	2.39	35.8	40.8	2.25	29.4	0.00	0.00	0.03	251	
268	7.88	7.85	34.116	26.602	147.4	0.656	1.90	28.5	44.4	2.42	31.0	0.00	0.00	0.03	269	205
300 ISL	7.40	7.37	34.121	26.675	140.7	0.702	1.63	24.2	50.4	2.55	33.0	0.00	0.00	0.03	302	
320	7.08	7.05	34.114	26.714	137.1	0.730	1.56	23.0	53.7	2.61	34.0	0.00	0.00	0.03	322	204
379	6.93	6.89	34.197	26.801	129.8	0.809	0.92	13.5	61.1	2.86	36.2	0.00	0.00	0.03	381	203
400 ISL	6.78	6.74														

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
31 45.3 N	121 18.8 W	12/08/96	0016 UTC	3660 m	300 06 kn	310 03 05	2	1012.7 mb	19.0 C	17.1 C	28m 02	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.69	18.69	33.303	23.804	408.8	0.000	5.48	102.5	2.2	0.26	0.0	0.00	0.10	0.02	0	
2	18.69	18.69	33.303	23.804	408.9	0.008	5.48	102.5	2.2	0.26	0.0	0.00	0.10	0.02	2	220
2	18.68	18.68	33.304	23.807	408.5	0.008									2	221
10 ISL	18.61	18.61	33.315	23.833	406.3	0.041	5.47	102.1	2.2	0.26	0.0	0.00	0.11	0.02	10	
15	18.56	18.56	33.347	23.870	403.0	0.061	5.47	102.1	2.2	0.26	0.0	0.00	0.11	0.03	15	219
20 ISL	18.38	18.38	33.334	23.905	399.8	0.081	5.51	102.4	2.2	0.26	0.0	0.00	0.12	0.04	20	
30	17.61	17.60	33.274	24.047	386.6	0.120	5.66	103.7	2.1	0.25	0.0	0.00	0.17	0.05	30	218
45	15.02	15.01	33.163	24.554	338.6	0.175	6.10	106.1	2.1	0.30	0.0	0.00	0.29	0.17	45	217
50 ISL	14.74	14.73	33.212	24.652	329.4	0.191	6.03	104.3	2.2	0.29	0.0	0.00	0.44	0.29	50	
55 A	14.57	14.56	33.268	24.732	322.0	0.208	5.92	102.1	2.4	0.28	0.0	0.01	0.57 A	0.41 A	55	216
65	13.91	13.90	33.306	24.899	306.2	0.239	5.78	98.3	3.1	0.45	1.6	0.22	0.56	0.48	65	215
75	13.19	13.18	33.310	25.049	292.2	0.269	5.56	93.2	4.1	0.64	4.4	0.23	0.47	0.36	75	214
84	12.94	12.93	33.420	25.184	279.5	0.295	5.35	89.3	5.4	0.70	5.8	0.04	0.24	0.21	84	213
94 A	12.80	12.79	33.577	25.333	265.6	0.322	5.19	86.4	5.7	0.59	4.9	0.03	0.20 A	0.24 A	94	212
100 ISL	12.36	12.35	33.569	25.412	258.2	0.338	4.98	82.2	7.6	0.78	7.8	0.02	0.14	0.18	100	
110	11.41	11.40	33.529	25.559	244.2	0.363	4.56	73.7	11.7	1.17	13.7	0.01	0.04	0.07	110	211
124	10.30	10.29	33.634	25.837	217.9	0.395	4.04	63.8	16.6	1.35	16.8	0.01	0.03	0.05	125	210
125 ISL	10.25	10.24	33.660	25.850	216.7	0.397	4.02	63.4	16.9	1.36	17.0	0.01	0.03	0.05	126	
143	9.56	9.54	33.740	26.044	198.5	0.435	3.70	57.5	21.2	1.57	20.2	0.01	0.01	0.03	144	209
150 ISL	9.29	9.27	33.781	26.120	191.3	0.448	3.38	52.2	23.3	1.66	21.6	0.01	0.01	0.03	151	
169	8.70	8.68	33.886	26.296	174.9	0.483	2.65	40.4	28.7	1.87	24.8	0.00	0.00	0.03	170	208
200	8.41	8.39	34.005	26.434	162.2	0.535	3.21	48.7	34.2	2.09	27.4	0.00	0.00	0.03	201	207
229	7.80	7.78	34.014	26.532	153.2	0.581	2.65	39.6	38.8	2.16	28.8	0.00	0.00	0.03	230	206
250 ISL	7.53	7.51	34.014	26.572	149.7	0.613	2.54	37.8	41.4	2.21	29.7	0.00	0.00	0.03	251	
268	7.36	7.33	34.018	26.599	147.3	0.640	2.48	36.7	43.8	2.27	30.5	0.00	0.00	0.03	269	205
300 ISL	7.04	7.01	34.056	26.674	140.6	0.686	1.98	29.1	50.4	2.47	32.9	0.00	0.00	0.03	302	
318	6.90	6.87	34.086	26.717	136.7	0.711	1.65	24.2	54.3	2.59	34.2	0.00	0.00	0.03	320	204
377	6.80	6.76	34.209	26.828	127.1	0.789	0.80	11.7	63.0	2.89	36.6	0.00	0.00	0.03	379	203
400 ISL	6.55	6.51	34.208	26.861	124.1	0.817	0.74	10.8	66.7	2.95	37.6	0.00	0.00	0.03	402	
437	6.09	6.05	34.195	26.910	119.5	0.863	0.65	9.4	72.6	3.02	39.0	0.00	0.00	0.03	440	202
500 ISL	5.73	5.69	34.252	27.001	111.4	0.935	0.41	5.9	80.6	3.16	40.6	0.00	0.00	0.03	503	
520	5.61	5.57	34.270	27.030	108.9	0.957	0.34	4.8	83.2	3.20	41.1	0.00	0.00	0.03	523	201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
31 25.4 N	122 0.0 W	11/08/96	1832 UTC	3808 m	300 09 kn	310 03 05	2	1014.5 mb	19.6 C	18.1 C	25m 01	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.45	18.45	33.256	23.827	406.5	0.000	5.54	103.1	1.5	0.28	0.0	0.00	0.15	0.04	0	
2	18.45	18.45	33.257	23.828	406.5	0.008									2	222
2 A	18.45	18.45	33.256	23.827	406.6	0.008	5.54	103.1	1.5	0.28	0.0	0.00	0.15	0.04	2	221
10 ISL	18.38	18.38	33.255	23.844	405.2	0.041	5.55	103.1	1.5	0.28	0.0	0.00	0.17	0.05	10	
16 A	18.32	18.32	33.254	23.859	404.1	0.065	5.55	103.0	1.5	0.28	0.0	0.00	0.18	0.05	16	220
20 ISL	17.99	17.99	33.241	23.930	397.5	0.081	5.66	104.4	1.5	0.28	0.0	0.00	0.21	0.06	20	
30 ISL	16.88	16.88	33.218	24.177	374.1	0.119	5.99	108.1	1.3	0.30	0.0	0.00	0.28	0.11	30	
33 A	16.47	16.46	33.214	24.269	365.5	0.131	6.10	109.2	1.3	0.30	0.0	0.00	0.31	0.13	33	219
42	15.31	15.30	33.232	24.544	339.5	0.162	6.33	110.8	1.2	0.34	0.2	0.01	0.37	0.19	42	218
50 A	14.16	14.15	33.250	24.804	314.9	0.188	6.10	104.3	2.1	0.43	1.1	0.08	0.40	0.29	50	217
58	13.52	13.51	33.294	24.970	299.3	0.213	5.85	98.7	2.7	0.59	3.3	0.30	0.49	0.37	58	216
66 A	13.19	13.18	33.305	25.045	292.3	0.237	5.66	94.9	3.6	0.65	4.2	0.40	0.48	0.42	66	215
75	12.71	12.70	33.353	25.177	279.9	0.262	5.44	90.3	4.8	0.75	6.0	0.48	0.43	0.33	75	214
86	12.31	12.30	33.399	25.290	269.4	0.293	5.43	89.4	4.9	0.96	9.3	0.60	0.23	0.14	86	213
96 A	11.89	11.88	33.443	25.403	258.8	0.319	4.80	78.3	8.8	1.00	10.6	0.04	0.14	0.13	96	212
100 ISL	11.60	11.59	33.472	25.480	251.6	0.329	4.57	74.1	10.5	1.08	11.9	0.03	0.11	0.12	100	
110	10.87	10.86	33.550	25.672	233.4	0.354	4.11	65.7	14.4	1.29	15.3	0.02	0.06	0.09	110	211
124	10.27	10.26	33.623	25.834	218.2	0.385	3.89	61.4	17.4	1.43	17.7	0.02	0.02	0.05	125	210
125 ISL	10.23	10.22	33.631	25.847	217.0	0.387	3.85	60.7	17.8	1.45	18.0	0.02	0.02	0.05	126	
144	9.54	9.52	33.782	26.080	195.1	0.426	3.13	48.6	24.5	1.79	23.0	0.01	0.00	0.04	145	209
150 ISL	9.36	9.34	33.810	26.132	190.3	0.438	3.15	48.8	25.5	1.80	23.3	0.01	0.00	0.04	151	
169	8.91	8.89	33.871	26.251	179.2	0.473	3.21	49.2	27.7	1.85	24.3	0.01	0.00	0.03	170	208
199	8.43	8.41	33.956	26.393	166.2	0.525	2.91	44.2	32.4	2.01	26.5	0.01	0.00	0.04	200	207
200 ISL	8.41	8.39	33.957	26.397	165.8	0.527	2.91	44.1	32.5	2.01	26.6	0.01	0.00	0.03	201	
228	7.90	7.88	33.981	26.492	157.1	0.572	2.95	44.2	36.2	2.06	27.8	0.01	0.00	0.03	229	206
250 ISL	7.64	7.62	33.995	26.541	152.7	0.606	2.90	43.2	38.8	2.11	28.5	0.01	0.00	0.03	251	
267	7.46	7.43	34.002	26.572	149.9	0.632	2.83	42.0	41.1	2.16	29.1	0.01	0.00	0.03	268	205
300 ISL	6.89	6.86	33.995	26.646	143.1	0.680	2.68	39.3	47.2	2.27	30.9	0.01	0.00	0.03	302	
318	6.58	6.55	33.993	26.686	139.3	0.705	2.54	36.9	51.0	2.34	32.0	0.01	0.00	0.03	320	204
377	6.02	5.99	34.037	26.793	129.6	0.785	1.65	23.7	63.7	2.67	36.4	0.01	0.00	0.03	379	203
400 ISL	5.91	5.88	34.066	26.830	126.3	0.814	1.36	19.5	67.7	2.78	37.6	0.01	0.00	0.03	402	
437	5.77	5.73	34.116	26.888	121.3	0.860	0.98	14.0	73.5	2.93	39.2	0.01	0.00	0.03	440	202
500 ISL	5.38	5.34	34.176	26.983	112.7	0.934	0.62	8.8	83.5	3.08	41.1	0.00	0.00	0.03	503	
519	5.26	5.22	34.195	27.012	110.0	0.955	0.51	7.2	86.5	3.13	41.7	0.00	0.00	0.03	522	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 5.2 N	122 39.4 W	11/08/96	1248 UTC	4018 m	310 06 kn			1013.3 mb	18.5 C	17.6 C	28m	01				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.32	19.32	33.575	23.852	404.1	0.000	5.38	102.0	2.2	0.21	0.0	0.00	0.10	0.03	0	
2	19.32	19.32	33.575	23.852	404.2	0.008	5.38	102.0	2.2	0.21	0.0	0.00	0.10	0.03	2	224
10 ISL	19.28	19.28	33.570	23.859	403.9	0.040	5.37	101.7	2.2	0.21	0.0	0.00	0.10	0.03	10	
15	19.31	19.31	33.570	23.852	404.8	0.061									15	223
15	19.26	19.26	33.573	23.867	403.3	0.061	5.37	101.7	2.2	0.21	0.0	0.00	0.10	0.03	15	222
20 ISL	19.04	19.04	33.511	23.875	402.7	0.081	5.41	102.0	2.2	0.22	0.0	0.00	0.11	0.03	20	
30	18.56	18.55	33.398	23.910	399.7	0.121									30	221
30	18.56	18.55	33.404	23.914	399.3	0.121	5.49	102.5	2.2	0.24	0.0	0.00	0.14	0.03	30	220
45	18.37	18.36	33.528	24.057	386.2	0.180									45	219
46	18.36	18.35	33.527	24.059	386.1	0.184	5.56	103.4	2.1	0.21	0.0	0.00	0.13	0.04	46	218
50 ISL	17.92	17.91	33.508	24.152	377.3	0.198	5.63	103.9	2.2	0.21	0.0	0.00	0.14	0.05	50	
60	16.65	16.64	33.429	24.394	354.5	0.235	5.79	104.2	2.3	0.23	0.0	0.00	0.18	0.08	60	217
75	15.44	15.43	33.302	24.570	338.0	0.287	5.86	102.8	2.3	0.26	0.0	0.00	0.22	0.15	75	216
85	14.44	14.43	33.311	24.793	316.9	0.320	5.80	99.8	2.7	0.33	0.1	0.05	0.37	0.31	85	214
86	14.44	14.43	33.312	24.794	316.9	0.323									86	215
95	13.67	13.66	33.357	24.989	298.5	0.351	5.67	96.0	3.5	0.37	0.4	0.09	0.32	0.26	95	213
100 ISL	13.46	13.45	33.366	25.039	293.9	0.365	5.61	94.6	3.9	0.40	0.9	0.15	0.31	0.25	100	
105	13.27	13.26	33.375	25.084	289.7	0.380	5.54	93.0	4.3	0.46	1.5	0.18	0.31	0.25	105	212
115	12.70	12.68	33.423	25.234	275.6	0.408	5.29	87.8	5.7	0.73	6.4	0.06	0.16	0.14	115	211
125 ISL	12.05	12.03	33.462	25.389	260.9	0.435	5.00	81.9	7.8	0.90	9.2	0.02	0.08	0.09	125	
126	11.98	11.96	33.466	25.405	259.4	0.438	4.97	81.3	8.0	0.91	9.4	0.02	0.08	0.09	126	210
140	11.11	11.09	33.540	25.623	238.9	0.473	4.59	73.7	11.3	1.03	11.7	0.02	0.09	0.11	140	209
150 ISL	10.41	10.39	33.591	25.785	223.4	0.496	4.31	68.2	14.8	1.22	14.8	0.01	0.07	0.09	150	
165	9.48	9.46	33.675	26.007	202.5	0.528	3.95	61.3	20.0	1.51	19.4	0.00	0.02	0.04	165	208
194	8.74	8.72	33.843	26.256	179.1	0.583	3.63	55.4	26.1	1.74	23.0	0.00	0.00	0.02	194	207
200 ISL	8.62	8.60	33.868	26.295	175.6	0.594	3.63	55.3	27.0	1.76	23.3	0.00	0.00	0.02	200	
229	8.09	8.07	33.948	26.438	162.3	0.643	3.63	54.6	31.1	1.82	24.5	0.00	0.00	0.02	229	206
250 ISL	7.75	7.73	33.966	26.502	156.4	0.676	3.52	52.6	34.2	1.90	25.7	0.00	0.00	0.02	250	
270	7.45	7.42	33.969	26.548	152.3	0.707	3.36	49.8	37.4	1.99	27.0	0.00	0.00	0.02	270	205
300 ISL	7.04	7.01	33.977	26.612	146.4	0.752	3.05	44.8	43.1	2.14	29.1	0.00	0.00	0.02	300	
320	6.80	6.77	33.983	26.649	143.0	0.781	2.79	40.8	47.1	2.25	30.6	0.00	0.00	0.02	320	204
380	6.24	6.21	34.028	26.759	133.1	0.864	1.84	26.5	59.4	2.61	35.3	0.00	0.00	0.02	380	203
400 ISL	6.04	6.01	34.047	26.799	129.4	0.890	1.57	22.5	64.2	2.72	36.7	0.00	0.00	0.02	400	
437	5.69	5.65	34.086	26.874	122.5	0.936	1.14	16.2	72.7	2.90	38.8	0.00	0.00	0.02	437	202
500 ISL	5.35	5.31	34.162	26.975	113.4	1.011	0.68	9.6	82.9	3.09	40.9	0.00	0.00	0.02	500	
517	5.26	5.22	34.183	27.002	110.9	1.030	0.55	7.8	85.7	3.14	41.5	0.00	0.00	0.02	517	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
30 45.3 N	123 20.0 W	11/08/96	0718 UTC	4024 m	340 03 kn			1013.6 mb	18.9 C	16.9 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.34	19.34	33.447	23.749	414.0	0.000	5.38	101.9	2.1	0.22	0.0	0.00	0.10	0.02	0	
2	19.34	19.34	33.447	23.749	414.0	0.008	5.38	101.9	2.1	0.22	0.0	0.00	0.10	0.02	2	220
10 ISL	19.33	19.33	33.447	23.752	414.0	0.041	5.39	102.1	2.0	0.22	0.0	0.00	0.09	0.02	10	
15	19.33	19.33	33.448	23.753	414.1	0.062	5.39	102.1	2.0	0.22	0.0	0.00	0.09	0.02	15	219
20 ISL	19.34	19.34	33.463	23.762	413.4	0.083	5.39	102.1	2.0	0.22	0.0	0.00	0.10	0.02	20	
30	19.38	19.37	33.496	23.778	412.3	0.124	5.39	102.2	2.0	0.22	0.0	0.00	0.11	0.03	30	218
45	19.41	19.40	33.670	23.904	400.9	0.185	5.41	102.8	2.0	0.21	0.0	0.00	0.11	0.03	45	217
50 ISL	19.06	19.05	33.671	23.994	392.5	0.205	5.47	103.2	2.0	0.20	0.0	0.00	0.12	0.04	50	
60	18.19	18.18	33.651	24.196	373.5	0.243	5.62	104.3	2.0	0.18	0.0	0.00	0.16	0.06	60	216
75	17.25	17.24	33.668	24.437	351.0	0.298	5.73	104.4	2.1	0.18	0.0	0.00	0.22	0.09	75	215
86	16.48	16.47	33.554	24.530	342.4	0.336	5.77	103.5	2.0	0.22	0.0	0.00	0.25	0.14	86	214
94	16.28	16.27	33.750	24.727	323.9	0.362	5.65	101.1	2.2	0.19	0.0	0.00	0.24	0.19	94	213
100 ISL	16.03	16.01	33.767	24.797	317.3	0.382	5.64	100.4	2.3	0.20	0.0	0.00	0.22	0.20	100	
104	15.77	15.75	33.737	24.833	314.0	0.394	5.63	99.7	2.4	0.22	0.0	0.00	0.22	0.21	104	212
114	14.64	14.62	33.599	24.974	300.7	0.425	5.62	97.2	2.9	0.27	0.0	0.08	0.26	0.25	114	211
124	13.38	13.36	33.499	25.158	283.1	0.454	5.46	92.0	4.0	0.43	1.6	0.16	0.20	0.18	124	210
125 ISL	13.38	13.36	33.516	25.172	281.9	0.457	5.44	91.6	4.1	0.44	1.7	0.15	0.19	0.18	125	
139	13.31	13.29	33.709	25.335	266.7	0.495	5.24	88.3	4.8	0.49	3.7	0.02	0.12	0.14	140	209
150 ISL	13.01	12.99	33.779	25.450	256.1	0.524	5.10	85.4	5.8	0.57	5.4	0.02	0.08	0.10	150	
165	12.31	12.29	33.797	25.600	242.0	0.561	4.90	80.9	8.0	0.73	8.1	0.01	0.04	0.05	165	208
194	10.10	10.08	33.703	25.927	210.9	0.627	4.39	69.0	15.6	1.23	15.6	0.00	0.01	0.03	194	207
200 ISL	9.83	9.81	33.715	25.981	205.8	0.640	4.28	66.9	17.1	1.31	16.8	0.00	0.00	0.02	200	
231	8.91	8.89	33.826	26.217	183.6	0.700	3.77	57.8	24.3	1.65	21.8	0.00	0.00	0.02	231	206
250 ISL	8.50	8.47	33.886	26.328	173.3	0.734	3.56	54.1	28.0	1.78	23.7	0.00	0.00	0.02	250	
268	8.19	8.16	33.935	26.414	165.4	0.764	3.38	51.0	31.4	1.88	25.2	0.00	0.00	0.02	268	205
300 ISL	7.67	7.64	33.988	26.532	154.4	0.816	2.95	44.0	38.2	2.08	28.0	0.00	0.00	0.02	300	
315	7.46	7.43	34.005	26.575	150.4	0.838	2.73	40.5	41.4	2.18	29.3	0.00	0.00	0.02	315	204
376	6.73	6.70	34.053	26.714	137.7	0.926	1.89	27.6	54.3	2.55	33.9	0.00	0.00	0.02	376	203
400 ISL	6.46	6.42	34.073	26.766	132.9	0.959	1.56	22.6	59.7	2.69	35.6	0.00	0.00	0.02	400	
441	6.05	6.01	34.111	26.849	125.3	1.012	1.07	15.4	68.6	2.89	38.2	0.00	0.00	0.02	441	202
500 ISL	5.66	5.62	34.172	26.946	116.5	1.083	0.67	9.5	78.6	3.08	40.3	0.00	0.00	0.02	500	
512	5.58	5.54	34.185	26.966	114.7	1.097	0.59	8.4	80.6	3.12	40.7	0.00	0.00	0.02	512	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
30 25.6 N	124 0.1 W	11/08/96	0134 UTC	4207 m	340 07 kn	350 03 05	2	1012.6 mb	19.8 c	17.2 c	29m 01	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.78	19.78	33.676	23.811	408.1	0.000	5.35	102.3	2.4	0.21	0.0	0.00	0.08	0.02	0	
2	19.78	19.78	33.675	23.810	408.2	0.008									2	221
2	19.78	19.78	33.676	23.811	408.2	0.008	5.35	102.3	2.4	0.21	0.0	0.00	0.08	0.02	2	220
10 ISL	19.74	19.74	33.676	23.822	407.4	0.041	5.35	102.3	2.3	0.20	0.0	0.00	0.08	0.02	10	
16	19.70	19.70	33.675	23.831	406.7	0.065	5.35	102.2	2.3	0.20	0.0	0.00	0.08	0.02	16	219
20 ISL	19.69	19.69	33.674	23.833	406.7	0.081	5.35	102.2	2.3	0.20	0.0	0.00	0.08	0.02	20	
30	19.68	19.67	33.673	23.836	406.8	0.122	5.36	102.3	2.3	0.20	0.0	0.00	0.09	0.02	30	218
45	19.65	19.64	33.672	23.843	406.7	0.185	5.36	102.3	2.3	0.20	0.0	0.00	0.10	0.03	45	217
50 ISL	19.40	19.39	33.663	23.901	401.3	0.203	5.42	102.9	2.3	0.20	0.0	0.00	0.11	0.04	50	
60	18.69	18.68	33.618	24.047	387.7	0.243	5.55	104.0	2.2	0.20	0.0	0.00	0.14	0.05	60	216
75 ISL	17.42	17.41	33.447	24.227	371.0	0.300	5.68	103.7	2.3	0.22	0.1	0.00	0.20	0.07	75	
76	17.35	17.34	33.441	24.239	369.8	0.303	5.69	103.8	2.3	0.22	0.1	0.00	0.20	0.07	76	215
85	17.05	17.04	33.544	24.390	355.8	0.336	5.74	104.1	2.4	0.21	0.1	0.00	0.25	0.11	85	214
95	16.87	16.85	33.635	24.502	345.4	0.371	5.72	103.5	2.5	0.21	0.1	0.00	0.25	0.14	95	213
100 ISL	16.57	16.55	33.664	24.594	336.7	0.388	5.70	102.5	2.5	0.22	0.1	0.00	0.24	0.18	100	
105	16.17	16.15	33.666	24.688	327.9	0.405	5.68	101.4	2.4	0.22	0.1	0.00	0.23	0.23	105	212
115	15.12	15.10	33.551	24.833	314.2	0.437	5.65	98.7	2.9	0.28	0.2	0.04	0.25	0.28	115	211
125	14.61	14.59	33.537	24.933	304.9	0.468	5.59	96.6	3.3	0.31	0.3	0.10	0.23	0.25	125	210
139	13.58	13.56	33.552	25.159	283.5	0.509	5.35	90.5	4.4	0.45	2.6	0.08	0.16	0.18	140	209
150 ISL	12.87	12.85	33.619	25.353	265.2	0.539	5.11	85.2	6.1	0.59	5.2	0.05	0.11	0.13	151	
163	12.06	12.04	33.698	25.571	244.6	0.572	4.80	78.7	8.7	0.78	8.7	0.02	0.06	0.09	164	208
192	10.16	10.14	33.689	25.905	212.9	0.639	4.15	65.3	16.7	1.31	16.7	0.01	0.02	0.03	193	207
200 ISL	9.79	9.77	33.717	25.990	205.0	0.655	4.01	62.6	18.9	1.42	18.4	0.01			201	
228	8.81	8.79	33.841	26.245	180.9	0.709	3.63	55.5	25.9	1.71	22.9	0.00			229	206
250 ISL	8.32	8.29	33.914	26.377	168.5	0.748	3.40	51.4	30.4	1.85	25.1	0.00			251	
268	8.03	8.00	33.960	26.457	161.2	0.778	3.22	48.4	33.8	1.94	26.4	0.00			269	205
300 ISL	7.59	7.56	34.004	26.556	152.1	0.828	2.81	41.8	39.8	2.13	28.8	0.00			302	
317	7.39	7.36	34.019	26.596	148.4	0.853	2.57	38.1	43.2	2.23	30.1	0.00			319	204
380	6.65	6.62	34.095	26.758	133.6	0.942	1.47	21.4	58.7	2.68	35.5	0.00			382	203
400 ISL	6.49	6.45	34.111	26.792	130.5	0.968	1.26	18.3	62.1	2.77	36.5	0.00			402	
442	6.21	6.17	34.142	26.853	125.1	1.022	0.96	13.8	68.1	2.90	38.1	0.00			445	202
500 ISL	5.85	5.81	34.193	26.939	117.4	1.092	0.67	9.6	76.7	3.05	39.9	0.00			503	
517	5.75	5.71	34.208	26.964	115.2	1.112	0.59	8.4	79.2	3.10	40.4	0.00			520	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 57.3 N	117 18.7 W	07/08/96	1841 UTC	118 m	300 09 kn	300 02 05	2	1014.6 mb	21.0 c	19.9 c	10m 04	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	21.57	21.57	33.675	23.332	453.8	0.000	5.64	111.5	2.2	0.23	0.0	0.00	2.01	0.58	0	
1	21.56	21.56	33.676	23.335	453.5	0.005									1	213
2 B	21.57	21.57	33.675	23.332	453.9	0.009	5.64	111.5	2.2	0.23	0.0	0.00	2.01	0.58	2	212
6 B	21.42	21.42	33.673	23.372	450.2	0.027	5.62	110.8	2.3	0.22	0.0	0.00	2.11	0.62	6	211
10 ISL	18.15	18.15	33.569	24.141	377.0	0.044	6.27	116.2	4.5	0.26	0.0	0.01	3.36	0.90	10	
13 B	15.31	15.31	33.567	24.801	314.1	0.054	6.64	116.4	6.5	0.33	0.0	0.01	4.06	1.09	13	210
20 B	13.05	13.05	33.562	25.270	269.6	0.074	5.30	88.7	9.2	0.68	3.6	0.12	1.57	0.87	20	209
27 B	12.50	12.50	33.580	25.392	258.2	0.093	4.95	81.9	10.2	0.87	7.1	0.19	1.12	0.82	27	208
30 ISL	12.33	12.33	33.588	25.431	254.5	0.101	4.72	77.8	11.0	0.96	8.2	0.24	0.95	0.80	30	
38 B	11.97	11.97	33.612	25.518	246.4	0.121	4.14	67.8	13.3	1.17	10.7	0.34	0.66	0.73	38	207
48	11.66	11.65	33.647	25.604	238.6	0.145	3.88	63.1	14.6	1.27	13.5	0.36	0.75	0.65	48	206
50 ISL	11.56	11.55	33.658	25.631	236.0	0.150	3.77	61.2	15.3	1.32	14.2	0.38	0.71	0.63	50	
59	11.18	11.17	33.703	25.735	226.3	0.171	3.31	53.3	18.3	1.55	16.8	0.47	0.48	0.56	59	205
70	11.15	11.14	33.707	25.744	225.7	0.195	3.25	52.3	18.6	1.57	17.1	0.48	0.45	0.57	70	204
75 ISL	11.06	11.05	33.720	25.770	223.3	0.207	3.16	50.8	19.3	1.71	17.8	0.44	0.39	0.51	75	
80	10.97	10.96	33.733	25.797	220.9	0.218	3.08	49.4	19.9	1.83	18.6	0.40	0.33	0.45	80	203
90	10.94	10.93	33.740	25.807	220.1	0.240	3.07	49.2	20.0	1.74	19.1	0.39	0.31	0.39	90	202
100 ISL	10.93	10.92	33.741	25.810	220.1	0.262	3.00	48.1	20.1	1.70	19.1	0.37	0.31	0.40	101	
102	10.93	10.92	33.741	25.810	220.1	0.266	2.99	47.9	20.1	1.69	19.1	0.37	0.31 A	0.40 A	103	201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 54.2 N	117 24.1 W	07/08/96	2231 UTC	566 m	270 10 kn	260 02 03	1	1013.0 mb	20.9 C	19.0 C	18m 03	4/8	AC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	21.52	21.52	33.677	23.347	452.4	0.000	5.42	107.0	2.1	0.28	0.0	0.00	0.20	0.06		0
2	21.52	21.52	33.677	23.347	452.4	0.009	5.42	107.0	2.1	0.28	0.0	0.00	0.20	0.06		2 220
10	20.85	20.85	33.666	23.521	436.1	0.045	5.49	107.1	2.0	0.28	0.0	0.00	0.20	0.08		10 219
20	14.70	14.70	33.534	24.908	304.1	0.082	6.46	111.9	4.2	0.38	0.0	0.01	1.56	0.78		20 218
30	12.69	12.69	33.562	25.341	263.1	0.110	5.17	85.9	8.8	0.80	6.2	0.15	1.32	0.92		30 217
40	12.16	12.15	33.614	25.484	249.8	0.136	4.54	74.6	11.5	1.00	8.6	0.26	1.14	0.91		40 216
50	11.61	11.60	33.628	25.598	239.1	0.160	4.00	65.0	13.8	1.24	13.5	0.33	0.71	0.69		50 215
60	11.36	11.35	33.642	25.655	233.9	0.184	3.82	61.7	14.8	1.33	14.9	0.36	0.48	0.47		60 214
69	11.02	11.01	33.694	25.757	224.4	0.204	3.52	56.5	17.1	1.48	17.1	0.30	0.39	0.35		69 213
75 ISL	10.84	10.83	33.719	25.809	219.6	0.218	3.37	53.9	18.2	1.55	18.2	0.28	0.35	0.31		75
85	10.61	10.60	33.757	25.879	213.2	0.239	3.15	50.1	19.9	1.65	19.8	0.24	0.30	0.27		85 212
99	10.38	10.37	33.818	25.967	205.1	0.269	2.88	45.6	22.4	1.79	21.8	0.11	0.21	0.21		99 211
100 ISL	10.36	10.35	33.823	25.974	204.4	0.271	2.86	45.3	22.6	1.80	21.9	0.10	0.20	0.21		100
118	10.11	10.10	33.915	26.089	193.9	0.306	2.51	39.5	25.7	1.97	24.0	0.03	0.08	0.15		118 210
125 ISL	10.04	10.03	33.946	26.125	190.6	0.320	2.40	37.8	26.7	2.02	24.6	0.03	0.06	0.13		126
139	9.96	9.94	34.005	26.185	185.2	0.346	2.20	34.6	28.6	2.11	25.5	0.02	0.03	0.09		140 209
150 ISL	10.01	9.99	34.057	26.217	182.4	0.366	1.98	31.1	30.0	2.19	26.2	0.02	0.03	0.09		151
169	10.15	10.13	34.142	26.260	178.8	0.401	1.63	25.7	32.1	2.31	27.1	0.01	0.02	0.08		170 208
199	10.17	10.15	34.235	26.330	172.9	0.454	1.33	21.0	33.8	2.41	28.0	0.01	0.01	0.06		200 207
200 ISL	10.16	10.14	34.236	26.333	172.7	0.455	1.33	21.0	33.8	2.41	28.0	0.01				201
230	9.91	9.88	34.253	26.389	167.9	0.506	1.36	21.4	34.7	2.43	28.4	0.01				231 206
250 ISL	9.88	9.85	34.302	26.432	164.2	0.540	1.17	18.4	36.2	2.51	28.9	0.01				251
267	9.85	9.82	34.343	26.470	161.0	0.567	0.99	15.5	37.6	2.59	29.4	0.01				269 205
300 ISL	9.56	9.53	34.355	26.528	156.1	0.620	0.95	14.8	40.0	2.65	30.0	0.01				302
320	9.32	9.28	34.346	26.561	153.3	0.650	0.93	14.4	41.5	2.67	30.3	0.01				322 204
378	8.59	8.55	34.314	26.652	145.3	0.737	0.88	13.4	46.7	2.75	31.8	0.01				380 203
400 ISL	8.36	8.32	34.318	26.691	141.8	0.769	0.79	12.0	49.3	2.81	32.5	0.01				403
437	7.98	7.94	34.325	26.754	136.2	0.820	0.63	9.5	54.0	2.91	33.8	0.01				440 202
500 ISL	7.26	7.21	34.293	26.833	129.1	0.904	0.56	8.3	61.4	3.00	35.9	0.02				503
508	7.17	7.12	34.290	26.843	128.2	0.914	0.55	8.1	62.3	3.01	36.2	0.02				511 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 50.6 N	117 32.1 W	08/08/96	0157 UTC	863 m	290 06 kn	290 02 04	1	1013.3 mb	20.5 C	18.8 C		4/8	AC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	21.00	21.00	33.684	23.494	438.4	0.000	5.39	105.5	1.8	0.27	0.2	0.00	0.13	0.04		0
1	21.00	21.00	33.679	23.490	438.7	0.004										1 221
2	21.00	21.00	33.684	23.494	438.4	0.009	5.39	105.5	1.8	0.27	0.2	0.00	0.13	0.04		2 220
10 ISL	20.18	20.18	33.650	23.687	420.3	0.043	5.61	108.1	1.9	0.28	0.2	0.00	0.16	0.05		10
15	19.12	19.12	33.599	23.922	398.0	0.064	5.78	109.2	1.9	0.28	0.2	0.00	0.19	0.06		15 219
20 ISL	17.32	17.32	33.500	24.289	363.2	0.083	5.82	106.1	2.6	0.37	1.0	0.07	0.22	0.07		20
30	13.87	13.87	33.422	24.996	296.0	0.116	5.90	100.4	4.6	0.58	3.3	0.21	0.35	0.16		30 218
45	12.80	12.79	33.530	25.295	267.9	0.158	5.21	86.7	7.6	0.77	6.4	0.17	0.83	0.54		45 217
50 ISL	12.24	12.23	33.560	25.427	255.4	0.171	4.69	77.2	10.2	0.96	9.5	0.27	0.80	0.64		50
55	11.73	11.72	33.589	25.546	244.2	0.183	4.20	68.4	12.8	1.15	12.5	0.38	0.71	0.70		55 216
65	11.33	11.32	33.632	25.653	234.3	0.207	3.80	61.4	15.3	1.32	15.2	0.46	0.53	0.57		65 215
75 ISL	10.99	10.98	33.716	25.780	222.4	0.230	3.27	52.4	18.9	1.56	18.6	0.09	0.26	0.30		75
76	10.96	10.95	33.726	25.793	221.2	0.232	3.22	51.6	19.3	1.58	18.9	0.05	0.24	0.28		76 214
84	10.81	10.80	33.795	25.873	213.7	0.250	2.88	46.0	21.6	1.72	20.7	0.03	0.17	0.24		84 213
94	10.66	10.65	33.850	25.943	207.3	0.271	2.61	41.6	23.7	1.85	22.2	0.02	0.12	0.19		94 212
100 ISL	10.57	10.56	33.894	25.993	202.7	0.283	2.41	38.3	25.3	1.93	23.3	0.02	0.08	0.15		100
110	10.40	10.39	33.956	26.071	195.5	0.303	2.17	34.4	27.5	2.04	24.7	0.02	0.03	0.10		111 211
125 ISL	10.07	10.06	33.964	26.134	189.8	0.332	2.33	36.7	27.8	2.04	25.0	0.02	0.03	0.09		126
126	10.05	10.04	33.963	26.137	189.5	0.334	2.35	37.0	27.8	2.04	25.0	0.02	0.03	0.09		127 210
145	9.99	9.97	34.006	26.181	185.8	0.369	2.22	34.9	28.9	2.08	25.6	0.01	0.03	0.07		146 209
150 ISL	10.03	10.01	34.046	26.205	183.6	0.379	2.09	32.9	29.6	2.13	26.0	0.01	0.03	0.07		151
170	10.19	10.17	34.213	26.309	174.2	0.415	1.56	24.7	32.5	2.33	27.5	0.01	0.01	0.06		171 208
199	10.10	10.08	34.280	26.377	168.4	0.464	1.30	20.5	34.7	2.43	28.4	0.01	0.01	0.06		200 207
200 ISL	10.10	10.08	34.282	26.379	168.3	0.466	1.30	20.5	34.8	2.43	28.4	0.01				201
228	9.84	9.81	34.299	26.436	163.3	0.512	1.23	19.3	36.7	2.47	29.0	0.01				229 206
250 ISL	9.13	9.10	34.222	26.493	158.1	0.548	1.49	23.0	38.8	2.44	29.7	0.01				251
268	8.59	8.56	34.171	26.538	153.9	0.576	1.66	25.3	40.7	2.43	30.3	0.01				270 205
300 ISL	8.74	8.71	34.286	26.605	148.2	0.624	1.11	17.0	44.1	2.61	31.1	0.02				302
319	8.96	8.93	34.372	26.639	145.6	0.652	0.71	10.9	46.0	2.74	31.5	0.02				321 204
378	8.33	8.29	34.339	26.711	139.4	0.736	0.68	10.3	51.1	2.83	33.1	0.01				380 203
400 ISL	8.09	8.05	34.327	26.738	137.1	0.766	0.66	10.0	53.2	2.86	33.7	0.01				403
438	7.66	7.62	34.309	26.788	132.7	0.818	0.60	9.0	57.3	2.92	34.9	0.01				441 202
500 ISL	6.98	6.93	34.291	26.870	125.3	0.898	0.48	7.1	65.3	3.04	37.2	0.01				503
506	6.91	6.86	34.290	26.879	124.5	0.905	0.47	6.9	66.1	3.05	37.4	0.01				509 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 40.8 N	117 52.6 W	08/08/96	0600 UTC	587 m	340 06 kn			1013.6 mb	19.9 C	18.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.48	20.48	33.644	23.602	428.0	0.000	5.39	104.4	1.6	0.27	0.0	0.00	0.14	0.04	0	
2	20.48	20.48	33.644	23.603	428.0	0.009	5.39	104.4	1.6	0.27	0.0	0.00	0.14	0.04	2	220
10 ISL	20.34	20.34	33.635	23.633	425.4	0.043	5.43	104.9	1.5	0.26	0.0	0.00	0.13	0.04	10	
11	20.32	20.32	33.634	23.638	425.0	0.047	5.43	104.9	1.5	0.26	0.0	0.00	0.13	0.04	11	219
20	16.93	16.93	33.541	24.413	351.4	0.082	5.96	107.9	2.1	0.31	0.0	0.00	0.17	0.05	20	218
30	13.58	13.58	33.504	25.119	284.3	0.114	5.71	96.6	3.6	0.52	1.9	0.09	1.02	0.43	30	217
40	12.25	12.24	33.564	25.428	255.1	0.141	4.65	76.5	9.6	0.94	9.1	0.28	1.32	0.81	40	216
50	11.50	11.49	33.621	25.613	237.7	0.165	3.99	64.7	14.1	1.26	13.6	0.46	0.91	0.78	50	215
59	10.79	10.78	33.717	25.815	218.6	0.186	3.34	53.3	18.9	1.55	18.5	0.25	0.31	0.32	59	214
70	10.36	10.35	33.806	25.960	205.1	0.209	2.94	46.5	22.5	1.77	21.5	0.08	0.16	0.21	70	213
75 ISL	10.37	10.36	33.860	26.000	201.3	0.219	2.69	42.6	23.9	1.86	22.6	0.06	0.11	0.18	75	
85	10.40	10.39	33.942	26.059	196.0	0.239	2.23	35.4	26.3	2.02	24.2	0.02	0.05	0.13	85	212
100	10.19	10.18	34.014	26.152	187.5	0.268	2.00	31.6	28.8	2.14	25.6	0.02	0.03	0.09	100	211
120	9.84	9.83	34.045	26.236	179.9	0.305	2.11	33.1	29.9	2.17	26.3	0.01	0.02	0.07	121	210
125 ISL	9.83	9.82	34.068	26.256	178.2	0.314	2.05	32.1	30.5	2.19	26.6	0.01	0.02	0.07	126	
139	9.81	9.79	34.126	26.304	173.8	0.338	1.82	28.5	32.2	2.26	27.3	0.01	0.01	0.06	140	209
150 ISL	9.81	9.79	34.161	26.332	171.5	0.357	1.70	26.6	33.2	2.30	27.7	0.01	0.01	0.06	151	
170	9.80	9.78	34.213	26.375	167.9	0.391	1.51	23.7	34.5	2.37	28.2	0.00	0.01	0.07	171	208
198	9.76	9.74	34.276	26.431	163.1	0.437	1.28	20.0	36.1	2.45	28.8	0.00	0.01	0.06	199	207
200 ISL	9.75	9.73	34.279	26.435	162.8	0.441	1.27	19.9	36.2	2.45	28.8	0.00			201	
228	9.62	9.59	34.313	26.484	158.7	0.486	1.12	17.5	38.3	2.52	29.5	0.00			229	206
250 ISL	9.51	9.48	34.332	26.517	156.0	0.520	1.02	15.9	39.8	2.57	29.8	0.00			251	
269	9.40	9.37	34.341	26.543	153.9	0.550	0.96	14.9	40.9	2.61	30.1	0.00			271	205
300 ISL	9.18	9.15	34.333	26.573	151.6	0.597	0.96	14.8	42.2	2.63	30.5	0.00			302	
318	9.01	8.98	34.326	26.595	149.8	0.624	0.96	14.8	43.3	2.64	30.8	0.00			320	204
380	8.10	8.06	34.338	26.745	136.1	0.713	0.59	8.9	53.6	2.88	33.6	0.00			382	203
400 ISL	7.82	7.78	34.331	26.781	132.8	0.740	0.54	8.1	56.5	2.92	34.4	0.00			403	
440	7.35	7.31	34.317	26.838	127.7	0.792	0.49	7.3	61.6	2.99	35.9	0.00			443	202
500 ISL	6.97	6.92	34.324	26.897	122.7	0.867	0.37	5.4	67.0	3.07	37.3	0.00			503	
511	6.90	6.85	34.326	26.908	121.7	0.880	0.35	5.1	68.0	3.09	37.5	0.00			515	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 30.5 N	118 13.3 W	08/08/96	1023 UTC	1612 m	280 08 kn			1014.5 mb	18.7 C	17.8 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.88	20.88	33.712	23.547	433.2	0.000	5.28	103.1	2.0	0.23	0.0	0.00	0.16	0.04	0	
2	20.88	20.88	33.712	23.547	433.3	0.009	5.28	103.1	2.0	0.23	0.0	0.00	0.16	0.04	2	220
9	20.84	20.84	33.711	23.558	432.6	0.039	5.29	103.2	2.0	0.23	0.0	0.00	0.16	0.04	9	219
10 ISL	20.52	20.52	33.692	23.629	425.8	0.043	5.36	104.0	2.0	0.23	0.0	0.00	0.16	0.05	10	
20	16.59	16.59	33.522	24.478	345.2	0.082	6.03	108.4	1.6	0.32	0.1	0.02	0.21	0.10	20	218
30	14.46	14.46	33.398	24.854	309.5	0.115	5.92	101.9	2.2	0.46	1.4	0.18	0.51	0.45	30	217
40	12.75	12.74	33.416	25.217	275.2	0.144	5.15	85.6	7.2	0.82	7.5	0.22	0.54	0.47	40	216
50	12.56	12.55	33.457	25.286	268.9	0.171	5.01	83.0	8.1	0.87	8.1	0.24	0.52	0.50	50	215
60	12.09	12.08	33.528	25.431	255.3	0.197	4.52	74.1	10.7	1.02	10.7	0.26	0.42	0.40	60	214
70	11.53	11.52	33.601	25.592	240.2	0.222	4.00	66.9	13.4	1.22	13.9	0.31	0.35	0.34	70	213
75 ISL	11.15	11.14	33.646	25.696	230.3	0.234	3.71	59.7	15.7	1.36	16.1	0.22	0.26	0.27	75	
85	10.44	10.43	33.734	25.890	212.0	0.256	3.23	51.2	20.3	1.61	20.2	0.02	0.09	0.13	85	212
100	10.03	10.02	33.805	26.016	200.4	0.287	3.02	47.5	23.0	1.76	22.1	0.01	0.04	0.08	100	211
120	9.77	9.76	33.880	26.119	191.0	0.326	2.82	44.1	25.4	1.88	23.7	0.01	0.02	0.07	121	210
125 ISL	9.73	9.72	33.891	26.134	189.7	0.335	2.80	43.7	25.8	1.89	23.9	0.01	0.02	0.06	126	
139	9.61	9.59	33.920	26.177	185.9	0.362	2.74	42.7	26.9	1.93	24.4	0.01	0.01	0.05	140	209
150 ISL	9.35	9.33	33.947	26.240	180.0	0.382	2.68	41.5	28.7	1.99	25.3	0.01	0.00	0.05	151	
170	9.03	9.01	34.035	26.361	168.9	0.417	2.38	36.6	32.5	2.14	27.0	0.00	0.00	0.04	171	208
200	9.76	9.74	34.316	26.463	160.2	0.466	1.15	18.0	37.6	2.51	28.9	0.01	0.01	0.06	201	207
230	8.83	8.81	34.195	26.519	155.0	0.513	1.68	25.8	39.5	2.39	29.5	0.00			231	206
250 ISL	8.93	8.90	34.275	26.566	151.0	0.544	1.33	20.4	41.8	2.52	30.2	0.00			251	
269	9.02	8.99	34.349	26.610	147.3	0.572	0.87	13.4	44.1	2.67	30.8	0.01			271	205
300 ISL	8.81	8.78	34.354	26.648	144.3	0.618	0.82	12.6	46.4	2.71	31.5	0.00			302	
319	8.59	8.56	34.334	26.667	142.7	0.645	0.79	12.1	47.7	2.73	31.9	0.00			321	204
379	7.88	7.84	34.310	26.756	134.9	0.728	0.66	9.9	54.6	2.85	34.0	0.00			381	203
400 ISL	7.67	7.63	34.316	26.791	131.7	0.756	0.57	8.5	57.3	2.90	34.8	0.00			403	
438	7.31	7.27	34.330	26.854	126.1	0.805	0.42	6.2	62.4	3.00	36.1	0.00			441	202
500 ISL	6.67	6.62	34.326	26.939	118.4	0.881	0.33	4.8	70.9	3.11	38.2	0.00			503	
515	6.51	6.46	34.326	26.960	116.4	0.898	0.31	4.5	72.9	3.14	38.7	0.00			519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 21.1 N	118 33.5 W	08/08/96	1455	UTC	1334 m	290 05 kn	300 03 05	2	1015.4 mb	17.9 c	17.1 c	23m 02		8/8	SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.66	19.66	33.648	23.820	407.2	0.000	5.47	104.4	1.7	0.26	0.0	0.00	0.16	0.06	0	
1	19.66	19.66	33.648	23.820	407.2	0.004	5.47	104.4	1.7	0.26	0.0	0.00	0.16	0.06	1	220
2	19.66	19.66	33.647	23.820	407.3	0.008									2	221
10	19.60	19.60	33.642	23.832	406.5	0.041	5.47	104.3	1.7	0.26	0.0	0.00	0.18	0.05	10	219
20	16.77	16.77	33.487	24.409	351.7	0.079	5.96	107.5	1.3	0.33	0.0	0.00	0.22	0.12	20	218
30 ISL	15.39	15.39	33.479	24.716	322.7	0.112	6.02	105.7	1.5	0.38	0.4	0.05	0.40	0.31	30	
31	15.30	15.30	33.479	24.736	320.9	0.116	6.03	105.7	1.5	0.39	0.5	0.06	0.42	0.33	31	217
41	14.12	14.11	33.403	24.930	302.6	0.147	5.81	99.3	2.8	0.50	1.9	0.25	0.52	0.45	41	216
50	13.17	13.16	33.419	25.136	283.2	0.173	5.31	89.0	5.4	0.74	5.9	0.30	0.40	0.36	50	215
60	11.98	11.97	33.518	25.444	254.1	0.200	4.63	75.8	9.8	0.97	10.1	0.15	0.35	0.40	60	214
71	10.96	10.95	33.575	25.675	232.2	0.227	4.30	68.9	13.2	1.17	13.8	0.03	0.14	0.18	71	213
75 ISL	10.66	10.65	33.607	25.753	224.9	0.236	4.17	66.4	14.7	1.25	15.1	0.02	0.10	0.14	75	
86	10.04	10.03	33.691	25.925	208.7	0.260	3.86	60.6	18.4	1.44	18.2	0.01	0.05	0.10	86	212
100 ISL	9.77	9.76	33.734	26.004	201.4	0.288	3.65	57.0	20.7	1.56	19.9	0.01	0.03	0.07	100	
101	9.76	9.75	33.736	26.007	201.1	0.290	3.64	56.8	20.8	1.57	20.0	0.01	0.03	0.07	101	211
120	9.27	9.26	33.826	26.158	187.1	0.327	3.13	48.4	25.9	1.82	23.5	0.01	0.01	0.04	120	210
125 ISL	9.16	9.15	33.843	26.189	184.3	0.337	3.12	48.1	26.8	1.85	24.0	0.01	0.01	0.04	125	
140	8.87	8.86	33.888	26.271	176.8	0.364	3.07	47.0	28.9	1.90	25.0	0.01	0.00	0.04	140	209
150 ISL	8.69	8.67	33.914	26.319	172.3	0.381	3.02	46.1	30.3	1.94	25.6	0.01	0.00	0.04	150	
170	8.47	8.45	33.978	26.403	164.6	0.415	2.79	42.4	33.3	2.04	26.8	0.00	0.00	0.04	170	208
200	8.61	8.59	34.142	26.511	155.1	0.463	1.96	29.9	38.7	2.30	29.0	0.01	0.00	0.03	200	207
230	8.94	8.92	34.314	26.595	147.9	0.508	1.04	16.0	43.0	2.60	30.6	0.01			230	206
250 ISL	8.79	8.76	34.333	26.634	144.6	0.537	0.93	14.3	45.4	2.68	31.3	0.01			250	
270	8.57	8.54	34.328	26.664	142.0	0.566	0.82	12.5	47.4	2.73	31.8	0.01			270	205
300 ISL	8.55	8.52	34.384	26.712	138.1	0.608	0.52	7.9	49.8	2.84	32.3	0.00			300	
319	8.53	8.50	34.415	26.739	135.8	0.634	0.35	5.3	51.3	2.91	32.6	0.00			319	204
376	7.77	7.73	34.371	26.820	128.7	0.710	0.37	5.5	58.5	3.04	34.6	0.00			376	203
400 ISL	7.42	7.38	34.351	26.854	125.5	0.740	0.37	5.5	61.8	3.06	35.6	0.00			400	
438	6.91	6.87	34.324	26.904	121.0	0.787	0.37	5.4	67.1	3.07	37.1	0.00			438	202
500 ISL	6.35	6.30	34.308	26.967	115.4	0.860	0.35	5.1	74.8	3.14	38.8	0.00			500	
516	6.20	6.15	34.304	26.983	113.9	0.878	0.34	4.9	76.8	3.16	39.3	0.00			516	201

LATITUDE	LONGITUDE	DAY/MO/YR	CST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 10.7 N	118 53.4 W	08/08/96	1911	UTC	1461 m	290 09 kn	300 03 04	2	1015.7 mb	18.0 c	17.5 c	13m 03		8/8	SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.47	18.47	33.757	24.205	370.5	0.000	5.55	103.6	1.7	0.29	0.3	0.02	0.74	0.21	0	
1 A	18.47	18.47	33.757	24.205	370.5	0.004	5.55	103.6	1.7	0.29	0.3	0.02	0.74	0.21	1	221
2	18.47	18.47	33.757	24.206	370.5	0.007									2	222
8 A	18.44	18.44	33.758	24.214	369.9	0.030	5.52	103.0	1.8	0.29	0.3	0.02	0.72	0.19	8	220
10 ISL	17.90	17.90	33.720	24.318	360.1	0.037	5.59	103.2	1.9	0.32	0.5	0.03	0.71	0.22	10	
16 A	16.05	16.05	33.628	24.682	325.5	0.057	5.75	102.4	2.1	0.45	1.7	0.09	0.69	0.32	16	219
20 ISL	15.49	15.49	33.637	24.815	313.0	0.070	5.61	98.8	3.5	0.56	3.2	0.14	0.71	0.37	20	
26 A	14.79	14.79	33.665	24.990	296.5	0.089	5.25	91.2	6.1	0.74	5.9	0.26	0.72	0.41	26	218
30 ISL	13.92	13.92	33.659	25.169	279.5	0.100	5.00	85.3	7.8	0.89	8.0	0.39	0.68	0.40	30	
34 A	13.12	13.12	33.657	25.330	264.3	0.111	4.76	79.9	9.3	1.03	10.0	0.51	0.62	0.39	34	217
42	12.53	12.52	33.664	25.452	252.9	0.132	4.47	74.1	11.3	1.17	12.1	0.59	0.53	0.36	42	216
50 ISL	11.94	11.93	33.694	25.588	240.1	0.151	4.05	66.3	14.0	1.33	14.6	0.53	0.39	0.29	50	
51 A	11.87	11.86	33.697	25.603	238.7	0.154	4.00	65.4	14.4	1.35	14.9	0.52	0.37	0.28	51	215
60	11.19	11.18	33.670	25.708	228.9	0.175	3.79	61.0	17.2	1.52	18.0	0.19	0.20	0.17	60	214
70	10.57	10.56	33.652	25.804	219.9	0.197	3.60	57.2	19.3	1.62	19.9	0.04	0.10	0.11	70	213
75 ISL	10.28	10.27	33.674	25.871	213.6	0.208	3.45	54.5	20.6	1.68	20.8	0.03	0.07	0.10	75	
85	9.78	9.77	33.739	26.006	200.9	0.229	3.19	49.8	23.2	1.78	22.4	0.02	0.04	0.09	85	212
99	9.29	9.28	33.806	26.139	188.5	0.256	3.13	48.4	25.9	1.86	24.0	0.01	0.01	0.07	99	211
100 ISL	9.27	9.26	33.814	26.148	187.6	0.258	3.11	48.1	26.2	1.87	24.2	0.01	0.01	0.07	100	
119	8.96	8.95	33.952	26.306	173.0	0.292	2.50	38.4	31.9	2.11	27.0	0.01	0.01	0.08	119	210
125 ISL	8.83	8.82	33.968	26.339	170.0	0.302	2.27	34.8	32.7	2.12	27.3	0.01	0.01	0.08	125	
140	8.52	8.51	33.991	26.406	163.9	0.328	1.83	27.8	34.2	2.13	27.6	0.01	0.00	0.06	140	209
150 ISL	8.36	8.34	34.021	26.454	159.4	0.344	1.90	28.8	36.3	2.19	28.3	0.01	0.00	0.06	150	
170	8.07	8.05	34.069	26.535	152.0	0.375	2.24	33.7	40.4	2.30	29.7	0.01	0.00	0.05	170	208
198	7.65	7.63	34.058	26.588	147.3	0.417	2.28	34.0	43.3	2.32	30.5	0.02	0.00	0.04	198	207
200 ISL	7.65	7.63	34.065	26.594	146.8	0.420	2.24	33.4	43.6	2.33	30.6	0.02			200	
227	7.70	7.68	34.149	26.653	141.7	0.459	1.55	23.2	48.3	2.55	32.5	0.01			227	206
250 ISL	7.68	7.66	34.183	26.683	139.3	0.491	1.29	19.3	50.6	2.64	33.2	0.01			250	
268	7.67	7.64	34.203	26.700	137.9	0.516	1.18	17.6	52.0	2.69	33.6	0.02			268	205
300 ISL	7.51	7.48	34.223	26.740	134.7	0.560	0.99	14.7	55.2	2.78	34.5	0.01			300	
317	7.39	7.36	34.231	26.763	132.7	0.582	0.91	13.5	57.1	2.82	35.0	0.01			317	204
377	6.96	6.92	34.267	26.852	125.0	0.660	0.62	9.1	64.4	2.98	36.8	0.01			377	203
400 ISL	6.78	6.74	34.273	26.881	122.4	0.688	0.55	8.0	67.2	3.03	37.4	0.01			400	
438	6.49	6.45	34.282	26.927	118.3	0.734	0.47	6.8	71.5	3.09	38.4	0.00			438	202
500 ISL	6.21	6.17	34.308	26.985	113.5	0.806	0.35	5.1	77.0	3.17	39.4	0.00			500	
523	6.10	6.05	34.318	27.007	111.6	0.831	0.31	4.5	79.0	3.20	39.8	0.00			523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 0.6 N	119 14.0 W	09/08/96	0040	UTC	1594 m	300	14 kn	300 03 04	2	1014.3 mb	17.8 C	16.5 C	10m 03		8/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.04	18.04	33.682	24.254	365.8	0.000	5.58	103.3	1.5	0.28	0.1	0.00	0.36	0.11	0	
2	18.04	18.04	33.682	24.254	365.9	0.007	5.58	103.3	1.5	0.28	0.1	0.00	0.36	0.11	2	220
2	18.04	18.04	33.681	24.253	366.0	0.007									2	221
10	18.04	18.04	33.680	24.253	366.3	0.037	5.60	103.7	1.5	0.28	0.1	0.00	0.37	0.11	10	219
20 ISL	16.44	16.44	33.506	24.500	343.1	0.072	5.83	104.5	1.6	0.33	0.1	0.01	0.51	0.19	20	
21	16.26	16.26	33.487	24.526	340.5	0.075	5.85	104.5	1.6	0.34	0.1	0.01	0.52	0.20	21	218
30	15.61	15.61	33.379	24.590	334.7	0.106	5.92	104.3	2.0	0.36	0.2	0.02	0.44	0.22	30	217
40	13.63	13.62	33.262	24.922	303.3	0.138	5.80	98.1	3.4	0.48	1.7	0.22	0.49	0.44	40	216
50	12.58	12.57	33.368	25.213	275.8	0.167	5.30	87.7	5.8	0.80	7.0	0.28	0.30	0.26	50	215
60	12.27	12.26	33.401	25.298	267.9	0.194	5.09	83.7	7.5	0.87	8.3	0.07	0.22	0.20	60	214
70	11.09	11.08	33.507	25.599	239.5	0.219	4.40	70.6	12.7	1.16	13.2	0.03	0.10	0.11	70	213
75 ISL	10.81	10.80	33.550	25.682	231.6	0.231	4.18	66.7	14.5	1.26	14.9	0.03	0.07	0.10	75	
85	10.48	10.47	33.616	25.792	221.4	0.254	3.86	61.2	17.4	1.43	17.5	0.02	0.05	0.08	85	212
100	9.92	9.91	33.688	25.943	207.2	0.286	3.49	54.7	21.2	1.63	20.7	0.02	0.02	0.05	100	211
119	9.69	9.68	33.719	26.006	201.6	0.325	3.43	53.5	22.1	1.68	21.3	0.02	0.01	0.05	120	210
119	9.69	9.68	33.724	26.010	201.3	0.325	3.41	53.2	22.5	1.68	21.5	0.02	0.01	0.05	120	209
125 ISL	9.53	9.52	33.755	26.061	196.6	0.337	3.35	52.0	23.6	1.72	22.1	0.02	0.01	0.05	126	
140	9.11	9.09	33.847	26.201	183.5	0.365	3.13	48.2	26.8	1.85	24.0	0.01	0.01	0.05	141	208
150 ISL	8.93	8.91	33.899	26.270	177.0	0.383	2.94	45.1	29.1	1.94	25.2	0.01	0.01	0.05	151	
169	8.66	8.64	33.984	26.379	167.0	0.416	2.56	39.1	33.4	2.11	27.3	0.01	0.00	0.05	170	207
200 ISL	8.29	8.27	34.076	26.508	155.2	0.466	2.10	31.8	39.4	2.31	29.7	0.01			201	
227	8.04	8.02	34.124	26.584	148.5	0.507	1.78	26.8	43.9	2.44	31.1	0.01			228	206
250 ISL	7.86	7.83	34.151	26.632	144.2	0.540	1.56	23.4	47.3	2.54	32.1	0.01			251	
267	7.74	7.71	34.167	26.662	141.6	0.565	1.41	21.1	49.6	2.61	32.7	0.01			269	205
300 ISL	7.55	7.52	34.205	26.720	136.6	0.611	1.10	16.4	53.8	2.74	33.9	0.02			302	
317	7.45	7.42	34.224	26.749	134.1	0.634	0.95	14.1	56.1	2.80	34.6	0.02			319	204
380	6.81	6.77	34.277	26.880	122.2	0.714	0.51	7.5	67.2	3.03	37.3	0.01			382	203
400 ISL	6.68	6.64	34.286	26.905	120.1	0.739	0.45	6.6	69.3	3.07	37.8	0.01			403	
437	6.50	6.46	34.296	26.937	117.4	0.783	0.40	5.8	72.3	3.12	38.4	0.01			440	202
500 ISL	6.22	6.18	34.311	26.986	113.5	0.855	0.32	4.6	77.6	3.20	39.2	0.00			503	
513	6.16	6.11	34.314	26.996	112.6	0.870	0.30	4.3	78.7	3.22	39.4	0.00			517	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 50.6 N	119 34.5 W	09/08/96	0448	UTC	1817 m	300	11 kn			1014.3 mb	17.0 C	16.0 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.25	17.25	33.272	24.130	377.6	0.000	5.65	102.8	1.9	0.30	0.0	0.00	0.16	0.05	0	
2	17.25	17.25	33.272	24.130	377.7	0.008	5.65	102.8	1.9	0.30	0.0	0.00	0.16	0.05	2	220
10 ISL	17.06	17.06	33.305	24.201	371.2	0.038	5.69	103.1	1.9	0.30	0.0	0.00	0.17	0.07	10	
11	17.03	17.03	33.311	24.213	370.1	0.041	5.70	103.2	1.9	0.30	0.0	0.00	0.17	0.07	11	219
20	16.98	16.98	33.343	24.249	367.0	0.074	5.72	103.5	1.9	0.30	0.0	0.00	0.22	0.08	20	218
30	17.01	17.01	33.396	24.283	364.0	0.111	5.73	103.8	1.8	0.30	0.0	0.00	0.26	0.11	30	217
40	16.84	16.83	33.446	24.362	356.9	0.147	5.76	104.0					0.34	0.19	40	216
50	15.13	15.12	33.241	24.590	335.3	0.182	5.98	104.3	2.3	0.35	0.1	0.02	0.29	0.17	50	215
61	13.97	13.96	33.255	24.848	311.0	0.217	5.82	99.1	3.3	0.48	1.5	0.17	0.29	0.20	61	214
70	13.16	13.15	33.355	25.089	288.2	0.244	5.38	90.1	4.9	0.63	4.1	0.21	0.29	0.21	70	213
75 ISL	12.88	12.87	33.384	25.167	280.8	0.258	5.24	87.3	5.6	0.68	5.1	0.17	0.27	0.20	75	
85	12.41	12.40	33.427	25.292	269.2	0.286	5.00	82.5	7.1	0.77	7.1	0.07	0.21	0.17	85	212
99	11.57	11.56	33.526	25.527	247.0	0.322	4.53	73.5	10.6	1.01	11.1	0.03	0.12	0.14	99	211
100 ISL	11.51	11.50	33.531	25.542	245.6	0.324	4.48	72.6	11.0	1.04	11.6	0.03	0.11	0.14	100	
120	10.34	10.33	33.634	25.830	218.5	0.371	3.58	56.6	19.5	1.59	19.9	0.02	0.01	0.06	121	210
125 ISL	10.14	10.13	33.660	25.885	213.4	0.382	3.52	55.4	20.4	1.61	20.2	0.02	0.01	0.06	126	
139	9.68	9.66	33.734	26.020	200.8	0.411	3.44	53.6	22.4	1.66	21.2	0.01	0.01	0.06	140	209
150 ISL	9.41	9.39	33.799	26.115	191.9	0.432	3.21	49.7	25.0	1.77	22.7	0.01	0.01	0.06	151	
170	9.05	9.03	33.906	26.257	178.7	0.469	2.76	42.5	29.8	1.98	25.5	0.01	0.01	0.05	171	208
198	8.70	8.68	33.999	26.385	167.0	0.518	2.43	37.1	34.0	2.13	27.4	0.01	0.01	0.06	199	207
200 ISL	8.67	8.65	34.006	26.395	166.1	0.521	2.40	36.6	34.4	2.14	27.6	0.01			201	
228	8.22	8.20	34.097	26.536	153.1	0.566	1.99	30.1	40.7	2.34	30.0	0.01			229	206
250 ISL	8.02	7.99	34.124	26.587	148.6	0.599	1.81	27.2	43.7	2.43	31.0	0.01			251	
269	7.89	7.86	34.138	26.617	145.9	0.627	1.67	25.1	46.0	2.49	31.6	0.01			271	205
300 ISL	7.68	7.65	34.189	26.688	139.7	0.671	1.24	18.5	51.5	2.65	33.2	0.01			302	
319	7.55	7.52	34.219	26.731	135.9	0.697	0.99	14.7	54.8	2.75	34.2	0.01			321	204
378	7.14	7.10	34.249	26.813	128.8	0.775	0.72	10.6	61.3	2.89	36.0	0.00			380	203
400 ISL	6.95	6.91	34.257	26.846	125.9	0.803	0.64	9.4	64.3	2.95	36.7	0.00			402	
436	6.63	6.59	34.268	26.898	121.2	0.848	0.52	7.6	69.3	3.03	37.8	0.00			439	202
500 ISL	6.20	6.16	34.289	26.971	114.8	0.923	0.37	5.3	76.2	3.12	39.3	0.00			503	
514	6.10	6.05	34.294	26.988	113.3	0.939	0.34	4.9	77.7	3.14	39.6	0.00			517	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 30.5 N	120 15.2 W	09/08/96	1040 UTC	3931 m	300 14 kn			1013.6 mb	17.4 C	16.7 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0 ISL	18.27	18.27	33.360	23.951	394.7	0.000	5.49	101.9	1.9	0.29	0.0	0.00	0.14	0.04	0	
1	18.27	18.27	33.360	23.951	394.7	0.004	5.49	101.9	1.9	0.29	0.0	0.00	0.14	0.04	1	220
10 ISL	18.27	18.27	33.360	23.952	395.0	0.039	5.49	101.9	1.9	0.28	0.0	0.00	0.13	0.04	10	
15	18.27	18.27	33.360	23.952	395.2	0.059	5.49	101.9	1.9	0.28	0.0	0.00	0.13	0.04	15	219
20 ISL	18.18	18.18	33.357	23.972	393.4	0.079	5.51	102.1	1.9	0.28	0.0	0.00	0.14	0.04	20	
30	17.99	17.98	33.351	24.014	389.7	0.118	5.54	102.2	1.8	0.28	0.0	0.00	0.15	0.04	30	218
46	16.25	16.24	33.293	24.381	355.2	0.178	5.91	105.4	1.9	0.30	0.0	0.00	0.27	0.14	46	217
50 ISL	15.89	15.88	33.284	24.455	348.2	0.192	5.96	105.5	1.9	0.31	0.0	0.00	0.32	0.18	50	
55	15.50	15.49	33.277	24.537	340.6	0.209	5.99	105.2	2.0	0.32	0.0	0.00	0.38	0.23	55	216
65	14.91	14.90	33.284	24.672	328.0	0.242	5.97	103.6	2.0	0.36	0.0	0.01	0.43	0.34	65	215
75	14.31	14.30	33.273	24.791	316.8	0.275	5.88	100.8	2.4	0.41	0.5	0.08	0.41	0.35	75	214
85	13.35	13.34	33.345	25.044	292.9	0.305	5.43	91.3	4.5	0.61	3.8	0.25	0.30	0.28	85	213
95	12.68	12.67	33.394	25.215	276.8	0.334	5.14	85.3	6.2	0.75	6.2	0.07	0.22	0.22	95	212
100 ISL	12.26	12.25	33.438	25.330	266.0	0.347	4.90	80.6	7.9	0.86	8.2	0.05	0.17	0.19	100	
110	11.43	11.42	33.533	25.559	244.3	0.373	4.40	71.2	11.6	1.08	12.4	0.02	0.09	0.13	110	211
125 ISL	10.59	10.58	33.621	25.777	223.7	0.408	3.96	62.9	15.9	1.34	16.4	0.01	0.05	0.10	126	
126	10.55	10.54	33.626	25.788	222.7	0.410	3.94	62.5	16.2	1.35	16.6	0.01	0.05	0.10	127	210
145	9.94	9.92	33.706	25.955	207.1	0.451	3.56	55.8	20.6	1.59	20.0	0.01	0.02	0.07	146	209
150 ISL	9.78	9.76	33.722	25.994	203.5	0.461	3.51	54.8	21.5	1.63	20.6	0.01	0.02	0.06	151	
171	9.20	9.18	33.791	26.143	189.6	0.502	3.36	51.8	24.9	1.76	22.8	0.00	0.01	0.05	172	208
200	8.66	8.64	33.919	26.328	172.4	0.555	2.97	45.3	30.7	1.96	25.7	0.00	0.00	0.04	201	207
230	8.35	8.33	34.026	26.460	160.3	0.605	2.47	37.4	36.4	2.16	28.2	0.00			231	206
250 ISL	7.95	7.92	34.033	26.526	154.3	0.636	2.51	37.7	39.1	2.20	29.0	0.00			251	
270	7.53	7.50	34.022	26.578	149.4	0.667	2.55	37.9	41.8	2.22	29.7	0.00			271	205
300 ISL	7.10	7.07	34.032	26.647	143.2	0.711	2.27	33.4	47.6	2.37	31.7	0.00			302	
320	6.88	6.85	34.044	26.686	139.6	0.739	2.00	29.3	51.7	2.48	33.1	0.00			322	204
380	6.49	6.46	34.107	26.789	130.5	0.820	1.27	18.4	62.3	2.76	36.5	0.00			382	203
400 ISL	6.38	6.34	34.125	26.817	128.0	0.846	1.10	15.9	65.1	2.83	37.2	0.00			402	
439	6.14	6.10	34.160	26.876	122.8	0.895	0.82	11.8	70.7	2.95	38.5	0.00			442	202
500 ISL	5.66	5.62	34.228	26.990	112.4	0.966	0.46	6.6	81.8	3.13	40.6	0.00			503	
516	5.53	5.49	34.246	27.020	109.6	0.984	0.37	5.3	84.7	3.18	41.2	0.00			519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 11.8 N	120 56.8 W	09/08/96	1814 UTC	3865 m	330 08 kn	350 04 06	2	1015.3 mb	18.8 C	18.2 C	31m	01	8/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0 ISL	19.11	19.11	33.495	23.845	404.9	0.000	5.41	102.1	2.0	0.29	0.0	0.00	0.13	0.04	0	
1	19.11	19.11	33.497	23.846	404.8	0.004	5.41	102.1	2.0	0.27	0.0	0.00	0.13	0.04	1	222
2 A	19.11	19.11	33.495	23.845	404.9	0.008	5.41	102.1	2.0	0.29	0.0	0.00	0.13	0.04	2	221
10	19.10	19.10	33.493	23.846	405.1	0.040	5.41	102.1	2.0	0.27	0.0	0.00	0.13	0.04	10	220
20 A	19.09	19.09	33.496	23.851	405.0	0.081	5.41	102.0	2.0	0.28	0.0	0.00	0.13	0.04	20	219
30	18.15	18.14	33.386	24.002	390.9	0.121	5.62	104.1	1.9	0.28	0.0	0.00	0.22	0.06	30	218
41 A	16.85	16.84	33.317	24.260	366.6	0.162	5.84	105.4	1.7	0.30	0.0	0.00	0.28	0.11	41	217
50 ISL	15.77	15.76	33.372	24.550	339.2	0.194	5.95	105.2	2.3	0.31	0.0	0.00	0.27	0.16	50	
52	15.53	15.52	33.384	24.613	333.3	0.201	5.96	104.8	2.5	0.31	0.0	0.00	0.27	0.18	52	216
63 A	14.14	14.13	33.321	24.863	309.6	0.236	5.75	98.3	2.6	0.55	1.8	0.38	0.31	0.35	63	215
73	13.87	13.86	33.329	24.926	303.9	0.267	5.67	96.4	2.9	0.59	2.5	0.52	0.27	0.28	73	214
75 ISL	13.84	13.83	33.332	24.934	303.2	0.273	5.66	96.2	2.9	0.60	2.6	0.52	0.27	0.28	75	
84 A	13.51	13.50	33.357	25.021	295.1	0.300	5.52	93.2	3.8	0.65	3.7	0.53	0.24	0.27	84	213
94	12.52	12.51	33.429	25.273	271.3	0.328	5.06	83.7	7.0	0.80	7.3	0.07	0.17	0.22	94	212
100 ISL	12.31	12.30	33.453	25.332	265.8	0.344	4.94	81.4	8.0	0.85	8.3	0.05	0.15	0.20	100	
105	12.17	12.16	33.471	25.373	262.0	0.358	4.85	79.6	8.8	0.89	9.0	0.04	0.13	0.19	105	211
117 A	11.17	11.16	33.557	25.625	238.2	0.388	4.44	71.4	12.4	1.12	13.0	0.02	0.08	0.12	117	210
125 ISL	10.74	10.73	33.587	25.724	228.8	0.406	4.35	69.3	13.7	1.19	14.3	0.02	0.06	0.10	126	
141	10.13	10.11	33.635	25.867	215.4	0.442	4.23	66.5	16.2	1.31	16.3	0.01	0.03	0.07	142	209
150 ISL	9.78	9.76	33.691	25.970	205.8	0.461	4.01	62.6	18.8	1.44	18.3	0.01	0.02	0.05	151	
168	9.17	9.15	33.813	26.165	187.4	0.496	3.52	54.3	24.4	1.71	22.3	0.01	0.00	0.03	169	208
199	8.55	8.53	33.977	26.391	166.4	0.551	2.85	43.4	32.2	2.02	26.5	0.00	0.00	0.03	200	207
200 ISL	8.53	8.51	33.980	26.396	165.9	0.553	2.83	43.0	32.5	2.03	26.6	0.00			201	
228	8.05	8.03	34.044	26.519	154.6	0.598	2.43	36.6	39.2	2.23	29.1	0.00			229	206
250 ISL	7.83	7.81	34.085	26.584	148.7	0.631	2.10	31.5	43.5	2.36	30.7	0.00			251	
268	7.66	7.63	34.106	26.626	145.0	0.657	1.87	27.9	46.6	2.45	31.8	0.00			269	205
300 ISL	7.19	7.16	34.101	26.688	139.3	0.703	1.70	25.1	51.8	2.56	33.4	0.00			302	
319	6.90	6.87	34.091	26.721	136.4	0.729	1.64	24.0	54.8	2.61	34.3	0.00			321	204
378	6.27	6.24	34.108	26.818	127.6	0.807	1.17	16.9	65.5	2.83	37.2	0.00			380	203
400 ISL	6.07	6.04	34.121	26.854	124.3	0.835	1.02	14.7	69.3	2.91	38.2	0.00			402	
439	5.80	5.76	34.155	26.915	118.8	0.882	0.77	11.0	75.4	3.03	39.7	0.00			442	202
500 ISL	5.68	5.64	34.255	27.009	110.6	0.952	0.42	6.0	82.0	3.17	40.7	0.00			503	
515	5.65	5.61	34.279	27.032	108.6	0.968	0.34	4.8	83.6	3.20	41.0	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
30 50.8 N	121 35.7 W	10/08/96	0008 UTC	4118 m	310 11 kn	340 04 05	2	1013.3 mb	18.8 C	17.3 C	28m 01	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.15	19.15	33.491	23.831	406.1	0.000	5.41	102.2	2.0	0.24	0.0	0.00	0.08	0.02	0	
1	19.15	19.15	33.491	23.831	406.2	0.004	5.41	102.2	2.0	0.24	0.0	0.00	0.08	0.02	1	220
2	19.15	19.15	33.491	23.831	406.2	0.008									2	221
10 ISL	19.14	19.14	33.503	23.844	405.3	0.041	5.41	102.2	2.0	0.24	0.0	0.00	0.08	0.02	10	
15	19.13	19.13	33.512	23.853	404.6	0.061	5.41	102.1	2.0	0.24	0.0	0.00	0.09	0.02	15	219
20 ISL	19.12	19.12	33.513	23.857	404.5	0.081	5.41	102.1	2.0	0.24	0.0	0.00	0.10	0.02	20	
30 ISL	19.11	19.10	33.516	23.862	404.3	0.121	5.41	102.1	2.0	0.24	0.0	0.00	0.11	0.03	30	
31	19.11	19.10	33.516	23.862	404.3	0.126	5.41	102.1	2.0	0.24	0.0	0.00	0.11	0.03	31	218
45	18.00	17.99	33.502	24.128	379.4	0.180	5.66	104.6	2.1	0.21	0.0	0.00	0.13	0.04	45	217
50 ISL	17.47	17.46	33.479	24.239	369.0	0.199	5.73	104.8	2.1	0.21	0.0	0.00	0.15	0.04	50	
59	16.51	16.50	33.435	24.431	350.9	0.232	5.83	104.6	2.1	0.23	0.0	0.00	0.18	0.06	59	216
75	15.29	15.28	33.375	24.659	329.5	0.286	5.83	102.0	2.2	0.25	0.0	0.00	0.21	0.13	75	215
84	14.53	14.52	33.282	24.752	320.9	0.315	5.89	101.5	2.2	0.29	0.0	0.00	0.23	0.18	84	214
94	14.03	14.02	33.338	24.900	307.0	0.347	5.78	98.6	3.1	0.35	0.2	0.03	0.37	0.32	94	213
100 ISL	13.76	13.75	33.408	25.010	296.6	0.365	5.68	96.4	3.4	0.37	0.4	0.12	0.35	0.30	100	
104	13.56	13.55	33.447	25.081	290.0	0.376	5.60	94.7	3.6	0.39	0.7	0.18	0.32	0.29	104	212
114	12.91	12.89	33.432	25.200	278.8	0.405	5.41	90.2	5.0	0.52	2.8	0.21	0.27	0.25	114	211
123	12.38	12.36	33.523	25.373	262.4	0.429	5.14	84.8	6.7	0.76	7.2	0.06	0.15	0.18	123	210
125 ISL	12.27	12.25	33.527	25.398	260.2	0.434	5.08	83.6	7.2	0.81	8.0	0.05	0.13	0.16	125	209
139	11.60	11.58	33.529	25.525	248.2	0.470	4.73	76.8	11.0	1.11	12.5	0.01	0.04	0.07	139	208
150 ISL	11.14	11.12	33.598	25.662	235.3	0.497	4.57	73.5	12.4	1.13	13.5	0.01	0.03	0.07	150	207
163	10.59	10.57	33.697	25.837	218.9	0.526	4.40	69.9	14.3	1.16	14.3	0.01	0.01	0.07	163	206
193	8.94	8.92	33.844	26.226	182.1	0.586	3.76	57.7	25.2	1.65	22.0	0.01	0.00	0.03	193	205
200 ISL	8.77	8.75	33.867	26.271	177.9	0.599	3.79	57.9	26.1	1.65	22.1	0.01	0.00	0.03	200	204
227	8.41	8.39	33.925	26.372	168.7	0.646	4.01	60.8	28.1	1.64	22.3	0.00	0.00	0.03	227	203
250 ISL	8.03	8.00	33.948	26.447	161.8	0.684	3.85	57.9	31.4	1.71	23.5	0.00	0.00	0.03	250	202
267	7.75	7.72	33.958	26.496	157.2	0.711	3.74	55.9	34.6	1.81	24.9	0.00	0.00	0.03	267	201
300 ISL	7.28	7.25	33.991	26.589	148.7	0.761	2.97	43.9	43.6	2.11	28.9	0.00	0.00	0.03	300	200
317	7.07	7.04	34.009	26.633	144.7	0.786	2.52	37.1	48.5	2.28	31.1	0.00	0.00	0.03	317	199
378	6.53	6.50	34.075	26.758	133.4	0.871	1.54	22.4	62.0	2.67	35.7	0.00	0.00	0.03	378	198
400 ISL	6.28	6.24	34.093	26.805	129.1	0.900	1.28	18.5	67.3	2.78	37.1	0.00	0.00	0.03	400	197
436	5.90	5.86	34.123	26.877	122.4	0.945	0.93	13.3	75.6	2.94	39.1	0.00	0.00	0.03	436	196
500 ISL	5.56	5.52	34.200	26.980	113.2	1.021	0.55	7.8	86.2	3.11	40.9	0.00	0.00	0.03	500	195
521	5.45	5.41	34.226	27.014	110.1	1.044	0.43	6.1	89.7	3.17	41.5	0.00	0.00	0.03	521	194

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 15.7 W	10/08/96	0627 UTC	4157 m	350 06 kn			1013.5 mb	18.7 C	17.6 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.58	19.58	33.667	23.856	403.8	0.000	5.36	102.1	2.1	0.21	0.0	0.00	0.09	0.03	0	
2	19.58	19.58	33.667	23.856	403.9	0.008	5.36	102.1	2.1	0.21	0.0	0.00	0.09	0.03	2	220
10 ISL	19.57	19.57	33.666	23.858	404.0	0.040	5.36	102.1	2.0	0.20	0.0	0.00	0.09	0.02	10	
15	19.57	19.57	33.666	23.858	404.1	0.061	5.36	102.1	2.0	0.20	0.0	0.00	0.09	0.02	15	219
20 ISL	19.57	19.57	33.668	23.860	404.2	0.081	5.36	102.1	2.0	0.20	0.0	0.00	0.09	0.02	20	
30	19.58	19.57	33.672	23.861	404.4	0.121	5.36	102.1	2.0	0.20	0.0	0.00	0.10	0.03	30	218
44	18.94	18.93	33.638	23.999	391.8	0.177	5.52	103.9	2.0	0.20	0.0	0.00	0.12	0.04	44	217
50 ISL	18.64	18.63	33.608	24.051	387.0	0.200	5.57	104.2	2.0	0.21	0.0	0.00	0.13	0.04	50	
60	18.08	18.07	33.575	24.165	376.4	0.238	5.65	104.6	2.0	0.21	0.0	0.00	0.15	0.05	60	216
75	17.01	17.00	33.641	24.473	347.5	0.293	5.75	104.3	2.1	0.19	0.0	0.00	0.19	0.08	75	215
85	16.67	16.66	33.702	24.600	335.7	0.327	5.68	102.4	2.2	0.19	0.0	0.00	0.23	0.13	85	214
94	16.47	16.45	33.817	24.734	323.2	0.357	5.60	100.6	2.3	0.19	0.0	0.00	0.22	0.18	94	213
100 ISL	16.29	16.27	33.867	24.815	315.7	0.376	5.56	99.6	2.4	0.20	0.0	0.00	0.24	0.22	100	
104	16.10	16.08	33.881	24.869	310.6	0.388	5.54	98.8	2.5	0.20	0.0	0.00	0.25	0.24	104	212
115	15.07	15.05	33.805	25.040	294.5	0.422	5.47	95.6	2.9	0.28	0.4	0.15	0.23	0.22	115	211
124	14.64	14.62	33.839	25.159	283.4	0.448	5.37	93.0	3.4	0.32	1.2	0.14	0.19	0.19	124	210
125 ISL	14.60	14.58	33.841	25.169	282.4	0.450	5.36	92.8	3.4	0.32	1.3	0.13	0.19	0.19	125	209
139	13.99	13.97	33.847	25.303	270.0	0.489	5.22	89.2	4.3	0.41	3.1	0.03	0.13	0.15	139	208
150 ISL	13.40	13.38	33.842	25.420	259.0	0.518	5.10	86.1	5.4	0.51	4.8	0.02	0.10	0.11	150	207
165	12.53	12.51	33.826	25.581	243.9	0.556	4.94	81.9	7.2	0.66	7.2	0.01	0.06	0.07	165	206
194	10.85	10.83	33.776	25.854	218.1	0.623	4.63	74.0	11.6	0.98	12.1	0.00	0.02	0.04	194	205
200 ISL	10.50	10.48	33.775	25.914	212.4	0.636	4.52	71.7	13.4	1.08	13.6	0.00	0.00	0.04	200	204
228	9.11	9.09	33.812	26.175	187.7	0.692	4.03	62.0	22.1	1.52	20.2	0.00	0.00	0.04	228	203
250 ISL	8.46	8.43	33.884	26.333	172.8	0.731	3.91	59.3	26.6	1.65	22.6	0.00	0.00	0.04	250	202
267	8.11	8.08	33.939	26.429	163.9	0.760	3.82	57.5	29.7	1.72	23.8	0.00	0.00	0.04	267	201
300 ISL	7.55	7.52	33.987	26.548	152.8	0.812	3.20	47.6	37.4	1.99	27.4	0.00	0.00	0.04	300	200
317	7.33	7.30	33.999	26.589	149.1	0.838	2.83	41.9	41.5	2.13	29.2	0.00	0.00	0.04	317	199
378	6.66</															

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
30 10.8 N	122 55.4 W	10/08/96	1304	UTC	3644 m	290	04 kn			1013.6 mb	18.9 C	17.8 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.56	19.56	33.668	23.862	403.3	0.000	5.35	101.9	2.1	0.20	0.0	0.00	0.10	0.03	0	
2	19.56	19.56	33.668	23.862	403.3	0.008	5.35	101.9	2.1	0.20	0.0	0.00	0.10	0.03	2	220
2	19.57	19.57	33.668	23.859	403.6	0.008									2	221
10 ISL	19.57	19.57	33.669	23.860	403.7	0.040	5.35	101.9	2.1	0.20	0.0	0.00	0.10	0.03	10	
16	19.57	19.57	33.670	23.861	403.9	0.065	5.35	101.9	2.1	0.20	0.0	0.00	0.10	0.03	16	219
20 ISL	19.57	19.57	33.670	23.861	404.0	0.081	5.35	101.9	2.1	0.20	0.0	0.00	0.10	0.03	20	
30 ISL	19.57	19.56	33.669	23.861	404.4	0.121	5.34	101.7	2.1	0.20	0.0	0.00	0.10	0.03	30	
31	19.57	19.56	33.669	23.861	404.4	0.125	5.34	101.7	2.1	0.20	0.0	0.00	0.10	0.03	31	218
46	19.45	19.44	33.669	23.893	402.0	0.186	5.38	102.3	2.1	0.20	0.0	0.00	0.11	0.04	46	217
50 ISL	19.39	19.38	33.677	23.914	400.1	0.202	5.39	102.3	2.1	0.20	0.0	0.00	0.12	0.04	50	
60	19.23	19.22	33.696	23.970	395.1	0.241	5.45	103.2	2.1	0.19	0.0	0.00	0.15	0.04	60	216
75	17.75	17.74	33.778	24.401	354.4	0.298	5.69	104.8	2.2	0.16	0.0	0.00	0.20	0.08	75	215
85	17.28	17.27	33.785	24.520	343.4	0.333	5.70	104.0	2.3	0.17	0.0	0.00	0.24	0.10	85	214
95	16.86	16.84	33.863	24.679	328.5	0.366	5.62	101.8	2.4	0.17	0.0	0.00	0.24	0.16	95	213
100 ISL	16.66	16.64	33.857	24.721	324.6	0.383	5.59	100.8	2.4	0.18	0.0	0.00	0.23	0.19	100	
106	16.37	16.35	33.834	24.771	320.1	0.402	5.57	99.9	2.5	0.20	0.0	0.00	0.22	0.21	106	212
115	15.68	15.66	33.811	24.910	307.0	0.430	5.54	98.0	2.6	0.23	0.0	0.03	0.23	0.22	115	211
125	14.23	14.21	33.653	25.103	288.7	0.460	5.50	94.4	3.3	0.32	0.6	0.19	0.19	0.20	125	210
139	12.87	12.85	33.593	25.333	266.8	0.499	5.21	86.9	5.4	0.55	4.4	0.02	0.13	0.15	140	209
150 ISL	12.25	12.23	33.612	25.468	254.1	0.527	5.02	82.6	7.0	0.69	6.8	0.02	0.10	0.12	151	
165	11.64	11.62	33.663	25.622	239.7	0.564	4.78	77.7	9.4	0.85	9.6	0.01	0.07	0.09	166	208
194	10.30	10.28	33.716	25.903	213.3	0.630	4.32	68.2	15.2	1.21	15.2	0.00	0.02	0.04	195	207
200 ISL	10.01	9.99	33.735	25.967	207.2	0.643	4.21	66.1	16.9	1.30	16.5	0.00			201	
230	8.77	8.75	33.844	26.253	180.1	0.701	3.69	56.4	25.4	1.69	22.4	0.00			231	206
250 ISL	8.38	8.35	33.896	26.354	170.7	0.736	3.52	53.3	28.7	1.80	24.1	0.00			251	
268	8.16	8.13	33.932	26.416	165.1	0.766	3.39	51.1	31.2	1.87	25.1	0.00			269	205
300 ISL	7.71	7.68	33.985	26.524	155.2	0.817	2.99	44.6	37.6	2.05	27.7	0.00			302	
319	7.45	7.42	34.009	26.580	150.0	0.846	2.71	40.2	42.0	2.17	29.4	0.00			321	204
378	6.61	6.58	34.062	26.737	135.5	0.931	1.71	24.9	57.3	2.59	34.8	0.00			380	203
400 ISL	6.41	6.37	34.084	26.781	131.5	0.960	1.44	20.9	61.5	2.71	36.2	0.00			402	
438	6.16	6.12	34.125	26.846	125.6	1.009	1.05	15.1	67.9	2.88	38.0	0.00			441	202
500 ISL	5.84	5.80	34.200	26.946	116.7	1.084	0.63	9.0	77.3	3.06	39.9	0.00			503	
523	5.72	5.68	34.228	26.983	113.4	1.110	0.47	6.7	80.8	3.12	40.6	0.00			526	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
29 51.0 N	123 35.4 W	10/08/96	1854	UTC	4089 m	320	08 kn	330 04 06	2	1014.4 mb	20.6 C	18.8 C	33m 01		8/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.02	20.02	33.653	23.731	415.7	0.000	5.32	102.2	1.9	0.27	0.0	0.00	0.08	0.02	0	
1	20.04	20.04	33.653	23.725	416.3	0.004									1	223
2 A	20.02	20.02	33.653	23.731	415.8	0.008	5.32	102.2	1.9	0.27	0.0	0.00	0.08	0.02	2	222
10	19.95	19.95	33.652	23.749	414.4	0.042	5.34	102.5	1.9	0.25	0.0	0.00	0.09	0.02	10	221
20 ISL	19.95	19.95	33.651	23.748	414.8	0.083	5.34	102.5	1.9	0.23	0.0	0.00	0.09	0.02	20	
21 A	19.95	19.95	33.651	23.748	414.8	0.087	5.34	102.5	1.9	0.23	0.0	0.00	0.09	0.02	21	220
30 ISL	19.94	19.93	33.649	23.750	415.0	0.124	5.34	102.4	1.9	0.23	0.0	0.00	0.10	0.03	30	
32	19.94	19.93	33.649	23.750	415.1	0.133	5.34	102.4	1.9	0.23	0.0	0.00	0.10	0.03	32	219
45 A	18.90	18.89	33.546	23.939	397.5	0.186	5.59	105.1	1.9	0.24	0.0	0.00	0.12	0.03	45	218
50 ISL	18.31	18.30	33.499	24.050	387.1	0.205	5.67	105.4	1.9	0.24	0.0	0.00	0.12	0.03	50	
56	17.59	17.58	33.453	24.190	373.8	0.228	5.75	105.4	1.9	0.25	0.0	0.00	0.13	0.04	56	217
68 A	16.55	16.54	33.424	24.413	352.9	0.272	5.86	105.2	2.1	0.26	0.0	0.00	0.18	0.07	68	216
75 ISL	16.16	16.15	33.438	24.514	343.5	0.296	5.83	103.9	2.1	0.25	0.0	0.00	0.20	0.10	75	
78	16.04	16.03	33.449	24.549	340.2	0.306	5.81	103.3	2.1	0.25	0.0	0.00	0.21	0.11	78	215
88 A	15.74	15.73	33.507	24.662	329.7	0.340	5.79	102.3	2.2	0.25	0.0	0.00	0.23	0.18	88	214
98	15.39	15.38	33.494	24.730	323.5	0.372	5.74	100.7	2.4	0.26	0.0	0.00	0.25	0.24	98	213
100 ISL	15.22	15.20	33.492	24.766	320.2	0.379	5.73	100.2	2.4	0.27	0.0	0.01	0.26	0.25	100	
106	14.66	14.64	33.483	24.880	309.4	0.398	5.71	98.7	2.5	0.30	0.0	0.03	0.28	0.28	106	212
115	14.05	14.03	33.433	24.970	300.9	0.425	5.61	95.8	3.2	0.39	0.6	0.19	0.27	0.32	115	211
125 A	13.47	13.45	33.457	25.108	288.0	0.455	5.45	92.0	4.0	0.47	2.2	0.07	0.19	0.24	125	210
138	12.73	12.71	33.493	25.283	271.5	0.491	5.22	86.7	5.5	0.61	4.9	0.02	0.14	0.16	139	209
150 ISL	12.06	12.04	33.551	25.457	255.1	0.523	4.95	81.1	7.6	0.78	7.8	0.02	0.10	0.12	151	
164	11.31	11.29	33.624	25.652	236.7	0.557	4.61	74.4	10.8	0.99	11.3	0.01	0.06	0.09	165	208
193	9.83	9.81	33.720	25.985	205.2	0.621	3.97	62.1	18.8	1.45	18.4	0.00	0.01	0.03	194	207
200 ISL	9.56	9.54	33.750	26.053	198.8	0.635	3.90	60.6	20.4	1.52	19.5	0.00			201	
227	8.73	8.71	33.860	26.272	178.3	0.686	3.69	56.3	26.1	1.71	22.7	0.00			228	206
250 ISL	8.28	8.25	33.927	26.393	167.0	0.726	3.40	51.4	30.8	1.87	25.0	0.00			251	
267	8.03	8.00	33.965	26.461	160.8	0.754	3.16	47.5	34.2	1.98	26.5	0.00			268	205
300 ISL	7.59	7.56	34.015	26.565	151.3	0.805	2.71	40.3	40.7	2.19	29.2	0.00			302	
318	7.38	7.35	34.033	26.609	147.3	0.832	2.46	36.4	44.2	2.30	30.5	0.00			320	204
378	6.77	6.74	34.086	26.735	135.8	0.917	1.61	23.5	56.5	2.67	34.9	0.00			380	203
400 ISL	6.59	6.55	34.107	26.776	132.1	0.947	1.35	19.6	60.5	2.77	36.1	0.00			402	
435	6.34	6.30	34.141	26.836	126.8	0.992	1.01	14.6	66.3	2.89	37.6	0.00			438	202
500 ISL	5.92	5.88	34.193	26.931	118.3	1.071	0.66	9.5	75.5	3.06	39.6	0.00			503	
521	5.78	5.74	34.210	26.962	115.5	1.096	0.55	7.9	78.5	3.12	40.3	0.00			524	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON		CALCOFI CRUISE 9608										STATION 77 49				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
35 5.3 N	120 46.7 W	22/ 8/96	1844 UTC	8 m	06	1203 - 1909 PST	1206 PST	1907 PST	1531.2 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	12.53	33.698	25.477	5.00	82.9	15.4	1.06	11.5	0.48	5.89	1.05	68. A	148.5	141.4	145.0	0.31
5	12.21	33.697	25.538	4.93	81.2	15.5	1.09	11.8	0.50	6.16	1.07	38.	136.5	136.0	136.3	0.36
11	11.98	33.698	25.583	4.22	69.1	17.5	1.31	14.5	0.51	4.46	0.98	12.	49.6	52.8	51.2	0.19
16	11.96	33.699	25.587	4.15	68.0	17.3	1.32	14.7	0.49	4.47	0.91	4.6	15.2	17.1	16.1	0.23
22	11.82	33.704	25.617	4.06	66.3	17.5	1.35	15.1	0.47	3.90	0.92	1.5	5.6	5.0	5.3	0.13
31	11.66	33.722	25.661	3.82	62.2	19.5	1.44	16.0	0.52	3.00	1.18	0.26	0.10	0.09	0.10	0.13
RV NEW HORIZON		CALCOFI CRUISE 9608										STATION 77 80				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 3.9 N	122 57.4 W	21/ 8/96	1820 UTC	17 m	02	1210 - 1913 PST	1215 PST	1917 PST	301.0 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	16.26	33.043	24.185	5.86	104.4	1.4	0.34	0.3	0.03	0.39	0.09	83. A	8.2	8.5	8.3	0.09
11	16.25	33.044	24.188	5.86	104.4	1.4	0.35	0.3	0.03	0.40	0.09	37.	11.5	10.0	10.7	0.10
22	16.22	33.038	24.191	5.86	104.3	1.3	0.35	0.3	0.03	0.42	0.09	14.	7.2	6.3	6.7	0.11
35	15.39	33.115	24.436	6.09	106.7	1.5	0.44	1.5	0.08	0.52	0.15	4.2	3.0	3.2	3.1	0.07
46	13.73	32.961	24.669	6.04	102.2	1.9	0.44	1.0	0.23	0.64	0.34	1.6	1.5	1.6	1.5	0.05
57	12.58	32.943	24.884	5.88	97.1	3.1	0.50	1.5	0.26	0.46	0.39					
64	12.06	32.960	24.996	5.73	93.6	3.8	0.60	3.0	0.24	0.39	0.40	0.31	0.08	0.09	0.08	0.02
RV NEW HORIZON		CALCOFI CRUISE 9608										STATION 80 70				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 49.2 N	121 50.8 W	19/ 8/96	1819 UTC	21 m	02	1216 - 1915 PST	1211 PST	1917 PST	260.7 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	15.81	33.009	24.260	5.90	104.1	1.3	0.34	0.2	0.02	0.25	0.06	86. A	6.1	5.9	6.0	0.06
7	15.78	33.012	24.269	5.91	104.3	1.3	0.34	0.2	0.02	0.26	0.07					
13	15.65	33.037	24.318	5.95	104.7	1.3	0.36	0.3	0.03	0.29	0.07	39.	7.9	6.8	7.4	0.07
20	15.59	33.042	24.335	5.95	104.6	1.2	0.37	0.4	0.03	0.27	0.08					
27	15.48	33.052	24.367	5.96	104.5	1.2	0.37	0.5	0.03	0.30	0.09	14.	5.9	4.7	5.3	0.06
36	14.97	33.037	24.467	6.02	104.5	1.5	0.37	0.5	0.03	0.34	0.14					
43	13.97	33.027	24.671	6.10	103.7	1.9	0.33	0.0	0.01	0.33	0.15	4.3	1.9	2.2	2.1	0.03
50	12.64	32.979	24.900	6.01	99.4	2.1	0.41	0.4	0.13	0.37	0.25					
57	12.08	32.919	24.960	5.91	96.5	2.1	0.47	1.0	0.21	0.35	0.23	1.6	0.63	0.61	0.62	0.03
67	11.42	32.916	25.080	5.74	92.5	3.3	0.62	3.3	0.10	0.31	0.25					
80	10.88	33.040	25.273	5.43	86.5	6.6	0.82	7.0	0.10	0.06	0.09	0.29	0.06	0.06	0.06	0.02
RV NEW HORIZON		CALCOFI CRUISE 9608										STATION 83 40.6				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 13.6 N	119 24.6 W	18/ 8/96	1839 UTC	12 m	04	1203 - 1914 PST	1202 PST	1914 PST	1793.0 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	17.53	33.611	24.323	6.26	114.7	0.3	0.12	0.1	0.00	2.03	0.50	77. A	32.7	22.7	27.7	0.43
8	17.24	33.608	24.391	6.22	113.3	0.3	0.13	0.1	0.00	2.27	0.57	36.	65.4	42.9	54.2	0.76
16	13.75	33.543	25.114	5.23	88.8	4.8	0.48	2.3	0.18	7.57	1.84	13.	120.8	159.8	140.3	0.81
25	12.35	33.551	25.398	4.16	68.6	12.3	1.12	9.5	0.69	1.01	0.58	4.1	10.3	10.5	10.4	0.15
30	12.22	33.561	25.431	4.00	65.8	13.4	1.23	10.8	0.78	0.66	0.49	2.2	3.7	4.0	3.9	0.11
RV NEW HORIZON		CALCOFI CRUISE 9608										STATION 83 70				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 15.1 N	121 27.2 W	17/ 8/96	1845 UTC	19 m	02	1210 - 1915 PST	1210 PST	1913 PST	403.1 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	16.57	33.229	24.256	5.86	105.1	1.6	0.35	0.3	0.02	0.36	0.10	85. A	7.8	7.6	7.7	0.09
12	16.55	33.233	24.265	5.84	104.7	1.6	0.39	0.3	0.02	0.37	0.10	38.	11.1	10.1	10.6	0.10
19	16.54	33.235	24.269	5.86	105.1	1.6	0.32	0.2	0.02	0.42	0.12					
25	14.72	33.019	24.507	6.12	105.7	2.0	0.33	0.2	0.02	0.48	0.22	13.	9.6	9.1	9.3	0.10
33	13.98	33.051	24.687	6.08	103.4	2.2	0.42	1.2	0.09	0.66	0.35					
39	13.45	33.061	24.803	5.97	100.5	2.4	0.48	1.9	0.17	0.62	0.35	4.3	4.5	4.8	4.7	0.06
45	13.27	33.080	24.854	5.94	99.6	2.6	0.51	2.3	0.21	0.65	0.40					
52	13.38	33.138	24.877	5.90	99.2	2.7	0.54	2.7	0.24	0.60	0.36	1.5	2.2	2.2	2.2	0.04
61	13.24	33.270	25.007	5.79	97.1	3.7	0.67	4.4	0.40	0.43	0.29					
73	11.55	33.183	25.264	5.37	86.9	7.3	0.90	8.8	0.27	0.25	0.23	0.27	0.09	0.10	0.09	0.04

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.3, 1.6, 0.28 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 83 110

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME				LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
31 55.3 N		124 12.0 W		16/ 8/96		1807 UTC		34 m	02	1218 - 1925 PST				1220 PST	1925 PST		203.7 mg C/m ²	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHEAO ug/L	LIGHT PCT	UPTAKE (mg C/m ³)					
													1	2	MEAN	DARK		
3	18.26	33.281	23.893	5.52	102.4	1.8	0.28	0.0	0.00	0.09	0.02	87. A	1.8	1.8	1.8	0.05		
11	18.22	33.279	23.902	5.49	101.7	1.8	0.27	0.0	0.00	0.09	0.03							
21	18.02	33.274	23.948	5.51	101.7	1.8	0.27	0.0	0.00	0.11	0.03	39.	2.4	2.5	2.4	0.12		
33	17.73	33.255	24.004	5.59	102.6	1.8	0.27	0.0	0.00	0.14	0.04							
45	17.01	33.159	24.102	5.75	104.0	1.7	0.28	0.0	0.00	0.20	0.07	13.	2.3	2.3	2.3	0.11		
53	17.01	33.239	24.164	5.68	102.8	1.8	0.27	0.0	0.00	0.23	0.10							
60	16.17	33.157	24.295	5.84	103.9	1.8	0.28	0.0	0.00	0.31	0.16							
69	15.42	33.189	24.487	5.97	104.7	2.0	0.28	0.0	0.00	0.29	0.17	4.4	1.6	1.8	1.7	0.07		
79	14.55	33.155	24.650	5.93	102.1	2.5	0.33	0.0	0.02	0.35	0.33							
91	13.65	33.112	24.803	5.89	99.5	2.7	0.38	0.4	0.13	0.33	0.26	1.6	1.2	1.2	1.2	0.04		
104	13.15	33.138	24.924	5.77	96.5	3.7	0.53	2.5	0.16	0.28	0.25							
116	12.60	33.232	25.105	5.55	91.8	4.9	0.61	3.9	0.06	0.19	0.20							
130	11.62	33.320	25.359	5.21	84.5	8.6	0.97	10.3		0.08	0.11	0.28	0.04	0.04	0.04	0.02		

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 87 50

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME				LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
33 19.6 N		119 39.2 W		14/ 8/96		1847 UTC		15 m	03	1205 - 1913 PST				1205 PST	1911 PST		758.1 mg C/m ²	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHEAO ug/L	LIGHT PCT	UPTAKE (mg C/m ³)					
													1	2	MEAN	DARK		
2	18.77	33.629	24.033	5.74	107.7	1.3	0.27	0.1	0.00	0.51	0.15	81. A	19.0	19.1	19.1	0.24		
10	16.05	33.612	24.670	5.69	101.3	3.6	0.48	2.5	0.09	0.96	0.37	36.	36.7	35.2	36.0	0.19		
20	14.57	33.622	25.004	5.28	91.2	7.1	0.80	6.2	0.17	1.05	0.43	13.	23.7	23.3	23.5	0.13		
30	12.58	33.527	25.336	4.82	79.9	9.9	1.01	10.6	0.24	0.61	0.34	4.6	5.6	6.0	5.8	0.06		
40	11.69	33.556	25.527	4.36	70.9	12.9	1.22	13.9	0.19	0.40	0.34	1.7	2.0	2.0	2.0	0.06		
48	11.51	33.554	25.559	4.31	69.8	13.4	1.25	14.4	0.14	0.38	0.34							
56	10.68	33.636	25.772	3.74	59.6	17.8	1.48	18.2	0.05	0.19	0.27	0.32	0.07	0.05	0.06	0.05		

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 87 80

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME				LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
32 20.7 N		121 43.9 W		15/ 8/96		1751 UTC		20 m	02	1213 - 1928 PST				1214 PST	1925 PST		341.4 mg C/m ²	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHEAO ug/L	LIGHT PCT	UPTAKE (mg C/m ³)					
													1	2	MEAN	DARK		
2	18.08	33.321	23.968	5.62	103.9	1.1	0.28	0.0	0.00	0.20	0.06	86. A	3.8	3.1	3.5	0.10		
8	18.03	33.320	23.980	5.60	103.4	1.2	0.28	0.0	0.00	0.21	0.05							
13	17.51	33.347	24.126	5.72	104.6	1.3	0.28	0.0	0.00	0.25	0.08	37.	7.5	7.4	7.5	0.15		
20	17.17	33.357	24.215	5.76	104.6	1.4	0.28	0.0	0.00	0.27	0.09							
27	16.60	33.360	24.351	5.83	104.7	1.4	0.28	0.0	0.01	0.30	0.10	13.	6.9	6.3	6.7	0.12		
34	15.07	33.257	24.615	6.30	109.7	1.8	0.33	0.0	0.02	0.61	0.33							
41	14.34	33.326	24.825	6.19	106.3	1.7	0.45	1.6	0.16	0.68	0.51	4.3	6.1	6.6	6.4	0.08		
49	13.74	33.332	24.954	5.79	98.2	2.6	0.62	3.3	0.50	0.50	0.47							
53	13.51	33.336	25.004	5.70	96.2	2.9	0.67	4.2	0.71	0.45	0.43	1.7	2.5	2.6	2.5	0.05		
65	12.63	33.402	25.230	5.27	87.4	5.5	0.91	8.9	0.20	0.24	0.26							
76	11.78	33.450	25.429	4.71	76.7	10.2	1.07	11.7	0.06	0.14	0.15	0.29	0.07	0.06	0.06	0.03		

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 90 53

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME				LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
32 39.0 N		119 30.1 W		12/ 8/96		1844 UTC		14 m	03	1205 - 1912 PST				1203 PST	1912 PST		506.2 mg C/m ²	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHEAO ug/L	LIGHT PCT	UPTAKE (mg C/m ³)					
													1	2	MEAN	DARK		
2	18.93	33.753	24.087	5.53	104.2	1.5	0.25	0.0	0.00	0.36	0.09	80. A	7.0	6.9	6.9	0.17		
9	18.69	33.758	24.152	5.53	103.7	1.5	0.25	0.0	0.00	0.37	0.10	37.	10.9	11.3	11.1	0.23		
19	17.73	33.714	24.355	5.59	102.9	1.7	0.28	0.2	0.01	1.24	0.38	12.	25.1	21.6	23.4	0.22		
28	15.26	33.684	24.902	5.15	90.3	6.3	0.68	5.5	0.17	0.95	0.45	4.6	13.1	13.8	13.4	0.14		
37	12.00	33.703	25.583	4.00	65.6	14.8	1.32	15.0	0.35	0.38	0.25	1.7	2.3	2.4	2.3	0.07		
45	11.26	33.715	25.730	3.58	57.8	17.8	1.50	18.1	0.20	0.26	0.23							
54	10.66	33.734	25.851	3.28	52.2	20.5	1.65	20.5	0.05	0.19	0.18	0.27	0.13	0.12	0.13	0.01		

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 90 90

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME				LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
31 25.4 N		122 0.0 W		11/ 8/96		1832 UTC		25 m	01	1213 - 1919 PST				1213 PST	1917 PST		268.6 mg C/m ²	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHEAO ug/L	LIGHT PCT	UPTAKE (mg C/m ³)					
													1	2	MEAN	DARK		
2	18.45	33.256	23.827	5.54	103.1	1.5	0.28	0.0	0.00	0.15	0.04	88. A	2.1	2.0	2.1	0.05		
16	18.32	33.254	23.859	5.55	103.0	1.5	0.28	0.0	0.00	0.18	0.05	37.	4.0	7.3	5.7	0.06		
33	16.47	33.214	24.269	6.10	109.2	1.3	0.30	0.0	0.00	0.31	0.13	13.	4.4	4.3	4.3	0.06		
42	15.31	33.232	24.544	6.33	110.8	1.2	0.34	0.2	0.01	0.37	0.19							
50	14.16	33.250	24.804	6.10	104.3	2.1	0.43	1.1	0.08	0.40	0.29	4.6	2.9	2.8	2.8	0.06		
58	13.52	33.294	24.970	5.85	98.7	2.7	0.59	3.3	0.30	0.49	0.37							
66	13.19	33.305	25.045	5.66	94.9	3.6	0.65	4.2	0.40	0.48	0.42	1.7	1.8	1.9	1.8	0.04		
75	12.71	33.353	25.177	5.44	90.3	4.8	0.75	6.0	0.48	0.43	0.33							
86	12.31	33.399	25.290	5.43	89.4	4.9	0.96	9.3	0.60	0.23	0.14							
96	11.89	33.443	25.403	4.80	78.3	8.8	1.00	10.6	0.04	0.14	0.13	0.28	0.04	0.04	0.04	0.01		

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.3, 1.6, 0.28 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.3 N	117 18.7 W	7/ 8/96	1841 UTC	10 m	04	1159 - 1912 PST	1155 PST	1909 PST	1629.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	21.57	33.675	23.332	5.64	111.5	2.2	0.23	0.0	0.00	2.01	0.58	74. A	68.0	64.4	66.2	0.54
6	21.42	33.673	23.372	5.62	110.8	2.3	0.22	0.0	0.00	2.11	0.62	40.	97.3	96.2	96.7	0.41
13	15.31	33.567	24.801	6.64	116.4	6.5	0.33	0.0	0.01	4.06	1.09	14.	89.8	92.9	91.4	0.65
20	13.05	33.562	25.270	5.30	88.7	9.2	0.68	3.6	0.12	1.57	0.87	4.6	17.1	18.3	17.7	0.18
27	12.50	33.580	25.392	4.95	81.9	10.2	0.87	7.1	0.19	1.12	0.82	1.6	7.7	7.4	7.5	0.15
38	11.97	33.612	25.518	4.14	67.8	13.3	1.17	10.7	0.34	0.66	0.73	0.29	0.27	0.27	0.27	0.13

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 10.7 N	118 53.4 W	8/ 8/96	1911 UTC	13 m	03	1210 - 1911 PST	1202 PST	1914 PST	441.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	18.47	33.757	24.205	5.55	103.6	1.7	0.29	0.3	0.02	0.74	0.21	89. A	20.3	19.9	20.1	0.13
8	18.44	33.758	24.214	5.52	103.0	1.8	0.29	0.3	0.02	0.72	0.19	39.	20.4	20.4	20.4	0.15
16	16.05	33.628	24.682	5.75	102.4	2.1	0.45	1.7	0.09	0.69	0.32	15.	14.0	14.0	14.0	0.13
26	14.79	33.665	24.990	5.25	91.2	6.1	0.74	5.9	0.26	0.72	0.41	4.6	5.3	5.5	5.4	0.10
34	13.12	33.657	25.330	4.76	79.9	9.3	1.03	10.0	0.51	0.62	0.39	1.8	1.8	1.9	1.8	0.05
42	12.53	33.664	25.452	4.47	74.1	11.3	1.17	12.1	0.59	0.53	0.36					
51	11.87	33.697	25.603	4.00	65.4	14.4	1.35	14.9	0.52	0.37	0.28	0.24	0.06	0.07	0.06	0.05

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 11.8 N	120 56.8 W	9/ 8/96	1814 UTC	31 m	01	1208 - 1920 PST	1209 PST	1921 PST	237.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	19.11	33.495	23.845	5.41	102.1	2.0	0.29	0.0	0.00	0.13	0.04	91. A	2.9	3.0	3.0	0.07
10	19.10	33.493	23.846	5.41	102.1	2.0	0.27	0.0	0.00	0.13	0.04					
20	19.09	33.496	23.851	5.41	102.0	2.0	0.28	0.0	0.00	0.13	0.04	37.	3.1	3.2	3.1	0.08
30	18.15	33.386	24.002	5.62	104.1	1.9	0.28	0.0	0.00	0.22	0.06					
41	16.85	33.317	24.260	5.84	105.4	1.7	0.30	0.0	0.00	0.28	0.11	13.	3.2	3.3	3.2	0.06
52	15.53	33.384	24.613	5.96	104.8	2.5	0.31	0.0	0.00	0.27	0.18					
63	14.14	33.321	24.863	5.75	98.3	2.6	0.55	1.8	0.38	0.31	0.35	4.4	2.2	2.4	2.3	0.03
73	13.87	33.329	24.926	5.67	96.4	2.9	0.59	2.5	0.52	0.27	0.28					
84	13.51	33.357	25.021	5.52	93.2	3.8	0.65	3.7	0.53	0.24	0.27	1.6	0.88	0.97	0.92	0.02
94	12.52	33.429	25.273	5.06	83.7	7.0	0.80	7.3	0.07	0.17	0.22					
105	12.17	33.471	25.373	4.85	79.6	8.8	0.89	9.0	0.04	0.13	0.19					
117	11.17	33.557	25.625	4.44	71.4	12.4	1.12	13.0	0.02	0.08	0.12	0.30	0.03	0.02	0.03	0.01

RV NEW HORIZON

CALCOFI CRUISE 9608

STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
29 51.0 N	123 35.4 W	10/ 8/96	1854 UTC	33 m	01	1217 - 1927 PST	1219 PST	1927 PST	145.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	20.02	33.653	23.731	5.32	102.2	1.9	0.27	0.0	0.00	0.08	0.02	91. A	1.8	1.8	1.8	0.07
10	19.95	33.652	23.749	5.34	102.5	1.9	0.25	0.0	0.00	0.09	0.02					
21	19.95	33.651	23.748	5.34	102.5	1.9	0.23	0.0	0.00	0.09	0.02	38.	2.1	2.2	2.2	0.09
32	19.94	33.649	23.750	5.34	102.4	1.9	0.23	0.0	0.00	0.10	0.03					
45	18.90	33.546	23.939	5.59	105.1	1.9	0.24	0.0	0.00	0.12	0.03	12.	1.5	1.5	1.5	0.08
56	17.59	33.453	24.190	5.75	105.4	1.9	0.25	0.0	0.00	0.13	0.04					
68	16.55	33.424	24.413	5.86	105.2	2.1	0.26	0.0	0.00	0.18	0.07	4.2	0.88	0.94	0.91	0.05
78	16.04	33.449	24.549	5.81	103.3	2.1	0.25	0.0	0.00	0.21	0.11					
88	15.74	33.507	24.662	5.79	102.3	2.2	0.25	0.0	0.00	0.23	0.18	1.7	0.73	0.75	0.74	0.03
98	15.39	33.494	24.730	5.74	100.7	2.4	0.26	0.0	0.00	0.25	0.24					
106	14.66	33.483	24.880	5.71	98.7	2.5	0.30	0.0	0.03	0.28	0.28					
115	14.05	33.433	24.970	5.61	95.8	3.2	0.39	0.6	0.19	0.27	0.32					
125	13.47	33.457	25.108	5.45	92.0	4.0	0.47	2.2	0.07	0.19	0.24	0.30	0.08	0.07	0.07	0.02

A) INCUBATION LIGHT INTENSITIES WERE 92, 38, 13, 4.3, 1.6, 0.28 PERCENT RESPECTIVELY.

CalCOFI Cruise 9608

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST)		Water Volume Strained (m ³)	Max. Tow Depth (m)	Volume per 1000 m ³ Strained	
					Start	End			Total (cm ³)	Small (cm ³)
77	49	35 05.0	120 47.0	08/22	1005	1011	120	59	1120	368
77	51	35 01.6	120 56.0	08/22	0811	0832	440	200	294	294
77	55	34 53.5	121 13.0	08/22	0440	0501	433	210	192	192
77	60	34 44.5	121 34.5	08/22	0017	0039	426	215	94	94
77	70	34 23.8	122 16.0	08/21	1742	1804	420	218	281	281
77	80	34 03.2	122 56.5	08/21	0922	0943	423	208	92	92
77	90	33 43.9	123 39.0	08/21	0249	0310	396	210	68	68
77	100	33 23.9	124 20.3	08/20	2043	2104	444	203	25	25
80	51	34 27.3	120 33.1	08/18	2128	2136	163	69	221	221
80	55	34 19.4	120 50.2	08/19	0035	0057	448	199	210	194
80	60	34 09.4	121 10.2	08/19	0401	0423	424	213	120	120
80	70	33 49.4	121 51.1	08/19	1157	1219	377	220	93	93
80	80	33 29.5	122 32.5	08/19	1828	1849	413	216	15	15
80	90	33 10.0	123 14.0	08/20	0026	0048	435	207	37	37
80	100	32 49.3	123 54.3	08/20	0827	0848	440	208	16	16
82	47	34 16.3	120 00.5	08/18	1655	1717	399	207	63	63
83	40.6	34 13.0	119 24.7	08/18	1130	1133	50	20	60	60
83	42	34 09.8	119 31.0	08/18	0913	0935	435	185	58	58
83	51	33 53.1	120 10.8	08/18	0259	0317	361	156	64	64
83	55	33 44.8	120 26.8	08/17	2310	2331	489	178	80	80
83	60	33 35.7	120 46.7	08/17	1848	1909	432	210	88	88
83	70	33 15.7	121 28.2	08/17	1203	1225	416	217	55	55
83	80	32 54.6	122 08.0	08/17	0553	0614	406	214	94	94
83	90	32 35.8	122 50.2	08/17	0007	0029	440	198	43	43
83	100	32 14.8	123 31.7	08/16	1746	1807	452	203	24	24
83	110	31 54.8	124 11.0	08/16	0921	0942	430	211	9	9
87	33	33 53.4	118 29.4	08/13	1623	1628	89	41	112	112
87	35	33 49.4	118 37.9	08/13	1849	1910	401	204	80	80
87	40	33 39.1	119 00.4	08/13	2244	2306	411	195	85	85
87	45	33 29.1	119 18.8	08/14	0224	0245	392	209	82	82
87	50	33 18.9	119 39.6	08/14	0942	0949	141	53	92	92
87	55	33 08.8	120 00.8	08/14	1608	1629	422	206	59	59
87	60	32 59.1	120 22.2	08/14	2009	2031	427	199	101	101
87	70	32 39.2	121 03.8	08/15	0154	0215	438	197	128	116
87	80	32 19.6	121 42.8	08/15	0825	0845	399	193	90	90
87	90	31 59.5	122 23.3	08/15	1610	1632	442	210	29	29
87	100	31 40.8	123 05.4	08/15	2137	2158	433	194	67	67
87	110	31 19.8	123 45.4	08/16	0315	0337	443	210	38	38
90	28	33 28.7	117 46.4	08/13	0857	0907	186	81	134	134
90	30	33 25.2	117 54.8	08/13	0608	0630	392	207	54	54
90	35	33 14.8	118 16.0	08/13	0130	0151	389	195	98	98
90	37	33 10.5	118 25.0	08/12	2235	2257	397	207	83	83
90	45	32 54.4	118 56.9	08/12	1717	1738	423	209	28	28
90	53	32 39.2	119 29.8	08/12	0957	1019	428	195	26	26
90	60	32 25.1	119 57.6	08/12	0611	0633	393	212	69	69
90	70	32 05.0	120 39.9	08/11	2324	2345	415	199	41	41
90	80	31 45.7	121 19.4	08/11	1728	1750	415	211	19	19
90	90	31 25.7	122 01.1	08/11	1132	1153	397	207	38	38
90	100	31 05.0	122 38.7	08/11	0555	0616	403	210	12	12
90	110	30 45.6	123 20.7	08/11	0020	0041	413	197	36	36
90	120	30 26.4	124 00.3	08/10	1845	1907	427	210	14	14
93	26.7	32 57.1	117 20.9	08/07	1247	1309	425	194	169	169
93	28	32 53.6	117 25.4	08/07	1628	1650	427	182	108	108
93	30	32 50.2	117 33.3	08/07	1923	1944	394	200	107	107
93	35	32 40.7	117 55.3	08/07	2340	0002	413	189	97	97
93	40	32 30.1	118 14.5	08/08	0329	0351	389	208	75	75
93	45	32 21.9	118 34.5	08/08	0805	0828	459	208	46	46
93	50	32 09.7	118 53.7	08/08	1243	1304	410	204	41	41
93	55	32 00.2	119 13.9	08/08	1802	1824	409	213	61	61
93	60	31 49.4	119 35.5	08/08	2211	2233	433	202	62	62
93	70	31 30.4	120 16.1	08/09	0345	0406	420	205	50	50
93	80	31 11.3	120 55.7	08/09	0919	0941	426	196	23	23
93	90	30 50.5	121 35.8	08/09	1748	1809	406	214	17	17
93	100	30 30.8	122 16.5	08/09	2339	0000	417	200	29	29
93	110	30 11.2	122 55.6	08/10	0604	0625	405	219	25	25
93	120	29 51.9	123 35.1	08/10	1228	1249	450	198	18	18

FIGURES

Cruise 9610

1. CalCOFI Cruise 9610, 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 93 (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.

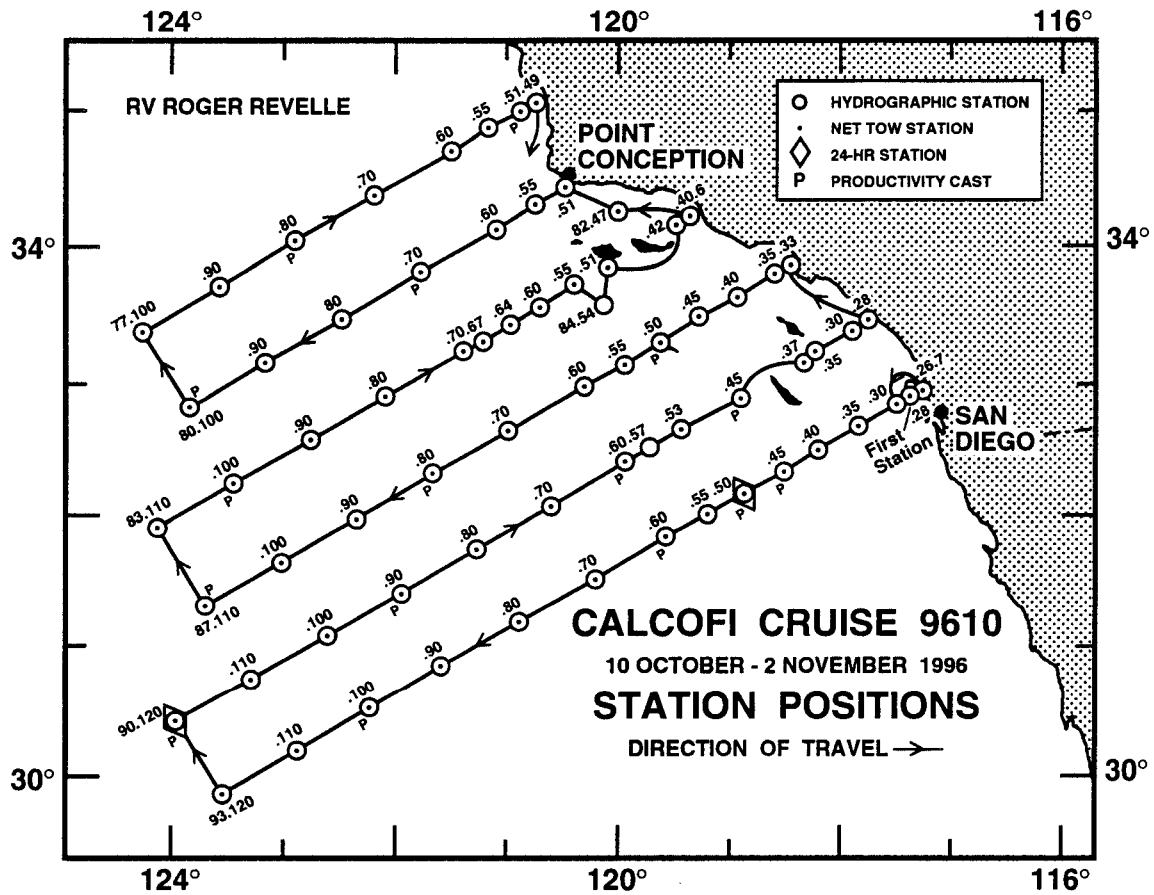


FIGURE 1

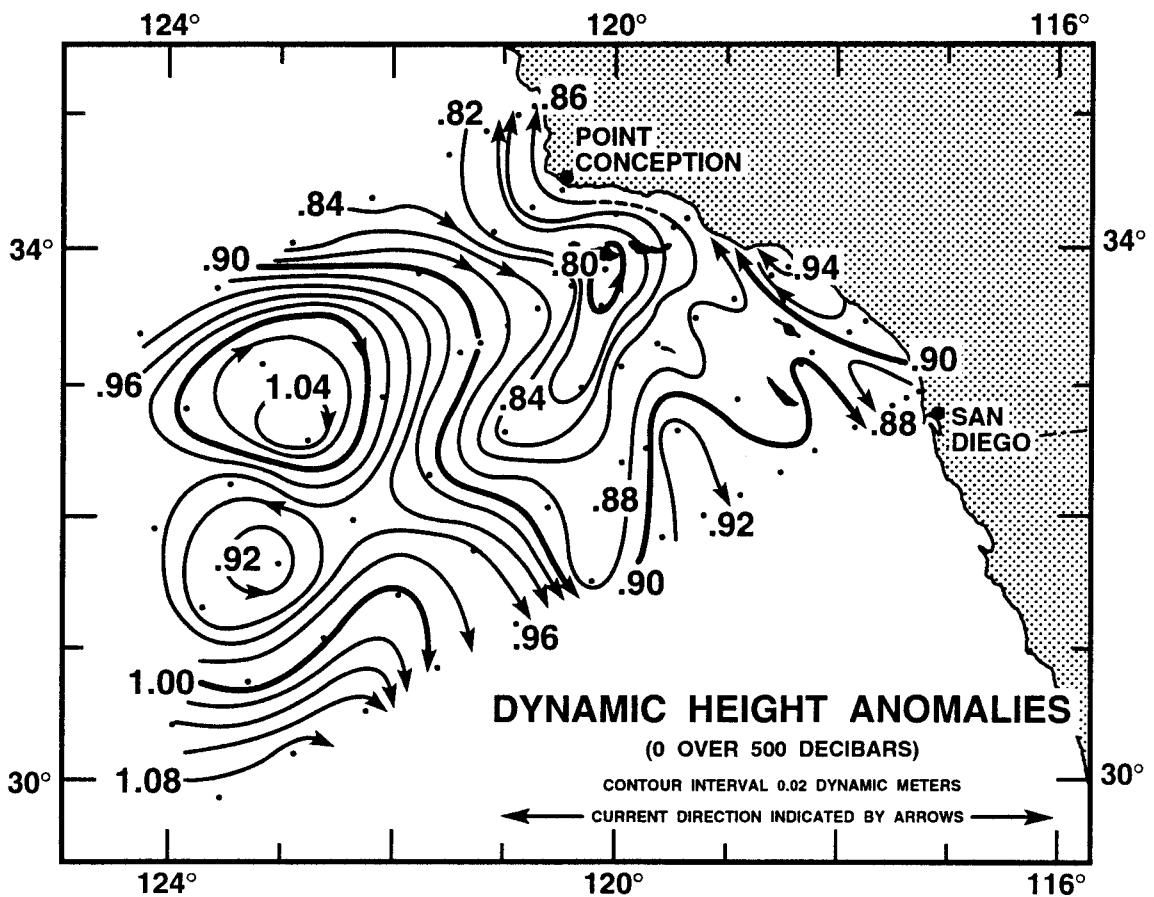


FIGURE 2

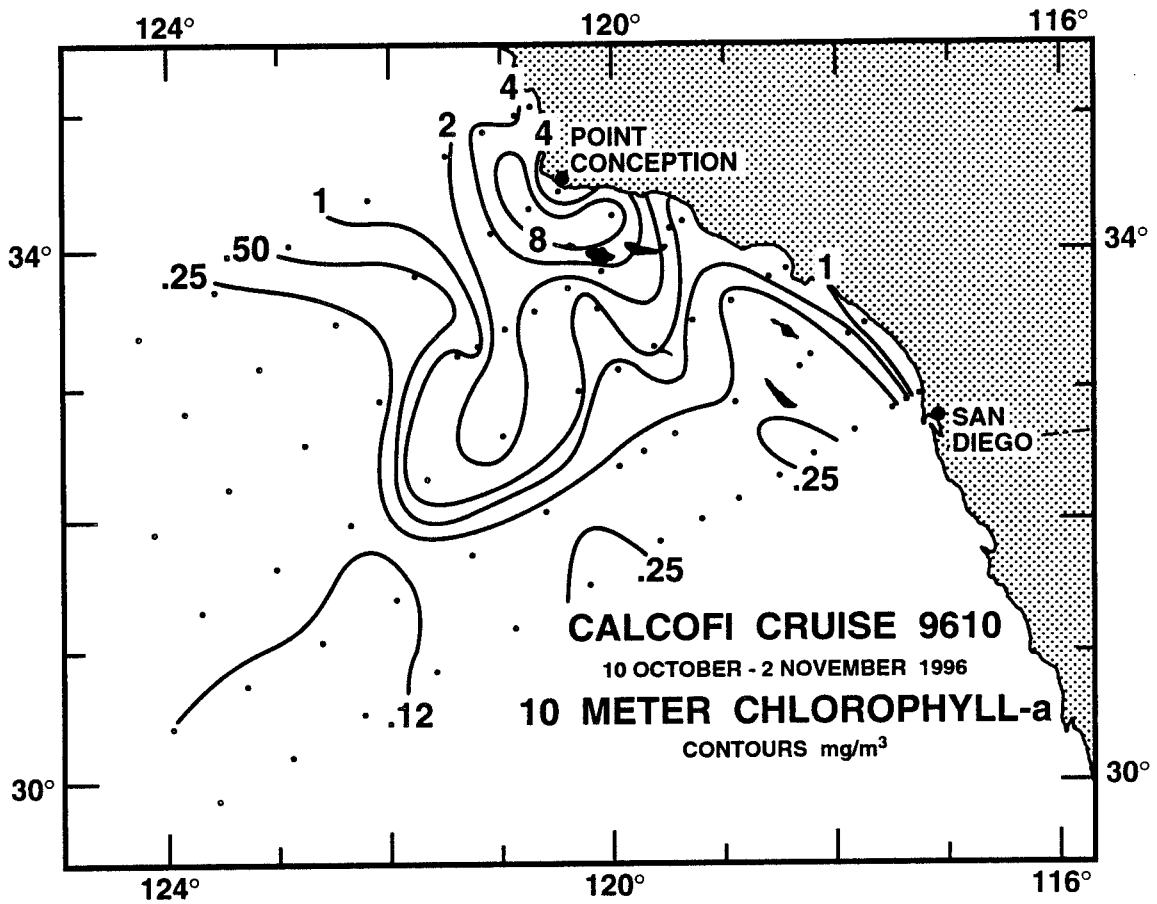


FIGURE 3A

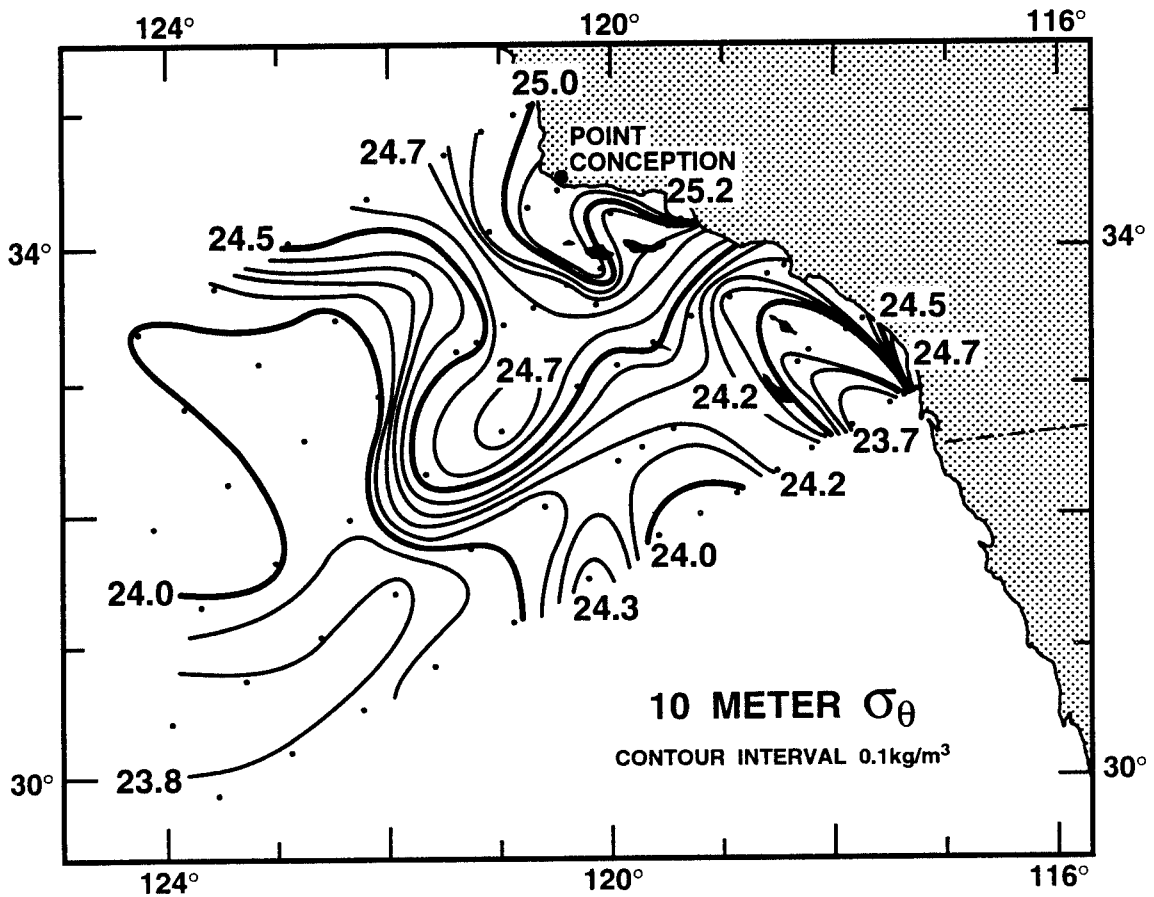


FIGURE 3B

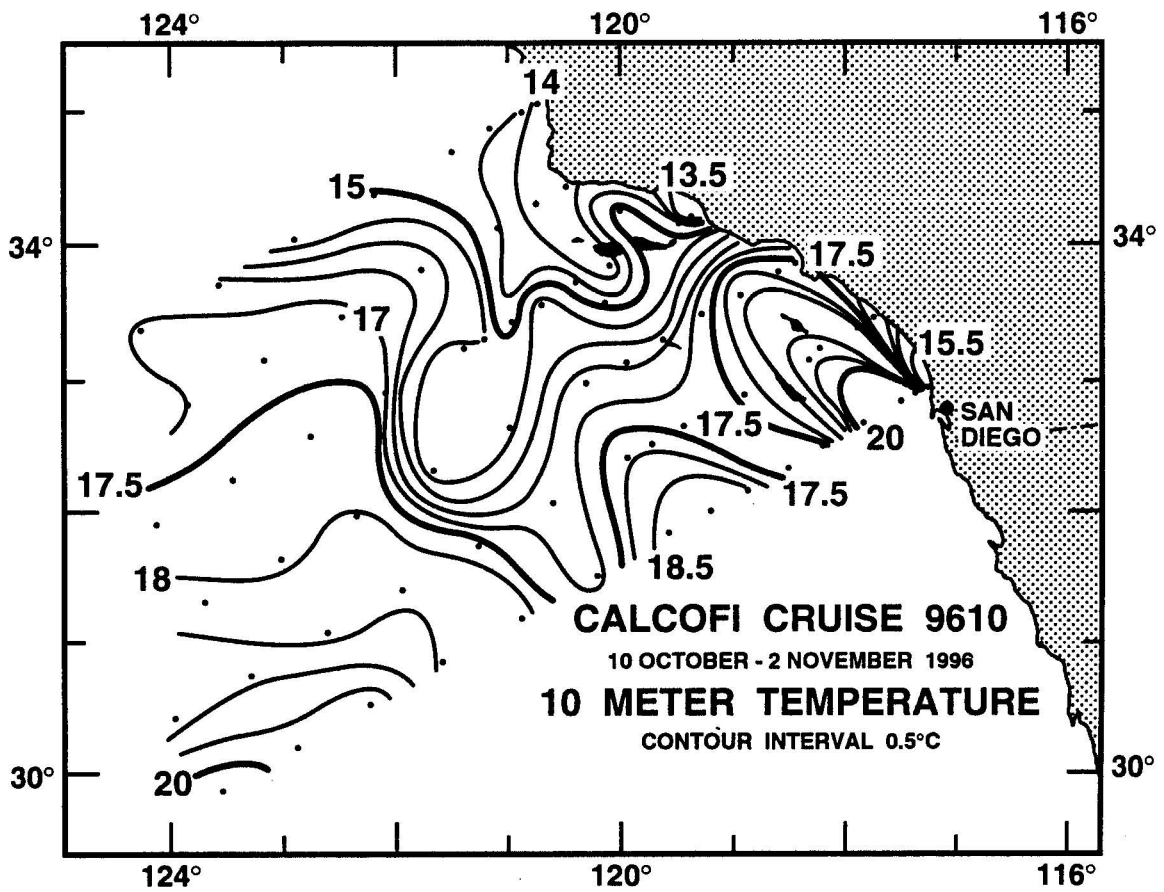


FIGURE 3C

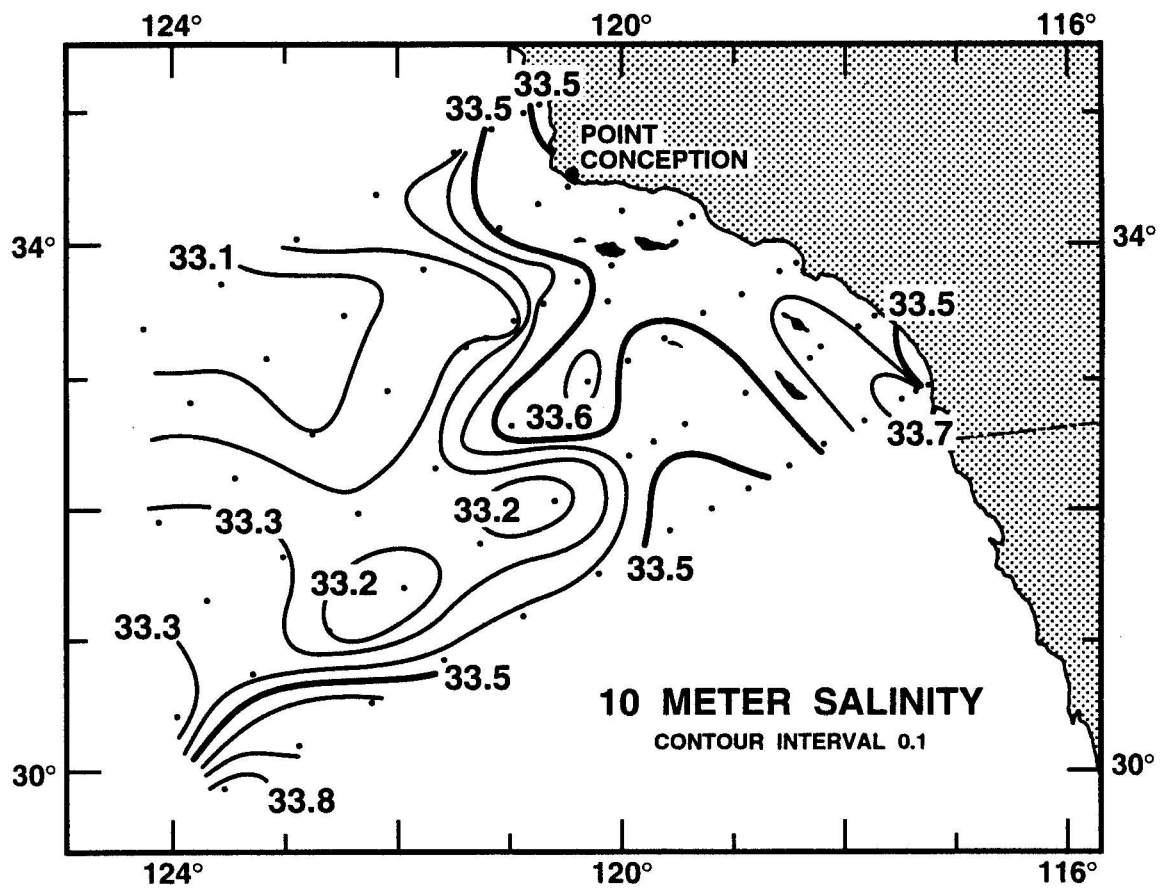


FIGURE 3D

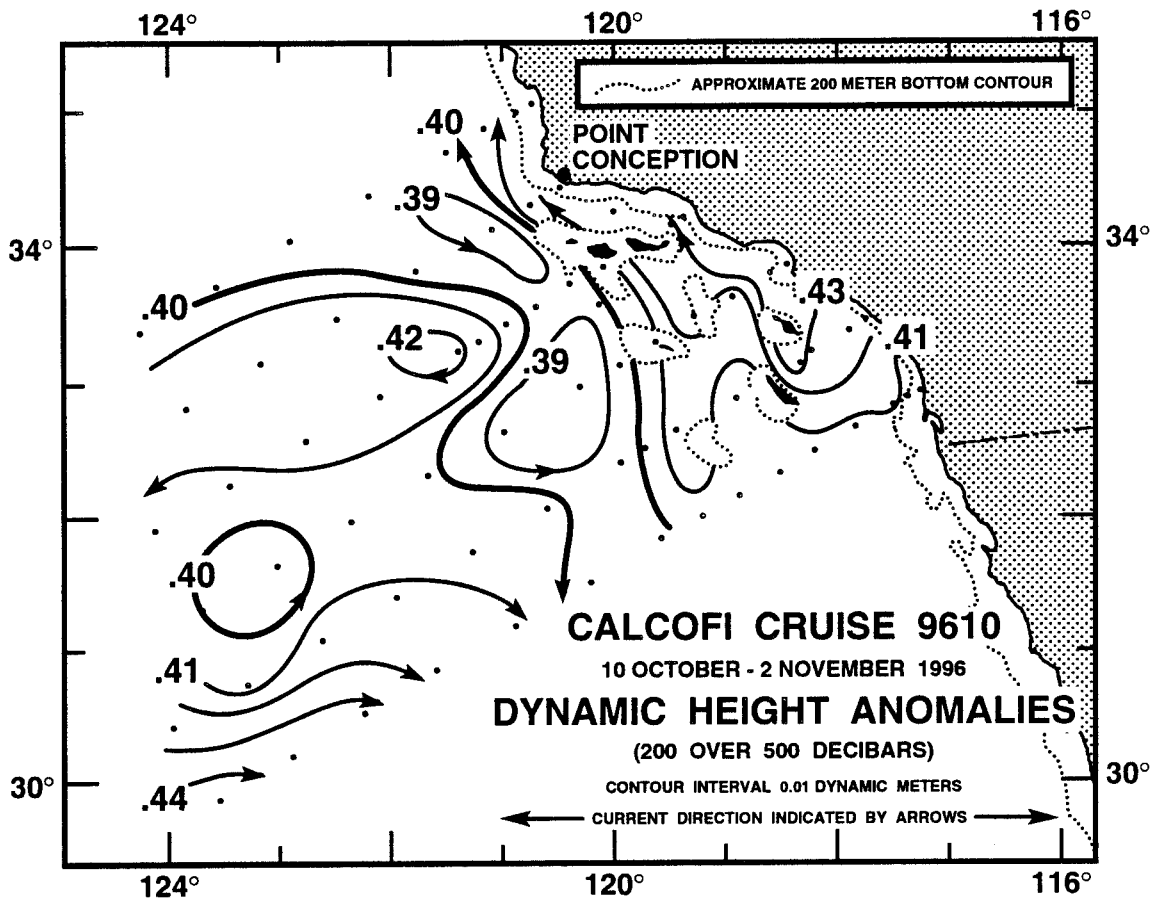


FIGURE 4A

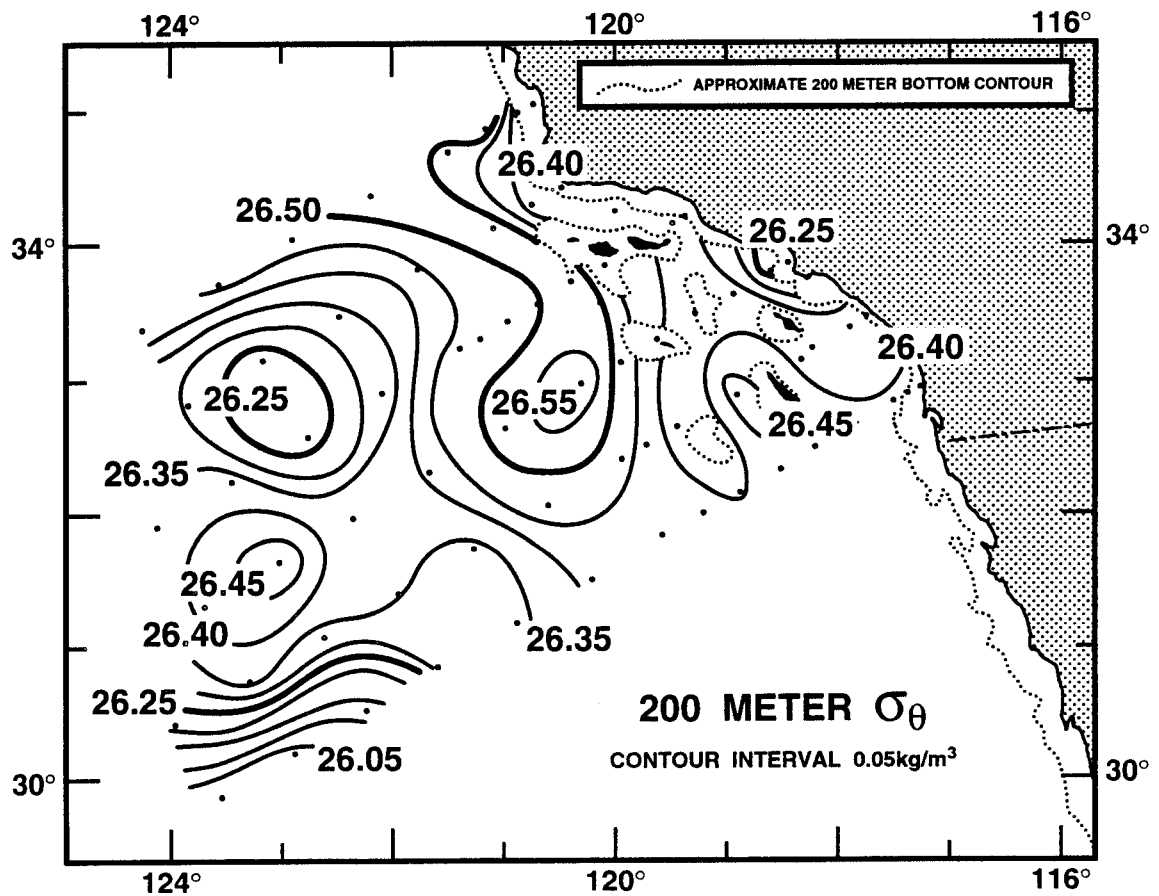


FIGURE 4B

CALCOFI CRUISE 9610

10 - 15 OCTOBER 1996

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 93

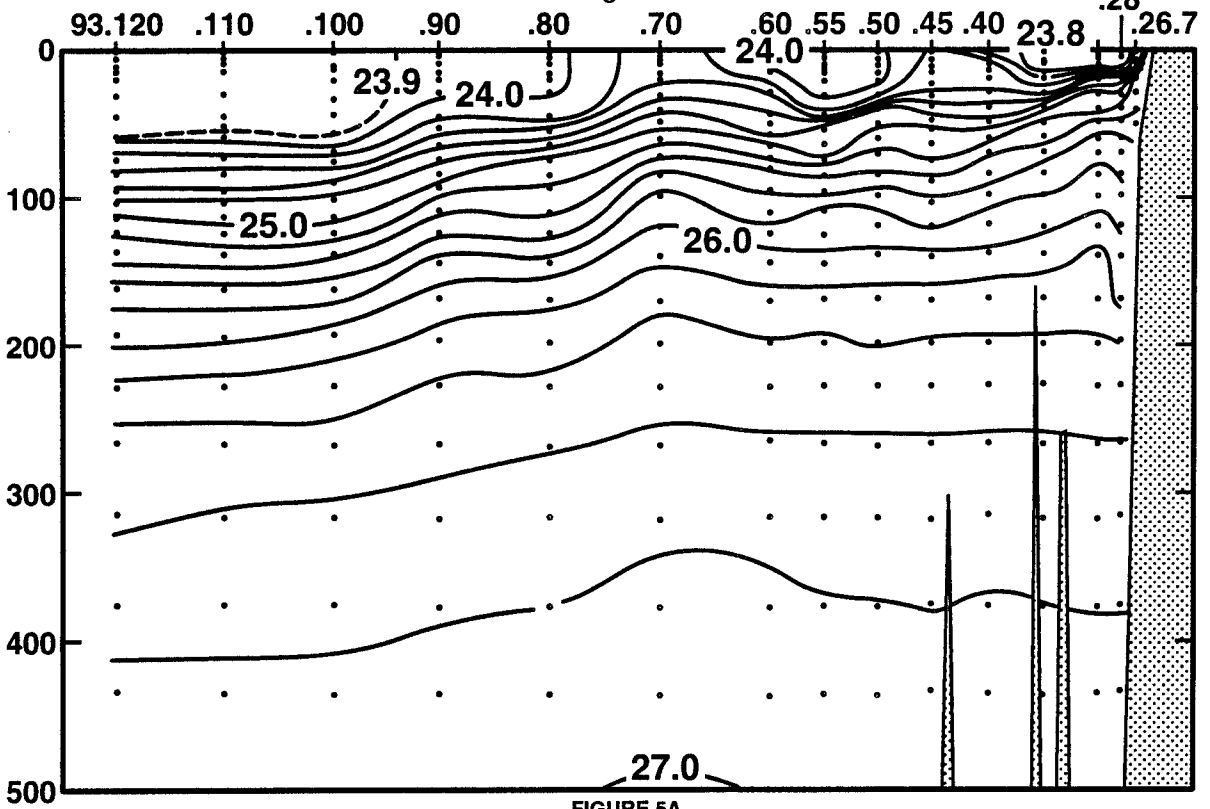


FIGURE 5A

DEPTH (m)

TEMPERATURE (°C) ALONG CALCOFI LINE 93

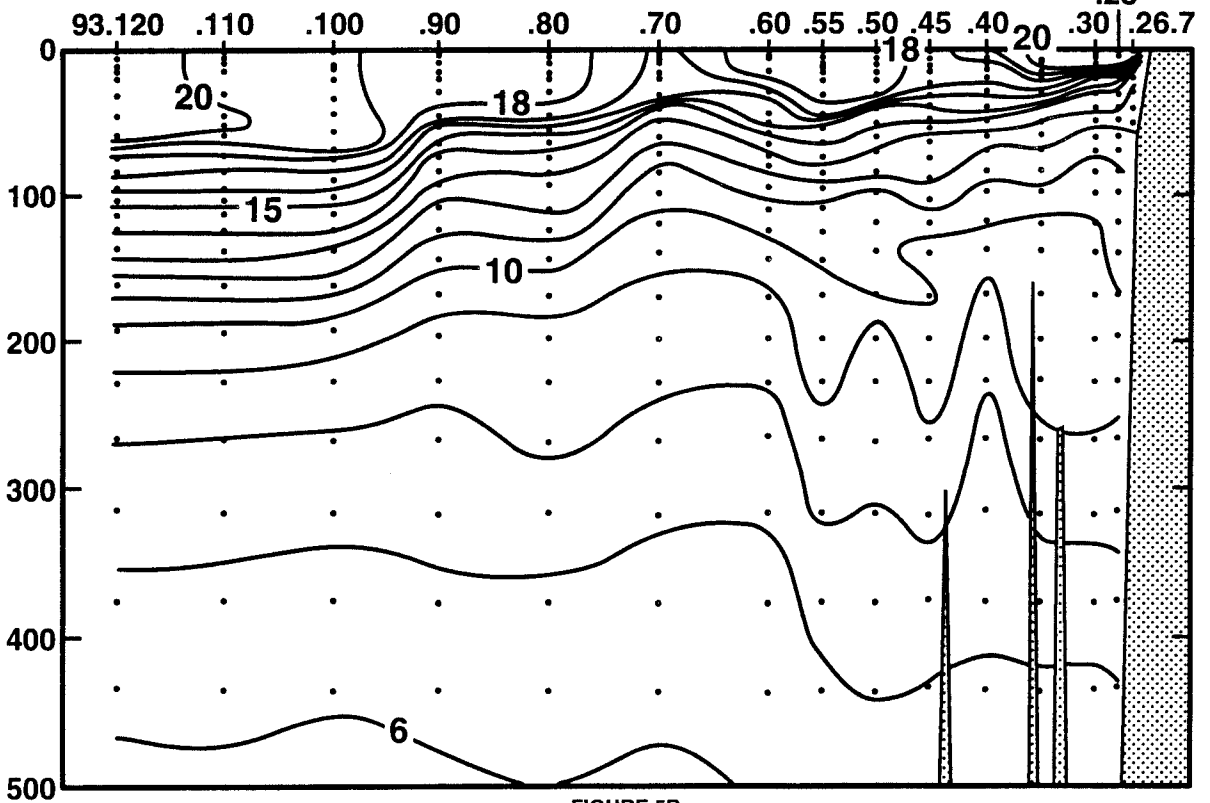


FIGURE 5B

CALCOFI CRUISE 9610

10 - 15 OCTOBER 1996

SALINITY ALONG CALCOFI LINE 93

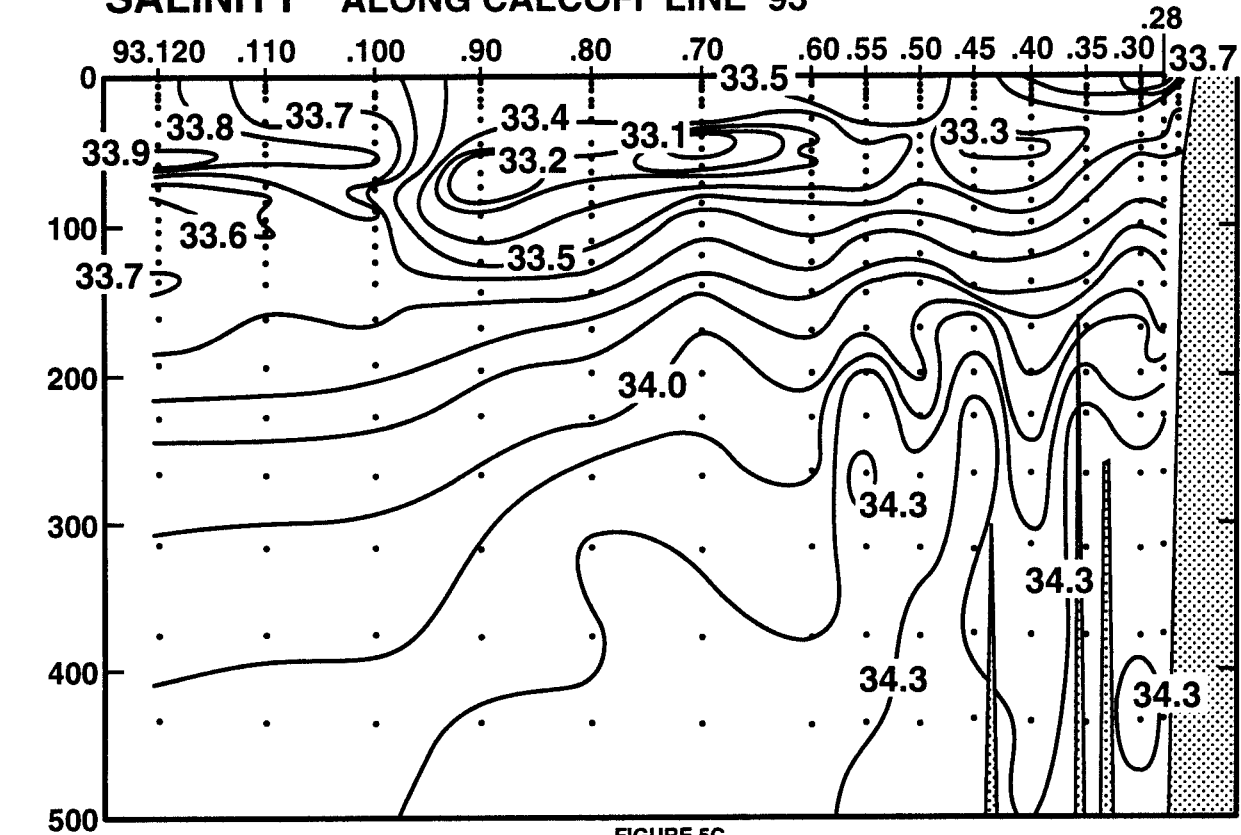


FIGURE 5C

DEPTH (m)

SILICATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

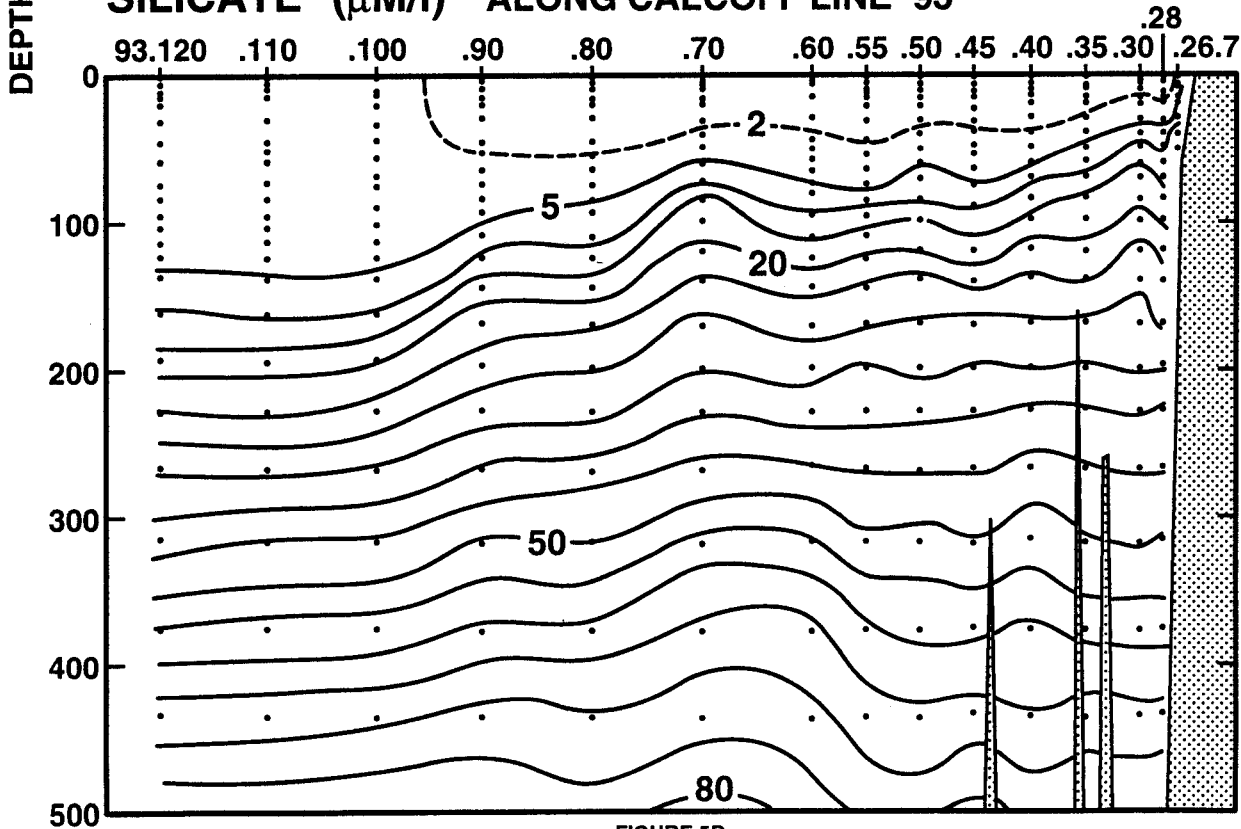


FIGURE 5D

CALCOFI CRUISE 9610

10 - 15 OCTOBER 1996

NITRATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

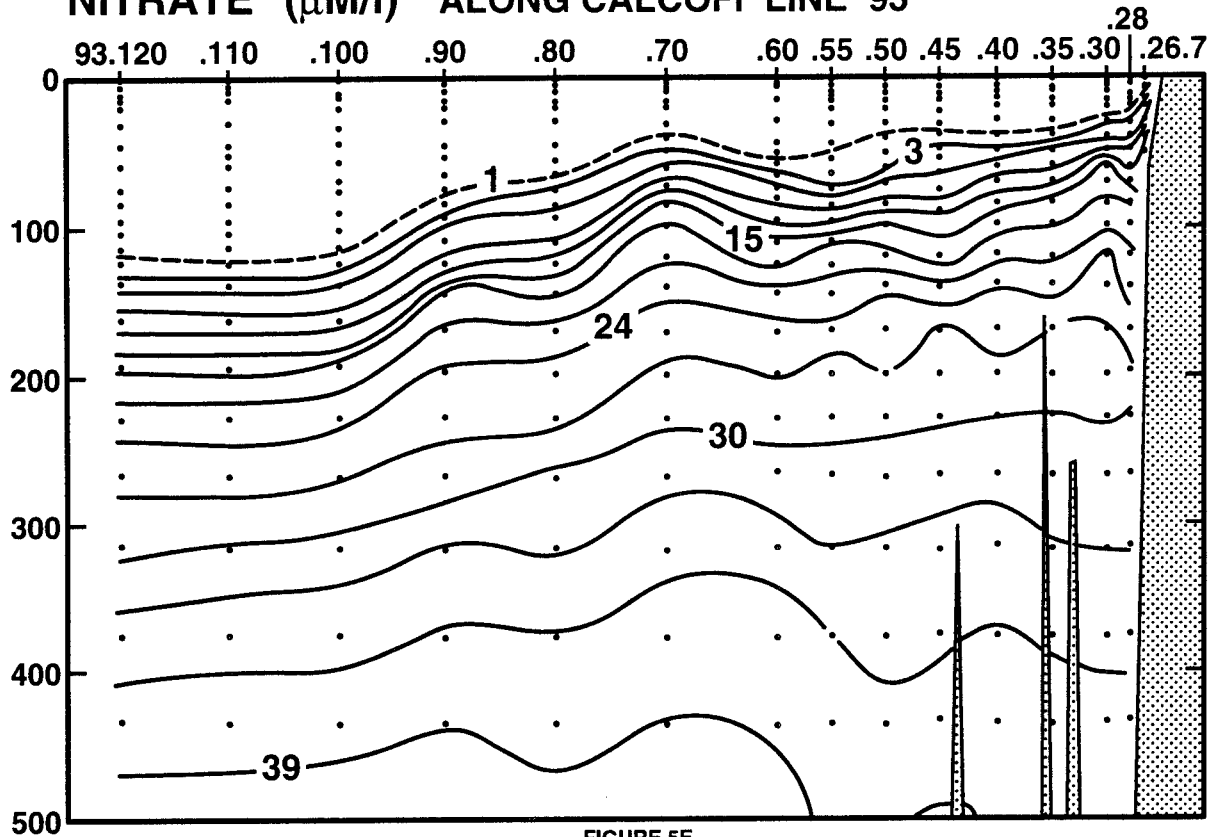


FIGURE 5E

DEPTH (m)

PHOSPHATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 93

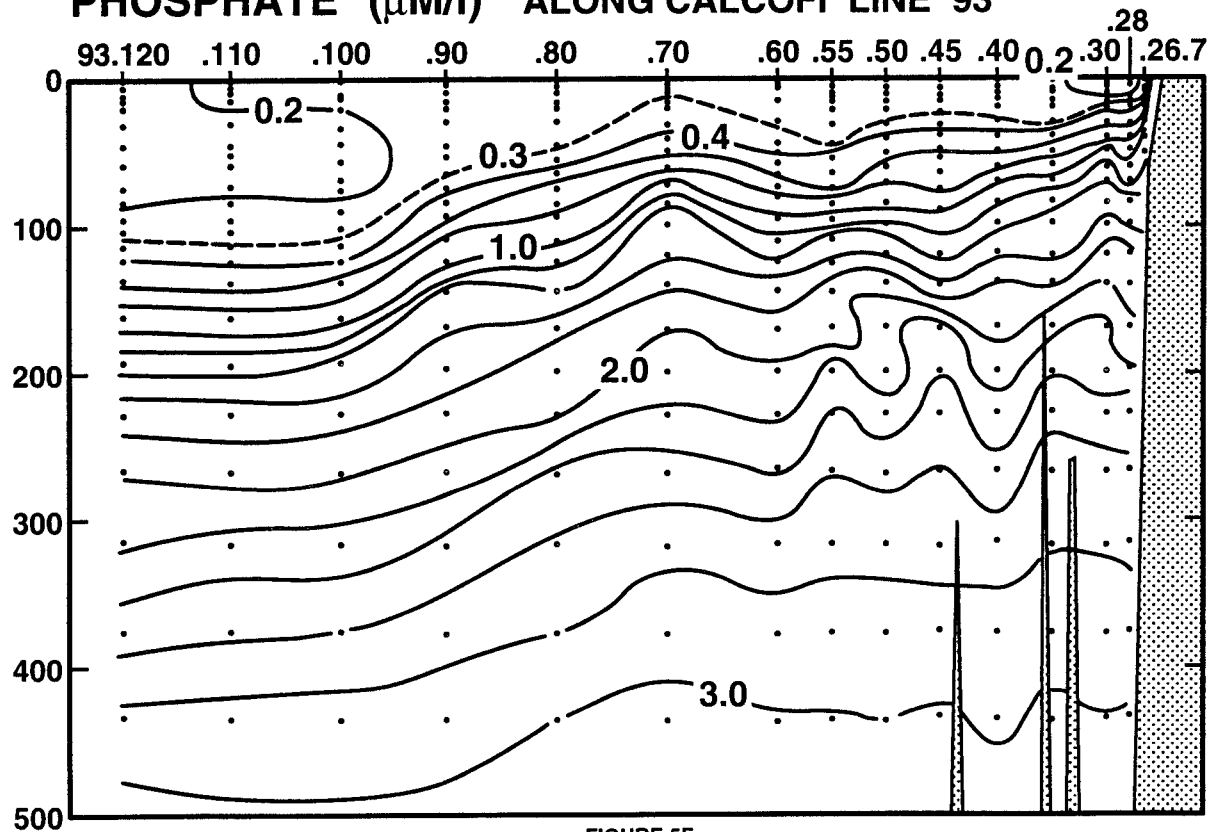


FIGURE 5F

CALCOFI CRUISE 9610

10 - 15 OCTOBER 1996

CHLOROPHYLL-a ($\mu\text{g/l}$) ALONG CALCOFI LINE 93

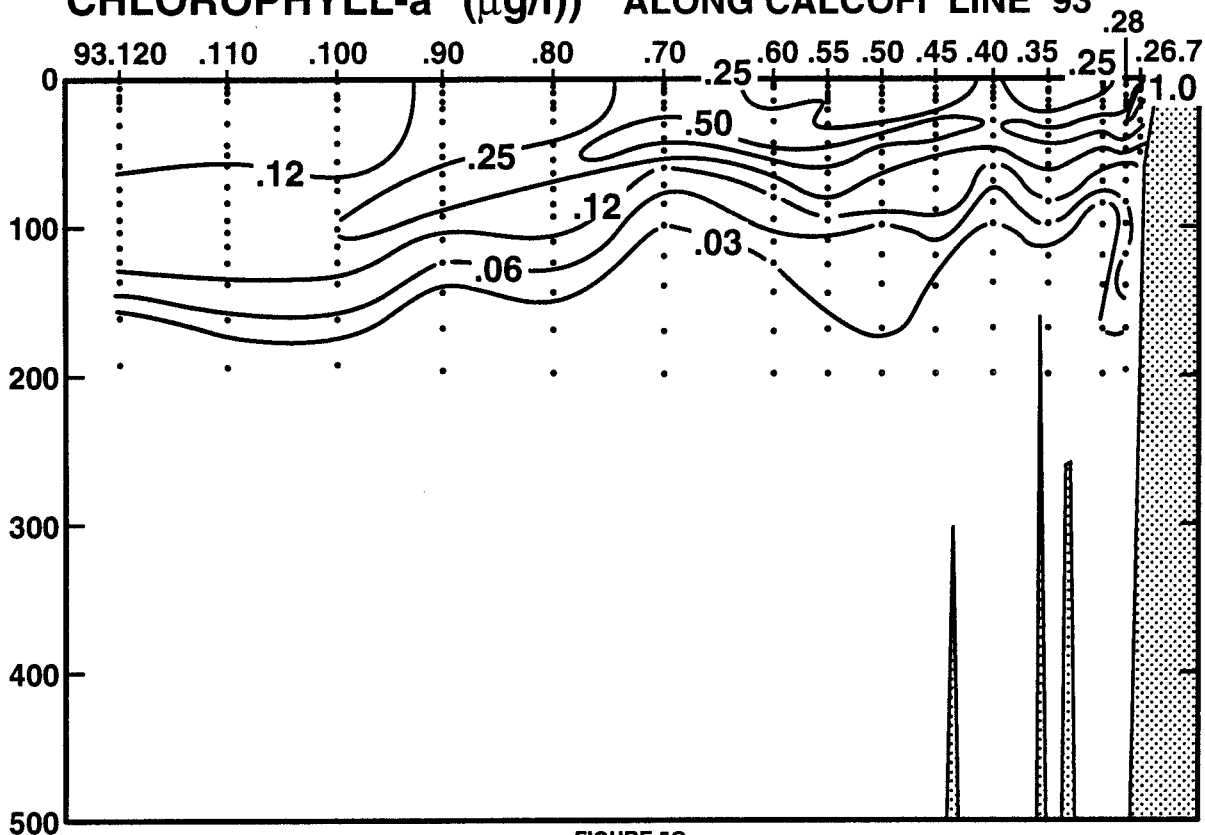


FIGURE 5G

DEPTH (m)

OXYGEN SATURATION (%) ALONG CALCOFI LINE 93

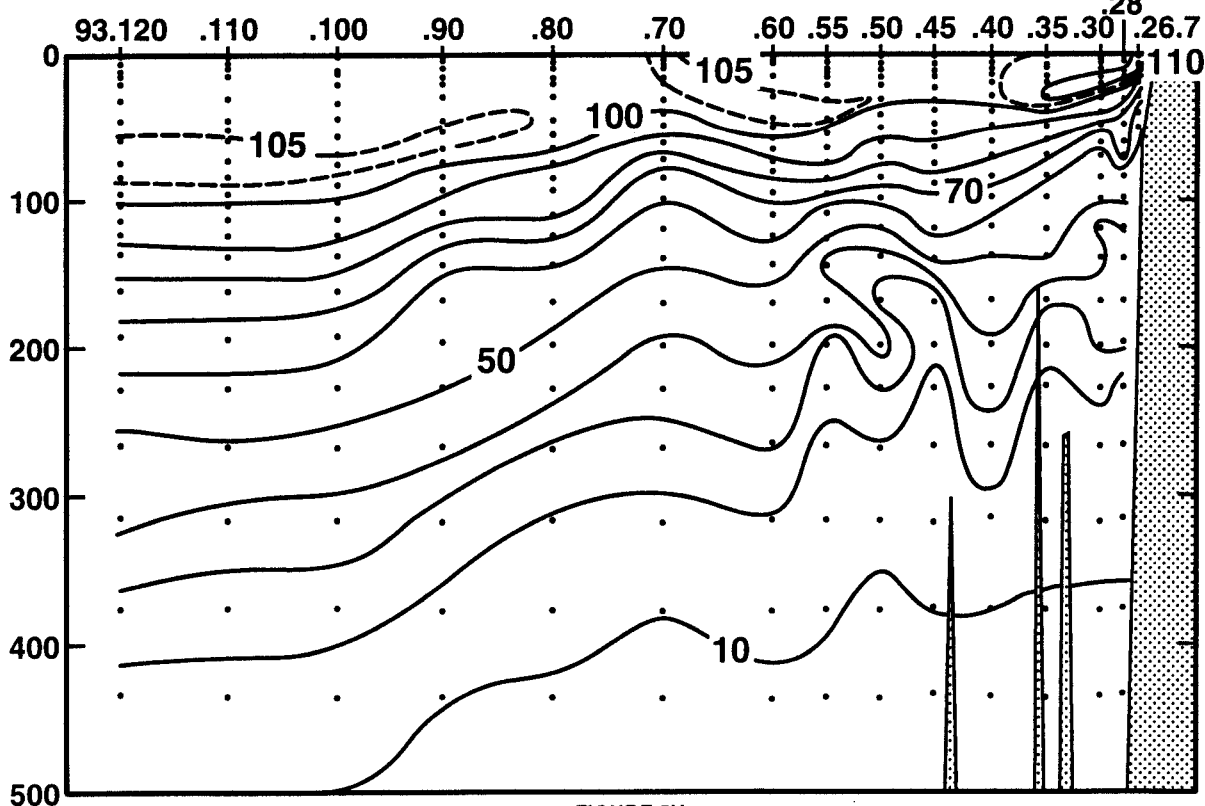


FIGURE 5H

CALCOFI CRUISE 9610

10 - 15 OCTOBER 1996

OXYGEN (ml/l) ALONG CALCOFI LINE 93

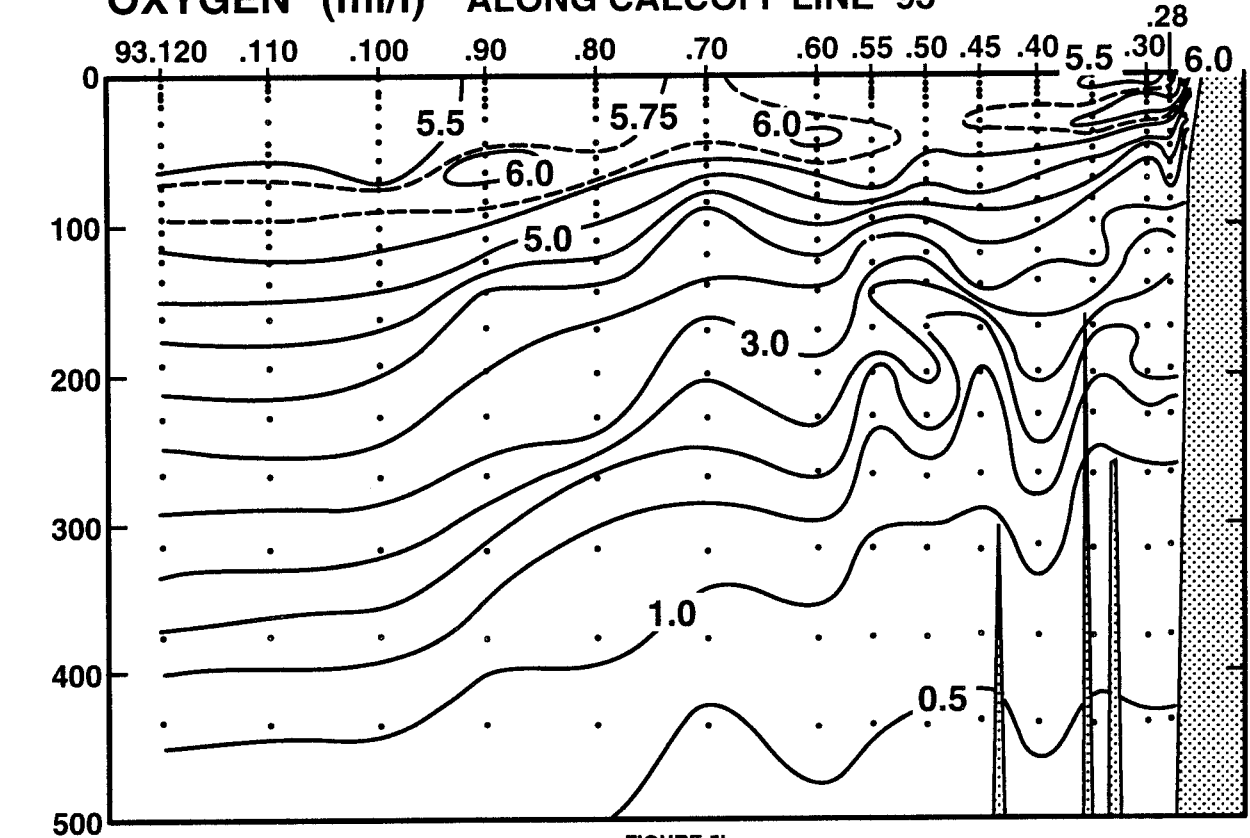


FIGURE 5I

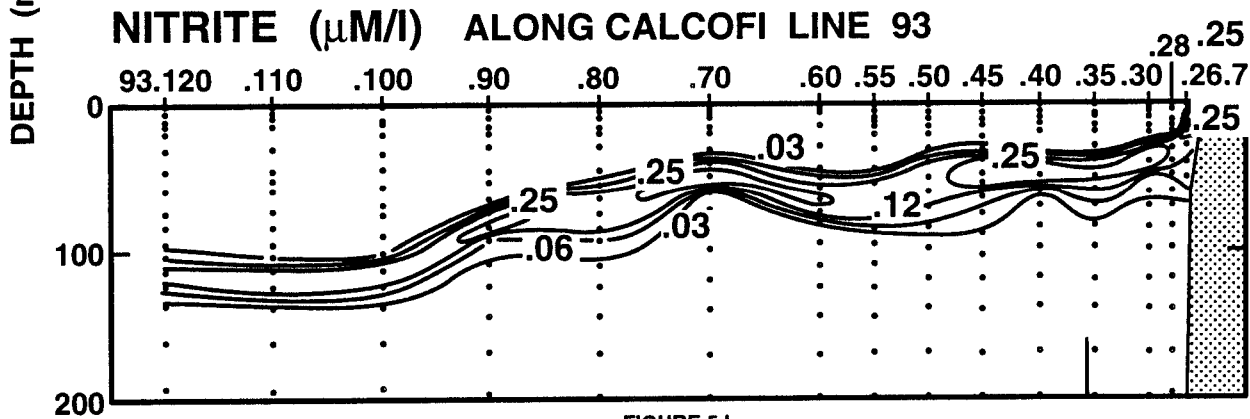


FIGURE 5J

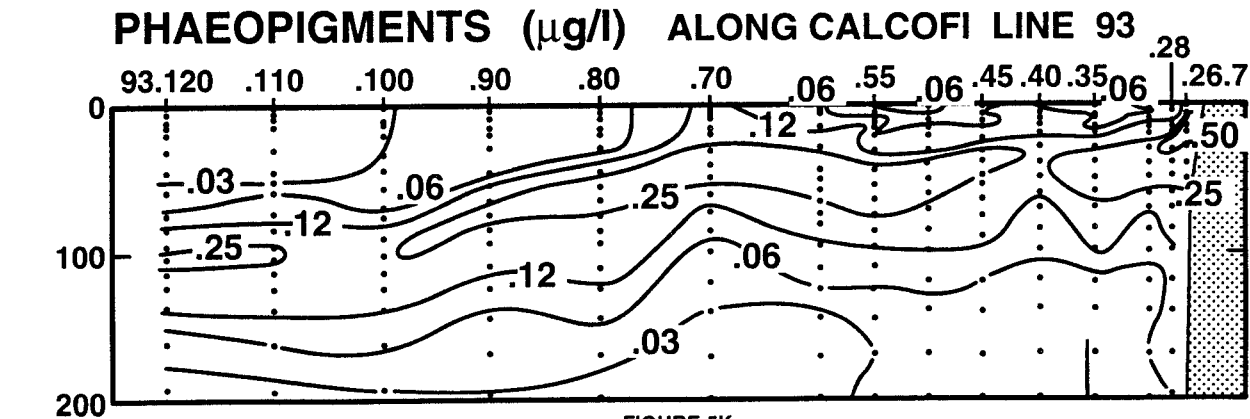


FIGURE 5K

PERSONNEL

CalCOFI Cruise 9610

SHIP'S CAPTAIN

Thomas J. Desjardins, RV *Roger Revelle*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Hayward, Thomas L. (Chief Scientist)	Research Oceanographer, SIO	1,2,3
Renger, Edward H. (Technician in Charge)	Staff Research Associate, SIO	1,2,3
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	1,2,3
Aoki, Kazuma	Graduate Student, Hokkaido University	1
Beaupre, Marie-Claude C.	Staff Research Associate, SIO	1
Bucklin, Ann C.	Associate Research Professor, University of New Hampshire	2
Charters, James S.	Computer Technician, SIO	1,2,3
Clark, M. Elizabeth	Associate Research Professor, University of Miami	2
Collier, Jackie L.	Assistant Professor, Rensselaer Polytechnical Institute	1,2,3
Cummings, Sherry L.	Staff Research Associate, SIO	1,2,3
Fey, Connie L.	Staff Research Associate, SIO	1,2,3
Fougnie, Bertrand S.	Graduate Student, University of Lille	2,3
Frouin, Robert J.	Associate Research Meteorologist, SIO	1
Fruetel, Debra L.	Volunteer	1
Griffith, David A.	Fishery Biologist, NMFS	1,2,3
Goericke, Ralf	Associate Research Oceanographer, SIO	1,2
Gruber, Dennis W.	Marine Technician, SIO	1,2,3
Haury, Lauren R.	Research Oceanographer, SIO	1
Hays, Amy E.	Fishery Biologist, NMFS	1,2,3
Hyrenbach, K. David	Graduate Student, SIO	1,2,3
Masten, Douglas M.	Staff Research Associate, SIO	1,2,3
Mazza, Stephen J.	Staff Research Associate, SIO	1,2,3
McGinnis, Jean L.	Staff Research Associate, SIO	1,2,3
Mitchell, B. Greg	Associate Research Biologist, SIO	1,2,3
Pierson, James J.	Laboratory Assistant, University of New Hampshire	1,2
Rathburn, Anthony E.	Post Graduate Researcher, SIO	1,2
Reynolds, Rick A.	Post Graduate Researcher, SIO	1,2,3
Schnee, Marek	Graduate Student, Inst. of Oceanology, Polish Academy of Sciences	1,2,3
Schwaber, Jason	Research Assistant, WHOI	1,2,3
Shankle, Amy M.	Graduate Student, SIO	1,2,3
Toledo, Gerardo V.	Graduate Student, SIO	1
Van Den Bosch, Jeannette M.	Scientist, NASA Jet Propulsion Laboratory	1
Wiebe, Peter H.	Senior Scientist, WHOI	1
Wilkinson, James R.	Programmer/Analyst, SIO	1,2,3
Wilson, Robert C.	Resident Technician, SIO	1,2,3
Zafiriu, Oliver C.	Senior Scientist, WHOI	1,2,3

Leg 1: San Diego to Dana Point, Ca., 10 - 20 Oct., 1996

Leg 2: Dana Point to Ventura, Ca., 20 - 28 Oct., 1996

Leg 3: Ventura to Port San Luis, Ca., 28 Oct. - 2 Nov., 1996

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
35 5.3 N	120 46.6 W	01/11/96	2045 UTC	74 m	010 17 kn	010 01 04	0	1021.1 mb	19.8 c	14.7 c	08m 11		0/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.27	14.27	33.448	24.932	301.2	0.000	6.81	116.8	0.7	0.32	0.1	0.02	5.10	1.90	0	
2	14.27	14.27	33.448	24.932	301.3	0.006	6.81	116.8	0.7	0.32	0.1	0.02	5.10	1.90	2	210
3	14.26	14.26	33.448	24.934	301.1	0.006	6.81	116.8	0.7	0.30	0.1	0.05	5.29	1.90	2	211
2	14.24	14.24	33.448	24.939	300.7	0.009	6.82	116.9	0.7	0.32	0.0	0.02	5.19	1.92	3	209
6	14.16	14.16	33.448	24.955	299.2	0.018	6.82	116.8	0.8	0.32	0.1	0.05	5.29	1.96	6	208
10	13.99	13.99	33.455	24.996	295.4	0.030	6.60	112.6	1.2	0.36	0.2	0.04	6.33	2.32	10	207
16	13.44	13.44	33.504	25.147	281.2	0.047	5.72	96.5	4.5	0.61	3.4	0.12	5.67	1.95	16	206
20 ISL	13.00	13.00	33.529	25.255	271.1	0.058	5.32	89.0	7.2	0.80	6.4	0.17	3.52	1.71	20	
21	12.90	12.90	33.534	25.278	268.9	0.061	5.24	87.4	7.8	0.85	7.1	0.18	2.96	1.66	21	205
30 ISL	12.33	12.33	33.551	25.402	257.3	0.085	5.12	84.4	11.5	1.04	9.9	0.26	2.45	1.31	30	
31	12.30	12.30	33.551	25.408	256.8	0.087	5.11	84.2	11.8	1.05	10.0	0.27	2.39	1.29	31	204
40	12.24	12.23	33.556	25.424	255.5	0.110	5.04	82.9	12.8	1.09	10.1	0.28	2.13	1.41	40	203
50 ISL	12.24	12.23	33.556	25.424	255.7	0.136	5.05	83.1	13.0	1.09	10.0	0.28	2.25	1.43	50	
51	12.24	12.23	33.556	25.424	255.8	0.138	5.05	83.1	13.0	1.09	10.0	0.28	2.27	1.43	51	202
60	12.22	12.21	33.559	25.430	255.4	0.161	5.01	82.4	13.1	1.10	10.1	0.28	2.31	1.58	60	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
35 1.2 N	120 55.1 W	01/11/96	1849 UTC	243 m	030 07 kn	330 02 08	0	1023.0 mb	17.2 c	13.9 c	09m 08		0/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.76	14.76	33.507	24.874	306.8	0.000	6.50	112.7	0.6	0.28	0.1	0.01	4.15	1.28	0	
2 A	14.76	14.76	33.507	24.874	306.9	0.006	6.50	112.7	0.6	0.28	0.1	0.01	4.15	1.28	2	219
2	14.76	14.76	33.507	24.874	306.9	0.006	6.49	112.5	0.8	0.28	0.1	0.03	4.40	1.22	2	220
3	14.74	14.74	33.507	24.878	306.5	0.009	6.49	112.5	0.7	0.28	0.1	0.01	4.27	1.22	3	218
6 A	14.63	14.63	33.506	24.901	304.4	0.018	6.51	112.6	0.7	0.29	0.1	0.01	3.76	1.46	6	217
10 ISL	14.56	14.56	33.505	24.915	303.1	0.031	6.44	111.2	0.8	0.31	0.2	0.02	3.96	1.73	10	
13 A	14.54	14.54	33.505	24.920	302.8	0.040	6.34	109.4	1.0	0.32	0.2	0.02	4.34	1.88	13	216
15	14.53	14.53	33.506	24.922	302.6	0.046	6.28	108.4	1.1	0.31	0.2	0.02	4.45	1.96	15	215
18 A	14.48	14.48	33.508	24.935	301.5	0.055	6.16	106.2	1.2	0.36	0.4	0.02	4.45	1.79	18	214
20 ISL	14.47	14.47	33.509	24.938	301.3	0.061	6.09	105.0	1.3	0.38	0.5	0.02	4.43	1.74	20	
25 A	14.37	14.37	33.509	24.959	299.4	0.076	5.95	102.3	1.8	0.42	0.9	0.04	4.39	1.66	25	213
30 ISL	13.97	13.97	33.507	25.041	291.7	0.091	5.82	99.3	3.1	0.51	2.0	0.08	3.67	1.45	30	
35 A	13.51	13.51	33.508	25.136	282.8	0.105	5.69	96.1	4.6	0.62	3.3	0.13	2.89	1.30	35	212
45	13.03	13.02	33.525	25.246	272.6	0.133	5.39	90.2	7.0	0.79	6.1	0.18	2.51	1.55	45	211
50 ISL	12.82	12.81	33.526	25.289	268.7	0.146	5.19	86.4	8.1	0.87	7.6	0.23	1.91	1.34	50	
55	12.51	12.50	33.535	25.356	262.3	0.159	4.89	80.9	9.7	0.98	9.5	0.25	1.26	1.05	55	210
65	11.24	11.23	33.629	25.667	232.9	0.184	3.86	62.2	15.9	1.36	16.0	0.11	0.47	0.69	65	209
75	10.56	10.55	33.682	25.829	217.7	0.207	3.62	57.5	19.3	1.54	19.0	0.05	0.20	0.41	75	208
85	10.52	10.51	33.683	25.837	217.1	0.229	3.61	57.3	19.4	1.56	19.2	0.05	0.21	0.46	85	207
95	10.26	10.25	33.735	25.922	209.2	0.250	3.36	53.0	21.9	1.66	20.7	0.04	0.19	0.43	95	206
100 ISL	10.11	10.10	33.756	25.964	205.3	0.260	3.27	51.5	22.9	1.70	21.4	0.04	0.16	0.39	101	
114	9.77	9.76	33.813	26.066	195.8	0.288	3.07	48.0	25.2	1.82	23.0	0.03	0.06	0.30	115	205
125 ISL	9.69	9.68	33.866	26.121	190.9	0.310	2.85	44.5	26.9	1.91	24.1	0.03	0.05	0.29	126	
135	9.64	9.62	33.906	26.161	187.3	0.328	2.70	42.1	28.1	1.98	24.9	0.03	0.04	0.29	136	204
150 ISL	9.42	9.40	33.913	26.203	183.6	0.356	2.76	42.8	28.8	1.97	25.2	0.03	0.03	0.23	151	
160	9.26	9.24	33.913	26.229	181.3	0.375	2.82	43.6	29.2	1.97	25.3	0.03	0.03	0.19	161	203
189	9.02	9.00	34.011	26.344	170.9	0.426	2.39	36.8	33.8	2.15	27.2	0.05	0.18	0.26	190	202
200 ISL	8.97	8.95	34.059	26.390	166.7	0.444	2.10	32.3	36.5	2.26	28.2	0.07	0.13	0.22	201	
219	8.87	8.85	34.141	26.470	159.5	0.475	1.61	24.7	41.2	2.44	29.9	0.10	0.05	0.16	220	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
34 53.3 N	121 11.9 W	01/11/96	1139 UTC	572 m	040 11 kn			1023.1 mb	14.6 c	12.3 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.56	14.56	33.531	24.935	301.0	0.000	6.41	110.7	0.6	0.34	0.3	0.04	5.67	2.07	0	
2	14.56	14.56	33.531	24.935	301.0	0.006	6.41	110.7	0.6	0.34	0.3	0.04	5.67	2.07	2	224
3	14.56	14.56	33.530	24.934	301.1	0.009	6.40	110.5	0.5	0.35	0.3	0.04	5.62	1.63	3	223
6	14.56	14.56	33.529	24.934	301.3	0.018	6.38	110.2	0.5	0.36	0.5	0.05	5.53	2.09	6	222
6	14.56	14.56	33.531	24.935	301.1	0.018	6.40	110.5	0.5	0.35	0.5	0.05	5.53	2.03	6	221
10	14.56	14.56	33.531	24.935	301.2	0.030	6.32	109.1	0.5	0.33	0.6	0.05	5.76	1.98	10	220
15	14.52	14.52	33.533	24.945	300.4	0.045	6.13	105.8	1.1	0.40	1.0	0.07	5.53	1.78	15	219
20	14.51	14.51	33.535	24.949	300.2	0.060	6.06	104.5	1.4	0.44	1.3	0.08	5.34	1.85	20	218
30	14.26	14.26	33.543	25.009	294.8	0.090	5.73	98.3	3.1	0.56	2.8	0.10			30	217
40	13.40	13.39	33.524	25.171	279.6	0.119	5.21	87.8	6.3	0.78	5.9	0.16	2.58	1.98	40	216
50	12.49	12.48	33.535	25.360	261.9	0.146	4.65	76.9	9.9	1.04	9.9	0.21	1.54	0.95	50	215
60	11.20	11.19	33.642	25.684	231.2	0.170	3.80	61.2	16.6	1.43	16.8	0.27	0.51	0.61	60	214
70	9.79	9.78	33.779	26.035	197.8	0.192	3.11	48.6	23.8	1.80	22.7	0.03	0.15			

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 32.9 W	01/11/96	0744 UTC	941 m	360 14 kn			1023.0 mb	14.8 c	13.3 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	14.59	14.59	33.255	24.716	321.8	0.000	6.32	109.0	2.0	0.38	0.4	0.04	1.97	0.59	0	
1	14.59	14.59	33.255	24.716	321.9	0.003	6.32	109.0	2.0	0.38	0.4	0.04	1.97	0.59	1	224
3	14.59	14.59	33.255	24.716	321.9	0.010	6.33	109.2	2.0	0.38	0.4	0.04	1.89	0.86	3	223
6	14.59	14.59	33.254	24.715	322.1	0.019	6.31	108.8	2.0	0.37	0.4	0.04	1.82	0.64	6	221
6	14.60	14.60	33.255	24.714	322.2	0.019	6.32	109.0	2.0	0.38	0.4	0.04	2.16	0.57	6	222
10	14.58	14.58	33.255	24.718	321.9	0.032	6.33	109.2	2.0	0.38	0.4	0.04	1.89	0.70	10	220
15	14.53	14.53	33.256	24.730	321.0	0.048	6.32	108.9	2.0	0.38	0.4	0.04	1.70	0.55	15	219
20	14.25	14.25	33.256	24.789	315.5	0.064	6.19	106.0	2.4	0.43	1.1	0.06	2.73	1.20	20	218
30	13.58	13.58	33.278	24.944	300.9	0.095	6.01	101.6	4.0	0.58	3.1	0.13	3.04	1.10	30	217
40	13.09	13.08	33.318	25.074	288.8	0.124	5.73	95.9	5.8	0.70	5.1	0.18	2.63	1.05	40	216
50	12.95	12.94	33.366	25.139	282.9	0.153	5.12	85.4	8.7	0.92	8.4	0.22	1.92	0.81	50	215
60	11.32	11.31	33.509	25.559	243.1	0.179	4.45	71.8	13.7	1.25	14.3	0.17	0.68	0.67	60	214
69	10.79	10.78	33.655	25.767	223.4	0.200	3.78	60.3	18.4	1.52	18.7	0.07	0.31	0.44	69	213
75 ISL	10.45	10.44	33.703	25.864	214.3	0.213	3.53	55.9	20.4	1.63	20.4	0.05	0.24	0.38	75	
85	9.99	9.98	33.745	25.976	203.8	0.234	3.31	51.9	22.7	1.74	21.9	0.03	0.13	0.34	85	212
100	9.62	9.61	33.793	26.075	194.7	0.264	3.20	49.8	24.7	1.83	23.2	0.02	0.06	0.21	101	211
120	9.10	9.09	33.908	26.250	178.4	0.302	2.84	43.7	29.3	2.00	25.7	0.01	0.04	0.16	121	210
125 ISL	9.02	9.01	33.919	26.271	176.5	0.310	2.84	43.7	29.8	2.00	25.9	0.01	0.04	0.16	126	
140	8.84	8.83	33.941	26.317	172.4	0.337	2.85	43.6	31.0	2.01	26.3	0.01	0.04	0.17	141	209
150 ISL	8.74	8.72	33.965	26.351	169.3	0.354	2.75	42.0	32.2	2.05	26.9	0.01	0.04	0.16	151	
170	8.59	8.57	34.014	26.413	163.7	0.387	2.50	38.1	34.8	2.16	28.1	0.01			171	208
199	8.40	8.38	34.062	26.480	157.9	0.434	2.26	34.3	37.9	2.26	29.2	0.01	0.03	0.11	200	207
200 ISL	8.39	8.37	34.065	26.484	157.5	0.435	2.24	34.0	38.1	2.27	29.3	0.01			201	
229	8.23	8.21	34.160	26.583	148.6	0.480	1.65	25.0	44.3	2.48	31.5	0.01			230	206
250 ISL	8.11	8.08	34.187	26.623	145.2	0.510	1.48	22.3	46.8	2.56	32.3	0.01			252	
269	7.99	7.96	34.195	26.647	143.2	0.538	1.41	21.2	48.4	2.61	32.7	0.01			271	205
300 ISL	7.73	7.70	34.194	26.685	140.0	0.582	1.29	19.3	51.2	2.67	33.6	0.01			302	
318	7.58	7.55	34.194	26.707	138.1	0.607	1.22	18.2	52.9	2.71	34.1	0.01			320	204
378	7.26	7.22	34.263	26.807	129.4	0.687	0.76	11.2	60.8	2.92	36.3	0.01			381	203
400 ISL	7.00	6.96	34.267	26.847	125.9	0.715	0.67	9.9	64.2	2.98	37.1	0.01			403	
437	6.54	6.50	34.264	26.907	120.3	0.761	0.57	8.3	69.9	3.06	38.4	0.01			440	202
500 ISL	6.06	6.02	34.260	26.966	115.1	0.835	0.51	7.3	77.1	3.12	40.1	0.01			504	
515	5.95	5.90	34.259	26.979	114.0	0.852	0.50	7.2	78.8	3.14	40.5	0.01			519	201

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 14.8 W	01/11/96	0143 UTC	4018 m	00 kn	330 02 05	1	1021.3 mb	15.3 c	13.6 c			4/8	CB		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	15.26	15.26	33.246	24.564	336.3	0.000	6.10	106.7	1.9	0.33	0.1	0.02	0.86	0.32	0	
2	15.27	15.27	33.247	24.563	336.5	0.007	6.10	106.7	1.9	0.33	0.2	0.02	0.87	0.33	2	224
2	15.26	15.26	33.246	24.564	336.3	0.007	6.10	106.7	1.9	0.33	0.1	0.02	0.86	0.32	2	222
4	15.24	15.24	33.248	24.570	335.8	0.013	6.10	106.6	1.8	0.33	0.1	0.02	0.96	0.33	4	223
7	15.19	15.19	33.247	24.580	334.9	0.024	6.11	106.7	1.7	0.33	0.1	0.02	0.91	0.34	7	221
10	15.02	15.02	33.260	24.627	330.5	0.033	6.15	107.0	1.6	0.33	0.1	0.02	1.33	0.51	10	220
16	14.82	14.82	33.337	24.730	320.9	0.053	6.36	110.3	0.7	0.30	0.0	0.01	1.99	0.94	16	219
20 ISL	14.75	14.75	33.458	24.839	310.7	0.066	6.33	109.7	0.6	0.32	0.1	0.01	2.91	1.35	20	
21	14.73	14.73	33.486	24.865	308.3	0.069	6.32	109.5	0.6	0.32	0.1	0.01	3.10	1.44	21	218
30	14.24	14.24	33.479	24.963	299.1	0.096	5.77	98.9	3.0	0.55	1.9	0.09	1.54	1.08	30	217
40	13.76	13.75	33.480	25.064	289.8	0.126	5.41	91.9	5.4	0.71	4.8	0.14	1.12	1.04	40	216
50	12.00	11.99	33.296	25.268	270.6	0.154	5.12	83.7	8.7	0.95	9.1	0.20	0.53	0.61	50	215
60	11.79	11.78	33.459	25.434	255.0	0.180	4.79	78.0	10.7	1.08	11.0	0.24	0.31	0.48	60	214
70	10.44	10.43	33.346	25.588	240.4	0.205	4.57	72.3	13.8	1.27	14.7	0.04	0.13	0.21	70	213
75 ISL	10.16	10.15	33.370	25.654	234.2	0.216	4.44	69.8	15.2	1.34	16.0	0.04	0.12	0.21	75	
85	9.92	9.91	33.474	25.776	222.8	0.239	4.16	65.1	17.8	1.46	18.2	0.03	0.11	0.22	85	212
100	9.44	9.43	33.607	25.959	205.6	0.271	3.80	58.9	21.9	1.65	21.1	0.02	0.05	0.13	101	211
120	8.95	8.94	33.764	26.161	186.8	0.311	3.66	56.1	25.2	1.73	23.0	0.02	0.03	0.11	121	210
125 ISL	8.85	8.84	33.790	26.197	183.5	0.320	3.57	54.6	26.4	1.77	23.6	0.02	0.03	0.11	126	
139	8.58	8.57	33.845	26.282	175.6	0.345	3.31	50.4	29.7	1.90	25.4	0.02	0.03	0.12	140	209
150 ISL	8.39	8.37	33.880	26.339	170.4	0.364	3.19	48.3	31.8	1.96	26.4	0.02	0.03	0.12	151	
169	8.10	8.08	33.926	26.418	163.0	0.396	3.06	46.1	34.8	2.03	27.6	0.01	0.02	0.10	170	208
199	7.67	7.65	33.973	26.519	153.9	0.443	2.90	43.3	39.2	2.13	29.1	0.01	0.02	0.08	200	207
200 ISL	7.66	7.64	33.974	26.521	153.7	0.445	2.89	43.1	39.4	2.13	29.2	0.01			201	
229	7.30	7.28	34.004	26.596	146.9	0.488	2.56	37.9	44.9	2.28	31.0	0.01			230	206
250 ISL	7.01	6.99	34.008	26.639	143.0	0.519	2.42	35.5	48.4	2.36	32.1	0.00			252	
269	6.78	6.76	34.009	26.672	140.1	0.546	2.31	33.8	51.3	2.42	33.0	0.00			271	205
300 ISL	6.57	6.54	34.026	26.713	136.5	0.589	1.99	28.9	56.0	2.54	34.6	0.00			302	
318	6.48	6.45	34.039	26.735	134.6	0.613	1.78	25.8	58.7	2.61	35.5	0.00			320	204
378	6.09	6.06	34.090													

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
34 3.1 N	122 56.6 W	31/10/96	1758 UTC	4236 m	360	07 kn	330 03 08	1	1019.7 mb	16.1 C	13.7 C	17m 04	5/8		AC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	db	
0 ISL	15.42	15.42	33.228	24.515	340.9	0.000	5.95	104.4	1.9	0.36	0.2	0.03	0.70	0.21	0	
1	15.42	15.42	33.229	24.516	340.9	0.003	5.93	104.0	1.9	0.36	0.2	0.03	0.70	0.17	1	224
2 A	15.42	15.42	33.228	24.515	341.0	0.007	5.95	104.4	1.9	0.36	0.2	0.03	0.70	0.21	2	223
3	15.40	15.40	33.229	24.520	340.5	0.010	5.94	104.1	1.9	0.35	0.2	0.03	0.69	0.21	3	222
7	15.41	15.41	33.230	24.519	340.8	0.024	5.94	104.2	1.9	0.35	0.2	0.03	0.61	0.17	7	221
10 ISL	15.38	15.38	33.231	24.526	340.2	0.034	5.95	104.3	1.9	0.35	0.2	0.03	0.63	0.18	10	
12 A	15.35	15.35	33.232	24.534	339.5	0.041	5.95	104.2	1.9	0.35	0.2	0.03	0.64	0.19	12	220
15	15.32	15.32	33.236	24.544	338.7	0.051	5.94	104.0	1.9	0.36	0.2	0.04	0.68	0.20	15	219
20 ISL	15.16	15.16	33.272	24.607	332.8	0.068	5.94	103.7	1.9	0.35	0.2	0.04	0.66	0.18	20	
23 A	14.98	14.98	33.290 D	24.660	327.9	0.078	5.94	103.3	1.9	0.35	0.2	0.04	0.65	0.17	23	218
30 ISL	14.14	14.14	33.257	24.813	313.4	0.100	5.92	101.2	2.3	0.42	0.8	0.13	0.62	0.26	30	
35 A	13.42	13.42	33.211	24.925	302.9	0.116	5.90	99.3	2.6	0.50	1.8	0.19	0.60	0.33	35	217
47 A	11.99	11.98	33.087	25.107	285.8	0.151	5.57	90.9	5.3	0.80	6.3	0.19	0.27	0.23	47	216
50 ISL	11.89	11.88	33.099	25.135	283.1	0.159	5.53	90.1	5.6	0.83	6.9	0.15	0.25	0.21	50	
56	11.74	11.73	33.146	25.200	277.1	0.176	5.44	88.4	6.4	0.89	8.0	0.06	0.22	0.18	56	215
66 A	11.02	11.01	33.236	25.400	258.2	0.203	5.02	80.3	9.8	1.06	11.1	0.04	0.13	0.12	66	214
75 ISL	10.62	10.61	33.326	25.541	245.0	0.226	4.64	73.6	12.9	1.21	13.8	0.05	0.09	0.09	75	
76	10.58	10.57	33.337	25.557	243.5	0.228	4.60	72.9	13.2	1.23	14.1	0.05	0.09	0.09	76	213
86	10.16	10.15	33.457	25.722	228.0	0.252	4.16	65.4	16.8	1.43	17.4	0.04	0.06	0.07	86	212
99	10.25	10.24	33.638	25.848	216.3	0.281	3.48	54.9	20.5	1.67	20.7	0.03	0.04	0.09	99	211
100 ISL	10.21	10.20	33.647	25.862	215.0	0.283	3.45	54.4	20.8	1.68	20.9	0.03	0.04	0.09	100	
119	9.36	9.35	33.793	26.118	190.9	0.321	3.00	46.4	26.8	1.91	24.8	0.02	0.01	0.07	119	210
125 ISL	9.34	9.33	33.864	26.177	185.5	0.333	2.75	42.6	28.6	1.99	25.8	0.02	0.01	0.07	125	
140	9.29	9.27	33.998	26.290	175.1	0.360	2.18	33.7	32.6	2.18	27.7	0.02	0.01	0.07	140	209
150 ISL	9.16	9.14	34.037	26.341	170.3	0.377	2.13	32.9	34.2	2.22	28.4	0.02	0.01	0.07	150	
169	8.85	8.83	34.059	26.408	164.3	0.409	2.04	31.3	36.2	2.29	29.1	0.02	0.01	0.07	169	208
200	8.31	8.29	34.044	26.480	157.9	0.459	2.30	34.8	38.6	2.25	29.7	0.02	0.00	0.05	200	207
228	7.98	7.96	34.121	26.590	147.8	0.501	1.77	26.6	45.2	2.47	31.9	0.02			228	206
250 ISL	7.59	7.57	34.110	26.639	143.4	0.533	1.80	26.8	48.5	2.51	32.8	0.03			250	
269	7.26	7.23	34.090	26.670	140.6	0.560	1.82	26.9	51.0	2.53	33.4	0.03			269	205
300 ISL	6.95	6.92	34.122	26.738	134.5	0.603	1.45	21.3	56.7	2.67	35.1	0.02			300	
317	6.83	6.80	34.145	26.773	131.4	0.626	1.21	17.7	59.7	2.75	36.0	0.02			317	204
378	6.55	6.52	34.172	26.832	126.5	0.704	0.91	13.2	66.8	2.90	37.8	0.02			378	203
400 ISL	6.46	6.42	34.193	26.861	124.0	0.732	0.78	11.3	69.4	2.96	38.3	0.02			400	
437	6.31	6.27	34.230	26.910	119.8	0.777	0.58	8.4	73.7	3.04	39.0	0.02			437	202
500 ISL	6.00	5.96	34.267	26.979	113.8	0.851	0.44	6.3	79.6	3.13	40.2	0.02			500	
511	5.95	5.91	34.273	26.990	112.9	0.863	0.41	5.9	80.6	3.14	40.4	0.02			511	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 43.3 N	123 38.0 W	31/10/96	0801 UTC	4159 m	310	15 kn			1017.6 mb	16.0 C	13.7 C					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	db	
0 ISL	16.61	16.61	33.031	24.095	381.0	0.000	5.79	103.8	1.4	0.33	0.0	0.00	0.21	0.08	0	
2	16.61	16.61	33.031	24.095	381.0	0.008	5.79	103.8	1.4	0.33	0.0	0.00	0.21	0.08	2	224
5	16.61	16.61	33.031	24.095	381.1	0.019	5.81	104.2	1.4	0.33	0.0	0.00	0.21	0.08	5	223
10	16.62	16.62	33.031	24.093	381.5	0.038	5.79	103.9	1.4	0.32	0.0	0.00	0.21	0.08	10	222
11	16.61	16.61	33.031	24.096	381.3	0.042	5.79	103.8	1.4	0.32	0.0	0.00			11	221
15	16.63	16.63	33.031	24.091	381.8	0.057	5.80	104.1	1.4	0.33	0.0	0.00	0.21	0.10	15	220
20	16.62	16.62	33.030	24.093	381.8	0.076	5.79	103.9	1.4	0.33	0.0	0.00	0.21	0.09	20	219
30 ISL	16.62	16.62	33.032	24.095	382.0	0.114	5.82	104.4	1.4	0.33	0.0	0.00	0.21	0.07	30	
31	16.62	16.62	33.032	24.095	382.0	0.118	5.82	104.4	1.4	0.33	0.0	0.00	0.21	0.07	31	218
45	16.60	16.59	33.033	24.101	381.9	0.172	5.79	103.8	1.4	0.33	0.0	0.00	0.21	0.10	45	217
50 ISL	15.74	15.73	33.024	24.289	364.0	0.190	5.97	105.2	1.5	0.35	0.1	0.01	0.34	0.22	50	
56	14.50	14.49	33.009	24.547	339.6	0.212	6.16	105.9	1.6	0.38	0.3	0.02	0.47	0.35	56	216
65	12.97	12.96	32.936	24.802	315.3	0.241	6.07	101.0	2.4	0.45	0.6	0.11	0.33	0.32	65	215
75	12.53	12.52	32.996	24.935	302.9	0.272	5.88	97.0	3.3	0.53	1.7	0.18	0.29	0.30	75	214
82	11.23	11.22	32.969	25.156	281.9	0.292	5.61	90.0	5.8	0.80	6.1	0.03	0.16	0.19	82	213
96	10.81	10.80	32.999	25.254	272.8	0.331	5.46	86.8	7.4	0.94	8.3	0.02	0.12	0.14	96	212
100 ISL	10.73	10.72	33.054	25.310	267.5	0.342	5.34	84.8	8.4	1.00	9.4	0.02	0.11	0.13	100	
110	10.48	10.47	33.232	25.493	250.4	0.368	4.96	78.4	11.8	1.18	12.9	0.02	0.08	0.09	110	211
125	9.76	9.75	33.520	25.839	217.6	0.403	4.32	67.4	19.0	1.61	20.1	0.01	0.03	0.05	125	210
146	9.01	8.99	33.717	26.115	191.7	0.446	3.45	53.0	26.3	1.86	24.4	0.02	0.01	0.03	146	209
150 ISL	8.88	8.86	33.752	26.163	187.2	0.454	3.36	51.4	27.5	1.89	25.0	0.02	0.01	0.03	150	
169	8.37	8.35	33.887	26.347	169.9	0.487	3.13	47.4	32.0	2.01	26.9	0.01	0.00	0.03	169	208
199	7.96	7.94	33.950	26.458	159.7	0.537	3.04	45.6	35.6	2.08	28.1	0.01	0.00	0.02	199	207
200 ISL	7.95	7.93	33.951	26.461	159.5	0.539	3.04	45.6	35.7	2.08	28.1	0.01			200	
227	7.58	7.56	33.976	26.534	152.9	0.581	2.90	43.2	39.3	2.15	29.1	0.01			227	206
250 ISL	7.29	7.27	33.990	26.587	148.2	0.615	2.76	40.8	43.1	2.23	30.2	0.01			250	
270	7.05	7.02	34.001	26.629	144.4	0.645	2.61	38.4	46.7	2.32	31.4	0.01			270	205
300 ISL	6.73	6.70	34.017	26.685	139.3	0.687	2.25	32.8	52.4	2.47	33.5	0.01			300	
319	6.55	6.52	34.029	26.718	136.3	0.713	2.00	29.1	56.0	2.57	34.8	0.01			319	204
378	6.12	6.09	34.079	26.814	127.8	0.791	1.27	18.3	66.1	2.82	38.0	0.01			378	203
400 ISL	5.92	5.89	34.091	26.849	124.6	0.819	1.12	16.0	70.1	2.90	39.0	0.01			400	
436	5.62	5.58	34.111	26.902	119.8	0.863	0.95	13.5	76.5	3.01	40.3	0.01			436	202
500 ISL	5.30	5.26														

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 23.3 N	124 19.4 W	31/10/96	0205	UTC	4511 m	320	15 kn	320 03 05	1	1015.8 mb	16.6 c	14.1 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C	PCT	THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.01	17.01	33.028	24.000	390.1	0.000	5.76	104.1	1.6	0.31	0.0	0.00	0.20	0.06	0	
2	17.01	17.01	33.028	24.000	390.1	0.008	5.76	104.1	1.6	0.31	0.0	0.00	0.20	0.06	2	223
2	17.01	17.01	33.028	24.000	390.1	0.008	5.88	106.3	U 1.6	0.32	0.0	0.00	0.20	0.07	2	224
6	17.01	17.01	33.028	24.000	390.2	0.023	5.75	103.9	1.6	0.31	0.0	0.00	0.20	0.07	6	222
10	17.01	17.01	33.028	24.000	390.4	0.039	5.76	104.1	1.6	0.31	0.0	0.00	0.20	0.07	10	221
15	17.01	17.01	33.028	24.000	390.5	0.059	5.75	103.9	1.6	0.31	0.0	0.00	0.20	0.07	15	220
20	17.00	17.00	33.027	24.002	390.5	0.078	5.85	U 105.7	U 1.6	0.31	0.0	0.00	0.20	0.07	20	219
30	16.99	16.99	33.028	24.006	390.5	0.117	5.79	104.6	1.6	0.31	0.0	0.00	0.23	0.07	30	218
46	15.51	15.50	33.105	24.402	353.1	0.177	6.11	107.3	1.6	0.38	0.4	0.03	0.59	0.36	46	217
50 ISL	14.72	14.71	33.069	24.546	339.5	0.190	6.11	105.5	1.8	0.41	0.6	0.04	0.53	0.42	50	
55	13.73	13.72	33.018	24.714	323.6	0.207	6.10	103.2	2.0	0.46	0.9	0.07	0.42	0.45	55	216
65	12.54	12.53	32.930	24.881	307.7	0.239	5.97	98.5	2.5	0.54	1.6	0.23	0.28	0.27	65	215
75	11.51	11.50	32.934	25.078	289.2	0.268	5.72	92.3	4.6	0.74	5.1	0.21	0.16	0.17	75	214
85	10.92	10.91	33.037	25.264	271.6	0.296	5.51	87.9	7.2	0.90	7.9	0.02	0.12	0.14	85	213
95	10.85	10.84	33.135	25.352	263.4	0.323	5.30	84.4	8.5	0.93	8.7	0.02	0.10	0.17	95	212
100 ISL	10.65	10.64	33.214	25.449	254.3	0.356	5.10	80.9	10.0	1.00	10.2	0.02	0.09	0.15	100	
110	10.18	10.17	33.380	25.659	234.5	0.361	4.66	73.3	13.7	1.19	13.8	0.02	0.06	0.09	110	211
125	9.80	9.79	33.543	25.850	216.5	0.394	4.13	64.5	18.4	1.45	18.2	0.02	0.03	0.05	126	210
145	9.05	9.03	33.669	26.071	195.8	0.436	3.88	59.6	23.3	1.65	21.5	0.01	0.01	0.03	146	209
150 ISL	8.94	8.92	33.703	26.115	191.7	0.445	3.88	59.6	23.3	1.65	21.5	0.01	0.01	0.03	151	
169	8.63	8.61	33.820	26.255	178.7	0.481	3.45	52.5	28.8	1.87	25.1	0.01	0.01	0.02	170	208
199	8.13	8.11	33.932	26.419	163.5	0.532	2.99	45.1	34.4	2.04	27.5	0.01	0.00	0.03	200	207
200 ISL	8.11	8.09	33.934	26.424	163.1	0.534	2.98	44.9	34.6	2.05	27.6	0.01			201	
229	7.68	7.66	33.983	26.525	153.8	0.579	2.71	40.4	40.5	2.20	29.9	0.01			230	206
250 ISL	7.44	7.42	34.002	26.575	149.4	0.611	2.58	38.3	43.6	2.28	31.0	0.01			251	
269	7.23	7.20	34.011	26.612	146.1	0.639	2.49	36.8	46.4	2.35	31.8	0.01			271	205
300 ISL	6.75	6.72	34.014	26.680	139.8	0.684	2.33	34.0	52.5	2.47	33.7	0.01			302	
318	6.49	6.46	34.016	26.716	136.5	0.709	2.21	32.1	56.2	2.54	34.8	0.01			320	204
378	6.09	6.06	34.064	26.806	128.5	0.788	1.55	22.3	65.8	2.78	37.7	0.01			380	203
400 ISL	5.89	5.86	34.075	26.840	125.4	0.816	1.37	19.6	69.9	2.85	38.7	0.01			403	
438	5.56	5.52	34.095	26.896	120.3	0.863	1.11	15.8	77.0	2.96	40.3	0.01			441	202
500 ISL	5.20	5.16	34.157	26.989	111.9	0.935	0.71	10.0	86.9	3.12	42.0	0.01			503	
516	5.11	5.07	34.173	27.012	109.8	0.952	0.61	8.6	89.4	3.16	42.4	0.01			520	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 27.0 N	120 31.4 W	29/10/96	0341	UTC	77 m	100	07 kn			1022.1 mb	15.0 c	14.1 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C	PCT	THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.48	13.48	33.526	25.156	280.0	0.000	5.70	96.3	6.6	0.71	5.3	0.17	4.61	1.01	0	
1	13.51	13.51	33.525	25.149	280.6	0.003	5.72	96.7	6.6	0.69	5.3	0.17	4.52	0.91	1	212
2	13.48	13.48	33.526	25.156	280.0	0.006	5.70	96.3	6.6	0.71	5.3	0.17	4.61	1.01	2	211
3	13.48	13.48	33.526	25.156	280.0	0.008	5.70	96.3	6.6	0.70	5.3	0.17	4.73	0.99	3	210
6	13.39	13.39	33.522	25.171	278.7	0.017	5.63	94.9	7.1	0.72	5.6	0.17	4.98	0.93	6	209
10	13.27	13.27	33.525	25.197	276.3	0.028	5.52	92.8	7.4	0.76	6.1	0.19	3.89	1.21	10	208
15	13.13	13.13	33.527	25.227	273.6	0.042	5.40	90.5	8.3	0.81	7.0	0.19	3.30	0.84	15	207
20	12.03	12.03	33.555	25.462	251.3	0.055	4.87	79.8	11.3	1.04	10.4	0.20	1.88	0.45	20	206
30	11.87	11.87	33.589	25.519	246.2	0.080	4.48	73.2	13.8	1.21	13.0	0.19	0.51	0.29	30	205
40	11.83	11.82	33.603	25.537	244.6	0.104	4.42	72.1	14.3	1.23	13.3	0.19	0.50	0.28	40	204
50	11.76	11.75	33.610	25.556	243.1	0.129	4.37	71.2	14.7	1.25	13.5	0.18	0.42	0.27	50	203
60	11.47	11.46	33.643	25.636	235.8	0.153	4.06	65.8	16.2	1.34	15.0	0.14	0.32	0.31	60	202
67	11.24	11.23	33.677	25.704	229.4	0.169	3.75	60.5	17.6	1.43	16.4	0.10	0.20	0.25	67	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 19.0 N	120 48.1 W	29/10/96	0745	UTC	795 m	160	10 kn			1021.0 mb	15.0 c	14.0 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C	PCT	THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.89	13.89	33.527	25.072	287.9	0.000	6.77	115.3	1.0	0.35	0.1	0.02	11.90	2.84	0	
1	13.87	13.87	33.528	25.077	287.4	0.003	6.75	114.9	1.1	0.35	0.1	0.02	11.90	2.72	1	224
2	13.89	13.89	33.527	25.072	287.9	0.006	6.77	115.3	1.0	0.35	0.1	0.02	11.90	2.84	2	223
3	13.88	13.88	33.528	25.075	287.7	0.009	6.77	115.3	1.0	0.37	0.0	0.02	10.86	3.15	3	222
6	13.89	13.89	33.528	25.073	288.0	0.017	6.79	115.7	1.0	0.37	0.0	0.02	11.14	3.35	6	221
10 ISL	13.72	13.72	33.527	25.108	284.8	0.029	6.76	114.7	1.0	0.34	0.0	0.03	12.32	1.84	10	
11	13.66	13.66	33.527	25.120	283.7	0.032	6.75	114.4	1.0	0.33	0.0	0.03	12.47	1.54	11	220
15	13.50	13.50	33.524	25.150	280.9	0.043	6.32	106.8	2.9	0.52	2.3	0.11	10.58	3.07	15	219
20	13.17	13.17	33.515	25.210	275.3	0.057	5.83	97.8	5.9	0.71	5.2	0.20	6.61	0.64	20	218
30	12.80	12.80	33.499	25.271	269.8	0.084	5.18	86.2	8.7	0.91	8.3	0.30	1.89	0.55	30	217
40	11.89	11.88	33.566	25.498	248.4	0.110	4.37	71.4	13.2	1.19	13.0	0.09	0.42	0.29	40	216
50	11.28	11.27	33.636	25.665	232.8	0.134	3.84	61.9	16.2	1.38	16.0	0.03	0.16	0.22	50	215
60	11.14	11.13	33.658	25.707	228.9	0.157	3.71	59.7	17.2	1.43	16.7	0.03	0.14	0.19	60	214
70	10.81	10.80	33.695	25.795	220.8	0.180	3.53	56.4	18.7	1.52	18.1	0.02	0.07	0.18	70	213
75 ISL	10.68	10.67	33.717	25.835	217.1	0.191	3.42	54.5	19.6	1.57	18.9	0.02	0.06	0.16	75	
85	10.49	10.48	33.754	25.897	211.4	0.212	3.25	51.6	21.2	1.66	20.3	0.02	0.04	0.12	85	212
99	10.30	10.29	33.774	25.946	207.0	0.241	3.19	50.4	22.3	1.72	21.0	0.02	0.04	0.12	100	211
100 ISL	10.27	10.26	33.775	25.952	206.5	0.243	3.19	50.4	22.4	1.72	21.1	0.02	0.04	0.12	101	
1																

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 9.3 N	121 9.0 W	29/10/96	1214	UTC	2187 m	150	12 kn			1017.8 mb	15.7 c	14.2 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.59	14.59	33.547	24.941	300.4	0.000	6.60	114.1	0.5	0.32	0.1	0.02	3.27	1.47	0	
2	14.59	14.59	33.547	24.941	300.4	0.006	6.60	114.1	0.5	0.32	0.1	0.02	3.27	1.47	2	224
4	14.59	14.59	33.547	24.941	300.5	0.012	6.63	114.6	0.5	0.32	0.0	0.02	3.36	1.44	4	223
7	14.59	14.59	33.547	24.941	300.6	0.021	6.61	114.2	0.5	0.32	0.0	0.02	3.31	1.67	7	222
7	14.59	14.59	33.547	24.941	300.6	0.021	6.61	114.2	0.5	0.32	0.0	0.02			7	221
10 ISL	14.59	14.59	33.548	24.942	300.6	0.030	6.63	114.6	0.4	0.32	0.0	0.02	3.34	1.43	10	
11	14.59	14.59	33.548	24.942	300.6	0.033	6.64	114.7	0.4	0.32	0.0	0.02	3.34	1.43	11	220
16	14.56	14.56	33.549	24.949	300.1	0.048	6.60	114.0	0.4	0.32	0.0	0.02	3.31	1.58	16	219
20 ISL	14.28	14.28	33.548	25.008	294.6	0.060	6.46	110.9	0.8	0.36	0.3	0.03	3.29	1.63	20	
21	14.20	14.20	33.548	25.025	293.0	0.063	6.42	110.1	0.9	0.37	0.4	0.03	3.28	1.64	21	218
30 ISL	14.04	14.04	33.535	25.048	291.0	0.089	6.03	103.0	2.0	0.49	1.2	0.06	2.90	1.74	30	
32	13.98	13.98	33.531	25.058	290.2	0.095	5.93	101.2	2.4	0.53	1.4	0.07	2.82	1.76	32	217
40	13.02	13.01	33.517	25.242	272.8	0.118	5.47	91.5	5.8	0.77	5.3	0.13	0.96	1.11	40	216
50 ISL	10.64	10.63	33.437	25.623	236.6	0.143	4.47	71.0	14.5	1.30	15.0	0.08	0.32	0.55	50	
51	10.44	10.43	33.441	25.661	233.0	0.145	4.35	68.8	15.4	1.35	15.9	0.07	0.26	0.52	51	215
60	10.79	10.78	33.725	25.822	218.0	0.166	3.36	53.7	19.9	1.60	19.1	0.10	0.24	0.54	60	214
70	10.42	10.41	33.747	25.904	210.4	0.187	3.24	51.3	21.2	1.67	20.3	0.08	0.30	0.44	70	213
75 ISL	10.13	10.12	33.739	25.947	206.4	0.197	3.30	51.9	21.7	1.68	20.8	0.06	0.24	0.38	75	
84	9.65	9.64	33.718	26.011	200.4	0.216	3.48	54.2	22.3	1.69	21.5	0.03	0.12	0.31	84	212
100	9.44	9.43	33.698	26.030	198.9	0.248	3.79	58.7	22.1	1.64	21.1	0.03	0.10	0.46	101	211
119	8.87	8.86	33.779	26.185	184.5	0.284	3.58	54.8	26.0	1.78	23.6	0.01	0.07	0.19	120	210
125 ISL	8.79	8.78	33.799	26.213	181.9	0.295	3.55	54.3	26.6	1.80	23.9	0.01	0.06	0.19	126	
139	8.65	8.64	33.841	26.268	176.9	0.320	3.49	53.2	28.0	1.84	24.4	0.01	0.04	0.20	140	209
150 ISL	8.46	8.44	33.880	26.328	171.4	0.339	3.43	52.1	29.8	1.88	25.1	0.01	0.05	0.21	151	
169	8.15	8.13	33.950	26.430	162.0	0.371	3.21	48.4	33.6	1.98	26.6	0.01	0.08	0.22	170	208
199	8.02	8.00	34.057	26.534	152.7	0.418	2.42	36.4	39.9	2.25	29.5	0.01	0.06	0.12	200	207
200 ISL	8.02	8.00	34.060	26.536	152.5	0.420	2.40	36.1	40.1	2.26	29.6	0.01			201	
228	8.02	8.00	34.126	26.588	148.0	0.462	1.90	28.6	44.2	2.43	31.2	0.01			229	206
250 ISL	7.82	7.80	34.131	26.622	145.1	0.494	1.81	27.1	46.5	2.48	31.9	0.02			252	
268	7.64	7.61	34.131	26.648	142.9	0.520	1.76	26.3	48.3	2.51	32.4	0.02			270	205
300 ISL	7.58	7.55	34.198	26.710	137.6	0.565	1.27	18.9	52.8	2.69	33.9	0.01			302	
318	7.51	7.48	34.231	26.746	134.4	0.589	0.99	14.7	55.7	2.80	34.8	0.01			320	204
378	6.42	6.39	34.161	26.840	125.6	0.667	0.95	13.8	67.4	2.91	38.1	0.01			381	203
400 ISL	6.24	6.20	34.181	26.880	122.0	0.695	0.82	11.8	70.7	2.98	38.8	0.01			403	
438	6.03	5.99	34.230	26.945	116.2	0.740	0.58	8.3	76.0	3.09	39.8	0.01			441	202
500 ISL	5.53	5.49	34.258	27.030	108.5	0.810	0.41	5.8	86.0	3.19	41.5	0.00			504	
515	5.41	5.37	34.265	27.050	106.7	0.826	0.37	5.2	88.4	3.22	41.9	0.00			519	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

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 50.4 W	29/10/96	1837	UTC	3633 m	190	22 kn	200 05 06	1	1015.2 mb	17.0 c	16.0 c	17m	02	7/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.44	16.44	33.126	24.207	370.3	0.000	5.79	103.6	1.5	0.32	0.0	0.01	0.35	0.14	0	
2 A	16.44	16.44	33.126	24.207	370.3	0.007	5.79	103.6	1.5	0.32	0.0	0.01	0.35	0.14	2	223
2	16.44	16.44	33.129	24.210	370.1	0.007	5.80	103.7	1.6	0.32	0.0	0.01	0.34	0.20	2	224
5	16.45	16.45	33.129	24.207	370.4	0.019	5.80	103.8	1.5	0.32	0.0	0.01	0.34	0.16	5	222
6	16.44	16.44	33.129	24.210	370.2	0.022	5.80	103.7	1.5	0.32	0.0	0.01	0.36	0.16	6	221
10 ISL	16.45	16.45	33.129	24.208	370.6	0.037	5.79	103.6	1.5	0.32	0.0	0.01	0.34	0.15	10	
11 A	16.45	16.45	33.129	24.208	370.6	0.041	5.79	103.6	1.5	0.32	0.0	0.01	0.34	0.14	11	220
15	16.47	16.47	33.129	24.203	371.2	0.056	5.79	103.6	1.5	0.32	0.0	0.01	0.38	0.12	15	219
20 ISL	16.41	16.41	33.132	24.219	369.8	0.074	5.80	103.7	1.5	0.32	0.0	0.01	0.39	0.15	20	
24 A	16.33	16.33	33.135	24.240	367.9	0.089	5.82	103.9	1.5	0.33	0.0	0.01	0.40	0.19	24	218
30 ISL	16.21	16.21	33.138	24.270	365.2	0.111	5.84	104.0	1.5	0.34	0.1	0.01	0.46	0.23	30	
35 A	16.02	16.01	33.137	24.313	361.4	0.129	5.86	103.9	1.5	0.35	0.1	0.01	0.51	0.28	35	217
46 A	15.06	15.05	33.119	24.511	342.7	0.168	5.95	103.5	1.7	0.41	0.5	0.05	0.50	0.51	46	216
50 ISL	14.40	14.39	33.081	24.623	332.1	0.181	5.94	101.9	2.0	0.46	1.0	0.13	0.49	0.49	50	
55	13.60	13.59	33.039	24.756	319.5	0.198	5.92	99.9	2.4	0.53	1.7	0.26	0.46	0.43	55	215
66 A	12.92	12.91	33.029	24.884	307.5	0.232	5.81	96.7	3.4	0.63	2.9	0.60	0.35	0.41	66	214
75	12.09	12.08	33.089	25.091	288.0	0.259	5.52	90.3	5.7	0.81	6.7	0.03	0.19	0.21	75	213
86	11.77	11.76	33.132	25.184	279.4	0.290	5.40	87.7	6.9	0.89	7.9	0.02	0.14	0.20	86	212
100	10.78	10.77	33.261	25.463	253.0	0.327	4.91	78.2	10.8	1.06	11.3	0.02	0.09	0.13	100	211
120	10.07	10.06	33.449	25.732	227.7	0.375	4.25	66.7	16.7	1.40	17.0	0.02	0.04	0.07	121	210
125 ISL	9.81	9.80	33.508	25.822	219.3	0.387	4.07	63.5	18.9	1.50	18.7	0.02	0.03	0.06	126	
139	9.12	9.10	33.669	26.060	196.8	0.416	3.62	55.7	24.9	1.77	23.0	0.01	0.01	0.04	140	209
150 ISL	8.82	8.80	33.763	26.181	185.5	0.437	3.34	51.1	27.9	1.89	24.9	0.01	0.01	0.04	151	
170	8.47	8.45	33.879	26.326	172.0	0.472	3.06	46.5	31.4	1.99	26.6	0.01	0.00	0.04	171	208
199	8.02	8.00	33.942	26.443	161.2	0.521	3.22	48.4	34.3	1.99	26.9	0.01	0.01	0.05	200	207
200 ISL	8.00	7.98	33.943	26.447	160.9	0.522	3.22	48.4	34.5	1.99	26.9	0.01			201	
231	7.36	7.34	33.975	26.565	149.9	0.571	3.09	45.8	40.9	2.10	28.8	0.01			232	206
250 ISL	7.09	7.07	33.988	26.613	145.6	0.599	2.82	41.5	45.0	2.22	30.4	0.01			251	
268	6.90	6.88	33.998	26.647	142.5	0.625	2.52	36.9	48.7	2.34	31.9	0.01			270	205
300 ISL	6.65	6.62	34.019	26.697	138.1	0.669	2.14	31.2	53.9	2.49	33.9	0.01			302	
319	6.52	6.49	34.032	26.725	135.7	0.695	1.93	28.0	56.8	2.57	34.9	0.01			321	204
378	6.06	6.03	34.081	26.823	126.8	0.773	1.20	17.2	68.1	2.85	38.4	0.01			380	203
400 ISL	5.91	5.88	34.098	2												

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	30/10/96	0217 UTC	3993 m	240 09 kn		1	1011.7 mb	15.0 C	13.4 C		6/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.29	17.29	33.063	23.961	393.8	0.000	5.71	103.8	1.8	0.29	0.0	0.00	0.19	0.07	0	
1	17.29	17.29	33.063	23.961	393.9	0.008	5.71	103.8	1.8	0.29	0.0	0.00	0.19	0.07	2	223
2	17.30	17.30	33.062	23.958	394.2	0.008	5.70	103.6	1.7	0.29	0.0	0.00	0.19	0.07	2	224
5	17.30	17.30	33.061	23.957	394.3	0.020	5.70	103.6	1.8	0.30	0.0	0.00	0.19	0.07	5	222
10	17.31	17.31	33.071	23.962	394.0	0.039	5.69	103.5	1.8	0.29	0.0	0.00	0.20	0.07	10	221
15	17.31	17.31	33.065	23.958	394.6	0.059	5.70	103.7	1.8	0.31	0.0	0.00	0.19	0.07	15	220
20	17.32	17.32	33.073	23.962	394.3	0.079	5.70	103.7	1.8	0.29	0.0	0.00	0.18	0.09	20	219
30	17.40	17.40	33.117	23.977	393.2	0.118	5.70	103.9	1.8	0.29	0.0	0.00	0.23	0.08	30	218
45	17.38	17.37	33.127	23.990	392.5	0.177	5.68	103.5	1.8	0.29	0.0	0.00	0.24	0.09	45	217
50 ISL	17.36	17.35	33.133	24.000	391.8	0.197	5.68	103.4	1.8	0.29	0.0	0.00	0.25	0.09	50	
55	17.34	17.33	33.139	24.009	391.0	0.216	5.68	103.4	1.8	0.29	0.0	0.00	0.25	0.08	55	216
66	15.91	15.90	32.983	24.220	371.1	0.258	6.03	106.6	1.8	0.31	0.0	0.00	0.38	0.35	66	215
75	14.18	14.17	33.000	24.607	334.3	0.290	6.09	104.0	1.9	0.38	0.3	0.02	0.34	0.45	75	214
85	13.88	13.87	33.039	24.700	325.7	0.323	6.04	102.5	2.4	0.40	0.4	0.11	0.34	0.27	85	213
95	13.01	13.00	33.017	24.858	310.8	0.355	5.93	98.8	2.8	0.48	1.1	0.21	0.25	0.34	95	212
100 ISL	12.56	12.55	33.085	24.999	297.5	0.370	5.76	95.1	3.9	0.56	2.5	0.16	0.20	0.30	100	
110	11.73	11.72	33.243	25.278	271.0	0.398	5.36	87.1	6.7	0.74	6.2	0.03	0.11	0.19	110	211
125	10.76	10.75	33.278	25.480	251.9	0.438	4.95	78.8	10.8	1.03	11.1	0.01	0.08	0.09	126	210
145	9.67	9.65	33.533	25.865	215.6	0.484	4.08	63.5	19.5	1.53	19.2	0.01	0.02	0.05	146	209
150 ISL	9.52	9.50	33.577	25.923	210.1	0.495	3.94	61.1	20.9	1.60	20.4	0.01	0.02	0.05	151	
169	9.10	9.08	33.706	26.092	194.3	0.533	3.57	54.9	25.1	1.77	23.2	0.00	0.01	0.04	170	208
200	8.47	8.45	33.885	26.331	172.0	0.590	3.27	49.6	30.6	1.92	25.7	0.00	0.00	0.03	201	207
229	8.16	8.14	33.976	26.450	161.2	0.639	3.17	47.8	34.1	1.98	26.6	0.00			230	206
250 ISL	7.93	7.90	34.020	26.519	155.0	0.672	2.78	41.7	38.5	2.13	28.4	0.00			251	
269	7.71	7.68	34.047	26.572	150.1	0.701	2.38	35.5	42.9	2.29	30.3	0.00			270	205
300 ISL	7.32	7.29	34.065	26.642	143.8	0.746	2.09	30.9	48.6	2.43	32.3	0.00			302	
319	7.07	7.04	34.067	26.678	140.4	0.773	1.98	29.1	51.9	2.49	33.3	0.00			321	204
378	6.22	6.19	34.061	26.787	130.4	0.853	1.56	22.5	63.2	2.70	36.6	0.00			380	203
400 ISL	6.04	6.01	34.078	26.824	127.1	0.882	1.34	19.2	67.2	2.80	37.7	0.00			402	
438	5.82	5.78	34.117	26.882	121.9	0.929	0.98	14.0	73.7	2.95	39.4	0.00			441	202
500 ISL	5.46	5.42	34.171	26.969	114.1	1.002	0.66	9.4	83.0	3.09	41.0	0.00			503	
516	5.37	5.33	34.185	26.991	112.1	1.020	0.58	8.2	85.4	3.13	41.4	0.00			519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 9.0 N	123 13.3 W	30/10/96	0819 UTC	4263 m	300 15 kn			1013.8 mb	16.4 C	13.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.34	17.34	33.086	23.966	393.2	0.000	5.67	103.2	1.6	0.30	0.0	0.00	0.17	0.08	0	
1	17.34	17.34	33.087	23.967	393.2	0.004	5.68	103.4	1.6	0.30	0.0	0.00	0.16	0.07	1	224
2	17.34	17.34	33.086	23.966	393.3	0.008	5.67	103.2	1.6	0.30	0.0	0.00	0.17	0.08	2	223
5	17.36	17.36	33.091	23.966	393.5	0.020	5.69	103.6	1.6	0.29	0.0	0.00	0.16	0.08	5	222
10	17.36	17.36	33.089	23.964	393.8	0.039	5.68	103.4	1.6	0.29	0.0	0.00	0.16	0.08	10	221
15	17.33	17.33	33.091	23.973	393.1	0.059	5.64	102.6	1.6	0.29	0.0	0.00	0.16	0.08	15	220
20	17.24	17.24	33.121	24.018	389.0	0.079	5.68	103.2	1.6	0.29	0.0	0.00	0.20	0.06	20	219
30	17.15	17.15	33.122	24.040	387.2	0.117	5.70	103.4	1.6	0.30	0.0	0.00	0.23	0.08	30	218
45	17.14	17.13	33.122	24.043	387.4	0.175	5.68	103.0	1.6	0.30	0.0	0.00	0.22	0.12	45	217
50 ISL	17.14	17.13	33.124	24.045	387.4	0.195	5.69	103.2	1.6	0.30	0.0	0.00	0.23	0.11	50	
59	17.13	17.12	33.128	24.051	387.2	0.230	5.71	103.5	1.6	0.30	0.0	0.00	0.27	0.09	59	216
75	16.88	16.87	33.112	24.098	383.2	0.291	5.75	103.7	1.6	0.30	0.0	0.00	0.38	0.15	75	215
85	14.86	14.85	33.150	24.580	337.3	0.327	6.03	104.5	2.3	0.32	0.0	0.02	0.36	0.28	85	214
95	14.15	14.14	33.072	24.670	328.9	0.361	5.96	101.7	2.4	0.39	0.4	0.11	0.28	0.32	95	213
100 ISL	13.84	13.83	33.107	24.761	320.3	0.377	5.89	99.9	2.5	0.44	0.9	0.30	0.25	0.32	100	
105	13.51	13.50	33.164	24.872	309.8	0.393	5.80	97.8	2.8	0.51	1.8	0.44	0.22	0.32	105	212
115	12.69	12.67	33.265	25.113	287.0	0.423	5.53	91.7	4.4	0.68	4.8	0.18	0.20	0.23	115	211
124	11.38	11.36	33.278	25.370	262.5	0.447	5.16	83.2	7.5	0.89	8.5	0.02	0.11	0.14	125	210
125 ISL	11.30	11.28	33.289	25.393	260.4	0.450	5.12	82.4	7.8	0.91	8.8	0.02	0.10	0.13	126	
139	10.71	10.69	33.478	25.645	236.6	0.485	4.69	74.6	12.3	1.10	12.8	0.01	0.04	0.06	140	209
150 ISL	10.32	10.30	33.573	25.787	223.3	0.510	4.39	69.3	15.2	1.25	15.4	0.01	0.03	0.05	151	
164	9.88	9.86	33.660	25.929	209.9	0.540	4.06	63.5	18.5	1.44	18.2	0.01	0.01	0.04	165	208
194	9.02	9.00	33.808	26.185	186.0	0.600	3.54	54.4	25.6	1.76	23.2	0.01	0.00	0.02	195	207
200 ISL	8.86	8.84	33.836	26.232	181.6	0.611	3.54	54.2	26.7	1.78	23.6	0.01			201	
228	8.18	8.16	33.943	26.421	163.9	0.659	3.56	53.7	31.6	1.85	25.1	0.01			229	206
250 ISL	7.77	7.75	33.985	26.514	155.3	0.694	3.23	48.3	36.4	2.00	27.0	0.01			251	
268	7.49	7.46	34.002	26.568	150.3	0.722	2.91	43.2	40.5	2.13	28.7	0.01			269	205
300 ISL	7.09	7.06	34.010	26.631	144.7	0.769	2.60	38.3	47.0	2.29	31.0	0.01			302	
317	6.92	6.89	34.011	26.655	142.6	0.793	2.44	35.8	50.4	2.36	32.1	0.01			319	204
377	6.36	6.33	34.073	26.779	131.3	0.875	1.50	21.7	50.5	2.37	32.1	U	0.01	U	379	203
400 ISL	6.12	6.08														

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 49.0 N	123 54.4 W	30/10/96	1801	UTC	4407 m	310	15 kn	320 04 06	1	1016.0 mb	16.8 c	12.9 c	24m 02	4/8		CU
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.96	16.96	33.131	24.091	381.4	0.000	5.72	103.4	1.6	0.30	0.0	0.00	0.21	0.05	0	
3 A	16.96	16.96	33.131	24.091	381.5	0.011	5.72	103.4	1.6	0.30	0.0	0.00	0.21	0.05	3	223
3	16.96	16.96	33.131	24.091	381.5	0.011	5.72	103.4	1.6	0.30	0.1	0.00	0.22	0.04	3	224
10	16.96	16.96	33.131	24.091	381.7	0.038	5.71	103.2	1.6	0.30	0.0	0.00	0.20	0.08	10	222
16 A	16.93	16.93	33.133	24.100	381.1	0.061	5.73	103.5	1.6	0.29	0.0	0.00	0.19	0.09	16	221
20 ISL	16.93	16.93	33.134	24.101	381.1	0.076	5.73	103.5	1.7	0.29	0.0	0.00	0.20	0.10	20	220
21	16.93	16.93	33.134	24.101	381.1	0.080	5.73	103.5	1.7	0.29	0.0	0.00	0.20	0.10	21	220
30 ISL	16.82	16.82	33.139	24.130	378.6	0.114	5.74	103.4	1.7	0.30	0.0	0.00	0.22	0.12	30	
33 A	16.77	16.76	33.141	24.144	377.4	0.126	5.75	103.5	1.7	0.30	0.0	0.00	0.23	0.12	33	219
41	16.66	16.65	33.147	24.174	374.8	0.156	5.77	103.6	1.7	0.31	0.0	0.00	0.28	0.12	41	218
49 A	16.63	16.62	33.149	24.183	374.2	0.186	5.78	103.8	1.7	0.32	0.0	0.00	0.29	0.16	49	217
50 ISL	16.61	16.60	33.150	24.188	373.7	0.189	5.78	103.7	1.7	0.32	0.0	0.00	0.30	0.17	50	
58	16.49	16.48	33.154	24.219	371.0	0.219	5.79	103.7	1.7	0.32	0.0	0.00	0.38	0.22	58	216
66 A	15.86	15.85	33.161	24.368	357.0	0.248	5.86	103.6	1.7	0.34	0.1	0.01	0.54	0.25	66	215
75	15.46	15.45	33.110	24.418	352.5	0.280	5.89	103.3	1.8	0.35	0.1	0.02	0.34	0.42	75	214
82	14.57	14.56	33.138	24.632	332.2	0.304	6.02	103.7	2.1	0.37	0.1	0.02	0.33	0.31	82	213
92 A	13.31	13.30	33.175	24.921	304.8	0.336	5.86	98.4	3.2	0.54	2.2	0.19	0.27	0.28	92	212
100 ISL	12.76	12.75	33.233	25.075	290.3	0.360	5.63	93.5	4.4	0.66	4.3	0.14	0.23	0.25	100	
110	12.25	12.24	33.316	25.237	275.0	0.388	5.27	86.6	6.5	0.82	7.4	0.02	0.18	0.20	110	211
124	11.23	11.21	33.436	25.520	248.3	0.425	4.72	75.9	11.4	1.15	13.0	0.01	0.06	0.10	125	210
125 ISL	11.18	11.16	33.445	25.536	246.8	0.427	4.68	75.2	11.7	1.17	13.3	0.01	0.06	0.10	126	
145	10.35	10.33	33.607	25.808	221.2	0.474	4.08	64.5	17.0	1.40	17.4	0.01	0.02	0.05	146	209
150 ISL	10.15	10.13	33.628	25.859	216.4	0.485	4.00	62.9	18.0	1.45	18.2	0.01	0.02	0.05	151	
169	9.47	9.45	33.692	26.022	201.1	0.525	3.77	58.5	21.5	1.60	20.7	0.01	0.01	0.04	170	208
198	8.71	8.69	33.852	26.268	178.1	0.580	3.43	52.3	28.1	1.84	24.5	0.01	0.02	0.01	199	207
200 ISL	8.67	8.65	33.861	26.281	176.8	0.583	3.41	52.0	28.5	1.85	24.7	0.01			201	
229	8.22	8.20	33.960	26.428	163.3	0.632	3.08	46.5	34.1	2.01	26.9	0.01			230	206
250 ISL	7.91	7.88	33.997	26.503	156.4	0.666	2.86	42.9	38.0	2.12	28.5	0.01			251	
269	7.65	7.62	34.016	26.556	151.6	0.695	2.67	39.8	41.4	2.21	29.8	0.01			270	205
300 ISL	7.26	7.23	34.035	26.627	145.2	0.741	2.35	34.7	47.0	2.36	31.8	0.01			302	
319	7.06	7.03	34.045	26.663	142.0	0.769	2.14	31.5	50.3	2.45	32.9	0.01			321	204
378	6.68	6.65	34.106	26.763	133.1	0.850	1.37	20.0	60.2	2.74	36.5	0.00			380	203
400 ISL	6.49	6.45	34.124	26.802	129.5	0.879	1.19	17.3	64.3	2.83	37.5	0.00			402	
438	6.18	6.14	34.155	26.867	123.7	0.927	0.95	13.7	71.0	2.96	39.0	0.00			441	202
500 ISL	5.89	5.85	34.222	26.957	115.7	1.001	0.55	7.9	79.0	3.11	40.5	0.00			503	
511	5.84	5.80	34.234	26.973	114.3	1.014	0.48	6.9	80.4	3.14	40.8	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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	28/10/96	2209	UTC	586 m	280	05 kn	270 01 04	1	1022.0 mb	15.6 c	14.0 c	07m 10	2/8		SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.40	15.40	33.541	24.760	317.6	0.000	6.64	116.6	1.7	0.30	0.0	0.01	5.88	1.28	0	
2 A	15.40	15.40	33.541	24.760	317.6	0.006	6.64	116.6	1.7	0.30	0.0	0.01	5.88	1.28	2	224
10	15.07	15.07	33.540	24.832	311.0	0.031	6.48	113.1	1.7	0.31	0.0	0.01	8.69	1.71	10	223
20	14.21	14.21	33.548	25.023	293.2	0.062	5.35	91.7	5.7	0.63	4.5	0.11	2.57	0.80	20	222
30	11.75	11.75	33.645	25.585	239.9	0.088	4.05	66.0	15.4	1.28	14.5	0.12	0.73	0.57	30	221
40	10.77	10.77	33.733	25.831	216.7	0.111	3.37	53.8	20.2	1.59	19.0	0.08	0.31	0.37	40	220
50	10.46	10.45	33.777	25.920	208.4	0.132	3.11	49.3	22.4	1.73	20.8	0.05	0.14	0.31	50	219
60	10.32	10.31	33.803	25.964	204.4	0.153	2.98	47.1	23.4	1.78	21.6	0.04	0.09	0.24	60	218
70	10.24	10.23	33.822	25.993	201.9	0.173	2.93	46.3	24.0	1.80	22.1	0.03	0.06	0.23	70	217
75 ISL	10.19	10.18	33.837	26.013	200.1	0.183	2.86	45.1	24.6	1.83	22.5	0.03	0.06	0.22	75	
85	10.11	10.10	33.867	26.051	196.8	0.203	2.73	43.0	25.8	1.90	23.1	0.03	0.05	0.20	85	216
100	10.07	10.06	33.883	26.070	195.2	0.233	2.67	42.0	26.6	1.94	23.5	0.04	0.05	0.27	101	215
119	9.95	9.94	33.952	26.145	188.6	0.269	2.36	37.1	28.9	2.04	25.0	0.03	0.03	0.16	120	214
125 ISL	9.89	9.88	33.983	26.179	185.4	0.280	2.26	35.4	29.8	2.09	25.6	0.03	0.03	0.14	126	
139	9.77	9.75	34.055	26.256	178.4	0.306	2.02	31.6	31.9	2.20	26.8	0.02	0.02	0.10	140	213
150 ISL	9.77	9.75	34.092	26.285	175.9	0.325	1.86	29.1	33.0	2.25	27.4	0.02	0.02	0.10	151	
169	9.78	9.76	34.136	26.318	173.2	0.359	1.61	25.2	34.7	2.33	28.1	0.02	0.02	0.10	170	212
199	9.57	9.55	34.204	26.406	165.4	0.409	1.25	19.5	38.1	2.49	29.8	0.01	0.01	0.09	200	211
200 ISL	9.56	9.54	34.205	26.409	165.2	0.411	1.24	19.3	38.2	2.49	29.8	0.01			201	
228	9.37	9.34	34.215	26.448	162.0	0.457	1.07	16.6	40.6	2.55	30.8	0.01			229	210
250 ISL	9.07	9.04	34.207	26.491	158.3	0.492	1.02	15.7	43.0	2.60	31.7	0.01			252	
268	8.79	8.76	34.198	26.528	154.9	0.520	0.99	15.2	45.2	2.64	32.4	0.01			270	209
300 ISL	8.40	8.37	34.196	26.587	149.7	0.569	0.90	13.7	49.9	2.73	33.4	0.01			302	
318	8.20	8.17	34.198	26.619	146.9	0.596	0.84	12.7	52.8	2.78	33.9	0.01			320	208
377	7.52	7.48	34.211	26.730	137.0	0.679	0.67	10.0	62.6	2.95	35.3	0.01			379	207
400 ISL	7.32	7.28	34.215													

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 24.7 W	28/10/96	1444 UTC	39 m	090 02 kn	310 01 05	0	1022.2 mb	15.2 c	12.0 c		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	15.07	15.07	33.525	24.821	311.9	0.000	5.72	99.8	5.8	0.52	1.7	0.14	2.03	0.57	0	
2	15.07	15.07	33.525	24.821	311.9	0.006	5.72	99.8	5.8	0.52	1.7	0.14	2.03	0.57	2	209
2	15.07	15.07	33.525	24.821	311.9	0.006	5.70	99.4	5.8	0.52	1.7	0.14	2.06	0.46	2	210
5	15.06	15.06	33.524	24.822	311.9	0.016	5.69	99.3	5.8	0.53	1.7	0.14	2.16	0.55	5	208
5	15.01	15.01	33.524	24.833	310.8	0.016	5.70	99.3	5.9	0.53	1.8	0.15	2.04	0.52	5	206
5	15.04	15.04	33.524	24.826	311.4	0.016	5.71	99.6	5.9	0.53	1.8	0.15	1.97	0.51	5	207
6	14.90	14.90	33.519	24.853	309.0	0.019	5.46	94.9	6.9	0.62	3.3	0.21	1.90	0.50	6	205
10	13.24	13.24	33.528	25.206	275.5	0.030	4.90	82.3	8.9	0.85	7.3	0.23	0.78	0.43	10	204
15	13.01	13.01	33.531	25.254	271.0	0.044	4.72	78.9	9.6	0.94	8.8	0.19	0.54	0.40	15	203
20	12.74	12.74	33.542	25.316	265.3	0.057	4.58	76.2	10.6	1.02	9.8	0.20	0.40	0.49	20	202
30 ISL	12.70	12.70	33.550	25.330	264.2	0.084	4.44	73.8	11.3	1.07	10.2	0.24	0.40	0.54	30	
31	12.70	12.70	33.551	25.331	264.1	0.087	4.43	73.6	11.4	1.07	10.2	0.24	0.40	0.55	31	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
34 10.7 N	119 30.5 W	28/10/96	1128 UTC	135 m	340 07 kn			1022.0 mb	15.4 c	13.3 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	14.94	14.94	33.510	24.837	310.3	0.000	5.65	98.3	5.6	0.52	2.2	0.16	1.76	0.47	0	
1	14.94	14.94	33.509	24.836	310.4	0.003	5.67	98.7	5.6	0.52	2.3	0.16	1.43	0.47	1	218
2	14.94	14.94	33.510	24.837	310.3	0.006	5.65	98.3	5.6	0.52	2.2	0.16	1.76	0.47	2	217
3	14.97	14.97	33.509	24.830	311.1	0.009	5.65	98.4	5.6	0.53	2.2	0.16	1.36	0.41	3	216
6	14.98	14.98	33.510	24.829	311.3	0.019	5.69	99.1	5.6	0.51	2.2	0.16	1.36	0.45	6	214
6	14.98	14.98	33.510	24.829	311.3	0.019	5.72	99.6	5.6	0.51	2.2	0.16	1.52	0.46	6	212
6	14.98	14.98	33.509	24.828	311.3	0.019	5.65	98.4	5.6	0.52	2.2	0.16	1.35	0.43	6	213
6	14.98	14.98	33.509	24.828	311.3	0.019	5.68	98.9	5.6	0.51	2.2	0.16	1.47	0.47	6	215
10	14.97	14.97	33.509	24.830	311.2	0.031	5.69	99.1	5.6	0.52	2.2	0.16	1.44	0.43	10	211
15	14.78	14.78	33.509	24.871	307.5	0.047	5.63	97.6	5.7	0.54	2.6	0.17	1.31	0.47	15	210
20	14.12	14.12	33.504	25.007	294.6	0.062	5.29	90.5	6.5	0.64	4.5	0.19	1.00	0.43	20	209
29	13.65	13.65	33.513	25.112	285.0	0.088	5.15	87.3	7.6	0.76	6.1	0.16	0.72	0.39	29	208
30 ISL	13.57	13.57	33.513	25.128	283.4	0.091	5.11	86.5	7.8	0.78	6.4	0.15	0.69	0.39	30	
39	12.85	12.84	33.512	25.271	270.0	0.115	4.79	79.8	9.5	0.93	9.2	0.11	0.50	0.38	39	207
49	12.56	12.55	33.506	25.324	265.3	0.142	4.70	77.8	9.6	0.96	9.8	0.10	0.47	0.40	49	206
50 ISL	12.50	12.49	33.506	25.335	264.2	0.145	4.68	77.4	9.7	0.97	9.9	0.09	0.46	0.40	50	
59	11.94	11.93	33.528	25.459	252.6	0.168	4.47	73.1	10.9	1.08	11.5	0.04	0.30	0.37	59	205
69	11.55	11.54	33.604	25.591	240.3	0.193	4.06	65.9	13.9	1.24	14.2	0.03	0.12	0.22	69	204
75 ISL	11.30	11.29	33.650	25.672	232.6	0.207	3.78	61.0	15.8	1.35	15.7	0.03	0.10	0.17	75	
84	10.95	10.94	33.716	25.787	221.9	0.227	3.38	54.2	18.7	1.52	17.9	0.02	0.07	0.12	84	203
100	10.43	10.42	33.820	25.959	205.8	0.262	2.92	46.3	23.2	1.76	21.6	0.02	0.15	0.12	101	202
120	10.37	10.36	33.842	25.987	203.6	0.303	2.84	45.0	24.0	1.81	22.1	0.02	0.04	0.10	121	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 52.4 N	120 8.2 W	28/10/96	0512 UTC	113 m	350 17 kn			1022.0 mb	14.9 c	12.8 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	13.45	13.45	33.547	25.178	277.8	0.000	5.67	95.7	6.4	0.69	5.4	0.10	3.64	1.21	0	
1	13.45	13.45	33.547	25.178	277.9	0.003	5.67	95.7	6.4	0.69	5.4	0.10	3.64	1.21	1	213
1	13.44	13.44	33.547	25.180	277.7	0.003	5.65	95.4	6.4	0.70	5.5	0.10	3.63	1.03	1	214
3	13.45	13.45	33.547	25.178	277.9	0.008	5.66	95.5	6.4	0.70	5.5	0.10	3.97	1.07	3	212
7	13.43	13.43	33.547	25.182	277.6	0.019	5.62	94.8	6.7	0.71	5.6	0.10	3.73	1.02	7	211
10	13.38	13.38	33.549	25.194	276.6	0.028	5.54	93.4	7.3	0.75	6.2	0.10	3.24	0.98	10	210
15	12.88	12.88	33.565	25.306	266.1	0.041	5.12	85.4	9.2	0.90	8.7	0.10	2.63	0.61	15	209
20	12.69	12.69	33.572	25.349	262.1	0.055	5.07	84.0	9.8	0.95	9.3	0.10	2.67	0.61	20	208
30	12.64	12.64	33.577	25.363	261.1	0.081	5.06	84.0	10.0	0.97	9.6	0.10	2.33	0.68	30	207
40	12.20	12.19	33.609	25.472	250.9	0.106	4.64	76.3	12.3	1.09	11.7	0.08	1.97	0.55	40	206
50	12.05	12.04	33.623	25.512	247.3	0.131	4.44	72.8	13.3	1.16	12.6	0.08	1.68	0.64	50	205
60	11.55	11.54	33.659	25.633	236.0	0.155	4.14	67.2	15.3	1.29	14.6	0.05	1.23	0.50	60	204
70	11.00	10.99	33.727	25.786	221.7	0.178	3.60	57.8	19.1	1.50	17.9	0.06	0.76	0.35	70	203
75 ISL	10.67	10.66	33.771	25.879	212.9	0.189	3.34	53.2	21.3	1.62	19.7	0.06	0.53	0.29	75	
86	10.03	10.02	33.865	26.063	195.6	0.212	2.86	45.0	25.7	1.85	23.0	0.05	0.14	0.19	86	202
100 ISL	9.74	9.73	33.935	26.166	186.1	0.238	2.57	40.2	28.5	1.98	24.8	0.04	0.04	0.13	101	
102	9.70	9.69	33.945	26.181	184.7	0.242	2.53	39.5	28.9	2.00	25.0	0.04	0.03	0.12	103	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 42.4 N	120 18.0 W	27/10/96	2156 UTC	995 m	280 10 kn	310 04 08	0	1021.8 mb	16.0 c	13.8 c		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	14.82	14.82	33.364	24.750	318.6	0.006	5.83	101.1	3.5	0.52	2.3	0.05	0.92	A 0.33	A	2 224
6	14.78	14.78	33.363	24.759	317.9	0.019	5.82	100.8	3.5	0.50	2.3	0.05	0.97	0.34		6 223
6	14.78	14.78	33.364	24.759	317.9	0.019	5.83	101.0	3.5	0.51	2.3	0.05	0.92	0.35		6 222
11	14.51	14.51	33.369	24.821	312.1	0.035	5.84	100.6	3.5	0.51	2.4	0.06	1.17	0.46		11 221
20	14.47	14.47	33.411	24.862	308.5	0.063	5.88	101.3	3.4	0.50	2.2	0.06	2.52	0.73		20 220
30	14.59	14.59	33.486	24.895	305.7	0.093	5.79	100.0	3.4	0.48	2.3	0.06	3.45	0.87		30 219
41	14.46	14.45	33.482	24.920	303.6	0.127	5.71	98.4	3.9	0.52	2.8	0.06	2.63	0.78		41 218
50	14.11	14.10	33.458	24.975	298.6	0.154	5.60	95.8	4.4	0.57	3.5	0.07	2.28	0.64		50 217
61	12.23	12.22	33.451	25.345	263.5	0.185	4.79	78.8	10.0	1.01	10.5	0.07	0.65	0.34		61 216
70	11.10	11.09	33.523	25.610	238.4	0.208	4.36	70.0	13.6	1.22	14.2	0.04	0.11	0.19		70 215
84	10.05	10.04	33.693	25.925	208.6	0.239	3.69	58.0	20.4	1.56	19.6	0.02	0.04	0.07		84 214
98	9.75	9.74	33.740	26.012	200.6	0.268	3.58	55.9	22.0	1.63	20.9	0.02	0.02	0.06		98 213
198	8.07	8.05	34.009	26.488	157.0	0.446	2.72	40.9	37.5	2.12	28.1	0.01	0.00	0.03		199 212
298	7.50	7.47	34.172	26.701	138.3	0.594	1.35	20.1	53.4	2.64	33.8	0.01				300 211
398	6.84	6.80	34.238	26.846	125.8	0.726	0.70	10.3	65.6	2.93	37.1	0.00				401 210
512	6.10	6.05	34.296	26.990	113.1	0.862	0.39	5.6	79.8	3.14	39.9	0.00				516 209
747	5.16	5.10	34.374	27.168	98.1	1.110	0.24	3.4	97.7	3.27	42.7	0.00				753 208
747	5.16	5.10	34.373	27.167	98.1	1.110	0.25	3.5	97.6	3.27	42.6	0.00				753 207
941	4.22	4.15	34.444	27.329	83.2	1.286	0.41	5.6	119.2	3.31	43.4	0.00				949 205
942	4.24	4.17	34.450	27.331	83.0	1.287	0.39	5.4	119.4	3.30	43.6	0.00				950 206
972	4.06	3.99	34.463	27.361	80.2	1.312	0.44	6.0	123.9	3.30	43.4	0.02				980 204
977	4.06	3.99	34.464	27.361	80.1	1.316	0.44	6.0	124.1	3.30	43.3	0.02				985 203
980	4.05	3.97	34.465	27.363	80.0	1.318	0.44	6.0	124.4	3.30	43.4	0.02				988 202
982	4.06	3.98	34.465	27.362	80.1	1.320	0.44	6.0	124.1	3.30	43.4	0.02				990 201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 45.4 N	120 26.2 W	27/10/96	1448 UTC	1270 m	330 07 kn			1020.3 mb	15.2 c	12.7 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.90	14.90	33.401	24.762	317.5	0.000	5.72	99.4	3.5	0.47	2.1	0.05	1.03	0.40	0	
2	14.90	14.90	33.402	24.763	317.4	0.006	5.74	99.7	3.6	0.48	2.1	0.05	1.08	0.33	2	224
3	14.90	14.90	33.401	24.762	317.5	0.010	5.72	99.4	3.5	0.47	2.1	0.05	1.03	0.40	3	223
5	14.91	14.91	33.401	24.760	317.8	0.016	5.71	99.2	3.5	0.47	2.1	0.05	0.95	0.48	5	222
10 ISL	14.91	14.91	33.402	24.761	317.9	0.032	5.73	99.6	3.5	0.47	2.1	0.05	1.03	0.42	10	
11	14.91	14.91	33.402	24.761	317.9	0.035	5.73	99.6	3.5	0.47	2.1	0.05	1.06	0.41	11	221
16	14.91	14.91	33.400	24.759	318.2	0.051	5.71	99.2	3.5	0.48	2.1	0.05	1.03	0.38	16	220
20	14.88	14.88	33.402	24.767	317.5	0.064	5.70	99.0	3.5	0.48	2.1	0.05	1.12	0.41	20	219
30 ISL	14.72	14.72	33.413	24.811	313.7	0.095	5.74	99.4	3.5	0.50	2.4	0.05	1.83	0.62	30	
31	14.70	14.70	33.415	24.817	313.2	0.098	5.74	99.3	3.5	0.50	2.4	0.05	1.91	0.65	31	218
45	14.56	14.55	33.433	24.861	309.4	0.142	5.74	99.0	3.5	0.52	2.7	0.05	2.40	0.89	45	217
50 ISL	14.48	14.47	33.433	24.878	307.9	0.157	5.73	98.7	3.5	0.53	2.8	0.06	2.53	1.06	50	
55	14.39	14.38	33.434	24.898	306.1	0.173	5.73	98.5	3.6	0.54	3.0	0.06	2.66	1.12	55	216
65	13.08	13.07	33.457	25.184	279.0	0.202	5.10	85.4	7.4	0.83	7.7	0.06	1.38	0.45	65	215
75	10.49	10.48	33.578	25.760	224.2	0.227	4.00	63.4	17.1	1.42	17.4	0.02	0.08	0.09	75	214
84	10.17	10.16	33.685	25.898	211.2	0.247	3.56	56.1	20.6	1.61	20.2	0.01	0.05	0.09	84	213
96	9.75	9.74	33.769	26.035	198.4	0.271	3.20	50.0	23.9	1.79	22.7	0.01	0.02	0.08	96	212
100 ISL	9.63	9.62	33.806	26.084	193.9	0.279	3.06	47.7	25.2	1.85	23.5	0.01	0.01	0.07	100	
111	9.35	9.34	33.889	26.194	183.5	0.300	2.78	43.1	28.4	1.97	25.2	0.01	0.00	0.06	112	211
125	9.03	9.02	33.895	26.251	178.4	0.325	2.85	43.8	29.6	1.98	25.8	0.01	0.00	0.05	126	210
143	8.72	8.70	33.918	26.318	172.3	0.357	3.01	46.0	30.8	1.97	26.0	0.01	0.01	0.04	144	209
150 ISL	8.59	8.57	33.937	26.353	169.1	0.369	2.98	45.4	31.8	1.99	26.4	0.01	0.01	0.04	151	
168	8.33	8.31	33.996	26.439	161.2	0.398	2.77	41.9	34.8	2.08	27.6	0.01	0.00	0.04	169	208
200	8.28	8.26	34.110	26.536	152.5	0.449	2.03	30.7	40.8	2.35	30.1	0.01	0.00	0.04	201	207
230	8.38	8.36	34.200	26.592	147.9	0.494	1.48	22.5	44.3	2.52	31.5	0.01			231	206
250 ISL	8.03	8.00	34.186	26.634	144.1	0.523	1.50	22.6	47.3	2.56	32.3	0.01			251	
269	7.63	7.60	34.160	26.672	140.6	0.550	1.51	22.5	50.2	2.59	33.1	0.01			271	205
300 ISL	7.39	7.36	34.173	26.717	136.7	0.593	1.30	19.3	54.1	2.69	34.3	0.01			302	
318	7.32	7.29	34.190	26.741	134.8	0.617	1.14	16.9	56.2	2.75	35.0	0.01			320	204
378	6.99	6.95	34.255	26.838	126.3	0.696	0.70	10.3	63.3	2.93	36.6	0.01			380	203
400 ISL	6.81	6.77	34.257	26.865	124.0	0.723	0.64	9.4	66.1	2.97	37.3	0.01			403	
437	6.52	6.48	34.254	26.901	120.8	0.768	0.59	8.6	70.3	3.02	38.5	0.00			440	202
500 ISL	6.33	6.28	34.280	26.947	117.2	0.843	0.47	6.8	74.6	3.10	39.3	0.00			503	
517	6.28	6.23	34.287	26.960	116.3	0.863	0.44	6.4	75.8	3.12	39.5	0.00			521	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 34.7 N	120 45.2 W	27/10/96	0019	UTC	1360 m	340	26 kn	340 12 07	0	1016.8 mb	15.2 c	11.8 c				O/B
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.55	15.55	33.479	24.680	325.3	0.000	5.89	103.7	3.1	0.39	0.9	0.04	1.35	0.44	0	
2	15.55	15.55	33.479	24.680	325.3	0.007	5.89	103.7	3.1	0.39	0.9	0.04	1.35	0.44	2	223
3	15.55	15.55	33.478	24.679	325.4	0.010	5.88	103.5	3.2	0.39	0.9	0.04	1.35	0.46	3	224
4	15.56	15.56	33.479	24.677	325.6	0.013	5.87	103.4	3.1	0.39	0.9	0.04	1.44	0.39	4	222
7	15.56	15.56	33.479	24.677	325.7	0.023	5.87	103.4	3.1	0.39	0.9	0.04	1.40	0.47	7	221
10 ISL	15.56	15.56	33.478	24.677	325.8	0.033	5.89	103.7	3.1	0.39	0.9	0.05	1.38	0.44	10	
11	15.56	15.56	33.478	24.677	325.9	0.036	5.89	103.7	3.1	0.39	0.9	0.05	1.37	0.42	11	220
16	15.56	15.56	33.477	24.676	326.1	0.052	5.87	103.4	3.1	0.39	0.9	0.05	1.26	0.41	16	219
20 ISL	15.55	15.55	33.482	24.682	325.6	0.065	5.89	103.7	3.1	0.39	0.9	0.05	1.39	0.43	20	
21	15.55	15.55	33.484	24.684	325.5	0.068	5.89	103.7	3.1	0.39	0.9	0.05	1.43	0.44	21	218
30	15.50	15.50	33.519	24.722	322.1	0.098	5.86	103.1	2.9	0.40	1.1	0.05	1.51	0.53	30	217
40	15.01	15.00	33.534	24.842	311.1	0.129	5.84	101.8	3.4	0.47	1.9	0.07	1.48	0.76	40	216
50	14.04	14.03	33.426	24.965	299.6	0.160	5.83	99.5	3.8	0.54	2.8	0.08	1.92	1.12	50	215
60	12.35	12.34	33.215	25.139	283.1	0.189	5.52	90.9	6.0	0.75	5.8	0.07	1.23	1.12	60	214
70	11.27	11.26	33.232	25.353	262.9	0.216	5.11	82.2	9.3	0.97	9.8	0.04	0.24	0.35	70	213
75 ISL	11.20	11.19	33.304	25.421	256.5	0.229	4.98	80.0	10.2	1.02	10.7	0.04	0.20	0.32	75	
85	11.06	11.05	33.403	25.524	247.0	0.254	4.78	76.6	11.5	1.08	12.0	0.03	0.12	0.25	85	212
100	10.52	10.51	33.468	25.669	233.3	0.290	4.47	70.8	14.6	1.25	15.1	0.02	0.09	0.14	100	211
120	9.56	9.55	33.585	25.923	209.5	0.335	3.93	61.0	21.3	1.62	20.9	0.02	0.04	0.09	120	210
125 ISL	9.37	9.36	33.630	25.989	203.3	0.345	3.83	59.2	22.5	1.66	21.7	0.02	0.04	0.08	126	
139	8.98	8.97	33.764	26.156	187.6	0.372	3.55	54.5	25.5	1.75	23.2	0.02	0.03	0.07	140	209
150 ISL	8.99	8.97	33.867	26.235	180.3	0.393	3.19	49.0	27.9	1.87	24.6	0.02	0.03	0.08	151	
170	9.00	8.98	33.994	26.334	171.4	0.428	2.57	39.5	31.9	2.07	26.8	0.02	0.02	0.11	171	208
199	8.61	8.59	34.081	26.463	159.6	0.476	2.26	34.5	36.7	2.21	28.5	0.02	0.02	0.09	200	207
200 ISL	8.58	8.56	34.080	26.467	159.2	0.477	2.27	34.6	36.8	2.21	28.5	0.02			201	
230	7.77	7.75	34.030	26.549	151.6	0.524	2.51	37.5	40.7	2.21	29.8	0.02			231	206
250 ISL	7.49	7.47	34.042	26.599	147.1	0.554	2.33	34.6	44.3	2.30	31.1	0.02			251	
269	7.35	7.32	34.068	26.640	143.5	0.581	2.05	30.4	47.7	2.41	32.4	0.01			271	205
300 ISL	7.24	7.21	34.111	26.689	139.2	0.625	1.66	24.5	51.8	2.55	33.8	0.01			302	
319	7.18	7.15	34.134	26.716	137.0	0.651	1.44	21.3	54.2	2.62	34.5	0.01			321	204
379	6.57	6.54	34.147	26.810	128.6	0.731	1.08	15.7	63.4	2.81	37.3	0.01			381	203
400 ISL	6.33	6.29	34.160	26.851	124.8	0.758	0.93	13.5	67.9	2.89	38.3	0.01			403	
438	5.95	5.91	34.190	26.924	118.1	0.804	0.67	9.6	75.7	3.02	40.0	0.01			441	202
500 ISL	5.71	5.67	34.250	27.002	111.4	0.875	0.44	6.3	82.3	3.12	41.0	0.01			503	
518	5.64	5.60	34.267	27.024	109.4	0.895	0.37	5.3	84.2	3.15	41.3	0.01			522	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 27.2 N	121 0.7 W	26/10/96	2014	UTC	3549 m	260	34 kn	340 15 08	0	1016.0 mb	15.0 c	11.8 c				O/B
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.61	14.61	33.205	24.673	325.9	0.000	6.09	105.1	1.7	0.38	0.2	0.04	2.72	0.81	0	
2	14.61	14.61	33.205	24.673	326.0	0.007	6.09	105.1	1.7	0.38	0.2	0.04	2.72	0.81	2	222
4	14.60	14.60	33.204	24.674	325.9	0.013	6.08	104.9	1.7	0.38	0.2	0.04	2.79	0.87	4	223
6	14.59	14.59	33.200	24.673	326.0	0.020	6.07	104.7	1.7	0.39	0.3	0.05	2.73	0.83	6	221
10	14.55	14.55	33.196	24.679	325.6	0.033	6.06	104.4	1.7	0.39	0.3	0.05	2.58	0.85	10	220
15	14.48	14.48	33.186	24.686	325.1	0.049	6.03	103.7	1.7	0.40	0.4	0.07	2.48	0.80	15	219
20	14.46	14.46	33.193	24.696	324.3	0.065	6.05	104.0	1.7	0.39	0.3	0.05	2.55	0.82	20	218
30	14.44	14.44	33.179	24.690	325.2	0.098	6.03	103.6	1.8	0.41	0.5	0.08	2.42	0.64	30	217
40	14.44	14.43	33.191	24.699	324.6	0.130	6.05	104.0	1.6	0.39	0.3	0.06	2.58	0.81	40	216
49	14.03	14.02	33.141	24.747	320.3	0.159	5.99	102.1	2.0	0.45	0.9	0.13	1.84	0.61	49	215
50 ISL	13.90	13.89	33.126	24.762	318.8	0.162	5.97	101.4	2.1	0.47	1.1	0.16	1.69	0.57	50	
61	12.34	12.33	33.021	24.990	297.3	0.196	5.72	94.0	4.2	0.67	3.8	0.39	0.23	0.23	61	214
70	11.66	11.65	33.103	25.181	279.2	0.222	5.42	87.8	6.6	0.80	6.4	0.04	0.17	0.18	70	213
75 ISL	11.32	11.31	33.179	25.302	267.8	0.236	5.21	83.9	8.3	0.91	8.4	0.03	0.13	0.15	75	
84	10.78	10.77	33.327	25.514	247.8	0.259	4.82	76.8	11.5	1.11	12.0	0.02	0.06	0.10	84	212
100 ISL	9.98	9.97	33.529	25.809	220.0	0.296	4.24	66.4	17.1	1.39	17.1	0.02	0.03	0.06	100	
101	9.93	9.92	33.539	25.825	218.5	0.299	4.21	65.9	17.5	1.41	17.4	0.02	0.03	0.06	101	211
119	9.14	9.13	33.676	26.062	196.2	0.336	3.63	55.9	24.1	1.74	22.6	0.01	0.01	0.03	120	210
125 ISL	9.10	9.09	33.730	26.110	191.7	0.348	3.52	54.2	25.1	1.78	23.3	0.01	0.01	0.03	126	
140	9.00	8.98	33.828	26.203	183.2	0.376	3.32	51.0	26.9	1.84	24.1	0.01	0.00	0.03	141	209
150 ISL	8.89	8.87	33.887	26.267	177.3	0.394	3.13	48.0	28.7	1.91	25.0	0.01	0.00	0.04	151	
169	8.63	8.61	33.965	26.369	168.0	0.426	2.85	43.4	32.0	2.03	26.6	0.01	0.01	0.05	170	208
198	8.08	8.06	33.971	26.457	159.9	0.474	3.01	45.3	35.2	2.04	27.5	0.01	0.00	0.05	199	207
200 ISL	8.06	8.04	33.973	26.462	159.5	0.477	3.00	45.1	35.4	2.05	27.6	0.01			201	
228	7.79	7.77	34.008	26.529	153.5	0.521	2.76	41.3	39.1	2.16	29.0	0.01			229	206
250 ISL	7.48	7.46	34.027	26.589	148.1	0.554	2.49	37.0	43.7	2.28	30.6	0.01			251	
268	7.22	7.19	34.040	26.636	143.7	0.580	2.26	33.4	47.7	2.38	31.9	0.01			270	205
300 ISL	6.89	6.86	34.055	26.693	138.6	0.626	1.95	28.6	52.8	2.51	33.7	0.01			302	
320	6.74	6.71	34.064	26.721	136.2	0.653	1.77	25.8	55.6	2.58	34.6	0.01			322	204
378	6.45	6.42	34.108	26.795	129.9	0.730	1.27	18.4	63.3	2.79	37.1	0.01			380	203
400 ISL	6.27	6.23	34.115	26.824	127.3	0.759	1.14	16.5	66.6	2.85	38.0	0.01			403	
438	5.95	5.91	34.125	26.872	122.9	0.806	0.96	13.8	72.2	2.94	39.4	0.00			441	202
500 ISL	5.64	5.60	34.160	26.939	117.2	0.881	0.72	10.2	79.0	3.05	40.7	0.00			503	
512	5.58	5.54	34.167	26.952	116.0	0.895	0.67	9.5	80.3	3.07	41.0	0.00			516	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 20.3 N	121 15.4 W	26/10/96	1600	UTC	3739 m	330	30 kn	340 15 09	0	1016.0 mb	15.0 C	12.5 c				0/8
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.57	15.57	33.173	24.440	348.1	0.000	5.85	102.9	2.0	0.35	0.1	0.02				0
2	15.57	15.57	33.173	24.440	348.2	0.007	5.85	102.9	2.0	0.35	0.1	0.02				2 223
4	15.57	15.57	33.173	24.440	348.2	0.014	5.86	103.0	1.9	0.35	0.1	0.02	0.64	0.25		4 222
8	15.57	15.57	33.173	24.440	348.4	0.028	5.85	102.9	1.9	0.35	0.1	0.02	0.62	0.22		8 221
10 ISL	15.57	15.57	33.173	24.440	348.4	0.035	5.86	103.0	1.9	0.35	0.1	0.02	0.61	0.22		10
11	15.57	15.57	33.173	24.440	348.4	0.038	5.86	103.0	1.9	0.35	0.1	0.02	0.61	0.22		11 220
15	15.56	15.56	33.173	24.442	348.3	0.052	5.86	103.0	1.9	0.35	0.1	0.02	0.63	0.22		15 219
20	15.56	15.56	33.173	24.443	348.5	0.070	5.87	103.2	1.9	0.35	0.0	0.02	0.63	0.22		20 218
30	15.54	15.54	33.173	24.447	348.3	0.105	5.86	103.0	1.8	0.35	0.0	0.02	0.63	0.23		30 217
40	15.14	15.13	33.153	24.520	341.7	0.139	5.86	102.1	2.0	0.39	0.4	0.06	0.57	0.24		40 216
50 ISL	13.80	13.79	33.102	24.764	318.6	0.172	5.79	98.2	2.7	0.49	1.7	0.19	0.45	0.27		50
51	13.63	13.62	33.101	24.798	315.4	0.175	5.78	97.7	2.8	0.51	1.8	0.20	0.44	0.27		51 215
59	12.12	12.11	33.175	25.151	281.9	0.199	5.26	86.1	6.8	0.84	7.3	0.11	0.45	0.30		59 214
69	11.61	11.60	33.259	25.312	266.8	0.227	4.94	80.1	9.2	0.99	9.9	0.08	0.47	0.32		69 213
75 ISL	11.15	11.14	33.377	25.487	250.2	0.242	4.52	72.6	12.6	1.18	13.0	0.06	0.36	0.31		75
86	10.39	10.38	33.605	25.798	220.8	0.268	3.72	58.8	19.0	1.53	18.7	0.04	0.15	0.28		86 212
100 ISL	10.09	10.08	33.730	25.947	206.9	0.298	3.26	51.3	22.6	1.71	21.4	0.03	0.13	0.23		100
101	10.08	10.07	33.737	25.955	206.2	0.300	3.23	50.8	22.8	1.72	21.5	0.03	0.13	0.23		101 211
120	9.74	9.73	33.999	26.217	181.7	0.337	2.22	34.7	30.4	2.10	26.2	0.02	0.06	0.19		121 210
125 ISL	9.69	9.68	34.036	26.254	178.3	0.346	2.09	32.6	31.4	2.15	26.8	0.02	0.05	0.18		126
140	9.61	9.59	34.106	26.322	172.1	0.372	1.85	28.9	33.2	2.25	27.9	0.01	0.04	0.17		141 209
150 ISL	9.57	9.55	34.146	26.360	168.7	0.389	1.70	26.5	34.5	2.30	28.4	0.01	0.04	0.16		151
168	9.50	9.48	34.197	26.412	164.2	0.419	1.50	23.3	36.4	2.37	29.1	0.01	0.04	0.14		169 208
199	9.34	9.32	34.221	26.457	160.5	0.469	1.39	21.6	38.0	2.43	29.8	0.01	0.02	0.12		200 207
200 ISL	9.34	9.32	34.222	26.458	160.4	0.471	1.39	21.6	38.1	2.43	29.8	0.01	0.02	0.12		201
229	9.17	9.14	34.248	26.506	156.4	0.517	1.27	19.6	40.0	2.48	30.4	0.01	0.04	0.17		230 206
250 ISL	9.00	8.97	34.257	26.541	153.5	0.549	1.20	18.5	41.4	2.53	30.9	0.01	0.04	0.16		251
269	8.82	8.79	34.260	26.572	150.8	0.578	1.15	17.6	43.0	2.57	31.4	0.01	0.04	0.16		271 205
300 ISL	8.44	8.41	34.256	26.628	145.9	0.624	1.06	16.1	46.7	2.63	32.5	0.01	0.04	0.16		302
320	8.18	8.15	34.253	26.665	142.5	0.653	1.01	15.3	49.4	2.67	33.2	0.01	0.04	0.16		322 204
376	7.62	7.58	34.255	26.750	135.1	0.731	0.84	12.5	56.3	2.81	35.0	0.01	0.04	0.16		378 203
400 ISL	7.46	7.42	34.262	26.779	132.7	0.763	0.76	11.3	58.6	2.86	35.5	0.01	0.04	0.16		403
437	7.20	7.16	34.272	26.824	128.8	0.811	0.65	9.6	62.2	2.92	36.4	0.01	0.04	0.16		440 202
500 ISL	6.53	6.48	34.275	26.917	120.3	0.890	0.50	7.3	71.6	3.04	38.6	0.01	0.04	0.16		503
513	6.39	6.34	34.276	26.937	118.5	0.905	0.47	6.8	73.5	3.06	39.0	0.01	0.04	0.16		517 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 14.6 N	121 26.7 W	26/10/96	1204	UTC	3804 m	340	33 kn			1015.7 mb	14.9 C	11.8 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.40	15.40	33.200	24.498	342.6	0.000	5.96	104.5	1.6	0.35	0.2	0.01	1.08	0.40		0
3	15.40	15.40	33.200	24.498	342.6	0.010	5.96	104.5	1.6	0.35	0.2	0.01	1.08	0.40		3 223
3	15.40	15.40	33.201	24.499	342.6	0.010	5.94	104.1	1.6	0.35	0.2	0.01	1.06	0.39		3 224
6	15.40	15.40	33.200	24.498	342.7	0.021	5.95	104.3	1.6	0.35	0.2	0.01	1.12	0.39		6 222
10 ISL	15.40	15.40	33.201	24.499	342.8	0.034	5.95	104.3	1.6	0.35	0.2	0.01	1.15	0.40		10
11	15.40	15.40	33.201	24.499	342.8	0.038	5.95	104.3	1.6	0.35	0.2	0.01	1.15	0.41		11 221
16	15.40	15.40	33.201	24.499	342.9	0.055	5.96	104.5	1.6	0.34	0.0	0.01	1.15	0.42		16 220
20 ISL	15.40	15.40	33.201	24.499	343.1	0.069	5.95	104.3	1.5	0.34	0.0	0.01	1.14	0.42		20
21	15.40	15.40	33.201	24.500	343.1	0.072	5.95	104.3	1.5	0.34	0.0	0.01	1.14	0.42		21 219
30 ISL	15.41	15.41	33.202	24.498	343.5	0.103	5.97	104.7	1.5	0.35	0.0	0.01	1.10	0.39		30
31	15.41	15.41	33.202	24.498	343.5	0.106	5.97	104.7	1.5	0.35	0.0	0.01	1.10	0.39		31 218
45	15.30	15.29	33.206	24.526	341.3	0.154	5.97	104.4	1.5	0.35	0.0	0.01	1.31	0.44		45 217
50 ISL	14.97	14.96	33.213	24.603	334.0	0.171	5.98	103.9	1.6	0.37	0.2	0.03	1.77	0.62		50
54	14.60	14.59	33.213	24.683	326.6	0.184	5.99	103.3	1.7	0.40	0.4	0.06	2.00	0.74		54 216
64	13.21	13.20	33.166	24.933	302.9	0.216	5.62	94.2	4.5	0.64	3.6	0.24	0.87	0.55		64 215
75	12.80	12.79	33.247	25.077	289.4	0.248	5.34	88.7	6.2	0.78	6.1	0.18	0.53	0.44		75 214
86	11.27	11.26	33.371	25.461	253.0	0.278	4.83	77.8	10.9	1.09	11.0	0.09	0.94	0.85		86 213
95	10.30	10.29	33.614	25.821	218.8	0.299	3.76	59.4	19.3	1.54	18.8	0.03	0.20	0.38		95 212
100 ISL	10.16	10.15	33.721	25.929	208.7	0.310	3.41	53.7	22.0	1.68	20.9	0.03	0.17	0.34		100
110	9.89	9.88	33.814	26.047	197.6	0.330	2.97	46.5	25.4	1.85	22.9	0.02	0.12	0.27		111 211
125 ISL	9.68	9.67	33.924	26.168	186.4	0.359	2.54	39.6	28.9	2.01	25.0	0.01	0.06	0.19		126
126	9.67	9.66	33.930	26.174	185.8	0.361	2.52	39.3	29.1	2.02	25.1	0.01	0.06	0.19		127 210
144	9.60	9.58	34.069	26.295	174.8	0.394	2.04	31.8	32.7	2.21	27.0	0.01	0.07	0.20		145 209
150 ISL	9.57	9.55	34.105	26.328	171.8	0.404	1.90	29.6	33.7	2.26	27.6	0.01	0.07	0.19		151
170	9.46	9.44	34.189	26.412	164.2	0.438	1.55	24.1	36.6	2.38	29.1	0.01	0.05	0.13		171 208
197	9.28	9.26	34.226	26.471	159.1	0.481	1.36	21.1	39.0	2.45	29.6	0.01	0.03	0.12		198 207

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 54.7 N	122 7.7 W	25/10/96	2017 UTC	4191 m	350 26 kn	350 05 05	1	1022.5 mb	17.9 c	14.2 c		7/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.49	17.49	33.145	23.976	392.3	0.000	5.65	103.2	2.0	0.30	0.0	0.00	0.16	0.06	0	
2	17.49	17.49	33.143	23.974	392.6	0.008	5.64	103.0	2.0	0.30	0.0	0.00	0.15	0.06	2	224
3	17.49	17.49	33.145	23.976	392.4	0.012	5.65	103.2	2.0	0.30	0.0	0.00	0.16	0.06	3	223
6	17.49	17.49	33.142	23.974	392.7	0.024	5.65	103.2	1.9	0.30	0.0	0.00	0.15	0.05	6	222
10 ISL	17.49	17.49	33.142	23.974	392.9	0.039	5.65	103.2	1.9	0.29	0.0	0.00	0.17	0.05	10	
11	17.49	17.49	33.142	23.974	392.9	0.043	5.65	103.2	1.9	0.29	0.0	0.00	0.17	0.05	11	221
15	17.49	17.49	33.141	23.973	393.1	0.059	5.65	103.2	1.9	0.29	0.0	0.00	0.15	0.05	15	220
20	17.49	17.49	33.141	23.974	393.2	0.079	5.66	103.3	1.8	0.29	0.0	0.00	0.16	0.05	20	219
30 ISL	17.50	17.49	33.142	23.972	393.7	0.118	5.64	103.0	1.8	0.30	0.0	0.00	0.15	0.05	30	
31	17.50	17.49	33.142	23.972	393.7	0.122	5.64	103.0	1.8	0.30	0.0	0.00	0.15	0.05	31	218
45	17.50	17.49	33.141	23.972	394.2	0.177	5.65	103.2	1.8	0.30	0.0	0.00	0.16	0.05	45	217
50 ISL	17.46	17.45	33.138	23.980	393.7	0.197	5.65	103.1	1.8	0.30	0.0	0.00	0.17	0.06	50	
55	17.42	17.41	33.136	23.988	393.0	0.216	5.65	103.0	1.8	0.30	0.0	0.00	0.18	0.07	55	216
65	14.72	14.71	33.044	24.527	341.7	0.253	6.12	105.7	2.2	0.31	0.0	0.00	0.33	0.25	65	215
75	13.40	13.39	32.981	24.752	320.4	0.286	6.06	101.8	2.8	0.43	0.3	0.06	0.39	0.32	75	214
85	12.66	12.65	32.997	24.911	305.5	0.318	5.84	96.6	3.9	0.55	2.0	0.25	0.30	0.26	85	213
95	11.69	11.68	33.089	25.166	281.3	0.347	5.45	88.4	6.6	0.79	6.4	0.03	0.18	0.19	95	212
100 ISL	11.31	11.30	33.144	25.278	270.7	0.361	5.28	85.0	8.2	0.89	8.3	0.02	0.13	0.15	100	
110	10.76	10.75	33.254	25.461	253.4	0.387	4.96	78.9	11.2	1.06	11.4	0.01	0.06	0.07	110	211
125	10.37	10.36	33.386	25.632	237.4	0.424	4.54	71.7	14.3	1.25	14.7	0.01	0.04	0.05	126	210
145	9.73	9.71	33.567	25.881	214.0	0.469	3.98	62.0	20.1	1.54	19.6	0.00	0.01	0.03	146	209
150 ISL	9.60	9.58	33.628	25.950	207.6	0.479	3.98	61.9	20.9	1.55	20.1	0.00	0.01	0.03	151	
168	9.19	9.17	33.823	26.169	187.0	0.515	3.98	61.4	23.1	1.57	20.9	0.00	0.00	0.02	169	208
199	8.56	8.54	33.896	26.326	172.6	0.571	3.72	56.6	28.4	1.75	23.7	0.00	0.00	0.02	200	207
200 ISL	8.54	8.52	33.899	26.331	172.1	0.572	3.69	56.1	28.6	1.76	23.8	0.00			201	
229	8.13	8.11	33.991	26.466	159.7	0.620	2.94	44.3	35.8	2.05	27.6	0.00			230	206
250 ISL	7.86	7.84	34.023	26.531	153.7	0.653	2.66	39.9	39.5	2.17	29.2	0.00			251	
269	7.62	7.59	34.034	26.575	149.8	0.682	2.53	37.7	42.4	2.24	30.2	0.00			270	205
300 ISL	7.12	7.09	34.016	26.631	144.6	0.728	2.53	37.3	46.8	2.29	31.4	0.00			302	
319	6.82	6.79	34.003	26.662	141.8	0.755	2.53	37.0	49.7	2.33	32.1	0.00			321	204
378	6.23	6.20	34.061	26.786	130.5	0.835	1.59	22.9	62.6	2.68	36.7	0.00			380	203
400 ISL	6.08	6.05	34.081	26.821	127.4	0.864	1.35	19.4	66.6	2.78	37.9	0.00			402	
437	5.86	5.82	34.114	26.875	122.6	0.910	1.03	14.7	72.8	2.91	39.5	0.00			440	202
500 ISL	5.47	5.43	34.167	26.965	114.5	0.985	0.68	9.6	82.7	3.06	41.3	0.00			503	
513	5.39	5.35	34.178	26.983	112.9	0.999	0.61	8.6	84.8	3.09	41.7	0.00			516	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 34.7 N	122 48.7 W	25/10/96	0623 UTC	4277 m	320 14 kn			1020.0 mb	18.2 c	17.8 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.66	17.66	33.100	23.901	399.5	0.000	5.64	103.3	1.9	0.29	0.1	0.00	0.14	0.05	0	
2	17.66	17.66	33.100	23.901	399.6	0.008	5.64	103.3	2.1	0.30	0.1	0.00	0.14	0.05	2	224
5	17.66	17.66	33.100	23.901	399.6	0.008	5.64	103.3	1.9	0.29	0.1	0.00	0.14	0.05	2	223
2	17.66	17.66	33.100	23.901	399.7	0.020	5.65	103.5	1.9	0.29	0.1	0.00	0.14	0.05	5	222
10	17.66	17.66	33.100	23.901	399.8	0.040	5.63	103.1	1.9	0.29	0.1	0.00	0.14	0.05	10	221
15	17.66	17.66	33.100	23.901	400.0	0.060	5.64	103.3	1.9	0.30	0.1	0.00	0.15	0.05	15	220
20	17.66	17.66	33.100	23.901	400.1	0.080	5.64	103.3	1.9	0.30	0.0	0.00	0.14	0.05	20	219
30	17.65	17.64	33.102	23.906	400.0	0.120	5.64	103.3	1.9	0.29	0.0	0.00	0.15	0.05	30	218
45	17.49	17.48	33.118	23.957	395.7	0.180	5.66	103.3	1.9	0.29	0.0	0.00	0.20	0.07	45	217
50 ISL	17.44	17.43	33.110	23.963	395.3	0.199	5.66	103.2	1.9	0.29	0.0	0.00	0.22	0.08	50	
60	17.33	17.32	33.120	23.997	392.3	0.239	5.67	103.2	1.9	0.30	0.0	0.00	0.25	0.09	60	216
75	16.49	16.48	33.092	24.172	376.0	0.296	5.80	103.8	1.8	0.32	0.0	0.00	0.30	0.20	75	215
85	15.37	15.36	33.070	24.407	353.8	0.333	5.94	103.9	2.1	0.35	0.2	0.02	0.32	0.27	85	214
95	14.00	13.99	33.046	24.681	327.8	0.367	5.95	101.2	2.6	0.39	0.3	0.09	0.27	0.25	95	213
100 ISL	13.52	13.51	33.045	24.778	318.6	0.383	5.91	99.6	2.8	0.43	0.7	0.16	0.22	0.22	100	
105	13.17	13.16	33.063	24.862	310.7	0.399	5.85	97.9	3.2	0.47	1.2	0.20	0.17	0.18	105	212
115	12.77	12.75	33.199	25.047	293.4	0.429	5.64	93.6	4.5	0.54	2.7	0.09	0.12	0.13	115	211
125	12.64	12.62	33.386	25.217	277.4	0.458	5.40	89.5	5.7	0.61	4.3	0.04	0.09	0.11	125	210
139	11.75	11.73	33.468	25.450	255.4	0.495	5.10	83.0	7.9	0.78	7.7	0.02	0.08	0.09	140	209
150 ISL	10.98	10.96	33.525	25.634	238.0	0.522	4.73	75.7	11.6	1.01	11.5	0.02	0.06	0.07	151	
165	10.02	10.00	33.606	25.864	216.2	0.556	4.25	66.7	17.3	1.34	16.8	0.01	0.03	0.04	166	208
194	8.88	8.86	33.777	26.183	186.1	0.614	3.95	60.5	25.5	1.73	23.0	0.01	0.00	0.02	195	207
200 ISL	8.74	8.72	33.806	26.228	181.9	0.626	3.86	58.9	26.6	1.76	23.6	0.01			201	
229	8.22	8.20	33.912	26.390	166.9	0.676	3.42	51.6	31.4	1.87	25.5	0.00			230	206
250 ISL	7.80	7.78	33.958	26.489	157.7	0.710	3.17	47.4	36.2	1.99	27.2	0.00			251	
269	7.45	7.42	33.985	26.560	151.1	0.740	2.96	43.9	40.6	2.11	28.8	0.00			270	205
300 ISL	7.04	7.01	34.004	26.633	144.4	0.785	2.63	38.7	46.6	2.26	31.0	0.00			302	
319	6.87	6.84	34.014	26.664	141.7	0.812	2.40	35.1	50.0	2.36	32.2	0.00			321	204
378	6.65	6.62	34.121	26.779	131.6	0.893	1.27	18.5	60.7	2.74	36.3	0.00			380	203
400 ISL	6.52	6.48	34.151	26.820	127.9	0.922	1.03	15.0	64.6	2.84	37.3	0.00			402	
437	6.28	6.24	34.193	26.884	122.2	0.968	0.75	10.8	70.6	2.96	38.6	0.00			440	202
500 ISL	5.95	5.91	34.243	26.966	115.0	1.043	0.49	7.0	78.6	3.10	40.2	0.00			503	
516	5.87	5.83	34.256	26.987	113.2	1.061	0.43	6.2	80.6	3.13	40.6	0.00			519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 14.6 N	123 29.5 W	24/10/96	1811	UTC	4165 m	320	12 kn	340 03 05	1	1021.0 mb	19.0 c	18.0 c	31m 02	4/8	ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL	17.72	17.72	33.281	24.025	387.7	0.000	5.69	104.4	1.9	0.29	0.0	0.00	0.14	0.04	0
2		17.73	17.73	33.281	24.023	388.0	0.008	5.68	104.3	1.9	0.30	0.0	0.00	0.13	0.04	2 224
3	A	17.72	17.72	33.281	24.025	387.8	0.012	5.69	104.4	1.9	0.29	0.0	0.00	0.14	0.04	3 223
5		17.73	17.73	33.282	24.023	388.0	0.019	5.69	104.5	1.9	0.29	0.0	0.00	0.14	0.04	5 222
10	ISL	17.72	17.72	33.282	24.026	387.9	0.039	5.69	104.4	1.9	0.29	0.0	0.00	0.13	0.04	10
11		17.72	17.72	33.282	24.026	387.9	0.043	5.69	104.4	1.9	0.29	0.0	0.00	0.13	0.04	11 221
20	ISL	17.69	17.69	33.284	24.035	387.4	0.078	5.71	104.7	1.9	0.29	0.0	0.00	0.14	0.04	20
21	A	17.69	17.69	33.284	24.035	387.4	0.081	5.71	104.7	1.9	0.29	0.0	0.00	0.14	0.04	21 220
30	ISL	17.64	17.63	33.282	24.046	386.7	0.116	5.70	104.5	1.9	0.29	0.0	0.00	0.15	0.05	30
31		17.63	17.62	33.282	24.048	386.5	0.120	5.70	104.4	1.9	0.29	0.0	0.00	0.15	0.05	31 219
42	A	17.44	17.43	33.282	24.094	382.5	0.162	5.70	104.0	1.9	0.29	0.0	0.00	0.16	0.05	42 218
50	ISL	16.95	16.94	33.257	24.191	373.4	0.193	5.80	104.8	1.9	0.30	0.0	0.00	0.24	0.09	50
53		16.76	16.75	33.249	24.230	369.9	0.204	5.86	105.5	1.9	0.31	0.0	0.00	0.28	0.11	53 217
64	A	13.61	13.60	33.146	24.837	312.0	0.241	6.09	102.9	3.0	0.45	0.9	0.11	0.49	0.37	64 216
74		12.96	12.95	33.200	25.009	295.9	0.272	5.78	96.4	4.3	0.66	4.3	0.10	0.43	0.39	74 215
75	ISL	12.90	12.89	33.213	25.031	293.8	0.275	5.74	95.6	4.5	0.68	4.7	0.09	0.42	0.38	75
86	A	12.27	12.26	33.356	25.264	271.9	0.306	5.31	87.3	6.8	0.92	9.0	0.02	0.25	0.21	86 214
96		11.74	11.73	33.425	25.417	257.4	0.332	4.97	80.9	9.7	1.08	11.9	0.01	0.12	0.15	96 213
100	ISL	11.55	11.54	33.450	25.472	252.3	0.342	4.83	78.3	10.8	1.13	12.8	0.01	0.10	0.13	100
120	A	10.62	10.61	33.567	25.730	228.1	0.390	4.17	66.3	16.2	1.38	17.1	0.01	0.03	0.05	121 212
125	ISL	10.36	10.35	33.594	25.796	221.9	0.402	4.01	63.4	17.8	1.46	18.4	0.01	0.02	0.04	126
132		10.02	10.00	33.635	25.886	213.4	0.417	3.83	60.1	19.9	1.56	19.9	0.00	0.01	0.03	133 211
144		9.53	9.51	33.733	26.044	198.5	0.442	3.82	59.3	22.2	1.62	21.0	0.00	0.00	0.03	145 210
150	ISL	9.36	9.34	33.766	26.097	193.5	0.453	3.80	58.8	23.0	1.64	21.5	0.00	0.00	0.03	151
156		9.21	9.19	33.794	26.143	189.3	0.465	3.76	58.0	23.9	1.67	22.1	0.00	0.00	0.02	157 209
176		8.78	8.76	33.876	26.276	176.9	0.502	3.39	51.8	28.6	1.87	24.9	0.00	0.00	0.02	177 208
199		8.40	8.38	33.926	26.374	168.0	0.541	3.51	53.2	31.2	1.89	25.5	0.00	0.00	0.02	200 207
200	ISL	8.38	8.36	33.928	26.378	167.5	0.543	3.51	53.2	31.3	1.89	25.5	0.00	0.00	0.02	201
228		7.88	7.86	33.966	26.483	157.9	0.588	3.40	50.9	35.0	1.96	26.9	0.00	0.00	0.02	229 206
250	ISL	7.50	7.48	33.978	26.547	152.0	0.623	3.35	49.8	38.8	2.03	27.9	0.00	0.00	0.02	251
268		7.24	7.21	33.986	26.591	148.0	0.650	3.30	48.7	42.2	2.10	28.9	0.00	0.00	0.02	269 205
300	ISL	6.98	6.95	34.014	26.649	142.9	0.696	2.73	40.1	47.9	2.30	31.4	0.00	0.00	0.02	302
318		6.86	6.83	34.030	26.678	140.3	0.722	2.35	34.4	51.3	2.42	33.0	0.00	0.00	0.02	320 204
378		6.15	6.12	34.075	26.807	128.4	0.802	1.46	21.0	65.8	2.75	37.4	0.00	0.00	0.02	380 203
400	ISL	5.96	5.93	34.088	26.842	125.3	0.830	1.30	18.6	69.7	2.83	38.4	0.00	0.00	0.02	402
438		5.70	5.66	34.117	26.897	120.4	0.877	1.03	14.7	75.6	2.94	39.8	0.00	0.00	0.02	441 202
500	ISL	5.52	5.48	34.219	27.000	111.3	0.949				84.3	3.13	41.3	0.00	0.00	503
510		5.49	5.45	34.236	27.017	109.7	0.960				85.7	3.16	41.5	0.00	0.00	513 201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 54.7 N	124 10.2 W	24/10/96	0057	UTC	4240 m	030	15 kn	030 02 05	2	1019.8 mb	19.2 c	18.2 c		8/8	ST	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL	17.74	17.74	33.329	24.057	384.6	0.000	5.63	103.4	1.8	0.30	0.0	0.00	0.14	0.04	0
1		17.74	17.74	33.329	24.057	384.7	0.004	5.63	103.4	1.8	0.30	0.0	0.00	0.14	0.04	1 223
1		17.74	17.74	33.329	24.057	384.7	0.004	5.63	103.4	1.8	0.30	0.0	0.00	0.14	0.04	1 224
6		17.74	17.74	33.330	24.058	384.7	0.023	5.64	103.6	1.8	0.30	0.0	0.00	0.14	0.05	6 222
10	ISL	17.74	17.74	33.329	24.057	384.9	0.038	5.63	103.4	1.8	0.30	0.0	0.00	0.14	0.04	10
11		17.74	17.74	33.329	24.057	385.0	0.042	5.63	103.4	1.8	0.30	0.0	0.00	0.14	0.04	11 221
16		17.71	17.71	33.327	24.063	384.6	0.062	5.63	103.3	1.8	0.30	0.0	0.00	0.13	0.04	16 220
20	ISL	17.67	17.67	33.327	24.073	383.8	0.077	5.63	103.3	1.8	0.30	0.0	0.00	0.13	0.04	20
21		17.66	17.66	33.327	24.075	383.6	0.081	5.63	103.2	1.8	0.30	0.0	0.00	0.13	0.04	21 219
30	ISL	17.60	17.59	33.324	24.088	382.7	0.115	5.64	103.3	1.8	0.30	0.0	0.00	0.15	0.05	30
31		17.60	17.59	33.324	24.088	382.7	0.119	5.64	103.3	1.8	0.30	0.0	0.00	0.15	0.05	31 218
45		17.60	17.59	33.324	24.089	383.1	0.173	5.63	103.1	1.8	0.30	0.0	0.00	0.18	0.05	45 217
50	ISL	17.38	17.37	33.320	24.138	378.6	0.192	5.64	102.9	1.8	0.30	0.0	0.00	0.20	0.07	50
56		17.12	17.11	33.315	24.196	373.2	0.214	5.66	102.7	1.8	0.30	0.0	0.00	0.22	0.10	56 216
65		14.22	14.21	33.170	24.730	322.3	0.246	6.01	102.8	2.3	0.43	0.6	0.18	0.73	0.55	65 215
75	ISL	13.26	13.25	33.139	24.902	306.1	0.277	5.72	95.9	3.2	0.59	3.1	0.10	0.49	0.37	75
76		13.23	13.22	33.137	24.907	305.7	0.280	5.67	95.0	3.3	0.60	3.4	0.08	0.44	0.33	76 214
85		12.47	12.46	33.114	25.038	293.3	0.307	5.47	90.2	4.9	0.71	5.3	0.02	0.24	0.20	85 213
95		11.89	11.88	33.221	25.231	275.2	0.335	5.25	85.6	6.9	0.86	7.9	0.01	0.12	0.14	95 212
100		11.59	11.58	33.202	25.272	271.3	0.349	5.21	84.4	7.9	0.89	8.4	0.01	0.10	0.11	100 211
125		10.82	10.80	33.537	25.671	233.8	0.412	4.47	71.3	13.3	1.19	14.2	0.01	0.04	0.07	126 210
144		9.93	9.91	33.668	25.927	209.8	0.454	3.69	57.8	20.5	1.59	20.5	0.00	0.01	0.04	145 209
150	ISL	9.69	9.67	33.703	25.994	203.4	0.467	3.66	57.0	21.9	1.65	21.4	0.00	0.01	0.04	151
169		9.05	9.03	33.798	26.172	186.7	0.504	3.56	54.7	25.0	1.74	23.0	0.01	0.00	0.03	170 208
199		8.43	8.41	33.906	26.354	169.9	0.557	3.41	51.7	29.9	1.86	25.1	0.01	0.00	0.02	200 207
200	ISL	8.41	8.39	33.909	26.359	169.4	0.559	3.40	51.5	30.1	1.86	25.2	0.01	0.00	0.02	201
229		7.92	7.90	33.970	26.480	158.2	0.607	3.19	47.8	35.7	1.99	27.2	0.00	0.00	0.02	230 206
250	ISL	7.56	7.54	33.991	26.549	151.8	0.639	3.02	44.9	39.6	2.08	28.7	0.00	0.00	0.02	251
269		7.26	7.23	34.000	26.599	147.3	0.667	2.84	42.0	43.1	2.17	30.0	0.00	0.00	0.02	270 205
300	ISL	6.84	6.81	34.010	26.665	141.3	0.712	2.50	36.6	49.3	2.32					

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 53.3 N	118 29.4 W	21/10/96	0140 UTC	62 m	280 15 kn			1015.0 mb	18.4 C	14.1 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.77	17.77	33.535	24.207	370.3	0.000	5.86	107.8	2.5	0.27	0.0	0.01	0.62	0.18	0	
1	17.77	17.77	33.535	24.207	370.3	0.007	5.86	107.8	2.5	0.27	0.0	0.01	0.62	0.18	2	207
2	17.77	17.77	33.535	24.207	370.3	0.007	5.85	107.6	2.5	0.27	0.0	0.01	0.61	0.17	2	208
4	17.77	17.77	33.534	24.207	370.6	0.022	5.86	107.8	2.5	0.27	0.0	0.01	0.64	0.18	6	206
10 ISL	17.73	17.73	33.529	24.213	370.1	0.037	5.88	108.1	2.3	0.27	0.0	0.01	0.70	0.20	10	
11	17.72	17.72	33.528	24.214	370.0	0.041	5.89	108.3	2.3	0.27	0.0	0.01	0.72	0.21	11	205
20 ISL	16.81	16.81	33.462	24.380	354.5	0.073	5.83	105.2	3.0	0.35	0.4	0.10	1.00	0.31	20	
21	16.65	16.65	33.453	24.411	351.6	0.077	5.82	104.7	3.1	0.37	0.4	0.11	1.02	0.32	21	204
30 ISL	14.55	14.55	33.395	24.833	311.5	0.107	5.55	95.7	5.2	0.61	2.2	0.44	0.68	0.33	30	
31	14.32	14.32	33.393	24.880	307.1	0.110	5.50	94.4	5.5	0.65	2.5	0.49	0.62	0.33	31	203
41	13.31	13.30	33.402	25.095	286.9	0.139	4.60	77.3	10.0	1.10	A	7.1	A	1.01	41	202
50 ISL	12.48	12.47	33.487	25.324	265.2	0.164							0.23	0.25	50	
52	12.29	12.28	33.507	25.376	260.3	0.170									52	201

A) UNUSUAL PROFILES AND ODD NO3/P04 RATIOS MAY BE DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 49.6 N	118 37.8 W	21/10/96	0403 UTC	666 m	350 15 kn			1016.0 mb	19.8 C	12.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.67	17.67	33.511	24.213	369.7	0.000	6.06	111.3	2.3	0.26	0.0	0.00	0.75	0.20	0	
1	17.67	17.67	33.511	24.213	369.8	0.004	6.06	111.3	2.3	0.26	0.0	0.00	0.75	0.20	1	223
2	17.67	17.67	33.511	24.213	369.8	0.007	6.06	111.3	2.5	0.27	0.0	0.01	0.72	0.20	2	224
3	17.67	17.67	33.511	24.213	369.8	0.011	6.06	111.3	2.3	0.26	0.0	0.00	0.76	0.22	3	222
4	17.68	17.68	33.513	24.212	370.0	0.022	6.05	111.1	2.3	0.26	0.0	0.00	0.72	0.20	6	221
10	17.69	17.69	33.512	24.209	370.4	0.037	6.07	111.5	2.3	0.26	0.0	0.00	0.71	0.19	10	220
15	17.52	17.52	33.504	24.244	367.3	0.055	6.08	111.3	2.3	0.26	0.0	0.01	0.86	0.31	15	219
20	17.00	17.00	33.475	24.346	357.8	0.074	6.01	108.9	2.5	0.30	0.0	0.01	1.19	0.40	20	218
30	14.24	14.24	33.365	24.875	307.5	0.107	5.09	87.2	7.0	0.91	A	4.3	A	0.93	30	217
40	13.38	13.37	33.364	25.052	291.0	0.137	4.69	79.0	9.2	1.22	A	6.8	A	1.14	40	216
50	13.04	13.03	33.444	25.182	278.8	0.165	4.82	80.6	8.2	0.92	A	7.5	A	1.03	50	215
60	12.87	12.86	33.485	25.247	272.9	0.193	4.81	80.2	8.3	0.88			0.53	0.41	60	214
70	12.46	12.45	33.533	25.365	261.9	0.220	4.51	74.6	10.1	0.97			0.13	0.38	70	213
75 ISL	12.25	12.24	33.547	25.416	257.2	0.233	4.35	71.6	11.1	1.05	10.6	0.18	0.30	0.30	75	
85	11.91	11.90	33.568	25.496	249.7	0.258	4.08	66.7	12.9	1.20	12.6	0.28	0.15	0.21	85	212
100	11.75	11.74	33.597	25.549	245.0	0.295	3.97	64.7	13.8	1.25	13.5	0.18	0.14	0.20	100	211
120	10.54	10.53	33.733	25.873	214.5	0.341	3.30	52.4	19.8	1.60	19.3	0.02	0.04	0.10	121	210
125 ISL	10.43	10.42	33.754	25.909	211.2	0.352	3.20	50.7	20.7	1.65	20.0	0.02	0.04	0.09	126	
140	10.29	10.27	33.805	25.973	205.4	0.383	2.99	47.2	22.8	1.75	21.4	0.02	0.04	0.07	141	209
150 ISL	10.14	10.12	33.841	26.027	200.5	0.403	2.86	45.1	24.3	1.82	22.5	0.02	0.03	0.07	151	
169	9.90	9.88	33.913	26.124	191.6	0.440	2.62	41.1	27.1	1.96	24.3	0.02	0.01	0.06	170	208
199	9.74	9.72	34.032	26.244	180.9	0.496	2.14	33.5	30.6	2.14	26.3	0.02	0.01	0.06	200	207
200 ISL	9.74	9.72	34.037	26.248	180.5	0.498	2.12	33.1	30.7	2.15	26.4	0.02	0.01	0.06	201	
229	9.64	9.61	34.162	26.363	170.2	0.549	1.70	26.5	34.4	2.33	28.2	0.01	0.01	0.06	230	206
250 ISL	9.60	9.57	34.228	26.421	165.1	0.584	1.42	22.2	36.4	2.43	29.1	0.01	0.01	0.06	251	
269	9.50	9.47	34.268	26.469	160.9	0.615	1.22	19.0	38.3	2.50	29.8	0.01	0.01	0.06	271	205
300 ISL	8.95	8.92	34.288	26.574	151.3	0.663	1.08	16.6	43.3	2.61	31.1	0.00	0.01	0.06	302	
319	8.56	8.53	34.286	26.634	145.8	0.692	1.05	16.0	46.4	2.67	31.9	0.00	0.01	0.06	321	204
377	7.80	7.76	34.267	26.734	136.9	0.774	0.95	14.2	52.3	2.77	33.7	0.00	0.01	0.06	379	203
400 ISL	7.60	7.56	34.271	26.766	134.0	0.805	0.84	12.5	55.4	2.83	34.5	0.00	0.01	0.06	403	
438	7.30	7.26	34.282	26.818	129.5	0.855	0.64	9.5	61.0	2.94	35.9	0.00	0.01	0.06	441	202
500 ISL	6.70	6.65	34.297	26.912	121.0	0.933	0.46	6.7	70.8	3.07	37.9	0.00	0.01	0.06	503	
516	6.54	6.49	34.302	26.938	118.6	0.952	0.41	6.0	73.3	3.10	38.4	0.00	0.01	0.06	520	201

A) UNUSUAL PROFILES AND ODD NO3/P04 RATIOS MAY BE DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 39.4 N	118 58.6 W	21/10/96	0823 UTC	745 m	070 13 kn			1018.2 mb	18.8 C	12.2 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.43	18.43	33.588	24.086	381.8	0.000	5.73	106.8	1.5	0.24	0.0	0.00	0.23	0.08	0	
1	18.43	18.43	33.588	24.086	381.9	0.004	5.70	106.2	1.7	0.24	0.0	0.00	0.22	0.07	1	224
2	18.43	18.43	33.588	24.086	381.9	0.008	5.73	106.8	1.5	0.24	0.0	0.00	0.23	0.08	2	223
4	18.42	18.42	33.589	24.089	381.6	0.015	5.71	106.4	1.5	0.24	0.0	0.00	0.23	0.08	4	222
6	18.42	18.42	33.589	24.090	381.7	0.023	5.72	106.6	1.5	0.24	0.0	0.00	0.23	0.07	6	221
10	18.42	18.42	33.589	24.090	381.8	0.038	5.71	106.4	1.5	0.24	0.0	0.00	0.23	0.08	10	220
16	18.36	18.36	33.583	24.100	381.0	0.061	5.75	107.0	1.5	0.24	0.0	0.00	0.23	0.08	16	219
20 ISL	17.44	17.44	33.488	24.251	366.8	0.076	5.90	107.8	1.7	0.29	0.2	0.01	0.32	0.13	20	
21	17.13	17.13	33.460	24.304	361.8	0.080	5.93	107.7	1.8	0.31	0.2	0.01	0.35	0.15	21	218
30	13.67	13.67	33.276	24.924	302.8	0.110	5.66	95.8	3.9	0.62	3.8	0.17	0.57	0.29	30	217
41	13.10	13.09	33.285	25.046	291.5	0.142	5.50	92.0	4.9	0.71	5.3	0.14	0.48	0.27	41	216
50	12.09	12.08	33.418	25.345	263.2	0.167	4.99	81.8	8.6	0.97	9.9	0.03	0.25	0.23	50	215
60	11.86	11.85	33.480	25.437	254.7	0.193	4.68	76.4	10.2	1.06	11.4	0.02	0.18	0.19	60	214
70	11.26	11.25	33.638	25.670	232.7	0.217	3.89	62.7	15.1	1.32	15.3	0.01	0.09	0.14	70	213
75 ISL	11.05	11.04	33.668	25.731	227.0	0.229	3.82	61.3	16.3	1.38	16.2	0.01	0.07	0.12	75	
85	10.75	10.74	33.692	25.804	220.3	0.251	3.67	58.5	17.6	1.44	17.4	0.01	0.05	0.10	85	212
99	10.47	10.46	33.743	25.893	212.2	0.282	3.41	54.1	19.9	1.59	19.7	0.01	0.03	0.07	99	211
100 ISL	10.45	10.44	33.748	25.900	211.5	0.284	3.38	53.6	20.1	1.60	19.9	0.01				

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 30.3 N	119 18.8 W	21/10/96	1340 UTC	1666 m	050 10 kn			1020.1 mb	18.5 c	15.5 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.38	17.38	33.537	24.303	361.2	0.000	5.74	104.8	2.0	0.27	0.0	0.00	0.43	0.16	0	
2	17.38	17.38	33.537	24.303	361.3	0.007	5.74	104.8	2.0	0.27	0.0	0.00	0.43	0.16	2	223
3	17.38	17.38	33.538	24.303	361.2	0.011	5.77	105.4	2.1	0.27	0.0	0.00	0.44	0.16	3	224
4	17.37	17.37	33.537	24.305	361.1	0.014	5.76	105.2	2.0	0.27	0.0	0.00	0.45	0.15	4	222
7	17.37	17.37	33.537	24.305	361.2	0.025	5.76	105.2	2.0	0.28	0.0	0.00	0.44	0.15	7	221
10 ISL	17.35	17.35	33.535	24.309	361.0	0.036	5.74	104.8	2.0	0.27	0.0	0.00	0.45	0.16	10	
11	17.34	17.34	33.532	24.309	361.0	0.040	5.73	104.6	2.0	0.27	0.0	0.00	0.45	0.17	11	220
16	17.18	17.18	33.522	24.339	358.2	0.058	5.75	104.6	2.0	0.27	0.0	0.01	0.50	0.20	16	219
20 ISL	16.41	16.41	33.461	24.472	345.7	0.072	5.85	104.8	2.3	0.34	0.4	0.06	0.59	0.29	20	
21	16.16	16.16	33.442	24.515	341.7	0.075	5.87	104.6	2.4	0.36	0.6	0.08	0.61	0.31	21	218
30	13.66	13.66	33.301	24.946	300.8	0.104	5.52	93.4	4.3	0.62	3.8	0.28	0.47	0.36	30	217
40	13.00	12.99	33.333	25.103	286.0	0.133	5.32	88.8	6.0	0.77	6.4	0.12	0.43	0.31	40	216
50	12.11	12.10	33.405	25.331	264.5	0.161	4.95	81.2					0.27	0.25	50	215
60	11.59	11.58	33.465	25.475	251.0	0.187	4.68	75.9	11.0	1.09	12.1	0.03	0.14	0.17	60	214
69	11.37	11.36	33.526	25.563	242.9	0.209	4.39	70.9	13.0	1.20	13.6	0.02	0.12	0.15	69	213
75 ISL	11.21	11.20	33.562	25.620	237.6	0.223	4.22	67.9	14.1	1.26	14.6	0.02	0.10	0.15	75	
85	10.92	10.91	33.627	25.723	228.0	0.247	3.92	62.7	16.1	1.37	16.4	0.01	0.07	0.14	85	212
100	10.39	10.38	33.758	25.918	209.7	0.280	3.31	52.4	21.2	1.64	20.2	0.01	0.04	0.10	100	211
119	10.15	10.14	33.834	26.019	200.6	0.318	2.96	46.6	23.8	1.80	22.2	0.01	0.02	0.06	120	210
125 ISL	10.09	10.08	33.871	26.058	197.0	0.330	2.80	44.1	25.0	1.86	22.9	0.01	0.02	0.06	126	
140	9.92	9.90	33.959	26.156	188.0	0.359	2.44	38.3	28.0	2.01	24.7	0.01	0.01	0.05	141	209
150 ISL	9.75	9.73	33.990	26.208	183.1	0.378	2.37	37.1	29.3	2.06	25.5	0.01	0.01	0.05	151	
169	9.45	9.43	34.035	26.293	175.4	0.412	2.31	35.9	31.4	2.12	26.6	0.00	0.01	0.06	170	208
199	9.34	9.32	34.137	26.392	166.7	0.463	1.89	29.3	35.1	2.28	28.1	0.00	0.00	0.05	200	207
200 ISL	9.34	9.32	34.139	26.393	166.6	0.465	1.88	29.1	35.2	2.28	28.1	0.00			201	
228	9.27	9.24	34.198	26.451	161.7	0.511	1.62	25.1	37.4	2.38	29.1	0.00			229	206
250 ISL	8.93	8.90	34.202	26.509	156.5	0.546	1.58	24.3	40.2	2.44	29.9	0.01			251	
268	8.63	8.60	34.200	26.555	152.3	0.574	1.57	24.0	42.6	2.48	30.6	0.01			270	205
300 ISL	8.46	8.43	34.236	26.609	147.6	0.622	1.33	20.2	45.6	2.58	31.6	0.01			302	
319	8.41	8.38	34.260	26.636	145.5	0.649	1.16	17.6	47.2	2.64	32.1	0.01			321	204
378	8.02	7.98	34.294	26.722	138.1	0.733	0.79	11.9	53.8	2.80	33.9	0.00			380	203
400 ISL	7.69	7.65	34.292	26.769	133.8	0.763	0.72	10.8	57.8	2.87	35.0	0.00			403	
438	7.10	7.06	34.288	26.850	126.3	0.812	0.62	9.1	64.9	2.99	36.8	0.00			441	202
500 ISL	6.59	6.54	34.306	26.934	118.8	0.888	0.43	6.3	73.5	3.09	38.5	0.00			503	
516	6.46	6.41	34.311	26.955	116.9	0.907	0.38	5.5	75.7	3.12	38.9	0.00			520	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 19.4 N	119 39.8 W	21/10/96	1859 UTC	78 m	060 13 kn	270 03 05	0	1025.2 mb	19.1 c	15.6 c	16m 04		0/8			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.10	16.10	33.410	24.503	342.1	0.000	5.85	104.1	1.9	0.33	0.3	0.03	1.09	0.32	0	
2	16.11	16.11	33.411	24.502	342.3	0.007	5.84	104.0	2.0	0.33	0.3	0.04	1.05	0.31	2	213
3 A	16.10	16.10	33.410	24.503	342.2	0.010	5.85	104.1	1.9	0.33	0.3	0.03	1.09	0.32	3	212
4	16.16	16.16	33.413	24.492	343.3	0.014	5.85	104.2	1.9	0.31	0.3	0.03	1.05	0.34	4	211
6	16.12	16.12	33.413	24.501	342.5	0.021	5.84	104.0	1.9	0.31	0.3	0.03	1.04	0.33	6	210
10 A	16.02	16.02	33.406	24.518	340.9	0.034	5.84	103.8	2.0	0.33	0.4	0.04	1.12	0.36	10	208
10	16.00	16.00	33.405	24.522	340.6	0.034	5.84	103.7	2.0	0.34	0.4	0.04	1.07	0.34	10	209
16	15.75	15.75	33.386	24.564	336.8	0.055	5.82	102.8	2.1	0.37	0.6	0.06	1.18	0.36	16	207
20 ISL	15.54	15.54	33.374	24.602	333.3	0.068	5.80	102.1	2.3	0.39	0.8	0.08	1.28	0.38	20	
23 A	15.40	15.40	33.366	24.627	331.0	0.078	5.79	101.6	2.5	0.41	1.0	0.09	1.35	0.40	23	206
30 ISL	15.29	15.29	33.360	24.646	329.4	0.101	5.78	101.2	2.6	0.42	1.2	0.10	1.28	0.38	30	
33 A	15.20	15.20	33.358	24.665	327.7	0.111	5.77	100.8	2.7	0.43	1.3	0.10	1.25	0.37	33	205
44 A	13.90	13.89	33.341	24.928	302.9	0.146	5.64	96.0	3.8	0.55	2.9	0.17	0.70	0.38	44	204
50 ISL	13.11	13.10	33.360	25.103	286.4	0.163	5.47	91.6	4.9	0.64	4.4	0.14	0.49	0.33	50	
53	12.73	12.72	33.380	25.193	277.8	0.172	5.35	88.9	5.7	0.70	5.5	0.12	0.40	0.30	53	203
62 A	11.89	11.88	33.488	25.438	254.7	0.196	4.77	77.9	10.1	0.99	10.5	0.08	0.16	0.21	62	202
69	11.20	11.19	33.565	25.624	237.0	0.213	4.42	71.1	13.5	1.17	13.5	0.05	0.09	0.14	69	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
33 9.4 N	120 0.4 W	21/10/96	2205 UTC	1193 m	350 06 kn	350 05 06	0	1024.5 mb	18.7 c	15.3 c	21m 03	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.70	16.70	33.418	24.371	354.6	0.000	5.77	103.9	2.0	0.32	0.0	0.01	0.40	0.12	0	
2	16.70	16.70	33.417	24.371	354.8	0.007	5.77	103.9	2.0	0.32	0.1	0.01	0.40	0.12	2	224
3	16.70	16.70	33.418	24.371	354.7	0.011	5.77	103.9	2.0	0.32	0.0	0.01	0.40	0.12	3	223
5	16.64	16.64	33.416	24.384	353.6	0.018	5.79	104.1	2.0	0.32	0.0	0.01	0.40	0.13	5	222
8	16.54	16.54	33.416	24.407	351.5	0.028	5.79	103.9	2.0	0.32	0.0	0.01	0.41	0.14	8	221
10	16.49	16.49	33.417	24.420	350.4	0.035	5.79	103.8	2.0	0.32	0.0	0.01	0.43	0.14	10	220
15	16.42	16.42	33.420	24.438	348.8	0.053	5.80	103.9	2.0	0.32	0.0	0.01	0.44	0.15	15	219
20 ISL	16.37	16.37	33.421	24.451	347.7	0.070	5.79	103.6	2.0	0.32	0.1	0.01	0.50	0.17	20	
21	16.36	16.36	33.421	24.453	347.5	0.074	5.79	103.6	2.0	0.32	0.1	0.01	0.52	0.18	21	218
30 ISL	16.31	16.31	33.418	24.462	346.9	0.105	5.78	103.3	2.0	0.33	0.1	0.01	0.61	0.22	30	
31	16.30	16.30	33.417	24.464	346.8	0.108	5.78	103.3	2.0	0.33	0.1	0.01	0.61	0.22	31	217
40	15.55	15.54	33.349	24.581	335.9	0.139	5.73	100.8	2.5	0.42	1.1	0.05	0.55	0.27	40	216
50	12.70	12.69	33.178	25.042	292.1	0.171	5.45	90.4	5.2	0.72	5.4	0.06	0.51	0.39	50	215
60	12.22	12.21	33.271	25.207	276.6	0.199	5.19	85.2	7.2	0.85	7.7	0.04	0.32	0.28	60	214
71	11.43	11.42	33.531	25.556	243.6	0.228	4.53	73.3	11.6	1.11	12.5	0.03	0.11	0.13	71	213
75 ISL	11.18	11.17	33.567	25.630	236.7	0.237	4.38	70.5	12.9	1.18	13.7	0.02	0.09	0.12	75	
84	10.70	10.69	33.602	25.742	226.1	0.258	4.14	65.9	15.4	1.31	15.8	0.01	0.05	0.09	84	212
100	10.25	10.24	33.668	25.872	214.1	0.293	3.90	61.5	18.2	1.45	18.1	0.01	0.03	0.06	100	211
120	9.25	9.24	33.803	26.143	188.5	0.333	3.52	54.4	24.2	1.70	22.3	0.01	0.01	0.04	121	210
125 ISL	9.16	9.15	33.830	26.179	185.2	0.343	3.42	52.7	25.2	1.75	22.9	0.01	0.01	0.04	126	
139	9.03	9.02	33.887	26.245	179.3	0.368	3.21	49.4	27.4	1.84	24.0	0.01	0.00	0.03	140	209
150 ISL	8.84	8.82	33.907	26.290	175.1	0.388	3.25	49.8	28.4	1.85	24.4	0.01	0.00	0.03	151	
170	8.47	8.45	33.929	26.365	168.3	0.422	3.35	50.9	30.3	1.87	25.0	0.01	0.00	0.03	171	208
200	8.05	8.03	33.996	26.481	157.6	0.471	2.84	42.7	36.4	2.09	27.7	0.01	0.00	0.02	201	207
229	7.85	7.83	34.027	26.535	152.9	0.516	2.60	38.9	39.6	2.18	29.1	0.01			230	206
250 ISL	7.64	7.62	34.058	26.590	148.0	0.548	2.30	34.3	43.6	2.31	30.6	0.00			251	
268	7.46	7.43	34.090	26.641	143.4	0.574	1.99	29.6	47.4	2.43	32.0	0.00			270	205
300 ISL	7.31	7.28	34.160	26.718	136.6	0.619	1.40	20.7	53.9	2.64	34.3	0.00			302	
318	7.25	7.22	34.196	26.755	133.3	0.643	1.10	16.3	57.2	2.75	35.4	0.00			320	204
378	6.92	6.88	34.245	26.840	126.1	0.721	0.72	10.6	64.4	2.93	37.0	0.00			380	203
400 ISL	6.80	6.76	34.252	26.862	124.2	0.748	0.64	9.4	66.5	2.97	37.5	0.00			403	
438	6.57	6.53	34.262	26.901	120.9	0.795	0.55	8.0	70.1	3.02	38.4	0.00			441	202
500 ISL	6.16	6.12	34.303	26.987	113.2	0.868	0.39	5.6	78.0	3.12	39.8	0.00			503	
510	6.09	6.04	34.310	27.002	111.9	0.879	0.36	5.2	79.3	3.14	40.0	0.00			514	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 59.4 N	120 21.0 W	22/10/96	0350 UTC	724 m	350 12 kn			1024.5 mb	17.1 c	14.6 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.63	16.63	33.602	24.529	339.6	0.000	5.79	104.2	2.6	0.35	0.6	0.04	0.96	0.23	0	
1	16.63	16.63	33.602	24.529	339.7	0.003	5.79	104.2	2.6	0.35	0.6	0.04	0.96	0.23	1	223
2	16.63	16.63	33.602	24.529	339.7	0.007	5.79	104.2	2.6	0.35	0.7	0.04	0.94	0.25	2	224
3	16.63	16.63	33.603	24.530	339.7	0.010	5.79	104.2	2.6	0.35	0.7	0.04	0.96	0.25	3	222
6	16.63	16.63	33.603	24.530	339.7	0.020	5.78	104.1	2.6	0.35	0.6	0.04	0.97	0.23	6	221
10	16.63	16.63	33.602	24.529	339.9	0.034	5.79	104.2	2.6	0.35	0.6	0.04	1.07	0.25	10	220
15	16.56	16.56	33.597	24.542	338.9	0.051	5.76	103.6	2.6	0.35	1.0	0.04	1.06	0.26	15	219
20	16.50	16.50	33.595	24.554	337.9	0.068	5.76	103.4	2.6	0.35	1.0	0.04	1.20	0.31	20	218
30	16.47	16.47	33.594	24.561	337.6	0.102	5.68	101.9	2.6	0.36	1.1	0.04	1.23	0.34	30	217
40	15.82	15.81	33.595	24.710	323.7	0.135	5.54	98.1	3.4	0.43	2.1	0.06	0.82	0.28	40	216
50	11.95	11.94	33.623	25.531	245.5	0.163	4.11	67.3	14.0	1.27	15.1	0.04	0.26	0.20	50	215
60	10.56	10.55	33.576	25.746	225.2	0.187	3.98	63.2	17.2	1.44	18.0	0.03	0.09	0.12	60	214
70	10.24	10.23	33.684	25.885	212.1	0.209	3.54	55.8	20.7	1.62	20.8	0.02	0.06	0.09	70	213
75 ISL	10.15	10.14	33.709	25.920	208.9	0.219	3.47	54.6	21.6	1.67	21.5	0.02	0.05	0.08	75	
85	9.94	9.93	33.731	25.973	204.1	0.240	3.34	52.4	22.9	1.73	22.3	0.01	0.03	0.07	85	212
99	9.24	9.23	33.757	26.109	191.4	0.267	3.42	52.8	24.8	1.78	23.5	0.02	0.01	0.05	99	211
100 ISL	9.21	9.20	33.762	26.117	190.6	0.269	3.40	52.4	25.1	1.79	23.6	0.02	0.01	0.05	100	
120	8.73	8.72	33.874	26.281	175.3	0.306	2.98	45.5	30.3	1.97	26.4	0.02	0.00	0.04	121	210
125 ISL	8.66	8.65	33.885	26.301	173.6	0.315	2.99	45.6	30.9	1.98	26.7	0.02	0.00	0.04	126	
140	8.46	8.45	33.904	26.346	169.5	0.340	3.01	45.7	32.1	2.00	27.1	0.01	0.00	0.04	141	209
150 ISL	8.29	8.27	33.922	26.386	165.8	0.357	3.04	46.0	33.3	2.01	27.4	0.01	0.00	0.04	151	
170	7.93	7.91	33.958	26.469	158.3	0.390	3.07	46.1	35.9	2.04	28.0	0.01	0.00	0.04	171	208
199	7.52	7.50	33.995	26.557	150.2	0.434	2.93	43.6	40.3	2.13	29.2	0.01	0.01	0.03	200	207
200 ISL	7.51	7.49	33.997	26.560	149.9	0.436	2.91	43.2	40.5	2.14	29.3	0.01			201	
229	7.27	7.25	34.044	26.632	143.5	0.478	2.32	34.3	46.7	2.36	31.8	0.01			230	206
250 ISL	7.05	7.03	34.070	26.683	138.9	0.508	1.94	28.5	51.6	2.50	33.5	0.01			251	
269	6.86	6.84	34.090	26.725	135.2	0.534	1.66	24.3	55.6	2.61	34.8	0.01			271	205
300 ISL	6.69	6.66	34.112	26.765	131.7	0.575	1.40	20.4	59.8	2.72	36.2	0.01			302	
318	6.															

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 39.4 N	121 1.9 W	22/10/96	0838	UTC	3803 m	350	15 kn			1025.7 mb	15.6 C	13.3 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.45	15.45	33.528	24.739	319.6	0.000	5.97	105.0	1.0	0.32	0.5	0.06	2.42	0.99	0	
1	15.45	15.45	33.529	24.740	319.5	0.003	5.96	104.8	1.0	0.32	0.4	0.06	2.42	0.96	1	224
3	15.47	15.47	33.530	24.737	319.9	0.010	5.98	105.2	0.9	0.32	0.5	0.06	2.38	0.90	3	222
6	15.48	15.48	33.531	24.735	320.2	0.019	5.97	105.0	1.0	0.32	0.5	0.06	2.39	0.89	6	221
10	15.41	15.41	33.526	24.747	319.2	0.032	5.94	104.3	1.2	0.34	0.7	0.07	2.36	0.94	10	220
15	15.30	15.30	33.529	24.774	316.8	0.048	5.97	104.6	1.0	0.32	0.5	0.06	2.33	0.89	15	219
20	15.30	15.30	33.522	24.769	317.4	0.064	5.98	104.8	1.0	0.34	0.7	0.07	2.88	1.07	20	218
30	15.12	15.12	33.532	24.816	313.2	0.095	5.94	103.7	1.2	0.35	1.2	0.08	3.18	0.90	30	217
40	15.12	15.11	33.530	24.815	313.6	0.127	5.84	102.0	1.5	0.39	1.7	0.09	2.77	1.01	40	216
50	12.13	12.12	33.382	25.310	266.6	0.156	4.84	79.4	9.7	1.01	10.6	0.12	0.57	0.68	50	215
60	10.78	10.77	33.400	25.570	241.9	0.181	4.67	74.4	12.8	1.19	13.8	0.05	0.07	0.15	60	214
69	10.36	10.35	33.435	25.671	232.5	0.202	4.48	70.7	15.0	1.30	15.6	0.04	0.05	0.12	69	213
75 ISL	10.27	10.26	33.496	25.734	226.6	0.216	4.26	67.2	16.6	1.38	16.9	0.04	0.05	0.12	75	
85	10.18	10.17	33.599	25.830	217.7	0.238	3.93	61.9	18.9	1.51	18.9	0.03	0.05	0.13	85	212
100	9.66	9.65	33.642	25.950	206.5	0.270	3.81	59.3	21.1	1.60	20.5	0.03	0.03	0.18	100	211
119	9.24	9.23	33.790	26.135	189.3	0.308	3.27	50.5	25.7	1.81	23.7	0.02	0.01	0.09	120	210
125 ISL	9.10	9.09	33.822	26.182	184.9	0.319	3.16	48.6	26.9	1.86	24.4	0.02	0.01	0.08	126	
139	8.78	8.77	33.879	26.278	176.0	0.344	3.01	46.0	29.6	1.94	25.6	0.01	0.01	0.07	140	209
150 ISL	8.53	8.51	33.916	26.345	169.8	0.363	3.02	45.9	31.5	1.98	26.3	0.01	0.01	0.06	151	
169	8.14	8.12	33.962	26.441	160.9	0.395	3.04	45.8	34.5	2.02	27.3	0.01	0.00	0.05	170	208
199	7.73	7.71	33.999	26.530	152.8	0.442	2.84	42.4	39.1	2.14	29.0	0.01	0.00	0.04	200	207
200 ISL	7.71	7.69	34.000	26.534	152.5	0.443	2.84	42.4	39.3	2.14	29.0	0.01			201	
229	7.29	7.27	34.006	26.599	146.7	0.487	2.69	39.8	43.7	2.23	30.3	0.01			230	206
250 ISL	7.05	7.03	34.013	26.638	143.2	0.517	2.52	37.1	47.1	2.31	31.4	0.01			251	
269	6.88	6.86	34.025	26.671	140.3	0.544	2.31	33.0	50.3	2.40	32.6	0.01			271	205
300 ISL	6.72	6.69	34.066	26.725	135.5	0.587	1.85	27.0	55.8	2.57	34.7	0.01			302	
318	6.64	6.61	34.091	26.755	132.9	0.611	1.58	23.0	58.9	2.67	35.8	0.01			320	204
378	6.26	6.23	34.137	26.842	125.3	0.688	1.05	15.2	68.3	2.88	38.3	0.00			380	203
400 ISL	6.18	6.14	34.170	26.879	122.1	0.716	0.87	12.5	71.0	2.95	38.9	0.00			403	
437	6.07	6.03	34.223	26.935	117.2	0.760	0.63	9.1	75.1	3.06	39.7	0.00			440	202
500 ISL	5.80	5.76	34.256	26.995	112.1	0.832	0.47	6.7	81.2	3.14	40.8	0.00			503	
515	5.74	5.70	34.264	27.009	110.9	0.849	0.43	6.1	82.7	3.16	41.0	0.00			519	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 19.4 N	121 42.9 W	22/10/96	1836	UTC	4064 m	360	16 kn	340 03 04	0	1025.7 mb	17.0 C	15.1 C	12m	04	0/8	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.49	15.49	33.262	24.526	339.9	0.000	6.03	105.9	1.0	0.32	0.0	0.00	1.67	0.50	0	
1 A	15.49	15.49	33.262	24.526	339.9	0.003	6.03	105.9	1.0	0.32	0.0	0.00	1.67	0.50	1	223
2	15.49	15.49	33.263	24.527	339.9	0.007	6.02	105.7	1.1	0.32	0.0	0.00	1.61	0.49	2	224
3	15.49	15.49	33.263	24.527	339.9	0.010	6.03	105.9	1.0	0.32	0.0	0.00	1.61	0.47	3	222
6	15.49	15.49	33.264	24.528	339.9	0.020	6.02	105.7	1.0	0.32	0.0	0.00	1.71	0.49	6	221
8 A	15.46	15.46	33.263	24.534	339.4	0.027	6.04	106.0	1.0	0.31	0.0	0.00	1.63	0.56	8	220
10 ISL	15.43	15.43	33.263	24.540	338.9	0.034	6.04	106.0	1.0	0.31	0.0	0.00	1.66	0.57	10	
16 A	15.36	15.36	33.266	24.558	337.3	0.054	6.03	105.6	1.0	0.31	0.0	0.00	1.95	0.61	16	219
20 ISL	15.35	15.35	33.268	24.562	337.1	0.068	6.00	105.1	1.0	0.31	0.0	0.00	2.10	0.61	20	
25 A	15.34	15.34	33.270	24.566	336.9	0.085	5.98	104.7	1.0	0.31	0.0	0.00	2.27	0.60	25	218
30 ISL	15.18	15.18	33.282	24.610	332.8	0.101	6.00	104.7	0.9	0.33	0.1	0.01	2.40	0.71	30	
33 A	15.06	15.06	33.288	24.641	329.9	0.111	6.01	104.7	0.9	0.34	0.1	0.01	2.44	0.77	33	217
46 A	14.68	14.67	33.248	24.693	325.4	0.154	5.96	103.0	1.4	0.39	0.4	0.05	2.13	0.70	46	216
50 ISL	14.26	14.25	33.189	24.736	321.4	0.167	5.93	101.5	1.9	0.43	0.7	0.10	1.75	0.68	50	
55	13.72	13.71	33.117	24.792	316.1	0.183	5.90	99.9	2.5	0.48	1.2	0.16	1.24	0.66	55	215
66	13.08	13.07	33.074	24.888	307.2	0.217	5.83	97.4	3.3	0.53	1.9	0.22	0.64	0.65	66	214
75 ISL	11.90	11.89	33.209	25.219	275.8	0.243	5.32	86.7	6.5	0.79	6.8	0.11	0.23	0.28	75	
76	11.78	11.77	33.227	25.256	272.3	0.246	5.27	85.7	6.8	0.82	7.3	0.09	0.20	0.25	76	213
85	11.58	11.57	33.267	25.324	266.0	0.270	5.26	85.2	7.6	0.81	7.4	0.03	0.17	0.21	85	212
99	10.50	10.49	33.414	25.631	237.0	0.305	4.59	72.7	13.5	1.19	13.9	0.01	0.08	0.16	99	211
100 ISL	10.46	10.45	33.420	25.642	235.9	0.308	4.56	72.2	13.8	1.21	14.2	0.01	0.08	0.16	100	
120	9.90	9.89	33.523	25.818	219.5	0.353	4.16	65.1	18.0	1.44	18.0	0.01	0.05	0.13	121	210
125 ISL	9.75	9.74	33.568	25.878	213.9	0.364	4.03	62.8	19.3	1.50	19.0	0.01	0.05	0.11	126	
140	9.33	9.31	33.705	26.054	197.4	0.395	3.70	57.2	23.0	1.67	21.8	0.00	0.04	0.07	141	209
150 ISL	9.10	9.08	33.766	26.139	189.5	0.414	3.66	56.3	24.8	1.73	22.8	0.00	0.04	0.06	151	
169	8.72	8.70	33.850	26.265	177.8	0.449	3.57	54.5	27.7	1.80	24.1	0.00	0.03	0.05	170	208
199	8.22	8.20	33.936	26.409	164.6	0.501	3.39	51.2	32.2	1.90	25.8	0.00	0.00	0.02	200	207
200 ISL	8.21	8.19	33.938	26.412	164.3	0.502	3.38	51.0	32.3	1.90	25.8	0.00			201	
229	7.81	7.79	33.975	26.500	156.2	0.549	3.17	47.4	36.3	2.02	27.5	0.00			230	206
250 ISL	7.46	7.44	33.994	26.566	150.2	0.581	2.89	42.9	41.1	2.15	29.3	0.00			251	
269	7.18	7.15	34.013	26.620	145.2	0.609	2.56	37.8	46.0	2.28	31.1	0.00			271	205
300 ISL	6.98	6.95	34.069	26.692	138.8	0.653	1.89	27.8	52.9	2.52	33.8	0.00			302	
317	6.90	6.87	34.096	26.725	135.9	0.676	1.55	22.7	56.4	2.64	35.1	0.00			319	204
378	6.23	6.20	34.103	26.819	127.4	0.757	1.20	17.3	66.6	2.83	38.0	0.00			380	203
400 ISL	6.17	6.13	34.127	26.846	125.1	0.784	1.04	15.0	69.3	2.90	38.7	0.00			403	
438	6.11	6.07	34.173	26.890	121.4	0.831	0.77	11.1	73.8	3.00	39.6	0.00			441	202
500 ISL	5.66	5.62	34.218	26.982	113.1	0.904	0.52	7.4	82.4	3.13	41.1	0.00			503	
512	5.57	5.53	34.227	27.000	111.4	0.917	0									

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 59.4 N	122 23.6 W	23/10/96	0153 UTC	4106 m	350 18 kn	350 04 05	1	1022.3 mb	16.8 c	15.0 c			5/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.01	18.01	33.234	23.919	397.8	0.000	5.62	103.7	1.8	0.29	0.0	0.00	0.12	0.03	0	
1	18.01	18.01	33.234	23.919	397.8	0.004	5.62	103.7	1.8	0.29	0.0	0.00	0.12	0.03	1	223
2	18.02	18.02	33.234	23.916	398.1	0.008	5.62	103.7	1.9	0.29	0.0	0.00	0.12	0.03	2	224
6	18.02	18.02	33.234	23.916	398.2	0.024	5.64	104.1	1.8	0.29	0.0	0.00	0.12	0.04	6	222
10	18.02	18.02	33.235	23.917	398.3	0.040	5.62	103.7	1.8	0.29	0.0	0.00	0.13	0.04	10	221
16	18.02	18.02	33.234	23.917	398.5	0.064	5.61	103.5	1.8	0.28	0.0	0.00	0.12	0.03	16	220
20 ISL	18.02	18.02	33.234	23.917	398.7	0.080	5.62	103.7	1.8	0.28	0.0	0.00	0.13	0.04	20	
21	18.02	18.02	33.234	23.917	398.7	0.084	5.62	103.7	1.8	0.28	0.0	0.00	0.13	0.04	21	219
30 ISL	18.02	18.01	33.234	23.917	399.0	0.120	5.62	103.7	1.8	0.29	0.0	0.00	0.13	0.04	30	218
31	18.02	18.01	33.234	23.917	399.0	0.124	5.62	103.7	1.8	0.29	0.0	0.00	0.21	0.07	45	217
45	17.37	17.36	33.231	24.072	384.7	0.178	5.76	105.0	1.8	0.30	0.0	0.00	0.21	0.07	45	217
50 ISL	16.14	16.13	33.203	24.337	359.5	0.197	5.92	105.3	1.8	0.33	0.0	0.00	0.26	0.13	50	
55	14.88	14.87	33.182	24.599	334.6	0.214	6.06	105.1	1.9	0.37	0.0	0.00	0.34	0.22	55	216
65	13.85	13.82	33.111	24.765	319.0	0.247	6.04	102.5	2.4	0.42	0.4	0.09	0.61	0.43	65	215
75	13.15	13.14	33.154	24.936	302.9	0.278	5.80	97.0	3.5	0.51	1.8	0.20	0.49	0.41	75	214
85	12.40	12.39	33.236	25.146	283.1	0.307	5.42	89.3	5.7	0.77	6.4	0.06	0.32	0.27	85	213
95	11.71	11.70	33.282	25.312	267.4	0.335	5.21	84.6	7.5	0.86	8.1	0.03	0.22	0.19	95	212
100 ISL	11.51	11.50	33.331	25.387	260.4	0.348	5.11	82.7	8.4	0.89	8.8	0.03	0.17	0.16	100	
110	11.18	11.17	33.437	25.529	247.0	0.374	4.85	78.0	10.6	0.99	10.8	0.02	0.10	0.12	110	211
125	10.49	10.48	33.544	25.734	227.7	0.409	4.26	67.5	15.9	1.37	16.6	0.01	0.04	0.05	126	210
145	9.46	9.44	33.714	26.040	198.9	0.452	3.81	59.1	21.8	1.60	20.9	0.01	0.01	0.04	146	209
150 ISL	9.31	9.29	33.744	26.088	194.4	0.462	3.70	57.2	23.1	1.65	21.7	0.01	0.01	0.04	151	
170	8.92	8.90	33.836	26.223	181.9	0.499	3.34	51.2	27.4	1.83	24.1	0.01	0.01	0.03	171	208
200	8.43	8.41	33.929	26.372	168.2	0.552	3.11	47.2	32.3	1.97	26.4	0.01	0.01	0.03	201	207
228	7.95	7.93	33.972	26.478	158.5	0.597	3.09	46.4	36.1	2.03	27.4	0.01	0.01	0.03	229	206
250 ISL	7.61	7.59	33.997	26.547	152.1	0.632	2.89	43.0	40.1	2.14	28.9	0.01	0.01	0.03	251	
269	7.33	7.30	34.012	26.599	147.4	0.660	2.68	39.7	43.8	2.24	30.3	0.01	0.01	0.03	270	205
300 ISL	6.90	6.87	34.018	26.663	141.5	0.705	2.46	36.0	49.7	2.36	32.1	0.01	0.01	0.03	302	
318	6.67	6.64	34.018	26.694	138.7	0.730	2.30	33.5	53.1	2.43	33.1	0.01	0.01	0.03	320	204
378	6.03	6.00	34.049	26.802	128.8	0.810	1.63	23.4	65.0	2.71	36.8	0.01	0.01	0.03	380	203
400 ISL	5.87	5.84	34.069	26.838	125.6	0.838	1.40	20.0	69.3	2.80	38.0	0.01	0.01	0.03	402	
438	5.64	5.60	34.106	26.896	120.4	0.885	1.04	14.8	76.2	2.94	39.7	0.00	0.01	0.03	441	202
500 ISL	5.35	5.31	34.163	26.976	113.3	0.958	0.70	9.9	84.7	3.08	41.4	0.00	0.01	0.03	503	
515	5.28	5.24	34.177	26.995	111.6	0.974	0.62	8.7	86.8	3.11	41.8	0.00	0.01	0.03	518	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 39.4 N	123 4.2 W	23/10/96	0819 UTC	4127 m	350 20 kn			1023.1 mb	17.7 c	15.9 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.80	17.80	33.308	24.026	387.5	0.000	5.68	104.4	1.8	0.31	0.0	0.00	0.14	0.05	0	
1	17.80	17.80	33.308	24.026	387.6	0.004	5.68	104.4	1.8	0.31	0.0	0.00	0.14	0.05	1	223
1	17.80	17.80	33.308	24.026	387.6	0.004	5.65	103.9	1.8	0.31	0.0	0.00	0.14	0.04	1	224
5	17.80	17.80	33.308	24.026	387.7	0.019	5.66	104.1	1.8	0.31	0.0	0.00	0.14	0.04	5	222
10	17.81	17.81	33.310	24.026	387.9	0.039	5.66	104.1	1.8	0.31	0.0	0.00	0.14	0.04	10	221
15	17.81	17.81	33.308	24.024	388.2	0.058	5.68	104.4	1.8	0.31	0.0	0.00	0.13	0.04	15	220
20	17.81	17.81	33.308	24.025	388.4	0.078	5.66	104.1	1.8	0.31	0.0	0.00	0.14	0.04	20	219
30	17.80	17.79	33.308	24.027	388.5	0.116	5.70	104.8	1.8	0.31	0.0	0.00	0.14	0.05	30	218
45	16.14	16.13	33.241	24.366	356.6	0.172	6.11	108.7	2.1	0.35	0.0	0.00	0.30	0.19	45	217
50 ISL	14.77	14.76	33.212	24.646	330.0	0.189	6.12	105.9	2.5	0.41	0.5	0.05	0.43	0.28	50	
55	13.44	13.43	33.210	24.921	303.8	0.205	6.13	103.2	3.1	0.50	1.6	0.10	0.53	0.36	55	216
65	12.39	12.38	33.259	25.165	280.7	0.235	5.49	90.5	5.7	0.80	6.7	0.06	0.43	0.36	65	215
75	11.95	11.94	33.327	25.302	267.9	0.262	5.22	85.3	7.7	0.94	9.3	0.03	0.32	0.31	75	214
85	11.55	11.54	33.430	25.456	253.5	0.288	4.86	78.7	10.0	1.09	11.9	0.02	0.20	0.19	85	213
95	10.94	10.93	33.491	25.614	238.6	0.313	4.59	73.4	12.7	1.19	13.9	0.01	0.12	0.13	95	212
100 ISL	10.64	10.63	33.532	25.698	230.6	0.324	4.36	69.3	14.8	1.30	15.7	0.01	0.08	0.10	100	
110	10.12	10.11	33.610	25.849	216.5	0.347	3.91	61.5	18.8	1.52	19.1	0.01	0.03	0.05	110	211
125	9.72	9.71	33.669	25.962	205.9	0.378	3.64	56.8	21.3	1.64	21.1	0.01	0.01	0.04	126	210
144	9.11	9.09	33.811	26.172	186.2	0.416	3.55	54.7	25.3	1.76	23.1	0.01	0.00	0.03	145	209
150 ISL	8.95	8.93	33.841	26.221	181.6	0.427	3.52	54.0	26.4	1.79	23.7	0.01	0.00	0.03	151	
169	8.50	8.48	33.909	26.345	170.2	0.460	3.40	51.7	29.8	1.88	25.2	0.01	0.00	0.03	170	208
198	7.97	7.95	33.973	26.475	158.2	0.508	3.21	48.2	35.2	2.01	27.1	0.00	0.00	0.03	199	207
200 ISL	7.95	7.93	33.976	26.480	157.7	0.511	3.20	48.0	35.5	2.02	27.2	0.00	0.00	0.03	201	
229	7.65	7.63	34.007	26.549	151.6	0.556	2.89	43.1	40.2	2.14	29.0	0.00	0.00	0.03	230	206
250 ISL	7.41	7.39	34.040	26.609	146.1	0.587	2.43	36.0	44.6	2.31	30.9	0.00	0.00	0.03	251	
268	7.21	7.18	34.067	26.659	141.6	0.613	2.03	30.0	48.5	2.45	32.6	0.00	0.00	0.03	270	205
300 ISL	6.94	6.91	34.085	26.710	137.1	0.657	1.74	25.5	53.9	2.58	34.4	0.00	0.00	0.03	302	
317	6.80	6.77	34.088	26.732	135.2	0.681	1.66	24.3	56.5	2.63	35.1	0.00	0.00	0.03	319	204
377	6.20	6.17	34.087	26.810	128.2	0.760	1.31	18.9	65.6	2.80	37.6	0.00	0.00	0.03	379	203
400 ISL	5.98	5.95	34.098	26.847	124.8	0.789	1.16	16.6	69.8	2.87	38.6	0.00	0.00	0.03	403	
437	5.67	5.63	34.125	26.907	119.4	0.834	0.92	13.1	76.3	2.98	40.1	0.00	0.00	0.03	440	202
500 ISL	5.42	5.38	34.186	26.986	112.5	0.907	0.65	9.2	84.0	3.11	41.3	0.00	0.00	0.03	503	
516	5.36	5.32	34.202	27.006	110.7	0.925	0.58	8.2	86.0	3.14	41.6	0.00	0.00	0.03	519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 19.4 N	123 44.6 W	23/10/96	1820	UTC	4050 m	330	17 kn	330 04 04	1	1022.1 mb	19.7 c	18.0 c	24m 01	7/8		SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.11	18.11	33.359	23.990	391.0	0.000	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.04	0	
2 A	18.11	18.11	33.359	23.990	391.1	0.008	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.04	2	223
3	18.11	18.11	33.359	23.990	391.1	0.012	5.60	103.6	1.9	0.30	0.0	0.00	0.15	0.05	3	224
6	18.11	18.11	33.358	23.989	391.3	0.023	5.60	103.6	1.8	0.30	0.0	0.00	0.15	0.04	6	224
10	18.10	18.10	33.359	23.993	391.1	0.039	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05	10	221
16 A	18.10	18.10	33.359	23.993	391.3	0.063	5.60	103.6	1.8	0.30	0.0	0.00	0.16	0.05	16	220
20	18.10	18.10	33.358	23.992	391.5	0.078	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05	20	219
30 ISL	18.10	18.09	33.358	23.993	391.8	0.117	5.60	103.6	1.8	0.30	0.0	0.00	0.15	0.05	30	
34 A	18.10	18.09	33.359	23.994	391.8	0.133	5.60	103.6	1.8	0.30	0.0	0.00	0.15	0.05	34	218
41	18.10	18.09	33.359	23.994	392.0	0.161	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05	41	217
50 A	17.91	17.90	33.355	24.038	388.2	0.196	5.62	103.6	1.8	0.30	0.0	0.00	0.17	0.06	50	216
57	13.90	13.89	33.252	24.859	309.8	0.220	6.51	110.7	2.2	0.38	0.2	0.01	0.55	0.34	57	215
65 A	12.95	12.94	33.284	25.076	289.3	0.244	5.71	95.2	4.1	0.67	4.7	0.17	0.58	0.49	65	214
75 ISL	12.28	12.27	33.378	25.279	270.2	0.272	5.19	85.4	6.4	0.91	8.8	0.10	0.39	0.39	75	
79	12.10	12.09	33.417	25.343	264.1	0.283	5.08	83.3	7.3	0.98	10.0	0.04	0.30	0.31	79	213
92 A	11.49	11.48	33.478	25.505	249.0	0.316	4.76	77.0	10.2	1.13	12.6	0.02	0.18	0.20	92	212
100 ISL	11.25	11.24	33.503	25.568	243.2	0.336	4.59	73.9	11.8	1.21	13.9	0.01	0.14	0.16	100	
108	11.02	11.01	33.527	25.628	237.6	0.355	4.41	70.7	13.4	1.28	15.2	0.01	0.11	0.13	108	211
125	10.27	10.26	33.600	25.816	220.0	0.394	3.98	62.8	17.5	1.44	17.9	0.01	0.04	0.05	126	210
145	9.23	9.21	33.753	26.108	192.4	0.435	3.58	55.2	23.6	1.69	22.1	0.01	0.01	0.03	146	209
150 ISL	9.08	9.06	33.779	26.152	188.2	0.445	3.51	54.0	24.7	1.73	22.8	0.01	0.01	0.03	151	
170	8.70	8.68	33.858	26.274	177.0	0.481	3.32	50.7	28.4	1.86	24.8	0.01	0.00	0.03	171	208
199	8.26	8.24	33.937	26.404	165.1	0.531	3.20	48.4	32.3	1.95	26.2	0.01	0.00	0.03	200	207
200 ISL	8.25	8.23	33.940	26.407	164.7	0.532	3.19	48.2	32.5	1.96	26.3	0.01			201	
228	7.84	7.82	34.002	26.517	154.7	0.577	2.84	42.5	38.0	2.11	28.5	0.00			229	206
250 ISL	7.48	7.46	34.007	26.573	149.5	0.611	2.83	42.0	40.8	2.15	29.3	0.00			251	
269	7.19	7.16	34.001	26.609	146.3	0.639	2.83	41.7	43.3	2.19	29.9	0.00			270	205
300 ISL	6.83	6.80	34.018	26.672	140.6	0.683	2.42	35.4	49.7	2.36	32.2	0.00			302	
318	6.66	6.63	34.033	26.707	137.4	0.708	2.11	30.7	53.9	2.48	33.7	0.00			320	204
378	6.14	6.11	34.091	26.821	127.1	0.787	1.28	18.4	66.7	2.80	37.9	0.00			380	203
400 ISL	5.96	5.93	34.109	26.858	123.8	0.815	1.08	15.5	70.7	2.89	38.9	0.00			402	
437	5.72	5.68	34.143	26.915	118.7	0.860	0.83	11.8	76.5	3.00	40.0	0.00			440	202
500 ISL	5.58	5.54	34.225	26.998	111.6	0.932	0.49	7.0	83.3	3.13	41.2	0.00			503	
511	5.55	5.51	34.239	27.012	110.3	0.945	0.43	6.1	84.5	3.15	41.4	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29.1 N	117 46.1 W	20/10/96	1332	UTC	70 m	090	10 kn			1014.5 mb	17.0 c	14.6 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.35	19.35	33.641	23.895	400.1	0.000	5.80	110.0	1.7	0.19	0.0	0.00	1.11	0.26	0	
2	19.35	19.35	33.641	23.895	400.1	0.008	5.80	110.0	1.7	0.19	0.0	0.00	1.11	0.26	2	211
3	19.35	19.35	33.640	23.894	400.2	0.012	5.82	110.4	1.9	0.19	0.0	0.00	1.00	0.28	3	212
3	19.35	19.35	33.640	23.894	400.2	0.012	5.82	110.4	1.8	0.18	0.0	0.00	1.03	0.27	3	210
7	19.22	19.22	33.639	23.927	397.3	0.028	5.83	110.3	1.9	0.20	0.0	0.00	1.04	0.28	7	209
7	19.06	19.06	33.639	23.968	393.4	0.028	5.82	109.8	1.9	0.19	0.0	0.00	0.99	0.29	7	207
7	19.19	19.19	33.638	23.934	396.6	0.028	5.80	109.7	1.9	0.19	0.0	0.00			7	208
10 ISL	16.88	16.88	33.506	24.397	352.5	0.039	5.81	105.1	2.5	0.26	0.0	0.01	1.19	0.46	10	
11	16.10	16.10	33.471	24.550	337.9	0.043	5.80	103.3	2.8	0.29	0.0	0.02	1.28	0.52	11	206
15	15.02	15.02	33.432	24.760	318.1	0.056	5.80	103.3	4.3	0.44	0.2	0.09	1.70	0.56	15	205
20	14.58	14.58	33.408	24.836	310.9	0.071	5.77	99.6	4.6	0.50	1.2	0.21	1.26	0.62	20	204
30	13.63	13.63	33.445	25.063	289.6	0.102	5.24	88.7	6.7	0.70	4.2	0.55	0.65	0.28	30	203
40	13.39	13.38	33.457	25.121	284.3	0.130	5.09	85.8	7.2	0.76	5.1	0.60	0.61	0.29	40	202
50 ISL	13.17	13.16	33.459	25.167	280.2	0.158	5.07	85.0	7.4	0.77	5.1	0.60	0.65	0.29	50	
52	13.13	13.12	33.460	25.176	279.4	0.164	5.06	84.8	7.4	0.77	5.1	0.60	0.66	0.29	52	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 25.1 N	117 54.3 W	20/10/96	0925	UTC	614 m	290	10 kn			1014.3 mb	18.6 c	13.0 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.78	18.78	33.576	23.990	391.0	0.000	5.65	106.0	1.3	0.24	0.0	0.00	0.27	0.07	0	
1	18.77	18.77	33.577	23.993	390.7	0.004	5.62	105.4	1.4	0.24	0.0	0.00	0.28	0.07	1	224
1	18.78	18.78	33.576	23.990	391.1	0.004	5.65	106.0	1.3	0.24	0.0	0.00	0.27	0.07	1	223
3	18.78	18.78	33.577	23.991	391.1	0.012	5.66	106.2	1.3	0.24	0.0	0.00	0.27	0.07	3	222
6	18.78	18.78	33.577	23.991	391.2	0.023	5.60	105.1	1.3	0.24	0.0	0.00	0.28	0.07	6	221
10 ISL	18.77	18.77	33.576	23.993	391.1	0.039	5.63	105.6	1.3	0.24	0.0	0.00	0.27	0.07	10	
11	18.77	18.77	33.576	23.993	391.1	0.043	5.64	105.8	1.3	0.24	0.0	0.00	0.27	0.07	11	220
15	18.75	18.75	33.576	23.998	390.8	0.059	5.63	105.6	1.3	0.24	0.0	0.00	0.27	0.08	15	219
20	17.64	17.64	33.531	24.236	368.2	0.078	5.76	105.7	1.3	0.26	0.0	0.00	0.28	0.10	20	218
30	15.56	15.56	33.412	24.627	331.2	0.113	5.92	104.2	1.8	0.34	0.0	0.01	0.58	0.36	30	217
40	14.05	14.04	33.304	24.868	308.5	0.145	5.79	98.8	3.2	0.50	1.9	0.24	0.71	0.51	40	216
50	13.19	13.18	33.311	25.049	291.5	0.175	5.50	92.2	4.6	0.68	4.9	0.11	0.45	0.36	50	215
60	12.60	12.59	33.414	25.245	273.0	0.203	5.16	85.5	6.8	0.81	7.5	0.04	0.27	0.26	60	214
70	12.20	12.19	33.508	25.395	259.0	0.229	4.68	76.9	9.5	0.98	10.1	0.03	0.17	0.21	70	213
75 ISL	11.90	11.89	33.546	25.481	250.9	0.242	4.42	72.2	11.2	1.08	11.7	0.03	0.14	0.19	75	
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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	20/10/96	0405	UTC	320 m	290	08 kn			1013.1 mb	18.5 C	14.9 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	19.15	19.15	33.608	23.921	397.6	0.000	5.65	106.8	1.8	0.23	0.0	0.00	0.22	0.09	0	
7	19.15	19.15	33.608	23.921	397.6	0.004	5.65	106.8	1.8	0.23	0.0	0.00	0.22	0.09	1	220
1	19.14	19.14	33.607	23.922	397.5	0.004	5.64	106.6	1.8	0.24	0.0	0.00	0.22	0.09	1	221
5	19.16	19.16	33.608	23.918	398.0	0.020	5.64	106.6	1.8	0.23	0.0	0.00	0.23	0.09	5	219
10	19.16	19.16	33.607	23.918	398.2	0.040	5.65	106.8	1.7	0.23	0.0	0.00	0.22	0.09	10	218
15	19.13	19.13	33.605	23.924	397.8	0.060	5.65	106.7	1.7	0.23	0.0	0.00	0.22	0.10	15	217
17	18.84	18.84	33.588	23.985	392.1	0.068	5.73	107.6	1.7	0.23	0.0	0.00	0.25	0.11	17	216
20	17.95	17.95	33.524	24.156	375.9	0.079	5.92	109.3	2.0	0.26	0.0	0.00	0.34	0.21	20	215
30	13.98	13.98	33.395	24.953	300.1	0.113	5.85	99.7	4.3	0.51	1.8	0.26	0.81	0.41	30	214
40	13.09	13.08	33.414	25.148	281.8	0.142	4.95	82.9	7.6	0.88	7.5	1.25	0.40	0.65	40	213
50	12.36	12.35	33.483	25.344	263.3	0.169	4.58	75.5	9.8	1.02	10.7	0.22	0.37	0.34	50	212
60	11.95	11.94	33.504	25.439	254.5	0.195	4.46	72.9	10.8	1.09	11.9	0.07	0.25	0.28	60	211
70	11.37	11.36	33.580	25.605	238.9	0.220	4.07	65.8	13.6	1.24	14.0	0.03	0.13	0.19	70	210
75 ISL	11.05	11.04	33.626	25.699	230.1	0.232	3.86	62.0	15.5	1.34	15.7	0.02	0.09	0.17	75	
85	10.51	10.50	33.712	25.861	214.8	0.254	3.49	55.4	19.1	1.54	18.9	0.01	0.05	0.14	85	209
100	10.20	10.19	33.772	25.962	205.6	0.285	3.22	50.8	21.9	1.69	21.2	0.01	0.02	0.08	100	208
120	10.01	10.00	33.888	26.085	194.3	0.325	2.67	42.0	25.9	1.91	23.7	0.01	0.03	0.06	121	207
125 ISL	9.97	9.96	33.908	26.107	192.3	0.335	2.60	40.8	26.5	1.94	24.0	0.01	0.03	0.06	126	
140	9.84	9.82	33.957	26.167	186.8	0.363	2.47	38.7	28.1	2.00	24.8	0.01	0.02	0.06	141	206
150 ISL	9.76	9.74	33.989	26.206	183.4	0.382	2.38	37.2	29.2	2.05	25.4	0.01	0.02	0.06	151	
170	9.64	9.62	34.056	26.279	176.9	0.418	2.16	33.7	31.4	2.15	26.6	0.01	0.01	0.06	171	205
199	9.66	9.64	34.171	26.366	169.3	0.468	1.66	25.9	34.7	2.33	28.3	0.01	0.00	0.06	200	204
200 ISL	9.66	9.64	34.173	26.367	169.2	0.470	1.65	25.8	34.8	2.33	28.3	0.01			201	
229	9.57	9.54	34.224	26.423	164.5	0.518	1.46	22.8	36.5	2.40	28.9	0.01			230	203
250 ISL	9.44	9.41	34.259	26.472	160.3	0.552	1.33	20.7	38.2	2.46	29.4	0.01			251	
269	9.27	9.24	34.285	26.520	156.0	0.582	1.21	18.7	40.3	2.52	30.0	0.01			271	202
300 ISL	8.79	8.76	34.309	26.616	147.3	0.629	0.95	14.6	46.0	2.66	31.6	0.01			302	
315	8.56	8.53	34.321	26.661	143.1	0.651	0.83	12.7	48.8	2.73	32.4	0.01			317	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 10.4 N	118 22.4 W	20/10/96	0104	UTC	1168 m	280	17 kn	090 03 06	1	1012.3 mb	19.2 C	16.3 C			2/8	CS
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	19.36	19.36	33.626	23.881	401.4	0.000	5.57	105.7	1.7	0.22	0.0	0.00	0.18	0.06	0	
2	19.36	19.36	33.626	23.881	401.5	0.008	5.57	105.7	1.7	0.22	0.0	0.00	0.18	0.06	2	223
2	19.36	19.36	33.626	23.881	401.5	0.008	5.55	105.3	1.9	0.23	0.0	0.00	0.19	0.07	2	224
5	19.39	19.39	33.626	23.873	402.3	0.020	5.55	105.4	1.7	0.22	0.0	0.00	0.19	0.06	5	222
10	19.38	19.38	33.627	23.877	402.1	0.040	5.56	105.5	1.7	0.22	0.0	0.00	0.21	0.07	10	221
15	19.34	19.34	33.624	23.885	401.6	0.060	5.57	105.6	1.7	0.22	0.0	0.00	0.18	0.06	15	220
17	19.09	19.09	33.613	23.940	396.3	0.068	5.59	105.5	1.7	0.23	0.0	0.00	0.18	0.08	17	219
20	17.89	17.89	33.584	24.217	370.1	0.080	5.69	105.0	1.8	0.24	0.0	0.00	0.18	0.07	20	218
30	14.07	14.07	33.391	24.931	302.2	0.113	5.71	97.5	4.4	0.54	2.7	0.22	0.76	0.38	30	217
40	12.84	12.83	33.457	25.231	273.9	0.142	4.96	82.6	7.9	0.83	7.4	0.15	0.47	0.32	40	216
50	12.09	12.08	33.596	25.484	250.1	0.168	3.96	65.0	13.0	1.12	12.0	0.04	0.31	0.31	50	215
60	11.63	11.62	33.655	25.616	237.7	0.193	3.50	56.9	16.1	1.32	14.8	0.02	0.14	0.19	60	214
70	11.22	11.21	33.711	25.734	226.6	0.216	3.25	52.4	18.2	1.46	17.0	0.01	0.06	0.14	70	213
75 ISL	11.09	11.08	33.736	25.777	222.6	0.227	3.12	50.2	19.2	1.52	17.9	0.01	0.07	0.12	75	
85	10.91	10.90	33.776	25.841	216.8	0.249	2.91	46.6	20.9	1.63	19.4	0.01	0.08	0.08	85	212
100	10.77	10.76	33.811	25.893	212.2	0.281	2.77	44.2	22.5	1.73	20.7	0.01	0.10	0.09	100	211
120	10.42	10.41	33.920	26.040	198.7	0.322	2.14	33.9	26.8	2.00	24.2	0.01	0.06	0.05	121	210
125 ISL	10.34	10.33	33.942	26.071	195.8	0.332	2.14	33.9	27.5	2.03	24.6	0.01	0.06	0.05	126	
140	10.11	10.09	34.001	26.156	188.0	0.361	2.13	33.6	29.0	2.08	25.3	0.01	0.05	0.06	141	209
150 ISL	10.00	9.98	34.031	26.199	184.2	0.380	2.11	33.2	29.8	2.11	25.7	0.01	0.04	0.05	151	
170	9.83	9.81	34.085	26.270	177.8	0.416	2.01	31.5	31.5	2.17	26.6	0.01	0.03	0.04	171	208
199	9.62	9.60	34.175	26.375	168.3	0.466	1.70	26.5	34.8	2.31	28.1	0.00	0.01	0.05	200	207
200 ISL	9.62	9.60	34.178	26.378	168.1	0.468	1.69	26.4	34.9	2.31	28.1	0.00			201	
229	9.61	9.58	34.252	26.438	163.1	0.516	1.37	21.4	37.2	2.42	29.1	0.00			230	206
250 ISL	9.45	9.42	34.270	26.479	159.6	0.550	1.30	20.2	38.6	2.46	29.5	0.00			251	
268	9.28	9.25	34.275	26.511	156.9	0.578	1.27	19.7	39.8	2.49	29.8	0.00			270	205
300 ISL	9.06	9.03	34.291	26.559	152.8	0.628	1.14	17.6	42.4	2.56	30.5	0.00			302	
318	8.93	8.90	34.298	26.585	150.6	0.655	1.06	16.3	44.1	2.61	31.0	0.00			320	204
378	8.27	8.23	34.317	26.703	140.2	0.742	0.76	11.5	51.4	2.77	33.1	0.00			380	203
400 ISL	7.91	7.87	34.309	26.751	135.8	0.773	0.68	10.2	55.4	2.83	34.2	0.00			403	
437	7.33	7.29	34.297	26.825	128.8	0.822	0.57	8.4	62.1	2.93	35.9	0.00			440	202
500 ISL	6.80	6.75	34.308	26.908	121.5	0.900	0.43	6.3	69.5	3.04	37.8	0.00			503	
516	6.66	6.61	34.311	26.929	119.6	0.920	0.39	5.7	71.4	3.07	38.3	0.00			520	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 54.3 N	118 55.9 W	19/10/96	1827	UTC	1678 m	320	25 kn	310 05 06	1	1014.5 mb	17.7 c	14.4 c	17m 03		1/8	AC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.50	17.50	33.467	24.220	369.0	0.000	5.69	104.1	1.7	0.27	0.0	0.00	0.24	0.07	0	
2 A	17.50	17.50	33.467	24.220	369.1	0.007	5.69	104.1	1.7	0.27	0.0	0.00	0.24	0.07	2	224
4	17.51	17.51	33.468	24.219	369.3	0.015	5.70	104.3	1.5	0.27	0.0	0.00	0.23	0.07	4	223
10 ISL	17.50	17.50	33.469	24.222	369.2	0.037	5.71	104.5	1.5	0.27	0.0	0.00	0.24	0.07	10	
12 A	17.50	17.50	33.469	24.222	369.3	0.044	5.71	104.5	1.5	0.27	0.0	0.00	0.24	0.07	12	222
15	17.49	17.49	33.471	24.226	369.0	0.055	5.69	104.1	1.5	0.27	0.0	0.00	0.24	0.08	15	221
20	16.80	16.80	33.516	24.424	350.3	0.073	5.79	104.5	1.6	0.30	0.0	0.00	0.32	0.16	20	220
24 A	15.52	15.52	33.394	24.622	331.5	0.087	5.83	102.5	1.9	0.35	0.0	0.05	0.56	0.37	24	219
30	14.74	14.74	33.309	24.726	321.7	0.107	5.75	99.5	2.5	0.46	1.2	0.30	0.57	0.40	30	218
36 A	13.82	13.81	33.233	24.861	309.1	0.126	5.66	96.1	3.3	0.55	2.7	0.24	0.55	0.39	36	217
46 A	13.01	13.00	33.232	25.023	293.8	0.156	5.43	90.6	4.9	0.69	5.1	0.04	0.32	0.34	46	216
50 ISL	12.82	12.81	33.226	25.056	290.8	0.167	5.40	89.8	5.2	0.71	5.6	0.03	0.28	0.30	50	
56	12.55	12.54	33.223	25.106	286.1	0.185	5.35	88.4	5.7	0.76	6.3	0.02	0.25	0.24	56	215
66 A	11.89	11.88	33.276	25.273	270.4	0.212	5.11	83.3	7.9	1.00	8.8	0.02	0.14	0.15	66	214
75 ISL	11.30	11.29	33.402	25.479	250.9	0.236	4.72	76.1	11.2	1.13	12.4	0.01	0.07	0.09	75	
76	11.25	11.24	33.416	25.500	249.1	0.238	4.68	75.3	11.6	1.14	12.8	0.01	0.06	0.09	76	213
85	11.02	11.01	33.460	25.575	242.1	0.261	4.53	72.6	13.0	1.21	14.0	0.01	0.05	0.08	85	212
99	10.48	10.47	33.585	25.768	224.0	0.293	4.07	64.5	17.0	1.41	17.3	0.01	0.02	0.05	99	211
100 ISL	10.45	10.44	33.589	25.776	223.2	0.295	4.05	64.1	17.2	1.42	17.4	0.01	0.02	0.05	100	
120	9.92	9.91	33.670	25.930	209.0	0.339	3.72	58.3	20.6	1.58	20.0	0.01	0.01	0.04	121	210
125 ISL	9.74	9.73	33.714	25.994	202.9	0.349	3.54	55.2	22.3	1.66	21.2	0.01	0.01	0.04	126	
138	9.31	9.29	33.835	26.159	187.4	0.374	3.04	47.0	27.0	1.87	24.3	0.00	0.00	0.04	139	209
150 ISL	9.09	9.07	33.917	26.259	178.2	0.396	2.72	41.9	30.2	2.00	26.0	0.00	0.00	0.04	151	
169	8.90	8.88	34.015	26.366	168.3	0.429	2.34	35.9	34.1	2.16	27.7	0.00	0.01	0.05	170	208
199	8.72	8.70	34.119	26.476	158.4	0.478	1.81	27.7	38.9	2.35	29.7	0.00	0.00	0.05	200	207
200 ISL	8.70	8.68	34.118	26.478	158.2	0.480	1.82	27.8	39.0	2.35	29.7	0.00			201	
229	8.10	8.08	34.080	26.540	152.6	0.525	2.16	32.6	41.4	2.32	30.0	0.00			230	206
250 ISL	7.94	7.91	34.115	26.592	148.1	0.556	1.94	29.1	44.4	2.41	30.9	0.00			251	
269	7.88	7.85	34.160	26.636	144.2	0.584	1.63	24.5	47.4	2.51	31.9	0.00			271	205
300 ISL	7.76	7.73	34.196	26.682	140.3	0.628	1.33	19.9	50.9	2.63	33.0	0.00			302	
318	7.69	7.66	34.209	26.703	138.6	0.653	1.19	17.8	52.8	2.69	33.6	0.00			320	204
378	7.22	7.18	34.223	26.781	131.8	0.734	0.92	13.6	59.8	2.83	35.5	0.00			380	203
400 ISL	7.08	7.04	34.241	26.815	128.9	0.763	0.79	11.6	62.2	2.89	36.1	0.00			403	
437	6.87	6.83	34.273	26.870	124.2	0.810	0.59	8.7	66.0	2.98	37.0	0.00			440	202
500 ISL	6.55	6.50	34.300	26.934	118.7	0.886	0.42	6.1	72.3	3.09	38.4	0.00			503	
512	6.49	6.44	34.305	26.946	117.7	0.901	0.39	5.7	73.5	3.11	38.7	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 55.1 N	118 57.0 W	19/10/96	2031	UTC	1690 m	310	23 kn	310 05 05	1	1013.6 mb	17.9 c	14.3 c			3/8	CS
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
3	17.53	17.53	33.488	24.229	368.3	0.011	5.77	105.6	1.0	0.26	0.0	0.00	0.28	0.09	3	224
5	17.53	17.53	33.491	24.232	368.1	0.018	5.76	105.5	0.9	0.26	0.0	0.00	0.28	0.10	5	223
9	17.53	17.53	33.492	24.233	368.2	0.033	5.80	106.2	0.9	0.26	0.0	0.00	0.29	0.10	9	222
13	17.54	17.54	33.491	24.229	368.6	0.048	5.78	105.9	0.9	0.25	0.0	0.00	0.31	0.09	13	221
17	17.54	17.54	33.492	24.230	368.7	0.063	5.75	105.3	0.9	0.25	0.0	0.00	0.30	0.09	17	220
18	17.54	17.54	33.492	24.230	368.7	0.066	5.76	105.5	0.9	0.25	0.0	0.00	0.29	0.09	18	219
21	17.49	17.49	33.496	24.246	367.3	0.077	5.77	105.6	0.9	0.25	0.0	0.00	0.29	0.10	21	218
23	17.41	17.41	33.497	24.266	365.5	0.085	5.76	105.2	0.9	0.26	0.0	0.00	0.29	0.10	23	217
25	17.32	17.32	33.496	24.286	363.6	0.092	5.78	105.4	1.0	0.28	0.0	0.00	0.28	0.11	25	216
27	16.97	16.97	33.496	24.369	355.8	0.099	5.79	104.9	1.1	0.29	0.0	0.00	0.28	0.11	27	215
29	16.25	16.25	33.479	24.523	341.1	0.106	5.83	104.1	1.4	0.33	0.0	0.01	0.33	0.16	29	214
31	16.02	16.02	33.449	24.552	338.4	0.113	5.77	102.5	1.6	0.37	0.3	0.09	0.44	0.21	31	213
33	15.29	15.28	33.418	24.691	325.2	0.120	5.70	99.8	1.9	0.43	0.8	0.22	0.44	0.22	33	212
36	15.03	15.02	33.369	24.710	323.5	0.129	5.67	98.7	2.4	0.48	1.5	0.38	0.47	0.25	36	211
39	14.74	14.73	33.352	24.760	318.8	0.139	5.63	97.5	2.6	0.51	1.9	0.43	0.46	0.26	39	210
42	14.17	14.16	33.309	24.847	310.5	0.148	5.56	95.1	3.2	0.58	3.0	0.46	0.41	0.26	42	209
45	14.04	14.03	33.298	24.866	308.9	0.158	5.52	94.2	3.5	0.61	3.5	0.38	0.38	0.26	45	208
48	13.95	13.94	33.300	24.886	307.0	0.167	5.50	93.7	3.7	0.64	3.9	0.31	0.35	0.25	48	207
51	13.40	13.39	33.298	24.997	296.5	0.176	5.47	92.1	3.9	0.66	4.4	0.22	0.33	0.23	51	206
56	13.02	13.01	33.255	25.039	292.5	0.191	5.37	89.7	5.2	0.76	6.1	0.04	0.23	0.21	56	205
60	12.54	12.53	33.254	25.132	283.7	0.202	5.28	87.3	6.2	0.82	7.0	0.03	0.22	0.19	60	204
65	12.35	12.34	33.268	25.180	279.3	0.216	5.19	85.5	7.0	0.87	8.1	0.03	0.17	0.17	65	203
74	11.49	11.48	33.378	25.426	256.0	0.240	4.82	78.0	10.3	1.07		0.03	0.09	0.11	74	202
85	10.84	10.83	33.465	25.611	238.6	0.268	4.51	72.0	12.8	1.20		0.02	0.05	0.08	85	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 39.0 N	119 28.9 W	19/10/96	1059	UTC	1320 m	330 29 kn		1014.5 mb	16.8 c	14.0 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.48	17.48	33.415	24.185	372.4	0.000	5.72	104.6	1.7	0.28	0.0	0.00	0.21	0.07	0	
1	17.48	17.48	33.415	24.185	372.4	0.004	5.72	104.6	1.7	0.28	0.0	0.00	0.21	0.07	1	223
1	17.48	17.48	33.415	24.185	372.4	0.004	5.69	104.0	1.7	0.28	0.0	0.00	0.20	0.07	1	224
4	17.48	17.48	33.415	24.185	372.5	0.015	5.69	104.0	1.7	0.28	0.0	0.00	0.05	0.02	U	4 222
7	17.49	17.49	33.415	24.183	372.8	0.026	5.69	104.1	1.7	0.28	0.0	0.00	0.21	0.07	7	221
10	17.49	17.49	33.415	24.183	372.9	0.037	5.70	104.2	1.7	0.27	0.0	0.00	0.37	0.12	U	10 220
15	17.49	17.49	33.415	24.183	373.1	0.056	5.69	104.1	1.6	0.27	0.0	0.00	0.20	0.06	15	219
20	17.49	17.49	33.414	24.183	373.3	0.075	5.72	104.6	1.6	0.28	0.0	0.00	0.20	0.07	20	218
30	17.41	17.41	33.414	24.202	371.8	0.112	5.72	104.4	1.6	0.28	0.0	0.00	0.22	0.08	30	217
40	17.01	17.00	33.408	24.293	363.5	0.149	5.83	105.6	1.7	0.28	0.0	0.00	0.22	0.08	40	216
49	14.31	14.30	33.275	24.792	316.0	0.179	5.87	100.7	2.8	0.47	1.6	0.16	0.51	0.42	49	215
50 ISL	14.16	14.15	33.273	24.822	313.2	0.182	5.85	100.0	2.9	0.49	1.8	0.16	0.50	0.42	50	
60	13.37	13.36	33.310	25.012	295.3	0.213	5.59	94.1	4.3	0.62	4.0	0.21	0.30	0.27	60	214
70	13.13	13.12	33.408	25.136	283.7	0.242	5.33	89.3	5.7	0.70	5.4	0.18	0.23	0.25	70	213
75 ISL	12.84	12.83	33.437	25.216	276.2	0.256	5.17	86.1	6.7	0.77	6.7	0.13	0.19	0.22	75	
85	12.16	12.15	33.486	25.386	260.2	0.283	4.84	79.5	8.9	0.93	9.7	0.03	0.11	0.15	85	212
100	11.38	11.37	33.575	25.600	240.1	0.320	4.36	70.4	12.5	1.15	13.2	0.02	0.08	0.12	100	211
119	10.37	10.36	33.725	25.896	212.2	0.363	3.62	57.3	19.3	1.53	19.1	0.01	0.02	0.05	120	210
125 ISL	10.34	10.33	33.765	25.933	208.9	0.376	3.46	54.7	20.3	1.59	19.9	0.01	0.02	0.05	126	
138	10.27	10.25	33.812	25.982	204.5	0.403	3.22	50.9	21.9	1.68	20.9	0.01	0.02	0.04	139	209
150 ISL	10.03	10.01	33.853	26.055	197.8	0.427	3.12	49.0	23.5	1.75	22.0	0.01	0.02	0.04	151	
169	9.60	9.58	33.921	26.180	186.2	0.463	3.00	46.7	26.4	1.87	23.8	0.01	0.01	0.03	170	208
199	9.21	9.19	34.074	26.363	169.3	0.516	2.45	37.9	32.3	2.10	26.5	0.01	0.01	0.03	200	207
200 ISL	9.20	9.18	34.077	26.367	169.0	0.518	2.44	37.7	32.5	2.11	26.6	0.01			201	
228	8.87	8.85	34.143	26.472	159.5	0.564	2.12	32.5	36.7	2.25	28.2	0.01			229	206
250 ISL	8.80	8.77	34.190	26.520	155.3	0.599	1.85	28.3	38.9	2.34	29.1	0.01			251	
268	8.77	8.74	34.225	26.552	152.6	0.626	1.63	25.0	40.7	2.42	29.7	0.01			270	205
300 ISL	8.59	8.56	34.282	26.626	146.2	0.674	1.19	18.2	45.4	2.60	31.3	0.00			302	
318	8.43	8.40	34.302	26.666	142.6	0.700	0.98	14.9	48.4	2.70	32.3	0.00			320	204
377	7.40	7.36	34.268	26.792	131.0	0.781	0.75	11.1	59.2	2.88	35.6	0.00			379	203
400 ISL	7.18	7.14	34.275	26.828	127.8	0.811	0.68	10.0	62.2	2.94	36.3	0.00			403	
436	6.92	6.88	34.290	26.876	123.6	0.856	0.58	8.5	66.2	3.02	37.2	0.00			439	202
500 ISL	6.37	6.32	34.283	26.945	117.5	0.933	0.48	7.0	73.9	3.09	39.0	0.00			503	
516	6.23	6.18	34.282	26.962	115.9	0.952	0.46	6.6	75.8	3.11	39.5	0.00			519	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 26.0 N	119 43.0 W	19/10/96	0155	UTC	1339 m	340 21 kn		1014.6 mb	17.9 c	16.1 c			7/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.42	18.42	33.531	24.045	385.8	0.004	5.57	103.8	1.6	0.29	0.0	0.00	0.17	0.05	1	224
5	18.44	18.44	33.532	24.041	386.3	0.019	5.57	103.8	1.6	0.29	0.0	0.00	0.16	0.05	5	223
8	18.40	18.40	33.529	24.049	385.7	0.031	5.60	104.3	1.6	0.29	0.0	0.00	0.16	0.05	8	222
10	18.35	18.35	33.512	24.048	385.8	0.039	5.60	104.2	1.6	0.29	0.0	0.00	0.18	0.05	10	221
14	17.93	17.93	33.481	24.128	378.4	0.054	5.64	104.1	1.6	0.29	0.0	0.00	0.19	0.07	14	220
17	17.80	17.80	33.471	24.152	376.2	0.065	5.66	104.2	1.6	0.30	0.0	0.00	0.19	0.07	17	219
20	17.14	17.14	33.384	24.243	367.6	0.076	5.79	105.1	1.5	0.31	0.0	0.00	0.23	0.09	20	218
23	17.05	17.05	33.379	24.260	366.0	0.087	5.80	105.1	1.5	0.32	0.0	0.00	0.24	0.10	23	217
25	16.71	16.71	33.351	24.319	360.5	0.095	5.85	105.3	1.5	0.33	0.0	0.00	0.26	0.13	25	216
28	16.22	16.22	33.318	24.406	352.3	0.105	5.92	105.5	1.5	0.34	0.0	0.00	0.34	0.17	28	215
31	15.88	15.88	33.293	24.464	346.8	0.116	5.96	105.5	1.6	0.35	0.0	0.00	0.42	0.25	31	214
35	14.91	14.90	33.230	24.629	331.2	0.129	5.93	102.9	2.0	0.42	0.4	0.12	0.84	0.53	35	213
38	14.91	14.90	33.240	24.637	330.5	0.139	5.90	102.4	2.0	0.43	0.5	0.15	0.84	0.54	38	212
41	14.87	14.86	33.244	24.649	329.5	0.149	5.91	102.5	2.0	0.43	0.5	0.16	0.87	0.55	41	211
43	14.57	14.56	33.231	24.703	324.3	0.156	5.83	100.5	2.2	0.47	0.9	0.28	0.77	0.53	43	210
46	14.47	14.46	33.221	24.716	323.1	0.165	5.79	99.6	2.3	0.49	1.2	0.35	0.72	0.53	46	209
49	14.36	14.35	33.221	24.740	321.0	0.175	5.78	99.2	2.4	0.50	1.3	0.37	0.68	0.51	49	208
52	13.88	13.87	33.304	24.904	305.4	0.184	5.66	96.2	3.6	0.57	2.5	0.31	0.44	0.39	52	207
56	13.65	13.64	33.329	24.970	299.2	0.197	5.58	94.4	4.1	0.61	3.3	0.25	0.40	0.36	56	206
60	13.30	13.29	33.351	25.058	290.9	0.208	5.47	91.9	4.7	0.66	4.3	0.18	0.29	0.30	60	205
65	13.18	13.17	33.370	25.097	287.3	0.223	5.41	90.7	4.9	0.68	4.8	0.13	0.26	0.27	65	204
70	12.60	12.59	33.436	25.262	271.7	0.237	5.09	84.3	7.0	0.84	7.6	0.07	0.19	0.22	70	203
85	11.67	11.66	33.541	25.520	247.4	0.276	4.47	72.7	11.2	1.11		0.03	0.09	0.16	85	202
1319	3.13	3.03	34.543	27.517	65.9		0.96	12.9	143.2	3.21	43.5	0.00			1331	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 25.3 N	119 57.9 W	18/10/96	1830	UTC	889 m	340	16 kn	330 04 06	1	1017.1 mb	17.3 C	16.6 C	23m 03		4/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	17.96	17.96	33.489	24.126	378.0	0.000	5.68	104.9	1.9	0.26	0.0	0.00	0.18	0.05	0	
2	17.96	17.96	33.489	24.126	378.1	0.008	5.68	104.9	1.9	0.26	0.0	0.00	0.18	0.05	2	224
4	17.96	17.96	33.489	24.126	378.2	0.015	5.62	103.8	1.9	0.26	0.0	0.00	0.17	0.06	4	223
6	17.96	17.96	33.489	24.126	378.2	0.023	5.62	103.8	1.9	0.26	0.0	0.00	0.17	0.05	6	222
10	17.95	17.95	33.492	24.131	377.9	0.038	5.65	104.3	1.8	0.26	0.0	0.00	0.17	0.06	10	221
15	17.92	17.92	33.487	24.135	377.7	0.057	5.62	103.7	1.8	0.27	0.0	0.00	0.18	0.05	15	220
20	17.68	17.68	33.456	24.169	374.6	0.076	5.65	103.7	1.8	0.28	0.0	0.00	0.19	0.06	20	
23	17.45	17.45	33.427	24.202	371.5	0.087	5.69	104.0	1.8	0.28	0.0	0.00	0.21	0.07	23	219
30	16.70	16.70	33.345	24.317	360.9	0.112	5.82	104.8	1.8	0.30	0.0	0.00	0.29	0.14	30	
31	16.54	16.54	33.329	24.341	358.5	0.116	5.84	104.8	1.8	0.31	0.0	0.00	0.30	0.15	31	218
39	14.55	14.54	33.141	24.637	330.4	0.143	5.97	102.8	2.1	0.39	0.4	0.08	1.00	0.63	39	217
48	12.98	12.97	33.026	24.870	308.4	0.172	5.79	96.5	3.6	0.55	2.5	0.26	0.60	0.45	48	216
50	12.72	12.71	33.032	24.925	303.2	0.178	5.72	94.8	4.0	0.60	3.3	0.21	0.52	0.40	50	
55	12.23	12.22	33.081	25.057	290.7	0.193	5.51	90.4	5.3	0.72	5.4	0.07	0.35	0.29	55	215
62	11.94	11.93	33.202	25.206	276.7	0.213	5.21	85.0	7.4	0.86	8.0	0.03	0.21	0.21	62	214
75	11.29	11.28	33.477	25.540	245.2	0.247	4.58	73.8	12.1	1.13	12.9	0.02	0.08	0.10	75	
76	11.24	11.23	33.496	25.565	243.0	0.249	4.53	72.9	12.4	1.15	13.2	0.02	0.08	0.09	76	213
88	10.72	10.71	33.617	25.750	225.4	0.278	4.17	66.4	15.1	1.27	15.5	0.02	0.05	0.07	88	212
100	10.42	10.41	33.648	25.827	218.4	0.304	4.05	64.1	16.5	1.34	16.7	0.02	0.04	0.06	100	
104	10.32	10.31	33.652	25.848	216.5	0.313	4.03	63.7	17.0	1.36	17.1	0.02	0.04	0.06	104	211
120	9.64	9.63	33.733	26.025	199.8	0.346	3.75	58.4	21.2	1.56	20.1	0.01	0.01	0.04	121	210
125	9.48	9.47	33.758	26.071	195.6	0.356	3.67	56.9	22.3	1.61	20.9	0.01	0.01	0.03	126	
140	9.07	9.05	33.827	26.191	184.3	0.385	3.47	53.4	25.4	1.74	22.9	0.01	0.01	0.02	141	209
150	8.86	8.84	33.870	26.258	178.1	0.403	3.35	51.3	27.5	1.81	24.0	0.01	0.01	0.02	151	
170	8.49	8.47	33.938	26.369	167.9	0.437	3.17	48.2	31.3	1.93	25.6	0.00	0.00	0.02	171	208
198	7.98	7.96	33.983	26.481	157.6	0.483	3.06	46.0	35.7	2.01	27.1	0.00	0.00	0.02	199	207
200	7.96	7.94	33.987	26.487	157.0	0.486	3.03	45.5	36.1	2.02	27.3	0.00	0.00	0.02	201	
228	7.75	7.73	34.034	26.555	151.0	0.529	2.54	38.0	41.3	2.21	29.6	0.00	0.00	0.02	229	206
250	7.56	7.54	34.054	26.599	147.2	0.562	2.31	34.4	44.4	2.30	30.8	0.00	0.00	0.02	251	
268	7.42	7.39	34.071	26.632	144.2	0.588	2.12	31.5	47.0	2.38	31.7	0.00	0.00	0.02	270	205
300	7.28	7.25	34.135	26.703	138.0	0.633	1.55	22.9	53.1	2.60	33.7	0.00	0.00	0.02	302	
317	7.20	7.17	34.169	26.741	134.6	0.656	1.25	18.5	56.5	2.71	34.7	0.00	0.00	0.02	319	204
377	6.68	6.65	34.218	26.851	124.8	0.734	0.78	11.4	66.4	2.93	37.4	0.00	0.00	0.02	379	203
400	6.54	6.50	34.236	26.884	121.9	0.763	0.67	9.7	69.1	2.99	38.0	0.00	0.00	0.02	403	
437	6.35	6.31	34.261	26.929	118.0	0.807	0.53	7.7	73.1	3.06	38.8	0.00	0.00	0.02	440	202
500	5.95	5.91	34.296	27.008	111.0	0.879	0.37	5.3	80.5	3.15	40.3	0.00	0.00	0.02	503	
511	5.88	5.84	34.302	27.022	109.8	0.891	0.34	4.9	81.8	3.17	40.6	0.00	0.00	0.02	514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 5.1 N	120 38.3 W	18/10/96	1015	UTC	3823 m	330	19 kn			1017.5 mb	16.9 C	14.8 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	16.92	16.92	33.110	24.084	382.0	0.000	5.78	104.3	1.6	0.30	0.0	0.00	0.17	0.06	0	
1	16.91	16.91	33.112	24.088	381.7	0.004	5.77	104.1	1.6	0.30	0.0	0.00	0.17	0.07	1	224
1	16.92	16.92	33.110	24.084	382.1	0.004	5.78	104.3	1.6	0.30	0.0	0.00	0.17	0.06	1	223
4	16.92	16.92	33.112	24.085	382.0	0.015	5.78	104.3	1.6	0.30	0.0	0.00	0.17	0.07	4	222
7	16.92	16.92	33.111	24.085	382.2	0.027	5.79	104.5	1.6	0.30	0.0	0.00	0.17	0.06	7	221
10	16.91	16.91	33.114	24.090	381.8	0.038	5.81	104.9	1.6	0.31	0.0	0.00	0.18	0.08	10	220
16	16.85	16.85	33.117	24.106	380.5	0.061	5.79	104.4	1.6	0.31	0.0	0.00	0.18	0.07	16	219
20	16.54	16.54	33.138	24.194	372.2	0.076	5.85	104.8	1.6	0.31	0.0	0.00	0.24	0.10	20	218
30	15.66	15.66	33.118	24.378	354.9	0.112	5.99	105.5	1.7	0.33	0.0	0.00	0.37	0.19	30	
31	15.53	15.53	33.109	24.400	352.8	0.116	6.00	105.4	1.7	0.33	0.0	0.00	0.38	0.20	31	217
40	13.63	13.62	32.975	24.700	324.4	0.146	6.07	102.5	2.3	0.40	0.3	0.07	0.37	0.36	40	216
50	12.80	12.79	32.997	24.883	307.2	0.178	5.89	97.7	3.4	0.54	2.3	0.16	0.38	0.29	50	215
61	12.09	12.08	33.062	25.069	289.7	0.211	5.58	91.3	5.5	0.72	5.4	0.03	0.19	0.22	61	214
71	11.67	11.66	33.207	25.260	271.7	0.239	5.20	84.4	7.9	0.90	8.6	0.02	0.11	0.12	71	213
75	11.54	11.53	33.288	25.347	263.6	0.250	5.04	81.6	8.9	0.97	9.9	0.02	0.09	0.10	75	
86	11.06	11.05	33.508	25.605	239.2	0.277	4.54	72.8	12.6	1.20	13.8	0.01	0.06	0.06	86	212
100	9.93	9.92	33.700	25.951	206.5	0.309	3.66	57.3	20.2	1.58	19.9	0.01	0.02	0.04	100	211
120	9.70	9.69	33.944	26.180	185.2	0.348	2.42	37.8	28.4	2.04	25.6	0.01	0.01	0.06	121	210
125	9.62	9.61	33.985	26.226	180.9	0.357	2.27	35.4	29.8	2.11	26.4	0.01	0.01	0.06	126	
139	9.43	9.41	34.072	26.325	171.8	0.382	2.01	31.2	32.9	2.23	27.7	0.01	0.00	0.05	140	209
150	9.35	9.33	34.122	26.377	167.0	0.400	1.82	28.2	34.7	2.30	28.4	0.01	0.00	0.05	151	
169	9.28	9.26	34.181	26.435	161.9	0.431	1.58	24.5	36.9	2.39	29.2	0.01	0.00	0.05	170	208
200	9.16	9.14	34.228	26.492	157.2	0.481	1.38	21.3	39.3	2.49	30.2	0.01	0.00	0.03	201	207
228	8.78	8.76	34.244	26.565	150.6	0.524	1.25	19.2	43.3	2.57	31.3	0.01	0.00	0.03	229	206
250	8.50	8.47	34.247	26.611	146.5	0.557	1.16	17.7	45.8	2.62	32.0	0.01	0.00	0.02	251	
268	8.30	8.27	34.247	26.642	143.9	0.583	1.09	16.5	47.6	2.66	32.6	0.01	0.00	0.02	270	205
300	8.05	8.02	34.248	26.681	140.6	0.628	1.02	15.4	50.6	2.72	33.5	0.01	0.00	0.02	302	
317	7.93	7.90	34.249	26.699	139.1	0.652	0.98	14.7	52.3	2.75	33.9	0.01	0.00	0.02	319	204
378	7.36	7.32	34.261	26.792	131.0	0.734	0.75	11.1	59.8	2.88	35.8	0.01	0.00	0.02	380	203
400	7.24	7.20	34.265	26.812	129.3	0.763	0.71	10.5	61.6	2.91	36.2	0.01	0.00	0.02	403	
436	7.07	7.03	34.270	26.840	127.1	0.809	0.66	9.7	64.2	2.96	36.8	0.01	0.00	0.02	439	202
500	6.7															

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 45.1 N	121 18.8 W	18/10/96	0233 UTC	3689 m	340 18 kn			1018.1 mb	17.7 C	15.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.65	17.65	33.212	23.989	391.1	0.000	5.67	103.9	1.8	0.29	0.0	0.00	0.13	0.04	0	
2	17.66	17.66	33.213	23.987	391.3	0.008	5.67	103.9	1.8	0.30	0.0	0.00	0.13	0.04	2	224
2	17.65	17.65	33.212	23.989	391.2	0.008	5.67	103.9	1.8	0.29	0.0	0.00	0.13	0.04	2	223
6	17.66	17.66	33.212	23.987	391.5	0.023	5.68	104.1	1.8	0.29	0.0	0.00	0.13	0.04	6	222
10 ISL	17.66	17.66	33.212	23.987	391.6	0.039	5.67	103.9	1.8	0.29	0.0	0.00	0.14	0.04	10	
11	17.66	17.66	33.212	23.987	391.7	0.043	5.67	103.9	1.8	0.29	0.0	0.00	0.14	0.04	11	221
16	17.66	17.66	33.215	23.989	391.6	0.063	5.65	103.5	1.7	0.29	0.0	0.00	0.14	0.04	16	220
20	17.64	17.64	33.208	23.989	391.8	0.078	5.66	103.7	1.7	0.29	0.0	0.00	0.14	0.04	20	219
30 ISL	17.53	17.52	33.188	24.000	391.0	0.117	5.68	103.8	1.7	0.29	0.0	0.00	0.15	0.04	30	
31	17.51	17.50	33.185	24.003	390.8	0.121	5.68	103.8	1.7	0.29	0.0	0.00	0.15	0.04	31	218
45	17.25	17.24	33.129	24.022	389.4	0.176	5.74	104.3	1.6	0.30	0.0	0.00	0.20	0.07	45	217
50 ISL	16.73	16.72	33.149	24.160	376.4	0.195	5.88	105.8	1.7	0.30	0.0	0.00	0.21	0.08	50	
55	16.07	16.06	33.168	24.326	360.7	0.214	6.02	106.9	1.8	0.30	0.0	0.00	0.23	0.11	55	216
66	14.50	14.49	33.113	24.627	332.2	0.252	6.12	105.3	2.1	0.34	0.0	0.00	0.37	0.29	66	215
75	13.83	13.82	33.179	24.818	314.2	0.281	5.88	99.8	3.0	0.42	0.9	0.19	0.39	0.31	75	214
84	13.00	12.99	33.206	25.006	296.4	0.308	5.61	93.6	4.3	0.62	4.1	0.05	0.32	0.26	84	213
95	12.81	12.80	33.369	25.170	281.1	0.340	5.31	88.3	5.6	0.68	5.5	0.04	0.22	0.22	95	212
100 ISL	12.55	12.54	33.418	25.259	272.8	0.354	5.10	84.4	7.0	0.79	7.3	0.03	0.18	0.19	100	
110	11.90	11.89	33.497	25.444	255.3	0.380	4.65	75.9	10.3	1.03	11.3	0.02	0.10	0.13	110	211
125	11.01	10.99	33.612	25.696	231.5	0.417	4.12	66.1	14.7	1.26	15.1	0.01	0.05	0.08	126	210
144	10.25	10.23	33.684	25.885	213.8	0.459	3.78	59.6	18.7	1.48	18.7	0.01	0.03	0.05	145	209
150 ISL	9.99	9.97	33.714	25.953	207.5	0.472	3.70	58.0	20.2	1.54	19.8	0.01	0.03	0.04	151	
169	9.26	9.24	33.816	26.153	188.6	0.509	3.45	53.3	24.9	1.73	22.7	0.01	0.02	0.03	170	208
199	8.75	8.73	33.947	26.337	171.6	0.563	3.02	46.2	30.8	1.95	25.8	0.01	0.00	0.02	200	207
200 ISL	8.73	8.71	33.950	26.342	171.1	0.565	3.02	46.1	31.0	1.95	25.9	0.01	0.00	0.02	201	
229	8.13	8.11	34.015	26.485	157.9	0.613	2.85	43.0	36.8	2.08	27.8	0.01	0.00	0.02	230	206
250 ISL	7.94	7.91	34.071	26.557	151.3	0.645	2.41	36.2	41.4	2.25	29.6	0.00	0.00	0.02	251	
269	7.86	7.83	34.122	26.609	146.7	0.674	1.94	29.1	45.3	2.41	31.2	0.00	0.00	0.02	270	205
300 ISL	7.80	7.77	34.201	26.680	140.5	0.718	1.36	20.4	50.1	2.62	32.8	0.00	0.00	0.02	302	
319	7.77	7.74	34.242	26.717	137.3	0.744	1.08	16.2	52.6	2.72	33.5	0.00	0.00	0.02	321	204
378	7.40	7.36	34.304	26.820	128.4	0.823	0.59	8.8	60.5	2.93	35.7	0.00	0.00	0.02	380	203
400 ISL	7.21	7.17	34.314	26.855	125.3	0.851	0.49	7.2	63.6	2.99	36.4	0.00	0.00	0.02	402	
437	6.88	6.84	34.326	26.910	120.4	0.896	0.38	5.6	68.6	3.07	37.6	0.00	0.00	0.01	440	202
500 ISL	6.45	6.40	34.348	26.985	113.8	0.970	0.28	4.1	75.3	3.15	39.2	0.00	0.00	0.01	503	
514	6.35	6.30	34.353	27.003	112.3	0.986	0.26	3.8	76.8	3.17	39.5	0.00	0.00	0.01	517	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 45.9 N	121 19.4 W	18/10/96	0458 UTC	3810 m												
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	17.65	17.65	33.220	23.995	390.5	0.004	5.65	103.5	1.5	0.31	0.0	0.00	0.13	0.04	1	224
5	17.66	17.66	33.220	23.993	390.9	0.020	5.66	103.7	1.4	0.30	0.0	0.00	0.13	0.04	5	223
8	17.66	17.66	33.220	23.993	391.0	0.031	5.66	103.7	1.4	0.30	0.0	0.00	0.13	0.04	8	222
16	17.66	17.66	33.221	23.994	391.2	0.063	5.66	103.7	1.4	0.30	0.0	0.00	0.13	0.04	16	221
19	17.66	17.66	33.220	23.993	391.3	0.074	5.66	103.7	1.4	0.30	0.0	0.00	0.13	0.04	19	220
22	17.66	17.66	33.220	23.993	391.4	0.086	5.66	103.7	1.4	0.30	0.0	0.00	0.13	0.04	22	219
26	17.61	17.61	33.216	24.003	390.7	0.102	5.67	103.8	1.4	0.30	0.0	0.00	0.14	0.05	26	218
28	17.65	17.65	33.208	23.987	392.2	0.109	5.66	103.7	1.4	0.30	0.0	0.00	0.14	0.05	28	217
33	17.60	17.59	33.201	23.994	391.8	0.129	5.67	103.8	1.4	0.31	0.0	0.00	0.14	0.04	33	216
36	17.45	17.44	33.179	24.013	390.0	0.141	5.69	103.8	1.3	0.31	0.0	0.00	0.15	0.05	36	215
40	17.29	17.28	33.174	24.047	386.9	0.156	5.73	104.2	1.3	0.31	0.0	0.00	0.17	0.06	40	214
44	16.37	16.36	33.194	24.277	365.0	0.171	5.98	106.8	1.5	0.31	0.0	0.00	0.22	0.11	44	213
49	15.48	15.47	33.170	24.459	347.8	0.189	6.06	106.4	1.7	0.33	0.0	0.00	0.25	0.18	49	212
52	14.89	14.88	33.156	24.577	336.6	0.199	6.06	105.1	1.9	0.33	0.0	0.00	0.30	0.24	52	211
56	14.63	14.62	33.137	24.618	332.8	0.213	6.05	104.4	2.0	0.34	0.0	0.00	0.32	0.28	56	210
60	13.95	13.94	33.161	24.779	317.5	0.226	5.98	101.7	2.2	0.39	0.3	0.09	0.42	0.33	60	209
65	13.79	13.78	33.161	24.812	314.5	0.242	5.87	99.5	2.7	0.45	1.1	0.30	0.35	0.31	65	208
69	13.62	13.61	33.186	24.866	309.4	0.254	5.80	98.0	3.0	0.47	1.5	0.29	0.35	0.31	69	207
72	13.39	13.38	33.206	24.928	303.6	0.263	5.71	96.0	3.4	0.52	2.2	0.23	0.33	0.30	72	206
80	12.85	12.84	33.260	25.077	289.5	0.287	5.56	92.5	4.4	0.62	4.1	0.09	0.28	0.25	80	205
90	12.34	12.33	33.374	25.265	271.9	0.315	5.23	86.1	6.6	0.76	6.6	0.03	0.18	0.17	90	204
100	11.99	11.98	33.460	25.398	259.4	0.342	4.86	79.5	8.5	0.92	9.4	0.03	0.12	0.16	100	203
110	11.72	11.71	33.524	25.498	250.1	0.367	4.55	74.0	10.8	1.06		0.03	0.09	0.11	110	202
125	11.07	11.05	33.610	25.684	232.7	0.403	4.11	66.0	14.4	1.26		0.02	0.05	0.08	126	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 25.2 N	121 59.7 W	17/10/96	1744	UTC	3877 m	350	17 kn	360 06 08 0		1019.9 mb	19.5 c	16.6 c	32m 01		0/8	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.43	18.43	33.180	23.774	411.6	0.000	5.56	103.4	1.8	0.28	0.1	0.00	0.10	0.03	0	
2 A	18.43	18.43	33.180	23.774	411.7	0.008	5.56	103.4	1.8	0.28	0.1	0.00	0.10	0.03	2	223
3	18.43	18.43	33.180	23.774	411.7	0.012	5.55	103.2	1.9	0.28	0.0	0.00	0.09	0.03	3	224
5	18.42	18.42	33.180	23.777	411.5	0.021	5.56	103.4	1.8	0.28	0.1	0.00	0.10	0.03	5	222
10	18.42	18.42	33.180	23.777	411.7	0.041	5.57	103.6	1.8	0.28	0.1	0.00	0.10	0.03	10	221
20 ISL	18.40	18.40	33.180	23.782	411.5	0.082	5.56	103.3	1.8	0.28	0.1	0.00	0.10	0.03	20	
21 A	18.40	18.40	33.179	23.782	411.6	0.086	5.56	103.3	1.8	0.28	0.1	0.00	0.10	0.03	21	220
30 ISL	18.34	18.33	33.178	23.796	410.5	0.123	5.57	103.4	1.8	0.28	0.1	0.00	0.10	0.03	30	
31	18.33	18.32	33.178	23.799	410.3	0.128	5.57	103.4	1.8	0.28	0.1	0.00	0.10	0.03	31	219
43 A	17.65	17.64	33.137	23.933	397.9	0.176	5.80	106.2	1.8	0.29	0.0	0.00	0.15	0.06	43	218
50 ISL	16.83	16.82	33.127	24.120	380.3	0.203	5.94	107.0	1.8	0.30	0.0	0.00	0.18	0.09	50	
54	16.32	16.31	33.127	24.237	369.1	0.218	6.01	107.2	1.9	0.30	0.0	0.00	0.19	0.10	54	217
65 A	15.15	15.14	33.140	24.509	343.5	0.257	6.04	105.3	2.2	0.30	0.0	0.00	0.19	0.10	65	216
75 ISL	14.84	14.83	33.146	24.581	336.9	0.291	6.05	104.8	2.3	0.31	0.0	0.00	0.22	0.14	75	
76	14.81	14.80	33.144	24.585	336.5	0.295	6.05	104.7	2.3	0.31	0.0	0.00	0.22	0.14	76	215
87 A	13.45	13.44	33.075	24.815	314.7	0.331	5.91	99.5	3.0	0.45	1.0	0.15	0.25	0.16	87	214
95	13.34	13.33	33.308	25.018	295.7	0.355	5.64	94.8	4.1	0.50	2.4	0.10	0.23	0.18	95	213
100 ISL	13.18	13.17	33.340	25.075	290.4	0.370	5.59	93.7	4.2	0.51	2.6	0.08	0.22	0.18	100	
105	12.93	12.92	33.346	25.129	285.3	0.384	5.55	92.5	4.5	0.54	3.0	0.07	0.22	0.18	105	212
114	12.26	12.25	33.438	25.330	266.3	0.409	5.24	86.2	6.6	0.68	5.8	0.03	0.12	0.15	114	211
123 A	11.73	11.71	33.512	25.487	251.5	0.432	4.99	81.2	8.6	0.83	8.6	0.01	0.08	0.10	123	210
125 ISL	11.61	11.59	33.524	25.519	248.5	0.437	4.93	80.0	9.2	0.87	9.3	0.01	0.07	0.09	126	
138	10.83	10.81	33.590	25.711	230.3	0.468	4.54	72.5	12.9	1.13	13.5	0.01	0.04	0.07	139	209
150 ISL	10.26	10.24	33.666	25.870	215.4	0.495	4.34	68.5	15.6	1.27	16.0	0.01	0.02	0.04	151	
164	9.69	9.67	33.753	26.033	200.0	0.524	4.19	65.3	18.7	1.39	18.1	0.01	0.01	0.02	165	208
193	8.62	8.60	33.891	26.313	173.7	0.578	3.84	58.5	26.6	1.69	22.7	0.00	0.00	0.02	194	207
200 ISL	8.46	8.44	33.910	26.352	170.0	0.590	3.75	56.9	28.1	1.74	23.5	0.00	0.00	0.02	201	
229	7.99	7.97	33.959	26.461	160.0	0.638	3.37	50.6	33.7	1.91	26.1	0.00	0.00	0.02	230	206
250 ISL	7.67	7.65	33.986	26.530	153.8	0.671	3.09	46.1	38.1	2.04	27.8	0.00	0.00	0.02	251	
268	7.43	7.40	34.003	26.577	149.4	0.698	2.85	42.3	41.7	2.14	29.2	0.00	0.00	0.02	269	205
300 ISL	7.10	7.07	34.025	26.641	143.7	0.745	2.49	36.7	47.2	2.30	31.4	0.00	0.00	0.02	302	
319	6.93	6.90	34.035	26.672	140.9	0.772	2.28	33.4	50.4	2.39	32.6	0.00	0.00	0.02	321	204
376	6.32	6.29	34.064	26.777	131.4	0.850	1.63	23.6	61.7	2.66	36.1	0.00	0.00	0.02	378	203
400 ISL	6.14	6.10	34.083	26.815	128.0	0.881	1.39	20.0	65.9	2.76	37.3	0.00	0.00	0.02	402	
437	5.91	5.87	34.115	26.870	123.2	0.928	1.07	15.3	71.8	2.90	38.9	0.00	0.00	0.02	440	202
500 ISL	5.53	5.49	34.164	26.955	115.5	1.003	0.74	10.5	81.1	3.06	40.7	0.00	0.00	0.02	503	
512	5.46	5.42	34.173	26.971	114.1	1.017	0.68	9.6	82.9	3.09	41.0	0.00	0.00	0.02	515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 5.1 N	122 39.6 W	17/10/96	1058	UTC	4017 m	350	26 kn			1019.6 mb	17.4 c	15.0 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.35	18.35	33.201	23.810	408.2	0.000	5.59	103.8	1.7	0.28	0.0	0.00	0.12	0.03	0	
2	18.35	18.35	33.201	23.810	408.2	0.008	5.59	103.8	1.9	0.28	0.1	0.00	0.13	0.03	2	224
2	18.35	18.35	33.201	23.810	408.2	0.008	5.71	106.0	1.7	0.28	0.0	0.00	0.12	0.03	2	223
6	18.36	18.36	33.200	23.807	408.7	0.025	5.61	104.2	1.7	0.28	0.0	0.00	0.11	0.03	6	222
10 ISL	18.37	18.37	33.200	23.805	409.0	0.041	5.59	103.8	1.7	0.28	0.0	0.00	0.11	0.03	10	
11	18.37	18.37	33.200	23.805	409.1	0.045	5.59	103.8	1.7	0.28	0.0	0.00	0.11	0.03	11	221
16	18.36	18.36	33.200	23.807	409.0	0.065	5.60	104.0	1.7	0.28	0.0	0.00	0.11	0.03	16	220
20 ISL	18.37	18.37	33.199	23.804	409.4	0.082	5.59	103.8	1.7	0.28	0.0	0.00	0.12	0.03	20	
21	18.37	18.37	33.199	23.804	409.4	0.086	5.59	103.8	1.7	0.28	0.0	0.00	0.12	0.03	21	219
30 ISL	18.37	18.36	33.199	23.805	409.7	0.123	5.61	104.2	1.7	0.27	0.0	0.00	0.11	0.03	30	
31	18.37	18.36	33.199	23.805	409.7	0.127	5.61	104.2	1.7	0.27	0.0	0.00	0.11	0.03	31	218
46	17.35	17.34	33.240	24.084	383.6	0.186	5.89	107.3	1.9	0.27	0.0	0.00	0.19	0.08	46	217
50 ISL	16.69	16.68	33.192	24.202	372.4	0.201	5.97	107.3	2.0	0.28	0.0	0.00	0.20	0.11	50	
60	15.05	15.04	33.078	24.482	345.8	0.237	6.11	106.2	2.1	0.32	0.0	0.00	0.24	0.20	60	216
75	14.13	14.12	33.058	24.663	329.0	0.288	6.08	103.7	2.4	0.34	0.1	0.01	0.41	0.30	75	215
87	13.23	13.22	32.975	24.782	317.9	0.327	6.00	100.4	2.7	0.46	1.0	0.13	0.39	0.30	87	214
96	12.79	12.78	33.027	24.909	305.9	0.355	5.82	96.6	3.5	0.54	2.2	0.14	0.27	0.26	96	213
100 ISL	12.51	12.50	33.069	24.996	297.7	0.367	5.72	94.4	4.2	0.58	2.9	0.09	0.24	0.23	100	
105	12.22	12.21	33.159	25.121	285.9	0.382	5.55	91.1	5.4	0.67	4.6	0.03	0.20	0.20	105	212
113	12.15	12.14	33.429	25.344	264.9	0.404	5.06	83.0	7.8	0.99	10.3	0.02	0.13	0.15	113	211
123	11.15	11.13	33.445	25.541	246.2	0.429	4.70	75.5	11.8	1.16	13.3	0.01	0.06	0.08	123	210
125 ISL	11.01	10.99	33.455	25.574	243.1	0.434	4.64	74.3	12.4	1.18	13.8	0.01	0.05	0.08	126	
139	10.25	10.23	33.550	25.781	223.6	0.467	4.29	67.6	16.1	1.33	16.5	0.01	0.03	0.06	140	209
150 ISL	9.84	9.82	33.642	25.922	210.3	0.491	4.02	62.8	19.1	1.47	18.8	0.01	0.01	0.05	151	
164	9.44	9.42	33.752	26.074	196.1	0.519	3.72	57.7	22.7	1.64	21.4	0.00	0.00	0.03	165	208
194	8.70	8.68	33.884	26.295	175.5	0.575	3.29	50.2	29.1	1.88	25.0	0.00	0.00	0.03	195	207
200 ISL	8.59	8.57	33.905	26.328	172.4	0.585	3.21	48.9	30.3	1.92	25.6	0.00	0.00	0.02	201	
229	8.15	8.13	33.980	26.454	160.8	0.633	2.91	43.9	35.3	2.07	27.6	0.00	0.00	0.02	230	206
250 ISL	7.83	7.81	34.000	26.517	155.0	0.667	2.89	43.3	38.1	2.11	28.3	0.00	0.00	0.02	251	
268	7.56	7.53	34.007	26.562	150.9	0.694	2.88	42.8	40.6	2.15	28.9	0.00	0.00	0.02	269	205
300 ISL	7.11	7.08	34.026	26.641	143.8	0.741	2.51	37.0	47.0	2.32	31.2					

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
30 45.1 N	123 19.9 W	17/10/96	0412 UTC	4037 m	360 21 kn			1020.8 mb	17.7 C	15.1 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.93	18.93	33.375	23.798	409.3	0.000	5.51	103.6	2.0	0.25	0.0	0.00	0.10	0.03	0	
1	18.92	18.92	33.375	23.801	409.1	0.004	5.50	103.3	2.0	0.25	0.0	0.00	0.10	0.03	1	224
2	18.93	18.93	33.375	23.799	409.4	0.008	5.51	103.6	2.0	0.25	0.0	0.00	0.10	0.03	2	223
6	18.93	18.93	33.375	23.799	409.5	0.025	5.53	103.9	2.0	0.25	0.0	0.00	0.10	0.03	6	222
10	18.93	18.93	33.375	23.799	409.6	0.041	5.51	103.6	2.0	0.25	0.0	0.00	0.10	0.02	10	221
16	18.92	18.92	33.375	23.802	409.5	0.066	5.50	103.3	2.0	0.25	0.0	0.00	0.09	0.02	16	220
20	18.92	18.92	33.375	23.802	409.7	0.082	5.50	103.3	2.0	0.25	0.0	0.00	0.09	0.02	20	219
30 ISL	18.93	18.92	33.375	23.800	410.2	0.123	5.51	103.5	2.0	0.25	0.0	0.00	0.09	0.03	30	
31	18.93	18.92	33.375	23.800	410.3	0.127	5.51	103.5	2.0	0.25	0.0	0.00	0.09	0.03	31	218
46	18.93	18.92	33.376	23.801	410.7	0.189	5.49	103.2	2.0	0.25	0.0	0.00	0.09	0.03	46	217
50 ISL	18.64	18.63	33.385	23.881	403.2	0.205	5.58	104.3	2.0	0.25	0.0	0.00	0.11	0.04	50	
56	17.87	17.86	33.363	24.054	386.9	0.229	5.75	105.9	2.1	0.24	0.0	0.00	0.16	0.06	56	216
65	15.76	15.75	33.177	24.403	353.7	0.262	6.05	106.8	2.2	0.28	0.0	0.00	0.24	0.18	65	215
75	14.45	14.44	33.158	24.673	328.1	0.296	5.98	102.8	2.4	0.33	0.1	0.04	0.31	0.27	75	214
85	13.71	13.70	33.178	24.842	312.2	0.328	5.81	98.4	3.1	0.45	1.2	0.15	0.29	0.28	85	213
95	13.08	13.07	33.275	25.044	293.1	0.358	5.59	93.5	4.4	0.56	3.2	0.04	0.22	0.23	95	212
100 ISL	12.76	12.75	33.331	25.151	283.1	0.373	5.48	91.0	5.1	0.61	4.2	0.03	0.18	0.20	100	
111	12.00	11.99	33.438	25.379	261.5	0.403	5.17	84.6	7.3	0.75	7.0	0.02	0.10	0.13	111	211
125	10.79	10.77	33.505	25.652	235.7	0.437	4.61	73.5	12.5	1.11	12.9	0.01	0.05	0.08	125	210
144	9.84	9.82	33.655	25.932	209.3	0.480	4.05	63.3	18.7	1.44	18.5	0.01	0.02	0.03	144	209
150 ISL	9.62	9.60	33.695	25.999	202.9	0.492	3.85	59.9	20.7	1.54	20.0	0.01	0.01	0.03	151	
170	9.08	9.06	33.808	26.175	186.5	0.531	3.46	53.2	25.6	1.76	23.3	0.01	0.00	0.03	171	208
199	8.65	8.63	33.939	26.346	170.7	0.583	4.24	64.6	25.6	1.55	21.3	0.00	0.00	0.02	200	207
200 ISL	8.63	8.61	33.941	26.350	170.3	0.584	4.24	64.6	25.8	1.55	21.4	0.00	0.00	0.02	201	
229	7.95	7.93	33.965	26.472	159.0	0.632	3.90	58.5	31.8	1.75	24.2	0.00	0.00	0.01	230	206
250 ISL	7.59	7.57	33.974	26.531	153.5	0.665	3.62	53.9	36.1	1.89	26.1	0.00	0.00	0.01	251	
269	7.31	7.28	33.981	26.577	149.4	0.694	3.32	49.1	40.2	2.02	27.8	0.00	0.00	0.01	270	205
300 ISL	6.89	6.86	34.009	26.657	142.0	0.739	2.61	38.2	48.5	2.29	31.3	0.00	0.00	0.01	302	
318	6.69	6.66	34.029	26.700	138.1	0.764	2.19	31.9	53.2	2.45	33.3	0.00	0.00	0.01	320	204
378	6.36	6.33	34.108	26.806	128.7	0.844	1.30	18.8	64.1	2.76	37.0	0.00	0.00	0.01	380	203
400 ISL	6.24	6.20	34.133	26.842	125.6	0.872	1.09	15.7	67.7	2.85	38.0	0.00	0.00	0.01	402	
438	6.00	5.96	34.168	26.900	120.4	0.919	0.82	11.8	73.8	2.98	39.4	0.00	0.00	0.01	441	202
500 ISL	5.48	5.44	34.195	26.986	112.6	0.991	0.62	8.8	83.5	3.11	41.1	0.00	0.00	0.01	503	
517	5.34	5.30	34.203	27.009	110.4	1.010	0.57	8.1	86.1	3.14	41.6	0.00	0.00	0.01	520	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
30 24.9 N	123 59.8 W	15/10/96	1756 UTC	4248 m	360 28 kn	350 08 07	1	1021.5 mb	19.8 C	18.0 C	28m 01		7/8	CU		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.88	18.88	33.270	23.731	415.7	0.000	5.53	103.8	2.0	0.26	0.0	0.00	0.11	0.04	0	
2 A	18.88	18.88	33.270	23.731	415.8	0.008	5.53	103.8	2.0	0.26	0.0	0.00	0.11	0.04	2	223
3	18.88	18.88	33.270	23.731	415.8	0.012	5.53	103.8	2.0	0.26	0.0	0.00	0.11	0.03	3	224
9	18.87	18.87	33.271	23.734	415.7	0.037	5.52	103.6	1.9	0.26	0.0	0.00	0.12	0.03	9	222
10 ISL	18.87	18.87	33.271	23.734	415.7	0.042	5.53	103.7	1.9	0.26	0.0	0.00	0.12	0.03	10	
18 A	18.87	18.87	33.271	23.735	416.0	0.075	5.58	104.7	1.9	0.26	0.0	0.00	0.11	0.04	18	221
20 ISL	18.87	18.87	33.271	23.735	416.0	0.083	5.57	104.5	1.9	0.26	0.0	0.00	0.11	0.04	20	
28	18.86	18.86	33.270	23.737	416.1	0.116	5.52	103.5	1.9	0.26	0.0	0.00	0.11	0.03	28	220
30 ISL	18.86	18.85	33.270	23.737	416.2	0.125	5.52	103.5	1.9	0.26	0.0	0.00	0.11	0.03	30	
38 A	18.85	18.84	33.270	23.740	416.2	0.158	5.53	103.7	1.8	0.26	0.0	0.00	0.11	0.04	38	219
48	18.82	18.81	33.271	23.749	415.7	0.200	5.53	103.6	1.8	0.26	0.0	0.00	0.12	0.04	48	218
50 ISL	18.75	18.74	33.291	23.782	412.7	0.208	5.56	104.1	1.8	0.25	0.0	0.00	0.13	0.04	50	
57 A	18.18	18.17	33.330	23.953	396.5	0.236	5.72	105.9	2.0	0.24	0.0	0.00	0.17	0.07	57	217
67	16.30	16.29	33.167	24.273	366.1	0.274	5.99	106.8	2.0	0.28	0.0	0.00	0.20	0.13	67	216
75 ISL	15.78	15.77	33.148	24.376	356.5	0.303	6.01	106.1	2.1	0.30	0.0	0.00	0.20	0.15	75	
77 A	15.69	15.68	33.150	24.398	354.5	0.310	6.01	105.9	2.1	0.30	0.0	0.00	0.20	0.15	77	215
87	14.63	14.62	33.145	24.625	333.0	0.345	6.01	103.7	2.4	0.32	0.0	0.02	0.21	0.16	87	214
97	13.91	13.90	33.165	24.791	317.4	0.377	5.90	100.3	2.8	0.39	0.5	0.14	0.21	0.20	97	213
100 ISL	13.68	13.67	33.190	24.858	311.1	0.387	5.83	98.6	3.1	0.44	1.2	0.12	0.21	0.20	100	
107 A	13.15	13.14	33.266	25.024	295.4	0.408	5.62	94.1	4.3	0.57	3.4	0.04	0.18	0.21	107	212
115	12.55	12.53	33.367	25.219	276.9	0.431	5.36	88.7	6.2	0.71	6.0	0.02	0.11	0.16	115	211
125	12.09	12.07	33.445	25.368	262.9	0.458	5.15	84.4	7.4	0.76	7.2	0.02	0.09	0.13	125	210
139	11.06	11.04	33.544	25.635	237.7	0.493	4.69	75.2	11.7	1.03	12.0	0.01	0.04	0.08	140	209
150 ISL	10.46	10.44	33.634	25.810	221.1	0.518	4.37	69.2	15.1	1.22	15.2	0.01	0.02	0.06	151	
164	9.87	9.85	33.732	25.987	204.4	0.548	4.08	63.8	18.9	1.41	18.4	0.01	0.01	0.04	165	208
193	8.99	8.97	33.792	26.177	186.7	0.605	4.01	61.6	23.5	1.58	21.3	0.01	0.00	0.03	194	207
200 ISL	8.88	8.86	33.823	26.219	182.8	0.618	4.05	62.0	24.3	1.58	21.5	0.01			201	
228	8.57	8.55	33.938	26.358	170.1	0.667	4.18	63.6	27.1	1.58	21.9	0.01			229	206
250 ISL	8.20	8.17	33.964	26.435	163.1	0.704	4.06	61.3	30.0	1.67	23.1	0.01			251	
268	7.88	7.85	33.968	26.485	158.4	0.733	3.88	58.1	32.9	1.77	24.5	0.01			269	205
300 ISL	7.40	7.37	33.978	26.562	151.3	0.782	3.43	50.8	39.3	1.97	27.4	0.00			302	
317	7.16	7.13	33.983	26.600	147.9	0.808	3.13	46.1	43.2	2.09	29.1	0.00			319	204
378	6.26	6.23	34.035	26.761	132.8	0.893	1.91	27.6	60.3	2.57	35.3	0.00			380	203
400 ISL	6.11	6.07	34.058	26.799	129.5	0.922	1.61	23.2	64.5	2.69	36.7	0.00			402	
437	5.95	5.91	34.100	26.853	124.8	0.969	1.22	17.5	70.4	2.85	38.4	0.00	</			

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
30 25.1 N	123 59.9 W	15/10/96	2110	UTC	4230 m	360 20 kn	360 08 07	1	1020.2 mb	19.9 C	18.2 C				5/8 CU	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.89	18.89	33.267	23.726	416.2	0.004	5.51	103.4	1.9	0.28	0.0	0.00	0.11	0.03	1	224
5	18.89	18.89	33.267	23.726	416.4	0.021	5.51	103.4	2.0	0.28	0.0	0.00	0.11	0.03	5	223
8	18.89	18.89	33.266	23.726	416.5	0.033	5.52	103.6	2.0	0.28	0.0	0.00	0.11	0.03	8	222
11	18.90	18.90	33.268	23.725	416.7	0.046	5.50	103.2	2.0	0.28	0.0	0.00	0.11	0.03	11	221
16	18.88	18.88	33.267	23.729	416.5	0.067	5.52	103.6	2.0	0.28	0.0	0.00	0.12	0.03	16	220
21	18.88	18.88	33.266	23.729	416.7	0.087	5.51	103.4	1.9	0.28	0.0	0.00	0.11	0.03	21	219
31	18.88	18.87	33.267	23.730	416.9	0.129	5.51	103.4	1.9	0.28	0.0	0.00	0.11	0.03	31	218
40	18.71	18.70	33.269	23.774	413.0	0.166	5.53	103.4	1.9	0.28	0.0	0.00	0.14	0.04	40	217
45	18.15	18.14	33.254	23.902	401.0	0.187	5.66	104.7	2.0	0.28	0.0	0.00	0.17	0.06	45	216
50	17.78	17.77	33.248	23.987	393.0	0.207	5.74	105.4	2.0	0.29	0.0	0.00	0.17	0.07	50	215
60	16.60	16.59	33.209	24.236	369.5	0.245	5.95	106.8	2.2	0.29	0.0	0.00	0.20	0.11	60	214
69	15.74	15.73	33.157	24.392	354.9	0.277	6.01	106.0	2.2	0.31	0.0	0.00	0.22	0.18	69	213
75	15.42	15.41	33.173	24.475	347.0	0.298	6.03	105.7	2.3	0.31	0.0	0.00	0.22	0.19	75	212
80	15.08	15.07	33.202	24.572	337.9	0.316	6.00	104.5	2.4	0.31	0.0	0.00	0.22	0.21	80	211
85	14.74	14.73	33.200	24.644	331.2	0.332	5.98	103.4	2.5	0.33	0.0	0.01	0.23	0.21	85	210
89	14.39	14.38	33.175	24.699	326.0	0.345	5.93	101.8	2.7	0.38	0.2	0.07	0.25	0.26	89	209
95	13.93	13.92	33.168	24.790	317.5	0.365	5.86	99.6	3.0	0.44	0.7	0.17	0.24	0.21	95	208
100	13.55	13.54	33.209	24.899	307.1	0.380	5.75	97.0	3.5	0.50	1.6	0.15	0.22	0.20	100	207
103	13.32	13.31	33.267	24.990	298.5	0.389	5.61	94.3	4.4	0.58	3.1	0.04	0.20	0.22	103	206
108	12.85	12.84	33.309	25.116	286.6	0.404	5.49	91.4	5.3	0.66	4.5	0.03	0.16	0.18	108	205
115	12.58	12.56	33.345	25.197	279.1	0.424	5.39	89.2	6.0	0.70	5.3	0.02	0.13	0.16	115	204
120	12.43	12.41	33.377	25.250	274.0	0.438	5.31	87.6	6.5	0.73	5.9	0.02	0.11	0.17	120	203
130	12.08	12.06	33.452	25.375	262.3	0.465	5.15	84.4	7.3	0.75	6.6	0.02	0.09	0.12	130	202
151	10.74	10.72	33.537	25.686	233.0	0.517	4.56	72.6	12.9	1.14		0.01	0.04	0.08	152	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
30 25.1 N	123 59.9 W	16/10/96	0143	UTC	4235 m	360 24 kn	350 08 07	1	1019.3 mb	19.0 C	17.9 C				3/8 CU	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.91	18.91	33.272	23.725	416.3	0.004	5.52	103.6	1.8	0.28	0.0	0.00	0.10	0.03	1	224
4	18.94	18.94	33.271	23.717	417.2	0.017	5.52	103.7	1.8	0.28	0.0	0.00	0.10	0.03	4	223
8	18.91	18.91	33.271	23.724	416.6	0.033	5.52	103.6	1.8	0.28	0.0	0.00	0.10	0.03	8	222
10	18.91	18.91	33.271	23.724	416.7	0.042	5.54	104.0	1.8	0.28	0.0	0.00	0.10	0.03	10	221
12	18.91	18.91	33.270	23.724	416.8	0.050	5.52	103.6	1.8	0.28	0.0	0.00	0.10	0.03	12	220
16	18.91	18.91	33.272	23.725	416.8	0.067	5.53	103.8	1.8	0.28	0.0	0.00	0.10	0.03	16	219
21	18.91	18.91	33.270	23.724	417.1	0.088	5.53	103.8	1.8	0.28	0.0	0.00	0.10	0.03	21	218
31	18.91	18.90	33.270	23.725	417.4	0.129	5.52	103.6	1.8	0.28	0.0	0.00	0.10	0.03	31	217
41	18.91	18.90	33.270	23.725	417.8	0.171	5.53	103.8	1.8	0.28	0.0	0.00	0.10	0.03	41	216
50	18.69	18.68	33.336	23.831	408.0	0.208	5.59	104.5	1.9	0.27	0.0	0.00	0.14	0.05	50	215
55	18.14	18.13	33.345	23.974	394.4	0.228	5.71	105.7	2.0	0.27	0.0	0.00	0.15	0.06	55	214
60	17.05	17.04	33.239	24.155	377.3	0.248	5.91	107.0	2.0	0.28	0.0	0.00	0.18	0.09	60	213
65	16.27	16.26	33.218	24.319	361.7	0.266	6.00	107.0	2.0	0.29	0.0	0.00	0.19	0.12	65	212
71	15.86	15.85	33.178	24.381	355.9	0.288	6.03	106.6	2.0	0.30	0.0	0.00	0.20	0.14	71	211
75	15.49	15.48	33.161	24.451	349.4	0.302	6.02	105.7	2.1	0.31	0.0	0.00	0.19	0.14	75	210
80	14.96	14.95	33.173	24.576	337.6	0.319	6.00	104.2	2.3	0.33	0.0	0.01	0.24	0.20	80	209
85	14.39	14.38	33.162	24.689	326.9	0.335	5.93	101.8	2.5	0.38	0.2	0.07	0.26	0.22	85	208
91	13.96	13.95	33.170	24.785	317.8	0.355	5.86	99.7	2.8	0.45	0.8	0.18	0.23	0.22	91	207
95	13.70	13.69	33.198	24.860	310.8	0.367	5.79	98.0	3.1	0.48	1.4	0.16	0.22	0.23	95	206
100	13.53	13.52	33.231	24.920	305.1	0.383	5.71	96.3	3.6	0.53	2.2	0.10	0.22	0.22	100	205
105	13.45	13.44	33.247	24.949	302.5	0.398	5.68	95.7	3.8	0.55	2.6	0.07	0.21	0.21	105	204
110	13.24	13.22	33.269	25.008	297.0	0.413	5.60	93.9	4.2	0.60	3.4	0.04	0.20	0.21	110	203
115	12.95	12.93	33.313	25.100	288.4	0.428	5.47	91.2	5.2	0.67	4.7	0.02	0.16	0.19	115	202
115	12.95	12.93	33.312	25.099	288.4	0.428	5.48	91.4	5.2	0.67	4.7	0.02	0.16	0.19	115	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
30 25.1 N	123 59.9 W	16/10/96	0542	UTC	4236 m	360 26 kn			1020.5 mb	18.9 C	17.1 C					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	18.86	18.86	33.261	23.729	416.0	0.008	5.51	103.3	1.8	0.28	0.0	0.00	0.10	0.03	2	224
4	18.86	18.86	33.261	23.729	416.0	0.017	5.52	103.5	1.8	0.28	0.0	0.00	0.10	0.03	4	223
7	18.87	18.87	33.261	23.727	416.4	0.029	5.52	103.6	1.8	0.28	0.0	0.00	0.10	0.03	7	222
10	18.86	18.86	33.261	23.729	416.2	0.042	5.52	103.5	1.8	0.28	0.0	0.00	0.10	0.03	10	221
13	18.86	18.86	33.260	23.729	416.4	0.054	5.52	103.5	1.8	0.28	0.0	0.00	0.10	0.03	13	220
15	18.86	18.86	33.260	23.729	416.5	0.062	5.51	103.3	1.8	0.28	0.0	0.00	0.10	0.03	15	219
20	18.86	18.86	33.262	23.731	416.5	0.083	5.52	103.5	1.8	0.28	0.0	0.00	0.10	0.03	20	218
31	18.87	18.86	33.264	23.730	416.9	0.129	5.51	103.4	1.8	0.28	0.0	0.00	0.10	0.03	31	217
40	18.87	18.86	33.264	23.730	417.2	0.167	5.51	103.4	1.8	0.28	0.0	0.00	0.10	0.03	40	216
50	18.43	18.42	33.365	23.918	399.7	0.207	5.64	105.0	2.0	0.26	0.0	0.00	0.14	0.05	50	215
56	18.15	18.14	33.344	23.971	394.8	0.231	5.71	105.7	2.0	0.26	0.0	0.00	0.15	0.06	56	214
61	16.94	16.93	33.270	24.204	372.6	0.250	5.90	106.6	2.0	0.27	0.0	0.00	0.21	0.10	61	213
65	16.24	16.23	33.186	24.301	363.4	0.265	5.99	106.7	2.0	0.29	0.0	0.00	0.18	0.11	65	212
70	15.92	15.91	33.175	24.365	357.4	0.283	6.02	106.6	2.1	0.30	0.0	0.00	0.18	0.12	70	211
75	15.60	15.59	33.162	24.427	351.7	0.301	6.03	106.1	2.1	0.31	0.0	0.00	0.20	0.13	75	210
79	15.22	15.21	33.150	24.502	344.6											

LATITUDE LONGITUDE DAY/MO/YR CAST TIME BOTTOM WIND SPEED WAVES WEA BAROMETER DRY WET SECCHI/FOREL CLD AMT TYPE
 30 25.1 N 123 59.9 W 16/10/96 0945 UTC 4244 m 360 23 kn 1019.9 mb 18.8 c 16.7 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	NO3 uM/L	NO2 uM/L	CHL-A ug/L	PHAE0 ug/L	PRES db	SAMP
1	18.87	18.87	33.283	23.743	414.6	0.004	5.55	104.1	1.8	0.28	0.0	0.00	0.09	0.03	1	224
5	18.88	18.88	33.280	23.739	415.2	0.021	5.54	104.0	1.8	0.28	0.0	0.00	0.09	0.03	5	223
11	18.88	18.88	33.280	23.739	415.3	0.046	5.54	104.0	1.8	0.28	0.0	0.00	0.09	0.03	11	222
15	18.88	18.88	33.279	23.738	415.6	0.062	5.57	104.5	1.8	0.28	0.0	0.00	0.10	0.03	15	221
31	18.88	18.87	33.281	23.741	415.9	0.129	5.52	103.6	1.8	0.28	0.0	0.00	0.09	0.03	31	220
36	18.93	18.92	33.305	23.747	415.5	0.150	5.52	103.7	1.8	0.27	0.0	0.00	0.10	0.02	36	219
37	18.59	18.58	33.293	23.822	408.3	0.154	5.55	103.6	1.8	0.28	0.0	0.00	0.11	0.04	37	218
40	18.36	18.35	33.226	23.828	407.8	0.166	5.58	103.6	1.6	0.29	0.0	0.00	0.13	0.04	40	217
43	18.28	18.27	33.218	23.842	406.6	0.178	5.65	104.8	1.5	0.29	0.0	0.00	0.15	0.06	43	216
45	17.62	17.61	33.179	23.973	394.2	0.186	5.70	104.3	1.5	0.30	0.0	0.00	0.18	0.07	45	215
50	16.87	16.86	33.150	24.128	379.5	0.206	5.96	107.5	1.7	0.30	0.0	0.00	0.23	0.15	50	214
55	16.45	16.44	33.213	24.274	365.7	0.224	6.00	107.4	2.0	0.28	0.0	0.00	0.24	0.17	55	213
60	16.03	16.02	33.292	24.430	350.9	0.242	6.01	106.7	2.2	0.26	0.0	0.00	0.23	0.15	60	212
65	15.59	15.58	33.246	24.494	345.0	0.259	6.04	106.3	2.2	0.28	0.0	0.00	0.23	0.15	65	211
70	14.98	14.97	33.148	24.552	339.5	0.277	6.01	104.4	2.2	0.32	0.0	0.00	0.19	0.14	70	210
75	14.86	14.85	33.143	24.574	337.6	0.293	6.04	104.7	2.3	0.34	0.0	0.00	0.21	0.16	75	209
80	14.73	14.72	33.145	24.604	334.9	0.310	6.00	103.7	2.3	0.34	0.0	0.01	0.21	0.16	80	208
85	14.57	14.56	33.196	24.677	328.0	0.327	5.98	103.0	2.5	0.34	0.1	0.03	0.23	0.20	85	207
90	13.99	13.98	33.188	24.792	317.1	0.343	5.86	99.8	2.9	0.43	0.9	0.14	0.21	0.25	90	206
95	13.42	13.41	33.228	24.940	303.1	0.359	5.76	97.0	3.5	0.52	2.2	0.10	0.18	0.21	95	205
100	13.07	13.06	33.285	25.054	292.3	0.373	5.61	93.8	4.4	0.59	3.6	0.03	0.18	0.22	100	204
104	12.82	12.81	33.317	25.128	285.4	0.385	5.52	91.8	5.1	0.64	4.5	0.02	0.14	0.17	104	203
115	12.39	12.37	33.364	25.248	274.1	0.416	5.34	88.0	6.4	0.74	6.2	0.02	0.11	0.13	115	202
127	12.03	12.01	33.413	25.355	264.2	0.448	5.24	85.8	7.3	0.78	7.2	0.01	0.09	0.11	127	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE LONGITUDE DAY/MO/YR CAST TIME BOTTOM WIND SPEED WAVES WEA BAROMETER DRY WET SECCHI/FOREL CLD AMT TYPE
 30 25.1 N 123 59.9 W 16/10/96 1336 UTC 4330 m 360 24 kn 1020.6 mb 18.7 c 16.3 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	NO3 uM/L	NO2 uM/L	CHL-A ug/L	PHAE0 ug/L	PRES db	SAMP
2	18.93	18.93	33.311	23.750	414.0	0.008	5.53	103.9	1.9	0.28	0.0	0.00	0.10	0.03	2	224
5	18.91	18.91	33.310	23.754	413.7	0.021	5.54	104.0	1.9	0.24	0.0	0.00	0.09	0.03	5	223
25	18.92	18.92	33.311	23.753	414.5	0.104	5.52	103.7	1.9	0.25	0.0	0.00	0.10	0.03	25	222
29	18.93	18.92	33.313	23.752	414.7	0.120	5.56	104.4	1.9	0.25	0.0	0.00	0.09	0.03	29	221
34	18.95	18.94	33.331	23.761	414.1	0.141	5.52	103.7	1.9	0.25	0.0	0.00	0.10	0.03	34	220
35	18.94	18.93	33.329	23.762	414.0	0.145	5.54	104.1	1.9	0.25	0.0	0.00	0.10	0.03	35	219
36	18.87	18.86	33.340	23.788	411.5	0.149	5.53	103.8	1.8	0.25	0.0	0.00	0.11	0.03	36	218
40	18.62	18.61	33.278	23.804	410.2	0.166	5.58	104.2	1.7	0.26	0.0	0.00	0.12	0.04	40	217
43	18.33	18.32	33.245	23.850	405.8	0.178	5.61	104.1	1.7	0.27	0.0	0.00	0.14	0.05	43	216
47	18.22	18.21	33.243	23.876	403.5	0.194	5.64	104.5	1.6	0.28	0.0	0.00	0.15	0.06	47	215
50	17.60	17.59	33.196	23.991	392.6	0.206	5.72	104.7	1.5	0.29	0.0	0.00	0.20	0.09	50	214
55	17.17	17.16	33.161	24.066	385.6	0.225	5.85	106.1	1.5	0.30	0.0	0.00	0.23	0.13	55	213
58	16.92	16.91	33.142	24.110	381.4	0.237	5.92	106.9	1.5	0.30	0.0	0.00	0.25	0.15	58	212
61	16.58	16.57	33.161	24.204	372.6	0.248	6.00	107.6	1.8	0.29	0.0	0.00	0.26	0.17	61	211
66	16.69	16.68	33.254	24.250	368.3	0.267	6.01	108.1	2.0	0.26	0.0	0.00	0.25	0.15	66	210
70	16.44	16.43	33.313	24.353	358.6	0.281	6.05	108.3	2.2	0.24	0.0	0.00	0.24	0.14	70	209
75	15.64	15.63	33.288	24.515	343.3	0.299	6.00	105.7	2.2	0.26	0.0	0.00	0.25	0.18	75	208
80	15.37	15.36	33.276	24.566	338.6	0.316	5.99	105.0	2.2	0.27	0.0	0.00	0.24	0.20	80	207
84	14.88	14.87	33.263	24.662	329.4	0.329	5.98	103.7	2.3	0.28	0.0	0.00	0.24	0.22	84	206
90	14.50	14.49	33.259	24.741	322.1	0.349	5.99	103.1	2.4	0.30	0.0	0.01	0.23	0.23	90	205
94	14.13	14.12	33.197	24.771	319.3	0.362	5.88	100.4	2.9	0.42	0.8	0.13	0.24	0.25	94	204
99	13.64	13.63	33.210	24.881	308.8	0.377	5.86	99.1	3.2	0.47	1.5	0.14	0.23	0.24	99	203
110	12.98	12.97	33.294	25.079	290.2	0.410	5.55	92.6	4.7	0.62	4.0	0.03	0.17	0.20	110	202
127	12.35	12.33	33.375	25.264	272.9	0.458	5.32	87.6	6.5	0.74	6.4	0.02	0.10	0.13	127	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE LONGITUDE DAY/MO/YR CAST TIME BOTTOM WIND SPEED WAVES WEA BAROMETER DRY WET SECCHI/FOREL CLD AMT TYPE
 30 25.1 N 123 59.9 W 16/10/96 1743 UTC 4331 m 010 23 kn 350 08 08 0 1022.8 mb 20.2 c 17.2 c 32m 01 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	NO3 uM/L	NO2 uM/L	CHL-A ug/L	PHAE0 ug/L	PRES db	SAMP
2 A	18.96	18.96	33.331	23.757	413.3	0.008	5.48	103.0	1.8	0.28	0.0	0.00	0.09	0.02	2	224
4	18.95	18.95	33.330	23.759	413.2	0.017	5.49	103.2	1.8	0.28	0.0	0.00	0.09	0.03	4	223
21 A	18.95	18.95	33.330	23.760	413.7	0.087	5.48	103.0	1.8	0.27	0.0	0.00	0.09	0.03	21	222
26	18.95	18.95	33.330	23.760	413.9	0.108	5.48	103.0	1.8	0.28	0.0	0.00	0.09	0.03	26	221
29	18.90	18.89	33.327	23.771	413.0	0.120	5.49	103.1	1.8	0.27	0.0	0.00	0.09	0.03	29	220
31	18.70	18.69	33.295	23.796	410.6	0.128	5.52	103.2	1.7	0.28	0.0	0.00	0.11	0.03	31	219
33	18.53	18.52	33.249	23.804	409.9	0.136	5.54	103.2	1.6	0.29	0.0	0.00	0.12	0.04	33	218
36	18.49	18.48	33.240	23.807	409.8	0.149	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.04	36	217
38	18.49	18.48	33.240	23.807	409.8	0.157	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.04	38	216
44 A	18.47	18.46	33.242	23.814	409.4	0.181	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.05	44	215
50	18.28	18.27	33.240	23.859	405.2	0.206	5.59	103.7	1.5	0.29	0.0	0.00	0.17	0.06	50	214
55	17.72	17.71	33.219	23.980	393.9	0.226	5.66	103.8	1.5	0.30	0.0	0.00	0.20	0.09	55	213
58	17.07	17.06	33.171	24.098	382.7	0.237	5.86	106.1	1.5	0.31	0.0	0.00	0.26	0.13	58	212
62	16.76	16.75	33.176	24.174	375.5	0.253	5.92	106.6	1.4	0.32	0.0	0.00	0.30	0.20	62	211
66 A	16.61	16.60	33.171	24.205	372.6	0.268	5.92	106.2	1.4	0.33	0.0	0.00	0.31	0.23	66	210
69	16.50	16.49	33.177	24.235	369.9	0.279	5.98	107.1	1.7	0.31	0.0	0.00	0.28	0.20	69	209
75	16.19	16.18	33.284	24.388	355.4	0.300	6.01	107.0	2.2	0.27	0.0	0.00	0.26	0.15	75	208
81	15.30	15.29	33.266	24.575	337.9	0.321	6.00	105.0	2.2	0.28	0.0	0.00	0.25	0.21	81	207
88 A	14.50	14.49	33.272	24.751	321.1	0.344	5.94	102.3	2.4	0.30	0.0	0.01	0.22	0.25	88	206
90	14.11	14.10	33.251	24.816	314.8	0.351	5.92	101.1	2.5	0.33	0.1	0.02				

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
30 25.1 N	123 59.9 W	16/10/96	2145	UTC	4244 m	250	36 kn	360 08 06	1	1022.1 mb	19.0 C	16.6 C			4/8	SC
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	18.97	18.97	33.342	23.763	412.7	0.008	5.53	104.0	1.8	0.28	0.0	0.00	0.09	0.03	2	224
6	18.97	18.97	33.343	23.764	412.8	0.025	5.50	103.4	1.8	0.28	0.0	0.00	0.09	0.03	6	223
19	18.96	18.96	33.342	23.766	413.0	0.078	5.51	103.6	1.8	0.28	0.0	0.00	0.09	0.03	19	222
22	18.91	18.91	33.340	23.778	412.1	0.091	5.55	104.2	1.8	0.28	0.0	0.00	0.09	0.03	22	221
27	18.67	18.67	33.289	23.799	410.2	0.111	5.53	103.4	1.7	0.28	0.0	0.00	0.10	0.03	27	220
31	18.63	18.62	33.277	23.800	410.2	0.128	5.55	103.6	1.6	0.28	0.0	0.00	0.11	0.03	31	219
34	18.53	18.52	33.254	23.807	409.6	0.140	5.55	103.4	1.6	0.29	0.0	0.00	0.12	0.04	34	218
35	18.54	18.53	33.251	23.803	410.1	0.144	5.56	103.6	1.6	0.29	0.0	0.00	0.11	0.03	35	217
38	18.51	18.50	33.245	23.806	409.9	0.156	5.57	103.8	1.6	0.29	0.0	0.00	0.12	0.04	38	216
41	18.45	18.44	33.241	23.818	408.9	0.169	5.57	103.6	1.6	0.29	0.0	0.00	0.13	0.04	41	215
44	18.26	18.25	33.208	23.839	406.9	0.181	5.61	104.0	1.5	0.30	0.0	0.00	0.17	0.06	44	214
48	17.70	17.69	33.197	23.967	394.8	0.197	5.78	106.0	1.5	0.30	0.0	0.00	0.22	0.10	48	213
52	17.08	17.07	33.201	24.118	380.5	0.213	5.94	107.6	1.7	0.29	0.0	0.00	0.26	0.13	52	212
55	16.77	16.76	33.184	24.178	374.9	0.224	5.96	107.3	1.6	0.30	0.0	0.00	0.28	0.16	55	211
59	16.64	16.63	33.196	24.217	371.3	0.239	5.90	106.0	1.3	0.34	0.0	0.00	0.35	0.26	59	210
64	15.95	15.94	33.194	24.373	356.5	0.257	5.97	105.8	1.5	0.35	0.0	0.00	0.41	0.33	64	209
69	15.41	15.40	33.154	24.463	348.1	0.275	6.02	105.5	1.9	0.33	0.0	0.00	0.34	0.31	69	208
76	15.22	15.21	33.281	24.602	334.9	0.299	5.99	104.6	2.2	0.29	0.0	0.00	0.25	0.25	76	207
85	14.04	14.03	33.216	24.804	315.9	0.328	5.89	100.4	3.0	0.39	0.3	0.10	0.22	0.24	85	206
89	13.84	13.83	33.252	24.873	309.4	0.340	5.87	99.7	2.7	0.37	0.2	0.07	0.21	0.23	89	205
94	13.75	13.74	33.251	24.891	307.8	0.356	5.84	99.0	2.8	0.39	0.5	0.07	0.21	0.24	94	204
99	13.16	13.15	33.277	25.030	294.6	0.371	5.61	93.9	4.1	0.59	3.4	0.04	0.18	0.22	99	203
110	12.54	12.53	33.351	25.209	277.8	0.402	5.40	89.3	5.6	0.71	5.5	0.02	0.13	0.16	110	202
124	11.84	11.82	33.463	25.429	257.1	0.440	5.03	82.0	8.1	0.88	8.7	0.01	0.08	0.09	124	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

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 57.4 N	117 18.3 W	10/10/96	2332	UTC	66 m	330	05 kn	340 01 05	1	1018.5 mb	19.6 C	18.7 C	08m	04	6/8	CU
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.63	18.63	33.525	23.988	391.2	0.000	6.03	112.8	2.5	0.26	0.0	0.00	0.84	0.35	0	
2	18.60	18.60	33.529	23.999	390.2	0.008	6.08	113.7	2.5	0.26	0.0	0.00	0.77	0.34	2	210
2	18.63	18.63	33.525	23.988	391.2	0.008	6.03	112.8	2.5	0.26	0.0	0.00	0.84	0.35	2	209
4	18.31	18.31	33.510	24.056	384.8	0.016	5.95	110.6	3.0	0.27	0.0	0.01	0.94	0.49	4	208
7	16.01	16.01	33.465	24.566	336.3	0.024	5.73	101.8	4.2	0.41	0.8	0.14	1.97	0.77	7	207
10	15.00	15.00	33.448	24.777	316.3	0.036	5.73	99.8	4.8	0.49	1.7	0.23	1.65	0.65	10	206
15	13.56	13.56	33.446	25.078	287.8	0.051	5.63	95.2	5.0	0.52	2.1	0.17	1.14	0.55	15	205
20	13.25	13.25	33.468	25.158	280.3	0.065	5.33	89.6	5.8	0.63	4.1	0.26	0.74	0.52	20	204
30	12.78	12.78	33.527	25.297	267.3	0.093	4.77	79.4	8.4	0.81	7.4	0.13	0.54	0.49	30	203
40	12.45	12.44	33.569	25.394	258.4	0.119	4.17	68.9	11.8	1.03	10.2	0.11	0.36	0.38	40	202
50 ISL	12.21	12.20	33.601	25.465	251.9	0.145	3.85	63.3	13.7	1.15	12.1	0.11	0.23	0.31	50	
52	12.16	12.15	33.607	25.479	250.6	0.150	3.78	62.1	14.1	1.18	12.5	0.11	0.20	0.30	52	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 54.8 N	117 23.7 W	10/10/96	1857	UTC	659 m	330	06 kn	280 01 07	2	1020.5 mb	18.9 C	18.0 C	17m	03	8/8	ST
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.35	20.35	33.712	23.689	419.7	0.000	5.56	107.5	1.1	0.16	0.0	0.00	0.33	0.10	0	
2	20.35	20.35	33.713	23.690	419.7	0.008	5.53	106.9	1.1	0.16	0.0	0.00	0.31	0.10	2	224
2	20.35	20.35	33.712	23.689	419.8	0.008	5.56	107.5	1.1	0.16	0.0	0.00	0.33	0.10	2	223
5	20.29	20.29	33.711	23.704	418.5	0.021	5.51	106.4	1.1	0.16	0.0	0.00	0.31	0.10	5	222
6	20.29	20.29	33.711	23.704	418.5	0.025	5.52	106.6	1.1	0.16	0.0	0.00	0.31	0.12	6	221
10 ISL	20.17	20.17	33.708	23.734	415.8	0.042	5.54	106.8	1.1	0.17	0.0	0.00	0.34	0.11	10	
11	20.14	20.14	33.707	23.741	415.2	0.046	5.55	106.9	1.1	0.17	0.0	0.00	0.35	0.11	11	220
15	18.77	18.77	33.532	23.959	394.5	0.062	5.89	110.5	1.4	0.24	0.0	0.00	0.34	0.12	15	219
20	15.90	15.90	33.408	24.547	338.5	0.081	6.20	109.9	2.3	0.30	0.0	0.00	0.36	0.18	20	218
30 ISL	13.95	13.95	33.416	24.975	298.0	0.112	5.73	97.6	4.5	0.54	2.6	0.17	0.82	0.61	30	
31	13.91	13.91	33.422	24.988	296.8	0.115	5.65	96.2	4.7	0.57	3.0	0.19	0.86	0.65	31	217
40	13.06	13.05	33.484	25.208	276.0	0.141	5.22	87.4	6.4	0.70	5.6	0.18	0.57	0.45	40	216
50	12.24	12.23	33.555	25.423	255.8	0.168	4.60	75.7	9.8	0.93	9.8	0.04	0.25	0.29	50	215
60	11.60	11.59	33.615	25.590	240.1	0.192	4.49	72.9	11.3	1.03	11.8	0.03	0.11	0.22	60	214
70	11.49	11.48	33.625	25.618	237.7	0.216	4.41	71.5	12.3	1.09	12.7	0.03	0.10	0.18	70	213
75 ISL	11.33	11.32	33.642	25.661	233.8	0.228	4.13	66.7	14.1	1.22	14.5	0.03	0.09	0.17	75	
84	10.98	10.97	33.680	25.754	225.1	0.249	3.58	57.4	17.6	1.46	17.9	0.02	0.06	0.16	84	212
99	10.50	10.49	33.735	25.881	213.2	0.282	3.37	53.5	19.9	1.58	19.7	0.01	0.04	0.11	99	211
100 ISL	10.50	10.49	33.744	25.888	212.6	0.284	3.33	52.8	20.1	1.59	19.8	0.01	0.04	0.11	100	
119	10.58	10.57	33.877	25.978	204.5	0.323	2.66	42.3	24.3	1.84	22.2	0.01	0.04	0.07	119	210
125 ISL	10.55	10.54	33.894	25.997	202.9	0.336	2.56	40.7	24.9	1.88	22.6	0.01	0.05	0.07	125	
140	10.40	10.38	33.918	26.042	198.9	0.366	2.43	38.5	25.7	1.93	23.3	0.01	0.07	0.07	140	209
150 ISL	10.28	10.26	33.938	26.078	195.7	0.386	2.40	37.9	26.3	1.96	23.8	0.01	0.06	0.07	150	
169	9.96	9.94	33.986	26.171	187.2	0.422	2.36	37.1	28.2	2.03	24.9	0.01	0.03	0.06	169	208
198	9.16	9.14	34.110	26.399	165.9	0.473	2.12	32.7	34.5	2.21	27.6	0.02	0.00	0.06	198	207
200 ISL	9.17	9.15	34.126	26.410	164.8	0.476	2.05	31.7	34.9	2.23	27.8	0.02	0.01	0.06	200	
228	9.30	9.27	34.296	26.523	154.9	0.521	1.14	17.7	40.5	2.54	30.1	0.01	0.01	0.06	228	206
250 ISL																

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 50.9 N	117 32.2 W	11/10/96	Q256	UTC	860 m	330	06 kn			1017.9 mb	19.6 C	18.7 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.61	20.61	33.739	23.640	424.4	0.000	5.43	105.5	1.3	0.17	0.0	0.00	0.23	0.07	0	
1	20.61	20.61	33.739	23.640	424.4	0.004	5.44	105.7	1.3	0.17	0.0	0.00	0.25	0.06	1	224
1	20.61	20.61	33.739	23.640	424.4	0.004	5.43	105.5	1.3	0.17	0.0	0.00	0.23	0.07	1	223
4	20.62	20.62	33.737	23.636	424.9	0.017	5.44	105.7	1.3	0.17	0.0	0.00	0.22	0.05	4	222
7	20.60	20.60	33.738	23.643	424.4	0.030	5.55	107.8	1.3	0.17	0.0	0.00	0.22	0.07	7	221
10 ISL	20.47	20.47	33.727	23.669	422.0	0.042	5.47	106.0	1.3	0.17	0.0	0.00	0.24	0.08	10	
11	20.43	20.43	33.724	23.677	421.3	0.047	5.48	106.1	1.3	0.17	0.0	0.00	0.25	0.08	11	220
16	17.90	17.90	33.570	24.203	371.2	0.066	6.05	111.6	2.1	0.24	0.0	0.00	0.35	0.13	16	219
20 ISL	16.27	16.27	33.532	24.559	337.4	0.081	6.32	112.9	3.2	0.30	0.0	0.00	0.34	0.18	20	
21	15.92	15.92	33.529	24.636	330.1	0.084	6.36	112.9	3.5	0.32	0.0	0.00	0.34	0.19	21	218
30 ISL	13.57	13.57	33.482	25.104	285.7	0.112	5.90	99.8	5.3	0.55	2.5	0.23	0.73	0.41	30	
31	13.42	13.42	33.477	25.131	283.2	0.115	5.81	98.0	5.5	0.58	2.9	0.26	0.77	0.43	31	217
40	13.13	13.12	33.466	25.181	278.7	0.140	5.38	90.2	6.6	0.73	5.5	0.32	0.48	0.37	40	216
50	12.15	12.14	33.566	25.449	253.3	0.166	4.47	73.4	10.9	1.05	11.0	0.05	0.19	0.30	50	215
60	11.53	11.52	33.626	25.611	238.1	0.191	3.84	62.3	14.5	1.29	15.0	0.03	0.14	0.22	60	214
70	11.10	11.09	33.648	25.707	229.2	0.214	3.71	59.6	16.3	1.38	16.7	0.03	0.09	0.15	70	213
75 ISL	10.85	10.84	33.665	25.765	223.8	0.226	3.69	59.0	17.1	1.42	17.4	0.03	0.07	0.12	75	
85	10.40	10.39	33.706	25.875	213.4	0.248	3.63	57.5	18.8	1.51	18.6	0.02	0.03	0.08	85	212
100	10.12	10.11	33.772	25.975	204.3	0.279	3.30	51.9	21.8	1.67	20.9	0.01	0.02	0.07	100	211
120	9.99	9.98	33.932	26.122	190.7	0.318	2.52	39.6	26.9	1.97	24.4	0.01	0.01	0.05	121	210
125 ISL	9.88	9.87	33.945	26.151	188.1	0.328	2.55	40.0	27.5	1.98	24.7	0.01	0.01	0.05	126	
140	9.55	9.53	33.972	26.227	181.1	0.356	2.62	40.8	28.9	2.00	25.3	0.01	0.01	0.05	141	209
150 ISL	9.56	9.54	34.022	26.265	177.7	0.373	2.43	37.8	30.3	2.07	25.9	0.01	0.02	0.05	151	
170	9.62	9.60	34.113	26.326	172.4	0.408	2.02	31.5	32.8	2.21	27.1	0.01	0.03	0.06	171	208
199	9.10	9.08	34.109	26.408	165.0	0.457	2.13	32.8	34.6	2.24	27.8	0.03	0.01	0.04	200	207
200 ISL	9.10	9.08	34.113	26.411	164.7	0.459	2.11	32.5	34.7	2.25	27.9	0.03			201	
229	9.18	9.15	34.240	26.499	157.1	0.506	1.48	22.9	39.4	2.48	29.6	0.01			230	206
250 ISL	9.07	9.04	34.294	26.559	151.8	0.538	1.16	17.9	42.3	2.60	30.5	0.01			251	
269	8.90	8.87	34.321	26.607	147.5	0.567	0.97	14.9	44.6	2.68	31.2	0.01			271	205
300 ISL	8.52	8.49	34.316	26.663	142.6	0.612	0.86	13.1	47.8	2.75	32.3	0.01			302	
319	8.26	8.23	34.303	26.693	140.0	0.638	0.84	12.7	49.8	2.78	32.9	0.01			321	204
378	7.65	7.61	34.308	26.787	131.7	0.719	0.63	9.4	57.6	2.88	34.9	0.01			380	203
400 ISL	7.38	7.34	34.302	26.822	128.6	0.747	0.57	8.5	61.1	2.93	35.8	0.01			403	
438	6.93	6.89	34.293	26.877	123.5	0.795	0.49	7.2	66.9	3.01	37.3	0.01			441	202
500 ISL	6.51	6.46	34.306	26.944	117.7	0.870	0.39	5.7	73.1	3.13	38.6	0.01			503	
516	6.40	6.35	34.310	26.962	116.1	0.889	0.36	5.2	74.7	3.16	38.9	0.01			520	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 40.8 N	117 52.4 W	11/10/96	Q727	UTC	623 m	300	07 kn			1018.2 mb	19.9 C	19.0 C				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	20.29	20.29	33.621	23.635	424.8	0.000	5.50	106.2	1.4	0.21	0.0	0.00	0.17	0.05	0	
2	20.29	20.29	33.621	23.635	424.9	0.008	5.50	106.2	1.4	0.21	0.0	0.00	0.17	0.05	2	223
2	20.29	20.29	33.621	23.635	424.9	0.008	5.47	105.6	1.4	0.22	0.0	0.00	0.17	0.05	2	224
4	20.26	20.26	33.620	23.643	424.3	0.017	5.49	105.9	1.4	0.21	0.0	0.00	0.17	0.05	4	222
7	20.26	20.26	33.620	23.643	424.4	0.030	5.49	105.9	1.4	0.21	0.0	0.00	0.18	0.03	7	221
10	20.15	20.15	33.616	23.669	422.0	0.042	5.51	106.1	1.4	0.22	0.1	0.00	0.17	0.06	10	220
16	19.74	19.74	33.597	23.762	413.4	0.067	5.58	106.6	1.4	0.22	0.0	0.00	0.19	0.05	16	219
20	18.64	18.64	33.555	24.010	389.9	0.084	5.71	106.8	1.4	0.23	0.0	0.00	0.22	0.07	20	218
30 ISL	16.92	16.92	33.468	24.359	356.8	0.121	6.10	110.4	2.0	0.28	0.0	0.00	0.37	0.22	30	
31	16.75	16.74	33.458	24.392	353.7	0.124	6.12	110.3	2.1	0.29	0.0	0.00	0.40	0.24	31	217
40	14.00	13.99	33.398	24.951	300.6	0.154	5.92	101.0	3.8	0.46	1.5	0.18	0.78	0.46	40	216
50	12.95	12.94	33.470	25.219	275.2	0.183	5.15	86.0	6.8	0.75	6.2	0.25	0.36	0.37	50	215
60	12.47	12.46	33.487	25.327	265.3	0.210	4.98	82.3	7.9	0.85	7.9	0.12	0.30	0.32	60	214
70	11.94	11.93	33.538	25.467	252.1	0.236	4.53	74.1	10.7	1.07	11.6	0.04	0.18	0.21	70	213
75 ISL	11.67	11.66	33.570	25.542	245.0	0.248	4.26	69.3	12.4	1.18	13.4	0.03	0.14	0.18	75	
85	11.20	11.19	33.632	25.677	232.4	0.272	3.80	61.2	15.4	1.35	16.2	0.02	0.09	0.14	85	212
99	10.89	10.88	33.681	25.771	223.8	0.304	3.57	57.1	17.4	1.45	17.8	0.01	0.06	0.13	99	211
100 ISL	10.85	10.84	33.682	25.778	223.1	0.306	3.57	57.1	17.6	1.45	17.9	0.01	0.06	0.13	100	
120	9.94	9.93	33.718	25.964	205.7	0.349	3.66	57.4	20.8	1.55	20.2	0.01	0.02	0.04	121	210
125 ISL	9.80	9.79	33.734	26.000	202.4	0.359	3.60	56.3	21.7	1.59	20.8	0.01	0.02	0.04	126	
139	9.56	9.54	33.801	26.092	193.9	0.387	3.30	51.3	24.3	1.74	22.6	0.01	0.01	0.04	140	209
150 ISL	9.57	9.55	33.914	26.179	185.9	0.408	2.86	44.5	27.2	1.90	24.3	0.01	0.01	0.04	151	
169	9.60	9.58	34.088	26.310	173.9	0.442	2.09	32.6	31.9	2.17	27.0	0.01	0.01	0.03	170	208
200	9.66	9.64	34.230	26.412	164.9	0.494	1.55	24.2	35.6	2.36	28.5	0.01	0.01	0.04	201	207
229	9.33	9.30	34.303	26.524	154.8	0.541	1.12	17.4	40.6	2.55	30.3	0.01			230	206
250 ISL	9.10	9.07	34.331	26.583	149.5	0.573	0.96	14.8	43.2	2.64						

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 31.4 N	118 13.7 W	11/10/96	1436 UTC		310 14 kn			1017.3 mb	18.7 C	17.6 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.94	18.94	33.606	23.972	392.7	0.000	5.54	104.3	1.3	0.23	0.1	0.00	0.27	0.06	0	
1	18.93	18.93	33.604	23.973	392.6	0.004	5.54	104.3	1.3	0.23	0.1	0.00	0.27	0.06	1	224
1	18.94	18.94	33.606	23.972	392.7	0.004	5.54	104.3	1.3	0.23	0.1	0.00	0.27	0.06	1	223
3	18.89	18.89	33.602	23.982	391.9	0.012	5.53	104.0	1.3	0.23	0.1	0.00	0.27	0.06	3	222
6	18.61	18.61	33.586	24.040	386.4	0.023	5.57	104.2	1.3	0.23	0.1	0.00	0.27	0.07	6	221
10	17.45	17.45	33.510	24.266	365.1	0.038	5.73	104.8	1.3	0.27	0.1	0.00	0.29	0.08	10	220
15	17.30	17.30	33.505	24.298	362.2	0.057	5.73	104.5	1.3	0.27	0.1	0.00	0.28	0.09	15	219
20	17.11	17.11	33.484	24.327	359.6	0.075	5.75	104.4	1.3	0.28	0.1	0.00	0.28	0.11	20	218
30	16.43	16.43	33.442	24.453	347.8	0.110	5.77	103.4	1.3	0.31	0.1	0.01	0.48	0.23	30	217
40	15.55	15.54	33.419	24.635	330.8	0.144	5.58	98.2	2.1	0.44	1.1	0.25	0.42	0.23	40	216
50	13.84	13.83	33.298	24.907	305.0	0.176	5.51	93.6	3.5	0.59	3.5	0.47	0.19	0.17	50	215
60	12.81	12.80	33.314	25.126	284.3	0.205	5.27	87.6	5.8	0.78	7.2	0.03	0.11	0.13	60	214
70	11.93	11.92	33.351	25.324	265.7	0.233	4.95	80.8	9.1	0.97	10.2	0.02	0.07	0.10	70	213
75 ISL	11.65	11.64	33.378	25.397	258.8	0.246	4.82	78.2	10.3	1.05	11.4	0.02	0.06	0.09	75	
85	11.24	11.23	33.443	25.522	247.1	0.271	4.58	73.7	12.4	1.18	13.5	0.01	0.04	0.08	85	212
99	10.70	10.69	33.552	25.704	230.1	0.305	4.22	67.2	15.7	1.33	16.4	0.01	0.03	0.07	99	211
100 ISL	10.66	10.65	33.558	25.715	229.0	0.307	4.19	66.6	16.0	1.34	16.6	0.01	0.03	0.07	100	
118	10.01	10.00	33.665	25.911	210.8	0.346	3.67	57.6	20.6	1.56	20.1	0.01	0.01	0.05	118	210
125 ISL	9.79	9.78	33.710	25.983	204.0	0.361	3.51	54.8	22.3	1.64	21.3	0.01	0.01	0.05	125	
139	9.41	9.39	33.793	26.110	192.1	0.389	3.26	50.5	25.3	1.78	23.3	0.01	0.00	0.04	139	209
150 ISL	9.17	9.15	33.841	26.187	185.0	0.409	3.14	48.4	27.2	1.85	24.3	0.01	0.00	0.04	150	
169	8.83	8.81	33.906	26.291	175.3	0.444	2.98	45.6	30.1	1.93	25.7	0.00	0.00	0.04	169	208
199	8.43	8.41	33.997	26.425	163.1	0.494	2.63	39.9	34.9	2.10	27.8	0.00	0.00	0.03	199	207
200 ISL	8.42	8.40	34.000	26.429	162.8	0.496	2.62	39.8	35.1	2.11	27.9	0.00	0.00	0.03	200	
229	8.07	8.05	34.066	26.534	153.2	0.542	2.25	33.9	40.5	2.27	29.9	0.00	0.00	0.03	229	206
250 ISL	7.86	7.84	34.102	26.593	147.9	0.574	1.98	29.7	44.1	2.37	31.2	0.00	0.00	0.03	250	
268	7.73	7.70	34.129	26.634	144.3	0.600	1.75	26.2	46.9	2.46	32.1	0.00	0.00	0.03	268	205
300 ISL	7.66	7.63	34.186	26.689	139.6	0.645	1.32	19.7	51.1	2.62	33.5	0.00	0.00	0.03	300	
317	7.63	7.60	34.213	26.715	137.4	0.669	1.12	16.7	53.2	2.70	34.1	0.00	0.00	0.03	317	204
377	7.15	7.11	34.263	26.823	127.9	0.748	0.71	10.5	61.2	2.88	36.1	0.00	0.00	0.03	377	203
400 ISL	7.05	7.01	34.271	26.843	126.2	0.778	0.64	9.4	62.9	2.92	36.5	0.00	0.00	0.03	400	
437	6.90	6.86	34.280	26.871	124.1	0.824	0.58	8.5	65.3	2.96	37.1	0.00	0.00	0.03	437	202
500 ISL	6.50	6.45	34.298	26.939	118.2	0.900	0.42	6.1	72.2	3.07	38.6	0.00	0.00	0.03	500	
515	6.41	6.36	34.303	26.955	116.8	0.918	0.38	5.5	73.8	3.09	38.9	0.00	0.00	0.03	515	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 20.8 N	118 33.3 W	11/10/96	1807 UTC	1350 m	310 18 kn	330 03 05	1	1019.0 mb	18.2 C	16.8 C	23m 03		2/8	sc		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	17.36	17.36	33.415	24.214	369.7	0.000	5.71	104.2	1.3	0.28	0.0	0.00	0.20	0.05	0	
1 A	17.36	17.36	33.415	24.214	369.7	0.004	5.71	104.2	1.3	0.28	0.0	0.00	0.20	0.05	1	222
1	17.36	17.36	33.414	24.213	369.8	0.004	5.70	104.0	1.3	0.28	0.0	0.00	0.19	0.05	1	223
6	17.37	17.37	33.414	24.211	370.1	0.022	5.71	104.2	1.3	0.28	0.0	0.00	0.20	0.06	6	221
10 ISL	17.33	17.33	33.415	24.221	369.3	0.037	5.71	104.1	1.3	0.27	0.0	0.00	0.21	0.05	10	
11	17.32	17.32	33.415	24.224	369.1	0.041	5.71	104.1	1.3	0.27	0.0	0.00	0.21	0.05	11	220
16 A	17.28	17.28	33.414	24.233	368.4	0.059	5.72	104.2	1.3	0.28	0.0	0.00	0.22	0.06	16	219
20 ISL	17.19	17.19	33.412	24.253	366.6	0.074	5.73	104.2	1.3	0.28	0.0	0.00	0.25	0.07	20	
23	17.12	17.12	33.410	24.268	365.3	0.085	5.73	104.0	1.4	0.28	0.1	0.00	0.27	0.09	23	218
30 ISL	16.31	16.31	33.387	24.439	349.2	0.110	5.83	104.2	1.6	0.31	0.3	0.04	0.57	0.20	30	
31 A	16.17	16.17	33.383	24.467	346.5	0.113	5.84	104.1	1.6	0.32	0.3	0.05	0.61	0.22	31	217
39	15.09	15.08	33.342	24.676	326.8	0.140	5.68	99.0	2.3	0.45	1.5	0.29	0.63	0.34	39	216
47 A	14.05	14.04	33.298	24.864	309.1	0.166	5.52	94.2	3.5	0.58	3.4	0.42	0.36	0.25	47	215
50 ISL	13.74	13.73	33.291	24.922	303.6	0.175	5.51	93.4	3.8	0.61	3.9	0.37	0.29	0.24	50	
55	13.31	13.30	33.291	25.010	295.4	0.190	5.50	92.4	4.3	0.64	4.6	0.25	0.22	0.22	55	214
63 A	12.87	12.86	33.320	25.120	285.1	0.213	5.40	89.9	5.0	0.71	5.9	0.09	0.18	0.19	63	213
75 ISL	12.62	12.61	33.381	25.216	276.2	0.247	5.24	86.8	6.2	0.76	6.8	0.04	0.16	0.16	75	
76	12.61	12.60	33.388	25.223	275.5	0.249	5.22	86.5	6.3	0.77	6.9	0.04	0.16	0.16	76	212
89 A	12.11	12.10	33.518	25.420	257.1	0.284	4.68	76.8	9.6	0.96	10.5	0.03	0.13	0.15	89	211
100 ISL	11.61	11.60	33.582	25.563	243.7	0.312	4.35	70.6	12.0	1.10	13.0	0.02	0.10	0.12	100	
104	11.42	11.41	33.600	25.612	239.1	0.321									104	225
119	10.70	10.69	33.675	25.800	221.4	0.356	3.95	62.9	16.3	1.33	16.7	0.01	0.04	0.06	119	210
125 ISL	10.31	10.30	33.694	25.882	213.7	0.369	3.90	61.6	17.8	1.40	17.9	0.01	0.03	0.05	125	
141	9.51	9.49	33.777	26.081	194.9	0.402	3.63	56.4	22.3	1.61	21.1	0.00	0.01	0.04	141	209
150 ISL	9.61	9.59	33.896	26.158	187.9	0.419	3.02	47.0	25.7	1.82	23.2	0.00	0.02	0.04	150	
170	10.10	10.08	34.159	26.282	176.8	0.455	1.66	26.2	32.6	2.25	27.2	0.00	0.06	0.04	170	208
199	9.71	9.69	34.243	26.414	164.8	0.505	1.48	23.2	35.7	2.36	28.5	0.00	0.04	0.04	199	207
200 ISL	9.71	9.69	34.244	26.416	164.6	0.506	1.47	23.0	35.8	2.37	28.5	0.00	0.00	0.03	200	
229	9.57	9.54	34.316	26.495	157.7	0.553	1.15	17.9	39.4	2.51	29.5	0.00	0.00	0.03	229	206
250 ISL	9.21	9.18	34.320	26.557	152.1	0.586	1.12	17.3	42.1	2.57	30.3	0.00	0.00	0.03	250	
269	8.85	8.82	34.311	26.607	147.5	0.614	1.09	16.7	44.6	2.61	31.1	0.00	0.00	0.03	269	205
300 ISL	8.49	8.46	34.307	26.661	142.8	0.659	0.98	14.9	48.1	2.68	32.1	0.00	0.00	0.03	300	
319	8.29	8.26	34.302	26.687	140.5	0.686	0.91	13.8	50.3	2.73	32.8	0.00	0.00	0.03	319	204
376	7.45	7.41	34.279	26.793	130.9	0.763	0.72	10.7	58.9	2.87	35.3	0.00	0.00	0.03	376	203
400 ISL	7.25	7.21	34.299	26.837	127.0	0.794	0.58	8.6	62.3</							

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 10.8 N	118 53.6 W	12/10/96	0001 UTC	1469 m	320 15 kn	330 02 05	1	1017.1 mb	17.5 c	16.0 c	14m 01		7/8	SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAEO	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.87	18.87	33.549	23.946	395.2	0.000	5.56	104.5	1.6	0.25	0.1	0.00	0.16	0.07		0
1	18.87	18.87	33.549	23.946	395.2	0.004	5.56	104.5	1.6	0.25	0.1	0.00	0.16	0.07		1 223
2	18.87	18.87	33.549	23.947	395.2	0.008	5.55	104.3	1.6	0.26	0.1	0.00	0.16	0.05		2 224
3	18.86	18.86	33.550	23.950	394.9	0.012	5.55	104.3	1.6	0.26	0.1	0.00	0.16	0.06		3 222
6	18.86	18.86	33.549	23.949	395.1	0.024	5.55	104.3	1.6	0.25	0.1	0.00	0.20	0.06		6 221
10	18.85	18.85	33.549	23.952	395.0	0.040	5.55	104.3	1.6	0.25	0.1	0.00	0.16	0.05		10 220
15	18.80	18.80	33.547	23.963	394.1	0.059	5.56	104.3	1.5	0.24	0.1	0.00	0.17	0.06		15 219
20	18.76	18.76	33.544	23.971	393.5	0.079	5.56	104.3	1.5	0.25	0.1	0.00	0.19	0.07		20 218
30	18.36	18.35	33.523	24.055	385.9	0.118	5.63	104.8	1.7	0.26	0.1	0.00	0.27	0.11		30 217
40	14.47	14.46	33.408	24.860	309.2	0.153	5.67	97.6	3.8	0.48	2.0	0.15	0.33	0.26		40 216
50	14.12	14.11	33.419	24.943	301.7	0.183	5.58	95.4	4.5	0.53	2.7	0.18	0.40	0.31		50 215
60	13.31	13.30	33.438	25.123	284.7	0.213	5.32	89.5	5.8	0.66	4.9	0.17	0.28	0.29		60 214
70	12.87	12.86	33.480	25.244	273.5	0.240	5.03	83.8	7.2	0.77	6.7	0.10	0.21	0.23		70 213
75 ISL	12.69	12.68	33.501	25.295	268.7	0.254	4.90	81.4	7.8	0.81	7.5	0.08	0.18	0.21		75
85	12.23	12.22	33.548	25.421	257.0	0.280	4.60	75.7	9.6	0.93	9.5	0.04	0.14	0.17		85 212
100	10.96	10.95	33.650	25.734	227.3	0.317	3.95	63.3	15.0	1.28	15.2	0.01	0.06	0.12		100 211
119	10.81	10.80	33.758	25.845	217.2	0.359	3.22	51.4	19.5	1.56	19.0	0.01	0.05	0.07		120 210
125 ISL	10.66	10.65	33.802	25.906	211.5	0.372	3.00	47.8	21.3	1.67	20.4	0.01	0.05	0.06		126
139	10.30	10.28	33.909	26.052	197.9	0.400	2.54	40.2	25.5	1.91	23.5	0.00	0.05	0.05		140 209
150 ISL	10.23	10.21	33.999	26.135	190.3	0.422	2.19	34.6	27.9	2.05	24.8	0.00	0.05	0.04		151
169	10.01	9.99	34.097	26.249	179.8	0.457	1.90	29.9	30.8	2.18	26.4	0.00	0.05	0.04		170 208
199	8.59	8.57	33.985	26.391	166.4	0.509	2.73	41.6	33.1	2.06	27.0	0.00	0.00	0.03		200 207
200 ISL	8.58	8.56	33.989	26.396	166.0	0.510	2.72	41.4	33.3	2.06	27.1	0.00				201
229	8.42	8.40	34.096	26.505	156.2	0.557	2.15	32.6	39.0	2.27	29.3	0.00				230 206
250 ISL	8.46	8.43	34.187	26.570	150.4	0.589	1.68	25.5	42.2	2.42	30.3	0.00				251
269	8.49	8.46	34.256	26.620	146.1	0.617	1.30	19.8	44.9	2.55	31.1	0.00				271 205
300 ISL	8.19	8.16	34.281	26.686	140.3	0.662	1.00	15.1	49.6	2.68	32.6	0.00				302
318	7.97	7.94	34.280	26.718	137.4	0.687	0.90	13.5	52.2	2.74	33.4	0.00				320 204
378	7.58	7.54	34.322	26.809	129.6	0.767	0.58	8.6	58.3	2.89	34.9	0.00				380 203
400 ISL	7.38	7.34	34.319	26.835	127.3	0.795	0.53	7.9	61.0	2.93	35.6	0.00				403
438	7.03	6.99	34.312	26.879	123.5	0.843	0.47	6.9	65.7	3.00	36.9	0.00				441 202
500 ISL	6.66	6.61	34.340	26.952	117.2	0.918	0.33	4.8	71.7	3.10	38.3	0.00				503
516	6.56	6.51	34.347	26.970	115.6	0.936	0.30	4.4	73.3	3.12	38.6	0.00				519 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 11.8 N	118 53.9 W	12/10/96	0355 UTC	1335 m	310 18 kn			1016.8 mb	17.2 c	15.8 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/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.68	18.68	33.548	23.993	390.7	0.004	5.56	104.1	1.6	0.29	0.0	0.00	0.17	0.06		1 224
2	18.69	18.69	33.548	23.991	391.0	0.008	5.55	103.9	1.6	0.29	0.0	0.00	0.30	0.07		2 223
4	18.70	18.70	33.548	23.988	391.3	0.016	5.57	104.3	1.6	0.29	0.0	0.00	0.17	0.06		4 222
6	18.69	18.69	33.549	23.992	391.0	0.023	5.56	104.1	1.6	0.29	0.0	0.00	0.17	0.06		6 221
8	18.72	18.72	33.550	23.985	391.7	0.031	5.55	104.0	1.6	0.29	0.0	0.00	0.17	0.06		8 220
10	18.69	18.69	33.549	23.992	391.2	0.039	5.55	103.9	1.6	0.29	0.0	0.00	0.16	0.06		10 219
12	18.31	18.31	33.512	24.058	384.9	0.047	5.58	103.7	1.5	0.29	0.0	0.00	0.17	0.06		12 218
14	18.47	18.47	33.523	24.027	388.0	0.055	5.57	103.9	1.5	0.29	0.0	0.00	0.18	0.06		14 217
18	18.13	18.13	33.489	24.085	382.6	0.070	5.60	103.7	1.4	0.30	0.0	0.00	0.17	0.05		18 216
22	18.03	18.03	33.476	24.100	381.3	0.085	5.62	103.9	1.4	0.30	0.0	0.00	0.18	0.07		22 215
26	17.97	17.97	33.467	24.108	380.7	0.101	5.64	104.1	1.5	0.30	0.0	0.00	0.19	0.07		26 214
30	17.86	17.85	33.462	24.131	378.6	0.116	5.65	104.1	1.5	0.30	0.0	0.00	0.22	0.08		30 213
35	17.85	17.84	33.462	24.133	378.5	0.135	5.66	104.2	1.5	0.30	0.0	0.00	0.24	0.12		35 212
40	17.69	17.68	33.468	24.177	374.5	0.153	5.69	104.5	1.8	0.31	0.0	0.01	0.34	0.17		40 211
45	15.41	15.40	33.429	24.674	327.2	0.171	5.71	100.2	3.3	0.45	1.1	0.13	0.66	0.28		45 210
50	14.61	14.60	33.415	24.836	311.8	0.187	5.65	97.6	4.0	0.52	1.9	0.17	0.47	0.29		50 209
55	14.24	14.23	33.418	24.917	304.3	0.202	5.57	95.5	4.4	0.56	2.6	0.18	0.41	0.28		55 208
60	13.92	13.91	33.427	24.991	297.4	0.217	5.49	93.5	4.8	0.60	3.1	0.17	0.36	0.28		60 207
65	13.67	13.66	33.436	25.049	291.9	0.232		5.3	0.64	3.9	0.15	0.32	0.25	0.25		65 206
70	13.36	13.35	33.442	25.117	285.6	0.247	5.29	89.1	5.9	0.70	4.9	0.12	0.27	0.26		70 205
75	12.94	12.93	33.455	25.211	276.8	0.261	5.16	86.1	6.6	0.77	6.1	0.10	0.23	0.24		75 204
80	12.10	12.09	33.535	25.435	255.4	0.274	4.65	76.3	9.9	1.01	10.2	0.03	0.14	0.18		80 203
100	11.06	11.05	33.680	25.740	226.8	0.322	3.73	59.9	16.2	1.40		0.01	0.05	0.09		100 202
121	10.63	10.62	33.804	25.913	210.8	0.368	2.93	46.6	21.5			0.01	0.05	0.07		122 201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 13.1 N	118 53.4 W	12/10/96	0842 UTC	1199 m	330 12 kn			1017.8 mb	16.5 C	15.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.02	18.02	33.480	24.104	380.1	0.004	5.60	103.5	1.4	0.30	0.0	0.00	0.20	0.07	1	224
2	18.02	18.02	33.478	24.103	380.3	0.008	5.63	104.1	1.4	0.30	0.0	0.00	0.20	0.06	2	223
4	18.02	18.02	33.479	24.104	380.3	0.015	5.61	103.7	1.3	0.30	0.0	0.00	0.19	0.06	4	222
6	18.02	18.02	33.479	24.104	380.3	0.023	5.58	103.1	1.3	0.30	0.0	0.00	0.20	0.06	6	221
8	18.01	18.01	33.478	24.106	380.2	0.030	5.62	103.9	1.3	0.30	0.0	0.00	0.19	0.06	8	220
10	18.01	18.01	33.482	24.109	380.0	0.038	5.61	103.7	1.3	0.30	0.0	0.00	0.19	0.06	10	219
12	18.01	18.01	33.480	24.107	380.2	0.046	5.63	104.0	1.3	0.30	0.0	0.00	0.17	0.06	12	218
14	18.02	18.02	33.478	24.103	380.7	0.053	5.61	103.7	1.3	0.30	0.0	0.00	0.17	0.06	14	217
17	17.94	17.94	33.469	24.116	379.6	0.065	5.64	104.1	1.3	0.30	0.0	0.00	0.20	0.06	17	216
22	17.76	17.76	33.455	24.149	376.6	0.084	5.68	104.4	1.4	0.30	0.0	0.00	0.23	0.09	22	215
26	17.58	17.58	33.447	24.187	373.1	0.099	5.70	104.4	1.4	0.31	0.0	0.01	0.30	0.13	26	214
30	17.50	17.49	33.447	24.206	371.4	0.113	5.70	104.3	1.5	0.32	0.0	0.01	0.31	0.14	30	213
34	17.33	17.32	33.443	24.244	368.0	0.128	5.72	104.3	1.6	0.32	0.1	0.01	0.34	0.16	34	212
40	16.79	16.78	33.445	24.373	355.8	0.150	5.74	103.6	2.1	0.36	0.4	0.05	0.56	0.30	40	211
45	14.60	14.59	33.418	24.841	311.3	0.167	5.65	97.6	3.9	0.51	1.9	0.19	0.51	0.36	45	210
49	14.33	14.32	33.416	24.896	306.1	0.179	5.61	96.3	4.2	0.55	2.4	0.18	0.44	0.31	49	209
54	13.99	13.98	33.418	24.969	299.3	0.194	5.54	94.5	4.5	0.59	3.2	0.16	0.40	0.34	54	208
60	13.81	13.80	33.413	25.003	296.2	0.212	5.50	93.4	4.7	0.62	3.5	0.15	0.37	0.32	60	207
64	13.59	13.58	33.408	25.044	292.4	0.224	5.49	92.8	4.8	0.64	4.0	0.15	0.35	0.46	64	206
69	12.85	12.84	33.422	25.203	277.3	0.238	5.37	89.4	5.4	0.70	5.0	0.13	0.29	0.31	69	205
74	12.61	12.60	33.461	25.280	270.1	0.252	5.10	84.5	7.0	0.82	7.2	0.09	0.21	0.26	74	204
79	11.90	11.89	33.537	25.474	251.7	0.265	4.62	75.5	10.1	1.02	10.9	0.03	0.13	0.18	79	203
99	11.02	11.01	33.673	25.741	226.6	0.313	3.83	61.4	15.8	1.37		0.01	0.05	0.09	99	202
121	10.65	10.64	33.801	25.907	211.3	0.361	2.94	46.8	21.4			0.01	0.05	0.06	122	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 14.8 N	118 52.2 W	12/10/96	1310 UTC	1181 m	310 15 kn			1017.2 mb	16.7 C	15.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	18.50	18.50	33.538	24.031	387.2	0.008	5.57	103.9	1.6	0.29	0.0	0.00	0.18	0.07	2	224
3	18.51	18.51	33.542	24.031	387.2	0.012	5.57	104.0	1.6	0.29	0.0	0.00	0.19	0.07	3	223
5	18.53	18.53	33.543	24.027	387.6	0.019	5.57	104.0	1.6	0.29	0.0	0.00	0.19	0.06	5	222
7	18.53	18.53	33.543	24.027	387.7	0.027	5.57	104.0	1.6	0.28	0.0	0.00	0.19	0.06	7	221
9	18.53	18.53	33.545	24.029	387.6	0.035	5.56	103.8	1.6	0.28	0.0	0.00	0.18	0.06	9	220
11	18.49	18.49	33.533	24.030	387.6	0.043	5.58	104.1	1.5	0.29	0.0	0.00	0.18	0.06	11	219
13	18.31	18.31	33.520	24.064	384.4	0.050	5.60	104.1	1.5	0.29	0.0	0.00	0.64	0.04	13	218
15	18.20	18.20	33.507	24.082	382.8	0.058	5.61	104.1	1.5	0.29	0.0	0.00	0.19	0.06	15	217
18	18.09	18.09	33.498	24.102	381.0	0.069	5.62	104.0	1.4	0.29	0.0	0.00	0.20	0.06	18	216
22	17.70	17.70	33.447	24.158	375.8	0.085	5.70	104.7	1.4	0.30	0.0	0.00	0.22	0.08	22	215
27	17.44	17.44	33.411	24.193	372.6	0.103	5.73	104.7	1.3	0.30	0.0	0.00	0.26	0.10	27	214
31	17.35	17.34	33.415	24.217	370.4	0.118	5.76	105.0	1.3	0.31	0.0	0.00	0.29	0.12	31	213
36	17.28	17.27	33.424	24.241	368.3	0.137	5.75	104.7	1.3	0.31	0.0	0.00	0.31	0.13	36	212
41	16.61	16.60	33.413	24.390	354.2	0.155	5.84	105.0	1.8	0.34	0.1	0.02	0.41	0.22	41	211
46	16.19	16.18	33.399	24.476	346.2	0.172	5.85	104.3	2.3	0.38	0.5	0.04	0.51	0.30	46	210
50	14.97	14.96	33.398	24.746	320.5	0.186	5.74	99.9	3.4	0.47	1.5	0.11	0.64	0.36	50	209
55	14.48	14.47	33.415	24.864	309.3	0.201	5.62	96.8	4.0	0.52	2.2	0.16	0.53	0.33	55	208
61	14.13	14.12	33.405	24.930	303.2	0.220	5.58	95.4	4.3	0.56	2.7	0.15	0.45	0.31	61	207
66	13.97	13.96	33.399	24.959	300.6	0.235	5.57	94.9	4.3	0.58	3.0	0.15	0.44	0.33	66	206
71	13.69	13.68	33.404	25.021	294.8	0.250	5.54	93.9	4.6	0.61	3.6	0.15	0.39	0.32	71	205
76	13.56	13.55	33.409	25.051	292.0	0.264	5.47	92.5	4.8	0.63	4.0	0.15	0.36	0.28	76	204
80	13.22	13.21	33.446	25.148	282.9	0.276	5.29	88.8	6.1	0.72	5.4	0.11	0.25	0.26	80	203
101	10.82	10.81	33.660	25.767	224.2	0.329	3.90	62.3	15.7	1.34		0.01	0.05	0.08	101	202
121	10.56	10.55	33.800	25.922	209.9	0.372	3.04	48.3	21.1			0.01	0.04	0.06	122	201

A) HIGH CHLOROPHYLL VERIFIED BY CTD FLUOROMETER TRACE.

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 16.9 N	118 51.5 W	12/10/96	1807 UTC	1025 m							23m 01					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	NO3	NO2	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
1	18.62	18.62	33.544	24.005	389.6	0.004	5.57	104.2	1.7	0.29	0.0	0.00	0.18	0.05	1	224
2 A	18.63	18.63	33.545	24.004	389.8	0.008	5.55	103.8	1.7	0.28	0.0	0.00	0.18	0.06	2	223
4	18.62	18.62	33.546	24.007	389.5	0.016	5.56	104.0	1.7	0.28	0.0	0.00	0.17	0.07	4	222
7	18.63	18.63	33.545	24.004	389.9	0.027	5.58	104.4	1.7	0.28	0.0	0.00	0.18	0.06	7	221
9	18.55	18.55	33.538	24.018	388.6	0.035	5.57	104.0	1.7	0.28	0.0	0.00	0.18	0.06	9	220
10	18.50	18.50	33.523	24.020	388.5	0.039	5.59	104.3	1.7	0.29	0.0	0.00	0.20	0.08	10	219
13	18.07	18.07	33.481	24.094	381.6	0.051	5.62	104.0	1.5	0.29	0.0	0.00	0.21	0.07	13	218
15 A	17.63	17.63	33.444	24.172	374.2	0.058	5.65	103.6	1.5	0.30	0.0	0.00	0.22	0.07	15	217
18	17.57	17.57	33.425	24.172	374.3	0.069	5.67	103.9	1.4	0.30	0.0	0.00	0.22	0.08	18	216
22	17.42	17.42	33.417	24.202	371.5	0.084	5.71	104.3	1.4	0.31	0.0	0.00	0.24	0.10	22	215
26	17.27	17.27	33.409	24.232	368.8	0.099	5.74	104.5	1.3	0.31	0.0	0.00	0.26	0.11	26	214
31 A	17.03	17.02	33.396	24.279	364.5	0.117	5.77	104.6	1.3	0.32	0.0	0.00	0.30	0.16	31	213
35	17.01	17.00	33.395	24.283	364.3	0.132	5.78	104.7	1.3	0.32	0.0	0.00	0.31	0.17	35	212
41	16.79	16.78	33.396	24.335	359.5	0.154	5.80	104.6	1.3	0.32	0.0	0.00	0.38	0.23	41	211
47 A	14.81	14.80	33.360	24.751	319.9	0.174	5.84	101.2	3.0	0.45	1.1	0.07	0.61	0.43	47	210
51	13.99	13.98	33.375	24.936	302.4	0.186	5.70	97.2	4.0	0.54	2.5	0.12	0.47	0.34	51	209
55</																

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 17.6 N	118 50.3 W	12/10/96	2116	UTC	1052 m	330 21 kn	350 03 04	2	1017.8 mb	17.8 c	16.3 c				8/8 SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	18.52	18.52	33.531	24.020	388.2	0.008	5.56	103.8	1.6	0.29	0.0	0.00	0.17	0.06	2	224
3	18.59	18.59	33.536	24.007	389.5	0.012	5.55	103.7	1.6	0.29	0.0	0.00	0.17	0.05	3	223
5	18.58	18.58	33.537	24.010	389.3	0.019	5.56	103.9	1.6	0.29	0.0	0.00	0.16	0.05	5	222
6	18.05	18.05	33.509	24.120	378.9	0.023	5.59	103.4	1.6	0.29	0.0	0.00	0.17	0.06	6	221
9	17.73	17.73	33.469	24.151	375.9	0.035	5.63	103.5	1.4	0.30	0.0	0.00	0.19	0.06	9	220
11	17.65	17.65	33.448	24.170	374.2	0.042	5.64	103.5	1.4	0.30	0.0	0.00	0.20	0.06	11	219
13	17.65	17.65	33.438	24.162	375.0	0.050	5.65	103.7	1.4	0.30	0.0	0.00	0.21	0.06	13	218
14	17.61	17.61	33.438	24.172	374.1	0.053	5.64	103.4	1.4	0.30	0.0	0.00	0.20	0.06	14	217
19	17.54	17.54	33.428	24.182	373.4	0.072	5.67	103.8	1.4	0.31	0.0	0.00	0.23	0.09	19	216
23	16.91	16.91	33.396	24.306	361.6	0.087	5.77	104.3	1.3	0.32	0.0	0.00	0.34	0.16	23	215
27	16.54	16.54	33.393	24.390	353.7	0.101	5.83	104.6	1.3	0.33	0.0	0.00	0.51	0.33	27	214
31	16.09	16.09	33.374	24.479	345.4	0.115	5.86	104.2	1.5	0.34	0.0	0.00	0.58	0.41	31	213
35	15.52	15.51	33.329	24.572	336.6	0.129	5.94	104.4	2.0	0.38	0.2	0.02	0.75	0.50	35	212
41	14.15	14.14	33.367	24.896	305.9	0.148	5.74	98.2	3.6	0.51	1.9	0.10	0.56	0.40	41	211
46	13.94	13.93	33.383	24.952	300.6	0.163	5.61	95.6	4.2	0.57	2.8	0.14	0.46	0.35	46	210
50	13.79	13.78	33.388	24.987	297.4	0.175	5.56	94.4	4.5	0.60	3.2	0.14	0.43	0.32	50	209
56	13.62	13.61	33.396	25.028	293.7	0.193	5.52	93.4	4.7	0.63	3.6	0.15	0.40	0.34	56	208
61	13.41	13.40	33.421	25.090	287.9	0.207	5.38	90.7	5.5	0.68	4.5	0.14	0.32	0.29	61	207
66	13.18	13.17	33.444	25.154	281.9	0.222	5.24	87.9	6.3	0.73	5.6	0.11	0.25	0.27	66	206
71	12.50	12.49	33.471	25.309	267.3	0.235	5.00	82.7	7.7	0.86	7.8	0.08	0.19	0.25	71	205
75	12.30	12.29	33.494	25.365	262.0	0.246	4.86	80.0	8.6	0.92	8.9	0.06	0.17	0.21	75	204
80	11.87	11.86	33.532	25.476	251.5	0.259	4.63	75.6	10.2	1.04	10.9	0.04	0.14	0.18	80	203
100	10.90	10.89	33.616	25.718	228.8	0.307	4.16	66.5	14.2	1.27		0.02	0.06	0.11	100	202
120	10.20	10.19	33.757	25.950	207.1	0.350	3.49	55.0	20.3			0.01	0.02	0.05	121	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 17.0 N	118 48.8 W	13/10/96	0047	UTC	1232 m	320 14 kn	310 05 05	2	1016.8 mb	17.7 c	16.8 c				8/8 SC	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	18.26	18.26	33.501	24.062	384.2	0.008	5.59	103.8	1.5	0.29	0.0	0.00	0.19	0.06	2	224
4	18.26	18.26	33.502	24.063	384.2	0.015	5.59	103.8	1.5	0.29	0.0	0.00	0.19	0.06	4	223
6	18.25	18.25	33.500	24.064	384.2	0.023	5.59	103.8	1.5	0.29	0.0	0.00	0.19	0.06	6	222
8	18.08	18.08	33.491	24.099	380.9	0.031	5.59	103.4	1.5	0.29	0.0	0.00	0.19	0.08	8	221
10	17.99	17.99	33.478	24.111	379.8	0.038	5.62	103.8	1.4	0.30	0.0	0.00	0.21	0.07	10	220
12	18.03	18.03	33.475	24.099	381.1	0.046	5.62	103.9	1.4	0.30	0.0	0.00	0.21	0.07	12	219
14	18.12	18.12	33.485	24.084	382.5	0.054	5.61	103.9	1.4	0.29	0.0	0.00	0.20	0.07	14	218
16	17.70	17.70	33.440	24.152	376.1	0.061	5.65	103.8	1.4	0.30	0.0	0.00	0.24	0.09	16	217
20	17.52	17.52	33.421	24.181	373.5	0.076	5.68	103.9	1.4	0.30	0.0	0.00	0.28	0.10	20	216
24	17.64	17.64	33.430	24.159	375.7	0.091	5.68	104.2	1.4	0.30	0.0	0.00	0.26	0.10	24	215
28	17.31	17.31	33.409	24.222	369.8	0.106	5.75	104.8	1.4	0.31	0.0	0.00	0.31	0.13	28	214
32	16.41	16.40	33.415	24.437	349.4	0.120	5.81	104.0	2.1	0.34	0.1	0.01	0.58	0.17	32	213
37	15.89	15.88	33.412	24.553	338.5	0.138	5.78	102.4	2.9	0.40	0.8	0.06	0.80	0.24	37	212
42	14.54	14.53	33.401	24.840	311.2	0.154	5.68	98.0	3.8	0.51	2.0	0.12	0.68	0.27	42	211
47	14.07	14.06	33.407	24.944	301.5	0.169	5.57	95.1	4.3	0.56	2.9	0.15	0.52	0.25	47	210
52	13.88	13.87	33.416	24.990	297.2	0.184	5.51	93.8	4.7	0.59	3.2	0.16	0.41	0.32	52	209
57	13.68	13.67	33.421	25.035	293.0	0.199	5.45	92.4	5.0	0.62	3.7	0.15	0.38	0.31	57	208
62	13.57	13.56	33.423	25.059	290.8	0.213	5.40	91.3	5.2	0.64	4.2	0.14	0.34	0.31	62	207
67	13.41	13.40	33.430	25.097	287.4	0.228	5.33	89.8	5.6	0.68	4.7	0.13	0.31	0.32	67	206
72	12.18	12.17	33.512	25.402	258.4	0.242	4.79	78.7	8.9	0.93	9.2	0.06	0.17	0.21	72	205
77	11.99	11.98	33.535	25.456	253.4	0.254	4.64	75.9	10.0	1.00	10.5	0.04	0.14	0.18	77	204
82	11.89	11.88	33.554	25.489	250.3	0.267	4.54	74.2	10.7	1.04	11.2	0.03	0.12	0.17	82	203
102	11.02	11.01	33.624	25.703	230.3	0.315	4.12	66.1	14.4	1.27		0.02	0.06	0.10	102	202
122	10.48	10.47	33.827	25.957	206.6	0.359	2.94	46.7	22.2			0.01	0.03	0.04	123	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 17.2 N	118 49.1 W	13/10/96	0411	UTC	1201 m	310 14 kn			1017.3 mb	17.9 c	17.0 c					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	17.85	17.85	33.464	24.134	377.4	0.008	5.62	103.5	1.4	0.29	0.0	0.00	0.17	0.06	2	224
4	17.86	17.86	33.464	24.131	377.7	0.015	5.62	103.5	1.4	0.30	0.0	0.00	0.17	0.06	4	223
6	17.85	17.85	33.465	24.135	377.4	0.023	5.63	103.7	1.4	0.29	0.0	0.00	0.17	0.05	6	222
8	17.86	17.86	33.464	24.131	377.8	0.030	5.62	103.5	1.4	0.30	0.0	0.00	0.18	0.06	8	221
10	17.86	17.86	33.464	24.131	377.8	0.038	5.63	103.7	1.4	0.29	0.0	0.00	0.18	0.05	10	220
12	17.86	17.86	33.464	24.132	377.9	0.045	5.62	103.5	1.4	0.29	0.0	0.00	0.17	0.05	12	219
14	17.86	17.86	33.464	24.132	378.0	0.053	5.62	103.5	1.4	0.29	0.0	0.00	0.17	0.06	14	218
16	17.86	17.86	33.465	24.133	378.0	0.060	5.62	103.5	1.4	0.29	0.0	0.00	0.17	0.05	16	217
20	17.83	17.83	33.463	24.138	377.5	0.076	5.62	103.5	1.4	0.30	0.0	0.00	0.18	0.06	20	216
24	17.66	17.66	33.451	24.171	374.6	0.091	5.63	103.3	1.4	0.30	0.0	0.00	0.19	0.06	24	215
28	17.51	17.51	33.430	24.191	372.8	0.106	5.67	103.7	1.3	0.30	0.0	0.00	0.21	0.07	28	214
32	17.41	17.40	33.423	24.209	371.2	0.120	5.67	103.5	1.3	0.31	0.0	0.00	0.24	0.08	32	213
37	17.10	17.09	33.411	24.274	365.2	0.139	5.80	105.3	1.5	0.32	0.0	0.00	0.32	0.17	37	212
42	15.73	15.72	33.399	24.579	336.2	0.156	5.81	102.6	2.8	0.41	0.8	0.05	0.72	0.27	42	211
47	15.29	15.28	33.411	24.686	326.1	0.173	5.70	99.8	3.5	0.47	1.5	0.12	0.63	0.26	47	210
52	14.32	14.31	33.410	24.894	306.4	0.189	5.66	97.2	4.2	0.54	2.5	0.15				

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 0.8 N	119 14.0 W	13/10/96	0805	UTC	1590 m	310	18 kn			1018.7 mb	18.0 c	17.2 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.93	18.93	33.569	23.947	395.1	0.000	5.55	104.4	1.9	0.25	0.0	0.00	0.20	0.06	0	
1	18.93	18.93	33.569	23.947	395.2	0.004	5.53	104.0	1.9	0.26	0.0	0.00	0.20	0.06	1	224
1	18.93	18.93	33.569	23.947	395.2	0.004	5.55	104.4	1.9	0.25	0.0	0.00	0.20	0.06	1	223
5	18.92	18.92	33.568	23.949	395.1	0.020	5.54	104.2	1.9	0.24	0.0	0.00	0.18	0.05	5	222
10	18.93	18.93	33.567	23.945	395.6	0.040	5.55	104.4	1.9	0.25	0.0	0.00	0.19	0.06	10	221
15	18.93	18.93	33.567	23.946	395.8	0.059	5.54	104.2	1.8	0.25	0.0	0.00	0.25	0.11	15	220
20	18.93	18.93	33.567	23.946	395.9	0.079	5.55	104.4	1.8	0.25	0.0	0.00	0.21	0.07	20	
21	18.93	18.93	33.567	23.946	396.0	0.083	5.55	104.4	1.8	0.25	0.0	0.00	0.20	0.06	21	219
30	18.90	18.89	33.566	23.953	395.6	0.119	5.55	104.4	1.9	0.25	0.0	0.00	0.21	0.07	30	218
44	17.40	17.39	33.414	24.205	372.0	0.172	5.89	107.5	1.9	0.28	0.0	0.00	0.48	0.27	44	217
50 ISL	15.60	15.59	33.376	24.591	335.3	0.194	5.81	102.3	2.9	0.40	1.1	0.08	0.51	0.36	50	
54	14.49	14.48	33.378	24.833	312.2	0.207	5.73	98.7	3.6	0.48	1.8	0.13	0.53	0.41	54	216
64	14.09	14.08	33.386	24.924	303.9	0.237	5.64	96.4	4.1	0.52	2.5	0.17	0.41	0.38	64	215
74	13.76	13.75	33.397	25.001	296.8	0.267	5.56	94.4	4.4	0.55	3.1	0.17	0.33	0.30	74	214
75 ISL	13.66	13.65	33.404	25.027	294.3	0.270	5.51	93.3	4.6	0.57	3.5	0.16	0.31	0.29	75	
85	12.57	12.56	33.499	25.317	266.8	0.298	4.91	81.3	8.0	0.84	8.1	0.04	0.16	0.19	85	213
95	11.82	11.81	33.596	25.535	246.2	0.324	4.32	70.5	11.8	1.06	11.8	0.02	0.10	0.14	95	212
100 ISL	11.45	11.44	33.646	25.643	236.1	0.336	3.98	64.4	14.3	1.21	14.1	0.01	0.07	0.12	100	
109	10.92	10.91	33.725	25.800	221.3	0.357	3.46	55.4	18.3	1.46	17.7	0.01	0.04	0.09	109	211
125	10.63	10.62	33.781	25.895	212.6	0.391	3.17	50.5	20.8	1.61	19.7	0.01	0.04	0.06	126	210
145	10.26	10.24	33.934	26.079	195.5	0.432	2.49	39.4	26.1	1.93	23.6	0.01	0.04	0.05	146	209
150 ISL	10.05	10.03	33.941	26.120	191.6	0.442	2.57	40.4	26.6	1.93	23.9	0.01	0.04	0.05	151	
169	9.34	9.32	33.967	26.258	178.7	0.477	2.89	44.8	28.3	1.92	24.5	0.01	0.02	0.03	170	208
199	9.44	9.42	34.200	26.425	163.6	0.528	1.76	27.4	35.4	2.31	28.2	0.00	0.03	0.04	200	207
200 ISL	9.43	9.41	34.203	26.429	163.3	0.530	1.75	27.2	35.5	2.32	28.3	0.00			201	
228	9.18	9.15	34.244	26.502	156.8	0.575	1.58	24.4	38.7	2.41	29.2	0.00			229	206
250 ISL	8.98	8.95	34.280	26.562	151.4	0.609	1.35	20.8	41.7	2.51	30.1	0.00			251	
268	8.80	8.77	34.303	26.609	147.3	0.636	1.16	17.8	44.3	2.59	30.9	0.00			269	205
300 ISL	8.41	8.38	34.303	26.670	141.9	0.682	0.99	15.0	48.4	2.69	32.2	0.00			302	
318	8.16	8.13	34.293	26.700	139.3	0.707	0.93	14.1	50.8	2.74	33.0	0.00			320	204
377	7.17	7.13	34.248	26.808	129.3	0.786	0.79	11.7	60.9	2.89	36.0	0.00			379	203
400 ISL	7.02	6.98	34.259	26.838	126.7	0.816	0.69	10.2	63.6	2.94	36.7	0.00			402	
437	6.89	6.85	34.288	26.879	123.3	0.862	0.52	7.6	67.2	3.01	37.4	0.00			440	202
500 ISL	6.60	6.55	34.320	26.944	117.9	0.938	0.38	5.5	72.1	3.11	38.5	0.00			503	
516	6.53	6.48	34.329	26.960	116.5	0.957	0.35	5.1	73.4	3.13	38.8	0.00			519	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 51.3 N	119 35.5 W	13/10/96	1819	UTC	1896 m	310	20 kn	310 06 04	1	1020.4 mb	19.0 c	18.2 c	21m	01	4/8	CU
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.87	18.87	33.558	23.953	394.5	0.000	5.53	103.9	1.9	0.24	0.0	0.00	0.21	0.06	0	
2	18.89	18.89	33.560	23.950	394.9	0.008	5.52	103.8	1.9	0.26	0.0	0.00	0.20	0.06	2	224
3 A	18.87	18.87	33.558	23.953	394.6	0.012	5.53	103.9	1.9	0.24	0.0	0.00	0.21	0.06	3	223
4	18.85	18.85	33.555	23.956	394.4	0.016	5.54	104.1	1.9	0.24	0.0	0.00	0.20	0.07	4	222
6	18.85	18.85	33.555	23.956	394.4	0.024	5.54	104.1	1.8	0.25	0.0	0.00	0.20	0.07	6	221
10 ISL	18.69	18.69	33.526	23.974	392.8	0.039	5.54	103.7	1.8	0.25	0.0	0.00	0.20	0.07	10	
15 A	18.49	18.49	33.536	24.032	387.5	0.059	5.55	103.5	1.8	0.25	0.0	0.00	0.21	0.07	15	220
20 ISL	17.73	17.73	33.451	24.153	376.1	0.078	5.67	104.2	1.7	0.26	0.0	0.00	0.24	0.09	20	
29 A	16.22	16.22	33.309	24.399	352.9	0.111	5.92	105.5	1.6	0.30	0.0	0.00	0.33	0.17	29	219
30 ISL	16.10	16.10	33.304	24.423	350.7	0.114	5.93	105.5	1.6	0.30	0.0	0.00	0.34	0.19	30	
43 A	15.14	15.13	33.298	24.632	331.2	0.159	6.04	105.4	2.2	0.34	0.0	0.00	0.48	0.42	43	218
50	15.05	15.04	33.304	24.656	329.0	0.182	5.87	102.2	2.2	0.38	0.3	0.08	0.53	0.42	50	217
57 A	14.38	14.37	33.290	24.789	316.5	0.204	5.86	100.7	3.0	0.45	1.1	0.16	0.33	0.34	57	216
65	13.48	13.47	33.335	25.010	295.7	0.229	5.58	94.1	4.5	0.60	3.5	0.27	0.23	0.25	65	215
73	12.86	12.85	33.380	25.168	280.7	0.252	5.30	88.3	6.0	0.74	6.0	0.12	0.17	0.23	73	214
75 ISL	12.68	12.67	33.402	25.220	275.8	0.257	5.24	87.0	6.4	0.76	6.5	0.09	0.15	0.21	75	
81 A	12.16	12.15	33.471	25.374	261.3	0.274	5.06	83.1	7.6	0.81	7.9	0.03	0.11	0.16	81	213
95	11.55	11.54	33.537	25.539	245.8	0.309	4.65	75.4	10.8	1.00	11.2	0.02	0.07	0.11	95	212
100 ISL	11.29	11.28	33.560	25.605	239.7	0.321	4.51	72.7	12.1	1.08	12.5	0.02	0.06	0.10	100	
110	10.80	10.79	33.604	25.727	228.2	0.345	4.24	67.7	14.6	1.24	15.0	0.01	0.05	0.08	110	211
125	10.34	10.33	33.651	25.844	217.3	0.378	3.94	62.3	17.4	1.40	17.6	0.01	0.03	0.06	126	210
144	9.36	9.34	33.778	26.107	192.5	0.417	3.49	54.0	23.8	1.69	22.0	0.01	0.01	0.02	145	209
150 ISL	9.21	9.19	33.805	26.152	188.3	0.428	3.40	52.5	25.0	1.75	22.8	0.01	0.01	0.02	151	
170	8.92	8.90	33.874	26.252	179.1	0.465	3.18	48.8	28.2	1.88	24.6	0.01	0.00	0.02	171	208
199	8.42	8.40	33.971	26.406	164.9	0.515	2.95	44.8	33.4	2.01	26.7	0.00	0.00	0.02	200	207
200 ISL	8.41	8.39	33.973	26.409	164.6	0.517	2.94	44.6	33.6	2.01	26.8	0.00			201	
229	8.12	8.10	34.027	26.496	156.9	0.563	2.61	39.3	38.1	2.15	28.6	0.00			230	206
250 ISL	7.88	7.85	34.063	26.560	151.1	0.596	2.32	34.8	41.9	2.27	30.1	0.00			251	
267	7.68	7.65	34.090	26.610	146.5	0.621	2.08	31.0	45.2	2.38	31.3	0.00			268	205
300 ISL	7.29	7.26	34.131	26.698	138.4	0.668	1.59	23.5	52.5	2.57	33.7	0.00			302	
318	7.09	7.06	34.149	26.740	134.6	0.692	1.35	19.9	56.5	2.67	34.9	0.00			320	204
378	6.55	6.52	34.198	26.853	124.6	0.770	0.84	12.2	66.8	2.90	37.7	0.00			380	203
400 ISL	6.47	6.43	34.214	26.876	122.6	0.797	0.73	10.6	68.7	2.95	38.2	0.00			403	
438	6.38	6.34	34.240	26.909	120.0	0.844	0.60	8.7	71.3	3.01	38.7	0.00			441	202
500 ISL	6.08	6.04	34.279	26.979</												

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
31 30.6 N	120 14.4 W	14/10/96	0010 UTC	3929 m	300 15 kn	310 04 05	1	1019.5 mb	19.2 c	17.7 c	14m 02	4/8	CI			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	16.69	16.69	33.422	24.377	354.1	0.000	5.84	105.2	1.6	0.30	0.0	0.00	0.35	0.12	0	
1	16.69	16.69	33.422	24.377	354.2	0.004	5.84	105.2	1.6	0.30	0.0	0.00	0.35	0.12	1	223
2	16.69	16.69	33.421	24.376	354.3	0.007	5.84	105.2	1.6	0.30	0.0	0.00	0.35	0.12	2	224
4	16.69	16.69	33.421	24.376	354.3	0.014	5.84	105.2	1.5	0.30	0.0	0.00	0.35	0.12	4	222
7	16.69	16.69	33.424	24.379	354.2	0.025	5.83	105.0	1.5	0.30	0.0	0.00	0.35	0.12	7	221
10	16.67	16.67	33.419	24.380	354.2	0.035	5.84	105.1	1.5	0.30	0.0	0.00	0.36	0.12	10	220
16	16.70	16.70	33.422	24.375	354.8	0.057	5.83	105.0	1.5	0.30	0.0	0.00	0.34	0.12	16	219
20	16.66	16.66	33.421	24.384	354.1	0.071	5.83	104.9	1.5	0.30	0.0	0.00	0.35	0.12	20	218
30 ISL	16.18	16.18	33.469	24.531	340.4	0.106	5.83	103.9	1.8	0.33	0.0	0.02	0.71	0.40	30	
31	16.13	16.13	33.481	24.552	338.4	0.109	5.83	103.9	1.9	0.33	0.0	0.02	0.74	0.43	31	217
40	13.98	13.97	33.097	24.723	322.3	0.139	5.87	99.9	2.4	0.45	1.1	0.19	0.56	0.46	40	216
50	12.96	12.95	33.064	24.903	305.3	0.170	5.68	94.6	3.6	0.58	3.2	0.37	0.28	0.26	50	215
60	12.23	12.22	33.188	25.141	282.9	0.200	5.34	87.7	6.1	0.76	6.5	0.02	0.12	0.14	60	214
71	11.79	11.78	33.389	25.380	260.4	0.229	4.80	78.2	9.9	1.02	10.8	0.02	0.07	0.11	71	213
75 ISL	11.46	11.45	33.453	25.490	250.0	0.240	4.56	73.8	11.8	1.14	12.7	0.02	0.06	0.10	75	
85	10.68	10.67	33.585	25.733	227.1	0.263	4.03	64.1	16.2	1.38	16.8	0.01	0.04	0.07	85	212
100	10.37	10.36	33.663	25.847	216.4	0.297	3.84	60.7	18.2	1.44	18.2	0.01	0.03	0.05	100	211
120	9.76	9.75	33.740	26.011	201.2	0.338	3.67	57.3	21.0	1.57	20.3	0.01	0.01	0.04	121	210
125 ISL	9.62	9.61	33.764	26.053	197.3	0.348	3.60	56.0	22.0	1.62	21.0	0.01	0.01	0.04	126	
140	9.23	9.21	33.840	26.176	185.9	0.377	3.37	52.0	25.5	1.76	23.0	0.01	0.00	0.03	141	209
150 ISL	9.03	9.01	33.899	26.254	178.6	0.395	3.21	49.4	27.9	1.85	24.1	0.01	0.00	0.03	151	
170	8.73	8.71	33.996	26.378	167.2	0.430	2.90	44.3	32.1	1.99	26.0	0.01	0.00	0.02	171	208
199	8.49	8.47	34.022	26.435	162.2	0.478	2.59	39.4	34.9	2.11	27.6	0.01	0.00	0.03	200	207
200 ISL	8.48	8.46	34.024	26.438	161.9	0.479	2.58	39.2	35.0	2.11	27.7	0.01			201	
229	8.19	8.17	34.080	26.527	153.9	0.525	2.31	34.9	39.8	2.24	29.3	0.01			230	206
250 ISL	7.93	7.90	34.110	26.589	148.3	0.557	2.03	30.5	43.7	2.36	30.7	0.01			251	
269	7.68	7.65	34.132	26.643	143.4	0.585	1.76	26.3	47.4	2.47	32.0	0.01			271	205
300 ISL	7.31	7.28	34.164	26.721	136.3	0.628	1.36	20.1	53.9	2.65	34.0	0.01			302	
318	7.11	7.08	34.180	26.762	132.6	0.652	1.15	16.9	57.5	2.74	35.1	0.01			320	204
378	6.65	6.62	34.225	26.861	123.9	0.729	0.72	10.5	66.4	2.93	37.4	0.00			380	203
400 ISL	6.49	6.45	34.241	26.895	120.9	0.756	0.60	8.7	69.4	2.99	38.2	0.00			403	
438	6.24	6.20	34.267	26.948	116.2	0.801	0.45	6.5	74.4	3.07	39.3	0.00			441	202
500 ISL	5.86	5.82	34.290	27.015	110.3	0.871	0.36	5.2	81.5	3.16	40.6	0.00			503	
517	5.75	5.71	34.297	27.034	108.6	0.890	0.33	4.7	83.5	3.18	40.9	0.00			521	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
31 10.8 N	120 55.2 W	14/10/96	0611 UTC	3828 m	330 21 kn			1020.6 mb	18.9 c	17.9 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.40	18.40	33.417	23.963	393.6	0.000	5.56	103.5	1.8	0.27	0.0	0.00	0.14	0.04	0	
2	18.40	18.40	33.417	23.963	393.7	0.008	5.56	103.5	1.8	0.27	0.0	0.00	0.14	0.04	2	223
2	18.40	18.40	33.417	23.963	393.7	0.008	5.55	103.3	1.8	0.27	0.0	0.00	0.14	0.04	2	224
6	18.40	18.40	33.417	23.963	393.8	0.024	5.55	103.3	1.8	0.27	0.0	0.00	0.14	0.04	6	222
10	18.40	18.40	33.417	23.963	393.9	0.039	5.55	103.3	1.8	0.27	0.0	0.00	0.14	0.04	10	221
16	18.41	18.41	33.416	23.960	394.4	0.063	5.55	103.3	1.8	0.27	0.0	0.00	0.14	0.05	16	220
20	18.41	18.41	33.415	23.960	394.6	0.079	5.54	103.1	1.8	0.26	0.0	0.00	0.14	0.04	20	219
30	18.40	18.39	33.417	23.964	394.5	0.118	5.55	103.3	1.8	0.26	0.0	0.00	0.14	0.04	30	218
45	17.66	17.65	33.357	24.099	382.1	0.177	5.71	104.7	1.7	0.29	0.0	0.00	0.30	0.17	45	217
50 ISL	16.76	16.75	33.325	24.288	364.2	0.195	5.81	104.7	1.8	0.32	0.1	0.02	0.39	0.29	50	
56	15.65	15.64	33.300	24.521	342.1	0.216	5.89	103.8	2.1	0.37	0.4	0.06	0.45	0.41	56	216
65	14.73	14.72	33.286	24.712	324.2	0.246	5.82	100.7	2.7	0.43	0.9	0.15	0.35	0.34	65	215
75	13.37	13.36	33.358	25.050	292.1	0.277	5.46	91.9	5.0	0.63	4.2	0.20	0.18	0.24	75	214
85	13.07	13.06	33.388	25.133	284.4	0.306	5.28	88.3	5.9	0.72	5.7	0.13	0.17	0.21	85	213
94	12.76	12.75	33.426	25.224	276.0	0.331	5.09	84.6	7.3	0.81	7.5	0.06	0.14	0.20	94	212
100 ISL	12.59	12.58	33.442	25.270	271.8	0.348	5.01	83.0	7.9	0.84	8.1	0.04	0.13	0.18	100	
110	12.26	12.25	33.467	25.353	264.1	0.374	4.87	80.1	8.9	0.91	9.1	0.02	0.11	0.15	110	211
124	11.54	11.52	33.529	25.536	246.8	0.410	4.47	72.4	11.9	1.12	12.7	0.02	0.07	0.11	125	210
125 ISL	11.48	11.46	33.536	25.552	245.3	0.413	4.44	71.9	12.1	1.13	12.9	0.02	0.07	0.11	126	
145	10.35	10.33	33.695	25.877	214.7	0.459	3.83	60.6	17.3	1.40	17.5	0.01	0.04	0.07	146	209
150 ISL	10.12	10.10	33.726	25.940	208.7	0.469	3.72	58.5	18.8	1.47	18.6	0.01	0.03	0.06	151	
169	9.40	9.38	33.825	26.137	190.2	0.507	3.42	53.0	24.3	1.72	22.3	0.00	0.01	0.04	170	208
199	8.76	8.74	33.930	26.322	173.0	0.562	3.16	48.3	29.9	1.90	25.1	0.00	0.00	0.02	200	207
200 ISL	8.74	8.72	33.931	26.326	172.7	0.563	3.16	48.3	30.0	1.90	25.1	0.00			201	
229	8.18	8.16	33.977	26.447	161.4	0.612	3.15	47.5	33.8	1.98	26.3	0.00			230	206
250 ISL	8.15	8.12	34.072	26.527	154.3	0.645	2.52	38.0	39.0	2.20	28.6	0.00			251	
269	8.13	8.10	34.145	26.587	148.9	0.674	1.86	28.1	43.8	2.42	30.8	0.00			270	205
300 ISL	7.96	7.93	34.198	26.655	143.0	0.719	1.43	21.5	47.9	2.56	32.3	0.00			302	
318	7.79	7.76	34.207	26.687	140.2	0.744	1.32	19.8	50.0	2.61	32.8	0.00			320	204
378	6.79	6.75	34.172	26.800	129.7	0.825	1.10	16.1	61.4	2.80	36.1	0.00			380	203
400 ISL	6.61	6.57	34.190	26.839	126.3	0.854	0.94	13.7	65.0	2.88	37.0	0.00			402	
437	6.40	6.36	34.229	26.897	121.1	0.899	0.67	9.7	70.2	3.00	38.3	0.00			440	202
500 ISL	6.00	5.96	34.259	26.973	114.4	0.974	0.52	7.5	75.8	3.08	39.5	0.00			503	
515	5.91	5.87	34.266	26.990	112.9	0.991	0.49	7.0	77.1	3.10	39.8	0.00			518	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
30 51.1 N	121 36.5 W	14/10/96	1358	UTC	4160 m	330	21 kn			1020.0 mb	18.5 c	16.9 c				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	18.40	18.40	33.413	23.960	393.9	0.000	5.57	103.7	1.9	0.26	0.0	0.00	0.15	0.05	0	
2	18.40	18.40	33.413	23.960	394.0	0.008	5.57	103.7	1.9	0.26	0.0	0.00	0.15	0.05	2	223
2	18.39	18.39	33.413	23.962	393.7	0.008	5.55	103.3	2.0	0.26	0.0	0.00	0.15	0.05	2	224
5	18.40	18.40	33.413	23.960	394.0	0.020	5.58	103.8	2.0	0.26	0.0	0.00	0.14	0.05	5	222
10	18.40	18.40	33.413	23.960	394.2	0.039	5.54	103.1	1.9	0.25	0.0	0.00	0.15	0.05	10	221
15	18.40	18.40	33.413	23.960	394.4	0.059	5.58	103.8	1.9	0.25	0.0	0.00	0.14	0.05	15	220
20	18.40	18.40	33.412	23.960	394.6	0.079	5.57	103.7	1.9	0.25	0.0	0.00	0.14	0.04	20	219
30	18.40	18.39	33.411	23.959	395.0	0.118	5.56	103.5	1.9	0.25	0.0	0.00	0.14	0.04	30	218
45	17.70	17.69	33.392	24.117	380.5	0.176	5.57	102.2	1.9	0.24	0.0	0.00	0.15	0.05	45	217
50 ISL	16.81	16.80	33.283	24.244	368.4	0.195	5.81	104.8	1.9	0.25	0.0	0.00	0.19	0.10	50	
55	15.87	15.86	33.179	24.379	355.6	0.213	6.04	106.8	2.0	0.27	0.0	0.00	0.24	0.16	55	216
65	14.72	14.71	33.113	24.580	336.6	0.248	6.08	105.0	2.2	0.29	0.0	0.00	0.32	0.23	65	215
75	13.81	13.80	33.126	24.781	317.7	0.281	5.93	100.6	2.9	0.39	0.7	0.17	0.35	0.28	75	214
85	13.18	13.17	33.106	24.893	307.2	0.312	5.80	97.1	3.4	0.47	1.9	0.27	0.28	0.21	85	213
94	12.95	12.94	33.316	25.101	287.6	0.339	5.57	92.9	4.8	0.53	3.3	0.06	0.18	0.18	94	212
100 ISL	12.55	12.54	33.363	25.216	276.8	0.356	5.41	89.5	6.0	0.64	5.2	0.04	0.13	0.16	100	
110	11.81	11.80	33.386	25.374	261.9	0.383	5.15	83.9	8.1	0.84	8.6	0.01	0.07	0.13	110	211
124	11.16	11.14	33.462	25.552	245.1	0.418	4.84	77.8	10.8	0.95	11.0	0.01	0.06	0.09	125	210
125 ISL	11.11	11.09	33.472	25.569	243.6	0.420	4.79	76.9	11.2	0.97	11.4	0.01	0.06	0.09	126	
144	10.25	10.23	33.657	25.864	215.8	0.464	3.92	61.8	18.4	1.42	18.3	0.00	0.02	0.05	145	209
150 ISL	10.04	10.02	33.686	25.922	210.3	0.477	3.86	60.6	19.5	1.48	19.3	0.00	0.02	0.05	151	
169	9.47	9.45	33.748	26.066	197.0	0.516	3.68	57.1	22.1	1.57	21.1	0.00	0.01	0.04	170	208
197	8.71	8.69	33.876	26.287	176.3	0.568	3.49	53.3	28.0	1.75	24.0	0.00	0.00	0.03	198	207
200 ISL	8.66	8.64	33.884	26.301	175.0	0.573	3.48	53.1	28.4	1.76	24.2	0.00			201	
228	8.30	8.28	33.943	26.403	165.7	0.621	3.36	50.8	32.0	1.86	25.5	0.00			229	206
250 ISL	7.95	7.92	33.984	26.487	157.9	0.656	3.10	46.5	36.3	1.98	27.3	0.00			251	
268	7.68	7.65	34.015	26.551	152.0	0.684	2.81	41.9	40.3	2.09	28.9	0.00			269	205
300 ISL	7.42	7.39	34.073	26.634	144.6	0.732	2.16	32.0	47.0	2.32	31.7	0.00			302	
319	7.31	7.28	34.103	26.674	141.1	0.759	1.79	26.5	50.8	2.45	33.2	0.00			321	204
379	6.78	6.74	34.154	26.787	130.9	0.840	1.17	17.1	61.4	2.72	36.4	0.00			381	203
400 ISL	6.62	6.58	34.175	26.825	127.5	0.868	0.98	14.3	65.3	2.80	37.4	0.00			402	
437	6.34	6.30	34.209	26.889	121.8	0.914	0.71	10.3	71.7	2.93	38.8	0.00			440	202
500 ISL	5.90	5.86	34.239	26.969	114.6	0.988	0.53	7.6	79.5	3.03	40.3	0.00			503	
515	5.79	5.75	34.246	26.989	112.8	1.005	0.49	7.0	81.3	3.05	40.7	0.00			518	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

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 15.5 W	14/10/96	1837	UTC	4274 m	340	23 kn	330 06 06	1	1022.8 mb	19.9 c	18.0 c	33m	01	1/8	CU
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	19.66	19.66	33.659	23.829	406.4	0.000	5.41	103.3	2.1	0.21	0.0	0.00	0.08	0.03	0	
2	19.65	19.65	33.658	23.831	406.3	0.008	5.43	103.6	2.1	0.21	0.0	0.00	0.08	0.03	2	224
3 A	19.66	19.66	33.659	23.829	406.5	0.012	5.41	103.2	2.1	0.21	0.0	0.00	0.08	0.03	3	223
5	19.65	19.65	33.658	23.831	406.4	0.020	5.42	103.4	2.1	0.21	0.0	0.00	0.08	0.02	5	222
10 ISL	19.66	19.66	33.660	23.830	406.6	0.041	5.41	103.2	2.1	0.21	0.0	0.00	0.08	0.02	10	
11	19.66	19.66	33.660	23.830	406.7	0.045	5.41	103.2	2.1	0.21	0.0	0.00	0.08	0.02	11	221
14	19.66	19.66	33.663	23.833	406.5	0.057	5.40	103.1	2.1	0.21	0.0	0.00	0.08	0.02	14	220
20 ISL	19.72	19.72	33.682	23.832	406.8	0.081	5.41	103.4	2.1	0.20	0.0	0.00	0.08	0.03	20	
21 A	19.73	19.73	33.686	23.832	406.8	0.085	5.41	103.4	2.1	0.20	0.0	0.00	0.08	0.03	21	219
30 ISL	19.81	19.80	33.752	23.862	404.3	0.122	5.40	103.4	2.1	0.19	0.0	0.00	0.09	0.03	30	
34	19.84	19.83	33.780	23.876	403.2	0.138	5.39	103.3	2.1	0.18	0.0	0.00	0.09	0.03	34	218
44 A	19.86	19.85	33.794	23.882	403.0	0.178	5.37	102.9	2.1	0.18	0.0	0.00	0.09	0.03	44	217
50 ISL	19.87	19.86	33.801	23.885	402.9	0.203	5.38	103.1	2.1	0.18	0.0	0.00	0.09	0.03	50	
56	19.88	19.87	33.808	23.888	402.8	0.227	5.38	103.2	2.1	0.18	0.0	0.00	0.10	0.03	56	216
69 A	19.32	19.31	33.766	24.001	392.5	0.278	5.45	103.4	2.1	0.18	0.0	0.00	0.13	0.05	69	215
75 ISL	17.79	17.78	33.580	24.240	369.8	0.301	5.75	105.8	2.2	0.19	0.0	0.00	0.18	0.08	75	
77	17.27	17.26	33.529	24.326	361.6	0.309	5.85	106.6	2.2	0.19	0.0	0.00	0.19	0.09	77	214
91 A	16.65	16.64	33.715	24.614	334.5	0.357	5.72	103.1	2.4	0.21	0.0	0.00	0.20	0.23	91	213
100 ISL	15.91	15.89	33.701	24.773	319.6	0.387	5.66	100.5	2.8	0.25	0.0	0.02	0.24	0.24	100	
103	15.64	15.62	33.686	24.822	314.9	0.396	5.64	99.6	2.9	0.26	0.0	0.03	0.25	0.24	103	212
114	14.81	14.79	33.661	24.985	299.6	0.430	5.55	96.4	3.2	0.31	0.3	0.18	0.21	0.23	114	211
125 A	14.16	14.14	33.638	25.106	288.4	0.462	5.42	92.9	4.1	0.40	1.6	0.11	0.17	0.20	125	210
139	12.99	12.97	33.689	25.384	262.1	0.501	5.08	85.0	6.5	0.61	5.7	0.02	0.09	0.13	140	209
150 ISL	12.26	12.24	33.693	25.529	248.4	0.529	4.90	80.7	8.0	0.74	8.0	0.02	0.06	0.10	151	
163	11.48	11.46	33.687	25.670	235.0	0.560	4.70	76.1	10.2	0.90	10.5	0.01	0.05	0.07	164	208
193	9.58	9.56	33.753	26.052	198.8	0.625	4.08	63.4	19.8	1.44	18.9	0.00	0.01	0.03	194	207
200 ISL	9.33	9.31	33.777	26.112	193.2	0.639	4.00	61.9	21.4	1.51	20.0	0.00			201	
229	8.65	8.63	33.876	26.297	175.9	0.693	3.73	56.8	27.3	1.71	23.2	0.00			230	206
250 ISL	8.25	8.22	33.931	26.401	166.2	0.729	3.46	52.3	31.6	1.85	25.2	0.00			251	
269	7.95	7.92	33.970	26.477	159.3	0.760	3.20	48.0	35.5	1.97	26.9	0.00			270	205
300 ISL	7.48	7.45	34.007	26.574	150.3	0.808	2.79	41.4	41.9	2.16	29.5	0.00			302	
318	7.24	7.21	34.022	26.620	146.1	0.834	2.54	37.5	45.6	2.26	30.9	0.00			320	204
377	6.71	6.68	34.082	26.740	135.3	0.917	1.67	24.4	57.5	2.60	35.1	0.00			379	203
400 ISL	6.49	6.45	34.101	26.784	131.2	0.948	1.40	20.3	62.1	2.71	36.4	0.00			402	
438	6.13	6.09	34.130	26.854	124.9	0.997	1.05	15.1	69.3	2.87	38.2	0.00			441	202
500 ISL	5.70	5.66	34													

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
30 11.0 N	122 54.9 W	15/10/96	0153 UTC	3983 m	340 25 kn	340 09 05	0	1021.3 mb	19.1 c	16.9 c		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	19.80	19.80	33.689	23.815	407.7	0.000	5.39	103.2	2.0	0.21	0.0	0.00	0.07	0.02	0	
2	19.80	19.80	33.689	23.815	407.7	0.008	5.39	103.2	2.0	0.21	0.0	0.00	0.07	0.02	2	223
3	19.80	19.80	33.689	23.816	407.7	0.012	5.38	103.0	2.0	0.21	0.0	0.00	0.07	0.02	3	224
6	19.80	19.80	33.687	23.814	408.0	0.024	5.38	103.0	2.0	0.21	0.0	0.00	0.07	0.02	6	222
10	19.80	19.80	33.689	23.816	408.0	0.041	5.38	103.0	2.0	0.20	0.0	0.00	0.07	0.02	10	221
16	19.81	19.81	33.689	23.814	408.4	0.065	5.39	103.2	2.0	0.20	0.0	0.00	0.07	0.01	16	220
20 ISL	19.82	19.82	33.690	23.812	408.7	0.082	5.39	103.2	2.0	0.20	0.0	0.00	0.07	0.01	20	
30 ISL	19.83	19.82	33.693	23.812	409.1	0.123	5.39	103.2	2.0	0.20	0.0	0.00	0.07	0.02	30	
31	19.83	19.82	33.693	23.812	409.1	0.127	5.39	103.2	2.0	0.20	0.0	0.00	0.07	0.02	31	219
45	20.07	20.06	33.866	23.882	403.0	0.183	5.37	103.4	2.0	0.18	0.0	0.00	0.09	0.02	45	218
50 ISL	20.08	20.07	33.871	23.883	403.1	0.204	5.36	103.2	2.0	0.17	0.0	0.00	0.09	0.03	50	
52	20.08	20.07	33.873	23.885	403.0	0.212	5.36	103.2	2.0	0.17	0.0	0.00	0.09	0.03	52	217
60	19.49	19.48	33.798	23.982	394.0	0.244	5.52	105.1	2.0	0.18	0.0	0.00	0.17	0.06	60	216
75	17.95	17.94	33.655	24.259	368.0	0.301	5.79	107.0	2.3	0.18	0.0	0.00	0.20	0.09	75	215
85	16.83	16.82	33.589	24.476	347.6	0.336	5.81	105.0	2.4	0.21	0.0	0.00	0.22	0.18	85	214
96	16.27	16.25	33.616	24.626	333.5	0.374	5.75	102.8	2.5	0.22	0.0	0.00	0.23	0.25	96	213
100 ISL	15.88	15.86	33.606	24.707	325.9	0.387	5.73	101.6	2.7	0.24	0.0	0.01	0.23	0.25	100	
105	15.40	15.38	33.594	24.805	316.6	0.403	5.69	99.9	3.0	0.27	0.0	0.03	0.22	0.25	105	212
114	14.90	14.88	33.613	24.929	305.0	0.431	5.61	97.6	3.2	0.30	0.2	0.15	0.19	0.24	114	211
125	14.27	14.25	33.631	25.077	291.1	0.464	5.47	93.9	3.8	0.37	1.0	0.16	0.16	0.19	125	210
140	13.43	13.41	33.668	25.279	272.1	0.506	5.22	88.1	5.4	0.52	4.0	0.02	0.10	0.14	140	209
150 ISL	12.71	12.69	33.689	25.439	257.0	0.533	5.02	83.5	7.0	0.66	6.5	0.02	0.07	0.10	150	
164	11.68	11.66	33.715	25.655	236.5	0.567	4.74	77.1	9.9	0.88	10.1	0.01	0.04	0.06	164	208
195	9.91	9.89	33.728	25.978	206.0	0.636	4.21	65.9	17.7	1.34	17.2	0.00	0.01	0.02	195	207
200 ISL	9.72	9.70	33.742	26.021	202.0	0.646	4.15	64.7	18.8	1.39	18.0	0.00			200	
229	8.88	8.86	33.842	26.234	181.9	0.702	3.85	59.0	24.9	1.63	21.9	0.00			229	206
250 ISL	8.38	8.35	33.910	26.365	169.7	0.739	3.58	54.2	29.7	1.79	24.3	0.00			250	
269	8.00	7.97	33.961	26.462	160.7	0.770	3.32	49.9	34.2	1.93	26.2	0.00			269	205
300 ISL	7.51	7.48	34.006	26.569	150.8	0.818	2.87	42.6	41.2	2.14	29.0	0.00			300	
318	7.29	7.26	34.022	26.613	146.8	0.845	2.60	38.4	45.2	2.25	30.5	0.00			318	204
377	6.74	6.71	34.079	26.733	135.9	0.928	1.73	25.3	57.1	2.57	34.8	0.00			377	203
400 ISL	6.55	6.51	34.102	26.777	132.0	0.959	1.45	21.1	61.4	2.69	36.1	0.00			400	
438	6.26	6.22	34.138	26.844	126.0	1.008	1.07	15.5	67.9	2.86	37.9	0.00			438	202
500 ISL	5.85	5.81	34.178	26.927	118.5	1.084	0.75	10.7	77.1	3.01	39.9	0.00			500	
516	5.75	5.71	34.189	26.949	116.6	1.103	0.67	9.6	79.5	3.05	40.4	0.00			516	201

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
29 50.8 N	123 35.1 W	15/10/96	0813 UTC	4114 m	350 28 kn			1021.7 mb	18.7 c	16.2 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db	
0 ISL	20.28	20.28	33.866	23.825	406.8	0.000	5.36	103.6	2.1	0.18	0.0	0.00	0.08	0.02	0	
2	20.28	20.28	33.866	23.825	406.8	0.008	5.36	103.6	2.1	0.18	0.0	0.00	0.08	0.02	2	223
3	20.28	20.28	33.866	23.825	406.9	0.012	5.33	103.0	2.1	0.19	0.0	0.00	0.08	0.02	3	224
6	20.28	20.28	33.867	23.826	406.9	0.024	5.35	103.4	2.1	0.18	0.0	0.00	0.08	0.02	6	222
10 ISL	20.28	20.28	33.866	23.825	407.1	0.041	5.32	102.8	2.1	0.18	0.0	0.00	0.08	0.02	10	
11	20.28	20.28	33.866	23.825	407.1	0.045	5.32	102.8	2.1	0.18	0.0	0.00	0.08	0.02	11	221
15	20.28	20.28	33.866	23.825	407.3	0.061	5.35	103.4	2.1	0.18	0.0	0.00	0.08	0.02	15	220
20	20.29	20.29	33.867	23.824	407.6	0.081	5.36	103.6	2.1	0.18	0.0	0.00	0.08	0.02	20	219
30 ISL	20.29	20.28	33.868	23.825	407.9	0.122	5.36	103.6	2.1	0.18	0.0	0.00	0.08	0.02	30	
31	20.29	20.28	33.868	23.825	407.9	0.126	5.36	103.6	2.1	0.18	0.0	0.00	0.08	0.02	31	218
45	20.29	20.28	33.869	23.826	408.3	0.183	5.32	102.8	2.1	0.18	0.0	0.00	0.08	0.02	45	217
50 ISL	20.25	20.24	33.884	23.849	406.4	0.204	5.34	103.2	2.1	0.18	0.0	0.00	0.09	0.03	50	
59	20.18	20.17	33.910	23.887	403.1	0.240	5.42	104.6	2.1	0.17	0.0	0.00	0.11	0.04	59	216
75 ISL	17.81	17.80	33.594	24.246	369.2	0.302	5.80	106.8	2.2	0.18	0.0	0.00	0.17	0.07	75	
76	17.65	17.64	33.580	24.274	366.6	0.306	5.82	106.8	2.2	0.18	0.0	0.00	0.17	0.07	76	215
85	17.17	17.16	33.668	24.456	349.5	0.338	5.81	105.7	2.3	0.19	0.0	0.00	0.21	0.14	85	214
96	16.26	16.24	33.615	24.628	333.4	0.375	5.75	102.8	2.5	0.22	0.0	0.00	0.21	0.23	96	213
100 ISL	15.96	15.94	33.645	24.719	324.7	0.389	5.71	101.5	2.8	0.24	0.0	0.02	0.22	0.25	100	
105	15.58	15.56	33.684	24.834	313.9	0.405	5.65	99.7	3.1	0.27	0.0	0.06	0.23	0.27	105	212
115	14.66	14.64	33.659	25.016	296.7	0.435	5.56	96.2	3.4	0.32	0.4	0.18	0.20	0.22	115	211
124	14.01	13.99	33.657	25.152	283.9	0.461	5.42	92.6	4.1	0.40	1.7	0.08	0.14	0.19	124	210
125 ISL	13.95	13.93	33.660	25.166	282.5	0.464	5.41	92.3	4.2	0.41	1.9	0.07	0.13	0.19	125	
138	13.27	13.25	33.705	25.340	266.2	0.500	5.21	87.7	5.6	0.54	4.3	0.02	0.08	0.13	138	209
150 ISL	12.44	12.42	33.694	25.495	251.6	0.531	4.97	82.2	7.6	0.71	7.2	0.02	0.03	0.08	150	
163	11.52	11.50	33.674	25.653	236.7	0.563	4.71	76.4	10.3	0.92	10.5	0.01	0.00	0.03	163	208
194	9.97	9.95	33.716	25.959	207.8	0.631	4.22	66.2	17.5	1.34	17.2	0.00	0.01	0.03	194	207
200 ISL	9.75	9.73	33.734	26.009	203.1	0.644	4.15	64.8	18.8	1.40	18.2	0.00			200	
230	8.89	8.87	33.837	26.229	182.5	0.702	3.79	58.1	25.3	1.67	22.2	0.00			230	206
250 ISL	8.39	8.36	33.908	26.362	170.0	0.737	3.50	53.0	30.3	1.83	24.6	0.00			250	
268	8.03	8.00	33.963	26.459	160.9	0.767	3.24	48.7	34.6	1.96	26.5	0.00			268	205
300 ISL	7.67	7.64	34.005	26.545	153.2	0.817	2.92	43.5	39.6	2.10	28.5	0.00			300	
317	7.53	7.50	34.015	26.573	150.7	0.843	2.76	41.0	42.1	2.17	29.4	0.00			317	204
378	6.79	6.75	34.063	26.714	137.8	0.931	1.92	28.1	55.1	2.52	34.0	0.00			378	203
400 ISL	6.57	6.53	34.086	26.762	133.4	0.961	1.61	23.4	59.9	2.64	35.5	0.00			400	
436	6.24	6.20	34.125	26.836	126.7	1.007	1.16	16.7	67.3	2.83	37.7	0.				

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
35 1.2 N	120 55.1 W	1/11/96	1849 UTC	9 m	08	1145 - 1740 PST	1148 PST	1736 PST	561.4 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	14.76	33.507	24.874	6.50	112.7	0.6	0.28	0.1	0.01	4.15	1.28	71. A	26.0	27.8	26.9	0.35
3	14.74	33.507	24.878	6.49	112.5	0.7	0.28	0.1	0.01	4.27	1.22					
6	14.63	33.506	24.901	6.51	112.6	0.7	0.29	0.1	0.01	3.76	1.46	36.	29.3	27.9	28.6	0.40
13	14.54	33.505	24.920	6.34	109.4	1.0	0.32	0.2	0.02	4.34	1.88	11.	25.3	26.5	25.9	0.40
15	14.53	33.506	24.922	6.28	108.4	1.1	0.31	0.2	0.02	4.45	1.96					
18	14.48	33.508	24.935	6.16	106.2	1.2	0.36	0.4	0.02	4.45	1.79	4.6	14.2	15.7	14.9	0.27
25	14.37	33.509	24.959	5.95	102.3	1.8	0.42	0.9	0.04	4.39	1.66	1.4	5.8	5.9	5.9	0.15
35	13.51	33.508	25.136	5.69	96.1	4.6	0.62	3.3	0.13	2.89	1.30	0.26	0.27	0.36	0.31	0.09

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 3.1 N	122 56.6 W	31/10/96	1758 UTC	17 m	04	1151 - 1745 PST	1156 PST	1743 PST	271.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	15.42	33.228	24.515	5.95	104.4	1.9	0.36	0.2	0.03	0.70	0.21	83. A	11.4	11.4	11.4	0.10
3	15.40	33.229	24.520	5.94	104.1	1.9	0.35	0.2	0.03	0.69	0.21					
7	15.41	33.230	24.519	5.94	104.2	1.9	0.35	0.2	0.03	0.61	0.17					
12	15.35	33.232	24.534	5.95	104.2	1.9	0.35	0.2	0.03	0.64	0.19	34.	9.6	10.2	9.9	0.12
15	15.32	33.236	24.544	5.94	104.0	1.9	0.36	0.2	0.04	0.68	0.20					
23	14.98	33.290	24.660	5.94	103.3	1.9	0.35	0.2	0.04	0.65	0.17	13.	4.8	4.6	4.7	0.10
35	13.42	33.211	24.925	5.90	99.3	2.6	0.50	1.8	0.19	0.60	0.33	4.2	2.2	2.4	2.3	0.05
47	11.99	33.087	25.107	5.57	90.9	5.3	0.80	6.3	0.19	0.27	0.23	1.4	0.40	0.42	0.41	0.04
56	11.74	33.146	25.200	5.44	88.4	6.4	0.89	8.0	0.06	0.22	0.18					
66	11.02	33.236	25.400	5.02	80.3	9.8	1.06	11.1	0.04	0.13	0.12	0.26	0.00	0.00	0.00	0.04

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 49.1 N	121 50.4 W	29/10/96	1837 UTC	17 m	02	1148 - 1750 PST	1151 PST	1748 PST	118.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	16.44	33.126	24.207	5.79	103.6	1.5	0.32	0.0	0.01	0.35	0.14	83. A	5.6	5.5	5.6	0.10
5	16.45	33.129	24.207	5.80	103.8	1.5	0.32	0.0	0.01	0.34	0.16					
6	16.44	33.129	24.210	5.80	103.7	1.5	0.32	0.0	0.01	0.36	0.16					
11	16.45	33.129	24.208	5.79	103.6	1.5	0.32	0.0	0.01	0.34	0.14	37.	4.0	3.9	3.9	0.07
15	16.47	33.129	24.203	5.79	103.6	1.5	0.32	0.0	0.01	0.38	0.12					
24	16.33	33.135	24.240	5.82	103.9	1.5	0.33	0.0	0.01	0.40	0.19	11.	2.0	2.1	2.0	0.08
35	16.02	33.137	24.313	5.86	103.9	1.5	0.35	0.1	0.01	0.51	0.28	4.2	0.77	0.88	0.82	0.07
46	15.06	33.119	24.511	5.95	103.5	1.7	0.41	0.5	0.05	0.50	0.51	1.6	0.42	0.38	0.40	0.05
55	13.60	33.039	24.756	5.92	99.9	2.4	0.53	1.7	0.26	0.46	0.43					
66	12.92	33.029	24.884	5.81	96.7	3.4	0.63	2.9	0.60	0.35	0.41	0.26	0.03	0.02	0.03	0.04

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 49.0 N	123 54.4 W	30/10/96	1801 UTC	24 m	02	1155 - 1753 PST	1200 PST	1753 PST	127.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
3	16.96	33.131	24.091	5.72	103.4	1.6	0.30	0.0	0.00	0.21	0.05	83. A	1.6	1.4	1.5	0.11
10	16.96	33.131	24.091	5.71	103.2	1.6	0.30	0.0	0.00	0.20	0.08					
16	16.93	33.133	24.100	5.73	103.5	1.6	0.29	0.0	0.00	0.19	0.09	36.	2.6	2.6	2.6	0.09
21	16.93	33.134	24.101	5.73	103.5	1.7	0.29	0.0	0.00	0.20	0.10					
33	16.77	33.141	24.144	5.75	103.5	1.7	0.30	0.0	0.00	0.23	0.12	12.	2.0	2.0	2.0	0.08
41	16.66	33.147	24.174	5.77	103.6	1.7	0.31	0.0	0.00	0.28	0.12					
49	16.63	33.149	24.183	5.78	103.8	1.7	0.32	0.0	0.00	0.29	0.16	4.4	1.1	1.3	1.2	0.07
58	16.49	33.154	24.219	5.79	103.7	1.7	0.32	0.0	0.00	0.38	0.22					
66	15.86	33.161	24.368	5.86	103.6	1.7	0.34	0.1	0.01	0.54	0.25	1.5	0.99	0.97	0.98	0.05
75	15.46	33.110	24.418	5.89	103.3	1.8	0.35	0.1	0.02	0.34	0.42					
82	14.57	33.138	24.652	6.02	103.7	2.1	0.37	0.1	0.02	0.33	0.31					
92	13.31	33.175	24.921	5.86	98.4	3.2	0.54	2.2	0.19	0.27	0.28	0.28	0.05	0.06	0.05	0.02

A) INCUBATION LIGHT INTENSITIES WERE 90, 37, 12, 4.3, 1.5, 0.27 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 14.6 N	123 29.5 W	24/10/96	1811 UTC	31 m	02	1152 - 1755 PST	1158 PST	1756 PST	157.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
3	17.72	33.281	24.025	5.69	104.4	1.9	0.29	0.0	0.00	0.14	0.04	86. A	2.0	2.0	2.0	0.12
5	17.73	33.282	24.023	5.69	104.5	1.9	0.29	0.0	0.00	0.14	0.04					
11	17.72	33.282	24.026	5.69	104.4	1.9	0.29	0.0	0.00	0.13	0.04					
21	17.69	33.284	24.035	5.71	104.7	1.9	0.29	0.0	0.00	0.14	0.04	35.	2.1	2.1	2.1	0.10
31	17.63	33.282	24.048	5.70	104.4	1.9	0.29	0.0	0.00	0.15	0.05					
42	17.44	33.282	24.094	5.70	104.0	1.9	0.29	0.0	0.00	0.16	0.05	12.	1.5	1.5	1.5	0.08
53	16.76	33.249	24.230	5.86	105.5	1.9	0.31	0.0	0.00	0.28	0.11					
64	13.61	33.146	24.837	6.09	102.9	3.0	0.45	0.9	0.11	0.49	0.37	4.2	2.0	2.2	2.1	0.06
74	12.96	33.200	25.009	5.78	96.4	4.3	0.66	4.3	0.10	0.43	0.39					
86	12.27	33.356	25.264	5.31	87.3	6.8	0.92	9.0	0.02	0.25	0.21	1.4	0.53	0.49	0.51	0.07
96	11.74	33.425	25.417	4.97	80.9	9.7	1.08	11.9	0.01	0.12	0.15					
120	10.62	33.567	25.730	4.17	66.3	16.2	1.38	17.1	0.01	0.03	0.05	0.26	0.00	0.02	0.01	0.03

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 19.4 N	119 39.8 W	21/10/96	1859 UTC	16 m	04	1145 - 1750 PST	1144 PST	1744 PST	641.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
3	16.10	33.410	24.503	5.85	104.1	1.9	0.33	0.3	0.03	1.09	0.32	75. A	17.8	17.9	17.8	0.14
4	16.16	33.413	24.492	5.85	104.2	1.9	0.31	0.3	0.03	1.05	0.34					
6	16.12	33.413	24.501	5.84	104.0	1.9	0.31	0.3	0.03	1.04	0.33					
10	16.02	33.406	24.518	5.84	103.8	2.0	0.33	0.4	0.04	1.12	0.36	38.	21.3	20.6	21.0	0.14
16	15.75	33.386	24.564	5.82	102.8	2.1	0.37	0.6	0.06	1.18	0.36					
23	15.40	33.366	24.627	5.79	101.6	2.5	0.41	1.0	0.09	1.35	0.40	11.	17.9	17.7	17.8	0.12
33	15.20	33.358	24.665	5.77	100.8	2.7	0.43	1.3	0.10	1.25	0.37	4.2	7.4	8.3	7.8	0.09
44	13.90	33.341	24.928	5.64	96.0	3.8	0.55	2.9	0.17	0.70	0.38	1.5	1.9	2.1	2.0	0.06
53	12.73	33.380	25.193	5.35	88.9	5.7	0.70	5.5	0.12	0.40	0.30					
62	11.89	33.488	25.438	4.77	77.9	10.1	0.99	10.5	0.08	0.16	0.21	0.26	0.05	0.05	0.05	0.03

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 19.4 N	121 42.9 W	22/10/96	1836 UTC	12 m	04	1149 - 1800 PST	1151 PST	1757 PST	502.3 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
1	15.49	33.262	24.526	6.03	105.9	1.0	0.32	0.0	0.00	1.67	0.50	88. A	14.8	16.1	15.4	0.19
3	15.49	33.263	24.527	6.03	105.9	1.0	0.32	0.0	0.00	1.61	0.47					
6	15.49	33.264	24.528	6.02	105.7	1.0	0.32	0.0	0.00	1.71	0.49					
8	15.46	33.263	24.534	6.04	106.0	1.0	0.31	0.0	0.00	1.63	0.56	36.	19.3	19.0	19.1	0.26
16	15.36	33.266	24.558	6.03	105.6	1.0	0.31	0.0	0.00	1.95	0.61	13.	17.8	17.1	17.5	0.20
25	15.34	33.270	24.566	5.98	104.7	1.0	0.31	0.0	0.00	2.27	0.60	4.1	9.6	10.4	10.0	0.16
33	15.06	33.288	24.641	6.01	104.7	0.9	0.34	0.1	0.01	2.44	0.77	1.5	5.1	5.3	5.2	0.14
46	14.68	33.248	24.693	5.96	103.0	1.4	0.39	0.4	0.05	2.13	0.70	0.28	0.21	0.23	0.22	0.09

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 19.4 N	123 44.6 W	23/10/96	1820 UTC	24 m	01	1155 - 1804 PST	1159 PST	1802 PST	108.5 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	18.11	33.359	23.990	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.04	88. A	2.4	2.4	2.4	0.05
6	18.11	33.358	23.989	5.60	103.6	1.8	0.30	0.0	0.00	0.15	0.04					
10	18.10	33.359	23.993	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05					
16	18.10	33.359	23.993	5.60	103.6	1.8	0.30	0.0	0.00	0.16	0.05	36.	2.6	2.7	2.6	0.07
20	18.10	33.358	23.992	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05					
34	18.10	33.359	23.994	5.60	103.6	1.8	0.30	0.0	0.00	0.15	0.05	11.	1.2	1.2	1.2	0.06
41	18.10	33.359	23.994	5.61	103.8	1.8	0.30	0.0	0.00	0.15	0.05					
50	17.91	33.355	24.038	5.62	103.6	1.8	0.30	0.0	0.00	0.17	0.06	4.1	0.44	0.51	0.47	0.05
57	13.90	33.252	24.859	6.51	110.7	2.2	0.38	0.2	0.01	0.55	0.34					
65	12.95	33.284	25.076	5.71	95.2	4.1	0.67	4.7	0.17	0.58	0.49	1.6	0.84	0.79	0.82	0.04
79	12.10	33.417	25.343	5.08	83.3	7.3	0.98	10.0	0.04	0.30	0.31					
92	11.49	33.478	25.505	4.76	77.0	10.2	1.13	12.6	0.02	0.18	0.20	0.28	0.03	0.03	0.03	0.03

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 54.3 N	118 55.9 W	19/10/96	1827 UTC	17 m	03	1138 - 1748 PST	1141 PST	1741 PST	211.9 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	17.50	33.467	24.220	5.69	104.1	1.7	0.27	0.0	0.00	0.24	0.07	83. A	3.6	3.5	3.6	0.11
4	17.51	33.468	24.219	5.70	104.3	1.5	0.27	0.0	0.00	0.23	0.07					
12	17.50	33.469	24.222	5.71	104.5	1.5	0.27	0.0	0.00	0.24	0.07	34.	4.8	4.7	4.8	0.10
15	17.49	33.471	24.226	5.69	104.1	1.5	0.27	0.0	0.00	0.24	0.08					
20	16.80	33.516	24.424	5.79	104.5	1.6	0.30	0.0	0.00	0.32	0.16					
24	15.52	33.394	24.622	5.83	102.5	1.9	0.35	0.0	0.05	0.56	0.37	11.	6.6	6.2	6.4	0.09
30	14.74	33.309	24.726	5.75	99.5	2.5	0.46	1.2	0.30	0.57	0.40					
36	13.82	33.233	24.861	5.66	96.1	3.3	0.55	2.7	0.24	0.55	0.39	3.9	3.1	3.9	3.5	0.05
46	13.01	33.232	25.023	5.43	90.6	4.9	0.69	5.1	0.04	0.32	0.34	1.6	1.1	1.2	1.2	0.05
56	12.55	33.223	25.106	5.35	88.4	5.7	0.76	6.3	0.02	0.25	0.24					
66	11.89	33.276	25.273	5.11	83.3	7.9	1.00	8.8	0.02	0.14	0.15	0.26	0.05	0.06	0.06	0.02

A) INCUBATION LIGHT INTENSITIES WERE 90, 37, 12, 4.3, 1.5, 0.27 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 25.3 N	119 57.9 W	18/10/96	1830 UTC	23 m	03	1145 - 1753 PST	1145 PST	1749 PST	182.9 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)		INTEGRATED VALUE	
m	DEG C		THETA	mL/L	PCT	μM/L	μM/L	μM/L	μM/L	μg/l	μg/l	PCT	1	2	MEAN	DARK
2	17.96	33.489	24.126	5.68	104.9	1.9	0.26	0.0	0.00	0.18	0.05	88. A	3.7	3.7	3.7	0.11
4	17.96	33.489	24.126	5.62	103.8	1.9	0.26	0.0	0.00	0.17	0.06					
6	17.96	33.489	24.126	5.62	103.8	1.9	0.26	0.0	0.00	0.17	0.05					
10	17.95	33.492	24.131	5.65	104.3	1.8	0.26	0.0	0.00	0.17	0.06					
15	17.92	33.487	24.135	5.62	103.7	1.8	0.27	0.0	0.00	0.18	0.05	37.	3.8	3.8	3.8	0.10
23	17.45	33.427	24.202	5.69	104.0	1.8	0.28	0.0	0.00	0.21	0.07					
31	16.54	33.329	24.341	5.84	104.8	1.8	0.31	0.0	0.00	0.30	0.15	13.	2.8	2.7	2.7	0.16
39	14.55	33.141	24.637	5.97	102.8	2.1	0.39	0.4	0.08	1.00	0.63					
48	12.98	33.026	24.870	5.79	96.5	3.6	0.55	2.5	0.26	0.60	0.45	4.1	2.7	2.9	2.8	0.06
55	12.23	33.081	25.057	5.51	90.4	5.3	0.72	5.4	0.07	0.35	0.29					
62	11.94	33.202	25.206	5.21	85.0	7.4	0.86	8.0	0.03	0.21	0.21	1.6	0.42	0.43	0.42	0.03
76	11.24	33.496	25.563	4.53	72.9	12.4	1.15	13.2	0.02	0.08	0.09					
88	10.72	33.617	25.750	4.17	66.4	15.1	1.27	15.5	0.02	0.05	0.07	0.28	0.01	0.00	0.00	0.02

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 25.2 N	121 59.7 W	17/10/96	1744 UTC	32 m	01	1150 - 1758 PST	1153 PST	1756 PST	122.6 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)		INTEGRATED VALUE	
m	DEG C		THETA	mL/L	PCT	μM/L	μM/L	μM/L	μM/L	μg/l	μg/l	PCT	1	2	MEAN	DARK
2	18.43	33.180	23.774	5.56	103.4	1.8	0.28	0.1	0.00	0.10	0.03	91. A	0.89	0.87	0.88	0.07
5	18.42	33.180	23.777	5.56	103.4	1.8	0.28	0.1	0.00	0.10	0.03					
10	18.42	33.180	23.777	5.57	103.6	1.8	0.28	0.1	0.00	0.10	0.03					
21	18.40	33.179	23.782	5.56	103.3	1.8	0.28	0.1	0.00	0.10	0.03	37.	1.5	1.4	1.5	0.07
31	18.33	33.178	23.799	5.57	103.4	1.8	0.28	0.1	0.00	0.10	0.03					
43	17.65	33.137	23.933	5.80	106.2	1.8	0.29	0.0	0.00	0.15	0.06	13.	1.6	1.5	1.6	0.05
54	16.32	33.127	24.237	6.01	107.2	1.9	0.30	0.0	0.00	0.19	0.10					
65	15.15	33.140	24.509	6.04	105.3	2.2	0.30	0.0	0.00	0.19	0.10	4.4	0.87	0.95	0.91	0.04
76	14.81	33.144	24.585	6.05	104.7	2.3	0.31	0.0	0.00	0.22	0.14					
87	13.45	33.075	24.815	5.91	99.5	3.0	0.45	1.0	0.15	0.25	0.16	1.5	0.88	0.89	0.89	0.03
95	13.34	33.308	25.018	5.64	94.8	4.1	0.50	2.4	0.10	0.23	0.18					
105	12.93	33.346	25.129	5.55	92.5	4.5	0.54	3.0	0.07	0.22	0.18					
114	12.26	33.438	25.330	5.24	86.2	6.6	0.68	5.8	0.03	0.12	0.15					
123	11.73	33.512	25.487	4.99	81.2	8.6	0.83	8.6	0.01	0.08	0.10	0.27	0.05	0.04	0.04	0.01

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
30 24.9 N	123 59.8 W	15/10/96	1756 UTC	28 m	01	1155 - 1815 PST	1201 PST	1813 PST	113.1 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)		INTEGRATED VALUE	
m	DEG C		THETA	mL/L	PCT	μM/L	μM/L	μM/L	μM/L	μg/l	μg/l	PCT	1	2	MEAN	DARK
2	18.88	33.270	23.731	5.53	103.8	2.0	0.26	0.0	0.00	0.11	0.04	90. A	1.3	1.2	1.3	0.06
9	18.87	33.271	23.734	5.52	103.6	1.9	0.26	0.0	0.00	0.12	0.03					
18	18.87	33.271	23.735	5.58	104.7	1.9	0.26	0.0	0.00	0.11	0.04	37.	2.3	2.3	2.3	0.05
28	18.86	33.270	23.737	5.52	103.5	1.9	0.26	0.0	0.00	0.11	0.03					
38	18.85	33.270	23.740	5.53	103.7	1.8	0.26	0.0	0.00	0.11	0.04	12.	1.3	1.3	1.3	0.06
48	18.82	33.271	23.749	5.53	103.6	1.8	0.26	0.0	0.00	0.12	0.04					
57	18.18	33.330	23.933	5.72	105.9	2.0	0.24	0.0	0.00	0.17	0.07	4.4	0.87	0.97	0.92	0.03
67	16.30	33.167	24.273	5.99	106.8	2.0	0.28	0.0	0.00	0.20	0.13					
77	15.69	33.150	24.398	6.01	105.9	2.1	0.30	0.0	0.00	0.20	0.15	1.5	0.58	0.58	0.58	0.03
87	14.63	33.145	24.625	6.01	103.7	2.4	0.32	0.0	0.02	0.21	0.16					
97	13.91	33.165	24.791	5.90	100.3	2.8	0.39	0.5	0.14	0.21	0.20					
107	13.15	33.266	25.024	5.62	94.1	4.3	0.57	3.4	0.04	0.18	0.21	0.28	0.05	0.07	0.06	0.02

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
30 25.1 N	123 59.9 W	16/10/96	1743 UTC	32 m	01	1156 - 1806 PST	1201 PST	1804 PST	130.6 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)		INTEGRATED VALUE	
m	DEG C		THETA	mL/L	PCT	μM/L	μM/L	μM/L	μM/L	μg/l	μg/l	PCT	1	2	MEAN	DARK
2	18.96	33.331	23.757	5.48	103.0	1.8	0.28	0.0	0.00	0.09	0.02	91. A	0.57	0.64	0.61	0.06
4	18.95	33.330	23.759	5.49	103.2	1.8	0.28	0.0	0.00	0.09	0.03					
21	18.95	33.330	23.760	5.48	103.0	1.8	0.27	0.0	0.00	0.09	0.03	37.	1.5	1.5	1.5	0.06
26	18.95	33.330	23.760	5.48	103.0	1.8	0.28	0.0	0.00	0.09	0.03					
29	18.90	33.327	23.771	5.49	103.1	1.8	0.27	0.0	0.00	0.09	0.03					
31	18.70	33.295	23.796	5.52	103.2	1.7	0.28	0.0	0.00	0.11	0.03					
33	18.53	33.249	23.804	5.54	103.2	1.6	0.29	0.0	0.00	0.12	0.04					
36	18.49	33.240	23.807	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.04					
38	18.49	33.240	23.807	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.04					
44	18.47	33.242	23.814	5.55	103.3	1.6	0.29	0.0	0.00	0.13	0.05	12.	1.7	1.5	1.6	0.05
50	18.28	33.240	23.859	5.59	103.7	1.5	0.29	0.0	0.00	0.17	0.06					
55	17.72	33.219	23.980	5.66	103.8	1.5	0.30	0.0	0.00	0.20	0.09					
58	17.07	33.171	24.098	5.86	106.1	1.5	0.31	0.0	0.00	0.26	0.13					
62	16.76	33.176	24.174	5.92	106.6	1.4	0.32	0.0	0.00	0.30	0.20					
66	16.61	33.171	24.205	5.92	106.2	1.4	0.33	0.0	0.00	0.31	0.23	4.2	1.8	1.9	1.8	0.05
69	16.50	33.177	24.235	5.98	107.1	1.7	0.31	0.0	0.00	0.28	0.20					
75	16.19	33.284	24.388	6.01	107.0	2.2	0.27	0.0	0.00	0.26	0.15					
81	15.30	33.266	24.573	6.00	105.0	2.2	0.28	0.0	0.00	0.25	0.21					
88	14.50	33.272	24.751	5.94	102.3	2.4	0.30	0.0	0.01	0.22	0.25	1.5	0.51	0.60	0.56	0.02
90	14.11	33.251	24.816	5.92	101.1	2.5	0.33	0.1	0.02	0.21	0.22					
95	13.59															

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 20.8 N	118 33.3 W	11/10/96	1807 UTC	23 m	03	1140 - 1747 PST	1141 PST	1751 PST	272.3 mg C/m ²							
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 UM/L	P04 UM/L	N03 UM/L	N02 UM/L	CHL-A UG/L	PHAE0 UG/L	LIGHT PCT	1	2	UPTAKE (mg C/m ³) MEAN DARK	
1	17.36	33.415	24.214	5.71	104.2	1.3	0.28	0.0	0.00	0.20	0.05	94. A	3.0	3.0	3.0	0.10
6	17.37	33.414	24.211	5.71	104.2	1.3	0.28	0.0	0.00	0.20	0.06					
11	17.32	33.415	24.224	5.71	104.1	1.3	0.27	0.0	0.00	0.21	0.05					
16	17.28	33.414	24.233	5.72	104.2	1.3	0.28	0.0	0.00	0.22	0.06	34.	4.3	4.2	4.3	0.12
23	17.12	33.410	24.268	5.73	104.0	1.4	0.28	0.1	0.00	0.27	0.09					
31	16.17	33.383	24.467	5.84	104.1	1.6	0.32	0.3	0.05	0.61	0.22	13.	8.1	8.1	8.1	0.08
39	15.09	33.342	24.676	5.68	99.0	2.3	0.45	1.5	0.29	0.63	0.34					
47	14.05	33.298	24.864	5.52	94.2	3.5	0.58	3.4	0.42	0.36	0.25	4.3	2.6	2.7	2.7	0.04
55	13.31	33.291	25.010	5.50	92.4	4.3	0.64	4.6	0.25	0.22	0.22					
63	12.87	33.320	25.120	5.40	89.9	5.0	0.71	5.9	0.09	0.18	0.19	1.5	0.62	0.60	0.61	0.02
76	12.41	33.388	25.223	5.22	86.5	6.3	0.77	6.9	0.04	0.16	0.16					
89	12.11	33.518	25.420	4.68	76.8	9.6	0.96	10.5	0.03	0.13	0.15	0.26	0.05	0.06	0.06	0.02

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 16.9 N	118 51.5 W	12/10/96	1807 UTC	23 m	01	1134 - 1755 PST	1141 PST	1751 PST	209.5 mg C/m ²							
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 UM/L	P04 UM/L	N03 UM/L	N02 UM/L	CHL-A UG/L	PHAE0 UG/L	LIGHT PCT	1	2	UPTAKE (mg C/m ³) MEAN DARK	
1	18.62	33.544	24.005	5.57	104.2	1.7	0.29	0.0	0.00	0.18	0.05					
2	18.63	33.545	24.004	5.55	103.8	1.7	0.28	0.0	0.00	0.18	0.06	88.	3.5	3.4	3.4	0.07
4	18.62	33.546	24.007	5.56	104.0	1.7	0.28	0.0	0.00	0.17	0.07					
7	18.63	33.545	24.004	5.58	104.4	1.7	0.28	0.0	0.00	0.18	0.06					
9	18.55	33.538	24.018	5.57	104.0	1.7	0.28	0.0	0.00	0.18	0.06					
10	18.50	33.523	24.020	5.59	104.3	1.7	0.29	0.0	0.00	0.20	0.08					
13	18.07	33.481	24.094	5.62	104.0	1.5	0.29	0.0	0.00	0.21	0.07					
15	17.63	33.444	24.172	5.65	103.6	1.5	0.30	0.0	0.00	0.22	0.07	37.	4.3	4.3	4.3	0.10
18	17.57	33.425	24.172	5.67	103.9	1.4	0.30	0.0	0.00	0.22	0.08					
22	17.42	33.417	24.202	5.71	104.3	1.4	0.31	0.0	0.00	0.24	0.10					
26	17.27	33.409	24.232	5.74	104.5	1.3	0.31	0.0	0.00	0.26	0.11					
31	17.03	33.396	24.279	5.77	104.6	1.3	0.32	0.0	0.00	0.30	0.16	13.	3.5	3.3	3.4	0.14
35	17.01	33.395	24.283	5.78	104.7	1.3	0.32	0.0	0.00	0.31	0.17					
41	16.79	33.396	24.335	5.80	104.6	1.3	0.32	0.0	0.00	0.38	0.23					
47	14.81	33.360	24.751	5.84	101.2	3.0	0.45	1.1	0.07	0.61	0.43	4.3	3.3	3.5	3.4	0.05
51	13.99	33.375	24.936	5.70	97.2	4.0	0.54	2.5	0.12	0.47	0.34					
55	13.70	33.387	25.005	5.59	94.7	4.5	0.58	3.1	0.14	0.41	0.33					
59	13.47	33.418	25.076	5.42	91.4	5.3	0.66	4.4	0.14	0.31	0.31					
63	13.33	33.432	25.115	5.37	90.3	5.7	0.68	4.8	0.13	0.28	0.28	1.5	0.75	0.76	0.75	0.03
69	13.14	33.441	25.160	5.25	88.0	6.3	0.73	5.6	0.11	0.24	0.28					
75	12.97	33.457	25.206	5.17	86.3	6.8	0.78	6.5	0.10	0.22	0.26					
80	12.60	33.473	25.291	5.03	83.4	7.6	0.84	7.6	0.08	0.19	0.24					
89	11.97	33.533	25.458	4.66	76.2	10.1	1.00	10.6	0.03	0.12	0.21	0.26	0.04	0.04	0.04	0.01

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 51.3 N	119 35.5 W	13/10/96	1819 UTC	21 m	01	1141 - 1755 PST	1144 PST	1755 PST	203.6 mg C/m ²							
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 UM/L	P04 UM/L	N03 UM/L	N02 UM/L	CHL-A UG/L	PHAE0 UG/L	LIGHT PCT	1	2	UPTAKE (mg C/m ³) MEAN DARK	
3	18.87	33.558	23.953	5.53	103.9	1.9	0.24	0.0	0.00	0.21	0.06	80. A	1.8	1.6	1.7	0.08
4	18.85	33.555	23.956	5.54	104.1	1.9	0.24	0.0	0.00	0.20	0.07					
6	18.85	33.555	23.956	5.54	104.1	1.8	0.25	0.0	0.00	0.20	0.07					
15	18.49	33.536	24.032	5.55	103.5	1.8	0.25	0.0	0.00	0.21	0.07	33.	3.5	3.5	3.5	0.10
29	16.22	33.309	24.399	5.92	105.5	1.6	0.30	0.0	0.00	0.33	0.17	12.	4.7	4.6	4.6	0.16
43	15.14	33.298	24.632	6.04	105.4	2.2	0.34	0.0	0.00	0.48	0.42	4.3	3.3	3.6	3.5	0.06
50	15.05	33.304	24.656	5.87	102.2	2.2	0.38	0.3	0.08	0.53	0.42					
57	14.38	33.290	24.789	5.86	100.7	3.0	0.45	1.1	0.16	0.33	0.34	1.6	1.4	1.5	1.5	0.04
65	13.48	33.335	25.010	5.58	94.1	4.5	0.60	3.5	0.27	0.23	0.25					
73	12.86	33.380	25.168	5.30	88.3	6.0	0.74	6.0	0.12	0.17	0.23					
81	12.16	33.471	25.374	5.06	83.1	7.6	0.81	7.9	0.03	0.11	0.16	0.27	0.06	0.06	0.06	0.02

RV ROGER REVELLE

CALCOFI CRUISE 9610

STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
30 30.8 N	122 15.5 W	14/10/96	1837 UTC	33 m	01	1149 - 1804 PST	1155 PST	1804 PST	96.9 mg C/m ²							
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 UM/L	P04 UM/L	N03 UM/L	N02 UM/L	CHL-A UG/L	PHAE0 UG/L	LIGHT PCT	1	2	UPTAKE (mg C/m ³) MEAN DARK	
3	19.66	33.659	23.829	5.41	103.2	2.1	0.21	0.0	0.00	0.08	0.03	87. A	0.88	0.90	0.89	0.08
5	19.65	33.658	23.831	5.42	103.4	2.1	0.21	0.0	0.00	0.08	0.02					
11	19.66	33.660	23.830	5.41	103.2	2.1	0.21	0.0	0.00	0.08	0.02					
14	19.66	33.663	23.833	5.40	103.1	2.1	0.21	0.0	0.00	0.08	0.02					
21	19.73	33.686	23.832	5.41	103.4	2.1	0.20	0.0	0.00	0.08	0.03	38.	1.3	1.2	1.2	0.09
34	19.84	33.780	23.876	5.39	103.3	2.1	0.18	0.0	0.00	0.09	0.03					
44	19.86	33.794	23.882	5.37	102.9	2.1	0.18	0.0	0.00	0.09	0.03	13.	1.0	0.99	1.0	0.09
56	19.88	33.808	23.888	5.38	103.2	2.1	0.18	0.0	0.00	0.10	0.03					
69	19.32	33.766	24.001	5.45	103.4	2.1	0.18	0.0	0.00	0.13	0.05	4.0	0.71	0.79	0.75	0.08
77	17.27	33.529	24.326	5.85	106.6	2.2	0.19	0.0	0.00	0.19	0.09					
91	16.65	33.715	24.614	5.72	103.1	2.4	0.21	0.0	0.00	0.20	0.23	1.5	0.67	0.64	0.66	0.05
103	15.64	33.686	24.822	5.64	99.6	2.9	0.26	0.0	0.03	0.25	0.24					
114	14.81	33.661	24.985	5.55	96.4	3.2	0.31	0.3	0.18	0.21	0.23					
125	14.16	33.638	25.106	5.42	92.9	4.1	0.40	1.6	0.11	0.17	0.20	0.30	0.08	0.09	0.09	0.02

A) INCUBATION LIGHT INTENSITIES WERE 90, 37, 12, 4.3, 1.5, 0.27 PERCENT RESPECTIVELY.

CalCOFI Cruise 9610

High Resolution Nutrients
Analyzed on Standard Casts

Range (W) and precision (P), in uM
High Resolution (hr) analyses:

	W	P
PO4	0 - 1.500	0.003
SiO3	0 - 22.50	0.02
NO3	0 - 12.00	0.02
NO2	0 - 1.500	0.005

Station 90 35

DEPTH m	SiO3 uM/l	SiO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	1.8	1.60	0.23	0.250	0.0	0.02	0.00	0.001
1	1.8	1.60	0.24	0.246	0.0	0.02	0.00	0.001
5	1.8	1.60	0.23	0.246	0.0	0.02	0.00	0.001
10	1.7	1.56	0.23	0.246	0.0	0.02	0.00	0.001
15	1.7	1.54	0.23	0.243	0.0	0.00	0.00	0.002
17	1.7	1.52	0.23	0.246	0.0	0.00	0.00	0.003
20	2.0	1.92	0.26	0.276	0.0	0.00	0.00	0.002
30	4.3	4.12	0.51	0.523	1.8	1.82	0.26	0.264
40	7.6	7.40	0.88	0.886	7.5	7.56	1.25	1.236
50	9.8	9.54	1.02	1.026	10.7	10.68	0.22	0.221
60	10.8	10.62	1.09	1.086	11.9		0.07	0.063
70	13.6	13.46	1.24	1.233	14.0		0.03	0.025
85	19.1	18.64	1.54		18.9		0.01	0.014

Station 90 37

DEPTH m	SiO3 uM/l	SiO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.7	1.50	0.22	0.240	0.0	0.00	0.00	0.002
2	1.9	1.46	0.23	0.240	0.0	0.00	0.00	0.002
5	1.7	1.46	0.22	0.240	0.0	0.00	0.00	0.002
10	1.7	1.46	0.22	0.240	0.0	0.00	0.00	0.002
15	1.7	1.46	0.22	0.236	0.0	0.00	0.00	0.002
17	1.7	1.50	0.23	0.243	0.0	0.00	0.00	0.001
20	1.8	1.56	0.24	0.260	0.0	0.00	0.00	0.001
30	4.4	4.34	0.54	0.566	2.7	2.72	0.22	0.224
40	7.9	7.96	0.83	0.856	7.4	7.48	0.15	0.151
50	13.0	12.82	1.12	1.146	12.0		0.04	0.042
60	16.1	15.86	1.32	1.330	14.8		0.02	0.021
70	18.2	17.96	1.46		17.0		0.01	0.017
85	20.9	20.66	1.63		19.4		0.01	0.013
100	22.5	22.10	1.73		20.7		0.01	0.012

Station 90 45

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.7	1.32	0.27	0.296	0.0	0.00	0.00	0.001
4	1.5	1.28	0.27	0.296	0.0	0.02	0.00	0.002
12	1.5	1.30	0.27	0.296	0.0	0.02	0.00	0.002
15	1.5	1.30	0.27	0.296	0.0	0.02	0.00	0.002
20	1.6	1.30	0.30	0.326	0.0	0.02	0.00	0.005
24	1.9	1.68	0.35	0.373	0.0	0.12	0.05	0.052
30	2.5	2.42	0.46	0.476	1.2	1.28	0.30	0.308
36	3.3	3.38	0.55	0.573	2.7	2.82	0.24	0.237
46	4.9	4.80	0.69	0.706	5.1	5.22	0.04	0.039
56	5.7	5.64	0.76	0.773	6.3	6.28	0.02	0.021
66	7.9	7.78	1.00	0.913	8.8	8.68	0.02	0.022
76	11.6	11.40	1.14	1.130	12.8		0.01	0.015
85	13.0	12.72	1.21	1.200	14.0		0.01	0.013
99	17.0	16.62	1.41		17.3		0.01	0.010

Station 90 53

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	1.7	1.54	0.28	0.306	0.0	0.00	0.00	0.003
1	1.7	1.54	0.28	0.306	0.0	0.00	0.00	0.004
4	1.7	1.52	0.28	0.303	0.0	0.00	0.00	0.004
7	1.7	1.51	0.28	0.303	0.0	0.00	0.00	0.004
10	1.7	1.52	0.27	0.303	0.0	0.02	0.00	0.004
15	1.6	1.52	0.27	0.303	0.0	0.00	0.00	0.004
20	1.6	1.52	0.28	0.303	0.0	0.00	0.00	0.001
30	1.6	1.52	0.28	0.303	0.0	0.02	0.00	0.001
40	1.7	1.56	0.28	0.313	0.0	0.02	0.00	0.003
49	2.8	2.84	0.47	0.490	1.6	1.56	0.16	0.166

Station 90 60

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.9	1.58	0.26	0.290	0.0	0.00	0.00	0.002
4	1.9	1.54	0.26	0.290	0.0	0.00	0.00	0.002
6	1.9	1.54	0.26	0.286	0.0	0.00	0.00	0.002
10	1.8	1.54	0.26	0.286	0.0	0.00	0.00	0.001
15	1.8	1.54	0.27	0.286	0.0	0.00	0.00	0.001
23	1.8	1.50	0.28	0.300	0.0	0.00	0.00	0.001
31	1.8	1.44	0.31	0.320	0.0	0.00	0.00	0.002
39	2.1	2.00	0.39	0.413	0.4	0.44	0.08	0.085
48	3.6	3.34	0.55	0.566	2.5	2.56	0.26	0.267
55	5.3	5.18	0.72	0.726	5.4	5.32	0.07	0.077
62	7.4	7.28	0.86	0.873	8.0	7.94	0.03	0.039
76	12.4	12.20	1.15	1.140	13.2		0.02	0.034

Station 90 70

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	1.6	1.50	0.30	0.316	0.0	0.04	0.00	0.002
1	1.6	1.46	0.30	0.323	0.0	0.00	0.00	0.002
4	1.6	1.46	0.30	0.323	0.0	0.00	0.00	0.001
7	1.6	1.44	0.30	0.323	0.0	0.00	0.00	0.001
10	1.6	1.44	0.31	0.323	0.0	0.00	0.00	0.001
16	1.6	1.44	0.31	0.320	0.0	0.00	0.00	0.001
20	1.6	1.46	0.31	0.326	0.0	0.02	0.00	0.002
31	1.7	1.70	0.33	0.343	0.0	0.02	0.00	0.003
40	2.3	2.34	0.40	0.406	0.3	0.40	0.07	0.077
50	3.4	3.22	0.54	0.546	2.3	2.28	0.16	0.167
61	5.5	5.40	0.72	0.730	5.4	5.44	0.03	0.026
71	7.9	7.84	0.90	0.900	8.6	8.56	0.02	0.017
86	12.6	12.48	1.20	1.180	13.8		0.01	0.018
100	20.2	20.06	1.58		19.9		0.01	0.017
120	28.4		2.04		25.6		0.01	0.013

Station 90 80

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.8	1.52	0.30	0.310	0.0	0.00	0.00	0.001
2	1.8	1.46	0.29	0.310	0.0	0.00	0.00	0.001
6	1.8	1.46	0.29	0.310	0.0	0.00	0.00	0.002
11	1.8	1.44	0.29	0.310	0.0	0.00	0.00	0.003
16	1.7	1.44	0.29	0.306	0.0	0.00	0.00	0.003
20	1.7	1.44	0.29	0.306	0.0	0.00	0.00	0.003
31	1.7	1.44	0.29	0.310	0.0	0.00	0.00	0.003
45	1.6	1.38	0.30	0.316	0.0	0.00	0.00	0.003
55	1.8	1.60	0.30	0.323	0.0	0.00	0.00	0.003
66	2.1	2.10	0.34	0.360	0.0	0.00	0.00	0.006
75	3.0	2.84	0.42	0.440	0.9	0.92	0.19	0.200
84	4.3	4.24	0.62	0.630	4.1	3.96	0.05	0.058
95	5.6	5.68	0.68	0.706	5.5	5.46	0.04	0.042
110	10.3	10.14	1.03	1.040	11.3	11.18	0.02	0.023
125	14.7	14.46	1.26	1.260	15.1		0.01	0.021

Station 90 90

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.8	1.62	0.28	0.300	0.1	0.00	0.00	0.001
3	1.9	1.60	0.28	0.296	0.0	0.00	0.00	0.000
5	1.8	1.60	0.28	0.300	0.1	0.00	0.00	0.000
10	1.8	1.58	0.28	0.296	0.1	0.00	0.00	0.000
21	1.8	1.58	0.28	0.293	0.1	0.00	0.00	0.000
31	1.8	1.60	0.28	0.293	0.1	0.00	0.00	0.000
43	1.8	1.56	0.29	0.310	0.0	0.00	0.00	0.001
54	1.9	1.76	0.30	0.323	0.0	0.00	0.00	0.001
65	2.2	2.12	0.30	0.320	0.0	0.00	0.00	0.001
76	2.3	2.22	0.31	0.326	0.0	0.00	0.00	0.002
87	3.0	2.94	0.45	0.460	1.0	1.00	0.15	0.152
95	4.1	3.98	0.50	0.520	2.4	2.36	0.10	0.104
105	4.5	4.52	0.54	0.546	3.0	3.02	0.07	0.070
114	6.6	6.48	0.68	0.690	5.8	5.82	0.03	0.029
123	8.6	8.60	0.83	0.846	8.6	8.60	0.01	0.020

Station 90 100

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.9	1.64	0.28	0.300	0.1	0.02	0.00	0.001
2	1.7	1.64	0.28	0.300	0.0	0.02	0.00	0.001
6	1.7	1.66	0.28	0.300	0.0	0.00	0.00	0.001
11	1.7	1.66	0.28	0.300	0.0	0.00	0.00	0.001
16	1.7	1.64	0.28	0.296	0.0	0.00	0.00	0.001
21	1.7	1.64	0.28	0.293	0.0	0.00	0.00	0.001
31	1.7	1.64	0.27	0.293	0.0	0.00	0.00	0.000
46	1.9	1.82	0.27	0.283	0.0	0.00	0.00	0.000
60	2.1	2.08	0.32	0.330	0.0	0.02	0.00	0.000
75	2.4	2.28	0.34	0.363	0.1	0.09	0.01	0.017
87	2.7	2.66	0.46	0.466	1.0	1.00	0.13	0.134
96	3.5	3.58	0.54	0.550	2.2	2.26	0.14	0.141
105	5.4	5.44	0.67	0.680	4.6	4.74	0.03	0.025
113	7.8	7.74	0.99	0.996	10.3	10.24	0.02	0.022
123	11.8	11.78	1.16	1.153	13.3		0.01	0.016

Station 90 110

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	2.0	1.98	0.25	0.270	0.0	0.00	0.00	0.000
2	2.0	1.98	0.25	0.270	0.0	0.00	0.00	0.000
6	2.0	1.96	0.25	0.270	0.0	0.00	0.00	0.000
10	2.0	1.96	0.25	0.270	0.0	0.00	0.00	0.001
16	2.0	1.94	0.25	0.270	0.0	0.00	0.00	0.001
20	2.0	1.92	0.25	0.270	0.0	0.00	0.00	0.001
31	2.0	1.90	0.25	0.270	0.0	0.00	0.00	0.001
46	2.0	1.90	0.25	0.273	0.0	0.00	0.00	0.001
56	2.1	1.94	0.24	0.263	0.0	0.00	0.00	0.001
65	2.2	2.02	0.28	0.306	0.0	0.00	0.00	0.002
75	2.4	2.38	0.33	0.360	0.1	0.12	0.04	0.040
85	3.1	3.02	0.45	0.470	1.2	1.24	0.15	0.152
95	4.4	4.30	0.56	0.593	3.2	3.28	0.04	0.039
111	7.3	7.20	0.75	0.773	7.0	7.00	0.02	0.018
125	12.5	12.38	1.11	1.120	12.9		0.01	0.011

Station 90 120

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	2.0	1.82	0.26	0.283	0.0	0.00	0.00	0.003
3	2.0	1.88	0.26	0.283	0.0	0.00	0.00	0.004
9	1.9	1.88	0.26	0.280	0.0	0.00	0.00	0.005
18	1.9	1.88	0.26	0.283	0.0	0.00	0.00	
28	1.9	1.88	0.26	0.276	0.0	0.00	0.00	0.005
38	1.8	1.88	0.26	0.276	0.0	0.02	0.00	0.006
48	1.8	1.90	0.26	0.273	0.0	0.02	0.00	0.000
57	2.0	2.08	0.24	0.256	0.0	0.04	0.00	0.000
67	2.0	2.18	0.28	0.296	0.0	0.04	0.00	0.000
77	2.1	2.24	0.30	0.306	0.0	0.04	0.00	0.000
87	2.4	2.23	0.32	0.333	0.0	0.10	0.02	0.021
97	2.8	3.04	0.39	0.400	0.5	0.56	0.14	0.144
107	4.3	4.48	0.57	0.583	3.4	3.44	0.04	0.040
115	6.2	6.28	0.71	0.726	6.0	5.98	0.02	0.023
125	7.4	7.42	0.76	0.776	7.2	7.16	0.02	0.021

Station 93 26.7

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	2.5	2.46	0.26	0.273	0.0	0.00	0.00	0.005
2	2.5	2.50	0.26	0.280	0.0	0.00	0.00	0.005
4	3.0	2.76	0.27	0.300	0.0	0.00	0.01	0.010
7	4.2	4.16	0.41	0.443	0.8	0.72	0.14	0.135
10	4.8	4.88	0.49	0.533	1.7	1.62	0.23	0.220
15	5.0	4.94	0.52	0.556	2.1	2.04	0.17	0.160
20	5.8	5.90	0.63	0.670	4.1	4.08	0.26	0.260
30	8.4	8.36	0.81	0.850	7.4	7.28	0.13	0.125
40	11.8	11.56	1.03	1.056	10.2	10.12	0.11	0.110
52	14.1	14.06	1.18	1.210	12.5		0.11	0.105

Station 93 28

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
2	1.1	1.10	0.16	0.183	0.0		0.00	0.000
2	1.1	1.10	0.16	0.180	0.0		0.00	0.000
5	1.1	1.08	0.16	0.180	0.0		0.00	0.000
6	1.1	1.08	0.16	0.183	0.0		0.00	0.000
11	1.1	1.08	0.17	0.186	0.0		0.00	0.000
15	1.4	1.58	0.24	0.270	0.0	0.06	0.00	0.000
20	2.3	2.20	0.30	0.326	0.0	0.06	0.00	0.000
31	4.7	4.84	0.57	0.590	3.0	3.04	0.19	0.180
40	6.4	6.68	0.70	0.723	5.6	5.56	0.18	0.170
50	9.8	9.92	0.93	0.946	9.8	9.72	0.04	0.040
60	11.3	11.44	1.03	1.040	11.8	11.68	0.03	0.030
70	12.3	12.36	1.09	1.103	12.7		0.03	
84	17.6	17.68	1.46		17.9		0.02	0.015
99	19.9	19.96	1.58		19.7		0.01	0.010

Station 93 30

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	1.3	1.10	0.17		0.0	0.06	0.00	0.000
1	1.3	1.12	0.17	0.188	0.0	0.04	0.00	0.000
4	1.3	1.08	0.17	0.188	0.0	0.14	0.00	0.000
7	1.3	1.08	0.17	0.203	0.0	0.10	0.00	0.000
11	1.3	1.12	0.17	0.183	0.0	0.06	0.00	0.000
16	2.1	1.92	0.24	0.263	0.0	0.06	0.00	0.000
21	3.5	3.38	0.32	0.343	0.0	0.04	0.00	0.000
31	5.5	5.44	0.58	0.590	2.9	2.98	0.26	0.250
40	6.6	6.58	0.73	0.746	5.5	5.50	0.32	0.310
50	10.9	10.84	1.05	1.056	11.0	10.92	0.05	0.040
60	14.5	14.48	1.29	1.296	15.0		0.03	0.025
70	16.3	16.08	1.38		16.7		0.03	0.020
85	18.8	18.76	1.51		18.6		0.02	0.010
100	21.8	21.62	1.67		20.9		0.01	0.010

Station 93 40

DEPTH m	SIO3 uM/l	SIO3hr uM/l	PO4 uM/l	PO4hr uM/l	NO3 uM/l	NO3hr uM/l	NO2 uM/l	NO2hr uM/l
1	1.3	1.24	0.23	0.266	0.1	0.02	0.00	0.000
1	1.3	1.24	0.23	0.266	0.1	0.04	0.00	0.000
3	1.3	1.24	0.23	0.260	0.1	0.02	0.00	0.000
6	1.3	1.24	0.23	0.260	0.1	0.00	0.00	0.000
10	1.3	1.23	0.27	0.303	0.1	0.00	0.00	0.000
15	1.3	1.32	0.27	0.303	0.1	0.00	0.00	0.000
20	1.3	1.22	0.28	0.313	0.1	0.02	0.00	0.000
30	1.3	1.34	0.31	0.343	0.1	0.08	0.01	0.015
40	2.1	2.10	0.44	0.476	1.1	1.16	0.25	0.250
50	3.5	3.58	0.59	0.630	3.5	3.42	0.47	0.465
60	5.8	5.92	0.78	0.826	7.2	7.12	0.03	0.035
70	9.1	9.04	0.97	1.013	10.2	10.14	0.02	0.020
85	12.4	12.54	1.18	1.210	13.5		0.01	0.015
99	15.7	15.76	1.33	1.363	16.4		0.01	0.010

CalCOFI Cruise 9610

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST)		Water Volume Strained (m ³)	Max. Tow Depth (m)	Volume per 1000 m ³ Strained	
					Start	End			Total (cm ³)	Small (cm ³)
77	49	35 05.3	120 47.6	11/01	1343	1350	122	59	4183	98
77	51	35 01.9	120 54.4	11/01	0842	0903	393	196	89	89
77	55	34 53.8	121 11.8	11/01	0447	0509	384	201	136	136
77	60	34 43.6	121 33.2	11/01	0051	0112	386	213	101	101
77	70	34 23.5	122 15.3	10/31	1904	1925	396	211	119	119
77	80	34 04.0	122 57.0	10/31	0845	0907	431	201	49	49
77	90	33 43.5	123 38.3	10/31	0105	0126	398	216	80	80
77	100	33 23.6	124 20.1	10/30	1927	1948	428	211	112	112
80	51	34 27.5	120 32.4	10/28	2047	2055	163	64	49	49
80	55	34 18.8	120 48.1	10/29	0055	0116	394	215	46	46
80	60	34 09.0	121 08.9	10/29	0525	0547	425	199	165	165
80	70	33 48.9	121 49.5	10/29	1221	1242	490	184	51	51
80	80	33 28.2	122 32.1	10/29	1946	2008	453	207	35	35
80	90	33 09.1	123 13.9	10/30	0128	0149	414	215	29	29
80	100	32 50.0	123 55.0	10/30	0840	0902	433	218	23	23
82	47	34 16.3	120 02.2	10/28	1607	1628	406	209	49	49
83	40.6	34 13.3	119 25.4	10/28	0612	0616	77	25	52	52
83	42	34 10.9	119 31.1	10/28	0420	0432	236	113	38	38
83	51	33 51.5	120 08.8	10/27	2215	2238	454	203	26	26
83	55	33 45.0	120 25.5	10/27	0557	0618	473	184	28	28
83	60	33 34.9	120 45.3	10/26	1748	1809	414	209	92	92
83	80	32 54.7	122 08.4	10/25	1412	1434	449	224	16	16
83	90	32 35.2	122 49.4	10/24	2343	0005	445	208	36	36
83	100	32 13.2	123 28.1	10/24	0857	0920	450	201	31	31
83	110	31 54.8	124 11.4	10/23	1815	1836	434	207	32	32
87	33	33 52.8	118 30.0	10/20	1831	1836	114	47	18	18
87	35	33 49.5	118 38.5	10/20	2124	2146	432	205	97	97
87	40	33 39.7	118 58.1	10/21	0125	0146	401	212	67	67
87	45	33 29.8	119 19.0	10/21	0452	0513	419	197	48	48
87	50	33 19.7	119 41.3	10/21	0947	0955	145	67	34	34
87	55	33 10.8	120 00.4	10/21	1601	1623	437	212	23	23
87	60	32 59.9	120 21.6	10/21	2010	2031	424	211	59	59
87	70	32 39.7	121 01.2	10/22	0140	0201	390	214	123	123
87	80	32 20.0	121 42.7	10/22	0840	0903	392	212	84	84
87	90	31 59.9	122 23.9	10/22	1912	1933	426	212	40	40
87	100	31 39.7	123 04.7	10/23	0120	0141	408	214	39	39
87	110	31 19.7	123 44.9	10/23	0830	0852	428	209	16	16
90	28	33 29.4	117 46.9	10/20	0623	0629	117	47	34	34
90	30	33 25.2	117 55.3	10/20	0241	0303	400	215	85	85
90	35	33 14.1	118 15.8	10/19	2114	2134	390	197	41	41
90	37	33 10.4	118 23.1	10/19	1823	1844	412	213	32	32
90	45	32 54.1	118 55.2	10/19	0918	0941	479	201	27	27
90	53	32 39.3	119 29.4	10/19	0402	0423	476	191	25	25
90	60	32 24.8	119 57.4	10/18	0905	0926	433	214	14	14
90	70	32 05.1	120 38.5	10/18	0338	0400	408	221	44	44
90	80	31 45.3	121 19.2	10/17	1956	2017	405	215	20	20
90	90	31 26.3	122 00.4	10/17	1135	1157	433	215	16	16
90	100	31 05.3	122 39.6	10/17	0407	0429	436	210	32	32
90	110	30 46.0	123 19.7	10/16	2156	2219	467	217	24	24
90	120	30 25.3	123 59.9	10/15	1203	1223	447	210	13	13
93	26.7	32 57.9	117 19.7	10/10	1658	1711	260	122	38	38
93	28	32 55.1	117 24.6	10/10	1348	1409	397	218	13	13
93	30	32 51.4	117 32.9	10/10	2026	2048	402	206	65	65
93	35	32 41.2	117 53.3	10/11	0119	0140	407	211	66	66
93	40	32 31.1	118 13.2	10/11	0535	0557	421	202	62	62
93	45	32 20.8	118 34.0	10/11	1312	1333	410	213	29	29
93	50	32 11.3	118 54.2	10/11	1730	1751	404	210	30	30
93	55	32 01.2	119 14.8	10/13	0145	0205	360	213	28	28
93	60	31 51.0	119 34.9	10/13	0832	0853	412	212	19	19
93	70	31 30.8	120 14.8	10/13	1734	1755	424	208	40	40
93	80	31 10.7	120 55.7	10/13	2336	0000	468	219	43	43
93	90	30 51.0	121 36.1	10/14	0507	0529	440	202	18	18
93	100	30 31.1	122 16.0	10/14	1234	1255	451	210	13	13
93	110	30 11.4	122 55.4	10/14	1926	1948	469	209	15	15
93	120	29 51.1	123 35.4	10/15	0130	0151	441	209	20	20

FIGURES

Avifauna Observations

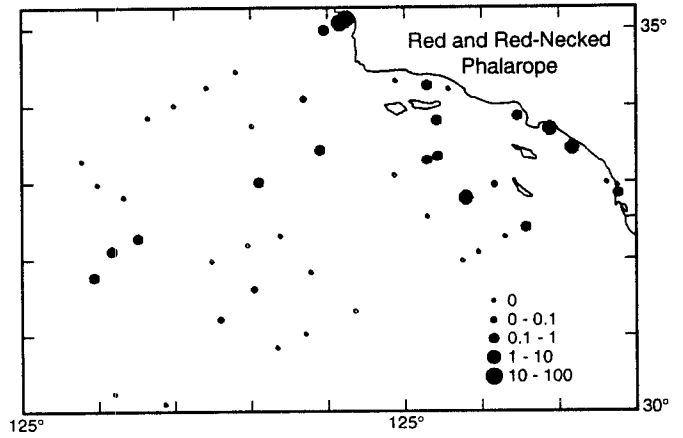
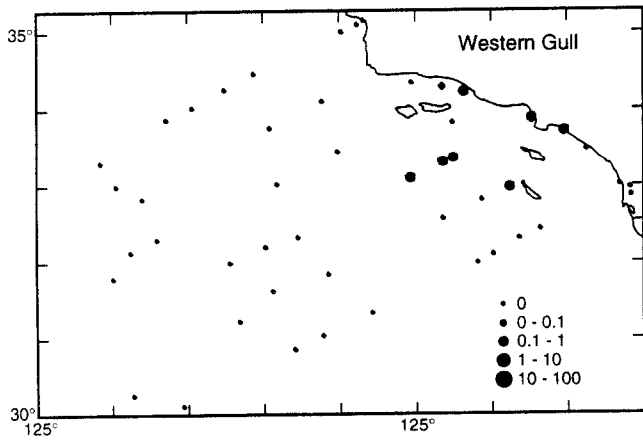
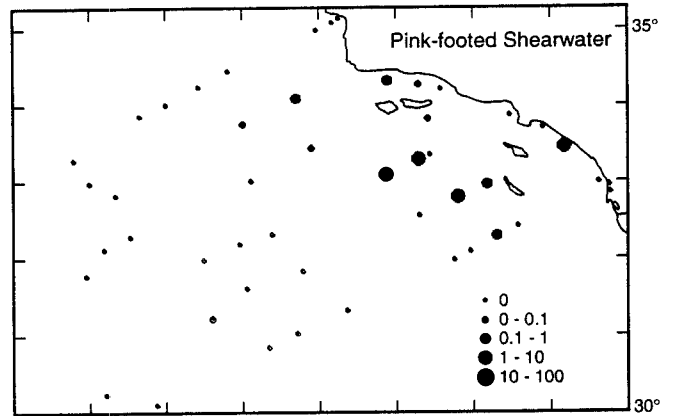
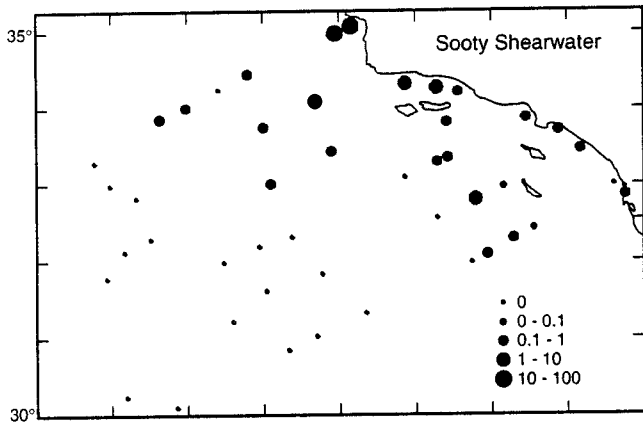
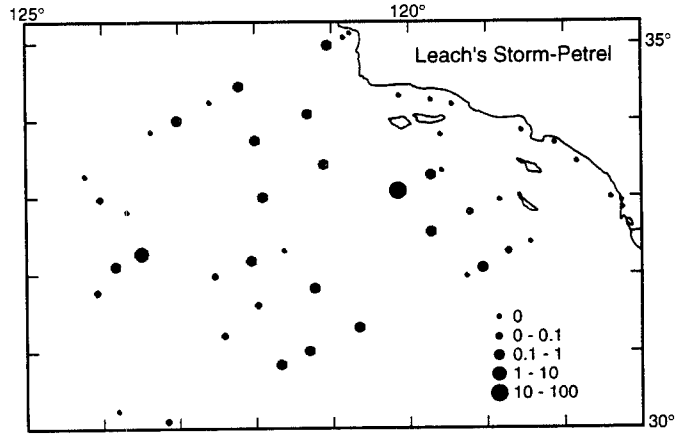
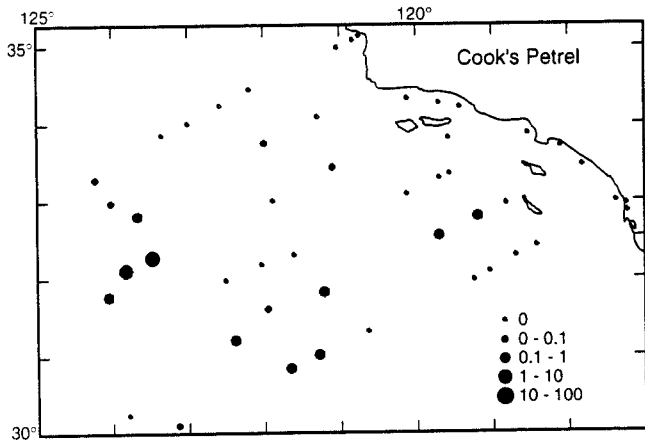
CalCOFI Cruise 9608

- 1a. Cook's Petrel distribution.
- 1b. Leach's Storm-Petrel distribution.
- 1c. Sooty Shearwater distribution.
- 1d. Pink-footed Shearwater distribution.
- 1e. Western Gull distribution.
- 1f. Red and Red-necked Phalarope distribution.

CalCOFI Cruise 9610

- 2a. Western Gull distribution.
- 2b. Sooty Shearwater distribution.
- 2c. Black-vented Shearwater distribution.
- 2d. Pink-footed Shearwater distribution.
- 2e. Leach's Storm-Petrel distribution.
- 2f. Northern Fulmar distribution.

CalCOFI Cruise 9608



CalCOFI Cruise 9610

