UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0604
21 October – 6 November 2006

CC Reference 08-04
23 June 2008

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 0610
21 October – 6 November 2006

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CONTENTS

INTRODUCTION

The data presented in this report were collected during cruise 0610* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *Roger Revelle.* 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 Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruises were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. SIO staff members from the Ocean Data Facility participate in the chemical analysis of nutrient samples at sea. CalCOFI data presented in this report and collected on previous cruises can be accessed at http://www.calcofi.org.

STANDARD PROCEDURES

CTD/Rosette Cast Data

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911, Serial number 1049) with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. 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 on samples from 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. Salinity samples were drawn into 200 ml Kimax high-alumina borosilicate bottles that were rinsed three times with sample prior to filling. The results were compared with the CTD salinity to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with standardized seawater. Periodic checks on the conductivity of the standardized seawater were made by comparison with IAPSO Standard Seawater batch P144. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen analyses were performed with an Ocean Data Facility of Scripps Institution of Oceanography designed automated oxygen titrator using photometric end-point detection based on the absorption of 365nm wavelength ultra-violet light. A computer using PC software controlled the titration of the samples and the data logging. The method used a modified-Winkler titration following the technique of Carpenter (1965) with modifications by Culberson (1991), but with higher concentrations of thiosulfate solution (50 g/l). Standard KIO3 solutions prepared ashore were run at the beginning of each run. Reagent and sea water blanks were determined to account for presence of oxidizing or reducing materials.

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

Nutrient samples were analyzed at sea by the Scripps Ocean Data Facility for dissolved silicate, phosphate, nitrate, nitrite, and ammonium using procedures similar to those described in Gordon et al. (1993) and Koroleff (1969, 1970). Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were rinsed three times prior to filling. Standardizations were done at the beginning and end of each group of samples with a set of mid-concentration range standards prepared fresh for each run. Samples not analyzed immediately after collection were refrigerated and run the following day. Sets of six different concentration standards were analyzed periodically to determine the deviation from linearity as a function of concentration, for the silicate, nitrate and phosphate analyses. Final sample concentrations were corrected for deviations from linearity using a second order polynomial.

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 in cold 90% acetone (Venrick and Hayward, 1984) for a mimimum of 24 hours. Chlorophyll a and pheopigment concentrations were determined from fluorescence readings before and after acidification with a Turner Designs Fluorometer Model 10-AU-005-CE (Yentsch and Menzel, 1963; Holm-Hansen *et al*., 1965).

Evaluation of the water sample data involved comparisons with the CTD data, 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). Precision estimates for routine analyses were made on CalCOFI cruise 9003 and are reported in SIO Ref. 91-4.

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 rosette up-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. 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 56.10 µCi of ^{14}C as $NaHCO_3$ (200 µl of 335.90 µCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). An adjustment to the specific activity was made to account for the 10 ml aliquot removed for DOC-14 analysis on CCE-LTER samples. 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 cocktail 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 0.505mm 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). An Optical Plankton Counter (OPC, Dave Checkley, SIO) was routinely used in one side of the paired bongo net frame. The purpose of the OPC is to obtain information on the vertical distributions of size categories of zooplankton, using data from the counter, without affecting the ongoing time series of data obtained from the catches of the integrative bongo net.

Avifauna Observations (Point Reys Bird Observatory)

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 that are not presented in this report. These programs include:

1) *Underway Data*. Continuous near surface measurements of temperature, salinity and *in vivo* chlorophyll fluorescence were recorded from seawater pumped through the ship's uncontaminated seawater system. Water was drawn from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 45 MicroTSG Thermosalinograph and a Wetlabs Wetstar fluorometer.

2) *ADCP*. Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP data were averaged over 3-minute intervals. Sixty 8-meter depth bins were recorded. (T. Chereskin, SIO)

3) *Underway Sea Surface xCO2*. Continuous measurements of the partial pressure of CO2 were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a diffusion chamber that was then analyzed with a Licor 6262 infrared CO2/H2O analyzer. One-minute averages were recorded and the mole fraction of CO2 (xCO2) at sea surface temperature was calculated. The system was calibrated with standard gases traceable to CMDL every two hours; at that time absolute zero and atmospheric samples were also collected. (G. Friederich, MBARI)

4) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure.

5) *SCCOOS Nearshore and Bio-optical Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore and make bio-optical observations for the development of empirical proxies for particle size load and structure and phytoplankton biomass and rates of primary production. The nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. Bio-optical measurements at all CalCOFI and SCCOOS stations consist of irradiance at 9 wavelengths, light transmission at three wavelengths, fluorescence of Chl a, CDOM and phycoerythrin and light scattering at three wavelengths.

6) *Bio-optics*. Spectral radiometry of the top 100 meters of the water column were measured daily with a multi-spectral free fall radiometer (PRR-800, Biospherical). Water samples obtained from the CTD/rosette cast were analyzed for determination of absorption by particulate, detrital materials, and algal HPLC pigments. (G. Mitchell, SIO)

7) *Marine mammal observations*. During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys.

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 profile. 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 are reported for most daylight stations.

Data values from discreet sampled CTD rosette were interpolated and are 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 stations where primary productivity samples were drawn 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 that are 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 are reported to two significant digits (values <1.00) or one decimal (values >1.00). Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

Macrozooplankton Data

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

FOOTNOTES

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

D: CTD salinity value listed in place of normal 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 0610

1. CalCOFI Cruise 0610 track and station positions.

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

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

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

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

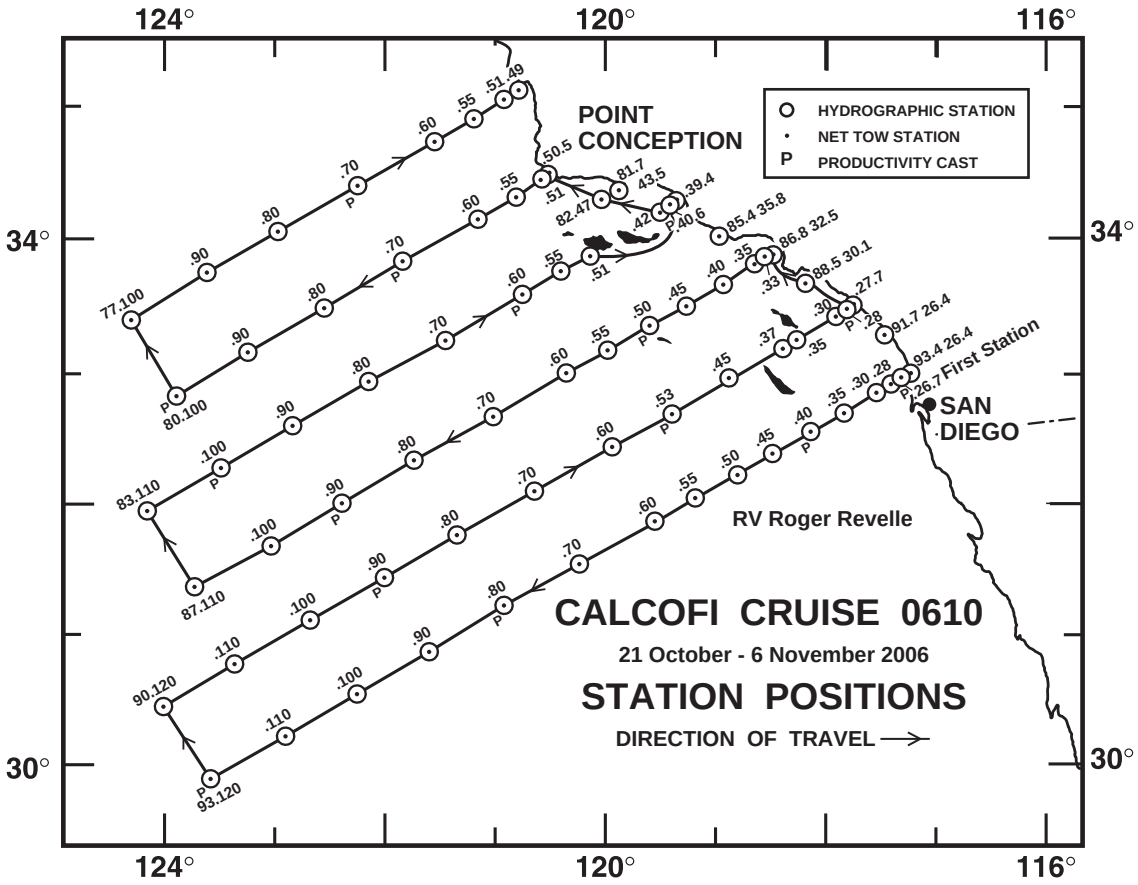

FIGURE 1

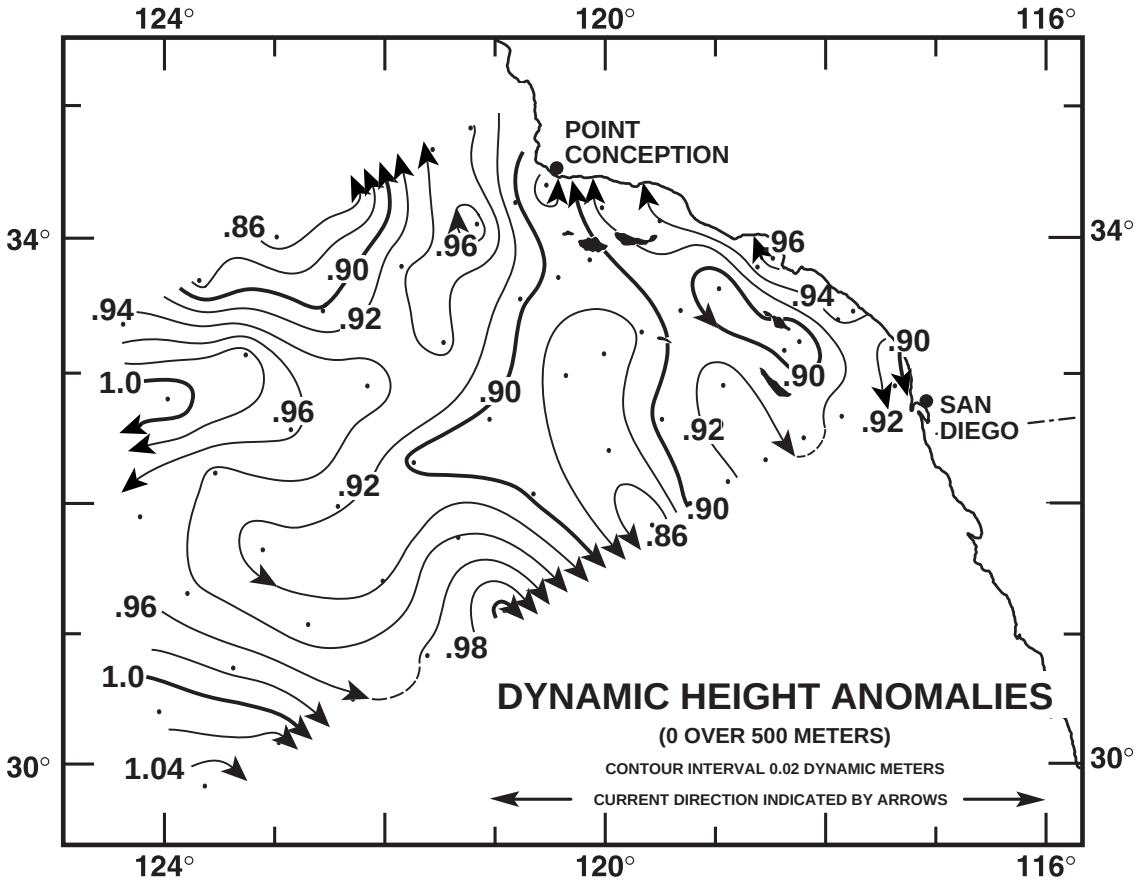

FIGURE 2

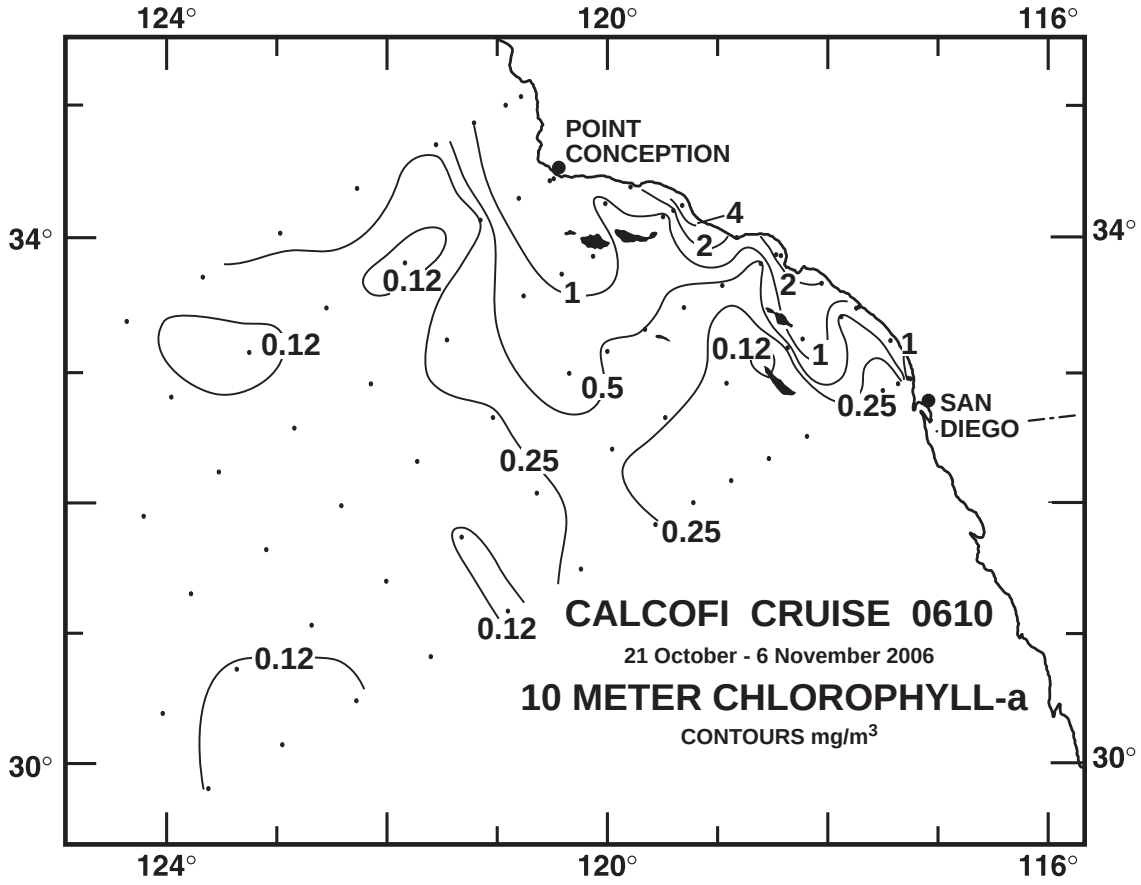

FIGURE 3A

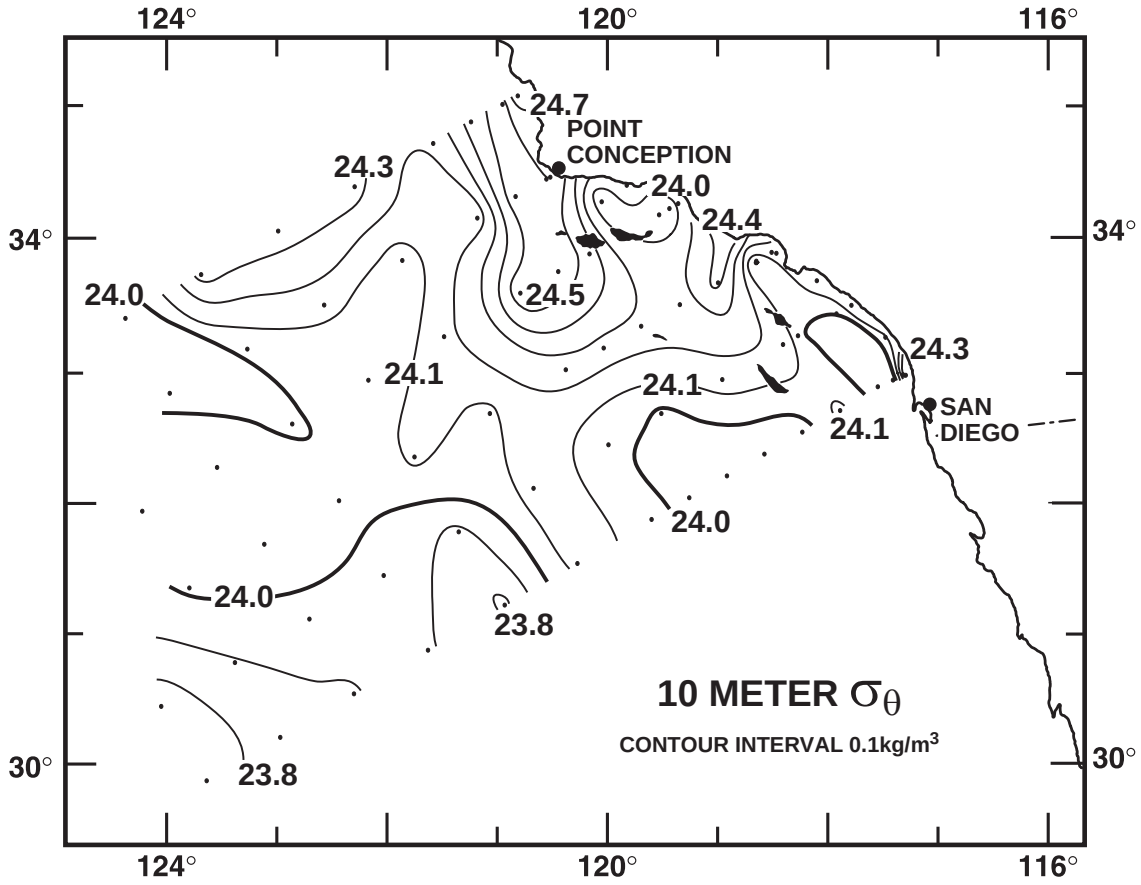

FIGURE 3B

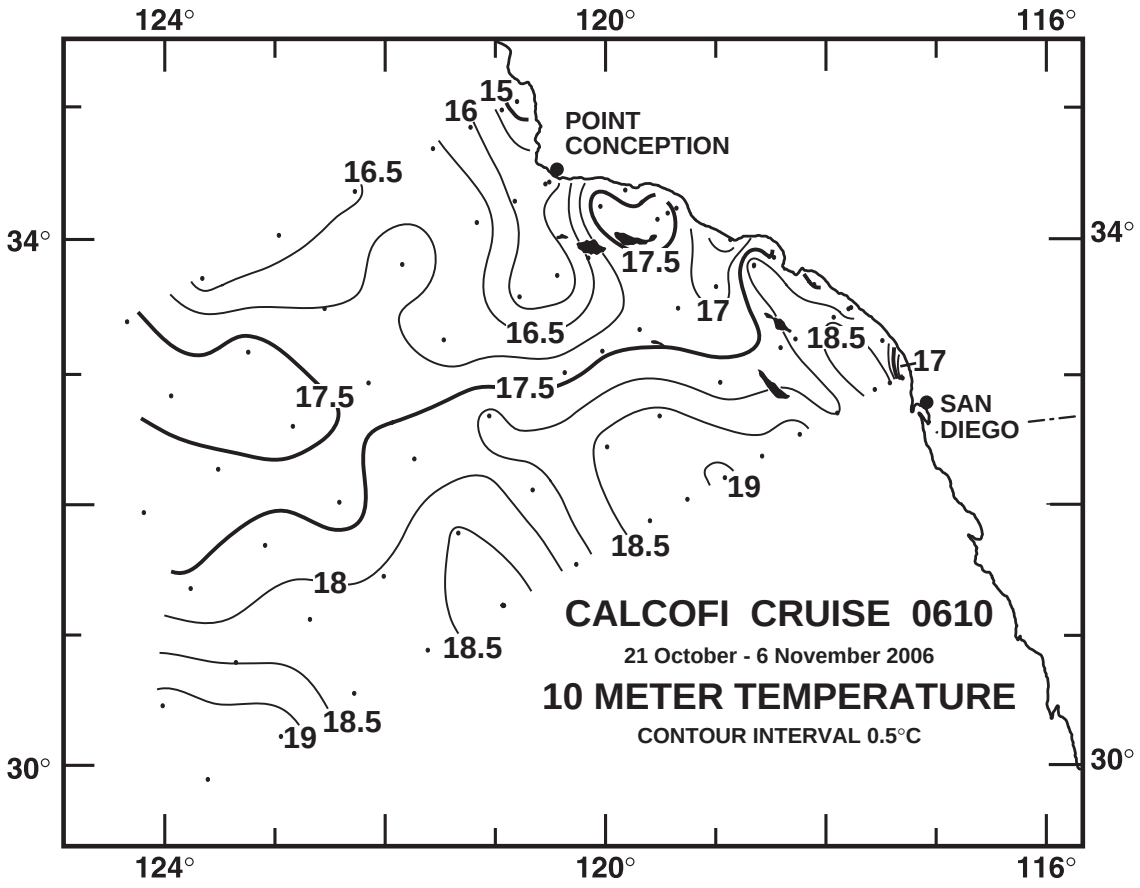

FIGURE 3C

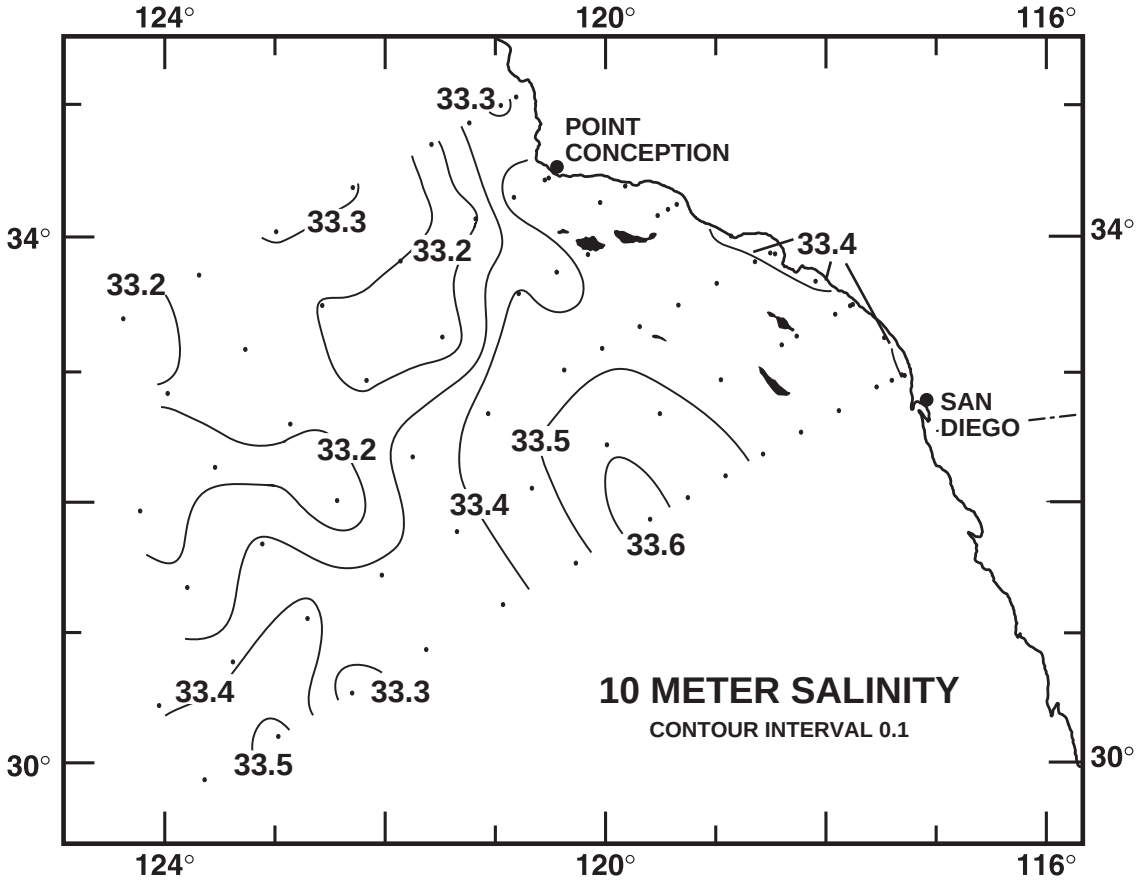

FIGURE 3D

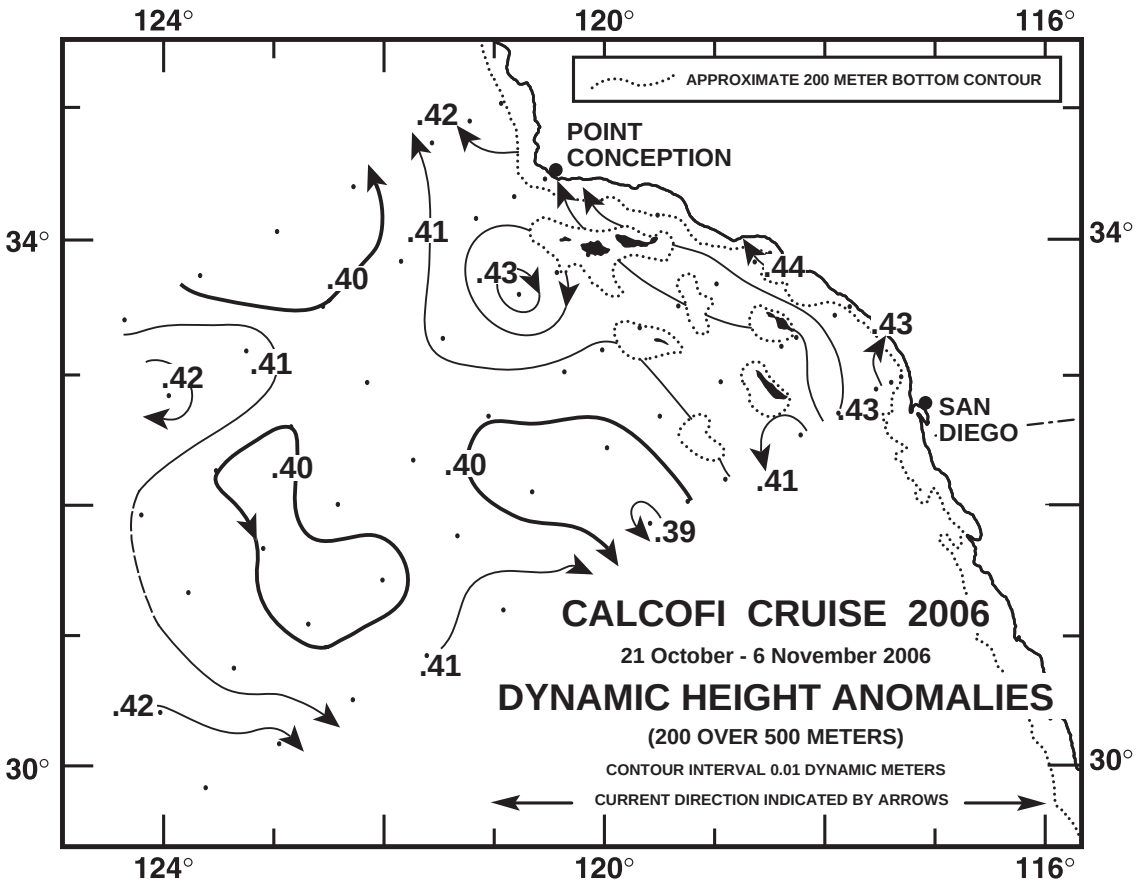

FIGURE 4A

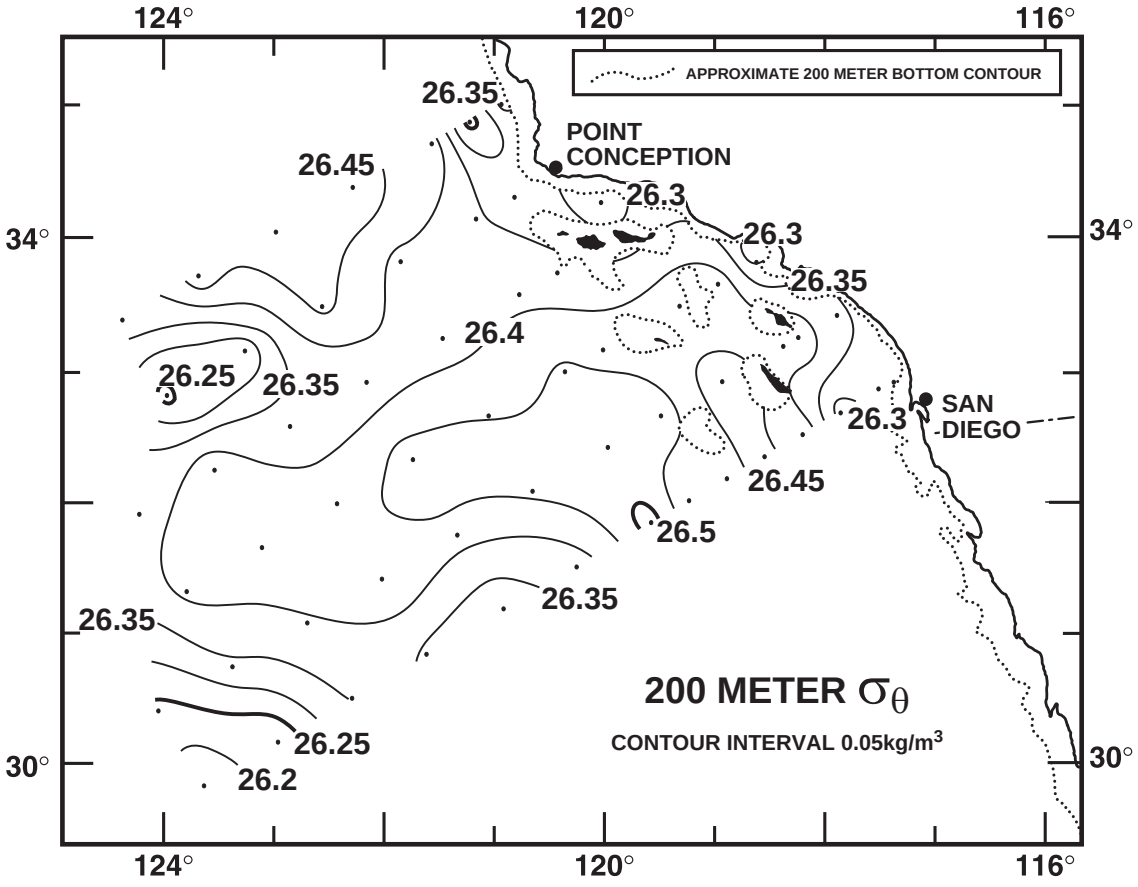

FIGURE 4B

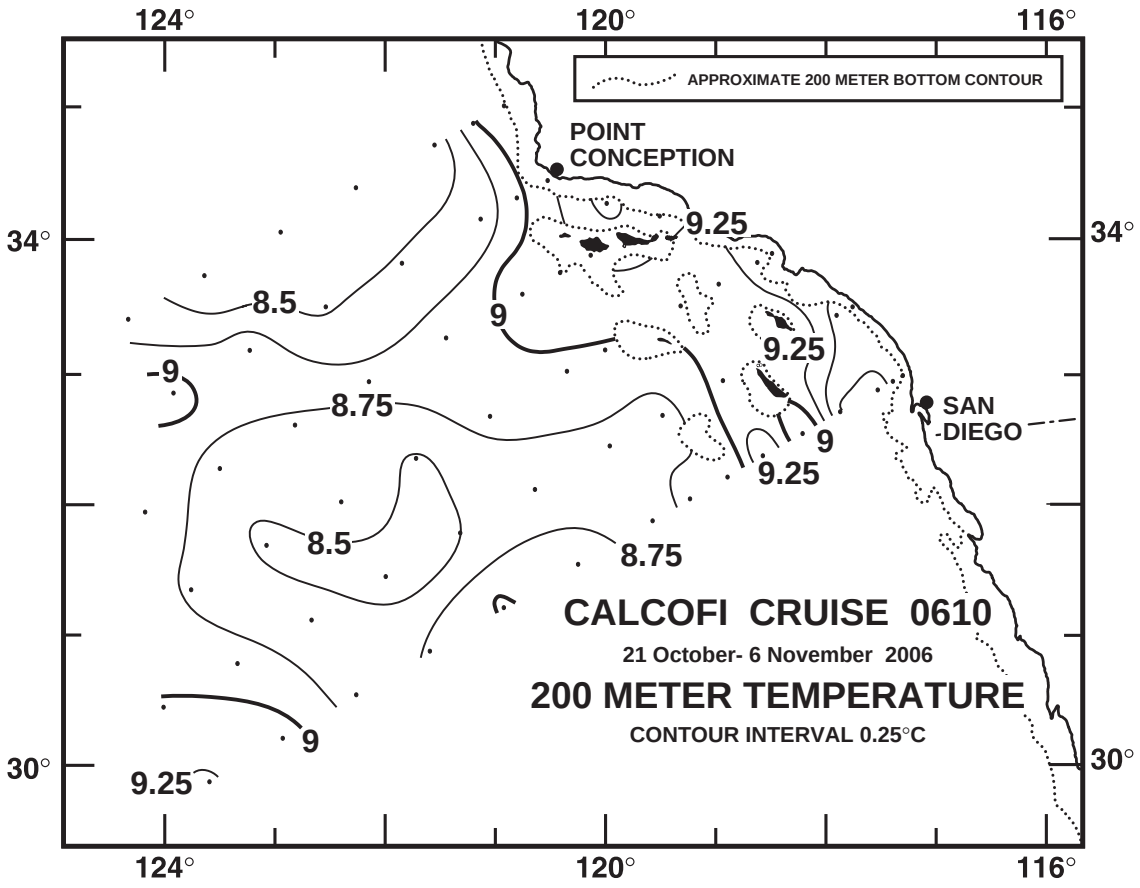

FIGURE 4C

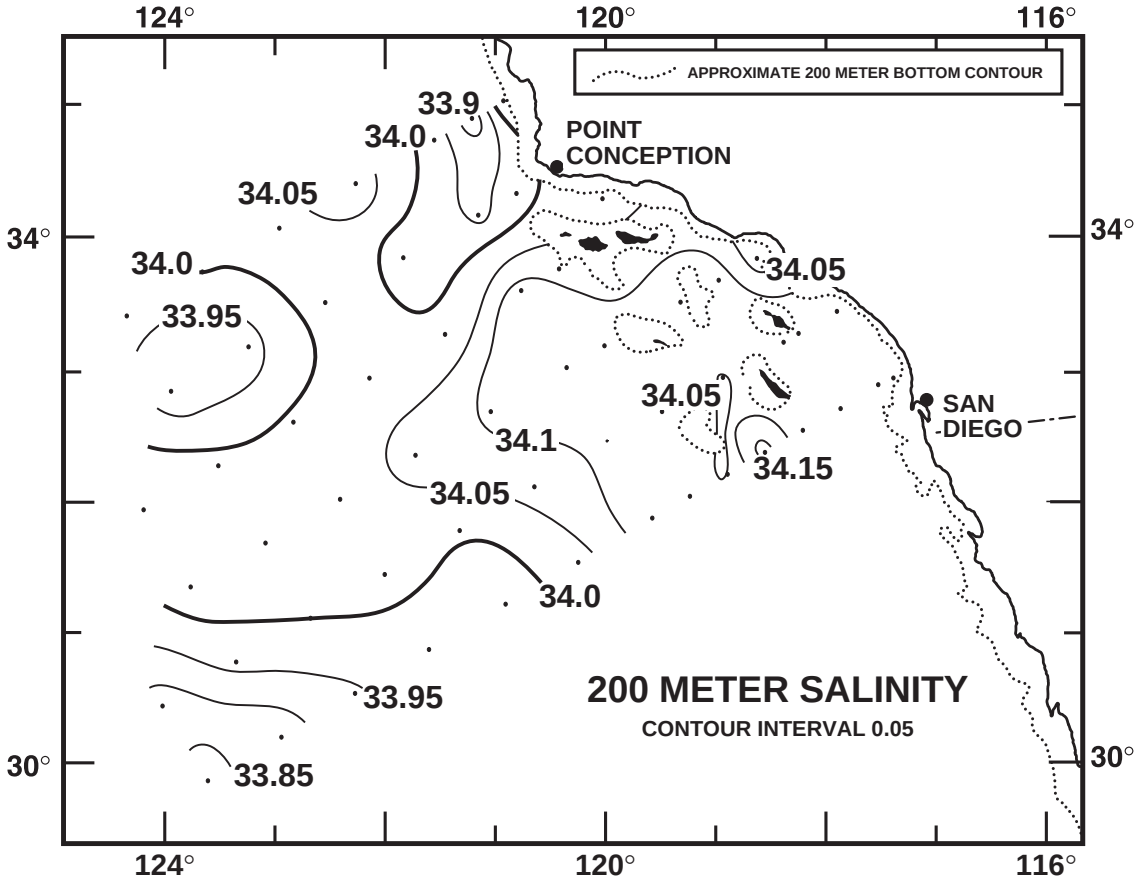

FIGURE 4D

CALCOFI CRUISE 0610

24 - 27 October 2006

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

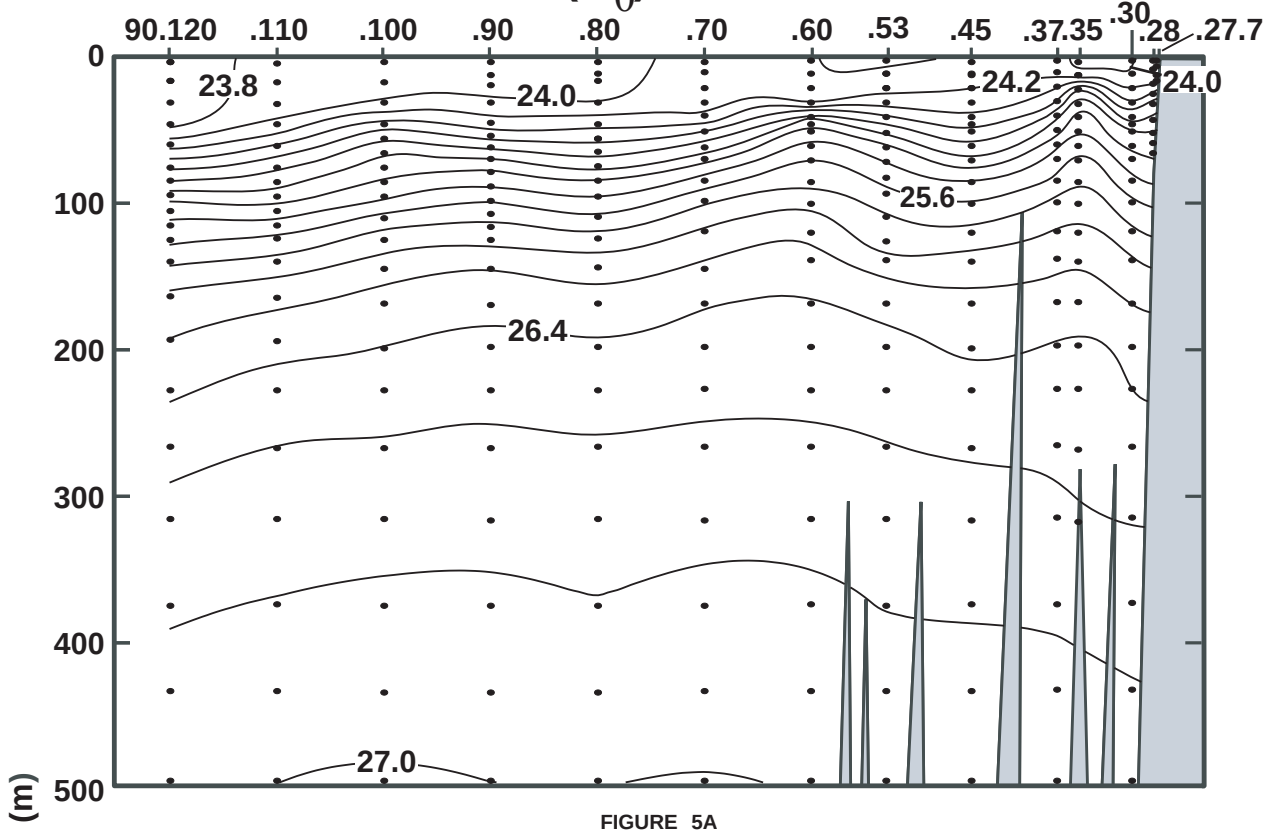

FIGURE 5A

TEMPERATURE (^{o}C) ALONG CALCOFI LINE 90

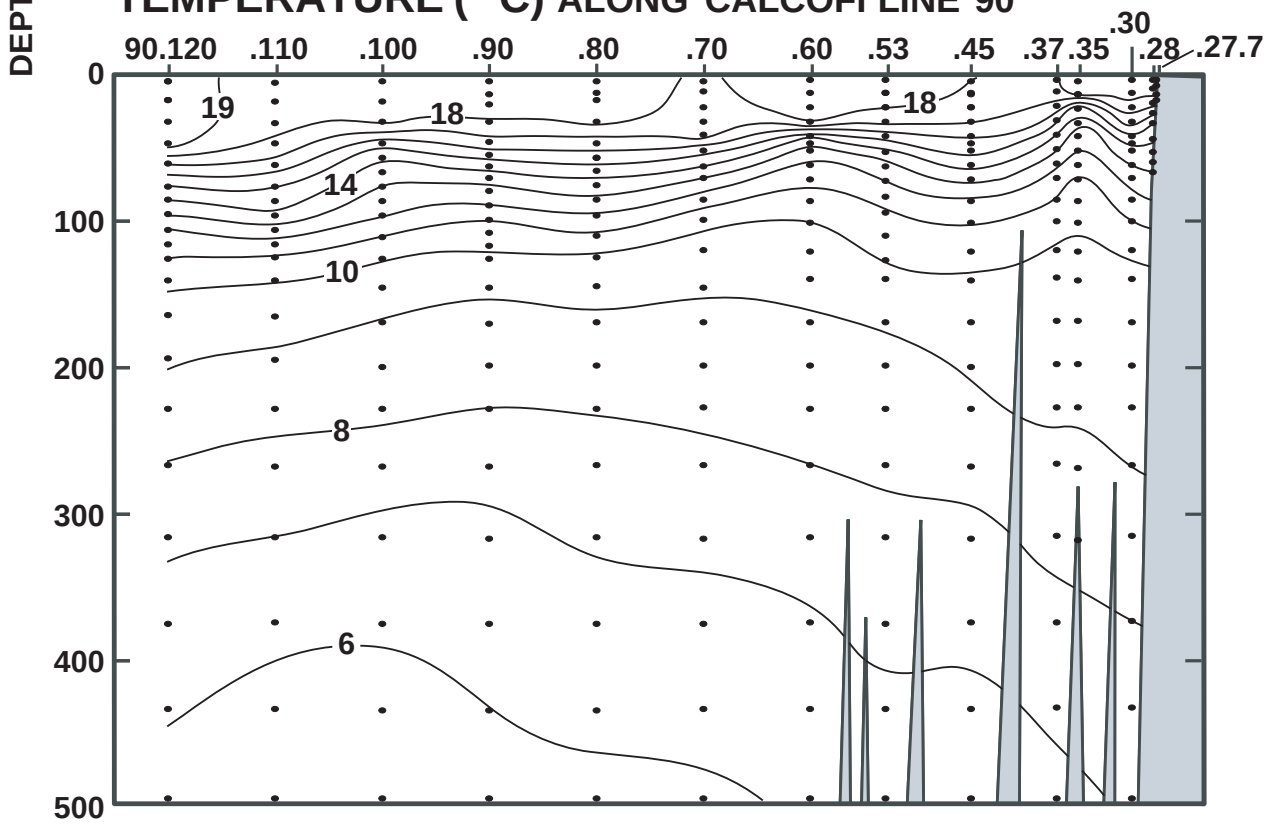

FIGURE 5B

CALCOFI CRUISE 0610

24- 27 October 2006

SALINITY ALONG CALCOFI LINE 90

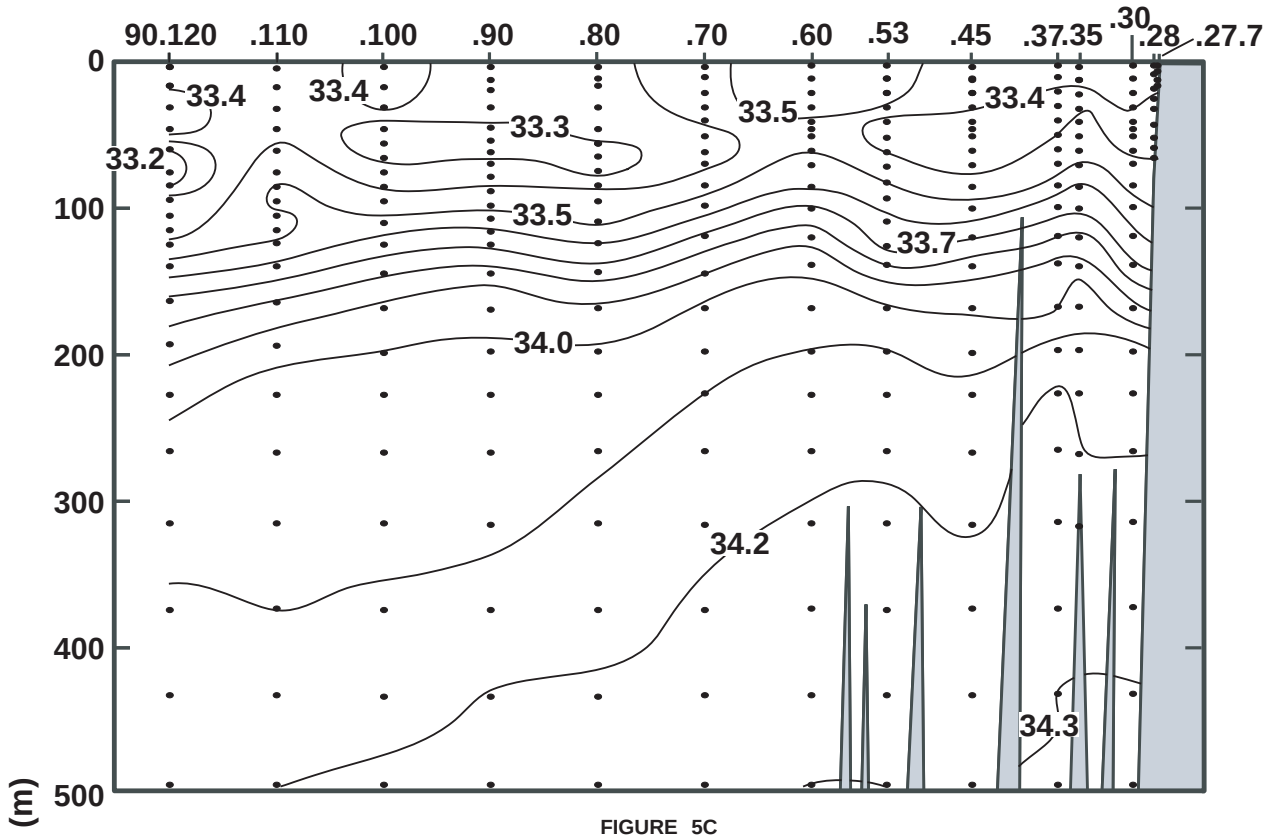

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

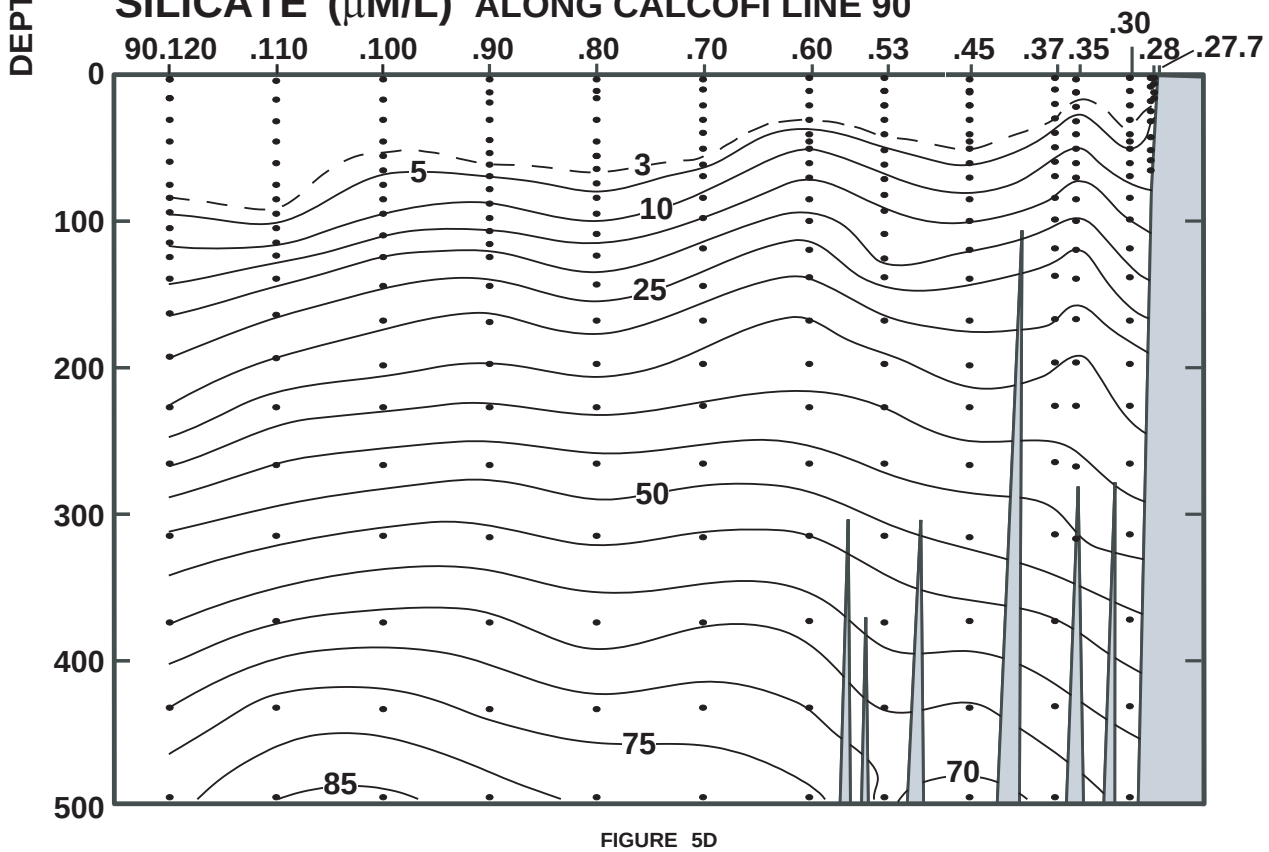

FIGURE 5D

CALCOFI CRUISE 0610

24 - 27 October 2006

NITRATE (μM/L) ALONG CALCOFI LINE 90

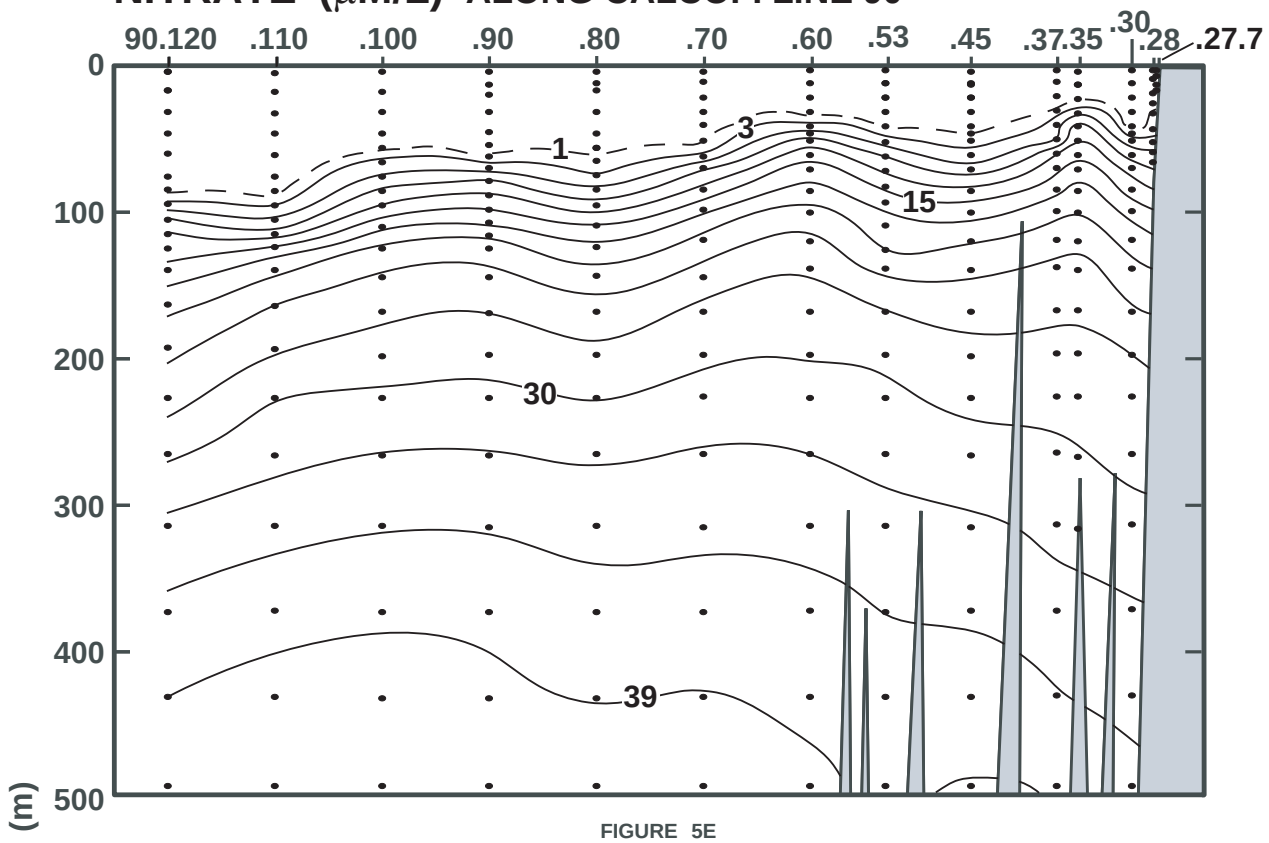

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

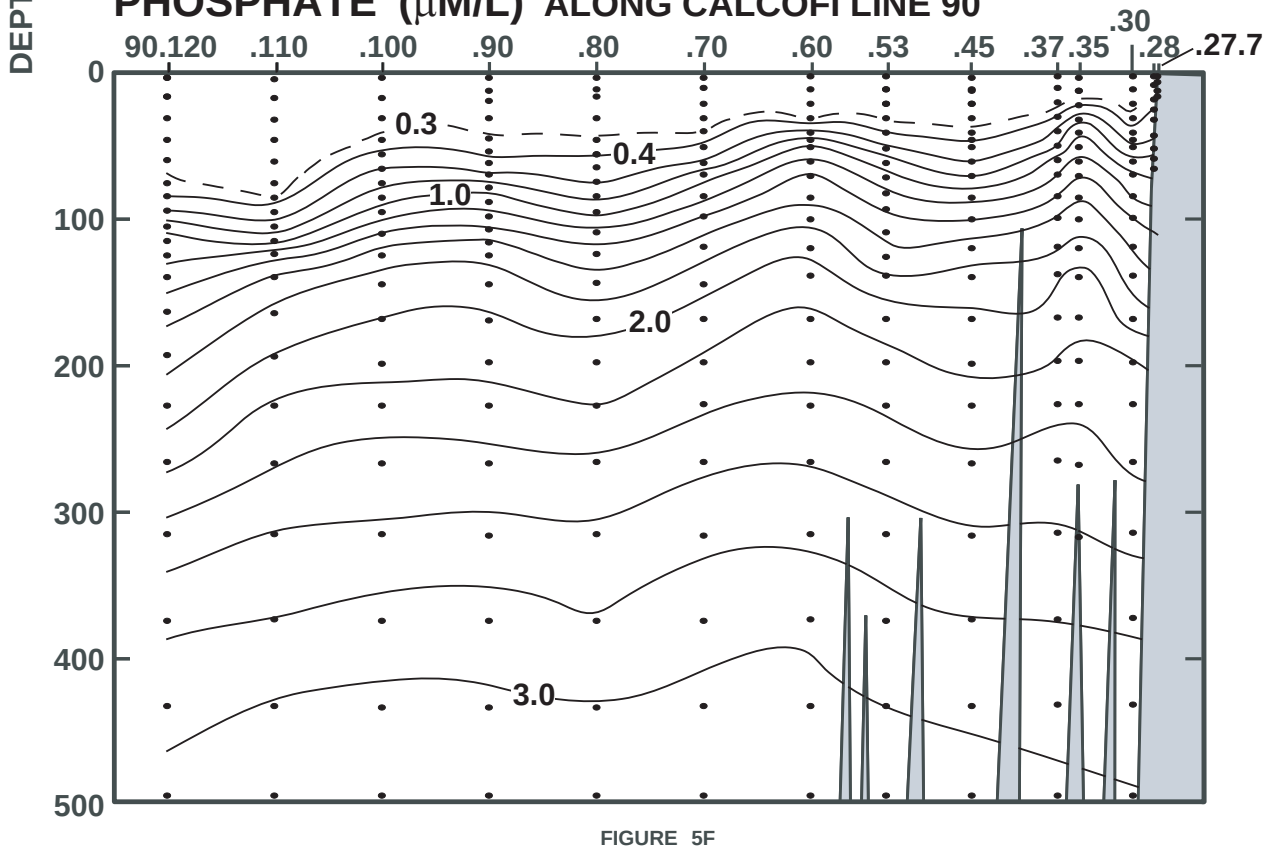

FIGURE 5F

CALCOFI CRUISE 0610

24 - 27 October 2006

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

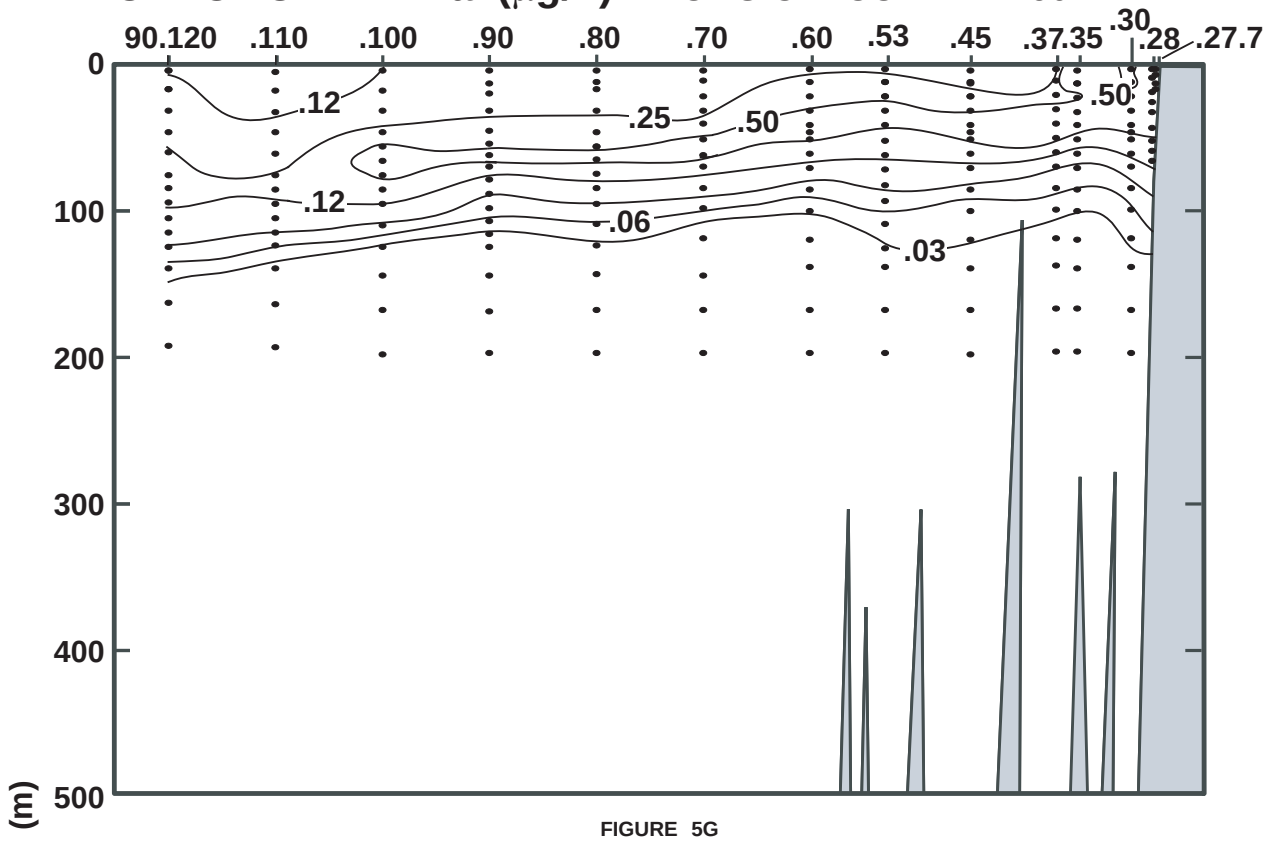

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

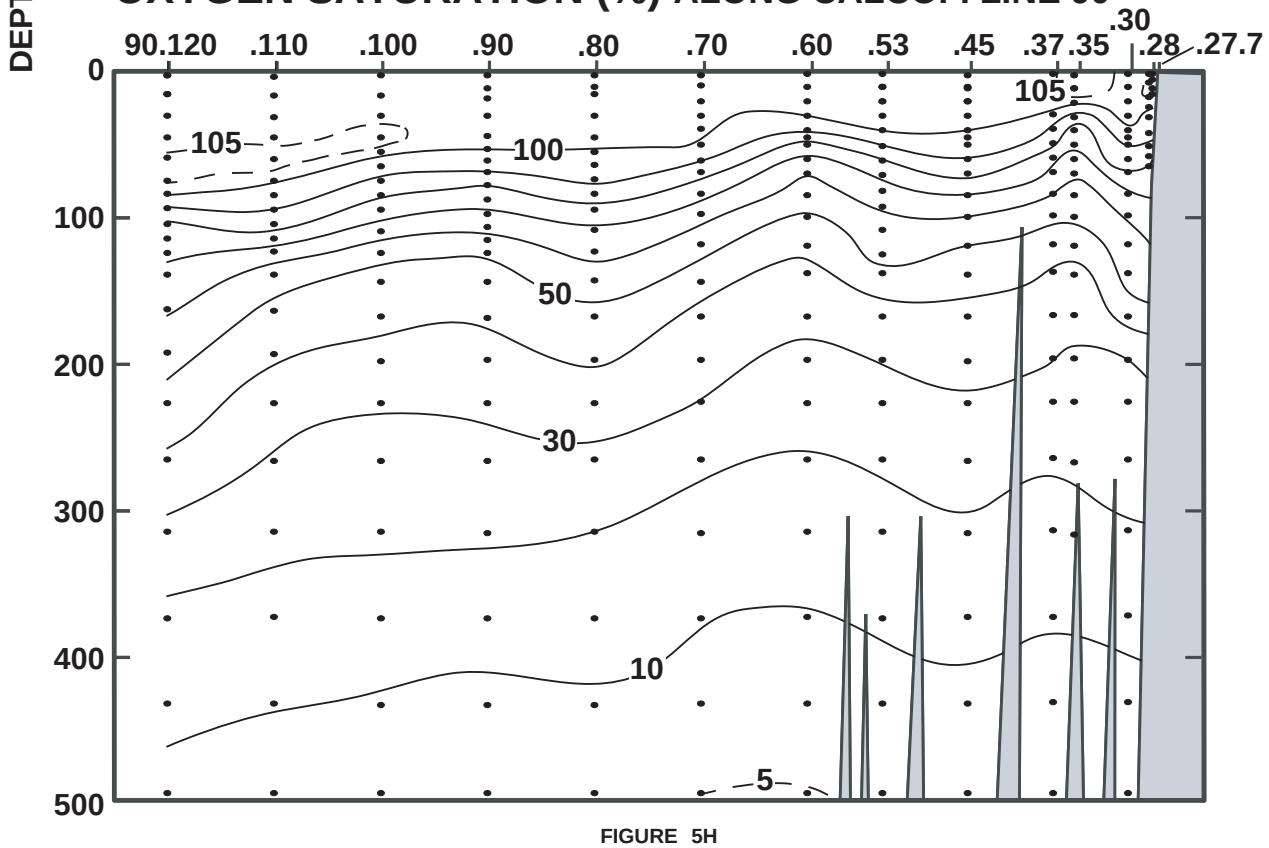

FIGURE 5H

CALCOFI CRUISE 0610

24 - 27 October 2006

OXYGEN (mL/L) ALONG CALCOFI LINE 90

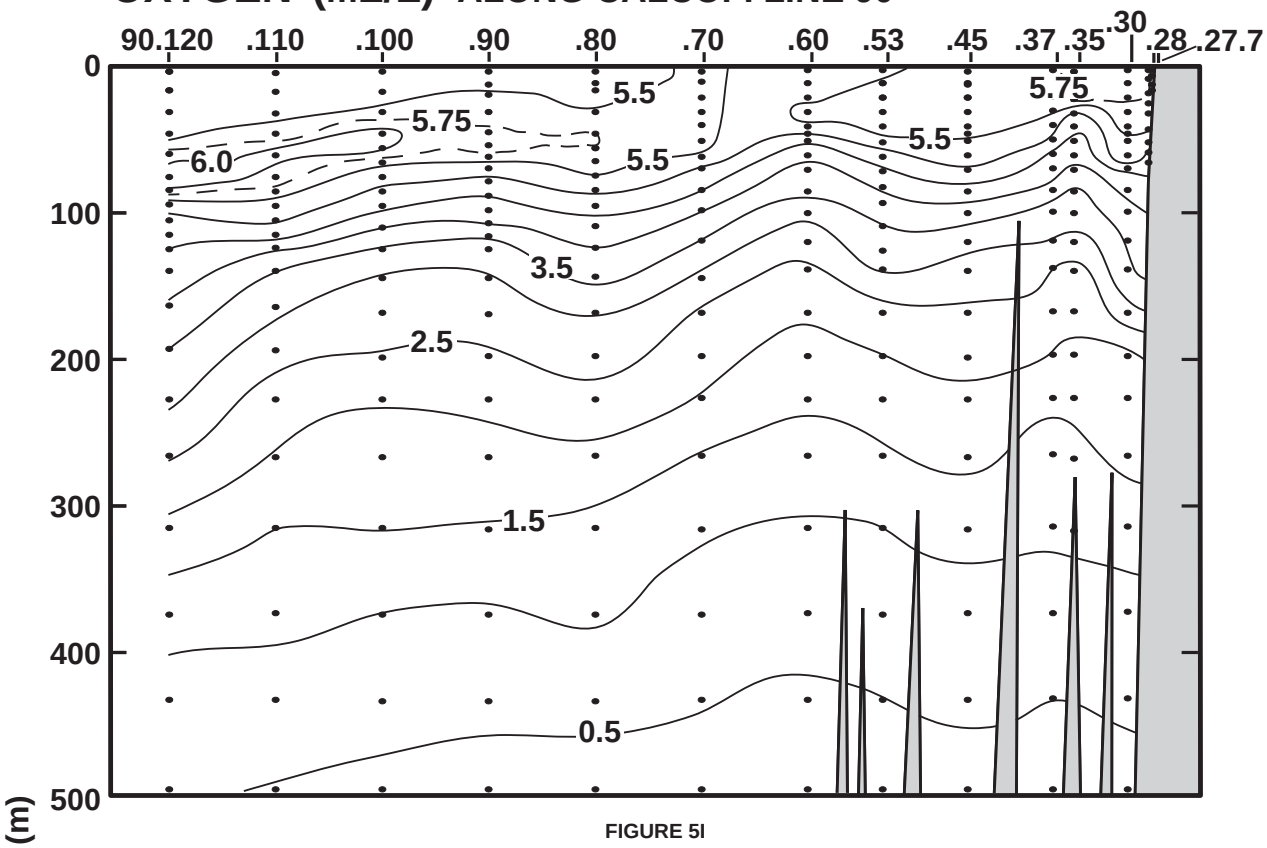

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

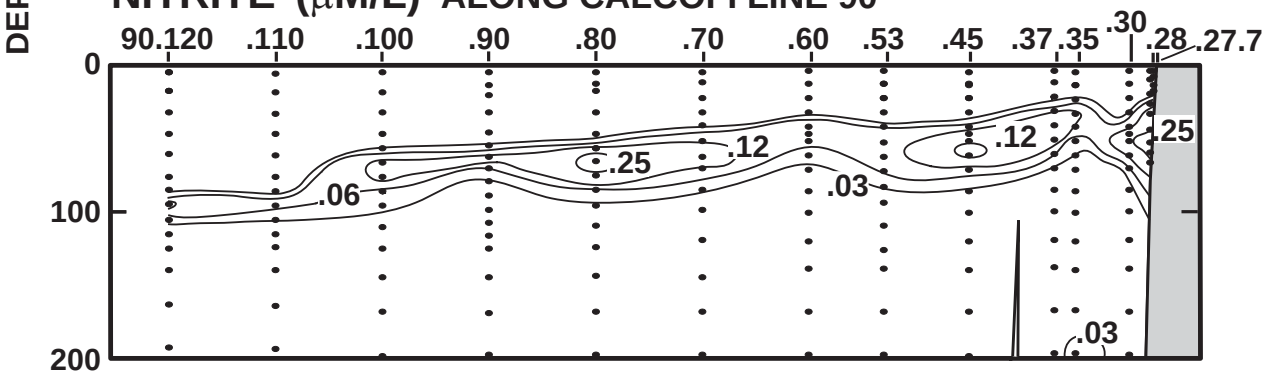

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

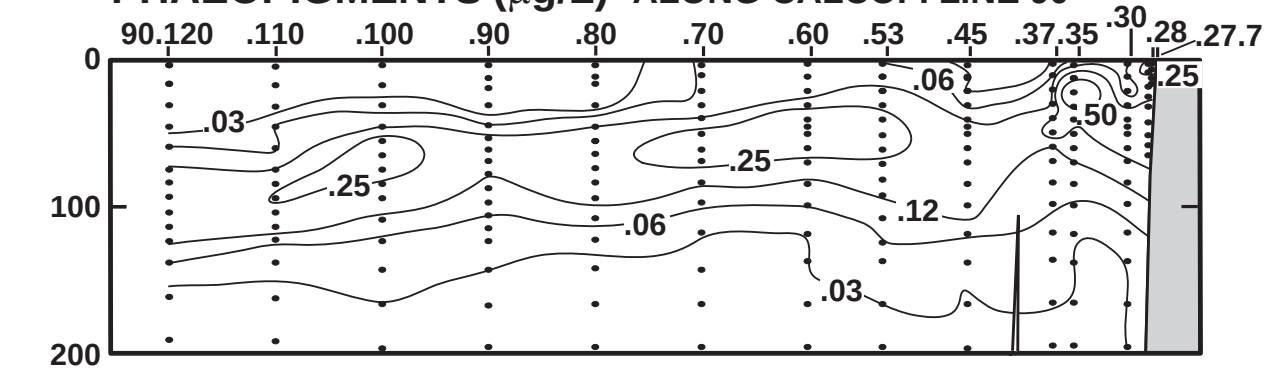

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0610

SHIP'S CAPTAIN

Wes Hill, RV *Roger Revelle*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Wilkinson, James R. (Chief Scientist)	Programmer/Analyst, SIO	1-3
Abramenkoff, Dimitry	Fishery Biologist, NMFS	1-3
Becker, Susan	Staff Research Associate, SIO	1-3
Burtenshaw, Jessica C.	Graduate Student, SIO	3
Chong, Laurie S.	Staff Research Associate, SIO	1-3
Dinger, Pete	Director of Technology, American Plastics Council	3
Douglas, Annie	Marine Mammal Observer, Cascadia Research	1-3
Dovel, Shonna L.	Staff Research Associate, SIO	1-3
Feldman, Lindsey E.	Volunteer	1-3
Fitzpatrick, Dylan	Volunteer	1
McKenna, Megan	Graduate Student, SIO	1
Hanson, Kate M.	Graduate Student, SIO	3
Havron, Andrea M.	Marine Mammal Observer, Cascadia Research	1-3
Hays, Amy E.	Fishery Biologist, NMFS	1-3
Hull, Pincelli	Graduate Student, SIO	3
Kansteiner, Matt	Volunteer	1
Karakoylu, Erdem	Graduate Student, SIO	3
Kelly, Rachel C.	Volunteer	1-3
King, Andrew L.	Graduate Student, SIO	2
Lindquist, Kirsten E.	Seabird Biologist, Pt. Reyes Bird Observatory	1-3
Overcash, Bryan J.	Scientific Aid, Cal. Department of Fish and Game	3
Ohman, Mark	Professor, SIO	3
Peacock, Cynthia G.	Research Scientist, University of Washington	1-3
Reynolds, Sue	Staff Research Associate, SIO	2
Oleson, Erin	Post-Doctoral Researcher, SIO	2
Sheldon, Jennifer L.	Staff Research Associate, SIO	1-3
Skydel, David	Volunteer	1
Stanaway, Kathryn E.	Staff Research Associate, SIO	1-3
Swart, Neil C.	Student, University of Cape Town	1-3
Thombley, Robert	Staff Research Associate, SIO	1-3
Wolgast, David M.	Staff Research Associate, SIO	1-3
Wolgast, Michael M.	Volunteer	1-3

Leg 1: San Diego to Dana Point, California 21-27 October, 2006
Leg 2: Dana Point to Ventura, California 27 October to 1 November, 2006
Leg 3: Ventura to San Diego, California 1-6 November, 2006

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 5.2 N	120 46.8 W	05/11/06	1047	UTC	72 m	350	09 kn			1018.4 mb	17.8 C	14.7 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.44	14.44	33.333	24.808	313.1	0.000	5.65	97.2	5.0	0.49	2.4	0.15	1.20	0.26	0	
2		14.44	14.44	33.333	24.808	313.1	0.006	5.65	97.2	5.0	0.49	2.4	0.15	1.20	0.26	2	210
6		14.47	14.47	33.316	24.788	315.1	0.019	5.72	98.5	4.6	0.46	2.0	0.13	1.23	0.26	6	209
10	ISL	14.48	14.48	33.316	24.786	315.4	0.031	5.72	98.5	4.5	0.46	2.0	0.13	1.28	0.26	10	
11		14.48	14.48	33.316	24.786	315.4	0.035	5.72	98.5	4.5	0.46	2.0	0.13	1.30	0.26	11	207
11		14.48	14.48	33.316	24.786	315.4	0.035									11	208
20		14.08	14.08	33.423	24.953	299.8	0.062	5.00	85.4	8.2	0.76	5.6	0.25	1.48	0.18	20	206
30		12.49	12.49	33.460	25.301	266.9	0.091	4.15	68.6	11.2	1.13	11.5	0.09	0.14	0.14	30	205
40		12.19	12.18	33.496	25.387	259.0	0.117	3.89	63.9	13.6	1.28	13.5	0.10	0.10	0.17	40	204
50		12.38	12.37	33.474	25.334	264.3	0.143	4.05	66.8	12.2	1.19	12.3	0.10	0.11	0.16	50	203
59		11.92	11.91	33.511	25.450	253.5	0.166	3.80	62.1	14.5	1.34	14.3	0.11	0.09	0.18	59	202
66		11.88	11.87	33.518	25.463	252.4	0.184	3.74	61.1	15.1	1.36	14.5	0.13	0.09	0.21	66	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 1.3 N	120 55.1 W	05/11/06	0713	UTC	239 m	010	15 kn			1018.4 mb	17.2 C	15.0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.38	15.38	33.274	24.559	336.7	0.000	5.94	104.1	2.1	0.31	0.2	0.03	1.45	0.26	0	
2		15.38	15.38	33.274	24.559	336.8	0.007	5.94	104.1	2.1	0.31	0.2	0.03	1.45	0.26	2	216
10		15.38	15.38	33.271	24.557	337.2	0.034	5.93	103.9	2.0	0.32	0.2	0.03	1.40	0.32	10	214
10		15.38	15.38	33.274	24.560	337.0	0.034			2.1	0.31	0.2	0.03			10	215
19		15.30	15.30	33.291	24.591	334.3	0.064	5.91	103.4	2.4	0.33	0.3	0.04	1.90 A	0.39 A	19	213
20	ISL	15.30	15.30	33.291	24.591	334.4	0.067	5.91	103.4	2.4	0.33	0.3	0.04	1.90	0.39	20	
30		15.27	15.27	33.293	24.599	333.9	0.101	5.90	103.2	2.5	0.34	0.4	0.05	1.90 A	0.41 A	30	212
40		15.02	15.01	33.336	24.687	325.8	0.134	5.76	100.3	2.1	0.35	0.4	0.07	1.13	0.25	40	211
49		14.21	14.20	33.310	24.840	311.4	0.162	5.46	93.5	3.7	0.52	2.0	0.25	0.46	0.21	49	210
50	ISL	14.01	14.00	33.280	24.858	309.7	0.165	5.46	93.1	3.8	0.54	2.2	0.25	0.43	0.21	50	
59		12.26	12.25	33.073	25.046	291.9	0.192	5.42	89.0	4.7	0.71	5.0	0.23	0.28	0.22	59	209
69		11.64	11.63	33.243	25.294	268.5	0.221	4.80	77.8	8.7	1.02	10.8	0.04	0.15	0.14	69	208
75	ISL	11.50	11.49	33.373	25.421	256.6	0.236	4.29	69.4	11.6	1.20	13.4	0.06	0.11	0.14	75	
84		11.37	11.36	33.542	25.576	242.0	0.259	3.61	58.3	15.4	1.43	16.2	0.10	0.07	0.13	84	207
99		10.89	10.88	33.619	25.722	228.4	0.294	3.27	52.3	18.4	1.60	18.7	0.03	0.04	0.11	99	206
100	ISL	10.86	10.85	33.625	25.732	227.5	0.296	3.25	51.9	18.6	1.61	18.9	0.03	0.04	0.11	100	
119		10.35	10.34	33.730	25.904	211.6	0.338	2.90	45.9	22.7	1.85	21.4	0.04	0.04	0.10	120	205
125	ISL	10.25	10.24	33.753	25.939	208.3	0.351	2.84	44.8	23.5	1.87	21.9	0.03	0.03	0.09	126	
139		10.04	10.02	33.806	26.016	201.2	0.379	2.70	42.4	25.1	1.90	23.1	0.02	0.02	0.08	140	204
150	ISL	9.81	9.79	33.869	26.104	193.1	0.401	2.52	39.4	27.2	1.98	24.3	0.03	0.01	0.08	151	
169		9.44	9.42	33.974	26.247	179.8	0.436	2.19	34.0	30.9	2.12	26.4	0.05	0.01	0.07	170	203
199		9.12	9.10	34.049	26.358	169.8	0.489	1.88	29.0	34.9	2.26	28.2	0.09	0.01	0.08	200	202
200	ISL	9.11	9.09	34.052	26.362	169.4	0.490	1.87	28.8	35.1	2.27	28.3	0.09			201	
228		8.69	8.67	34.132	26.491	157.6	0.536	1.48	22.6	41.3	2.44	30.3	0.10			229	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 53.3 N	121 12.1 W	05/11/06	0317	UTC	570 m	350	16 kn			1018.9 mb	16.7 C	15.7 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.10	16.10	33.326	24.438	348.2	0.000	5.76	102.5	2.3	0.31	0.3	0.04	0.86	0.02	0	
2		16.10	16.10	33.326	24.438	348.3	0.007	5.76	102.5	2.3	0.31	0.3	0.04	0.86 A	0.02 A	2	223
10		16.09	16.09	33.327	24.442	348.2	0.035									10	221
10		16.10	16.10	33.327	24.440	348.5	0.035									10	222
11		16.09	16.09	33.326	24.441	348.4	0.038	5.78	102.8	2.3	0.30	0.3	0.04	0.95	0.10	11	220
20		16.10	16.10	33.327	24.440	348.7	0.070									20	219
21		16.09	16.09	33.327	24.442	348.6	0.073	5.77	102.6	2.3	0.31	0.2	0.04	0.79	0.38	21	218
30		15.70	15.70	33.311	24.518	341.6	0.104	5.73	101.1	2.4	0.33	0.4	0.06	0.99	0.12	30	217
41		15.68	15.67	33.356	24.557	338.2	0.142	5.64	99.5	2.8	0.35	0.5	0.08	0.93	0.06	41	216
50		15.18	15.17	33.423	24.720	323.0	0.171	5.37	93.8	4.6	0.47	1.9	0.20	0.67	0.16	50	215
60		14.02	14.01	33.408	24.955	300.7	0.203	4.94	84.3	6.8	0.73	5.4	0.37	0.49	0.17	60	214
70		13.01	13.00	33.386	25.143	283.0	0.232	4.81	80.4	7.3	0.86	7.8	0.15	0.41	0.19	70	213
75	ISL	12.42	12.41	33.414	25.280	270.1	0.246	4.56	75.3	10.3	1.08	11.2	0.08	0.30	0.19	75	
84		11.52	11.51	33.487	25.506	248.7	0.269	4.05	65.6	15.9	1.47	17.1	0.01	0.10	0.18	84	212
100		11.18	11.17	33.558	25.623	237.9	0.308	3.55	57.1	15.9	1.47	17.1	0.01	0.03	0.17	100	211
120		10.75	10.74	33.644	25.767	224.6	0.354	3.25	51.8	18.8	1.62	19.4	0.01	0.05	0.08	121	210
125	ISL	10.66	10.65	33.662	25.797	221.9	0.365	3.18	50.6	19.5	1.66	19.9	0.01	0.04	0.09	126	
139		10.46	10.44	33.707	25.867	215.5	0.396	3.00	47.6	21.2	1.75	21.0	0.01	0.01	0.13	140	209
150	ISL	10.42	10.40	33.732	25.894	213.2	0.419	2.92	46.2	22.1	1.81	21.5	0.01	0.01	0.13	151	
169		10.23	10.21	33.770	25.956	207.6	0.459	2.79	44.0	23.4	1.85	22.2	0.01	0.01	0.14	170	208
199		9.03	9.01	33.857	26.222	182.6	0.518	3.46	53.2	25.1	1.75	23.3	0.01	0.00	0.05	200	207
200	ISL	9.01	8.99	33.862	26.229	181.9	0.520	3.45	53.0	25.3	1.75	23.4	0.01			201	
229		8.59	8.57	33.994	26.399	166.3	0.570	2.86	43.6	32.0	1.98	26.6	0.00			230	206
250	ISL	8.45	8.42	34.075	26.484	158.5	0.604	2.19	33.3	37.0	2.22	29.2	0.00			251	
268		8.35	8.32	34.124	26.538	153.7	0.632	1.69	25.6	40.8	2.40	31.2	0.00			270	205
300	ISL	7.90	7.87	34.119	26.601	148.0	0.681	1.68	25.2	45.0	2.45	32.6	0.00			302	
318		7.65	7.62	34.106	26.628	145.7	0.707	1.67	24.9	47.1	2.48	33.0	0.00			320	204
378		7.42	7.38	34.203	26.738	136.1	0.792	0.90	13.4	57.3	2.79	34.8	0.01			380	203
400	ISL	7.17	7.13	34.222	26.788	131.6	0.821	0.72	10.6	62.3	2.88	35.6	0.02			403	
437		6.72	6.68	34.244	26.867	124.3	0.869	0.52	7.6	70.1	3.01	36.9	0.03			440	202
500	ISL	6.23	6.19	34.272	26.954	116.5	0.944	0.40	5.8	76.4	3.09	38.9	0.01			503	
514		6.12	6.07	34.279	26.974	114.7	0.961	0.37	5.3	77.8	3.11	39.4	0.00			518	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 43.4 N	121 32.6 W	04/11/06	2318 UTC	926 m	340 22 kn	330 05 07	2	1018.2 mb	17.0 C	15.8 C		8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.58	16.58	33.165	24.205	370.5	0.000	5.72	102.6	1.6	0.30	0.0	0.00	0.24	0.06	0	
2		16.58	16.58	33.165	24.205	370.6	0.007	5.72	102.6	1.6	0.30	0.0	0.00	0.24	0.06	2	221
10		16.57	16.57	33.168	24.210	370.4	0.037	5.71	102.4	1.6	0.30	0.0	0.00	0.23	0.10	10	219
11		16.57	16.57	33.166	24.208	370.5	0.041									11	220
20		16.53	16.53	33.165	24.217	370.0	0.074	5.73	102.7	1.5	0.30	0.0	0.00	0.27	0.20	20	218
30		16.49	16.49	33.167	24.228	369.2	0.111	5.74	102.8	1.6	0.30	0.0	0.00	0.35	0.01	30	217
41		16.25	16.24	33.188	24.300	362.8	0.151	5.81	103.6	1.5	0.30	0.0	0.00	0.40	0.07	41	216
50		15.37	15.36	33.209	24.513	342.7	0.183	5.89	103.2	1.6	0.35	0.2	0.03	0.59	0.33	50	215
60		14.64	14.63	33.150	24.626	332.1	0.217	5.89	101.6	1.8	0.41	0.7	0.07	0.71	0.20	60	214
70		13.04	13.03	33.058	24.883	307.7	0.249	5.70	95.1	3.2	0.61	3.2	0.33	0.29	0.21	70	213
75	ISL	12.47	12.46	33.061	24.997	297.0	0.264	5.53	91.2	4.4	0.72	5.0	0.26	0.19	0.16	75	
85		11.65	11.64	33.129	25.204	277.4	0.293	5.13	83.1	7.1	0.92	8.9	0.03	0.10	0.08	85	212
100		10.93	10.92	33.341	25.499	249.6	0.332	4.60	73.5	10.9	1.15	13.2	0.02	0.06	0.18	100	211
120		10.17	10.16	33.503	25.757	225.4	0.380	4.13	65.0	15.5	1.41	17.6	0.01	0.04	0.04	121	210
125	ISL	9.98	9.97	33.552	25.828	218.8	0.391	4.02	63.0	16.8	1.47	18.6	0.01	0.03	0.04	126	
140		9.48	9.46	33.688	26.017	201.0	0.422	3.75	58.2	20.4	1.62	21.1	0.01	0.01	0.03	141	209
150	ISL	9.31	9.29	33.742	26.087	194.5	0.442	3.66	56.6	21.7	1.67	21.9	0.01	0.01	0.03	151	
170		9.05	9.03	33.826	26.194	184.7	0.480	3.50	53.8	24.4	1.74	23.2	0.00	0.00	0.04	171	208
199		8.35	8.33	33.985	26.428	162.8	0.530	2.94	44.5	33.2	1.98	27.1	0.00	0.00	0.02	200	207
200	ISL	8.33	8.31	33.988	26.433	162.3	0.532	2.92	44.2	33.5	1.99	27.2	0.00			201	
229		7.92	7.90	34.025	26.524	154.1	0.578	2.48	37.2	39.5	2.18	29.9	0.00			230	206
250	ISL	7.66	7.64	34.029	26.565	150.4	0.610	2.39	35.6	42.3	2.24	30.8	0.00			251	
269		7.45	7.42	34.028	26.594	147.9	0.638	2.34	34.7	44.5	2.28	31.4	0.00			271	205
300	ISL	7.14	7.11	34.049	26.655	142.5	0.683	1.97	29.0	49.5	2.43	33.4	0.00			302	
318		6.98	6.95	34.063	26.688	139.5	0.709	1.74	25.5	52.4	2.53	34.5	0.00			320	204
376		6.57	6.54	34.090	26.765	132.8	0.788	1.34	19.5	59.5	2.72	36.6	0.00			378	203
400	ISL	6.55	6.51	34.123	26.794	130.4	0.819	1.13	16.4	61.7	2.79	37.2	0.00			403	
437		6.52	6.48	34.178	26.841	126.4	0.867	0.82	11.9	65.0	2.90	37.9	0.00			440	202
500	ISL	6.27	6.23	34.239	26.923	119.4	0.944	0.52	7.5	72.1	3.04	39.1	0.00			503	
513		6.22	6.17	34.252	26.940	118.0	0.960	0.46	6.6	73.6	3.07	39.4	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 23.5 N	122 15.1 W	04/11/06	1800 UTC	4026 m	360 17 kn	010 04 07	2	1020.4 mb	15.9 C	15.0 C	17m	8/8	AS

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.41	16.41	33.313	24.358	355.9	0.000	5.75	102.9	1.4	0.31	0.1	0.00	0.42	0.00	0	
2	B	16.41	16.41	33.313	24.358	356.0	0.007	5.75	102.9	1.4	0.31	0.1	0.00	0.42	0.00	2	223
10	ISL	16.40	16.40	33.312	24.360	356.1	0.036	5.79	103.6	1.3	0.30	0.1	0.00	0.42	0.01	10	
11		16.40	16.40	33.321	24.367	355.4	0.039									11	222
11	B	16.40	16.40	33.312	24.360	356.1	0.039	5.79	103.6	1.3	0.30	0.1	0.00	0.42	0.01	11	221
19		16.38	16.38	33.315	24.367	355.7	0.068									19	220
19		16.39	16.39	33.321	24.369	355.5	0.068	5.73	102.5	1.3	0.30	0.1	0.00	0.38	0.03	19	219
20	ISL	16.38	16.38	33.327	24.376	354.8	0.071	5.74	102.7	1.3	0.30	0.1	0.00	0.43	0.04	20	
27	B	16.28	16.28	33.367	24.430	349.9	0.096	5.77	103.0	1.1	0.31	0.1	0.00	0.86 A	0.10 A	27	218
30	ISL	15.73	15.73	33.329	24.525	340.9	0.106	5.72	101.0	1.4	0.36	0.5	0.09	1.08	0.14	30	
38	B	13.94	13.93	33.239	24.841	311.0	0.132	5.57	94.8	3.6	0.59	3.2	0.28	1.39	0.23	38	217
48	B	12.40	12.39	33.303	25.197	277.3	0.162	4.79	79.0	9.0	1.06	11.0	0.08	0.61	0.22	48	216
50	ISL	12.10	12.09	33.331	25.276	269.8	0.167	4.63	75.9	10.2	1.15	12.5	0.06	0.50	0.21	50	
57		11.21	11.20	33.438	25.523	246.3	0.185	4.14	66.6	14.1	1.41	16.7	0.01	0.23	0.19	57	215
65	B	10.78	10.77	33.520	25.664	233.1	0.204	3.80	60.6	16.7	1.55	19.0	0.01	0.14	0.07	65	214
75		10.09	10.08	33.614	25.856	215.0	0.227	3.39	53.3	20.3	1.73	21.9	0.01	0.04	0.13	75	213
85		9.84	9.83	33.678	25.948	206.4	0.248	3.18	49.7	21.8	1.79	22.8	0.01	0.02	0.08	85	212
100		9.43	9.42	33.750	26.073	194.9	0.278	3.06	47.4	24.2	1.87	24.4	0.01	0.01	0.09	100	211
120		9.25	9.24	33.834	26.168	186.2	0.316	2.95	45.6	26.2	1.90	24.9	0.01	0.01	0.07	121	210
125	ISL	9.19	9.18	33.856	26.195	183.8	0.325	2.91	44.9	26.9	1.92	25.2	0.01	0.01	0.06	126	
140		9.01	8.99	33.924	26.277	176.2	0.352	2.72	41.8	29.1	1.99	26.3	0.01	0.01	0.04	141	209
150	ISL	8.95	8.93	33.974	26.325	171.8	0.370	2.49	38.2	31.0	2.07	27.3	0.01	0.01	0.04	151	
170		8.84	8.82	34.058	26.409	164.3	0.403	2.04	31.3	34.7	2.23	29.1	0.00	0.01	0.04	171	208
199		8.46	8.44	34.094	26.496	156.4	0.450	1.85	28.1	38.9	2.33	30.7	0.01	0.00	0.04	200	207
200	ISL	8.44	8.42	34.093	26.499	156.2	0.451	1.85	28.1	39.1	2.33	30.8	0.01			201	
229		7.86	7.84	34.071	26.568	149.8	0.496	1.84	27.6	43.7	2.40	32.3	0.01			230	206
250	ISL	7.65	7.63	34.097	26.620	145.3	0.527	1.58	23.6	47.2	2.52	33.6	0.01			252	
268		7.53	7.50	34.127	26.661	141.6	0.553	1.32	19.6	50.1	2.62	34.6	0.01			270	205
300	ISL	7.28	7.25	34.151	26.715	136.8	0.597	1.12	16.6	54.1	2.73	35.5	0.01			302	
318		7.12	7.09	34.155	26.741	134.6	0.622	1.06	15.6	56.4	2.77	35.9	0.01			320	204
378		6.27	6.24	34.130	26.835	125.9	0.700	0.93	13.4	66.9	2.89	38.5	0.01			380	203
400	ISL	6.15	6.11	34.147	26.864	123.4	0.727	0.83	12.0	69.4	2.94	38.9	0.01			403	
437		6.06	6.02	34.189	26.909	119.6	0.772	0.64	9.2	73.0	3.02	39.4	0.01			440	202
500	ISL	5.86	5.82	34.258	26.990	112.7	0.845	0.37	5.3	80.3	3.15	40.5	0.01			504	
514		5.82	5.78	34.274	27.007	111.1	0.861	0.31	4.4	81.9	3.18	40.7	0.01			518	201

A) SECOND 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.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 3.2 N	122 56.5 W	04/11/06	1037	UTC	4233 m	340	12 kn			1019.4 mb	16.0 C	14.9 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.26	16.26	33.315	24.394	352.5	0.000	5.71	101.9	1.5	0.31	0.1	0.00	0.26	0.09	0	
2		16.26	16.26	33.315	24.394	352.6	0.007	5.71	101.9	1.5	0.31	0.1	0.00	0.26	0.09	2	220
10	ISL	16.24	16.24	33.316	24.399	352.3	0.035	5.71	101.8	1.5	0.31	0.1	0.00	0.27	0.09	10	
11		16.24	16.24	33.316	24.399	352.3	0.039	5.71	101.8	1.5	0.31	0.1	0.00	0.27	0.09	11	219
20		16.23	16.23	33.318	24.403	352.2	0.070	5.72	102.0	1.5	0.31	0.0	0.00	0.28	0.10	20	218
30		15.97	15.97	33.312	24.458	347.3	0.105	5.72	101.5	1.6	0.32	0.1	0.00	0.41	0.19	30	217
40		13.74	13.73	33.185	24.840	311.1	0.138	5.56	94.2	4.1	0.64	3.8	0.25	0.58	0.53	40	216
50		12.46	12.45	33.228	25.127	283.9	0.168	5.09	84.0	7.2	0.91	8.7	0.06	0.36	0.45	50	215
60		11.99	11.98	33.385	25.339	264.0	0.196	4.89	80.0	8.4	0.93	9.9	0.02	0.26	0.27	60	214
70		11.04	11.03	33.424	25.543	244.7	0.221	4.34	69.6	12.9	1.29	15.4	0.01	0.13	0.12	70	213
75	ISL	10.77	10.76	33.454	25.615	238.0	0.233	4.14	66.0	14.4	1.40	17.0	0.01	0.10	0.09	75	
85		10.37	10.36	33.527	25.741	226.2	0.256	3.84	60.7	16.8	1.54	19.1	0.01	0.07	0.06	85	212
100		9.60	9.59	33.661	25.975	204.1	0.289	3.62	56.3	20.3	1.64	21.2	0.00	0.02	0.04	100	211
120		9.12	9.11	33.816	26.174	185.5	0.327	3.07	47.3	26.0	1.89	24.9	0.00	0.01	0.04	121	210
125	ISL	9.06	9.05	33.851	26.211	182.1	0.337	2.92	44.9	27.2	1.95	25.6	0.00	0.01	0.04	126	
140		8.94	8.92	33.939	26.300	174.1	0.363	2.54	39.0	30.4	2.08	27.3	0.00	0.00	0.05	141	209
150	ISL	8.83	8.81	33.971	26.342	170.2	0.381	2.43	37.2	31.7	2.12	28.0	0.00	0.00	0.05	151	
169		8.60	8.58	34.004	26.404	164.6	0.412	2.31	35.2	33.7	2.17	28.9	0.00	0.00	0.04	170	208
199		8.24	8.22	34.039	26.487	157.2	0.461	2.06	31.1	38.4	2.29	30.8	0.00	0.00	0.04	200	207
200	ISL	8.23	8.21	34.040	26.489	157.0	0.462	2.05	31.0	38.5	2.29	30.8	0.00			201	
229		7.97	7.95	34.075	26.556	151.1	0.507	1.86	27.9	42.4	2.39	31.9	0.00			230	206
250	ISL	7.78	7.76	34.106	26.608	146.4	0.538	1.61	24.1	45.9	2.50	33.0	0.00			251	
268		7.59	7.56	34.127	26.652	142.5	0.564	1.39	20.7	49.0	2.60	34.0	0.00			270	205
300	ISL	7.15	7.12	34.127	26.714	136.8	0.609	1.22	18.0	54.2	2.70	35.6	0.00			302	
318		6.91	6.88	34.125	26.746	133.9	0.633	1.15	16.9	57.0	2.75	36.4	0.00			320	204
378		6.50	6.47	34.184	26.848	124.9	0.711	0.77	11.2	65.8	2.95	38.1	0.00			380	203
400	ISL	6.40	6.36	34.205	26.878	122.4	0.738	0.65	9.4	68.4	3.00	38.6	0.00			403	
437		6.24	6.20	34.235	26.923	118.5	0.783	0.49	7.1	72.6	3.08	39.3	0.00			440	202
500	ISL	5.88	5.84	34.266	26.993	112.3	0.855	0.36	5.2	80.0	3.17	40.4	0.00			503	
513		5.81	5.77	34.273	27.008	111.1	0.870	0.33	4.7	81.5	3.19	40.6	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 43.2 N	123 38.2 W	04/11/06	0423	UTC	4161 m	350	12 kn			1019.8 mb	16.6 C	15.4 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.29	16.29	33.228	24.320	359.5	0.000	5.75	102.6	1.7	0.31	0.0	0.00	0.22	0.06	0	
1		16.29	16.29	33.228	24.320	359.6	0.004	5.75	102.6	1.7	0.31	0.0	0.00	0.22	0.06	1	222
9		16.24	16.24	33.222	24.327	359.2	0.032	5.75	102.5	1.6	0.31	0.0	0.00	0.22	0.07	9	221
10	ISL	16.20	16.20	33.223	24.337	358.2	0.036	5.76	102.6	1.6	0.31	0.0	0.00	0.22	0.07	10	
19		15.88	15.88	33.239	24.422	350.4	0.068	5.81	102.8	1.6	0.31	0.0	0.00	0.23	0.09	19	220
20	ISL	15.88	15.88	33.242	24.424	350.2	0.071	5.81	102.8	1.6	0.31	0.0	0.00	0.25	0.10	20	
29		15.90	15.90	33.270	24.442	348.9	0.103	5.77	102.2	1.7	0.32	0.0	0.00	0.49	0.14	29	218
30		15.92	15.92	33.276	24.442	348.9	0.106									30	219
39		14.86	14.85	33.255	24.659	328.4	0.137	5.64	97.8	3.0	0.49	1.8	0.15	0.60	0.40	39	217
49		12.35	12.34	33.044	25.006	295.5	0.168	5.68	93.4	3.8	0.60	3.4	0.16	0.25	0.26	49	216
50	ISL	12.35	12.34	33.066	25.023	293.9	0.171	5.67	93.2	3.8	0.61	3.4	0.15	0.25	0.25	50	
59		12.38	12.37	33.223	25.139	283.1	0.197	5.42	89.3	4.9	0.66	4.9	0.05	0.20	0.20	59	215
69		11.49	11.48	33.283	25.352	262.9	0.224	4.84	78.3	9.2	1.03	11.1	0.02	0.14	0.13	69	214
75	ISL	11.08	11.07	33.342	25.472	251.6	0.240	4.55	72.9	11.5	1.19	13.8	0.02	0.11	0.10	75	
84		10.57	10.56	33.442	25.640	235.8	0.262	4.17	66.2	14.7	1.39	16.9	0.01	0.07	0.07	84	213
98		9.85	9.84	33.590	25.878	213.3	0.293	3.65	57.0	19.3	1.64	20.9	0.01	0.03	0.04	98	212
100	ISL	9.79	9.78	33.604	25.899	211.4	0.297	3.62	56.5	19.7	1.65	21.2	0.01	0.03	0.04	100	
118		9.37	9.36	33.714	26.054	197.0	0.334	3.46	53.5	22.3	1.73	22.5	0.01	0.01	0.03	119	210
125	ISL	9.22	9.21	33.767	26.120	190.8	0.348	3.34	51.5	24.0	1.78	23.4	0.01	0.01	0.03	126	
138		8.97	8.96	33.859	26.232	180.4	0.372	3.13	48.0	27.2	1.88	24.9	0.01	0.00	0.03	139	209
150	ISL	8.77	8.75	33.909	26.303	173.9	0.393	3.06	46.8	29.1	1.92	25.7	0.01	0.00	0.03	151	
169		8.49	8.47	33.957	26.384	166.5	0.425	3.01	45.7	31.5	1.95	26.5	0.01	0.00	0.02	170	208
198		8.08	8.06	34.001	26.481	157.7	0.472	2.81	42.3	36.3	2.06	28.3	0.00	0.00	0.02	199	207
200	ISL	8.05	8.03	34.003	26.487	157.1	0.475	2.78	41.8	36.7	2.07	28.5	0.00			201	
228		7.67	7.65	34.032	26.565	150.0	0.518	2.32	34.6	42.5	2.25	31.0	0.00			229	206
250	ISL	7.45	7.43	34.049	26.610	146.0	0.551	2.04	30.3	46.4	2.37	32.5	0.00			251	
267		7.30	7.27	34.060	26.640	143.4	0.576	1.85	27.4	49.1	2.46	33.5	0.00			269	205
300	ISL	6.98	6.95	34.078	26.699	138.1	0.622	1.58	23.2	53.6	2.59	35.0	0.00			302	
317		6.83	6.80	34.090	26.729	135.4	0.645	1.44	21.1	55.9	2.65	35.7	0.00			319	204
377		6.54	6.51	34.185	26.844	125.4	0.723	0.76	11.1	66.5	2.93	38.0	0.00			379	203
400	ISL	6.38	6.34	34.201	26.877	122.4	0.752	0.65	9.4	69.5	2.99	38.6	0.00			403	
437		6.13	6.09	34.220	26.925	118.2	0.796	0.54	7.8	73.8	3.05	39.5	0.00			440	202
500	ISL	5.82	5.78	34.284	27.015	110.2	0.868	0.33	4.7	81.9	3.16	40.7	0.00			503	
513		5.75	5.71	34.297	27.034	108.5	0.883	0.29	4.1	83.6	3.18	41.0	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.1 N	124 19.2 W	03/11/06	2250 UTC	4589 m	340 09 kn	300 03 10	4	1018.2 mb	17.8 C	17.2 C		8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.79	17.79	33.112	23.879	401.6	0.000	5.55	101.9	1.8	0.30	0.0	0.00	0.13	0.02	0	
2		17.79	17.79	33.112	23.879	401.7	0.008	5.55	101.9	1.8	0.30	0.0	0.00	0.13	0.02	2	220
2		17.76	17.76	33.109	23.884	401.2	0.008									2	221
10	ISL	17.66	17.66	33.107	23.906	399.3	0.040	5.55	101.6	1.7	0.30	0.0	0.00	0.13	0.04	10	
11		17.63	17.63	33.106	23.913	398.7	0.044	5.55	101.6	1.7	0.30	0.0	0.00	0.13	0.04	11	219
20	ISL	17.32	17.32	33.115	23.994	391.3	0.080	5.58	101.5	1.7	0.30	0.0	0.00	0.17	0.04	20	
21		17.28	17.28	33.117	24.005	390.3	0.084	5.58	101.4	1.7	0.30	0.0	0.00	0.18	0.04	21	218
30		16.79	16.79	33.143	24.141	377.6	0.118	5.65	101.8	1.5	0.31	0.0	0.00	0.21	0.04	30	217
40		16.75	16.74	33.183	24.181	374.1	0.156	5.66	101.9	1.6	0.31	0.0	0.00	0.21	0.08	40	216
50		14.56	14.55	33.067	24.579	336.4	0.191	6.25	107.6	1.3	0.30	0.0	0.00	0.29	0.14	50	215
60		13.14	13.13	33.021	24.835	312.1	0.224	6.07	101.5	1.5	0.35	0.0	0.01	0.29	0.25	60	214
70		13.12	13.11	33.190	24.970	299.5	0.254	5.85	97.8	2.1	0.40	1.0	0.11	0.28	0.14	70	213
75	ISL	12.71	12.70	33.168	25.033	293.6	0.269	5.66	93.8	3.4	0.53	3.0	0.09	0.26	0.12	75	
85		11.76	11.75	33.112	25.170	280.6	0.298	5.26	85.4	6.2	0.81	7.4	0.02	0.19	0.09	85	212
100		11.26	11.25	33.314	25.419	257.3	0.338	4.91	79.0	8.5	0.94	10.1	0.02	0.03	0.25	100	211
120		10.02	10.01	33.464	25.752	225.8	0.386	4.44	69.6	13.8	1.27	15.8	0.01	0.04	0.04	121	210
125	ISL	9.90	9.89	33.525	25.820	219.5	0.398	4.46	69.8	14.4	1.28	16.3	0.01	0.03	0.03	126	
139		9.72	9.70	33.694	25.982	204.3	0.427	4.50	70.2	15.8	1.29	16.8	0.00	0.01	0.02	140	209
150	ISL	9.53	9.51	33.788	26.087	194.6	0.449	4.48	69.6	17.3	1.31	17.5	0.00	0.01	0.01	151	
170		9.17	9.15	33.903	26.235	180.8	0.487	4.43	68.3	20.7	1.39	19.1	0.00	0.00	0.01	171	208
199		8.58	8.56	33.971	26.382	167.3	0.537	4.04	61.5	27.0	1.59	22.2	0.00	0.00	0.01	200	207
200	ISL	8.56	8.54	33.972	26.385	166.9	0.539	4.03	61.3	27.2	1.60	22.3	0.00			201	
229		8.02	8.00	33.985	26.477	158.5	0.586	3.64	54.7	33.0	1.78	25.0	0.00			230	206
250	ISL	7.66	7.64	33.988	26.532	153.5	0.619	3.36	50.1	37.5	1.91	26.9	0.00			251	
269		7.35	7.32	33.989	26.578	149.4	0.648	3.10	45.9	41.8	2.03	28.7	0.00			271	205
300	ISL	6.86	6.83	33.991	26.647	143.0	0.693	2.61	38.2	48.9	2.25	31.7	0.00			302	
319		6.59	6.56	33.995	26.686	139.3	0.720	2.31	33.6	53.2	2.38	33.4	0.00			321	204
378		5.90	5.87	34.032	26.804	128.5	0.799	1.56	22.3	65.5	2.71	37.6	0.00			380	203
400	ISL	5.65	5.62	34.038	26.840	125.2	0.827	1.43	20.3	69.8	2.78	38.5	0.00			403	
438		5.27	5.23	34.052	26.897	119.9	0.873	1.27	17.9	76.9	2.87	39.8	0.00			441	202
500	ISL	4.97	4.93	34.109	26.977	112.7	0.945	0.84	11.8	87.0	3.02	41.7	0.00			503	
513		4.91	4.87	34.121	26.993	111.3	0.960	0.75	10.5	89.1	3.05	42.1	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.9 N	120 29.2 W	02/11/06	0438 UTC	25 m	290 08 kn			1015.8 mb	17.0 C	14.2 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.12	16.12	33.437	24.519	340.6	0.000	5.70	101.5	3.2	0.38	0.6	0.06	1.09	0.30	0	
1		16.12	16.12	33.437	24.519	340.6	0.003	5.70	101.5	3.2	0.38	0.6	0.06	1.09	0.30	1	205
5		16.14	16.14	33.436	24.514	341.2	0.017	5.64	100.5	3.3	0.39	0.7	0.07	1.15	0.28	5	204
10		15.60	15.60	33.434	24.634	329.9	0.034	5.51	97.1	4.6	0.50	2.0	0.14	1.04	0.32	10	203
15		13.69	13.69	33.392	25.010	294.3	0.049	4.87	82.5	7.5	0.81	5.7	0.37	0.97	0.24	15	202
20		13.43	13.43	33.392	25.063	289.4	0.064	4.63	78.0	8.4	0.91	7.1	0.38	0.57	0.22	20	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.0 N	120 31.3 W	02/11/06	0544 UTC	74 m	310 16 kn			1016.4 mb	16.4 C	14.1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.93	15.93	33.435	24.561	336.6	0.000	5.63	99.9	3.6	0.41	0.9	0.09	1.22	0.34	0	
1		15.93	15.93	33.435	24.561	336.6	0.003	5.63	99.9	3.6	0.41	0.9	0.09	1.22	0.34	1	208
5		15.93	15.93	33.435	24.561	336.7	0.017	5.64	100.1	3.6	0.41	0.9	0.09	1.74	0.07	5	207
10		15.90	15.90	33.434	24.567	336.3	0.034	5.63	99.8	3.7	0.41	0.8	0.10	1.54	0.19	10	206
20		15.24	15.24	33.394	24.683	325.5	0.067	5.48	95.9	4.2	0.50	1.6	0.22	1.17	0.26	20	205
30		13.61	13.61	33.363	25.004	295.2	0.098	4.94	83.6	6.5	0.80	6.2	0.67	0.57	0.34	30	204
40		13.31	13.30	33.369	25.069	289.3	0.127	4.71	79.2	7.6	0.90	7.8	0.57	0.44	0.32	40	203
50		13.09	13.08	33.377	25.120	284.7	0.156	4.61	77.1	8.0	0.95	8.8	0.40	0.41	0.25	50	202
66		12.31	12.30	33.441	25.322	265.9	0.200	4.16	68.5	10.8	1.18	12.2	0.08	0.18	0.20	66	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 19.0 N	120 48.0 W	02/11/06	0902 UTC	787 m	340 09 kn			1017.4 mb	16.5 C	15.0 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.91	15.91	33.462	24.586	334.2	0.000	5.81	103.0	2.4	0.29	0.0	0.02	1.93	0.46	0	
1		15.91	15.91	33.462	24.586	334.2	0.003	5.81	103.0	2.4	0.29	0.0	0.02	1.93	0.46	1	222
10	ISL	15.91	15.91	33.463	24.587	334.4	0.033	5.82	103.2	2.3	0.29	0.0	0.02	1.94	0.41	10	
11		15.91	15.91	33.463	24.587	334.4	0.037									11	221
11		15.91	15.91	33.463	24.587	334.4	0.037	5.82	103.2	2.3	0.29	0.0	0.02	1.94	0.40	11	220
20	ISL	15.89	15.89	33.460	24.590	334.5	0.067	5.78	102.5	2.3	0.31	0.1	0.03	1.85	0.44	20	
21		15.89	15.89	33.460	24.590	334.5	0.070	5.77	102.3	2.3	0.31	0.1	0.03	1.84	0.44	21	219
26		15.78	15.78	33.454	24.610	332.7	0.087	5.72	101.2	2.7	0.33	0.2	0.06	1.29	0.33	26	218
30		15.69	15.69	33.451	24.628	331.2	0.100	5.65	99.8	2.9	0.36	0.6	0.09	1.00	0.29	30	217
40		14.94	14.93	33.435	24.781	316.9	0.133	5.23	90.9	4.7	0.58	3.1	0.27	0.38	0.20	40	216
50		13.83	13.82	33.376	24.969	299.1	0.163	4.79	81.4	6.6	0.80	6.0	0.26	0.22	0.17	50	215
60		11.97	11.96	33.202	25.200	277.2	0.192	4.99	81.5	7.6	0.94	9.0	0.09	0.14	0.17	60	214
70		11.59	11.58	33.325	25.367	261.6	0.219	4.80	77.8	9.1	1.04	11.0	0.02	0.10	0.12	70	213
75	ISL	11.45	11.44	33.373	25.430	255.7	0.232	4.64	75.0	10.0	1.11	12.1	0.02	0.09	0.10	75	
85		11.18	11.17	33.454	25.542	245.3	0.257	4.29	69.0	12.1	1.25	14.5	0.02	0.07	0.09	85	212
100		10.57	10.56	33.571	25.741	226.6	0.292	3.82	60.6	15.9	1.47	17.9	0.01	0.05	0.10	100	211
120		10.02	10.01	33.674	25.916	210.3	0.336	3.47	54.5	19.7	1.66	20.7	0.01	0.03	0.06	121	210
125	ISL	9.89	9.88	33.707	25.964	205.9	0.347	3.39	53.1	20.7	1.70	21.3	0.01	0.03	0.06	126	
138		9.62	9.60	33.790	26.073	195.6	0.373	3.17	49.4	23.3	1.80	22.9	0.01	0.03	0.06	139	209
150	ISL	9.51	9.49	33.844	26.134	190.1	0.396	2.92	45.4	25.2	1.90	24.2	0.01	0.03	0.06	151	
169		9.38	9.36	33.905	26.203	183.9	0.431	2.60	40.3	27.6	2.02	25.7	0.01	0.02	0.06	170	208
198		8.97	8.95	33.974	26.323	173.0	0.483	2.63	40.4	30.6	2.05	26.7	0.01	0.01	0.07	199	207
200	ISL	8.95	8.93	33.980	26.331	172.3	0.487	2.60	39.9	30.9	2.06	26.9	0.01			201	
228		8.73	8.71	34.065	26.432	163.1	0.534	2.09	31.9	35.4	2.25	29.2	0.01			229	206
250	ISL	8.51	8.48	34.105	26.498	157.2	0.569	1.82	27.7	38.6	2.36	30.6	0.00			251	
268		8.31	8.28	34.128	26.547	152.8	0.597	1.64	24.8	41.2	2.44	31.5	0.00			270	205
300	ISL	7.92	7.89	34.156	26.628	145.6	0.644	1.38	20.7	46.1	2.57	33.1	0.00			302	
318		7.70	7.67	34.168	26.669	141.8	0.670	1.25	18.7	49.0	2.64	33.9	0.00			320	204
377		7.07	7.03	34.209	26.791	130.8	0.751	0.82	12.1	59.3	2.86	36.5	0.00			379	203
400	ISL	6.82	6.78	34.209	26.825	127.7	0.780	0.74	10.8	62.7	2.92	37.3	0.00			403	
437		6.46	6.42	34.206	26.871	123.6	0.827	0.66	9.6	67.8	2.99	38.5	0.00			440	202
500	ISL	6.01	5.97	34.231	26.949	116.6	0.903	0.49	7.0	75.6	3.10	40.1	0.00			503	
513		5.92	5.88	34.237	26.966	115.2	0.918	0.45	6.4	77.2	3.12	40.4	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 9.1 N	121 8.7 W	02/11/06	1332 UTC	2154 m	090 02 kn			1017.1 mb	17.5 C	16.2 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.02	17.02	33.181	24.115	379.1	0.000	5.61	101.5	1.8	0.30	0.0	0.00	0.16	0.04	0	
2		17.02	17.02	33.181	24.115	379.2	0.008	5.61	101.5	1.8	0.30	0.0	0.00	0.16	0.04	2	221
10	ISL	17.03	17.03	33.183	24.114	379.5	0.038	5.62	101.7	1.8	0.29	0.0	0.00	0.16	0.04	10	
15		17.03	17.03	33.184	24.115	379.6	0.057	5.62	101.7	1.8	0.29	0.0	0.00	0.16	0.04	15	220
20	ISL	17.03	17.03	33.189	24.119	379.3	0.076	5.62	101.7	1.8	0.29	0.0	0.00	0.16	0.04	20	
30	ISL	17.04	17.04	33.203	24.128	378.8	0.114	5.61	101.6	1.7	0.29	0.0	0.00	0.17	0.04	30	
31		17.04	17.03	33.204	24.129	378.8	0.118	5.61	101.6	1.7	0.29	0.0	0.00	0.17	0.04	31	219
46		16.96	16.95	33.194	24.141	378.2	0.174	5.63	101.8	1.7	0.30	0.0	0.00	0.21	0.06	46	218
50	ISL	16.12	16.11	33.154	24.304	362.7	0.189	5.81	103.3	1.8	0.32	0.0	0.00	0.27	0.15	50	
55		15.01	15.00	33.115	24.519	342.2	0.207	6.02	104.6	1.9	0.35	0.0	0.01	0.35	0.26	55	217
65		14.00	13.99	33.102	24.723	323.0	0.240	5.93	100.9	2.4	0.40	0.4	0.09	0.49	0.29	65	215
65		14.04	14.03	33.099	24.713	324.0	0.240									65	216
75		13.60	13.59	33.117	24.817	314.3	0.272	5.83	98.4	2.7	0.45	1.1	0.18	0.39	0.32	75	214
85		12.96	12.95	33.264	25.059	291.4	0.302	5.51	91.9	3.9	0.56	3.5	0.10	0.22	0.22	85	213
95		12.55	12.54	33.338	25.197	278.6	0.331	5.12	84.7	6.0	0.75	6.8	0.03	0.15	0.17	95	212
100	ISL	12.24	12.23	33.373	25.283	270.4	0.344	4.98	81.9	7.0	0.83	8.3	0.03	0.12	0.15	100	
110		11.56	11.55	33.434	25.458	253.9	0.371	4.76	77.1	8.9	0.96	10.8	0.02	0.08	0.13	110	211
125		10.63	10.62	33.484	25.663	234.5	0.407	4.54	72.1	11.9	1.13	13.8	0.02	0.05	0.08	126	210
145		9.58	9.56	33.655	25.975	205.1	0.451	4.11	63.9	17.9	1.44	18.8	0.01	0.02	0.03	146	209
150	ISL	9.43	9.41	33.691	26.027	200.2	0.461	4.04	62.6	19.1	1.48	19.6	0.01	0.01	0.03	151	
170		9.02	9.00	33.809	26.186	185.5	0.500	3.86	59.3	22.9	1.58	21.6	0.01	0.00	0.03	171	208
199		8.57	8.55	33.927	26.349	170.4	0.552	3.85	58.6	27.3	1.63	22.9	0.01	0.00	0.02	200	207
200	ISL	8.55	8.53	33.929	26.353	170.0	0.553	3.84	58.4	27.5	1.63	23.0	0.01			201	
229		8.14	8.12	33.975	26.452	161.0	0.601	3.32	50.0	33.1	1.83	26.0	0.01			230	206
250	ISL	7.94	7.91	34.012	26.511	155.7	0.635	2.77	41.6	37.9	2.03	28.6	0.00			251	
269		7.75	7.72	34.037	26.558	151.4	0.664	2.32	34.7	42.3	2.20	30.7	0.00			271	205
300	ISL	7.17	7.14	34.027	26.633	144.5	0.710	2.17	32.0	48.1	2.31	32.6	0.00			302	
318		6.85	6.82	34.020	26.671	140.9	0.735	2.14	31.3	51.1	2.35	33.4	0.00			320	204
378		6.53	6.50	34.092	26.771	132.2	0.817	1.31	19.0	59.9	2.64	36.7	0.00			380	203
400	ISL	6.39	6.35	34.107	26.802	129.5	0.846	1.14	16.5	63.0	2.71	37.5	0.00			403	
437		6.13	6.09	34.124	26.849	125.3	0.893	0.96	13.8	68.2	2.81	38.6	0.00			440	202
500	ISL	5.64	5.60	34.141	26.924	118.6	0.970	0.74	10.5	76.7	2.93	40.3	0.00			503	
513		5.54	5.50	34.145	26.939	117.2	0.985	0.70	9.9	78.4	2.96	40.7	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.7 N	121 49.3 W	02/11/06	1928 UTC	3611 m	250 07 kn	250 03 07	1	1018.1 mb	20.0 C	18.0 C	32m	7/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.45	17.45	33.194	24.023	387.9	0.000	5.56	101.5	1.7	0.30	0.0	0.00	0.14	0.03	0	
2	A	17.45	17.45	33.194	24.023	387.9	0.008	5.56	101.5	1.7	0.30	0.0	0.00	0.14	0.03	2	224
10	ISL	17.43	17.43	33.200	24.033	387.3	0.039	5.57	101.6	1.8	0.30	0.0	0.00	0.06	0.02	10	
11		17.42	17.42	33.201	24.036	387.0	0.043	5.57	101.6	1.8	0.30	0.0	0.00	0.05	0.02	11	223
20	ISL	17.34	17.34	33.197	24.052	385.7	0.077	5.57	101.4	1.7	0.30	0.0	0.00	0.15	0.07	20	
21	A	17.33	17.33	33.196	24.054	385.6	0.081	5.57	101.4	1.7	0.30	0.0	0.00	0.16	0.07	21	221
21		17.33	17.33	33.201	24.058	385.3	0.081									21	222
30		17.32	17.32	33.196	24.057	385.7	0.116	5.58	101.6	1.7	0.30	0.0	0.00	0.17	0.04	30	220
40		15.26	15.25	33.037	24.405	352.7	0.153	6.17	107.7	1.4	0.32	0.0	0.00	0.27	0.12	40	219
50	A	14.12	14.11	33.034	24.645	329.9	0.187	6.16	105.1	1.6	0.35	0.2	0.02	0.32	0.12	50	218
60		13.65	13.64	33.058	24.761	319.2	0.219	6.08	102.7	1.8	0.37	0.3	0.04	0.25	0.13	60	217
69	A	13.13	13.12	33.119	24.913	304.9	0.248	5.81	97.2	2.7	0.48	1.8	0.13	0.28	0.14	69	216
75	ISL	13.02	13.01	33.156	24.963	300.3	0.266	5.72	95.4	3.0	0.51	2.3	0.11	0.29	0.11	75	
79		12.96	12.95	33.193	25.004	296.5	0.278	5.65	94.2	3.4	0.53	2.8	0.10	0.30	0.09	79	215
89	A	12.53	12.52	33.392	25.242	274.1	0.306	5.16	85.3	5.6	0.72	6.4	0.04	0.18	0.11	89	214
100		11.92	11.91	33.434	25.391	260.1	0.336	4.75	77.6	8.3	0.95	10.2	0.02	0.13	0.09	100	213
111		11.13	11.12	33.458	25.555	244.6	0.363	4.56	73.2	10.3	1.10	12.7	0.02	0.09	0.08	111	212
123	A	10.20	10.19	33.543	25.783	223.0	0.391	4.20	66.1	14.8	1.36	16.8	0.01	0.04	0.05	124	211
125	ISL	10.07	10.06	33.562	25.820	219.5	0.396	4.13	64.8	15.6	1.40	17.5	0.01	0.03	0.05	126	
133		9.65	9.64	33.639	25.950	207.2	0.413	3.87	60.2	18.4	1.55	19.8	0.01	0.02	0.03	134	210
145		9.45	9.43	33.727	26.052	197.8	0.437	3.49	54.1	21.7	1.70	22.1	0.01	0.01	0.03	146	209
150	ISL	9.36	9.34	33.754	26.088	194.4	0.447	3.52	54.5	22.3	1.70	22.2	0.01	0.01	0.03	151	
170		9.00	8.98	33.842	26.215	182.7	0.485	3.66	56.2	24.1	1.69	22.5	0.01	0.00	0.03	171	208
199		8.53	8.51	33.956	26.378	167.7	0.535	3.10	47.1	30.5	1.92	26.0	0.01	0.00	0.02	200	207
200	ISL	8.51	8.49	33.959	26.383	167.2	0.537	3.09	47.0	30.7	1.93	26.1	0.01			201	
228		8.03	8.01	34.014	26.499	156.5	0.582	2.73	41.1	36.5	2.09	28.5	0.01			229	206
250	ISL	7.71	7.69	34.028	26.557	151.2	0.616	2.51	37.5	41.2	2.20	30.2	0.01			251	
268		7.48	7.45	34.035	26.595	147.7	0.643	2.32	34.5	44.9	2.29	31.5	0.01			270	205
300	ISL	7.13	7.10	34.073	26.675	140.6	0.689	1.76	25.9	51.0	2.51	34.0	0.00			302	
318		6.95	6.92	34.094	26.716	136.8	0.714	1.45	21.3	54.3	2.63	35.3	0.00			320	204
377		6.33	6.30	34.109	26.811	128.2	0.792	1.10	15.9	64.3	2.83	37.8	0.00			379	203
400	ISL	6.11	6.07	34.125	26.852	124.5	0.822	0.95	13.7	68.7	2.91	38.8	0.00			403	
437		5.82	5.78	34.157	26.914	118.9	0.867	0.72	10.3	75.1	3.02	40.1	0.00			440	202
500	ISL	5.71	5.67	34.221	26.979	113.5	0.940	0.47	6.7	80.2	3.12	40.8	0.00			503	
513		5.69	5.65	34.234	26.992	112.4	0.954	0.42	6.0	81.3	3.14	41.0	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.2 N	122 31.6 W	03/11/06	0125 UTC	3980 m	290 11 kn	280 03 09	2	1016.1 mb	18.2 C	17.7 C		8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.33	17.33	33.231	24.080	382.4	0.000	5.59	101.8	1.5	0.30	0.0	0.00	0.14	0.03	0	
2		17.33	17.33	33.231	24.080	382.5	0.008	5.59	101.8	1.5	0.30	0.0	0.00	0.14	0.03	2	222
2		17.33	17.33	33.229	24.078	382.6	0.008									2	223
10		17.01	17.01	33.192	24.126	378.4	0.038	5.62	101.7	1.6	0.30	0.0	0.00	0.16	0.04	10	220
10		17.01	17.01	33.195	24.128	378.1	0.038									10	221
20		16.50	16.50	33.188	24.242	367.6	0.075	5.71	102.3	1.5	0.31	0.0	0.00	0.20	0.05	20	219
30		16.05	16.05	33.205	24.358	356.9	0.112	5.80	103.0	1.4	0.31	0.0	0.00	0.31	0.08	30	218
40		15.08	15.07	33.122	24.509	342.7	0.147	6.01	104.6	1.6	0.34	0.0	0.00	0.32	0.14	40	217
49		13.32	13.31				0.176									49	216
50		13.33	13.32	32.980	24.765	318.5	0.179	5.98	100.3	2.4	0.47	1.3	0.14	0.45	0.30	50	215
60		12.50	12.49	33.023	24.961	300.0	0.210	5.66	93.3	3.9	0.65	4.0	0.26	0.42	0.30	60	214
70		12.09	12.08	33.119	25.114	285.7	0.240	5.32	87.0	5.8	0.83	7.3	0.05	0.33	0.27	70	213
75	ISL	12.04	12.03	33.203	25.188	278.7	0.254	5.15	84.2	6.7	0.89	8.5	0.04	0.27	0.23	75	
84		11.82	11.81	33.357	25.349	263.6	0.278	4.80	78.2	8.9	1.02	11.0	0.02	0.16	0.16	84	212
99		10.29	10.28	33.507	25.740	226.6	0.315	4.08	64.4	15.4	1.44	17.8	0.01	0.05	0.07	99	211
100	ISL	10.23	10.22	33.517	25.757	224.9	0.317	4.06	64.0	15.6	1.45	18.0	0.01	0.05	0.07	100	
119		9.57	9.56	33.671	25.988	203.3	0.358	3.82	59.4	19.5	1.59	20.5	0.01	0.02	0.03	120	210
125	ISL	9.40	9.39	33.708	26.045	198.0	0.370	3.64	56.4	21.3	1.67	21.7	0.01	0.02	0.03	126	
139		9.07	9.06	33.785	26.158	187.4	0.397	3.24	49.8	25.3	1.86	24.3	0.01	0.01	0.03	140	209
150	ISL	8.90	8.88	33.856	26.241	179.8	0.417	3.15	48.3	27.3	1.90	25.1	0.01	0.01	0.03	151	
169		8.69	8.67	33.965	26.359	168.9	0.450	3.04	46.4	30.3	1.93	25.9	0.00	0.00	0.03	170	208
199		8.47	8.45	34.051	26.461	159.7	0.500	2.24	34.0	36.3	2.21	29.3	0.00	0.00	0.03	200	207
200	ISL	8.45	8.43	34.050	26.464	159.5	0.501	2.26	34.3	36.4	2.21	29.3	0.00			201	
228		7.75	7.73	34.005	26.533	153.1	0.545	2.93	43.8	38.3	2.05	28.3	0.01			229	206
250	ISL	7.41	7.39	34.004	26.581	148.8	0.578	2.77	41.1	42.0	2.14	29.7	0.01			251	
268		7.19	7.16	34.012	26.618	145.4	0.605	2.45	36.1	45.8	2.27	31.5	0.00			270	205
300	ISL	6.73	6.70	34.019	26.687	139.1	0.650	2.07	30.2	53.2	2.47	34.0	0.00			302	
318		6.51	6.48	34.028	26.723	135.8	0.675	1.85	26.9	57.1	2.57	35.3	0.00			320	204
377		6.27	6.24	34.101	26.812	128.1	0.753	1.14	16.5	64.3	2.82	37.8	0.00			379	203
400	ISL	6.16	6.12	34.124	26.845	125.2	0.782	0.96	13.8	67.3	2.90	38.5	0.00			403	
437		5.97	5.93	34.157	26.895	120.8	0.827	0.73	10.5	72.6	3.02	39.6	0.00			440	202
500	ISL	5.55	5.51	34.213	26.992	112.1	0.901	0.46	6.5	83.0	3.14	41.3	0.00			503	
513		5.46	5.42	34.225	27.012	110.2	0.915	0.40	5.7	85.1	3.16	41.7	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 9.0 N	123 13.2 W	03/11/06	0720 UTC	4235 m	250 08 kn			1017.8 mb	18.9 C	18.1 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.03	18.03	33.299	23.963	393.5	0.000	5.49	101.4	1.6	0.27	0.0	0.00	0.10	0.02	0	
2		18.03	18.03	33.299	23.964	393.6	0.008	5.49	101.4	1.6	0.27	0.0	0.00	0.10	0.02	2	222
10	ISL	17.84	17.84	33.278	23.994	391.0	0.039	5.51	101.4	1.6	0.28	0.0	0.00	0.11	0.02	10	
16		17.68	17.68	33.264	24.022	388.5	0.063	5.52	101.2	1.6	0.28	0.0	0.00	0.11	0.02	16	221
20	ISL	17.70	17.70	33.277	24.027	388.1	0.078	5.51	101.1	1.6	0.28	0.0	0.00	0.11	0.02	20	
30		17.76	17.75	33.301	24.032	388.1	0.117	5.50	101.0	1.5	0.27	0.0	0.00	0.11	0.02	30	220
44		17.37	17.36	33.223	24.066	385.2	0.171	5.56	101.3	1.6	0.29	0.0	0.00	0.14	0.03	44	218
50	ISL	16.41	16.40	33.181	24.258	367.0	0.194	5.86	104.8	1.5	0.28	0.0	0.00	0.16	0.04	50	
55		15.43	15.42	33.151	24.456	348.3	0.212	6.10	106.9	1.4	0.28	0.0	0.00	0.18	0.05	55	217
64		13.79	13.78	33.099	24.764	319.0	0.242	6.13	103.9	1.6	0.31	0.0	0.00	0.17	0.10	64	216
74		13.30	13.29	33.183	24.928	303.6	0.273	5.97	100.2	2.0	0.34	0.1	0.02	0.26	0.15	74	214
74		13.29	13.28	33.176	24.925	303.9	0.273	5.99	100.5	2.0	0.34	0.1	0.03	0.25	0.14	74	215
75	ISL	13.32	13.31	33.190	24.930	303.5	0.276	5.97	100.3	2.0	0.34	0.1	0.02	0.26	0.15	75	
82		13.42	13.41	33.289	24.987	298.3	0.297	5.92	99.7	1.9	0.32	0.1	0.03	0.24	0.18	82	213
84		13.35	13.34	33.347	25.046	292.7	0.303	5.87	98.7	1.9	0.32	0.2	0.06	0.23	0.22	84	212
100	ISL	13.04	13.03	33.431	25.173	281.0	0.349	5.63	94.1	2.4	0.37	1.5	0.03	0.16	0.20	100	
109		12.91	12.90	33.491	25.245	274.4	0.374	5.55	92.6	3.0	0.43	2.5	0.02	0.13	0.19	109	211
124		12.52	12.50	33.589	25.398	260.2	0.414	5.34	88.4	4.4	0.54	4.7	0.02	0.07	0.09	125	210
125	ISL	12.44	12.42	33.591	25.415	258.6	0.416	5.31	87.8	4.6	0.56	5.0	0.02	0.07	0.09	126	
144		10.72	10.70	33.619	25.753	226.4	0.462	4.75	75.7	10.5	1.02	12.4	0.01	0.03	0.04	145	209
150	ISL	10.31	10.29	33.647	25.846	217.6	0.476	4.62	73.0	12.5	1.14	14.3	0.01	0.02	0.03	151	
168		9.43	9.41	33.746	26.071	196.5	0.513	4.35	67.4	17.9	1.39	18.4	0.01	0.00	0.01	169	208
198		8.99	8.97	33.891	26.255	179.4	0.569	4.26	65.4	22.1	1.48	20.2	0.00	0.00	0.01	199	207
200	ISL	8.95	8.93	33.897	26.266	178.4	0.573	4.24	65.1	22.5	1.49	20.4	0.00			201	
228		8.42	8.40	33.951	26.391	166.9	0.621	3.91	59.3	28.2	1.66	23.0	0.00			229	206
250	ISL	8.03	8.00	33.977	26.470	159.6	0.657	3.43	51.6	33.5	1.85	25.8	0.00			251	
268		7.73	7.70	33.991	26.525	154.5	0.685	3.03	45.2	37.9	2.01	28.0	0.00			269	205
300	ISL	7.28	7.25	34.004	26.600	147.7	0.734	2.60	38.4	44.4	2.21	30.8	0.00			302	
318		7.02	6.99	34.006	26.637	144.3	0.760	2.42	35.6	48.0	2.30	32.1	0.00			320	204
377		5.96	5.93	34.005	26.776	131.2	0.841	1.94	27.8	62.5	2.59	36.0	0.00			379	203
400	ISL	5.73	5.70	34.019	26.815	127.6	0.871	1.69	24.1	67.0	2.70	37.4	0.00			402	
437		5.49	5.45	34.052	26.871	122.6	0.917	1.28	18.1	73.4	2.85	39.3	0.00			440	202
500	ISL	5.27	5.23	34.127	26.957	115.0	0.992	0.77	10.9	82.8	3.03	41.2	0.00			503	
513		5.22	5.18	34.143	26.975	113.4	1.007	0.67	9.4	84.7	3.07	41.6	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 48.7 N	123 55.2 W	03/11/06	1745 UTC	4359 m	260 04 kn	250 03 07	4	1018.9 mb	19.1 C	18.1 C	41m	8/8 ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.82	17.82	33.187	23.929	396.8	0.000	5.53	101.6	1.8	0.29	0.0	0.00	0.05	0.29	0	
1		17.85	17.85	33.186	23.921	397.6	0.004									1	224
2	B	17.82	17.82	33.187	23.929	396.9	0.008	5.53	101.6	1.8	0.29	0.0	0.00	0.05	0.29	2	223
10	ISL	17.71	17.71	33.209	23.973	393.0	0.040	5.53	101.4	1.7	0.29	0.0	0.00	0.07	0.21	10	
14		17.64	17.64	33.222	23.999	390.6	0.055									14	222
14		17.64	17.64	33.222	23.999	390.6	0.055	5.53	101.3	1.6	0.29	0.0	0.00	0.19	0.02	14	221
20	ISL	17.61	17.61	33.221	24.006	390.1	0.079	5.54	101.4	1.7	0.29	0.0	0.00	0.13	0.09	20	
25	B	17.60	17.60	33.224	24.011	389.8	0.098	5.54	101.4	1.6	0.29	0.0	0.00	0.17	0.03	25	220
30	ISL	17.59	17.58	33.226	24.015	389.6	0.118	5.54	101.4	1.6	0.29	0.0	0.00	0.20	0.03	30	
39		17.57	17.56	33.229	24.023	389.2	0.153	5.54	101.3	1.5	0.29	0.0	0.00	0.28 A	0.02 A	39	219
50	ISL	17.13	17.12	33.208	24.112	381.1	0.195	5.62	101.9	1.4	0.30	0.0	0.00	0.49	0.00	50	
52	B	16.97	16.96	33.181	24.129	379.5	0.203	5.65	102.1	1.4	0.30	0.0	0.00	0.52	0.00	52	218
64		15.15	15.14	33.170	24.532	341.3	0.246	5.95	103.7	1.5	0.32	0.0	0.00	0.51	0.08	64	217
71		14.56	14.55	33.165	24.655	329.7	0.269	5.97	102.8	1.7	0.34	0.0	0.02	0.54 A	0.12 A	71	216
75	ISL	14.19	14.18	33.162	24.730	322.6	0.282	6.01	102.7	1.7	0.34	0.1	0.03	0.47	0.10	75	
79		13.86	13.85	33.163	24.800	316.1	0.295	6.04	102.6	1.7	0.34	0.2	0.04	0.38 A	0.08 A	79	215
88	B	13.54	13.53	33.187	24.884	308.3	0.323	5.95	100.4	2.0	0.37	0.5	0.08	0.31	0.10	88	214
97		13.41	13.40	33.255	24.963	301.0	0.351	5.88	99.0	2.2	0.37	0.5	0.06	0.29 A	0.19 A	97	213
100	ISL	13.31	13.30	33.276	24.999	297.6	0.360	5.82	97.8	2.4	0.38	0.7	0.08	0.26	0.23	100	
106		13.13	13.12	33.335	25.081	290.0	0.377	5.69	95.3	2.8	0.42	1.4	0.10	0.20	0.27	106	212
114	B	13.14	13.12	33.475	25.188	280.0	0.400	5.52	92.5	3.5	0.46	2.6	0.06	0.15	0.19	114	211
125	ISL	12.67	12.65	33.572	25.355	264.3	0.430	5.28	87.7	4.9	0.57	4.9	0.03	0.10	0.12	126	
135		11.99	11.97	33.605	25.511	249.5	0.456	5.07	83.0	6.7	0.72	7.5	0.02	0.06	0.09	136	210
150	ISL	10.89	10.87	33.602	25.710	230.7	0.492	4.76	76.1	10.4	1.00	11.9	0.01	0.04	0.07	151	
157	B	10.40	10.38	33.602	25.796	222.6	0.508	4.63	73.2	12.2	1.13	13.9	0.01	0.03	0.06	158	209
177		9.59	9.57	33.714	26.020	201.5	0.550	4.39	68.3	16.7	1.35	17.6	0.01	0.01	0.03	178	208
199		9.20	9.18	33.888	26.219	182.9	0.592	4.36	67.3	20.2	1.41	19.1	0.00	0.00	0.02	200	207
200	ISL	9.18	9.16	33.892	26.226	182.3	0.594	4.36	67.3	20.3	1.41	19.2	0.00			201	
229		8.65	8.63	33.935	26.343	171.5	0.645	4.12	62.8	25.1	1.57	21.6	0.00			230	206
250	ISL	8.29	8.26	33.965	26.422	164.3	0.681	3.81	57.6	30.0	1.72	23.7	0.00			251	
269		7.99	7.96	33.987	26.484	158.6	0.711	3.47	52.1	34.7	1.86	25.8	0.00			270	205
300	ISL	7.52	7.49	33.999	26.562	151.5	0.759	2.92	43.4	41.2	2.09	29.1	0.00			302	
319		7.26	7.23	34.007	26.605	147.5	0.788	2.57	38.0	45.1	2.23	31.0	0.00			321	204
378		6.70	6.67	34.094	26.751	134.3	0.871	1.35	19.7	57.5	2.70	36.2	0.00			380	203
400	ISL	6.48	6.44	34.111	26.793	130.4	0.900	1.13	16.4	61.5	2.80	37.3	0.00			402	
437		6.14	6.10	34.134	26.856	124.7	0.947	0.91	13.1	67.7	2.91	38.7	0.00			440	202
500	ISL	5.69	5.65	34.180	26.949	116.3	1.023	0.61	8.7	78.1	3.07	40.5	0.00			503	
513		5.60	5.56	34.190	26.968	114.6	1.038	0.55	7.8	80.2	3.10	40.9	0.00			516	201

A) SECOND 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.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 81.7 43.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 24.2 N	119 47.8 W	01/11/06	2154 UTC	24 m	260 09 kn	240 01 06	1	1015.4 mb	17.2 C	15.0 C		2/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.40	17.40	33.439	24.223	368.8	0.000	5.86	107.0	3.0	0.29	0.0	0.01	1.57	0.31	0	
1		17.40	17.40	33.439	24.223	368.8	0.004	5.86	107.0	3.0	0.29	0.0	0.01	1.57	0.31	1	206
5		17.29	17.29	33.437	24.248	366.6	0.018	5.89	107.3	3.0	0.30	0.0	0.01	1.52	0.26	5	205
10		17.07	17.07	33.435	24.298	361.9	0.037	5.84	105.9	3.5	0.32	0.0	0.02	1.89	0.52	10	203
10		17.09	17.09	33.438	24.296	362.2	0.037									10	204
15		16.82	16.82	33.429	24.352	356.9	0.055	5.72	103.3	4.1	0.37	0.0	0.04	1.85	0.57	15	202
18		16.91	16.91	33.423	24.327	359.5	0.065	5.62	101.6	4.4	0.41	0.0	0.06	1.55	0.50	18	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 81.8 46.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 16.6 N	120 1.4 W	01/11/06	2353 UTC	585 m	280 24 kn	250 03 06	1	1014.5 mb	17.0 C	15.0 C		3/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.10	18.10	33.489	24.092	381.3	0.000	5.74	106.3	2.1	0.24	0.0	0.00	0.85	0.05	0	
2	A	18.10	18.10	33.489	24.092	381.4	0.008	5.74	106.3	2.1	0.24	0.0	0.00	0.85	0.05	2	224
10		18.09	18.09	33.489	24.095	381.4	0.038	5.73	106.1					0.89	0.00	10	223
20		17.22	17.22	33.447	24.272	364.7	0.075	5.86	106.6	2.5	0.29	0.0	0.00	0.67	0.16	20	222
30		15.68	15.68	33.395	24.587	335.0	0.110	5.78	102.0	3.5	0.39	0.0	0.03	0.78	0.26	30	221
40		13.58	13.57	33.391	25.032	292.8	0.142	5.08	85.9	6.8	0.75	3.9	0.28	0.32	0.22	40	220
50		12.35	12.34	33.436	25.310	266.6	0.170	4.45	73.4	10.0	1.07	10.3	0.05	0.15	0.22	50	219
60		11.72	11.71	33.491	25.471	251.4	0.196	3.99	64.9	13.0	1.28	13.4	0.05	0.11	0.15	60	218
70		11.63	11.62	33.498	25.494	249.5	0.221	3.96	64.3	13.2	1.30	13.9	0.04	0.11	0.14	70	217
75	ISL	11.55	11.54	33.509	25.517	247.4	0.233	3.90	63.2	13.7	1.33	14.3	0.04	0.10	0.14	75	
85		11.32	11.31	33.544	25.587	241.0	0.258	3.73	60.2	15.1	1.41	15.6	0.03	0.08	0.13	85	216
99		10.79	10.78	33.623	25.743	226.4	0.290	3.37	53.8	18.1	1.59	18.4	0.01	0.05	0.09	99	215
100	ISL	10.76	10.75	33.627	25.752	225.6	0.293	3.36	53.6	18.3	1.60	18.5	0.01	0.05	0.09	100	
119		10.30	10.29	33.688	25.879	213.8	0.334	3.22	50.9	20.6	1.70	20.6	0.01	0.05	0.07	120	214
125	ISL	10.21	10.20	33.706	25.909	211.1	0.347	3.16	49.8	21.3	1.73	21.1	0.01	0.04	0.06	126	
139		10.04	10.02	33.756	25.977	204.9	0.376	2.98	46.8	22.9	1.81	22.2	0.01	0.02	0.05	140	213
150	ISL	9.95	9.93	33.818	26.041	199.1	0.398	2.76	43.3	24.8	1.90	23.2	0.01	0.02	0.05	151	
169		9.82	9.80	33.925	26.146	189.5	0.435	2.37	37.1	27.9	2.05	24.9	0.01	0.02	0.06	170	212
199		9.62	9.60	34.013	26.249	180.3	0.491	2.08	32.4	30.6	2.15	26.6	0.00	0.02	0.05	200	211
200	ISL	9.61	9.59	34.016	26.253	180.0	0.493	2.07	32.3	30.7	2.15	26.7	0.00			201	
229		9.41	9.38	34.099	26.351	171.2	0.544	1.71	26.5	34.2	2.30	28.4	0.00			230	210
250	ISL	9.16	9.13	34.162	26.441	163.0	0.579	1.31	20.2	39.0	2.46	30.2	0.00			251	
268		8.92	8.89	34.207	26.515	156.3	0.607	1.00	15.4	43.3	2.60	31.6	0.00			270	209
300	ISL	8.61	8.58	34.228	26.580	150.5	0.656	0.89	13.6	47.5	2.70	32.6	0.00			302	
318		8.44	8.41	34.226	26.605	148.4	0.683	0.83	12.6	49.6	2.74	32.8	0.00			320	208
378		7.74	7.70	34.232	26.715	138.6	0.769	0.55	8.2	61.7	2.95	33.7	0.00			380	207
400	ISL	7.50	7.46	34.236	26.753	135.2	0.800	0.47	7.0	66.4	3.02	33.0	0.00			403	
437		7.10	7.06	34.239	26.812	129.9	0.849	0.31	4.6	77.7	3.22	31.8	0.00			440	206
477		6.65	6.61	34.235	26.870	124.5	0.899	0.04	0.6	98.5	3.62	26.2	0.00			480	205
500	ISL	6.53	6.48	34.235	26.886	123.2	0.928	0.02	0.3	104.4	3.76	24.0	0.01			503	
512		6.50	6.45	34.236	26.891	122.9	0.943	0.01	0.1	107.0	3.85	22.6	0.01			516	204
539		6.46	6.41	34.237	26.897	122.7	0.976	0.02	0.3	116.5	4.21	17.3	0.00			543	203
565		6.45	6.40	34.237	26.899	122.9	1.008	0.00	0.0	121.1	4.41	14.7	0.00			569	202
571		6.45	6.40	34.237	26.899	123.0	1.015	0.00	0.0	121.2	4.40	14.4	0.00			575	201

A) SANTA BARBARA BASIN STATION.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 15.8 N	119 20.0 W	01/11/06	1859 UTC	21 m	280 02 kn	280 01 03	1	1017.1 mb	18.3 C	16.5 C		5/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.41	17.41	33.448	24.227	368.4	0.000	6.16	112.5	3.3	0.28	0.0	0.01	11.46	0.67	0	
1		17.41	17.41	33.448	24.227	368.4	0.004	6.16	112.5	3.3	0.28	0.0	0.01	11.46	0.67	1	205
5		17.34	17.34	33.446	24.243	367.1	0.018	6.13	111.8	3.2	0.31	0.0	0.02	13.52	0.48	5	204
10		17.24	17.24	33.444	24.265	365.1	0.037	5.82	105.9	3.2	0.29	0.0	0.00	7.82	0.57	10	202
10		17.24	17.24	33.444	24.265	365.1	0.037									10	203
15		17.24	17.24	33.444	24.265	365.3	0.055	5.76	104.8	3.2	0.27	0.0	0.00	5.15	0.59	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.5 N	119 24.7 W	01/11/06	1754 UTC	35 m	250 04 kn	280 01 05	1	1017.1 mb	18.3 C	16.5 C	16m	7/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.06	18.06	33.473	24.089	381.5	0.000	5.75	106.4	1.9	0.23	0.0	0.00	0.93	0.12	0	
1	A	18.06	18.06	33.473	24.089	381.6	0.004	5.75	106.4	1.9	0.23	0.0	0.00	0.93	0.12	1	208
6		17.99	17.99	33.470	24.104	380.3	0.023	5.76	106.4	1.9	0.22	0.0	0.00	0.92	0.17	6	207
10	ISL	17.95	17.95	33.466	24.111	379.8	0.038	5.76	106.3	1.9	0.23	0.0	0.00	0.96	0.17	10	
11		17.88	17.88	33.463	24.126	378.4	0.042									11	205
11		17.81	17.81	33.458	24.139	377.2	0.042									11	206
11	A	17.94	17.94	33.465	24.113	379.7	0.042	5.76	106.3	1.9	0.24	0.0	0.00	0.97	0.17	11	204
18		17.22	17.22	33.438	24.265	365.3	0.068	5.68	103.3	2.8	0.32	0.3	0.04	1.08	0.32	18	203
20	ISL	17.03	17.03	33.432	24.306	361.6	0.075	5.58	101.1	3.4	0.36	0.5	0.07	1.04	0.33	20	
25	A	16.31	16.31	33.416	24.461	346.9	0.093	5.35	95.6	4.5	0.47	1.1	0.13	0.98	0.37	25	202
29	A	15.23	15.23	33.407	24.696	324.6	0.106	5.34	93.4	4.5	0.51	1.5	0.16	1.14	0.14	29	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 10.6 N	119 30.3 W	01/11/06	1351	UTC	139 m	160	01 kn			1016.0 mb	16.1 C	14.1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.83	17.83	33.450	24.128	377.9	0.000	5.89	108.4	2.7	0.23	0.0	0.01	1.90	0.25	0	
1		17.83	17.83	33.450	24.128	377.9	0.004	5.89	108.4	2.7	0.23	0.0	0.01	1.90	0.25	1	215
10		17.81	17.81	33.453	24.135	377.5	0.038									10	214
10		17.81	17.81	33.450	24.133	377.7	0.038	5.89	108.4	2.7	0.24	0.0	0.01	1.68	0.29	10	213
20	ISL	17.80	17.80	33.452	24.137	377.6	0.076	5.88	108.2	2.6	0.23	0.0	0.01	1.66	0.25	20	
21		17.80	17.80	33.452	24.137	377.7	0.079	5.88	108.2	2.6	0.23	0.0	0.01	1.66	0.25	21	212
30	ISL	15.76	15.76	33.338	24.525	340.9	0.112	5.85	103.4	2.8	0.34	0.0	0.00	0.90	0.28	30	
31		15.52	15.52	33.327	24.570	336.7	0.115	5.85	102.9	2.9	0.35	0.0	0.00	0.83	0.28	31	211
36		14.93	14.92	33.305	24.682	326.1	0.132									36	210
36		14.94	14.93	33.302	24.678	326.5	0.132	5.82	101.1	3.3	0.38	0.1	0.03	0.92	0.32	36	209
40		14.30	14.29	33.305	24.817	313.4	0.144	5.66	97.1	4.2	0.47	0.9	0.13	0.64	0.31	40	208
50		13.21	13.20	33.352	25.077	288.9	0.175	5.09	85.4	6.5	0.75	6.1	0.11	0.26	0.27	50	207
61		12.45	12.44	33.404	25.266	271.0	0.205	4.69	77.5	8.7	0.94	9.5	0.03	0.16	0.22	61	206
70		11.42	11.41	33.462	25.504	248.5	0.229	4.25	68.7	12.1	1.20	13.7	0.01	0.12	0.15	70	205
75	ISL	11.35	11.34	33.470	25.523	246.8	0.241	4.18	67.5	12.7	1.23	14.1	0.01	0.10	0.15	75	
84		11.23	11.22	33.485	25.557	243.8	0.263	4.10	66.0	13.1	1.27	14.8	0.01	0.08	0.15	84	204
99		11.00	10.99	33.570	25.665	233.9	0.299	3.62	58.0	16.1	1.46	17.1	0.01	0.06	0.11	99	203
100	ISL	10.99	10.98	33.574	25.670	233.5	0.301	3.60	57.7	16.2	1.47	17.2	0.01	0.06	0.11	100	
118		10.77	10.76	33.631	25.753	225.9	0.343	3.41	54.4	18.2	1.57	18.6	0.01	0.05	0.10	119	202
125	ISL	10.70	10.69	33.650	25.781	223.4	0.358	3.33	53.0	18.9	1.60	19.0	0.01	0.05	0.09	126	
132		10.63	10.61	33.669	25.808	221.0	0.374	3.25	51.7	19.5	1.63	19.5	0.01	0.05	0.08	133	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 52.7 N	120 8.0 W	01/11/06	0222	UTC	102 m	320	16 kn			1014.6 mb	14.9 C	12.8 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.71	16.71	33.497	24.430	349.1	0.000	5.80	104.5	2.6	0.30	0.4	0.03	1.70	0.09	0	
2		16.71	16.71	33.497	24.430	349.1	0.007	5.80	104.5	2.6	0.30	0.4	0.03	1.70	0.09	2	212
10	ISL	16.52	16.52	33.489	24.468	345.8	0.035	5.78	103.8	2.8	0.33	0.6	0.04	1.47	0.29	10	
11		16.50	16.50	33.493	24.476	345.1	0.038									11	211
11		16.50	16.50	33.494	24.476	345.0	0.038									11	210
11		16.50	16.50	33.495	24.477	344.9	0.038	5.78	103.7	2.8	0.33	0.6	0.04	1.44	0.32	11	209
20	ISL	15.73	15.73	33.476	24.638	329.9	0.069	5.58	98.6	3.9	0.44	1.9	0.09	1.45	0.24	20	
21		15.65	15.65	33.474	24.654	328.4	0.072	5.56	98.1	4.0	0.45	2.1	0.10	1.45	0.22	21	208
30	ISL	15.59	15.59	33.474	24.668	327.3	0.101	5.52	97.3	4.1	0.47	2.3	0.10	1.42	0.18	30	
31		15.59	15.59	33.474	24.668	327.4	0.105	5.51	97.1	4.1	0.47	2.3	0.10	1.42	0.18	31	207
40		14.92	14.91	33.477	24.817	313.4	0.134	5.17	89.9	5.7	0.62	4.2	0.15	0.97	0.12	40	206
50		12.99	12.98	33.508	25.241	273.2	0.163	4.41	73.7	10.3	1.02	10.0	0.21	0.23	0.34	50	205
60		12.39	12.38	33.540	25.383	259.9	0.189	4.01	66.2	12.8	1.22	13.1	0.18	0.24	0.18	60	204
70		11.51	11.50	33.593	25.590	240.4	0.215	3.57	57.9	15.7	1.44	16.5	0.08	0.20	0.08	70	203
75	ISL	11.28	11.27	33.607	25.643	235.5	0.226	3.45	55.6	16.4	1.50	17.4	0.05	0.14	0.09	75	
80		11.12	11.11	33.622	25.683	231.7	0.238	3.37	54.2	17.0	1.54	18.1	0.03	0.09	0.12	80	202
95		10.76	10.75	33.738	25.838	217.3	0.272	3.11	49.6	19.5	1.67	19.9	0.06	0.06	0.11	95	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.6 N	120 24.9 W	31/10/06	2249	UTC	1052 m	330	17 kn	320 04 06	2	1014.8 mb	15.0 C	12.9 C		8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.44	15.44	33.282	24.552	337.4	0.000	6.00	105.3	1.3	0.28	0.0	0.00			0	
2		15.44	15.44	33.282	24.552	337.5	0.007	6.00	105.3	1.3	0.28	0.0	0.00			2	223
10	ISL	15.45	15.45	33.294	24.560	337.0	0.034	5.99	105.2	1.3	0.28	0.0	0.00			10	
11		15.45	15.45	33.300	24.564	336.6	0.037									11	222
11		15.45	15.45	33.296	24.561	336.9	0.037	5.99	105.2	1.3	0.28	0.0	0.00	1.11	0.22	11	220
11		15.45	15.45	33.292	24.558	337.2	0.037									11	221
20	ISL	15.22	15.22	33.408	24.698	324.1	0.067	5.63	98.4	2.9	0.42	0.9	0.08	1.33	0.27	20	
21		15.18	15.18	33.421	24.717	322.4	0.070	5.58	97.5	3.1	0.44	1.1	0.09	1.35	0.28	21	218
21		15.21	15.21	33.418	24.708	323.2	0.070									21	219
30	ISL	14.78	14.78	33.441	24.819	312.9	0.099	5.29	91.7	4.7	0.59	3.2	0.20	0.90	0.10	30	
31		14.73	14.73	33.440	24.829	311.9	0.102	5.26	91.1	4.9	0.61	3.4	0.21	0.83	0.08	31	217
40		14.26	14.25	33.415	24.910	304.5	0.130	5.06	86.8	5.8	0.71	4.8	0.31	0.49	0.25	40	216
50		13.52	13.51	33.431	25.075	289.0	0.159	4.72	79.7	7.9	0.88	7.9	0.38	0.30	0.27	50	215
60		12.46	12.45	33.451	25.301	267.7	0.187	4.33	71.5	10.4	1.10	11.7	0.11	0.23	0.20	60	214
70		11.86	11.85	33.460	25.422	256.4	0.213	4.26	69.5	11.2	1.16	12.7	0.06	0.16	0.15	70	213
75	ISL	11.42	11.41	33.475	25.515	247.6	0.226	4.29	69.3	12.0	1.20	13.7	0.04	0.13	0.13	75	
85		10.56	10.55	33.521	25.703	229.8	0.250	4.32	68.6	13.9	1.30	15.9	0.02	0.08	0.09	85	212
100		9.81	9.80	33.605	25.897	211.6	0.283	4.03	62.9	17.3	1.46	18.7	0.01	0.04	0.06	100	211
120		9.76	9.75	33.806	26.063	196.3	0.324	2.92	45.6	24.2	1.86	23.5	0.01	0.03	0.06	121	210
125	ISL	9.74	9.73	33.830	26.085	194.3	0.333	2.81	43.9	24.9	1.90	24.0	0.01	0.03	0.06	126	
140		9.65	9.63	33.876	26.136	189.8	0.362	2.65	41.3	26.2	1.96	24.8	0.01	0.02	0.05	141	209
150	ISL	9.56	9.54	33.909	26.177	186.1	0.381	2.56	39.8	27.2	2.00	25.4	0.01	0.02	0.05	151	
170		9.37	9.35	33.976	26.260	178.5	0.418	2.39	37.0	29.5	2.08	26.5	0.01	0.01	0.04	171	208
199		9.22	9.20	34.083	26.369	168.8	0.468	2.08	32.2	33.4	2.19	27.8	0.01	0.01	0.05	200	207
200	ISL	9.22	9.20	34.085	26.370	168.7	0.470	2.07	32.0	33.5	2.19	27.8	0.01			201	
229		9.00	8.98	34.126	26.438	162.8	0.518	1.85	28.5	36.4	2.29	29.1	0.01			230	206
250	ISL	8.63	8.60	34.118	26.490	158.1	0.551	1.82	27.8	38.8	2.33	30.2	0.00			251	
269		8.30	8.27	34.113	26.537	153.8	0.581	1.78	27.0	41.2	2.37	31.2	0.00			271	205
300	ISL	8.16	8.13	34.181	26.612	147.2	0.628	1.36	20.5	45.6	2.54	32.3	0.00			302	
318		8.11	8.08	34.223	26.652	143.7	0.654	1.10	16.6	48.1	2.64	32.9	0.00			320	204
378		7.44	7.40	34.211	26.741	135.8	0.738	0.92	13.7	54.8	2.78	35.4	0.00			380	203
400	ISL	7.18	7.14	34.206	26.774	132.9	0.767	0.87	12.8	57.7	2.82	36.2	0.00			403	
437		6.81	6.77	34.205	26.824	128.4	0.816	0.77	11.3	62.5	2.89	37.3	0.00			440	202
500	ISL	6.54	6.49	34.255	26.900	121.9	0.894	0.51	7.4	68.8	3.02	38.5	0.00			503	
513		6.49	6.44	34.265	26.915	120.7	0.910	0.46	6.7	70.1	3.05	38.8	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.7 N	120 45.4 W	31/10/06	1817 UTC	2813 m	330 16 kn	320 03 05	2	1017.2 mb	16.0 C	12.8 C	18m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.81	15.81	33.422	24.578	335.0	0.000	5.80	102.6	2.3	0.31	0.1	0.01	0.79	0.16	0	
2	A	15.81	15.81	33.422	24.578	335.1	0.007	5.80	102.6	2.3	0.31	0.1	0.01	0.79	0.16	2	222
10	ISL	15.78	15.78	33.414	24.579	335.2	0.034	5.81	102.7	2.2	0.30	0.1	0.01	0.77	0.19	10	
12	A	15.80	15.80	33.414	24.574	335.7	0.040									12	221
12		15.77	15.77	33.411	24.579	335.3	0.040	5.81	102.7	2.2	0.30	0.1	0.01	0.77	0.20	12	220
20	ISL	15.73	15.73	33.406	24.584	335.0	0.067	5.82	102.8	2.1	0.30	0.1	0.01	0.79	0.17	20	
21		15.73	15.73	33.402	24.581	335.3	0.070									21	219
21		15.73	15.73	33.405	24.583	335.1	0.070	5.82	102.8	2.1	0.30	0.1	0.01	0.79	0.17	21	218
29	A	14.22	14.22	33.134	24.701	324.1	0.097	5.89	100.8	2.1	0.40	0.6	0.10	0.70	0.21	29	217
30	ISL	14.07	14.07	33.112	24.715	322.7	0.100	5.88	100.3	2.1	0.41	0.6	0.11	0.68	0.22	30	
40	A	12.90	12.89	33.024	24.884	306.9	0.131	5.80	96.5	2.5	0.49	1.7	0.21	0.43	0.25	40	216
50	ISL	12.34	12.33	33.146	25.087	287.8	0.161	5.38	88.5	5.0	0.70	5.5	0.15	0.26	0.22	50	
51	A	12.31	12.30	33.163	25.106	286.0	0.164	5.33	87.6	5.3	0.72	5.9	0.14	0.25	0.21	51	215
60		12.12	12.11	33.253	25.212	276.1	0.189	5.10	83.6	6.6	0.82	7.8	0.11	0.19	0.18	60	214
69	A	11.60	11.59	33.478	25.484	250.4	0.213	4.12	66.9	12.0	1.24	14.2	0.03	0.17	0.17	69	213
75	ISL	11.21	11.20	33.558	25.617	237.9	0.228	3.76	60.5	14.6	1.41	16.7	0.03	0.15	0.16	75	
85		10.62	10.61	33.638	25.784	222.1	0.251	3.41	54.2	17.9	1.58	19.3	0.02	0.10	0.14	85	212
100		10.11	10.10	33.756	25.964	205.3	0.283	2.99	47.1	22.0	1.78	22.2	0.01	0.05	0.10	100	211
120		9.81	9.80	33.863	26.099	192.9	0.323	2.67	41.8	25.3	1.92	24.1	0.01	0.03	0.06	121	210
125	ISL	9.75	9.74	33.893	26.132	189.8	0.332	2.59	40.5	26.2	1.96	24.5	0.01	0.03	0.06	126	
140		9.61	9.59	33.973	26.218	182.0	0.360	2.37	36.9	28.5	2.05	25.7	0.01	0.03	0.06	141	209
150	ISL	9.55	9.53	34.004	26.252	178.9	0.378	2.28	35.5	29.4	2.09	26.2	0.01	0.02	0.06	151	
169		9.45	9.43	34.047	26.303	174.5	0.412	2.15	33.4	30.7	2.14	26.9	0.01	0.01	0.05	170	208
200		9.29	9.27	34.123	26.389	167.0	0.465	1.87	29.0	33.5	2.25	28.2	0.03	0.01	0.05	201	207
229		9.15	9.12	34.154	26.436	163.0	0.512	1.74	26.9	35.4	2.30	28.9	0.01			230	206
250	ISL	9.05	9.02	34.180	26.473	159.9	0.546	1.60	24.7	37.0	2.37	29.5	0.01			251	
269		8.96	8.93	34.203	26.505	157.2	0.576	1.46	22.5	38.6	2.43	30.1	0.01			271	205
300	ISL	8.77	8.74	34.230	26.557	152.8	0.625	1.27	19.4	41.4	2.51	31.0	0.00			302	
318		8.64	8.61	34.242	26.587	150.3	0.652	1.16	17.7	43.2	2.56	31.6	0.00			320	204
378		8.06	8.02	34.270	26.698	140.5	0.739	0.82	12.4	50.0	2.76	33.9	0.00			380	203
400	ISL	7.87	7.83	34.271	26.727	138.0	0.770	0.77	11.6	52.2	2.80	34.4	0.00			403	
437		7.55	7.51	34.264	26.768	134.4	0.820	0.72	10.7	55.8	2.84	35.3	0.00			440	202
500	ISL	6.87	6.82	34.238	26.843	127.7	0.903	0.66	9.7	63.3	2.93	37.4	0.00			503	
513		6.73	6.68	34.233	26.858	126.3	0.919	0.65	9.5	64.8	2.95	37.8	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.7 N	121 26.7 W	31/10/06	1120 UTC	3802 m	310 10 kn			1015.2 mb	15.2 C	13.5 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.42	16.42	33.100	24.192	371.7	0.000	5.72	102.3	1.8	0.31	0.1	0.00	0.26	0.08	0	
2		16.42	16.42	33.100	24.192	371.8	0.007	5.72	102.3	1.8	0.31	0.1	0.00	0.26	0.08	2	222
10	ISL	16.43	16.43	33.104	24.193	372.0	0.037	5.73	102.4	1.9	0.31	0.1	0.00	0.33	0.04	10	
11		16.43	16.43	33.105	24.194	371.9	0.041	5.73	102.5	1.9	0.31	0.1	0.00	0.34	0.04	11	220
11		16.43	16.43	33.101	24.191	372.2	0.041									11	221
20		16.43	16.43	33.100	24.190	372.5	0.074	5.72	102.3	1.9	0.32	0.1	0.00	0.29	0.08	20	219
30		16.41	16.41	33.101	24.196	372.3	0.112	5.74	102.6	1.8	0.32	0.1	0.00	0.38	0.07	30	218
40		16.21	16.20	33.119	24.256	366.9	0.149	5.80	103.3	1.7	0.33	0.1	0.00	0.74	0.18	40	217
50		15.50	15.49	33.226	24.498	344.2	0.184	5.88	103.3	1.6	0.33	0.1	0.00	0.58	0.18	50	215
50		15.50	15.49	33.212	24.487	345.2	0.184									50	216
60		14.77	14.76	33.292	24.708	324.4	0.218	5.66	98.0	2.4	0.42	0.7	0.07	0.42	0.22	60	214
70		13.59	13.58	33.181	24.868	309.2	0.249	5.76	97.3	3.0	0.43	0.8	0.17	0.38	0.18	70	213
75	ISL	13.25	13.24	33.240	24.983	298.5	0.265	5.59	93.8	3.8	0.50	2.2	0.14	0.32	0.17	75	
85		12.75	12.74	33.409	25.213	276.8	0.293	5.14	85.4	5.8	0.69	5.7	0.04	0.18	0.16	85	212
100		11.89	11.88	33.491	25.441	255.3	0.333	4.80	78.4	8.7	0.90	9.7	0.01	0.10	0.12	100	211
120		10.52	10.51	33.560	25.742	227.0	0.381	3.99	63.3	15.9	1.41	17.2	0.01	0.03	0.04	121	210
125	ISL	10.24	10.23	33.605	25.825	219.1	0.393	3.84	60.5	17.6	1.50	18.5	0.01	0.02	0.04	126	
139		9.60	9.58	33.738	26.036	199.2	0.422	3.47	54.0	22.0	1.68	21.5	0.00	0.01	0.03	140	209
150	ISL	9.37	9.35	33.805	26.126	190.8	0.443	3.21	49.7	24.5	1.79	23.2	0.00	0.00	0.03	151	
169		9.19	9.17	33.889	26.221	182.1	0.479	2.84	43.8	27.9	1.93	25.2	0.00	0.00	0.03	170	208
199		8.87	8.85	34.009	26.366	168.9	0.531	2.48	38.0	32.6	2.08	27.3	0.00	0.00	0.02	200	207
200	ISL	8.86	8.84	34.011	26.370	168.6	0.533	2.47	37.9	32.7	2.08	27.4	0.00			201	
229		8.58	8.56	34.062	26.453	161.1	0.581	2.21	33.7	36.3	2.19	28.9	0.00			230	206
250	ISL	8.33	8.30	34.097	26.519	155.1	0.614	1.98	30.0	39.9	2.30	30.1	0.00			251	
269		8.08	8.05	34.124	26.578	149.7	0.643	1.76	26.5	43.4	2.40	31.3	0.00			271	205
300	ISL	7.68	7.65	34.149	26.657	142.6	0.688	1.43	21.4	48.7	2.55	33.1	0.00			302	
318		7.47	7.44	34.158	26.694	139.2	0.714	1.27	18.9	51.5	2.63	34.1	0.00			320	204
378		7.01	6.97	34.179	26.776	132.2	0.795	0.98	14.4	58.7	2.79	35.9	0.00			380	203
400	ISL	6.80	6.76	34.192	26.815	128.7	0.824	0.86	12.6	62.1	2.86	36.8	0.00			403	
436		6.47	6.43	34.213	26.875	123.2	0.869	0.67	9.7	67.7	2.96	38.2	0.00			439	202
500	ISL	6.05	6.01	34.233	26.946	117.0	0.946	0.50	7.2	75.0	3.07	39.7	0.00			503	
513		5.96	5.92	34.237	26.961	115.7	0.961	0.46	6.6	76.5	3.09	40.0	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.7 N	122 7.7 W	31/10/06	0530 UTC	4180 m	330 07 kn			1016.8 mb	16.3 C	13.6 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.45	17.45	33.181	24.013	388.8	0.000	5.55	101.3	1.7	0.30	0.0	0.00	0.17	0.01	0	
2		17.45	17.45	33.181	24.013	388.9	0.008									2	223
2		17.45	17.45	33.181	24.013	388.9	0.008	5.55	101.3	1.7	0.30	0.0	0.00	0.17	0.01	2	222
10		17.46	17.46	33.181	24.011	389.3	0.039									10	221
15		17.46	17.46	33.181	24.011	389.5	0.058	5.55	101.3	1.6	0.30	0.0	0.00	0.15	0.03	15	220
20	ISL	17.46	17.46	33.182	24.012	389.6	0.078	5.55	101.3	1.6	0.30	0.0	0.00	0.16	0.03	20	
30		17.46	17.45	33.183	24.013	389.8	0.117	5.56	101.5	1.5	0.30	0.0	0.00	0.17	0.02	30	219
45		16.36	16.35	33.185	24.273	365.5	0.173	5.73	102.3	1.4	0.31	0.0	0.00	0.29	0.11	45	218
50	ISL	15.62	15.61	33.138	24.403	353.1	0.191	5.92	104.2	1.3	0.33	0.0	0.00	0.33	0.19	50	
54		15.03	15.02	33.107	24.509	343.2	0.205	6.04	105.0	1.3	0.35	0.0	0.00	0.36 A	0.25 A	54	217
64		14.12	14.11	33.127	24.718	323.5	0.239									64	216
64		14.12	14.11	33.135	24.724	322.9	0.239	5.93	101.2	2.0	0.41	0.4	0.07	0.50 A	0.21 A	64	215
75		13.74	13.73	33.328	24.952	301.5	0.273	5.58	94.6	2.8	0.45	1.2	0.23	0.28	0.22	75	214
84		13.48	13.47	33.446	25.096	288.0	0.300	5.28	89.1	4.0	0.55	3.3	0.17	0.19	0.19	84	213
94		12.73	12.72	33.464	25.259	272.6	0.328	5.05	83.9	5.4	0.70	6.2	0.05	0.16	0.15	94	212
100	ISL	12.16	12.15	33.455	25.362	262.9	0.344	4.86	79.8	7.1	0.85	8.6	0.04	0.15	0.13	100	
109		11.30	11.29	33.451	25.518	248.1	0.367	4.58	73.8	9.9	1.07	12.2	0.02	0.12	0.10	109	211
124		10.23	10.22	33.534	25.771	224.1	0.402	4.25	67.0	13.9	1.31	16.2	0.01	0.05	0.05	125	210
125	ISL	10.19	10.18	33.539	25.782	223.1	0.404	4.23	66.6	14.1	1.32	16.4	0.01	0.05	0.05	126	
144		9.72	9.70	33.651	25.948	207.6	0.445	3.78	58.9	18.8	1.57	20.4	0.01	0.01	0.03	145	209
150	ISL	9.60	9.58	33.711	26.015	201.4	0.457	3.52	54.7	20.8	1.67	21.8	0.01	0.01	0.03	151	
169		9.29	9.27	33.893	26.208	183.4	0.494	2.74	42.4	27.0	1.96	25.7	0.01	0.00	0.03	170	208
199		8.92	8.90	34.001	26.352	170.2	0.547	2.41	37.0	31.5	2.10	27.9	0.01	0.00	0.03	200	207
200	ISL	8.91	8.89	34.004	26.356	169.9	0.549	2.40	36.8	31.7	2.11	28.0	0.01			201	
228		8.60	8.58	34.077	26.462	160.3	0.595	2.01	30.6	36.3	2.25	29.9	0.00			229	206
250	ISL	8.32	8.29	34.100	26.523	154.7	0.630	1.82	27.6	39.9	2.34	31.4	0.00			251	
268		8.07	8.04	34.108	26.567	150.8	0.657	1.70	25.6	42.8	2.41	32.5	0.01			269	205
300	ISL	7.55	7.52	34.118	26.651	143.1	0.704	1.50	22.3	48.2	2.54	34.1	0.01			302	
318		7.26	7.23	34.123	26.696	138.9	0.730	1.39	20.5	51.3	2.61	34.9	0.01			320	204
377		6.61	6.58	34.153	26.809	128.7	0.808	0.94	13.7	62.1	2.83	37.7	0.00			379	203
400	ISL	6.45	6.41	34.176	26.849	125.2	0.838	0.79	11.5	65.4	2.90	38.7	0.00			402	
437		6.24	6.20	34.215	26.907	120.0	0.883	0.58	8.4	70.4	3.00	40.1	0.00			440	202
500	ISL	5.85	5.81	34.253	26.987	112.9	0.956	0.40	5.7	79.2	3.11	41.2	0.00			503	
514		5.76	5.72	34.262	27.005	111.3	0.972	0.36	5.1	81.2	3.14	41.4	0.00			517	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 34.6 N	122 48.9 W	30/10/06	2331 UTC	4261 m	320 12 kn	310 04 10	2	1015.7 mb	17.5 C	13.5 C		8/8 SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.65	17.65	33.212	23.989	391.1	0.000	5.56	101.9	1.6	0.28	0.0	0.00	0.16	0.00	0	
2		17.65	17.65	33.212	23.989	391.2	0.008	5.56	101.9	1.6	0.28	0.0	0.00	0.16	0.00	2	224
10	ISL	17.65	17.65	33.213	23.990	391.3	0.039	5.54	101.5	1.7	0.28	0.0	0.00	0.15	0.01	10	
11		17.65	17.65	33.213	23.990	391.4	0.043	5.54	101.5	1.7	0.28	0.0	0.00	0.15	0.01	11	223
16		17.66	17.66	33.212	23.987	391.8	0.063	5.54	101.5	1.7	0.28	0.0	0.00	0.14	0.02	16	222
20	ISL	17.66	17.66	33.213	23.988	391.9	0.078	5.54	101.5	1.6	0.28	0.0	0.00	0.16	0.00	20	
21		17.66	17.66	33.213	23.988	391.9	0.082	5.54	101.5	1.6	0.28	0.0	0.00	0.17	0.00	21	221
30		17.65	17.64	33.212	23.990	392.0	0.117	5.54	101.5	1.7	0.28	0.0	0.00	0.19	0.01	30	220
46		17.52	17.51	33.203	24.015	390.2	0.180	5.59	102.1	1.6	0.28	0.0	0.00	0.27	0.02	46	219
50	ISL	16.76	16.75	33.184	24.180	374.5	0.195	5.78	104.1	1.6	0.28	0.0	0.00	0.29	0.05	50	
55		15.74	15.73	33.172	24.403	353.3	0.214	5.99	105.7	1.6	0.29	0.0	0.00	0.32	0.10	55	218
60		15.07	15.06	33.180	24.557	338.8	0.231	6.03	105.0	1.6	0.29	0.0	0.00	0.34	0.14	60	217
65		14.75	14.74	33.200	24.641	330.9	0.248	5.97	103.3	1.8	0.30	0.0	0.00	0.40	0.16	65	216
74		14.35	14.34	33.288	24.794	316.5	0.277									74	215
74		14.36	14.35	33.303	24.804	315.6	0.277	5.80	99.6	2.2	0.33	0.2	0.03	0.34	0.24	74	214
75	ISL	14.24	14.23	33.299	24.826	313.5	0.280	5.77	98.8	2.4	0.35	0.5	0.05	0.33	0.23	75	
85		13.09	13.08	33.253	25.025	294.7	0.310	5.44	91.0	4.4	0.61	3.9	0.17	0.22	0.12	85	213
95		12.88	12.87	33.343	25.136	284.4	0.339	5.21	86.8	5.3	0.68	5.4	0.10	0.19	0.13	95	212
100	ISL	12.71	12.70	33.370	25.190	279.3	0.353	5.09	84.5	5.9	0.74	6.5	0.07	0.17	0.12	100	
110		12.15	12.14	33.412	25.331	266.1	0.381	4.81	78.9	8.0	0.91	9.5	0.02	0.12	0.10	110	211
125		10.59	10.58	33.505	25.687	232.3	0.418	4.25	67.5	13.7	1.29	15.9	0.01	0.03	0.05	126	210
145		9.85	9.83	33.630	25.911	211.3	0.462	3.82	59.7	18.5	1.53	19.7	0.00	0.02	0.03	146	209
150	ISL	9.70	9.68	33.676	25.971	205.6	0.473	3.65	56.9	20.1	1.61	20.8	0.00	0.02	0.03	151	
170		9.19	9.17	33.859	26.198	184.4	0.512	2.98	46.0	26.6	1.89	24.9	0.00	0.00	0.03	171	208
199		8.75	8.73	34.007	26.384	167.2	0.563	2.42	37.0	33.1	2.11	28.1	0.00	0.00	0.02	200	207
200	ISL	8.73	8.71	34.011	26.390	166.6	0.564	2.40	36.7	33.4	2.12	28.2	0.00			201	
229		8.25	8.23	34.100	26.533	153.3	0.611	1.77	26.8	41.0	2.38	31.6	0.00			230	206
250	ISL	8.01	7.98	34.131	26.594	147.9	0.642	1.49	22.4	44.7	2.50	33.0	0.00			251	
269		7.84	7.81	34.147	26.632	144.6	0.670	1.32	19.8	47.4	2.58	33.8	0.00			270	205
300	ISL	7.55	7.52	34.172	26.694	139.1	0.714	1.09	16.2	51.7	2.70	35.0	0.00			302	
319		7.38	7.35	34.186	26.729	135.9	0.740	0.97	14.4	54.3	2.76	35.6	0.00			321	204
378		6.93	6.89	34.238	26.833	126.7	0.818	0.62	9.1	62.8	2.94	37.5	0.00			380	203
400	ISL	6.78	6.74	34.256	26.868	123.6	0.845	0.53	7.8	65.8	3.00	38.0	0.00			402	
437		6.56	6.52	34.282	26.918	119.3	0.890	0.41	6.0	70.4	3.07	38.7	0.00			440	202
500	ISL	6.26	6.22	34.300	26.972	114.8	0.964	0.34	4.9	75.5	3.13	39.6	0.00			503	
513		6.20	6.15	34.304	26.983	113.9	0.979	0.32	4.6	76.6	3.14	39.8	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 14.7 N	123 29.6 W	30/10/06	1732 UTC	4153 m	340 09 kn	340 03 06	2	1017.7 mb	17.5 C	14.0 C	24m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.32	17.32	33.173	24.038	386.4	0.000	5.59	101.7	1.6	0.30	0.1	0.00	0.18	0.04	0	
2	C	17.32	17.32	33.173	24.038	386.5	0.008	5.59	101.7	1.6	0.30	0.1	0.00	0.18	0.04	2	224
10		17.32	17.32	33.173	24.038	386.7	0.039	5.58	101.6	1.7	0.30	0.0	0.00	0.22 B	0.05 B	10	223
15	C	17.32	17.32	33.175	24.040	386.8	0.058	5.62	102.3	1.6	0.30	0.0	0.00	0.18	0.04	15	222
20	ISL	17.31	17.31	33.175	24.043	386.7	0.077	5.60	101.9	1.6	0.30	0.0	0.00	0.20	0.05	20	
26		17.30	17.30	33.174	24.044	386.7	0.101	5.58	101.5	1.6	0.30	0.0	0.00	0.27 A	0.07 A	26	221
30	ISL	17.14	17.14	33.159	24.071	384.3	0.116	5.63	102.1	1.6	0.30	0.0	0.00	0.33	0.09	30	
38	C	16.82	16.81	33.131	24.125	379.4	0.146	5.72	103.1	1.6	0.31	0.0	0.00	0.45	0.12	38	220
44		15.74	15.73	33.166	24.398	353.5	0.168	5.93	104.6	1.5	0.32	0.0	0.00	0.51	0.03	44	219
50	ISL	14.94	14.93	33.180	24.584	335.8	0.189	5.96	103.5	1.6	0.34	0.0	0.00	0.48	0.14	50	
52	C	14.73	14.72	33.180	24.630	331.6	0.196	5.97	103.2	1.6	0.34	0.0	0.00	0.47	0.18	52	218
60		14.10	14.09	33.169	24.754	319.9	0.222	5.74	98.0	2.5	0.47	1.1	0.23	0.78	0.16	60	217
66	C	12.92	12.91	33.039	24.892	306.8	0.241	5.73	95.3	3.2	0.57	2.4	0.23	0.45	0.21	66	216
75		13.17	13.16	33.363	25.094	287.9	0.267	5.01	84.0	6.8	0.84	7.3	0.05	0.27	0.17	75	215
82		12.28	12.27	33.283	25.205	277.3	0.287	5.02	82.5	7.2	0.89	8.5	0.03	0.16	0.19	82	214
91	C	12.07	12.06	33.413	25.346	264.1	0.312	5.02	82.2	7.1	0.83	8.2	0.03	0.22	0.06	91	213
100	ISL	11.46	11.45	33.458	25.495	250.1	0.335	4.81	77.8	8.7	0.95	10.3	0.02	0.15	0.10	100	
101		11.38	11.37	33.460	25.511	248.6	0.337	4.77	77.0	9.0	0.97	10.6	0.02	0.14	0.11	101	212
110		10.88	10.87	33.491	25.625	237.9	0.359	4.38	70.0	12.3	1.21	14.3	0.02	0.07	0.05	110	211
125		10.19	10.18	33.528	25.773	224.0	0.394	4.22	66.4	14.8	1.35	16.7	0.01	0.05	0.06	126	210
144		9.39	9.37	33.703	26.043	198.6	0.434	3.79	58.7	20.5	1.61	20.9	0.01	0.01	0.03	145	209
150	ISL	9.24	9.22	33.750	26.104	192.9	0.446	3.70	57.1	21.9	1.66	21.7	0.01	0.01	0.03	151	
170		8.91	8.89	33.886	26.263	178.1	0.483	3.36	51.5	26.7	1.80	24.0	0.00	0.00	0.02	171	208
199		8.58	8.56	34.051	26.444	161.4	0.532	2.31	35.2	35.3	2.17	28.7	0.00	0.00	0.03	200	207
200	ISL	8.57	8.55	34.054	26.448	161.0	0.534	2.29	34.9	35.5	2.18	28.8	0.00			201	
229		8.30	8.28	34.095	26.522	154.4	0.579	1.95	29.5	39.6	2.32	30.6	0.00			230	206
250	ISL	8.00	7.97	34.109	26.578	149.4	0.611	1.77	26.6	43.2	2.41	31.8	0.00			251	
269		7.71	7.68	34.117	26.627	144.9	0.639	1.64	24.5	46.5	2.49	32.9	0.00			271	205
300	ISL	7.34	7.31	34.130	26.690	139.2	0.683	1.40	20.7	51.5	2.61	34.4	0.00			302	
318		7.14	7.11	34.137	26.724	136.2	0.708	1.27	18.7	54.4	2.68	35.2	0.00			320	204
377		6.50	6.47	34.165	26.833	126.3	0.785	0.90	13.1	64.4	2.88	37.7	0.00			379	203
400	ISL	6.46	6.42	34.194	26.861	124.0	0.814	0.75	10.9	66.7	2.94	38.2	0.00			402	
437		6.43	6.39	34.238	26.901	120.8	0.860	0.55	8.0	70.0	3.02	38.8	0.00			440	202
500	ISL	5.90	5.86	34.251	26.979	113.7	0.933	0.42	6.0	78.7	3.12	40.4	0.00			503	
514		5.78	5.74	34.254	26.996	112.1	0.949	0.39	5.6	80.6	3.14	40.8	0.00			517	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 54.6 N	124 10.1 W	30/10/06	1052 UTC	4210 m	320 13 kn			1016.1 mb	17.0 C	14.0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.19	17.19	33.147	24.049	385.4	0.000	5.60	101.7	1.4	0.30	0.1	0.00	0.22	0.00	0	
1		17.19	17.19	33.147	24.049	385.4	0.004	5.60	101.7	1.4	0.30	0.1	0.00	0.22	0.00	1	222
10		17.19	17.19	33.143	24.046	386.0	0.039	5.60	101.6	1.3	0.30	0.1	0.00	0.24	0.00	10	221
15		17.19	17.19	33.147	24.049	385.9	0.058	5.59	101.5	1.3	0.30	0.1	0.00	0.21	0.03	15	220
20	ISL	17.19	17.19	33.147	24.049	386.0	0.077	5.59	101.5	1.3	0.30	0.1	0.00	0.21	0.02	20	
30		17.20	17.20	33.146	24.047	386.6	0.116	5.59	101.5	1.3	0.30	0.1	0.00	0.22	0.01	30	219
45		17.18	17.17	33.271	24.148	377.5	0.173	5.65	102.6	1.0	0.29	0.1	0.00	0.34	0.07	45	218
50	ISL	16.19	16.18	33.251	24.362	357.1	0.191	5.84	104.0	1.3	0.30	0.1	0.00	0.37	0.13	50	
55		15.12	15.11	33.234	24.587	335.7	0.209	6.01	104.8	1.8	0.33	0.1	0.00	0.40	0.18	55	217
65		14.10	14.09	33.230	24.801	315.5	0.241									65	216
65		14.10	14.09	33.231	24.802	315.5	0.241	5.94	101.4	3.1	0.46	1.2	0.08	0.54	0.12	65	215
75		13.66	13.65	33.232	24.894	307.0	0.272	5.71	96.6	3.5	0.53	2.5	0.15	0.46	0.22	75	214
85		12.96	12.95	33.355	25.130	284.7	0.302	5.05	84.3	6.0	0.82	7.7	0.07	0.37	0.20	85	213
95		12.34	12.33	33.307	25.213	277.0	0.330	4.91	80.8	7.0	0.91	8.9	0.05	0.34	0.11	95	212
100	ISL	12.04	12.03	33.340	25.295	269.2	0.344	4.72	77.2	8.2	1.00	10.4	0.03	0.26	0.11	100	
109		11.45	11.44	33.431	25.476	252.2	0.367	4.40	71.1	10.6	1.17	13.4	0.01	0.10	0.12	109	211
124		10.20	10.19	33.550	25.789	222.5	0.403	4.33	68.2	13.6	1.28	16.0	0.01	0.05	0.07	125	210
125	ISL	10.15	10.14	33.558	25.803	221.1	0.405	4.32	67.9	13.8	1.29	16.2	0.01	0.05	0.07	126	
144		9.49	9.47	33.714	26.035	199.3	0.445	3.97	61.6	18.7	1.51	19.7	0.01	0.01	0.04	145	209
150	ISL	9.39	9.37	33.768	26.094	193.9	0.457	3.71	57.5	20.7	1.61	21.1	0.01	0.01	0.04	151	
169		9.22	9.20	33.919	26.240	180.4	0.492	2.85	44.0	26.9	1.92	25.2	0.00	0.00	0.03	170	208
199		8.95	8.93	34.046	26.383	167.4	0.545	2.25	34.6	32.4	2.14	28.0	0.00	0.00	0.03	200	207
200	ISL	8.94	8.92	34.048	26.386	167.1	0.546	2.24	34.4	32.5	2.14	28.0	0.00			201	
229		8.51	8.49	34.083	26.481	158.5	0.593	2.10	31.9	35.6	2.22	29.2	0.00			230	206
250	ISL	8.24	8.21	34.101	26.536	153.5	0.626	1.92	29.0	39.3	2.32	30.5	0.00			251	
269		8.00	7.97	34.114	26.582	149.3	0.655	1.75	26.3	42.8	2.41	31.8	0.00			270	205
300	ISL	7.61	7.58	34.126	26.649	143.3	0.700	1.56	23.3	47.3	2.52	33.2	0.00			302	
318		7.39	7.36	34.133	26.686	140.0	0.726	1.45	21.5	49.8	2.58	33.9	0.00			320	204
378		6.80	6.76	34.181	26.806	129.2	0.807	0.94	13.8	60.2	2.82	36.6	0.00			380	203
400	ISL	6.61	6.57	34.193	26.841	126.0	0.835	0.81	11.8	63.6	2.88	37.4	0.00			402	
436		6.32	6.28	34.209	26.892	121.5	0.879	0.65	9.4	68.8	2.97	38.6	0.00			439	202
500	ISL	5.90	5.86	34.234	26.966	115.0	0.955	0.48	6.9	76.5	3.08	40.2	0.00			503	
513		5.81	5.77	34.239	26.981	113.6	0.970	0.44	6.3	78.1	3.10	40.5	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 1.2 N	118 50.6 W	01/11/06	1023 UTC	22 m	030 07 kn			1015.2 mb	15.0 C	13.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.55	17.55	33.442	24.189	372.0	0.000	5.80	106.2	3.0	0.27	0.0	0.02	1.39	0.27	0	
1	17.55	17.55	33.442	24.189	372.0	0.004	5.80	106.2	3.0	0.27	0.0	0.02	1.39	0.27	1	204
5	17.47	17.47	33.429	24.198	371.3	0.019	5.78	105.7	3.1	0.29	0.0	0.03	1.48	0.28	5	203
10	15.83	15.83	33.349	24.517	341.0	0.036	5.59	98.9	4.8	0.48	0.7	0.15	1.39	0.11	10	202
15	15.30	15.30	33.315	24.609	332.5	0.053	5.50	96.3	5.5	0.54	1.0	0.21	0.97	0.27	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 53.0 N	118 26.8 W	27/10/06	2336 UTC	32 m	290 06 kn	290 01 08	0	1017.6 mb	20.7 C	17.0 C		0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.94	18.94	33.454	23.856	403.8	0.000	6.39	120.2	2.3	0.18	0.0	0.00	4.49	0.65	0	
1	18.94	18.94	33.454	23.856	403.8	0.004	6.39	120.2	2.3	0.18	0.0	0.00	4.49 A	0.65 A	1	206
5	18.34	18.34	33.442	23.997	390.5	0.020	6.38	118.6	2.2	0.19	0.0	0.00	3.52	0.02	5	205
10	17.71	17.71	33.419	24.133	377.7	0.039	6.03	110.7	2.7	0.25	0.0	0.01	2.89	0.00	10	204
15	17.23	17.23	33.404	24.237	368.0	0.058	5.82	105.9	3.1	0.30	0.0	0.01	2.37	0.34	15	203
20	17.19	17.19	33.399	24.243	367.6	0.076	5.75	104.5	3.4	0.32	0.0	0.01	2.90	0.21	20	202
26	17.16	17.16	33.399	24.250	367.1	0.098	5.74	104.3	3.4	0.32	0.0	0.01	3.13	0.23	26	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 53.4 N	118 29.4 W	28/10/06	0028 UTC	58 m	290 13 kn	270 01 06	0	1017.1 mb	20.1 C	16.9 C		0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.35	18.35	33.463	24.010	389.1	0.000	5.97	111.0	2.0	0.21	0.0	0.01	2.73	0.23	0	
1	18.38	18.38	33.463	24.003	389.8	0.004									1	208
1	18.35	18.35	33.463	24.010	389.1	0.004	5.97	111.0	2.0	0.21	0.0	0.01	2.73	0.23	1	207
5	17.75	17.75	33.428	24.130	377.8	0.019	6.01	110.5	2.3	0.23	0.0	0.01	2.27	0.13	5	206
10	17.45	17.45	33.400	24.181	373.1	0.038	5.96	108.9	2.8	0.25	0.0	0.01	2.26	0.19	10	205
20	16.55	16.55	33.369	24.369	355.5	0.074	5.87	105.4	3.1	0.31	0.1	0.03	1.88 A	0.37 A	20	204
30	15.82	15.82	33.343	24.516	341.8	0.109	5.78	102.2	3.9	0.38	0.4	0.08	2.07	0.18	30	203
40	14.75	14.74	33.324	24.736	321.1	0.142	5.64	97.6	4.6	0.46	1.1	0.17	1.18 A	0.01 A	40	202
50 ISL	14.48	14.47	33.310	24.783	316.9	0.174	5.51	94.9	5.5	0.55	1.6	0.27	0.73	0.35	50	
51	14.45	14.44	33.308	24.788	316.5	0.178	5.50	94.6	5.6	0.56	1.7	0.28	0.69	0.38	51	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 49.4 N	118 37.7 W	28/10/06	0239 UTC	644 m	280 16 kn			1017.3 mb	20.8 C	16.4 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.67	18.67	33.510	23.967	393.2	0.000	5.59	104.6	1.4	0.22	0.0	0.01	0.24	0.05	0	
1	18.67	18.67	33.510	23.967	393.2	0.004	5.59	104.6	1.4	0.22	0.0	0.01	0.24	0.05	1	222
7	18.67	18.67	33.506	23.964	393.7	0.028	5.56	104.1	1.4	0.22	0.0	0.01	0.26	0.04	7	221
10	18.61	18.61	33.506	23.979	392.4	0.039	5.57	104.1	1.3	0.22	0.0	0.01	0.31	0.04	10	220
20	18.26	18.26	33.479	24.046	386.4	0.078	5.67	105.3	1.3	0.23	0.0	0.01	0.31	0.08	20	219
30	15.75	15.75	33.343	24.531	340.3	0.115	5.92	104.6	2.0	0.33	0.0	0.01	0.38	0.17	30	218
40	14.07	14.06	33.286	24.850	310.2	0.147									40	217
40	14.06	14.05	33.286	24.852	310.0	0.147	5.61	95.7	3.4	0.48	1.8	0.20	0.82	0.50	40	216
50	13.36	13.35	33.341	25.038	292.5	0.177	5.21	87.7	5.2	0.67	5.0	0.18	0.43	0.42	50	215
60	12.70	12.69	33.395	25.211	276.3	0.206	4.75	78.9	7.7	0.90	8.7	0.04	0.28	0.25	60	214
70	12.34	12.33	33.406	25.289	269.1	0.233	4.67	76.9	8.2	0.94	9.5	0.06	0.22	0.31	70	213
75 ISL	12.12	12.11	33.415	25.338	264.5	0.246	4.59	75.3	8.8	0.99	10.4	0.05	0.21	0.28	75	
85	11.64	11.63	33.442	25.449	254.2	0.272	4.37	70.9	10.4	1.12	12.5	0.03	0.18	0.19	85	212
100	10.94	10.93	33.509	25.628	237.4	0.309	3.94	63.0	13.9	1.34	16.0	0.02	0.08	0.13	100	211
119	10.55	10.54	33.714	25.856	216.0	0.352	2.94	46.7	20.8	1.74	20.8	0.01	0.03	0.06	120	210
125 ISL	10.49	10.48	33.742	25.889	213.1	0.365	2.83	44.9	21.8	1.79	21.4	0.01	0.03	0.06	126	
139	10.38	10.36	33.786	25.942	208.3	0.395	2.72	43.1	23.2	1.86	22.2	0.01	0.02	0.05	140	209
150 ISL	10.27	10.25	33.853	26.014	201.8	0.417	2.53	40.0	25.0	1.93	23.1	0.01	0.02	0.05	151	
169	10.02	10.00	33.963	26.142	189.9	0.454	2.26	35.5	27.9	2.04	24.7	0.01	0.01	0.04	170	208
199	9.42	9.40	34.018	26.286	176.8	0.509	2.31	35.9	30.0	2.08	26.3	0.03	0.01	0.04	200	207
200 ISL	9.41	9.39	34.021	26.290	176.4	0.511	2.30	35.7	30.1	2.08	26.4	0.03			201	
229	9.16	9.13	34.103	26.395	167.0	0.561	1.94	29.9	33.9	2.23	28.2	0.01			230	206
250 ISL	9.04	9.01	34.147	26.448	162.2	0.595	1.72	26.5	36.3	2.31	29.1	0.01			251	
268	8.94	8.91	34.178	26.489	158.7	0.624	1.56	24.0	38.2	2.38	29.7	0.01			270	205
300 ISL	8.70	8.67	34.224	26.563	152.2	0.674	1.29	19.7	41.9	2.50	30.8	0.00			302	
318	8.55	8.52	34.244	26.602	148.7	0.701	1.16	17.7	43.9	2.56	31.4	0.00			320	204
378	8.10	8.06	34.271	26.692	141.0	0.788	0.85	12.8	50.0	2.72	33.1	0.00			380	203
400 ISL	7.94	7.90	34.282	26.725	138.2	0.819	0.75	11.3	52.4	2.78	33.7	0.00			403	
437	7.64	7.60	34.297	26.781	133.3	0.869	0.59	8.8	57.0	2.87	34.8	0.00			440	202
500 ISL	6.89	6.84	34.311	26.898	122.6	0.950	0.37	5.4	68.2	3.04	36.8	0.01			503	
514	6.72	6.67	34.315	26.924	120.1	0.967	0.32	4.7	70.7	3.08	37.3	0.01			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 39.4 N	118 58.4 W	28/10/06	0649 UTC	744 m	300 08 kn			1017.3 mb	19.0 C	16.0 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.24	17.24	33.455	24.273	364.0	0.000	5.69	103.6	1.8	0.26	0.0	0.00	0.38	0.07	0	
2		17.24	17.24	33.455	24.273	364.1	0.007	5.69	103.6	1.8	0.26	0.0	0.00	0.38	0.07	2	223
10		16.62	16.62	33.462	24.424	349.9	0.036	5.73	103.1	2.5	0.27	0.0	0.00	0.40	0.06	10	222
20		16.37	16.37	33.478	24.494	343.6	0.071	5.78	103.5	3.2	0.28	0.0	0.01	0.53	0.17	20	221
29		15.14	15.14	33.464	24.759	318.6	0.100									29	220
30		15.10	15.10	33.466	24.769	317.6	0.103	5.38	93.9	5.3	0.51	3.1	0.20	1.06	0.31	30	219
40		12.67	12.66	33.473	25.276	269.5	0.133	4.45	73.9	10.5	1.05	11.2	0.14	0.40	0.24	40	218
50		11.94	11.93	33.484	25.425	255.6	0.159	4.20	68.7	12.4	1.19	13.7	0.04	0.24	0.14	50	217
59		10.99	10.98	33.571	25.666	232.8	0.181	3.77	60.4	16.7	1.44	17.4	0.02	0.07	0.09	59	216
69		10.72	10.71	33.605	25.741	225.9	0.204	3.61	57.5	18.1	1.52	18.7	0.02	0.06	0.08	69	215
75	ISL	10.57	10.56	33.621	25.780	222.3	0.217	3.54	56.2	18.8	1.56	19.2	0.02	0.05	0.07	75	
84		10.35	10.34	33.652	25.842	216.6	0.237	3.41	53.9	19.9	1.62	20.1	0.02	0.04	0.06	84	214
99		9.98	9.97	33.754	25.985	203.3	0.269	3.00	47.1	23.2	1.79	22.6	0.01	0.03	0.06	99	213
100	ISL	9.96	9.95	33.761	25.994	202.5	0.271	2.98	46.7	23.4	1.80	22.7	0.01	0.03	0.06	100	
119		9.64	9.63	33.877	26.138	189.1	0.308	2.67	41.6	27.2	1.94	24.7	0.02	0.01	0.05	120	212
125	ISL	9.59	9.58	33.902	26.166	186.6	0.319	2.58	40.2	28.0	1.98	25.1	0.02	0.01	0.05	126	
139		9.50	9.48	33.951	26.219	181.8	0.345	2.39	37.1	29.7	2.05	26.0	0.01	0.01	0.05	140	211
150	ISL	9.41	9.39	33.993	26.267	177.5	0.365	2.23	34.6	31.3	2.11	26.7	0.01	0.01	0.05	151	
169		9.25	9.23	34.060	26.345	170.4	0.398	1.98	30.6	33.9	2.21	27.8	0.01	0.01	0.06	170	210
199		9.07	9.05	34.136	26.434	162.5	0.448	1.73	26.7	36.7	2.31	29.0	0.00	0.00	0.12	200	209
200	ISL	9.07	9.05	34.138	26.436	162.4	0.449	1.72	26.5	36.8	2.31	29.0	0.00			201	
228		8.93	8.91	34.188	26.498	157.1	0.494	1.45	22.3	39.8	2.42	30.1	0.01			229	208
250	ISL	8.80	8.77	34.216	26.540	153.4	0.528	1.26	19.3	41.9	2.49	30.7	0.01			251	
268		8.69	8.66	34.233	26.571	150.8	0.556	1.13	17.3	43.5	2.55	31.2	0.00			270	207
300	ISL	8.50	8.47	34.256	26.619	146.8	0.603	0.97	14.8	46.0	2.63	32.0	0.00			302	
318		8.39	8.36	34.265	26.643	144.8	0.629	0.90	13.7	47.5	2.67	32.5	0.00			320	206
377		7.97	7.93	34.286	26.724	138.0	0.713	0.68	10.2	53.4	2.80	34.0	0.01			379	205
400	ISL	7.84	7.80	34.292	26.748	136.0	0.744	0.63	9.4	54.9	2.83	34.4	0.01			403	
437		7.60	7.56	34.300	26.789	132.5	0.794	0.56	8.4	57.9	2.89	35.1	0.00			440	204
500	ISL	6.88	6.83	34.311	26.899	122.4	0.874	0.37	5.4	68.2	3.04	37.3	0.01			503	
512		6.73	6.68	34.314	26.922	120.3	0.889	0.34	5.0	70.5	3.07	37.7	0.01			516	203
600	ISL	5.89	5.84	34.345	27.056	107.9	0.989	0.20	2.9	86.1	3.22	39.3	0.01			604	
616		5.77	5.72	34.351	27.075	106.1	1.006	0.19	2.7	88.6	3.24	39.4	0.01			620	202
700	ISL	5.55	5.49	34.368	27.117	103.0	1.094	0.16	2.3	94.7	3.28	39.4	0.01			705	
737		5.45	5.39	34.376	27.135	101.5	1.132	0.15	2.1	97.4	3.30	39.4	0.01			743	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.4 N	119 19.1 W	28/10/06	1126 UTC	1640 m	340 06 kn			1016.3 mb	17.9 C	16.5 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.29	17.29	33.445	24.253	365.9	0.000	5.61	102.2	1.9	0.27	0.0	0.00	0.42	0.10	0	
2		17.29	17.29	33.445	24.254	365.9	0.007	5.61	102.2	1.9	0.27	0.0	0.00	0.42	0.10	2	222
10		17.28	17.28	33.447	24.258	365.8	0.037									10	221
10		17.28	17.28	33.448	24.259	365.7	0.037	5.62	102.4	1.8	0.26	0.0	0.00	0.41	0.11	10	220
20		17.20	17.20	33.446	24.276	364.4	0.073	5.64	102.6	1.7	0.26	0.0	0.00	0.43	0.13	20	219
30		16.80	16.80	33.431	24.359	356.8	0.109	5.70	102.9	1.8	0.28	0.0	0.01	0.74	0.28	30	217
39		16.45	16.44	33.432	24.441	349.3	0.141	5.68	101.8	2.4	0.31	0.3	0.02	0.85	0.29	39	216
49		15.01	15.00	33.394	24.734	321.6	0.174	5.37	93.5	4.1	0.52	2.8	0.20	0.52	0.26	49	215
50	ISL	14.90	14.89	33.391	24.756	319.5	0.178	5.35	92.9	4.2	0.54	3.0	0.20	0.50	0.26	50	
59		13.88	13.87	33.383	24.965	299.8	0.206	5.08	86.4	5.9	0.71	5.7	0.21	0.35	0.22	59	214
69		12.09	12.08	33.439	25.362	262.1	0.234	4.43	72.6	10.8	1.09	12.1	0.02	0.14	0.15	69	213
75	ISL	11.56	11.55	33.469	25.484	250.5	0.249	4.22	68.4	12.6	1.21	14.1	0.02	0.11	0.12	75	
84		11.14	11.13	33.507	25.590	240.6	0.271	4.01	64.4	14.5	1.33	15.9	0.01	0.06	0.08	84	212
99		10.54	10.53	33.590	25.761	224.6	0.306	3.66	58.1	17.7	1.51	18.8	0.01	0.03	0.06	99	211
100	ISL	10.50	10.49	33.598	25.774	223.4	0.308	3.63	57.6	18.0	1.52	19.0	0.01	0.03	0.06	100	
119		9.81	9.80	33.745	26.006	201.6	0.349	3.14	49.1	23.0	1.77	22.6	0.01	0.01	0.05	120	210
125	ISL	9.72	9.71	33.772	26.043	198.3	0.361	3.05	47.6	23.9	1.81	23.2	0.01	0.01	0.05	126	
139		9.58	9.56	33.831	26.112	192.0	0.388	2.86	44.5	25.8	1.88	24.3	0.01	0.00	0.05	140	209
150	ISL	9.40	9.38	33.913	26.206	183.3	0.409	2.60	40.3	28.5	1.98	25.6	0.01	0.00	0.05	151	
169		9.14	9.12	34.052	26.357	169.3	0.442	2.15	33.2	33.0	2.15	27.7	0.01	0.00	0.04	170	208
198		9.08	9.06	34.142	26.437	162.2	0.490	1.87	28.8	35.8	2.27	28.7	0.01	0.00	0.04	199	207
200	ISL	9.07	9.05	34.146	26.442	161.8	0.493	1.85	28.5	36.0	2.28	28.8	0.01			201	
228		8.87	8.85	34.190	26.509	156.0	0.538	1.57	24.1	39.2	2.39	29.9	0.01			229	206
250	ISL	8.68	8.65	34.203	26.549	152.5	0.572	1.45	22.2	41.1	2.45	30.6	0.01			251	
268		8.52	8.49	34.209	26.579	150.0	0.599	1.36	20.7	42.7	2.49	31.2	0.01			270	205
300	ISL	8.23	8.20	34.236	26.644	144.2	0.646	1.12	16.9	46.7	2.61	32.4	0.01			302	
318		8.09	8.06	34.252	26.678	141.2	0.672	0.98	14.8	48.9	2.67	33.1	0.01			320	204
377		7.82	7.78	34.284	26.744	135.9	0.754	0.71	10.6	53.9	2.80	34.3	0.00			379	203
400	ISL	7.67	7.63	34.291	26.771	133.6	0.785	0.63	9.4	56.1	2.85	34.8	0.00			403	
437		7.39	7.35	34.299	26.818	129.5	0.833	0.53	7.9	59.8	2.92	35.7	0.00			440	202
500	ISL	6.90	6.85	34.320	26.903	122.0	0.912	0.36	5.3	67.1	3.04	37.5	0.00			503	
513		6.80	6.75	34.325	26.921	120.5	0.928	0.32	4.7	68.6	3.06	37.9	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 19.5 N	119 40.0 W	28/10/06	1655 UTC	82 m	290 09 kn	300 02 03	1	1017.0 mb	17.5 C	16.6 C	19m	6/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.30	17.30	33.450	24.255	365.7	0.000	5.61	102.2	1.1	0.26	0.1	0.00	0.43	0.11	0	
2	B	17.30	17.30	33.450	24.255	365.8	0.007	5.61	102.2	1.1	0.26	0.1	0.00	0.43	0.11	2	211
2		17.30	17.30	33.449	24.254	365.9	0.007									2	212
5		17.27	17.27	33.449	24.261	365.3	0.018	5.62	102.4	1.0	0.25	0.1	0.00	0.57 A	0.10 A	5	210
10	ISL	17.20	17.20	33.447	24.277	364.0	0.037	5.63	102.4	1.0	0.25	0.1	0.00	0.49	0.05	10	
11		17.18	17.18	33.447	24.281	363.6	0.040									11	209
11		17.18	17.18	33.447	24.281	363.6	0.040	5.63	102.4	1.0	0.25	0.1	0.00	0.47	0.04	11	208
13	B	17.13	17.13	33.448	24.294	362.4	0.047	5.66	102.8	0.9	0.25	0.1	0.00	0.38	0.11	13	207
20	ISL	15.79	15.79	33.406	24.571	336.3	0.072	5.65	99.9	1.7	0.36	0.7	0.07	0.93	0.41	20	
21		15.53	15.53	33.399	24.623	331.3	0.075	5.65	99.4	1.8	0.38	0.8	0.09	1.02	0.44	21	206
29	B	14.10	14.10	33.348	24.891	305.9	0.101	5.34	91.2	4.3	0.62	3.9	0.22	0.46	0.41	29	205
30	ISL	13.94	13.94	33.350	24.926	302.7	0.104	5.28	89.9	4.7	0.65	4.4	0.22	0.42	0.40	30	
41	B	12.72	12.71	33.404	25.213	275.6	0.136	4.74	78.7	8.1	0.92	9.1	0.10	0.22	0.23	41	204
50	ISL	12.64	12.63	33.405	25.230	274.2	0.160	4.73	78.4	8.2	0.93	9.4	0.09	0.21	0.22	50	
54	B	12.61	12.60	33.405	25.236	273.7	0.171	4.72	78.2	8.3	0.94	9.5	0.09	0.21	0.21	54	203
63		12.30	12.29	33.423	25.310	266.9	0.196	4.56	75.1	9.4	1.04	11.0	0.07	0.17	0.18	63	202
73	B	12.21	12.20	33.429	25.332	265.1	0.222	4.49	73.8	9.6	1.06	11.6	0.06	0.17	0.19	73	201

A) SECOND 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.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.5 N	120 0.3 W	28/10/06	1926 UTC	1201 m	300 10 kn	320 02 03	0	1016.7 mb	19.1 C	17.5 C		0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.49	17.49	33.495	24.244	366.8	0.000	5.69	104.1	2.3	0.23	0.0	0.00	0.37	0.13	0	
1		17.49	17.49	33.495	24.244	366.8	0.004	5.69	104.1	2.3	0.23	0.0	0.00	0.37	0.13	1	222
10		17.43	17.43	33.492	24.256	365.9	0.037	5.70	104.2	2.3	0.23	0.0	0.00	0.43	0.09	10	220
10		17.44	17.44	33.493	24.255	366.1	0.037									10	221
20	ISL	16.31	16.31	33.466	24.499	343.1	0.072	5.57	99.6	3.9	0.36	1.6	0.07	0.87	0.37	20	
25		15.86	15.86	33.459	24.596	334.1	0.089									25	219
25		15.49	15.49	33.455	24.675	326.5	0.089	5.51	96.9	5.0	0.47	2.4	0.11	0.98	0.47	25	218
30		14.66	14.66	33.451	24.853	309.7	0.105	5.21	90.1	6.1	0.62	4.7	0.26	0.75	0.38	30	217
40		13.51	13.50	33.454	25.095	286.9	0.135	4.81	81.2	7.8	0.82	7.7	0.34	0.66	0.29	40	216
50		12.58	12.57	33.472	25.293	268.2	0.163	4.39	72.7	10.3	1.06	11.5	0.12	0.37	0.26	50	215
60		11.98	11.97	33.504	25.433	255.1	0.189	4.08	66.8	12.3	1.21	13.9	0.05	0.23	0.19	60	214
70		11.32	11.31	33.573	25.609	238.5	0.213	3.68	59.4	15.6	1.42	17.1	0.02	0.12	0.13	70	213
75	ISL	11.01	11.00	33.605	25.690	231.0	0.225	3.52	56.4	17.1	1.51	18.4	0.02	0.09	0.11	75	
84		10.54	10.53	33.658	25.814	219.3	0.245	3.31	52.5	19.4	1.63	20.2	0.02	0.05	0.08	84	212
100		10.01	10.00	33.735	25.965	205.2	0.279	3.11	48.8	22.1	1.75	22.2	0.01	0.02	0.06	100	211
119		9.76	9.75	33.828	26.080	194.7	0.317	2.74	42.8	25.3	1.90	24.1	0.01	0.01	0.06	120	210
125	ISL	9.67	9.66	33.855	26.116	191.4	0.329	2.65	41.3	26.2	1.94	24.7	0.01	0.01	0.06	126	
139		9.47	9.45	33.915	26.196	184.0	0.355	2.47	38.4	28.4	2.02	25.9	0.01	0.01	0.06	140	209
150	ISL	9.32	9.30	33.963	26.258	178.3	0.375	2.33	36.1	30.1	2.08	26.7	0.01	0.01	0.06	151	
169		9.12	9.10	34.038	26.349	170.0	0.408	2.11	32.5	32.9	2.18	27.9	0.01	0.00	0.05	170	208
199		8.98	8.96	34.115	26.432	162.7	0.458	1.79	27.5	36.2	2.30	29.2	0.01	0.01	0.05	200	207
200	ISL	8.97	8.95	34.118	26.436	162.4	0.460	1.78	27.4	36.3	2.30	29.2	0.01			201	
229		8.79	8.77	34.185	26.517	155.2	0.506	1.44	22.1	39.9	2.43	30.5	0.01			230	206
250	ISL	8.70	8.67	34.216	26.556	151.9	0.538	1.28	19.6	41.6	2.50	31.0	0.00			251	
269		8.56	8.53	34.227	26.587	149.3	0.567	1.18	18.0	43.4	2.55	31.6	0.00			271	205
300	ISL	7.89	7.86	34.198	26.665	142.0	0.612	1.13	17.0	49.2	2.64	33.5	0.00			302	
318		7.47	7.44	34.178	26.710	137.8	0.637	1.12	16.6	52.7	2.68	34.6	0.00			320	204
378		7.00	6.96	34.190	26.786	131.2	0.718	0.90	13.2	59.1	2.80	36.3	0.00			380	203
400	ISL	6.89	6.85	34.212	26.818	128.4	0.746	0.78	11.4	61.7	2.86	36.8	0.00			403	
438		6.72	6.68	34.257	26.877	123.3	0.794	0.56	8.2	66.3	2.97	37.7	0.00			441	202
500	ISL	6.31	6.26	34.305	26.970	115.1	0.868	0.35	5.1	74.3	3.10	39.1	0.00			503	
513		6.22	6.17	34.315	26.989	113.3	0.883	0.31	4.5	76.0	3.13	39.4	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 59.5 N	120 20.8 W	28/10/06	2325 UTC	720 m	300 13 kn	300 03 08	0	1014.8 mb	18.3 C	16.4 C		0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.44	17.44	33.463	24.231	368.0	0.000	5.83	106.5	1.1	0.24	0.0	0.00	0.75	0.38	0	
2	17.44	17.44	33.463	24.232	368.0	0.007	5.83	106.5	1.1	0.24	0.0	0.00	0.75	0.38	2	223
10 ISL	17.32	17.32	33.461	24.259	365.7	0.037	5.83	106.3	1.1	0.24	0.0	0.00	0.82	0.42	10	
11	17.32	17.32	33.461	24.259	365.7	0.040									11	222
11	17.31	17.31	33.461	24.261	365.5	0.040	5.83	106.3	1.1	0.24	0.0	0.00	0.83	0.42	11	221
20 ISL	16.79	16.79	33.460	24.383	354.2	0.073	5.79	104.5	1.3	0.27	0.2	0.01	0.94	0.35	20	
21	16.73	16.73	33.460	24.397	352.9	0.076	5.79	104.4	1.3	0.27	0.2	0.01	0.95 A	0.34 A	21	219
21	17.08	17.08	33.460	24.315	360.7	0.076									21	220
30 ISL	14.33	14.33	33.458	24.928	302.5	0.106	5.12	88.0	5.5	0.69	5.4	0.26	0.79	0.49	30	
31	14.05	14.05	33.463	24.991	296.5	0.109	5.03	85.9	6.0	0.74	6.1	0.29	0.76	0.50	31	217
31	14.08	14.08	33.461	24.983	297.3	0.109									31	218
41	12.88	12.87	33.513	25.266	270.5	0.138	4.38	73.0	9.6	1.06	11.1	0.39	0.47	0.19	41	216
50	11.55	11.54	33.508	25.516	246.9	0.161	4.02	65.2	12.2	1.28	15.0	0.06	0.21	0.15	50	215
60	11.35	11.34	33.553	25.588	240.3	0.185	3.77	60.9	13.8	1.40	16.7	0.03	0.08	0.12	60	214
70	10.75	10.74	33.621	25.748	225.2	0.208	3.42	54.5	16.9	1.58	19.2	0.03	0.16	0.12	70	213
75 ISL	10.63	10.62	33.638	25.782	222.1	0.220	3.34	53.1	17.5	1.61	19.7	0.03	0.13	0.11	75	
85	10.51	10.50	33.663	25.823	218.4	0.242	3.25	51.6	18.4	1.65	20.4	0.02	0.05	0.09	85	212
100	10.14	10.13	33.730	25.939	207.7	0.274	3.04	47.9	21.0	1.76	22.1	0.02	0.02	0.06	100	211
120	9.88	9.87	33.801	26.039	198.6	0.314	2.77	43.4	23.5	1.88	23.8	0.02	0.02	0.08	121	210
125 ISL	9.82	9.81	33.819	26.063	196.4	0.324	2.71	42.4	24.2	1.91	24.2	0.02	0.02	0.08	126	
139	9.63	9.61	33.874	26.137	189.6	0.351	2.55	39.7	26.3	1.98	25.2	0.01	0.01	0.06	140	209
150 ISL	9.45	9.43	33.924	26.206	183.3	0.372	2.48	38.5	27.8	2.02	25.9	0.01	0.01	0.05	151	
169	9.16	9.14	34.012	26.322	172.6	0.405	2.33	36.0	30.5	2.10	27.1	0.01	0.01	0.03	170	208
199	8.90	8.88	34.128	26.455	160.5	0.455	1.71	26.3	36.2	2.34	29.6	0.01	0.00	0.05	200	207
200 ISL	8.89	8.87	34.131	26.459	160.1	0.457	1.69	25.9	36.4	2.35	29.7	0.01			201	
229	8.66	8.64	34.200	26.549	152.1	0.502	1.32	20.2	40.8	2.50	31.0	0.01			230	206
250 ISL	8.50	8.47	34.219	26.589	148.6	0.534	1.20	18.3	42.9	2.55	31.7	0.01			251	
268	8.35	8.32	34.224	26.616	146.3	0.560	1.15	17.4	44.6	2.58	32.2	0.01			270	205
300 ISL	7.94	7.91	34.227	26.680	140.6	0.606	1.01	15.2	49.2	2.67	33.5	0.00			302	
318	7.70	7.67	34.227	26.716	137.4	0.631	0.93	13.9	51.8	2.72	34.2	0.00			320	204
378	7.18	7.14	34.247	26.806	129.5	0.711	0.72	10.6	58.3	2.85	35.9	0.00			380	203
400 ISL	7.01	6.97	34.248	26.830	127.4	0.740	0.66	9.7	60.8	2.89	36.5	0.00			403	
437	6.72	6.68	34.250	26.872	123.8	0.786	0.58	8.5	65.3	2.95	37.6	0.00			440	202
500 ISL	6.16	6.12	34.272	26.963	115.5	0.862	0.42	6.1	74.5	3.08	39.5	0.00			503	
514	6.04	5.99	34.277	26.982	113.8	0.878	0.38	5.5	76.5	3.11	39.9	0.00			518	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 39.4 N	121 1.9 W	29/10/06	0509 UTC	3793 m	300 14 kn			1016.0 mb	18.5 C	16.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.15	18.15	33.491	24.081	382.3	0.000	5.51	102.1	1.8	0.26	0.0	0.00	0.21	0.01	0	
2	18.15	18.15	33.491	24.081	382.4	0.008	5.51	102.1	1.8	0.26	0.0	0.00	0.21	0.01	2	221
10	18.14	18.14	33.487	24.081	382.7	0.038	5.50	101.9	1.8	0.26	0.0	0.00	0.21	0.06	10	220
20	17.87	17.87	33.470	24.134	378.0	0.076	5.56	102.5	1.8	0.27	0.0	0.01	0.24	0.18	20	219
30	16.92	16.92	33.426	24.327	359.8	0.113	5.76	104.2	2.6	0.31	0.0	0.01	0.62	0.11	30	218
40	15.09	15.08	33.336	24.672	327.2	0.148	5.70	99.4	3.9	0.45	0.4	0.11	0.81	0.26	40	216
40	15.08	15.07	33.336	24.674	327.0	0.148									40	217
50	14.28	14.27	33.338	24.847	310.8	0.179	5.72	98.1	4.8	0.52	0.7	0.08	0.91	0.18	50	215
60	13.53	13.52	33.364	25.022	294.4	0.210	5.14	86.8	6.8	0.74	4.4	0.17	0.59	0.16	60	214
69	12.59	12.58	33.431	25.260	271.8	0.235	4.73	78.4	9.7	0.97	7.9	0.10	0.35	0.27	69	213
75 ISL	12.24	12.23	33.455	25.346	263.8	0.251	4.52	74.3	10.9	1.07	9.6	0.06	0.27	0.25	75	
85	11.77	11.76	33.485	25.458	253.3	0.277	4.20	68.4	13.0	1.22	12.4	0.02	0.19	0.16	85	212
100	10.63	10.62	33.576	25.734	227.2	0.313	3.68	58.5	18.1	1.51	17.8	0.01	0.06	0.06	100	211
119	9.95	9.94	33.682	25.934	208.6	0.355	3.32	52.0	22.1	1.71	21.2	0.01	0.02	0.05	120	210
125 ISL	9.81	9.80	33.718	25.985	203.7	0.367	3.22	50.3	23.3	1.76	22.0	0.01	0.02	0.04	126	
139	9.55	9.53	33.805	26.097	193.4	0.395	2.97	46.2	26.0	1.86	23.7	0.01	0.01	0.03	140	209
150 ISL	9.38	9.36	33.879	26.182	185.5	0.416	2.73	42.3	28.4	1.96	25.2	0.01	0.01	0.03	151	
169	9.16	9.14	33.996	26.310	173.7	0.450	2.34	36.1	32.5	2.11	27.3	0.01	0.00	0.03	170	208
199	8.90	8.88	34.118	26.447	161.3	0.500	1.99	30.5	37.3	2.25	28.8	0.01	0.00	0.02	200	207
200 ISL	8.89	8.87	34.120	26.450	161.0	0.502	1.98	30.4	37.5	2.26	28.9	0.01			201	
229	8.59	8.57	34.170	26.536	153.2	0.547	1.65	25.2	42.0	2.40	30.6	0.01			230	206
250 ISL	8.41	8.38	34.192	26.582	149.3	0.579	1.48	22.5	44.7	2.48	31.6	0.01			251	
269	8.24	8.21	34.205	26.618	146.1	0.607	1.34	20.3	47.0	2.55	32.4	0.01			271	205
300 ISL	7.86	7.83	34.218	26.685	140.1	0.651	1.12	16.8	51.5	2.66	33.9	0.00			302	
318	7.63	7.60	34.224	26.723	136.6	0.676	1.00	14.9	54.2	2.72	34.8	0.00			320	204
379	7.09	7.05	34.250	26.821	128.0	0.757	0.67	9.9	62.8	2.90	37.3	0.00			381	203
400 ISL	6.88	6.84	34.257	26.855	124.9	0.783	0.58	8.5	66.1	2.95	38.1	0.00			403	
434	6.54	6.50	34.267	26.909	120.1	0.825	0.47	6.8	71.2	3.03	39.4	0.00			437	202
500 ISL	6.07	6.03	34.277	26.978	114.0	0.902	0.36	5.2	79.3	3.12	41.2	0.00			503	
513	5.98	5.93	34.279	26.991	112.8	0.917	0.34	4.9	80.9	3.14	41.5	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 19.5 N	121 42.7 W	29/10/06	1111	UTC	4022 m	290	14 kn			1015.5 mb	17.7 C	16.4 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.56	17.56	33.366	24.128	377.8	0.000	5.56	101.8	1.6	0.29	0.0	0.00	0.19	0.02	0	
2		17.56	17.56	33.366	24.129	377.9	0.008	5.56	101.8	1.6	0.29	0.0	0.00	0.19	0.02	2	222
10	ISL	17.58	17.58	33.371	24.128	378.2	0.038	5.56	101.8	1.5	0.29	0.0	0.00	0.20	0.04	10	
11		17.58	17.58	33.371	24.128	378.2	0.042									11	221
11		17.58	17.58	33.372	24.129	378.1	0.042	5.56	101.8	1.5	0.29	0.0	0.00	0.20	0.04	11	220
20		17.68	17.68	33.456	24.169	374.6	0.075	5.55	101.9	1.3	0.27	0.0	0.00	0.21	0.05	20	219
30		17.64	17.63	33.456	24.179	374.0	0.113	5.54	101.6	1.3	0.27	0.0	0.00	0.25	0.05	30	218
40		17.38	17.37	33.447	24.235	369.0	0.150	5.58	101.8	1.1	0.29	0.0	0.00	0.37	0.14	40	217
50		15.75	15.74	33.316	24.511	342.9	0.186	5.80	102.4	1.9	0.38	0.1	0.02	0.88	0.41	50	215
50		15.85	15.84	33.329	24.499	344.1	0.186									50	216
60		13.42	13.41	33.258	24.962	300.0	0.218	5.31	89.4	5.0	0.71	4.5	0.15	0.61	0.49	60	214
70		12.06	12.05	33.407	25.343	263.9	0.246	4.44	72.7	10.8	1.17	12.3	0.02	0.24	0.24	70	213
75	ISL	11.54	11.53	33.476	25.493	249.7	0.259	4.12	66.8	13.3	1.33	14.9	0.02	0.14	0.16	75	
85		10.77	10.76	33.586	25.718	228.5	0.283	3.68	58.7	17.0	1.53	18.3	0.01	0.03	0.07	85	212
100		10.13	10.12	33.645	25.874	213.8	0.316	3.51	55.2	19.1	1.63	20.1	0.01	0.02	0.05	100	211
120		9.46	9.45	33.837	26.136	189.3	0.356	2.74	42.5	25.9	1.95	25.1	0.01	0.00	0.04	121	210
125	ISL	9.37	9.36	33.867	26.174	185.7	0.366	2.65	41.0	26.9	1.99	25.7	0.01	0.00	0.04	126	
140		9.18	9.16	33.933	26.257	178.2	0.393	2.46	38.0	29.4	2.07	26.8	0.01	0.00	0.04	141	209
150	ISL	9.04	9.02	33.969	26.307	173.5	0.411	2.32	35.7	31.0	2.13	27.7	0.01	0.00	0.04	151	
169		8.80	8.78	34.022	26.387	166.3	0.443	2.09	32.0	33.9	2.23	29.3	0.00	0.00	0.04	170	208
199		8.48	8.46	34.079	26.482	157.8	0.491	1.89	28.7	37.8	2.32	30.7	0.00	0.00	0.03	200	207
200	ISL	8.47	8.45	34.081	26.485	157.5	0.493	1.88	28.6	37.9	2.32	30.7	0.00			201	
229		8.29	8.27	34.122	26.545	152.3	0.538	1.64	24.8	41.3	2.43	31.9	0.01			230	206
250	ISL	8.05	8.02	34.135	26.591	148.2	0.569	1.49	22.4	44.3	2.51	32.9	0.01			251	
268		7.83	7.80	34.142	26.629	144.8	0.596	1.37	20.5	46.9	2.58	33.8	0.00			270	205
300	ISL	7.58	7.55	34.161	26.681	140.3	0.641	1.19	17.7	50.4	2.67	34.8	0.00			302	
318		7.45	7.42	34.171	26.707	138.0	0.666	1.10	16.3	52.4	2.71	35.3	0.00			320	204
377		6.88	6.84	34.205	26.814	128.5	0.745	0.78	11.4	60.8	2.90	37.3	0.00			379	203
400	ISL	6.59	6.55	34.198	26.848	125.4	0.774	0.72	10.5	64.6	2.95	38.3	0.00			403	
437		6.18	6.14	34.192	26.896	120.9	0.820	0.63	9.1	70.5	3.02	39.8	0.00			440	202
500	ISL	5.96	5.92	34.266	26.983	113.4	0.894	0.38	5.5	77.4	3.14	40.7	0.00			503	
513		5.91	5.87	34.282	27.002	111.7	0.908	0.33	4.7	78.8	3.17	40.9	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 59.4 N	122 23.6 W	29/10/06	1801	UTC	4102 m	280	07 kn	320 03 04	0	1017.0 mb	19.3 C	16.4 C	30m	0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.25	17.25	33.094	23.994	390.6	0.000	5.62	102.1	1.8	0.32	0.0	0.00	0.14	0.03	0	
2	A	17.25	17.25	33.094	23.994	390.7	0.008	5.62	102.1	1.8	0.32	0.0	0.00	0.14	0.03	2	224
10	ISL	17.17	17.17	33.091	24.011	389.3	0.039	5.62	101.9	1.7	0.31	0.0	0.00	0.16	0.01	10	
11		17.16	17.16	33.091	24.013	389.1	0.043	5.62	101.9	1.7	0.31	0.0	0.00	0.16	0.01	11	223
20	A	17.15	17.15	33.110	24.031	387.8	0.078	5.63	102.1	1.6	0.31	0.0	0.00	0.17	0.03	20	222
29		17.81	17.81	33.450	24.134	378.3	0.112	5.54	102.0	1.2	0.27	0.0	0.00	0.21	0.06	29	221
30	ISL	17.78	17.77	33.445	24.137	378.0	0.116	5.55	102.1	1.2	0.27	0.0	0.00	0.21	0.06	30	
38		17.50	17.49	33.404	24.173	374.8	0.146	5.59	102.2	1.1	0.27	0.0	0.00	0.31	0.08	38	220
46	A	16.08	16.07	33.308	24.431	350.4	0.175	5.82	103.5	1.1	0.31	0.0	0.00	0.64	0.34	46	219
50	ISL	15.65	15.64	33.287	24.511	342.9	0.189	5.83	102.7	1.3	0.32	0.1	0.01	0.82	0.45	50	
57		14.94	14.93	33.275	24.658	329.1	0.213	5.85	101.6	1.7	0.40	0.2	0.05	0.95	0.56	57	218
66	A	13.57	13.56	33.299	24.964	300.1	0.241	5.30	89.5	4.5	0.69	4.5	0.09	0.51	0.47	66	217
74		12.91	12.90	33.359	25.142	283.2	0.264	4.98	83.0	6.7	0.85	7.3	0.10	0.24	0.26	74	216
75	ISL	12.75	12.74	33.348	25.165	281.1	0.267	4.96	82.4	7.0	0.88	7.8	0.09	0.22	0.24	75	
83	A	11.59	11.58	33.289	25.339	264.5	0.289	4.74	76.8	9.6	1.10	11.8	0.02	0.12	0.16	83	215
94		11.28	11.27	33.505	25.564	243.4	0.317	4.05	65.3	13.5	1.33	15.6	0.02	0.07	0.11	94	214
100	ISL	11.03	11.02	33.548	25.642	236.1	0.331	3.88	62.2	15.1	1.42	17.0	0.01	0.06	0.10	100	
105		10.82	10.81	33.566	25.694	231.2	0.343	3.78	60.3	16.2	1.48	18.0	0.01	0.05	0.09	105	213
115	A	10.46	10.45	33.616	25.796	221.7	0.366	3.54	56.1	18.2	1.59	19.6	0.01	0.03	0.06	116	212
125	ISL	10.00	9.99	33.681	25.925	209.6	0.387	3.33	52.2	20.7	1.70	21.6	0.01	0.02	0.05	126	
130		9.79	9.78	33.716	25.987	203.7	0.397	3.22	50.3	22.0	1.76	22.6	0.01	0.02	0.05	131	211
145		9.53	9.51	33.809	26.103	192.9	0.427	2.84	44.1	25.4	1.91	24.7	0.00	0.01	0.05	146	210
150	ISL	9.43	9.41	33.839	26.143	189.2	0.437	2.73	42.3	26.4	1.95	25.4	0.00	0.01	0.05	151	
165		9.15	9.13	33.919	26.251	179.2	0.464	2.46	37.9	29.3	2.06	27.2	0.00	0.01	0.05	166	209
182		8.92	8.90	33.984	26.339	171.2	0.494	2.28	35.0	32.1	2.14	28.4	0.00	0.01	0.04	183	208
199		8.79	8.77	34.033	26.398	165.9	0.523	2.20	33.7	34.0	2.18	29.0	0.00	0.00	0.04	200	207
200	ISL	8.78	8.76	34.036	26.402	165.5	0.524	2.19	33.5	34.2	2.19	29.1	0.00			201	
229		8.49	8.47	34.106	26.502	156.5	0.571	1.72	26.2	39.2	2.37	31.2	0.00			230	206
250	ISL	8.21	8.18	34.129	26.563	151.0	0.603	1.53	23.1	42.5	2.47	32.3	0.00			251	
269		7.96	7.93	34.141	26.609	146.7	0.632	1.41	21.2	45.3	2.54	33.2	0.00			271	205
300	ISL	7.65	7.62	34.166	26.675	140.9	0.676	1.19	17.8	49.7	2.65	34.6	0.00			302	
318		7.48	7.45	34.175	26.706	138.1	0.701	1.08	16.1	52.3	2.71	35.3	0.00			320	204
377		6.74	6.71	34.164	26.800	129.6	0.780	0.97	14.2	61.2	2.82	37.4	0.00			379	203
400	ISL	6.54	6.50	34.183	26.842	125.8	0.810	0.83	12.1	64.8	2.89	38.2	0.00			402	
437		6.26	6.22	34.221	26.909	119.8	0.855	0.58	8.4	70.6	3.01	39.5	0.00			440	202
500	ISL	5.81	5.77	34.253	26.992	112.4	0.928	0.41	5.9	79.2	3.12	41.1	0.00			503	
514		5.71	5.67	34.261	27.010	110.7	0.944	0.37	5.3	81.1	3.15	41.5	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.4 N	123 4.0 W	29/10/06	2236 UTC	4116 m	290 13 kn	290 03 07	1	1015.2 mb	18.0 C	15.0 C		6/8	CC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.62	17.62	33.318	24.077	382.7	0.000	5.59	102.4	1.4	0.29	0.1	0.00	0.20	0.00	0	
2		17.62	17.62	33.318	24.077	382.7	0.008	5.59	102.4	1.4	0.29	0.1	0.00	0.20	0.00	2	224
10		17.61	17.61	33.319	24.081	382.7	0.038	5.58	102.2	1.3	0.29	0.1	0.00	0.17	0.03	10	223
15		17.57	17.57	33.350	24.114	379.7	0.057	5.58	102.2	1.3	0.28	0.0	0.00	0.19	0.04	15	222
20	ISL	17.44	17.44	33.353	24.148	376.6	0.076	5.61	102.5	1.3	0.28	0.0	0.00	0.22	0.07	20	
25		17.32	17.32	33.357	24.180	373.8	0.095	5.64	102.8	1.2	0.29	0.0	0.00	0.29	0.09	25	221
30		15.79	15.79	33.193	24.407	352.2	0.113	5.93	104.7	1.7	0.33	0.0	0.00	0.44	0.09	30	220
45		13.24	13.23	32.956	24.764	318.4	0.163	5.98	100.1	2.7	0.48	1.1	0.11	0.47	0.24	45	219
50		13.02	13.01	32.968	24.817	313.5	0.179	5.90	98.3	3.1	0.52	1.6	0.16	0.53	0.21	50	217
50		13.03	13.02	32.963	24.811	314.1	0.179									50	218
55		12.87	12.86	33.042	24.904	305.4	0.195	5.69	94.6	3.9	0.59	2.9	0.20	0.45	0.28	55	216
65		12.82	12.81	33.315	25.125	284.6	0.224	5.13	85.3	6.6	0.81	7.2	0.09	0.31	0.29	65	215
75		12.18	12.17	33.421	25.331	265.2	0.252	4.73	77.7	9.1	1.01	10.7	0.03	0.20	0.26	75	214
85		11.58	11.57	33.444	25.461	253.0	0.278	4.49	72.8	11.1	1.14	13.0	0.02	0.12	0.16	85	213
95		11.29	11.28	33.483	25.545	245.2	0.303	4.31	69.5	12.5	1.24	14.5	0.02	0.10	0.16	95	212
100	ISL	11.15	11.14	33.495	25.579	242.0	0.315	4.24	68.1	13.1	1.27	15.1	0.02	0.09	0.14	100	
110		10.80	10.79	33.524	25.664	234.1	0.339	4.07	64.9	14.6	1.36	16.5	0.01	0.06	0.10	110	211
125		9.91	9.90	33.623	25.895	212.4	0.372	3.59	56.2	19.4	1.63	20.5	0.01	0.02	0.04	126	210
145		9.42	9.40	33.741	26.068	196.2	0.413	3.30	51.1	23.2	1.77	23.1	0.01	0.00	0.04	146	209
150	ISL	9.29	9.27	33.779	26.119	191.5	0.423	3.23	49.9	24.4	1.81	23.7	0.01	0.00	0.04	151	
169		8.86	8.84	33.911	26.291	175.4	0.457	2.99	45.8	28.9	1.93	25.8	0.00	0.00	0.03	170	208
199		8.45	8.43	33.999	26.423	163.3	0.508	2.69	40.8	34.0	2.06	27.9	0.01	0.00	0.02	200	207
200	ISL	8.43	8.41	34.000	26.427	162.9	0.510	2.69	40.8	34.1	2.06	27.9	0.01			201	
229		8.02	8.00	34.023	26.507	155.7	0.556	2.60	39.1	38.3	2.13	29.4	0.00			230	206
250	ISL	7.80	7.78	34.046	26.558	151.2	0.588	2.30	34.4	42.0	2.25	30.9	0.00			251	
268		7.62	7.59	34.063	26.598	147.6	0.615	2.02	30.1	45.4	2.37	32.3	0.00			270	205
300	ISL	7.12	7.09	34.066	26.671	140.9	0.661	1.77	26.1	51.4	2.51	34.4	0.01			302	
318		6.85	6.82	34.069	26.710	137.3	0.686	1.64	24.0	54.8	2.59	35.4	0.01			320	204
378		6.45	6.42	34.157	26.833	126.3	0.765	0.88	12.8	65.4	2.89	38.3	0.01			380	203
400	ISL	6.30	6.26	34.177	26.869	123.1	0.793	0.74	10.7	68.7	2.96	39.0	0.01			402	
437		6.06	6.02	34.204	26.921	118.5	0.838	0.59	8.5	73.7	3.04	39.8	0.00			440	202
500	ISL	5.77	5.73	34.249	26.993	112.2	0.910	0.40	5.7	80.4	3.13	41.1	0.00			503	
514		5.70	5.66	34.259	27.010	110.7	0.926	0.36	5.1	81.9	3.15	41.4	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 19.4 N	123 44.6 W	30/10/06	0458 UTC	4028 m	330 11 kn			1016.9 mb	17.2 C	14.0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.53	17.53	33.211	24.017	388.4	0.000	5.57	101.8	1.6	0.29	0.0	0.00	0.19	0.00	0	
2		17.53	17.53	33.211	24.017	388.5	0.008	5.57	101.8	1.6	0.29	0.0	0.00	0.19	0.00	2	222
10		17.54	17.54	33.212	24.016	388.9	0.039	5.56	101.7							10	221
16		17.54	17.54	33.212	24.016	389.1	0.062	5.57	101.8	1.6	0.29	0.0	0.00	0.17	0.03	16	220
20	ISL	17.53	17.53	33.209	24.016	389.2	0.078	5.57	101.8	1.6	0.29	0.0	0.00	0.17	0.03	20	
30		17.49	17.48	33.201	24.020	389.2	0.117	5.57	101.7	1.6	0.29	0.1	0.00	0.18	0.02	30	219
45		16.71	16.70	33.227	24.224	370.2	0.174	5.79	104.2	1.6	0.30	0.0	0.00	0.31	0.12	45	218
50	ISL	15.60	15.59	33.152	24.418	351.7	0.192	5.91	104.0	1.7	0.35	0.1	0.01	0.40	0.16	50	
55		14.64	14.63	33.117	24.600	334.4	0.209									55	217
55		14.47	14.46	33.101	24.624	332.2	0.209	5.98	102.8	2.0	0.40	0.2	0.04	0.48	0.19	55	216
65		13.50	13.49	33.191	24.894	306.6	0.241	5.74	96.8	3.4	0.48	1.3	0.15	0.45	0.19	65	215
74		13.19	13.18	33.248	25.001	296.7	0.268	5.47	91.7	4.0	0.56	3.0	0.09	0.37	0.19	74	214
75	ISL	13.18	13.17	33.256	25.009	295.9	0.271	5.46	91.5	4.0	0.56	3.1	0.08	0.36	0.19	75	
85		12.82	12.81	33.334	25.141	283.7	0.300	5.23	87.0	5.1	0.65	5.2	0.02	0.23	0.18	85	213
95		11.63	11.62	33.402	25.420	257.2	0.327	4.62	75.0	9.5	1.05	12.1	0.02	0.17	0.15	95	212
100	ISL	11.28	11.27	33.437	25.511	248.6	0.340	4.45	71.7	10.9	1.15	13.9	0.02	0.13	0.13	100	
108		10.89	10.88	33.490	25.622	238.1	0.359	4.25	67.9	12.8	1.25	15.8	0.01	0.06	0.10	108	211
124		10.18	10.17	33.590	25.823	219.2	0.396	3.83	60.3	17.1	1.49	19.8	0.02	0.03	0.06	125	210
125	ISL	10.15	10.14	33.599	25.836	218.0	0.398	3.80	59.8	17.4	1.51	20.1	0.02	0.03	0.06	126	
143		9.63	9.61	33.761	26.049	198.0	0.435	3.24	50.4	22.6	1.75	24.1	0.01	0.01	0.04	144	209
150	ISL	9.48	9.46	33.807	26.110	192.4	0.449	3.13	48.6	24.1	1.80	25.0	0.01	0.01	0.04	151	
168		9.16	9.14	33.902	26.236	180.7	0.482	2.90	44.7	27.4	1.91	26.9	0.01	0.01	0.03	169	208
198		8.70	8.68	34.031	26.410	164.6	0.534	2.34	35.7	34.0	2.14	30.4	0.00	0.00	0.03	199	207
200	ISL	8.68	8.66	34.035	26.416	164.1	0.538	2.32	35.4	34.3	2.15	30.5	0.00			201	
228		8.37	8.35	34.070	26.492	157.3	0.583	2.11	32.0	37.9	2.24	32.2	0.01			229	206
250	ISL	8.08	8.05	34.095	26.555	151.6	0.617	1.85	27.9	41.6	2.36	33.8	0.01			251	
267		7.84	7.81	34.109	26.602	147.3	0.642	1.66	24.9	44.6	2.45	35.0	0.00			268	205
300	ISL	7.41	7.38	34.110	26.665	141.7	0.690	1.49	22.1	49.9	2.56	36.7	0.00			302	
318		7.19	7.16	34.108	26.694	139.0	0.715	1.42	21.0	52.8	2.61	37.5	0.00			320	204
377		6.54	6.51	34.150	26.816	128.0	0.794	0.95	13.8	63.5	2.84	40.6	0.00			379	203
400	ISL	6.36	6.32	34.161	26.848	125.1	0.823	0.83	12.0	66.7	2.90	41.5	0.00			402	
437		6.11	6.07	34.178	26.894	121.0	0.868	0.68	9.8	71.5	2.98	42.6	0.00			440	202
500	ISL	5.68	5.64	34.218	26.980	113.4	0.942	0.46	6.6	80.9	3.10	44.3	0.00			503	
513		5.59	5.55	34.227	26.998	111.7	0.957	0.41	5.8	82.8	3.12	44.7	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 40.4 N	118 4.9 W	27/10/06	2036	UTC	22 m	240	15 kn	280 01 07	0	1018.7 mb	20.1 C	16.9 C		0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.75	17.75	33.391	24.102	380.3	0.000	6.23	114.5	3.2	0.27	0.0	0.00	1.97	0.26	0	
1		17.75	17.75	33.391	24.102	380.4	0.004	6.23	114.5	3.2	0.27	0.0	0.00	1.97	0.26	1	204
5		17.70	17.70	33.388	24.112	379.6	0.019	6.24	114.6	3.1	0.27	0.0	0.00	2.04	0.32	5	203
10		17.39	17.39	33.386	24.185	372.8	0.038	6.18	112.8	3.0	0.27	0.0	0.00	2.04	0.35	10	202
15		16.88	16.88	33.374	24.296	362.3	0.056	5.98	108.0	3.4	0.31	0.0	0.00	1.79	0.42	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.7 N	117 44.8 W	27/10/06	1536	UTC	23 m	170	01 kn	320 01 04	4	1020.7 mb	19.3 C	17.8 C		7/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.14	18.14	33.430	24.037	386.5	0.000	5.80	107.4	2.4	0.25	0.0	0.01	0.85	0.24	0	
1		18.14	18.14	33.430	24.037	386.6	0.004	5.80	107.4	2.4	0.25	0.0	0.01	0.85	0.24	1	204
5		18.12	18.12	33.434	24.045	385.9	0.019	5.77	106.8	2.4	0.25	0.0	0.01	0.98	0.19	5	203
10	ISL	18.11	18.11	33.433	24.047	385.9	0.039	5.77	106.8	2.3	0.25	0.0	0.01	0.87	0.21	10	
11		18.11	18.11	33.434	24.048	385.9	0.042	5.77	106.8	2.3	0.25	0.0	0.01	0.84	0.21	11	202
15		18.11	18.11	33.434	24.048	386.0	0.058	5.75	106.4	2.3	0.25	0.0	0.01	0.79	0.23	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.1 N	117 46.2 W	27/10/06	1828	UTC	72 m	340	06 kn	310 01 04	4	1019.8 mb	20.9 C	17.3 C	11m	7/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.01	18.01	33.421	24.062	384.2	0.000	5.83	107.7	2.7	0.30	0.0	0.03	1.22	0.34	0	
1	A	18.01	18.01	33.421	24.062	384.2	0.004	5.83	107.7	2.7	0.30	0.0	0.03	1.22	0.34	1	210
7	A	17.60	17.60	33.420	24.161	375.0	0.027	5.76	105.6	2.7	0.30	0.0	0.03	0.95	0.34	7	208
7		17.72	17.72	33.417	24.129	378.0	0.027									7	209
10	ISL	17.48	17.48	33.426	24.194	371.9	0.038	5.77	105.5	2.6	0.31	0.0	0.02	0.88	0.31	10	
17	A	17.07	17.07	33.423	24.289	363.0	0.064	5.79	105.0	2.4	0.32	0.0	0.01	0.71	0.23	17	207
20	ISL	16.73	16.73	33.404	24.354	356.9	0.074	5.74	103.4	2.9	0.36	0.1	0.03	0.85	0.21	20	
24	A	16.16	16.16	33.375	24.463	346.6	0.088	5.66	100.8	3.8	0.42	0.3	0.08	0.99	0.19	24	206
30	ISL	15.02	15.02	33.347	24.695	324.7	0.109	5.55	96.6	5.2	0.54	1.3	0.18	0.68	0.33	30	
31	A	14.84	14.84	33.344	24.732	321.2	0.112	5.54	96.1	5.4	0.56	1.5	0.20	0.62	0.36	31	205
42	A	14.13	14.12	33.336	24.876	307.8	0.146	5.56	95.0	5.6	0.57	1.7	0.25	0.60	0.37	42	204
50	ISL	13.54	13.53	33.364	25.019	294.3	0.171	5.18	87.5	7.1	0.72	4.2	0.31	0.47	0.35	50	
51		13.47	13.46	33.368	25.037	292.7	0.173	5.12	86.4	7.3	0.74	4.6	0.32	0.45	0.35	51	203
58		13.06	13.05	33.385	25.132	283.8	0.194	4.83	80.8	8.3	0.86	6.5	0.28	0.38	0.37	58	202
65		13.07	13.06	33.400	25.142	283.0	0.213	4.70	78.6	8.9	0.92	7.6	0.26	0.32	0.35	65	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 25.2 N	117 54.3 W	27/10/06	1217	UTC	617 m	330	06 kn			1019.5 mb	18.8 C	16.6 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.52	18.52	33.485	23.985	391.5	0.000	5.48	102.3					0.31	0.07	0	
1		18.52	18.52	33.485	23.985	391.5	0.004	5.48	102.3					0.31	0.07	1	222
10		18.52	18.52	33.482	23.983	392.0	0.039	5.49	102.4					0.30	0.07	10	221
20		17.68	17.68	33.442	24.159	375.6	0.078	5.68	104.3	1.1	0.25	0.0	0.00	0.60	0.03	20	220
30		16.73	16.73	33.419	24.366	356.1	0.114	5.79	104.3	1.7	0.29	0.0	0.00	0.50	0.17	30	219
40		14.94	14.93	33.336	24.704	324.1	0.148	5.81	101.0	3.0	0.41	0.3	0.07	0.79	0.44	40	218
45		14.30	14.29	33.332	24.838	311.5	0.164	5.52	94.7	3.9	0.53	1.6	0.21	0.62	0.48	45	216
45		14.30	14.29	33.330	24.836	311.7	0.164									45	217
50		13.79	13.78	33.336	24.947	301.2	0.179	5.32	90.3	4.7	0.64	4.2	0.26	0.40	0.31	50	215
60		13.16	13.15	33.375	25.105	286.4	0.209	5.77	96.7	6.6	0.82	7.3	0.11	0.25	0.28	60	214
69		12.37	12.36	33.421	25.295	268.5	0.234	4.56	75.2	9.1	1.04	10.8	0.04	0.16	0.22	69	213
75	ISL	12.11	12.10	33.438	25.358	262.6	0.250	4.44	72.8	10.0	1.10	12.0	0.03	0.13	0.19	75	
84		11.82	11.81	33.460	25.429	256.0	0.273	4.27	69.6	11.2	1.17	13.2	0.02	0.10	0.14	84	212
99		10.98	10.97	33.531	25.638	236.4	0.310	3.86	61.8	14.7	1.39	16.7	0.01	0.05	0.08	99	211
100	ISL	10.94	10.93	33.535	25.648	235.5	0.312	3.84	61.4	14.9	1.40	16.9	0.01	0.05	0.08	100	
119		10.28	10.27	33.613	25.824	219.0	0.355	3.55	56.0	17.8	1.57	19.6	0.01	0.04	0.05	120	210
125	ISL	10.05	10.04	33.639	25.884	213.5	0.368	3.52	55.3	18.7	1.61	20.4	0.01	0.03	0.04	126	
139		9.59	9.57	33.707	26.014	201.3	0.397	3.46	53.8	21.0	1.69	21.9	0.01	0.01	0.03	140	209
150	ISL	9.53	9.51	33.790	26.088	194.4	0.419	3.30	51.3	22.8	1.75	22.8	0.01	0.01	0.03	151	
169		9.44	9.42	33.903	26.192	185.0	0.455	2.88	44.7	26.2	1.89	24.3	0.01	0.00	0.03	170	208
199		9.60	9.58	34.142	26.353	170.5	0.509	1.89	29.5	32.3	2.22	27.1	0.00	0.00	0.03	200	207
200	ISL	9.60	9.58	34.144	26.355	170.3	0.510	1.89	29.5	32.4	2.22	27.1	0.00			201	
228		9.51	9.48	34.175	26.394	167.2	0.558	1.77	27.6	34.0	2.29	27.8	0.01			229	206
250	ISL	9.25	9.22	34.188	26.447	162.5	0.594	1.70	26.3	35.8	2.33	28.5	0.01			251	
268		9.01	8.98	34.197	26.493	158.4	0.623	1.63	25.1	37.5	2.36	29.1	0.00			270	205
300	ISL	8.73	8.70	34.227	26.561	152.4	0.672	1.39	21.3	41.0	2.47	30.3	0.00			302	
317		8.59	8.56	34.243	26.595	149.4	0.698	1.24	18.9	43.1	2.54	31.0	0.00			319	204
376		8.00	7.96	34.282	26.716	138.7	0.783	0.81	12.2	50.9	2.76	33.3	0.00			378	203
400	ISL	7.77	7.73	34.291	26.757	135.0	0.816	0.69	10.3	53.8	2.83	34.2	0.00			403	
436		7.45	7.41	34.301 D	26.811	130.2	0.864	0.55	8.2	57.8	2.92	35.3	0.00			439	202
500	ISL	7.10	7.05	34.311	26.869	125.5	0.946	0.42	6.2	63.8	3.01	36.5	0.00			503	
513		7.03	6.98	34.313	26.880	124.6	0.962	0.39	5.7	65.0	3.03	36.8	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 15.1 N	118 15.1 W	27/10/06	0751 UTC	341 m	020 11 kn			1020.0 mb	20.1 C	16.1 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.61	18.61	33.461	23.944	395.4	0.000	6.01	112.3	1.7	0.16	0.2	0.00	1.12	0.08	0	
2		18.61	18.61	33.461	23.944	395.4	0.008	6.01	112.3	1.7	0.16	0.2	0.00	1.12	0.08	2	219
10	ISL	18.35	18.35	33.453	24.003	390.1	0.039	6.01	111.8	1.8	0.17	0.3	0.00	1.93	0.41	10	
11		18.32	18.32	33.452	24.010	389.5	0.043									11	218
11		18.32	18.32	33.452	24.010	389.5	0.043	6.01	111.7	1.8	0.17	0.3	0.00	2.01	0.47	11	217
20	ISL	14.69	14.69	33.349	24.767	317.5	0.075	5.94	102.7	4.1	0.38	0.3	0.00	0.43	0.90	20	
21		14.26	14.26	33.348	24.858	308.9	0.078	5.93	101.7	4.4	0.41	0.3	0.00	0.25	0.93	21	216
30	ISL	12.94	12.94	33.384	25.154	280.9	0.105	4.99	83.3	6.9	0.76	5.1	0.17	1.12	0.62	30	
31		12.88	12.88	33.389	25.170	279.4	0.108	4.88	81.3	7.2	0.80	5.8	0.18	1.24	0.56	31	214
31		12.89	12.89	33.389	25.168	279.6	0.108									31	215
40		12.27	12.26	33.424	25.316	265.8	0.132	4.46	73.4	9.0	1.02	10.6	0.07	0.55	0.25	40	213
50		11.82	11.81	33.452	25.422	255.8	0.158	4.23	69.0	10.6	1.17	12.8	0.02	0.23	0.20	50	212
60		11.38	11.37	33.476	25.522	246.5	0.183	4.06	65.6	12.2	1.27	14.5	0.02	0.22	0.23	60	211
70		10.77	10.76	33.521	25.667	233.0	0.207	3.88	61.9	14.6	1.40	16.7	0.02	0.08	0.10	70	210
75	ISL	10.64	10.63	33.561	25.721	227.9	0.219	3.69	58.7	16.0	1.48	17.8	0.02	0.07	0.09	75	
85		10.48	10.47	33.641	25.811	219.6	0.241	3.34	52.9	18.6	1.63	19.6	0.02	0.05	0.07	85	209
100		9.98	9.97	33.702	25.944	207.2	0.273	3.24	50.8	21.1	1.73	21.3	0.02	0.03	0.05	100	208
120		9.76	9.75	33.844	26.092	193.5	0.313	2.75	43.0	25.5	1.93	23.6	0.02	0.01	0.03	121	207
125	ISL	9.78	9.77	33.878	26.115	191.4	0.323	2.61	40.8	26.4	1.98	24.0	0.02	0.01	0.03	126	
140		9.85	9.83	33.971	26.177	186.0	0.351	2.24	35.1	28.6	2.10	25.0	0.02	0.01	0.03	141	206
150	ISL	9.76	9.74	34.022	26.232	180.9	0.369	2.09	32.7	30.0	2.16	25.7	0.02	0.01	0.03	151	
168		9.49	9.47	34.093	26.332	171.7	0.401	1.93	30.0	32.3	2.24	26.8	0.03	0.01	0.03	169	205
198		9.03	9.01	34.147	26.449	161.1	0.451	1.74	26.8	36.5	2.34	28.5	0.06	0.01	0.03	199	204
200	ISL	9.02	9.00	34.149	26.452	160.8	0.454	1.73	26.6	36.6	2.34	28.6	0.06			201	
228		8.95	8.93	34.168	26.479	158.9	0.499	1.61	24.7	38.1	2.38	29.2	0.04			229	203
250	ISL	8.85	8.82	34.183	26.507	156.6	0.534	1.49	22.9	39.4	2.43	29.7	0.04			251	
270		8.75	8.72	34.198	26.534	154.3	0.565	1.38	21.1	40.8	2.48	30.2	0.05			272	202
300	ISL	8.59	8.56	34.228	26.583	150.2	0.611	1.22	18.6	43.2	2.55	30.9	0.03			302	
320		8.49	8.46	34.249	26.615	147.5	0.640	1.12	17.0	44.8	2.60	31.3	0.02			322	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.1 N	118 23.2 W	27/10/06	0423 UTC	1179 m	320 10 kn			1019.7 mb	19.5 C	16.9 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.90	17.90	33.439	24.102	380.3	0.000	5.58	102.9	1.4	0.25	0.1	0.00	0.19	0.04	0	
1		17.90	17.90	33.439	24.102	380.3	0.004	5.58	102.9	1.4	0.25	0.1	0.00	0.19	0.04	1	221
9		17.63	17.63	33.435	24.165	374.7	0.034	5.61	102.9	1.3	0.25	0.1	0.00	0.19	0.06	9	220
10	ISL	17.55	17.55	33.432	24.182	373.0	0.038	5.62	102.9	1.3	0.25	0.1	0.00	0.19	0.06	10	
19		16.70	16.70	33.404	24.361	356.2	0.071	5.70	102.6	1.5	0.27	0.2	0.00	0.34	0.10	19	219
20	ISL	16.62	16.62	33.401	24.378	354.7	0.074	5.69	102.3	1.5	0.27	0.3	0.00	0.40	0.10	20	
29		15.77	15.77	33.372	24.549	338.6	0.105	5.65	99.9	2.4	0.37	0.9	0.07	0.90	0.12	29	217
29		15.81	15.81	33.375	24.542	339.3	0.105									29	218
30	ISL	15.61	15.61	33.369	24.583	335.5	0.109	5.61	98.8	2.7	0.40	1.3	0.09	0.89	0.12	30	
39		14.12	14.11	33.364	24.900	305.4	0.138	5.20	88.9	5.4	0.64	4.8	0.24	0.68	0.19	39	216
49		13.17	13.16	33.380	25.106	286.0	0.167	5.03	84.3	6.8	0.73	5.2	0.20	0.65	0.33	49	215
50	ISL	13.07	13.06	33.388	25.132	283.5	0.170	4.96	83.0	7.2	0.77	5.9	0.19	0.62	0.31	50	
59		12.21	12.20	33.455	25.351	262.8	0.195	4.36	71.7	10.6	1.09	12.3	0.07	0.28	0.09	59	214
69		11.61	11.60	33.465	25.472	251.6	0.220	4.24	68.8	12.0	1.19	14.1	0.02	0.13	0.08	69	213
75	ISL	11.33	11.32	33.485	25.539	245.3	0.235	4.11	66.3	13.0	1.26	15.2	0.02	0.09	0.09	75	
84		10.97	10.96	33.533	25.641	235.8	0.257	3.84	61.5	14.8	1.37	16.9	0.01	0.07	0.10	84	212
99		10.48	10.47	33.662	25.828	218.3	0.291	3.26	51.7	19.0	1.61	20.1	0.01	0.05	0.07	99	211
100	ISL	10.45	10.44	33.667	25.837	217.5	0.293	3.24	51.3	19.2	1.62	20.2	0.01	0.05	0.07	100	
119		9.94	9.93	33.768	26.003	202.0	0.333	3.01	47.2	22.6	1.77	22.4	0.00	0.02	0.04	120	210
125	ISL	9.89	9.88	33.820	26.052	197.5	0.345	2.85	44.6	24.1	1.83	23.1	0.00	0.02	0.04	126	
138		9.82	9.80	33.925	26.146	188.8	0.370	2.52	39.4	27.0	1.96	24.6	0.00	0.01	0.04	139	209
150	ISL	9.61	9.59	33.949	26.200	183.9	0.392	2.48	38.6	28.0	1.99	25.4	0.00	0.01	0.04	151	
168		9.31	9.29	33.966	26.262	178.3	0.425	2.43	37.6	29.0	2.01	26.2	0.01	0.01	0.03	169	208
198		9.21	9.19	34.134	26.410	164.8	0.476	2.00	30.9	34.1	2.19	27.9	0.00	0.00	0.03	199	207
200	ISL	9.21	9.19	34.142	26.417	164.3	0.480	1.97	30.5	34.3	2.20	28.0	0.00			201	
228		9.20	9.17	34.222	26.481	158.8	0.525	1.57	24.3	37.3	2.35	29.0	0.00			229	206
250	ISL	8.97	8.94	34.236	26.529	154.5	0.559	1.41	21.7	39.7	2.42	29.9	0.00			251	
267		8.74	8.71	34.236	26.566	151.3	0.585	1.33	20.4	41.6	2.46	30.6	0.00			269	205
300	ISL	8.40	8.37	34.256	26.634	145.3	0.634	1.10	16.7	45.6	2.57	31.9	0.00			302	
317		8.24	8.21	34.266	26.667	142.4	0.659	0.99	15.0	47.7	2.63	32.5	0.00			319	204
377		7.66	7.62	34.287	26.769	133.4	0.742	0.69	10.3	55.4	2.80	34.6	0.00			379	203
400	ISL	7.47	7.43	34.294	26.802	130.5	0.772	0.61	9.1	57.9	2.85	35.2	0.00			403	
436		7.21	7.17	34.304	26.847	126.6	0.818	0.50	7.4	61.6	2.92	36.1	0.00			439	202
500	ISL	6.78	6.73	34.317	26.917	120.6	0.897	0.37	5.4	68.2	3.03	37.6	0.00			503	
513		6.69	6.64	34.320	26.932	119.3	0.913	0.34	5.0	69.5	3.05	37.9	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 55.0 N	118 56.1 W	26/10/06	2315 UTC	1693 m	360 07 kn	310 04 10	0	1018.6 mb	20.0 C	18.0 C		0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.21	18.21	33.448	24.033	386.9	0.000	5.55	102.9	1.4	0.25	0.1	0.00	0.19	0.02	0	
2		18.21	18.21	33.448	24.033	386.9	0.008	5.55	102.9	1.4	0.25	0.1	0.00	0.19	0.02	2	224
10		17.70	17.70	33.441	24.153	375.8	0.038	5.58	102.5	1.1	0.25	0.0	0.00	0.23	0.04	10	222
11		17.72	17.72	33.442	24.149	376.2	0.042									11	223
20		17.56	17.56	33.430	24.178	373.7	0.076									20	221
20		17.52	17.52	33.427	24.186	373.0	0.076	5.61	102.7	1.1	0.25	0.0	0.00	0.36	0.01	20	220
30		17.20	17.20	33.410	24.249	367.3	0.113	5.65	102.7	1.2	0.25	0.0	0.00	0.47	0.04	30	219
40		16.13	16.12	33.370	24.467	346.8	0.148	5.64	100.4	1.9	0.34	0.4	0.06	0.69	0.14	40	218
45		15.94	15.93	33.377	24.515	342.3	0.166	5.58	99.0	2.2	0.37	0.9	0.12	0.70	0.10	45	217
45		15.83	15.82	33.375	24.539	340.1	0.166									45	216
50		15.35	15.34	33.363	24.636	330.9	0.182	5.45	95.5	2.9	0.46	1.9	0.26	0.49	0.24	50	215
60		14.33	14.32	33.322	24.824	313.3	0.215	5.31	91.1	4.5	0.59	3.9	0.30	0.31	0.21	60	214
70		13.35	13.34	33.368	25.062	290.8	0.245	4.94	83.1	6.6	0.79	7.4	0.06	0.19	0.14	70	213
75	ISL	12.77	12.76	33.393	25.196	278.1	0.259	4.71	78.3	8.1	0.91	9.4	0.05	0.15	0.13	75	
85		11.75	11.74	33.451	25.435	255.4	0.286	4.26	69.3	11.1	1.15	13.1	0.02	0.08	0.12	85	212
100		11.12	11.11	33.535	25.616	238.6	0.323	3.76	60.4	14.6	1.39	16.7	0.01	0.03	0.18	100	211
120		10.43	10.42	33.691	25.859	215.8	0.368	3.14	49.7	19.9	1.70	20.8	0.01	0.04	0.06	121	210
125	ISL	10.26	10.25	33.735	25.923	209.8	0.379	3.03	47.8	21.1	1.75	21.6	0.01	0.03	0.05	126	
140		9.83	9.81	33.858 D	26.092	194.0	0.409	2.78	43.5	24.3	1.87	23.4	0.00	0.01	0.04	141	209
150	ISL	9.70	9.68	33.915	26.158	187.9	0.428	2.63	41.0	26.1	1.94	24.4	0.00	0.01	0.03	151	
169		9.53	9.51	33.989	26.244	180.1	0.463	2.41	37.5	28.9	2.04	25.9	0.01	0.01	0.03	170	208
200		9.07	9.05	34.042	26.361	169.5	0.517	2.26	34.8	32.4	2.14	27.6	0.01	0.00	0.03	201	207
229		8.88	8.86	34.125	26.456	161.0	0.565	1.88	28.8	36.5	2.28	29.0	0.01			230	206
250	ISL	8.57	8.54	34.145	26.520	155.2	0.599	1.74	26.5	39.6	2.36	30.3	0.02			251	
269		8.27	8.24	34.152	26.572	150.5	0.628	1.64	24.8	42.4	2.43	31.4	0.02			271	205
300	ISL	7.95	7.92	34.171	26.635	144.9	0.673	1.39	20.9	46.3	2.55	32.7	0.01			302	
319		7.79	7.76	34.183	26.668	142.0	0.701	1.24	18.6	48.6	2.62	33.4	0.00			321	204
377		7.26	7.22	34.226	26.778	132.2	0.780	0.86	12.7	56.9	2.80	35.5	0.00			379	203
400	ISL	7.04	7.00	34.235	26.816	128.8	0.810	0.74	10.9	60.4	2.87	36.4	0.00			403	
437		6.72	6.68	34.250	26.872	123.8	0.857	0.59	8.6	65.8	2.97	37.7	0.00			440	202
500	ISL	6.37	6.32	34.290	26.950	117.0	0.933	0.40	5.8	72.8	3.08	39.1	0.00			503	
513		6.30	6.25	34.298	26.966	115.6	0.948	0.36	5.2	74.3	3.10	39.4	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 39.4 N	119 29.1 W	26/10/06	1831 UTC	1324 m	060 03 kn	330 04 12	0	1019.9 mb	19.5 C	17.5 C	33m	0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.74	18.74	33.537	23.970	392.9	0.000	5.45	102.2	1.6	0.23	0.1	0.00	0.22	0.06	0	
1		18.74	18.74	33.537	23.970	392.9	0.004	5.45	102.2	1.6	0.23	0.1	0.00	0.22	0.06	1	223
10		18.71	18.71	33.539	23.979	392.4	0.039			1.8	0.23	0.1	0.00			10	222
10		18.71	18.71	33.535	23.976	392.7	0.039	5.44	101.9	1.8	0.23	0.1	0.00	0.24	0.07	10	221
20		18.67	18.67	33.541	23.991	391.6	0.078									20	220
20		18.66	18.66	33.545	23.997	391.1	0.078	5.48	102.6	2.0	0.23	0.1	0.00	0.31	0.11	20	219
30		17.37	17.37	33.507	24.283	364.1	0.116	5.67	103.5	2.0	0.29	0.2	0.01	0.59	0.20	30	218
40		15.41	15.40	33.345	24.609	333.3	0.151	5.82	102.1	2.7	0.38	0.6	0.03	0.51	0.30	40	217
50	ISL	13.70	13.69	33.344	24.971	298.9	0.183	5.35	90.7	5.1	0.63	4.2	0.11	0.39	0.28	50	
51		13.55	13.54	33.350	25.007	295.5	0.186	5.28	89.2	5.4	0.66	4.7	0.12	0.38	0.28	51	216
61		12.54	12.53	33.414	25.256	272.0	0.214	4.68	77.4	8.4	0.93	9.2	0.09	0.25	0.30	61	215
71		12.09	12.08	33.459	25.378	260.7	0.241	4.40	72.1	10.6	1.07	11.5	0.07	0.20	0.20	71	214
75	ISL	11.85	11.84	33.475	25.435	255.2	0.251	4.28	69.8	11.5	1.14	12.6	0.05	0.18	0.18	75	
82		11.44	11.43	33.502	25.532	246.2	0.269	4.09	66.1	13.1	1.25	14.5	0.03	0.14	0.16	82	213
93		10.99	10.98	33.542	25.644	235.7	0.295	3.86	61.8	14.9	1.36	16.4	0.03	0.10	0.13	93	212
100	ISL	10.68	10.67	33.582	25.730	227.6	0.311	3.68	58.6	16.6	1.46	18.0	0.02	0.07	0.10	100	
109		10.35	10.34	33.631	25.826	218.7	0.331	3.48	55.0	18.5	1.57	19.7	0.01	0.04	0.07	109	211
125	ISL	10.20	10.19	33.651	25.868	215.0	0.366	3.44	54.2	18.6	1.62	20.3	0.01	0.03	0.06	126	
126		10.19	10.18	33.654	25.872	214.7	0.368	3.44	54.2	18.6	1.62	20.3	0.01	0.03	0.06	127	210
139		9.65	9.63	33.786	26.065	196.4	0.395	3.05	47.5	23.0	1.81	23.2	0.01	0.01	0.04	140	209
150	ISL	9.39	9.37	33.885	26.186	185.2	0.416	2.76	42.8	26.1	1.94	24.9	0.01	0.01	0.04	151	
169		9.11	9.09	34.016	26.333	171.5	0.450	2.35	36.2	30.6	2.10	27.1	0.01	0.00	0.03	170	208
199		8.65	8.63	34.105	26.476	158.4	0.499	1.98	30.2	36.4	2.26	29.4	0.01	0.00	0.03	200	207
200	ISL	8.64	8.62	34.107	26.479	158.1	0.501	1.97	30.1	36.5	2.26	29.5	0.01			201	
229		8.43	8.41	34.146	26.542	152.6	0.546	1.70	25.8	40.1	2.38	30.7	0.01			230	206
250	ISL	8.30	8.27	34.165	26.577	149.6	0.578	1.56	23.6	42.2	2.44	31.4	0.01			251	
268		8.19	8.16	34.179	26.605	147.3	0.604	1.44	21.8	44.0	2.50	32.0	0.01			270	205
300	ISL	7.89	7.86	34.215	26.678	140.8	0.650	1.14	17.1	48.6	2.64	33.3	0.01			302	
318		7.71	7.68	34.233	26.719	137.1	0.675	0.98	14.6	51.3	2.71	34.1	0.01			320	204
378		7.24	7.20	34.241	26.793	130.8	0.756	0.76	11.2	57.7	2.84	35.9	0.01			380	203
400	ISL	7.11	7.07	34.258	26.825	128.1	0.784	0.65	9.6	60.3	2.90	36.5	0.01			403	
437		6.92	6.88	34.289	26.875	123.7	0.831	0.49	7.2	64.4	2.99	37.3	0.01			440	202
500	ISL	6.63	6.58	34.300	26.924	119.8	0.908	0.39	5.7	69.1	3.05	38.2	0.01			503	
513		6.57	6.52	34.303	26.934	118.9	0.923	0.37	5.4	70.1	3.06	38.4	0.01			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 25.1 N	119 57.7 W	26/10/06	1133 UTC	880 m	330 05 kn			1015.3 mb	17.6 C	15.5 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.72	18.72	33.588	24.014	388.7	0.000	5.42	101.6	2.1	0.25	0.1	0.00	0.25	0.08	0	
1		18.72	18.72	33.588	24.014	388.7	0.004	5.42	101.6	2.1	0.25	0.1	0.00	0.25	0.08	1	221
10		18.73	18.73	33.590	24.013	389.1	0.039	5.42	101.6	2.1	0.24	0.1	0.00	0.26	0.08	10	220
20		18.73	18.73	33.590	24.014	389.5	0.078	5.42	101.6	2.1	0.24	0.1	0.00	0.26	0.07	20	219
30		18.42	18.41	33.614	24.110	380.7	0.116	5.58	104.0	2.4	0.26	0.1	0.00	0.46	0.17	30	218
40		13.84	13.83	33.448	25.023	293.7	0.150	5.50	93.5	6.5	0.67	3.9	0.12	1.13	0.46	40	217
45		13.46	13.45	33.434	25.090	287.5	0.165									45	216
50		12.41	12.40	33.461	25.318	265.8	0.178	4.55	75.1	10.2	1.06	10.9	0.07	0.48	0.36	50	215
60		11.88	11.87	33.500	25.449	253.6	0.204	4.18	68.2	12.2	1.24	13.5	0.04	0.32	0.34	60	214
70		11.21	11.20	33.547	25.609	238.6	0.229	3.72	59.9	15.5	1.44	16.9	0.02	0.17	0.20	70	213
75	ISL	10.94	10.93	33.557	25.665	233.3	0.241	3.68	58.9	16.1	1.47	17.6	0.01	0.13	0.16	75	
85		10.49	10.48	33.585	25.766	223.9	0.264	3.65	57.9	17.3	1.52	18.7	0.01	0.07	0.10	85	212
100		9.97	9.96	33.719	25.959	205.8	0.296	3.07	48.1	22.4	1.77	22.4	0.01	0.03	0.06	100	211
120		9.51	9.50	33.861	26.147	188.3	0.335	2.70	42.0	26.6	1.95	24.9	0.01	0.01	0.03	121	210
125	ISL	9.45	9.44	33.895	26.183	184.9	0.345	2.62	40.7	27.5	1.99	25.4	0.01	0.01	0.03	126	
139		9.32	9.30	33.979	26.270	176.9	0.370	2.41	37.3	29.9	2.08	26.5	0.01	0.00	0.03	140	209
150	ISL	9.16	9.14	34.029	26.335	170.9	0.389	2.25	34.7	32.1	2.15	27.5	0.01	0.00	0.03	151	
169		8.90	8.88	34.086	26.422	163.1	0.421	2.02	31.0	35.5	2.24	28.9	0.01	0.00	0.02	170	208
199		8.71	8.69	34.097	26.460	159.9	0.469	1.88	28.7	37.6	2.30	29.7	0.00	0.00	0.02	200	207
200	ISL	8.70	8.68	34.099	26.463	159.6	0.471	1.87	28.6	37.7	2.30	29.8	0.00			201	
229		8.38	8.36	34.145	26.549	151.9	0.516	1.58	24.0	41.6	2.45	31.5	0.00			230	206
250	ISL	8.17	8.14	34.165	26.597	147.7	0.547	1.41	21.3	44.5	2.53	32.4	0.00			251	
268		7.98	7.95	34.178	26.635	144.3	0.574	1.28	19.2	47.1	2.59	33.0	0.00			270	205
300	ISL	7.59	7.56	34.198	26.708	137.7	0.619	1.06	15.8	52.3	2.71	34.3	0.00			302	
318		7.37	7.34	34.208	26.748	134.1	0.643	0.95	14.1	55.2	2.77	35.0	0.00			320	204
377		6.89	6.85	34.240	26.840	126.0	0.720	0.65	9.5	63.5	2.95	37.2	0.00			379	203
400	ISL	6.75	6.71	34.256	26.872	123.2	0.749	0.56	8.2	66.1	3.00	37.8	0.00			403	
437		6.55	6.51	34.281	26.919	119.2	0.794	0.44	6.4	70.0	3.06	38.5	0.00			440	202
500	ISL	6.17	6.13	34.301	26.984	113.5	0.867	0.33	4.8	76.5	3.14	39.8	0.00			503	
514		6.08	6.03	34.306	27.000	112.2	0.883	0.30	4.3	78.0	3.16	40.1	0.00			518	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.1 N	120 38.3 W	26/10/06	0529 UTC	3828 m	290 11 kn			1015.1 mb	17.2 C	16.0 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.78	17.78	33.465	24.151	375.6	0.000	5.52	101.5	1.4	0.28	0.0	0.00	0.20	0.07	0	
2		17.78	17.78	33.465	24.151	375.7	0.008	5.52	101.5	1.4	0.28	0.0	0.00	0.20	0.07	2	220
9		17.78	17.78	33.463	24.150	376.0	0.034	5.51	101.4	1.3	0.28	0.0	0.00	0.20	0.07	9	219
10	ISL	17.78	17.78	33.463	24.150	376.1	0.038	5.51	101.4	1.3	0.28	0.0	0.00	0.20	0.07	10	
20		17.79	17.79	33.467	24.151	376.3	0.075	5.51	101.4	1.2	0.28	0.0	0.00	0.21	0.06	20	218
30		17.79	17.78	33.468	24.152	376.6	0.113	5.51	101.4	1.2	0.28	0.0	0.01	0.22	0.07	30	217
39		17.71	17.70	33.472	24.175	374.7	0.147	5.53	101.6	1.1	0.29	0.0	0.00	0.26	0.09	39	216
50		15.08	15.07	33.306	24.651	329.5	0.185	5.80	101.1	2.0	0.43	0.6	0.10	0.56	0.34	50	215
61		14.18	14.17	33.322	24.856	310.3	0.221	5.44	93.1	3.9	0.62	3.4	0.28	0.54	0.42	61	214
69		12.95	12.94	33.378	25.149	282.5	0.244	4.91	81.9	7.6	0.94	9.1	0.08	0.35	0.31	69	213
75	ISL	12.30	12.29	33.412	25.301	268.0	0.261	4.73	77.9	8.8	1.03	10.9	0.06	0.26	0.23	75	
84		11.51	11.50	33.457	25.484	250.8	0.284	4.55	73.7	10.1	1.10	12.4	0.02	0.16	0.13	84	212
98		10.31	10.30	33.542	25.763	224.3	0.317	4.03	63.6	15.0	1.42	17.4	0.01	0.05	0.07	98	211
100	ISL	10.20	10.19	33.558	25.795	221.4	0.322	3.97	62.5	15.7	1.45	17.9	0.01	0.05	0.06	100	
119		9.51	9.50	33.718	26.035	198.9	0.362	3.49	54.2	21.3	1.70	21.9	0.01	0.01	0.03	120	210
125	ISL	9.39	9.38	33.764	26.090	193.7	0.374	3.34	51.7	22.7	1.76	22.8	0.01	0.01	0.03	126	
145		9.12	9.10	33.899	26.240	179.9	0.411	2.87	44.2	27.2	1.93	25.3	0.01	0.00	0.03	146	209
150	ISL	9.04	9.02	33.930	26.277	176.4	0.420	2.76	42.5	28.5	1.97	25.9	0.01	0.00	0.03	151	
169		8.78	8.76	34.022	26.390	166.0	0.452	2.42	37.0	32.8	2.11	28.0	0.01	0.00	0.03	170	208
199		8.52	8.50	34.065	26.464	159.4	0.501	2.19	33.3	35.9	2.22	29.4	0.01	0.00	0.03	200	207
200	ISL	8.51	8.49	34.066	26.467	159.2	0.503	2.18	33.2	36.0	2.22	29.5	0.01			201	
228		8.20	8.18	34.100	26.541	152.6	0.546	1.97	29.8	40.3	2.37	31.2	0.01			229	206
250	ISL	7.92	7.89	34.124	26.602	147.1	0.579	1.69	25.4	44.3	2.48	32.4	0.01			251	
268		7.70	7.67	34.143	26.649	142.8	0.605	1.45	21.7	47.6	2.56	33.3	0.01			270	205
300	ISL	7.38	7.35	34.170	26.716	136.8	0.650	1.18	17.5	52.8	2.69	34.7	0.01			302	
319		7.20	7.17	34.184	26.753	133.5	0.676	1.05	15.5	55.7	2.76	35.4	0.01			321	204
378		6.66	6.63	34.221	26.856	124.3	0.752	0.69	10.1	64.6	2.94	37.5	0.01			380	203
400	ISL	6.44	6.40	34.225	26.888	121.4	0.779	0.62	9.0	67.7	2.98	38.2	0.01			403	
437		6.11	6.07	34.232	26.937	117.0	0.823	0.53	7.6	72.5	3.04	39.2	0.00			440	202
500	ISL	5.85	5.81	34.281	27.009	110.8	0.895	0.35	5.0	79.2	3.15	40.5	0.00			503	
513		5.80	5.76	34.291	27.023	109.6	0.909	0.31	4.4	80.6	3.17	40.8	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 45.1 N	121 18.8 W	25/10/06	2345 UTC	3672 m	310 12 kn	320 07 08	2	1014.5 mb	17.1 C	15.1 C		8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.59	18.59	33.368	23.878	401.7	0.000	5.41	101.0	1.8	0.27	0.1	0.00	0.14	0.01	0	
2		18.59	18.59	33.368	23.878	401.7	0.008	5.41	101.0	1.8	0.27	0.1	0.00	0.14	0.01	2	222
2		18.59	18.59				0.008									2	223
10		18.59	18.59	33.368	23.879	402.0	0.040	5.43	101.4	1.8	0.27	0.1	0.00	0.12	0.02	10	221
15		18.49	18.49	33.366	23.902	399.9	0.060	5.45	101.6	1.9	0.27	0.1	0.00	0.15	0.01	15	220
20	ISL	18.40	18.40	33.366	23.925	398.0	0.080	5.46	101.6	1.9	0.27	0.1	0.00	0.17	0.01	20	
30		18.21	18.20	33.366	23.972	393.8	0.120	5.51	102.1	1.8	0.28	0.1	0.00	0.21	0.01	30	219
45		16.41	16.40	33.326	24.369	356.3	0.176	5.76	103.1	0.9	0.31	0.1	0.00	0.32	0.11	45	218
50	ISL	16.05	16.04	33.318	24.445	349.2	0.194	5.77	102.5	1.1	0.32	0.1	0.01	0.40	0.19	50	
55		15.65	15.64	33.304	24.525	341.8	0.211									55	217
55		15.66	15.65	33.303	24.522	342.0	0.211	5.78	101.9	1.3	0.35	0.1	0.03	0.48	0.25	55	216
64		14.52	14.51	33.250	24.729	322.5	0.241	5.62	96.8	2.8	0.48	1.5	0.35	0.57	0.22	64	215
74		13.52	13.51	33.234	24.924	304.1	0.272	5.53	93.3	3.8	0.57	3.1	0.22	0.32	0.24	74	214
75	ISL	13.45	13.44	33.252	24.952	301.4	0.275	5.49	92.5	4.0	0.59	3.4	0.20	0.30	0.24	75	
84		12.82	12.81	33.419	25.207	277.4	0.301	5.06	84.2	5.9	0.76	6.9	0.04	0.15	0.21	84	213
95		11.86	11.85	33.433	25.401	259.0	0.331	4.76	77.6	8.1	0.94	10.1	0.02	0.12	0.15	95	212
100	ISL	11.50	11.49	33.446	25.478	251.7	0.343	4.57	74.0	9.7	1.06	12.0	0.01	0.09	0.12	100	
109		10.89	10.88	33.482	25.616	238.7	0.366	4.25	67.9	12.8	1.28	15.3	0.01	0.05	0.07	109	211
124		9.81	9.80	33.587	25.883	213.4	0.399	4.02	62.8	17.1	1.48	18.7	0.01	0.03	0.04	125	210
125	ISL	9.77	9.76	33.595	25.896	212.2	0.402	4.00	62.4	17.3	1.49	18.9	0.01	0.03	0.04	126	
144		9.26	9.24	33.741	26.094	193.7	0.440	3.67	56.7	21.8	1.67	21.9	0.01	0.01	0.02	145	209
150	ISL	9.16	9.14	33.788	26.147	188.8	0.452	3.51	54.1	23.4	1.73	22.8	0.01	0.01	0.02	151	
169		8.92	8.90	33.915	26.284	176.1	0.486	3.04	46.6	28.1	1.91	25.3	0.00	0.00	0.02	170	208
199		8.51	8.49	34.003	26.417	163.9	0.537	2.71	41.2	33.1	2.05	27.5	0.00	0.00	0.01	200	207
200	ISL	8.50	8.48	34.005	26.421	163.6	0.539	2.70	41.0	33.3	2.05	27.6	0.00			201	
229		8.08	8.06	34.035	26.508	155.7	0.585	2.38	35.8	38.9	2.20	29.8	0.00			230	206
250	ISL	7.80	7.78	34.060	26.569	150.1	0.617	2.10	31.4	42.9	2.33	31.3	0.00			251	
268		7.59	7.56	34.080	26.615	145.9	0.644	1.86	27.7	46.1	2.43	32.5	0.00			269	205
300	ISL	7.33	7.30	34.110	26.676	140.6	0.690	1.53	22.7	50.8	2.57	34.0	0.00			302	
318		7.20	7.17	34.124	26.705	138.0	0.715	1.38	20.4	53.2	2.63	34.7	0.00			320	204
378		6.61	6.58	34.148	26.805	129.1	0.795	1.10	16.0	61.7	2.80	36.7	0.00			380	203
400	ISL	6.47	6.43	34.175	26.845	125.5	0.823	0.91	13.2	65.3	2.88	37.5	0.00			402	
438		6.26	6.22	34.225	26.912	119.5	0.870	0.60	8.7	71.3	3.01	38.8	0.00			441	202
500	ISL	5.85	5.81	34.264	26.995	112.1	0.941	0.42	6.0	79.1	3.12	40.3	0.00			503	
513		5.76	5.72	34.272	27.013	110.5	0.956	0.38	5.4	80.7	3.14	40.6	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 25.1 N	121 59.4 W	25/10/06	1748 UTC	3860 m	330 05 kn	320 06 09	2	1016.3 mb	17.8 C	15.0 C	28m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.10	18.10	33.342	23.979	392.0	0.000	5.50	101.7	1.6	0.30	0.0	0.00	0.17	0.03	0	
2	A	18.10	18.10	33.342	23.979	392.1	0.008	5.50	101.7	1.6	0.30	0.0	0.00	0.17	0.03	2	224
10	ISL	18.09	18.09	33.341	23.981	392.2	0.039	5.50	101.7	1.6	0.30	0.1	0.00	0.19	0.01	10	
11		18.09	18.09	33.341	23.981	392.2	0.043	5.50	101.7	1.6	0.30	0.1	0.00	0.19	0.01	11	223
18	A	18.08	18.08	33.340	23.983	392.3	0.071	5.50	101.7	1.5	0.29	0.1	0.00	0.20	0.01	18	221
18		18.08	18.08	33.340	23.983	392.3	0.071									18	222
20	ISL	18.07	18.07	33.340	23.986	392.1	0.078	5.50	101.7	1.6	0.29	0.1	0.00	0.20	0.01	20	
30		17.99	17.98	33.338	24.004	390.7	0.118	5.51	101.7	1.5	0.28	0.1	0.00	0.23	0.00	30	220
44	A	16.60	16.59	33.289	24.297	363.2	0.170	5.84	104.9	1.4	0.31	0.1	0.00	0.35	0.06	44	219
50	ISL	15.92	15.91	33.265	24.434	350.3	0.192	5.88	104.2	1.4	0.33	0.0	0.00	0.36	0.10	50	
53		15.53	15.52	33.253	24.512	342.9	0.202	5.90	103.7	1.4	0.35	0.0	0.00	0.36	0.13	53	218
61	A	14.21	14.20	33.234	24.781	317.3	0.229	5.69	97.4	3.1	0.46	1.3	0.16	0.62	0.26	61	217
69		13.47	13.46	33.348	25.022	294.6	0.253	5.30	89.4	4.7	0.62	4.4	0.05	0.40	0.22	69	216
75	ISL	12.87	12.86	33.380	25.166	280.9	0.270	4.97	82.8	6.9	0.85	8.0	0.03	0.25	0.15	75	
78	A	12.59	12.58	33.389	25.228	275.1	0.279	4.81	79.7	8.0	0.96	9.7	0.02	0.19	0.12	78	215
88		11.94	11.93	33.438	25.390	259.9	0.305	4.50	73.5	10.1	1.10	12.3	0.02	0.12	0.10	88	214
98		11.05	11.04	33.485	25.590	241.0	0.330	4.26	68.3	12.7	1.28	15.1	0.02	0.08	0.06	98	213
100	ISL	10.91	10.90	33.493	25.621	238.1	0.335	4.23	67.6	13.1	1.30	15.5	0.02	0.07	0.06	100	
107	A	10.52	10.51	33.530	25.718	228.9	0.352	4.07	64.5	15.0	1.40	17.1	0.02	0.05	0.06	107	212
116		10.16	10.15	33.620	25.850	216.5	0.372	3.52	55.4	19.0	1.65	20.7	0.01	0.02	0.04	117	211
125		9.82	9.81	33.682	25.956	206.6	0.391	3.25	50.8	21.3	1.76	22.4	0.01	0.01	0.04	126	210
145		9.16	9.14	33.857	26.201	183.6	0.430	2.96	45.6	26.3	1.90	25.0	0.00	0.00	0.03	146	209
150	ISL	9.05	9.03	33.887	26.242	179.8	0.439	2.90	44.6	27.4	1.93	25.5	0.00	0.00	0.03	151	
170		8.74	8.72	33.972	26.357	169.1	0.474	2.67	40.8	31.2	2.03	27.1	0.00	0.00	0.02	171	208
199		8.38	8.36	34.025	26.454	160.3	0.521	2.44	37.0	35.1	2.14	28.9	0.01	0.00	0.02	200	207
200	ISL	8.37	8.35	34.026	26.457	160.1	0.523	2.43	36.8	35.3	2.14	29.0	0.01			201	
229		7.97	7.95	34.058	26.542	152.4	0.568	2.11	31.7	40.9	2.29	30.9	0.00			230	206
250	ISL	7.64	7.62	34.068	26.598	147.3	0.600	1.95	29.1	44.8	2.38	32.1	0.00			251	
269		7.35	7.32	34.073	26.644	143.1	0.627	1.82	27.0	48.3	2.46	33.2	0.00			270	205
300	ISL	6.93	6.90	34.078	26.706	137.4	0.671	1.60	23.5	53.8	2.59	34.9	0.00			302	
319		6.70	6.67	34.083	26.741	134.2	0.697	1.46	21.3	57.0	2.67	35.9	0.00			321	204
378		6.22	6.19	34.139	26.849	124.6	0.773	0.92	13.3	66.4	2.90	38.4	0.00			380	203
400	ISL	6.13	6.09	34.165	26.881	121.8	0.800	0.77	11.1	69.2	2.96	39.0	0.00			402	
438		6.01	5.97	34.206	26.929	117.7	0.846	0.56	8.0	73.8	3.03	39.7	0.00			441	202
500	ISL	5.65	5.61	34.239	27.000	111.4	0.917	0.40	5.7	81.9	3.13	40.9	0.00			503	
513		5.57	5.53	34.246	27.016	110.0	0.931	0.37	5.3	83.6	3.15	41.2	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 5.1 N	122 39.6 W	25/10/06	1128 UTC	4018 m	010 08 kn			1014.4 mb	17.0 C	14.5 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.47	18.47	33.435	23.959	393.9	0.000	5.44	101.4	2.1	0.28	0.0	0.00	0.12	0.03	0	
2		18.47	18.47	33.435	23.959	394.0	0.008	5.44	101.4	2.1	0.28	0.0	0.00	0.12	0.03	2	220
10	ISL	18.48	18.48	33.434	23.956	394.6	0.039	5.43	101.2	2.1	0.28	0.0	0.00	0.13	0.03	10	
16		18.48	18.48	33.434	23.957	394.7	0.063	5.42	101.0	2.1	0.28	0.0	0.00	0.13	0.03	16	219
20	ISL	18.47	18.47	33.433	23.959	394.7	0.079	5.43	101.2	2.1	0.28	0.0	0.00	0.13	0.03	20	
30		18.43	18.42	33.429	23.966	394.4	0.118	5.44	101.3	2.0	0.28	0.0	0.00	0.13	0.03	30	218
45		15.41	15.40	33.222	24.514	342.4	0.174	6.26	109.7	2.7	0.34	0.0	0.00	0.26	0.11	45	217
50	ISL	14.74	14.73	33.206	24.647	329.8	0.190	6.17	106.7	2.8	0.36	0.1	0.01	0.41	0.17	50	
55		14.21	14.20	33.213 D	24.765	318.7	0.207	6.08	104.0	3.1	0.38	0.1	0.02	0.54	0.25	55	216
65		13.41	13.40	33.296	24.994	297.2	0.237	5.58	94.0	4.8	0.62	4.1	0.15	0.51	0.41	65	215
75		12.97	12.96	33.316	25.097	287.6	0.267	5.25	87.6	5.7	0.75	6.3	0.14	0.64	0.23	75	214
85		12.61	12.60	33.395	25.229	275.2	0.295	4.85	80.4	8.0	0.95	9.8	0.06	0.31	0.31	85	213
95		12.12	12.11	33.431	25.351	263.8	0.322	4.65	76.3	9.5	1.08	11.9	0.03	0.26	0.22	95	212
100	ISL	11.69	11.68	33.463	25.456	253.9	0.335	4.46	72.5	11.3	1.19	13.7	0.03	0.20	0.17	100	
110		10.80	10.79	33.540	25.677	232.9	0.359	4.01	64.0	15.4	1.43	17.5	0.02	0.07	0.08	110	211
125		9.94	9.93	33.648	25.909	211.0	0.392	3.39	53.1	20.2	1.70	21.6	0.01	0.02	0.05	126	210
145		9.39	9.37	33.787	26.109	192.4	0.433	2.94	45.5	24.7	1.89	24.5	0.01	0.00	0.04	146	209
150	ISL	9.28	9.26	33.820	26.152	188.3	0.442	2.88	44.5	25.7	1.92	25.0	0.01	0.00	0.04	151	
169		8.96	8.94	33.927	26.287	175.8	0.477	2.74	42.1	29.1	2.00	26.3	0.01	0.00	0.03	170	208
200		8.63	8.61	34.001	26.397	165.8	0.530	2.47	37.7	33.2	2.11	28.1	0.01	0.00	0.02	201	207
229		8.19	8.17	34.059	26.510	155.5	0.576	2.06	31.1	39.2	2.29	30.6	0.01			230	206
250	ISL	7.85	7.83	34.073	26.572	149.9	0.608	1.88	28.2	43.2	2.39	32.0	0.01			251	
269		7.54	7.51	34.074	26.618	145.7	0.636	1.77	26.3	46.8	2.46	33.1	0.01			270	205
300	ISL	7.02	6.99	34.065	26.684	139.6	0.681	1.62	23.8	52.6	2.57	34.8	0.01			302	
318		6.74	6.71	34.062	26.719	136.3	0.706	1.53	22.3	55.9	2.63	35.7	0.01			320	204
378		6.17	6.14	34.118	26.839	125.5	0.784	0.98	14.1	66.5	2.88	38.4	0.00			380	203
400	ISL	5.96	5.93	34.130	26.875	122.2	0.811	0.85	12.2	70.7	2.95	39.3	0.00			402	
438		5.63	5.59	34.152	26.933	116.9	0.857	0.66	9.4	77.5	3.04	40.5	0.00			441	202
500	ISL	5.38	5.34	34.221	27.018	109.4	0.927	0.42	5.9	86.0	3.15	41.6	0.00			503	
514		5.32	5.28	34.237	27.038	107.6	0.942	0.36	5.1	87.9	3.18	41.8	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 45.1 N	123 19.9 W	25/10/06	0531 UTC	4032 m	340 11 kn			1015.1 mb	17.9 C	15.2 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.44	18.44	33.336	23.891	400.4	0.000	5.43	101.1	1.6	0.26	0.0	0.00	0.10	0.02	0	
3		18.44	18.44	33.336	23.891	400.5	0.012	5.43	101.1	1.6	0.26	0.0	0.00	0.10	0.02	3	220
10	ISL	18.44	18.44	33.336	23.891	400.8	0.040	5.43	101.1	1.6	0.26	0.0	0.00	0.10	0.02	10	
16		18.43	18.43	33.336	23.894	400.7	0.064	5.44	101.2	1.6	0.26	0.0	0.00	0.10	0.02	16	219
20	ISL	18.43	18.43	33.336	23.894	400.8	0.080	5.44	101.2	1.6	0.26	0.0	0.00	0.10	0.02	20	
30	ISL	18.43	18.42	33.335	23.894	401.2	0.120	5.44	101.2	1.6	0.26	0.0	0.00	0.10	0.02	30	
31		18.43	18.42	33.335	23.894	401.2	0.124	5.44	101.2	1.6	0.26	0.0	0.00	0.10	0.02	31	218
45		17.75	17.74	33.301	24.035	388.3	0.180	5.58	102.5	1.6	0.26	0.0	0.00	0.15	0.06	45	217
50	ISL	17.40	17.39	33.353	24.159	376.6	0.199	5.75	104.9	1.6	0.24	0.0	0.00	0.15	0.06	50	
60		16.55	16.54	33.458	24.439	350.2	0.235	6.03	108.3	1.5	0.22	0.0	0.00	0.16	0.05	60	216
75		14.88	14.87	33.427	24.789	317.2	0.285	5.86	101.8	1.8	0.28	0.0	0.00	0.23	0.10	75	215
85		14.58	14.57	33.521	24.926	304.4	0.316	5.69	98.3	2.0	0.30	0.1	0.01	0.26	0.19	85	214
95		13.77	13.76	33.527	25.100	288.0	0.346	5.31	90.2	3.6	0.49	2.9	0.09	0.24	0.27	95	213
100	ISL	13.17	13.16	33.505	25.204	278.0	0.360	5.17	86.7	4.6	0.59	4.7	0.06	0.23	0.24	100	
105		12.55	12.54	33.482	25.308	268.2	0.374	5.05	83.6	5.7	0.70	6.5	0.02	0.23	0.19	105	212
115		11.63	11.62	33.469	25.472	252.7	0.400	4.78	77.6	8.4	0.92	10.1	0.01	0.11	0.18	115	211
124		10.82	10.81	33.511	25.651	235.7	0.422	4.08	65.1	13.7	1.33	16.1	0.01	0.05	0.06	125	210
125	ISL	10.77	10.75	33.517	25.665	234.4	0.424	4.03	64.2	14.1	1.36	16.5	0.01	0.05	0.06	126	
140		10.21	10.19	33.623	25.844	217.6	0.458	3.49	55.0	18.5	1.62	20.3	0.00	0.02	0.04	141	209
150	ISL	9.81	9.79	33.704	25.975	205.3	0.479	3.29	51.4	21.3	1.73	22.1	0.00	0.01	0.03	151	
165		9.29	9.27	33.819	26.150	188.8	0.508	3.10	47.9	25.0	1.85	24.1	0.00	0.00	0.02	166	208
195		8.92	8.90	33.950	26.312	173.9	0.563	2.71	41.6	30.0	2.01	26.6	0.00	0.00	0.02	196	207
200	ISL	8.84	8.82	33.970	26.341	171.3	0.572	2.63	40.3	31.1	2.05	27.1	0.00			201	
229		8.31	8.29	34.060	26.493	157.2	0.619	2.21	33.5	37.7	2.24	29.9	0.00			230	206
250	ISL	7.93	7.90	34.073	26.560	151.0	0.652	2.07	31.1	41.8	2.33	31.2	0.00			251	
269		7.62	7.59	34.070	26.603	147.1	0.680	1.97	29.4	45.2	2.39	32.1	0.00			270	205
300	ISL	7.23	7.20	34.086	26.671	141.0	0.725	1.67	24.7	50.6	2.53	34.0	0.00			302	
318		7.03	7.00	34.094	26.705	137.9	0.750	1.50	22.1	53.7	2.61	35.0	0.00			320	204
377		6.26	6.23	34.097	26.810	128.2	0.828	1.18	17.0	64.7	2.80	37.7	0.00			379	203
400	ISL	6.00	5.97	34.114	26.857	123.9	0.857	1.00	14.4	69.6	2.89	38.7	0.00			402	
437		5.65	5.61	34.149	26.928	117.3	0.902	0.73	10.4	77.0	3.02	40.2	0.00			440	202
500	ISL	5.40	5.36	34.199	26.999	111.3	0.974	0.48	6.8	84.9	3.15	41.5	0.00			503	
513		5.35	5.31	34.210	27.013	110.0	0.988	0.43	6.1	86.5	3.18	41.8	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 25.0 N	123 59.8 W	24/10/06	2338	UTC	1525 m	340	13 kn	350 08 09	1	1013.3 mb	18.8 C	16.1 C		7/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.27	19.27	33.388	23.722	416.6	0.000	5.36	101.4	1.7	0.26	0.1	0.00	0.11	0.03	0	
2		19.27	19.27	33.394	23.727	416.2	0.008									2	222
2		19.27	19.27	33.388	23.722	416.6	0.008	5.36	101.4	1.7	0.26	0.1	0.00	0.11	0.03	2	221
10	ISL	19.26	19.26	33.386	23.724	416.8	0.042	5.36	101.4	1.7	0.26	0.1	0.00	0.13	0.02	10	
15		19.26	19.26	33.391	23.728	416.6	0.062									15	220
15		19.26	19.26	33.385	23.723	417.0	0.062	5.36	101.4	1.7	0.26	0.1	0.00	0.14	0.01	15	219
20	ISL	19.29	19.29	33.404	23.730	416.5	0.083	5.36	101.4	1.6	0.26	0.1	0.00	0.14	0.01	20	
30		19.37	19.36	33.448	23.744	415.6	0.125	5.35	101.4	1.5	0.25	0.1	0.00	0.13	0.01	30	218
45		19.42	19.41	33.478	23.755	415.1	0.187	5.35	101.5	1.6	0.24	0.1	0.00	0.14	0.02	45	217
50	ISL	18.68	18.67	33.373	23.862	405.0	0.208	5.52	103.2	1.6	0.25	0.1	0.00	0.18	0.03	50	
59		17.04	17.03	33.186	24.116	380.9	0.243	5.86	106.1	1.7	0.27	0.1	0.00	0.26	0.06	59	216
75		14.88	14.87	33.153	24.577	337.3	0.301	6.11	105.9	2.5	0.33	0.1	0.00	0.25	0.13	75	215
84		14.03	14.02	33.188	24.784	317.7	0.330	5.96	101.6	3.0	0.39	0.2	0.00	0.29	0.15	84	214
94		13.14	13.13	33.348	25.089	288.9	0.360	5.31	88.9	4.5	0.60	3.6	0.15	0.28	0.20	94	213
100	ISL	12.45	12.44	33.369	25.240	274.5	0.377	5.00	82.5	6.3	0.78	6.9	0.10	0.21	0.21	100	
105		11.91	11.90	33.366	25.340	265.0	0.391	4.80	78.3	7.9	0.92	9.6	0.03	0.15	0.22	105	212
115		11.35	11.34	33.359	25.438	255.9	0.417	4.56	73.5	9.8	1.10	12.4	0.02	0.18	0.13	115	211
125		10.99	10.97	33.424	25.553	245.1	0.442	4.50	72.0	10.8	1.14	13.3	0.01	0.11	0.13	125	210
140		10.30	10.28	33.538	25.763	225.3	0.477	4.28	67.5	14.1	1.29	16.0	0.00	0.04	0.06	141	209
150	ISL	9.91	9.89	33.619	25.892	213.2	0.499	4.14	64.8	16.5	1.39	17.8	0.00	0.03	0.04	151	
164		9.49	9.47	33.723	26.043	199.0	0.528	3.95	61.3	19.7	1.52	20.0	0.00	0.01	0.02	165	208
194		9.09	9.07	33.848	26.205	184.1	0.585	3.50	53.9	24.9	1.73	23.2	0.00	0.00	0.01	195	207
200	ISL	9.02	9.00	33.870	26.234	181.5	0.596	3.43	52.7	25.7	1.76	23.6	0.00			201	
229		8.65	8.63	33.961	26.364	169.6	0.647	3.11	47.4	30.2	1.89	25.7	0.00			230	206
250	ISL	8.28	8.25	34.007	26.456	161.0	0.682	2.81	42.5	35.1	2.03	27.7	0.00			251	
268		7.95	7.92	34.034	26.527	154.5	0.710	2.55	38.3	39.6	2.15	29.5	0.00			269	205
300	ISL	7.40	7.37	34.053	26.621	145.8	0.758	2.11	31.3	46.9	2.36	32.3	0.00			302	
318		7.13	7.10	34.059	26.664	141.8	0.784	1.88	27.7	50.6	2.47	33.7	0.00			320	204
378		6.71	6.68	34.122	26.771	132.3	0.867	1.19	17.4	59.8	2.76	36.7	0.00			380	203
400	ISL	6.48	6.44	34.134	26.811	128.7	0.895	1.03	15.0	63.7	2.83	37.6	0.00			402	
437		6.10	6.06	34.152	26.875	122.8	0.942	0.83	11.9	70.0	2.92	39.0	0.00			440	202
500	ISL	5.76	5.72	34.195	26.952	116.1	1.017	0.57	8.1	78.0	3.06	40.4	0.00			503	
513		5.69	5.65	34.204	26.968	114.7	1.032	0.52	7.4	79.7	3.09	40.7	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.4 N	117 27.8 W	21/10/06	2331	UTC	24 m	290	07 kn	280 01 07	0	1008.6 mb	19.9 C	18.0 C		0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.82	18.82	33.463	23.893	400.2	0.000	5.75	107.9	1.5	0.21	0.0	0.00	0.56	0.05	0	
1		18.82	18.82	33.463	23.893	400.2	0.004	5.75	107.9	1.5	0.21	0.0	0.00	0.56	0.05	1	205
5		18.74	18.74	33.455	23.907	399.1	0.020	5.79	108.5	1.5	0.21	0.0	0.00	0.52	0.04	5	204
10		18.37	18.37	33.434	23.984	392.0	0.040	5.88	109.4	1.7	0.24	0.0	0.00	0.67	0.00	10	202
10		18.37	18.37				0.040									10	203
15		17.95	17.95	33.404	24.064	384.5	0.059	5.99	110.5	2.2	0.27	0.0	0.00	0.51	1.39	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.0 N	117 16.8 W	21/10/06	2101	UTC	21 m	040	27 kn	290 01 07	1	1009.4 mb	19.9 C	18.8 C		1/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.77	18.77	33.439	23.888	400.8	0.000	5.75	107.8	2.1	0.28	0.0	0.00	1.10	0.01	0	
1		18.77	18.77	33.439	23.888	400.8	0.004	5.75	107.8	2.1	0.28	0.0	0.00	1.10	0.01	1	204
5		18.10	18.10	33.405	24.028	387.6	0.020	5.82	107.7	2.5	0.30	0.0	0.00	0.96	0.20	5	203
10		16.18	16.18	33.353	24.441	348.3	0.038	5.58	99.4	4.3	0.45	0.7	0.10	2.16	0.63	10	202
15		14.95	14.95	33.338	24.703	323.5	0.055	5.39	93.7	5.5	0.59	1.7	0.21	1.28	0.56	15	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.3 N	117 18.3 W	21/10/06	1842	UTC	65 m	050	27 kn	350 01 07	0	1010.3 mb	18.8 C	17.6 C	22m	0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.77	18.77	33.496	23.931	396.6	0.000	5.59	104.8	1.5	0.25	0.1	0.01	0.26	0.06	0	
1		18.73	18.73	33.495	23.940	395.8	0.004							0.29	0.06	1	211
2	A	18.77	18.77	33.496	23.931	396.7	0.008	5.59	104.8	1.5	0.25	0.1	0.01	0.26	0.06	2	210
7		18.14	18.14	33.456	24.057	384.9	0.027	5.72	105.9	1.6	0.32	0.0	0.00	0.30	0.14	7	209
10	ISL	17.25	17.25	33.400	24.229	368.6	0.039	5.89	107.2	2.1	0.33	0.0	0.00	0.43	0.14	10	
15	A	15.34	15.34	33.328	24.610	332.3	0.056			3.7	0.36	0.0	0.01	0.74	0.21	15	208
15		15.61	15.61	33.329	24.551	338.0	0.056	6.08	107.1	3.2	0.36	0.0	0.01	0.75	0.14	15	207
20	ISL	14.46	14.46	33.336	24.806	313.8	0.073	5.89	101.4	4.3	0.48	0.8	0.10	1.24	0.45	20	
24		13.77	13.77	33.359	24.968	298.5	0.085	5.61	95.2	5.3	0.60	1.9	0.18	1.49	0.67	24	206
30	ISL	13.18	13.18	33.375	25.100	286.1	0.102	5.11	85.7	6.9	0.76	4.8	0.22	0.97	0.52	30	
34	A	12.93	12.93	33.383	25.156	280.9	0.114	4.81	80.2	7.8	0.86	6.8	0.25	0.55	0.35	34	205
40		12.53	12.52	33.404	25.250	272.0	0.130	4.60	76.1	8.5	0.95	8.6	0.07	0.51	0.27	40	204
47	A	12.20	12.19	33.455	25.353	262.4	0.149	4.19	68.9	10.7	1.15	11.3	0.06	0.28	0.23	47	203
50	ISL	12.04	12.03	33.475	25.399	258.1	0.157	4.00	65.5	11.9	1.23	12.7	0.07	0.21	0.23	50	
54		11.86	11.85	33.497	25.450	253.3	0.167	3.78	61.7	13.4	1.32	14.3	0.10	0.14	0.22	54	202
59	A	11.78	11.77	33.512	25.477	250.9	0.180	3.67	59.8	14.2	1.38	15.1	0.13	0.06	0.34	59	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.8 N	117 23.7 W	22/10/06	0207 UTC	651 m	230 04 kn			1009.6 mb	19.8 C	18.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.20	19.20	33.493	23.820	407.2	0.000	5.51	104.2	1.6	0.23	0.1	0.00	0.22	0.03	0	
2	19.20	19.20	33.493	23.820	407.3	0.008	5.51	104.2	1.6	0.23	0.1	0.00	0.22	0.03	2	220
10 ISL	18.81	18.81	33.481	23.910	399.0	0.040	5.59	104.9	1.6	0.23	0.1	0.00	0.23	0.04	10	
12	18.60	18.60	33.474	23.957	394.6	0.048	5.63	105.2	1.6	0.23	0.1	0.00	0.23	0.04	12	219
20 ISL	17.20	17.20	33.430	24.264	365.5	0.079	5.81	105.7	1.8	0.28	0.1	0.00	0.29	0.10	20	
22	16.76	16.76	33.414	24.355	356.9	0.086	5.85	105.5	1.9	0.30	0.1	0.00	0.31	0.12	22	218
30 ISL	14.76	14.76	33.313	24.725	321.9	0.113	5.87	101.6	3.2	0.43	0.4	0.06	1.05	0.70	30	
31	14.53	14.53	33.304	24.767	317.8	0.116	5.87	101.2	3.4	0.45	0.5	0.07	1.13	0.77	31	217
41	13.54	13.53	33.309	24.977	298.1	0.147	5.61	94.7	4.7	0.54	2.3	0.08	0.91	0.55	41	216
50 ISL	13.01	13.00	33.354	25.118	284.9	0.173	5.23	87.4	6.2	0.72	5.2	0.14	0.68	0.43	50	
51	12.97	12.96	33.360	25.130	283.7	0.176	5.18	86.5	6.4	0.74	5.6	0.15	0.66	0.42	51	215
62	12.48	12.47	33.405	25.261	271.5	0.207	4.72	78.0	8.8	0.95	9.2	0.07	0.43	0.27	62	214
71	11.66	11.65	33.433	25.438	254.9	0.230	4.47	72.6	10.7	1.10	11.8	0.03	0.22	0.25	71	213
75 ISL	11.40	11.39	33.446	25.496	249.4	0.240	4.37	70.6	11.6	1.16	12.9	0.03	0.17	0.22	75	
86	10.85	10.84	33.504	25.640	235.9	0.267	4.02	64.2	14.8	1.35	15.9	0.02	0.11	0.14	86	212
100 ISL	10.31	10.30	33.658	25.854	215.8	0.299	3.35	52.9	20.6	1.66	20.3	0.01	0.04	0.07	100	
101	10.28	10.27	33.670	25.868	214.4	0.301	3.30	52.1	21.0	1.68	20.6	0.01	0.04	0.07	101	211
121	10.23	10.22	33.861	26.026	199.9	0.342	2.63	41.5	26.3	1.92	23.1	0.01	0.02	0.03	122	210
125 ISL	10.23	10.22	33.881	26.042	198.5	0.350	2.52	39.8	27.1	1.96	23.4	0.01	0.02	0.03	126	
141	10.25	10.23	33.944	26.088	194.5	0.382	2.17	34.3	29.9	2.10	24.6	0.01	0.01	0.04	142	209
150 ISL	10.19	10.17	33.990	26.134	190.3	0.399	2.04	32.2	31.1	2.15	25.2	0.01	0.01	0.04	151	
171	9.99	9.97	34.085	26.243	180.4	0.438	1.86	29.2	33.5	2.22	26.5	0.01	0.01	0.05	172	208
200	9.67	9.65	34.144	26.343	171.5	0.489	1.75	27.3	36.0	2.29	27.7	0.01	0.01	0.03	201	207
230	9.09	9.06	34.153	26.445	162.2	0.539	1.89	29.1	39.3	2.30	28.8	0.01			231	206
250 ISL	9.10	9.07	34.229	26.503	157.1	0.571	1.53	23.6	42.4	2.43	29.6	0.01			251	
270	9.10	9.07	34.294	26.554	152.7	0.602	1.13	17.4	45.5	2.57	30.4	0.00			272	205
300 ISL	8.69	8.66	34.276	26.605	148.2	0.647	1.14	17.4	48.9	2.63	31.6	0.00			302	
317	8.40	8.37	34.252	26.631	145.9	0.672	1.14	17.3	50.8	2.64	32.3	0.00			319	204
376	7.81	7.77	34.293	26.752	135.1	0.755	0.73	10.9	60.6	2.84	34.6	0.00			378	203
400 ISL	7.56	7.52	34.300	26.794	131.3	0.787	0.62	9.2	64.0	2.91	35.4	0.00			403	
434	7.20	7.16	34.307	26.851	126.2	0.831	0.49	7.2	69.0	2.99	36.6	0.00			437	202
500 ISL	6.57	6.52	34.324	26.951	117.2	0.911	0.30	4.4	81.9	3.13	38.9	0.00			503	
513	6.45	6.40	34.328	26.970	115.4	0.926	0.26	3.8	84.4	3.16	39.3	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 51.7 N	117 31.9 W	22/10/06	0557 UTC	824 m	300 04 kn			1011.7 mb	18.9 C	17.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.15	19.15	33.495	23.834	405.8	0.000	5.45	102.9	1.7	0.24	0.0	0.00	0.15	0.03	0	
2	19.15	19.15	33.495	23.834	405.9	0.008	5.45	102.9	1.7	0.24	0.0	0.00	0.15	0.03	2	220
10 ISL	18.71	18.71	33.487	23.940	396.2	0.040	5.51	103.2	1.7	0.25	0.0	0.01	0.17	0.01	10	
11	18.60	18.60	33.482	23.963	393.9	0.044	5.52	103.2	1.7	0.25	0.0	0.01	0.17	0.01	11	219
20 ISL	16.86	16.86	33.352	24.284	363.6	0.078	5.92	106.9	1.9	0.29	0.0	0.01	0.22	0.09	20	
21	16.63	16.63	33.336	24.325	359.7	0.082	5.97	107.3	1.9	0.29	0.0	0.01	0.23	0.10	21	218
30	14.81	14.81	33.229	24.650	329.0	0.113	6.17	106.9	2.6	0.33	0.0	0.00	0.35	0.16	30	217
40	13.86	13.85	33.311	24.913	304.2	0.145	5.56	94.5	4.4	0.56	2.7	0.09	0.90	0.43	40	216
50	13.08	13.07	33.371	25.117	285.0	0.174	5.14	86.0	6.4	0.75	5.9	0.15	0.64	0.35	50	215
60	12.14	12.13	33.438	25.352	262.9	0.201	4.38	71.9	9.7	1.07	11.1	0.04	0.25	0.24	60	214
70	11.44	11.43	33.503	25.532	245.8	0.227	3.95	63.9	12.9	1.30	14.7	0.02	0.12	0.18	70	213
75 ISL	11.28	11.27	33.546	25.595	240.0	0.239	3.68	59.3	14.7	1.41	16.2	0.02	0.09	0.15	75	
85	11.11	11.10	33.629	25.691	231.1	0.262	3.19	51.3	18.1	1.61	18.6	0.02	0.05	0.10	85	212
100	10.80	10.79	33.713	25.812	219.9	0.296	2.84	45.4	21.1	1.78	20.7	0.01	0.03	0.08	100	211
120	10.46	10.45	33.782	25.925	209.5	0.339	2.73	43.3	23.0	1.86	22.1	0.01	0.02	0.05	121	210
125 ISL	10.39	10.38	33.803	25.954	206.9	0.350	2.66	42.1	23.7	1.89	22.5	0.01	0.02	0.05	126	
140	10.23	10.21	33.872	26.035	199.5	0.380	2.43	38.4	26.0	2.00	23.7	0.01	0.02	0.04	141	209
150 ISL	10.14	10.12	33.921	26.089	194.6	0.400	2.28	35.9	27.3	2.06	24.5	0.01	0.01	0.04	151	
168	10.01	9.99	34.008	26.179	186.4	0.434	2.02	31.8	29.4	2.16	25.8	0.01	0.00	0.04	169	208
198	9.87	9.85	34.135	26.303	175.3	0.488	1.73	27.1	32.4	2.28	27.2	0.01	0.00	0.03	199	207
200 ISL	9.84	9.82	34.137	26.309	174.7	0.492	1.74	27.3	32.5	2.28	27.3	0.01			201	
228	9.36	9.33	34.149	26.398	166.7	0.540	1.89	29.3	34.2	2.28	28.1	0.01			229	206
250 ISL	9.14	9.11	34.177	26.456	161.6	0.576	1.76	27.2	36.4	2.34	28.9	0.01			251	
268	9.01	8.98	34.204	26.498	157.9	0.605	1.59	24.5							270	205
300 ISL	8.76	8.73	34.242	26.568	151.8	0.654	1.32	20.2	41.9	2.49	30.7	0.01			302	
318	8.61	8.58	34.258	26.604	148.6	0.681	1.18	18.0							320	204
378	7.97	7.93	34.278	26.717	138.6	0.767	0.83	12.5	52.0	2.80	33.7	0.01			380	203
400 ISL	7.78	7.74	34.285	26.751	135.6	0.797	0.73	10.9	54.4	2.85	34.4	0.01			403	
437	7.48	7.44	34.296	26.803	131.0	0.847	0.59	8.8	58.6	2.92	35.6	0.01			440	202
500 ISL	6.87	6.82	34.306	26.896	122.6	0.927	0.42	6.2	67.8	3.06	37.8	0.00			503	
513	6.74	6.69	34.309	26.917	120.8	0.943	0.38	5.6	69.7	3.09	38.2	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 40.8 N	117 52.3 W	22/10/06	1010 UTC	624 m	040 02 kn			1011.5 mb	17.8 C	16.6 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.42	18.42	33.488	24.012	388.9	0.000	5.52	102.8	1.5	0.26	0.0	0.00	0.21	0.05	0	
2		18.42	18.42	33.488	24.012	389.0	0.008	5.52	102.8	1.5	0.26	0.0	0.00	0.21	0.05	2	220
10	ISL	17.95	17.95	33.488	24.128	378.2	0.038	5.57	102.8	1.5	0.26	0.0	0.00	0.18	0.06	10	
11		17.87	17.87	33.488	24.147	376.4	0.042	5.58	102.8	1.5	0.26	0.0	0.00	0.18	0.06	11	219
20		17.64	17.64	33.469	24.189	372.7	0.076	5.61	102.9	1.5	0.26	0.0	0.00	0.25	0.09	20	218
30		15.83	15.83	33.243	24.437	349.4	0.112	5.95	105.2	1.8	0.31	0.0	0.00	0.38	0.14	30	217
40		14.64	14.63	33.274	24.721	322.5	0.146	5.72	98.8	2.7	0.43	0.8	0.10	0.65	0.37	40	216
50		13.92	13.91	33.313	24.902	305.5	0.177	5.52	93.9	3.8	0.52	1.9	0.14	0.51	0.40	50	215
60		12.81	12.80	33.370	25.170	280.2	0.206	5.00	83.2	6.5	0.79	6.7	0.14	0.43	0.31	60	214
70		12.02	12.01	33.420	25.360	262.2	0.233	4.59	75.1	8.6	0.99	10.0	0.04	0.22	0.26	70	213
75	ISL	11.72	11.71	33.457	25.445	254.3	0.246	4.28	69.6	10.5	1.14	12.2	0.04	0.17	0.22	75	
84		11.32	11.31	33.533	25.578	241.8	0.269	3.70	59.7	14.2	1.40	16.0	0.05	0.11	0.14	84	212
99		11.02	11.01	33.670	25.739	226.8	0.304	2.96	47.5	19.6	1.69	19.4	0.01	0.04	0.09	99	211
100	ISL	10.99	10.98	33.675	25.748	226.0	0.306	2.95	47.3	19.8	1.70	19.5	0.01	0.04	0.09	100	
119		10.54	10.53	33.751	25.887	213.2	0.348	2.82	44.8	21.7	1.80	21.2	0.01	0.02	0.05	120	210
125	ISL	10.49	10.48	33.793	25.929	209.3	0.360	2.68	42.5	22.9	1.86	21.9	0.01	0.02	0.05	126	
139		10.42	10.40	33.892	26.018	201.1	0.389	2.35	37.3	25.6	1.99	23.3	0.01	0.01	0.06	140	209
150	ISL	10.31	10.29	33.947	26.080	195.5	0.411	2.22	35.1	27.0	2.05	24.1	0.01	0.01	0.05	151	
170		10.08	10.06	34.018	26.175	186.8	0.449	2.09	32.9	28.8	2.11	25.1	0.01	0.00	0.03	171	208
199		9.81	9.79	34.081	26.271	178.4	0.502	1.89	29.6	31.1	2.21	26.6	0.06	0.00	0.03	200	207
200	ISL	9.80	9.78	34.084	26.275	178.0	0.504	1.89	29.6	31.2	2.21	26.7	0.06			201	
228		9.40	9.37	34.170	26.408	165.8	0.552	1.76	27.3	34.7	2.29	28.1	0.01			229	206
250	ISL	9.14	9.11	34.205	26.478	159.5	0.588	1.61	24.9	37.3	2.37	29.1	0.01			251	
268		8.95	8.92	34.222	26.522	155.6	0.616	1.48	22.8	39.4	2.44	29.8	0.01			270	205
300	ISL	8.67	8.64	34.250	26.588	149.8	0.665	1.22	18.6	43.2	2.57	30.9	0.00			302	
318		8.53	8.50	34.262	26.619	147.1	0.692	1.09	16.6	45.3	2.63	31.5	0.00			320	204
377		8.02	7.98	34.285	26.715	138.8	0.776	0.85	12.8	51.0	2.77	33.3	0.00			379	203
400	ISL	7.66	7.62	34.282	26.766	134.1	0.808	0.75	11.2	55.1	2.84	34.5	0.00			403	
437		7.10	7.06	34.276	26.841	127.1	0.856	0.60	8.8	61.9	2.94	36.4	0.00			440	202
500	ISL	6.68	6.63	34.284	26.905	121.6	0.934	0.48	7.0	68.4	3.04	37.9	0.00			503	
513		6.59	6.54	34.286	26.918	120.5	0.950	0.45	6.6	69.7	3.06	38.2	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 30.9 N	118 12.8 W	22/10/06	1647 UTC	1657 m	320 06 kn	320 02 05	1	1013.0 mb	17.3 C	16.2 C	31m	2/8 AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.05	19.05	33.516	23.876	401.9	0.000	5.46	102.9	1.7	0.23	0.1	0.00			0	
1	A	19.05	19.05	33.516	23.876	401.9	0.004	5.46	102.9	1.7	0.23	0.1	0.00			1	223
10	ISL	18.75	18.75	33.496	23.937	396.5	0.040	5.49	102.9	2.0	0.25	0.1	0.00			10	
11		18.71	18.71	33.493	23.944	395.8	0.044	5.49	102.8	2.0	0.25	0.1	0.00			11	221
11		18.72	18.72	33.499	23.946	395.6	0.044									11	222
20	A	18.57	18.57	33.480	23.970	393.7	0.079	5.53	103.3	1.9	0.25	0.1	0.00	0.22	0.06	20	220
30		17.44	17.43	33.380	24.169	374.9	0.118	5.78	105.6	2.1	0.28	0.1	0.00	0.35	0.06	30	219
40		15.17	15.16	33.259	24.595	334.5	0.153	6.06	105.8	3.0	0.35	0.1	0.00	0.55	0.17	40	218
48	A	14.23	14.22	33.284	24.815	313.7	0.179	5.82	99.7	3.4	0.46	0.3	0.02	0.83	0.47	48	217
50	ISL	13.93	13.92	33.297	24.888	306.9	0.185	5.71	97.2	3.8	0.50	1.1	0.06	0.77	0.47	50	
58		12.89	12.88	33.362	25.148	282.2	0.209	5.18	86.3	6.1	0.71	5.3	0.19	0.41	0.47	58	216
67	A	12.44	12.43	33.420	25.281	269.8	0.234	4.61	76.1	8.9	0.97	9.3	0.06	0.26	0.31	67	215
75	ISL	11.92	11.91	33.452	25.404	258.2	0.255	4.36	71.2	10.4	1.10	11.7	0.03	0.20	0.23	75	
76		11.85	11.84	33.456	25.421	256.7	0.258	4.33	70.6	10.6	1.12	12.0	0.03	0.19	0.22	76	214
86	A	11.08	11.07	33.511	25.604	239.3	0.282	3.96	63.5	13.8	1.34	15.7	0.02	0.11	0.16	86	213
100	ISL	10.61	10.60	33.605	25.761	224.7	0.315	3.50	55.6	17.6	1.56	19.0	0.01	0.06	0.09	100	
102		10.57	10.56	33.620	25.779	223.0	0.319	3.44	54.6	18.1	1.58	19.3	0.01	0.06	0.08	102	212
119	A	10.11	10.10	33.753	25.962	205.9	0.356	3.13	49.3	21.6	1.75	21.6	0.01	0.02	0.05	120	211
125	ISL	9.92	9.91	33.797	26.029	199.7	0.368	3.12	48.9	22.5	1.77	22.2	0.00	0.01	0.04	126	
130		9.78	9.77	33.828	26.077	195.2	0.378	3.12	48.8	23.1	1.79	22.7	0.00	0.01	0.03	131	210
140		9.59	9.57	33.862	26.135	189.9	0.397	3.05	47.5	24.3	1.83	23.4	0.01	0.01	0.03	141	209
150	ISL	9.36	9.34	33.909	26.209	182.9	0.416	2.96	45.9	26.5	1.89	24.4	0.01	0.01	0.03	151	
169		8.97	8.95	33.996	26.340	170.8	0.449	2.75	42.3	30.9	2.00	26.2	0.00	0.00	0.02	170	208
199		8.68	8.66	34.063	26.438	162.0	0.499	2.43	37.1	34.5	2.12	28.0	0.00	0.00	0.02	200	207
200	ISL	8.66	8.64	34.064	26.442	161.6	0.501	2.42	36.9	34.7	2.13	28.1	0.00			201	
229		8.23	8.21	34.101	26.537	153.0	0.546	2.07	31.3	41.2	2.31	30.5	0.00			230	206
250	ISL	8.10	8.07	34.129	26.579	149.3	0.578	1.82	27.4	43.6	2.40	31.5	0.00			251	
268		8.02	7.99	34.151	26.608	146.9	0.605	1.61	24.2	45.2	2.47	32.2	0.00			270	205
300	ISL	7.77	7.74	34.179	26.667	141.7	0.651	1.31	19.6	49.1	2.60	33.4	0.00			302	
318		7.61	7.58	34.191	26.700	138.8	0.676	1.17	17.4	51.5	2.67	34.1	0.00			320	204
378		7.03	6.99	34.229	26.812	128.8	0.757	0.78	11.5	60.5	2.87	36.5	0.00			380	203
400	ISL	6.91	6.87	34.236	26.835	126.9	0.785	0.70	10.3	62.7	2.92	37.0	0.00			403	
437		6.74	6.70	34.251	26.870	124.0	0.831	0.59	8.6	66.1	3.00	37.7	0.00			440	202
500	ISL	6.41	6.36	34.316	26.965	115.6	0.907	0.33	4.8	73.9	3.12	39.1	0.00			503	
513		6.34	6.29	34.329	26.985	113.9	0.921	0.28	4.1	75.5	3.15	39.4	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 20.8 N	118 33.3 W	22/10/06	1957 UTC	1347 m	320 10 kn	330 02 04	0	1012.6 mb	18.8 c	17.2 c		0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.87	18.87	33.457	23.876	401.9	0.000	5.46	102.5	1.9	0.24	0.1	0.00	0.19	0.00	0	
1		18.87	18.87	33.457	23.876	401.9	0.004	5.46	102.5	1.9	0.24	0.1	0.00	0.19	0.00	1	222
10		18.67	18.67	33.456	23.926	397.5	0.040	5.49	102.7	1.9	0.24	0.1	0.00	0.19	0.05	10	221
15		18.63	18.63	33.456	23.936	396.7	0.060	5.47	102.3	1.9	0.24	0.0	0.00	0.23	0.01	15	220
20		18.61	18.61	33.453	23.939	396.6	0.080	5.49	102.6	1.8	0.24	0.1	0.00	0.24	0.03	20	219
30		17.97	17.96	33.411	24.065	384.9	0.119	5.65	104.3	1.8	0.26	0.1	0.00	0.38	0.05	30	218
45		15.54	15.53	33.237	24.497	344.1	0.173	6.06	106.5	2.1	0.33	0.1	0.00	0.72	0.09	45	217
50	ISL	14.79	14.78	33.246	24.668	327.9	0.190	5.94	102.9	2.6	0.38	0.4	0.02	0.75	0.27	50	
55		14.16	14.15	33.275	24.823	313.2	0.206	5.75	98.3	3.3	0.45	1.0	0.05	0.79	0.43	55	216
65		13.48	13.47	33.342	25.015	295.2	0.237	5.31	89.6	4.9	0.64	3.5	0.14	0.63	0.34	65	215
75		12.56	12.55	33.414	25.253	272.7	0.265	4.63	76.6	8.0	0.94	8.8	0.05	0.34	0.24	75	214
84		11.97	11.96	33.421	25.371	261.6	0.289	4.52	73.9	9.5	1.05	11.4	0.03	0.22	0.21	84	213
94		11.26	11.25	33.487	25.553	244.4	0.314	4.11	66.2	12.8	1.27	15.0	0.01	0.14	0.12	94	212
100	ISL	10.99	10.98	33.518	25.626	237.6	0.329	3.94	63.1	14.2	1.36	16.4	0.01	0.11	0.09	100	
109		10.69	10.68	33.561	25.713	229.5	0.350	3.73	59.4	16.0	1.47	18.1	0.01	0.09	0.06	109	211
125		10.15	10.14	33.657	25.881	213.8	0.385	3.37	53.0	19.5	1.65	20.7	0.01	0.04	0.04	126	210
144		9.67	9.65	33.762	26.043	198.6	0.425	3.21	50.0	22.4	1.75	22.6	0.00	0.02	0.02	145	209
150	ISL	9.57	9.55	33.805	26.094	194.0	0.436	3.14	48.8	23.5	1.79	23.1	0.00	0.01	0.02	151	
169		9.41	9.39	33.949	26.233	181.1	0.472	2.83	43.9	27.2	1.92	24.8	0.00	0.00	0.02	170	208
199		9.56	9.54	34.170	26.381	167.7	0.524	1.89	29.5	33.1	2.23	27.4	0.00	0.00	0.02	200	207
200	ISL	9.55	9.53	34.174	26.386	167.3	0.526	1.87	29.1	33.3	2.24	27.5	0.00			201	
229		9.17	9.14	34.239	26.499	157.1	0.573	1.53	23.6	37.9	2.40	29.2	0.00			230	206
250	ISL	8.71	8.68	34.206	26.547	152.8	0.605	1.56	23.9	40.4	2.42	30.3	0.00			251	
268		8.34	8.31	34.176	26.580	149.7	0.633	1.59	24.1	42.4	2.44	31.1	0.00			270	205
300	ISL	8.21	8.18	34.249	26.657	142.9	0.680	1.15	17.4	46.7	2.62	32.2	0.00			302	
317		8.19	8.16	34.295	26.697	139.5	0.704	0.88	13.3	49.1	2.73	32.8	0.00			319	204
377		7.36	7.32	34.275	26.803	130.0	0.784	0.64	9.5	58.5	2.89	35.8	0.00			379	203
400	ISL	7.17	7.13	34.282	26.835	127.1	0.814	0.56	8.3	61.2	2.94	36.5	0.00			402	
437		6.94	6.90	34.299	26.881	123.2	0.860	0.44	6.5	65.2	3.01	37.4	0.00			440	202
500	ISL	6.53	6.48	34.324	26.956	116.6	0.936	0.31	4.5	72.1	3.11	38.8	0.00			503	
513		6.45	6.40	34.330	26.971	115.3	0.951	0.28	4.1	73.5	3.13	39.1	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 10.8 N	118 53.6 W	22/10/06	2358 UTC	1469 m	330 15 kn	290 03 08	0	1011.1 mb	18.3 c	17.0 c		0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.24	19.24	33.594	23.887	400.8	0.000	5.41	102.4	1.8	0.23	0.1	0.00	0.13	0.03	0	
2		19.24	19.24	33.594	23.887	400.9	0.008	5.41	102.4	1.8	0.23	0.1	0.00	0.13	0.03	2	221
10		19.18	19.18	33.594	23.903	399.7	0.040	5.41	102.3	1.8	0.23	0.1	0.00	0.14	0.04	10	220
20	ISL	19.15	19.15	33.592	23.909	399.4	0.080	5.42	102.4	1.7	0.23	0.1	0.00	0.16	0.05	20	
21		19.15	19.15	33.592	23.909	399.4	0.084	5.42	102.4	1.7	0.23	0.1	0.00	0.16	0.05	21	219
30		18.38	18.37	33.485	24.021	389.1	0.119	5.63	104.8	1.9	0.29	0.1	0.00	0.27	0.10	30	218
40		15.63	15.62	33.315	24.537	340.1	0.156	6.05	106.6	2.6	0.35	0.1	0.00	0.60	0.32	40	217
46		14.68	14.67				0.176									46	216
50	ISL	13.78	13.77	33.314	24.932	302.7	0.188	5.57	94.5	4.8	0.58	3.0	0.12	0.86	0.37	50	
51		13.56	13.55	33.319	24.981	298.0	0.191	5.50	92.9	5.1	0.61	3.4	0.13	0.86	0.38	51	215
60		12.85	12.84	33.377	25.167	280.4	0.217	4.94	82.3	7.5	0.94	7.7	0.11	0.45	0.32	60	214
70		12.08	12.07	33.424	25.352	263.0	0.244	4.52	74.1	9.7	1.05	11.4	0.02	0.21	0.26	70	213
75	ISL	11.73	11.72	33.442	25.432	255.5	0.257	4.38	71.2	10.7	1.12	12.7	0.02	0.15	0.23	75	
85		11.09	11.08	33.487	25.584	241.3	0.282	4.12	66.1	13.1	1.28	15.1	0.01	0.10	0.17	85	212
100		10.34	10.33	33.612	25.813	219.7	0.317	3.54	55.9	18.2	1.57	19.5	0.00	0.04	0.06	100	211
119		10.03	10.02	33.706	25.939	208.1	0.357	3.29	51.7	20.8	1.69	21.4	0.00	0.02	0.04	120	210
125	ISL	9.93	9.92	33.766	26.003	202.1	0.370	3.15	49.4	22.2	1.76	22.2	0.00	0.01	0.04	126	
139		9.70	9.68	33.903	26.149	188.6	0.397	2.83	44.2	25.6	1.91	24.1	0.00	0.00	0.03	140	209
150	ISL	9.53	9.51	33.949	26.213	182.7	0.418	2.72	42.3	27.2	1.96	25.0	0.00	0.00	0.03	151	
169		9.23	9.21	33.985	26.290	175.6	0.452	2.65	40.9	29.4	2.00	26.0	0.00	0.00	0.02	170	208
199		8.74	8.72	34.044	26.414	164.3	0.503	2.53	38.7	33.6	2.07	27.6	0.00	0.00	0.02	200	207
200	ISL	8.74	8.72	34.046	26.416	164.2	0.504	2.52	38.5	33.7	2.07	27.6	0.00			201	
228		8.68	8.66	34.108	26.474	159.2	0.549	2.12	32.4	36.8	2.23	29.0	0.00			229	206
250	ISL	8.42	8.39	34.144	26.543	153.0	0.584	1.77	26.9	41.0	2.37	30.6	0.00			251	
269		8.16	8.13	34.168	26.601	147.7	0.612	1.51	22.8	44.7	2.48	32.0	0.00			271	205
300	ISL	7.90	7.87	34.186	26.654	143.0	0.657	1.30	19.5	48.3	2.57	33.0	0.00			302	
318		7.77	7.74	34.194	26.680	140.9	0.683	1.21	18.1	50.1	2.62	33.4	0.00			320	204
378		7.26	7.22	34.263	26.807	129.4	0.764	0.70	10.4	59.2	2.89	35.8	0.00			380	203
400	ISL	7.09	7.05	34.270	26.837	126.9	0.792	0.60	8.8	61.9	2.93	36.5	0.00			403	
437		6.83	6.79	34.278	26.879	123.2	0.839	0.48	7.0	66.0	2.98	37.6	0.00			440	202
500	ISL	6.55	6.50	34.319	26.949	117.3	0.914	0.31	4.5	71.6	3.09	38.8	0.00			503	
513		6.49	6.44	34.327	26.964	116.1	0.929	0.28	4.1	72.7	3.11	39.0	0.00			516	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 0.8 N	119 14.0 W	23/10/06	0356	UTC	1589 m	320	13 kn			1011.9 mb	18.0 C	16.7 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.78	18.78	33.508	23.938	396.0	0.000	5.43	101.8	1.7	0.26	0.0	0.00	0.12	0.04	0	
1		18.78	18.78	33.508	23.938	396.0	0.004	5.43	101.8	1.7	0.26	0.0	0.00	0.12	0.04	1	224
10	ISL	18.79	18.79	33.509	23.936	396.5	0.040	5.41	101.5	1.7	0.26	0.0	0.01	0.13	0.03	10	
11		18.79	18.79	33.509	23.936	396.5	0.044	5.41	101.5	1.7	0.26	0.0	0.01	0.13	0.03	11	223
16		18.79	18.79	33.514	23.940	396.3	0.063	5.41	101.5	1.9	0.26	0.0	0.00	0.14	0.04	16	222
20		18.78	18.78	33.517	23.945	396.0	0.079	5.43	101.8	1.8	0.26	0.0	0.00	0.14	0.04	20	221
26		18.54	18.54	33.469	23.969	393.9	0.103	5.47	102.1	1.8	0.26	0.0	0.00	0.17	0.05	26	220
30		17.99	17.98	33.439	24.082	383.3	0.118	5.62	103.8	1.6	0.27	0.0	0.00	0.23	0.08	30	219
35		16.65	16.64	33.359	24.339	358.9	0.137	5.92	106.5	1.6	0.31	0.0	0.00	0.28	0.17	35	218
41		15.89	15.88	33.352	24.507	343.0	0.158	5.97	105.8	1.9	0.33	0.0	0.00	0.38	0.22	41	217
45		15.48	15.47	33.344	24.593	334.9	0.172	5.90	103.7	2.4	0.36	0.1	0.02	0.70	0.50	45	216
50		14.76	14.75	33.333	24.741	320.9	0.188	5.68	98.3	3.3	0.47	1.3	0.15	0.84	0.57	50	215
60		14.10	14.09	33.302	24.857	310.1	0.220	5.49	93.8	4.1	0.58	3.1	0.19	0.67	0.42	60	214
71		12.31	12.30	33.439	25.320	266.1	0.251	4.56	75.1	9.2	1.03	10.9	0.03	0.20	0.29	71	213
75	ISL	11.91	11.90	33.462	25.414	257.3	0.262	4.38	71.5	10.4	1.13	12.5	0.02	0.17	0.24	75	
85		11.19	11.18	33.499	25.575	242.1	0.287	4.06	65.3	13.1	1.30	15.4	0.01	0.10	0.13	85	212
100		10.19	10.18	33.612	25.838	217.2	0.321	3.57	56.2	17.8	1.57	19.8	0.01	0.04	0.07	100	211
120		9.61	9.60	33.723	26.022	200.1	0.363	3.28	51.0	21.7	1.74	22.4	0.01	0.01	0.03	121	210
125	ISL	9.55	9.54	33.752	26.055	197.1	0.373	3.18	49.4	22.6	1.78	23.0	0.01	0.01	0.03	126	
141		9.45	9.43	33.843	26.143	189.1	0.404	2.83	43.9	25.5	1.91	24.8	0.01	0.01	0.02	142	209
150	ISL	9.36	9.34	33.893	26.197	184.1	0.421	2.64	40.9	27.3	1.98	25.7	0.01	0.01	0.02	151	
169		9.16	9.14	33.983	26.300	174.7	0.455	2.30	35.5	30.7	2.10	27.3	0.01	0.00	0.03	170	208
199		8.90	8.88	34.057	26.399	165.8	0.506	2.04	31.3	34.3	2.22	28.9	0.00	0.00	0.02	200	207
200	ISL	8.89	8.87	34.060	26.403	165.4	0.507	2.03	31.1	34.5	2.23	29.0	0.00			201	
228		8.45	8.43	34.131	26.527	154.0	0.552	1.65	25.1	40.3	2.40	31.1	0.00			229	206
250	ISL	8.18	8.15	34.153	26.586	148.7	0.585	1.47	22.2	43.7	2.48	32.2	0.00			251	
268		7.98	7.95	34.163	26.624	145.4	0.612	1.36	20.4	46.1	2.53	32.9	0.00			270	205
300	ISL	7.64	7.61	34.196	26.700	138.6	0.657	1.12	16.7	50.8	2.65	34.2	0.00			302	
317		7.47	7.44	34.211	26.736	135.3	0.681	1.00	14.9	53.3	2.71	34.8	0.00			319	204
380		6.80	6.76	34.230	26.844	125.6	0.763	0.68	10.0	63.3	2.90	37.3	0.00			382	203
400	ISL	6.68	6.64	34.245	26.873	123.1	0.788	0.59	8.6	65.9	2.95	37.8	0.00			403	
438		6.49	6.45	34.275	26.922	118.9	0.834	0.44	6.4	70.2	3.04	38.7	0.00			441	202
500	ISL	6.19	6.15	34.297	26.979	114.1	0.906	0.33	4.8	75.7	3.11	39.8	0.00			503	
514		6.12	6.07	34.302	26.992	113.0	0.922	0.31	4.5	77.0	3.13	40.1	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 50.8 N	119 34.4 W	23/10/06	0821	UTC	1891 m	330	08 kn			1012.0 mb	18.1 C	16.6 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.92	18.92	33.730	24.072	383.2	0.000	5.44	102.4	1.7	0.23	0.1	0.00	0.24	0.07	0	
2		18.92	18.92	33.730	24.072	383.2	0.008	5.44	102.4	1.7	0.23	0.1	0.00	0.24	0.07	2	220
10	ISL	18.92	18.92	33.715	24.061	384.6	0.038	5.44	102.4	1.6	0.23	0.1	0.00	0.26	0.05	10	
11		18.92	18.92	33.713	24.060	384.8	0.042	5.44	102.4	1.6	0.23	0.1	0.00	0.26	0.05	11	219
20	ISL	18.89	18.89	33.707	24.063	384.8	0.077	5.44	102.4	1.7	0.23	0.1	0.00	0.30	0.09	20	
21		18.89	18.89	33.707	24.063	384.8	0.081	5.44	102.4	1.7	0.23	0.1	0.00	0.30	0.09	21	218
30	ISL	15.00	15.00	33.515	24.829	312.0	0.112	5.78	100.7	4.5	0.51	1.8	0.06	1.29	0.78	30	
31		14.52	14.52	33.504	24.924	303.0	0.115	5.78	99.7	4.9	0.55	2.0	0.07	1.37	0.84	31	217
40		12.62	12.61	33.498	25.306	266.7	0.141	4.66	77.3	9.3	1.03	9.8	0.18	0.53	0.47	40	216
50	ISL	11.64	11.63	33.506	25.498	248.7	0.167	4.07	66.1	12.4	1.27	14.6	0.04	0.20	0.30	50	
51		11.58	11.57	33.508	25.510	247.5	0.169	4.03	65.4	12.7	1.29	14.9	0.02	0.19	0.29	51	215
60		10.95	10.94	33.566	25.670	232.5	0.191	3.62	58.0	15.9	1.49	18.1	0.01	0.11	0.14	60	214
70		10.62	10.61	33.611	25.763	223.8	0.213	3.41	54.2	17.8	1.58	19.5	0.01	0.09	0.13	70	213
75	ISL	10.47	10.46	33.636	25.809	219.6	0.225	3.29	52.1	18.8	1.64	20.3	0.01	0.08	0.11	75	
85		10.18	10.17	33.691	25.901	210.9	0.246	3.05	48.1	21.0	1.75	22.0	0.01	0.06	0.08	85	212
100		9.71	9.70	33.793	26.060	196.1	0.277	2.76	43.1	24.6	1.90	24.4	0.01	0.02	0.05	100	211
120		9.30	9.29	33.930	26.235	179.9	0.314	2.40	37.1	29.1	2.06	26.7	0.01	0.01	0.03	121	210
125	ISL	9.23	9.22	33.957	26.267	176.9	0.323	2.33	36.0	30.0	2.09	27.1	0.01	0.01	0.03	126	
140		9.06	9.04	34.021	26.345	169.8	0.349	2.14	33.0	32.5	2.17	28.2	0.00	0.00	0.03	141	209
150	ISL	8.96	8.94	34.049	26.383	166.4	0.366	2.04	31.3	33.7	2.21	28.7	0.00	0.00	0.03	151	
170		8.79	8.77	34.090	26.442	161.1	0.399	1.89	28.9	35.7	2.27	29.6	0.01	0.00	0.03	171	208
199		8.56	8.54	34.151	26.526	153.6	0.444	1.70	25.9	39.5	2.37	30.5	0.00	0.01	0.02	200	207
200	ISL	8.54	8.52	34.149	26.527	153.5	0.446	1.71	26.0	39.6	2.37	30.5	0.00			201	
229		7.88	7.86	34.092	26.582	148.6	0.490	1.95	29.2	42.8	2.35	31.4	0.00			230	206
250	ISL	7.55	7.53	34.091	26.629	144.3	0.520	1.86	27.7	46.3	2.42	32.4	0.00			251	
269		7.34	7.31	34.108	26.673	140.4	0.547	1.66	24.6	49.7	2.51	33.5	0.00			271	205
300	ISL	7.12	7.09	34.153	26.739	134.5	0.590	1.24	18.3	55.1	2.68	35.2	0.00			302	
318		7.04	7.01	34.184	26.775	131.3	0.614	0.99	14.6	58.0	2.78	36.0	0.00			320	204
377		6.83	6.79	34.263	26.866	123.5	0.689	0.55	8.1	64.3	2.96	37.4	0.00			379	203
400	ISL	6.62	6.58	34.273	26.903	120.2	0.717	0.47	6.9	67.7	3.01	38.2	0.00			403	
437		6.29	6.25	34.284	26.955	115.5	0.761	0.38	5.5	73.0	3.08	39.3	0.00			440	202
500	ISL	6.12	6.08	34.334	27.017	110.4	0.832	0.25	3.6	77.7	3.16	40.0	0.00			503	
513		6.08	6.03	34.344	27.030	109.3	0.846	0.22	3.2	78.7	3.18	40.1	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 30.6 N	120 14.5 W	23/10/06	1457 UTC	3934 m	340 13 kn	330 03 08	1	1012.1 mb	17.0 C	16.0 C		6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.84	17.84	33.457	24.131	377.6	0.000	5.50	101.3	1.1	0.28	0.1	0.00			0	
2		17.84	17.84	33.457	24.131	377.7	0.008	5.50	101.3	1.1	0.28	0.1	0.00			2	221
10	ISL	17.84	17.84	33.459	24.133	377.8	0.038	5.49	101.1	1.1	0.29	0.1	0.00			10	
11		17.84	17.84	33.459	24.133	377.8	0.042	5.49	101.1	1.1	0.29	0.1	0.00	0.18	0.05	11	220
20	ISL	17.73	17.73	33.448	24.151	376.3	0.075	5.52	101.4	1.1	0.28	0.1	0.00	0.20	0.04	20	
21		17.72	17.72	33.448	24.154	376.1	0.079	5.52	101.4	1.1	0.28	0.1	0.00	0.20	0.04	21	219
30	ISL	17.61	17.60	33.486	24.210	371.1	0.113	5.57	102.1	0.9	0.28	0.1	0.00	0.23	0.06	30	
31		17.60	17.59	33.490	24.215	370.6	0.117	5.58	102.3	0.9	0.28	0.1	0.00	0.23	0.06	31	218
40		15.04	15.03	33.204	24.581	335.9	0.148	5.98	104.1	2.0	0.36	0.1	0.01	0.46	0.22	40	217
45		14.31	14.30	33.175	24.714	323.3	0.165	5.88	100.8	2.3	0.43	0.7	0.08	0.66	0.38	45	216
50		13.73	13.72	33.170	24.831	312.3	0.181	5.83	98.7	2.8	0.46	1.3	0.12	0.53	0.30	50	215
60		13.15	13.14	33.225	24.991	297.3	0.211	5.55	92.9	4.0	0.60	3.7	0.19	0.39	0.29	60	214
70		12.71	12.70	33.368	25.188	278.7	0.240	5.03	83.5	6.4	0.83	8.2	0.05	0.30	0.23	70	213
75	ISL	12.28	12.27	33.402	25.297	268.4	0.254	4.83	79.5	7.7	0.93	9.9	0.04	0.23	0.21	75	
85		11.39	11.38	33.444	25.496	249.6	0.280	4.57	73.8	10.0	1.07	12.4	0.02	0.12	0.18	85	212
100		10.71	10.70	33.509	25.668	233.5	0.316	4.54	72.3	11.5	1.13	13.6	0.01	0.09	0.12	100	211
120		10.07	10.06	33.689	25.919	210.0	0.360	3.27	51.4	20.3	1.68	21.3	0.01	0.02	0.05	121	210
125	ISL	9.94	9.93	33.725	25.969	205.3	0.371	3.15	49.4	21.4	1.74	22.1	0.01	0.02	0.05	126	
139		9.62	9.60	33.810	26.089	194.2	0.399	3.01	46.9	23.6	1.82	23.5	0.01	0.01	0.04	140	209
150	ISL	9.46	9.44	33.859	26.154	188.2	0.420	2.91	45.2	25.1	1.87	24.3	0.01	0.01	0.04	151	
169		9.27	9.25	33.925 D	26.236	180.7	0.455									170	208
199		9.00	8.98	34.024	26.358	169.7	0.507	2.45	37.7	31.3	2.07	27.1	0.01	0.00	0.03	200	207
200	ISL	8.99	8.97	34.027	26.362	169.4	0.509	2.44	37.5	31.5	2.08	27.2	0.01			201	
228		8.73	8.71	34.108	26.466	159.9	0.555	2.02	30.9	36.1	2.24	29.1	0.00			229	206
250	ISL	8.52	8.49	34.157	26.537	153.5	0.589	1.69	25.7	39.9	2.38	30.5	0.00			251	
268		8.35	8.32	34.187	26.587	149.1	0.617	1.45	22.0	43.0	2.48	31.5	0.00			270	205
300	ISL	8.01	7.98	34.213	26.659	142.6	0.663	1.17	17.6	47.7	2.61	33.0	0.00			302	
317		7.82	7.79	34.218	26.691	139.8	0.687	1.07	16.0	50.0	2.66	33.7	0.00			319	204
377		7.14	7.10	34.219	26.789	131.0	0.769	0.82	12.1	58.2	2.80	36.0	0.00			379	203
400	ISL	6.98	6.94	34.232	26.822	128.2	0.798	0.71	10.4	60.8	2.86	36.7	0.00			402	
437		6.76	6.72	34.258	26.873	123.8	0.845	0.55	8.0	64.9	2.96	37.6	0.00			440	202
500	ISL	6.27	6.23	34.290	26.963	115.7	0.920	0.36	5.2	74.0	3.07	39.3	0.00			503	
514		6.16	6.11	34.298	26.984	113.8	0.937	0.32	4.6	76.0	3.10	39.7	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 11.5 N	120 53.9 W	23/10/06	1925 UTC	3876 m	330 11 kn	340 03 07	1	1012.8 mb	18.5 C	16.0 C	35m	5/8	AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.06	19.06	33.376	23.766	412.3	0.000	5.38	101.4	1.8	0.26	0.0	0.00	0.10	0.02	0	
2	A	19.06	19.06	33.376	23.766	412.4	0.008	5.38	101.4	1.8	0.26	0.0	0.00	0.10	0.02	2	224
10	ISL	19.03	19.03	33.375	23.774	412.0	0.041	5.38	101.3	1.8	0.26	0.0	0.00	0.11	0.01	10	
13		19.02	19.02	33.374	23.776	411.9	0.054	5.38	101.3	1.8	0.26	0.0	0.00	0.12	0.01	13	223
20	ISL	19.00	19.00	33.374	23.781	411.7	0.082	5.38	101.2	1.8	0.27	0.0	0.00	0.13	0.01	20	
23		18.99	18.99	33.375	23.784	411.5	0.095			1.7	0.26	0.0	0.00	0.11	0.03	23	222
23	A	18.99	18.99	33.374	23.784	411.5	0.095	5.38	101.2	1.8	0.27	0.0	0.00	0.13	0.01	23	221
30	ISL	18.98	18.97	33.373	23.786	411.6	0.124	5.38	101.2	1.8	0.27	0.0	0.00	0.13	0.02	30	
39		18.96	18.95	33.372	23.790	411.5	0.161	5.38	101.2	1.8	0.26	0.0	0.00	0.12	0.04	39	220
50	ISL	17.75	17.74	33.265	24.007	391.1	0.205	5.70	104.7	1.8	0.27	0.0	0.00	0.16	0.03	50	
54	A	17.15	17.14	33.225	24.120	380.4	0.220	5.83	105.8	1.8	0.27	0.0	0.00	0.18	0.03	54	219
64		15.59	15.58	33.181	24.444	349.7	0.257	6.04	106.2	1.7	0.29	0.0	0.00	0.19	0.04	64	218
75	A	14.57	14.56	33.215	24.691	326.4	0.294	5.92	102.0	1.9	0.30	0.0	0.00	0.23	0.13	75	217
85		14.28	14.27	33.293	24.813	315.0	0.326									85	216
86		14.27	14.26	33.296	24.818	314.6	0.329	5.71	97.9	2.4	0.34	0.1	0.02	0.29	0.21	86	215
97	A	13.78	13.77	33.390	24.992	298.3	0.363	5.42	92.0	3.7	0.50	1.9	0.13	0.30	0.23	97	214
100	ISL	13.57	13.56	33.391	25.036	294.2	0.372	5.36	90.6	4.0	0.53	2.5	0.12	0.28	0.25	100	
106		13.04	13.03	33.382	25.135	284.8	0.389	5.23	87.4	4.8	0.60	4.2	0.10	0.23	0.29	106	213
116		11.75	11.74	33.386	25.386	260.9	0.416	4.88	79.4	7.3	0.86	8.7	0.02	0.18	0.22	116	212
125		11.18	11.16	33.412	25.510	249.2	0.439	4.58	73.6	10.4	1.09	12.3	0.01	0.13	0.13	126	211
134	A	10.89	10.87	33.423	25.570	243.6	0.461	4.52	72.2	11.1	1.12	13.0	0.01	0.15	0.12	135	210
150		9.85	9.83	33.603	25.890	213.4	0.498	3.82	59.7	18.3	1.56	19.5	0.00	0.03	0.04	151	209
165		9.46	9.44	33.745	26.065	197.0	0.529	3.46	53.7	22.4	1.71	22.1	0.00	0.00	0.03	166	208
194		9.12	9.10	33.936	26.270	178.0	0.583	3.01	46.4	27.6	1.88	24.7	0.00	0.00	0.02	195	207
200	ISL	9.03	9.01	33.962	26.304	174.8	0.594	2.94	45.2	28.7	1.91	25.2	0.00			201	
229		8.57	8.55	34.046	26.442	162.1	0.643	2.64	40.2	34.0	2.06	27.4	0.00			230	206
250	ISL	8.29	8.26	34.069	26.503	156.6	0.676	2.42	36.6	37.5	2.16	28.8	0.00			251	
269		8.06	8.03	34.077	26.544	152.9	0.705	2.22	33.4	40.6	2.25	30.0	0.00			270	205
300	ISL	7.66	7.63	34.096	26.618	146.3	0.752	1.91	28.5	45.8	2.40	31.9	0.00			302	
319		7.44	7.41	34.108	26.659	142.6	0.779	1.73	25.7	48.9	2.49	32.9	0.00			321	204
377		6.93	6.89	34.147	26.761	133.4	0.859	1.25	18.3	57.3	2.70	35.4	0.00			379	203
400	ISL	6.72	6.68	34.164	26.803	129.7	0.890	1.07	15.6	61.1	2.78	36.4	0.00			402	
437		6.41	6.37	34.192	26.867	123.9	0.937	0.82	11.9	67.2	2.91	37.8	0.00			440	202
500	ISL	5.99	5.95	34.230	26.951	116.4	1.012	0.57	8.2	76.2	3.05	39.5	0.00			503	
513		5.90	5.86	34.238	26.969	114.8	1.027	0.52	7.4	78.1	3.08	39.9	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 50.8 N	121 35.4 W	24/10/06	0056 UTC	4097 m	330 09 kn	320 04 10	1	1011.9 mb	17.8 C	15.1 C		3/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.49	18.49	33.323	23.869	402.6	0.000	5.46	101.7	1.8	0.28	0.1	0.00	0.14	0.00	0	
2		18.49	18.49	33.323	23.869	402.6	0.008	5.46	101.7	1.8	0.28	0.1	0.00	0.14	0.00	2	220
10	ISL	18.37	18.37	33.325	23.900	399.9	0.040	5.47	101.7	1.8	0.28	0.1	0.00	0.14	0.01	10	
16		18.24	18.24	33.326	23.933	397.0	0.064	5.49	101.8	1.8	0.28	0.1	0.00	0.14	0.02	16	219
20	ISL	18.18	18.18	33.326	23.948	395.7	0.080	5.50	101.9	1.7	0.28	0.1	0.00	0.17	0.02	20	
30		18.02	18.01	33.326	23.988	392.3	0.119	5.52	101.9	1.5	0.28	0.1	0.00	0.24	0.01	30	218
45		15.40	15.39	33.191	24.493	344.5	0.175	6.06	106.2	1.7	0.28	0.1	0.00	0.24	0.04	45	217
50	ISL	15.09	15.08	33.227	24.588	335.5	0.192	6.03	105.0	1.7	0.28	0.1	0.00	0.19	0.14	50	
55		14.90	14.89	33.264	24.658	329.0	0.208	5.96	103.4	1.7	0.29	0.1	0.00	0.15	0.21	55	216
65		14.43	14.42	33.247	24.745	320.9	0.241	5.89	101.2	2.1	0.32	0.1	0.00	0.28	0.06	65	215
75		14.22	14.21	33.352	24.871	309.2	0.272	5.68	97.3	2.5	0.34	0.2	0.02	0.40	0.13	75	214
85		13.56	13.55	33.410	25.052	292.2	0.302	5.26	88.9	4.5	0.59	4.2	0.04	0.37	0.14	85	213
95		12.56	12.55	33.423	25.260	272.5	0.330	4.80	79.5	8.1	0.95	10.0	0.02	0.17 A	0.12 A	95	212
100	ISL	12.16	12.15	33.431	25.343	264.6	0.344	4.67	76.7	9.0	1.02	11.3	0.01	0.12	0.11	100	
110		11.46	11.45	33.457	25.494	250.5	0.370	4.51	72.9	10.4	1.10	12.8	0.01	0.08	0.08	110	211
125		10.49	10.48	33.532	25.725	228.6	0.406	4.29	68.0	13.4	1.27	15.6	0.01	0.07	0.04	126	210
144		9.80	9.78	33.642	25.928	209.6	0.447	4.08	63.7	16.9	1.43	18.3	0.00	0.03	0.03	145	209
150	ISL	9.67	9.65	33.676	25.976	205.1	0.460	3.97	61.8	18.1	1.49	19.2	0.00	0.02	0.03	151	
169		9.35	9.33	33.783	26.113	192.5	0.497	3.54	54.8	22.2	1.68	22.0	0.00	0.01	0.02	170	208
199		8.81	8.79	33.955	26.333	172.0	0.552	2.74	41.9	30.4	2.00	26.7	0.00	0.00	0.02	200	207
200	ISL	8.79	8.77	33.958	26.339	171.4	0.554	2.73	41.8	30.6	2.01	26.8	0.00			201	
229		8.31	8.29	34.022	26.463	160.0	0.602			35.7	2.11	28.7	0.00			230	206
250	ISL	8.01	7.98	34.046	26.527	154.2	0.635	2.23	33.5	39.5	2.21	30.0	0.00			251	
269		7.77	7.74	34.060	26.573	150.0	0.664	2.14	32.0	43.0	2.30	31.2	0.00			270	205
300	ISL	7.42	7.39	34.085	26.644	143.7	0.709	1.78	26.4	49.6	2.46	33.1	0.00			302	
319		7.22	7.19	34.099	26.683	140.1	0.736	1.56	23.0	53.4	2.55	34.2	0.00			321	204
377		6.67	6.64	34.148	26.797	129.8	0.815	0.99	14.4	61.4	2.81	37.1	0.00			379	203
400	ISL	6.42	6.38	34.156	26.837	126.2	0.844	0.86	12.5	65.5	2.88	38.1	0.00			402	
439		6.03	5.99	34.170	26.898	120.6	0.892	0.69	9.9	72.3	2.98	39.4	0.00			442	202
500	ISL	5.77	5.73	34.226	26.975	113.9	0.964	0.46	6.6	79.4	3.10	40.6	0.00			503	
515		5.70	5.66	34.240	26.995	112.2	0.981	0.40	5.7	81.2	3.13	40.9	0.00			518	201

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

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 30.8 N	122 15.5 W	24/10/06	0629 UTC	4254 m	330 12 kn			1012.9 mb	17.7 C	15.0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.25	18.25	33.248	23.871	402.4	0.000	5.47	101.4	1.6	0.29	0.0	0.00	0.08	0.02	0	
2		18.25	18.25	33.248	23.871	402.5	0.008	5.47	101.4	1.6	0.29	0.0	0.00	0.08	0.02	2	220
10	ISL	18.15	18.15	33.238	23.888	401.1	0.040	5.49	101.6	1.6	0.29	0.0	0.00	0.09	0.03	10	
15		18.05	18.05	33.231	23.907	399.4	0.060	5.51	101.7	1.6	0.29	0.0	0.00	0.10	0.03	15	219
20	ISL	18.00	18.00	33.236	23.923	398.1	0.080	5.53	102.0	1.6	0.29	0.0	0.00	0.12	0.03	20	
30		17.67	17.66	33.232	24.001	391.0	0.120	5.56	101.9	1.5	0.30	0.0	0.01	0.17	0.02	30	218
45		16.06	16.05	33.142	24.308	362.1	0.176	5.97	106.0	1.4	0.31	0.0	0.01	0.19	0.05	45	217
50	ISL	15.44	15.43	33.128	24.435	350.1	0.194	6.01	105.4	1.4	0.31	0.0	0.01	0.20	0.06	50	
60		14.35	14.34	33.152	24.689	326.1	0.228	6.10	104.6	1.5	0.31	0.0	0.00	0.22	0.07	60	216
74		13.73	13.72	33.323	24.950	301.6	0.272	5.76	97.6	2.2	0.36	0.1	0.06	0.35	0.27	74	215
75	ISL	13.70	13.69	33.327	24.959	300.8	0.275	5.74	97.2	2.6	0.37	0.2	0.08	0.35	0.27	75	
84		13.32	13.31	33.343	25.049	292.5	0.301	5.51	92.6	6.0	0.52	2.1	0.20	0.35	0.21	84	214
95		12.46	12.45	33.380	25.246	273.8	0.332	4.94	81.6	7.3	0.92	9.1	0.06	0.20	0.23	95	213
100	ISL	12.11	12.10	33.409	25.336	265.4	0.346	4.77	78.2	8.6	1.03	10.9	0.03	0.17	0.19	100	
105		11.81	11.80	33.438	25.415	257.9	0.359	4.63	75.4	9.9	1.10	12.2	0.02	0.15	0.14	105	212
114		11.43	11.42	33.465	25.506	249.4	0.382	4.43	71.6	11.5	1.19	13.7	0.02	0.11	0.10	114	211
124		10.91	10.89	33.507	25.632	237.5	0.406	4.10	65.5	13.8	1.33	15.9	0.01	0.05	0.05	125	210
125	ISL	10.86	10.84	33.512	25.645	236.3	0.409	4.07	65.0	14.1	1.35	16.1	0.01	0.05	0.05	126	
139		10.18	10.16	33.589	25.823	219.6	0.441	3.67	57.8	17.6	1.56	19.3	0.01	0.02	0.04	140	209
150	ISL	9.80	9.78	33.664	25.945	208.1	0.464	3.47	54.2	20.2	1.67	21.2	0.01	0.01	0.04	151	
164		9.41	9.39	33.761	26.086	195.0	0.492	3.34	51.7	23.1	1.76	22.8	0.01	0.00	0.03	165	208
194		8.70	8.68	33.923	26.325	172.6	0.547	3.50	53.4	27.9	1.77	23.9	0.01	0.00	0.01	195	207
200	ISL	8.61	8.59	33.942	26.354	169.9	0.558	3.45	52.6	29.0	1.79	24.3	0.01			201	
229		8.23	8.21	34.003	26.460	160.3	0.606	3.00	45.3	34.8	1.97	26.9	0.00			230	206
250	ISL	7.93	7.90	34.038	26.533	153.6	0.638	2.52	37.8	40.3	2.16	29.4	0.00			251	
268		7.68	7.65	34.061	26.587	148.6	0.666	2.12	31.6	45.0	2.33	31.5	0.00			269	205
300	ISL	7.24	7.21	34.087	26.671	141.0	0.712	1.70	25.1	51.0	2.51	33.8	0.00			302	
318		7.01	6.98	34.098	26.711	137.3	0.737	1.53	22.5	53.8	2.59	34.7	0.00			320	204
377		6.53	6.50	34.132	26.803	129.2	0.816	1.10	16.0	62.3	2.80	37.0	0.00			379	203
400	ISL	6.31	6.27	34.150	26.846	125.2	0.845	0.92	13.3	66.8	2.88	38.1	0.00			402	
437		5.97	5.93	34.183	26.916	118.9	0.890	0.67	9.6	73.9	3.00	39.6	0.00			440	202
500	ISL	5.68	5.64	34.234	26.993	112.2	0.963	0.45	6.4	81.3	3.11	40.8	0.00			503	
515		5.61	5.57	34.246	27.011	110.6	0.980	0.40	5.7	83.0	3.13	41.1	0.00			518	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 10.8 N	122 55.4 W	24/10/06	1208 UTC	3765 m	320 09 kn			1012.7 mb	18.0 C	15.0 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.47	19.47	33.555	23.798	409.3	0.000	5.33	101.3	1.7	0.24	0.0	0.00	0.08	0.02	0	
2		19.47	19.47	33.555	23.799	409.3	0.008	5.33	101.3	1.7	0.24	0.0	0.00	0.08	0.02	2	221
10	ISL	19.47	19.47	33.556	23.800	409.5	0.041	5.33	101.3	1.7	0.24	0.0	0.00	0.08	0.02	10	
16		19.47	19.47	33.558	23.802	409.6	0.066	5.33	101.3	1.7	0.24	0.0	0.00	0.08	0.02	16	220
20	ISL	19.47	19.47	33.558	23.802	409.7	0.082	5.33	101.3	1.7	0.24	0.0	0.00	0.08	0.02	20	
30	ISL	19.47	19.46	33.559	23.803	410.0	0.123	5.33	101.3	1.7	0.24	0.0	0.00	0.09	0.02	30	
31		19.47	19.46	33.559	23.803	410.0	0.127	5.33	101.3	1.7	0.24	0.0	0.00	0.09	0.02	31	219
46		18.57	18.56	33.620	24.078	384.3	0.187	5.70	106.5	1.7	0.22	0.0	0.00	0.16	0.01	46	218
50	ISL	18.11	18.10	33.620	24.192	373.5	0.202	5.75	106.5	1.7	0.22	0.0	0.00	0.15	0.02	50	
60		16.92	16.91	33.606	24.467	347.6	0.238	5.82	105.4	1.8	0.23	0.0	0.00	0.13	0.04	60	217
75		15.81	15.80	33.546	24.676	328.0	0.288	5.90	104.5	1.8	0.24	0.0	0.00	0.19	0.07	75	216
75		15.80	15.79	33.550	24.681	327.5	0.288	5.89	104.3	1.8	0.24	0.0	0.00	0.18	0.07	75	215
95		15.47	15.46	33.695	24.867	310.4	0.352	5.66	99.6	2.1	0.24	0.0	0.00	0.23	0.20	95	214
100		14.90	14.89	33.687	24.985	299.2	0.367	5.37	93.4	2.9	0.35	0.7	0.09	0.26	0.31	100	213
105		14.86	14.84	33.740	25.035	294.6	0.382	5.36	93.2	2.9	0.35	0.9	0.10	0.34	0.21	105	212
115		14.53	14.51	33.774	25.132	285.6	0.411	5.33	92.1	3.2	0.36	1.7	0.07	0.21	0.27	115	211
125		13.56	13.54	33.691	25.271	272.6	0.439	5.11	86.5	4.7	0.54	4.4	0.02	0.12	0.25	125	210
139		11.84	11.82	33.605	25.540	246.9	0.476	4.85	79.1	8.2	0.84	9.2	0.01	0.08	0.12	140	209
150	ISL	10.92	10.90	33.606	25.708	230.9	0.502	4.68	74.9	11.0	1.03	12.3	0.00	0.05	0.06	151	
164		10.11	10.09	33.653	25.885	214.2	0.533	4.49	70.6	14.4	1.22	15.5	0.00	0.02	0.02	165	208
195		9.26	9.24	33.824	26.160	188.5	0.595	4.18	64.6	20.8	1.46	19.7	0.00	0.00	0.01	196	207
200	ISL	9.15	9.13	33.846	26.194	185.3	0.605	4.09	63.0	22.0	1.50	20.4	0.00			201	
229		8.65	8.63	33.954	26.358	170.1	0.656	3.45	52.6	29.1	1.77	24.3	0.00			230	206
250	ISL	8.39	8.36	34.011	26.443	162.4	0.691	2.97	45.0	33.8	1.95	26.8	0.00			251	
269		8.16	8.13	34.046	26.505	156.7	0.722	2.57	38.8	38.0	2.11	28.8	0.00			270	205
300	ISL	7.58	7.55	34.063	26.604	147.6	0.769	2.11	31.4	45.4	2.33	31.8	0.00			302	
319		7.25	7.22	34.067	26.654	142.9	0.796	1.89	27.9	49.6	2.45	33.3	0.00			321	204
378		6.84	6.80	34.127	26.758	133.7	0.878	1.32	19.3	57.7	2.67	35.6	0.00			380	203
400	ISL	6.56	6.52	34.129	26.797	130.1	0.907	1.18	17.2	61.8	2.75	36.7	0.00			402	
437		6.10	6.06	34.130	26.858	124.5	0.954	0.98	14.1	68.9	2.86	38.5	0.00			440	202
500	ISL	5.74	5.70	34.179	26.942	117.0	1.030	0.67	9.6	77.7	3.01	40.1	0.00			503	
514		5.66	5.62	34.190	26.960	115.4	1.046	0.60	8.5	79.7	3.04	40.5	0.00			517	201

RV ROGER REVELLE CALCOFI CRUISE 0610 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
29 50.9 N	123 35.2 W	24/10/06	1756 UTC	4131 m	310 09 kn	320 03 11	1	1014.4 mb	19.6 C	15.8 C	31m	5/8 AC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.48	19.48	33.492	23.748	414.1	0.000	5.37	102.0	1.7	0.26	0.0	0.00	0.10	0.02	0	
2	A	19.48	19.48	33.492	23.748	414.2	0.008	5.37	102.0	1.7	0.26	0.0	0.00	0.10	0.02	2	224
10	ISL	19.48	19.48	33.492	23.748	414.4	0.041	5.34	101.5	1.7	0.25	0.0	0.00	0.10	0.02	10	
11		19.48	19.48	33.492	23.748	414.5	0.046	5.34	101.5	1.7	0.25	0.0	0.00	0.10	0.02	11	223
19		19.48	19.48	33.491	23.748	414.8	0.079									19	222
20	A	19.48	19.48	33.493	23.750	414.7	0.083	5.33	101.3	1.6	0.24	0.0	0.00	0.11	0.02	20	221
30	ISL	19.50	19.49	33.505	23.754	414.6	0.124	5.33	101.3	1.6	0.25	0.0	0.00	0.11	0.02	30	
35		19.51	19.50	33.511	23.756	414.6	0.145	5.33	101.3	1.6	0.25	0.0	0.00	0.11	0.02	35	220
49		18.75	18.74	33.470	23.918	399.6	0.202									49	219
49	A	18.95	18.94	33.451	23.854	405.8	0.202	5.53	104.0	1.6	0.24	0.0	0.00	0.16	0.04	49	218
50	ISL	18.65	18.64	33.428	23.911	400.3	0.206	5.58	104.3	1.6	0.24	0.0	0.00	0.16	0.04	50	
59		16.02	16.01	33.300	24.439	350.1	0.240	5.97	106.0	1.6	0.26	0.0	0.00	0.17	0.06	59	217
67	A	15.41	15.40	33.383	24.639	331.2	0.267	5.87	103.0	1.8	0.27	0.0	0.00	0.19	0.11	67	216
75	ISL	15.61	15.60	33.556	24.728	323.0	0.293	5.81	102.5	1.9	0.24	0.0	0.00	0.22	0.13	75	
77		15.69	15.68	33.599	24.743	321.6	0.300	5.79	102.3	1.9	0.24	0.0	0.00	0.23	0.13	77	215
86	A	15.41	15.40	33.679	24.867	310.1	0.328	5.68	99.8	2.1	0.30	0.0	0.01	0.31	0.13	86	214
97		15.35	15.34	33.820	24.990	298.8	0.362	5.49	96.5	2.3	0.29	0.0	0.06	0.24	0.30	97	213
100	ISL	15.22	15.20	33.823	25.021	295.9	0.371	5.45	95.5	2.5	0.30	0.3	0.07	0.23	0.29	100	
108		14.76	14.74	33.798	25.101	288.4	0.394	5.35	92.9	3.1	0.34	1.3	0.09	0.19	0.25	108	212
119	A	14.02	14.00	33.751	25.222	277.1	0.425	5.18	88.6	4.0	0.48	3.4	0.03	0.13	0.21	119	211
125	ISL	13.35	13.33	33.701	25.321	267.8	0.441	5.08	85.6	5.0	0.58	5.0	0.02	0.11	0.16	125	
130		12.80	12.78	33.662	25.400	260.2	0.455	5.01	83.5	5.9	0.67	6.4	0.02	0.10	0.12	131	210
140		12.14	12.12	33.623	25.497	251.1	0.480	4.90	80.5	7.3	0.82	8.3	0.01	0.08	0.11	141	209
150	ISL	11.51	11.49	33.595	25.593	242.0	0.505	4.80	77.8	8.8	0.93	10.2	0.01	0.06	0.09	151	
165		10.65	10.63	33.596	25.748	227.4	0.540	4.64	73.8	11.5	1.08	13.0	0.01	0.04	0.05	166	208
194		9.42	9.40	33.790	26.107	193.5	0.601	4.19	64.9	19.6	1.43	19.1	0.01	0.01	0.01	195	207
200	ISL	9.29	9.27	33.822	26.153	189.2	0.613	4.10	63.4	20.8	1.48	19.9	0.01			201	
229		8.86	8.84	33.939	26.314	174.5	0.665	3.66	56.1	26.4	1.70	22.9	0.01			230	206
250	ISL	8.50	8.47	33.989	26.409	165.7	0.701	3.29	50.0	31.3	1.85	25.3	0.01			251	
269		8.18	8.15	34.018	26.480	159.1	0.732	2.95	44.5	35.7	1.99	27.3	0.01			270	205
300	ISL	7.77	7.74	34.055	26.570	150.9	0.780	2.39	35.7	41.8	2.21	30.1	0.01			302	
319		7.53	7.50	34.069	26.616	146.7	0.808	2.08	30.9	45.3	2.33	31.6	0.01			321	204
378		6.72	6.69	34.093	26.747	134.6	0.891	1.47	21.5	57.2	2.66	35.6	0.00			380	203
400	ISL	6.43	6.39	34.104	26.794	130.2	0.920	1.26	18.3	62.2	2.76	36.9	0.00			402	
437		6.01	5.97	34.128	26.867	123.5	0.967	0.96	13.8	70.0	2.89	38.8	0.00			440	202
500	ISL	5.68	5.64	34.192	26.959	115.3	1.042	0.64	9.1	78.3	3.05	40.3	0.00			503	
512		5.62	5.58	34.204	26.976	113.8	1.056	0.58	8.3	79.9	3.08	40.6	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 23.5 N	122 15.1 W	04/11/06	1800 UTC	17 m	1157 - 1735 PST	1153 PST	1735 PST	185.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.41	33.313	24.358	5.75	102.9	1.4	0.31	0.1	0.00	0.42	0.00	83. A	0.00	1.2	0.61	0.11
11	16.40	33.312	24.360	5.79	103.6	1.3	0.30	0.1	0.00	0.42	0.01	37.	4.5	4.6	4.5	0.10
19	16.39	33.321	24.369	5.73	102.5	1.3	0.30	0.1	0.00	0.38	0.03					
27	16.28	33.367	24.430	5.77	103.0	1.1	0.31	0.1	0.00	0.86 B	0.10 B	8.7	4.9	4.9	4.9	0.02
38	13.94	33.239	24.841	5.57	94.8	3.6	0.59	3.2	0.28	1.39	0.23	3.2	4.7	4.1	4.4	0.06
48	12.40	33.303	25.197	4.79	79.0	9.0	1.06	11.0	0.08	0.61	0.22	1.3	0.92	0.87	0.90	0.04
57	11.21	33.438	25.523	4.14	66.6	14.1	1.41	16.7	0.01	0.23	0.19					
65	10.78	33.520	25.664	3.80	60.6	16.7	1.55	19.0	0.01	0.14	0.07	0.28	0.03	0.02	0.03	0.02

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

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.7 N	121 49.3 W	02/11/06	1928 UTC	32 m	1222 - 1742 PST	1151 PST	1743 PST	157.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.45	33.194	24.023	5.56	101.5	1.7	0.30	0.0	0.00	0.14	0.03	91. A	2.3	2.3	2.3	0.08
11	17.42	33.201	24.036	5.57	101.6	1.8	0.30	0.0	0.00	0.05	0.02					
21	17.33	33.196	24.054	5.57	101.4	1.7	0.30	0.0	0.00	0.16	0.07	37.	2.2	2.2	2.2	0.10
30	17.32	33.196	24.057	5.58	101.6	1.7	0.30	0.0	0.00	0.17	0.04					
40	15.26	33.037	24.405	6.17	107.7	1.4	0.32	0.0	0.00	0.27	0.12					
50	14.12	33.034	24.645	6.16	105.1	1.6	0.35	0.2	0.02	0.32	0.12	9.1	2.2	2.1	2.2	0.05
60	13.65	33.058	24.761	6.08	102.7	1.8	0.37	0.3	0.04	0.25	0.13					
69	13.13	33.119	24.913	5.81	97.2	2.7	0.48	1.8	0.13	0.28	0.14	3.7	0.99	0.92	0.95	0.02
79	12.96	33.193	25.004	5.65	94.2	3.4	0.53	2.8	0.10	0.30	0.09					
89	12.53	33.392	25.242	5.16	85.3	5.6	0.72	6.4	0.04	0.18	0.11	1.4	0.28	0.24	0.26	0.02
100	11.92	33.434	25.391	4.75	77.6	8.3	0.95	10.2	0.02	0.13	0.09					
111	11.13	33.458	25.555	4.56	73.2	10.3	1.10	12.7	0.02	0.09	0.08					
123	10.20	33.543	25.783	4.20	66.1	14.8	1.36	16.8	0.01	0.04	0.05	0.27	0.00	0.01	0.00	0.03

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 48.7 N	123 55.2 W	03/11/06	1745 UTC	41 m	1200 - 1746 PST	1159 PST	1747 PST	217.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.82	33.187	23.929	5.53	101.6	1.8	0.29	0.0	0.00	0.05	0.29	93. A	2.5	2.5	2.5	0.07
14	17.64	33.222	23.999													
25	17.60	33.224	24.011	5.54	101.4	1.6	0.29	0.0	0.00	0.17	0.03	39.	2.3	2.4	2.4	0.10
39A	17.57	33.229	24.023	5.54	101.3	1.5	0.29	0.0	0.00	0.28	0.02					
52	16.97	33.181	24.129	5.65	102.1	1.4	0.30	0.0	0.00	0.52	0.00					
64	15.15	33.170	24.532	5.95	103.7	1.5	0.32	0.0	0.00	0.51	0.08	9.1	2.5	2.6	2.5	0.04
71A	14.56	33.165	24.655	5.97	102.8	1.7	0.34	0.0	0.02	0.54	0.12					
79A	13.86	33.163	24.800	6.04	102.6	1.7	0.34	0.2	0.04	0.38	0.08					
88	13.54	33.187	24.884	5.95	100.4	2.0	0.37	0.5	0.08	0.31	0.10	3.7	0.90	0.86	0.88	0.02
97A	13.41	33.255	24.963	5.88	99.0	2.2	0.37	0.5	0.06	0.29	0.19					
106	13.13	33.335	25.081	5.69	95.3	2.8	0.42	1.4	0.10	0.20	0.27					
114	13.14	33.475	25.188	5.52	92.5	3.5	0.46	2.6	0.06	0.15	0.19	1.4	0.26	0.26	0.26	0.01
135	11.99	33.605	25.511	5.07	83.0	6.7	0.72	7.5	0.02	0.06	0.09					
157	10.40	33.602	25.796	4.63	73.2	12.2	1.13	13.9	0.01	0.03	0.06	0.28	0.00	0.00	0.00	0.02

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

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 13.5 N	119 24.7 W	01/11/06	1754 UTC	16 m	1140 - 1732 PST	1141 PST	1732 PST	291.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	18.06	33.473	24.089	5.75	106.4	1.9	0.23	0.0	0.00	0.93	0.12	91. A	9.1	10.1	9.6	0.17
6	17.99	33.470	24.104	5.76	106.4	1.9	0.22	0.0	0.00	0.92	0.17					
11	17.94	33.465	24.113	5.76	106.3	1.9	0.24	0.0	0.00	0.97	0.17	35.	11.5	11.9	11.6	0.16
18	17.22	33.438	24.265	5.68	103.3	2.8	0.32	0.3	0.04	1.08	0.32					
25	16.31	33.416	24.461	5.35	95.6	4.5	0.47	1.1	0.13	0.98	0.37	9.1	9.7	9.2	9.4	0.24
29	15.23	33.407	24.696	5.34	93.4	4.5	0.51	1.5	0.16	1.14	0.14	6.2	4.9	4.9	4.9	0.22

A) INCUBATION LIGHT INTENSITIES WERE 97, 39, 9.3, 3.7, 1.4, 0.28 PERCENT RESPECTIVELY.

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 34.7 N	120 45.4 W	31/10/06	1817 UTC	18 m	1148 - 1735 PST	1147 PST	1735 PST	349.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.81	33.422	24.578	5.80	102.6	2.3	0.31	0.1	0.01	0.79	0.16	84. A	10.4	10.7	10.6	0.24
12	15.77	33.411	24.579	5.81	102.7	2.2	0.30	0.1	0.01	0.77	0.20	36.	12.6	12.6	12.6	0.19
21	15.73	33.405	24.583	5.82	102.8	2.1	0.30	0.1	0.01	0.79	0.17					
29	14.22	33.134	24.701	5.89	100.8	2.1	0.40	0.6	0.10	0.70	0.21	8.4	5.4	5.5	5.4	0.08
40	12.90	33.024	24.884	5.80	96.5	2.5	0.49	1.7	0.21	0.43	0.25	3.3	2.0	2.0	2.0	0.03
51	12.31	33.163	25.106	5.33	87.6	5.3	0.72	5.9	0.14	0.25	0.21	1.3	0.49	0.56	0.53	0.03
60	12.12	33.253	25.212	5.10	83.6	6.6	0.82	7.8	0.11	0.19	0.18					
69	11.60	33.478	25.484	4.12	66.9	12.0	1.24	14.2	0.03	0.17	0.17	0.28	0.04	0.04	0.04	0.02

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 14.7 N	123 29.6 W	30/10/06	1732 UTC	24 m	1157 - 1746 PST	1158 PST	1748 PST	137.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.32	33.173	24.038	5.59	101.7	1.6	0.30	0.1	0.00	0.18	0.04	88. A	2.9	2.9	2.9	0.09
10	17.32	33.173	24.038	5.58	101.6	1.7	0.30	0.0	0.00	0.22 C	0.05 C					
15	17.32	33.175	24.040	5.62	102.3	1.6	0.30	0.0	0.00	0.18	0.04	38.	2.8	2.8	2.8	0.08
26	17.30	33.174	24.044	5.58	101.5	1.6	0.30	0.0	0.00	0.27 B	0.07 B					
38	16.82	33.131	24.125	5.72	103.1	1.6	0.31	0.0	0.00	0.45	0.12	8.8	1.9	2.0	2.0	0.05
44	15.74	33.166	24.398	5.93	104.6	1.5	0.32	0.0	0.00	0.51	0.03					
52	14.73	33.180	24.630	5.97	103.2	1.6	0.34	0.0	0.00	0.47	0.18	3.6	1.2	1.1	1.2	0.05
60	14.10	33.169	24.754	5.74	98.0	2.5	0.47	1.1	0.23	0.78	0.16					
66	12.92	33.039	24.892	5.73	95.3	3.2	0.57	2.4	0.23	0.45	0.21	1.5	0.46	0.43	0.44	0.03
75	13.17	33.363	25.094	5.01	84.0	6.8	0.84	7.3	0.05	0.27	0.17					
82	12.28	33.283	25.205	5.02	82.5	7.2	0.89	8.5	0.03	0.16	0.19					
91	12.07	33.413	25.346	5.02	82.2	7.1	0.83	8.2	0.03	0.22	0.06	0.30	0.03	0.02	0.02	0.01

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

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

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.5 N	119 40.0 W	28/10/06	1655 UTC	19 m	1145 - 1737 PST	1142 PST	1739 PST	169.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.30	33.450	24.255	5.61	102.2	1.1	0.26	0.1	0.00	0.43	0.11	85. A	4.0	3.9	4.0	0.13
5	17.27	33.449	24.261	5.62	102.4	1.0	0.25	0.1	0.00	0.57 B	0.10 B					
11	17.18	33.447	24.281	5.63	102.4	1.0	0.25	0.1	0.00	0.47	0.04					
13	17.13	33.448	24.294	5.66	102.8	0.9	0.25	0.1	0.00	0.38	0.11	35.	6.2	6.3	6.2	0.14
21	15.53	33.399	24.623	5.65	99.4	1.8	0.38	0.8	0.09	1.02	0.44					
29	14.10	33.348	24.891	5.34	91.2	4.3	0.62	3.9	0.22	0.46	0.41	9.6	2.5	2.3	2.4	0.09
41	12.72	33.404	25.213	4.74	78.7	8.1	0.92	9.1	0.10	0.22	0.23	3.6	1.0	0.95	0.98	0.03
54	12.61	33.405	25.236	4.72	78.2	8.3	0.94	9.5	0.09	0.21	0.21	1.3	0.54	0.56	0.55	0.03
63	12.30	33.423	25.310	4.56	75.1	9.4	1.04	11.0	0.07	0.17	0.18					
73	12.21	33.429	25.332	4.49	73.8	9.6	1.06	11.6	0.06	0.17	0.19	0.27	0.08	0.06	0.07	0.04

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

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.4 N	122 23.6 W	29/10/06	1801 UTC	30 m	1153 - 1752 PST	1153 PST	1752 PST	293.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.25	33.094	23.994	5.62	102.1	1.8	0.32	0.0	0.00	0.14	0.03	90. A	2.5	2.6	2.5	0.09
11	17.16	33.091	24.013	5.62	101.9	1.7	0.31	0.0	0.00	0.16	0.01					
20	17.15	33.110	24.031	5.63	102.1	1.6	0.31	0.0	0.00	0.17	0.03	36.	2.8	2.9	2.8	0.11
29	17.81	33.450	24.134	5.54	102.0	1.2	0.27	0.0	0.00	0.21	0.06					
38	17.50	33.404	24.173	5.59	102.2	1.1	0.27	0.0	0.00	0.31	0.08					
46	16.08	33.308	24.431	5.82	103.5	1.1	0.31	0.0	0.00	0.64	0.34	9.5	6.5	6.3	6.4	0.10
57	14.94	33.275	24.658	5.85	101.6	1.7	0.40	0.2	0.05	0.95	0.56					
66	13.57	33.299	24.964	5.30	89.5	4.5	0.69	4.5	0.09	0.51	0.47	3.4	2.7	2.6	2.7	0.05
74	12.91	33.359	25.142	4.98	83.0	6.7	0.85	7.3	0.10	0.24	0.26					
83	11.59	33.289	25.339	4.74	76.8	9.6	1.10	11.8	0.02	0.12	0.16	1.4	0.30	0.30	0.30	0.02
94	11.28	33.505	25.564	4.05	65.3	13.5	1.33	15.6	0.02	0.07	0.11					
105	10.82	33.566	25.694	3.78	60.3	16.2	1.48	18.0	0.01	0.05	0.09					
115	10.46	33.616	25.796	3.54	56.1	18.2	1.59	19.6	0.01	0.03	0.06	0.28	0.01	0.01	0.01	0.02

A) INCUBATION LIGHT INTENSITIES WERE 97, 39, 9.3, 3.7, 1.4, 0.28 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.1 N	117 46.2 W	27/10/06	1828 UTC	11 m	1133 - 1731 PST	1135 PST	1732 PST	439.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	18.01	33.421	24.062	5.83	107.7	2.7	0.30	0.0	0.03	1.22	0.34	87. A	37.5	30.9	34.2	0.30
7	17.60	33.420	24.161	5.76	105.6	2.7	0.30	0.0	0.03	0.95	0.34	38.	17.8	16.7	17.3	0.21
17	17.07	33.423	24.289	5.79	105.0	2.4	0.32	0.0	0.01	0.71	0.23	9.3	10.1	11.6	10.9	0.13
24	16.16	33.375	24.463	5.66	100.8	3.8	0.42	0.3	0.08	0.99	0.19	3.5	7.1	7.0	7.1	0.12
31	14.84	33.344	24.732	5.54	96.1	5.4	0.56	1.5	0.20	0.62	0.36	1.3	2.3	2.2	2.3	0.08
42	14.13	33.336	24.876	5.56	95.0	5.6	0.57	1.7	0.25	0.60	0.37	0.28	0.29	0.08	0.19	0.07

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 39.4 N	119 29.1 W	26/10/06	1831 UTC	33 m	1149 - 1732 PST	1142 PST	1735 PST	274.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	18.74	33.537	23.970	5.45	102.2	1.6	0.23	0.1	0.00	0.22	0.06	95. A	2.1	2.3	2.2	0.08
10	18.71	33.535	23.976	5.44	101.9	1.8	0.23	0.1	0.00	0.24	0.07					
20	18.66	33.545	23.997	5.48	102.6	2.0	0.23	0.1	0.00	0.31	0.11	39.	6.6	5.9	6.3	0.08
30	17.37	33.507	24.283	5.67	103.5	2.0	0.29	0.2	0.01	0.59	0.20					
40	15.41	33.345	24.609	5.82	102.1	2.7	0.38	0.6	0.03	0.51	0.30					
51	13.55	33.350	25.007	5.28	89.2	5.4	0.66	4.7	0.12	0.38	0.28	9.3	2.6	2.5	2.5	0.04
61	12.54	33.414	25.256	4.68	77.4	8.4	0.93	9.2	0.09	0.25	0.30					
71	12.09	33.459	25.378	4.40	72.1	10.6	1.07	11.5	0.07	0.20	0.20	3.7	1.0	1.0	1.0	0.04
82	11.44	33.502	25.532	4.09	66.1	13.1	1.25	14.5	0.03	0.14	0.16					
93	10.99	33.542	25.644	3.86	61.8	14.9	1.36	16.4	0.03	0.10	0.13	1.3	0.32	0.31	0.31	0.03
109	10.35	33.631	25.826	3.48	55.0	18.5	1.57	19.7	0.01	0.04	0.07					
126	10.19	33.654	25.872	3.44	54.2	18.6	1.62	20.3	0.01	0.03	0.06	0.28	0.01	0.01	0.01	0.02

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 25.1 N	121 59.4 W	25/10/06	1748 UTC	28 m	1153 - 1743 PST	1152 PST	1747 PST	214.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.10	33.342	23.979	5.50	101.7	1.6	0.30	0.0	0.00	0.17	0.03	90. A	3.0	3.0	3.0	0.07
11	18.09	33.341	23.981	5.50	101.7	1.6	0.30	0.1	0.00	0.19	0.01					
18	18.08	33.340	23.983	5.50	101.7	1.5	0.29	0.1	0.00	0.20	0.01	37.	3.2	3.1	3.2	0.08
30	17.99	33.338	24.004	5.51	101.7	1.5	0.28	0.1	0.00	0.23	0.00					
44	16.60	33.289	24.297	5.84	104.9	1.4	0.31	0.1	0.00	0.35	0.06	9.0	2.9	2.9	2.9	0.05
53	15.53	33.253	24.512	5.90	103.7	1.4	0.35	0.0	0.00	0.36	0.13					
61	14.21	33.234	24.781	5.69	97.4	3.1	0.46	1.3	0.16	0.62	0.26	3.5	3.1	3.1	3.1	0.04
69	13.47	33.348	25.022	5.30	89.4	4.7	0.62	4.4	0.05	0.40	0.22					
78	12.59	33.389	25.228	4.81	79.7	8.0	0.96	9.7	0.02	0.19	0.12	1.4	0.32	0.33	0.32	0.02
88	11.94	33.438	25.390	4.50	73.5	10.1	1.10	12.3	0.02	0.12	0.10					
98	11.05	33.485	25.590	4.26	68.3	12.7	1.28	15.1	0.02	0.08	0.06					
107	10.52	33.530	25.718	4.07	64.5	15.0	1.40	17.1	0.02	0.05	0.06	0.28	0.01	0.01	0.01	0.02

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.3 N	117 18.3 W	21/10/06	1842 UTC	22 m	1145 - 1735 PST	1134 PST	1735 PST	342.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.77	33.496	23.931	5.59	104.8	1.5	0.25	0.1	0.01	0.26	0.06	87. A	5.3	5.2	5.2	0.23
7	18.14	33.456	24.057	5.72	105.9	1.6	0.32	0.0	0.00	0.30	0.14					
15	15.61	33.329	24.551	6.08	107.1	3.2	0.36	0.0	0.01	0.75	0.14	35.	14.1	15.3	14.7	0.19
24	13.77	33.359	24.968	5.61	95.2	5.3	0.60	1.9	0.18	1.49	0.67					
34	12.93	33.383	25.156	4.81	80.2	7.8	0.86	6.8	0.25	0.55	0.35	9.3	3.3	3.3	3.3	0.08
40	12.53	33.404	25.250	4.60	76.1	8.5	0.95	8.6	0.07	0.51	0.27					
47	12.20	33.455	25.353	4.19	68.9	10.7	1.15	11.3	0.06	0.28	0.23	3.8	0.97	0.24	0.61	0.17
54	11.86	33.497	25.450	3.78	61.7	13.4	1.32	14.3	0.10	0.14	0.22					
59	11.78	33.512	25.477	3.67	59.8	14.2	1.38	15.1	0.13	0.06	0.34	1.6	0.44	0.38	0.41	0.13

A) INCUBATION LIGHT INTENSITIES WERE 97, 39, 9.3, 3.7, 1.4, 0.28 PERCENT RESPECTIVELY.

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 30.9 N	118 12.8 W	22/10/06	1647 UTC	31 m	1145 - 1740 PST	1137 PST	1742 PST	237.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	19.05	33.516	23.876	5.46	102.9	1.7	0.23	0.1	0.00			95. A	2.8	2.7	2.7	0.10
11	18.71	33.493	23.944	5.49	102.8	2.0	0.25	0.1	0.00							
20	18.57	33.480	23.970	5.53	103.3	1.9	0.25	0.1	0.00	0.22	0.06	37.	3.0	2.8	2.9	0.11
30	17.44	33.380	24.169	5.78	105.6	2.1	0.28	0.1	0.00	0.35	0.06					
40	15.17	33.259	24.595	6.06	105.8	3.0	0.35	0.1	0.00	0.55	0.17					
48	14.23	33.284	24.815	5.82	99.7	3.4	0.46	0.3	0.02	0.83	0.47	9.3	4.9	5.2	5.1	0.09
58	12.89	33.362	25.148	5.18	86.3	6.1	0.71	5.3	0.19	0.41	0.47					
67	12.44	33.420	25.281	4.61	76.1	8.9	0.97	9.3	0.06	0.26	0.31	3.6	0.76	0.78	0.77	0.03
76	11.85	33.456	25.421	4.33	70.6	10.6	1.12	12.0	0.03	0.19	0.22					
86	11.08	33.511	25.604	3.96	63.5	13.8	1.34	15.7	0.02	0.11	0.16	1.4	0.23	0.22	0.23	0.03
102	10.57	33.620	25.779	3.44	54.6	18.1	1.58	19.3	0.01	0.06	0.08					
119	10.11	33.753	25.962	3.13	49.3	21.6	1.75	21.6	0.01	0.02	0.05	0.28	0.01	0.01	0.01	0.02

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 11.5 N	120 53.9 W	23/10/06	1925 UTC	35 m	1228 - 1748 PST	1148 PST	1751 PST	131.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	19.06	33.376	23.766	5.38	101.4	1.8	0.26	0.0	0.00	0.10	0.02	92. A	1.8	1.7	1.8	0.08
13	19.02	33.374	23.776	5.38	101.3	1.8	0.26	0.0	0.00	0.12	0.01					
23	18.99	33.374	23.784	5.38	101.2	1.8	0.27	0.0	0.00	0.13	0.01	36.	1.8	1.8	1.8	0.10
39	18.96	33.372	23.790	5.38	101.2	1.8	0.26	0.0	0.00	0.12	0.04					
54	17.15	33.225	24.120	5.83	105.8	1.8	0.27	0.0	0.00	0.18	0.03	9.4	1.1	1.1	1.1	0.08
64	15.59	33.181	24.444	6.04	106.2	1.7	0.29	0.0	0.00	0.19	0.04					
75	14.57	33.215	24.691	5.92	102.0	1.9	0.30	0.0	0.00	0.23	0.13	3.7	0.77	0.85	0.81	0.05
86	14.27	33.296	24.818	5.71	97.9	2.4	0.34	0.1	0.02	0.29	0.21					
97	13.78	33.390	24.992	5.42	92.0	3.7	0.50	1.9	0.13	0.30	0.23	1.4	0.51	0.53	0.52	0.02
106	13.04	33.382	25.135	5.23	87.4	4.8	0.60	4.2	0.10	0.23	0.29					
116	11.75	33.386	25.386	4.88	79.4	7.3	0.86	8.7	0.02	0.18	0.22					
125	11.18	33.412	25.510	4.58	73.6	10.4	1.09	12.3	0.01	0.13	0.13					
134	10.89	33.423	25.570	4.52	72.2	11.1	1.12	13.0	0.01	0.15	0.12	0.28	0.04	0.04	0.04	0.02

RV ROGER REVELLE — CALCOFI CRUISE 0610 — STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
29 50.9 N	123 35.2 W	24/10/06	1756 UTC	31 m	1152 - 1800 PST	1159 PST	1800 PST	124.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	19.48	33.492	23.748	5.37	102.0	1.7	0.26	0.0	0.00	0.10	0.02	91. A	1.2	1.3	1.2	0.08
11	19.48	33.492	23.748	5.34	101.5	1.7	0.25	0.0	0.00	0.10	0.02					
20	19.48	33.493	23.750	5.33	101.3	1.6	0.24	0.0	0.00	0.11	0.02	37.	1.8	1.8	1.8	0.08
35	19.51	33.511	23.756	5.33	101.3	1.6	0.25	0.0	0.00	0.11	0.02					
49	18.95	33.451	23.854	5.53	104.0	1.6	0.24	0.0	0.00	0.16	0.04	8.8	1.5	1.5	1.5	0.08
59	16.02	33.300	24.439	5.97	106.0	1.6	0.26	0.0	0.00	0.17	0.06					
67	15.41	33.383	24.639	5.87	103.0	1.8	0.27	0.0	0.00	0.19	0.11	3.6	1.0	1.1	1.0	0.04
77	15.69	33.599	24.743	5.79	102.3	1.9	0.24	0.0	0.00	0.23	0.13					
86	15.41	33.679	24.867	5.68	99.8	2.1	0.30	0.0	0.01	0.31	0.13	1.4	0.50	0.55	0.53	0.02
97	15.35	33.820	24.990	5.49	96.5	2.3	0.29	0.0	0.06	0.24	0.30					
108	14.76	33.798	25.101	5.35	92.9	3.1	0.34	1.3	0.09	0.19	0.25					
119	14.02	33.751	25.222	5.18	88.6	4.0	0.48	3.4	0.03	0.13	0.21	0.28	0.08	0.10	0.09	0.02

A) INCUBATION LIGHT INTENSITIES WERE 97, 39, 9.3, 3.7, 1.4, 0.28 PERCENT RESPECTIVELY.

CalCOFI Cruise 0610

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
76.7	49.0	35 05.2	120 46.8	11/05	0338	0344	124	54	8	8
76.7	51.0	35 01.3	120 55.1	11/05	0118	0137	350	177	49	49
76.7	55.0	34 53.3	121 12.1	11/04	2034	2058	450	245	36	36
76.7	60.0	34 43.4	121 32.6	11/04	1624	1647	465	224	11	11
76.7	70.0	34 23.6	122 14.8	11/04	0900	0922	442	219	59	14
76.7	80.0	34 03.2	122 56.5	11/04	0404	0426	414	206	299	77
76.7	90.0	33 43.2	123 38.2	11/03	2150	2212	397	233	222	73
76.7	100.0	33 23.1	124 19.2	11/03	1549	1611	399	219	38	38
80.0	50.5	34 27.9	120 29.2	11/01	2053	2056	89	14	11	11
80.0	51.0	34 27.0	120 31.3	11/01	2243	2251	158	70	6	6
80.0	55.0	34 19.0	120 48.0	11/02	0246	0309	420	217	86	86
80.0	60.0	34 09.0	121 08.7	11/02	0657	0719	424	211	38	38
80.0	70.0	33 49.7	121 49.3	11/02	1246	1308	448	192	27	27
80.0	80.0	33 29.2	122 31.6	11/02	1845	1907	410	212	61	61
80.0	90.0	33 09.0	123 13.2	11/03	0107	0128	417	205	19	19
80.0	100.0	32 49.1	123 54.1	11/03	0842	0904	430	206	53	53
81.7	43.5	34 24.2	119 47.8	11/01	1406	1408	40	14	25	25
81.8	46.9	34 16.6	120 01.4	11/01	1721	1743	457	206	18	18
83.3	39.4	34 15.8	119 19.9	11/01	1109	1111	36	15	28	28
83.3	40.6	34 13.5	119 24.7	11/01	0913	0916	56	22	71	71
83.3	42.0	34 10.6	119 30.3	11/01	0730	0741	234	100	26	26
83.3	51.0	33 52.7	120 08.0	10/31	1955	2004	160	77	100	100
83.3	55.0	33 44.6	120 24.9	10/31	1608	1629	438	214	59	59
83.3	60.0	33 34.7	120 45.4	10/31	1214	1236	440	212	100	100
83.3	70.0	33 14.7	121 26.7	10/31	0531	0553	400	219	30	30
83.3	80.0	32 54.7	122 07.7	10/30	2252	2314	431	219	32	32
83.3	90.0	32 34.6	122 48.9	10/30	1708	1730	412	219	15	15
83.3	100.0	32 14.7	123 29.6	10/30	1041	1102	446	208	27	27
83.3	110.0	31 54.6	124 10.1	10/30	0459	0520	419	208	41	41
85.4	35.8	34 01.2	118 50.6	11/01	0236	0238	53	15	19	19
86.7	33.0	33 53.4	118 29.4	10/27	1719	1724	91	43	33	33
86.7	35.0	33 49.4	118 37.7	10/27	2007	2029	426	206	73	73
86.7	40.0	33 39.4	118 58.4	10/28	0042	0104	408	205	71	71
86.7	45.0	33 29.4	119 19.1	10/28	0511	0533	426	203	52	52
86.7	50.0	33 19.5	119 40.0	10/28	0812	0818	130	53	116	116
86.7	55.0	33 09.5	120 00.3	10/28	1253	1314	415	209	34	34
86.7	60.0	32 59.5	120 20.8	10/28	1649	1711	411	220	51	51
86.7	70.0	32 39.4	121 01.9	10/28	2258	2320	473	201	53	53
86.7	80.0	32 19.5	121 42.6	10/29	0431	0453	474	197	51	51
86.7	90.0	31 59.4	122 23.6	10/29	0847	0909	458	203	37	37
86.7	100.0	31 39.4	123 04.0	10/29	1647	1708	414	214	24	24
86.7	110.0	31 19.4	123 44.6	10/29	2219	2241	417	218	43	43
86.8	32.5	33 53.0	118 26.8	10/27	1549	1552	56	16	53	53
88.5	30.1	33 40.4	118 04.9	10/27	1247	1249	42	12	48	48
90.0	27.7	33 29.7	117 44.8	10/27	0749	0751	49	13	40	40
90.0	28.0	33 29.1	117 46.2	10/27	0917	0939	414	214	31	31
90.0	30.0	33 25.2	117 54.3	10/27	0557	0619	423	193	73	73
90.0	35.0	33 15.1	118 15.1	10/27	0124	0145	416	207	60	60
90.0	37.0	33 11.1	118 23.2	10/26	2208	2230	397	222	70	70
90.0	45.0	32 55.0	118 56.1	10/26	1641	1703	429	208	28	28
90.0	53.0	32 39.2	119 29.0	10/26	0918	0940	418	214	53	53
90.0	60.0	32 25.1	119 57.7	10/26	0514	0536	429	207	61	61
90.0	70.0	32 05.1	120 38.3	10/25	2309	2331	425	214	31	31
90.0	80.0	31 45.1	121 18.8	10/25	1708	1730	435	210	9	9
90.0	90.0	31 25.1	121 59.4	10/25	1119	1142	455	216	11	11
90.0	100.0	31 05.1	122 39.6	10/25	0507	0529	421	214	38	38
90.0	110.0	30 45.1	123 19.9	10/24	2304	2326	449	211	27	27
90.0	120.0	30 25.0	123 59.8	10/24	1700	1722	479	193	19	19
91.7	26.4	33 14.4	117 27.8	10/21	1545	1547	50	12	80	80
93.3	26.7	32 57.3	117 18.3	10/21	1145	1149	73	40	55	55
93.3	28.0	32 54.8	117 23.7	10/21	1950	2015	414	229	58	58
93.3	30.0	32 51.7	117 31.9	10/21	2325	2347	414	222	53	53
93.3	35.0	32 40.8	117 52.3	10/22	0450	0512	453	205	49	49
93.3	40.0	32 30.9	118 12.8	10/22	0733	0755	397	229	58	58
93.3	45.0	32 20.8	118 33.3	10/22	1316	1338	428	207	40	40
93.3	50.0	32 10.8	118 53.6	10/22	1711	1733	414	206	41	41
93.3	55.0	32 00.8	119 14.0	10/22	2137	2200	438	216	55	55
93.3	60.0	31 50.8	119 34.4	10/23	0142	0204	441	208	57	57
93.3	70.0	31 30.6	120 14.5	10/23	0605	0627	413	215	44	44
93.3	80.0	31 11.5	120 53.9	10/23	1233	1255	431	201	42	42
93.3	90.0	30 50.8	121 35.4	10/23	1802	1824	432	216	28	28
93.3	100.0	30 30.8	122 15.5	10/23	2345	0007	451	194	33	33
93.3	110.0	30 10.8	122 55.4	10/24	0523	0545	445	208	18	18
93.3	120.0	29 50.8	123 35.2	10/24	1102	1124	419	222	17	17
93.4	26.4	32 57.0	117 16.8	10/21	1314	1316	40	16	101	101

FIGURES

Avifauna Observations

CalCOFI Cruise 0610

1a. Black-vented Shearwater distribution.

1b. Bonaparte’s Gull distribution.

1c. Leach’s Storm-Petrel distribution.

1d. California Gull distribution

1e. Brown Pelican distribution.

1f. Western Gull distribution.

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