UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0604
1 – 18 April 2006

CC Reference 08-02
21 May 2008

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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CONTENTS

INTRODUCTION

The data presented in this report were collected during cruise 0604* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon.* 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 minimum of 24 hours. Chlorophyll a and phaeopigment 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 59.10 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.

8) *O_2 Isotopes.* Water samples were collected at 38 stations for analysis of isotopic composition of dissolved oxygen to assess in situ primary production rates and compare with CalCOFI 14-C primary production. Isotopic analysis was performed at the University of Washington.

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 0604

1. CalCOFI Cruise 0604 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.

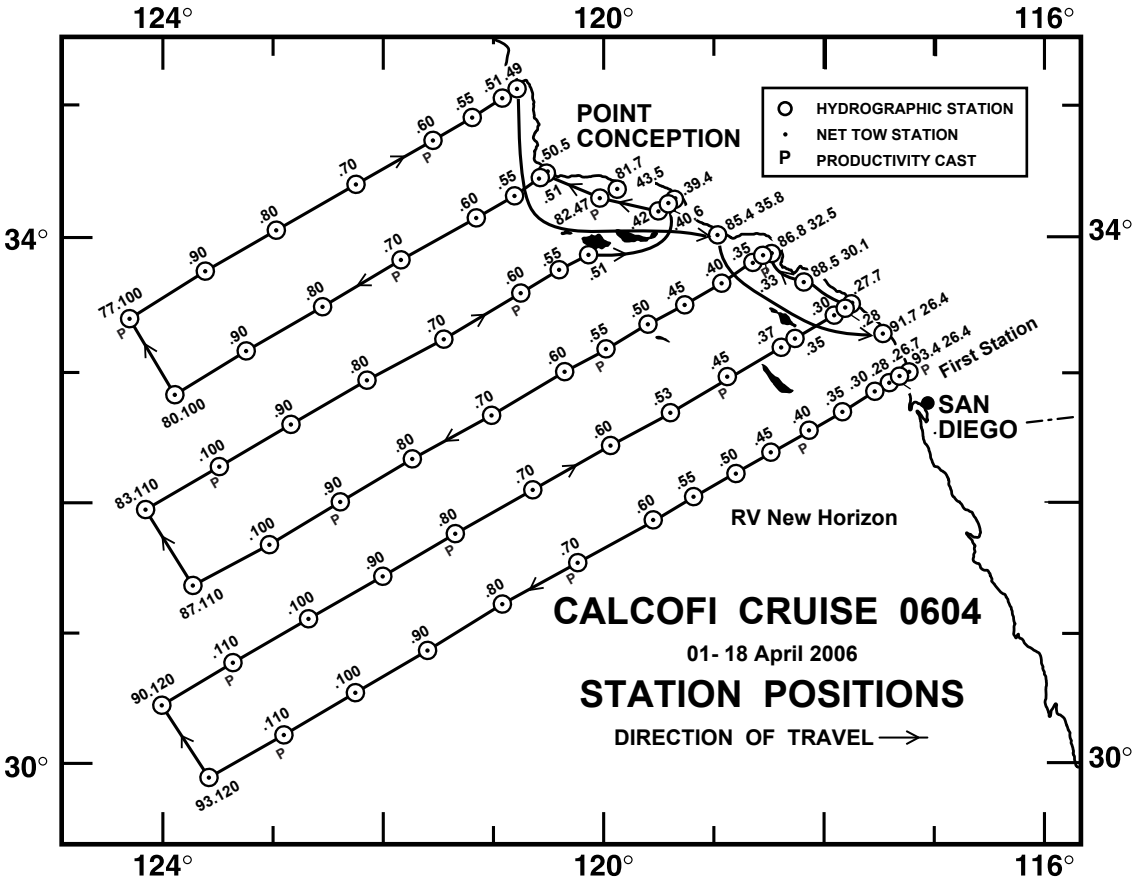

FIGURE 1

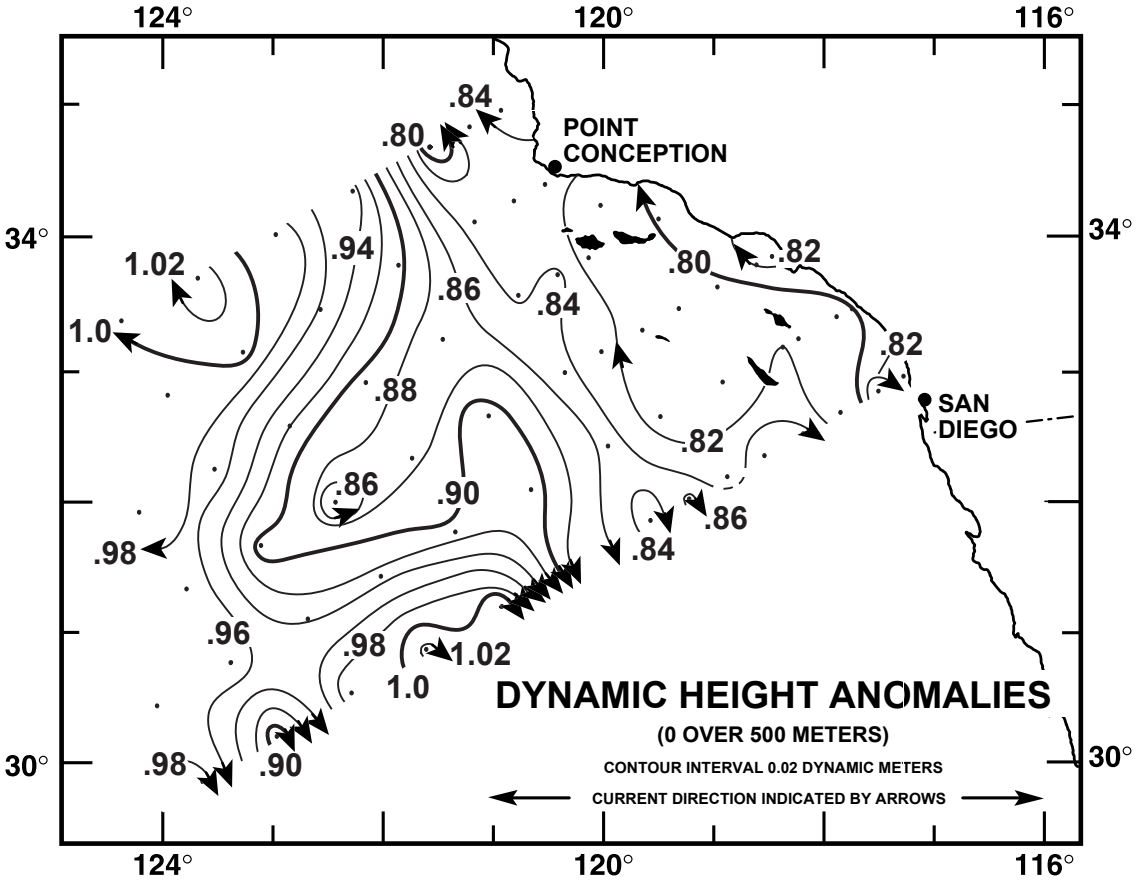

FIGURE 2

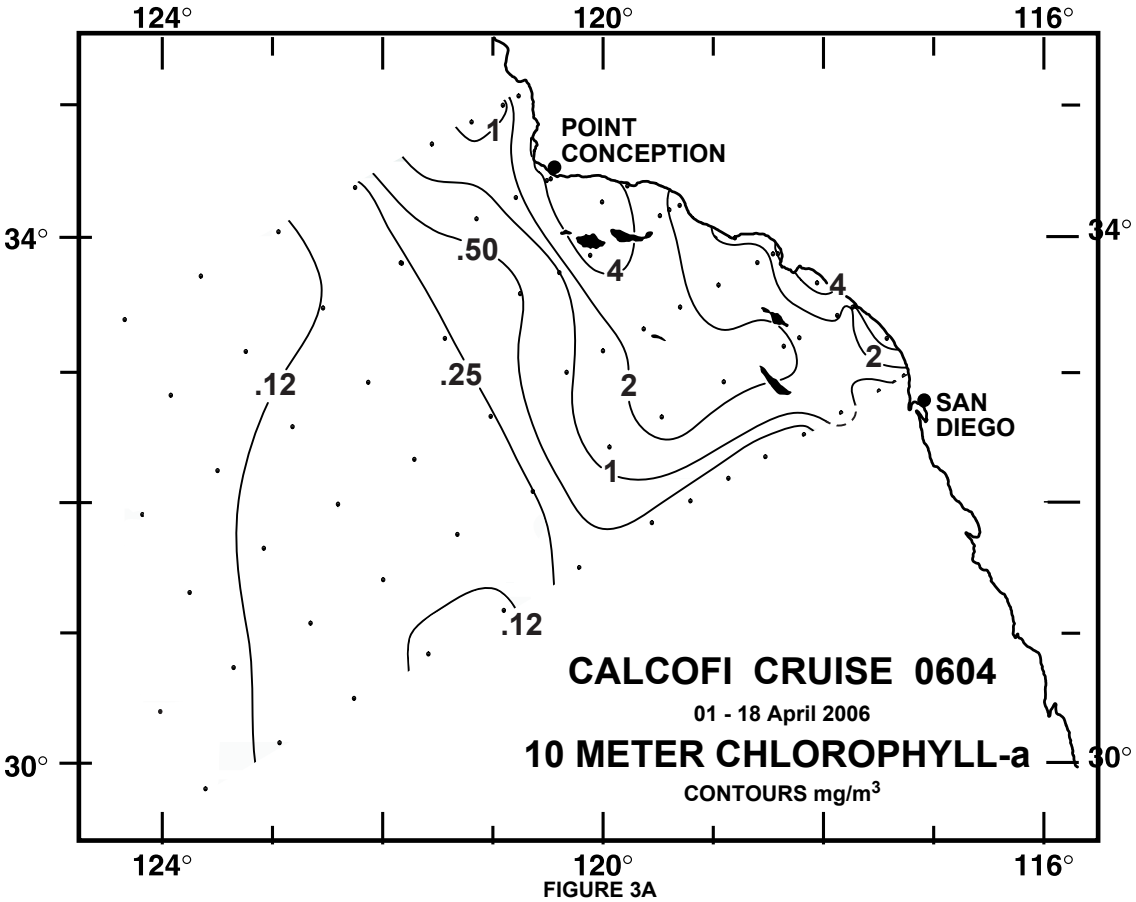

FIGURE 3A

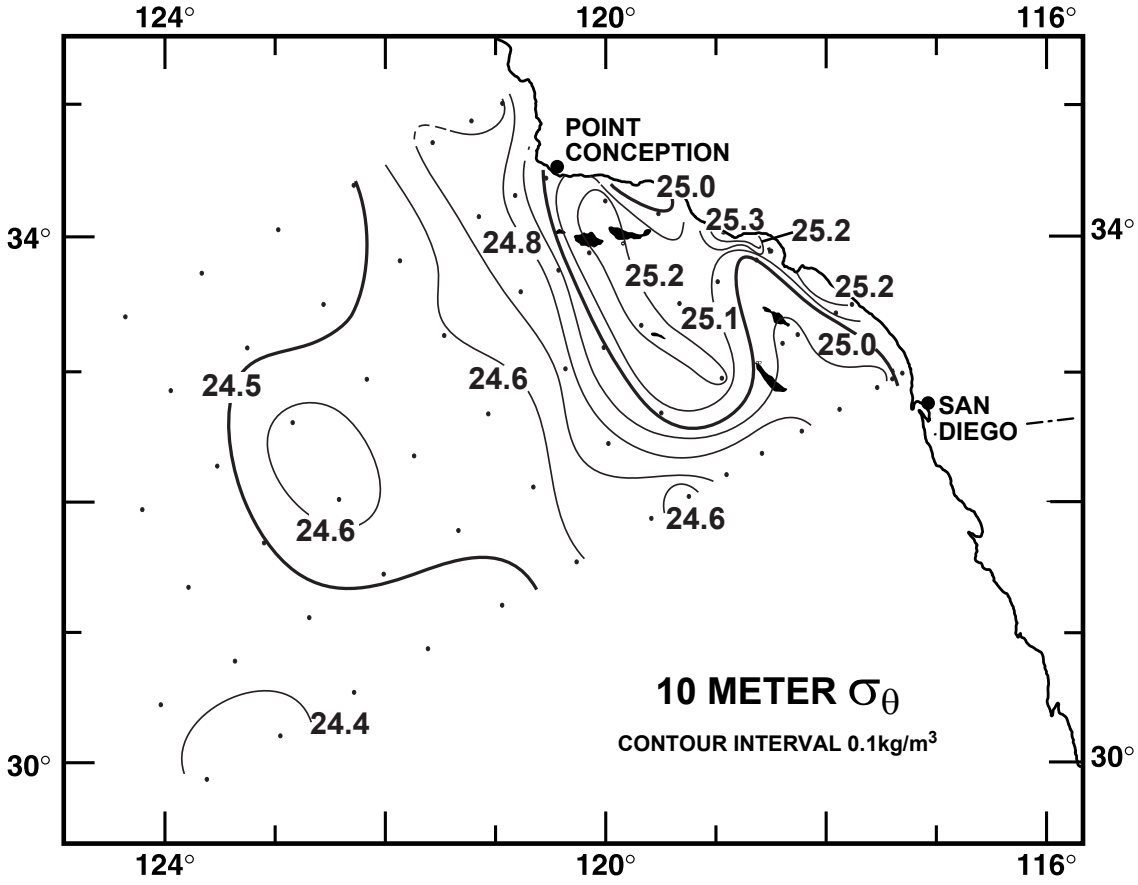

FIGURE 3B

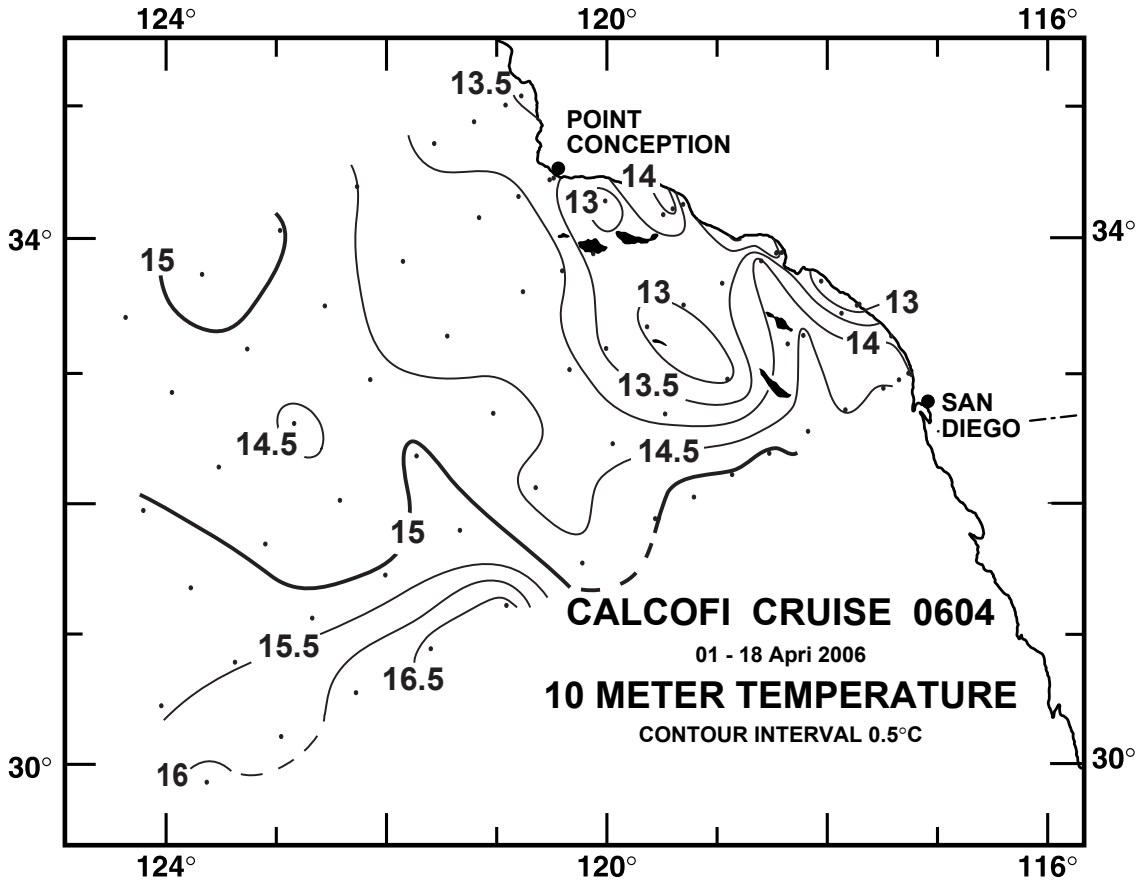

FIGURE 3C

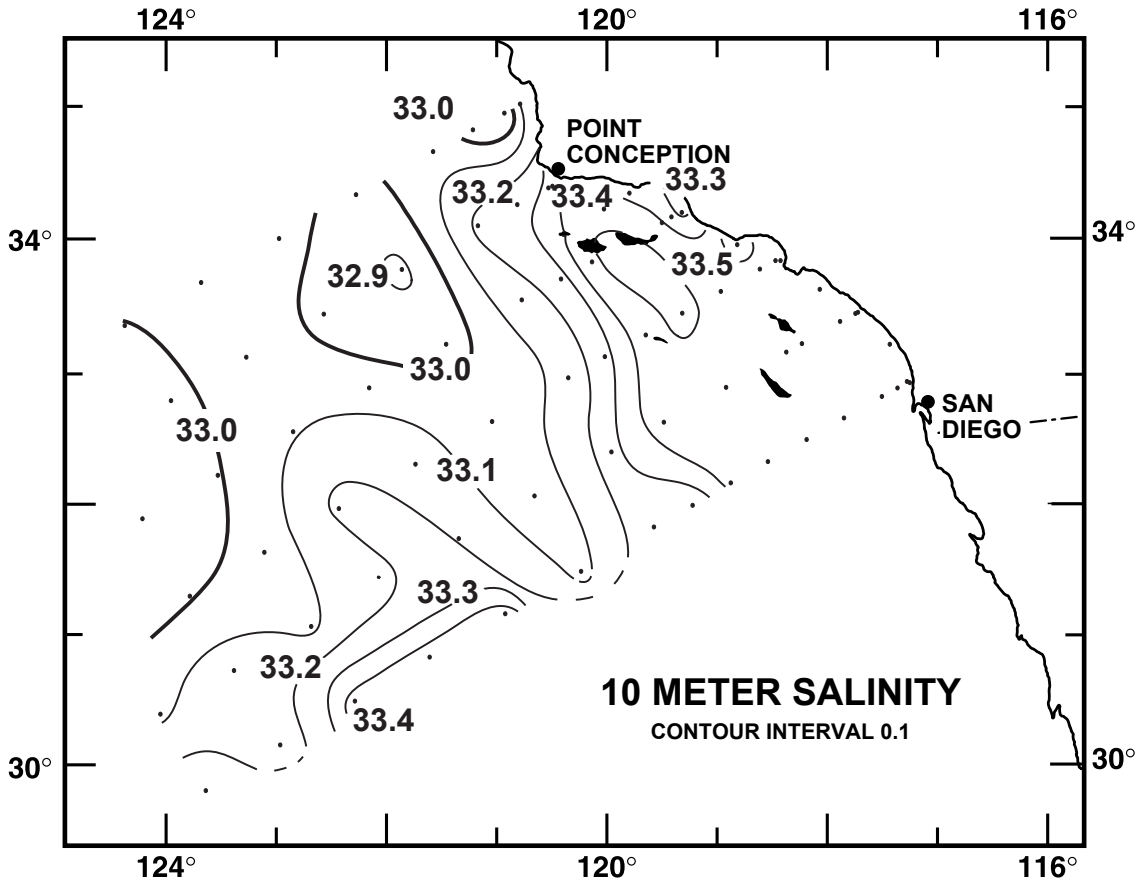

FIGURE 3D

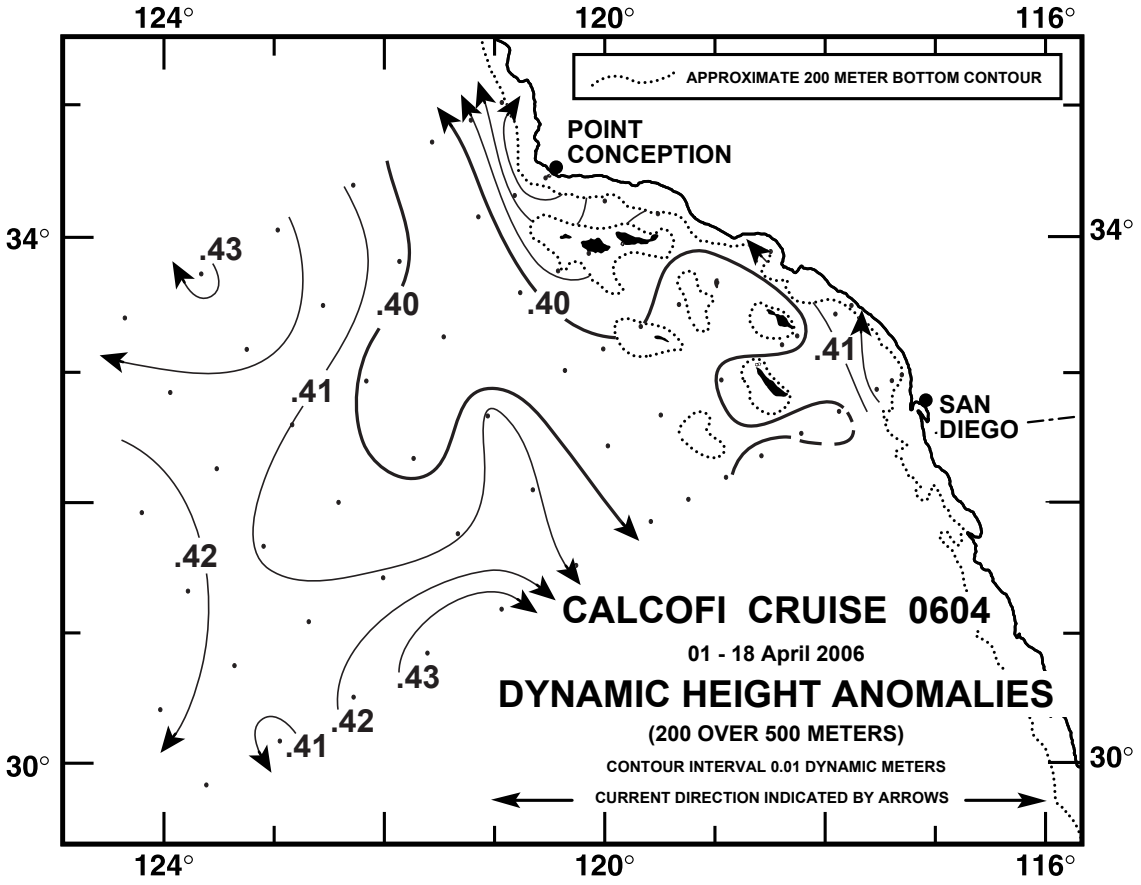

FIGURE 4A

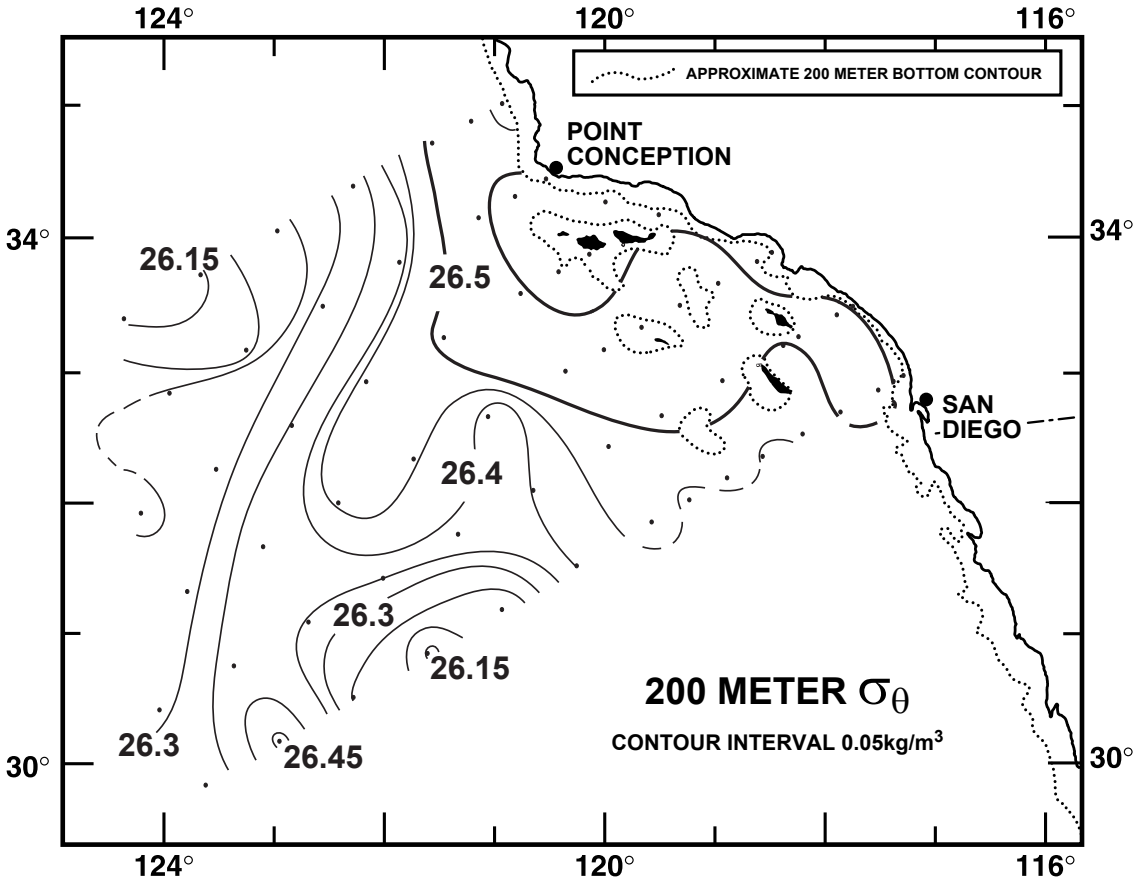

FIGURE 4B

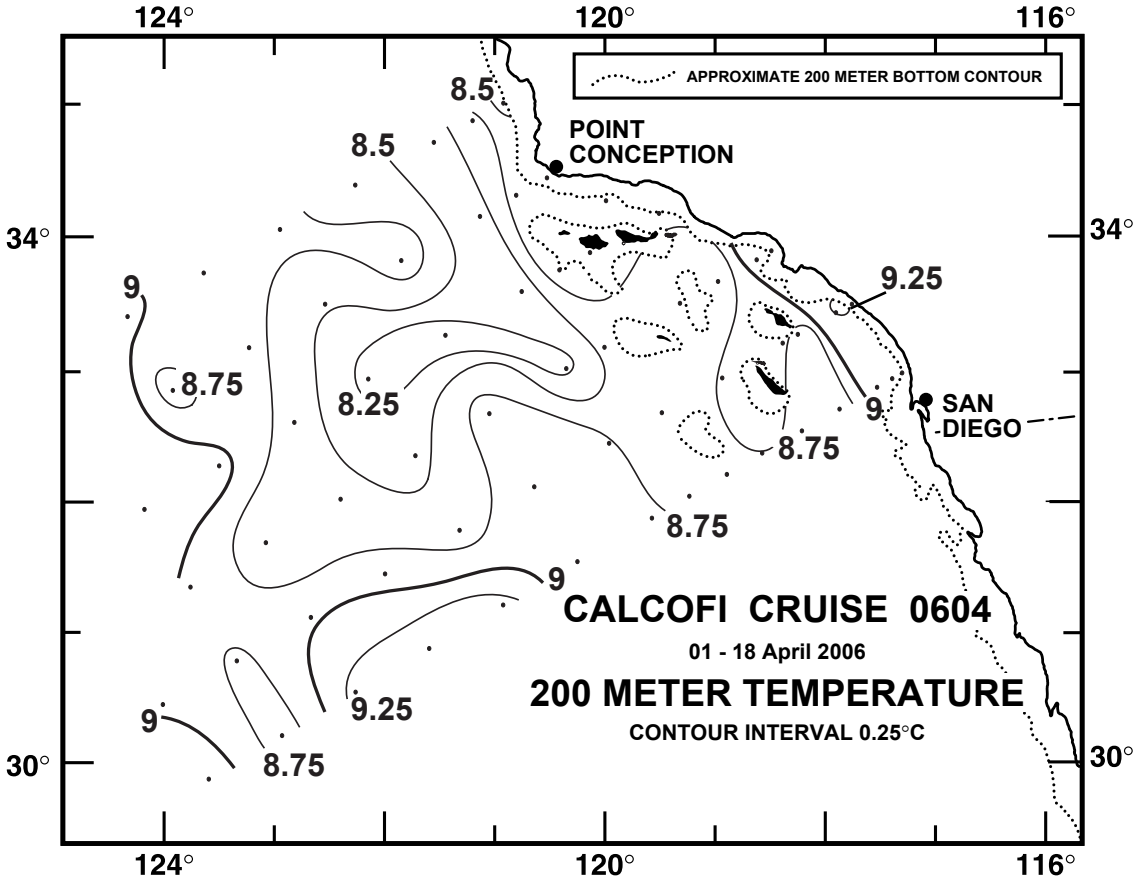

FIGURE 4C

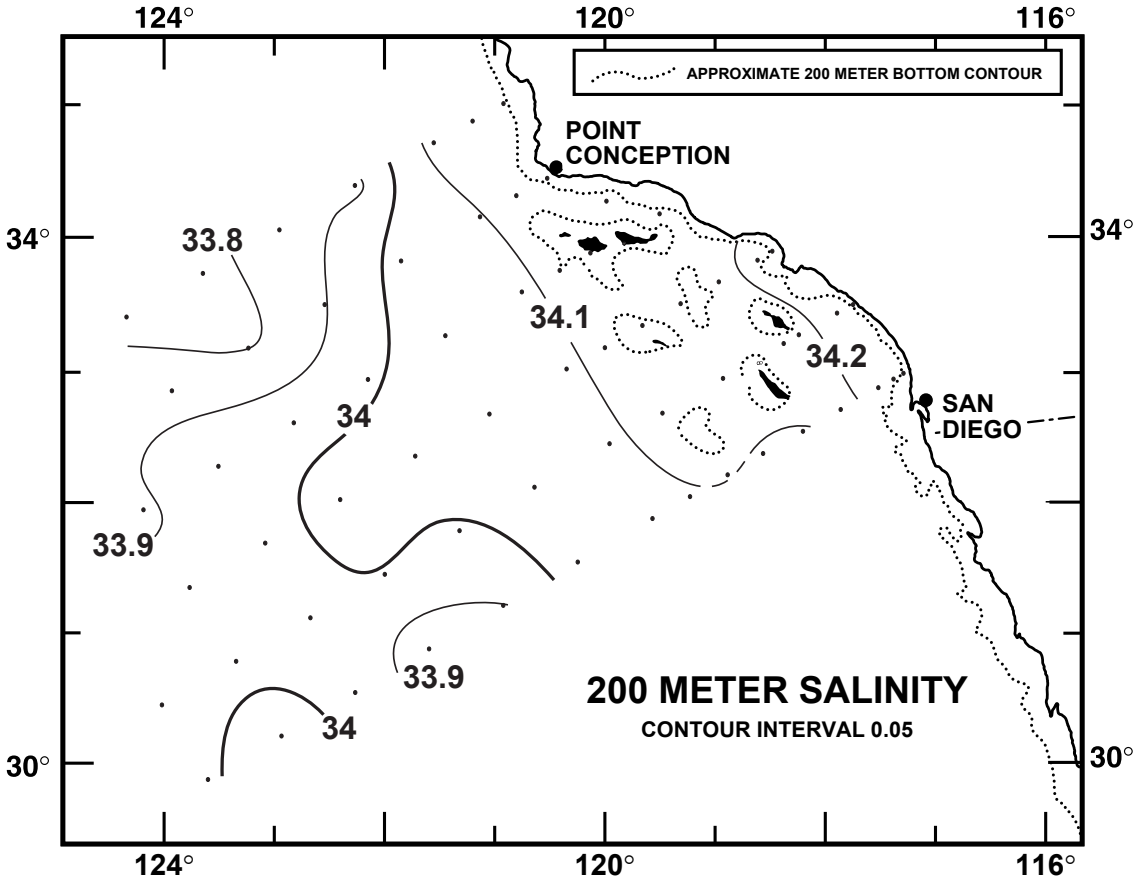

FIGURE 4D

CALCOFI CRUISE 0604

05 - 08 April 2006

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

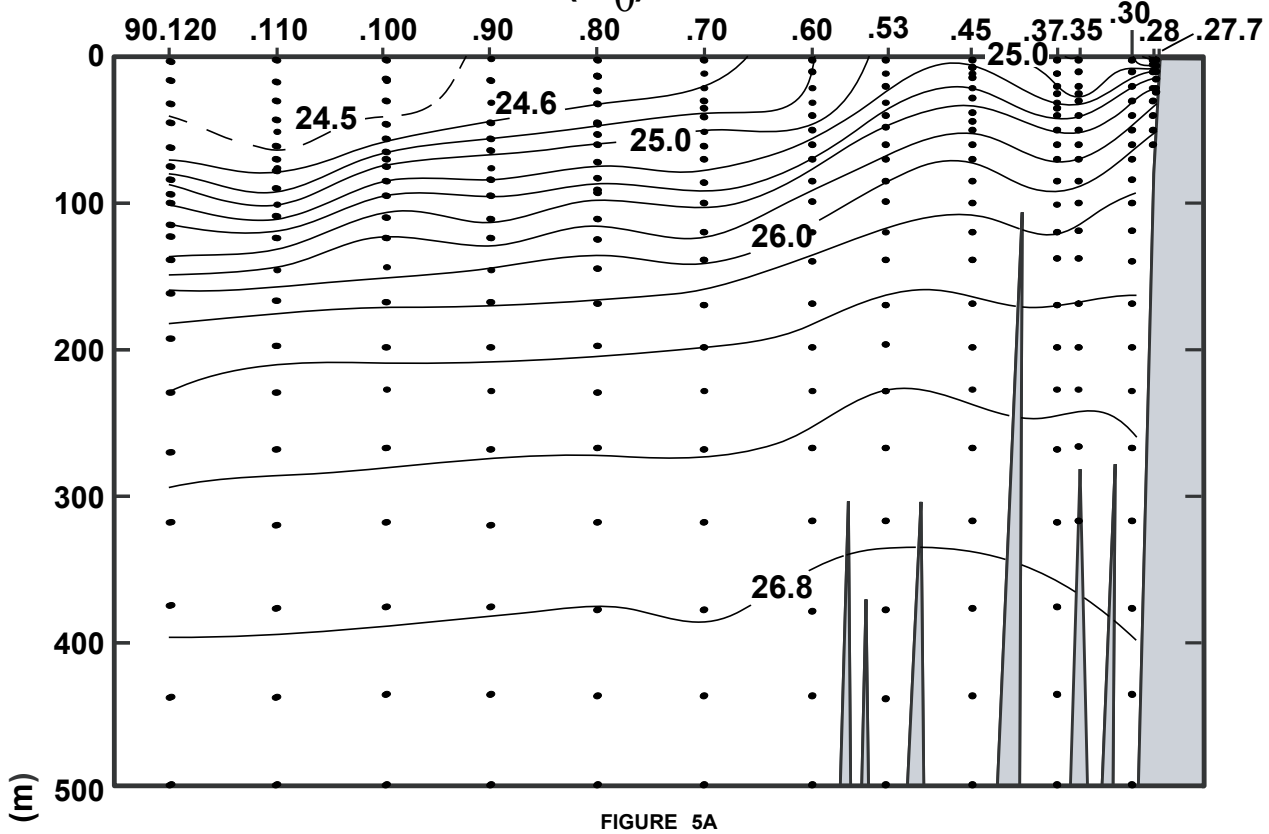

FIGURE 5A

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

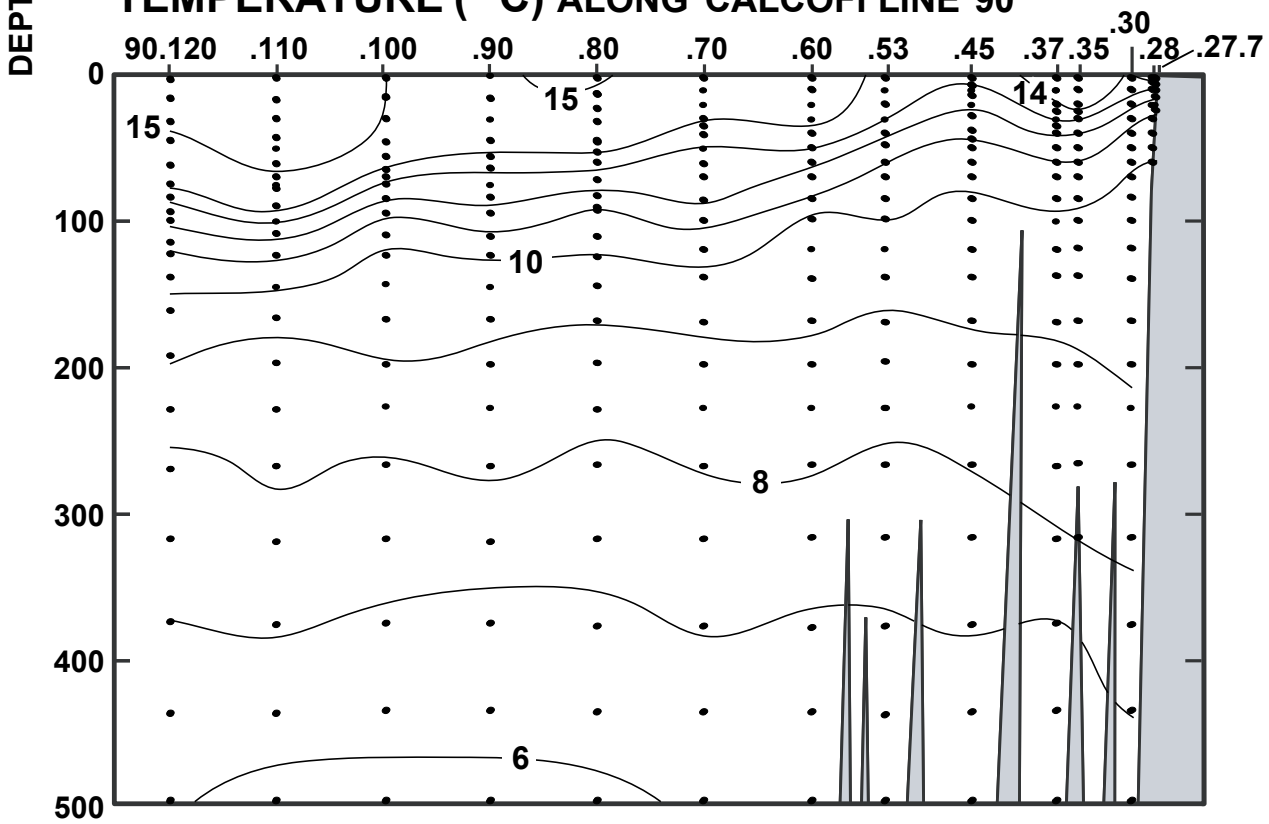

FIGURE 5B

CALCOFI CRUISE 0604

05- 08 April 2006

SALINITY ALONG CALCOFI LINE 90

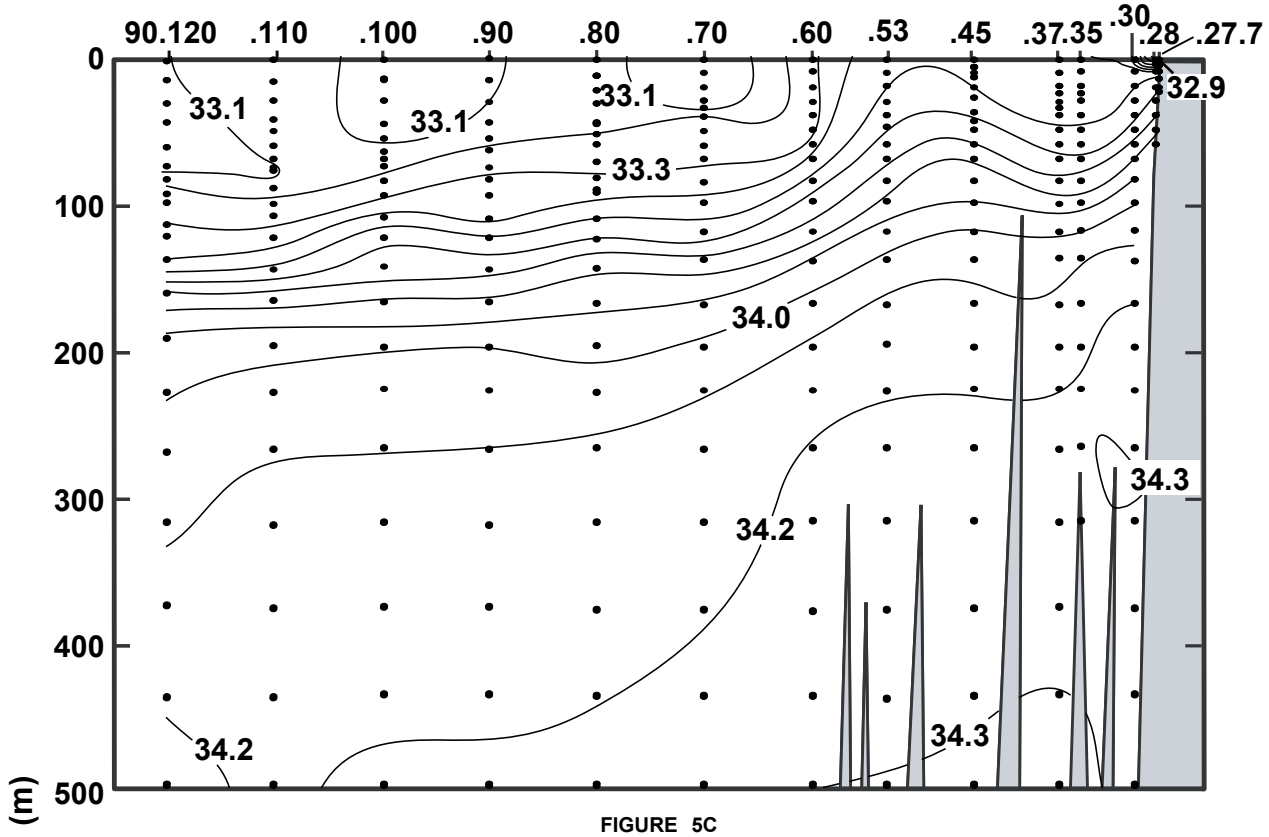

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

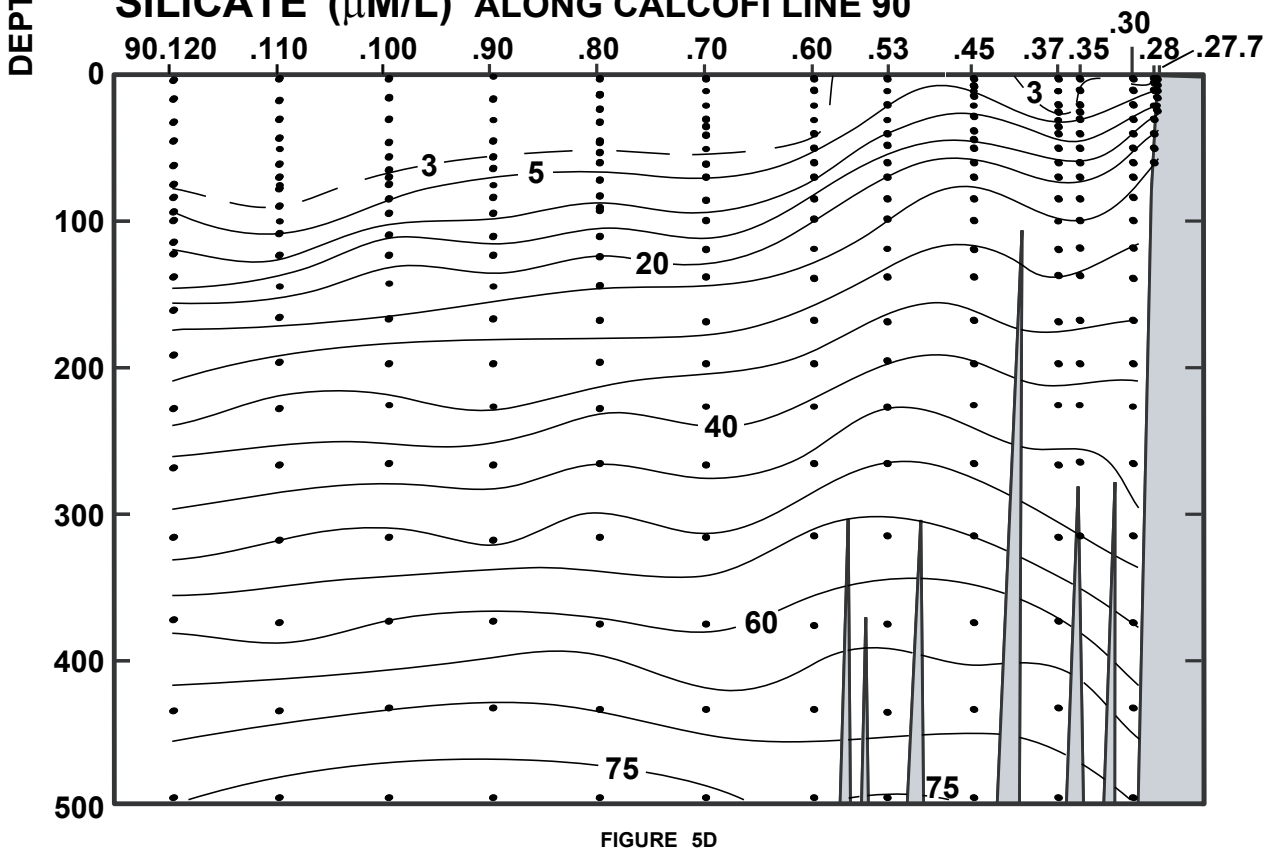

FIGURE 5D

CALCOFI CRUISE 0604

05 - 08 April 2006

NITRATE (μM/L) ALONG CALCOFI LINE 90

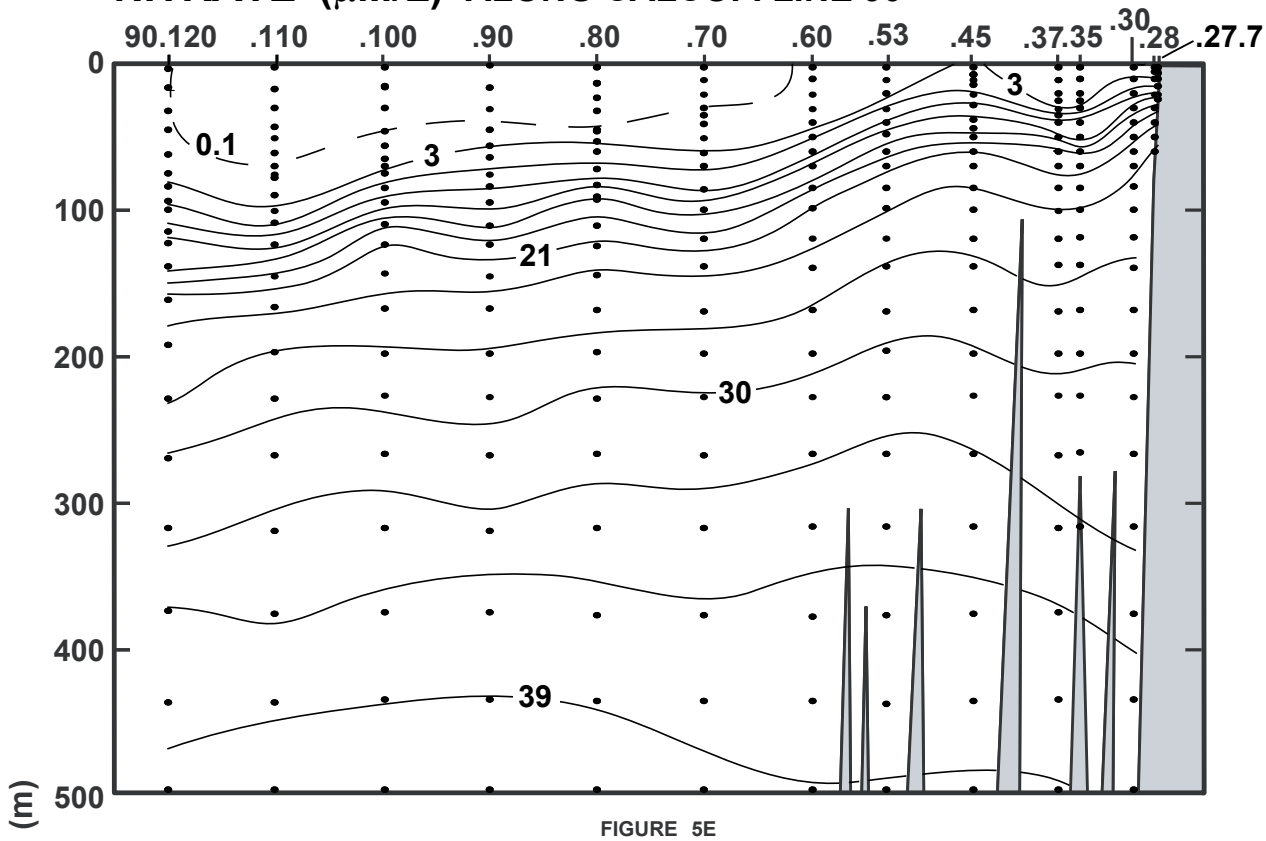

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

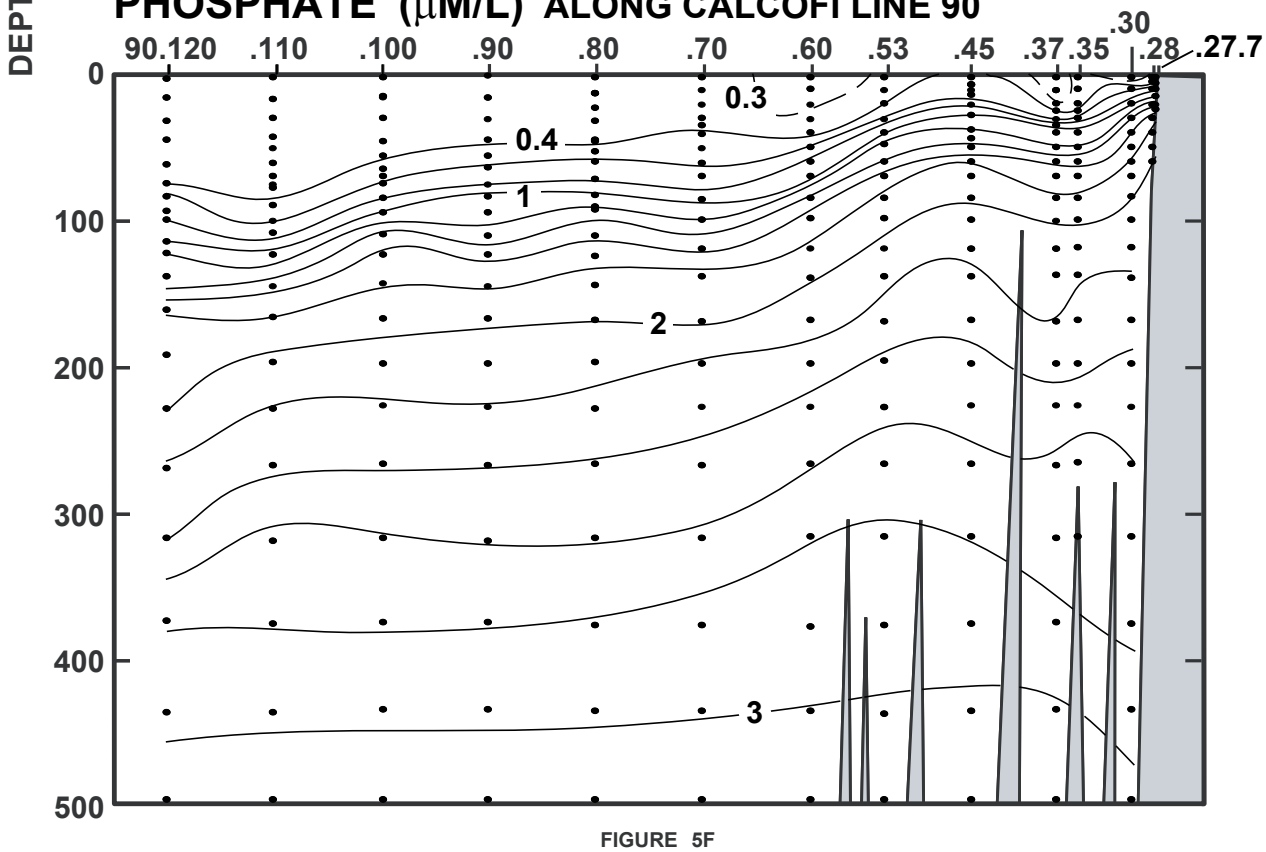

FIGURE 5F

PERSONNEL

CalCOFI Cruise 0604

SHIP'S CAPTAIN

David Merline, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Wilkinson, James R. (Chief Scientist)	Programmer/Analyst, SIO	1
Abremenkoff, Dimitry	Fishery Biologist, NMFS	1
Becker, Susan	Staff Research Associate, SIO	1
Camacho, Dominique	Marine Mammal Observer, Cascadia Research	1
Campbell, Gregory	Staff Research Associate, SIO	1
Douglas, Annie	Marine Mammal Observer, Cascadia Research	1
Dovel, Shonna L.	Staff Research Associate, SIO	1
Langer, David J.	Volunteer	1
Liddel, Kenneth	Volunteer	1
Manion, Sue M.	Fishery Biologist, NMFS	1
Murdoch, Craig	Staff Research Associate, SIO	1
Munro, David R.	Graduate Student, University of Washington	1
Sheldon, Jennifer L.	Staff Research Associate, SIO	1
Stanaway, Kathryn E.	Volunteer	1
Wolgast, David M.	Staff Research Associate, SIO	1
Yakich, Jason	Seabird Biologist, Pt. Reyes Bird Observatory	1

San Diego-San Diego, 1-18 April, 2006

RV NEW HORIZON CALCOFI CRUISE 0604 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 5.3 N	120 46.6 W	17/04/06	0449 UTC	71 m	290 14 kn			1017.6 mb	13.7 C	12.0 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	13.54	13.54	33.089	24.805	313.3	0.000	6.33	106.8	5.4	0.40	1.8	0.08	3.36	0.39	0	
1		13.54	13.54	33.089	24.805	313.3	0.003	6.33	106.8	5.4	0.40	1.8	0.08	3.36	0.39	1	210
6		13.54	13.54	33.091	24.807	313.3	0.019	6.33	106.8	5.3	0.41	1.8	0.08	3.56 A	0.45 A	6	209
10		13.41	13.41	33.110	24.848	309.5	0.031	6.26	105.3	5.9	0.46	2.4	0.09	3.44	0.51	10	208
15		12.25	12.25	33.233	25.171	278.9	0.046	5.39	88.6	10.4	0.82	7.1	0.17	2.45	0.56	15	207
20	ISL	11.18	11.18	33.476	25.557	242.2	0.059	4.26	68.5	18.3	1.37	14.3	0.27	0.95	0.43	20	
21		11.00	11.00	33.525	25.628	235.5	0.061	4.05	64.9	19.8	1.47	15.7	0.29	0.68	0.40	21	206
30		10.44	10.44	33.674	25.843	215.3	0.082	3.45	54.7	24.0	1.74	19.6	0.32	0.30	0.33	30	205
41		10.40	10.40	33.688	25.861	213.9	0.105	3.39	53.7	24.7	1.77	20.0	0.32	0.28	0.34	41	204
50		10.10	10.09	33.740	25.953	205.3	0.124	3.27	51.4	25.3	1.84	21.4	0.28	0.18	0.28	50	203
61		9.77	9.76	33.842	26.088	192.7	0.146	2.73	42.7	29.7	2.06	23.9	0.31	0.14	0.42	61	202
64		9.75	9.74	33.850	26.097	191.8	0.152	2.66	41.6	30.4	2.09	24.0	0.33	0.21	0.59	64	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 1.1 N	120 55.1 W	17/04/06	0658 UTC	245 m	310 15 kn			1018.5 mb	13.6 C	11.7 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	13.68	13.68	32.872	24.609	332.0	0.000	6.20	104.7	2.6	0.31	0.1	0.00	0.54	0.03	0	
2		13.68	13.68	32.872	24.609	332.0	0.007	6.20	104.7	2.6	0.31	0.1	0.00	0.54	0.03	2	220
2		13.68	13.68	32.871	24.609	332.1	0.007									2	221
10	ISL	13.63	13.63	32.882	24.627	330.5	0.033	6.21	104.8	2.7	0.31	0.0	0.00	0.43	0.07	10	
11		13.62	13.62	32.884	24.631	330.2	0.036	6.21	104.8	2.7	0.31	0.0	0.00	0.42	0.08	11	218
11		13.62	13.62	32.883	24.630	330.3	0.036									11	219
20		13.48	13.48	32.899	24.671	326.6	0.066	6.24	105.0	2.7	0.31	0.1	0.01	0.55	0.05	20	216
21		13.47	13.47	32.902	24.676	326.2	0.069									21	217
30		13.21	13.21	32.961	24.773	317.1	0.098									30	215
30		13.21	13.21	32.961	24.773	317.1	0.098	6.21	103.9	3.2	0.35	0.6	0.03	0.78	0.01	30	214
41		12.54	12.53	33.116	25.025	293.5	0.132	5.88	97.1	5.6	0.57	3.7	0.17	1.01	0.10	41	213
49		11.53	11.52	33.241	25.312	266.3	0.154									49	212
49		11.47	11.46	33.259	25.337	263.9	0.154	4.88	78.9	10.5	1.06	11.3	0.14	1.08	0.14	49	211
50	ISL	11.31	11.30	33.284	25.385	259.3	0.157	4.76	76.7	11.2	1.12	12.2	0.13	1.03	0.14	50	
59		10.13	10.12	33.517	25.774	222.5	0.178	3.88	61.0	17.7	1.54	18.8	0.05	0.42	0.14	59	210
70		9.82	9.81	33.696	25.966	204.4	0.202	3.42	53.5	23.1	1.77	21.6	0.20	0.07	0.12	70	209
75	ISL	9.65	9.64	33.724	26.016	199.8	0.212	3.33	51.9	23.5	1.79	22.4	0.16	0.06	0.11	75	
85		9.34	9.33	33.745	26.083	193.6	0.232	3.23	50.0	24.4	1.83	23.6	0.04	0.03	0.09	85	208
100		9.04	9.03	33.804	26.177	184.8	0.260	3.09	47.5	26.4	1.89	24.9	0.01	0.01	0.06	101	207
120		8.93	8.92	33.848	26.229	180.3	0.297	2.99	45.9	27.8	1.93	25.5	0.01	0.00	0.06	121	206
125	ISL	8.95	8.94	33.875	26.248	178.7	0.306	2.85	43.7	28.5	1.97	25.9	0.01	0.00	0.06	126	
139		9.01	9.00	33.960	26.305	173.5	0.330	2.40	36.9	31.0	2.12	27.3	0.01	0.00	0.06	140	205
150	ISL	8.92	8.90	34.018	26.365	168.1	0.349	2.17	33.3	33.3	2.21	28.3	0.01	0.00	0.05	151	
168		8.68	8.66	34.096	26.464	159.0	0.378	1.86	28.4	37.3	2.33	29.8	0.01	0.01	0.05	169	204
199		8.32	8.30	34.170	26.577	148.7	0.426	1.34	20.3	44.2	2.55	31.9	0.03	0.01	0.08	200	203
200	ISL	8.32	8.30	34.170	26.577	148.7	0.428	1.34	20.3	44.2	2.55	31.9	0.03			201	
228		8.33	8.31	34.177	26.582	148.8	0.469	1.26	19.1	45.2	2.58	31.9	0.04			229	202
236		8.34	8.32	34.178	26.581	149.0	0.481	1.26	19.1	45.5	2.58	31.9	0.04			237	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 53.4 N	121 12.0 W	16/04/06	2209 UTC	562 m	180 10 kn	280 04 08	1	1016.5 mb	15.7 C	15.0 C	12m	6/8 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	14.02	14.02	32.938	24.591	333.8	0.000	6.13	104.3	3.1	0.32	0.1	0.01	0.56	0.00	0	
2		14.02	14.02	32.938	24.591	333.8	0.007	6.13	104.3	3.1	0.32	0.1	0.01	0.56	0.00	2	222
10		13.71	13.71	32.942	24.658	327.7	0.033	6.17	104.3	3.4	0.32	0.1	0.01	0.74	0.12	10	221
20	ISL	13.42	13.42	32.962	24.732	320.8	0.066	6.12	102.9	3.6	0.35	0.6	0.05	1.08	0.10	20	
21		13.39	13.39	32.966	24.741	320.0	0.069	6.11	102.6	3.6	0.36	0.7	0.06	1.11	0.10	21	220
25		13.27	13.27	32.985	24.780	316.4	0.081	6.03	101.1	3.9	0.40	1.2	0.10	1.12	0.08	25	219
30	ISL	12.28	12.28	33.135	25.089	287.0	0.097	5.33	87.6	7.2	0.79	6.9	0.17	0.62	0.11	30	
31		12.06	12.06	33.168	25.156	280.7	0.099	5.17	84.6	7.9	0.87	8.2	0.17	0.51	0.12	31	218
36		11.68	11.68	33.219	25.267	270.3	0.113	4.87	79.0	9.1	1.01	10.4	0.07	0.40	0.11	36	217
40		11.34	11.34	33.271	25.370	260.5	0.124	4.62	74.5	10.8	1.15	12.6	0.05	0.27	0.11	40	216
50	ISL	10.71	10.70	33.394	25.578	241.0	0.149	4.30	68.4	14.0	1.34	15.7	0.07	0.14	0.10	50	
51		10.65	10.64	33.406	25.598	239.1	0.151	4.28	68.0	14.3	1.35	15.9	0.07	0.14	0.10	51	215
60		9.99	9.98	33.528	25.806	219.4	0.172	3.89	61.0	17.9	1.56	19.3	0.05	0.06	0.11	60	214
71		9.75	9.74	33.728	26.002	201.0	0.195	3.28	51.2	23.7	1.82	22.7	0.09	0.05	0.14	71	213
75	ISL	9.76	9.75	33.788	26.048	196.8	0.203	3.04	47.5	25.2	1.90	23.6	0.11	0.05	0.19	75	
85		9.78	9.77	33.885	26.120	190.1	0.222	2.54	39.7	27.8	2.05	25.0	0.15	0.07	0.29	85	212
100		9.76	9.75	33.913	26.146	188.0	0.251	2.41	37.7	28.5	2.11	25.7	0.05	0.07	0.26	101	211
120		9.40	9.39	33.972	26.251	178.3	0.287	2.25	34.9	31.2	2.17	26.8	0.06	0.03	0.22	121	210
125	ISL	9.37	9.36	33.992	26.272	176.5	0.296	2.17	33.6	32.0	2.20	27.1	0.07	0.03	0.22	126	
140		9.31	9.29	34.049	26.327	171.6	0.322	1.90	29.4	34.2	2.29	28.0	0.11	0.04	0.23	141	209
150	ISL	9.24	9.22	34.075	26.358	168.8	0.339	1.78	27.5	35.3	2.33	28.5	0.12	0.03	0.23	151	
169		9.09	9.07	34.114	26.413	163.9	0.371	1.61	24.8	37.3	2.40	29.5	0.13	0.01	0.21	170	208
199		8.78	8.76	34.177	26.512	155.0	0.419	1.36	20.8	40.9	2.52	31.0	0.06	0.01	0.15	200	207
200	ISL	8.77	8.75	34.178	26.514	154.8	0.420	1.36	20.8	41.0	2.52	31.0	0.06			201	
228		8.60	8.58	34.192	26.552	151.7	0.463	1.28	19.5	43.1	2.56	31.6	0.04			229	206
250	ISL	8.48	8.45	34.201	26.578	149.7	0.496	1.24	18.9	44.3	2.59	32.0	0.02			252	
268		8.37	8.34	34.207	26.600	147.9	0.523	1.20	18.2	45.4	2.61	32.3	0.01			270	205
300	ISL	8.08	8.05	34.222	26.656	143.0	0.570	1.08	16.3	48.7	2.68	33.4	0.01			302	
319		7.87	7.84	34.227	26.691	139.9	0.597	1.00	15.0	51.2	2.72	34.1	0.01			321	204
379		7.03	6.99	34.206	26.794	130.5	0.678	0.83	12.2	60.5	2.86	36.6	0.01			382	203
400	ISL	6.85	6.81	34.206	26.819	128.3	0.705	0.78	11.4	62.9	2.90	37.2	0.01			403	
438		6.59	6.55	34.212	26.859	124.9	0.753	0.69	10.0	66.9	2.96	38.2	0.00			441	202
500	ISL	6.24	6.20	34.237	26.925	119.2	0.829	0.52	7.5	74.0	3.06	39.3	0.01			504	
510		6.18	6.13	34.241	26.936	118.2	0.841	0.49	7.1	75.2	3.08	39.5	0.01			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 33.4 W	16/04/06	1801 UTC	919 m	210 09 kn	280 04 06	1	1016.6 mb	14.8 C	14.1 C	12m	4/8	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	13.90	13.90	32.988	24.654	327.7	0.000	6.27	106.5	3.4	0.31	0.3	0.02	1.08	0.24	0	
2	A	13.90	13.90	32.988	24.654	327.8	0.007	6.27	106.5	3.4	0.31	0.3	0.02	1.08	0.24	2	223
7		13.88	13.88	32.995	24.664	327.0	0.023									7	222
7	A	13.89	13.89	32.987	24.655	327.8	0.023	6.26	106.3	3.3	0.31	0.3	0.02	1.19	0.24	7	221
10	ISL	13.76	13.76	33.057	24.736	320.2	0.033	6.31	106.9	2.9	0.33	0.5	0.03	1.61	0.35	10	
16		13.32	13.32	33.260	24.982	296.9	0.051									16	220
17	A	13.32	13.32	33.256	24.979	297.2	0.054	6.42	107.9	2.2	0.37	1.7	0.08	2.26	0.62	17	219
20	ISL	13.11	13.11	33.305	25.059	289.7	0.063	6.26	104.8	2.6	0.47	2.7	0.11	1.89	0.62	20	
23	A	12.91	12.91	33.342	25.128	283.2	0.072	6.09	101.5	3.2	0.57	3.6	0.14	1.43	0.61	23	218
30	A	12.65	12.65	33.379	25.207	275.8	0.091	5.91	98.0	4.5	0.68	4.7	0.18	1.02	0.56	30	217
42		11.72	11.71	33.546	25.514	246.9	0.122	5.35	87.1	10.5	1.05	9.0	0.25	0.36	0.37	42	216
50	ISL	11.18	11.17	33.625	25.674	231.9	0.142	4.95	79.7	14.1	1.26	12.2	0.25	0.35	0.28	50	
52	A	11.06	11.05	33.641	25.708	228.6	0.146	4.83	77.5	15.0	1.31	13.1	0.25	0.35	0.27	52	215
60		10.64	10.63	33.690	25.821	218.1	0.164	4.12	65.6	18.6	1.54	16.8	0.29	0.26	0.35	60	214
69		10.44	10.43	33.719	25.878	212.8	0.183	3.87	61.3	20.1	1.63	18.4	0.30	0.26	0.29	69	213
75	ISL	10.12	10.11	33.751	25.958	205.3	0.196	3.48	54.8	22.3	1.76	20.8	0.23	0.19	0.26	75	
85		9.56	9.55	33.812	26.099	192.0	0.216	2.83	44.0	26.1	1.96	24.8	0.09	0.06	0.23	85	212
99		9.20	9.19	33.875	26.207	182.0	0.242	2.60	40.1	28.7	2.05	26.5	0.03	0.03	0.20	100	211
100	ISL	9.18	9.17	33.878	26.213	181.5	0.244	2.59	40.0	28.8	2.05	26.6	0.03	0.03	0.20	101	
120		8.99	8.98	33.933	26.287	174.9	0.280	2.47	38.0	30.8	2.11	27.4	0.05	0.02	0.21	121	210
125	ISL	8.96	8.95	33.955	26.309	172.9	0.288	2.40	36.9	31.5	2.13	27.7	0.05	0.02	0.20	126	
141		8.86	8.84	34.022	26.377	166.7	0.315	2.16	33.1	34.0	2.21	28.7	0.06	0.01	0.16	142	209
150	ISL	8.76	8.74	34.044	26.410	163.7	0.330	2.07	31.7	35.3	2.25	29.2	0.06	0.01	0.14	151	
170		8.53	8.51	34.079	26.474	158.0	0.362	1.91	29.1	38.2	2.32	30.3	0.06	0.01	0.12	171	208
198		8.32	8.30	34.124	26.541	152.1	0.406	1.66	25.2	41.7	2.43	31.5	0.05	0.01	0.10	199	207
200	ISL	8.31	8.29	34.130	26.547	151.5	0.409	1.62	24.5	42.1	2.44	31.6	0.05			201	
229		8.20	8.18	34.212	26.629	144.3	0.452	1.12	16.9	47.3	2.65	33.0	0.03			230	206
250	ISL	8.01	7.98	34.230	26.672	140.5	0.482	0.99	14.9	50.1	2.72	33.8	0.02			252	
268		7.84	7.81	34.232	26.698	138.2	0.507	0.95	14.2	52.1	2.75	34.3	0.01			270	205
300	ISL	7.65	7.62	34.238	26.731	135.6	0.551	0.86	12.8	54.7	2.80	34.9	0.01			302	
318		7.54	7.51	34.240	26.749	134.2	0.575	0.82	12.2	56.2	2.83	35.3	0.01			320	204
378		6.87	6.83	34.254	26.854	124.7	0.653	0.61	8.9	65.4	2.97	37.6	0.01			381	203
400	ISL	6.59	6.55	34.234	26.876	122.7	0.680	0.61	8.9	68.2	3.00	38.4	0.01			403	
436		6.19	6.15	34.207	26.907	119.9	0.723	0.61	8.8	72.4	3.03	39.6	0.00			439	202
500	ISL	5.94	5.90	34.276	26.994	112.4	0.798	0.39	5.6	79.6	3.14	40.7	0.00			504	
512		5.89	5.85	34.289	27.010	110.9	0.811	0.35	5.0	81.0	3.16	40.9	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 23.6 N	122 14.9 W	16/04/06	1201 UTC	4031 m	260 07 kn			1015.4 mb	14.5 C	12.9 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	14.53	14.53	32.944	24.489	343.5	0.000	5.90	101.5	1.8	0.33	0.1	0.00	0.18	0.01	0	
2		14.53	14.53	32.944	24.489	343.5	0.007	5.90	101.5	1.8	0.33	0.1	0.00	0.18	0.01	2	220
10	ISL	14.53	14.53	32.943	24.488	343.8	0.034	5.90	101.5	1.8	0.32	0.0	0.00	0.17	0.02	10	
16		14.53	14.53	32.942	24.487	344.0	0.055	5.91	101.6	1.8	0.32	0.0	0.00	0.16	0.02	16	219
20	ISL	14.51	14.51	32.944	24.493	343.6	0.069	5.91	101.6	1.8	0.32	0.0	0.00	0.17	0.01	20	
30	ISL	14.42	14.42	32.949	24.516	341.7	0.103	5.92	101.6	1.7	0.32	0.0	0.00	0.21	0.00	30	
31		14.41	14.41	32.950	24.519	341.4	0.106	5.92	101.5	1.7	0.32	0.0	0.00	0.21	0.00	31	218
45		14.22	14.21	32.951	24.560	337.9	0.154	5.95	101.7	1.7	0.32	0.0	0.00	0.26	0.05	45	217
50	ISL	13.99	13.98	32.911	24.577	336.4	0.171	6.00	102.0	1.7	0.33	0.0	0.00	0.41	0.06	50	
56		13.65	13.64	32.866	24.612	333.2	0.191	6.03	101.8	1.7	0.34	0.0	0.00	0.61	0.09	56	216
65		13.07	13.06	32.866	24.729	322.3	0.220	5.93	98.9	1.9	0.42	0.4	0.07	0.76	0.24	65	215
75		12.93	12.92	32.956	24.826	313.3	0.252	5.77	96.0	3.1	0.49	1.5	0.29	0.39	0.09	75	214
86		12.64	12.63	33.068	24.970	299.9	0.286	5.47	90.5	4.6	0.64	4.3	0.19	0.19	0.09	86	213
95		12.03	12.02	33.182	25.175	280.5	0.312	5.12	83.7	6.8	0.85	7.7	0.03	0.13	0.09	95	212
100	ISL	11.66	11.65	33.209	25.264	272.1	0.326	4.94	80.1	8.2	0.97	9.6	0.03	0.11	0.08	100	
111		10.94	10.93	33.260	25.434	256.0	0.355	4.57	73.0	11.1	1.21	13.3	0.02	0.07	0.06	112	211
125		10.41	10.40	33.403	25.638	236.8	0.389	4.21	66.5	14.1	1.39	16.3	0.01	0.03	0.04	126	210
143		9.75	9.73	33.603	25.906	211.7	0.430	3.70	57.7	19.1	1.63	20.2	0.01	0.01	0.03	144	209
150	ISL	9.55	9.53	33.649	25.975	205.2	0.444	3.73	57.9	20.1	1.64	20.5	0.01	0.01	0.03	151	
169		9.09	9.07	33.738	26.119	191.8	0.482	3.82	58.8	22.0	1.65	21.3	0.00	0.00	0.02	170	208
199		8.52	8.50	33.881	26.320	173.1	0.537	3.65	55.5	27.4	1.75	23.6	0.01	0.00	0.02	200	207
200	ISL	8.51	8.49	33.885	26.325	172.6	0.539	3.62	55.0	27.7	1.76	23.7	0.01			201	
229		8.12	8.10	33.981	26.459	160.3	0.587	2.80	42.2	35.2	2.06	27.8	0.00			230	206
250	ISL	7.83	7.81	34.014	26.528	154.0	0.620	2.42	36.2	39.8	2.21	29.9	0.00			251	
269		7.59	7.56	34.030	26.576	149.7	0.649	2.17	32.3	43.6	2.32	31.4	0.00			271	205
300	ISL	7.27	7.24	34.059	26.644	143.5	0.694	1.79	26.5	48.9	2.48	33.4	0.00			302	
318		7.09	7.06	34.073	26.681	140.2	0.720	1.60	23.6	51.9	2.57	34.3	0.00			320	204
378		6.39	6.36	34.110	26.804	129.0	0.800	1.06	15.4	63.5	2.83	37.4	0.00			380	203
400	ISL	6.25	6.21	34.133	26.840	125.7	0.828	0.90	13.0	66.6	2.90	38.1	0.00			403	
439		6.06	6.02	34.174	26.897	120.7	0.876	0.67	9.6	71.6	3.00	39.1	0.00			442	202
500	ISL	5.61	5.57	34.214	26.985	112.8	0.948	0.45	6.4	81.2	3.12	40.7	0.00			503	
513		5.52	5.48	34.223	27.003	111.1	0.962	0.40	5.7	83.3	3.15	41.0	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 3.4 N	122 56.3 W	16/04/06	0556 UTC	4227 m	230 10 kn			1017.2 mb	15.5 C	13.7 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	15.05	15.05	33.072	24.476	344.7	0.000	5.81	101.0	1.9	0.31	0.1	0.00	0.10	0.01	0	
2		15.05	15.05	33.072	24.476	344.8	0.007	5.81	101.0	1.9	0.31	0.1	0.00	0.10	0.01	2	222
10	ISL	15.05	15.05	33.070	24.475	345.1	0.034	5.80	100.9	1.9	0.31	0.1	0.00	0.09	0.01	10	
15		15.05	15.05	33.069	24.474	345.3	0.052	5.80	100.9	1.9	0.31	0.1	0.00	0.08	0.01	15	220
16		15.05	15.05	33.070	24.475	345.3	0.055									16	221
20	ISL	15.03	15.03	33.066	24.476	345.3	0.069	5.80	100.8	1.9	0.31	0.1	0.00	0.08	0.01	20	
30		14.97	14.97	33.068	24.491	344.1	0.103	5.81	100.9	1.8	0.31	0.1	0.00	0.09	0.02	30	219
45		14.94	14.93	33.107	24.528	341.1	0.155	5.82	101.0	1.8	0.31	0.0	0.00	0.13	0.03	45	218
50	ISL	14.91	14.90	33.107	24.535	340.6	0.172	5.82	100.9	1.8	0.31	0.0	0.00	0.16	0.04	50	
60		14.84	14.83	33.109	24.552	339.3	0.206	5.82	100.8	1.8	0.31	0.0	0.00	0.21	0.07	60	217
75		14.20	14.19	32.990	24.596	335.4	0.257	5.92	101.1	1.8	0.33	0.0	0.00	0.27	0.09	75	216
85		13.87	13.86	32.967	24.646	330.8	0.290	5.94	100.8	1.8	0.34	0.1	0.01	0.43	0.30	85	215
90		14.03	14.02	33.097	24.714	324.6	0.306	5.76	98.1	2.4	0.38	0.6	0.06	0.53	0.41	90	214
95		13.91	13.90	33.158	24.786	317.8	0.322	5.66	96.2	2.6	0.42	1.1	0.08	0.55	0.31	95	213
100	ISL	13.45	13.44	33.226	24.932	304.0	0.338	5.52	93.0	3.2	0.50	2.3	0.06	0.42	0.32	100	
104		12.98	12.97	33.275	25.064	291.5	0.350	5.39	89.9	3.9	0.58	3.6	0.04	0.28	0.32	104	212
114		11.87	11.86	33.339	25.327	266.5	0.378	5.05	82.3	6.6	0.82	7.9	0.02	0.12	0.15	115	211
125		11.34	11.32	33.374	25.452	254.8	0.406	4.93	79.5	8.2	0.92	9.7	0.01	0.08	0.08	126	210
140		10.70	10.68	33.451	25.626	238.4	0.443	4.80	76.4	10.4	1.05	12.1	0.01	0.04	0.04	141	209
150	ISL	10.24	10.22	33.516	25.756	226.2	0.467	4.66	73.4	12.5	1.17	14.1	0.01	0.02	0.03	151	
164		9.65	9.63	33.613	25.931	209.7	0.497	4.43	68.9	15.9	1.34	17.0	0.00	0.01	0.02	165	208
195		8.90	8.88	33.796	26.195	185.0	0.558	3.93	60.2	23.4	1.63	21.6	0.00	0.00	0.01	196	207
200	ISL	8.82	8.80	33.821	26.227	182.1	0.567	3.91	59.8	24.2	1.65	21.9	0.00			201	
229		8.40	8.38	33.935	26.381	167.8	0.618	3.76	57.0	29.0	1.72	23.5	0.00			230	206
250	ISL	8.01	7.98	33.971	26.468	159.8	0.653	3.40	51.1	34.3	1.88	25.9	0.00			251	
269		7.67	7.64	33.987	26.531	154.0	0.682	3.02	45.0	39.3	2.04	28.2	0.00			271	205
300	ISL	7.27	7.24	34.013	26.608	146.9	0.729	2.47	36.5	45.8	2.27	31.2	0.00			302	
319		7.05	7.02	34.023	26.647	143.4	0.757	2.18	32.1	49.4	2.39	32.7	0.00			321	204
378		6.23	6.20	34.025	26.757	133.2	0.838	1.70	24.5	60.3	2.64	36.2	0.00			380	203
400	ISL	6.04	6.01	34.037	26.791	130.1	0.867	1.50	21.5	63.9	2.73	37.3	0.00			403	
438		5.76	5.72	34.066	26.849	124.9	0.916	1.16	16.5	70.1	2.87	39.0	0.00			441	202
500	ISL	5.27	5.23	34.123	26.953	115.3	0.990	0.75	10.6	82.3	3.05	41.1	0.00			503	
512		5.17	5.13	34.134	26.974	113.4	1.004	0.67	9.4	84.7	3.08	41.5	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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	16/04/06	0001 UTC	4188 m	280 06 kn	330 03 05	1	1017.3 mb	15.0 C	13.6 C	38m	4/8 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	15.22	15.22	33.046	24.419	350.1	0.000	5.80	101.2	2.1	0.32	0.1	0.00	0.10	0.02	0	
2		15.22	15.22	33.046	24.419	350.2	0.007	5.80	101.2	2.1	0.32	0.1	0.00	0.10	0.02	2	221
10	ISL	15.10	15.10	33.043	24.443	348.1	0.035	5.80	101.0	2.1	0.32	0.1	0.00	0.10	0.02	10	
15		15.01	15.01	33.040	24.460	346.6	0.052	5.80	100.8	2.1	0.32	0.1	0.00	0.10	0.02	15	220
20	ISL	15.00	15.00	33.041	24.464	346.5	0.070	5.81	100.9	2.1	0.32	0.1	0.00	0.10	0.02	20	
30		14.98	14.98	33.039	24.467	346.5	0.104	5.82	101.0	2.1	0.32	0.1	0.00	0.10	0.02	30	219
45		14.93	14.92	33.075	24.505	343.2	0.156	5.82	101.0	2.2	0.32	0.1	0.00	0.13	0.03	45	218
50	ISL	14.89	14.88	33.074	24.514	342.6	0.173	5.82	100.9	2.2	0.32	0.1	0.00	0.15	0.04	50	
60		14.83	14.82	33.074	24.527	341.6	0.207	5.83	100.9	2.1	0.32	0.1	0.00	0.19	0.05	60	217
75		14.86	14.85	33.115	24.552	339.6	0.258	5.82	100.8	2.0	0.31	0.1	0.00	0.25	0.08	75	216
85		14.85	14.84	33.123	24.561	339.1	0.292	5.80	100.5	2.1	0.31	0.2	0.00	0.27	0.11	85	215
95		14.81	14.80	33.168	24.605	335.2	0.326	5.78	100.1	2.0	0.32	0.1	0.00	0.31	0.33	95	214
100		14.55	14.54	33.126	24.628	333.1	0.343	5.78	99.5	2.1	0.32	0.1	0.01	0.34	0.25	100	213
104		14.22	14.20	33.086	24.666	329.5	0.356	5.78	98.8	2.2	0.35	0.2	0.06	0.31	0.23	104	212
115		13.56	13.54	33.182	24.876	309.7	0.391	5.57	94.0	3.0	0.47	1.9	0.12	0.22	0.28	115	211
124		13.10	13.08	33.333	25.086	290.0	0.418	5.37	89.8	4.0	0.55	3.6	0.03	0.15	0.19	125	210
125	ISL	13.09	13.07	33.341	25.094	289.2	0.421	5.36	89.7	4.1	0.56	3.7	0.03	0.15	0.19	126	
139		12.84	12.82	33.380	25.174	281.9	0.461	5.29	88.0	4.6	0.60	4.4	0.02	0.12	0.15	140	209
150	ISL	11.88	11.86	33.359	25.341	266.0	0.491	5.07	82.7	4.5	0.60	4.4	0.02	0.08	0.10	151	
164		10.47	10.45	33.368	25.601	241.2	0.527	4.68	74.0	4.4	0.60	4.4	0.02	0.04	0.05	165	208
194		8.99	8.97	33.696	26.102	193.8	0.592	3.72	57.1	11.1	1.15	13.2	0.01	0.00	0.01	195	207
200	ISL	8.87	8.85	33.747	26.161	188.3	0.603	3.56	54.5	14.5	1.31	15.7	0.01			201	
229		8.57	8.55	33.926	26.348	171.0	0.656	2.96	45.0	30.8	1.97	26.6	0.00			230	206
250	ISL	8.33	8.30	33.990	26.435	163.0	0.691	2.72	41.2	35.2	2.05	27.9	0.00			251	
269		8.11	8.08	34.018	26.491	158.0	0.721	2.56	38.6	37.2	2.13	29.1	0.00			270	205
300	ISL	7.68	7.65	34.039	26.570	150.8	0.769	2.25	33.6	43.0	2.29	31.3	0.00			302	
318		7.42	7.39	34.042	26.610	147.2	0.796	2.07	30.7	46.5	2.38	32.5	0.00			320	204
378		6.61	6.58	34.057	26.733	135.8	0.881	1.58	23.0	56.9	2.63	35.8	0.00			380	203
400	ISL	6.36	6.32	34.063	26.771	132.4	0.910	1.43	20.7	60.7	2.71	36.8	0.00			402	
437		6.00	5.96	34.079	26.830	127.0	0.958	1.19	17.1	66.9	2.83	38.3	0.00			440	202
500	ISL	5.66	5.62	34.145	26.925	118.5	1.036	0.74	10.5	76.6	3.01	40.3	0.00			503	
512		5.59	5.55	34.158	26.943	116.8	1.050	0.65	9.2	78.5	3.05	40.7	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 23.4 N	124 19.3 W	15/04/06	1756 UTC	4553 m	320 12 kn	330 04 05	2	1018.3 mb	15.1 C	13.8 C	33m	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	14.99	14.99	32.992	24.427	349.3	0.000	5.85	101.6	2.1	0.33	0.4	0.00	0.10	0.03	0	
2	A	14.99	14.99	32.992	24.427	349.4	0.007	5.85	101.6	2.1	0.33	0.4	0.00	0.10	0.03	2	223
10		14.96	14.96	32.993	24.435	348.9	0.035	5.82	101.0	2.1	0.32	0.4	0.00	0.10	0.02	10	222
19		14.95	14.95	32.991	24.436	349.1	0.066									19	221
19	A	14.95	14.95	32.992	24.436	349.0	0.066	5.84	101.3	2.2	0.32	0.4	0.00	0.10	0.02	19	220
20	ISL	14.95	14.95	32.993	24.437	349.0	0.070	5.84	101.3	2.2	0.32	0.4	0.00	0.10	0.02	20	
30	ISL	14.93	14.93	33.002	24.449	348.2	0.105	5.85	101.4	2.1	0.32	0.4	0.00	0.11	0.02	30	
33		14.93	14.93	33.005	24.451	348.0	0.115	5.85	101.4	2.1	0.32	0.4	0.00	0.11	0.02	33	219
47		14.81	14.80	33.053	24.514	342.4	0.163									47	218
47	A	14.81	14.80	33.050	24.512	342.6	0.163	5.84	101.0	2.1	0.32	0.4	0.00	0.14	0.04	47	217
50	ISL	14.81	14.80	33.059	24.519	342.0	0.174	5.84	101.1	2.1	0.32	0.4	0.00	0.15	0.04	50	
58		14.80	14.79	33.077	24.535	340.7	0.201	5.84	101.0	2.0	0.31	0.3	0.00	0.17	0.05	58	216
68	A	14.78	14.77	33.090	24.550	339.6	0.235	5.83	100.8	2.0	0.31	0.4	0.00	0.23	0.10	68	215
75	ISL	14.51	14.50	33.055	24.581	336.9	0.259	5.84	100.4	2.0	0.32	0.3	0.00	0.30	0.23	75	
80		14.23	14.22	33.016	24.610	334.2	0.275	5.85	100.0	2.0	0.33	0.3	0.00	0.34	0.30	80	214
90	A	13.57	13.56	32.923	24.674	328.3	0.309	5.95	100.3	2.0	0.37	0.3	0.03	0.36	0.20	90	213
100	ISL	13.35	13.34	33.044	24.812	315.4	0.341	5.71	95.9	2.7	0.46	1.6	0.19	0.28	0.20	100	
102		13.32	13.31	33.079	24.845	312.3	0.347	5.64	94.6	2.9	0.48	1.9	0.21	0.26	0.20	102	212
113		12.98	12.96	33.192	25.000	297.8	0.381	5.43	90.5	3.7	0.56	3.4	0.09	0.20	0.19	113	211
124	A	11.91	11.89	33.305	25.293	270.0	0.412	5.13	83.7	6.1	0.77	7.1	0.02	0.10	0.12	125	210
125	ISL	11.83	11.81	33.310	25.312	268.2	0.415	5.10	83.1	6.3	0.79	7.4	0.02	0.09	0.11	126	
139		10.91	10.89	33.365	25.522	248.3	0.451	4.77	76.2	9.6	1.04	11.7	0.01	0.04	0.06	140	209
150	ISL	10.37	10.35	33.429	25.666	234.7	0.477	4.58	72.3	12.1	1.19	14.3	0.01	0.02	0.04	151	
164		9.85	9.83	33.519	25.824	219.9	0.509	4.42	69.0	14.9	1.33	16.7	0.01	0.00	0.03	165	208
195		9.15	9.13	33.711	26.089	195.2	0.573	4.28	65.9	19.4	1.47	19.5	0.00	0.00	0.02	196	207
200	ISL	9.06	9.04	33.747	26.131	191.2	0.583	4.08	62.7	21.0	1.55	20.6	0.00			201	
228		8.62	8.60	33.924	26.339	171.9	0.634	2.90	44.2	30.7	1.99	27.0	0.00			229	206
250	ISL	8.29	8.26	33.997	26.447	161.9	0.671	2.55	38.6	35.6	2.13	29.2	0.00			251	
268		8.02	7.99	34.029	26.513	155.9	0.699	2.43	36.5	39.0	2.19	30.2	0.00			269	205
300	ISL	7.46	7.43	34.044	26.606	147.3	0.748	2.16	32.1	45.6	2.34	32.4	0.00			302	
318		7.16	7.13	34.043	26.647	143.5	0.774	2.02	29.8	49.2	2.42	33.6	0.00			320	204
378		6.53	6.50	34.087	26.768	132.5	0.857	1.38	20.1	59.7	2.71	37.0	0.00			380	203
400	ISL	6.30	6.26	34.095	26.804	129.2	0.886	1.22	17.6	63.5	2.79	38.0	0.00			402	
437		5.96	5.92	34.111	26.860	124.1	0.932	1.00	14.3	69.6	2.90	39.4	0.00			440	202
500	ISL	5.62	5.58	34.168	26.948	116.3	1.008	0.64	9.1	79.1	3.05	41.2	0.00			503	
512		5.55	5.51	34.179	26.965	114.8	1.022	0.57	8.1	80.9	3.08	41.5	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 27.5 N	120 29.2 W	13/04/06	2340 UTC	27 m	310 08 kn	310 02 05	1	1012.6 mb	15.5 C	14.9 C		3/8	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	14.58	14.58	33.325	24.772	316.5	0.000	6.63	114.4	3.1	0.35	1.2	0.06	3.44	0.17	0	
2		14.58	14.58	33.325	24.772	316.5	0.006	6.63	114.4	3.1	0.35	1.2	0.06	3.44	0.17	2	206
5		14.18	14.18	33.334	24.863	307.9	0.016									5	205
5		14.32	14.32	33.337	24.836	310.5	0.016	6.70	115.0	3.4	0.36	1.3	0.07	4.08	0.02	5	204
10	ISL	13.60	13.60	33.405	25.038	291.4	0.031	7.03	118.9	4.3	0.33	1.4	0.09	8.99	0.26	10	
11		13.48	13.48	33.420	25.074	288.0	0.034	7.08	119.5	4.5	0.32	1.4	0.09	9.87	A 0.33	A 11	203
15		13.45	13.45	33.439	25.095	286.2	0.045	7.02	118.4	5.0	0.35	1.6	0.11	8.98	0.35	15	202
19		13.22	13.22	33.458	25.156	280.5	0.056	6.72	112.8	5.8	0.47	2.6	0.14	6.46	A 0.21	A 19	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 26.7 N	120 31.4 W	14/04/06	0035 UTC	79 m	310 08 kn	310 02 06	1	1012.2 mb	15.5 C	14.7 C	08m	4/8	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	14.05	14.05	33.311	24.872	306.9	0.000	6.65	113.5	3.1	0.33	1.0	0.05	2.56	0.43	0	
1		14.05	14.05	33.311	24.872	306.9	0.003	6.65	113.5	3.1	0.33	1.0	0.05	2.56	0.43	1	214
1		14.07	14.07	33.309	24.867	307.5	0.003									1	215
5		13.96	13.96	33.309	24.890	305.4	0.015									5	213
6		13.84	13.84	33.309	24.914	303.1	0.018	6.69	113.7	3.0	0.33	1.0	0.05	2.63	0.46	6	212
10		13.45	13.45	33.320	25.003	294.8	0.030	6.69	112.8	3.1	0.35	1.1	0.06	3.46	0.78	10	210
10		13.29	13.29	33.316	25.032	292.0	0.030									10	211
15		12.81	12.81	33.393	25.187	277.4	0.045									15	209
15		12.79	12.79	33.391	25.189	277.2	0.045	6.35	105.6	4.6	0.52	3.6	0.11	3.86	0.69	15	208
20	ISL	12.45	12.45	33.449	25.300	266.7	0.058	6.04	99.8	7.2	0.71	5.8	0.15	2.97	0.67	20	
21		12.39	12.39	33.459	25.319	264.9	0.061	5.97	98.5	7.8	0.75	6.3	0.16	2.72	0.66	21	207
30		11.52	11.52	33.548	25.552	243.0	0.084	4.92	79.7	13.0	1.18	11.4	0.21	1.11	0.44	30	205
31		11.48	11.48	33.549	25.560	242.3	0.086									31	206
41		11.05	11.05	33.573	25.657	233.3	0.110	4.49	72.0	15.1	1.34	14.2	0.24	0.67	0.30	41	204
50		10.44	10.43	33.669	25.839	216.1	0.130	3.70	58.6	19.8	1.65	18.8	0.26	0.20	0.29	50	203
60		10.47	10.46	33.672	25.836	216.6	0.152	3.72	59.0	19.9	1.65	18.5	0.25	0.26	0.31	60	202
70		10.58	10.57	33.714	25.850	215.5	0.173	3.74	59.5	20.7	1.68	17.8	0.27	0.35	0.46	70	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 48.1 W	14/04/06	0401	UTC	782 m	350	06 kn			1010.7 mb	14.8 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	14.05	14.05	33.283	24.851	309.0	0.000	6.26	106.8	2.5	0.31	0.6	0.03	1.01	0.10	0	
2		14.05	14.05	33.283	24.851	309.0	0.006	6.26	106.8	2.5	0.31	0.6	0.03	1.01	0.10	2	222
10		14.15	14.15	33.279	24.827	311.5	0.031									10	221
10		14.15	14.15	33.279	24.827	311.5	0.031	6.24	106.7	2.4	0.30	0.5	0.03	0.89	0.06	10	220
20		13.53	13.53	33.294	24.967	298.5	0.062	6.25	105.5	3.1	0.39	1.8	0.08	1.19	0.24	20	219
30		13.38	13.38	33.303	25.004	295.2	0.091	6.16	103.7	3.5	0.43	2.3	0.12	1.17	0.30	30	218
40		12.41	12.40	33.375	25.251	271.9	0.120									40	217
40		12.40	12.39	33.376	25.254	271.7	0.120	5.45	89.9	7.1	0.80	7.3	0.26	1.08	0.27	40	216
50	ISL	11.26	11.25	33.493	25.557	243.0	0.145	4.50	72.5	13.2	1.26	13.9	0.22	0.44	0.19	50	
51		11.16	11.15	33.508	25.587	240.2	0.148	4.41	70.9	13.8	1.30	14.5	0.21	0.37	0.19	51	215
60		10.81	10.80	33.669	25.775	222.5	0.169	4.03	64.4	17.6	1.51	16.1	0.28	0.16	0.25	60	214
71		10.53	10.52	33.734	25.875	213.2	0.192	3.64	57.8	20.0	1.65	18.3	0.28	0.11	0.25	71	213
75	ISL	10.26	10.25	33.757	25.939	207.1	0.201	3.42	54.0	21.6	1.73	19.9	0.25	0.09	0.24	75	
85		9.61	9.60	33.826	26.102	191.8	0.221	2.85	44.4	26.0	1.94	24.1	0.16	0.05	0.20	85	212
100		9.40	9.39	33.977	26.255	177.6	0.249	2.23	34.6	30.9	2.18	26.8	0.06	0.02	0.17	101	211
120		9.39	9.38	34.037	26.304	173.4	0.284	1.94	30.1	32.6	2.27	27.7	0.12	0.05	0.33	121	210
125	ISL	9.38	9.37	34.044	26.311	172.8	0.292	1.93	29.9	32.8	2.27	27.8	0.12	0.05	0.31	126	
139		9.33	9.31	34.061	26.333	171.0	0.316	1.91	29.6	33.2	2.28	28.0	0.09	0.04	0.24	140	209
150	ISL	9.27	9.25	34.082	26.359	168.7	0.335	1.85	28.6	34.1	2.30	28.3	0.07	0.04	0.23	151	
169		9.15	9.13	34.121	26.409	164.3	0.367	1.73	26.7	36.0	2.36	28.9	0.05	0.03	0.22	170	208
199		8.99	8.97	34.170	26.474	158.8	0.415	1.54	23.7	38.5	2.44	29.9	0.03	0.03	0.16	200	207
200	ISL	8.98	8.96	34.171	26.476	158.6	0.417	1.53	23.5	38.6	2.44	29.9	0.03			201	
229		8.76	8.74	34.184	26.521	154.8	0.462	1.34	20.5	41.8	2.54	30.8	0.02			230	206
250	ISL	8.59	8.56	34.201	26.561	151.3	0.494	1.26	19.2	43.4	2.58	31.4	0.01			252	
269		8.44	8.41	34.215	26.596	148.3	0.523	1.20	18.2	44.6	2.60	32.0	0.01			271	205
300	ISL	8.23	8.20	34.220	26.632	145.4	0.568	1.11	16.8	47.0	2.65	32.8	0.01			302	
318		8.10	8.07	34.221	26.652	143.7	0.594	1.06	16.0	48.6	2.68	33.2	0.01			320	204
378		7.55	7.51	34.238	26.747	135.4	0.678	0.83	12.4	55.7	2.82	35.0	0.01			381	203
400	ISL	7.29	7.25	34.230	26.777	132.7	0.708	0.79	11.7	58.3	2.86	35.8	0.01			403	
437		6.87	6.83	34.221	26.829	128.0	0.756	0.73	10.7	62.9	2.92	37.2	0.01			440	202
500	ISL	6.40	6.35	34.261	26.923	119.6	0.834	0.49	7.1	71.3	3.05	39.0	0.00			504	
514		6.30	6.25	34.270	26.944	117.7	0.850	0.44	6.4	73.2	3.08	39.4	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 9.3 N	121 9.3 W	14/04/06	0824	UTC	2225 m	240	05 kn			1010.3 mb	13.5 C	12.9 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	14.46	14.46	33.225	24.720	321.4	0.000	6.18	106.3	3.2	0.31	0.4	0.02	0.50	0.06	0	
2		14.46	14.46	33.225	24.720	321.5	0.006	6.18	106.3	3.2	0.31	0.4	0.02	0.50	0.06	2	220
10	ISL	14.36	14.36	33.227	24.743	319.5	0.032	6.23	106.9	3.2	0.30	0.3	0.02	0.60	0.04	10	
11		14.34	14.34	33.227	24.747	319.1	0.035	6.24	107.1	3.2	0.30	0.3	0.02	0.62	0.04	11	219
20		14.12	14.12	33.227	24.794	315.0	0.064	6.26	106.9	3.2	0.31	0.4	0.02	0.69	0.12	20	218
29		13.53	13.53	33.257	24.938	301.5	0.092	6.20	104.6	2.9	0.36	1.2	0.06	1.00	0.24	29	217
30	ISL	13.48	13.48	33.260	24.951	300.3	0.095	6.18	104.2	2.9	0.37	1.3	0.07	1.05	0.23	30	
40		13.02	13.01	33.290	25.066	289.6	0.124	5.93	99.0	4.0	0.51	3.1	0.22	1.38	0.14	40	216
50		12.42	12.41	33.344	25.225	274.7	0.152	5.48	90.4	6.1	0.74	5.8	0.52	1.04	0.28	50	215
59		11.81	11.80	33.397	25.382	259.9	0.176	4.92	80.2	9.6	1.01	10.3	0.28	0.35	0.17	59	214
71		11.11	11.10	33.507	25.595	239.8	0.206	4.40	70.7	13.6	1.26	14.2	0.24	0.16	0.12	71	213
75	ISL	10.82	10.81	33.550	25.680	231.8	0.216	4.07	65.0	15.9	1.41	16.4	0.16	0.13	0.12	75	
83		10.29	10.28	33.631	25.836	217.1	0.234	3.44	54.3	20.4	1.69	20.5	0.01	0.10	0.14	83	212
100		9.95	9.94	33.709	25.955	206.2	0.270	3.10	48.6	23.1	1.84	22.5	0.01	0.05	0.13	101	211
120		9.33	9.32	33.862	26.177	185.4	0.309	2.58	39.9	28.0	2.04	25.8	0.01	0.02	0.10	121	210
125	ISL	9.24	9.23	33.889	26.212	182.1	0.318	2.51	38.8	28.8	2.07	26.3	0.01	0.01	0.11	126	
139		9.06	9.04	33.950	26.289	175.1	0.343	2.38	36.6	30.7	2.12	27.2	0.01	0.00	0.13	140	209
150	ISL	8.95	8.93	33.987	26.336	170.8	0.362	2.26	34.7	32.0	2.16	27.9	0.01	0.00	0.12	151	
169		8.76	8.74	34.034	26.403	164.8	0.394	2.08	31.8	34.5	2.23	29.0	0.02	0.01	0.09	170	208
199		8.30	8.28	34.083	26.512	154.8	0.442	1.87	28.3	39.8	2.35	30.8	0.03	0.00	0.06	200	207
200	ISL	8.29	8.27	34.084	26.514	154.6	0.443	1.86	28.2	39.9	2.35	30.8	0.03			201	
228		8.12	8.10	34.122	26.570	149.8	0.486	1.62	24.4	43.3	2.46	31.8	0.03			229	206
250	ISL	8.07	8.04	34.175	26.620	145.5	0.519	1.30	19.6	46.4	2.58	32.5	0.02			252	
269		8.00	7.97	34.217	26.663	141.7	0.546	1.04	15.7	49.3	2.69	33.2	0.01			271	205
300	ISL	7.64	7.61	34.233	26.729	135.8	0.589	0.86	12.8	54.1	2.79	34.5	0.00			302	
317		7.41	7.38	34.233	26.762	132.8	0.612	0.80	11.9	56.8	2.83	35.2	0.00			319	204
378		6.72	6.69	34.255	26.875	122.6	0.690	0.56	8.2	66.5	3.00	37.6	0.00			380	203
400	ISL	6.55	6.51	34.260	26.902	120.2	0.716	0.51	7.4	69.1	3.03	38.2	0.00			403	
439		6.29	6.25	34.269	26.943	116.7	0.762	0.44	6.4	73.4	3.08	39.1	0.00			442	202
500	ISL	5.88	5.84	34.288	27.011	110.7	0.832	0.33	4.7	80.5	3.15	40.4	0.00			504	
513		5.79	5.75	34.292	27.025	109.4	0.846	0.31	4.4	82.0	3.17	40.7	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 49.2 N	121 50.2 W	14/04/06	1600 UTC	3634 m	200 07 kn	240 02 06	2	1008.0 mb	15.5 C	14.8 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	14.26	14.26	32.860	24.480	344.2	0.000	6.01	102.7	2.8	0.32	0.0	0.00	0.19	0.04	0	
2		14.26	14.26	32.860	24.481	344.3	0.007	6.01	102.7	2.8	0.32	0.0	0.00	0.19	0.04	2	220
10	ISL	14.04	14.04	32.874	24.537	339.1	0.034	6.04	102.8	2.8	0.32	0.0	0.00	0.21	0.05	10	
15		13.85	13.85	32.885	24.585	334.7	0.051	6.06	102.7	2.7	0.32	0.0	0.00	0.22	0.05	15	219
20	ISL	13.74	13.74	32.887	24.609	332.5	0.068	6.06	102.5	2.6	0.32	0.0	0.00	0.27	0.07	20	
30		13.61	13.61	32.893	24.641	329.8	0.101	6.06	102.2	2.4	0.33	0.0	0.00	0.42	0.10	30	218
45		13.58	13.57	32.938	24.682	326.3	0.150	6.02	101.5	2.7	0.34	0.1	0.03	0.70	0.05	45	217
50	ISL	13.43	13.42	32.946	24.718	322.9	0.166	5.95	100.0	2.8	0.38	0.3	0.08	0.68	0.11	50	
55		13.26	13.25	32.959	24.763	318.8	0.182	5.87	98.3	2.8	0.42	0.7	0.14	0.66	0.18	55	216
65		13.04	13.03	33.022	24.855	310.3	0.214	5.76	96.1	3.6	0.49	1.7	0.24	0.49	0.24	65	215
75		12.33	12.32	33.215	25.143	283.1	0.243	5.19	85.4	6.8	0.81	7.0	0.08	0.21	0.15	75	214
84		11.84	11.83	33.340	25.332	265.2	0.268	4.71	76.7	10.3	1.08	11.3	0.02	0.11	0.09	84	213
94		11.36	11.35	33.429	25.490	250.4	0.294	4.16	67.1	13.7	1.33	14.9	0.02	0.07	0.08	94	212
100	ISL	11.09	11.08	33.490	25.586	241.4	0.309	3.79	60.8	15.9	1.48	17.0	0.02	0.05	0.07	100	
110		10.64	10.63	33.595	25.748	226.2	0.332	3.24	51.5	19.5	1.70	20.2	0.02	0.02	0.06	111	211
125		9.88	9.87	33.749	25.998	202.6	0.364	2.83	44.3	24.2	1.92	23.8	0.01	0.01	0.05	126	210
145		9.60	9.58	33.894	26.158	187.8	0.403	2.44	38.0	27.9	2.07	26.0	0.01	0.01	0.06	146	209
150	ISL	9.55	9.53	33.923	26.189	184.9	0.413	2.35	36.6	28.8	2.10	26.4	0.01	0.01	0.06	151	
169		9.37	9.35	34.010	26.287	176.0	0.447	2.08	32.2	31.8	2.20	27.7	0.01	0.00	0.05	170	208
198		9.05	9.03	34.072	26.387	167.0	0.497	1.86	28.6	35.2	2.30	29.3	0.01	0.00	0.04	199	207
200	ISL	9.01	8.99	34.072	26.394	166.4	0.500	1.87	28.8	35.4	2.30	29.4	0.01			201	
230		8.47	8.45	34.073	26.479	158.6	0.549	1.99	30.2	38.1	2.30	30.5	0.01			231	206
250	ISL	8.23	8.20	34.104	26.540	153.1	0.580	1.79	27.1	41.3	2.39	31.6	0.01			251	
269		8.03	8.00	34.134	26.594	148.3	0.608	1.56	23.5	44.7	2.49	32.6	0.01			271	205
300	ISL	7.63	7.60	34.137	26.655	142.8	0.654	1.42	21.2	48.9	2.58	34.0	0.01			302	
319		7.37	7.34	34.128	26.685	140.1	0.680	1.38	20.5	51.4	2.62	34.8	0.01			321	204
380		6.49	6.46	34.103	26.785	130.8	0.763	1.18	17.1	61.4	2.79	37.7	0.00			382	203
400	ISL	6.33	6.29	34.118	26.818	127.9	0.789	1.04	15.0	64.6	2.86	38.5	0.00			403	
439		6.08	6.04	34.159	26.883	122.1	0.838	0.75	10.8	70.9	2.98	39.8	0.00			442	202
500	ISL	5.63	5.59	34.211	26.980	113.2	0.909	0.49	7.0	81.1	3.12	41.5	0.00			503	
513		5.53	5.49	34.222	27.001	111.3	0.924	0.43	6.1	83.3	3.15	41.9	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 49.1 N	121 49.6 W	14/04/06	1734 UTC	3616 m	200 08 kn	240 02 06	5	1008.5 mb	14.1 C	14.0 C	17m	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	14.38	14.38	32.852	24.449	347.2	0.000	5.98	102.5	2.2	0.33	0.1	0.00	0.21	0.04	0	
1		14.38	14.38				0.003									1	213
2	A	14.38	14.38	32.852	24.449	347.3	0.007	5.98	102.5	2.2	0.33	0.1	0.00	0.21	0.04	2	212
10	ISL	14.22	14.22	32.874	24.500	342.7	0.035	6.01	102.6	2.4	0.32	0.0	0.00	0.21	0.05	10	
11		14.19	14.19	32.877	24.509	341.9	0.038	6.02	102.8	2.4	0.32	0.0	0.00	0.21	0.05	11	210
11	A	14.20	14.20				0.038									11	211
20	ISL	13.90	13.90	32.882	24.573	336.0	0.068	6.06	102.8	2.3	0.33	0.0	0.00	0.23	0.06	20	
25		13.75	13.75				0.085									25	209
25	A	13.76	13.76	32.883	24.602	333.3	0.085	6.08	102.9	2.2	0.33	0.0	0.00	0.24	0.07	25	208
30	ISL	13.73	13.73	32.893	24.616	332.1	0.102	6.07	102.6	2.2	0.33	0.0	0.00	0.29	0.09	30	
35		13.68	13.68				0.118									35	207
36	A	13.68	13.67	32.905	24.636	330.4	0.122	6.06	102.4	2.3	0.33	0.0	0.00	0.40	0.13	36	206
47	A	13.30	13.29	32.912	24.718	322.9	0.158	5.99	100.4	2.5	0.38	0.4	0.06	0.83	0.25	47	204
47		13.33	13.32				0.158									47	205
50	ISL	13.24	13.23	32.930	24.744	320.5	0.167	5.94	99.4	2.7	0.40	0.7	0.10	0.77	0.25	50	
64	A	12.94	12.93	33.012	24.867	309.1	0.211	5.73	95.4	3.6	0.51	2.0	0.26	0.51	0.26	64	202
64		12.94	12.93				0.211									64	203
206		8.87	8.85	34.063	26.409	165.0	0.548	1.91	29.3	35.9	2.28	29.1	0.01			207	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 28.7 N	122 32.2 W	14/04/06	2242	UTC	4000 m	310	16 kn	330 05 05	2	1010.5 mb	14.5 C	14.5 C	22m	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	14.83	14.83	32.937	24.419	350.1	0.000	5.85	101.2	2.1	0.32	0.1	0.00	0.12	0.01	0	
2		14.83	14.83	32.937	24.419	350.1	0.007	5.85	101.2	2.1	0.32	0.1	0.00	0.12	0.01	2	222
10	ISL	14.81	14.81	32.945	24.430	349.3	0.035	5.85	101.2	2.1	0.32	0.1	0.00	0.12	0.01	10	
15		14.80	14.80	32.954	24.439	348.6	0.052									15	221
15		14.79	14.79	32.959	24.445	348.0	0.052	5.86	101.3	2.1	0.32	0.1	0.00	0.12 A	0.01 A	15	220
20	ISL	14.73	14.73	32.972	24.468	346.0	0.070	5.87	101.4	2.1	0.32	0.1	0.00	0.13	0.01	20	
30	ISL	14.61	14.61	33.002	24.517	341.6	0.104	5.88	101.3	2.0	0.32	0.0	0.00	0.15	0.02	30	
31		14.60	14.60	33.005	24.522	341.2	0.108	5.88	101.3	2.0	0.32	0.0	0.00	0.15	0.02	31	219
45		14.61	14.60	33.050	24.555	338.5	0.155	5.87	101.2	2.0	0.32	0.0	0.00	0.21 A	0.02 A	45	218
50	ISL	14.51	14.50	33.034	24.564	337.8	0.172	5.89	101.3	2.0	0.32	0.0	0.00	0.23	0.03	50	
61		14.27	14.26	32.989	24.580	336.5	0.209	5.92	101.3	2.1	0.33	0.0	0.00	0.29	0.06	61	217
74		14.16	14.15	32.978	24.595	335.5	0.253	5.92	101.0	2.0	0.33	0.0	0.00	0.41	0.12	74	216
75	ISL	14.18	14.17	33.001	24.608	334.2	0.256	5.89	100.6	2.0	0.33	0.1	0.01	0.45	0.15	75	
80		14.30	14.29	33.176	24.718	323.9	0.273	5.71	97.8	2.5	0.38	0.5	0.06	0.61	0.30	80	215
85		13.61	13.60	33.278	24.940	302.9	0.288	5.52	93.3	3.8	0.50	2.4	0.07	0.48	0.27	85	214
95		12.86	12.85	33.280	25.091	288.6	0.318	5.37	89.4	4.6	0.62	4.3	0.05	0.26	0.22	95	213
100	ISL	12.26	12.25	33.271	25.200	278.3	0.332	5.28	86.8	5.6	0.71	5.9	0.03	0.21	0.14	100	
106		11.48	11.47	33.249	25.328	266.1	0.348	5.13	82.9	7.3	0.86	8.3	0.02	0.17	0.06	106	212
115		10.43	10.42	33.180	25.461	253.5	0.372	4.82	76.1	11.1	1.16	12.8	0.02	0.08	0.06	116	211
125		9.88	9.87	33.372	25.704	230.5	0.396	4.51	70.4	14.4	1.33	16.1	0.01	0.03	0.03	126	210
141		9.58	9.56	33.539	25.884	213.7	0.431	4.24	65.8	17.1	1.45	18.2	0.01	0.01	0.02	142	209
150	ISL	9.40	9.38	33.620	25.977	205.0	0.450	4.23	65.5	18.3	1.48	18.9	0.01	0.00	0.02	151	
166		9.09	9.07	33.739	26.120	191.6	0.482	4.21	64.7	20.6	1.51	19.8	0.01	0.00	0.02	167	208
194		8.61	8.59	33.874	26.301	174.9	0.533	3.95	60.1	25.9	1.65	22.3	0.01	0.00	0.02	195	207
200	ISL	8.53	8.51	33.896	26.330	172.1	0.544	3.79	57.6	27.4	1.71	23.2	0.01			201	
229		8.19	8.17	33.978	26.447	161.5	0.592	2.93	44.2	34.7	2.02	27.5	0.00			230	206
250	ISL	7.93	7.90	34.010	26.511	155.7	0.625	2.57	38.6	39.0	2.17	29.5	0.00			251	
268		7.72	7.69	34.028	26.556	151.6	0.653	2.33	34.8	42.3	2.27	30.8	0.00			270	205
300	ISL	7.46	7.43	34.060	26.618	146.1	0.701	1.91	28.4	47.0	2.44	32.9	0.01			302	
317		7.32	7.29	34.072	26.648	143.5	0.725	1.72	25.5	49.3	2.52	33.8	0.01			319	204
378		6.55	6.52	34.079	26.759	133.4	0.810	1.34	19.5	59.6	2.73	36.8	0.00			380	203
400	ISL	6.34	6.30	34.094	26.798	129.8	0.839	1.17	16.9	63.4	2.81	37.7	0.00			403	
439		6.03	5.99	34.128	26.865	123.7	0.888	0.88	12.6	70.0	2.95	39.2	0.00			442	202
500	ISL	5.61	5.57	34.178	26.957	115.4	0.961	0.57	8.1	79.4	3.08	41.0	0.00			503	
512		5.53	5.49	34.188	26.974	113.8	0.975	0.51	7.2	81.3	3.11	41.3	0.00			515	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 8.9 N	123 13.9 W	15/04/06	0515	UTC	4218 m	320	15 kn			1015.1 mb	14.3 C	12.4 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	14.97	14.97	33.039	24.468	345.5	0.000	5.82	101.0	2.0	0.31	0.0	0.00	0.10	0.02	0	
1		14.97	14.97	33.039	24.468	345.5	0.003	5.82	101.0	2.0	0.31	0.0	0.00	0.10	0.02	1	221
10	ISL	14.97	14.97	33.038	24.467	345.8	0.035	5.82	101.0	2.0	0.31	0.0	0.00	0.10	0.02	10	
15		14.97	14.97	33.038	24.467	345.9	0.052	5.82	101.0	2.0	0.31	0.0	0.00	0.10	0.02	15	219
15		14.97	14.97	33.036	24.466	346.1	0.052									15	220
20	ISL	14.97	14.97	33.046	24.474	345.5	0.069	5.82	101.0	2.0	0.31	0.0	0.00	0.10	0.02	20	
30		14.97	14.97	33.071	24.493	343.9	0.104	5.81	100.9	2.0	0.31	0.0	0.00	0.12	0.01	30	218
45		14.87	14.86	33.086	24.527	341.2	0.155	5.83	101.0	2.0	0.31	0.1	0.00	0.19	0.03	45	217
50	ISL	14.85	14.84	33.086	24.531	340.9	0.172	5.83	101.0	2.0	0.31	0.1	0.00	0.20	0.03	50	
60		14.81	14.80	33.085	24.540	340.4	0.206	5.84	101.1	1.9	0.31	0.0	0.00	0.24	0.04	60	216
75		14.44	14.43	33.024	24.572	337.7	0.257	5.87	100.8	1.9	0.32	0.0	0.00	0.38	0.11	75	215
85		14.11	14.10	32.957	24.589	336.3	0.291	5.93	101.1	1.9	0.33	0.0	0.00	0.35	0.10	85	214
95		14.07	14.06	32.985	24.619	333.7	0.324	5.91	100.7	1.7	0.33	0.1	0.00	0.44	0.20	95	213
100	ISL	14.11	14.10	33.065	24.673	328.7	0.341	5.80	98.9	1.9	0.35	0.3	0.05	0.41	0.23	100	
105		14.15	14.13	33.182	24.755	321.1	0.357	5.66	96.7	2.3	0.39	0.8	0.09	0.39	0.25	105	212
115		13.06	13.04	33.237	25.019	296.0	0.388	5.46	91.2	3.2	0.53	2.7	0.05	0.22	0.22	115	211
124		12.52	12.50	33.244	25.130	285.6	0.414	5.28	87.2	4.4	0.66	4.9	0.03	0.18	0.14	125	210
125	ISL	12.46	12.44	33.245	25.143	284.4	0.417	5.26	86.8	4.5	0.67	5.1	0.03	0.17	0.14	126	
139		11.57	11.55	33.288	25.343	265.5	0.455	5.04	81.6	6.9	0.88	8.7	0.02	0.10	0.10	140	209
150	ISL	10.75	10.73	33.379	25.561	244.8	0.483	4.83	76.9	9.9	1.05	11.9	0.01	0.05	0.06	151	
164		9.81	9.79	33.522	25.833	219.0	0.516	4.49	70.1	14.4	1.29	16.1	0.01	0.01	0.02	165	208
195		8.99	8.97	33.762	26.154	188.9	0.579	3.27	50.2	25.5	1.85	24.4	0.00	0.00	0.01	196	207
200	ISL	8.91	8.89	33.797	26.194	185.2	0.588	3.17	48.6	26.7	1.89	25.0	0.00			201	
230		8.55	8.53	33.962	26.380	168.1	0.641	2.75	41.8	32.2	2.04	27.4	0.00			231	206
250	ISL	8.32	8.29	34.017	26.458	160.9	0.674	2.48	37.5	35.6	2.15	28.9	0.00			251	
270		8.07	8.04	34.046	26.519	155.4	0.706	2.24	33.7	39.1	2.25	30.3	0.00			271	205
300	ISL	7.60	7.57	34.069	26.606	147.4	0.751	1.90	28.3	45.4	2.41	32.4	0.00			302	
319		7.30	7.27	34.074	26.652	143.1	0.779	1.72	25.4	49.4	2.50	33.6	0.00			321	204
378		6.60	6.57	34.087	26.758	133.5	0.861	1.32	19.2	59.2	2.72	36.4	0.00			380	203
400	ISL	6.38	6.34	34.096	26.794	130.2	0.890	1.18	17.1	62.8	2.79	37.3	0.00			402	
439		6.04	6.00	34.118	26.856	124.6	0.939	0.94	13.5	69.0	2.91	38.8	0.00			442	202
500	ISL	5.74	5.70	34.179	26.942	117.0	1.013	0.60	8.6	77.7	3.06	40.4	0.00			503	
513		5.67	5.63	34.192	26.961	115.3	1.028	0.53	7.5	79.5	3.09	40.7	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 48.9 N	123 54.4 W	15/04/06	1136	UTC	4447 m	300	09 kn			1016.2 mb	15.0 C	13.9 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	14.97	14.97	32.970	24.415	350.5	0.000	5.83	101.2	2.1	0.32	0.1	0.00	0.10	0.03	0	
1		14.97	14.97	32.970	24.415	350.5	0.004	5.83	101.2	2.1	0.32	0.1	0.00	0.10	0.03	1	220
10	ISL	14.97	14.97	32.970	24.415	350.8	0.035	5.82	101.0	2.1	0.32	0.1	0.00	0.09	0.02	10	
15		14.97	14.97	32.970	24.415	350.9	0.053	5.81	100.8	2.1	0.32	0.1	0.00	0.09	0.02	15	219
20	ISL	14.96	14.96	32.979	24.424	350.2	0.070	5.81	100.8	2.1	0.32	0.1	0.00	0.09	0.02	20	
30		14.93	14.93	33.001	24.448	348.2	0.105	5.83	101.1	2.1	0.32	0.1	0.00	0.10	0.03	30	218
45		14.86	14.85	33.019	24.477	345.9	0.157	5.84	101.1	2.1	0.32	0.1	0.00	0.13	0.03	45	217
50	ISL	14.81	14.80	33.020	24.489	344.9	0.174	5.84	101.0	2.1	0.32	0.1	0.00	0.15	0.04	50	
60		14.69	14.68	33.021	24.516	342.6	0.209	5.85	101.0	2.1	0.32	0.1	0.00	0.19	0.06	60	216
75		14.56	14.55	33.030	24.551	339.7	0.260	5.84	100.5	2.1	0.31	0.1	0.00	0.28	0.14	75	215
85		14.44	14.43	33.040	24.584	336.8	0.294	5.84	100.3	2.1	0.32	0.1	0.00	0.32	0.25	85	214
95		13.54	13.53	33.138	24.846	312.1	0.326	5.60	94.4	3.1	0.47	1.9	0.09	0.32	0.31	95	213
100	ISL	13.04	13.03	33.171	24.972	300.1	0.342	5.48	91.5	3.6	0.54	3.1	0.07	0.26	0.30	100	
105		12.53	12.52	33.192	25.087	289.2	0.356	5.36	88.5	4.3	0.63	4.5	0.03	0.19	0.26	105	212
114		11.63	11.62	33.196	25.260	272.8	0.382	5.11	82.8	6.4	0.84	7.7	0.01	0.12	0.15	114	211
125		11.00	10.98	33.277	25.437	256.1	0.411	4.80	76.8	9.0	1.04	11.3	0.01	0.08	0.09	126	210
140		10.18	10.16	33.374	25.655	235.5	0.447	4.40	69.2	13.0	1.30	15.5	0.00	0.03	0.05	141	209
150	ISL	9.81	9.79	33.456	25.781	223.6	0.470	4.20	65.5	15.5	1.43	17.7	0.00	0.01	0.03	151	
164		9.42	9.40	33.576	25.939	208.8	0.501	3.95	61.1	18.9	1.57	20.1	0.00	0.00	0.02	165	208
194		8.76	8.74	33.814	26.231	181.6	0.559	3.42	52.2	26.1	1.82	24.0	0.00	0.00	0.01	195	207
200	ISL	8.64	8.62	33.851	26.278	177.1	0.570	3.31	50.4	27.8	1.86	24.8	0.00			201	
229		8.14	8.12	33.988	26.462	160.0	0.619	2.75	41.5	35.9	2.07	28.2	0.00			230	206
250	ISL	7.94	7.91	34.037	26.530	153.8	0.652	2.36	35.4	40.0	2.22	30.2	0.00			251	
269		7.78	7.75	34.058	26.571	150.3	0.681	2.05	30.7	43.2	2.34	31.6	0.00			270	205
300	ISL	7.41	7.38	34.075	26.637	144.3	0.726	1.75	26.0	48.2	2.48	33.3	0.00			302	
317		7.19	7.16	34.078	26.671	141.3	0.751	1.64	24.2	50.9	2.54	34.0	0.00			319	204
379		6.50	6.47	34.089	26.773	132.0	0.835	1.25	18.1	60.6	2.75	36.9	0.00			381	203
400	ISL	6.31	6.27	34.103	26.809	128.7	0.863	1.10	15.9	64.2	2.82	37.8	0.00			402	
441		6.00	5.96	34.135	26.874	122.9	0.914	0.82	11.8	71.0	2.95	39.2	0.00			444	202
500	ISL	5.69	5.65	34.173	26.943	116.8	0.985	0.60	8.5	78.3	3.05	40.3	0.00			503	
509		5.64	5.60	34.179	26.954	115.9	0.996	0.57	8.1	79.4	3.07	40.5	0.00			512	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 24.3 N	119 47.8 W	13/04/06	1610	UTC	18 m	220	01 kn	260 01 06	0	1016.2 mb	16.0 C	15.0 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	14.45	14.45	33.176	24.684	324.8	0.000	7.45	128.1	3.2	0.10	0.1	0.01	2.21	0.44	0	
2		14.45	14.45	33.176	24.684	324.9	0.006	7.45	128.1	3.2	0.10	0.1	0.01	2.21	0.44	2	204
5		14.23	14.23	33.253	24.790	314.9	0.016	7.33	125.5	2.8	0.10	0.1	0.01	3.70	0.22	5	203
10		14.07	14.07	33.340	24.891	305.4	0.032	6.96	118.8	2.8	0.19	0.2	0.02	3.70	0.23	10	202
13		13.97	13.97	33.329	24.903	304.4	0.041	7.04	120.0	3.1	0.19	0.3	0.02	4.30	0.22	13	201

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 17.0 N	120 1.5 W	13/04/06	1826	UTC	578 m	220	04 kn	260 01 07	0	1016.1 mb	16.4 C	15.6 C	08m	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	12.90	12.90	33.471	25.229	273.0	0.000	6.56	109.4	6.3	0.51	3.5	0.15	5.24	0.25	0	
2	A,B	12.90	12.90	33.471	25.229	273.0	0.005	6.56	109.4	6.3	0.51	3.5	0.15	5.24	0.25	2	224
6	B	12.80	12.80	33.475	25.252	271.0	0.016	6.59	109.7	6.4	0.53	3.5	0.15	5.50	0.67	6	223
10	ISL	12.71	12.71	33.481	25.274	269.0	0.027	6.51	108.2	6.5	0.54	3.7	0.15	6.09	0.53	10	
11	B	12.69	12.69	33.482	25.279	268.5	0.030	6.48	107.6	6.5	0.54	3.8	0.15	6.19	0.46	11	222
17	B	12.65	12.65	33.483	25.287	267.9	0.046	6.35	105.4	6.6	0.57	4.2	0.15	5.33	0.22	17	221
20	ISL	12.63	12.63	33.484	25.292	267.5	0.054	6.32	104.8	6.7	0.57	4.4	0.15	4.82	0.28	20	
22	B	12.61	12.61	33.485	25.297	267.1	0.059	6.30	104.5	6.7	0.58	4.5	0.15	4.49	0.32	22	220
30	ISL	12.47	12.47	33.492	25.330	264.2	0.081	6.03	99.7	7.1	0.67	5.5	0.16	3.46	0.80	30	
31	B	12.45	12.45	33.493	25.334	263.8	0.083	6.00	99.1	7.1	0.68	5.6	0.16	3.32	0.85	31	219
40		11.44	11.44	33.546	25.565	242.0	0.106	4.76	77.0	12.7	1.19	12.0	0.23	1.11	0.50	40	218
50		10.35	10.34	33.716	25.891	211.1	0.129	3.67	58.0	20.9	1.67	18.9	0.27	0.27	0.33	50	217
61		10.11	10.10	33.796	25.995	201.5	0.151	3.25	51.2	23.9	1.84	21.6	0.30	0.17	0.34	61	216
71		9.77	9.76	33.863	26.104	191.3	0.171	2.66	41.6	26.9	2.02	24.6	0.16	0.11	0.45	71	215
75	ISL	9.69	9.68	33.910	26.154	186.6	0.178	2.41	37.6	28.5	2.10	25.6	0.11	0.09	0.52	75	
85		9.57	9.56	34.020	26.260	176.8	0.197	1.92	29.9	32.1	2.27	27.5	0.03	0.06	0.64	85	214
100		9.43	9.42	34.053	26.309	172.4	0.223	1.81	28.1	33.8	2.32	28.2	0.02	0.08	0.40	101	213
119		9.33	9.32	34.087	26.353	168.7	0.255	1.70	26.3	35.2	2.36	28.7	0.03	0.07	0.36	120	212
125	ISL	9.30	9.29	34.096	26.365	167.7	0.265	1.66	25.7	35.5	2.37	28.9	0.03	0.06	0.34	126	
139		9.24	9.22	34.115	26.389	165.6	0.289	1.59	24.6	36.2	2.40	29.2	0.02	0.05	0.28	140	211
150	ISL	9.18	9.16	34.125	26.407	164.1	0.307	1.56	24.1	36.8	2.42	29.5	0.02	0.04	0.25	151	
169		9.06	9.04	34.139	26.438	161.6	0.338	1.51	23.3	38.0	2.45	29.9	0.03	0.03	0.21	170	210
200		8.89	8.87	34.168	26.488	157.4	0.387	1.38	21.2	40.3	2.52	30.5	0.02	0.04	0.21	201	209
229		8.61	8.59	34.182	26.543	152.6	0.432	1.17	17.8	44.3	2.61	31.7	0.01			230	208
250	ISL	8.41	8.38	34.190	26.580	149.4	0.464	1.07	16.3	47.2	2.66	32.3	0.01			252	
269		8.23	8.20	34.195	26.612	146.7	0.492	1.01	15.3	49.6	2.70	32.7	0.01			271	207
300	ISL	7.99	7.96	34.201	26.653	143.2	0.537	0.92	13.8	52.5	2.76	33.4	0.01			302	
328		7.76	7.73	34.205	26.690	140.1	0.577	0.84	12.6	55.8	2.83	33.9	0.01			330	206
398		6.93	6.89	34.215	26.815	128.7	0.671	0.46	6.8	73.3	3.11	33.6	0.00			401	205
400	ISL	6.91	6.87	34.215	26.818	128.5	0.673	0.45	6.6	74.0	3.12	33.5	0.00			403	
476		6.47	6.43	34.230	26.889	122.5	0.769	0.12	1.7	96.0	3.58	27.7	0.00			479	204
500	ISL	6.43	6.38	34.232	26.896	122.1	0.798	0.09	1.3	99.4	3.63	26.5	0.00			504	
526		6.42	6.37	34.233	26.899	122.2	0.830	0.07	1.0	101.8	3.68	25.7	0.00			530	203
566		6.38	6.33	34.236	26.907	122.0	0.879	0.03	0.4	103.8	3.85	25.6	0.03			570	202
572		6.38	6.33	34.237	26.908	122.0	0.886	0.03	0.4	103.6	3.86	25.7	0.05			576	201

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

RV NEW HORIZON CALCOFI CRUISE 0604 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 15.4 N	119 19.6 W	13/04/06	1259 UTC	21 m	360 12 kn			1016.0 mb	11.7 C	10.5 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	14.67	14.67	32.842	24.380	353.8	0.000	7.59	130.8	9.6	0.10	0.0	0.02	10.06	0.36	0	
2	14.67	14.67	32.842	24.380	353.9	0.007	7.59	130.8	9.6	0.10	0.0	0.02	10.06	0.36	2	205
5	14.69	14.69	32.840	24.375	354.5	0.018	7.60	131.0	9.6	0.12	0.0	0.02	10.51	0.41	5	204
10	13.25	13.25	33.270	25.004	294.6	0.034									10	203
10	13.30	13.30	33.194	24.935	301.2	0.034	6.59	110.7	7.7	0.15	0.1	0.03	12.12	0.42	10	202
17	11.49	11.49	33.511	25.528	244.9	0.053	3.36	54.4	15.1	1.06	11.6	0.28	7.62	0.33	17	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 13.4 N	119 25.2 W	13/04/06	1119 UTC	38 m	340 06 kn			1016.5 mb	14.5 C	13.1 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	13.99	13.99	33.062	24.693	324.0	0.000	7.34	124.9	4.5	0.06	0.1	0.00	1.71	0.27	0	
2	13.99	13.99	33.062	24.693	324.1	0.006	7.34	124.9	4.5	0.06	0.1	0.00	1.71	0.27	2	206
5	13.99	13.99	33.177	24.781	315.7	0.016	7.33	124.8	3.3	0.05	0.0	0.00	1.69	0.26	5	205
10	14.02	14.02	33.329	24.893	305.3	0.032	7.28	124.2	1.5	0.05	0.0	0.00	1.70	0.26	10	203
10	14.01	14.01	33.315	24.884	306.1	0.032	7.27	124.0							10	204
20 ISL	12.97	12.97	33.459	25.206	275.7	0.061	6.39	106.7	2.8	0.20	0.6	0.04	10.21	0.81	20	
21	12.81	12.81	33.468	25.245	272.0	0.063	6.22	103.6	2.9	0.21	0.7	0.04	10.80	0.86	21	202
30	11.20	11.20	33.642	25.683	230.5	0.086	3.68	59.3	15.8	1.56	14.3	0.26	0.54	0.44	30	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 10.7 N	119 30.3 W	13/04/06	0907 UTC	136 m	110 06 kn			1017.2 mb	14.0 C	13.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.98	13.98	33.442	24.988	295.9	0.000	7.30	124.5	0.2	0.04	0.0	0.00	1.36	0.33	0	
2	13.98	13.98	33.442	24.988	295.9	0.006	7.30	124.5	0.2	0.04	0.0	0.00	1.36	0.33	2	212
10	13.69	13.69	33.464	25.065	288.9	0.029	7.28	123.4	0.2	0.05	0.0	0.00	2.48	0.42	10	210
10	13.67	13.67	33.457	25.064	289.0	0.029									10	211
20	11.82	11.82	33.555	25.502	247.6	0.056	5.02	81.9	8.5	0.96	8.4	0.17	1.31	0.33	20	209
30	11.16	11.16	33.647	25.694	229.4	0.080	4.80	77.2	14.3	1.37	12.2	0.21	0.32	0.32	30	208
39	10.92	10.92	33.660	25.748	224.6	0.100	4.13	66.1	16.4	1.52	15.4	0.24	0.19	0.24	39	207
50	10.65	10.64	33.717	25.840	216.0	0.125	3.91	62.3	19.7	1.66	17.6	0.28	0.13	0.31	50	206
61	10.53	10.52	33.743	25.881	212.4	0.148	3.70	58.8	21.2	1.74	18.8	0.30	0.13	0.36	61	205
70	10.14	10.13	33.832	26.018	199.5	0.167	2.99	47.1	26.0	1.99	22.1	0.35	0.12	0.57	70	204
75 ISL	10.00	9.99	33.860	26.064	195.3	0.177	2.77	43.5	27.3	2.03	23.2	0.33	0.12	0.56	75	
85	9.81	9.80	33.896	26.124	189.8	0.196	2.52	39.4	28.5	2.10	24.5	0.29	0.11	0.55	85	203
100 ISL	9.64	9.63	33.942	26.188	184.0	0.224	2.39	37.3	28.7	2.11	25.5	0.38	0.06	0.32	101	
101	9.63	9.62	33.945	26.192	183.6	0.226	2.39	37.3	28.7	2.11	25.5	0.38	0.06	0.30	102	202
120	9.56	9.55	33.996 D	26.244	179.1	0.260	2.22	34.6	30.5	2.17	26.3	0.17	0.06	0.34	121	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 7.9 W	13/04/06	0254 UTC	101 m	060 10 kn	150 03 05	0	1016.3 mb	15.0 C	13.9 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	13.47	13.47	33.507	25.143	281.2	0.000	6.75	114.0	3.2	0.25	1.1	0.07	4.46	0.41	0	
1	13.47	13.47	33.507	25.143	281.2	0.003	6.75	114.0	3.2	0.25	1.1	0.07	4.46	0.41	1	211
2	13.46	13.46	33.513	25.150	280.6	0.006									2	212
10	13.24	13.24	33.511	25.193	276.7	0.028	6.53	109.7	4.1	0.33	2.0	0.09	5.05	0.16	10	209
10	13.24	13.24	33.509	25.191	276.9	0.028									10	210
20	12.57	12.57	33.546	25.352	261.8	0.055	5.58	92.5	8.6	0.75	6.4	0.15	3.54 A	0.59 A	20	208
30	11.73	11.73	33.598	25.552	243.0	0.080	4.75	77.4	12.3	1.16	10.7	0.21	1.33	0.49	30	207
40	10.63	10.63	33.733	25.856	214.3	0.103	3.67	58.4	19.7	1.65	17.3	0.24	0.32	0.35	40	206
50	10.08	10.07	33.839	26.033	197.6	0.124	2.90	45.6	24.7	1.93	22.1	0.24	0.12	0.33	50	205
60	9.97	9.96	33.864	26.072	194.2	0.143	2.77	43.5	26.1	1.97	23.1	0.23	0.11	0.35	60	204
70	9.62	9.61	33.972	26.214	180.8	0.162	2.32	36.2	30.3	2.16	25.6	0.22	0.08	0.43	70	203
75 ISL	9.52	9.51	34.004	26.256	177.0	0.171	2.19	34.1	31.5	2.21	26.3	0.21	0.08	0.42	75	
85	9.40	9.39	34.036	26.301	172.9	0.188	2.06	32.0	32.9	2.25	27.0	0.19	0.07	0.41	85	202
94	9.36	9.35	34.043	26.313	171.9	0.204	2.01	31.2	33.5	2.28	27.2	0.18	0.08	0.61	95	201

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

RV NEW HORIZON CALCOFI CRUISE 0604 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 44.8 N	120 24.6 W	12/04/06	2308 UTC	1003 m	120 16 kn	140 04 03	1	1016.2 mb	16.1 C	15.0 C	13m	5/8	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	14.18	14.18	33.240	24.791	314.7	0.000	6.22	106.4	3.1	0.34	0.9	0.04	0.64	0.12	0	
2		14.18	14.18	33.240	24.791	314.8	0.006	6.22	106.4	3.1	0.34	0.9	0.04	0.64	0.12	2	222
10	ISL	14.10	14.10	33.240	24.807	313.4	0.031	6.23	106.4	3.1	0.34	0.9	0.04	0.66	0.13	10	
11		14.09	14.09	33.240	24.810	313.2	0.035	6.23	106.4	3.1	0.34	0.9	0.04	0.66	0.13	11	220
11		14.14	14.14	33.240	24.799	314.2	0.035									11	221
20		13.61	13.61	33.264	24.927	302.3	0.062									20	219
20		13.65	13.65	33.262	24.917	303.2	0.062	6.28	106.3	3.2	0.38	1.3	0.06	0.89	0.21	20	218
30		13.30	13.30	33.279	25.002	295.4	0.092	6.11	102.6	3.3	0.45	2.2	0.12	1.06	0.28	30	217
41		12.32	12.31	33.366	25.261	271.0	0.123	5.42	89.2	6.8	0.80	6.8	0.36	0.61	0.23	41	216
50		11.69	11.68	33.418	25.420	256.0	0.147	4.89	79.5	10.1	1.04	10.8	0.38	0.28	0.15	50	215
61		11.09	11.08	33.500	25.593	239.8	0.174	4.37	70.1	13.5	1.26	14.4	0.20	0.12	0.11	61	214
70		10.92	10.91	33.517	25.637	235.8	0.196	4.21	67.3	14.7	1.34	15.7	0.06	0.11	0.11	70	213
75	ISL	10.70	10.69	33.573	25.719	228.1	0.207	3.93	62.6	16.7	1.46	17.4	0.06	0.09	0.12	75	
84		10.30	10.29	33.690	25.880	213.0	0.227	3.39	53.5	20.7	1.69	20.5	0.05	0.05	0.13	84	212
100		10.03	10.02	33.777	25.994	202.4	0.260	3.02	47.4	23.7	1.84	22.5	0.04	0.06	0.12	101	211
120		9.58	9.57	33.864	26.138	189.2	0.300	2.64	41.1	27.3	2.01	25.0	0.03	0.03	0.11	121	210
125	ISL	9.54	9.53	33.883	26.159	187.2	0.309	2.57	40.0	27.9	2.04	25.4	0.03	0.03	0.11	126	
138		9.48	9.46	33.934	26.209	182.8	0.333	2.40	37.3	29.4	2.10	26.1	0.05	0.03	0.13	139	209
150	ISL	9.33	9.31	34.001	26.286	175.7	0.355	2.22	34.4	31.6	2.18	27.0	0.06	0.03	0.19	151	
170		9.09	9.07	34.101	26.403	164.9	0.389	1.98	30.5	34.8	2.29	28.2	0.07	0.03	0.27	171	208
199		8.98	8.96	34.138	26.450	161.0	0.436	1.89	29.1	36.0	2.31	28.8	0.04	0.02	0.14	200	207
200	ISL	8.97	8.95	34.139	26.452	160.8	0.437	1.89	29.1	36.1	2.31	28.8	0.04			201	
230		8.55	8.53	34.153	26.529	153.9	0.485	1.69	25.7	40.3	2.41	30.5	0.03			231	206
250	ISL	8.35	8.32	34.172	26.575	149.9	0.515	1.48	22.4	43.1	2.50	31.6	0.02			252	
269		8.17	8.14	34.189	26.616	146.3	0.543	1.28	19.3	45.9	2.59	32.6	0.01			271	205
300	ISL	7.79	7.76	34.201	26.682	140.3	0.588	1.09	16.3	50.6	2.70	34.0	0.00			302	
319		7.57	7.54	34.205	26.717	137.2	0.614	1.01	15.0	53.3	2.75	34.7	0.00			321	204
379		7.11	7.07	34.218	26.793	130.7	0.694	0.81	11.9	59.4	2.87	36.3	0.00			381	203
400	ISL	6.92	6.88	34.236	26.833	127.1	0.721	0.69	10.1	63.0	2.93	37.0	0.00			403	
438		6.60	6.56	34.270	26.903	120.7	0.768	0.49	7.1	69.3	3.04	38.2	0.00			441	202
500	ISL	6.32	6.27	34.290	26.957	116.3	0.842	0.39	5.6	74.2	3.11	39.1	0.00			503	
514		6.26	6.21	34.295	26.968	115.3	0.858	0.37	5.3	75.3	3.12	39.3	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 35.2 N	120 45.7 W	12/04/06	1841 UTC	1370 m	140 16 kn	140 04 04	1	1015.8 mb	15.9 C	15.0 C	11m	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	14.22	14.22	33.163	24.723	321.2	0.000	6.26	107.1	2.6	0.29	0.0	0.01	0.49	0.11	0	
2	A	14.22	14.22	33.163	24.723	321.2	0.006	6.26	107.1	2.6	0.29	0.0	0.01	0.49	0.11	2	224
7	A	14.21	14.21	33.164	24.726	321.1	0.022	6.27	107.3	2.6	0.28	0.0	0.01	0.51	0.12	7	223
10	ISL	14.22	14.22	33.164	24.724	321.4	0.032	6.25	106.9	2.6	0.28	0.0	0.00	0.50	0.11	10	
11		14.22	14.22	33.164	24.724	321.4	0.035	6.24	106.8	2.6	0.28	0.0	0.00	0.50	0.11	11	222
16		14.16	14.16	33.165	24.737	320.2	0.051									16	221
17	A	14.16	14.16	33.165	24.737	320.3	0.055	6.27	107.1	2.4	0.28	0.0	0.00	0.53	0.12	17	220
20	ISL	14.10	14.10	33.169	24.753	318.9	0.064	6.30	107.5	2.5	0.28	0.0	0.00	0.62	0.14	20	
23	A	14.01	14.01	33.171	24.773	317.0	0.074	6.32	107.7	2.5	0.28	0.0	0.01	0.74	0.17	23	219
29		13.78	13.78	33.158	24.811	313.6	0.093									29	218
30		13.57	13.57	33.157	24.853	309.6	0.096	6.34	107.0	3.3	0.34	0.6	0.03	1.09	0.25	30	217
43	A	12.47	12.46	33.290	25.173	279.4	0.134	5.95	98.2	4.8	0.64	4.7	0.18	1.57	0.45	43	216
50	ISL	12.02	12.01	33.344	25.301	267.4	0.153	5.49	89.8	7.5	0.86	7.5	0.39	1.01	0.40	50	
52	A	11.90	11.89	33.357	25.334	264.3	0.158	5.34	87.1	8.4	0.92	8.4	0.43	0.81	0.39	52	215
60		11.36	11.35	33.392	25.461	252.4	0.179	4.74	76.5	11.3	1.15	12.5	0.30	0.34	0.21	60	214
71		10.82	10.81	33.468	25.616	237.8	0.206	4.33	69.1	14.3	1.34	15.8	0.03	0.15	0.12	71	213
75	ISL	10.67	10.66	33.515	25.679	231.9	0.215	4.10	65.2	16.0	1.43	17.1	0.03	0.11	0.12	75	
85		10.26	10.25	33.626	25.837	217.1	0.238	3.61	56.9	20.0	1.64	20.1	0.02	0.05	0.11	85	212
100	ISL	9.35	9.34	33.684	26.034	198.5	0.269	3.59	55.5	22.2	1.71	22.0	0.02	0.02	0.07	100	
101		9.30	9.29	33.687	26.044	197.5	0.271	3.59	55.5	22.3	1.71	22.1	0.02	0.02	0.07	102	211
121		9.15	9.14	33.863	26.206	182.6	0.309	2.81	43.3	28.0	1.99	25.6	0.01	0.01	0.12	122	210
125	ISL	9.13	9.12	33.891	26.232	180.2	0.316	2.70	41.6	28.9	2.03	26.1	0.01	0.01	0.11	126	
141		9.04	9.02	33.983	26.318	172.3	0.345	2.34	36.0	32.0	2.14	27.5	0.01	0.01	0.08	142	209
150	ISL	8.98	8.96	34.018	26.355	169.0	0.360	2.19	33.7	33.3	2.19	28.1	0.01	0.01	0.07	151	
170		8.80	8.78	34.066	26.422	163.0	0.393	1.97	30.2	35.8	2.28	29.3	0.01	0.00	0.06	171	208
200		8.37	8.35	34.085	26.503	155.7	0.441	1.83	27.8	40.0	2.37	31.0	0.01	0.00	0.05	201	207
231		7.92	7.90	34.099	26.582	148.6	0.488	1.78	26.7	43.7	2.43	32.1	0.02			232	206
250	ISL	7.67	7.65	34.109	26.626	144.6	0.516	1.63	24.3	47.1	2.52	33.1	0.02			251	
267		7.46	7.43	34.118	26.664	141.3	0.540	1.46	21.7	50.3	2.60	34.1	0.01			269	205
300	ISL	7.14	7.11	34.135	26.722	136.1	0.586	1.21	17.8	55.0	2.71	35.5	0.01			302	
318		7.00	6.97	34.144	26.749	133.7	0.610	1.10	16.2	57.2	2.76	36.1	0.01			320	204
378		6.61	6.58	34.171	26.823	127.3	0.689	0.86	12.5	64.0	2.89	37.7	0.00			380	203
400	ISL	6.50	6.46	34.191	26.854	124.7	0.716	0.75	10.9	66.6	2.95	38.2	0.00			403	
439		6.30	6.26	34.225	26.907	120.1	0.764	0.57	8.2	71.3	3.04	39.1	0.00			442	202
500	ISL	5.84	5.80	34.243	26.980	113.5	0.835	0.42	6.0	79.3	3.13	40.6	0.00			503	
514		5.74	5.70	34.247	26.996	112.1	0.851	0.39	5.6	81.1	3.15	40.9	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 14.8 N	121 26.4 W	12/04/06	1249	UTC	3800 m	140 15 kn			1011.9 mb	14.8 C	13.8 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	13.96	13.96	32.937	24.602	332.7	0.000	6.07	103.2	2.8	0.31	0.0	0.00	0.24	0.05	0	
1		13.96	13.96	32.937	24.602	332.7	0.003	6.07	103.2	2.8	0.31	0.0	0.00	0.24	0.05	1	221
10	ISL	13.96	13.96	32.936	24.602	333.0	0.033	6.08	103.3	2.8	0.31	0.1	0.00	0.23	0.06	10	
11		13.96	13.96	32.936	24.602	333.0	0.037	6.08	103.3	2.8	0.31	0.1	0.00	0.23	0.06	11	219
11		13.96	13.96	32.937	24.603	332.9	0.037									11	220
20	ISL	13.95	13.95	32.936	24.604	333.0	0.067	6.07	103.1	2.9	0.31	0.1	0.00	0.23	0.05	20	
21		13.95	13.95	32.936	24.604	333.1	0.070	6.07	103.1	2.9	0.31	0.1	0.00	0.23	0.05	21	218
30		13.46	13.46	32.946	24.712	323.0	0.099	6.24	105.0	3.2	0.31	0.0	0.00	0.36	0.12	30	217
41		12.98	12.97	33.028	24.871	308.1	0.134	6.23	103.8	3.5	0.37	0.8	0.03	1.47	0.48	41	216
49		12.70	12.69	33.157	25.026	293.6	0.158	6.06	100.5	4.0	0.54	3.1	0.09	1.17	0.47	49	215
50	ISL	12.67	12.66	33.167	25.040	292.3	0.161	6.04	100.1	4.1	0.56	3.3	0.10	1.12	0.47	50	
61		12.26	12.25	33.272	25.200	277.3	0.192	5.74	94.3	6.1	0.76	5.8	0.17	0.63	0.48	61	214
70		11.66	11.65	33.397	25.410	257.5	0.217	5.39	87.5	9.4	1.02	9.1	0.20	0.46	0.35	70	213
75	ISL	11.16	11.15	33.423	25.521	247.0	0.229	4.94	79.4	11.6	1.17	12.1	0.14	0.30	0.24	75	
84		10.33	10.32	33.465	25.700	230.1	0.251	4.10	64.7	15.6	1.42	17.4	0.02	0.05	0.09	84	212
100		10.03	10.02	33.654	25.898	211.5	0.286	3.58	56.2	21.7	1.71	21.0	0.07	0.12	0.14	100	211
122		9.39	9.38	33.840	26.150	188.0	0.330	2.65	41.1	27.4	2.01	25.6	0.01	0.06	0.12	123	210
125	ISL	9.32	9.31	33.849	26.168	186.3	0.336	2.66	41.2	27.7	2.01	25.8	0.01	0.06	0.13	126	
140		9.01	8.99	33.879	26.241	179.6	0.363	2.69	41.3	29.2	2.03	26.5	0.01	0.04	0.15	141	209
150	ISL	8.83	8.81	33.922	26.304	173.8	0.381	2.57	39.3	31.0	2.08	27.4	0.01	0.03	0.14	151	
169		8.54	8.52	34.003	26.412	163.8	0.413	2.30	35.0	34.8	2.18	29.1	0.01	0.01	0.10	170	208
200		8.11	8.09	34.039	26.506	155.3	0.462	2.13	32.1	39.7	2.28	30.8	0.02	0.00	0.08	201	207
231		7.78	7.76	34.061	26.572	149.5	0.509	1.90	28.4	44.1	2.40	32.3	0.01			232	206
250	ISL	7.56	7.54	34.073	26.614	145.8	0.537	1.77	26.3	47.2	2.47	33.2	0.01			251	
268		7.38	7.35	34.088	26.651	142.4	0.563	1.63	24.2	50.0	2.54	34.0	0.01			270	205
300	ISL	7.33	7.30	34.147	26.705	137.8	0.608	1.24	18.4	53.4	2.68	34.9	0.01			302	
320		7.30	7.27	34.178	26.734	135.4	0.636	1.02	15.1	55.4	2.77	35.4	0.01			322	204
375		6.56	6.53	34.151	26.814	128.1	0.708	0.93	13.5							377	203
400	ISL	6.29	6.25	34.152	26.850	124.8	0.740	0.84	12.1	67.5	2.96	38.4	0.00			403	
438		5.96	5.92	34.166	26.904	120.0	0.786	0.68	9.8	73.6	3.02	39.8	0.00			441	202
500	ISL	5.67	5.63	34.215	26.979	113.5	0.859	0.46	6.6	81.2	3.12	41.0	0.00			503	
510		5.62	5.58	34.223	26.991	112.3	0.870	0.42	6.0	82.4	3.14	41.2	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 54.8 N	122 7.8 W	12/04/06	0618	UTC	4182 m	150 16 kn			1012.4 mb	15.3 C	14.4 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	14.52	14.52	33.059	24.579	334.8	0.000	6.02	103.6	2.6	0.31	0.1	0.00	0.13	0.04	0	
3		14.52	14.52	33.059	24.579	334.9	0.010	6.02	103.6	2.6	0.31	0.1	0.00	0.13	0.04	3	221
10		14.52	14.52	33.060	24.580	335.0	0.033	6.01	103.4	2.5	0.30	0.0	0.00	0.14	0.04	10	219
11		14.52	14.52				0.037									11	220
20	ISL	14.51	14.51	33.062	24.584	334.9	0.067	6.01	103.4	2.6	0.31	0.0	0.00	0.14	0.03	20	
21		14.51	14.51	33.062	24.584	334.9	0.070	6.01	103.4	2.6	0.31	0.0	0.00	0.14	0.03	21	218
30		14.02	14.02	33.071	24.694	324.7	0.100	6.08	103.5	2.7	0.31	0.0	0.00	0.14	0.05	30	217
40		13.82	13.81	33.075	24.739	320.8	0.132	6.10	103.5	2.7	0.32	0.1	0.01	0.26	0.10	40	216
50	ISL	13.11	13.10	33.114	24.912	304.5	0.164	6.03	100.8	3.6	0.42	1.2	0.10	0.39	0.18	50	
51		13.04	13.03	33.119	24.930	302.8	0.167	6.02	100.5	3.7	0.43	1.4	0.11	0.40	0.19	51	215
60		12.80	12.79	33.164	25.012	295.2	0.194	5.89	97.8	4.8	0.54	2.8	0.19	0.46	0.28	60	214
71		12.22	12.21	33.265	25.203	277.3	0.225	5.26	86.4	7.1	0.84	8.1	0.14	0.27	0.11	71	213
75	ISL	12.05	12.04	33.299	25.261	271.8	0.236	5.16	84.4	7.2	0.86	8.5	0.11	0.23	0.11	75	
85		11.53	11.52	33.359	25.404	258.4	0.262	4.97	80.5	7.3	0.89	9.2	0.05	0.16	0.10	85	212
100		10.24	10.23	33.369	25.640	236.1	0.300	4.40	69.3	13.1	1.31	15.7	0.03	0.06	0.05	100	211
120		9.65	9.64	33.536	25.870	214.6	0.345	4.08	63.5	17.4	1.50	19.0	0.02	0.02	0.03	121	210
125	ISL	9.55	9.54	33.584	25.924	209.5	0.355	3.91	60.7	18.8	1.57	20.0	0.02	0.02	0.03	126	
139		9.31	9.29	33.711	26.062	196.6	0.384	3.45	53.3	22.9	1.76	22.7	0.02	0.01	0.03	140	209
150	ISL	9.03	9.01	33.782	26.162	187.3	0.405	3.34	51.3	25.3	1.82	23.9	0.02	0.01	0.03	151	
170		8.54	8.52	33.880	26.316	173.0	0.441	3.26	49.6	29.2	1.89	25.4	0.01	0.00	0.03	171	208
199		8.10	8.08	33.987	26.467	159.0	0.489	2.77	41.7	36.1	2.07	28.3	0.01	0.00	0.02	200	207
200	ISL	8.09	8.07	33.989	26.470	158.7	0.491	2.75	41.4	36.3	2.08	28.4	0.01			201	
229		7.74	7.72	34.028	26.552	151.3	0.535	2.32	34.7	41.9	2.25	30.7	0.01			230	206
250	ISL	7.46	7.44	34.042	26.604	146.7	0.567	2.07	30.7	45.8	2.37	32.3	0.01			251	
269		7.21	7.18	34.049	26.644	142.9	0.594	1.89	27.9	49.2	2.46	33.5	0.01			271	205
300	ISL	6.84	6.81	34.051	26.697	138.2	0.638	1.69	24.7	53.9	2.57	35.0	0.01			302	
318		6.65	6.62	34.054	26.725	135.7	0.663	1.58	23.0	56.4	2.62	35.7	0.01			320	204
377		6.29	6.26	34.108	26.815	127.8	0.740	1.06	15.3	65.1	2.84	38.0	0.00			379	203
400	ISL	6.11	6.07	34.127	26.854	124.4	0.769	0.91	13.1	69.0	2.91	38.8	0.00			403	
437		5.85	5.81	34.159	26.912	119.1	0.814	0.71	10.2	75.0	3.01	39.9	0.00			440	202
500	ISL	5.61	5.57	34.230	26.998	111.6	0.887	0.44	6.3	82.1	3.14	40.9	0.00			503	
512		5.57	5.53	34.243	27.013	110.2	0.900	0.39	5.5	83.5	3.16	41.1	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 48.7 W	12/04/06	0022 UTC	4278 m	180 16 kn	190 05 05	2	1010.9 mb	15.8 C	14.8 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	14.34	14.34	33.094	24.644	328.6	0.000	6.06	103.9	3.0	0.32	0.1	0.00	0.22	0.01	0	
2		14.34	14.34	33.094	24.644	328.7	0.007	6.06	103.9	3.0	0.32	0.1	0.00	0.22	0.01	2	223
10		14.35	14.35	33.093	24.642	329.2	0.033	6.05	103.7	3.0	0.32	0.1	0.00	0.21	0.01	10	221
11		14.35	14.35	33.093	24.642	329.2	0.036									11	222
15		14.35	14.35	33.095	24.643	329.2	0.049	6.05	103.7	2.8	0.32	0.1	0.00	0.18	0.04	15	220
20	ISL	14.22	14.22	33.097	24.672	326.5	0.066	6.05	103.5	2.8	0.32	0.1	0.00	0.19	0.04	20	
30		13.88	13.88	33.097	24.743	320.1	0.098			2.8	0.32	0.0	0.00	0.22	0.04	30	219
46		13.66	13.65	33.081	24.776	317.4	0.149	6.07	102.6	3.0	0.33	0.2	0.02	0.68	0.08	46	218
50	ISL	13.56	13.55	33.077	24.793	315.8	0.162	6.01	101.4	3.2	0.36	0.5	0.05	0.66	0.13	50	
51		13.61	13.60	33.082	24.787	316.4	0.165									51	217
56		13.40	13.39	33.081	24.829	312.6	0.181	5.92	99.5	3.5	0.41	1.1	0.10	0.63	0.18	56	216
65		13.17	13.16	33.130	24.913	304.8	0.208	5.87	98.2	3.9	0.47	1.7	0.15	0.54	0.11	65	215
75		12.59	12.58	33.209	25.088	288.3	0.238	5.57	92.1	5.6	0.68	5.1	0.38	0.30	0.09	75	214
84		12.49	12.48	33.270	25.155	282.2	0.264	5.72	94.5	6.4	0.70	5.0	0.50	0.19	0.10	84	213
94		12.07	12.06	33.311	25.267	271.7	0.291	5.12	83.8	8.4	0.92	9.3	0.03	0.13	0.10	94	212
100	ISL	11.52	11.51	33.337	25.390	260.1	0.307	4.88	79.0	9.8	1.05	11.5	0.03	0.10	0.08	100	
110		10.55	10.54	33.396	25.608	239.4	0.332	4.62	73.2	12.1	1.22	14.3	0.02	0.05	0.05	111	211
124		9.80	9.79	33.508	25.823	219.1	0.364	4.41	68.8	15.0	1.33	16.6	0.01	0.01	0.04	125	210
125	ISL	9.76	9.75	33.516	25.836	217.9	0.367	4.39	68.4	15.3	1.34	16.8	0.01	0.01	0.04	126	
145		9.17	9.15	33.667	26.050	197.8	0.408	3.81	58.7	21.5	1.65	21.5	0.01	0.01	0.03	146	209
150	ISL	9.09	9.07	33.704	26.092	193.9	0.418	3.64	56.0	22.9	1.72	22.5	0.01	0.01	0.03	151	
169		8.89	8.87	33.829	26.222	182.0	0.454	3.08	47.2	27.5	1.92	25.5	0.01	0.00	0.03	170	208
198		8.63	8.61	33.945	26.354	170.0	0.505	2.79	42.5	31.4	2.02	27.1	0.01	0.00	0.02	199	207
200	ISL	8.60	8.58	33.952	26.364	169.0	0.508	2.76	42.0	31.8	2.03	27.3	0.01			201	
230		8.12	8.10	34.022	26.492	157.2	0.557	2.43	36.6	38.3	2.18	29.6	0.01			231	206
250	ISL	7.78	7.76	34.028	26.547	152.2	0.588	2.36	35.3	41.5	2.24	30.6	0.01			251	
267		7.51	7.48	34.025	26.583	148.9	0.614	2.31	34.3	44.1	2.29	31.4	0.01			269	205
300	ISL	7.14	7.11	34.042	26.649	143.0	0.662	1.93	28.4	49.9	2.46	33.6	0.00			302	
319		6.98	6.95	34.057	26.683	140.0	0.689	1.67	24.5	53.2	2.56	34.8	0.00			321	204
377		6.59	6.56	34.126	26.790	130.4	0.767	1.11	16.2	61.4	2.80	37.0	0.00			379	203
400	ISL	6.49	6.45	34.152	26.824	127.5	0.797	0.94	13.7	64.1	2.87	37.6	0.00			403	
437		6.32	6.28	34.189	26.876	123.0	0.843	0.72	10.4	68.7	2.97	38.5	0.00			440	202
500	ISL	5.79	5.75	34.232	26.978	113.7	0.918	0.46	6.6	79.5	3.11	40.5	0.00			503	
512		5.69	5.65	34.241	26.997	111.9	0.931	0.41	5.8	81.6	3.14	40.9	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 14.6 N	123 29.2 W	11/04/06	1901 UTC	4183 m	190 19 kn	200 04 05	2	1012.2 mb	15.0 C	11.5 C	31m	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	14.88	14.88	32.981	24.442	347.9	0.000	5.87	101.7	1.9	0.33	0.1	0.00	0.09	0.02	0	
2	A	14.88	14.88	32.981	24.443	347.9	0.007	5.87	101.7	1.9	0.33	0.1	0.00	0.09	0.02	2	224
10	ISL	14.85	14.85	32.984	24.452	347.3	0.035	5.87	101.6	2.0	0.33	0.1	0.00	0.10	0.01	10	
11		14.85	14.85	32.984	24.452	347.3	0.038	5.87	101.6	2.0	0.33	0.1	0.00	0.10	0.01	11	223
18	A	14.82	14.82	32.980	24.455	347.2	0.063	5.88	101.7	2.0	0.33	0.1	0.00	0.10	0.02	18	221
18		14.82	14.82	32.985	24.459	346.8	0.063									18	222
20	ISL	14.80	14.80	32.980	24.459	346.8	0.069	5.88	101.7	2.0	0.33	0.1	0.00	0.10	0.02	20	
30	ISL	14.69	14.69	32.983	24.486	344.6	0.104	5.89	101.6	2.0	0.33	0.0	0.00	0.12	0.03	30	
31		14.68	14.68	32.983	24.488	344.4	0.108	5.89	101.6	2.0	0.33	0.0	0.00	0.12	0.03	31	220
45		14.53	14.52	32.978	24.516	342.1	0.156									45	219
45	A	14.54	14.53	32.980	24.516	342.2	0.156	5.89	101.3	1.9	0.33	0.0	0.00	0.16	0.08	45	218
50	ISL	14.48	14.47	32.973	24.523	341.6	0.173	5.90	101.4	1.9	0.33	0.1	0.00	0.19	0.07	50	
54		14.42	14.41	32.967	24.531	341.0	0.186	5.91	101.4	1.9	0.33	0.1	0.00	0.21	0.07	54	217
64	A	14.26	14.25	32.953	24.554	339.0	0.220	5.92	101.2	1.9	0.33	0.0	0.00	0.27	0.09	64	216
74		14.02	14.01	32.931	24.587	336.1	0.254	5.94	101.1	1.9	0.34	0.0	0.00	0.42	0.14	74	215
75	ISL	13.95	13.94	32.929	24.600	334.9	0.257	5.93	100.7	1.9	0.35	0.0	0.01	0.42	0.16	75	
84	A	13.35	13.34	32.943	24.733	322.5	0.287	5.89	98.8	2.3	0.41	0.6	0.08	0.47	0.28	84	214
96		13.02	13.01	33.070	24.897	307.1	0.325	5.63	93.9	3.6	0.53	2.6	0.17	0.30	0.22	96	213
100	ISL	13.01	13.00	33.113	24.933	303.9	0.337	5.58	93.1	3.7	0.55	3.0	0.16	0.30	0.22	100	
107		12.94	12.93	33.174	24.994	298.2	0.358	5.48	91.3	4.0	0.60	3.9	0.12	0.30	0.22	107	212
117	A	12.41	12.39	33.202	25.119	286.5	0.387	5.24	86.3	5.2	0.74	6.2	0.06	0.23	0.17	118	211
125	ISL	11.54	11.52	33.298	25.356	263.9	0.409	5.01	81.1	7.3	0.89	9.1	0.03	0.13	0.10	126	
131		10.85	10.83	33.387	25.549	245.5	0.425	4.80	76.6	9.5	1.03	11.6	0.01	0.06	0.05	132	210
146		9.89	9.87	33.533	25.828	219.1	0.459	4.02	62.9	16.8	1.48	18.5	0.01	0.02	0.03	147	209
150	ISL	9.69	9.67	33.560	25.882	214.0	0.468	3.96	61.7	17.9	1.53	19.4	0.01	0.02	0.03	151	
172		9.03	9.01	33.711	26.107	192.9	0.513	3.73	57.3	22.6	1.69	22.4	0.01	0.00	0.02	173	208
197		9.13	9.11	33.975	26.299	175.4	0.559	2.49	38.4	30.3	2.08	26.8	0.01	0.01	0.05	198	207
200	ISL	9.10	9.08	33.988	26.314	174.0	0.564	2.47	38.1	30.8	2.10	27.1	0.01			201	
228		8.69	8.67	34.049	26.426	163.7	0.611	2.26	34.5	34.6	2.18	28.7	0.01			229	206
250	ISL	8.57	8.54	34.110	26.493	157.7	0.647	1.90	28.9	38.0	2.32	30.0	0.01			251	
270		8.48	8.45	34.154	26.542	153.5	0.678	1.57	23.9	41.1	2.45	31.2	0.01			271	205
300	ISL	8.09	8.06	34.170	26.613	147.0	0.723	1.37	20.7	45.7	2.56	32.6	0.00			302	
317		7.82	7.79	34.167	26.651	143.6	0.748	1.31	19.6	48.3	2.61	33.4	0.00			319	204
379		6.82	6.78	34.132	26.765	133.1	0.833	1.16	17.0	58.1	2.76	36.4	0.01			381	203
400	ISL	6.67	6.63	34.152	26.801	129.9	0.861	1.01	14.7	61.4	2.83	37.1	0.01			402	
437		6.46	6.42	34.193	26.861	124.5	0.908	0.73	10.6	67.1	2.95	38.2	0.00			440	202
500	ISL	5.83	5.79	34.194	26.943	117.1	0.984	0.56	8.0	77.2	3.07	40.3	0.00			503	
510		5.73	5.69	34.195	26.956	115.8	0.996	0.53	7.6	78.8	3.09	40.6	0.00			513	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 9.8 W	11/04/06	1203 UTC	4231 m	200 20 kn			1010.3 mb	15.2 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	15.02	15.02	33.027	24.448	347.4	0.000	5.94	103.2	2.0	0.33	0.1	0.00	0.10	0.02	0	
1	15.02	15.02	33.027	24.448	347.4	0.003	5.94	103.2	2.0	0.33	0.1	0.00	0.10	0.02	1	221
9	15.01	15.01	33.025	24.449	347.6	0.031	5.83	101.3	2.0	0.32	0.1	0.00	0.10	0.02	9	220
10 ISL	15.01	15.01	33.025	24.449	347.6	0.035	5.83	101.3	2.0	0.32	0.1	0.00	0.10	0.02	10	
16	15.02	15.02	33.024	24.446	348.0	0.056	5.83	101.3	2.0	0.32	0.1	0.00	0.10	0.02	16	219
20 ISL	14.96	14.96	33.024	24.459	346.9	0.070	5.84	101.3	2.0	0.32	0.1	0.00	0.10	0.02	20	
30 ISL	14.78	14.78	33.021	24.496	343.7	0.104	5.88	101.7	2.0	0.32	0.1	0.00	0.12	0.02	30	
31	14.76	14.76	33.021	24.500	343.3	0.107	5.88	101.6	2.0	0.32	0.1	0.00	0.12	0.02	31	218
45	14.64	14.63	33.014	24.521	341.7	0.155	5.89	101.5	2.0	0.32	0.0	0.00	0.17	0.05	45	217
50 ISL	14.62	14.61	33.020	24.530	341.0	0.172	5.88	101.3	2.0	0.32	0.0	0.00	0.19	0.06	50	
61	14.57	14.56	33.034	24.551	339.3	0.210	5.86	100.9	2.1	0.32	0.1	0.00	0.24	0.11	61	216
75 ISL	14.36	14.35	33.033	24.595	335.5	0.257	5.86	100.5	2.0	0.33	0.0	0.00	0.34	0.22	75	
76	14.34	14.33	33.036	24.602	334.9	0.261	5.86	100.4	2.0	0.33	0.0	0.00	0.35	0.23	76	215
82	13.98	13.97	33.011	24.658	329.7	0.280	5.94	101.0	2.1	0.33	0.0	0.01	0.42	0.29	82	214
95	13.55	13.54	33.124	24.833	313.3	0.322	5.63	95.0	3.0	0.48	1.8	0.19	0.30	0.32	95	213
100 ISL	13.19	13.18	33.169	24.940	303.2	0.338	5.50	92.1	3.6	0.55	3.0	0.13	0.24	0.30	100	
107	12.74	12.73	33.223	25.071	290.8	0.358	5.35	88.8	4.3	0.63	4.4	0.04	0.17	0.26	107	212
113	12.62	12.60	33.247	25.113	287.0	0.376	5.30	87.7	4.6	0.66	4.9	0.04	0.16	0.23	113	211
124	11.88	11.86	33.323	25.313	268.1	0.406	5.11	83.3	6.1	0.78	7.3	0.02	0.11	0.12	125	210
125 ISL	11.80	11.78	33.324	25.328	266.6	0.409	5.08	82.7	6.4	0.80	7.7	0.02	0.11	0.11	126	
139	10.70	10.68	33.347	25.545	246.1	0.445	4.67	74.2	10.5	1.13	12.8	0.01	0.05	0.05	140	209
150 ISL	10.10	10.08	33.447	25.726	229.0	0.471	4.47	70.2	13.5	1.29	15.5	0.01	0.03	0.04	151	
163	9.60	9.58	33.593	25.923	210.4	0.500	4.26	66.2	16.9	1.42	18.0	0.01	0.01	0.03	164	208
197	9.14	9.12	33.871	26.216	183.2	0.566	3.32	51.2	25.6	1.79	23.6	0.01	0.00	0.01	198	207
200 ISL	9.09	9.07	33.886	26.235	181.4	0.572	3.29	50.6	26.2	1.81	23.9	0.01			201	
228	8.62	8.60	33.980	26.383	167.7	0.621	3.11	47.4	30.8	1.91	25.7	0.00			229	206
250 ISL	8.31	8.28	34.018	26.460	160.7	0.657	2.84	43.0	34.7	2.03	27.5	0.00			251	
266	8.08	8.05	34.033	26.507	156.4	0.682	2.62	39.5	37.8	2.12	28.9	0.00			267	205
300 ISL	7.49	7.46	34.051	26.607	147.2	0.734	2.13	31.6	45.7	2.35	32.0	0.00			302	
317	7.20	7.17	34.056	26.652	143.0	0.759	1.90	28.0	49.6	2.46	33.4	0.00			319	204
380	6.55	6.52	34.074	26.755	133.8	0.846	1.47	21.4	58.7	2.68	36.2	0.00			382	203
400 ISL	6.33	6.29	34.079	26.787	130.8	0.872	1.34	19.4	62.1	2.75	37.1	0.00			402	
440	5.92	5.88	34.096	26.853	124.7	0.923	1.09	15.6	69.3	2.88	38.7	0.00			443	202
500 ISL	5.51	5.47	34.154	26.950	116.0	0.996	0.70	9.9	79.7	3.04	40.6	0.00			503	
512	5.43	5.39	34.166	26.969	114.2	1.009	0.62	8.8	81.8	3.07	41.0	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 0.6 N	118 49.8 W	18/04/06	0243 UTC	22 m	280 17 kn	320 03 05	0	1016.8 mb	13.6 C	12.0 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	12.18	12.18	33.565	25.441	252.8	0.000	5.06	83.2	12.4	0.96	9.7	0.20	2.37	0.16	0	
2	12.18	12.18	33.565	25.441	252.9	0.005	5.06	83.2	12.4	0.96	9.7	0.20	2.37 A	0.16 A	2	204
5	12.18	12.18	33.569	25.444	252.6	0.013	5.04	82.9	12.3	0.96	9.6	0.20	2.46	0.17	5	203
10 ISL	12.18	12.18	33.571	25.446	252.6	0.025	5.04	82.9	12.4	0.96	9.7	0.20	2.61	0.15	10	
11	12.18	12.18	33.571	25.446	252.6	0.028	5.04	82.9	12.4	0.96	9.7	0.20	2.62	0.15	11	202
16	12.05	12.05	33.569	25.469	250.5	0.040	4.96	81.3	12.5	0.98	9.9	0.20	2.51	0.22	16	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 53.3 N	118 26.5 W	08/04/06	2050 UTC	24 m	260 10 kn	220 01 07	1	1018.7 mb	17.0 C	14.9 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	14.46	14.46	33.304	24.781	315.6	0.000	7.08	121.8	1.4	0.19	0.0	0.01	4.46	0.13	0	
2	14.46	14.46	33.304	24.781	315.7	0.006	7.08	121.8	1.4	0.19	0.0	0.01	4.46	0.13	2	204
5	14.13	14.13	33.309	24.854	308.8	0.016	7.06	120.7	1.4	0.19	0.0	0.01	4.28	0.18	5	203
10	13.90	13.90	33.386	24.962	298.7	0.031	5.74	97.7	5.5	0.48	1.6	0.06	5.02	0.74	10	202
18	11.55	11.55	33.582	25.573	240.8	0.052	3.54	57.4	15.6	1.33	12.3	0.22	2.80	1.27	18	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 53.3 N	118 29.2 W	08/04/06	1854 UTC	59 m	230 04 kn	230 01 07	1	1019.7 mb	16.0 C	14.5 C	10m	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	13.31	13.31	33.470	25.146	280.8	0.000	5.97	100.4	6.3	0.61	4.6	0.21	2.29	0.22	0	
2		13.34	13.34	33.472	25.142	281.3	0.006									2	211
2	A	13.31	13.31	33.470	25.146	280.9	0.006	5.97	100.4	6.3	0.61	4.6	0.21	2.29	0.22	2	210
6	A	12.62	12.62	33.481	25.292	267.2	0.017	5.56	92.2	7.0	0.72	6.3	0.24	2.35	0.20	6	209
10	ISL	12.21	12.21	33.488	25.376	259.3	0.027	5.21	85.7	7.9	0.86	8.1	0.26	2.02	0.23	10	
11		12.15	12.15	33.490	25.389	258.1	0.030	5.14	84.4	8.1	0.89	8.4	0.26	1.87	0.24	11	208
14		12.07	12.07	33.501	25.413	255.9	0.037	5.02	82.3	8.4	0.94	8.8	0.25	1.19	0.24	14	206
14	A	12.12	12.12	33.496	25.399	257.1	0.037									14	207
20	ISL	12.08	12.08	33.517	25.423	255.0	0.053	5.03	82.5	8.5	0.93	8.6	0.24	0.92	0.30	20	
21	A	12.08	12.08	33.518	25.424	255.0	0.055	5.03	82.5	8.5	0.92	8.6	0.24	0.88	0.31	21	205
28	A	11.88	11.88	33.517	25.461	251.6	0.073	4.79	78.2	9.5	1.02	9.9	0.23	0.65	0.28	28	204
30	ISL	11.74	11.74	33.539	25.504	247.5	0.078	4.53	73.8	10.9	1.15	10.6	0.23	0.57	0.39	30	
38	A	10.97	10.97	33.641	25.724	226.8	0.097	3.40	54.5	17.4	1.68	15.4	0.21	0.29	0.66	38	203
44		10.22	10.21	33.681	25.886	211.5	0.110	2.97	46.8	20.2	1.81	20.9	0.18	0.14	0.19	44	202
50		10.18	10.17	33.699	25.907	209.6	0.123	2.90	45.7	21.3	1.84	21.3	0.19	0.16	0.25	50	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 37.6 W	08/04/06	2254 UTC	641 m	270 12 kn	250 01 06	0	1017.6 mb	16.9 C	14.9 C	13m	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	15.26	15.26	33.438	24.712	322.2	0.000	6.18	108.2	3.7	0.34	0.4	0.04	0.96	0.15	0	
2		15.26	15.26	33.438	24.712	322.3	0.006	6.18	108.2	3.7	0.34	0.4	0.04	0.96	0.15	2	221
10		14.39	14.39	33.435	24.897	304.8	0.032	6.28	108.0	3.8	0.34	0.5	0.05	0.91	0.23	10	219
10		14.37	14.37	33.434	24.901	304.5	0.032									10	220
20		13.60	13.60	33.459	25.080	287.7	0.061	6.15	104.1	4.3	0.40	1.4	0.08	1.07	0.39	20	218
30		13.10	13.10	33.481	25.198	276.8	0.089	5.73	96.0	5.2	0.57	3.5	0.13	0.79	0.32	30	217
40		11.74	11.73	33.502	25.476	250.5	0.116	4.55	74.1	10.3	1.09	10.9	0.23	0.56	0.13	40	216
50	ISL	10.89	10.88	33.535	25.656	233.5	0.140	3.68	58.8	15.8	1.48	16.9	0.23	0.38	0.21	50	
51		10.83	10.82	33.541	25.671	232.1	0.142	3.61	57.6	16.3	1.51	17.4	0.23	0.37	0.22	51	215
60		10.49	10.48	33.664	25.827	217.5	0.162	3.05	48.4	19.8	1.78	19.8	0.26	0.25	0.23	60	214
70		9.83	9.82	33.836	26.073	194.2	0.183	2.64	41.3	25.1	1.95	23.9	0.14	0.10	0.17	70	213
75	ISL	9.82	9.81	33.844	26.081	193.6	0.193	2.61	40.8	25.3	1.96	24.0	0.14	0.10	0.18	75	
85		9.80	9.79	33.860	26.097	192.3	0.212	2.56	40.0	25.8	1.97	24.2	0.15	0.11	0.21	85	212
99		9.69	9.68	33.964	26.197	183.1	0.238	2.33	36.4	28.4	2.05	25.5	0.15	0.07	0.19	100	211
100	ISL	9.68	9.67	33.969	26.203	182.6	0.240	2.32	36.2	28.5	2.05	25.6	0.15	0.07	0.19	101	
119		9.62	9.61	34.029	26.260	177.6	0.274	2.19	34.1	29.7	2.10	26.2	0.06	0.05	0.16	120	210
125	ISL	9.62	9.61	34.037	26.266	177.1	0.285	2.18	34.0	30.0	2.11	26.3	0.05	0.05	0.16	126	
140		9.60	9.58	34.058	26.286	175.5	0.311	2.13	33.2	30.8	2.13	26.5	0.04	0.04	0.15	141	209
150	ISL	9.55	9.53	34.094	26.323	172.2	0.329	2.02	31.5	31.9	2.17	27.0	0.03	0.04	0.14	151	
170		9.41	9.39	34.171	26.406	164.7	0.363	1.76	27.3	34.5	2.27	28.1	0.01	0.03	0.12	171	208
200		9.23	9.21	34.236	26.487	157.7	0.411	1.42	22.0	37.9	2.40	29.3	0.01	0.01	0.08	201	207
229		8.83	8.81	34.217	26.536	153.4	0.456	1.45	22.2	40.3	2.42	30.3	0.01			230	206
250	ISL	8.68	8.65	34.230	26.570	150.5	0.488	1.33	20.3	42.5	2.48	30.9	0.02			252	
268		8.57	8.54	34.246	26.600	148.0	0.515	1.19	18.1	44.4	2.54	31.4	0.02			270	205
300	ISL	8.29	8.26	34.260	26.654	143.3	0.561	1.03	15.6	47.5	2.63	32.3	0.01			302	
318		8.12	8.09	34.265	26.684	140.7	0.587	0.95	14.3	49.3	2.67	32.9	0.01			320	204
378		7.48	7.44	34.272	26.783	131.9	0.669	0.70	10.4	57.4	2.82	35.2	0.01			380	203
400	ISL	7.22	7.18	34.272	26.820	128.6	0.697	0.62	9.2	60.4	2.87	36.1	0.01			403	
438		6.81	6.77	34.275	26.879	123.2	0.745	0.51	7.5	65.6	2.96	37.6	0.00			441	202
500	ISL	6.39	6.34	34.298	26.954	116.7	0.820	0.37	5.4	73.6	3.05	38.8	0.01			504	
512		6.31	6.26	34.303	26.968	115.4	0.834	0.34	4.9	75.2	3.07	39.0	0.01			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 39.1 N	118 58.6 W	09/04/06	0329 UTC	683 m	290 12 kn			1017.1 mb	14.4 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	14.85	14.85	33.434	24.798	314.0	0.000	6.13	106.4	3.2	0.32	0.3	0.03	0.65	0.08	0	
1		14.85	14.85	33.434	24.798	314.0	0.003	6.13	106.4	3.2	0.32	0.3	0.03	0.65	0.08	1	222
1		14.86	14.86	33.435	24.797	314.2	0.003									1	223
10		13.44	13.44	33.429	25.089	286.6	0.030	5.66	95.5	5.1	0.57	3.9	0.13	0.96	0.34	10	220
10		13.75	13.75	33.441	25.035	291.7	0.030									10	221
15		12.88	12.88	33.451	25.218	274.5	0.044	5.41	90.2	6.2	0.72	6.0	0.18	0.80	0.28	15	219
20	ISL	12.24	12.24	33.436	25.330	263.9	0.058	4.84	79.6	8.6	0.96	9.7	0.27	0.72	0.26	20	
21		12.13	12.13	33.435	25.350	262.0	0.060	4.74	77.8	9.1	1.00	10.3	0.29	0.72	0.26	21	218
30		12.04	12.04	33.557	25.462	251.6	0.084	5.15	84.4	9.5	0.94	8.6	0.27	0.90	0.22	30	217
40		11.70	11.69	33.609	25.566	241.9	0.108	5.03	81.9	9.7	1.08	9.2	0.19	0.38	0.18	40	216
50	ISL	10.56	10.55	33.558	25.732	226.3	0.132	3.84	61.0	16.1	1.48	17.6	0.08	0.21	0.17	50	
51		10.44	10.43	33.555	25.750	224.6	0.134	3.72	58.9	16.8	1.52	18.5	0.07	0.20	0.17	51	215
60		10.06	10.05	33.636	25.878	212.6	0.154	3.39	53.3	19.8	1.68	20.8	0.02	0.14	0.14	60	214
70		9.85	9.84	33.744	25.998	201.4	0.174	3.04	47.6	23.0	1.82	22.7	0.01	0.05	0.09	70	213
75	ISL	9.89	9.88	33.802	26.037	197.8	0.184	2.80	43.9	24.5	1.90	23.5	0.02	0.05	0.12	75	
85		10.02	10.01	33.898	26.090	193.0	0.204	2.38	37.4	27.1	2.05	24.9	0.04	0.05	0.19	85	212
100		9.83	9.82	33.947	26.161	186.6	0.232	2.18	34.1	29.2	2.14	26.0	0.02	0.05	0.18	101	211
120		9.38	9.37	33.982	26.262	177.3	0.269	2.42	37.5	29.7	2.08	26.3	0.01	0.01	0.10	121	210
125	ISL	9.39	9.38	34.006	26.280	175.8	0.277	2.31	35.8	30.5	2.12	26.7	0.01	0.01	0.10	126	
139		9.40	9.38	34.068	26.327	171.6	0.302	1.93	30.0	33.1	2.25	27.8	0.01	0.01	0.11	140	209
150	ISL	9.27	9.25	34.102	26.375	167.2	0.320	1.88	29.1	34.5	2.28	28.4	0.01	0.01	0.10	151	
169		8.96	8.94	34.142	26.456	159.8	0.351	1.80	27.7	36.8	2.31	29.2	0.02	0.01	0.08	170	208
199		8.53	8.51	34.169	26.545	151.9	0.398	1.57	23.9	41.2	2.43	30.8	0.01	0.01	0.06	200	207
200	ISL	8.52	8.50	34.170	26.547	151.7	0.400	1.56	23.8	41.3	2.43	30.8	0.01			201	
228		8.30	8.28	34.191	26.597	147.3	0.442	1.38	20.9	44.4	2.52	31.8	0.01			229	206
250	ISL	8.01	7.98	34.201	26.649	142.7	0.473	1.23	18.5	47.8	2.60	32.8	0.01			252	
268		7.77	7.74	34.210	26.691	138.9	0.499	1.11	16.6	50.9	2.67	33.6	0.01			270	205
300	ISL	7.48	7.45	34.237	26.755	133.3	0.542	0.86	12.8	56.1	2.79	34.8	0.01			302	
318		7.35	7.32	34.251	26.784	130.7	0.566	0.74	11.0	58.8	2.85	35.4	0.01			320	204
378		6.95	6.91	34.268	26.854	124.8	0.643	0.56	8.2	64.6	2.95	36.9	0.01			381	203
400	ISL	6.82	6.78	34.276	26.878	122.7	0.670	0.51	7.5	66.5	2.98	37.4	0.01			403	
439		6.61	6.57	34.290	26.918	119.4	0.717	0.43	6.3	70.0	3.04	38.1	0.00			442	202
500	ISL	6.32	6.27	34.306	26.969	115.1	0.789	0.33	4.8	76.2	3.11	38.9	0.00			504	
511		6.27	6.22	34.309	26.978	114.4	0.801	0.31	4.5	77.3	3.12	39.0	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 29.1 N	119 19.4 W	09/04/06	0751 UTC	1625 m	310 17 kn			1017.1 mb	13.3 C	11.9 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	13.57	13.57	33.542	25.150	280.5	0.000	6.48	109.7	2.0	0.35	2.7	0.11	2.03	0.13	0	
1		13.57	13.57	33.542	25.150	280.6	0.003									1	223
2		13.57	13.57	33.542	25.150	280.6	0.006	6.48	109.7	2.0	0.35	2.7	0.11	2.03	0.13	2	222
10		13.50	13.50	33.540	25.163	279.6	0.028	6.44	108.8	1.7	0.35	2.7	0.11	2.29	0.16	10	220
10		13.46	13.46	33.541	25.172	278.7	0.028									10	221
15		12.92	12.92	33.540	25.279	268.7	0.042	6.30	105.2	1.8	0.38	2.9	0.10	2.63	0.27	15	219
20	ISL	12.85	12.85	33.544	25.296	267.2	0.055	6.24	104.0	2.1	0.41	3.2	0.10	2.36	0.33	20	
21		12.83	12.83	33.545	25.301	266.7	0.058	6.22	103.6	2.2	0.42	3.3	0.10	2.30	0.33	21	218
30		12.47	12.47	33.550	25.375	259.9	0.081	5.70	94.3	4.4	0.70	4.7	0.11	0.73	0.26	30	217
41		11.81	11.80	33.591	25.532	245.2	0.109	5.06	82.5	8.5	1.05	8.1	0.15	0.24	0.19	41	216
50		11.49	11.48	33.617	25.612	237.8	0.131	4.78	77.4	11.3	1.21	10.3	0.19	0.16	0.19	50	215
61		10.91	10.90	33.684	25.769	223.1	0.156	3.87	61.9	16.5	1.52	15.9	0.23	0.09	0.20	61	214
71		10.48	10.47	33.742	25.889	211.8	0.178	3.40	53.9	19.5	1.71	18.8	0.24	0.08	0.17	71	213
75	ISL	10.33	10.32	33.768	25.936	207.5	0.186	3.17	50.1	21.1	1.78	20.3	0.24	0.08	0.18	75	
83		10.08	10.07	33.817	26.017	199.9	0.203	2.78	43.7	24.0	1.91	22.9	0.25	0.08	0.22	83	212
100	ISL	9.83	9.82	33.869	26.100	192.4	0.236	2.61	40.8	25.9	1.99	24.4	0.18	0.06	0.18	101	
101		9.82	9.81	33.872	26.104	192.0	0.238	2.60	40.7	26.0	1.99	24.4	0.17	0.06	0.18	102	211
119		9.45	9.44	33.987	26.255	178.0	0.271	2.28	35.4	29.8	2.13	26.4	0.06	0.04	0.19	120	210
125	ISL	9.39	9.38	34.012	26.284	175.3	0.282	2.22	34.4	30.6	2.15	26.7	0.04	0.04	0.18	126	
138		9.28	9.26	34.056	26.337	170.6	0.304	2.12	32.8	32.2	2.19	27.3	0.03	0.03	0.17	139	209
150	ISL	9.16	9.14	34.095	26.387	166.1	0.325	2.01	31.0	33.8	2.23	27.9	0.03	0.03	0.17	151	
170		8.95	8.93	34.148	26.462	159.3	0.357	1.82	28.0	36.6	2.32	29.0	0.02	0.02	0.17	171	208
200	ISL	8.56	8.54	34.185	26.552	151.1	0.404	1.47	22.4	41.6	2.48	30.9	0.01	0.01	0.10	201	
201		8.55	8.53	34.186	26.555	150.9	0.405	1.46	22.2	41.8	2.49	31.0	0.01	0.01	0.10	202	207
230		8.33	8.31	34.213	26.610	146.2	0.448	1.25	19.0	45.1	2.58	31.8	0.01			231	206
250	ISL	8.20	8.17	34.221	26.636	144.0	0.477	1.13	17.1	47.1	2.63	32.5	0.01			252	
267		8.08	8.05	34.225	26.658	142.2	0.502	1.04	15.7	48.9	2.68	33.1	0.01			269	205
300	ISL	7.70	7.67	34.237	26.723	136.4	0.548	0.88	13.2	53.5	2.78	34.4	0.01			302	
315		7.52	7.49	34.243	26.754	133.6	0.568	0.81	12.1	55.7	2.82	35.0	0.01			317	204
376		7.00	6.96	34.268	26.847	125.4	0.647	0.56	8.2	64.2	2.96	36.8	0.00			378	203
400	ISL	6.84	6.80	34.276	26.876	123.0	0.677	0.49	7.2	67.0	3.00	37.3	0.00			403	
436		6.63	6.59	34.288	26.914	119.7	0.720	0.42	6.1	70.8	3.05	37.9	0.01			439	202
500	ISL	6.30	6.25	34.310	26.975	114.6	0.795	0.34	4.9	76.9	3.13	38.7	0.00			504	
512		6.24	6.19	34.315	26.987	113.6	0.809	0.32	4.6	78.1	3.14	38.8	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 19.1 N	119 39.0 W	09/04/06	1226 UTC	77 m	320 15 kn			1015.6 mb	12.9 C	11.9 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	12.96	12.96	33.454	25.204	275.4	0.000	6.28	104.9	2.8	0.44	3.8	0.15	2.52	0.34	0	
2		12.96	12.96	33.454	25.204	275.4	0.006	6.28	104.9	2.8	0.44	3.8	0.15	2.52	0.34	2	210
5		12.95	12.95	33.460	25.211	274.9	0.014	6.27	104.7	2.8	0.44	3.8	0.15	2.53	0.32	5	209
10		12.89	12.89	33.446	25.212	274.9	0.028									10	208
10		12.90	12.90	33.446	25.210	275.1	0.028	6.23	103.9	3.1	0.46	4.1	0.16	2.47	0.35	10	207
20		12.41	12.41	33.439	25.300	266.8	0.055	5.83	96.2	5.6	0.65	5.6	0.21	2.27	0.47	20	206
29		12.34	12.34	33.457	25.328	264.4	0.078	5.72	94.3	6.5	0.71	6.0	0.22	1.77	0.47	29	205
30	ISL	12.28	12.28	33.464	25.344	262.8	0.081	5.65	93.0	6.9	0.74	6.4	0.23	1.67	0.46	30	
40		11.58	11.57	33.545	25.539	244.5	0.106	4.79	77.7	12.1	1.10	11.2	0.32	0.64	0.31	40	204
50		10.99	10.98	33.620	25.704	229.0	0.130	4.07	65.2	16.5	1.40	15.6	0.32	0.17	0.22	50	203
59		10.32	10.31	33.723	25.902	210.3	0.150	3.28	51.8	22.1	1.74	20.6	0.18	0.09	0.28	59	202
70		10.13	10.12	33.758	25.962	204.9	0.173	3.06	48.2	23.9	1.84	22.1	0.13	0.05	0.30	70	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 9.1 N	120 1.0 W	09/04/06	1726 UTC	1198 m	300 14 kn	310 04 07	0	1016.6 mb	14.9 C	13.2 C	13m	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	13.41	13.41	33.269	24.971	297.5	0.000	6.29	105.9	4.2	0.41	1.9	0.08	1.16	0.22	0	
2	A	13.41	13.41	33.269	24.971	297.6	0.006	6.29	105.9	4.2	0.41	1.9	0.08	1.16	0.22	2	224
7		13.40	13.40	33.268	24.972	297.6	0.021									7	223
8	A	13.41	13.41	33.268 D	24.970	297.8	0.024	6.29	105.9	4.2	0.41	1.9	0.08	1.17	0.21	8	222
10	ISL	13.38	13.38	33.267	24.976	297.4	0.030	6.29	105.8	4.3	0.50	2.1	0.09	1.29	0.17	10	
11		13.36	13.36	33.268	24.980	296.9	0.033	6.29	105.8	4.3	0.54	2.2	0.10	1.37	0.15	11	221
19	A	12.75	12.75	33.327	25.147	281.3	0.056	6.10	101.3	5.0	0.56	4.2	0.17	2.13	0.38	19	219
20		12.76	12.76	33.324	25.143	281.7	0.059			5.0	0.56	4.1	0.17			20	220
27	A	12.47	12.47	33.380	25.243	272.4	0.078	5.82	96.1	5.4	0.68	5.4	0.20	1.34	0.46	27	218
30	ISL	12.40	12.40	33.413	25.282	268.7	0.086	5.75	94.9	5.7	0.72	5.8	0.18	1.12	0.44	30	
37	A	12.31	12.31	33.477	25.349	262.5	0.105	5.64	92.9	6.3	0.79	6.4	0.14	0.79	0.41	37	217
42		12.28	12.27	33.490	25.365	261.1	0.118	5.58	91.9	6.5	0.80	6.5	0.14	0.75	0.28	42	216
49	A	12.13	12.12	33.520	25.417	256.4	0.136	5.43	89.1	7.1	0.87	7.1	0.15	0.66	0.36	49	215
50	ISL	12.11	12.10	33.526	25.425	255.6	0.139	5.41	88.8	7.2	0.88	7.2	0.15	0.64	0.36	50	
62		11.90	11.89	33.577	25.505	248.3	0.169	5.25	85.8	8.6	0.98	8.3	0.16	0.46	0.32	62	214
69		11.88	11.87	33.581	25.512	247.8	0.186	5.23	85.4	8.7	0.99	8.4	0.16	0.37	0.38	69	213
75	ISL	11.40	11.39	33.576	25.597	239.8	0.201	4.80	77.6	11.6	1.16	11.6	0.14	0.26	0.35	75	
86		10.35	10.34	33.614	25.812	219.5	0.226	3.78	59.7	18.7	1.56	18.8	0.08	0.10	0.25	86	212
100		9.84	9.83	33.799	26.043	197.7	0.255	2.94	46.0	25.4	1.88	23.1	0.05	0.07	0.17	101	211
119		9.50	9.49	33.941	26.211	182.2	0.291	2.41	37.5	29.8	2.09	25.9	0.03	0.04	0.15	120	210
125	ISL	9.43	9.42	33.970	26.245	179.1	0.302	2.32	36.0	30.6	2.12	26.4	0.02	0.03	0.13	126	
140		9.26	9.24	34.026	26.317	172.5	0.329	2.17	33.6	32.2	2.18	27.3	0.01	0.01	0.09	141	209
150	ISL	9.10	9.08	34.058	26.367	167.9	0.346	2.05	31.6	33.9	2.23	28.2	0.01	0.01	0.09	151	
169		8.80	8.78	34.110	26.456	159.8	0.377	1.81	27.7	37.4	2.33	29.7	0.01	0.01	0.08	170	208
200		8.55	8.53	34.171	26.543	152.0	0.425	1.44	21.9	42.0	2.48	31.2	0.02	0.01	0.06	201	207
230		8.26	8.24	34.199	26.610	146.2	0.470	1.22	18.5	45.8	2.59	32.4	0.01			231	206
250	ISL	8.07	8.04	34.213	26.649	142.7	0.499	1.10	16.6	48.3	2.65	33.1	0.01			252	
270		7.90	7.87	34.224	26.683	139.7	0.527	1.00	15.0	50.7	2.71	33.8	0.01			272	205
300	ISL	7.69	7.66	34.237	26.725	136.2	0.568	0.88	13.1	53.6	2.77	34.5	0.01			302	
317		7.58	7.55	34.242	26.745	134.6	0.591	0.82	12.2	55.2	2.80	34.9	0.01			319	204
380		7.18	7.14	34.258	26.815	128.7	0.674	0.66	9.7	61.3	2.90	36.3	0.01			382	203
400	ISL	7.07	7.03	34.262	26.833	127.2	0.700	0.62	9.1	63.1	2.93	36.7	0.01			403	
438		6.86	6.82	34.270	26.869	124.3	0.748	0.54	7.9	66.5	2.98	37.4	0.01			441	202
500	ISL	6.45	6.40	34.288	26.938	118.2	0.823	0.41	6.0	72.9	3.07	38.8	0.01			503	
511		6.38	6.33	34.292	26.951	117.1	0.836	0.39	5.7	74.0	3.09	39.0	0.01			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 59.4 N	120 20.7 W	09/04/06	2156	UTC	724 m	260	10 kn	260 03 05	0	1016.4 mb	16.0 C	14.0 C	12m	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	14.39	14.39	33.097	24.636	329.4	0.000	6.20	106.4	2.8	0.30	0.0	0.00	0.36	0.08	0	
2		14.39	14.39	33.097	24.636	329.5	0.007	6.20	106.4	2.8	0.30	0.0	0.00	0.36	0.08	2	221
10		14.18	14.18	33.106	24.687	324.8	0.033									10	220
11		14.10	14.10	33.113	24.709	322.7	0.036	6.26	106.8	2.6	0.29	0.0	0.00	0.53	0.09	11	219
20		13.88	13.88	33.106	24.750	319.2	0.065	6.28	106.7	2.5	0.29	0.0	0.00	0.69	0.02	20	218
30	ISL	13.56	13.56	33.075	24.791	315.5	0.097	6.28	105.9	2.7	0.30	0.1	0.01	1.00	0.23	30	
31		13.52	13.52	33.069	24.795	315.1	0.100	6.28	105.8	2.7	0.30	0.1	0.01	1.04	0.25	31	217
40		12.93	12.92	33.194	25.010	294.9	0.127	5.79	96.5	4.4	0.54	2.9	0.24	1.38	0.01	40	216
50	ISL	12.59	12.58	33.226	25.101	286.5	0.156	5.53	91.5	5.6	0.68	5.1	0.33	0.90	0.17	50	
51		12.55	12.54	33.226	25.109	285.8	0.159	5.51	91.1	5.8	0.70	5.4	0.34	0.84	0.19	51	215
61		11.76	11.75	33.276	25.297	268.0	0.187	5.03	81.8	9.9	1.00	10.3	0.20	0.71	0.11	61	214
71		11.29	11.28	33.380	25.464	252.3	0.213	4.73	76.2	12.2	1.18	13.2	0.11	0.33	0.16	71	213
75	ISL	11.01	11.00	33.464	25.580	241.4	0.223	4.40	70.5	14.7	1.33	15.3	0.08	0.24	0.16	75	
84		10.36	10.35	33.642	25.832	217.5	0.243	3.67	58.0	20.4	1.64	19.9	0.02	0.10	0.15	84	212
100		9.63	9.62	33.669	25.977	204.0	0.277	3.50	54.5	21.9	1.71	21.6	0.02	0.03	0.11	100	211
119		9.15	9.14	33.793	26.152	187.7	0.314	3.27	50.4	25.5	1.82	23.6	0.02	0.02	0.08	120	210
125	ISL	9.00	8.99	33.817	26.194	183.7	0.325	3.25	49.9	26.3	1.84	24.1	0.02	0.02	0.07	126	
139		8.71	8.70	33.863	26.276	176.2	0.351	3.20	48.8	28.1	1.88	25.0	0.01	0.01	0.05	140	209
150	ISL	8.56	8.54	33.908	26.334	170.8	0.370	3.09	47.0	30.0	1.92	25.8	0.01	0.01	0.05	151	
169		8.39	8.37	33.980	26.417	163.3	0.401	2.81	42.6	33.4	2.02	27.3	0.01	0.00	0.05	170	208
199		8.19	8.17	34.054	26.506	155.4	0.449	2.23	33.7	38.6	2.23	29.8	0.01	0.00	0.03	200	207
200	ISL	8.18	8.16	34.056	26.509	155.1	0.451	2.21	33.4	38.8	2.24	29.9	0.01			201	
230		7.92	7.90	34.095	26.578	148.9	0.496	1.81	27.2	43.9	2.40	31.8	0.01			231	206
250	ISL	7.59	7.57	34.102	26.632	144.0	0.526	1.63	24.3	47.7	2.49	33.1	0.01			251	
268		7.32	7.29	34.109	26.676	140.0	0.551	1.48	21.9	50.9	2.57	34.1	0.01			270	205
300	ISL	7.28	7.25	34.163	26.725	135.9	0.595	1.17	17.3	54.3	2.69	35.0	0.00			302	
319		7.26	7.23	34.188	26.748	134.1	0.621	1.00	14.8	56.0	2.75	35.3	0.00			321	204
378		6.82	6.78	34.222	26.835	126.4	0.698	0.74	10.8	62.8	2.89	36.9	0.00			380	203
400	ISL	6.64	6.60	34.230	26.866	123.7	0.725	0.65	9.5	65.9	2.94	37.6	0.00			403	
437		6.36	6.32	34.243	26.914	119.5	0.770	0.52	7.5	71.0	3.01	38.7	0.00			440	202
500	ISL	6.08	6.04	34.278	26.978	114.0	0.844	0.38	5.5	76.8	3.11	39.7	0.00			503	
511		6.03	5.98	34.284	26.989	113.1	0.856	0.35	5.0	77.8	3.13	39.9	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 39.3 N	121 1.7 W	10/04/06	0430	UTC	3793 m	200	06 kn			1015.8 mb	15.1 C	13.2 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	15.28	15.28	33.060	24.417	350.3	0.000	5.96	104.1	2.2	0.32	0.1	0.00	0.15	0.01	0	
2		15.28	15.28	33.060	24.417	350.4	0.007	5.96	104.1	2.2	0.32	0.1	0.00	0.15	0.01	2	221
10	ISL	14.93	14.93	33.081	24.509	341.8	0.035	5.98	103.8	2.2	0.32	0.1	0.00	0.18	0.00	10	
11		14.87	14.87	33.087	24.527	340.2	0.038									11	220
11		14.87	14.87	33.085	24.525	340.3	0.038	5.99	103.8	2.2	0.32	0.1	0.00	0.19	0.00	11	219
20	ISL	14.68	14.68	33.107	24.583	335.1	0.068	6.05	104.4	2.2	0.31	0.1	0.00	0.19	0.03	20	
21		14.67	14.67	33.110	24.587	334.7	0.072	6.05	104.4	2.2	0.31	0.1	0.00	0.19	0.03	21	218
30		14.65	14.65	33.159	24.630	330.9	0.102	6.04	104.2	2.1	0.31	0.0	0.00	0.23	0.06	30	217
40		14.50	14.49	33.161	24.663	328.0	0.135	6.01	103.4	2.1	0.32	0.0	0.00	0.35	0.12	40	216
50		13.93	13.92	33.173	24.792	316.0	0.167	5.70	96.9	2.4	0.38	0.7	0.09	0.92	0.18	50	215
60		13.21	13.20	33.250	24.998	296.6	0.198	5.53	92.7	3.7	0.59	3.6	0.42	0.79	0.39	60	214
70		12.76	12.75	33.302	25.127	284.5	0.227	5.03	83.6	4.7	0.68	5.1	0.24	0.46	0.27	70	213
75	ISL	12.48	12.47	33.313	25.190	278.6	0.241	4.84	79.9	5.6	0.75	6.4	0.18	0.35	0.21	75	
85		11.87	11.86	33.334	25.322	266.2	0.268	4.46	72.7	8.0	0.93	9.5	0.10	0.19	0.12	85	212
99		11.01	11.00	33.411	25.539	245.8	0.304	3.70	59.2	11.9	1.22	14.1	0.02	0.02	0.06	99	211
100	ISL	10.95	10.94	33.416	25.554	244.4	0.306	3.64	58.2	12.2	1.24	14.4	0.02	0.02	0.06	100	
120		10.00	9.99	33.559	25.830	218.5	0.353	2.75	43.1	18.0	1.58	19.6	0.01	0.02	0.05	121	210
125	ISL	9.87	9.86	33.626	25.904	211.5	0.363	2.64	41.3	20.1	1.68	21.0	0.01	0.02	0.05	126	
139		9.65	9.63	33.807	26.082	194.9	0.392	2.44	38.0	25.5	1.94	24.5	0.01	0.01	0.05	140	209
150	ISL	9.56	9.54	33.870	26.146	189.0	0.413	2.32	36.1	27.2	1.98	25.1	0.01	0.04	0.06	151	
169		9.45	9.43	33.927	26.209	183.4	0.448	2.14	33.2	28.7	2.06	26.2	0.01	0.08	0.08	170	208
198		9.05	9.03	34.045	26.366	169.0	0.499	1.81	27.9	33.1	2.18	28.1	0.00	0.00	0.05	199	207
200	ISL	9.03	9.01	34.051	26.374	168.2	0.503	1.79	27.5	33.4	2.19	28.2	0.00			201	
229		8.78	8.76	34.117	26.466	160.0	0.550	1.48	22.7	37.3	2.32	29.8	0.00			230	206
250	ISL	8.45	8.42	34.146	26.540	153.3	0.583	1.33	20.2	41.1	2.42	31.0	0.00			251	
270		8.13	8.10	34.163	26.602	147.6	0.613	1.24	18.7	44.6	2.50	32.1	0.00			272	205
300	ISL	7.84	7.81	34.173	26.653	143.1	0.657	1.22	18.3	48.0	2.59	33.2	0.00			302	
318		7.70	7.67	34.176	26.676	141.2	0.682	1.21	18.1	49.8	2.63	33.8	0.00			320	204
377		7.24	7.20	34.218	26.775	132.5	0.763	0.86	12.7	57.4	2.81	35.6	0.00			379	203
400	ISL	7.02	6.98	34.230	26.815	128.9	0.793	0.74	10.9	61.0	2.88	36.4	0.00			403	
437		6.68	6.64	34.248	26.875	123.4	0.840	0.58	8.5	66.7	2.97	37.7	0.00			440	202
500	ISL	6.24	6.20	34.285	26.963	115.6	0.915	0.38	5.5	74.4	3.09	39.3	0.00			503	
511		6.16	6.11	34.292	26.979	114.2	0.928	0.35	5.0	75.7	3.11	39.6	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 19.7 N	121 42.9 W	10/04/06	1124 UTC	3991 m	260 10 kn			1013.4 mb	15.1 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	15.21	15.21	33.175	24.520	340.4	0.000	5.90	103.0	2.1	0.34	0.1	0.00	0.16	0.03	0	
2		15.21	15.21	33.175	24.521	340.5	0.007	5.90	103.0	2.1	0.34	0.1	0.00	0.16	0.03	2	221
10		15.07	15.07	33.170	24.547	338.2	0.034	5.90	102.7	2.2	0.33	0.0	0.00	0.17	0.03	10	220
15		15.08	15.08	33.170	24.545	338.5	0.051	5.91	102.9	2.2	0.33	0.0	0.00	0.17	0.03	15	219
20	ISL	15.00	15.00	33.170	24.563	337.0	0.068	5.91	102.7	2.2	0.33	0.0	0.00	0.20	0.04	20	
30		14.85	14.85	33.171	24.596	334.1	0.101	5.92	102.6	2.1	0.33	0.0	0.00	0.30	0.10	30	218
44		13.69	13.68	33.214	24.873	308.1	0.146	5.82	98.5	3.3	0.49	2.0	0.14	0.54	0.24	44	217
50	ISL	13.23	13.22	33.240	24.986	297.5	0.164	5.67	95.1	4.1	0.60	3.7	0.24	0.52	0.27	50	
55		12.86	12.85	33.259	25.074	289.2	0.179	5.50	91.5	5.0	0.71	5.3	0.29	0.51	0.29	55	216
65		12.13	12.12	33.270	25.223	275.2	0.207	5.04	82.6	7.3	0.93	9.0	0.13	0.38	0.37	65	215
75	ISL	11.37	11.36	33.316	25.400	258.5	0.234	4.62	74.5	10.0	1.13	12.4	0.04	0.22	0.30	75	
76		11.30	11.29	33.322	25.417	256.9	0.237	4.58	73.8	10.3	1.15	12.7	0.04	0.20	0.29	76	214
85		10.73	10.72	33.391	25.573	242.2	0.259	4.20	66.8	13.1	1.35	15.8	0.02	0.13	0.13	85	213
95		10.10	10.09	33.495	25.762	224.4	0.282	3.81	59.8	17.1	1.55	19.2	0.01	0.05	0.06	95	212
100	ISL	9.96	9.95	33.521	25.806	220.3	0.293	3.72	58.3	18.0	1.60	20.0	0.01	0.04	0.06	100	
110		9.78	9.77	33.572	25.876	213.8	0.315	3.56	55.5	19.6	1.68	21.1	0.01	0.03	0.05	111	211
125		9.30	9.29	33.750	26.094	193.3	0.346	3.07	47.4	25.0	1.89	24.4	0.01	0.01	0.03	126	210
145		9.11	9.09	33.902	26.244	179.5	0.383	2.76	42.5	28.7	2.01	26.2	0.01	0.00	0.03	146	209
150	ISL	9.04	9.02	33.923	26.271	176.9	0.392	2.72	41.8	29.4	2.03	26.5	0.01	0.00	0.03	151	
169		8.75	8.73	33.976	26.359	168.9	0.425	2.60	39.7	32.0	2.07	27.4	0.00	0.00	0.03	170	208
200		8.45	8.43	34.053	26.466	159.3	0.476	2.40	36.5	36.2	2.16	28.7	0.01	0.00	0.08	201	207
231		7.89	7.87	34.054	26.551	151.5	0.524	2.29	34.3	41.3	2.25	30.4	0.01			232	206
250	ISL	7.67	7.65	34.064	26.591	148.0	0.552	2.13	31.8	44.1	2.33	31.4	0.01			251	
267		7.51	7.48	34.075	26.623	145.2	0.577	1.94	28.8	46.6	2.41	32.4	0.01			269	205
300	ISL	7.20	7.17	34.103	26.689	139.3	0.624	1.52	22.4	52.0	2.58	34.4	0.00			302	
320		7.01	6.98	34.119	26.728	135.8	0.652	1.28	18.8	55.3	2.68	35.5	0.00			322	204
378		6.44	6.41	34.144	26.824	127.1	0.728	0.96	13.9	64.5	2.86	37.8	0.00			380	203
400	ISL	6.34	6.30	34.172	26.860	124.0	0.755	0.80	11.6	67.3	2.93	38.4	0.00			403	
439		6.17	6.13	34.216	26.917	119.0	0.803	0.56	8.1	72.3	3.03	39.3	0.00			442	202
500	ISL	5.58	5.54	34.212	26.987	112.5	0.874	0.48	6.8	81.9	3.11	41.0	0.00			503	
511		5.47	5.43	34.212	27.001	111.3	0.886	0.46	6.5	83.6	3.12	41.3	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 59.3 N	122 24.1 W	10/04/06	1819 UTC	4113 m	320 08 kn	290 02 06	1	1014.8 mb	14.9 C	14.0 C	16m	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	14.81	14.81	33.200	24.626	330.4	0.000	6.10	105.7	2.4	0.29	0.0	0.01	0.38	0.09	0	
2	A	14.81	14.81	33.200	24.626	330.4	0.007	6.10	105.7	2.4	0.29	0.0	0.01	0.38	0.09	2	224
10	A	14.64	14.64	33.209	24.670	326.5	0.033			2.2	0.28	0.0	0.01	0.52	0.06	10	223
10		14.63	14.63	33.210	24.673	326.2	0.033									10	222
17		14.39	14.39	33.216	24.728	321.1	0.056	6.21	106.7	2.1	0.28	0.0	0.01	0.51	0.13	17	221
20	ISL	14.33	14.33	33.222	24.746	319.6	0.065	6.21	106.5	2.0	0.28	0.0	0.01	0.57	0.14	20	
24	A	14.24	14.24	33.233	24.773	317.0	0.078	6.22	106.5	1.9	0.28	0.1	0.01	0.68	0.16	24	219
24		14.25	14.25	33.231	24.770	317.4	0.078									24	220
30	ISL	14.00	14.00	33.261	24.845	310.4	0.097	6.16	105.0	2.2	0.32	0.6	0.04	0.87	0.24	30	
34	A	13.76	13.76	33.288	24.915	303.8	0.109	6.07	103.0	2.4	0.37	1.3	0.06	0.95	0.28	34	217
34		13.81	13.81	33.270	24.891	306.1	0.109									34	218
45	A	12.64	12.63	33.414	25.237	273.4	0.141	5.55	92.0	5.1	0.71	5.1	0.36	0.63	0.24	45	216
50	ISL	12.47	12.46	33.423	25.277	269.8	0.154	5.40	89.2	5.8	0.77	6.3	0.47	0.46	0.20	50	
52		12.42	12.41	33.423	25.286	268.9	0.160	5.33	88.0	6.2	0.80	6.8	0.48	0.39	0.18	52	215
61	A	11.88	11.87	33.455	25.414	256.9	0.184	4.79	78.2	9.7	1.04	11.3	0.07	0.16	0.14	61	214
70		10.95	10.94	33.385	25.529	246.1	0.206	4.35	69.6	12.4	1.28	14.8	0.04	0.13	0.12	70	213
75	ISL	10.58	10.57	33.419	25.620	237.5	0.218	4.08	64.7	14.3	1.41	16.7	0.03	0.10	0.10	75	
84		10.13	10.12	33.516	25.773	223.1	0.239	3.68	57.8	17.5	1.59	19.6	0.02	0.05	0.06	84	212
100		9.82	9.81	33.598	25.890	212.3	0.274	3.45	53.9	20.2	1.70	21.5	0.02	0.02	0.04	100	211
119		9.51	9.50	33.713	26.031	199.2	0.313	3.15	48.9	23.4	1.83	23.5	0.01	0.01	0.05	120	210
125	ISL	9.38	9.37	33.756	26.086	194.1	0.325	3.07	47.5	24.6	1.86	24.1	0.01	0.01	0.05	126	
140		9.09	9.07	33.856	26.211	182.5	0.353	2.90	44.6	27.5	1.94	25.4	0.01	0.00	0.03	141	209
150	ISL	8.98	8.96	33.898	26.261	177.9	0.371	2.80	43.0	28.8	1.98	26.1	0.01	0.00	0.03	151	
169		8.82	8.80	33.959	26.334	171.3	0.404	2.61	40.0	31.1	2.05	27.2	0.01	0.00	0.03	170	208
199		8.51	8.49	34.057	26.460	159.9	0.454	2.16	32.9	36.7	2.23	29.5	0.01	0.00	0.03	200	207
200	ISL	8.50	8.48	34.058	26.462	159.7	0.455	2.15	32.7	36.9	2.23	29.6	0.01			201	
230		8.13	8.11	34.086	26.540	152.6	0.502	1.92	29.0	41.6	2.35	31.1	0.01			231	206
250	ISL	7.90	7.87	34.110	26.594	147.9	0.532	1.70	25.5	45.0	2.45	32.2	0.01			251	
269		7.68	7.65	34.130	26.642	143.5	0.560	1.50	22.4	48.2	2.55	33.3	0.01			271	205
300	ISL	7.30	7.27	34.140	26.704	137.9	0.604	1.30	19.2	53.0	2.65	34.6	0.01			302	
318		7.09	7.06	34.141	26.734	135.2	0.628	1.21	17.8	55.6	2.70	35.3	0.01			320	204
377		6.55	6.52	34.157	26.820	127.6	0.706	0.93	13.5	64.2	2.86	37.5	0.01			379	203
400	ISL	6.35	6.31	34.165	26.853	124.7	0.735	0.83	12.0	67.7	2.92	38.2	0.01			403	
437		6.06	6.02	34.183	26.904	120.0	0.780	0.68	9.8	73.1	3.00	39.2	0.01			440	202
500	ISL	5.74	5.70	34.235	26.986	112.9	0.853	0.46	6.6	80.4	3.12	40.6	0.01			503	
513		5.67	5.63	34.246	27.003	111.3	0.868	0.42	6.0	81.9	3.14	40.9	0.01			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 39.2 N	123 4.2 W	10/04/06	2330 UTC	4131 m	290 08 kn	310 04 05	1	1013.9 mb	16.0 C	13.3 C	24m	4/8	CS

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	15.24	15.24	33.067	24.431	349.0	0.000	5.92	103.3	2.3	0.32	0.1	0.00	0.14	0.01	0	
2		15.24	15.24	33.067	24.431	349.1	0.007	5.92	103.3	2.3	0.32	0.1	0.00	0.14	0.01	2	222
10		14.99	14.99	33.081	24.496	343.1	0.035									10	221
11		14.99	14.99	33.081	24.496	343.1	0.038	5.96	103.5	2.2	0.32	0.1	0.00	0.17	0.02	11	220
20		14.73	14.73	33.095	24.563	337.0	0.069	6.02	104.0	2.4	0.31	0.1	0.00	0.23	0.01	20	219
30		14.52	14.52	33.103	24.614	332.4	0.102	6.06	104.3	2.4	0.31	0.1	0.00	0.27	0.05	30	218
40		14.10	14.09	33.149	24.738	320.8	0.135	6.08	103.8	2.5	0.32	0.2	0.03	0.70	0.16	40	217
45		13.77	13.76	33.196	24.843	311.0	0.151	5.99	101.6	2.5	0.39	1.0	0.12	0.78	0.19	45	216
50		13.05	13.04	33.279	25.052	291.2	0.166	5.62	93.9	4.1	0.62	4.3	0.49	0.70	0.24	50	215
60		12.78	12.77	33.341	25.153	281.8	0.194	5.43	90.3	4.9	0.72	5.9	0.49	0.44	0.17	60	214
70		12.06	12.05	33.373	25.317	266.4	0.222	5.08	83.2	7.3	0.90	9.1	0.04	0.19	0.07	70	213
75	ISL	11.79	11.78	33.394	25.384	260.1	0.235	4.87	79.3	8.8	1.01	10.8	0.03	0.12	0.07	75	
85		11.32	11.31	33.445	25.510	248.3	0.260	4.44	71.6	11.9	1.23	14.2	0.02	0.06	0.07	85	212
100		10.57	10.56	33.544	25.720	228.6	0.296	3.80	60.3	16.4	1.52	18.5	0.02	0.04	0.06	100	211
121		9.26	9.25	33.619	25.998	202.3	0.341	4.34	67.0	17.7	1.43	18.6	0.01	0.01	0.02	122	210
125	ISL	9.14	9.13	33.647	26.039	198.5	0.349	4.26	65.6	18.8	1.47	19.3	0.01	0.01	0.02	126	
141		8.84	8.83	33.763	26.177	185.6	0.380	3.81	58.3	23.6	1.67	22.4	0.01	0.00	0.03	142	209
150	ISL	8.71	8.69	33.813	26.237	180.1	0.397	3.70	56.5	25.4	1.72	23.2	0.01	0.00	0.03	151	
168		8.53	8.51	33.888	26.324	172.2	0.428	3.53	53.7	28.2	1.78	24.3	0.01	0.00	0.02	169	208
199		8.43	8.41	33.947	26.386	166.8	0.481	3.02	45.8	31.7	1.96	26.7	0.01	0.00	0.01	200	207
200	ISL	8.42	8.40	33.949	26.389	166.6	0.482	3.01	45.7	31.8	1.96	26.7	0.01			201	
229		8.14	8.12	33.991	26.464	159.8	0.530	2.90	43.7	35.3	2.01	27.8	0.00			230	206
250	ISL	7.85	7.83	34.012	26.524	154.4	0.563	2.67	40.0	39.2	2.12	29.4	0.00			251	
270		7.55	7.52	34.028	26.580	149.3	0.593	2.39	35.6	43.5	2.25	31.1	0.00			272	205
300	ISL	7.07	7.04	34.047	26.663	141.7	0.637	1.94	28.5	50.5	2.45	33.7	0.00			302	
320		6.77	6.74	34.059	26.713	137.0	0.665	1.65	24.1	55.0	2.58	35.2	0.00			322	204
379		6.29	6.26	34.103	26.811	128.2	0.743	1.14	16.5	64.3	2.81	37.8	0.00			381	203
400	ISL	6.17	6.13	34.122	26.842	125.5	0.770	0.99	14.3	67.1	2.88	38.5	0.00			403	
437		5.98	5.94	34.155	26.892	121.1	0.815	0.77	11.0	71.7	2.98	39.5	0.00			440	202
500	ISL	5.71	5.67	34.206	26.967	114.6	0.889	0.53	7.6	79.3	3.08	40.6	0.00			503	
512		5.66	5.62	34.216	26.981	113.4	0.903	0.48	6.8	80.8	3.10	40.8	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 19.0 N	123 44.3 W	11/04/06	0518 UTC	4083 m	200 09 kn			1014.6 mb	15.3 C	13.1 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	15.25	15.25	32.985	24.365	355.2	0.000	5.85	102.1	1.8	0.33	0.1	0.00	0.09	0.02	0	
2		15.25	15.25	32.985	24.365	355.3	0.007	5.85	102.1	1.8	0.33	0.1	0.00	0.09	0.02	2	223
10		15.12	15.12	32.990	24.398	352.4	0.035	5.85	101.8	1.7	0.32	0.1	0.00	0.11	0.00	10	222
10		15.15	15.15	32.986	24.388	353.3	0.035									10	221
15		14.93	14.93	32.987	24.437	348.9	0.053	5.87	101.8	1.6	0.32	0.0	0.00	0.10	0.02	15	220
20	ISL	14.83	14.83	32.987	24.458	346.9	0.070	5.87	101.6	1.6	0.32	0.0	0.00	0.10	0.02	20	
30	ISL	14.73	14.73	32.989	24.482	345.0	0.105	5.88	101.5	1.7	0.32	0.0	0.00	0.10	0.02	30	
31		14.73	14.73	32.989	24.482	345.0	0.108	5.88	101.5	1.7	0.32	0.0	0.00	0.10	0.02	31	219
46		14.61	14.60	32.994	24.512	342.6	0.160	5.89	101.5	1.7	0.32	0.0	0.00	0.16	0.04	46	218
50	ISL	14.58	14.57	32.994	24.518	342.1	0.174	5.89	101.4	1.7	0.32	0.0	0.00	0.19	0.05	50	
55		14.54	14.53	32.993	24.526	341.5	0.191	5.90	101.5	1.7	0.32	0.0	0.00	0.23	0.07	55	217
65		14.40	14.39	32.991	24.554	339.1	0.225	5.92	101.5	1.7	0.32	0.0	0.00	0.28	0.14	65	216
75		14.12	14.11	33.005	24.624	332.7	0.258	5.89	100.5	2.0	0.34	0.1	0.03	0.70	0.29	75	215
80		13.73	13.72	33.070	24.754	320.4	0.275	5.93	100.4	2.2	0.37	0.5	0.07	0.77	0.33	80	214
85		13.55	13.54	33.167	24.866	309.9	0.290	5.99	101.1	2.5	0.40	1.0	0.11	0.65	0.29	85	213
95		13.02	13.01	33.221	25.014	296.0	0.321	5.55	92.6	4.2	0.62	4.3	0.17	0.43	0.28	95	212
100	ISL	12.64	12.63	33.267	25.124	285.6	0.335	5.39	89.3	4.7	0.68	5.4	0.15	0.31	0.23	100	
109		11.88	11.87	33.354	25.337	265.5	0.360	5.09	83.0	6.2	0.80	7.6	0.08	0.13	0.13	109	211
125		10.47	10.46	33.450	25.665	234.3	0.400	4.28	67.7	13.6	1.31	15.7	0.01	0.03	0.05	126	210
145		9.64	9.62	33.648	25.959	206.6	0.444	3.54	55.1	20.6	1.69	21.4	0.01	0.01	0.04	146	209
150	ISL	9.49	9.47	33.657	25.991	203.7	0.454	3.61	56.0	20.7	1.68	21.3	0.01	0.01	0.04	151	
170		9.10	9.08	33.677	26.070	196.5	0.494	3.99	61.4	20.9	1.58	20.9	0.01	0.00	0.02	171	208
199		8.97	8.95	33.916	26.278	177.3	0.549	3.30	50.7	27.6	1.83	24.3	0.01	0.00	0.02	200	207
200	ISL	8.95	8.93	33.920	26.284	176.7	0.550	3.28	50.3	27.8	1.84	24.4	0.01			201	
230		8.39	8.37	34.002	26.435	162.7	0.601	2.87	43.5	33.8	2.01	27.2	0.01			231	206
250	ISL	8.16	8.13	34.046	26.505	156.4	0.633	2.47	37.3	38.0	2.16	29.1	0.00			251	
268		7.97	7.94	34.072	26.554	152.0	0.661	2.15	32.3	41.6	2.29	30.7	0.00			269	205
300	ISL	7.50	7.47	34.066	26.617	146.2	0.709	2.00	29.7	46.5	2.39	32.4	0.00			302	
319		7.24	7.21	34.059	26.649	143.4	0.736	1.96	29.0	49.0	2.44	33.2	0.00			321	204
380		6.96	6.92	34.137	26.750	134.7	0.821	1.20	17.6	57.2	2.73	35.8	0.00			382	203
400	ISL	6.82	6.78	34.153	26.781	131.8	0.848	1.04	15.2	60.2	2.81	36.6	0.00			402	
437		6.54	6.50	34.179	26.839	126.6	0.895	0.80	11.6	65.9	2.93	37.9	0.00			440	202
500	ISL	6.06	6.02	34.225	26.938	117.7	0.972	0.53	7.6	75.6	3.07	39.7	0.00			503	
515		5.94	5.90	34.236	26.962	115.5	0.990	0.46	6.6	77.9	3.10	40.1	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 40.1 N	118 5.4 W	08/04/06	1514	UTC	24 m	080	03 kn	080 01 06	1	1018.6 mb	13.0 C	11.9 C		1/8	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	13.93	13.93	32.076	23.943	395.4	0.000	5.88	99.3	11.8	0.92	9.1	0.33	3.90	0.31	0	
2		13.93	13.93	32.076	23.944	395.5	0.008	5.88	99.3	11.8	0.92	9.1	0.33	3.90	0.31	2	205
5		13.67	13.67	33.269	24.918	302.7	0.018	5.61	95.0	6.5	0.69	5.6	0.33	5.50	0.24	5	204
10		12.54	12.54	33.472	25.300	266.5	0.033	4.79	79.3	8.6	0.99	7.5	0.32	4.70	0.55	10	203
15		11.64	11.64	33.545	25.527	245.0	0.045	3.66	59.5	13.0	1.51	10.2	0.23	2.21	1.50	15	202
19		11.42	11.42	33.585	25.599	238.3	0.055	2.66	43.0	17.3	1.81	12.8	0.26	2.08	2.86	19	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 29.5 N	117 44.9 W	08/04/06	0732	UTC	31 m		0 kn			1018.6 mb	13.5 C	11.9 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	14.43	14.43	32.793	24.393	352.6	0.000	6.64	113.8	4.3	0.37	0.5	0.14	8.73	0.35	0	
2		14.43	14.43	32.793	24.393	352.6	0.007	6.64	113.8	4.3	0.37	0.5	0.14	8.73	0.35	2	206
6		13.64	13.64	33.286	24.938	300.9	0.020	5.86	99.2	3.1	0.46	1.0	0.13	13.96	0.07	6	205
10	A	12.70	12.70	33.414	25.224	273.7	0.032	5.20	86.3	5.8	0.74	3.4	0.18	5.66	A 0.44 A	10	204
15		12.12	12.12	33.532	25.427	254.5	0.045	4.85	79.6	6.4	0.97	5.6	0.16	1.62	0.27	15	203
20	ISL	11.63	11.63	33.583	25.559	242.1	0.057	3.77	61.3	11.1	1.29	9.5	0.21	0.56	0.29	20	
21		11.54	11.54	33.589	25.580	240.1	0.060	3.55	57.6	12.1	1.35	10.3	0.22	0.35	0.29	21	202
24		11.23	11.23	33.620	25.661	232.5	0.067	3.26	52.5	13.7	1.49	12.3	0.24	0.27	0.45	24	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 29.0 N	117 46.2 W	08/04/06	0831	UTC	77 m		0 kn			1018.6 mb	13.5 C	11.9 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	14.45	14.45	32.734	24.344	357.3	0.000	6.73	115.4	3.1	0.28	0.4	0.13	2.92	0.46	0	
2		14.45	14.45	32.734	24.344	357.3	0.007	6.73	115.4	3.1	0.28	0.4	0.13	2.92	0.46	2	208
5		13.98	13.98	32.793	24.487	343.8	0.018	6.56	111.4	3.2	0.29	0.5	0.13	3.15	0.30	5	207
10		12.70	12.70	33.474	25.271	269.3	0.033	5.37	89.2	3.1	0.67	2.9	0.10	0.95	0.31	10	206
20	ISL	11.43	11.43	33.548	25.568	241.2	0.059	4.12	66.6	7.2	1.31	9.6	0.16	0.70	0.23	20	
21		11.36	11.36	33.571	25.599	238.3	0.061	4.04	65.3	7.9	1.36	10.4	0.17	0.68	0.22	21	205
30		10.73	10.73	33.642	25.767	222.5	0.082	3.02	48.1	17.2	1.75	17.2	0.26	0.38	0.26	30	204
40		10.41	10.41	33.710	25.876	212.4	0.103	2.64	41.8	20.7	1.88	20.5	0.29	0.16	0.26	40	203
50		10.13	10.12	33.790	25.987	202.1	0.124	2.56	40.3	23.5	1.94	23.2	0.31	0.14	0.22	50	202
60		10.00	9.99	33.855	26.059	195.3	0.144	2.45	38.5	25.3	2.01	24.4	0.23	0.10	0.22	60	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 25.3 N	117 54.5 W	08/04/06	1108	UTC	619 m		0 kn			1017.9 mb	13.8 C	12.0 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	13.83	13.83	33.307	24.915	302.9	0.000	6.48	110.1	0.6	0.21	0.1	0.09	2.98	0.27	0	
2		13.83	13.83	33.307	24.915	302.9	0.006	6.48	110.1	0.6	0.21	0.1	0.09	2.98	0.27	2	220
10		13.47	13.47	33.459	25.106	285.0	0.030	5.39	91.0	6.3	0.70	5.5	0.23	2.19	0.38	10	219
20		12.30	12.30	33.499	25.368	260.3	0.057	4.48	73.8	8.0	1.04	8.1	0.18	0.89	0.30	20	218
30		11.36	11.36	33.556	25.587	239.6	0.082	3.93	63.5	10.8	1.40	12.6	0.19	0.23	0.17	30	217
40		10.57	10.57	33.542	25.717	227.5	0.105	3.74	59.4	16.1	1.51	17.6	0.08	0.16	0.14	40	216
50		10.20	10.19	33.635	25.854	214.7	0.127	3.29	51.8	19.7	1.69	20.6	0.04	0.10	0.13	50	215
60		10.09	10.08	33.728	25.945	206.2	0.148	2.99	47.0	22.1	1.80	22.1	0.03	0.07	0.12	60	214
70		9.91	9.90	33.825	26.051	196.3	0.168	2.82	44.2	24.3	1.89	23.4	0.02	0.05	0.09	70	213
75	ISL	9.87	9.86	33.866	26.090	192.8	0.178	2.70	42.3	25.2	1.93	24.0	0.02	0.05	0.09	75	
84		9.82	9.81	33.926	26.146	187.7	0.195	2.51	39.3	26.6	1.99	24.8	0.03	0.04	0.11	84	212
100		9.72	9.71	33.988	26.211	181.8	0.225	2.42	37.8	28.1	2.06	25.6	0.02	0.02	0.09	101	211
119		9.62	9.61	34.063	26.286	175.0	0.259	2.11	32.9	30.4	2.14	26.5	0.02	0.05	0.10	120	210
125	ISL	9.60	9.59	34.082	26.305	173.4	0.269	2.04	31.8	30.9	2.16	26.7	0.02	0.05	0.10	126	
140		9.57	9.55	34.125	26.344	170.1	0.295	1.91	29.8	32.1	2.21	27.2	0.01	0.03	0.10	141	209
150	ISL	9.56	9.54	34.152	26.366	168.1	0.312	1.83	28.5	33.0	2.25	27.6	0.01	0.03	0.09	151	
169		9.51	9.49	34.201	26.413	164.1	0.343	1.65	25.7	35.0	2.32	28.3	0.01	0.02	0.08	170	208
199		9.26	9.24	34.271	26.509	155.5	0.391	1.23	19.1	38.9	2.47	29.8	0.01	0.01	0.06	200	207
200	ISL	9.25	9.23	34.271	26.511	155.4	0.393	1.23	19.0	39.0	2.47	29.8	0.01			201	
229		8.88	8.86	34.270	26.570	150.2	0.437	1.17	18.0	41.8	2.53	30.8	0.02			230	206
250	ISL	8.81	8.78	34.284	26.592	148.5	0.469	1.09	16.7	42.8	2.56	31.2	0.02			252	
268		8.79	8.76	34.296	26.605	147.7	0.495	1.02	15.6	43.5	2.59	31.4	0.02			270	205
300	ISL	8.62	8.59	34.300	26.635	145.3	0.542	0.95	14.5	45.0	2.63	31.7	0.02			302	
318		8.46	8.43	34.295	26.656	143.6	0.568	0.93	14.1	46.3	2.66	32.0	0.02			320	204
378		7.50	7.46	34.238	26.754	134.7	0.652	0.92	13.7	54.7	2.75	35.0	0.00			380	203
400	ISL	7.31	7.27	34.248	26.789	131.6	0.681	0.79	11.7	57.2	2.81	35.8	0.00			403	
437		7.07	7.03	34.276	26.845	126.7	0.729	0.56	8.2	61.4	2.91	36.8	0.00			440	202
500	ISL	6.57	6.52	34.286	26.921	120.0	0.806	0.42	6.1	69.7	3.03	38.4	0.03			504	
512		6.47	6.42	34.288	26.936	118.7	0.821	0.39	5.7	71.3	3.05	38.7	0.04			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 15.0 W	08/04/06	0201	UTC	341 m	270	08 kn	270 01 03	0	1016.7 mb	14.7 C	12.2 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	14.77	14.77	33.413	24.799	313.9	0.000	6.03	104.5	3.2	0.32	0.2	0.01	0.36	0.12	0	
2		14.77	14.77	33.413	24.799	314.0	0.006	6.03	104.5	3.2	0.32	0.2	0.01	0.36	0.12	2	218
10		14.61	14.61	33.410	24.831	311.1	0.031	6.07	104.8	3.2	0.31	0.2	0.01	0.41	0.15	10	217
20		14.48	14.48	33.412	24.861	308.6	0.062	6.06	104.4	3.1	0.33	0.4	0.02	0.69	0.24	20	216
25		14.39	14.39	33.408	24.877	307.2	0.078	6.04	103.9	3.3	0.35	0.7	0.03	0.74	0.16	25	215
30		13.19	13.19	33.436	25.145	281.8	0.092	5.67	95.1	4.8	0.58	4.0	0.15	0.83	0.35	30	214
40		11.92	11.91	33.429	25.385	259.1	0.119	4.60	75.1	9.8	1.07	11.3	0.21	0.70	0.17	40	213
50		11.67	11.66	33.559	25.533	245.3	0.145	4.63	75.3	8.6	1.14	9.9	0.17	0.56	0.19	50	212
60		10.92	10.91	33.579	25.685	231.0	0.168	3.44	55.0	15.5	1.54	17.2	0.21	0.44	0.23	60	211
70		10.54	10.53	33.632	25.793	220.9	0.191	3.16	50.2	19.1	1.68	20.2	0.21	0.51	0.26	70	210
75	ISL	10.38	10.37	33.659	25.842	216.4	0.202	3.07	48.6	20.1	1.74	21.0	0.19	0.44	0.22	75	
85		10.12	10.11	33.719	25.933	207.9	0.223	2.90	45.6	21.5	1.83	22.0	0.15	0.24	0.14	85	209
100		9.92	9.91	33.839	26.061	196.1	0.254	2.59	40.6	24.5	1.96	24.1	0.24	0.09	0.14	101	208
119		9.83	9.82	34.013	26.213	182.1	0.289	2.11	33.1	29.2	2.14	26.1	0.12	0.08	0.14	120	207
125	ISL	9.76	9.75	34.045	26.249	178.7	0.300	2.07	32.4	30.0	2.16	26.4	0.08	0.06	0.13	126	
138		9.61	9.59	34.096	26.314	172.8	0.323	2.04	31.8	31.2	2.18	26.7	0.02	0.03	0.09	139	206
150	ISL	9.56	9.54	34.143	26.359	168.8	0.344	1.87	29.1	32.6	2.24	27.2	0.02	0.02	0.08	151	
169		9.49	9.47	34.202	26.417	163.7	0.375	1.64	25.5	35.0	2.33	28.1	0.02	0.01	0.07	170	205
199		8.58	8.56	34.143	26.516	154.5	0.423	1.83	27.9	38.8	2.33	29.8	0.02	0.01	0.04	200	204
200	ISL	8.58	8.56	34.147	26.520	154.3	0.424	1.81	27.6	38.9	2.34	29.8	0.02			201	
228		8.79	8.77	34.268	26.582	149.0	0.467	1.20	18.4	42.2	2.54	30.5	0.02			229	203
250	ISL	8.66	8.63	34.299	26.627	145.1	0.499	0.97	14.8	44.7	2.63	31.2	0.02			252	
267		8.48	8.45	34.303	26.658	142.4	0.524	0.88	13.4	46.4	2.68	31.7	0.02			269	202
300	ISL	8.24	8.21	34.296	26.690	139.9	0.570	0.83	12.6	49.1	2.73	32.5	0.02			302	
318		8.11	8.08	34.292	26.707	138.6	0.595	0.80	12.1	50.5	2.76	32.9	0.02			320	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 11.2 N	118 23.4 W	07/04/06	2249	UTC	1180 m	260	08 kn	290 02 05	0	1016.3 mb	15.7 C	13.5 C	13m	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	14.82	14.82	33.440	24.809	312.9	0.000	6.31	109.5	2.2	0.28	0.2	0.05	3.15	0.25	0	
2		14.82	14.82	33.440	24.809	313.0	0.006	6.31	109.5	2.2	0.28	0.2	0.05	3.15 A	0.25 A	2	223
10	ISL	14.16	14.16	33.435	24.946	300.2	0.031	6.43	110.1	2.0	0.26	0.2	0.05	3.20	0.26	10	
11		14.06	14.06	33.435	24.966	298.3	0.034									11	222
11		14.06	14.06	33.435	24.966	298.3	0.034	6.44	110.0	2.0	0.26	0.2	0.05	3.21	0.26	11	221
20		13.85	13.85	33.431	25.007	294.7	0.060	6.28	106.8	2.1	0.30	0.5	0.08	4.52	0.31	20	220
25		13.65	13.65	33.432	25.049	290.8	0.075	6.05	102.5	2.7	0.39	1.4	0.12	4.30	0.39	25	219
30	ISL	13.37	13.37	33.435	25.108	285.3	0.090	5.66	95.3	4.1	0.54	3.2	0.13	1.88	0.38	30	
31		13.27	13.27	33.435	25.128	283.4	0.092	5.55	93.3	4.5	0.59	3.7	0.14	1.35	0.38	31	218
35		12.58	12.58	33.437	25.266	270.4	0.103	4.89	81.0	6.9	0.89	7.1	0.21	0.46	0.26	35	217
40		12.27	12.26	33.448	25.334	264.0	0.117	4.63	76.2	8.2	1.01	8.8	0.23	0.32	0.18	40	216
50		11.24	11.23	33.488	25.557	243.0	0.142	3.87	62.3	13.4	1.38	15.2	0.27	0.19	0.15	50	215
60		10.75	10.74	33.548	25.691	230.5	0.166	3.44	54.8	16.8	1.58	18.5	0.19	0.14	0.14	60	214
70		10.54	10.53	33.623	25.786	221.6	0.188	3.17	50.3	18.8	1.69	20.2	0.06	0.13	0.14	70	213
75	ISL	10.46	10.45	33.651	25.822	218.3	0.199	3.09	49.0	19.6	1.73	20.8	0.05	0.12	0.14	75	
85		10.29	10.28	33.713	25.900	211.1	0.221	2.94	46.4	21.2	1.81	21.8	0.04	0.10	0.13	85	212
100	ISL	9.98	9.97	33.866	26.072	195.0	0.251	2.59	40.7	25.2	1.96	24.0	0.03	0.07	0.10	101	
101		9.96	9.95	33.876	26.083	194.0	0.253	2.57	40.3	25.4	1.97	24.1	0.03	0.07	0.10	102	211
120		9.81	9.80	33.934	26.154	187.7	0.290	2.44	38.2	26.7	2.03	25.0	0.03	0.08	0.10	121	210
125	ISL	9.70	9.69	33.958	26.191	184.2	0.299	2.41	37.6	27.5	2.05	25.4	0.03	0.06	0.10	126	
138		9.41	9.39	34.022	26.289	175.1	0.322	2.34	36.3	29.8	2.10	26.3	0.02	0.02	0.08	139	209
150	ISL	9.28	9.26	34.060	26.340	170.5	0.343	2.27	35.1	31.2	2.13	26.8	0.02	0.02	0.07	151	
170		9.13	9.11	34.105	26.400	165.2	0.377	2.13	32.9	33.3	2.18	27.6	0.03	0.01	0.06	171	208
199		8.83	8.81	34.161	26.492	157.0	0.423	1.83	28.1	37.1	2.30	29.1	0.03	0.00	0.05	200	207
200	ISL	8.82	8.80	34.162	26.494	156.8	0.425	1.82	27.9	37.2	2.30	29.2	0.03			201	
228		8.50	8.48	34.177	26.556	151.3	0.468	1.57	23.9	41.0	2.42	30.5	0.03			229	206
250	ISL	8.45	8.42	34.223	26.600	147.6	0.501	1.30	19.8	43.4	2.53	31.2	0.02			252	
269		8.40	8.37	34.260	26.637	144.4	0.529	1.08	16.4	45.4	2.61	31.7	0.01			271	205
300	ISL	7.99	7.96	34.255	26.695	139.2	0.573	0.96	14.4	49.6	2.70	32.9	0.01			302	
319		7.69	7.66	34.242	26.729	136.2	0.599	0.93	13.9	52.4	2.74	33.8	0.01			321	204
377		6.94	6.90	34.238	26.832	126.8	0.675	0.71	10.4	62.0	2.89	36.5	0.00			379	203
400	ISL	6.80	6.76	34.263	26.871	123.4	0.704	0.58	8.5	64.8	2.95	37.2	0.00			403	
437		6.65	6.61	34.306	26.925	118.7	0.749	0.38	5.5	68.5	3.04	38.0	0.00			440	202
500	ISL	6.30	6.25	34.317	26.980	114.1	0.822	0.30	4.3	74.2	3.11	39.2	0.00			503	
512		6.23	6.18	34.319	26.991	113.1	0.835	0.29	4.2	75.3	3.12	39.4	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0604 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 55.8 W	07/04/06	1838 UTC	1705 m	300 03 kn	300 01 08	1	1016.9 mb	14.5 C	13.0 C	10m	2/8	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	13.17	13.17	33.463	25.169	278.7	0.000	6.42	107.7	4.6	0.44	3.5	0.15	2.94	0.00	0	
2	A	13.17	13.17	33.463	25.169	278.7	0.006	6.42	107.7	4.6	0.44	3.5	0.15	2.94	0.00	2	224
7		12.90	12.90	33.454	25.216	274.4	0.019									7	223
7	A	12.92	12.92	33.454	25.212	274.8	0.019	6.39	106.6	4.4	0.43	3.3	0.15	3.56	0.16	7	222
10	ISL	12.76	12.76	33.450	25.240	272.2	0.028	6.23	103.6	4.7	0.49	3.7	0.16	2.49	0.37	10	
11		12.72	12.72	33.449	25.247	271.5	0.030	6.17	102.5	4.8	0.51	3.9	0.16	2.13	0.43	11	221
14	A	12.65	12.65	33.455	25.266	269.9	0.038	6.10	101.2	4.9	0.53	4.2	0.17	2.12	0.39	14	220
20	ISL	12.20	12.20	33.491	25.380	259.1	0.054	5.62	92.4	7.3	0.77	6.7	0.21	1.48	0.54	20	
21	A	12.10	12.10	33.498	25.405	256.8	0.057	5.52	90.5	7.8	0.82	7.3	0.22	1.33	0.57	21	219
28	A	11.43	11.43	33.525	25.551	243.1	0.074	4.91	79.4	11.0	1.10	10.9	0.31	0.50	0.36	28	218
30	ISL	11.36	11.36	33.535	25.571	241.2	0.079	4.82	77.8	11.6	1.14	11.4	0.31	0.45	0.35	30	
38	A	11.21	11.21	33.577	25.631	235.7	0.098	4.60	74.1	13.5	1.25	12.6	0.26	0.27	0.29	38	217
44		11.03	11.02	33.607	25.687	230.5	0.112	4.41	70.7	14.9	1.34	13.8	0.24	0.30	0.37	44	216
50		10.81	10.80	33.640	25.752	224.4	0.126	4.15	66.3	16.7	1.45	15.5	0.25	0.26	0.36	50	215
60		10.27	10.26	33.757	25.937	207.0	0.148	3.11	49.1	22.8	1.82	21.3	0.29	0.10	0.31	60	214
70		10.06	10.05	33.801	26.007	200.5	0.168	2.84	44.7	24.4	1.91	23.0	0.16	0.09	0.26	70	213
75	ISL	9.99	9.98	33.815	26.030	198.5	0.178	2.77	43.5	25.2	1.94	23.4	0.13	0.08	0.28	75	
85		9.86	9.85	33.841	26.073	194.6	0.198	2.66	41.7	26.7	1.98	24.0	0.11	0.05	0.30	85	212
100		9.67	9.66	33.903	26.153	187.3	0.226	2.46	38.4	27.7	2.05	25.3	0.04	0.03	0.17	101	211
120		9.57	9.56	34.007	26.251	178.4	0.263	2.13	33.2	30.5	2.17	26.6	0.05	0.04	0.22	121	210
125	ISL	9.53	9.52	34.024	26.271	176.6	0.272	2.09	32.5	31.0	2.19	26.8	0.05	0.04	0.22	126	
139		9.42	9.40	34.062	26.319	172.4	0.296	1.99	30.9	32.5	2.23	27.4	0.05	0.05	0.23	140	209
150	ISL	9.33	9.31	34.094	26.359	168.8	0.315	1.86	28.8	33.8	2.28	28.0	0.05	0.04	0.23	151	
169		9.15	9.13	34.143	26.426	162.7	0.346	1.64	25.3	36.3	2.37	29.1	0.04	0.03	0.23	170	208
199		8.76	8.74	34.188	26.524	153.9	0.394	1.44	22.0	40.8	2.47	30.3	0.03	0.02	0.14	200	207
200	ISL	8.75	8.73	34.189	26.526	153.7	0.395	1.44	22.0	40.9	2.47	30.3	0.03			201	
228		8.47	8.45	34.203	26.581	149.0	0.438	1.33	20.2	43.3	2.53	31.6	0.02			229	206
250	ISL	8.24	8.21	34.216	26.626	145.0	0.470	1.18	17.9	46.1	2.60	32.5	0.01			252	
268		8.06	8.03	34.227	26.662	141.8	0.496	1.06	16.0	48.6	2.66	33.1	0.01			270	205
300	ISL	7.74	7.71	34.239	26.719	136.8	0.540	0.92	13.8	52.4	2.74	34.0	0.01			302	
318		7.57	7.54	34.244	26.748	134.3	0.565	0.86	12.8	54.4	2.78	34.5	0.01			320	204
378		7.10	7.06	34.258	26.826	127.6	0.643	0.66	9.7	61.1	2.90	36.4	0.00			380	203
400	ISL	6.95	6.91	34.268	26.854	125.1	0.671	0.59	8.7	63.6	2.95	37.0	0.00			403	
438		6.69	6.65	34.287	26.905	120.7	0.718	0.47	6.9	68.0	3.02	37.9	0.00			441	202
500	ISL	6.27	6.23	34.306	26.976	114.5	0.791	0.34	4.9	74.6	3.10	39.3	0.00			503	
511		6.20	6.15	34.309	26.987	113.5	0.803	0.32	4.6	75.8	3.12	39.6	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 39.0 N	119 29.3 W	07/04/06	1130 UTC	1322 m	320 10 kn			1015.7 mb	13.1 C	11.4 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	13.77	13.77	33.497	25.074	287.7	0.000	6.43	109.2	4.5	0.32	1.2	0.07	2.96	0.03	0	
2		13.77	13.77	33.497	25.074	287.8	0.006	6.43	109.2	4.5	0.32	1.2	0.07	2.96	0.03	2	220
10	ISL	13.77	13.77	33.500	25.077	287.8	0.029	6.41	108.9	4.5	0.33	1.1	0.06	2.82	0.16	10	
11		13.77	13.77	33.500	25.077	287.8	0.032	6.41	108.9	4.5	0.33	1.1	0.06	2.79	0.19	11	219
20		13.62	13.62	33.489	25.099	285.9	0.057	6.34	107.4	4.5	0.34	1.3	0.06	2.38	0.40	20	218
30	ISL	12.93	12.93	33.527	25.267	270.2	0.085	5.84	97.5	6.2	0.57	4.1	0.13	0.97	0.24	30	
31		12.84	12.84	33.533	25.290	268.0	0.088	5.77	96.2	6.5	0.61	4.5	0.14	0.83	0.21	31	217
40		11.84	11.83	33.586	25.522	246.1	0.111	4.87	79.5	10.8	1.04	10.0	0.23	0.29	0.14	40	216
48		11.42	11.41	33.592	25.605	238.4	0.130	4.26	68.9	13.7	1.27	14.0	0.30	0.26	0.12	48	215
50	ISL	11.38	11.37	33.594	25.614	237.6	0.135	4.21	68.0	14.0	1.29	14.4	0.30	0.25	0.12	50	
60		11.14	11.13	33.620	25.678	231.7	0.159	3.97	63.8	15.7	1.39	15.9	0.29	0.19	0.12	60	214
70		10.48	10.47	33.687	25.847	215.9	0.181	3.25	51.5	20.3	1.69	20.5	0.09	0.13	0.11	70	213
75	ISL	10.34	10.33	33.717	25.894	211.4	0.192	3.08	48.7	21.5	1.77	21.5	0.09	0.12	0.11	75	
85		10.22	10.21	33.764	25.952	206.2	0.213	2.92	46.1	22.8	1.85	22.3	0.09	0.10	0.11	85	212
99		9.98	9.97	33.805	26.025	199.5	0.241	2.73	42.9	24.6	1.92	23.5	0.08	0.08	0.10	100	211
100	ISL	9.97	9.96	33.809	26.029	199.1	0.243	2.72	42.7	24.7	1.93	23.6	0.08	0.08	0.10	101	
120		9.66	9.65	33.911	26.161	187.0	0.282	2.43	37.9	27.5	2.05	25.5	0.03	0.04	0.08	121	210
125	ISL	9.54	9.53	33.939	26.203	183.1	0.291	2.37	36.9	28.6	2.08	26.0	0.03	0.03	0.07	126	
139		9.23	9.21	34.015	26.313	172.9	0.316	2.20	34.0	31.6	2.16	27.2	0.02	0.01	0.06	140	209
150	ISL	9.08	9.06	34.061	26.373	167.3	0.335	2.06	31.7	33.5	2.22	28.0	0.02	0.01	0.06	151	
170		8.90	8.88	34.116	26.445	160.9	0.367	1.82	27.9	36.3	2.32	29.2	0.02	0.00	0.06	171	208
197		8.67	8.65	34.138	26.499	156.2	0.410	1.59	24.3	39.4	2.41	30.3	0.01	0.00	0.06	198	207
200	ISL	8.63	8.61	34.143	26.509	155.3	0.415	1.56	23.8	39.9	2.43	30.5	0.01			201	
229		8.24	8.22	34.194	26.609	146.2	0.459	1.25	18.9	45.0	2.58	32.2	0.01			230	206
250	ISL	8.00	7.97	34.208	26.656	142.0	0.489	1.12	16.9	48.1	2.65	32.9	0.01			252	
268		7.81	7.78	34.215	26.690	139.1	0.514	1.03	15.4	50.5	2.70	33.4	0.01			270	205
300	ISL	7.52	7.49	34.235	26.748	134.0	0.558	0.85	12.7	54.6	2.79	34.6	0.00			302	
318		7.38	7.35	34.245	26.776	131.5	0.582	0.76	11.3	56.8	2.83	35.2	0.00			320	204
379		6.91	6.87	34.264	26.856	124.5	0.660	0.58	8.5	64.2	2.96	37.0	0.00			381	203
400	ISL	6.81	6.77	34.268	26.873	123.2	0.686	0.54	7.9	65.7	2.98	37.3	0.00			403	
440		6.63	6.59	34.276	26.904	120.7	0.735	0.47	6.9	68.4	3.02	37.8	0.00			443	202
500	ISL	6.21	6.17	34.303	26.981	113.9	0.805	0.35	5.1	75.6	3.12	39.2	0.00			503	
514		6.11	6.06	34.309	26.999	112.3	0.821	0.32	4.6	77.3	3.14	39.5	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 25.3 N	119 57.5 W	07/04/06	0604	UTC	888 m	310	10 kn			1017.8 mb	13.6 C	11.7 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	14.32	14.32	33.283	24.794	314.4	0.000	6.31	108.3	2.7	0.30	0.3	0.03	1.27	0.04	0	
2		14.32	14.32	33.283	24.794	314.4	0.006	6.31	108.3	2.7	0.30	0.3	0.03	1.27 A	0.04 A	2	221
10		14.32	14.32	33.282	24.794	314.7	0.031	6.32	108.4	2.6	0.30	0.4	0.03	1.41	0.08	10	219
10		14.32	14.32	33.281	24.793	314.8	0.031									10	220
20	ISL	14.29	14.29	33.282	24.801	314.4	0.063	6.31	108.2	2.5	0.29	0.4	0.03	1.35	0.04	20	
21		14.29	14.29	33.282	24.801	314.4	0.066	6.31	108.2	2.5	0.29	0.4	0.03	1.34	0.03	21	218
30	ISL	14.05	14.05	33.256	24.831	311.7	0.094	6.20	105.8	2.8	0.33	0.8	0.05	1.08	0.06	30	
31		14.02	14.02	33.254	24.836	311.3	0.097	6.19	105.5	2.8	0.34	0.9	0.05	1.05	0.07	31	217
40		13.98	13.97	33.273	24.859	309.4	0.125	6.16	104.9	2.7	0.35	1.0	0.05	1.07	0.12	40	216
50		13.02	13.01	33.283	25.061	290.3	0.155	5.65	94.4	4.4	0.59	4.1	0.14	0.99	0.18	50	215
60		12.08	12.07	33.303	25.258	271.7	0.183	5.02	82.2	7.7	0.93	9.1	0.22	0.46 A	0.16 A	60	214
70		11.97	11.96	33.485	25.420	256.5	0.210	5.30	86.7	8.8	0.86	7.6	0.28	0.31	0.14	70	213
75	ISL	11.54	11.53	33.513	25.522	246.9	0.222	4.87	78.9	11.1	1.05	10.7	0.22	0.26	0.13	75	
85		10.52	10.51	33.539	25.725	227.8	0.246	3.80	60.3	16.5	1.50	18.3	0.06	0.17	0.10	85	212
99		9.70	9.69	33.638	25.941	207.4	0.277	3.42	53.3	20.7	1.72	21.8	0.02	0.06	0.06	99	211
100	ISL	9.69	9.68	33.648	25.950	206.5	0.279	3.41	53.1	20.9	1.73	21.9	0.02	0.06	0.06	100	
120		9.40	9.39	33.778	26.100	192.7	0.319	3.27	50.7	23.5	1.79	23.1	0.01	0.01	0.04	121	210
125	ISL	9.38	9.37	33.819	26.135	189.5	0.328	3.11	48.2	24.7	1.84	23.8	0.01	0.01	0.04	126	
140		9.33	9.31	33.933	26.233	180.5	0.356	2.61	40.4	28.4	2.01	25.7	0.01	0.01	0.05	141	209
150	ISL	9.28	9.26	33.973	26.272	177.0	0.374	2.47	38.2	29.7	2.06	26.3	0.01	0.01	0.05	151	
169		9.13	9.11	34.020	26.333	171.5	0.407	2.33	35.9	31.5	2.12	27.0	0.01	0.00	0.05	170	208
199		8.77	8.75	34.098	26.452	160.8	0.457	1.99	30.5	36.2	2.27	29.1	0.01	0.00	0.05	200	207
200	ISL	8.76	8.74	34.100	26.455	160.5	0.458	1.98	30.3	36.3	2.28	29.2	0.01			201	
229		8.56	8.54	34.161	26.534	153.4	0.504	1.56	23.8	40.5	2.43	30.7	0.01			230	206
250	ISL	8.38	8.35	34.189	26.584	149.0	0.536	1.35	20.5	43.4	2.52	31.7	0.01			251	
268		8.18	8.15	34.204	26.626	145.3	0.562	1.20	18.1	46.2	2.59	32.6	0.01			270	205
300	ISL	7.64	7.61	34.218	26.717	136.9	0.607	0.96	14.3	52.9	2.73	34.3	0.00			302	
318		7.34	7.31	34.224	26.765	132.5	0.631	0.85	12.6	56.6	2.80	35.2	0.00			320	204
380		6.89	6.85	34.263	26.858	124.3	0.711	0.58	8.5	63.6	2.95	36.9	0.00			382	203
400	ISL	6.84	6.80	34.266	26.868	123.7	0.736	0.55	8.1	64.8	2.97	37.1	0.00			403	
438		6.74	6.70	34.270	26.885	122.6	0.783	0.51	7.5	67.1	3.00	37.5	0.00			441	202
500	ISL	6.28	6.24	34.299	26.969	115.1	0.856	0.36	5.2	74.6	3.10	39.1	0.00			503	
512		6.19	6.14	34.305	26.985	113.6	0.870	0.33	4.8	76.1	3.12	39.4	0.00			516	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 38.9 W	06/04/06	2306	UTC	3795 m	310	08 kn	330 04 07	1	1018.7 mb	15.0 C	13.1 C	19m	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	14.69	14.69	33.001	24.499	342.5	0.000	6.02	103.9	2.2	0.34	0.1	0.00	0.24	0.05	0	
2		14.69	14.69	33.001	24.499	342.6	0.007	6.02	103.9	2.2	0.34	0.1	0.00	0.24	0.05	2	222
10	ISL	14.28	14.28	32.994	24.580	335.0	0.034	6.05	103.5	2.1	0.33	0.1	0.00	0.23	0.06	10	
11		14.22	14.22	32.993	24.592	334.0	0.037	6.06	103.6	2.1	0.33	0.1	0.00	0.23	0.06	11	220
11		14.25	14.25	32.994	24.586	334.5	0.037									11	221
20	ISL	14.18	14.18	32.994	24.601	333.3	0.067	6.06	103.5	1.9	0.33	0.1	0.00	0.24	0.06	20	
21		14.18	14.18	32.994	24.601	333.3	0.071	6.06	103.5	1.9	0.33	0.1	0.00	0.24	0.06	21	219
30		14.15	14.15	32.998	24.611	332.7	0.101	6.05	103.3	1.9	0.33	0.1	0.00	0.29	0.08	30	218
35		13.76	13.76	33.095	24.766	318.0	0.117	6.10	103.3	2.3	0.36	0.5	0.06	0.63	0.17	35	217
41		13.28	13.27	33.195	24.941	301.5	0.136	6.08	102.0	2.2	0.41	1.0	0.11	0.80	0.28	41	216
50	ISL	13.04	13.03	33.249	25.031	293.2	0.162	5.88	98.2	2.9	0.50	1.9	0.23	0.54	0.23	50	
51		13.03	13.02	33.251	25.034	292.9	0.165	5.86	97.9	3.0	0.51	2.0	0.24	0.50	0.22	51	215
61		12.94	12.93	33.270	25.067	290.0	0.194	5.76	96.0	3.3	0.56	2.9	0.25	0.37	0.19	61	214
70		12.74	12.73	33.288	25.120	285.2	0.220	5.54	92.0	4.9	0.68	5.3	0.31	0.22	0.13	70	213
75	ISL	12.59	12.58	33.303	25.161	281.4	0.234	5.45	90.2	5.4	0.73	6.2	0.28	0.17	0.11	75	
86		12.16	12.15	33.348	25.279	270.4	0.265	5.18	85.0	6.9	0.87	8.4	0.16	0.10	0.10	86	212
100		11.34	11.33	33.429	25.494	250.2	0.301	4.55	73.4	11.3	1.21	13.7	0.02	0.05	0.09	100	211
120		10.52	10.51	33.534	25.721	228.9	0.349	3.76	59.6	16.5	1.54	18.7	0.01	0.04	0.09	121	210
125	ISL	10.31	10.30	33.581	25.794	222.0	0.360	3.55	56.0	18.1	1.63	20.0	0.01	0.04	0.08	126	
139		9.78	9.76	33.719	25.992	203.5	0.390	3.06	47.8	22.6	1.85	23.2	0.01	0.03	0.06	140	209
150	ISL	9.45	9.43	33.796	26.106	192.7	0.412	2.94	45.6	24.9	1.91	24.4	0.01	0.02	0.05	151	
170		9.05	9.03	33.910	26.260	178.4	0.449	2.81	43.2	28.3	1.98	25.7	0.01	0.01	0.04	171	208
199		8.94	8.92	34.065	26.399	165.8	0.499	2.08	31.9	34.2	2.23	28.5	0.00	0.00	0.04	200	207
200	ISL	8.93	8.91	34.067	26.402	165.5	0.501	2.07	31.8	34.3	2.23	28.6	0.00			201	
229		8.51	8.49	34.095	26.490	157.6	0.547	1.93	29.4	38.0	2.31	30.1	0.00			230	206
250	ISL	8.28	8.25	34.114	26.540	153.1	0.580	1.79	27.1	40.8	2.39	31.1	0.00			251	
269		8.10	8.07	34.129	26.579	149.7	0.609	1.65	24.9	43.3	2.46	31.9	0.00			271	205
300	ISL	7.77	7.74	34.146	26.642	144.1	0.654	1.41	21.1	47.5	2.57	33.2	0.00			302	
319		7.58	7.55	34.156	26.677	141.0	0.681	1.27	18.9	50.1	2.64	34.0	0.00			321	204
379		7.08	7.04	34.197	26.780	131.8	0.763	0.92	13.5	58.3	2.82	36.1	0.00			381	203
400	ISL	6.90	6.86	34.208	26.814	128.8	0.791	0.81	11.9	61.2	2.88	36.8	0.00			403	
438		6.58	6.54	34.229	26.874	123.5	0.839	0.62	9.0	66.4	2.98	38.0	0.00			441	202
500	ISL	6.15	6.11	34.279	26.970	114.9	0.913	0.39	5.6	75.4	3.13	39.7	0.00			503	
513		6.06	6.01	34.290	26.990	113.1	0.927	0.34	4.9	77.3	3.16	40.0	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 45.5 N	121 19.6 W	06/04/06	1741	UTC	3793 m	310	09 kn	320 04 07	1	1021.7 mb	15.0 C	12.9 C	22m	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	15.05	15.05	33.145	24.532	339.3	0.000	5.90	102.7	2.2	0.34	0.2	0.00	0.18	0.05	0	
2	A	15.05	15.05	33.145	24.532	339.4	0.007	5.90	102.7	2.2	0.34	0.2	0.00	0.18	0.05	2	224
10	ISL	14.95	14.95	33.141	24.551	337.8	0.034	5.90	102.4	2.1	0.33	0.1	0.00	0.19	0.05	10	
13		14.91	14.91	33.141	24.560	337.1	0.044									13	223
13	A	14.91	14.91	33.140	24.559	337.2	0.044	5.90	102.4	2.0	0.33	0.1	0.00	0.19	0.05	13	222
20	ISL	14.90	14.90	33.140	24.561	337.1	0.068	5.90	102.3	2.0	0.33	0.1	0.00	0.19	0.05	20	
23		14.90	14.90	33.139	24.561	337.3	0.078	5.90	102.3	2.0	0.33	0.1	0.00	0.19	0.05	23	221
30	ISL	14.86	14.86	33.143	24.573	336.4	0.101	5.91	102.4	2.1	0.33	0.0	0.00	0.21	0.06	30	
32	A	14.85	14.85	33.144	24.575	336.2	0.108	5.92	102.6	2.1	0.33	0.0	0.00	0.21	0.06	32	220
45		14.12	14.11	33.158	24.741	320.7	0.151									45	219
46	A	14.11	14.10	33.156	24.742	320.7	0.154	6.04	103.1	2.3	0.33	0.0	0.00	0.44	0.18	46	218
50	ISL	13.73	13.72	33.180	24.839	311.5	0.167	5.88	99.6	2.8	0.43	1.2	0.15	0.53	0.32	50	
53		13.44	13.43	33.200	24.913	304.5	0.176	5.73	96.5	3.3	0.52	2.3	0.25	0.56	0.40	53	217
60		12.87	12.86	33.234	25.053	291.3	0.197	5.43	90.4	4.6	0.68	5.0	0.16	0.34	0.32	60	216
72	A	12.62	12.61	33.267	25.127	284.5	0.231	5.32	88.1	5.5	0.77	6.5	0.07	0.25	0.24	72	215
75	ISL	12.38	12.37	33.275	25.180	279.6	0.240	5.20	85.7	6.3	0.84	7.7	0.05	0.21	0.20	75	
83	A	11.63	11.62	33.308	25.346	263.8	0.261	4.77	77.4	9.0	1.07	11.4	0.02	0.11	0.10	83	214
91		11.01	11.00	33.365	25.503	249.0	0.282	4.25	68.0	12.2	1.31	15.2	0.01	0.10	0.10	91	213
93		10.94	10.93	33.373	25.522	247.3	0.287	4.24	67.8	12.4	1.32	15.4	0.01	0.09	0.10	93	212
100	ISL	10.62	10.61	33.427	25.620	238.1	0.304	4.07	64.6	14.1	1.41	16.9	0.01	0.06	0.09	100	
111		10.17	10.16	33.528	25.776	223.4	0.329	3.68	57.9	17.4	1.59	19.6	0.01	0.04	0.06	112	211
125		9.98	9.97	33.615	25.877	214.1	0.360	3.33	52.2	20.2	1.73	21.6	0.01	0.02	0.06	126	210
145		9.38	9.36	33.784	26.108	192.4	0.401	2.96	45.8	25.3	1.91	24.6	0.01	0.01	0.05	146	209
150	ISL	9.30	9.28	33.812	26.143	189.2	0.410	2.90	44.8	26.1	1.94	25.0	0.01	0.01	0.05	151	
169		9.05	9.03	33.892	26.246	179.7	0.445	2.73	42.0	28.7	2.00	26.2	0.01	0.00	0.04	170	208
198		8.55	8.53	33.971	26.386	166.8	0.495	2.64	40.2	33.1	2.08	27.8	0.01	0.00	0.04	199	207
200	ISL	8.52	8.50	33.977	26.396	166.0	0.499	2.61	39.7	33.5	2.09	28.0	0.01			201	
230		8.13	8.11	34.056	26.517	154.9	0.547	2.07	31.2	39.8	2.29	30.8	0.01			231	206
250	ISL	7.98	7.95	34.085	26.562	150.9	0.577	1.92	28.9	42.5	2.36	31.5	0.01			251	
268		7.84	7.81	34.100	26.595	148.0	0.604	1.84	27.6	44.7	2.41	32.0	0.01			270	205
300	ISL	7.38	7.35	34.107	26.667	141.5	0.651	1.60	23.7	50.0	2.54	33.7	0.00			302	
319		7.11	7.08	34.111	26.708	137.7	0.677	1.44	21.2	53.3	2.62	34.8	0.00			321	204
379		6.75	6.71	34.184	26.815	128.3	0.757	0.84	12.3	62.6	2.87	37.3	0.00			381	203
400	ISL	6.58	6.54	34.191	26.843	125.8	0.784	0.76	11.1	65.4	2.92	37.9	0.00			403	
438		6.26	6.22	34.197	26.890	121.6	0.831	0.67	9.7	70.4	2.99	38.9	0.00			441	202
500	ISL	5.82	5.78	34.231	26.973	114.2	0.904	0.48	6.9	78.8	3.10	40.5	0.00			503	
518		5.69	5.65	34.241	26.997	112.0	0.924	0.42	6.0	81.3	3.13	40.9	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 24.9 N	121 59.7 W	06/04/06	0925	UTC	3882 m	310	11 kn			1020.6 mb	14.2 C	12.4 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	14.93	14.93	33.090	24.516	340.9	0.000	5.92	102.7	2.2	0.32	0.1	0.00	0.18	0.04	0	
1		14.93	14.93	33.090	24.516	340.9	0.003	5.92	102.7	2.2	0.32	0.1	0.00	0.18	0.04	1	220
10	ISL	14.93	14.93	33.089	24.515	341.2	0.034	5.92	102.7	2.2	0.33	0.1	0.00	0.19	0.03	10	
16		14.93	14.93	33.088	24.515	341.5	0.055	5.92	102.7	2.2	0.34	0.1	0.00	0.20	0.02	16	219
20	ISL	14.92	14.92	33.090	24.518	341.2	0.068	5.93	102.9	2.2	0.34	0.1	0.00	0.20	0.02	20	
30	ISL	14.88	14.88	33.094	24.530	340.4	0.102	5.95	103.1	2.2	0.32	0.1	0.00	0.20	0.05	30	
31		14.88	14.88	33.094	24.531	340.4	0.106	5.95	103.1	2.2	0.32	0.1	0.00	0.20	0.05	31	218
45		14.66	14.65	33.114	24.593	334.8	0.153	5.95	102.7	2.1	0.33	0.1	0.00	0.35	0.12	45	217
50	ISL	14.30	14.29	33.146	24.694	325.3	0.169	5.87	100.6	2.4	0.39	0.7	0.06	0.62	0.23	50	
56		13.81	13.80	33.190	24.830	312.5	0.189	5.72	97.1	3.0	0.48	1.8	0.12	0.84	0.35	56	216
64		13.26	13.25	33.235	24.976	298.7	0.213	5.42	90.9	4.2	0.63	4.2	0.06	0.51	0.33	64	215
75	ISL	12.77	12.76	33.278	25.107	286.6	0.245	5.37	89.2	5.2	0.74	6.2	0.03	0.29	0.18	75	
76		12.73	12.72	33.282	25.118	285.6	0.248	5.37	89.1	5.3	0.75	6.4	0.03	0.28	0.17	76	214
84		12.44	12.43	33.315	25.200	277.9	0.271	5.24	86.5	6.4	0.86	8.0	0.02	0.19	0.12	84	213
95		11.89	11.88	33.390	25.362	262.7	0.300	4.89	79.8	8.9	1.05	11.1	0.01	0.09	0.07	95	212
100	ISL	11.59	11.58	33.383	25.412	258.0	0.313	4.75	77.0	9.6	1.11	12.0	0.01	0.07	0.06	100	
111		10.89	10.88	33.376	25.533	246.6	0.341	4.41	70.4	11.7	1.25	14.3	0.02	0.06	0.05	111	211
124		10.09	10.08	33.506	25.773	223.9	0.372	3.87	60.8	16.7	1.53	18.8	0.01	0.02	0.04	125	210
125	ISL	10.05	10.04	33.514	25.786	222.7	0.374	3.84	60.3	17.0	1.55	19.0	0.01	0.02	0.04	126	
146		9.48	9.46	33.657	25.993	203.4	0.419	3.35	51.9	22.0	1.78	22.7	0.01	0.01	0.03	147	209
150	ISL	9.40	9.38	33.684	26.027	200.2	0.427	3.29	50.9	22.9	1.81	23.2	0.01	0.01	0.03	151	
168		9.11	9.09	33.805	26.168	187.1	0.462	3.03	46.6	26.4	1.92	25.1	0.01	0.00	0.03	169	208
199		8.91	8.89	34.000	26.353	170.2	0.517	2.52	38.7	31.7	2.08	27.1	0.01	0.00	0.02	200	207
200	ISL	8.91	8.89	34.003	26.355	169.9	0.519	2.51	38.5	31.8	2.08	27.2	0.01			201	
229		8.72	8.70	34.063	26.433	163.1	0.567	2.22	33.9	35.0	2.20	28.7	0.01			230	206
250	ISL	8.45	8.42	34.100	26.503	156.7	0.601	1.96	29.8	38.7	2.31	30.1	0.01			251	
269		8.18	8.15	34.126	26.565	151.1	0.630	1.73	26.1	42.3	2.41	31.4	0.01			270	205
300	ISL	7.86	7.83	34.148	26.630	145.3	0.676	1.49	22.3	46.3	2.52	32.7	0.01			302	
321		7.64	7.61	34.152	26.665	142.2	0.706	1.36	20.3	49.1	2.59	33.5	0.01			323	204
377		6.75	6.72	34.139	26.779	131.6	0.783	1.06	15.5	60.0	2.78	36.6	0.00			379	203
400	ISL	6.44	6.40	34.138	26.820	127.9	0.812	0.94	13.6	64.5	2.85	37.7	0.00			402	
437		6.07	6.03	34.150	26.877	122.6	0.859	0.76	10.9	70.9	2.96	39.2	0.01			440	202
500	ISL	5.95	5.91	34.237	26.962	115.4	0.934	0.45	6.5	76.9	3.09	40.0	0.00			503	
512		5.93	5.89	34.254	26.978	114.0	0.948	0.39	5.6	78.1	3.11	40.1	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 39.0 W	06/04/06	0255	UTC	4093 m	320	17 kn	330 07 07	1	1020.2 mb	14.7 C	12.7 C		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	15.00	15.00	33.060	24.477	344.5	0.000	5.88	102.2	2.0	0.33	0.1	0.00	0.17	0.02	0	
2		15.00	15.00	33.060	24.478	344.6	0.007	5.88	102.2	2.0	0.33	0.1	0.00	0.17	0.02	2	222
10	ISL	15.01	15.01	33.054	24.471	345.5	0.034	5.89	102.3	2.0	0.33	0.1	0.00	0.16	0.02	10	
15		15.01	15.01	33.050	24.468	345.9	0.052	5.89	102.3	2.0	0.33	0.1	0.00	0.16	0.02	15	220
16		15.01	15.01	33.050	24.468	345.9	0.055									16	221
20	ISL	15.01	15.01	33.051	24.469	346.0	0.069	5.89	102.3	2.0	0.33	0.1	0.00	0.16	0.02	20	
30		15.00	15.00	33.054	24.474	345.8	0.104	5.88	102.1	1.9	0.33	0.1	0.00	0.17	0.02	30	219
46		14.85	14.84	33.051	24.504	343.3	0.159	5.90	102.2	2.0	0.33	0.1	0.00	0.21	0.02	46	218
50	ISL	14.78	14.77	33.059	24.526	341.4	0.172	5.92	102.4	2.0	0.33	0.1	0.00	0.24	0.03	50	
56		14.56	14.55	33.079	24.588	335.6	0.193	5.94	102.3	2.1	0.33	0.1	0.00	0.29	0.05	56	217
65		13.71	13.70	33.131	24.805	315.1	0.222	5.72	96.8	3.1	0.46	1.6	0.06	0.70	0.24	65	216
70		13.20	13.19	33.158	24.929	303.4	0.238	5.51	92.3	3.8	0.58	3.4	0.10	0.54	0.34	70	215
75		12.90	12.89	33.193	25.016	295.3	0.253	5.42	90.2	4.1	0.63	4.2	0.08	0.45	0.39	75	214
85		12.04	12.03	33.224	25.205	277.4	0.281	5.16	84.4	5.9	0.79	7.1	0.04	0.30	0.22	85	213
95		11.14	11.13	33.270	25.406	258.4	0.308	4.88	78.3	8.3	0.99	10.4	0.02	0.16	0.14	95	212
100	ISL	10.83	10.82	33.318	25.499	249.6	0.321	4.59	73.2	10.5	1.15	12.9	0.01	0.12	0.11	100	
110		10.36	10.35	33.432	25.669	233.6	0.345	3.98	62.8	15.2	1.46	17.7	0.01	0.06	0.06	110	211
124		9.82	9.81	33.585	25.880	213.7	0.376	3.48	54.4	19.8	1.70	21.4	0.01	0.02	0.04	125	210
125	ISL	9.80	9.79	33.590	25.887	213.1	0.378	3.47	54.2	20.0	1.71	21.5	0.01	0.02	0.04	126	
144		9.57	9.55	33.665	25.984	204.2	0.418	3.34	51.9	22.0	1.77	22.5	0.01	0.01	0.04	145	209
150	ISL	9.51	9.49	33.705	26.025	200.4	0.430	3.22	50.0	23.1	1.82	23.1	0.01	0.01	0.04	151	
168		9.34	9.32	33.831	26.152	188.8	0.465	2.82	43.6	26.5	1.96	25.2	0.01	0.01	0.04	169	208
199		8.98	8.96	33.971	26.319	173.4	0.521	2.47	37.9	31.1	2.09	27.4	0.00	0.00	0.03	200	207
200	ISL	8.97	8.95	33.975	26.324	172.9	0.523	2.46	37.8	31.3	2.09	27.5	0.00			201	
228		8.60	8.58	34.059	26.448	161.6	0.570	2.15	32.8	36.3	2.22	29.4	0.01			229	206
250	ISL	8.21	8.18	34.080	26.524	154.6	0.605	2.01	30.4	40.2	2.30	30.6	0.01			251	
268		7.89	7.86	34.085	26.576	149.9	0.632	1.91	28.6	43.3	2.37	31.6	0.00			269	205
300	ISL	7.49	7.46	34.109	26.653	142.9	0.679	1.58	23.5	49.0	2.52	33.5	0.00			302	
319		7.29	7.26	34.122	26.691	139.4	0.706	1.38	20.4	52.2	2.61	34.5	0.00			321	204
377		6.76	6.73	34.147	26.784	131.1	0.784	1.04	15.2	60.2	2.79	36.7	0.00			379	203
400	ISL	6.57	6.53	34.163	26.823	127.7	0.814	0.90	13.1	64.0	2.86	37.6	0.00			402	
437		6.28	6.24	34.190	26.882	122.4	0.860	0.69	10.0	69.9	2.97	38.8	0.00			440	202
500	ISL	5.90	5.86	34.232	26.964	115.1	0.935	0.45	6.4	77.7	3.09	40.2	0.00			503	
512		5.83	5.79	34.240	26.979	113.8	0.949	0.41	5.9	79.2	3.11	40.5	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 44.8 N	123 20.5 W	05/04/06	1923	UTC	4001 m	310	20 kn	320 07 07	1	1020.4 mb	15.9 C	13.9 C	29m	1/8	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	15.49	15.49	33.168	24.453	346.8	0.000	5.77	101.3	2.0	0.31	0.1	0.00	0.09	0.01	0	
2	A	15.49	15.49	33.168	24.453	346.9	0.007	5.77	101.3	2.0	0.31	0.1	0.00	0.09	0.01	2	224
10	ISL	15.48	15.48	33.166	24.454	347.0	0.035	5.77	101.3	1.9	0.31	0.1	0.00	0.09	0.03	10	
17	A	15.47	15.47	33.165	24.456	347.1	0.059	5.77	101.3	1.8	0.31	0.1	0.00	0.10	0.04	17	222
17		15.48	15.48	33.165	24.454	347.3	0.059	5.76	101.1	1.7	0.32	0.1	0.00	0.10	0.01	17	223
20	ISL	15.47	15.47	33.165	24.456	347.2	0.069	5.77	101.3	1.8	0.31	0.1	0.00	0.10	0.03	20	
30		15.47	15.47	33.165	24.457	347.5	0.104	5.77	101.2	1.9	0.31	0.0	0.00	0.10	0.01	30	221
43	A	15.43	15.42	33.161	24.463	347.3	0.149	5.77	101.2	1.9	0.31	0.0	0.00	0.11	0.01	43	220
43		15.44	15.43	33.163	24.462	347.3	0.149	5.77	101.2	1.9	0.31	0.0	0.00	0.11	0.00	43	219
50	ISL	15.41	15.40	33.160	24.467	347.1	0.174	5.77	101.1	1.8	0.31	0.0	0.00	0.12	0.01	50	
51		15.41	15.40	33.159	24.466	347.2	0.177	5.77	101.1	1.8	0.31	0.0	0.00	0.12	0.01	51	218
61	A	15.38	15.37	33.153	24.468	347.3	0.212	5.79	101.4	1.9	0.31	0.0	0.00	0.13	0.01	61	217
70		14.87	14.86	33.128	24.560	338.7	0.243	5.83	101.0	1.9	0.31	0.0	0.00	0.21	0.05	70	216
75	ISL	14.68	14.67	33.084	24.567	338.2	0.260	5.86	101.1	1.9	0.32	0.1	0.00	0.24	0.08	75	
76		14.65	14.64	33.076	24.567	338.2	0.263									76	215
78	A	14.60	14.59	33.071	24.574	337.6	0.270	5.86	101.0	2.0	0.32	0.1	0.00	0.27	0.10	78	214
90		14.19	14.18	33.166	24.734	322.7	0.309	5.70	97.4	2.5	0.41	0.9	0.06	0.55	0.22	90	213
100	ISL	13.21	13.20	33.207	24.966	300.7	0.341	5.48	91.8	3.8	0.56	3.2	0.04	0.38	0.22	100	
101		13.10	13.09	33.211	24.991	298.4	0.344	5.46	91.3	3.9	0.58	3.5	0.04	0.35	0.22	101	212
109	A	12.49	12.48	33.260	25.148	283.5	0.367	5.29	87.3	4.7	0.67	5.1	0.03	0.24	0.16	109	211
124		11.18	11.16	33.321	25.439	255.9	0.407	4.80	77.1	8.9	1.02	10.9	0.01	0.10	0.08	125	210
125	ISL	11.12	11.10	33.328	25.455	254.4	0.410	4.75	76.2	9.3	1.05	11.3	0.01	0.09	0.08	126	
146		10.10	10.08	33.518	25.781	223.7	0.460	3.76	59.1	17.3	1.57	19.3	0.00	0.01	0.02	147	209
150	ISL	9.91	9.89	33.566	25.851	217.1	0.469	3.66	57.3	18.7	1.62	20.2	0.00	0.01	0.02	151	
167		9.22	9.20	33.762	26.117	192.0	0.504	3.35	51.7	24.0	1.79	23.2	0.00	0.00	0.01	168	208
198		8.73	8.71	33.955	26.346	170.7	0.560	2.75	42.0	31.5	2.04	27.1	0.00	0.00	0.02	199	207
200	ISL	8.70	8.68	33.963	26.357	169.7	0.563	2.72	41.5	31.9	2.05	27.3	0.00			201	
230		8.31	8.29	34.038	26.476	158.9	0.612	2.29	34.7	37.2	2.21	29.5	0.00			231	206
250	ISL	8.20	8.17	34.066	26.515	155.5	0.644	2.09	31.6	39.4	2.29	30.4	0.00			251	
269		8.13	8.10	34.089	26.543	153.1	0.673	1.90	28.7	41.4	2.36	31.1	0.00			270	205
300	ISL	7.99	7.96	34.152	26.614	146.9	0.720	1.40	21.1	46.5	2.56	32.7	0.00			302	
321		7.85	7.82	34.187	26.662	142.6	0.750	1.10	16.5	50.0	2.68	33.7	0.00			323	204
378		7.15	7.11	34.171	26.750	134.7	0.829	1.02	15.0	56.8	2.78	35.6	0.00			380	203
400	ISL	6.82	6.78	34.166	26.792	130.9	0.858	0.94	13.8	60.9	2.84	36.7	0.00			402	
439		6.28	6.24	34.164	26.862	124.3	0.908	0.78	11.3	68.3	2.95	38.6	0.00			442	202
500	ISL	5.80	5.76	34.180	26.935	117.7	0.982	0.60	8.6	76.7	3.07	40.2	0.00			503	
512		5.70	5.66	34.184	26.951	116.3	0.996	0.57	8.1	78.3	3.09	40.5	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 24.8 N	124 0.1 W	05/04/06	1313 UTC	4205 m	300 28 kn			1016.1 mb	14.5 C	12.1 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	15.35	15.35	33.097	24.430	349.1	0.000	5.81	101.7	2.3	0.35	0.2	0.00	0.10	0.01	0	
3	15.35	15.35	33.097	24.430	349.2	0.010	5.81	101.7	2.3	0.35	0.2	0.00	0.10	0.01	3	220
10 ISL	15.36	15.36	33.095	24.426	349.7	0.035	5.81	101.7	2.1	0.33	0.2	0.00	0.10	0.02	10	
16	15.36	15.36	33.095	24.427	349.9	0.056	5.82	101.9	2.0	0.32	0.1	0.00	0.10	0.02	16	219
20 ISL	15.34	15.34	33.094	24.430	349.7	0.070	5.82	101.8	2.0	0.32	0.1	0.00	0.10	0.02	20	
30 ISL	15.30	15.30	33.090	24.436	349.4	0.105	5.82	101.7	2.1	0.33	0.1	0.00	0.10	0.01	30	
32	15.29	15.29	33.089	24.438	349.3	0.112	5.82	101.7	2.1	0.33	0.1	0.00	0.10	0.01	32	218
45	14.68	14.67	33.040	24.532	340.6	0.157	5.91	102.0	2.2	0.32	0.1	0.00	0.13	0.03	45	217
50 ISL	14.64	14.63	33.049	24.548	339.3	0.174	5.91	101.9	2.2	0.32	0.1	0.00	0.14	0.04	50	
62	14.53	14.52	33.052	24.574	337.2	0.214	5.90	101.5	2.2	0.33	0.1	0.00	0.21	0.06	62	216
75	14.34	14.33	33.056	24.617	333.4	0.258	5.87	100.6	2.3	0.35	0.1	0.01	0.42	0.25	75	215
84	13.22	13.21	33.172	24.936	303.1	0.287	5.40	90.5	4.6	0.67	4.6	0.05	0.35	0.28	84	214
94	12.52	12.51	33.236	25.123	285.5	0.316	5.28	87.2	5.0	0.70	5.4	0.04	0.23	0.20	94	213
100	12.24	12.23	33.235	25.176	280.5	0.333	5.14	84.4	6.1	0.80	7.0	0.03	0.23	0.13	100	212
115	11.31	11.30	33.306	25.404	259.1	0.373	4.85	78.1	8.5	1.00	10.4	0.02	0.12	0.08	115	211
123	10.87	10.86	33.346	25.514	248.7	0.394	4.52	72.1	11.1	1.23	13.6	0.01	0.07	0.05	124	210
125 ISL	10.82	10.80	33.349	25.525	247.7	0.399	4.52	72.0	11.2	1.23	13.6	0.01	0.07	0.05	126	
139	10.53	10.51	33.391	25.609	240.0	0.433	4.59	72.7	11.7	1.20	13.9	0.01	0.07	0.05	140	209
150 ISL	10.02	10.00	33.538	25.810	220.9	0.458	4.04	63.4	16.6	1.46	17.8	0.01	0.04	0.04	151	
162	9.47	9.45	33.721	26.044	198.8	0.483	3.34	51.8	22.7	1.78	22.6	0.01	0.00	0.02	163	208
193	9.07	9.05	33.923	26.267	178.2	0.542	3.03	46.6	27.7	1.92	24.8	0.01	0.00	0.01	194	207
200 ISL	8.98	8.96	33.945	26.299	175.3	0.554	3.01	46.2	28.5	1.93	25.1	0.01			201	
230	8.56	8.54	33.993	26.402	165.9	0.605	2.90	44.1	32.3	1.99	26.7	0.01			231	206
250 ISL	8.12	8.09	34.018	26.489	157.9	0.638	2.68	40.4	37.0	2.10	28.5	0.01			251	
271	7.70	7.67	34.039	26.567	150.6	0.670	2.43	36.3	41.9	2.23	30.3	0.01			272	205
300 ISL	7.51	7.48	34.056	26.608	147.1	0.713	2.21	32.8	45.1	2.33	31.5	0.00			302	
319	7.46	7.43	34.067	26.624	145.9	0.741	2.04	30.3	46.9	2.39	32.1	0.00			321	204
376	6.99	6.95	34.153	26.758	133.8	0.821	1.08	15.9	58.7	2.78	36.2	0.00			378	203
400 ISL	6.77	6.73	34.174	26.805	129.6	0.852	0.88	12.9	62.4	2.87	37.1	0.00			402	
439	6.43	6.39	34.198	26.869	123.8	0.902	0.70	10.2	67.4	2.97	38.2	0.01			442	202
500 ISL	6.07	6.03	34.233	26.943	117.3	0.975	0.49	7.0	74.6	3.07	39.6	0.00			503	
511	6.01	5.97	34.240	26.957	116.1	0.988	0.45	6.5	75.9	3.09	39.9	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 14.8 N	117 27.7 W	02/04/06	0032 UTC	19 m	310 10 kn	260 01 06	1	1019.7 mb	16.1 C	14.9 C		5/8 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	14.74	14.74	33.450	24.834	310.6	0.000	7.35	127.3	3.0	0.18	0.0	0.01	3.45	0.17	0	
2	14.74	14.74	33.450	24.834	310.6	0.006	7.35	127.3	3.0	0.18	0.0	0.01	3.45	0.17	2	204
5	14.55	14.55	33.467	24.888	305.6	0.015	7.27	125.5	3.1	0.18	0.0	0.01	2.91	0.19	5	203
10	13.99	13.99	33.507	25.036	291.6	0.030	6.84	116.7	3.7	0.22	0.0	0.01	5.36	0.13	10	202
12	13.73	13.73	33.517	25.098	285.8	0.036	6.49	110.2	4.0	0.26	0.0	0.01	6.79	0.34	12	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 57.2 N	117 17.0 W	01/04/06	2134 UTC	24 m	210 09 kn	210 01 06	1	1020.7 mb	18.9 C	15.5 C		4/8 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	14.59	14.59	33.448	24.865	307.7	0.000	6.61	114.2	0.8	0.21	0.1	0.01	1.00	0.14	0	
2	14.59	14.59	33.448	24.865	307.7	0.006	6.61	114.2	0.8	0.21	0.1	0.01	1.00	0.14	2	204
5	14.51	14.51	33.452	24.885	305.9	0.015	6.66	114.8	0.6	0.19	0.0	0.01	0.99	0.11	5	203
10	13.40	13.40	33.468	25.127	282.9	0.030	5.86	98.8	4.9	0.47	2.7	0.07	1.79	0.28	10	202
15	13.06	13.06	33.480	25.205	275.7	0.044	5.49	91.9	6.3	0.61	4.4	0.09	1.74	0.27	15	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 57.7 N	117 18.5 W	01/04/06	1949 UTC	71 m	210 10 kn	210 01 06	1	1020.7 mb	16.9 C	15.5 C	14m	4/8 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	14.60	14.60	33.426	24.845	309.5	0.000	6.52	112.6	1.2	0.21	0.0	0.01	0.88	0.16	0	
2	14.61	14.61	33.426	24.843	309.7	0.006									2	211
2 A	14.60	14.60	33.426	24.845	309.5	0.006	6.52	112.6	1.2	0.21	0.0	0.01	0.88	0.16	2	210
9 A	14.42	14.42	33.426	24.884	306.1	0.028	6.57	113.1	0.9	0.20	0.0	0.01	0.88	0.16	9	208
9	14.45	14.45	33.426 D	24.878	306.7	0.028									9	209
10 ISL	14.35	14.35	33.429	24.901	304.5	0.031	6.53	112.2	1.1	0.21	0.0	0.01	1.11	0.19	10	
15	13.63	13.63	33.440	25.059	289.6	0.046	6.35	107.5	2.2	0.24	0.1	0.03	1.92	0.34	15	207
20 A	12.04	12.04	33.441	25.372	259.9	0.059	4.25	69.6	10.0	1.01	9.9	0.28	0.91	0.26	20	206
29 A	11.00	11.00	33.520	25.624	236.1	0.082	3.60	57.7	15.0	1.44	16.5	0.20	0.67	0.25	29	205
30 ISL	10.94	10.94	33.531	25.643	234.3	0.084	3.55	56.8	15.4	1.47	16.9	0.19	0.64	0.25	30	
39 A	10.62	10.62	33.630	25.777	221.8	0.105	3.21	51.0	18.7	1.70	19.6	0.15	0.40	0.25	39	204
46	10.40	10.39	33.685	25.858	214.2	0.120	3.01	47.7	20.6	1.79	21.0	0.15	0.31	0.27	46	203
50 ISL	10.34	10.33	33.702	25.882	212.0	0.128	2.96	46.8	21.2	1.81	21.5	0.15	0.29	0.26	50	
53 A	10.29	10.28	33.721	25.905	209.9	0.135	2.90	45.8	21.8	1.83	21.9	0.15	0.27	0.25	53	202
60	10.10	10.09	33.829	26.022	198.9	0.149	2.54	40.0	25.1	1.97	23.6	0.18	0.21	0.36	60	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 54.7 N	117 23.6 W	02/04/06	0336	UTC	619 m	310	12 kn			1019.5 mb	14.4 C	12.5 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	14.60	14.60	33.443	24.859	308.2	0.000	6.72	116.1	1.4	0.20	0.1	0.00	0.84	0.12	0	
2		14.60	14.60	33.443	24.859	308.3	0.006	6.72	116.1	1.4	0.20	0.1	0.00	0.84	0.12	2	220
10		14.56	14.56	33.444	24.868	307.6	0.031	6.76	116.7	1.3	0.20	0.1	0.00	0.96	0.03	10	219
20	ISL	14.02	14.02	33.477	25.007	294.6	0.061	7.08	120.9	1.3	0.19	0.1	0.01	1.15	0.16	20	
21		13.97	13.97	33.481	25.021	293.4	0.064	7.11	121.3	1.3	0.19	0.1	0.01	1.16	0.18	21	218
30		11.44	11.44	33.536	25.557	242.5	0.088	4.05	65.5	11.5	1.27	12.4	0.18	1.14	0.24	30	217
40		10.64	10.64	33.631	25.774	222.0	0.111	3.19	50.8	16.2	1.68	18.2	0.18	0.78	0.27	40	216
50		10.16	10.15	33.757	25.956	205.0	0.133	2.69	42.4	21.8	1.91	22.3	0.23	0.43	0.20	50	215
60		10.05	10.04	33.817	26.021	199.0	0.153	2.55	40.1	24.2	1.96	23.6	0.27	0.42	0.28	60	214
70		9.95	9.94	33.894	26.099	191.9	0.172	2.40	37.7	26.4	2.03	24.8	0.40	0.19	0.22	70	213
75	ISL	9.92	9.91	33.912	26.118	190.1	0.182	2.32	36.4	27.2	2.06	25.2	0.53	0.20	0.21	75	
85		9.86	9.85	33.939	26.149	187.4	0.201	2.21	34.6	28.3	2.09	25.7	0.66	0.21	0.20	85	212
100		9.71	9.70	34.009	26.229	180.1	0.228	2.21	34.5	29.3	2.11	26.3	0.12	0.18	0.16	101	211
120		9.61	9.60	34.087	26.307	173.1	0.264	2.06	32.1	31.1	2.17	26.8	0.03	0.16	0.17	121	210
125	ISL	9.56	9.55	34.096	26.322	171.8	0.272	2.05	31.9	31.5	2.18	26.9	0.03	0.15	0.17	126	
140		9.44	9.42	34.118	26.359	168.5	0.298	2.01	31.2	32.6	2.20	27.3	0.03	0.13	0.17	141	209
150	ISL	9.44	9.42	34.151	26.385	166.3	0.314	1.87	29.1	33.6	2.25	27.7	0.03	0.11	0.16	151	
170		9.46	9.44	34.213	26.431	162.4	0.347	1.58	24.6	35.6	2.35	28.5	0.02	0.09	0.15	171	208
200		9.22	9.20	34.233	26.486	157.7	0.395	1.45	22.4	37.8	2.41	29.3	0.02	0.09	0.14	201	207
229		9.12	9.09	34.258	26.522	154.9	0.441	1.29	19.9	39.7	2.47	29.9	0.02			230	206
250	ISL	9.03	9.00	34.269	26.546	153.0	0.473	1.21	18.6	40.7	2.51	30.3	0.01			252	
269		8.94	8.91	34.275	26.565	151.5	0.502	1.15	17.7	41.7	2.54	30.6	0.01			271	205
300	ISL	8.77	8.74	34.286	26.601	148.7	0.548	1.02	15.6	43.7	2.60	31.2	0.02			302	
320		8.62	8.59	34.288	26.626	146.6	0.578	0.95	14.5	45.3	2.64	31.7	0.03			322	204
377		7.85	7.81	34.253	26.715	138.6	0.659	0.95	14.2	51.8	2.72	33.8	0.01			379	203
400	ISL	7.72	7.68	34.275	26.752	135.5	0.691	0.81	12.1	54.2	2.80	34.5	0.01			403	
436		7.53	7.49	34.313	26.809	130.5	0.739	0.56	8.3	58.2	2.92	35.6	0.01			439	202
500	ISL	6.78	6.73	34.292	26.898	122.4	0.820	0.45	6.6	68.0	3.02	37.7	0.03			503	
513		6.63	6.58	34.289	26.915	120.8	0.835	0.43	6.3	70.0	3.04	38.1	0.03			517	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 50.8 N	117 32.0 W	02/04/06	0720	UTC	856 m	320	11 kn			1020.1 mb	14.0 C	11.8 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	14.52	14.52	33.417	24.855	308.5	0.000	6.31	108.8	1.8	0.24	0.1	0.01	0.62	0.26	0	
1		14.52	14.52	33.417	24.855	308.5	0.003	6.31	108.8	1.8	0.24	0.1	0.01	0.62	0.26	1	220
10	ISL	14.51	14.51	33.419	24.859	308.4	0.031	6.32	108.9	1.8	0.24	0.1	0.01	0.60	0.21	10	
11		14.51	14.51	33.419	24.859	308.5	0.034	6.32	108.9	1.8	0.24	0.1	0.01	0.60	0.21	11	219
20		13.87	13.87	33.442	25.011	294.3	0.061	6.40	108.9	1.8	0.24	0.1	0.02	1.57	0.32	20	218
30		12.94	12.94	33.461	25.214	275.2	0.090	5.65	94.3	4.1	0.59	3.5	0.14	1.50	0.20	30	217
40		10.92	10.92	33.530	25.646	234.2	0.115	3.61	57.7	15.6	1.49	17.7	0.08	0.39	0.22	40	216
50		10.48	10.47	33.629	25.801	219.7	0.138	3.20	50.7	19.2	1.69	20.9	0.04	0.24	0.16	50	215
60		10.33	10.32	33.684	25.870	213.4	0.159	3.07	48.5	20.6	1.76	21.9	0.04	0.17	0.14	60	214
69		10.12	10.11	33.803	25.999	201.3	0.178	2.75	43.3	23.8	1.90	23.8	0.03	0.14	0.14	69	213
75	ISL	10.00	9.99	33.869	26.071	194.6	0.190	2.59	40.7	25.4	1.97	24.7	0.03	0.10	0.13	75	
85		9.86	9.85	33.959	26.165	185.9	0.209	2.37	37.1	27.5	2.06	25.9	0.02	0.04	0.11	85	212
100		9.82	9.81	34.058	26.249	178.2	0.236	2.09	32.7	29.7	2.15	26.9	0.02	0.03	0.09	101	211
120		9.73	9.72	34.140	26.328	171.1	0.271	1.91	29.9	31.5	2.21	27.7	0.02	0.01	0.07	121	210
125	ISL	9.67	9.66	34.161	26.355	168.7	0.280	1.83	28.6	32.4	2.24	28.1	0.02	0.01	0.08	126	
139		9.51	9.49	34.214	26.423	162.5	0.303	1.59	24.8	34.9	2.34	29.1	0.02	0.03	0.10	140	209
150	ISL	9.45	9.43	34.233	26.448	160.4	0.321	1.48	23.0	36.0	2.39	29.5	0.02	0.03	0.10	151	
169		9.38	9.36	34.250	26.473	158.4	0.351	1.36	21.1	37.4	2.44	29.9	0.02	0.02	0.09	170	208
200		9.23	9.21	34.280	26.521	154.4	0.399	1.21	18.7	39.6	2.50	30.5	0.02	0.01	0.07	201	207
229		9.09	9.06	34.280	26.544	152.8	0.444	1.17	18.1	40.7	2.52	30.9	0.02			230	206
250	ISL	9.07	9.04	34.294	26.559	151.8	0.476	1.10	17.0	41.4	2.56	31.0	0.02			252	
268		9.04	9.01	34.306	26.573	150.8	0.503	1.03	15.9	42.2	2.59	31.2	0.02			270	205
300	ISL	8.80	8.77	34.306	26.612	147.7	0.551	0.96	14.7	44.4	2.64	31.9	0.01			302	
318		8.65	8.62	34.303	26.633	145.9	0.577	0.93	14.2	45.6	2.67	32.3	0.01			320	204
378		8.45	8.41	34.316	26.675	143.0	0.664	0.82	12.5	47.9	2.72	32.9	0.01			380	203
400	ISL	8.26	8.22	34.321	26.708	140.1	0.695	0.74	11.2	50.1	2.77	33.5	0.01			403	
438		7.83	7.79	34.325	26.776	134.0	0.747	0.59	8.8	55.1	2.87	35.0	0.01			441	202
500	ISL	6.87	6.82	34.308	26.898	122.5	0.827	0.42	6.2	66.3	3.02	38.3	0.00			503	
512		6.68	6.63	34.306	26.922	120.2	0.841	0.39	5.7	68.5	3.05	38.9	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 40.9 N	117 52.4 W	02/04/06	1132 UTC	624 m	350 09 kn			1019.8 mb	13.4 C	11.5 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	14.52	14.52	33.470	24.896	304.6	0.000	6.59	113.7	0.4	0.16	0.1	0.00	0.87	0.16	0	
2		14.52	14.52	33.470	24.896	304.7	0.006	6.59	113.7	0.4	0.16	0.1	0.00	0.87	0.16	2	220
10		14.46	14.46	33.465	24.906	304.0	0.030	6.59	113.5	0.4	0.18	0.1	0.01	1.32	0.22	10	219
20		13.24	13.24	33.464	25.156	280.4	0.060	6.06	101.8	2.1	0.33	0.4	0.03	2.04	0.53	20	218
30		12.20	12.20	33.495	25.384	259.0	0.087	5.22	85.8	4.8	0.77	4.5	0.10	0.58	0.22	30	217
40		11.24	11.24	33.586	25.633	235.5	0.111	3.74	60.3	11.7	1.33	12.7	0.17	0.24	0.17	40	216
50		10.49	10.48	33.673	25.833	216.6	0.134	3.01	47.7	19.2	1.75	20.0	0.17	0.12	0.15	50	215
60		10.31	10.30	33.698	25.884	212.0	0.155	2.90	45.8	20.9	1.81	21.5	0.18	0.12	0.17	60	214
70		9.99	9.98	33.796	26.015	199.8	0.176	2.79	43.8	23.7	1.90	23.4	0.07	0.06	0.15	70	213
75	ISL	9.93	9.92	33.831	26.053	196.3	0.186	2.71	42.5	24.6	1.93	23.9	0.07	0.06	0.15	75	
84		9.88	9.87	33.877	26.097	192.3	0.203	2.57	40.3	25.8	1.98	24.5	0.08	0.05	0.14	84	212
99		9.78	9.77	33.928	26.154	187.2	0.232	2.46	38.5	26.9	2.03	25.2	0.14	0.05	0.16	100	211
100	ISL	9.76	9.75	33.931	26.160	186.7	0.234	2.46	38.5	27.0	2.03	25.2	0.14	0.05	0.16	101	
119		9.41	9.40	33.990	26.264	177.1	0.268	2.44	37.9	29.3	2.06	26.2	0.03	0.04	0.13	120	210
125	ISL	9.35	9.34	34.021	26.298	174.0	0.279	2.36	36.6	30.2	2.09	26.6	0.03	0.03	0.11	126	
139		9.24	9.22	34.090	26.370	167.5	0.303	2.15	33.3	32.3	2.17	27.5	0.02	0.01	0.08	140	209
150	ISL	9.12	9.10	34.119	26.412	163.7	0.321	2.03	31.3	34.0	2.22	28.2	0.02	0.01	0.07	151	
169		8.89	8.87	34.142	26.467	158.8	0.352	1.90	29.2	36.6	2.29	29.2	0.02	0.01	0.06	170	208
199		8.47	8.45	34.134	26.526	153.6	0.398	1.84	28.0	39.6	2.34	30.4	0.02	0.01	0.07	200	207
200	ISL	8.47	8.45	34.135	26.527	153.5	0.400	1.83	27.8	39.7	2.34	30.4	0.02			201	
228		8.35	8.33	34.157	26.563	150.6	0.443	1.66	25.2	42.4	2.42	31.3	0.01			229	206
250	ISL	8.11	8.08	34.167	26.607	146.7	0.475	1.52	22.9	44.9	2.49	32.1	0.01			252	
268		7.88	7.85	34.176	26.649	143.0	0.501	1.39	20.9	47.2	2.56	32.9	0.01			270	205
300	ISL	7.58	7.55	34.202	26.713	137.3	0.546	1.12	16.7	52.1	2.69	34.3	0.00			302	
318		7.43	7.40	34.217	26.746	134.3	0.571	0.97	14.4	54.8	2.76	35.1	0.00			320	204
377		7.08	7.04	34.253	26.824	127.7	0.648	0.66	9.7	61.3	2.90	36.8	0.00			379	203
400	ISL	6.93	6.89	34.272	26.860	124.5	0.677	0.55	8.1	64.1	2.96	37.4	0.00			403	
438		6.68	6.64	34.300	26.917	119.6	0.723	0.40	5.8	68.7	3.05	38.4	0.00			441	202
500	ISL	6.28	6.23	34.313	26.980	114.1	0.796	0.32	4.6	74.9	3.12	39.8	0.00			503	
511		6.21	6.16	34.315	26.991	113.2	0.808	0.31	4.5	76.0	3.13	40.1	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 31.0 N	118 12.5 W	02/04/06	1726 UTC	1686 m	310 03 kn	320 01 06	1	1020.4 mb	14.9 C	13.1 C	24m	1/8 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	15.05	15.05	33.401	24.729	320.5	0.000	5.93	103.3	2.4	0.33	0.1	0.00	0.29	0.01	0	
1	A	15.05	15.05	33.401	24.729	320.6	0.003	5.93	103.3	2.4	0.33	0.1	0.00	0.29	0.01	1	223
1		15.03	15.03	33.402	24.734	320.1	0.003									1	224
8		14.95	14.95	33.401	24.751	318.7	0.026	5.93	103.1	2.4	0.33	0.1	0.00	0.31	0.01	8	222
10	ISL	14.95	14.95	33.401	24.751	318.7	0.032	5.93	103.1	2.4	0.33	0.1	0.00	0.30	0.01	10	
15	A	14.92	14.92	33.400	24.757	318.3	0.048	5.93	103.1	2.3	0.32	0.0	0.00	0.27	0.03	15	220
15		14.92	14.92	33.400	24.757	318.3	0.048									15	221
20	ISL	14.79	14.79	33.397	24.783	316.0	0.064	5.96	103.3	2.3	0.32	0.0	0.00	0.33	0.06	20	
24		14.66	14.66	33.395	24.809	313.6	0.076	5.98	103.4	2.3	0.32	0.1	0.00	0.40	0.08	24	219
30	ISL	14.58	14.58	33.396	24.828	312.1	0.095	5.97	103.0	2.4	0.34	0.2	0.02	0.49	0.08	30	
34	A	14.46	14.46	33.396	24.853	309.8	0.108	5.97	102.8	2.4	0.35	0.2	0.03	0.54	0.08	34	218
42		13.72	13.71	33.387	25.000	295.9	0.132	5.78	98.0	3.5	0.50	2.1	0.15	0.57	0.05	42	217
49	A	13.26	13.25	33.387	25.094	287.2	0.152	5.67	95.2	4.2	0.60	3.4	0.24	0.58	0.13	49	216
50	ISL	13.13	13.12	33.385	25.118	284.9	0.155	5.58	93.5	4.6	0.64	4.1	0.24	0.56	0.14	50	
58		11.98	11.97	33.391	25.345	263.4	0.177	4.72	77.2	8.8	1.03	10.4	0.17	0.33	0.20	58	215
66	A	11.15	11.14	33.442	25.537	245.2	0.197	4.22	67.8	12.2	1.28	14.3	0.07	0.22	0.19	66	214
75	ISL	10.43	10.42	33.539	25.740	226.1	0.219	3.78	59.8	16.3	1.51	18.0	0.04	0.12	0.12	75	
78		10.26	10.25	33.570	25.793	221.0	0.225	3.67	57.9	17.4	1.57	18.9	0.03	0.10	0.10	78	213
91	A	10.12	10.11	33.608	25.847	216.2	0.254	3.57	56.1	18.5	1.62	19.7	0.02	0.08	0.07	91	212
100	ISL	9.84	9.83	33.703	25.968	204.8	0.273	3.36	52.5	21.3	1.74	21.4	0.02	0.04	0.05	100	
105		9.68	9.67	33.758	26.038	198.3	0.283	3.23	50.3	22.9	1.80	22.3	0.02	0.02	0.04	106	211
119		9.57	9.56	33.817	26.102	192.5	0.310	3.03	47.1	24.6	1.86	23.4	0.02	0.01	0.04	120	210
125	ISL	9.50	9.49	33.843	26.134	189.6	0.321	2.94	45.7	25.5	1.90	24.0	0.02	0.01	0.04	126	
139		9.30	9.28	33.902	26.213	182.3	0.348	2.74	42.4	27.7	1.98	25.4	0.01	0.00	0.05	140	209
150	ISL	9.13	9.11	33.948	26.277	176.5	0.367	2.61	40.2	29.5	2.03	26.3	0.01	0.00	0.05	151	
169		8.87	8.85	34.016	26.371	167.8	0.400	2.42	37.1	32.5	2.11	27.7	0.01	0.00	0.04	170	208
200		8.63	8.61	34.081	26.460	159.9	0.451	2.12	32.3	36.4	2.24	29.3	0.01	0.00	0.03	201	207
229		8.33	8.31	34.125	26.541	152.7	0.496	1.83	27.7	40.5	2.36	30.8	0.01			230	206
250	ISL	8.12	8.09	34.136	26.582	149.1	0.528	1.69	25.5	43.1	2.43	31.7	0.01			251	
269		7.93	7.90	34.141	26.614	146.3	0.556	1.58	23.7	45.4	2.49	32.5	0.01			271	205
300	ISL	7.67	7.64	34.165	26.671	141.3	0.600	1.34	20.0	49.6	2.61	33.7	0.01			302	
319		7.50	7.47	34.182	26.709	137.9	0.627	1.19	17.7	52.4	2.68	34.5	0.01			321	204
378		6.84	6.80	34.225	26.835	126.4	0.705	0.74	10.8	62.8	2.91	37.3	0.00			380	203
400	ISL	6.67	6.63	34.240	26.870	123.3	0.732	0.64	9.3	65.8	2.96	38.0	0.00			403	
438		6.44	6.40	34.266	26.921	118.9	0.778	0.50	7.3	70.4	3.03	39.0	0.01			441	202
500	ISL	6.16	6.12	34.315	26.997	112.4	0.850	0.32	4.6	76.6	3.14	40.2	0.01			503	
513		6.10	6.05	34.325	27.012	111.0	0.865	0.28	4.0	77.9	3.16	40.4	0.01			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 20.9 N	118 33.3 W	02/04/06	2046 UTC	1332 m	300 04 kn	310 01 09	1	1019.5 mb	16.3 C	13.8 C	22m	5/8	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	15.23	15.23	33.415	24.701	323.3	0.000	5.92	103.5	2.5	0.32	0.1	0.00	0.24	0.03	0	
2		15.23	15.23	33.415	24.701	323.3	0.006	5.92	103.5	2.5	0.32	0.1	0.00	0.24	0.03	2	220
10	ISL	15.05	15.05	33.413	24.739	319.9	0.032	5.94	103.5	2.5	0.32	0.0	0.00	0.25	0.03	10	
11		15.01	15.01	33.413	24.748	319.1	0.035	5.94	103.4	2.5	0.32	0.0	0.00	0.25	0.03	11	219
20		14.54	14.54	33.407	24.844	310.2	0.064	5.99	103.3	2.6	0.34	0.2	0.02	0.38	0.08	20	218
30	ISL	14.39	14.39	33.405	24.875	307.6	0.095	5.99	103.0	2.7	0.36	0.4	0.04	0.44	0.10	30	
31		14.38	14.38	33.405	24.877	307.4	0.098	5.99	103.0	2.7	0.36	0.4	0.04	0.44	0.10	31	217
40		14.10	14.09	33.404	24.935	302.1	0.125	5.97	102.0	2.8	0.40	0.7	0.06	0.49	0.12	40	216
50		12.76	12.75	33.400	25.203	276.8	0.154	5.33	88.6	6.0	0.78	6.5	0.37	0.62	0.22	50	215
60		11.95	11.94	33.416	25.370	261.0	0.181	4.86	79.4	8.7	1.02	10.3	0.21	0.44	0.17	60	214
70		11.36	11.35	33.443	25.500	248.8	0.206	4.38	70.7	11.8	1.25	13.9	0.06	0.26	0.16	70	213
75	ISL	11.03	11.02	33.479	25.588	240.6	0.219	4.11	65.9	13.8	1.37	15.8	0.05	0.21	0.15	75	
85		10.48	10.47	33.555	25.744	225.9	0.242	3.67	58.1	17.2	1.57	18.9	0.03	0.14	0.12	85	212
99		10.26	10.25	33.591	25.810	219.9	0.273	3.55	56.0	18.5	1.62	19.8	0.02	0.10	0.10	99	211
100	ISL	10.22	10.21	33.602	25.825	218.5	0.275	3.52	55.5	18.8	1.63	20.0	0.02	0.09	0.10	100	
119		9.49	9.48	33.810	26.110	191.7	0.314	3.03	47.0	24.8	1.87	23.8	0.01	0.01	0.06	120	210
125	ISL	9.46	9.45	33.818	26.121	190.8	0.326	3.02	46.9	25.0	1.88	23.9	0.01	0.01	0.06	126	
140		9.38	9.36	33.838	26.150	188.3	0.354	3.00	46.5	25.6	1.89	24.1	0.01	0.01	0.06	141	209
150	ISL	9.29	9.27	33.878	26.196	184.2	0.373	2.90	44.8	26.8	1.93	24.7	0.01	0.01	0.05	151	
169		9.08	9.06	33.966	26.299	174.7	0.407	2.65	40.8	29.8	2.02	26.3	0.01	0.00	0.04	170	208
200		8.76	8.74	34.065	26.427	163.1	0.459	2.23	34.1	34.8	2.19	28.5	0.01	0.00	0.04	201	207
229		8.47	8.45	34.116	26.513	155.4	0.506	1.89	28.7	39.5	2.33	30.4	0.01			230	206
250	ISL	8.31	8.28	34.141	26.557	151.6	0.538	1.70	25.8	41.9	2.41	31.3	0.01			251	
269		8.16	8.13	34.158	26.593	148.4	0.566	1.55	23.4	44.1	2.48	32.0	0.01			271	205
300	ISL	7.77	7.74	34.181	26.669	141.5	0.611	1.27	19.0	49.3	2.62	33.6	0.01			302	
318		7.52	7.49	34.193	26.715	137.4	0.636	1.11	16.5	52.7	2.70	34.6	0.01			320	204
378		6.82	6.78	34.232	26.843	125.6	0.715	0.70	10.2	63.6	2.91	37.4	0.00			380	203
400	ISL	6.67	6.63	34.253	26.880	122.4	0.742	0.57	8.3	66.9	2.98	38.1	0.00			403	
438		6.45	6.41	34.287	26.937	117.4	0.788	0.40	5.8	72.1	3.07	39.0	0.00			441	202
500	ISL	6.01	5.97	34.320	27.020	110.0	0.859	0.29	4.2	79.8	3.15	40.4	0.00			503	
512		5.93	5.89	34.327	27.036	108.6	0.872	0.27	3.9	81.3	3.17	40.7	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 11.1 N	118 53.3 W	03/04/06	0107 UTC	1462 m	350 06 kn	310 02 08	2	1017.3 mb	15.8 C	13.5 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	15.32	15.32	33.435	24.697	323.7	0.000	5.95	104.3	2.0	0.32	0.1	0.00	0.19	0.02	0	
2		15.32	15.32	33.435	24.697	323.7	0.006	5.95	104.3	2.0	0.32	0.1	0.00	0.19	0.02	2	220
10		15.01	15.01	33.430	24.761	317.9	0.032	5.96	103.8	2.0	0.32	0.1	0.00	0.21	0.03	10	219
20		14.69	14.69	33.420	24.822	312.3	0.064	6.00	103.8	2.0	0.32	0.1	0.00	0.20	0.04	20	218
30		14.49	14.49	33.419	24.864	308.6	0.095	6.01	103.6	2.1	0.33	0.2	0.01	0.31	0.08	30	217
40		13.60	13.59	33.422	25.052	291.0	0.125	5.80	98.1	3.5	0.50	2.5	0.13	0.55	0.09	40	216
50		11.89	11.88	33.441	25.401	257.9	0.152	4.68	76.4	9.8	1.10	11.8	0.21	0.46	0.16	50	215
59		11.10	11.09	33.508	25.598	239.3	0.174	4.08	65.5	13.9	1.38	16.3	0.10	0.26	0.24	59	214
70		10.37	10.36	33.585	25.786	221.6	0.200	3.53	55.8	18.2	1.62	20.0	0.04	0.15	0.10	70	213
75	ISL	10.10	10.09	33.624	25.863	214.4	0.211	3.38	53.1	19.8	1.70	21.2	0.03	0.10	0.09	75	
85		9.69	9.68	33.706	25.995	201.9	0.232	3.17	49.4	22.5	1.81	23.0	0.02	0.03	0.08	85	212
100		9.48	9.47	33.824	26.122	190.2	0.261	2.92	45.3	25.4	1.90	24.3	0.02	0.01	0.05	100	211
120		9.28	9.27	34.016	26.305	173.2	0.297	2.46	38.1	30.2	2.07	26.4	0.01	0.01	0.04	121	210
125	ISL	9.19	9.18	34.024	26.326	171.3	0.306	2.47	38.1	30.7	2.07	26.7	0.01	0.01	0.04	126	
139		8.94	8.93	34.020	26.363	168.0	0.330	2.50	38.4	31.7	2.08	27.2	0.01	0.00	0.04	140	209
150	ISL	8.83	8.81	34.035	26.392	165.4	0.348	2.42	37.1	32.9	2.11	27.7	0.01	0.00	0.04	151	
169		8.72	8.70	34.067	26.435	161.7	0.379	2.22	33.9	35.0	2.19	28.7	0.01	0.00	0.04	170	208
200		8.56	8.54	34.112	26.495	156.6	0.428	1.94	29.6	38.2	2.30	30.0	0.01	0.00	0.04	201	207
229		8.50	8.48	34.173	26.553	151.7	0.473	1.55	23.6	41.4	2.45	31.0	0.01			230	206
250	ISL	8.35	8.32	34.192	26.591	148.4	0.505	1.37	20.8	43.7	2.52	31.8	0.01			251	
267		8.19	8.16	34.202	26.623	145.5	0.530	1.25	18.9	45.7	2.57	32.5	0.01			269	205
300	ISL	7.88	7.85	34.233	26.694	139.3	0.577	0.99	14.9	50.3	2.70	33.8	0.01			302	
319		7.69	7.66	34.247	26.733	135.8	0.603	0.86	12.9	53.2	2.77	34.6	0.01			321	204
378		7.00	6.96	34.252	26.835	126.6	0.680	0.64	9.4	62.3	2.92	36.8	0.01			380	203
400	ISL	6.84	6.80	34.257	26.861	124.4	0.708	0.59	8.6	64.5	2.95	37.3	0.01			403	
438		6.62	6.58	34.268	26.899	121.1	0.754	0.51	7.4	68.1	3.00	38.1	0.00			441	202
500	ISL	6.17	6.13	34.294	26.979	114.0	0.827	0.37	5.3	75.8	3.11	39.6	0.00			503	
513		6.08	6.03	34.300	26.995	112.6	0.842	0.34	4.9	77.4	3.13	39.9	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 13.8 W	03/04/06	0639	UTC	1587 m	180	06 kn			1017.9 mb	15.6 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	15.31	15.31	33.194	24.513	341.1	0.000	5.89	103.1	2.1	0.33	0.1	0.01	0.20	0.04	0	
1		15.31	15.31	33.194	24.513	341.2	0.003	5.89	103.0	2.1	0.33	0.1	0.01	0.20	0.04	1	222
10		15.33	15.33	33.195	24.510	341.7	0.034			2.1	0.33	0.1	0.01	0.21	0.04	10	221
10		15.33	15.33	33.191	24.507	342.0	0.034	5.88	102.9	2.0	0.34	0.0	0.01	0.33 A	0.06 A	10	220
20		14.74	14.74	33.219	24.656	328.1	0.068	5.99	103.6	2.1	0.33	0.1	0.02	0.38	0.03	20	219
29		14.44	14.44	33.233	24.731	321.2	0.097	6.00	103.2	2.1	0.34	0.3	0.03	0.50 B	0.13 B	29	218
30	ISL	14.37	14.37	33.232	24.745	319.9	0.100	5.99	102.8	2.2	0.35	0.4	0.04	0.51	0.16	30	
40		13.57	13.56	33.220	24.902	305.2	0.131	5.82	98.3	3.2	0.49	2.3	0.14	0.63	0.34	40	217
50		13.02	13.01	33.240	25.028	293.5	0.161	5.56	92.8	4.5	0.64	4.6	0.21	0.67	0.17	50	216
61		12.75	12.74	33.325	25.147	282.4	0.193	5.38	89.4	5.4	0.75	6.2	0.25	0.33	0.19	61	215
70		11.55	11.54	33.348	25.392	259.2	0.217	4.70	76.1	9.7	1.11	11.9	0.11	0.20	0.10	70	214
75	ISL	11.10	11.09	33.413	25.524	246.7	0.230	4.30	69.0	12.3	1.29	14.7	0.07	0.16	0.09	75	
84		10.54	10.53	33.545	25.726	227.7	0.251	3.69	58.5	16.6	1.55	18.8	0.03	0.13	0.08	84	213
100		9.98	9.97	33.659	25.911	210.4	0.286	3.31	51.9	20.6	1.73	21.6	0.02	0.08	0.07	100	212
119		9.61	9.60	33.763	26.054	197.1	0.325	3.11	48.4	23.4	1.83	23.1	0.02	0.03	0.05	120	211
125	ISL	9.54	9.53	33.799	26.093	193.5	0.337	3.01	46.8	24.4	1.87	23.7	0.02	0.03	0.05	126	
139		9.40	9.38	33.884	26.183	185.2	0.363	2.75	42.6	26.9	1.96	25.1	0.01	0.03	0.05	140	210
150	ISL	9.32	9.30	33.951	26.248	179.2	0.383	2.52	39.0	28.7	2.04	26.0	0.01	0.02	0.05	151	
169		9.16	9.14	34.039	26.343	170.6	0.417	2.23	34.4	31.5	2.15	27.3	0.01	0.01	0.04	170	209
199		8.67	8.65	34.045	26.426	163.2	0.467	2.35	35.9	34.5	2.15	28.4	0.01	0.00	0.05	200	208
200	ISL	8.66	8.64	34.046	26.428	163.0	0.468	2.34	35.7	34.6	2.15	28.4	0.01			201	
229		8.44	8.42	34.089	26.496	157.0	0.515	2.07	31.4	37.9	2.27	29.8	0.01			230	207
250	ISL	8.10	8.07	34.111	26.565	150.7	0.547	1.84	27.7	42.0	2.39	31.3	0.01			251	
268		7.78	7.75	34.129	26.626	145.0	0.574	1.63	24.4	45.9	2.49	32.7	0.01			270	206
300	ISL	7.44	7.41	34.169	26.707	137.7	0.619	1.26	18.7	51.9	2.66	34.3	0.00			302	
319		7.28	7.25	34.192	26.748	134.1	0.645	1.06	15.7	55.1	2.75	35.1	0.00			321	205
377		6.85	6.81	34.246	26.850	125.0	0.720	0.64	9.4	63.6	2.94	37.2	0.00			379	204
400	ISL	6.70	6.66	34.261	26.883	122.2	0.748	0.54	7.9	66.3	2.99	37.8	0.00			403	
438		6.46	6.42	34.280	26.930	118.1	0.794	0.43	6.2	70.6	3.06	38.7	0.00			441	203
500	ISL	6.05	6.01	34.309	27.006	111.4	0.865	0.31	4.5	78.3	3.14	39.8	0.00			503	
512		5.97	5.93	34.315	27.021	110.0	0.878	0.29	4.2	79.8	3.16	40.0	0.00			515	201

A) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
B) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A.
CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ACID RATIO FROM ADJACENT SAMPLES.

RV NEW HORIZON CALCOFI CRUISE 0604 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 34.6 W	03/04/06	1106	UTC	1904 m	180	07 kn			1016.4 mb	15.3 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	15.06	15.06	33.287	24.639	329.1	0.000	6.09	106.1	2.3	0.34	0.4	0.02	0.39	0.05	0	
2		15.06	15.06	33.287	24.639	329.2	0.007	6.09	106.1	2.3	0.34	0.4	0.02	0.39	0.05	2	220
9		15.04	15.04	33.288	24.645	328.9	0.030	6.10	106.2	2.3	0.33	0.4	0.02	0.41	0.05	9	219
10	ISL	14.97	14.97	33.294	24.665	327.0	0.033	6.12	106.4	2.3	0.33	0.4	0.02	0.41	0.05	10	
20		14.01	14.01	33.369	24.926	302.4	0.064	6.25	106.6	2.5	0.34	0.8	0.04	0.50	0.10	20	218
30		13.31	13.31	33.393	25.088	287.2	0.094	6.05	101.7	2.9	0.47	2.6	0.12	0.71	0.19	30	217
40		12.53	12.52	33.346	25.205	276.3	0.122	5.36	88.6	5.7	0.77	6.7	0.28	0.71	0.26	40	216
50		11.90	11.89	33.465	25.417	256.3	0.149	4.86	79.4	9.6	1.03	11.2	0.20	0.28	0.17	50	215
60		10.90	10.89	33.438	25.579	241.1	0.174	4.20	67.1	13.3	1.34	15.7	0.03	0.16	0.09	60	214
69		10.19	10.18	33.500	25.750	224.9	0.194	3.75	59.0	16.9	1.57	19.3	0.01	0.07	0.07	69	213
75	ISL	10.07	10.06	33.574	25.829	217.6	0.208	3.46	54.3	19.1	1.69	21.0	0.01	0.05	0.06	75	
84		9.88	9.87	33.676	25.940	207.2	0.227	3.14	49.1	21.7	1.80	22.6	0.01	0.03	0.06	84	212
99		9.72	9.71	33.703	25.988	202.9	0.258	3.09	48.2	22.6	1.83	23.2	0.01	0.02	0.04	99	211
100	ISL	9.70	9.69	33.711	25.998	202.0	0.260	3.07	47.9	22.8	1.84	23.3	0.01	0.02	0.04	100	
119		9.40	9.39	33.861	26.165	186.5	0.297	2.70	41.9	26.7	1.98	25.5	0.01	0.01	0.05	120	210
125	ISL	9.36	9.35	33.885	26.190	184.3	0.308	2.81	43.5	27.3	2.00	25.8	0.01	0.01	0.04	126	
140		9.24	9.22	33.924	26.240	179.8	0.335	3.16	48.8	28.4	2.03	26.1	0.01	0.00	0.02	141	209
150	ISL	9.05	9.03	33.954	26.294	174.8	0.353	3.06	47.1	29.5	2.01	26.1	0.01	0.00	0.02	151	
169		8.65	8.63	34.006	26.398	165.2	0.385	2.88	43.9	31.9	1.98	26.5	0.01	0.00	0.02	170	208
199		8.33	8.31	34.053	26.484	157.5	0.433	2.39	36.2	36.9	2.17	29.1	0.01	0.00	0.02	200	207
200	ISL	8.32	8.30	34.054	26.486	157.3	0.435	2.37	35.9	37.1	2.18	29.2	0.01			201	
230		7.89	7.87	34.085	26.575	149.2	0.481	1.95	29.2	42.9	2.36	31.5	0.01			231	206
250	ISL	7.51	7.49	34.073	26.621	145.1	0.510	1.87	27.8	46.6	2.43	32.7	0.01			251	
269		7.19	7.16	34.065	26.660	141.5	0.538	1.80	26.6	49.9	2.49	33.7	0.01			271	205
300	ISL	7.11	7.08	34.125	26.719	136.4	0.581	1.38	20.3	54.1	2.64	34.9	0.01			302	
318		7.07	7.04	34.157	26.749	133.8	0.605	1.12	16.5	56.4	2.73	35.5	0.01			320	204
378		6.56	6.53	34.205	26.857	124.2	0.682	0.72	10.5	65.8	2.93	37.9	0.00			380	203
400	ISL	6.45	6.41	34.228	26.890	121.3	0.709	0.60	8.7	68.6	2.98	38.4	0.00			403	
438		6.29	6.25	34.267	26.942	116.8	0.755	0.43	6.2	72.9	3.06	39.2	0.00			441	202
500	ISL	5.93	5.89	34.305	27.018	110.1	0.825	0.30	4.3	79.9	3.15	40.5	0.00			503	
512		5.86	5.82	34.313	27.033	108.7	0.838	0.27	3.9	81.2	3.17	40.7	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 30.4 N	120 13.8 W	03/04/06	1833 UTC	3941 m	180 11 kn	180 02 05	2	1016.8 mb	16.9 C	15.9 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	14.51	14.51	33.055	24.578	334.9	0.000	6.07	104.4	2.5	0.33	0.1	0.01	0.32	0.07	0	
1	A	14.51	14.51	33.055	24.578	334.9	0.003	6.07	104.4	2.5	0.33	0.1	0.01	0.32	0.07	1	224
10		14.53	14.53	33.075	24.590	334.1	0.033									10	223
10	A	14.60	14.60	33.138	24.624	330.9	0.033	6.11	105.3	2.4	0.33	0.3	0.02	0.46	0.08	10	222
18		14.22	14.22	33.302	24.831	311.4	0.059	6.22	106.5	2.5	0.35	0.7	0.04	0.63	0.06	18	221
20	ISL	14.19	14.19	33.303	24.838	310.8	0.065	6.22	106.4	2.5	0.35	0.7	0.04	0.63	0.07	20	
26	A	14.11	14.11	33.313	24.862	308.6	0.084	6.22	106.3	2.5	0.36	0.8	0.05	0.61	0.11	26	220
30	ISL	13.98	13.98	33.327	24.900	305.1	0.096	6.21	105.8	2.5	0.37	0.9	0.06	0.63	0.13	30	
37		13.74	13.73	33.358	24.974	298.3	0.117									37	219
37	A	13.74	13.73	33.357	24.973	298.4	0.117	6.20	105.2	2.7	0.40	1.4	0.07	0.67	0.16	37	218
45		13.54	13.53	33.383	25.034	292.8	0.141	6.03	101.9	3.2	0.46	2.3	0.10	0.69	0.17	45	217
50	ISL	13.23	13.22	33.384	25.097	286.9	0.155	5.80	97.4	4.0	0.56	3.4	0.17	0.66	0.20	50	
51	A	13.17	13.16	33.384	25.109	285.8	0.158	5.76	96.6	4.1	0.58	3.6	0.18	0.65	0.20	51	216
59		13.02	13.01	33.414	25.163	280.9	0.181	5.73	95.8	4.3	0.61	4.0	0.20	0.59	0.15	59	215
68	A	12.05	12.04	33.397	25.337	264.4	0.206	4.82	78.9	8.7	1.02	10.7	0.10	0.26	0.16	68	214
75	ISL	11.39	11.38	33.428	25.483	250.6	0.224	4.31	69.6	12.2	1.27	14.5	0.05	0.19	0.11	75	
76		11.31	11.30	33.436	25.504	248.6	0.226	4.24	68.4	16.7 U	1.54 U	18.4 U	0.02 U	0.19	0.10	76	213
85		10.90	10.89	33.571	25.683	231.8	0.248	3.64	58.2	16.8	1.54	18.4	0.02	0.15	0.11	85	212
100		10.20	10.19	33.684	25.893	212.1	0.281	3.06	48.2	21.7	1.81	22.1	0.01	0.07	0.10	100	211
120		9.81	9.80	33.807	26.055	197.1	0.322	2.65	41.4	25.5	1.97	24.6	0.01	0.03	0.09	121	210
125	ISL	9.70	9.69	33.836	26.096	193.3	0.332	2.60	40.6	26.3	2.00	25.1	0.01	0.03	0.09	126	
141		9.39	9.37	33.916	26.210	182.7	0.362	2.49	38.6	28.7	2.06	26.2	0.02	0.02	0.09	142	209
150	ISL	9.26	9.24	33.949	26.257	178.4	0.378	2.45	37.9	29.8	2.08	26.7	0.02	0.01	0.08	151	
169		9.03	9.01	33.998	26.332	171.6	0.411	2.37	36.5	31.7	2.12	27.5	0.01	0.00	0.07	170	208
200	ISL	8.76	8.74	34.041	26.409	164.8	0.463	2.24	34.3	34.5	2.19	28.7	0.01	0.00	0.05	201	
201		8.75	8.73	34.042	26.411	164.6	0.465	2.24	34.3	34.6	2.19	28.7	0.01	0.00	0.05	202	207
229		8.39	8.37	34.067	26.486	157.9	0.510	2.09	31.7	38.0	2.26	30.0	0.01			230	206
250	ISL	8.11	8.08	34.085	26.543	152.8	0.543	1.94	29.2	41.3	2.34	31.2	0.01			251	
270		7.86	7.83	34.100	26.592	148.4	0.573	1.77	26.5	44.7	2.43	32.3	0.01			272	205
300	ISL	7.54	7.51	34.121	26.655	142.7	0.617	1.51	22.5	49.1	2.56	33.7	0.01			302	
318		7.36	7.33	34.133	26.690	139.6	0.642	1.36	20.2	51.7	2.63	34.4	0.01			320	204
379		6.77	6.73	34.185	26.813	128.5	0.724	0.87	12.7	62.0	2.86	37.0	0.01			381	203
400	ISL	6.62	6.58	34.206	26.850	125.2	0.750	0.74	10.8	65.2	2.93	37.7	0.01			403	
439		6.36	6.32	34.240	26.911	119.8	0.798	0.54	7.8	70.7	3.04	38.9	0.00			442	202
500	ISL	5.96	5.92	34.255	26.975	114.2	0.869	0.41	5.9	77.6	3.11	40.3	0.00			503	
511		5.89	5.85	34.258	26.986	113.2	0.882	0.39	5.6	78.9	3.12	40.5	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 10.9 N	120 54.6 W	04/04/06	0023 UTC	3839 m	180 12 kn	230 04 05	2	1014.2 mb	18.4 C	17.2 C	32m	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	16.68	16.68	33.412	24.371	354.6	0.000	5.67	102.1	1.8	0.30	0.1	0.00	0.09	0.01	0	
2		16.68	16.68	33.412	24.371	354.7	0.007	5.67	102.1	1.8	0.30	0.1	0.00	0.09	0.01	2	220
10	ISL	16.62	16.62	33.409	24.383	353.8	0.035	5.67	101.9	1.8	0.29	0.0	0.00	0.09	0.01	10	
15		16.59	16.59	33.420	24.399	352.5	0.053	5.67	101.9	1.8	0.29	0.0	0.00	0.09	0.01	15	219
20	ISL	16.46	16.46	33.425	24.433	349.4	0.071	5.69	102.0	1.8	0.29	0.0	0.00	0.09	0.01	20	
30		16.18	16.18	33.434	24.504	342.9	0.105	5.72	102.0	1.8	0.29	0.0	0.00	0.09	0.02	30	218
45		16.05	16.04	33.433	24.534	340.6	0.157	5.71	101.5	1.8	0.29	0.0	0.00	0.12	0.03	45	217
50	ISL	16.01	16.00	33.433	24.543	339.9	0.174	5.71	101.4	1.8	0.29	0.0	0.00	0.13	0.03	50	
60		15.94	15.93	33.432	24.558	338.7	0.207	5.71	101.3	1.8	0.29	0.0	0.00	0.14	0.04	60	216
75		15.86	15.85	33.422	24.569	338.2	0.258	5.71	101.1	1.7	0.30	0.0	0.00	0.19	0.05	75	215
84		15.78	15.77	33.417	24.583	337.1	0.289	5.71	101.0	1.7	0.30	0.0	0.00	0.20	0.09	84	214
94		15.23	15.22	33.362	24.663	329.7	0.322	5.72	100.0	2.1	0.34	0.0	0.01	0.34	0.19	94	213
100	ISL	14.72	14.71	33.349	24.764	320.3	0.341	5.57	96.4	2.7	0.42	0.9	0.08	0.37	0.23	100	
104		14.36	14.34	33.345	24.837	313.3	0.354	5.44	93.4	3.2	0.49	1.7	0.13	0.39	0.24	104	212
115		13.53	13.51	33.333	24.999	298.0	0.388	5.11	86.3	4.8	0.69	4.4	0.15	0.31	0.21	115	211
125		12.22	12.20	33.367	25.283	271.0	0.416	4.57	75.1	8.1	1.01	9.8	0.05	0.22	0.13	126	210
140		11.27	11.25	33.429	25.507	249.9	0.455	4.38	70.5	10.8	1.17	13.0	0.02	0.12	0.11	141	209
150	ISL	10.67	10.65	33.489	25.661	235.3	0.480	4.16	66.1	13.5	1.32	15.7	0.02	0.07	0.08	151	
164		9.98	9.96	33.592	25.859	216.6	0.511	3.81	59.7	17.6	1.54	19.2	0.01	0.02	0.04	165	208
195		9.47	9.45	33.863	26.156	188.9	0.574	3.21	49.8	24.3	1.80	23.1	0.01	0.00	0.02	196	207
200	ISL	9.39	9.37	33.886	26.187	186.1	0.583	3.18	49.3	25.0	1.82	23.4	0.01			201	
229		8.98	8.96	33.979	26.326	173.3	0.636	3.02	46.4	28.7	1.90	25.0	0.00			230	206
250	ISL	8.85	8.82	34.059	26.410	165.8	0.671	2.61	40.0	32.3	2.05	26.8	0.00			251	
269		8.72	8.69	34.113	26.472	160.1	0.702	2.24	34.2	35.7	2.19	28.4	0.00			270	205
300	ISL	8.19	8.16	34.102	26.545	153.5	0.751	2.11	31.9	40.3	2.28	30.2	0.00			302	
317		7.86	7.83	34.082	26.578	150.5	0.777	2.09	31.3	42.9	2.32	31.1	0.00			319	204
379		6.95	6.91	34.096	26.719	137.5	0.866	1.50	22.0	54.4	2.61	35.0	0.00			381	203
400	ISL	6.70	6.66	34.099	26.755	134.2	0.894	1.36	19.8	57.9	2.68	36.0	0.00			402	
438		6.34	6.30	34.111	26.812	129.0	0.944	1.14	16.5	63.7	2.80	37.6	0.00			441	202
500	ISL	6.04	6.00	34.167	26.895	121.8	1.022	0.76	10.9	71.8	2.97	39.3	0.00			503	
513		5.98	5.94	34.179	26.912	120.3	1.038	0.68	9.8	73.5	3.01	39.6	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 51.0 N	121 35.3 W	04/04/06	0554 UTC	4090 m	270 03 kn			1013.5 mb	15.5 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	16.49	16.49	33.382	24.392	352.6	0.000	5.66	101.5	1.7	0.12	0.2	0.00	0.09	0.02	0	
1		16.49	16.49	33.382	24.392	352.7	0.004	5.66	101.5	1.7	0.12	0.2	0.00	0.09	0.02	1	222
10	ISL	16.56	16.56	33.441	24.422	350.2	0.035	5.66	101.7	1.6	0.12	0.2	0.00	0.09	0.01	10	
11		16.57	16.57	33.449	24.426	349.8	0.039	5.66	101.7	1.6	0.12	0.2	0.00	0.09	0.01	11	221
16		16.55	16.55	33.460	24.439	348.7	0.056	5.68	102.0	1.7	0.13	0.2	0.00	0.09	0.01	16	220
20	ISL	16.52	16.52	33.465	24.450	347.8	0.070	5.68	102.0	1.7	0.13	0.2	0.00	0.09	0.01	20	
30		16.42	16.42	33.465	24.473	345.9	0.105	5.69	101.9	1.6	0.13	0.2	0.00	0.10	0.01	30	219
45		16.15	16.14	33.446	24.521	341.9	0.156	5.69	101.4	1.5	0.14	0.2	0.00	0.13	0.01	45	218
50	ISL	16.12	16.11	33.443	24.526	341.6	0.173	5.69	101.3	1.5	0.14	0.2	0.00	0.13	0.01	50	
60		16.09	16.08	33.440	24.531	341.4	0.208	5.70	101.4	1.5	0.15	0.2	0.00	0.13	0.02	60	217
75		15.98	15.97	33.434	24.551	339.9	0.259	5.68	100.8	1.5	0.16	0.2	0.00	0.17	0.05	75	216
84		15.90	15.89	33.423	24.561	339.2	0.289	5.71	101.2	1.6	0.18	0.2	0.00	0.25	0.08	84	215
95		15.75	15.74	33.411	24.586	337.2	0.326	5.68	100.4	1.6	0.19	0.2	0.00	0.42	0.17	95	214
100	ISL	15.31	15.29	33.395	24.671	329.1	0.343	5.63	98.6	1.9	0.23	0.6	0.07	0.40	0.26	100	
106		14.63	14.61	33.373	24.801	316.8	0.362	5.53	95.5	2.6	0.32	1.0	0.15	0.34	0.33	106	213
115		13.60	13.58	33.344	24.994	298.6	0.390	5.27	89.1	4.1	0.52	3.7	0.13	0.27	0.23	115	212
124		12.60	12.58	33.367	25.210	278.0	0.416	5.01	83.0	6.0	0.71	7.1	0.03	0.17	0.19	125	211
125	ISL	12.51	12.49	33.371	25.231	276.1	0.419	4.95	81.8	6.3	0.74	7.5	0.03	0.16	0.18	126	
140		11.44	11.42	33.446	25.490	251.6	0.458	4.15	67.1	11.5	1.17	13.7	0.02	0.10	0.09	141	210
150	ISL	10.78	10.76	33.500	25.650	236.4	0.483	4.14	66.0	13.7	1.29	15.8	0.01	0.06	0.06	151	
164		10.03	10.01	33.582	25.843	218.1	0.515	4.12	64.6	16.3	1.37	17.7	0.01	0.02	0.04	165	209
194		9.40	9.38	33.774	26.098	194.4	0.577	3.51	54.4	22.6	1.64	22.1	0.01	0.00	0.03	195	208
200	ISL	9.32	9.30	33.811	26.140	190.5	0.588	3.40	52.6	23.7	1.69	22.7	0.01			201	
229		9.03	9.01	33.964	26.306	175.2	0.641	2.90	44.6	28.9	1.89	25.3	0.00			230	207
250	ISL	8.83	8.80	34.030	26.390	167.6	0.677	2.59	39.7	32.4	2.02	27.0	0.00			251	
269		8.65	8.62	34.067	26.447	162.5	0.708	2.35	35.9	35.3	2.13	28.4	0.00			270	206
300	ISL	8.26	8.23	34.097	26.531	154.9	0.758	2.09	31.6	39.7	2.25	30.1	0.00			302	
318		8.03	8.00	34.107	26.573	151.1	0.785	1.96	29.5	42.2	2.31	31.0	0.00			320	205
378		7.39	7.35	34.161	26.709	138.8	0.872	1.26	18.7	52.4	2.64	34.5	0.00			380	204
400	ISL	7.15	7.11	34.182	26.759	134.2	0.902	1.05	15.5	56.4	2.73	35.6	0.00			402	
437		6.76	6.72	34.213	26.837	127.1	0.951	0.78	11.4	63.0	2.86	37.1	0.00			440	203
500	ISL	6.22	6.18	34.236	26.927	119.0	1.028	0.56	8.1	71.7	3.01	39.1	0.00			503	
511		6.13	6.08	34.241	26.942	117.6	1.041	0.52	7.5	73.2	3.04	39.5	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0604 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	04/04/06	1240 UTC	4159 m	240 11 kn			1011.0 mb	16.1 C	14.9 C		

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.55	16.55	33.431	24.416	350.4	0.000	5.67	101.8	1.8	0.29	0.1	0.00	0.12	0.02	0	
2		16.55	16.55	33.431	24.416	350.4	0.007	5.67	101.8	1.8	0.29	0.1	0.00	0.12	0.02	2	220
10	ISL	16.56	16.56	33.439	24.420	350.3	0.035	5.68	102.0	1.7	0.29	0.1	0.00	0.13	0.02	10	
15		16.56	16.56	33.444	24.424	350.1	0.053	5.68	102.0	1.7	0.29	0.1	0.00	0.14	0.02	15	219
20	ISL	16.46	16.46	33.433	24.439	348.8	0.070	5.71	102.4	1.7	0.29	0.1	0.00	0.14	0.02	20	
30		16.22	16.22	33.406	24.474	345.9	0.105	5.76	102.7	1.7	0.29	0.1	0.00	0.15	0.03	30	218
45		16.01	16.00	33.394	24.513	342.6	0.156	5.76	102.3	1.7	0.29	0.1	0.00	0.19	0.04	45	217
50	ISL	15.94	15.93	33.399	24.532	340.9	0.173	5.76	102.2	1.7	0.29	0.1	0.00	0.20	0.05	50	
59		15.85	15.84	33.409	24.561	338.5	0.204	5.75	101.8	1.8	0.29	0.1	0.00	0.21	0.06	59	216
75	ISL	15.80	15.79	33.404	24.569	338.2	0.258	5.73	101.3	1.9	0.30	0.1	0.00	0.28	0.10	75	
76		15.80	15.79	33.404	24.569	338.2	0.262	5.73	101.3	1.9	0.30	0.1	0.00	0.29	0.10	76	215
85		15.00	14.99	33.357	24.709	325.0	0.291	5.61	97.6					0.40	0.31	85	214
93		14.33	14.32	33.339	24.838	312.9	0.317	5.41	92.8	3.5	0.52	2.0	0.15	0.37	0.31	93	213
100	ISL	13.99	13.98	33.361	24.926	304.6	0.339	5.37	91.5	3.8	0.54	2.6	0.13	0.33	0.30	100	
105		13.71	13.70	33.377	24.997	298.1	0.354	5.32	90.2	4.0	0.56	3.1	0.10	0.29	0.29	105	212
114		12.70	12.68	33.370	25.193	279.4	0.380	4.94	82.0	6.3	0.82	7.0	0.05	0.20	0.23	114	211
124		11.69	11.67	33.392	25.402	259.6	0.407	4.76	77.3	8.3	0.97	10.1	0.02	0.12	0.17	125	210
125	ISL	11.62	11.60	33.398	25.419	258.0	0.409	4.71	76.4	8.7	1.00	10.5	0.02	0.12	0.16	126	
139		10.84	10.82	33.507	25.645	236.7	0.444	3.95	63.1	14.0	1.39	16.3	0.01	0.08	0.10	140	209
150	ISL	10.50	10.48	33.595	25.773	224.6	0.469	3.59	56.9	16.9	1.56	18.8	0.01	0.06	0.07	151	
165		10.18	10.16	33.711	25.919	211.1	0.502	3.29	51.8	20.1	1.70	20.9	0.01	0.03	0.04	166	208
193		9.41	9.39	33.914	26.206	184.2	0.557	2.97	46.1	26.3	1.89	24.3	0.01	0.00	0.02	194	207
200	ISL	9.38	9.36	33.954	26.242	180.9	0.570	2.87	44.5	27.4	1.93	24.8	0.01			201	
229		9.23	9.20	34.076	26.362	170.1	0.621	2.44	37.7	31.3	2.07	26.4	0.00			230	206
250	ISL	9.05	9.02	34.123	26.428	164.2	0.656	2.23	34.3	33.9	2.17	27.5	0.00			251	
270		8.81	8.78	34.146	26.484	159.1	0.688	2.04	31.3	36.8	2.26	28.7	0.00			271	205
300	ISL	8.20	8.17	34.154	26.584	149.8	0.735	1.68	25.4	43.4	2.44	31.3	0.00			302	
317		7.85	7.82	34.158	26.640	144.7	0.760	1.47	22.0	47.2	2.54	32.8	0.00			319	204
378		7.35	7.31	34.237	26.774	132.6	0.844	0.90	13.3	56.0	2.79	35.0	0.00			380	203
400	ISL	7.23	7.19	34.266	26.814	129.1	0.873	0.71	10.5	59.0	2.87	35.8	0.00			402	
435		7.05	7.01	34.305	26.870	124.2	0.917	0.45	6.6	63.5	2.99	36.9	0.00			438	202
500	ISL	6.55	6.50	34.331	26.959	116.4	0.996	0.29	4.2	71.3	3.11	38.8	0.00			503	
510		6.47	6.42	34.336	26.974	115.1	1.007	0.26	3.8	72.5	3.13	39.1	0.00			513	201

RV NEW HORIZON CALCOFI CRUISE 0604 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 10.6 N	122 55.7 W	04/04/06	1913	UTC	3717 m	240	13 kn	240 07 05	2	1012.0 mb	15.1 C	14.9 C	22m	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	15.96	15.96	33.129	24.319	359.7	0.000	5.83	103.3	2.1	0.33	0.1	0.00	0.14	0.02	0	
2	A	15.96	15.96	33.129	24.319	359.7	0.007	5.83	103.3	2.1	0.33	0.1	0.00	0.14	0.02	2	223
2		15.95	15.95	33.130	24.322	359.4	0.007									2	224
10	ISL	15.93	15.93	33.130	24.327	359.2	0.036	5.84	103.4	2.1	0.33	0.1	0.00	0.14	0.03	10	
13	A	15.92	15.92	33.130	24.329	359.1	0.047	5.85	103.6	2.1	0.33	0.1	0.00	0.14	0.03	13	221
14		15.90	15.90	33.134	24.337	358.4	0.050			2.1	0.35	0.0	0.00	0.15	0.03	14	222
20	ISL	15.33	15.33	33.158	24.482	344.8	0.071	5.97	104.5	2.1	0.33	0.1	0.00	0.19	0.04	20	
22		15.14	15.14	33.167	24.530	340.2	0.078	6.00	104.6	2.1	0.33	0.1	0.00	0.21	0.04	22	220
30	ISL	14.69	14.69	33.178	24.636	330.3	0.105	6.06	104.7	2.2	0.33	0.1	0.00	0.25	0.04	30	
32	A	14.61	14.61	33.179	24.654	328.7	0.112	6.07	104.7	2.2	0.33	0.1	0.00	0.26	0.04	32	219
38		14.41	14.40	33.188	24.703	324.1	0.131	6.09	104.6	2.0	0.33	0.1	0.00	0.34	0.12	38	218
46	A	13.67	13.66	33.192	24.860	309.4	0.157	5.85	99.0	2.6	0.46	1.4	0.12	0.65	0.37	46	216
46		13.68	13.67	33.191	24.857	309.7	0.157									46	217
50	ISL	13.26	13.25	33.221	24.965	299.4	0.169	5.66	95.0	3.6	0.59	3.3	0.23	0.56	0.36	50	
54	A	12.91	12.90	33.255	25.061	290.4	0.181	5.48	91.3	4.6	0.71	5.2	0.30	0.42	0.34	54	215
62		12.59	12.58	33.298	25.157	281.5	0.203	5.26	87.1	5.6	0.82	7.1	0.14	0.28	0.26	62	214
72		11.87	11.86	33.312	25.305	267.5	0.231	4.88	79.6	8.0	1.00	10.1	0.03	0.16	0.15	72	213
75	ISL	11.74	11.73	33.331	25.344	263.9	0.239	4.81	78.2	8.6	1.05	10.9	0.03	0.13	0.13	75	
83	A	11.41	11.40	33.395	25.454	253.6	0.260	4.63	74.8	10.4	1.19	13.0	0.02	0.08	0.08	83	212
100		10.35	10.34	33.530	25.747	225.9	0.300	3.81	60.2	16.8	1.57	18.8	0.01	0.02	0.05	100	211
120		9.50	9.49	33.633	25.970	205.0	0.343	3.64	56.5	20.6	1.71	21.4	0.01	0.01	0.02	121	210
125	ISL	9.43	9.42	33.671	26.011	201.2	0.354	3.61	55.9	21.8	1.78	22.3	0.01	0.01	0.02	126	
140		9.34	9.32	33.788	26.118	191.4	0.383	3.49	54.0	25.3	1.96	24.7	0.01	0.00	0.03	141	209
150	ISL	9.19	9.17	33.854	26.193	184.4	0.402	3.39	52.3	26.5	1.96	24.8	0.01	0.00	0.03	151	
170		8.88	8.86	33.965	26.330	171.8	0.437	3.08	47.2	28.9	1.93	25.1	0.01	0.00	0.02	171	208
199		8.59	8.57	34.079	26.465	159.4	0.485	2.20	33.5	36.3	2.26	29.0	0.01	0.00	0.02	200	207
200	ISL	8.57	8.55	34.080	26.469	159.1	0.487	2.20	33.5	36.4	2.26	29.0	0.01			201	
230		8.05	8.03	34.075	26.544	152.3	0.534	2.26	34.0	40.0	2.29	30.0	0.01			231	206
250	ISL	7.86	7.84	34.093	26.586	148.5	0.564	1.98	29.7	43.3	2.41	31.5	0.01			251	
269		7.70	7.67	34.110	26.623	145.3	0.592	1.67	24.9	46.6	2.54	32.9	0.01			271	205
300	ISL	7.30	7.27	34.106	26.677	140.4	0.636	1.56	23.1	51.0	2.64	34.1	0.00			302	
318		7.06	7.03	34.104	26.709	137.6	0.661	1.53	22.5	53.5	2.68	34.6	0.00			320	204
378		6.57	6.54	34.169	26.827	127.0	0.740	0.90	13.1	63.6	2.94	37.6	0.01			380	203
400	ISL	6.40	6.36	34.184	26.861	123.9	0.768	0.77	11.2	67.0	3.01	38.3	0.01			402	
438		6.12	6.08	34.209	26.917	118.9	0.814	0.60	8.6	72.4	3.10	39.3	0.01			441	202
500	ISL	5.79	5.75	34.269	27.007	111.0	0.885	0.39	5.6	80.2	3.23	40.6	0.00			503	
511		5.73	5.69	34.280	27.023	109.5	0.898	0.35	5.0	81.6	3.25	40.8	0.00			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0604 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 49.6 N	123 35.7 W	05/04/06	0227	UTC	4033 m	280	33 kn	270 14 06	1	1011.9 mb	15.0 C	12.9 C		4/8	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	16.32	16.32	33.278	24.351	356.5	0.000	5.70	101.8	1.5	0.29	0.0	0.00	0.08	0.01	0	
2		16.32	16.32	33.278	24.352	356.6	0.007	5.70	101.8	1.5	0.29	0.0	0.00	0.08	0.01	2	221
10	ISL	16.33	16.33	33.276	24.348	357.2	0.036	5.69	101.6	1.5	0.29	0.0	0.00	0.07	0.01	10	
15		16.33	16.33	33.275	24.347	357.4	0.054	5.69	101.6	1.5	0.29	0.0	0.00	0.07	0.01	15	220
20	ISL	16.33	16.33	33.275	24.348	357.5	0.071	5.69	101.6	1.5	0.29	0.0	0.00	0.07	0.01	20	
30	ISL	16.33	16.33	33.275	24.348	357.8	0.107	5.69	101.6	1.4	0.29	0.0	0.00	0.08	0.01	30	
31		16.33	16.33	33.275	24.348	357.9	0.111	5.69	101.6	1.4	0.29	0.0	0.00	0.08	0.01	31	219
45		16.04	16.03	33.232	24.381	355.1	0.161	5.74	101.9	1.6	0.30	0.0	0.00	0.09	0.01	45	218
50	ISL	15.78	15.77	33.207	24.421	351.5	0.178	5.77	101.9	1.6	0.31	0.0	0.00	0.11	0.01	50	
63		15.11	15.10	33.146	24.522	342.2	0.223	5.84	101.7	1.6	0.32	0.0	0.00	0.18	0.04	63	217
74		14.89	14.88	33.110	24.542	340.6	0.261	5.85	101.4	1.9	0.32	0.0	0.00	0.23	0.10	74	216
75	ISL	14.88	14.87	33.111	24.545	340.3	0.264	5.85	101.4	1.9	0.32	0.0	0.00	0.27	0.11	75	
85		14.79	14.78	33.121	24.572	338.0	0.298	5.83	100.9	1.7	0.33	0.0	0.00	0.52	0.17	85	215
91		13.82	13.81	33.192	24.831	313.4	0.318	5.59	94.9	2.9	0.51	2.2	0.10	0.34	0.33	91	214
95		13.78	13.77	33.169	24.821	314.5	0.330	5.65	95.8	2.6	0.46	1.4	0.13	0.28 A	0.25 A	95	213
100	ISL	13.22	13.21	33.214	24.969	300.4	0.346	5.49	92.0	3.3	0.54	2.9	0.09	0.25	0.20	100	
103		12.80	12.79	33.250	25.080	289.9	0.355	5.34	88.7	4.0	0.63	4.4	0.05	0.24	0.18	103	212
114		11.85	11.84	33.212	25.232	275.5	0.386	5.02	81.7	6.7	0.90	8.5	0.02	0.15	0.14	114	211
125	ISL	10.90	10.88	33.357	25.517	248.5	0.415	4.51	72.0	10.9	1.19	13.5	0.01	0.06	0.07	126	
126		10.82	10.80	33.373	25.544	245.9	0.417	4.46	71.1	11.3	1.21	13.9	0.01	0.05	0.06	127	210
140		10.30	10.28	33.458	25.700	231.2	0.450	4.05	63.9	14.9	1.43	17.3	0.01	0.03	0.03	141	209
150	ISL	9.95	9.93	33.551	25.832	218.9	0.473	4.10	64.2	16.3	1.45	18.1	0.01	0.02	0.03	151	
164		9.55	9.53	33.696	26.012	202.0	0.502	4.15	64.5	18.3	1.47	18.9	0.01	0.00	0.02	165	208
196		9.27	9.25	33.975	26.276	177.5	0.563	2.39	37.0	29.8	2.09	26.6	0.00	0.00	0.02	197	207
200	ISL	9.22	9.20	33.992	26.297	175.6	0.570	2.37	36.6	30.6	2.10	27.0	0.00			201	
227		8.78	8.76	34.050	26.413	165.0	0.616	2.21	33.8	34.5	2.19	28.5	0.00			228	206
250	ISL	8.30	8.27	34.051	26.488	158.1	0.653	2.31	35.0	37.5	2.21	29.4	0.00			251	
267		7.95	7.92	34.043	26.534	153.8	0.680	2.38	35.7	39.8	2.22	30.1	0.00			268	205
300	ISL	7.49	7.46	34.058	26.613	146.7	0.729	2.08	30.9	45.7	2.37	32.0	0.00			302	
317		7.31	7.28	34.070	26.648	143.5	0.754	1.86	27.5	48.8	2.46	33.0	0.00			319	204
378		6.79	6.75	34.125	26.763	133.2	0.838	1.21	17.7	57.6	2.73	36.1	0.00			380	203
400	ISL	6.57	6.53	34.136	26.801	129.7	0.867	1.07	15.6	61.5	2.80	36.9	0.00			402	
441		6.17	6.13	34.154	26.868	123.7	0.919	0.88	12.7	68.6	2.91	38.2	0.00			444	202
500	ISL	5.79	5.75	34.190	26.944	116.8	0.990	0.65	9.3	76.2	3.03	39.7	0.00			503	
518		5.68	5.64	34.201	26.967	114.8	1.011	0.58	8.3	78.5	3.07	40.2	0.00			521	201

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 43.4 N	121 33.4 W	16/04/06	1801 UTC	12 m	1210 - 1904 PST	1206 PST	1903 PST	492.8 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	13.90	32.988	24.654	6.27	106.5	3.4	0.31	0.3	0.02	1.08	0.24	77. A	16.6	18.6	17.6	0.24
7	13.89	32.987	24.655	6.26	106.3	3.3	0.31	0.3	0.02	1.19	0.24	41.	18.5	20.9	19.7	0.25
17	13.32	33.256	24.979	6.42	107.9	2.2	0.37	1.7	0.08	2.26	0.62	11.	23.3	25.0	24.2	0.35
23	12.91	33.342	25.128	6.09	101.5	3.2	0.57	3.6	0.14	1.43	0.61	5.3	8.0	8.1	8.0	0.18
30	12.65	33.379	25.207	5.91	98.0	4.5	0.68	4.7	0.18	1.02	0.56	2.2	2.1	1.9	2.0	0.14
42	11.72	33.546	25.514	5.35	87.1	10.5	1.05	9.0	0.25	0.36	0.37	0.46	0.19	0.20	0.20	0.03

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 23.4 N	124 19.3 W	15/04/06	1756 UTC	33 m	1221 - 1909 PST	1217 PST	1909 PST	112.9 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.99	32.992	24.427	5.85	101.6	2.1	0.33	0.4	0.00	0.10	0.03	91. A	0.97	0.86	0.91	0.06
10	14.96	32.993	24.435	5.82	101.0	2.1	0.32	0.4	0.00	0.10	0.02					
19	14.95	32.992	24.436	5.84	101.3	2.2	0.32	0.4	0.00	0.10	0.02	41.	1.4	1.3	1.4	0.06
33	14.93	33.005	24.451	5.85	101.4	2.1	0.32	0.4	0.00	0.11	0.02					
47	14.81	33.050	24.512	5.84	101.0	2.1	0.32	0.4	0.00	0.14	0.04	11.	1.1	1.2	1.1	0.07
58	14.80	33.077	24.535	5.84	101.0	2.0	0.31	0.3	0.00	0.17	0.05					
68	14.78	33.090	24.550	5.83	100.8	2.0	0.31	0.4	0.00	0.23	0.10	4.2	1.1	1.0	1.0	0.06
80	14.23	33.016	24.610	5.85	100.0	2.0	0.33	0.3	0.00	0.34	0.30					
90	13.57	32.923	24.674	5.95	100.3	2.0	0.37	0.3	0.03	0.36	0.20	1.5	0.84	0.75	0.80	0.03
102	13.32	33.079	24.845	5.64	94.6	2.9	0.48	1.9	0.21	0.26	0.20					
113	12.98	33.192	25.000	5.43	90.5	3.7	0.56	3.4	0.09	0.20	0.19					
124	11.91	33.305	25.293	5.13	83.7	6.1	0.77	7.1	0.02	0.10	0.12	0.31	0.06	0.05	0.06	0.01

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.1 N	121 49.6 W	14/04/06	1734 UTC	17 m	1210 - 1910 PST	1208 PST	1908 PST	106.5 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.38	32.852	24.449	5.98	102.5	2.2	0.33	0.1	0.00	0.21	0.04	83. A	1.6	1.7	1.6	0.10
11	14.19	32.877	24.509	6.02	102.8	2.4	0.32	0.0	0.00	0.21	0.05	37.	2.7	2.7	2.7	0.13
25	13.76	32.883	24.602	6.08	102.9	2.2	0.33	0.0	0.00	0.24	0.07	10.	2.1	2.0	2.0	0.14
36	13.68	32.905	24.636	6.06	102.4	2.3	0.33	0.0	0.00	0.40	0.13	3.9	2.0	1.9	1.9	0.09
47	13.30	32.912	24.718	5.99	100.4	2.5	0.38	0.4	0.06	0.83	0.25	1.4	1.2	1.4	1.3	0.12
64	12.94	33.012	24.867	5.73	95.4	3.6	0.51	2.0	0.26	0.51	0.26	0.31	0.08	0.14	0.11	0.12

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 17.0 N	120 1.5 W	13/04/06	1826 UTC	8 m	1203 - 1900 PST	1201 PST	1858 PST	894.6 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	12.90	33.471	25.229	6.56	109.4	6.3	0.51	3.5	0.15	5.24	0.25	68. A	30.4	35.1	32.8	0.58
6	12.80	33.475	25.252	6.59	109.7	6.4	0.53	3.5	0.15	5.50	0.67	32.	69.7	62.0	65.8	0.69
11	12.69	33.482	25.279	6.48	107.6	6.5	0.54	3.8	0.15	6.19	0.46	12.	52.5	58.5	55.5	0.54
17	12.65	33.483	25.287	6.35	105.4	6.6	0.57	4.2	0.15	5.33	0.22	3.8	21.0	21.4	21.2	0.45
22	12.61	33.485	25.297	6.30	104.5	6.7	0.58	4.5	0.15	4.49	0.32	1.5	6.8	5.7	6.2	0.34
31	12.45	33.493	25.334	6.00	99.1	7.1	0.68	5.6	0.16	3.32	0.85	0.26	0.41	0.51	0.46	0.25

A) INCUBATION LIGHT INTENSITIES WERE 94, 42, 11, 4.3, 1.5, 0.30 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON | CALCOFI CRUISE 0604 | STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 35.2 N	120 45.7 W	12/04/06	1841 UTC	11 m	1208 - 1902 PST	1204 PST	1855 PST	177.3 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	14.22	33.163	24.723	6.26	107.1	2.6	0.29	0.0	0.01	0.49	0.11	76. A	3.4	3.5	3.4	0.19
7	14.21	33.164	24.726	6.27	107.3	2.6	0.28	0.0	0.01	0.51	0.12	38.	7.5	7.0	7.2	0.18
11	14.22	33.164	24.724	6.24	106.8	2.6	0.28	0.0	0.00	0.50	0.11					
17	14.16	33.165	24.737	6.27	107.1	2.4	0.28	0.0	0.00	0.53	0.12	9.3	6.0	6.2	6.1	0.20
23	14.01	33.171	24.773	6.32	107.7	2.5	0.28	0.0	0.01	0.74	0.17	4.0	4.7	4.9	4.8	0.16
30	13.57	33.157	24.853	6.34	107.0	3.3	0.34	0.6	0.03	1.09	0.25	1.5	2.5	2.3	2.4	0.13
43	12.47	33.290	25.173	5.95	98.2	4.8	0.64	4.7	0.18	1.57	0.45	0.25	0.50	0.72	0.61	0.06

RV NEW HORIZON | CALCOFI CRUISE 0604 | STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 14.6 N	123 29.2 W	11/04/06	1901 UTC	31 m	1218 - 1903 PST	1215 PST	1903 PST	110.4 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	14.88	32.981	24.443	5.87	101.7	1.9	0.33	0.1	0.00	0.09	0.02	91. A	1.2	1.2	1.2	0.06
11	14.85	32.984	24.452	5.87	101.6	2.0	0.33	0.1	0.00	0.10	0.01					
18	14.82	32.980	24.455	5.88	101.7	2.0	0.33	0.1	0.00	0.10	0.02	41.	1.2	1.3	1.2	0.07
31	14.68	32.983	24.488	5.89	101.6	2.0	0.33	0.0	0.00	0.12	0.03					
45	14.54	32.980	24.516	5.89	101.3	1.9	0.33	0.0	0.00	0.16	0.08	11.	1.1	1.1	1.1	0.09
54	14.42	32.967	24.531	5.91	101.4	1.9	0.33	0.1	0.00	0.21	0.07					
64	14.26	32.953	24.554	5.92	101.2	1.9	0.33	0.0	0.00	0.27	0.09	4.2	1.0	0.99	1.0	0.07
74	14.02	32.931	24.587	5.94	101.1	1.9	0.34	0.0	0.00	0.42	0.14					
84	13.35	32.943	24.733	5.89	98.8	2.3	0.41	0.6	0.08	0.47	0.28	1.6	0.98	1.1	1.0	0.04
96	13.02	33.070	24.897	5.63	93.9	3.6	0.53	2.6	0.17	0.30	0.22					
107	12.94	33.174	24.994	5.48	91.3	4.0	0.60	3.9	0.12	0.30	0.22					
117	12.41	33.202	25.119	5.24	86.3	5.2	0.74	6.2	0.06	0.23	0.17	0.30	0.08	0.08	0.08	0.01

RV NEW HORIZON | CALCOFI CRUISE 0604 | STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 53.3 N	118 29.2 W	08/04/06	1854 UTC	10 m	1202 - 1850 PST	1156 PST	1847 PST	613.8 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	13.31	33.470	25.146	5.97	100.4	6.3	0.61	4.6	0.21	2.29	0.22	74. A	43.0	42.9	42.9	0.69
6	12.62	33.481	25.292	5.56	92.2	7.0	0.72	6.3	0.24	2.35	0.20	40.	46.1	47.3	46.7	0.56
11	12.15	33.490	25.389	5.14	84.4	8.1	0.89	8.4	0.26	1.87	0.24					
14	12.07	33.501	25.413	5.02	82.3	8.4	0.94	8.8	0.25	1.19	0.24	12.	15.3	14.6	14.9	0.36
21	12.08	33.518	25.424	5.03	82.5	8.5	0.92	8.6	0.24	0.88	0.31	4.0	5.4	5.9	5.7	0.19
28	11.88	33.517	25.461	4.79	78.2	9.5	1.02	9.9	0.23	0.65	0.28	1.4	1.3	1.1	1.2	0.31
38	10.97	33.641	25.724	3.40	54.5	17.4	1.68	15.4	0.21	0.29	0.66	0.29	0.03	0.03	0.03	0.13

RV NEW HORIZON | CALCOFI CRUISE 0604 | STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.1 N	120 1.0 W	09/04/06	1726 UTC	13 m	1205 - 1855 PST	1202 PST	1855 PST	586.5 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	13.41	33.269	24.971	6.29	105.9	4.2	0.41	1.9	0.08	1.16	0.22	79. A	4.5	13.5	9.0	0.26
8	13.41	33.268D	24.970	6.29	105.9	4.2	0.41	1.9	0.08	1.17	0.21	39.	24.7	23.4	24.0	0.25
11	13.36	33.268	24.980	6.29	105.8	4.3	0.54	2.2	0.10	1.37	0.15					
19	12.75	33.327	25.147	6.10	101.3	5.0	0.56	4.2	0.17	2.13	0.38	11.	24.6	24.6	24.6	0.29
20	12.76	33.324	25.143			5.0	0.56	4.1	0.17							
27	12.47	33.380	25.243	5.82	96.1	5.4	0.68	5.4	0.20	1.34	0.46	4.1	9.2	9.5	9.3	0.15
37	12.31	33.477	25.349	5.64	92.9	6.3	0.79	6.4	0.14	0.79	0.41	1.3	1.7	1.6	1.7	0.12
42	12.28	33.490	25.365	5.58	91.9	6.5	0.80	6.5	0.14	0.75	0.28					
49	12.13	33.520	25.417	5.43	89.1	7.1	0.87	7.1	0.15	0.66	0.36	0.31	0.21	0.27	0.24	0.02

A) INCUBATION LIGHT INTENSITIES WERE 94, 42, 11, 4.3, 1.5, 0.30 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.3 N	122 24.1 W	10/04/06	1819 UTC	16 m	1220 - 1903 PST	1211 PST	1903 PST	283.3 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.81	33.200	24.626	6.10	105.7	2.4	0.29	0.0	0.01	0.38	0.09	83. A	3.8	4.6	4.2	0.15
10	14.64	33.209	24.670			2.2	0.28	0.0	0.01	0.52	0.06	38.	7.1	7.8	7.4	0.15
17	14.39	33.216	24.728	6.21	106.7	2.1	0.28	0.0	0.01	0.51	0.13					
24	14.24	33.233	24.773	6.22	106.5	1.9	0.28	0.1	0.01	0.68	0.16	10.	7.8	7.6	7.7	0.16
34	13.76	33.288	24.915	6.07	103.0	2.4	0.37	1.3	0.06	0.95	0.28	3.8	6.0	5.7	5.8	0.14
45	12.64	33.414	25.237	5.55	92.0	5.1	0.71	5.1	0.36	0.63	0.24	1.3	1.6	1.8	1.7	0.03
52	12.42	33.423	25.286	5.33	88.0	6.2	0.80	6.8	0.48	0.39	0.18					
61	11.88	33.455	25.414	4.79	78.2	9.7	1.04	11.3	0.07	0.16	0.14	0.29	0.07	0.05	0.06	0.03

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 55.0 N	118 55.8 W	07/04/06	1838 UTC	10 m	1204 - 1830 PST	1158 PST	1843 PST	759.5 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	13.17	33.463	25.169	6.42	107.7	4.6	0.44	3.5	0.15	2.94	0.00	74. A	31.6	31.1	31.4	0.42
7	12.92	33.454	25.212	6.39	106.6	4.4	0.43	3.3	0.15	3.56	0.16	34.	64.1	68.1	66.1	0.91
11	12.72	33.449	25.247	6.17	102.5	4.8	0.51	3.9	0.16	2.13	0.43					
14	12.65	33.455	25.266	6.10	101.2	4.9	0.53	4.2	0.17	2.12	0.39	12.	20.6	22.2	21.4	0.34
21	12.10	33.498	25.405	5.52	90.5	7.8	0.82	7.3	0.22	1.33	0.57	4.0	8.4	9.0	8.7	0.24
28	11.43	33.525	25.551	4.91	79.4	11.0	1.10	10.9	0.31	0.50	0.36	1.4	1.3	1.1	1.2	0.10
38	11.21	33.577	25.631	4.60	74.1	13.5	1.25	12.6	0.26	0.27	0.29	0.29	0.13	0.14	0.14	0.04

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 45.5 N	121 19.6 W	06/04/06	1741 UTC	22 m	1208 - 1852 PST	1208 PST	1851 PST	162.4 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	15.05	33.145	24.532	5.90	102.7	2.2	0.34	0.2	0.00	0.18	0.05	87. A	0.99	1.1	1.0	0.07
13	14.91	33.140	24.559	5.90	102.4	2.0	0.33	0.1	0.00	0.19	0.05	40.	2.6	2.7	2.7	0.09
23	14.90	33.139	24.561	5.90	102.3	2.0	0.33	0.1	0.00	0.19	0.05					
32	14.85	33.144	24.575	5.92	102.6	2.1	0.33	0.0	0.00	0.21	0.06	11.	2.6	2.6	2.6	0.08
46	14.11	33.156	24.742	6.04	103.1	2.3	0.33	0.0	0.00	0.44	0.18	4.0	3.1	3.3	3.2	0.09
53	13.44	33.200	24.913	5.73	96.5	3.3	0.52	2.3	0.25	0.56	0.40					
60	12.87	33.234	25.053	5.43	90.4	4.6	0.68	5.0	0.16	0.34	0.32	1.5	1.4	1.3	1.4	0.04
72	12.62	33.267	25.127	5.32	88.1	5.5	0.77	6.5	0.07	0.25	0.24					
83	11.63	33.308	25.346	4.77	77.4	9.0	1.07	11.4	0.02	0.11	0.10	0.31	0.06	0.08	0.07	0.01

RV NEW HORIZON CALCOFI CRUISE 0604 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 44.8 N	123 20.5 W	05/04/06	1923 UTC	29 m	1234 - 1902 PST	1216 PST	1857 PST	77.9 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	15.49	33.168	24.453	5.77	101.3	2.0	0.31	0.1	0.00	0.09	0.01	90. A	0.30	0.37	0.33	0.07
17	15.47	33.165	24.456	5.77	101.3	1.8	0.31	0.1	0.00	0.10	0.04	41.	1.1	1.1	1.1	0.06
30	15.47	33.165	24.457	5.77	101.2	1.9	0.31	0.0	0.00	0.10	0.01					
43	15.44	33.163	24.462	5.77	101.2	1.9	0.31	0.0	0.00	0.11	0.00	10.	1.0	1.1	1.0	0.07
51	15.41	33.159	24.466	5.77	101.1	1.8	0.31	0.0	0.00	0.12	0.01					
61	15.38	33.153	24.468	5.79	101.4	1.9	0.31	0.0	0.00	0.13	0.01	4.0	0.72	0.68	0.70	0.06
70	14.87	33.128	24.560	5.83	101.0	1.9	0.31	0.0	0.00	0.21	0.05					
76	14.65	33.076	24.567													
78	14.60	33.071	24.574	5.86	101.0	2.0	0.32	0.1	0.00	0.27	0.10	1.6	0.62	0.68	0.65	0.06
90	14.19	33.166	24.734	5.70	97.4	2.5	0.41	0.9	0.06	0.55	0.22					
101	13.10	33.211	24.991	5.46	91.3	3.9	0.58	3.5	0.04	0.35	0.22					
109	12.49	33.260	25.148	5.29	87.3	4.7	0.67	5.1	0.03	0.24	0.16	0.31	0.14	0.16	0.15	0.02

A) INCUBATION LIGHT INTENSITIES WERE 94, 42, 11, 4.3, 1.5, 0.30 PERCENT RESPECTIVELY.

RV NEW HORIZON — CALCOFI CRUISE 0604 — STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.7 N	117 18.5 W	01/04/06	1949 UTC	14 m	1224 - 1840 PST	1153 PST	1838 PST	283.9 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	14.60	33.426	24.845	6.52	112.6	1.2	0.21	0.0	0.01	0.88	0.16	80. A	7.7	7.5	7.6	0.25
9	14.42	33.426	24.884	6.57	113.1	0.9	0.20	0.0	0.01	0.88	0.16	37.	12.3	11.7	12.0	0.32
15	13.63	33.440	25.059	6.35	107.5	2.2	0.24	0.1	0.03	1.92	0.34					
20	12.04	33.441	25.372	4.25	69.6	10.0	1.01	9.9	0.28	0.91	0.26	11.	8.5	8.6	8.5	0.18
29	11.00	33.520	25.624	3.60	57.7	15.0	1.44	16.5	0.20	0.67	0.25	4.2	3.9	4.3	4.1	0.11
39	10.62	33.630	25.777	3.21	51.0	18.7	1.70	19.6	0.15	0.40	0.25	1.4	0.80	0.79	0.80	0.08
46	10.40	33.685	25.858	3.01	47.7	20.6	1.79	21.0	0.15	0.31	0.27					
53	10.29	33.721	25.905	2.90	45.8	21.8	1.83	21.9	0.15	0.27	0.25	0.30	0.07	0.09	0.08	0.13

RV NEW HORIZON — CALCOFI CRUISE 0604 — STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 31.0 N	118 12.5 W	02/04/06	1726 UTC	24 m	1158 - 1842 PST	1156 PST	1841 PST	282.4 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
1	15.05	33.401	24.729	5.93	103.3	2.4	0.33	0.1	0.00	0.29	0.01	94. A	3.9	3.9	3.9	0.09
8	14.95	33.401	24.751	5.93	103.1	2.4	0.33	0.1	0.00	0.31	0.01					
15	14.92	33.400	24.757	5.93	103.1	2.3	0.32	0.0	0.00	0.27	0.03	38.	4.9	5.2	5.0	0.11
24	14.66	33.395	24.809	5.98	103.4	2.3	0.32	0.1	0.00	0.40	0.08					
34	14.46	33.396	24.853	5.97	102.8	2.4	0.35	0.2	0.03	0.54	0.08	11.	5.5	6.0	5.7	0.09
42	13.72	33.387	25.000	5.78	98.0	3.5	0.50	2.1	0.15	0.57	0.05					
49	13.26	33.387	25.094	5.67	95.2	4.2	0.60	3.4	0.24	0.58	0.13	4.4	3.6	3.7	3.7	0.09
58	11.98	33.391	25.345	4.72	77.2	8.8	1.03	10.4	0.17	0.33	0.20					
66	11.15	33.442	25.537	4.22	67.8	12.2	1.28	14.3	0.07	0.22	0.19	1.5	0.60	0.59	0.59	0.03
78	10.26	33.570	25.793	3.67	57.9	17.4	1.57	18.9	0.03	0.10	0.10					
91	10.12	33.608	25.847	3.57	56.1	18.5	1.62	19.7	0.02	0.08	0.07	0.30	0.02	0.03	0.02	0.03

RV NEW HORIZON — CALCOFI CRUISE 0604 — STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 30.4 N	120 13.8 W	03/04/06	1833 UTC	18 m	1210 - 1855 PST	1204 PST	1849 PST	254.1 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	14.51	33.055	24.578	6.07	104.4	2.5	0.33	0.1	0.01	0.32	0.07	92. A	5.9	5.9	5.9	0.12
10	14.60	33.138	24.624	6.11	105.3	2.4	0.33	0.3	0.02	0.46	0.08	43.	6.9	6.8	6.8	0.13
18	14.22	33.302	24.831	6.22	106.5	2.5	0.35	0.7	0.04	0.63	0.06					
26	14.11	33.313	24.862	6.22	106.3	2.5	0.36	0.8	0.05	0.61	0.11	11.	5.3	5.7	5.5	0.14
37	13.74	33.357	24.973	6.20	105.2	2.7	0.40	1.4	0.07	0.67	0.16	4.3	3.0	3.4	3.2	0.12
45	13.54	33.383	25.034	6.03	101.9	3.2	0.46	2.3	0.10	0.69	0.17					
51	13.17	33.384	25.109	5.76	96.6	4.1	0.58	3.6	0.18	0.65	0.20	1.3	1.4	1.5	1.4	0.08
59	13.02	33.414	25.163	5.73	95.8	4.3	0.61	4.0	0.20	0.59	0.15					
68	12.05	33.397	25.337	4.82	78.9	8.7	1.02	10.7	0.10	0.26	0.16	0.30	0.08	0.09	0.08	0.05

RV NEW HORIZON — CALCOFI CRUISE 0604 — STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 10.6 N	122 55.7 W	04/04/06	1913 UTC	22 m	1220 - 1701 PST	1215 PST	1859 PST	162.3 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	15.96	33.129	24.319	5.83	103.3	2.1	0.33	0.1	0.00	0.14	0.02	87. A	1.7	1.9	1.8	0.07
13	15.92	33.130	24.329	5.85	103.6	2.1	0.33	0.1	0.00	0.14	0.03	40.	2.5	2.5	2.5	0.08
22	15.14	33.167	24.530	6.00	104.6	2.1	0.33	0.1	0.00	0.21	0.04					
32	14.61	33.179	24.654	6.07	104.7	2.2	0.33	0.1	0.00	0.26	0.04	11.	2.3	2.6	2.5	0.09
38	14.41	33.188	24.703	6.09	104.6	2.0	0.33	0.1	0.00	0.34	0.12					
46	13.67	33.192	24.860	5.85	99.0	2.6	0.46	1.4	0.12	0.65	0.37	4.0	3.8	3.8	3.8	0.07
54	12.91	33.255	25.061	5.48	91.3	4.6	0.71	5.2	0.30	0.42	0.34					
62	12.59	33.298	25.157	5.26	87.1	5.6	0.82	7.1	0.14	0.28	0.26	1.3	0.66	0.71	0.69	0.03
72	11.87	33.312	25.305	4.88	79.6	8.0	1.00	10.1	0.03	0.16	0.15					
83	11.41	33.395	25.454	4.63	74.8	10.4	1.19	13.0	0.02	0.08	0.08	0.31	0.03	0.03	0.03	0.03

A) INCUBATION LIGHT INTENSITIES WERE 94, 42, 11, 4.3, 1.5, 0.30 PERCENT RESPECTIVELY.

CalCOFI Cruise 0604

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 05.3	120 46.5	04/16	2139	2145	122	54	33	33
76.7	51.0	35 01.3	120 55.0	04/16	2358	0019	466	211	120	120
76.7	55.0	34 53.3	121 12.0	04/16	1533	1554	442	204	34	34
76.7	60.0	34 43.4	121 33.3	04/16	1113	1134	475	204	53	53
76.7	70.0	34 23.5	122 15.1	04/16	0505	0527	458	210	33	33
76.7	80.0	34 03.2	122 56.5	04/15	2310	2331	451	206	27	27
76.7	90.0	33 43.2	123 38.2	04/15	1727	1748	438	210	14	14
76.7	100.0	33 23.3	124 19.4	04/15	1104	1126	480	210	21	21
80.0	50.5	34 27.6	120 29.2	04/13	1553	1555	44	13	90	90
80.0	51.0	34 26.9	120 31.3	04/13	1746	1756	207	87	77	77
80.0	55.0	34 19.1	120 47.9	04/13	2140	2202	472	198	305	305
80.0	60.0	34 09.2	121 09.2	04/14	0155	0216	436	212	76	76
80.0	70.0	33 49.2	121 50.2	04/14	0658	0720	429	213	33	33
80.0	80.0	33 29.0	122 31.8	04/14	1630	1651	506	194	10	10
80.0	90.0	33 08.9	123 13.2	04/14	2252	2314	467	208	26	26
80.0	100.0	32 49.0	123 54.3	04/15	0458	0519	453	212	20	20
81.7	43.5	34 24.3	119 47.8	04/13	0819	0821	42	10	119	119
81.8	46.9	34 16.6	120 01.6	04/13	1210	1231	450	202	218	218
83.3	39.4	34 15.4	119 19.6	04/13	0508	0510	45	12	199	199
83.3	40.6	34 13.4	119 25.1	04/13	0402	0405	63	21	144	144
83.3	42.0	34 10.6	119 30.4	04/13	0209	0218	169	76	148	148
83.3	51.0	33 52.7	120 08.1	04/12	2002	2011	185	80	43	43
83.3	55.0	33 44.6	120 24.8	04/12	1650	1711	479	198	50	50
83.3	60.0	33 34.8	120 46.0	04/12	1222	1243	447	210	38	38
83.3	70.0	33 14.7	121 26.5	04/12	0608	0630	475	208	36	36
83.3	80.0	32 54.9	122 07.9	04/11	2342	0004	443	213	88	88
83.3	90.0	32 34.8	122 48.9	04/11	1738	1759	447	209	25	25
83.3	100.0	32 14.8	123 29.2	04/11	0951	1012	471	202	17	17
83.3	110.0	31 54.6	124 10.0	04/11	0515	0536	515	198	27	27
85.4	35.8	34 00.7	118 49.9	04/17	1857	1859	52	13	252	252
86.7	33.0	33 53.4	118 29.4	04/08	1209	1214	107	43	644	644
86.7	35.0	33 49.5	118 37.5	04/08	1635	1656	470	204	130	130
86.7	40.0	33 39.3	118 58.2	04/08	2106	2127	418	210	77	77
86.7	45.0	33 29.4	119 19.0	04/09	0154	0215	423	216	158	158
86.7	50.0	33 19.2	119 38.9	04/09	0528	0536	174	62	34	34
86.7	55.0	33 09.4	120 00.4	04/09	1109	1131	448	197	27	27
86.7	60.0	32 59.5	120 20.7	04/09	1532	1553	387	216	39	39
86.7	70.0	32 39.5	121 01.7	04/09	2209	2230	410	220	49	49
86.7	80.0	32 19.6	121 42.8	04/10	0436	0457	432	212	51	51
86.7	90.0	31 59.4	122 23.8	04/10	0919	0940	437	210	43	43
86.7	100.0	31 39.4	123 03.9	04/10	1647	1708	463	209	32	32
86.7	110.0	31 19.4	123 44.4	04/10	2232	2253	437	211	37	37
86.8	32.5	33 53.3	118 26.5	04/08	1305	1307	41	14	617	617
88.5	30.1	33 40.1	118 05.4	04/08	0726	0728	43	13	212	212
90.0	27.7	33 29.5	117 44.9	04/07	2346	2348	45	12	333	333
90.0	28.0	33 29.0	117 46.2	04/08	0131	0152	409	212	149	149
90.0	30.0	33 25.3	117 54.4	04/08	0444	0505	408	211	145	145
90.0	35.0	33 15.1	118 15.0	04/07	1935	1956	426	210	157	157
90.0	37.0	33 11.1	118 23.2	04/07	1625	1646	417	210	91	91
90.0	45.0	32 55.0	118 55.8	04/07	0930	0951	423	208	94	94
90.0	53.0	32 39.1	119 29.2	04/07	0502	0523	440	209	57	57
90.0	60.0	32 25.1	119 57.6	04/06	2342	0004	436	212	57	57
90.0	70.0	32 05.0	120 38.5	04/06	1650	1712	461	208	24	24
90.0	80.0	31 45.2	121 19.3	04/06	0838	0859	460	202	39	39
90.0	90.0	31 25.0	121 59.6	04/06	0258	0320	474	214	44	44
90.0	100.0	31 05.0	122 38.9	04/05	2035	2056	464	211	50	50
90.0	110.0	30 45.1	123 20.2	04/05	1308	1329	481	213	12	12
91.7	26.4	33 14.8	117 27.8	04/01	1655	1657	37	14	109	109
93.3	26.7	32 57.6	117 18.4	04/01	1246	1253	112	72	151	151
93.3	28.0	32 54.8	117 23.7	04/01	2135	2156	398	213	166	166
93.3	30.0	32 50.8	117 31.8	04/02	0043	0104	394	215	56	56
93.3	35.0	32 40.8	117 52.4	04/02	0449	0509	405	206	106	106
93.3	40.0	32 30.9	118 12.5	04/02	0823	0844	417	209	48	48
93.3	45.0	32 20.8	118 33.3	04/02	1408	1429	424	213	38	38
93.3	50.0	32 10.8	118 53.6	04/02	1838	1859	414	208	70	70
93.3	55.0	32 00.8	119 14.0	04/02	2301	2322	432	204	127	127
93.3	60.0	31 50.9	119 34.5	04/03	0320	0341	413	213	73	73
93.3	70.0	31 30.5	120 14.0	04/03	0831	0852	434	210	58	58
93.3	80.0	31 10.9	120 55.0	04/03	1647	1708	433	207	21	21
93.3	90.0	30 50.8	121 35.3	04/03	2312	2333	416	217	34	34
93.3	100.0	30 30.9	122 15.5	04/04	0557	0618	466	206	17	17
93.3	110.0	30 10.8	122 55.3	04/04	1226	1248	469	217	32	32
93.4	26.4	32 57.3	117 16.9	04/01	1350	1352	49	13	124	124

FIGURES

Avifauna Observations

CalCOFI Cruise 0604

1a. Pacific Loon distribution.

1b. Leach's Storm-Petrel distribution

1c. Unidentified Dark Shearwater distribution.

1d. California Gull distribution

1e. Brandt's Cormorant Gull distribution.

1f. Western Gull distribution.

CalCOFI Cruise 0604