UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0808
14 – 30 October 2008

CC Reference 09-05
16 October 2009

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 0810
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INTRODUCTION

The data presented in this report were collected during cruise 0810* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon* of Scripps Institution of Oceanography, University of California, San Diego. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the 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 P149. 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

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

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.

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 acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

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 52.29 µCi of ^{14}C as $NaHCO_3$ (200 µl of 271 µCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation 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.

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 membrane contactor with a gas loop that was 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. (M. Ohman, SIO)

5) *SCCOOS Nearshore Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore. 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. (R. Goericke, SIO)

6) *Inorganic Carbon System*: The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and pCO2. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, 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. (J. Hildebrand, SIO)

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 0810

1. CalCOFI Cruise 0810 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.

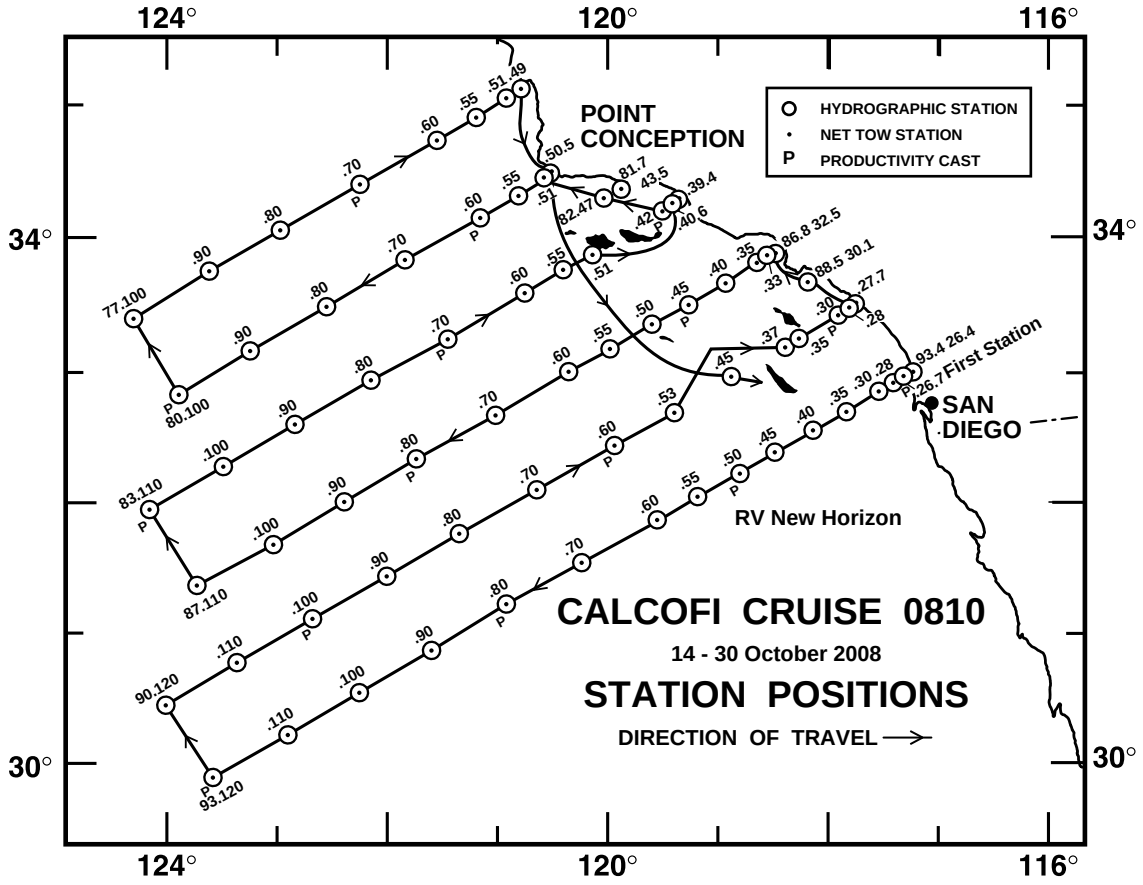

FIGURE 1

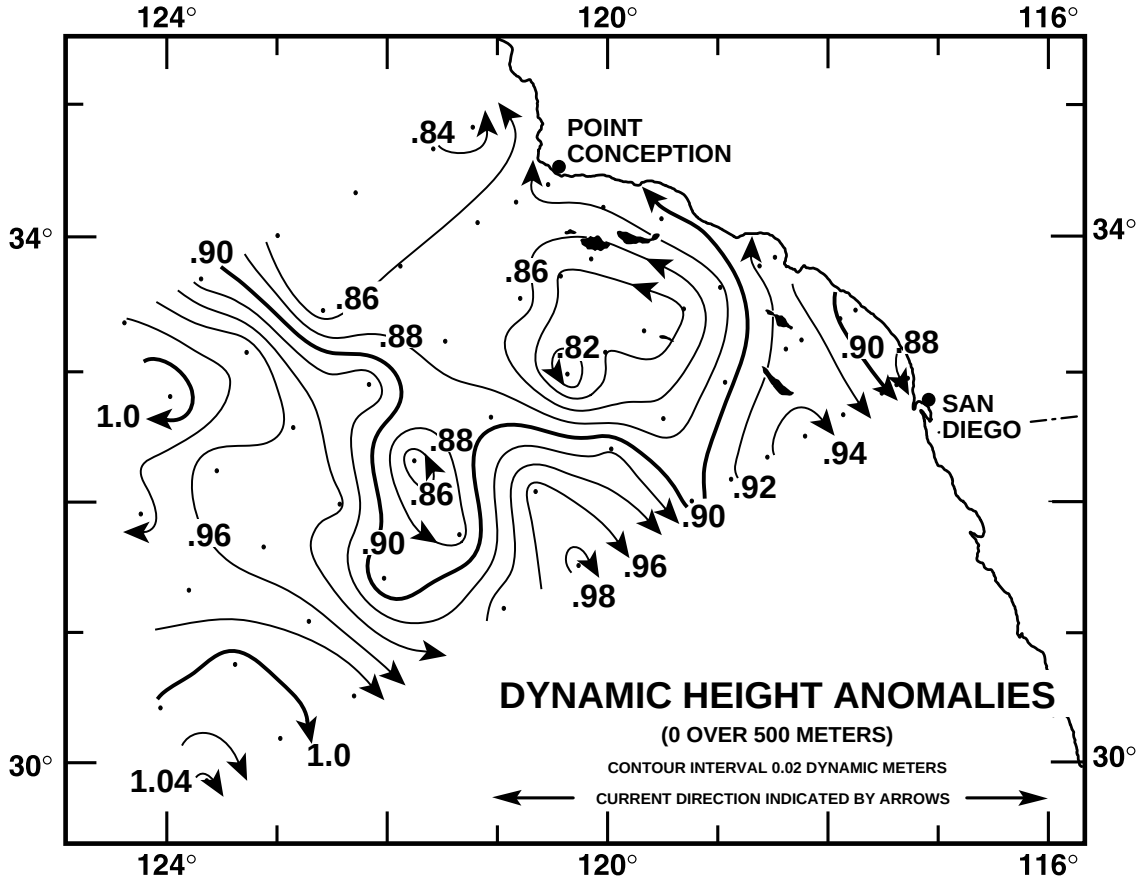

FIGURE 2

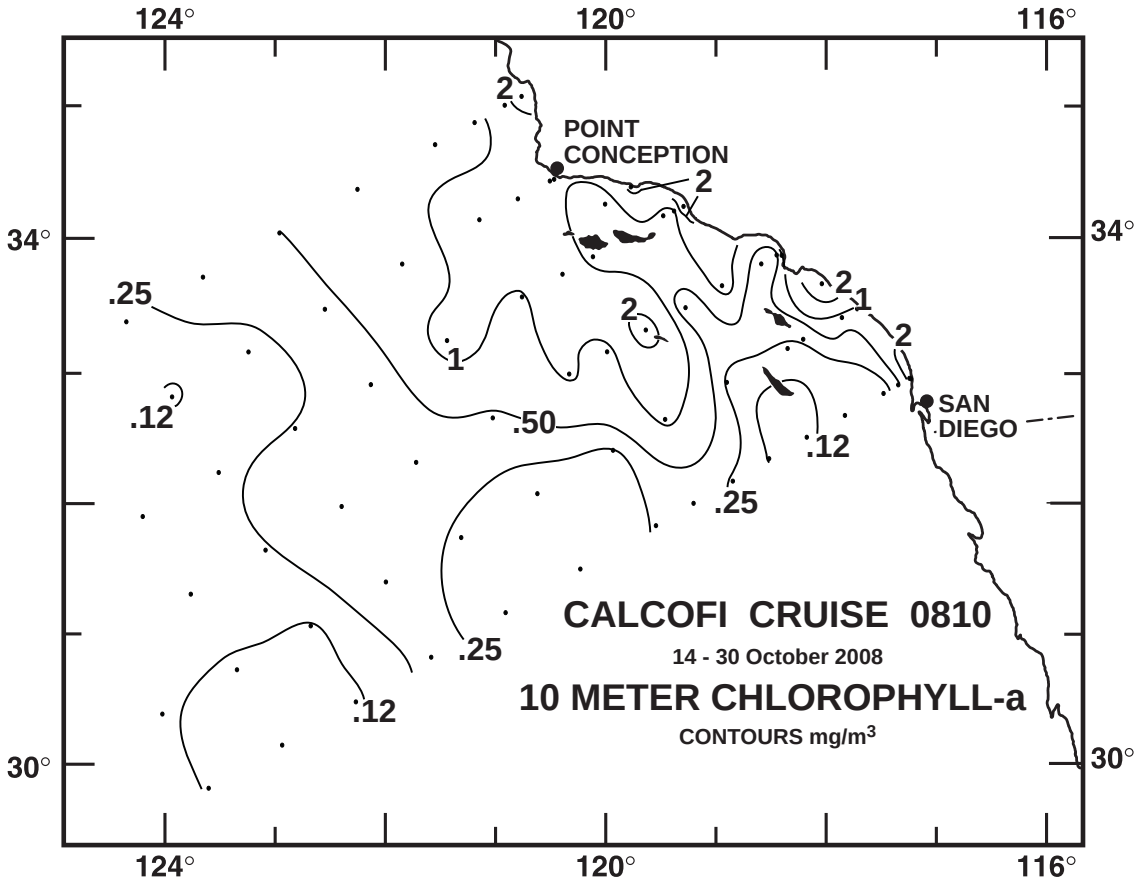

FIGURE 3A

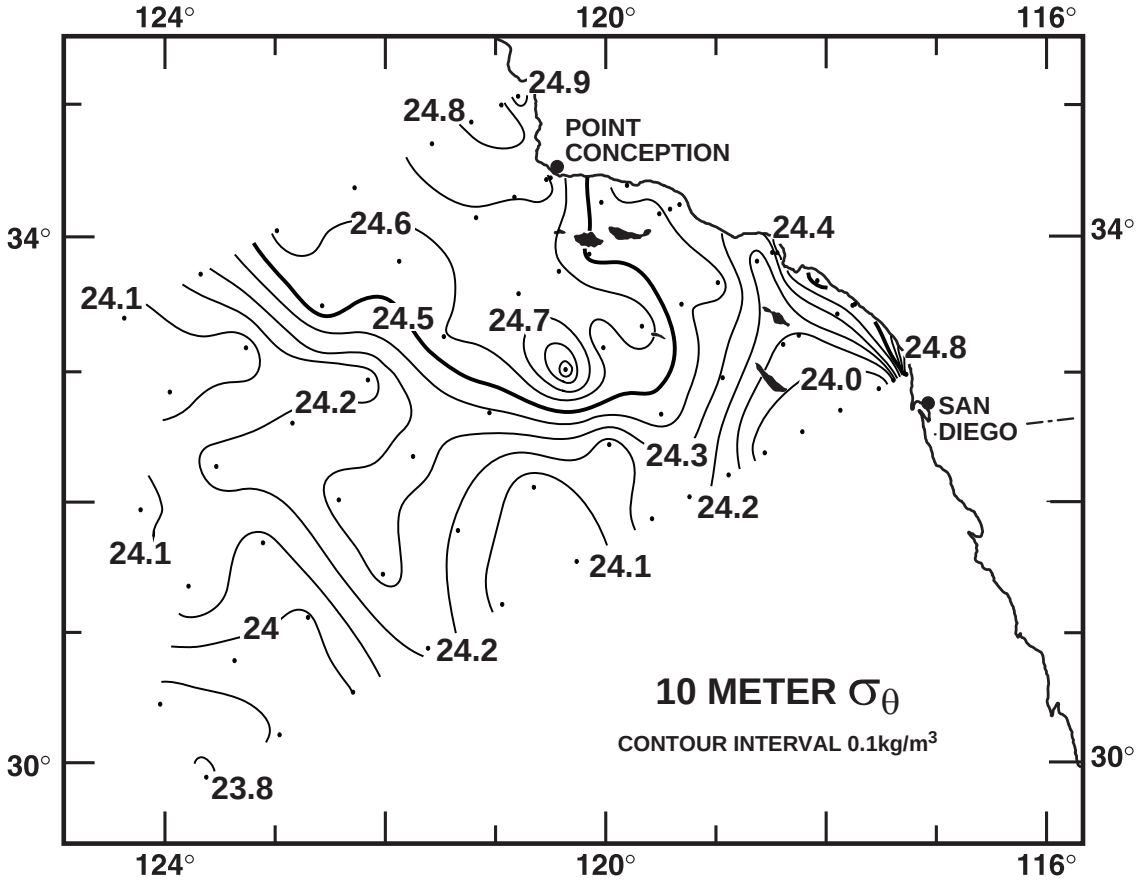

FIGURE 3B

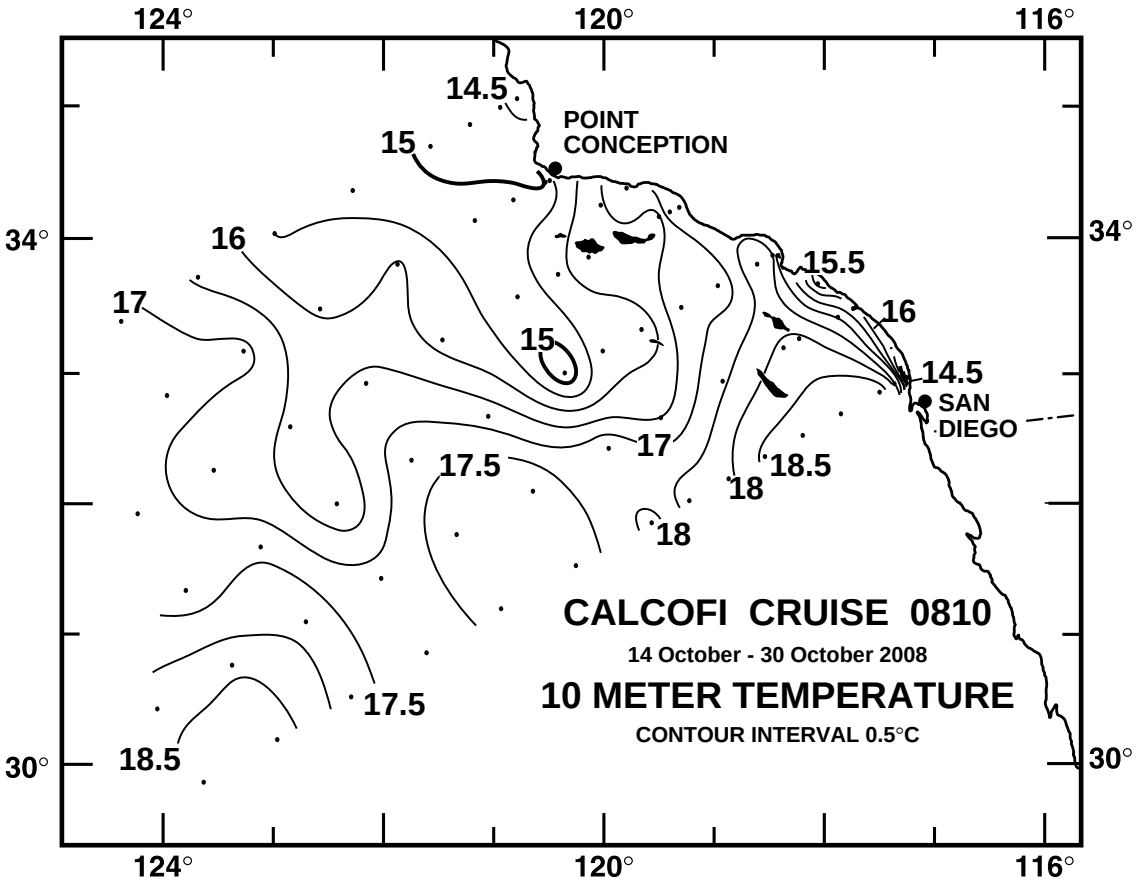

FIGURE 3C

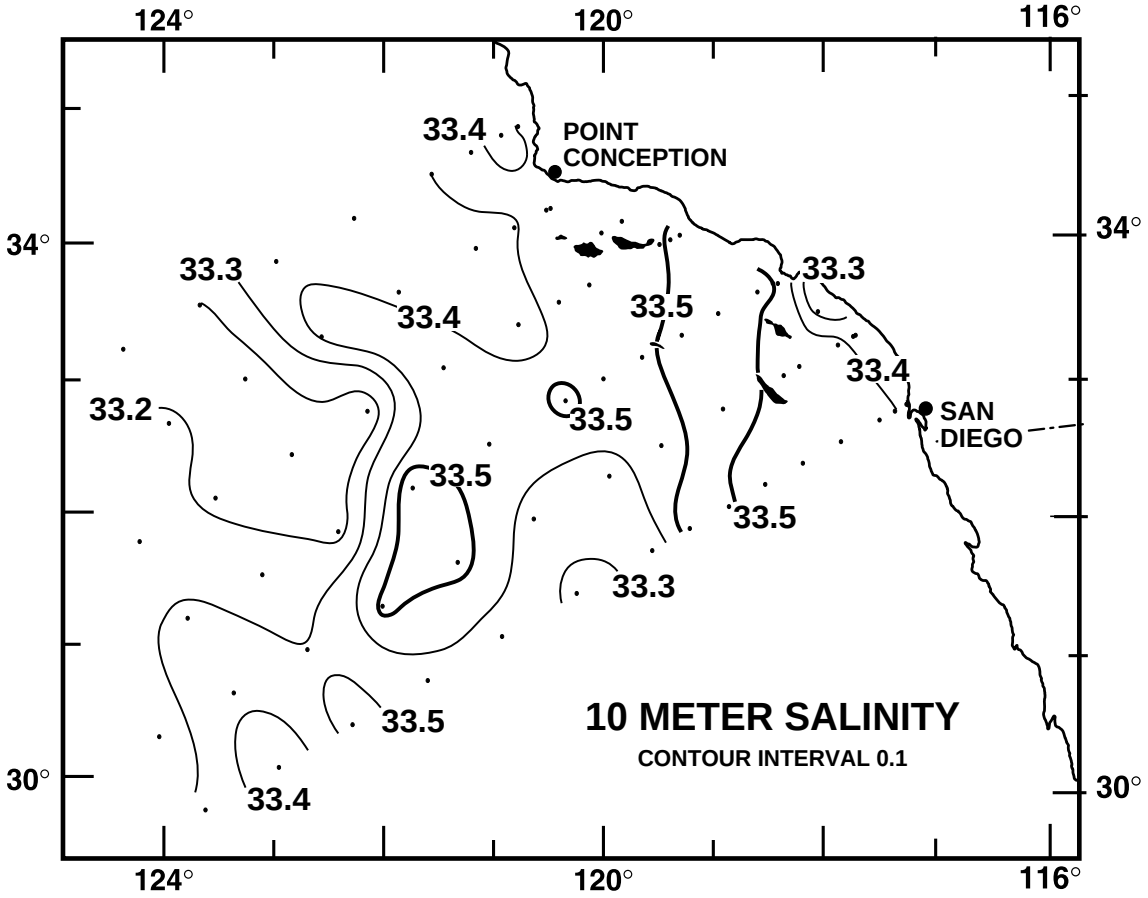

FIGURE 3D

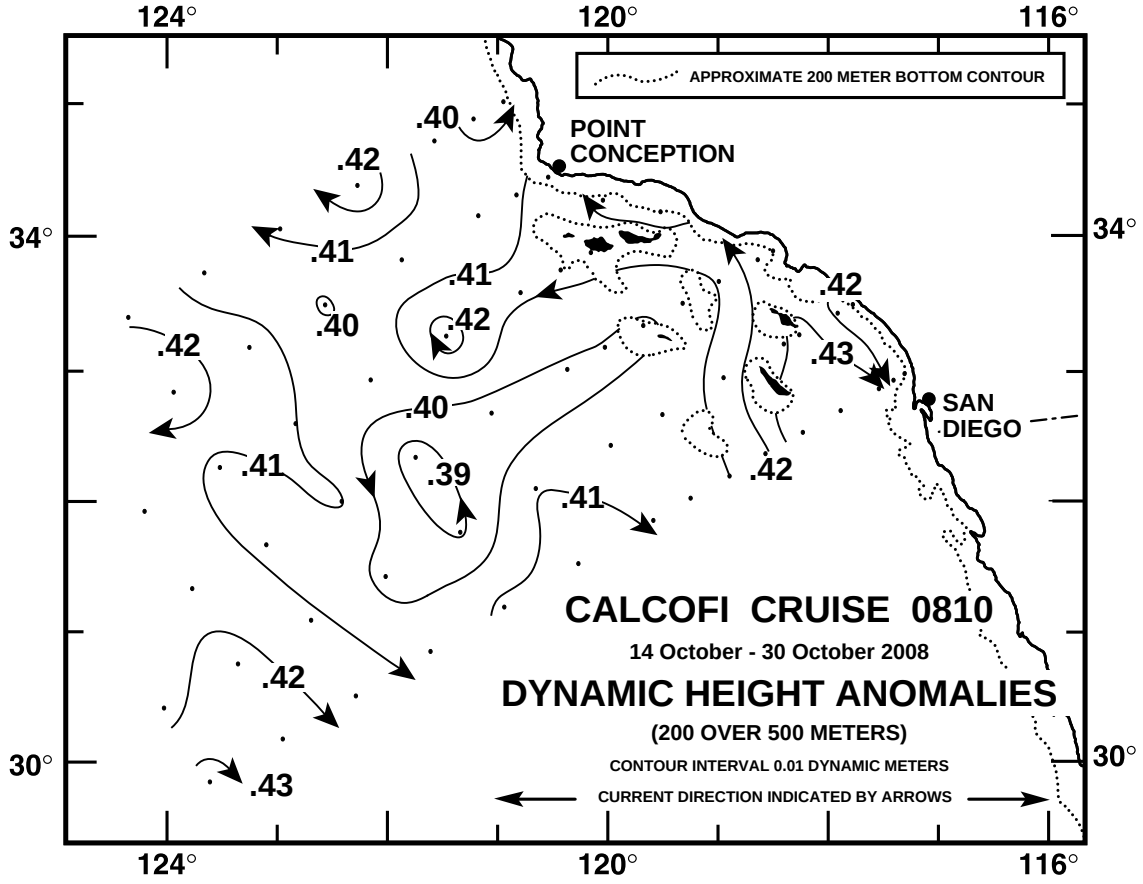

FIGURE 4A

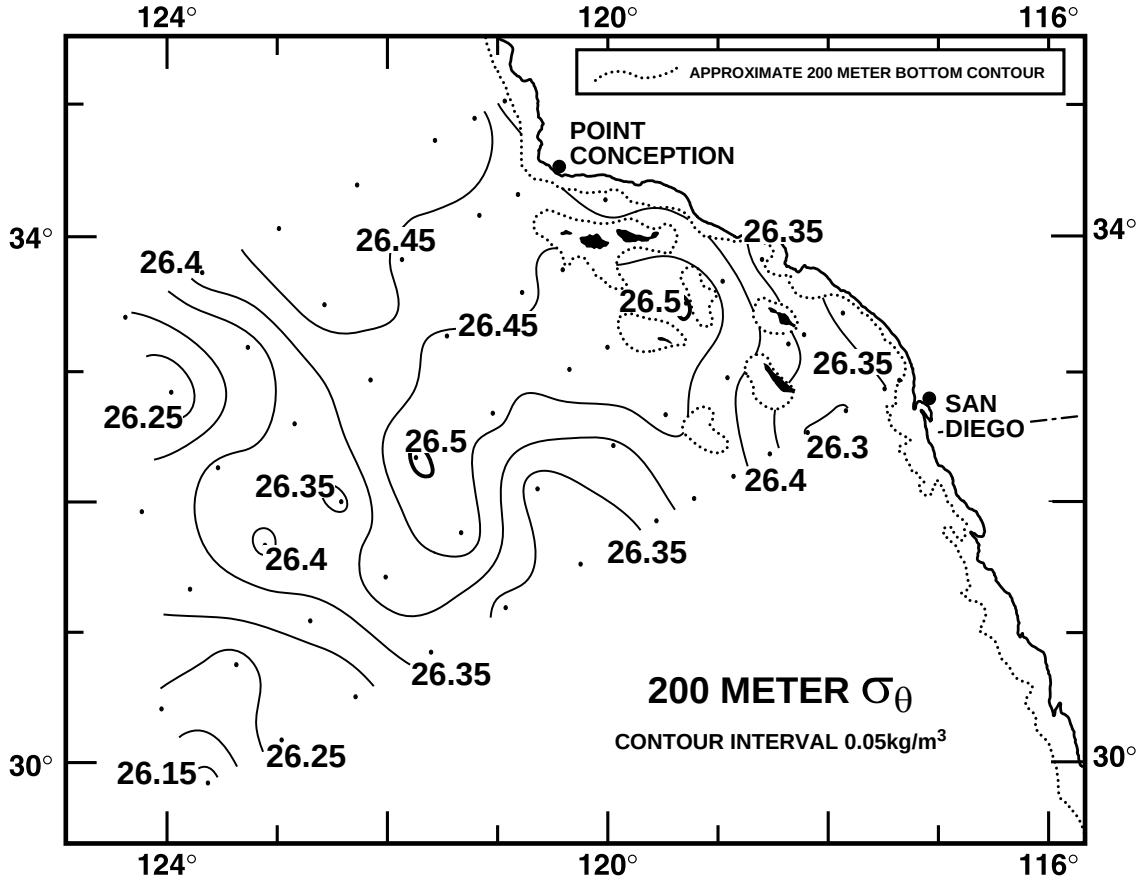

FIGURE 4B

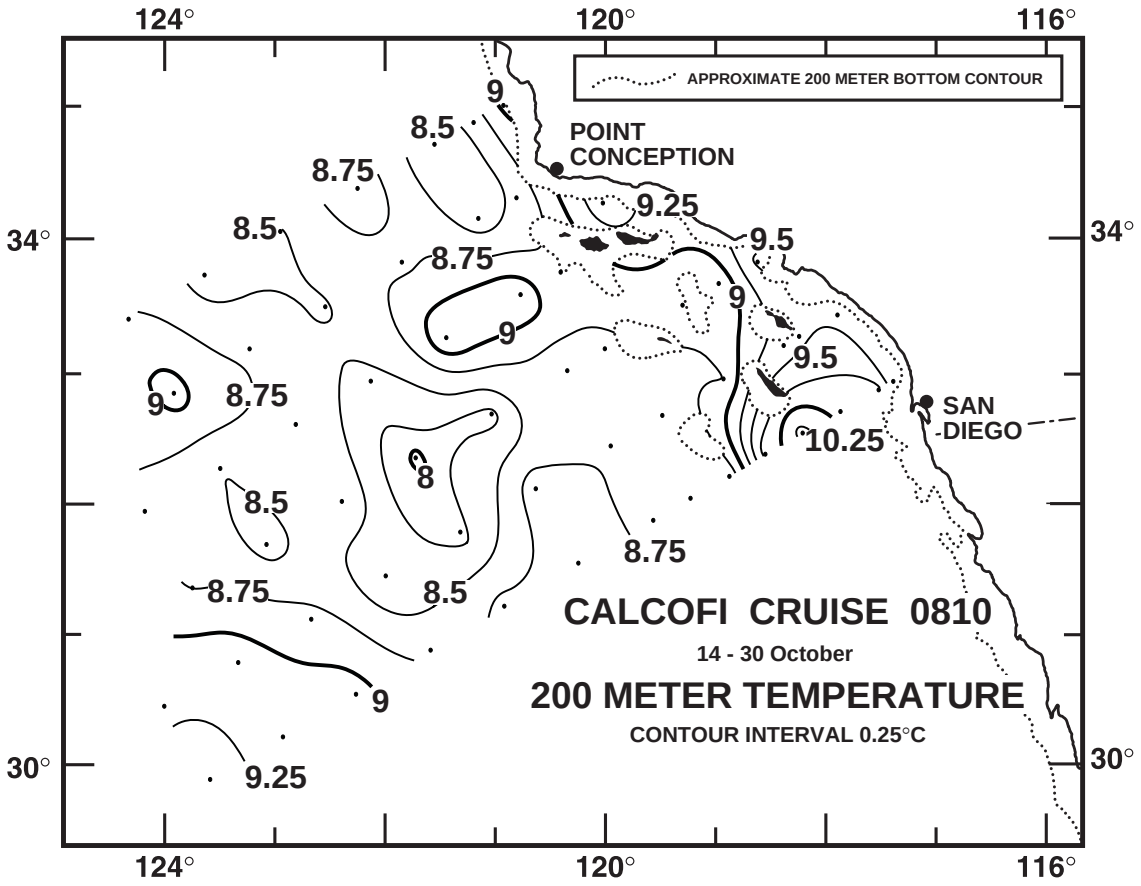

FIGURE 4C

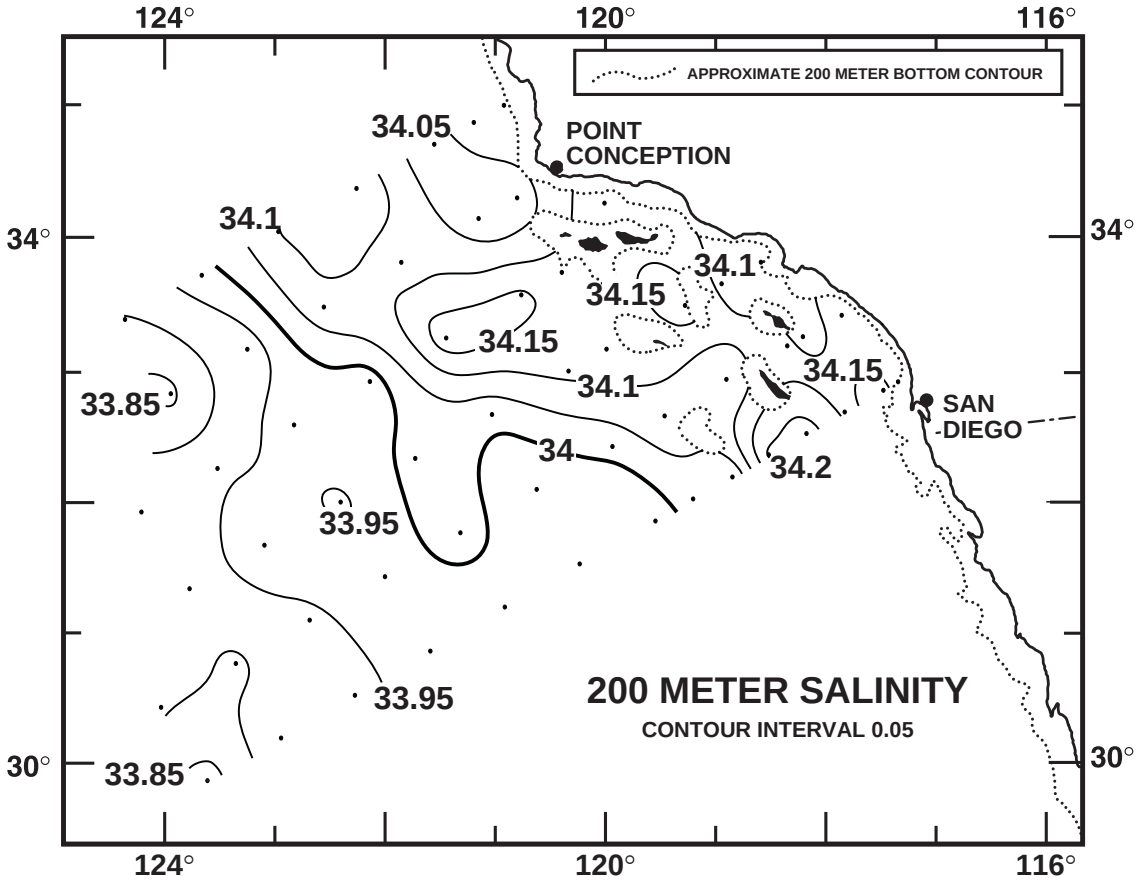

FIGURE 4D

CALCOFI CRUISE 0810

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POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

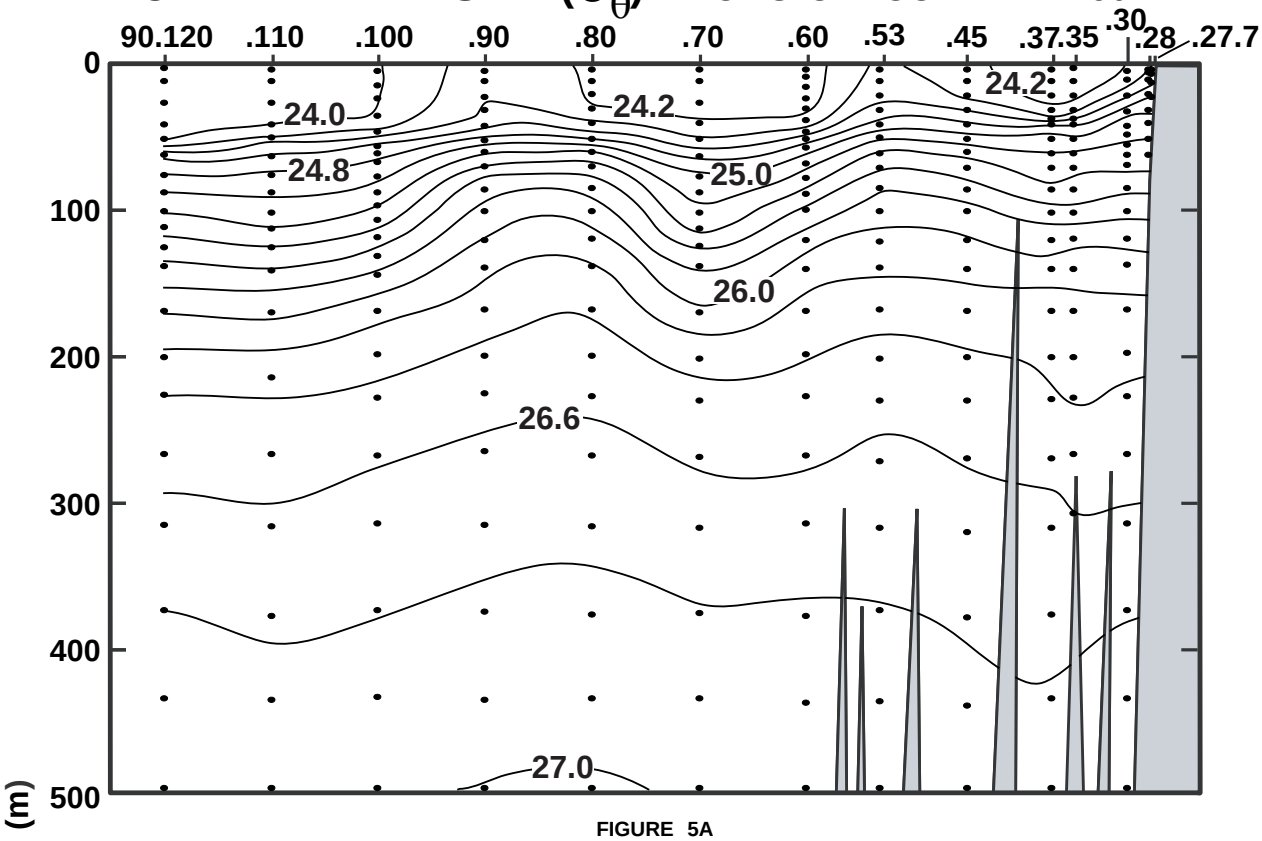

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

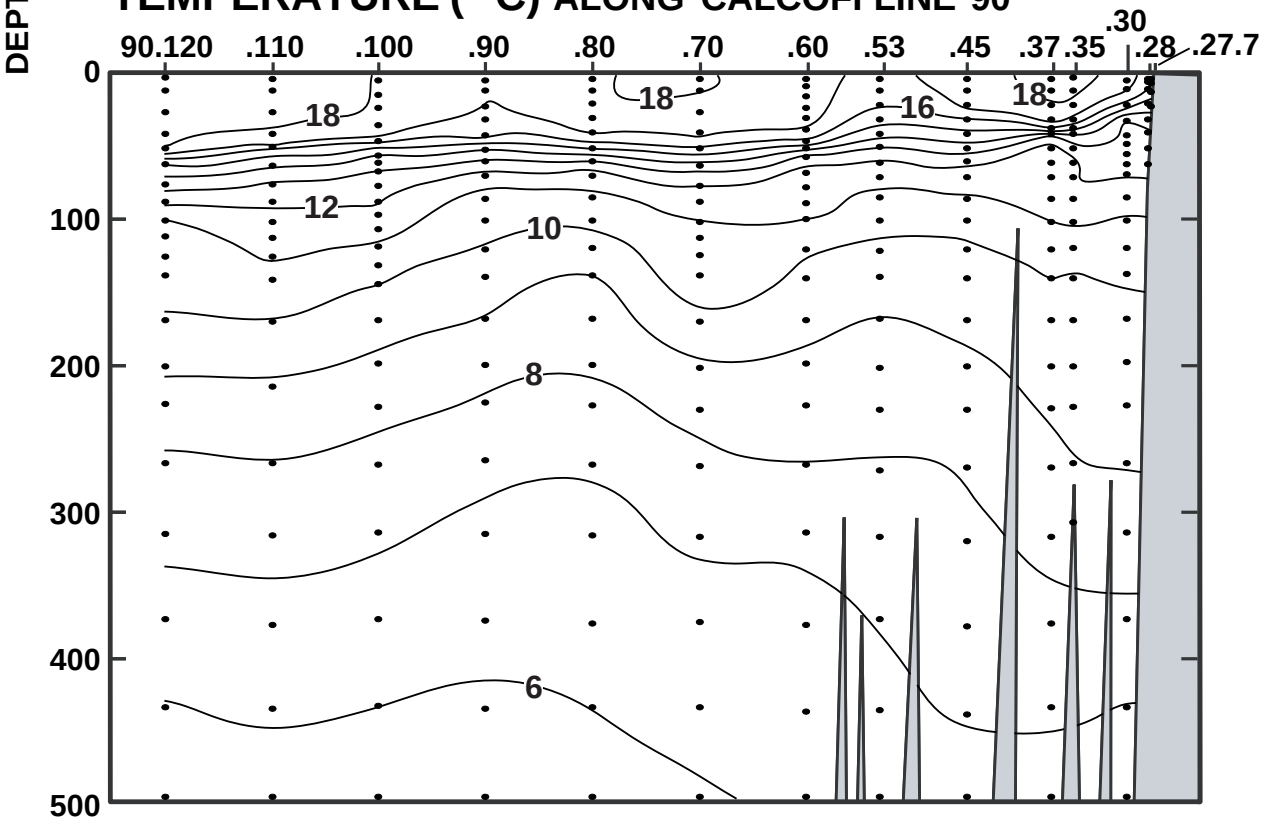

FIGURE 5B

CALCOFI CRUISE 0810

18 - 20 October 2008

SALINITY ALONG CALCOFI LINE 90

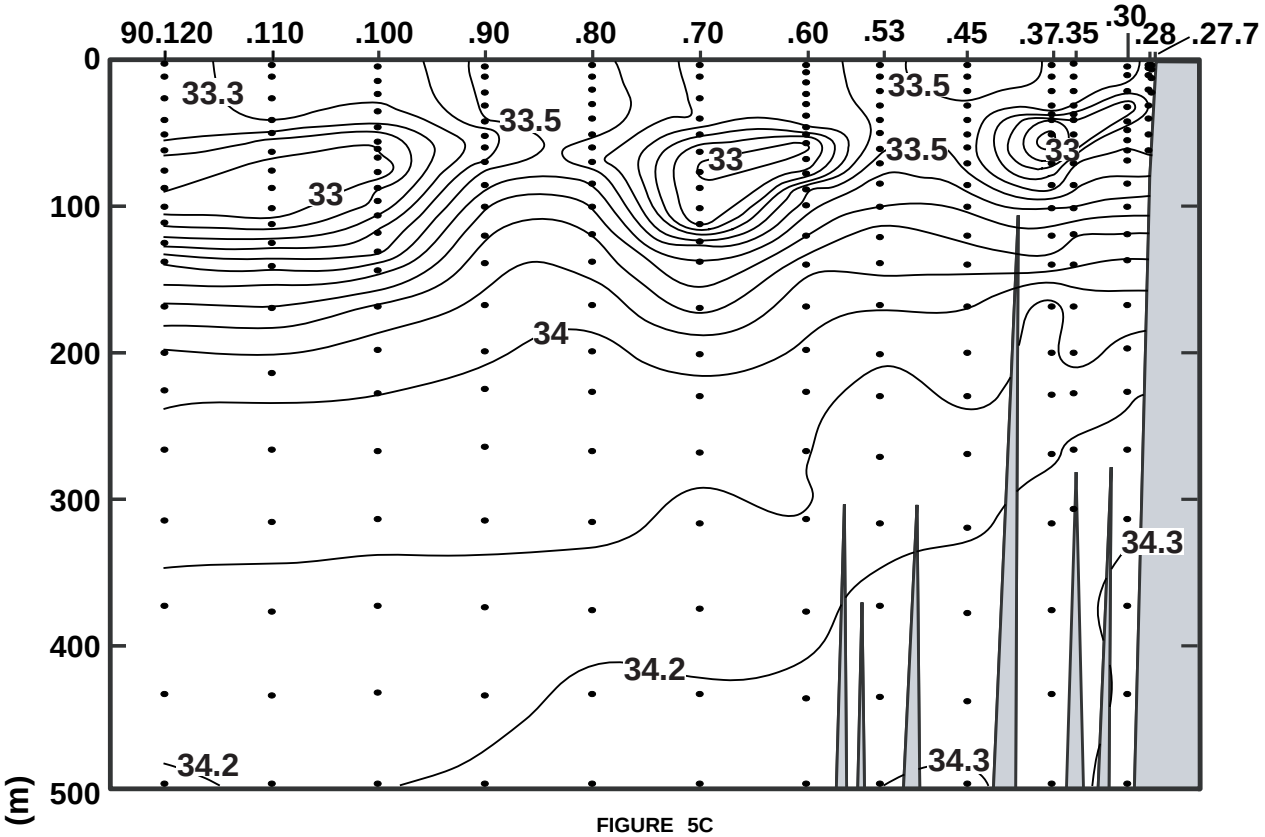

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

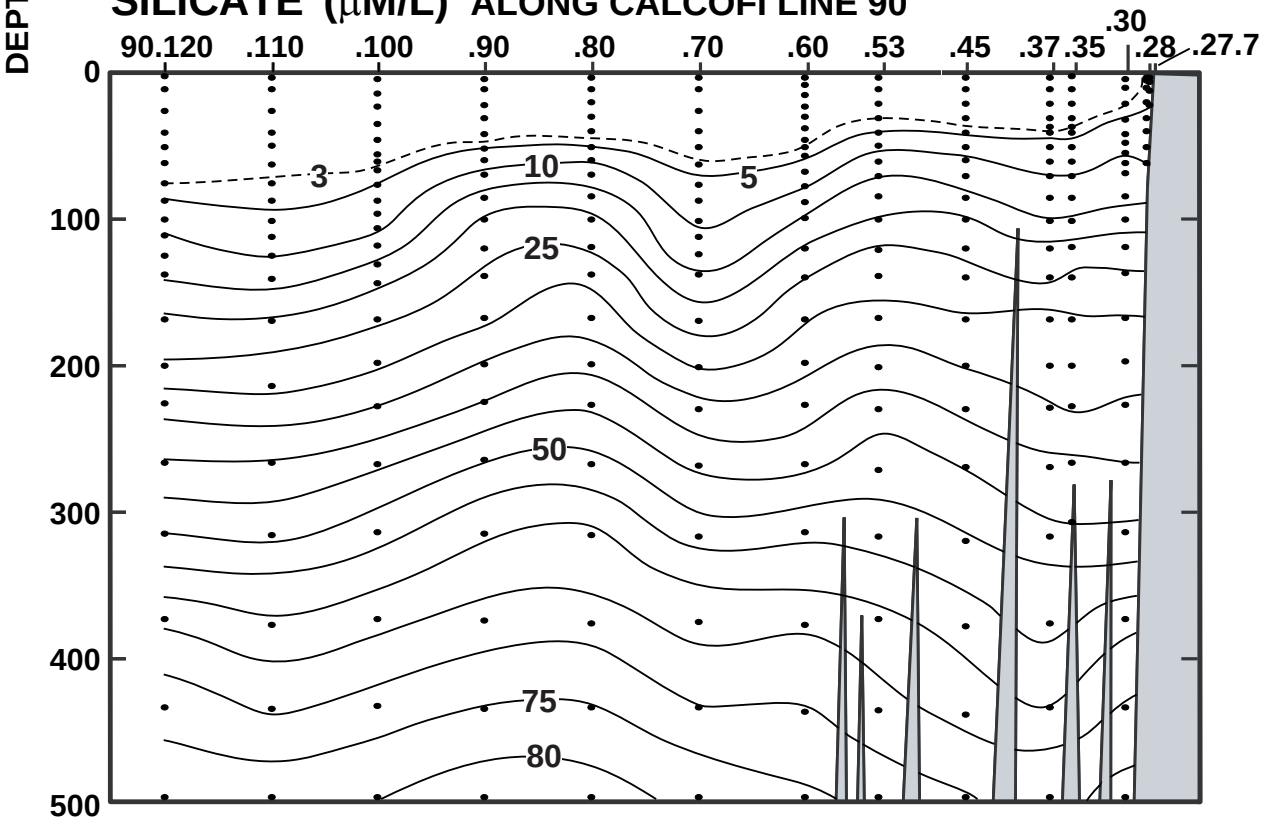

FIGURE 5D

CALCOFI CRUISE 0810

18 - 20 October 2008

NITRATE (μM/L) ALONG CALCOFI LINE 90

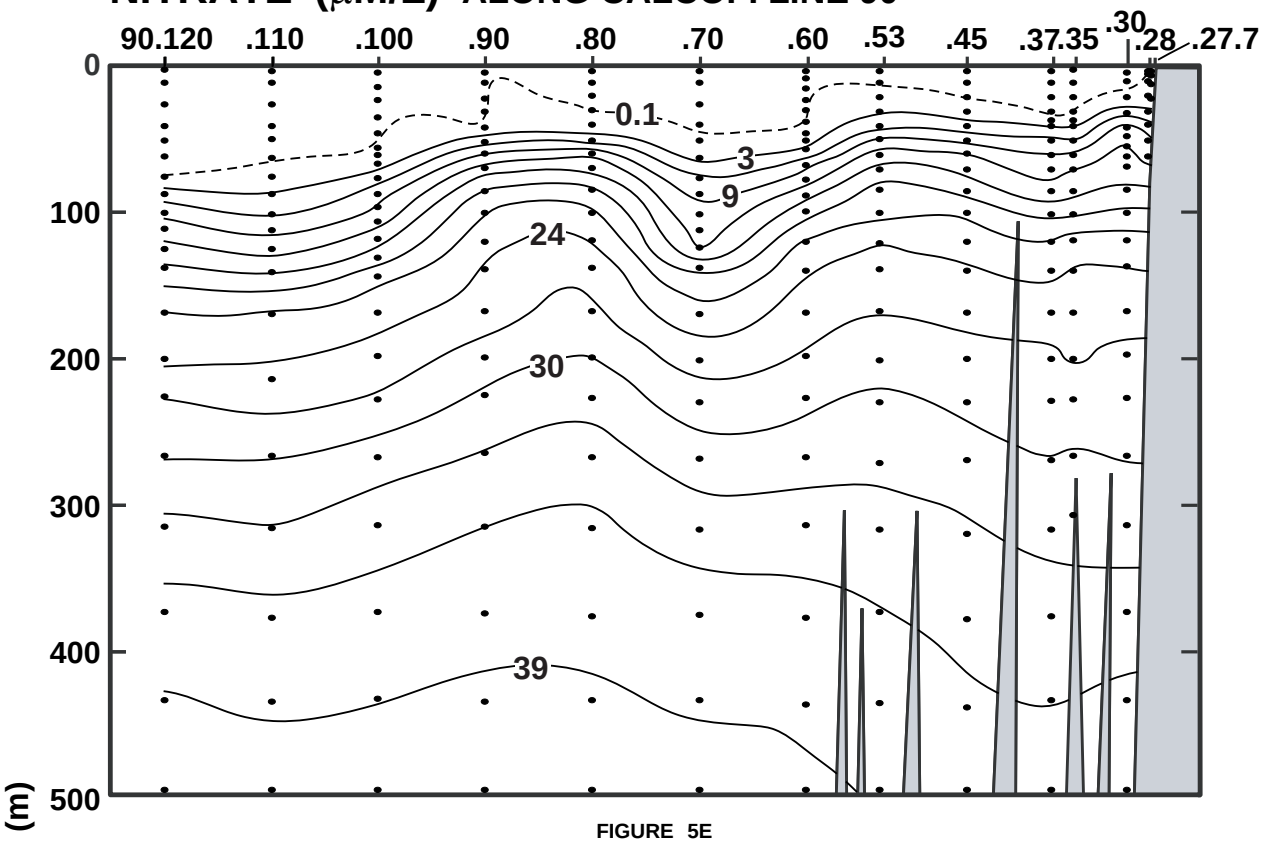

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

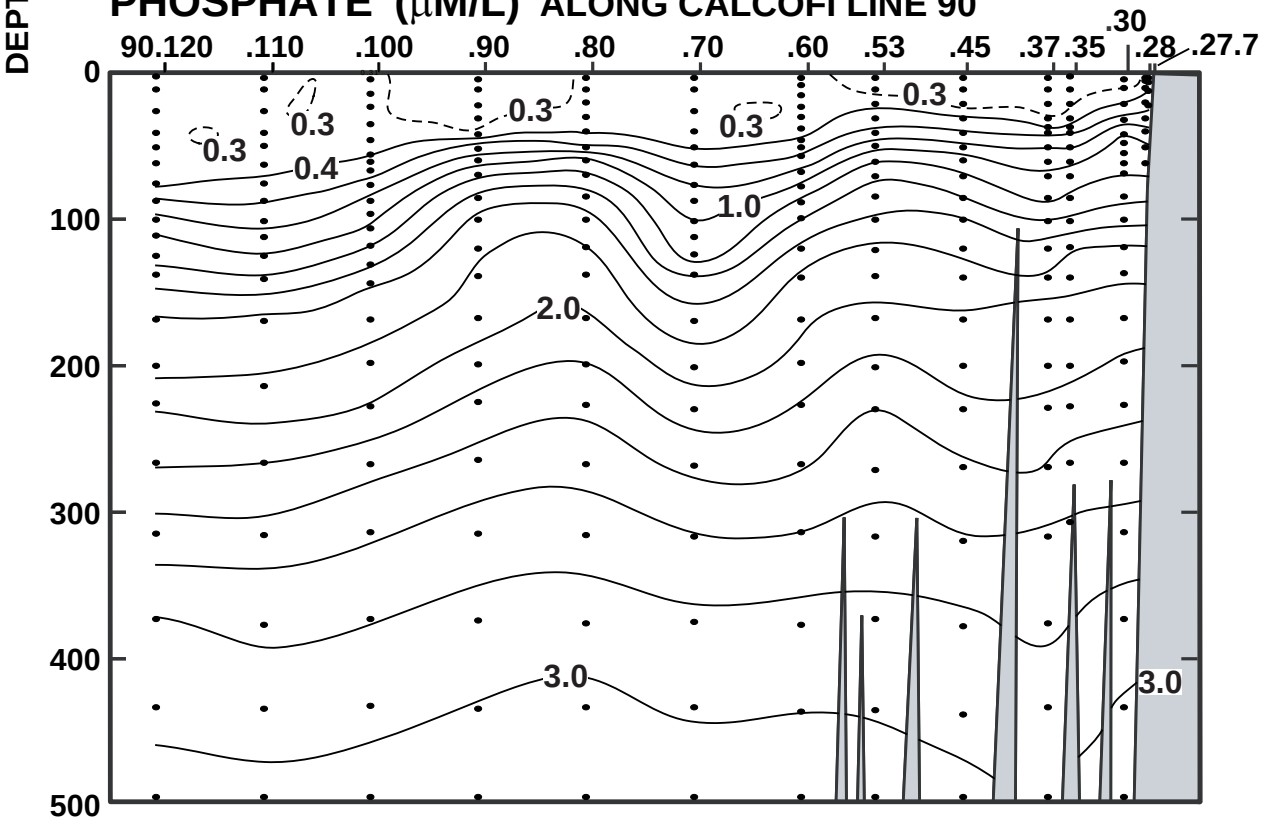

FIGURE 5F

CALCOFI CRUISE 0810

18 - 20 October 2008

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

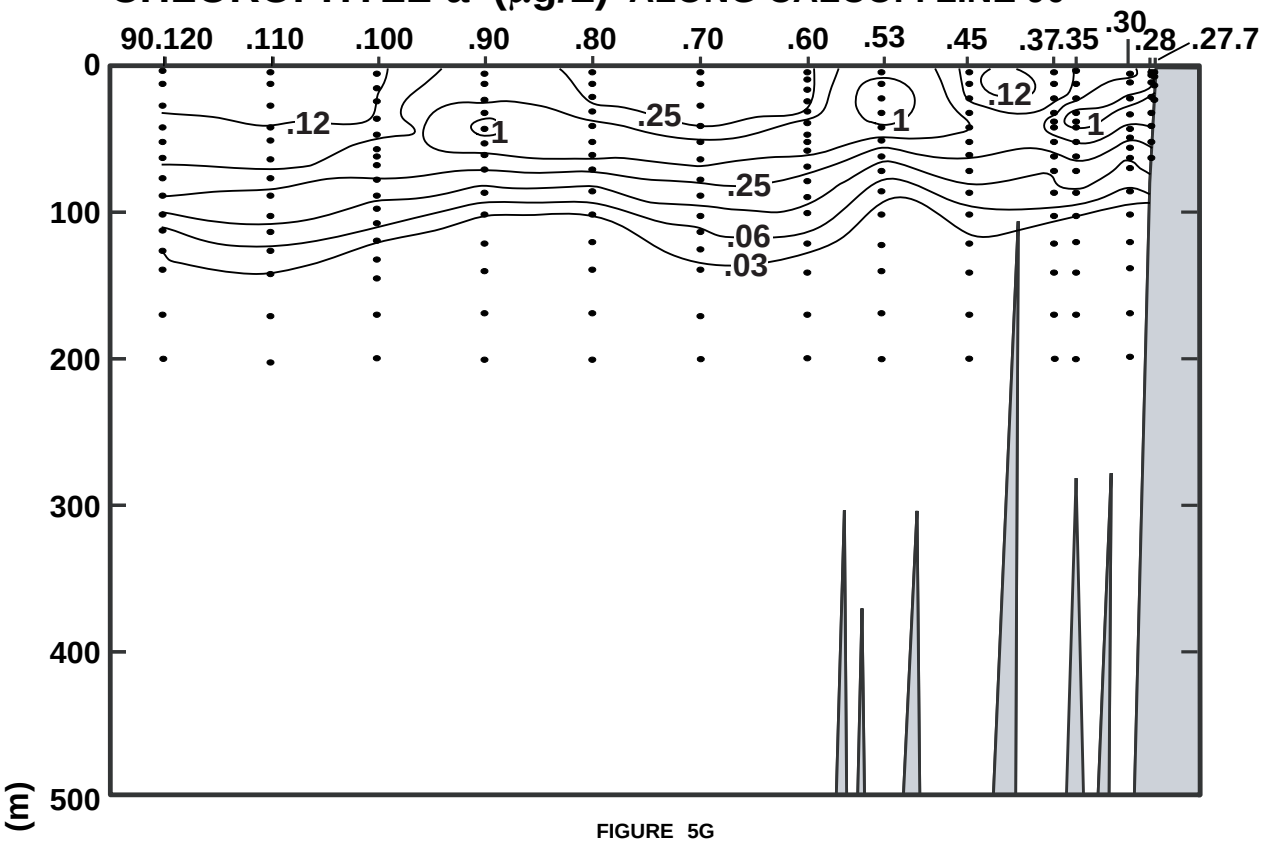

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

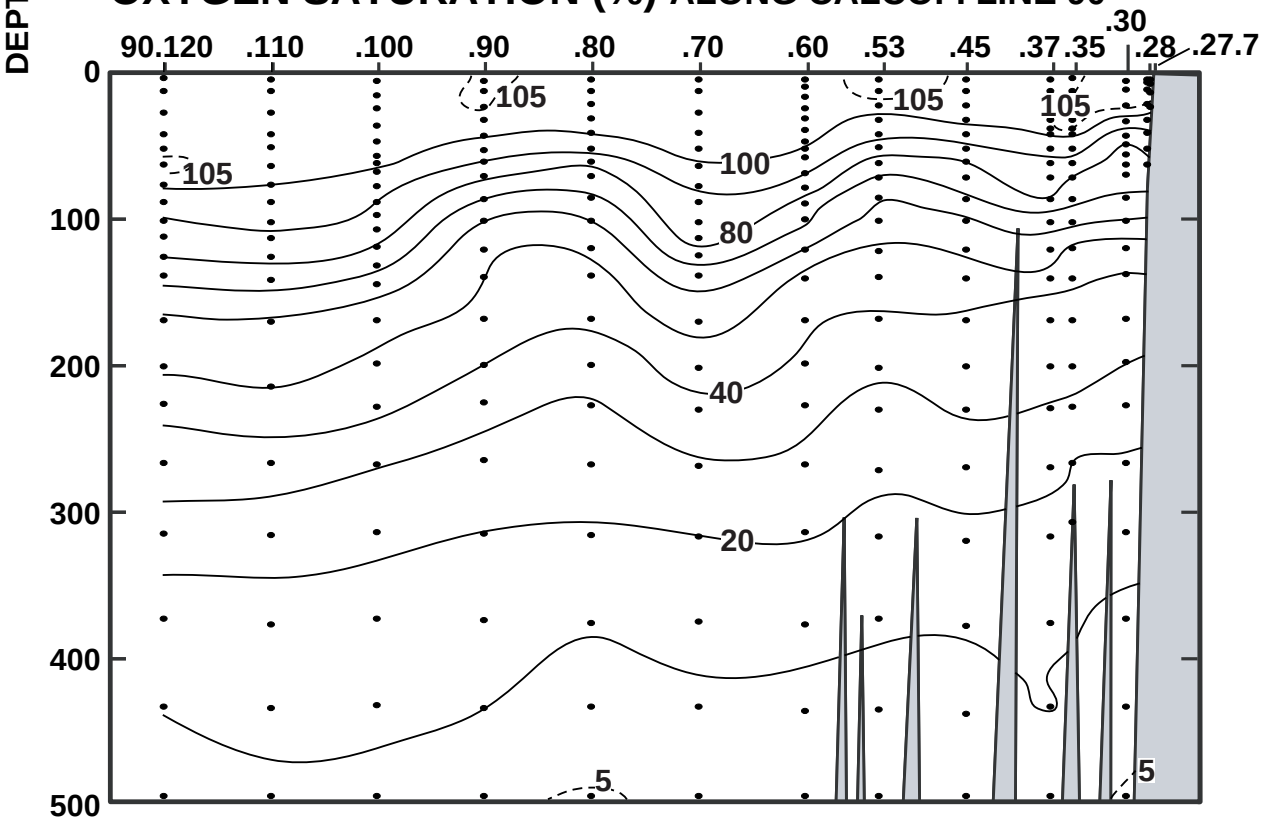

FIGURE 5H

CALCOFI CRUISE 0810

18 - 20 October 2008

OXYGEN (mL/L) ALONG CALCOFI LINE 90

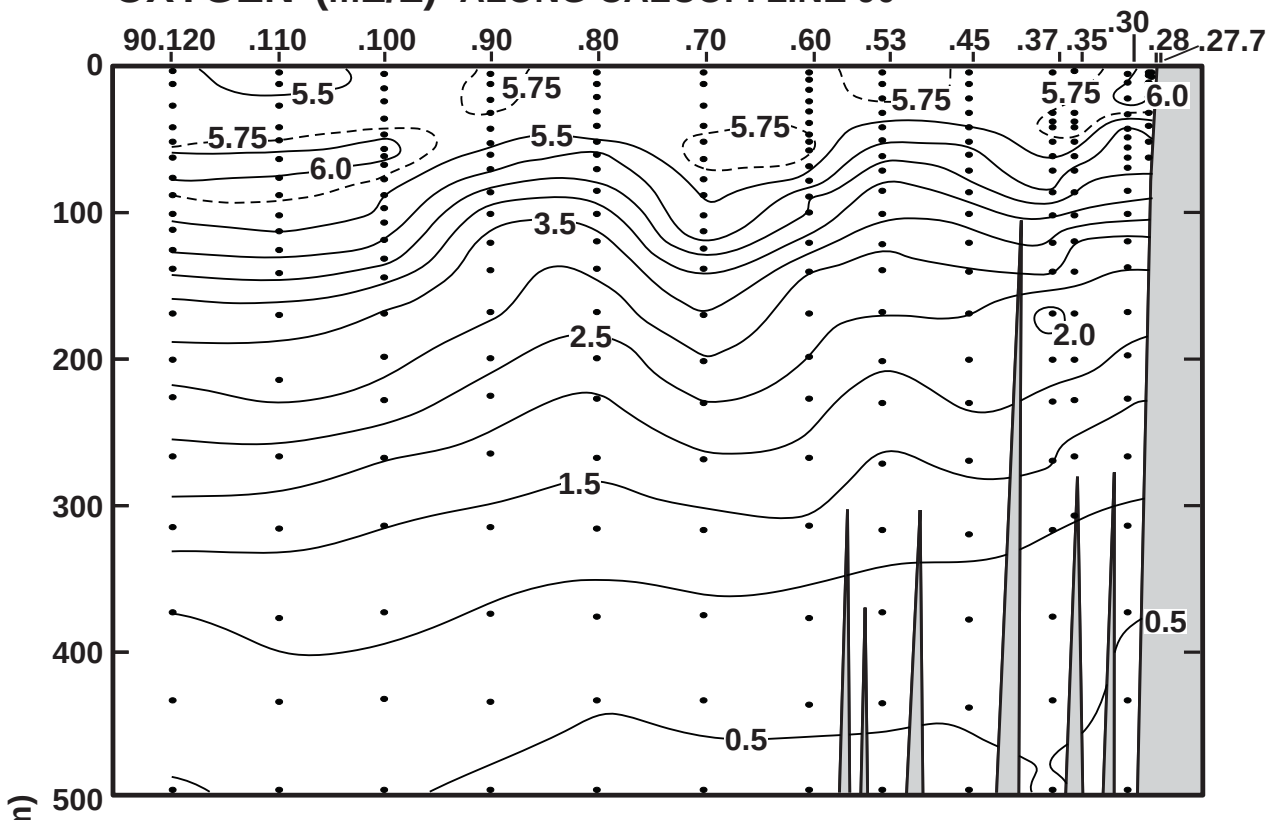

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

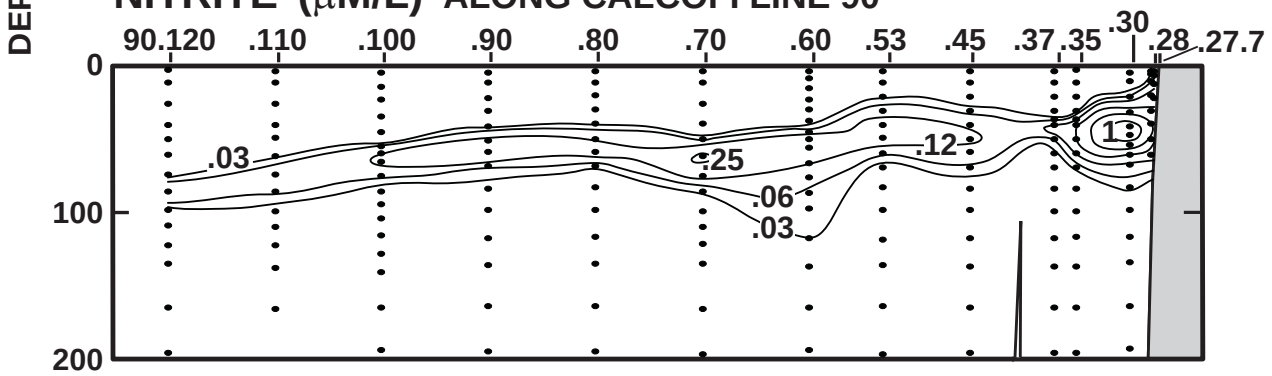

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

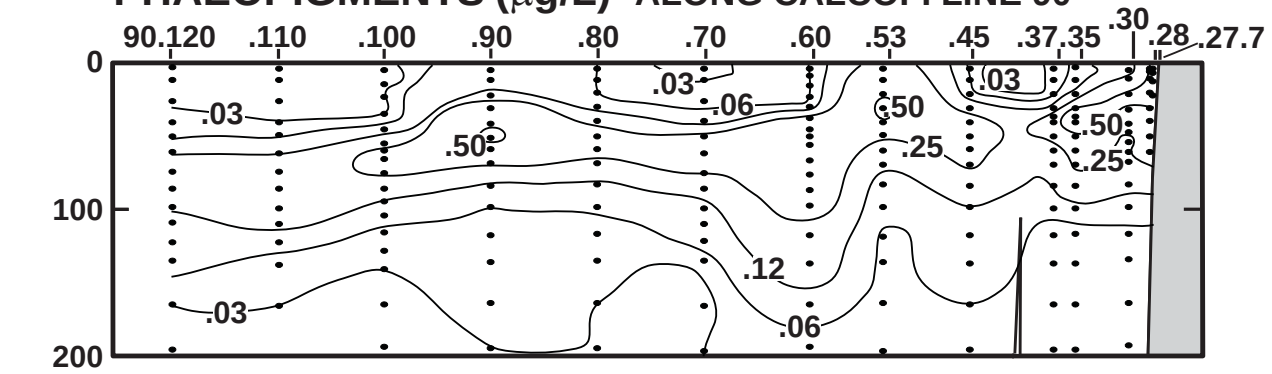

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0810

SHIP'S CAPTAIN

John P. Manion, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Wilkinson, James R. (Chief Scientist)	Programmer Analyst, SIO
Abremenkoff, Dimitri N.	Fishery Biologist, NMFS
Brower, Amelia A.	Volunteer
Camacho-Wylie, Dominique	Marine Mammal Observer, Cascadia Research
Dovel, Shonna L.	Staff Research Associate, SIO
Faber, David N.	Staff Research Associate, SIO
Havron, Andrea M.	Marine Mammal Observer, Cascadia Research
Hays, Amy E.	Fishery Biologist, NMFS
Merkens, Karlina	Graduate Student, SIO
Overcash, Bryan J.	Staff Research Associate, SIO
Schuller, Daniel	Staff Research Associate, SIO
Stong, Nick	Volunteer
Susner, Michael G.	Staff Research Associate, SIO
Van Voorhis, G.	Volunteer
Wolgast, David M.	Staff Research Associate, SIO

San Diego to San Diego, California, 14-30 October, 2008

RV NEW HORIZON CALCOFI CRUISE 0810 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 5.4 N	120 46.6 W	29/10/08	1237 UTC	70 m	010 04 kn			1016.7 mb	12.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.05	14.05	33.405	24.945	300.0	0.000	6.06	103.5	3.1	0.56	2.1	0.13	1.13	1.90	0.65	0	
2	14.05	14.05	33.405	24.945	300.1	0.006	6.06	103.5	3.1	0.56	2.1	0.13	1.13	1.90	0.65	2	208
6	14.05	14.05	33.406	24.946	300.1	0.018	6.05	103.3	3.2	0.56	2.1	0.14	1.12	2.07	0.65	6	207
10	13.91	13.91	33.408	24.977	297.3	0.030	6.02	102.5	3.6	0.61	2.5	0.15	1.12	2.25	0.90	10	206
20	13.77	13.77	33.411 D	25.008	294.6	0.060	5.93	100.7	4.2	0.67	3.1	0.17	0.98	2.62	1.20	20	205
30	12.98	12.98	33.461	25.206	276.0	0.088	5.26	87.9	8.3	1.01	7.2	0.25	1.19	2.41	1.73	30	204
40	12.37	12.36	33.502	25.357	261.8	0.115	4.72	77.9	12.3	1.23	10.7	0.27	0.96	1.51	1.50	40	203
50	12.08	12.07	33.524	25.429	255.2	0.141	4.41	72.3	14.7	1.36	12.6	0.28	0.89	1.25	1.43	50	202
60	11.62	11.61	33.555	25.540	244.9	0.166	4.08	66.3	17.1	1.52	15.0	0.27	0.58	0.95	1.37	60	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 1.4 N	120 55.7 W	29/10/08	0952 UTC	254 m	330 15 kn			1017.5 mb	13.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.80	14.80	33.353	24.746	318.9	0.000	6.09	105.6	1.1	0.38	0.4	0.04	0.12	1.84	0.34	0	
2	14.80	14.80	33.353	24.746	319.0	0.006	6.09	105.6	1.1	0.38	0.4	0.04	0.12	1.84	0.34	2	216
10 ISL	14.79 D	14.79	33.352 D	24.748	319.1	0.032	6.09	105.5	1.2	0.37	0.4	0.04	0.14	1.86	0.37	10	
11	14.79	14.79	33.357	24.752	318.7	0.035	6.09	105.5	1.2	0.37	0.4	0.04	0.14	1.87	0.37	11	215
20 ISL	14.80 D	14.80	33.354 D	24.748	319.4	0.064	6.12	106.1	1.2	0.39	0.4	0.04	0.12	1.95	0.41	20	
21	14.80	14.80	33.357	24.750	319.2	0.067	6.12	106.1	1.2	0.39	0.4	0.04	0.12	1.96	0.41	21	214
30	14.80	14.80	33.361	24.753	319.1	0.096	6.15	106.6	1.0	0.38	0.3	0.04	0.12	2.08	0.43	30	213
40	14.27	14.26	33.384	24.884	307.0	0.127	5.99	102.7	2.2	0.49	1.7	0.10	0.36	1.22	0.44	40	212
50	12.84	12.83	33.397	25.185	278.5	0.156	5.14	85.6	7.8	0.96	8.5	0.28	0.32	0.57	0.37	50	211
61	11.86	11.85	33.390	25.367	261.4	0.186	4.76	77.6	11.3	1.19	12.5	0.24	0.05	0.90	0.55	61	210
70	11.43	11.42	33.460	25.501	248.8	0.209	4.47	72.3	13.4	1.32	15.1	0.07	0.01	0.21	0.33	70	209
75 ISL	11.41 D	11.40	33.476 D	25.517	247.4	0.221	4.39	70.9	14.1	1.36	15.7	0.05	0.01	0.16	0.24	75	
85	11.23	11.22	33.535	25.596	240.1	0.246	4.27	68.8	15.1	1.41	16.5	0.02	0.02	0.07	0.14	85	208
100 ISL	10.78 D	10.77	33.603 D	25.729	227.7	0.281	4.00	63.8	17.3	1.52	18.4	0.01	0.00	0.06	0.15	101	
102	10.78	10.77	33.607	25.732	227.5	0.285	3.95	63.0	17.7	1.54	18.8	0.01	0.00	0.06	0.15	103	207
122	9.76	9.75	33.850	26.097	193.1	0.327	2.86	44.7	26.6	1.95	24.6	0.02	0.00	0.03	0.14	123	206
125 ISL	9.74 D	9.73	33.876 D	26.121	190.9	0.333	2.71	42.3	27.9	2.00	25.2	0.03	0.00	0.03	0.15	126	
143	9.32	9.30	34.005	26.291	175.1	0.366	2.01	31.1	33.9	2.24	27.8	0.09	0.02	0.03	0.20	144	205
150 ISL	9.20 D	9.18	34.031 D	26.330	171.4	0.378	1.96	30.3	34.4	2.26	28.0	0.10	0.02	0.03	0.20	151	
171	9.16	9.14	34.044	26.347	170.2	0.414	1.82	28.1	35.8	2.32	28.6	0.13	0.01	0.03	0.18	172	204
200	9.06	9.04	34.065	26.380	167.7	0.463	1.70	26.2	37.0	2.37	29.2	0.14	0.00	0.03	0.19	201	203
224	9.00	8.98	34.076	26.399	166.4	0.503	1.65	25.4	37.7	2.39	29.4	0.12	0.00			225	202
245	8.96	8.93	34.083	26.411	165.6	0.538	1.61	24.7	38.3	2.41	29.5	0.12	0.00			246	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 53.5 N	121 11.9 W	29/10/08	0556 UTC	570 m	350 14 kn			1019.0 mb	14.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.84	14.84	33.444	24.808	313.1	0.000	6.11	106.1	0.3	0.34	0.3	0.02	0.16	0.59	0.16	0	
2	14.84	14.84	33.444	24.808	313.1	0.006	6.11	106.1	0.3	0.34	0.3	0.02	0.16	0.59	0.16	2	221
9	14.84	14.84	33.439	24.804	313.7	0.028	6.10	105.9	0.3	0.36	0.3	0.02	0.15	0.56	0.16	9	219
9	14.84	14.84	33.440	24.805	313.6	0.028										9	220
10 ISL	14.84 D	14.84	33.438 D	24.804	313.8	0.031	6.10	105.9	0.4	0.37	0.4	0.03	0.15	0.59	0.18	10	
20	14.02	14.02	33.409	24.955	299.6	0.062	6.10	104.1	1.2	0.55	2.3	0.15	0.41	0.87	0.44	20	218
29	13.26	13.26	33.431	25.127	283.5	0.088	5.24	88.0	5.4	0.91	6.5	0.28	1.07	0.72	0.54	29	217
30 ISL	13.12 D	13.12	33.437 D	25.160	280.4	0.091	5.17	86.6	6.0	0.95	7.1	0.30	1.06	0.69	0.53	30	
39	12.21	12.20	33.448	25.346	262.9	0.116	4.70	77.3	10.4	1.22	11.8	0.45	0.68	0.40	0.38	39	216
50	11.73	11.72	33.477	25.458	252.4	0.144	4.49	73.1	12.6	1.33	14.3	0.37	0.29	0.26	0.29	50	215
59	11.07	11.06	33.481	25.582	240.8	0.166	4.33	69.5	15.7	1.46	17.1	0.08	0.03	0.18	0.26	59	214
69	10.48	10.47	33.582	25.765	223.6	0.189	3.99	63.2	19.2	1.61	19.7	0.01	0.02	0.08	0.21	69	213
75 ISL	10.38 D	10.37	33.613 D	25.806	219.8	0.203	3.82	60.4	20.5	1.67	20.7	0.01	0.01	0.06	0.19	75	
84	10.09	10.08	33.693	25.918	209.3	0.222	3.55	55.8	22.1	1.76	22.0	0.01	0.01	0.04	0.16	84	212
100	9.80	9.79	33.831	26.075	194.7	0.254	2.87	44.9	26.2	1.95	24.5	0.00	0.03	0.03	0.15	101	211
119	9.33	9.32	33.887	26.196	183.5	0.290	2.74	42.4	28.8	2.03	26.1	0.00	0.02	0.02	0.17	120	210
125 ISL	9.29 D	9.28	33.935 D	26.240	179.5	0.301	2.54	39.3	30.0	2.08	26.7	0.00	0.02	0.02	0.17	126	
140	9.27	9.25	34.017	26.308	173.3	0.327	2.03	31.4	32.8	2.20	27.9	0.00	0.03	0.01	0.15	141	209
150 ISL	9.21 D	9.19	34.023 D	26.323	172.2	0.345	1.99	30.7	33.8	2.23	28.3	0.00	0.03	0.01	0.14	151	
168	8.99	8.97	34.054	26.382	166.8	0.375	1.91	29.4	35.3	2.27	28.8	0.00	0.03	0.01	0.13	169	208
199	8.59	8.57	34.105	26.485	157.5	0.426	1.67	25.5	39.9	2.39	30.2	0.00	0.00	0.01	0.07	200	207
200 ISL	8.59 D	8.57	34.106 D	26.486	157.5	0.427	1.66	25.3	40.0	2.39	30.2	0.00	0.00			201	
228	8.42	8.40	34.156	26.552	151.7	0.470	1.36	20.7	43.7	2.52	31.3	0.00	0.03			229	206
250 ISL	8.33 D	8.30	34.167 D	26.574	149.9	0.504	1.29	19.6	45.4	2.57	31.9	0.00	0.02			252	
268	8.06	8.03	34.162	26.611	146.6	0.530	1.25	18.8	47.1	2.60	32.5	0.00	0.02			270	205
300 ISL	7.60 D	7.57	34.186 D	26.698	138.7	0.576	1.00	14.9	53.5	2.74	34.2	0.00	0.02			302	
316	7.36	7.33	34.199	26.742	134.6	0.598	0.87	12.9	56.9	2.81	35.1	0.00	0.02			318	204
376	6.92	6.88	34.225	26.824	127.5	0.676	0.67	9.8	63.5	2.93	36.5	0.00	0.02			379	203
400 ISL	6.76 D	6.72	34.244 D	26.861	124.3	0.707	0.58	8.5	66.8	2.99	37.1	0.00	0.02			403	
437	6.54	6.50	34.267	26.909	120.1	0.752	0.45	6.5	72.4	3.08	37.9	0.00	0.01			440	202
500 ISL	5.91 D	5.87	34.300 D	27.016	110.2	0.824	0.31	4.4	82.3	3.19	39.3	0.00	0.03			504	
520	5.86	5.81	34.309	27.030	109.1	0.846	0.26	3.7	85.4	3.22	39.8	0.00	0.03			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 43.5 N	121 33.1 W	29/10/08	0140 UTC	916 m	330 24 kn	340 05 06	2	1019.2 mb	14.0 C	12.9 C		7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.77	14.77	33.401	24.790	314.8	0.000	6.12	106.0	0.4	0.37	0.4	0.03	0.24	0.59	0.17	0	
3	14.77	14.77	33.401	24.790	314.9	0.009	6.12	106.0	0.4	0.37	0.4	0.03	0.24	0.59	0.17	3	220
10	14.77	14.77	33.402	24.791	315.0	0.031	6.12	106.0	0.4	0.38	0.4	0.03	0.23	0.60	0.16	10	219
20	14.58	14.58	33.394	24.826	312.0	0.063	6.12	105.6	0.5	0.38	0.6	0.04	0.25	0.61	0.17	20	218
29	13.14	13.14	33.348	25.087	287.3	0.090	6.05	101.3	3.3	0.73	5.2	0.22	0.79	0.83	0.44	29	217
30 ISL	13.07 D	13.07	33.352 D	25.104	285.7	0.093	6.02	100.7	3.7	0.75	5.5	0.24	0.78	0.79	0.43	30	
39	12.47	12.46	33.358	25.226	274.3	0.118	5.61	92.7	7.7	0.96	8.6	0.35	0.64	0.33	0.37	39	216
49	11.36	11.35	33.412	25.476	250.7	0.144	4.96	80.0	14.1	1.31	14.4	0.30	0.05	0.21	0.29	49	215
50 ISL	11.20 D	11.19	33.394 D	25.491	249.3	0.147	4.93	79.3	14.4	1.33	14.6	0.29	0.05	0.21	0.29	50	
59	11.32	11.31	33.500	25.552	243.7	0.169	4.74	76.5	15.9	1.41	16.0	0.16	0.05	0.21	0.27	59	214
69	10.95	10.94	33.548	25.656	234.0	0.193	4.34	69.5	17.3	1.53	18.2	0.03	0.04	0.16	0.20	69	213
75 ISL	9.93 D	9.92	33.455 D	25.759	224.2	0.206	4.33	67.7	18.5	1.57	19.0	0.02	0.04	0.11	0.14	75	
85	9.50	9.49	33.482	25.851	215.6	0.228	4.30	66.6	20.9	1.63	20.4	0.00	0.03	0.03	0.06	85	212
100	9.59	9.58	33.737	26.036	198.4	0.259	3.42	53.2	24.9	1.86	23.9	0.00	0.01	0.02	0.06	101	211
119	9.46	9.45	33.863	26.156	187.3	0.296	2.85	44.2	27.9	1.98	25.5	0.00	0.01	0.01	0.08	120	210
125 ISL	9.41 D	9.40	33.874 D	26.173	185.9	0.307	2.83	43.9	28.4	1.99	25.8	0.00	0.01	0.01	0.08	126	
139	9.18	9.16	33.896	26.228	180.9	0.333	2.77	42.7	29.3	2.01	26.3	0.00	0.02	0.01	0.06	140	209
150 ISL	9.02 D	9.00	33.927 D	26.278	176.3	0.353	2.67	41.1	30.6	2.04	26.8	0.00	0.02	0.01	0.05	151	
169	8.73	8.71	33.975	26.361	168.7	0.385	2.47	37.7	33.2	2.11	27.8	0.00	0.01	0.01	0.05	170	208
200	8.26	8.24	34.020	26.469	158.9	0.436	2.23	33.7	37.9	2.22	29.5	0.00	0.02	0.00	0.05	201	207
229	7.98	7.96	34.045	26.530	153.5	0.481	1.98	29.8	41.5	2.33	30.9	0.00	0.01			230	206
250 ISL	7.72 D	7.70	34.073 D	26.591	148.0	0.513	1.75	26.1	45.1	2.42	32.1	0.00	0.02			252	
268	7.62	7.59	34.097	26.624	145.1	0.540	1.53	22.8	48.3	2.51	33.1	0.00	0.03			270	205
300 ISL	7.74 D	7.71	34.207 D	26.694	139.2	0.585	1.10	16.5	52.2	2.68	33.9	0.00	0.03			302	
318	7.68	7.65	34.216	26.710	137.9	0.610	0.88	13.1	54.1	2.76	34.2	0.00	0.02			320	204
378	7.23	7.19	34.247	26.799	130.2	0.690	0.61	9.0	62.0	2.91	35.7	0.00	0.01			381	203
400 ISL	7.16 D	7.12	34.253 D	26.814	129.1	0.719	0.57	8.4	64.0	2.94	36.1	0.00	0.01			403	
438	6.79	6.75	34.256	26.867	124.3	0.767	0.51	7.5	68.0	3.00	37.0	0.00	0.00			441	202
500 ISL	5.96 D	5.92	34.294 D	27.005	111.3	0.840	0.33	4.7	80.1	3.14	39.5	0.00	0.00			504	
512	5.88	5.84	34.293	27.015	110.5	0.853	0.29	4.2	82.4	3.17	40.0	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 23.2 N	122 14.9 W	28/10/08	1906 UTC	4023 m	330 14 kn	340 05 07	2	1022.0 mb	14.9 C	13.7 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.98	14.98	33.315	24.678	325.4	0.000	6.12	106.4	1.0	0.38	0.9	0.04	0.10	0.97	0.18	0	
2 A	14.98	14.98	33.315	24.678	325.5	0.007	6.12	106.4	1.0	0.38	0.9	0.04	0.10	0.97	0.18	2	221
8 A	14.98	14.98	33.316	24.679	325.5	0.026	6.11	106.3	1.2	0.38	0.9	0.04	0.09	0.97	0.16	8	220
10 ISL	14.98 D	14.98	33.315 D	24.679	325.7	0.033	6.12	106.4	1.3	0.38	0.9	0.04	0.08	0.98	0.17	10	
16 A	14.96	14.96	33.332	24.696	324.2	0.052	6.13	106.6	1.4	0.39	0.9	0.04	0.07	1.01	0.20	16	219
20 ISL	14.96 D	14.96	33.354 D	24.713	322.7	0.065	6.12	106.4	1.3	0.38	0.9	0.04	0.08	1.05	0.20	20	
23 A	14.96	14.96	33.368	24.724	321.7	0.075	6.10	106.1	1.3	0.38	0.9	0.04	0.09	1.08	0.21	23	218
30 A	14.84	14.84	33.402	24.776	316.9	0.097	6.00	104.1	0.8	0.41	1.2	0.07	0.33	0.80	0.27	30	217
41 A	14.52	14.51	33.386	24.833	311.9	0.132	5.72	98.6	1.8	0.54	1.6	0.15	1.05	0.81	0.49	41	216
50	12.21	12.20	33.479	25.370	260.9	0.157	4.67	76.8	12.7	1.22	12.8	0.33	0.27	0.46	0.44	50	215
59	10.95	10.94	33.488	25.609	238.2	0.180	4.33	69.3	16.1	1.47	17.7	0.05	0.04	0.26	0.32	59	214
69	10.28	10.27	33.681	25.876	213.0	0.202	3.59	56.7	21.3	1.72	21.6	0.03	0.03	0.07	0.18	69	213
75 ISL	10.22 D	10.21	33.771 D	25.957	205.5	0.215	3.26	51.4	23.1	1.79	22.7	0.02	0.03	0.05	0.14	75	
84	10.02	10.01	33.822	26.031	198.6	0.233	2.84	44.6	25.3	1.88	23.8	0.00	0.04	0.02	0.11	84	212
99	9.55	9.54	33.956	26.214	181.5	0.262	2.17	33.8	30.3	2.14	27.3	0.00	0.04	0.01	0.08	100	211
100 ISL	9.52 D	9.51	33.963 D	26.224	180.5	0.263	2.14	33.3	30.5	2.15	27.4	0.00	0.04	0.01	0.08	101	
119	9.35	9.34	34.027	26.302	173.5	0.297	1.80	27.9	32.9	2.26	28.7	0.00	0.02	0.01	0.08	120	210
125 ISL	9.30 D	9.29	34.041 D	26.322	171.8	0.307	1.72	26.6	33.6	2.28	29.0	0.00	0.02	0.01	0.08	126	
139	9.24	9.22	34.059 D	26.346	169.8	0.331										140	209
150 ISL	9.19 D	9.17	34.080 D	26.370	167.6	0.350	1.47	22.7	36.3	2.36	29.9	0.00	0.03	0.01	0.08	151	
168	9.07	9.05	34.115	26.417	163.5	0.380	1.35	20.8	37.8	2.40	30.4	0.00	0.04	0.01	0.07	169	208
200	8.93	8.91	34.154	26.470	159.1	0.431	1.15	17.7	39.4	2.49	31.4	0.00	0.01	0.00	0.05	201	207
226	8.86	8.84	34.175	26.498	156.9	0.472	1.11	17.0	41.1	2.52	31.5	0.00	0.02			227	206
250 ISL	8.79 D	8.76	34.196 D	26.526	154.7	0.510	1.07	16.4	42.7	2.55	31.6	0.00	0.02			252	
268	8.70	8.67	34.212	26.553	152.5	0.537	1.03	15.7	44.0	2.58	31.8	0.00	0.02			270	205
300 ISL	8.52 D	8.49	34.233 D	26.598	148.8	0.586	0.94	14.3	46.3	2.64	32.3	0.00	0.02			302	
317	8.43	8.40	34.241	26.618	147.1	0.611	0.89	13.5	47.6	2.68	32.7	0.00	0.02			319	204
377	7.85	7.81	34.234	26.700	140.0	0.697	0.82	12.3	52.3	2.77	34.1	0.00	0.00			379	203
400 ISL	7.71 D	7.67	34.247 D	26.731	137.4	0.729	0.77	11.5	54.3	2.81	34.5	0.00	0.01			403	
439	7.46	7.42	34.247	26.767	134.4	0.782	0.67	10.0	58.0	2.87	35.3	0.00	0.02			442	202
500 ISL	6.89 D	6.84	34.250 D	26.850	127.1	0.862	0.56	8.2	65.6	2.97	36.9	0.00	0.00			503	
515	6.81	6.76	34.254	26.864	125.9	0.881	0.53	7.8	67.5	2.99	37.3	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 56.8 W	28/10/08	1245 UTC	4237 m	330 15 kn			1021.5 mb	15.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.53	15.53	33.402	24.625	330.5	0.000	6.00	105.6	0.6	0.36	0.0	0.00	0.02	0.48	0.10	0	
1	15.53	15.53	33.402	24.625	330.5	0.003	6.00	105.6	0.6	0.36	0.0	0.00	0.02	0.48	0.10	1	220
10	15.46	15.46	33.394	24.634	329.9	0.033	6.01	105.6	0.5	0.36	0.0	0.00	0.01	0.49	0.11	10	219
20	14.15	14.15	33.329	24.866	308.1	0.065	6.36	108.8	0.1	0.46	1.4	0.07	0.20	1.10	0.36	20	218
30	14.14	14.14	33.388	24.914	303.8	0.096	5.98	102.3	1.0	0.58	2.1	0.13	0.49	1.79	0.71	30	217
41	12.33	12.32	33.285	25.196	277.1	0.127	5.35	88.1	9.0	1.06	9.4	0.50	0.08	0.92	0.65	41	216
50	11.31	11.30	33.243	25.354	262.3	0.152	5.10	82.1	12.0	1.24	13.1	0.10	0.00	0.31	0.37	50	215
61	10.70	10.69	33.330	25.530	245.8	0.180	4.74	75.4	14.6	1.44	16.2	0.05	0.04	0.23	0.28	61	214
70	10.56	10.55	33.534	25.713	228.5	0.201	4.19	66.5	18.4	1.67	19.6	0.01	0.04	0.18	0.25	70	213
75 ISL	10.36 D	10.35	33.590 D	25.792	221.2	0.212	3.97	62.8	20.4	1.75	21.0	0.01	0.03	0.13	0.22	75	
85	9.75	9.74	33.677	25.963	205.1	0.234	3.62	56.5	23.7	1.85	23.2	0.00	0.00	0.05	0.15	85	212
100 ISL	9.47 D	9.46	33.800 D	26.105	191.8	0.263	3.14	48.7	26.9	1.99	25.4	0.00	0.00	0.02	0.12	101	
102	9.45	9.44	33.807	26.114	191.0	0.267	3.09	47.9	27.2	2.00	25.6	0.00	0.00	0.02	0.12	103	211
121	9.09	9.08	33.912	26.254	178.0	0.302	2.74	42.2	30.4	2.07	27.0	0.00	0.00	0.01	0.08	122	210
125 ISL	9.07 D	9.06	33.915 D	26.260	177.6	0.309	2.73	42.0	30.7	2.07	27.1	0.00	0.00	0.01	0.08	126	
141	8.89	8.87	33.946	26.313	172.8	0.337	2.66	40.8	31.8	2.10	27.5	0.00	0.00	0.01	0.07	142	209
150 ISL	8.84 D	8.82	33.999 D	26.362	168.3	0.353	2.46	37.7	33.1	2.16	28.1	0.00	0.00	0.01	0.07	151	
170	8.79	8.77	34.066	26.423	162.9	0.386	1.97	30.2	36.2	2.30	29.4	0.00	0.00	0.00	0.08	171	208
200 ISL	8.48 D	8.46	34.101 D	26.499	156.2	0.434	1.77	26.9	39.8	2.40	30.6	0.00	0.00	0.01	0.05	201	
201	8.51	8.49	34.105	26.497	156.3	0.435	1.77	26.9	39.9	2.40	30.6	0.00	0.00	0.01	0.05	202	207
232	8.49	8.47	34.171	26.553	151.7	0.483	1.23	18.7	43.8	2.59	32.0	0.00	0.01			233	206
250 ISL	8.39 D	8.36	34.192 D	26.585	149.0	0.510	1.11	16.9	45.6	2.64	32.5	0.00	0.03			252	
271	8.23	8.20	34.200	26.616	146.4	0.541	1.05	15.9	47.5	2.68	33.0	0.00	0.04			273	205
300 ISL	7.97 D	7.94	34.207 D	26.660	142.5	0.583	0.92	13.8	50.3	2.76	33.7	0.00	0.02			302	
317	7.94	7.91	34.228	26.681	140.8	0.607	0.86	12.9	51.9	2.80	34.1	0.00	0.00			319	204
382	7.44	7.40	34.239	26.763	133.8	0.696	0.71	10.5	58.4	2.91	35.7	0.00	0.00			385	203
400 ISL	7.31 D	7.27	34.250 D	26.790	131.5	0.720	0.65	9.6	60.5	2.95	36.2	0.00	0.00			403	
438	7.00	6.96	34.259	26.841	127.0	0.769	0.54	7.9	65.2	3.02	37.2	0.00	0.01			441	202
500 ISL	6.49 D	6.44	34.272 D	26.920	119.9	0.846	0.42	6.1	72.2	3.13	38.7	0.00	0.00			503	
513	6.41	6.36	34.273	26.932	119.0	0.861	0.40	5.8	73.7	3.15	39.0	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 43.4 N	123 38.0 W	28/10/08	0634 UTC	4353 m	010 14 kn			1022.5 mb	16.0 C	15.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.41	16.41	33.199	24.270	364.3	0.000	5.83	104.3	1.7	0.35	0.0	0.01	0.03	0.41	0.05	0	
2	16.41	16.41	33.199	24.270	364.3	0.007	5.83	104.3	1.7	0.35	0.0	0.01	0.03	0.41	0.05	2	221
10 ISL	16.38 D	16.38	33.196 D	24.275	364.1	0.036	5.87	104.9	1.5	0.35	0.1	0.01	0.04	0.43	0.07	10	
11	16.33	16.33	33.197	24.287	363.0	0.040	5.88	105.0	1.5	0.35	0.1	0.01	0.04	0.43	0.08	11	220
19	15.92	15.92	33.194	24.378	354.6	0.069	5.92	104.8	1.4	0.38	0.3	0.02	0.03	0.47	0.15	19	219
20 ISL	15.91 D	15.91	33.193 D	24.380	354.5	0.072	5.92	104.8	1.4	0.38	0.3	0.02	0.03	0.47	0.16	20	
30	15.75	15.75	33.214	24.432	349.8	0.108	5.84	103.1	1.8	0.40	0.7	0.04	0.07	0.50	0.23	30	218
40	14.93	14.92	33.175	24.582	335.7	0.142	5.78	100.3	2.6	0.50	1.6	0.13	0.40	0.42	0.26	40	217
50	13.48	13.47	33.026	24.770	318.0	0.174	5.82	98.0	3.9	0.65	3.1	0.33	0.54	0.31	0.24	50	216
60	11.54	11.53	32.889	25.037	292.7	0.205	5.72	92.4	6.3	0.82	6.5	0.27	0.02	0.18	0.17	60	215
69	10.90	10.89	32.842	25.115	285.4	0.231	5.68	90.4	7.7	0.91	8.0	0.02	0.01	0.15	0.16	69	214
75 ISL	10.72 D	10.71	32.915 D	25.203	277.1	0.248	5.62	89.2	7.9	0.91	8.3	0.01	0.01	0.11	0.12	75	
85	10.38	10.37	32.999	25.328	265.4	0.275	5.47	86.2	8.2	0.92	8.8	0.00	0.01	0.04	0.04	85	213
100	10.24	10.23	33.212	25.518	247.7	0.314	5.14	80.8	11.1	1.09	11.9	0.00	0.01	0.02	0.04	100	212
118	10.16	10.15	33.536	25.785	222.7	0.356	4.28	67.3	19.1	1.59	19.9	0.00	0.01	0.03	0.03	119	211
125 ISL	9.99 D	9.98	33.626 D	25.884	213.4	0.371	4.02	63.0	21.4	1.68	21.4	0.00	0.01	0.02	0.03	126	
139	9.32	9.30	33.713	26.062	196.6	0.400	3.58	55.3	25.1	1.80	23.3	0.00	0.00	0.01	0.04	140	210
150 ISL	9.16 D	9.14	33.834 D	26.183	185.4	0.421	3.28	50.6	27.6	1.90	24.8	0.00	0.00	0.00	0.04	151	
169	8.83	8.81	33.903	26.289	175.6	0.455	2.85	43.6	31.3	2.05	26.9	0.00	0.01	0.00	0.04	170	209
200 ISL	8.33 D	8.31	33.983 D	26.429	162.7	0.508	2.39	36.2	37.1	2.19	29.4	0.00	0.00	0.00	0.03	201	
201	8.30	8.28	33.985	26.435	162.1	0.509	2.38	36.0	37.3	2.19	29.5	0.00	0.00	0.00	0.03	202	208
228	7.93	7.91	34.001	26.503	156.0	0.552	2.29	34.4	39.9	2.24	30.2	0.00	0.00			229	207
250 ISL	7.69 D	7.67	34.019 D	26.553	151.6	0.586	2.16	32.2	43.6	2.32	31.2	0.00	0.01			251	
268	7.27	7.24	34.014	26.609	146.4	0.613	2.06	30.4	47.1	2.39	32.1	0.00	0.01			270	206
300 ISL	6.60 D	6.57	33.984 D	26.676	140.0	0.659	2.07	30.1	53.2	2.44	33.2	0.00	0.01			302	
316	6.44	6.41	33.993	26.704	137.5	0.681	2.08	30.1	56.2	2.47	33.8	0.00	0.01			318	205
376	6.09	6.06	34.067	26.808	128.2	0.761	1.25	18.0	66.4	2.79	37.6	0.00	0.00			378	204
400 ISL	5.96 D	5.93	34.092 D	26.845	125.0	0.791	1.01	14.5	69.5	2.88	38.5	0.00	0.01			403	
437	5.95	5.91	34.155	26.896	120.7	0.836	0.72	10.3	74.1	2.99	39.4	0.00	0.02			440	203
500 ISL	5.46 D	5.42	34.192 D	26.986	112.5	0.910	0.48	6.8	83.5	3.11	40.8	0.00	0.00			503	
520	5.38	5.34	34.214	27.013	110.1	0.932	0.41	5.8	86.5	3.15	41.2	0.00	0.00			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.1 N	124 19.2 W	28/10/08	0037 UTC	4589 m	360 11 kn	350 04 09	1	1020.9 mb	16.8 C	14.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.15	17.15	33.106	24.027	387.5	0.000	5.66	102.6	1.6	0.32	0.0	0.00	0.03	0.17	0.03	0	
2	17.15	17.15	33.106	24.027	387.6	0.008	5.66	102.6	1.6	0.32	0.0	0.00	0.03	0.17	0.03	2	220
10	17.11	17.11	33.110	24.040	386.6	0.039	5.66	102.6	1.8	0.32	0.0	0.00	0.02	0.16	0.04	10	219
20	16.97	16.97	33.082	24.051	385.8	0.077	5.69	102.8	1.7	0.32	0.0	0.00	0.03	0.19	0.04	20	218
29	16.34	16.34	32.979	24.118	379.7	0.112	5.80	103.4	1.3	0.35	0.1	0.00	0.03	0.38	0.11	29	217
30 ISL	16.16 D	16.16	32.937 D	24.127	378.9	0.116	5.81	103.2	1.3	0.35	0.1	0.00	0.03	0.38	0.11	30	
40	15.67	15.66	32.948	24.246	367.8	0.153	5.85	102.9	1.8	0.40	0.5	0.02	0.08	0.36	0.14	40	216
50	15.03	15.02	32.966	24.400	353.4	0.189	5.92	102.8	2.2	0.42	0.7	0.03	0.19	0.34	0.19	50	215
60	13.84	13.83	32.967	24.652	329.6	0.223	6.12	103.8	2.6	0.40	0.3	0.02	0.16	0.31	0.22	60	214
69	12.41	12.40	32.866	24.857	310.1	0.252	6.01	98.8	3.2	0.51	1.3	0.21	0.10	0.19	0.16	69	213
75 ISL	12.11 D	12.10	32.882 D	24.926	303.7	0.270	5.93	96.9	3.5	0.54	2.1	0.16	0.07	0.15	0.13	75	
83	11.57	11.56	32.864	25.012	295.6	0.294	5.82	94.0	4.1	0.59	3.4	0.03	0.05	0.12	0.10	83	212
100	10.86	10.85	32.977	25.228	275.4	0.343	5.56	88.5	6.9	0.84	7.8	0.00	0.02	0.06	0.05	100	211
119	10.71	10.70	33.202	25.430	256.6	0.393	5.20	82.6	9.5	1.00	10.7	0.00	0.01	0.03	0.04	120	210
125 ISL	10.46 D	10.45	33.289 D	25.541	246.1	0.408	5.06	80.0	10.9	1.08	12.0	0.00	0.01	0.02	0.03	126	
139	10.10	10.08	33.396	25.686	232.5	0.442	4.71	73.9	14.6	1.28	15.3	0.00	0.02	0.01	0.02	140	209
150 ISL	9.78 D	9.76	33.507 D	25.826	219.4	0.467	4.35	67.8	18.1	1.45	18.2	0.00	0.02	0.00	0.02	151	
168	9.27	9.25	33.697	26.058	197.6	0.504	3.83	59.1	23.3	1.69	22.1	0.00	0.02	0.00	0.03	169	208
200	8.76	8.74	33.896	26.295	175.6	0.564	3.53	53.9	27.3	1.77	23.7	0.00	0.01	0.00	0.03	201	207
227	8.25	8.23	33.955	26.420	164.1	0.610	3.47	52.4	31.7	1.83	24.8	0.00	0.02			228	206
250 ISL	7.87 D	7.85	33.978 D	26.494	157.2	0.647	3.09	46.3	37.1	1.99	27.0	0.00	0.02			251	
267	7.54	7.51	33.989	26.551	152.0	0.673	2.73	40.6	41.2	2.14	28.9	0.00	0.01			268	205
300 ISL	7.09 D	7.06	33.995 D	26.619	145.8	0.722	2.07	30.5	47.1	2.40	32.2	0.00	0.00			302	
318	7.08	7.05	34.045	26.660	142.2	0.748	1.74	25.6	50.0	2.52	33.8	0.00	0.00			320	204
377	6.70	6.67	34.104	26.758	133.5	0.830	1.15	16.8	59.8	2.78	36.5	0.00	0.00			379	203
400 ISL	6.44 D	6.40	34.119 D	26.805	129.3	0.860	1.01	14.6	63.7	2.85	37.3	0.00	0.00			402	
436	6.16	6.12	34.132	26.852	125.1	0.906	0.85	12.2	69.6	2.94	38.4	0.00	0.00			439	202
500 ISL	5.63 D	5.59	34.162 D	26.942	116.9	0.983	0.61	8.7	78.4	3.07	40.1	0.00	0.00			503	
520	5.61	5.57	34.191	26.967	114.7	1.006	0.53	7.5	81.2	3.11	40.6	0.00	0.00			523	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 27.8 N	120 29.1 W	29/10/08	1909 UTC	26 m	300 06 kn	300 01 06	0	1015.4 mb	18.2 C	16.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.81	15.81	33.434	24.587	334.1	0.000	5.89	104.2	3.1	0.44	1.1	0.09	0.38	1.51	0.22	0	
2	15.81	15.81	33.434	24.587	334.2	0.007	5.89	104.2	3.1	0.44	1.1	0.09	0.38	1.51	0.22	2	205
5	15.79	15.79	33.434	24.592	333.8	0.017	5.88	104.0	3.1	0.44	1.1	0.09	0.39	1.42	0.25	5	204
10 ISL	15.45 D	15.45	33.428 D	24.663	327.2	0.033	5.86	103.0	3.1	0.48	1.3	0.11	0.39	1.12	0.29	10	
11	15.43	15.43	33.429	24.668	326.7	0.036	5.85	102.7	3.1	0.49	1.3	0.11	0.39	1.05	0.31	11	203
15	14.97	14.97	33.418	24.760	318.1	0.049	5.56	96.7	4.6	0.59	2.5	0.17	0.72	0.89	0.44	15	202
20	14.42	14.42	33.406	24.869	307.8	0.065	5.35	92.0	6.0	0.73	4.1	0.25	0.65	0.94	0.52	20	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.0 N	120 31.4 W	26/10/08	0740 UTC	76 m	300 18 kn			1015.7 mb	13.5 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.96	14.96	33.438	24.777	316.0	0.000	6.02	104.7	3.4	0.45	1.5	0.10	0.34	1.29	0.37	0	
1	14.96	14.96	33.438	24.777	316.0	0.003	6.02	104.7	3.4	0.45	1.5	0.10	0.34	1.29	0.37	1	208
10	14.89	14.89	33.437	24.792	314.9	0.032	5.99	104.1	3.4	0.48	1.7	0.11	0.34	1.39	0.36	10	207
19	14.66	14.66	33.433	24.839	310.7	0.060	5.86	101.3	4.0	0.54	2.4	0.15	0.38	1.62	0.40	19	206
20 ISL	14.31 D	14.31	33.437 D	24.916	303.4	0.063	5.80	99.6	4.4	0.57	2.7	0.17	0.39	1.58	0.41	20	
30	13.58	13.58	33.419	25.053	290.5	0.092	5.10	86.2	8.4	0.87	6.4	0.36	0.45	1.04	0.47	30	205
40	13.10	13.09	33.427	25.156	281.0	0.121	4.78	80.0	10.4	1.02	8.7	0.41	0.34	0.76	0.48	40	204
49	12.93	12.92	33.437	25.198	277.3	0.146	4.76	79.4	10.7	1.05	9.6	0.37	0.21	0.67	0.46	49	203
50 ISL	12.91 D	12.90	33.435 D	25.200	277.1	0.149	4.74	79.1	10.9	1.06	9.8	0.36	0.21	0.66	0.46	50	
60	12.35	12.34	33.490	25.352	262.8	0.176	4.41	72.7	13.5	1.23	12.2	0.26	0.21	0.50	0.41	60	202
70	11.75	11.74	33.538	25.503	248.7	0.202	4.07	66.3	16.5	1.38	14.9	0.18	0.09	0.23	0.33	70	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 18.9 N	120 48.6 W	26/10/08	1044 UTC	781 m	350 12 kn			1016.3 mb	12.6 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.15	15.15	33.396	24.704	323.0	0.000	6.06	105.8	4.5	0.38	0.6	0.04	0.07	1.32	0.41	0	
2	15.15	15.15	33.396	24.704	323.1	0.006	6.06	105.8	4.5	0.38	0.6	0.04	0.07	1.32	0.41	2	221
10 ISL	15.16 D	15.16	33.394 D	24.700	323.6	0.032	6.05	105.7	4.8	0.40	0.6	0.04	0.06	1.35	0.38	10	
11	15.15	15.15	33.394	24.703	323.4	0.036	6.05	105.6	4.9	0.40	0.6	0.04	0.06	1.35	0.38	11	219
11	15.16	15.16	33.396	24.702	323.5	0.036										11	220
20 ISL	14.86 D	14.86	33.381 D	24.756	318.6	0.064	5.96	103.4	5.6	0.47	1.5	0.08	0.14	1.19	0.44	20	
21	14.77	14.77	33.380	24.774	316.9	0.068	5.94	102.9	5.7	0.48	1.6	0.09	0.16	1.17	0.45	21	218
30 ISL	14.52 D	14.52	33.436 D	24.871	307.9	0.096	5.74	99.0	6.2	0.59	2.9	0.17	0.47	1.14	0.52	30	
31	14.52	14.52	33.438	24.873	307.8	0.099	5.72	98.6	6.3	0.60	3.0	0.18	0.51	1.14	0.53	31	217
41	14.09	14.08	33.437	24.963	299.5	0.129	5.54	94.7	7.2	0.72	4.0	0.22	0.86	1.25	0.57	41	216
50 ISL	13.57 D	13.56	33.449 D	25.079	288.7	0.156	5.18	87.6	9.7	0.86	6.4	0.33	0.50	0.91	0.55	50	
52	13.54	13.53	33.450	25.086	288.0	0.161	5.08	85.9	10.4	0.90	7.2	0.35	0.38	0.80	0.54	52	215
61	12.39	12.38	33.471	25.330	265.0	0.186	4.55	75.1	14.0	1.16	11.9	0.34	0.05	0.30	0.34	61	214
73	11.73	11.72	33.516	25.489	250.1	0.217	4.21	68.5	16.2	1.33	14.8	0.10	0.07	0.13	0.23	73	213
75 ISL	11.62 D	11.61	33.535 D	25.524	246.7	0.222	4.16	67.6	16.7	1.35	15.2	0.08	0.07	0.12	0.23	75	
85	11.32	11.31	33.582	25.616	238.2	0.246	3.90	62.9	19.4	1.46	16.9	0.04	0.04	0.09	0.22	85	212
100	10.75	10.74	33.702	25.812	219.9	0.281	3.39	54.1	23.0	1.66	20.0	0.01	0.04	0.05	0.19	100	211
121	10.36	10.35	33.789	25.948	207.4	0.326	3.00	47.5	25.8	1.80	22.0	0.00	0.03	0.03	0.15	122	210
125 ISL	10.32 D	10.31	33.803 D	25.966	205.8	0.334	2.95	46.6	26.1	1.82	22.2	0.00	0.03	0.03	0.15	126	
141	10.19	10.17	33.842	26.019	201.1	0.366	2.79	44.0	27.4	1.88	22.9	0.00	0.03	0.02	0.15	142	209
150 ISL	9.97 D	9.95	33.918 D	26.115	192.0	0.384	2.76	43.3	29.0	1.92	23.9	0.00	0.02	0.02	0.13	151	
170	9.02	9.00	33.936	26.285	176.1	0.421	2.72	41.8	33.1	2.01	26.3	0.00	0.01	0.01	0.09	171	208
200 ISL	8.55 D	8.53	34.013 D	26.419	163.7	0.472	2.45	37.3	37.7	2.12	28.1	0.00	0.02	0.01	0.06	201	
202	8.45	8.43	34.020	26.440	161.8	0.475	2.43	36.9	38.0	2.13	28.2	0.00	0.02	0.01	0.06	203	207
233	8.17	8.15	34.045	26.502	156.3	0.525	2.12	32.0	41.9	2.26	30.0	0.00	0.02			234	206
250 ISL	7.93 D	7.90	34.072 D	26.559	151.1	0.551	1.87	28.1	45.2	2.36	31.0	0.00	0.02			251	
272	7.89	7.86	34.137	26.617	146.1	0.583	1.52	22.8	49.5	2.50	32.1	0.00	0.02			274	205
300 ISL	7.75 D	7.72	34.191 D	26.680	140.5	0.623	1.16	17.4	53.2	2.65	33.3	0.00	0.01			302	
319	7.69	7.66	34.208	26.702	138.7	0.650	0.96	14.3	55.3	2.73	34.0	0.00	0.01			321	204
377	7.18	7.14	34.228	26.791	130.9	0.728	0.69	10.2	62.6	2.90	35.9	0.00	0.01			379	203
400 ISL	6.93 D	6.89	34.235 D	26.831	127.3	0.758	0.63	9.2	65.3	2.94	36.5	0.00	0.01			403	
442	6.64	6.60	34.237	26.872	123.8	0.811	0.55	8.0	70.0	2.99	37.4	0.00	0.01			445	202
500 ISL	6.37 D	6.32	34.268 D	26.933	118.6	0.881	0.42	6.1	76.2	3.08	38.7	0.00	0.00			503	
516	6.22	6.17	34.273	26.956	116.5	0.900	0.38	5.5	77.9	3.11	39.0	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 9.4 N	121 9.3 W	26/10/08	1728 UTC	2220 m	320 11 kn	330 04 09	2	1019.5 mb	13.9 C	12.4 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.19	15.19	33.384	24.686	324.7	0.000	6.02	105.2	1.2	0.54	0.4	0.04	0.14	1.34	0.32	0	
3 A	15.19	15.19	33.384	24.686	324.8	0.010	6.02	105.2	1.2	0.54	0.4	0.04	0.14	1.34	0.32	3	222
6 A	15.18	15.18	33.385	24.689	324.6	0.019	6.04	105.5	1.5	0.55	0.4	0.04	0.14	1.31	0.37	6	221
10 ISL	15.19 D	15.19	33.387 D	24.688	324.7	0.032	6.05	105.7	1.4	0.53	0.4	0.04	0.14	1.62	0.55	10	
11	15.19	15.19	33.390	24.691	324.6	0.036	6.05	105.7	1.4	0.52	0.4	0.04	0.14	1.69	0.58	11	220
16 A	15.19	15.19	33.387	24.688	324.9	0.052	6.04	105.5	1.3	0.53	0.4	0.05	0.13	1.38	0.43	16	219
20 ISL	15.10 D	15.10	33.398 D	24.717	322.3	0.065	5.99	104.5	2.1	0.57	1.0	0.08	0.20	1.66	0.51	20	
23 A	14.94	14.94	33.395	24.749	319.3	0.075	5.96	103.6	2.8	0.62	1.6	0.10	0.27	1.89	0.60	23	218
29 A	14.44	14.44	33.387	24.850	309.9	0.093	5.96	102.6	3.8	0.72	2.5	0.14	0.40	1.60	0.57	29	217
30 ISL	14.32 D	14.32	33.384 D	24.873	307.7	0.096	5.95	102.1	3.9	0.73	2.6	0.15	0.43	1.57	0.57	30	
40 A	13.67	13.66	33.400	25.021	293.9	0.127	5.75	97.4	5.1	0.85	4.4	0.24	0.63	1.20	0.55	40	216
50	13.08	13.07	33.402	25.141	282.7	0.155	5.32	89.0	7.5	1.04	7.5	0.30	0.44	0.50	0.35	50	215
59	12.11	12.10	33.396	25.325	265.4	0.180	4.87	79.8	10.8	1.27	12.0	0.17	0.02	0.17	0.27	59	214
70	11.07	11.06	33.313	25.452	253.5	0.209	4.82	77.2	12.6	1.37	13.9	0.03	0.01	0.13	0.25	70	213
75 ISL	11.17 D	11.16	33.451 D	25.541	245.1	0.221	4.73	76.0	13.4	1.43	14.9	0.03	0.01	0.11	0.22	75	
85	10.93	10.92	33.513	25.632	236.6	0.245	4.48	71.7	15.2	1.54	16.8	0.02	0.00	0.08	0.16	85	212
100 ISL	10.41 D	10.40	33.639 D	25.822	218.9	0.279	4.00	63.3	18.5	1.68	19.5	0.01	0.01	0.08	0.13	100	
101	10.46	10.45	33.630	25.806	220.4	0.282	3.97	62.9	18.8	1.69	19.7	0.01	0.01	0.08	0.13	101	211
120	9.66	9.65	33.773	26.053	197.2	0.321	3.38	52.7	24.4	1.92	23.5	0.00	0.01	0.03	0.09	121	210
125 ISL	9.51 D	9.50	33.805 D	26.103	192.5	0.331	3.27	50.8	25.2	1.95	24.1	0.00	0.01	0.03	0.08	126	
138	9.36	9.34	33.847	26.160	187.3	0.356	3.04	47.1	26.8	2.01	25.1	0.00	0.01	0.03	0.07	139	209
150 ISL	9.20 D	9.18	33.911 D	26.236	180.3	0.378	2.91	44.9	28.4	2.05	25.8	0.00	0.01	0.02	0.06	151	
168	8.82	8.80	33.945	26.323	172.3	0.409	2.77	42.4	30.8	2.10	26.5	0.00	0.00	0.01	0.06	169	208
200	8.33	8.31	34.003	26.445	161.2	0.463	2.56	38.8	35.8	2.18	28.0	0.00	0.00	0.00	0.04	201	207
228	8.06	8.04	34.044 D	26.518	154.7	0.507	2.25	33.9	39.2	2.30	29.7	0.00	0.00			229	206
250 ISL	7.87 D	7.85	34.057 D	26.556	151.4	0.541	2.00	30.0	43.1	2.40	31.2	0.00	0.00			251	
268	7.61	7.58	34.071	26.605	146.9	0.568	1.81	27.0	46.5	2.49	32.4	0.00	0.00			270	205
300 ISL	7.20 D	7.17	34.080 D	26.671	141.0	0.614	1.54	22.7	52.1	2.62	34.1	0.00	0.00			302	
316	7.04	7.01	34.089	26.700	138.4	0.636	1.42	20.9	54.8	2.68	34.8	0.00	0.00			318	204
376	6.57	6.54	34.157	26.818	127.8	0.716	0.90	13.1	64.0	2.91	37.2	0.00	0.00			378	203
400 ISL	6.63 D	6.59	34.213 D	26.854	124.8	0.746	0.73	10.6	66.5	2.98	37.6	0.00	0.00			403	
439	6.46	6.42	34.253	26.908	120.1	0.794	0.52	7.6	70.1	3.07	38.1	0.00	0.00			442	202
500 ISL	6.02 D	5.98	34.272 D	26.981	113.7	0.865	0.37	5.3	76.9	3.15	39.4	0.00	0.00			503	
517	5.99	5.94	34.287	26.996	112.4	0.884	0.33	4.7	78.8	3.17	39.8	0.00	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 28.8 N	122 32.4 W	27/10/08	0532 UTC	4011 m	340 12 kn			1020.0 mb	14.1 C	12.7 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.88	15.88	33.424	24.563	336.3	0.000	5.97	105.8	0.3	0.31	0.0	0.00	0.02	0.43	0.10	0	
2	15.88	15.88	33.424	24.564	336.4	0.007	5.97	105.8	0.3	0.31	0.0	0.00	0.02	0.43	0.10	2	220
10	15.88	15.88	33.429	24.568	336.2	0.034	5.98	106.0	0.3	0.29	0.0	0.00	0.02	0.44	0.09	10	219
20 ISL	15.20 D	15.20	33.406 D	24.701	323.8	0.067	6.05	105.7	0.5	0.34	0.4	0.03	0.09	1.14	0.30	20	
21	15.23	15.23	33.409	24.697	324.3	0.070	6.05	105.8	0.5	0.34	0.4	0.03	0.10	1.21	0.32	21	218
30 ISL	14.62 D	14.62	33.383 D	24.809	313.8	0.099	5.96	102.9	0.9	0.49	2.2	0.09	0.27	1.09	0.29	30	
31	14.61	14.61	33.392	24.818	313.0	0.102	5.95	102.8	1.0	0.51	2.5	0.10	0.29	1.08	0.29	31	217
40	13.51	13.50	33.410	25.061	290.1	0.129	5.30	89.5	5.9	0.84	6.7	0.49	0.32	1.16	0.48	40	216
50	11.87	11.86	33.412	25.382	259.7	0.156	4.85	79.1	11.0	1.15	12.5	0.37	0.03	0.59	0.36	50	215
60	11.05	11.04	33.400	25.523	246.5	0.182	4.55	72.9	14.5	1.36	16.0	0.08	0.02	0.32	0.32	60	214
70	10.63	10.62	33.563	25.724	227.5	0.205	4.04	64.2	17.6	1.57	19.2	0.04	0.04	0.15	0.21	70	213
75 ISL	10.33 D	10.32	33.619 D	25.819	218.5	0.217	3.88	61.3	19.5	1.65	20.5	0.03	0.03	0.10	0.17	75	
85	9.93	9.92	33.663	25.922	209.0	0.238	3.63	56.9	23.0	1.79	22.7	0.01	0.01	0.03	0.12	85	212
100	9.56	9.55	33.788	26.081	194.1	0.268	3.21	49.9	26.2	1.93	24.9	0.00	0.01	0.01	0.09	100	211
119	9.43	9.42	33.875	26.171	186.0	0.304	2.71	42.0	28.5	2.04	26.4	0.00	0.01	0.01	0.10	120	210
125 ISL	9.36 D	9.35	33.904 D	26.205	182.8	0.315	2.66	41.2	29.3	2.05	26.7	0.00	0.01	0.01	0.10	126	
139	9.01	9.00	33.934	26.285	175.5	0.340	2.59	39.8	31.2	2.08	27.4	0.00	0.01	0.01	0.10	140	209
150 ISL	9.02 D	9.00	34.004 D	26.338	170.6	0.359	2.40	36.9	32.7	2.13	28.1	0.00	0.01	0.01	0.10	151	
169	8.80	8.78	34.025	26.389	166.1	0.391	2.04	31.2	35.2	2.23	29.2	0.00	0.01	0.01	0.11	170	208
200 ISL	8.48 D	8.46	34.095 D	26.494	156.6	0.441	1.72	26.2	39.6	2.36	30.7	0.00	0.01	0.01	0.10	201	
201	8.46	8.44	34.093	26.496	156.5	0.443	1.71	26.0	39.7	2.36	30.7	0.00	0.01	0.01	0.10	202	207
228	8.28	8.26	34.139	26.560	150.9	0.484	1.42	21.5	43.0	2.49	31.7	0.00	0.01			229	206
250 ISL	8.25 D	8.22	34.189 D	26.604	147.1	0.517	1.19	18.0	46.4	2.59	32.3	0.00	0.02			251	
269	8.08	8.05	34.217	26.651	142.9	0.545	1.03	15.5	49.4	2.67	32.8	0.00	0.02			271	205
300 ISL	7.74 D	7.71	34.226 D	26.709	137.8	0.588	0.90	13.5	53.7	2.74	34.1	0.00	0.02			302	
319	7.47	7.44	34.212	26.737	135.3	0.614	0.85	12.6	56.1	2.78	34.9	0.00	0.01			321	204
380	7.06	7.02	34.245	26.821	128.0	0.695	0.62	9.1	63.2	2.94	36.3	0.00	0.00			382	203
400 ISL	6.32 D	6.28	34.166 D	26.858	124.2	0.720	0.60	8.7	66.2	2.97	37.1	0.00	0.00			403	
440	6.23	6.19	34.210	26.904	120.3	0.769	0.57	8.2	72.3	3.03	38.6	0.00	0.00			443	202
500 ISL	5.81 D	5.77	34.233 D	26.976	113.9	0.839	0.43	6.1	79.2	3.11	39.9	0.00	0.00			503	
513	5.77	5.73	34.240	26.986	113.0	0.854	0.40	5.7	80.7	3.13	40.2	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.4 N	123 13.5 W	27/10/08	1135 UTC	4228 m	340 09 kn			1020.1 mb	15.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.16	17.16	33.125	24.039	386.3	0.000	5.62	101.9	1.8	0.32	0.0	0.00	0.03	0.12	0.03	0	
1	17.16	17.16	33.125	24.039	386.4	0.004	5.62	101.9	1.8	0.32	0.0	0.00	0.03	0.12	0.03	1	221
10	17.16	17.16	33.125	24.039	386.6	0.039	5.61	101.8	1.9	0.33	0.0	0.00	0.04	0.13	0.03	10	220
20 ISL	17.16 D	17.16	33.122 D	24.037	387.1	0.077	5.62	101.9	1.9	0.33	0.0	0.00	0.05	0.13	0.03	20	
25	17.15	17.15	33.125	24.042	386.9	0.097	5.62	101.9	1.9	0.33	0.0	0.00	0.05	0.13	0.03	25	219
30 ISL	17.01 D	17.01	33.129 D	24.078	383.6	0.116	5.64	102.0	1.7	0.33	0.0	0.00	0.04	0.17	0.05	30	
40	16.85	16.84	33.139	24.124	379.6	0.154	5.69	102.6	1.4	0.33	0.0	0.00	0.02	0.27	0.10	40	218
50 ISL	16.04 D	16.03	33.096 D	24.277	365.2	0.191	5.77	102.4	1.6	0.34	0.0	0.00	0.04	0.36	0.16	50	
51	16.33	16.32	33.115	24.226	370.1	0.195	5.78	103.1	1.6	0.34	0.0	0.00	0.04	0.37	0.17	51	217
55	15.39	15.38	33.129	24.447	349.1	0.209	5.92	103.7	1.8	0.37	0.3	0.01	0.08	0.37	0.23	55	216
62	13.61	13.60	33.014	24.735	321.7	0.233	6.16	104.0	2.6	0.38	0.1	0.02	0.05	0.30	0.27	62	215
75 ISL	12.46 D	12.45	32.990 D	24.943	302.1	0.273	5.89	97.0	3.8	0.53	2.0	0.26	0.05	0.20	0.25	75	
76	12.53	12.52	32.991	24.931	303.3	0.276	5.85	96.5	3.9	0.55	2.2	0.27	0.05	0.19	0.25	76	214
87	11.74	11.73	32.977	25.069	290.3	0.309	5.70	92.5	5.1	0.69	5.0	0.03	0.03	0.12	0.21	87	213
100 ISL	11.32 D	11.31	33.045 D	25.199	278.2	0.346	5.57	89.6	6.4	0.80	7.1	0.01	0.00	0.08	0.17	100	
101	11.32	11.31	33.042	25.197	278.4	0.349	5.56	89.4	6.6	0.81	7.3	0.01	0.00	0.08	0.16	101	212
111	10.79	10.78	33.170	25.391	260.1	0.376	5.30	84.3	9.6	1.01	10.9	0.00	0.02	0.03	0.05	111	211
125	10.35	10.34	33.327	25.589	241.5	0.411	4.94	77.9	12.6	1.18	13.8	0.00	0.01	0.01	0.02	126	210
139	10.15	10.13	33.435	25.708	230.5	0.444	4.69	73.7	15.0	1.33	16.1	0.00	0.00	0.01	0.04	140	209
150 ISL	9.86 D	9.84	33.621 D	25.902	212.2	0.468	4.26	66.6	18.4	1.52	19.0	0.00	0.00	0.01	0.04	151	
170	9.24	9.22	33.797	26.141	189.7	0.508	3.51	54.2	24.5	1.81	23.8	0.00	0.00	0.00	0.02	171	208
200 ISL	8.73 D	8.71	33.914 D	26.314	173.8	0.563	3.44	52.5	28.0	1.81	24.5	0.00	0.00	0.00	0.02	201	
201	8.72	8.70	33.914	26.315	173.7	0.565	3.44	52.5	28.1	1.81	24.5	0.00	0.00	0.00	0.02	202	207
231	8.32	8.30	33.965	26.417	164.4	0.615	2.71	41.0	34.6	2.09	28.2	0.00	0.01			232	206
250 ISL	7.90 D	7.87	33.993 D	26.502	156.5	0.646	2.33	34.9	38.9	2.24	30.2	0.00	0.01			251	
271	7.68	7.65	34.031	26.564	150.9	0.678	2.01	30.0	43.4	2.38	32.0	0.00	0.01			273	205
300 ISL	7.22 D	7.19	34.041 D	26.637	144.2	0.721	1.81	26.7	48.3	2.49	33.6	0.00	0.02			302	
322	7.02	6.99	34.043	26.667	141.6	0.752	1.72	25.3	51.9	2.55	34.6	0.00	0.02			324	204
378	6.33	6.30	34.063	26.775	131.7	0.829	1.32	19.1	62.8	2.77	37.3	0.00	0.00			380	203
400 ISL	6.29 D	6.25	34.114 D	26.820	127.7	0.857	1.10	15.9	66.2	2.86	38.1	0.00	0.00			402	
440	6.13	6.09	34.162	26.879	122.5	0.908	0.73	10.5	71.7	3.00	39.3	0.00	0.00			443	202
500 ISL	5.71 D	5.67	34.186 D	26.951	116.1	0.979	0.55	7.8	79.3	3.10	40.6	0.00	0.00			503	
511	5.64	5.60	34.189	26.962	115.1	0.992	0.52	7.4	80.7	3.12	40.8	0.00	0.00			514	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 49.0 N	123 54.6 W	27/10/08	1802 UTC	4361 m	360 08 kn	340 04 09	1	1022.8 mb	17.1 C	15.0 C	29m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.49	17.49	33.227	24.039	386.4	0.000	5.58	101.9	2.5	0.32	0.0	0.00	0.04	0.10	0.03	0	
2 A	17.49	17.49	33.227	24.039	386.4	0.008	5.58	101.9	2.5	0.32	0.0	0.00	0.04	0.10	0.03	2	224
10 ISL	17.46 D	17.46	33.224 D	24.044	386.2	0.039	5.58	101.9	2.5	0.32	0.0	0.00	0.05	0.10	0.03	10	
20 A	17.45	17.45	33.226	24.048	386.1	0.077	5.59	102.0	2.4	0.31	0.0	0.00	0.05	0.10	0.03	20	223
30 ISL	17.46 D	17.45	33.225 D	24.046	386.7	0.116	5.63	102.8	2.0	0.31	0.0	0.00	0.03	0.10	0.03	30	
31 A	17.46	17.45	33.229	24.049	386.4	0.120	5.64	103.0	1.9	0.31	0.0	0.00	0.03	0.10	0.03	31	222
39 A	16.72	16.71	33.109	24.131	378.8	0.150	5.73	103.0	1.4	0.34	0.0	0.00	0.04	0.27	0.11	39	221
50	16.51	16.50	33.116	24.185	374.0	0.192	5.73	102.6	1.4	0.34	0.0	0.00	0.06	0.40	0.22	50	220
58 A	15.85	15.84	33.139	24.353	358.2	0.221	5.81	102.7	1.6	0.37	0.1	0.00	0.08	0.47	0.28	58	219
75 ISL	13.33 D	13.32	33.000 D	24.781	317.7	0.279	6.05	101.5	2.7	0.39	0.2	0.03	0.08	0.19	0.19	75	
77 A	13.27	13.26	32.998	24.792	316.7	0.285	6.06	101.5	2.9	0.40	0.2	0.03	0.08	0.15	0.17	77	218
90	12.34	12.33	32.959	24.943	302.5	0.325	5.83	95.8	3.7	0.52	1.9	0.19	0.01	0.11	0.12	90	217
100 ISL	11.93 D	11.92	32.978 D	25.035	293.9	0.355	5.71	93.0	4.7	0.62	3.9	0.11	0.13	0.10	0.11	100	
107	11.69	11.68	33.027	25.118	286.2	0.375	5.64	91.4	5.6	0.70	5.4	0.03	0.18	0.09	0.11	107	216
115	11.55	11.54	33.098	25.199	278.6	0.398	5.53	89.4	6.9	0.80	7.1	0.02	0.04	0.06	0.10	115	215
124	11.23	11.21	33.163	25.307	268.4	0.422	5.40	86.7	8.7	0.91	9.2	0.01	0.05	0.05	0.08	125	210
125 ISL	11.17 D	11.15	33.171 D	25.324	266.8	0.425	5.39	86.5	8.8	0.92	9.4	0.01	0.05	0.05	0.08	126	
143	10.74	10.72	33.279	25.485	251.9	0.472	5.16	82.1	11.4	1.09	12.3	0.00	0.01	0.03	0.04	144	209
150 ISL	10.54 D	10.52	33.384 D	25.602	240.9	0.489	4.95	78.4	13.0	1.18	13.9	0.00	0.01	0.02	0.03	151	
168	9.90	9.88	33.581	25.864	216.2	0.530	4.30	67.3	17.8	1.44	18.3	0.00	0.01	0.01	0.02	169	208
198	9.21	9.19	33.818	26.163	188.2	0.591	3.30	50.9	26.4	1.84	24.5	0.00	0.01	0.00	0.02	199	207
200 ISL	9.13 D	9.11	33.838 D	26.191	185.6	0.595	3.30	50.8	26.6	1.84	24.5	0.00	0.01			201	
227	8.76	8.74	33.931	26.323	173.5	0.643	3.43	52.4	28.5	1.79	24.3	0.00	0.00			228	206
250 ISL	8.35 D	8.32	33.990 D	26.432	163.3	0.682	2.97	45.0	33.4	1.99	26.8	0.00	0.00			251	
267	8.06	8.03	34.002	26.485	158.5	0.709	2.52	37.9	37.8	2.18	29.1	0.00	0.00			268	205
300 ISL	7.63 D	7.60	34.048 D	26.585	149.4	0.760	1.86	27.7	44.9	2.42	32.1	0.00	0.00			302	
317	7.53	7.50	34.077	26.622	146.1	0.785	1.60	23.8	48.3	2.52	33.4	0.00	0.00			319	204
376	6.73	6.70	34.077	26.733	135.9	0.868	1.31	19.1	58.5	2.72	36.5	0.00	0.02			378	203
400 ISL	6.50 D	6.46	34.096 D	26.779	131.8	0.900	1.16	16.8	62.5	2.80	37.5	0.00	0.01			402	
437	6.20	6.16	34.118	26.835	126.7	0.948	0.92	13.3	68.4	2.91	38.8	0.00	0.00			440	202
500 ISL	5.79 D	5.75	34.173 D	26.931	118.1	1.025	0.65	9.3	76.8	3.03	40.1	0.00	0.00			503	
520	5.63	5.59	34.176	26.953	116.1	1.049	0.57	8.1	79.5	3.07	40.5	0.00	0.00			523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 49.3 N	121 50.8 W	26/10/08	2303 UTC	3636 m	340 11 kn	340 04 08	2	1017.7 mb	14.5 C	13.1 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.07	16.07	33.380	24.487	343.6	0.000	5.89	104.7	0.1	0.29	0.0	0.00	0.02	0.53	0.14	0	
1	16.07	16.07	33.380	24.487	343.7	0.003	5.89	104.7	0.1	0.29	0.0	0.00	0.02	0.53	0.14	1	220
10	16.05	16.05	33.380	24.492	343.5	0.034	5.90	104.9	0.2	0.29	0.0	0.00	0.01	0.57	0.15	10	219
20	15.78	15.78	33.394	24.564	337.0	0.068	5.92	104.7	0.1	0.28	0.0	0.00	0.02	0.76	0.21	20	218
30	15.51	15.51	33.381	24.614	332.5	0.102	5.90	103.7	0.3	0.31	0.2	0.02	0.06	1.32	0.36	30	217
40	14.92	14.91	33.391	24.751	319.7	0.134	5.99	104.1	0.7	0.41	1.5	0.06	0.26	1.69	0.50	40	216
49	13.21	13.20	33.259	25.005	295.7	0.162	5.39	90.4	6.2	0.78	6.2	0.31	0.43	0.79	0.53	49	215
50 ISL	11.75 D	11.74	33.049 D	25.122	284.3	0.165	5.30	86.0	6.9	0.83	7.1	0.29	0.39	0.72	0.50	50	
59	11.85	11.84	33.422	25.394	258.8	0.189	4.66	76.0	12.6	1.22	14.2	0.06	0.01	0.27	0.26	59	214
70	11.43	11.42	33.450	25.493	249.6	0.217	4.55	73.5	13.9	1.32	15.6	0.05	0.01	0.20	0.24	70	213
75 ISL	10.74 D	10.73	33.455 D	25.620	237.5	0.230	4.40	70.1	15.4	1.41	17.0	0.03	0.01	0.16	0.22	75	
83	10.64	10.63	33.577	25.733	226.9	0.248	4.06	64.6	18.2	1.58	19.6	0.01	0.01	0.10	0.19	83	212
100	10.09	10.08	33.767	25.976	204.1	0.285	3.10	48.8	23.9	1.84	23.4	0.00	0.02	0.03	0.14	100	211
119	9.82	9.81	33.901	26.127	190.2	0.322	2.44	38.2	27.5	2.01	25.5	0.00	0.00	0.01	0.09	120	210
125 ISL	9.65 D	9.64	33.934 D	26.181	185.2	0.334	2.35	36.6	28.4	2.05	26.1	0.00	0.00	0.01	0.09	126	
139	9.41	9.39	33.969	26.248	179.1	0.359	2.24	34.8	30.3	2.12	27.2	0.00	0.00	0.01	0.11	140	209
150 ISL	9.36 D	9.34	33.989 D	26.272	177.0	0.379	2.12	32.9	31.8	2.17	27.8	0.00	0.00	0.01	0.10	151	
172	9.10	9.08	34.048	26.360	169.0	0.417	1.92	29.6	34.5	2.24	28.7	0.00	0.00	0.01	0.06	173	208
200 ISL	8.68 D	8.66	34.069 D	26.443	161.6	0.463	1.90	29.0	37.3	2.29	29.8	0.00	0.00	0.00	0.06	201	
201	8.63	8.61	34.064	26.447	161.2	0.465	1.90	29.0	37.4	2.29	29.8	0.00	0.00	0.00	0.06	202	207
228	8.47	8.45	34.132	26.525	154.2	0.507	1.49	22.7	41.9	2.47	31.1	0.00	0.02			229	206
250 ISL	8.07 D	8.04	34.158 D	26.606	146.8	0.540	1.24	18.7	46.1	2.58	32.1	0.00	0.01			251	
269	7.97	7.94	34.191	26.647	143.2	0.568	1.09	16.4	49.5	2.66	33.0	0.00	0.00			271	205
300 ISL	7.56 D	7.53	34.176 D	26.695	138.9	0.612	0.96	14.3	53.3	2.74	34.3	0.00	0.01			302	
317	7.48	7.45	34.197	26.724	136.5	0.635	0.91	13.5	55.2	2.78	35.0	0.00	0.01			319	204
379	6.96	6.92	34.232	26.824	127.6	0.717	0.64	9.4	63.3	2.94	36.7	0.00	0.00			381	203
400 ISL	6.70 D	6.66	34.242 D	26.868	123.6	0.743	0.56	8.2	66.3	2.99	37.2	0.00	0.00			403	
440	6.45	6.41	34.266	26.920	119.0	0.792	0.43	6.2	72.0	3.08	38.2	0.00	0.00			443	202
500 ISL	6.04 D	6.00	34.296 D	26.997	112.2	0.861	0.31	4.5	79.3	3.16	39.7	0.00	0.00			503	
511	5.99	5.95	34.300	27.007	111.4	0.873	0.29	4.2	80.6	3.18	40.0	0.00	0.00			515	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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	26/10/08	0038 UTC	20 m	250 05 kn	240 01 07	0	1014.7 mb	17.2 C	15.5 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.95	17.95	33.508	24.143	376.4	0.000	5.94	109.7	2.2	0.29	0.0	0.00	0.04	1.12	0.19	0	
2	17.95	17.95	33.508	24.143	376.5	0.008	5.94	109.7	2.2	0.29	0.0	0.00	0.04	1.12	0.19	2	204
5	17.82	17.82	33.492	24.162	374.7	0.019	6.03	111.0	2.4	0.28	0.0	0.00	0.02	1.36	0.32	5	203
10	17.08	17.08	33.466	24.320	359.9	0.037	6.32	114.7	3.0	0.27	0.0	0.00	0.03	2.34	0.71	10	202
16	17.01	17.01	33.464	24.335	358.7	0.059	6.33	114.7	3.0	0.26	0.0	0.01	0.04	2.65	0.79	16	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 16.5 N	120 1.7 W	26/10/08	0249 UTC	581 m	280 12 kn			1015.4 mb	14.3 C	13.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.97	16.97	33.457	24.338	357.8	0.000	5.94	107.6	2.3	0.27	0.0	0.00	0.03	0.30	0.08	0	
1	16.97	16.97	33.457	24.338	357.8	0.004	5.94	107.6	2.3	0.27	0.0	0.00	0.03	0.30	0.08	1	224
10	16.46	16.46	33.441	24.445	348.0	0.035	6.05	108.5	2.2	0.28	0.0	0.00	0.04	0.41	0.17	10	223
20	15.39	15.39	33.416	24.667	327.1	0.069	5.81	101.9	3.4	0.47	1.7	0.22	0.23	1.75	0.50	20	222
29	14.59	14.59	33.398	24.827	312.1	0.098	5.49	94.8	5.1	0.65	4.3	0.44	0.34	0.70	0.37	29	221
30 ISL	14.44 D	14.44	33.407 D	24.866	308.4	0.101	5.47	94.1	5.3	0.68	4.7	0.43	0.33	0.64	0.37	30	
39	12.27	12.26	33.273	25.198	276.9	0.127	5.32	87.5	7.5	0.94	8.7	0.26	0.14	0.35	0.38	39	220
49	11.63	11.62	33.358	25.385	259.4	0.154	4.93	80.0	10.3	1.14	12.4	0.10	0.00	0.20	0.23	49	219
50 ISL	11.62 D	11.61	33.352 D	25.382	259.7	0.157	4.88	79.2	10.6	1.16	12.8	0.09	0.00	0.19	0.22	50	
59	11.23	11.22	33.505	25.572	241.8	0.179	4.39	70.7	13.6	1.33	15.6	0.03	0.01	0.08	0.12	59	218
69	10.97	10.96	33.591	25.686	231.2	0.203	3.99	63.9	16.0	1.46	17.5	0.01	0.01	0.04	0.08	69	217
75 ISL	10.82 D	10.81	33.651 D	25.759	224.3	0.217	3.82	61.0	17.0	1.52	18.4	0.01	0.01	0.03	0.08	75	
84	10.67	10.66	33.678	25.807	220.0	0.237	3.59	57.2	18.5	1.59	19.5	0.01	0.01	0.02	0.07	84	216
100	10.46	10.45	33.767	25.913	210.2	0.271	3.12	49.5	21.8	1.75	21.3	0.00	0.01	0.02	0.08	101	215
119	10.21	10.20	33.835	26.009	201.5	0.310	2.81	44.3	24.4	1.86	23.0	0.00	0.00	0.02	0.13	120	214
125 ISL	10.14 D	10.13	33.867 D	26.046	198.1	0.322	2.71	42.7	25.1	1.90	23.5	0.00	0.00	0.02	0.13	126	
139	9.95	9.93	33.918	26.119	191.5	0.349	2.48	38.9	26.6	1.98	24.6	0.00	0.00	0.01	0.12	140	213
150 ISL	9.75 D	9.73	34.006 D	26.221	182.0	0.370	2.30	36.0	28.2	2.05	25.3	0.00	0.00	0.01	0.12	151	
168	9.70	9.68	34.035	26.252	179.4	0.402	1.97	30.8	31.1	2.17	26.6	0.00	0.01	0.01	0.12	169	212
200 ISL	9.44 D	9.42	34.140 D	26.378	168.1	0.458	1.24	19.3	36.4	2.41	29.5	0.00	0.01	0.01	0.12	201	
203	9.41	9.39	34.146	26.387	167.2	0.463	1.17	18.2	36.9	2.43	29.8	0.00	0.01	0.01	0.12	204	211
228	9.20	9.17	34.183	26.451	161.6	0.504	0.80	12.4	40.6	2.58	31.3	0.00	0.01			229	210
250 ISL	8.95 D	8.92	34.205 D	26.508	156.5	0.539	0.66	10.1	44.0	2.67	32.0	0.00	0.01			251	
270	8.70	8.67	34.221	26.560	151.9	0.570	0.61	9.3	47.1	2.74	32.5	0.00	0.01			272	209
300 ISL	8.27 D	8.24	34.232 D	26.635	145.1	0.615	0.56	8.5	52.0	2.83	33.2	0.00	0.01			302	
318	8.10	8.07	34.232	26.661	142.9	0.640	0.54	8.1	54.8	2.88	33.6	0.00	0.01			320	208
378	7.60	7.56	34.244	26.744	135.7	0.724	0.41	6.1	62.6	2.98	34.4	0.00	0.00			380	207
400 ISL	7.41 D	7.37	34.243 D	26.771	133.4	0.754	0.28	4.2	66.7	3.04	34.2	0.00	0.00			403	
437	7.01	6.97	34.249	26.832	127.9	0.802	0.08	1.2	76.1	3.17	33.8	0.00	0.00			440	206
481	6.64	6.60	34.247	26.881	123.6	0.857	0.01	0.1	92.7	3.39	30.2	0.00	0.00			484	205
500 ISL	6.56 D	6.51	34.247 D	26.891	122.8	0.881	0.01	0.1	96.8	3.46	29.1	0.00	0.11			503	
516	6.52	6.47	34.248	26.898	122.4	0.900	0.01	0.1	100.4	3.51	27.9	0.00	0.20			520	204
535	6.47	6.42	34.248	26.904	121.9	0.923	0.00	0.0	106.9	3.59	25.3	0.00	0.63			539	203
563	6.43	6.38	34.248	26.910	121.8	0.958	0.00	0.0	117.6	3.75	19.8	0.00	1.82			567	202
565	6.43	6.38	34.249	26.911	121.7	0.960	0.00	0.0	117.7	3.77	19.7	0.00	1.82			569	201

A) SANTA BARBARA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 15.5 N	119 19.5 W	25/10/08	2123 UTC	21 m	300 13 kn	320 02 07	2	1015.4 mb	16.9 C	15.2 C		4/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.47	17.47	33.519	24.267	364.6	0.000	6.23	114.0	2.5	0.31	0.0	0.01	0.04	2.06	0.59	0	
1	17.47	17.47	33.519	24.267	364.6	0.004	6.23	114.0	2.5	0.31	0.0	0.01	0.04	2.06	0.59	1	205
5	17.41	17.41	33.509	24.274	364.1	0.018	6.21	113.5	2.5	0.32	0.0	0.01	0.04	1.94	0.54	5	204
10	17.08	17.08	33.507	24.351	356.9	0.036	6.07	110.2	2.4	0.31	0.0	0.00	0.03	3.09	0.63	10	202
10	17.07	17.07	33.507	24.353	356.7	0.036										10	203
17	16.64	16.64	33.477	24.431	349.5	0.061	5.49	98.8	4.1	0.51	0.0	0.02	0.12	3.99	1.15	17	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 24.6 W	25/10/08	1937 UTC	36 m	300 06 kn	280 02 05	4	1016.4 mb	16.5 C	15.2 C	15m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.91	17.91	33.530	24.170	373.9	0.000	5.70	105.2	1.1	0.30	0.0	0.00	0.01	0.63	0.08	0	
1	17.91	17.91	33.530	24.170	373.9	0.004	5.70	105.2	1.1	0.30	0.0	0.00	0.01	0.63	0.08	1	206
5	17.89	17.89	33.529	24.174	373.6	0.019	5.70	105.1	1.0	0.29	0.0	0.00	0.00	0.56	0.15	5	205
10	17.65	17.65	33.522	24.227	368.8	0.037	5.76	105.7	1.1	0.29	0.0	0.00	0.03	0.74	0.15	10	203
10	17.64	17.64	33.523	24.230	368.5	0.037										10	204
20	17.24	17.24	33.504	24.311	361.0	0.074	5.84	106.3	1.4	0.31	0.0	0.01	0.03	1.86	0.52	20	202
30	16.01	16.01	33.437	24.545	339.0	0.109	5.82	103.4	2.7	0.43	1.1	0.06	0.11	2.14	0.70	30	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 11.2 N	119 30.4 W	25/10/08	1824 UTC	107 m	300 06 kn	320 02 05	4	1017.1 mb	15.2 C	14.9 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.72	16.72	33.447	24.389	353.0	0.000	6.07	109.4	2.2	0.28	0.0	0.00	0.03	0.76	0.28	0	
1 A	16.72	16.72	33.447	24.389	353.0	0.004	6.07	109.4	2.2	0.28	0.0	0.00	0.03	0.76	0.28	1	213
7 A	16.57	16.57	33.444	24.422	350.1	0.025	6.64	119.3	2.1	0.28	0.0	0.00	0.03	0.78	0.32	7	212
10 ISL	16.15 D	16.15	33.434 D	24.510	341.7	0.035	6.39	113.8	2.2	0.27	0.0	0.00	0.03	0.80	0.36	10	
11	16.22	16.22	33.419	24.483	344.4	0.038	6.29	112.2	2.3	0.26	0.0	0.00	0.03	0.80	0.38	11	211
15 A	15.62	15.62	33.396	24.601	333.3	0.052	6.35	111.9	2.4	0.25	0.0	0.00	0.03	0.96	0.50	15	210
20	15.35	15.35	33.420	24.679	326.0	0.068	5.86	102.7	3.8	0.44	1.6	0.11	0.11	1.11	0.63	20	209
23 A	15.27	15.27	33.420	24.697	324.4	0.078	5.79	101.4	4.0	0.47	1.9	0.14	0.15	1.02	0.58	23	208
30 A	15.04	15.04	33.418	24.745	319.9	0.101	5.70	99.3	4.4	0.53	2.7	0.17	0.19	0.75	0.51	30	207
41 A	14.51	14.50	33.400	24.846	310.7	0.135	5.56	95.8	5.4	0.65	4.2	0.23	0.22	0.59	0.44	41	206
50	12.26	12.25	33.275	25.202	276.8	0.162	5.29	86.9	8.4	0.98	9.4	0.16	0.05	0.40	0.36	50	205
59	11.83	11.82	33.321	25.319	265.9	0.186	5.07	82.6	10.0	1.10	11.5	0.09	0.02	0.22	0.27	59	204
70	11.38	11.37	33.413	25.473	251.4	0.215	4.71	76.0	12.4	1.25	14.0	0.05	0.02	0.12	0.18	70	203
75 ISL	10.95 D	10.94	33.508 D	25.625	237.1	0.227	4.38	70.1	14.7	1.36	15.7	0.05	0.02	0.10	0.15	75	
84	10.87	10.86	33.623	25.729	227.4	0.248	3.81	60.9	18.7	1.55	18.4	0.06	0.01	0.07	0.12	84	202
98	10.68	10.67	33.686	25.812	219.9	0.279	3.50	55.7	19.7	1.65	19.8	0.04	0.00	0.03	0.09	98	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 52.6 N	120 8.2 W	25/10/08	1057 UTC	105 m	300 12 kn			1014.4 mb	15.2 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.61	16.61	33.484	24.443	347.8	0.000	5.87	105.6	2.2	0.32	0.3	0.02	0.05	0.63	0.29	0	
1	16.61	16.61	33.484	24.443	347.8	0.003	5.87	105.6	2.2	0.32	0.3	0.02	0.05	0.63	0.29	1	211
10 ISL	16.41 D	16.41	33.472 D	24.480	344.6	0.035	5.91	105.9	1.8	0.34	0.5	0.02	0.05	0.69	0.30	10	
11	16.42	16.42	33.474	24.479	344.7	0.038	5.91	105.9	1.8	0.34	0.5	0.02	0.05	0.70	0.30	11	209
11	16.41	16.41	33.474	24.482	344.5	0.038										11	210
20 ISL	13.95 D	13.95	33.362 D	24.933	301.7	0.067	5.67	96.6	5.2	0.63	4.2	0.17	0.09	0.89	0.50	20	
21	14.06	14.06	33.365	24.913	303.7	0.070	5.63	96.1	5.6	0.67	4.7	0.19	0.09	0.90	0.52	21	208
30 ISL	13.39 D	13.39	33.402 D	25.079	288.1	0.097	5.30	89.3	7.4	0.83	6.9	0.26	0.12	0.65	0.47	30	
31	13.41	13.41	33.395	25.069	289.1	0.100	5.26	88.6	7.6	0.85	7.2	0.26	0.12	0.61	0.47	31	207
40	12.52	12.51	33.453	25.290	268.2	0.125	4.83	79.9	10.9	1.08	11.0	0.22	0.07	0.33	0.41	40	206
50	12.19	12.18	33.447	25.349	262.9	0.151	4.77	78.4	11.3	1.14	11.9	0.18	0.03	0.28	0.37	50	205
60	11.78	11.77	33.534	25.494	249.3	0.177	4.32	70.4	14.2	1.30	14.4	0.15	0.01	0.19	0.28	60	204
70	11.44	11.43	33.578	25.591	240.3	0.201	4.15	67.1	15.5	1.40	16.0	0.09	0.01	0.14	0.23	70	203
75 ISL	11.14 D	11.13	33.638 D	25.692	230.7	0.213	3.96	63.7	16.8	1.47	17.1	0.08	0.01	0.11	0.21	75	
85	10.78	10.77	33.705	25.808	219.9	0.236	3.49	55.7	20.0	1.63	19.5	0.06	0.01	0.07	0.17	85	202
97	10.22	10.21	33.831	26.004	201.5	0.261	2.91	45.9	24.4	1.85	22.6	0.03	0.02	0.08	0.06	97	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 44.7 N	120 24.6 W	25/10/08	0651 UTC	976 m	300 13 kn			1015.3 mb	16.2 C	15.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.06	16.06	33.485	24.570	335.7	0.000	6.34	112.8	0.2	0.23	0.0	0.00	0.02	1.70	0.27	0	
2	16.06	16.06	33.485	24.570	335.8	0.007	6.34	112.8	0.2	0.23	0.0	0.00	0.02	1.70	0.27	2	221
10	15.86	15.86	33.483	24.614	331.9	0.033	6.48	114.8	0.0	0.22	0.0	0.00	0.03	1.88	0.44	10	219
10	15.91	15.91	33.483	24.602	332.9	0.033										10	220
20	14.48	14.48	33.479	24.912	303.7	0.065	6.08	104.8	1.0	0.47	1.6	0.09	0.39	3.81	0.66	20	218
30	12.45	12.45	33.486	25.329	264.2	0.094	4.69	77.5	11.2	1.11	11.6	0.33	0.01	0.43	0.29	30	217
40	11.32	11.32	33.383	25.460	251.9	0.119	4.81	77.5	12.7	1.24	14.1	0.02	0.01	0.16	0.22	40	216
50	10.84	10.83	33.527	25.658	233.3	0.144	4.41	70.4	16.3	1.43	17.3	0.01	0.01	0.05	0.15	50	215
60	10.43	10.42	33.602	25.789	221.1	0.166	4.13	65.4	19.0	1.57	19.5	0.01	0.02	0.02	0.11	60	214
70	10.39	10.38	33.619	25.809	219.4	0.188	4.07	64.4	19.3	1.59	19.8	0.00	0.01	0.03	0.11	70	213
75 ISL	10.22 D	10.21	33.701 D	25.902	210.6	0.199	3.90	61.5	20.4	1.64	20.6	0.00	0.01	0.03	0.11	75	
85	10.00	9.99	33.759	25.985	203.0	0.220	3.49	54.8	23.0	1.77	22.5	0.00	0.01	0.02	0.11	85	212
99	9.73	9.72	33.825	26.082	194.0	0.248	3.16	49.3	25.5	1.86	24.0	0.00	0.00	0.01	0.11	100	211
100 ISL	9.71 D	9.70	33.829 D	26.088	193.4	0.250	3.14	49.0	25.6	1.86	24.0	0.00	0.00	0.01	0.11	101	
118	9.58	9.57	33.901	26.166	186.4	0.284	2.82	43.9	27.6	1.93	24.7	0.00	0.00	0.01	0.11	119	210
125 ISL	9.50 D	9.49	33.921 D	26.195	183.8	0.297	2.78	43.2	28.5	1.95	25.3	0.00	0.00	0.01	0.10	126	
139	9.07	9.05	33.923	26.266	177.2	0.322	2.74	42.2	30.3	2.00	26.5	0.00	0.00	0.01	0.08	140	209
150 ISL	8.88 D	8.86	33.983 D	26.344	170.1	0.341	2.65	40.6	31.9	2.03	26.9	0.00	0.00	0.01	0.07	151	
168	8.81	8.79	34.036	26.396	165.4	0.371	2.38	36.4	34.7	2.12	27.7	0.00	0.00	0.01	0.06	169	208
200	8.76	8.74	34.122	26.472	158.8	0.423	1.46	22.3	39.9	2.43	31.0	0.00	0.02	0.00	0.08	201	207
229	8.51	8.49	34.147	26.531	153.7	0.469	1.23	18.7	43.6	2.55	32.3	0.00	0.02			230	206
250 ISL	8.35 D	8.32	34.173 D	26.576	149.8	0.500	1.14	17.3	45.7	2.60	32.8	0.00	0.02			252	
270	8.22	8.19	34.179	26.601	147.7	0.530	1.08	16.3	47.5	2.63	33.1	0.00	0.01			272	205
300 ISL	7.93 D	7.90	34.192 D	26.654	143.0	0.574	0.99	14.9	50.6	2.70	33.8	0.00	0.00			302	
318	7.84	7.81	34.201	26.675	141.4	0.599	0.94	14.1	52.4	2.74	34.2	0.00	0.00			320	204
376	7.37	7.33	34.205	26.746	135.3	0.680	0.83	12.3	57.8	2.83	35.5	0.00	0.00			378	203
400 ISL	7.12 D	7.08	34.212 D	26.787	131.6	0.712	0.75	11.1	60.7	2.88	36.2	0.00	0.01			403	
433	6.86	6.82	34.223	26.832	127.7	0.754	0.63	9.2	65.1	2.96	37.2	0.00	0.02			436	202
500 ISL	6.24 D	6.20	34.267 D	26.949	117.0	0.836	0.41	5.9	75.7	3.10	39.1	0.00	0.00			503	
516	6.10	6.05	34.271	26.970	115.0	0.855	0.36	5.2	78.2	3.13	39.6	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 34.4 N	120 46.4 W	25/10/08	0156 UTC	1565 m	300 07 kn			1014.1 mb	17.0 C	15.7 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.48	16.48	33.398	24.407	351.3	0.000	6.04	108.3	0.5	0.32	0.0	0.00	0.05	0.89	0.16	0	
2	16.48	16.48	33.398	24.407	351.3	0.007	6.04	108.3	0.5	0.32	0.0	0.00	0.05	0.89	0.16	2	221
10	15.25	15.25	33.293	24.603	332.9	0.034	6.11	106.8	2.1	0.36	0.0	0.01	0.06	0.92	0.24	10	219
10	15.24	15.24	33.292	24.604	332.8	0.034										10	220
20	15.11	15.11	33.288	24.630	330.6	0.068	6.00	104.6	2.3	0.38	0.3	0.02	0.05	1.04	0.33	20	218
30	15.09	15.09	33.291	24.637	330.3	0.101	5.87	102.3	2.5	0.41	0.6	0.04	0.14	0.84	0.34	30	217
40	14.38	14.37	33.395	24.869	308.4	0.133	5.49	94.4	3.8	0.64	3.2	0.20	0.84	0.40	0.25	40	216
50	12.10	12.09	33.426	25.350	262.8	0.161	4.87	79.8	10.5	1.14	12.3	0.16	0.03	0.12	0.20	50	215
60	11.17	11.16	33.457	25.545	244.3	0.186	4.55	73.1	13.7	1.32	15.4	0.06	0.08	0.07	0.14	60	214
70	11.06	11.05	33.479	25.582	241.0	0.211	4.47	71.7	14.6	1.36	16.1	0.05	0.06	0.07	0.15	70	213
75 ISL	11.01 D	11.00	33.545 D	25.643	235.4	0.223	4.30	68.9	15.8	1.43	17.2	0.04	0.05	0.06	0.14	75	
85	10.59	10.58	33.660	25.807	220.0	0.245	3.87	61.5	18.6	1.60	19.7	0.01	0.02	0.03	0.12	85	212
100	10.32	10.31	33.756	25.929	208.7	0.278	3.28	51.9	22.0	1.74	21.7	0.01	0.01	0.02	0.11	100	211
119	9.94	9.93	33.860	26.075	195.2	0.316	2.83	44.4	25.4	1.89	23.8	0.00	0.01	0.01	0.09	120	210
125 ISL	9.92 D	9.91	33.885 D	26.098	193.1	0.328	2.73	42.8	26.1	1.92	24.2	0.00	0.01	0.01	0.10	126	
140	9.79	9.77	33.929	26.154	188.1	0.356	2.54	39.7	27.6	1.99	24.9	0.00	0.01	0.01	0.11	141	209
150 ISL	9.42 D	9.40	33.962 D	26.241	180.0	0.375	2.51	38.9	28.6	2.01	25.4	0.00	0.01	0.01	0.10	151	
168	9.30	9.28	34.007	26.296	175.1	0.407	2.42	37.5	30.8	2.07	26.4	0.00	0.01	0.01	0.07	169	208
200 ISL	9.20 D	9.18	34.161 D	26.433	162.7	0.461	1.62	25.0	36.7	2.35	28.7	0.00	0.04	0.01	0.09	201	
201	9.19	9.17	34.161	26.435	162.6	0.462	1.60	24.7	36.9	2.36	28.8	0.00	0.04	0.01	0.09	202	207
228	8.77	8.75	34.171	26.509	155.9	0.505	1.51	23.1	40.4	2.43	30.0	0.00	0.00			229	206
250 ISL	8.45 D	8.42	34.173 D	26.561	151.3	0.539	1.47	22.3	43.1	2.48	30.9	0.00	0.01			251	
269	8.12	8.09	34.162	26.602	147.5	0.567	1.43	21.6	45.4	2.52	31.7	0.00	0.01			271	205
300 ISL	7.74 D	7.71	34.176 D	26.670	141.5	0.612	1.23	18.4	49.9	2.64	33.1	0.00	0.01			302	
316	7.67	7.64	34.189	26.690	139.8	0.635	1.11	16.6	52.1	2.71	33.7	0.00	0.01			318	204
378	7.53	7.49	34.250	26.759	134.2	0.720	0.75	11.2	56.7	2.83	34.9	0.00	0.00			380	203
400 ISL	7.08 D	7.04	34.215 D	26.795	130.8	0.749	0.72	10.6	60.8	2.87	36.0	0.00	0.00			403	
442	6.42	6.38	34.199	26.871	123.6	0.802	0.68	9.9	68.7	2.95	38.1	0.00	0.01			445	202
500 ISL	6.44 D	6.39	34.277 D	26.931	118.9	0.873	0.42	6.1	72.3	3.06	38.4	0.00	0.00			503	
517	6.44	6.39	34.301	26.950	117.4	0.893	0.35	5.1	73.3	3.09	38.5	0.00	0.00			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 14.6 N	121 26.7 W	24/10/08	1922 UTC	3801 m	300 08 kn	290 03 07	0	1016.2 mb	20.1 C	17.6 C	10m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.18	16.18	33.455	24.519	340.5	0.000	6.14	109.5	0.2	0.28	0.0	0.00	0.04	0.98	0.43	0	
2 A	16.18	16.18	33.455	24.520	340.6	0.007	6.14	109.5	0.2	0.28	0.0	0.00	0.04	0.98	0.43	2	223
7 A	15.83	15.83	33.456	24.600	333.1	0.024	6.16	109.1	0.3	0.30	0.0	0.00	0.02	1.04	0.46	7	222
10	15.77	15.77	33.454	24.612	332.1	0.034	6.16	108.9	0.3	0.31	0.0	0.00	0.04	1.25	0.51	10	221
14 A	15.69	15.69	33.454	24.630	330.5	0.047	6.19	109.3	0.4	0.28	0.0	0.00	0.04	1.41	0.59	14	220
20 ISL	15.56 D	15.56	33.451 D	24.656	328.1	0.067	6.06	106.7	0.4	0.29	0.0	0.01	0.10	2.20	0.91	20	
21 A	15.56	15.56	33.453	24.658	328.0	0.070	6.02	106.0	0.4	0.29	0.0	0.01	0.11	2.32	0.96	21	219
27 A	15.43	15.43	33.436	24.674	326.7	0.090	5.81	102.0	1.1	0.39	0.5	0.03	0.36	2.17	0.84	27	218
30 ISL	15.40 D	15.40	33.433 D	24.678	326.3	0.099	5.80	101.8	1.3	0.40	0.7	0.04	0.35	1.86	0.70	30	
34 A	15.38	15.37	33.437	24.686	325.7	0.112	5.78	101.4	1.5	0.42	1.0	0.06	0.34	1.38	0.51	34	217
44	13.23	13.22	33.323	25.050	291.2	0.143	5.35	89.8	7.5	0.78	7.0	0.27	0.10	0.69	0.48	44	216
50	12.54	12.53	33.399	25.245	272.8	0.160	4.95	81.9	10.5	1.05	10.7	0.17	0.06	0.25	0.27	50	215
59	11.49	11.48	33.563	25.570	242.0	0.183	4.20	68.0	15.1	1.37	16.3	0.07	0.04	0.14	0.22	59	214
70	10.65	10.64	33.672	25.805	219.8	0.209	3.68	58.6	19.7	1.60	19.8	0.03	0.02	0.05	0.16	70	213
75 ISL	10.44 D	10.43	33.754 D	25.906	210.3	0.219	3.48	55.2	21.1	1.66	20.7	0.02	0.02	0.04	0.15	75	
85	10.24	10.23	33.784	25.964	205.0	0.240	3.12	49.2	23.6	1.77	22.2	0.01	0.03	0.03	0.14	85	212
99	9.80	9.79	33.897	26.127	189.8	0.268	2.67	41.8	27.7	1.95	24.7	0.00	0.02	0.02	0.12	99	211
100 ISL	9.73 D	9.72	33.922 D	26.158	186.9	0.270	2.65	41.4	27.9	1.96	24.8	0.00	0.02	0.02	0.12	100	
118	9.56	9.55	33.981	26.232	180.2	0.303	2.32	36.1	31.6	2.08	26.1	0.00	0.03	0.02	0.09	119	210
125 ISL	9.47 D	9.46	34.033 D	26.288	175.0	0.315	2.19	34.0	33.0	2.13	26.6	0.00	0.03	0.02	0.09	126	
139	9.40	9.38	34.070	26.328	171.4	0.339	1.94	30.1	35.2	2.21	27.5	0.00	0.03	0.01	0.08	140	209
150 ISL	9.38 D	9.36	34.113 D	26.365	168.2	0.358	1.79	27.8	35.9	2.26	27.9	0.00	0.03	0.01	0.07	151	
169	9.37	9.35	34.152	26.398	165.5	0.390	1.58	24.5	36.4	2.34	28.5	0.00	0.02	0.01	0.06	170	208
200	9.22	9.20	34.188	26.451	161.1	0.440	1.39	21.5	38.5	2.44	29.5	0.00	0.02	0.01	0.04	201	207
228	9.15	9.12	34.222	26.489	158.0	0.485	1.22	18.8	40.0	2.49	30.0	0.00	0.02			229	206
250 ISL	9.03 D	9.00	34.251 D	26.531	154.4	0.519	1.07	16.5	42.0	2.56	30.5	0.00	0.03			251	
267	8.92	8.89	34.268	26.563	151.7	0.546	0.97	14.9	43.8	2.61	30.9	0.00	0.03			269	205
300 ISL	8.64 D	8.61	34.280 D	26.616	147.1	0.595	0.85	13.0	47.3	2.69	31.8	0.00	0.03			302	
317	8.39	8.36	34.284	26.658	143.3	0.620	0.81	12.3	49.0	2.73	32.3	0.00	0.03			319	204
377	8.00	7.96	34.293	26.725	137.9	0.704	0.69	10.4	53.4	2.82	33.5	0.00	0.02			379	203
400 ISL	7.85 D	7.81	34.294 D	26.748	136.0	0.735	0.65	9.7	55.0	2.85	34.0	0.00	0.01			403	
437	7.67	7.63	34.298	26.778	133.7	0.785	0.58	8.7	57.7	2.89	34.7	0.00	0.00			440	202
500 ISL	7.18 D	7.13	34.293 D	26.844	128.0	0.868	0.50	7.4	63.2	2.97	36.0	0.00	0.00			503	
519	7.10	7.05	34.293	26.855	127.1	0.892	0.48	7.1	64.8	2.99	36.4	0.00	0.00			523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 54.6 N	122 7.7 W	24/10/08	1327 UTC	4184 m	300 08 kn			1015.0 mb	17.2 C	15.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.73	16.73	33.111	24.129	377.8	0.000	5.71	102.7	1.3	0.34	0.0	0.00	0.07	0.23	0.06	0	
1	16.73	16.73	33.111	24.129	377.8	0.004	5.71	102.7	1.3	0.34	0.0	0.00	0.07	0.23	0.06	1	221
10	16.66	16.66	33.109	24.144	376.6	0.038	5.72	102.7	1.0	0.35	0.0	0.00	0.06	0.24	0.07	10	219
10	16.67	16.67	33.108	24.141	377.0	0.038										10	220
20	16.60	16.60	33.114	24.162	375.3	0.075	5.73	102.8	1.4	0.35	0.0	0.00	0.06	0.27	0.10	20	218
30 ISL	16.29 D	16.29	33.130 D	24.246	367.6	0.112	5.77	102.9	1.5	0.36	0.0	0.00	0.06	0.43	0.19	30	
31	16.31	16.31	33.134	24.244	367.7	0.116	5.78	103.1	1.5	0.36	0.0	0.00	0.06	0.44	0.20	31	217
40	15.81	15.80	33.143	24.365	356.6	0.149	5.82	102.8	1.7	0.41	0.4	0.02	0.15	0.43	0.26	40	216
50	14.19	14.18	33.012	24.614	333.0	0.183	5.89	100.6	2.7	0.50	1.1	0.13	0.48	0.29	0.25	50	215
61	12.51	12.50	32.961	24.911	304.8	0.218	5.89	97.1	3.5	0.55	1.5	0.23	0.08	0.19	0.24	61	214
70	12.08	12.07	32.952	24.986	297.8	0.245	5.85	95.6	4.1	0.63	3.1	0.14	0.04	0.15	0.22	70	213
75 ISL	11.31 D	11.30	32.878 D	25.070	289.8	0.260	5.80	93.2	4.4	0.67	3.8	0.09	0.04	0.13	0.20	75	
85	11.39	11.38	32.955	25.116	285.7	0.289	5.67	91.3	5.3	0.77	5.4	0.01	0.03	0.08	0.14	85	212
100 ISL	10.78 D	10.77	33.093 D	25.332	265.4	0.330	5.39	85.7	8.4	0.94	9.0	0.00	0.05	0.04	0.07	100	
101	10.76	10.75	33.095	25.337	265.0	0.333	5.36	85.2	8.7	0.96	9.3	0.00	0.05	0.04	0.07	101	211
120	9.83	9.82	33.345	25.691	231.6	0.380	4.64	72.4	16.5	1.46	17.1	0.00	0.02	0.01	0.03	121	210
125 ISL	9.73 D	9.72	33.456 D	25.794	221.9	0.391	4.44	69.1	18.1	1.54	18.4	0.00	0.02	0.01	0.03	126	
140	9.37	9.35	33.650	26.005	202.1	0.423	3.87	59.9	22.2	1.71	21.5	0.00	0.02	0.01	0.02	141	209
150 ISL	9.10 D	9.08	33.788 D	26.156	187.9	0.443	3.56	54.8	24.7	1.81	23.2	0.00	0.02	0.01	0.02	151	
171	8.86	8.84	33.895	26.278	176.7	0.481	3.10	47.5	29.2	1.96	25.6	0.00	0.03	0.01	0.02	172	208
200 ISL	8.45 D	8.43	33.972 D	26.402	165.3	0.531	2.90	44.0	33.3	2.04	27.0	0.00	0.01	0.00	0.03	201	
201	8.43	8.41	33.979	26.411	164.5	0.532	2.90	44.0	33.4	2.04	27.0	0.00	0.01	0.00	0.03	202	207
230	8.05	8.03	34.007	26.490	157.3	0.579	2.51	37.8	38.2	2.20	29.2	0.00	0.02			231	206
250 ISL	7.78 D	7.76	34.015 D	26.536	153.2	0.610	2.25	33.6	41.9	2.32	30.6	0.00	0.02			251	
270	7.62	7.59	34.046	26.584	148.9	0.640	2.00	29.8	45.6	2.43	31.9	0.00	0.02			272	205
300 ISL	7.33 D	7.30	34.078 D	26.651	142.9	0.684	1.65	24.4	50.6	2.56	33.8	0.00	0.03			302	
320	7.14	7.11	34.086	26.684	140.0	0.712	1.44	21.2	53.9	2.63	34.9	0.00	0.04			322	204
380	6.45	6.42	34.114	26.799	129.5	0.793	1.02	14.8	64.5	2.86	37.8	0.00	0.00			382	203
400 ISL	6.29 D	6.25	34.119 D	26.824	127.3	0.819	0.92	13.3	68.1	2.92	38.5	0.00	0.00			403	
438	5.85	5.81	34.137	26.894	120.8	0.866	0.77	11.0	74.6	3.02	39.6	0.00	0.00			441	202
500 ISL	5.38 D	5.34	34.178 D	26.984	112.6	0.938	0.56	7.9	83.6	3.12	41.0	0.00	0.01			503	
521	5.30	5.26	34.193	27.006	110.7	0.962	0.49	6.9	86.6	3.16	41.5	0.00	0.02			525	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 34.7 N	122 48.4 W	24/10/08	0722 UTC	4276 m	260 06 kn			1016.1 mb	15.0 C	14.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.45	16.45	33.131	24.209	370.1	0.000	5.76	103.0	1.7	0.35	0.0	0.00	0.06	0.24	0.07	0	
2	16.45	16.45	33.131	24.209	370.2	0.007	5.76	103.0	1.7	0.35	0.0	0.00	0.06	0.24	0.07	2	222
10	16.43	16.43	33.131	24.214	370.0	0.037	5.75	102.8	1.5	0.35	0.0	0.00	0.08	0.25	0.07	10	220
10	16.42	16.42	33.135	24.219	369.5	0.037										10	221
20 ISL	16.33 D	16.33	33.130 D	24.236	368.2	0.074	5.76	102.8	1.7	0.35	0.0	0.00	0.06	0.30	0.09	20	
25	16.33	16.33	33.137	24.242	367.8	0.092	5.76	102.8	1.8	0.35	0.0	0.00	0.05	0.32	0.10	25	219
30 ISL	16.32 D	16.32	33.131 D	24.240	368.2	0.111	5.79	103.3	1.8	0.35	0.0	0.00	0.05	0.43	0.17	30	
40	15.70	15.69	33.157	24.400	353.2	0.147	5.85	103.1	1.9	0.36	0.0	0.00	0.06	0.63	0.29	40	218
49	15.60	15.59	33.217	24.469	346.9	0.178	5.90	103.8	1.6	0.37	0.0	0.00	0.08	0.66	0.29	49	217
50 ISL	15.48 D	15.47	33.218 D	24.496	344.3	0.182	5.89	103.4	1.7	0.37	0.0	0.01	0.09	0.66	0.30	50	
54	15.04	15.03	33.187	24.568	337.5	0.195	5.86	101.9	2.3	0.40	0.3	0.04	0.14	0.68	0.33	54	216
62	14.08	14.07	33.101	24.706	324.5	0.222	5.82	99.2	3.1	0.48	1.0	0.19	0.24	0.30	0.22	62	215
74	12.27	12.26	32.896	24.907	305.5	0.260	5.89	96.6	3.7	0.57	2.2	0.27	0.10	0.16	0.17	74	214
75 ISL	12.14 D	12.13	32.881 D	24.920	304.3	0.263	5.89	96.3	3.7	0.57	2.2	0.27	0.09	0.16	0.17	75	
86	11.69	11.68	32.850	24.980	298.8	0.296	5.86	94.9	3.9	0.62	3.1	0.17	0.05	0.13	0.14	86	213
100 ISL	10.97 D	10.96	32.937 D	25.177	280.2	0.336	5.59	89.2	7.3	0.84	7.4	0.02	0.04	0.07	0.07	100	
101	10.95	10.94	32.956	25.196	278.4	0.339	5.56	88.7	7.6	0.86	7.8	0.01	0.04	0.07	0.07	101	212
111	10.56	10.55	33.047	25.335	265.4	0.366	5.34	84.5	9.9	1.03	10.5	0.00	0.05	0.04	0.05	111	211
124	10.15	10.14	33.288	25.593	241.0	0.399	4.84	76.0	13.9	1.27	14.9	0.00	0.03	0.01	0.03	125	210
125 ISL	10.15 D	10.14	33.298 D	25.601	240.3	0.402	4.77	74.9	14.4	1.30	15.4	0.00	0.03	0.01	0.03	126	
138	10.05	10.03	33.679	25.915	210.8	0.431	3.85	60.5	21.0	1.68	21.4	0.00	0.04	0.01	0.03	139	209
150 ISL	9.75 D	9.73	33.771 D	26.037	199.3	0.456	3.38	52.8	24.6	1.85	24.0	0.00	0.03	0.01	0.03	151	
168	9.29	9.27	33.870	26.190	185.1	0.490	2.99	46.2	28.0	1.95	25.7	0.00	0.02	0.00	0.03	169	208
200	8.69	8.67	33.987	26.377	167.8	0.547	2.43	37.1	33.6	2.10	28.2	0.00	0.01	0.00	0.02	201	207
228	8.27	8.25	34.027	26.473	159.0	0.592	2.32	35.1	37.6	2.18	29.3	0.00	0.02			229	206
250 ISL	8.09 D	8.06	34.065 D	26.530	154.0	0.627	2.02	30.4	41.2	2.30	30.6	0.00	0.02			251	
267	7.94	7.91	34.083	26.567	150.7	0.653	1.76	26.4	44.1	2.40	31.7	0.00	0.02			268	205
300 ISL	7.41 D	7.38	34.100 D	26.657	142.4	0.701	1.50	22.3	49.5	2.54	33.5	0.00	0.02			302	
317	7.32	7.29	34.109	26.677	140.8	0.725	1.40	20.7	52.3	2.60	34.4	0.00	0.02			319	204
377	6.72	6.69	34.146	26.789	130.7	0.807	0.97	14.2	61.7	2.83	37.0	0.00	0.01			379	203
400 ISL	6.56 D	6.52	34.162 D	26.823	127.7	0.836	0.84	12.2	65.0	2.89	37.7	0.00	0.01			402	
436	6.31	6.27	34.189	26.877	122.8	0.881	0.67	9.7	70.1	2.97	38.6	0.00	0.01			439	202
500 ISL	5.84 D	5.80	34.231 D	26.971	114.4	0.957	0.46	6.6	79.1	3.10	40.2	0.00	0.00			503	
519	5.71	5.67	34.242	26.995	112.2	0.979	0.40	5.7	81.8	3.14	40.7	0.00	0.00			522	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 14.7 N	123 29.5 W	24/10/08	0107 UTC	4171 m	320 04 kn	340 03 07	0	1014.2 mb	17.9 C	16.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.92	16.92	33.200	24.153	375.5	0.000	5.76	104.0	1.9	0.36	0.0	0.00	0.05	0.19	0.07	0	
2	16.92	16.92	33.200	24.153	375.5	0.008	5.76	104.0	1.9	0.36	0.0	0.00	0.05	0.19	0.07	2	222
10 ISL	16.44 D	16.44	33.187 D	24.255	366.1	0.037	5.77	103.2	1.9	0.37	0.0	0.00	0.07	0.23	0.09	10	
11	16.43	16.43	33.189	24.258	365.8	0.041	5.77	103.2	1.9	0.37	0.0	0.00	0.07	0.24	0.09	11	220
11	16.43	16.43	33.188	24.258	365.8	0.041										11	221
20 ISL	16.37 D	16.37	33.184 D	24.269	365.1	0.074	5.78	103.3	1.8	0.36	0.0	0.00	0.05	0.31	0.12	20	
26	16.25	16.25	33.186	24.298	362.5	0.096	5.78	103.0	1.7	0.35	0.0	0.00	0.04	0.36	0.14	26	219
30 ISL	16.22 D	16.22	33.182 D	24.302	362.2	0.110	5.78	103.0	1.8	0.35	0.0	0.00	0.05	0.37	0.14	30	
40	16.11	16.10	33.172	24.319	360.9	0.146	5.78	102.7	2.0	0.36	0.0	0.00	0.06	0.40	0.14	40	218
50	15.78	15.77	33.158	24.383	355.1	0.182	5.77	101.9	2.0	0.38	0.2	0.02	0.04	0.45	0.24	50	217
55	14.37	14.36	33.076	24.626	332.0	0.199	5.83	100.0	2.7	0.50	1.4	0.17	0.14	0.53	0.38	55	216
61	13.03	13.02	32.993	24.835	312.1	0.219	5.83	97.2	4.2	0.64	3.2	0.40	0.19	0.39	0.47	61	215
74	11.93	11.92	32.988	25.042	292.6	0.258	5.59	91.1	6.9	0.84	7.0	0.12	0.02	0.14	0.27	74	214
75 ISL	11.81 D	11.80	32.993 D	25.068	290.1	0.261	5.58	90.7	7.1	0.85	7.2	0.11	0.02	0.13	0.26	75	
86	11.16	11.15	33.051	25.232	274.7	0.292	5.42	86.9	9.1	0.98	9.8	0.01	0.03	0.08	0.13	86	213
100	10.87	10.86	33.277	25.460	253.3	0.329	5.01	79.9	12.2	1.20	13.6	0.00	0.04	0.04	0.06	100	212
111	10.60	10.59	33.407	25.608	239.4	0.356	4.71	74.7	15.1	1.37	16.3	0.00	0.02	0.02	0.04	111	211
123	10.09	10.08	33.565	25.819	219.6	0.383	4.15	65.2	19.1	1.57	19.8	0.00	0.01	0.01	0.03	124	210
125 ISL	10.13 D	10.12	33.560 D	25.808	220.6	0.388	4.09	64.3	19.6	1.59	20.2	0.00	0.01	0.01	0.03	126	
149	9.24	9.22	33.646	26.023	200.6	0.438	3.58	55.2	24.1	1.77	23.1	0.00	0.01	0.01	0.03	150	209
150 ISL	9.19 D	9.17	33.669 D	26.049	198.1	0.440	3.56	54.9	24.2	1.78	23.2	0.00	0.01	0.01	0.03	151	
168	8.99	8.97	33.793	26.178	186.2	0.475	3.29	50.5	26.4	1.86	24.6	0.00	0.00	0.00	0.03	169	208
200	8.50	8.48	33.941	26.370	168.3	0.532	2.98	45.3	31.8	1.96	26.5	0.00	0.01	0.00	0.02	201	207
228	8.15	8.13	33.984	26.457	160.5	0.578	3.03	45.7	35.0	1.98	27.0	0.00	0.01			229	206
250 ISL	7.81 D	7.79	34.023 D	26.538	153.0	0.612	2.49	37.3	40.1	2.19	29.4	0.00	0.01			251	
267	7.67	7.64	34.050	26.580	149.3	0.638	2.00	29.8	44.4	2.38	31.6	0.00	0.02			268	205
300 ISL	7.19 D	7.16	34.065 D	26.660	141.9	0.686	1.63	24.1	50.9	2.56	33.8	0.00	0.04			302	
318	7.04	7.01	34.077	26.691	139.3	0.711	1.52	22.4	54.0	2.63	34.7	0.00	0.04			320	204
377	6.49	6.46	34.119	26.798	129.6	0.791	1.06	15.4	63.3	2.82	37.3	0.00	0.00			379	203
400 ISL	6.06 D	6.03	34.110 D	26.846	125.0	0.820	0.96	13.8	67.7	2.89	38.3	0.00	0.00			402	
436	5.76	5.72	34.132	26.901	120.0	0.864	0.83	11.8	74.4	3.00	39.6	0.00	0.00			439	202
500 ISL	5.50 D	5.46	34.192 D	26.981	113.0	0.938	0.54	7.7	82.2	3.12	40.8	0.00	0.02			503	
519	5.41	5.37	34.205	27.002	111.2	0.960	0.45	6.4	84.5	3.15	41.2	0.00	0.02			522	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 54.7 N	124 10.4 W	23/10/08	1851 UTC	4182 m	360 06 kn	340 04 08	1	1016.4 mb	18.2 C	16.4 C	30m	3/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.32	17.32	33.156	24.025	387.7	0.000	5.62	102.3	1.6	0.32	0.0	0.00	0.06	0.13	0.04	0	
2 A	17.32	17.32	33.156	24.025	387.7	0.008	5.62	102.3	1.6	0.32	0.0	0.00	0.06	0.13	0.04	2	223
10 ISL	17.23 D	17.23	33.154 D	24.045	386.1	0.039	5.62	102.1	1.7	0.33	0.0	0.00	0.04	0.14	0.04	10	
11	17.23	17.23	33.156	24.047	386.0	0.043	5.62	102.1	1.7	0.33	0.0	0.00	0.04	0.14	0.04	11	221
11	17.23	17.23	33.156	24.047	386.0	0.043										11	222
20 A	17.22	17.22	33.157	24.050	385.9	0.077	5.62	102.1	2.0	0.32	0.0	0.00	0.04	0.15	0.05	20	220
30 ISL	17.21 D	17.21	33.154 D	24.051	386.2	0.116	5.62	102.1	1.9	0.32	0.0	0.00	0.03	0.17	0.05	30	
32	17.20	17.19	33.156	24.055	385.9	0.124	5.62	102.0	1.9	0.32	0.0	0.00	0.03	0.17	0.05	32	219
42 A	16.94	16.93	33.130	24.096	382.3	0.162	5.67	102.4	1.8	0.33	0.0	0.00	0.03	0.25	0.09	42	218
50 ISL	14.91 D	14.90	33.041 D	24.484	345.4	0.191	6.09	105.6	2.5	0.35	0.0	0.00	0.03	0.23	0.13	50	
52	14.67	14.66	33.031	24.527	341.3	0.198	6.19	106.8	2.7	0.35	0.0	0.00	0.03	0.23	0.14	52	217
61 A	13.72	13.71	32.991	24.695	325.5	0.228	6.21	105.0	2.9	0.37	0.0	0.00	0.03	0.21	0.17	61	216
71	12.88	12.87	32.945	24.827	313.1	0.260	6.08	101.0	2.6	0.40	0.1	0.01	0.04	0.30	0.23	71	215
75 ISL	12.80 D	12.79	32.939 D	24.838	312.1	0.272	6.02	99.9	2.7	0.42	0.3	0.06	0.04	0.28	0.23	75	
80 A	12.51	12.50	32.932	24.889	307.4	0.288	5.94	97.9	3.0	0.46	0.7	0.13	0.04	0.23	0.23	80	214
90	12.24	12.23	32.978	24.977	299.3	0.318	5.80	95.1	3.9	0.55	2.7	0.14	0.03	0.20	0.23	90	213
100	11.70	11.69	32.964	25.067	290.8	0.348	5.72	92.7	4.9	0.67	4.9	0.03	0.02	0.15	0.20	100	212
110 A	11.33	11.32	33.075	25.221	276.4	0.376	5.55	89.3	7.3	0.84	7.9	0.01	0.02	0.08	0.15	110	211
124	10.86	10.85	33.217	25.415	258.1	0.414	5.26	83.8	10.3	1.03	11.2	0.00	0.03	0.04	0.06	125	210
125 ISL	10.77 D	10.76	33.226 D	25.438	255.9	0.416	5.23	83.2	10.4	1.04	11.4	0.00	0.03	0.04	0.06	126	
144	10.34	10.32	33.509	25.733	228.2	0.462	4.70	74.2	13.4	1.18	14.3	0.00	0.02	0.01	0.02	145	209
150 ISL	9.98 D	9.96	33.556 D	25.831	219.0	0.476	4.56	71.5	14.9	1.26	15.6	0.00	0.02	0.01	0.02	151	
168	9.28	9.26	33.653	26.022	201.0	0.513	4.18	64.5	20.1	1.50	19.6	0.00	0.02	0.00	0.01	169	208
198	8.67	8.65	33.884	26.299	175.1	0.570	3.53	53.8	27.8	1.77	24.0	0.00	0.01	0.00	0.02	199	207
200 ISL	8.67 D	8.65	33.895 D	26.308	174.3	0.573	3.50	53.4	28.2	1.78	24.2	0.00	0.01			201	
228	8.28	8.26	33.980	26.435	162.7	0.620	3.10	46.9	33.7	1.92	26.4	0.00	0.01			229	206
250 ISL	7.96 D	7.93	33.998 D	26.497	157.0	0.656	2.77	41.6	38.0	2.06	28.4	0.00	0.01			251	
268	7.69	7.66	34.013	26.548	152.3	0.683	2.49	37.2	41.6	2.19	30.0	0.00	0.01			269	205
300 ISL	7.29 D	7.26	34.048 D	26.633	144.6	0.731	1.87	27.7	49.1	2.44	33.0	0.00	0.01			302	
318	7.08	7.05	34.073	26.682	140.1	0.757	1.56	23.0	53.2	2.56	34.5	0.00	0.01			320	204
378	6.44	6.41	34.086	26.778	131.4	0.838	1.28	18.6	62.4	2.73	36.8	0.00	0.02			380	203
400 ISL	6.14 D	6.10	34.082 D	26.814	128.1	0.867	1.19	17.1	66.3	2.79	37.7	0.00	0.02			402	
437	5.83	5.79	34.105	26.871	122.9	0.913	1.02	14.6	72.7	2.89	39.0	0.00	0.01			440	202
500 ISL	5.48 D	5.44	34.149 D	26.949	116.0	0.988	0.68	9.6	80.3	3.03	40.6	0.00	0.00			503	
518	5.42	5.38	34.172	26.975	113.7	1.009	0.58	8.2	82.5	3.07	41.1	0.00	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 40.4 N	118 5.1 W	20/10/08	2325 UTC	22 m	250 11 kn	270 02 07	0	1015.0 mb	17.5 C	15.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.36	16.36	33.219	24.297	361.7	0.000	6.84	122.2	4.8	0.19	0.0	0.00	0.00	3.14	1.13	0	
2	16.36	16.36	33.219	24.297	361.8	0.007	6.84	122.2	4.8	0.19	0.0	0.00	0.00	3.14	1.13	2	204
5	15.83	15.83	33.240	24.433	348.9	0.018	6.56	116.0	4.7	0.24	0.1	0.05	0.02	3.10	0.93	5	203
10 ISL	15.42 D	15.42	33.272 D	24.549	338.0	0.035	6.28	110.2	4.4	0.31	0.7	0.12	0.16	3.67	1.00	10	
11	15.36	15.36	33.284	24.572	335.9	0.038	6.21	108.8	4.4	0.34	0.8	0.14	0.19	3.78	1.03	11	202
15	14.39	14.39	33.316	24.806	313.7	0.051	5.68	97.6	5.5	0.62	2.8	0.36	0.75	1.36	0.90	15	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.4 N	118 29.4 W	21/10/08	0410 UTC	58 m	260 01 kn			1015.5 mb	17.4 C	15.6 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.72	17.72	33.511	24.201	370.9	0.000	5.77	106.1	1.7	0.30	0.0	0.00	0.05	0.31	0.10	0	
3	17.72	17.72	33.511	24.201	371.0	0.011	5.77	106.1	1.7	0.30	0.0	0.00	0.05	0.31	0.10	3	208
6	17.71	17.71	33.511	24.204	370.8	0.022	5.76	105.8	1.9	0.29	0.0	0.00	0.06	0.32	0.08	6	207
9	17.64	17.64	33.507	24.218	369.6	0.033	5.78	106.1	1.7	0.29	0.0	0.00	0.03	0.33	0.10	9	206
9	17.60	17.60	33.503	24.224	369.0	0.033			1.7	0.29	0.0	0.00	0.02			9	205
10 ISL	17.61 D	17.61	33.502 D	24.221	369.3	0.037	5.80	106.4	1.8	0.29	0.0	0.00	0.04	0.35	0.12	10	
19	16.38	16.38	33.411	24.441	348.7	0.069	5.91	105.8	3.3	0.42	1.2	0.04	1.19	0.65	0.31	19	204
20 ISL	15.92 D	15.92	33.409 D	24.544	338.9	0.073	5.89	104.4	3.6	0.45	1.5	0.06	1.60	0.69	0.33	20	
30	13.91	13.91	33.298	24.892	305.9	0.105	5.62	95.6	6.6	0.81	5.2	0.23	5.46	0.95	0.49	30	203
40	13.23	13.22	33.295	25.028	293.2	0.135	5.28	88.6	8.0	0.99	7.6	0.33	5.83	0.69	0.46	40	202
50 ISL	12.47 D	12.46	33.394 D	25.254	271.9	0.163	4.53	74.8	11.8	1.18	11.6	0.42	1.87	0.44	0.43	50	
53	12.24	12.23	33.433	25.329	264.9	0.171	4.31	70.9	12.9	1.24	12.8	0.45	0.68	0.37	0.42	53	201

A) UNUSUAL PROFILES, ODD NO3/PO4 RATIOS AND HIGH AMMONIA MAY BE
DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 49.4 N	118 37.7 W	21/10/08	0635 UTC	646 m	100 05 kn			1015.0 mb	17.5 C	15.1 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.95	17.95	33.530	24.160	374.8	0.000	5.62	103.8	1.3	0.29	0.0	0.00	0.02	0.22	0.05	0	
2	17.95	17.95	33.530	24.160	374.9	0.007	5.62	103.8	1.3	0.29	0.0	0.00	0.02	0.22	0.05	2	221
10	17.90	17.90	33.528	24.171	374.1	0.037	5.65	104.2	1.1	0.29	0.0	0.00	0.03	0.24	0.07	10	219
10	17.89	17.89	33.528	24.173	373.9	0.037										10	220
20	17.83	17.83	33.531	24.190	372.6	0.075	5.66	104.3	1.3	0.29	0.0	0.00	0.03	0.31	0.10	20	218
29	17.51	17.51	33.513	24.254	366.8	0.108	5.78	105.8	1.4	0.29	0.1	0.00	0.03	0.48	0.20	29	217
30 ISL	17.29 D	17.29	33.518 D	24.311	361.5	0.112	5.81	105.9	1.5	0.30	0.2	0.01	0.04	0.53	0.23	30	
40	15.38	15.37	33.392	24.651	329.2	0.146	5.96	104.5	3.1	0.45	1.6	0.06	0.08	0.95	0.45	40	216
50	13.35	13.34	33.356	25.052	291.2	0.177	5.53	93.0	6.5	0.80	6.9	0.27	0.03	0.74	0.42	50	215
58	11.98	11.97	33.187	25.187	278.4	0.200	5.43	88.7	8.5	0.93	9.2	0.10	0.03	0.43	0.38	58	214
69	11.31	11.30	33.228	25.342	263.8	0.230	5.20	83.7	10.7	1.06	11.5	0.03	0.04	0.26	0.25	69	213
75 ISL	11.04 D	11.03	33.360 D	25.494	249.6	0.245	4.74	75.9	12.3	1.19	13.7	0.01	0.04	0.16	0.18	75	
84	11.24	11.23	33.566	25.618	238.0	0.267	4.11	66.2	14.6	1.38	16.7	0.00	0.04	0.05	0.10	84	212
100	10.68	10.67	33.553	25.708	229.7	0.305	4.31	68.6	16.2	1.44	17.8	0.00	0.04	0.05	0.07	100	211
119	10.55	10.54	33.731	25.870	214.8	0.347	3.34	53.1	20.5	1.69	20.8	0.00	0.05	0.01	0.05	120	210
125 ISL	10.45 D	10.44	33.776 D	25.922	209.9	0.360	3.14	49.8	21.9	1.75	21.7	0.00	0.04	0.01	0.05	126	
139	10.07	10.05	33.873	26.063	196.8	0.388	2.78	43.7	25.0	1.87	23.5	0.00	0.00	0.01	0.04	140	209
150 ISL	9.96 D	9.94	33.912 D	26.112	192.3	0.409	2.58	40.5	26.5	1.94	24.5	0.00	0.00	0.01	0.04	151	
169	9.73	9.71	33.996	26.217	182.8	0.445	2.33	36.4	28.6	2.04	25.7	0.00	0.01	0.00	0.04	170	208
200	9.56	9.54	34.103	26.329	172.7	0.500	1.93	30.1	32.7	2.19	27.2	0.01	0.02	0.00	0.04	201	207
228	9.42	9.39	34.188	26.419	164.8	0.547	1.51	23.5	36.5	2.34	28.7	0.00	0.03			229	206
250 ISL	9.13 D	9.10	34.246 D	26.512	156.3	0.583	1.25	19.3	39.5	2.46	29.8	0.02	0.03			251	
268	8.96	8.93	34.264	26.553	152.7	0.611	1.09	16.8	41.9	2.54	30.5	0.03	0.03			270	205
300 ISL	8.65 D	8.62	34.257 D	26.597	149.0	0.659	0.99	15.1	45.2	2.61	31.3	0.01	0.02			302	
317	8.50	8.47	34.271	26.631	146.0	0.684	0.96	14.6	46.8	2.64	31.7	0.00	0.02			319	204
376	8.04	8.00	34.300	26.724	137.9	0.768	0.68	10.2	53.1	2.78	33.5	0.00	0.00			378	203
400 ISL	7.71 D	7.67	34.301 D	26.774	133.4	0.800	0.59	8.8	57.1	2.85	34.5	0.00	0.00			403	
437	7.20	7.16	34.301	26.846	126.7	0.848	0.47	6.9	63.4	2.96	36.1	0.00	0.01			440	202
500 ISL	6.60 D	6.55	34.325 D	26.948	117.5	0.925	0.33	4.8	71.4	3.07	37.7	0.00	0.00			503	
520	6.53	6.48	34.327	26.959	116.7	0.949	0.28	4.1	73.9	3.10	38.2	0.00	0.00			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 39.5 N	118 58.8 W	21/10/08	1111 UTC	755 m	310 02 kn			1014.8 mb	17.1 C	15.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.80	16.80	33.498	24.410	351.0	0.000	5.74	103.6	1.8	0.36	0.8	0.02	0.06	1.16	0.15	0	
2	16.80	16.80	33.498	24.410	351.1	0.007	5.74	103.6	1.8	0.36	0.8	0.02	0.06	1.16	0.15	2	224
10	16.57	16.57	33.486	24.454	347.1	0.035	5.74	103.1	1.8	0.39	1.2	0.03	0.06	1.21	0.20	10	223
20	15.84	15.84	33.461	24.602	333.3	0.069	5.68	100.6	2.9	0.47	2.4	0.06	0.06	1.17	0.36	20	222
30 ISL	15.27 D	15.27	33.443 D	24.715	322.9	0.102	5.62	98.4	3.8	0.56	3.4	0.08	0.08	1.10	0.35	30	
31	15.25	15.25	33.443	24.719	322.5	0.105	5.61	98.2	3.9	0.57	3.5	0.08	0.08	1.09	0.35	31	221
41	13.74	13.73	33.392	25.000	295.9	0.136	5.43	92.1	6.5	0.78	6.6	0.15	0.11	0.88	0.43	41	220
50	12.14	12.13	33.400	25.322	265.4	0.161	5.02	82.4	10.3	1.08	11.5	0.09	0.03	0.27	0.30	50	219
60	11.87	11.86	33.406	25.378	260.3	0.187	4.94	80.6	11.3	1.14	12.5	0.05	0.04	0.21	0.26	60	218
71	11.33	11.32	33.447	25.509	248.1	0.215	4.73	76.3	13.2	1.25	14.5	0.02	0.04	0.11	0.19	71	217
75 ISL	10.99 D	10.98	33.461 D	25.581	241.3	0.225	4.69	75.1	13.7	1.28	15.0	0.02	0.03	0.10	0.17	75	
86	10.77	10.76	33.483	25.637	236.1	0.251	4.51	71.9	15.1	1.36	16.3	0.02	0.02	0.09	0.14	86	216
100 ISL	10.52 D	10.51	33.653 D	25.814	219.7	0.283	3.94	62.5	18.4	1.55	19.1	0.01	0.03	0.05	0.10	100	
102	10.49	10.48	33.659	25.824	218.8	0.288	3.85	61.1	19.0	1.58	19.5	0.01	0.03	0.04	0.09	102	215
120	9.69	9.68	33.822	26.087	194.0	0.325	3.14	49.0	24.6	1.82	23.4	0.00	0.04	0.01	0.06	121	214
125 ISL	9.55 D	9.54	33.843 D	26.126	190.3	0.335	3.06	47.6	25.6	1.85	24.0	0.00	0.04	0.01	0.06	126	
140	9.21	9.19	33.906	26.231	180.7	0.362	2.88	44.5	28.2	1.92	25.3	0.00	0.02	0.01	0.05	141	213
150 ISL	9.09 D	9.07	33.930 D	26.269	177.2	0.380	2.58	39.7	30.2	2.02	26.1	0.00	0.02	0.01	0.05	151	
171	9.31	9.29	34.095	26.363	168.8	0.417	1.99	30.8	34.0	2.21	27.4	0.00	0.02	0.00	0.05	172	212
200 ISL	8.76 D	8.74	34.080 D	26.439	162.0	0.465	1.88	28.8	37.1	2.28	28.6	0.00	0.02	0.00	0.04	201	
202	9.02	9.00	34.124	26.433	162.7	0.468	1.88	28.9	37.3	2.28	28.7	0.00	0.02	0.00	0.04	203	211
229	8.98	8.96	34.210	26.507	156.2	0.511	1.28	19.7	41.0	2.47	29.9	0.01	0.01			230	210
250 ISL	8.14 D	8.11	34.112 D	26.560	151.2	0.543	1.51	22.8	42.5	2.44	30.9	0.01	0.01			251	
270	7.89	7.86	34.081	26.573	150.2	0.573	1.82	27.3	43.9	2.39	31.7	0.00	0.02			272	209
300 ISL	7.76 D	7.73	34.168 D	26.660	142.4	0.617	1.50	22.4	48.4	2.52	32.7	0.00	0.03			302	
316	7.64	7.61	34.169	26.679	140.8	0.640	1.24	18.5	51.0	2.62	33.2	0.00	0.03			318	208
381	7.25	7.21	34.225	26.779	132.2	0.729	0.82	12.1	58.7	2.82	35.3	0.00	0.02			383	207
400 ISL	7.11 D	7.07	34.266 D	26.831	127.4	0.753	0.65	9.6	62.2	2.90	35.9	0.00	0.02			403	
438	6.92	6.88	34.312	26.894	122.0	0.801	0.38	5.6	68.1	3.03	36.9	0.00	0.03			441	206
477	6.75	6.71	34.312	26.917	120.2	0.848	0.36	5.3	69.6	3.06	37.5	0.00	0.00			480	205
500 ISL	6.61 D	6.56	34.320 D	26.942	118.0	0.875	0.32	4.7	71.6	3.08	37.9	0.00	0.02			503	
509	6.58	6.53	34.323	26.949	117.5	0.886	0.31	4.5	72.5	3.09	38.1	0.00	0.03			513	204
568	6.22	6.17	34.343	27.012	112.0	0.953	0.25	3.6	79.4	3.15	38.8	0.00	0.02			572	203
600 CSL	5.91	5.86	34.353	27.059	107.5	0.989										604	200
700 CSL	5.46	5.40	34.382	27.138	100.8	1.093										705	200
739	5.34	5.28	34.393	27.162	98.9	1.132	0.12	1.7	101.0	3.35	39.0	0.00	1.10			745	202
745	5.32	5.26	34.390	27.162	98.9	1.138	0.12	1.7	101.7	3.35	38.8	0.00	0.04			751	201

A) SANTA MONICA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 29.5 N	119 18.4 W	21/10/08	1725 UTC	1656 m	100 02 kn	290 05 06	1	1016.4 mb	18.5 C	17.3 C	20m	2/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.99	16.99	33.515	24.378	354.0	0.000	5.94	107.6	0.1	0.20	0.0	0.00	0.04	0.21	0.05	0	
2 A	16.99	16.99	33.515	24.378	354.1	0.007	5.94	107.6	0.1	0.20	0.0	0.00	0.04	0.21	0.05	2	222
10	16.88	16.88	33.515	24.404	351.8	0.035	5.95	107.6	0.3	0.19	0.0	0.00	0.10	0.20	0.06	10	221
13 A	16.69	16.69	33.505	24.441	348.4	0.046	6.08	109.5	0.1	0.20	0.0	0.00	0.01	0.32	0.13	13	220
20	15.53	15.53	33.481 D	24.686	325.3	0.069	5.93	104.4	0.0	0.21	0.0	0.00	0.09	0.20	0.07	20	219
27 A	14.00	14.00	33.478	25.013	294.3	0.091	5.38	91.8	5.4	0.72	5.7	0.17	0.28	2.23	1.14	27	218
30 ISL	13.50 D	13.50	33.474 D	25.112	284.9	0.100	5.22	88.2	6.8	0.82	7.1	0.19	0.26	1.98	1.04	30	
35	13.19	13.19	33.480	25.179	278.7	0.114	4.98	83.6	8.6	0.95	9.2	0.22	0.22	1.12	0.65	35	217
42 A	12.16	12.15	33.513	25.406	257.3	0.133	4.59	75.4	11.8	1.20	13.3	0.17	0.06	0.83	0.61	42	216
50 ISL	11.29 D	11.28	33.490 D	25.549	243.7	0.153	4.54	73.2	13.3	1.30	15.2	0.09	0.03	0.50	0.41	50	
54 A	11.19	11.18	33.495	25.571	241.7	0.162	4.52	72.7	14.0	1.33	15.7	0.05	0.02	0.35	0.31	54	215
64	10.60	10.59	33.589	25.749	225.0	0.186	4.24	67.4	18.0	1.49	18.6	0.03	0.03	0.12	0.23	64	214
74 A	10.45	10.44	33.629	25.807	219.7	0.208	4.08	64.6	18.8	1.57	19.7	0.03	0.02	0.06	0.15	74	213
75 ISL	10.42 D	10.41	33.640 D	25.820	218.4	0.210	4.05	64.1	18.9	1.58	19.8	0.03	0.02	0.06	0.14	75	
87	10.08	10.07	33.718	25.939	207.3	0.236	3.60	56.6	21.0	1.69	21.6	0.01	0.03	0.03	0.06	87	212
100 ISL	9.70 D	9.69	33.803 D	26.070	195.2	0.262	3.29	51.3	24.4	1.79	23.4	0.02	0.01	0.02	0.06	101	
101	9.70	9.69	33.804	26.070	195.1	0.264	3.27	51.0	24.7	1.80	23.5	0.02	0.01	0.02	0.06	102	211
119	9.44	9.43	33.868	26.164	186.7	0.298	3.01	46.7	27.0	1.89	24.7	0.01	0.03	0.01	0.06	120	210
125 ISL	9.39 D	9.38	33.890 D	26.189	184.4	0.309	2.95	45.7	27.6	1.91	25.0	0.01	0.03	0.01	0.06	126	
140	9.26	9.24	33.939	26.249	179.0	0.337	2.77	42.8	29.1	1.97	25.7	0.00	0.01	0.01	0.05	141	209
150 ISL	9.16 D	9.14	34.022 D	26.330	171.5	0.354	2.58	39.8	30.5	2.02	26.2	0.00	0.01	0.01	0.05	151	
170	9.14	9.12	34.072	26.372	167.8	0.388	2.15	33.2	33.8	2.16	27.4	0.00	0.01	0.01	0.05	171	208
200 ISL	8.86 D	8.84	34.193 D	26.512	155.1	0.436	1.53	23.5	40.2	2.41	29.7	0.00	0.00	0.00	0.09	201	
202	8.86	8.84	34.195	26.514	155.0	0.440	1.49	22.9	40.6	2.43	29.8	0.00	0.00	0.00	0.09	203	207
229	8.62	8.60	34.240	26.587	148.5	0.481	1.11	16.9	44.7	2.57	31.3	0.03	0.03			230	206
250 ISL	8.57 D	8.54	34.272 D	26.620	145.7	0.511	0.92	14.0	47.3	2.66	32.1	0.02	0.02			251	
269	8.27	8.24	34.283	26.675	140.8	0.539	0.81	12.3	49.4	2.72	32.7	0.00	0.00			271	205
300 ISL	8.05 D	8.02	34.278 D	26.704	138.4	0.582	0.74	11.2	53.1	2.78	33.6	0.00	0.00			302	
319	7.79	7.76	34.287	26.750	134.3	0.608	0.72	10.8	55.2	2.81	34.1	0.00	0.00			321	204
378	7.34	7.30	34.281	26.810	129.2	0.686	0.62	9.2	60.5	2.90	35.5	0.00	0.01			380	203
400 ISL	7.23 D	7.19	34.293 D	26.836	127.1	0.714	0.56	8.3	62.0	2.93	35.9	0.00	0.01			403	
437	7.07	7.03	34.300	26.864	124.9	0.760	0.47	6.9	64.8	2.99	36.5	0.00	0.02			440	202
500 ISL	6.60 D	6.55	34.320 D	26.944	117.9	0.837	0.36	5.2	73.0	3.09	38.0	0.00	0.01			503	
515	6.44	6.39	34.327	26.970	115.4	0.854	0.33	4.8	74.9	3.12	38.4	0.00	0.01			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 19.4 N	119 39.8 W	21/10/08	2043 UTC	83 m	250 02 kn	300 03 06	1	1014.9 mb	17.8 C	16.2 C	08m	2/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.26	16.26	33.494	24.531	339.4	0.000	6.13	109.5	0.9	0.35	0.3	0.04	0.00	2.02	0.68	0	
2	16.26	16.26	33.494	24.531	339.5	0.007	6.13	109.5	0.9	0.35	0.3	0.04	0.00	2.02	0.68	2	211
5	15.88	15.88	33.491	24.615	331.6	0.017	6.14	108.8	0.9	0.33	0.3	0.05	0.01	2.00	0.72	5	210
10	15.53	15.53	33.489	24.692	324.4	0.033	6.12	107.7	0.5	0.34	0.3	0.05	0.01	2.61	0.91	10	208
10	15.53	15.53	33.491	24.694	324.3	0.033										10	209
15	15.33	15.33	33.487	24.735	320.5	0.049	6.06	106.3	0.8	0.40	0.7	0.06	0.08	2.65	0.96	15	207
20	14.42	14.42	33.476	24.923	302.7	0.065	5.51	94.8	4.0	0.67	4.2	0.16	0.24	1.72	0.65	20	206
30	13.30	13.30	33.482	25.159	280.5	0.094	4.99	83.9	8.0	0.96	8.9	0.27	0.24	0.59	0.43	30	205
40	11.77	11.76	33.542	25.501	248.1	0.121	4.31	70.2	13.3	1.30	14.7	0.15	0.00	0.20	0.32	40	204
49	11.61	11.60	33.584	25.564	242.4	0.143	4.14	67.2	15.6	1.40	15.8	0.14	0.03	0.16	0.35	49	203
50 ISL	11.61 D	11.60	33.586 D	25.565	242.2	0.145	4.13	67.1	15.7	1.40	15.9	0.14	0.03	0.16	0.35	50	
60	11.44	11.43	33.593	25.602	239.0	0.169	4.07	65.9	16.3	1.42	16.4	0.13	0.00	0.15	0.32	60	202
70	11.28	11.27	33.623	25.655	234.2	0.193	3.90	62.9	17.0	1.48	17.3	0.12	0.00	0.12	0.33	70	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.5 N	120 0.6 W	22/10/08	0038 UTC	1196 m	320 13 kn	330 06 08	0	1013.7 mb	16.7 C	14.9 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.95	15.95	33.403	24.532	339.4	0.000	5.99	106.3	1.2	0.31	0.0	0.01	0.06	0.77	0.22	0	
2	15.95	15.95	33.403	24.532	339.4	0.007	5.99	106.3	1.2	0.31	0.0	0.01	0.06	0.77	0.22	2	221
9	15.91	15.91	33.404	24.542	338.7	0.031										9	220
10	15.88	15.88	33.404	24.548	338.1	0.034	6.01	106.5	1.0	0.32	0.0	0.01	0.07	0.76	0.21	10	219
20	15.25	15.25	33.410	24.693	324.6	0.067	6.05	105.9	1.4	0.34	0.5	0.03	0.10	0.98	0.32	20	218
30	14.45	14.45	33.423	24.876	307.5	0.099	5.83	100.4	4.0	0.54	3.1	0.18	0.28	1.31	0.52	30	217
40	13.15	13.14	33.443	25.159	280.8	0.128	5.20	87.2	8.4	0.89	8.4	0.39	0.17	0.58	0.43	40	216
50	12.46	12.45	33.431	25.285	269.0	0.156	4.83	79.8	10.4	1.08	11.5	0.21	0.04	0.28	0.30	50	215
60	11.09	11.08	33.587	25.661	233.3	0.181	4.08	65.5	16.5	1.43	17.5	0.04	0.01	0.06	0.16	60	214
70	10.69	10.68	33.647	25.779	222.3	0.203	3.83	61.0	18.7	1.55	19.2	0.03	0.03	0.05	0.15	70	213
75 ISL	10.52 D	10.51	33.671 D	25.827	217.8	0.214	3.79	60.1	19.1	1.58	19.7	0.03	0.02	0.04	0.15	75	
85	10.41	10.40	33.689	25.860	214.9	0.236	3.70	58.6	20.0	1.63	20.5	0.03	0.00	0.03	0.17	85	212
99	9.95	9.94	33.791	26.019	200.1	0.265	3.25	51.0	23.5	1.77	22.7	0.03	0.01	0.03	0.18	99	211
100 ISL	9.84 D	9.83	33.821 D	26.061	196.1	0.267	3.22	50.4	23.7	1.78	22.8	0.03	0.01	0.03	0.18	100	
119	9.54	9.53	33.910	26.180	185.1	0.303	2.79	43.4	27.9	1.92	24.8	0.01	0.00	0.02	0.12	120	210
125 ISL	9.46 D	9.45	33.912 D	26.195	183.8	0.314	2.70	41.9	28.9	1.96	25.3	0.01	0.00	0.02	0.12	126	
138	9.24	9.22	33.980	26.284	175.6	0.338	2.55	39.4	30.7	2.03	26.2	0.00	0.00	0.01	0.13	139	209
150 ISL	8.90 D	8.88	34.006 D	26.358	168.7	0.358	2.44	37.4	32.0	2.08	27.0	0.00	0.00	0.01	0.12	151	
169	8.83	8.81	34.050	26.404	164.7	0.390	2.27	34.8	34.1	2.15	28.0	0.00	0.00	0.01	0.11	170	208
200	8.70	8.68	34.115	26.476	158.4	0.440	1.82	27.8	39.4	2.31	29.5	0.01	0.00	0.01	0.10	201	207
229	8.45	8.43	34.144	26.538	153.0	0.485	1.61	24.5	42.0	2.41	30.6	0.02	0.01			230	206
250 ISL	8.03 D	8.00	34.126 D	26.587	148.6	0.517	1.31	19.7	45.0	2.54	31.7	0.02	0.01			251	
267	8.16	8.13	34.214	26.637	144.2	0.542	1.09	16.5	47.6	2.63	32.5	0.01	0.01			269	205
300 ISL	7.68 D	7.65	34.184 D	26.684	140.0	0.589	1.14	17.0	51.3	2.66	33.6	0.00	0.02			302	
318	7.46	7.43	34.162	26.699	138.8	0.614	1.17	17.4	53.3	2.67	34.2	0.00	0.02			320	204
375	6.91	6.87	34.214	26.817	128.2	0.690	0.75	11.0	62.8	2.89	36.6	0.00	0.02			377	203
400 ISL	6.80 D	6.76	34.230 D	26.845	125.9	0.722	0.64	9.4	65.5	2.95	37.2	0.00	0.02			403	
437	6.61	6.57	34.257	26.892	121.8	0.768	0.52	7.6	69.1	3.01	37.9	0.00	0.02			440	202
500 ISL	6.20 D	6.16	34.308 D	26.986	113.4	0.842	0.35	5.1	76.4	3.11	39.2	0.00	0.00			503	
520	6.08	6.03	34.310	27.003	111.9	0.864	0.29	4.2	78.7	3.14	39.6	0.00	0.00			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 21.0 W	22/10/08	0514 UTC	722 m	300 08 kn			1014.2 mb	15.1 C	14.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.52	14.52	33.550	24.958	298.8	0.000	5.88	101.5	3.2	0.62	5.0	0.17	0.16	1.10	0.36	0	
2	14.52	14.52	33.550	24.958	298.8	0.006	5.88	101.5	3.2	0.62	5.0	0.17	0.16	1.10	0.36	2	221
10	14.52	14.52	33.550	24.958	299.0	0.030	5.88	101.5	4.1	0.63	5.0	0.17	0.17	1.09	0.39	10	219
10	14.52	14.52	33.550	24.958	299.0	0.030										10	220
20	14.51	14.51	33.550	24.961	299.1	0.060	5.85	100.9	4.2	0.68	5.1	0.17	0.20	1.08	0.40	20	218
30	12.91	12.91	33.591	25.321	265.1	0.088	4.80	80.1	9.7	1.08	11.2	0.31	0.59	0.91	0.26	30	217
40	10.94	10.94	33.669	25.751	224.3	0.112	3.67	58.8	18.3	1.55	19.0	0.07	0.03	0.21	0.19	40	216
49	10.59	10.58	33.720	25.853	214.8	0.132	3.36	53.4	20.5	1.67	20.7	0.03	0.02	0.12	0.14	49	215
50 ISL	10.59 D	10.58	33.720 D	25.853	214.8	0.134	3.35	53.3	20.5	1.67	20.8	0.03	0.02	0.11	0.14	50	
59	10.51	10.50	33.736	25.879	212.5	0.154	3.28	52.1	20.8	1.69	21.0	0.03	0.03	0.08	0.14	59	214
70	10.23	10.22	33.776	25.959	205.1	0.177	3.15	49.7	22.1	1.76	22.1	0.02	0.03	0.05	0.14	70	213
75 ISL	9.94 D	9.93	33.807 D	26.032	198.3	0.187	3.15	49.4	23.1	1.78	22.7	0.01	0.03	0.03	0.13	75	
84	9.70	9.69	33.830	26.090	192.9	0.204	3.16	49.3	25.1	1.84	23.8	0.00	0.02	0.01	0.10	84	212
100	9.70	9.69	33.961	26.193	183.5	0.234	2.41	37.6	28.8	2.03	25.5	0.00	0.03	0.01	0.10	101	211
120	9.44	9.43	34.001	26.268	176.8	0.270	2.32	36.0	30.5	2.11	26.7	0.00	0.00	0.01	0.10	121	210
125 ISL	9.47 D	9.46	34.042 D	26.295	174.3	0.279	2.22	34.5	31.3	2.14	27.0	0.00	0.00	0.01	0.10	126	
139	9.33	9.31	34.093	26.358	168.6	0.303	1.90	29.4	33.6	2.22	27.8	0.00	0.01	0.02	0.09	140	209
150 ISL	9.31 D	9.29	34.137 D	26.396	165.3	0.322	1.70	26.3	35.3	2.29	28.4	0.00	0.01	0.02	0.09	151	
169	9.15	9.13	34.165	26.444	161.1	0.353	1.52	23.5	37.5	2.38	29.2	0.00	0.01	0.01	0.10	170	208
200 ISL	8.53 D	8.51	34.119 D	26.505	155.6	0.402	1.82	27.7	38.7	2.32	29.8	0.00	0.02	0.01	0.07	201	
201	8.54	8.52	34.117	26.502	155.9	0.403	1.83	27.9	38.7	2.32	29.8	0.00	0.02	0.01	0.07	202	207
228	8.43	8.41	34.157	26.551	151.8	0.445	1.53	23.2	42.8	2.45	30.9	0.00	0.02			229	206
250 ISL	8.16 D	8.13	34.185 D	26.614	146.1	0.478	1.35	20.4	46.3	2.54	32.0	0.00	0.03			252	
269	7.88	7.85	34.175	26.648	143.1	0.505	1.23	18.5	49.1	2.60	33.0	0.00	0.03			271	205
300 ISL	7.64 D	7.61	34.189 D	26.694	139.1	0.549	1.07	16.0	52.6	2.68	34.0	0.00	0.02			302	
317	7.49	7.46	34.200	26.724	136.4	0.572	0.99	14.7	54.5	2.72	34.5	0.00	0.01			319	204
377	6.80	6.76	34.239	26.852	124.8	0.651	0.64	9.4	64.5	2.93	36.9	0.00	0.00			379	203
400 ISL	6.69 D	6.65	34.245 D	26.871	123.3	0.679	0.58	8.5	67.6	2.98	37.8	0.00	0.00			403	
437	6.21	6.17	34.235	26.927	118.1	0.724	0.51	7.4	72.1	3.05	39.0	0.00	0.01			440	202
500 ISL	5.97 D	5.93	34.307 D	27.015	110.5	0.796	0.34	4.9	78.9	3.13	39.8	0.00	0.00			503	
520	5.95	5.90	34.316	27.024	109.8	0.818	0.28	4.0	81.1	3.15	40.0	0.00	0.00			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 39.5 N	121 2.1 W	22/10/08	1154 UTC	3783 m	330 13 kn			1014.1 mb	16.8 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.82	16.82	33.472	24.385	353.4	0.000	5.67	102.4	0.8	0.31	0.0	0.00	0.05	0.43	0.13	0	
2	16.82	16.82	33.472	24.385	353.4	0.007	5.67	102.4	0.8	0.31	0.0	0.00	0.05	0.43	0.13	2	221
10	16.82	16.82	33.474	24.387	353.5	0.035	5.69	102.7	1.0	0.32	0.0	0.00	0.05	0.41	0.14	10	219
11	16.82	16.82	33.473	24.386	353.6	0.039										11	220
20	16.83	16.83	33.474	24.385	354.0	0.071	5.68	102.6	1.0	0.31	0.0	0.00	0.04	0.40	0.16	20	218
30 ISL	16.83 D	16.83	33.471 D	24.383	354.5	0.106	5.67	102.4	0.8	0.31	0.0	0.00	0.04	0.42	0.14	30	
31	16.83	16.82	33.472	24.384	354.5	0.110	5.67	102.4	0.8	0.31	0.0	0.00	0.04	0.42	0.14	31	217
40	16.82	16.81	33.471	24.386	354.6	0.142	5.68	102.6	0.5	0.31	0.0	0.00	0.04	0.42	0.15	40	216
50	13.60	13.59	33.078	24.786	316.5	0.175	5.83	98.4	3.4	0.56	2.5	0.25	0.08	0.68	0.51	50	215
61	12.52	12.51	33.224	25.113	285.6	0.208	5.36	88.5	7.0	0.88	8.3	0.07	0.05	0.38	0.32	61	214
71	11.93	11.92	33.324	25.303	267.7	0.236	5.12	83.6	9.5	1.06	11.4	0.03	0.04	0.20	0.24	71	213
75 ISL	11.63 D	11.62	33.377 D	25.400	258.6	0.246	5.06	82.1	10.2	1.11	12.1	0.02	0.04	0.17	0.22	75	
85	11.47	11.46	33.388	25.438	255.2	0.272	4.92	79.6	11.8	1.20	13.6	0.01	0.04	0.12	0.18	85	212
100	10.70	10.69	33.437	25.614	238.6	0.309	4.67	74.3	15.0	1.37	16.5	0.00	0.01	0.05	0.09	100	211
120	9.73	9.72	33.621	25.923	209.6	0.354	3.97	61.9	21.2	1.68	21.6	0.00	0.03	0.01	0.05	121	210
125 ISL	9.71 D	9.70	33.691 D	25.981	204.2	0.364	3.75	58.5	22.4	1.74	22.6	0.00	0.03	0.01	0.05	126	
140	9.55	9.53	33.828	26.115	191.7	0.394	3.16	49.1	25.4	1.87	24.7	0.00	0.02	0.01	0.04	141	209
150 ISL	9.34 D	9.32	33.864 D	26.177	186.0	0.413	3.09	47.8	27.1	1.90	25.3	0.00	0.01	0.01	0.04	151	
170	8.78	8.76	33.951	26.334	171.3	0.449	2.94	45.0	30.5	1.94	26.1	0.00	0.01	0.00	0.04	171	208
200 ISL	8.18 D	8.16	34.010 D	26.473	158.5	0.498	2.68	40.4	36.4	2.06	28.2	0.00	0.03	0.00	0.02	201	
201	8.15	8.13	34.015	26.481	157.7	0.500	2.67	40.3	36.6	2.07	28.3	0.00	0.03	0.00	0.02	202	207
230	7.69	7.67	34.023	26.555	151.0	0.544	2.27	33.9	42.3	2.26	30.8	0.00	0.01			231	206
250 ISL	7.51 D	7.49	34.067 D	26.616	145.5	0.574	1.99	29.6	45.7	2.37	32.0	0.00	0.01			251	
268	7.46	7.43	34.080	26.634	144.1	0.600	1.75	26.0	48.6	2.45	32.9	0.00	0.01			270	205
300 ISL	7.01 D	6.98	34.108 D	26.719	136.3	0.645	1.43	21.0	53.9	2.60	34.5	0.00	0.00			302	
317	6.94	6.91	34.112	26.732	135.3	0.668	1.29	18.9	56.7	2.67	35.3	0.00	0.00			319	204
379	6.34	6.31	34.153	26.844	125.1	0.749	0.84	12.2	66.6	2.89	38.0	0.00	0.00			381	203
400 ISL	6.27 D	6.23	34.173 D	26.870	123.0	0.775	0.76	11.0	68.6	2.93	38.4	0.00	0.01			403	
439	6.11	6.07	34.187	26.901	120.4	0.822	0.64	9.2	72.1	2.99	39.1	0.00	0.02			442	202
500 ISL	5.55 D	5.51	34.232 D	27.007	110.7	0.893	0.43	6.1	81.6	3.12	40.8	0.00	0.02			503	
516	5.51	5.47	34.237	27.016	110.0	0.911	0.38	5.4	84.1	3.15	41.2	0.00	0.02			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 19.3 N	121 43.3 W	22/10/08	1830 UTC	4053 m	010 04 kn	310 05 06	0	1016.0 mb	18.0 C	16.3 C	21m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.55	17.55	33.596	24.307	360.8	0.000	5.61	102.8	0.8	0.31	0.0	0.00	0.06	0.39	0.10	0	
2 A	17.55	17.55	33.596	24.307	360.8	0.007			0.8	0.31	0.0	0.00	0.06	0.39	0.10	2	224
8 A	17.34	17.34	33.594	24.356	356.4	0.029	5.61	102.4	0.9	0.30	0.0	0.00	0.02	0.40	0.14	8	222
8	17.34	17.34	33.594	24.356	356.4	0.029										8	223
10 ISL	17.34 D	17.34	33.593 D	24.355	356.5	0.036	5.61	102.4	1.0	0.30	0.0	0.00	0.02	0.40	0.15	10	
14 A	17.34	17.34	33.594	24.356	356.5	0.050	5.61	102.4	1.2	0.30	0.0	0.00	0.03	0.41	0.15	14	221
20 ISL	17.34 D	17.34	33.593 D	24.356	356.8	0.072	5.62	102.6	1.3	0.32	0.0	0.00	0.04	0.42	0.16	20	
22	17.33	17.33	33.594	24.359	356.6	0.079	5.62	102.6	1.3	0.32	0.0	0.00	0.04	0.43	0.16	22	220
29 A	17.33	17.33	33.594	24.359	356.8	0.104	5.61	102.4	0.8	0.31	0.0	0.00	0.03	0.46	0.14	29	219
30 ISL	17.33 D	17.33	33.591 D	24.357	357.0	0.107	5.61	102.4	0.9	0.31	0.0	0.00	0.03	0.47	0.15	30	
36	16.98	16.97	33.572	24.426	350.7	0.128	5.61	101.7	1.8	0.40	1.2	0.03	0.05	0.50	0.24	36	218
44	13.93	13.92	33.499	25.044	291.9	0.154	5.52	94.1	6.1	0.79	6.9	0.16	0.09	0.51	0.37	44	217
49	12.65	12.64	33.478	25.285	269.0	0.168	5.32	88.3	9.2	1.03	10.7	0.22	0.06	0.38	0.35	49	216
50 ISL	12.51 D	12.50	33.472 D	25.307	266.9	0.171	5.29	87.5	9.5	1.06	11.1	0.22	0.06	0.37	0.35	50	
57 A	12.01	12.00	33.500	25.424	255.9	0.189	5.06	82.8	11.0	1.19	13.3	0.15	0.04	0.30	0.35	57	215
66	11.21	11.20	33.532	25.597	239.6	0.211	4.65	74.8	14.4	1.36	16.3	0.03	0.02	0.20	0.23	66	214
75 ISL	10.75 D	10.74	33.565 D	25.704	229.5	0.233	4.36	69.5	16.5	1.46	18.0	0.01	0.03	0.13	0.13	75	
76 A	10.71	10.70	33.571	25.716	228.4	0.235	4.33	69.0	16.7	1.47	18.1	0.01	0.03	0.12	0.12	76	213
88	10.34	10.33	33.641	25.835	217.3	0.262	4.02	63.5	18.7	1.59	20.2	0.00	0.03	0.06	0.07	88	212
100 ISL	10.11 D	10.10	33.721 D	25.937	207.9	0.287	3.67	57.7	21.3	1.71	22.1	0.00	0.00	0.03	0.06	100	
101	10.10	10.09	33.722	25.939	207.7	0.289	3.64	57.3	21.5	1.72	22.2	0.00	0.00	0.03	0.06	101	211
120	9.35	9.34	33.837	26.154	187.6	0.327	3.11	48.1	27.1	1.90	25.1	0.00	0.01	0.01	0.04	121	210
125 ISL	9.24 D	9.23	33.842 D	26.176	185.6	0.336	3.03	46.8	28.1	1.93	25.5	0.00	0.01	0.01	0.04	126	
140	8.90	8.89	33.901 D	26.276	176.3	0.363										141	209
150 ISL	8.74 D	8.72	33.941 D	26.333	171.0	0.381	2.74	41.9	32.2	2.03	27.3	0.00	0.03	0.00	0.03	151	
168	8.43	8.41	33.988	26.417	163.3	0.411	2.63	39.9	34.4	2.07	28.0	0.00	0.03	0.00	0.03	169	208
200	7.94	7.92	34.016	26.513	154.6	0.461	2.32	34.8	39.5	2.21	30.1	0.00	0.02	0.00	0.02	201	207
230	7.61	7.59	34.065	26.600	146.7	0.507	1.83	27.3	46.7	2.42	32.5	0.00	0.03			231	206
250 ISL	7.45 D	7.43	34.105 D	26.655	141.8	0.536	1.54	22.9	50.6	2.53	33.8	0.00	0.02			251	
270	7.26	7.23	34.121	26.694	138.3	0.564	1.30	19.2	53.8	2.62	34.8	0.00	0.01			272	205
300 ISL	6.90 D	6.87	34.139 D	26.758	132.5	0.604	1.08	15.8	57.5	2.72	35.9	0.00	0.00			302	
320	6.86	6.83	34.152	26.774	131.3	0.631	0.97	14.2	59.7	2.78	36.5	0.00	0.00			322	204
378	6.48	6.45	34.200	26.863	123.5	0.704	0.68	9.9	67.0	2.94	37.9	0.00	0.01			380	203
400 ISL	6.33 D	6.29	34.215 D	26.895	120.7	0.731	0.58	8.4	70.3	3.00	38.5	0.00	0.01			403	
438	6.14	6.10	34.266	26.960	114.9	0.776	0.42	6.1	75.8	3.08	39.4	0.00	0.00			441	202
500 ISL	5.80 D	5.76	34.308 D	27.036	108.2	0.845	0.30	4.3	82.2	3.16	40.4	0.00	0.02			503	
513	5.76	5.72	34.316	27.048	107.3	0.859	0.27	3.9	83.6	3.18	40.6	0.00	0.02			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 23.4 W	23/10/08	0024 UTC	4092 m	310 06 kn	330 04 06	0	1014.8 mb	17.4 C	16.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.40	16.40	33.167	24.248	366.4	0.000	5.84	104.4	1.2	0.34	0.0	0.00	0.06	0.41	0.10	0	
2	16.40	16.40	33.167	24.248	366.5	0.007	5.84	104.4	1.2	0.34	0.0	0.00	0.06	0.41	0.10	2	221
9	15.98	15.98	33.154	24.334	358.5	0.033										9	220
10	15.98	15.98	33.158	24.337	358.2	0.036	5.86	103.9	1.5	0.34	0.0	0.00	0.04	0.42	0.13	10	219
20	15.89	15.89	33.155	24.355	356.8	0.072	5.86	103.7	1.3	0.35	0.0	0.00	0.04	0.45	0.17	20	218
29	15.80	15.80	33.152	24.373	355.4	0.104	5.86	103.5	1.4	0.36	0.0	0.00	0.05	0.56	0.22	29	217
30 ISL	15.68 D	15.68	33.159 D	24.406	352.3	0.108	5.86	103.3	1.4	0.36	0.0	0.00	0.06	0.55	0.23	30	
40	14.95	14.94	33.121	24.536	340.1	0.142	5.89	102.2	1.9	0.40	0.3	0.06	0.17	0.49	0.34	40	216
49	14.41	14.40	33.095	24.632	331.2	0.172	5.86	100.6	2.4	0.44	0.6	0.13	0.24	0.33	0.27	49	215
50 ISL	13.67 D	13.66	33.036 D	24.740	321.0	0.176	5.86	99.0	2.4	0.44	0.6	0.16	0.23	0.31	0.26	50	
60	12.88	12.87	32.948	24.829	312.6	0.207	5.84	97.0	2.9	0.52	1.7	0.32	0.06	0.17	0.20	60	214
70	11.59	11.58	32.863	25.008	295.7	0.238	5.75	92.9	4.4	0.68	4.5	0.04	0.07	0.10	0.13	70	213
75 ISL	11.46 D	11.45	32.856 D	25.026	294.1	0.253	5.71	92.0	5.4	0.75	5.7	0.03	0.07	0.08	0.11	75	
85	10.99	10.98	32.943	25.178	279.8	0.281	5.57	88.9	7.6	0.88	8.1	0.00	0.07	0.05	0.07	85	212
100	10.40	10.39	33.153	25.445	254.7	0.321	5.15	81.2	11.5	1.11	12.3	0.00	0.06	0.02	0.03	100	211
119	10.19	10.18	33.284	25.583	241.9	0.369	4.99	78.4	13.6	1.26	14.9	0.00	0.05	0.01	0.02	120	210
125 ISL	10.16 D	10.15	33.299 D	25.600	240.4	0.383	4.92	77.3	14.6	1.31	15.7	0.00	0.05	0.01	0.02	126	
138	9.87	9.85	33.413	25.738	227.5	0.413	4.67	72.9	17.2	1.44	17.8	0.00	0.04	0.01	0.03	139	209
150 ISL	9.52 D	9.50	33.566 D	25.915	210.9	0.440	4.15	64.4	21.1	1.62	20.8	0.00	0.04	0.01	0.03	151	
168	9.05	9.03	33.758	26.141	189.7	0.476	3.37	51.8	26.7	1.87	24.8	0.00	0.04	0.00	0.02	169	208
200	8.72	8.70	33.939	26.335	171.8	0.534	3.00	45.8	29.1	1.95	26.1	0.00	0.06	0.00	0.02	201	207
228	8.19	8.17	33.995	26.460	160.2	0.580	2.85	43.0	34.5	2.05	27.5	0.00	0.06			229	206
250 ISL	8.03 D	8.00	34.022 D	26.505	156.3	0.615	2.49	37.5	39.2	2.18	29.4	0.00	0.03			251	
267	7.76	7.73	34.039	26.558	151.4	0.641	2.17	32.4	42.7	2.30	30.9	0.00	0.01			268	205
300 ISL	7.56 D	7.53	34.110 D	26.644	143.8	0.690	1.66	24.7	48.3	2.50	33.1	0.00	0.00			302	
317	7.40	7.37	34.110	26.666	141.8	0.714	1.44	21.4	50.9	2.60	34.0	0.00	0.00			319	204
377	6.84	6.80	34.172	26.793	130.4	0.796	0.90	13.2	60.1	2.86	36.5	0.00	0.00			379	203
400 ISL	6.61 D	6.57	34.188 D	26.837	126.4	0.825	0.77	11.2	63.9	2.94	37.4	0.00	0.00			402	
437	6.31	6.27	34.222	26.903	120.4	0.871	0.61	8.8	69.9	3.04	38.7	0.00	0.00			440	202
500 ISL	5.77 D	5.73	34.226 D	26.975	113.9	0.945	0.45	6.4	78.9	3.13	40.3	0.00	0.00			503	
519	5.68	5.64	34.239	26.997	112.0	0.966	0.40	5.7	81.6	3.16	40.8	0.00	0.00			522	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 39.5 N	123 4.3 W	23/10/08	0633 UTC	4142 m	060 07 kn			1015.5 mb	17.0 C	16.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.42	17.42	33.241	24.066	383.7	0.000	5.60	102.2	2.1	0.32	0.0	0.00	0.04	0.11	0.03	0	
2	17.42	17.42	33.241	24.066	383.8	0.008	5.60	102.2	2.1	0.32	0.0	0.00	0.04	0.11	0.03	2	221
10 CSL	17.43	17.43	33.239	24.063	384.4	0.038										10	200
10	17.42	17.42	33.242	24.067	384.0	0.038										10	220
11	17.43	17.43	33.242	24.065	384.2	0.042	5.59	102.0	2.0	0.32	0.0	0.00	0.04	0.11	0.03	11	219
20 ISL	17.42 D	17.42	33.240 D	24.066	384.4	0.077	5.59	102.0	1.9	0.32	0.0	0.00	0.04	0.12	0.04	20	
24	17.37	17.37	33.246	24.083	383.0	0.092	5.59	101.9	1.9	0.32	0.0	0.00	0.04	0.13	0.04	24	218
30 ISL	17.33 D	17.33	33.252 D	24.097	381.8	0.115	5.60	102.0	1.7	0.32	0.0	0.00	0.03	0.16	0.05	30	
39	17.10	17.09	33.354	24.230	369.4	0.149	5.63	102.1	1.4	0.32	0.0	0.00	0.02	0.24	0.09	39	217
50	16.57	16.56	33.278	24.296	363.5	0.189	5.70	102.3	1.6	0.35	0.2	0.02	0.02	0.37	0.21	50	216
62	12.60	12.59	32.881	24.832	312.4	0.230	5.87	96.9	3.9	0.58	2.1	0.49	0.07	0.43	0.45	62	215
75	12.06	12.05	32.915	24.961	300.3	0.270	5.69	92.9	4.9	0.68	4.5	0.09	0.02	0.23	0.31	75	214
86	11.94	11.93	33.163	25.176	280.1	0.302	5.34	87.1	8.3	0.92	9.2	0.01	0.03	0.13	0.16	86	213
100	11.17	11.16	33.256	25.390	260.0	0.339	5.10	81.9	11.0	1.11	12.5	0.00	0.03	0.05	0.06	100	212
110	10.44	10.43	33.253	25.516	248.1	0.365	5.10	80.6	9.7	0.99	10.9	0.00	0.05	0.02	0.04	110	211
124	9.96	9.95	33.504	25.793	222.0	0.398	4.66	73.0	13.9	1.18	14.5	0.00	0.00	0.01	0.02	125	210
125 ISL	9.93 D	9.92	33.523 D	25.813	220.1	0.400	4.62	72.3	14.3	1.20	14.9	0.00	0.00	0.01	0.02	126	
138	9.56	9.54	33.643	25.968	205.6	0.428	4.07	63.2	20.0	1.52	19.7	0.00	0.01	0.01	0.02	139	209
150 ISL	9.21 D	9.19	33.728 D	26.092	194.0	0.452	3.62	55.8	23.9	1.71	22.7	0.00	0.01	0.01	0.02	151	
169	8.87	8.85	33.844	26.237	180.6	0.487	3.12	47.8	28.3	1.88	25.5	0.00	0.00	0.00	0.02	170	208
200	8.40	8.38	33.975	26.412	164.3	0.541	3.06	46.4	32.6	1.91	26.3	0.00	0.02	0.00	0.02	201	207
229	8.21	8.19	34.025	26.481	158.3	0.587	2.54	38.4	37.5	2.12	28.8	0.00	0.01			230	206
250 ISL	7.90 D	7.87	34.043 D	26.541	152.8	0.620	2.21	33.1	41.4	2.25	30.5	0.00	0.03			251	
269	7.76	7.73	34.067	26.580	149.3	0.649			44.8	2.36	31.9	0.00	0.05			270	205
300 ISL	7.45 D	7.42	34.096 D	26.648	143.3	0.694	1.58	23.5	49.5	2.50	33.5	0.00	0.02			302	
317	7.30	7.27	34.108	26.679	140.5	0.718	1.42	21.0	52.1	2.57	34.2	0.00	0.00			319	204
375	6.46	6.43	34.114	26.798	129.6	0.797	1.03	14.9	63.5	2.79	37.5	0.00	0.01			377	203
400 ISL	6.55 D	6.51	34.179 D	26.838	126.3	0.829	0.89	12.9	66.8	2.85	38.2	0.00	0.01			402	
439	6.13	6.09	34.170	26.885	121.9	0.877	0.71	10.2	71.3	2.94	38.9	0.00	0.02			442	202
500 ISL	5.82 D	5.78	34.233 D	26.975	114.0	0.949	0.48	6.9	79.2	3.07	40.3	0.00	0.01			503	
517	5.66	5.62	34.240	27.000	111.7	0.968	0.41	5.8	81.4	3.11	40.7	0.00	0.01			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 19.5 N	123 44.5 W	23/10/08	1238 UTC	3903 m	330 07 kn			1014.2 mb	16.0 C	14.8 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.09	17.09	33.341	24.221	369.0	0.000	5.63	102.1	1.0	0.34	0.0	0.00	0.03	0.22	0.09	0	
1	17.09	17.09	33.341	24.221	369.0	0.004	5.63	102.1	1.0	0.34	0.0	0.00	0.03	0.22	0.09	1	221
10 ISL	17.09 D	17.09	33.339 D	24.220	369.4	0.037	5.62	101.9	1.1	0.33	0.0	0.00	0.04	0.24	0.09	10	
11	17.09	17.09	33.341	24.221	369.3	0.041	5.62	101.9	1.1	0.33	0.0	0.00	0.04	0.24	0.09	11	219
11	17.09	17.09	33.342	24.222	369.2	0.041										11	220
20 ISL	17.00 D	17.00	33.337 D	24.240	367.8	0.074	5.64	102.1	1.0	0.33	0.0	0.00	0.05	0.23	0.10	20	
26	16.99	16.99	33.339	24.244	367.6	0.096	5.65	102.3	0.9	0.34	0.0	0.00	0.06	0.23	0.11	26	218
30 ISL	16.99 D	16.99	33.336 D	24.242	368.0	0.111	5.64	102.1	0.9	0.34	0.0	0.00	0.06	0.24	0.12	30	
40	16.98	16.97	33.339	24.247	367.8	0.147	5.63	101.9	0.9	0.34	0.0	0.00	0.05	0.29	0.13	40	217
50	16.84	16.83	33.318	24.264	366.5	0.184	5.66	102.1	1.2	0.35	0.1	0.00	0.05	0.35	0.21	50	216
63	13.27	13.26	32.994	24.788	316.7	0.228	5.95	99.7	3.1	0.59	2.3	0.29	0.25	0.48	0.51	63	215
75	12.10	12.09	32.938	24.972	299.3	0.265	5.72	93.5	5.2	0.75	5.3	0.31	0.03	0.22	0.29	75	214
87	11.31	11.30	32.965	25.138	283.7	0.300	5.57	89.5	7.0	0.88	7.9	0.01	0.02	0.10	0.15	87	213
100 ISL	11.25 D	11.24	33.214 D	25.343	264.5	0.336	5.22	83.9	10.1	1.06	11.4	0.01	0.03	0.04	0.07	100	
101	10.99	10.98	33.201	25.379	261.0	0.339	5.19	83.0	10.3	1.08	11.7	0.01	0.03	0.04	0.07	101	212
111	10.96	10.95	33.375	25.520	247.9	0.364	4.93	78.8	12.2	1.24	14.4	0.00	0.01	0.03	0.05	111	211
125 ISL	10.61 D	10.60	33.533 D	25.705	230.6	0.398	4.49	71.3	15.4	1.42	17.4	0.00	0.00	0.01	0.04	126	
126	10.61	10.60	33.530	25.703	230.8	0.400	4.46	70.8	15.7	1.43	17.6	0.00	0.00	0.01	0.04	127	210
140	10.13	10.11	33.646	25.876	214.6	0.431	4.04	63.6	19.9	1.63	20.6	0.00	0.02	0.01	0.04	141	209
150 ISL	9.88 D	9.86	33.703 D	25.963	206.5	0.452	3.90	61.0	21.5	1.64	21.4	0.00	0.02	0.01	0.03	151	
170	9.16	9.14	33.825	26.176	186.4	0.491	3.74	57.6	23.8	1.65	22.0	0.00	0.01	0.00	0.02	171	208
200 ISL	8.74 D	8.72	33.951 D	26.341	171.2	0.545	3.29	50.3	29.1	1.84	24.7	0.00	0.01	0.00	0.01	201	
202	8.67	8.65	33.961	26.360	169.5	0.548	3.26	49.7	29.4	1.85	24.9	0.00	0.01	0.00	0.01	203	207
231	8.32	8.30	33.988	26.435	162.7	0.597	3.22	48.7	33.0	1.89	25.7	0.00	0.00			232	206
250 ISL	7.94 D	7.91	34.003 D	26.504	156.4	0.627	2.75	41.3	37.2	2.06	28.0	0.00	0.00			251	
270	7.84	7.81	34.032	26.541	153.1	0.658	2.19	32.8	41.9	2.27	30.6	0.00	0.01			271	205
300 ISL	7.38 D	7.35	34.053 D	26.624	145.5	0.703	1.87	27.7	47.3	2.42	32.4	0.00	0.00			302	
319	7.27	7.24	34.070	26.653	143.0	0.730	1.75	25.9	50.5	2.48	33.2	0.00	0.00			321	204
378	6.66	6.63	34.115	26.772	132.2	0.811	1.13	16.5	60.9	2.75	36.6	0.00	0.00			380	203
400 ISL	6.47 D	6.43	34.125 D	26.806	129.2	0.840	1.03	14.9	64.9	2.82	37.4	0.00	0.00			402	
439	5.99	5.95	34.130	26.871	123.1	0.889	0.90	12.9	71.5	2.91	38.6	0.00	0.01			442	202
500 ISL	5.72 D	5.68	34.212 D	26.970	114.3	0.962	0.56	8.0	79.5	3.06	40.1	0.00	0.00			503	
519	5.64	5.60	34.220	26.987	112.9	0.983	0.45	6.4	82.0	3.11	40.6	0.00	0.00			522	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 26.7 W	21/10/08	0311 UTC	27 m	270 01 kn			1015.2 mb	17.0 C	16.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.09	17.09	33.456	24.309	360.6	0.000	5.87	106.5	2.4	0.30	0.2	0.01	0.11	0.42	0.18	0	
2	17.09	17.09	33.456	24.309	360.6	0.007	5.87	106.5	2.4	0.30	0.2	0.01	0.11	0.42	0.18	2	204
5	16.94	16.94	33.447	24.338	358.0	0.018	5.85	105.9	2.5	0.33	0.4	0.05	0.13	0.64	0.25	5	203
10	16.47	16.47	33.429	24.433	349.1	0.036	5.78	103.6	3.2	0.39	1.0	0.12	0.19	1.04	0.41	10	202
20 ISL	15.57 D	15.57	33.404 D	24.618	331.8	0.070	5.65	99.5	4.5	0.52	2.5	0.21	0.42	1.52	0.52	20	
22	15.31	15.31	33.399	24.672	326.7	0.076	5.62	98.4	4.8	0.55	2.8	0.23	0.46	1.62	0.54	22	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 44.8 W	20/10/08	2042 UTC	28 m	270 04 kn	270 02 07	0	1016.1 mb	18.0 C	15.2 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.33	16.33	33.345	24.401	351.9	0.000	6.13	109.5	3.5	0.33	0.1	0.04	0.23	1.38	0.55	0	
2	16.33	16.33	33.345	24.401	351.9	0.007	6.13	109.5	3.5	0.33	0.1	0.04	0.23	1.38	0.55	2	204
5	16.07	16.07	33.347	24.462	346.2	0.018	6.13	109.0	3.5	0.34	0.2	0.05	0.32	1.17	0.62	5	203
10 ISL	15.68 D	15.68	33.332 D	24.538	339.1	0.035	6.03	106.4	3.6	0.39	0.4	0.08	0.41	1.12	0.76	10	
11	15.68	15.68	33.333	24.539	339.0	0.038	6.01	106.0	3.6	0.40	0.5	0.09	0.43	1.11	0.78	11	202
20 ISL	14.54 D	14.54	33.312 D	24.771	317.2	0.068	5.94	102.4	4.7	0.54	1.5	0.19	0.77	0.74	0.69	20	
21	14.36	14.36	33.309	24.807	313.8	0.071	5.93	101.8	4.8	0.56	1.6	0.20	0.81	0.70	0.68	21	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 46.1 W	20/10/08	1908 UTC	68 m	210 03 kn	230 02 07	1	1017.5 mb	17.2 C	15.2 C	11m	2/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.35	16.35	33.351	24.401	351.8	0.000	6.15	110.0	3.2	0.29	0.0	0.00	0.04	0.84	0.51	0	
2	16.35	16.35	33.351	24.401	351.9	0.007	6.15	110.0	3.2	0.29	0.0	0.00	0.04	0.84	0.51	2	209
4	16.35	16.35	33.347	24.398	352.2	0.014	6.17	110.3	3.2	0.29	0.0	0.00	0.04	0.82	0.50	4	208
9	16.11	16.11	33.337	24.445	347.9	0.032	6.28	111.7	3.2	0.30	0.0	0.00	0.04	0.77	0.46	9	206
9	16.17	16.17	33.342	24.435	348.9	0.032										9	207
10 ISL	16.19 D	16.19	33.341 D	24.430	349.4	0.035	6.28	111.9	3.3	0.31	0.1	0.01	0.05	0.80	0.47	10	
19	14.34	14.34	33.295	24.800	314.4	0.065	6.25	107.3	4.7	0.48	1.3	0.17	0.20	1.07	0.58	19	205
20 ISL	14.18 D	14.18	33.299 D	24.837	310.9	0.068	6.22	106.4	4.8	0.50	1.4	0.18	0.25	1.04	0.57	20	
30	13.69	13.69	33.307	24.944	300.9	0.099	5.76	97.6	6.0	0.67	3.3	0.31	0.57	0.67	0.47	30	204
39	12.89	12.88	33.307	25.105	285.8	0.125	5.32	88.6	7.1	0.85	6.7	0.39	0.13	0.54	0.43	39	203
50	12.54	12.53	33.344	25.202	276.9	0.156	4.94	81.7	8.9	1.03	9.5	0.29	0.01	0.30	0.38	50	202
61	12.35	12.34	33.369	25.258	271.8	0.186	4.81	79.2	9.6	1.09	10.5	0.19	0.04	0.23	0.38	61	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 25.0 N	117 54.3 W	20/10/08	1730 UTC	618 m	050 03 kn	230 02 06	2	1018.0 mb	18.1 C	15.2 C	15m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.53	17.53	33.464	24.211	370.0	0.000	5.87	107.5	2.0	0.28	0.0	0.00	0.05	0.43	0.17	0	
3 A	17.53	17.53	33.464	24.211	370.0	0.011	5.87	107.5	2.0	0.28	0.0	0.00	0.05	0.43	0.17	3	221
9 A	17.05	17.05	33.444	24.310	360.8	0.033	6.00	108.8	2.1	0.30	0.0	0.00	0.06	0.63	0.31	9	220
10 ISL	17.05 D	17.05	33.447 D	24.312	360.6	0.037	6.01	109.0	2.1	0.31	0.0	0.00	0.06	0.69	0.34	10	
20 A	15.78	15.78	33.358	24.536	339.6	0.072	6.12	108.2	2.5	0.37	0.4	0.05	0.06	1.11	0.55	20	219
30 ISL	12.90 D	12.90	33.105 D	24.946	300.7	0.104	5.80	96.5	5.3	0.69	4.7	0.27	0.10	0.88	0.50	30	
31 A	12.76	12.76	33.075	24.950	300.3	0.107	5.74	95.2	5.7	0.73	5.3	0.29	0.11	0.83	0.50	31	218
41 A	12.85	12.84	33.323	25.125	284.0	0.136	4.84	80.6	8.8	1.02	10.7	1.56	0.14	0.29	0.28	41	217
47	12.77	12.76	33.329	25.146	282.2	0.153	4.79	79.6	8.5	1.04	11.0	1.48	0.08	0.27	0.25	47	216
50 ISL	12.66 D	12.65	33.340 D	25.176	279.4	0.161	4.75	78.8	8.9	1.06	11.5	1.18	0.06	0.22	0.23	50	
54 A	12.50	12.49	33.357	25.220	275.3	0.172	4.69	77.5	9.7	1.10	12.3	0.70	0.05	0.16	0.21	54	215
61	12.11	12.10	33.417	25.341	263.9	0.191	4.55	74.6	11.2	1.17	13.2	0.16	0.05	0.11	0.24	61	214
68	12.04	12.03	33.437	25.370	261.3	0.210	4.58	75.0	11.4	1.19	13.4	0.11	0.04	0.10	0.18	68	213
75 ISL	11.90 D	11.89	33.456 D	25.411	257.5	0.228	4.46	72.8	12.0	1.25	14.2	0.07	0.03	0.08	0.16	75	
84	11.43	11.42	33.535	25.560	243.6	0.250	4.21	68.1	13.5	1.35	15.6	0.04	0.03	0.05	0.14	84	212
100	10.85	10.84	33.644	25.749	225.9	0.288	3.74	59.8	17.7	1.53	18.7	0.00	0.03	0.01	0.08	100	211
119	10.49	10.48	33.807	25.939	208.2	0.329	2.84	45.1	22.8	1.82	22.2	0.00	0.03	0.01	0.05	120	210
125 ISL	10.38 D	10.37	33.849 D	25.991	203.4	0.341	2.70	42.8	23.7	1.88	22.9	0.00	0.03	0.01	0.05	126	
137	10.20	10.18	33.904	26.065	196.6	0.365	2.52	39.8	25.2	1.96	23.9	0.00	0.02	0.00	0.04	138	209
150 ISL	9.95 D	9.93	33.960 D	26.152	188.6	0.391	2.35	36.9	27.4	2.03	24.9	0.00	0.02	0.00	0.04	151	
168	9.68	9.66	34.049	26.266	178.0	0.423	2.17	33.9	30.3	2.11	26.1	0.00	0.02	0.01	0.04	169	208
198	9.45	9.43	34.127	26.366	169.2	0.476	1.94	30.1	33.3	2.22	27.5	0.00	0.01	0.00	0.03	199	207
200 ISL	9.45 D	9.43	34.131 D	26.369	168.9	0.479	1.91	29.7	33.5	2.23	27.6	0.00	0.01			201	
228	9.36	9.33	34.195	26.434	163.3	0.525	1.53	23.7	35.6	2.35	28.4	0.03	0.03			229	206
250 ISL	9.18 D	9.15	34.214 D	26.479	159.5	0.561	1.37	21.2	37.9	2.43	29.2	0.02	0.02			251	
268	9.03	9.00	34.254	26.534	154.5	0.589	1.26	19.4	40.0	2.50	29.8	0.00	0.01			270	205
300 ISL	8.79 D	8.76	34.281 D	26.594	149.4	0.638	1.00	15.3	43.8	2.61	31.0	0.00	0.02			302	
316	8.63	8.60	34.293	26.628	146.3	0.661	0.87	13.3	46.1	2.67	31.6	0.00	0.03			318	204
376	7.72	7.68	34.317	26.784	132.0	0.745	0.53	7.9	58.5	2.91	34.6	0.00	0.01			378	203
400 ISL	7.34 D	7.30	34.318 D	26.840	126.8	0.776	0.45	6.7	61.8	2.97	35.5	0.00	0.00			403	
437	6.96	6.92	34.316	26.891	122.2	0.822	0.37	5.4	66.1	3.03	36.7	0.00	0.00			440	202
500 ISL	6.53 D	6.48	34.337 D	26.966	115.7	0.897	0.31	4.5	73.8	3.12	37.9	0.00	0.00			503	
515	6.43	6.38	34.340	26.982	114.3	0.914	0.29	4.2	75.6	3.14	38.2	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 15.2 N	118 15.1 W	20/10/08	1156 UTC	310 m	250 05 kn			1016.1 mb	16.7 C	14.8 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.18	18.18	33.475	24.061	384.2	0.000	5.63	104.4	1.4	0.29	0.0	0.00	0.01	0.26	0.07	0	
1	18.18	18.18	33.475	24.061	384.2	0.004	5.63	104.4	1.4	0.29	0.0	0.00	0.01	0.26	0.07	1	219
10	18.11	18.11	33.474	24.078	382.9	0.038	5.65	104.6	1.3	0.29	0.0	0.00	0.02	0.27	0.08	10	217
10	18.12	18.12	33.475	24.077	383.1	0.038										10	218
20	17.89	17.89	33.466	24.126	378.7	0.076	5.72	105.4	1.5	0.29	0.0	0.00	0.02	0.35	0.15	20	216
30	16.77	16.77	33.394	24.338	358.8	0.113	5.96	107.5	1.9	0.33	0.0	0.00	0.04	1.22	0.51	30	215
36	15.30	15.29	33.308	24.604	333.6	0.134	6.14	107.5	2.8	0.39	0.8	0.10	0.16	1.50	0.79	36	214
40	14.15	14.14	33.220	24.782	316.6	0.147	5.93	101.3	3.8	0.56	2.9	0.16	0.13	0.97	0.66	40	213
50	12.67	12.66	33.155	25.030	293.2	0.178	5.67	93.9	6.0	0.78	6.2	0.24	0.07	0.52	0.45	50	212
60	11.92	11.91	33.200	25.208	276.4	0.206	5.39	87.9	8.1	0.96	9.3	0.12	0.01	0.31	0.34	60	211
70	12.02	12.01	33.417	25.358	262.5	0.233	4.81	78.7	10.0	1.11	12.1	0.03	0.02	0.19	0.27	70	210
75 ISL	11.86 D	11.85	33.446 D	25.411	257.6	0.246	4.68	76.3	10.7	1.16	12.9	0.02	0.02	0.16	0.25	75	
85	11.74	11.73	33.492	25.469	252.2	0.272	4.48	72.9	12.3	1.25	14.3	0.01	0.02	0.11	0.21	85	209
100 ISL	11.18 D	11.17	33.600 D	25.656	234.8	0.308	3.92	63.1	15.8	1.45	17.4	0.00	0.03	0.03	0.11	100	
101	11.16	11.15	33.605	25.663	234.1	0.310	3.88	62.4	16.1	1.47	17.6	0.00	0.03	0.03	0.10	101	208
119	10.33	10.32	33.797	25.959	206.2	0.350	2.99	47.3	22.5	1.79	22.3	0.00	0.00	0.01	0.05	120	207
125 ISL	10.20 D	10.19	33.819 D	25.999	202.6	0.362	2.87	45.3	23.7	1.84	23.1	0.00	0.00	0.01	0.05	126	
140	9.93	9.91	33.898	26.106	192.7	0.392	2.71	42.5	26.0	1.91	24.3	0.00	0.00	0.00	0.04	141	206
150 ISL	9.82 D	9.80	33.953 D	26.168	187.0	0.411	2.51	39.3	27.7	1.98	25.1	0.00	0.00	0.00	0.04	151	
169	9.71	9.69	34.038	26.253	179.3	0.446	2.19	34.2	30.3	2.10	26.2	0.00	0.01	0.00	0.04	170	205
200 ISL	9.44 D	9.42	34.054 D	26.310	174.4	0.501	2.19	34.0	31.8	2.14	26.8	0.01	0.03	0.00	0.04	201	
201	9.43	9.41	34.054	26.312	174.3	0.502	2.19	34.0	31.8	2.14	26.8	0.01	0.03	0.00	0.04	202	204
229	9.34	9.31	34.113	26.373	169.1	0.550	1.90	29.5	34.1	2.24	27.8	0.01	0.03			230	203
250 ISL	9.20 D	9.17	34.170 D	26.441	163.0	0.585	1.54	23.8	37.9	2.39	29.2	0.03	0.03			251	
268	8.97	8.94	34.233	26.527	155.1	0.614	1.25	19.2	41.2	2.51	30.4	0.04	0.02			270	202
300 ISL	8.71 D	8.68	34.259 D	26.589	149.8	0.663	1.09	16.7	44.0	2.59	31.3	0.02	0.00			302	
309	8.68	8.65	34.261	26.595	149.3	0.676	1.04	15.9	44.8	2.61	31.5	0.02	0.00			311	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 11.0 N	118 23.5 W	20/10/08	0833 UTC	1181 m	280 06 kn			1016.0 mb	16.1 C	14.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.10	18.10	33.491	24.093	381.2	0.000	5.58	103.3	1.1	0.28	0.0	0.00	0.06	0.19	0.04	0	
2	18.10	18.10	33.491	24.093	381.2	0.008	5.58	103.3	1.1	0.28	0.0	0.00	0.06	0.19	0.04	2	221
10	18.11	18.11	33.491	24.091	381.7	0.038	5.57	103.1	1.3	0.29	0.0	0.00	0.07	0.19	0.05	10	220
20	17.91	17.91	33.479	24.131	378.2	0.076	5.62	103.6	1.2	0.29	0.0	0.00	0.06	0.19	0.05	20	219
30	17.25	17.25	33.452	24.269	365.4	0.113	5.75	104.7	1.1	0.31	0.0	0.00	0.05	0.35	0.14	30	218
36	16.64	16.63	33.402	24.374	355.5	0.135	5.83	104.8	1.1	0.34	0.2	0.01	0.05	0.71	0.31	36	217
40	12.95	12.94	33.037	24.884	306.9	0.148	5.88	97.9	4.1	0.61	3.5	0.21	0.06	0.65	0.42	40	216
50	11.54	11.53	32.967	25.097	286.7	0.178	5.64	91.1	6.6	0.81	7.1	0.04	0.08	0.32	0.30	50	215
60	10.95	10.94	32.965	25.202	276.9	0.206	5.55	88.5	8.6	0.93	9.1	0.01	0.06	0.20	0.16	60	214
70	10.90	10.89	33.111	25.324	265.5	0.233	5.32	84.8	10.2	1.04	11.0	0.01	0.05	0.12	0.13	70	213
75 ISL	11.40 D	11.39	33.263 D	25.353	263.0	0.246	5.23	84.4	10.4	1.07	11.5	0.01	0.04	0.12	0.13	75	
85	11.30	11.29	33.324	25.419	256.9	0.272	4.97	80.0	11.1	1.13	12.8	0.02	0.03	0.11	0.12	85	212
100 ISL	11.01 D	11.00	33.596 D	25.683	232.1	0.309	4.11	65.9	15.2	1.39	17.0	0.00	0.03	0.04	0.07	100	
101	11.01	11.00	33.594	25.682	232.3	0.311	4.05	64.9	15.5	1.41	17.3	0.00	0.03	0.04	0.07	101	211
120	10.26	10.25	33.741	25.927	209.3	0.353	3.47	54.8	20.8	1.66	21.1	0.00	0.03	0.01	0.04	121	210
125 ISL	10.13 D	10.12	33.745 D	25.953	206.9	0.364	3.38	53.2	21.5	1.70	21.7	0.00	0.03	0.01	0.04	126	
140	10.03	10.01	33.829	26.036	199.4	0.394	3.08	48.4	23.6	1.80	23.0	0.00	0.03	0.01	0.03	141	209
150 ISL	9.86 D	9.84	33.992 D	26.192	184.8	0.413	2.61	40.9	26.6	1.94	24.2	0.00	0.03	0.01	0.03	151	
169	9.99	9.97	34.142	26.287	176.2	0.448	1.80	28.3	32.1	2.19	26.3	0.00	0.04	0.00	0.03	170	208
200 ISL	9.36 D	9.34	34.131 D	26.384	167.5	0.501	1.99	30.9	33.7	2.18	27.3	0.00	0.04	0.00	0.03	201	
201	9.35	9.33	34.130	26.385	167.4	0.503	2.00	31.0	33.8	2.18	27.3	0.00	0.04	0.00	0.03	202	207
230	9.17	9.14	34.148	26.428	163.8	0.551	1.89	29.2	35.8	2.24	28.0	0.00	0.05			231	206
250 ISL	8.82 D	8.79	34.132 D	26.471	159.9	0.583	1.75	26.8	38.1	2.31	28.9	0.00	0.03			251	
271	8.68	8.65	34.173	26.526	155.1	0.616	1.56	23.8	40.9	2.39	30.0	0.00	0.00			273	205
300 ISL	8.39 D	8.36	34.244 D	26.626	146.0	0.660	1.22	18.5	44.2	2.54	31.3	0.00	0.01			302	
319	8.33	8.30	34.260	26.648	144.2	0.687	1.01	15.3	46.3	2.63	32.0	0.00	0.01			321	204
379	7.81	7.77	34.275	26.738	136.4	0.772	0.76	11.4	53.2	2.76	33.9	0.00	0.02			381	203
400 ISL	7.60 D	7.56	34.263 D	26.760	134.6	0.800	0.74	11.0	55.5	2.80	34.6	0.00	0.03			403	
437	7.20	7.16	34.245	26.802	130.8	0.849	0.71	10.5	59.6	2.86	35.8	0.00	0.04			440	202
500 ISL	6.65 D	6.60	34.261 D	26.891	123.0	0.929	0.54	7.9	66.3	2.97	37.5	0.00	0.03			503	
514	6.60	6.55	34.267	26.902	122.0	0.946	0.50	7.3	67.8	2.99	37.9	0.00	0.03			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 55.6 N	118 56.2 W	30/10/08	0825 UTC	1707 m	140 11 kn			1012.8 mb	18.1 C	17.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.56	17.56	33.545	24.266	364.7	0.000	5.67	103.9	0.3	0.25	0.0	0.00	0.04	0.16	0.05	0	
2	17.56	17.56	33.545	24.266	364.8	0.007	5.67	103.9	0.3	0.25	0.0	0.00	0.04	0.16	0.05	2	220
10	17.41	17.41	33.545	24.302	361.6	0.036	5.70	104.2	0.2	0.24	0.0	0.00	0.03	0.18	0.06	10	219
20	17.36	17.36	33.543	24.313	360.9	0.072	5.70	104.1	0.3	0.25	0.0	0.00	0.03	0.19	0.07	20	218
30	15.86	15.86	33.472	24.606	333.2	0.107	5.80	102.8	1.6	0.41	1.2	0.04	0.08	0.43	0.19	30	217
40	14.77	14.76	33.452	24.830	312.1	0.139	5.50	95.3	4.2	0.62	4.2	0.12	0.12	0.51	0.34	40	216
50	13.70	13.69	33.474	25.072	289.3	0.170	5.15	87.3	7.7	0.86	8.0	0.17	0.09	0.42	0.31	50	215
59	12.21	12.20	33.451	25.348	263.1	0.194	4.81	79.1	11.3	1.11	12.2	0.10	0.02	0.27	0.28	59	214
70	11.62	11.61	33.467	25.472	251.6	0.223	4.68	76.0	13.0	1.22	14.0	0.05	0.02	0.17	0.27	70	213
75 ISL	11.29 D	11.28	33.510 D	25.565	242.8	0.235	4.56	73.5	13.9	1.28	15.0	0.03	0.02	0.14	0.24	75	
85	10.95	10.94	33.568	25.672	232.9	0.259	4.24	67.9	16.1	1.42	17.2	0.01	0.03	0.10	0.17	85	212
100	10.22	10.21	33.682	25.888	212.6	0.292	3.70	58.3	20.8	1.63	20.6	0.00	0.02	0.04	0.12	100	211
120	9.91	9.90	33.772	26.011	201.2	0.334	3.30	51.7	23.8	1.76	22.6	0.00	0.02	0.03	0.11	121	210
125 ISL	9.82 D	9.81	33.796 D	26.045	198.1	0.344	3.21	50.2	24.5	1.79	23.1	0.00	0.02	0.03	0.11	126	
140	9.56	9.54	33.862	26.140	189.4	0.373	2.96	46.0	26.7	1.87	24.4	0.00	0.03	0.02	0.11	141	209
150 ISL	9.45 D	9.43	33.917 D	26.201	183.8	0.391	2.79	43.3	28.0	1.93	25.1	0.00	0.02	0.02	0.09	151	
169	9.28	9.26	33.991	26.286	176.0	0.426	2.52	39.0	30.3	2.02	26.2	0.00	0.01	0.01	0.06	170	208
200 ISL	8.74 D	8.72	34.040 D	26.411	164.6	0.478	2.38	36.4	34.5	2.10	27.7	0.00	0.01	0.01	0.06	201	
201	8.74	8.72	34.040	26.411	164.6	0.480	2.38	36.4	34.6	2.10	27.7	0.00	0.01	0.01	0.06	202	207
231	8.44	8.42	34.080	26.489	157.7	0.528	2.08	31.6	38.6	2.23	29.2	0.00	0.01			232	206
250 ISL	8.21 D	8.18	34.115 D	26.552	152.0	0.558	1.86	28.1	41.6	2.33	30.3	0.00	0.01			251	
271	8.04	8.01	34.129	26.588	148.8	0.589	1.62	24.4	44.8	2.43	31.5	0.00	0.02			273	205
300 ISL	7.93 D	7.90	34.167 D	26.635	144.9	0.632	1.37	20.6	48.3	2.54	32.7	0.00	0.02			302	
322	7.73	7.70	34.178	26.673	141.5	0.663	1.20	17.9	50.8	2.61	33.4	0.00	0.02			324	204
381	7.41	7.37	34.257	26.782	132.0	0.744	0.71	10.5	58.2	2.85	35.3	0.00	0.02			383	203
400 ISL	7.29 D	7.25	34.260 D	26.801	130.4	0.769	0.63	9.3	60.0	2.89	35.7	0.00	0.03			403	
442	7.09	7.05	34.287	26.851	126.3	0.823	0.51	7.5	63.8	2.95	36.5	0.00	0.04			445	202
500 ISL	6.56 D	6.51	34.314 D	26.944	117.8	0.894	0.35	5.1	70.7	3.06	38.1	0.00	0.01			503	
513	6.53	6.48	34.316	26.950	117.4	0.909	0.32	4.7	72.2	3.08	38.4	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 38.8 N	119 29.4 W	19/10/08	2259 UTC	1317 m	310 13 kn	300 03 04	2	1015.5 mb	15.7 C	13.3 C	08m	6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.56	16.56	33.473	24.446	347.5	0.000	5.97	107.3	0.0	0.27	0.0	0.00	0.05	0.91	0.33	0	
2	16.56	16.56	33.473	24.446	347.6	0.007	5.97	107.3	0.0	0.27	0.0	0.00	0.05	0.91	0.33	2	220
10	16.47	16.47	33.473	24.467	345.8	0.035	5.97	107.1	0.1	0.28	0.0	0.00	0.05	1.11	0.43	10	219
20	16.11	16.11	33.457	24.538	339.5	0.069	5.80	103.3	1.0	0.34	0.5	0.02	0.07	1.54	0.50	20	218
30	15.25	15.25	33.433	24.711	323.2	0.102	5.57	97.5	3.2	0.51	2.8	0.09	0.17	1.20	0.53	30	217
40	14.51	14.50	33.414	24.857	309.6	0.134	5.44	93.8	4.8	0.65	4.8	0.15	0.16	0.97	0.50	40	216
49	13.00	12.99	33.427	25.176	279.3	0.160	5.08	84.9	8.9	0.95	9.4	0.17	0.07	0.33	0.28	49	215
50 ISL	12.92 D	12.91	33.429 D	25.194	277.7	0.163	5.04	84.1	9.3	0.98	9.9	0.16	0.06	0.31	0.26	50	
60	11.78	11.77	33.489	25.459	252.6	0.190	4.61	75.1	12.8	1.21	13.7	0.06	0.02	0.14	0.17	60	214
70	11.31	11.30	33.551	25.594	240.0	0.214	4.29	69.2	14.8	1.35	15.9	0.01	0.02	0.08	0.14	70	213
75 ISL	11.24 D	11.23	33.568 D	25.620	237.6	0.226	4.09	65.9	16.3	1.43	17.2	0.01	0.01	0.06	0.12	75	
84	10.67	10.66	33.664	25.796	221.0	0.247	3.78	60.2	18.8	1.55	19.1	0.00	0.00	0.04	0.08	84	212
100	10.50	10.49	33.697	25.851	216.1	0.282	3.64	57.7	20.1	1.61	19.9	0.00	0.01	0.02	0.07	100	211
121	9.63	9.62	33.856	26.123	190.6	0.324	3.01	46.9	26.1	1.87	24.0	0.00	0.01	0.01	0.05	122	210
125 ISL	9.60 D	9.59	33.866 D	26.136	189.4	0.332	3.00	46.7	26.4	1.87	24.2	0.00	0.01	0.01	0.05	126	
139	9.47	9.45	33.867	26.158	187.6	0.358	2.98	46.3	26.9	1.89	24.6	0.00	0.02	0.00	0.05	140	209
150 ISL	9.23 D	9.21	33.900 D	26.223	181.6	0.379	2.84	43.9	28.7	1.95	25.4	0.00	0.02	0.00	0.05	151	
168	8.97	8.95	33.989	26.334	171.3	0.410	2.53	38.9	32.4	2.07	26.9	0.00	0.01	0.00	0.04	169	208
200 ISL	8.67 D	8.65	34.094 D	26.464	159.6	0.463	2.07	31.6	37.7	2.25	28.7	0.00	0.00	0.00	0.03	201	
202	8.66	8.64	34.094	26.466	159.4	0.467	2.04	31.1	38.0	2.26	28.8	0.00	0.00	0.00	0.03	203	207
231	8.26	8.24	34.135	26.559	150.9	0.512	1.70	25.7	42.9	2.41	30.8	0.00	0.00			232	206
250 ISL	8.17 D	8.14	34.162 D	26.594	147.9	0.540	1.56	23.6	45.4	2.48	31.7	0.00	0.00			251	
273	7.88	7.85	34.161	26.637	144.2	0.574	1.42	21.3	48.0	2.55	32.5	0.00	0.01			275	205
300 ISL	7.73 D	7.70	34.178 D	26.672	141.2	0.612	1.25	18.7	51.1	2.63	33.4	0.00	0.00			302	
319	7.56	7.53	34.188	26.705	138.3	0.639	1.13	16.8	53.3	2.69	34.0	0.00	0.00			321	204
376	7.09	7.05	34.239	26.812	128.8	0.715	0.74	10.9	61.5	2.88	36.1	0.00	0.00			378	203
400 ISL	6.92 D	6.88	34.256 D	26.849	125.6	0.745	0.66	9.7	63.6	2.93	36.7	0.00	0.00			403	
439	6.78	6.74	34.265	26.875	123.5	0.794	0.57	8.3	66.7	2.99	37.4	0.00	0.00			442	202
500 ISL	6.41 D	6.36	34.299 D	26.952	116.9	0.867	0.40	5.8	73.2	3.08	38.7	0.00	0.00			503	
512	6.35	6.30	34.305	26.965	115.8	0.881	0.37	5.4	74.5	3.10	39.0	0.00	0.00			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 24.8 N	119 57.4 W	19/10/08	1744 UTC	909 m	320 09 kn	290 03 07	2	1017.6 mb	16.1 C	14.0 C	21m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.49	17.49	33.329	24.117	378.9	0.000	5.60	102.4	1.4	0.32	0.0	0.00	0.00	0.19	0.06	0	
2 A	17.49	17.49	33.329	24.117	379.0	0.008	5.60	102.4	1.4	0.32	0.0	0.00	0.00	0.19	0.06	2	223
7	17.48	17.48	33.329	24.120	378.9	0.027	5.59	102.2	1.6	0.32	0.0	0.00	0.03	0.19	0.06	7	222
10 ISL	17.48 D	17.48	33.327 D	24.118	379.1	0.038	5.59	102.2	1.6	0.32	0.0	0.00	0.03	0.19	0.06	10	
14 A	17.48	17.48	33.332	24.122	378.9	0.053	5.60	102.3	1.6	0.32	0.0	0.00	0.04	0.19	0.06	14	221
20 ISL	17.47 D	17.47	33.332 D	24.125	378.8	0.076	5.62	102.7	1.4	0.31	0.0	0.00	0.04	0.20	0.06	20	
22	17.47	17.47	33.336	24.128	378.6	0.083	5.62	102.7	1.3	0.31	0.0	0.00	0.04	0.20	0.06	22	220
29 A	17.46	17.46	33.336	24.131	378.6	0.110	5.59	102.1	1.5	0.32	0.0	0.00	0.04	0.22	0.06	29	219
30 ISL	17.39 D	17.39	33.329 D	24.142	377.5	0.114	5.61	102.3	1.5	0.32	0.0	0.00	0.04	0.27	0.09	30	
37	16.78	16.77	33.319	24.278	364.7	0.140	5.74	103.5	1.8	0.34	0.0	0.00	0.05	0.65	0.31	37	218
45 A	16.24	16.23	33.370	24.442	349.4	0.168	5.70	101.7	2.2	0.40	1.0	0.06	0.07	0.77	0.46	45	217
50	14.05	14.04	33.135	24.738	321.1	0.185	5.83	99.4	3.0	0.52	2.1	0.22	0.13	0.70	0.53	50	216
56 A	12.56	12.55	32.955	24.897	306.0	0.204	5.87	96.9	4.1	0.59	2.9	0.29	0.08	0.62	0.49	56	215
67	11.58	11.57	33.041	25.148	282.3	0.236	5.55	89.8	7.8	0.91	8.5	0.10	0.05	0.26	0.27	67	214
75 ISL	11.26 D	11.25	33.084 D	25.239	273.8	0.258	5.44	87.4	9.1	1.00	10.1	0.08	0.05	0.22	0.29	75	
77 A	11.37	11.36	33.112	25.241	273.6	0.264	5.39	86.8	9.4	1.02	10.4	0.08	0.05	0.21	0.30	77	213
88	11.73	11.72	33.520	25.493	250.1	0.293	4.46	72.6	13.3	1.27	14.8	0.05	0.04	0.14	0.34	88	212
99	10.98	10.97	33.505	25.618	238.3	0.320	4.51	72.2	15.3	1.39	16.8	0.05	0.06	0.10	0.35	99	211
100 ISL	10.94 D	10.93	33.574 D	25.678	232.6	0.322	4.49	71.9	15.6	1.40	17.0	0.05	0.06	0.10	0.34	100	
120	10.16	10.15	33.700	25.913	210.6	0.366	3.77	59.4	21.0	1.67	21.5	0.03	0.04	0.04	0.17	121	210
125 ISL	9.99 D	9.98	33.748 D	25.979	204.4	0.377	3.56	55.9	22.1	1.72	22.2	0.02	0.04	0.03	0.17	126	
140	9.81	9.79	33.851	26.090	194.2	0.406	3.01	47.1	25.0	1.84	23.6	0.01	0.04	0.02	0.18	141	209
150 ISL	9.63 D	9.61	33.917 D	26.171	186.6	0.426	2.83	44.1	26.8	1.90	24.5	0.00	0.03	0.01	0.15	151	
169	9.27	9.25	33.962	26.265	178.0	0.460	2.66	41.1	29.7	1.97	25.8	0.00	0.01	0.01	0.09	170	208
199	8.80	8.78	34.014	26.381	167.4	0.512	2.50	38.3	33.4	2.06	27.3	0.00	0.03	0.01	0.05	200	207
200 ISL	8.76 D	8.74	34.014 D	26.387	166.8	0.514	2.49	38.1	33.5	2.06	27.4	0.00	0.03			201	
228	8.43	8.41	34.058	26.473	159.1	0.559	2.22	33.7	37.8	2.21	29.3	0.00	0.01			229	206
250 ISL	8.26 D	8.23	34.086 D	26.521	154.9	0.594	2.02	30.6	40.6	2.30	30.5	0.00	0.01			251	
269	7.97	7.94	34.093	26.570	150.4	0.623	1.85	27.8	43.4	2.37	31.5	0.00	0.01			271	205
300 ISL	7.41 D	7.38	34.090 D	26.649	143.2	0.668	1.58	23.4	50.4	2.52	33.7	0.00	0.00			302	
316	7.08	7.05	34.103	26.705	137.9	0.691	1.44	21.2	54.2	2.60	34.8	0.00	0.00			318	204
380	6.58	6.55	34.168	26.825	127.2	0.776	0.85	12.4	64.4	2.87	37.3	0.00	0.00			382	203
400 ISL	6.50 D	6.46	34.182 D	26.847	125.4	0.801	0.74	10.8	66.7	2.92	37.9	0.00	0.00			403	
440	6.30	6.26	34.221	26.904	120.4	0.850	0.57	8.2	70.6	3.00	38.8	0.00	0.01			443	202
500 ISL	6.13 D	6.09	34.284 D	26.976	114.3	0.920	0.38	5.5	76.3	3.11	39.6	0.00	0.02			503	
514	6.07	6.02	34.295	26.993	112.8	0.936	0.34	4.9	77.6	3.13	39.8	0.00	0.02			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 38.1 W	19/10/08	1118 UTC	3815 m	320 08 kn			1016.2 mb	16.1 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.06	18.06	33.362	24.004	389.6	0.000	5.51	101.8	1.4	0.31	0.0	0.00	0.02	0.13	0.02	0	
2	18.06	18.06	33.362	24.004	389.7	0.008	5.51	101.8	1.4	0.31	0.0	0.00	0.02	0.13	0.02	2	220
10	18.05	18.05	33.362	24.007	389.7	0.039	5.52	102.0	1.5	0.32	0.0	0.00	0.04	0.13	0.03	10	219
20 ISL	17.77 D	17.77	33.373 D	24.084	382.7	0.078	5.56	102.2	1.3	0.32	0.0	0.00	0.03	0.16	0.04	20	
25	17.59	17.59	33.371	24.126	378.9	0.097	5.58	102.2	1.1	0.32	0.0	0.00	0.03	0.18	0.05	25	218
30 ISL	17.49 D	17.48	33.379 D	24.156	376.2	0.116	5.59	102.2	1.0	0.32	0.0	0.00	0.03	0.19	0.06	30	
39	17.45	17.44	33.404	24.185	373.7	0.149	5.60	102.3	0.9	0.32	0.0	0.00	0.03	0.22	0.07	39	217
50	15.91	15.90	33.222	24.403	353.2	0.189	5.89	104.3	1.6	0.37	0.2	0.02	0.04	0.58	0.29	50	216
62	13.49	13.48	33.015	24.760	319.3	0.230	5.91	99.5	3.3	0.56	2.0	0.31	0.27	0.62	0.48	62	215
75 ISL	11.97 D	11.96	32.989 D	25.036	293.2	0.269	5.61	91.5	5.8	0.79	6.3	0.13	0.04	0.29	0.27	75	
76	11.96	11.95	32.984	25.033	293.5	0.272	5.59	91.1	6.0	0.81	6.6	0.11	0.02	0.26	0.25	76	214
87	11.67	11.66	33.023	25.118	285.7	0.304	5.53	89.6	7.2	0.89	8.2	0.02	0.02	0.16	0.17	87	213
100 ISL	10.97 D	10.96	33.006 D	25.231	275.1	0.341	5.48	87.5	9.1	0.98	9.8	0.01	0.04	0.09	0.09	100	
101	10.96	10.95	33.009	25.235	274.7	0.343	5.47	87.3	9.2	0.99	9.9	0.01	0.04	0.09	0.09	101	212
112	10.56	10.55	33.047	25.335	265.4	0.373	5.37	85.0	10.7	1.07	11.3	0.01	0.02	0.05	0.08	112	211
124	11.01	10.99	33.453	25.572	243.2	0.404	4.71	75.4	10.6	1.07	11.4	0.01	0.03	0.05	0.08	125	210
125 ISL	11.09 D	11.07	33.493 D	25.589	241.7	0.406	4.66	74.8	10.9	1.09	11.8	0.01	0.03	0.05	0.08	126	
138	10.59	10.57	33.601	25.762	225.5	0.436	4.10	65.1	15.7	1.39	17.2	0.00	0.01	0.02	0.04	139	209
150 ISL	10.31 D	10.29	33.661 D	25.857	216.6	0.463	3.80	60.0	18.3	1.53	19.6	0.00	0.01	0.02	0.03	151	
170	9.80	9.78	33.770	26.029	200.6	0.505	3.48	54.4	21.6	1.65	21.6	0.00	0.01	0.01	0.02	171	208
200 ISL	8.91 D	8.89	33.952 D	26.315	173.7	0.561	2.99	45.9	29.1	1.88	25.4	0.00	0.00	0.00	0.03	201	
202	8.88	8.86	33.955	26.323	173.1	0.564	2.96	45.4	29.6	1.89	25.6	0.00	0.00	0.00	0.03	203	207
231	8.33	8.31	34.029	26.466	159.8	0.613	2.49	37.7	36.4	2.10	28.3	0.00	0.04			232	206
250 ISL	8.00 D	7.97	34.054 D	26.535	153.5	0.642	2.21	33.2	40.1	2.22	29.9	0.00	0.03			251	
270	7.85	7.82	34.071	26.571	150.4	0.673	1.93	28.9	43.7	2.34	31.4	0.00	0.01			271	205
300 ISL	7.54 D	7.51	34.109 D	26.646	143.6	0.717	1.54	22.9	49.3	2.51	33.3	0.00	0.01			302	
319	7.31	7.28	34.124	26.690	139.5	0.744	1.33	19.7	52.7	2.60	34.3	0.00	0.01			321	204
378	6.64	6.61	34.153	26.805	129.1	0.823	0.93	13.6	62.7	2.82	37.0	0.00	0.01			380	203
400 ISL	6.46 D	6.42	34.170 D	26.842	125.7	0.851	0.79	11.5	65.6	2.88	37.6	0.00	0.01			402	
437	6.33	6.29	34.211	26.892	121.5	0.897	0.60	8.7	70.1	2.97	38.5	0.00	0.00			440	202
500 ISL	5.94 D	5.90	34.252 D	26.975	114.2	0.971	0.42	6.0	77.5	3.09	39.9	0.00	0.00			503	
510	5.90	5.86	34.257	26.984	113.4	0.982	0.39	5.6	78.7	3.11	40.1	0.00	0.00			513	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 45.2 N	121 19.1 W	19/10/08	0455 UTC	3756 m	330 06 kn			1017.7 mb	16.1 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.88	17.88	33.531	24.177	373.1	0.000	5.56	102.5	1.1	0.31	0.0	0.00	0.01	0.21	0.06	0	
2	17.88	17.88	33.531	24.178	373.2	0.007	5.56	102.5	1.1	0.31	0.0	0.00	0.01	0.21	0.06	2	220
10	17.89	17.89	33.536	24.179	373.3	0.037	5.55	102.4	1.2	0.31	0.0	0.00	0.04	0.20	0.06	10	219
19	17.88	17.88	33.532	24.179	373.6	0.071	5.56	102.5	1.0	0.31	0.0	0.00	0.00	0.21	0.06	19	218
20 ISL	17.89 D	17.89	33.529 D	24.174	374.1	0.075	5.56	102.5	1.0	0.31	0.0	0.00	0.00	0.22	0.06	20	
29	17.79	17.79	33.539	24.207	371.3	0.108	5.56	102.3	1.0	0.30	0.0	0.00	0.01	0.29	0.08	29	217
30 ISL	17.78 D	17.77	33.572 D	24.234	368.7	0.112	5.56	102.3	1.0	0.30	0.1	0.00	0.01	0.32	0.09	30	
39	17.27	17.26	33.607	24.384	354.8	0.144	5.56	101.4	1.7	0.36	0.7	0.01	0.04	0.63	0.20	39	216
50	15.22	15.21	33.504	24.773	317.9	0.181	5.57	97.4	4.2	0.62	4.2	0.13	0.05	0.82	0.34	50	215
59	12.74	12.73	33.481	25.270	270.7	0.208	4.80	79.8	10.0	1.09	11.8	0.17	0.02	0.60	0.31	59	214
69	11.41	11.40	33.392	25.452	253.5	0.234	4.80	77.5	12.3	1.22	14.1	0.02	0.03	0.21	0.21	69	213
75 ISL	11.27 D	11.26	33.539 D	25.592	240.3	0.249	4.62	74.5	14.3	1.33	15.9	0.01	0.02	0.16	0.16	75	
84	10.73	10.72	33.590	25.728	227.5	0.270	4.26	67.9	17.3	1.49	18.6	0.00	0.01	0.09	0.10	84	212
100	10.23	10.22	33.701	25.901	211.3	0.305	3.75	59.1	21.1	1.68	21.6	0.00	0.03	0.03	0.07	100	211
119	9.60	9.59	33.795	26.080	194.6	0.344	3.31	51.5	24.4	1.81	23.8	0.00	0.02	0.01	0.04	120	210
125 ISL	9.43 D	9.42	33.834 D	26.139	189.1	0.355	3.23	50.1	25.7	1.85	24.5	0.00	0.01	0.01	0.04	126	
138	8.99	8.98	33.836	26.211	182.4	0.379	3.08	47.3	28.6	1.94	26.0	0.00	0.00	0.01	0.04	139	209
150 ISL	8.71 D	8.69	33.905 D	26.309	173.3	0.401	2.95	45.0	30.4	1.97	26.7	0.00	0.00	0.01	0.04	151	
168	8.50	8.48	33.961	26.385	166.3	0.431	2.74	41.6	32.9	2.02	27.5	0.00	0.00	0.00	0.03	169	208
200	8.13	8.11	34.031	26.497	156.2	0.483	2.16	32.6	39.0	2.22	30.1	0.00	0.02	0.00	0.03	201	207
228	7.65	7.63	34.039	26.574	149.2	0.526	1.96	29.2	44.3	2.36	32.0	0.00	0.06			229	206
250 ISL	7.49 D	7.47	34.058 D	26.612	145.9	0.558	1.74	25.9	48.4	2.46	33.3	0.00	0.05			251	
269	7.15	7.12	34.064	26.665	141.0	0.585	1.56	23.0	52.0	2.54	34.3	0.00	0.04			271	205
300 ISL	6.67 D	6.64	34.065 D	26.731	134.9	0.628	1.41	20.6	58.0	2.66	35.9	0.00	0.03			302	
318	6.42	6.39	34.066	26.765	131.8	0.652	1.33	19.3	61.2	2.72	36.7	0.00	0.03			320	204
379	6.37	6.34	34.186	26.867	123.1	0.730	0.73	10.6	68.2	2.93	38.1	0.00	0.00			381	203
400 ISL	6.22 D	6.18	34.192 D	26.891	120.9	0.755	0.63	9.1	70.8	2.98	38.6	0.00	0.00			403	
437	6.01	5.97	34.221	26.941	116.6	0.799	0.51	7.3	75.4	3.04	39.5	0.00	0.00			440	202
500 ISL	5.71 D	5.67	34.279 D	27.025	109.2	0.871	0.33	4.7	83.4	3.14	40.9	0.00	0.00			503	
516	5.56	5.52	34.287	27.049	106.9	0.888	0.28	4.0	85.4	3.17	41.2	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 25.0 N	121 59.6 W	18/10/08	2221 UTC	3870 m	250 08 kn	300 03 08	2	1017.6 mb	17.5 C	13.1 C	15m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.25	17.25	33.528	24.327	358.9	0.000	5.78	105.3	0.1	0.25	0.0	0.00	0.01	0.34	0.11	0	
3	17.25	17.25	33.528	24.327	359.0	0.011	5.78	105.3	0.1	0.25	0.0	0.00	0.01	0.34	0.11	3	220
10	17.24	17.24	33.528	24.329	359.0	0.036	5.79	105.4	0.2	0.25	0.0	0.00	0.02	0.34	0.10	10	219
20 ISL	16.96 D	16.96	33.516 D	24.387	353.9	0.072	5.82	105.4	0.0	0.25	0.0	0.00	0.02	0.35	0.13	20	
21	16.96	16.96	33.518	24.388	353.7	0.075	5.82	105.4	0.0	0.25	0.0	0.00	0.02	0.35	0.13	21	218
30	16.85	16.85	33.515	24.412	351.8	0.107	5.76	104.1	0.0	0.26	0.0	0.00	0.02	0.92	0.40	30	217
41	16.81	16.80	33.510	24.418	351.6	0.146	5.64	101.8	0.7	0.28	0.0	0.00	0.05	1.18	0.48	41	216
50 ISL	13.80 D	13.79	33.307 D	24.922	303.6	0.175	5.58	94.7	4.6	0.65	4.3	0.16	0.26	0.84	0.55	50	
51	14.00	13.99	33.331	24.900	305.8	0.178	5.57	95.0	5.1	0.70	4.9	0.18	0.28	0.79	0.55	51	215
59	12.78	12.77	33.356	25.165	280.6	0.201	5.40	89.8	7.7	0.93	9.0	0.24	0.17	0.41	0.42	59	214
69	11.64	11.63	33.400	25.416	256.9	0.228	5.08	82.5	11.2	1.16	13.2	0.05	0.02	0.22	0.26	69	213
75 ISL	11.09 D	11.08	33.511 D	25.602	239.3	0.243	4.81	77.2	13.5	1.29	15.4	0.04	0.02	0.15	0.19	75	
85	10.69	10.68	33.571	25.720	228.3	0.267	4.34	69.1	17.1	1.47	18.3	0.01	0.02	0.09	0.10	85	212
100	10.28	10.27	33.697	25.889	212.4	0.300	3.75	59.2	20.8	1.66	21.1	0.00	0.02	0.03	0.06	100	211
120	9.94	9.93	33.792	26.021	200.3	0.341	3.28	51.4	23.4	1.77	22.8	0.00	0.01	0.02	0.06	121	210
125 ISL	9.81 D	9.80	33.809 D	26.057	197.0	0.351	3.27	51.1	24.1	1.79	23.2	0.00	0.01	0.02	0.06	126	
139	9.37	9.35	33.854	26.164	187.0	0.378	3.25	50.3	26.0	1.83	24.3	0.00	0.01	0.01	0.05	140	209
150 ISL	9.24 D	9.22	33.881 D	26.207	183.1	0.398	3.21	49.6	26.9	1.84	24.6	0.00	0.01	0.01	0.05	151	
168	8.98	8.96	33.922	26.280	176.4	0.430	3.09	47.5	28.7	1.88	25.1	0.00	0.01	0.01	0.04	169	208
200	8.22	8.20	33.983	26.446	161.1	0.484	2.66	40.2	35.5	2.10	28.5	0.00	0.01	0.00	0.03	201	207
226	7.94	7.92	34.019	26.516	154.8	0.526	2.28	34.2	40.0	2.25	30.4	0.00	0.00			227	206
250 ISL	7.59 D	7.57	34.054 D	26.594	147.6	0.562	2.01	29.9	45.7	2.38	32.1	0.00	0.00			251	
266	7.30	7.27	34.055	26.636	143.7	0.585	1.85	27.4	49.6	2.46	33.1	0.00	0.00			268	205
300 ISL	6.92 D	6.89	34.065 D	26.697	138.3	0.633	1.51	22.1	56.5	2.62	35.1	0.00	0.00			302	
317	6.68	6.65	34.078	26.740	134.3	0.656	1.36	19.8	59.4	2.69	36.0	0.00	0.00			319	204
377	6.30	6.27	34.129	26.831	126.3	0.734	0.96	13.9	67.1	2.87	38.0	0.00	0.00			379	203
400 ISL	6.13 D	6.09	34.140 D	26.861	123.6	0.763	0.86	12.4	70.2	2.93	38.6	0.00	0.00			403	
438	5.84	5.80	34.164	26.917	118.6	0.809	0.71	10.2	75.3	3.01	39.5	0.00	0.00			441	202
500 ISL	5.45 D	5.41	34.219 D	27.008	110.4	0.880	0.42	6.0	83.6	3.14	40.7	0.00	0.01			503	
513	5.60	5.56	34.262	27.025	109.2	0.895	0.36	5.1	85.3	3.17	40.9	0.00	0.01			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 40.0 W	18/10/08	1716 UTC	3974 m	230 08 kn	320 04 08	1	1019.1 mb	17.7 C	14.9 C	32m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.94	17.94	33.300	23.986	391.4	0.000	5.54	102.1	2.0	0.31	0.0	0.00	0.04	0.11	0.02	0	
3	17.94	17.94	33.300 D	23.986	391.5	0.012	5.54	102.1	2.0	0.31	0.0	0.00	0.04	0.11	0.02	3	224
10 ISL	17.95 D	17.95	33.300 D	23.984	391.9	0.039	5.53	102.0	2.1	0.31	0.0	0.00	0.03	0.11	0.02	10	
13	17.94	17.94	33.303	23.989	391.5	0.051	5.52	101.8	2.1	0.31	0.0	0.00	0.02	0.11	0.02	13	222
13	17.94	17.94	33.303	23.989	391.5	0.051			1.7	0.31	0.0	0.00	0.03			13	223
20 ISL	17.94 D	17.94	33.300 D	23.987	392.0	0.078	5.53	101.9	2.1	0.31	0.0	0.00	0.01	0.12	0.03	20	
22	17.94	17.94	33.303	23.989	391.8	0.086	5.54	102.1	2.1	0.31	0.0	0.00	0.01	0.12	0.03	22	220
30 ISL	17.93 D	17.92	33.298 D	23.988	392.2	0.118	5.55	102.3	2.0	0.31	0.0	0.00	0.01	0.13	0.03	30	
34	17.87	17.86	33.287	23.995	391.7	0.133	5.56	102.3	2.0	0.31	0.0	0.00	0.01	0.13	0.03	34	219
45	16.67	16.66	33.182	24.199	372.5	0.175	5.84	104.9	2.2	0.32	0.0	0.00	0.06	0.18	0.08	45	221
50 ISL	14.51 D	14.50	33.047 D	24.574	336.8	0.193	6.08	104.6	2.4	0.34	0.1	0.01	0.04	0.27	0.13	50	
55	13.87	13.86	32.998	24.669	327.8	0.210	6.22	105.5	2.7	0.38	0.2	0.02	0.02	0.37	0.19	55	218
60	13.56	13.55	33.007	24.740	321.2	0.226	6.09	102.7	3.0	0.46	0.9	0.16	0.05	0.42	0.28	60	217
66	12.96	12.95	32.985	24.842	311.5	0.245	5.87	97.7	3.1	0.49	1.5	0.22	0.05	0.38	0.37	66	216
75 ISL	12.14 D	12.13	32.892 D	24.928	303.4	0.272	5.73	93.7	4.8	0.68	4.5	0.07	0.04	0.24	0.29	75	
76	12.17	12.16	32.905	24.933	303.1	0.276	5.72	93.6	5.0	0.70	4.9	0.05	0.04	0.22	0.27	76	215
87	12.10	12.09	33.109	25.104	287.0	0.308	5.49	89.8	7.1	0.87	8.0	0.01	0.03	0.14	0.14	87	214
96	11.72	11.71	33.118	25.182	279.7	0.333	5.46	88.6	7.8	0.94	9.2	0.00	0.00	0.09	0.12	96	213
100 ISL	11.39 D	11.38	33.124 D	25.248	273.6	0.345	5.41	87.2	8.2	0.97	9.8	0.00	0.00	0.08	0.10	100	
106	11.42	11.41	33.203	25.304	268.4	0.361	5.31	85.7	9.1	1.03	10.9	0.00	0.01	0.07	0.08	106	212
118	10.86	10.85	33.320	25.495	250.4	0.392	4.98	79.4	12.3	1.20	14.0	0.00	0.00	0.03	0.05	118	211
125 ISL	10.15 D	10.14	33.340 D	25.633	237.2	0.409	4.84	76.0	14.2	1.29	15.3	0.00	0.01	0.02	0.04	126	
131	10.11	10.09	33.359	25.655	235.3	0.423	4.69	73.6	15.8	1.37	16.5	0.00	0.01	0.01	0.03	132	210
144	10.11	10.09	33.589	25.835	218.5	0.453	4.12	64.8	19.3	1.58	20.1	0.00	0.00	0.01	0.03	145	209
150 ISL	9.71 D	9.69	33.605 D	25.914	211.0	0.466	3.92	61.1	20.6	1.63	21.0	0.00	0.00	0.01	0.03	151	
169	9.34	9.32	33.820	26.143	189.6	0.504	3.46	53.5	24.2	1.71	22.8	0.00	0.00	0.00	0.02	170	208
199	8.84	8.82	33.941	26.318	173.4	0.558	3.16	48.4	29.1	1.86	25.0	0.00	0.00	0.00	0.02	200	207
200 ISL	8.84 D	8.82	33.940 D	26.317	173.5	0.560	3.15	48.2	29.3	1.86	25.1	0.00	0.00			201	
229	8.30	8.28	33.996	26.444	161.8	0.608	2.83	42.8	34.6	2.01	27.4	0.00	0.00			230	206
250 ISL	7.93 D	7.90	34.023 D	26.521	154.7	0.642	2.41	36.2	39.6	2.18	29.6	0.00	0.01			251	
269	7.72	7.69	34.054	26.576	149.7	0.671	2.02	30.2	44.2	2.33	31.6	0.00	0.01			270	205
300 ISL	7.33 D	7.30	34.087 D	26.658	142.3	0.716	1.65	24.4	50.1	2.50	33.7	0.00	0.01			302	
316	7.18	7.15	34.090	26.682	140.2	0.738	1.51	22.3	52.9	2.57	34.5	0.00	0.01			318	204
376	6.52	6.49	34.116	26.792	130.2	0.820	1.11	16.1	63.3	2.79	37.2	0.00	0.01			378	203
400 ISL	6.29 D	6.25	34.121 D	26.826	127.1	0.850	0.99	14.3	67.0	2.86	38.0	0.00	0.01			402	
436	6.01	5.97	34.147	26.882	122.0	0.895	0.83	11.9	72.2	2.94	38.9	0.00	0.00			439	202
500 ISL	5.55 D	5.51	34.189 D	26.973	113.9	0.971	0.56	8.0	79.8	3.08	40.4	0.00	0.00			503	
518	5.67	5.63	34.234	26.994	112.3	0.991	0.49	7.0	81.9	3.12	40.8	0.00	0.00			521	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 45.2 N	123 19.7 W	18/10/08	0808 UTC	4019 m	240 03 kn			1017.6 mb	18.1 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.43	18.43	33.380	23.927	397.0	0.000	5.46	101.6	2.2	0.31	0.0	0.00	0.02	0.09	0.02	0	
2	18.43	18.43	33.380	23.927	397.1	0.008	5.46	101.6	2.2	0.31	0.0	0.00	0.02	0.09	0.02	2	224
10	18.44	18.44	33.379	23.924	397.6	0.040	5.47	101.9	2.0	0.33	0.0	0.00	0.06	0.08	0.02	10	223
20 ISL	18.33 D	18.33	33.370 D	23.945	396.0	0.079	5.51	102.4	2.2	0.32	0.0	0.00	0.03	0.09	0.02	20	
25	18.31	18.31	33.370	23.950	395.7	0.099	5.53	102.7	2.4	0.31	0.0	0.00	0.01	0.09	0.02	25	222
30 ISL	18.24 D	18.23	33.358 D	23.958	395.1	0.119	5.53	102.6	2.4	0.31	0.0	0.00	0.02	0.10	0.02	30	
40	18.01	18.00	33.316	23.983	393.1	0.158	5.54	102.3	2.4	0.32	0.0	0.00	0.04	0.12	0.03	40	221
49	17.15	17.14	33.218	24.115	380.8	0.193	5.74	104.1	2.1	0.32	0.0	0.00	0.00	0.15	0.05	49	220
50 ISL	15.44 D	15.43	33.091 D	24.407	352.8	0.197	5.78	101.3	2.1	0.32	0.0	0.00	0.00	0.15	0.05	50	
62	14.08	14.07	33.032	24.653	329.6	0.238	6.15	104.8	2.6	0.34	0.0	0.00	0.02	0.19	0.11	62	219
75	12.83	12.82	32.953	24.843	311.6	0.279	5.98	99.3	3.2	0.44	0.5	0.11	0.03	0.29	0.21	75	218
87	12.30	12.29	32.986	24.971	299.7	0.316	5.76	94.6	4.3	0.58	3.2	0.07	0.02	0.22	0.23	87	217
100 ISL	11.50 D	11.49	32.941 D	25.085	289.0	0.354	5.69	91.8	5.8	0.72	5.5	0.01	0.01	0.15	0.19	100	
101	11.50	11.49	32.944	25.088	288.8	0.357	5.69	91.8	5.9	0.73	5.7	0.01	0.01	0.15	0.19	101	216
112	11.21	11.20	33.032	25.209	277.5	0.388	5.52	88.6	8.1	0.88	8.3	0.00	0.03	0.09	0.14	112	215
125	11.05	11.03	33.253	25.410	258.7	0.423	5.15	82.5	9.8	1.01	10.8	0.00	0.03	0.05	0.08	126	214
141	10.86	10.84	33.471	25.613	239.7	0.463	4.67	74.6	13.0	1.23	14.6	0.00	0.03	0.03	0.04	142	213
150 ISL	10.56 D	10.54	33.571 D	25.744	227.4	0.484	4.36	69.2	15.4	1.38	17.0	0.00	0.02	0.02	0.04	151	
170	9.97	9.95	33.702	25.947	208.4	0.528	3.73	58.5	20.8	1.66	21.5	0.00	0.00	0.00	0.03	171	212
200 ISL	9.19 D	9.17	33.887 D	26.220	182.9	0.586	3.39	52.3	26.3	1.79	23.9	0.00	0.02	0.00	0.02	201	
215	8.87	8.85	33.957	26.326	173.0	0.613	3.30	50.6	28.7	1.81	24.4	0.00	0.03	0.00	0.02	216	211
250 ISL	8.25 D	8.22	34.017 D	26.469	159.9	0.671	2.68	40.5	36.4	2.06	28.0	0.00	0.01			251	
268	7.97	7.94	34.037	26.526	154.6	0.700	2.34	35.1	40.3	2.20	29.8	0.00	0.00			269	210
300 ISL	7.63 D	7.60	34.053 D	26.589	149.0	0.748	1.91	28.5	45.7	2.37	32.0	0.00	0.01			302	
318	7.45	7.42	34.077	26.633	145.0	0.775	1.71	25.4	48.6	2.46	33.1	0.00	0.02			320	204
380	6.70	6.67	34.118	26.770	132.5	0.861	1.12	16.3	60.7	2.75	36.5	0.00	0.00			382	203
400 ISL	6.47 D	6.43	34.119 D	26.801	129.7	0.887	1.02	14.8	63.8	2.81	37.3	0.00	0.00			402	
438	6.16	6.12	34.132	26.852	125.1	0.935	0.89	12.8	69.2	2.90	38.5	0.00	0.00			441	202
500 ISL	5.68 D	5.64	34.178 D	26.948	116.3	1.010	0.63	9.0	77.2	3.04	40.2	0.00	0.00			503	
510	5.68	5.64	34.183	26.952	116.1	1.022	0.59	8.4	78.5	3.06	40.5	0.00	0.00			513	201

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 25.1 N	123 59.8 W	18/10/08	0131 UTC	4309 m	340 10 kn	340 04 09	2	1016.3 mb	18.3 C	15.1 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.33	18.33	33.223	23.832	406.1	0.000	5.51	102.3	2.2	0.32	0.0	0.00	0.03	0.10	0.03	0	
1	18.33	18.33	33.223	23.832	406.1	0.004	5.51	102.3	2.2	0.32	0.0	0.00	0.03	0.10	0.03	1	220
10	18.32	18.32	33.221	23.833	406.3	0.041	5.52	102.5	2.1	0.33	0.0	0.00	0.03	0.12	0.02	10	219
20 ISL	18.19 D	18.19	33.218 D	23.863	403.8	0.081	5.52	102.2	1.9	0.32	0.0	0.00	0.03	0.11	0.02	20	
25	18.15	18.15	33.218	23.873	403.0	0.101	5.52	102.1	1.8	0.32	0.0	0.00	0.03	0.11	0.03	25	218
30 ISL	18.13 D	18.12	33.218 D	23.878	402.7	0.121	5.52	102.1	1.9	0.32	0.0	0.00	0.04	0.12	0.03	30	
40	18.11	18.10	33.224	23.888	402.1	0.162	5.53	102.2	2.1	0.32	0.0	0.00	0.04	0.14	0.04	40	217
50	18.14	18.13	33.254	23.904	400.9	0.202	5.53	102.3	2.3	0.31	0.0	0.00	0.02	0.15	0.05	50	216
61	14.87	14.86	33.110	24.546	339.8	0.243	6.21	107.6	2.7	0.34	0.0	0.00	0.02	0.21	0.11	61	215
75	13.47	13.46	33.076	24.812	314.8	0.288	6.04	101.7	2.8	0.33	0.0	0.00	0.03	0.33	0.18	75	214
87	12.25	12.24	33.017	25.005	296.5	0.325	5.73	94.0	5.3	0.65	4.6	0.14	0.04	0.26	0.22	87	213
100	10.97	10.96	32.939	25.179	280.0	0.363	5.59	89.2	7.8	0.86	8.0	0.01	0.05	0.10	0.14	100	212
111	10.63	10.62	33.070	25.340	264.8	0.393	5.39	85.4	10.3	1.01	10.8	0.00	0.02	0.05	0.07	111	211
125	10.68	10.67	33.255	25.476	252.3	0.429	5.05	80.2	12.0	1.12	12.8	0.00	0.02	0.03	0.07	126	210
138	10.77	10.75	33.493	25.646	236.5	0.460	4.64	73.9	14.2	1.28	15.5	0.00	0.03	0.03	0.07	139	209
150 ISL	10.41 D	10.39	33.568 D	25.767	225.1	0.488	4.25	67.2	16.8	1.43	17.9	0.00	0.03	0.02	0.06	151	
169	9.80	9.78	33.716	25.986	204.6	0.529	3.72	58.1	20.9	1.62	21.1	0.00	0.02	0.00	0.03	170	208
200 ISL	9.19 D	9.17	33.907 D	26.236	181.4	0.589	3.38	52.2	25.5	1.72	23.2	0.00	0.02	0.00	0.03	201	
201	9.17	9.15	33.906	26.238	181.2	0.591	3.37	52.0	25.7	1.72	23.3	0.00	0.02	0.00	0.03	202	207
227	8.53	8.51	33.982	26.398	166.2	0.636	2.81	42.7	32.9	1.97	26.9	0.00	0.05			228	206
250 ISL	8.12 D	8.09	34.013 D	26.485	158.2	0.673	2.55	38.4	37.4	2.10	28.7	0.00	0.03			251	
268	7.88	7.85	34.028	26.532	153.9	0.701	2.40	36.0	40.4	2.18	29.8	0.00	0.00			269	205
300 ISL	7.50 D	7.47	34.062 D	26.614	146.5	0.749	1.94	28.8	46.6	2.38	32.4	0.00	0.01			302	
317	7.23	7.20	34.065	26.655	142.8	0.774	1.69	25.0	50.1	2.49	33.7	0.00	0.02			319	204
376	6.53	6.50	34.129	26.801	129.4	0.854	1.00	14.5	63.9	2.81	37.3	0.00	0.01			378	203
400 ISL	6.32 D	6.28	34.140 D	26.837	126.1	0.885	0.86	12.4	68.2	2.88	38.2	0.00	0.00			402	
437	5.95	5.91	34.157	26.898	120.5	0.930	0.71	10.2	73.6	2.96	39.2	0.00	0.00			440	202
500 ISL	5.73 D	5.69	34.221 D	26.976	113.8	1.004	0.44	6.3	78.8	3.08	40.3	0.00	0.02			503	
520	5.76	5.72	34.263	27.006	111.3	1.027	0.36	5.1	80.5	3.12	40.7	0.00	0.02			523	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 57.5 N	117 18.0 W	14/10/08	1924 UTC	58 m	290 12 kn	310 01 06	0	1015.5 mb	21.6 C	17.3 C	06m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.51	17.51	33.428	24.188	372.1	0.000	6.04	110.5	3.6	0.28	0.1A		0.14	1.91	0.47	0	
1	17.51	17.51	33.428	24.188	372.1	0.004	6.04	110.5	3.6	0.28	0.1A		0.14	1.91	0.47	1	209
4	17.10	17.10	33.417	24.277	363.8	0.015	6.03	109.4	3.6	0.30	0.1A		0.12	1.86	0.47	4	208
8	15.08	15.08	33.312	24.655	327.9	0.029	6.54	114.0	4.2	0.36	0.1A		0.07	1.24	0.41	8	207
10 ISL	14.46 D	14.46	33.294 D	24.774	316.6	0.035	6.55	112.7	4.5	0.38	0.1A		0.09	1.18	0.48	10	
12	14.26	14.26	33.293	24.815	312.7	0.041	6.56	112.4	4.8	0.41	0.0A		0.11	1.12	0.58	12	206
16	13.55	13.55	33.270	24.944	300.6	0.054	6.01	101.5	5.4	0.58	2.4A		0.09	2.64	0.77	16	205
20 ISL	13.20 D	13.20	33.289 D	25.029	292.6	0.065	5.56	93.2	6.6	0.75	5.4A		0.35	1.70	0.62	20	
22	13.16	13.16	33.296	25.042	291.3	0.071	5.37	90.0	7.2	0.83	6.8A		0.48	0.92	0.50	22	204
30 ISL	12.46 D	12.46	33.345 D	25.218	274.8	0.094	4.92	81.2	8.9	1.03	9.9A		0.12	0.30	0.34	30	
31	12.45	12.45	33.345	25.220	274.7	0.097	4.88	80.6	9.1	1.05	10.2A		0.05	0.22	0.33	31	203
40	12.06	12.05	33.412	25.346	262.9	0.121	4.47	73.2	11.4	1.21	12.9A		0.03	0.09	0.23	40	202
50	11.76	11.75	33.475	25.451	253.1	0.147	4.35	70.8	12.5	1.31	14.4A		0.09	0.07	0.16	50	201

A) DUE TO A PROBLEM WITH NO2 ANALYSIS, THIS VALUE REPRESENTS NO2+NO3 AND SEPERATE NO2 VALUES
ARE UNAVAILABLE
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 54.5 N	117 24.0 W	14/10/08	2259 UTC	599 m	100 02 kn	310 01 05	0	1014.0 mb	21.0 C	16.8 C	15m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.18	18.18	33.439	24.034	386.8	0.000	5.93	109.9	2.3	0.21	0.0A		0.05	0.31	0.13	0	
1	18.18	18.18	33.439	24.034	386.9	0.004	5.93	109.9	2.3	0.21	0.0A		0.05	0.31	0.13	1	220
10	18.06	18.06	33.435	24.061	384.6	0.039	5.97	110.4	2.1	0.20	0.0A		0.01	0.31	0.06	10	219
20	15.01	15.01	33.288	24.652	328.6	0.074	6.66	115.9	2.7	0.34	0.0A		0.04	0.29	0.07	20	218
30	13.75	13.75	33.284	24.914	303.8	0.106	6.32	107.2	4.1	0.49	0.9A		0.03	1.24	0.35	30	217
41	12.64	12.63	33.314	25.159	280.7	0.138	5.36	88.8	6.9	0.88	8.1A		0.02	0.53	0.36	41	216
50	12.41	12.40	33.361	25.240	273.2	0.163	5.11	84.3	8.0	0.99	9.8A		0.04	0.28	0.34	50	215
60	11.90	11.89	33.410	25.375	260.6	0.190	4.85	79.2	10.3	1.14	12.3A		0.02	0.10	0.23	60	214
69	11.40	11.39	33.461	25.507	248.2	0.213	4.67	75.4	12.4	1.27	14.4A		0.01	0.06	0.14	69	213
75 ISL	11.34 D	11.33	33.553 D	25.590	240.5	0.227	4.41	71.2	13.9	1.36	15.9A		0.01	0.04	0.10	75	
86	10.96	10.95	33.623	25.713	229.0	0.253	3.86	61.8	16.7	1.53	18.4A		0.02	0.02	0.06	86	212
100 ISL	10.68 D	10.67	33.730 D	25.846	216.6	0.284	3.28	52.3	19.9	1.72	20.9A		0.00	0.01	0.07	100	
101	10.68	10.67	33.730	25.846	216.7	0.286	3.25	51.8	20.1	1.73	21.0A		0.00	0.01	0.07	101	211
120	10.23	10.22	33.831	26.003	202.1	0.326	2.92	46.1	23.5	1.88	23.1A		0.00	0.00	0.05	121	210
125 ISL	10.08 D	10.07	33.854 D	26.046	198.0	0.336	2.88	45.3	24.3	1.91	23.6A		0.00	0.00	0.06	126	
140	9.79	9.77	33.888	26.122	191.1	0.365	2.80	43.8	26.3	1.97	24.7A		0.01	0.01	0.09	141	209
150 ISL	9.94 D	9.92	33.993 D	26.179	186.0	0.384	2.78	43.6	27.4	1.99	25.2A		0.02	0.01	0.08	151	
169	9.30	9.28	33.956	26.256	178.9	0.419	2.70	41.8	29.3	2.04	26.1A		0.02	0.00	0.04	170	208
200 ISL	9.27 D	9.25	34.100 D	26.374	168.3	0.473	2.14	33.1	33.5	2.23	27.8A		0.00	0.01	0.05	201	
202	9.22	9.20	34.087	26.372	168.6	0.476	2.09	32.3	33.8	2.25	27.9A		0.00	0.01	0.05	203	207
229	9.26	9.23	34.200	26.454	161.3	0.521	1.55	24.0	37.4	2.45	29.2A		0.01			230	206
250 ISL	9.13 D	9.10	34.248 D	26.513	156.2	0.554	1.30	20.1	39.9	2.56	30.0A		0.01			251	
269	8.97	8.94	34.268	26.555	152.5	0.583	1.15	17.7	42.2	2.63	30.6A		0.01			271	205
300 ISL	8.66 D	8.63	34.291 D	26.622	146.6	0.630	0.95	14.5	46.1	2.74	31.9A		0.04			302	
318	8.40	8.37	34.293	26.664	142.8	0.656	0.86	13.1	48.5	2.79	32.7A		0.05			320	204
380	7.65	7.61	34.303	26.784	132.1	0.741	0.59	8.8	57.3	2.97	35.0A		0.00			382	203
400 ISL	7.45 D	7.41	34.314 D	26.821	128.7	0.767	0.51	7.6	60.4	3.03	35.8A		0.02			403	
438	7.00	6.96	34.324	26.892	122.2	0.815	0.37	5.4	66.6	3.13	37.4A		0.05			441	202
500 ISL	6.24 D	6.20	34.345 D	27.010	111.2	0.887	0.24	3.5	78.0	3.26	39.6A		0.03			503	
513	6.13	6.08	34.352	27.030	109.4	0.901	0.21	3.0	80.4	3.29	40.1A		0.03			517	201

A) DUE TO A PROBLEM WITH NO2 ANALYSIS, THIS VALUE REPRESENTS NO2+NO3 AND SEPERATE NO2 VALUES ARE UNAVAILABLE
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 50.6 N	117 31.9 W	15/10/08	0212 UTC	858 m	060 05 kn			1013.0 mb	20.1 C	16.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.78	18.78	33.485	23.920	397.7	0.000	5.66	106.1	2.3	0.22	0.0	0.00	0.04	0.15	0.04	0	
1	18.78	18.78	33.485	23.920	397.7	0.004	5.66	106.1	2.3	0.22	0.0	0.00	0.04	0.15	0.04	1	220
10	18.76	18.76	33.481	23.922	397.8	0.040	5.67	106.3	1.8	0.21	0.0	0.00	0.05	0.18	0.03	10	219
20	16.85	16.85	33.352	24.286	363.4	0.078	6.26	113.0	2.3	0.30	0.0	0.00	0.10	0.25	0.08	20	218
30 ISL	13.64 D	13.64	33.187 D	24.862	308.8	0.111	6.18	104.5	4.2	0.53	2.0	0.10	0.17	0.77	0.31	30	
31	13.65	13.65	33.169	24.846	310.3	0.115	6.17	104.3	4.4	0.56	2.3	0.11	0.17	0.81	0.33	31	217
40	12.71	12.70	33.278	25.118	284.6	0.141	5.55	92.1	6.4	0.82	6.7	0.26	0.15	0.63	0.33	40	216
50 ISL	12.40 D	12.39	33.475 D	25.330	264.6	0.169	4.79	79.1	8.6	1.01	10.1	0.06	0.06	0.30	0.34	50	
51	12.42	12.41	33.472	25.324	265.2	0.171	4.72	77.9	8.8	1.02	10.4	0.03	0.05	0.27	0.34	51	215
61	12.13	12.12	33.568	25.454	253.1	0.197	4.33	71.1	11.0	1.16	12.7	0.02	0.05	0.11	0.22	61	214
71	11.59	11.58	33.628	25.602	239.2	0.222	3.89	63.2	14.4	1.36	15.9	0.01	0.06	0.06	0.12	71	213
75 ISL	11.28 D	11.27	33.676 D	25.696	230.4	0.231	3.77	60.8	15.7	1.44	17.1	0.01	0.07	0.04	0.10	75	
85	10.90	10.89	33.688	25.774	223.2	0.254	3.46	55.4	18.7	1.63	19.6	0.00	0.09	0.01	0.06	85	212
100	10.64	10.63	33.808	25.914	210.2	0.287	2.77	44.1	22.8	1.84	22.1	0.00	0.00	0.01	0.05	100	211
122	10.32	10.31	33.964	26.091	193.8	0.331	2.13	33.7	28.1	2.07	24.8	0.01	0.00	0.00	0.05	123	210
125 ISL	10.31 D	10.30	33.977 D	26.103	192.7	0.337	2.09	33.1	28.5	2.08	25.0	0.01	0.01	0.00	0.05	126	
141	10.13	10.11	34.030	26.176	186.2	0.367	1.99	31.4	29.9	2.13	25.6	0.00	0.07	0.00	0.05	142	209
150 ISL	10.05 D	10.03	34.057 D	26.210	183.1	0.384	1.95	30.7	30.6	2.16	25.9	0.00	0.06	0.00	0.05	151	
170	9.95	9.93	34.108	26.268	178.1	0.420	1.84	28.9	32.1	2.22	26.5	0.00	0.01	0.00	0.04	171	208
200 ISL	9.84 D	9.82	34.185 D	26.347	171.2	0.472	1.57	24.6	34.3	2.32	27.5	0.00	0.04	0.00	0.04	201	
202	9.84	9.82	34.185	26.347	171.2	0.476	1.55	24.3	34.5	2.33	27.6	0.00	0.04	0.00	0.04	203	207
229	9.81	9.78	34.256	26.408	166.0	0.521	1.27	19.9	36.9	2.44	28.2	0.00	0.04			230	206
250 ISL	9.69 D	9.66	34.274 D	26.442	163.2	0.556	1.18	18.5	38.6	2.49	28.7	0.00	0.08			251	
267	9.47	9.44	34.287	26.489	159.0	0.583	1.16	18.1	39.8	2.51	29.0	0.00	0.12			269	205
300 ISL	9.23 D	9.20	34.274 D	26.518	156.8	0.635	1.13	17.5	41.1	2.54	29.5	0.00	0.11			302	
316	9.11	9.08	34.281	26.543	154.7	0.660	1.11	17.1	42.2	2.56	29.9	0.00	0.11			318	204
376	7.79	7.75	34.250	26.722	138.0	0.748	0.88	13.2	54.4	2.76	33.8	0.00	0.04			378	203
400 ISL	7.74 D	7.70	34.313 D	26.779	133.0	0.780	0.70	10.5	58.1	2.85	34.7	0.00	0.05			403	
436	7.36	7.32	34.316	26.836	127.8	0.827	0.44	6.5	63.3	2.98	35.8	0.00	0.07			439	202
500 ISL	6.73 D	6.68	34.321 D	26.927	119.6	0.907	0.32	4.7	73.2	3.10	37.7	0.00	0.02			503	
525	6.46	6.41	34.330	26.970	115.6	0.936	0.27	3.9	77.1	3.15	38.4	0.00	0.00			529	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 40.6 N	117 52.7 W	15/10/08	0639 UTC	599 m	290 02 kn			1013.4 mb	19.2 C	17.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.87	18.87	33.505	23.913	398.4	0.000	5.52	103.7	2.3	0.24	0.0	0.00	0.02	0.22	0.05	0	
3	18.87	18.87	33.505	23.913	398.5	0.012	5.52	103.7	2.3	0.24	0.0	0.00	0.02	0.22	0.05	3	220
10 ISL	18.75 D	18.75	33.499 D	23.939	396.2	0.040	5.53	103.7	2.4	0.24	0.0	0.00	0.01	0.21	0.04	10	
11	18.74	18.74	33.507	23.947	395.4	0.044	5.53	103.6	2.4	0.24	0.0	0.00	0.01	0.21	0.04	11	219
20	18.07	18.07	33.457	24.075	383.5	0.079	5.69	105.2	2.2	0.26	0.0	0.00	0.04	0.25	0.09	20	218
30	14.99	14.99	33.312	24.675	326.7	0.114	6.21	108.0	2.8	0.38	0.0	0.00	0.04	0.31	0.19	30	217
41	13.02	13.01	33.267	25.048	291.3	0.148	5.59	93.4	5.6	0.68	4.7	0.14	0.06	0.58	0.41	41	216
50	12.81	12.80	33.370	25.170	280.0	0.174	5.17	86.0	9.6	0.84	7.3	0.07	0.04	0.34	0.39	50	215
60	12.13	12.12	33.434	25.350	263.0	0.201	4.77	78.3	9.7	1.06	11.2	0.03	0.03	0.19	0.27	60	214
71	11.33	11.32	33.409	25.479	250.9	0.229	4.86	78.4	11.7	1.19	13.6	0.02	0.03	0.14	0.17	71	213
75 ISL	11.03 D	11.02	33.521 D	25.621	237.5	0.239	4.78	76.6	12.5	1.24	14.4	0.02	0.03	0.11	0.14	75	
85	10.93	10.92	33.538	25.652	234.8	0.263	4.41	70.6	14.8	1.38	16.4	0.02	0.02	0.05	0.08	85	212
100 ISL	10.52 D	10.51	33.710 D	25.858	215.5	0.297	3.57	56.7	19.7	1.62	20.0	0.00	0.01	0.01	0.06	100	
101	10.52	10.51	33.713	25.860	215.2	0.299	3.51	55.7	20.0	1.64	20.2	0.00	0.01	0.01	0.06	101	211
119	10.57	10.56	33.820	25.936	208.6	0.337	2.75	43.7	23.1	1.85	22.5	0.00	0.01	0.01	0.05	120	210
125 ISL	10.49 D	10.48	33.847 D	25.971	205.3	0.349	2.59	41.1	24.2	1.90	23.1	0.00	0.02	0.01	0.05	126	
142	10.32	10.30	33.934	26.068	196.4	0.383	2.26	35.8	26.9	2.02	24.5	0.00	0.03	0.00	0.05	143	209
150 ISL	10.22 D	10.20	33.995 D	26.133	190.4	0.399	2.16	34.1	27.9	2.06	25.0	0.00	0.03	0.00	0.05	151	
169	10.11	10.09	34.046	26.192	185.2	0.435	1.97	31.1	30.0	2.15	25.9	0.00	0.01	0.00	0.05	170	208
200 ISL	9.95 D	9.93	34.142 D	26.295	176.1	0.491	1.70	26.7	32.5	2.26	26.9	0.00	0.01	0.00	0.05	201	
202	9.94	9.92	34.143	26.297	176.0	0.494	1.68	26.4	32.7	2.27	27.0	0.00	0.01	0.00	0.05	203	207
231	9.84	9.81	34.237	26.388	168.0	0.544	1.32	20.7	35.4	2.41	28.2	0.00	0.04			232	206
250 ISL	9.60 D	9.57	34.275 D	26.458	161.6	0.575	1.19	18.6	37.4	2.47	28.7	0.00	0.04			251	
268	9.53	9.50	34.299	26.489	159.1	0.604	1.12	17.5	39.1	2.51	29.0	0.00	0.03			270	205
300 ISL	9.19 D	9.16	34.291 D	26.538	154.9	0.654	1.15	17.8	40.9	2.53	29.7	0.00	0.04			302	
318	8.97	8.94	34.262	26.551	153.9	0.682	1.19	18.3	42.1	2.54	30.3	0.00	0.04			320	204
377	7.72	7.68	34.221	26.709	139.1	0.769	1.02	15.2	52.3	2.72	33.9	0.00	0.02			379	203
400 ISL	7.46 D	7.42	34.230 D	26.754	135.1	0.800	0.89	13.2	55.2	2.79	34.7	0.00	0.01			403	
435	7.32	7.28	34.264	26.801	131.1	0.847	0.69	10.2	59.4	2.89	35.7	0.00	0.00			438	202
500 ISL	6.75 D	6.70	34.302 D	26.910	121.3	0.929	0.42	6.1	68.6	3.04	37.7	0.00	0.01			503	
511	6.69	6.64	34.311	26.925	119.9	0.942	0.37	5.4	70.2	3.07	38.0	0.00	0.01			514	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 30.7 N	118 13.2 W	15/10/08	1047 UTC	1602 m	360 03 kn			1012.1 mb	18.8 C	17.0 C	1m	

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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.60	18.60	33.437	23.928	396.9	0.000	5.47	102.2	2.6	0.30	0.0	0.00	0.06	0.09	0.02	0	
1	18.60	18.60	33.437	23.928	396.9	0.004	5.47	102.2	2.6	0.30	0.0	0.00	0.06	0.09	0.02	1	220
10	18.60	18.60	33.435	23.927	397.3	0.040	5.47	102.2	2.5	0.29	0.0	0.00	0.01	0.09	0.02	10	219
20 ISL	18.56 D	18.56	33.439 D	23.941	396.4	0.079	5.67	105.9	2.6	0.30	0.0	0.00	0.04	0.13	0.04	20	
25	17.30	17.30	33.338	24.170	374.7	0.099	5.80	105.6	2.6	0.31	0.0	0.00	0.06	0.16	0.05	25	218
30 ISL	16.13 D	16.13	33.276 D	24.394	353.4	0.117	5.94	105.7	2.6	0.32	0.0	0.00	0.04	0.19	0.07	30	
40	15.03	15.02	33.226	24.600	334.0	0.151	6.13	106.7	2.9	0.35	0.0	0.00	0.00	0.25	0.12	40	217
50	13.84	13.83	33.228	24.853	310.2	0.183	6.04	102.6	3.5	0.44	0.6	0.02	0.04	1.35	0.51	50	216
63	12.55	12.54	33.340	25.197	277.6	0.222	5.17	85.5	7.5	0.86	7.8	0.08	0.04	0.31	0.39	63	215
75 ISL	11.59 D	11.58	33.495 D	25.499	249.2	0.253	4.49	72.8	12.0	1.19	13.2	0.02	0.05	0.16	0.19	75	
77	11.59	11.58	33.496	25.500	249.1	0.258	4.39	71.2	12.7	1.23	13.9	0.01	0.05	0.14	0.16	77	214
87	11.37	11.36	33.577	25.603	239.5	0.283	4.05	65.4	14.7	1.37	15.8	0.00	0.17	0.09	0.12	87	213
100 ISL	11.12 D	11.11	33.702 D	25.746	226.2	0.313	3.50	56.3	17.7	1.54	18.2	0.00	0.03	0.04	0.07	100	
101	11.12	11.11	33.699	25.744	226.5	0.315	3.46	55.6	17.9	1.55	18.4	0.00	0.02	0.04	0.07	101	212
112	11.08	11.07	33.741	25.784	222.9	0.340	3.24	52.1	19.1	1.62	19.1	0.00	0.04	0.03	0.06	113	211
124	10.84	10.82	33.829	25.895	212.6	0.366	2.61	41.7	23.8	1.87	21.8	0.00	0.06	0.01	0.04	125	210
125 ISL	10.84 D	10.82	33.841 D	25.905	211.7	0.368	2.55	40.8	24.2	1.89	22.0	0.00	0.06	0.01	0.04	126	
138	10.68	10.66	33.935	26.006	202.3	0.395	1.94	30.9	29.1	2.12	24.0	0.00	0.02	0.01	0.03	139	209
150 ISL	10.46 D	10.44	33.994 D	26.091	194.5	0.419	1.91	30.3	29.5	2.14	24.8	0.00	0.01	0.01	0.03	151	
164	10.41	10.39	34.032	26.130	191.2	0.446	1.87	29.7	30.0	2.16	25.3	0.00	0.00	0.00	0.04	165	208
200 ISL	10.36 D	10.34	34.231 D	26.294	176.4	0.512	1.29	20.5	33.9	2.38	26.9	0.00	0.04	0.00	0.02	201	
202	10.36	10.34	34.231	26.294	176.4	0.516	1.25	19.8	34.1	2.39	27.0	0.00	0.04	0.00	0.02	203	207
229	10.27	10.24	34.317	26.377	169.1	0.562	1.03	16.3	35.7	2.48	27.7	0.00	0.04			230	206
250 ISL	10.02 D	9.99	34.360 D	26.454	162.2	0.597	0.94	14.8	37.5	2.54	28.2	0.00	0.03			251	
270	9.76	9.73	34.366	26.503	157.9	0.629	0.89	13.9	39.5	2.59	28.8	0.00	0.01			272	205
300 ISL	9.10 D	9.07	34.328 D	26.582	150.7	0.675	0.81	12.5	43.1	2.66	30.1	0.00	0.01			302	
320	8.94	8.91	34.350	26.625	146.9	0.705	0.76	11.7	45.4	2.70	30.9	0.00	0.01			322	204
376	8.65	8.61	34.364	26.682	142.5	0.786	0.59	9.0	48.8	2.79	31.8	0.00	0.02			378	203
400 ISL	8.32 D	8.28	34.345 D	26.718	139.2	0.820	0.65	9.9	51.9	2.81	32.9	0.00	0.02			402	
437	7.48	7.44	34.258	26.773	133.9	0.870	0.76	11.3	57.4	2.84	34.8	0.00	0.01			440	202
500 ISL	7.01 D	6.96	34.273 D	26.851	127.1	0.953	0.55	8.1	64.9	2.97	36.7	0.00	0.00			503	
519	6.80	6.75	34.283	26.888	123.7	0.976	0.49	7.2	67.2	3.01	37.3	0.00	0.00			522	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 21.0 N	118 33.5 W	15/10/08	1448 UTC	1333 m	010 05 kn	310 02 06	0	1012.8 mb	19.8 C	17.7 C	31m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.72	18.72	33.460	23.916	398.1	0.000	5.45	102.1	2.2	0.29	0.0	0.00	0.16	0.11	0.02	0	
1	18.72	18.72	33.460	23.916	398.1	0.004	5.45	102.1	2.2	0.29	0.0	0.00	0.16	0.11	0.02	1	221
10	18.72	18.72	33.459	23.916	398.4	0.040	5.46	102.3	2.2	0.29	0.0	0.00	0.13	0.11	0.02	10	220
20 ISL	18.73 D	18.73	33.455 D	23.911	399.3	0.080	5.46	102.3	2.3	0.29	0.0	0.00	0.13	0.12	0.02	20	
25	18.72	18.72	33.459	23.916	398.9	0.100	5.46	102.3	2.3	0.29	0.0	0.00	0.13	0.12	0.02	25	219
30 ISL	18.60 D	18.59	33.455 D	23.943	396.5	0.120	5.65	105.6	2.3	0.30	0.0	0.00	0.13	0.16	0.03	30	
40	15.64	15.63	33.242	24.479	345.7	0.157	6.14	108.2	2.4	0.33	0.0	0.00	0.12	0.25	0.05	40	218
50	13.74	13.73	33.172	24.830	312.3	0.190	6.54	110.8	0.5	0.34	0.0	0.00	0.13	1.82	0.71	50	217
55	13.32	13.31	33.199	24.936	302.3	0.205	6.08	102.1	2.8	0.51	2.0	0.07	0.20	2.04	0.91	55	216
61	12.91	12.90	33.201	25.019	294.5	0.223	5.84	97.3	4.4	0.65	4.2	0.13	0.23	1.19	0.63	61	215
75	12.41	12.40	33.460	25.318	266.5	0.262	4.68	77.2	8.8	1.02	10.4	0.03	0.11	0.19	0.32	75	214
87	11.92	11.91	33.558	25.487	250.7	0.293	4.25	69.5	11.9	1.22	13.8	0.01	0.10	0.10	0.19	87	213
100 ISL	11.32 D	11.31	33.595 D	25.627	237.6	0.325	4.03	65.0	14.5	1.36	16.2	0.01	0.10	0.05	0.10	100	
101	11.31	11.30	33.595	25.628	237.4	0.327	4.01	64.7	14.7	1.37	16.4	0.01	0.10	0.05	0.10	101	212
112	10.90	10.89	33.690	25.776	223.6	0.353	3.53	56.5	18.1	1.56	19.0	0.00	0.07	0.03	0.07	112	211
124	10.59	10.58	33.826	25.937	208.5	0.379	2.82	44.9	22.7	1.81	22.0	0.00	0.07	0.01	0.05	125	210
125 ISL	10.57 D	10.56	33.834 D	25.947	207.6	0.381	2.79	44.4	22.9	1.82	22.1	0.00	0.07	0.01	0.05	126	
140	10.47	10.45	33.899	26.015	201.5	0.411	2.52	40.0	25.2	1.94	23.3	0.00	0.07	0.01	0.04	141	209
150 ISL	10.33 D	10.31	33.969 D	26.094	194.2	0.431	2.20	34.8	27.7	2.05	24.2	0.00	0.06	0.01	0.03	151	
164	10.35	10.33	34.089	26.184	185.9	0.458	1.77	28.1	31.2	2.20	25.4	0.00	0.05	0.00	0.03	165	208
200 ISL	9.86 D	9.84	34.212 D	26.365	169.5	0.522	1.58	24.8	34.0	2.32	27.1	0.00	0.05	0.00	0.03	201	
202	9.85	9.83	34.216	26.369	169.1	0.525	1.58	24.8	34.1	2.32	27.2	0.00	0.05	0.00	0.03	203	207
231	9.67	9.64	34.340	26.497	157.6	0.572	1.05	16.4	38.8	2.54	28.7	0.00	0.04			232	206
250 ISL	9.42 D	9.39	34.348 D	26.545	153.4	0.602	1.25	19.4	42.0	2.54	30.0	0.00	0.03			251	
270	8.36	8.33	34.203	26.598	148.1	0.632	1.52	23.1	44.9	2.53	31.3	0.00	0.02			272	205
300 ISL	8.30 D	8.27	34.244 D	26.640	144.6	0.676	1.21	18.3	47.1	2.61	31.9	0.00	0.02			302	
317	8.35	8.32	34.279	26.660	143.1	0.700	0.94	14.3	48.1	2.67	32.0	0.00	0.02			319	204
378	7.74	7.70	34.306	26.773	133.1	0.785	0.62	9.3	56.1	2.86	34.2	0.00	0.00			380	203
400 ISL	7.61 D	7.57	34.315 D	26.799	130.9	0.814	0.56	8.4	58.5	2.90	34.9	0.00	0.00			403	
436	7.22	7.18	34.294	26.838	127.5	0.860	0.51	7.5	62.3	2.95	36.1	0.00	0.01			439	202
500 ISL	6.63 D	6.58	34.277 D	26.906	121.5	0.940	0.44	6.4	69.1	3.03	37.8	0.00	0.00			503	
514	6.56	6.51	34.286	26.922	120.1	0.957	0.42	6.1	70.6	3.05	38.2	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 10.8 N	118 53.0 W	15/10/08	1931 UTC	1459 m	310 06 kn	220 02 06	1	1013.9 mb	19.7 C	18.3 C	26m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.71	18.71	33.490	23.942	395.6	0.000	5.45	102.1	1.9	0.28	0.0	0.00	0.04	0.13	0.03	0	
2 A	18.71	18.71	33.490	23.942	395.7	0.008	5.45	102.1	1.9	0.28	0.0	0.00	0.04	0.13	0.03	2	222
2	18.91	18.91	33.490	23.891	400.5	0.008	5.46	102.6	1.8	0.29	0.0	0.00	0.06	0.13	0.02	2	223
9	18.12	18.12	33.502	24.097	381.1	0.035	5.51	102.0	1.5	0.28	0.0	0.00	0.06	0.21	0.05	9	221
10 ISL	17.92 D	17.92	33.510 D	24.152	375.9	0.039	5.52	101.8	1.4	0.28	0.0	0.00	0.06	0.22	0.06	10	
17 A	17.70	17.70	33.519	24.213	370.4	0.065	5.57	102.3	1.0	0.29	0.0	0.00	0.04	0.27	0.09	17	220
20 ISL	17.63 D	17.63	33.520 D	24.230	368.8	0.076	5.61	102.9	1.0	0.29	0.0	0.00	0.04	0.29	0.09	20	
26	17.63	17.63	33.524	24.234	368.7	0.098	5.66	103.9	1.1	0.29	0.0	0.00	0.03	0.32	0.10	26	219
30 ISL	17.62 D	17.61	33.518 D	24.232	369.0	0.113	5.62	103.1	1.1	0.29	0.0	0.00	0.03	0.35	0.12	30	
37 A	17.53	17.52	33.510	24.247	367.7	0.139	5.59	102.4	1.1	0.29	0.0	0.00	0.04	0.41	0.15	37	218
47	13.30	13.29	33.044	24.820	313.2	0.173	5.94	99.6	3.4	0.56	2.3	0.47	0.09	0.48	0.39	47	217
50 ISL	12.59 D	12.58	32.968 D	24.901	305.5	0.182	5.86	96.8	4.2	0.65	3.7	0.38	0.19	0.45	0.46	50	
54 A	12.20	12.19	32.977	24.982	297.8	0.194	5.71	93.6	5.4	0.76	5.6	0.20	0.29	0.39	0.51	54	216
62	11.78	11.77	33.092	25.151	282.0	0.218	5.48	89.0	8.0	0.93	8.9	0.05	0.04	0.26	0.29	62	215
73 A	11.50	11.49	33.232	25.311	266.9	0.248	5.20	84.1	10.2	1.08	11.6	0.01	0.06	0.13	0.17	73	214
75 ISL	11.25 D	11.24	33.236 D	25.359	262.3	0.253	5.14	82.6	10.5	1.11	12.2	0.01	0.06	0.12	0.16	75	
86	11.52	11.51	33.465	25.489	250.4	0.281	4.86	78.7	12.4	1.26	14.8	0.01	0.04	0.10	0.13	86	213
96 A	10.73	10.72	33.427	25.601	239.8	0.306	4.69	74.7	14.2	1.32	16.0	0.00	0.03	0.04	0.07	96	212
100 ISL	10.54 D	10.53	33.410 D	25.621	238.0	0.315	4.65	73.7	14.4	1.33	16.0	0.00	0.03	0.03	0.06	100	
109	10.30	10.29	33.429	25.677	232.8	0.336	4.51	71.1	15.1	1.34	16.4	0.00	0.03	0.02	0.05	109	211
121	9.89	9.88	33.569	25.856	216.0	0.363	4.03	63.0	18.5	1.52	19.2	0.00	0.06	0.01	0.03	122	210
125 ISL	9.80 D	9.79	33.630 D	25.918	210.1	0.372	3.86	60.3	19.8	1.59	20.2	0.00	0.05	0.01	0.03	126	
140	9.56	9.54	33.810	26.099	193.3	0.402	3.31	51.5	24.4	1.81	23.7	0.00	0.02	0.00	0.03	141	209
150 ISL	9.38 D	9.36	33.859 D	26.167	187.0	0.421	3.13	48.5	26.1	1.87	24.7	0.00	0.03	0.00	0.03	151	
172	9.03	9.01	33.928	26.277	176.8	0.461	2.91	44.7	29.1	1.93	25.8	0.00	0.04	0.00	0.03	173	208
200 ISL	8.53 D	8.51	34.011 D	26.421	163.6	0.509	2.54	38.6	34.4	2.09	28.0	0.00	0.04	0.00	0.03	201	
202	8.53	8.51	34.015	26.424	163.3	0.512	2.52	38.3	34.8	2.10	28.1	0.00	0.04	0.00	0.03	203	207
228	8.31	8.29	34.036	26.474	159.0	0.554	2.31	35.0	37.5	2.18	29.4	0.00	0.01			229	206
250 ISL	7.97 D	7.94	34.039 D	26.528	154.1	0.588	2.04	30.6	41.3	2.30	30.9	0.00	0.02			251	
269	7.81	7.78	34.082	26.585	148.9	0.617	1.80	26.9	44.8	2.41	32.2	0.00	0.02			271	205
300 ISL	7.53 D	7.50	34.105 D	26.644	143.7	0.663	1.54	22.9	48.9	2.53	33.5	0.00	0.01			302	
319	7.43	7.40	34.123	26.672	141.3	0.690	1.40	20.8	51.4	2.59	34.2	0.00	0.00			321	204
378	6.71	6.68	34.159	26.801	129.6	0.770	0.98	14.3	62.3	2.82	36.8	0.00	0.01			380	203
400 ISL	6.67 D	6.63	34.191 D	26.831	127.0	0.798	0.79	11.5	64.0	2.89	37.1	0.00	0.01			403	
438	6.78	6.74	34.277	26.885	122.6	0.845	0.53	7.8	66.4	3.00	37.5	0.00	0.00			441	202
500 ISL	6.02 D	5.98	34.243 D	26.958	115.9	0.919	0.50	7.2	75.0	3.08	39.5	0.00	0.02			503	
511	5.99	5.95	34.247	26.965	115.3	0.932	0.50	7.2	76.5	3.09	39.8	0.00	0.02			514	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 0.7 N	119 14.1 W	16/10/08	0006 UTC	1593 m	320 05 kn	330 03 06	1	1012.4 mb	18.8 C	17.4 C	17m	5/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.28	18.28	33.559	24.101	380.4	0.000	5.56	103.3	0.8	0.28	0.0	0.00	0.04	0.22	0.06	0	
2	18.28	18.28	33.559	24.101	380.5	0.008	5.56	103.3	0.8	0.28	0.0	0.00	0.04	0.22	0.06	2	220
10	17.78	17.78	33.555	24.221	369.4	0.038	5.59	102.9	0.8	0.28	0.0	0.00	0.02	0.25	0.06	10	219
20	17.66	17.66	33.547	24.244	367.5	0.074	5.62	103.2	0.7	0.27	0.0	0.00	0.04	0.28	0.09	20	218
29	17.45	17.45	33.523	24.276	364.7	0.107	5.69	104.0	0.6	0.26	0.0	0.00	0.03	0.44	0.17	29	217
30 ISL	17.42 D	17.41	33.518 D	24.280	364.4	0.111	5.70	104.2	0.6	0.26	0.0	0.00	0.03	0.46	0.17	30	
39	17.27	17.26	33.513	24.312	361.6	0.144	5.75	104.8	0.5	0.25	0.0	0.00	0.02	0.61	0.21	39	216
49	15.17	15.16	33.408	24.710	323.9	0.178	5.82	101.7	3.1	0.55	2.8	0.14	0.09	0.82	0.46	49	215
50 ISL	14.70 D	14.69	33.413 D	24.816	313.8	0.181	5.80	100.4	3.6	0.59	3.4	0.17	0.11	0.77	0.45	50	
59	12.96	12.95	33.462	25.212	276.2	0.208	5.48	91.5	8.0	0.96	9.3	0.31	0.20	0.30	0.32	59	214
69	11.81	11.80	33.450	25.423	256.2	0.234	5.05	82.3	11.1	1.18	13.2	0.06	0.02	0.20	0.22	69	213
75 ISL	11.59 D	11.58	33.549 D	25.541	245.2	0.249	4.88	79.2	12.4	1.27	14.7	0.04	0.02	0.16	0.17	75	
84	11.46	11.45	33.578	25.588	240.9	0.271	4.67	75.6	14.1	1.37	16.4	0.01	0.02	0.11	0.12	84	212
100	10.50	10.49	33.587	25.766	224.2	0.308	4.25	67.4	17.7	1.52	18.8	0.00	0.01	0.04	0.05	100	211
119	9.55	9.54	33.714	26.025	199.8	0.349	3.55	55.2	22.3	1.69	21.9	0.00	0.02	0.01	0.03	120	210
125 ISL	9.45 D	9.44	33.794 D	26.104	192.4	0.361	3.42	53.0	23.5	1.74	22.6	0.00	0.02	0.01	0.03	126	
139	9.23	9.21	33.858	26.190	184.5	0.387	3.18	49.1	26.2	1.83	24.1	0.00	0.02	0.00	0.03	140	209
150 ISL	9.22 D	9.20	33.926 D	26.245	179.5	0.407	2.95	45.6	28.2	1.90	25.1	0.00	0.02	0.00	0.03	151	
169	8.94	8.92	33.984	26.335	171.2	0.440	2.61	40.1	31.5	2.00	26.5	0.00	0.01	0.01	0.03	170	208
199	8.53	8.51	34.038	26.442	161.6	0.490	2.34	35.6	36.0	2.13	28.2	0.00	0.02	0.00	0.02	200	207
200 ISL	8.52 D	8.50	34.040 D	26.445	161.3	0.492	2.33	35.4	36.2	2.13	28.3	0.00	0.02			201	
227	8.22	8.20	34.078 D	26.521	154.5	0.534										228	206
250 ISL	7.88 D	7.85	34.094 D	26.584	148.7	0.569	1.84	27.6	44.6	2.37	31.3	0.00	0.03			251	
268	7.62	7.59	34.100	26.627	144.9	0.596	1.67	24.9	47.6	2.45	32.4	0.00	0.03			270	205
300 ISL	7.33 D	7.30	34.112 D	26.678	140.4	0.641	1.42	21.0	52.5	2.57	34.0	0.00	0.01			302	
316	7.14	7.11	34.125	26.714	137.1	0.664	1.31	19.3	54.8	2.63	34.7	0.00	0.00			318	204
377	6.64	6.61	34.161	26.811	128.5	0.745	0.90	13.1	63.2	2.82	36.8	0.00	0.01			379	203
400 ISL	6.50 D	6.46	34.193 D	26.855	124.6	0.774	0.78	11.3	66.2	2.88	37.4	0.00	0.01			403	
438	6.28	6.24	34.211	26.899	120.8	0.820	0.60	8.7	71.0	2.98	38.4	0.00	0.00			441	202
500 ISL	6.02 D	5.98	34.291 D	26.996	112.3	0.893	0.37	5.3	78.6	3.09	39.7	0.00	0.00			503	
520	5.85	5.80	34.299	27.023	109.8	0.915	0.29	4.2	81.0	3.13	40.1	0.00	0.00			524	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 50.6 N	119 34.3 W	16/10/08	0424 UTC	1826 m	300 08 kn			1013.1 mb	17.7 C	16.6 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.97	16.97	33.313	24.228	368.3	0.000	5.76	104.2	1.9	0.34	0.0	0.00	0.04	0.28	0.06	0	
2	16.97	16.97	33.313	24.228	368.4	0.007	5.76	104.2	1.9	0.34	0.0	0.00	0.04	0.28	0.06	2	220
9	16.87	16.87	33.315	24.253	366.2	0.033	5.73	103.5	1.8	0.33	0.0	0.00	0.04	0.25	0.06	9	219
10 ISL	16.79 D	16.79	33.321 D	24.276	364.0	0.037	5.73	103.3	1.8	0.33	0.0	0.00	0.04	0.26	0.06	10	
19	16.64	16.64	33.323	24.313	360.8	0.069	5.77	103.7	1.8	0.33	0.0	0.00	0.03	0.38	0.11	19	218
20 ISL	16.63 D	16.63	33.320 D	24.313	360.9	0.073	5.77	103.7	1.8	0.33	0.0	0.00	0.03	0.39	0.11	20	
30	16.67	16.67	33.349	24.327	359.9	0.109	5.73	103.1	1.8	0.33	0.0	0.00	0.02	0.41	0.11	30	217
39	16.44	16.43	33.332	24.367	356.3	0.141	5.77	103.3	1.9	0.34	0.0	0.01	0.02	0.44	0.15	39	216
49	15.70	15.69	33.273	24.489	344.9	0.176	5.85	103.2	2.0	0.40	0.4	0.08	0.06	0.55	0.23	49	215
50 ISL	14.77 D	14.76	33.183 D	24.623	332.1	0.180	5.85	101.2	2.1	0.42	0.6	0.13	0.06	0.54	0.24	50	
60	13.24	13.23	33.025	24.818	313.7	0.212	5.89	98.7	3.7	0.58	2.6	0.48	0.09	0.37	0.32	60	214
69	13.04	13.03	33.180	24.978	298.7	0.240	5.76	96.2	4.5	0.60	3.4	0.19	0.07	0.29	0.31	69	213
75 ISL	12.65 D	12.64	33.261 D	25.117	285.6	0.257	5.62	93.1	5.5	0.68	5.0	0.14	0.06	0.25	0.30	75	
86	12.28	12.27	33.312	25.228	275.3	0.288	5.32	87.5	7.3	0.86	8.4	0.05	0.03	0.18	0.27	86	212
100	11.78	11.77	33.401	25.391	260.0	0.325	5.00	81.4	8.7	0.99	10.8	0.02	0.01	0.09	0.19	100	211
119	10.14	10.13	33.429	25.704	230.4	0.372	4.48	70.4	15.1	1.33	16.2	0.00	0.01	0.02	0.04	120	210
125 ISL	10.05 D	10.04	33.513 D	25.785	222.8	0.386	4.31	67.6	16.5	1.40	17.4	0.00	0.01	0.02	0.04	126	
137	9.78	9.76	33.612	25.908	211.3	0.412	3.98	62.1	19.0	1.51	19.4	0.00	0.02	0.01	0.03	138	209
150 ISL	9.71 D	9.69	33.775 D	26.047	198.4	0.438	3.60	56.2	22.2	1.66	21.7	0.00	0.02	0.00	0.03	151	
168	9.25	9.23	33.848	26.179	186.1	0.473	3.18	49.1	26.2	1.83	24.3	0.00	0.01	0.00	0.04	169	208
200 ISL	8.63 D	8.61	33.953 D	26.360	169.4	0.530	3.12	47.6	30.2	1.87	25.6	0.00	0.01	0.00	0.02	201	
201	8.65	8.63	33.953	26.357	169.7	0.531	3.12	47.6	30.3	1.87	25.6	0.00	0.01	0.00	0.02	202	207
227	8.15	8.13	33.998	26.468	159.4	0.574	2.75	41.5	36.6	2.08	28.2	0.00	0.03			228	206
250 ISL	7.85 D	7.83	34.031 D	26.539	153.0	0.610	2.17	32.5	41.5	2.27	30.3	0.00	0.02			251	
267	7.92	7.89	34.105	26.587	148.8	0.636	1.75	26.3	44.8	2.40	31.6	0.00	0.01			268	205
300 ISL	7.66 D	7.63	34.149 D	26.660	142.3	0.684	1.37	20.4	49.9	2.56	33.4	0.00	0.00			302	
318	7.46	7.43	34.153	26.692	139.5	0.709	1.25	18.6	52.3	2.63	34.1	0.00	0.00			320	204
378	7.05	7.01	34.217	26.800	129.9	0.790	0.84	12.4	60.2	2.84	35.9	0.00	0.00			380	203
400 ISL	6.92 D	6.88	34.239 D	26.836	126.8	0.818	0.69	10.1	63.2	2.91	36.6	0.00	0.00			402	
438	6.65	6.61	34.267	26.894	121.6	0.865	0.48	7.0	68.2	3.00	37.7	0.00	0.00			441	202
500 ISL	6.24 D	6.20	34.298 D	26.973	114.7	0.939	0.36	5.2	74.9	3.09	39.2	0.00	0.00			503	
518	6.14	6.09	34.298	26.986	113.6	0.959	0.32	4.6	76.8	3.11	39.6	0.00	0.00			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 30.9 N	120 15.0 W	16/10/08	1035 UTC	3933 m	260 05 kn			1013.8 mb	17.8 C	16.6 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.89	17.89	33.272	23.977	392.3	0.000	5.54	102.0	1.9	0.34	0.0	0.00	0.04	0.13	0.03	0	
2	17.89	17.89	33.272	23.977	392.3	0.008	5.54	102.0	1.9	0.34	0.0	0.00	0.04	0.13	0.03	2	220
10 ISL	17.79 D	17.79	33.269 D	23.999	390.5	0.039	5.54	101.8	1.7	0.33	0.0	0.00	0.02	0.12	0.03	10	
11	17.87	17.87	33.273	23.983	392.1	0.043	5.54	102.0	1.7	0.33	0.0	0.00	0.02	0.12	0.03	11	219
20 ISL	17.73 D	17.73	33.265 D	24.011	389.7	0.078	5.55	101.9	1.6	0.33	0.0	0.00	0.03	0.12	0.04	20	
26	17.70	17.70	33.264	24.018	389.3	0.102	5.56	102.0	1.6	0.33	0.0	0.00	0.03	0.12	0.04	26	218
30 ISL	17.66 D	17.65	33.255 D	24.021	389.1	0.117	5.57	102.1	1.6	0.33	0.0	0.00	0.03	0.13	0.04	30	
40	17.63	17.62	33.253	24.027	388.9	0.156	5.58	102.2	1.8	0.34	0.0	0.00	0.03	0.15	0.04	40	217
50 ISL	17.01 D	17.00	33.212 D	24.143	378.1	0.194	5.69	103.0	1.9	0.34	0.0	0.00	0.03	0.18	0.08	50	
51	16.99	16.98	33.209	24.145	377.9	0.198	5.71	103.3	1.9	0.34	0.0	0.00	0.03	0.19	0.08	51	216
62	13.65	13.64	32.988	24.707	324.4	0.237	6.11	103.2	3.2	0.47	1.1	0.18	0.04	0.37	0.28	62	215
74	12.96	12.95	32.960	24.823	313.5	0.275	5.90	98.2	4.1	0.58	2.6	0.38	0.12	0.35	0.37	74	214
75 ISL	12.76 D	12.75	32.961 D	24.863	309.7	0.278	5.88	97.5	4.2	0.59	2.8	0.38	0.11	0.35	0.37	75	
87	12.18	12.17	32.981	24.990	297.9	0.315	5.68	93.0	5.4	0.70	4.9	0.25	0.02	0.27	0.30	87	213
100	11.65	11.64	33.108	25.188	279.3	0.352	5.36	86.9	7.3	0.85	7.8	0.03	0.02	0.16	0.24	100	212
110	11.40	11.39	33.204	25.308	268.1	0.380	5.15	83.1	8.8	0.96	9.8	0.02	0.02	0.10	0.19	110	211
125	10.95	10.93	33.390	25.534	246.9	0.418	4.79	76.6	12.4	1.19	13.9	0.01	0.00	0.04	0.08	126	210
139	10.56	10.54	33.576	25.748	226.8	0.451	4.32	68.6	16.7	1.45	17.9	0.00	0.00	0.01	0.04	140	209
150 ISL	10.06 D	10.04	33.698 D	25.928	209.8	0.475	3.96	62.2	19.4	1.58	20.0	0.00	0.00	0.01	0.04	151	
169	9.60	9.58	33.799	26.084	195.3	0.514	3.43	53.4	23.4	1.72	22.6	0.00	0.00	0.00	0.03	170	208
200 ISL	8.87 D	8.85	33.952 D	26.322	173.1	0.571	2.95	45.2	29.7	1.91	25.5	0.00	0.00	0.00	0.03	201	
201	8.88	8.86	33.951	26.319	173.4	0.573	2.94	45.1	29.9	1.92	25.6	0.00	0.00	0.00	0.03	202	207
229	8.40	8.38	34.004	26.435	162.7	0.620	2.64	40.0	35.1	2.07	27.7	0.00	0.01			230	206
250 ISL	8.08 D	8.05	34.032 D	26.506	156.3	0.653	2.34	35.2	39.7	2.20	29.4	0.00	0.02			251	
270	7.88	7.85	34.060	26.557	151.6	0.684	2.03	30.4	43.9	2.32	31.0	0.00	0.03			271	205
300 ISL	7.81 D	7.78	34.129 D	26.622	146.0	0.729	1.55	23.2	48.0	2.50	32.8	0.00	0.01			302	
319	7.65	7.62	34.150	26.662	142.4	0.756	1.27	18.9	50.4	2.60	33.7	0.00	0.00			321	204
381	7.01	6.97	34.206	26.797	130.2	0.841	0.77	11.3	60.8	2.85	36.4	0.00	0.00			383	203
400 ISL	6.91 D	6.87	34.224 D	26.825	127.8	0.865	0.67	9.8	63.3	2.90	36.9	0.00	0.00			402	
441	6.65	6.61	34.249	26.880	123.0	0.916	0.51	7.4	68.2	3.00	37.9	0.00	0.00			444	202
500 ISL	6.23 D	6.19	34.294 D	26.971	114.8	0.987	0.34	4.9	76.1	3.11	39.2	0.00	0.01			503	
513	6.15	6.10	34.299	26.986	113.6	1.001	0.30	4.3	77.8	3.14	39.5	0.00	0.01			516	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 11.1 N	120 55.2 W	16/10/08	1827 UTC	3823 m	100 02 kn	310 03 08	0	1016.0 mb	19.0 C	18.0 C	32m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.92	17.92	33.344	24.025	387.7	0.000	5.55	102.3	1.9	0.32	0.0	0.00	0.03	0.11	0.03	0	
2 A	17.92	17.92	33.344	24.025	387.8	0.008	5.55	102.3	1.9	0.32	0.0	0.00	0.03	0.11	0.03	2	223
10 ISL	17.82 D	17.82	33.343 D	24.049	385.8	0.039	5.54	101.9	1.7	0.32	0.0	0.00	0.03	0.11	0.03	10	
12	17.84	17.84	33.345	24.045	386.1	0.046	5.54	102.0	1.7	0.32	0.0	0.00	0.03	0.11	0.03	12	222
20 A	17.70	17.70	33.346	24.080	383.1	0.077	5.56	102.0	1.7	0.32	0.0	0.00	0.03	0.12	0.04	20	221
30 ISL	17.18 D	17.18	33.301 D	24.170	374.8	0.115	5.66	102.8	1.9	0.35	0.0	0.00	0.06	0.17	0.06	30	
33	17.12	17.11	33.299	24.183	373.7	0.126	5.71	103.6	1.9	0.36	0.0	0.00	0.07	0.18	0.07	33	220
43 A	15.44	15.43	33.152	24.454	348.1	0.162	5.97	104.7	2.6	0.40	0.3	0.05	0.07	0.44	0.23	43	219
49	14.19	14.18	33.082	24.668	327.8	0.183	6.01	102.7	2.9	0.48	1.1	0.17	0.14	0.51	0.35	49	218
50 ISL	14.01 D	14.00	33.065 D	24.692	325.5	0.186	6.01	102.3	3.0	0.49	1.2	0.19	0.16	0.50	0.35	50	
55	13.67	13.66	33.053	24.753	319.8	0.202	5.98	101.1	3.6	0.55	1.9	0.31	0.25	0.43	0.37	55	217
66 A	12.61	12.60	32.985	24.911	305.0	0.236	5.75	95.0	5.0	0.69	3.9	0.55	0.24	0.30	0.36	66	216
75 ISL	11.89 D	11.88	32.960 D	25.028	294.0	0.263	5.65	91.9	6.0	0.80	6.2	0.15	0.05	0.18	0.24	75	
77	11.87	11.86	32.961	25.032	293.6	0.269	5.63	91.6	6.3	0.82	6.8	0.05	0.01	0.16	0.21	77	215
87 A	10.91	10.90	32.947	25.195	278.1	0.298	5.53	88.1	8.9	0.97	9.4	0.01	0.03	0.09	0.10	87	214
96	10.65	10.64	32.999	25.281	270.1	0.323	5.42	85.9	10.7	1.06	11.0	0.01	0.01	0.06	0.07	96	213
100 ISL	10.57 D	10.56	33.053 D	25.337	264.9	0.333	5.36	84.8	11.4	1.10	11.6	0.01	0.01	0.05	0.06	100	
107	10.62	10.61	33.128	25.387	260.3	0.352	5.21	82.6	12.6	1.17	12.9	0.00	0.01	0.03	0.05	107	212
116 A	10.29	10.28	33.282	25.564	243.6	0.374	4.88	76.9	14.9	1.31	15.6	0.00	0.02	0.02	0.04	116	211
125 ISL	9.97 D	9.96	33.432 D	25.735	227.5	0.395	4.46	69.8	17.6	1.46	18.2	0.00	0.01	0.01	0.03	126	
130	9.88	9.87	33.512	25.813	220.2	0.407	4.24	66.3	19.1	1.53	19.5	0.00	0.00	0.01	0.03	131	210
144	9.85	9.83	33.660	25.934	209.1	0.437	3.88	60.7	21.7	1.67	21.5	0.00	0.01	0.01	0.04	145	209
150 ISL	9.72 D	9.70	33.740 D	26.018	201.2	0.449	3.67	57.2	23.2	1.73	22.5	0.00	0.01	0.01	0.04	151	
167	9.27	9.25	33.848	26.176	186.4	0.482	3.12	48.2	27.2	1.89	25.1	0.00	0.00	0.00	0.03	168	208
198	8.87	8.85	33.933	26.307	174.5	0.538	2.82	43.2	30.6	1.98	26.7	0.00	0.01	0.00	0.03	199	207
200 ISL	8.84 D	8.82	33.950 D	26.325	172.8	0.541	2.80	42.9	30.9	1.99	26.8	0.00	0.01			201	
229	8.41	8.39	34.002	26.432	163.0	0.590	2.50	37.9	35.8	2.11	28.6	0.00	0.02			230	206
250 ISL	8.12 D	8.09	34.041 D	26.507	156.2	0.624	2.24	33.8	39.7	2.22	30.0	0.00	0.02			251	
269	7.93	7.90	34.061	26.551	152.2	0.653	2.00	30.0	43.4	2.32	31.3	0.00	0.01			270	205
300 ISL	7.54 D	7.51	34.100 D	26.639	144.3	0.699	1.64	24.4	49.4	2.49	33.4	0.00	0.00			302	
317	7.24	7.21	34.091	26.674	141.0	0.723	1.47	21.7	52.6	2.58	34.5	0.00	0.00			319	204
378	6.62	6.59	34.128	26.788	130.7	0.806	1.06	15.4	61.9	2.79	37.1	0.00	0.00			380	203
400 ISL	6.37 D	6.33	34.133 D	26.825	127.3	0.834	0.93	13.5	66.3	2.86	38.0	0.00	0.00			402	
437	6.03	5.99	34.159	26.889	121.4	0.880	0.74	10.6	73.3	2.96	39.3	0.00	0.01			440	202
500 ISL	5.76 D	5.72	34.225 D	26.976	113.8	0.954	0.50	7.1	80.3	3.09	40.3	0.00	0.00			503	
512	5.71	5.67	34.232	26.987	112.8	0.968	0.45	6.4	81.6	3.11	40.5	0.00	0.00			515	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 50.9 N	121 35.2 W	16/10/08	2355 UTC	4089 m	230 04 kn	340 04 09	0	1014.8 mb	18.2 C	16.5 C	18m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.01	18.01	33.364	24.018	388.3	0.000	5.63	104.0	0.9	0.31	0.0	0.00	0.03	0.19	0.04	0	
2	18.01	18.01	33.364	24.018	388.4	0.008	5.63	104.0	0.9	0.31	0.0	0.00	0.03	0.19	0.04	2	220
10	17.03	17.03	33.338	24.233	368.1	0.038	5.69	103.1	1.0	0.32	0.0	0.00	0.02	0.25	0.06	10	219
20 ISL	16.91 D	16.91	33.328 D	24.254	366.5	0.075	5.70	103.0	1.1	0.32	0.0	0.00	0.02	0.31	0.10	20	
25	16.86	16.86	33.327	24.265	365.6	0.093	5.71	103.1	1.1	0.32	0.0	0.00	0.02	0.34	0.13	25	218
30 ISL	16.87 D	16.87	33.339 D	24.272	365.1	0.111	5.69	102.8	1.0	0.32	0.0	0.00	0.02	0.40	0.17	30	
40	16.86	16.85	33.352	24.285	364.2	0.148	5.66	102.2	0.8	0.31	0.0	0.00	0.02	0.52	0.25	40	217
50	15.42	15.41	33.176	24.477	346.1	0.183	5.81	101.8	1.7	0.41	0.6	0.09	0.18	0.55	0.28	50	216
63	12.22	12.21	32.905	24.923	303.7	0.226	5.74	94.0	4.6	0.64	3.9	0.29	0.03	0.25	0.31	63	215
75	11.89	11.88	32.991	25.052	291.7	0.261	5.58	90.8	6.5	0.82	7.1	0.12	0.01	0.15	0.20	75	214
86	11.35	11.34	33.022	25.175	280.1	0.293	5.46	87.9	8.1	0.93	9.1	0.02	0.02	0.10	0.13	86	213
100 ISL	10.85 D	10.84	33.155 D	25.368	262.0	0.331	5.22	83.2	11.1	1.11	12.2	0.00	0.01	0.05	0.06	100	
101	10.85	10.84	33.162	25.374	261.5	0.333	5.19	82.7	11.4	1.12	12.4	0.00	0.01	0.05	0.06	101	212
111	10.67	10.66	33.336	25.541	245.8	0.359	4.82	76.6	14.0	1.28	15.1	0.00	0.02	0.03	0.05	111	211
125	9.94	9.93	33.445	25.751	226.0	0.392	4.39	68.7	17.9	1.49	18.6	0.00	0.02	0.01	0.03	126	210
140	9.65	9.63	33.633	25.946	207.8	0.424	3.84	59.8	21.7	1.68	21.7	0.00	0.01	0.01	0.04	141	209
150 ISL	9.49 D	9.47	33.732 D	26.050	198.1	0.445	3.49	54.2	24.2	1.79	23.4	0.00	0.01	0.01	0.04	151	
170	9.17	9.15	33.884	26.220	182.2	0.483	2.95	45.5	28.4	1.94	25.7	0.00	0.00	0.00	0.03	171	208
200 ISL	8.70 D	8.68	33.975 D	26.366	168.8	0.535	2.73	41.7	32.2	2.01	26.9	0.00	0.00	0.00	0.02	201	
201	8.70	8.68	33.976	26.367	168.8	0.537	2.72	41.5	32.3	2.01	26.9	0.00	0.00	0.00	0.02	202	207
230	8.26	8.24	34.052	26.494	157.1	0.584	2.05	31.0	39.2	2.27	30.3	0.00	0.01			231	206
250 ISL	8.09 D	8.06	34.079 D	26.541	152.9	0.615	1.77	26.7	42.5	2.39	31.6	0.00	0.02			251	
269	7.91	7.88	34.099	26.584	149.1	0.644	1.59	23.9	45.3	2.47	32.5	0.00	0.02			270	205
300 ISL	7.49 D	7.46	34.122 D	26.663	141.9	0.689	1.36	20.2	50.5	2.60	34.0	0.00	0.01			302	
317	7.32	7.29	34.133	26.696	139.0	0.713	1.25	18.5	53.5	2.66	34.8	0.00	0.01			319	204
376	6.69	6.66	34.185	26.824	127.4	0.791	0.77	11.2	63.9	2.90	37.3	0.00	0.01			378	203
400 ISL	6.56 D	6.52	34.199 D	26.852	124.9	0.822	0.67	9.7	67.1	2.96	38.0	0.00	0.01			402	
437	6.29	6.25	34.218	26.903	120.4	0.867	0.56	8.1	71.6	3.02	38.9	0.00	0.00			440	202
500 ISL	5.97 D	5.93	34.269 D	26.984	113.3	0.941	0.37	5.3	79.0	3.14	40.1	0.00	0.00			503	
517	5.85	5.81	34.282	27.010	111.0	0.960	0.32	4.6	81.0	3.17	40.4	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 30.6 N	122 15.7 W	17/10/08	0620 UTC	4171 m	150 04 kn			1016.4 mb	17.5 C	15.8 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.07	18.07	33.270	23.931	396.6	0.000	5.56	102.7	2.1	0.37	0.2	0.00	0.24	0.09	0.02	0	
2	18.07	18.07	33.270	23.932	396.7	0.008	5.56	102.7	2.1	0.37	0.2	0.00	0.24	0.09	0.02	2	220
10	17.75	17.75	33.254	23.997	390.6	0.039	5.58	102.5	2.5	0.35	0.3	0.00	0.02	0.09	0.02	10	219
20 ISL	17.67 D	17.67	33.253 D	24.016	389.2	0.078	5.59	102.5	2.6	0.36	0.4	0.00	0.02	0.10	0.02	20	
26	17.64	17.64	33.255	24.025	388.5	0.102	5.59	102.4	2.6	0.36	0.4	0.00	0.02	0.11	0.03	26	218
30 ISL	17.61 D	17.60	33.252 D	24.030	388.2	0.117	5.60	102.5	2.5	0.37	0.4	0.00	0.03	0.12	0.04	30	
39	17.17	17.16	33.232	24.120	379.9	0.152	5.67	102.9	2.3	0.38	0.5	0.00	0.04	0.14	0.05	39	217
50	16.55	16.54	33.264	24.290	364.0	0.193	5.84	104.8	3.0	0.36	0.6	0.00	0.01	0.18	0.07	50	216
63	15.79	15.78	33.273	24.470	347.3	0.239	5.97	105.5	3.8	0.37	0.7	0.00	0.01	0.19	0.10	63	215
75 ISL	14.51 D	14.50	33.272 D	24.748	321.0	0.279	5.96	102.6	4.3	0.40	0.9	0.00	0.01	0.23	0.16	75	
76	14.62	14.61	33.272	24.725	323.2	0.282	5.96	102.9	4.3	0.40	0.9	0.00	0.01	0.23	0.16	76	214
88	13.93	13.92	33.249	24.852	311.4	0.320	5.83	99.2	4.7	0.48	2.0	0.12	0.04	0.24	0.18	88	213
100 ISL	12.89 D	12.88	33.277 D	25.083	289.5	0.356	5.55	92.4	6.9	0.69	5.5	0.11	0.03	0.18	0.24	100	
101	12.82	12.81	33.282	25.101	287.8	0.359	5.52	91.8	7.1	0.71	5.8	0.11	0.03	0.17	0.24	101	212
112	11.92	11.91	33.340	25.318	267.3	0.390	5.22	85.2	9.6	0.92	9.4	0.01	0.02	0.11	0.17	112	211
125	11.45	11.43	33.400	25.452	254.8	0.424	5.05	81.6	11.2	1.04	11.4	0.00	0.03	0.06	0.11	126	210
139	10.70	10.68	33.480	25.648	236.3	0.458	4.69	74.6	15.2	1.28	15.1	0.00	0.01	0.03	0.04	140	209
150 ISL	10.23 D	10.21	33.592 D	25.817	220.4	0.483	4.29	67.6	18.1	1.44	17.8	0.00	0.01	0.02	0.03	151	
169	9.94	9.92	33.736	25.979	205.4	0.524	3.59	56.3	22.7	1.67	21.6	0.00	0.00	0.01	0.02	170	208
200 ISL	9.11 D	9.09	33.927 D	26.264	178.7	0.583	3.07	47.3	29.0	1.89	24.9	0.00	0.04	0.00	0.02	201	
203	9.10	9.08	33.928	26.267	178.5	0.589			29.5	1.91	25.1	0.00	0.04	0.00	0.02	204	207
230	8.67	8.65	33.995	26.387	167.4	0.635	2.79	42.6	34.4	2.07	27.3	0.00	0.01			231	206
250 ISL	8.40 D	8.37	34.026 D	26.453	161.4	0.668	2.49	37.8	38.3	2.19	28.9	0.00	0.01			251	
270	8.12	8.09	34.059	26.521	155.2	0.700	2.19	33.0	42.4	2.32	30.5	0.00	0.01			271	205
300 ISL	7.58 D	7.55	34.099 D	26.632	144.9	0.745	1.72	25.6	48.8	2.52	32.9	0.00	0.02			302	
320	7.44	7.41	34.123	26.671	141.4	0.774	1.44	21.4	52.9	2.64	34.4	0.00	0.02			322	204
377	6.69	6.66	34.144	26.791	130.4	0.851	1.04	15.2	62.8	2.86	37.2	0.00	0.01			379	203
400 ISL	6.60 D	6.56	34.156 D	26.813	128.6	0.881	0.88	12.8	65.8	2.93	37.9	0.00	0.01			402	
440	6.35	6.31	34.201	26.882	122.5	0.931	0.64	9.3	70.5	3.03	38.9	0.00	0.00			443	202
500 ISL	5.99 D	5.95	34.258 D	26.973	114.4	1.002	0.42	6.0	78.1	3.16	40.5	0.00	0.00			503	
510	5.95	5.91	34.261	26.981	113.7	1.013	0.38	5.5	79.4	3.18	40.8	0.00	0.00			513	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 11.0 N	122 55.4 W	17/10/08	1207 UTC	3980 m	120 01 kn			1015.6 mb	17.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.99	18.99	33.514	23.889	400.6	0.000	5.41	101.9	2.0	0.29	0.0	0.00	0.05	0.10	0.02	0	
2	18.99	18.99	33.514	23.890	400.7	0.008	5.41	101.9	2.0	0.29	0.0	0.00	0.05	0.10	0.02	2	221
10 ISL	18.92 D	18.92	33.509 D	23.904	399.6	0.040	5.42	101.9	1.7	0.29	0.0	0.00	0.03	0.09	0.02	10	
11	18.92	18.92	33.510	23.905	399.6	0.044	5.42	101.9	1.7	0.29	0.0	0.00	0.03	0.09	0.02	11	219
11	18.92	18.92	33.512	23.906	399.4	0.044										11	220
20 ISL	18.88 D	18.88	33.505 D	23.911	399.2	0.080	5.43	102.0	2.0	0.29	0.0	0.00	0.01	0.09	0.03	20	
25	18.87	18.87	33.511	23.919	398.7	0.100	5.43	102.0	2.2	0.29	0.0	0.00	0.00	0.09	0.03	25	218
30 ISL	18.86 D	18.85	33.503 D	23.915	399.2	0.120	5.43	102.0	2.2	0.29	0.0	0.00	0.00	0.10	0.03	30	
40	18.86	18.85	33.506	23.918	399.3	0.160	5.42	101.8	2.2	0.29	0.0	0.00	0.01	0.11	0.03	40	217
50 ISL	18.85 D	18.84	33.501 D	23.917	399.8	0.200	5.40	101.4	1.7	0.28	0.0	0.00	0.01	0.12	0.03	50	
51	18.86	18.85	33.507	23.919	399.6	0.204	5.40	101.4	1.7	0.28	0.0	0.00	0.01	0.12	0.03	51	216
63	16.65	16.64	33.306	24.299	363.6	0.250	6.02	108.2	2.1	0.30	0.0	0.00	0.01	0.19	0.09	63	215
75	14.16	14.15	33.222	24.783	317.6	0.290	6.20	106.0	3.3	0.39	0.0	0.00	0.01	0.23	0.16	75	214
87	12.88	12.87	33.257	25.069	290.5	0.327	5.64	93.9	5.1	0.68	5.0	0.20	0.03	0.24	0.25	87	213
100 ISL	12.42 D	12.41	33.309 D	25.199	278.4	0.364	5.36	88.4	6.5	0.83	7.7	0.13	0.03	0.22	0.26	100	
101	12.42	12.41	33.313	25.202	278.1	0.367	5.35	88.2	6.6	0.84	7.9	0.12	0.03	0.22	0.26	101	212
112	12.02	12.01	33.364	25.318	267.3	0.397	5.17	84.6	8.6	0.98	10.3	0.03	0.02	0.15	0.28	112	211
125	11.40	11.38	33.448	25.498	250.4	0.430	4.70	75.9	11.4	1.16	13.4	0.01	0.01	0.08	0.19	125	210
139	10.63	10.61	33.563	25.725	229.0	0.464	4.01	63.7	16.0	1.43	17.9	0.00	0.00	0.04	0.06	140	209
150 ISL	10.24 D	10.22	33.644 D	25.856	216.7	0.488	3.71	58.5	18.5	1.56	20.0	0.00	0.00	0.02	0.05	151	
169	9.71	9.69	33.785	26.055	198.0	0.528	3.40	53.0	22.2	1.69	22.2	0.00	0.01	0.01	0.02	170	208
200 ISL	9.03 D	9.01	33.937 D	26.285	176.7	0.586	2.99	46.0	28.9	1.88	25.1	0.00	0.01	0.00	0.02	201	
201	9.03	9.01	33.939	26.286	176.6	0.588	2.98	45.8	29.1	1.88	25.2	0.00	0.01	0.00	0.02	202	207
229	8.67	8.65	33.995	26.387	167.4	0.636	2.79	42.6	32.9	1.99	26.5	0.00	0.01			230	206
250 ISL	8.40 D	8.37	34.028 D	26.455	161.3	0.670	2.52	38.2	36.0	2.10	28.1	0.00	0.02			251	
268	8.19	8.16	34.048	26.502	157.0	0.699	2.26	34.1	39.1	2.20	29.6	0.00	0.02			269	205
300 ISL	7.71 D	7.68	34.100 D	26.614	146.7	0.748	1.81	27.0	46.3	2.40	32.2	0.00	0.01			302	
319	7.43	7.40	34.107	26.660	142.5	0.775	1.57	23.3	50.7	2.52	33.5	0.00	0.01			321	204
378	6.86	6.82	34.141	26.766	133.0	0.856	1.12	16.4	60.0	2.75	36.0	0.00	0.01			380	203
400 ISL	6.65 D	6.61	34.155 D	26.806	129.4	0.885	0.99	14.4	63.0	2.82	36.8	0.00	0.01			402	
440	6.42	6.38	34.176	26.853	125.3	0.936	0.77	11.2	68.0	2.92	38.1	0.00	0.02			443	202
500 ISL	6.12 D	6.08	34.235 D	26.939	117.8	1.009	0.49	7.1	75.0	3.05	39.6	0.00	0.00			503	
517	5.97	5.92	34.249	26.969	115.0	1.029	0.41	5.9	77.0	3.09	40.0	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0810 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 51.4 N	123 34.9 W	17/10/08	1849 UTC	4188 m	260 08 kn	340 04 07	1	1017.9 mb	20.2 C	16.5 C	36m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.90	18.90	33.318	23.762	412.7	0.000	5.49	103.1	2.0	0.31	0.0	0.00	0.05	0.09	0.02	0	
3 A	18.90	18.90	33.318	23.763	412.8	0.012	5.49	103.1	2.0	0.31	0.0	0.00	0.05	0.09	0.02	3	222
10 ISL	18.86 D	18.86	33.314 D	23.770	412.4	0.041	5.44	102.1	2.0	0.31	0.0	0.00	0.04	0.09	0.02	10	
13	18.86	18.86	33.317	23.772	412.2	0.054	5.42	101.7	2.0	0.31	0.0	0.00	0.03	0.09	0.02	13	221
20 ISL	18.82 D	18.82	33.310 D	23.777	412.0	0.082	5.43	101.8	1.7	0.30	0.0	0.00	0.02	0.09	0.02	20	
25 A	18.82	18.82	33.325	23.789	411.1	0.103	5.44	102.0	1.6	0.30	0.0	0.00	0.01	0.09	0.02	25	220
30 ISL	18.79 D	18.78	33.322 D	23.794	410.7	0.124	5.45	102.1	1.7	0.30	0.0	0.00	0.00	0.09	0.02	30	
34	18.78	18.77	33.339	23.810	409.4	0.140	5.45	102.1	1.8	0.30	0.0	0.00	0.00	0.10	0.02	34	219
42	18.75	18.74	33.343	23.821	408.6	0.173	5.44	101.9	2.0	0.29	0.0	0.00	0.00	0.11	0.02	42	218
50 A	16.17	16.16	33.185	24.316	361.5	0.204	6.06	107.8	2.3	0.30	0.0	0.00	0.01	0.16	0.06	50	217
61	14.38	14.37	33.070	24.619	332.8	0.242	6.19	106.2	2.2	0.32	0.0	0.00	0.03	0.17	0.10	61	216
74 A	13.25	13.24	33.006	24.802	315.7	0.284	6.03	101.0	2.8	0.39	0.2	0.04	0.03	0.29	0.25	74	215
75 ISL	13.18 D	13.17	33.001 D	24.812	314.7	0.287	6.01	100.5	2.8	0.40	0.3	0.06	0.03	0.29	0.26	75	
84	12.73	12.72	32.973	24.879	308.5	0.315	5.87	97.2	3.3	0.48	1.2	0.20	0.02	0.25	0.30	84	214
97 A	12.69	12.68	33.105	24.989	298.4	0.355	5.70	94.4	4.1	0.56	3.2	0.08	0.00	0.16	0.30	97	213
100 ISL	12.64 D	12.63	33.118 D	25.009	296.5	0.363	5.67	93.8	4.2	0.58	3.5	0.06	0.00	0.15	0.29	100	
112	12.29	12.28	33.160	25.109	287.3	0.398	5.57	91.5	5.1	0.67	5.2	0.02	0.00	0.10	0.23	112	212
124	11.64	11.62	33.183	25.248	274.1	0.432	5.46	88.5	7.9	0.86	8.4	0.00	0.00	0.05	0.11	124	211
125 ISL	11.43 D	11.41	33.189 D	25.291	270.0	0.435	5.45	87.9	8.1	0.88	8.7	0.00	0.00	0.05	0.10	125	
134 A	11.22	11.20	33.246	25.374	262.3	0.459	5.31	85.3	9.7	0.99	10.6	0.00	0.01	0.03	0.05	135	210
150 ISL	11.09 D	11.07	33.464 D	25.567	244.4	0.499	4.95	79.4	10.4	1.05	12.0	0.00	0.01	0.02	0.04	151	
153	11.11	11.09	33.502	25.593	242.0	0.507	4.87	78.2	10.6	1.06	12.2	0.00	0.01	0.02	0.04	154	209
170	10.54	10.52	33.592	25.764	226.0	0.546	4.37	69.3	14.7	1.30	16.1	0.00	0.00	0.01	0.02	171	208
199	9.52	9.50	33.811	26.107	193.7	0.607	3.65	56.7	22.4	1.62	21.5	0.00	0.00	0.00	0.02	200	207
200 ISL	9.49 D	9.47	33.820 D	26.119	192.5	0.609	3.65	56.7	22.6	1.62	21.6	0.00	0.00			201	
233	8.90	8.87	33.954	26.319	174.0	0.670	3.54	54.3	27.2	1.71	23.2	0.00	0.00			234	206
250 ISL	8.56 D	8.53	33.978 D	26.391	167.4	0.699	3.22	49.0	30.7	1.86	25.3	0.00	0.00			251	
270	8.24	8.21	33.993	26.452	161.8	0.732	2.79	42.2	35.2	2.05	27.9	0.00	0.00			271	205
300 ISL	7.84 D	7.81	34.024 D	26.536	154.2	0.779	2.39	35.8	41.7	2.22	30.2	0.00	0.01			302	
320	7.51	7.48	34.048	26.602	148.0	0.809	2.17	32.3	46.0	2.32	31.4	0.00	0.01			322	204
383	6.82	6.78	34.101	26.740	135.5	0.899	1.41	20.6	58.1	2.68	35.5	0.00	0.01			385	203
400 ISL	6.62 D	6.58	34.111 D	26.775	132.3	0.921	1.24	18.1	61.2	2.74	36.4	0.00	0.01			402	
440	6.12	6.08	34.117	26.845	125.7	0.973	0.91	13.1	68.1	2.86	38.1	0.00	0.00			443	202
500 ISL	5.70 D	5.66	34.199 D	26.962	115.0	1.045	0.62	8.8	77.8	3.06	40.1	0.00	0.00			503	
513	5.65	5.61	34.201	26.970	114.4	1.060	0.56	8.0	79.9	3.10	40.5	0.00	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.2 N	117 17.1 W	14/10/08	2117 UTC	28 m	360 04 kn	310 01 07	0	1013.9 mb	20.0 C	16.6 C	04m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.06	17.06	33.418	24.287	362.7	0.000	5.94	107.7	4.2	0.35	0.2A		0.12	2.76	0.71	0	
2	17.06	17.06	33.418	24.287	362.7	0.007	5.94	107.7	4.2	0.35	0.2A		0.12	2.76	0.71	2	205
5	16.43	16.43	33.416	24.432	349.0	0.018	5.96	106.8	4.2	0.35	0.2A		0.10	2.79	0.75	5	204
10	13.91	13.91	33.296	24.890	305.5	0.034	5.62	95.6	6.5	0.70	4.4A		0.34	1.44	0.70	10	203
15	13.32	13.32	33.292	25.007	294.5	0.049	5.28	88.7	7.6	0.86	6.8A		0.58	1.07	0.61	15	202
20 ISL	12.98 D	12.98	33.297 D	25.079	287.8	0.064	5.11	85.3	8.4	0.94	7.9A		0.67	0.73	0.51	20	
21	13.00	13.00	33.298	25.076	288.1	0.067	5.08	84.8	8.5	0.95	8.1A		0.69	0.66	0.49	21	201

A) DUE TO A PROBLEM WITH NO2 ANALYSIS, THIS VALUE REPRESENTS NO2+NO3 AND SEPERATE NO2 VALUES ARE UNAVAILABLE
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 23.2 N	122 14.9 W	28/10/08	1906 UTC	11 m	1220 - 1742 PST	1152 PST	1742 PST	357.9 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	14.98	33.315	24.678	6.12	106.4	1.0	0.38	0.9	0.04	0.97	0.18	76. A	13.1	13.9	13.5	0.17
8	14.98	33.316	24.679	6.11	106.3	1.2	0.38	0.9	0.04	0.97	0.16	33.	17.7	17.9	17.8	0.17
16	14.96	33.332	24.696	6.13	106.6	1.4	0.39	0.9	0.04	1.01	0.20	11.	13.4	12.9	13.1	0.15
23	14.96	33.368	24.724	6.10	106.1	1.3	0.38	0.9	0.04	1.08	0.21	4.0	7.2	7.0	7.1	0.11
30	14.84	33.402	24.776	6.00	104.1	0.8	0.41	1.2	0.07	0.80	0.27	1.5	1.9	2.0	1.9	0.10
41	14.52	33.386	24.833	5.72	98.6	1.8	0.54	1.6	0.15	0.81	0.49	0.33	0.16	0.13	0.14	0.10

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 9.4 N	121 9.3 W	26/10/08	1728 UTC	11 m	1150 - 1745 PST	1150 PST	1745 PST	590.5 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
3	15.19	33.384	24.686	6.02	105.2	1.2	0.54	0.4	0.04	1.34	0.32	66. A	23.6	26.4	25.0	0.26
6	15.18	33.385	24.689	6.04	105.5	1.5	0.55	0.4	0.04	1.31	0.37	43.	31.1	28.5	29.8	0.17
11	15.19	33.390	24.691	6.05	105.7	1.4	0.52	0.4	0.04	1.69	0.58					
16	15.19	33.387	24.688	6.04	105.5	1.3	0.53	0.4	0.05	1.38	0.43	11.	21.8	19.9	20.9	0.27
23	14.94	33.395	24.749	5.96	103.6	2.8	0.62	1.6	0.10	1.89	0.60	4.0	11.8	11.8	11.8	0.12
29	14.44	33.387	24.850	5.96	102.6	3.8	0.72	2.5	0.14	1.60	0.57	1.7	3.2	3.5	3.3	0.12
40	13.67	33.400	25.021	5.75	97.4	5.1	0.85	4.4	0.24	1.20	0.55	0.38	0.37	0.32	0.34	0.06

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 49.0 N	123 54.6 W	27/10/08	1802 UTC	29 m	1200 - 1755 PST	1200 PST	1755 PST	231.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.49	33.227	24.039	5.58	101.9	2.5	0.32	0.0	0.00	0.10	0.03	90. A	1.5	1.4	1.4	0.07
20	17.45	33.226	24.048	5.59	102.0	2.4	0.31	0.0	0.00	0.10	0.03	35.	2.4	2.5	2.5	0.07
31	17.46	33.229	24.049	5.64	103.0	1.9	0.31	0.0	0.00	0.10	0.03					
39	16.72	33.109	24.131	5.73	103.0	1.4	0.34	0.0	0.00	0.27	0.11	13.	4.2	3.9	4.0	0.12
50	16.51	33.116	24.185	5.73	102.6	1.4	0.34	0.0	0.00	0.40	0.22					
58	15.85	33.139	24.353	5.81	102.7	1.6	0.37	0.1	0.00	0.47	0.28	4.6	4.1	4.2	4.2	0.07
77	13.27	32.998	24.792	6.06	101.5	2.9	0.40	0.2	0.03	0.15	0.17	1.7	0.51	0.53	0.52	0.05
90	12.34	32.959	24.943	5.83	95.8	3.7	0.52	1.9	0.19	0.11	0.12					
107	11.69	33.027	25.118	5.64	91.4	5.6	0.70	5.4	0.03	0.09	0.11	0.35	0.07	0.07	0.07	0.03

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 11.2 N	119 30.4 W	25/10/08	1824 UTC	11 m	1142 - 1745 PST	1142 PST	1739 PST	667.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.72	33.447	24.389	6.07	109.4	2.2	0.28	0.0	0.00	0.76	0.28	87. A	31.6	32.8	32.2	0.26
7	16.57	33.444	24.422	6.64	119.3	2.1	0.28	0.0	0.00	0.78	0.32	38.	34.4	34.6	34.5	0.32
11	16.22	33.419	24.483	6.29	112.2	2.3	0.26	0.0	0.00	0.80	0.38					
15	15.62	33.396	24.601	6.35	111.9	2.4	0.25	0.0	0.00	0.96	0.50	12.	22.0	21.1	21.6	0.35
20	15.35	33.420	24.679	5.86	102.7	3.8	0.44	1.6	0.11	1.11	0.63					
23	15.27	33.420	24.697	5.79	101.4	4.0	0.47	1.9	0.14	1.02	0.58	4.0	11.8	12.1	12.0	0.16
30	15.04	33.418	24.745	5.70	99.3	4.4	0.53	2.7	0.17	0.75	0.51	1.5	4.1	3.2	3.6	0.11
41	14.51	33.400	24.846	5.56	95.8	5.4	0.65	4.2	0.23	0.59	0.44	0.33	0.32	0.29	0.31	0.09

A) INCUBATION LIGHT INTENSITIES WERE 91, 36, 11, 4.1, 1.5, 0.35 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 14.6 N	121 26.7 W	24/10/08	1922 UTC	10 m	1220 - 1745 PST	1153 PST	1747 PST	727.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.18	33.455	24.520	6.14	109.5	0.2	0.28	0.0	0.00	0.98	0.43	74. A	22.5	22.5	22.5	0.34
7	15.83	33.456	24.600	6.16	109.1	0.3	0.30	0.0	0.00	1.04	0.46	34.	30.8	30.6	30.7	0.42
10	15.77	33.454	24.612	6.16	108.9	0.3	0.31	0.0	0.00	1.25	0.51					
14	15.69	33.454	24.630	6.19	109.3	0.4	0.28	0.0	0.00	1.41	0.59	12.	29.0	29.8	29.4	0.35
21	15.56	33.453	24.658	6.02	106.0	0.4	0.29	0.0	0.01	2.32	0.96	4.0	24.3	30.1	27.2	0.28
27	15.43	33.436	24.674	5.81	102.0	1.1	0.39	0.5	0.03	2.17	0.84	1.6	8.5	9.0	8.7	0.18
34	15.38	33.437	24.686	5.78	101.4	1.5	0.42	1.0	0.06	1.38	0.51	0.54	0.64	0.83	0.73	0.15

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 54.7 N	124 10.4 W	23/10/08	1851 UTC	30 m	1210 - 1757 PST	1159 PST	1757 PST	283.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.32	33.156	24.025	5.62	102.3	1.6	0.32	0.0	0.00	0.13	0.04	90. A	1.3	1.3	1.3	0.09
11	17.23	33.156	24.047	5.62	102.1	1.7	0.33	0.0	0.00	0.14	0.04					
20	17.22	33.157	24.050	5.62	102.1	2.0	0.32	0.0	0.00	0.15	0.05	36.	3.5	3.6	3.6	0.10
32	17.20	33.156	24.055	5.62	102.0	1.9	0.32	0.0	0.00	0.17	0.05					
42	16.94	33.130	24.096	5.67	102.4	1.8	0.33	0.0	0.00	0.25	0.09	12.	4.7	4.7	4.7	0.09
52	14.67	33.031	24.527	6.19	106.8	2.7	0.35	0.0	0.00	0.23	0.14					
61	13.72	32.991	24.695	6.21	105.0	2.9	0.37	0.0	0.00	0.21	0.17	4.4	2.8	2.7	2.7	0.09
71	12.88	32.945	24.827	6.08	101.0	2.6	0.40	0.1	0.01	0.30	0.23					
80	12.51	32.932	24.889	5.94	97.9	3.0	0.46	0.7	0.13	0.23	0.23	1.7	1.8	2.0	1.9	0.04
90	12.24	32.978	24.977	5.80	95.1	3.9	0.55	2.7	0.14	0.20	0.23					
100	11.70	32.964	25.067	5.72	92.7	4.9	0.67	4.9	0.03	0.15	0.20					
110	11.33	33.075	25.221	5.55	89.3	7.3	0.84	7.9	0.01	0.08	0.15	0.36	0.16	0.19	0.17	0.04

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.5 N	119 18.4 W	21/10/08	1725 UTC	20 m	1144 - 1749 PST	1142 PST	1746 PST	721.5 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	16.99	33.515	24.378	5.94	107.6	0.1	0.20	0.0	0.00	0.21	0.05	86. A	5.8	6.5	6.1	0.23
10	16.88	33.515	24.404	5.95	107.6	0.3	0.19	0.0	0.00	0.20	0.06					
13	16.69	33.505	24.441	6.08	109.5	0.1	0.20	0.0	0.00	0.32	0.13	37.	10.1	9.3	9.7	0.31
20	15.53			5.93		0.0	0.21	0.0	0.00	0.20	0.07					
27	14.00	33.478	25.013	5.38	91.8	5.4	0.72	5.7	0.17	2.23	1.14	13.	33.1	30.9	32.0	0.20
35	13.19	33.480	25.179	4.98	83.6	8.6	0.95	9.2	0.22	1.12	0.65					
42	12.16	33.513	25.406	4.59	75.4	11.8	1.20	13.3	0.17	0.83	0.61	4.0	5.2	5.8	5.5	0.10
54	11.19	33.495	25.571	4.52	72.7	14.0	1.33	15.7	0.05	0.35	0.31	1.6	0.98	1.0	1.0	0.07
64	10.60	33.589	25.749	4.24	67.4	18.0	1.49	18.6	0.03	0.12	0.23					
74	10.45	33.629	25.807	4.08	64.6	18.8	1.57	19.7	0.03	0.06	0.15	0.34	0.02	0.02	0.02	0.04

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 19.3 N	121 43.3 W	22/10/08	1830 UTC	21 m	1153 - 1750 PST	1150 PST	1749 PST	513.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2D	17.55	33.596	24.307			0.8	0.31	0.0	0.00	0.39	0.10	86. A	6.1	6.2	6.1	0.13
8	17.34	33.594	24.356	5.61	102.4	0.9	0.30	0.0	0.00	0.40	0.14					
14	17.34	33.594	24.356	5.61	102.4	1.2	0.30	0.0	0.00	0.41	0.15	36.	11.6	12.3	11.9	0.15
22	17.33	33.594	24.359	5.62	102.6	1.3	0.32	0.0	0.00	0.43	0.16					
29	17.33	33.594	24.359	5.61	102.4	0.8	0.31	0.0	0.00	0.46	0.14	12.	11.1	11.5	11.3	0.17
36	16.98	33.572	24.426	5.61	101.7	1.8	0.40	1.2	0.03	0.50	0.24					
44	13.93	33.499	25.044	5.52	94.1	6.1	0.79	6.9	0.16	0.51	0.37	4.0	7.0	7.0	7.0	0.07
49	12.65	33.478	25.285	5.32	88.3	9.2	1.03	10.7	0.22	0.38	0.35					
57	12.01	33.500	25.424	5.06	82.8	11.0	1.19	13.3	0.15	0.30	0.35	1.6	2.2	2.2	2.2	0.06
66	11.21	33.532	25.597	4.65	74.8	14.4	1.36	16.3	0.03	0.20	0.23					
76	10.71	33.571	25.716	4.33	69.0	16.7	1.47	18.1	0.01	0.12	0.12	0.39	0.15	0.15	0.15	0.05

A) INCUBATION LIGHT INTENSITIES WERE 91, 36, 11, 4.1, 1.5, 0.35 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.0 N	117 54.3 W	20/10/08	1730 UTC	15 m	1135 - 1739 PST	1135 PST	1739 PST	674.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	17.53	33.464	24.211	5.87	107.5	2.0	0.28	0.0	0.00	0.43	0.17	74. A	9.8	8.1	9.0	0.29
9	17.05	33.444	24.310	6.00	108.8	2.1	0.30	0.0	0.00	0.63	0.31	40.	25.3	24.7	25.0	0.25
20	15.78	33.358	24.536	6.12	108.2	2.5	0.37	0.4	0.05	1.11	0.55	13.	25.7	28.8	27.2	0.13
31	12.76	33.075	24.950	5.74	95.2	5.7	0.73	5.3	0.29	0.83	0.50	4.2	9.1	8.8	8.9	0.06
41	12.85	33.323	25.125	4.84	80.6	8.8	1.02	10.7	1.56	0.29	0.28	1.5	1.2	1.3	1.3	0.19
47	12.77	33.329	25.146	4.79	79.6	8.5	1.04	11.0	1.48	0.27	0.25					
54	12.50	33.357	25.220	4.69	77.5	9.7	1.10	12.3	0.70	0.16	0.21	0.40	0.08	0.07	0.07	0.11

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 24.8 N	119 57.4 W	19/10/08	1744 UTC	21 m	1140 - 1750 PST	1141 PST	1747 PST	314.3 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	17.49	33.329	24.117	5.60	102.4	1.4	0.32	0.0	0.00	0.19	0.06	86. A	4.0	4.0	4.0	0.11
7	17.48	33.329	24.120	5.59	102.2	1.6	0.32	0.0	0.00	0.19	0.06					
14	17.48	33.332	24.122	5.60	102.3	1.6	0.32	0.0	0.00	0.19	0.06	36.	5.6	5.2	5.4	0.11
22	17.47	33.336	24.128	5.62	102.7	1.3	0.31	0.0	0.00	0.20	0.06					
29	17.46	33.336	24.131	5.59	102.1	1.5	0.32	0.0	0.00	0.22	0.06	12.	3.9	3.8	3.8	0.10
37	16.78	33.319	24.278	5.74	103.5	1.8	0.34	0.0	0.00	0.65	0.31					
45	16.24	33.370	24.442	5.70	101.7	2.2	0.40	1.0	0.06	0.77	0.46	3.7	7.9	8.3	8.1	0.09
50	14.05	33.135	24.738	5.83	99.4	3.0	0.52	2.1	0.22	0.70	0.53					
56	12.56	32.955	24.897	5.87	96.9	4.1	0.59	2.9	0.29	0.62	0.49	1.7	2.4	2.6	2.5	0.06
67	11.58	33.041	25.148	5.55	89.8	7.8	0.91	8.5	0.10	0.26	0.27					
77	11.37	33.112	25.241	5.39	86.8	9.4	1.02	10.4	0.08	0.21	0.30	0.36	0.10	0.11	0.11	0.05

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.1 N	122 40.0 W	18/10/08	1716 UTC	32 m	1155 - 1758 PST	1156 PST	1754 PST	197.3 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
3	17.94			5.54		2.0	0.31	0.0	0.00	0.11	0.02	87. A	2.3	2.4	2.4	0.11
13	17.94	33.303	23.989	5.52	101.8	2.1	0.31	0.0	0.00	0.11	0.02					
22	17.94	33.303	23.989	5.54	102.1	2.1	0.31	0.0	0.00	0.12	0.03	35.	2.5	2.5	2.5	0.09
34	17.87	33.287	23.995	5.56	102.3	2.0	0.31	0.0	0.00	0.13	0.03					
45	16.67	33.182	24.199	5.84	104.9	2.2	0.32	0.0	0.00	0.18	0.08	12.	2.2	2.0	2.1	0.08
55	13.87	32.998	24.669	6.22	105.5	2.7	0.38	0.2	0.02	0.37	0.19					
60	13.56	33.007	24.740	6.09	102.7	3.0	0.46	0.9	0.16	0.42	0.28					
66	12.96	32.985	24.842	5.87	97.7	3.1	0.49	1.5	0.22	0.38	0.37	4.2	2.8	2.8	2.8	0.04
76	12.17	32.905	24.933	5.72	93.6	5.0	0.70	4.9	0.05	0.22	0.27					
87	12.10	33.109	25.104	5.49	89.8	7.1	0.87	8.0	0.01	0.14	0.14	1.5	0.38	0.35	0.37	0.04
96	11.72	33.118	25.182	5.46	88.6	7.8	0.94	9.2	0.00	0.09	0.12					
106	11.42	33.203	25.304	5.31	85.7	9.1	1.03	10.9	0.00	0.07	0.08					
118	10.86	33.320	25.495	4.98	79.4	12.3	1.20	14.0	0.00	0.03	0.05	0.35	0.00	0.02	0.01	0.03

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.5 N	117 18.0 W	14/10/08	1924 UTC	6 m	1205 - 1740 PST	1135 PST	1741 PST	757.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	17.51	33.428	24.188	6.04	110.5	3.6	0.28	0.1	0.00	1.91	0.47	77. A	81.1	75.8	78.5	0.60
4	17.10	33.417	24.277	6.03	109.4	3.6	0.30	0.1	0.00	1.86	0.47	36.	95.2	90.8	93.0	0.49
8	15.08	33.312	24.655	6.54	114.0	4.2	0.36	0.1	0.00	1.24	0.41	13.	32.6	32.6	32.6	0.61
12	14.26	33.293	24.815	6.56	112.4	4.8	0.41	0.0	0.00	1.12	0.58	4.6	14.8	14.0	14.4	0.49
16	13.55	33.270	24.944	6.01	101.5	5.4	0.58	2.4	0.00	2.64	0.77	1.7	8.8	10.0	9.4	0.40
22	13.16	33.296	25.042	5.37	90.0	7.2	0.83	6.8	0.00	0.92	0.50	0.36	0.27	0.29	0.28	0.17

A) INCUBATION LIGHT INTENSITIES WERE 91, 36, 11, 4.1, 1.5, 0.35 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 10.8 N	118 53.0 W	15/10/08	1931 UTC	26 m	1231 - 1749 PST	1141 PST	1750 PST	381.5 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	18.71	33.490	23.942	5.45	102.1	1.9	0.28	0.0	0.00	0.13	0.03	89. A	3.8	3.9	3.8	0.12
9	18.12	33.502	24.097	5.51	102.0	1.5	0.28	0.0	0.00	0.21	0.05					
17	17.70	33.519	24.213	5.57	102.3	1.0	0.29	0.0	0.00	0.27	0.09	37.	7.7	8.0	7.8	0.25
26	17.63	33.524	24.234	5.66	103.9	1.1	0.29	0.0	0.00	0.32	0.10					
37	17.53	33.510	24.247	5.59	102.4	1.1	0.29	0.0	0.00	0.41	0.15	11.	6.6	8.0	7.3	0.23
47	13.30	33.044	24.820	5.94	99.6	3.4	0.56	2.3	0.47	0.48	0.39					
54	12.20	32.977	24.982	5.71	93.6	5.4	0.76	5.6	0.20	0.39	0.51	4.1	3.4	3.4	3.4	0.09
62	11.78	33.092	25.151	5.48	89.0	8.0	0.93	8.9	0.05	0.26	0.29					
73	11.50	33.232	25.311	5.20	84.1	10.2	1.08	11.6	0.01	0.13	0.17	1.3	0.60	0.57	0.59	0.06
86	11.52	33.465	25.489	4.86	78.7	12.4	1.26	14.8	0.01	0.10	0.13					
96	10.73	33.427	25.601	4.69	74.7	14.2	1.32	16.0	0.00	0.04	0.07	0.35	0.02	0.02	0.02	0.05

RV NEW HORIZON — CALCOFI CRUISE 0810 — STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 11.1 N	120 55.2 W	16/10/08	1827 UTC	32 m	1149 - 1157 PST	1149 PST	1757 PST	392.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.92	33.344	24.025	5.55	102.3	1.9	0.32	0.0	0.00	0.11	0.03	91. A	2.3	2.7	2.5	0.11
12	17.84	33.345	24.045	5.54	102.0	1.7	0.32	0.0	0.00	0.11	0.03					
20	17.70	33.346	24.080	5.56	102.0	1.7	0.32	0.0	0.00	0.12	0.04	38.	4.1	4.3	4.2	0.15
33	17.12	33.299	24.183	5.71	103.6	1.9	0.36	0.0	0.00	0.18	0.07					
43	15.44	33.152	24.454	5.97	104.7	2.6	0.40	0.3	0.05	0.44	0.23	13.	8.5	8.7	8.6	0.10
49	14.19	33.082	24.668	6.01	102.7	2.9	0.48	1.1	0.17	0.51	0.35					
55	13.67	33.053	24.753	5.98	101.1	3.6	0.55	1.9	0.31	0.43	0.37					
66	12.61	32.985	24.911	5.75	95.0	5.0	0.69	3.9	0.55	0.30	0.36	4.2	3.2	3.2	3.2	0.06
77	11.87	32.961	25.032	5.63	91.6	6.3	0.82	6.8	0.05	0.16	0.21					
87	10.91	32.947	25.195	5.53	88.1	8.9	0.97	9.4	0.01	0.09	0.10	1.5	0.40	0.44	0.42	0.04
96	10.65	32.999	25.281	5.42	85.9	10.7	1.06	11.0	0.01	0.06	0.07					
107	10.62	33.128	25.387	5.21	82.6	12.6	1.17	12.9	0.00	0.03	0.05					
116	10.29	33.282	25.564	4.88	76.9	14.9	1.31	15.6	0.00	0.02	0.04	0.38	0.03	0.01	0.02	0.03

A) INCUBATION LIGHT INTENSITIES WERE 91, 36, 11, 4.1, 1.5, 0.35 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^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	100.0	33 23.1	124 19.2	10/27	1743	1805	406	217	34	34
76.7	90.0	33 43.3	123 38.0	10/27	2339	0001	431	210	46	46
76.7	80.0	34 03.4	122 56.6	10/28	0548	0610	431	204	56	56
76.7	70.0	34 23.3	122 14.8	10/28	1222	1243	419	202	33	33
76.7	60.0	34 43.3	121 32.9	10/28	1849	1910	419	206	72	72
76.7	55.0	34 53.3	121 11.9	10/28	2305	2326	414	205	63	63
76.7	51.0	35 01.3	120 55.3	10/29	0254	0316	413	215	68	68
76.7	49.0	35 05.3	120 46.6	10/29	0524	0529	100	45	240	160
80.0	51.0	34 27.0	120 31.3	10/26	0039	0046	169	66	53	53
80.0	55.0	34 19.0	120 48.2	10/26	0422	0444	453	200	57	57
80.0	60.0	34 09.1	121 09.1	10/26	0815	0836	421	208	83	83
80.0	70.0	33 49.0	121 50.5	10/26	1638	1700	460	210	61	61
80.0	80.0	33 29.0	122 32.0	10/26	2253	2314	434	212	124	124
80.0	90.0	33 09.1	123 13.4	10/27	0456	0518	456	213	40	40
80.0	100.0	32 49.0	123 54.5	10/27	1128	1150	428	211	23	23
80.0	50.5	34 27.7	120 29.1	10/29	1122	1124	56	12	107	107
81.7	43.5	34 24.3	119 47.7	10/25	1652	1654	49	14	21	21
81.8	46.9	34 16.6	120 01.2	10/25	2019	2040	415	211	58	58
83.3	110.0	31 54.7	124 10.2	10/23	1156	1218	481	211	29	29
83.3	100.0	32 14.6	123 29.5	10/23	1818	1840	419	216	53	53
83.3	90.0	32 34.7	122 48.7	10/24	0033	0054	431	216	37	37
83.3	80.0	32 54.7	122 07.7	10/24	0625	0646	437	201	27	27
83.3	70.0	33 14.7	121 26.5	10/24	1250	1311	430	208	40	40
83.3	60.0	33 34.5	120 46.1	10/24	1928	1949	435	206	55	55
83.3	55.0	33 44.7	120 24.5	10/25	0020	0041	434	217	58	58
83.3	51.0	33 52.7	120 08.2	10/25	0359	0408	175	88	29	29
83.3	42.0	34 11.2	119 30.4	10/25	0947	0955	170	75	29	29
83.3	40.6	34 13.5	119 24.7	10/25	1230	1232	63	19	16	16
83.3	39.4	34 15.5	119 19.5	10/25	1337	1339	47	13	64	64
86.7	33.0	33 53.4	118 29.4	10/20	2105	2109	113	34	35	35
86.7	35.0	33 49.4	118 37.6	10/21	0002	0024	442	218	57	57
86.7	40.0	33 39.4	118 58.6	10/21	0453	0515	432	215	58	58
86.7	45.0	33 29.5	119 18.3	10/21	0828	0849	420	217	43	43
86.7	50.0	33 19.5	119 39.7	10/21	1346	1352	136	52	133	133
86.7	55.0	33 09.3	120 00.3	10/21	1810	1832	460	210	111	111
86.7	60.0	32 59.3	120 20.9	10/21	2243	2305	457	216	98	98
86.7	70.0	32 39.4	121 01.9	10/22	0521	0542	442	206	61	61
86.7	80.0	32 19.3	121 42.9	10/22	1139	1201	448	216	56	56
86.7	90.0	31 59.3	122 23.5	10/22	1739	1801	444	211	36	36
86.7	100.0	31 39.4	123 04.1	10/22	2339	0001	447	210	29	29
86.7	110.0	31 19.5	123 44.4	10/23	0538	0559	447	207	36	36
86.8	32.5	33 53.2	118 26.7	10/20	1928	1930	49	13	41	41
88.5	30.1	33 40.4	118 05.0	10/20	1540	1542	44	14	45	45
90.0	120.0	30 25.0	123 59.8	10/17	1905	1926	423	215	40	40
90.0	110.0	30 45.2	123 19.9	10/18	0143	0204	446	212	25	25
90.0	100.0	31 05.0	122 40.1	10/18	0813	0835	461	212	13	13
90.0	90.0	31 25.0	121 59.4	10/18	1547	1609	410	216	54	54
90.0	80.0	31 45.1	121 18.9	10/18	2223	2244	430	203	93	93
90.0	70.0	32 05.1	120 38.3	10/19	0448	0509	434	206	44	44
90.0	60.0	32 25.1	119 57.6	10/19	1103	1124	415	217	29	29
90.0	53.0	32 39.0	119 29.0	10/19	1632	1653	431	209	44	44
90.0	37.0	33 11.1	118 23.4	10/20	0208	0229	438	212	41	41
90.0	35.0	33 15.1	118 15.1	10/20	0515	0536	419	211	38	38
90.0	30.0	33 25.1	117 54.3	10/20	0832	0852	406	215	15	15
90.0	28.0	33 29.1	117 46.1	10/20	1205	1210	108	39	19	19
90.0	27.7	33 29.7	117 44.9	10/20	1255	1257	44	13	23	23
90.0	45.0	32 55.2	118 56.1	10/30	0153	0214	403	214	64	64
93.3	26.7	32 57.3	117 17.7	10/14	1220	1234	297	146	34	34
93.3	28.0	32 54.7	117 23.7	10/14	1645	1704	396	208	35	35
93.3	30.0	32 51.5	117 31.1	10/14	1952	2014	440	214	52	52
93.3	35.0	32 40.8	117 52.4	10/15	0001	0022	464	207	30	30
93.3	40.0	32 30.8	118 13.0	10/15	0404	0425	455	198	15	15
93.3	45.0	32 21.0	118 33.3	10/15	0808	0830	341	216	15	15
93.3	50.0	32 10.9	118 53.5	10/15	1248	1309	465	205	39	39
93.3	55.0	32 00.7	119 13.9	10/15	1729	1752	451	214	49	49
93.3	60.0	31 50.8	119 34.3	10/15	2145	2207	462	205	54	54
93.3	70.0	31 30.8	120 14.8	10/16	0354	0417	456	205	55	55
93.3	80.0	31 11.0	120 55.2	10/16	0913	0935	443	213	34	34
93.3	90.0	30 50.8	121 35.3	10/16	1706	1727	484	203	39	39
93.3	100.0	30 30.7	122 15.5	10/16	2328	2349	435	211	23	23
93.3	110.0	30 10.9	122 55.3	10/17	0513	0536	490	201	47	29
93.3	120.0	29 51.2	123 35.1	10/17	1149	1211	463	210	15	15
93.4	26.4	32 57.0	117 16.3	10/14	1343	1346	80	22	63	63