UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0808
14 – 30 August 2008

CC Reference 09-04
14 October 2009

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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CONTENTS

Introduction 3

Literature Cited 7

CalCOFI Cruise 0808

List of Figures 9

Personnel 20

Tabulated Rosette Cast Data 21

Tabulated Primary Productivity Data 52

Tabulated Macrozooplankton Data 58

INTRODUCTION

The data presented in this report were collected during cruise 0808* 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.

LITERATURE CITED

Anderson, G. C., compiler, 1971. "Oxygen Analysis," Marine Technician's Handbook, SIO Ref. No. 71-8, Sea Grant Pub. No. 9.

Carpenter, J. H., 1965. The Chesapeake Bay Institute technique for the Winkler dissolved oxygen method. *Limnol. Oceanogr., 10*: 141-143.

Carter, D. J. T., 1980. Echo-sounding correction tables. Third Edition. Hydrographic Department, Ministry of Defence, Taunton, U.K., NP 139: 150 pp.

Culberson, C. H. 1991. Dissolved oxygen. WHP Operations and Methods -- July 1991.

Fitzwater, S. E., G. A. Knauer and J. H. Martin, 1982. Metal contamination and its effect on primary production measurements. *Limnol. Oceanogr., 27*: 544-551.

Gordon, L. I., J. C. Jennings, Jr., A. A. Ross, and J. M. Krest, 1993. A suggested protocol for continuous flow automated analysis of seawater nutrients (phosphate, nitrate, nitrite and silicic acid) in the WOCE Hydrographic Program and the Joint Global Ocean Fluxes Study. WOCE Operations Manual, Part 3.1.3 "WHP Operations and Methods," *WHP Office Report WHPO 91-1*.

Holm-Hansen, O., C. J. Lorenzen, R. W. Holmes and J. D. H. Strickland, 1965. Fluorometric determination of chlorophyll. *J. Cons. perm. int. Explor. Mer, 30*: 3-15.

Klein, H. T., 1973. A new technique for processing physical oceanographic data. SIO Ref. No. 73-14.

Koroleff, F. 1969. Direct determination of ammonia in natural waters as Indophenol Blue. Int. Con. Explor. Sea, C.M. C: 9.

Koroleff, F. 1970. The above paper revised, Int. Con. Explor. Sea, Information on techniques and methods for sea water analysis. Interlab Report No. 3, 19-22.

Kramer, D., M. J. Kalin, E. G. Stevens, J. R. Thrailkill and J. R. Zweifel, 1972. Collecting and processing data on fish eggs and larvae in the California Current region. *NOAA Technical Report NMFS CIRC-370:* 38 pp.

Lean, D. R. S. and B. K. Burnison, 1979. An evaluation of errors in the ^{14}C method of primary production measurement. *Limnol. Oceanogr., 24*: 917-928.

Reid, J. L. and A. W. Mantyla, 1976. The effect of the geostrophic flow upon coastal sea elevations in the northern North Pacific Ocean. *J. Geophys. Res., 81:* 3100-3110.

Parsons, T. R., Y. Maita, C. M. Lalli, 1984. *A Manual of Chemical and Biological Methods for Seawater Analysis*. Pergamon Press Ltd., 3-28.

Saunders, P. M., 1981. Practical conversion of pressure to depth. *J. Phys. Oceanogr., 11*: 573-574.

Scripps Institution of Oceanography, University of California, 1991. Physical, Chemical and Biological Data, CalCOFI Cruises 9003 and 9004. SIO Ref. 91-4, 96 pp.

UNESCO, 1981, a. Background papers and supporting data on the Practical Salinity Scale, 1978. *UNESCO Tech. Pap. in Mar. Sci., No. 37*.

UNESCO, 1981, b. Background papers and supporting data on the International Equation of State 1980. *UNESCO Tech. Pap. in Mar. Sci., No. 38.*

Venrick, E. L. and T. L. Hayward, 1984. Determining chlorophyll on the 1984 CalCOFI surveys. *CalCOFI Rep., Vol. XXV*: 74-79.

Weiss, R. F., 1970. The solubility of nitrogen, oxygen and argon in water and seawater. *Deep-Sea Res., 17:* 721-735.

Yentsch, C. S. and D. W. Menzel, 1963. A method for the determination of phytoplankton, chlorophyll and phaeophytin by fluorescence. *Deep-Sea Res., 10:* 221-231.

FIGURES

Cruise 0808

1. CalCOFI Cruise 0808 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.

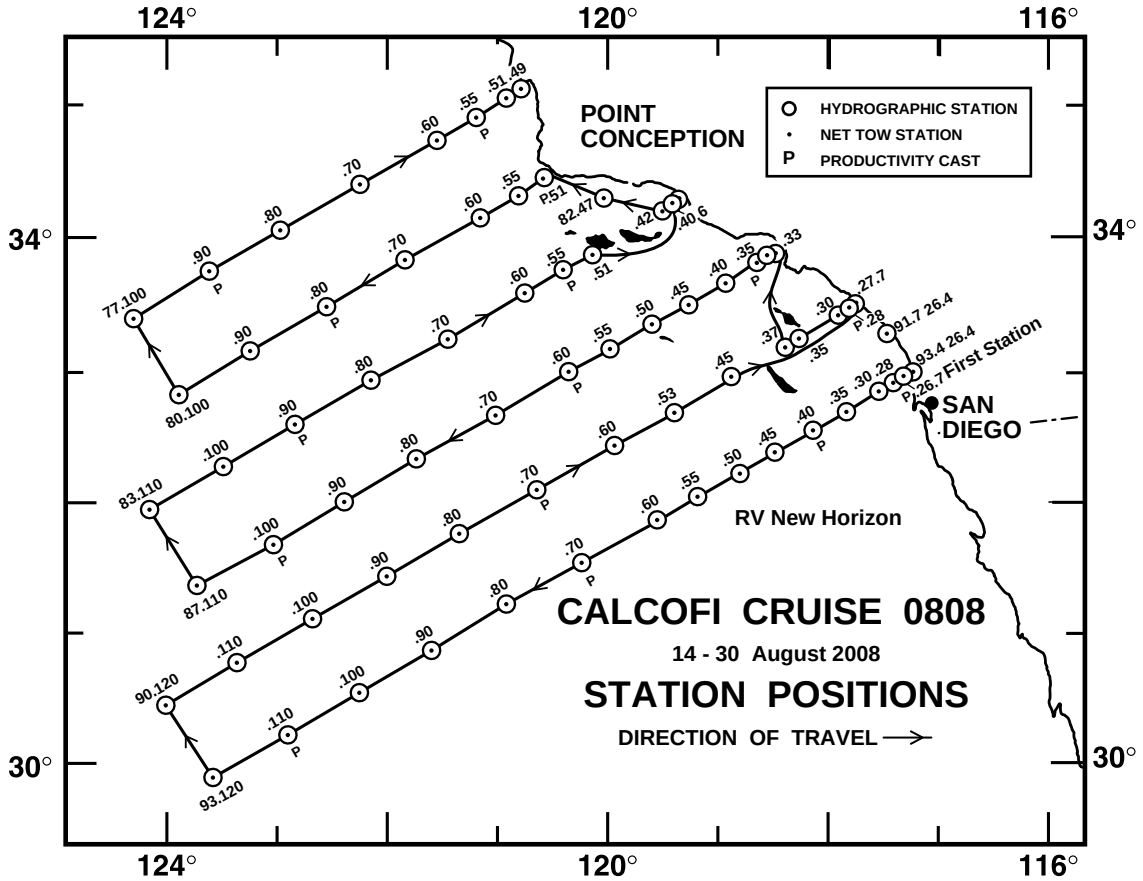

FIGURE 1

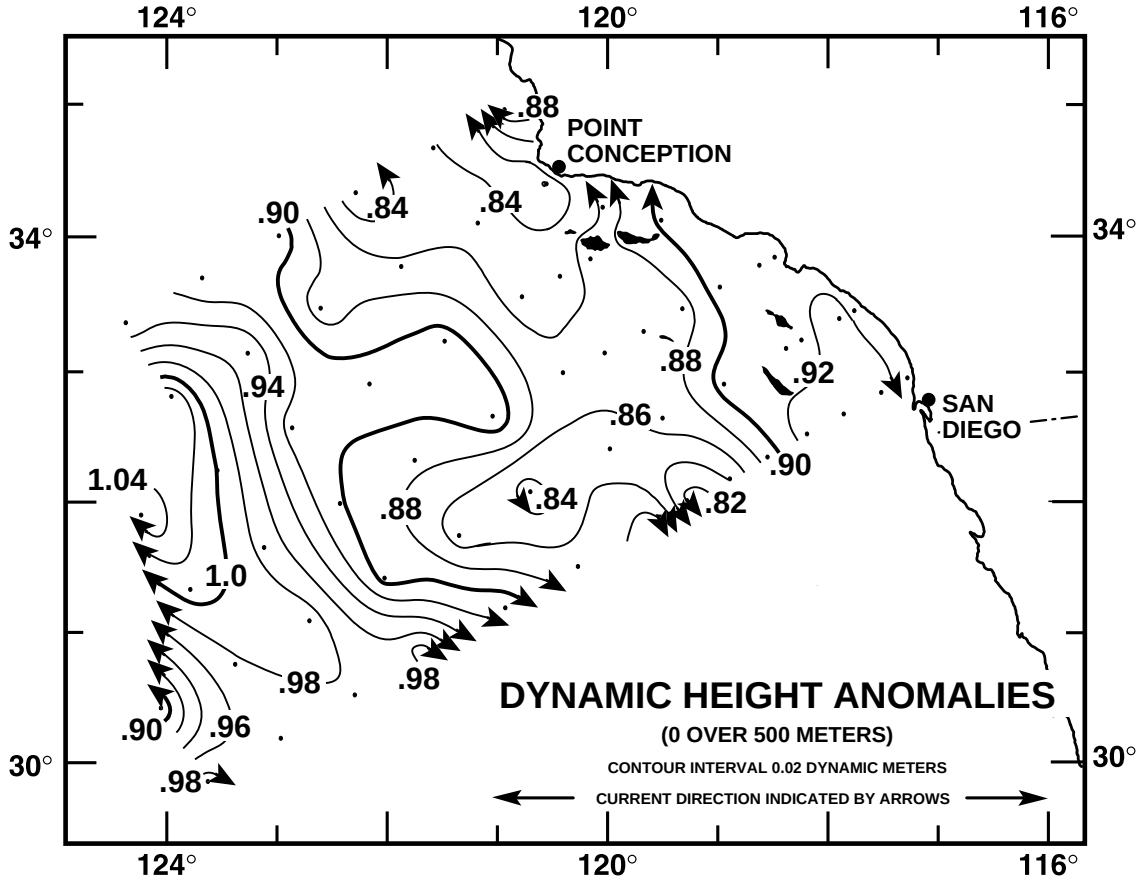

FIGURE 2

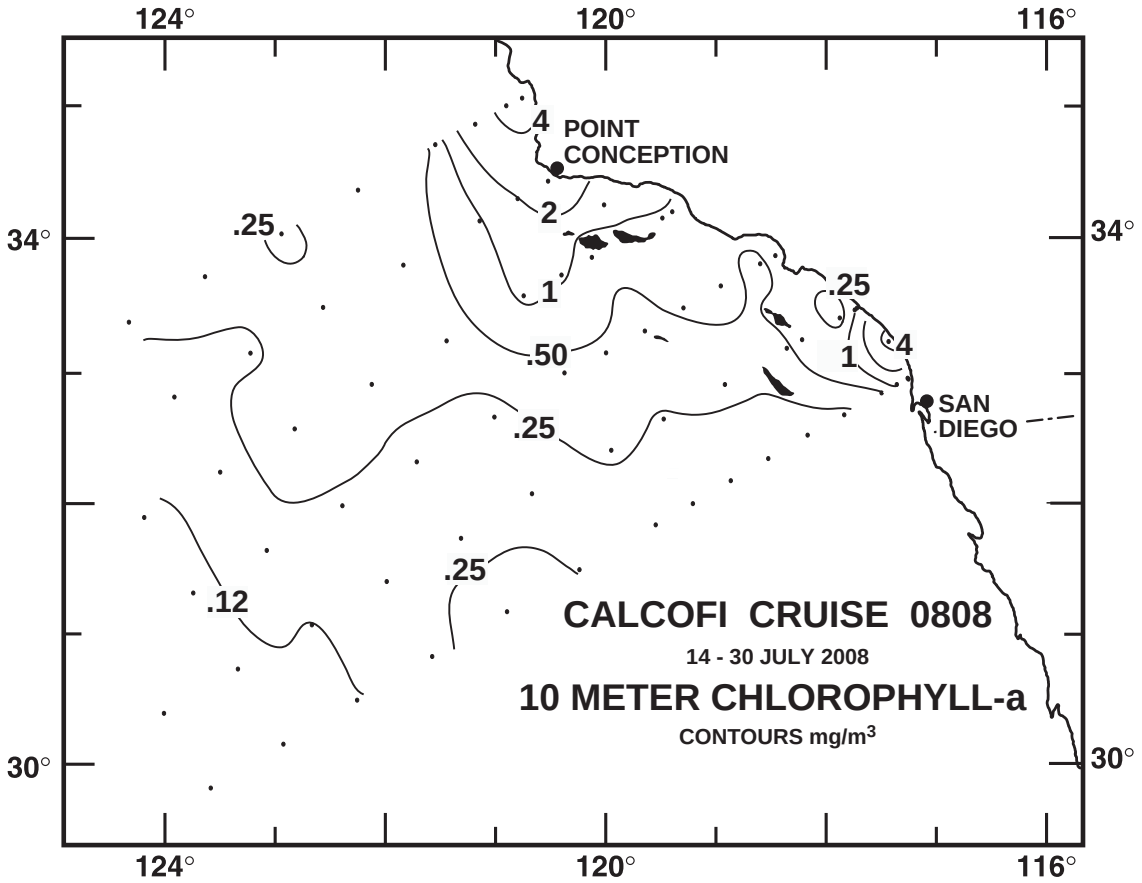

FIGURE 3A

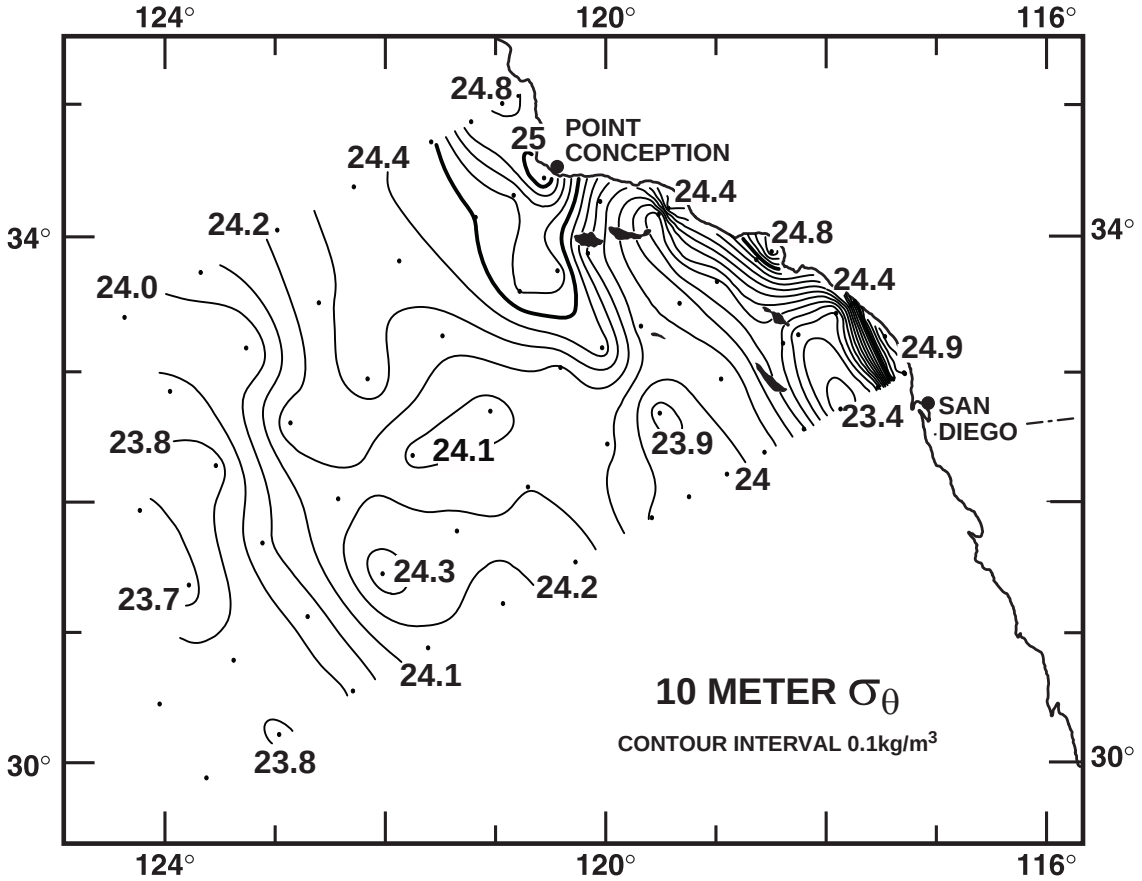

FIGURE 3B

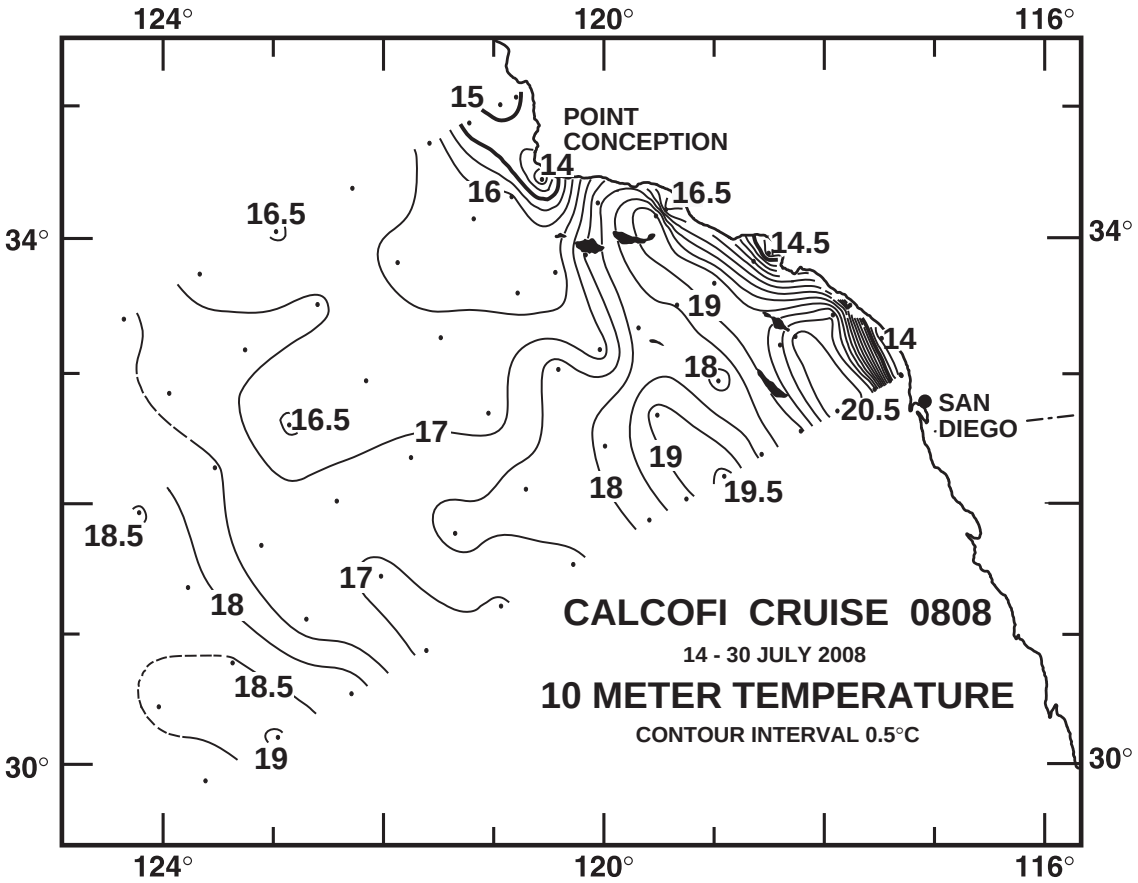

FIGURE 3C

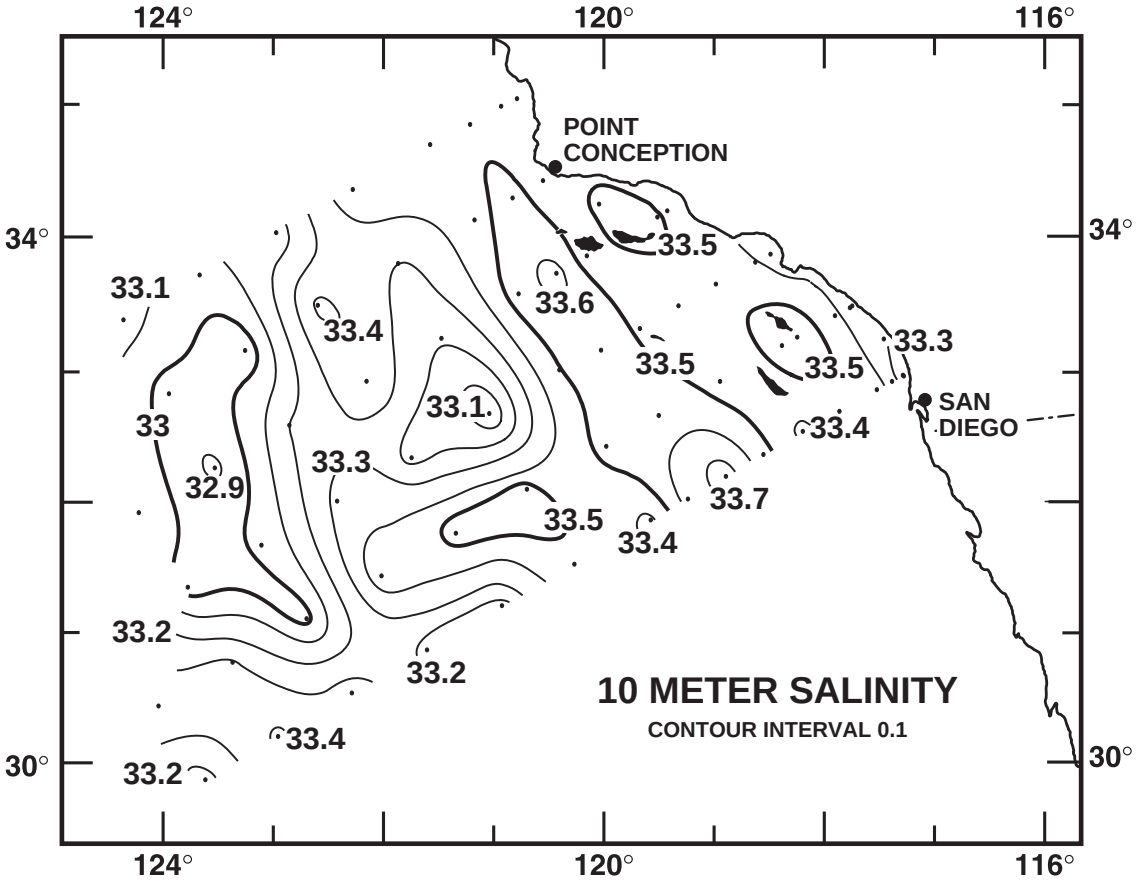

FIGURE 3D

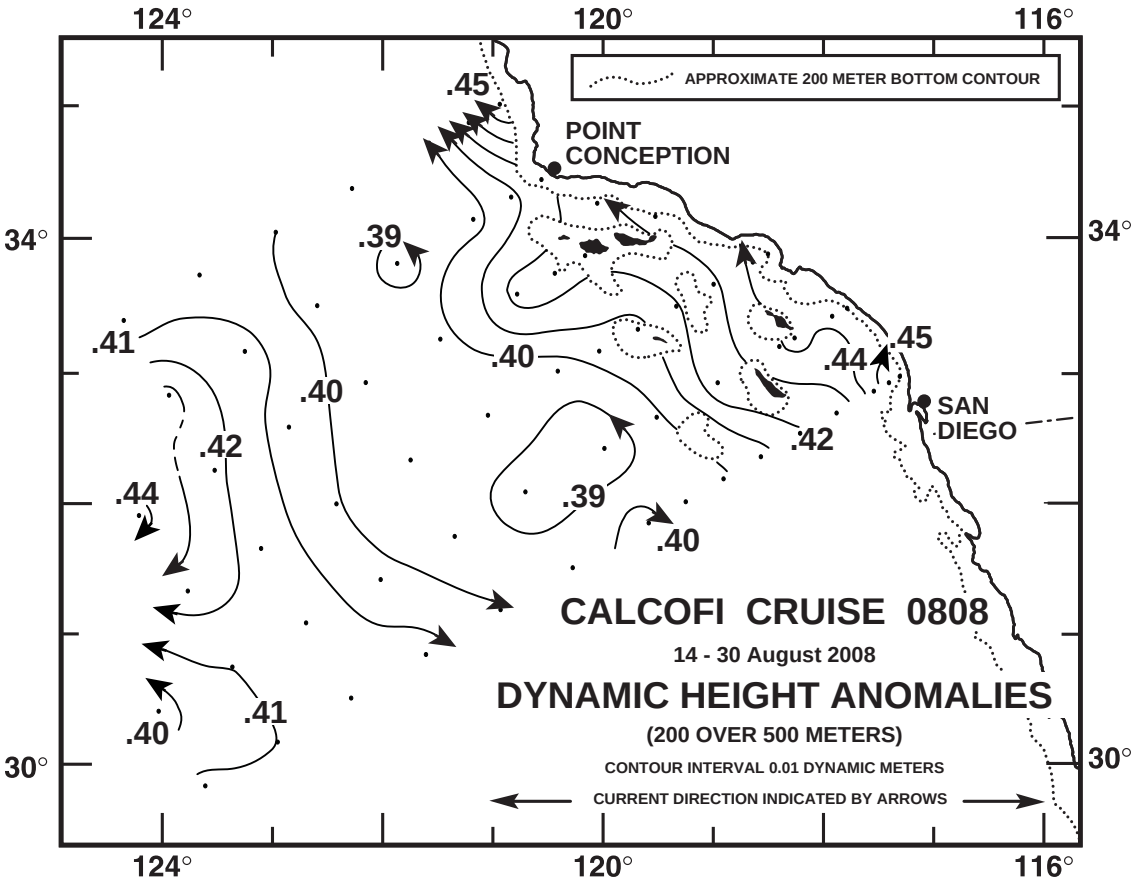

FIGURE 4A

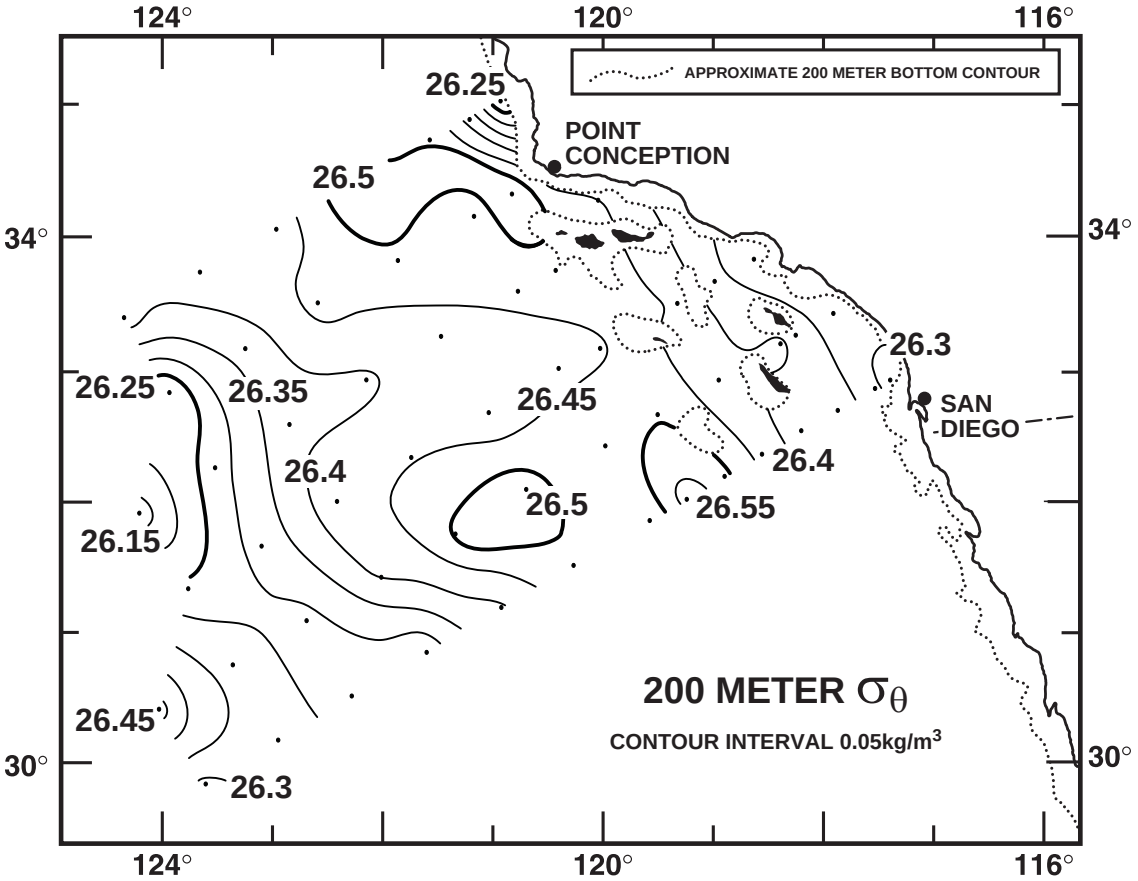

FIGURE 4B

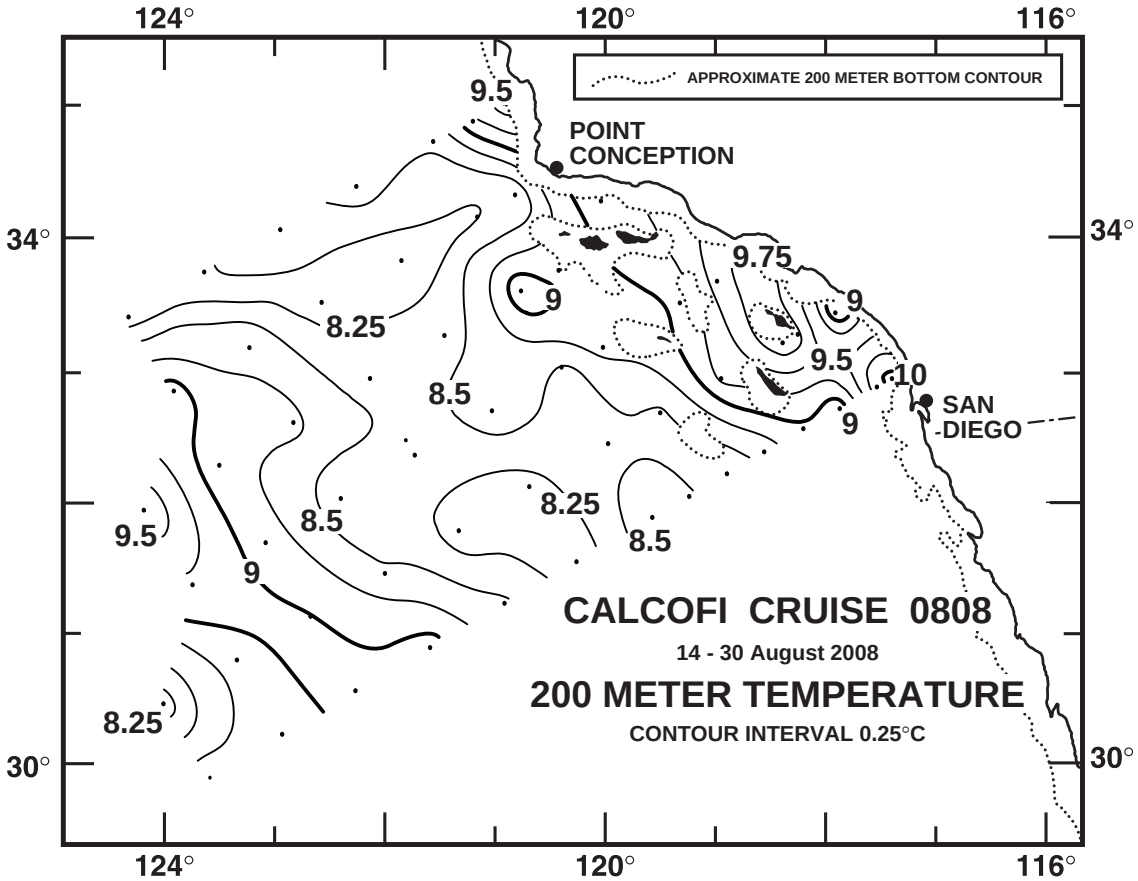

FIGURE 4C

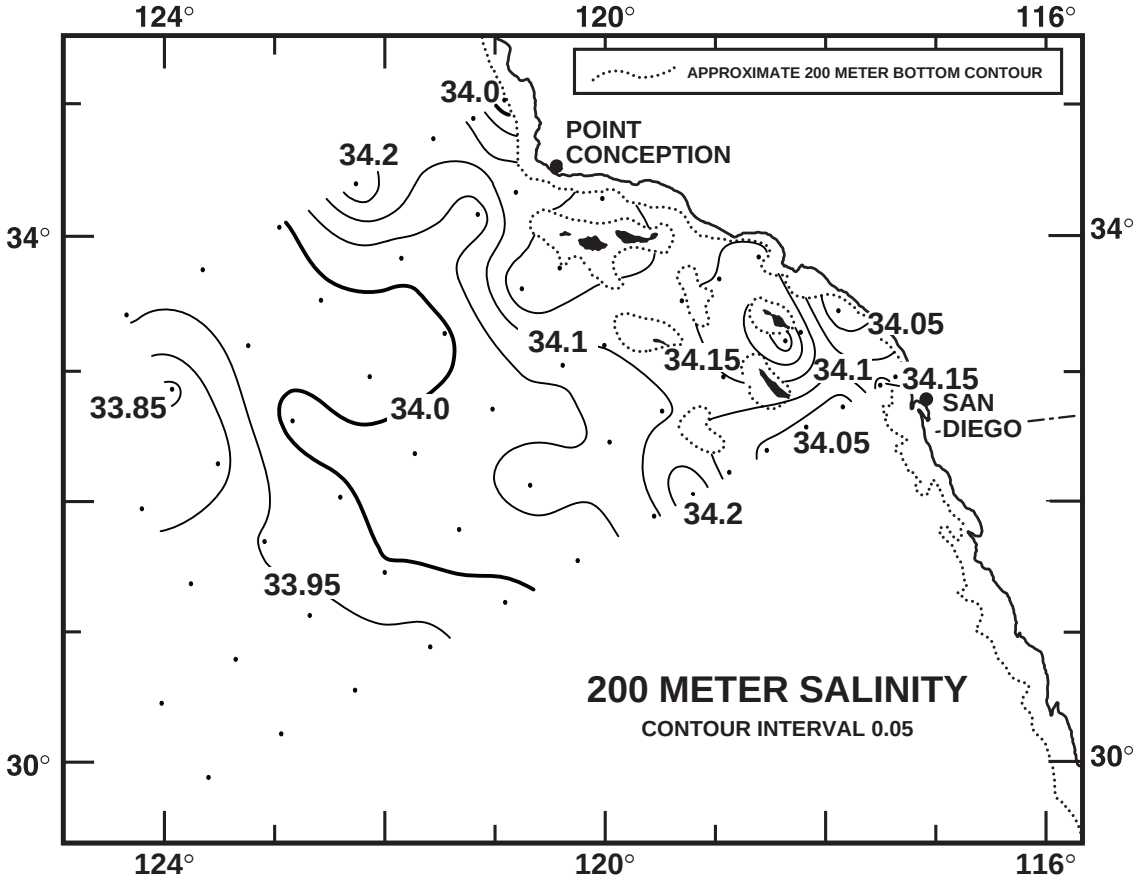

FIGURE 4D

CALCOFI CRUISE 0808

18 - 21 August 2008

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

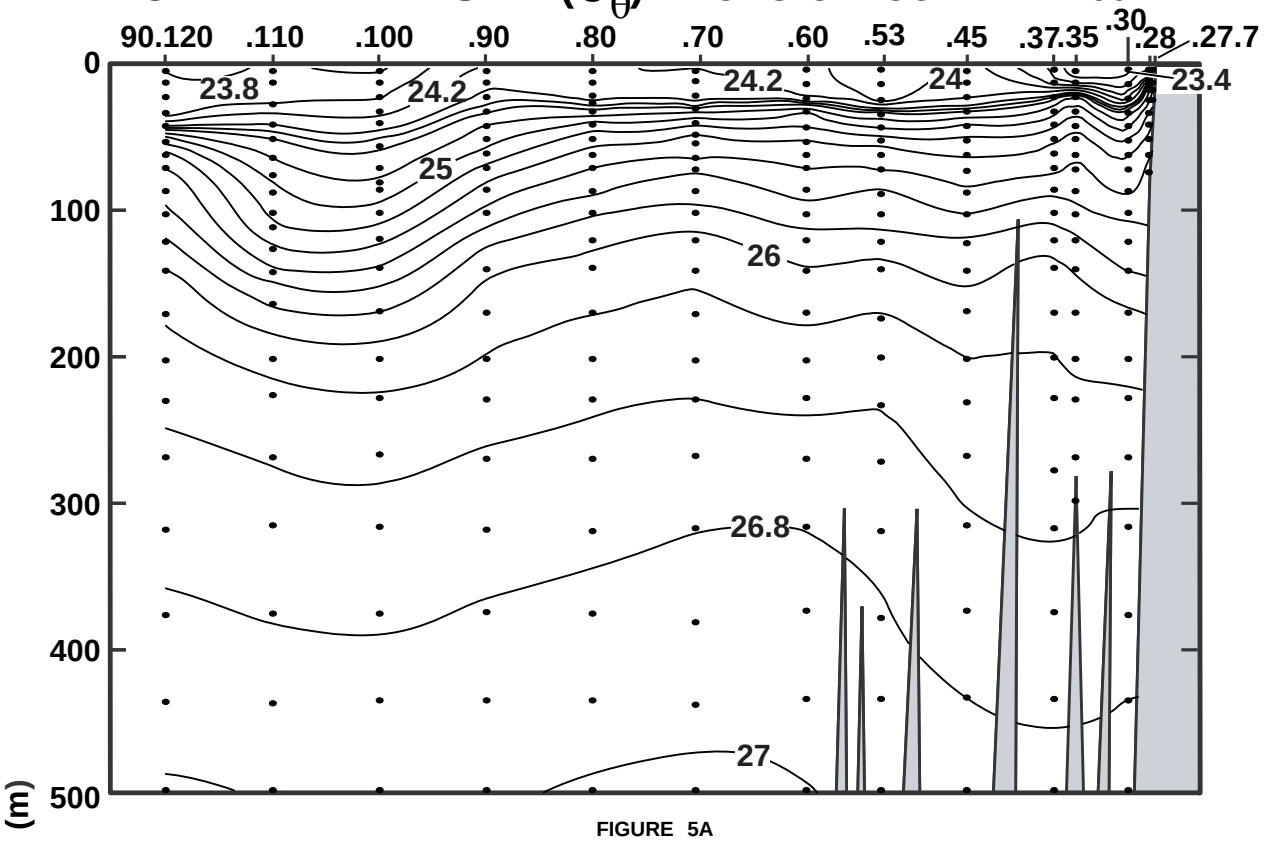

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

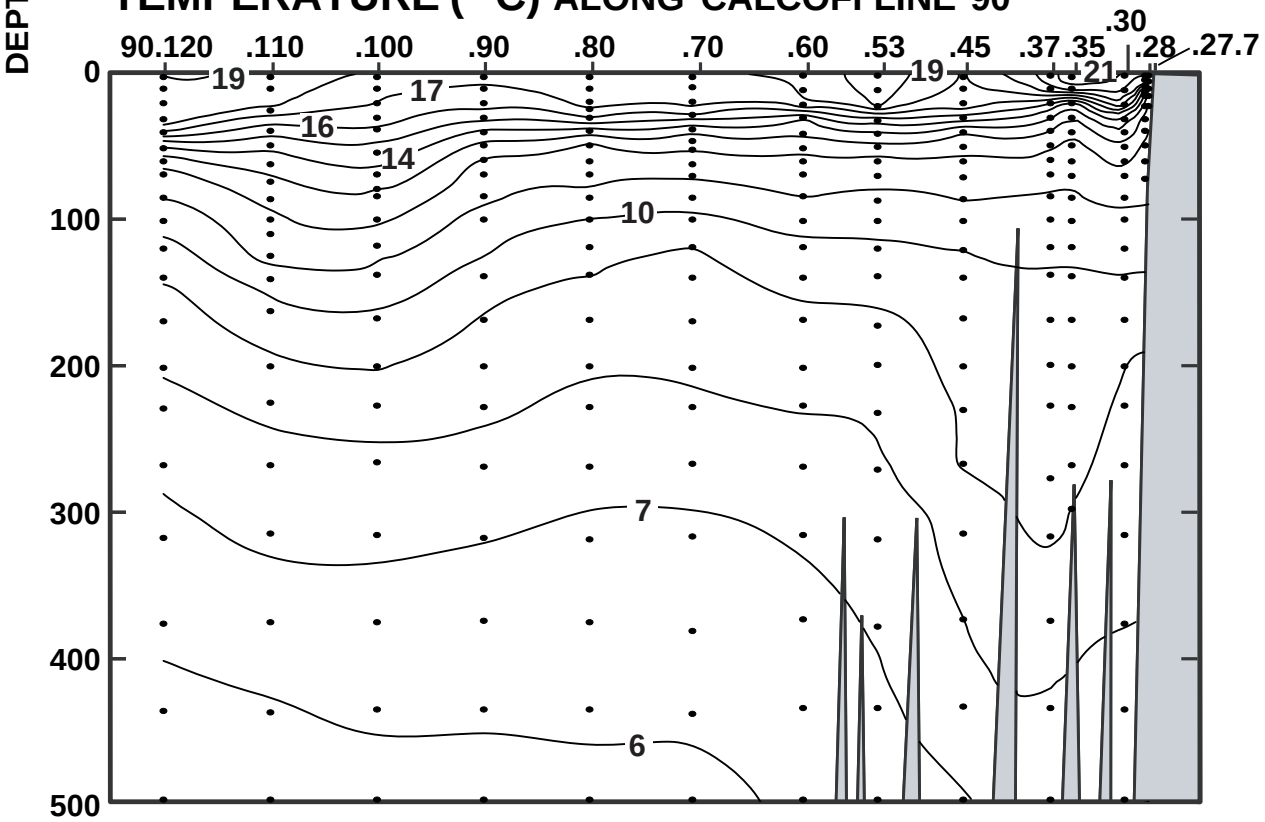

FIGURE 5B

CALCOFI CRUISE 0808

18 - 21 August 2008

SALINITY ALONG CALCOFI LINE 90

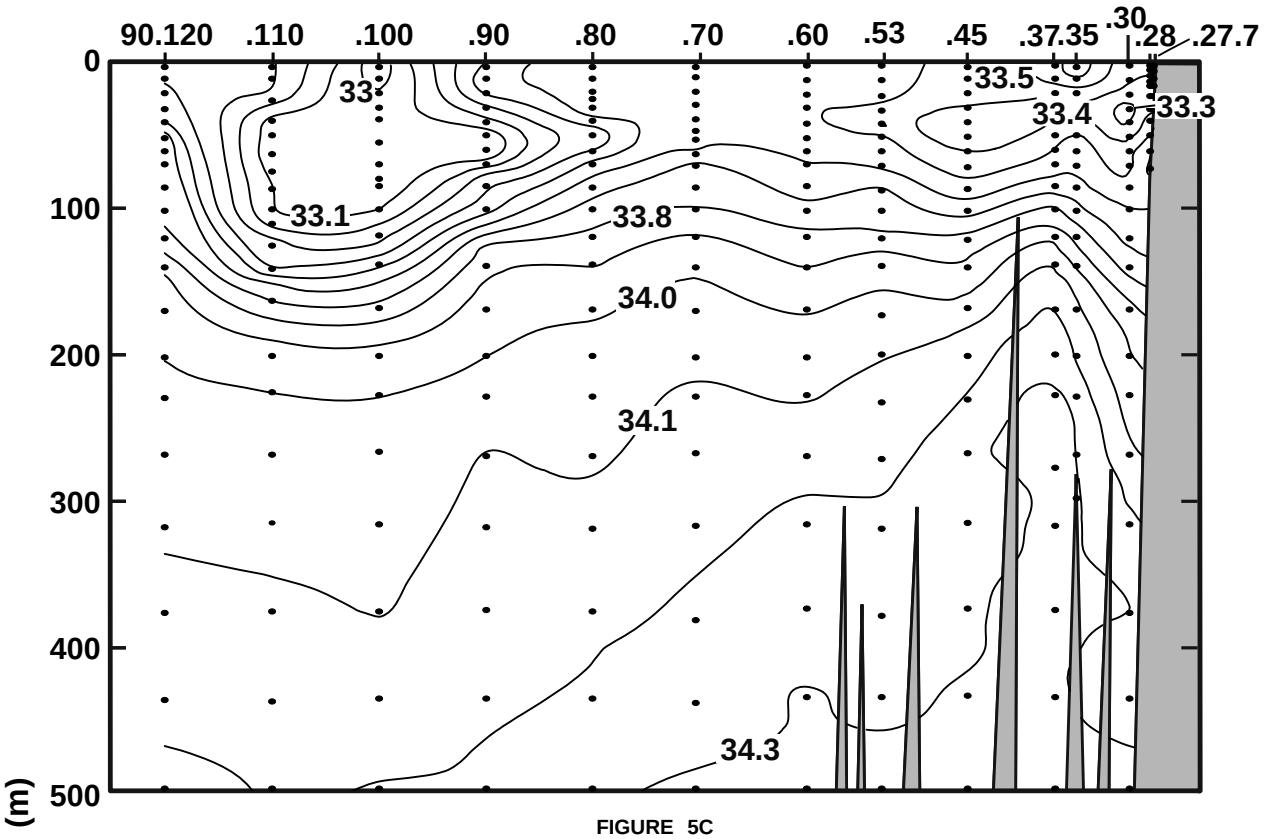

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

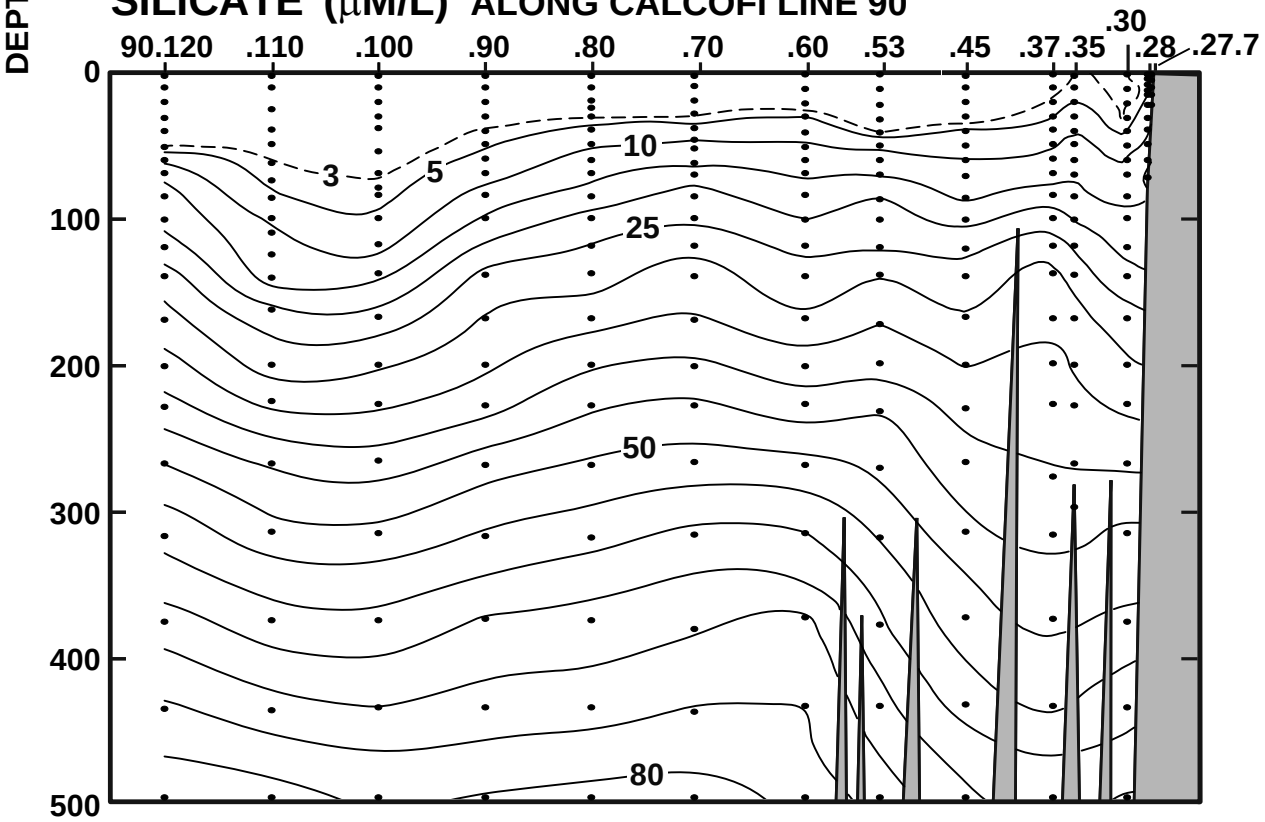

FIGURE 5D

CALCOFI CRUISE 0808

18 - 21 August 2008

NITRATE (μM/L) ALONG CALCOFI LINE 90

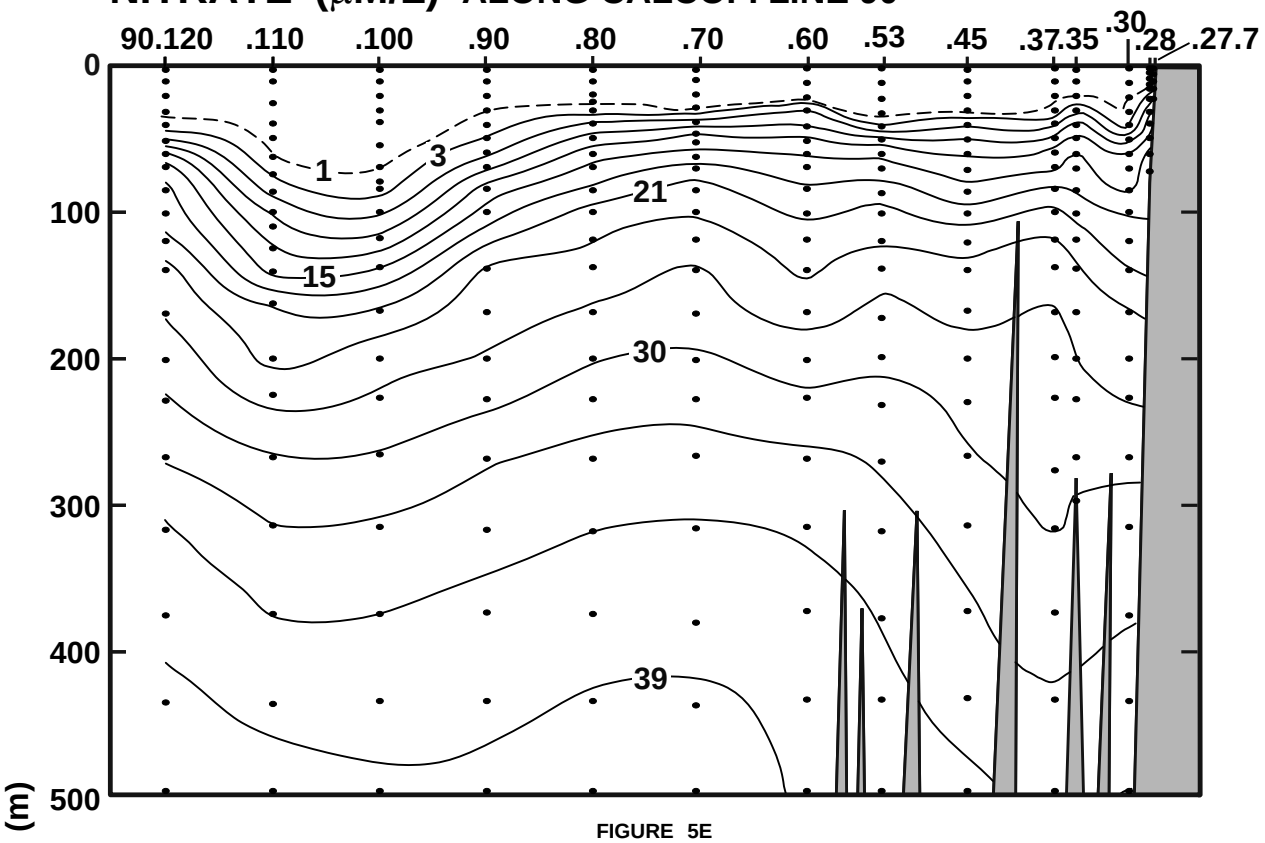

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

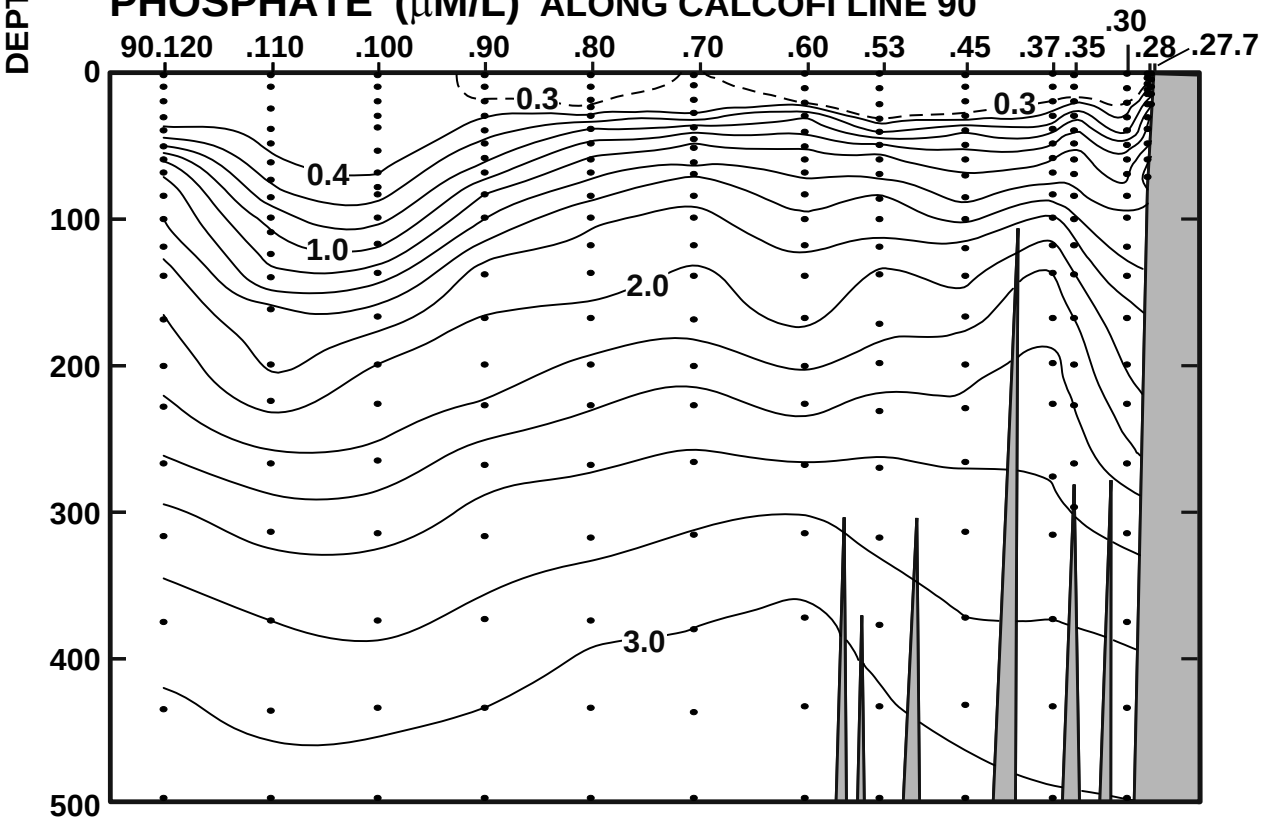

FIGURE 5F

CALCOFI CRUISE 0808

18 - 21 August 2008

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

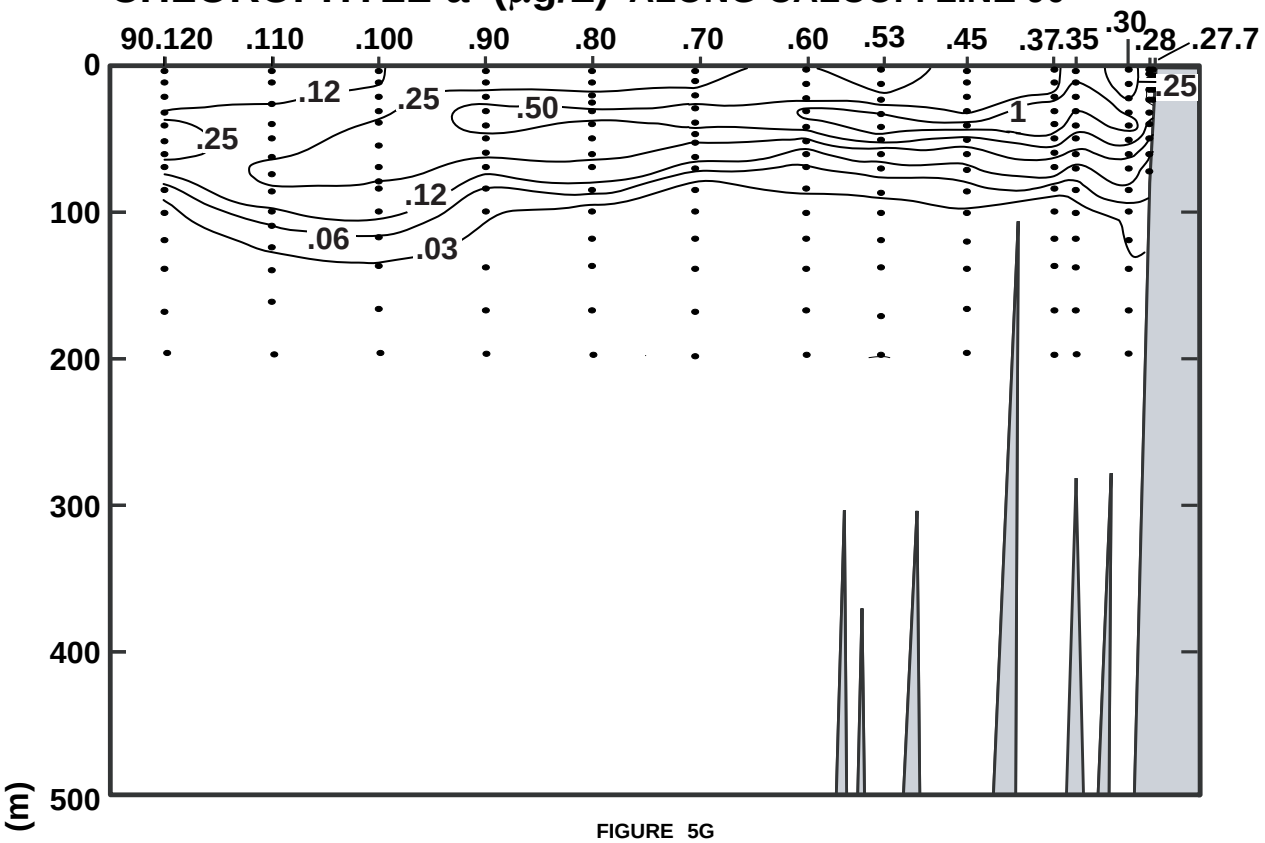

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

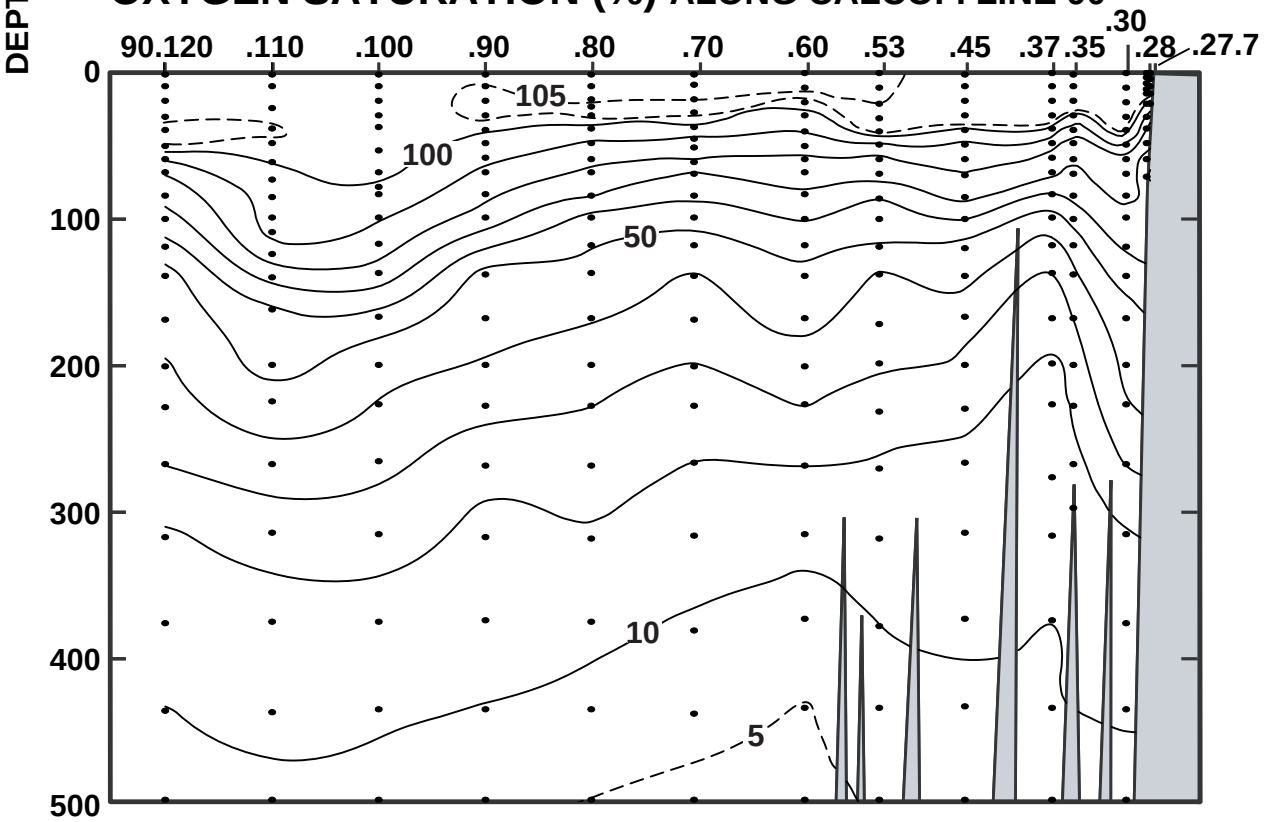

FIGURE 5H

CALCOFI CRUISE 0808

18 - 21 August 2008

OXYGEN (mL/L) ALONG CALCOFI LINE 90

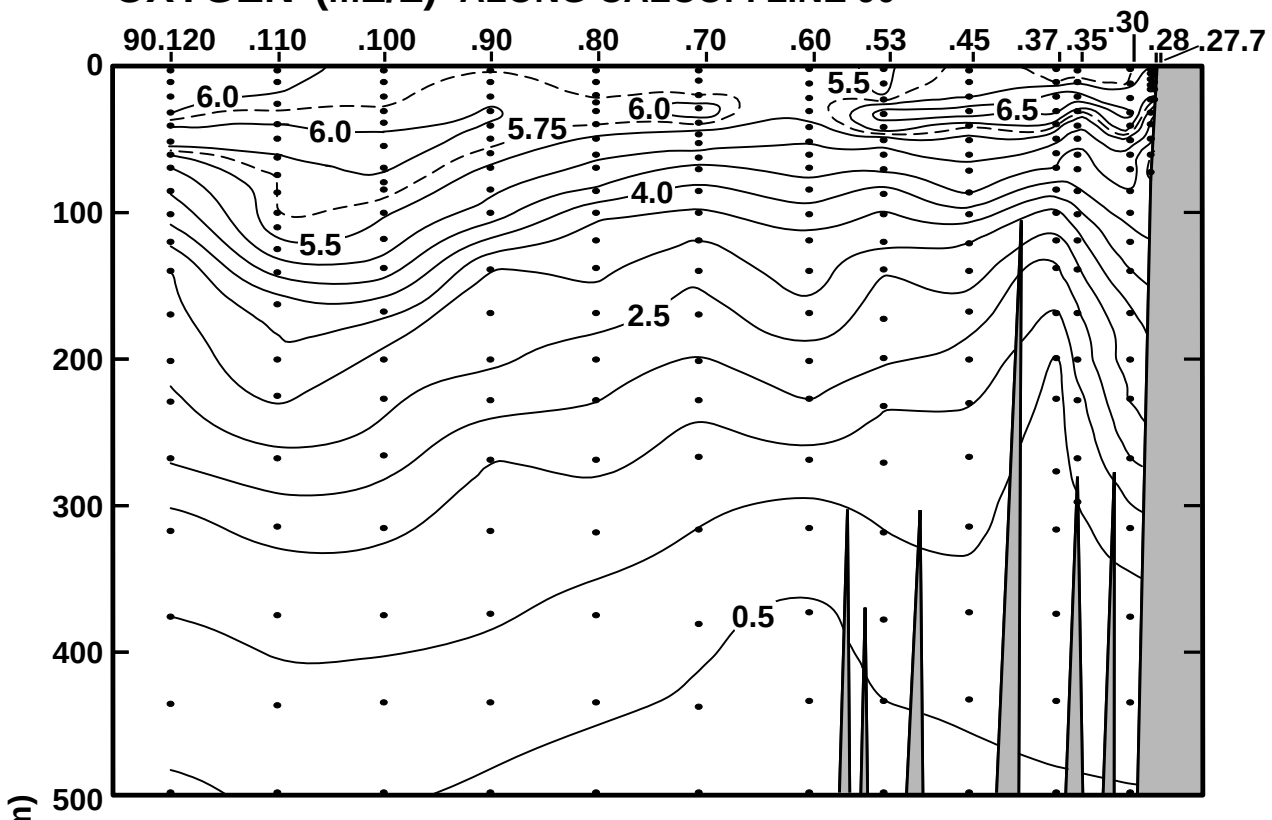

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

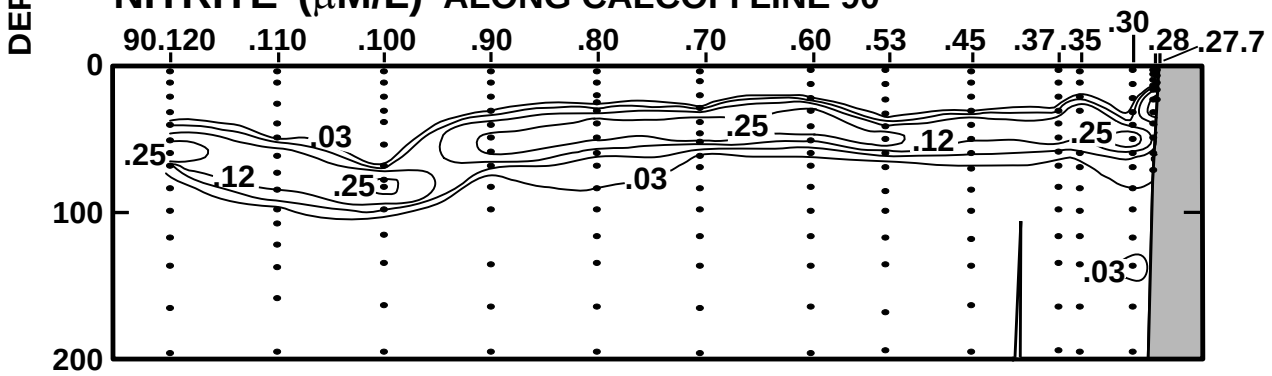

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

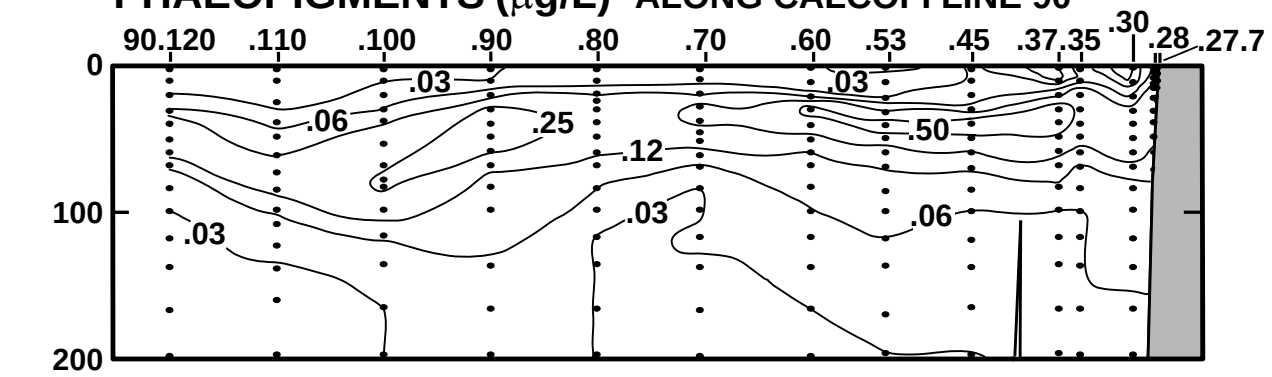

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0808

SHIP'S CAPTAIN

Murray Stein, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Wolgast, David M. (Chief Scientist)	Staff Research Associate, SIO
Asch, Rebecca	Graduate Student, SIO
Becker, Susan	Staff Research Associate, SIO
Camacho-Wylie, Dominique	Marine Mammal Observer, MPL
Daniels, Emy F.	Volunteer, UCSD
Dovel, Shonna L.	Staff Research Associate, SIO
Eide, Nick	Bird Observer, Farallon Institute
Faber, David N.	Staff Research Associate, SIO
Havron, Andrea M.	Marine Mammal Observer, MPL
Hays, Amy E.	Fishery Biologist, NMFS
Munger, Lisa M.	Post-Doc, SIO
Munro, David R.	Graduate Student, UW
Overcash, Bryan J.	Staff Research Associate, SIO
Roadman, Megan J.	Staff Research Associate, SIO
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO
Sullivan, Christopher J.	Volunteer, UCSD
Susner, Michael G.	Staff Research Associate, SIO
Wilkinson, James R.	Programmer Analyst, SIO

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 5.1 N	120 46.3 W	29/08/08	2324 UTC	70 m	290 07 kn	200 04 06	4	1006.3 mb	16.0 C	15.9 C	05m	8/8	

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	15.19	15.19	33.478	24.758	317.8	0.000	6.26	109.4	7.3	0.53	2.4	0.07	0.54	4.28	0.97	0	
2	15.19	15.19	33.478	24.758	317.9	0.006	6.26	109.4	7.3	0.53	2.4	0.07	0.54	4.28	0.97	2	212
6	15.03	15.03	33.477	24.792	314.7	0.019	6.21	108.2	7.4	0.56	2.7	0.08	0.46	4.15	0.89	6	210
6	15.02	15.02	33.477	24.795	314.5	0.019										6	211
10	14.94	14.94	33.476	24.811	313.0	0.032	6.21	108.0	7.5	0.56	2.8	0.08	0.48	4.30	0.91	10	208
10	14.93	14.93	33.476	24.813	312.8	0.032										10	209
20 ISL	14.46 D	14.46	33.473 D	24.912	303.7	0.062	6.18	106.5	7.7	0.58	3.2	0.09	0.59	4.94	1.02	20	
22	14.42	14.42	33.474	24.921	302.9	0.068	6.17	106.2	7.7	0.59	3.3	0.09	0.61	5.03	1.04	22	207
30 ISL	13.94 D	13.94	33.489 D	25.034	292.4	0.092	6.08	103.6	6.6	0.63	4.2	0.11	0.54	4.70	0.96	30	
31	13.94	13.94	33.493	25.037	292.2	0.095	6.07	103.5	6.5	0.63	4.3	0.11	0.53	4.66	0.95	31	205
31	13.94	13.94	33.492	25.036	292.3	0.095										31	206
40	12.45	12.44	33.527	25.361	261.5	0.120	4.81	79.5	11.5	1.13	11.8	0.20	0.25	0.79	0.41	40	204
50 ISL	11.82 D	11.81	33.591 D	25.530	245.6	0.145	4.17	68.0	16.2	1.44	14.9	0.29	0.75	0.56	0.70	50	
51	11.81	11.80	33.591	25.532	245.4	0.148										51	203
52	11.81	11.80	33.586	25.528	245.8	0.150	4.12	67.2	16.8	1.47	15.0	0.30	0.88	0.52	0.80	52	202
59	11.83	11.82	33.594	25.531	245.7	0.168	4.05	66.1	17.5	1.51	15.1	0.34	1.02	0.59	0.94	59	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 1.6 N	120 54.9 W	29/08/08	2103 UTC	231 m	250 08 kn	170 04 07	2	1007.4 mb	18.0 C	17.0 C	05m	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	15.86	15.86	33.505	24.630	330.0	0.000	6.56	116.3	6.0	0.33	0.0	0.02	0.00	2.64	0.80	0	
2	15.86	15.86	33.505	24.630	330.0	0.007	6.56	116.3	6.0	0.33	0.0	0.02	0.00	2.64	0.80	2	215
3	15.88	15.88	33.505	24.626	330.5	0.010										3	216
10	15.35	15.35	33.502	24.742	319.7	0.033	6.55	114.9	6.5	0.40	0.3	0.04	0.35	4.55	1.34	10	214
10	15.32	15.32	33.502	24.748	319.0	0.033			6.5	0.41	0.3	0.04	0.32			10	213
19	13.87	13.87	33.500	25.056	290.0	0.060	5.68	96.7	8.3	0.75	5.9	0.13	0.26	2.99	0.91	19	212
20 ISL	13.78 D	13.78	33.502 D	25.076	288.1	0.063	5.63	95.7	8.4	0.77	6.2	0.14	0.27	2.83	0.87	20	
29	12.94	12.94	33.507	25.250	271.8	0.088	5.18	86.5	9.9	0.97	9.3	0.26	0.33	1.50	0.59	29	211
30 ISL	12.39 D	12.39	33.540 D	25.382	259.2	0.091	5.09	84.0	10.3	1.01	9.9	0.27	0.30	1.36	0.56	30	
39	11.58	11.58	33.593	25.576	240.9	0.113	4.29	69.6	14.1	1.36	15.7	0.36	0.00	0.37	0.31	39	210
50	11.15	11.14	33.640 D	25.691	230.2	0.139										50	209
59	11.01	11.00	33.654	25.727	227.0	0.160	3.81	61.1	17.2	1.54	18.5	0.09	0.05	0.15	0.19	59	208
70	10.73	10.72	33.710	25.821	218.3	0.184	3.41	54.4	19.7	1.68	20.2	0.05	0.04	0.07	0.14	70	207
75 ISL	10.69 D	10.68	33.718 D	25.834	217.2	0.195	3.34	53.2	20.1	1.70	20.5	0.05	0.05	0.07	0.14	75	
85	10.61	10.60	33.734	25.861	214.9	0.217	3.27	52.0	20.7	1.73	21.0	0.04	0.06	0.06	0.13	85	206
100	10.37	10.36	33.781	25.939	207.7	0.248	3.06	48.4	23.4	1.84	22.3	0.02	0.02	0.03	0.13	101	205
118	10.17	10.16	33.818	26.003	202.0	0.285	2.91	45.9	24.6	1.89	23.0	0.03	0.05	0.03	0.12	119	204
125 ISL	10.11 D	10.10	33.835 D	26.026	199.9	0.299	2.86	45.0	24.9	1.91	23.2	0.03	0.04	0.03	0.11	126	
142	10.04	10.02	33.853	26.053	197.8	0.333	2.76	43.4	25.7	1.95	23.8	0.03	0.00	0.03	0.10	143	203
150 ISL	9.99 D	9.97	33.864 D	26.070	196.3	0.349	2.72	42.7	26.1	1.97	24.1	0.03	0.00	0.03	0.10	151	
173	9.81	9.79	33.911	26.137	190.4	0.393	2.58	40.4	27.2	2.01	24.8	0.03	0.00	0.02	0.10	174	202
200 ISL	9.66 D	9.64	33.957 D	26.199	185.1	0.444	2.37	37.0	28.5	2.08	25.5	0.05	0.10	0.02	0.13	201	
204	9.66	9.64	33.956	26.198	185.3	0.452	2.34	36.5	28.7	2.09	25.6	0.05	0.12	0.02	0.14	205	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 53.2 N	121 11.7 W	29/08/08	1718 UTC	572 m	180 14 kn	180 04 07	2	1008.4 mb	17.0 C	16.8 C	08m	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	15.58	15.58	33.510	24.697	323.6	0.000	6.70	118.1	1.8	0.30	0.1	0.01	0.34	2.39	0.28	0	
2 A	15.58	15.58	33.510	24.697	323.7	0.006	6.70	118.1	1.8	0.30	0.1	0.01	0.34	2.39	0.28	2	223
3	15.64	15.64	33.511	24.684	324.9	0.010			1.8	0.29	0.1	0.01	0.43			3	224
4 A	15.61	15.61	33.508	24.689	324.5	0.013	6.70	118.2	1.9	0.30	0.1	0.02	0.10	2.25	0.43	4	222
10 A	14.61	14.61	33.500	24.901	304.5	0.032	5.97	103.2	4.7	0.55	2.8	0.14	0.38	3.19	0.89	10	220
10	14.62	14.62	33.501	24.899	304.6	0.032										10	221
15 A	13.91	13.91	33.545	25.083	287.3	0.047	5.27	89.8	7.2	0.88	7.1	0.25	0.88	1.17	0.42	15	219
20 A	13.48	13.48	33.581	25.199	276.4	0.061	4.96	83.8	9.3	1.00	9.4	0.29	0.52	0.65	0.26	20	218
29 A	11.58	11.58	33.655	25.624	236.1	0.084	4.18	67.9	15.3	1.43	16.5	0.18	0.06	0.23	0.24	29	217
30 ISL	11.45 D	11.45	33.679 D	25.667	232.1	0.086	4.12	66.7	15.7	1.46	16.9	0.17	0.05	0.22	0.24	30	
40	11.05	11.05	33.734	25.782	221.3	0.109	3.71	59.6	18.7	1.61	19.4	0.05	0.00	0.17	0.20	40	216
50	10.70	10.69	33.764	25.868	213.4	0.131	3.47	55.3	20.6	1.71	20.9	0.03	0.00	0.12	0.19	50	215
60	10.44	10.43	33.772	25.920	208.7	0.152	3.34	53.0	21.6	1.76	21.6	0.02	0.02	0.09	0.17	60	214
70	10.24	10.23	33.803	25.978	203.3	0.172	3.22	50.8	22.9	1.82	22.5	0.02	0.00	0.06	0.14	70	213
75 ISL	10.10 D	10.09	33.813 D	26.010	200.4	0.182	3.23	50.8	23.4	1.84	22.9	0.02	0.05	0.04	0.13	75	
85	9.80	9.79	33.809	26.057	196.1	0.202	3.25	50.8	24.0	1.86	23.4	0.02	0.14	0.02	0.10	85	212
100 ISL	9.60 D	9.59	33.822 D	26.101	192.2	0.231	3.22	50.1	24.6	1.85	23.6	0.01	0.02	0.02	0.08	101	
101	9.60	9.59	33.823	26.102	192.1	0.233	3.22	50.1	24.6	1.85	23.6	0.01	0.01	0.02	0.08	102	211
120	9.40	9.39	33.865	26.168	186.3	0.269	3.02	46.8	26.5	1.92	24.6	0.03	0.08	0.02	0.07	121	210
125 ISL	9.25 D	9.24	33.903 D	26.222	181.2	0.278	2.95	45.6	27.2	1.94	24.9	0.03	0.06	0.02	0.07	126	
139	9.14	9.12	33.938	26.267	177.2	0.303	2.72	41.9	29.1	2.01	25.7	0.03	0.00	0.01	0.07	140	209
150 ISL	9.34 D	9.32	34.036 D	26.312	173.2	0.323	2.49	38.6	30.4	2.08	26.2	0.03	0.01	0.01	0.07	151	
169	9.35	9.33	34.053	26.324	172.5	0.356	2.08	32.2	32.5	2.21	27.1	0.04	0.04	0.01	0.08	170	208
198	9.22	9.20	34.096	26.379	167.8	0.405	1.65	25.5	35.5	2.36	28.6	0.14	0.04	0.01	0.09	199	207
200 ISL	9.21 D	9.19	34.097 D	26.381	167.6	0.408	1.62	25.0	35.8	2.37	28.7	0.13	0.05			201	
228	8.97	8.95	34.162	26.471	159.6	0.454	1.34	20.6	39.8	2.50	30.0	0.02	0.12			229	206
250 ISL	8.91 D	8.88	34.223 D	26.529	154.6	0.489	1.24	19.0	41.4	2.54	30.4	0.03	0.06			252	
268	8.79	8.76	34.221	26.546	153.2	0.516	1.18	18.1	42.3	2.56	30.6	0.03	0.00			270	205
300 ISL	8.66 D	8.63	34.247 D	26.587	149.9	0.565	1.02	15.6	44.4	2.64	31.0	0.01	0.00			302	
320	8.58	8.55	34.272	26.620	147.2	0.595	0.93	14.2	46.1	2.70	31.4	0.00	0.00			322	204
379	7.63	7.59	34.225	26.725	137.5	0.679	0.88	13.1	54.2	2.81	34.1	0.00	0.00			382	203
400 ISL	7.53 D	7.49	34.252 D	26.761	134.4	0.707	0.80	11.9	56.6	2.86	34.7	0.00	0.02			403	
439	7.22	7.18	34.262	26.813	129.9	0.759	0.62	9.2	61.5	2.95	35.6	0.00	0.04			442	202
500 ISL	6.60 D	6.55	34.292 D	26.922	120.0	0.835	0.42	6.1	72.3	3.11	37.5	0.00	0.01			504	
508	6.45	6.40	34.280	26.932	118.9	0.844	0.39	5.7	73.7	3.13	37.8	0.00	0.01			512	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 0808 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 43.9 N	121 33.3 W	29/08/08	1306 UTC	892 m	330 08 kn			1006.4 mb	15.8 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	16.82	16.82	33.352	24.293	362.1	0.000	5.70	102.9	2.9	0.34	0.0	0.00	0.42	0.31	0.11	0	
2	16.82	16.82	33.352	24.293	362.2	0.007	5.70	102.9	2.9	0.34	0.0	0.00	0.42	0.31	0.11	2	220
10	16.40	16.40	33.456	24.470	345.6	0.036	5.86	104.9	3.9	0.32	0.0	0.00	0.44	0.51	0.17	10	219
20	15.54	15.54	33.481	24.684	325.5	0.069	5.85	103.0	5.1	0.46	1.4	0.07	0.70	0.81	0.35	20	218
29	14.96	14.96	33.512	24.835	311.3	0.098	5.89	102.5	7.1	0.56	2.8	0.13	0.69	1.36	0.64	29	217
30 ISL	14.87 D	14.87	33.520 D	24.861	308.9	0.101	5.86	101.8	7.3	0.60	3.3	0.19	0.69	1.28	0.61	30	
39	12.48	12.47	33.360	25.226	274.3	0.127	5.55	91.7	8.5	0.97	8.5	0.63	0.69	0.39	0.28	39	216
49	11.82	11.81	33.365	25.355	262.2	0.154	5.40	88.0	10.2	1.12	11.6	0.29	0.10	0.24	0.22	49	215
50 ISL	11.73 D	11.72	33.378 D	25.382	259.7	0.157	5.39	87.6	10.3	1.13	11.8	0.26	0.10	0.23	0.22	50	
60	11.30	11.29	33.380	25.462	252.2	0.182	5.18	83.5	11.9	1.23	13.6	0.05	0.11	0.14	0.17	60	214
69	10.41	10.40	33.439	25.665	233.0	0.204	4.72	74.6	15.5	1.42	16.9	0.02	0.20	0.04	0.09	69	213
75 ISL	10.38 D	10.37	33.453 D	25.681	231.6	0.218	4.58	72.4	17.1	1.50	18.2	0.02	0.14	0.03	0.09	75	
85	10.13	10.12	33.608	25.845	216.3	0.240	4.32	67.9	19.4	1.62	19.9	0.02	0.00	0.02	0.08	85	212
100 ISL	9.86 D	9.85	33.805 D	26.045	197.6	0.271	3.32	52.0	24.2	1.84	23.2	0.01	0.00	0.03	0.08	101	
101	9.86	9.85	33.801	26.042	197.9	0.273	3.25	50.9	24.5	1.85	23.4	0.01	0.00	0.03	0.08	102	211
119	9.24	9.23	33.952	26.262	177.3	0.307	2.59	40.0	29.9	2.04	26.2	0.00	0.06	0.01	0.09	120	210
125 ISL	9.16 D	9.15	33.958 D	26.279	175.7	0.318	2.50	38.6	30.7	2.07	26.5	0.00	0.09	0.01	0.09	126	
140	9.14	9.12	34.000	26.316	172.6	0.344	2.38	36.7	31.9	2.12	26.9	0.01	0.14	0.01	0.07	141	209
150 ISL	8.92 D	8.90	34.032 D	26.376	167.0	0.361	2.31	35.5	33.1	2.15	27.3	0.01	0.11	0.01	0.06	151	
168	8.73	8.71	34.055	26.424	162.8	0.390	2.18	33.3	35.5	2.21	28.1	0.01	0.02	0.00	0.05	169	208
200 ISL	8.55 D	8.53	34.124 D	26.506	155.5	0.441	1.72	26.2	39.8	2.38	29.9	0.02	0.00	0.00	0.04	201	
201	8.54	8.52	34.124	26.508	155.4	0.443	1.71	26.0	39.9	2.39	30.0	0.02	0.00	0.00	0.04	202	207
229	8.27	8.25	34.142	26.563	150.5	0.486	1.52	23.0	43.1	2.49	31.3	0.03	0.21			230	206
250 ISL	8.21 D	8.18	34.194 D	26.614	146.2	0.517	1.35	20.4	45.3	2.57	31.9	0.01	0.12			252	
267	8.08	8.05	34.194	26.633	144.5	0.542	1.21	18.2	47.2	2.63	32.3	0.00	0.00			269	205
300 ISL	7.96 D	7.93	34.265 D	26.707	138.1	0.588	0.92	13.8	51.2	2.76	33.1	0.00	0.00			302	
317	7.84	7.81	34.265	26.725	136.6	0.612	0.79	11.8	53.5	2.82	33.6	0.00	0.00			319	204
378	7.13	7.09	34.252	26.817	128.4	0.692	0.58	8.6	63.5	2.98	35.5	0.00	0.00			380	203
400 ISL	6.98 D	6.94	34.275 D	26.856	125.0	0.720	0.53	7.8	65.9	3.02	36.1	0.00	0.07			403	
436	6.75	6.71	34.286	26.896	121.5	0.765	0.45	6.6	69.2	3.07	36.9	0.01	0.17			439	202
500 ISL	6.28 D	6.23	34.304 D	26.973	114.8	0.840	0.33	4.8	75.6	3.15	38.3	0.00	0.01			504	
502	6.27	6.22	34.301	26.972	114.9	0.843	0.33	4.8	75.8	3.15	38.3	0.00	0.00			506	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 15.1 W	29/08/08	0606 UTC	4026 m	290 08 kn			1007.6 mb	18.0 C	16.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.06	17.06	33.512	24.359	355.8	0.000	5.80	105.3	2.1	0.31	0.0	0.00	0.22	0.56	0.12	0	
2	17.06	17.06	33.512	24.359	355.9	0.007	5.80	105.3	2.1	0.31	0.0	0.00	0.22	0.56	0.12	2	221
9	16.89	16.89	33.488	24.381	354.0	0.032	5.82	105.2	1.9	0.31	0.0	0.00	0.30	0.48	0.12	9	219
10 CSL	16.81	16.81	33.486	24.398	352.4	0.035										10	200
10	16.90	16.90	33.496	24.385	353.7	0.035										10	220
19	16.50	16.50	33.477	24.464	346.5	0.067	5.82	104.4	1.8	0.33	0.0	0.00	0.13	0.70	0.21	19	218
20 ISL	16.50 D	16.50	33.474 D	24.461	346.7	0.070	5.81	104.3	1.9	0.34	0.0	0.01	0.18	0.76	0.24	20	
30	15.58	15.58	33.568	24.742	320.2	0.104	5.68	100.1	3.8	0.51	1.9	0.20	0.68	1.22	0.44	30	217
41	13.32	13.31	33.612	25.255	271.6	0.136	4.80	80.8	8.6	1.03	9.4	0.70	0.29	0.63	0.24	41	216
48	12.07	12.06	33.664	25.540	244.6	0.154	4.16	68.3	15.1	1.42	16.5	0.02	0.22	0.14	0.15	48	215
50 ISL	11.78 D	11.77	33.665 D	25.595	239.4	0.159	4.12	67.2	16.1	1.48	17.0	0.02	0.20	0.13	0.15	50	
60	11.01	11.00	33.682	25.749	224.9	0.182	3.94	63.2	18.7	1.61	19.5	0.01	0.12	0.06	0.13	60	214
71	9.97	9.96	33.656	25.909	209.8	0.206	3.98	62.4	20.7	1.68	20.9	0.01	0.15	0.03	0.07	71	213
75 ISL	9.98 D	9.97	33.771 D	25.998	201.6	0.215	3.77	59.2	21.7	1.73	21.6	0.01	0.13	0.03	0.07	75	
85	9.90	9.89	33.817	26.047	197.1	0.235	3.12	48.9	24.5	1.87	23.4	0.01	0.05	0.02	0.08	85	212
100 ISL	9.60 D	9.59	33.907 D	26.167	185.9	0.263	2.64	41.1	28.3	2.03	25.6	0.00	0.00	0.01	0.08	101	
102	9.50	9.49	33.926	26.199	183.0	0.267	2.60	40.4	28.7	2.05	25.8	0.00	0.00	0.01	0.08	103	211
120	9.29	9.28	33.989	26.282	175.4	0.299	2.29	35.4	31.4	2.14	27.0	0.01	0.03	0.01	0.07	121	210
125 ISL	9.19 D	9.18	33.997 D	26.305	173.3	0.308	2.21	34.1	32.2	2.17	27.4	0.01	0.03	0.01	0.07	126	
141	8.98	8.96	34.045	26.376	166.8	0.335	1.96	30.1	34.8	2.29	28.8	0.00	0.02	0.00	0.08	142	209
150 ISL	8.87 D	8.85	34.098 D	26.435	161.4	0.350	1.82	27.9	36.5	2.35	29.4	0.00	0.03	0.00	0.07	151	
169	8.67	8.65	34.133	26.494	156.1	0.380	1.53	23.4	39.8	2.45	30.5	0.00	0.04	0.00	0.06	170	208
200	8.65	8.63	34.204	26.553	151.1	0.428	1.17	17.9	43.0	2.60	31.3	0.00	0.00	0.00	0.07	201	207
230	8.49	8.47	34.229	26.598	147.4	0.472	1.01	15.4	46.5	2.69	31.9	0.00	0.00			231	206
250 ISL	8.14 D	8.11	34.235 D	26.656	142.1	0.501	0.92	13.9	49.2	2.75	32.8	0.00	0.00			252	
268	7.95	7.92	34.238	26.687	139.4	0.527	0.85	12.8	51.6	2.80	33.6	0.00	0.00			270	205
300 ISL	7.72 D	7.69	34.261 D	26.739	134.9	0.571	0.79	11.8	55.0	2.86	34.4	0.00	0.00			302	
318	7.49	7.46	34.235	26.752	133.8	0.595	0.76	11.3	56.7	2.89	34.7	0.00	0.00			320	204
377	7.21	7.17	34.263	26.814	128.7	0.672	0.59	8.7	62.0	2.99	35.6	0.00	0.00			380	203
400 ISL	6.87 D	6.83	34.256 D	26.856	124.9	0.701	0.51	7.5	65.5	3.04	36.4	0.00	0.00			403	
437	6.61	6.57	34.288	26.916	119.5	0.747	0.41	6.0	71.1	3.11	37.6	0.00	0.00			440	202
500 ISL	6.18 D	6.14	34.294 D	26.978	114.2	0.820	0.37	5.3	76.2	3.17	38.6	0.00	0.00			504	
510	6.16	6.11	34.295	26.981	114.0	0.832	0.36	5.2	77.0	3.18	38.8	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 0808 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 3.3 N	122 56.5 W	28/08/08	2352 UTC	4234 m	260 05 kn	330 06 07	0	1008.1 mb	19.9 C	18.0 C	26m	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	33.146	23.972	392.7	0.000	5.81	106.1	2.0	0.41	0.5	0.02	0.08	0.15	0.02	0	
2	17.51	17.51	33.146	23.972	392.8	0.008	5.81	106.1	2.0	0.41	0.5	0.02	0.08	0.15	0.02	2	222
10	16.41	16.41	33.136	24.222	369.2	0.038	5.82	104.0	2.0	0.42	0.5	0.02	0.32	0.19	0.04	10	220
10	16.41	16.41	33.137	24.223	369.1	0.038										10	221
20	16.17	16.17	33.138	24.279	364.1	0.075	5.87	104.4	1.9	0.41	0.5	0.02	0.13	0.18	0.03	20	219
30	15.30	15.30	33.083	24.431	349.9	0.111	5.95	104.0	2.0	0.43	0.6	0.04	0.27	0.25	0.06	30	218
41	13.35	13.34	32.873	24.678	326.6	0.148	6.16	103.3	2.6	0.45	0.2	0.08	0.17	0.39	0.19	41	217
50 ISL	12.53 D	12.52	32.836 D	24.810	314.1	0.177	6.04	99.6	3.2	0.52	0.9	0.36	0.11	0.66	0.33	50	
51	12.53	12.52	32.837	24.811	314.1	0.180	6.02	99.2	3.3	0.53	1.0	0.38	0.10	0.68	0.34	51	216
61	11.88	11.87	32.836	24.933	302.6	0.211	5.82	94.6	4.1	0.63	3.0	0.11	0.08	0.45	0.27	61	215
70	11.06	11.05	32.797	25.052	291.4	0.237	5.92	94.5	7.2	0.86	6.6	0.36	0.26	0.36	0.21	70	214
75 ISL	10.75 D	10.74	32.794 D	25.104	286.5	0.252	5.86	93.0	7.6	0.90	7.3	0.28	0.20	0.29	0.17	75	
85	10.39	10.38	32.830	25.194	278.1	0.280	5.75	90.5	8.0	0.94	8.3	0.03	0.00	0.15	0.11	85	213
100	10.12	10.11	33.127	25.472	252.0	0.320	5.15	80.7	12.7	1.19	13.1	0.01	0.02	0.03	0.04	100	212
120	9.60	9.59	33.462	25.820	219.3	0.367	4.26	66.2	19.7	1.57	19.4	0.00	0.00	0.02	0.04	121	211
125 ISL	9.62 D	9.61	33.605 D	25.929	209.1	0.378	3.92	61.0	21.8	1.69	21.2	0.01	0.00	0.01	0.04	126	
129	9.41	9.40	33.641	25.991	203.2	0.386	3.65	56.5	23.4	1.78	22.6	0.01	0.00	0.01	0.04	130	210
139	9.30	9.28	33.827	26.154	187.9	0.406	3.12	48.2	27.1	1.95	25.0	0.01	0.00	0.01	0.07	140	209
150 ISL	9.01 D	8.99	33.848 D	26.217	182.1	0.426	3.05	46.9	28.8	1.96	25.4	0.01	0.00	0.01	0.06	151	
169	8.82	8.80	33.915	26.300	174.5	0.460	2.94	45.0	30.0	1.99	26.2	0.01	0.00	0.01	0.04	170	208
200	8.40	8.38	33.984	26.419	163.7	0.512	2.66	40.3	34.4	2.10	27.9	0.00	0.00	0.01	0.06	201	207
228	7.82	7.80	33.994	26.514	154.9	0.557	2.49	37.3	39.6	2.20	29.6	0.00	0.00			229	206
250 ISL	7.60 D	7.58	34.038 D	26.580	148.9	0.590	2.07	30.8	44.5	2.36	31.5	0.00	0.03			251	
268	7.43	7.40	34.058	26.621	145.3	0.617	1.71	25.4	48.4	2.50	33.1	0.00	0.06			270	205
300 ISL	6.94 D	6.91	34.056 D	26.687	139.2	0.662	1.44	21.1	53.5	2.63	34.7	0.00	0.03			302	
317	6.86	6.83	34.081	26.718	136.5	0.686	1.36	19.9	56.0	2.68	35.3	0.00	0.00			319	204
376	6.13	6.10	34.095	26.825	126.7	0.763	1.03	14.8	67.4	2.89	38.1	0.00	0.00			378	203
400 ISL	6.09 D	6.05	34.127 D	26.856	124.1	0.793	0.94	13.5	70.8	2.95	38.6	0.00	0.00			403	
436	5.77	5.73	34.131	26.899	120.2	0.837	0.82	11.7	75.4	3.03	39.2	0.00	0.00			439	202
500 ISL	5.36 D	5.32	34.186 D	26.993	111.7	0.912	0.55	7.8	84.5	3.14	40.6	0.00	0.00			503	
521	5.26	5.22	34.199	27.015	109.8	0.935	0.46	6.5	87.5	3.17	41.1	0.00	0.00			525	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 43.8 N	123 37.9 W	28/08/08	1743 UTC	4323 m	030 03 kn	320 06 08	2	1010.3 mb	18.0 C	17.0 C	16m	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	16.94	16.94	33.039	24.025	387.7	0.000	5.88	106.2	1.0	0.38	0.3	0.02	0.18	0.31	0.05	0	
2 A	16.94	16.94	33.039	24.025	387.8	0.008	5.88	106.1	1.0	0.38	0.3	0.02	0.18	0.31	0.05	2	221
9 A	16.78	16.78	33.043	24.065	384.1	0.035	5.89	106.0	0.9	0.40	0.4	0.03	0.06	0.34	0.06	9	219
9	16.78	16.78	33.043	24.065	384.1	0.035										9	220
10 ISL	16.72 D	16.72	33.048 D	24.083	382.4	0.039	5.92	106.4	0.9	0.41	0.5	0.03	0.07	0.35	0.07	10	
20 ISL	15.74 D	15.74	33.060 D	24.316	360.6	0.076	6.16	108.6	1.4	0.47	1.3	0.05	0.21	0.50	0.21	20	
22 A	15.64	15.64	33.068	24.344	357.9	0.083	6.21	109.3	1.6	0.49	1.5	0.06	0.26	0.54	0.24	22	218
30 ISL	14.99 D	14.99	33.210 D	24.596	334.1	0.111	6.17	107.3	2.2	0.53	2.3	0.08	0.33	0.65	0.27	30	
32 A	15.03	15.03	33.237	24.608	333.0	0.117	6.16	107.2	2.5	0.55	2.5	0.09	0.35	0.66	0.28	32	217
43 A	12.01	12.00	32.884	24.946	301.0	0.152	5.89	96.1	5.3	0.76	4.3	0.38	0.58	0.53	0.34	43	216
50 ISL	11.52 D	11.51	32.902 D	25.050	291.2	0.173	6.07	98.0	6.6	0.84	5.8	0.37	0.48	0.34	0.26	50	
51	11.58	11.57	32.853	25.001	295.9	0.176	6.10	98.6	6.7	0.85	6.0	0.37	0.46	0.32	0.25	51	215
60 A	11.21	11.20	32.939	25.135	283.3	0.202	5.96	95.6	7.0	0.93	7.0	0.45	0.51	0.30	0.19	60	214
70	10.09	10.08	32.840	25.252	272.2	0.230	5.89	92.1	8.8	1.06	9.2	0.20	0.01	0.17	0.12	70	213
75 ISL	9.89 D	9.88	32.833 D	25.280	269.6	0.243	5.85	91.1	9.6	1.09	10.0	0.12	0.04	0.14	0.11	75	
84	9.32	9.31	32.793	25.342	263.9	0.267	5.79	89.0	11.4	1.15	11.5	0.02	0.10	0.11	0.09	84	212
100	9.43	9.42	33.084	25.552	244.3	0.308	5.06	78.1	16.2	1.37	15.7	0.01	0.00	0.05	0.04	100	211
119	9.41	9.40	33.464	25.852	216.1	0.352	4.47	69.1	22.9	1.70	21.2	0.00	0.02	0.02	0.04	120	210
125 ISL	9.52 D	9.51	33.645 D	25.976	204.5	0.364	4.20	65.2	23.6	1.74	21.9	0.00	0.02	0.02	0.04	126	
139	9.10	9.08	33.699	26.086	194.3	0.392	3.55	54.6	24.8	1.80	23.1	0.00	0.01	0.01	0.03	140	209
150 ISL	8.83 D	8.81	33.803 D	26.210	182.7	0.413	3.13	47.9	27.6	1.92	24.9	0.00	0.01	0.01	0.03	151	
168	8.63	8.61	33.897	26.315	173.0	0.445	2.72	41.4	32.1	2.09	27.5	0.00	0.00	0.01	0.02	169	208
199	8.20	8.18	33.966	26.435	162.0	0.497	3.07	46.3	33.9	1.99	26.7	0.00	0.00	0.00	0.02	200	207
200 ISL	8.17 D	8.15	33.971 D	26.444	161.2	0.498	3.05	46.0	34.1	2.00	26.8	0.00	0.00			201	
228	7.84	7.82	33.998	26.514	154.9	0.543	2.38	35.6	39.7	2.25	30.1	0.00	0.00			229	206
250 ISL	7.41 D	7.39	34.011 D	26.586	148.3	0.576	1.99	29.5	44.6	2.40	31.9	0.00	0.00			251	
267	7.42	7.39	34.055	26.620	145.4	0.601	1.76	26.1	48.2	2.49	32.9	0.00	0.00			269	205
300 ISL	7.00 D	6.97	34.059 D	26.682	139.8	0.648	1.46	21.4	53.3	2.63	34.4	0.00	0.00			302	
317	6.95	6.92	34.092	26.715	136.9	0.672	1.36	20.0	55.7	2.68	35.0	0.00	0.00			319	204
377	6.11	6.08	34.069	26.807	128.4	0.751	1.23	17.7	66.4	2.82	37.4	0.00	0.00			379	203
400 ISL	6.04 D	6.01	34.097 D	26.839	125.7	0.780	1.11	15.9	69.8	2.88	38.0	0.00	0.00			403	
437	5.72	5.68	34.110	26.889	121.1	0.826	0.90	12.8	74.8	2.97	38.9	0.00	0.00			440	202
500 ISL	5.33 D	5.29	34.175 D	26.988	112.2	0.900	0.59	8.3	83.7	3.11	40.5	0.00	0.00			503	
519	5.27	5.23	34.183	27.001	111.1	0.921	0.50	7.1	86.4	3.15	41.0	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 0808 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 19.1 W	28/08/08	1140 UTC	4595 m	360 09 kn			1009.9 mb	17.2 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	17.66	17.66	33.148	23.937	396.0	0.000	5.66	103.7	1.3	0.37	0.2	0.01	0.43	0.25	0.04	0	
2	17.66	17.66	33.148	23.938	396.1	0.008	5.66	103.7	1.3	0.37	0.2	0.01	0.43	0.25	0.04	2	220
10	17.67	17.67	33.149	23.936	396.5	0.040	5.66	103.7	1.3	0.37	0.2	0.01	0.43	0.27	0.04	10	219
20	17.65	17.65	33.151	23.943	396.2	0.079	5.67	103.8	1.3	0.38	0.2	0.01	0.40	0.27	0.04	20	218
30	14.63	14.63	32.801	24.358	356.8	0.117	6.54	112.6	0.3	0.42	0.0	0.01	0.42	0.52	0.18	30	217
40	13.18	13.17	32.773	24.634	330.7	0.151	6.32	105.6	3.2	0.55	1.6	0.07	0.39	0.42	0.25	40	216
50	12.35	12.34	32.736	24.767	318.2	0.184	6.04	99.1	5.0	0.70	2.6	0.39	1.30	0.38	0.24	50	215
59	12.01	12.00	32.740	24.834	312.0	0.212	5.97	97.3	5.4	0.73	3.2	0.77	0.81	0.35	0.20	59	214
69	11.53	11.52	32.783	24.956	300.5	0.243	5.87	94.7	6.2	0.80	5.3	0.32	0.46	0.27	0.15	69	213
75 ISL	11.05 D	11.04	32.793 D	25.051	291.7	0.260	5.77	92.1	6.8	0.86	6.6	0.16	0.33	0.22	0.15	75	
84	10.84	10.83	32.911	25.179	279.6	0.286	5.53	88.0	8.4	0.97	8.9	0.03	0.21	0.14	0.16	84	212
100	10.18	10.17	33.240	25.550	244.6	0.328	4.78	75.1	13.8	1.30	14.8	0.01	0.20	0.05	0.09	100	211
119	10.48	10.47	33.656	25.823	219.2	0.372	4.26	67.5	19.1	1.68	20.2	0.01	0.15	0.07	0.09	120	210
125 ISL	10.17 D	10.16	33.659 D	25.879	213.9	0.385	3.90	61.4	21.3	1.78	21.8	0.01	0.11	0.06	0.09	126	
138	9.73	9.71	33.829	26.086	194.5	0.412	3.16	49.3	25.8	1.94	24.5	0.00	0.04	0.03	0.09	139	209
150 ISL	9.09 D	9.07	33.908 D	26.252	178.8	0.434	3.16	48.7	28.1	1.94	24.9	0.00	0.05	0.02	0.07	151	
171	8.49	8.47	33.897	26.337	170.9	0.471	3.16	48.0	30.7	1.94	25.7	0.00	0.06	0.01	0.03	172	208
200 ISL	8.19 D	8.17	33.961 D	26.433	162.3	0.519	2.87	43.3	34.3	2.05	27.3	0.00	0.00	0.00	0.02	201	
202	8.17	8.15	33.962	26.437	161.9	0.522	2.85	43.0	34.5	2.06	27.4	0.00	0.00	0.00	0.02	203	207
227	7.73	7.71	33.970	26.508	155.4	0.562	2.92	43.6	37.9	2.09	28.0	0.00	0.00			228	206
250 ISL	7.43 D	7.41	33.994 D	26.570	149.8	0.597	2.61	38.7	42.4	2.22	29.9	0.00	0.00			251	
267	7.27	7.24	33.999	26.597	147.5	0.622	2.28	33.7	46.0	2.35	31.6	0.00	0.00			269	205
300 ISL	7.15 D	7.12	34.079 D	26.677	140.4	0.670	1.72	25.4	52.3	2.56	34.1	0.00	0.00			302	
318	6.83	6.80	34.057	26.703	137.9	0.695	1.46	21.4	55.6	2.66	35.2	0.00	0.00			320	204
376	6.12	6.09	34.076	26.812	128.0	0.772	1.19	17.1	66.1	2.84	37.4	0.00	0.00			378	203
400 ISL	6.00 D	5.97	34.108 D	26.852	124.4	0.802	1.05	15.1	69.5	2.91	38.1	0.00	0.00			403	
435	5.78	5.74	34.120	26.889	121.1	0.845	0.84	12.0	74.0	3.00	39.1	0.00	0.00			438	202
500 ISL	5.35 D	5.31	34.171 D	26.982	112.7	0.921	0.56	7.9	83.2	3.12	40.4	0.00	0.00			503	
520	5.28	5.24	34.187	27.003	110.9	0.944	0.48	6.8	86.0	3.16	40.8	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 0808 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 27.3 N	120 32.3 W	26/08/08	1905 UTC	78 m	310 25 kn	330 09 08	0	1008.6 mb	17.0 C	15.6 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	17.38	17.38	33.532	24.299	361.6	0.000	6.04	110.3	5.2	0.33	0.1	0.04	0.00	2.92	0.62	0	
1 A	17.38	17.38	33.532	24.299	361.6	0.004	6.04	110.3	5.2	0.33	0.1	0.04	0.00	2.92	0.62	1	214
4 A	17.43	17.43	33.532	24.287	362.8	0.014	6.03	110.2	5.1	0.33	0.1	0.04	0.17	3.02	0.50	4	212
4	17.41	17.41	33.532	24.292	362.4	0.014										4	213
8 A	17.37	17.37	33.525	24.296	362.1	0.029	6.03	110.1	5.1	0.34	0.2	0.04	0.66	3.76	0.80	8	210
8	17.29	17.29	33.528	24.317	360.1	0.029										8	211
10 ISL	13.69 D	13.69	33.412 D	25.025	292.7	0.035	6.09	103.2	5.6	0.39	0.6	0.05	0.63	3.43	0.78	10	
12 A	15.72	15.72	33.480	24.643	329.2	0.042	6.12	108.1	6.3	0.48	1.5	0.07	0.55	3.10	0.76	12	209
16 A	13.02	13.02	33.393	25.145	281.4	0.054	5.87	98.1	7.6	0.74	5.3	0.14	0.72	0.79	0.45	16	207
16	12.82	12.82	33.388	25.181	278.0	0.054										16	208
20 ISL	12.09 D	12.09	33.417 D	25.344	262.6	0.065	5.33	87.4	9.1	0.96	9.2	0.12	0.47	0.64	0.40	20	
23 A	12.02	12.02	33.432	25.369	260.3	0.073	4.93	80.7	10.1	1.09	11.5	0.08	0.24	0.52	0.37	23	206
30 ISL	11.90 D	11.90	33.462 D	25.415	256.1	0.091	4.84	79.0	10.9	1.13	12.1	0.07	0.39	0.46	0.36	30	
33	11.91	11.91	33.458	25.410	256.6	0.098	4.80	78.4	11.0	1.15	12.4	0.06	0.50	0.44	0.36	33	204
33	11.90	11.90	33.459	25.412	256.4	0.098										33	205
40	11.82	11.81	33.482	25.445	253.4	0.116	4.70	76.6	11.6	1.19	13.2	0.05	0.34	0.25	0.26	40	203
50 ISL	11.46 D	11.45	33.551 D	25.566	242.2	0.141	4.32	69.9	13.7	1.33	15.3	0.02	0.49	0.20	0.25	50	
51	11.46	11.45	33.550	25.565	242.3	0.143	4.28	69.3	13.9	1.34	15.5	0.02	0.51	0.19	0.25	51	202
60	11.34	11.33	33.580	25.610	238.2	0.165	4.10	66.2	15.4	1.42	16.4	0.05	0.41			60	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 0808 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 19.3 N	120 48.7 W	26/08/08	2232 UTC	777 m	340 20 kn	320 09 08	1	1008.7 mb	17.1 C	15.5 C	07m	6/8	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	16.21	16.21	33.551	24.586	334.2	0.000	5.85	104.4	3.0	0.43	1.4	0.07	0.74	1.87	0.61	0	
2	16.21	16.21	33.551	24.586	334.2	0.007	5.85	104.4	3.0	0.43	1.4	0.07	0.74	1.87	0.61	2	221
10	16.18	16.18	33.548	24.591	334.0	0.033	5.84	104.2	2.9	0.43	1.3	0.06	0.64	1.92	0.63	10	219
10	16.18	16.18	33.549	24.592	333.9	0.033										10	220
19	16.16	16.16	33.547	24.595	333.9	0.063	5.82	103.8	2.8	0.41	1.2	0.06	0.74	2.00	0.66	19	218
20 ISL	16.16 D	16.16	33.543 D	24.592	334.2	0.067	5.81	103.6	2.9	0.42	1.3	0.06	0.78	1.99	0.66	20	
30	15.63	15.63	33.548	24.716	322.8	0.100	5.68	100.2	3.6	0.52	2.5	0.08	1.02	1.60	0.61	30	217
39	12.31	12.30	33.542	25.399	257.8	0.126	4.74	78.1	11.2	1.16	12.5	0.27	0.52	0.69	0.49	39	216
50	11.42	11.41	33.647	25.648	234.4	0.153	4.14	67.0	15.9	1.43	16.9	0.14	0.36	0.32	0.32	50	215
60	11.05	11.04	33.710	25.764	223.6	0.176	3.80	61.0	18.6	1.57	19.1	0.08	0.35	0.20	0.26	60	214
70	10.78	10.77	33.711	25.813	219.1	0.198	3.67	58.6	19.4	1.61	19.7	0.04	0.31	0.15	0.22	70	213
75 ISL	10.29 D	10.28	33.786 D	25.957	205.5	0.208	3.56	56.3	20.7	1.68	20.7	0.03	0.34	0.11	0.19	75	
85	9.98	9.97	33.793	26.015	200.1	0.229	3.34	52.4	23.6	1.81	22.9	0.02	0.41	0.04	0.12	85	212
100	9.52	9.51	33.836	26.125	189.9	0.258	3.19	49.6	25.5	1.85	24.0	0.02	0.41	0.01	0.06	101	211
118	9.25	9.24	33.895	26.215	181.7	0.291	2.92	45.1	27.8	1.93	25.2	0.02	0.27	0.01	0.06	119	210
125 ISL	9.16 D	9.15	33.911 D	26.242	179.2	0.304	2.87	44.3	28.4	1.95	25.4	0.02	0.31	0.01	0.06	126	
140	9.01	8.99	33.942	26.291	174.9	0.331	2.78	42.7	29.7	1.99	25.9	0.02	0.41	0.01	0.06	141	209
150 ISL	8.86 D	8.84	33.975 D	26.340	170.3	0.348	2.72	41.7	30.9	2.02	26.4	0.02	0.39	0.01	0.06	151	
169	8.63	8.61	34.012	26.406	164.5	0.380	2.50	38.1	34.2	2.11	27.6	0.02	0.31	0.01	0.07	170	208
200 ISL	8.25 D	8.23	34.141 D	26.565	149.8	0.428	1.65	25.0	43.1	2.45	30.8	0.02	0.26	0.00	0.08	201	
202	8.24	8.22	34.143	26.568	149.5	0.431	1.59	24.0	43.7	2.47	31.0	0.02	0.26	0.00	0.08	203	207
229	8.19	8.17	34.204	26.624	144.7	0.471	1.25	18.9	46.9	2.59	31.8	0.02	0.27			230	206
250 ISL	8.20 D	8.17	34.265 D	26.671	140.7	0.501	0.97	14.7	49.3	2.70	32.3	0.01	0.19			252	
266	8.22	8.19	34.290	26.688	139.5	0.524	0.79	12.0	50.8	2.77	32.7	0.00	0.11			268	205
300 ISL	8.04 D	8.01	34.294 D	26.718	137.1	0.571	0.75	11.3	52.3	2.80	33.1	0.00	0.04			302	
319	8.00	7.97	34.290	26.721	137.1	0.597	0.72	10.8	52.8	2.81	33.3	0.00	0.02			321	204
383	7.69	7.65	34.292	26.769	133.5	0.683	0.64	9.6	56.5	2.88	34.3	0.00	0.00			386	203
400 ISL	7.64 D	7.60	34.294 D	26.778	132.9	0.706	0.62	9.3	57.4	2.90	34.5	0.00	0.00			403	
436	7.46	7.42	34.295	26.805	130.8	0.753	0.58	8.6	59.8	2.94	35.0	0.00	0.00			439	202
500 ISL	6.94 D	6.89	34.302 D	26.884	123.9	0.835	0.49	7.2	66.5	3.04	36.6	0.00	0.00			504	
512	6.86	6.81	34.300	26.893	123.1	0.850	0.47	6.9	67.7	3.06	36.9	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 0808 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 9.2 N	121 9.3 W	27/08/08	0250 UTC	2226 m	320 18 kn	340 08 09	2	1008.3 mb	16.0 C	14.5 C		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.20	16.20	33.434	24.499	342.5	0.000	5.87	104.7	1.8	0.34	0.1	0.02	0.32	0.92	0.26	0	
3	16.20	16.20	33.434	24.499	342.6	0.010	5.87	104.7	1.8	0.34	0.1	0.02	0.32	0.92	0.26	3	221
10 ISL	16.19 D	16.19	33.433 D	24.501	342.6	0.034	5.86	104.5	2.0	0.35	0.1	0.02	0.04	0.94	0.23	10	
11	16.19	16.19	33.435	24.502	342.5	0.038	5.86	104.5	2.0	0.35	0.1	0.02	0.00	0.94	0.23	11	219
11	16.20	16.20	33.436	24.501	342.7	0.038										11	220
20 ISL	16.18 D	16.18	33.436 D	24.505	342.5	0.069	5.90	105.2	2.0	0.35	0.2	0.02	0.18	1.00	0.26	20	
21	16.18	16.18	33.441	24.509	342.2	0.072	5.90	105.2	2.0	0.35	0.2	0.02	0.21	1.01	0.26	21	218
30	16.10	16.10	33.454	24.538	339.7	0.103	5.89	104.8	2.2	0.34	0.2	0.02	0.23	1.12	0.29	30	217
41	13.09	13.08	33.221	24.999	296.0	0.138	5.85	97.8	4.8	0.77	4.9	0.33	1.20	0.55	0.29	41	216
50	11.17	11.16	32.999	25.189	278.0	0.163	5.59	89.6	8.7	0.96	8.9	0.12	0.02	0.31	0.19	50	215
61	11.59	11.58	33.336	25.375	260.6	0.193	5.35	86.7	10.5	1.13	12.2	0.03	0.12	0.19	0.15	61	214
71	11.03	11.02	33.391	25.519	247.0	0.218	5.12	82.0	12.5	1.27	14.5	0.02	0.00	0.11	0.10	71	213
75 ISL	10.91 D	10.90	33.460 D	25.594	240.0	0.228	4.99	79.8	13.6	1.33	15.5	0.01	0.07	0.09	0.09	75	
86	10.40	10.39	33.518	25.729	227.4	0.254	4.59	72.6	16.7	1.50	18.0	0.00	0.26	0.05	0.06	86	212
100 ISL	9.72 D	9.71	33.586 D	25.897	211.6	0.285	4.01	62.5	20.1	1.64	20.4	0.00	0.02	0.02	0.04	100	
101	9.71	9.70	33.600	25.909	210.4	0.287	3.97	61.9	20.3	1.65	20.6	0.00	0.00	0.02	0.04	101	211
120	9.44	9.43	33.783	26.097	193.0	0.325	3.51	54.4	25.2	1.88	23.9	0.00	0.00	0.01	0.04	121	210
125 ISL	9.21 D	9.20	33.836 D	26.176	185.6	0.334	3.38	52.2	26.3	1.93	24.6	0.00	0.00	0.01	0.04	126	
140	9.06	9.04	33.885	26.238	179.9	0.362	3.01	46.3	29.1	2.03	26.1	0.00	0.00	0.01	0.03	141	209
150 ISL	8.92 D	8.90	33.926 D	26.293	174.9	0.380	2.82	43.3	30.6	2.07	26.7	0.00	0.01	0.01	0.03	151	
171	8.69	8.67	33.984	26.374	167.5	0.416	2.53	38.6	33.3	2.13	27.5	0.00	0.03	0.01	0.03	172	208
200 ISL	8.20 D	8.18	34.018 D	26.476	158.2	0.463	2.36	35.6	37.4	2.21	29.0	0.00	0.00	0.00	0.03	201	
201	8.22	8.20	34.019	26.474	158.4	0.464	2.36	35.7	37.5	2.21	29.1	0.00	0.00	0.00	0.03	202	207
230	7.92	7.90	34.046	26.540	152.6	0.509	2.07	31.1	41.8	2.35	30.8	0.00	0.00			231	206
250 ISL	7.48 D	7.46	34.047 D	26.605	146.6	0.539	1.86	27.6	45.3	2.45	32.1	0.00	0.05			251	
267	7.39	7.36	34.068	26.634	144.0	0.564	1.68	24.9	48.4	2.53	33.1	0.00	0.08			269	205
300 ISL	7.22 D	7.19	34.141 D	26.716	136.7	0.610	1.26	18.6	54.2	2.71	34.6	0.00	0.03			302	
316	7.11	7.08	34.153	26.741	134.6	0.632	1.07	15.8	56.8	2.79	35.2	0.00	0.00			318	204
377	6.85	6.81	34.248	26.852	124.9	0.711	0.61	8.9	64.8	3.00	36.7	0.00	0.00			379	203
400 ISL	6.59 D	6.55	34.242 D	26.882	122.1	0.740	0.54	7.9	67.0	3.04	37.2	0.00	0.00			403	
438	6.44	6.40	34.254	26.912	119.8	0.786	0.48	7.0	70.5	3.08	38.0	0.00	0.00			441	202
500 ISL	5.77 D	5.73	34.228 D	26.977	113.8	0.858	0.43	6.1	77.9	3.15	39.4	0.00	0.00			503	
513	5.77	5.73	34.243	26.989	112.8	0.873	0.42	6.0	79.5	3.17	39.7	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 0808 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.1 N	121 50.6 W	27/08/08	0900 UTC	3630 m	320 15 kn			1010.4 mb	16.2 C	14.5 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.33	16.33	33.295	24.362	355.5	0.000										0	
9	16.33	16.33	33.295	24.362	355.5	0.004										9	222
9	16.33	16.33	33.296	24.363	355.7	0.032										9	221
10	16.34	16.34	33.297	24.362	355.9	0.036	5.75	102.7	2.4	0.36	0.1	0.02	0.32	0.30	0.12	10	220
19	16.34	16.34	33.298	24.363	356.1	0.068	5.76	102.9	2.2	0.37	0.1	0.02	0.38	0.29	0.12	19	219
20 ISL	16.34 D	16.34	33.296 D	24.361	356.2	0.071	5.76	102.9	2.2	0.37	0.1	0.02	0.38	0.29	0.12	20	
30	16.28	16.28	33.323	24.396	353.2	0.107	5.76	102.8	2.1	0.37	0.1	0.02	0.36	0.31	0.15	30	218
35	15.78	15.77	33.415	24.580	335.9	0.124	5.83	103.1	1.9	0.42	0.6	0.09	0.73	0.49	0.19	35	217
40	14.58	14.57	33.392	24.825	312.6	0.140	5.80	100.1	2.8	0.58	2.0	0.31	1.00	0.79	0.34	40	216
49	12.56	12.55	33.132	25.034	292.8	0.167	5.73	94.7	5.5	0.80	5.5	0.46	0.59	0.58	0.34	49	215
50 ISL	12.24 D	12.23	33.074 D	25.050	291.3	0.170	5.72	93.9	5.7	0.81	5.8	0.45	0.53	0.55	0.33	50	
60	11.67	11.66	33.105	25.181	279.0	0.199	5.60	90.8	7.9	0.95	8.6	0.27	0.05	0.26	0.19	60	214
69	11.46	11.45	33.305	25.375	260.8	0.223	5.34	86.3	10.8	1.13	12.2	0.02	0.09	0.11	0.12	69	213
75 ISL	11.01 D	11.00	33.345 D	25.487	250.2	0.238	5.11	81.8	12.9	1.23	14.0	0.02	0.10	0.06	0.09	75	
85	10.13	10.12	33.316	25.617	237.9	0.263	4.72	74.1	16.0	1.38	16.3	0.01	0.12	0.03	0.06	85	212
100 ISL	9.73 D	9.72	33.509 D	25.835	217.5	0.297	4.22	65.7	18.5	1.53	18.9	0.01	0.04	0.02	0.04	100	
101	9.72	9.71	33.513	25.840	217.0	0.299	4.19	65.3	18.6	1.54	19.1	0.01	0.03	0.02	0.04	101	211
119	9.40	9.39	33.666	26.012	201.0	0.337	3.64	56.4	22.8	1.75	22.4	0.01	0.00	0.01	0.03	120	210
125 ISL	9.17 D	9.16	33.766 D	26.127	190.1	0.348	3.47	53.5	24.5	1.81	23.4	0.01	0.00	0.01	0.03	126	
139	8.96	8.95	33.873	26.245	179.2	0.374	3.12	47.9	28.5	1.94	25.3	0.00	0.00	0.01	0.04	140	209
150 ISL	8.72 D	8.70	33.897 D	26.301	174.0	0.394	2.93	44.7	30.9	2.01	26.4	0.00	0.05	0.01	0.03	151	
169	8.39	8.37	33.977	26.415	163.5	0.426	2.69	40.8	34.3	2.10	27.7	0.00	0.15	0.00	0.02	170	208
200 ISL	8.04 D	8.02	34.006 D	26.490	156.8	0.475	2.48	37.3	38.3	2.20	29.2	0.00	0.28	0.00	0.02	201	
202	8.00	7.98	34.009	26.499	156.0	0.479	2.47	37.1	38.6	2.21	29.3	0.00	0.28	0.00	0.02	203	207
230	7.63	7.61	34.025	26.566	150.0	0.521	2.19	32.6	43.6	2.33	31.1	0.00	0.03			231	206
250 ISL	7.42 D	7.40	34.036 D	26.604	146.5	0.551	1.97	29.2	47.7	2.43	32.5	0.00	0.01			251	
266	7.10	7.07	34.042	26.654	141.9	0.574	1.79	26.4	51.1	2.52	33.6	0.00	0.00			268	205
300 ISL	6.68 D	6.65	34.070 D	26.733	134.7	0.621	1.45	21.1	57.5	2.69	35.7	0.00	0.00			302	
317	6.53	6.50	34.072	26.755	132.8	0.644	1.30	18.9	60.5	2.76	36.6	0.00	0.00			319	204
378	6.06	6.03	34.114	26.849	124.4	0.722	0.96	13.8	69.4	2.93	38.3	0.00	0.00			380	203
400 ISL	6.05 D	6.02	34.163 D	26.890	120.9	0.749	0.77	11.1	71.9	3.00	38.7	0.00	0.00			403	
437	6.02	5.98	34.227	26.944	116.2	0.793	0.48	6.9	75.6	3.11	39.2	0.00	0.00			440	202
500 ISL	5.63 D	5.59	34.264 D	27.022	109.3	0.864	0.31	4.4	81.1	3.20	39.9	0.00	0.24			503	
515	5.82	5.78	34.314	27.039	108.2	0.881	0.27	3.9	82.4	3.22	40.1	0.00	0.30			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.8 N	122 34.0 W	27/08/08	1702 UTC	3995 m	330 12 kn	340 06 06	2	1012.0 mb	16.8 C	15.0 C	13m	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	17.12	17.12	33.430	24.282	363.1	0.000	5.62	102.1	1.8	0.33	0.0	0.00	0.07	0.31	0.06	0	
2 A	17.12	17.12	33.430	24.282	363.2	0.007	5.62	102.1	1.8	0.33	0.0	0.00	0.07	0.31	0.06	2	222
8	17.12	17.12	33.429	24.282	363.4	0.029										8	221
9 A	17.12	17.12	33.429	24.282	363.5	0.033	5.64	102.4	1.7	0.32	0.0	0.00	0.04	0.33	0.04	9	220
10 ISL	17.11 D	17.11	33.428 D	24.283	363.4	0.036	5.64	102.4	1.7	0.32	0.0	0.00	0.05	0.33	0.04	10	
19 A	17.10	17.10	33.439	24.295	362.6	0.069	5.63	102.2	1.7	0.32	0.0	0.00	0.08	0.37	0.04	19	219
20 ISL	17.10 D	17.10	33.436 D	24.292	362.8	0.073	5.63	102.2	1.7	0.32	0.0	0.00	0.06	0.37	0.04	20	
27 A	17.09	17.09	33.471	24.322	360.3	0.098	5.64	102.4	1.8	0.31	0.0	0.01	0.00	0.38	0.08	27	218
30 ISL	17.02 D	17.02	33.500 D	24.361	356.7	0.109	5.75	104.2	1.9	0.32	0.0	0.01	0.09	0.61	0.13	30	
36 A	16.11	16.10	33.567	24.623	331.9	0.129	5.93	105.6	2.0	0.34	0.1	0.02	0.26	1.23	0.32	36	217
41	14.97	14.96	33.540	24.855	309.8	0.145	5.86	102.0	3.3	0.53	2.0	0.13	0.94	1.71	0.63	41	216
48 A	14.44	14.43	33.553	24.979	298.2	0.167	5.58	96.1	5.6	0.69	4.1	0.43	0.71	0.78	0.40	48	215
50 ISL	13.91 D	13.90	33.525 D	25.068	289.7	0.173	5.51	93.9	6.3	0.75	5.2	0.40	0.59	0.64	0.36	50	
60	12.29	12.28	33.378	25.277	270.0	0.201	5.19	85.4	9.8	1.06	10.8	0.10	0.07	0.29	0.22	60	214
69	11.55	11.54	33.466	25.484	250.5	0.224	4.83	78.3	12.8	1.28	14.5	0.04	0.01	0.11	0.15	69	213
75 ISL	11.25 D	11.24	33.518 D	25.579	241.5	0.239	4.54	73.1	14.7	1.41	16.5	0.03	0.01	0.09	0.13	75	
87	10.72	10.71	33.652	25.778	222.8	0.267	4.05	64.5	18.4	1.62	19.7	0.02	0.00	0.04	0.10	87	212
100	9.67	9.66	33.638	25.946	206.9	0.295	3.92	61.0	22.3	1.76	22.2	0.00	0.03	0.01	0.07	100	211
119	9.47	9.46	33.777 D	26.087	193.9	0.333								0.02	0.08	120	210
125 ISL	9.39 D	9.38	33.830 D	26.142	188.8	0.344	3.35	51.9	26.5	1.93	24.8	0.00	0.01	0.02	0.08	126	
140	9.12	9.10	33.862	26.211	182.5	0.372	3.00	46.2	28.1	1.98	25.6	0.00	0.00	0.01	0.06	141	209
150 ISL	8.92 D	8.90	33.899 D	26.271	176.9	0.390	2.92	44.8	29.5	2.00	26.1	0.00	0.00	0.01	0.06	151	
170	8.48	8.46	33.947	26.378	167.1	0.424	2.82	42.8	32.4	2.03	27.1	0.00	0.00	0.01	0.06	171	208
199	8.11	8.09	33.987	26.465	159.2	0.472	2.63	39.6	36.5	2.13	28.6	0.00	0.00	0.00	0.03	200	207
200 ISL	8.08 D	8.06	33.991 D	26.473	158.5	0.473	2.62	39.4	36.7	2.13	28.7	0.00	0.00			201	
228	7.74	7.72	34.013	26.540	152.4	0.517	2.29	34.2	41.4	2.27	30.4	0.02	0.00			229	206
250 ISL	7.46 D	7.44	34.030 D	26.594	147.5	0.550	2.02	30.0	45.2	2.39	31.9	0.01	0.00			251	
268	7.31	7.28	34.041	26.624	144.9	0.576	1.81	26.8	48.4	2.49	33.1	0.00	0.00			270	205
300 ISL	6.98 D	6.95	34.065 D	26.689	139.1	0.621	1.47	21.6	54.1	2.64	34.9	0.00	0.00			302	
319	6.78	6.75	34.077	26.726	135.8	0.648	1.30	19.0	57.5	2.72	35.8	0.00	0.00			321	204
380	6.08	6.05	34.110	26.844	125.0	0.727	0.93	13.4	69.1	2.93	38.5	0.00	0.00			382	203
400 ISL	5.90 D	5.87	34.130 D	26.882	121.4	0.752	0.84	12.0	72.3	2.98	39.0	0.00	0.00			403	
437	5.66	5.62	34.147	26.925	117.6	0.796	0.69	9.8	77.8	3.05	39.7	0.00	0.00			440	202
500 ISL	5.33 D	5.29	34.196 D	27.004	110.6	0.868	0.49	6.9	85.8	3.15	40.9	0.00	0.00			503	
512	5.27	5.23	34.199	27.014	109.8	0.881	0.45	6.3	87.3	3.17	41.1	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;

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.0 N	123 13.3 W	27/08/08	2219 UTC	4235 m	350 06 kn	340 06 08	2	1011.5 mb	18.3 C	16.1 C	19m	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	17.40	17.40	32.929	23.832	406.1	0.000	5.75	104.7	0.8	0.38	0.0	0.00	0.00	0.18	0.02	0	
2	17.40	17.40	32.929	23.832	406.1	0.008	5.75	104.7	0.8	0.38	0.0	0.00	0.00	0.18	0.02	2	221
9	17.26	17.26	32.927	23.864	403.3	0.036	5.75	104.4	0.8	0.38	0.0	0.00	0.17	0.20	0.02	9	219
9	17.26	17.26	32.928	23.865	403.3	0.036										9	220
10 ISL	17.25 D	17.25	32.924 D	23.864	403.4	0.040	5.75	104.4	0.8	0.38	0.0	0.00	0.17	0.20	0.02	10	
20 ISL	17.23 D	17.23	32.925 D	23.870	403.1	0.081	5.76	104.5	0.9	0.38	0.0	0.00	0.16	0.20	0.03	20	
24	17.17	17.17	32.928	23.886	401.7	0.097	5.76	104.4	0.9	0.38	0.0	0.00	0.16	0.20	0.03	24	218
30 ISL	15.61 D	15.61	32.999 D	24.298	362.6	0.120	5.91	103.9	1.3	0.40	0.3	0.01	0.12	0.26	0.06	30	
39	15.10	15.09	32.985	24.399	353.2	0.152	6.11	106.3	1.9	0.43	0.7	0.02	0.06	0.36	0.13	39	217
49	14.16	14.15	32.912	24.543	339.7	0.187	6.09	103.9	2.5	0.43	0.2	0.01	0.40	0.45	0.22	49	216
50 ISL	13.60 D	13.59	32.958 D	24.693	325.3	0.190	6.08	102.6	2.6	0.44	0.3	0.05	0.40	0.44	0.22	50	
62	12.85	12.84	32.889	24.790	316.4	0.229	5.92	98.3	3.6	0.55	1.0	0.43	0.42	0.37	0.28	62	215
74	11.99	11.98	32.972	25.018	294.8	0.265	5.70	93.0	5.3	0.71	4.6	0.08	0.00	0.13	0.17	74	214
75 ISL	11.99 D	11.98	33.013 D	25.050	291.8	0.268	5.69	92.8	5.5	0.73	4.9	0.07	0.00	0.12	0.16	75	
86	11.55	11.54	33.079	25.183	279.4	0.300	5.56	89.9	8.0	0.89	8.0	0.02	0.00	0.08	0.10	86	213
100 ISL	10.31 D	10.30	33.135 D	25.446	254.5	0.337	5.49	86.4	10.0	1.02	10.1	0.01	0.04	0.03	0.05	100	
101	10.40	10.39	33.020	25.341	264.5	0.340	5.48	86.4	10.2	1.03	10.3	0.01	0.04	0.03	0.05	101	212
111	10.14	10.13	33.226	25.546	245.2	0.365	5.06	79.4	13.5	1.24	13.8	0.01	0.00	0.02	0.04	111	211
124	9.66	9.65	33.308	25.690	231.7	0.396	4.65	72.2	17.2	1.44	17.1	0.00	0.00	0.01	0.03	125	210
125 ISL	9.61 D	9.60	33.334 D	25.719	229.0	0.398	4.63	71.9	17.3	1.45	17.2	0.00	0.00	0.01	0.03	126	
139	9.52	9.50	33.418	25.799	221.6	0.430	4.36	67.6	19.2	1.55	18.8	0.00	0.00	0.01	0.05	140	209
150 ISL	9.66 D	9.64	33.672 D	25.975	205.2	0.453	3.97	61.8	21.9	1.68	21.0	0.00	0.00	0.01	0.04	151	
164	9.30	9.28	33.791	26.127	191.0	0.481	3.44	53.2	25.6	1.86	23.9	0.00	0.00	0.01	0.03	165	208
200 ISL	8.67 D	8.65	33.968 D	26.365	168.9	0.546	2.68	40.9	32.0	2.09	27.2	0.00	0.00	0.00	0.03	201	
201	8.72	8.70	33.957	26.349	170.5	0.548	2.67	40.8	32.1	2.09	27.2	0.00	0.00	0.00	0.03	202	207
228	8.23	8.21	33.986	26.447	161.5	0.592	3.09	46.7	33.8	1.98	26.3	0.00	0.00			229	206
250 ISL	7.90 D	7.87	34.009 D	26.514	155.4	0.627	2.73	40.9	38.0	2.12	28.4	0.00	0.00			251	
268	7.72	7.69	34.023	26.552	152.0	0.655	2.25	33.6	42.2	2.30	30.7	0.00	0.00			270	205
300 ISL	7.41 D	7.38	34.071 D	26.634	144.6	0.702	1.62	24.0	48.6	2.54	33.0	0.00	0.00			302	
318	7.40	7.37	34.117	26.672	141.3	0.728	1.32	19.6	51.9	2.65	34.0	0.00	0.00			320	204
379	6.85	6.81	34.160	26.783	131.4	0.811	0.94	13.8	60.5	2.86	36.1	0.00	0.00			381	203
400 ISL	6.72 D	6.68	34.174 D	26.811	128.9	0.839	0.84	12.3	63.6	2.92	36.8	0.00	0.00			403	
437	6.35	6.31	34.184	26.868	123.7	0.885	0.70	10.1	68.9	3.01	37.9	0.00	0.00			440	202
500 ISL	5.92 D	5.88	34.227 D	26.958	115.8	0.961	0.48	6.9	77.4	3.13	39.4	0.00	0.00			503	
519	5.81	5.77	34.246	26.986	113.2	0.983	0.41	5.9	79.9	3.17	39.8	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 0808 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 54.5 W	28/08/08	0449 UTC	4359 m	350 07 kn			1011.1 mb	17.0 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	17.57	17.57	32.928	23.791	410.0	0.000	5.63	102.8	1.8	0.34	0.0	0.00	0.08	0.10	0.02	0	
3	17.57	17.57	32.928	23.791	410.1	0.012	5.63	102.8	1.8	0.34	0.0	0.00	0.08	0.10	0.02	3	221
9	17.33	17.33	32.945	23.861	403.6	0.037	5.69	103.4	1.8	0.35	0.0	0.00	0.13	0.14	0.03	9	219
10 ISL	17.26 D	17.26	32.950 D	23.882	401.7	0.041	5.70	103.5	1.8	0.35	0.0	0.00	0.15	0.15	0.03	10	
10	17.41	17.41	32.938	23.837	405.9	0.041										10	220
20 ISL	17.09 D	17.09	32.960 D	23.930	397.4	0.081	5.77	104.4	1.5	0.36	0.1	0.00	0.37	0.28	0.05	20	
25	17.05	17.05	32.985	23.958	394.8	0.101	5.80	104.9	1.4	0.36	0.1	0.00	0.46	0.35	0.06	25	218
30 ISL	16.96 D	16.96	32.991 D	23.984	392.5	0.120	5.81	104.9	1.3	0.36	0.1	0.00	0.44	0.42	0.06	30	
40	16.98	16.97	33.040	24.018	389.7	0.160	5.82	105.1	1.2	0.37	0.2	0.01	0.35	0.49	0.09	40	217
50	15.16	15.15	32.832	24.269	365.9	0.197	6.10	106.2	2.3	0.38	0.0	0.00	0.30	0.37	0.16	50	216
62	14.06	14.05	32.926	24.575	337.0	0.239	6.30	107.3	2.5	0.61	2.6	0.11	0.60	0.51	0.28	62	215
75 ISL	14.32 D	14.31	33.107 D	24.661	329.2	0.283	6.06	103.8	3.0	0.69	3.9	0.15	0.74	0.43	0.10	75	
76	14.33	14.32	33.122	24.670	328.4	0.286	6.04	103.5	3.1	0.69	4.0	0.15	0.75	0.42	0.09	76	214
87	14.14	14.13	33.152	24.734	322.6	0.322	5.94	101.4	3.7	0.73	4.5	0.19	1.05	0.39	0.26	87	213
100 ISL	11.94 D	11.93	32.872 D	24.951	301.9	0.362	5.77	93.9	5.2	0.75	4.6	0.25	0.29	0.24	0.23	100	
101	11.82	11.81	32.865	24.968	300.3	0.365	5.75	93.4	5.4	0.75	4.6	0.25	0.23	0.22	0.23	101	212
112	10.71	10.70	32.935	25.222	276.2	0.397	5.49	87.1	8.2	0.94	8.6	0.01	0.33	0.06	0.14	112	211
125	9.79	9.78	32.942	25.383	260.9	0.432	5.50	85.5	12.3	1.17	12.2	0.01	0.00	0.05	0.07	126	210
141	10.05	10.03	33.240	25.573	243.3	0.472	4.86	76.1	13.3	1.26	14.2	0.00	0.21	0.03	0.05	142	209
150 ISL	9.71 D	9.69	33.315 D	25.688	232.5	0.494	4.55	70.8	15.8	1.39	16.4	0.00	0.17	0.02	0.04	151	
165	9.60	9.58	33.532	25.875	214.9	0.527	4.10	63.7	20.7	1.64	20.4	0.00	0.11	0.01	0.03	166	208
200 ISL	9.13 D	9.11	33.839 D	26.192	185.5	0.597	3.32	51.1	27.1	1.90	24.9	0.00	0.12	0.00	0.02	201	
202	9.12	9.10	33.845	26.198	184.9	0.601	3.29	50.7	27.4	1.91	25.0	0.00	0.12	0.00	0.02	203	207
229	8.65	8.63	33.947	26.353	170.7	0.649	2.99	45.6	30.9	1.97	26.1	0.00	0.42			230	206
250 ISL	8.40 D	8.37	34.005 D	26.437	163.0	0.684	2.55	38.7	34.7	2.13	28.1	0.00	0.25			251	
270	8.27	8.24	34.034	26.479	159.2	0.716	2.14	32.4	38.5	2.29	30.0	0.00	0.00			271	205
300 ISL	7.79 D	7.76	34.037 D	26.553	152.5	0.763	1.94	29.0	43.1	2.38	31.3	0.00	0.00			302	
319	7.60	7.57	34.055	26.595	148.8	0.792	1.88	28.0	45.9	2.42	31.9	0.00	0.00			321	204
378	6.87	6.83	34.088	26.723	137.0	0.876	1.47	21.5	56.2	2.66	34.8	0.00	0.00			380	203
400 ISL	6.56 D	6.52	34.092 D	26.768	132.8	0.906	1.34	19.5	60.4	2.74	35.8	0.00	0.00			402	
439	6.08	6.04	34.101	26.837	126.4	0.956	1.11	16.0	67.8	2.86	37.5	0.00	0.00			442	202
500 ISL	5.52 D	5.48	34.141 D	26.938	117.1	1.031	0.77	10.9	78.7	3.02	39.6	0.00	0.00			503	
513	5.46	5.42	34.158	26.959	115.2	1.046	0.70	9.9	81.0	3.06	40.1	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 0808 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 2.0 W	26/08/08	1359 UTC	583 m	240 05 kn	290 03 08	1	1007.4 mb	18.8 C	17.3 C	08m	2/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.22	19.22	33.557	23.864	403.0	0.000	5.79	109.5	3.3	0.17	0.0	0.00	0.14	1.03	0.15	0	
2 A	19.22	19.22	33.557	23.864	403.1	0.008	5.79	109.5	3.3	0.17	0.0	0.00	0.14	1.03	0.15	2	224
10	17.94	17.94	33.526	24.160	375.2	0.039	6.13	113.2	3.5	0.23	0.0	0.00	0.00	1.20	0.29	10	223
19	15.21	15.21	33.467	24.746	319.6	0.070	6.13	107.2	4.9	0.45	0.9	0.07	0.00	2.19	0.75	19	222
20 ISL	14.50 D	14.50	33.471 D	24.902	304.7	0.074	6.06	104.5	5.2	0.49	1.5	0.12	0.00	2.05	0.73	20	
29	13.31	13.31	33.461	25.140	282.2	0.100	5.32	89.5	7.9	0.88	7.8	0.48	0.02	0.50	0.37	29	221
30 ISL	13.08 D	13.08	33.478 D	25.199	276.6	0.103	5.28	88.4	8.1	0.90	8.2	0.46	0.02	0.48	0.37	30	
39	12.60	12.59	33.482	25.297	267.5	0.127	4.99	82.7	9.9	1.05	10.9	0.14	0.00	0.30	0.32	39	220
49	11.63	11.62	33.570	25.549	243.7	0.153	4.35	70.7	14.0	1.32	15.3	0.03	0.00	0.13	0.20	49	219
50 ISL	11.50 D	11.49	33.587 D	25.586	240.2	0.155	4.31	69.8	14.3	1.34	15.5	0.03	0.00	0.13	0.19	50	
60	11.21	11.20	33.627	25.671	232.4	0.179	3.94	63.5	16.9	1.49	17.4	0.02	0.03	0.10	0.16	60	218
69	10.82	10.81	33.687	25.787	221.5	0.199	3.61	57.7	19.0	1.60	19.2	0.02	0.00	0.06	0.12	69	217
75 ISL	10.54 D	10.53	33.751 D	25.886	212.2	0.212	3.32	52.7	21.0	1.71	20.7	0.02	0.00	0.04	0.11	75	
84	10.20	10.19	33.842	26.016	200.1	0.231	2.88	45.4	24.1	1.87	22.8	0.01	0.00	0.02	0.10	84	216
100 ISL	9.84 D	9.83	33.974 D	26.180	184.8	0.262	2.38	37.3	28.1	2.05	25.0	0.00	0.00	0.01	0.06	101	
101	9.85	9.84	33.970	26.175	185.2	0.264	2.36	37.0	28.3	2.06	25.1	0.00	0.00	0.01	0.06	102	215
120	9.69	9.68	34.034	26.252	178.3	0.298	2.10	32.8	30.8	2.17	26.3	0.00	0.00	0.01	0.07	121	214
125 ISL	9.65 D	9.64	34.053 D	26.274	176.4	0.307	2.02	31.5	31.5	2.20	26.7	0.00	0.03	0.01	0.07	126	
139	9.49	9.47	34.081	26.322	172.1	0.331	1.80	28.0	33.3	2.28	27.7	0.00	0.10	0.01	0.07	140	213
150 ISL	9.52 D	9.50	34.106 D	26.337	170.9	0.350	1.66	25.8	34.5	2.33	28.2	0.00	0.08	0.01	0.07	151	
169	9.36	9.34	34.139	26.389	166.3	0.382	1.45	22.5	36.3	2.40	28.9	0.00	0.00	0.00	0.08	170	212
200 ISL	9.17 D	9.15	34.183 D	26.455	160.6	0.433	1.16	17.9	38.9	2.52	30.3	0.00	0.00	0.00	0.08	201	
201	9.17	9.15	34.182	26.454	160.7	0.434	1.15	17.8	39.0	2.52	30.3	0.00	0.00	0.00	0.08	202	211
228	9.06	9.04	34.200	26.486	158.2	0.478	1.02	15.7	40.8	2.58	30.9	0.00	0.00			229	210
250 ISL	8.97 D	8.94	34.213 D	26.511	156.3	0.512	0.93	14.3	42.2	2.62	31.4	0.00	0.00			252	
269	8.85	8.82	34.219	26.535	154.3	0.542	0.85	13.0	43.9	2.67	31.8	0.00	0.00			271	209
300 ISL	8.46 D	8.43	34.230 D	26.605	148.1	0.589	0.72	10.9	48.8	2.79	32.7	0.00	0.03			302	
317	8.27	8.24	34.235	26.638	145.2	0.613	0.66	10.0	51.6	2.85	33.2	0.00	0.04			319	208
377	7.89	7.85	34.231	26.692	140.8	0.699	0.53	8.0	57.4	2.95	34.0	0.00	0.00			379	207
400 ISL	7.68 D	7.64	34.235 D	26.726	137.9	0.731	0.50	7.5	59.6	2.98	34.2	0.00	0.04			403	
437	7.33	7.29	34.243	26.783	132.8	0.781	0.39	5.8	66.7	3.08	34.5	0.00	0.08			440	206
476	6.79	6.75	34.248	26.861	125.5	0.832	0.08	1.2	83.4	3.34	32.7	0.00	0.00			479	205
500 ISL	6.67 D	6.62	34.249 D	26.878	124.1	0.862	0.06	0.9	86.9	3.38	32.2	0.00	0.00			503	
510	6.65	6.60	34.247	26.880	124.1	0.874	0.05	0.7	88.1	3.40	31.9	0.00	0.00			514	204
543	6.50	6.45	34.249	26.901	122.4	0.915	0.02	0.3	98.3	3.56	29.2	0.00	0.00			547	203
565	6.43	6.38	34.248	26.910	121.8	0.942	0.01	0.1	112.1	3.79	23.5	0.00	1.61			569	202
571	6.43	6.38	34.250	26.912	121.7	0.949	0.01	0.1	112.5	3.79	23.3	0.00	1.71			575	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 0808 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.4 N	119 25.1 W	26/08/08	0929 UTC	38 m	090 07 kn			1006.4 mb	20.1 C	18.6 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	20.60	20.60	33.553	23.501	437.6	0.000	5.76	111.8	3.8	0.15	0.0	0.00	0.29	0.78	0.12	0	
1	20.60	20.60	33.553	23.501	437.7	0.004	5.76	111.8	3.8	0.15	0.0	0.00	0.29	0.78	0.12	1	208
4	20.36	20.36	33.542	23.557	432.5	0.017										4	207
5	19.55	19.55	33.536	23.764	412.8	0.022	5.89	112.1	3.6	0.16	0.0	0.00	0.41	0.80	0.12	5	206
9	16.43	16.43	33.420	24.436	348.8	0.037										9	205
10	16.45	16.45	33.420	24.431	349.3	0.040	6.47	115.9	3.1	0.33	0.0	0.00	0.40	0.91	0.36	10	204
13	14.99	14.99	33.384	24.730	320.9	0.050	6.42	111.7	3.7	0.41	0.6	0.03	0.39	2.15	0.58	13	203
20	13.34	13.34	33.390	25.079	287.8	0.072	5.74	96.6	6.8	0.76	5.8	0.16	0.22	1.09	0.52	20	202
30 ISL	12.48 D	12.48	33.409 D	25.263	270.5	0.100	5.27	87.1	9.2	0.99	9.1	0.16	0.60	0.63	0.50	30	
32	12.39	12.39	33.413	25.284	268.6	0.105	5.18	85.4	9.7	1.04	9.7	0.16	0.68	0.54	0.50	32	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 10.5 N	119 30.4 W	26/08/08	0627 UTC	166 m	250 07 kn			1005.8 mb	18.6 C	16.8 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	19.81	19.81	33.543	23.701	418.5	0.000	5.77	110.4	3.1	0.17	0.0	0.00	0.53	0.93	0.11	0	
2	19.81	19.81	33.543	23.702	418.6	0.008	5.77	110.4	3.1	0.17	0.0	0.00	0.53	0.93	0.11	2	216
4	19.80	19.80	33.543	23.704	418.4	0.017	5.77	110.3	3.1	0.17	0.0	0.00	0.36	0.95	0.13	4	215
10	19.75	19.75	33.540	23.715	417.6	0.042	5.81	111.0	3.0	0.17	0.0	0.00	0.21	0.96	0.14	10	213
10	19.76	19.76	33.541	23.713	417.8	0.042										10	214
20	16.47	16.47	33.415	24.423	350.4	0.080	6.39	114.6	2.9	0.30	0.0	0.00	0.00	0.89	0.31	20	212
26	14.07	14.07	33.368	24.913	303.8	0.100	6.04	103.2	5.3	0.58	3.5	0.10	0.09	1.09	0.49	26	211
30	13.64	13.64	33.367	25.001	295.5	0.112	5.98	101.2	5.6	0.66	4.3	0.13	0.26	0.96	0.49	30	210
40	12.76	12.75	33.368	25.178	278.9	0.141	5.53	91.9	7.1	0.84	7.4	0.21	0.18	0.65	0.47	40	209
50 ISL	12.19 D	12.18	33.434 D	25.339	263.8	0.168	5.15	84.6	8.9	1.02	10.3	0.12	0.09	0.40	0.38	50	
51	12.19	12.18	33.427	25.333	264.4	0.170	5.10	83.8	9.2	1.04	10.6	0.11	0.09	0.38	0.37	51	208
60	11.64	11.63	33.542	25.526	246.2	0.193	4.41	71.6	14.5	1.32	14.7	0.07	0.15	0.29	0.21	60	207
69	11.07	11.06	33.627	25.696	230.2	0.215	3.87	62.1	15.9	1.49	17.5	0.01	0.05	0.05	0.10	69	206
75 ISL	10.87 D	10.86	33.696 D	25.785	221.8	0.228	3.63	58.1	17.2	1.57	18.7	0.01	0.03	0.04	0.09	75	
85	10.75	10.74	33.718	25.824	218.4	0.250	3.35	53.4	19.2	1.68	19.9	0.01	0.00	0.02	0.08	85	205
100 ISL	10.55 D	10.54	33.762 D	25.893	212.1	0.283	3.11	49.4	20.8	1.78	21.1	0.01	0.00	0.02	0.08	100	
102	10.55	10.54	33.763	25.894	212.1	0.287	3.09	49.1	21.0	1.79	21.2	0.01	0.00	0.02	0.08	103	204
121	10.31	10.30	33.836	25.993	203.1	0.326	2.83	44.7	24.4	1.92	22.6	0.02	0.00	0.02	0.08	122	203
125 ISL	10.32 D	10.31	33.837 D	25.992	203.3	0.334	2.82	44.6	24.4	1.92	22.6	0.02	0.00	0.02	0.08	126	
141	10.29	10.27	33.845	26.004	202.5	0.367	2.79	44.1	24.2	1.92	22.8	0.00	0.00	0.01	0.07	142	202
150	10.22	10.20	33.859	26.027	200.5	0.385	2.71	42.8	24.5	1.94	23.3	0.00	0.00	0.01	0.06	151	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 8.6 W	25/08/08	2346 UTC	111 m	300 23 kn	280 05 09	0	1006.1 mb	18.1 C	16.5 C	09m	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	17.78	17.78	33.437	24.130	377.7	0.000	6.07	111.6	2.6	0.29	0.0	0.00	0.14	0.40	0.11	0	
2	17.78	17.78	33.437	24.130	377.7	0.008	6.07	111.6	2.6	0.29	0.0	0.00	0.14	0.40	0.11	2	212
6	17.81	17.81	33.438	24.124	378.5	0.023	6.06	111.5	2.5	0.29	0.0	0.00	0.03	0.40	0.10	6	211
10	17.62	17.62	33.440	24.171	374.1	0.038	6.12	112.2	2.6	0.29	0.0	0.00	0.02	0.52	0.15	10	209
10	17.64	17.64	33.441	24.167	374.5	0.038										10	210
20 ISL	13.59 D	13.59	33.409 D	25.043	291.2	0.071	5.81	98.3	6.1	0.70	5.2	0.15	0.09	1.18	0.44	20	
22	13.16	13.16	33.418	25.137	282.4	0.077	5.70	95.6	7.0	0.80	6.6	0.18	0.10	1.28	0.49	22	208
30 ISL	12.75 D	12.75	33.435 D	25.231	273.6	0.099	5.32	88.4	8.9	0.98	9.5	0.12	0.04	1.00	0.43	30	
31	12.40	12.40	33.443	25.305	266.5	0.102	5.28	87.1	9.1	1.00	9.8	0.11	0.03	0.95	0.41	31	207
39	12.17	12.16	33.453	25.357	261.8	0.123	5.14	84.4	9.8	1.07	10.8	0.08	0.00	0.75	0.35	39	206
50 ISL	11.82 D	11.81	33.487 D	25.450	253.2	0.151	4.93	80.4	11.1	1.16	12.4	0.04	0.00	0.38	0.26	50	
51	11.84	11.83	33.490	25.448	253.4	0.154	4.90	79.9	11.3	1.17	12.6	0.04	0.00	0.35	0.25	51	205
57	11.50	11.49	33.541	25.551	243.8	0.169	4.69	76.0	13.4	1.29	14.5	0.04	0.00	0.20	0.18	57	204
71	11.47	11.46	33.538	25.554	243.8	0.203	4.66	75.4	13.5	1.29	14.6	0.04	0.00	0.21	0.17	71	203
75 ISL	11.49 D	11.48	33.538 D	25.551	244.2	0.212	4.65	75.3	13.6	1.31	14.6	0.04	0.00	0.21	0.17	75	
78	11.47	11.46	33.540	25.556	243.8	0.220	4.63	74.9	13.6	1.32	14.7	0.04	0.00	0.21	0.17	78	202
93	11.30	11.29	33.590	25.626	237.5	0.256	4.39	70.8	15.5	1.38	15.4	0.09	0.10	0.22	0.25	93	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.6 N	120 25.0 W	25/08/08	1932 UTC	1102 m	320 15 kn	340 08 09	2	1008.8 mb	17.5 C	16.9 C	08m	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	16.16	16.16	33.642	24.668	326.4	0.000	5.73	102.2	2.2	0.46	2.3	0.08	0.22	1.09	0.24	0	
2 A	16.16	16.16	33.642	24.668	326.5	0.007	5.73	102.2	2.2	0.46	2.3	0.08	0.22	1.09	0.24	2	223
5 A	16.15	16.15	33.641	24.669	326.4	0.016	5.73	102.2	2.1	0.47	2.3	0.08	0.11	1.04	0.24	5	222
10 A	16.13	16.13	33.640	24.673	326.2	0.033	5.71	101.8	2.2	0.46	2.3	0.08	0.17	1.07	0.24	10	220
10	16.12	16.12	33.640	24.676	326.0	0.033										10	221
16 A	16.10	16.10	33.641	24.681	325.6	0.052	5.69	101.4	2.2	0.46	2.3	0.08	0.24	1.05	0.24	16	219
20 ISL	16.09 D	16.09	33.635 D	24.679	326.0	0.065	5.68	101.2	2.2	0.44	2.3	0.08	0.40	1.07	0.26	20	
21 A	16.09	16.09	33.643	24.685	325.4	0.068	5.68	101.2	2.2	0.44	2.3	0.08	0.44	1.07	0.27	21	218
30 A	14.21	14.21	33.656	25.106	285.5	0.096	5.15	88.4	6.9	0.79	7.4	0.15	0.29	1.30	0.45	30	217
39	12.31	12.30	33.680	25.506	247.6	0.120	4.45	73.4	13.6	1.25	14.2	0.21	0.23	0.91	0.37	39	216
49	11.44	11.43	33.710	25.693	230.1	0.144	4.07	65.9	16.6	1.46	17.3	0.23	0.13	0.38	0.38	49	215
50 ISL	11.32 D	11.31	33.728 D	25.729	226.7	0.146	4.03	65.1	16.9	1.48	17.6	0.21	0.12	0.35	0.36	50	
60	10.64	10.63	33.736	25.857	214.7	0.168	3.71	59.1	19.7	1.63	20.2	0.00	0.00	0.15	0.17	60	214
71	10.34	10.33	33.717	25.894	211.4	0.192	3.71	58.7	20.0	1.65	20.6	0.05	0.00	0.07	0.12	71	213
75 ISL	9.96 D	9.95	33.763 D	25.995	201.8	0.200	3.59	56.3	20.9	1.69	21.2	0.05	0.02	0.05	0.11	75	
85	9.92	9.91	33.811	26.039	197.8	0.220	3.20	50.2	23.8	1.81	22.9	0.02	0.05	0.03	0.08	85	212
100	9.77	9.76	33.908	26.140	188.5	0.249	2.69	42.1	27.1	1.96	24.4	0.00	0.00	0.02	0.07	101	211
119	9.36	9.35	33.947	26.238	179.6	0.284	2.62	40.6	29.3	2.01	25.6	0.00	0.18	0.01	0.06	120	210
125 ISL	9.35 D	9.34	33.952 D	26.244	179.1	0.295	2.52	39.0	30.2	2.04	26.0	0.00	0.14	0.01	0.07	126	
141	9.23	9.21	34.016	26.314	172.8	0.323	2.24	34.6	32.6	2.14	27.0	0.00	0.00	0.01	0.08	142	209
150 ISL	9.20 D	9.18	34.038 D	26.336	170.9	0.338	2.16	33.4	33.3	2.17	27.3	0.00	0.00	0.01	0.08	151	
168	9.18	9.16	34.067	26.362	168.8	0.369	2.01	31.0	34.6	2.23	27.9	0.00	0.00	0.01	0.07	169	208
199	8.96	8.94	34.162	26.472	158.9	0.420	1.59	24.4	38.4	2.39	29.2	0.00	0.00	0.00	0.06	200	207
200 ISL	8.97 D	8.95	34.171 D	26.478	158.4	0.421	1.58	24.3	38.5	2.39	29.2	0.00	0.00			201	
229	8.79	8.77	34.207	26.535	153.5	0.466	1.33	20.4	41.4	2.48	30.2	0.00	0.10			230	206
250 ISL	8.71 D	8.68	34.222 D	26.559	151.6	0.498	1.21	18.5	43.1	2.53	30.8	0.00	0.06			252	
268	8.59	8.56	34.234	26.587	149.2	0.525	1.13	17.2	44.5	2.57	31.2	0.00	0.00			270	205
300 ISL	8.46 D	8.43	34.288 D	26.650	143.8	0.572	0.99	15.1	47.1	2.64	31.7	0.00	0.00			302	
326	8.31	8.28	34.274	26.662	143.0	0.610	0.89	13.5	49.1	2.70	32.1	0.00	0.00			328	204
379	7.99	7.95	34.285	26.720	138.4	0.684	0.77	11.6	52.8	2.79	33.1	0.00	0.00			381	203
400 ISL	7.92 D	7.88	34.290 D	26.734	137.3	0.713	0.71	10.7	54.2	2.82	33.5	0.00	0.00			403	
438	7.63	7.59	34.292	26.779	133.5	0.765	0.62	9.3	57.3	2.87	34.4	0.00	0.00			441	202
500 ISL	6.80 D	6.75	34.269 D	26.877	124.4	0.845	0.53	7.8	65.5	2.98	36.7	0.00	0.02			503	
512	6.77	6.72	34.268	26.880	124.2	0.860	0.51	7.5	67.1	3.00	37.2	0.00	0.02			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;

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 35.1 N	120 45.5 W	25/08/08	1421 UTC	1378 m	340 20 kn	310 08 08	2	1008.8 mb	16.1 C	15.1 C	08m	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	16.11	16.11	33.554	24.611	331.8	0.000	5.78	103.0	0.7	0.35	1.0	0.05	0.30	1.10	0.26	0	
2	16.11	16.11	33.554	24.611	331.8	0.007	5.78	103.0	0.7	0.35	1.0	0.05	0.30	1.10	0.26	2	221
10	16.13	16.13	33.560	24.612	332.1	0.033	5.78	103.0	0.8	0.35	0.9	0.05	0.29	1.11	0.30	10	219
10	16.12	16.12	33.559	24.613	331.9	0.033										10	220
19	15.86	15.86	33.572	24.682	325.6	0.063	5.78	102.5	1.3	0.39	1.6	0.08	0.37	1.30	0.32	19	218
20 ISL	15.86 D	15.86	33.565 D	24.677	326.2	0.066	5.79	102.6	1.3	0.40	1.7	0.09	0.41	1.29	0.33	20	
30	14.15	14.15	33.250	24.805	314.2	0.098	5.85	100.0	3.3	0.57	3.0	0.21	0.60	1.00	0.40	30	217
39	12.39	12.38	33.361	25.244	272.6	0.124	5.32	87.7	8.6	0.97	9.6	0.34	0.11	0.56	0.30	39	216
49	11.28	11.27	33.429	25.504	248.0	0.150	4.93	79.4	12.7	1.21	14.0	0.06	0.06	0.16	0.13	49	215
50 ISL	11.25 D	11.24	33.462 D	25.535	245.1	0.153	4.82	77.6	13.3	1.24	14.5	0.06	0.05	0.17	0.14	50	
59	11.12	11.11	33.737	25.772	222.7	0.174	3.81	61.3	18.4	1.52	18.9	0.15	0.00	0.31	0.24	59	214
69	10.29	10.28	33.778	25.950	206.0	0.195	3.45	54.5	22.0	1.69	21.7	0.05	0.00	0.15	0.14	69	213
75 ISL	10.05 D	10.04	33.817 D	26.022	199.3	0.208	3.10	48.7	24.5	1.80	23.1	0.04	0.00	0.09	0.12	75	
84	9.70	9.69	33.932	26.170	185.3	0.225	2.60	40.6	27.8	1.95	24.6	0.02	0.00	0.04	0.10	84	212
100	9.52	9.51	34.017	26.267	176.5	0.254	2.28	35.5	30.7	2.06	25.8	0.02	0.00	0.01	0.07	101	211
119	9.45	9.44	34.053	26.307	173.1	0.287	2.13	33.1	32.1	2.11	26.5	0.02	0.00	0.02	0.09	120	210
125 ISL	9.40 D	9.39	34.072 D	26.330	171.0	0.297	2.09	32.4	32.6	2.13	26.7	0.02	0.01	0.02	0.09	126	
139	9.32	9.30	34.097	26.362	168.2	0.321	1.96	30.4	33.9	2.18	27.1	0.02	0.04	0.01	0.09	140	209
150 ISL	9.26 D	9.24	34.149 D	26.413	163.6	0.339	1.79	27.7	35.1	2.24	27.5	0.02	0.03	0.01	0.08	151	
169	9.33	9.31	34.188	26.432	162.2	0.370	1.51	23.4	36.9	2.34	28.2	0.02	0.00	0.01	0.07	170	208
200	9.22	9.20	34.202	26.462	160.0	0.420	1.45	22.4	37.2	2.55 U	28.6	0.03	0.48	0.00	0.05	201	207
227	9.19	9.17	34.241	26.498	157.2	0.463	1.25	19.3	39.8	2.49	29.3	0.00	0.03			228	206
250 ISL	9.03 D	9.00	34.266 D	26.543	153.3	0.499	1.08	16.6	41.8	2.56	29.8	0.00	0.03			252	
268	8.97	8.94	34.287	26.570	151.1	0.526	0.97	14.9	43.3	2.62	30.2	0.00	0.03			270	205
300 ISL	8.74 D	8.71	34.302 D	26.618	147.0	0.574	0.84	12.9	46.3	2.70	31.0	0.00	0.01			302	
317	8.57	8.54	34.307	26.649	144.4	0.599	0.80	12.2	47.9	2.74	31.5	0.00	0.00			319	204
376	7.99	7.95	34.287	26.721	138.2	0.682	0.75	11.3	53.2	2.81	33.0	0.00	0.00			378	203
400 ISL	7.85 D	7.81	34.295 D	26.749	135.9	0.715	0.69	10.3	55.2	2.85	33.5	0.00	0.00			403	
438	7.56	7.52	34.300	26.795	131.9	0.766	0.58	8.6	58.9	2.91	34.5	0.00	0.00			441	202
500 ISL	6.92 D	6.87	34.305 D	26.889	123.4	0.845	0.45	6.6	67.7	3.03	36.7	0.00	0.00			503	
518	6.65	6.60	34.291	26.914	121.0	0.867	0.41	6.0	70.3	3.07	37.4	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 0808 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 27.2 W	25/08/08	0716 UTC	3807 m	350 20 kn			1009.8 mb	16.8 C	15.5 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.58	16.58	33.212	24.241	367.1	0.000	5.82	104.4	1.4	0.39	0.1	0.02	0.22	0.33	0.07	0	
2	16.58	16.58	33.212	24.241	367.1	0.007	5.82	104.4	1.4	0.39	0.1	0.02	0.22	0.33	0.07	2	221
10 CSL	16.58	16.58	33.210	24.240	367.5	0.037										10	200
10	16.58	16.58	33.213	24.242	367.3	0.037										10	220
11	16.58	16.58	33.212	24.241	367.4	0.040	5.82	104.4	1.5	0.38	0.1	0.02	0.16	0.35	0.06	11	219
20 ISL	16.52 D	16.52	33.259 D	24.292	362.9	0.073	5.87	105.2	1.3	0.39	0.1	0.02	0.26	0.39	0.10	20	
21	16.50	16.50	33.265	24.301	362.0	0.077	5.88	105.4	1.3	0.39	0.1	0.02	0.27	0.40	0.11	21	218
30	15.77	15.77	33.284	24.482	345.1	0.109	6.03	106.5	1.4	0.41	0.5	0.06	0.06	0.56	0.20	30	217
40	14.05	14.04	33.080	24.695	324.9	0.142	6.11	104.1	2.6	0.53	1.4	0.29	0.23	0.67	0.35	40	216
50 ISL	12.70 D	12.69	32.914 D	24.838	311.5	0.174	5.95	98.5	4.3	0.65	2.7	0.66	0.26	0.63	0.42	50	
51	12.70	12.69	32.917	24.840	311.3	0.177	5.93	98.2	4.5	0.66	2.9	0.68	0.26	0.63	0.43	51	215
60	12.02	12.01	32.944	24.991	297.1	0.205	5.76	94.0	6.2	0.82	6.2	0.31	0.00	0.35	0.24	60	214
70	11.77	11.76	33.011	25.090	287.9	0.234	5.77	93.7	7.3	0.91	7.7	0.24	0.07	0.20	0.15	70	213
75 ISL	11.23 D	11.22	32.988 D	25.170	280.3	0.248	5.71	91.6	8.1	0.95	8.5	0.16	0.10	0.15	0.12	75	
85	10.58	10.57	33.000	25.294	268.7	0.275	5.49	86.9	10.1	1.06	10.4	0.02	0.13	0.07	0.07	85	212
100 ISL	10.69 D	10.68	33.331 D	25.533	246.3	0.314	5.06	80.4	13.6	1.29	14.1	0.00	0.06	0.03	0.06	100	
102	10.43	10.42	33.304	25.557	244.0	0.319	4.98	78.7	14.1	1.32	14.7	0.00	0.05	0.03	0.06	102	211
122	9.43	9.42	33.658	26.001	202.1	0.364	3.82	59.2	21.3	1.65	20.8	0.02	0.04	0.01	0.03	123	210
125 ISL	9.41 D	9.40	33.710 D	26.045	198.0	0.370	3.72	57.6	22.2	1.70	21.5	0.02	0.04	0.01	0.03	126	
142	9.23	9.21	33.820	26.160	187.4	0.402	3.32	51.3	26.6	1.90	24.4	0.00	0.01	0.01	0.04	143	209
150 ISL	9.07 D	9.05	33.853 D	26.212	182.6	0.417	3.20	49.2	27.9	1.94	25.0	0.00	0.01	0.01	0.04	151	
170	8.69	8.67	33.926	26.329	171.8	0.453	2.97	45.3	30.5	1.98	25.8	0.00	0.00	0.01	0.03	171	208
200 ISL	8.38 D	8.36	33.991 D	26.428	162.9	0.503	2.52	38.2	35.0	2.13	28.2	0.00	0.00	0.00	0.03	201	
201	8.38	8.36	33.990	26.427	162.9	0.504	2.50	37.9	35.2	2.14	28.3	0.00	0.00	0.00	0.03	202	207
230	8.11	8.09	34.025	26.495	156.9	0.551	2.14	32.2	39.3	2.28	30.2	0.00	0.00			231	206
250 ISL	7.83 D	7.81	34.035 D	26.545	152.4	0.582	2.00	29.9	42.0	2.34	31.1	0.00	0.00			251	
269	7.66	7.63	34.044	26.577	149.6	0.610	1.89	28.2	44.6	2.39	31.9	0.00	0.00			271	205
300 ISL	7.25 D	7.22	34.073 D	26.658	142.2	0.656	1.63	24.1	49.8	2.53	33.5	0.00	0.00			302	
321	7.04	7.01	34.072	26.687	139.7	0.685	1.45	21.3	53.6	2.63	34.6	0.00	0.00			323	204
379	6.34	6.31	34.100	26.802	129.1	0.763	1.07	15.5	64.4	2.85	37.4	0.00	0.08			381	203
400 ISL	6.08 D	6.05	34.104 D	26.839	125.7	0.790	0.97	13.9	68.1	2.90	38.0	0.00	0.06			403	
436	5.82	5.78	34.125	26.889	121.3	0.834	0.83	11.9	73.9	2.96	38.8	0.00	0.01			439	202
500 ISL	5.45 D	5.41	34.169 D	26.969	114.1	0.910	0.59	8.4	82.0	3.08	40.1	0.00	0.02			503	
512	5.39	5.35	34.172	26.978	113.3	0.923	0.54	7.6	83.5	3.10	40.4	0.00	0.02			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.8 N	122 7.7 W	25/08/08	0105 UTC	4183 m	340 17 kn	340 04 06	2	1010.5 mb	17.1 C	15.2 C	14m	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	16.59	16.59	33.380	24.368	355.0	0.000	5.83	104.7	2.0	0.34	0.0	0.00	0.00	0.35	0.07	0	
2	16.59	16.59	33.380	24.368	355.1	0.007	5.83	104.7	2.0	0.34	0.0	0.00	0.00	0.35	0.07	2	221
10	16.61	16.61	33.398	24.377	354.4	0.035	5.82	104.6	2.0	0.34	0.0	0.00	0.00	0.36	0.07	10	219
11	16.61	16.61	33.402	24.380	354.1	0.039										11	220
20	15.91	15.91	33.476	24.597	333.7	0.070	6.05	107.3	2.3	0.36	0.2	0.02	0.05	0.65	0.19	20	218
30	15.06	15.06	33.455	24.770	317.6	0.103	5.89	102.7	4.7	0.45	0.9	0.12	0.62	0.85	0.35	30	217
39	13.77	13.76	33.220	24.861	309.1	0.131	5.81	98.5	5.0	0.59	2.4	0.29	0.40	0.60	0.37	39	216
49	12.81	12.80	33.097	24.958	300.0	0.161	5.78	96.0	5.1	0.75	4.7	0.39	0.16	0.40	0.31	49	215
50 ISL	12.84 D	12.83	33.113 D	24.965	299.5	0.164	5.78	96.1	5.2	0.75	4.8	0.37	0.14	0.39	0.30	50	
60	11.46	11.45	32.871	25.037	292.6	0.194	5.77	93.0	6.2	0.79	5.9	0.12	0.00	0.27	0.22	60	214
70	11.25	11.24	32.952	25.138	283.2	0.223	5.74	92.1	7.9	0.92	8.1	0.08	0.00	0.15	0.13	70	213
75 ISL	11.02 D	11.01	32.987 D	25.207	276.8	0.237	5.66	90.4	8.8	0.97	9.0	0.06	0.00	0.11	0.11	75	
84	10.56	10.55	33.029	25.320	266.1	0.261	5.48	86.7	10.5	1.05	10.6	0.03	0.00	0.07	0.09	84	212
100	10.25	10.24	33.177	25.489	250.4	0.302	5.12	80.5	13.6	1.23	13.8	0.00	0.00	0.04	0.07	100	211
120	10.26	10.25	33.497 D	25.737	227.3	0.350										121	210
125 ISL	10.24 D	10.23	33.524 D	25.762	225.1	0.361	4.69	73.9	17.0	1.45	17.4	0.00	0.00	0.03	0.06	126	
140	10.10	10.08	33.585	25.833	218.6	0.395	4.36	68.5	19.5	1.59	19.6	0.00	0.00	0.02	0.06	141	209
150 ISL	9.73 D	9.71	33.702 D	25.987	204.2	0.416	3.95	61.6	22.5	1.75	21.9	0.00	0.00	0.02	0.07	151	
169	9.26	9.24	33.884	26.206	183.6	0.453	3.22	49.8	28.2	2.00	25.7	0.00	0.00	0.01	0.09	170	208
200 ISL	8.45 D	8.43	33.956 D	26.390	166.5	0.507	2.90	44.0	32.9	2.02	26.8	0.00	0.00	0.00	0.05	201	
202	8.40	8.38	33.958	26.399	165.6	0.510	2.89	43.8	33.2	2.02	26.8	0.00	0.00	0.00	0.05	203	207
228	8.04	8.02	34.013	26.496	156.7	0.552	2.36	35.5	38.4	2.21	29.2	0.00	0.00			229	206
250 ISL	7.78 D	7.76	34.027 D	26.546	152.3	0.586	2.17	32.5	42.1	2.31	30.7	0.00	0.00			251	
265	7.53	7.50	34.025	26.580	149.1	0.609	2.08	30.9	44.5	2.36	31.5	0.00	0.00			267	205
300 ISL	7.23 D	7.20	34.059 D	26.650	143.0	0.660	1.71	25.3	50.3	2.53	33.3	0.00	0.00			302	
318	7.06	7.03	34.068	26.681	140.2	0.685	1.52	22.4	53.4	2.61	34.2	0.00	0.00			320	204
377	6.35	6.32	34.106	26.806	128.7	0.765	1.05	15.2	65.0	2.84	36.9	0.00	0.00			379	203
400 ISL	6.34 D	6.30	34.153 D	26.845	125.4	0.794	0.92	13.3	68.0	2.90	37.5	0.00	0.00			403	
438	6.02	5.98	34.160	26.891	121.2	0.841	0.74	10.6	72.6	2.98	38.4	0.00	0.00			441	202
500 ISL	5.43 D	5.39	34.176 D	26.977	113.3	0.914	0.55	7.8	82.6	3.09	40.0	0.00	0.00			503	
514	5.36	5.32	34.189	26.995	111.7	0.929	0.51	7.2	84.9	3.11	40.4	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 0808 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 34.5 N	122 49.4 W	24/08/08	1855 UTC	4271 m	010 13 kn	320 04 07	2	1013.7 mb	17.2 C	16.0 C	14m	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	16.37	16.37	33.208	24.286	362.8	0.000	5.93	106.0	2.0	0.40	0.3	0.03	0.00			0	
2 A	16.37	16.37	33.208	24.286	362.8	0.007	5.93	106.0	2.0	0.40	0.3	0.03	0.00			2	222
9 A	16.36	16.36	33.207	24.288	362.9	0.033	5.94	106.1	1.9	0.40	0.3	0.03	0.05	0.48	0.07	9	220
9	16.36	16.36	33.207	24.288	362.9	0.033										9	221
10 ISL	16.35 D	16.35	33.204 D	24.288	362.9	0.036	5.94	106.1	1.9	0.40	0.3	0.03	0.07	0.48	0.07	10	
19 A	16.10	16.10	33.197	24.340	358.2	0.069	5.96	105.9	2.0	0.40	0.4	0.03	0.21	0.51	0.08	19	219
20 ISL	15.10 D	15.10	33.033 D	24.436	349.1	0.072	5.98	104.1	2.0	0.40	0.5	0.03	0.20	0.53	0.10	20	
28 A	15.06	15.06	33.163	24.545	339.0	0.100	6.12	106.5	2.6	0.47	1.2	0.06	0.14	0.64	0.28	28	218
30 ISL	14.25 D	14.25	33.057 D	24.635	330.3	0.106	6.11	104.5	2.9	0.51	1.5	0.12	0.27	0.63	0.31	30	
37 A	13.49	13.48	32.996	24.745	320.1	0.129	6.01	101.2	4.0	0.63	2.4	0.37	0.71	0.55	0.36	37	217
45	13.24	13.23	33.030	24.821	313.0	0.155	5.93	99.3	4.2	0.69	3.2	0.52	0.63	0.43	0.28	45	216
50 ISL	12.65 D	12.64	32.993 D	24.909	304.8	0.170	5.89	97.4	4.7	0.73	3.9	0.47	0.46	0.34	0.22	50	
52 A	12.07	12.06	32.940	24.978	298.1	0.176	5.87	95.9	4.9	0.74	4.3	0.42	0.38	0.31	0.20	52	215
61	11.49	11.48	32.876	25.036	292.8	0.203	5.76	92.9	6.5	0.82	6.5	0.08	0.08	0.19	0.16	61	214
69	11.46	11.45	32.947	25.097	287.2	0.226	5.75	92.7	7.3	0.89	7.5	0.14	0.00	0.15	0.10	69	213
75 ISL	11.09 D	11.08	32.962 D	25.175	279.9	0.243	5.72	91.5	8.1	0.96	8.7	0.12	0.01	0.12	0.10	75	
84	11.07	11.06	33.078	25.269	271.1	0.268	5.68	90.9	9.7	1.06	10.6	0.05	0.03	0.08	0.09	84	212
100	10.16	10.15	33.123	25.462	253.0	0.310	5.23	82.1	13.3	1.22	13.4	0.01	0.06	0.03	0.06	100	211
119	9.51	9.50	33.446 D	25.822	219.0	0.354										120	210
125 ISL	9.42 D	9.41	33.473 D	25.858	215.7	0.367	4.21	65.1	20.0	1.56	19.3	0.00	0.04	0.02	0.05	126	
142	9.15	9.13	33.648	26.038	198.9	0.403	3.54	54.5	25.0	1.81	23.3	0.00	0.01	0.01	0.04	143	209
150 ISL	9.02 D	9.00	33.747 D	26.137	189.7	0.418	3.33	51.1	27.5	1.93	24.8	0.00	0.01	0.01	0.04	151	
168	9.03	9.01	33.952	26.296	175.0	0.451	2.94	45.2	32.6	2.15	27.7	0.00	0.00	0.01	0.05	169	208
200 ISL	8.83 D	8.81	34.020 D	26.381	167.5	0.506	2.30	35.2	36.1	2.29	29.8	0.00	0.00	0.01	0.05	201	
203	8.77	8.75	34.019	26.390	166.7	0.511	2.25	34.4	36.3	2.29	29.9	0.00	0.00	0.01	0.05	204	207
231	8.16	8.14	34.032	26.494	157.1	0.556	2.06	31.1	39.8	2.30	30.6	0.00	0.00			232	206
250 ISL	7.81 D	7.79	34.027 D	26.542	152.7	0.586	2.00	29.9	43.2	2.36	31.4	0.00	0.05			251	
273	7.36	7.33	34.039	26.616	145.8	0.620	1.93	28.6	47.6	2.45	32.5	0.00	0.10			275	205
300 ISL	7.11 D	7.08	34.054 D	26.663	141.7	0.659	1.72	25.3	52.2	2.56	34.0	0.00	0.08			302	
317	6.86	6.83	34.052	26.695	138.7	0.683	1.57	23.0	55.0	2.63	34.9	0.00	0.05			319	204
380	6.20	6.17	34.091	26.813	127.9	0.767	1.12	16.1	66.1	2.86	37.7	0.00	0.00			382	203
400 ISL	6.03 D	6.00	34.117 D	26.856	124.1	0.792	0.99	14.2	69.2	2.92	38.3	0.00	0.00			403	
436	5.82	5.78	34.132	26.894	120.7	0.836	0.79	11.3	74.7	3.01	39.1	0.00	0.00			439	202
500 ISL	5.29 D	5.25	34.166 D	26.985	112.4	0.910	0.61	8.6	84.6	3.11	40.6	0.00	0.00			503	
504	5.28	5.24	34.166	26.986	112.3	0.915	0.60	8.5	85.2	3.12	40.7	0.00	0.00			507	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 0808 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 14.8 N	123 29.7 W	24/08/08	1233 UTC	4139 m	330 18 kn			1013.0 mb	18.1 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	17.56	17.56	32.877	23.754	413.5	0.000	5.68	103.7	1.3	0.39	0.0	0.00	0.27	0.15	0.01	0	
2	17.56	17.56	32.877	23.754	413.6	0.008	5.68	103.7	1.3	0.39	0.0	0.00	0.27	0.15	0.01	2	221
10	17.57	17.57	32.873	23.749	414.3	0.041	5.67	103.5	1.3	0.39	0.0	0.00	0.00	0.14	0.02	10	219
10	17.57	17.57	32.873	23.749	414.3	0.041										10	220
20	17.56	17.56	32.873	23.752	414.4	0.083	5.67	103.5	1.3	0.39	0.0	0.00	0.07	0.14	0.03	20	218
30	16.64	16.64	32.884	23.977	393.3	0.123	5.91	106.0	1.6	0.44	0.3	0.01	0.31	0.19	0.04	30	217
40	14.88	14.87	32.901	24.382	354.8	0.161	6.21	107.5	2.4	0.48	0.8	0.03	0.30	0.29	0.11	40	216
50	14.15	14.14	32.916	24.548	339.2	0.195	6.16	105.1	2.9	0.49	0.8	0.04	0.30	0.40	0.20	50	215
61	13.36	13.35	32.931	24.721	323.0	0.232	6.06	101.7	2.9	0.47	0.3	0.15	0.23	0.33	0.19	61	214
72	12.26	12.25	32.849	24.872	308.7	0.266	5.97	97.9	3.2	0.51	0.7	0.16	0.16	0.26	0.17	72	213
75 ISL	12.06 D	12.05	32.844 D	24.906	305.6	0.276	5.94	96.9	3.5	0.54	1.2	0.19	0.13	0.24	0.18	75	
84	12.13	12.12	32.903	24.939	302.7	0.303	5.85	95.7	4.3	0.62	3.0	0.23	0.05	0.18	0.20	84	212
97	11.23	11.22	32.800	25.024	294.7	0.342	5.82	93.3	4.5	0.69	4.1	0.03	0.14	0.12	0.10	97	211
100 ISL	11.03 D	11.02	32.822 D	25.077	289.7	0.351	5.78	92.3	5.2	0.74	4.9	0.03	0.12	0.11	0.09	100	
121	10.96	10.95	33.216	25.397	259.8	0.408	5.35	85.5	10.5	1.06	11.0	0.00	0.00	0.03	0.04	122	210
125 ISL	10.42 D	10.41	33.168 D	25.453	254.4	0.419	5.26	83.0	10.7	1.07	11.4	0.00	0.06	0.03	0.04	126	
140	10.15	10.13	33.333	25.628	238.0	0.456	4.88	76.6	11.6	1.12	12.5	0.00	0.28	0.02	0.03	141	209
150 ISL	9.87 D	9.85	33.477 D	25.788	223.0	0.479	4.61	72.0	14.0	1.24	14.6	0.00	0.22	0.02	0.05	151	
169	9.41	9.39	33.650	25.999	203.3	0.519	4.10	63.5	19.6	1.51	19.1	0.00	0.00	0.01	0.08	170	208
200 ISL	8.79 D	8.77	33.881 D	26.279	177.1	0.578	3.38	51.7	27.4	1.83	23.9	0.00	0.04	0.00	0.02	201	
202	8.77	8.75	33.887	26.286	176.4	0.582	3.35	51.2	27.8	1.84	24.1	0.00	0.04	0.00	0.02	203	207
228	8.41	8.39	33.962	26.401	165.9	0.626	3.23	49.0	31.3	1.89	25.2	0.00	0.18			229	206
250 ISL	8.12 D	8.09	33.981 D	26.460	160.6	0.662	3.09	46.6	35.2	1.97	26.5	0.00	0.12			251	
268	7.76	7.73	33.993	26.522	154.8	0.690	2.87	42.9	38.8	2.08	27.9	0.00	0.03			269	205
300 ISL	7.71 D	7.68	34.077 D	26.596	148.4	0.739	1.95	29.1	45.6	2.39	31.4	0.00	0.01			302	
317	7.56	7.53	34.099	26.635	144.9	0.764	1.47	21.9	49.2	2.56	33.2	0.00	0.00			319	204
381	6.47	6.44	34.082	26.771	132.1	0.853	1.33	19.3	61.0	2.74	35.8	0.00	0.00			383	203
400 ISL	6.33 D	6.29	34.104 D	26.807	128.9	0.877	1.21	17.5	64.0	2.80	36.5	0.00	0.01			402	
437	6.03	5.99	34.123	26.861	124.1	0.924	0.96	13.8	69.8	2.91	37.9	0.00	0.04			440	202
500 ISL	5.47 D	5.43	34.145 D	26.947	116.2	1.000	0.77	10.9	80.8	3.02	39.6	0.00	0.01			503	
518	5.23	5.19	34.140	26.972	113.8	1.021	0.72	10.1	84.0	3.05	40.1	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 0808 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 54.2 N	124 10.8 W	24/08/08	0603 UTC	4171 m	330 14 kn			1015.5 mb	18.9 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	18.59	18.59	33.073	23.653	423.2	0.000	5.49	102.3	2.6	0.35	0.0	0.00	0.09	0.08	0.01	0	
3	18.59	18.59	33.073	23.653	423.3	0.013	5.49	102.3	2.6	0.35	0.0	0.00	0.09	0.08	0.01	3	221
9	18.60	18.60	33.073	23.651	423.7	0.038										9	220
10	18.60	18.60	33.081	23.657	423.1	0.042	5.48	102.2	2.5	0.35	0.0	0.00	0.00	0.07	0.01	10	219
20 ISL	18.58 D	18.58	33.069 D	23.653	423.9	0.085	5.47	101.9	2.5	0.34	0.0	0.00	0.02	0.08	0.02	20	
25	18.52	18.52	33.076	23.673	422.1	0.106	5.47	101.8	2.5	0.34	0.0	0.00	0.03	0.08	0.02	25	218
30 ISL	18.68 D	18.67	33.214 D	23.739	416.0	0.127	5.51	103.0	2.4	0.33	0.0	0.00	0.02	0.09	0.02	30	
39	18.29	18.28	33.256	23.868	404.0	0.164	5.58	103.5	2.3	0.32	0.0	0.00	0.00	0.11	0.02	39	217
50	16.22	16.21	33.171	24.294	363.6	0.206	6.04	107.6	2.4	0.32	0.0	0.00	0.13	0.13	0.04	50	216
62	14.50	14.49	33.069	24.593	335.3	0.248	6.17	106.1	3.0	0.37	0.0	0.00	0.00	0.24	0.20	62	215
74	14.13	14.12	33.155	24.737	321.9	0.287	6.04	103.1	2.9	0.37	0.2	0.04	0.29	0.31	0.30	74	214
75 ISL	14.08 D	14.07	33.166 D	24.756	320.1	0.290	6.02	102.7	2.9	0.37	0.2	0.05	0.28	0.30	0.30	75	
86	14.49	14.48	33.389	24.843	312.3	0.325	5.76	99.2	2.7	0.38	0.5	0.15	0.23	0.21	0.31	86	213
99	14.34	14.33	33.497	24.958	301.6	0.365	5.59	96.1	3.3	0.44	1.7	0.17	0.06	0.18	0.22	99	212
100 ISL	14.36 D	14.35	33.535 D	24.984	299.3	0.368	5.59	96.1	3.4	0.45	1.9	0.16	0.07	0.17	0.21	100	
110	13.42	13.40	33.473	25.130	285.5	0.397	5.52	93.1	4.7	0.56	3.9	0.05	0.16	0.09	0.16	110	211
125	13.17	13.15	33.619	25.293	270.3	0.439	5.17	86.8	5.1	0.63	5.2	0.02	0.09	0.06	0.12	126	210
141	11.53	11.51	33.422	25.455	254.9	0.481	5.31	86.0	10.0	0.96	10.2	0.00	0.18	0.03	0.05	142	209
150 ISL	10.87 D	10.85	33.436 D	25.584	242.6	0.504	5.07	80.9	11.3	1.06	11.8	0.00	0.11	0.02	0.04	151	
162	10.65	10.63	33.520	25.689	233.0	0.532	4.65	73.9	12.5	1.16	13.5	0.00	0.00	0.01	0.03	163	208
199	9.77	9.75	33.839	26.088	195.6	0.611	3.97	62.0	19.9	1.49	19.3	0.00	0.12	0.00	0.00	200	207
200 ISL	9.77 D	9.75	33.876 D	26.117	192.9	0.613	3.97	62.0	20.1	1.49	19.4	0.00	0.12			201	
229	9.02	9.00	33.977	26.318	174.1	0.666	4.01	61.7	24.9	1.56	21.0	0.00	0.00			230	206
250 ISL	8.72 D	8.69	33.992 D	26.377	168.8	0.702	3.67	56.1	28.7	1.71	23.1	0.00	0.00			251	
268	8.42	8.39	33.996	26.427	164.3	0.732	3.32	50.4	32.0	1.86	25.1	0.00	0.00			269	205
300 ISL	7.85 D	7.82	34.012 D	26.525	155.2	0.784	2.97	44.5	37.7	2.04	27.5	0.00	0.00			302	
315	7.74	7.71	34.015	26.543	153.7	0.807	2.83	42.3	40.4	2.11	28.5	0.00	0.00			317	204
377	6.79	6.76	34.024	26.683	140.7	0.898	2.10	30.7	53.0	2.47	33.1	0.00	0.00			379	203
400 ISL	6.46 D	6.42	34.036 D	26.737	135.7	0.930	1.68	24.4	58.1	2.63	34.9	0.00	0.00			402	
437	6.28	6.24	34.116	26.824	127.9	0.979	1.08	15.6	65.5	2.86	37.3	0.00	0.00			440	202
500 ISL	5.86 D	5.82	34.138 D	26.895	121.6	1.057	0.92	13.2	72.7	2.95	38.7	0.00	0.00			503	
511	5.76	5.72	34.134	26.904	120.7	1.070	0.89	12.7	73.9	2.97	38.9	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 0808 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 29.3 W	21/08/08	1528 UTC	59 m	120 06 kn	260 02 08	1	1009.1 mb	20.0 C	18.0 C	10m	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	17.30	17.30	33.416	24.229	368.2	0.000	6.30	114.8	3.6	0.35	0.0	0.00	0.29	0.81	0.05	0	
1	17.30	17.30	33.416	24.229	368.2	0.004	6.30	114.8	3.6	0.35	0.0	0.00	0.29	0.81	0.05	1	208
4	14.90	14.90	33.373	24.740	319.6	0.014	6.69	116.2	4.0	0.38	0.0	0.00	0.16	0.89	0.19	4	207
9	14.14	14.14	33.367	24.897	304.8	0.030										9	206
10	14.15	14.15	33.365	24.894	305.2	0.033	6.75	115.5	4.3	0.40	0.1	0.01	0.37	1.01	0.19	10	205
19	13.55	13.55	33.378	25.027	292.7	0.060	6.15	103.9	5.3	0.59	3.2	0.19	0.22	2.19	0.50	19	204
20 ISL	13.47 D	13.47	33.383 D	25.047	290.8	0.062	6.03	101.7	6.0	0.67	4.0	0.22	0.63	2.11	0.49	20	
30	12.38	12.38	33.281	25.183	278.1	0.091	5.10	84.0	11.8 A	1.34 A	10.2 A	0.51	4.10 A	0.87	0.40	30	203
39	12.50	12.49	33.363	25.224	274.5	0.116	5.27	87.1	9.3	1.00	8.6	0.58	2.02	0.79	0.37	39	202
50	11.63	11.62	33.535	25.522	246.3	0.144	4.16	67.6	15.7	1.42	15.5	0.26	0.31	0.25	0.24	50	201

A) UNUSUAL PROFILES AND ODD NO3/PO4 RATIOS 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 0808 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 49.7 N	118 37.5 W	21/08/08	1815 UTC	626 m	070 01 kn	280 02 06	1	1009.6 mb	20.1 C	19.0 C	18m	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	19.21	19.21	33.485	23.811	408.0	0.000	5.93	112.1	2.5	0.27	0.0	0.00	0.20	0.34	0.08	0	
1 A	19.21	19.21	33.485	23.812	408.1	0.004	5.93	112.1	2.5	0.27	0.0	0.00	0.20	0.34	0.08	1	223
3	19.22	19.22	33.476	23.802	409.0	0.012			2.4	0.28	0.0	0.00	0.15			3	224
10 ISL	16.59 D	16.59	33.404 D	24.386	353.5	0.039	6.48	116.4	2.2	0.30	0.0	0.00	0.11	0.27	0.07	10	
11 A	16.19	16.19	33.378	24.458	346.7	0.042	6.56	116.9	2.2	0.31	0.0	0.00	0.10	0.26	0.07	11	221
11	16.11	16.11	33.399	24.493	343.4	0.042	6.55	116.6	2.2	0.31	0.0	0.00	0.24	0.25	0.07	11	222
18	14.24	14.24	33.330	24.848	309.8	0.065	6.75	115.7	3.7	0.38	0.0	0.00	0.13	0.61	0.22	18	220
20 ISL	13.95 D	13.95	33.340 D	24.916	303.3	0.071	6.70	114.1	3.9	0.40	0.2	0.02	0.19	1.20	0.37	20	
24 A	13.74	13.74	33.356	24.972	298.1	0.083	6.51	110.4	4.3	0.46	1.2	0.07	0.30	2.20	0.65	24	219
30	13.19	13.19	33.348	25.077	288.3	0.101	6.03	101.1	6.3	0.67	4.2	0.46	1.61	1.56	0.63	30	218
37 A	12.68	12.68	33.400	25.218	275.0	0.121	5.36	88.9	9.5	0.92	8.1	1.41	2.55	0.80	0.50	37	217
48 A	12.02	12.01	33.478	25.405	257.5	0.150	4.74	77.6	11.4	1.15	13.2	0.26	0.07	0.26	0.26	48	216
50 ISL	11.99 D	11.98	33.482 D	25.414	256.7	0.155	4.71	77.1	11.5	1.16	13.4	0.22	0.05	0.25	0.24	50	
57	11.86	11.85	33.502	25.454	253.0	0.173	4.63	75.6	11.8	1.19	13.8	0.07	0.00	0.22	0.21	57	215
66 A	11.50	11.49	33.552	25.560	243.2	0.195	4.24	68.7	14.0	1.35	15.7	0.03	0.00	0.14	0.20	66	214
75	11.32	11.31	33.572	25.608	238.7	0.217	3.96	63.9	16.1	1.47	17.1	0.03	0.11	0.10	0.20	75	213
84	11.07	11.06	33.624	25.694	230.8	0.238	3.66	58.8	17.6	1.56	18.2	0.01	0.01	0.15	0.20	84	212
100	10.66	10.65	33.741	25.858	215.5	0.274	3.35	53.3	19.4	1.64	19.7	0.02	0.00	0.02	0.06	100	211
119	10.41	10.40	33.836	25.976	204.7	0.314	2.84	45.0	23.1	1.84	22.3	0.01	0.00	0.01	0.05	120	210
125 ISL	10.30 D	10.29	33.858 D	26.012	201.4	0.326	2.68	42.4	24.3	1.90	22.9	0.01	0.00	0.01	0.05	126	
140	10.27	10.25	33.942	26.083	195.0	0.356	2.37	37.5	26.8	2.01	24.1	0.00	0.00	0.01	0.05	141	209
150 ISL	9.83 D	9.81	33.932 D	26.150	188.7	0.375	2.37	37.1	27.5	2.02	24.4	0.00	0.00	0.01	0.05	151	
169	9.77	9.75	33.997	26.211	183.3	0.410	2.37	37.1	28.6	2.04	24.9	0.00	0.00	0.00	0.04	170	208
200 ISL	9.96 D	9.94	34.171 D	26.316	174.2	0.466	1.56	24.5	33.2	2.30	26.8	0.00	0.00	0.00	0.04	201	
201	9.96	9.94	34.172	26.317	174.1	0.467	1.53	24.1	33.3	2.31	26.9	0.00	0.00	0.00	0.04	202	207
227	9.73	9.70	34.214	26.388	167.8	0.512	1.50	23.5	34.8	2.36	27.4	0.01	0.01			228	206
250 ISL	9.33 D	9.30	34.178 D	26.426	164.5	0.550	1.49	23.1	36.2	2.38	27.8	0.01	0.02			251	
268	9.31	9.28	34.228	26.469	160.8	0.579	1.49	23.1	37.5	2.40	28.2	0.01	0.02			270	205
300 ISL	9.01 D	8.98	34.239 D	26.526	155.9	0.630	1.28	19.7	40.6	2.50	29.2	0.00	0.02			302	
316	8.94	8.91	34.286	26.574	151.6	0.655	1.14	17.5	42.4	2.56	29.8	0.00	0.02			318	204
376	8.51	8.47	34.351	26.693	141.3	0.742	0.70	10.7	48.9	2.77	31.8	0.00	0.00			378	203
400 ISL	8.21 D	8.17	34.328 D	26.721	138.8	0.776	0.62	9.4	51.6	2.82	32.5	0.00	0.02			403	
436	7.87	7.83	34.324	26.769	134.7	0.825	0.55	8.3	55.9	2.89	33.6	0.01	0.05			439	202
500 ISL	7.06 D	7.01	34.323 D	26.884	124.0	0.908	0.39	5.7	65.5	3.03	35.9	0.01	0.02			503	
518	6.90	6.85	34.324	26.907	122.0	0.930	0.34	5.0	68.2	3.07	36.5	0.01	0.01			522	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 0808 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 39.6 N	118 58.8 W	21/08/08	2304 UTC	778 m	230 04 kn	300 03 06	1	1008.1 mb	22.0 C	19.1 C	11m	1/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	21.31	21.31	33.548	23.306	456.2	0.000	5.55	109.1	2.8	0.17	0.0	0.00	0.22	0.52	0.05	0	
3	21.31	21.31	33.548	23.306	456.4	0.014	5.55	109.1	2.8	0.17	0.0	0.00	0.22	0.52	0.05	3	224
9	20.26	20.26	33.509	23.558	432.5	0.040	5.90	113.8	2.8	0.18	0.0	0.00	0.20	0.73	0.08	9	223
10 ISL	19.43 D	19.43	33.492 D	23.761	413.2	0.045	6.00	113.9	2.8	0.18	0.0	0.00	0.20	0.73	0.09	10	
20	16.04	16.04	33.376	24.491	343.9	0.082	6.73	119.6	3.1	0.29	0.0	0.00	0.25	0.75	0.15	20	222
29	14.16	14.16	33.342	24.874	307.6	0.112	6.42	109.8	4.2	0.48	1.5	0.07	0.31	2.04	0.53	29	221
30 ISL	13.74 D	13.74	33.352 D	24.969	298.6	0.115	6.37	108.0	4.3	0.50	1.8	0.08	0.31	2.03	0.56	30	
39	13.22	13.21	33.357	25.078	288.4	0.141	5.88	98.7	5.5	0.67	4.4	0.20	0.28	1.47	0.69	39	220
50	12.56	12.55	33.365	25.214	275.7	0.172	5.42	89.7	7.4	0.87	7.8	0.24	0.24	0.83	0.50	50	219
60	11.74	11.73	33.517	25.488	249.8	0.198	4.57	74.4	11.9	1.20	13.6	0.04	0.13	0.28	0.26	60	218
69	11.37	11.36	33.569	25.597	239.7	0.221	4.25	68.7	14.1	1.35	15.8	0.02	0.13	0.14	0.18	69	217
75 ISL	11.18 D	11.17	33.609 D	25.662	233.6	0.235	4.08	65.7	15.0	1.41	16.7	0.02	0.09	0.10	0.15	75	
85	10.99	10.98	33.635	25.717	228.6	0.258	3.81	61.1	16.4	1.49	17.9	0.01	0.02	0.07	0.11	85	216
100 ISL	10.43 D	10.42	33.736 D	25.894	212.0	0.291	3.32	52.6	20.2	1.69	20.7	0.02	0.08	0.03	0.07	100	
101	10.44	10.43	33.732	25.889	212.5	0.293	3.29	52.1	20.5	1.70	20.9	0.02	0.09	0.03	0.07	101	215
119	10.22	10.21	33.797	25.978	204.4	0.331	3.01	47.5	22.8	1.80	22.5	0.01	0.11	0.02	0.07	120	214
125 ISL	10.13 D	10.12	33.822 D	26.013	201.2	0.343	2.98	46.9	23.3	1.81	22.7	0.01	0.13	0.02	0.07	126	
140	10.05	10.03	33.855	26.053	197.8	0.373	2.90	45.6	24.6	1.85	23.1	0.01	0.17	0.01	0.06	141	213
150 ISL	9.84 D	9.82	33.946 D	26.159	187.9	0.392	2.75	43.1	25.9	1.91	23.7	0.01	0.16	0.01	0.06	151	
169	9.77	9.75	33.996	26.210	183.4	0.427	2.37	37.1	28.7	2.05	25.2	0.01	0.15	0.01	0.06	170	212
200	9.60	9.58	34.151	26.360	169.8	0.482	1.74	27.1	33.6	2.28	27.4	0.01	0.00	0.00	0.05	201	211
227	9.31	9.28	34.207	26.452	161.6	0.527	1.49	23.1	37.2	2.39	28.7	0.05	0.15			228	210
250 ISL	9.34 D	9.31	34.295 D	26.516	156.0	0.563	1.23	19.1	39.7	2.49	29.5	0.04	0.11			251	
271	9.14	9.11	34.330	26.576	150.6	0.595	1.03	15.9	41.7	2.57	30.0	0.01	0.03			273	209
300 ISL	8.89 D	8.86	34.319 D	26.608	148.1	0.639	0.91	14.0	43.9	2.64	30.8	0.00	0.00			302	
316	8.76	8.73	34.317	26.627	146.5	0.662	0.87	13.3	45.2	2.68	31.2	0.00	0.00			318	208
378	8.03	7.99	34.322	26.743	136.2	0.750	0.63	9.5	53.2	2.84	33.5	0.00	0.00			380	207
400 ISL	7.85 D	7.81	34.313 D	26.763	134.6	0.780	0.58	8.7	55.1	2.87	34.0	0.00	0.00			403	
441	7.60	7.56	34.316	26.802	131.4	0.834	0.51	7.6	58.5	2.93	34.9	0.00	0.00			444	206
500 ISL	7.07 D	7.02	34.310 D	26.872	125.2	0.910	0.43	6.3	65.6	3.03	36.5	0.00	0.05			503	
509	6.96	6.91	34.309	26.887	123.8	0.921	0.42	6.2	66.7	3.04	36.7	0.00	0.06			512	205
596	6.38	6.33	34.327	26.979	115.7	1.025	0.29	4.2	76.1	3.15	38.2	0.00	0.00			600	204
600 ISL	6.33 D	6.28	34.329 D	26.987	114.9	1.030	0.28	4.1	76.5	3.15	38.2	0.00	0.00			604	
700	5.75	5.69	34.364	27.089	105.9	1.140	0.16	2.3	90.0	3.28	38.8	0.00	0.02			705	203
758	5.35	5.29	34.385	27.154	99.8	1.200	0.09	1.3	102.5	3.39	37.5	0.00	0.00			764	202
761	5.36	5.30	34.386	27.154	99.9	1.203	0.09	1.3	102.4	3.38	37.6	0.00	0.10			767	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 29.6 N	119 19.0 W	22/08/08	0327 UTC	1647 m	250 07 kn			1008.3 mb	18.1 C	17.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	20.53	20.53	33.506	23.484	439.3	0.000	5.72	110.8	2.7	0.22	0.0	0.00	0.14	0.34	0.04	0	
2	20.53	20.53	33.506	23.484	439.3	0.009	5.72	110.8	2.7	0.22	0.0	0.00	0.14	0.34	0.04	2	222
2	20.52	20.52	33.507	23.488	439.0	0.009										2	221
9	19.68	19.68	33.492	23.697	419.3	0.039	5.95	113.5	2.6	0.23	0.0	0.00	0.04	0.41	0.05	9	219
10 CSL	18.48	18.48	33.456	23.973	393.0	0.043										10	200
10	19.68	19.68	33.487	23.693	419.7	0.043										10	220
19	12.99	12.99	33.339	25.109	284.9	0.075	5.96	99.5	5.4	0.65	4.2	0.17	0.10	0.94	0.44	19	218
20 ISL	12.87 D	12.87	33.340 D	25.134	282.6	0.077	5.90	98.3	5.7	0.69	4.8	0.17	0.09	0.91	0.43	20	
29	12.34	12.34	33.396	25.280	268.9	0.102	5.26	86.7	8.7	0.98	9.9	0.13	0.02	0.44	0.38	29	217
30 ISL	12.33 D	12.33	33.397 D	25.283	268.6	0.105	5.21	85.8	9.0	1.00	10.3	0.12	0.03	0.41	0.37	30	
39	11.92	11.92	33.462	25.411	256.6	0.129	4.87	79.6	10.8	1.15	12.5	0.02	0.12	0.25	0.26	39	216
49	11.76	11.75	33.493	25.465	251.7	0.154	4.77	77.7	11.7	1.21	13.5	0.02	0.10	0.17	0.22	49	215
50 ISL	11.75 D	11.74	33.495 D	25.469	251.4	0.157	4.74	77.2	11.9	1.22	13.7	0.02	0.09	0.16	0.21	50	
59	11.33	11.32	33.558	25.595	239.6	0.179	4.38	70.7	14.1	1.35	15.6	0.02	0.04	0.10	0.15	59	214
69	10.77	10.76	33.650	25.767	223.4	0.202	3.84	61.3	17.4	1.55	18.5	0.01	0.03	0.04	0.08	69	213
75 ISL	10.60 D	10.59	33.722 D	25.853	215.4	0.215	3.58	56.9	18.9	1.63	19.6	0.01	0.02	0.03	0.07	75	
84	10.52	10.51	33.740	25.881	212.9	0.234	3.30	52.4	20.5	1.71	20.6	0.01	0.00	0.02	0.06	84	212
99	10.30	10.29	33.770	25.943	207.3	0.266	3.21	50.7	21.8	1.77	21.5	0.00	0.00	0.02	0.06	99	211
100 ISL	10.27 D	10.26	33.785 D	25.960	205.8	0.268	3.18	50.2	22.0	1.78	21.6	0.00	0.00	0.02	0.06	101	
119	10.18	10.17	33.912	26.075	195.3	0.306	2.55	40.2	26.1	1.99	23.6	0.00	0.00	0.01	0.04	120	210
125 ISL	10.11 D	10.10	33.948 D	26.115	191.6	0.317	2.55	40.2	26.6	2.00	23.9	0.00	0.00	0.01	0.04	126	
137	9.86	9.84	33.936	26.148	188.6	0.340	2.55	39.9	27.3	2.01	24.4	0.00	0.00	0.01	0.04	138	209
150 ISL	9.84 D	9.82	34.020 D	26.217	182.4	0.364	2.44	38.2	28.8	2.07	25.0	0.00	0.00	0.01	0.04	151	
168	9.52	9.50	34.078	26.316	173.3	0.396	2.21	34.4	31.5	2.17	26.1	0.00	0.01	0.00	0.03	169	208
200	9.02	9.00	34.145	26.449	161.1	0.450	1.73	26.6	37.4	2.37	28.9	0.00	0.00	0.00	0.04	201	207
229	8.84	8.82	34.208	26.527	154.2	0.496	1.37	21.0	41.2	2.53	30.2	0.00	0.00			230	206
250 ISL	8.88 D	8.85	34.259 D	26.562	151.4	0.528	1.17	18.0	42.6	2.60	30.3	0.00	0.00			251	
267	8.87	8.84	34.277	26.578	150.3	0.553	1.05	16.1	43.6	2.64	30.4	0.00	0.00			269	205
300 ISL	8.50 D	8.47	34.290 D	26.646	144.2	0.602	0.90	13.7	46.8	2.74	31.3	0.00	0.00			302	
317	8.42	8.39	34.290	26.658	143.3	0.626	0.85	12.9	48.6	2.78	31.9	0.00	0.00			319	204
376	8.00	7.96	34.309	26.737	136.7	0.709	0.64	9.6	53.8	2.89	33.4	0.00	0.00			378	203
400 ISL	7.74 D	7.70	34.307 D	26.774	133.4	0.741	0.59	8.8	56.4	2.94	34.1	0.00	0.02			403	
435	7.43	7.39	34.305	26.817	129.6	0.787	0.53	7.9	60.7	3.01	35.1	0.00	0.05			438	202
500 ISL	6.84 D	6.79	34.313 D	26.906	121.7	0.869	0.39	5.7	69.7	3.12	36.9	0.00	0.38			503	
519	6.63	6.58	34.319	26.939	118.6	0.892	0.35	5.1	72.3	3.15	37.4	0.00	0.47			523	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 19.1 N	119 39.9 W	22/08/08	0736 UTC	81 m	340 15 kn			1009.3 mb	17.2 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	18.29	18.29	33.494	24.049	385.4	0.000	5.85	108.7	1.8	0.29	0.0	0.00	0.48	0.46	0.09	0	
1	18.29	18.29	33.494	24.049	385.4	0.004	5.85	108.7	1.8	0.29	0.0	0.00	0.48	0.46	0.09	1	210
5	18.30	18.30	33.499	24.050	385.4	0.019	5.84	108.5	1.8	0.28	0.0	0.00	0.43	0.46	0.06	5	209
10 ISL	18.30 D	18.30	33.490 D	24.044	386.2	0.039	5.84	108.5	1.8	0.26	0.0	0.00	0.55	0.45	0.08	10	
11	18.26	18.26	33.495	24.057	385.0	0.042	5.84	108.4	1.8	0.26	0.0	0.00	0.58	0.45	0.08	11	207
11	18.27	18.27	33.495	24.055	385.2	0.042										11	208
20 ISL	16.15 D	16.15	33.486 D	24.551	338.2	0.075	5.98	106.6	2.0	0.38	1.0	0.06	0.63	1.78	0.28	20	
21	16.56	16.56	33.477	24.450	347.9	0.078	5.99	107.6	2.0	0.39	1.1	0.07	0.63	1.91	0.30	21	206
30 ISL	13.34 D	13.34	33.409 D	25.094	286.6	0.107	5.58	93.9	6.2	0.80	6.6	0.25	0.76	1.17	0.23	30	
31	13.30	13.30	33.409	25.102	285.9	0.110	5.52	92.8	6.7	0.85	7.3	0.26	0.77	1.03	0.22	31	205
41	12.13	12.12	33.375	25.304	266.9	0.137	5.30	86.9	9.1	1.02	10.2	0.14	0.43	0.27	0.30	41	204
50 ISL	11.64 D	11.63	33.492 D	25.487	249.7	0.161	4.93	80.1	12.0	1.22	13.2	0.09	0.10	0.13	0.16	50	
51	11.62	11.61	33.497	25.494	249.0	0.163	4.88	79.2	12.4	1.24	13.6	0.09	0.07	0.11	0.14	51	203
59	11.12	11.11	33.588	25.656	233.8	0.183	4.38	70.4	16.2	1.44	16.5	0.06	0.00	0.09	0.10	59	202
69	11.08	11.07	33.597	25.671	232.6	0.206	4.32	69.4	16.6	1.46	16.8	0.05	0.00	0.07	0.12	69	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 9.1 N	120 0.9 W	22/08/08	1134 UTC	1196 m	300 15 kn			1009.1 mb	16.8 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	16.69	16.69	33.551	24.476	344.7	0.000	5.75	103.6	1.0	0.35	0.8	0.04	0.03	0.63	0.20	0	
1	16.69	16.69	33.551	24.476	344.7	0.003	5.75	103.6	1.0	0.35	0.8	0.04	0.03	0.63	0.20	1	222
10 CSL	16.69	16.69	33.543	24.470	345.6	0.035										10	200
10	16.69	16.69	33.544	24.471	345.5	0.035										10	221
11	16.69	16.69	33.543	24.470	345.6	0.038	5.76	103.8	1.0	0.35	0.8	0.04	0.00	0.65	0.16	11	220
20	16.45	16.45	33.531	24.517	341.5	0.069	5.81	104.2	1.0	0.36	0.9	0.05	0.00	0.84	0.22	20	219
30	16.27	16.27	33.511	24.543	339.3	0.103	5.89	105.2	1.0	0.37	0.9	0.05	0.07	1.33	0.40	30	218
40	16.14	16.13	33.505	24.568	337.2	0.137	5.92	105.5	1.1	0.37	0.9	0.05	0.15	1.56	0.25	40	217
50 ISL	14.56 D	14.55	33.576 D	24.971	299.0	0.169	6.03	104.1	1.9	0.60	3.6	0.14	0.01	2.29	0.57	50	
51	14.36	14.35	33.577	25.014	294.9	0.172	6.04	103.9	2.1	0.63	4.0	0.15	0.00	2.33	0.61	51	216
60	13.71	13.70	33.553	25.131	284.0	0.198	5.67	96.2	4.8	0.82	6.7	0.28	0.06	1.50	0.61	60	215
65	13.14	13.13	33.557	25.250	272.8	0.211	5.37	90.1	7.3	0.99	9.1	0.36	0.19	0.95	0.42	65	214
69	12.69	12.68	33.557	25.339	264.4	0.222	5.15	85.6	9.2	1.09	11.1	0.36	0.21	0.54	0.41	69	213
75 ISL	11.43 D	11.42	33.631 D	25.634	236.3	0.237	4.80	77.7	12.1	1.25	13.9	0.23	0.17	0.35	0.29	75	
84	11.16	11.15	33.632	25.684	231.7	0.258	4.30	69.2	16.1	1.46	17.3	0.01	0.06	0.06	0.09	84	212
100 ISL	10.36 D	10.35	33.741 D	25.910	210.5	0.294	3.64	57.6	20.9	1.69	20.8	0.01	0.00	0.02	0.08	100	
101	10.36	10.35	33.741	25.910	210.5	0.296	3.61	57.1	21.1	1.70	21.0	0.01	0.00	0.02	0.08	101	211
119	9.70	9.69	33.843	26.101	192.6	0.332	3.05	47.6	25.5	1.86	23.6	0.00	0.00	0.02	0.06	120	210
125 ISL	9.51 D	9.50	33.876 D	26.158	187.3	0.343	2.98	46.3	26.2	1.88	24.0	0.00	0.00	0.02	0.06	126	
139	9.36	9.34	33.904	26.205	183.1	0.369	2.88	44.6	27.5	1.92	24.5	0.00	0.00	0.01	0.05	140	209
150 ISL	9.28 D	9.26	33.918 D	26.229	181.0	0.389	2.74	42.4	28.9	1.97	25.2	0.00	0.01	0.01	0.04	151	
169	9.06	9.04	34.008	26.335	171.3	0.423	2.47	38.0	31.5	2.06	26.4	0.00	0.03	0.01	0.04	170	208
196	8.85	8.83	34.071	26.418	163.9	0.468	2.11	32.3	35.3	2.22	28.1	0.00	0.20	0.00	0.05	197	207
200 ISL	8.82 D	8.80	34.102 D	26.447	161.2	0.475	2.05	31.4	36.0	2.24	28.4	0.00	0.19			201	
231	8.43	8.41	34.145	26.542	152.7	0.523	1.64	24.9	41.8	2.43	30.4	0.00	0.00			232	206
250 ISL	8.32 D	8.29	34.184 D	26.589	148.5	0.552	1.41	21.4	44.6	2.52	31.2	0.00	0.00			251	
295	8.04	8.01	34.250	26.684	140.3	0.617	0.96	14.5	50.5	2.72	32.6	0.00	0.00			297	205
300 ISL	7.93 D	7.90	34.252 D	26.702	138.6	0.624	0.92	13.8	51.2	2.74	32.8	0.00	0.00			302	
320	7.84	7.81	34.280	26.737	135.5	0.651	0.76	11.4	53.8	2.82	33.4	0.00	0.01			322	204
379	7.35	7.31	34.281	26.809	129.4	0.729	0.60	8.9	59.9	2.93	35.0	0.00	0.20			381	203
400 ISL	7.32 D	7.28	34.307 D	26.834	127.4	0.756	0.54	8.0	62.2	2.96	35.4	0.00	0.16			403	
437	6.99	6.95	34.306	26.879	123.4	0.803	0.44	6.5	66.1	3.02	36.1	0.00	0.06			440	202
500 ISL	6.46 D	6.41	34.298 D	26.945	117.6	0.879	0.38	5.5	72.3	3.10	37.7	0.00	0.10			503	
502	6.46	6.41	34.296	26.943	117.8	0.881	0.38	5.5	72.5	3.10	37.8	0.00	0.10			505	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 0.0 N	120 23.4 W	22/08/08	1805 UTC	885 m	340 15 kn	330 05 07	2	1011.6 mb	17.1 C	15.2 C	13m	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	17.84	17.84	33.505	24.167	374.1	0.000	5.59	103.0	1.7	0.29	0.0	0.00	0.45	0.33	0.06	0	
2 A	17.84	17.84	33.505	24.167	374.2	0.007	5.59	103.0	1.7	0.29	0.0	0.00	0.45	0.33	0.06	2	223
8 A	17.82	17.82	33.503	24.171	374.0	0.030	5.57	102.6	1.7	0.30	0.0	0.00	0.35	0.31	0.07	8	222
10 ISL	17.80 D	17.80	33.497 D	24.171	374.0	0.037	5.57	102.5	1.7	0.30	0.0	0.00	0.33	0.31	0.07	10	
17	17.74	17.74	33.498	24.187	372.8	0.064	5.60	103.0	1.7	0.30	0.0	0.00	0.27	0.33	0.08	17	220
20 ISL	17.71 D	17.71	33.491 D	24.189	372.7	0.075	5.60	102.9	1.7	0.30	0.0	0.00	0.24	0.34	0.08	20	
26 A	17.68	17.68	33.494	24.199	372.0	0.097	5.60	102.8	1.7	0.29	0.0	0.00	0.19	0.36	0.07	26	219
30 ISL	17.56 D	17.55	33.487 D	24.222	369.9	0.112	5.63	103.1	1.5	0.29	0.0	0.00	0.17	0.45	0.04	30	
35 A	17.33	17.32	33.506	24.292	363.4	0.130	5.67	103.4	1.3	0.30	0.0	0.00	0.15	0.57	0.00	35	218
42 A	14.75	14.74	33.456	24.838	311.5	0.154	6.02	104.3	3.4	0.57	3.2	0.16	0.44	1.54	0.52	42	217
49 A	12.50	12.49	33.381	25.238	273.4	0.174	5.45	90.1	8.5	0.98	9.4	0.41	0.49	0.48	0.29	49	215
49	12.58	12.57	33.383	25.224	274.7	0.174	5.46	90.4								49	216
50 ISL	12.29 D	12.28	33.393 D	25.288	268.7	0.177	5.40	88.9	8.9	1.01	9.9	0.39	0.48	0.46	0.27	50	
60	11.78	11.77	33.454	25.432	255.2	0.203	5.07	82.6	11.4	1.18	13.2	0.06	0.29	0.21	0.17	60	214
70	11.01	11.00	33.534	25.634	236.1	0.228	4.67	74.8	14.9	1.38	16.4	0.02	0.26	0.08	0.08	70	213
75 ISL	10.61 D	10.60	33.608 D	25.762	224.0	0.239	4.43	70.4	16.7	1.47	17.9	0.02	0.25	0.06	0.07	75	
85	10.40	10.39	33.666	25.844	216.4	0.261	3.99	63.2	19.8	1.62	20.2	0.01	0.24	0.03	0.06	85	212
100 ISL	10.14 D	10.13	33.754 D	25.958	205.9	0.293	3.63	57.2	21.9	1.73	21.6	0.00	0.01	0.03	0.07	100	
101	10.19	10.18	33.738	25.937	207.9	0.295	3.61	56.9	22.0	1.74	21.7	0.00	0.00	0.03	0.07	101	211
119	9.33	9.32	33.872	26.184	184.6	0.330	2.94	45.5	27.6	1.94	25.0	0.00	0.00	0.01	0.05	120	210
125 ISL	9.31 D	9.30	33.888 D	26.200	183.2	0.341	2.83	43.8	28.6	1.96	25.5	0.00	0.00	0.01	0.05	126	
139	9.11	9.09	33.961	26.290	175.0	0.367	2.68	41.3	30.2	1.99	26.0	0.00	0.02	0.01	0.04	140	209
150 ISL	9.02 D	9.00	33.977 D	26.317	172.6	0.386	2.63	40.4	31.0	2.01	26.3	0.00	0.05	0.01	0.04	151	
168	8.85	8.83	34.002	26.364	168.5	0.416	2.58	39.5	32.4	2.05	26.7	0.00	0.11	0.01	0.04	169	208
200	8.49	8.47	34.054	26.460	159.8	0.469	2.23	33.9	37.1	2.19	28.7	0.00	0.11	0.00	0.05	201	207
229	7.97	7.95	34.104	26.578	149.0	0.514	1.68	25.2	44.4	2.44	31.6	0.00	0.00			230	206
250 ISL	7.77 D	7.75	34.116 D	26.617	145.5	0.545	1.52	22.7	47.4	2.52	32.6	0.00	0.00			251	
268	7.59	7.56	34.124	26.650	142.7	0.571	1.44	21.5	49.5	2.57	33.2	0.00	0.00			270	205
300 ISL	7.14 D	7.11	34.148 D	26.732	135.1	0.615	1.22	18.0	54.6	2.69	34.5	0.00	0.00			302	
314	7.08	7.05	34.153	26.745	134.1	0.634	1.12	16.5	57.0	2.74	35.0	0.00	0.00			316	204
380	6.55	6.52	34.220	26.870	122.9	0.719	0.65	9.5	67.3	2.97	37.2	0.00	0.00			382	203
400 ISL	6.54 D	6.50	34.235 D	26.883	122.0	0.743	0.59	8.6	68.4	2.99	37.5	0.00	0.00			403	
438	6.45	6.41	34.250	26.907	120.2	0.789	0.52	7.5	70.1	3.02	37.8	0.00	0.00			441	202
500 ISL	6.15 D	6.11	34.291 D	26.979	114.0	0.862	0.35	5.0	76.6	3.14	38.9	0.00	0.00			503	
514	6.07	6.02	34.309	27.004	111.8	0.878	0.31	4.5	78.1	3.17	39.2	0.00	0.00			518	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 0808 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 39.9 N	121 1.3 W	22/08/08	2253 UTC	3775 m	340 14 kn	330 05 06	2	1011.1 mb	17.9 C	16.0 C	17m	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	16.70	16.70	32.992	24.044	385.8	0.000	5.71	102.6	2.5	0.39	0.1	0.00	0.09	0.16	0.03	0	
2	16.70	16.70	32.992	24.045	385.9	0.008	5.71	102.6	2.5	0.39	0.1	0.00	0.09	0.16	0.03	2	224
9	16.70	16.70	32.994	24.046	385.9	0.035	5.72	102.7	2.5	0.39	0.1	0.00	0.26	0.17	0.02	9	223
9	16.69	16.69	32.993	24.048	385.8	0.035			2.5	0.38	0.1	0.00	0.28			9	222
10 ISL	16.69 D	16.69	32.992 D	24.047	385.9	0.039	5.72	102.7	2.5	0.39	0.1	0.00	0.26	0.17	0.02	10	
19	16.58	16.58	33.013	24.089	382.2	0.073	5.74	102.9	2.6	0.38	0.0	0.00	0.25	0.18	0.04	19	221
20 ISL	16.15 D	16.15	33.026 D	24.197	371.9	0.077	5.77	102.5	2.6	0.38	0.0	0.00	0.24	0.20	0.05	20	
29	15.83	15.83	33.114	24.337	358.8	0.110	6.01	106.2	2.7	0.37	0.0	0.00	0.18	0.41	0.18	29	220
30 ISL	15.81 D	15.81	33.163 D	24.380	354.8	0.113	6.02	106.4	2.7	0.37	0.0	0.00	0.19	0.44	0.20	30	
34	15.43	15.42	33.121	24.432	349.9	0.127	6.07	106.4	2.6	0.38	0.1	0.02	0.24	0.52	0.25	34	219
40	13.78	13.77	32.921	24.628	331.3	0.148	6.15	104.1	3.6	0.50	1.0	0.15	0.26	0.48	0.28	40	218
49	12.85	12.84	32.914	24.809	314.3	0.177	6.01	99.8	4.4	0.59	2.1	0.55	0.51	0.41	0.37	49	217
50 CSL	12.59	12.58	32.896	24.845	310.8	0.180										50	200
50	12.79	12.78	32.914	24.820	313.2	0.180										50	216
59	12.30	12.29	32.945	24.939	302.1	0.208	5.83	95.7	4.7	0.63	3.2	0.43	0.32	0.34	0.38	59	215
69	11.42	11.41	32.931	25.091	287.7	0.237	5.68	91.5	6.8	0.80	6.7	0.04	0.14	0.26	0.17	69	214
75 ISL	11.14 D	11.13	33.034 D	25.222	275.4	0.254	5.58	89.4	7.6	0.87	8.2	0.03	0.14	0.19	0.15	75	
84	11.49	11.48	33.253	25.329	265.4	0.278	5.37	86.8	9.3	1.00	10.5	0.01	0.14	0.10	0.12	84	212
85	11.52	11.51	33.259	25.328	265.6	0.281										85	213
99	10.66	10.65	33.483	25.657	234.6	0.316	4.77	75.8	15.4	1.37	16.4	0.00	0.05	0.03	0.04	99	211
100 ISL	10.59 D	10.58	33.516 D	25.695	231.0	0.318	4.74	75.3	15.6	1.38	16.6	0.00	0.05	0.03	0.04	100	
119	10.37	10.36	33.612	25.808	220.6	0.361	4.25	67.2	18.6	1.55	19.5	0.00	0.00	0.01	0.04	120	210
125 ISL	10.24 D	10.23	33.678 D	25.882	213.7	0.374	4.07	64.2	20.1	1.63	20.7	0.00	0.00	0.01	0.04	126	
138	9.89	9.87	33.793	26.031	199.7	0.401	3.67	57.5	23.6	1.80	23.1	0.00	0.00	0.01	0.04	139	209
150 ISL	9.50 D	9.48	33.841 D	26.133	190.2	0.425	3.31	51.4	26.1	1.88	24.5	0.00	0.00	0.01	0.04	151	
168	9.10	9.08	33.913	26.254	179.0	0.458	2.82	43.4	29.4	1.96	26.0	0.00	0.00	0.01	0.03	169	208
200 ISL	8.66 D	8.64	34.020 D	26.408	164.9	0.513	2.23	34.0	34.8	2.13	28.5	0.00	0.10	0.00	0.03	201	
201	8.68	8.66	34.015	26.401	165.6	0.515	2.22	33.9	35.0	2.14	28.6	0.00	0.10	0.00	0.03	202	207
228	8.24	8.22	34.061	26.504	156.1	0.558	2.02	30.5	39.6	2.25	30.1	0.00	0.00			229	206
250 ISL	8.07 D	8.04	34.090 D	26.553	151.8	0.592	1.75	26.4	43.0	2.35	31.2	0.00	0.02			251	
268	7.95	7.92	34.121	26.595	148.1	0.619	1.52	22.8	45.7	2.44	32.1	0.00	0.04			270	205
300 ISL	7.58 D	7.55	34.161 D	26.681	140.3	0.665	1.25	18.6	50.9	2.58	33.6	0.00	0.01			302	
318	7.40	7.37	34.160	26.706	138.1	0.690	1.14	16.9	53.7	2.65	34.3	0.00	0.00			320	204
380	6.79	6.75	34.186	26.811	128.7	0.773	0.84	12.3	62.2	2.81	36.2	0.00	0.10			382	203
400 ISL	6.67 D	6.63	34.204 D	26.842	126.0	0.798	0.72	10.5	65.2	2.87	36.8	0.00	0.07			403	
438	6.44	6.40	34.247	26.906	120.3	0.845	0.50	7.3	70.6	2.97	37.9	0.00	0.00			441	202
500 ISL	6.07 D	6.03	34.282 D	26.982	113.6	0.918	0.37	5.3	77.8	3.06	39.2	0.00	0.00			503	
516	5.92	5.87	34.280	27.000	112.0	0.936	0.34	4.9	79.6	3.08	39.5	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 19.5 N	121 43.3 W	23/08/08	0519 UTC	4045 m	340 17 kn			1012.4 mb	17.1 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	17.16	17.16	33.161	24.067	383.7	0.000	5.68	103.1	2.5	0.33	0.0	0.00	0.00	0.16	0.02	0	
2	17.16	17.16	33.161	24.067	383.8	0.008	5.68	103.1	2.5	0.33	0.0	0.00	0.00	0.16	0.02	2	221
10	17.16	17.16	33.161	24.067	384.0	0.038	5.68	103.1	2.5	0.34	0.0	0.00	0.15	0.15	0.02	10	219
11	17.17	17.17	33.165	24.068	384.0	0.042										11	220
20	17.09	17.09	33.167	24.088	382.3	0.077	5.71	103.5	2.4	0.33	0.0	0.00	0.10	0.16	0.03	20	218
30 ISL	15.39 D	15.39	33.250 D	24.540	339.5	0.113	6.20	108.7	0.6	0.31	0.0	0.00	0.01	0.50	0.15	30	
31	15.43	15.43	33.230	24.516	341.9	0.116	6.24	109.5	0.5	0.31	0.0	0.00	0.00	0.54	0.17	31	217
42	13.37	13.36	33.180	24.911	304.4	0.152	5.84	98.2	4.6	0.66	3.4	0.30	0.79	1.02	0.58	42	216
50	13.04	13.03	33.188	24.983	297.7	0.176	5.76	96.2	5.4	0.72	4.4	0.38	0.58	0.55	0.35	50	215
60	12.03	12.02	33.283	25.252	272.3	0.204	5.44	89.0	8.9	1.00	10.0	0.02	0.00	0.17	0.16	60	214
70	11.87	11.86	33.296	25.292	268.7	0.231	5.43	88.5	9.4	1.04	10.7	0.01	0.01	0.13	0.13	70	213
75 ISL	11.76 D	11.75	33.352 D	25.356	262.7	0.245	5.36	87.2	9.9	1.09	11.5	0.01	0.03	0.10	0.11	75	
85	11.37	11.36	33.429	25.488	250.4	0.270	5.11	82.5	11.6	1.22	13.8	0.01	0.07	0.05	0.06	85	212
100	10.63	10.62	33.575	25.734	227.3	0.306	4.51	71.7	16.4	1.49	18.1	0.00	0.08	0.02	0.04	100	211
119	10.23	10.22	33.619	25.837	217.8	0.348	4.16	65.6	18.8	1.61	19.8	0.00	0.01	0.01	0.04	120	210
125 ISL	9.93 D	9.92	33.690 D	25.944	207.8	0.361	3.93	61.6	20.4	1.68	20.9	0.00	0.01	0.01	0.04	126	
141	9.50	9.48	33.811	26.110	192.2	0.393	3.27	50.8	25.3	1.88	24.1	0.00	0.00	0.01	0.04	142	209
150 ISL	9.23 D	9.21	33.906 D	26.228	181.1	0.410	3.01	46.5	27.6	1.95	25.3	0.00	0.00	0.01	0.04	151	
171	8.81	8.79	33.968	26.343	170.5	0.447	2.55	39.0	32.3	2.09	27.4	0.00	0.00	0.00	0.03	172	208
200 ISL	8.50 D	8.48	34.038 D	26.446	161.1	0.495	2.08	31.6	37.3	2.26	29.6	0.00	0.00	0.01	0.03	201	
202	8.48	8.46	34.042	26.453	160.6	0.498	2.05	31.2	37.6	2.27	29.7	0.00	0.00	0.01	0.03	203	207
228	8.12	8.10	34.077	26.535	153.1	0.539	1.78	26.8	42.2	2.39	31.5	0.00	0.00			229	206
250 ISL	8.00 D	7.97	34.109 D	26.578	149.4	0.572	1.55	23.3	45.7	2.50	32.5	0.00	0.00			251	
271	7.76	7.73	34.142	26.640	143.8	0.603	1.33	19.9	48.9	2.60	33.3	0.00	0.00			273	205
300 ISL	7.62 D	7.59	34.192 D	26.699	138.6	0.644	1.02	15.2	52.8	2.72	34.4	0.00	0.00			302	
319	7.47	7.44	34.214	26.738	135.1	0.670	0.84	12.5	55.5	2.80	35.0	0.00	0.00			321	204
381	6.81	6.77	34.283	26.885	121.8	0.750	0.47	6.9	67.2	3.03	37.1	0.00	0.05			383	203
400 ISL	6.62 D	6.58	34.295 D	26.920	118.6	0.772	0.40	5.8	70.1	3.07	37.6	0.00	0.04			403	
438	6.37	6.33	34.311	26.966	114.6	0.817	0.31	4.5	74.9	3.14	38.3	0.00	0.00			441	202
500 ISL	6.06 D	6.02	34.334 D	27.025	109.6	0.886	0.26	3.7	80.2	3.20	39.0	0.00	0.00			503	
511	6.02	5.97	34.334	27.030	109.2	0.898	0.25	3.6	81.1	3.21	39.1	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 0808 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 59.5 N	122 23.6 W	23/08/08	1059 UTC	4187 m	330 17 kn			1013.0 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	17.39	17.39	33.322	24.135	377.1	0.000	5.64	102.9	1.1	0.31	0.0	0.00	0.29	0.17	0.03	0	
2	17.39	17.39	33.322	24.135	377.2	0.008	5.64	102.9	1.1	0.31	0.0	0.00	0.29	0.17	0.03	2	221
10	17.39	17.39	33.324	24.137	377.3	0.038	5.64	102.9	1.2	0.31	0.0	0.00	0.20	0.16	0.03	10	219
10	17.39	17.39	33.321	24.135	377.5	0.038										10	220
20	17.35	17.35	33.362	24.176	373.9	0.075	5.68	103.6	0.8	0.29	0.0	0.00	0.30	0.16	0.03	20	218
30	15.65	15.65	33.087	24.357	357.0	0.112	6.02	106.0	1.9	0.44	0.7	0.04	0.45	0.19	0.03	30	217
40	13.44	13.43	32.943	24.714	323.1	0.146	6.17	103.7	3.7	0.59	2.1	0.32	0.78	0.33	0.15	40	216
50	12.36	12.35	32.859	24.860	309.3	0.177	6.01	98.7	4.7	0.67	3.0	0.72	0.28	0.39	0.27	50	215
59	11.57	11.56	32.877	25.022	294.1	0.205	5.79	93.5	5.5	0.75	5.2	0.06	0.06	0.40	0.25	59	214
70	11.04	11.03	32.923	25.153	281.8	0.236	5.68	90.7	8.3	0.94	8.4	0.02	0.00	0.26	0.12	70	213
75 ISL	10.70 D	10.69	32.987 D	25.263	271.4	0.250	5.53	87.7	9.7	1.02	9.9	0.02	0.01	0.18	0.09	75	
86	10.36	10.35	33.150	25.449	254.0	0.279	5.14	81.0	12.0	1.16	12.5	0.01	0.06	0.05	0.05	86	212
99	10.23	10.22	33.373	25.645	235.6	0.311	4.77	75.1	12.3	1.19	13.5	0.00	0.07	0.03	0.03	99	211
100 ISL	10.20 D	10.19	33.398 D	25.670	233.3	0.313	4.74	74.6	12.5	1.20	13.7	0.00	0.07	0.03	0.03	100	
122	9.80	9.79	33.663 D	25.944	207.6	0.362										123	210
125 ISL	9.51 D	9.50	33.724 D	26.040	198.5	0.368	3.93	61.0	19.7	1.57	19.8	0.00	0.08	0.01	0.02	126	
141	9.26	9.24	33.793	26.134	189.8	0.399	3.45	53.3	25.4	1.85	24.0	0.00	0.09	0.00	0.02	142	209
150 ISL	9.20 D	9.18	33.842 D	26.182	185.4	0.416	3.23	49.8	27.2	1.93	25.1	0.00	0.06	0.00	0.02	151	
168	8.91	8.89	33.917	26.287	175.7	0.448	2.90	44.5	30.3	2.04	26.5	0.00	0.00	0.00	0.02	169	208
200 ISL	8.28 D	8.26	33.990 D	26.442	161.4	0.502	2.76	41.7	34.8	2.07	27.6	0.00	0.00	0.00	0.01	201	
201	8.27	8.25	33.992	26.445	161.2	0.504	2.76	41.7	34.9	2.07	27.6	0.00	0.00	0.00	0.01	202	207
228	7.89	7.87	34.012	26.518	154.6	0.546	2.52	37.8	39.4	2.19	29.2	0.00	0.00			229	206
250 ISL	7.55 D	7.53	34.028 D	26.580	149.0	0.580	2.24	33.3	43.7	2.31	31.0	0.00	0.06			251	
268	7.34	7.31	34.040	26.619	145.4	0.606	2.00	29.6	47.3	2.42	32.4	0.00	0.11			270	205
300 ISL	7.12 D	7.09	34.076 D	26.678	140.2	0.652	1.65	24.3	52.6	2.59	34.2	0.00	0.09			302	
316	6.94	6.91	34.084	26.710	137.4	0.674	1.49	21.9	55.1	2.66	34.9	0.00	0.08			318	204
377	6.45	6.42	34.141	26.821	127.4	0.755	0.94	13.6	64.9	2.89	37.5	0.00	0.00			379	203
400 ISL	6.25 D	6.21	34.156 D	26.859	124.0	0.784	0.82	11.8	68.7	2.95	38.1	0.00	0.00			403	
437	5.93	5.89	34.171	26.911	119.3	0.829	0.69	9.9	74.4	3.03	39.0	0.00	0.00			440	202
499	5.54	5.50	34.208	26.989	112.3	0.901	0.47	6.7	82.3	3.14	40.5	0.00	0.00			502	201
500 CSL	5.53	5.49	34.209	26.991	112.1	0.902										503	200

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.2 N	123 4.5 W	23/08/08	1716 UTC	4120 m	350 16 kn	350 05 07	2	1015.1 mb	17.0 C	14.9 C	17m	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	17.10	17.10	33.034		23.983	391.6	0.000	5.77	104.5	2.0	0.39	0.1	0.01	0.24	0.23	0.02	0	
2	A	17.10	17.10	33.034		23.983	391.7	0.008	5.77	104.5	2.0	0.39	0.1	0.01	0.24	0.23	0.02	2	222
10	A	17.10	17.10	33.032		23.982	392.1	0.039	5.79	104.8	2.1	0.39	0.1	0.01	0.00	0.23	0.03	10	220
10		17.10	17.10					0.039										10	221
16		16.61	16.61	33.029		24.094	381.6	0.062	5.89	105.6	2.1	0.39	0.1	0.01	0.21	0.24	0.04	16	219
20	ISL	15.55	D 15.55	32.983	D	24.299	362.2	0.077	5.97	104.8	2.4	0.44	0.6	0.04	0.29	0.21	0.05	20	
24	A	15.27	15.27	32.962		24.344	358.0	0.092	6.04	105.4	2.7	0.49	1.1	0.07	0.35	0.17	0.05	24	218
30	ISL	15.16	D 15.16	32.968	D	24.373	355.4	0.113	6.04	105.2	2.8	0.51	1.3	0.08	0.39	0.18	0.05	30	
35	A	15.12	15.11	32.971		24.384	354.5	0.131	6.04	105.1	2.9	0.51	1.4	0.09	0.42	0.19	0.05	35	217
46	A	14.05	14.04	32.991		24.627	331.6	0.169	6.15	104.7	3.6	0.59	2.4	0.21	0.20	0.27	0.09	46	216
50	ISL	13.74	D 13.73	32.997	D	24.695	325.2	0.182	6.14	103.9	3.9	0.62	2.8	0.26	0.35	0.27	0.10	50	
55		13.59	13.58	33.008		24.734	321.6	0.198	6.13	103.4	4.3	0.65	3.3	0.31	0.58	0.27	0.12	55	215
63	A	13.52	13.51	33.040		24.773	318.1	0.223	6.02	101.4	4.7	0.69	3.7	0.36	0.77	0.24	0.14	63	214
74		13.36	13.35	33.066		24.826	313.3	0.258	5.93	99.6	5.0	0.74	4.2	0.45	0.84	0.26	0.16	74	213
75	ISL	13.14	D 13.13	33.051	D	24.858	310.3	0.261	5.92	99.0	5.1	0.75	4.3	0.48	0.78	0.27	0.16	75	
85		12.26	12.25	32.977		24.972	299.6	0.292	5.82	95.5	6.4	0.81	5.8	0.72	0.14	0.31	0.16	85	212
100	ISL	11.45	D 11.44	33.009	D	25.147	283.1	0.335	5.70	91.9	9.4	0.97	9.2	0.15	0.06	0.11	0.09	100	
103		11.26	11.25	33.038		25.204	277.7	0.344	5.67	91.1	10.0	1.01	9.9	0.01	0.04	0.06	0.07	103	211
119		10.62	10.61	33.113		25.376	261.7	0.387	5.34	84.6	12.0	1.14	12.0	0.01	0.10	0.03	0.05	120	210
125	ISL	10.51	D 10.50	33.135	D	25.412	258.3	0.403	5.13	81.1	13.0	1.20	13.1	0.01	0.07	0.02	0.05	126	
138		10.05	10.03	33.408	D	25.704	230.8	0.434	4.59	72.0	15.5	1.34	15.9	0.01	0.00	0.01	0.04	139	209
150	ISL	10.05	D 10.03	33.615	D	25.865	215.7	0.461	3.98	62.5	19.0	1.53	19.0	0.01	0.09	0.00	0.03	151	
170		9.45	9.43	33.822		26.127	191.2	0.502	3.12	48.4	25.0	1.83	23.6	0.00	0.25	0.00	0.02	171	208
200	ISL	8.86	D 8.84	33.956	D	26.326	172.7	0.557	2.96	45.3	30.0	1.93	25.4	0.00	0.03	0.00	0.01	201	
204		8.75	8.73	33.966		26.351	170.3	0.563	2.94	44.9	30.5	1.94	25.6	0.00	0.00	0.00	0.01	205	207
231		8.17	8.15	33.993		26.461	160.1	0.608	3.49	52.7	33.2	1.81	24.6	0.00	0.14			232	206
250	ISL	7.95	D 7.92	34.003	D	26.502	156.5	0.638	3.23	48.5	36.5	1.93	26.1	0.00	0.09			251	
269		7.72	7.69	34.014		26.545	152.7	0.667	2.78	41.5	40.3	2.11	28.3	0.00	0.00			270	205
300	ISL	7.45	D 7.42	34.053	D	26.614	146.5	0.714	2.33	34.6	45.6	2.30	30.6	0.00	0.00			302	
324		7.13	7.10	34.040		26.649	143.4	0.749	2.04	30.1	49.9	2.42	32.2	0.00	0.00			326	204
376		6.33	6.30	34.062		26.774	131.7	0.820	1.50	21.7	61.6	2.69	35.7	0.00	0.00			378	203
400	ISL	6.13	D 6.09	34.083	D	26.816	127.9	0.851	1.28	18.4	65.9	2.79	36.7	0.00	0.00			402	
439		5.88	5.84	34.124		26.880	122.1	0.900	0.95	13.6	72.2	2.92	38.0	0.00	0.00			442	202
500	ISL	5.52	D 5.48	34.199	D	26.984	112.7	0.972	0.48	6.8	81.9	3.08	39.8	0.00	0.00			503	
504		5.51	5.47	34.200		26.986	112.6	0.976	0.45	6.4	82.5	3.09	39.9	0.00	0.00			507	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 0808 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 19.8 N	123 44.3 W	23/08/08	2321 UTC	406 m	360 15 kn	360 04 06	2	1014.1 mb	19.6 C	16.7 C	21m	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	18.16	18.16	32.955		23.669	421.7	0.000	5.54	102.3	2.3	0.36	0.0	0.00	0.13	0.07	0.01	0	
2		18.16	18.16	32.955		23.669	421.7	0.008	5.54	102.3	2.3	0.36	0.0	0.00	0.13	0.07	0.01	2	221
10		18.15	18.15	32.955		23.671	421.7	0.042	5.55	102.5	2.3	0.35	0.0	0.00	0.04	0.08	0.01	10	219
10		18.16	18.16	32.954		23.668	422.0	0.042										10	220
20	ISL	18.10	D 18.10	33.209	D	23.878	402.4	0.083	5.55	102.6	2.4	0.33	0.0	0.00	0.07	0.09	0.02	20	
23		18.02	18.02	33.206		23.896	400.8	0.095	5.55	102.4	2.4	0.32	0.0	0.00	0.09	0.09	0.02	23	218
30	ISL	17.78	D 17.77	33.238	D	23.979	393.1	0.123	5.72	105.1	2.4	0.32	0.0	0.00	0.04	0.11	0.02	30	
39		16.21	16.20	33.144		24.275	365.1	0.157	5.96	106.1	2.5	0.32	0.0	0.00	0.00	0.14	0.03	39	217
50		15.40	15.39	33.114		24.433	350.3	0.197	6.10	106.8	2.8	0.34	0.0	0.00	0.15	0.15	0.05	50	216
61		13.62	13.61	32.972		24.700	325.0	0.234	6.21	104.8	2.6	0.37	0.0	0.00	0.00	0.24	0.14	61	215
74		13.36	13.35	33.061		24.822	313.7	0.275	5.98	100.4	3.6	0.47	1.0	0.22	0.00	0.39	0.41	74	214
75	ISL	13.21	D 13.20	33.087	D	24.872	308.9	0.278	5.96	99.8	3.7	0.49	1.2	0.24	0.00	0.39	0.41	75	
86		12.51	12.50	33.047		24.978	299.0	0.312	5.77	95.2	5.3	0.66	4.1	0.33	0.04	0.28	0.37	86	213
100	ISL	11.97	D 11.96	33.086	D	25.111	286.7	0.353	5.64	92.0	6.5	0.77	6.2	0.03	0.06	0.16	0.25	100	
101		12.01	12.00	33.081		25.100	287.8	0.356	5.63	91.9	6.6	0.78	6.3	0.01	0.06	0.15	0.24	101	212
111		11.74	11.73	33.136		25.193	279.1	0.384	5.60	90.9	8.1	0.90	8.2	0.00	0.00	0.12	0.10	111	211
124		11.32	11.30	33.189		25.311	268.1	0.420	5.46	87.9	9.4	0.98	9.8	0.00	0.03	0.06	0.06	125	210
125	ISL	11.24	D 11.22	33.184	D	25.322	267.1	0.422	5.45	87.6	9.5	0.99	9.9	0.00	0.03	0.06	0.06	126	
139		10.74	10.72	33.335		25.528	247.7	0.458	5.12	81.5	11.7	1.12	12.4	0.00	0.00	0.01	0.02	140	209
150	ISL	10.36	D 10.34	33.514	D	25.734	228.3	0.485	4.54	71.7	15.3	1.35	16.0	0.00	0.01	0.01	0.02	151	
164		9.87	9.85	33.669		25.938	209.1	0.515	3.82	59.8	20.1	1.63	20.4	0.00	0.03	0.00	0.02	165	208
199		9.22	9.20	33.928		26.247	180.3	0.583	3.67	56.7	24.4	1.66	21.7	0.00	0.00	0.00	0.01	200	207
200	ISL	9.20	D 9.18	33.941	D	26.261	179.0	0.585	3.67	56.7	24.5	1.66	21.8	0.00	0.00			201	
228		8.66	8.64	33.982		26.378	168.2	0.634	3.54	54.0	29.0	1.76	23.7	0.00	0.00			229	206
250	ISL	8.31	D 8.28	34.007	D	26.452	161.5	0.670	3.16	47.8	33.8	1.93	26.0	0.00	0.02			251	
266		8.04	8.01	34.016		26.499	157.1	0.695	2.83	42.6	37.5	2.07	27.7	0.00	0.03			267	205
300	ISL	7.70	D 7.67	34.044	D	26.572	150.7	0.748	2.29	34.2	43.7	2.29	30.6	0.00	0.01			302	
317		7.44	7.41	34.045		26.610	147.2	0.773	2.06	30.6	46.7	2.39	31.9	0.00	0.00			319	204
377		6.63	6.60	34.066		26.738	135.4	0.858	1.49	21.7	58.6	2.68	35.6	0.00	0.01			379	203
400	ISL	6.36	D 6.32	34.089	D	26.792	130.4	0.888	1.25	18.1	62.8	2.78	36.7	0.00	0.01			402	
438		6.14	6.10	34.138		26.859	124.4	0.937	0.90	13.0	69.5	2.93	38.1	0.00	0.00			441	202
500	ISL	5.66	D 5.62	34.195	D	26.964	114.8	1.011	0.61	8.7	79.5	3.08	39.8	0.00	0.00			503	
519		5.55	5.51	34.203		26.984	113.1	1.033	0.52	7.4	82.6	3.12	40.3	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 0808 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 45.1 W	20/08/08	2232 UTC	39 m	290 03 kn	250 01 06	1	1008.8 mb	21.7 C	19.2 C		1/8	CU

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	20.13	20.13	33.464	23.558	432.2	0.000	6.09	117.1	4.5	0.25	0.0	0.01	0.13	0.94	0.11	0	
1	20.13	20.13	33.464	23.558	432.3	0.004	6.09	117.1	4.5	0.25	0.0	0.01	0.13	0.94	0.11	1	205
5	19.18	19.18	33.432	23.779	411.3	0.021	6.43	121.5	4.5	0.27	0.0	0.01	0.06	0.89	0.18	5	204
10	14.45	14.45	33.362	24.828	311.4	0.039	6.68	115.0	5.0	0.42	0.1	0.01	0.02	0.86	0.28	10	203
15	13.43	13.43	33.344	25.025	292.8	0.054	6.30	106.2	6.0	0.58	2.6	0.16	0.65	1.41	0.43	15	202
20 ISL	12.90 D	12.90	33.323 D	25.115	284.4	0.069	5.92	98.7	7.0	0.73	5.2	0.30	1.83	1.34	0.52	20	
22	12.92	12.92	33.328	25.115	284.4	0.074	5.77	96.2	7.4	0.79	6.2	0.35	2.30	1.31	0.56	22	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 28.7 N	117 46.3 W	20/08/08	2034 UTC	92 m	180 04 kn	270 02 07	0	1009.6 mb	21.0 C	18.7 C	6m	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	19.83	19.83	33.439	23.617	426.6	0.000	6.05	115.7	4.7	0.24	0.0	0.00	0.12	1.27	0.15	0	
1 A	19.83	19.83	33.439	23.617	426.6	0.004	6.05	115.7	4.7	0.24	0.0	0.00	0.12	1.27	0.15	1	211
1	19.68	19.68	33.441	23.657	422.8	0.004										1	212
4 A	18.58	18.58	33.438	23.934	396.5	0.017	6.25	116.7	4.3	0.24	0.0	0.01	0.08	0.81	0.12	4	210
8 A	18.37	18.37	33.425	23.977	392.6	0.032	6.35	118.1	4.1	0.24	0.0	0.01	0.04	0.92	0.17	8	209
10 ISL	17.46 D	17.46	33.391 D	24.172	374.0	0.040	6.47	118.2	3.6	0.25	0.0	0.00	0.02	0.88	0.20	10	
12 A	16.79	16.79	33.359	24.306	361.3	0.047	6.59	118.8	3.2	0.28	0.0	0.00	0.00	0.86	0.24	12	208
15 A	15.52	15.52	33.327	24.570	336.2	0.058	6.67	117.3	3.8	0.35	0.4	0.03	0.01	0.99	0.29	15	207
20 ISL	13.55 D	13.55	33.305 D	24.971	298.1	0.074	6.25	105.6	5.1	0.56	2.8	0.19	0.99	1.06	0.46	20	
22 A	13.29	13.29	33.308	25.026	292.9	0.080	6.00	100.8	5.7	0.66	4.0	0.26	1.43	1.09	0.52	22	206
30 ISL	12.44 D	12.44	33.340 D	25.218	274.8	0.102	5.31	87.6	8.4	0.94	8.5	0.39	1.39	0.72	0.46	30	
31	12.42	12.42	33.361	25.238	273.0	0.105	5.23	86.3	8.7	0.97	9.0	0.41	1.38	0.66	0.45	31	205
39	12.14	12.13	33.489	25.391	258.6	0.126	4.68	76.8	10.3	1.12	12.1	0.08	0.01	0.30	0.32	39	204
49	11.78	11.77	33.503	25.469	251.3	0.152	4.62	75.3	11.3	1.18	13.1	0.04	0.00	0.21	0.26	49	203
50 ISL	11.73 D	11.72	33.543 D	25.510	247.5	0.154	4.56	74.2	11.6	1.20	13.4	0.04	0.00	0.20	0.25	50	
60	11.47	11.46	33.610	25.610	238.2	0.179	3.89	63.0	14.8	1.42	16.5	0.03	0.00	0.12	0.19	60	202
72	11.21	11.20	33.655	25.693	230.6	0.207	3.58	57.7	16.9	1.55	18.1	0.04	0.00	0.07	0.16	72	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 0808 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 54.4 W	21/08/08	0033 UTC	615 m	230 04 kn	270 02 06	0	1008.0 mb	22.0 C	18.9 C	19m	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	20.79	20.79	33.423	23.352	451.9	0.000	5.61	109.2	2.7	0.25	0.0	0.00	0.27	0.23	0.02	0	
1	20.79	20.79	33.423	23.352	451.9	0.005	5.61	109.2	2.7	0.25	0.0	0.00	0.27	0.23	0.02	1	221
10 ISL	20.03 D	20.03	33.403 D	23.538	434.5	0.044	5.70	109.4	2.6	0.25	0.0	0.00	0.18	0.24	0.03	10	
11	20.02	20.02	33.413	23.548	433.6	0.049	5.71	109.5	2.6	0.25	0.0	0.00	0.17	0.24	0.03	11	219
11	20.02	20.02	33.411	23.547	433.7	0.049										11	220
20 ISL	18.69 D	18.69	33.368 D	23.854	404.7	0.086	6.02	112.6	2.6	0.27	0.0	0.00	0.36	0.43	0.09	20	
21	18.58	18.58	33.361	23.876	402.6	0.091	6.07	113.3	2.6	0.27	0.0	0.00	0.38	0.46	0.10	21	218
30 ISL	14.78 D	14.78	33.255 D	24.676	326.5	0.123	6.59	114.1	2.7	0.31	0.1	0.01	0.29	0.90	0.25	30	
31	14.77	14.77	33.255	24.678	326.3	0.127	6.63	114.8	2.7	0.32	0.1	0.01	0.28	0.96	0.27	31	217
40	13.93	13.92	33.272	24.868	308.4	0.155	6.42	109.3	3.7	0.42	0.7	0.05	0.31	1.46	0.49	40	216
50	12.66	12.65	33.354	25.187	278.3	0.184	5.44	90.2	7.5	0.86	7.7	0.50	0.29	0.66	0.47	50	215
60	12.26	12.25	33.456	25.343	263.7	0.212	4.85	79.8	9.6	1.03	11.2	0.08	0.03	0.31	0.40	60	214
70	11.68	11.67	33.448	25.446	254.1	0.237	4.98	80.9	10.9	1.12	12.4	0.04	0.17	0.18	0.19	70	213
75 ISL	11.66 D	11.65	33.491 D	25.483	250.7	0.250	4.87	79.1	11.6	1.16	13.1	0.04	0.19	0.15	0.14	75	
85	11.38	11.37	33.528	25.563	243.3	0.275	4.55	73.5	13.2	1.26	14.6	0.03	0.22	0.12	0.10	85	212
100	10.60	10.59	33.603	25.761	224.7	0.310	4.22	67.1	16.7	1.45	17.7	0.03	0.03	0.04	0.07	100	211
120	10.31	10.30	33.668	25.862	215.5	0.354	3.89	61.4	18.7	1.54	19.2	0.02	0.00	0.03	0.08	121	210
125 ISL	10.22 D	10.21	33.693 D	25.897	212.3	0.365	3.79	59.8	19.3	1.57	19.6	0.02	0.00	0.03	0.08	126	
140	9.98	9.96	33.759	25.989	203.8	0.396	3.50	54.9	21.4	1.67	21.1	0.03	0.00	0.02	0.08	141	209
150 ISL	9.67 D	9.65	33.818 D	26.087	194.6	0.416	3.29	51.3	23.3	1.75	22.2	0.03	0.00	0.02	0.07	151	
169	9.36	9.34	33.924	26.221	182.2	0.452	2.95	45.7	27.0	1.88	24.2	0.02	0.00	0.01	0.04	170	208
200 ISL	8.95 D	8.93	34.000 D	26.347	170.8	0.506	2.79	42.8	30.4	1.96	25.5	0.01	0.00	0.01	0.03	201	
201	8.99	8.97	34.005	26.344	171.0	0.508	2.79	42.9	30.5	1.96	25.5	0.01	0.00	0.01	0.03	202	207
228	8.74	8.72	34.053	26.422	164.2	0.553	2.57	39.3	33.9	2.06	26.8	0.00	0.00			229	206
250 ISL	8.57 D	8.54	34.082 D	26.471	159.8	0.589	2.30	35.0	36.7	2.17	28.0	0.00	0.00			251	
269	8.49	8.46	34.117	26.511	156.4	0.619	2.02	30.7	39.2	2.28	29.1	0.00	0.00			271	205
300 ISL	8.32 D	8.29	34.187 D	26.592	149.2	0.666	1.52	23.0	43.7	2.47	30.8	0.00	0.10			302	
317	8.28	8.25	34.216	26.621	146.7	0.691	1.27	19.2	46.0	2.56	31.6	0.00	0.15			319	204
378	8.07	8.03	34.302	26.721	138.3	0.778	0.76	11.5	51.6	2.77	32.8	0.00	0.00			380	203
400 ISL	7.38 D	7.34	34.212 D	26.751	135.3	0.808	0.75	11.1	54.4	2.81	33.6	0.00	0.00			403	
437	7.26	7.22	34.256	26.803	130.9	0.858	0.74	10.9	59.2	2.87	35.0	0.00	0.00			440	202
500 ISL	7.05 D	7.00	34.334 D	26.894	123.1	0.938	0.47	6.9	65.7	3.00	36.1	0.00	0.02			503	
517	6.86	6.81	34.325	26.913	121.3	0.958	0.40	5.9	67.4	3.04	36.4	0.00	0.03			521	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 15.1 N	118 14.8 W	21/08/08	0442 UTC	307 m	270 08 kn			1008.4 mb	20.5 C	18.9 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	21.76	21.76	33.654	23.263	460.3	0.000	5.57	110.5	3.2	0.09	0.0	0.01	0.43	0.85	0.08	0	
2	21.76	21.76	33.654	23.263	460.4	0.009	5.57	110.5	3.2	0.09	0.0	0.01	0.43	0.85	0.08	2	219
3	21.78	21.78	33.655	23.259	460.9	0.014										3	218
10	20.69	20.69	33.609	23.520	436.2	0.045	5.93	115.3	3.4	0.11	0.0	0.01	0.14	1.02	0.08	10	216
10	21.09	21.09	33.626	23.426	445.2	0.045										10	217
20	14.32	14.32	33.441	24.917	303.3	0.083	6.85	117.6	5.8	0.39	0.3	0.03	0.40	1.55	0.52	20	215
30	12.91	12.91	33.414	25.183	278.1	0.112	5.65	94.2	7.5	0.78	6.2	0.26	0.34	0.87	0.44	30	214
40	12.12	12.11	33.456	25.369	260.7	0.139	4.96	81.4	10.2	1.05	10.9	0.22	0.27	0.47	0.38	40	213
49	11.73	11.72	33.513	25.486	249.7	0.162	4.63	75.4	11.9	1.18	13.2	0.11	0.22	0.31	0.27	49	212
50 ISL	11.65 D	11.64	33.527 D	25.512	247.3	0.164	4.60	74.7	12.1	1.19	13.5	0.10	0.21	0.30	0.26	50	
60	11.36	11.35	33.568	25.597	239.4	0.188	4.32	69.8	13.7	1.31	15.5	0.04	0.10	0.19	0.19	60	211
70	11.19	11.18	33.591	25.646	235.0	0.212	4.17	67.1	14.7	1.36	16.3	0.02	0.21	0.08	0.10	70	210
75 ISL	11.02 D	11.01	33.606 D	25.689	231.1	0.224	4.11	65.9	15.2	1.39	16.7	0.02	0.20	0.07	0.09	75	
85	10.91	10.90	33.627	25.725	227.8	0.247	3.93	62.9	16.4	1.45	17.7	0.02	0.16	0.04	0.07	85	209
100 ISL	10.64 D	10.63	33.732 D	25.854	215.8	0.280	3.43	54.6	19.2	1.60	19.8	0.02	0.25	0.02	0.06	100	
101	10.66	10.65	33.720	25.842	217.1	0.282	3.39	54.0	19.4	1.61	19.9	0.02	0.25	0.02	0.06	101	208
119	10.21	10.20	33.861	26.030	199.5	0.320	2.86	45.1	24.0	1.82	22.4	0.02	0.10	0.01	0.06	120	207
125 ISL	10.11 D	10.10	33.895 D	26.073	195.5	0.332	2.73	43.0	25.2	1.87	23.1	0.02	0.09	0.01	0.06	126	
139	9.91	9.89	33.979	26.173	186.3	0.358	2.46	38.6	27.7	1.98	24.3	0.02	0.08	0.02	0.06	140	206
150 ISL	9.88 D	9.86	34.058 D	26.240	180.2	0.378	2.26	35.4	29.4	2.05	25.1	0.02	0.08	0.02	0.06	151	
169	9.79	9.77	34.115	26.300	174.9	0.412	1.97	30.8	31.7	2.15	26.0	0.02	0.07	0.01	0.05	170	205
200 ISL	9.74 D	9.72	34.183 D	26.362	169.7	0.466	1.69	26.4	33.8	2.26	26.9	0.02	0.03			201	
201	9.74	9.72	34.182	26.361	169.8	0.467	1.68	26.3	33.9	2.26	26.9	0.02	0.03			202	204
229	9.70	9.67	34.251	26.422	164.6	0.514	1.33	20.8	36.4	2.39	27.8	0.03	0.17			230	203
250 ISL	9.55 D	9.52	34.301 D	26.487	158.9	0.548	1.18	18.4	37.9	2.46	28.3	0.04	0.12			251	
269	9.48	9.45	34.303	26.500	158.0	0.578	1.09	17.0	39.5	2.51	28.8	0.04	0.04			271	202
299	8.96	8.93	34.317	26.595	149.3	0.624	0.95	14.6	43.6	2.59	30.2	0.02	0.00			301	201
300 CSL	8.94	8.91	34.318	26.599	148.9	0.626										302	200

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.2 N	118 23.1 W	21/08/08	0808 UTC	1177 m	210 05 kn			1008.2 mb	19.2 C	16.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	20.42	20.42	33.564	23.557	432.3	0.000	5.59	108.1	2.3	0.20	0.0	0.00	0.09	0.35	0.03	0	
1	20.42	20.42	33.564	23.557	432.3	0.004	5.59	108.1	2.3	0.20	0.0	0.00	0.09	0.35	0.03	1	222
1	20.42	20.42	33.560	23.555	432.6	0.004										1	223
9	19.87	19.87	33.541	23.685	420.5	0.038										9	221
10	19.80	19.80	33.545	23.706	418.5	0.043	5.69	108.8	2.4	0.22	0.0	0.00	0.15	0.30	0.02	10	220
20	16.11	16.11	33.410	24.501	342.9	0.081	6.72	119.6	3.2	0.30	0.0	0.00	0.14	0.52	0.16	20	219
30	14.16	14.16	33.386	24.908	304.4	0.113	6.67	114.1	4.7	0.41	0.5	0.03	0.23	1.92	0.71	30	217
30	14.30	14.30	33.391	24.883	306.8	0.113										30	218
39	13.04	13.03	33.398	25.146	282.0	0.140	5.88	98.3	6.8	0.71	4.9	0.20	0.12	1.50	0.62	39	216
49	12.29	12.28	33.434	25.320	265.6	0.167	5.21	85.8	9.0	0.97	9.5	0.18	0.00	0.82	0.48	49	215
50 ISL	12.10 D	12.09	33.460 D	25.376	260.3	0.170	5.14	84.3	9.3	1.00	9.9	0.17	0.01	0.76	0.46	50	
59	11.76	11.75	33.504	25.474	251.1	0.193	4.66	75.9	11.7	1.19	13.2	0.05	0.09	0.33	0.30	59	214
69	11.55	11.54	33.536	25.538	245.3	0.217	4.49	72.8	12.8	1.27	14.4	0.02	0.11	0.20	0.19	69	213
75 ISL	11.25 D	11.24	33.584 D	25.630	236.6	0.232	4.21	67.8	14.4	1.37	15.9	0.02	0.11	0.13	0.15	75	
84	10.89	10.88	33.661	25.755	225.0	0.253	3.69	59.0	17.4	1.54	18.5	0.01	0.10	0.05	0.11	84	212
100	10.50	10.49	33.825	25.951	206.6	0.287	2.82	44.8	23.1	1.83	21.9	0.00	0.00	0.02	0.06	100	211
119	10.19	10.18	33.978	26.124	190.6	0.325	2.27	35.8	27.9	2.06	24.2	0.00	0.00	0.01	0.05	120	210
125 ISL	10.11 D	10.10	34.013 D	26.165	186.8	0.336	2.14	33.7	29.1	2.11	24.8	0.00	0.00	0.01	0.05	126	
138	9.95	9.93	34.093	26.255	178.5	0.360	1.90	29.9	31.3	2.20	25.8	0.00	0.00	0.00	0.05	139	209
150 ISL	9.93 D	9.91	34.151 D	26.304	174.2	0.381	1.69	26.6	32.9	2.27	26.5	0.00	0.00	0.00	0.05	151	
169	9.90	9.88	34.212	26.357	169.5	0.414	1.39	21.8	34.9	2.37	27.3	0.00	0.00	0.00	0.04	170	208
200	9.94	9.92	34.290	26.412	165.1	0.466	0.94	14.8	37.9	2.54	28.2	0.00	0.00	0.00	0.05	201	207
228	9.90	9.87	34.330	26.451	162.0	0.511	0.98	15.4	37.9	2.55	28.2	0.00	0.00			229	206
250 ISL	9.79 D	9.76	34.340 D	26.477	159.9	0.547	0.97	15.2	39.0	2.57	28.6	0.00	0.00			251	
278	9.41	9.38	34.330	26.533	155.1	0.591	0.96	14.9	40.8	2.60	29.3	0.00	0.00			280	205
300 ISL	9.22 D	9.19	34.318 D	26.554	153.4	0.625	0.94	14.5	41.9	2.62	29.6	0.00	0.01			302	
318	9.15	9.11	34.330	26.575	151.7	0.652	0.91	14.1	42.9	2.65	29.8	0.00	0.01			320	204
376	8.63	8.59	34.354	26.677	142.9	0.738	0.65	9.9	48.8	2.80	31.4	0.00	0.02			378	203
400 ISL	8.37 D	8.33	34.337 D	26.704	140.6	0.772	0.65	9.9	50.8	2.83	32.1	0.00	0.02			403	
436	7.97	7.93	34.312	26.745	137.0	0.822	0.65	9.8	54.0	2.86	33.1	0.00	0.01			439	202
500 ISL	7.26 D	7.21	34.332 D	26.863	126.2	0.906	0.44	6.5	61.9	3.02	35.2	0.00	0.00			503	
518	7.19	7.14	34.335	26.876	125.3	0.929	0.38	5.6	64.1	3.07	35.8	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 0808 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 54.7 N	118 56.6 W	20/08/08	1100 UTC	1686 m	310 09 kn			1009.8 mb	17.7 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	17.90	17.90	33.453	24.113	379.3	0.000	5.87	108.2	1.7	0.27	0.0	0.00	0.27	0.29	0.07	0	
2	17.90	17.90	33.453	24.113	379.3	0.008	5.87	108.2	1.7	0.27	0.0	0.00	0.27	0.29	0.07	2	221
10	17.89	17.89	33.455	24.117	379.2	0.038	5.87	108.2	1.7	0.28	0.0	0.00	0.12	0.29	0.06	10	219
10	17.90	17.90	33.453	24.113	379.6	0.038										10	220
20	17.87	17.87	33.452	24.120	379.3	0.076	5.89	108.5	1.7	0.28	0.0	0.00	0.29	0.28	0.09	20	218
30	15.60	15.60	33.396	24.606	333.3	0.111	6.76	119.1	0.3	0.26	0.0	0.00	0.26	0.32	0.12	30	217
40	13.02	13.01	33.298	25.072	289.0	0.143	5.75	96.0	6.0	0.79	5.9	0.25	0.61	1.28	0.68	40	216
50	12.29	12.28	33.329	25.238	273.4	0.171	5.37	88.3	8.3	0.96	9.2	0.12	0.26	0.28	0.45	50	215
60	11.85	11.84	33.404	25.380	260.1	0.197	5.06	82.5	10.1	1.09	11.7	0.06	0.19	0.18	0.23	60	214
71	11.35	11.34	33.451	25.509	248.1	0.225	4.94	79.7	12.2	1.22	13.8	0.02	0.24	0.09	0.13	71	213
75 ISL	11.27 D	11.26	33.485 D	25.549	244.3	0.235	4.87	78.5	12.7	1.25	14.3	0.02	0.24	0.07	0.11	75	
86	11.04	11.03	33.529	25.625	237.3	0.262	4.55	73.0	14.3	1.34	15.9	0.01	0.25	0.05	0.08	86	212
100 ISL	10.65 D	10.64	33.662 D	25.798	221.2	0.294	3.84	61.1	17.9	1.54	19.0	0.01	0.33	0.03	0.06	100	
101	10.65	10.64	33.657	25.794	221.6	0.296	3.79	60.3	18.2	1.56	19.2	0.01	0.34	0.03	0.06	101	211
121	10.01	10.00	33.831	26.040	198.5	0.338	2.99	47.0	24.0	1.85	23.1	0.01	0.33	0.01	0.04	122	210
125 ISL	9.95 D	9.94	33.862 D	26.075	195.4	0.346	2.91	45.7	24.6	1.88	23.5	0.01	0.32	0.01	0.04	126	
140	9.84	9.82	33.912	26.132	190.2	0.375	2.69	42.1	26.4	1.95	24.3	0.01	0.29	0.01	0.04	141	209
150 ISL	9.70 D	9.68	33.961 D	26.194	184.5	0.394	2.57	40.1	27.7	2.01	24.9	0.01	0.27	0.01	0.04	151	
168	9.52	9.50	34.022	26.272	177.4	0.426	2.36	36.7	30.2	2.11	25.9	0.01	0.23	0.00	0.03	169	208
200 ISL	9.31 D	9.29	34.149 D	26.406	165.3	0.481	1.88	29.1	34.6	2.28	27.7	0.01	0.08	0.00	0.03	201	
201	9.31	9.29	34.138	26.397	166.2	0.483	1.87	29.0	34.7	2.28	27.8	0.01	0.08	0.00	0.03	202	207
231	9.09	9.06	34.198	26.480	158.9	0.531	1.56	24.1	38.3	2.42	29.2	0.01	0.05			232	206
250 ISL	9.08 D	9.05	34.243 D	26.517	155.7	0.561	1.30	20.0	40.1	2.52	29.7	0.01	0.02			251	
268	9.10	9.07	34.282	26.545	153.5	0.589	1.11	17.1	41.7	2.59	30.2	0.01	0.00			270	205
300 ISL	8.31 D	8.28	34.185 D	26.592	149.2	0.638	1.16	17.6	44.8	2.62	31.3	0.01	0.05			302	
316	8.31	8.28	34.222	26.622	146.7	0.661	1.22	18.5	46.4	2.63	31.9	0.01	0.08			318	204
375	7.99	7.95	34.281	26.717	138.6	0.745	0.80	12.0	52.2	2.80	33.4	0.01	0.00			377	203
400 ISL	7.86 D	7.82	34.285 D	26.739	136.8	0.780	0.68	10.2	54.5	2.86	33.9	0.01	0.00			403	
435	7.62	7.58	34.316	26.799	131.6	0.827	0.55	8.2	57.9	2.93	34.6	0.00	0.00			438	202
500 ISL	6.95 D	6.90	34.318 D	26.895	122.9	0.909	0.39	5.7	66.1	3.06	36.7	0.00	0.05			503	
510	6.89	6.84	34.323	26.907	121.8	0.922	0.37	5.4	67.4	3.08	37.0	0.00	0.06			513	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 39.0 N	119 29.7 W	20/08/08	0502 UTC	1318 m	320 25 kn			1011.4 mb	18.2 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	19.27	19.27	33.543	23.840	405.3	0.000	5.46	103.4	1.9	0.27	0.0	0.00	0.19	0.25	0.03	0	
1	19.27	19.27	33.543	23.841	405.3	0.004	5.46	103.4	1.9	0.27	0.0	0.00	0.19	0.25	0.03	1	221
10 ISL	19.27 D	19.27	33.536 D	23.836	406.1	0.041	5.47	103.6	1.9	0.27	0.0	0.00	0.26	0.23	0.04	10	
11	19.27	19.27	33.544	23.842	405.5	0.045	5.47	103.6	1.9	0.27	0.0	0.00	0.27	0.23	0.04	11	219
11	19.27	19.27	33.545	23.843	405.5	0.045										11	220
20 ISL	19.18 D	19.18	33.545 D	23.866	403.6	0.081	5.50	104.0	1.7	0.27	0.0	0.00	0.22	0.25	0.04	20	
22	19.18	19.18	33.556	23.874	402.8	0.089	5.51	104.1	1.7	0.27	0.0	0.00	0.21	0.25	0.04	22	218
30 ISL	15.57 D	15.57	33.455 D	24.658	328.3	0.118	6.61	116.4	0.4	0.29	0.0	0.00	0.25	0.79	0.21	30	
32	15.37	15.37	33.458	24.704	323.9	0.125	6.85	120.2	0.2	0.29	0.0	0.00	0.27	0.97	0.27	32	217
41	13.80	13.79	33.372	24.972	298.6	0.153	6.33	107.5	2.8	0.57	3.0	0.10	0.43	1.74	0.66	41	216
50	12.76	12.75	33.536	25.308	266.8	0.178	5.22	86.8	8.6	1.06	10.4	0.45	0.47	0.37	0.34	50	215
60	11.63	11.62	33.546	25.531	245.8	0.204	4.79	77.8	13.1	1.27	14.6	0.04	0.03	0.17	0.16	60	214
70	11.48	11.47	33.580	25.585	240.8	0.228	4.61	74.7	14.4	1.34	15.8	0.02	0.06	0.09	0.13	70	213
75 ISL	11.24 D	11.23	33.623 D	25.662	233.6	0.240	4.36	70.3	16.2	1.43	17.1	0.01	0.05	0.07	0.11	75	
87	10.59	10.58	33.718	25.852	215.8	0.267	3.74	59.5	20.5	1.65	20.3	0.00	0.00	0.04	0.07	87	212
100 ISL	10.30 D	10.29	33.755 D	25.931	208.5	0.295	3.47	54.8	22.3	1.74	21.6	0.00	0.00	0.02	0.07	100	
101	10.28	10.27	33.763	25.941	207.6	0.297	3.46	54.7	22.4	1.74	21.7	0.00	0.00	0.02	0.07	101	211
120	9.86	9.85	33.818	26.055	197.0	0.335	3.15	49.3	24.4	1.84	23.5	0.00	0.00	0.01	0.06	121	210
125 ISL	9.58 D	9.57	33.878 D	26.149	188.2	0.345	2.98	46.4	25.7	1.89	24.2	0.00	0.00	0.01	0.06	126	
139	9.34	9.32	33.961	26.253	178.6	0.370	2.51	38.9	29.6	2.05	26.1	0.00	0.00	0.01	0.05	140	209
150 ISL	9.24 D	9.22	33.988 D	26.290	175.2	0.390	2.46	38.0	31.7	2.11	26.9	0.00	0.00	0.01	0.05	151	
173	8.69	8.67	34.051	26.427	162.5	0.429	2.35	35.9	35.1	2.17	28.0	0.00	0.00	0.01	0.04	174	208
200	8.46	8.44	34.093	26.496	156.5	0.472	2.06	31.3	38.6	2.28	29.3	0.00	0.00	0.00	0.03	201	207
233	8.13	8.11	34.155	26.595	147.6	0.522	1.52	22.9	44.7	2.51	31.7	0.00	0.07			234	206
250 ISL	8.01 D	7.98	34.171 D	26.625	144.9	0.547	1.39	20.9	46.7	2.57	32.2	0.00	0.04			251	
272	7.82	7.79	34.175	26.657	142.2	0.578	1.29	19.3	49.0	2.62	32.7	0.00	0.00			274	205
300 ISL	7.61 D	7.58	34.199 D	26.706	137.9	0.618	1.11	16.6	52.3	2.70	33.6	0.00	0.01			302	
320	7.46	7.43	34.209	26.736	135.4	0.645	0.99	14.7	54.7	2.75	34.2	0.00	0.02			322	204
380	7.14	7.10	34.252	26.815	128.6	0.724	0.68	10.0	60.7	2.91	35.8	0.00	0.13			382	203
400 ISL	6.98 D	6.94	34.250 D	26.836	126.8	0.750	0.61	9.0	62.9	2.95	36.2	0.00	0.08			403	
436	6.77	6.73	34.275	26.885	122.6	0.795	0.50	7.3	66.7	3.02	37.0	0.00	0.00			439	202
500 ISL	6.42 D	6.37	34.309 D	26.959	116.3	0.871	0.37	5.4	72.8	3.15	38.3	0.00	0.27			503	
512	6.38	6.33	34.314	26.968	115.5	0.885	0.35	5.1	74.0	3.18	38.6	0.00	0.32			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 58.1 W	19/08/08	2350 UTC	854 m	320 15 kn	290 05 05	1	1012.1 mb	18.1 C	16.5 C	11m	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	18.15	18.15	33.546	24.123	378.3	0.000	5.65	104.7	0.8	0.25	0.0	0.00	0.14	0.26	0.04	0	
1	18.15	18.15	33.546	24.123	378.3	0.004	5.65	104.7	0.8	0.25	0.0	0.00	0.14	0.26	0.04	1	221
10 ISL	18.12 D	18.12	33.540 D	24.126	378.4	0.038	5.66	104.8	0.7	0.24	0.0	0.00	0.02	0.27	0.04	10	
11	18.10	18.10	33.545	24.135	377.6	0.042	5.66	104.8	0.7	0.24	0.0	0.00	0.00	0.27	0.04	11	219
11	18.13	18.13	33.546	24.128	378.2	0.042										11	220
20 ISL	17.89 D	17.89	33.543 D	24.185	373.1	0.075	5.70	105.1	0.4	0.24	0.0	0.00	0.00	0.29	0.05	20	
21	17.92	17.92	33.545	24.179	373.7	0.079	5.70	105.2	0.4	0.24	0.0	0.00	0.00	0.29	0.05	21	218
30	13.93	13.93	33.499	25.043	291.5	0.109	5.63	95.9	5.3	0.79	6.6	0.32	0.42	1.25	0.60	30	217
41	13.26	13.25	33.513	25.191	277.7	0.140	5.39	90.6	7.6	0.96	8.9	0.46	0.51	0.59	0.37	41	216
50 ISL	12.21 D	12.20	33.539 D	25.417	256.4	0.164	5.06	83.2	10.8	1.16	12.8	0.13	0.15	0.20	0.19	50	
51	12.17	12.16	33.541	25.426	255.6	0.167	5.02	82.5	11.2	1.18	13.2	0.09	0.11	0.17	0.17	51	215
60	11.83	11.82	33.579	25.519	246.9	0.190	4.84	79.0	12.9	1.28	14.8	0.03	0.07	0.09	0.12	60	214
69	11.54	11.53	33.603	25.592	240.2	0.212	4.69	76.1	14.3	1.36	16.1	0.02	0.00	0.06	0.09	69	213
75 ISL	11.27 D	11.26	33.633 D	25.665	233.4	0.226	4.53	73.1	15.4	1.42	17.0	0.01	0.00	0.05	0.08	75	
84	11.02	11.01	33.662	25.732	227.1	0.246	4.26	68.3	17.2	1.50	18.4	0.01	0.01	0.04	0.07	84	212
100 ISL	10.54 D	10.53	33.718 D	25.861	215.2	0.282	3.86	61.3	19.8	1.62	20.2	0.01	0.00	0.02	0.06	100	
101	10.51	10.50	33.722	25.869	214.4	0.284	3.84	60.9	20.0	1.63	20.3	0.01	0.00	0.02	0.06	101	211
119	9.71	9.70	33.830	26.089	193.7	0.321	3.33	52.0	24.0	1.78	22.7	0.01	0.00	0.01	0.05	120	210
125 ISL	9.57 D	9.56	33.852 D	26.130	190.0	0.332	3.27	50.9	24.7	1.80	23.0	0.01	0.04	0.01	0.05	126	
140	9.29	9.27	33.897	26.211	182.6	0.360	3.19	49.3	26.3	1.82	23.6	0.01	0.12	0.01	0.04	141	209
150 ISL	9.10 D	9.08	33.941 D	26.276	176.5	0.378	3.11	47.9	27.7	1.85	24.2	0.01	0.11	0.01	0.04	151	
169	8.84	8.82	33.989	26.355	169.3	0.411	2.90	44.4	30.7	1.94	25.6	0.00	0.04	0.00	0.03	170	208
200 ISL	8.43 D	8.41	34.055 D	26.470	158.8	0.462	2.34	35.5	36.8	2.16	28.4	0.00	0.00	0.00	0.02	201	
202	8.43	8.41	34.056	26.471	158.8	0.465	2.30	34.9	37.2	2.18	28.6	0.00	0.00	0.00	0.02	203	207
228	8.12	8.10	34.090	26.545	152.2	0.505	2.02	30.5	41.8	2.33	30.3	0.00	0.00			229	206
250 ISL	7.67 D	7.65	34.125 D	26.639	143.4	0.538	1.68	25.1	46.9	2.48	32.1	0.00	0.00			251	
270	7.45	7.42	34.138	26.681	139.7	0.566	1.35	20.1	51.7	2.61	33.6	0.00	0.00			272	205
300 ISL	7.25 D	7.22	34.208 D	26.764	132.2	0.607	0.95	14.0	57.2	2.78	35.0	0.00	0.00			302	
317	7.13	7.10	34.225	26.795	129.5	0.629	0.77	11.4	60.1	2.86	35.6	0.00	0.00			319	204
375	6.56	6.53	34.290	26.924	117.8	0.701	0.40	5.8	70.7	3.07	37.7	0.00	0.01			377	203
400 ISL	6.45 D	6.41	34.298 D	26.945	116.1	0.730	0.37	5.4	72.9	3.11	38.1	0.00	0.01			403	
436	6.34	6.30	34.309	26.968	114.3	0.772	0.32	4.6	74.9	3.13	38.3	0.00	0.00			439	202
500 ISL	6.13 D	6.09	34.322 D	27.006	111.4	0.844	0.28	4.0	78.3	3.14	38.7	0.00	0.00			503	
524	6.10	6.05	34.325	27.013	111.2	0.871	0.27	3.9	79.6	3.15	38.9	0.00	0.00			528	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 5.0 N	120 41.0 W	19/08/08	1807 UTC	3779 m	340 18 kn	340 04 05	2	1015.2 mb	17.0 C	16.0 C	14m	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	17.81	17.81	33.541	24.202	370.8	0.000	5.59	102.9	2.3	0.31	0.0	0.00	0.18	0.21	0.04	0	
2 A	17.81	17.81	33.541	24.202	370.8	0.007	5.59	102.9	2.3	0.31	0.0	0.00	0.18	0.21	0.04	2	223
2	17.81	17.81				0.007			2.3	0.31	0.0	0.00	0.14			2	224
9 A	17.80	17.80	33.541	24.205	370.8	0.033	5.58	102.7	2.3	0.31	0.0	0.00	0.00	0.21	0.04	9	221
9	17.81	17.81	33.540	24.202	371.1	0.033										9	222
10 ISL	17.79 D	17.79	33.534 D	24.202	371.1	0.037	5.59	102.9	2.3	0.31	0.0	0.00	0.01	0.22	0.04	10	
19 A	17.43	17.43	33.535	24.290	363.1	0.070	5.70	104.2	2.4	0.31	0.0	0.00	0.09	0.29	0.09	19	220
20 ISL	17.24 D	17.24	33.532 D	24.333	359.0	0.074	5.76	104.9	2.4	0.31	0.0	0.00	0.10	0.33	0.11	20	
28 A	16.23	16.23	33.507	24.549	338.6	0.102	6.17	110.1	2.2	0.35	0.1	0.02	0.14	0.60	0.30	28	218
28	15.91	15.91	33.503	24.619	332.0	0.102										28	219
30 ISL	15.07 D	15.07	33.526 D	24.822	312.6	0.108	6.15	107.3	2.8	0.44	1.3	0.07	0.37	0.60	0.30	30	
38 A	13.46	13.45	33.510	25.148	281.7	0.132	5.82	98.2	6.3	0.88	7.2	0.37	1.01	0.61	0.29	38	217
46	12.31	12.30	33.555	25.410	257.0	0.153	5.33	87.8	9.9	1.15	12.0	0.69	0.05	0.37	0.19	46	216
50 ISL	12.08 D	12.07	33.595 D	25.485	250.0	0.164	5.15	84.5	11.4	1.22	13.7	0.31	0.02	0.28	0.15	50	
52 A	12.04	12.03	33.590	25.488	249.6	0.169	5.08	83.3	12.1	1.25	14.4	0.10	0.00	0.24	0.14	52	215
62	11.65	11.64	33.604	25.572	241.9	0.193	4.92	80.0	13.5	1.33	15.6	0.02	0.00	0.15	0.10	62	214
70	11.11	11.10	33.731	25.770	223.3	0.212	4.24	68.2	18.3	1.58	19.6	0.01	0.00	0.08	0.05	70	213
75 ISL	10.85 D	10.84	33.752 D	25.832	217.4	0.223	4.08	65.3	19.7	1.66	20.7	0.01	0.00	0.05	0.04	75	
85	10.48	10.47	33.777	25.917	209.5	0.244	3.93	62.4	21.1	1.75	21.8	0.01	0.00	0.02	0.03	85	212
100	9.77	9.76	33.795	26.052	196.9	0.275	3.41	53.3	24.0	1.85	23.7	0.00	0.00	0.01	0.03	100	211
119	8.99	8.98	33.909	26.268	176.6	0.310	3.01	46.2	28.3	1.91	25.3	0.00	0.00	0.00	0.03	120	210
125 ISL	8.91 D	8.90	33.945 D	26.309	172.9	0.321	2.87	44.0	29.6	1.95	25.9	0.00	0.00	0.00	0.03	126	
140	8.77	8.76	33.987	26.364	167.9	0.346	2.56	39.2	32.6	2.06	27.3	0.00	0.01	0.00	0.04	141	209
150 ISL	8.67 D	8.65	34.005 D	26.394	165.2	0.363	2.49	38.0	33.6	2.09	27.7	0.00	0.01	0.00	0.03	151	
170	8.52	8.50	34.036	26.441	161.1	0.395	2.41	36.7	35.5	2.13	28.2	0.00	0.00	0.00	0.01	171	208
200 ISL	8.13 D	8.11	34.078 D	26.534	152.7	0.442	1.98	29.9	40.8	2.32	30.5	0.00	0.07	0.00	0.02	201	
202	8.12	8.10	34.082	26.538	152.3	0.445	1.95	29.4	41.2	2.33	30.7	0.00	0.08	0.00	0.02	203	207
229	7.87	7.85	34.115	26.602	146.7	0.486	1.60	24.0	45.9	2.48	32.3	0.00	0.11			230	206
250 ISL	7.70 D	7.68	34.128 D	26.637	143.7	0.516	1.44	21.5	49.2	2.57	33.1	0.00	0.10			251	
268	7.43	7.40	34.139	26.684	139.3	0.542	1.34	19.9	52.0	2.63	33.8	0.00	0.10			270	205
300 ISL	7.00 D	6.97	34.150 D	26.753	133.0	0.585	1.11	16.3	57.9	2.75	35.4	0.00	0.04			302	
318	6.78	6.75	34.164	26.794	129.3	0.609	0.99	14.5	61.2	2.81	36.3	0.00	0.00			320	204
383	6.38	6.35	34.223	26.895	120.5	0.690	0.60	8.7	69.5	3.00	38.1	0.00	0.00			385	203
400 ISL	6.31 D	6.27	34.230 D	26.909	119.3	0.711	0.55	8.0	71.3	3.03	38.5	0.00	0.00			403	
440	6.06	6.02	34.245	26.953	115.5	0.758	0.46	6.6	75.4	3.09	39.4	0.00	0.00			443	202
500 ISL	5.83 D	5.79	34.313 D	27.037	108.2	0.825	0.28	4.0	82.1	3.17	40.2	0.00	0.00			503	
504	5.82	5.78	34.316	27.040	107.9	0.829	0.27	3.9	82.5	3.18	40.3	0.00	0.00			507	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 0808 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 44.7 N	121 19.4 W	19/08/08	0942 UTC	3726 m	340 11 kn			1014.3 mb	16.8 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	17.72	17.72	33.569	24.245	366.6	0.000	5.59	102.8	1.2	0.30	0.0	0.02	0.03	0.21	0.04	0	
2	17.72	17.72	33.569	24.245	366.7	0.007	5.59	102.8	1.2	0.30	0.0	0.02	0.03	0.21	0.04	2	221
10	17.73	17.73	33.569	24.243	367.2	0.037	5.59	102.8	1.1	0.29	0.0	0.00	0.00	0.21	0.04	10	220
19	17.48	17.48	33.579	24.312	361.0	0.069	5.68	104.0	1.4	0.29	0.0	0.00	0.00	0.26	0.10	19	219
20 ISL	17.31 D	17.31	33.573 D	24.348	357.6	0.073	5.71	104.2	1.4	0.29	0.0	0.00	0.00	0.27	0.12	20	
24	16.94	16.94	33.573	24.435	349.4	0.087	5.86	106.1	1.4	0.29	0.1	0.01	0.00	0.36	0.18	24	218
30	16.11	16.11	33.579	24.632	330.8	0.108	6.01	107.1	2.0	0.40	1.1	0.05	0.00	0.58	0.25	30	217
39	13.49	13.48	33.464	25.107	285.7	0.135	5.76	97.3	6.5	0.84	6.8	0.38	0.38	0.46	0.20	39	216
49	11.81	11.80	33.303	25.308	266.6	0.163	5.44	88.6	9.2	1.03	10.1	0.30	0.00	0.44	0.20	49	215
50 ISL	11.66 D	11.65	33.300 D	25.334	264.2	0.166	5.41	87.8	9.5	1.05	10.5	0.28	0.00	0.43	0.19	50	
60	11.33	11.32	33.410	25.480	250.5	0.191	5.10	82.2	12.2	1.23	13.8	0.05	0.00	0.28	0.13	60	214
69	11.22	11.21	33.537	25.599	239.5	0.213	4.87	78.4	14.0	1.34	15.6	0.05	0.00	0.21	0.09	69	213
75 ISL	11.04 D	11.03	33.583 D	25.667	233.1	0.228	4.73	75.9	14.9	1.42	16.7	0.04	0.00	0.16	0.07	75	
85	10.89	10.88	33.660	25.754	225.1	0.250	4.42	70.7	16.8	1.55	18.7	0.03	0.00	0.08	0.06	85	212
100	9.96	9.95	33.741	25.978	204.0	0.283	3.63	56.9	21.8	1.76	22.2	0.03	0.00	0.02	0.06	100	211
119	9.32	9.31	33.823	26.148	188.1	0.320	3.26	50.4	25.2	1.84	23.9	0.02	0.02	0.01	0.03	120	210
125 ISL	9.18 D	9.17	33.858 D	26.198	183.5	0.331	3.21	49.5	26.0	1.86	24.2	0.02	0.02	0.01	0.03	126	
138	9.04	9.03	33.888	26.244	179.3	0.355	3.13	48.1	27.6	1.91	24.9	0.01	0.00	0.01	0.03	139	209
150 ISL	8.68 D	8.66	33.964 D	26.360	168.4	0.375	2.98	45.5	29.5	1.96	25.9	0.01	0.00	0.01	0.03	151	
169	8.56	8.54	33.981	26.392	165.7	0.407	2.71	41.2	33.0	2.05	27.5	0.02	0.00	0.00	0.03	170	208
200 ISL	8.08 D	8.06	34.039 D	26.510	154.9	0.457	2.31	34.8	39.2	2.23	29.7	0.01	0.00	0.00	0.03	201	
201	8.10	8.08	34.045	26.512	154.8	0.458	2.30	34.7	39.4	2.24	29.8	0.01	0.00	0.00	0.03	202	207
229	7.75	7.73	34.060	26.576	149.1	0.501	2.02	30.2	44.2	2.38	31.5	0.01	0.00			230	206
250 ISL	7.53 D	7.51	34.073 D	26.618	145.3	0.532	1.80	26.8	47.6	2.49	32.8	0.01	0.03			251	
270	7.30	7.27	34.091	26.665	141.1	0.561	1.61	23.8	50.8	2.58	33.9	0.01	0.05			272	205
300 ISL	7.00 D	6.97	34.099 D	26.713	136.8	0.602	1.42	20.9	55.3	2.67	35.2	0.01	0.02			302	
320	6.78	6.75	34.104	26.747	133.8	0.629	1.31	19.2	58.2	2.73	36.0	0.01	0.00			322	204
377	6.42	6.39	34.170	26.847	124.9	0.703	0.83	12.0	66.7	2.96	37.9	0.00	0.00			379	203
400 ISL	6.40 D	6.36	34.195 D	26.870	123.1	0.732	0.71	10.3	69.0	3.01	38.4	0.00	0.00			403	
437	6.18	6.14	34.220	26.919	118.8	0.776	0.56	8.1	72.6	3.07	39.2	0.00	0.00			440	202
500 ISL	5.85 D	5.81	34.291 D	27.017	110.1	0.848	0.34	4.9	81.4	3.18	40.6	0.00	0.07			503	
509	5.74	5.70	34.283	27.024	109.4	0.858	0.31	4.4	82.7	3.20	40.8	0.00	0.08			512	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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	19/08/08	0307 UTC	3871 m	310 12 kn	330 02 07	2	1014.1 mb	16.9 C	15.7 C		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.25	17.25	33.409	24.235	367.6	0.000	5.73	104.3	0.4	0.30	0.0	0.00	0.00	0.19	0.03	0	
2	17.25	17.25	33.409	24.235	367.7	0.007	5.73	104.3	0.4	0.30	0.0	0.00	0.00	0.19	0.03	2	220
3	17.26	17.26	33.409	24.233	367.9	0.011										3	221
10	16.85	16.85	33.474	24.380	354.2	0.036	5.82	105.2	0.0	0.28	0.0	0.00	0.01	0.22	0.03	10	219
20	16.43	16.43	33.422	24.438	349.0	0.071	5.87	105.2	0.1	0.30	0.0	0.00	0.08	0.28	0.08	20	218
30	15.36	15.36	33.276	24.566	337.0	0.106	6.08	106.5	1.2	0.38	0.1	0.01	0.22	0.75	0.29	30	217
40	13.69	13.68	33.167	24.836	311.5	0.138	5.93	100.4	3.5	0.54	1.8	0.16	0.67	0.60	0.43	40	216
49	12.75	12.74	33.037	24.923	303.3	0.166	5.86	97.2	4.6	0.63	3.1	0.30	0.38	0.42	0.37	49	215
50 ISL	12.64 D	12.63	33.023 D	24.934	302.4	0.169	5.84	96.6	4.7	0.64	3.3	0.30	0.35	0.41	0.36	50	
59	11.93	11.92	33.012	25.060	290.5	0.196	5.67	92.4	5.9	0.76	5.3	0.28	0.09	0.29	0.26	59	214
69	11.41	11.40	33.140	25.256	272.1	0.224	5.45	87.9	7.6	0.90	8.2	0.05	0.00	0.16	0.16	69	213
75 ISL	11.61 D	11.60	33.315 D	25.355	262.8	0.240	5.30	85.9	9.4	1.03	10.4	0.03	0.01	0.11	0.11	75	
84	11.30	11.29	33.387	25.468	252.3	0.263	5.09	82.0	12.2	1.21	13.4	0.01	0.04	0.06	0.07	84	212
100	10.49	10.48	33.458	25.667	233.6	0.302	4.80	76.0	15.5	1.39	16.1	0.01	0.00	0.04	0.09	100	211
120	10.26	10.25	33.782	25.959	206.2	0.346										121	210
125 ISL	10.03 D	10.02	33.821 D	26.029	199.7	0.356	3.63	57.0	22.6	1.74	21.7	0.00	0.00	0.02	0.07	126	
139	9.51	9.49	33.859	26.145	188.8	0.383	2.98	46.3	26.3	1.91	24.4	0.00	0.00	0.02	0.05	140	209
150 ISL	9.23 D	9.21	33.910 D	26.231	180.9	0.403	2.88	44.5	28.1	1.96	25.3	0.00	0.00	0.02	0.05	151	
169	8.93	8.91	33.950	26.310	173.6	0.437	2.72	41.7	30.4	2.01	26.1	0.00	0.00	0.01	0.05	170	208
200 ISL	8.54 D	8.52	33.998 D	26.409	164.7	0.490	2.60	39.6	34.0	2.08	27.2	0.00	0.16	0.01	0.05	201	
201	8.54	8.52	34.000	26.411	164.6	0.491	2.59	39.4	34.1	2.08	27.2	0.00	0.16	0.01	0.05	202	207
229	8.25	8.23	34.033	26.481	158.3	0.536	2.22	33.6	38.0	2.22	29.2	0.00	0.13			230	206
250 ISL	7.86 D	7.84	34.066 D	26.565	150.5	0.569	1.84	27.6	43.0	2.38	31.1	0.00	0.20			251	
270	7.68	7.65	34.111	26.627	145.0	0.598	1.50	22.4	47.9	2.53	32.7	0.00	0.27			272	205
300 ISL	7.28 D	7.25	34.112 D	26.685	139.7	0.641	1.29	19.1	52.9	2.64	34.0	0.00	0.18			302	
319	7.05	7.02	34.122	26.725	136.1	0.667	1.23	18.1	55.7	2.69	34.6	0.00	0.09			321	204
376	6.28	6.25	34.108	26.817	127.6	0.742	1.07	15.5	65.4	2.85	37.1	0.00	0.00			378	203
400 ISL	6.16 D	6.12	34.122 D	26.843	125.4	0.773	0.92	13.3	68.3	2.91	37.7	0.00	0.00			403	
437	6.09	6.05	34.177	26.896	120.9	0.818	0.67	9.6	72.3	3.00	38.3	0.00	0.00			440	202
500 ISL	5.62 D	5.58	34.209 D	26.980	113.3	0.892	0.45	6.4	80.5	3.11	39.4	0.01	0.00			503	
516	5.60	5.56	34.235	27.003	111.3	0.910	0.40	5.7	82.6	3.14	39.7	0.01	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 5.3 N	122 40.1 W	18/08/08	2047 UTC	3976 m	020 05 kn	330 02 08	1	1015.5 mb	19.5 C	18.0 C	22m	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	17.86	17.86	32.989	23.767	412.2	0.000	5.58	102.5	2.6	0.35	0.0	0.00	0.14	0.12	0.00	0	
2	17.86	17.86	32.989	23.768	412.3	0.008	5.58	102.5	2.6	0.35	0.0	0.00	0.14	0.12	0.00	2	220
3	17.45	17.45	32.987	23.865	403.1	0.012										3	221
10	17.13	17.13	32.973	23.930	397.1	0.040	5.65	102.3	2.6	0.36	0.0	0.00	0.01	0.11	0.03	10	219
20	17.01	17.01	33.004	23.982	392.4	0.080	5.66	102.3	2.6	0.35	0.0	0.00	0.08	0.16	0.04	20	218
30	16.56	16.56	33.070	24.138	377.9	0.118	5.79	103.8	2.9	0.35	0.0	0.00	0.00	0.20	0.06	30	217
38	15.86	15.85	33.078	24.303	362.3	0.148	5.93	104.8	2.8	0.35	0.0	0.00	0.13	0.27	0.10	38	216
50 ISL	14.73 D	14.72	33.059 D	24.536	340.4	0.190	6.05	104.5	2.7	0.36	0.0	0.00	0.15	0.34	0.18	50	
54	14.55	14.54	33.049	24.567	337.6	0.204	6.07	104.5	2.7	0.36	0.0	0.00	0.16	0.35	0.20	54	215
69	13.76	13.75	33.038	24.723	323.0	0.253	6.04	102.3	2.7	0.39	0.1	0.02	0.26	0.39	0.24	69	214
75 ISL	13.37 D	13.36	33.019 D	24.788	317.0	0.272	5.96	100.1	3.2	0.46	0.9	0.17	0.37	0.30	0.25	75	
79	13.00	12.99	33.013	24.857	310.5	0.285	5.91	98.5	3.6	0.51	1.5	0.27	0.39	0.24	0.26	79	213
84	12.88	12.87	33.026	24.890	307.4	0.300	5.86	97.4	3.8	0.54	1.8	0.35	0.25	0.22	0.27	84	212
100	12.16	12.15	33.098	25.085	289.2	0.348	5.55	90.9	5.6	0.73	5.5	0.04	0.06	0.15	0.16	100	211
118	11.48	11.47	33.275	25.349	264.4	0.398	5.26	85.0	8.4	0.96	9.6	0.01	0.03	0.06	0.07	118	210
125 ISL	11.06 D	11.04	33.308 D	25.451	254.8	0.416	5.11	81.9	10.1	1.07	11.5	0.00	0.02	0.04	0.05	126	
138	10.89	10.87	33.479	25.614	239.6	0.448	4.76	76.0	13.7	1.29	14.9	0.00	0.00	0.03	0.04	139	209
150 ISL	10.41 D	10.39	33.600 D	25.792	222.8	0.476	4.32	68.4	17.0	1.47	17.7	0.00	0.02	0.02	0.04	151	
168	9.81	9.79	33.728	25.994	203.8	0.514	3.64	56.9	21.7	1.70	21.4	0.00	0.05	0.01	0.03	169	208
200 ISL	9.02 D	9.00	33.933 D	26.283	176.8	0.575	2.78	42.7	29.2	1.99	25.9	0.00	0.00	0.00	0.03	201	
201	9.06	9.04	33.935	26.278	177.3	0.577	2.76	42.5	29.4	2.00	26.0	0.00	0.00	0.00	0.03	202	207
228	8.49	8.47	33.998	26.417	164.5	0.623	2.60	39.5	34.1	2.08	27.4	0.00	0.00			229	206
250 ISL	8.05 D	8.02	34.020 D	26.501	156.7	0.659	2.42	36.4	38.6	2.18	28.9	0.00	0.00			251	
267	7.79	7.76	34.026	26.544	152.8	0.685	2.25	33.7	42.1	2.27	30.2	0.00	0.00			268	205
300 ISL	7.38 D	7.35	34.056 D	26.627	145.3	0.734	1.82	27.0	48.3	2.46	32.4	0.00	0.00			302	
317	7.26	7.23	34.079	26.662	142.1	0.758	1.60	23.6	51.3	2.55	33.4	0.00	0.00			319	204
377	6.55	6.52	34.093	26.770	132.3	0.841	1.22	17.7	61.2	2.75	36.0	0.00	0.04			379	203
400 ISL	6.49 D	6.45	34.141 D	26.816	128.3	0.871	1.04	15.1	64.7	2.83	36.8	0.00	0.03			402	
437	6.19	6.15	34.165	26.874	123.0	0.917	0.76	11.0	70.0	2.96	37.9	0.00	0.00			440	202
500 ISL	5.75 D	5.71	34.206 D	26.962	115.1	0.992	0.54	7.7	78.8	3.08	39.4	0.00	0.02			503	
519	5.62	5.58	34.217	26.987	112.9	1.014	0.48	6.8	81.4	3.12	39.9	0.00	0.03			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 20.1 W	18/08/08	1403 UTC	4057 m	320 10 kn	340 03 06	2	1014.2 mb	17.2 C	15.2 C	27m	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	18.58	18.58	33.313	23.839	405.4	0.000	5.44	101.5	2.7	0.32	0.1	0.00	0.00	0.10	0.01	0	
2	18.58	18.58	33.313	23.839	405.5	0.008	5.44	101.5	2.7	0.32	0.1	0.00	0.00	0.10	0.01	2	221
2	18.58	18.58	33.315	23.840	405.4	0.008										2	222
10	18.56	18.56	33.312	23.843	405.3	0.041	5.44	101.5	2.7	0.32	0.1	0.00	0.05	0.10	0.01	10	220
20 ISL	18.35 D	18.35	33.302 D	23.888	401.4	0.081	5.52	102.6	2.6	0.32	0.1	0.00	0.06	0.11	0.01	20	
25	17.61	17.61	33.229	24.012	389.7	0.101	5.60	102.5	2.6	0.32	0.1	0.00	0.07	0.12	0.02	25	219
30 ISL	16.74 D	16.74	33.173 D	24.175	374.3	0.120	5.76	103.7	2.6	0.33	0.1	0.00	0.05	0.13	0.03	30	
39	15.27	15.26	33.059	24.419	351.3	0.152	6.03	105.3	2.7	0.34	0.1	0.00	0.01	0.14	0.05	39	218
49	14.49	14.48	33.055	24.584	335.8	0.187	6.08	104.5	2.8	0.36	0.0	0.00	0.00	0.16	0.07	49	217
50 ISL	14.16 D	14.15	33.056 D	24.654	329.1	0.190	6.08	103.8	2.8	0.36	0.0	0.02	0.01	0.17	0.07	50	
62	13.42	13.41	33.033	24.788	316.6	0.229	5.98	100.5	3.1	0.45	0.6	0.20	0.12	0.24	0.12	62	215
62	13.42	13.41	33.031	24.786	316.8	0.229										62	216
74	12.78	12.77	33.075	24.948	301.7	0.266	5.76	95.6	4.1	0.57	2.7	0.20	0.05	0.30	0.14	74	214
75 ISL	12.73 D	12.72	33.075 D	24.957	300.8	0.269	5.75	95.3	4.2	0.58	2.9	0.20	0.04	0.30	0.14	75	
86	12.30	12.29	33.104	25.063	291.0	0.301	5.67	93.2	5.8	0.70	5.0	0.12	0.00	0.22	0.14	86	213
100	11.77	11.76	33.100	25.159	282.0	0.342	5.77	93.7	9.3	0.93	8.7	0.01	0.00	0.10	0.07	100	212
110	11.64	11.63	33.164	25.233	275.2	0.369	5.72	92.7	10.7	1.01	10.0	0.01	0.03	0.06	0.04	110	211
125	11.42	11.40	33.372	25.436	256.3	0.409	5.29	85.4	11.1	1.14	12.3	0.01	0.00	0.04	0.06	126	210
141	10.33	10.31	33.379	25.634	237.6	0.449	4.63	73.0	13.0	1.23	14.1	0.00	0.00	0.01	0.02	142	209
150 ISL	10.08 D	10.06	33.610 D	25.856	216.6	0.469	4.24	66.6	16.1	1.40	16.7	0.00	0.00	0.01	0.02	151	
163	9.79	9.77	33.695	25.972	205.9	0.497	3.75	58.6	21.1	1.66	20.7	0.00	0.00	0.01	0.01	164	208
200 ISL	8.82 D	8.80	33.956 D	26.333	172.0	0.567	3.50	53.6	27.6	1.75	23.1	0.00	0.03	0.00	0.01	201	
201	8.82	8.80	33.958	26.334	171.9	0.568	3.49	53.4	27.7	1.75	23.1	0.00	0.03	0.00	0.01	202	207
226	8.32	8.30	33.999	26.444	161.8	0.610	3.11	47.1	33.4	1.93	25.8	0.00	0.13			227	206
250 ISL	7.89 D	7.86	34.029 D	26.531	153.7	0.648	2.70	40.5	39.7	2.12	28.4	0.00	0.07			251	
269	7.49	7.46	34.026	26.587	148.6	0.677	2.37	35.2	44.4	2.27	30.2	0.00	0.00			270	205
300 ISL	7.32 D	7.29	34.063 D	26.641	143.9	0.722	1.91	28.3	49.3	2.45	32.2	0.01	0.00			302	
316	7.21	7.18	34.078	26.668	141.5	0.745	1.70	25.1	51.4	2.53	33.0	0.01	0.00			318	204
377	6.58	6.55	34.118	26.785	130.9	0.828	1.12	16.3	61.9	2.80	35.9	0.00	0.02			379	203
400 ISL	6.31 D	6.27	34.132 D	26.832	126.6	0.858	1.03	14.9	65.7	2.86	36.8	0.00	0.06			402	
439	5.89	5.85	34.127	26.881	122.0	0.906	0.93	13.3	72.1	2.93	38.1	0.00	0.10			442	202
500 ISL	5.42 D	5.38	34.192 D	26.991	112.0	0.977	0.60	8.5	82.3	3.08	40.1	0.00	0.02			503	
512	5.38	5.34	34.195	26.998	111.4	0.991	0.53	7.5	84.3	3.11	40.5	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 0808 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 25.0 N	124 0.1 W	18/08/08	0717 UTC	4308 m	330 04 kn			1013.9 mb	19.0 C	17.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	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	19.02	19.02	33.388	23.786	410.5	0.000	5.43	102.2	2.9	0.33	0.0	0.00	0.32	0.11	0.02	0	
2	19.02	19.02	33.388	23.786	410.6	0.008	5.43	102.2	2.9	0.33	0.0	0.00	0.32	0.11	0.02	2	222
10	18.78	18.78	33.389	23.847	405.0	0.041	5.45	102.1	2.9	0.33	0.0	0.00	0.17	0.11	0.03	10	220
10	18.78	18.78	33.388	23.846	405.0	0.041										10	221
20	18.80	18.80	33.422	23.868	403.4	0.081	5.43	101.8	2.6	0.31	0.0	0.00	0.01	0.11	0.03	20	219
30 ISL	18.79 D	18.78	33.439 D	23.884	402.2	0.122	5.43	101.8	2.4	0.31	0.0	0.01	0.02	0.11	0.05	30	
31	18.80	18.79	33.455	23.894	401.3	0.126	5.43	101.8	2.4	0.31	0.0	0.01	0.02	0.11	0.05	31	218
40	16.93	16.92	33.489	24.374	355.8	0.160	5.99	108.4	1.9	0.44	1.2	0.04	0.58	0.36	0.27	40	216
40	16.97	16.96	33.505	24.377	355.5	0.160										40	217
50 ISL	13.69 D	13.68	33.650 D	25.210	276.2	0.191	6.29	106.8	2.3	0.76	5.8	0.17	1.22	0.31	0.16	50	
51	13.95	13.94	33.635	25.145	282.4	0.194	6.32	107.8	2.3	0.80	6.4	0.18	1.24	0.30	0.14	51	215
60	12.37	12.36	33.657	25.478	250.9	0.218	5.47	90.3	9.0	1.20	12.9	0.65	0.39	0.31	0.15	60	214
69	11.72	11.71	33.642	25.589	240.5	0.240	4.99	81.3	13.2	1.36	16.0	0.04	0.15	0.17	0.07	69	213
75 ISL	11.33 D	11.32	33.655 D	25.671	232.8	0.254	4.79	77.4	15.0	1.44	17.4	0.03	0.15	0.11	0.05	75	
85	11.04	11.03	33.691	25.751	225.3	0.277	4.54	72.9	17.0	1.54	18.8	0.01	0.16	0.04	0.03	85	212
100 ISL	10.43 D	10.42	33.659 D	25.834	217.7	0.310	4.21	66.7	18.7	1.60	19.7	0.01	0.04	0.02	0.03	100	
101	10.37	10.36	33.659	25.844	216.7	0.313	4.19	66.3	18.8	1.60	19.7	0.01	0.03	0.02	0.03	101	211
120	9.69	9.68	33.748	26.029	199.5	0.352	3.60	56.1	22.0	1.71	21.8	0.01	0.00	0.01	0.02	121	210
125 ISL	9.58 D	9.57	33.767 D	26.062	196.5	0.362	3.42	53.2	23.3	1.76	22.7	0.01	0.00	0.01	0.02	126	
140	9.17	9.15	33.873	26.211	182.5	0.390	2.97	45.8	27.3	1.92	25.1	0.01	0.00	0.00	0.02	141	209
150 ISL	8.79 D	8.77	33.926 D	26.313	172.9	0.408	2.94	45.0	29.1	1.96	25.9	0.01	0.00	0.00	0.02	151	
170	8.55	8.53	33.960	26.377	167.1	0.442	2.87	43.7	32.0	2.01	26.8	0.01	0.01	0.00	0.02	171	208
200 ISL	8.09 D	8.07	33.994 D	26.474	158.4	0.491	2.61	39.3	36.9	2.12	28.8	0.00	0.11	0.00	0.02	201	
202	8.09	8.07	33.998	26.477	158.1	0.494	2.59	39.0	37.2	2.13	28.9	0.00	0.12	0.00	0.02	203	207
230	7.68	7.66	34.013	26.549	151.6	0.538	2.40	35.8	42.0	2.24	30.3	0.00	0.12			231	206
250 ISL	7.41 D	7.39	34.032 D	26.603	146.7	0.567	2.24	33.2	46.0	2.33	31.5	0.00	0.06			251	
269	7.09	7.06	34.034	26.649	142.4	0.595	2.05	30.2	49.9	2.43	32.7	0.00	0.00			271	205
300 ISL	6.94 D	6.91	34.094 D	26.717	136.4	0.638	1.55	22.7	55.5	2.62	35.1	0.00	0.00			302	
319	6.75	6.72	34.095	26.744	134.0	0.664	1.25	18.3	58.7	2.73	36.4	0.00	0.00			321	204
378	6.18	6.15	34.112	26.833	126.1	0.741	1.00	14.4	67.3	2.89	38.2	0.00	0.00			380	203
400 ISL	6.02 D	5.99	34.132 D	26.869	122.8	0.768	0.88	12.6	70.5	2.95	38.8	0.00	0.00			402	
438	5.78	5.74	34.162	26.923	118.0	0.814	0.68	9.7	75.9	3.04	39.8	0.00	0.00			441	202
500 ISL	5.56 D	5.52	34.252 D	27.021	109.3	0.884	0.40	5.7	84.0	3.18	40.8	0.00	0.03			503	
515	5.47	5.43	34.263	27.041	107.5	0.900	0.33	4.7	86.0	3.21	41.1	0.00	0.04			518	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.3 N	117 28.0 W	15/08/08	0125 UTC	30 m	310 04 kn	310 01 07	1	1009.7 mb	22.2 C	20.4 C		7/8	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	20.56	20.56	33.497	23.469	440.7	0.000	6.11	118.5	3.7	0.26	0.0	0.01	0.17	1.08	0.36	0	
1	20.56	20.56	33.497	23.469	440.7	0.004	6.11	118.5	3.7	0.26	0.0	0.01	0.17	1.08	0.36	1	205
5	19.29	19.29	33.456	23.769	412.2	0.021	6.28	118.9	3.8	0.28	0.0	0.01	0.19	2.31	0.61	5	204
10	13.52	13.52	33.308	24.979	297.0	0.039	6.54	110.4	4.4	0.52	2.3	0.15	0.75	4.99	0.75	10	203
15	12.64	12.64	33.314	25.158	280.1	0.054	5.78	95.8	6.2	0.75	5.8	0.18	0.31	0.81	0.09	15	202
20 ISL	12.35 D	12.35	33.351 D	25.243	272.2	0.067	5.41	89.1	8.0	0.89	7.8	0.26	0.59	0.74	0.13	20	
21	12.36	12.36	33.353	25.243	272.2	0.070	5.34	88.0	8.3	0.92	8.2	0.28	0.65	0.73	0.14	21	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 57.6 N	117 17.7 W	14/08/08	1836 UTC	47 m	290 06 kn	230 02 05	1	1011.3 mb	22.4 C	20.0 C	12m	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	21.18	21.18	33.514	23.316	455.3	0.000	5.85	114.7	3.3	0.24	0.1	0.00	0.00	0.74	0.15	0	
1 A	21.18	21.18	33.514	23.316	455.4	0.005	5.85	114.7	3.3	0.24	0.1	0.00	0.00	0.74	0.15	1	208
2	21.23	21.23				0.009										2	211
7 A	14.60	14.60	33.252	24.711	322.5	0.029	6.72	115.9	3.7	0.36	0.5	0.00	0.11	0.43	0.17	7	207
10 ISL	13.97 D	13.97	33.245 D	24.838	310.4	0.038	6.81	116.0	3.2	0.37	0.8	0.00	0.46	1.04	0.34	10	
16 A	13.53	13.53	33.357	25.015	293.8	0.056	6.99	118.0	2.1	0.38	1.1	0.01	0.81	2.27	0.67	16	206
20	13.09	13.09	33.365	25.110	284.9	0.068	6.45	107.9	2.0	0.51	0.8	0.04	0.23	5.86	1.62	20	204
21	13.09	13.09	33.365	25.110	284.9	0.071	6.45	107.9	1.9	0.51	0.9	0.04	0.00	5.76	1.76	21	205
24 A	12.92	12.92	33.363	25.142	281.9	0.079	6.04	100.7	4.2	0.67	3.4	0.11	0.57	4.57	1.41	24	203
30 ISL	12.67 D	12.67	33.381 D	25.205	276.0	0.096	5.47	90.7	7.1	0.88	6.5	0.19	0.73	2.94	0.93	30	
34 A	12.56	12.56	33.412	25.250	271.8	0.107	5.24	86.7	8.2	0.97	7.7	0.22	0.83	2.25	0.75	34	202
40	12.40	12.39	33.428	25.294	267.9	0.123	5.07	83.7	9.7	1.06	9.0	0.27	1.09	1.51	0.67	40	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 0808 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.7 N	117 23.6 W	15/08/08	0405 UTC	604 m	230 02 kn			1011.0 mb	21.8 C	19.9 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	21.31	21.31	33.513	23.280	458.8	0.000	6.06	119.1	3.3	0.23	0.0	0.01	0.23	0.61	0.13	0	
1	21.32	21.32	33.518	23.281	458.7	0.005										1	221
2	21.31	21.31	33.513	23.280	458.9	0.009	6.06	119.1	3.3	0.23	0.0	0.01	0.23	0.61	0.13	2	220
10	14.88	14.88	33.338	24.718	321.9	0.040	6.82	118.4	3.5	0.35	0.0	0.01	0.21	1.12	0.55	10	219
20	13.42	13.42	33.320	25.009	294.5	0.071	6.49	109.3	3.4	0.48	1.6	0.07	0.39	1.84	0.72	20	218
30	12.57	12.57	33.473	25.296	267.4	0.099	5.04	83.5	9.0	0.96	9.0	0.39	0.17	0.81	0.64	30	217
40	12.09	12.08	33.529	25.431	254.8	0.125	4.41	72.3	11.5	1.22	13.2	0.16	0.26	0.50	0.38	40	216
50	11.94	11.93	33.573	25.494	249.0	0.151	4.01	65.6	13.3	1.36	15.0	0.17	0.07	0.22	0.20	50	215
60	11.81	11.80	33.592	25.533	245.5	0.175	3.90	63.6	14.2	1.40	15.8	0.07	0.05	0.23	0.25	60	214
70	11.42	11.41	33.606	25.616	237.9	0.200	4.02	65.0	14.2	1.36	15.8	0.03	0.00	0.16	0.14	70	213
75 ISL	11.05 D	11.04	33.668 D	25.731	227.0	0.211	3.67	58.9	16.6	1.49	17.4	0.03	0.01	0.12	0.13	75	
86	10.89	10.88	33.753	25.826	218.2	0.236	2.84	45.5	22.3	1.81	21.2	0.02	0.03	0.04	0.12	86	212
100 ISL	10.65 D	10.64	33.768 D	25.881	213.3	0.266	2.99	47.6	22.5	1.78	21.4	0.02	0.00	0.03	0.09	100	
101	10.61	10.60	33.773	25.892	212.3	0.268	3.00	47.7	22.5	1.78	21.4	0.02	0.00	0.03	0.09	102	211
120	10.61	10.60	33.846	25.949	207.3	0.308	2.42	38.5	26.1	1.98	23.1	0.02	0.05	0.02	0.11	121	210
125 ISL	10.57 D	10.56	33.849 D	25.958	206.5	0.318	2.35	37.4	26.6	2.01	23.4	0.02	0.05	0.02	0.11	126	
140	10.37	10.35	33.910 D	26.041	199.0	0.349										141	209
150 ISL	10.25 D	10.23	33.970 D	26.109	192.8	0.368	2.09	33.0	28.7	2.11	24.7	0.02	0.08	0.01	0.10	151	
170	10.13	10.11	34.043	26.186	185.8	0.406	1.99	31.4	29.9	2.15	25.3	0.02	0.11	0.01	0.08	171	208
200	10.12	10.10	34.136	26.261	179.4	0.461	1.58	24.9	33.2	2.30	26.3	0.01	0.23	0.00	0.07	201	207
229	9.98	9.95	34.177	26.318	174.6	0.512	1.74	27.4	33.2	2.29	26.6	0.02	0.06			230	206
250 ISL	9.97 D	9.94	34.238 D	26.367	170.4	0.548	1.63	25.6	33.9	2.33	27.0	0.01	0.25			251	
269	9.83	9.80	34.248	26.399	167.8	0.581	1.45	22.7	35.0	2.38	27.5	0.00	0.43			271	205
300 ISL	9.63 D	9.60	34.294 D	26.469	161.7	0.632	1.19	18.6	37.1	2.48	28.1	0.00	0.20			302	
319	9.68	9.64	34.335	26.493	159.9	0.662	1.03	16.1	38.8	2.54	28.5	0.00	0.00			321	204
378	8.75	8.71	34.344	26.651	145.5	0.752	0.71	10.9	46.9	2.74	31.1	0.00	0.00			380	203
400 ISL	8.42 D	8.38	34.340 D	26.699	141.1	0.784	0.66	10.0	49.3	2.78	31.9	0.00	0.00			403	
439	8.00	7.95	34.324	26.750	136.6	0.838	0.60	9.0	53.7	2.85	33.3	0.00	0.00			442	202
500 ISL	7.20 D	7.15	34.328 D	26.869	125.7	0.918	0.42	6.2	62.5	2.99	35.6	0.00	0.00			503	
519	7.10	7.05	34.332	26.886	124.2	0.942	0.36	5.3	65.2	3.03	36.3	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 0808 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 50.9 N	117 31.8 W	15/08/08	0739 UTC	843 m	230 05 kn			1011.5 mb	21.2 C	19.8 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	22.01	22.01	33.555	23.119	474.1	0.000	5.48	109.1	3.6	0.20	0.0	0.00	0.11	0.37	0.06	0	
1	22.02	22.02	33.556	23.117	474.4	0.005										1	221
2	22.01	22.01	33.555	23.119	474.2	0.009	5.48	109.1	3.6	0.20	0.0	0.00	0.11	0.37	0.06	2	220
10	20.08	20.08	33.461	23.569	431.5	0.046	5.89	113.2	3.4	0.26	0.0	0.00	0.15	0.35	0.06	10	219
20	15.58	15.58	33.306	24.540	339.2	0.084	6.57	115.6	3.0	0.32	0.1	0.00	0.28	0.25	0.08	20	218
30	14.94	14.94	33.418	24.767	317.8	0.117	6.51	113.2	2.3	0.35	0.0	0.01	0.19	0.41	0.17	30	217
40	13.83	13.82	33.423	25.006	295.4	0.148	6.42	109.1	1.4	0.46	0.7	0.03	0.21	1.54	0.61	40	216
50	12.66	12.65	33.452	25.262	271.1	0.176	5.05	83.8	8.5	0.95	8.8	0.33	0.07	0.67	0.43	50	215
60	12.21	12.20	33.478	25.369	261.2	0.203	4.78	78.6	10.5	1.09	11.3	0.09	0.08	0.44	0.40	60	214
70	11.81	11.80	33.570	25.516	247.4	0.228	4.16	67.8	13.6	1.31	14.7	0.04	0.11	0.18	0.21	70	213
75 ISL	11.68 D	11.67	33.568 D	25.539	245.4	0.240	4.04	65.7	14.3	1.36	15.5	0.04	0.16	0.15	0.20	75	
85	11.37	11.36	33.615	25.633	236.6	0.265	3.90	63.0	15.3	1.43	16.5	0.03	0.23	0.09	0.18	85	212
100 ISL	10.79 D	10.78	33.705 D	25.807	220.4	0.299	3.43	54.8	18.8	1.60	19.0	0.02	0.03	0.03	0.10	100	
101	10.78	10.77	33.712	25.814	219.7	0.301	3.40	54.3	19.1	1.61	19.2	0.02	0.01	0.03	0.09	101	211
120	10.44	10.43	33.818	25.957	206.5	0.342	2.93	46.5	22.7	1.80	21.4	0.01	0.00	0.02	0.07	121	210
125 ISL	10.22 D	10.21	33.834 D	26.007	201.8	0.352	2.96	46.7	23.3	1.80	21.7	0.01	0.00	0.02	0.07	126	
140	9.83	9.81	33.895	26.121	191.3	0.381	3.00	47.0	25.1	1.82	22.5	0.01	0.00	0.02	0.06	141	209
150 ISL	10.05 D	10.03	34.061 D	26.214	182.8	0.400	2.60	40.9	27.8	1.97	23.8	0.01	0.00	0.02	0.06	151	
169	10.01	9.99	34.134	26.278	177.1	0.434	1.75	27.5	32.8	2.26	26.1	0.02	0.01	0.01	0.05	170	208
200 ISL	9.92 D	9.90	34.165 D	26.318	174.0	0.489	1.65	25.9	33.6	2.31	26.5	0.02	0.00	0.01	0.05	201	
202	9.91	9.89	34.170	26.323	173.5	0.492	1.64	25.8	33.7	2.31	26.5	0.02	0.00	0.01	0.05	203	207
229	9.78	9.75	34.243	26.403	166.5	0.538	1.49	23.3	35.4	2.38	27.1	0.01	0.01			230	206
250 ISL	9.55 D	9.52	34.263 D	26.457	161.7	0.572	1.37	21.4	37.0	2.44	27.7	0.01	0.17			251	
268	9.53	9.50	34.287	26.479	160.0	0.601	1.25	19.5	38.5	2.49	28.2	0.01	0.30			270	205
300 ISL	9.59 D	9.56	34.347 D	26.517	157.2	0.652	0.92	14.4	40.8	2.62	28.8	0.00	0.14			302	
319	9.38	9.34	34.386	26.582	151.3	0.681	0.77	12.0	42.4	2.69	29.2	0.00	0.00			321	204
377	8.23	8.19	34.264	26.667	143.5	0.767	0.99	15.0	49.2	2.70	31.8	0.00	0.00			379	203
400 ISL	7.88 D	7.84	34.231 D	26.694	141.1	0.800	0.93	14.0	52.2	2.75	32.7	0.00	0.00			403	
437	7.57	7.53	34.263	26.764	134.8	0.851	0.77	11.5	56.8	2.84	33.9	0.00	0.00			440	202
500 ISL	7.26 D	7.21	34.284 D	26.826	129.8	0.934	0.56	8.3	61.3	2.94	35.1	0.00	0.00			503	
516	7.23	7.18	34.299	26.842	128.5	0.955	0.51	7.5	62.5	2.97	35.4	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 40.9 N	117 52.0 W	15/08/08	1203 UTC	635 m	300 01 kn			1010.3 mb	20.1 C	18.9 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	21.76	21.76	33.479	23.130	473.0	0.000	5.28	104.6	2.7	0.27	0.0	0.00	0.00	0.15	0.02	0	
2	21.76	21.76	33.479	23.131	473.1	0.009	5.28	104.6	2.7	0.27	0.0	0.00	0.00	0.15	0.02	2	220
10	21.03	21.03	33.457	23.313	456.0	0.047	5.61	109.7	2.6	0.26	0.0	0.00	0.08	0.20	0.02	10	219
20	17.33	17.33	33.364	24.183	373.3	0.088	6.38	116.3	2.4	0.29	0.0	0.00	0.14	0.24	0.04	20	218
30	14.70	14.70	33.232	24.675	326.6	0.123	6.54	113.0	3.2	0.35	0.0	0.00	0.09	0.36	0.17	30	217
40	13.55	13.54	33.218	24.904	305.0	0.155	6.17	104.1	4.6	0.54	2.3	0.11	0.12	1.14	0.51	40	216
50	13.52	13.51	33.410	25.059	290.5	0.184	5.85	98.8	3.9	0.64	3.1	0.12	0.51	0.79	0.50	50	215
60	12.97	12.96	33.422	25.179	279.4	0.213	5.29	88.3	7.1	0.85	6.8	0.26	0.32	0.52	0.45	60	214
69	12.38	12.37	33.416	25.289	269.1	0.238	5.12	84.4	8.8	0.99	9.8	0.13	0.11	0.28	0.29	69	213
75 ISL	11.75 D	11.74	33.397 D	25.393	259.2	0.253	4.98	81.0	10.2	1.07	11.4	0.07	0.10	0.18	0.22	75	
84	11.56	11.55	33.506	25.513	248.0	0.276	4.70	76.2	12.4	1.20	13.4	0.01	0.09	0.10	0.15	84	212
100	10.97	10.96	33.627	25.714	229.2	0.314	3.96	63.4	16.1	1.44	17.1	0.01	0.06	0.05	0.09	100	211
119	10.35	10.34	33.750	25.919	210.1	0.356	3.34	52.8	21.4	1.68	20.6	0.00	0.03	0.02	0.05	120	210
125 ISL	10.25 D	10.24	33.748 D	25.935	208.7	0.369	3.23	51.0	22.3	1.72	21.1	0.00	0.02	0.02	0.05	126	
138	10.03	10.01	33.830	26.036	199.3	0.395	3.05	47.9	23.9	1.78	21.8	0.00	0.00	0.01	0.07	139	209
150 ISL	9.84 D	9.82	33.864 D	26.095	193.9	0.419	2.92	45.7	25.6	1.84	22.7	0.00	0.00	0.01	0.06	151	
168	9.48	9.46	33.967	26.235	180.9	0.453	2.76	42.9	28.2	1.93	24.2	0.00	0.00	0.01	0.04	169	208
199	8.83	8.81	34.016	26.378	167.7	0.507	2.51	38.4	33.0	2.08	26.7	0.00	0.06	0.00	0.02	200	207
200 ISL	8.83 D	8.81	34.013 D	26.376	168.0	0.508	2.50	38.3	33.1	2.08	26.8	0.00	0.06			201	
228	8.49	8.47	34.055	26.462	160.2	0.554	2.28	34.7	36.7	2.19	28.2	0.00	0.07			229	206
250 ISL	8.27 D	8.24	34.094 D	26.526	154.5	0.589	2.02	30.6	40.5	2.30	29.5	0.00	0.07			251	
268	8.04	8.01	34.112	26.575	150.0	0.616	1.80	27.1	43.7	2.40	30.6	0.00	0.07			270	205
300 ISL	7.75 D	7.72	34.141 D	26.641	144.2	0.663	1.46	21.8	48.4	2.54	32.0	0.00	0.04			302	
319	7.63	7.60	34.158	26.672	141.5	0.691	1.30	19.4	50.8	2.61	32.7	0.00	0.02			321	204
378	7.19	7.15	34.181	26.753	134.5	0.772	1.04	15.4	56.9	2.76	34.4	0.00	0.00			380	203
400 ISL	7.07 D	7.03	34.193 D	26.779	132.3	0.801	0.93	13.7	59.1	2.81	35.0	0.00	0.00			403	
439	6.84	6.80	34.218	26.830	127.8	0.852	0.75	11.0	63.3	2.90	36.1	0.00	0.00			442	202
500 ISL	6.34 D	6.29	34.237 D	26.912	120.5	0.928	0.51	7.4	70.9	3.04	37.5	0.00	0.03			503	
514	6.31	6.26	34.269	26.942	117.9	0.944	0.45	6.5	72.6	3.07	37.8	0.00	0.04			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 31.7 N	118 11.8 W	15/08/08	1754 UTC	1778 m	290 03 kn	320 02 05	1	1012.5 mb	20.2 C	18.3 C	25m	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	19.06	19.06	33.396	23.782	410.9	0.000	5.51	103.8	4.0	0.29	0.0	0.00	0.00	0.16	0.00	0	
1 A	19.06	19.06	33.396	23.782	410.9	0.004	5.51	103.8	4.0	0.29	0.0	0.00	0.00	0.16	0.00	1	224
8	18.90	18.90	33.385	23.814	408.1	0.033	5.52	103.7	4.1	0.30	0.0	0.00	0.00	0.17 B	0.00 B	8	222
9	18.90	18.90	33.384	23.813	408.2	0.037			4.1	0.30	0.0	0.00	0.00			9	223
10 ISL	18.87 D	18.87	33.375 D	23.814	408.1	0.041	5.53	103.8	4.0	0.30	0.0	0.00	0.00	0.17	0.00	10	
15 A	18.71	18.71	33.378	23.857	404.3	0.061	5.57	104.2	3.8	0.30	0.0	0.00	0.00	0.18	0.00	15	220
20 ISL	17.68 D	17.68	33.366 D	24.100	381.2	0.081	5.97	109.5	3.8	0.31	0.0	0.00	0.02	0.27	0.02	20	
24	15.78	15.78	33.257	24.458	347.1	0.095	6.29	111.1	3.8	0.33	0.0	0.00	0.05	0.37	0.03	24	219
30 ISL	15.45 D	15.45	33.239 D	24.518	341.6	0.116	6.30	110.6	4.0	0.34	0.0	0.00	0.10	0.49	0.12	30	
34 A	15.13	15.12	33.255	24.601	333.8	0.130	6.31	110.0	4.1	0.36	0.0	0.00	0.13	0.58	0.20	34	218
42	13.95	13.94	33.193	24.803	314.7	0.156	5.99	101.9	4.4	0.47	1.1	0.15	0.17	0.85	0.38	42	217
50 ISL	13.56 D	13.55	33.277 D	24.948	301.1	0.180	5.79	97.8	5.4	0.61	3.2	0.23	0.32	0.64	0.45	50	
52 A	13.58	13.57	33.292	24.956	300.4	0.186	5.74	97.0	5.7	0.64	3.8	0.25	0.34	0.56	0.46	52	216
60	12.89	12.88	33.273	25.079	288.8	0.210	5.50	91.6	6.2	0.73	5.5	0.11	0.04	0.45	0.47	60	215
68 A	12.49	12.48	33.293	25.173	280.1	0.233	5.38	88.9	7.4	0.83	7.3	0.06	0.11	0.33	0.29	68	214
75 ISL	12.08 D	12.07	33.370 D	25.311	267.1	0.252	5.14	84.2	8.8	0.93	9.0	0.03	0.05	0.22	0.18	75	
79	12.01	12.00	33.393	25.342	264.3	0.262	4.99	81.6	9.6	0.99	9.9	0.02	0.00	0.16	0.14	79	213
94 A	11.44	11.43	33.508	25.537	246.0	0.301	4.52	73.1	12.7	1.18	13.1	0.01	0.00	0.07	0.08	94	212
100 ISL	11.15 D	11.14	33.557 D	25.628	237.5	0.315	4.38	70.4	13.5	1.23	14.0	0.00	0.00	0.06	0.06	100	
106	11.12	11.11	33.569	25.643	236.2	0.329	4.26	68.4	14.5	1.29	14.9	0.00	0.00	0.06	0.05	106	211
120	10.42	10.41	33.650	25.829	218.6	0.361	3.98	63.0	18.8	1.53	18.6	0.00	0.00	0.02	0.02	121	210
125 ISL	10.19 D	10.18	33.715 D	25.919	210.1	0.372	3.80	59.9	20.2	1.59	19.6	0.00	0.01	0.02	0.02	126	
139	9.80	9.78	33.819	26.066	196.4	0.400	3.29	51.4	23.5	1.73	21.7	0.00	0.03	0.01	0.02	140	209
150 ISL	9.50 D	9.48	33.868 D	26.154	188.2	0.421	3.09	48.0	25.3	1.82	22.8	0.00	0.07	0.01	0.02	151	
168	9.37	9.35	33.923	26.219	182.4	0.455	2.88	44.6	27.9	1.93	24.1	0.00	0.12	0.00	0.02	169	208
199	8.96	8.94	34.040	26.376	168.0	0.509	2.34	36.0	33.8	2.11	26.9	0.00	0.00	0.00	0.02	200	207
200 ISL	8.96 D	8.94	34.036 D	26.373	168.3	0.511	2.33	35.8	33.9	2.11	26.9	0.00	0.00			201	
228	8.80	8.78	34.081	26.434	163.0	0.557	2.22	34.0	36.1	2.18	27.5	0.00	0.00			229	206
250 ISL	8.53 D	8.50	34.107 D	26.497	157.4	0.592	1.95	29.7	38.8	2.29	28.4	0.00	0.00			251	
269	8.55	8.52	34.158	26.534	154.2	0.622	1.70	25.9	41.5	2.40	29.4	0.00	0.00			271	205
300 ISL	7.90 D	7.87	34.128 D	26.609	147.3	0.669	1.47	22.1	46.4	2.51	31.2	0.00	0.00			302	
318	7.74	7.71	34.154	26.652	143.4	0.695	1.36	20.3	49.4	2.57	32.3	0.00	0.00			320	204
379	7.16	7.12	34.201	26.772	132.7	0.779	0.89	13.1	58.9	2.81	35.0	0.00	0.00			381	203
400 ISL	6.96 D	6.92	34.223 D	26.818	128.6	0.807	0.79	11.6	61.9	2.87	35.7	0.00	0.00			403	
441	6.64	6.60	34.233	26.869	124.0	0.858	0.63	9.2	67.0	2.96	36.8	0.00	0.00			444	202
500 ISL	6.37 D	6.32	34.261 D	26.927	119.1	0.930	0.42	6.1	71.3	3.07	37.6	0.00	0.00			503	
515	6.43	6.38	34.300	26.950	117.3	0.948	0.37	5.4	72.4	3.10	37.8	0.00	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV NEW HORIZON CALCOFI CRUISE 0808 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 33.1 W	15/08/08	2136 UTC	1315 m	300 08 kn	280 03 07	1	1012.1 mb	19.9 C	18.0 C	17m	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	19.14	19.14	33.495	23.837	405.6	0.000	5.50	103.9	3.3	0.29	0.0	0.00	0.19	0.14	0.02	0	
2	19.14	19.14	33.495	23.837	405.7	0.008	5.50	103.8	3.3	0.29	0.0	0.00	0.19	0.14	0.02	2	220
2	19.12	19.12	33.493	23.841	405.3	0.008										2	221
10	18.40	18.40	33.538	24.056	385.1	0.040	5.62	104.7	2.7	0.27	0.0	0.00	0.10	0.19	0.03	10	219
20	18.27	18.27	33.625	24.155	376.0	0.078	5.66	105.2	1.7	0.26	0.0	0.00	0.00	0.27	0.06	20	218
30	14.87	14.87	33.344	24.725	321.8	0.113	6.36	110.4	5.3	0.46	1.6	0.08	0.27	0.79	0.45	30	217
40	13.25	13.24	33.259	24.996	296.2	0.144	5.98	100.3	7.0	0.70	4.8	0.27	0.38	0.68	0.47	40	216
50	12.28	12.27	33.264	25.190	278.0	0.172	5.61	92.2	8.5	0.89	8.0	0.32	0.17	0.41	0.31	50	215
61	11.92	11.91	33.334	25.312	266.6	0.202	5.39	88.0	9.9	1.02	10.2	0.06	0.20	0.28	0.22	61	214
69	11.64	11.63	33.443	25.449	253.7	0.223	5.17	83.9	11.8	1.14	12.4	0.02	0.02	0.13	0.12	69	213
75 ISL	11.33 D	11.32	33.479 D	25.534	245.8	0.238	5.01	80.8	12.8	1.20	13.5	0.02	0.06	0.10	0.08	75	
84	10.95	10.94	33.489	25.610	238.7	0.260	4.73	75.7	14.4	1.29	15.0	0.01	0.12	0.05	0.05	84	212
100	10.60	10.59	33.676	25.818	219.3	0.296	3.97	63.1	19.4	1.58	19.3	0.00	0.13	0.04	0.06	100	211
118	10.25	10.24	33.751	25.937	208.3	0.335	3.51	55.4	22.1	1.72	21.4	0.00	0.02	0.03	0.06	119	210
125 ISL	9.93 D	9.92	33.798 D	26.028	199.8	0.349	3.30	51.7	23.6	1.78	22.3	0.00	0.02	0.02	0.06	126	
139	9.59	9.57	33.862	26.135	189.8	0.377	2.93	45.6	26.5	1.89	24.0	0.00	0.03	0.01	0.05	140	209
150 ISL	9.27 D	9.25	33.904 D	26.220	181.9	0.397	2.89	44.7	27.8	1.92	24.6	0.00	0.03	0.01	0.04	151	
169	9.04	9.02	33.962	26.302	174.4	0.431	2.83	43.5	29.9	1.96	25.3	0.00	0.04	0.00	0.03	170	208
199	8.57	8.55	34.040	26.437	162.0	0.481	2.38	36.2	35.8	2.15	27.8	0.00	0.00	0.01	0.04	200	207
200 ISL	8.57 D	8.55	34.038 D	26.436	162.2	0.483	2.37	36.1	36.0	2.15	27.9	0.00	0.00			201	
227	8.26	8.24	34.076	26.513	155.2	0.526	2.14	32.4	39.9	2.27	29.3	0.00	0.00			228	206
250 ISL	8.06 D	8.03	34.088 D	26.553	151.8	0.561	1.96	29.5	42.8	2.35	30.4	0.00	0.01			251	
268	7.86	7.83	34.102	26.593	148.2	0.588	1.81	27.1	45.1	2.42	31.2	0.00	0.01			270	205
300 ISL	7.74 D	7.71	34.142 D	26.643	144.0	0.635	1.42	21.2	50.1	2.59	32.9	0.00	0.00			302	
318	7.43	7.40	34.164	26.705	138.2	0.660	1.20	17.8	53.2	2.69	33.8	0.00	0.00			320	204
378	6.86	6.82	34.219	26.828	127.2	0.740	0.77	11.3	63.5	2.92	36.3	0.00	0.00			380	203
400 ISL	6.74 D	6.70	34.230 D	26.853	125.0	0.768	0.68	9.9	65.8	2.97	36.7	0.00	0.00			403	
438	6.55	6.51	34.256	26.899	121.1	0.814	0.56	8.1	69.0	3.04	37.2	0.00	0.00			441	202
500 ISL	6.22 D	6.18	34.282 D	26.963	115.6	0.888	0.40	5.8	74.7	3.12	38.3	0.00	0.00			503	
519	6.16	6.11	34.296	26.982	114.0	0.910	0.35	5.0	76.4	3.15	38.6	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 0808 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 10.9 N	118 53.4 W	16/08/08	0201 UTC	1463 m	290 09 kn	320 03 07	1	1010.7 mb	19.0 C	17.0 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	19.79	19.79	33.766	23.877	401.8	0.000	5.43	103.9	0.8	0.22	0.0	0.00	0.06	0.19	0.03	0	
1	19.79	19.79	33.766	23.877	401.8	0.004	5.43	103.9	0.8	0.22	0.0	0.00	0.06	0.19	0.03	1	222
10	19.60	19.60	33.764	23.925	397.6	0.040	5.44	103.8	0.6	0.22	0.0	0.00	0.02	0.18	0.04	10	220
10	19.66	19.66	33.762	23.908	399.2	0.040										10	221
19	19.13	19.13	33.750	24.035	387.4	0.075	5.59	105.7	0.7	0.23	0.0	0.00	0.05	0.26	0.06	19	219
20 ISL	18.94 D	18.94	33.744 D	24.079	383.3	0.079	5.76	108.5	0.7	0.24	0.2	0.01	0.06	0.65	0.14	20	
30	14.68	14.68	33.632	24.988	296.8	0.113	6.63	114.8	0.7	0.39	1.9	0.07	0.12	3.21	0.77	30	218
36	12.81	12.81	33.595	25.344	263.0	0.130	5.33	88.8	8.9	1.02	10.0	0.41	0.05	1.05	0.47	36	217
40	12.45	12.44	33.593	25.412	256.6	0.140	5.08	84.0	10.8	1.14	11.9	0.29	0.11	0.69	0.35	40	216
50	11.74	11.73	33.616	25.565	242.3	0.165	4.67	76.1	13.7	1.31	14.8	0.04	0.08	0.28	0.19	50	215
60	11.66	11.65	33.617	25.580	241.0	0.190	4.58	74.5	14.4	1.34	15.2	0.03	0.13	0.24	0.17	60	214
70	10.48	10.47	33.736	25.885	212.2	0.212	3.49	55.4	21.0	1.70	20.9	0.00	0.16	0.05	0.08	70	213
75 ISL	10.28 D	10.27	33.749 D	25.929	208.1	0.223	3.42	54.0	22.2	1.73	21.3	0.00	0.11	0.04	0.08	75	
84	10.04	10.03	33.769	25.986	202.9	0.241	3.30	51.9	23.1	1.77	22.1	0.00	0.00	0.02	0.07	84	212
100	9.59	9.58	33.828	26.107	191.6	0.273	3.10	48.2	25.6	1.83	23.2	0.00	0.00	0.01	0.06	100	211
119	9.15	9.14	33.929	26.258	177.6	0.308	2.89	44.6	28.9	1.92	24.5	0.00	0.00	0.00	0.04	120	210
125 ISL	9.09 D	9.08	33.940 D	26.276	176.0	0.318	2.87	44.2	29.4	1.93	24.7	0.00	0.00	0.00	0.04	126	
139	8.97	8.96	33.976	26.324	171.7	0.343	2.85	43.8	30.5	1.95	25.0	0.00	0.00	0.01	0.04	140	209
150 ISL	8.78 D	8.76	34.001 D	26.373	167.2	0.361	2.79	42.7	31.7	1.98	25.5	0.00	0.00	0.01	0.04	151	
169	8.66	8.64	34.026	26.412	163.9	0.393	2.61	39.8	34.3	2.06	26.6	0.00	0.00	0.00	0.03	170	208
200 ISL	8.26 D	8.24	34.076 D	26.513	154.8	0.442	2.08	31.5	40.0	2.26	29.0	0.00	0.00	0.00	0.02	201	
201	8.28	8.26	34.079	26.512	154.9	0.444	2.06	31.2	40.2	2.27	29.1	0.00	0.00	0.00	0.02	202	207
229	7.95	7.93	34.114	26.589	147.9	0.486	1.71	25.7	45.3	2.44	30.9	0.00	0.00			230	206
250 ISL	7.79 D	7.77	34.147 D	26.639	143.5	0.517	1.58	23.7	48.6	2.52	32.0	0.00	0.01			251	
269	7.48	7.45	34.129	26.669	140.8	0.544	1.49	22.1	51.2	2.57	32.8	0.00	0.01			271	205
300 ISL	7.51 D	7.48	34.199 D	26.721	136.5	0.587	1.23	18.3	55.0	2.68	33.8	0.00	0.00			302	
319	7.19	7.16	34.181	26.752	133.6	0.612	1.06	15.7	57.0	2.75	34.3	0.00	0.00			321	204
377	7.12	7.08	34.265	26.828	127.3	0.688	0.62	9.1	62.2	2.93	35.2	0.00	0.00			379	203
400 ISL	7.13 D	7.09	34.299 D	26.854	125.3	0.717	0.53	7.8	63.8	2.97	35.5	0.00	0.00			403	
436	7.00	6.96	34.315	26.885	122.8	0.762	0.40	5.9	66.2	3.03	36.0	0.00	0.00			439	202
500 ISL	6.85 D	6.80	34.318 D	26.909	121.5	0.840										503	
516	6.83	6.78	34.318 D	26.912	121.4	0.859										520	201

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

RV NEW HORIZON CALCOFI CRUISE 0808 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 0.5 N	119 13.9 W	16/08/08	0603 UTC	1598 m	290 04 kn			1012.1 mb	18.0 C	16.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.07	19.07	33.634	23.961	393.8	0.000	5.53	104.4	1.0	0.25	0.0	0.00	0.04	0.23	0.03	0	
1	19.07	19.07	33.634	23.961	393.8	0.004	5.53	104.4	1.0	0.25	0.0	0.00	0.04	0.23	0.03	1	221
1	19.07	19.07	33.646	23.970	392.9	0.004										1	222
10	18.89	18.89	33.646	24.016	388.9	0.039	5.59	105.1	1.1	0.23	0.0	0.00	0.00	0.25	0.03	10	219
10	19.00	19.00	33.645	23.987	391.6	0.039										10	220
20	15.37	15.37	33.627	24.834	311.2	0.074	6.87	120.7	0.3	0.28	0.2	0.01	0.14	1.22	0.43	20	218
30	13.51	13.51	33.639	25.238	273.0	0.103	5.69	96.2	5.4	0.83	7.3	0.17	0.25	3.18	1.26	30	217
40	12.01	12.00	33.611	25.510	247.3	0.129	4.80	78.6	12.7	1.24	13.8	0.07	0.00	3.23	1.22	40	216
49	11.61	11.60	33.630	25.599	239.0	0.151	4.58	74.4	14.7	1.36	15.7	0.02	0.08	0.61	0.37	49	215
50 ISL	11.55 D	11.54	33.631 D	25.611	237.9	0.154	4.55	73.8	14.9	1.37	15.9	0.02	0.08	0.57	0.35	50	
60	11.13	11.12	33.665	25.714	228.3	0.177	4.28	68.8	17.0	1.49	17.9	0.01	0.00	0.16	0.14	60	214
70	10.66	10.65	33.694	25.821	218.3	0.199	3.96	63.0	18.9	1.59	19.5	0.00	0.00	0.09	0.12	70	213
75 ISL	10.38 D	10.37	33.719 D	25.889	211.9	0.210	3.84	60.8	19.6	1.62	20.0	0.00	0.00	0.06	0.10	75	
85	9.93	9.92	33.721	25.967	204.7	0.231	3.60	56.4	21.3	1.68	21.1	0.00	0.00	0.03	0.07	85	212
100 ISL	9.46 D	9.45	33.881 D	26.170	185.6	0.260	3.06	47.5	25.9	1.84	23.6	0.00	0.00	0.01	0.04	100	
102	9.45	9.44	33.892	26.180	184.7	0.264	2.99	46.4	26.5	1.86	23.9	0.00	0.00	0.01	0.04	103	211
120	9.08	9.07	33.971	26.302	173.4	0.296	2.71	41.7	30.4	1.98	25.5	0.00	0.00	0.01	0.04	121	210
125 ISL	9.02 D	9.01	33.975 D	26.315	172.3	0.305	2.67	41.1	31.0	2.00	25.8	0.00	0.01	0.01	0.04	126	
139	8.87	8.86	34.008	26.365	167.9	0.329	2.57	39.4	32.6	2.04	26.4	0.00	0.02	0.01	0.03	140	209
150 ISL	8.68 D	8.66	34.050 D	26.427	162.1	0.347	2.45	37.4	34.5	2.10	27.2	0.00	0.02	0.01	0.03	151	
169	8.52	8.50	34.084	26.479	157.5	0.377	2.13	32.4	38.3	2.24	28.6	0.00	0.00	0.00	0.03	170	208
200 ISL	8.54 D	8.52	34.211 D	26.576	148.9	0.425	1.23	18.7	44.2	2.54	30.8	0.00	0.00	0.02	0.04	201	
201	8.54	8.52	34.216	26.580	148.6	0.426	1.20	18.3	44.4	2.55	30.9	0.00	0.00	0.02	0.04	202	207
229	8.16	8.14	34.226	26.646	142.7	0.467	1.12	16.9	47.9	2.63	32.0	0.00	0.00			230	206
250 ISL	7.88 D	7.85	34.230 D	26.691	138.7	0.496	1.01	15.2	50.8	2.69	32.8	0.00	0.00			251	
269	7.75	7.72	34.244	26.721	136.1	0.523	0.89	13.3	53.5	2.75	33.5	0.00	0.00			271	205
300 ISL	7.52 D	7.49	34.274 D	26.778	131.1	0.564	0.67	10.0	57.6	2.88	34.5	0.00	0.14			302	
319	7.42	7.39	34.296	26.810	128.3	0.589	0.55	8.2	60.0	2.95	35.0	0.00	0.22			321	204
376	6.96	6.92	34.310	26.886	121.7	0.660	0.41	6.0	66.9	3.04	36.4	0.00	0.08			378	203
400 ISL	6.90 D	6.86	34.309 D	26.893	121.3	0.689	0.38	5.6	68.3	3.06	36.7	0.00	0.10			403	
435	6.80	6.76	34.317	26.914	119.9	0.731	0.36	5.3	69.6	3.07	37.0	0.00	0.13			438	202
500 ISL	6.60 D	6.55	34.317 D	26.941	118.1	0.809	0.32	4.7	72.4	3.11	37.5	0.00	0.02			503	
512	6.55	6.50	34.322	26.952	117.2	0.823	0.31	4.5	72.9	3.12	37.6	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 0808 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 50.8 N	119 34.0 W	16/08/08	1016 UTC	1849 m	270 07 kn			1011.7 mb	17.4 C	16.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.20	18.20	33.386	23.988	391.2	0.000	5.58	103.4	4.1	0.32	0.0	0.00	0.09	0.15	0.03	0	
3	18.20	18.20	33.386	23.989	391.2	0.012	5.58	103.4	4.1	0.32	0.0	0.00	0.09	0.15	0.03	3	220
10	18.19	18.19	33.376	23.984	392.0	0.039	5.58	103.4	3.9	0.32	0.0	0.00	0.02	0.15	0.03	10	219
20 ISL	17.91 D	17.91	33.379 D	24.055	385.5	0.078	5.64	104.0	4.2	0.32	0.0	0.00	0.14	0.18	0.05	20	
21	17.98	17.98	33.384	24.042	386.8	0.082	5.65	104.3	4.2	0.32	0.0	0.00	0.15	0.18	0.05	21	218
30	14.35	14.35	33.233	24.750	319.4	0.114	6.27	107.6	3.4	0.48	2.0	0.09	0.08	0.49	0.28	30	217
40	13.22	13.21	33.240	24.988	297.0	0.144	5.97	100.1	6.4	0.70	4.6	0.25	0.46	0.42	0.34	40	216
50	12.46	12.45	33.222	25.123	284.4	0.174	5.70	94.0	6.9	0.81	6.7	0.27	0.07	0.39	0.38	50	215
59	12.17	12.16	33.288	25.229	274.4	0.199	5.59	91.7	8.4	0.93	9.0	0.16	0.14	0.31	0.30	59	214
70	11.83	11.82	33.410	25.388	259.6	0.228	5.31	86.5	10.2	1.07	11.3	0.01	0.00	0.16	0.10	70	213
75 ISL	11.58 D	11.57	33.468 D	25.480	251.0	0.241	5.21	84.5	10.6	1.09	11.8	0.01	0.01	0.12	0.09	75	
85	11.31	11.30	33.489	25.546	244.9	0.266	4.99	80.5	12.0	1.15	12.9	0.00	0.02	0.08	0.08	85	212
100 ISL	10.26 D	10.25	33.548 D	25.777	223.1	0.301	4.46	70.3	17.5	1.47	17.8	0.00	0.00	0.02	0.03	100	
101	10.29	10.28	33.548	25.771	223.6	0.303	4.42	69.7	17.9	1.49	18.2	0.00	0.00	0.02	0.03	101	211
120	9.69	9.68	33.775	26.050	197.5	0.343	3.31	51.6	24.0	1.78	22.9	0.00	0.00	0.01	0.02	121	210
125 ISL	9.56 D	9.55	33.802 D	26.092	193.6	0.353	3.22	50.1	24.9	1.80	23.4	0.00	0.00	0.01	0.02	126	
141	9.30	9.28	33.900	26.212	182.5	0.383	3.04	47.0	27.2	1.87	24.2	0.00	0.00	0.00	0.02	142	209
150 ISL	9.12 D	9.10	33.938 D	26.270	177.1	0.399	2.62	40.4	29.2	2.01	25.2	0.00	0.00	0.00	0.02	151	
171	9.61	9.59	34.158	26.363	168.9	0.435	1.73	27.0	33.7	2.30	27.3	0.00	0.00	0.00	0.01	172	208
199	8.86	8.84	34.116	26.452	160.8	0.481	2.02	31.0	36.4	2.26	28.2	0.00	0.04	0.00	0.02	200	207
200 ISL	8.70 D	8.68	34.086 D	26.453	160.6	0.483	2.02	30.9	36.5	2.26	28.2	0.00	0.04			201	
231	8.52	8.50	34.133	26.518	155.0	0.532	1.80	27.4	40.5	2.36	29.7	0.00	0.16			232	206
250 ISL	8.16 D	8.13	34.130 D	26.571	150.2	0.561	1.64	24.8	43.7	2.45	31.1	0.00	0.14			251	
270	7.89	7.86	34.138	26.617	146.0	0.591	1.50	22.5	46.9	2.54	32.4	0.00	0.08			272	205
300 ISL	7.61 D	7.58	34.141 D	26.661	142.2	0.634	1.43	21.3	49.9	2.59	33.2	0.00	0.02			302	
315	7.46	7.43	34.139	26.681	140.5	0.655	1.40	20.8	51.2	2.61	33.4	0.00	0.00			317	204
376	7.07	7.03	34.200	26.784	131.4	0.738	0.89	13.1	59.3	2.85	35.6	0.00	0.00			378	203
400 ISL	7.19 D	7.15	34.302 D	26.848	125.9	0.769	0.69	10.2	62.3	2.94	36.2	0.00	0.00			403	
437	6.86	6.82	34.299	26.892	122.1	0.815	0.44	6.5	66.6	3.05	37.0	0.00	0.00			440	202
500 ISL	6.49 D	6.44	34.315 D	26.954	116.7	0.890	0.33	4.8	72.7	3.14	38.2	0.00	0.00			503	
510	6.41	6.36	34.320	26.969	115.4	0.902	0.31	4.5	73.7	3.15	38.4	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 0808 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 30.4 N	120 15.3 W	16/08/08	1754 UTC	3943 m	340 06 kn	290 04 06	2	1013.3 mb	18.0 C	16.6 C	16m	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	17.54	17.54	33.513	24.246	366.6	0.000	5.64	103.3	2.7	0.31	0.0	0.00	0.55	0.23	0.06	0	
1 A	17.54	17.54	33.513	24.246	366.6	0.004	5.64	103.3	2.7	0.31	0.0	0.00	0.55	0.23	0.06	1	221
10 A	17.38	17.38	33.497	24.272	364.4	0.037	5.66	103.3	2.5	0.31	0.0	0.00	0.53	0.24	0.06	10	219
10	17.39	17.39	33.499	24.271	364.5	0.037										10	220
20 ISL	17.03 D	17.03	33.441 D	24.313	360.9	0.073	5.73	103.9	2.5	0.32	0.1	0.00	0.40	0.32	0.10	20	
22 A	16.95	16.95	33.440	24.331	359.2	0.080	5.74	103.9	2.5	0.32	0.1	0.00	0.37	0.35	0.11	22	218
30 ISL	14.72 D	14.72	33.324 D	24.742	320.2	0.107	6.02	104.2	3.2	0.46	1.6	0.05	0.38	0.53	0.26	30	
33 A	14.51	14.51	33.299	24.768	317.9	0.117	6.09	104.9	3.6	0.53	2.3	0.10	0.38	0.58	0.31	33	217
43 A	13.29	13.28	33.279	25.004	295.6	0.147	5.76	96.7	6.1	0.76	4.9	0.42	0.95	0.48	0.33	43	216
50 ISL	12.67 D	12.66	33.290 D	25.135	283.2	0.168	5.63	93.3	7.4	0.86	6.9	0.56	0.30	0.38	0.24	50	
52	12.65	12.64	33.291	25.140	282.8	0.173	5.60	92.8	7.7	0.88	7.5	0.60	0.09	0.34	0.21	52	215
59 A	12.16	12.15	33.296	25.238	273.7	0.193	5.45	89.4	8.9	0.98	9.6	0.09	0.00	0.20	0.13	59	214
70	11.38	11.37	33.304	25.389	259.5	0.222	5.30	85.5	10.8	1.11	11.9	0.01	0.00	0.09	0.07	70	213
75 ISL	11.34 D	11.33	33.342 D	25.426	256.1	0.235	5.23	84.3	11.3	1.15	12.6	0.01	0.00	0.07	0.07	75	
84	11.03	11.02	33.391	25.520	247.3	0.258	5.04	80.7	12.7	1.25	14.1	0.01	0.00	0.05	0.06	84	212
100	10.82	10.81	33.725	25.817	219.4	0.295	4.30	68.7	18.5	1.58	19.4	0.00	0.00	0.03	0.05	100	211
118	9.60	9.59	33.708	26.012	201.0	0.333	3.68	57.2	21.7	1.67	21.1	0.00	0.02	0.01	0.02	119	210
125 ISL	9.43 D	9.42	33.809 D	26.119	191.0	0.347	3.53	54.7	23.3	1.73	22.0	0.00	0.03	0.01	0.02	126	
138	9.12	9.11	33.851	26.202	183.3	0.371	3.33	51.3	26.2	1.84	23.6	0.00	0.04	0.01	0.03	139	209
150 ISL	8.88 D	8.86	33.898 D	26.277	176.4	0.393	3.16	48.4	28.4	1.91	24.7	0.00	0.07	0.01	0.03	151	
167	8.61	8.59	33.934	26.347	169.9	0.422	2.94	44.8	31.3	2.00	26.1	0.00	0.12	0.00	0.02	168	208
200 ISL	8.05 D	8.03	34.007 D	26.490	156.8	0.476	2.52	37.9	36.8	2.16	28.6	0.00	0.10	0.00	0.02	201	
201	8.14	8.12	34.014	26.482	157.6	0.477	2.51	37.8	37.0	2.16	28.7	0.00	0.10	0.00	0.02	202	207
228	7.70	7.68	34.019	26.551	151.4	0.519	2.21	33.0	42.0	2.30	30.7	0.00	0.00			229	206
250 ISL	7.51 D	7.49	34.052 D	26.604	146.6	0.552	1.92	28.5	46.6	2.43	32.3	0.00	0.00			251	
267	7.32	7.29	34.067	26.643	143.1	0.577	1.70	25.2	49.9	2.52	33.3	0.00	0.00			269	205
300 ISL	6.98 D	6.95	34.087 D	26.706	137.4	0.623	1.40	20.6	54.5	2.65	34.6	0.00	0.00			302	
316	6.97	6.94	34.109	26.725	135.9	0.645	1.29	18.9	56.5	2.70	35.1	0.00	0.00			318	204
377	6.34	6.31	34.148	26.840	125.5	0.724	0.92	13.3	66.2	2.90	37.5	0.00	0.03			379	203
400 ISL	6.31 D	6.27	34.178 D	26.868	123.2	0.753	0.77	11.1	68.7	2.96	38.0	0.00	0.02			403	
437	6.14	6.10	34.215	26.920	118.7	0.798	0.56	8.1	72.4	3.05	38.5	0.00	0.00			440	202
500 ISL	5.75 D	5.71	34.239 D	26.988	112.7	0.871	0.39	5.6	80.2	3.15	39.7	0.00	0.00			503	
519	5.70	5.66	34.269	27.018	110.0	0.892	0.34	4.8	82.5	3.18	40.1	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 0808 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 11.3 N	120 54.5 W	16/08/08	2324 UTC	3852 m	250 04 kn	350 03 06	2	1012.0 mb	18.7 C	16.4 C	20m	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	17.26	17.26	33.205	24.077	382.7	0.000	5.70	103.6	3.4	0.37	0.1	0.00	0.17	0.15	0.03	0	
1	17.26	17.26	33.205	24.077	382.8	0.004	5.70	103.6	3.4	0.37	0.1	0.00	0.17	0.15	0.03	1	221
10 CSL	16.90	16.90	33.181	24.143	376.7	0.038										10	200
10	16.91	16.91	33.187	24.146	376.5	0.038										10	220
11	16.90	16.90	33.189	24.149	376.2	0.042	5.73	103.5	3.2	0.36	0.1	0.00	0.12	0.15	0.03	11	219
20	16.62	16.62	33.200	24.223	369.4	0.075	5.79	104.0	3.2	0.36	0.1	0.00	0.03	0.19	0.05	20	218
30	15.61	15.61	33.134	24.402	352.7	0.111	5.97	105.0	3.2	0.37	0.1	0.00	0.04	0.28	0.11	30	217
40	13.81	13.80	33.012	24.692	325.2	0.145	6.09	103.2	3.2	0.45	0.4	0.04	0.14	0.38	0.22	40	216
50	12.95	12.94	32.996	24.852	310.1	0.177	5.94	98.9	4.3	0.56	1.8	0.37	0.19	0.36	0.32	50	215
60	12.59	12.58	33.059	24.972	299.0	0.208	5.86	96.9	5.6	0.77	4.8	0.42	0.47	0.31	0.25	60	214
71	11.89	11.88	33.059	25.105	286.6	0.240	5.67	92.3	7.0	0.80	6.4	0.15	0.06	0.20	0.19	71	213
75 ISL	11.64 D	11.63	33.079 D	25.167	280.7	0.251	5.61	90.9	7.4	0.83	7.0	0.10	0.04	0.17	0.16	75	
86	11.22	11.21	33.144	25.293	268.8	0.281	5.43	87.2	8.8	0.96	9.1	0.02	0.00	0.10	0.10	86	212
100 ISL	10.94 D	10.93	33.375 D	25.523	247.3	0.317	5.06	80.9	11.8	1.17	13.0	0.00	0.00	0.03	0.04	100	
101	10.95	10.94	33.389	25.533	246.4	0.320	5.02	80.3	12.1	1.19	13.3	0.00	0.00	0.03	0.04	101	211
119	10.39	10.38	33.623	25.813	220.1	0.362	4.08	64.5	17.9	1.53	18.9	0.00	0.00	0.01	0.03	120	210
125 ISL	10.19 D	10.18	33.650 D	25.869	214.9	0.375	3.93	61.9	18.9	1.57	19.7	0.00	0.00	0.01	0.03	126	
140	9.87	9.85	33.745	25.997	203.0	0.406	3.70	57.9	20.9	1.64	20.8	0.00	0.00	0.01	0.03	141	209
150 ISL	9.53 D	9.51	33.817 D	26.109	192.4	0.426	3.48	54.1	23.3	1.73	22.2	0.00	0.03	0.01	0.03	151	
170	9.13	9.11	33.897	26.237	180.6	0.463	3.08	47.5	28.3	1.91	24.9	0.00	0.10	0.01	0.02	171	208
200 ISL	8.55 D	8.53	33.978 D	26.392	166.4	0.515	2.88	43.8	33.3	2.00	26.6	0.00	0.13	0.00	0.03	201	
201	8.50	8.48	33.988	26.407	164.9	0.517	2.88	43.8	33.5	2.00	26.6	0.00	0.13	0.00	0.03	202	207
229	8.03	8.01	34.011	26.496	156.7	0.562	2.50	37.6	39.1	2.17	29.1	0.00	0.07			230	206
250 ISL	7.83 D	7.81	34.031 D	26.542	152.7	0.595	2.19	32.8	43.2	2.30	30.9	0.00	0.08			251	
272	7.45	7.42	34.060	26.619	145.5	0.627	1.88	27.9	47.6	2.44	32.6	0.00	0.09			274	205
300 ISL	7.06 D	7.03	34.065 D	26.678	140.2	0.667	1.59	23.4	54.0	2.59	34.5	0.00	0.03			302	
315	6.84	6.81	34.075	26.716	136.7	0.688	1.45	21.2	57.3	2.66	35.4	0.00	0.00			317	204
384	6.54	6.51	34.197	26.853	124.6	0.778	0.74	10.8	67.0	2.95	37.5	0.00	0.00			386	203
400 ISL	6.43 D	6.39	34.196 D	26.867	123.4	0.798	0.68	9.9	69.4	2.99	38.0	0.00	0.00			402	
432	6.12	6.08	34.204	26.913	119.2	0.837	0.60	8.6	74.0	3.04	38.9	0.00	0.00			435	202
500 ISL	5.89 D	5.85	34.269 D	26.994	112.2	0.916	0.36	5.2	80.5	3.16	40.0	0.00	0.00			503	
502	5.89	5.85	34.271	26.996	112.1	0.918	0.35	5.0	80.7	3.16	40.0	0.00	0.00			505	201

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
30 50.9 N	121 35.0 W	17/08/08	0609 UTC	4085 m	270 05 kn			1012.8 mb	17.2 C	15.5 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.06	17.06	33.096	24.040	386.2	0.000	5.69	103.0	3.6	0.36	0.0	0.00	0.26	0.15	0.03	0	
2	17.06	17.06	33.096	24.040	386.3	0.008	5.69	103.0	3.6	0.36	0.0	0.00	0.26	0.15	0.03	2	221
10	16.84	16.84	33.166	24.146	376.5	0.038	5.76	103.9	3.6	0.35	0.0	0.00	0.34	0.19	0.06	10	219
11	16.84	16.84	33.163	24.144	376.7	0.042										11	220
20 ISL	16.73 D	16.73	33.201 D	24.199	371.8	0.076	5.77	103.8	3.0	0.34	0.0	0.00	0.33	0.24	0.06	20	
21	16.75	16.75	33.209	24.200	371.7	0.079	5.77	103.9	3.0	0.34	0.0	0.00	0.33	0.25	0.06	21	218
30 ISL	16.47 D	16.47	33.164 D	24.231	369.0	0.113	5.80	103.8	3.4	0.35	0.0	0.00	0.40	0.30	0.09	30	
31	16.50	16.50	33.170	24.228	369.3	0.116	5.81	104.1	3.5	0.35	0.0	0.00	0.41	0.31	0.10	31	217
41	15.71	15.70	33.110	24.361	356.9	0.153	5.92	104.3	3.4	0.37	0.0	0.00	0.41	0.45	0.16	41	216
50 ISL	15.90 D	15.89	33.273 D	24.445	349.2	0.185	5.90	104.5	2.0	0.34	0.0	0.00	0.33	0.45	0.20	50	
51	15.92	15.91	33.274	24.441	349.6	0.188	5.90	104.5	1.9	0.34	0.0	0.00	0.32	0.45	0.21	51	215
61	14.11	14.10	33.007	24.627	332.0	0.222	6.12	104.4	3.0	0.38	0.0	0.00	0.24	0.54	0.30	61	214
70	13.56	13.55	32.962	24.705	324.8	0.252	6.13	103.3	3.3	0.39	0.0	0.02	0.15	0.47	0.32	70	213

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 53.2 N	121 11.7 W	29/08/08	1718 UTC	8 m	1205 - 1901 PST	1206 PST	1901 PST	750.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.58	33.510	24.697	6.70	118.1	1.8	0.30	0.1	0.01	2.39	0.28	68. A	59.9	60.6	60.3	0.72
3	15.64	33.511	24.684			1.8	0.29	0.1	0.01							
4	15.61	33.508	24.689	6.70	118.2	1.9	0.30	0.1	0.02	2.25	0.43	46.	60.9	60.6	60.7	1.1
10	14.61	33.500	24.901	5.97	103.2	4.7	0.55	2.8	0.14	3.19	0.89	15.	50.8	52.9	51.8	0.25
15	13.91	33.545	25.083	5.27	89.8	7.2	0.88	7.1	0.25	1.17	0.42	5.6	5.9	6.1	6.0	0.10
20	13.48	33.581	25.199	4.96	83.8	9.3	1.00	9.4	0.29	0.65	0.26	2.2	1.5	1.6	1.6	0.11
29	11.58	33.655	25.624	4.18	67.9	15.3	1.43	16.5	0.18	0.23	0.24	0.38	0.05	0.07	0.06	0.06

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 43.8 N	123 37.9 W	28/08/08	1743 UTC	16 m	1210 - 1921 PST	1216 PST	1907 PST	399.6 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	16.94	33.039	24.025	5.88	106.1	1.0	0.38	0.3	0.02	0.31	0.05	83. A	9.1	8.9	9.0	0.11
9	16.78	33.043	24.065	5.89	106.0	0.9	0.40	0.4	0.03	0.34	0.06	42.	13.8	13.3	13.5	0.15
22	15.64	33.068	24.344	6.21	109.3	1.6	0.49	1.5	0.06	0.54	0.24	12.	10.5	11.4	10.9	0.14
32	15.03	33.237	24.608	6.16	107.2	2.5	0.55	2.5	0.09	0.66	0.28	4.6	5.7	6.0	5.9	0.09
43	12.01	32.884	24.946	5.89	96.1	5.3	0.76	4.3	0.38	0.53	0.34	1.6	1.9	1.8	1.9	0.07
51	11.58	32.853	25.001	6.10	98.6	6.7	0.85	6.0	0.37	0.32	0.25					
60	11.21	32.939	25.135	5.96	95.6	7.0	0.93	7.0	0.45	0.30	0.19	0.32	0.14	0.15	0.14	0.04

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 27.3 N	120 32.3 W	26/08/08	1905 UTC	6 m	1200 - 1905 PST	1204 PST	1906 PST	828.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	17.38	33.532	24.299	6.04	110.3	5.2	0.33	0.1	0.04	2.92	0.62	77. A	41.5	49.4	45.5	0.55
4	17.43	33.532	24.287	6.03	110.2	5.1	0.33	0.1	0.04	3.02	0.50	36.	80.4	83.2	81.8	0.49
8	17.37	33.525	24.296	6.03	110.1	5.1	0.34	0.2	0.04	3.76	0.80	13.	57.1	60.2	58.6	0.52
12	15.72	33.480	24.643	6.12	108.1	6.3	0.48	1.5	0.07	3.10	0.76	4.6	32.7	35.4	34.1	0.33
16	13.02	33.393	25.145	5.87	98.1	7.6	0.74	5.3	0.14	0.79	0.45	1.7	11.1	9.6	10.3	0.18
23	12.02	33.432	25.369	4.93	80.7	10.1	1.09	11.5	0.08	0.52	0.37	0.28	0.28	0.19	0.24	0.06

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.8 N	122 34.0 W	27/08/08	1702 UTC	13 m	1210 - 1911 PST	1211 PST	1911 PST	201.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.12	33.430	24.282	5.62	102.1	1.8	0.33	0.0	0.00	0.31	0.06	79. A	6.4	6.5	6.4	0.12
9	17.12	33.429	24.282	5.64	102.4	1.7	0.32	0.0	0.00	0.33	0.04	35.	7.8	8.4	8.1	0.12
19	17.10	33.439	24.295	5.63	102.2	1.7	0.32	0.0	0.00	0.37	0.04	11.	5.2	5.2	5.2	0.12
27	17.09	33.471	24.322	5.64	102.4	1.8	0.31	0.0	0.01	0.38	0.08	4.1	2.8	2.8	2.8	0.10
36	16.11	33.567	24.623	5.93	105.6	2.0	0.34	0.1	0.02	1.23	0.32	1.4	2.6	2.4	2.5	0.15
41	14.97	33.540	24.855	5.86	102.0	3.3	0.53	2.0	0.13	1.71	0.63					
48	14.44	33.553	24.979	5.58	96.1	5.6	0.69	4.1	0.43	0.78	0.40	0.35	0.11	0.18	0.14	0.11

A) INCUBATION LIGHT INTENSITIES WERE 91, 39, 12, 4.4, 1.6, 0.31 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 44.6 N	120 25.0 W	25/08/08	1932 UTC	8 m	1230 - 1903 PST	1204 PST	1900 PST	431.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.16	33.642	24.668	5.73	102.2	2.2	0.46	2.3	0.08	1.09	0.24	68. A	22.9	23.1	23.0	0.24
5	16.15	33.641	24.669	5.73	102.2	2.1	0.47	2.3	0.08	1.04	0.24	38.	33.6	32.3	32.9	0.23
10	16.13	33.640	24.673	5.71	101.8	2.2	0.46	2.3	0.08	1.07	0.24	15.	24.4	22.9	23.6	0.22
16	16.10	33.641	24.681	5.69	101.4	2.2	0.46	2.3	0.08	1.05	0.24	4.6	11.6	11.9	11.8	0.21
21	16.09	33.643	24.685	5.68	101.2	2.2	0.44	2.3	0.08	1.07	0.27	1.8	3.4	3.1	3.3	0.21
30	14.21	33.656	25.106	5.15	88.4	6.9	0.79	7.4	0.15	1.30	0.45	0.32	0.44	0.35	0.39	0.12

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 34.5 N	122 49.4 W	24/08/08	1855 UTC	14 m	1223 - 1907 PST	1213 PST	1906 PST	133.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.37	33.208	24.286	5.93	106.0	2.0	0.40	0.3	0.03							
9	16.36	33.207	24.288	5.94	106.1	1.9	0.40	0.3	0.03	0.48	0.07	37.	11.0	11.1	11.1	0.13
19	16.10	33.197	24.340	5.96	105.9	2.0	0.40	0.4	0.03	0.51	0.08	12.	0.23	5.5	2.9	0.12
28	15.06	33.163	24.545	6.12	106.5	2.6	0.47	1.2	0.06	0.64	0.28	4.6	3.5	3.5	3.5	0.09
37	13.49	32.996	24.745	6.01	101.2	4.0	0.63	2.4	0.37	0.55	0.36	1.7	1.5	1.5	1.5	0.06
45	13.24	33.030	24.821	5.93	99.3	4.2	0.69	3.2	0.52	0.43	0.28					
52	12.07	32.940	24.978	5.87	95.9	4.9	0.74	4.3	0.42	0.31	0.20	0.33	0.07	0.05	0.06	0.04

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.7 N	118 37.5 W	21/08/08	1815 UTC	18 m	1202 - 1900 PST	1157 PST	1900 PST	1108.2 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	19.21	33.485	23.812	5.93	112.1	2.5	0.27	0.0	0.00	0.34	0.08	92. A	15.3	15.3	15.3	0.41
11	16.19	33.378	24.458	6.56	116.9	2.2	0.31	0.0	0.00	0.26	0.07	39.	13.2	12.6	12.9	0.20
18	14.24	33.330	24.848	6.75	115.7	3.7	0.38	0.0	0.00	0.61	0.22					
24	13.74	33.356	24.972	6.51	110.4	4.3	0.46	1.2	0.07	2.20	0.65	13.		55.2	55.2	0.24
30	13.19	33.348	25.077	6.03	101.1	6.3	0.67	4.2	0.46	1.56	0.63					
37	12.68	33.400	25.218	5.36	88.9	9.5	0.92	8.1	1.41	0.80	0.50	4.3	10.4	10.4	10.4	0.16
48	12.02	33.478	25.405	4.74	77.6	11.4	1.15	13.2	0.26	0.26	0.26	1.7	1.8	1.6	1.7	0.07
57	11.86	33.502	25.454	4.63	75.6	11.8	1.19	13.8	0.07	0.22	0.21					
66	11.50	33.552	25.560	4.24	68.7	14.0	1.35	15.7	0.03	0.14	0.20	0.36	0.11	0.10	0.11	0.04

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 0.0 N	120 23.4 W	22/08/08	1805 UTC	13 m	1205 - 1906 PST	1204 PST	1908 PST	218.6 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	17.84	33.505	24.167	5.59	103.0	1.7	0.29	0.0	0.00	0.33	0.06	79. A	8.2	7.6	7.9	0.14
8	17.82	33.503	24.171	5.57	102.6	1.7	0.30	0.0	0.00	0.31	0.07	39.	7.8	8.7	8.2	0.15
17	17.74	33.498	24.187	5.60	103.0	1.7	0.30	0.0	0.00	0.33	0.08					
26	17.68	33.494	24.199	5.60	102.8	1.7	0.29	0.0	0.00	0.36	0.07	4.6	4.3	5.1	4.7	0.17
35	17.33	33.506	24.292	5.67	103.4	1.3	0.30	0.0	0.00	0.57	0.00	1.6	1.7	1.9	1.8	0.19
42	14.75	33.456	24.838	6.02	104.3	3.4	0.57	3.2	0.16	1.54	0.52	0.70	0.71	0.00	0.35	0.17
49	12.50	33.381	25.238	5.45	90.1	8.5	0.98	9.4	0.41	0.48	0.29	0.31	0.12	0.11	0.11	0.06

A) INCUBATION LIGHT INTENSITIES WERE 91, 39, 12, 4.4, 1.6, 0.31 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 39.2 N	123 4.5 W	23/08/08	1716 UTC	17 m	1213 - 1921 PST	1215 PST	1917 PST	171.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.10	33.034	23.983	5.77	104.5	2.0	0.39	0.1	0.01	0.23	0.02	83. A	5.8	5.4	5.6	0.08
10	17.10	33.032	23.982	5.79	104.8	2.1	0.39	0.1	0.01	0.23	0.03	41.	6.4	6.9	6.7	0.07
16	16.61	33.029	24.094	5.89	105.6	2.1	0.39	0.1	0.01	0.24	0.04					
24	15.27	32.962	24.344	6.04	105.4	2.7	0.49	1.1	0.07	0.17	0.05	11.	3.0	3.5	3.3	0.07
35	15.12	32.971	24.384	6.04	105.1	2.9	0.51	1.4	0.09	0.19	0.05	4.2	1.4	1.4	1.4	0.04
46	14.05	32.991	24.627	6.15	104.7	3.6	0.59	2.4	0.21	0.27	0.09	1.6	0.56	0.49	0.52	0.04
55	13.59	33.008	24.734	6.13	103.4	4.3	0.65	3.3	0.31	0.27	0.12					
63	13.52	33.040	24.773	6.02	101.4	4.7	0.69	3.7	0.36	0.24	0.14	0.34	0.05	0.05	0.05	0.03

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 28.7 N	117 46.3 W	20/08/08	2034 UTC	6 m	1313 - 1858 PST	1154 PST	1857 PST	253.9 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
1	19.83	33.439	23.617	6.05	115.7	4.7	0.24	0.0	0.00	1.27	0.15	77. A	30.7	30.7	30.7	0.41
4	18.58	33.438	23.934	6.25	116.7	4.3	0.24	0.0	0.01	0.81	0.12	36.	21.7	23.6	22.6	0.44
8	18.37	33.425	23.977	6.35	118.1	4.1	0.24	0.0	0.01	0.92	0.17	13.	14.6	16.8	15.7	0.53
12	16.79	33.359	24.306	6.59	118.8	3.2	0.28	0.0	0.00	0.86	0.24	4.6	6.5	6.4	6.4	0.40
15	15.52	33.327	24.570	6.67	117.3	3.8	0.35	0.4	0.03	0.99	0.29	2.2	2.0	3.1	2.5	0.27
22	13.29	33.308	25.026	6.00	100.8	5.7	0.66	4.0	0.26	1.09	0.52	0.36	0.09	0.13	0.11	0.20

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 5.0 N	120 41.0 W	19/08/08	1807 UTC	14 m	1211 - 1910 PST	1209 PST	1909 PST	292.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.81	33.541	24.202	5.59	102.9	2.3	0.31	0.0	0.00	0.21	0.04	80. A	1.8	5.4	3.6	0.10
9	17.80	33.541	24.205	5.58	102.7	2.3	0.31	0.0	0.00	0.21	0.04	37.	8.4	8.6	8.5	0.11
19	17.43	33.535	24.290	5.70	104.2	2.4	0.31	0.0	0.00	0.29	0.09	12.	6.6	6.9	6.8	0.11
28	16.23	33.507	24.549	6.17	110.1	2.2	0.35	0.1	0.02	0.60	0.30	4.6	9.9	10.6	10.2	0.17
38	13.46	33.510	25.148	5.82	98.2	6.3	0.88	7.2	0.37	0.61	0.29	1.6	3.1	3.2	3.2	0.06
46	12.31	33.555	25.410	5.33	87.8	9.9	1.15	12.0	0.69	0.37	0.19					
52	12.04	33.590	25.488	5.08	83.3	12.1	1.25	14.4	0.10	0.24	0.14	0.33	0.09	0.12	0.11	0.04

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.6 N	117 17.7 W	14/08/08	1836 UTC	12 m	1210 - 1905 PST	1154 PST	1901 PST	944.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	21.18	33.514	23.316	5.85	114.7	3.3	0.24	0.1	0.00	0.74	0.15	88. A	36.3	36.6	36.4	0.73
7	14.60	33.252	24.711	6.72	115.9	3.7	0.36	0.5	0.00	0.43	0.17	41.	14.2	14.5	14.3	0.38
16	13.53	33.357	25.015	6.99	118.0	2.1	0.38	1.1	0.01	2.27	0.67	13.	44.8	46.4	45.6	0.70
20	13.09	33.365	25.110	6.45	107.9	2.0	0.51	0.8	0.04	5.86	1.62					
21	13.09	33.365	25.110	6.45	107.9	1.9	0.51	0.9	0.04	5.76	1.76					
24	12.92	33.363	25.142	6.04	100.7	4.2	0.67	3.4	0.11	4.57	1.41	4.6	29.6	30.1	29.9	0.42
34	12.56	33.412	25.250	5.24	86.7	8.2	0.97	7.7	0.22	2.25	0.75	1.3	6.6	7.3	6.9	0.15

A) INCUBATION LIGHT INTENSITIES WERE 91, 39, 12, 4.4, 1.6, 0.31 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 31.7 N	118 11.8 W	15/08/08	1754 UTC	25 m	1200 - 1905 PST	1157 PST	1903 PST	459.5 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
1	19.06	33.396	23.782	5.51	103.8	4.0	0.29	0.0	0.00	0.16	0.00	94. A	3.9	3.6	3.8	0.13
8	18.90	33.385	23.814	5.52	103.7	4.1	0.30	0.0	0.00	0.17 B	0.00 B					
15	18.71	33.378	23.857	5.57	104.2	3.8	0.30	0.0	0.00	0.18	0.00	40.	5.3	5.1	5.2	0.18
24	15.78	33.257	24.458	6.29	111.1	3.8	0.33	0.0	0.00	0.37	0.03					
34	15.13	33.255	24.601	6.31	110.0	4.1	0.36	0.0	0.00	0.58	0.20	12.	11.0	11.2	11.1	0.14
42	13.95	33.193	24.803	5.99	101.9	4.4	0.47	1.1	0.15	0.85	0.38					
52	13.58	33.292	24.956	5.74	97.0	5.7	0.64	3.8	0.25	0.56	0.46	4.1	5.9	5.5	5.7	0.05
60	12.89	33.273	25.079	5.50	91.6	6.2	0.73	5.5	0.11	0.45	0.47					
68	12.49	33.293	25.173	5.38	88.9	7.4	0.83	7.3	0.06	0.33	0.29	1.5	1.9	2.0	1.9	0.03
79	12.01	33.393	25.342	4.99	81.6	9.6	0.99	9.9	0.02	0.16	0.14					
94	11.44	33.508	25.537	4.52	73.1	12.7	1.18	13.1	0.01	0.07	0.08	0.31	0.07	0.10	0.09	0.01

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

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 30.4 N	120 15.3 W	16/08/08	1754 UTC	16 m	1207 - 1911 PST	1205 PST	1909 PST	289.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	17.54	33.513	24.246	5.64	103.3	2.7	0.31	0.0	0.00	0.23	0.06	91. A	7.6	7.4	7.5	0.09
10	17.38	33.497	24.272	5.66	103.3	2.5	0.31	0.0	0.00	0.24	0.06	38.	9.3	8.6	8.9	0.23
22	16.95	33.440	24.331	5.74	103.9	2.5	0.32	0.1	0.00	0.35	0.11	12.	6.4	6.7	6.6	0.10
33	14.51	33.299	24.768	6.09	104.9	3.6	0.53	2.3	0.10	0.58	0.31	4.2	5.3	5.1	5.2	0.07
43	13.29	33.279	25.004	5.76	96.7	6.1	0.76	4.9	0.42	0.48	0.33	1.6	1.8	1.8	1.8	0.05
52	12.65	33.291	25.140	5.60	92.8	7.7	0.88	7.5	0.60	0.34	0.21					
59	12.16	33.296	25.238	5.45	89.4	8.9	0.98	9.6	0.09	0.20	0.13	0.35	0.08	0.10	0.09	0.03

RV NEW HORIZON — CALCOFI CRUISE 0808 — STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 11.0 N	122 55.5 W	17/08/08	1853 UTC	33 m	1216 - 1915 PST	1216 PST	1915 PST	226.3 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	19.25	33.418	23.750	5.39	101.9	2.1	0.31	0.0	0.01	0.09	0.01	91. A	1.9	2.0	2.0	0.08
12	19.07	33.420	23.798	5.40	101.8	1.9	0.31	0.0	0.00	0.09	0.01					
20	19.04	33.414	23.801	5.41	101.9	2.1	0.31	0.0	0.01	0.10	0.02	39.	2.9	2.7	2.8	0.13
32	17.81	33.320	24.034	5.78	106.3	2.1	0.31	0.0	0.01	0.15	0.04					
46	15.63	33.242	24.481	6.10	107.4	1.8	0.33	0.0	0.00	0.19	0.06	12.	2.8	2.7	2.8	0.09
57	15.07	33.229	24.594	6.06	105.5	2.4	0.35	0.0	0.00	0.21	0.10					
67	14.04	33.201	24.792	5.93	101.1	3.1	0.43	0.4	0.07	0.26	0.14	4.4	2.5	2.3	2.4	0.03
77	13.04	33.163	24.965	5.72	95.5	4.3	0.61	3.0	0.32	0.21	0.13					
87	12.66	33.202	25.070	5.62	93.1	5.5	0.75	5.7	0.21	0.21	0.15	1.7	0.99	0.90	0.95	0.03
100	12.29	33.315	25.229	5.34	87.8	7.0	0.88	8.0	0.02	0.13	0.13					
111	11.73	33.373	25.379	5.13	83.4	8.9	0.99	10.0	0.01	0.07	0.08					
123	11.44	33.535	25.559	4.56	73.8	11.1	1.14	12.6	0.01	0.06	0.09	0.33	0.05	0.07	0.06	0.01

A) INCUBATION LIGHT INTENSITIES WERE 91, 39, 12, 4.4, 1.6, 0.31 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 23.5	124 19.4	08/28	0442	0502	410	213	134	134
76.7	90.0	33 43.6	123 37.9	08/28	1054	1116	454	209	57	57
76.7	80.0	34 03.3	122 56.4	08/28	1705	1727	431	212	67	67
76.7	70.0	34 23.3	122 14.9	08/28	2331	2356	519	207	79	79
76.7	60.0	34 43.7	121 33.2	08/29	0621	0642	432	212	58	58
76.7	55.0	34 53.2	121 11.3	08/29	1044	1106	464	209	24	24
76.7	51.0	35 01.4	120 55.1	08/29	1402	1421	421	183	17	17
76.7	49.0	35 05.1	120 46.5	08/29	1611	1617	136	57	15	15
80.0	51.0	34 27.2	120 32.0	08/26	1158	1206	176	66	11	11
80.0	55.0	34 19.1	120 48.4	08/26	1549	1609	422	223	78	78
80.0	60.0	34 09.1	121 09.2	08/26	2004	2026	469	209	111	111
80.0	70.0	33 49.1	121 50.5	08/27	0231	0253	458	219	72	72
80.0	80.0	33 29.8	122 33.9	08/27	0757	0821	501	210	46	46
80.0	90.0	33 08.9	123 13.2	08/27	1546	1606	406	214	76	76
80.0	100.0	32 49.0	123 54.4	08/27	2214	2237	472	212	49	49
81.8	46.9	34 16.5	120 01.9	08/26	0738	0800	461	220	22	22
83.3	110.0	31 54.6	124 10.1	08/23	2312	2334	453	211	18	18
83.3	100.0	32 14.7	123 29.5	08/24	0546	0607	429	205	89	89
83.3	90.0	32 34.7	122 48.7	08/24	1207	1229	432	215	46	46
83.3	80.0	32 54.8	122 07.6	08/24	1813	1833	396	217	73	73
83.3	70.0	33 14.6	121 26.8	08/25	0050	0112	497	192	109	109
83.3	60.0	33 34.9	120 45.3	08/25	0806	0829	447	209	36	36
83.3	55.0	33 44.6	120 24.7	08/25	1301	1322	436	217	37	37
83.3	51.0	33 52.8	120 08.4	08/25	1652	1700	181	73	22	22
83.3	42.0	34 10.6	119 30.5	08/25	2346	0007	440	217	186	186
83.3	40.6	34 13.4	119 25.1	08/26	0220	0224	86	29	12	12
86.7	33.0	33 53.4	118 29.3	08/21	0833	0837	107	33	19	19
86.7	35.0	33 49.5	118 37.7	08/21	1150	1211	429	203	19	19
86.7	40.0	33 39.4	118 58.6	08/21	1642	1703	413	212	34	34
86.7	45.0	33 29.5	119 19.0	08/21	2101	2122	440	205	43	43
86.7	50.0	33 19.3	119 39.8	08/22	0041	0047	123	44	186	186
86.7	55.0	33 09.4	120 00.5	08/22	0511	0531	446	210	49	49
86.7	60.0	32 59.9	120 23.1	08/22	0901	0923	449	208	36	36
86.7	70.0	32 39.8	121 01.3	08/22	1625	1646	421	214	28	28
86.7	80.0	32 19.6	121 43.0	08/22	2234	2256	466	213	52	52
86.7	90.0	31 59.6	122 23.4	08/23	0509	0530	456	205	44	44
86.7	100.0	31 39.3	123 03.9	08/23	1037	1100	474	212	63	63
86.7	110.0	31 19.7	123 44.2	08/23	1635	1655	406	217	25	25
90.0	120.0	30 25.1	123 59.9	08/18	0049	0111	451	211	47	47
90.0	110.0	30 45.2	123 19.9	08/18	0734	0755	458	206	9	9
90.0	100.0	31 05.3	122 40.0	08/18	1413	1434	425	213	33	33
90.0	90.0	31 25.0	121 59.5	08/18	2032	2054	423	211	118	118
90.0	80.0	31 44.9	121 19.3	08/19	0310	0332	433	212	51	51
90.0	70.0	32 04.9	120 40.9	08/19	0906	0928	430	219	40	40
90.0	60.0	32 25.0	119 57.9	08/19	1707	1728	461	196	30	30
90.0	53.0	32 39.1	119 29.1	08/19	2226	2248	452	213	49	49
90.0	45.0	32 54.9	118 56.4	08/20	0426	0448	455	215	51	51
90.0	28.0	33 28.8	117 46.0	08/20	1332	1353	436	198	37	37
90.0	27.7	33 29.5	117 45.1	08/20	1443	1446	79	23	76	76
90.0	30.0	33 25.1	117 54.3	08/20	1801	1823	426	218	42	42
90.0	35.0	33 15.2	118 14.9	08/20	2210	2231	411	216	58	58
90.0	37.0	33 11.3	118 23.2	08/21	0143	0205	442	210	41	41
91.7	26.4	33 14.3	117 27.9	08/14	1710	1712	41	16	49	49
93.3	26.7	32 57.4	117 17.8	08/14	1305	1326	429	210	14	14
93.3	28.0	32 54.8	117 23.7	08/14	2150	2211	430	211	28	28
93.3	30.0	32 50.9	117 31.8	08/15	0102	0123	433	216	58	58
93.3	35.0	32 40.8	117 51.8	08/15	0526	0546	415	213	58	58
93.3	40.0	32 31.7	118 11.9	08/15	0850	0911	425	214	21	21
93.3	45.0	32 21.0	118 33.0	08/15	1504	1525	419	221	26	26
93.3	50.0	32 11.0	118 53.1	08/15	1923	1944	445	215	70	70
93.3	55.0	32 00.9	119 13.9	08/15	2323	2346	470	219	66	66
93.3	60.0	31 50.8	119 33.9	08/16	0335	0357	472	215	55	55
93.3	70.0	31 30.4	120 15.3	08/16	0849	0911	448	215	56	56
93.3	80.0	31 11.0	120 54.8	08/16	1637	1658	441	211	57	57
93.3	90.0	30 50.9	121 35.3	08/16	2323	2346	460	212	44	44
93.3	100.0	30 30.8	122 15.4	08/17	0540	0602	460	214	22	22
93.3	110.0	30 10.9	122 55.4	08/17	1159	1220	441	213	18	18
93.3	120.0	29 50.9	123 34.9	08/17	1815	1836	416	215	31	31
93.4	26.4	32 57.2	117 17.0	08/14	1450	1452	41	16	25	25