UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0711
2 – 14 November 2007

CC Reference 09-01
16 September 2009

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 0711
2 -18 November 2007

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INTRODUCTION

The data presented in this report were collected during cruise 0711* 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 P144. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen analyses were performed with an Ocean Data Facility of Scripps Institution of Oceanography designed automated oxygen titrator using photometric end-point detection based on the absorption of 365nm wavelength ultra-violet light. A computer using PC software controlled the titration of the samples and the data logging. The method used a modified-Winkler titration following the technique of Carpenter (1965) with modifications by Culberson (1991), but with higher concentrations of thiosulfate solution (50 g/l). Standard KIO3

* 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 rinsed three times prior to filling. Standardizations were done at the beginning and end of each group of samples with a set of mid-concentration range standards prepared fresh for each run. Samples not analyzed immediately after collection were refrigerated and run the following day. Sets of six different concentration standards were analyzed periodically to determine the deviation from linearity as a function of concentration, for the silicate, nitrate and phosphate analyses. Final sample concentrations were corrected for deviations from linearity using a second order polynomial.

Samples for chlorophyll-*a* and phaeopigments were collected in calibrated 138 ml polyethylene bottles and filtered onto Whatman GF/F filters. The pigments were extracted in cold 90% acetone (Venrick and Hayward, 1984) for a minimum of 24 hours. Chlorophyll a and phaeopigment concentrations were determined from fluorescence readings before and after acidification with a Turner Designs Fluorometer Model 10-AU-005-CE (Yentsch and Menzel, 1963; Holm-Hansen *et al*., 1965).

Evaluation of the water sample data involved comparisons with the CTD data, adjacent stations and consideration of the variation of a property as a function of density or depth and the relationships with other properties (Klein, 1973). Precision estimates for routine analyses were made on CalCOFI cruise 9003 and are reported in SIO Ref. 91-4.

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 47.95 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.

Avifauna Observations (Point Reys Bird Observatory)

Sea birds were counted within a 300-meter wide strip off to one side of the ship. Counts were made while underway between stations during periods of daylight. These counts were summed over 20 nautical mile (nm) intervals, or the distance between consecutive stations, whichever was less. Included at the end of this report are individual maps of the most numerous bird species (individuals/nm).

Ancillary Programs

Several ancillary programs produced data on these cruises that are not presented in this report. These programs include:

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

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

3) *Underway Sea Surface xCO2*. Continuous measurements of the partial pressure of CO2 were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a 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 and Bio-optical Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore and make bio-optical observations for the development of empirical proxies for particle size load and structure and phytoplankton biomass and rates of primary production. The nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. Bio-optical measurements at all CalCOFI and SCCOOS stations consist of irradiance at 9 wavelengths, light transmission at three wavelengths, fluorescence of Chl a, CDOM and phycoerythrin and light scattering at three wavelengths.

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

TABULATED DATA

CTD/Rosette Cast Data

The time reported is the Coordinated Universal Time (UTC) of the first rosette bottle trip on the up cast. The rosette bottles tripped on the up cast are reported as cast 2, where cast 1 is considered to be the down CTD profile. The sample number reported is the cast number followed by a two-digit rosette bottle number. Bottom depths, determined acoustically, have been corrected using British Admiralty Tables (Carter, 1980) and are reported in meters. Weather conditions have been coded using WMO code 4501. Secchi depths are reported for most daylight stations.

Data values from discreet sampled CTD rosette were interpolated and are reported for standard depths. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Multiple bottles tripped at the same depth to provide water for ancillary programs are not used in the calculation of standard depth data. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (UNESCO, 1981b). Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), and dynamic height or geopotential anomaly are included with both observed and interpolated standard depth levels.

On stations where primary productivity samples were drawn a footnote appears after each productivity depth sampled. The corresponding primary productivity data are reported in a separate section following the tabulated rosette cast data.

Primary Productivity Data

In addition to the normal hydrographic data that are reported in the rosette cast data section, the tabulated data include: the *in situ* light levels at which the samples were collected, the uptake from each of the replicate light bottles, uptake 1 and uptake 2 (which have been corrected for dark uptake by subtracting the dark value), the mean of the two uptake values and the dark uptake. The uptake values are totals for the incubation period. Also shown are the times of LAN, civil twilight, and the value of the mean uptake integrated from the surface to the deepest sample, assuming the shallowest value continues to the surface and that negative values (when dark uptake exceeds light uptake) are zero. The uptake data are reported to two significant digits (values <1.00) or one decimal (values >1.00). Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

Macrozooplankton Data

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

FOOTNOTES

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

D: CTD salinity value listed in place of normal shipboard salinity analysis.
ISL: After a depth value indicates that this is an interpolated or extrapolated standard level.
U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

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FIGURES

Cruise 0711

1. CalCOFI Cruise 0711 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.

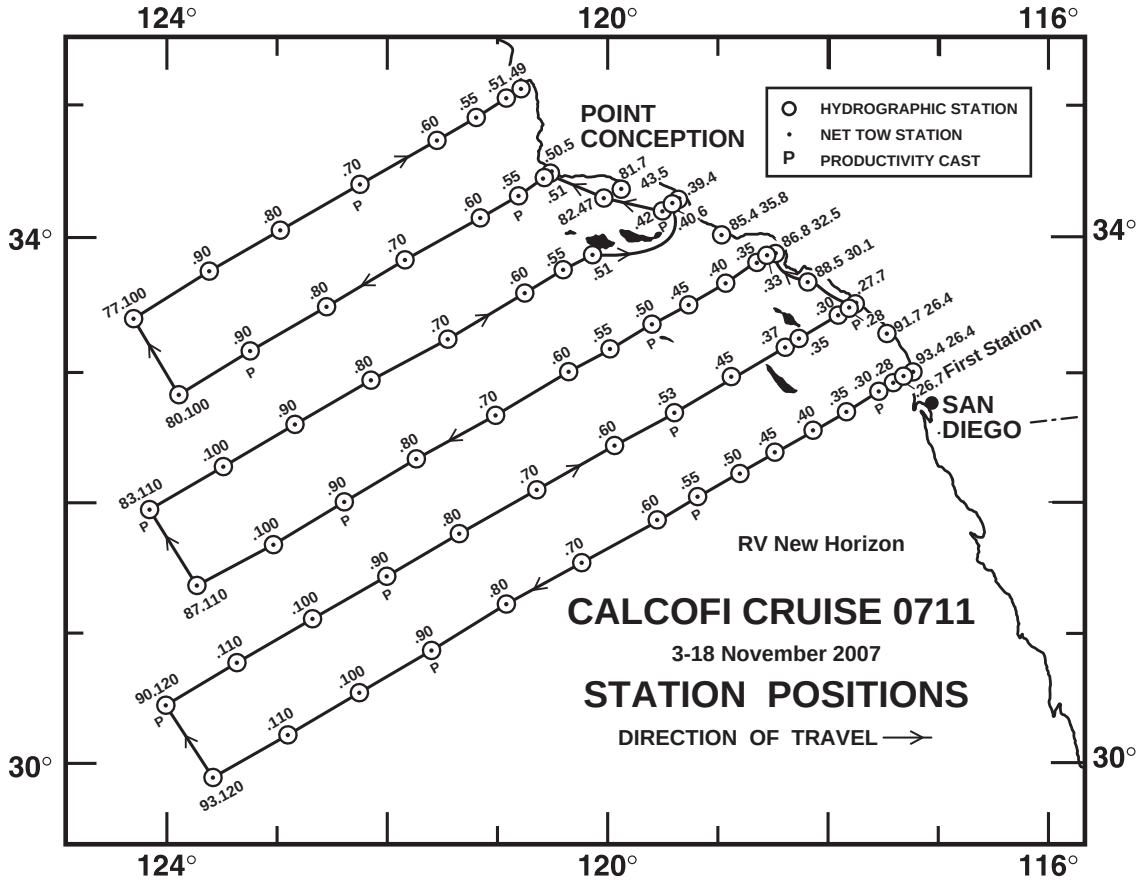
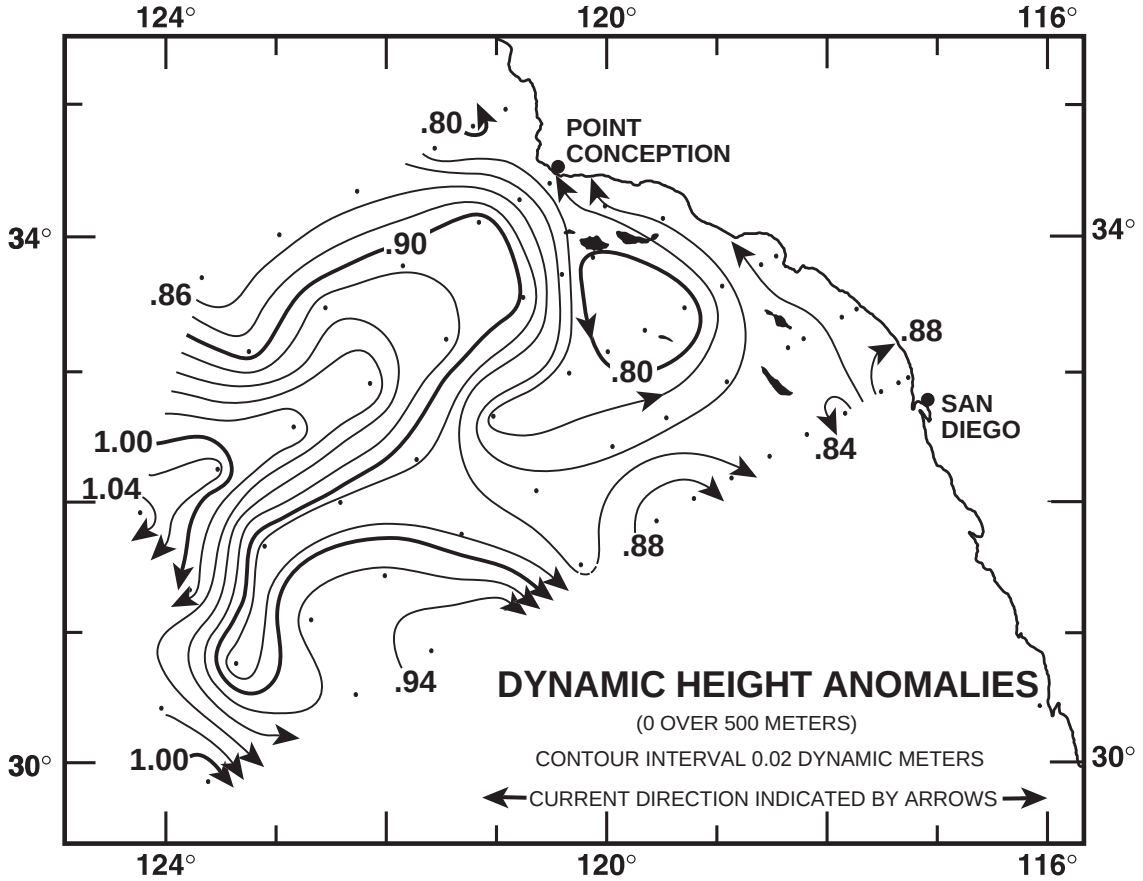

124°
120°
116°
34°
30°
POINT CONCEPTION
HYDROGRAPHIC STATION
NET TOW STATION
PRODUCTIVITY CAST
SAN DIEGO
First Station
RV New Horizon
CALCOFI CRUISE 0711
3-18 November 2007
STATION POSITIONS
DIRECTION OF TRAVEL

FIGURE 1


124°
120°
116°
34°
30°
POINT CONCEPTION
SAN DIEGO
.80
.90
.86
.80
.88
.84
.88
.94
1.00
1.04
1.00
DYNAMIC HEIGHT ANOMALIES
(0 OVER 500 METERS)
CONTOUR INTERVAL 0.02 DYNAMIC METERS
CURRENT DIRECTION INDICATED BY ARROWS

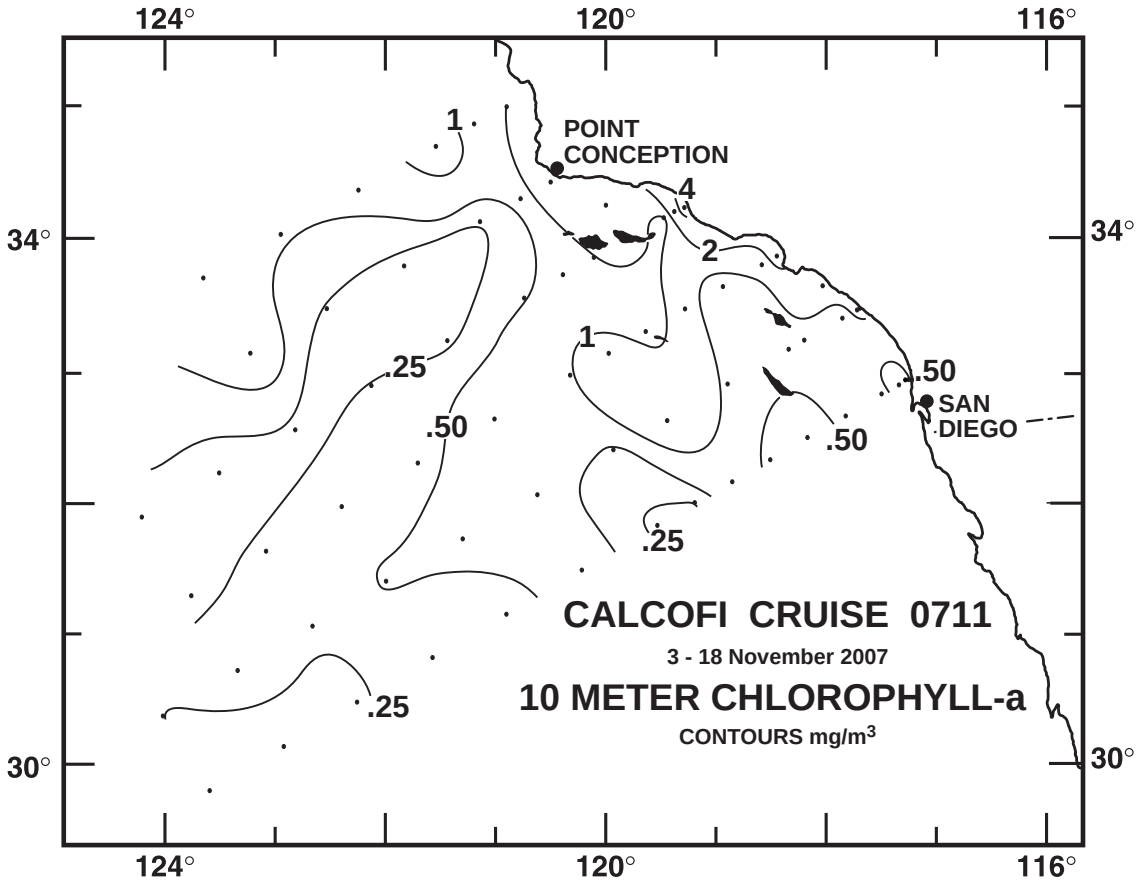


FIGURE 3A

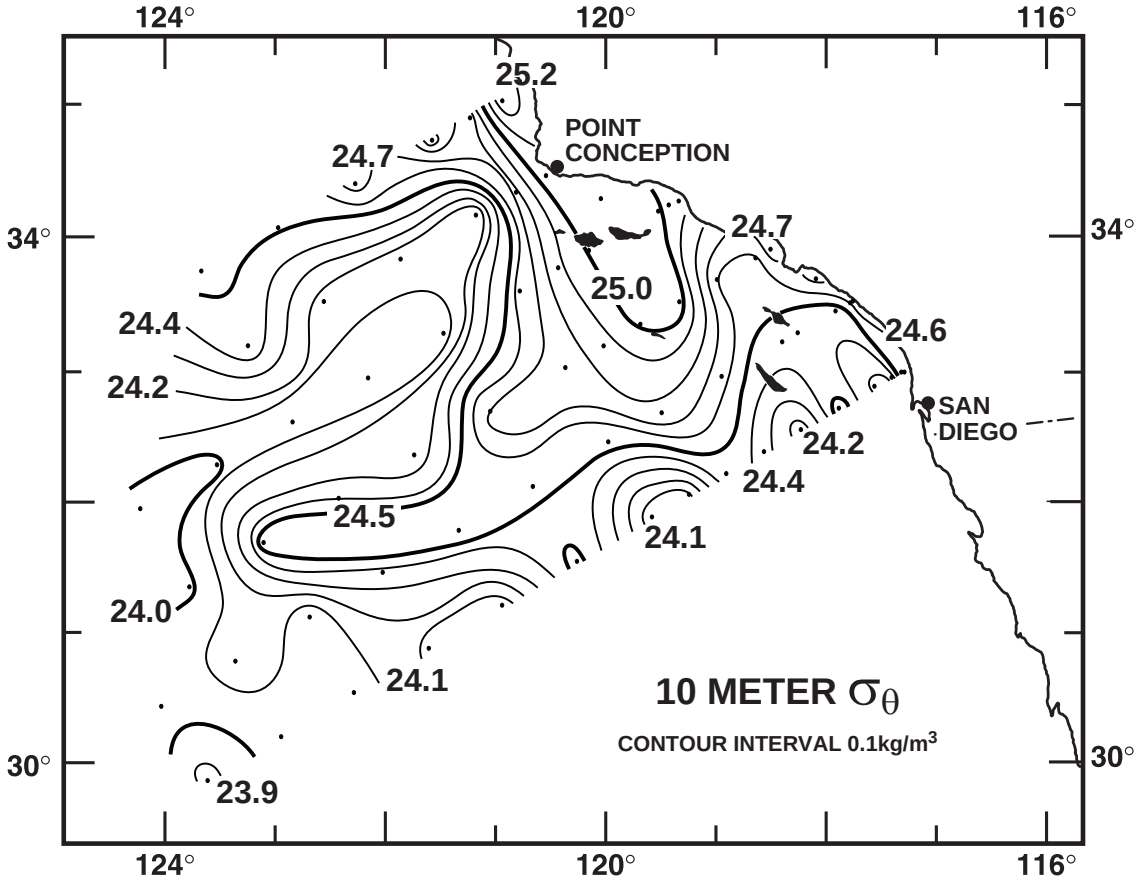


FIGURE 3B

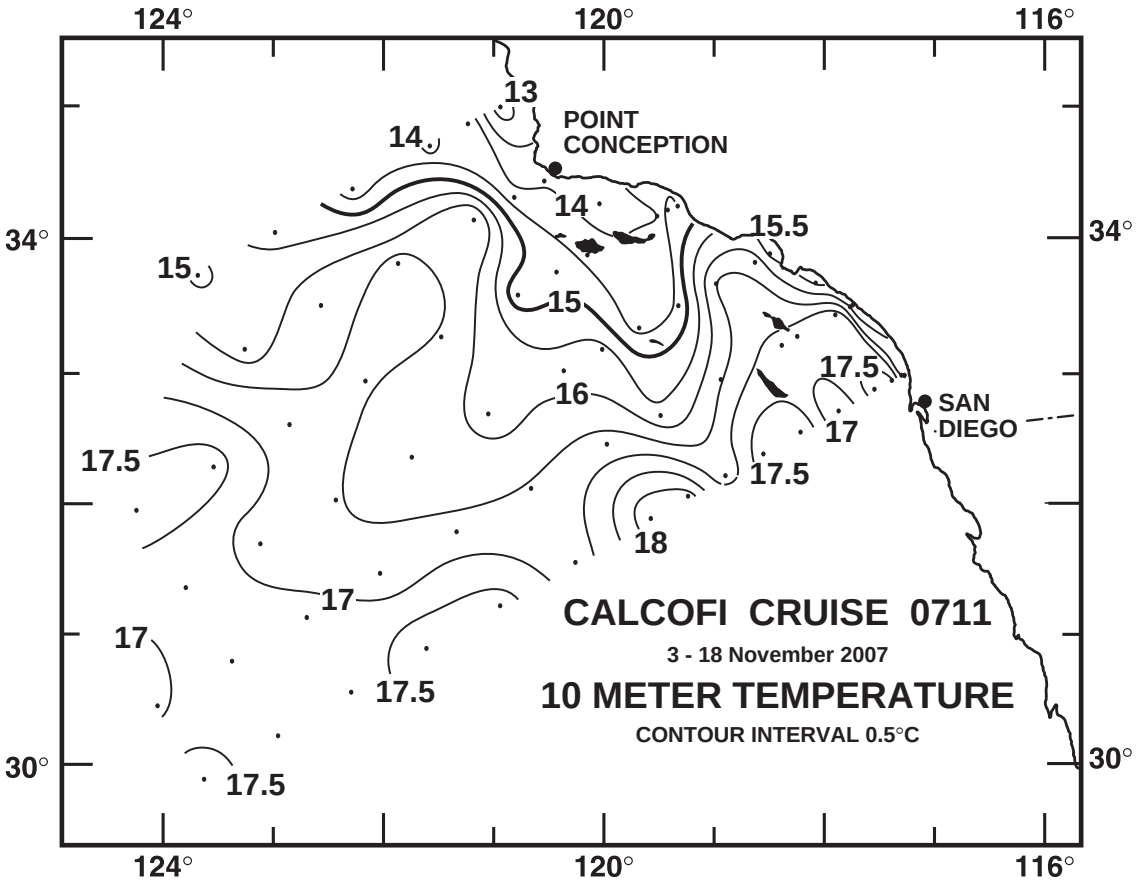


FIGURE 3C

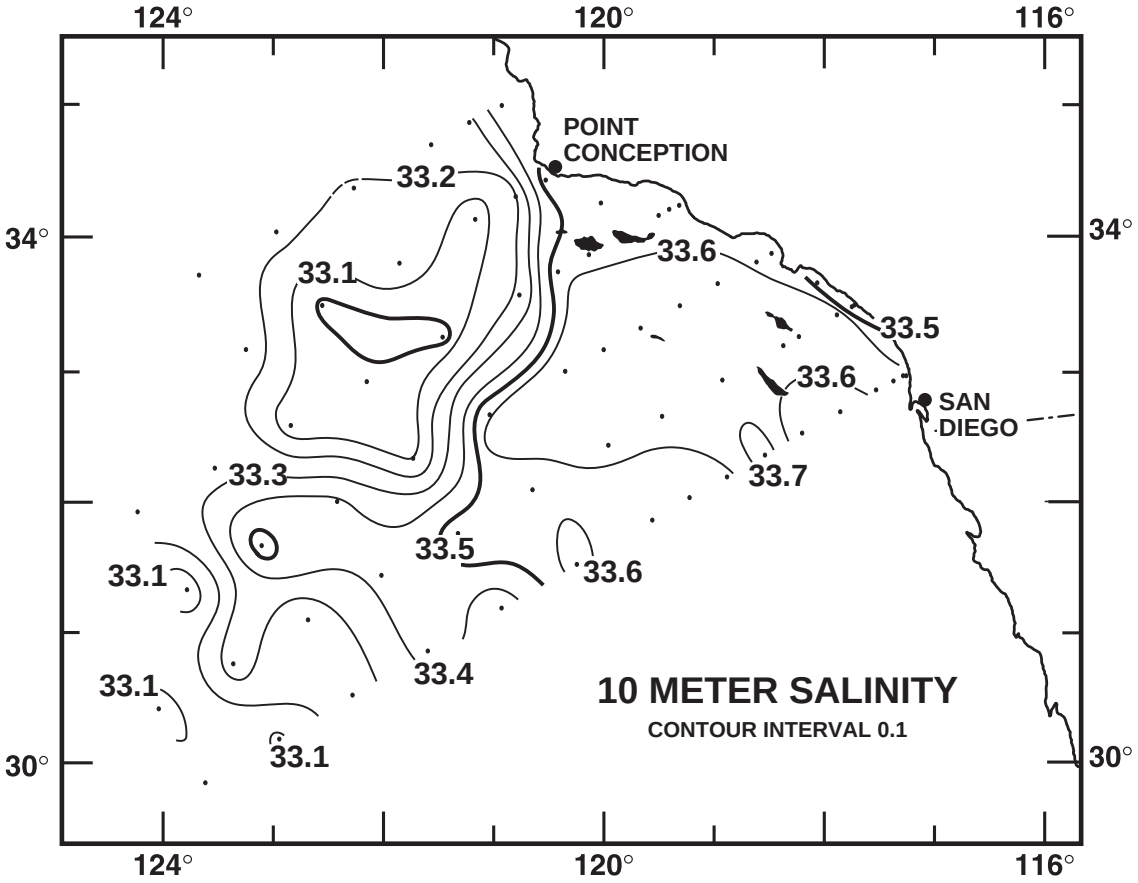


FIGURE 3D

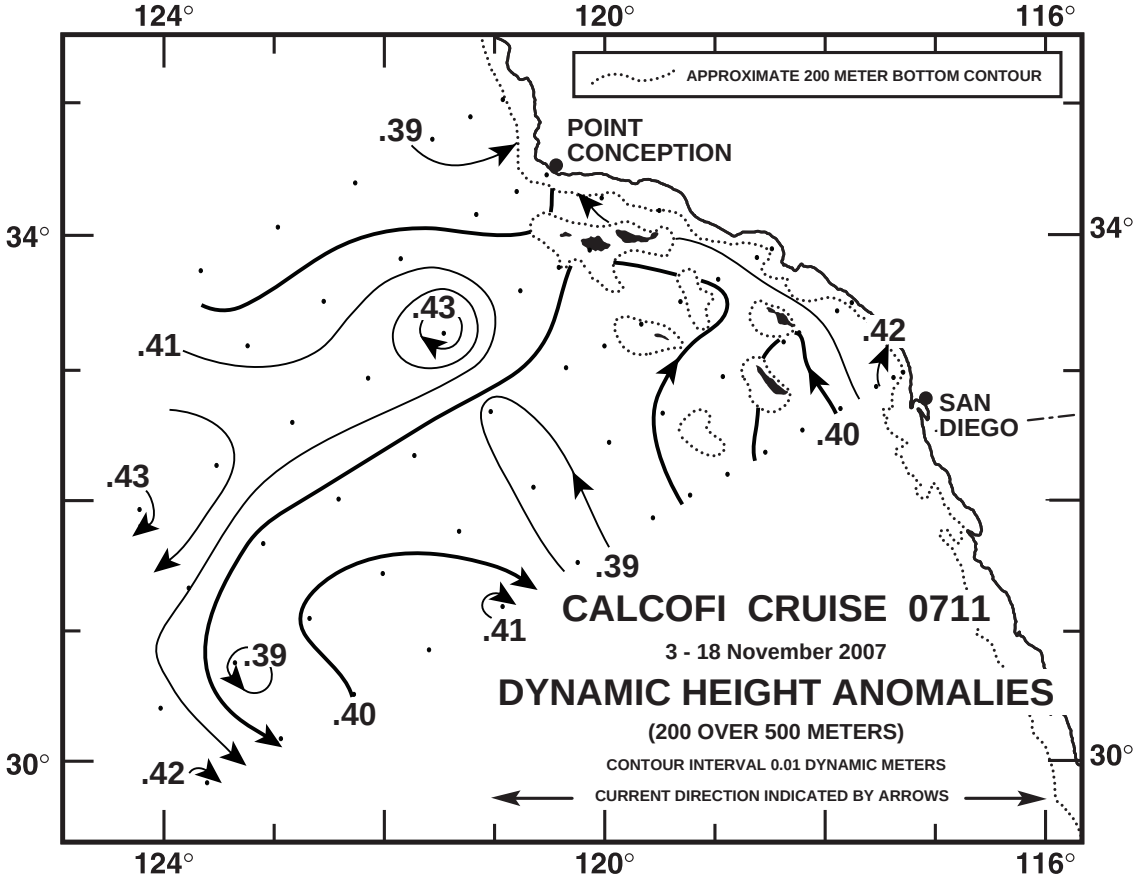


FIGURE 4A

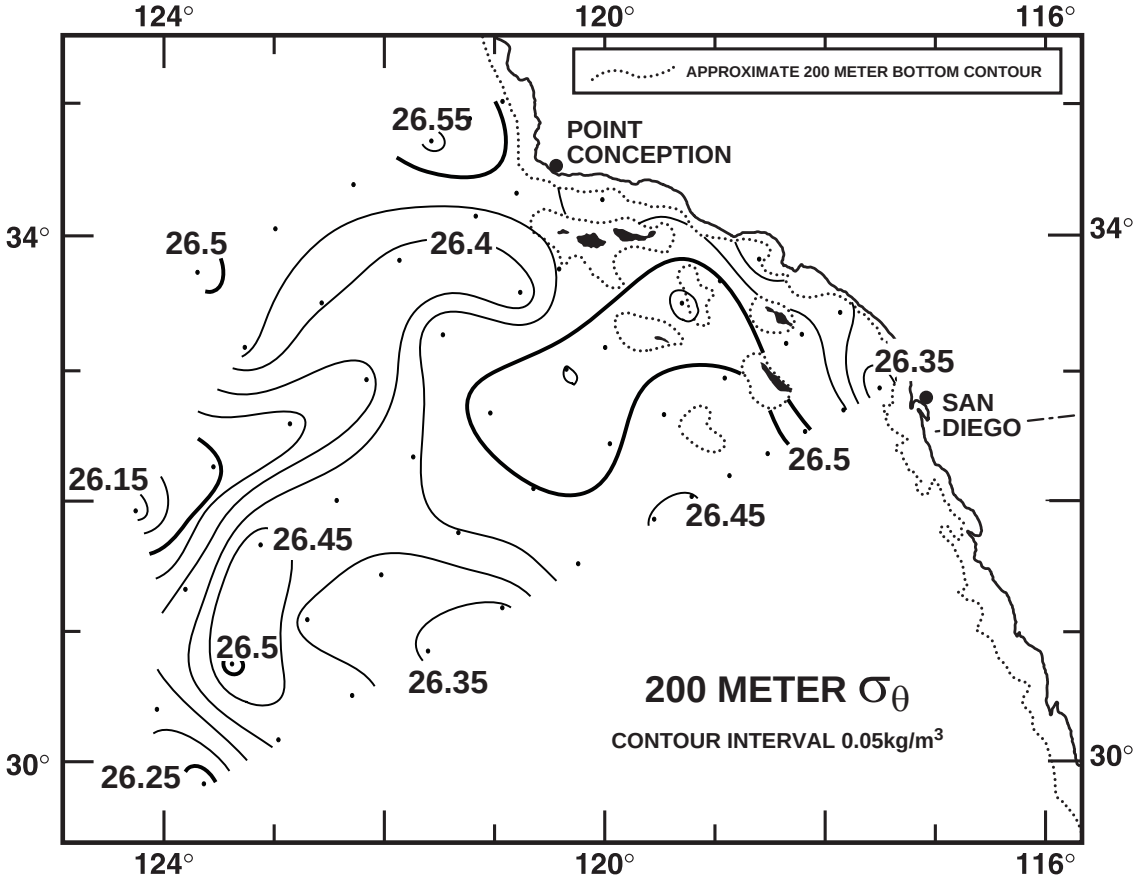


FIGURE 4B

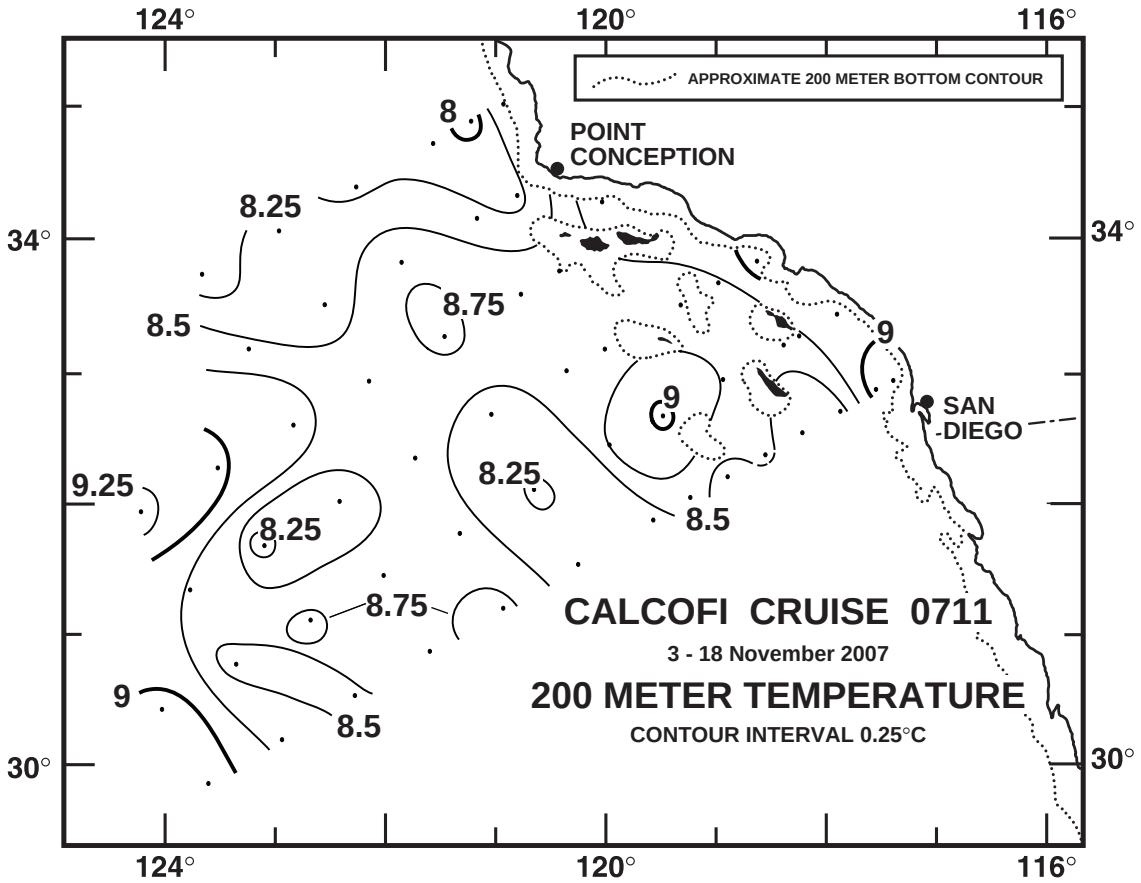


FIGURE 4C

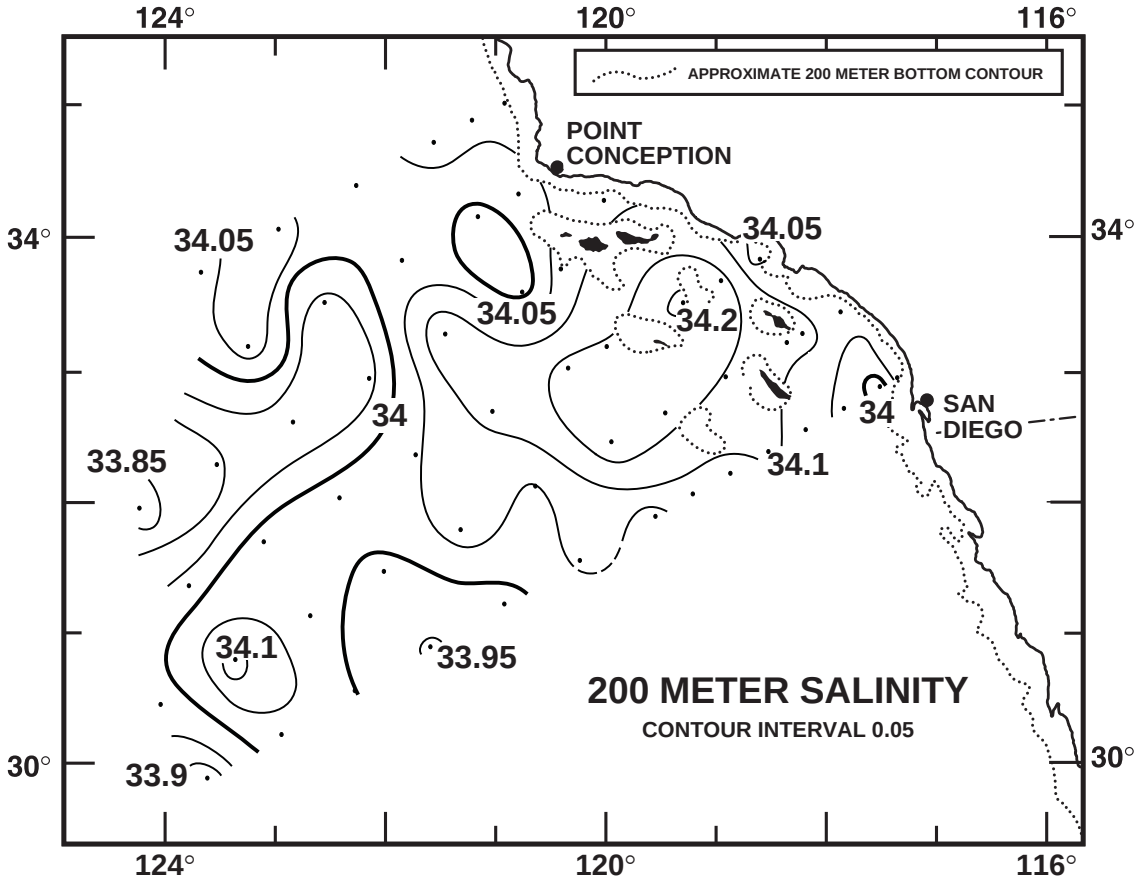


FIGURE 4D

CALCOFI CRUISE 0711

6 - 9 November 2007

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

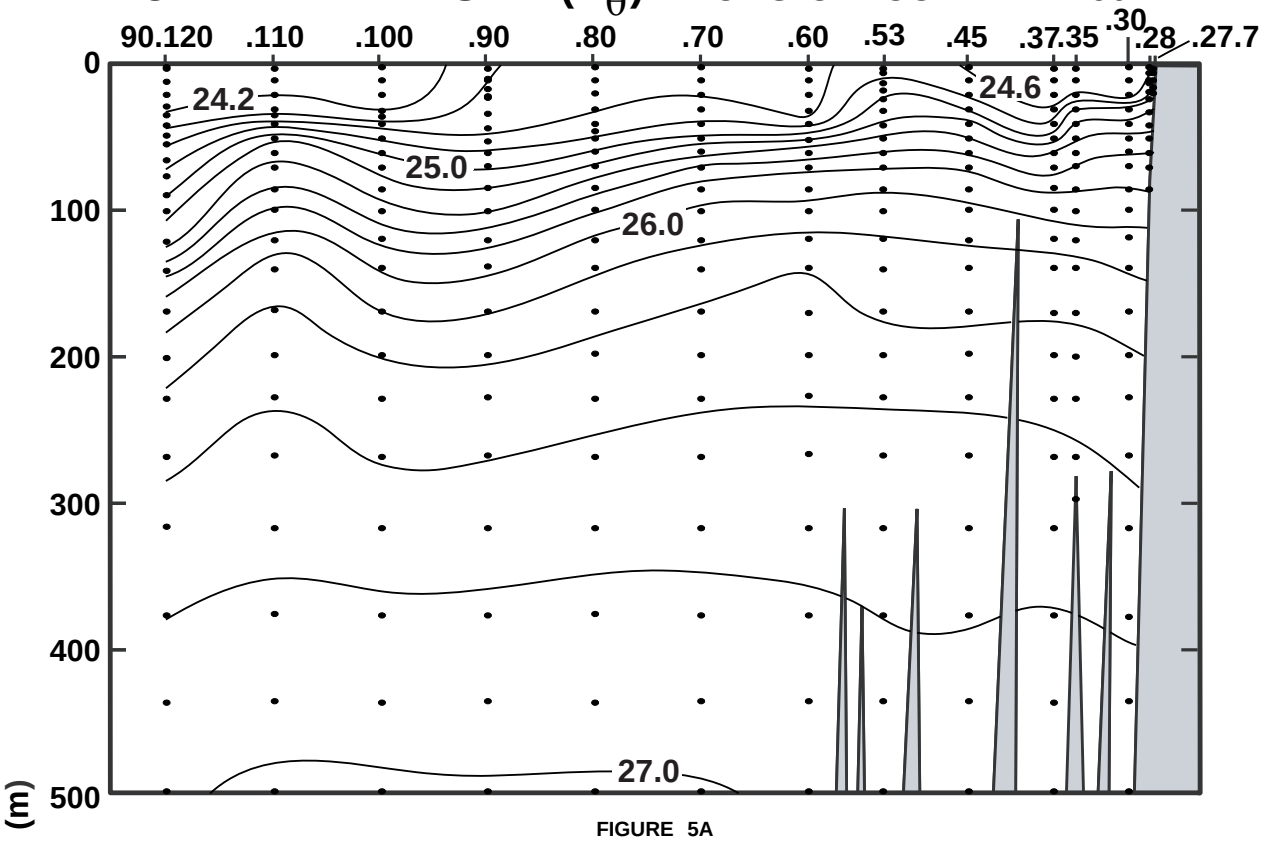


FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

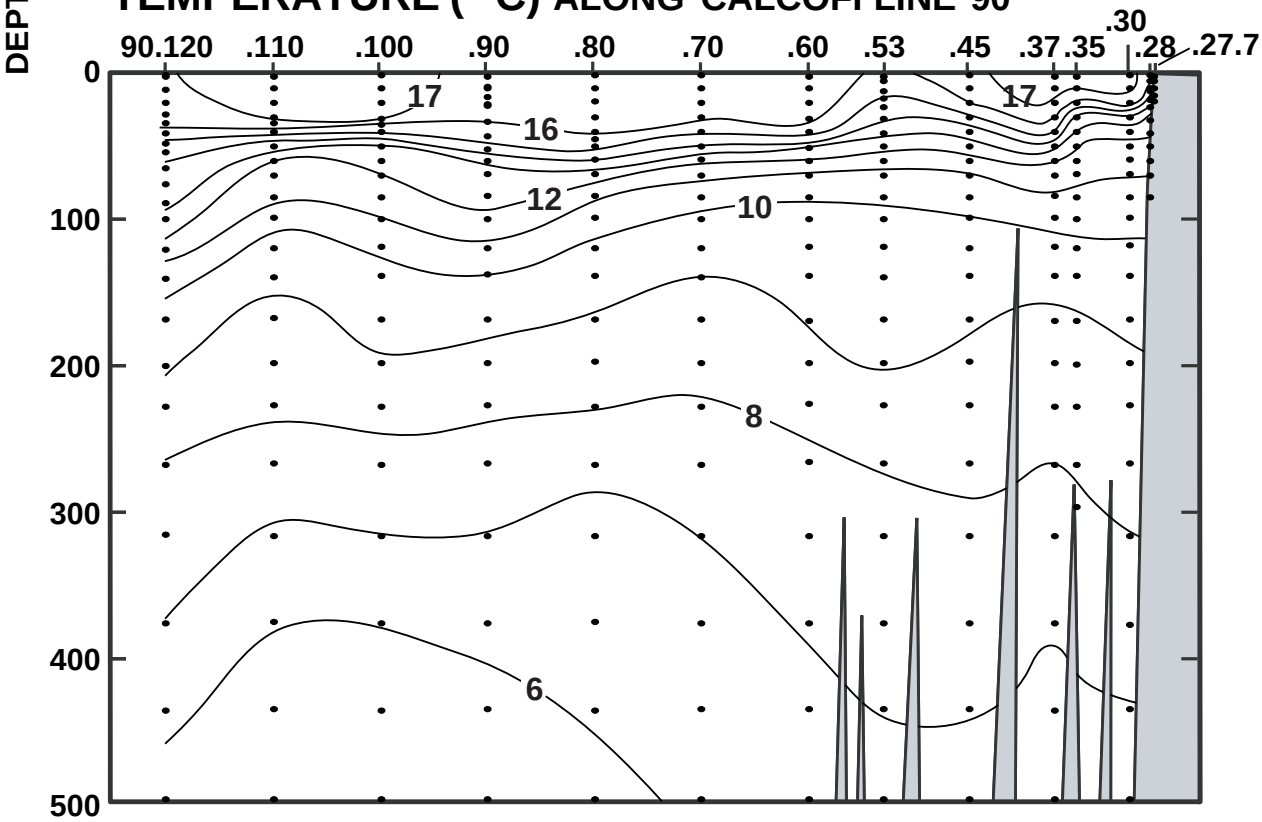


FIGURE 5B

CALCOFI CRUISE 0711

6 - 9 November 2007

SALINITY ALONG CALCOFI LINE 90

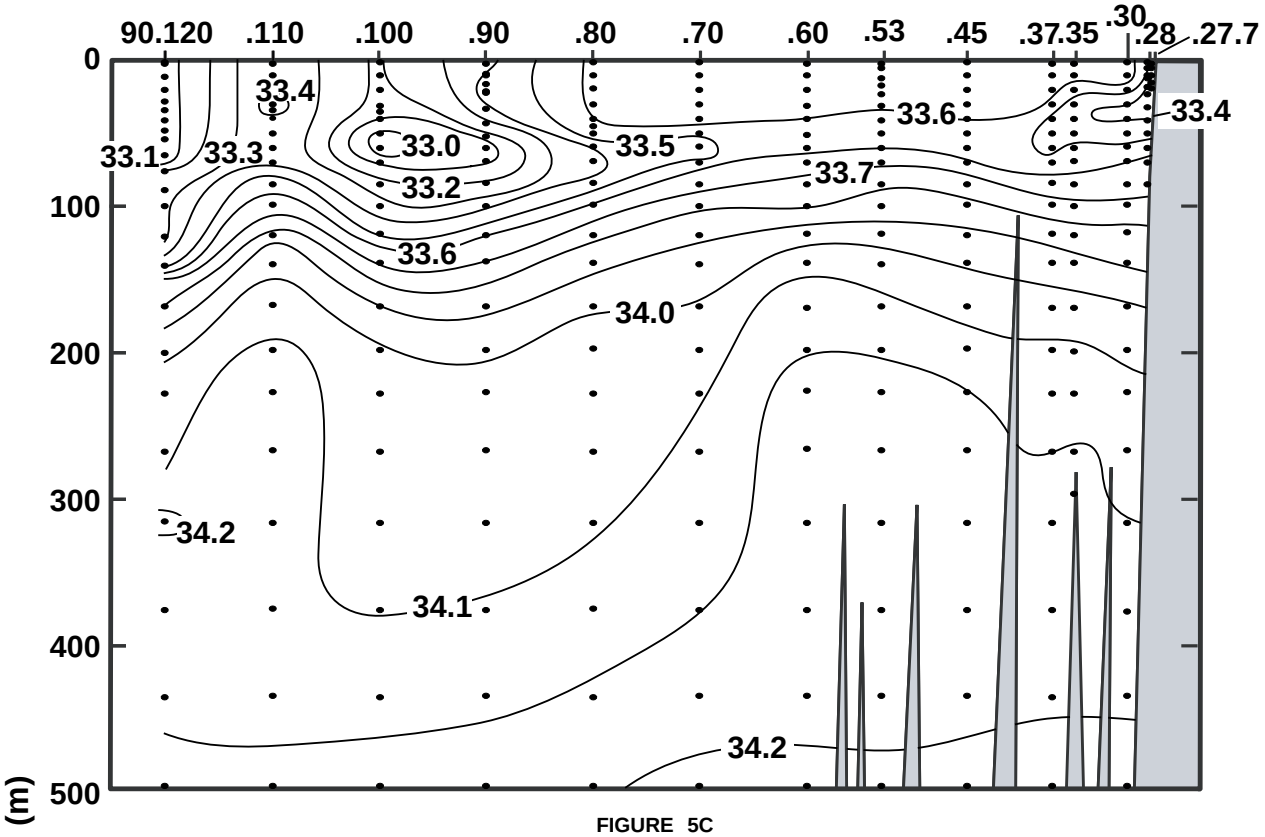


FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

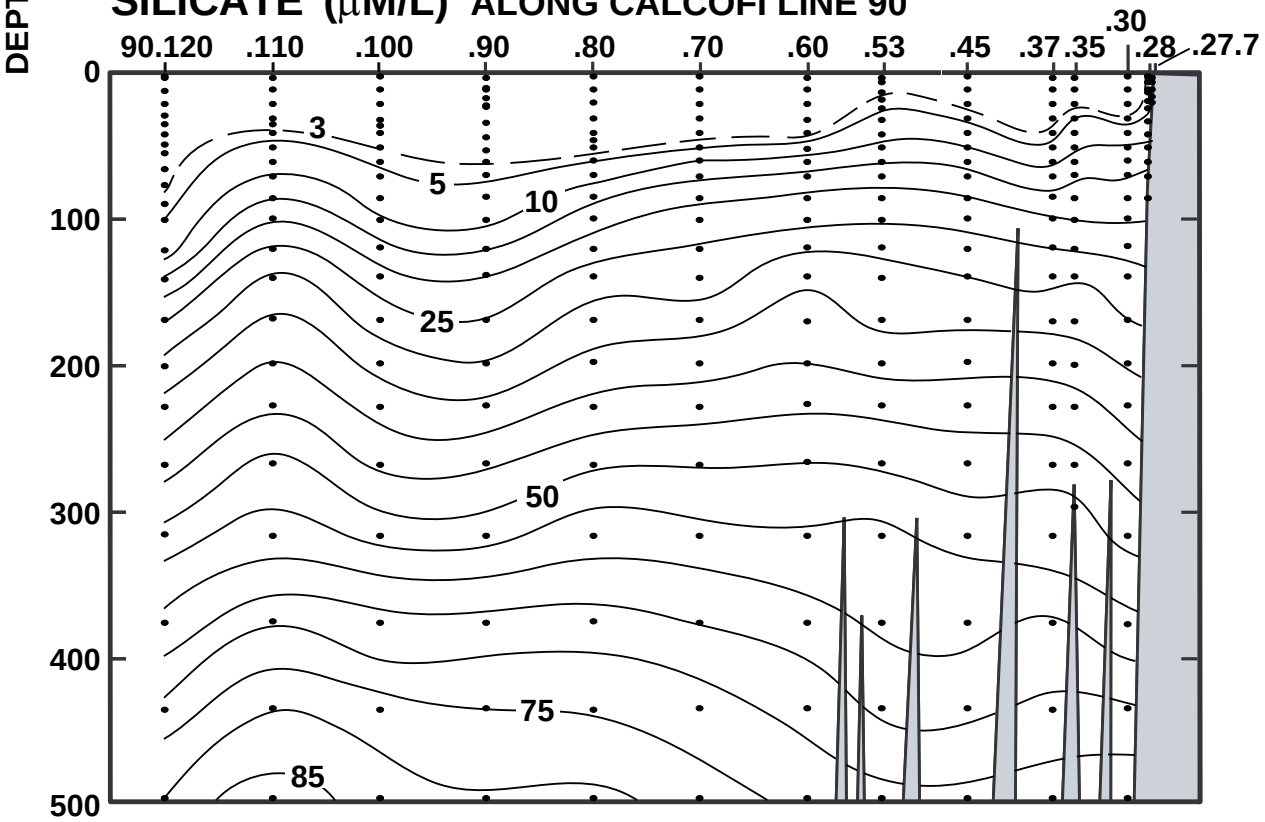


FIGURE 5D

CALCOFI CRUISE 0711

6 - 9 November 2007

NITRATE (μM/L) ALONG CALCOFI LINE 90

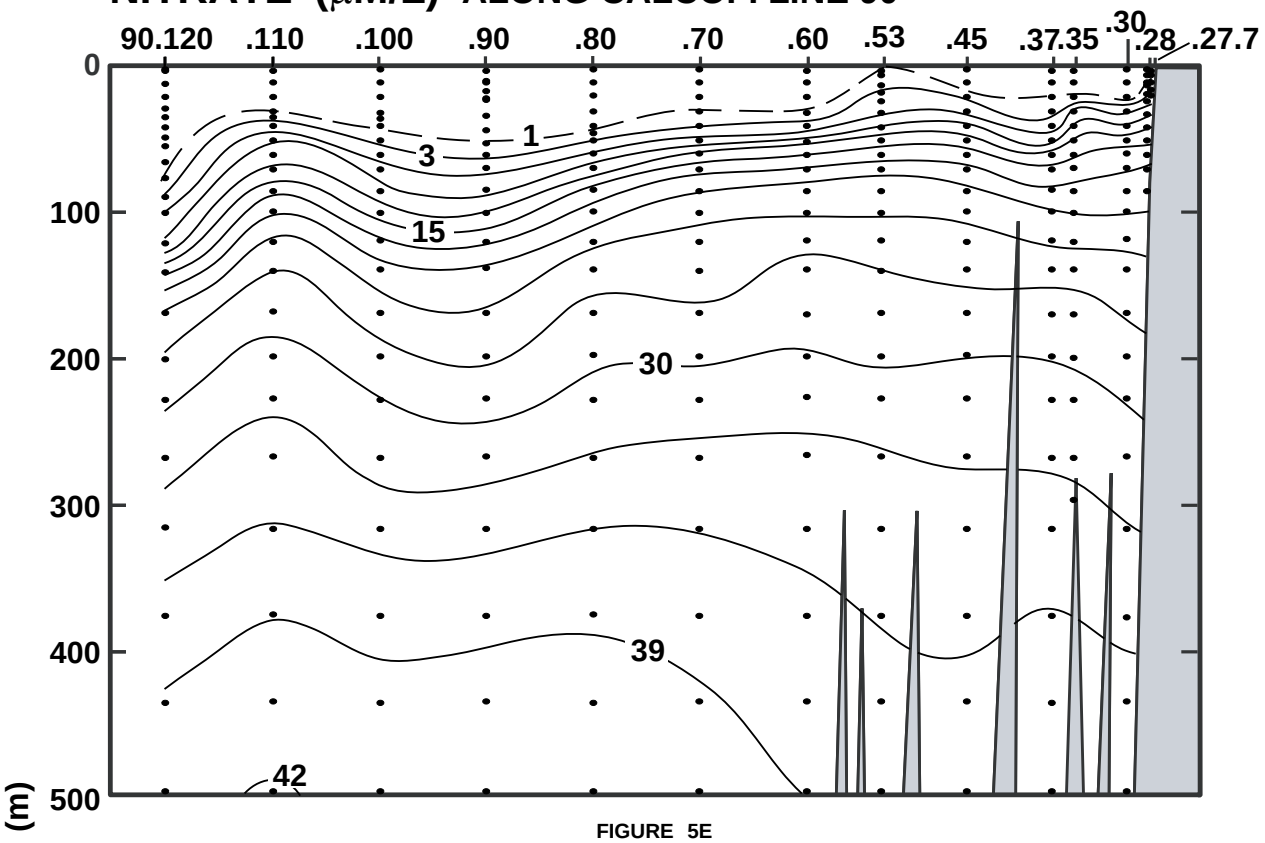


FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

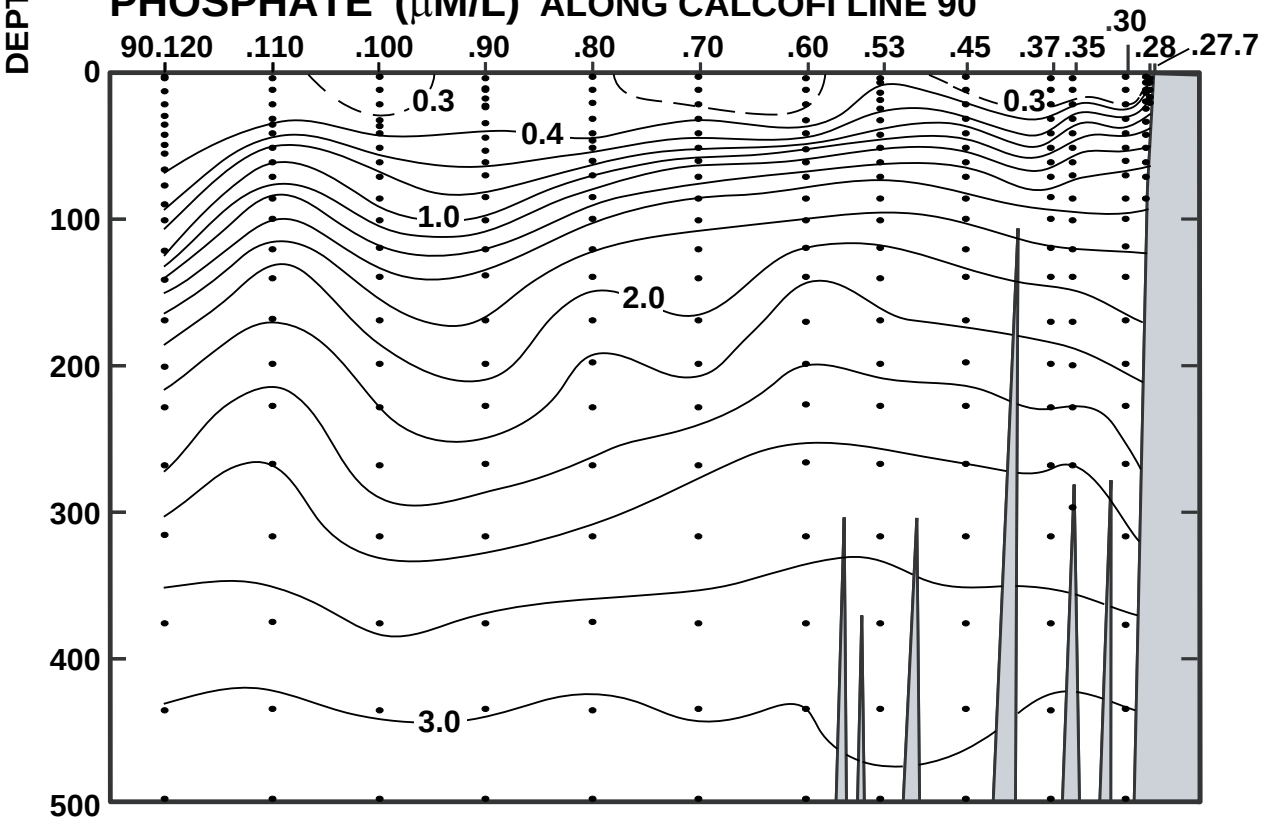


FIGURE 5F

CALCOFI CRUISE 0711

6 - 9 November 2007

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

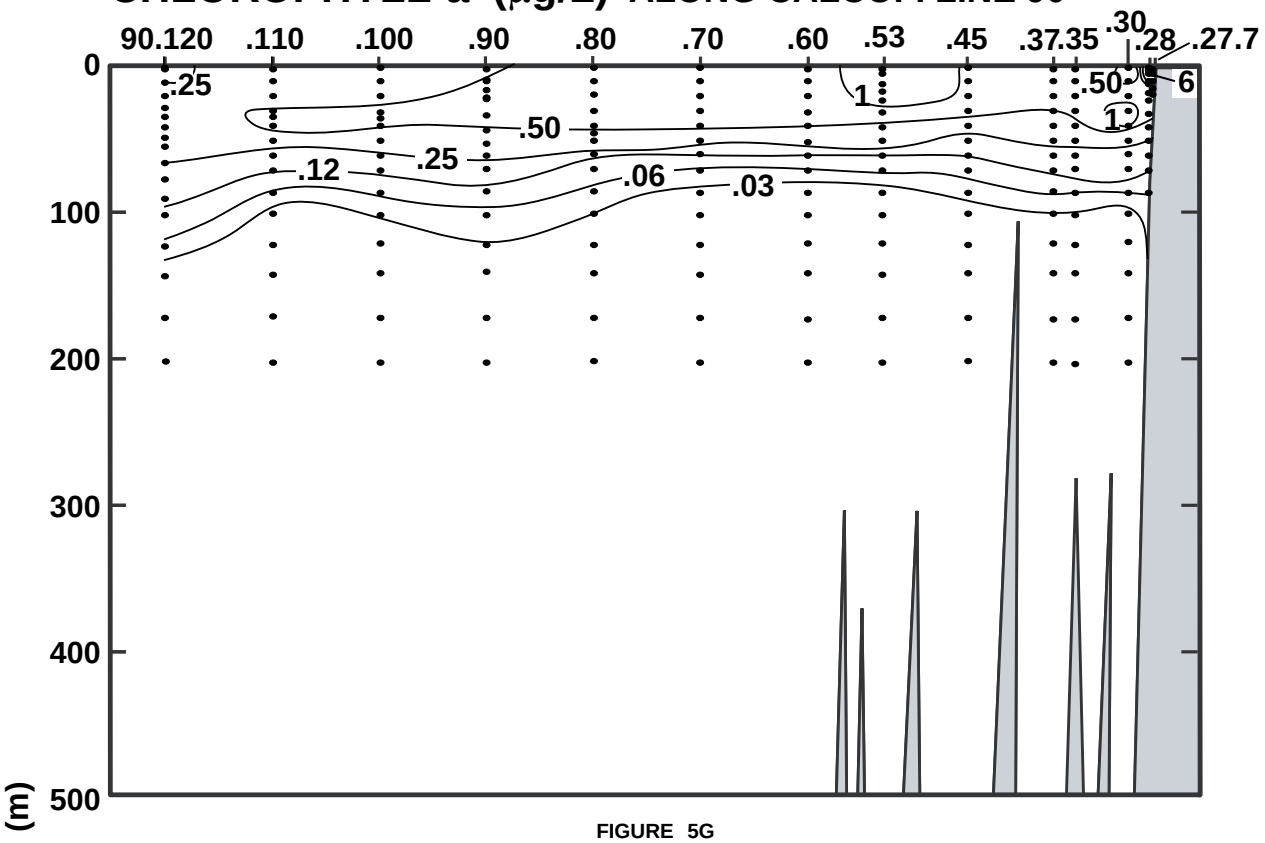


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

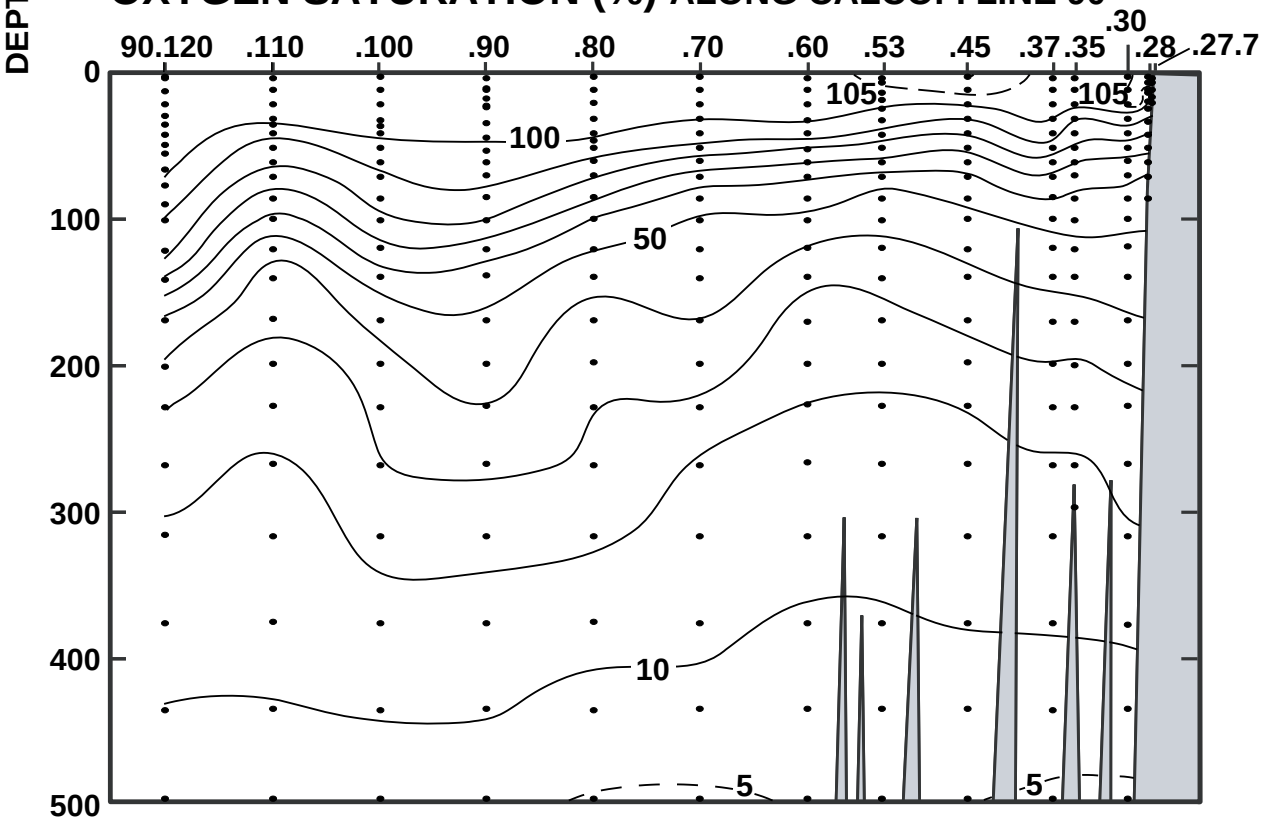


FIGURE 5H

CALCOFI CRUISE 0711

6 - 9 November 2007

OXYGEN (mL/L) ALONG CALCOFI LINE 90

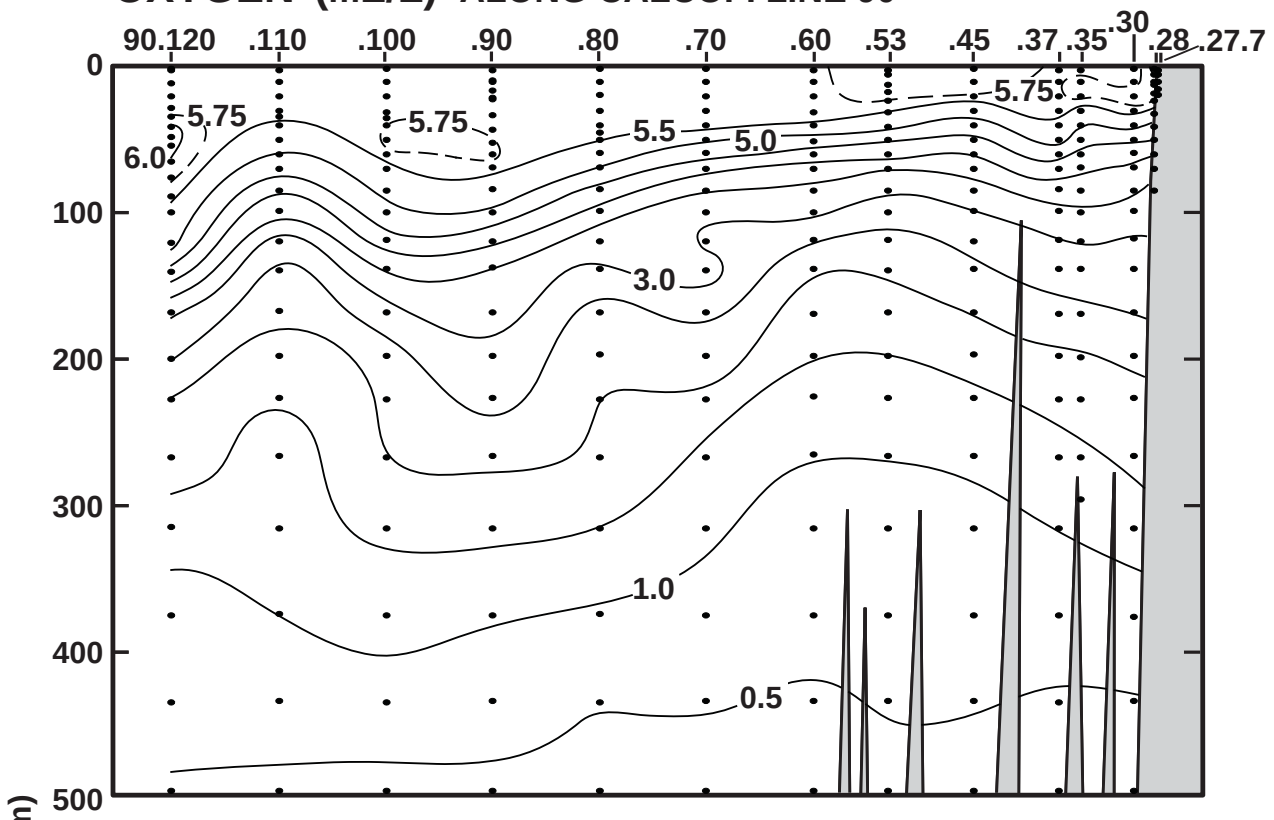


FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

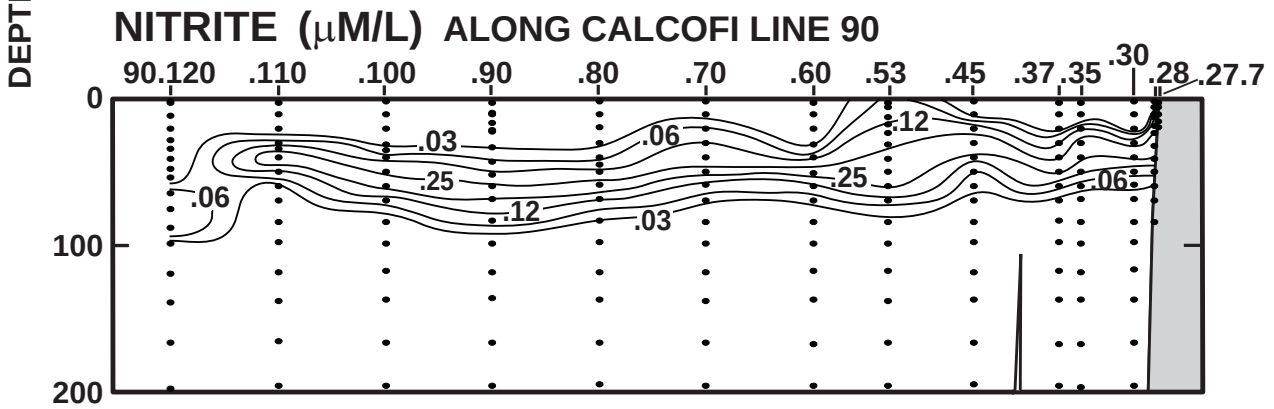


FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

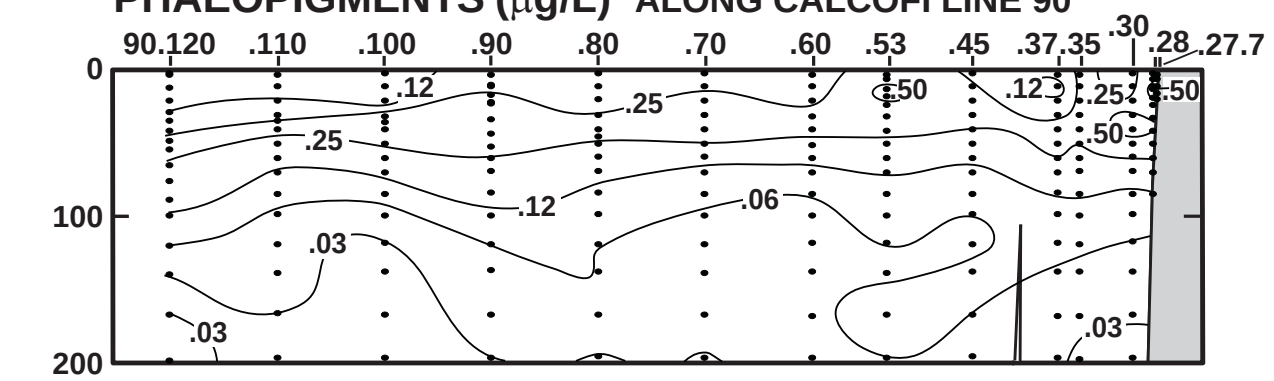


FIGURE 5K

PERSONNEL
CalCOFI Cruise 0711

SHIP'S CAPTAIN

John Manion, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Wilkinson, James R. (Chief Scientist)	Programmer Analyst, SIO	1,2
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	1,2
Bowlin, Noelle M.	Fishery Biologist, NMFS	1
Camacho, Dominique	Marine Mammal Observer, Cascadia Research	1,2
Campbell, Gregory S.	Staff Research Associate, SIO	1,2
Dovel, Shonna L.	Staff Research Associate, SIO	1,2
Hays, Amy E.	Fishery Biologist, NMFS	1,2
Jones, Emily F.	Scientific Aid, CDFG	1,2
Morse, Laura J.	Marine Mammal Observer, Cascadia Research	1,2
Peacock, Jennale L.	Volunteer, SIO	1,2
Overcash, Bryan J.	Staff Research Associate, SIO	2
Reynolds, Sue M.	Staff Research Associate, SIO	1,2
Ribas-Ribas, Mariana	Graduate Student, Universidad De Cadizo MRC	1,2
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO	1,2
Thombley, Robert L.	Staff Research Associate, SIO	1,2
Walker, Nathan J	Volunteer, SIO	1,2,
Wolgast, David M.	Staff Research Associate, SIO	1,2

San Diego-Dana Point, 2 November - 9 November, 2007
Dana Point –San Diego, 9 November - 18 November, 2007

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 1.1 N	120 55.1 W	18/11/07	0524 UTC	243 m	310 20 kn			1015.6 mb	12.8 C	12.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.61	12.61	33.487	25.298	266.4	0.000	5.40	89.5	11.0	1.02	11.0	0.38	0.92	0.35	0	
3	12.61	12.61	33.487	25.298	266.5	0.008	5.40	89.5	11.0	1.02	11.0	0.38	0.92	0.35	3	216
10	12.62	12.62	33.488	25.297	266.8	0.027	5.40	89.6	10.9	1.03	11.0	0.38	1.00	0.32	10	214
10	12.62	12.62	33.488	25.297	266.8	0.027									10	215
20	12.61	12.61	33.491	25.302	266.6	0.053	5.40	89.5	11.0	1.02	11.0	0.38	0.94	0.29	20	213
30	12.60	12.60	33.487	25.301	266.9	0.080	5.37	89.0	11.0	1.02	11.0	0.39	0.90	0.34	30	212
40	12.05	12.04	33.481	25.401	257.6	0.106	5.05	82.7	11.3	1.08	11.7	0.45	0.62	0.28	40	211
49	11.13	11.12	33.403	25.510	247.4	0.129	4.56	73.2	13.8	1.29	15.8	0.14	0.17	0.21	49	210
50 ISL	11.08 D	11.07	33.407 D	25.522	246.2	0.131	4.52	72.5	14.1	1.31	16.1	0.13	0.16	0.21	50	
60	10.52	10.51	33.492	25.687	230.7	0.155	4.18	66.3	16.8	1.45	18.6	0.05	0.07	0.18	60	209
70	10.41	10.40	33.535	25.740	226.0	0.178	4.01	63.4	17.7	1.50	19.3	0.04	0.04	0.14	70	208
75 ISL	10.37 D	10.36	33.558 D	25.765	223.7	0.189	3.95	62.4	18.1	1.52	19.6	0.04	0.04	0.12	75	
85	10.32	10.31	33.589	25.798	220.8	0.212	3.81	60.2	19.0	1.56	20.2	0.04	0.03	0.10	85	207
100	10.19	10.18	33.705	25.911	210.4	0.244	3.37	53.1	21.4	1.67	21.8	0.03	0.02	0.09	101	206
119	9.71	9.70	33.865	26.117	191.1	0.282	2.77	43.2	26.7	1.89	24.8	0.03	0.01	0.08	120	205
125 ISL	9.65 D	9.64	33.891 D	26.147	188.4	0.293	2.69	41.9	27.5	1.92	25.3	0.03	0.01	0.08	126	
139	9.47	9.45	33.913	26.194	184.2	0.320	2.58	40.1	28.9	1.98	26.1	0.03	0.00	0.07	140	204
150 ISL	9.38 D	9.36	33.935 D	26.226	181.3	0.340	2.47	38.3	30.4	2.04	27.0	0.04	0.00	0.08	151	
170	8.89	8.87	33.985	26.344	170.4	0.375	2.18	33.4	34.3	2.19	28.7	0.10	0.01	0.09	171	203
200	8.48	8.46	34.093	26.493	156.8	0.424	1.45	22.0	43.6	2.50	31.3	0.31	0.00	0.18	201	202
228	8.02	8.00	34.136	26.596	147.3	0.466	1.28	19.3	48.7	2.58	33.1	0.08			229	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 53.3 N	121 12.6 W	18/11/07	0124 UTC	566 m	330 25 kn	320 06 06	1	1015.0 mb	14.1 C	13.0 C		4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.36	14.36	33.267	24.774	316.3	0.000	5.96	102.3	3.0	0.48	2.8	0.16	0.80	0.25	0	
2	14.36	14.36	33.267	24.774	316.4	0.006	5.96	102.3	3.0	0.48	2.8	0.16	0.80	0.25	2	221
10	14.36	14.36	33.269	24.775	316.4	0.032	5.97	102.5	3.0	0.47	2.8	0.15	0.79	0.25	10	219
10	14.36	14.36	33.267	24.774	316.6	0.032									10	220
19	14.13	14.13	33.289	24.839	310.6	0.060	5.87	100.3	3.6	0.53	3.7	0.21	0.83	0.29	19	218
20 ISL	13.92 D	13.92	33.316 D	24.904	304.5	0.063	5.78	98.4	4.2	0.58	4.5	0.23	0.82	0.30	20	
30	12.29	12.29	33.474	25.350	262.2	0.091	4.77	78.5	11.5	1.15	13.3	0.34	0.61	0.36	30	217
40	11.67	11.66	33.554	25.529	245.4	0.117	4.26	69.3	14.8	1.36	16.9	0.15	0.37	0.31	40	216
50 ISL	10.95 D	10.94	33.633 D	25.722	227.3	0.140	3.88	62.1	17.7	1.53	19.6	0.05	0.19	0.23	50	
51	11.04	11.03	33.620	25.695	229.8	0.143	3.85	61.8	18.0	1.55	19.8	0.05	0.18	0.22	51	215
60	10.51	10.50	33.665	25.824	217.8	0.163	3.58	56.8	20.8	1.67	21.6	0.04	0.13	0.19	60	214
71	10.28	10.27	33.696	25.888	211.9	0.186	3.40	53.7	22.2	1.74	22.5	0.03	0.09	0.17	71	213
75 ISL	10.21 D	10.20	33.708 D	25.909	210.0	0.195	3.32	52.3	22.8	1.77	23.1	0.03	0.07	0.16	75	
86	9.77	9.76	33.768	26.031	198.6	0.217	3.07	48.0	24.6	1.84	24.7	0.02	0.03	0.13	86	212
100	9.53	9.52	33.878	26.156	187.0	0.244	2.68	41.7	27.4	1.95	26.2	0.02	0.01	0.08	101	211
120	9.06	9.05	33.904	26.253	178.1	0.281	2.82	43.4	28.9	1.95	26.5	0.03	0.00	0.06	121	210
125 ISL	8.98 D	8.97	33.907 D	26.268	176.8	0.290	2.83	43.5	29.4	1.96	26.7	0.03	0.00	0.05	126	
140	8.60	8.59	33.922	26.339	170.2	0.316	2.86	43.6	31.4	1.98	27.5	0.03	0.00	0.03	141	209
150 ISL	8.48 D	8.46	33.964 D	26.391	165.5	0.332	2.66	40.4	33.3	2.05	28.5	0.03	0.00	0.03	151	
169	8.33	8.31	34.010	26.450	160.2	0.363	2.20	33.3	37.3	2.21	30.5	0.03	0.00	0.03	170	208
200 ISL	7.95 D	7.93	34.053 D	26.541	152.0	0.412	1.85	27.8	43.1	2.38	32.6	0.03	0.00	0.02	201	
202	7.90	7.88	34.054	26.549	151.2	0.415	1.84	27.6	43.4	2.39	32.7	0.03	0.00	0.02	203	207
231	7.61	7.59	34.065	26.600	146.7	0.458	1.68	25.0	47.2	2.49	33.8	0.03			232	206
250 ISL	7.28 D	7.26	34.083 D	26.661	141.1	0.485	1.53	22.6	51.0	2.56	34.7	0.04			252	
270	7.12	7.09	34.107	26.703	137.4	0.513	1.35	19.9	55.2	2.63	35.6	0.04			272	205
300 ISL	7.18 D	7.15	34.198 D	26.766	131.9	0.554	1.03	15.2	60.4	2.77	36.2	0.03			302	
319	6.95	6.92	34.178	26.782	130.6	0.579	0.84	12.3	63.3	2.86	36.5	0.03			321	204
380	6.50	6.47	34.215	26.872	122.6	0.656	0.63	9.2	70.1	2.97	38.5	0.03			383	203
400 ISL	6.38 D	6.34	34.235 D	26.904	119.8	0.680	0.58	8.4	72.1	3.01	38.9	0.03			403	
440	6.14	6.10	34.237	26.937	117.1	0.727	0.49	7.1	76.1	3.07	39.6	0.03			443	202
500 ISL	5.79 D	5.75	34.262 D	27.001	111.5	0.796	0.40	5.7	81.9	3.14	40.5	0.04			504	
516	5.78	5.74	34.262	27.003	111.6	0.814	0.37	5.3	83.5	3.16	40.7	0.04			520	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 43.1 N	121 33.2 W	17/11/07	2032 UTC	973 m	320 17 kn	320 06 08	1	1017.7 mb	15.0 C	13.9 C	09m	7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.74	13.74	33.305	24.932	301.3	0.000	5.96	101.1	4.6	0.58	4.5	0.19	1.54	0.42	0	
2	13.74	13.74	33.305	24.932	301.3	0.006	5.96	101.1	4.6	0.58	4.5	0.19	1.54	0.42	2	220
10	13.73	13.73	33.303	24.932	301.5	0.030	5.97	101.2	4.6	0.58	4.4	0.20	1.50	0.51	10	219
20	13.73	13.73	33.303	24.933	301.7	0.060	5.94	100.7	4.6	0.58	4.3	0.20	1.50	0.48	20	218
30	13.52	13.52	33.322	24.990	296.5	0.090	5.84	98.6	5.2	0.63	5.2	0.23	1.11	0.49	30	217
40	11.67	11.66	33.467	25.462	251.8	0.118	4.76	77.4	12.8	1.22	14.7	0.34	0.54	0.37	40	216
50	11.31	11.30	33.512	25.563	242.4	0.142	4.39	70.8	14.5	1.34	16.5	0.17	0.37	0.28	50	215
60	10.77	10.76	33.514	25.661	233.3	0.166	4.23	67.4	16.6	1.46	18.4	0.07	0.24	0.19	60	214
70	9.73	9.72	33.600	25.906	210.1	0.188	3.73	58.2	21.4	1.68	22.3	0.04	0.03	0.07	70	213
75 ISL	9.59 D	9.58	33.688 D	25.997	201.5	0.199	3.42	53.2	23.2	1.77	23.6	0.04	0.02	0.08	75	
84	9.66	9.65	33.811	26.082	193.7	0.216	2.89	45.0	25.9	1.89	25.1	0.03	0.01	0.09	84	212
100	9.56	9.55	33.926	26.189	183.9	0.247	2.43	37.8	29.2	2.03	26.6	0.03	0.01	0.09	101	211
119	9.42	9.41	33.973	26.249	178.5	0.281	2.24	34.8	30.9	2.09	27.2	0.03	0.01	0.10	120	210
125 ISL	9.30 D	9.29	34.014 D	26.300	173.8	0.292	2.18	33.7	31.9	2.12	27.7	0.03	0.01	0.10	126	
139	9.04	9.02	34.033	26.357	168.6	0.316	2.06	31.7	34.2	2.19	29.0	0.03	0.00	0.09	140	209
150 ISL	9.03 D	9.01	34.053 D	26.375	167.2	0.334	2.00	30.8	35.2	2.22	29.5	0.03	0.00	0.08	151	
170	8.71	8.69	34.060	26.431	162.1	0.367	1.92	29.3	37.2	2.25	30.3	0.04	0.00	0.06	171	208
199	8.02	8.00	34.085	26.556	150.6	0.412	1.83	27.5	43.1	2.35	32.2	0.04	0.00	0.03	200	207
200 ISL	8.02 D	8.00	34.087 D	26.557	150.5	0.414	1.81	27.2	43.3	2.36	32.3	0.04			201	
229	7.90	7.88	34.157	26.630	144.0	0.456	1.31	19.7	48.4	2.56	33.9	0.03			230	206
250 ISL	7.78 D	7.76	34.188 D	26.672	140.3	0.486	1.12	16.8	51.4	2.64	34.7	0.03			252	
268	7.58	7.55	34.190	26.703	137.6	0.511	1.04	15.5	53.7	2.68	35.3	0.03			270	205
300 ISL	7.34 D	7.31	34.185 D	26.734	135.1	0.555	1.01	15.0	57.0	2.76	36.2	0.03			302	
318	7.08	7.05	34.158	26.749	133.8	0.579	1.00	14.7	58.8	2.80	36.7	0.03			320	204
377	6.63	6.60	34.200	26.844	125.5	0.656	0.74	10.8	66.6	2.91	38.4	0.03			380	203
400 ISL	6.68 D	6.64	34.235 D	26.865	123.9	0.684	0.66	9.6	70.2	2.96	39.1	0.03			403	
436	6.12	6.08	34.222	26.928	117.9	0.728	0.54	7.8	75.5	3.04	40.2	0.02			439	202
500 ISL	5.85 D	5.81	34.290 D	27.016	110.2	0.801	0.35	5.0	82.0	3.15	41.3	0.02			504	
514	5.78	5.74	34.291	27.026	109.4	0.816	0.31	4.4	83.4	3.17	41.5	0.02			518	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 23.2 N	122 14.9 W	17/11/07	1454 UTC	4026 m	320 10 kn	340 06 08	2	1019.5 mb	14.9 C	14.0 C	15m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.08	14.08	33.182	24.767	317.0	0.000	5.95	101.5	3.5	0.51	3.0	0.17	0.67	0.25	0	
1 A	14.08	14.08	33.182	24.767	317.0	0.003	5.95	101.5	3.5	0.51	3.0	0.17	0.67	0.25	1	221
8 A	14.08	14.08	33.181	24.766	317.3	0.025	5.97	101.9	3.5	0.49	3.0	0.16	0.64	0.24	8	220
10 ISL	14.06 D	14.06	33.181 D	24.770	316.9	0.032	5.97	101.8	3.5	0.50	3.0	0.16	0.64	0.24	10	
20 A	13.98	13.98	33.179	24.786	315.8	0.063	5.96	101.5	3.7	0.52	3.2	0.17	0.64	0.24	20	219
29 A	13.61	13.61	33.181	24.863	308.6	0.091	5.97	100.9	4.5	0.58	4.0	0.19	0.59	0.23	29	218
30 ISL	13.53 D	13.53	33.180 D	24.879	307.2	0.095	5.97	100.7	4.6	0.58	4.1	0.19	0.59	0.23	30	
38 A	13.42	13.41	33.178	24.900	305.4	0.119	5.95	100.1	5.2	0.62	4.5	0.20	0.58	0.23	38	217
45	13.25	13.24	33.182	24.937	302.0	0.140	5.95	99.8	5.6	0.65	5.0	0.20	0.48	0.22	45	216
50 ISL	13.22 D	13.21	33.216 D	24.969	299.0	0.155	5.89	98.7	5.8	0.68	5.6	0.22	0.47	0.27	50	
54 A	12.85	12.84	33.174	25.010	295.2	0.167	5.84	97.1	6.0	0.71	6.0	0.24	0.46	0.30	54	215
62	10.78	10.77	33.062	25.307	266.9	0.190	5.33	84.7	8.8	1.05	11.4	0.05	0.24	0.26	62	214
70	11.27	11.26	33.458	25.528	246.2	0.210	4.46	71.8	14.8	1.43	17.9	0.04	0.17	0.13	70	213
75 ISL	10.86 D	10.85	33.515 D	25.646	235.1	0.222	4.43	70.8	15.0	1.39	17.6	0.04	0.11	0.08	75	
85	9.92	9.91	33.497	25.794	221.1	0.245	4.37	68.4	15.5	1.32	16.9	0.04	0.01	0.04	85	212
100	9.57	9.56	33.640	25.964	205.2	0.277	3.84	59.7	20.3	1.56	20.8	0.03	0.01	0.03	100	211
120	9.36	9.35	33.857	26.168	186.2	0.316	2.58	40.0	29.0	2.06	27.5	0.02	0.01	0.04	121	210
125 ISL	9.19 D	9.18	33.894 D	26.224	180.9	0.325	2.60	40.1	29.4	2.05	27.5	0.02	0.01	0.04	126	
140	8.95	8.93	33.913	26.278	176.1	0.352	2.64	40.5	30.6	2.03	27.7	0.02	0.00	0.03	141	209
150 ISL	8.69 D	8.67	33.924 D	26.327	171.6	0.370	2.77	42.3	30.9	2.00	27.3	0.02	0.00	0.03	151	
169	8.56	8.54	33.972	26.385	166.4	0.402	2.95	44.9	32.0	1.96	26.9	0.03	0.00	0.02	170	208
199	8.17	8.15	34.023	26.484	157.4	0.450	2.53	38.2	37.6	2.11	29.4	0.03	0.00	0.02	200	207
200 ISL	8.13 D	8.11	34.028 D	26.494	156.4	0.452	2.51	37.8	37.8	2.12	29.5	0.03			201	
228	7.73	7.71	34.040	26.563	150.2	0.495	2.13	31.8	43.7	2.29	32.0	0.04			229	206
250 ISL	7.28 D	7.26	34.045 D	26.631	143.9	0.527	1.98	29.3	48.1	2.39	33.3	0.04			252	
268	7.08	7.05	34.039	26.654	141.9	0.553	1.90	28.0	51.5	2.45	34.2	0.03			270	205
300 ISL	6.49 D	6.46	34.015 D	26.715	136.3	0.597	1.71	24.8	57.3	2.55	35.9	0.02			302	
317	6.43	6.40	34.043	26.745	133.6	0.620	1.59	23.0	60.2	2.61	36.8	0.02			319	204
377	6.08	6.05	34.100	26.836	125.7	0.698	1.04	15.0	69.2	2.85	39.2	0.02			379	203
400 ISL	5.96 D	5.93	34.122 D	26.868	122.8	0.727	0.90	12.9	72.7	2.91	39.9	0.02			403	
437	5.64	5.60	34.143	26.925	117.7	0.771	0.72	10.2	78.5	3.00	41.0	0.02			440	202
500 ISL	5.18 D	5.14	34.189 D	27.016	109.3	0.843	0.47	6.6	89.0	3.14	42.5	0.02			504	
511	5.12	5.08	34.198	27.031	108.0	0.855	0.43	6.0	90.8	3.16	42.8	0.02			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 3.1 N	122 56.7 W	17/11/07	0726	UTC	4241 m	310	15 kn			1019.9 mb	16.0 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.30	15.30	33.244	24.554	337.3	0.000	5.86	102.5	1.2	0.35	1.1	0.08	0.54	0.14	0	
2	15.30	15.30	33.244	24.554	337.3	0.007	5.86	102.5	1.2	0.35	1.1	0.08	0.54	0.14	2	220
10	15.30	15.30	33.247	24.556	337.3	0.034	5.86	102.5	1.2	0.35	1.1	0.08	0.55	0.14	10	219
20	15.15	15.15	33.272	24.609	332.6	0.067	5.88	102.6	1.5	0.35	1.4	0.09	0.54	0.18	20	218
30	14.12	14.12	33.323	24.868	308.2	0.099	5.57	95.2	3.8	0.64	5.5	0.37	0.44	0.22	30	217
39	12.46	12.45	33.288	25.174	279.3	0.126	5.13	84.7	8.1	1.02	11.4	0.36	0.44	0.26	39	216
50	11.42	11.41	33.326	25.398	258.1	0.155	4.83	78.0	11.5	1.24	14.9	0.05	0.26	0.17	50	215
59	10.74	10.73	33.353	25.541	244.7	0.178	4.64	73.8	13.6	1.33	16.5	0.03	0.15	0.10	59	214
70	10.67	10.66	33.492	25.661	233.5	0.204	4.26	67.8	16.7	1.53	19.6	0.03	0.10	0.08	70	213
75 ISL	10.43 D	10.42	33.567 D	25.762	224.0	0.216	4.10	64.9	18.0	1.60	20.6	0.03	0.08	0.07	75	
85	10.23	10.22	33.604	25.825	218.2	0.238	3.75	59.1	20.6	1.72	22.4	0.02	0.05	0.06	85	212
99	9.77	9.76	33.745	26.013	200.6	0.267	3.10	48.4	25.2	1.93	25.5	0.02	0.03	0.06	99	211
100 ISL	9.72 D	9.71	33.765 D	26.037	198.4	0.269	3.07	47.9	25.4	1.94	25.6	0.02	0.03	0.06	101	
119	9.34	9.33	33.845	26.162	186.8	0.306	2.64	40.9	28.6	2.05	27.4	0.02	0.01	0.05	120	210
125 ISL	9.24 D	9.23	33.886 D	26.210	182.3	0.317	2.52	38.9	29.5	2.09	27.8	0.02	0.01	0.05	126	
139	9.10	9.08	33.934	26.270	176.9	0.342	2.28	35.1	31.3	2.16	28.6	0.01	0.00	0.05	140	209
150 ISL	8.96 D	8.94	33.974 D	26.324	171.9	0.361	2.14	32.9	32.6	2.19	29.2	0.01	0.00	0.05	151	
169	8.76	8.74	34.012	26.385	166.4	0.393	1.97	30.1	34.9	2.23	30.2	0.01	0.00	0.05	170	208
199	8.35	8.33	34.061	26.487	157.2	0.442	1.76	26.7	39.4	2.33	31.7	0.02	0.00	0.04	200	207
200 ISL	8.34 D	8.32	34.065 D	26.492	156.8	0.443	1.75	26.5	39.5	2.33	31.7	0.02			201	
229	8.00	7.98	34.087	26.560	150.7	0.488	1.58	23.8	43.8	2.44	33.1	0.02			230	206
250 ISL	7.60 D	7.58	34.084 D	26.617	145.5	0.519	1.48	22.1	47.5	2.50	34.0	0.02			252	
268	7.45	7.42	34.106	26.656	142.0	0.545	1.39	20.6	50.8	2.55	34.7	0.02			270	205
300 ISL	7.14 D	7.11	34.132 D	26.720	136.3	0.589	1.19	17.5	55.7	2.66	36.1	0.02			302	
317	6.93	6.90	34.125	26.743	134.2	0.612	1.09	16.0	58.1	2.71	36.8	0.02			319	204
378	6.23	6.20	34.116	26.829	126.4	0.692	0.96	13.9	67.3	2.84	38.9	0.02			380	203
400 ISL	6.14 D	6.10	34.138 D	26.858	123.9	0.719	0.86	12.4	70.7	2.89	39.5	0.02			403	
438	5.80	5.76	34.161	26.920	118.4	0.765	0.67	9.6	76.4	2.98	40.4	0.02			441	202
500 ISL	5.63 D	5.59	34.254 D	27.014	110.0	0.836	0.38	5.4	85.0	3.09	41.5	0.02			503	
513	5.53	5.49	34.262	27.033	108.4	0.850	0.32	4.5	86.8	3.11	41.7	0.02			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 43.3 N	123 38.4 W	17/11/07	0111	UTC	4168 m	300	09 kn	320 03 07	1	1019.1 mb	16.0 C	14.1 C		4/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.47	15.47	33.261	24.530	339.6	0.000	5.89	103.4	1.1	0.33	1.1	0.06	0.61	0.16	0	
1	15.47	15.47	33.261	24.530	339.6	0.003	5.89	103.4	1.1	0.33	1.1	0.06	0.61	0.16	1	220
10	15.47	15.47	33.271	24.537	339.1	0.034	5.91	103.8	1.1	0.33	1.0	0.06	0.63	0.14	10	219
20	15.35	15.35	33.307	24.592	334.2	0.068	5.87	102.8	1.2	0.35	1.3	0.08	0.71	0.20	20	218
30	15.27	15.27	33.329	24.627	331.2	0.101	5.83	102.0	1.3	0.37	1.6	0.11	0.49	0.20	30	217
40	13.92	13.91	33.415	24.981	297.7	0.132	5.40	92.0	5.2	0.76	7.4	0.60	0.41	0.25	40	216
50	11.79	11.78	33.441	25.419	256.1	0.160	4.68	76.2	12.6	1.29	16.1	0.07	0.29	0.19	50	215
60	10.76	10.75	33.440	25.605	238.6	0.185	4.43	70.6	15.8	1.45	18.5	0.04	0.17	0.11	60	214
70	10.48	10.47	33.567	25.753	224.7	0.208	3.95	62.6	19.5	1.66	21.6	0.03	0.11	0.09	70	213
75 ISL	10.27 D	10.26	33.593 D	25.809	219.5	0.219	3.72	58.7	21.0	1.73	22.6	0.03	0.10	0.08	75	
85	10.10	10.09	33.688	25.913	209.9	0.240	3.33	52.4	23.5	1.82	24.1	0.03	0.08	0.08	85	212
100	9.82	9.81	33.765	26.020	199.9	0.271	2.99	46.8	26.1	1.95	25.9	0.02	0.02	0.08	100	211
118	9.27	9.26	33.846	26.174	185.6	0.306	2.64	40.8	30.0	2.09	28.0	0.02	0.01	0.06	119	210
125 ISL	9.16 D	9.15	33.915 D	26.245	178.9	0.319	2.49	38.4	31.3	2.13	28.6	0.02	0.01	0.05	126	
139	8.91	8.90	33.965	26.325	171.6	0.343	2.27	34.8	33.6	2.18	29.6	0.02	0.00	0.04	140	209
150 ISL	8.60 D	8.58	33.988 D	26.391	165.5	0.362	2.31	35.2	34.8	2.17	29.9	0.02	0.00	0.03	151	
168	8.37	8.35	34.002	26.437	161.3	0.391	2.43	36.8	36.6	2.16	30.1	0.02	0.00	0.02	169	208
199	8.04	8.02	34.036	26.514	154.5	0.440	2.18	32.8	41.3	2.28	31.6	0.02	0.00	0.02	200	207
200 ISL	8.02 D	8.00	34.043 D	26.523	153.7	0.442	2.16	32.5	41.5	2.29	31.7	0.02			201	
229	7.90	7.88	34.096	26.582	148.6	0.486	1.48	22.2	47.0	2.56	34.7	0.02			230	206
250 ISL	7.65 D	7.63	34.116 D	26.635	143.8	0.516	1.42	21.2	50.5	2.63	35.6	0.02			251	
269	7.40	7.37	34.114	26.669	140.8	0.543	1.37	20.3	53.2	2.65	36.0	0.02			271	205
300 ISL	7.21 D	7.18	34.134 D	26.712	137.1	0.586	1.16	17.1	56.7	2.72	36.8	0.02			302	
319	7.17	7.14	34.157	26.736	135.2	0.612	1.03	15.2	58.7	2.77	37.3	0.02			321	204
377	6.67	6.64	34.178	26.821	127.6	0.688	0.80	11.7	67.0	2.97	39.1	0.01			379	203
400 ISL	6.29 D	6.25	34.161 D	26.857	124.2	0.717	0.73	10.6	70.7	3.04	39.9	0.01			403	
437	6.04	6.00	34.185	26.909	119.6	0.762	0.63	9.1	76.8	3.14	41.2	0.02			440	202
500 ISL	5.66 D	5.62	34.239 D	26.999	111.5	0.835	0.45	6.4	86.4	3.21	42.7	0.02			503	
512	5.46	5.42	34.222	27.010	110.4	0.849	0.41	5.8	88.2	3.22	43.0	0.02			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 26.9 N	120 31.4 W	15/11/07	1457	UTC	78 m	340	07 kn	300 03 09	0	1012.7 mb	15.1 C	14.0 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.11	14.11	33.545	25.041	290.9	0.000	5.78	98.9	7.1	0.53	3.4	0.24	2.44	0.56	0	
1	14.11	14.11	33.545	25.041	290.9	0.003	5.78	98.9	7.1	0.53	3.4	0.24	2.44	0.56	1	209
5	14.08	14.08	33.544	25.046	290.5	0.015	5.73	98.0	7.3	0.55	3.7	0.26	2.07	0.55	5	208
10	13.98	13.98	33.544	25.067	288.7	0.029	5.69	97.1	7.6	0.58	4.4	0.28	1.64	0.52	10	207
19	13.53	13.53	33.539	25.156	280.5	0.055	5.31	89.8	9.0	0.77	6.6	0.40	1.15	0.46	19	206
20 ISL	13.57 D	13.57	33.543 D	25.151	281.0	0.057	5.26	89.0	9.2	0.80	6.9	0.42	1.09	0.45	20	
30	12.87	12.87	33.534	25.284	268.5	0.085	4.83	80.5	10.7	1.01	10.0	0.54	0.63	0.39	30	205
40	12.73	12.72	33.542	25.318	265.6	0.112	4.73	78.6	11.3	1.05	10.7	0.46	0.53	0.37	40	204
49	12.38	12.37	33.554	25.396	258.4	0.135	4.48	73.9	13.0	1.17	12.4	0.39	0.50	0.41	49	203
50 ISL	12.36 D	12.35	33.558 D	25.403	257.8	0.138	4.48	73.9	13.0	1.17	12.5	0.39	0.49	0.41	50	
60	12.17	12.16	33.562	25.442	254.2	0.163	4.38	72.0	13.4	1.23	13.6	0.35	0.32	0.35	60	202
66	11.88	11.87	33.583	25.513	247.6	0.178	4.14	67.6	15.0	1.33	15.2	0.28	0.22	0.34	66	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 47.6 W	15/11/07	1817 UTC	751 m	300 10 kn	300 03 05	0	1013.7 mb	16.4 C	14.9 C	16m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.43	14.43	33.182	24.693	324.0	0.000	5.95	102.3	2.3	0.44	1.7	0.13	0.53	0.16	0	
2 A	14.43	14.43	33.182	24.693	324.0	0.006	5.95	102.3	2.3	0.44	1.7	0.13	0.53	0.16	2	222
9 A	14.17	14.17	33.181	24.747	319.1	0.029	5.95	101.7	2.7	0.48	2.3	0.17	1.00	0.20	9	221
10	14.03	14.03	33.182	24.777	316.3	0.032	5.97	101.8	2.8	0.49	2.7	0.19	0.58	0.18	10	220
20 ISL	13.79 D	13.79	33.174 D	24.821	312.4	0.064	5.96	101.1	3.1	0.51	3.1	0.20	0.66	0.24	20	
21 A	13.78	13.78	33.173	24.822	312.3	0.067	5.96	101.1	3.1	0.51	3.1	0.20	0.67	0.25	21	219
30 ISL	13.69 D	13.69	33.194 D	24.857	309.2	0.095	5.94	100.5	3.4	0.54	3.5	0.23	0.73	0.28	30	
31 A	13.69	13.69	33.194	24.857	309.3	0.098	5.94	100.5	3.4	0.54	3.5	0.23	0.73	0.28	31	218
41 A	13.66	13.65	33.215	24.880	307.4	0.129	5.97	101.0	3.7	0.56	3.9	0.24	0.72	0.29	41	217
50	13.02	13.01	33.172	24.975	298.5	0.156	5.79	96.6	4.3	0.65	5.0	0.31	0.50	0.34	50	216
58 A	11.69	11.68	33.124	25.192	277.9	0.179	5.41	87.8	7.0	0.92	9.2	0.22	0.22	0.19	58	215
64	11.44	11.43	33.213	25.307	267.1	0.195	5.14	83.0	9.3	1.12	12.0	0.05	0.14	0.15	64	214
70	11.23	11.22	33.358	25.458	252.9	0.211	4.81	77.4	12.1	1.21	14.4	0.04	0.10	0.10	70	213
75 ISL	11.30 D	11.29	33.500 D	25.556	243.7	0.223	4.44	71.6	14.6	1.34	16.6	0.03	0.10	0.11	75	
84	10.80	10.79	33.605	25.727	227.6	0.245	3.83	61.1	18.3	1.56	19.9	0.03	0.09	0.12	84	212
100	10.38	10.37	33.658	25.842	217.0	0.280	3.56	56.3	20.3	1.65	21.3	0.03	0.06	0.11	100	211
119	9.80	9.79	33.826	26.071	195.5	0.319	2.86	44.7	25.3	1.86	24.7	0.02	0.02	0.08	120	210
125 ISL	9.73 D	9.72	33.848 D	26.100	192.8	0.331	2.88	45.0	26.3	1.87	25.3	0.02	0.01	0.07	126	
139	9.05	9.04	33.865	26.224	181.2	0.357	2.93	45.1	28.0	1.90	26.0	0.02	0.00	0.04	140	209
150 ISL	8.92 D	8.90	33.903 D	26.275	176.6	0.377	2.96	45.4	28.7	1.90	26.1	0.02	0.00	0.03	151	
170	8.61	8.59	33.938	26.351	169.7	0.411	3.01	45.9	30.4	1.89	26.2	0.03	0.00	0.02	171	208
199	8.20	8.18	34.003	26.464	159.3	0.459	2.25	34.0	37.5	2.16	30.1	0.02	0.01	0.02	200	207
200 ISL	8.14 D	8.12	34.019 D	26.486	157.2	0.461	2.24	33.8	37.6	2.17	30.2	0.02			201	
229	7.96	7.94	34.035	26.526	153.9	0.506	2.00	30.0	41.2	2.30	31.7	0.03			230	206
250 ISL	7.65 D	7.63	34.066 D	26.595	147.5	0.537	1.80	26.8	44.6	2.39	32.9	0.03			251	
269	7.51	7.48	34.069	26.618	145.6	0.565	1.62	24.1	48.0	2.47	34.0	0.02			271	205
300 ISL	7.12 D	7.09	34.091 D	26.690	139.1	0.609	1.40	20.6	53.9	2.59	35.6	0.01			302	
318	6.80	6.77	34.092	26.735	134.9	0.634	1.28	18.7	57.3	2.66	36.5	0.01			320	204
377	6.29	6.26	34.140	26.841	125.4	0.711	0.89	12.9	67.2	2.86	38.7	0.01			379	203
400 ISL	6.35 D	6.31	34.184 D	26.868	123.2	0.739	0.77	11.1	69.7	2.92	39.2	0.01			403	
437	6.11	6.07	34.196	26.908	119.7	0.784	0.61	8.8	73.0	2.99	39.8	0.01			440	202
500 ISL	6.01 D	5.97	34.265 D	26.976	114.1	0.858	0.40	5.7	77.9	3.08	40.3	0.01			503	
511	5.99	5.95	34.271	26.984	113.5	0.871	0.36	5.2	78.7	3.10	40.4	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 8.9 N	121 9.4 W	15/11/07	2249 UTC	2236 m	330 20 kn	320 05 07	1	1013.4 mb	16.1 C	14.8 C	17m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.65	16.65	33.036	24.090	381.5	0.000	5.69	102.1	1.5	0.30	0.0	0.00	0.22	0.06	0	
2	16.65	16.65	33.036	24.090	381.6	0.008	5.69	102.1	1.5	0.30	0.0	0.00	0.22	0.06	2	221
10	16.65	16.65	33.042	24.095	381.3	0.038	5.67	101.8	1.5	0.30	0.0	0.00	0.22	0.06	10	220
20	16.65	16.65	33.037	24.091	382.0	0.076	5.68	102.0	1.4	0.29	0.0	0.00	0.23	0.07	20	219
30	16.63	16.63	33.038	24.097	381.8	0.114	5.69	102.1	1.4	0.29	0.0	0.00	0.24	0.07	30	218
35	15.55	15.54	33.131	24.413	351.8	0.133	5.92	104.0	1.5	0.33	0.0	0.02	0.71	0.31	35	217
40	14.95	14.94	33.144	24.554	338.4	0.150	5.89	102.3	1.9	0.40	0.5	0.07	0.72	0.40	40	216
50	13.87	13.86	33.055	24.713	323.5	0.183	5.93	100.7	2.5	0.48	1.0	0.15	0.48	0.30	50	215
60	13.17	13.16	33.116	24.902	305.7	0.215	5.83	97.6	3.6	0.61	3.1	0.34	0.32	0.23	60	214
70	13.29	13.28	33.351	25.060	290.9	0.244	5.66	95.1	4.6	0.74	5.1	0.43	0.35	0.32	70	213
75 ISL	12.46 D	12.45	33.279 D	25.168	280.7	0.259	5.61	92.6	4.8	0.75	5.5	0.33	0.28	0.28	75	
85	11.28	11.27	33.109	25.255	272.5	0.286	5.47	87.9	5.5	0.76	6.5	0.07	0.11	0.14	85	212
100	10.98	10.97	33.390	25.528	246.9	0.325	4.94	79.0	8.8	0.93	10.3	0.02	0.03	0.04	100	211
119	10.17	10.16	33.579	25.816	219.7	0.370	4.33	68.1	14.8	1.27	16.2	0.02	0.01	0.02	120	210
125 ISL	9.64 D	9.63	33.691 D	25.993	203.0	0.382	4.05	63.0	17.5	1.41	18.4	0.02	0.01	0.02	126	
139	9.31	9.29	33.777	26.114	191.7	0.410	3.43	53.0	23.6	1.71	23.2	0.01	0.01	0.02	140	209
150 ISL	8.89 D	8.87	33.837 D	26.228	181.0	0.431	3.14	48.1	26.7	1.85	25.3	0.02	0.01	0.02	151	
168	8.68	8.66	33.891	26.303	174.2	0.462	2.86	43.6	30.3	1.97	27.1	0.03	0.00	0.02	169	208
199	8.41	8.39	33.981	26.415	164.0	0.515	2.62	39.7	34.3	2.05	28.5	0.01	0.00	0.01	200	207
200 ISL	8.38 D	8.36	33.985 D	26.423	163.3	0.517	2.61	39.6	34.5	2.05	28.6	0.01			201	
229	8.01	7.99	34.031	26.515	155.0	0.563	2.29	34.4	39.9	2.20	30.6	0.01			230	206
250 ISL	7.83 D	7.81	34.066 D	26.569	150.1	0.595	2.20	32.9	43.7	2.28	31.7	0.02			251	
268	7.33	7.30	34.038	26.619	145.4	0.621	2.11	31.2	47.2	2.36	32.6	0.02			270	205
300 ISL	6.83 D	6.80	34.063 D	26.708	137.2	0.667	1.64	24.0	55.0	2.55	35.3	0.01			302	
318	6.62	6.59	34.076	26.746	133.7	0.691	1.35	19.7	59.4	2.66	36.8	0.01			320	204
377	6.17	6.14	34.125	26.844	125.0	0.767	0.89	12.8	68.9	2.92	39.2	0.01			379	203
400 ISL	6.00 D	5.97	34.139 D	26.877	122.0	0.796	0.78	11.2	72.1	2.97	39.8	0.01			403	
438	5.78	5.74	34.164	26.924	117.9	0.841	0.65	9.3	77.1	3.01	40.7	0.01			441	202
500 ISL	5.38 D	5.34	34.178 D	26.984	112.6	0.913	0.54	7.6	84.6	3.08	42.0	0.01			503	
511	5.32	5.28	34.180	26.993	111.8	0.925	0.52	7.3	85.9	3.09	42.2	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 48.8 N	121 50.3 W	16/11/07	0514 UTC	3631 m	340 24 kn			1016.4 mb	15.2 C	14.7 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.99	16.99	33.202	24.138	376.9	0.000	5.60	101.3	1.8	0.27	0.1	0.00	0.15	0.04	0	
3	16.99	16.99	33.202	24.138	377.0	0.011	5.60	101.3	1.8	0.27	0.1	0.00	0.15	0.04	3	220
10	17.00	17.00	33.203	24.137	377.3	0.038	5.61	101.5	1.6	0.27	0.2	0.00	0.15	0.04	10	219
20	16.99	16.99	33.198	24.136	377.8	0.075	5.61	101.5	1.6	0.27	0.2	0.00	0.17	0.04	20	218
30	14.78	14.78	33.058	24.524	341.0	0.111	6.06	104.8	1.7	0.32	0.2	0.01	0.50	0.21	30	217
40	14.27	14.26	33.062	24.635	330.6	0.145	5.94	101.7	2.2	0.40	1.0	0.07	0.39	0.21	40	216
50	12.95	12.94	32.975	24.836	311.7	0.177	5.88	97.9	2.9	0.49	1.8	0.21	0.32	0.24	50	215
60	12.00	11.99	32.901	24.961	299.9	0.208	5.83	95.1	3.0	0.54	2.4	0.22	0.24	0.20	60	214
70	11.85	11.84	33.009	25.073	289.5	0.237	5.64	91.7	4.1	0.62	4.6	0.06	0.14	0.11	70	213
75 ISL	10.74 D	10.73	32.864 D	25.160	281.2	0.251	5.52	87.6	4.4	0.64	5.3	0.05	0.11	0.10	75	
85	12.08	12.07	33.336	25.284	269.9	0.279	5.24	85.8	6.1	0.76	7.6	0.03	0.09	0.09	85	212
100	11.00	10.99	33.369	25.508	248.8	0.318	4.65	74.4	13.6	1.33	16.4	0.02	0.09	0.10	100	211
120	9.74	9.73	33.429	25.771	223.9	0.365	4.39	68.4	15.9	1.36	17.3	0.03	0.02	0.04	121	210
125 ISL	9.51 D	9.50	33.546 D	25.901	211.7	0.376	4.04	62.6	18.3	1.51	19.3	0.03	0.02	0.04	126	
140	9.74	9.72	33.783	26.048	198.1	0.407	2.92	45.6	26.1	1.98	25.9	0.01	0.01	0.05	141	209
150 ISL	9.37 D	9.35	33.868 D	26.175	186.1	0.426	2.54	39.3	28.6	2.06	26.9	0.01	0.01	0.04	151	
168	9.29	9.27	33.945	26.249	179.5	0.459	2.19	33.9	31.2	2.20	28.6	0.01	0.00	0.03	169	208
200	8.77	8.75	34.002	26.377	167.9	0.514	2.06	31.5	34.8	2.24	30.1	0.01	0.00	0.04	201	207
229	8.13	8.11	34.016	26.485	157.8	0.562	2.35	35.4	38.1	2.20	30.1	0.01			230	206
250 ISL	7.87 D	7.85	34.036 D	26.540	152.9	0.594	2.10	31.5	42.2	2.32	31.6	0.01			251	
269	7.59	7.56	34.048	26.590	148.3	0.623	1.79	26.7	46.3	2.46	33.2	0.01			271	205
300 ISL	7.21 D	7.18	34.076 D	26.666	141.4	0.668	1.71	25.2	51.6	2.57	34.5	0.01			302	
318	6.87	6.84	34.053	26.695	138.8	0.693	1.69	24.7	54.6	2.62	35.2	0.01			320	204
378	6.11	6.08	34.087	26.822	127.0	0.773	1.18	17.0	66.4	2.86	38.5	0.01			380	203
400 ISL	5.96 D	5.93	34.101 D	26.852	124.4	0.800	1.03	14.8	70.0	2.93	39.2	0.01			403	
437	5.73	5.69	34.134	26.907	119.5	0.846	0.82	11.7	75.6	3.02	40.2	0.01			440	202
500 ISL	5.40 D	5.36	34.183 D	26.986	112.5	0.919	0.58	8.2	84.3	3.13	41.9	0.01			503	
513	5.27	5.23	34.179	26.998	111.3	0.933	0.53	7.5	86.1	3.15	42.2	0.01			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 29.4 N	122 31.9 W	16/11/07	1200 UTC	3989 m	340 23 kn			1017.3 mb	16.0 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.39	16.39	32.979	24.106	380.0	0.000	5.69	101.6	1.4	0.29	0.1	0.00	0.19	0.06	0	
1	16.39	16.39	32.979	24.106	380.0	0.004	5.69	101.6	1.4	0.29	0.1	0.00	0.19	0.06	1	221
10	16.39	16.39	32.979	24.106	380.2	0.038	5.68	101.4	1.2	0.29	0.1	0.00	0.18	0.07	10	220
20	16.38	16.38	32.978	24.108	380.4	0.076	5.68	101.4	1.2	0.29	0.2	0.00	0.19	0.06	20	219
30	15.84	15.84	32.959	24.216	370.4	0.114	5.81	102.6	1.2	0.31	0.1	0.00	0.31	0.14	30	218
35	15.20	15.19	33.024	24.407	352.3	0.132	5.93	103.4	1.4	0.32	0.2	0.01	0.50	0.27	35	217
40	14.47	14.46	33.021	24.562	337.7	0.149	5.95	102.2	1.7	0.38	0.4	0.03	0.40	0.26	40	216
50	13.32	13.31	32.943	24.738	321.0	0.182	6.03	101.1	2.2	0.42	0.8	0.09	0.30	0.21	50	215
60	11.97	11.96	32.871	24.943	301.6	0.213	5.93	96.6	2.8	0.51	1.9	0.23	0.25	0.17	60	214
70	11.63	11.62	32.901	25.030	293.6	0.243	5.75	93.0	3.2	0.57	3.4	0.09	0.18	0.19	70	213
75 ISL	11.13 D	11.12	32.919 D	25.134	283.7	0.257	5.65	90.4	3.8	0.61	4.3	0.05	0.14	0.16	75	
85	11.52	11.51	33.111	25.214	276.5	0.285	5.43	87.7	5.4	0.71	6.4	0.02	0.07	0.08	85	212
100	10.95	10.94	33.264	25.435	255.7	0.325	5.04	80.5	8.1	0.91	10.0	0.02	0.04	0.05	100	211
119	10.69	10.68	33.533	25.691	231.8	0.371	4.43	70.5	13.2	1.20	15.2	0.02	0.02	0.04	120	210
125 ISL	10.59 D	10.58	33.573 D	25.740	227.3	0.385	4.20	66.7	15.5	1.33	17.2	0.02	0.01	0.04	126	
139	9.70	9.68	33.649	25.950	207.4	0.416	3.70	57.7	20.8	1.62	21.6	0.02	0.00	0.03	140	209
150 ISL	9.74 D	9.72	33.827 D	26.083	195.1	0.438	3.49	54.5	23.7	1.73	23.5	0.02	0.00	0.03	151	
170	8.73	8.71	33.809	26.231	181.1	0.475	3.25	49.6	27.7	1.84	25.5	0.01	0.00	0.02	171	208
199	8.31	8.29	33.927	26.388	166.5	0.526	2.89	43.7	32.7	1.99	27.8	0.01	0.00	0.01	200	207
200 ISL	8.28 D	8.26	33.936 D	26.400	165.5	0.527	2.88	43.5	32.9	1.99	27.8	0.01			201	
229	7.99	7.97	34.023	26.512	155.3	0.574	2.66	40.0	38.6	2.06	29.1	0.01			230	206
250 ISL	7.89 D	7.86	34.054 D	26.551	151.9	0.606	2.18	32.7	42.4	2.23	30.9	0.01			251	
273	7.73	7.70	34.100	26.611	146.5	0.640	1.68	25.1	46.3	2.42	33.0	0.01			275	205
300 ISL	7.43 D	7.40	34.108 D	26.660	142.1	0.679	1.64	24.3	50.5	2.49	34.3	0.01			302	
319	6.96	6.93	34.061	26.689	139.4	0.706	1.62	23.8	53.6	2.52	35.1	0.01			321	204
377	6.13	6.10	34.069	26.805	128.6	0.784	1.32	19.0	65.0	2.74	38.0	0.01			379	203
400 ISL	6.11 D	6.07	34.107 D	26.838	125.8	0.813	1.11	16.0	68.1	2.82	38.8	0.01			403	
436	5.93	5.89	34.135	26.883	121.9	0.858	0.80	11.5	72.5	2.92	39.8	0.01			439	202
500 ISL	5.50 D	5.46	34.170 D	26.964	114.7	0.933	0.65	9.2	81.6	3.03	41.4	0.01			503	
515	5.30	5.26	34.156	26.976	113.4	0.951	0.61	8.6	83.7	3.06	41.8	0.01			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 9.2 N	123 13.1 W	16/11/07	1903 UTC	4236 m	340 14 kn	350 04 05	2	1020.6 mb	15.7 C	15.0 C	12m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.74	15.74	33.286	24.489	343.5	0.000	5.82	102.8	1.3	0.32	0.2	0.05	0.74	0.21	0	
2 A	15.74	15.74	33.286	24.489	343.5	0.007	5.82	102.8	1.3	0.32	0.2	0.05	0.74	0.21	2	221
7 A	15.74	15.74	33.287	24.490	343.6	0.024	5.84	103.1	1.3	0.32	0.2	0.04	0.74	0.25	7	220
10 ISL	15.72 D	15.72	33.286 D	24.494	343.3	0.034	5.83	102.9	1.3	0.32	0.2	0.04	0.74	0.24	10	
15 A	15.72	15.72	33.289	24.496	343.2	0.052	5.82	102.7	1.2	0.33	0.1	0.05	0.73	0.22	15	219
20 ISL	15.72 D	15.72	33.287 D	24.495	343.5	0.069	5.83	102.9	1.2	0.32	0.2	0.05	0.73	0.22	20	
23 A	15.72	15.72	33.286	24.494	343.7	0.079	5.83	102.9	1.2	0.32	0.2	0.05	0.73	0.22	23	218
30 ISL	15.71 D	15.71	33.287 D	24.497	343.6	0.103	5.81	102.5	1.2	0.32	0.2	0.05	0.69	0.21	30	
31 A	15.71	15.71	33.286	24.496	343.7	0.106	5.81	102.5	1.2	0.32	0.2	0.05	0.68	0.21	31	217
42 A	15.70	15.69	33.287	24.500	343.7	0.144	5.80	102.3	1.2	0.32	0.2	0.05	0.64	0.21	42	216
50 ISL	15.55 D	15.54	33.266 D	24.517	342.3	0.172	5.79	101.8	1.5	0.36	0.6	0.08	0.49	0.20	50	
51	15.48	15.47	33.261	24.529	341.2	0.175	5.79	101.7	1.5	0.36	0.6	0.09	0.47	0.20	51	215
60	12.41	12.40	33.276	25.175	279.7	0.203	5.20	85.7	7.8	1.00	10.8	0.24	0.25	0.23	60	214
70	10.85	10.84	33.099	25.324	265.5	0.230	5.22	83.1	9.3	1.05	11.5	0.04	0.12	0.10	70	213
75 ISL	10.98 D	10.97	33.292 D	25.451	253.6	0.243	4.91	78.5	11.9	1.21	14.2	0.04	0.11	0.10	75	
85	10.88	10.87	33.526	25.651	234.8	0.268	4.13	66.0	17.8	1.57	20.2	0.04	0.10	0.11	85	212
99	10.19	10.18	33.660	25.876	213.7	0.299	3.49	55.0	23.0	1.82	23.9	0.04	0.04	0.08	99	211
100 ISL	10.12 D	10.11	33.676 D	25.900	211.4	0.301	3.47	54.6	23.2	1.83	24.1	0.04	0.04	0.08	100	
119	9.53	9.52	33.765	26.068	195.7	0.340	3.07	47.7	26.7	1.94	26.3	0.03	0.00	0.05	120	210
125 ISL	9.49 D	9.48	33.800 D	26.102	192.6	0.352	2.84	44.1	28.0	1.99	26.9	0.03	0.00	0.05	126	
139	9.35	9.33	33.914	26.214	182.2	0.378	2.34	36.2	30.7	2.10	28.2	0.02	0.00	0.06	140	209
150 ISL	9.20 D	9.18	33.952 D	26.269	177.3	0.398	2.31	35.7	31.9	2.13	28.7	0.02	0.00	0.05	151	
169	8.86	8.84	33.978	26.343	170.5	0.431	2.25	34.5	33.7	2.18	29.5	0.02	0.00	0.04	170	208
199	8.67	8.65	34.078	26.452	160.7	0.480	1.64	25.0	38.9	2.37	31.8	0.02	0.00	0.04	200	207
200 ISL	8.66 D	8.64	34.085 D	26.459	160.1	0.482	1.64	25.0	39.0	2.37	31.8	0.02			201	
228	8.28	8.26	34.097	26.527	154.0	0.526	1.58	23.9	42.7	2.43	33.0	0.02			229	206
250 ISL	8.14 D	8.11	34.127 D	26.571	150.1	0.559	1.45	21.9	45.6	2.50	34.0	0.02			251	
268	7.86	7.83	34.122	26.609	146.7	0.586	1.36	20.4	48.1	2.55	34.8	0.02			270	205
300 ISL	7.21 D	7.18	34.077 D	26.667	141.4	0.632	1.42	21.0	53.5	2.58	36.1	0.01			302	
318	6.89	6.86	34.067	26.703	138.0	0.657	1.48	21.7	56.5	2.60	36.7	0.01			320	204
378	6.30	6.27	34.072	26.786	130.6	0.738	1.33	19.2	64.2	2.74	38.4	0.01			380	203
400 ISL	6.05 D	6.02	34.077 D	26.822	127.3	0.766	1.18	17.0	67.8	2.83	39.2	0.01			403	
437	5.86	5.82	34.116	26.876	122.4	0.812	0.92	13.2	74.3	2.97	40.5	0.01			440	202
500 ISL	5.26 D	5.22	34.133 D	26.963	114.5	0.887	0.69	9.7	84.9	3.06	42.0	0.01			503	
511	5.21	5.17	34.147	26.980	112.9	0.900	0.65	9.2	86.8	3.07	42.3	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 16.4 N	120 1.6 W	15/11/07	0957 UTC	586 m	300 01 kn			1012.2 mb	16.0 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.52	14.52	33.541	24.951	299.4	0.000	6.44	111.1	4.7	0.27	0.1	0.02	3.23	1.23	0	
2	14.52	14.52	33.541	24.951	299.5	0.006	6.44	111.1	4.7	0.27	0.1	0.02	3.23	1.23	2	224
10	13.76	13.76	33.527	25.099	285.6	0.029	5.43	92.2	7.1	0.70	6.2	0.46	1.64	0.74	10	223
20	12.82	12.82	33.513	25.278	268.9	0.057	4.78	79.6	9.5	1.01	11.1	0.57	2.09	0.48	20	222
30	12.38	12.38	33.530	25.376	259.7	0.084	4.58	75.6	11.3	1.14	13.2	0.13	0.24	0.22	30	221
40	11.97	11.96	33.539	25.462	251.9	0.109	4.42	72.3	12.8	1.26	15.1	0.04	0.13	0.24	40	220
50	11.56	11.55	33.560	25.554	243.3	0.134	4.11	66.7	14.1	1.35	16.7	0.04	0.10	0.21	50	219
60	11.14	11.13	33.610	25.670	232.5	0.158	3.79	60.9	16.3	1.46	18.3	0.03	0.07	0.23	60	218
70	10.92	10.91	33.641	25.734	226.7	0.181	3.64	58.3	17.5	1.54	19.2	0.04	0.05	0.16	70	217
75 ISL	10.61 D	10.60	33.698 D	25.833	217.3	0.192	3.51	55.8	18.6	1.59	19.8	0.04	0.04	0.15	75	
85	10.46	10.45	33.723	25.878	213.2	0.213	3.25	51.5	20.8	1.69	21.1	0.04	0.03	0.14	85	216
99	10.25	10.24	33.777	25.957	206.0	0.243	3.06	48.3	22.3	1.75	22.4	0.03	0.03	0.12	100	215
100 ISL	10.20 D	10.19	33.792 D	25.977	204.1	0.245	3.04	47.9	22.5	1.76	22.5	0.03	0.03	0.12	101	
119	9.87	9.86	33.880	26.102	192.6	0.282	2.67	41.8	26.0	1.92	24.4	0.02	0.01	0.12	120	214
125 ISL	9.80 D	9.79	33.900 D	26.129	190.1	0.294	2.57	40.2	26.9	1.95	24.9	0.02	0.01	0.11	126	
139	9.60	9.58	33.955	26.206	183.1	0.320	2.38	37.1	28.9	2.00	25.9	0.02	0.01	0.09	140	213
150 ISL	9.37 D	9.35	33.982 D	26.265	177.7	0.340	2.32	36.0	30.3	2.05	26.7	0.02	0.01	0.09	151	
169	9.15	9.13	33.996	26.311	173.6	0.373	2.24	34.6	32.4	2.14	27.9	0.02	0.01	0.09	170	212
199	9.04	9.02	34.067	26.385	167.2	0.424	1.84	28.3	35.5	2.27	29.4	0.01	0.01	0.11	200	211
200 ISL	9.00 D	8.98	34.086 D	26.406	165.2	0.426	1.82	28.0	35.7	2.28	29.5	0.01			201	
228	8.91	8.89	34.147	26.469	159.8	0.471	1.19	18.3	40.5	2.47	31.7	0.01			229	210
250 ISL	8.67 D	8.64	34.190 D	26.540	153.3	0.506	0.89	13.6	44.4	2.60	32.9	0.01			252	
268	8.53	8.50	34.194	26.565	151.2	0.533	0.73	11.1	47.6	2.70	33.6	0.01			270	209
300 ISL	8.15 D	8.12	34.215 D	26.640	144.6	0.581	0.62	9.4	53.5	2.81	34.1	0.02			302	
318	7.99	7.96	34.216	26.665	142.4	0.606	0.59	8.9	57.0	2.87	34.2	0.02			320	208
378	7.37	7.33	34.242	26.775	132.5	0.689	0.34	5.0	69.3	3.13	34.7	0.01			380	207
400 ISL	7.04 D	7.00	34.228 D	26.811	129.3	0.718	0.25	3.7	74.2	3.20	34.3	0.01			403	
437	6.88	6.84	34.254	26.853	125.7	0.765	0.12	1.8	83.8	3.32	32.7	0.01			440	206
476	6.65	6.61	34.258	26.888	122.8	0.813	0.03	0.4	96.7	3.53	29.4	0.00			479	205
500 ISL	6.58 D	6.53	34.261 D	26.900	122.0	0.843	0.02	0.3	103.3	3.71	27.1	0.00			504	
511	6.56	6.51	34.260	26.902	121.9	0.856	0.01	0.1	105.6	3.79	26.4	0.00			515	204
534	6.49	6.44	34.257	26.909	121.5	0.884	0.03	0.4	107.3	3.90	26.4	0.00			538	203
556	6.34	6.29	34.239	26.914	121.1	0.911	0.11	1.6	106.6	3.86	27.6	0.04			560	202
571	6.28	6.23	34.227	26.913	121.4	0.929	0.16	2.3	102.0	3.72	29.7	0.01			575	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 15.3 N	119 19.4 W	15/11/07	0037 UTC	24 m	280 13 kn	270 02 08	1	1011.5 mb	17.9 C	15.7 C		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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.04	15.04	33.536	24.835	310.4	0.000	7.04	122.8	4.9	0.25	0.0	0.03	2.49	0.50	0	
1	15.04	15.04	33.536	24.836	310.5	0.003	7.04	122.8	4.9	0.25	0.0	0.03	2.49	0.50	1	205
5	15.08	15.08	33.536	24.827	311.4	0.016	7.01	122.3	5.0	0.26	0.0	0.03	2.49	0.47	5	204
10	14.45	14.45	33.538	24.964	298.5	0.031	5.95	102.5	7.5	0.44	0.2	0.10	5.11	0.63	10	202
10	14.46	14.46	33.538	24.962	298.7	0.031									10	203
15	13.36	13.36	33.524	25.179	278.2	0.045	4.47	75.3	11.9	1.23	6.8	0.60	1.62	0.83	15	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.5 N	119 24.8 W	14/11/07	2232 UTC	39 m	260 06 kn	250 02 09	0	1011.6 mb	19.5 C	15.9 C	9m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.43	15.43	33.535	24.749	318.6	0.000	6.39	112.3	3.2	0.24	0.0	0.04	2.04	0.32	0	
2	15.43	15.43	33.535	24.749	318.7	0.006	6.39	112.3	3.2	0.24	0.0	0.04	2.04	0.32	2	206
5	15.14	15.14	33.535	24.813	312.7	0.016	6.40	111.8	3.1	0.23	0.1	0.04	1.87	0.40	5	205
10	14.70	14.70	33.529	24.904	304.2	0.031	6.28	108.7	3.3	0.27	0.5	0.09	2.95	0.69	10	203
10	14.77	14.77	33.527	24.887	305.8	0.031									10	204
20	13.70	13.70	33.504	25.094	286.4	0.061	5.25	89.1	6.7	0.75	6.7	0.72	0.84	0.46	20	202
30	13.27	13.27	33.488	25.169	279.5	0.089	5.02	84.4	7.5	0.87	8.6	0.70	0.76	0.38	30	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 10.7 N	119 30.5 W	14/11/07	1825 UTC	135 m	290 03 kn	280 01 07	0	1013.3 mb	19.8 C	15.5 C	11m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.67	14.67	33.557	24.932	301.3	0.000	5.78	100.1	5.1	0.48	3.4	0.18	1.25	0.57	0	
1 A	14.67	14.67	33.557	24.932	301.3	0.003	5.78	100.0	5.1	0.48	3.4	0.18	1.25	0.57	1	213
6 A	14.55	14.55	33.557	24.957	299.0	0.018	5.71	98.6	5.4	0.49	3.8	0.20	1.21	0.55	6	212
10	13.99	13.99	33.550	25.070	288.4	0.030	5.33	91.0	6.9	0.67	6.2	0.33	0.86	0.51	10	211
14 A	13.25	13.25	33.553	25.223	273.9	0.041	5.01	84.2	8.6	0.84	8.8	0.41	0.56	0.38	14	210
20 ISL	12.82 D	12.82	33.505 D	25.271	269.5	0.057	4.85	80.8	9.5	0.98	10.9	0.61	0.26	0.26	20	
21 A	12.82	12.82	33.504	25.271	269.6	0.060	4.84	80.6	9.6	1.00	11.1	0.63	0.23	0.25	21	209
28 A	12.57	12.57	33.509	25.323	264.7	0.079	4.71	78.0	10.4	1.12	12.1	0.39	0.19	0.21	28	208
30 ISL	12.58 D	12.58	33.524 D	25.333	263.8	0.084	4.69	77.7	10.6	1.13	12.3	0.35	0.18	0.21	30	
40 A	12.21	12.20	33.526	25.406	257.2	0.110	4.52	74.3	12.0	1.16	13.8	0.21	0.15	0.19	40	207
49	11.57	11.56	33.565	25.556	243.1	0.133	4.12	66.8	14.2	1.33	16.4	0.12	0.13	0.20	49	206
50 ISL	11.50 D	11.49	33.577 D	25.579	241.0	0.135	4.11	66.6	14.3	1.34	16.5	0.11	0.13	0.20	50	
60	11.19	11.18	33.564	25.625	236.7	0.159	4.00	64.4	14.9	1.38	17.6	0.06	0.08	0.16	60	205
70	10.80	10.79	33.626	25.743	225.7	0.182	3.70	59.1	16.8	1.49	19.3	0.06	0.06	0.12	70	204
75 ISL	10.64 D	10.63	33.674 D	25.809	219.6	0.193	3.59	57.1	17.7	1.53	20.0	0.05	0.05	0.11	75	
85	10.46	10.45	33.704	25.864	214.6	0.215	3.39	53.7	19.6	1.61	21.2	0.03	0.03	0.10	85	203
99	10.07	10.06	33.811	26.014	200.5	0.244	2.99	47.0	23.5	1.77	23.1	0.04	0.01	0.08	100	202
100 ISL	10.05 D	10.04	33.818 D	26.023	199.7	0.246	2.98	46.8	23.6	1.77	23.2	0.04	0.01	0.08	101	
120	9.91	9.90	33.868	26.086	194.1	0.285	2.75	43.1	26.0	1.85	24.3	0.06	0.01	0.11	121	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 0711 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 52.7 N	120 8.1 W	14/11/07	1228 UTC	102 m	330 01 kn			1012.2 mb	16.9 C	14.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.74	14.74	33.563	24.921	302.3	0.000	5.61	97.2	4.7	0.54	3.7	0.19	1.08	0.47	0	
1	14.74	14.74	33.563	24.921	302.3	0.003	5.61	97.2	4.7	0.54	3.7	0.19	1.08	0.47	1	211
10	14.33	14.33	33.557	25.004	294.7	0.030	5.48	94.2	5.5	0.60	4.9	0.22	0.97	0.37	10	209
10	14.31	14.31	33.561	25.011	294.0	0.030									10	210
20	14.13	14.13	33.555	25.045	291.1	0.059	5.34	91.4	6.5	0.66	5.9	0.22	0.85	0.41	20	208
30	13.57	13.57	33.543	25.151	281.2	0.088	5.15	87.1	7.7	0.79	7.7	0.24	0.72	0.34	30	207
40	11.80	11.79	33.543	25.496	248.5	0.114	4.33	70.6	12.9	1.24	15.0	0.14	0.25	0.24	40	206
49	11.45	11.44	33.551	25.568	242.0	0.136	4.16	67.3	14.0	1.32	16.5	0.10	0.17	0.21	49	205
50 ISL	11.40 D	11.39	33.557 D	25.581	240.7	0.139	4.15	67.1	14.1	1.32	16.5	0.10	0.17	0.21	50	
60	11.39	11.38	33.571	25.594	239.7	0.163	4.07	65.8	14.7	1.35	16.9	0.11	0.15	0.19	60	204
70	11.40	11.39	33.602	25.617	237.8	0.187	3.99	64.5	15.4	1.35	16.9	0.13	0.18	0.22	70	203
75 ISL	11.38 D	11.37	33.621 D	25.635	236.2	0.198	3.96	64.0	15.8	1.36	17.1	0.13	0.18	0.21	75	
84	11.29	11.28	33.626	25.656	234.4	0.220	3.91	63.1	16.3	1.40	17.5	0.13	0.16	0.20	84	202
90	11.27	11.26	33.628	25.661	234.1	0.234	3.88	62.6	16.4	1.42	17.7	0.13	0.16	0.21	90	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.8 N	120 24.8 W	14/11/07	0839 UTC	1031 m	340 15 kn			1013.2 mb	17.0 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.02	15.02	33.604	24.892	305.0	0.000	5.62	98.0	3.6	0.53	3.6	0.19	0.58	0.17	0	
2	15.02	15.02	33.604	24.892	305.1	0.006	5.62	98.0	3.6	0.53	3.6	0.19	0.58	0.17	2	221
10	15.02	15.02	33.604	24.893	305.3	0.031	5.62	98.0	3.5	0.52	3.7	0.19	0.59	0.19	10	219
10	15.02	15.02	33.605	24.893	305.2	0.031									10	220
20	14.83	14.83	33.609	24.938	301.3	0.061	5.57	96.8	3.6	0.56	4.0	0.24	0.52	0.21	20	218
30	13.80	13.80	33.588	25.139	282.4	0.090	5.00	85.0	6.2	0.80	8.1	0.36	0.39	0.19	30	217
40	12.46	12.45	33.578	25.399	257.9	0.117	4.41	72.9	10.1	1.09	12.9	0.31	0.30	0.19	40	216
50	11.99	11.98	33.602	25.507	247.8	0.142	4.15	68.0	12.2	1.23	14.9	0.18	0.23	0.14	50	215
60	11.63	11.62	33.624	25.591	240.0	0.167	3.95	64.2	13.8	1.31	16.6	0.11	0.17	0.14	60	214
70	10.83	10.82	33.733	25.821	218.3	0.190	3.42	54.7	18.8	1.55	20.5	0.05	0.13	0.15	70	213
75 ISL	10.25 D	10.24	33.809 D	25.981	203.2	0.200	3.18	50.2	21.1	1.65	22.1	0.03	0.10	0.14	75	
85	9.93	9.92	33.858	26.074	194.5	0.220	2.82	44.2	24.7	1.79	24.3	0.02	0.05	0.12	85	212
100	9.65	9.64	33.915	26.166	186.1	0.249	2.63	41.0	27.2	1.89	25.3	0.02	0.02	0.10	101	211
120	9.47	9.46	33.962	26.232	180.2	0.285	2.47	38.4	29.2	1.98	26.4	0.02	0.01	0.10	121	210
125 ISL	9.44 D	9.43	33.977 D	26.249	178.7	0.294	2.39	37.1	30.0	2.01	26.7	0.02	0.01	0.10	126	
139	9.30	9.28	34.020	26.305	173.6	0.319	2.19	33.9	32.3	2.10	27.5	0.02	0.01	0.08	140	209
150 ISL	9.04 D	9.02	34.036 D	26.360	168.6	0.338	2.19	33.7	33.4	2.11	28.1	0.02	0.01	0.08	151	
169	8.82	8.80	34.039	26.397	165.3	0.369	2.18	33.4	34.7	2.12	29.1	0.01	0.00	0.07	170	208
199	8.64	8.62	34.075	26.454	160.5	0.418	2.00	30.5	37.1	2.18	30.1	0.01	0.00	0.04	200	207
200 ISL	8.64 D	8.62	34.077 D	26.455	160.4	0.420	2.00	30.5	37.2	2.18	30.1	0.01			201	
229	8.32	8.30	34.081	26.508	155.8	0.466	1.87	28.3	40.1	2.25	31.5	0.01			230	206
250 ISL	7.93 D	7.90	34.093 D	26.576	149.5	0.498	1.71	25.7	43.9	2.36	32.9	0.01			252	
268	7.69	7.66	34.098	26.615	146.0	0.524	1.57	23.4	47.4	2.45	34.0	0.01			270	205
300 ISL	7.27 D	7.24	34.112 D	26.686	139.6	0.570	1.36	20.1	52.2	2.54	35.3	0.01			302	
318	7.17	7.14	34.121	26.707	137.8	0.595	1.26	18.6	54.7	2.58	35.9	0.01			320	204
377	6.49	6.46	34.130	26.807	128.8	0.674	0.98	14.2	64.3	2.76	38.4	0.01			379	203
400 ISL	6.11 D	6.07	34.129 D	26.855	124.2	0.703	0.90	13.0	68.5	2.83	39.4	0.01			403	
437	5.81	5.77	34.134	26.897	120.5	0.748	0.77	11.0	74.7	2.93	40.8	0.00			440	202
500 ISL	5.60 D	5.56	34.187 D	26.965	114.7	0.822	0.52	7.4	80.2	3.03	41.4	0.00			503	
512	5.68	5.64	34.214	26.977	113.8	0.836	0.47	6.7	81.3	3.05	41.5	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.2 N	120 45.6 W	14/11/07	0356 UTC	1533 m	340 23 kn			1014.4 mb	17.0 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.72	14.72	33.199	24.645	328.6	0.000	5.96	103.0	1.7	0.36	1.1	0.09	0.49	0.16	0	
2	14.72	14.72	33.199	24.645	328.6	0.007	5.96	103.0	1.7	0.36	1.1	0.09	0.49	0.16	2	221
10 ISL	14.73 D	14.73	33.200 D	24.644	329.0	0.033	5.96	103.1	1.7	0.35	1.0	0.09	0.48	0.15	10	
11	14.73	14.73	33.201	24.645	328.9	0.036	5.96	103.1	1.7	0.35	1.0	0.09	0.48	0.15	11	219
11	14.73	14.73	33.200	24.644	329.0	0.036									11	220
20 ISL	14.73 D	14.73	33.201 D	24.645	329.2	0.066	5.96	103.1	1.7	0.35	1.0	0.09	0.50	0.16	20	
21	14.73	14.73	33.204	24.647	329.0	0.069	5.96	103.1	1.7	0.35	1.0	0.09	0.50	0.16	21	218
30	14.67	14.67	33.196	24.654	328.6	0.099	5.96	102.9	1.6	0.35	1.1	0.09	0.53	0.18	30	217
40	13.99	13.98	33.092	24.717	322.9	0.131	5.97	101.6	2.0	0.39	1.1	0.10	0.43	0.20	40	216
49	12.37	12.36	32.935	24.917	303.9	0.159	5.80	95.3	2.8	0.49	2.1	0.11	0.29	0.21	49	215
50 ISL	12.35 D	12.34	32.932 D	24.919	303.8	0.162	5.79	95.1	2.9	0.50	2.2	0.10	0.28	0.21	50	
60	11.82	11.81	32.925	25.013	295.0	0.192	5.69	92.4	3.3	0.57	3.3	0.05	0.20	0.19	60	214
71	11.20	11.19	32.896	25.104	286.5	0.224	5.67	90.9	3.9	0.63	4.5	0.05	0.13	0.16	71	213
75 ISL	11.11 D	11.10	33.038 D	25.230	274.6	0.236	5.52	88.4	5.3	0.73	6.4	0.05	0.10	0.13	75	
85	10.46	10.45	33.174	25.450	253.8	0.262	5.10	80.6	9.2	0.99	11.3	0.05	0.04	0.05	85	212
100	10.16	10.15	33.273	25.579	241.8	0.299	4.85	76.2	11.4	1.10	13.3	0.03	0.02	0.03	100	211
121	10.19	10.18	33.620	25.845	217.1	0.347	3.84	60.5	19.6	1.64	21.3	0.03	0.02	0.04	122	210
125 ISL	9.98 D	9.97	33.641 D	25.897	212.2	0.356	3.77	59.1	20.3	1.65	21.8	0.03	0.02	0.04	126	
140	9.46	9.44	33.668	26.004	202.2	0.387	3.59	55.6	22.2	1.71	22.7	0.02	0.01	0.02	141	209
150 ISL	9.14 D	9.12	33.798 D	26.158	187.8	0.407	3.36	51.8	24.3	1.79	24.0	0.02	0.01	0.02	151	
169	8.94	8.92	33.865	26.242	180.1	0.442	2.96	45.4	28.1	1.92	26.2	0.03	0.00	0.02	170	208
200 ISL	8.63 D	8.61	33.978 D	26.379	167.5	0.495	2.91	44.4	31.0	1.88	26.7	0.02	0.00	0.02	201	
201	8.64	8.62	33.974	26.375	168.0	0.497	2.91	44.4	31.1	1.88	26.7	0.02	0.00	0.02	202	207
228	7.93	7.91	34.005	26.506	155.7	0.541	2.41	36.2	38.9	2.13	30.3	0.02			229	206
250 ISL	7.78 D	7.76	34.053 D	26.566	150.3	0.574	2.02	30.2	43.6	2.28	32.2	0.02			251	
270	7.54	7.51	34.063	26.609	146.5	0.604	1.72	25.6	46.9	2.39	33.5	0.02			272	205
300 ISL	7.21 D	7.18	34.084 D	26.672	140.8	0.647	1.48	21.9	50.7	2.48	34.8	0.02			302	
321	7.14	7.11	34.087	26.685	139.9	0.677	1.39	20.5	53.1	2.53	35.5	0.02			323	204
378	6.45	6.42	34.093	26.783	131.0	0.754	1.17	17.0	62.3	2.71	37.7	0.02			380	203
400 ISL	6.24 D	6.20	34.106 D	26.820	127.6	0.782	0.98	14.1	65.1	2.78	38.3	0.02			403	
437	6.31	6.27	34.195	26.882	122.4	0.829	0.65	9.4	69.6	2.90	39.1	0.02			440	202
500 ISL	5.74 D	5.70	34.234 D	26.985	112.9	0.903	0.43	6.1	79.5	3.04	40.9	0.02			503	
511	5.71	5.67	34.244	26.997	111.9	0.915	0.39	5.6	81.2	3.06	41.2	0.02			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 14.9 N	121 27.0 W	13/11/07	2100 UTC	3803 m	350 13 kn	300 08 07	0	1016.9 mb	18.1 C	15.1 C	23m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.50	16.50	32.955	24.062	384.1	0.000	5.70	102.0	1.3	0.30	0.0	0.00	0.16	0.05	0	
2	16.50	16.50	32.955	24.062	384.2	0.008	5.70	102.0	1.3	0.30	0.0	0.00	0.16	0.05	2	221
10	16.51	16.51	32.957	24.062	384.5	0.038	5.70	102.0	1.3	0.30	0.0	0.00	0.17	0.05	10	219
10	16.51	16.51				0.038									10	220
20	16.45	16.45	32.959	24.078	383.3	0.077	5.71	102.0	1.2	0.30	0.0	0.00	0.18	0.05	20	218
29	16.08	16.08	32.994	24.189	372.9	0.111	5.78	102.6	1.3	0.31	0.1	0.01	0.27	0.10	29	217
30 ISL	16.00 D	16.00	33.034 D	24.238	368.3	0.115	5.79	102.6	1.4	0.32	0.2	0.02	0.30	0.12	30	
40	14.70	14.69	33.176	24.633	330.9	0.150	5.87	101.4	1.9	0.43	1.4	0.11	0.53	0.24	40	216
49	14.54	14.53	33.193	24.680	326.7	0.179	5.83	100.4	2.1	0.48	2.0	0.14	0.48	0.20	49	215
50 ISL	14.50 D	14.49	33.195 D	24.690	325.7	0.182	5.84	100.5	2.1	0.48	1.9	0.14	0.48	0.21	50	
59	12.63	12.62	32.897	24.838	311.7	0.211	5.98	98.8	2.4	0.45	0.9	0.13	0.43	0.25	59	214
70	11.23	11.22	32.814	25.035	293.1	0.244	5.95	95.4	3.1	0.60	3.1	0.21	0.20	0.15	70	213
75 ISL	10.80 D	10.79	32.845 D	25.135	283.6	0.259	5.75	91.3	3.8	0.64	4.3	0.15	0.13	0.12	75	
84	11.54	11.53	33.284	25.344	264.0	0.283	5.27	85.3	6.1	0.77	7.4	0.03	0.06	0.07	84	212
100	10.27	10.26	33.457	25.704	230.0	0.323	4.36	68.7	15.6	1.37	17.4	0.02	0.02	0.04	100	211
119	9.65	9.64	33.818	26.090	193.7	0.363	2.99	46.6	25.4	1.84	24.6	0.02	0.01	0.07	120	210
125 ISL	9.56 D	9.55	33.886 D	26.158	187.3	0.375	2.75	42.8	27.2	1.92	25.5	0.02	0.01	0.07	126	
139	9.41	9.39	33.968	26.247	179.1	0.400	2.37	36.8	30.2	2.06	26.6	0.02	0.01	0.07	140	209
150 ISL	9.19 D	9.17	34.043 D	26.341	170.4	0.419	2.13	32.9	32.6	2.15	27.7	0.02	0.01	0.06	151	
169	9.00	8.98	34.102	26.418	163.4	0.451	1.84	28.3	36.2	2.26	29.3	0.02	0.00	0.05	170	208
198	8.86	8.84	34.145	26.474	158.6	0.498	1.54	23.6	39.5	2.37	30.6	0.02	0.00	0.04	199	207
200 ISL	8.85 D	8.83	34.151 D	26.481	158.1	0.501	1.52	23.3	39.7	2.38	30.7	0.02			201	
228	8.72	8.70	34.188	26.531	153.9	0.545	1.28	19.6	41.8	2.48	31.9	0.02			229	206
250 ISL	8.62 D	8.59	34.208 D	26.562	151.3	0.578	1.18	18.0	43.2	2.52	32.4	0.02			251	
269	8.55	8.52	34.212	26.576	150.2	0.607	1.13	17.2	44.3	2.54	32.6	0.02			271	205
300 ISL	8.44 D	8.41	34.225 D	26.604	148.2	0.653	1.07	16.3	45.9	2.59	33.0	0.01			302	
317	8.37	8.34	34.228	26.617	147.2	0.678	1.04	15.8	46.7	2.62	33.2	0.01			319	204
377	8.08	8.04	34.237	26.669	143.2	0.765	0.94	14.2	50.4	2.69	34.1	0.01			379	203
400 ISL	7.99 D	7.95	34.240 D	26.685	142.0	0.798	0.90	13.5	51.5	2.71	34.4	0.01			403	
436	7.82	7.78	34.246	26.715	139.7	0.849	0.83	12.4	53.7	2.76	35.0	0.01			439	202
500 ISL	7.22 D	7.17	34.263 D	26.815	130.8	0.935	0.60	8.9	62.6	2.90	37.0	0.01			503	
511	7.08	7.03	34.269	26.839	128.5	0.950	0.56	8.2	64.1	2.92	37.4	0.01			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 54.5 N	122 7.9 W	13/11/07	1404 UTC	4184 m	350 27 kn			1018.3 mb	16.2 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.56	16.56	33.049	24.120	378.6	0.000									0	
1	16.56	16.56	33.049	24.121	378.6	0.004									1	221
10	16.57	16.57	33.049	24.119	379.1	0.038	5.69	102.0	1.2	0.30	0.1	0.00	0.25	0.08	10	220
15	16.57	16.57	33.048	24.118	379.3	0.057	5.68	101.8	1.2	0.30	0.2	0.01	0.25	0.08	15	219
20 ISL	16.56 D	16.56	33.047 D	24.120	379.3	0.076	5.69	102.0	1.2	0.29	0.3	0.01	0.25	0.08	20	
30	16.57	16.57	33.054	24.123	379.3	0.114	5.70	102.2	1.2	0.28	0.4	0.00	0.25	0.08	30	218
46	16.22	16.21	33.046	24.198	372.7	0.174	5.79	103.0	1.2	0.30	0.4	0.01	0.36	0.15	46	217
50 ISL	15.19 D	15.18	33.088 D	24.459	347.8	0.188	5.91	103.1	1.4	0.32	0.4	0.02	0.34	0.16	50	
55	14.80	14.79	33.108	24.559	338.4	0.205	6.04	104.5	1.6	0.35	0.5	0.03	0.31 A	0.17 A	55	216
65	14.01	14.00	33.055	24.685	326.6	0.239	6.07	103.3	1.7	0.35	0.5	0.03	0.27	0.19	65	215
75	12.66	12.65	32.995	24.909	305.4	0.270	5.80	96.0	2.5	0.47	1.8	0.13	0.23	0.15	75	214
85	12.24	12.23	33.012	25.003	296.7	0.300	5.68	93.2	3.0	0.54	3.2	0.06	0.12	0.13	85	213
94	12.61	12.60	33.210	25.086	289.1	0.327	5.55	91.8	3.2	0.51	3.5	0.04	0.10	0.12	94	212
100 ISL	12.16 D	12.15	33.283 D	25.229	275.6	0.344	5.44	89.2	4.1	0.58	4.9	0.03	0.08	0.10	100	
109	11.96	11.95	33.357	25.324	266.7	0.368	5.25	85.8	5.8	0.72	7.5	0.02	0.06	0.07	109	211
125	11.34	11.32	33.475	25.530	247.3	0.409	4.95	79.9	8.5	0.89	10.3	0.02	0.04	0.05	126	210
144	9.88	9.86	33.554	25.846	217.4	0.453	4.02	62.9	18.6	1.51	20.2	0.01	0.00	0.02	145	209
150 ISL	9.68 D	9.66	33.577 D	25.897	212.6	0.466	3.82	59.5	20.4	1.60	21.7	0.01	0.00	0.02	151	
169	9.36	9.34	33.745	26.081	195.5	0.505	3.37	52.1	24.2	1.76	24.2	0.01	0.00	0.02	170	208
199	8.85	8.83	33.925	26.304	174.8	0.561	2.93	44.9	29.7	1.90	26.7	0.01	0.00	0.02	200	207
200 ISL	8.73 D	8.71	33.939 D	26.333	171.9	0.562	2.93	44.8	29.9	1.90	26.8	0.01			201	
230	8.22	8.20	33.993	26.454	160.9	0.612	2.86	43.2	35.4	2.00	28.6	0.01			231	206
250 ISL	7.97 D	7.94	34.027 D	26.518	155.0	0.644	2.45	36.8	39.8	2.15	30.6	0.01			251	
269	7.84	7.81	34.062	26.565	150.9	0.673	2.00	30.0	43.9	2.31	32.5	0.00			270	205
300 ISL	7.64 D	7.61	34.143 D	26.658	142.5	0.718	1.55	23.1	49.7	2.49	34.6	0.00			302	
318	7.41	7.38	34.123	26.675	141.0	0.744	1.36	20.2	52.6	2.57	35.5	0.00			320	204
377	7.11	7.07	34.190	26.771	132.7	0.825	0.89	13.1	59.4	2.75	37.3	0.00			379	203
400 ISL	6.84 D	6.80	34.197 D	26.813	128.8	0.855	0.78	11.4	62.2	2.81	37.9	0.00			402	
437	6.64	6.60	34.218	26.857	125.1	0.902	0.64	9.3	67.2	2.91	38.8	0.00			440	202
500 ISL	6.00 D	5.96	34.247 D	26.963	115.3	0.977	0.42	6.0	77.6	3.08	40.8	0.00			503	
512	5.98	5.94	34.265	26.980	113.9	0.991	0.38	5.5	79.6	3.11	41.2	0.00			515	201

A) 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 0711 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 34.4 N	122 48.9 W	13/11/07	0649 UTC	4258 m	340 19 kn			1020.4 mb	17.0 C	14.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.02	17.02	33.033	24.001	389.9	0.000	5.62	101.6	1.4	0.30	0.2	0.00	0.19	0.05	0	
2	17.02	17.02	33.033	24.001	390.0	0.008	5.62	101.6	1.4	0.30	0.2	0.00	0.19	0.05	2	221
10 ISL	17.02 D	17.02	33.032 D	24.001	390.3	0.039	5.61	101.4	1.4	0.30	0.2	0.00	0.19	0.05	10	
11	17.03	17.03	33.033	23.999	390.5	0.043	5.61	101.4	1.4	0.30	0.2	0.00	0.19	0.05	11	219
11	17.03	17.03	33.033	23.999	390.5	0.043									11	220
20	17.03	17.03	33.033	24.000	390.7	0.078	5.61	101.4	1.4	0.30	0.3	0.00	0.18	0.05	20	218
29	17.02	17.02	33.033	24.002	390.8	0.113	5.61	101.4	1.3	0.30	0.4	0.00	0.18	0.05	29	217
30 ISL	16.98 D	16.98	33.030 D	24.010	390.1	0.117	5.62	101.5	1.3	0.30	0.4	0.00	0.19	0.05	30	
40	16.75	16.74	33.029	24.063	385.4	0.156	5.69	102.3	1.2	0.31	0.3	0.00	0.28	0.10	40	216
50 ISL	15.74 D	15.73	33.102 D	24.349	358.3	0.193	6.03	106.3	1.6	0.31	0.2	0.00	0.35	0.21	50	
51	15.71	15.70	33.107	24.359	357.3	0.197	6.06	106.8	1.7	0.31	0.2	0.00	0.35	0.22	51	215
60	14.68	14.67	33.033	24.527	341.6	0.228	6.10	105.3	1.9	0.34	0.2	0.01	0.38	0.23	60	214
70	13.49	13.48	32.936	24.699	325.3	0.261	6.03	101.5	2.3	0.42	0.6	0.09	0.29	0.23	70	213
75 ISL	13.16 D	13.15	32.956 D	24.781	317.7	0.278	5.95	99.5	2.6	0.46	1.2	0.12	0.25	0.22	75	
84	12.62	12.61	32.943	24.877	308.7	0.306	5.78	95.5	3.2	0.54	2.6	0.15	0.18	0.18	84	212
100 ISL	11.64 D	11.63	32.952 D	25.068	290.7	0.354	5.60	90.6	4.5	0.67	5.4	0.03	0.10	0.11	100	
101	11.65	11.64	32.950	25.065	291.0	0.357	5.59	90.5	4.6	0.68	5.6	0.02	0.10	0.11	101	211
121	10.91	10.90	33.104	25.318	267.2	0.412	5.23	83.4	8.2	0.95	10.2	0.01	0.05	0.10	122	210
125 ISL	10.71 D	10.70	33.148 D	25.388	260.7	0.423	5.12	81.3	9.4	1.02	11.5	0.01	0.04	0.08	126	
139	10.25	10.23	33.311	25.594	241.3	0.458	4.62	72.7	14.3	1.30	16.1	0.01	0.02	0.03	140	209
150 ISL	10.32 D	10.30	33.556 D	25.774	224.5	0.484	3.96	62.5	18.5	1.53	19.7	0.01	0.02	0.03	151	
169	9.75	9.73	33.795	26.056	197.9	0.524	3.01	47.0	24.6	1.83	24.3	0.00	0.01	0.04	170	208
196	8.96	8.94	33.858	26.234	181.4	0.575	3.17	48.6	27.5	1.83	25.2	0.00	0.00	0.02	197	207
200 ISL	8.91 D	8.89	33.895 D	26.271	177.9	0.582	3.10	47.5	28.3	1.86	25.6	0.00			201	
231	8.55	8.53	33.999	26.409	165.3	0.635	2.39	36.4	34.9	2.10	28.9	0.00			232	206
250 ISL	8.29 D	8.26	34.029 D	26.472	159.6	0.666	2.18	33.0	38.1	2.19	30.2	0.00			251	
268	8.08	8.05	34.050	26.520	155.2	0.695	2.02	30.4	40.9	2.27	31.2	0.00			269	205
300 ISL	7.78 D	7.75	34.103 D	26.606	147.5	0.743	1.62	24.2	46.0	2.43	32.8	0.00			302	
320	7.73	7.70	34.141	26.644	144.3	0.772	1.38	20.6	49.2	2.53	33.8	0.00			322	204
377	7.06	7.02	34.187	26.775	132.3	0.851	0.91	13.4	59.4	2.74	36.6	0.00			379	203
400 ISL	6.90 D	6.86	34.206 D	26.812	129.0	0.881	0.78	11.4	62.9	2.81	37.5	0.00			402	
438	6.51	6.47	34.222	26.877	123.1	0.929	0.61	8.9	68.5	2.91	38.8	0.00			441	202
500 ISL	6.04 D	6.00	34.270 D	26.977	114.1	1.003	0.40	5.8	77.7	3.08	40.4	0.00			503	
511	5.97	5.93	34.273	26.988	113.1	1.015	0.36	5.2	79.3	3.11	40.7	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 29.9 W	12/11/07	2351 UTC	4163 m	350 20 kn	340 07 06	1	1020.5 mb	18.0 C	14.0 C	22m	1/8 CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.83	17.83	33.244	23.970	392.9	0.000	5.49	101.0	1.6	0.29	0.5	0.00	0.11	0.03	0	
2	17.83	17.83	33.244	23.970	393.0	0.008	5.49	101.0	1.6	0.29	0.5	0.00	0.11	0.03	2	222
10	17.83	17.83	33.239	23.966	393.6	0.039	5.50	101.1	1.5	0.29	0.4	0.00	0.11	0.03	10	221
15	17.83	17.83	33.237	23.965	393.9	0.059	5.50	101.1	1.5	0.28	0.5	0.00	0.11	0.03	15	220
20 ISL	17.83 D	17.83	33.236 D	23.965	394.1	0.079	5.50	101.1	1.5	0.28	0.5	0.00	0.11	0.03	20	
30	17.83	17.82	33.237	23.966	394.3	0.118	5.50	101.1	1.5	0.28	0.4	0.00	0.11	0.03	30	219
45	17.82	17.81	33.232	23.965	394.9	0.177	5.50	101.1	1.4	0.29	0.4	0.00	0.12	0.03	45	218
50 ISL	17.71 D	17.70	33.233 D	23.992	392.5	0.197	5.78	106.0	1.4	0.27	0.4	0.00	0.17	0.06	50	
55	16.44	16.43	33.362	24.391	354.6	0.216	6.05	108.3	1.5	0.25	0.4	0.00	0.21	0.09	55	217
66	15.42	15.41	33.322	24.590	335.9	0.254	6.07	106.5	1.6	0.27	0.4	0.00	0.19	0.14	66	216
74	15.03	15.02	33.378	24.718	323.8	0.280	5.95	103.6	1.6	0.29	0.4	0.01	0.24	0.17	74	215
75 ISL	15.06 D	15.05	33.425 D	24.748	321.0	0.283	5.93	103.4	1.6	0.29	0.4	0.01	0.24	0.17	75	
80	14.94	14.93	33.450	24.793	316.9	0.299	5.83	101.4	1.8	0.29	0.6	0.02	0.24	0.17	80	214
84	14.15	14.14	33.294	24.841	312.3	0.312	5.80	99.2	2.3	0.38	1.2	0.12	0.22	0.17	84	213
94	14.55	14.54	33.574	24.973	300.1	0.342	5.58	96.3	2.4	0.35	1.3	0.10	0.17	0.15	94	212
100 ISL	13.55 D	13.54	33.428 D	25.068	291.1	0.360	5.51	93.1	3.0	0.43	2.6	0.09	0.16	0.15	100	
109	13.27	13.25	33.419	25.118	286.5	0.386	5.43	91.2	3.8	0.56	4.5	0.07	0.14	0.16	109	211
125	13.53	13.51	33.692	25.277	271.9	0.431	5.27	89.2	3.5	0.49	3.9	0.03	0.09	0.14	126	210
144	12.31	12.29	33.630	25.470	253.8	0.481	5.09	83.9	5.7	0.67	7.0	0.02	0.04	0.09	145	209
150 ISL	11.87 D	11.85	33.600 D	25.530	248.1	0.496	4.87	79.5	8.0	0.83	9.6	0.02	0.03	0.07	151	
169	10.21	10.19	33.655	25.870	215.8	0.540	4.07	64.1	16.5	1.37	18.4	0.01	0.01	0.02	170	208
198	9.22	9.20	33.857	26.192	185.5	0.598	3.26	50.3	25.4	1.76	24.7	0.01	0.00	0.01	199	207
200 ISL	9.14 D	9.12	33.880 D	26.223	182.6	0.602	3.22	49.6	26.0	1.78	25.0	0.01			201	
229	8.44	8.42	33.948	26.385	167.4	0.653	2.71	41.1	33.2	2.02	28.7	0.01			230	206
250 ISL	8.21 D	8.18	33.998 D	26.460	160.7	0.687	2.44	36.8	36.7	2.13	30.2	0.01			251	
269	8.04	8.01	34.017	26.500	157.1	0.717	2.24	33.7	39.5	2.21	31.2	0.01			270	205
300 ISL	7.54 D	7.51	34.042 D	26.593	148.6	0.765	2.00	29.7	45.2	2.34	32.9	0.01			302	
318	7.39	7.36	34.058	26.627	145.5	0.791	1.88	27.9	48.6	2.41	33.9	0.01			320	204
380	6.73	6.69	34.092	26.745	134.9	0.878	1.34	19.6	58.8	2.67	37.1	0.01			382	203
400 ISL	6.33 D	6.29	34.081 D	26.789	130.6	0.904	1.19	17.2	61.7	2.75	37.9	0.01			402	
437	6.33	6.29	34.140	26.836	126.7	0.952	0.93	13.5	66.9	2.87	39.1	0.01			440	202
500 ISL	5.83 D	5.79	34.191 D	26.940	117.3	1.029	0.61	8.7	76.8	3.00	40.8	0.01			503	
512	5.78	5.74	34.197	26.951	116.3	1.043	0.55	7.9	78.7	3.02	41.1	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 54.8 N	124 11.5 W	12/11/07	1737 UTC	4482 m	360 18 kn	350 06 05	0	1020.0 mb	18.2 C	15.2 C	29m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.98	17.98	33.290	23.969	393.0	0.000	5.49	101.3	1.9	0.27	0.3	0.00	0.12	0.04	0	
2 A	17.98	17.98	33.290	23.969	393.1	0.008	5.49	101.3	1.9	0.27	0.3	0.00	0.12	0.04	2	223
10	17.98	17.98	33.282	23.963	393.9	0.039	5.49	101.3	1.8	0.27	0.3	0.00	0.12	0.05	10	222
15 A	17.98	17.98	33.279	23.961	394.3	0.059	5.48	101.1	1.7	0.28	0.3	0.00	0.12	0.03	15	221
20 ISL	17.97 D	17.97	33.278 D	23.963	394.3	0.079	5.48	101.1	1.7	0.28	0.3	0.00	0.12	0.03	20	
26	17.97	17.97	33.279	23.964	394.4	0.102	5.49	101.2	1.8	0.28	0.2	0.00	0.13	0.03	26	220
30 ISL	17.97 D	17.96	33.279 D	23.964	394.5	0.118	5.49	101.2	1.8	0.28	0.2	0.00	0.13	0.03	30	
38 A	17.97	17.96	33.280	23.965	394.7	0.150	5.50	101.4	1.7	0.28	0.3	0.00	0.12	0.03	38	219
47	17.97	17.96	33.279	23.965	395.0	0.185	5.48	101.1	1.7	0.28	0.3	0.00	0.12	0.04	47	218
50 ISL	17.97 D	17.96	33.278 D	23.964	395.2	0.197	5.49	101.2	1.7	0.27	0.3	0.00	0.12	0.04	50	
57 A	17.94	17.93	33.277	23.971	394.8	0.225	5.50	101.4	1.7	0.24	0.4	0.00	0.13	0.04	57	217
66	16.13	16.12	33.249	24.375	356.4	0.259	6.07	108.0	1.7	0.23	0.3	0.00	0.20	0.12	66	216
74 A	15.31	15.30	33.194	24.516	343.2	0.287	6.08	106.4	1.9	0.26	0.4	0.00	0.23	0.14	74	215
75 ISL	15.23 D	15.22	33.191 D	24.531	341.7	0.290	6.06	105.8	1.9	0.26	0.4	0.00	0.23	0.14	75	
84	15.23	15.22	33.405	24.696	326.3	0.320	5.90	103.2	1.7	0.26	0.4	0.01	0.21	0.14	84	214
94	15.10	15.09	33.476	24.779	318.7	0.352	5.83	101.7	1.8	0.23	0.5	0.01	0.16	0.14	94	213
100 ISL	14.57 D	14.56	33.420 D	24.850	312.0	0.371	5.76	99.4	2.1	0.31	1.2	0.08	0.13	0.13	100	
103 A	14.35	14.34	33.340	24.835	313.5	0.381	5.72	98.2	2.4	0.37	1.7	0.11	0.12	0.12	103	212
113	13.04	13.02	33.211	25.003	297.5	0.411	5.57	93.0	3.7	0.55	4.3	0.07	0.10	0.11	113	211
125 ISL	11.85 D	11.83	33.171 D	25.200	278.8	0.446	5.38	87.6	5.8	0.77	7.9	0.03	0.06	0.07	126	
127	11.85	11.83	33.171	25.200	278.8	0.451	5.34	86.9	6.2	0.80	8.5	0.02	0.05	0.06	128	210
143	11.67	11.65	33.377	25.394	260.8	0.495	4.96	80.5	8.3	0.96	11.4	0.01	0.02	0.04	144	209
150 ISL	11.39 D	11.37	33.404 D	25.466	254.0	0.513	4.79	77.3	9.8	1.06	13.0	0.01	0.02	0.03	151	
169	10.52	10.50	33.501	25.697	232.3	0.559	4.28	67.8	15.0	1.34	17.6	0.00	0.01	0.02	170	208
199	9.36	9.34	33.795	26.121	192.3	0.622	3.29	50.9	24.6	1.75	24.4	0.00	0.00	0.02	200	207
200 ISL	9.32 D	9.30	33.803 D	26.134	191.1	0.624	3.27	50.6	24.8	1.76	24.5	0.00			201	
228	8.83	8.81	33.944	26.322	173.6	0.675	2.84	43.5	30.4	1.93	27.2	0.00			229	206
250 ISL	8.51 D	8.48	34.000 D	26.416	165.0	0.713	2.44	37.1	35.4	2.09	29.2	0.01			251	
270	8.26	8.23	34.062	26.503	157.0	0.745	2.09	31.6	39.8	2.24	30.8	0.01			271	205
300 ISL	7.94 D	7.91	34.092 D	26.574	150.6	0.791	1.66	24.9	44.4	2.41	32.5	0.00			302	
316	8.01	7.98	34.157	26.615	147.1	0.815	1.47	22.1	46.5	2.48	33.2	0.00			318	204
378	7.30	7.26	34.164	26.724	137.3	0.903	1.10	16.3	55.8	2.68	35.9	0.01			380	203
400 ISL	6.90 D	6.86	34.155 D	26.772	132.8	0.933	1.04	15.2	60.1	2.75	37.0	0.01			402	
438	6.34	6.30	34.130	26.827	127.6	0.982	0.95	13.7	67.4	2.87	38.8	0.01			441	202
500 ISL	6.06 D	6.02	34.211 D	26.927	118.8	1.059	0.58	8.3	75.6	3.02	40.2	0.01			503	
511	6.00	5.96	34.216	26.939	117.7	1.072	0.51	7.3	77.1	3.05	40.5	0.01			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 53.3 N	118 29.6 W	10/11/07	0205 UTC	61 m	260 06 kn			1015.4 mb	16.0 C	15.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.38	15.38	33.536	24.761	317.5	0.000	5.86	102.9	4.5	0.36	0.9	0.14	2.09	0.51	0	
1	15.38	15.38	33.536	24.761	317.5	0.003	5.86	102.9	4.5	0.36	0.9	0.14	2.09	0.51	1	208
5	15.38	15.38	33.537	24.762	317.6	0.016	5.84	102.5	4.5	0.34	0.9	0.14	2.25	0.48	5	207
10	15.35	15.35	33.536	24.768	317.2	0.032	5.85	102.6	4.5	0.36	1.0	0.14	2.68	0.52	10	205
10	15.37	15.37	33.536	24.764	317.6	0.032									10	206
20	14.62	14.62	33.476	24.880	306.8	0.063	5.56	96.1	4.8	0.51	3.3	0.30	1.18	0.35	20	204
30	13.06	13.06	33.373	25.122	284.0	0.092	5.04	84.3	7.5	0.91	8.6	0.90	0.48	0.33	30	203
40	12.39	12.38	33.415	25.286	268.6	0.120	4.70	77.5	9.5	1.13	12.1	0.74	0.26	0.28	40	202
50	11.84	11.83	33.514	25.467	251.6	0.146	4.05	66.1	12.8	1.32	16.2	0.79	0.10	0.19	50	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 49.3 N	118 37.7 W	10/11/07	0406 UTC	665 m	330 10 kn			1015.7 mb	16.7 C	14.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.42	16.42	33.584	24.564	336.3	0.000	5.93	106.3	1.6	0.23	0.0	0.00	0.90	0.32	0	
1	16.42	16.42	33.584	24.564	336.3	0.003	5.93	106.3	1.6	0.23	0.0	0.00	0.90	0.32	1	221
10	16.32	16.32	33.572	24.578	335.3	0.034	5.93	106.1	1.8	0.25	0.1	0.02	1.13	0.37	10	219
10	16.31	16.31	33.573	24.581	335.0	0.034									10	220
20	15.27	15.27	33.474	24.738	320.3	0.066	5.87	102.8	3.0	0.40	1.8	0.14	1.68	0.58	20	218
30	13.31	13.31	33.411	25.102	285.9	0.097	5.17	86.9	6.7	0.85	7.6	0.63	0.75	0.35	30	217
40	12.41	12.40	33.415	25.282	269.0	0.124	4.61	76.1	10.1	1.22	11.9	0.67	0.32	0.28	40	216
50	11.66	11.65	33.480	25.474	250.9	0.150	4.13	67.1	13.4	1.44	15.8	0.39	0.15	0.21	50	215
60	10.99	10.98	33.597	25.687	230.9	0.174	3.79	60.7	15.5	1.45	18.3	0.03	0.08	0.16	60	214
70	10.75	10.74	33.638	25.761	224.0	0.197	3.54	56.5	17.4	1.55	19.9	0.01	0.05	0.11	70	213
75 ISL	10.67 D	10.66	33.662 D	25.794	221.0	0.208	3.44	54.8	18.1	1.61	20.5	0.01	0.04	0.10	75	
85	10.60	10.59	33.677	25.818	218.9	0.230	3.29	52.3	19.1	1.71	21.3	0.02	0.03	0.09	85	212
100	10.49	10.48	33.710	25.863	214.9	0.263	3.20	50.8	19.9	1.67	21.5	0.02	0.03	0.07	101	211
120	9.79	9.78	33.797	26.050	197.5	0.304	3.19	49.9	22.6	1.75	23.0	0.00	0.01	0.06	121	210
125 ISL	9.68 D	9.67	33.828 D	26.093	193.5	0.314	3.10	48.3	23.5	1.81	23.4	0.00	0.01	0.05	126	
140	9.57	9.55	33.919	26.182	185.3	0.342	2.78	43.3	26.3	1.98	24.5	0.00	0.00	0.04	141	209
150 ISL	9.67 D	9.65	33.995 D	26.226	181.5	0.361	2.63	41.0	27.6	1.99	25.1	0.00	0.00	0.04	151	
169	9.46	9.44	34.017	26.278	176.9	0.395	2.42	37.6	29.5	2.02	26.1	0.01	0.00	0.05	170	208
199	9.20	9.18	34.054	26.349	170.6	0.447	2.32	35.8	31.7	2.09	27.0	0.01	0.00	0.04	200	207
200 ISL	9.15 D	9.13	34.047 D	26.352	170.4	0.449	2.31	35.6	31.8	2.09	27.1	0.01			201	
229	8.85	8.83	34.133	26.467	159.9	0.496	1.89	29.0	36.8	2.26	29.3	0.00			230	206
250 ISL	8.60 D	8.57	34.180 D	26.543	153.0	0.529	1.62	24.7	40.2	2.46	30.4	0.00			251	
268	8.47	8.44	34.202	26.581	149.8	0.557	1.43	21.7	42.9	2.62	31.2	0.00			270	205
300 ISL	8.35 D	8.32	34.241 D	26.630	145.6	0.604	1.19	18.1	46.5	2.62	32.1	0.00			302	
318	8.14	8.11	34.237	26.659	143.1	0.630	1.09	16.5	48.3	2.62	32.6	0.00			320	204
378	7.59	7.55	34.260	26.758	134.3	0.713	0.76	11.3	55.8	2.81	35.0	0.00			380	203
400 ISL	7.38 D	7.34	34.274 D	26.799	130.7	0.742	0.67	9.9	58.2	2.86	35.6	0.00			403	
437	7.12	7.08	34.287	26.847	126.6	0.790	0.53	7.8	62.8	2.95	36.5	0.00			440	202
500 ISL	6.38 D	6.33	34.320 D	26.973	114.9	0.866	0.32	4.6	75.2	3.19	38.5	0.00			503	
514	6.27	6.22	34.327	26.992	113.1	0.882	0.27	3.9	78.0	3.24	38.9	0.00			518	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 0711 STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 39.4 N	118 58.6 W	10/11/07	0826 UTC	756 m	330 05 kn			1015.6 mb	16.2 C	14.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.60	16.60	33.676	24.593	333.6	0.000	5.76	103.7	0.7	0.25	0.0	0.02	0.51	0.19	0	
2	16.60	16.60	33.676	24.593	333.6	0.007	5.76	103.7	0.7	0.25	0.0	0.02	0.51	0.19	2	224
10	16.61	16.61	33.676	24.591	334.1	0.033	5.76	103.7	0.7	0.27	0.0	0.02	0.52	0.21	10	223
20	16.53	16.53	33.679	24.612	332.4	0.067	5.78	103.9	0.8	0.25	0.0	0.02	0.53	0.23	20	222
30	14.90	14.90	33.554	24.881	307.0	0.099	5.51	95.8	3.2	0.56	3.8	0.27	0.67	0.41	30	221
40	13.36	13.35	33.603	25.240	273.0	0.128	4.79	80.7	7.9	0.97	9.9	0.25	0.36	0.24	40	220
50	12.40	12.39	33.676	25.486	249.8	0.154	4.26	70.4	13.0	1.23	14.1	0.28	0.40	0.34	50	219
60	11.58	11.57	33.677	25.642	235.2	0.178	3.91	63.5	15.5	1.38	16.7	0.29	0.26	0.26	60	218
70	11.05	11.04	33.762	25.805	219.9	0.201	3.39	54.5	19.6	1.61	20.1	0.12	0.20	0.25	70	217
75 ISL	10.82 D	10.81	33.782 D	25.861	214.6	0.212	3.25	52.0	20.9	1.68	21.3	0.07	0.14	0.21	75	
84	10.23	10.22	33.797	25.976	203.9	0.231	3.07	48.5	22.8	1.77	22.8	0.02	0.04	0.15	84	216
100	9.78	9.77	33.872	26.110	191.4	0.262	2.77	43.3	25.9	1.88	24.7	0.01	0.02	0.17	101	215
120	9.39	9.38	33.965	26.247	178.7	0.299	2.62	40.6	28.7	2.00	25.5	0.01	0.01	0.17	121	214
125 ISL	9.39 D	9.38	33.974 D	26.255	178.1	0.308	2.56	39.7	29.3	2.02	25.8	0.01	0.01	0.15	126	
140	9.27	9.25	34.030	26.318	172.4	0.334	2.36	36.5	31.1	2.06	26.7	0.01	0.00	0.08	141	213
150 ISL	9.23 D	9.21	34.071 D	26.357	168.9	0.351	2.21	34.2	32.5	2.11	27.4	0.01	0.00	0.09	151	
169	9.07	9.05	34.121	26.422	163.1	0.383	1.94	29.9	35.3	2.22	28.6	0.01	0.00	0.10	170	212
199	8.72	8.70	34.165	26.512	155.0	0.431	1.62	24.8	39.7	2.36	30.3	0.01	0.00	0.07	200	211
200 ISL	8.70 D	8.68	34.164 D	26.514	154.8	0.432	1.62	24.8	39.8	2.36	30.3	0.01			201	
228	8.49	8.47	34.178	26.558	151.1	0.475	1.52	23.1	42.0	2.42	31.0	0.02			229	210
250 ISL	8.32 D	8.29	34.214 D	26.613	146.3	0.508	1.27	19.3	45.1	2.53	31.9	0.02			252	
268	8.20	8.17	34.235	26.647	143.3	0.534	1.05	15.9	47.9	2.62	32.7	0.01			270	209
300 ISL	7.87 D	7.84	34.257 D	26.714	137.4	0.579	0.88	13.2	51.5	2.71	33.7	0.00			302	
318	7.79	7.76	34.257	26.726	136.5	0.603	0.83	12.4	53.4	2.75	34.2	0.00			320	208
378	7.29	7.25	34.276	26.813	128.9	0.683	0.60	8.9	61.0	2.90	36.0	0.00			380	207
400 ISL	7.12 D	7.08	34.283 D	26.843	126.3	0.711	0.54	8.0	63.3	2.93	36.5	0.00			403	
437	6.90	6.86	34.291	26.880	123.3	0.757	0.46	6.7	67.4	2.97	37.2	0.00			440	206
500 ISL	6.42 D	6.37	34.319 D	26.967	115.5	0.832	0.29	4.2	76.8	3.12	38.8	0.00			503	
511	6.28	6.23	34.326	26.990	113.3	0.845	0.27	3.9	78.4	3.15	39.0	0.00			515	205
580	5.92	5.87	34.349	27.055	107.7	0.921	0.20	2.9	85.6	3.19	39.7	0.00			584	204
600 ISL	5.79 D	5.74	34.358 D	27.078	105.6	0.943	0.19	2.7	88.5	3.22	39.6	0.00			604	
657	5.50	5.44	34.376	27.128	101.2	1.002	0.15	2.1	96.5	3.31	39.4	0.00			662	203
700 ISL	5.35 D	5.29	34.388 D	27.156	98.9	1.045	0.13	1.8	100.3	3.31	38.8	0.00			705	
732	5.29	5.23	34.390	27.165	98.4	1.076	0.11	1.6	103.3	3.31	38.4	0.00			738	202
750	5.27	5.21	34.393	27.170	98.1	1.094	0.08	1.1	105.8	3.34	37.2	0.00			756	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 29.3 N	119 19.0 W	10/11/07	1240 UTC	1646 m	290 14 kn			1015.1 mb	15.1 C	13.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.60	14.60	33.689	25.048	290.2	0.000	5.51	95.3	4.2	0.63	5.5	0.15	1.34	0.45	0	
2	14.60	14.60	33.689	25.048	290.2	0.006	5.51	95.3	4.2	0.63	5.5	0.15	1.34	0.45	2	221
10	14.53	14.53	33.688	25.063	289.1	0.029	5.47	94.5	4.4	0.66	5.9	0.15	1.31	0.42	10	219
10	14.56	14.56	33.688	25.056	289.7	0.029									10	220
20	13.37	13.37	33.689	25.304	266.4	0.057	4.84	81.6	8.4	0.96	10.1	0.22	1.00	0.46	20	218
30	12.04	12.04	33.722	25.590	239.4	0.082	3.94	64.6	15.1	1.36	16.5	0.25	0.50	0.40	30	217
40	11.09	11.09	33.752	25.789	220.7	0.105	3.43	55.1	18.9	1.58	20.1	0.07	0.23	0.24	40	216
49	10.51	10.50	33.798	25.927	207.7	0.124	3.14	49.9	22.0	1.74	22.4	0.02	0.11	0.18	49	215
50 ISL	10.50 D	10.49	33.795 D	25.927	207.8	0.126	3.12	49.5	22.2	1.75	22.5	0.02	0.10	0.17	50	
60	10.15	10.14	33.836	26.019	199.2	0.147	2.98	47.0	23.8	1.81	23.4	0.02	0.07	0.14	60	214
69	9.75	9.74	33.885	26.125	189.3	0.164	2.77	43.3	26.0	1.88	24.6	0.02	0.03	0.13	69	213
75 ISL	9.68 D	9.67	33.896 D	26.145	187.5	0.176	2.68	41.8	26.9	1.91	25.1	0.02	0.02	0.12	75	
85	9.52	9.51	33.932	26.200	182.5	0.194	2.58	40.1	28.1	1.95	25.7	0.01	0.01	0.11	85	212
99	9.40	9.39	33.974	26.253	177.8	0.219	2.44	37.9	29.8	2.04	26.5	0.01	0.01	0.10	100	211
100 ISL	9.39 D	9.38	33.976 D	26.256	177.5	0.221	2.43	37.7	29.9	2.04	26.5	0.01	0.01	0.10	101	
119	9.18	9.17	34.050	26.348	169.1	0.254	2.24	34.6	32.4	2.10	27.4	0.02	0.00	0.09	120	210
125 ISL	9.13 D	9.12	34.065 D	26.368	167.3	0.264	2.16	33.3	33.4	2.14	27.8	0.02	0.00	0.08	126	
139	8.97	8.96	34.112	26.430	161.7	0.287	1.96	30.1	35.7	2.24	28.6	0.02	0.00	0.07	140	209
150 ISL	8.88 D	8.86	34.119 D	26.450	160.0	0.305	1.83	28.1	37.0	2.29	29.2	0.02	0.00	0.07	151	
169	8.81	8.79	34.165	26.497	155.8	0.335	1.63	25.0	39.0	2.35	30.1	0.03	0.01	0.07	170	208
198	8.54	8.52	34.200	26.567	149.7	0.379	1.34	20.4	43.0	2.47	31.3	0.05			199	207
200 ISL	8.55 D	8.53	34.206 D	26.571	149.4	0.382	1.33	20.3	43.2	2.48	31.4	0.05			201	
228	8.35	8.33	34.215	26.609	146.3	0.424	1.21	18.4	45.3	2.55	32.0	0.05			229	206
250 ISL	8.27 D	8.24	34.233 D	26.635	144.1	0.455	1.10	16.7	47.5	2.60	32.6	0.05			252	
268	8.03	8.00	34.231	26.670	141.1	0.481	1.01	15.2	49.4	2.64	33.2	0.05			270	205
300 ISL	7.87 D	7.84	34.238 D	26.699	138.8	0.526	0.88	13.2	52.0	2.70	34.0	0.05			302	
318	7.78	7.75	34.246	26.719	137.1	0.551	0.82	12.3	53.6	2.73	34.5	0.05			320	204
377	7.27	7.23	34.275	26.815	128.7	0.629	0.60	8.9	61.8	2.87	36.0	0.01			380	203
400 ISL	7.10 D	7.06	34.282 D	26.845	126.1	0.658	0.54	8.0	64.2	2.91	36.5	0.01			403	
437	6.89	6.85	34.296	26.885	122.7	0.704	0.46	6.7	67.8	2.97	37.3	0.02			440	202
500 ISL	6.40 D	6.35	34.323 D	26.972	115.0	0.779	0.31	4.5	75.1	3.06	38.9	0.00			504	
511	6.34	6.29	34.326	26.983	114.1	0.792	0.28	4.1	76.4	3.08	39.2	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 19.0 N	119 40.2 W	10/11/07	1730 UTC	82 m	300 15 kn	300 03 04	1	1016.9 mb	16.1 C	14.9 C	14m	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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.09	15.09	33.652	24.914	303.0	0.000	5.82	101.7	0.7	0.46	2.6	0.15	0.95	0.32	0	
2 A	15.09	15.09	33.652	24.914	303.0	0.006	5.82	101.7	0.7	0.46	2.6	0.15	0.95	0.32	2	211
7 A	15.04	15.04	33.650	24.924	302.3	0.021	5.80	101.2	0.8	0.47	2.7	0.16	0.74	0.22	7	210
10	14.31	14.31	33.595	25.038	291.5	0.030	5.41	93.0	3.5	0.71	5.9	0.24	0.71	0.30	10	208
10	13.75	13.75	33.579	25.142	281.6	0.030									10	209
18 A	12.59	12.59	33.596	25.387	258.5	0.052	4.57	75.8	10.0	1.16	12.5	0.27	0.37	0.39	18	207
20 ISL	12.40 D	12.40	33.593 D	25.421	255.2	0.057	4.53	74.8	10.3	1.18	12.9	0.26	0.34	0.43	20	
27 A	12.23	12.23	33.592	25.453	252.3	0.075	4.38	72.1	11.6	1.24	14.1	0.24	0.29	0.50	27	206
30 ISL	11.93 D	11.93	33.635 D	25.543	243.8	0.082	4.06	66.4	14.4	1.36	16.1	0.20	0.25	0.44	30	
36 A	10.91	10.91	33.764	25.830	216.7	0.096	3.38	54.1	20.4	1.63	20.5	0.12	0.16	0.28	36	205
43	10.26	10.26	33.826	25.992	201.4	0.110	2.96	46.8	24.2	1.80	23.3	0.06	0.07	0.20	43	204
50 A	10.20	10.19	33.834	26.009	200.0	0.125	2.92	46.1	24.5	1.83	23.6	0.06	0.07	0.26	50	203
59	10.23	10.22	33.832	26.002	200.8	0.143	2.94	46.4	24.5	1.81	23.5	0.06	0.07	0.21	59	202
68	10.22	10.21	33.840	26.010	200.2	0.161	2.92	46.1	24.6	1.81	23.5	0.06	0.07	0.21	68	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 0711 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 0.1 W	10/11/07	2039 UTC	1206 m	300 20 kn	290 05 09	0	1015.5 mb	16.8 C	15.0 C	9m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.81	15.81	33.699	24.791	314.7	0.000	5.96	105.6	2.5	0.38	1.7	0.09	1.26	0.33	0	
2	15.81	15.81	33.699	24.791	314.8	0.006	5.96	105.6	2.5	0.38	1.7	0.09	1.26	0.33	2	221
10	15.68	15.68	33.682	24.807	313.4	0.031	5.94	105.0	2.5	0.39	1.9	0.10	1.29	0.37	10	219
10	15.72	15.72	33.691	24.805	313.6	0.031	5.95	105.3	2.5	0.39	1.8	0.09	1.27	0.29	10	220
20	11.96	11.96	33.302	25.279	268.7	0.061	5.16	84.3	8.5	0.97	10.1	0.23	0.54	0.22	20	218
30	11.26	11.26	33.487	25.552	243.0	0.086	4.32	69.6	13.6	1.29	15.5	0.10	0.18	0.16	30	217
40	10.46	10.46	33.574	25.761	223.3	0.109	3.85	61.0	17.7	1.52	19.5	0.03	0.06	0.10	40	216
50	10.39	10.38	33.717	25.885	211.7	0.131	3.34	52.9	20.5	1.66	21.6	0.04	0.04	0.10	50	215
60	10.27	10.26	33.778	25.953	205.5	0.152	3.11	49.1	22.3	1.73	22.4	0.03	0.04	0.13	60	214
69	10.06	10.05	33.814	26.017	199.6	0.170	2.98	46.9	23.5	1.78	23.1	0.03	0.03	0.14	69	213
75 ISL	10.00 D	9.99	33.831 D	26.041	197.4	0.182	2.95	46.3	23.8	1.80	23.3	0.03	0.03	0.13	75	
85	9.96	9.95	33.840	26.055	196.3	0.202	2.89	45.4	24.5	1.84	23.7	0.03	0.02	0.11	85	212
99	9.62	9.61	33.910	26.167	186.0	0.229	2.65	41.3	27.5	2.00	25.3	0.05	0.01	0.10	100	211
100 ISL	9.55 D	9.54	33.927 D	26.191	183.6	0.230	2.63	40.9	27.7	2.01	25.4	0.05	0.01	0.10	101	
119	9.30	9.29	34.004	26.293	174.4	0.264	2.32	35.9	31.4	2.07	27.0	0.02	0.01	0.07	120	210
125 ISL	9.23 D	9.22	34.015 D	26.313	172.6	0.275	2.26	34.9	32.3	2.09	27.4	0.02	0.01	0.07	126	
139	9.06	9.04	34.047	26.365	167.9	0.299	2.15	33.1	34.0	2.14	28.1	0.02	0.01	0.08	140	209
150 ISL	8.88 D	8.86	34.067 D	26.409	163.8	0.317	2.05	31.4	35.3	2.18	28.7	0.03	0.01	0.08	151	
169	8.79	8.77	34.100	26.450	160.4	0.348	1.86	28.5	37.5	2.26	29.7	0.04	0.00	0.07	170	208
200	8.56	8.54	34.153	26.527	153.5	0.396	1.50	22.9	41.6	2.42	31.4	0.03	0.00	0.07	201	207
228	8.30	8.28	34.188	26.595	147.5	0.439	1.23	18.6	45.6	2.54	32.5	0.02			229	206
250 ISL	8.09 D	8.06	34.197 D	26.634	144.2	0.471	1.11	16.7	48.2	2.60	33.2	0.01			252	
268	7.93	7.90	34.209	26.667	141.2	0.496	1.05	15.8	50.2	2.64	33.8	0.01			270	205
300 ISL	7.70 D	7.67	34.229 D	26.717	137.0	0.541	0.97	14.5	53.4	2.69	34.6	0.01			302	
318	7.52	7.49	34.212	26.730	136.0	0.565	0.93	13.8	55.3	2.72	35.1	0.01			320	204
378	7.01	6.97	34.244	26.827	127.4	0.644	0.68	10.0	63.2	2.90	37.0	0.01			380	203
400 ISL	6.82 D	6.78	34.253 D	26.860	124.4	0.672	0.61	8.9	65.7	2.94	37.5	0.01			403	
438	6.61	6.57	34.262	26.896	121.4	0.719	0.51	7.4	70.2	3.00	38.4	0.01			441	202
500 ISL	5.92 D	5.88	34.266 D	26.988	112.9	0.791	0.41	5.9	80.6	3.08	40.4	0.01			504	
511	5.75	5.71	34.253	26.999	111.8	0.804	0.39	5.6	82.4	3.10	40.8	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 59.2 N	120 20.9 W	11/11/07	0100 UTC	730 m	300 21 kn	290 05 09	0	1014.0 mb	16.2 C	15.0 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.72	15.72	33.619	24.749	318.6	0.000	6.07	107.4	1.8	0.34	0.9	0.06	1.06	0.31	0	
2	15.72	15.72	33.619	24.750	318.7	0.006	6.07	107.4	1.8	0.34	0.9	0.06	1.06	0.31	2	221
10	15.72	15.72	33.620	24.750	318.8	0.032	6.07	107.3	1.7	0.33	0.9	0.06	1.05	0.34	10	219
10	15.72	15.72				0.032									10	220
20	15.70	15.70	33.617	24.753	318.9	0.064	6.07	107.3	1.7	0.34	0.9	0.06	1.05	0.31	20	218
30	15.21	15.21	33.585	24.837	311.2	0.095	5.88	102.9	0.6	0.41	1.2	0.13	0.85	0.35	30	217
40	14.28	14.27	33.563	25.020	294.0	0.126	5.54	95.1	3.2	0.60	3.8	0.37	0.67	0.37	40	216
50	12.39	12.38	33.565	25.402	257.8	0.153	4.29	70.8	11.4	1.22	14.7	0.08	0.11	0.20	50	215
61	10.88	10.87	33.624	25.727	227.0	0.180	3.80	60.8	16.2	1.47	18.9	0.02	0.05	0.13	61	214
71	10.26	10.25	33.757	25.939	207.1	0.201	3.21	50.7	21.3	1.69	22.1	0.03	0.05	0.12	71	213
75 ISL	10.18 D	10.17	33.789 D	25.978	203.5	0.210	3.09	48.7	22.5	1.73	22.8	0.02	0.04	0.12	75	
85	9.91	9.90	33.846	26.068	195.1	0.230	2.89	45.3	24.7	1.80	23.9	0.01	0.03	0.13	85	212
99	9.59	9.58	33.924	26.182	184.5	0.256	2.63	41.0	27.5	1.92	25.2	0.02	0.02	0.11	99	211
100 ISL	9.57 D	9.56	33.928 D	26.189	183.9	0.258	2.62	40.8	27.7	1.93	25.3	0.02	0.02	0.11	101	
119	9.35	9.34	34.002	26.283	175.3	0.292	2.38	36.9	30.3	2.12	26.5	0.01	0.01	0.10	120	210
125 ISL	9.26 D	9.25	34.036 D	26.324	171.5	0.303	2.30	35.6	31.2	2.13	26.9	0.01	0.01	0.10	126	
140	9.13	9.11	34.058	26.363	168.1	0.328	2.10	32.4	33.4	2.14	27.9	0.01	0.01	0.09	141	209
150 ISL	9.06 D	9.04	34.077 D	26.389	165.8	0.345	1.97	30.3	34.7	2.18	28.4	0.01	0.01	0.08	151	
170	8.90	8.88	34.127	26.454	160.1	0.377	1.73	26.6	37.4	2.28	29.5	0.01	0.01	0.07	171	208
198	8.55	8.53	34.173	26.545	151.8	0.421	1.40	21.3	42.0	2.41	31.4	0.01	0.00	0.05	199	207
200 ISL	8.50 D	8.48	34.179 D	26.557	150.7	0.424	1.38	21.0	42.3	2.42	31.5	0.01			201	
228	8.28	8.26	34.203	26.610	146.1	0.466	1.17	17.7	45.9	2.54	32.5	0.01			229	206
250 ISL	8.04 D	8.01	34.215 D	26.655	142.1	0.497	1.04	15.7	48.6	2.60	33.3	0.00			252	
269	7.93	7.90	34.229	26.683	139.8	0.524	0.95	14.3	50.9	2.65	33.9	0.00			271	205
300 ISL	7.63 D	7.60	34.234 D	26.731	135.6	0.567	0.85	12.7	54.2	2.74	34.7	0.00			302	
318	7.52	7.49	34.242	26.753	133.7	0.591	0.80	11.9	56.1	2.79	35.1	0.00			320	204
377	7.09	7.05	34.277	26.842	126.0	0.668	0.58	8.5	62.7	2.89	36.5	0.00			379	203
400 ISL	7.03 D	6.99	34.281 D	26.854	125.2	0.696	0.54	7.9	63.8	2.92	36.8	0.00			403	
438	6.89	6.85	34.289	26.880	123.3	0.744	0.50	7.3	65.8	2.96	37.3	0.00			441	202
500 ISL	6.38 D	6.33	34.305 D	26.961	116.0	0.818	0.35	5.1	74.0	3.07	38.9	0.00			503	
514	6.31	6.26	34.312	26.975	114.8	0.834	0.32	4.6	75.8	3.09	39.3	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
32 39.3 N	121 1.6 W	11/11/07	0729	UTC	3796 m	310	17 kn			1014.9 mb	17.2 C	16.0 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.70	15.70	33.608	24.745	319.0	0.000	6.02	106.4	0.0	0.14	0.1	0.01	0.80	0.26	0	
2	15.70	15.70	33.608	24.745	319.1	0.006	6.02	106.4	0.0	0.14	0.1	0.01	0.80	0.26	2	221
10	15.70	15.70	33.612	24.749	319.0	0.032	6.01	106.2					0.83	0.28	10	219
11	15.70	15.70	33.613	24.750	319.0	0.035									11	220
20	14.35	14.35	33.375	24.860	308.7	0.063	6.10	104.8	1.3	0.29	1.6	0.10	1.08	0.71	20	218
30	14.32	14.32	33.468	24.938	301.5	0.094	5.81	99.8	1.6	0.41	2.1	0.16	0.81	0.32	30	217
40	14.00	13.99	33.535	25.057	290.5	0.123	5.46	93.2	3.6	0.59	4.4	0.33	0.32	0.24	40	216
50	12.28	12.27	33.628	25.472	251.2	0.151	3.99	65.7	13.1	1.28	16.2	0.04	0.09	0.18	50	215
60	10.98	10.97	33.684	25.756	224.3	0.174	3.53	56.6	17.9	1.53	20.3	0.03	0.06	0.14	60	214
70	10.42	10.41	33.726	25.887	212.0	0.196	3.26	51.6	20.9	1.65	22.3	0.01	0.04	0.12	70	213
75 ISL	10.30 D	10.29	33.770 D	25.942	206.8	0.207	3.12	49.3	22.1	1.70	23.1	0.01	0.04	0.11	75	
84	10.02	10.01	33.809	26.021	199.6	0.225	2.90	45.6	24.0	1.79	24.2	0.01	0.03	0.10	84	212
99	9.41	9.40	33.882	26.179	184.8	0.254	2.68	41.6	27.9	1.90	26.0	0.01	0.01	0.09	99	211
100 ISL	9.30 D	9.29	33.909 D	26.218	181.1	0.256	2.67	41.3	28.0	1.90	26.1	0.01	0.01	0.09	101	
120	9.19	9.18	33.945	26.264	177.1	0.291	2.50	38.6	30.1	1.95	27.0	0.01	0.01	0.08	121	210
125 ISL	9.07 D	9.06	33.980 D	26.311	172.7	0.300	2.46	37.9	30.5	1.97	27.2	0.01	0.01	0.07	126	
139	9.06	9.04	33.992	26.322	171.9	0.324	2.33	35.9	32.0	2.02	27.7	0.01	0.01	0.05	140	209
150 ISL	8.83 D	8.81	34.050 D	26.404	164.3	0.343	2.17	33.2	33.9	2.09	28.5	0.01	0.01	0.05	151	
170	8.69	8.67	34.096	26.462	159.2	0.375	1.87	28.6	37.7	2.22	30.0	0.01	0.00	0.04	171	208
199	8.36	8.34	34.123	26.534	152.7	0.420	1.63	24.7	41.6	2.37	31.6	0.01	0.00	0.03	200	207
200 ISL	8.36 D	8.34	34.123 D	26.534	152.8	0.422	1.64	24.9	41.7	2.37	31.6	0.01			201	
229	7.84	7.82	34.089	26.586	148.2	0.465	1.80	27.0	44.8	2.34	32.6	0.01			230	206
250 ISL	7.66 D	7.64	34.116 D	26.633	144.0	0.496	1.57	23.4	48.3	2.49	33.8	0.01			251	
269	7.48	7.45	34.151	26.687	139.1	0.523	1.28	19.0	51.5	2.64	34.8	0.01			271	205
300 ISL	7.23 D	7.20	34.165 D	26.733	135.1	0.566	1.04	15.4	55.0	2.62	35.6	0.00			302	
318	7.13	7.10	34.190	26.767	132.1	0.590	0.93	13.7	56.9	2.61	36.0	0.00			320	204
378	6.84	6.80	34.258	26.861	124.0	0.666	0.56	8.2	65.4	2.96	38.0	0.00			380	203
400 ISL	6.70 D	6.66	34.282 D	26.899	120.6	0.693	0.47	6.9	68.3	3.01	38.6	0.00			403	
438	6.46	6.42	34.303	26.948	116.4	0.738	0.35	5.1	72.8	3.05	39.4	0.00			441	202
500 ISL	6.17 D	6.13	34.343 D	27.018	110.4	0.809	0.25	3.6	78.3	3.15	40.4	0.00			503	
512	6.10	6.05	34.345	27.028	109.5	0.822	0.23	3.3	79.4	3.17	40.6	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
32 19.3 N	121 42.9 W	11/11/07	1338	UTC	4055 m	310	15 kn			1015.2 mb	17.8 C	16.9 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.33	16.33	33.053	24.176	373.2	0.000	5.74	102.4	1.3	0.15	0.2	0.00	0.35	0.03	0	
2	16.33	16.33	33.053	24.177	373.3	0.007	5.74	102.4	1.3	0.15	0.2	0.00	0.35	0.03	2	221
10	16.21	16.21	33.074	24.220	369.4	0.037	5.77	102.7	1.2	0.15	0.2	0.00	0.38	0.06	10	219
10	16.20	16.20	33.073	24.222	369.2	0.037									10	220
20	15.41	15.41	33.111	24.428	349.9	0.073	6.06	106.2	1.3	0.15	0.2	0.00	0.67	0.10	20	218
30	14.75	14.75	33.254	24.682	326.0	0.107	6.14	106.2	1.5	0.22	1.0	0.05	1.05	0.26	30	217
40	13.58	13.57	33.072	24.785	316.3	0.139	6.06	102.3	2.4	0.32	1.6	0.12	0.80	0.27	40	216
49	14.06	14.05	33.335	24.890	306.6	0.167	5.80	99.0	1.8	0.35	1.9	0.17	0.42	0.25	49	215
50 ISL	14.22 D	14.21	33.409 D	24.914	304.4	0.170	5.77	98.9	2.0	0.37	2.2	0.21	0.39	0.24	50	
60	13.70	13.69	33.412	25.024	294.1	0.200	5.52	93.6	4.3	0.53	5.1	0.54	0.19	0.16	60	214
69	12.54	12.53	33.263	25.140	283.3	0.226	5.47	90.4	4.5	0.56	5.6	0.21	0.16	0.13	69	213
75 ISL	11.13 D	11.12	33.105 D	25.279	270.0	0.243	5.20	83.3	6.6	0.72	8.3	0.11	0.12	0.12	75	
85	11.24	11.23	33.387	25.479	251.2	0.269	4.61	74.2	11.7	1.07	14.1	0.04	0.06	0.09	85	212
99	10.07	10.06	33.582	25.835	217.5	0.301	3.90	61.2	19.0	1.49	20.6	0.01	0.01	0.02	99	211
100 ISL	10.04 D	10.03	33.595 D	25.851	216.1	0.304	3.86	60.6	19.3	1.51	20.9	0.01	0.01	0.02	100	
119	9.68	9.67	33.727	26.014	200.9	0.343	3.33	51.9	23.0	1.71	23.6	0.00	0.01	0.03	120	210
125 ISL	9.57 D	9.56	33.757 D	26.056	197.0	0.355	3.32	51.6	23.8	1.73	23.9	0.00	0.01	0.03	126	
140	9.13	9.11	33.842	26.193	184.1	0.384	3.31	51.0	25.7	1.77	24.4	0.00	0.00	0.03	141	209
150 ISL	8.88 D	8.86	33.873 D	26.257	178.2	0.402	3.20	49.0	27.4	1.82	25.3	0.00	0.00	0.03	151	
169	8.65	8.63	33.919	26.330	171.7	0.435	2.88	43.9	31.1	1.95	27.2	0.00	0.00	0.03	170	208
200	8.53	8.51	34.048	26.450	160.8	0.487	2.12	32.3	37.2	2.23	29.9	0.00	0.00	0.02	201	207
228	8.38	8.36	34.153	26.555	151.3	0.530	1.52	23.1	43.0	2.44	31.9	0.00			229	206
250 ISL	8.16 D	8.13	34.176 D	26.607	146.8	0.563	1.31	19.8	46.6	2.60	33.0	0.00			251	
268	7.95	7.92	34.194	26.652	142.6	0.589	1.21	18.2	49.2	2.70	33.7	0.00			270	205
300 ISL	7.66 D	7.63	34.239 D	26.731	135.6	0.634	0.95	14.2	53.3	2.78	34.7	0.00			302	
319	7.61	7.58	34.241	26.740	135.1	0.659	0.81	12.1	55.6	2.81	35.2	0.00			321	204
378	7.09	7.05	34.268	26.835	126.7	0.737	0.59	8.7	63.2	2.98	37.0	0.00			380	203
400 ISL	6.95 D	6.91	34.283 D	26.866	124.0	0.764	0.50	7.3	66.1	3.02	37.7	0.00			403	
437	6.66	6.62	34.301	26.920	119.2	0.809	0.37	5.4	70.7	3.08	38.8	0.00			440	202
500 ISL	6.23 D	6.19	34.327 D	26.997	112.4	0.882	0.28	4.0	77.4	3.21	40.0	0.00			503	
513	6.18	6.13	34.329	27.005	111.8	0.897	0.26	3.8	78.8	3.24	40.2	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 23.9 W	11/11/07	1929 UTC	4153 m	340 19 kn	310 04 07	1	1017.5 mb	17.0 C	14.8 C	11m	6/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.51	16.51	33.439	24.432	348.9	0.000	5.77	103.5	0.5	0.14	0.3	0.00	0.33	0.12	0	
2 A	16.51	16.51	33.439	24.432	349.0	0.007	5.77	103.5	0.5	0.14	0.3	0.00	0.33	0.12	2	223
6 A	16.50	16.50	33.435	24.431	349.2	0.021	5.77	103.5	0.5	0.16	0.2	0.00	0.34	0.12	6	222
10 ISL	16.50	16.50	33.434	24.430	349.4	0.035	5.77	103.5	0.4	0.14	0.3	0.00	0.34	0.12	10	
11	16.50	16.50	33.434	24.430	349.4	0.038	5.77	103.5	0.4	0.14	0.3	0.00	0.34	0.12	11	220
14 A	16.50	16.50	33.489	24.473	345.4	0.049	5.76	103.4	0.3	0.14	0.1	0.00	0.38	0.15	14	219
20 ISL	16.53	16.53	33.601	24.552	338.1	0.069	5.75	103.3	0.1	0.12	0.1	0.00	0.46	0.21	20	
22 A	16.54	16.54	33.632	24.574	336.1	0.076	5.74	103.2	0.0	0.12	0.1	0.00	0.50	0.23	22	218
28 A	16.36	16.36	33.620	24.606	333.2	0.096	5.69	101.9	0.0	0.17	0.5	0.02	0.68	0.31	28	217
30 ISL	16.14	16.14	33.580	24.626	331.4	0.103	5.69	101.4	0.2	0.20	0.7	0.04	0.66	0.30	30	
40 A	15.06	15.05	33.389	24.719	322.7	0.136	5.70	99.3	1.5	0.33	1.5	0.15	0.38	0.27	40	216
50	14.92	14.91	33.410	24.766	318.6	0.168	5.63	97.8	1.9	0.37	1.8	0.23	0.22	0.18	50	215
60	14.48	14.47	33.524	24.948	301.5	0.199	5.03	86.7	4.6	0.66	7.2	0.21	0.09	0.12	60	214
70	12.58	12.57	33.386	25.227	275.0	0.227	4.85	80.3	8.4	0.93	11.7	0.02	0.06	0.11	70	213
75 ISL	12.00	11.99	33.413	25.359	262.5	0.241	4.63	75.7	10.5	1.07	13.9	0.02	0.05	0.10	75	
84	11.26	11.25	33.501	25.564	243.1	0.264	4.24	68.3	13.9	1.29	17.1	0.01	0.03	0.08	84	212
99	10.25	10.24	33.529	25.763	224.4	0.299	4.09	64.5	17.2	1.42	19.0	0.01	0.01	0.05	99	211
100 ISL	10.22	10.21	33.543	25.779	222.8	0.301	4.02	63.3	17.6	1.44	19.3	0.01	0.01	0.05	100	
120	9.76	9.75	33.832	26.083	194.4	0.343	2.82	44.1	25.3	1.84	25.1	0.00	0.02	0.06	121	210
125 ISL	9.57	9.56	33.849	26.128	190.2	0.352	2.88	44.8	25.8	1.83	25.1	0.00	0.02	0.06	126	
139	9.06	9.05	33.862	26.220	181.6	0.378	3.19	49.1	26.5	1.75	25.0	0.01	0.01	0.06	140	209
150 ISL	8.87	8.85	33.901	26.281	176.0	0.398	3.05	46.7	28.4	1.81	25.9	0.01	0.01	0.05	151	
169	8.68	8.66	33.972	26.366	168.2	0.431	2.61	39.8	32.3	1.99	27.9	0.01	0.00	0.03	170	208
199	8.27	8.25	34.031	26.476	158.3	0.480	2.14	32.4	37.9	2.21	30.6	0.00	0.00	0.02	200	207
200 ISL	8.26	8.24	34.032	26.478	158.0	0.481	2.13	32.2	38.1	2.21	30.6	0.00			201	
228	7.90	7.88	34.065	26.558	150.8	0.524	1.96	29.4	42.8	2.31	31.8	0.00			229	206
250 ISL	7.75	7.73	34.106	26.612	146.0	0.557	1.64	24.5	46.4	2.46	33.2	0.00			251	
268	7.65	7.62	34.137	26.651	142.6	0.583	1.36	20.3	49.2	2.58	34.3	0.00			270	205
300 ISL	7.32	7.29	34.158	26.715	136.9	0.628	1.13	16.7	54.0	2.69	35.5	0.00			302	
316	7.15	7.12	34.164	26.744	134.3	0.649	1.06	15.6	56.3	2.73	35.9	0.00			318	204
377	6.69	6.66	34.207	26.841	125.7	0.729	0.70	10.2	64.7	2.92	37.9	0.00			379	203
400 ISL	6.44	6.40	34.207	26.874	122.7	0.757	0.64	9.3	68.4	2.97	38.7	0.00			403	
439	6.04	6.00	34.211	26.929	117.7	0.804	0.55	7.9	74.4	3.04	40.0	0.00			442	202
500 ISL	5.82	5.78	34.280	27.012	110.5	0.874	0.34	4.9	81.0	3.18	40.9	0.00			503	
511	5.78	5.74	34.292	27.026	109.3	0.886	0.30	4.3	82.2	3.20	41.1	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 39.3 N	123 4.6 W	12/11/07	0132 UTC	4111 m	340 18 kn	330 06 06	1	1017.7 mb	16.0 C	13.1 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	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.55	16.55	33.569	24.522	340.3	0.000	5.76	103.5	0.3	0.28	0.3	0.00	0.42	0.17	0	
1	16.55	16.55	33.569	24.522	340.3	0.003	5.76	103.5	0.3	0.28	0.3	0.00	0.42	0.17	1	221
10	16.56	16.56	33.571	24.522	340.6	0.034	5.75	103.4	0.2	0.28	0.2	0.00	0.41	0.16	10	219
10	16.54	16.54	33.566	24.522	340.6	0.034									10	220
20	16.54	16.54	33.567	24.524	340.8	0.068	5.75	103.3	0.2	0.28	0.4	0.00	0.43	0.16	20	218
30	16.30	16.30	33.522	24.545	339.1	0.102	5.78	103.3	0.4	0.29	0.4	0.01	0.45	0.18	30	217
40	15.49	15.48	33.520	24.726	322.1	0.135	5.53	97.3	1.4	0.46	1.9	0.25	0.35	0.19	40	216
50 ISL	14.61 D	14.60	33.401 D	24.826	312.9	0.167	5.83	100.7	1.2	0.44	1.5	0.16	0.55	0.27	50	
51	14.66	14.65	33.404	24.817	313.7	0.170	5.83	100.8	1.2	0.44	1.5	0.14	0.56	0.27	51	215
59	13.64	13.63	33.486	25.094	287.5	0.194	4.95	83.8	6.7	0.89	9.7	0.15	0.09	0.14	59	214
71	12.31	12.30	33.466	25.341	264.1	0.227	4.64	76.4	10.2	1.14	13.7	0.03	0.06	0.12	71	213
75 ISL	12.04 D	12.03	33.481 D	25.404	258.2	0.238	4.51	73.9	11.4	1.21	15.0	0.03	0.05	0.12	75	
84	11.29	11.28	33.518	25.572	242.4	0.260	4.18	67.4	14.2	1.37	17.6	0.02	0.04	0.11	84	212
100 ISL	10.47 D	10.46	33.660 D	25.828	218.3	0.297	3.57	56.6	19.1	1.62	21.5	0.01	0.02	0.09	100	
101	10.46	10.45	33.663	25.832	217.9	0.299	3.53	55.9	19.4	1.63	21.7	0.01	0.02	0.09	101	211
120	9.91	9.90	33.795	26.029	199.6	0.339	2.96	46.4	24.1	1.82	24.7	0.01	0.01	0.07	121	210
125 ISL	9.75 D	9.74	33.839 D	26.090	193.8	0.349	2.91	45.5	25.2	1.85	25.2	0.01	0.01	0.06	126	
139	9.19	9.17	33.892	26.223	181.3	0.375	2.83	43.7	27.9	1.90	26.1	0.01	0.01	0.05	140	209
150 ISL	9.06 D	9.04	33.934 D	26.277	176.4	0.395	2.73	42.0	29.4	1.94	26.7	0.01	0.01	0.05	151	
169	8.83	8.81	33.975	26.345	170.2	0.428	2.53	38.7	32.0	2.02	27.9	0.01	0.01	0.05	170	208
200 ISL	8.16 D	8.14	34.039 D	26.499	156.1	0.478	2.12	32.0	39.2	2.20	30.8	0.01	0.00	0.02	201	
201	8.17	8.15	34.038	26.496	156.3	0.480	2.11	31.8	39.4	2.21	30.9	0.01	0.00	0.02	202	207
230	7.83	7.81	34.066	26.569	149.8	0.524	1.92	28.8	43.7	2.31	32.4	0.01			231	206
250 ISL	7.54 D	7.52	34.073 D	26.617	145.5	0.554	1.72	25.6	47.6	2.42	33.7	0.01			251	
270	7.27	7.24	34.088	26.667	140.9	0.582	1.52	22.5	51.6	2.54	34.9	0.01			272	205
300 ISL	6.94 D	6.91	34.116 D	26.735	134.8	0.624	1.29	18.9	57.1	2.65	36.4	0.01			302	
320	6.70	6.67	34.111	26.763	132.2	0.650	1.15	16.8	60.4	2.70	37.2	0.01			322	204
380	6.36	6.33	34.171	26.856	124.1	0.727	0.77	11.1	68.0	2.88	38.8	0.01			382	203
400 ISL	6.26 D	6.22	34.195 D	26.888	121.2	0.752	0.69	10.0	69.9	2.93	39.1	0.01			403	
441	6.14	6.10	34.217	26.921	118.6	0.801	0.55	7.9	73.8	3.02	39.6	0.01			444	202
500 ISL	5.84 D	5.80	34.282 D	27.011	110.6	0.869	0.35	5.0	81.0	3.11	40.9	0.00			503	
513	5.77	5.73	34.283	27.021	109.8	0.883	0.31	4.4	82.6	3.13	41.2	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 19.1 N	123 44.9 W	12/11/07	0742 UTC	3863 m	340 16 kn			1020.0 mb	16.1 C	13.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.11	17.11	33.011	23.963	393.5	0.000	5.60	101.4	1.3	0.32	0.1	0.01	0.19	0.03	0	
3	17.11	17.11	33.011	23.963	393.6	0.012	5.60	101.4	1.3	0.32	0.1	0.01	0.19	0.03	3	221
10 ISL	17.12 D	17.12	33.010 D	23.961	394.1	0.039	5.60	101.4	1.3	0.35	0.1	0.01	0.21	0.02	10	
11	17.12	17.12	33.009	23.960	394.2	0.043	5.60	101.4	1.3	0.36	0.1	0.01	0.21	0.02	11	220
15	17.12	17.12	33.011	23.962	394.2	0.059	5.60	101.4	1.2	0.36	0.2	0.00	0.17	0.06	15	219
20 ISL	17.12 D	17.12	33.009 D	23.960	394.5	0.079	5.60	101.4	1.2	0.36	0.2	0.00	0.17	0.06	20	
30	17.13	17.13	33.010	23.959	395.0	0.118	5.60	101.4	1.1	0.35	0.3	0.00	0.17	0.05	30	218
45	16.95	16.94	33.052	24.034	388.3	0.177	5.68	102.6	1.1	0.34	0.2	0.00	0.27	0.08	45	217
50 ISL	15.53 D	15.52	33.109 D	24.401	353.4	0.196	5.91	103.8	1.4	0.37	0.3	0.00	0.38	0.16	50	
55	14.34	14.33	32.966	24.547	339.5	0.213	6.10	104.5	1.7	0.40	0.4	0.01	0.47	0.23	55	216
65	14.28	14.27	33.078	24.646	330.3	0.246	5.96	102.0	1.6	0.42	0.5	0.04	0.33	0.21	65	215
75	13.87	13.86	33.103	24.751	320.6	0.279	5.90	100.2	1.7	0.45	0.8	0.09	0.24	0.16	75	214
85	12.90	12.89	33.016	24.879	308.6	0.310	5.86	97.5	2.3	0.50	1.2	0.17	0.20	0.18	85	213
95	12.41	12.40	33.008	24.968	300.3	0.341	5.72	94.1	3.0	0.59	3.0	0.18	0.18	0.17	95	212
100 ISL	12.18 D	12.17	32.999 D	25.004	296.9	0.356	5.47	89.6	4.4	0.73	5.6	0.15	0.15	0.16	100	
109	12.56	12.55	33.341	25.197	278.8	0.382	5.02	83.1	7.5	1.00	10.4	0.07	0.09	0.13	109	211
124	10.86	10.85	33.321	25.496	250.4	0.421	4.84	77.2	11.1	1.16	13.5	0.01	0.02	0.04	125	210
125 ISL	10.91 D	10.89	33.375 D	25.529	247.3	0.424	4.82	77.0	11.3	1.17	13.7	0.01	0.02	0.04	126	
144	10.34	10.32	33.481	25.712	230.3	0.469	4.30	67.9	16.2	1.47	18.4	0.01	0.01	0.03	145	209
150 ISL	9.93 D	9.91	33.519 D	25.811	220.9	0.483	4.08	63.8	18.2	1.57	20.0	0.01	0.01	0.03	151	
169	9.24	9.22	33.708	26.072	196.3	0.522	3.39	52.3	24.7	1.85	24.5	0.01	0.01	0.03	170	208
200	8.72	8.70	33.960	26.351	170.2	0.579	2.57	39.3	32.3	2.09	28.4	0.00	0.00	0.03	201	207
228	8.37	8.35	34.038	26.467	159.7	0.625	2.30	34.9	37.5	2.20	29.8	0.00			229	206
250 ISL	7.98 D	7.95	34.033 D	26.521	154.7	0.660	2.26	34.0	40.6	2.25	30.8	0.00			251	
269	7.76	7.73	34.044	26.562	151.0	0.689	2.23	33.3	43.1	2.29	31.6	0.00			270	205
300 ISL	7.35 D	7.32	34.052 D	26.628	145.2	0.735	1.97	29.2	48.5	2.43	33.3	0.00			302	
318	7.16	7.13	34.061	26.661	142.1	0.761	1.77	26.1	51.7	2.52	34.4	0.00			320	204
377	6.73	6.70	34.129	26.774	132.1	0.842	1.13	16.5	61.0	2.80	37.4	0.00			379	203
400 ISL	6.41 D	6.37	34.156 D	26.838	126.1	0.871	1.06	15.4	66.0	2.87	38.5	0.00			402	
437	5.74	5.70	34.102	26.880	122.0	0.917	1.01	14.4	74.0	2.96	40.1	0.00			440	202
500 ISL	5.39 D	5.35	34.149 D	26.960	114.9	0.992	0.71	10.0	82.3	3.09	41.7	0.00			503	
512	5.35	5.31	34.158	26.972	113.8	1.006	0.65	9.2	83.9	3.12	42.0	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 39.8 N	118 4.9 W	09/11/07	2220 UTC	25 m	270 08 kn	250 01 07	1	1015.2 mb	16.9 C	15.0 C		1/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.12	16.12	33.304	24.417	350.3	0.000	6.73	119.7	8.9	0.23	0.1	0.01	4.03	1.02	0	
2	16.12	16.12	33.304	24.417	350.4	0.007	6.73	119.7	8.9	0.23	0.1	0.01	4.03	1.02	2	204
5	16.11	16.11	33.306	24.421	350.1	0.018	6.71	119.4	8.9	0.23	0.2	0.01	4.07	0.99	5	203
10	15.31	15.31	33.475	24.730	320.8	0.034	5.92	103.7	3.7	0.37	1.7	0.10	1.49	0.55	10	202
15	15.23	15.23	33.468	24.742	319.8	0.050	5.85	102.4	3.6	0.40	1.9	0.12	1.11	0.40	15	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 29.6 N	117 44.9 W	09/11/07	1925 UTC	30 m	290 06 kn	310 01 03	1	1016.7 mb	17.2 C	14.0 C		5/8	CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.76	15.76	33.482	24.635	329.5	0.000	6.22	110.0	3.7	0.24	0.2	0.01	6.18	0.69	0	
2	15.76	15.76	33.482	24.635	329.6	0.007	6.22	110.0	3.7	0.24	0.2	0.01	6.18	0.69	2	205
5	15.71	15.71	33.479	24.644	328.8	0.016	6.12	108.1	3.7	0.24	0.2	0.02	4.96	0.48	5	204
10	14.73	14.73	33.405	24.802	313.9	0.033	5.72	99.0	4.2	0.49	2.0	0.17	1.03	0.59	10	203
15	14.54	14.54	33.372	24.817	312.6	0.048	5.75	99.2	4.4	0.58	2.7	0.23	0.72	0.56	15	202
19	13.72	13.72	33.298	24.931	301.9	0.060	5.46	92.5	6.0	0.88	5.3	0.50	0.46	0.65	19	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 28.8 N	117 46.4 W	09/11/07	1809 UTC	110 m	320 07 kn	280 01 03	1	1017.1 mb	15.1 C	14.0 C	09m	5/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.21	16.21	33.492	24.541	338.5	0.000	6.10	108.9	3.6	0.23	0.0	0.00	1.47	0.42	0	
1 A	16.21	16.21	33.492	24.541	338.5	0.003	6.10	108.9	3.6	0.23	0.0	0.00	1.47	0.42	1	212
5 A	16.14	16.14	33.491	24.556	337.2	0.017	5.69	101.4	3.7	0.23	0.0	0.00	1.31	0.48	5	211
10	16.10	16.10	33.490	24.565	336.5	0.034	6.05	107.7	3.7	0.23	0.1	0.00	1.37	0.58	10	210
12 A	16.08	16.08	33.489	24.569	336.2	0.040	6.07	108.0	3.5	0.24	0.1	0.00	1.30	0.67	12	209
18 A	14.97	14.97	33.426	24.766	317.5	0.060	6.12	106.5	2.8	0.34	0.6	0.01	0.85	0.32	18	208
20 ISL	14.80 D	14.80	33.410 D	24.791	315.3	0.066	6.02	104.4	3.3	0.44	1.9	0.09	0.71	0.31	20	
23 A	13.59	13.59	33.365	25.009	294.5	0.076	5.82	98.4	4.2	0.61	4.1	0.22	0.55	0.30	23	207
30 ISL	12.80 D	12.80	33.391 D	25.187	277.7	0.096	5.34	88.8	5.9	0.84	7.7	0.44	0.49	0.37	30	
32 A	12.62	12.62	33.375	25.210	275.6	0.101	5.21	86.3	6.4	0.88	8.5	0.46	0.47	0.40	32	206
41	12.13	12.12	33.431	25.348	262.7	0.125	4.80	78.8	8.7	1.07	11.9	0.17	0.37	0.50	41	205
50	11.73	11.72	33.461	25.446	253.6	0.149	4.52	73.5	10.9	1.20	14.1	0.05	0.25	0.40	50	213
60	11.29	11.28	33.565	25.608	238.4	0.173	4.01	64.7	13.9	1.36	16.8	0.02	0.17	0.25	60	203
70	10.96	10.95	33.633	25.720	227.9	0.196	3.64	58.3	16.3	1.50	18.7	0.01	0.12	0.19	70	202
75 ISL	10.91 D	10.90	33.651 D	25.743	225.9	0.208	3.55	56.8	16.9	1.53	19.1	0.01			75	
85	10.81	10.80	33.679	25.783	222.3	0.230	3.36	53.7	18.1	1.58	19.8	0.02			85	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 0711 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 25.1 N	117 54.3 W	09/11/07	1350 UTC	620 m	030 04 kn			1016.4 mb	16.5 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.38	17.38	33.669	24.404	351.6	0.000	5.66	103.4	0.7	0.22	0.0	0.00	0.56	0.21	0	
1	17.38	17.38	33.669	24.404	351.6	0.004	5.66	103.4	0.7	0.22	0.0	0.00	0.56	0.21	1	220
10	17.39	17.39	33.674	24.406	351.7	0.035	5.67	103.7	0.6	0.23	0.0	0.00	0.53	0.18	10	219
20	16.73	16.73	33.547	24.464	346.5	0.070	5.88	106.0	1.0	0.28	0.1	0.00	0.60	0.25	20	218
30	13.75	13.75	33.393	24.999	295.8	0.102	5.68	96.4	3.2	0.63	5.1	0.13	1.59	0.65	30	217
40	12.53	12.52	33.398	25.245	272.4	0.131	5.16	85.4	6.6	0.89	9.0	0.25	1.07	0.62	40	216
50	11.64	11.63	33.432	25.440	254.1	0.157	4.61	74.8	10.5	1.16	13.6	0.07	0.27	0.40	50	215
59	11.32	11.31	33.520	25.567	242.2	0.179	4.23	68.2	12.7	1.30	15.8	0.04	0.19	0.24	59	214
69	11.15	11.14	33.579	25.644	235.1	0.203	3.95	63.5	14.3	1.38	17.1	0.03	0.18	0.22	69	213
75 ISL	10.88 D	10.87	33.629 D	25.731	227.0	0.217	3.78	60.4	15.6	1.46	18.2	0.02	0.13	0.17	75	
85	10.59	10.58	33.671	25.815	219.2	0.239	3.55	56.4	17.7	1.57	19.8	0.01	0.05	0.09	85	212
99	10.34	10.33	33.706	25.886	212.7	0.270	3.43	54.2	19.2	1.60	20.8	0.01	0.02	0.08	99	211
100 ISL	10.24 D	10.23	33.701 D	25.899	211.5	0.272	3.40	53.6	19.4	1.61	20.9	0.01	0.02	0.08	100	
118	9.88	9.87	33.848	26.075	195.1	0.308	2.93	45.9	24.0	1.80	23.3	0.01	0.01	0.05	119	210
125 ISL	9.57 D	9.56	33.843 D	26.123	190.7	0.322	2.92	45.4	24.8	1.83	23.9	0.01	0.01	0.04	126	
139	9.44	9.42	33.879	26.172	186.2	0.348	2.91	45.1	26.0	1.87	24.9	0.00	0.00	0.04	140	209
150 ISL	9.33 D	9.31	33.931 D	26.231	180.9	0.368	2.79	43.2	27.3	1.92	25.4	0.00	0.00	0.04	151	
169	9.33	9.31	34.018	26.300	174.8	0.402	2.52	39.0	29.8	2.01	26.1	0.00	0.00	0.04	170	208
199	8.86	8.84	34.056	26.405	165.2	0.453	2.22	34.0	34.2	2.13	28.3	0.01	0.02	0.10	200	207
200 ISL	8.80 D	8.78	34.054 D	26.413	164.5	0.455	2.20	33.7	34.3	2.14	28.4	0.01			201	
228	8.83	8.81	34.158	26.490	157.8	0.500	1.74	26.7	38.1	2.32	29.6	0.00			229	206
250 ISL	8.43 D	8.40	34.119 D	26.521	155.0	0.534	1.73	26.3	40.4	2.38	30.5	0.00			251	
268	8.26	8.23	34.135	26.560	151.6	0.562	1.72	26.0	42.1	2.41	31.2	0.00			270	205
300 ISL	8.02 D	7.99	34.166 D	26.621	146.3	0.610	1.42	21.4	45.8	2.53	32.4	0.00			302	
318	8.01	7.98	34.209	26.656	143.3	0.636	1.21	18.2	48.0	2.60	33.0	0.00			320	204
379	7.55	7.51	34.267	26.770	133.3	0.720	0.75	11.2	56.1	2.83	35.1	0.00			381	203
400 ISL	7.36 D	7.32	34.277 D	26.805	130.2	0.748	0.64	9.5	59.4	2.90	35.9	0.00			403	
437	6.95	6.91	34.290	26.872	124.0	0.795	0.48	7.1	65.3	3.00	37.2	0.00			440	202
500 ISL	6.37 D	6.32	34.320 D	26.974	114.8	0.870	0.30	4.3	74.8	3.12	38.7	0.00			503	
513	6.30	6.25	34.326	26.988	113.6	0.885	0.26	3.8	76.8	3.15	39.0	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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	09/11/07	0857 UTC	314 m	300 09 kn			1016.7 mb	16.2 C	13.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.02	17.02	33.639	24.466	345.6	0.000	5.75	104.3	1.0	0.24	0.1	0.00	0.95	0.27	0	
2	17.02	17.02	33.639	24.466	345.7	0.007	5.75	104.3	1.0	0.24	0.1	0.00	0.95	0.27	2	218
10	17.01	17.01	33.636	24.467	345.9	0.035			0.9	0.24	0.0	0.00	0.94	0.31	10	216
10	17.01	17.01	33.635	24.466	346.0	0.035	5.76	104.5	0.9	0.24	0.0	0.00	0.97	0.28	10	217
20	15.67	15.67	33.525	24.689	325.0	0.068	5.87	103.6	2.1	0.39	1.2	0.09	0.88	0.29	20	215
30	13.18	13.18	33.418	25.133	282.9	0.099	5.24	87.9	5.9	0.83	7.6	0.48	0.42	0.27	30	214
40	12.52	12.51	33.416	25.261	270.9	0.126	4.97	82.2	7.6	0.98	10.3	0.30	0.37	0.30	40	213
50	12.00	11.99	33.447	25.385	259.4	0.153	4.68	76.6	10.0	1.13	12.9	0.08	0.25	0.24	50	212
60	11.56	11.55	33.529	25.531	245.8	0.178	4.29	69.6	12.3	1.27	15.1	0.03	0.16	0.23	60	211
69	11.29	11.28	33.574	25.615	237.9	0.200	4.07	65.6	13.9	1.36	16.6	0.03	0.12	0.19	69	210
75 ISL	11.02 D	11.01	33.623 D	25.702	229.8	0.214	3.88	62.2	15.5	1.45	17.9	0.02	0.09	0.16	75	
85	10.64	10.63	33.666	25.803	220.4	0.236	3.60	57.3	17.9	1.58	19.9	0.01	0.05	0.13	85	209
100	10.46	10.45	33.711	25.869	214.4	0.269	3.45	54.7	19.0	1.62	20.6	0.01	0.03	0.10	100	208
120	9.87	9.86	33.831	26.064	196.2	0.310	3.05	47.8	23.7	1.78	23.2	0.00	0.01	0.09	121	207
125 ISL	9.71 D	9.70	33.868 D	26.119	191.0	0.320	2.96	46.2	25.3	1.83	24.1	0.00	0.01	0.08	126	
139	9.11	9.09	33.956	26.286	175.4	0.345	2.73	42.1	29.7	1.96	26.3	0.00	0.00	0.04	140	206
150 ISL	9.01 D	8.99	33.990 D	26.329	171.5	0.364	2.57	39.5	31.8	2.03	27.3	0.00	0.00	0.04	151	
170	8.83	8.81	34.045	26.400	165.1	0.398	2.28	34.9	34.6	2.13	28.4	0.00	0.00	0.05	171	205
200	8.72	8.70	34.135	26.489	157.3	0.446	1.81	27.7	39.0	2.32	30.1	0.01	0.00	0.08	201	204
229	8.44	8.42	34.161	26.552	151.7	0.491	1.60	24.3	42.5	2.45	31.2	0.02			230	203
250 ISL	8.29 D	8.26	34.185 D	26.594	148.0	0.523	1.34	20.3	45.3	2.56	31.9	0.03			251	
269	8.29	8.26	34.238	26.636	144.4	0.550	1.11	16.8	47.8	2.65	32.5	0.03			271	202
298	7.99	7.96	34.252	26.693	139.4	0.592	0.95	14.3	51.6	2.74	33.6	0.01			300	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.0 N	118 23.2 W	09/11/07	0544 UTC	1181 m	280 05 kn			1016.5 mb	16.0 C	13.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.17	17.17	33.643	24.434	348.7	0.000	5.72	104.1	0.7	0.23	0.0	0.00	0.57	0.17	0	
2	17.17	17.17	33.643	24.434	348.8	0.007	5.72	104.1	0.7	0.23	0.0	0.00	0.57	0.17	2	220
10	17.17	17.17	33.643	24.434	349.0	0.035	5.72	104.1	0.6	0.22	0.1	0.00	0.65	0.03	10	219
20	17.18	17.18	33.644	24.433	349.5	0.070	5.72	104.1	0.6	0.22	0.0	0.00	0.57	0.15	20	218
30	16.20	16.20	33.584	24.615	332.4	0.104	5.71	101.9	1.3	0.37	1.0	0.06	0.52	0.23	30	217
40	15.38	15.37	33.560	24.781	316.9	0.136	5.42	95.2	2.7	0.55	3.6	0.23	0.52	0.32	40	216
50	13.31	13.30	33.442	25.126	284.1	0.166	5.22	87.8	5.6	0.82	7.4	0.45	0.30	0.28	50	215
60	12.24	12.23	33.488	25.371	261.0	0.194	4.63	76.2	8.8	1.11	12.4	0.04	0.22	0.25	60	214
70	11.47	11.46	33.497	25.522	246.8	0.219	4.37	70.7	12.2	1.27	15.1	0.03	0.16	0.19	70	213
75 ISL	11.40 D	11.39	33.576 D	25.597	239.8	0.231	4.18	67.6	13.5	1.34	16.2	0.02	0.13	0.17	75	
84	10.95	10.94	33.629	25.719	228.4	0.252	3.81	61.0	15.7	1.46	18.1	0.01	0.09	0.13	84	212
99	10.18	10.17	33.738	25.938	207.7	0.285	3.33	52.5	20.6	1.67	21.5	0.00	0.02	0.08	99	211
100 ISL	10.15 D	10.14	33.756 D	25.958	205.9	0.287	3.31	52.1	20.8	1.68	21.6	0.00	0.02	0.08	100	
119	9.71	9.70	33.860	26.113	191.5	0.325	2.97	46.4	24.5	1.82	23.4	0.00	0.01	0.09	120	210
125 ISL	9.64 D	9.63	33.904 D	26.159	187.3	0.336	2.91	45.4	25.7	1.86	24.1	0.00	0.01	0.08	126	
139	9.17	9.15	33.935	26.260	177.9	0.362	2.80	43.2	28.3	1.94	25.6	0.00	0.00	0.05	140	209
150 ISL	9.09 D	9.07	33.978 D	26.306	173.6	0.381	2.66	41.0	29.9	2.00	26.4	0.00	0.00	0.05	151	
170	8.92	8.90	34.019	26.366	168.4	0.415	2.37	36.4	32.8	2.10	27.7	0.00	0.00	0.06	171	208
199	8.59	8.57	34.095	26.477	158.3	0.463	2.00	30.5	37.7	2.24	29.6	0.00	0.00	0.04	200	207
200 ISL	8.55 D	8.53	34.103 D	26.490	157.1	0.464	1.99	30.3	37.9	2.24	29.7	0.00			201	
229	8.27	8.25	34.135	26.558	151.1	0.509	1.73	26.2	42.1	2.37	31.2	0.00			230	206
250 ISL	8.09 D	8.06	34.160 D	26.605	146.9	0.540	1.50	22.6	45.0	2.48	32.0	0.00			251	
269	7.97	7.94	34.182	26.640	143.8	0.568	1.31	19.7	47.6	2.57	32.7	0.00			271	205
300 ISL	7.71 D	7.68	34.193 D	26.687	139.8	0.612	1.10	16.4	51.5	2.68	34.1	0.00			302	
318	7.54	7.51	34.212	26.727	136.2	0.637	1.01	15.0	53.7	2.73	34.8	0.00			320	204
378	7.06	7.02	34.243	26.819	128.1	0.716	0.72	10.6	61.1	2.89	36.3	0.00			380	203
400 ISL	6.94 D	6.90	34.248 D	26.840	126.4	0.744	0.62	9.1	63.2	2.95	36.7	0.00			403	
438	6.83	6.79	34.294	26.892	122.1	0.791	0.45	6.6	66.8	3.04	37.5	0.00			441	202
500 ISL	6.38 D	6.33	34.324 D	26.976	114.6	0.864									503	
512	6.35	6.30	34.327 D	26.982	114.1	0.878									516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 55.2 N	118 56.1 W	09/11/07	0005	UTC	1709 m	320	07 kn	320 01 08	2	1016.4 mb	16.8 C	13.3 C	09m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.80	16.80	33.718	24.578	334.9	0.000	5.80	104.8	0.4	0.24	0.0	0.00	0.63	0.20	0	
1	16.80	16.80	33.718	24.578	334.9	0.003	5.80	104.8	0.4	0.24	0.0	0.00	0.63	0.20	1	221
10	16.47	16.47	33.685	24.630	330.3	0.033	5.90	105.9	0.6	0.24	0.0	0.00	0.96	0.35	10	219
10	16.48	16.48	33.684	24.627	330.6	0.033									10	220
20	16.04	16.04	33.669	24.716	322.4	0.066	5.76	102.5	1.0	0.37	1.3	0.09	0.97	0.44	20	218
30	14.80	14.80	33.648	24.975	298.1	0.097	5.15	89.4	4.5	0.70	6.2	0.53	0.55	0.37	30	217
40	13.02	13.01	33.589	25.298	267.5	0.125	4.80	80.3	7.8	0.94	10.3	0.11	0.34	0.24	40	216
50	12.64	12.63	33.613	25.391	258.9	0.152	4.32	71.7	10.5	1.15	13.8	0.04	0.16	0.15	50	215
60	11.38	11.37	33.583	25.605	238.6	0.176	4.05	65.4	13.9	1.35	16.8	0.03	0.09	0.13	60	214
70	10.83	10.82	33.665	25.768	223.3	0.200	3.64	58.2	17.0	1.52	19.4	0.01	0.06	0.09	70	213
75 ISL	10.62 D	10.61	33.707 D	25.838	216.8	0.211	3.51	55.8	18.2	1.57	20.2	0.00	0.05	0.08	75	
85	10.33	10.32	33.744	25.917	209.5	0.232	3.30	52.2	20.3	1.65	21.5	0.00	0.04	0.07	85	212
99	9.95	9.94	33.817	26.039	198.1	0.260	3.00	47.1	23.4	1.78	23.2	0.00	0.01	0.06	99	211
100 ISL	9.91 D	9.90	33.827 D	26.053	196.8	0.262	2.98	46.7	23.6	1.79	23.3	0.00	0.01	0.06	101	
120	9.55	9.54	33.918	26.185	184.7	0.301	2.67	41.5	27.4	1.92	25.2	0.00	0.01	0.05	121	210
125 ISL	9.49 D	9.48	33.939 D	26.211	182.3	0.310	2.60	40.4	28.2	1.95	25.6	0.00	0.01	0.06	126	
139	9.34	9.32	33.985	26.272	176.8	0.335	2.41	37.3	30.2	2.03	26.5	0.00	0.00	0.07	140	209
150 ISL	9.25 D	9.23	34.027 D	26.319	172.5	0.354	2.25	34.8	31.8	2.09	27.2	0.00	0.00	0.07	151	
169	9.08	9.06	34.080	26.388	166.3	0.386	1.99	30.7	34.4	2.19	28.4	0.01	0.00	0.05	170	208
198	8.81	8.79	34.140	26.478	158.2	0.433	1.66	25.4	38.4	2.33	30.0	0.00	0.00	0.05	199	207
200 ISL	8.78 D	8.76	34.150 D	26.491	157.1	0.436	1.63	25.0	38.7	2.34	30.1	0.00			201	
228	8.58	8.56	34.213	26.572	149.9	0.479	1.31	20.0	42.8	2.48	31.3	0.00			229	206
250 ISL	8.39 D	8.36	34.236 D	26.619	145.7	0.512	1.16	17.6	45.3	2.55	32.1	0.00			251	
268	8.25	8.22	34.241	26.645	143.6	0.538	1.07	16.2	47.2	2.60	32.6	0.00			270	205
300 ISL	8.00 D	7.97	34.247 D	26.687	140.0	0.583	0.93	14.0	50.6	2.69	33.5	0.00			302	
318	7.83	7.80	34.252	26.716	137.4	0.608	0.86	12.9	52.5	2.73	34.0	0.00			320	204
378	7.42	7.38	34.266	26.787	131.5	0.689	0.69	10.2	58.2	2.82	35.3	0.00			380	203
400 ISL	7.26 D	7.22	34.270 D	26.813	129.3	0.718	0.63	9.3	60.0	2.86	35.8	0.00			403	
437	7.08	7.04	34.283	26.849	126.3	0.765	0.53	7.8	63.2	2.92	36.6	0.00			440	202
500 ISL	6.62 D	6.57	34.314 D	26.936	118.6	0.842	0.36	5.2	71.1	3.06	38.4	0.00			503	
511	6.50	6.45	34.315	26.953	117.1	0.855	0.33	4.8	72.5	3.08	38.7	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 38.6 N	119 28.6 W	08/11/07	1824	UTC	1317 m	340	06 kn	350 01 05	1	1018.9 mb	17.0 C	13.9 C	09m	7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.70	15.70	33.638	24.768	316.8	0.000	5.98	105.7	1.8	0.38	1.1	0.07	1.68	0.34	0	
2 A	15.70	15.70	33.638	24.769	316.9	0.006	5.98	105.7	1.8	0.38	1.1	0.07	1.68	0.34	2	224
5 A	15.68	15.68	33.639	24.774	316.5	0.016	5.97	105.5	1.9	0.38	1.2	0.07	1.73	0.36	5	223
10 ISL	15.54 D	15.54	33.644 D	24.809	313.3	0.032	5.93	104.5	3.0	0.46	2.4	0.10	1.65	0.50	10	
12 A	15.35	15.35	33.653	24.858	308.6	0.038	5.91	103.8	3.5	0.49	2.9	0.11	1.61	0.55	12	221
12	15.49	15.49	33.647	24.823	312.0	0.038	5.95	104.8							12	222
17 A	14.91	14.91	33.658	24.958	299.3	0.053	5.90	102.7	3.9	0.50	3.3	0.12	1.62	0.55	17	219
17	14.94	14.94	33.657	24.951	300.0	0.053	5.91	102.9							17	220
20 ISL	14.70 D	14.70	33.643 D	24.992	296.1	0.062	5.80	100.5	4.4	0.55	3.9	0.14	1.33	0.48	20	
23 A	14.48	14.48	33.637	25.034	292.2	0.071	5.69	98.2	5.0	0.61	4.6	0.17	1.00	0.40	23	218
30 ISL	14.25 D	14.25	33.614 D	25.065	289.4	0.091	5.57	95.6	5.6	0.66	5.3	0.20	0.74	0.33	30	
31 A	14.21	14.21	33.612	25.072	288.8	0.094	5.55	95.2	5.7	0.67	5.4	0.21	0.73	0.32	31	217
41	12.94	12.93	33.535	25.272	270.0	0.122	5.18	86.5	8.1	0.90	8.9	0.41	0.58	0.27	41	216
50	12.00	11.99	33.547	25.462	252.1	0.146	4.49	73.5	12.2	1.20	14.1	0.38	0.31	0.23	50	215
60	11.68	11.67	33.586	25.553	243.7	0.170	4.26	69.3	13.7	1.28	15.4	0.28	0.23	0.20	60	214
70	10.65	10.64	33.688	25.818	218.6	0.193	3.52	56.0	18.7	1.57	20.2	0.05	0.06	0.13	70	213
75 ISL	10.52 D	10.51	33.702 D	25.851	215.5	0.204	3.28	52.1	20.5	1.65	21.4	0.04	0.05	0.11	75	
85	10.09	10.08	33.805	26.006	201.0	0.225	2.99	47.0	23.0	1.75	22.7	0.03	0.02	0.09	85	212
100	9.98	9.97	33.844	26.055	196.7	0.255	2.83	44.4	24.4	1.82	23.4	0.02	0.02	0.08	101	211
119	9.70	9.69	33.970	26.201	183.2	0.291	2.27	35.4	29.2	2.04	25.8	0.03	0.01	0.06	120	210
125 ISL	9.67 D	9.66	33.976 D	26.210	182.4	0.302	2.18	34.0	30.0	2.08	26.2	0.03	0.01	0.06	126	
140	9.60	9.58	34.034	26.267	177.3	0.329	2.05	32.0	31.2	2.13	26.8	0.02	0.00	0.05	141	209
150 ISL	9.59 D	9.57	34.051 D	26.283	176.1	0.347	2.00	31.2	32.0	2.16	27.1	0.02	0.00	0.06	151	
169	9.40	9.38	34.099	26.352	169.9	0.380	1.90	29.5	33.6	2.21	27.7	0.02	0.01	0.09	170	208
199	9.11	9.09	34.177	26.460	160.1	0.429	1.58	24.4	37.3	2.32	29.2	0.01	0.01	0.06	200	207
200 ISL	9.11 D	9.09	34.180 D	26.462	159.9	0.431	1.57	24.2	37.5	2.33	29.3	0.01			201	
228	8.52	8.50	34.214	26.582	148.9	0.474	1.29	19.6	43.6	2.49	31.5	0.00			229	206
250 ISL	8.40 D	8.37	34.240 D	26.621	145.6	0.506	1.14	17.3	46.8	2.57	32.5	0.00			251	
268	8.02	7.99	34.235	26.674	140.6	0.532	1.04	15.7	49.1	2.62	33.2	0.00			270	205
300 ISL	7.67 D	7.64	34.244 D	26.733	135.4	0.576	0.84	12.5	54.1	2.74	34.6	0.00			302	
318	7.51	7.48	34.251	26.762	132.9	0.600	0.75	11.2	56.6	2.79	35.3	0.00			320	204
378	7.33	7.29	34.264	26.798	130.3	0.679	0.65	9.6	59.4	2.83	35.9	0.00			380	203
400 ISL	7.27 D	7.23	34.269 D	26.811	129.5	0.708	0.62	9.2	60.5	2.85	36.2	0.00			403	
437	7.09	7.05	34.276	26.842	127.0	0.755	0.56	8.3	63.1	2.90	36.8	0.00			440	202
500 ISL	6.53 D	6.48	34.305 D	26.941	118.1	0.833	0.43	6.3	71.2	3.03	38.3	0.00			503	
512	6.50	6.45	34.303	26.944	117.9	0.847	0.40	5.8	72.8	3.05	38.6	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 0711 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 25.3 N	119 57.6 W	08/11/07	1319 UTC	881 m	310 08 kn			1017.2 mb	15.9 C	12.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.73	16.73	33.631	24.528	339.7	0.000	5.68	102.5	0.0	0.28	0.0	0.00	0.44	0.16	0	
2	16.73	16.73	33.631	24.528	339.8	0.007	5.68	102.5	0.0	0.28	0.0	0.00	0.44	0.16	2	220
10	16.73	16.73	33.631	24.528	340.0	0.034	5.70	102.8	0.0	0.28	0.0	0.00	0.45	0.17	10	219
20	16.72	16.72	33.629	24.529	340.2	0.068	5.69	102.6	0.0	0.28	0.0	0.00	0.49	0.18	20	218
30 ISL	16.59 D	16.59	33.623 D	24.555	338.1	0.102	5.64	101.5	0.0	0.31	0.2	0.02	0.73	0.38	30	
31	16.58	16.58	33.623	24.558	337.9	0.105	5.63	101.3	0.0	0.31	0.2	0.02	0.75	0.40	31	217
40	16.23	16.22	33.604	24.624	331.9	0.135	5.59	99.8	0.0	0.38	0.6	0.05	0.52	0.29	40	216
50 ISL	13.02 D	13.01	33.581 D	25.292	268.4	0.165	4.69	78.5	7.5	0.98	10.1	0.28	0.22	0.21	50	
51	12.96	12.95	33.582	25.304	267.2	0.168	4.59	76.7	8.4	1.04	11.2	0.30	0.19	0.20	51	215
60	11.72	11.71	33.594	25.552	243.8	0.191	4.15	67.6	12.7	1.28	15.6	0.07	0.09	0.13	60	214
70	10.81	10.80	33.623	25.739	226.1	0.215	3.84	61.3	16.3	1.47	18.7	0.02	0.05	0.10	70	213
75 ISL	10.47 D	10.46	33.660 D	25.827	217.8	0.226	3.67	58.2	18.2	1.56	20.1	0.02	0.04	0.08	75	
85	10.04	10.03	33.721	25.949	206.4	0.247	3.36	52.8	21.3	1.69	22.2	0.01	0.02	0.06	85	212
100	9.80	9.79	33.772	26.029	199.1	0.277	3.16	49.4	23.2	1.77	23.4	0.02	0.01	0.05	100	211
119	9.26	9.25	33.956	26.261	177.3	0.313	2.59	40.0	29.7	1.99	26.3	0.00	0.01	0.05	120	210
125 ISL	9.24 D	9.23	33.991 D	26.292	174.5	0.324	2.41	37.3	31.2	2.05	26.9	0.00	0.01	0.05	126	
139	9.17	9.15	34.090	26.381	166.4	0.348	2.05	31.7	34.1	2.18	28.0	0.00	0.00	0.05	140	209
150 ISL	9.11 D	9.09	34.135 D	26.426	162.3	0.366	1.89	29.2	35.5	2.24	28.6	0.00	0.00	0.05	151	
170	9.04	9.02	34.156	26.454	160.1	0.398	1.71	26.3	37.4	2.32	29.3	0.00	0.00	0.05	171	208
199	8.79	8.77	34.198	26.527	153.6	0.443	1.49	22.8	40.5	2.42	30.4	0.00	0.00	0.04	200	207
200 ISL	8.78 D	8.76	34.197 D	26.528	153.6	0.445	1.48	22.7	40.6	2.42	30.4	0.00			201	
227	8.56	8.54	34.228	26.587	148.5	0.486	1.26	19.2	44.0	2.52	31.4	0.00			228	206
250 ISL	8.06 D	8.03	34.197 D	26.638	143.7	0.519	1.10	16.6	47.7	2.60	32.9	0.00			251	
267	7.93	7.90	34.214	26.671	140.9	0.543	1.01	15.2	50.3	2.66	34.0	0.00			269	205
300 ISL	7.67 D	7.64	34.227 D	26.720	136.7	0.589	0.89	13.3	53.8	2.73	34.9	0.00			302	
318	7.54	7.51	34.235	26.745	134.5	0.614	0.83	12.4	55.4	2.76	35.2	0.00			320	204
378	7.15	7.11	34.267	26.826	127.6	0.692	0.60	8.9	61.9	2.90	36.6	0.00			380	203
400 ISL	6.94 D	6.90	34.281 D	26.866	124.0	0.720	0.53	7.8	64.7	2.94	37.2	0.00			403	
437	6.71	6.67	34.295	26.909	120.3	0.765	0.41	6.0	69.3	3.01	38.1	0.00			440	202
500 ISL	6.38 D	6.33	34.318 D	26.971	115.1	0.839									503	
512	6.35	6.30	34.320 D	26.977	114.7	0.853									516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 4.9 N	120 38.5 W	08/11/07	0535 UTC	3837 m	300 05 kn			1018.6 mb	16.0 C	12.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.65	16.65	33.577	24.505	341.9	0.000	5.73	103.2	0.0	0.27	0.0	0.00	0.42	0.15	0	
1	16.65	16.65	33.577	24.505	341.9	0.003	5.73	103.2	0.0	0.27	0.0	0.00	0.42	0.15	1	222
10	16.58	16.58	33.574	24.519	340.9	0.034	5.73	103.0	0.0	0.27	0.0	0.00	0.48	0.18	10	220
10	16.62	16.62	33.573	24.509	341.8	0.034									10	221
20	16.36	16.36	33.582	24.577	335.8	0.068	5.64	101.0	0.2	0.31	0.3	0.06	0.75	0.36	20	219
30	15.86	15.86	33.596	24.701	324.2	0.101	5.64	100.0	0.4	0.40	1.2	0.14	0.71	0.34	30	217
30	15.92	15.92	33.585	24.679	326.3	0.101									30	218
40	15.69	15.68	33.669	24.796	315.5	0.133	5.63	99.5	0.5	0.44	1.9	0.15	0.54	0.33	40	216
50	14.01	14.00	33.529	25.051	291.4	0.163	5.09	86.9	4.9	0.79	7.1	0.32	0.30	0.25	50	215
59	11.90	11.89	33.450	25.406	257.6	0.188	4.62	75.4	10.3	1.16	13.8	0.04	0.08	0.13	59	214
70	11.13	11.12	33.575	25.645	235.1	0.215	4.04	64.9	14.3	1.36	17.4	0.02	0.05	0.10	70	213
75 ISL	10.82 D	10.81	33.624 D	25.738	226.3	0.227	3.84	61.3	16.1	1.45	18.8	0.02	0.04	0.09	75	
85	10.31	10.30	33.679	25.870	214.0	0.249	3.51	55.5	19.5	1.62	21.2	0.01	0.03	0.07	85	212
100	9.73	9.72	33.796	26.059	196.2	0.280	3.08	48.1	23.4	1.78	23.7	0.01	0.01	0.05	100	211
120	9.44	9.43	33.872	26.167	186.4	0.318	2.93	45.5	25.4	1.82	24.5	0.00	0.01	0.06	121	210
125 ISL	9.37 D	9.36	33.897 D	26.198	183.5	0.327	3.00	46.5	25.6	1.80	24.5	0.00	0.01	0.06	126	
140	9.00	8.98	33.921	26.276	176.3	0.354	3.20	49.2	26.6	1.77	24.4	0.00	0.01	0.04	141	209
150 ISL	8.77 D	8.75	33.957 D	26.340	170.3	0.371	3.04	46.5	28.6	1.84	25.4	0.00	0.01	0.04	151	
169	8.57	8.55	34.007	26.411	163.9	0.403	2.61	39.7	33.0	2.02	27.7	0.00	0.01	0.04	170	208
199	8.24	8.22	34.038	26.486	157.3	0.451	2.36	35.7	37.0	2.14	29.3	0.00	0.00	0.03	200	207
200 ISL	8.21 D	8.19	34.040 D	26.492	156.7	0.453	2.35	35.5	37.2	2.14	29.4	0.00			201	
229	7.87	7.85	34.078	26.573	149.5	0.497	1.94	29.1	42.8	2.30	31.6	0.00			230	206
250 ISL	7.85 D	7.83	34.151 D	26.633	144.1	0.528	1.56	23.4	46.3	2.45	32.7	0.00			251	
269	7.68	7.65	34.174	26.676	140.2	0.555	1.25	18.7	49.3	2.57	33.6	0.00			271	205
300 ISL	7.25 D	7.22	34.164 D	26.730	135.4	0.598	1.14	16.9	54.0	2.66	35.1	0.00			302	
318	7.00	6.97	34.157	26.759	132.8	0.622	1.08	15.9	56.6	2.69	35.9	0.00			320	204
378	6.57	6.54	34.185	26.840	125.8	0.700	0.81	11.8	64.2	2.84	37.7	0.00			380	203
400 ISL	6.49 D	6.45	34.218 D	26.876	122.6	0.727	0.72	10.5	66.9	2.89	38.4	0.00			403	
437	6.17	6.13	34.218	26.918	118.9	0.772	0.58	8.4	71.2	2.97	39.3	0.00			440	202
500 ISL	6.14 D	6.10	34.333 D	27.014	110.8	0.844	0.31	4.5	77.3	3.13	40.0	0.00			503	
513	6.07	6.02	34.340	27.028	109.5	0.858	0.25	3.6	78.5	3.16	40.1	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 44.9 N	121 18.7 W	07/11/07	2305 UTC	3630 m	010 06 kn	350 02 05	1	1017.2 mb	16.1 C	13.0 C	12m	3/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.77	16.77	33.611	24.503	342.1	0.000	5.70	102.9	0.2	0.32	0.0	0.01	0.55	0.17	0	
1	16.77	16.77	33.611	24.503	342.1	0.003	5.70	102.9	0.2	0.32	0.0	0.01	0.55	0.17	1	221
10	16.62	16.62	33.617	24.543	338.6	0.034	5.73	103.2	0.2	0.31	0.1	0.01	0.69	0.17	10	220
19	16.54	16.54	33.621	24.565	336.8	0.064	5.72	102.8	0.3	0.31	0.0	0.01	0.61	0.17	19	219
20 ISL	16.52 D	16.52	33.617 D	24.567	336.7	0.068	5.72	102.8	0.3	0.31	0.0	0.01	0.62	0.17	20	
30	16.34	16.34	33.600	24.595	334.3	0.101	5.75	102.9	0.1	0.32	0.0	0.01	0.74	0.18	30	218
40	16.07	16.06	33.597	24.655	328.9	0.135	5.66	100.8	0.3	0.37	0.4	0.05	0.66	0.29	40	217
45	15.99	15.98	33.594	24.671	327.5	0.151	5.65	100.4	0.4	0.39	0.5	0.06	0.56	0.26	45	216
50	15.56	15.55	33.544	24.729	322.1	0.167	5.62	99.0	0.9	0.44	1.1	0.12	0.44	0.24	50	215
59	14.10	14.09	33.488	25.000	296.4	0.195	5.05	86.4	5.3	0.82	7.4	0.32	0.10	0.16	59	214
69	12.28	12.27	33.281	25.203	277.2	0.224	5.05	83.0	7.6	0.96	9.8	0.11	0.09	0.16	69	213
75 ISL	11.73 D	11.72	33.371 D	25.377	260.8	0.240	4.80	78.0	10.1	1.11	12.3	0.05	0.07	0.13	75	
84	11.03	11.02	33.446	25.562	243.3	0.263	4.31	69.1	13.9	1.34	16.2	0.01	0.05	0.09	84	212
99	10.70	10.69	33.612	25.750	225.7	0.298	3.74	59.6	17.6	1.57	19.6	0.01	0.03	0.09	99	211
100 ISL	10.59 D	10.58	33.654 D	25.802	220.8	0.300	3.71	59.0	17.9	1.58	19.8	0.01	0.03	0.09	100	
120	9.69	9.68	33.761	26.039	198.5	0.342	3.19	49.7	24.0	1.82	23.8	0.01	0.02	0.06	121	210
125 ISL	9.66 D	9.65	33.831 D	26.099	193.0	0.352	3.08	48.0	25.1	1.86	24.5	0.01	0.02	0.06	126	
139	9.31	9.29	33.875	26.190	184.5	0.378	2.79	43.2	27.7	1.95	25.9	0.00	0.01	0.06	140	209
150 ISL	9.24 D	9.22	33.933 D	26.247	179.3	0.398	2.60	40.2	29.5	2.01	26.7	0.00	0.01	0.06	151	
169	8.96	8.94	34.000	26.345	170.4	0.431	2.33	35.8	32.5	2.11	27.9	0.00	0.00	0.05	170	208
198	8.59	8.57	34.071	26.458	160.0	0.479	2.05	31.2	37.2	2.24	29.6	0.00	0.00	0.03	199	207
200 ISL	8.59 D	8.57	34.079 D	26.465	159.5	0.482	2.05	31.2	37.5	2.25	29.7	0.00			201	
229	8.12	8.10	34.076	26.534	153.2	0.528	1.99	30.0	41.8	2.31	31.1	0.00			230	206
250 ISL	7.72 D	7.70	34.069 D	26.588	148.3	0.559	1.96	29.3	45.8	2.36	32.2	0.00			251	
269	7.22	7.19	34.056	26.648	142.6	0.587	1.94	28.6	49.6	2.41	33.2	0.00			271	205
300 ISL	6.79 D	6.76	34.063 D	26.713	136.7	0.630	1.69	24.7	55.5	2.55	35.1	0.00			302	
318	6.60	6.57	34.075	26.748	133.5	0.655	1.51	22.0	58.7	2.64	36.1	0.00			320	204
377	6.19	6.16	34.138	26.852	124.3	0.731	0.94	13.6	68.1	2.87	38.7	0.00			379	203
400 ISL	6.22 D	6.18	34.191 D	26.890	121.0	0.759	0.75	10.8	70.9	2.94	39.3	0.00			403	
438	6.07	6.03	34.227	26.938	116.9	0.804	0.50	7.2	75.0	3.04	40.0	0.00			441	202
500 ISL	5.81 D	5.77	34.287 D	27.019	109.9	0.874	0.33	4.7	81.4	3.16	41.0	0.00			503	
513	5.76	5.72	34.295	27.031	108.8	0.889	0.30	4.3	82.8	3.18	41.2	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 25.7 N	122 0.0 W	07/11/07	1752 UTC	3822 m	360 04 kn	310 04 11	2	1018.4 mb	17.1 C	13.2 C	17m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.48	16.48	33.367	24.383	353.5	0.000	5.70	102.2	0.7	0.32	0.0	0.00	0.43	0.15	0	
2 A	16.48	16.48	33.367	24.383	353.6	0.007	5.70	102.2	0.7	0.32	0.0	0.00	0.43	0.15	2	223
9	16.50	16.50				0.032									9	222
10 A	16.57	16.57	33.414	24.399	352.4	0.035	5.68	102.0	0.6	0.33	0.0	0.00	0.53	0.24	10	221
16	16.52	16.52	33.426	24.420	350.6	0.056	5.66	101.6	0.6	0.35	0.0	0.00	0.57	0.28	16	220
20 ISL	16.47 D	16.47	33.429 D	24.434	349.4	0.070	5.64	101.1	0.6	0.36	0.0	0.00	0.60	0.31	20	
21 A	16.45	16.45	33.430	24.439	348.9	0.074	5.64	101.1	0.6	0.36	0.0	0.00	0.60	0.31	21	218
22	16.46	16.46				0.077									22	219
30 ISL	16.22 D	16.22	33.392 D	24.463	346.9	0.105	5.66	100.9	0.6	0.37	0.1	0.01	0.56	0.28	30	
33 A	16.08	16.07	33.380	24.486	344.8	0.116	5.67	100.8	0.6	0.38	0.1	0.02	0.54	0.27	33	217
43 A	15.55	15.54	33.311	24.552	338.8	0.150	5.69	100.1	1.0	0.43	0.4	0.06	0.41	0.28	43	216
50 ISL	14.78 D	14.77	33.209 D	24.641	330.4	0.173	5.73	99.2	1.6	0.47	0.8	0.11	0.38	0.27	50	
52	14.53	14.52	33.186	24.677	327.1	0.180	5.75	99.0	1.8	0.48	1.0	0.13	0.37	0.27	52	215
60 A	13.03	13.02	32.970	24.817	313.8	0.205	5.85	97.5	2.9	0.55	2.1	0.28	0.31	0.26	60	214
69	12.70	12.69	33.091	24.975	298.9	0.233	5.62	93.1	4.1	0.68	4.9	0.27	0.22	0.23	69	213
75 ISL	12.50 D	12.49	33.146 D	25.057	291.3	0.251	5.49	90.6	4.8	0.74	6.3	0.18	0.16	0.21	75	
84	12.35	12.34	33.264	25.177	280.1	0.276	5.31	87.4	5.8	0.83	8.0	0.04	0.09	0.18	84	212
100	11.86	11.85	33.393	25.370	262.0	0.320	4.97	81.0	8.4	1.02	11.3	0.00	0.05	0.09	100	211
120	10.79	10.78	33.592	25.719	229.1	0.369	4.07	64.9	14.4	1.40	17.4	0.00	0.03	0.06	121	210
125 ISL	10.47 D	10.46	33.645 D	25.817	219.9	0.380	3.89	61.7	16.0	1.48	18.7	0.00	0.02	0.06	126	
138	10.02	10.00	33.700	25.937	208.7	0.408	3.51	55.1	19.7	1.65	21.5	0.00	0.01	0.05	139	209
150 ISL	9.61 D	9.59	33.767 D	26.057	197.4	0.432	3.35	52.1	22.0	1.73	22.8	0.00	0.01	0.05	151	
169	9.16	9.14	33.872	26.213	182.9	0.468	3.23	49.8	25.0	1.79	24.0	0.00	0.00	0.04	170	208
199	8.73	8.71	33.975	26.362	169.2	0.521	2.94	44.9	30.1	1.92	26.2	0.00	0.00	0.03	200	207
200 ISL	8.72 D	8.70	33.983 D	26.369	168.5	0.523	2.93	44.8	30.3	1.92	26.3	0.00			201	
228	8.13	8.11	34.014	26.484	157.9	0.569	2.70	40.7	36.0	2.07	28.5	0.00			229	206
250 ISL	7.83 D	7.81	34.037 D	26.546	152.3	0.603	2.38	35.6	40.5	2.20	30.3	0.00			251	
268	7.61	7.58	34.053	26.591	148.2	0.630	2.10	31.3	44.0	2.31	31.7	0.00			269	205
300 ISL	7.32 D	7.29	34.093 D	26.664	141.7	0.676	1.76	26.1	49.7	2.47	33.8	0.00			302	
318	6.95	6.92	34.080	26.705	137.8	0.701	1.60	23.5	53.0	2.55	34.8	0.00			320	204
378	6.20	6.17	34.118	26.835	125.9	0.780	1.02	14.7	65.7	2.83	38.2	0.00			380	203
400 ISL	6.00 D	5.97	34.125 D	26.866	123.1	0.808	0.91	13.1	69.5	2.89	39.0	0.00			402	
437	5.73	5.69	34.146	26.916	118.6	0.853	0.76	10.8	74.7	2.98	40.0	0.00			440	202
500 ISL	5.66 D	5.62	34.257 D	27.013	110.2	0.925	0.42	6.0	80.3	3.12	41.0	0.00			503	
511	5.67	5.63	34.265	27.018	109.9	0.937	0.36	5.1	81.3	3.14	41.2	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 39.6 W	07/11/07	0834 UTC	4028 m	340 09 kn			1016.8 mb	16.9 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.44	17.44	33.194	24.025	387.6	0.000	5.55	101.3	0.8	0.29	0.0	0.00	0.26	0.07	0	
1	17.44	17.44	33.194	24.025	387.7	0.004	5.55	101.3	0.8	0.29	0.0	0.00	0.26	0.07	1	221
10	17.44	17.44	33.196	24.027	387.8	0.039	5.55	101.3	0.8	0.29	0.0	0.00	0.25	0.07	10	220
20	17.45	17.45	33.195	24.025	388.4	0.078	5.55	101.3	0.8	0.29	0.0	0.00	0.25	0.07	20	219
30 ISL	17.08 D	17.08	33.180 D	24.101	381.4	0.116	5.63	102.0	0.8	0.30	0.0	0.00	0.47	0.20	30	
31	17.10	17.09	33.188	24.103	381.3	0.120	5.64	102.2	0.8	0.30	0.0	0.00	0.50	0.22	31	218
35	16.80	16.79	33.238	24.211	371.0	0.135	5.72	103.1	0.6	0.29	0.0	0.00	0.62	0.28	35	217
40	15.05	15.04	33.105 D	24.503	343.3	0.153									40	216
50	12.79	12.78	32.975	24.868	308.7	0.185	5.83	96.7	2.8	0.53	2.0	0.24	0.34	0.26	50	215
60	12.06	12.05	32.925	24.969	299.2	0.216	5.70	93.1	4.0	0.65	4.1	0.37	0.22	0.19	60	214
70	11.93	11.92	33.103	25.131	284.0	0.245	5.39	87.9	6.6	0.91	9.2	0.00	0.10	0.12	70	213
75 ISL	11.76 D	11.75	33.130 D	25.184	279.1	0.259	5.30	86.1	6.9	0.90	9.3	0.00	0.09	0.10	75	
85	11.74	11.73	33.263	25.291	269.2	0.286	5.15	83.7	7.3	0.88	9.4	0.00	0.07	0.08	85	212
100	10.92	10.91	33.308	25.475	251.9	0.326	4.90	78.3	10.7	1.10	13.0	0.00	0.03	0.04	100	211
119	10.35	10.34	33.475	25.705	230.4	0.371	4.34	68.5	16.2	1.42	18.3	0.00	0.01	0.03	120	210
125 ISL	9.96 D	9.95	33.580 D	25.853	216.4	0.385	4.11	64.4	18.0	1.50	19.6	0.00	0.01	0.03	126	
139	9.78	9.76	33.672	25.955	206.9	0.414	3.58	55.9	21.7	1.66	22.1	0.00	0.01	0.02	140	209
150 ISL	9.53 D	9.51	33.770 D	26.073	195.9	0.437	3.28	51.0	23.8	1.75	23.4	0.00	0.01	0.02	151	
169	9.35	9.33	33.877	26.186	185.5	0.473	2.86	44.3	26.9	1.87	25.2	0.00	0.01	0.02	170	208
199	8.95	8.93	34.030	26.370	168.5	0.526	2.25	34.6	33.1	2.10	27.9	0.00	0.00	0.02	200	207
200 ISL	8.85 D	8.83	34.023 D	26.380	167.5	0.528	2.24	34.3	33.3	2.10	28.0	0.00			201	
229	8.38	8.36	34.052	26.476	158.8	0.575	2.08	31.5	37.8	2.20	30.1	0.00			230	206
250 ISL	8.01 D	7.98	34.058 D	26.537	153.3	0.608	2.05	30.8	40.9	2.25	31.0	0.00			251	
269	7.73	7.70	34.064	26.582	149.1	0.636	2.01	30.0	43.9	2.29	31.8	0.00			270	205
300 ISL	7.29 D	7.26	34.071 D	26.651	142.9	0.682	1.79	26.5	49.5	2.42	33.5	0.00			302	
318	7.00	6.97	34.076	26.695	138.8	0.707	1.64	24.1	53.1	2.50	34.6	0.00			320	204
378	6.09	6.06	34.091	26.827	126.5	0.787	1.21	17.4	66.3	2.77	38.0	0.00			380	203
400 ISL	5.96 D	5.93	34.127 D	26.872	122.4	0.814	1.06	15.2	69.0	2.83	38.5	0.00			402	
438	5.88	5.84	34.188 D	26.931	117.4	0.860									441	202
500 ISL	5.69 D	5.65	34.267 D	27.017	109.8	0.930	0.38	5.4	81.0	3.11	40.7	0.00			503	
512	5.73	5.69	34.298	27.037	108.2	0.943	0.30	4.3	82.5	3.14	41.0	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 45.1 N	123 19.9 W	07/11/07	0158 UTC	4022 m	350 16 kn			1015.8 mb	17.3 C	14.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.34	17.34	33.366	24.181	372.8	0.000	5.56	101.4	0.4	0.32	0.0	0.00	0.33	0.10	0	
2	17.34	17.34	33.366	24.181	372.8	0.007	5.56	101.4	0.4	0.32	0.0	0.00	0.33	0.10	2	221
10	17.35	17.35	33.366	24.179	373.3	0.037	5.56	101.4	0.4	0.33	0.0	0.00	0.34	0.11	10	220
20	17.35	17.35	33.376	24.187	372.9	0.075	5.55	101.2	0.4	0.34	0.0	0.00	0.36	0.12	20	219
30	17.29	17.29	33.428	24.242	368.0	0.112	5.56	101.3	0.4	0.35	0.0	0.00	0.55	0.19	30	218
34	17.01	17.00	33.477	24.345	358.2	0.126	5.56	100.8	0.5	0.38	0.3	0.04	0.67	0.28	34	217
40	15.57	15.56	33.531	24.717	323.0	0.147	5.29	93.2	3.0	0.60	3.7	0.57	0.61	0.27	40	216
50	12.80	12.79	33.383	25.182	278.8	0.177	5.00	83.2	7.1	0.92	9.5	0.02	0.24	0.17	50	215
60	11.61	11.60	33.308	25.350	263.0	0.204	5.01	81.2	8.4	0.98	10.5	0.01	0.16	0.15	60	214
70	11.37	11.36	33.370	25.442	254.4	0.230	4.76	76.8	10.2	1.12	12.7	0.00	0.12	0.11	70	213
75 ISL	11.49 D	11.48	33.465 D	25.494	249.6	0.242	4.50	72.8	11.8	1.24	14.3	0.00	0.10	0.10	75	
85	11.31	11.30	33.600	25.632	236.7	0.267	3.97	64.1	15.5	1.48	17.7	0.00	0.05	0.08	85	212
99	10.24	10.23	33.644	25.855	215.7	0.298	3.69	58.2	19.6	1.63	21.0	0.00	0.02	0.05	99	211
100 ISL	10.21 D	10.20	33.669 D	25.879	213.4	0.300	3.64	57.4	20.0	1.65	21.2	0.00	0.02	0.05	100	
120	9.61	9.60	33.882	26.147	188.3	0.341	2.71	42.2	27.0	1.95	25.5	0.00	0.01	0.04	121	210
125 ISL	9.40 D	9.39	33.915 D	26.207	182.7	0.350	2.58	40.0	28.2	2.00	26.1	0.00	0.01	0.04	126	
140	9.27	9.25	33.977	26.277	176.3	0.377	2.32	35.9	31.2	2.10	27.4	0.00	0.00	0.04	141	209
150 ISL	9.03 D	9.01	34.018 D	26.347	169.8	0.394	2.24	34.5	33.0	2.14	28.1	0.00	0.00	0.04	151	
168	8.70	8.68	34.056	26.429	162.2	0.424	2.12	32.4	35.9	2.20	29.3	0.00	0.00	0.03	169	208
199	8.52	8.50	34.126	26.512	154.9	0.473	1.62	24.7	40.6	2.38	31.1	0.00	0.00	0.02	200	207
200 ISL	8.44 D	8.42	34.120 D	26.520	154.2	0.475	1.61	24.5	40.7	2.38	31.1	0.00			201	
228	8.09	8.07	34.133	26.583	148.5	0.517	1.53	23.1	44.7	2.45	32.4	0.00			229	206
250 ISL	7.78 D	7.76	34.149 D	26.642	143.2	0.549	1.37	20.5	48.5	2.54	33.6	0.00			251	
268	7.56	7.53	34.153	26.677	140.1	0.575	1.25	18.6	51.7	2.62	34.5	0.00			270	205
300 ISL	7.08 D	7.05	34.122 D	26.720	136.2	0.619	1.26	18.6	55.9	2.67	35.7	0.00			302	
318	6.81	6.78	34.112	26.749	133.6	0.643	1.26	18.4	58.3	2.69	36.3	0.00			320	204
377	5.99	5.96	34.109	26.854	123.9	0.719	1.01	14.5	69.9	2.91	38.9	0.00			379	203
400 ISL	5.84 D	5.81	34.113 D	26.876	122.0	0.747	0.87	12.4	74.1	2.96	39.8	0.00			403	
437	5.52	5.48	34.154	26.948	115.4	0.791	0.66	9.4	80.3	3.03	41.0	0.00			440	202
500 ISL	5.17 D	5.13	34.212 D	27.036	107.5	0.861	0.44	6.2	89.1	3.15	42.2	0.00			503	
513	5.14	5.10	34.221	27.046	106.6	0.875	0.40	5.6	90.9	3.17	42.4	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 24.5 N	124 0.1 W	06/11/07	1904 UTC	4204 m	350 10 kn	320 05 06	2	1018.1 mb	17.5 C	14.5 C	21m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.92	16.92	33.058	24.044	385.9	0.000	5.65	102.0	1.1	0.32	0.0	0.00	0.23	0.08	0	
1 A	16.92	16.92	33.058	24.044	385.9	0.004	5.65	102.0	1.1	0.32	0.0	0.00	0.23	0.08	1	223
2	16.92	16.92	33.067	24.051	385.3	0.008									2	224
10 ISL	16.88 D	16.88	33.058 D	24.054	385.3	0.039	5.64	101.7	1.0	0.31	0.0	0.00	0.25	0.07	10	
11 A	16.87	16.87	33.067	24.063	384.4	0.042	5.64	101.7	1.0	0.31	0.0	0.00	0.25	0.07	11	222
20	16.58	16.58	33.099	24.155	375.9	0.077	5.71	102.4	0.9	0.32	0.0	0.00	0.31	0.10	20	221
28 A	16.67	16.67	33.165	24.185	373.3	0.107	5.69	102.2	0.8	0.31	0.0	0.00	0.36	0.12	28	220
30 ISL	16.63 D	16.63	33.158 D	24.189	373.0	0.114	5.70	102.3	0.8	0.31	0.0	0.00	0.37	0.13	30	
34	16.46	16.45	33.129	24.206	371.5	0.129	5.72	102.3	0.9	0.31	0.0	0.00	0.38	0.17	34	219
41 A	15.37	15.36	33.014	24.363	356.7	0.154	6.09	106.5	1.2	0.32	0.0	0.00	0.43	0.23	41	218
48	14.80	14.79	33.028	24.497	344.1	0.179	6.10	105.5	1.8	0.33	0.0	0.00	0.33	0.27	48	216
48	14.80	14.79	33.027	24.497	344.1	0.179									48	217
50 ISL	14.62 D	14.61	33.026 D	24.534	340.6	0.186	6.09	105.0	1.9	0.34	0.0	0.00	0.32	0.27	50	
54 A	14.44	14.43	33.034	24.579	336.5	0.199	6.07	104.2	2.0	0.35	0.0	0.00	0.30	0.27	54	215
65	13.72	13.71	33.029	24.724	322.8	0.236	5.98	101.2	2.3	0.40	0.4	0.08	0.25	0.24	65	214
75 ISL	13.82 D	13.81	33.217 D	24.849	311.2	0.267	5.83	98.9	2.5	0.39	0.8	0.10	0.20	0.19	75	
76 A	13.83	13.82	33.217	24.847	311.4	0.270	5.81	98.6	2.5	0.39	0.8	0.10	0.19	0.19	76	213
89	13.28	13.27	33.261	24.993	297.8	0.310	5.58	93.7	3.7	0.53	3.4	0.12	0.14	0.16	89	212
100	12.63	12.62	33.278	25.135	284.6	0.342	5.39	89.3	5.0	0.73	6.2	0.01	0.10	0.11	100	211
121	11.71	11.69	33.274	25.306	268.6	0.400	5.19	84.3	7.5	0.92	9.4	0.00	0.05	0.06	122	210
125 ISL	11.23 D	11.21	33.304 D	25.417	258.0	0.411	5.04	81.0	9.0	1.02	10.9	0.00	0.04	0.05	126	
141	10.29	10.27	33.465	25.708	230.6	0.450	4.33	68.3	15.8	1.43	17.5	0.00	0.01	0.03	142	209
150 ISL	10.13 D	10.11	33.703 D	25.921	210.5	0.470	3.90	61.4	19.0	1.60	20.2	0.00	0.01	0.03	151	
169	9.63	9.61	33.799	26.079	195.7	0.508	3.09	48.1	24.6	1.86	24.4	0.00	0.00	0.03	170	208
200 ISL	9.07 D	9.05	33.985 D	26.316	173.8	0.565	2.54	39.1	31.1	2.09	27.3	0.00	0.00	0.04	201	
201	9.07	9.05	33.974	26.307	174.6	0.567	2.53	38.9	31.3	2.09	27.3	0.00	0.00	0.04	202	207
229	8.80	8.78	34.074	26.429	163.5	0.615	1.98	30.3	36.5	2.27	29.5	0.00			230	206
250 ISL	8.14 D	8.11	34.036 D	26.500	156.8	0.648	1.96	29.6	39.7	2.32	30.8	0.00			251	
269	7.97	7.94	34.063	26.547	152.7	0.678	1.95	29.3	42.5	2.37	31.9	0.00			270	205
300 ISL	7.91 D	7.88	34.173 D	26.642	144.1	0.724	1.41	21.2	48.3	2.57	33.4	0.00			302	
317	7.77	7.74	34.206	26.689	140.0	0.748	1.09	16.3	51.5	2.69	34.2	0.00			319	204
378	6.98	6.94	34.199	26.796	130.3	0.830	0.85	12.5	61.1	2.87	36.9	0.00			380	203
400 ISL	6.70 D	6.66	34.193 D	26.829	127.2	0.858	0.79	11.5	64.8	2.92	37.8	0.00			402	
438	6.24	6.20	34.188	26.886	122.0	0.906	0.68	9.8	71.0	3.01	39.3	0.00			441	202
500 ISL	5.81 D	5.77	34.227 D	26.971	114.3	0.979	0.45	6.4	80.0	3.14	41.0	0.00			503	
512	5.74	5.70	34.240	26.990	112.6	0.993	0.40	5.7	81.8	3.17	41.3	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 30.8 N	122 15.6 W	05/11/07	2354 UTC	4162 m	320 06 kn	330 04 07	2	1016.0 mb	16.6 C	14.0 C	20m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.48	17.48	33.245	24.055	384.8	0.000	5.58	101.9	0.8	0.32	0.2	0.00	0.22	0.06	0	
2	17.48	17.48	33.245	24.055	384.9	0.008	5.58	101.9	0.8	0.32	0.2	0.00	0.22	0.06	2	220
10	17.48	17.48	33.247	24.057	385.0	0.038	5.58	101.9	0.8	0.31	0.0	0.00	0.21	0.06	10	219
20	17.42	17.42	33.265	24.085	382.6	0.077	5.58	101.8	0.7	0.30	0.2	0.00	0.27	0.09	20	218
30	17.35	17.35	33.298	24.128	378.9	0.115	5.59	101.9	0.7	0.31	0.1	0.00	0.38	0.14	30	217
39	16.85	16.84	33.239	24.201	372.2	0.149	5.68	102.5	0.8	0.32	0.2	0.00	0.50	0.23	39	216
50	14.10	14.09	33.067	24.675	327.1	0.187	5.99	102.2	1.8	0.50	0.8	0.03	0.47	0.31	50	215
60	12.87	12.86	32.969	24.848	310.9	0.219	5.86	97.4	2.9	0.54	2.0	0.20	0.37	0.31	60	214
69	12.14	12.13	32.967	24.986	297.8	0.246	5.64	92.3	4.5	0.70	5.2	0.19	0.20	0.22	69	213
75 ISL	11.77 D	11.76	33.000 D	25.081	288.9	0.264	5.50	89.3	5.4	0.79	7.0	0.12	0.14	0.17	75	
84	11.52	11.51	33.103	25.207	277.0	0.290	5.29	85.5	7.0	0.91	9.4	0.00	0.10	0.12	84	212
100	11.23	11.22	33.325	25.433	255.9	0.332	4.83	77.7	11.1	1.18	13.9	0.00	0.05	0.07	100	211
119	10.12	10.11	33.559	25.809	220.4	0.377	4.05	63.7	17.9	1.53	19.6	0.00	0.01	0.02	120	210
125 ISL	9.83 D	9.82	33.651 D	25.930	209.0	0.390	3.83	59.9	19.8	1.62	21.0	0.00	0.01	0.02	126	
139	9.41	9.39	33.753	26.079	195.1	0.419	3.41	52.8	23.7	1.78	23.7	0.00	0.00	0.02	140	209
150 ISL	9.17 D	9.15	33.836 D	26.183	185.4	0.440	3.22	49.6	25.7	1.84	24.8	0.00	0.00	0.02	151	
169	8.93	8.91	33.919	26.286	175.9	0.474	3.01	46.2	28.5	1.91	25.9	0.00	0.00	0.01	170	208
199	8.44	8.42	34.000	26.426	163.0	0.525	2.72	41.3	34.0	2.06	28.1	0.00	0.00	0.01	200	207
200 ISL	8.44 D	8.42	34.000 D	26.426	163.1	0.526	2.70	41.0	34.2	2.07	28.2	0.00			201	
229	8.04	8.02	34.061	26.534	153.2	0.572	2.12	31.9	41.0	2.30	30.9	0.00			230	206
250 ISL	7.81 D	7.79	34.076 D	26.580	149.1	0.604	2.06	30.8	43.8	2.36	31.9	0.00			251	
269	7.54	7.51	34.061	26.607	146.7	0.632	2.00	29.8	46.0	2.39	32.5	0.00			270	205
300 ISL	7.27 D	7.24	34.080 D	26.661	142.0	0.677	1.82	26.9	51.5	2.51	34.2	0.00			302	
319	6.80	6.77	34.059	26.709	137.4	0.703	1.68	24.6	55.3	2.59	35.3	0.00			321	204
378	6.12	6.09	34.098	26.829	126.4	0.781	1.15	16.6	67.1	2.86	38.5	0.00			380	203
400 ISL	5.98 D	5.95	34.124 D	26.867	122.9	0.809	0.97	13.9	70.2	2.93	39.2	0.00			402	
437	5.85	5.81	34.159	26.912	119.1	0.853	0.71	10.2	74.8	3.02	40.2	0.00			440	202
500 ISL	5.63 D	5.59	34.246 D	27.008	110.6	0.926	0.41	5.8	83.4	3.17	41.6	0.00			503	
511	5.53	5.49	34.253	27.026	109.0	0.938	0.36	5.1	84.9	3.20	41.8	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 57.2 N	117 18.6 W	03/11/07	0721	UTC	85 m	270	03 kn			1016.2 mb	16.7 C	15.0 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.46	18.46	33.691	24.157	375.0	0.000	5.64	105.3	0.3	0.21	0.0	0.02	0.33	0.09	0	
2	18.46	18.46	33.691	24.158	375.1	0.008	5.64	105.3	0.3	0.21	0.0	0.02	0.33	0.09	2	209
5	18.43	18.43	33.691	24.165	374.5	0.019	5.67	105.8	0.3	0.21	0.0	0.01	0.30	0.09	5	208
10	16.07	16.07	33.676	24.715	322.2	0.036	5.67	101.0	0.4	0.21	0.0	0.01	0.31	0.12	10	207
20	13.18	13.18	33.163	24.936	301.5	0.067	5.79	97.0	3.2	0.63	3.9	0.31	0.67	0.41	20	206
30	12.68	12.68	33.226	25.083	287.7	0.097	5.42	89.8	5.3	0.85	7.3	0.20	0.52	0.37	30	205
40	12.17	12.16	33.307	25.244	272.6	0.125	5.07	83.2	7.6	1.10	10.3	0.09	0.39	0.31	40	204
50	11.94	11.93	33.374	25.339	263.7	0.152	4.83	78.9	9.4	1.12	12.0	0.10	0.37	0.31	50	203
60	11.69	11.68	33.425	25.426	255.8	0.178	4.62	75.1	10.5	1.20	13.2	0.08	0.27	0.28	60	202
74	11.23	11.22	33.651	25.686	231.3	0.212	3.44	55.4	17.7	1.59	18.9	0.18	0.04	0.24	74	201
75 CSL	11.17	11.16	33.828	25.834	217.2	0.214									75	200

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
32 54.8 N	117 23.8 W	03/11/07	1213	UTC	624 m	350	03 kn			1015.6 mb	16.5 C	14.8 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.03	18.03	33.641	24.225	368.6	0.000	5.54	102.5	0.2	0.26	0.0	0.01	0.30	0.08	0	
1	18.03	18.03	33.641	24.225	368.6	0.004	5.54	102.5	0.2	0.26	0.0	0.01	0.30	0.08	1	221
10	17.80	17.80	33.648	24.287	363.0	0.037	5.57	102.6	0.1	0.26	0.0	0.01	0.30	0.09	10	220
20	16.48	16.48	33.598	24.561	337.2	0.072	5.71	102.5	0.4	0.29	0.0	0.01	0.51	0.21	20	219
25	14.67	14.67	33.313	24.744	319.9	0.088	5.80	100.2	1.8	0.46	1.4	0.16	0.70	0.35	25	218
30	13.24	13.24	33.171	24.930	302.2	0.104	5.72	95.9	3.6	0.67	4.1	0.32	0.64	0.38	30	217
40	12.64	12.63	33.263	25.120	284.4	0.133	5.30	87.8	6.1	0.87	8.0	0.17	0.43	0.44	40	216
50	12.52	12.51	33.437	25.278	269.6	0.161			8.3	1.02	10.4	0.25	0.35	0.38	50	215
60	12.03	12.02	33.459	25.389	259.3	0.187	4.58	75.0	9.9	1.15	12.8	0.05	0.24	0.27	60	214
70	11.71	11.70	33.472	25.459	252.9	0.213	4.42	71.9	11.4	1.24	14.4	0.02	0.18	0.20	70	213
75 ISL	11.59 D	11.58	33.525 D	25.522	246.9	0.225	4.22	68.5	12.3	1.29	15.2	0.02	0.15	0.18	75	
84	11.33	11.32	33.609	25.635	236.4	0.247	3.82	61.7	14.2	1.39	16.7	0.01	0.11	0.15	84	212
99	10.68	10.67	33.706	25.827	218.4	0.281	3.36	53.5	18.5	1.60	19.9	0.01	0.04	0.09	99	211
100 ISL	10.52 D	10.51	33.698 D	25.849	216.3	0.283	3.35	53.2	18.7	1.61	20.0	0.01	0.04	0.09	100	
119	10.15	10.14	33.803	25.995	202.8	0.323	3.16	49.8	21.6	1.72	21.6	0.01	0.01	0.05	120	210
125 ISL	10.05 D	10.04	33.832 D	26.034	199.2	0.335	2.94	46.2	23.3	1.80	22.4	0.01	0.01	0.05	126	
139	10.06	10.04	33.935	26.113	192.0	0.362	2.45	38.6	27.0	1.99	24.3	0.01	0.00	0.04	140	209
150 ISL	10.00 D	9.98	33.974 D	26.154	188.4	0.383	2.50	39.3	27.9	1.99	24.8	0.01	0.00	0.04	151	
170	9.51	9.49	34.010	26.264	178.2	0.420	2.58	40.1	28.5	1.99	25.2	0.01	0.01	0.04	171	208
199	9.29	9.27	34.087	26.361	169.6	0.471	2.13	33.0	32.4	2.17	27.3	0.06	0.00	0.05	200	207
200 ISL	9.19 D	9.17	34.073 D	26.366	169.1	0.472	2.12	32.7	32.5	2.17	27.3	0.06			201	
229	9.07	9.05	34.102	26.408	165.6	0.521	1.96	30.2	34.3	2.20	28.1	0.06			230	206
250 ISL	8.95 D	8.92	34.135 D	26.453	161.7	0.555	2.07	31.8	36.6	2.26	28.9	0.05			251	
269	8.59	8.56	34.136	26.510	156.5	0.585	2.12	32.3	39.2	2.33	29.8	0.05			271	205
300 ISL	8.37 D	8.34	34.222 D	26.612	147.3	0.632	1.52	23.1	44.5	2.52	31.4	0.02			302	
317	8.18	8.15	34.232	26.649	144.0	0.657	1.14	17.2	47.6	2.63	32.3	0.00			319	204
378	7.45	7.41	34.256	26.775	132.7	0.742	0.79	11.7	56.8	2.83	35.0	0.00			380	203
400 ISL	7.25 D	7.21	34.259 D	26.806	129.9	0.770	0.69	10.2	59.8	2.90	35.9	0.00			403	
437	6.92	6.88	34.278	26.867	124.5	0.818	0.55	8.1	64.9	3.00	37.2	0.00			440	202
500 ISL	6.40 D	6.35	34.317 D	26.968	115.4	0.893	0.32	4.6	75.4	3.14	39.1	0.01			503	
511	6.25	6.20	34.330	26.997	112.6	0.906	0.28	4.0	77.2	3.16	39.4	0.01			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 50.7 N	117 33.2 W	03/11/07	1736	UTC	512 m	300	03 kn	290 03 07	2	1016.9 mb	16.8 C	15.0 C	21m		3/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.06	18.06	33.616	24.199	371.1	0.000	5.58	103.3	0.5	0.27	0.0	0.00	0.62	0.10	0	
2 A	18.06	18.06	33.616	24.199	371.2	0.007	5.58	103.3	0.5	0.27	0.0	0.00	0.62	0.10	2	222
10 A	17.75	17.75	33.617	24.275	364.1	0.037	5.57	102.5	0.5	0.27	0.0	0.00	0.62	0.08	10	221
20	13.39	13.39	33.276	24.981	297.1	0.070	5.69	95.8	4.6	0.66	4.6	0.22	0.85	0.51	20	220
28 A	12.50	12.50	33.470	25.307	266.3	0.092	4.88	80.7	8.9	0.98	10.2	0.37	0.60	0.53	28	219
30 ISL	12.28 D	12.28	33.471 D	25.350	262.3	0.098	4.78	78.7	9.4	1.02	10.8	0.36	0.52	0.48	30	
34	12.35	12.35	33.477	25.341	263.2	0.108	4.67	77.0	10.0	1.07	11.5	0.35	0.39	0.38	34	218
41 A	12.19	12.18	33.483	25.377	260.0	0.127	4.57	75.1	10.4	1.12	12.0	0.33	0.33	0.35	41	217
48	11.98	11.97	33.498	25.428	255.3	0.145	4.47	73.1	11.1	1.17	12.9	0.16	0.31	0.30	48	216
50 ISL	11.90 D	11.89	33.511 D	25.453	252.9	0.150	4.39	71.7	11.6	1.20	13.4	0.13	0.28	0.28	50	
54 A	11.78	11.77	33.536	25.495	249.0	0.160	4.23	68.9	12.5	1.26	14.4	0.10	0.21	0.25	54	215
65	11.69	11.68	33.547	25.521	246.9	0.187	4.14	67.3	12.9	1.29	14.9	0.08	0.19	0.26	65	214
75 ISL	11.52 D	11.51	33.570 D	25.570	242.4	0.211	3.99	64.7	13.9	1.34	15.7	0.06	0.15	0.21	75	
76 A	11.51	11.50	33.576	25.577	241.8	0.214	3.97	64.3	14.0	1.35	15.8	0.06	0.14	0.20	76	213
88	11.22	11.21	33.625	25.668	233.4	0.242	3.65	58.8	16.0	1.47	17.5	0.04	0.09	0.18	88	212
99	10.93	10.92	33.679	25.762	224.6	0.268	3.43	54.9	17.9	1.56	18.8	0.03	0.07	0.12	99	211
100 ISL	10.92 D	10.91	33.681 D	25.765	224.3	0.270	3.42	54.8	18.0	1.56	18.9	0.03	0.07	0.12	100	
119	10.64	10.63	33.725	25.849	216.8	0.312	3.27	52.0	19.9	1.65	20.1	0.03	0.04	0.09	120	210
125 ISL	10.54 D	10.53	33.785 D	25.914	210.8	0.325	3.07	48.8	21.5	1.73	21.0	0.03	0.03	0.08	126	
139	10.24	10.22	33.904	26.058	197.3	0.353	2.61	41.2	25.2	1.91	23.1	0.02	0.01	0.06	140	209
150 ISL	10.19 D	10.17	33.927 D	26.085	195.0	0.375	2.58	40.7	25.7	1.93	23.4	0.02	0.01	0.05	151	
169	10.07	10.05	33.946	26.121	192.0	0.411	2.52	39.7	26.6	1.96	23.9	0.02	0.01	0.05	170	208
199	9.20	9.18	33.963	26.278	177.4	0.467	2.77	42.8	29.0	1.94	25.6	0.02	0.00	0.03	200	207
200 ISL	9.15 D	9.13	33.970 D	26.292	176.1	0.469	2.76	42.6	29.2	1.94	25.7	0.02			201	
228	8.93	8.91	34.072	26.407	165.7	0.516	2.28	35.0	34.1	2.13	27.7	0.03			229	206
250 ISL	9.13 D	9.10	34.201 D	26.476	159.6	0.552	1.83	28.2	37.7	2.30	29.1	0.02			251	
268	8.82	8.79	34.204	26.528	154.9	0.581	1.50	23.0	40.4	2.43	30.1	0.01			270	205
300 ISL	8.37 D	8.34	34.216 D	26.607	147.8	0.629	1.31	19.9	44.8	2.54	31.5	0.01			302	
318	8.12	8.09	34.207	26.638	145.0	0.655	1.27	19.2	47.3	2.59	32.3	0.01			320	204
378	7.32	7.28	34.250	26.789	131.2	0.738	0.78	11.6	58.4	2.84	35.4	0.01			380	203
400 ISL	7.11 D	7.07	34.265 D	26.830	127.5	0.767	0.68	10.0	60.8	2.89	36.1	0.01			403	
438	6.91	6.87	34.273	26.864	124.7	0.815	0.56	8.2	64.7	2.95	37.1	0.01			441	202
500 ISL	6.35 D	6.30	34.315 D	26.972	114.9	0.889	0.34	4.9	74.8	3.13	39.0	0.01			503	
512	6.26	6.21	34.325	26.992	113.1	0.903	0.30	4.3	76.7	3.16	39.4	0.01			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 40.7 N	117 52.5 W	03/11/07	2224 UTC	625 m	270 07 kn	270 02 09	2	1015.0 mb	16.7 C	15.0 C	11m	6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.99	16.99	33.551	24.406	351.4	0.000	6.06	109.8	3.2	0.25	0.0	0.00	0.52	0.27	0	
2	16.99	16.99	33.551	24.406	351.4	0.007	6.06	109.8	3.2	0.25	0.0	0.00	0.52	0.27	2	221
10	16.42	16.42	33.538	24.529	340.0	0.035	6.20	111.1	3.3	0.25	0.0	0.01	0.63	0.37	10	220
15	15.27	15.27	33.496 D	24.755	318.6	0.051	6.36	111.4	3.6	0.29	0.1	0.03	1.47	0.80	15	219
20 ISL	14.48 D	14.48	33.494 D	24.924	302.6	0.067	5.95	102.6	5.1	0.47	2.2	0.24	1.19	0.80	20	
21	14.45	14.45	33.505	24.939	301.2	0.070	5.84	100.6	5.4	0.51	2.7	0.30	1.08	0.80	21	218
30	13.42	13.42	33.500	25.148	281.5	0.096	5.22	88.0	7.4	0.81	7.0	0.76	0.72	0.57	30	217
40	13.05	13.04	33.504	25.226	274.4	0.124	4.89	81.8	8.1	0.92	8.7	0.48	0.63	0.46	40	216
50	11.80	11.79	33.556	25.507	247.8	0.150	4.08	66.5	12.4	1.28	14.7	0.04	0.17	0.23	50	215
60	11.43	11.42	33.583	25.596	239.5	0.174	3.89	62.9	14.2	1.38	16.4	0.03	0.12	0.24	60	214
70	10.34	10.33	33.675	25.861	214.4	0.197	3.59	56.8	18.6	1.60	20.0	0.02	0.02	0.06	70	213
75 ISL	10.03 D	10.02	33.748 D	25.971	204.1	0.207	3.34	52.5	20.5	1.69	21.1	0.02	0.02	0.06	75	
85	10.17	10.16	33.825	26.008	200.9	0.228	2.90	45.7	23.5	1.83	22.4	0.02	0.01	0.05	85	212
100	9.80	9.79	33.903	26.131	189.4	0.257	2.90	45.4	24.8	1.86	23.3	0.02	0.01	0.04	101	211
120	9.66	9.65	34.005	26.234	180.0	0.294	2.53	39.5	28.2	2.00	24.8	0.02	0.00	0.05	121	210
125 ISL	9.56 D	9.55	34.025 D	26.267	177.0	0.303	2.33	36.3	29.4	2.07	25.4	0.02	0.00	0.05	126	
140	9.74	9.72	34.129	26.319	172.5	0.329	1.78	27.8	32.5	2.25	27.1	0.02	0.00	0.04	141	209
150 ISL	9.74 D	9.72	34.141 D	26.328	171.8	0.346	1.77	27.7	33.1	2.27	27.4	0.02	0.00	0.04	151	
169	9.55	9.53	34.156	26.372	168.0	0.378	1.74	27.1	33.9	2.30	27.8	0.02	0.00	0.05	170	208
198	8.37	8.35	34.086	26.504	155.6	0.425	2.07	31.4	39.1	2.28	30.0	0.02	0.00	0.03	199	207
200 ISL	8.39 D	8.37	34.034 D	26.460	159.8	0.429	2.05	31.1	39.4	2.29	30.1	0.02			201	
229	8.35	8.33	34.166	26.570	149.9	0.473	1.56	23.7	43.0	2.48	31.2	0.01			230	206
250 ISL	8.24 D	8.21	34.218 D	26.628	144.8	0.504	1.33	20.1	44.9	2.57	31.8	0.01			251	
268	8.19	8.16	34.230	26.645	143.5	0.530	1.19	18.0	46.5	2.63	32.2	0.02			270	205
300 ISL	7.86 D	7.83	34.239 D	26.702	138.5	0.575	1.04	15.6	49.8	2.70	33.2	0.01			302	
320	7.74	7.71	34.235	26.716	137.4	0.603	0.98	14.7	52.0	2.74	33.9	0.01			322	204
377	7.19	7.15	34.259	26.814	128.7	0.679	0.72	10.6	59.0	2.88	35.9	0.01			379	203
400 ISL	6.93 D	6.89	34.258 D	26.849	125.6	0.708	0.65	9.5	61.6	2.93	36.5	0.01			403	
438	6.80	6.76	34.274	26.880	123.1	0.755	0.55	8.1	65.7	3.00	37.3	0.01			441	202
500 ISL	6.46 D	6.41	34.299 D	26.946	117.5	0.830	0.40	5.8	71.7	3.09	38.7	0.01			503	
513	6.43	6.38	34.309	26.958	116.6	0.845	0.37	5.4	73.0	3.11	39.0	0.01			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 30.9 N	118 13.1 W	04/11/07	0406 UTC	1603 m	270 04 kn			1015.5 mb	17.0 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.98	17.98	33.507	24.135	377.2	0.000	5.56	102.7	0.5	0.29	0.1	0.00	0.21	0.06	0	
1	17.98	17.98	33.507	24.135	377.2	0.004	5.56	102.7	0.5	0.29	0.1	0.00	0.21	0.06	1	221
10	17.97	17.97	33.508	24.138	377.2	0.038	5.56	102.7	0.5	0.29	0.0	0.00	0.22	0.06	10	219
10	17.97	17.97	33.516	24.145	376.6	0.038									10	220
20	17.13	17.13	33.598	24.409	351.7	0.074	5.73	104.2	0.2	0.28	0.1	0.01	0.44	0.19	20	218
30	16.37	16.37	33.522	24.529	340.6	0.109	5.81	104.0	0.4	0.33	0.3	0.02	0.92	0.42	30	217
40	14.01	14.00	33.318	24.887	306.6	0.141	5.53	94.3	3.3	0.64	4.5	0.22	0.71	0.37	40	216
50	12.15	12.14	33.442	25.353	262.5	0.170	4.81	79.0	9.0	1.07	12.1	0.07	0.19	0.19	50	215
60	11.43	11.42	33.462	25.502	248.5	0.195	4.54	73.4	11.6	1.25	14.9	0.03	0.13	0.16	60	214
70	10.85	10.84	33.564	25.686	231.2	0.219	4.03	64.4	15.7	1.48	18.6	0.02	0.07	0.09	70	213
75 ISL	10.77 D	10.76	33.586 D	25.717	228.3	0.231	3.89	62.0	16.6	1.53	19.4	0.02	0.06	0.08	75	
84	10.59	10.58	33.642	25.793	221.3	0.251	3.71	59.0	17.7	1.57	20.1	0.02	0.05	0.07	84	212
100	10.20	10.19	33.752	25.946	207.0	0.285	3.27	51.6	20.9	1.71	22.0	0.01	0.03	0.07	100	211
120	9.33	9.32	33.862	26.177	185.4	0.324	2.96	45.8	26.3	1.91	25.3	0.01	0.00	0.03	121	210
125 ISL	9.24 D	9.23	33.888 D	26.212	182.2	0.334	2.88	44.5	27.4	1.94	25.7	0.01	0.00	0.03	126	
139	8.98	8.97	33.962	26.311	172.9	0.358	2.68	41.2	30.1	2.00	26.6	0.01	0.00	0.04	140	209
150 ISL	8.79 D	8.77	34.002 D	26.373	167.3	0.377	2.54	38.9	32.0	2.05	27.4	0.01	0.00	0.04	151	
169	8.63	8.61	34.045	26.431	162.0	0.408	2.32	35.4	34.9	2.14	28.6	0.01	0.00	0.03	170	208
199	8.35	8.33	34.080	26.502	155.8	0.456	2.06	31.2	38.9	2.27	30.3	0.01	0.00	0.03	200	207
200 ISL	8.33 D	8.31	34.077 D	26.503	155.7	0.458	2.05	31.1	39.0	2.27	30.4	0.01			201	
229	8.08	8.06	34.109	26.566	150.2	0.502	1.79	27.0	42.7	2.39	31.8	0.01			230	206
250 ISL	7.87 D	7.84	34.142 D	26.623	145.0	0.533	1.57	23.5	45.6	2.49	32.7	0.01			251	
268	7.80	7.77	34.160	26.648	143.0	0.559	1.38	20.7	48.1	2.57	33.5	0.01			270	205
300 ISL	7.57 D	7.54	34.194 D	26.708	137.7	0.604	1.15	17.1	52.6	2.68	34.8	0.01			302	
319	7.32	7.29	34.189	26.740	134.8	0.630	1.03	15.3	55.2	2.74	35.4	0.01			321	204
377	7.06	7.02	34.264	26.836	126.6	0.705	0.62	9.1	61.7	2.93	36.8	0.01			379	203
400 ISL	6.88 D	6.84	34.268 D	26.864	124.1	0.734	0.52	7.6	64.7	3.00	37.5	0.01			403	
437	6.58	6.54	34.291	26.923	118.9	0.779	0.42	6.1	69.4	3.09	38.6	0.01			440	202
500 ISL	6.23 D	6.19	34.316 D	26.989	113.2	0.852	0.31	4.5	75.5	3.16	39.8	0.01			503	
513	6.16	6.11	34.323	27.003	111.9	0.867	0.29	4.2	76.8	3.17	40.1	0.01			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 20.8 N	118 33.1 W	04/11/07	0720 UTC	1330 m	340 03 kn			1016.8 mb	16.8 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.04	18.04	33.770	24.321	359.4	0.000	5.56	103.0	0.0	0.25	0.0	0.00	0.38	0.13	0	
1	18.04	18.04	33.770	24.322	359.4	0.004	5.56	103.0	0.0	0.25	0.0	0.00	0.38	0.13	1	220
10	17.98	17.98	33.766	24.333	358.6	0.036	5.56	102.9	0.0	0.25	0.0	0.00	0.39	0.15	10	219
20	17.92	17.92	33.757	24.342	358.2	0.072	5.55	102.5	0.0	0.25	0.0	0.00	0.51	0.19	20	218
30	14.97	14.97	33.547	24.860	309.0	0.105	5.45	94.9	3.1	0.60	4.0	0.14	1.01	0.57	30	217
40	13.41	13.40	33.444	25.107	285.7	0.135	5.23	88.1	6.0	0.86	8.0	0.25	0.82	0.49	40	216
50	12.17	12.16	33.514	25.405	257.6	0.162	4.67	76.7	9.3	1.14	12.5	0.18	0.29	0.37	50	215
60	11.70	11.69	33.517	25.495	249.1	0.187	4.45	72.4	11.3	1.26	14.6	0.05	0.21	0.28	60	214
70	10.89	10.88	33.601	25.708	229.1	0.211	3.95	63.2	15.7	1.46	18.0	0.02	0.06	0.10	70	213
75 ISL	10.74 D	10.73	33.595 D	25.730	227.1	0.223	3.86	61.5	16.7	1.51	18.8	0.02	0.05	0.09	75	
84	10.43	10.42	33.640	25.819	218.8	0.243	3.75	59.4	17.9	1.57	19.7	0.01	0.03	0.06	84	212
100	10.00	9.99	33.780	26.002	201.7	0.276	3.21	50.4	21.7	1.73	22.1	0.01	0.03	0.06	100	211
120	9.60	9.59	33.887	26.152	187.8	0.315	2.83	44.1	25.6	1.88	24.3	0.02	0.01	0.05	121	210
125 ISL	9.46 D	9.45	33.929 D	26.208	182.6	0.325	2.74	42.5	26.7	1.92	24.8	0.02	0.01	0.05	126	
140	9.25	9.23	33.988	26.288	175.2	0.351	2.52	39.0	29.6	2.02	26.1	0.01	0.00	0.06	141	209
150 ISL	9.19 D	9.17	34.000 D	26.308	173.6	0.369	2.46	38.0	30.8	2.05	26.6	0.01	0.00	0.06	151	
169	8.93	8.91	34.045	26.385	166.6	0.401	2.36	36.2	32.9	2.11	27.5	0.01	0.00	0.05	170	208
199	8.58	8.56	34.112	26.492	156.8	0.450	1.93	29.4	38.3	2.31	29.7	0.00	0.00	0.03	200	207
200 ISL	8.54 D	8.52	34.112 D	26.498	156.3	0.451	1.92	29.2	38.5	2.32	29.8	0.00			201	
228	8.25	8.23	34.155	26.577	149.3	0.494	1.58	23.9	43.1	2.44	31.4	0.00			229	206
250 ISL	8.06 D	8.03	34.161 D	26.610	146.4	0.527	1.44	21.7	46.1	2.52	32.4	0.00			251	
269	7.78	7.75	34.162	26.652	142.6	0.554	1.34	20.1	48.5	2.58	33.2	0.00			271	205
300 ISL	7.58 D	7.55	34.182 D	26.697	138.7	0.598	1.12	16.7	52.2	2.68	34.1	0.00			302	
318	7.49	7.46	34.211	26.733	135.6	0.622	1.00	14.9	54.2	2.73	34.6	0.00			320	204
377	7.03	6.99	34.252	26.831	127.0	0.700	0.68	10.0	61.1	2.90	36.4	0.00			379	203
400 ISL	6.94 D	6.90	34.251 D	26.842	126.2	0.729	0.61	9.0	63.1	2.94	36.8	0.00			403	
437	6.74	6.70	34.276	26.890	122.2	0.775	0.52	7.6	66.4	3.00	37.4	0.00			440	202
500 ISL	6.34 D	6.29	34.310 D	26.970	115.1	0.850	0.33	4.8	73.6	3.10	38.8	0.00			503	
511	6.32	6.27	34.328	26.987	113.7	0.862	0.30	4.3	74.9	3.12	39.1	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 10.8 N	118 53.6 W	04/11/07	1046 UTC	1473 m	340 03 kn			1016.3 mb	16.1 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.90	16.90	33.582	24.451	347.1	0.000	5.67	102.6	0.0	0.31	0.0	0.00	0.59	0.14	0	
1	16.90	16.90	33.582	24.451	347.1	0.003	5.67	102.6	0.0	0.31	0.0	0.00	0.59	0.14	1	221
10	16.70	16.70	33.575	24.492	343.4	0.035	5.67	102.2	0.0	0.30	0.0	0.00	0.74	0.17	10	220
20	16.63	16.63	33.629	24.550	338.2	0.069	5.63	101.4	0.0	0.32	0.2	0.02	0.62	0.29	20	219
25	16.54	16.54	33.639	24.579	335.7	0.085	5.61	100.8	0.0	0.35	0.4	0.03	0.54	0.28	25	218
30	16.31	16.31	33.653	24.643	329.7	0.102	5.56	99.5	0.0	0.42	0.9	0.07	0.38	0.29	30	217
41	15.63	15.62	33.631	24.780	317.0	0.138	5.39	95.1	0.7	0.56	2.8	0.17	0.25	0.23	41	216
50	14.66	14.65	33.594	24.964	299.7	0.165	5.18	89.7	3.0	0.72	5.1	0.28	0.19	0.19	50	215
60	13.38	13.37	33.532	25.182	279.1	0.194	4.80	80.9	7.0	0.98	10.0	0.37	0.12	0.19	60	214
70	11.56	11.55	33.504	25.511	247.8	0.221	4.34	70.4	12.7	1.33	16.0	0.04	0.06	0.12	70	213
75 ISL	11.33 D	11.32	33.543 D	25.584	241.1	0.233	4.15	67.0	14.4	1.42	17.6	0.03	0.05	0.10	75	
85	10.70	10.69	33.618	25.755	225.0	0.256	3.80	60.5	17.0	1.54	19.4	0.02	0.04	0.08	85	212
100	10.16	10.15	33.737	25.941	207.5	0.289	3.32	52.3	20.7	1.69	21.8	0.00	0.03	0.09	100	211
119	9.60	9.59	33.816	26.097	193.0	0.327	3.12	48.6	23.8	1.80	23.5	0.00	0.01	0.05	120	210
125 ISL	9.36 D	9.35	33.842 D	26.156	187.4	0.338	3.05	47.2	25.2	1.84	24.2	0.00	0.01	0.05	126	
140	9.04	9.02	33.918	26.267	177.1	0.365	2.86	44.0	28.7	1.94	25.9	0.00	0.00	0.05	141	209
150 ISL	8.84 D	8.82	33.956 D	26.329	171.4	0.383	2.73	41.8	30.8	2.00	26.7	0.00	0.00	0.05	151	
170	8.58	8.56	34.023	26.422	162.9	0.416	2.48	37.8	34.4	2.10	28.0	0.00	0.00	0.04	171	208
199	8.39	8.37	34.069	26.487	157.2	0.463	2.16	32.8	38.2	2.22	29.6	0.00	0.00	0.03	200	207
200 ISL	8.34 D	8.32	34.071 D	26.497	156.3	0.464	2.15	32.6	38.3	2.22	29.6	0.00			201	
229	8.16	8.14	34.105	26.551	151.7	0.509	1.88	28.4	41.7	2.34	31.0	0.00			230	206
250 ISL	7.90 D	7.87	34.116 D	26.598	147.4	0.540	1.74	26.1	44.3	2.41	31.9	0.00			251	
268	7.80	7.77	34.118	26.615	146.1	0.567	1.62	24.3	46.6	2.47	32.6	0.00			270	205
300 ISL	7.55 D	7.52	34.128 D	26.659	142.3	0.613	1.36	20.2	50.5	2.59	33.8	0.00			302	
318	7.42	7.39	34.162	26.705	138.2	0.638	1.22	18.1	52.8	2.66	34.4	0.00			320	204
377	6.86	6.82	34.195	26.809	128.9	0.717	0.87	12.7	61.3	2.84	36.6	0.00			379	203
400 ISL	6.72 D	6.68	34.220 D	26.848	125.5	0.746	0.74	10.8	64.8	2.91	37.4	0.00			403	
437	6.40	6.36	34.239	26.905	120.3	0.792	0.56	8.1	70.2	3.00	38.5	0.00			440	202
500 ISL	5.97 D	5.93	34.274 D	26.988	112.9	0.865	0.39	5.6	77.8	3.09	39.9	0.00			503	
511	5.95	5.91	34.284	26.999	112.0	0.878	0.36	5.2	79.1	3.11	40.2	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 1.3 N	119 13.8 W	04/11/07	1650 UTC	1563 m	210 04 kn	140 06 12	1	1018.0 mb	16.0 C	19.0 C	27m	4/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.32	18.32	33.517	24.059	384.4	0.000	5.43	101.0	1.2	0.30	0.0	0.00	0.23	0.07	0	
2 A	18.32	18.32	33.517	24.059	384.5	0.008	5.43	101.0	1.2	0.30	0.0	0.00	0.23	0.07	2	222
7	18.27	18.27	33.516	24.071	383.5	0.027	5.43	100.9	1.2	0.29	0.0	0.00	0.23	0.07	7	221
10 ISL	18.25 D	18.25	33.515 D	24.075	383.2	0.038	5.45	101.2	1.1	0.29	0.0	0.00	0.24	0.08	10	
14 A	18.10	18.10	33.517	24.114	379.7	0.054	5.48	101.5	1.0	0.29	0.0	0.00	0.28	0.11	14	220
20 ISL	17.35 D	17.35	33.461 D	24.252	366.7	0.076	5.56	101.4	0.6	0.30	0.0	0.00	0.40	0.19	20	
24	17.09	17.09	33.509	24.351	357.4	0.091	5.61	101.9	0.4	0.31	0.0	0.00	0.48	0.25	24	219
30 ISL	16.71 D	16.71	33.498 D	24.432	349.9	0.112	5.66	102.0	0.7	0.35	0.2	0.03	0.51	0.29	30	
35 A	15.64	15.63	33.341	24.555	338.3	0.129	5.69	100.3	1.2	0.40	0.5	0.07	0.53	0.30	35	218
44	13.99	13.98	33.135	24.750	319.8	0.159	5.77	98.2	2.4	0.52	1.6	0.21	0.43	0.29	44	217
50 ISL	12.94 D	12.93	33.108 D	24.941	301.7	0.177	5.67	94.4	3.6	0.65	3.7	0.39	0.30	0.24	50	
53 A	12.83	12.82	33.095	24.953	300.7	0.186	5.59	92.9	4.3	0.72	5.1	0.42	0.24	0.22	53	216
60	12.18	12.17	33.128	25.104	286.4	0.207	5.36	87.9	6.4	0.90	8.7	0.04	0.15	0.19	60	215
69 A	11.72	11.71	33.231	25.270	270.8	0.232	5.10	82.8	8.4	1.03	10.9	0.02	0.10	0.12	69	214
75 ISL	11.26 D	11.25	33.329 D	25.430	255.7	0.248	4.97	80.0	9.5	1.08	12.0	0.02	0.07	0.10	75	
83	11.24	11.23	33.378	25.472	251.9	0.268	4.79	77.1	11.0	1.15	13.3	0.02	0.05	0.08	83	213
96 A	10.81	10.80	33.545	25.679	232.4	0.299	4.29	68.5	13.9	1.31	15.9	0.02	0.03	0.05	96	212
100 ISL	10.66 D	10.65	33.572 D	25.726	228.0	0.309	4.20	66.8	14.5	1.34	16.5	0.02	0.03	0.05	100	
108	10.49	10.48	33.608	25.784	222.6	0.327	4.01	63.6	16.0	1.41	17.8	0.02	0.02	0.04	108	211
121	9.80	9.79	33.743	26.007	201.7	0.354	3.45	53.9	21.1	1.67	21.6	0.01	0.01	0.03	122	210
125 ISL	9.63 D	9.62	33.776 D	26.061	196.6	0.362	3.46	53.9	21.9	1.67	21.8	0.01	0.01	0.03	126	
140	9.30	9.28	33.864	26.183	185.2	0.391	3.48	53.8	24.0	1.69	22.5	0.01	0.00	0.03	141	209
150 ISL	9.26 D	9.24	33.871 D	26.196	184.2	0.409	3.24	50.1	26.3	1.79	23.9	0.01	0.00	0.03	151	
169	8.95	8.93	33.962	26.316	173.0	0.443	2.66	40.8	30.8	2.02	26.8	0.00	0.00	0.04	170	208
200	8.71	8.69	34.079	26.446	161.3	0.495	2.16	33.0	36.2	2.19	28.6	0.00	0.00	0.04	201	207
230	8.45	8.43	34.130	26.527	154.1	0.542	1.81	27.5	40.5	2.34	30.3	0.00			231	206
250 ISL	8.16 D	8.13	34.141 D	26.579	149.3	0.573	1.56	23.6	43.4	2.44	31.3	0.00			251	
269	8.15	8.12	34.183	26.614	146.4	0.601	1.36	20.5	46.0	2.53	32.1	0.00			271	205
300 ISL	7.88 D	7.85	34.208 D	26.674	141.1	0.645	1.25	18.8	49.5	2.60	33.2	0.00			302	
319	7.61	7.58	34.180	26.692	139.6	0.672	1.21	18.0	51.7	2.64	33.9	0.00			321	204
378	6.97	6.93	34.220	26.814	128.6	0.751	0.80	11.8	61.5	2.86	36.4	0.00			380	203
400 ISL	6.61 D	6.57	34.226 D	26.867	123.6	0.779	0.69	10.1	65.5	2.93	37.4	0.00			403	
436	6.33	6.29	34.239	26.914	119.4	0.823	0.55	8.0	71.6	3.02	38.8	0.00			439	202
500 ISL	6.11 D	6.07	34.301 D	26.992	112.7	0.897	0.34	4.9	77.4	3.14	39.7	0.00			503	
513	6.08	6.03	34.314	27.006	111.5	0.912	0.30	4.3	78.6	3.16	39.9	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 0711 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 51.0 N	119 33.9 W	04/11/07	2042 UTC	2053 m	250 06 kn	340 03 07	1	1016.5 mb	18.1 C	15.4 C	25m	5/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.71	18.71	33.512	23.958	394.0	0.000	5.42	101.5	1.3	0.30	0.0	0.00	0.16	0.05	0	
2	18.71	18.71	33.512	23.958	394.1	0.008	5.42	101.5	1.3	0.30	0.0	0.00	0.16	0.05	2	220
10	18.46	18.46	33.509	24.019	388.6	0.039	5.43	101.2	1.2	0.28	0.0	0.00	0.17	0.05	10	219
20	17.48	17.48	33.460	24.220	369.7	0.077	5.54	101.3	0.6	0.30	0.0	0.00	0.28	0.09	20	218
30	17.32	17.32	33.474	24.270	365.4	0.114	5.57	101.6	0.5	0.29	0.0	0.00	0.37	0.15	30	217
39	17.29	17.28	33.507	24.302	362.5	0.147	5.59	101.9	0.4	0.29	0.0	0.00	0.47	0.21	39	216
50	15.28	15.27	33.299	24.602	334.2	0.185	5.72	100.1	1.6	0.43	0.8	0.11	0.48	0.30	50	215
59	12.75	12.74	33.108 D	24.979	298.4	0.213	5.51	91.4	4.8	0.73	5.7	0.26	0.22	0.22	59	214
69	11.80	11.79	33.176	25.212	276.3	0.242	5.25	85.4	7.6	0.97	10.2	0.02	0.09	0.12	69	213
75 ISL	11.63 D	11.62	33.268 D	25.315	266.6	0.258	5.07	82.2	9.5	1.09	12.3	0.02	0.07	0.09	75	
84	11.13	11.12	33.363	25.480	251.1	0.282	4.75	76.2	12.3	1.24	14.8	0.01	0.04	0.06	84	212
99	10.50	10.49	33.618	25.790	221.9	0.317	4.09	64.9	15.6	1.37	17.4	0.01	0.02	0.04	99	211
100 ISL	10.36 D	10.35	33.640 D	25.831	218.0	0.319	4.06	64.2	15.9	1.38	17.6	0.01	0.02	0.04	100	
119	9.65	9.64	33.783	26.063	196.3	0.359	3.63	56.6	21.3	1.60	21.4	0.01	0.01	0.03	120	210
125 ISL	9.49 D	9.48	33.816 D	26.115	191.4	0.370	3.59	55.7	22.1	1.63	21.9	0.01	0.01	0.03	126	
140	9.32	9.30	33.851	26.170	186.4	0.399	3.52	54.5	23.7	1.67	22.6	0.01	0.00	0.03	141	209
150 ISL	9.08 D	9.06	33.895 D	26.243	179.6	0.417	3.38	52.0	25.5	1.73	23.5	0.01	0.00	0.03	151	
169	8.85	8.83	33.946	26.320	172.7	0.450							0.00	0.03	170	208
200	8.45	8.43	34.032	26.449	160.8	0.502	2.45	37.2	36.1	2.10	28.6	0.00	0.00	0.03	201	207
229	8.06	8.04	34.078	26.545	152.2	0.548	1.99	30.0	42.3	2.31	31.2	0.00			230	206
250 ISL	7.84 D	7.82	34.109 D	26.602	147.1	0.579	1.70	25.5	46.0	2.44	32.6	0.00			251	
268	7.67	7.64	34.126	26.640	143.7	0.605	1.48	22.1	49.0	2.54	33.6	0.00			270	205
300 ISL	7.33 D	7.30	34.159 D	26.715	136.9	0.650	1.23	18.2	54.4	2.66	35.1	0.00			302	
318	7.13	7.10	34.159	26.743	134.4	0.674	1.11	16.4	57.2	2.72	35.8	0.00			320	204
376	6.89	6.85	34.247	26.846	125.5	0.750	0.66	9.7	64.2	2.92	37.2	0.00			378	203
400 ISL	6.50 D	6.46	34.231 D	26.885	121.7	0.780	0.54	7.8	67.5	3.00	37.8	0.00			403	
440	6.49	6.45	34.299	26.941	117.1	0.827	0.39	5.7	72.6	3.10	38.8	0.00			443	202
500 ISL	6.21 D	6.17	34.323 D	26.997	112.4	0.896	0.30	4.3	77.6	3.16	39.8	0.00			503	
513	6.16	6.11	34.326	27.006	111.7	0.911	0.28	4.0	78.7	3.17	40.0	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 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 30.7 N	120 14.6 W	05/11/07	0339 UTC	3942 m	210 05 kn			1016.5 mb	17.3 C	14.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.95	16.95	33.624	24.471	345.1	0.000	5.65	102.4	0.1	0.31	0.0	0.00	0.58	0.17	0	
2	16.95	16.95	33.624	24.471	345.2	0.007	5.65	102.4	0.1	0.31	0.0	0.00	0.58	0.17	2	220
10	16.77	16.77	33.636	24.523	340.5	0.034	5.68	102.6	0.0	0.31	0.0	0.00	0.75	0.31	10	219
20	16.71	16.71	33.636	24.537	339.5	0.068	5.63	101.5	0.0	0.31	0.0	0.00	0.72	0.29	20	218
30 ISL	16.64 D	16.64	33.623 D	24.544	339.2	0.102	5.62	101.2	0.0	0.32	0.0	0.01	0.64	0.25	30	
31	16.64	16.63	33.626	24.546	339.0	0.106	5.62	101.2	0.0	0.32	0.0	0.01	0.62	0.25	31	217
41	16.24	16.23	33.605	24.622	332.1	0.139	5.53	98.8	0.6	0.42	0.8	0.12	0.31	0.22	41	216
50	15.60	15.59	33.577	24.745	320.6	0.169	5.37	94.7	2.0	0.56	2.6	0.31	0.23	0.20	50	215
61	13.06	13.05	33.597	25.296	268.2	0.201	4.41	73.9	10.2	1.15	13.2	0.02	0.11	0.17	61	214
70	12.27	12.26	33.634	25.479	251.0	0.224	4.08	67.2	13.4	1.35	16.2	0.02	0.08	0.14	70	213
75 ISL	11.85 D	11.84	33.653 D	25.573	242.1	0.237	3.89	63.5	15.1	1.44	17.6	0.02	0.07	0.12	75	
85	11.09	11.08	33.702	25.751	225.4	0.260	3.52	56.6	18.2	1.60	20.1	0.01	0.06	0.09	85	212
100	10.17	10.16	33.792	25.982	203.6	0.292	3.05	48.1	22.7	1.79	23.1	0.00	0.03	0.08	100	211
120	9.46	9.45	33.869	26.161	186.9	0.331	2.83	43.9	26.9	1.94	25.4	0.00	0.01	0.09	121	210
125 ISL	9.33 D	9.32	33.889 D	26.198	183.5	0.341	2.80	43.3	27.7	1.96	25.7	0.00	0.01	0.08	126	
139	9.12	9.10	33.951	26.280	175.9	0.366	2.71	41.8	29.8	2.00	26.3	0.00	0.00	0.04	140	209
150 ISL	9.00 D	8.98	33.982 D	26.324	172.0	0.385	2.54	39.0	31.6	2.06	27.2	0.00	0.00	0.04	151	
169	8.76	8.74	34.028	26.398	165.2	0.417	2.24	34.3	34.6	2.17	28.7	0.00	0.00	0.03	170	208
200	8.29	8.27	34.058	26.494	156.6	0.467	2.15	32.5	38.7	2.25	30.2	0.00	0.00	0.02	201	207
228	7.61	7.59	34.034	26.576	149.0	0.510	2.33	34.7	43.4	2.26	31.1	0.00			229	206
250 ISL	7.25 D	7.23	34.060 D	26.647	142.4	0.542	2.04	30.1	48.1	2.39	32.8	0.00			251	
268	7.11	7.08	34.076	26.679	139.6	0.567	1.74	25.6	51.9	2.52	34.2	0.00			270	205
300 ISL	6.85 D	6.82	34.082 D	26.720	136.1	0.611	1.60	23.4	57.0	2.60	35.6	0.00			302	
318	6.48	6.45	34.061	26.753	133.0	0.635	1.55	22.5	59.7	2.64	36.3	0.00			320	204
377	5.95	5.92	34.114	26.863	123.0	0.711	1.01	14.5	71.0	2.92	39.2	0.00			379	203
400 ISL	5.90 D	5.87	34.145 D	26.894	120.3	0.739	0.75	10.7	73.6	3.00	39.7	0.00			403	
437	6.04	6.00	34.260	26.968	114.0	0.782	0.40	5.8	77.2	3.12	40.2	0.00			440	202
500 ISL	5.62 D	5.58	34.294 D	27.047	106.9	0.852	0.28	4.0	85.7	3.29	41.6	0.00			503	
511	5.54	5.50	34.303	27.064	105.4	0.863	0.26	3.7	87.2	3.32	41.9	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 10.7 N	120 55.2 W	05/11/07	1106 UTC	3829 m	260 04 kn			1016.0 mb	18.0 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.87	17.87	33.319	24.018	388.4	0.000	5.50	101.3	0.9	0.32	0.0	0.00	0.25	0.11	0	
1	17.87	17.87	33.319	24.018	388.4	0.004	5.50	101.3	0.9	0.32	0.0	0.00	0.25	0.11	1	221
10 ISL	17.88 D	17.88	33.315 D	24.013	389.2	0.039	5.51	101.5	0.9	0.31	0.0	0.00	0.25	0.10	10	
15	17.88	17.88	33.317	24.014	389.2	0.058	5.51	101.5	0.9	0.31	0.0	0.00	0.25	0.10	15	220
20 ISL	17.88 D	17.88	33.314 D	24.012	389.6	0.078	5.51	101.5	0.9	0.31	0.0	0.00	0.25	0.10	20	
30	17.88	17.87	33.317	24.015	389.7	0.117	5.50	101.3	0.9	0.31	0.0	0.00	0.24	0.10	30	219
45	17.44	17.43	33.300	24.108	381.2	0.175	5.57	101.7	0.9	0.35	0.0	0.00	0.31	0.18	45	218
50	16.18	16.17	33.262	24.373	356.1	0.193	5.79	103.1	1.1	0.38	0.1	0.00	0.37	0.25	50	217
55	14.04	14.03	33.135	24.740	321.1	0.210	5.92	100.9	2.5	0.50	1.2	0.16	0.28	0.24	55	216
65	13.21	13.20	33.153	24.923	303.9	0.241	5.62	94.2	4.1	0.70	4.8	0.39	0.17	0.16	65	215
75	12.48	12.47	33.246	25.138	283.6	0.271	5.36	88.5	5.9	0.84	7.7	0.01	0.10	0.11	75	214
85	12.16	12.15	33.342	25.274	270.9	0.298	5.15	84.5	7.1	0.92	9.3	0.00	0.08	0.10	85	213
95	11.70	11.69	33.414	25.416	257.5	0.325	4.90	79.6	8.8	1.04	11.5	0.00	0.06	0.08	95	212
100 ISL	11.53 D	11.52	33.465 D	25.487	250.9	0.337	4.79	77.6	9.7	1.09	12.4	0.00	0.05	0.07	100	
110	11.16	11.15	33.498	25.580	242.2	0.362	4.54	73.0	11.8	1.20	14.3	0.00	0.03	0.06	110	211
124	10.50	10.49	33.617	25.790	222.5	0.395	4.01	63.6	16.1	1.44	18.0	0.00	0.01	0.03	125	210
125 ISL	10.43 D	10.42	33.626 D	25.809	220.7	0.397	3.99	63.2	16.3	1.45	18.2	0.00	0.01	0.03	126	
144	9.91	9.89	33.729	25.978	204.9	0.437	3.65	57.2	19.8	1.59	20.5	0.00	0.01	0.03	145	209
150 ISL	9.64 D	9.62	33.780 D	26.063	196.9	0.449	3.55	55.3	21.0	1.63	21.2	0.00	0.01	0.03	151	
169	9.31	9.29	33.863	26.182	185.9	0.486	3.30	51.0	24.6	1.75	23.3	0.00	0.00	0.04	170	208
199	8.84	8.82	33.964	26.336	171.8	0.539	3.07	47.0	29.3	1.87	25.2	0.00	0.00	0.03	200	207
200 ISL	8.84 D	8.82	33.965 D	26.337	171.7	0.541	3.05	46.7	29.5	1.88	25.3	0.00			201	
229	8.53	8.51	34.029	26.435	162.8	0.590	2.55	38.8	34.9	2.08	28.0	0.00			230	206
250 ISL	8.25 D	8.22	34.081 D	26.519	155.1	0.623	2.22	33.6	39.2	2.22	29.8	0.00			251	
269	8.00	7.97	34.088	26.562	151.3	0.652	1.94	29.2	42.9	2.34	31.3	0.00			270	205
300 ISL	7.81 D	7.78	34.143 D	26.633	144.9	0.698	1.47	22.0	47.5	2.53	33.1	0.00			302	
318	7.70	7.67	34.158	26.661	142.5	0.724	1.24	18.5	50.1	2.63	33.9	0.00			320	204
378	6.97	6.93	34.193	26.792	130.6	0.806	0.86	12.6	60.6	2.85	36.7	0.00			380	203
400 ISL	6.77 D	6.73	34.219 D	26.840	126.3	0.834	0.73	10.7	64.8	2.92	37.7	0.00			402	
438	6.30	6.26	34.227	26.909	119.9	0.881	0.55	8.0	71.4	3.02	39.1	0.00			441	202
500 ISL	6.00 D	5.96	34.260 D	26.974	114.3	0.953	0.39	5.6	77.4	3.11	40.1	0.00			503	
512	5.97	5.93	34.276	26.990	112.9	0.967	0.36	5.2	78.6	3.13	40.3	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 51.0 N	121 35.0 W	05/11/07	1735 UTC	4085 m	300 06 kn	120 04 07	2	1017.9 mb	17.8 C	15.1 C	25m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.98	17.98	33.437	24.081	382.3	0.000			1.0	0.31	0.0	0.00	0.27	0.11	0	
3 A	17.98	17.98	33.437	24.081	382.4	0.011			1.0	0.31	0.0	0.00	0.27	0.11	3	224
10 ISL	17.98 D	17.98	33.437 D	24.082	382.6	0.038			0.9	0.32	0.0	0.00	0.30	0.10	10	
13 A	17.97	17.97	33.438	24.085	382.4	0.050	5.44	100.4	0.9	0.32	0.0	0.00	0.32	0.09	13	223
20 ISL	17.97 D	17.97	33.435 D	24.083	382.8	0.077	5.47	101.0	0.9	0.31	0.0	0.00	0.30	0.10	20	
24	17.96	17.96	33.434	24.085	382.8	0.092	5.48	101.1	0.9	0.31	0.0	0.00	0.29	0.11	24	222
30 ISL	17.97 D	17.96	33.439 D	24.086	382.9	0.115	5.49	101.3	0.9	0.31	0.0	0.00	0.31	0.13	30	
33 A	17.96	17.95	33.439	24.089	382.7	0.126	5.49	101.3	0.9	0.31	0.0	0.00	0.32	0.14	33	221
40	17.72	17.71	33.432	24.142	377.9	0.153	5.52	101.4	0.8	0.31	0.0	0.00	0.44	0.21	40	220
44	17.38	17.37	33.410	24.207	371.8	0.168	5.60	102.2	0.6	0.32	0.0	0.00	0.42	0.23	44	219
49 A	16.95	16.94	33.399	24.300	363.0	0.186	5.67	102.6	0.4	0.33	0.0	0.00	0.44	0.28	49	218
50 ISL	16.93 D	16.92	33.399 D	24.305	362.6	0.190	5.67	102.5	0.4	0.33	0.0	0.00	0.42	0.27	50	
55	16.72	16.71	33.409	24.362	357.4	0.208	5.70	102.7	0.5	0.34	0.0	0.00	0.32	0.23	55	217
64 A	15.17	15.16	33.313	24.638	331.2	0.239	5.89	102.8	1.8	0.46	0.9	0.08	0.32	0.28	64	216
73	13.90	13.89	33.307	24.902	306.1	0.268	5.68	96.6	3.4	0.61	3.3	0.42	0.23	0.28	73	215
75 ISL	13.52 D	13.51	33.316 D	24.987	298.1	0.274	5.65	95.4	3.7	0.64	4.0	0.41	0.21	0.27	75	
81	13.21	13.20	33.315	25.049	292.3	0.291	5.56	93.2	4.7	0.74	6.0	0.29	0.17	0.23	81	214
89 A	12.81	12.80	33.341	25.148	283.0	0.314	5.33	88.6	5.7	0.83	7.7	0.15	0.14	0.18	89	213
99	12.31	12.30	33.417	25.304	268.4	0.342	5.04	83.0	6.9	0.93	9.6	0.02	0.08	0.12	99	212
100 ISL	12.20 D	12.19	33.459 D	25.358	263.3	0.345	5.01	82.3	7.1	0.95	9.9	0.02	0.08	0.12	100	
110	11.66	11.65	33.508	25.497	250.2	0.370	4.66	75.7	9.8	1.11	12.7	0.00	0.05	0.08	110	211
123	11.00	10.99	33.587	25.678	233.1	0.402	4.18	67.0	13.4	1.29	15.9	0.00	0.03	0.05	124	210
125 ISL	10.79 D	10.77	33.597 D	25.723	228.9	0.406	4.11	65.6	14.0	1.33	16.5	0.00	0.03	0.05	126	
144	9.98	9.96	33.708	25.950	207.6	0.448	3.57	56.0	19.6	1.62	20.9	0.00	0.01	0.03	145	209
150 ISL	9.67 D	9.65	33.779 D	26.057	197.5	0.460	3.55	55.3	20.7	1.63	21.5	0.00	0.01	0.03	151	
169	9.35	9.33	33.852	26.167	187.4	0.496	3.50	54.2	23.5	1.68	22.6	0.00	0.00	0.03	170	208
200	8.72	8.70	33.946	26.340	171.3	0.552	3.33	50.9	28.5	1.83	24.7	0.00	0.00	0.03	201	207
229	8.21	8.19	33.991	26.454	160.9	0.600	3.11	47.0	34.1	1.94	26.7	0.00			230	206
250 ISL	7.88 D	7.85	34.062 D	26.559	151.1	0.633	2.32	34.8	40.0	2.23	29.7	0.00			251	
269	8.03	8.00	34.130	26.590	148.6	0.661	1.57	23.6	45.3	2.50	32.4	0.00			270	205
300 ISL	7.57 D	7.54	34.140 D	26.666	141.7	0.706	1.34	20.0	50.2	2.66	33.8	0.00			302	
318	7.52	7.49	34.170	26.697	139.1	0.732	1.20	17.9	52.4	2.70	34.0	0.00			320	204
378	7.18	7.14	34.253	26.811	129.1	0.812	0.70	10.3	60.4	2.92	35.8	0.00			380	203
400 ISL	6.88 D	6.84	34.272 D	26.867	123.8	0.840	0.60	8.8	64.3	3.00	36.8	0.00			402	
439	6.49	6.45	34.266	26.915	119.5	0.887	0.48	7.0	71.0	3.11	38.4	0.00			442	202
500 ISL	6.06 D	6.02	34.291 D	26.990	112.8	0.958	0.32	4.6	77.8	3.18	39.7	0.00			503	
513	6.03	5.98	34.309	27.009	111.3	0.973	0.29	4.2	79.3	3.20	40.0	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 0711 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 10.6 N	122 55.1 W	06/11/07	0616 UTC	3612 m	320 10 kn			1017.3 mb	17.0 C	14.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.16	17.16	33.076	24.001	389.9	0.000	5.61	101.7	1.0	0.31	0.0	0.00	0.17	0.05	0	
2	17.16	17.16	33.076	24.001	390.0	0.008	5.61	101.7	1.0	0.31	0.0	0.00	0.17	0.05	2	220
2	17.16	17.16				0.008									2	221
10 ISL	17.16 D	17.16	33.073 D	23.999	390.4	0.039	5.62	101.9	0.9	0.32	0.0	0.00	0.17	0.05	10	
15	17.14	17.14	33.073	24.004	390.1	0.059	5.62	101.9	0.9	0.32	0.0	0.00	0.17	0.05	15	219
20 ISL	17.03 D	17.03	33.092 D	24.045	386.4	0.078	5.63	101.8	0.9	0.32	0.0	0.00	0.20	0.06	20	
30	16.85	16.85	33.077	24.076	383.8	0.116	5.66	102.0	0.8	0.33	0.0	0.00	0.28	0.09	30	218
45	16.73	16.72	33.084	24.110	381.1	0.174	5.68	102.1	0.8	0.32	0.0	0.00	0.39	0.16	45	217
50 ISL	16.14 D	16.13	33.113 D	24.267	366.1	0.192	5.77	102.6	0.8	0.33	0.0	0.00	0.50	0.25	50	
55	15.48	15.47	33.093	24.400	353.6	0.210	5.86	102.8	0.8	0.35	0.0	0.00	0.57	0.33	55	216
65	13.61	13.60	33.022	24.741	321.2	0.244	5.94	100.3	2.1	0.46	0.6	0.08	0.37	0.27	65	215
75	12.67	12.66	32.994	24.906	305.6	0.276	5.73	94.8	3.6	0.63	3.5	0.50	0.20	0.21	75	214
85	11.92	11.91	33.014	25.064	290.7	0.305	5.53	90.1	5.0	0.76	6.1	0.04	0.15	0.19	85	213
95	11.39	11.38	33.080	25.213	276.7	0.334	5.34	86.0	6.9	0.88	8.5	0.01	0.10	0.12	95	212
100 ISL	11.22 D	11.21	33.277 D	25.397	259.3	0.347	5.04	81.0	9.0	1.03	10.9	0.01	0.07	0.09	100	
109	10.99	10.98	33.467	25.586	241.5	0.370	4.41	70.6	13.3	1.33	15.6	0.00	0.03	0.05	109	211
125	10.23	10.22	33.680	25.885	213.4	0.406	3.52	55.5	20.2	1.65	21.3	0.00	0.02	0.06	126	210
144	9.72	9.70	33.840	26.096	193.6	0.445	2.88	45.0	25.3	1.88	24.4	0.00	0.01	0.04	145	209
150 ISL	9.42 D	9.40	33.837 D	26.143	189.2	0.456	2.77	42.9	26.5	1.92	25.0	0.00	0.01	0.04	151	
169	9.23	9.21	33.951	26.263	178.2	0.491	2.55	39.4	29.8	2.02	26.5	0.00	0.00	0.03	170	208
200	8.68	8.66	34.031	26.413	164.4	0.544	2.17	33.1	35.1	2.19	29.1	0.00	0.00	0.03	201	207
229	7.99	7.97	34.029	26.516	154.8	0.591	2.39	35.9	39.7	2.20	29.8	0.00			230	206
250 ISL	8.19 D	8.16	34.132 D	26.568	150.4	0.623	1.95	29.5	43.3	2.37	31.4	0.00			251	
268	7.86	7.83	34.126	26.612	146.4	0.649	1.48	22.2	46.5	2.53	32.9	0.00			269	205
300 ISL	7.46 D	7.43	34.153 D	26.692	139.2	0.695	1.34	19.9	52.5	2.67	34.8	0.00			302	
318	7.02	6.99	34.111	26.720	136.5	0.720	1.26	18.5	55.8	2.72	35.7	0.00			320	204
378	6.62	6.59	34.183	26.831	126.6	0.799	0.80	11.7	64.4	2.93	37.6	0.00			380	203
400 ISL	6.24 D	6.20	34.165 D	26.867	123.2	0.826	0.68	9.8	67.8	2.98	38.4	0.00			402	
438	6.10	6.06	34.212	26.922	118.4	0.872	0.53	7.6	73.6	3.06	39.6	0.00			441	202
500 ISL	5.77 D	5.73	34.265 D	27.006	111.0	0.943	0.35	5.0	81.8	3.17	40.9	0.00			503	
511	5.67	5.63	34.267	27.020	109.7	0.955	0.32	4.6	83.2	3.19	41.1	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
29 50.6 N	123 35.0 W	06/11/07	1225 UTC	4105 m	340 13 kn			1016.2 mb	16.7 C	13.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.96	17.96	33.119	23.843	405.0	0.000	5.49	101.1	1.5	0.31	0.0	0.00	0.16	0.04	0	
2	17.96	17.96	33.119	23.843	405.1	0.008	5.49	101.1	1.5	0.31	0.0	0.00	0.16	0.04	2	220
10 ISL	17.97 D	17.97	33.115 D	23.838	405.9	0.041	5.48	101.0	1.5	0.30	0.0	0.00	0.15	0.04	10	
16	17.98	17.98	33.117	23.837	406.2	0.065	5.48	101.0	1.5	0.30	0.0	0.00	0.15	0.05	16	219
20 ISL	17.98 D	17.98	33.116 D	23.836	406.3	0.081	5.49	101.2	1.4	0.30	0.0	0.00	0.16	0.05	20	
30	17.73	17.72	33.071	23.863	404.1	0.122	5.53	101.4	1.2	0.30	0.0	0.00	0.22	0.06	30	218
44	16.99	16.98	33.046	24.020	389.6	0.177	5.64	101.9	1.0	0.32	0.0	0.00	0.35	0.17	44	217
50 ISL	16.77 D	16.76	33.058 D	24.081	384.0	0.200	5.67	102.0	0.9	0.32	0.0	0.00	0.41	0.22	50	
55	16.47	16.46	33.098	24.181	374.6	0.219	5.70	102.0	0.9	0.33	0.0	0.00	0.44	0.24	55	216
65	15.18	15.17	33.039	24.424	351.6	0.256	6.02	104.9	1.5	0.36	0.0	0.00	0.36	0.20	65	215
75	13.56	13.55	32.982	24.721	323.4	0.289	6.04	101.8	2.0	0.41	0.2	0.03	0.29	0.23	75	214
85	12.81	12.80	32.892	24.800	316.0	0.321	5.97	99.0	2.4	0.47	0.9	0.11	0.24	0.18	85	213
95	12.29	12.28	32.918	24.921	304.7	0.352	5.74	94.2	3.5	0.61	3.1	0.21	0.17	0.19	95	212
100 ISL	11.84 D	11.83	32.906 D	24.996	297.6	0.368	5.67	92.1	4.3	0.69	4.5	0.16	0.14	0.17	100	
110	11.20	11.19	32.914	25.119	286.0	0.397	5.51	88.3	5.9	0.82	7.2	0.01	0.10	0.12	110	211
124	11.79	11.77	33.315	25.323	267.1	0.435	5.13	83.5	7.2	0.89	9.0	0.00	0.05	0.06	124	210
125 ISL	11.57 D	11.55	33.311 D	25.361	263.5	0.438	5.10	82.6	7.5	0.91	9.4	0.00	0.05	0.06	125	
144	10.53	10.51	33.463	25.665	234.8	0.485	4.42	70.1	14.8	1.35	16.6	0.00	0.01	0.02	145	209
150 ISL	10.52 D	10.50	33.532 D	25.720	229.6	0.499	4.21	66.7	16.3	1.43	17.9	0.00	0.01	0.02	151	
168	9.87	9.85	33.710	25.970	206.1	0.539	3.68	57.6	19.7	1.59	20.5	0.00	0.01	0.02	169	208
199	9.22	9.20	33.861	26.195	185.2	0.599	3.18	49.1	25.4	1.81	24.0	0.00	0.00	0.02	200	207
200 ISL	9.23 D	9.21	33.888 D	26.214	183.4	0.601	3.20	49.4	25.5	1.80	24.0	0.00			201	
229	8.73	8.71	33.982	26.368	169.3	0.652	3.80	58.1	27.3	1.66	22.5	0.00			230	206
250 ISL	8.34 D	8.31	34.001 D	26.443	162.4	0.687	3.48	52.7	31.8	1.81	24.7	0.00			251	
268	8.00	7.97	34.012	26.502	156.9	0.716	3.00	45.1	36.6	2.00	27.3	0.00			269	205
300 ISL	7.58 D	7.55	34.043 D	26.588	149.1	0.765	2.40	35.7	44.3	2.27	30.6	0.00			302	
318	7.26	7.23	34.050	26.639	144.3	0.791	2.10	31.0	48.4	2.40	32.2	0.00			320	204
378	6.58	6.55	34.101	26.772	132.2	0.874	1.40	20.4	59.5	2.69	35.9	0.00			380	203
400 ISL	6.27 D	6.23	34.086 D	26.801	129.5	0.903	1.26	18.2	63.8	2.79	37.0	0.00			402	
437	5.85	5.81	34.105	26.869	123.1	0.950	1.06	15.2	71.1	2.93	38.6	0.00			440	202
500 ISL	5.41 D	5.37	34.183 D	26.985	112.6	1.024	0.62	8.8	82.4	3.11	40.8	0.00			503	
511	5.34	5.30	34.188	26.997	111.5	1.036	0.54	7.6	84.4	3.14	41.2	0.00			514	201

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

RV NEW HORIZON CALCOFI CRUISE 0711 STATION 93.3 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.2 N	117 16.9 W	03/11/07	1008 UTC	22 m	070 01 kn			1015.9 mb	16.5 C	15.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.93	17.93	33.638	24.247	366.5	0.000	5.68	104.9	0.8	0.26	0.0	0.00	0.47	0.20	0	
1	17.93	17.93	33.638	24.247	366.5	0.004	5.68	104.9	0.8	0.26	0.0	0.00	0.47	0.20	1	204
5	17.86	17.86	33.618	24.249	366.5	0.018	5.71	105.3	1.0	0.26	0.1	0.01	0.50	0.24	5	203
10	16.58	16.58	33.519	24.477	344.9	0.036	5.80	104.3	1.9	0.37	0.9	0.05	0.66	0.43	10	202
14	15.39	15.39	33.423	24.672	326.4	0.050	5.66	99.3	3.2	0.53	2.8	0.13	0.82	0.60	14	201

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 23.2 N	122 14.9 W	17/11/07	1454 UTC	15 m	1154 - 1727 PST	1154 PST	1725 PST	213.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.08	33.182	24.767	5.95	101.5	3.5	0.51	3.0	0.17	0.67	0.25	90. A	4.4	3.5	4.0	0.05
8	14.08	33.181	24.766	5.97	101.9	3.5	0.49	3.0	0.16	0.64	0.24	44.	10.4	10.2	10.3	0.08
20	13.98	33.179	24.786	5.96	101.5	3.7	0.52	3.2	0.17	0.64	0.24	13.	6.1	6.5	6.3	0.05
29	13.61	33.181	24.863	5.97	100.9	4.5	0.58	4.0	0.19	0.59	0.23	5.1	2.5	2.5	2.5	0.05
38	13.42	33.178	24.900	5.95	100.1	5.2	0.62	4.5	0.20	0.58	0.23	2.0	0.64	0.72	0.68	0.04
45	13.25	33.182	24.937	5.95	99.8	5.6	0.65	5.0	0.20	0.48	0.22					
54	12.85	33.174	25.010	5.84	97.1	6.0	0.71	6.0	0.24	0.46	0.30	0.40	0.05	0.05	0.05	0.05

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 19.3 N	120 47.6 W	15/11/07	1817 UTC	16 m	1150 - 1735 PST	1148 PST	1726 PST	344.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.43	33.182	24.693	5.95	102.3	2.3	0.44	1.7	0.13	0.53	0.16	83. A	8.1	6.8	7.4	0.11
9	14.17	33.181	24.747	5.95	101.7	2.7	0.48	2.3	0.17	1.00	0.20	42.	14.1	14.3	14.2	0.12
10	14.03	33.182	24.777	5.97	101.8	2.8	0.49	2.7	0.19	0.58	0.18					
21	13.78	33.173	24.822	5.96	101.1	3.1	0.51	3.1	0.20	0.67	0.25	13.	8.6	8.9	8.7	0.14
31	13.69	33.194	24.857	5.94	100.5	3.4	0.54	3.5	0.23	0.73	0.28	5.1	5.0	5.2	5.1	0.07
41	13.66	33.215	24.880	5.97	101.0	3.7	0.56	3.9	0.24	0.72	0.29	2.0	1.5	1.7	1.6	0.10
50	13.02	33.172	24.975	5.79	96.6	4.3	0.65	5.0	0.31	0.50	0.34					
58	11.69	33.124	25.192	5.41	87.8	7.0	0.92	9.2	0.22	0.22	0.19	0.38	0.04	0.05	0.05	0.04

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.2 N	123 13.1 W	16/11/07	1903 UTC	12 m	1205 - 1740 PST	1153 PST	1741 PST	167.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.74	33.286	24.489	5.82	102.8	1.3	0.32	0.2	0.05	0.74	0.21	77. A	5.2	4.8	5.0	0.09
7	15.74	33.287	24.490	5.84	103.1	1.3	0.32	0.2	0.04	0.74	0.25	41.	11.0	11.0	11.0	0.09
15	15.72	33.289	24.496	5.82	102.7	1.2	0.33	0.1	0.05	0.73	0.22	15.	6.3	7.0	6.6	0.08
23	15.72	33.286	24.494	5.83	102.9	1.2	0.32	0.2	0.05	0.73	0.22	5.3	2.9	0.44	1.7	0.10
31	15.71	33.286	24.496	5.81	102.5	1.2	0.32	0.2	0.05	0.68	0.21	1.9	0.84	0.70	0.77	0.07
42	15.70	33.287	24.500	5.80	102.3	1.2	0.32	0.2	0.05	0.64	0.21	0.46	0.03	0.03	0.03	0.06

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 10.7 N	119 30.5 W	14/11/07	1825 UTC	11 m	1143 - 1730 PST	1143 PST	1725 PST	454.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.67	33.557	24.932	5.78	100.0	5.1	0.48	3.4	0.18	1.25	0.57	87. A	32.4	30.9	31.6	0.23
6	14.55	33.557	24.957	5.71	98.6	5.4	0.49	3.8	0.20	1.21	0.55	43.	42.1	40.8	41.5	0.24
10	13.99	33.550	25.070	5.33	91.0	6.9	0.67	6.2	0.33	0.86	0.51					
14	13.25	33.553	25.223	5.01	84.2	8.6	0.84	8.8	0.41	0.56	0.38	14.	8.4	8.7	8.5	0.09
21	12.82	33.504	25.271	4.84	80.6	9.6	1.00	11.1	0.63	0.23	0.25	5.3	1.1	1.2	1.1	0.06
28	12.57	33.509	25.323	4.71	78.0	10.4	1.12	12.1	0.39	0.19	0.21	2.0	0.30	0.29	0.30	0.07
40	12.21	33.526	25.406	4.52	74.3	12.0	1.16	13.8	0.21	0.15	0.19	0.38	0.01	0.02	0.02	0.05

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 54.8 N	124 11.5 W	12/11/07	1737 UTC	29 m	1202 - 1740 PST	1201 PST	1738 PST	105.1 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	17.98	33.290	23.969	5.49	101.3	1.9	0.27	0.3	0.00	0.12	0.04	90. A	0.47	0.46	0.46	0.06
10	17.98	33.282	23.963	5.49	101.3	1.8	0.27	0.3	0.00	0.12	0.05					
15	17.98	33.279	23.961	5.48	101.1	1.7	0.28	0.3	0.00	0.12	0.03	45.	1.9	2.0	1.9	0.06
26	17.97	33.279	23.964	5.49	101.2	1.8	0.28	0.2	0.00	0.13	0.03					
38	17.97	33.280	23.965	5.50	101.4	1.7	0.28	0.3	0.00	0.12	0.03	13.	1.4	1.5	1.5	0.06
47	17.97	33.279	23.965	5.48	101.1	1.7	0.28	0.3	0.00	0.12	0.04					
57	17.94	33.277	23.971	5.50	101.4	1.7	0.24	0.4	0.00	0.13	0.04	4.9	0.93	0.96	0.94	0.05
66	16.13	33.249	24.375	6.07	108.0	1.7	0.23	0.3	0.00	0.20	0.12					
74	15.31	33.194	24.516	6.08	106.4	1.9	0.26	0.4	0.00	0.23	0.14	2.0	0.73	0.77	0.75	0.03
84	15.23	33.405	24.696	5.90	103.2	1.7	0.26	0.4	0.01	0.21	0.14					
94	15.10	33.476	24.779	5.83	101.7	1.8	0.23	0.5	0.01	0.16	0.14					
103	14.35	33.340	24.835	5.72	98.2	2.4	0.37	1.7	0.11	0.12	0.12	0.43	0.09	0.10	0.09	0.02

A) INCUBATION LIGHT INTENSITIES WERE 99, 44, 13, 5, 2, 0.4 PERCENT RESPETIVELY

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.0 N	119 40.2 W	10/11/07	1730 UTC	14 m	1143 - 1733 PST	1143 PST	1729 PST	273.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.09	33.652	24.914	5.82	101.7	0.7	0.46	2.6	0.15	0.95	0.32	80. A	12.5	10.9	11.7	0.13
7	15.04	33.650	24.924	5.80	101.2	0.8	0.47	2.7	0.16	0.74	0.22	46.	20.1	20.5	20.3	0.16
10	14.31	33.595	25.038	5.41	93.0	3.5	0.71	5.9	0.24	0.71	0.30					
18	12.59	33.596	25.387	4.57	75.8	10.0	1.16	12.5	0.27	0.37	0.39	14.	3.7	4.0	3.9	0.09
27	12.23	33.592	25.453	4.38	72.1	11.6	1.24	14.1	0.24	0.29	0.50	5.2	1.7	1.7	1.7	0.07
36	10.91	33.764	25.830	3.38	54.1	20.4	1.63	20.5	0.12	0.16	0.28	1.9	0.32	0.36	0.34	0.05
43	10.26	33.826	25.992	2.96	46.8	24.2	1.80	23.3	0.06	0.07	0.20					
50	10.20	33.834	26.009	2.92	46.1	24.5	1.83	23.6	0.06	0.07	0.26	0.42	0.01	0.06	0.03	0.03

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.5 N	122 23.9 W	11/11/07	1929 UTC	11 m	1225 - 1744 PST	1154 PST	1744 PST	166.3 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	16.51	33.439	24.432	5.77	103.5	0.5	0.14	0.3	0.00	0.33	0.12	76. A	4.4	4.0	4.2	0.20
6	16.50	33.435	24.431	5.77	103.5	0.5	0.16	0.2	0.00	0.34	0.12	43.	7.6	7.2	7.4	0.18
11	16.50	33.434	24.430	5.77	103.5	0.4	0.14	0.3	0.00	0.34	0.12					
14	16.50	33.489	24.473	5.76	103.4	0.3	0.14	0.1	0.00	0.38	0.15	14.	5.7	6.1	5.9	0.21
22	16.54	33.632	24.574	5.74	103.2	0.0	0.12	0.1	0.00	0.50	0.23	4.6	4.6	4.7	4.6	0.19
28	16.36	33.620	24.606	5.69	101.9	0.0	0.17	0.5	0.02	0.68	0.31	2.0	2.6	2.7	2.7	0.09
40	15.06	33.389	24.719	5.70	99.3	1.5	0.33	1.5	0.15	0.38	0.27	0.38	0.25	0.23	0.24	0.03

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 28.8 N	117 46.4 W	09/11/07	1809 UTC	9 m	1138 - 1730 PST	1135 PST	1721 PST	366.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.21	33.492	24.541	6.10	108.9	3.6	0.23	0.0	0.00	1.47	0.42	84. A	22.0	22.1	22.1	0.18
5	16.14	33.491	24.556	5.69	101.4	3.7	0.23	0.0	0.00	1.31	0.48	43.	25.4	27.3	26.3	0.21
10	16.10	33.490	24.565	6.05	107.7	3.7	0.23	0.1	0.00	1.37	0.58					
12	16.08	33.489	24.569	6.07	108.0	3.5	0.24	0.1	0.00	1.30	0.67	13.	17.1	18.8	17.9	0.15
18	14.97	33.426	24.766	6.12	106.5	2.8	0.34	0.6	0.01	0.85	0.32	4.6	5.2	5.3	5.3	0.09
23	13.59	33.365	25.009	5.82	98.4	4.2	0.61	4.1	0.22	0.55	0.30	2.0	1.4	1.3	1.3	0.07
32	12.62	33.375	25.210	5.21	86.3	6.4	0.88	8.5	0.46	0.47	0.40	0.43	0.13	0.11	0.12	0.08

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 38.6 N	119 28.6 W	08/11/07	1824 UTC	9 m	1140 - 1733 PST	1142 PST	1722 PST	534.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.70	33.638	24.769	5.98	105.7	1.8	0.38	1.1	0.07	1.68	0.34	71. A	7.9	8.6	8.2	0.12
5	15.68	33.639	24.774	5.97	105.5	1.9	0.38	1.2	0.07	1.73	0.36	43.	17.9	16.4	17.1	0.19
12	15.35	33.653	24.858	5.91	103.8	3.5	0.49	2.9	0.11	1.61	0.55	13.	36.3	35.8	36.0	0.29
17	14.91	33.658	24.958	5.90	102.7	3.9	0.50	3.3	0.12	1.62	0.55	5.5	35.7	34.3	35.0	0.10
23	14.48	33.637	25.034	5.69	98.2	5.0	0.61	4.6	0.17	1.00	0.40	2.0	1.7	1.6	1.6	0.06
31	14.21	33.612	25.072	5.55	95.2	5.7	0.67	5.4	0.21	0.73	0.32	0.51	0.16	0.14	0.15	0.05

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 25.7 N	122 0.0 W	07/11/07	1752 UTC	17 m	1153 - 1735 PST	1152 PST	1733 PST	255.1 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	16.48	33.367	24.383	5.70	102.2	0.7	0.32	0.0	0.00	0.43	0.15	83. A	5.9	6.0	5.9	0.09
10	16.57	33.414	24.399	5.68	102.0	0.6	0.33	0.0	0.00	0.53	0.24	41.	9.0	8.7	8.8	0.09
16	16.52	33.426	24.420	5.66	101.6	0.6	0.35	0.0	0.00	0.57	0.28					
21	16.45	33.430	24.439	5.64	101.1	0.6	0.36	0.0	0.00	0.60	0.31	15.	6.7	6.5	6.6	0.04
33	16.08	33.380	24.486	5.67	100.8	0.6	0.38	0.1	0.02	0.54	0.27	5.1	3.8	3.8	3.8	0.04
43	15.55	33.311	24.552	5.69	100.1	1.0	0.43	0.4	0.06	0.41	0.28	2.1	1.3	1.4	1.3	0.03
52	14.53	33.186	24.677	5.75	99.0	1.8	0.48	1.0	0.13	0.37	0.27					
60	13.03	32.970	24.817	5.85	97.5	2.9	0.55	2.1	0.28	0.31	0.26	0.44	0.09	0.12	0.10	0.03

A) INCUBATION LIGHT INTENSITIES WERE 99, 44, 13, 5, 2, 0.4 PERCENT RESPETIVELY

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 24.5 N	124 0.1 W	06/11/07	1904 UTC	21 m	1210 - 1749 PST	1200 PST	1747 PST	150.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.92	33.058	24.044	5.65	102.0	1.1	0.32	0.0	0.00	0.23	0.08	93. A	4.1	4.0	4.0	0.07
11	16.87	33.067	24.063	5.64	101.7	1.0	0.31	0.0	0.00	0.25	0.07	45.	3.9	4.0	3.9	0.05
20	16.58	33.099	24.155	5.71	102.4	0.9	0.32	0.0	0.00	0.31	0.10					
28	16.67	33.165	24.185	5.69	102.2	0.8	0.31	0.0	0.00	0.36	0.12	13.	3.0	3.0	3.0	0.06
34	16.46	33.129	24.206	5.72	102.3	0.9	0.31	0.0	0.00	0.38	0.17					
41	15.37	33.014	24.363	6.09	106.5	1.2	0.32	0.0	0.00	0.43	0.23	5.0	1.5	1.6	1.5	0.04
48	14.80	33.028	24.497	6.10	105.5	1.8	0.33	0.0	0.00	0.33	0.27					
54	14.44	33.034	24.579	6.07	104.2	2.0	0.35	0.0	0.00	0.30	0.27	1.9	0.55	0.49	0.52	0.02
65	13.72	33.029	24.724	5.98	101.2	2.3	0.40	0.4	0.08	0.25	0.24					
76	13.83	33.217	24.847	5.81	98.6	2.5	0.39	0.8	0.10	0.19	0.19	0.39	0.03	0.03	0.03	0.02

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 50.7 N	117 33.2 W	03/11/07	1736 UTC	21 m	1137 - 1735 PST	1134 PST	1729 PST	339.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.06	33.616	24.199	5.58	103.3	0.5	0.27	0.0	0.00	0.62	0.10	86. A	6.1	5.9	6.0	0.20
10	17.75	33.617	24.275	5.57	102.5	0.5	0.27	0.0	0.00	0.62	0.08	48.	8.8	9.4	9.1	0.15
20	13.39	33.276	24.981	5.69	95.8	4.6	0.66	4.6	0.22	0.85	0.51					
28	12.50	33.470	25.307	4.88	80.7	8.9	0.98	10.2	0.37	0.60	0.53	13.	8.9	8.2	8.5	0.13
34	12.35	33.477	25.341	4.67	77.0	10.0	1.07	11.5	0.35	0.39	0.38					
41	12.19	33.483	25.377	4.57	75.1	10.4	1.12	12.0	0.33	0.33	0.35	5.0	2.8	2.8	2.8	0.07
48	11.98	33.498	25.428	4.47	73.1	11.1	1.17	12.9	0.16	0.31	0.30					
54	11.78	33.536	25.495	4.23	68.9	12.5	1.26	14.4	0.10	0.21	0.25	1.9	0.95	0.90	0.93	0.05
65	11.69	33.547	25.521	4.14	67.3	12.9	1.29	14.9	0.08	0.19	0.26					
76	11.51	33.576	25.577	3.97	64.3	14.0	1.35	15.8	0.06	0.14	0.20	0.39	0.16	0.06	0.11	0.06

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 1.3 N	119 13.8 W	04/11/07	1650 UTC	27 m	1143 - 1740 PST	1142 PST	1735 PST	279.0 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	18.32	33.517	24.059	5.43	101.0	1.2	0.30	0.0	0.00	0.23	0.07	89. A	3.7	3.5	3.6	0.08
7	18.27	33.516	24.071	5.43	100.9	1.2	0.29	0.0	0.00	0.23	0.07					
14	18.10	33.517	24.114	5.48	101.5	1.0	0.29	0.0	0.00	0.28	0.11	45.	5.3	5.5	5.4	0.12
24	17.09	33.509	24.351	5.61	101.9	0.4	0.31	0.0	0.00	0.48	0.25					
35	15.64	33.341	24.555	5.69	100.3	1.2	0.40	0.5	0.07	0.53	0.30	14.	6.7	6.8	6.8	0.08
44	13.99	33.135	24.750	5.77	98.2	2.4	0.52	1.6	0.21	0.43	0.29					
53	12.83	33.095	24.953	5.59	92.9	4.3	0.72	5.1	0.42	0.24	0.22	4.9	1.3	1.4	1.3	0.05
60	12.18	33.128	25.104	5.36	87.9	6.4	0.90	8.7	0.04	0.15	0.19					
69	11.72	33.231	25.270	5.10	82.8	8.4	1.03	10.9	0.02	0.10	0.12	2.0	0.29	0.29	0.29	0.03
83	11.24	33.378	25.472	4.79	77.1	11.0	1.15	13.3	0.02	0.05	0.08					
96	10.81	33.545	25.679	4.29	68.5	13.9	1.31	15.9	0.02	0.03	0.05	0.43	0.01	0.01	0.01	0.02

RV NEW HORIZON — CALCOFI CRUISE 0711 — STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 51.0 N	121 35.0 W	05/11/07	1735 UTC	25 m	1147 - 1743 PST	1150 PST	1743 PST	223.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	17.98	33.437	24.081			1.0	0.31	0.0	0.00	0.27	0.11	83. A	1.7	1.2	1.5	0.05
13	17.97	33.438	24.085	5.44	100.4	0.9	0.32	0.0	0.00	0.32	0.09	45.	4.9	5.0	4.9	0.08
24	17.96	33.434	24.085	5.48	101.1	0.9	0.31	0.0	0.00	0.29	0.11					
33	17.96	33.439	24.089	5.49	101.3	0.9	0.31	0.0	0.00	0.32	0.14	13.	3.7	4.1	3.9	0.05
40	17.72	33.432	24.142	5.52	101.4	0.8	0.31	0.0	0.00	0.44	0.21					
44	17.38	33.410	24.207	5.60	102.2	0.6	0.32	0.0	0.00	0.42	0.23					
49	16.95	33.399	24.300	5.67	102.6	0.4	0.33	0.0	0.00	0.44	0.28	4.9	3.2	3.2	3.2	0.04
55	16.72	33.409	24.362	5.70	102.7	0.5	0.34	0.0	0.00	0.32	0.23					
64	15.17	33.313	24.638	5.89	102.8	1.8	0.46	0.9	0.08	0.32	0.28	2.0	0.89	0.88	0.88	0.03
73	13.90	33.307	24.902	5.68	96.6	3.4	0.61	3.3	0.42	0.23	0.28					
81	13.21	33.315	25.049	5.56	93.2	4.7	0.74	6.0	0.29	0.17	0.23					
89	12.81	33.341	25.148	5.33	88.6	5.7	0.83	7.7	0.15	0.14	0.18	0.42	0.07	0.07	0.07	0.03

A) INCUBATION LIGHT INTENSITIES WERE 99, 44, 13, 5, 2, 0.4 PERCENT RESPETIVELY

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	51.0	35 01.1	120 55.1	11/17	2201	2224	461	210	65	65
76.7	55.0	34 53.2	121 12.0	11/17	1829	1852	488	201	141	141
76.7	60.0	34 43.1	121 32.9	11/17	1348	1411	457	210	26	26
76.7	70.0	34 23.3	122 14.8	11/17	0546	0609	432	217	42	42
76.7	80.0	34 03.1	122 56.5	11/17	0028	0052	470	210	68	68
76.7	90.0	33 43.3	123 38.0	11/16	1810	1832	460	209	143	143
80.0	51.0	34 27.0	120 31.4	11/15	0742	0749	137	47	37	37
80.0	55.0	34 19.0	120 48.1	11/15	1125	1148	490	190	49	49
80.0	60.0	34 09.0	121 09.2	11/15	1606	1629	434	210	23	23
80.0	70.0	33 48.8	121 50.3	11/15	2223	2247	443	212	56	56
80.0	80.0	33 29.0	122 32.0	11/16	0458	0521	474	205	51	51
80.0	90.0	33 09.0	123 13.4	11/16	1209	1232	460	208	54	54
81.8	46.9	34 16.5	120 01.5	11/15	0331	0353	437	208	105	105
83.3	39.4	34 15.4	119 19.4	11/14	1647	1649	46	14	22	22
83.3	40.6	34 13.5	119 24.8	11/14	1523	1527	80	27	12	12
83.3	42.0	34 10.7	119 30.5	11/14	1113	1125	246	111	12	12
83.3	51.0	33 52.7	120 08.0	11/14	0511	0520	171	67	23	23
83.3	55.0	33 44.7	120 24.6	11/14	0148	0213	472	202	453	59
83.3	60.0	33 34.4	120 45.3	11/13	2107	2131	474	208	42	42
83.3	70.0	33 14.7	121 26.8	11/13	1418	1442	441	221	20	20
83.3	80.0	32 54.7	122 07.7	11/13	0703	0727	464	209	13	13
83.3	90.0	32 34.5	122 48.7	11/12	2354	0019	473	214	23	23
83.3	100.0	32 14.8	123 29.5	11/12	1701	1725	472	208	8	8
83.3	110.0	31 54.7	124 10.2	11/12	0826	0850	492	210	12	12
86.7	33.0	33 53.3	118 29.6	11/09	1845	1850	100	42	20	20
86.7	35.0	33 49.3	118 37.6	11/09	2115	2137	435	213	37	37
86.7	40.0	33 39.4	118 58.5	11/10	0147	0209	415	221	448	67
86.7	45.0	33 29.4	119 19.1	11/10	0543	0605	412	208	75	75
86.7	50.0	33 19.4	119 39.8	11/10	0845	0853	161	70	56	56
86.7	55.0	33 09.4	120 00.3	11/10	1355	1417	402	217	20	20
86.7	60.0	32 59.3	120 20.9	11/10	1810	1832	389	218	146	146
86.7	70.0	32 39.3	121 01.6	11/11	0039	0102	409	219	120	120
86.7	80.0	32 19.5	121 43.1	11/11	0637	0659	440	215	18	18
86.7	90.0	31 59.4	122 23.6	11/11	1236	1258	449	205	927	13
86.7	100.0	31 39.3	123 04.2	11/11	1836	1859	477	203	662	38
86.7	110.0	31 19.2	123 44.7	11/12	0053	0120	545	209	39	39
88.5	30.1	33 39.8	118 04.8	11/09	1429	1431	46	14	22	22
90.0	27.7	33 29.7	117 44.9	11/09	1141	1143	47	13	21	21
90.0	28.0	33 29.1	117 46.1	11/09	0933	0939	136	56	37	37
90.0	30.0	33 25.1	117 54.3	11/09	0708	0730	408	213	61	61
90.0	35.0	33 15.1	118 15.0	11/09	0216	0238	402	210	112	62
90.0	37.0	33 11.0	118 23.1	11/08	2308	2330	417	212	139	101
90.0	45.0	32 55.1	118 56.1	11/08	1731	1753	421	208	135	135
90.0	53.0	32 39.1	119 28.9	11/08	1146	1207	395	205	46	46
90.0	60.0	32 25.1	119 57.6	11/08	0637	0658	401	210	50	50
90.0	70.0	32 05.0	120 38.4	11/07	2259	2321	418	211	913	851
90.0	80.0	31 45.0	121 18.7	11/07	1634	1656	406	213	382	135
90.0	90.0	31 25.1	121 59.4	11/07	0847	0909	440	209	257	43
90.0	100.0	31 05.4	122 39.7	11/07	0212	0233	415	208	58	58
90.0	110.0	30 45.1	123 19.9	11/06	1915	1937	419	213	1932	41
90.0	120.0	30 25.1	123 59.9	11/06	1237	1258	390	219	44	44
93.3	26.7	32 57.2	117 18.6	11/03	0041	0059	369	173	117	92
93.3	28.0	32 54.8	117 23.7	11/03	0625	0647	421	211	312	312
93.3	30.0	32 50.8	117 31.9	11/03	0831	0852	426	208	40	40
93.3	35.0	32 40.8	117 52.4	11/03	1309	1330	401	218	20	20
93.3	40.0	32 30.9	118 12.8	11/03	1847	1909	434	208	62	62
93.3	45.0	32 20.9	118 33.1	11/04	0040	0101	419	208	318	155
93.3	50.0	32 10.8	118 53.6	11/04	0500	0522	391	217	166	120
93.3	55.0	32 00.8	119 14.0	11/04	0829	0849	425	210	19	19
93.3	60.0	31 50.9	119 34.2	11/04	1504	1527	447	209	118	25
93.3	70.0	31 30.8	120 14.6	11/04	2148	2210	443	209	194	108
93.3	80.0	31 10.8	120 55.2	11/05	0421	0443	455	201	75	75
93.3	90.0	30 50.8	121 35.4	11/05	1052	1114	458	211	37	37
93.3	100.0	30 30.8	122 15.6	11/05	1706	1729	445	219	67	67
93.3	110.0	30 10.7	122 55.2	11/05	2320	2342	427	214	370	19
93.3	120.0	29 50.8	123 35.2	11/06	0526	0548	427	219	28	28
93.4	26.4	32 57.2	117 16.8	11/03	0223	0225	44	15	23	23