UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 1001
12 January – 4 February 2011

CC Reference 10-05
22 February 2011

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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INTRODUCTION

The data presented in this report were collected during cruise 1001* 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 P150. 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 acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

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

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

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 40.60 µCi of ^{14}C as $NaHCO_3$ (200 µl of 203 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).

Avifauna Observations (Farallon Institute of Advanced Ecosystem Research)

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 Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore. Nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. (R. Goericke, SIO)

6) *Inorganic Carbon System*: The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and pCO_2. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)

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

8) *Lagrangian Drifter Buoys*. Surface Velocity Program (SVP) drifters, drogued at 15 meters depth, were deployed at 7 stations. The drifter observations of position and SST approximately every hour following the 15-meter currents supplement Eulerian current profiles. This will provide new insight into the connection between

continental shelf flows and the larger scale California Current located further offshore. Drifter pairs were deployed at 6 of the 7 stations to assess the relative motion of drifter pairs which gives an understanding of energy as a function of spatial scale. Drifter tracks are displayed in near real-time on the web (http://www.icess.ucsb.edu/drifter/realtime-SVP/index.php). (C. Ohlmann, UCSB)

9) *ALF (Advanced Laser Fluorometer)*. Continuous underway analysis of phytoplankton pigment groups and variable fluorescence (F_v/F_m). ALF, developed by A. Chekalyuk at Lamont-Doherty Earth Observatory, uses laser stimulated emission at 405 and 532 nm together with spectral deconvolution analysis to distinguish fluorescence from three types of phycoerythrin, chlorophyll-*a*, and chromophoric dissolved organic matter (CDOM). The ALF is useful for differentiating the contribution of cyanobacteria and cryptophytes from other phytoplankton taxa present in natural phytoplankton assemblages, as well as for assessing phytoplankton photophysiological status.

10) *Micronekton trawling*: A Matsuda-Oozeki-Hu trawl (MOHT) with 5 m2 mouth opening and 1.77 mm mesh is used to sample the micronekton (krill, small pelagic fishes, squids, etc) within the epipelagic (upper 200 m) and mesopelagic (200 - 500 m) depth horizons. The samples provide size- and species composition data on the pelagic community, which is combined with Ek-60 multi-frequency acoustic data to estimate the distribution and abundance of the micronekton. (T. Koslow, 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 1001

1. CalCOFI Cruise1001 track and station positions.

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

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

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

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

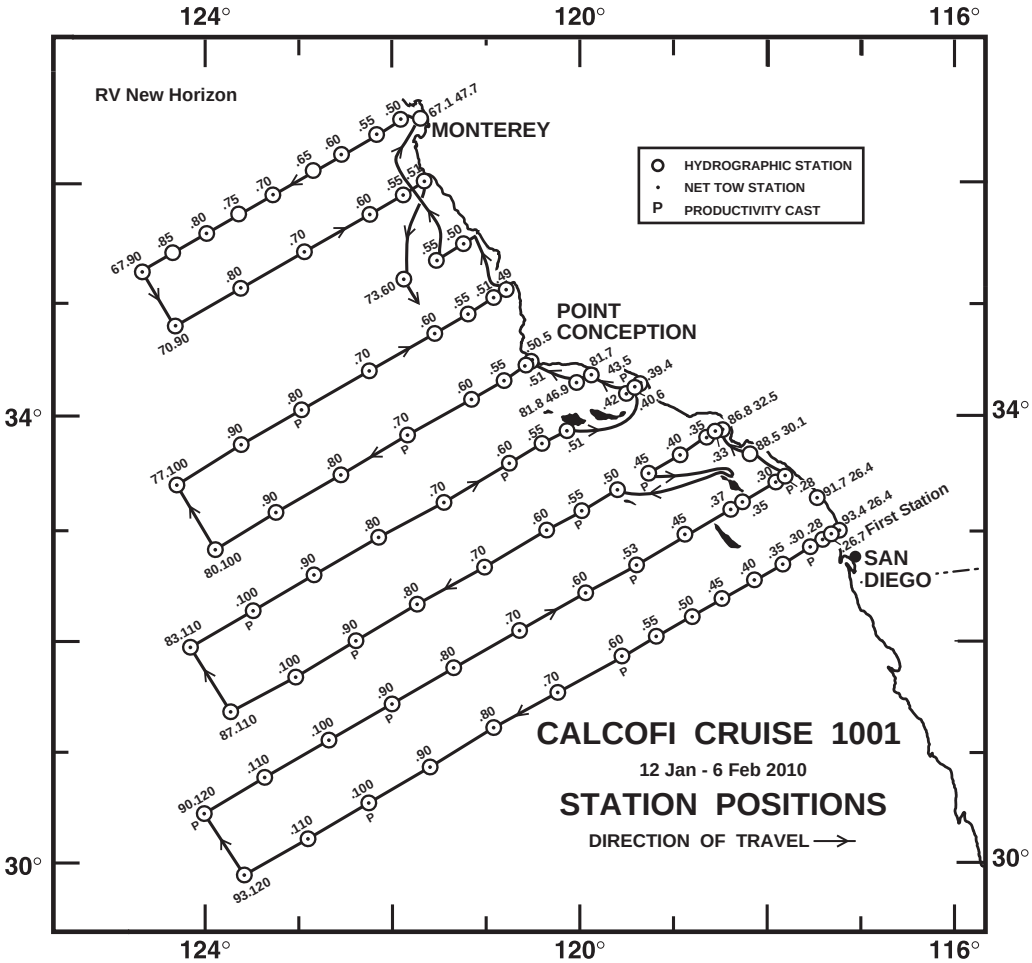


FIGURE 1

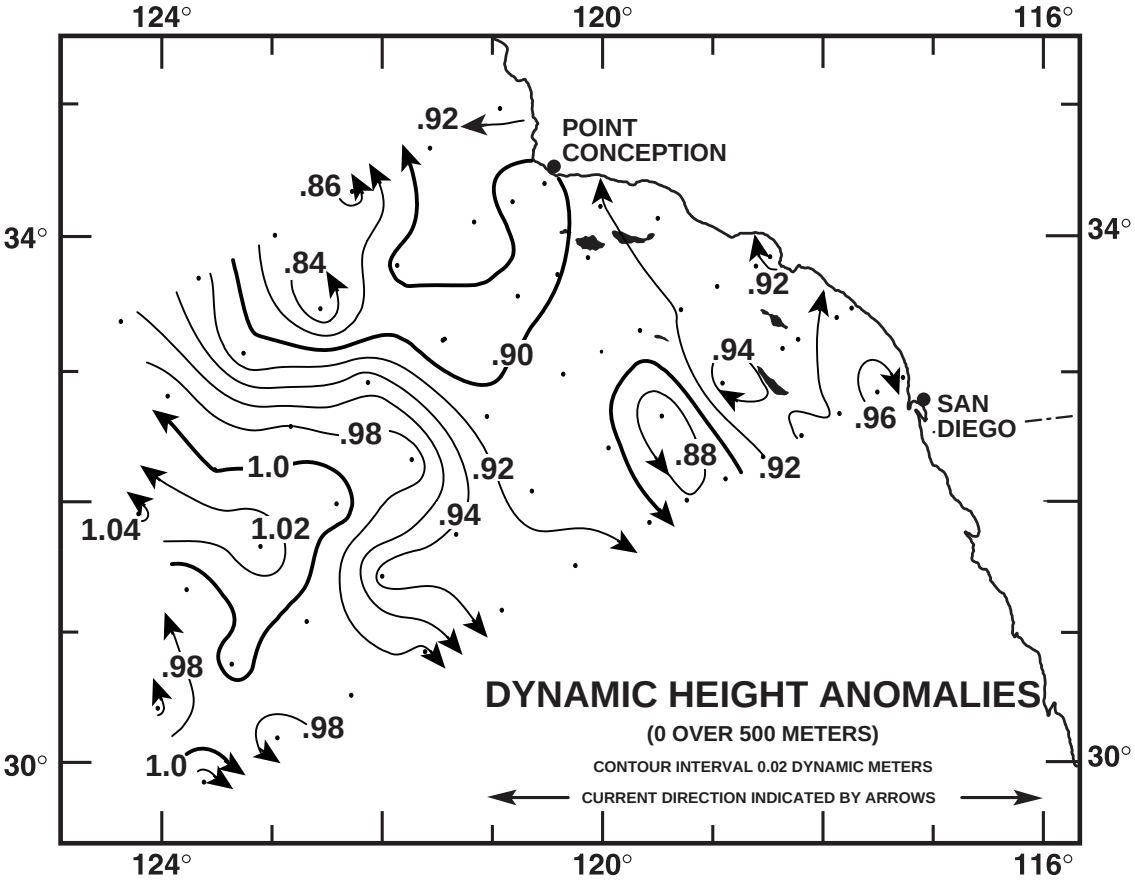


FIGURE 2

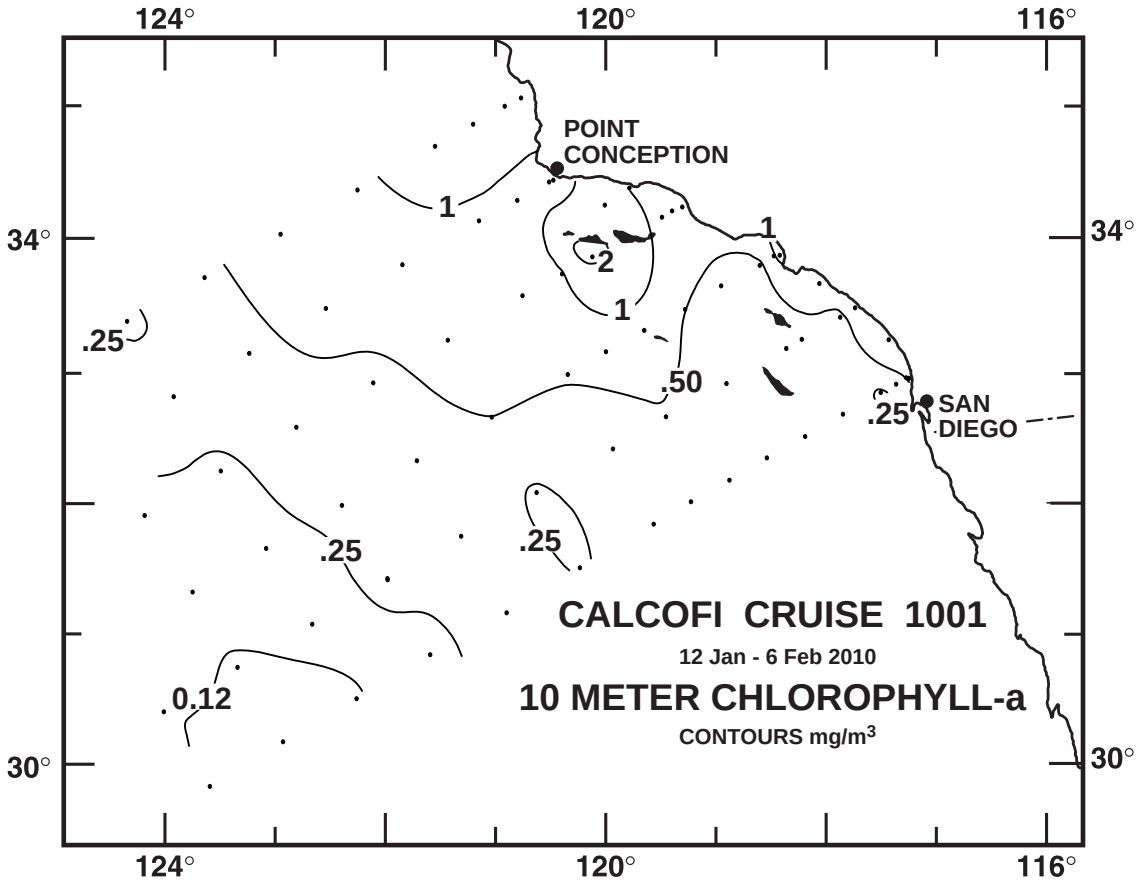
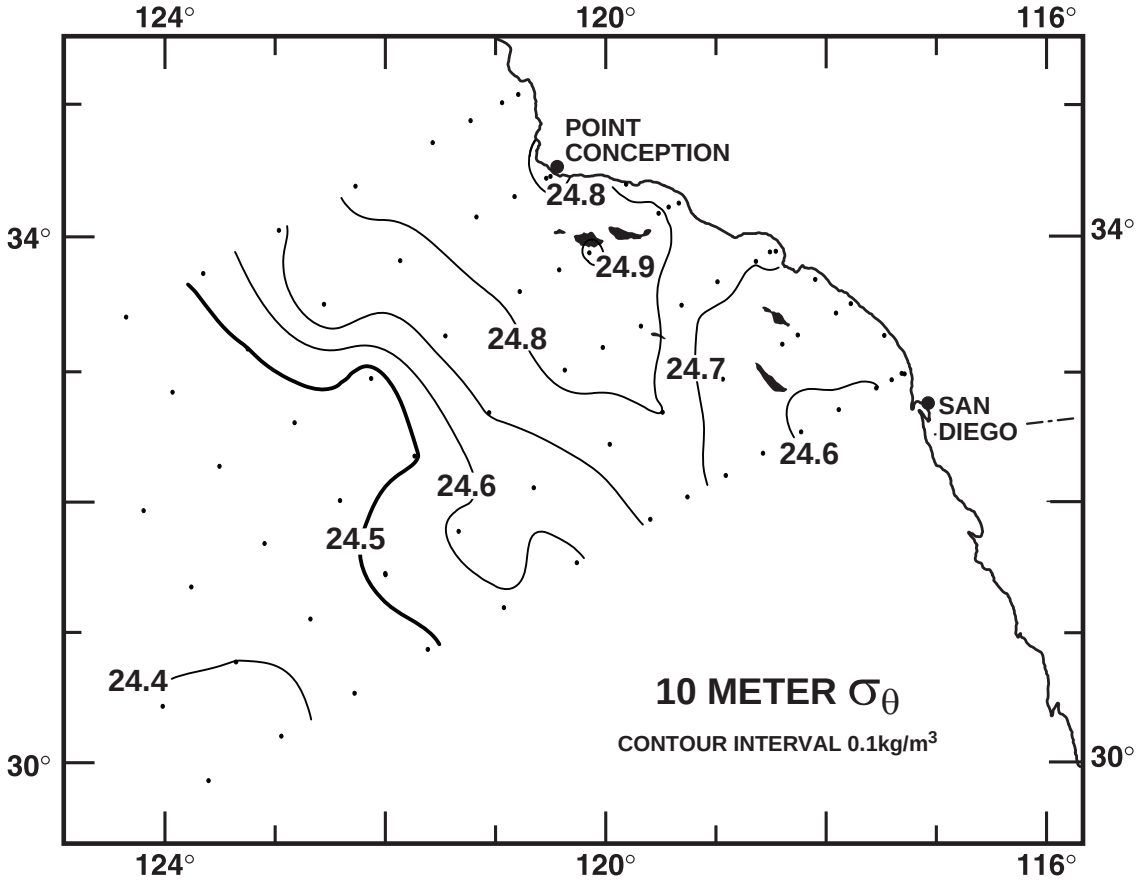


FIGURE 3A



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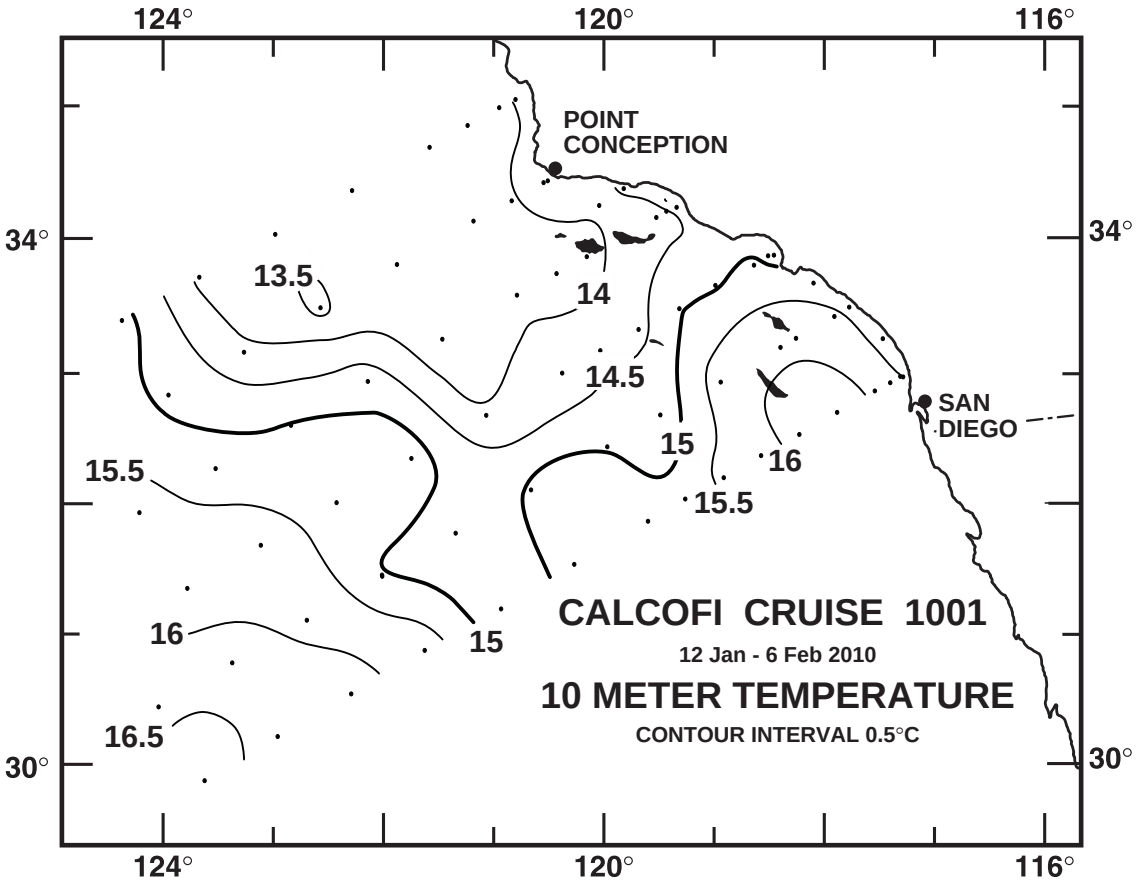


FIGURE 3C

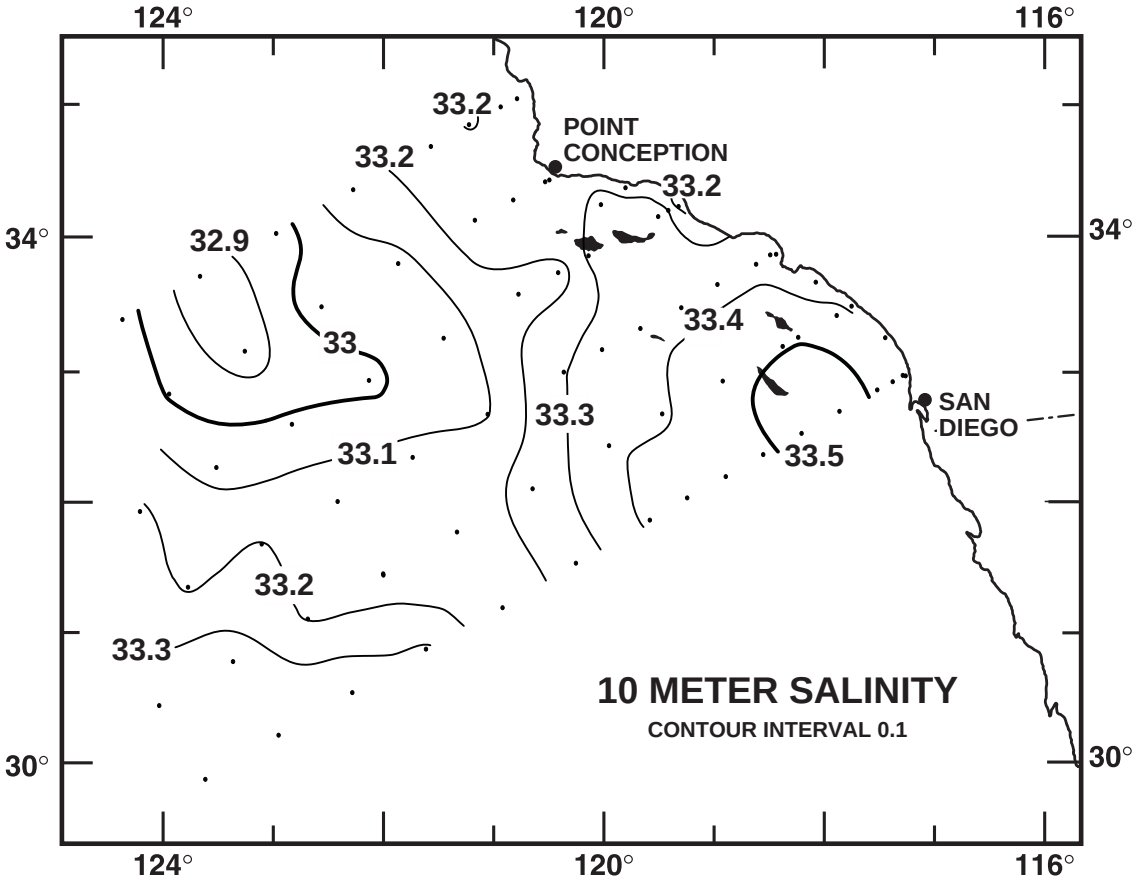


FIGURE 3D

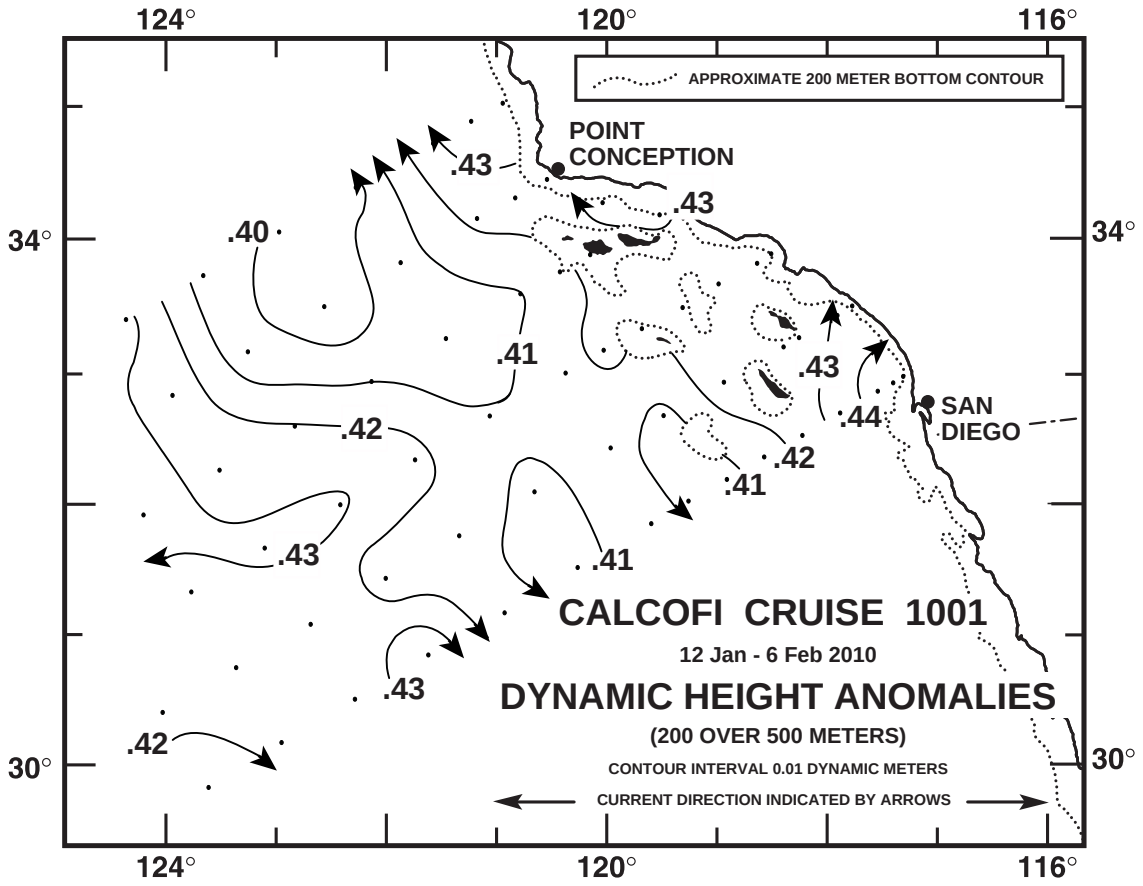


FIGURE 4A

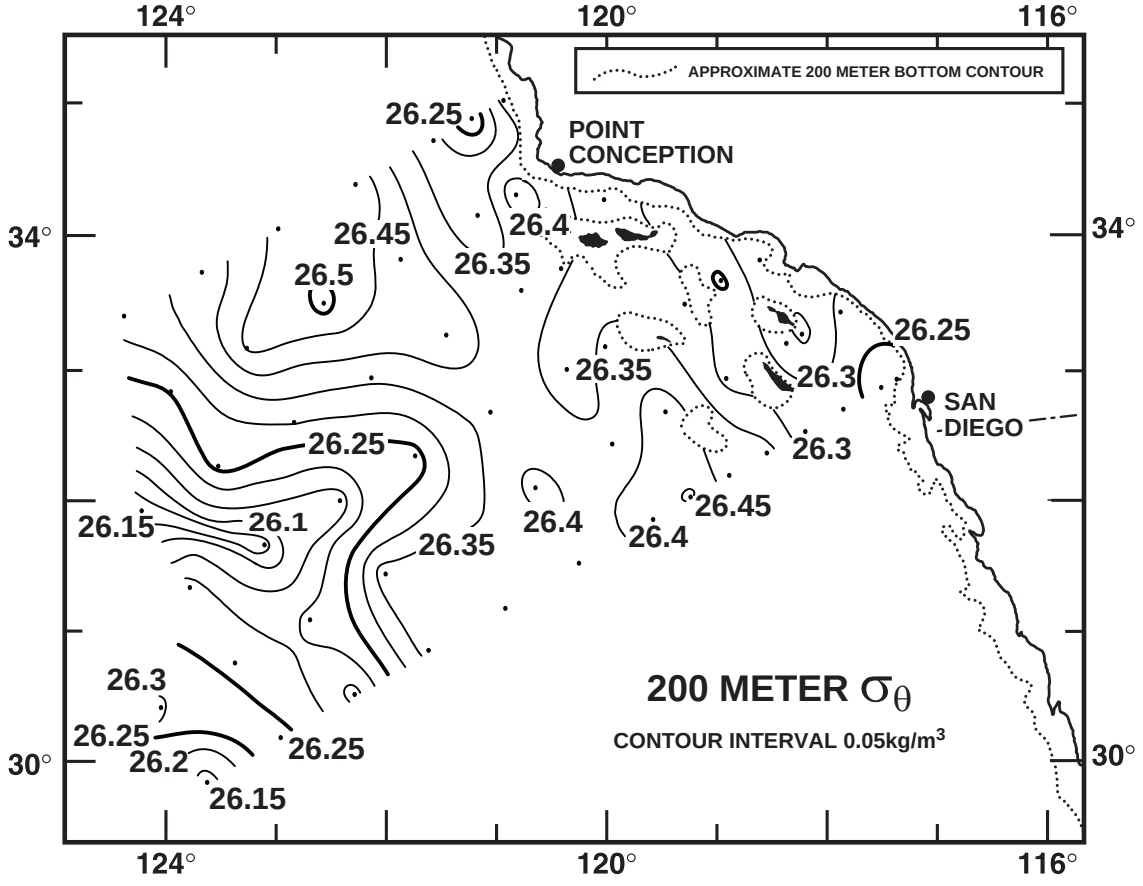


FIGURE 4B

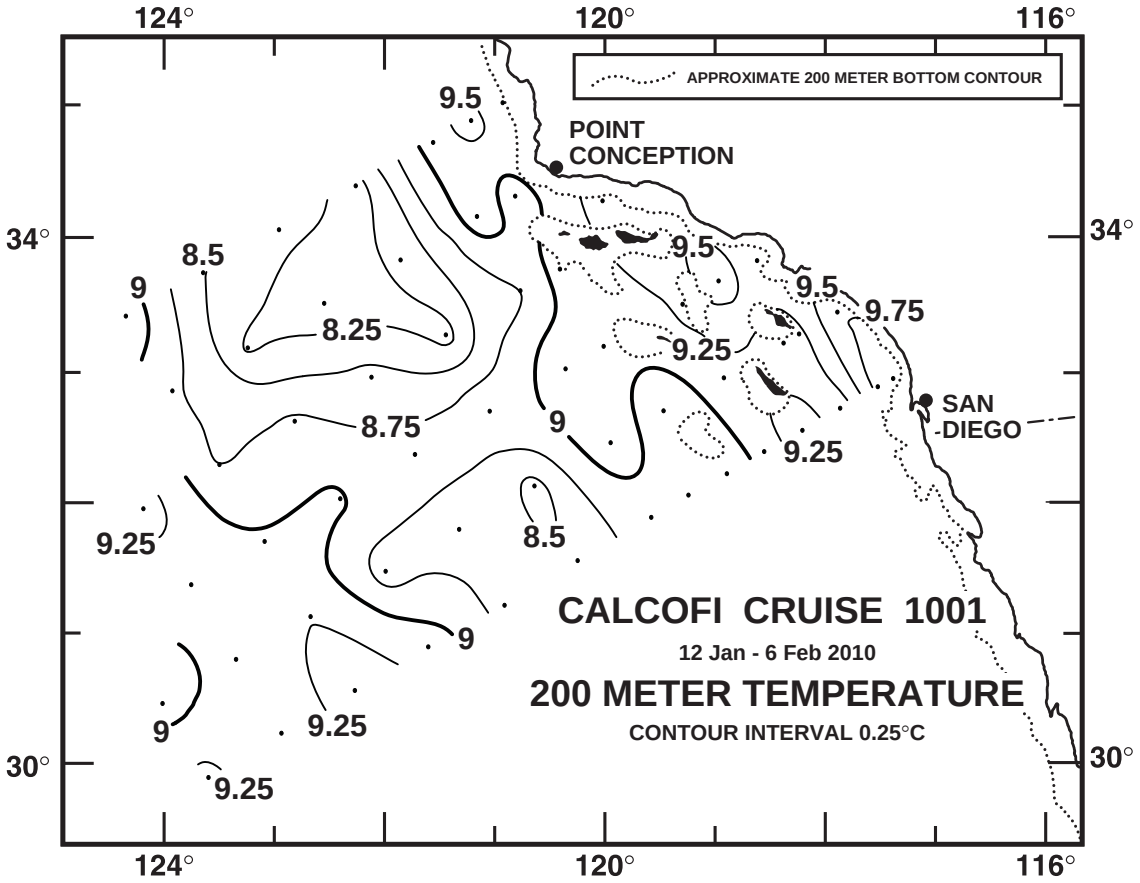


FIGURE 4C

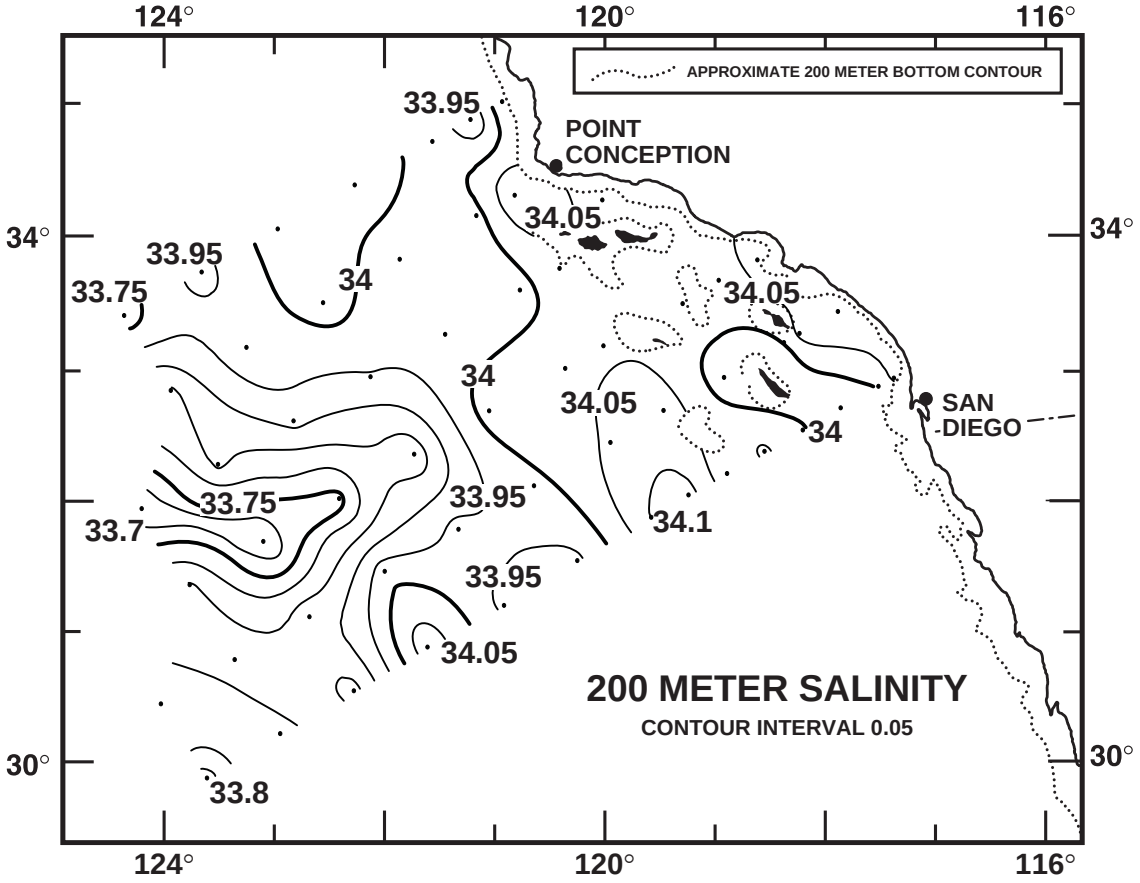


FIGURE 4D

CALCOFI CRUISE 1001

16 - 19 January 2010

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

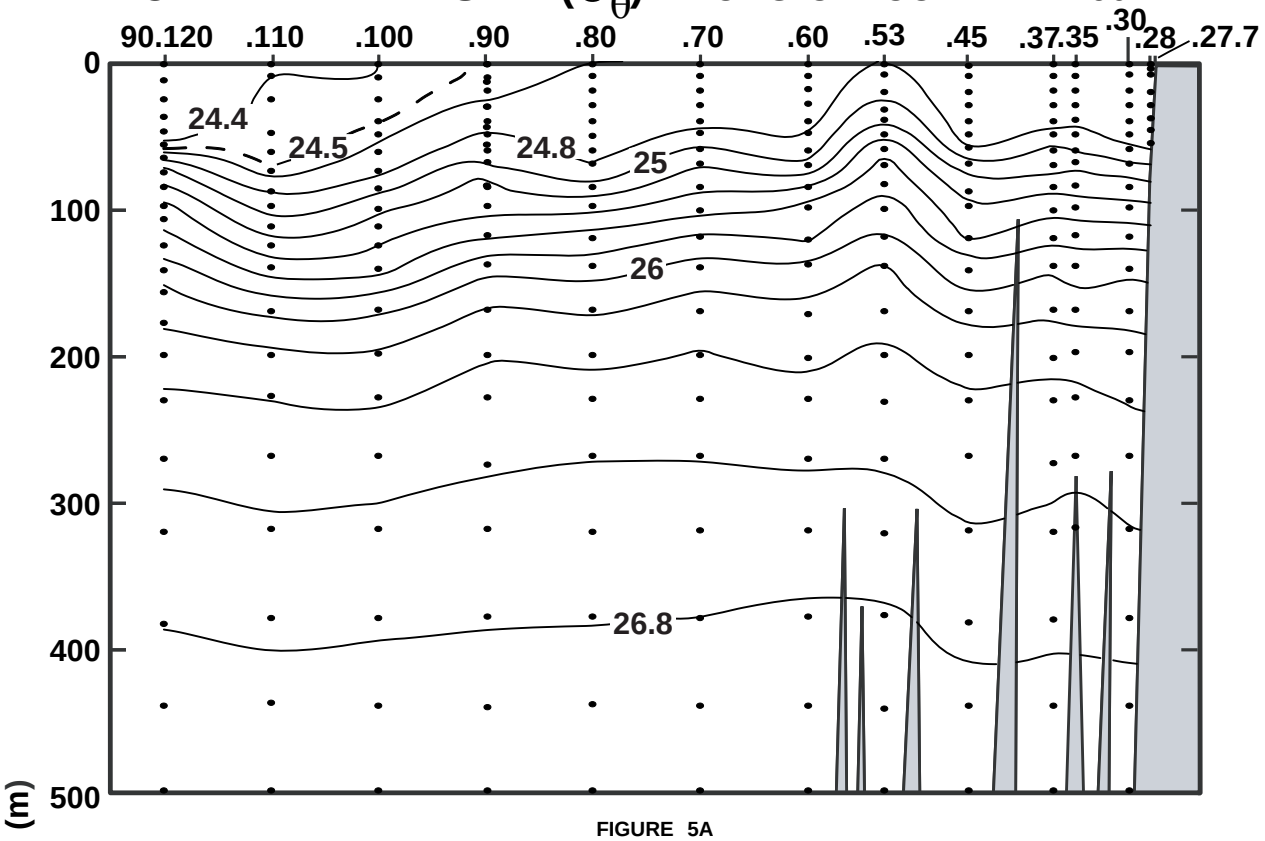


FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

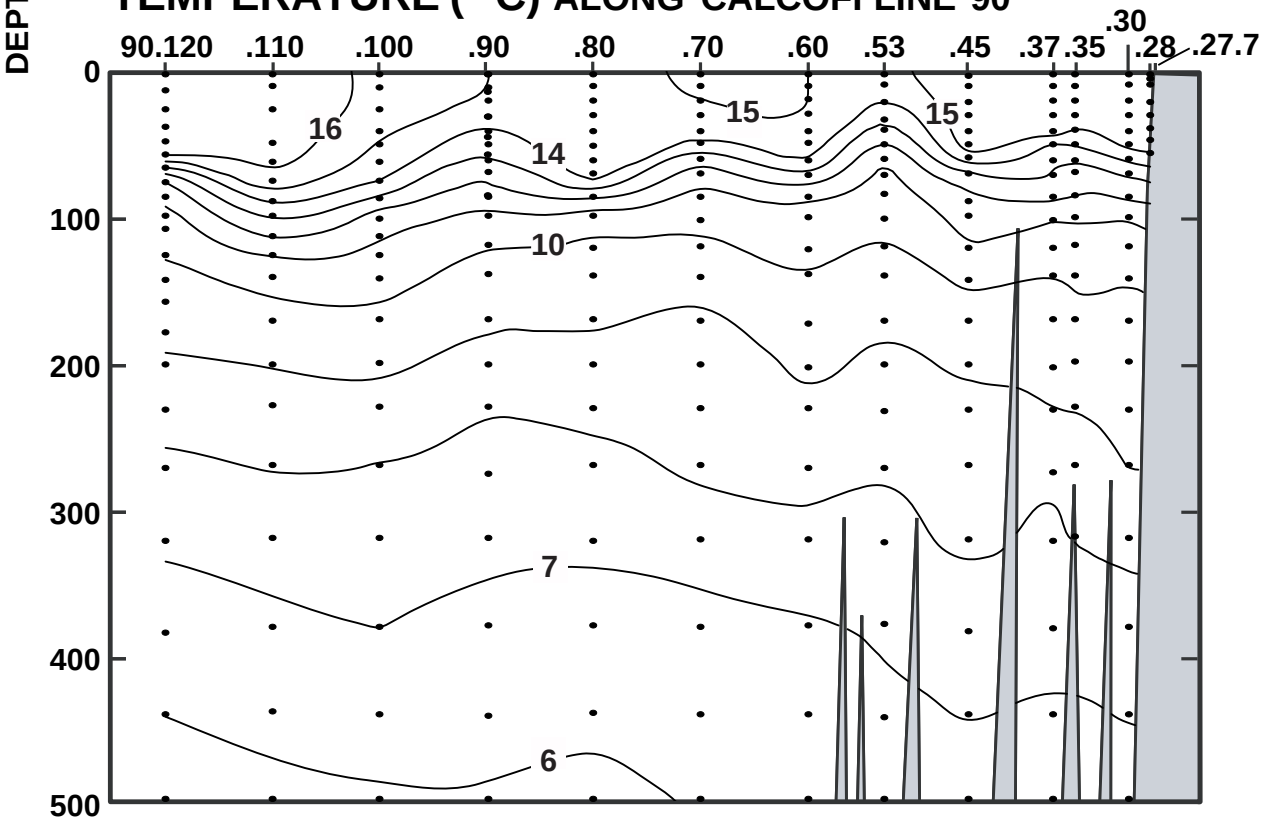


FIGURE 5B

CALCOFI CRUISE 1001

16 - 19 January 2010

SALINITY ALONG CALCOFI LINE 90

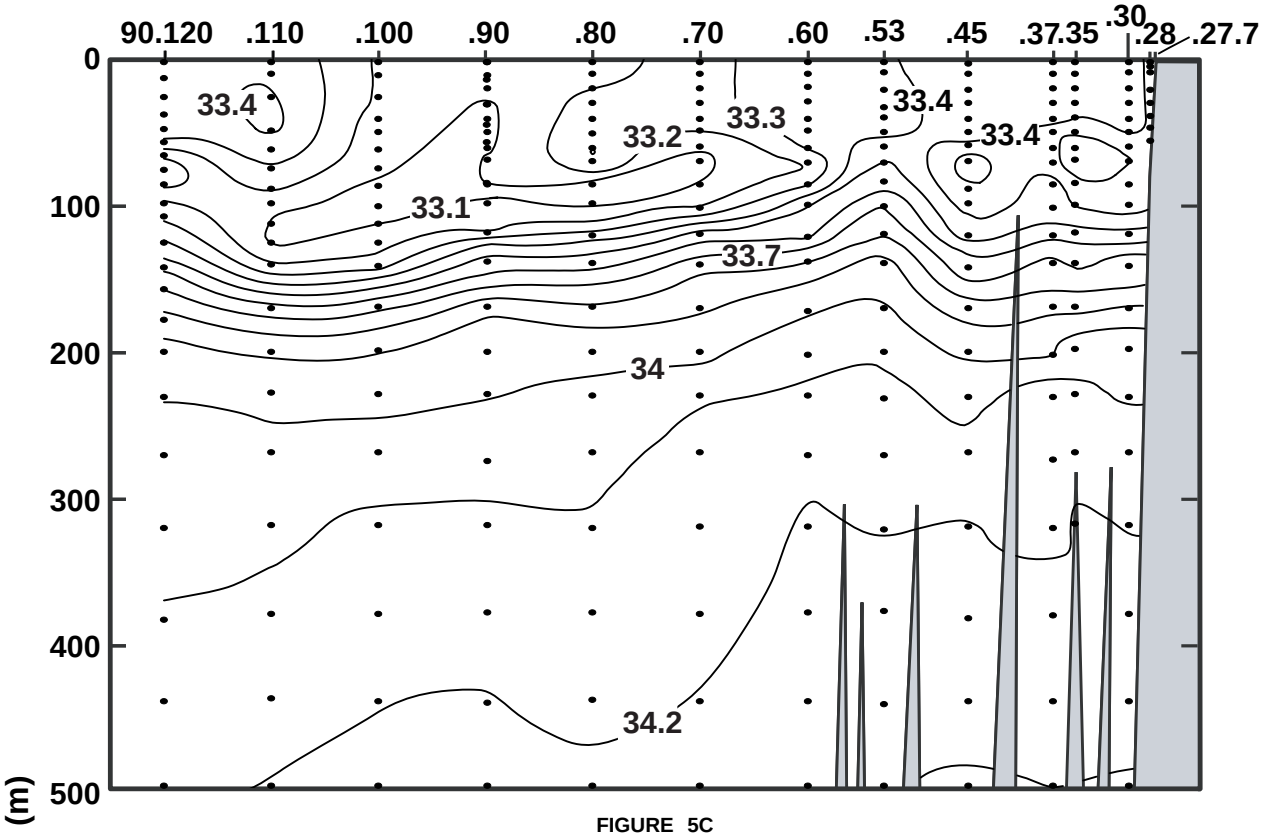


FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

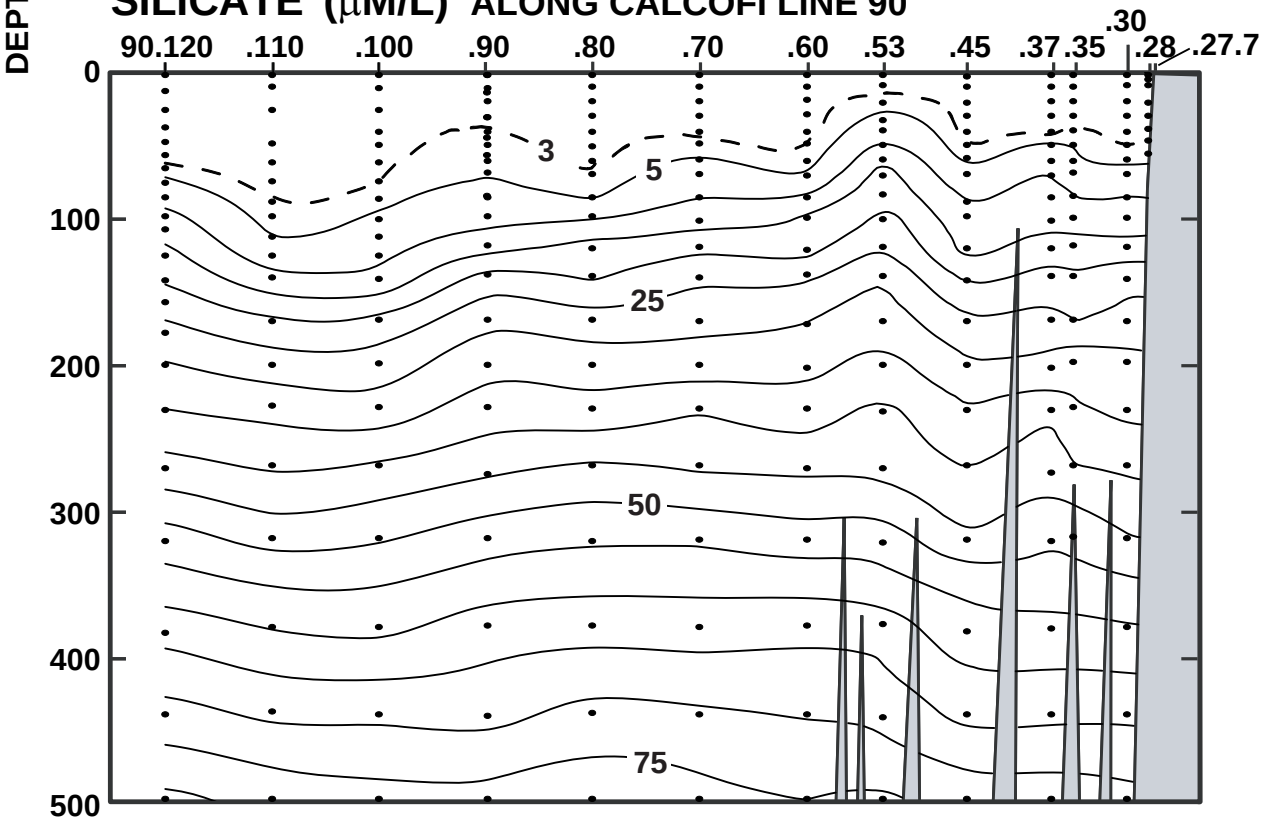


FIGURE 5D

CALCOFI CRUISE 1001

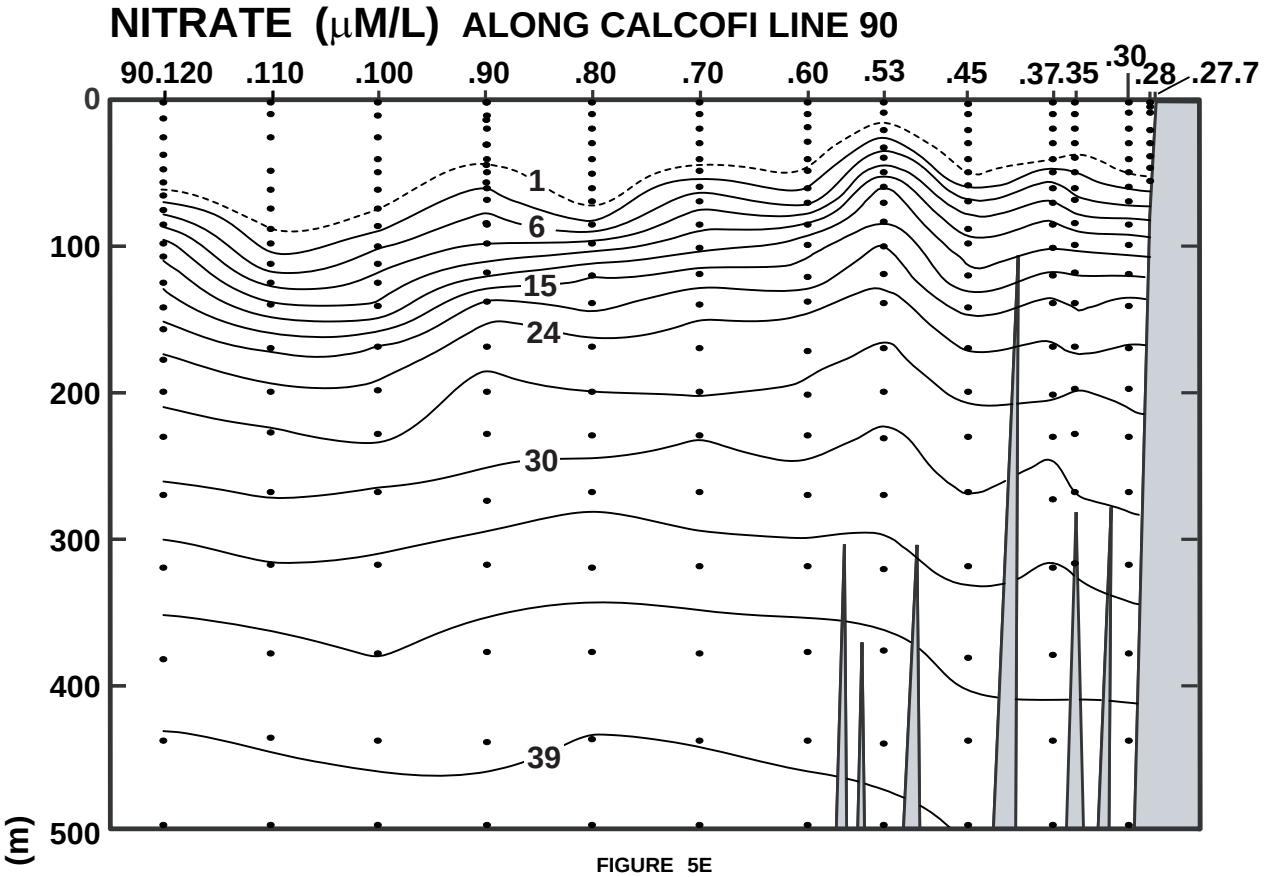


FIGURE 5E

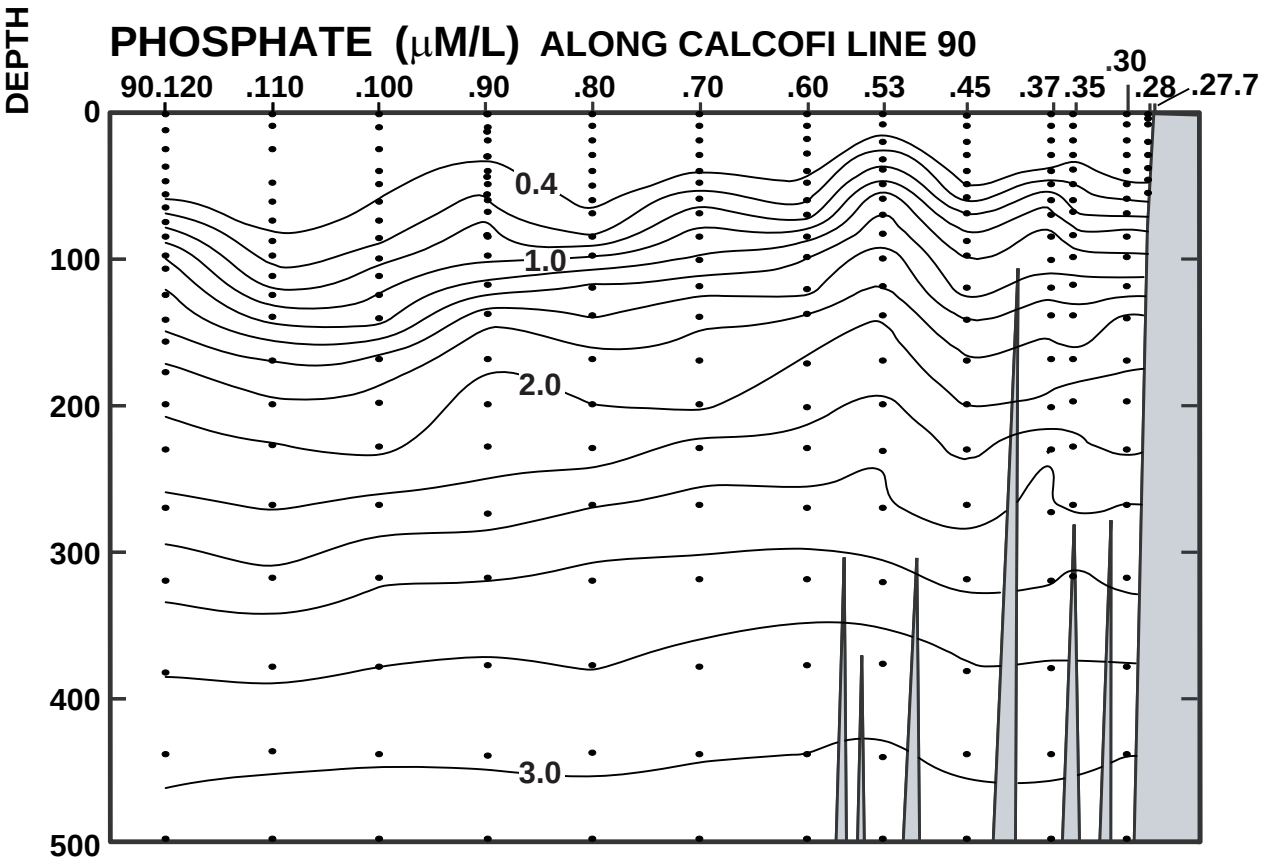


FIGURE 5F

CALCOFI CRUISE 1001

16 - 19 January 2010

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

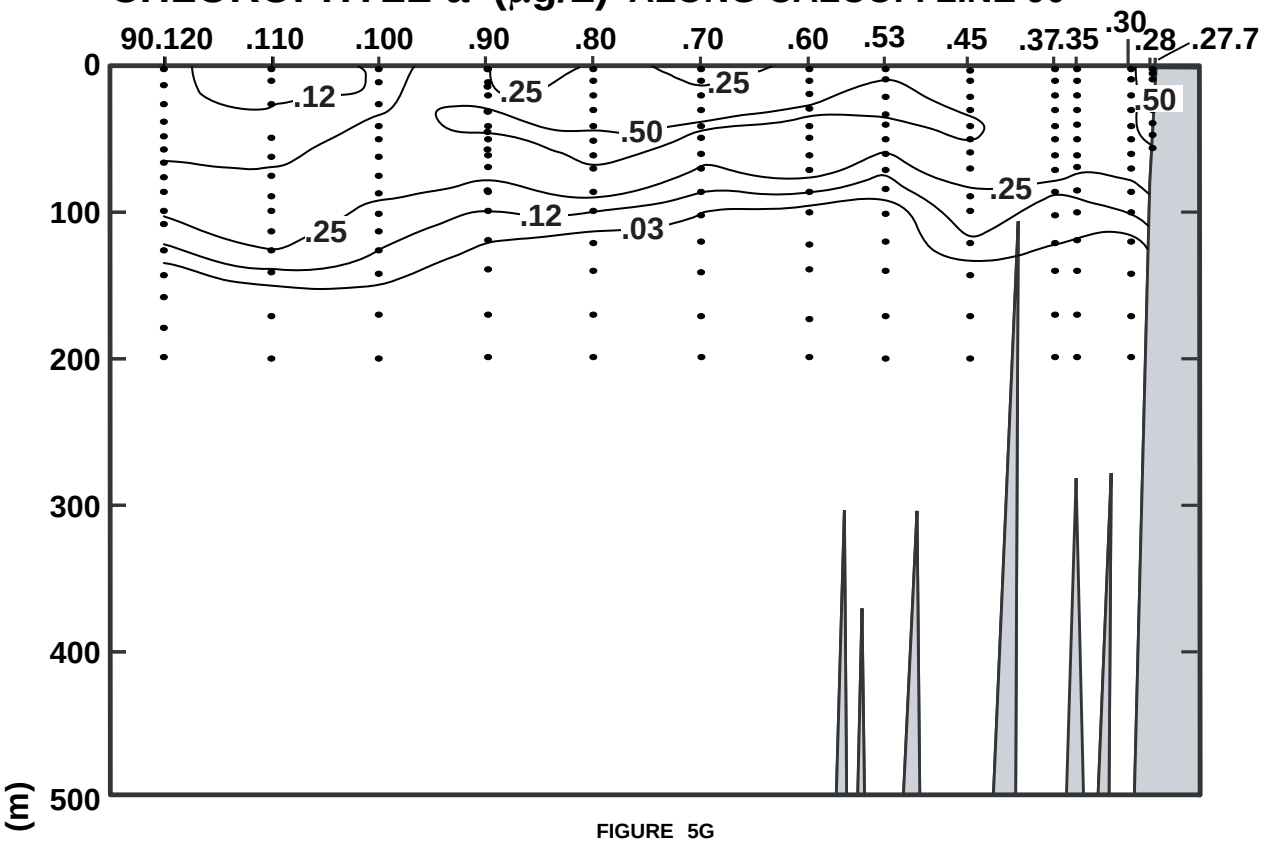


FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

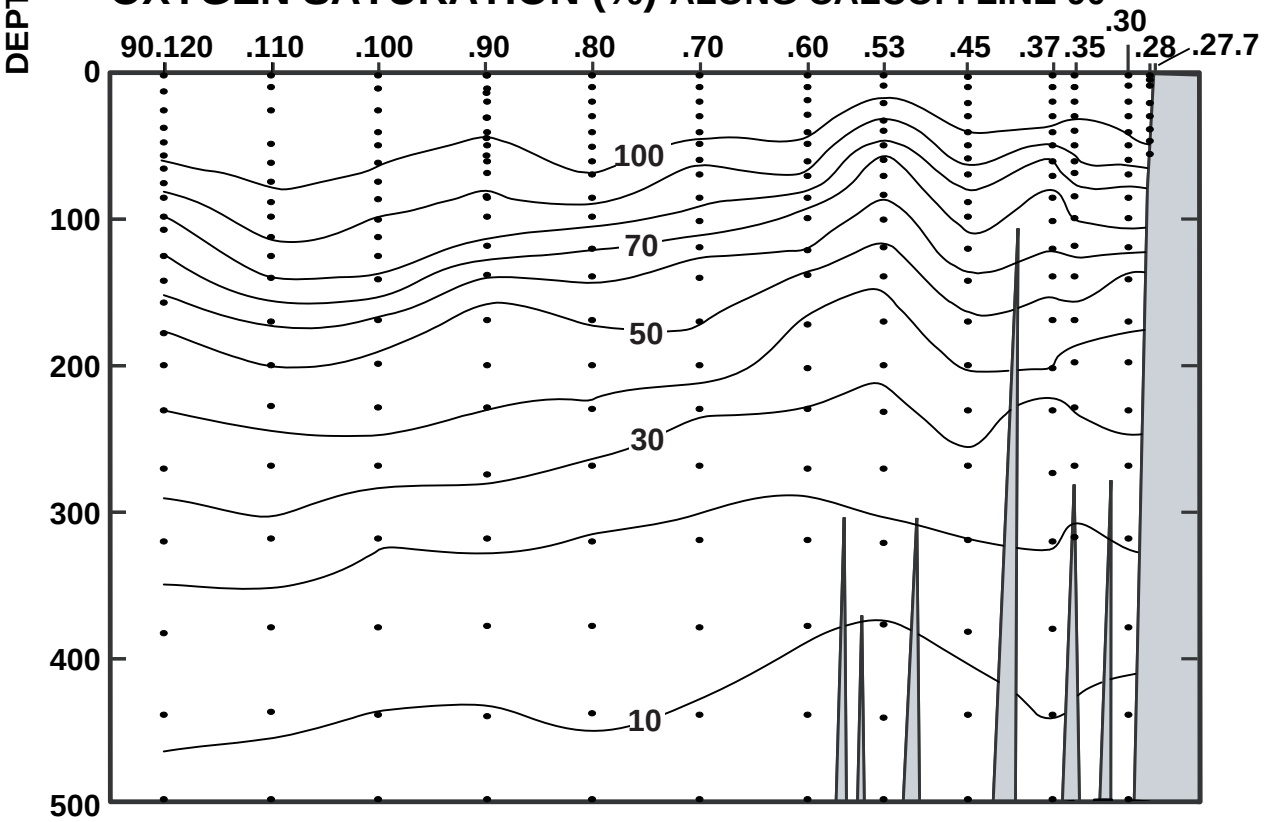


FIGURE 5H

CALCOFI CRUISE 1001

16 - 19 Month 2010

OXYGEN (mL/L) ALONG CALCOFI LINE 90

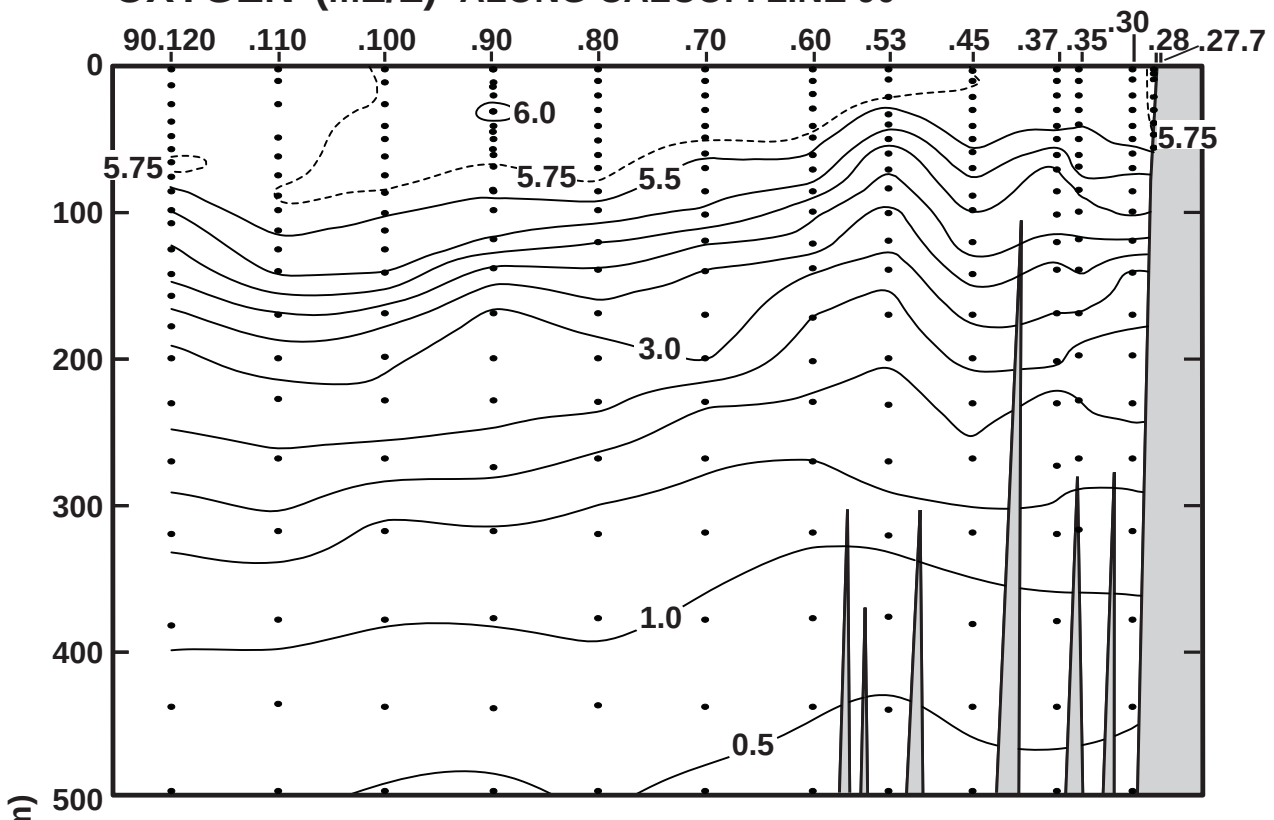


FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

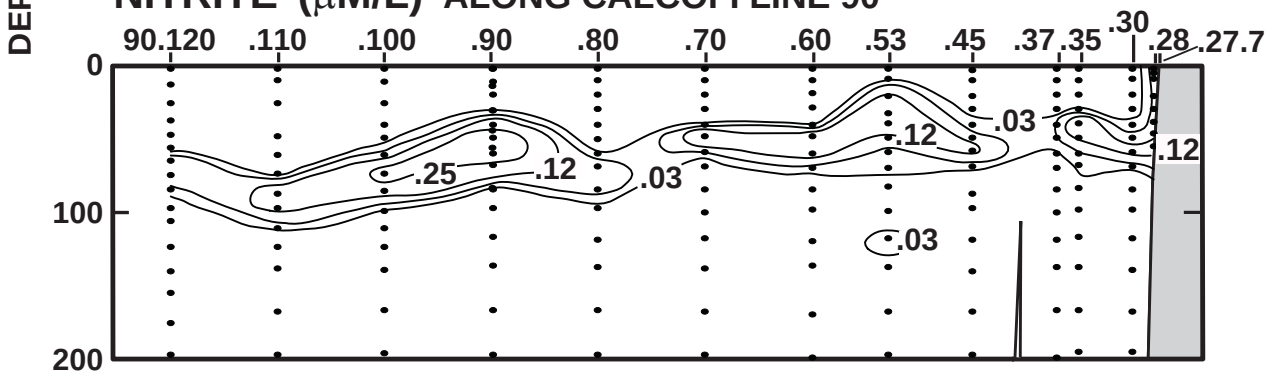
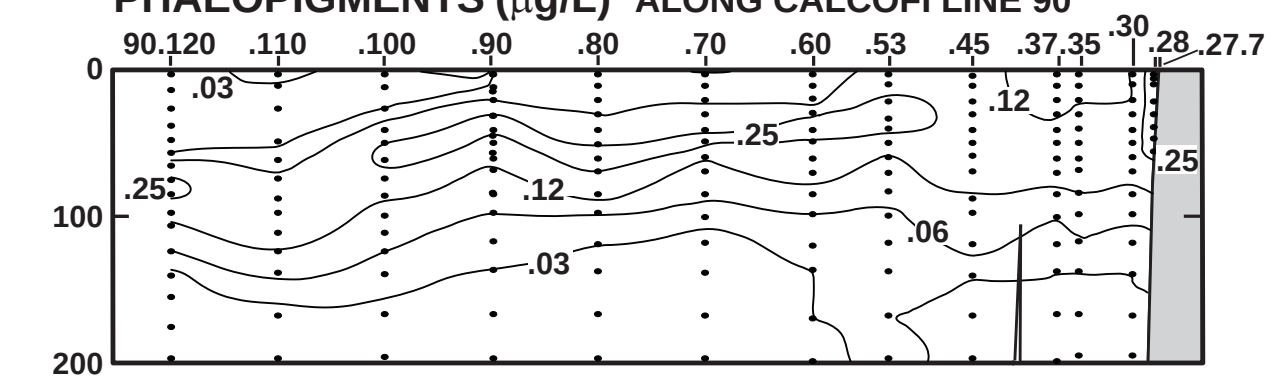


FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90



PERSONNEL

CalCOFI Cruise 1001

SHIP'S CAPTAIN

Murray Stein, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Hays, Amy (Chief Scientist)	Fishery Biologist, NMFS	1-4
Abramenkoff, Dimitry	Fishery Biologist, NMFS	2-4
Becker, Susan	Staff Research Associate, SIO	1-3
Beyers, Kyle	Acoustic Technician, NOAA	1-3
Blum, Marguerite	Oceanographer, MBARI	4
Breese, Dawn	Bird Observer, FIAER	1-3
Dovel, Shonna	Staff Research Associate, SIO	1-3
Faber, David N.	Staff Research Associate, SIO	1-4
Griffith, Dave	Fishery Biologist, NMFS	1-4
Jones, Josh	Staff Research Associate, MPL	1-4
Kondor, Julie	Marine Mammal Observer, MPL	1-4
Lieu, Jian	Staff Research Associate, SIO	2-3
Lopez, Ana	Staff Research Associate, SIO	1-2
Manion, Sue	Fishery Biologist, NMFS	1-2
Overcash, Bryan	Staff Research Associate, SIO	1-4
Roadman, Megan	Staff Research Associate, SIO	1-3
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO	1-3
Susner, Michael G.	Staff Research Associate, SIO	1-4
Walters, Maya	Volunteer	1
Whitaker, Katherine	Marine Mammal Observer, MPL	1-4
Wilkinson, James R.	Programmer Analyst, SIO	1-3
Wolgast, David M	Staff Research Associate, SIO	1-3
Zwotsky, Juan	Acoustic Technician, SWFSC	3-4

Leg 1: San Diego to Dana Point, California, 12-19 January, 2010
Leg 2: Dana Point to Ventura, California, 19-26 January, 2010
Leg 3: Ventura to Monterrey, California, 26 January – 1 February, 2010
Leg 4: Monterrey to San Diego, California, 1-6 February, 2010

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 47.2 N	122 2.2 W	01/02/10	1946 UTC	801 m	020 03 kn	270 02 10	1	1013.2 mb	13.0 C	11.0 C	10m	5/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.29	13.29	33.216	24.954	299.2	0.000	5.96	100.1						1.25	0.42	0	
2	13.29	13.29	33.216	24.954	299.2	0.006	5.96	100.1						1.25	0.42	2	218
10	13.26	13.26	33.222	24.965	298.4	0.030	5.95	99.8						1.34	0.46	10	217
20	13.27	13.27	33.231	24.970	298.2	0.060	5.90	99.0						1.21	0.40	20	216
30	13.27	13.27	33.238	24.976	297.9	0.090	5.87	98.5						1.22	0.34	30	215
40	13.21	13.20	33.254	25.000	295.8	0.119	5.88	98.6						0.93	0.48	40	214
50 ISL	13.16 D	13.15	33.268 D	25.022	294.1	0.149	5.79	97.0						0.51	0.30	50	
51	13.16	13.15	33.263	25.018	294.5	0.152	5.78	96.8						0.47	0.28	51	213
60	13.09	13.08	33.284	25.048	291.8	0.178	5.66	94.7						0.31	0.21	60	212
70	12.93	12.92	33.301	25.093	287.8	0.207	5.59	93.2						0.22	0.23	70	211
75 ISL	12.89 D	12.88	33.307 D	25.106	286.7	0.221	5.58	92.9						0.19	0.22	75	
85	12.82	12.81	33.315	25.126	285.0	0.250	5.56	92.5						0.15	0.19	85	210
100	12.39	12.38	33.395	25.272	271.5	0.292	4.95	81.6						0.06	0.17	101	209
120	10.37	10.36	33.690	25.869	214.9	0.340	3.14	49.7						0.02	0.09	121	208
125 ISL	10.31 D	10.30	33.704 D	25.890	212.9	0.351	3.11	49.1						0.02	0.09	126	
141	10.20	10.18	33.728	25.928	209.7	0.385	3.00	47.3						0.01	0.09	142	207
150 ISL	10.16 D	10.14	33.736 D	25.941	208.6	0.404	2.83	44.6						0.01	0.09	151	
171	9.52	9.50	33.881	26.162	188.0	0.445	2.40	37.3						0.01	0.08	172	206
200 ISL	9.00 D	8.98	34.002 D	26.340	171.4	0.497	2.14	32.9						0.01	0.06	201	
201	9.07	9.05	33.978	26.311	174.3	0.499	2.13	32.8						0.01	0.06	202	205
249	8.52	8.49	34.085	26.481	158.8	0.579	1.68	25.6								250	204
250 ISL	8.52 D	8.49	34.081 D	26.478	159.1	0.581	1.67	25.4								251	
300	8.10	8.07	34.124	26.576	150.6	0.658	1.41	21.3								302	203
400	7.08	7.04	34.176	26.764	133.7	0.800	0.84	12.4								403	202
500 ISL	5.75 D	5.71	34.261 D	27.005	111.0	0.923	0.50	7.1								504	
515	5.66	5.62	34.250	27.008	110.9	0.939	0.45	6.4								519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 37.0 N	122 24.6 W	02/02/10	0034 UTC	2868 m	110 07 kn	270 02 09	2	1011.4 mb	13.4 C	11.1 C		7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.38	13.38	33.279	24.985	296.2	0.000	6.05	101.8						1.55	0.36	0	
1	13.38	13.38	33.279	24.985	296.3	0.003	6.05	101.8						1.55	0.36	1	220
10	13.33	13.33	33.278	24.994	295.6	0.030	6.03	101.4						1.25	0.75	10	219
20 ISL	13.21 D	13.21	33.280 D	25.020	293.4	0.059	5.91	99.1						0.88	0.64	20	
25	13.21	13.21	33.280	25.020	293.5	0.074	5.84	97.9						0.72	0.50	25	218
30 ISL	13.21 D	13.21	33.281 D	25.021	293.6	0.088	5.81	97.4						0.66	0.45	30	
40	13.20	13.19	33.279	25.022	293.8	0.118	5.77	96.7						0.57	0.39	40	217
50	13.19	13.18	33.284	25.028	293.5	0.147	5.74	96.2						0.40	0.37	50	216
62	13.09	13.08	33.314	25.071	289.7	0.182	5.50	92.0						0.14	0.18	62	215
75	12.88	12.87	33.346	25.138	283.7	0.219	5.26	87.6						0.09	0.16	75	214
87	12.13	12.12	33.431	25.349	263.8	0.252	4.56	74.8						0.04	0.13	87	213
100 ISL	11.28 D	11.27	33.503 D	25.562	243.7	0.285	3.91	63.0						0.03	0.11	101	
101	11.29	11.28	33.505	25.562	243.7	0.288	3.87	62.4						0.03	0.11	102	212
114	11.07	11.06	33.541	25.630	237.5	0.319	3.66	58.7						0.02	0.10	115	211
124	10.87	10.86	33.583	25.698	231.2	0.342	3.49	55.8						0.02	0.09	125	210
125 ISL	10.84 D	10.82	33.591 D	25.710	230.2	0.345	3.48	55.6						0.02	0.09	126	
140	10.42	10.40	33.658	25.836	218.5	0.378	3.25	51.5						0.02	0.09	141	209
150 ISL	10.22 D	10.20	33.723 D	25.921	210.6	0.400	3.05	48.1						0.02	0.08	151	
170	9.82	9.80	33.850	26.088	195.0	0.440	2.66	41.6						0.01	0.07	171	208
200 ISL	9.45 D	9.43	33.944 D	26.223	182.7	0.497	2.39	37.1						0.01	0.05	201	
201	9.48	9.46	33.930	26.207	184.3	0.499	2.38	37.0						0.01	0.05	202	207
250	8.89	8.86	34.041	26.389	167.7	0.585	2.04	31.3								251	206
300	8.29	8.26	34.117	26.542	153.9	0.665	1.59	24.1								302	205
400	7.17	7.13	34.176	26.752	135.0	0.810	0.92	13.6								403	204
500 ISL	6.31 D	6.26	34.204 D	26.890	122.6	0.939	0.61	8.8								504	
515	6.20	6.15	34.205	26.905	121.2	0.957	0.58	8.4								519	203
600 CSL	5.63	5.58	34.272	27.030	109.9	1.055										604	200
700 CSL	5.20	5.14	34.324	27.123	101.8	1.161										705	200
751	4.95	4.89	34.343	27.167	97.8	1.212	0.23	3.2								757	202
800 CSL	4.69	4.63	34.371	27.219	93.0	1.259										806	200
900 CSL	4.32	4.25	34.413	27.293	86.3	1.348										907	200
1000 CSL	4.04	3.96	34.445	27.349	81.5	1.432										1009	200
1025	4.00	3.92	34.441	27.350	81.5	1.453	0.38	5.2								1034	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 27.4 N	122 46.8 W	02/02/10	0514 UTC	2962 m	090 08 kn			1011.1 mb	13.5 C	11.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.45	13.45	33.252	24.950	299.6	0.000	6.10	102.8						1.37	0.56	0	
2	13.45	13.45	33.252	24.950	299.6	0.006	6.10	102.8						1.37	0.56	2	220
10	13.46	13.46	33.254	24.949	299.9	0.030	6.09	102.6								10	219
20 ISL	13.43 D	13.43	33.254 D	24.956	299.5	0.060	6.02	101.4						0.90	0.48	20	
26	13.42	13.42	33.259	24.962	299.1	0.078	5.94	100.0						0.66	0.42	26	218
30 ISL	13.40 D	13.40	33.262 D	24.968	298.6	0.090	5.88	99.0						0.51	0.35	30	
40	13.22	13.21	33.269	25.010	294.9	0.120	5.64	94.6						0.19	0.20	40	217
50	12.59	12.58	33.287	25.148	282.0	0.148	5.24	86.7						0.08	0.14	50	216
62	12.19	12.18	33.353	25.276	270.1	0.181	4.84	79.5						0.06	0.15	62	215
75	11.83	11.82	33.454	25.423	256.4	0.216	4.35	70.9						0.05	0.15	75	214
87	11.16	11.15	33.521	25.598	240.0	0.246	3.94	63.3						0.04	0.13	87	213
100	10.45	10.44	33.670	25.839	217.2	0.275	3.24	51.3						0.02	0.09	101	212
112	10.18	10.17	33.736	25.937	208.1	0.301	3.00	47.3						0.02	0.11	113	211
125 ISL	9.84 D	9.83	33.821 D	26.061	196.6	0.327	2.82	44.1						0.01	0.06	126	
126	9.87	9.86	33.827	26.061	196.7	0.329	2.81	44.0						0.01	0.06	127	210
140	9.71	9.69	33.855	26.109	192.3	0.356	2.72	42.4						0.02	0.06	141	209
150 ISL	9.48 D	9.46	33.886 D	26.172	186.5	0.375	2.63	40.8						0.02	0.06	151	
170	9.24	9.22	33.956	26.266	178.0	0.412	2.44	37.7						0.02	0.05	171	208
200	8.91	8.89	34.027	26.374	168.2	0.464	2.18	33.5								201	207
250 ISL	8.48 D	8.45	34.102 D	26.500	157.0	0.545	1.77	26.9								252	
251	8.50	8.47	34.104	26.499	157.2	0.546	1.76	26.8								253	206
300	8.03	8.00	34.149	26.606	147.7	0.621	1.34	20.2								302	205
400 ISL	6.96 D	6.92	34.175 D	26.780	132.1	0.761	0.90	13.2								403	
401	6.97	6.93	34.174	26.778	132.3	0.762	0.90	13.2								404	204
500 ISL	6.27 D	6.23	34.265 D	26.943	117.5	0.886	0.46	6.6								504	
515	6.22	6.17	34.273	26.956	116.5	0.904	0.40	5.8								519	203
600 CSL	5.54	5.49	34.315	27.075	105.6	0.998										604	200
700 CSL	5.13	5.07	34.342	27.145	99.5	1.100										705	200
750	4.98	4.92	34.359	27.177	97.0	1.150	0.22	3.1								756	202
800 CSL	4.66	4.60	34.372	27.223	92.6	1.197										806	200
900 CSL	4.30	4.23	34.414	27.296	86.0	1.286										908	200
1000 CSL	4.03	3.95	34.444	27.349	81.4	1.370										1009	200
1026	3.96	3.88	34.452	27.362	80.2	1.391	0.42	5.7								1035	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 65.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 17.4 N	123 7.4 W	02/02/10	0951 UTC	3265 m	100 03 kn			1010.1 mb	13.5 C	12.4 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.06					0.000								1.09	0.29	0	
2	13.06	13.06	33.179 D	24.971	297.6	0.006								1.09	0.29	2	212
10	13.06	13.06	33.180 D	24.972	297.7	0.030								1.04	0.33	10	211
19	13.07	13.07	33.187 D	24.976	297.6	0.057								1.13	0.27	19	210
20 ISL	13.07 D	13.07	33.188 D	24.977	297.5	0.060								1.11	0.27	20	
30	13.06	13.06	33.189 D	24.980	297.5	0.089								0.82	0.29	30	209
41	13.03	13.02	33.187 D	24.984	297.4	0.122								0.75	0.25	41	208
50 ISL	13.00 D	12.99	33.192 D	24.994	296.7	0.149								0.52	0.20	50	
61	12.95	12.94	33.197 D	25.008	295.6	0.181								0.21	0.14	61	207
75 ISL	12.12 D	12.11	33.252 D	25.211	276.5	0.221								0.08	0.11	75	
80	11.49	11.48	33.272 D	25.344	264.0	0.235								0.07	0.10	80	206
100	10.34	10.33	33.423 D	25.665	233.7	0.285								0.02	0.10	101	205
125 ISL	9.70 D	9.69	33.707 D	25.995	202.8	0.339								0.02	0.07	126	
150	9.40	9.38	33.852 D	26.158	187.8	0.388								0.02	0.04	151	204
200 ISL	8.60 D	8.58	34.035 D	26.429	162.9	0.476								0.02	0.03	201	
201	8.66	8.64	34.034 D	26.419	163.9	0.477								0.02	0.03	202	203
250 CSL	7.98	7.95	34.078	26.557	151.4	0.555										252	200
300 CSL	7.52	7.49	34.102	26.643	143.8	0.628										302	200
400 CSL	6.40	6.36	34.147	26.832	126.6	0.764										403	200
500 CSL	5.73	5.69	34.213	26.970	114.4	0.884										504	200
503	5.71	5.67	34.218 D	26.976	113.8	0.888										507	202
600 CSL	5.24	5.19	34.280	27.083	104.4	0.993										604	200
700 CSL	4.95	4.89	34.353	27.175	96.5	1.094										705	200
800 CSL	4.51	4.45	34.381	27.246	90.1	1.187										806	200
900 CSL	4.21	4.14	35.462	28.139	7.3	1.236										908	200
1000 CSL	3.94	3.86	34.449	27.362	80.0	1.279										1009	200
1002	3.94	3.86	34.446	27.359	80.2	1.281										1011	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 7.0 N	123 29.4 W	02/02/10	1330 UTC	3568 m	160 07 kn			1009.3 mb	13.0 C	11.6 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.90	12.90	33.019	24.879	306.3	0.000	6.16	102.5						1.05	0.09	0	
3	12.90	12.90	33.019	24.879	306.4	0.009	6.16	102.5						1.05	0.09	3	220
10 ISL	12.90 D	12.90	33.020 D	24.880	306.5	0.031	6.16	102.5						1.09	0.14	10	
11	12.90	12.90	33.024	24.883	306.2	0.034	6.16	102.5						1.09	0.15	11	219
20 ISL	12.90 D	12.90	33.020 D	24.880	306.7	0.061	6.17	102.6						0.96	0.15	20	
21	12.90	12.90	33.017	24.878	307.0	0.064	6.17	102.6						0.94 A	0.15 A	21	218
29	12.90	12.90	33.019	24.880	307.0	0.089	6.16	102.5						0.94	0.19	29	217
30 ISL	12.90 D	12.90	33.021 D	24.881	306.9	0.092	6.14	102.1						0.91	0.19	30	
40	12.87	12.86	33.091	24.942	301.4	0.122	5.92	98.4						0.57	0.20	40	216
50 ISL	12.59 D	12.58	33.142 D	25.036	292.7	0.152	5.74	94.9						0.34	0.18	50	
60	11.90	11.89	33.140	25.165	280.5	0.181	5.52	90.0						0.19	0.14	60	215
75 ISL	10.19 D	10.18	33.226 D	25.537	245.3	0.220	4.98	78.2						0.09	0.06	75	
78	10.06	10.05	33.227	25.560	243.2	0.228	4.86	76.1						0.08	0.05	78	214
100	9.41	9.40	33.439	25.833	217.6	0.278	4.04	62.5						0.03	0.04	101	213
125	8.97	8.96	33.640	26.060	196.4	0.330	3.57	54.7						0.02	0.04	126	212
150	8.73	8.71	33.828	26.246	179.3	0.377	3.01	45.9						0.03	0.02	151	211
200	8.11	8.09	33.992	26.469	158.8	0.461	2.36	35.6						0.02	0.01	201	210
250	7.52	7.50	34.032	26.587	148.2	0.538	1.87	27.8								252	209
300	6.94	6.91	34.043	26.677	140.2	0.610	1.56	22.9								302	208
351	6.41	6.38	34.070	26.769	131.8	0.680	1.16	16.8								353	207
400 ISL	5.99 D	5.96	34.121 D	26.864	123.3	0.742	0.83	11.9								403	
402	5.99	5.96	34.117	26.861	123.6	0.745	0.82	11.8								405	206
450	5.78	5.74	34.167	26.927	117.8	0.803	0.58	8.3								453	205
499	5.58	5.54	34.213	26.988	112.5	0.859	0.43	6.1								503	204
500 CSL	5.51	5.47	34.212	26.996	111.7	0.860										504	200
600 CSL	5.24	5.19	34.313	27.109	102.0	0.967										604	200
601	5.24	5.19	34.308	27.105	102.3	0.968	0.23	3.2								605	203
700 ISL	4.93 D	4.87	34.361 D	27.183	95.7	1.066	0.22	3.1								705	
751	4.72	4.66	34.374	27.218	92.6	1.114	0.21	2.9								757	202
800 CSL	4.49	4.43	34.387	27.253	89.4	1.159										806	200
900 CSL	4.15	4.08	34.430	27.324	83.0	1.245										908	200
1000 CSL	3.87	3.79	34.459	27.377	78.4	1.326										1009	200
1027	3.83	3.75	34.458	27.380	78.2	1.347	0.45	6.1								1036	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 1001 STATION 66.7 75.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 57.2 N	123 50.9 W	02/02/10	1801 UTC	3879 m	360 02 kn	280 03 07	1	1010.4 mb	14.1 C	12.2 C	11m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.03					0.000								0.76	0.23	0	
2	13.03	13.03	33.036 D	24.866	307.5	0.006								0.76	0.23	2	212
10	12.96	12.96	33.036 D	24.880	306.4	0.031								0.76	0.40	10	211
20	12.95	12.95	33.036 D	24.883	306.5	0.061								0.88	0.30	20	210
29	12.83	12.83	33.061 D	24.926	302.6	0.089								1.07	0.36	29	209
30 ISL	12.83 D	12.83	33.071 D	24.934	301.9	0.092								1.02	0.35	30	
40	12.77	12.76	33.140 D	24.999	295.9	0.122								0.36	0.24	40	208
50 ISL	12.56 D	12.55	33.178 D	25.069	289.5	0.151								0.26	0.18	50	
60	11.77	11.76	33.199 D	25.235	273.8	0.179								0.16	0.15	60	207
75 ISL	10.13 D	10.12	33.267 D	25.579	241.3	0.218								0.06	0.12	75	
81	9.69	9.68	33.364 D	25.728	227.2	0.232								0.04	0.11	81	206
100	9.77	9.76	33.676 D	25.959	205.7	0.273								0.02	0.09	101	205
125 ISL	9.35 D	9.34	33.862 D	26.173	185.8	0.322								0.02	0.07	126	
150 ISL	9.05 D	9.03	33.965 D	26.303	174.0	0.367								0.02	0.06	151	
151	9.10	9.08	33.964 D	26.294	174.8	0.369								0.02	0.06	152	204
200 ISL	8.28 D	8.26	34.043 D	26.484	157.5	0.450								0.01	0.03	201	
201	8.30	8.28	34.044 D	26.482	157.8	0.452								0.01	0.03	202	203
250 CSL	7.54	7.52	34.066	26.611	146.0	0.526										252	200
300 CSL	7.31	7.28	34.116	26.684	139.8	0.597										302	200
400 CSL	6.50	6.46	34.190	26.853	124.8	0.730										403	200
500 CSL	5.73	5.69	34.231	26.984	113.0	0.849										504	200
501	5.73	5.69	34.232 D	26.985	113.0	0.850										505	202
600 CSL	5.23	5.18	34.290	27.092	103.5	0.957										604	200
700 CSL	4.73	4.67	34.346	27.194	94.3	1.056										705	200
800 CSL	4.48	4.42	34.399	27.264	88.4	1.147										806	200
900 CSL	4.13	4.06	34.432	27.328	82.6	1.233										908	200
1000 CSL	3.82	3.74	34.461	27.383	77.7	1.313										1009	200
1005	3.81	3.73	34.464	27.387	77.4	1.317										1014	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 47.6 N	124 12.0 W	02/02/10	2116 UTC	3949 m	110 03 kn	280 05 10	1	1008.8 mb	14.5 C	13.2 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.20	13.20	33.036	24.833	310.7	0.000	6.19	103.6						0.78	0.16	0	
2	13.20	13.20	33.036	24.833	310.8	0.006	6.19	103.6						0.78	0.16	2	220
10	12.94	12.94	33.035	24.884	306.1	0.031	6.19	103.1						0.82	0.22	10	219
20	12.92	12.92	33.043	24.894	305.4	0.061	6.21	103.4						0.90	0.24	20	218
30	13.14	13.14	33.165	24.945	300.8	0.092	5.94	99.4						0.57	0.24	30	217
40	12.85	12.84	33.111	24.961	299.5	0.122	6.12	101.7						0.78	0.27	40	216
50 ISL	12.62 D	12.61	33.097 D	24.995	296.5	0.152	5.91	97.8						0.53	0.21	50	
61	11.94	11.93	33.160	25.173	279.8	0.183	5.46	89.1						0.13	0.12	61	215
75 ISL	10.53 D	10.52	33.234 D	25.485	250.3	0.220	4.88	77.3						0.07	0.09	75	
80	10.26	10.25	33.261	25.552	244.0	0.233	4.67	73.5						0.05	0.08	80	214
100	9.51	9.50	33.498	25.862	214.8	0.279	3.88	60.2						0.03	0.04	101	213
125	9.12	9.11	33.724	26.102	192.5	0.330	3.20	49.2						0.01	0.03	126	212
150	8.85	8.83	33.854	26.247	179.2	0.376	2.73	41.8						0.01	0.04	151	211
200	8.04	8.02	34.012	26.495	156.3	0.460	2.12	31.9						0.01	0.02	201	210
250 ISL	7.46 D	7.44	34.036 D	26.599	147.1	0.536	1.84	27.3								252	
251	7.47	7.45	34.034	26.596	147.4	0.537	1.83	27.2								253	209
300	7.35	7.32	34.129	26.688	139.4	0.607	1.13	16.7								302	208
351	6.78	6.75	34.139	26.775	131.6	0.677	0.96	14.0								353	207
400	6.40	6.36	34.172	26.852	124.8	0.739	0.68	9.9								403	206
451	6.14	6.10	34.228	26.930	117.9	0.801	0.48	6.9								454	205
500 ISL	5.75 D	5.71	34.253 D	26.999	111.6	0.858	0.37	5.3								504	
501	5.81	5.77	34.247	26.987	112.9	0.859	0.37	5.3								505	204
600 ISL	5.19 D	5.14	34.286 D	27.093	103.3	0.966	0.27	3.8								604	
602	5.17	5.12	34.283	27.093	103.3	0.968	0.27	3.8								606	203
700 ISL	4.81 D	4.75	34.337 D	27.178	96.0	1.065	0.24	3.4								705	
752	4.63	4.57	34.369	27.224	91.9	1.114	0.23	3.2								758	202
800 CSL	4.49	4.43	34.388	27.254	89.3	1.158										806	200
900 CSL	4.13	4.06	34.427	27.324	83.0	1.244										908	200
1000 CSL	3.84	3.76	34.457	27.378	78.2	1.325										1009	200
1026	3.79	3.71	34.465	27.390	77.2	1.345	0.50	6.8								1035	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 85.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 37.2 N	124 33.1 W	03/02/10	0153 UTC	4240 m	180 04 kn	270 06 11	1	1009.7 mb	13.8 C	12.0 C		3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.02					0.000								0.99	0.06	0	
2	13.02	13.02	32.947 D	24.800	313.9	0.006								0.99	0.06	2	212
10	12.72	12.72	33.076 D	24.958	299.0	0.031								1.36	0.04	10	211
20	12.55	12.55	33.248 D	25.125	283.4	0.060								0.79	0.40	20	210
30	12.43	12.43	33.262 D	25.159	280.4	0.088								0.46	0.26	30	209
39	12.33	12.32	33.291 D	25.201	276.7	0.113								0.45	0.18	39	208
50 ISL	12.02 D	12.01	33.324 D	25.286	268.9	0.143								0.30	0.16	50	
60	11.05	11.04	33.412 D	25.532	245.6	0.169								0.13	0.15	60	207
75 ISL	9.36 D	9.35	33.539 D	25.918	209.0	0.203								0.03	0.11	75	
81	9.23	9.22	33.559 D	25.955	205.6	0.215								0.01	0.10	81	206
100	9.06	9.05	33.744 D	26.127	189.6	0.253								0.01	0.09	101	205
125 ISL	8.79 D	8.78	33.913 D	26.302	173.4	0.298								0.01	0.07	126	
150	8.66	8.64	34.008 D	26.397	164.9	0.341								0.01	0.05	151	204
200 ISL	8.04 D	8.02	34.044 D	26.520	153.9	0.420								0.01	0.03	201	
201	8.04	8.02	34.051 D	26.526	153.4	0.422								0.01	0.03	202	203
250 CSL	7.67	7.65	34.113	26.629	144.3	0.495										252	200
300 CSL	7.18	7.15	34.127	26.710	137.2	0.565										302	200
400 CSL	6.57	6.53	34.212	26.861	124.1	0.696										403	200
500	5.90	5.86	34.261 D	26.987	113.0	0.814										504	202
600 CSL	5.32	5.27	34.294	27.084	104.4	0.923										605	200
700 CSL	4.82	4.76	34.343	27.181	95.7	1.023										705	200
800 CSL	4.43	4.37	34.392	27.264	88.3	1.115										806	200
900 CSL	4.20	4.13	34.425	27.315	84.0	1.201										908	200
1000 CSL	3.92	3.84	34.454	27.368	79.4	1.283										1009	200
1001	3.92	3.84	34.456	27.370	79.3	1.284										1010	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 66.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 27.2 N	124 54.3 W	03/02/10	0506 UTC	4396 m	130 04 kn			1010.0 mb	13.3 C	12.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.79	12.79	32.916	24.821	311.9	0.000	6.29	104.3						0.80	0.22	0	
2	12.79	12.79	32.916	24.821	311.9	0.006	6.29	104.3						0.80	0.22	2	220
10	12.76	12.76	32.953	24.855	308.8	0.031	6.37	105.6						0.91	0.27	10	219
20	12.71	12.71	33.020 D	24.917	303.2	0.062	6.27	D103.9								20	218
30	12.69	12.69	33.130	25.007	294.9	0.092	6.11	101.2						0.91	0.44	30	217
40	12.48	12.47	33.232	25.126	283.8	0.121	5.83	96.2						0.51	0.31	40	216
50 ISL	12.40 D	12.39	33.277 D	25.177	279.2	0.149	5.74	94.6						0.37	0.29	50	
60	12.24	12.23	33.300	25.226	274.8	0.176	5.55	91.2						0.32	0.27	60	215
75 ISL	11.01 D	11.00	33.458 D	25.575	241.8	0.215	4.46	71.4						0.12	0.15	75	
80	10.94	10.93	33.475	25.601	239.5	0.227	4.10	65.6						0.06	0.11	80	214
100	9.99	9.98	33.526	25.805	220.4	0.273	3.78	59.2						0.03	0.10	101	213
125 ISL	9.04 D	9.03	33.660 D	26.065	196.0	0.325	3.46	53.1						0.02	0.06	126	
126	9.04	9.03	33.663 D	26.067	195.8	0.327	3.44	52.8						0.02	0.06	127	212
150	8.94	8.92	33.904	26.272	176.8	0.372	2.64	40.5						0.02	0.04	151	211
199	8.49	8.47	34.052	26.459	159.9	0.454	1.98	30.1						0.02	0.03	200	210
200 ISL	8.50 D	8.48	34.066 D	26.468	159.1	0.456	1.97	30.0								201	
250 ISL	8.00 D	7.97	34.130 D	26.595	147.8	0.533	1.47	22.1								252	
251	7.98	7.95	34.128	26.596	147.7	0.534	1.46	21.9								253	209
300 ISL	7.33 D	7.30	34.136 D	26.697	138.6	0.604	1.08	16.0								302	
301	7.28	7.25	34.132	26.700	138.3	0.606	1.07	15.8								303	208
350	6.72	6.69	34.146	26.789	130.3	0.671	0.87	12.7								352	207
400	5.96	5.93	34.120	26.867	123.0	0.735	0.85	12.2								403	206
450	5.68	5.64	34.162	26.935	116.9	0.795	0.63	9.0								453	205
500	5.55	5.51	34.212	26.991	112.2	0.852	0.44	6.3								504	204
600	4.84	4.79	34.245	27.100	102.1	0.959	0.31	4.3								604	203
700 ISL	4.62 D	4.56	34.334 D	27.196	93.9	1.057	0.23	3.2								705	
750	4.48	4.42	34.359	27.232	90.8	1.103	0.21	2.9								756	202
800 CSL	4.21	4.15	34.361	27.262	88.0	1.148										806	200
900 CSL	4.03	3.96	34.429	27.336	81.7	1.233										908	200
1000 CSL	3.76	3.69	34.459	27.388	77.1	1.312										1009	200
1026	3.69	3.61	34.468	27.402	75.8	1.332	0.51	6.9								1035	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 67.1 47.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 47.9 N	121 50.8 W	01/02/10	1711 UTC	227 m	040 11 kn	270 02 05	1	1013.1 mb	10.6 C	8.6 C	03m	3/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.10					0.000	6.17							2.67	0.86	0	
1	13.10	13.10	32.911 D	24.756	318.0	0.003	6.17	103.0						2.67	0.86	1	211
5	13.12	13.12	33.046 D	24.856	308.6	0.016	6.13	102.5						2.58	0.69	5	210
10	13.27	13.27	33.256 D	24.989	296.1	0.031	5.89	98.9						1.29	0.41	10	209
20 ISL	13.23 D	13.23	33.259 D	25.000	295.3	0.060	5.80	97.3						0.76	0.33	20	
21	13.23	13.23	33.259 D	25.000	295.4	0.063	5.79	97.1						0.71	0.32	21	208
30	13.23	13.23	33.259 D	25.000	295.6	0.090	5.80	97.3						0.69	0.35	30	207
41	13.21	13.20	33.261 D	25.006	295.3	0.122	5.79	97.1						0.71	0.36	41	206
50 ISL	13.17 D	13.16	33.266 D	25.018	294.4	0.149	5.74	96.2						0.56	0.31	50	
60	13.10	13.09	33.277 D	25.041	292.5	0.178	5.67	94.8						0.35	0.25	60	205
75 ISL	13.03 D	13.02	33.288 D	25.063	290.7	0.222	5.58	93.2						0.24	0.20	75	
81	12.94	12.93	33.091 D	24.929	303.7	0.240	5.53	92.1						0.22	0.19	81	204
100 ISL	12.59 D	12.58	33.353 D	25.201	278.3	0.295	5.23	86.6						0.17	0.19	101	
101	12.57	12.56	33.360 D	25.210	277.4	0.298	5.21	86.2						0.17	0.19	102	203
125 ISL	11.54 D	11.52	33.517 D	25.526	247.8	0.361	4.22	68.4						0.10	0.16	126	
150	10.32	10.30	33.717 D	25.899	212.6	0.419	3.11	49.1						0.05	0.13	151	202
200 ISL	9.10 D	9.08	33.912 D	26.254	179.6	0.517	2.22	34.2						0.04	0.19	201	
202	9.15	9.13	33.900	26.237	181.3	0.520	2.18	33.6						0.04	0.19	203	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 11.1 N	121 43.8 W	04/02/10	1317 UTC	225 m	080 07 kn			1008.7 mb	14.3 C	11.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.50	13.50	33.152	24.862	307.9	0.000	6.05	102.0						1.73	0.61	0	
2	13.50	13.50	33.152	24.862	307.9	0.006	6.05	102.0						1.73	0.61	2	214
10	13.51	13.51	33.166	24.871	307.3	0.031	5.99	101.0						1.49	0.57	10	213
20 ISL	13.48 D	13.48	33.219 D	24.919	303.1	0.061	5.77	97.3						0.70	0.47	20	
21	13.50	13.50	33.223	24.918	303.2	0.064	5.75	97.0						0.62	0.46	21	212
30	13.45	13.45	33.231	24.934	301.8	0.092	5.70	96.0						0.49	0.31	30	211
41	13.38	13.37	33.252	24.965	299.3	0.125	5.55	93.4						0.30	0.24	41	210
50 ISL	13.33 D	13.32	33.263 D	24.984	297.7	0.151	5.46	91.8						0.27	0.21	50	
51	13.32	13.31	33.269	24.990	297.1	0.154	5.45	91.6						0.27	0.21	51	209
60	13.26	13.25	33.281	25.012	295.3	0.181	5.40	90.6						0.18	0.19	60	208
70	13.05	13.04	33.329	25.091	288.0	0.210	5.20	86.9						0.09	0.15	70	207
75 ISL	12.96 D	12.95	33.343 D	25.120	285.4	0.225	5.09	84.9						0.09	0.15	75	
85	12.76	12.75	33.376	25.185	279.4	0.253	4.90	81.4						0.08	0.14	85	206
100	12.54	12.53	33.398	25.245	274.1	0.294	4.74	78.4						0.08	0.14	100	205
121	11.35	11.33	33.548	25.585	242.1	0.349	3.87	62.5						0.04	0.14	122	204
125 ISL	10.49 D	10.48	33.684 D	25.844	217.4	0.358	3.56	56.5						0.03	0.13	126	
140	9.48	9.46	33.886	26.171	186.4	0.388	2.44	37.9						0.02	0.10	141	203
150 ISL	9.07 D	9.05	33.997 D	26.324	171.9	0.406	2.27	35.0						0.02	0.09	151	
170	8.84	8.82	34.046	26.400	165.2	0.440	1.93	29.6						0.01	0.07	171	202
200 ISL	8.66 D	8.64	34.065 D	26.443	161.6	0.489	1.70	25.9								201	
234	8.06	8.04	34.115	26.574	149.5	0.542	1.44	21.7								235	201
250 CSL	7.96	7.93	34.135	26.604	146.9	0.565										252	200

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
36 3.0 N	122 0.5 W	04/02/10	0937 UTC	1309 m	320 02 kn			1009.4 mb	13.2 C	11.4 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.65	13.65	33.212	24.878	306.4	0.000	6.01	101.7						2.13	0.67	0	
2	13.65	13.65	33.212	24.878	306.4	0.006	6.01	101.7						2.13	0.67	2	220
10	13.65	13.65	33.214	24.880	306.5	0.031	6.03	102.0						2.12	0.71	10	219
20	13.65	13.65	33.212	24.879	306.9	0.061	6.03	102.0						2.03	0.74	20	218
30	13.63	13.63	33.212	24.883	306.7	0.092	6.01	101.6						2.01	0.77	30	217
41	13.51	13.50	33.249	24.936	302.0	0.125	5.71	96.3						0.43	0.29	41	216
50 ISL	13.47 D	13.46	33.272 D	24.963	299.7	0.153	5.67	95.6						0.27	0.23	50	
51	13.47	13.46	33.273	24.963	299.7	0.156	5.67	95.6						0.25	0.22	51	215
59	13.43	13.42	33.278	24.975	298.7	0.179	5.60	94.3						0.18	0.19	59	214
70	12.80	12.79	33.346	25.154	282.0	0.211	4.99	83.0						0.08	0.15	70	213
75 ISL	12.44 D	12.43	33.386 D	25.255	272.5	0.225	4.80	79.2						0.07	0.14	75	
85	11.31	11.30	33.363	25.448	254.2	0.252	4.48	72.2						0.05	0.12	85	212
100 ISL	10.62 D	10.61	33.514 D	25.688	231.6	0.288	3.93	62.4						0.03	0.10	101	
101	10.67	10.66	33.511	25.677	232.7	0.290	3.90	62.0						0.03	0.10	102	211
120	10.07	10.06	33.590	25.842	217.3	0.333	3.66	57.5						0.02	0.08	121	210
125 ISL	9.80 D	9.79	33.658 D	25.940	208.0	0.344	3.45	53.9						0.02	0.07	126	
141	9.68	9.66	33.860	26.118	191.5	0.376	2.75	42.9						0.01	0.06	142	209
150 ISL	9.61 D	9.59	33.908 D	26.168	187.0	0.393	2.62	40.8						0.01	0.07	151	
170	9.17	9.15	33.967	26.285	176.1	0.429	2.49	38.4						0.00	0.08	171	208
199	8.89	8.87	34.070	26.411	164.7	0.478	2.04	31.3						0.00	0.04	200	207
200 ISL	8.88 D	8.86	34.067 D	26.410	164.7	0.480	2.03	31.1								201	
231	8.48	8.46	34.094	26.494	157.2	0.530	1.90	28.9								232	206
250 ISL	8.15 D	8.12	34.110 D	26.557	151.5	0.559	1.76	26.6								252	
271	7.90	7.87	34.116	26.599	147.8	0.591	1.57	23.6								273	205
300 ISL	7.71 D	7.68	34.176 D	26.674	141.0	0.633	1.26	18.8								302	
320	7.54	7.51	34.183	26.704	138.4	0.661	1.06	15.8								322	204
380	7.11	7.07	34.212	26.788	131.1	0.741	0.82	12.1								383	203
400 ISL	6.96 D	6.92	34.217 D	26.813	129.0	0.767	0.76	11.2								403	
441	6.44	6.40	34.198	26.868	123.9	0.819	0.65	9.4								444	202
500 ISL	6.11 D	6.07	34.250 D	26.952	116.5	0.890	0.46	6.6								504	
517	6.01	5.96	34.252	26.966	115.3	0.910	0.41	5.9								521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 52.8 N	122 21.6 W	04/02/10	0542 UTC	3012 m	210 04 kn			1009.9 mb	13.3 C	11.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.43	13.43	33.177	24.896	304.7	0.000	6.15	103.5						0.80	0.20	0	
2	13.43	13.43	33.177	24.896	304.7	0.006	6.15	103.5						0.80	0.20	2	220
10	13.44	13.44	33.179	24.896	305.0	0.030	6.13	103.2						0.83	0.17	10	219
20	13.37	13.37	33.192	24.920	302.9	0.061	6.15	103.4						1.03	0.26	20	218
30	13.35	13.35	33.195	24.927	302.6	0.091	6.03	101.4						0.75	0.28	30	217
40	13.35	13.34	33.209	24.938	301.8	0.121	5.93	99.7						0.50	0.24	40	216
50	13.22	13.21	33.242	24.990	297.1	0.151	5.77	96.7						0.31	0.19	50	215
60	13.15	13.14	33.257	25.015	294.9	0.181	5.75	96.3						0.29	0.18	60	214
70	11.41	11.40	33.283	25.367	261.5	0.209	4.78	77.1						0.08	0.10	70	213
75 ISL	11.08 D	11.07	33.291 D	25.433	255.4	0.222	4.58	73.4						0.07	0.09	75	
85	10.60	10.59	33.343	25.558	243.6	0.247	4.40	69.8						0.06	0.08	85	212
100	9.69	9.68	33.483	25.821	218.8	0.281	4.00	62.3						0.02	0.04	101	211
121	9.52	9.51	33.743	26.053	197.2	0.325	3.26	50.6						0.01	0.04	122	210
125 ISL	9.46 D	9.45	33.775 D	26.088	194.0	0.333	3.17	49.2						0.01	0.04	126	
140	9.22	9.20	33.867	26.199	183.7	0.361	2.90	44.8						0.00	0.04	141	209
150 ISL	9.06 D	9.04	33.909 D	26.257	178.3	0.379	2.80	43.1						0.00	0.04	151	
171	8.81	8.79	33.981	26.353	169.5	0.416	2.66	40.7						0.00	0.04	172	208
200 ISL	8.45 D	8.43	34.029 D	26.447	161.1	0.464	2.34	35.5						0.00	0.02	201	
201	8.45	8.43	34.029	26.447	161.1	0.465	2.33	35.4						0.00	0.02	202	207
230	8.12	8.10	34.056	26.518	154.7	0.511	2.06	31.1								231	206
250 ISL	7.90 D	7.87	34.092 D	26.579	149.2	0.541	1.82	27.3								252	
271	7.78	7.75	34.107	26.609	146.7	0.573	1.57	23.5								273	205
300 ISL	7.57 D	7.54	34.135 D	26.662	142.1	0.614	1.30	19.4								302	
320	7.48	7.45	34.163	26.697	139.1	0.643	1.14	16.9								322	204
381	7.02	6.98	34.209	26.798	130.1	0.725	0.81	11.9								384	203
400 ISL	6.98 D	6.94	34.231 D	26.821	128.2	0.749	0.72	10.6								403	
441	6.68	6.64	34.246	26.874	123.6	0.801	0.57	8.3								444	202
500 ISL	6.31 D	6.26	34.267 D	26.940	117.9	0.872	0.47	6.8								504	
515	6.05	6.00	34.260	26.968	115.2	0.890	0.44 D	6.3								519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 33.1 N	123 4.3 W	03/02/10	2348 UTC	3846 m	180 08 kn	280 04 10	1	1009.3 mb	15.1 C	13.0 C	09m	2/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.99	13.99	33.029	24.667	326.5	0.000	6.24	106.2						0.85	0.15	0	
2	13.99	13.99	33.029	24.667	326.5	0.007	6.24	106.2						0.85	0.15	2	220
10	13.46	13.46	33.039	24.783	315.7	0.032	6.26	105.4						0.96	0.25	10	219
20	13.43	13.43	33.040	24.790	315.3	0.064	6.19	104.1						0.90	0.27	20	218
30	13.41	13.41	33.079	24.825	312.3	0.095	6.07	102.1						0.75	0.29	30	217
41	13.33	13.32	33.139	24.888	306.6	0.129	5.87	98.6						0.41	0.29	41	216
50	13.28	13.27	33.270	24.999	296.2	0.156	5.70	95.7						0.20	0.20	50	215
60	12.68	12.67	33.260	25.110	285.9	0.185	5.38	89.2						0.14	0.14	60	214
70	11.50	11.49	33.291	25.357	262.5	0.213	4.87	78.8						0.10	0.09	70	213
75 ISL	10.70 D	10.69	33.370 D	25.561	243.1	0.225	4.59	73.0						0.08	0.08	75	
85	10.13	10.12	33.461	25.730	227.2	0.249	4.08	64.1						0.04	0.07	85	212
100 ISL	9.17 D	9.16	33.620 D	26.013	200.5	0.281	3.57	55.0						0.01	0.06	101	
102	9.14	9.13	33.627	26.023	199.6	0.285	3.52	54.2						0.01	0.06	103	211
121	8.81	8.80	33.770	26.187	184.3	0.322	3.28	50.1						0.00	0.06	122	210
125 ISL	8.77 D	8.76	33.770 D	26.193	183.7	0.329	3.22	49.2						0.00	0.06	126	
140	8.63	8.62	33.827	26.260	177.7	0.356	3.00	45.7						0.00	0.05	141	209
150 ISL	8.54 D	8.52	33.877 D	26.313	172.8	0.374	2.89	43.9						0.00	0.05	151	
170	8.36	8.34	33.939	26.390	165.9	0.407	2.77	42.0						0.00	0.04	171	208
200	7.98	7.96	33.973	26.474	158.4	0.456	2.93	44.0						0.00	0.03	201	207
230	7.64	7.62	34.004	26.548	151.7	0.503	2.21	32.9								231	206
250 ISL	7.31 D	7.29	34.010 D	26.599	147.0	0.532	2.07	30.6								252	
272	6.95	6.92	34.009	26.649	142.4	0.564	2.00	29.3								274	205
300 ISL	6.61 D	6.58	34.019 D	26.702	137.6	0.603	1.65	24.0								302	
322	6.57	6.54	34.058	26.739	134.4	0.633	1.36	19.8								324	204
380	6.33	6.30	34.119	26.819	127.5	0.709	0.90	13.0								383	203
400 ISL	6.18 D	6.14	34.128 D	26.845	125.2	0.735	0.81	11.7								403	
440	5.80	5.76	34.152	26.912	119.0	0.783	0.67	9.6								443	202
500 ISL	5.32 D	5.28	34.174 D	26.988	112.1	0.853	0.53	7.5								504	
517	5.26	5.22	34.188	27.006	110.6	0.872	0.49	6.9								521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 13.0 N	123 47.0 W	03/02/10	1734 UTC	4072 m	120 04 kn	290 02 06	1	1011.5 mb	14.3 C	13.0 C	19m	3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.06	13.06	32.953	24.796	314.2	0.000	6.11	101.9						0.38	0.25	0	
1	13.06	13.06	32.953	24.796	314.2	0.003	6.11	101.9						0.38	0.25	1	220
10	13.00	13.00	32.955	24.810	313.1	0.031	6.10	101.6						0.47	0.06	10	219
20	12.79	12.79	33.018	24.900	304.8	0.062	6.00	99.6						0.54	0.31	20	218
30	12.71	12.71	33.045	24.937	301.6	0.093	6.05	100.2						0.69	0.28	30	217
40	12.66	12.65	33.065	24.962	299.4	0.123	6.00	99.3						0.61	0.21	40	216
50	12.07	12.06	33.109	25.109	285.6	0.152	5.67	92.7						0.25	0.39	50	215
60	11.21	11.20	33.203	25.341	263.8	0.179	5.25	84.3						0.13	0.13	60	214
70	10.36	10.35	33.232	25.512	247.6	0.205	4.88	77.0						0.04	0.17	70	213
75 ISL	9.59 D	9.58	33.299 D	25.693	230.3	0.217	4.71	73.1						0.04	0.17	75	
85	9.23	9.22	33.435 D	25.858	214.9	0.239	4.38	67.5						0.07	0.13	85	212
100	8.88	8.87	33.545	26.000	201.7	0.270	3.92	59.9						0.00	0.05	101	211
121	8.77	8.76	33.744	26.173	185.6	0.311	3.28	50.1						0.00	0.04	122	210
125 ISL	8.71 D	8.70	33.785 D	26.215	181.7	0.318	3.20	48.8						0.00	0.04	126	
141	8.53	8.52	33.852	26.295	174.4	0.347	2.96	45.0						0.00	0.04	142	209
150 ISL	8.37 D	8.35	33.874 D	26.337	170.5	0.362	2.89	43.8						0.00	0.04	151	
170	8.25	8.23	33.946	26.412	163.8	0.396	2.77	41.9						0.00	0.03	171	208
200	7.80	7.78	33.986	26.510	154.8	0.444	2.50	37.4						0.00	0.02	201	207
229	7.41	7.39	33.991	26.570	149.4	0.488	2.31	34.2								230	206
250 ISL	7.25 D	7.23	34.031 D	26.624	144.5	0.519	1.96	29.0								252	
271	7.11	7.08	34.061	26.668	140.7	0.549	1.59	23.4								273	205
300 ISL	6.89 D	6.86	34.084 D	26.716	136.5	0.589	1.33	19.5								302	
321	6.66	6.63	34.087	26.750	133.4	0.617	1.20	17.5								323	204
381	6.32	6.29	34.142	26.838	125.7	0.695	0.86	12.4								384	203
400 ISL	6.22 D	6.18	34.160 D	26.866	123.3	0.718	0.77	11.1								403	
441	6.01	5.97	34.180	26.908	119.7	0.768	0.61	8.8								444	202
500 ISL	5.49 D	5.45	34.196 D	26.985	112.6	0.837	0.45	6.4								504	
517	5.38	5.34	34.208	27.008	110.5	0.856	0.41	5.8								521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 70.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 53.0 N	124 28.7 W	03/02/10	1136 UTC	4323 m	140 02 kn			1009.0 mb	13.4 C	12.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.53	13.53	32.781	24.569	335.8	0.000	6.12	103.0						0.57	0.12	0	
2	13.53	13.53	32.781	24.569	335.8	0.007	6.12	103.0						0.57	0.12	2	220
10	13.39	13.39	32.787	24.602	332.9	0.033	6.17	103.5						0.81	0.23	10	219
20	13.06	13.06	32.802	24.680	325.8	0.066	6.00	100.0						0.61	0.29	20	218
30 ISL	12.95 D	12.95	32.812 D	24.709	323.2	0.099	5.94	98.8						0.47	0.26	30	
31	12.96	12.96	32.815	24.710	323.2	0.102	5.94	98.8						0.46	0.26	31	217
39	12.92	12.91	32.817	24.719	322.5	0.128	5.94	98.7						0.43	0.25	39	216
50 ISL	12.69 D	12.68	32.856 D	24.795	315.6	0.163	5.85	96.8						0.29	0.16	50	
51	12.76	12.75	32.858	24.783	316.8	0.166	5.83	96.6						0.27	0.15	51	215
61	11.65	11.64	32.942	25.058	290.7	0.197	5.59	90.5						0.14	0.10	61	214
70	10.62	10.61	33.003	25.289	268.8	0.222	5.42	85.8						0.09	0.08	70	213
75 ISL	10.25 D	10.24	33.056 D	25.394	258.9	0.235	5.35	84.1						0.07	0.06	75	
86	9.50	9.49	33.079	25.536	245.5	0.263	5.20	80.4						0.04	0.04	86	212
100	9.55	9.54	33.410	25.787	222.0	0.295	4.11	63.7						0.02	0.07	100	211
120	9.45	9.44	33.687	26.020	200.2	0.338	3.24	50.2						0.01	0.07	121	210
125 ISL	9.35 D	9.34	33.730 D	26.070	195.6	0.347	3.12	48.3						0.01	0.07	126	
140	9.00	8.98	33.811	26.190	184.5	0.376	2.87	44.1						0.01	0.06	141	209
150 ISL	8.66 D	8.64	33.833 D	26.260	177.9	0.394	2.71	41.3						0.01	0.06	151	
170	8.53	8.51	33.930	26.357	169.1	0.429	2.47	37.6						0.00	0.05	171	208
199	8.10	8.08	33.981	26.462	159.5	0.476	2.32	34.9						0.00	0.03	200	207
200 ISL	8.05 D	8.03	33.993 D	26.479	157.9	0.478	2.31	34.8								201	
231	7.67	7.65	34.006	26.545	152.0	0.526	2.05	30.6								232	206
250 ISL	7.51 D	7.49	34.025 D	26.583	148.6	0.555	1.85	27.5								251	
270	7.29	7.26	34.035	26.622	145.1	0.584	1.66	24.5								272	205
300 ISL	6.95 D	6.92	34.045 D	26.677	140.2	0.627	1.55	22.7								302	
319	6.66	6.63	34.038	26.711	137.1	0.653	1.49	21.7								321	204
381	6.43	6.40	34.139	26.822	127.4	0.735	0.83	12.0								383	203
400 ISL	6.23 D	6.19	34.147 D	26.854	124.4	0.759	0.75	10.8								403	
441	5.94	5.90	34.161	26.902	120.2	0.809	0.64	9.2								444	202
500 ISL	5.51 D	5.47	34.209 D	26.993	111.9	0.878	0.44	6.2								503	
516	5.41	5.37	34.215	27.010	110.4	0.895	0.39	5.5								520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 73.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 38.6 N	121 15.3 W	31/01/10	2319 UTC	32 m	240 13 kn	300 02 08	1	1013.2 mb	14.2 C	12.0 C	03m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.01	14.01	33.149	24.756	318.0	0.000	5.95	101.4	4.9	0.72	1.9	0.33	0.66	2.63	0.59	0	
2	14.01	14.01	33.149	24.756	318.1	0.006	5.95	101.4	4.9	0.72	1.9	0.33	0.66	2.63	0.59	2	205
5	14.02	14.02	33.152	24.756	318.1	0.016	5.96	101.6	4.9	0.72	1.8	0.32	0.73	2.49	0.52	5	204
10	13.73	13.73	33.177	24.835	310.8	0.032	5.72	96.9	5.2	0.78	2.2	0.38	1.00	0.90	0.42	10	203
15	13.70	13.70	33.185	24.848	309.7	0.047	5.69	96.3	5.2	0.80	2.3	0.39	1.08	0.70	0.40	15	202
20 ISL	13.68 D	13.68	33.206 D	24.868	307.9	0.063	5.63	95.3	5.1	0.80	2.3	0.39	1.04	0.56	0.41	20	
25	13.70	13.70	33.219	24.874	307.5	0.078	5.57	94.3	5.1	0.79	2.3	0.40	1.00	0.42	0.41	25	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 73.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 28.5 N	121 36.7 W	01/02/10	0235 UTC	999 m	270 17 kn			1013.3 mb	13.0 C	11.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.41	13.41	33.197	24.915	302.8	0.000	6.06	102.0	3.9	0.48	1.2	0.08	0.06	0.99	0.26	0	
2	13.41	13.41	33.197	24.915	302.9	0.006	6.06	102.0	3.9	0.48	1.2	0.08	0.06	0.99	0.26	2	220
10	13.41	13.41	33.203	24.920	302.7	0.030	6.07	102.2	3.8	0.47	1.2	0.08	0.08	0.99	0.27	10	219
20	13.38	13.38	33.205	24.928	302.2	0.061	6.04	101.6	4.0	0.48	1.3	0.08	0.05	1.03	0.31	20	218
30	13.33	13.33	33.218	24.948	300.5	0.091	5.96	100.1	4.1	0.50	1.6	0.11	0.05	0.92	0.29	30	217
41	13.32	13.31	33.215	24.948	300.8	0.124	5.92	99.5	3.8	0.50	1.7	0.12	0.07	0.76	0.32	41	216
50	13.29	13.28	33.227	24.964	299.6	0.151	5.87	98.6	4.2	0.52	1.9	0.14	0.09	0.47	0.25	50	215
60	13.12	13.11	33.226	24.997	296.6	0.181	5.71	95.5	4.6	0.59	2.8	0.18	0.12	0.24	0.16	60	214
71	11.42	11.41	33.175	25.281	269.7	0.212	5.31	85.7	8.7	0.98	9.4	0.04	0.00	0.09	0.10	71	213
75 ISL	10.89 D	10.88	33.193 D	25.390	259.4	0.222	5.10	81.3	10.6	1.11	11.6	0.03	0.00	0.08	0.09	75	
86	10.06	10.05	33.302	25.618	237.8	0.250	4.51	70.7	15.4	1.39	16.4	0.01	0.00	0.04	0.06	86	212
100	9.97	9.96	33.457	25.755	225.2	0.282	4.02	62.9	18.9	1.58	19.1	0.01	0.00	0.02	0.05	101	211
121	9.69	9.68	33.722	26.008	201.5	0.327	3.29	51.3	24.1	1.79	22.8	0.01	0.00	0.01	0.07	122	210
125 ISL	9.60 D	9.59	33.763 D	26.055	197.1	0.335	3.17	49.3	25.1	1.83	23.4	0.01	0.00	0.01	0.07	126	
150	9.10	9.08	33.931	26.268	177.3	0.382	2.65	40.8	30.2	2.00	26.1	0.01	0.00	0.01	0.05	151	209
171	8.93	8.91	33.965	26.322	172.5	0.418	2.52	38.7	32.3	2.06	26.8	0.01	0.00	0.00	0.05	172	208
200	8.70	8.68	34.016	26.398	165.8	0.467	2.30	35.1	35.0	2.15	28.1	0.01	0.00	0.00	0.04	201	207
230	8.38	8.36	34.091	26.507	155.9	0.516	1.87	28.4	40.2	2.31	30.1	0.01	0.00			231	206
250 ISL	8.08 D	8.05	34.097 D	26.557	151.4	0.546	1.71	25.8	43.4	2.40	31.2	0.01	0.00			252	
270	7.88	7.85	34.106	26.594	148.2	0.576	1.59	23.8	46.2	2.47	32.1	0.00	0.00			272	205
300 ISL	7.75 D	7.72	34.153 D	26.650	143.3	0.620	1.33	19.9	49.4	2.57	33.0	0.00	0.00			302	
321	7.72	7.69	34.175	26.672	141.6	0.650	1.15	17.2	51.4	2.63	33.5	0.00	0.00			323	204
381	7.33	7.29	34.199	26.747	135.2	0.733	0.85	12.6	58.2	2.79	34.9	0.00	0.00			384	203
400 ISL	7.12 D	7.08	34.209 D	26.785	131.8	0.758	0.77	11.4	60.7	2.84	35.3	0.00	0.00			403	
441	6.93	6.89	34.218	26.818	129.1	0.812	0.62	9.1	65.8	2.94	36.1	0.00	0.00			444	202
500 ISL	6.56 D	6.51	34.236 D	26.883	123.6	0.886	0.54	7.9	69.6	2.98	37.7	0.00	0.00			504	
516	6.46	6.41	34.226	26.888	123.2	0.906	0.52	7.5	70.6	2.99	38.1	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 73.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 18.8 N	121 57.0 W	04/02/10	2052 UTC	2299 m	100 21 kn	180 04 06	2	1007.1 mb	14.3 C	12.7 C	08m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.68	13.68	33.232	24.887	305.5	0.000	6.20	105.0						1.22	0.48	0	
3	13.68	13.68	33.232	24.888	305.6	0.009	6.20	105.0						1.22	0.48	3	220
10	13.67	13.67	33.233	24.891	305.5	0.031	6.19	104.8						1.23	0.46	10	219
20	13.66	13.66	33.235	24.895	305.4	0.061	6.18	104.6						1.21	0.48	20	218
30	13.61	13.61	33.229	24.900	305.1	0.092	6.11	103.3						1.10	0.55	30	217
40	13.44	13.43	33.245	24.947	300.9	0.122	5.73	96.5						0.37	0.30	40	216
50	13.15	13.14	33.262	25.019	294.3	0.152	5.48	91.8						0.18	0.19	50	215
60	12.38	12.37	33.270	25.176	279.6	0.180	5.10	84.0						0.09	0.15	60	214
71	11.71	11.70	33.413	25.413	257.2	0.210	4.31	70.1						0.06	0.14	71	213
75 ISL	11.66 D	11.65	33.422 D	25.429	255.8	0.220	4.20	68.2						0.05	0.13	75	
86	11.02	11.01	33.449	25.567	242.9	0.248	4.07	65.2						0.04	0.10	86	212
100 ISL	10.89 D	10.88	33.525 D	25.649	235.4	0.281	3.83	61.2						0.04	0.10	101	
101	10.89	10.88	33.530	25.653	235.0	0.283	3.81	60.9						0.04	0.10	102	211
121	10.28	10.27	33.638	25.844	217.2	0.329	3.47	54.8						0.02	0.09	122	210
125 ISL	10.18 D	10.17	33.665 D	25.882	213.7	0.337	3.44	54.2						0.02	0.09	126	
140	9.92	9.90	33.717	25.967	205.9	0.369	3.34	52.3						0.00	0.07	141	209
150 ISL	9.75 D	9.73	33.761 D	26.030	200.1	0.389	3.19	49.8						0.00	0.06	151	
171	9.42	9.40	33.895	26.189	185.3	0.429	2.83	43.9						0.00	0.04	172	208
200 ISL	9.24 D	9.22	33.986 D	26.290	176.3	0.482	2.46	38.0						0.01	0.04	201	
202	9.14	9.12	33.980	26.301	175.2	0.485	2.45	37.8						0.01	0.04	203	207
230	8.56	8.54	33.990	26.400	166.1	0.533	2.56	39.0								231	206
250 ISL	8.19 D	8.16	34.030 D	26.488	158.0	0.566	2.22	33.5								251	
272	8.27	8.24	34.116	26.544	153.2	0.600	1.74	26.3								274	205
300 ISL	8.09 D	8.06	34.154 D	26.601	148.2	0.642	1.43	21.6								302	
321	7.97	7.94	34.177	26.637	145.1	0.673	1.27	19.1								323	204
381	7.24	7.20	34.178	26.743	135.5	0.757	1.01	14.9								383	203
400 ISL	7.07 D	7.03	34.179 D	26.768	133.4	0.783	0.90	13.2								403	
440	6.81	6.77	34.231	26.845	126.5	0.835	0.67	9.8								443	202
500 ISL	6.40 D	6.35	34.252 D	26.916	120.2	0.909	0.50	7.2								503	
516	6.26	6.21	34.249	26.932	118.8	0.928	0.46	6.6								520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 5.3 N	120 46.7 W	31/01/10	1738 UTC	73 m	350 05 kn	310 03 06	1	1014.1 mb	14.2 C	12.0 C	09m	6/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.09	14.09	33.272	24.834	310.6	0.000	5.86	100.1	3.7	0.51	1.1	0.22	0.06	1.63	0.59	0	
2	14.09	14.09	33.272	24.834	310.6	0.006	5.86	100.1	3.7	0.51	1.1	0.22	0.06	1.63	0.59	2	208
5	14.09	14.09	33.275	24.836	310.5	0.016	5.85	99.9	3.4	0.51	1.1	0.22	0.00	1.59	0.59	5	207
10	14.07	14.07	33.274	24.840	310.3	0.031	5.84	99.7	3.2	0.50	1.0	0.23	0.06	1.67	0.67	10	206
20	14.06	14.06	33.272	24.841	310.5	0.062	5.80	99.0	3.6	0.51	1.2	0.25	0.08	1.42	0.54	20	205
30	14.02	14.02	33.276	24.852	309.7	0.093	5.71	97.4	3.5	0.53	1.4	0.29	0.15	0.89	0.38	30	204
40	13.82	13.81	33.270	24.889	306.4	0.124	5.77	98.0	3.4	0.53	1.4	0.25	0.15	0.56	0.34	40	203
50	13.67	13.66	33.328	24.965	299.5	0.154	5.38	91.1	5.6	0.69	3.4	0.46	0.24	0.20	0.28	50	202
60	13.18	13.17	33.364	25.092	287.6	0.184	5.05	84.7	8.2	0.85	5.8	0.48	0.16	0.14	0.31	60	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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	31/01/10	1051 UTC	568 m	300 10 kn			1012.6 mb	13.5 C	11.7 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.68	13.68	33.195	24.859	308.2	0.000	6.08	102.9	2.8	0.42	0.3	0.04	0.06	1.46	0.47	0	
2	13.68	13.68	33.195	24.859	308.3	0.006	6.08	102.9	2.8	0.42	0.3	0.04	0.06	1.46	0.47	2	220
10	13.67	13.67	33.194	24.860	308.3	0.031	6.08	102.9	3.2	0.41	0.4	0.04	0.00	1.58	0.38	10	219
20	13.68	13.68	33.194	24.859	308.8	0.062	6.08	102.9	3.2	0.42	0.3	0.04	0.00	1.43	0.45	20	218
30	13.66	13.66	33.194	24.863	308.6	0.093	6.07	102.7	3.1	0.42	0.4	0.05	0.09	1.35	0.47	30	217
42	13.31	13.30	33.201	24.940	301.7	0.129	5.70	95.7	4.0	0.57	2.6	0.18	0.17	0.34	0.22	42	216
49	13.34	13.33	33.218	24.947	301.2	0.150	5.70	95.8	4.0	0.57	2.6	0.20	0.11	0.30	0.18	49	215
50 ISL	13.42 D	13.41	33.202 D	24.918	303.9	0.153	5.69	95.8	4.2	0.58	2.7	0.20	0.10	0.29	0.18	50	
59	12.82	12.81	33.234	25.063	290.4	0.180	5.38	89.4	5.6	0.74	5.4	0.19	0.00	0.15	0.17	59	214
69	12.17	12.16	33.434	25.343	263.9	0.208	4.49	73.7	12.2	1.13	11.1	0.08	0.05	0.09	0.26	69	213
75 ISL	11.38 D	11.37	33.291 D	25.379	260.5	0.223	4.22	68.1	14.7	1.29	13.8	0.04	0.05	0.07	0.23	75	
86	10.76	10.75	33.484	25.640	235.9	0.251	3.94	62.8	17.5	1.48	17.3	0.01	0.05	0.04	0.14	86	212
100 ISL	10.59 D	10.58	33.567 D	25.734	227.2	0.283	3.62	57.5	19.0	1.59	19.2	0.02	0.05	0.02	0.09	100	
102	10.58	10.57	33.574	25.742	226.5	0.288	3.58	56.9	19.1	1.60	19.3	0.02	0.05	0.02	0.09	103	211
121	10.31	10.30	33.676	25.868	214.9	0.330	3.26	51.5	21.5	1.72	21.2	0.02	0.00	0.02	0.08	122	210
125 ISL	10.20 D	10.19	33.700 D	25.906	211.4	0.338	3.17	50.0	22.4	1.76	21.7	0.02	0.00	0.02	0.08	126	
142	10.00	9.98	33.826	26.038	199.2	0.373	2.79	43.8	26.0	1.91	23.8	0.01	0.00	0.01	0.07	143	209
150 ISL	9.84 D	9.82	33.846 D	26.081	195.3	0.389	2.67	41.8	26.9	1.95	24.3	0.01	0.00	0.01	0.07	151	
169	9.80	9.78	33.905	26.134	190.6	0.426	2.48	38.8	28.3	2.01	25.2	0.01	0.00	0.01	0.07	170	208
199	9.37	9.35	33.933	26.227	182.3	0.481	2.46	38.1	30.8	2.06	26.4	0.00	0.00	0.01	0.08	200	207
200 ISL	9.37 D	9.35	33.897 D	26.199	184.9	0.483	2.47	38.3	30.9	2.06	26.4	0.00	0.00			201	
233	8.68	8.66	33.990	26.382	168.0	0.542	2.56	39.1	33.9	2.09	27.9	0.00	0.00			234	206
250 ISL	8.61 D	8.58	34.011 D	26.409	165.7	0.570	2.42	36.9	35.2	2.14	28.4	0.00	0.00			251	
271	8.62	8.59	34.056	26.443	162.9	0.604	2.16	32.9	37.1	2.22	29.1	0.00	0.00			273	205
300 ISL	8.42 D	8.39	34.132 D	26.534	154.7	0.650	1.70	25.8	42.1	2.40	30.9	0.00	0.00			302	
324	8.12	8.09	34.165	26.605	148.2	0.687	1.34	20.2	46.8	2.55	32.4	0.00	0.00			326	204
380	7.55	7.51	34.206	26.722	137.8	0.767	0.94	14.0	55.7	2.75	34.7	0.00	0.00			382	203
400 ISL	7.35 D	7.31	34.222 D	26.763	134.1	0.794	0.82	12.2	58.9	2.81	35.4	0.00	0.00			403	
438	6.99	6.95	34.240	26.827	128.3	0.844	0.64	9.4	64.6	2.92	36.7	0.00	0.00			441	202
500 ISL	6.42 D	6.37	34.254 D	26.915	120.3	0.921	0.49	7.1	72.6	3.04	38.2	0.00	0.00			503	
515	6.34	6.29	34.259	26.930	119.1	0.939	0.45	6.5	74.5	3.07	38.6	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 1.5 N	120 55.5 W	31/01/10	1503 UTC	250 m	280 07 kn	310 03 05	1	1013.4 mb	13.8 C	11.0 C	09m	4/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.73	13.73	33.207	24.858	308.3	0.000	5.99	101.5	3.9	0.44	0.6	0.05	0.00	1.43	0.46	0	
2	13.73	13.73	33.207	24.858	308.4	0.006	5.99	101.5	3.9	0.44	0.6	0.05	0.00	1.43	0.46	2	215
10	13.73	13.73	33.207	24.858	308.5	0.031	5.99	101.5	3.6	0.44	0.6	0.05	0.00	1.45	0.46	10	214
20	13.73	13.73	33.207	24.859	308.8	0.062	5.99	101.5	3.5	0.44	0.6	0.06	0.00	1.40	0.45	20	213
30	13.69	13.69	33.216	24.874	307.6	0.093	5.94	100.6	3.7	0.46	0.8	0.11	0.05	1.13	0.46	30	212
40	13.59	13.58	33.247	24.919	303.6	0.123	5.79	97.8	3.5	0.51	1.5	0.23	0.11	0.57	0.32	40	211
50	13.50	13.49	33.296	24.975	298.5	0.153	5.60	94.5	3.8	0.59	2.7	0.36	0.12	0.25	0.22	50	210
59	13.42	13.41	33.298	24.993	297.1	0.180	5.57	93.8	4.4	0.61	3.0	0.36	0.11	0.23	0.22	59	209
69	12.90	12.89	33.273	25.077	289.3	0.209	5.37	89.4	5.7	0.74	5.2	0.30	0.00	0.15	0.18	69	208
75 ISL	12.65 D	12.64	33.387 D	25.215	276.3	0.226	5.02	83.2	8.0	0.90	7.6	0.23	0.00	0.11	0.19	75	
85	12.07	12.06	33.419	25.351	263.6	0.253	4.45	72.9	12.0	1.15	11.5	0.10	0.00	0.07	0.20	85	207
100 ISL	11.30 D	11.29	33.401 D	25.479	251.6	0.292	4.31	69.4	13.7	1.28	14.0	0.02	0.00	0.05	0.13	100	
101	11.29	11.28	33.396	25.477	251.8	0.294	4.30	69.3	13.8	1.29	14.1	0.02	0.00	0.05	0.13	101	206
119	10.72	10.71	33.630	25.761	225.1	0.337	3.40	54.2	20.8	1.64	19.2	0.01	0.00	0.04	0.18	120	205
125 ISL	10.61 D	10.60	33.663 D	25.806	221.0	0.351	3.19	50.7	22.6	1.73	20.6	0.01	0.00	0.03	0.17	126	
139	10.04	10.02	33.797	26.009	201.9	0.380	2.79	43.8	26.4	1.91	23.2	0.01	0.00	0.02	0.14	140	204
150 ISL	9.65 D	9.63	33.877 D	26.137	189.9	0.402	2.54	39.6	29.2	2.01	24.7	0.01	0.00	0.01	0.13	151	
171	9.37	9.35	33.973	26.258	178.8	0.441	2.20	34.1	33.7	2.15	26.8	0.02	0.00	0.01	0.12	172	203
200	9.02	9.00	34.042	26.369	168.7	0.491	2.01	30.9	36.9	2.25	28.3	0.03	0.00	0.01	0.10	201	202
230	8.69	8.67	34.097	26.464	160.2	0.540	1.76	26.9	40.0	2.36	29.8	0.02	0.00			231	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 43.2 N	121 33.2 W	31/01/10	0514 UTC	961 m	290 07 kn			1014.0 mb	13.5 C	11.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.71	13.71	33.218	24.871	307.1	0.000	6.15	104.2	2.8	0.42	0.3	0.03	0.07	1.70	0.09	0	
2	13.71	13.71	33.218	24.871	307.1	0.006	6.15	104.2	2.8	0.42	0.3	0.03	0.07	1.70	0.09	2	220
10	13.70	13.70	33.222	24.876	306.9	0.031	6.19	104.8	2.9	0.41	0.3	0.04	0.06	1.59	0.20	10	219
20	13.60	13.60	33.249	24.918	303.2	0.061	5.99	101.2	2.6	0.45	0.7	0.11	0.11	1.11	0.24	20	218
30 ISL	13.54 D	13.54	33.279 D	24.953	300.1	0.091	5.83	98.4	2.7	0.50	1.4	0.21	0.20	0.64	0.31	30	
31	13.54	13.54	33.282	24.956	299.9	0.094	5.81	98.1	2.7	0.51	1.5	0.22	0.21	0.60	0.31	31	217
40	13.42	13.41	33.290	24.986	297.2	0.121	5.65	95.2	3.7	0.58	2.7	0.28	0.17	0.44	0.25	40	216
50	12.22	12.21	33.226	25.172	279.7	0.150	5.24	86.0	7.2	0.85	7.5	0.12	0.00	0.19 A	0.22 A	50	215
60	11.34	11.33	33.186	25.304	267.3	0.177	5.06	81.5	9.3	1.03	10.4	0.03	0.00	0.15	0.25	60	214
71	11.03	11.02	33.190	25.363	261.9	0.207	5.00	80.0	10.2	1.11	11.8	0.02	0.00	0.07	0.16	71	213
75 ISL	10.92 D	10.91	33.212 D	25.400	258.5	0.217	4.73	75.5	11.7	1.19	13.1	0.02	0.00	0.06	0.15	75	
85	11.04	11.03	33.488	25.593	240.3	0.242	3.97	63.6	15.8	1.41	16.4	0.01	0.00	0.05	0.14	85	212
100	10.81	10.80	33.582	25.708	229.8	0.277	3.62	57.8	18.5	1.54	18.5	0.01	0.00	0.04	0.14	101	211
120	10.15	10.14	33.700	25.914	210.5	0.321	3.23	50.9	22.6	1.76	21.9	0.01	0.00	0.01	0.09	121	210
125 ISL	10.17 D	10.16	33.772 D	25.967	205.6	0.332	3.12	49.2	23.3	1.79	22.3	0.01	0.00	0.01	0.08	126	
140	10.10	10.08	33.801	26.002	202.6	0.362	2.84	44.7	25.0	1.86	23.3	0.01	0.00	0.01	0.07	141	209
150 ISL	10.03 D	10.01	33.806 D	26.018	201.3	0.382	2.72	42.7	26.4	1.91	24.0	0.01	0.00	0.01	0.08	151	
170	9.66	9.64	33.907	26.159	188.2	0.421	2.56	39.9	29.1	2.01	25.3	0.01	0.00	0.01	0.09	171	208
200	9.13	9.11	34.001	26.319	173.5	0.476	2.35	36.2	32.6	2.12	27.2	0.00	0.00	0.00	0.06	201	207
231	8.68	8.66	34.086	26.457	160.9	0.527	1.97	30.1	38.3	2.30	29.5	0.00	0.00			232	206
250 ISL	8.59 D	8.56	34.090 D	26.474	159.5	0.558	1.83	27.9	40.1	2.36	30.1	0.00	0.00			251	
270	8.49	8.46	34.118	26.512	156.3	0.589	1.72	26.2	41.6	2.40	30.6	0.00	0.00			272	205
300 ISL	8.21 D	8.18	34.151 D	26.581	150.2	0.635	1.49	22.5	45.2	2.50	31.9	0.00	0.00			302	
319	8.01	7.98	34.157	26.615	147.1	0.664	1.35	20.3	47.7	2.57	32.8	0.00	0.00			321	204
381	7.43	7.39	34.186	26.723	137.6	0.752	1.01	15.0	55.6	2.75	35.1	0.00	0.00			383	203
400 ISL	7.36 D	7.32	34.197 D	26.742	136.1	0.778	0.88	13.0	58.9	2.82	35.7	0.00	0.00			403	
441	6.91	6.87	34.230	26.830	128.0	0.832	0.64	9.4	65.9	2.96	36.9	0.00	0.00			444	202
500 ISL	6.45 D	6.40	34.259 D	26.915	120.4	0.905	0.50	7.3	71.6	3.03	38.4	0.00	0.00			503	
515	6.41	6.36	34.264	26.925	119.7	0.923	0.46	6.7	73.1	3.05	38.8	0.00	0.00			519	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 1001 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 23.2 N	122 15.1 W	30/01/10	2231 UTC	4026 m	260 14 kn	320 03 07	1	1015.3 mb	14.9 C	12.4 C	10m	4/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.75	13.75	33.178	24.832	310.8	0.000	6.06	102.7	3.5	0.43	0.8	0.07	0.08	0.90	0.17	0	
3	13.75	13.75	33.178	24.832	310.9	0.009	6.06	102.7	3.5	0.43	0.8	0.07	0.08	0.90	0.17	3	220
10	13.70	13.70	33.179	24.843	310.0	0.031	6.06	102.6	3.7	0.43	0.8	0.07	0.09	0.91	0.17	10	219
20	13.60	13.60	33.180	24.864	308.3	0.062	6.04	102.0	3.7	0.43	0.9	0.07	0.07	1.00	0.21	20	218
30	13.60	13.60	33.179	24.864	308.6	0.093	6.00	101.4	3.6	0.43	0.9	0.08	0.09	0.91	0.19	30	217
40	13.58	13.57	33.192	24.878	307.5	0.124	5.93	100.1	3.7	0.45	1.2	0.11	0.09	0.57	0.19	40	216
50	13.37	13.36	33.220	24.942	301.6	0.154	5.67	95.3	4.7	0.60	3.5	0.17	0.09	0.22	0.12	50	215
60	12.24	12.23	33.280	25.210	276.3	0.183	5.15	84.6	7.9	0.91	8.8	0.02	0.00	0.09	0.10	60	214
71	10.82	10.81	33.226	25.428	255.7	0.212	4.86	77.4	11.7	1.19	13.3	0.01	0.00	0.05	0.07	71	213
75 ISL	10.60 D	10.59	33.350 D	25.563	242.9	0.222	4.62	73.3	13.9	1.32	15.4	0.01	0.02	0.05	0.06	75	
85	9.93	9.92	33.463	25.766	223.8	0.246	3.99	62.4	19.3	1.60	20.2	0.01	0.05	0.04	0.05	85	212
100 ISL	9.70 D	9.69	33.599 D	25.910	210.3	0.278	3.59	55.9	22.5	1.76	22.7	0.01	0.00	0.01	0.05	100	
101	9.70	9.69	33.595	25.907	210.6	0.280	3.57	55.6	22.6	1.77	22.8	0.01	0.00	0.01	0.05	102	211
121	9.40	9.39	33.785	26.105	192.2	0.320	2.97	46.0	27.4	1.97	25.9	0.00	0.00	0.01	0.05	122	210
125 ISL	9.17 D	9.16	33.809 D	26.161	186.9	0.328	3.00	46.2	27.7	1.95	25.8	0.00	0.00	0.01	0.04	126	
139	8.92	8.91	33.890 D	26.264	177.4	0.354	3.19	48.9	28.6	1.87	25.3	0.00	0.00	0.00	0.02	140	209
150 ISL	8.70 D	8.68	33.933 D	26.333	171.0	0.373	3.12	47.6	30.4	1.90	25.9	0.00	0.00	0.00	0.02	151	
171	8.38	8.36	33.976	26.416	163.4	0.408	2.78	42.1	34.4	2.03	27.8	0.00	0.00	0.00	0.02	172	208
199	8.15	8.13	34.029	26.492	156.6	0.453	2.28	34.4	38.9	2.21	30.0	0.00	0.00	0.00	0.02	200	207
200 ISL	8.13 D	8.11	34.029 D	26.495	156.3	0.454	2.27	34.2	39.1	2.22	30.1	0.00	0.00			201	
231	7.89	7.87	34.060	26.555	151.1	0.502	1.91	28.6	43.5	2.36	31.9	0.00	0.00			232	206
250 ISL	7.73 D	7.71	34.073 D	26.589	148.2	0.530	1.73	25.9	46.0	2.44	32.7	0.00	0.00			251	
273	7.54	7.51	34.093	26.633	144.4	0.564	1.53	22.8	49.1	2.53	33.7	0.00	0.00			275	205
300 ISL	7.31 D	7.28	34.123 D	26.689	139.3	0.602	1.25	18.5	53.5	2.65	35.0	0.00	0.00			302	
318	7.09	7.06	34.142	26.735	135.1	0.627	1.07	15.8	56.5	2.73	35.9	0.00	0.00			320	204
379	6.72	6.69	34.199	26.831	126.8	0.707	0.71	10.4	64.9	2.91	37.7	0.00	0.00			381	203
400 ISL	6.62 D	6.58	34.217 D	26.859	124.4	0.733	0.63	9.2	67.8	2.96	38.2	0.00	0.00			403	
444	6.19	6.15	34.231	26.926	118.2	0.787	0.50	7.2	73.8	3.04	39.3	0.00	0.00			447	202
500 ISL	5.72 D	5.68	34.236 D	26.989	112.5	0.851	0.39	5.6	81.0	3.11	40.6	0.00	0.00			503	
516	5.65	5.61	34.254	27.012	110.5	0.869	0.36	5.1	83.1	3.13	41.0	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 3.0 N	122 56.7 W	30/01/10	1648 UTC	4241 m	330 04 kn	320 04 09	1	1016.4 mb	14.0 C	11.9 C	10m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.55	13.55	32.925	24.677	325.6	0.000	6.14	103.5	3.6	0.41	0.5	0.03	0.06	1.03	0.23	0	
2	13.55	13.55	32.925	24.677	325.6	0.007	6.14	103.5	3.6	0.41	0.5	0.03	0.06	1.03	0.23	2	222
8	13.55	13.55	32.924	24.676	325.8	0.026	6.13	103.3	3.6	0.41	0.5	0.03	0.07	1.00	0.25	8	221
10 ISL	13.54 D	13.54	32.926 D	24.680	325.5	0.033	6.13	103.3	3.6	0.41	0.5	0.03	0.07	1.01	0.25	10	
16	13.54	13.54	32.925	24.679	325.8	0.052	6.13	103.3	3.6	0.40	0.5	0.03	0.08	1.06	0.26	16	220
20 ISL	13.54 D	13.54	32.934 D	24.686	325.2	0.065	6.13	103.3	3.6	0.40	0.5	0.03	0.08	1.06	0.26	20	
25	13.53	13.53	32.941	24.694	324.6	0.081	6.13	103.3	3.5	0.40	0.5	0.03	0.08	1.06	0.27	25	219
30 ISL	13.50 D	13.50	32.987 D	24.735	320.8	0.098	6.11	102.9	3.7	0.42	0.8	0.05	0.07	0.93	0.28	30	
32	13.48	13.48	33.004	24.753	319.2	0.104	6.09	102.5	3.8	0.43	0.9	0.06	0.06	0.86	0.28	32	218
40	13.33	13.32	33.055	24.823	312.7	0.129	5.97	100.2	4.0	0.49	1.6	0.13	0.00	0.56	0.27	40	217
47	13.15	13.14	33.052	24.856	309.7	0.151	5.86	98.0	4.2	0.54	2.3	0.19	0.09	0.31	0.20	47	223
50 ISL	12.64 D	12.63	33.076 D	24.975	298.5	0.160	5.78	95.6	4.9	0.62	3.7	0.16	0.05	0.23	0.16	50	
53	12.37	12.36	33.075	25.026	293.6	0.169	5.70	93.8	5.7	0.70	5.2	0.12	0.00	0.17	0.13	53	215
61	11.81	11.80	33.076	25.132	283.7	0.192	5.58	90.7	6.8	0.82	7.0	0.03	0.00	0.13	0.11	61	214
70	11.04	11.03	33.091	25.284	269.4	0.217	5.37	85.9	8.8	0.99	9.8	0.02	0.00	0.08	0.08	70	213
75 ISL	10.65 D	10.64	33.106 D	25.364	261.8	0.230	5.23	82.9	10.3	1.09	11.5	0.02	0.00	0.06	0.07	75	
85	10.00	9.99	33.200	25.549	244.4	0.256	4.87	76.2	13.8	1.31	15.1	0.01	0.00	0.03	0.05	85	212
99	9.59	9.58	33.439	25.803	220.4	0.288	4.15	64.4	19.7	1.60	20.1	0.00	0.00	0.01	0.05	99	211
100 ISL	9.60 D	9.59	33.463 D	25.820	218.8	0.290	4.11	63.8	20.0	1.62	20.4	0.00	0.00	0.01	0.05	100	
120	9.43	9.42	33.717	26.047	197.7	0.332	3.34	51.8	25.2	1.86	24.1	0.00	0.00	0.01	0.03	121	210
125 ISL	9.45 D	9.44	33.767 D	26.083	194.4	0.342	3.16	49.0	26.4	1.91	24.9	0.00	0.00	0.01	0.03	126	
141	9.10	9.08	33.870	26.220	181.6	0.372	2.71	41.7	29.9	2.04	27.0	0.00	0.00	0.00	0.05	142	209
150 ISL	8.95 D	8.93	33.926 D	26.288	175.3	0.388	2.60	39.9	31.2	2.08	27.6	0.00	0.00	0.00	0.05	151	
171	8.74	8.72	33.966	26.353	169.6	0.424	2.46	37.6	33.7	2.13	28.4	0.00	0.00	0.00	0.04	172	208
200 ISL	8.34 D	8.32	34.025 D	26.461	159.7	0.472	2.13	32.3	37.9	2.25	30.1	0.00	0.00	0.00	0.03	201	
203	8.32	8.30	34.025	26.464	159.5	0.477	2.09	31.6	38.4	2.26	30.3	0.00	0.00	0.00	0.03	204	207
230	7.79	7.77	34.058	26.568	149.8	0.518	1.78	26.6	44.9	2.42	32.5	0.00	0.00			231	206
250 ISL	7.62 D	7.60	34.070 D	26.603	146.8	0.548	1.61	24.0	47.8	2.50	33.4	0.00	0.00			251	
271	7.47	7.44	34.092	26.642	143.4	0.579	1.46	21.7	50.3	2.56	34.0	0.00	0.00			273	205
300 ISL	7.28 D	7.25	34.113 D	26.685	139.6	0.620	1.26	18.6	54.3	2.65	35.2	0.00	0.00			302	
321	7.01	6.98	34.112	26.722	136.3	0.649	1.13	16.6	57.4	2.72	36.1	0.00	0.00			323	204
382	6.36	6.33	34.133	26.826	126.9	0.729	0.86	12.4	66.9	2.90	38.2	0.00	0.00			384	203
400 ISL	6.27 D	6.23	34.145 D	26.847	125.1	0.751	0.79	11.4	69.4	2.94	38.7	0.00	0.00			403	
441	5.99	5.95	34.180	26.911	119.4	0.802	0.64	9.2	74.7	3.03	39.7	0.00	0.00			444	202
500 ISL	5.70 D	5.66	34.239 D	26.994	112.1	0.870	0.39	5.6	81.2	3.14	40.6	0.00	0.00			503	
517	5.74	5.70	34.272	27.016	110.3	0.889	0.32	4.6	83.1	3.17	40.8	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 43.2 N	123 37.8 W	30/01/10	0805 UTC	3348 m	270 03 kn			1015.7 mb	13.2 C	12.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.89	13.89	32.804	24.514	341.1	0.000	5.93	100.6	2.0	0.35	0.0	0.00	0.00	0.34	0.10	0	
3	13.89	13.89	32.804	24.514	341.1	0.010	5.93	100.6	2.0	0.35	0.0	0.00	0.00	0.34	0.10	3	220
10 ISL	13.89 D	13.89	32.806 D	24.516	341.2	0.034	5.93	100.6	2.2	0.35	0.0	0.00	0.00	0.33	0.10	10	
11	13.88	13.88	32.808	24.519	340.8	0.038	5.93	100.5	2.2	0.35	0.0	0.00	0.00	0.33	0.10	11	219
20	13.88	13.88	32.804	24.516	341.4	0.068	5.93	100.5	2.2	0.35	0.0	0.00	0.06	0.33	0.13	20	218
30	13.87	13.87	32.801	24.516	341.6	0.102	5.94	100.7	2.1	0.35	0.0	0.00	0.06	0.36	0.14	30	217
40	13.84	13.83	32.798	24.521	341.5	0.137	5.93	100.4	2.3	0.35	0.0	0.00	0.06	0.41	0.14	40	216
49	13.83	13.82	32.802	24.526	341.3	0.167	5.92	100.2	2.3	0.35	0.0	0.00	0.07	0.43	0.15	49	215
50 ISL	13.82 D	13.81	32.801 D	24.527	341.2	0.171	5.92	100.2	2.3	0.35	0.0	0.01	0.07	0.42	0.15	50	
61	13.45	13.44	32.881 D	24.664	328.4	0.207	5.88	98.8	2.5	0.40	0.4	0.07	0.06	0.32	0.19	61	214
71	11.92	11.91	32.884	24.963	300.0	0.239	5.88	95.7	4.9	0.66	4.0	0.02	0.00	0.20	0.15	71	213
75 ISL	11.16 D	11.15	32.849 D	25.074	289.4	0.251	5.88	94.1	5.2	0.69	4.3	0.02	0.00	0.17	0.13	75	
84	10.60	10.59	32.824	25.153	282.0	0.276	5.89	93.1	5.8	0.73	5.0	0.01	0.00	0.11	0.08	84	212
100 ISL	10.03 D	10.02	33.063 D	25.437	255.3	0.319	5.38	84.1	10.4	1.07	11.3	0.00	0.00	0.04	0.05	100	
101	10.04	10.03	33.052	25.427	256.3	0.322	5.34	83.5	10.7	1.09	11.7	0.00	0.00	0.04	0.05	101	211
120	9.74	9.73	33.299	25.670	233.6	0.368	4.81	74.9	14.7	1.29	15.6	0.00	0.00	0.01	0.02	121	210
125 ISL	9.59 D	9.58	33.354 D	25.737	227.2	0.380	4.62	71.7	16.9	1.40	17.3	0.00	0.01	0.01	0.02	126	
141	9.24	9.22	33.563	25.958	206.5	0.415	4.01	61.8	23.7	1.74	22.5	0.00	0.05	0.00	0.01	142	209
150 ISL	9.13 D	9.11	33.663 D	26.054	197.6	0.433	3.78	58.2	25.5	1.82	23.8	0.00	0.04	0.00	0.01	151	
170	8.97	8.95	33.762	26.157	188.2	0.471	3.39	52.0	27.9	1.90	25.4	0.00	0.00	0.00	0.01	171	208
200	8.51	8.49	33.928	26.359	169.4	0.525	2.82	42.9	32.9	2.04	27.9	0.00	0.00	0.00	0.01	201	207
228	8.02	8.00	33.978	26.472	159.0	0.571	2.65	39.8	37.4	2.11	29.1	0.00	0.00			229	206
250 ISL	7.66 D	7.64	33.988 D	26.532	153.5	0.605	2.58	38.5	40.7	2.16	29.9	0.00	0.00			251	
269	7.38	7.35	33.990	26.574	149.7	0.634	2.49	36.9	43.9	2.22	30.8	0.00	0.00			271	205
300 ISL	6.82 D	6.79	34.009 D	26.667	141.1	0.679	2.05	30.0	51.3	2.42	33.4	0.00	0.00			302	
319	6.67	6.64	34.031	26.704	137.7	0.706	1.74	25.4	56.0	2.55	35.1	0.00	0.00			321	204
383	6.13	6.10	34.081	26.814	127.8	0.791	1.06	15.3	67.1	2.84	38.6	0.00	0.00			385	203
400 ISL	6.01 D	5.98	34.091 D	26.838	125.8	0.812	0.97	13.9	69.9	2.89	39.1	0.00	0.00			403	
441	5.71	5.67	34.121	26.899	120.2	0.863	0.80	11.4	76.3	2.98	40.1	0.00	0.00			444	202
500 ISL	5.16 D	5.12	34.144 D	26.983	112.4	0.931	0.55	7.7	84.6	3.09	41.3	0.00	0.00			503	
520	5.23	5.19	34.187	27.009	110.3	0.954	0.46	6.5	87.4	3.13	41.7	0.00	0.00			524	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.2 N	124 19.7 W	30/01/10	0020 UTC	4577 m	230 09 kn	280 04 08	1	1014.2 mb	15.8 C	13.0 C	21m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.18	15.18	33.037	24.421	349.9	0.000	5.79	100.9	2.1	0.32	0.0	0.00	0.06	0.20	0.05	0	
2	15.18	15.18	33.037	24.421	350.0	0.007	5.79	100.9	2.1	0.32	0.0	0.00	0.06	0.20	0.05	2	220
10	15.18	15.18	33.036	24.420	350.3	0.035	5.79	100.9	2.1	0.33	0.0	0.00	0.00	0.20	0.06	10	219
20	15.17	15.17	33.039	24.425	350.1	0.070	5.79	100.9	2.0	0.32	0.0	0.00	0.00	0.20	0.05	20	218
30	15.04	15.04	33.045	24.458	347.3	0.105	5.81	101.0	2.0	0.33	0.0	0.00	0.00	0.28	0.08	30	217
40	14.90	14.89	33.046	24.490	344.6	0.139	5.83	101.1	2.2	0.34	0.0	0.00	0.00	0.37	0.14	40	216
50	14.49	14.48	33.021	24.558	338.3	0.174	5.82	100.0	2.4	0.37	0.2	0.04	0.00	0.52	0.23	50	215
60	14.07	14.06	33.036	24.658	329.1	0.207	5.75	98.0	3.0	0.44	1.3	0.11	0.00	0.32	0.18	60	214
70	13.17	13.16	33.018	24.827	313.2	0.239	5.69	95.2	4.4	0.59	3.5	0.07	0.00	0.17	0.13	70	213
75 ISL	12.72 D	12.71	33.026 D	24.921	304.2	0.255	5.66	93.8	5.0	0.66	4.5	0.05	0.00	0.13	0.11	75	
85	11.75	11.74	33.006	25.090	288.3	0.284	5.57	90.4	6.3	0.80	6.6	0.01	0.00	0.09	0.09	85	212
100 ISL	10.71	10.70	33.120 D	25.365	262.2	0.325	5.26	83.5	9.7	1.06	11.2	0.00	0.00	0.05	0.06	100	
101	10.66	10.65	33.095	25.355	263.3	0.328	5.23	82.9	10.0	1.08	11.5	0.00	0.00	0.05	0.06	101	211
121	10.16	10.15	33.398	25.677	233.0	0.378	4.23	66.5	17.5	1.55	19.2	0.00	0.00	0.04	0.04	122	210
125 ISL	10.07 D	10.06	33.470 D	25.748	226.3	0.387	4.07	63.9	18.8	1.61	20.3	0.00	0.00	0.03	0.04	126	
141	9.84	9.82	33.643	25.922	210.1	0.422	3.48	54.4	23.2	1.82	23.6	0.00	0.00	0.01	0.02	142	209
150 ISL	9.82 D	9.80	33.769 D	26.024	200.6	0.440	3.14	49.1	25.1	1.92	25.0	0.00	0.00	0.01	0.02	151	
171	9.58	9.56	33.878	26.149	189.1	0.481	2.41	37.5	28.9	2.12	27.6	0.00	0.00	0.01	0.02	172	208
200	9.20	9.18	34.035	26.334	172.1	0.534	1.72	26.6	34.8	2.30	30.0	0.00	0.00	0.00	0.02	201	207
231	9.03	9.00	34.098	26.411	165.3	0.586	1.40	21.5	37.8	2.41	31.2	0.00	0.00			232	206
250 ISL	8.85 D	8.82	34.132 D	26.467	160.4	0.617	1.25	19.2	39.5	2.47	31.8	0.00	0.00			251	
272	8.73	8.70	34.153	26.502	157.4	0.652	1.12	17.1	41.6	2.53	32.5	0.00	0.00			274	205
300 ISL	8.33 D	8.30	34.180 D	26.585	149.8	0.695	1.01	15.3	44.9	2.60	33.2	0.00	0.00			302	
321	8.22	8.19	34.187	26.608	148.0	0.726	0.95	14.4	47.5	2.65	33.7	0.00	0.00			323	204
381	7.62	7.58	34.222	26.724	137.6	0.812	0.78	11.6	55.1	2.81	35.3	0.00	0.00			383	203
400 ISL	7.39 D	7.35	34.208 D	26.746	135.7	0.838	0.73	10.8	57.7	2.85	35.9	0.00	0.00			403	
442	6.97	6.93	34.222	26.816	129.4	0.893	0.62	9.1	63.4	2.92	37.2	0.00	0.00			445	202
500 ISL	6.31 D	6.26	34.193 D	26.881	123.4	0.967	0.53	7.7	70.1	3.01	38.6	0.00	0.00			503	
516	6.34	6.29	34.224	26.902	121.7	0.986	0.51	7.4	71.9	3.04	39.0	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 27.7 N	120 29.2 W	28/01/10	0427 UTC	26 m	230 09 kn			1012.9 mb	15.0 C	11.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.31	14.31	33.231	24.756	318.0	0.000	5.65	96.9	4.7	0.69	0.9	0.24	1.71	0.60	0.37	0	
2	14.31	14.31	33.231	24.756	318.0	0.006	5.65	96.9	4.7	0.69	0.9	0.24	1.71	0.60	0.37	2	206
5	14.31	14.31	33.231	24.756	318.1	0.016	5.66	97.1	4.9	0.74	0.9	0.25	1.76	0.62	0.37	5	205
10	14.31	14.31	33.231	24.757	318.2	0.032	5.65	96.9	5.0	0.75	0.9	0.26	1.77	0.61	0.40	10	203
10	14.31	14.31	33.231	24.757	318.2	0.032										10	204
15	14.31	14.31	33.232	24.758	318.3	0.048	5.69	97.6	4.9	0.77	0.9	0.26	1.77	0.56	0.40	15	202
20	14.31	14.31	33.230	24.756	318.6	0.064	5.66	97.1	5.1	0.76	0.9	0.26	1.79	0.55	0.39	20	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 31.5 W	28/01/10	0522 UTC	80 m	280 05 kn			1013.7 mb	14.5 C	12.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.32	14.32	33.242	24.763	317.4	0.000	5.69	97.6	3.5	0.55	0.8	0.21	0.81	0.72	0.28	0	
1	14.32	14.32	33.242	24.763	317.4	0.003	5.69	97.6	3.5	0.55	0.8	0.21	0.81	0.72	0.28	1	209
5	14.32	14.32	33.242	24.763	317.5	0.016	5.67	97.3	3.7	0.66	0.9	0.20	0.99	0.69	0.29	5	208
10	14.33	14.33	33.242	24.761	317.8	0.032	5.67	97.3	3.7	0.56	0.8	0.21	0.86	0.73	0.24	10	207
20 ISL	14.33 D	14.33	33.253 D	24.770	317.3	0.064	5.65	96.9	3.9	0.57	1.0	0.22	0.79	0.67	0.27	20	
21	14.33	14.33	33.253	24.770	317.3	0.067	5.65	96.9	3.9	0.57	1.0	0.22	0.79	0.66	0.27	21	206
30 ISL	14.33 D	14.33	33.257 D	24.773	317.2	0.095	5.64	96.8	3.8	0.55	1.2	0.24	0.72	0.72	0.22	30	
31	14.33	14.33	33.260	24.775	317.0	0.098	5.64	96.8	3.8	0.55	1.2	0.24	0.71	0.73	0.21	31	205
41	14.33	14.32	33.271	24.784	316.5	0.130	5.64	96.8	4.1	0.57	1.2	0.24	0.76	0.61	0.24	41	204
50	14.25	14.24	33.307	24.829	312.5	0.158	5.61	96.1	4.1	0.55	1.7	0.25	0.50	0.52	0.23	50	203
60	14.20	14.19	33.328	24.856	310.2	0.190	5.57	95.3	4.1	0.56	2.0	0.24	0.37	0.50	0.22	60	202
70	14.08	14.07	33.332	24.885	307.8	0.220	5.50	93.9	4.7	0.58	2.4	0.24	0.27	0.39	0.23	70	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 18.5 N	120 48.7 W	28/01/10	0926 UTC	776 m	260 15 kn			1013.2 mb	14.0 C	12.3 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.96	13.96	33.289	24.874	306.8	0.000	5.76	98.1	3.5	0.52	1.7	0.20	0.16	0.80	0.34	0	
1	13.96	13.96	33.289	24.874	306.8	0.003	5.76	98.1	3.5	0.52	1.7	0.20	0.16	0.80	0.34	1	221
9	13.95	13.95	33.288	24.876	306.9	0.028	5.74	97.7	3.6	0.52	1.7	0.20	0.18	0.79	0.40	9	219
9	13.95	13.95	33.288	24.876	306.9	0.028										9	220
10 ISL	13.96 D	13.96	33.286 D	24.872	307.2	0.031	5.74	97.8	3.6	0.52	1.7	0.20	0.18	0.79	0.39	10	
19	13.94	13.94	33.290	24.880	306.8	0.058	5.74	97.7	3.6	0.52	1.7	0.20	0.17	0.76	0.31	19	218
20 ISL	13.92 D	13.92	33.292 D	24.885	306.3	0.061	5.72	97.3	3.7	0.53	1.8	0.21	0.16	0.73	0.30	20	
30	13.73	13.73	33.326	24.951	300.3	0.092	5.44	92.2	4.8	0.64	3.5	0.30	0.07	0.37	0.26	30	217
40	13.49	13.48	33.335	25.007	295.2	0.121	5.28	89.1	5.8	0.71	4.8	0.30	0.00	0.20	0.19	40	216
50	12.33	12.32	33.415	25.297	267.8	0.150	4.55	75.0	11.3	1.08	10.3	0.25	0.00	0.09	0.23	50	215
59	11.88	11.87	33.390	25.363	261.7	0.173	4.52	73.7	11.0	1.14	11.8	0.05	0.00	0.06	0.14	59	214
71	11.46	11.45	33.445	25.484	250.5	0.204	4.17	67.4	13.4	1.29	14.4	0.03	0.00	0.05	0.13	71	213
75 ISL	11.39 D	11.38	33.462 D	25.510	248.1	0.214	4.07	65.7	14.2	1.33	15.0	0.03	0.00	0.05	0.12	75	
85	11.17	11.16	33.540	25.611	238.7	0.239	3.80	61.1	16.5	1.45	16.7	0.03	0.00	0.04	0.11	85	212
100	10.64	10.63	33.670	25.806	220.4	0.273	3.24	51.6	21.0	1.69	20.2	0.01	0.00	0.02	0.11	101	211
123	10.40	10.39	33.739	25.902	211.8	0.323	2.98	47.2	23.1	1.79	21.9	0.01	0.00	0.01	0.10	124	210
125 ISL	10.34 D	10.33	33.756 D	25.926	209.6	0.327	2.94	46.5	23.4	1.80	22.1	0.01	0.00	0.01	0.10	126	
142	10.01	9.99	33.852	26.057	197.4	0.361	2.61	41.0	26.9	1.94	24.3	0.01	0.00	0.01	0.10	143	209
150 ISL	9.73 D	9.71	33.904 D	26.145	189.2	0.377	2.44	38.1	29.2	2.02	25.4	0.02	0.00	0.01	0.10	151	
173	9.10	9.08	34.062	26.371	168.0	0.418	2.00	30.8	35.4	2.23	28.2	0.03	0.00	0.00	0.09	174	208
200 ISL	8.85 D	8.83	34.104 D	26.444	161.5	0.462	1.61	24.7	39.4	2.38	30.0	0.01	0.00	0.00	0.06	201	
202	8.84	8.82	34.125	26.462	159.9	0.466	1.59	24.4	39.6	2.39	30.1	0.01	0.00	0.00	0.06	203	207
230	8.58	8.56	34.154	26.526	154.3	0.510	1.43	21.8	42.8	2.47	31.2	0.00	0.00			231	206
250 ISL	8.50 D	8.47	34.156 D	26.540	153.3	0.540	1.38	21.0	44.2	2.51	31.7	0.00	0.00			251	
272	8.33	8.30	34.171	26.578	150.0	0.574	1.34	20.3	45.5	2.54	32.1	0.00	0.00			274	205
300 ISL	8.22 D	8.19	34.189 D	26.609	147.5	0.615	1.19	18.0	48.1	2.61	32.7	0.00	0.00			302	
324	8.01	7.98	34.200	26.649	144.0	0.650	1.05	15.8	50.4	2.67	33.3	0.00	0.00			326	204
379	7.61	7.57	34.225	26.728	137.3	0.728	0.90	13.4	55.2	2.76	34.8	0.00	0.00			381	203
400 ISL	7.51 D	7.47	34.227 D	26.744	136.0	0.756	0.88	13.1	57.2	2.79	35.4	0.00	0.00			403	
439	7.03	6.99	34.199	26.790	131.9	0.809	0.83	12.2	61.2	2.84	36.6	0.00	0.00			442	202
500 ISL	6.68 D	6.63	34.254 D	26.881	123.9	0.887	0.53	7.7	69.1	2.98	38.0	0.00	0.00			503	
512	6.57	6.52	34.260	26.901	122.1	0.901	0.47	6.8	70.6	3.01	38.3	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 9.1 N	121 9.4 W	28/01/10	1341 UTC	1138 m	270 15 kn			1014.3 mb	13.3 C	11.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.93	13.93	33.276	24.870	307.1	0.000	5.78	98.4	3.1	0.51	1.5	0.21	0.12	0.83	0.35	0	
3	13.93	13.93	33.276	24.870	307.2	0.009	5.78	98.4	3.1	0.51	1.5	0.21	0.12	0.83	0.35	3	220
10	13.93	13.93	33.277	24.871	307.3	0.031	5.79	98.5	3.3	0.50	1.5	0.21	0.12	0.82	0.35	10	219
20	13.93	13.93	33.278	24.872	307.5	0.061	5.77	98.2	3.3	0.50	1.5	0.20	0.12	0.82	0.35	20	218
30	13.93	13.93	33.278	24.873	307.7	0.092	5.77	98.2	3.4	0.51	1.6	0.21	0.13	0.77	0.37	30	217
39	13.80	13.79	33.286	24.906	304.8	0.120	5.74	97.4	3.4	0.51	1.9	0.21	0.13	0.68	0.36	39	216
50	13.64	13.63	33.302	24.951	300.8	0.153	5.64	95.4	4.0	0.57	2.5	0.23	0.21	0.33	0.27	50	215
60	13.57	13.56	33.314	24.975	298.8	0.183	5.54	93.6	4.6	0.61	3.2	0.25	0.27	0.21	0.20	60	214
70	13.32	13.31	33.338	25.044	292.5	0.213	5.32	89.4	5.8	0.74	4.9	0.29	0.22	0.16	0.19	70	213
75 ISL	12.87 D	12.86	33.369 D	25.158	281.8	0.227	5.08	84.6	7.4	0.86	6.9	0.24	0.14	0.13	0.18	75	
84	12.17	12.16	33.399	25.316	266.8	0.252	4.62	75.8	10.5	1.07	10.8	0.12	0.00	0.09	0.15	84	212
100 ISL	11.42 D	11.41	33.458 D	25.502	249.5	0.293	4.21	68.0	13.7	1.27	14.2	0.04	0.00	0.07	0.14	100	
102	11.41	11.40	33.462	25.507	249.0	0.298	4.18	67.5	14.0	1.29	14.5	0.04	0.00	0.07	0.14	102	211
119	10.70	10.69	33.533	25.689	231.9	0.339	3.87	61.6	16.8	1.48	17.7	0.02	0.00	0.03	0.11	120	210
125 ISL	10.51 D	10.50	33.618 D	25.789	222.6	0.352	3.69	58.5	18.2	1.55	18.8	0.02	0.00	0.02	0.10	126	
141	10.21	10.19	33.726	25.925	210.0	0.387	3.21	50.6	22.2	1.73	21.6	0.01	0.00	0.01	0.06	142	209
150 ISL	9.92 D	9.90	33.797 D	26.029	200.2	0.406	3.04	47.6	23.9	1.81	22.7	0.01	0.00	0.01	0.06	151	
172	9.65	9.63	33.887	26.145	189.6	0.448	2.76	43.0	27.3	1.95	24.7	0.01	0.00	0.00	0.05	173	208
200	9.17	9.15	33.985	26.300	175.3	0.500	2.51	38.7	30.7	2.05	26.7	0.00	0.00	0.00	0.05	201	207
232	8.62	8.60	34.068	26.452	161.3	0.553	2.14	32.6	36.9	2.23	29.1	0.00	0.00			233	206
250 ISL	8.31 D	8.28	34.069 D	26.500	156.9	0.582	1.96	29.7	39.9	2.31	30.2	0.00	0.00			251	
274	8.11	8.08	34.108	26.561	151.5	0.619	1.73	26.1	43.7	2.41	31.6	0.00	0.00			276	205
300 ISL	7.76 D	7.73	34.116 D	26.620	146.2	0.658	1.51	22.6	48.0	2.52	33.1	0.00	0.00			302	
319	7.51	7.48	34.127	26.664	142.1	0.685	1.36	20.2	50.9	2.60	34.1	0.00	0.00			321	204
381	7.11	7.07	34.174	26.758	134.0	0.771	0.95	14.0	58.2	2.79	36.1	0.00	0.00			383	203
400 ISL	7.04 D	7.00	34.179 D	26.772	132.9	0.796	0.89	13.1	59.9	2.82	36.5	0.00	0.00			403	
440	6.79	6.75	34.191	26.816	129.2	0.848	0.79	11.6	63.5	2.89	37.2	0.00	0.00			443	202
500 ISL	6.22 D	6.18	34.216 D	26.911	120.5	0.923	0.58	8.4	71.9	3.02	39.0	0.00	0.00			503	
516	6.11	6.06	34.217	26.926	119.2	0.943	0.52	7.5	74.2	3.06	39.5	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.1 N	121 50.8 W	28/01/10	2005 UTC	3635 m	270 10 kn	280 04 08	1	1016.7 mb	14.1 C	12.2 C	14m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.83	13.83	33.064	24.727	320.8	0.000	5.99	101.6	3.4	0.46	0.9	0.07	0.08	0.73	0.21	0	
2	13.83	13.83	33.064	24.727	320.8	0.006	5.99	101.6	3.4	0.46	0.9	0.07	0.08	0.73	0.21	2	220
10 ISL	13.74 D	13.74	33.062 D	24.744	319.4	0.032	6.01	101.8	3.3	0.45	0.8	0.07	0.05	0.77	0.22	10	
11	13.74	13.74	33.062	24.744	319.4	0.035	6.01	101.8	3.3	0.45	0.8	0.07	0.05	0.77	0.22	11	219
20 ISL	13.73 D	13.73	33.071 D	24.753	318.8	0.064	5.99	101.4	3.4	0.46	0.9	0.08	0.05	0.74	0.25	20	
24	13.74	13.74	33.102	24.776	316.8	0.077	5.98	101.3	3.5	0.46	1.0	0.08	0.05	0.73	0.26	24	218
30 ISL	13.70 D	13.70	33.117 D	24.795	315.1	0.096	5.94	100.5	3.5	0.46	1.0	0.09	0.07	0.64	0.23	30	
35	13.70	13.70	33.117	24.796	315.2	0.111	5.91	100.0	3.5	0.47	1.1	0.10	0.08	0.55	0.21	35	217
45	13.64	13.63	33.116	24.807	314.4	0.143	5.86	99.0	3.5	0.49	1.4	0.11	0.08	0.41	0.20	45	216
50 ISL	13.63 D	13.62	33.118 D	24.811	314.1	0.159	5.87	99.2	3.6	0.49	1.4	0.12	0.08	0.40	0.20	50	
55	13.61	13.60	33.120	24.817	313.7	0.174	5.88	99.3	3.7	0.50	1.5	0.13	0.08	0.39	0.19	55	215
65	13.41	13.40	33.118	24.856	310.3	0.205	5.79	97.4	3.7	0.53	2.1	0.17	0.08	0.26	0.15	65	214
75	12.33	12.32	33.132	25.078	289.2	0.235	5.61	92.3	5.4	0.70	4.9	0.11	0.00	0.13	0.10	75	213
85	11.58	11.57	33.136	25.222	275.7	0.264	5.45	88.2	7.0	0.84	7.2	0.04	0.00	0.09	0.08	85	212
100	10.19	10.18	33.167	25.491	250.2	0.303	5.11	80.3	11.2	1.16	12.6	0.01	0.00	0.04	0.04	100	211
120	9.70	9.69	33.508	25.840	217.4	0.350	3.95	61.5	20.6	1.71	21.4	0.00	0.00	0.01	0.04	121	210
125 ISL	9.59 D	9.58	33.549 D	25.890	212.8	0.361	3.85	59.8	21.8	1.73	22.2	0.00	0.00	0.01	0.04	126	
140	9.25	9.23	33.673	26.042	198.5	0.391	3.64	56.2	24.3	1.80	23.3	0.00	0.00	0.01	0.03	141	209
150 ISL	9.30 D	9.28	33.772 D	26.112	192.2	0.411	3.29	50.9	26.7	1.90	24.8	0.00	0.00	0.01	0.03	151	
169	8.91	8.89	33.919	26.289	175.6	0.446	2.72	41.7	30.9	2.08	27.3	0.00	0.00	0.00	0.03	170	208
200	8.32	8.30	33.970	26.420	163.5	0.499	2.96	44.8	33.9	2.04	27.6	0.00	0.00	0.00	0.02	201	207
230	8.02	8.00	34.032	26.514	155.0	0.546	2.32	34.9	39.9	2.27	30.3	0.00	0.00			231	206
250 ISL	7.90 D	7.87	34.056 D	26.551	151.9	0.577	1.97	29.5	43.1	2.40	31.9	0.00	0.00			251	
270	7.73	7.70	34.073	26.589	148.5	0.607	1.68	25.1	46.1	2.51	33.2	0.00	0.00			272	205
300 ISL	7.21 D	7.18	34.059 D	26.653	142.7	0.651	1.43	21.1	50.8	2.61	34.5	0.00	0.00			302	
320	7.24	7.21	34.118	26.695	139.0	0.679	1.32	19.5	53.8	2.66	35.1	0.00	0.00			322	204
380	6.75	6.71	34.147	26.786	131.0	0.760	0.97	14.2	62.4	2.86	37.4	0.00	0.00			382	203
400 ISL	6.49 D	6.45	34.152 D	26.824	127.5	0.786	0.83	12.1	65.1	2.93	38.0	0.00	0.00			403	
440	6.43	6.39	34.227	26.892	121.7	0.836	0.56	8.1	70.1	3.05	38.9	0.00	0.00			443	202
500 ISL	6.10 D	6.06	34.267 D	26.967	115.1	0.907	0.39	5.6	75.9	3.15	39.9	0.00	0.00			503	
516	6.10	6.05	34.282	26.979	114.2	0.925	0.34	4.9	77.5	3.18	40.2	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 29.1 N	122 32.2 W	29/01/10	0231 UTC	3997 m	250 12 kn			1017.1 mb	12.5 C	10.3 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.41	13.41	33.088	24.831	310.9	0.000	6.09	102.4	4.3	0.46	1.4	0.08	0.05	0.86	0.16	0	
2	13.41	13.41	33.088	24.831	310.9	0.006	6.09	102.4	4.3	0.46	1.4	0.08	0.05	0.86	0.16	2	220
10	13.42	13.42	33.088	24.829	311.3	0.031	6.10	102.6	4.2	0.45	1.4	0.08	0.06	0.85	0.16	10	219
20	13.36	13.36	33.088	24.842	310.4	0.062	6.08	102.1	4.1	0.46	1.4	0.08	0.09	0.96	0.17	20	218
30	13.36	13.36	33.091	24.844	310.4	0.093	6.07	102.0	4.2	0.45	1.4	0.09	0.06	0.88	0.17	30	217
41	13.31	13.30	33.124	24.880	307.3	0.127	5.99	100.5	4.1	0.46	1.6	0.13	0.10	0.65	0.17	41	216
50	12.69	12.68	33.167	25.036	292.7	0.154	5.68	94.1	5.4	0.68	4.9	0.16	0.00	0.29	0.16	50	215
61	11.40	11.39	33.351	25.421	256.2	0.184	4.65	75.1	11.2	1.20	13.3	0.01	0.00	0.10	0.09	61	214
69	10.34	10.33	33.378	25.630	236.4	0.204	4.33	68.3	15.9	1.46	17.4	0.01	0.00	0.06	0.06	69	213
75 ISL	9.71 D	9.70	33.364 D	25.725	227.4	0.218	4.34	67.5	17.4	1.50	18.6	0.01	0.00	0.04	0.05	75	
85	9.55	9.54	33.387	25.769	223.4	0.241	4.35	67.5	18.9	1.56	19.4	0.01	0.00	0.03	0.04	85	212
100 ISL	9.39 D	9.38	33.561 D	25.931	208.3	0.273	3.79	58.6	22.9	1.77	22.6	0.01	0.00	0.01	0.03	100	
101	9.39	9.38	33.570	25.938	207.6	0.275	3.75	58.0	23.2	1.78	22.8	0.01	0.00	0.01	0.03	102	211
120	9.22	9.21	33.725	26.087	193.8	0.313	3.36	51.8	26.2	1.88	24.7	0.00	0.00	0.01	0.03	121	210
125 ISL	8.93 D	8.92	33.725 D	26.133	189.5	0.323	3.21	49.2	27.6	1.94	25.6	0.00	0.00	0.01	0.03	126	
141	8.71	8.70	33.858	26.272	176.6	0.352	2.77	42.3	32.0	2.12	28.1	0.00	0.00	0.00	0.02	142	209
150 ISL	8.65 D	8.63	33.922 D	26.332	171.1	0.368	2.67	40.7	33.1	2.13	28.5	0.00	0.00	0.00	0.02	151	
171	8.43	8.41	33.970	26.403	164.6	0.403	2.53	38.4	35.0	2.15	29.0	0.00	0.00	0.00	0.02	172	208
200	8.01	7.99	34.024	26.509	155.0	0.449	2.13	32.0	40.6	2.31	31.3	0.00	0.00	0.00	0.01	201	207
230	7.68	7.66	34.044	26.573	149.3	0.495	1.89	28.2	45.0	2.41	32.6	0.00	0.00			231	206
250 ISL	7.34 D	7.32	34.053 D	26.629	144.2	0.524	1.84	27.2	48.4	2.46	33.4	0.00	0.00			251	
272	6.97	6.94	34.031	26.663	141.1	0.556	1.78	26.1	52.3	2.53	34.4	0.00	0.00			274	205
300 ISL	6.81 D	6.78	34.072 D	26.718	136.3	0.594	1.46	21.4	57.5	2.67	36.1	0.00	0.00			302	
320	6.53	6.50	34.072	26.755	132.8	0.621	1.22	17.7	61.2	2.77	37.3	0.00	0.00			322	204
379	5.91	5.88	34.092	26.851	124.1	0.697	1.02	14.6	70.5	2.91	39.0	0.00	0.00			381	203
400 ISL	5.74 D	5.71	34.101 D	26.879	121.6	0.723	0.92	13.1	73.7	2.96	39.6	0.00	0.00			403	
441	5.49	5.45	34.142	26.942	115.9	0.772	0.70	9.9	79.8	3.06	40.7	0.00	0.00			444	202
500 ISL	5.25 D	5.21	34.204 D	27.020	109.0	0.838	0.42	5.9	87.4	3.17	41.7	0.00	0.00			503	
516	5.22	5.18	34.236	27.049	106.5	0.855	0.35	4.9	89.5	3.20	42.0	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 8.6 N	123 13.6 W	29/01/10	1015 UTC	4229 m	160 02 kn			1017.1 mb	12.3 C	10.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.05	14.05	32.822	24.495	342.9	0.000	5.92	100.7	2.6	0.35	0.0	0.00	0.05	0.35	0.11	0	
2	14.05	14.05	32.822	24.495	342.9	0.007	5.92	100.7	2.6	0.35	0.0	0.00	0.05	0.35	0.11	2	222
10	14.05	14.05	32.826	24.498	342.8	0.034	5.93	100.9	2.5	0.34	0.0	0.00	0.00	0.33	0.10	10	221
20	14.02	14.02	32.818	24.498	343.1	0.069	5.95	101.2	2.3	0.35	0.0	0.00	0.06	0.38	0.11	20	220
30 ISL	13.93 D	13.93	32.809 D	24.510	342.2	0.103	5.92	D100.5	2.6	0.35	0.1	0.01	0.01	0.48	0.15	30	
31	13.93	13.93	32.809	24.510	342.2	0.106	5.93	100.6	2.6	0.35	0.1	0.01	0.00	0.49	0.16	31	219
40	13.61	13.60	32.826	24.589	335.0	0.137	5.90	99.5	3.0	0.40	0.6	0.05	0.00	0.49	0.19	40	218
50	12.67	12.66	32.864	24.805	314.6	0.169	5.87	97.1	4.0	0.54	2.4	0.08	0.06	0.34	0.20	50	217
60	11.40	11.39	32.918	25.085	288.1	0.199	5.84	94.0	4.9	0.63	3.6	0.03	0.00	0.16	0.21	60	216
70	11.05	11.04	32.915	25.145	282.5	0.228	5.77	92.2	6.3	0.76	5.6	0.02	0.00	0.14	0.11	70	215
75 ISL	10.98 D	10.97	32.974 D	25.204	277.1	0.242	5.70 D	91.0	7.1	0.83	6.7	0.02	0.00	0.11	0.08	75	
84	10.17	10.16	32.959	25.332	265.0	0.266	5.54	86.9	8.8	0.96	9.1	0.01	0.00	0.06	0.05	84	214
100	9.67	9.66	33.097	25.523	247.0	0.307	5.11	79.3	13.8	1.28	14.7	0.01	0.05	0.03	0.05	100	213
120	9.33	9.32	33.435	25.843	217.0	0.354	4.24	65.4	20.5	1.59	20.2	0.00	0.00	0.01	0.03	121	212
125 ISL	9.30 D	9.29	33.496 D	25.895	212.2	0.364	3.91	60.3	22.5	1.70	21.8	0.00	0.00	0.01	0.03	126	
139	9.34	9.32	33.715	26.060	196.8	0.393	3.10	47.9	27.3	1.95	25.6	0.00	0.00	0.00	0.05	140	211
150 ISL	8.99 D	8.97	33.783 D	26.170	186.6	0.414	3.14	48.2	28.4	1.93	25.6	0.00	0.00	0.00	0.04	151	
171	8.62	8.60	33.896	26.316	173.0	0.452	3.21	48.9	29.6	1.90	25.7	0.00	0.00	0.00	0.02	172	210
200 ISL	8.21 D	8.19	33.997 D	26.458	159.9	0.500	2.51	37.9	36.6	2.14	29.1	0.00	0.00	0.00	0.02	201	
201	8.24	8.22	33.999	26.455	160.2	0.502	2.48	37.5	36.9	2.15	29.2	0.00	0.00	0.00	0.02	202	209
230	7.92	7.90	34.046	26.540	152.6	0.547	2.08	31.2	42.3	2.31	31.1	0.00	0.00			231	208
250 ISL	7.66 D	7.64	34.044 D	26.577	149.3	0.577	1.89	28.2	45.6	2.40	32.3	0.00	0.00			251	
270	7.50	7.47	34.070	26.620	145.4	0.607	1.70	25.3	48.5	2.48	33.3	0.00	0.00			272	207
300 ISL	7.57 D	7.54	34.155 D	26.677	140.6	0.650	1.30	19.4	52.4	2.63	34.4	0.00	0.00			302	
320	7.35	7.32	34.172	26.722	136.5	0.677	1.05	15.6	54.9	2.72	35.0	0.00	0.00			322	206
381	6.80	6.76	34.208	26.827	127.2	0.758	0.69	10.1	64.3	2.92	37.3	0.00	0.00			383	205
400 ISL	6.59 D	6.55	34.208 D	26.855	124.7	0.782	0.60	8.7	66.4	2.96	37.7	0.00	0.00			403	
441	6.52	6.48	34.258	26.905	120.6	0.832	0.45	6.5	70.6	3.04	38.5	0.00	0.00			444	204
500 ISL	5.96 D	5.92	34.259 D	26.978	113.9	0.901	0.38	5.5	78.6	3.12	40.0	0.00	0.00			503	
513	5.83	5.79	34.253	26.989	112.8	0.916	0.37	5.3	80.4	3.14	40.4	0.00	0.00			517	203
600 CSL	5.12	5.07	34.279	27.096	103.0	1.010	0.27	3.8								604	200
700 CSL	4.72	4.66	34.329	27.181	95.5	1.109	0.22	3.1								705	200
800 CSL	4.41	4.35	34.401	27.273	87.4	1.200	0.28	3.9								806	200
900 CSL	4.16	4.09	34.442	27.333	82.3	1.285	0.39	5.4								907	200
1000 CSL	3.91	3.83	34.475	27.386	77.7	1.365	0.52	7.1								1008	200
1100 CSL	3.64	3.56	34.500	27.433	73.5	1.441	0.65	8.8								1110	200
1200 CSL	3.44	3.35	34.517	27.467	70.6	1.513	0.74	10.0								1211	200
1300 CSL	3.21	3.12	34.532	27.501	67.5	1.582	0.86	11.5								1312	200
1400 CSL	2.96	2.86	34.541	27.531	64.5	1.648	0.97	12.9								1413	200
1500 CSL	2.77	2.66	34.557	27.562	61.7	1.711	1.10	14.6								1515	200
1600 CSL	2.63	2.52	34.569	27.584	59.7	1.772	1.21	16.0								1616	200
1800 CSL	2.28	2.15	34.593	27.633	54.8	1.886	1.46	19.1								1819	200
2000 CSL	2.06	1.92	34.614	27.669	51.5	1.993	1.74	22.7								2022	200
2200 CSL	1.90	1.75	34.629	27.694	49.2	2.093	1.98	25.7								2225	200
2400 CSL	1.80	1.63	34.641	27.713	47.8	2.190	2.20	28.5								2429	200
2600 CSL	1.72	1.53	34.649	27.726	46.9	2.285	2.37	30.6								2633	200
2800 CSL	1.66	1.46	34.656	27.737	46.2	2.378	2.52	32.5								2837	200
3000 CSL	1.61	1.39	34.661	27.746	45.8	2.470	2.63	33.8								3041	200
3200 CSL	1.56	1.32	34.666	27.755	45.4	2.561	2.77	35.6								3245	200
3400 CSL	1.53	1.27	34.671	27.763	45.1	2.652	2.91	37.3								3449	200
3505	1.52	1.25	34.677	27.769	44.9	2.699	2.89	37.0	175.2	2.71	38.6	0.00	0.00			3557	201
3505	1.52	1.25	34.675	27.767	45.0	2.699										3557	202

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 48.8 N	123 54.5 W	29/01/10	1736 UTC	4365 m	150 10 kn	250 04 05	1	1016.8 mb	15.9 C	13.6 C	20m	5/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.84	14.84	32.988	24.456	346.5	0.000	5.84	101.1	2.0	0.35	0.0	0.00	0.00	0.32	0.19	0	
2	14.84	14.84	32.988	24.456	346.6	0.007	5.84	101.1	2.0	0.35	0.0	0.00	0.00	0.32	0.19	2	222
8	14.83	14.83	32.988	24.459	346.6	0.028	5.84	101.1	2.3	0.34	0.0	0.00	0.00	0.37	0.13	8	221
10 ISL	14.82 D	14.82	32.988 D	24.461	346.4	0.035	5.84	101.0	2.3	0.34	0.0	0.00	0.00	0.38	0.13	10	
16	14.82	14.82	32.990	24.463	346.4	0.055	5.85	101.2	2.3	0.34	0.0	0.00	0.00	0.40	0.13	16	220
20 ISL	14.82 D	14.82	32.990 D	24.463	346.5	0.069	5.86	101.4	2.2	0.34	0.0	0.00	0.03	0.41	0.13	20	
24	14.82	14.82	32.993	24.465	346.4	0.083	5.87	101.6	2.1	0.34	0.0	0.00	0.05	0.41	0.13	24	219
30 ISL	14.82 D	14.82	32.991 D	24.464	346.7	0.104	5.85	101.2	2.2	0.33	0.0	0.00	0.02	0.41	0.13	30	
33	14.82	14.82	32.994	24.466	346.6	0.114	5.84	101.0	2.2	0.33	0.0	0.00	0.00	0.41	0.13	33	218
42	14.82	14.81	32.991	24.464	347.0	0.146	5.84	101.0	2.2	0.34	0.0	0.00	0.00	0.41	0.13	42	217
50 ISL	14.76 D	14.75	32.981 D	24.470	346.7	0.173	5.84	100.9	2.0	0.34	0.0	0.00	0.00	0.41	0.14	50	
51	14.81	14.80	32.992	24.468	347.0	0.177	5.84	101.0	2.0	0.34	0.0	0.00	0.00	0.41	0.14	51	216
57	14.62	14.61	32.961	24.484	345.5	0.198	5.80	99.9	2.3	0.37	0.1	0.02	0.00	0.43	0.19	57	215
64	14.54	14.53	32.953	24.495	344.7	0.222	5.80	99.7	2.4	0.36	0.2	0.03	0.00	0.34	0.18	64	214
75 ISL	14.27 D	14.26	32.952 D	24.552	339.6	0.259	5.79	99.0	2.5	0.40	0.7	0.09	0.04	0.21	0.13	75	
79	14.08	14.07	32.953	24.592	335.8	0.273	5.79	98.6	2.6	0.42	0.9	0.11	0.05	0.17	0.11	79	213
94	13.03	13.02	32.954	24.805	315.8	0.322	5.82	97.0	3.7	0.52	2.2	0.10	0.00	0.12	0.10	94	212
100 ISL	11.36 D	11.35	32.909 D	25.086	288.9	0.340	5.77	92.8	5.5	0.69	4.7	0.05	0.00	0.10	0.09	100	
106	10.95	10.94	32.928	25.174	280.6	0.357	5.68	90.6	7.4	0.87	7.4	0.01	0.00	0.08	0.08	106	211
121	10.31	10.30	33.111	25.428	256.7	0.397	5.34	84.1	9.4	0.99	10.2	0.00	0.00	0.04	0.04	122	210
125 ISL	10.22 D	10.21	33.124 D	25.453	254.4	0.407	5.26	82.6	10.2	1.04	11.1	0.00	0.00	0.04	0.04	126	
141	9.68	9.66	33.225	25.622	238.5	0.447	4.96	77.0	13.7	1.24	14.5	0.00	0.00	0.03	0.03	142	209
150 ISL	9.48 D	9.46	33.295 D	25.710	230.3	0.468	4.80	74.3	15.5	1.33	16.0	0.00	0.00	0.02	0.02	151	
171	9.26	9.24	33.533	25.931	209.6	0.514	4.37	67.4	20.0	1.52	19.2	0.00	0.00	0.01	0.01	172	208
200 ISL	8.78 D	8.76	33.838 D	26.246	180.2	0.571	3.43	52.4	27.9	1.83	24.7	0.00	0.00	0.00	0.01	201	
201	8.78	8.76	33.839	26.247	180.1	0.573	3.40	52.0	28.2	1.84	24.9	0.00	0.00	0.00	0.01	202	207
230	8.59	8.57	33.965	26.376	168.4	0.623	2.59	39.4	33.4	2.09	28.2	0.00	0.00			231	206
250 ISL	7.99 D	7.96	33.978 D	26.477	158.9	0.656	2.43	36.5	37.4	2.17	29.5	0.00	0.00			251	
269	7.77	7.74	33.994	26.522	154.9	0.686	2.37	35.4	41.1	2.23	30.5	0.00	0.00			270	205
300 ISL	7.38 D	7.35	34.024 D	26.601	147.6	0.733	1.97	29.2	46.3	2.39	32.4	0.00	0.00			302	
320	7.33	7.30	34.057	26.635	144.8	0.762	1.69	25.0	49.5	2.50	33.6	0.00	0.00			322	204
381	6.81	6.77	34.120	26.756	133.9	0.847	1.09	15.9	59.1	2.75	36.5	0.00	0.00			383	203
400 ISL	6.71 D	6.67	34.148 D	26.792	130.7	0.872	0.95	13.9	61.9	2.82	37.2	0.00	0.00			402	
440	6.46	6.42	34.170	26.843	126.3	0.923	0.73	10.6	67.9	2.94	38.4	0.00	0.00			443	202
500 ISL	5.75 D	5.71	34.156 D	26.922	118.9	0.997	0.68	9.7	77.2	3.02	40.0	0.00	0.00			503	
517	5.58	5.54	34.148	26.937	117.5	1.017	0.66	9.4	79.8	3.04	40.4	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 81.7 43.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 24.1 N	119 48.1 W	27/01/10	2056 UTC	27 m	120 03 kn	220 01 07	1	1011.8 mb	15.7 C	13.0 C		2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.72	14.72	33.220	24.661	327.1	0.000	5.75	99.4	4.3	0.55	1.3	0.35	0.90	1.29	0.26	0	
2	14.72	14.72	33.220	24.661	327.1	0.007	5.75	99.4	4.3	0.55	1.3	0.35	0.90	1.29	0.26	2	205
5	14.70	14.70	33.228	24.672	326.2	0.016	5.73	99.0	4.3	0.55	1.3	0.35	0.88	1.13	0.26	5	204
10	14.59	14.59	33.279	24.734	320.3	0.033	5.69	98.2	3.7	0.48	1.1	0.37	0.76	0.98	0.37	10	203
15	14.58	14.58	33.276	24.734	320.5	0.049	5.65	97.4	3.8	0.51	1.1	0.38	0.91	0.79	0.39	15	202
18	14.57	14.57	33.275	24.736	320.4	0.058	5.64	97.3	3.9	0.51	1.1	0.38	0.95	0.79	0.40	18	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 16.3 N	120 1.4 W	27/01/10	2311 UTC	582 m	200 11 kn	270 01 06	1	1010.5 mb	16.3 C	14.0 C	11m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.37	14.37	33.336	24.825	311.5	0.000	5.85	100.5	3.7	0.44	1.3	0.17	0.04	1.26	0.26	0	
2 A	14.37	14.37	33.336	24.825	311.5	0.006	5.85	100.5	3.7	0.44	1.3	0.17	0.04	1.26	0.26	2	224
10 ISL	13.99 D	13.99	33.322 D	24.894	305.2	0.031	5.88	100.2	3.6	0.45	1.3	0.15	0.04	1.38	0.36	10	
11	13.98	13.98	33.317 D	24.892	305.4	0.034	5.88	D100.2								11	223
19	13.87	13.87	33.311	24.910	303.9	0.058	5.88	100.0	3.5	0.46	1.4	0.12	0.04	1.53	0.49	19	222
20 ISL	13.87 D	13.87	33.312 D	24.911	303.8	0.061	5.88	100.0	3.5	0.46	1.4	0.12	0.04	1.53	0.49	20	
29	13.84	13.84	33.309	24.915	303.7	0.089	5.88	99.9	3.5	0.47	1.5	0.13	0.06	1.51	0.46	29	221
30 ISL	13.84 D	13.84	33.310 D	24.916	303.6	0.092	5.87	99.7	3.5	0.47	1.5	0.13	0.06	1.50	0.46	30	
40	13.82	13.81	33.310	24.920	303.5	0.122	5.78	98.2	3.7	0.47	1.7	0.15	0.06	1.19	0.43	40	220
49	13.22	13.21	33.337	25.063	290.1	0.149	5.16	86.6	6.5	0.75	5.9	0.33	0.00	0.30	0.23	49	219
50 ISL	13.17 D	13.16	33.342 D	25.077	288.8	0.152	5.11	85.6	6.8	0.78	6.3	0.32	0.00	0.29	0.22	50	
61	12.45	12.44	33.361	25.233	274.2	0.183	4.70	77.6	9.6	1.00	9.7	0.07	0.00	0.15	0.16	61	218
75	11.86	11.85	33.415	25.387	259.8	0.220	4.41	71.9	12.1	1.15	12.4	0.04	0.00	0.08	0.13	75	217
85	11.56	11.55	33.446	25.467	252.5	0.246	4.15	67.3	13.6	1.27	14.3	0.02	0.00	0.07	0.11	85	216
100	11.08	11.07	33.546	25.632	237.1	0.282	3.72	59.7	16.7	1.46	17.3	0.01	0.00	0.04	0.08	100	215
121	10.61	10.60	33.697	25.833	218.4	0.330	3.13	49.8	21.6	1.68	20.7	0.01	0.00	0.03	0.07	122	214
125 ISL	10.44 D	10.43	33.750 D	25.904	211.7	0.339	3.03	48.0	22.5	1.72	21.3	0.01	0.00	0.03	0.07	126	
140	10.23	10.21	33.823	25.997	203.1	0.370	2.70	42.6	25.3	1.86	23.3	0.01	0.00	0.02	0.06	141	213
150 ISL	10.15 D	10.13	33.841 D	26.025	200.7	0.390	2.57	40.5	26.4	1.91	24.0	0.01	0.00	0.02	0.06	151	
171	9.85	9.83	33.925	26.141	190.0	0.431	2.35	36.8	28.5	2.00	25.3	0.01	0.00	0.01	0.06	172	212
199	9.40	9.38	34.028	26.297	175.7	0.482	1.93	29.9	33.6	2.19	27.9	0.00	0.00	0.01	0.05	200	211
200 ISL	9.39 D	9.37	34.033 D	26.302	175.2	0.484	1.91	29.6	33.8	2.20	28.0	0.00	0.00			201	
230	9.10	9.07	34.108	26.408	165.7	0.535	1.40	21.6	39.1	2.37	29.9	0.00	0.00			231	210
250 ISL	8.89 D	8.86	34.144 D	26.470	160.1	0.568	1.03	15.8	42.4	2.51	31.4	0.00	0.00			251	
270	8.76	8.73	34.171	26.512	156.5	0.599	0.72	11.0	45.5	2.64	32.8	0.00	0.00			272	209
300 ISL	8.49 D	8.46	34.196 D	26.573	151.1	0.646	0.53	8.1	50.1	2.74	33.9	0.00	0.00			302	
320	8.26	8.23	34.204	26.615	147.4	0.675	0.48	7.3	53.1	2.79	34.3	0.00	0.00			322	208
381	7.74	7.70	34.220	26.705	139.5	0.763	0.28	4.2	62.7	2.94	34.6	0.00	0.00			383	207
400 ISL	7.57 D	7.53	34.225 D	26.734	137.0	0.789	0.24	3.6	65.4	2.98	34.5	0.00	0.00			403	
440	7.11	7.07	34.234	26.806	130.4	0.843	0.16	2.4	73.3	3.08	34.4	0.00	0.00			443	206
480	6.76	6.72	34.245	26.863	125.3	0.894	0.05	0.7	87.7	3.23	31.1	0.00	0.00			483	205
500 ISL	6.68 D	6.63	34.247 D	26.875	124.4	0.919	0.05	0.7	95.9	3.30	28.3	0.06	0.00			503	
517	6.61	6.56	34.252	26.889	123.3	0.940	0.05	0.7	105.4	3.46	23.7	0.08	0.00			521	204
539	6.55	6.50	34.254	26.899	122.6	0.967	0.02	0.3	124.1	3.95	12.5	0.00	0.05			543	203
566	6.55	6.50	34.255	26.900	122.9	1.000	0.04	0.6	126.4	4.08	11.1	0.00	0.00			570	202
573	6.55	6.50	34.256	26.901	123.0	1.009	0.01	0.1	126.2	4.07	11.1	0.01	0.06			577	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 15.5 N	119 19.5 W	27/01/10	1412 UTC	19 m	330 14 kn			1011.2 mb	13.1 C	9.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.159	24.711	322.3	0.000	5.72	97.9	5.0	0.67	1.6	0.28	1.10	0.79	0.29	0	
2	14.26	14.26	33.159	24.711	322.3	0.006	5.72	97.9	5.0	0.67	1.6	0.28	1.10	0.79	0.29	2	205
5	14.27	14.27	33.160	24.710	322.5	0.016	5.70	97.6	5.1	0.65	1.5	0.29	1.05	0.76	0.29	5	204
10	14.29	14.29	33.163	24.708	322.8	0.032	5.70	97.7	5.0	0.65	1.5	0.29	1.15	0.83	0.29	10	202
10	14.29	14.29	33.161	24.707	323.0	0.032										10	203
15	14.29	14.29	33.162	24.708	323.0	0.048	5.71	97.8	5.0	0.64	1.5	0.29	1.03	0.84	0.28	15	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 13.7 N	119 25.0 W	27/01/10	1624 UTC	37 m	010 06 kn	070 01 07	0	1012.7 mb	14.7 C	11.9 C	05m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.68	14.68	33.306	24.736	319.9	0.000	5.65	97.7	3.6	0.50	1.0	0.30	0.46	0.85	0.42	0	
2	14.68	14.68	33.306	24.736	320.0	0.006	5.65	97.7	3.6	0.50	1.0	0.30	0.46	0.85	0.42	2	208
4	14.68	14.68	33.310	24.739	319.7	0.013	5.66	97.8	3.6	0.52	1.0	0.30	0.50	0.91	0.38	4	207
8	14.68	14.68	33.305	24.735	320.2	0.026	5.65	97.7	3.7	0.50	1.0	0.30	0.52	0.84	0.41	8	205
8	14.68	14.68	33.305	24.735	320.2	0.026										8	206
10 ISL	14.68 D	14.68	33.305 D	24.735	320.3	0.032	5.65	97.7	3.7	0.50	1.0	0.30	0.56	0.84	0.42	10	
13	14.68	14.68	33.313	24.742	319.8	0.042	5.64	97.5	3.7	0.50	1.0	0.31	0.61	0.84	0.44	13	204
16	14.68	14.68	33.305	24.735	320.4	0.051	5.67	98.0	3.6	0.52	1.0	0.31	0.59	0.84	0.39	16	203
20 ISL	14.68 D	14.68	33.305 D	24.736	320.5	0.064	5.65	97.7	3.6	0.51	1.0	0.31	0.58	0.83	0.39	20	
23	14.68	14.68	33.305	24.736	320.6	0.074	5.63	97.3	3.7	0.51	1.0	0.31	0.57	0.82	0.39	23	202
30 ISL	14.68 D	14.68	33.305 D	24.736	320.8	0.096	5.64	97.5	3.7	0.52	1.0	0.31	0.65	0.81	0.44	30	
32	14.68	14.68	33.307	24.738	320.7	0.103	5.64	97.5	3.7	0.52	1.0	0.31	0.67	0.81	0.45	32	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 10.8 N	119 30.5 W	27/01/10	1141 UTC	128 m	220 04 kn			1011.0 mb	14.1 C	11.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.35	14.35	33.353	24.842	309.8	0.000	5.71	98.1	3.5	0.44	1.2	0.13	0.08	0.80	0.34	0	
2	14.35	14.35	33.353	24.842	309.9	0.006	5.71	98.1	3.5	0.44	1.2	0.13	0.08	0.80	0.34	2	212
10	14.31	14.31	33.349	24.848	309.6	0.031	5.70	97.8	3.4	0.44	1.3	0.13	0.07	0.87	0.28	10	210
10	14.31	14.31	33.353	24.851	309.3	0.031										10	211
20	14.17	14.17	33.338	24.869	307.8	0.062	5.72	97.9	3.3	0.47	1.5	0.14	0.06	1.10	0.35	20	209
30 ISL	14.14 D	14.14	33.336 D	24.874	307.6	0.093	5.73	98.0	3.3	0.46	1.4	0.14	0.06	1.13	0.38	30	
31	14.15	14.15	33.337	24.873	307.8	0.096	5.73	98.0	3.3	0.46	1.4	0.14	0.06	1.13	0.38	31	208
41	14.00	13.99	33.334	24.902	305.3	0.126	5.74	97.9	3.4	0.48	1.7	0.15	0.07	1.19	0.36	41	207
49	13.82	13.81	33.324	24.931	302.7	0.151	5.58 D	94.8	4.7	0.61	3.5	0.21	0.14	0.74	0.19	49	206
50 ISL	13.81 D	13.80	33.331 D	24.939	302.0	0.154	5.57	94.6	4.7	0.61	3.5	0.21	0.14	0.73	0.19	50	
59	13.67	13.66	33.325	24.963	299.9	0.181	5.49	93.0	4.7	0.62	3.5	0.20	0.13	0.66	0.26	59	205
71	13.61	13.60	33.337	24.985	298.2	0.217	5.44	92.0	5.0	0.63	3.8	0.19	0.11	0.62	0.26	71	204
75 ISL	13.55 D	13.54	33.345 D	25.003	296.5	0.229	5.27	89.0	5.9	0.72	5.3	0.15	0.08	0.47	0.22	75	
85	12.25	12.24	33.323	25.242	273.9	0.257	4.71	77.4	9.0	1.00	10.0	0.03	0.00	0.09	0.12	85	203
100	11.25	11.24	33.504	25.568	243.1	0.296	3.90	62.8	15.2	1.40	16.1	0.02	0.00	0.04	0.09	100	202
120	10.84	10.83	33.625	25.736	227.5	0.343	3.45	55.1	19.0	1.59	19.1	0.02	0.00	0.02	0.08	121	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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	27/01/10	0529 UTC	102 m	030 17 kn			1010.5 mb	14.2 C	11.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.85	13.85	33.311	24.914	303.0	0.000	5.90	100.3	2.8	0.45	1.1	0.08	0.09	2.13	0.35	0	
2	13.85	13.85	33.311	24.914	303.0	0.006	5.90	100.3	2.8	0.45	1.1	0.08	0.09	2.13	0.35	2	211
10 ISL	13.85 D	13.85	33.313 D	24.916	303.1	0.030	5.91	100.4	2.8	0.45	1.1	0.08	0.09	2.18	0.35	10	
11	13.86	13.86	33.313	24.914	303.3	0.033	5.91	100.5	2.8	0.45	1.1	0.08	0.09	2.19	0.35	11	209
11	13.86	13.86	33.313	24.914	303.3	0.033										11	210
20 ISL	13.87 D	13.87	33.316 D	24.914	303.5	0.061	5.90	100.3	2.8	0.45	1.1	0.08	0.08	2.14	0.33	20	
21	13.86	13.86	33.312	24.913	303.6	0.064	5.90	100.3	2.8	0.45	1.1	0.08	0.08	2.13	0.33	21	208
30 ISL	13.86 D	13.86	33.314 D	24.915	303.7	0.091	5.95	101.1	2.7	0.45	1.1	0.08	0.09	2.14	0.33	30	
31	13.86	13.86	33.313	24.914	303.8	0.094	5.95	101.1	2.7	0.45	1.1	0.08	0.09	2.14	0.33	31	207
40	13.86	13.85	33.315	24.916	303.9	0.121	5.89	100.1	2.8	0.45	1.2	0.08	0.10	2.00	0.36	40	206
50	13.85	13.84	33.317	24.920	303.8	0.152	5.90	100.3	2.9	0.45	1.2	0.08	0.08	1.87	0.33	50	205
61	13.43	13.42	33.333	25.018	294.7	0.185	5.44	91.7	4.9	0.65	4.0	0.16	0.24	1.09	0.28	61	204
70	12.73	12.72	33.369	25.185	279.0	0.211	5.00	83.0	8.0	0.89	7.6	0.16	0.27	0.64	0.31	70	203
75 ISL	12.28 D	12.27	33.396 D	25.293	268.8	0.224	4.83	79.5	9.3	0.98	9.0	0.15	0.24	0.50	0.31	75	
83	11.97	11.96	33.410	25.363	262.4	0.245	4.57	74.7	11.1	1.10	11.1	0.13	0.17	0.36	0.32	83	202
95	11.35	11.34	33.484	25.535	246.2	0.276	4.09	66.0	14.5	1.34	15.0	0.10	0.08	0.14	0.24	95	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 44.9 N	120 24.5 W	27/01/10	0046 UTC	994 m	030 19 kn	150 04 09	5	1008.3 mb	13.9 C	12.8 C		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.65	13.65	33.148	24.829	311.1	0.000	5.97	100.9	3.7	0.46	1.2	0.09	0.00	0.89	0.14	0	
2	13.65	13.65	33.148	24.829	311.1	0.006	5.97	100.9	3.7	0.46	1.2	0.09	0.00	0.89	0.14	2	221
10	13.66	13.66	33.166	24.841	310.2	0.031	5.97	101.0	3.6	0.45	1.2	0.09	0.00	0.94	0.16	10	219
10	13.66	13.66	33.169	24.843	310.0	0.031										10	220
20	13.70	13.70	33.250	24.898	305.0	0.062	5.89	99.8	3.9	0.46	1.4	0.07	0.00	1.02	0.19	20	218
30	13.69	13.69	33.250	24.900	305.1	0.092	5.85	99.1	3.9	0.47	1.4	0.08	0.00	0.86	0.20	30	217
40	13.67	13.66	33.248	24.903	305.1	0.123	5.83	98.7	3.8	0.47	1.5	0.10	0.00	0.69	0.17	40	216
50	13.67	13.66	33.249	24.904	305.3	0.153	5.81	98.3	3.9	0.47	1.5	0.10	0.00	0.34	0.41	50	215
60	13.57	13.56	33.241	24.919	304.2	0.184	5.77	97.4	3.9	0.49	1.7	0.11	0.06	0.39	0.13	60	214
71	11.68	11.67	33.135	25.203	277.2	0.216	5.31	86.1	7.3	0.87	8.3	0.03	0.00	0.08	0.07	71	213
75 ISL	11.07 D	11.06	33.122 D	25.303	267.7	0.227	5.06	81.0	9.0	0.99	10.5	0.02	0.00	0.07	0.07	75	
87	10.81	10.80	33.406	25.570	242.5	0.257	4.34	69.2	13.8	1.29	15.5	0.01	0.00	0.04	0.06	87	212
100 ISL	10.48 D	10.47	33.546 D	25.737	226.9	0.288	3.96	62.7	16.9	1.45	17.9	0.00	0.00	0.03	0.04	100	
101	10.53	10.52	33.533	25.719	228.7	0.290	3.94	62.5	17.1	1.46	18.0	0.00	0.00	0.03	0.04	101	211
121	10.16	10.15	33.685	25.901	211.8	0.334	3.43	54.0	21.0	1.65	21.0	0.00	0.00	0.01	0.03	122	210
125 ISL	10.02 D	10.01	33.725 D	25.956	206.6	0.343	3.36	52.8	21.7	1.68	21.5	0.00	0.00	0.01	0.03	126	
140	9.75	9.73	33.805	26.064	196.6	0.373	3.11	48.6	24.4	1.79	23.2	0.00	0.00	0.00	0.02	141	209
150 ISL	9.56 D	9.54	33.882 D	26.155	188.1	0.392	2.90	45.1	26.6	1.87	24.3	0.00	0.00	0.00	0.02	151	
170	9.32	9.30	33.977	26.269	177.7	0.429	2.54	39.3	30.4	2.01	26.1	0.00	0.00	0.00	0.02	171	208
200	9.09	9.07	34.032	26.350	170.6	0.481	2.34	36.1	32.9	2.09	27.4	0.00	0.00	0.00	0.01	201	207
230	8.78	8.76	34.075	26.433	163.2	0.531	2.12	32.4	36.1	2.18	28.7	0.00	0.00			231	206
250 ISL	8.56 D	8.53	34.119 D	26.501	156.9	0.563	1.88	28.6	39.5	2.29	29.9	0.00	0.00			251	
272	8.24	8.21	34.140	26.567	151.0	0.597	1.60	24.2	43.6	2.41	31.3	0.00	0.00			274	205
300 ISL	7.88 D	7.85	34.167 D	26.642	144.2	0.638	1.36	20.4	47.9	2.52	32.7	0.00	0.00			302	
324	7.59	7.56	34.167	26.684	140.4	0.672	1.20	17.9	52.0	2.62	33.9	0.00	0.00			326	204
383	7.07	7.03	34.202	26.786	131.4	0.752	0.87	12.8	67.1	2.94	37.5	0.00	0.00			385	203
400 ISL	7.07 D	7.03	34.230 D	26.808	129.6	0.775	0.78	11.5	67.1	2.94	37.5	0.00	0.00			403	
441	6.70	6.66	34.247	26.872	123.8	0.827	0.58	8.5	67.2	2.94	37.5	0.00	0.00			444	202
500 ISL	6.32 D	6.27	34.257 D	26.931	118.8	0.898	0.46	6.7	72.7	3.02	38.7	0.00	0.00			503	
513	6.27	6.22	34.263	26.942	117.8	0.913	0.43	6.2	73.9	3.04	39.0	0.00	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 34.9 N	120 45.9 W	26/01/10	2022 UTC	1516 m	060 12 kn	280 04 08	2	1009.4 mb	14.9 C	13.9 C	13m	8/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.06	14.06	33.179	24.768	316.8	0.000	5.95	101.5	3.2	0.44	0.9	0.08	0.00	0.73	0.21	0	
3	14.06	14.06	33.179	24.768	316.9	0.010	5.95	101.5	3.2	0.44	0.9	0.08	0.00	0.73	0.21	3	221
10	13.97	13.97	33.210	24.811	313.0	0.032	5.91	100.6	3.3	0.45	1.0	0.10	0.00	0.76	0.24	10	219
11	13.91	13.91	33.206	24.821	312.2	0.035										11	220
20 ISL	13.76 D	13.76	33.190 D	24.839	310.6	0.063	5.92	100.4	3.4	0.46	1.1	0.12	0.00	0.73	0.28	20	
22	13.76	13.76	33.192	24.841	310.5	0.069	5.92	100.4	3.4	0.46	1.1	0.12	0.00	0.72	0.28	22	218
30 ISL	13.75 D	13.75	33.190 D	24.842	310.7	0.094	5.90	100.0	3.3	0.47	1.2	0.13	0.00	0.64	0.24	30	
33	13.75	13.75	33.189	24.841	310.8	0.103	5.89	99.8	3.3	0.47	1.2	0.13	0.00	0.59	0.22	33	217
41	13.76	13.75	33.194	24.843	310.9	0.128	5.86	99.3	3.3	0.46	1.3	0.14	0.07	0.39	0.19	41	216
50	13.64	13.63	33.194	24.868	308.7	0.156	5.69	96.2	3.5	0.49	1.7	0.15	0.07	0.30	0.15	50	215
60	13.12	13.11	33.176	24.959	300.3	0.186	5.69	95.2	4.3	0.61	3.5	0.16	0.00	0.16	0.11	60	214
69	11.98	11.97	33.143	25.153	281.9	0.212	5.46	89.1	6.7	0.82	7.2	0.05	0.00	0.08	0.08	69	213
75 ISL	11.17 D	11.16	33.149 D	25.306	267.4	0.229	5.25	84.2	8.3	0.94	9.3	0.04	0.00	0.07	0.07	75	
85	10.85	10.84	33.226	25.423	256.5	0.255	4.89	77.9	11.1	1.14	12.5	0.02	0.00	0.05	0.07	85	212
100	10.02	10.01	33.378	25.684	231.8	0.292	4.44	69.6	16.2	1.43	17.4	0.01	0.00	0.02	0.03	100	211
119	9.80	9.79	33.684	25.961	206.0	0.333	3.53	55.1	21.9	1.70	21.6	0.00	0.00	0.01	0.02	120	210
125 ISL	9.79 D	9.78	33.749 D	26.013	201.1	0.346	3.41	53.3	23.3	1.75	22.5	0.00	0.00	0.01	0.02	126	
141	9.30	9.28	33.812	26.143	189.0	0.377	3.26	50.4	26.1	1.83	24.3	0.00	0.00	0.00	0.02	142	209
150 ISL	9.24 D	9.22	33.840 D	26.174	186.2	0.394	3.17	49.0	27.1	1.86	24.8	0.00	0.00	0.00	0.02	151	
170	9.03	9.01	33.908	26.262	178.3	0.430	3.00	46.1	28.9	1.92	25.6	0.00	0.00	0.00	0.02	171	208
200	8.73	8.71	33.980	26.365	168.9	0.482	2.77	42.3	32.0	2.00	26.8	0.00	0.00	0.00	0.01	201	207
230	8.44	8.42	34.069	26.480	158.5	0.531	2.14	32.5	38.3	2.23	29.5	0.00	0.00			231	206
250 ISL	8.25 D	8.22	34.091 D	26.527	154.4	0.563	1.76	26.6	41.8	2.37	30.7	0.00	0.00			251	
271	8.16	8.13	34.167	26.600	147.8	0.594	1.45	21.9	45.3	2.50	31.8	0.00	0.00			273	205
300 ISL	7.74 D	7.71	34.168 D	26.663	142.1	0.636	1.42	21.2	50.5	2.58	33.7	0.00	0.00			302	
321	7.09	7.06	34.094	26.697	138.8	0.666	1.39	20.5	54.3	2.62	35.0	0.00	0.00			323	204
383	6.52	6.49	34.137	26.808	128.7	0.749	1.00	14.5	64.1	2.83	37.4	0.00	0.00			385	203
400 ISL	6.36 D	6.32	34.141 D	26.833	126.6	0.770	0.90	13.0	66.3	2.88	37.9	0.00	0.00			403	
442	6.22	6.18	34.190	26.890	121.7	0.823	0.66	9.5	71.3	2.99	38.9	0.00	0.00			445	202
500 ISL	5.89 D	5.85	34.239 D	26.971	114.5	0.891	0.43	6.2	78.6	3.10	40.1	0.00	0.00			503	
515	5.83	5.79	34.255	26.991	112.7	0.908	0.37	5.3	80.5	3.13	40.4	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 14.6 N	121 26.3 W	26/01/10	1333 UTC	3803 m	170 05 kn			1010.7 mb	14.5 C	13.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.55	13.55	32.968	24.710	322.4	0.000	6.03	101.6	3.6	0.44	1.0	0.10	0.05	0.72	0.15	0	
2	13.55	13.55	32.968	24.710	322.4	0.006	6.03	101.6	3.6	0.44	1.0	0.10	0.05	0.72	0.15	2	221
9	13.55	13.55	33.015	24.746	319.2	0.029	6.04	101.8	3.7	0.44	1.0	0.10	0.06	0.78	0.14	9	219
10 ISL	13.54 D	13.54	33.018 D	24.751	318.8	0.032	6.04	101.8	3.7	0.44	1.0	0.10	0.06	0.78	0.15	10	
11	13.55	13.55	33.015	24.746	319.2	0.035										11	220
20	13.46	13.46	33.016	24.766	317.6	0.064	6.00	101.0	3.7	0.44	1.2	0.12	0.07	0.74	0.20	20	218
29	13.44	13.44	33.026	24.778	316.7	0.092	5.94	99.9	3.6	0.46	1.4	0.16	0.12	0.51	0.18	29	217
30 ISL	13.42 D	13.42	33.028 D	24.783	316.2	0.096	5.94	99.9	3.6	0.46	1.4	0.16	0.12	0.51	0.18	30	
41	13.34	13.33	33.030	24.801	314.8	0.130	5.94	99.7	3.7	0.47	1.6	0.14	0.06	0.46	0.18	41	216
50	12.85	12.84	33.143	24.986	297.4	0.158	5.80	96.4	4.4	0.60	3.4	0.33	0.06	0.23	0.14	50	215
59	12.28	12.27	33.157	25.107	286.1	0.184	5.65	92.8	5.5	0.74	5.9	0.09	0.06	0.14	0.12	59	214
69	11.50	11.49	33.145	25.243	273.3	0.212	5.36	86.6	7.9	0.95	9.3	0.01	0.05	0.09	0.09	69	213
75 ISL	11.03 D	11.02	33.153 D	25.334	264.7	0.228	5.25	84.0	9.7	1.06	11.2	0.01	0.03	0.07	0.08	75	
85	9.94	9.93	33.119	25.495	249.4	0.254	5.06	79.0	12.9	1.24	14.2	0.01	0.00	0.04	0.06	85	212
99	9.59	9.58	33.283	25.681	232.0	0.288	4.56	70.7	17.3	1.47	18.2	0.00	0.00	0.02	0.04	99	211
100 ISL	9.52 D	9.51	33.292 D	25.700	230.2	0.290	4.52	70.0	17.6	1.49	18.5	0.00	0.00	0.02	0.04	100	
120	9.30	9.29	33.560	25.945	207.3	0.334	3.91	60.4	22.3	1.70	22.1	0.00	0.00	0.01	0.03	121	210
125 ISL	9.26 D	9.25	33.613 D	25.993	202.9	0.344	3.88	59.9	22.8	1.69	22.3	0.00	0.00	0.01	0.03	126	
138	9.04	9.03	33.717	26.110	192.0	0.370	3.84	59.0	24.1	1.68	22.5	0.00	0.00	0.00	0.02	139	209
150 ISL	8.96 D	8.94	33.827 D	26.209	182.8	0.392	3.61	55.4	26.6	1.76	23.9	0.00	0.00	0.00	0.02	151	
169	8.55	8.53	33.887	26.320	172.5	0.426	3.19	48.5	30.8	1.92	26.3	0.00	0.00	0.00	0.02	170	208
197	8.26	8.24	33.957	26.419	163.5	0.473	2.92	44.1	34.6	2.01	27.9	0.00	0.00	0.00	0.02	198	207
200 ISL	8.13 D	8.11	33.971 D	26.450	160.7	0.478	2.90	43.7	35.0	2.02	28.0	0.00	0.00			201	
229	7.82	7.80	33.985	26.507	155.6	0.524	2.63	39.4	39.4	2.14	29.7	0.00	0.00			230	206
250 ISL	7.46 D	7.44	33.997 D	26.568	150.0	0.556	2.01	29.8	43.8	2.35	31.6	0.00	0.00			251	
272	7.80	7.77	34.130	26.624	145.3	0.588	1.36	20.4	48.6	2.56	33.6	0.00	0.00			274	205
300 ISL	7.35 D	7.32	34.124 D	26.684	139.8	0.628	1.28	19.0	53.5	2.66	35.1	0.00	0.00			302	
322	7.01	6.98	34.110	26.721	136.5	0.659	1.21	17.8	57.1	2.69	36.0	0.00	0.00			324	204
378	6.23	6.20	34.104	26.820	127.3	0.732	1.02	14.7	66.4	2.84	38.5	0.00	0.00			380	203
400 ISL	6.35 D	6.31	34.180 D	26.865	123.5	0.760	0.81	11.7	68.5	2.92	38.8	0.00	0.00			403	
437	6.37	6.33	34.245	26.914	119.5	0.805	0.46	6.7	71.8	3.04	39.1	0.00	0.00			440	202
500 ISL	5.67 D	5.63	34.224 D	26.986	112.8	0.878	0.41	5.8	81.6	3.12	40.9	0.00	0.00			503	
517	5.58	5.54	34.238	27.008	110.8	0.897	0.40	5.7	84.3	3.14	41.4	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 55.1 N	122 6.6 W	26/01/10	0738 UTC	4163 m	140 15 kn			1013.5 mb	15.0 C	13.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.83	14.83	32.961	24.438	348.3	0.000	5.84	101.0	2.1	0.33	0.0	0.00	0.06	0.26	0.08	0	
2	14.83	14.83	32.961	24.438	348.4	0.007	5.84	101.0	2.1	0.33	0.0	0.00	0.06	0.26	0.08	2	221
10	14.83	14.83	32.957	24.435	348.9	0.035	5.84	101.0	2.1	0.33	0.0	0.00	0.00	0.26	0.09	10	219
10	14.82	14.82	32.957	24.437	348.7	0.035										10	220
20 ISL	14.83 D	14.83	32.959 D	24.437	349.0	0.070	5.83	100.9	2.0	0.33	0.0	0.00	0.00	0.27	0.08	20	
26	14.83	14.83	32.958	24.436	349.2	0.091	5.83	100.9	2.0	0.33	0.0	0.00	0.00	0.27	0.08	26	218
30 ISL	14.83 D	14.83	32.958 D	24.436	349.3	0.105	5.83	100.9	2.0	0.33	0.0	0.00	0.00	0.28	0.09	30	
41	14.82	14.81	32.959	24.440	349.3	0.143	5.83	100.8	2.1	0.33	0.0	0.00	0.00	0.33	0.10	41	217
50 ISL	14.70 D	14.69	32.947 D	24.456	348.0	0.174	5.83	100.6	2.2	0.33	0.0	0.00	0.00	0.40	0.16	50	
51	14.69	14.68	32.950	24.461	347.6	0.178	5.83	100.6	2.2	0.33	0.0	0.00	0.00	0.41	0.17	51	216
61	13.98	13.97	33.007	24.654	329.4	0.212	5.85	99.5	3.1	0.43	1.0	0.20	0.00	0.34	0.20	61	215
74	13.22	13.21	33.056	24.846	311.4	0.253	5.80	97.1	4.0	0.56	2.6	0.35	0.00	0.14	0.11	74	214
75 ISL	13.20	13.19	33.011 D	24.815	314.4	0.257	5.80	97.1	4.1	0.57	2.8	0.34	0.00	0.13	0.11	75	
85	12.52	12.51	33.144	25.052	292.0	0.287	5.74	94.8	5.1	0.68	4.9	0.19	0.00	0.08	0.09	85	213
100	11.34	11.33	33.068	25.213	276.8	0.330	5.47	88.0	7.4	0.86	8.0	0.01	0.00	0.05	0.06	100	212
114	10.41	10.40	33.104	25.405	258.7	0.367	5.26	83.0	9.9	1.04	11.1	0.00	0.00	0.03	0.05	115	211
124	10.02	10.01	33.197	25.544	245.7	0.392	5.03	78.7	12.4	1.18	13.6	0.00	0.00	0.02	0.04	125	210
125 ISL	9.99 D	9.98	33.203 D	25.553	244.8	0.395	5.01	78.3	12.7	1.20	13.9	0.00	0.00	0.02	0.04	126	
139	9.43	9.41	33.358	25.767	224.7	0.428	4.67	72.2	17.4	1.41	17.5	0.00	0.00	0.01	0.02	140	209
150 ISL	9.34 D	9.32	33.541 D	25.924	209.9	0.451	4.25	65.7	20.9	1.57	20.2	0.00	0.00	0.01	0.02	151	
173	8.97	8.95	33.815	26.198	184.3	0.497	3.49	53.6	26.6	1.79	24.1	0.00	0.00	0.00	0.02	174	208
197	8.64	8.62	33.936	26.345	170.8	0.539	3.43	52.3	29.2	1.79	24.6	0.00	0.00	0.00	0.01	198	207
200 ISL	8.59 D	8.57	33.946 D	26.360	169.3	0.545	3.39	51.6	29.9	1.81	24.9	0.00	0.00			201	
235	7.95	7.93	33.995	26.496	156.9	0.602	2.76	41.4	38.6	2.07	28.7	0.00	0.00			236	206
250 ISL	7.71 D	7.69	34.004 D	26.538	153.0	0.625	2.57	38.4	41.2	2.15	29.8	0.00	0.00			251	
265	7.59	7.56	34.012	26.562	151.0	0.648	2.39	35.6	43.5	2.23	30.8	0.00	0.00			266	205
300 ISL	7.26 D	7.23	34.032 D	26.624	145.4	0.700	1.97	29.1	49.7	2.41	33.2	0.00	0.00			302	
321	6.96	6.93	34.049	26.679	140.3	0.730	1.73	25.4	53.6	2.51	34.6	0.00	0.00			323	204
381	6.37	6.34	34.110	26.807	128.7	0.810	1.07	15.5	65.3	2.82	37.9	0.00	0.00			383	203
400 ISL	6.22 D	6.18	34.123 D	26.836	126.1	0.834	0.95	13.7	67.8	2.87	38.4	0.00	0.00			402	
442	6.10	6.06	34.158	26.880	122.5	0.887	0.74	10.6	72.3	2.96	39.2	0.00	0.00			445	202
500 ISL	5.86 D	5.82	34.227 D	26.965	115.0	0.955	0.48	6.9	78.7	3.07	40.3	0.00	0.00			503	
515	5.82	5.78	34.242	26.982	113.5	0.973	0.41 D	5.9	80.4	3.10	40.6	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 34.8 N	122 48.2 W	26/01/10	0042 UTC	4182 m	150 18 kn	210 04 07	1	1014.6 mb	15.9 C	14.4 C		3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.03	15.03	33.024	24.443	347.8	0.000	5.84	101.5	2.2	0.34	0.0	0.00	0.00	0.35	0.09	0	
3	15.03	15.03	33.024	24.443	347.9	0.010	5.84	101.5	2.2	0.34	0.0	0.00	0.00	0.35	0.09	3	221
10	15.04	15.04	33.024	24.441	348.3	0.035	5.84	101.5	2.2	0.34	0.0	0.00	0.00	0.36	0.08	10	219
10	15.04	15.04	33.023	24.441	348.3	0.035										10	220
20	15.03	15.03	33.029	24.448	348.0	0.070	5.83	101.3	2.2	0.34	0.0	0.00	0.00	0.36	0.09	20	218
30 ISL	14.98 D	14.98	33.021 D	24.453	347.8	0.104	5.84	101.4	2.2	0.33	0.0	0.00	0.00	0.37	0.11	30	
31	14.98	14.98	33.022	24.453	347.7	0.108	5.84	101.4	2.2	0.33	0.0	0.00	0.00	0.37	0.11	31	217
39	14.96	14.95	33.022	24.458	347.6	0.136	5.84	101.3	2.1	0.34	0.0	0.00	0.00	0.41	0.10	39	216
50	14.93	14.92	33.021	24.464	347.3	0.174	5.85	101.4	2.2	0.34	0.0	0.00	0.00	0.41	0.11	50	215
60	14.91	14.90	33.020	24.468	347.2	0.209	5.82	100.9	2.2	0.34	0.0	0.00	0.00	0.44	0.10	60	214
71	14.75	14.74	33.005	24.491	345.3	0.247	5.83	100.7	2.3	0.35	0.1	0.02	0.00	0.38	0.16	71	213
75 ISL	14.67	14.66	33.166 D	24.632	332.0	0.260	5.83	100.7	2.4	0.36	0.3	0.10	0.00	0.31	0.15	75	
85	14.10	14.09	33.175	24.760	320.1	0.293	5.80	99.0	2.9	0.41	0.8	0.25	0.00	0.14	0.13	85	212
99	11.85	11.84	33.013	25.077	289.9	0.336	5.73	93.2	5.0	0.64	4.0	0.02	0.00	0.08	0.09	99	211
100 ISL	11.80 D	11.79	33.022 D	25.093	288.3	0.338	5.72	92.9	5.1	0.65	4.2	0.02	0.00	0.08	0.09	100	
120	10.80	10.79	33.105	25.338	265.3	0.394	5.39	85.7	8.2	0.90	8.8	0.00	0.00	0.05	0.05	121	210
125 ISL	10.43 D	10.42	33.163 D	25.448	254.9	0.407	5.26	83.0	9.8	1.00	10.5	0.00	0.00	0.04	0.04	126	
140	9.56	9.54	33.328	25.722	229.0	0.443	4.78	74.1	15.4	1.32	15.9	0.00	0.00	0.01	0.02	141	209
150 ISL	9.50 D	9.48	33.517 D	25.880	214.2	0.465	4.22	65.4	19.4	1.55	19.5	0.00	0.00	0.01	0.02	151	
171	9.38	9.36	33.745	26.078	195.8	0.508	3.24	50.2	26.2	1.89	25.0	0.00	0.00	0.00	0.02	172	208
200	8.81	8.79	33.918	26.304	174.7	0.562	3.42	52.3	28.0	1.78	24.5	0.00	0.00	0.00	0.01	201	207
230	8.38	8.36	33.962	26.406	165.5	0.613	3.29	49.9	31.7	1.87	25.7	0.00	0.00			231	206
250 ISL	8.02 D	7.99	33.981 D	26.475	159.2	0.646	3.02	45.4	35.6	1.99	27.4	0.00	0.00			251	
272	7.74	7.71	34.000	26.531	154.1	0.680	2.65	39.6	40.4	2.15	29.6	0.00	0.00			273	205
300 ISL	7.39 D	7.36	34.028 D	26.603	147.5	0.722	2.18	32.3	45.9	2.33	31.9	0.00	0.00			302	
320	7.25	7.22	34.048	26.639	144.4	0.751	1.87	27.6	49.7	2.45	33.3	0.00	0.00			322	204
380	6.57	6.54	34.093	26.767	132.6	0.835	1.23	17.9	61.1	2.74	36.9	0.00	0.00			382	203
400 ISL	6.33 D	6.29	34.111 D	26.813	128.4	0.861	1.10	15.9	64.5	2.81	37.7	0.00	0.00			402	
442	5.98	5.94	34.125	26.869	123.4	0.913	0.89	12.8	71.3	2.92	39.1	0.00	0.00			445	202
500 ISL	5.65 D	5.61	34.168 D	26.944	116.7	0.983	0.60	8.5	79.5	3.05	40.6	0.00	0.00			503	
517	5.55	5.51	34.190	26.974	114.0	1.003	0.51	7.2	81.9	3.09	41.0	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 29.0 W	25/01/10	1906 UTC	4210 m	140 10 kn	190 03 04	2	1016.4 mb	16.0 C	14.0 C	23m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.28	15.28	33.055	24.413	350.7	0.000	5.76	100.6	2.2	0.33	0.0	0.00	0.00	0.20	0.07	0	
2	15.28	15.28	33.055	24.413	350.8	0.007	5.76	100.6	2.2	0.33	0.0	0.00	0.00	0.20	0.07	2	221
10	15.28	15.28	33.051	24.410	351.3	0.035	5.77	100.8	2.1	0.33	0.0	0.00	0.00	0.20	0.08	10	219
10	15.28	15.28	33.051	24.410	351.3	0.035										10	220
18	15.28	15.28	33.054	24.412	351.3	0.063	5.77	100.8	2.0	0.32	0.0	0.00	0.00	0.21	0.07	18	218
20 ISL	15.28 D	15.28	33.050 D	24.410	351.6	0.070	5.77	100.8	2.0	0.32	0.0	0.00	0.00	0.21	0.07	20	
28	15.27	15.27	33.051	24.413	351.6	0.098	5.77	100.8	2.2	0.33	0.0	0.00	0.00	0.20	0.08	28	217
30 ISL	15.28 D	15.28	33.051 D	24.411	351.8	0.105	5.77	100.8	2.2	0.33	0.0	0.00	0.00	0.20	0.08	30	
39	15.26	15.25	33.049	24.414	351.8	0.137	5.75	100.4	2.1	0.33	0.0	0.00	0.00	0.24	0.10	39	216
48	15.27	15.26	33.053	24.415	351.9	0.169	5.76	100.6	2.0	0.32	0.0	0.00	0.00	0.30	0.13	48	215
50 ISL	15.28 D	15.27	33.059 D	24.417	351.8	0.176	5.76	100.6	2.0	0.32	0.0	0.00	0.00	0.30	0.13	50	
58	15.30	15.29	33.067	24.419	351.8	0.204	5.73	100.1	2.1	0.32	0.0	0.00	0.00	0.29	0.13	58	214
74	15.20	15.19	33.164	24.516	343.1	0.259	5.72	99.8	2.5	0.36	0.2	0.11	0.00	0.17	0.10	74	213
75 ISL	15.19 D	15.18	33.164 D	24.519	342.9	0.263	5.73	100.0	2.5	0.36	0.2	0.12	0.00	0.17	0.10	75	
90	13.81	13.80	33.115	24.773	318.9	0.313	5.83	98.9	3.2	0.44	1.0	0.22	0.00	0.13	0.14	90	212
100 ISL	12.80 D	12.79	33.205 D	25.045	293.1	0.343	5.73	95.2	3.8	0.49	2.1	0.12	0.00	0.09	0.12	100	
107	12.50	12.49	33.222	25.117	286.5	0.363	5.63	93.0	4.4	0.54	3.1	0.04	0.00	0.07	0.09	107	211
124	11.19	11.17	33.133	25.291	270.0	0.411	5.47	87.8	6.7	0.77	6.7	0.02	0.00	0.05	0.06	125	210
125 ISL	11.04 D	11.02	33.159 D	25.338	265.5	0.413	5.43	86.9	7.2	0.80	7.2	0.02	0.00	0.05	0.06	126	
140	9.96	9.94	33.276	25.616	239.2	0.451	4.77	74.6	14.6	1.32	15.6	0.01	0.00	0.01	0.03	141	209
150 ISL	9.59 D	9.57	33.370 D	25.750	226.5	0.475	4.47	69.4	17.7	1.41	18.4	0.01	0.00	0.01	0.03	151	
171	9.15	9.13	33.613	26.012	202.0	0.520	4.05	62.3	22.1	1.61	21.2	0.01	0.00	0.00	0.02	172	208
200 ISL	8.74 D	8.72	33.863 D	26.272	177.7	0.575	3.67	56.0	27.1	1.74	23.7	0.01	0.00	0.00	0.01	201	
201	8.74	8.72	33.864	26.273	177.7	0.576	3.66	55.9	27.3	1.74	23.8	0.01	0.00	0.00	0.01	202	207
231	8.28	8.26	33.958	26.417	164.4	0.628	2.91	44.0	34.2	2.02	27.8	0.00	0.00			232	206
250 ISL	8.10 D	8.07	33.976 D	26.459	160.7	0.659	2.81	42.3	37.0	2.07	28.7	0.00	0.00			251	
270	7.71	7.68	33.980	26.519	155.1	0.690	2.77	41.3	39.8	2.10	29.4	0.00	0.00			271	205
300 ISL	7.16 D	7.13	33.985 D	26.601	147.5	0.736	2.34	34.5	45.8	2.29	31.8	0.00	0.00			302	
322	7.01	6.98	34.014	26.645	143.6	0.768	1.97	28.9	50.5	2.44	33.7	0.00	0.00			324	204
381	6.52	6.49	34.067	26.753	133.9	0.849	1.30	18.9	61.1	2.72	37.1	0.00	0.00			383	203
400 ISL	6.36 D	6.32	34.079 D	26.784	131.2	0.875	1.17	16.9	64.0	2.78	37.8	0.00	0.00			402	
441	6.03	5.99	34.108	26.849	125.3	0.927	0.97	13.9	69.8	2.89	38.9	0.00	0.00			444	202
500 ISL	5.63 D	5.59	34.151 D	26.933	117.7	0.999	0.71	10.1	78.0	3.01	40.5	0.00	0.00			503	
517	5.53	5.49	34.162	26.954	115.8	1.019	0.63	8.9	80.4	3.05	40.9	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 54.5 N	124 10.2 W	25/01/10	1250 UTC	4245 m	120 07 kn			1016.2 mb	14.9 C	13.5 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.76	15.76	33.213		24.428	349.2	0.000	5.67	100.1	2.0	0.36	0.0	0.00	0.00	0.19	0.08	0	
3		15.76	15.76	33.213		24.428	349.3	0.010	5.67	100.1	2.0	0.36	0.0	0.00	0.00	0.19	0.08	3	222
10		15.76	15.76	33.216		24.431	349.3	0.035	5.69	100.5	2.0	0.35	0.0	0.00	0.00	0.19	0.08	10	219
10		15.76	15.76	33.215		24.430	349.4	0.035										10	220
20	ISL	15.76	D 15.76	33.214	D	24.430	349.7	0.070	5.68	100.3	2.0	0.34	0.0	0.00	0.00	0.22	0.09	20	
25		15.75	15.75	33.213		24.431	349.7	0.087	5.67	100.1	2.0	0.34	0.0	0.00	0.00	0.24	0.09	25	218
30	ISL	15.76	D 15.76	33.214	D	24.430	350.0	0.105	5.67	100.1	2.0	0.34	0.0	0.00	0.00	0.24	0.08	30	
44		15.76	15.75	33.212		24.429	350.5	0.154	5.68	100.3	1.9	0.34	0.0	0.00	0.00	0.23	0.07	44	217
50		15.74	15.73	33.208		24.431	350.6	0.175	5.67	100.1	2.0	0.35	0.0	0.00	0.00	0.24	0.09	50	216
61		15.76	15.75	33.211		24.429	351.1	0.214	5.67	100.1	2.0	0.35	0.0	0.00	0.00	0.21	0.08	61	215
75	ISL	15.74	D 15.73	33.210	D	24.433	351.1	0.263	5.66	99.9	1.9	0.34	0.0	0.00	0.00	0.27	0.10	75	
76		15.74	15.73	33.213		24.435	350.9	0.266	5.66	99.9	1.9	0.34	0.0	0.00	0.00	0.27	0.10	76	214
90		15.74	15.73	33.208		24.432	351.7	0.315	5.65	99.7	2.0	0.36	0.0	0.00	0.00	0.23	0.09	90	213
98		15.27	15.26	33.189		24.521	343.3	0.343	5.69	99.4	2.3	0.38	0.1	0.05	0.06	0.15	0.11	98	212
100	ISL	15.04	D 15.02	33.186	D	24.569	338.8	0.350	5.70	99.2	2.5	0.40	0.3	0.06	0.06	0.14	0.11	100	
112		12.80	12.78	33.069		24.940	303.4	0.389	5.74	95.3	4.1	0.56	2.5	0.10	0.00	0.10	0.11	112	211
125	ISL	11.39	D 11.37	33.050	D	25.191	279.6	0.426	5.53	89.1	6.0	0.75	5.8	0.02	0.00	0.04	0.05	126	
126		11.39	11.37	33.054		25.194	279.3	0.429	5.51	88.8	6.1	0.76	6.1	0.01	0.00	0.04	0.05	127	210
143		11.05	11.03	33.113		25.301	269.4	0.476	5.30	84.8	8.0	0.92	9.0	0.01	0.00	0.04	0.05	144	209
150	ISL	10.63	D 10.61	33.174	D	25.422	257.9	0.494	5.16	81.8	9.5	1.01	10.6	0.01	0.00	0.03	0.04	151	
172		10.12	10.10	33.388		25.677	234.1	0.548	4.66	73.2	14.8	1.30	15.8	0.00	0.00	0.01	0.02	173	208
197		9.57	9.55	33.620		25.950	208.5	0.604	4.07	63.2	20.2	1.56	20.1	0.00	0.00	0.00	0.01	198	207
200	ISL	9.42	D 9.40	33.644	D	25.993	204.5	0.610	4.00	61.9	20.9	1.59	20.6	0.00	0.00			201	
230		8.96	8.94	33.864		26.239	181.6	0.668	3.42	52.5	27.1	1.80	24.2	0.00	0.00			231	206
250	ISL	8.49	D 8.46	33.942	D	26.374	169.0	0.703	3.41	51.8	30.5	1.84	25.1	0.00	0.00			251	
270		8.02	7.99	33.960		26.458	161.1	0.736	3.40	51.1	34.1	1.88	26.0	0.00	0.00			271	205
300	ISL	7.49	D 7.46	33.982	D	26.553	152.3	0.783	2.68	39.8	42.4	2.17	30.0	0.00	0.00			302	
321		7.19	7.16	34.013		26.620	146.2	0.814	2.09	30.8	48.4	2.40	32.9	0.00	0.00			323	204
381		6.55	6.52	34.059		26.743	134.9	0.899	1.42	20.6	59.7	2.69	36.6	0.00	0.00			383	203
400	ISL	6.41	D 6.37	34.079	D	26.777	131.8	0.924	1.27	18.4	62.9	2.76	37.4	0.00	0.00			402	
441		6.07	6.03	34.105		26.842	126.0	0.977	0.99	14.2	69.5	2.89	38.8	0.00	0.00			444	202
500	ISL	5.72	D 5.68	34.171	D	26.938	117.4	1.049	0.64	9.1	78.8	3.04	40.5	0.00	0.00			503	
518		5.58	5.54	34.186		26.967	114.7	1.069	0.53	7.5	81.6	3.09	41.0	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 53.1 N	118 30.0 W	20/01/10	0250 UTC	59 m	210 22 kn			1002.1 mb	14.9 C	12.0 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.87	14.87	33.353		24.731	320.4	0.000	5.83	101.2	3.2	0.39	0.3	0.24	0.64	0.93	0.32	0	
3		14.87	14.87	33.353		24.731	320.4	0.010	5.83	101.2	3.2	0.39	0.3	0.24	0.64	0.93	0.32	3	208
5		14.88	14.88	33.357		24.732	320.4	0.016	5.82	101.0	3.3	0.40	0.3	0.25	0.64	0.95	0.29	5	207
10		14.88	14.88	33.354		24.730	320.8	0.032	5.82	101.0	3.1	0.40	0.3	0.24	0.62	0.96	0.29	10	205
10		14.88	14.88					0.032										10	206
20		14.88	14.88	33.357		24.733	320.8	0.064	5.81	100.9	3.2	0.40	0.4	0.27	0.69	0.89	0.28	20	204
30		14.87	14.87	33.353		24.732	321.2	0.096	5.82	101.0	3.3	0.40	0.4	0.26	0.66	0.86	0.33	30	203
41		14.62	14.61	33.337		24.774	317.5	0.131	5.63	97.2	4.0	0.50	1.4	0.81	1.09	0.51	0.28	41	202
50	ISL	13.82	D 13.81	33.316	D	24.925	303.3	0.159	5.17	87.8	5.9	0.71	4.8	0.77	0.34	0.24	0.22	50	
54		13.70	13.69	33.315		24.949	301.1	0.171	4.97	84.2	6.8	0.81	6.3	0.75	0.00	0.12	0.20	54	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 48.8 N	118 37.6 W	20/01/10	0522 UTC	750 m	200 20 kn			1003.4 mb	15.0 C	12.3 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.10	15.10	33.378		24.701	323.3	0.000	5.74	100.1	3.1	0.42	0.3	0.05	0.44	0.35	0.14	0	
2		15.10	15.10	33.378		24.701	323.3	0.006	5.74	100.1	3.1	0.42	0.3	0.05	0.44	0.35	0.14	2	221
10		15.10	15.10	33.379		24.702	323.5	0.032	5.75	100.3	3.2	0.39	0.2	0.05	0.07	0.39	0.14	10	219
10		15.10	15.10					0.032										10	220
20		15.10	15.10	33.384		24.706	323.4	0.065	5.75	100.3	3.3	0.38	0.2	0.05	0.08	0.37	0.15	20	218
30		15.09	15.09	33.376		24.702	324.0	0.097	5.73	99.9	3.3	0.38	0.3	0.06	0.06	0.34	0.22	30	217
41		14.99	14.98	33.370		24.720	322.7	0.133	5.72	99.5	3.2	0.40	0.5	0.09	0.07	0.42	0.22	41	216
50	ISL	14.53	D 14.52	33.342	D	24.797	315.6	0.161	5.63	97.0	3.9	0.47	1.3	0.15	0.12	0.40	0.20	50	
51		14.63	14.62	33.347		24.780	317.3	0.165	5.62	97.1	4.0	0.48	1.4	0.15	0.12	0.40	0.20	51	215
60		12.97	12.96	33.268		25.059	290.7	0.192	4.99	83.2	7.3	0.85	6.9	0.05	0.00	0.32	0.27	60	214
73		12.35	12.34	33.301		25.206	277.1	0.229	4.78	78.7	8.7	0.99	9.1	0.03	0.00	0.17	0.15	73	213
75	ISL	12.17	D 12.16	33.317	D	25.252	272.6	0.234	4.75	77.9	9.1	1.02	9.6	0.03	0.00	0.16	0.14	75	
86		11.59	11.58	33.376		25.407	258.2	0.263	4.46	72.3	11.9	1.19	12.7	0.02	0.00	0.10	0.11	86	212
100		11.43	11.42	33.551		25.572	242.8	0.299	3.60	58.2	16.5	1.51	16.7	0.00	0.00	0.02	0.07	100	211
122		10.90	10.89	33.692		25.778	223.7	0.350	3.11	49.8	20.7	1.72	20.1	0.00	0.00	0.01	0.05	123	210
125	ISL	10.76	D 10.74	33.717	D	25.822	219.5	0.356	3.05	48.7	21.3	1.75	20.5	0.00	0.00	0.01	0.05	126	
140		10.42	10.40	33.838		25.976	205.1	0.388	2.75	43.6	24.2	1.90	22.5	0.00	0.00	0.01	0.04	141	209
150	ISL	10.28	D 10.26	33.888	D	26.039	199.3	0.409	2.61	41.3	25.8	1.96	23.5	0.00	0.00	0.01	0.04	151	
172		9.89	9.87	33.981		26.178	186.5	0.451	2.35	36.8	29.2	2.06	25.3	0.00	0.00	0.00	0.04	173	208
200	ISL	9.29	D 9.27	34.075	D	26.351	170.5	0.501	2.01	31.1	33.9	2.21	27.5	0.00	0.00	0.00	0.05	201	
201		9.31	9.29	34.076		26.349	170.8	0.503	2.00	31.0						0.00	0.05	202	207
233		8.96	8.93	34.150		26.463	160.4	0.556	1.63	25.1	38.9	2.37	29.5	0.00	0.00			234	206
250	ISL	8.77	D 8.74	34.167	D	26.507	156.6	0.583	1.53	23.4	40.6	2.43	30.1	0.00	0.00			251	
275		8.55	8.52	34.181		26.552	152.6	0.621	1.41	21.5	43.0	2.50	30.9	0.00	0.00			277	205
300	ISL	8.35	D 8.32	34.201	D	26.599	148.6	0.659	1.25	19.0	46.1	2.58	31.9	0.00	0.00			302	
321		8.10	8.07	34.210		26.644	144.6	0.690	1.12	16.9	48.8	2.65	32.7	0.00	0.00			323	204
380		7.68	7.64	34.247		26.735	136.7	0.773	0.79	11.8	55.7	2.81	34.5	0.00	0.00			382	203
400	ISL	7.55	D 7.51	34.262	D	26.766	134.0	0.800	0.68	10.1	58.5	2.88	35.2	0.00	0.00			403	
440		7.14	7.10	34.295		26.850	126.3	0.852	0.48	7.1	64.3	3.00	36.5	0.00	0.00			443	202
500	ISL	6.61	D 6.56	34.317	D	26.940	118.2	0.925	0.33	4.8	72.5	3.12	38.1	0.00	0.00			503	
514		6.50	6.45	34.306		26.946	117.8	0.942	0.29	4.2	74.4	3.15	38.5	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 58.5 W	20/01/10	1203 UTC	753 m	310 21 kn			1003.1 mb	15.1 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.95	14.95	33.372	24.729	320.6	0.000	5.74	99.8	3.9	0.39	0.6	0.11	0.05	0.35	0.11	0	
3	14.95	14.95	33.372	24.729	320.7	0.010	5.74	99.8	3.9	0.39	0.6	0.11	0.05	0.35	0.11	3	224
10	14.95	14.95	33.371	24.728	321.0	0.032	5.72	99.5	3.8	0.38	0.6	0.11	0.05	0.36	0.11	10	223
20 ISL	14.95 D	14.95	33.371 D	24.729	321.2	0.064	5.71	99.3	3.4	0.39	0.6	0.11	0.00	0.39	0.13	20	
21	14.95	14.95	33.370	24.728	321.3	0.067	5.71	99.3	3.4	0.39	0.6	0.11	0.00	0.39	0.13	21	222
29	14.88	14.88	33.367	24.741	320.3	0.093	5.68	98.6	3.9	0.40	0.8	0.12	0.06	0.34	0.11	29	221
30 ISL	14.85 D	14.85	33.365 D	24.746	319.9	0.096	5.68	98.6	3.9	0.40	0.8	0.12	0.06	0.34	0.11	30	
39	14.76	14.75	33.359	24.761	318.7	0.125	5.61	97.2	4.3	0.44	1.3	0.11	0.00	0.36	0.13	39	220
49	14.09	14.08	33.326	24.877	307.9	0.156	5.40	92.2	5.2	0.58	3.1	0.07	0.00	0.34	0.19	49	219
50 ISL	13.83 D	13.82	33.301 D	24.912	304.6	0.159	5.38	91.4	5.3	0.60	3.3	0.06	0.00	0.33	0.19	50	
61	12.70	12.69	33.240	25.091	287.8	0.192	5.14	85.2	6.8	0.81	6.3	0.02	0.00	0.22	0.21	61	218
69	12.15	12.14	33.270	25.220	275.6	0.215	4.86	79.7	9.2	0.98	9.2	0.02	0.00	0.15	0.17	69	217
75 ISL	12.06 D	12.05	33.282 D	25.246	273.3	0.231	4.60	75.3	10.8	1.08	10.7	0.02	0.00	0.12	0.15	75	
85	12.05	12.04	33.407	25.345	264.1	0.258	4.19	68.6	12.8	1.22	12.6	0.01	0.00	0.08	0.13	85	216
99	11.73	11.72	33.476	25.459	253.6	0.294	3.88	63.1	14.3	1.36	14.8	0.01	0.00	0.04	0.08	99	215
100 ISL	11.70 D	11.69	33.480 D	25.468	252.8	0.297	3.87	62.9	14.4	1.37	14.9	0.01	0.00	0.04	0.08	100	
120	11.20	11.19	33.561	25.622	238.4	0.346	3.57	57.5	16.6	1.51	17.5	0.00	0.00	0.02	0.06	121	214
125 ISL	11.17 D	11.15	33.608 D	25.664	234.6	0.358	3.45	55.5	17.6	1.56	18.1	0.00	0.00	0.02	0.05	126	
140	11.06	11.04	33.699	25.755	226.3	0.392	3.10	49.8	20.6	1.70	19.7	0.00	0.00	0.01	0.04	141	213
150 ISL	10.77 D	10.75	33.773 D	25.865	216.1	0.414	2.96	47.3	22.2	1.77	20.9	0.00	0.00	0.01	0.03	151	
169	10.27	10.25	33.828	25.995	204.0	0.454	2.76	43.6	24.8	1.87	23.0	0.00	0.00	0.01	0.03	170	212
200	9.72	9.70	34.017	26.235	181.7	0.514	2.46	38.4	29.0	2.01	25.4	0.00	0.00	0.00	0.03	201	211
232	9.17	9.14	34.076	26.372	169.2	0.570	2.15	33.2	34.3	2.17	27.6	0.00	0.00			233	210
250 ISL	8.89 D	8.86	34.141 D	26.468	160.3	0.600	1.87	28.7	38.4	2.30	29.2	0.00	0.00			251	
270	8.55	8.52	34.168	26.542	153.5	0.631	1.55	23.6	42.7	2.44	30.8	0.00	0.00			272	209
300 ISL	8.31 D	8.28	34.217 D	26.617	146.8	0.676	1.24	18.8	46.3	2.57	32.0	0.00	0.00			302	
320	8.23	8.20	34.224	26.635	145.4	0.705	1.08	16.3	48.2	2.63	32.6	0.00	0.00			322	208
381	7.64	7.60	34.259	26.750	135.2	0.791	0.72	10.7	56.5	2.82	34.9	0.00	0.00			383	207
400 ISL	7.42 D	7.38	34.267 D	26.788	131.8	0.816	0.63	9.4	59.4	2.87	35.6	0.00	0.00			403	
441	7.06	7.02	34.290	26.857	125.6	0.869	0.46	6.8	65.6	2.98	36.9	0.00	0.00			444	206
480	6.74	6.70	34.309	26.916	120.3	0.917	0.35	5.1	70.7	3.07	38.0	0.00	0.00			483	205
500 ISL	6.63 D	6.58	34.315 D	26.936	118.7	0.941	0.33	4.8	72.5	3.09	38.4	0.00	0.00			503	
515	6.51	6.46	34.316	26.953	117.2	0.959	0.32	4.7	73.9	3.10	38.7	0.00	0.00			519	204
600 ISL	5.89 D	5.84	34.356 D	27.064	107.1	1.054	0.20	2.9	86.7	3.22	39.4	0.00	0.00			604	
632	5.73	5.68	34.365	27.092	104.7	1.088	0.15	2.1	91.6	3.26	39.6	0.00	0.00			637	203
700 ISL	5.51 D	5.45	34.378 D	27.129	101.7	1.158	0.13	1.8	96.9	3.32	39.2	0.00	0.00			705	
742	5.45	5.39	34.382	27.140	101.1	1.201	0.11	1.6	99.3	3.33	39.0	0.00	0.00			748	202
749	5.43	5.37	34.386	27.146	100.7	1.208	0.10	1.4	99.8	3.33	38.8	0.00	0.00			755	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 28.7 N	119 18.0 W	20/01/10	1844 UTC	1655 m	110 29 kn	180 06 04	2	1000.8 mb	14.9 C	13.1 C	15m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.96	14.96	33.368	24.723	321.1	0.000	5.75	100.0	3.3	0.39	0.5	0.04	0.07	0.50	0.16	0	
3	14.96	14.96	33.368	24.724	321.2	0.010	5.75	100.0	3.3	0.39	0.5	0.04	0.07	0.50	0.16	3	222
10 ISL	14.96 D	14.96	33.367 D	24.723	321.4	0.032	5.75	100.0	3.3	0.39	0.4	0.04	0.05	0.50	0.17	10	
11	14.97	14.97	33.368	24.722	321.6	0.035										11	221
12	14.97	14.97	33.368	24.722	321.6	0.039	5.75	100.0	3.3	0.39	0.4	0.04	0.05	0.50	0.17	12	220
20	14.95	14.95	33.367	24.725	321.5	0.064	5.76	100.1	3.1	0.40	0.5	0.04	0.05	0.51	0.16	20	219
25	14.95	14.95	33.367	24.726	321.7	0.080	5.74	99.8	3.3	0.40	0.5	0.04	0.00	0.51	0.18	25	218
30 ISL	14.89 D	14.89	33.363 D	24.736	320.8	0.096	5.73	99.5	3.3	0.41	0.6	0.05	0.03	0.49	0.16	30	
32	14.90	14.90	33.364	24.734	321.0	0.103	5.72	99.3	3.3	0.41	0.6	0.05	0.05	0.47	0.15	32	217
38	14.64	14.63	33.351	24.780	316.8	0.122	5.63	97.3	3.5	0.46	1.4	0.06	0.00	0.41	0.16	38	216
50	13.80	13.79	33.312	24.926	303.2	0.159	5.34	90.7	5.3	0.65	4.0	0.07	0.00	0.24	0.21	50	215
62	12.68	12.67	33.297	25.139	283.2	0.194	4.94	81.9	8.0	0.90	8.0	0.04	0.00	0.19	0.18	62	214
70	12.36	12.35	33.316	25.215	276.1	0.217	4.79	78.9	8.8	0.98	9.0	0.03	0.00	0.14	0.16	70	213
75 ISL	12.12 D	12.11	33.330 D	25.272	270.8	0.230	4.62	75.7	9.7	1.07	10.2	0.02	0.00	0.11	0.14	75	
87	11.83	11.82	33.426	25.401	258.8	0.262	4.17	68.0	12.3	1.28	13.4	0.01	0.00	0.06	0.10	87	212
100 ISL	11.54 D	11.53	33.506 D	25.517	248.0	0.295	3.85	62.4	14.9	1.42	15.3	0.01	0.00	0.03	0.07	100	
102	11.48	11.47	33.507	25.529	246.9	0.300	3.80	61.5	15.3	1.44	15.6	0.01	0.00	0.03	0.07	102	211
118	10.79	10.78	33.669	25.779	223.4	0.338	3.31	52.8	20.1	1.67	19.7	0.02	0.00	0.02	0.05	119	210
125 ISL	10.58 D	10.57	33.714 D	25.851	216.7	0.353	3.19	50.7	21.2	1.72	20.6	0.02	0.00	0.02	0.05	126	
142	10.33	10.31	33.782	25.948	207.8	0.389	2.99	47.3	23.2	1.81	22.1	0.03	0.00	0.01	0.05	143	209
150 ISL	10.07 D	10.05	33.831 D	26.031	200.1	0.406	2.86	45.0	24.7	1.86	23.0	0.02	0.00	0.01	0.04	151	
171	9.70	9.68	33.958	26.192	185.1	0.446	2.53	39.5	28.6	2.00	25.3	0.00	0.00	0.00	0.03	172	208
200 ISL	9.28 D	9.26	34.051 D	26.334	172.1	0.498	2.24	34.7	32.9	2.14	27.2	0.00	0.00	0.01	0.04	201	
201	9.27	9.25	34.055	26.339	171.7	0.499	2.23	34.5	33.0	2.15	27.3	0.00	0.00	0.01	0.04	202	207
228	8.97	8.95	34.124	26.441	162.4	0.545	1.79	27.5	37.8	2.33	29.1	0.00	0.00			229	206
250 ISL	8.74 D	8.71	34.161 D	26.507	156.6	0.580	1.52	23.3	41.1	2.44	30.4	0.00	0.00			251	
269	8.52	8.49	34.191	26.564	151.3	0.609	1.33	20.2	43.6	2.52	31.4	0.00	0.00			271	205
300 ISL	8.26 D	8.23	34.220 D	26.627	145.8	0.655	1.08	16.3	47.7	2.64	32.6	0.00	0.00			302	
326	8.07	8.04	34.240	26.672	142.0	0.692	0.93	14.0	50.9	2.72	33.4	0.00	0.00			328	204
375	7.69	7.65	34.261	26.745	135.7	0.760	0.75	11.2	56.1	2.84	34.7	0.00	0.00			377	203
400 ISL	7.53 D	7.49	34.267 D	26.773	133.3	0.794	0.66	9.8	58.5	2.89	35.4	0.00	0.00			403	
438	7.26	7.22	34.279	26.821	129.2	0.844	0.54	8.0	62.4	2.96	36.4	0.00	0.00			441	202
500 ISL	6.69 D	6.64	34.311 D	26.925	119.8	0.921	0.37	5.4	70.6	3.08	38.1	0.00	0.00			503	
513	6.63	6.58	34.314	26.935	118.9	0.937	0.34	5.0	72.3	3.11	38.4	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 19.1 N	119 40.1 W	23/01/10	1146 UTC	79 m	220 15 kn			1008.7 mb	13.1 C	11.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.32	14.32	33.380	24.869	307.2	0.000	5.65	97.0	3.9	0.50	1.7	0.11	0.09	0.60	0.20	0	
3	14.32	14.32	33.380	24.869	307.3	0.009	5.65	97.0	3.9	0.50	1.7	0.11	0.09	0.60	0.20	3	210
5	14.33	14.33	33.383	24.870	307.3	0.015	5.65	97.0	4.0	0.50	1.7	0.11	0.09	0.66	0.13	5	209
10	14.34	14.34	33.378	24.864	308.0	0.031	5.64	96.9	3.9	0.50	1.7	0.11	0.10	0.65	0.13	10	207
11	14.33	14.33	33.378	24.866	307.8	0.034										11	208
20	14.34	14.34	33.379	24.865	308.2	0.062	5.64	96.9	3.9	0.50	1.7	0.12	0.10	0.63	0.26	20	206
30 ISL	14.33 D	14.33	33.379 D	24.867	308.3	0.092	5.65	97.0	3.9	0.50	1.7	0.12	0.09	0.57	0.22	30	
32	14.33	14.33	33.379	24.867	308.3	0.099	5.65	97.0	3.9	0.50	1.7	0.12	0.09	0.57	0.21	32	205
37	14.32	14.31	33.380	24.870	308.2	0.114	5.62	96.5	4.0	0.50	1.8	0.12	0.10	0.60	0.19	37	204
50 ISL	13.03 D	13.02	33.411 D	25.158	281.1	0.152	5.01	83.8	7.8	0.83	6.7	0.13	0.07	0.34	0.18	50	
52	12.99	12.98	33.412	25.167	280.3	0.158	4.88	81.5	8.7	0.90	7.8	0.13	0.06	0.28	0.18	52	203
60	12.12	12.11	33.445	25.361	262.0	0.180	4.39	72.0	12.0	1.16	11.9	0.12	0.05	0.14	0.20	60	202
68	12.12	12.11	33.440	25.357	262.5	0.201	4.39	72.0	12.0	1.17	11.9	0.12	0.00	0.12	0.26	68	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 9.3 N	120 0.8 W	23/01/10	1707 UTC	1199 m	250 09 kn	250 09 06	1	1014.4 mb	13.7 C	10.5 C	22m	2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.44	14.44	33.360	24.828	311.1	0.000	5.67	97.6	3.8	0.48	1.4	0.07	0.00	0.65	0.34	0	
2	14.44	14.44	33.360	24.828	311.2	0.006	5.67	97.6	3.8	0.48	1.4	0.07	0.00	0.65	0.34	2	222
9	14.44	14.44	33.361	24.829	311.3	0.028	5.68	97.7	3.8	0.47	1.4	0.07	0.00	0.65	0.31	9	220
9	14.45	14.45	33.363	24.829	311.3	0.028										9	221
10 ISL	14.44 D	14.44	33.348 D	24.820	312.2	0.031	5.68	97.7	3.8	0.47	1.4	0.07	0.01	0.66	0.31	10	
17	14.44	14.44	33.360	24.829	311.5	0.053	5.70	98.1	3.7	0.47	1.4	0.07	0.05	0.69	0.35	17	219
20 ISL	14.44 D	14.44	33.348 D	24.820	312.5	0.062	5.69	97.9	3.7	0.47	1.4	0.07	0.04	0.69	0.34	20	
27	14.44	14.44	33.360	24.829	311.8	0.084	5.67	97.6	3.7	0.47	1.4	0.07	0.00	0.66	0.31	27	218
30 ISL	14.44 D	14.44	33.348 D	24.820	312.8	0.094	5.67	97.6	3.7	0.47	1.4	0.07	0.02	0.65	0.32	30	
36	14.44	14.43	33.358	24.828	312.2	0.112	5.67	97.6	3.7	0.47	1.4	0.07	0.06	0.63	0.33	36	217
46	14.44	14.43	33.362	24.831	312.2	0.144	5.67	97.6	3.7	0.47	1.4	0.07	0.00	0.64	0.32	46	216
50 ISL	14.44 D	14.43	33.349 D	24.822	313.2	0.156	5.67	97.5	3.7	0.47	1.4	0.07	0.00	0.64	0.33	50	
56	14.44	14.43	33.360	24.830	312.6	0.175	5.67	97.6	3.7	0.47	1.4	0.07	0.00	0.64	0.34	56	215
63	13.94	13.93	33.345	24.923	303.9	0.196	5.47	93.1	4.9	0.60	3.4	0.08	0.00	0.36	0.23	63	214
71	13.53	13.52	33.339	25.003	296.5	0.220	5.28	89.1	5.9	0.69	4.9	0.08	0.05	0.28	0.22	71	213
75 ISL	12.83 D	12.82	33.306 D	25.117	285.6	0.232	5.15	85.7	6.9	0.79	6.7	0.06	0.04	0.22	0.19	75	
86	11.38	11.37	33.333	25.412	257.7	0.262	4.67	75.3	10.7	1.13	12.3	0.02	0.00	0.08	0.10	86	212
100 ISL	11.08 D	11.07	33.497 D	25.594	240.7	0.297	3.82	61.3	16.2	1.47	17.3	0.02	0.00	0.02	0.05	100	
101	10.96	10.95	33.555	25.660	234.3	0.299	3.76	60.2	16.6	1.49	17.6	0.02	0.00	0.02	0.05	101	211
120	10.68	10.67	33.638	25.775	223.9	0.343	3.54	56.4	18.8	1.59	19.3	0.02	0.00	0.01	0.04	121	210
125 ISL	10.59 D	10.58	33.640 D	25.792	222.3	0.354	3.45	54.8	19.7	1.63	19.9	0.02	0.00	0.01	0.04	126	
140	10.25	10.23	33.767	25.950	207.6	0.386	3.16	49.9	22.5	1.76	21.9	0.00	0.00	0.01	0.03	141	209
150 ISL	10.02 D	10.00	33.821 D	26.031	200.0	0.406	2.98	46.8	24.4	1.83	23.1	0.00	0.00	0.01	0.03	151	
170	9.60	9.58	33.940	26.195	184.8	0.445	2.65	41.3	28.1	1.97	25.3	0.00	0.00	0.00	0.03	171	208
200 ISL	9.12 D	9.10	34.042 D	26.353	170.3	0.498	2.29	35.3	33.2	2.14	27.4	0.02	0.00	0.00	0.03	201	
201	9.12	9.10	34.056	26.364	169.3	0.500	2.28	35.2	33.4	2.15	27.5	0.02	0.00	0.00	0.03	202	207
230	8.81	8.79	34.113	26.458	160.8	0.548	1.95	29.9	37.6	2.28	29.3	0.02	0.00			231	206
250 ISL	8.52 D	8.49	34.133 D	26.519	155.3	0.579	1.63	24.8	41.3	2.41	30.7	0.02	0.00			251	
271	8.36	8.33	34.186	26.585	149.3	0.611	1.32	20.0	45.1	2.55	32.0	0.02	0.00			273	205
300 ISL	8.23 D	8.20	34.183 D	26.603	148.1	0.655	1.12	16.9	48.1	2.64	33.0	0.01	0.00			302	
320	8.06	8.03	34.225	26.661	142.8	0.684	1.04	15.7	49.8	2.68	33.5	0.00	0.00			322	204
380	7.65	7.61	34.247	26.740	136.2	0.767	0.82	12.2	55.9	2.80	35.0	0.00	0.00			382	203
400 ISL	7.50 D	7.46	34.239 D	26.755	135.0	0.794	0.77	11.5	58.2	2.84	35.6	0.00	0.00			403	
444	7.02	6.98	34.246	26.828	128.3	0.852	0.66	9.7	63.5	2.93	37.0	0.00	0.00			447	202
500 ISL	6.59 D	6.54	34.275 D	26.909	121.1	0.922	0.51	7.4	70.3	3.03	38.4	0.00	0.00			503	
515	6.49	6.44	34.277	26.924	119.8	0.940	0.47	6.8	72.1	3.06	38.8	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 58.9 N	120 21.4 W	23/01/10	2104 UTC	799 m	230 09 kn	290 08 09	1	1016.4 mb	14.0 C	11.2 C	18m	3/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.25	14.25	33.296	24.819	312.0	0.000	5.77	98.9	3.5	0.46	1.3	0.06	0.05	0.49	0.18	0	
2	14.25	14.25	33.296	24.819	312.0	0.006	5.77	98.9	3.5	0.46	1.3	0.06	0.05	0.49	0.18	2	221
10	14.15	14.15	33.295	24.839	310.3	0.031	5.78	98.8	3.6	0.46	1.3	0.06	0.00	0.53	0.18	10	219
10	14.16	14.16	33.295	24.837	310.5	0.031										10	220
20 ISL	14.10 D	14.10	33.289 D	24.846	310.0	0.062	5.77	98.6	3.6	0.46	1.3	0.06	0.00	0.56	0.19	20	
21	14.10	14.10	33.292	24.848	309.8	0.065	5.77	98.6	3.6	0.46	1.3	0.06	0.00	0.56	0.19	21	218
30 ISL	14.08 D	14.08	33.288 D	24.849	310.0	0.093	5.79	98.9	3.5	0.46	1.3	0.06	0.00	0.58	0.21	30	
31	14.08	14.08	33.291	24.852	309.8	0.096	5.79	98.9	3.5	0.46	1.3	0.06	0.00	0.58	0.21	31	217
39	14.07	14.06	33.289	24.852	309.9	0.121	5.75	98.1	3.5	0.47	1.4	0.07	0.00	0.58	0.21	39	216
50	14.04	14.03	33.287	24.857	309.8	0.155	5.73	97.7	3.7	0.47	1.5	0.07	0.00	0.59	0.20	50	215
61	13.97	13.96	33.282	24.868	309.0	0.189	5.69	96.9	3.8	0.47	1.7	0.07	0.00	0.50	0.19	61	214
71	13.41	13.40	33.279	24.981	298.6	0.220	5.53	93.1	4.9	0.59	3.6	0.08	0.00	0.32	0.16	71	213
75 ISL	13.19 D	13.18	33.284 D	25.029	294.1	0.231	5.40	90.5	5.8	0.68	5.0	0.07	0.00	0.25	0.15	75	
85	12.23	12.22	33.314	25.239	274.2	0.260	5.00	82.1	8.7	0.94	9.1	0.05	0.00	0.12	0.12	85	212
100 ISL	10.70 D	10.69	33.458 D	25.630	237.1	0.298	4.25	67.6	14.7	1.34	15.9	0.01	0.00	0.03	0.05	100	
101	10.71	10.70	33.457	25.628	237.4	0.301	4.20	66.8	15.1	1.36	16.3	0.01	0.00	0.03	0.05	101	211
121	10.26	10.25	33.644	25.852	216.4	0.346	3.57	56.3	19.9	1.61	20.1	0.00	0.00	0.01	0.04	122	210
125 ISL	10.19 D	10.18	33.673 D	25.886	213.2	0.355	3.46	54.5	20.7	1.65	20.7	0.00	0.00	0.01	0.04	126	
139	10.09	10.07	33.781	25.988	203.9	0.384	3.11	48.9	23.2	1.77	22.3	0.00	0.00	0.00	0.03	140	209
150 ISL	9.80 D	9.78	33.819 D	26.067	196.6	0.406	2.96	46.3	25.2	1.84	23.5	0.00	0.00	0.00	0.03	151	
171	9.40	9.38	33.943	26.230	181.5	0.445	2.74	42.5	28.7	1.96	25.5	0.00	0.00	0.00	0.02	172	208
200	9.23	9.21	34.037	26.331	172.4	0.497	2.33	36.0	32.2	2.10	27.1	0.00	0.00	0.00	0.02	201	207
230	8.91	8.89	34.107	26.437	162.8	0.547	1.95	29.9	36.6	2.24	28.9	0.00	0.00			231	206
250 ISL	8.65 D	8.62	34.139 D	26.503	156.8	0.579	1.72	26.3	39.9	2.36	30.1	0.00	0.00			251	
270	8.38	8.35	34.171	26.570	150.7	0.610	1.51	22.9	43.3	2.47	31.2	0.00	0.00			272	205
300 ISL	8.01 D	7.98	34.182 D	26.635	144.9	0.654	1.28	19.3	48.5	2.60	32.9	0.00	0.00			302	
325	7.67	7.64	34.185	26.687	140.2	0.690	1.13	16.9	52.8	2.68	34.2	0.00	0.00			327	204
380	7.01	6.97	34.203	26.795	130.4	0.764	0.86	12.6	61.0	2.83	36.4	0.00	0.00			382	203
400 ISL	6.95 D	6.91	34.205 D	26.805	129.8	0.790	0.77	11.3	63.0	2.88	36.9	0.00	0.00			403	
439	6.68	6.64	34.236	26.866	124.3	0.840	0.62	9.0	66.8	2.96	37.8	0.00	0.00			442	202
500 ISL	6.22 D	6.18	34.266 D	26.950	116.8	0.913	0.43	6.2	74.9	3.09	39.5	0.00	0.00			503	
512	6.16	6.11	34.273	26.964	115.6	0.927	0.39	5.6	76.5	3.11	39.8	0.00	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.4 N	121 2.5 W	24/01/10	0331 UTC	3742 m	260 06 kn			1019.6 mb	13.8 C	11.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.03	14.03	33.091	24.707	322.7	0.000	5.92	100.9	3.2	0.42	0.7	0.10	0.05	0.47	0.12	0	
2	14.03	14.03	33.091	24.707	322.8	0.006	5.92	100.9	3.2	0.42	0.7	0.10	0.05	0.47	0.12	2	221
10	14.03	14.03	33.092	24.708	322.9	0.032	5.93	101.0	3.2	0.42	0.7	0.10	0.00	0.50	0.12	10	219
10	14.03	14.03	33.093	24.708	322.8	0.032										10	220
20	13.99	13.99	33.096	24.719	322.1	0.065	5.91	100.6	3.2	0.42	0.7	0.10	0.05	0.55	0.14	20	218
30	14.00	14.00	33.103	24.723	322.0	0.097	5.88	100.1	3.1	0.42	0.7	0.11	0.06	0.52	0.16	30	217
41	13.90	13.89	33.153	24.783	316.6	0.132	5.81	98.7	3.4	0.45	1.2	0.12	0.06	0.38	0.13	41	216
49	13.92	13.91	33.181	24.800	315.2	0.157	5.78	98.3	3.5	0.47	1.3	0.12	0.05	0.38	0.13	49	215
50 ISL	13.90 D	13.89	33.186 D	24.808	314.4	0.160	5.77	98.1	3.5	0.47	1.3	0.12	0.05	0.37	0.13	50	
60	13.66	13.65	33.243	24.902	305.8	0.191	5.60	94.8	4.2	0.56	2.9	0.09	0.00	0.28	0.13	60	214
72	12.34	12.33	33.234	25.156	281.8	0.227	5.15	84.8	7.4	0.87	8.0	0.03	0.00	0.12	0.13	72	213
75 ISL	12.12	12.11	33.154 D	25.135	283.8	0.235	4.98	81.5	8.4	0.95	9.3	0.03	0.00	0.11	0.13	75	
87	11.40	11.39	33.402	25.462	252.9	0.267	4.43	71.5	12.0	1.21	13.6	0.01	0.00	0.08	0.12	87	212
99	10.70	10.69	33.396	25.582	241.7	0.297	4.39	69.8	13.8	1.30	15.2	0.01	0.00	0.05	0.07	99	211
100 ISL	10.36 D	10.35	33.411 D	25.653	234.9	0.299	4.37	69.0	14.0	1.31	15.4	0.01	0.00	0.05	0.07	100	
122	10.07	10.06	33.615	25.861	215.5	0.349	3.73	58.6	19.9	1.60	20.2	0.01	0.00	0.01	0.03	123	210
125 ISL	10.12 D	10.11	33.654 D	25.884	213.5	0.355	3.62	56.9	20.7	1.64	20.7	0.01	0.00	0.01	0.03	126	
142	9.90	9.88	33.812	26.044	198.6	0.390	3.06	47.9	24.4	1.81	23.0	0.01	0.00	0.01	0.02	143	209
150 ISL	9.83 D	9.81	33.838 D	26.076	195.7	0.406	2.93	45.8	25.5	1.86	23.7	0.01	0.00	0.01	0.02	151	
170	9.43	9.41	33.931	26.215	182.8	0.444	2.76	42.8	27.8	1.93	25.0	0.01	0.00	0.00	0.02	171	208
200 ISL	9.03 D	9.01	34.026 D	26.354	170.1	0.497	2.51	38.6	32.0	2.05	26.9	0.01	0.00	0.00	0.02	201	
201	9.03	9.01	34.031	26.358	169.7	0.499	2.50	38.5	32.2	2.05	27.0	0.01	0.00	0.00	0.02	202	207
230	8.74	8.72	34.100	26.458	160.7	0.546	2.04	31.2	37.0	2.23	29.0	0.00	0.00			231	206
250 ISL	8.42 D	8.39	34.115 D	26.520	155.1	0.578	1.76	26.7	41.1	2.35	30.5	0.00	0.00			251	
271	8.12	8.09	34.154	26.596	148.1	0.610	1.51	22.8	45.4	2.47	32.0	0.00	0.00			273	205
300 ISL	7.80 D	7.77	34.174 D	26.659	142.5	0.652	1.27	19.0	49.8	2.59	33.5	0.00	0.00			302	
320	7.50	7.47	34.175	26.703	138.4	0.680	1.15	17.1	52.6	2.66	34.3	0.00	0.00			322	204
383	6.81	6.77	34.179	26.803	129.5	0.765	0.86	12.6	62.1	2.84	37.0	0.00	0.00			385	203
400 ISL	6.97 D	6.93	34.235 D	26.826	127.8	0.786	0.78	11.5	64.4	2.89	37.5	0.00	0.00			403	
443	6.43	6.39	34.224	26.890	121.9	0.840	0.58	8.4	69.6	2.99	38.6	0.00	0.00			446	202
500 ISL	6.29 D	6.24	34.293 D	26.963	115.7	0.908	0.38	5.5	74.8	3.09	39.5	0.00	0.00			503	
515	6.18	6.13	34.302	26.984	113.8	0.925	0.33	4.8	76.2	3.11	39.7	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 19.5 N	121 43.0 W	24/01/10	1045 UTC	4069 m	290 03 kn			1020.7 mb	14.6 C	11.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.27	15.27	33.171	24.504	342.0	0.000	5.72	100.0	2.3	0.34	0.1	0.04	0.00	0.33	0.10	0	
3	15.27	15.27	33.171	24.504	342.1	0.010	5.72	100.0	2.3	0.34	0.1	0.04	0.00	0.33	0.10	3	221
9	15.28	15.28	33.156	24.491	343.5	0.031	5.74	100.3	2.4	0.34	0.1	0.04	0.00	0.32	0.10	9	219
10 CSL	15.28	15.28	33.156	24.491	343.6	0.034										10	200
10	15.28	15.28	33.154	24.489	343.7	0.034										10	220
20	15.28	15.28	33.155	24.490	343.9	0.069	5.71	99.8	2.3	0.35	0.1	0.04	0.00	0.29	0.12	20	218
30 ISL	15.28 D	15.28	33.156 D	24.491	344.1	0.103	5.72	100.0	2.3	0.34	0.0	0.04	0.06	0.29	0.13	30	
31	15.28	15.28	33.154	24.490	344.3	0.106	5.72	100.0	2.3	0.34	0.0	0.04	0.06	0.29	0.13	31	217
40	15.28	15.27	33.156	24.492	344.4	0.137	5.72	100.0	2.3	0.34	0.0	0.04	0.00	0.30	0.12	40	216
49	15.29	15.28	33.155	24.489	344.9	0.168	5.73	100.2	2.3	0.34	0.1	0.03	0.00	0.29	0.13	49	215
50 ISL	15.28 D	15.27	33.156 D	24.492	344.7	0.172	5.73	100.2	2.3	0.34	0.1	0.03	0.00	0.29	0.13	50	
60	15.25	15.24	33.155	24.498	344.4	0.206	5.71	99.7	2.3	0.34	0.1	0.04	0.00	0.29	0.13	60	214
70	14.56	14.55	33.139	24.635	331.6	0.240	5.72	98.5	2.9	0.41	0.5	0.17	0.13	0.15	0.12	70	213
75 ISL	14.26 D	14.25	33.131 D	24.692	326.3	0.257	5.73	98.1	3.0	0.43	0.7	0.19	0.10	0.14	0.11	75	
86	13.70	13.69	33.122	24.801	316.1	0.292	5.74	97.1	3.5	0.49	1.5	0.22	0.05	0.11	0.10	86	212
99	12.17	12.16	33.082	25.071	290.5	0.331	5.61	91.9	5.0	0.64	4.1	0.02	0.00	0.07	0.08	99	211
100 ISL	12.11 D	12.10	33.082 D	25.082	289.5	0.334	5.60	91.6	5.1	0.65	4.3	0.02	0.00	0.07	0.08	100	
120	11.12	11.11	33.114	25.289	270.1	0.390	5.45	87.3	7.1	0.81	7.2	0.01	0.00	0.04	0.05	121	210
125 ISL	10.81 D	10.80	33.123 D	25.351	264.2	0.404	5.41	86.1	7.7	0.86	8.0	0.01	0.00	0.04	0.05	126	
140	10.26	10.24	33.203	25.508	249.5	0.442	5.20	81.8	10.3	1.02	10.9	0.01	0.00	0.03	0.04	141	209
150 ISL	9.76 D	9.74	33.251 D	25.630	238.0	0.467	4.94	76.9	13.1	1.18	13.7	0.01	0.00	0.02	0.03	151	
169	9.36	9.34	33.482	25.875	214.9	0.510	4.33	66.9	19.3	1.51	19.2	0.00	0.00	0.01	0.02	170	208
198	8.77	8.75	33.814	26.229	181.8	0.567	3.39	51.8	28.5	1.88	25.2	0.00	0.00	0.00	0.02	199	207
200 ISL	8.76 D	8.74	33.812 D	26.229	181.8	0.571	3.36	51.3	28.8	1.88	25.3	0.00	0.00			201	
232	8.43	8.41	33.919	26.364	169.5	0.627	3.15	47.8	31.9	1.94	26.6	0.00	0.00			233	206
250 ISL	8.09 D	8.06	33.962 D	26.449	161.6	0.657	3.07	46.2	34.8	1.98	27.4	0.00	0.00			251	
270	7.80	7.77	33.981	26.507	156.3	0.689	2.90	43.4	38.6	2.06	28.5	0.00	0.00			271	205
300 ISL	7.36 D	7.33	34.023 D	26.603	147.4	0.734	2.22	32.9	45.9	2.32	31.7	0.00	0.00			302	
319	7.30	7.27	34.062	26.643	144.0	0.762	1.74	25.7	50.3	2.50	33.7	0.00	0.00			321	204
380	7.32	7.28	34.206	26.754	134.5	0.847	0.83	12.3	57.8	2.82	36.0	0.00	0.00			382	203
400 ISL	7.10 D	7.06	34.215 D	26.792	131.1	0.873	0.69	10.2	61.0	2.89	36.7	0.00	0.00			402	
441	6.66	6.62	34.233	26.866	124.3	0.926	0.55	8.0	68.0	3.00	38.2	0.00	0.00			444	202
500 ISL	5.88 D	5.84	34.233 D	26.967	114.8	0.996	0.45	6.4	78.0	3.10	40.4	0.00	0.00			503	
515	5.77	5.73	34.233	26.981	113.6	1.013	0.43	6.1	80.5	3.12	40.9	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 59.1 N	122 23.5 W	24/01/10	1727 UTC	4146 m	110 04 kn	290 05 06	1	1022.1 mb	15.6 C	12.9 C	32m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.47	15.47	33.173	24.462	346.0	0.000	5.71	100.2	2.0	0.34	0.0	0.00	0.00	0.25	0.12	0	
2	15.47	15.47	33.173	24.462	346.1	0.007	5.71	100.2	2.0	0.34	0.0	0.00	0.00	0.25	0.12	2	223
10 ISL	15.46 D	15.46	33.173 D	24.464	346.1	0.035	5.72	100.4	1.9	0.34	0.0	0.00	0.00	0.25	0.12	10	
14	15.46	15.46	33.171	24.463	346.4	0.048	5.72	100.4	1.9	0.34	0.0	0.00	0.00	0.25	0.12	14	221
15	15.46	15.46	33.172	24.464	346.3	0.052										15	222
20 ISL	15.46 D	15.46	33.173 D	24.465	346.4	0.069	5.71	100.2	1.9	0.34	0.0	0.00	0.00	0.26	0.12	20	
26	15.46	15.46	33.170	24.463	346.8	0.090	5.70	100.0	2.0	0.34	0.0	0.00	0.00	0.26	0.12	26	220
30 ISL	15.46 D	15.46	33.172 D	24.464	346.7	0.104	5.70	100.0	2.0	0.34	0.0	0.00	0.00	0.26	0.12	30	
35	15.46	15.45	33.173	24.465	346.8	0.121	5.71	100.2	2.0	0.33	0.0	0.00	0.00	0.26	0.12	35	219
42	15.46	15.45	33.175	24.467	346.8	0.146	5.71	100.2	2.2	0.30	0.0	0.00	0.00	0.25	0.13	42	218
50 ISL	15.46 D	15.45	33.172 D	24.465	347.3	0.173	5.71	100.2	2.1	0.31	0.0	0.00	0.00	0.26	0.13	50	
52	15.46	15.45	33.173	24.466	347.2	0.180	5.71	100.2	2.1	0.32	0.0	0.00	0.00	0.26	0.13	52	217
63	15.46	15.45	33.172	24.465	347.6	0.218	5.70	100.0	2.0	0.33	0.0	0.00	0.00	0.25	0.13	63	216
71	15.45	15.44	33.171	24.467	347.7	0.246	5.72	100.3	2.2	0.36	0.0	0.01	0.06	0.24	0.12	71	215
75 ISL	15.40 D	15.39	33.174 D	24.480	346.6	0.260	5.72	100.2	2.2	0.37	0.0	0.02	0.06	0.22	0.11	75	
81	15.29	15.28	33.176	24.506	344.3	0.281	5.72	100.0	2.3	0.38	0.1	0.07	0.07	0.19	0.11	81	214
93	13.93	13.92	33.205	24.818	314.7	0.320	5.81	98.8	3.2	0.43	0.6	0.30	0.00	0.12	0.14	93	213
100 ISL	13.43 D	13.42	33.223 D	24.934	303.8	0.342	5.76	97.0	3.4	0.45	1.1	0.17	0.00	0.10	0.12	100	
103	13.29	13.28	33.223	24.962	301.2	0.351	5.73	96.2	3.5	0.46	1.4	0.10	0.00	0.09	0.11	103	212
119	11.39	11.38	33.082	25.215	277.1	0.397	5.55	89.4	6.2	0.76	5.9	0.01	0.00	0.04	0.05	120	211
125 ISL	10.88 D	10.86	33.068 D	25.296	269.5	0.414	5.50	87.6	6.8	0.82	7.0	0.01	0.00	0.03	0.04	126	
135	10.61	10.59	33.072	25.346	264.8	0.440	5.36	84.9	8.4	0.95	9.2	0.00	0.00	0.03	0.04	136	210
150	9.68	9.66	33.206	25.607	240.1	0.478	4.86	75.5	14.8	1.33	15.5	0.00	0.00	0.01	0.02	151	209
170	9.34	9.32	33.471	25.870	215.5	0.524	4.41	68.1	18.9	1.48	18.6	0.00	0.00	0.00	0.01	171	208
200 ISL	9.04 D	9.02	33.730 D	26.121	192.2	0.585	3.96	60.8	23.3	1.65	21.6	0.00	0.00	0.00	0.01	201	
201	9.07	9.05	33.712	26.102	194.0	0.587	3.94	60.6	23.5	1.66	21.7	0.00	0.00	0.00	0.01	202	207
231	8.62	8.60	33.923	26.338	172.0	0.642	2.92	44.5	32.5	2.04	27.4	0.00	0.00			232	206
250 ISL	8.14 D	8.11	33.986 D	26.461	160.5	0.673	2.57	38.7	36.9	2.17	29.4	0.00	0.00			251	
271	7.87	7.84	34.003	26.514	155.7	0.707	2.31	34.6	41.0	2.27	30.8	0.00	0.00			272	205
300 ISL	7.76 D	7.73	34.053 D	26.570	150.9	0.751	1.90	28.4	45.6	2.42	32.4	0.00	0.00			302	
321	7.58	7.55	34.090	26.625	145.9	0.782	1.63	24.3	48.6	2.52	33.4	0.00	0.00			323	204
382	7.15	7.11	34.156	26.738	135.9	0.868	1.02	15.0	57.5	2.77	36.2	0.00	0.00			384	203
400 ISL	7.06 D	7.02	34.167 D	26.760	134.1	0.893	0.88	13.0	60.5	2.84	36.9	0.00	0.00			402	
441	6.59	6.55	34.205	26.854	125.4	0.946	0.64	9.3	67.4	2.97	38.3	0.00	0.00			444	202
500 ISL	6.12 D	6.08	34.243 D	26.945	117.2	1.017	0.46	6.6	75.9	3.09	39.9	0.00	0.00			503	
520	5.95	5.90	34.251	26.973	114.6	1.041	0.40	5.7	78.8	3.13	40.4	0.00	0.00			523	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.4 N	123 4.5 W	24/01/10	2331 UTC	4112 m	160 04 kn	280 04 09	1	1020.1 mb	15.5 C	12.1 C	35m	3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.04	16.04	33.214	24.366	355.2	0.000	5.69	101.0	2.0	0.33	0.0	0.00	0.00	0.20	0.05	0	
2	16.04	16.04	33.214	24.366	355.2	0.007	5.69	101.0	2.0	0.33	0.0	0.00	0.00	0.20	0.05	2	221
10	15.77	15.77	33.207	24.422	350.2	0.035	5.70	100.7	2.1	0.32	0.0	0.00	0.00	0.22	0.07	10	219
11	15.77	15.77	33.207	24.422	350.2	0.039										11	220
20 ISL	15.72 D	15.72	33.202 D	24.429	349.8	0.070	5.69	100.4	2.0	0.32	0.0	0.00	0.00	0.23	0.08	20	
24	15.71	15.71	33.201	24.431	349.7	0.084	5.69	100.3	2.0	0.32	0.0	0.00	0.00	0.23	0.08	24	218
30 ISL	15.70 D	15.70	33.198 D	24.431	349.9	0.105	5.69	100.3	2.0	0.32	0.0	0.00	0.00	0.24	0.08	30	
41	15.69	15.68	33.197	24.433	350.1	0.144	5.68	100.1	1.9	0.32	0.0	0.00	0.00	0.25	0.09	41	217
50	15.67	15.66	33.193	24.435	350.2	0.175	5.68	100.1	2.0	0.32	0.0	0.00	0.00	0.26	0.10	50	216
63	15.65	15.64	33.188	24.436	350.5	0.221	5.70	100.4	1.9	0.32	0.0	0.00	0.00	0.27	0.10	63	215
75	15.63	15.62	33.187	24.440	350.5	0.263	5.66	99.6	1.9	0.32	0.0	0.00	0.00	0.26	0.11	75	214
87	15.46	15.45	33.183	24.475	347.5	0.305	5.70	100.0	2.2	0.33	0.1	0.03	0.00	0.20	0.11	87	213
100 ISL	14.91 D	14.90	33.169 D	24.584	337.4	0.349	5.73	99.4	2.5	0.36	0.4	0.10	0.00	0.15	0.12	100	
101	14.95	14.93	33.173	24.579	337.9	0.353	5.73	99.5	2.5	0.36	0.4	0.10	0.00	0.15	0.12	101	212
112	13.06	13.04	33.161	24.960	301.6	0.388	5.72	95.5	4.0	0.52	2.6	0.11	0.00	0.09	0.11	112	211
125	12.68	12.66	33.216	25.078	290.7	0.426	5.61	93.0	4.5	0.54	3.1	0.03	0.00	0.06	0.09	126	210
141	10.57	10.55	33.052	25.338	265.8	0.471	5.38	85.1	8.7	1.02	9.3	0.01	0.00	0.03	0.04	142	209
150 ISL	10.27 D	10.25	33.136 D	25.454	254.8	0.494	5.26	82.7	10.3	1.12	11.2	0.01	0.00	0.02	0.03	151	
170	9.69	9.67	33.263	25.651	236.4	0.543	4.91	76.3	13.7	1.22	14.4	0.00	0.00	0.01	0.02	171	208
200 ISL	9.04 D	9.02	33.626 D	26.040	199.9	0.609	4.08	62.6	22.2	1.60	21.1	0.00	0.00	0.00	0.01	201	
201	9.06	9.04	33.600	26.016	202.1	0.611	4.05	62.2	22.5	1.61	21.3	0.00	0.00	0.00	0.01	202	207
230	8.67	8.65	33.899	26.312	174.5	0.665	2.98	45.4	31.3	1.97	26.8	0.00	0.00			231	206
250 ISL	8.61 D	8.58	33.979 D	26.384	168.0	0.700	2.88	43.9	34.3	2.00	27.4	0.00	0.00			251	
270	8.16	8.13	34.014	26.480	159.1	0.732	2.78	41.9	36.6	2.03	28.0	0.00	0.00			271	205
300 ISL	7.78 D	7.75	34.048 D	26.563	151.6	0.779	2.29	34.2	42.2	2.23	30.4	0.00	0.00			302	
320	7.59	7.56	34.061	26.601	148.2	0.809	1.92	28.6	46.4	2.38	32.3	0.00	0.00			322	204
381	6.71	6.67	34.103	26.756	133.8	0.895	1.20	17.5	59.9	2.71	36.4	0.00	0.00			383	203
400 ISL	6.46 D	6.42	34.118 D	26.801	129.6	0.920	1.05	15.2	63.3	2.78	37.2	0.00	0.00			402	
446	6.17	6.13	34.163	26.875	123.1	0.978	0.77	11.1	70.7	2.93	38.6	0.00	0.00			449	202
500 ISL	5.74 D	5.70	34.224 D	26.977	113.7	1.042	0.48	6.8	79.4	3.06	40.3	0.00	0.00			503	
512	5.70	5.66	34.234	26.990	112.6	1.056	0.42	6.0	81.3	3.09	40.7	0.00	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 19.5 N	123 44.3 W	25/01/10	0616 UTC	4034 m	120 03 kn			1019.9 mb	15.0 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.53	15.53	33.183	24.456	346.6	0.000	5.78	101.6	1.9	0.33	0.0	0.00	0.06	0.17	0.06	0	
2	15.53	15.53	33.183	24.456	346.6	0.007	5.78	101.6	1.9	0.33	0.0	0.00	0.06	0.17	0.06	2	221
10	15.54	15.54	33.185	24.456	346.9	0.035	5.73	100.7	2.0	0.34	0.0	0.00	0.05	0.17	0.06	10	219
10	15.54	15.54	33.182	24.453	347.1	0.035										10	220
20	15.46	15.46	33.174	24.465	346.3	0.069	5.74	100.7	1.9	0.34	0.0	0.00	0.06	0.19	0.08	20	218
30	15.37	15.37	33.165	24.479	345.3	0.104	5.75	100.7	2.0	0.34	0.0	0.00	0.05	0.25	0.11	30	217
41	15.02	15.01	33.141	24.537	340.1	0.142	5.81	101.0	2.3	0.35	0.0	0.00	0.00	0.34	0.17	41	216
50	14.99	14.98	33.140	24.543	339.8	0.172	5.79	100.6	2.2	0.36	0.0	0.02	0.06	0.33	0.18	50	215
60	14.03	14.02	33.128	24.737	321.5	0.205	5.79	98.6	2.9	0.46	0.8	0.37	0.11	0.28	0.23	60	214
70	13.54	13.53	33.095	24.812	314.6	0.237	5.77	97.3	3.4	0.52	1.5	0.47	0.06	0.20	0.16	70	213
75 ISL	13.21 D	13.20	33.072 D	24.861	310.1	0.253	5.76	96.4	3.6	0.54	2.0	0.34	0.04	0.16	0.14	75	
85	12.57	12.56	33.037	24.959	300.9	0.283	5.71	94.3	4.3	0.60	3.3	0.04	0.00	0.10	0.10	85	212
100 ISL	11.22 D	11.21	32.992 D	25.176	280.4	0.327	5.56	89.2	6.1	0.80	6.4	0.01	0.00	0.06	0.06	100	
101	11.27	11.26	32.991	25.166	281.3	0.330	5.55	89.1	6.3	0.81	6.6	0.01	0.00	0.06	0.06	101	211
121	10.19	10.18	33.054	25.403	259.0	0.384	5.28	82.9	9.8	1.05	11.0	0.01	0.00	0.03	0.04	122	210
125 ISL	9.99 D	9.98	33.105 D	25.477	252.0	0.394	5.18	81.0	10.9	1.12	12.1	0.01	0.00	0.03	0.04	126	
141	9.73	9.71	33.256	25.638	237.0	0.433	4.71	73.3	15.6	1.38	16.7	0.00	0.00	0.01	0.02	142	209
150 ISL	9.57 D	9.55	33.372 D	25.755	226.0	0.454	4.40	68.2	18.3	1.51	18.9	0.00	0.00	0.01	0.02	151	
170	9.26	9.24	33.637	26.013	201.9	0.497	3.77	58.2	23.5	1.74	22.7	0.00	0.00	0.00	0.02	171	208
200 ISL	9.02 D	9.00	33.859 D	26.225	182.3	0.554	3.40	52.2	26.6	1.80	24.3	0.00	0.00	0.00	0.01	201	
201	9.02	9.00	33.868	26.232	181.7	0.556	3.39	52.1	26.7	1.80	24.3	0.00	0.00	0.00	0.01	202	207
231	8.47	8.45	33.966	26.395	166.6	0.608	3.06	46.5	32.2	1.93	26.5	0.00	0.00			232	206
250 ISL	8.17 D	8.14	33.993 D	26.462	160.4	0.639	2.86	43.1	35.8	2.03	28.0	0.00	0.00			251	
271	7.81	7.78	34.006	26.525	154.6	0.672	2.60	38.9	39.9	2.16	29.6	0.00	0.00			272	205
300 ISL	7.44 D	7.41	34.039 D	26.605	147.4	0.716	2.09	31.0	45.9	2.35	32.0	0.00	0.00			302	
322	7.33	7.30	34.073	26.647	143.7	0.748	1.71	25.3	50.2	2.49	33.7	0.00	0.00			324	204
382	6.80	6.76	34.127	26.763	133.2	0.831	1.12	16.4	59.5	2.75	36.6	0.00	0.00			384	203
400 ISL	6.55 D	6.51	34.134 D	26.802	129.6	0.855	1.02	14.8	62.4	2.81	37.3	0.00	0.00			402	
442	6.21	6.17	34.151	26.860	124.4	0.908	0.84	12.1	69.1	2.92	38.7	0.00	0.00			445	202
500 ISL	5.74 D	5.70	34.175 D	26.939	117.3	0.978	0.60	8.6	77.7	3.04	40.3	0.00	0.00			503	
516	5.66	5.62	34.203	26.971	114.4	0.997	0.54	7.7	80.1	3.07	40.7	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.4 N	118 26.8 W	20/01/10	0146 UTC	29 m	200 18 kn			1001.7 mb	14.0 C	12.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.86	14.86	33.333	24.718	321.6	0.000	5.84	101.3	3.4	0.42	0.4	0.24	1.01	0.99	0.53	0	
2	14.86	14.86	33.333	24.718	321.7	0.006	5.84	101.3	3.4	0.42	0.4	0.24	1.01	0.99	0.53	2	205
5	14.87	14.87	33.332	24.715	322.0	0.016	5.86	101.7	3.4	0.41	0.4	0.23	1.03	1.21	0.50	5	204
10	14.86	14.86	33.332	24.718	322.0	0.032	5.84	101.3	3.4	0.41	0.4	0.24	1.04	1.18	0.51	10	203
15	14.87	14.87	33.326	24.711	322.7	0.048	5.85	101.5	3.4	0.42	0.4	0.23	1.06	1.20	0.43	15	202
20	14.86	14.86	33.347	24.729	321.1	0.064	5.79	100.5	3.3	0.45	0.4	0.27	1.18	1.16	0.43	20	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 40.5 N	118 5.4 W	19/01/10	2045 UTC	23 m	070 40 kn	130 06 06	6	995.6 mb	14.0 C	13.7 C		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.24	15.24	33.312	24.619	331.0	0.000	5.73	100.2	2.9	0.40	0.1	0.08	0.34	0.80	0.50	0	
2	15.24	15.24	33.312	24.619	331.1	0.007	5.73	100.2	2.9	0.40	0.1	0.08	0.34	0.80	0.50	2	204
5	15.23	15.23	33.321	24.629	330.3	0.017	5.77	100.9	3.1	0.41	0.1	0.08	0.33	0.85	0.50	5	203
10 ISL	15.21 D	15.21	33.332 D	24.642	329.2	0.033	5.77	100.8	3.2	0.39	0.2	0.08	0.33	0.86	0.52	10	
11	15.22	15.22	33.331	24.639	329.5	0.036	5.77	100.8	3.2	0.39	0.2	0.08	0.33	0.86	0.52	11	202
14	15.22	15.22	33.361	24.662	327.4	0.046	5.74	100.3	3.1	0.40	0.1	0.09	0.35	0.84	0.49	14	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.4 N	117 46.1 W	19/01/10	1703 UTC	62 m	040 13 kn	130 04 05	2	1006.8 mb	14.5 C	11.9 C	12m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.37	15.37	33.380	24.643	328.7	0.000	5.78	101.4	3.1	0.40	0.3	0.08	0.57	0.77	0.32	0	
2	15.37	15.37	33.380	24.643	328.8	0.007	5.78	101.4	3.1	0.40	0.3	0.08	0.57	0.77	0.32	2	208
5	15.37	15.37	33.382	24.645	328.7	0.016	5.76	101.0	2.9	0.39	0.2	0.07	0.58	0.77	0.34	5	207
9	15.38	15.38	33.382	24.643	329.1	0.030	5.77	101.2	2.9	0.38	0.2	0.07	0.48	0.81	0.30	9	206
10 ISL	15.39 D	15.39	33.381 D	24.640	329.4	0.033	5.77	101.2	2.9	0.38	0.2	0.07	0.48	0.81	0.30	10	
20 ISL	15.39 D	15.39	33.381 D	24.640	329.6	0.066	5.77	101.2	3.0	0.38	0.2	0.07	0.51	0.76	0.34	20	
21	15.39	15.39	33.384	24.642	329.5	0.069	5.77	101.2	3.0	0.38	0.2	0.07	0.51	0.75	0.34	21	205
30	15.39	15.39	33.384	24.643	329.7	0.099	5.75	100.9	2.8	0.38	0.2	0.07	0.51	0.73	0.34	30	204
39	15.37	15.36	33.386	24.649	329.4	0.128	5.76	101.0	2.8	0.37	0.2	0.08	0.57	0.70	0.32	39	203
47	15.35	15.34	33.387	24.655	329.1	0.155	5.75	100.8	3.1	0.38	0.3	0.09	0.62	0.62	0.32	47	202
50 ISL	15.34 D	15.33	33.386 D	24.656	329.1	0.165	5.70	99.9	3.3	0.41	0.5	0.11	0.73	0.57	0.31	50	
56	15.03	15.02	33.368	24.710	324.1	0.184	5.61	97.7	3.8	0.48	0.9	0.15	0.94	0.48	0.30	56	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 54.1 W	19/01/10	1404 UTC	620 m	070 17 kn			1006.9 mb	14.2 C	12.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.64	15.64	33.443	24.632	329.8	0.000	5.71	100.7	2.3	0.35	0.0	0.00	0.00	0.38	0.14	0	
2	15.64	15.64	33.443	24.632	329.9	0.007	5.71	100.7	2.3	0.35	0.0	0.00	0.00	0.38	0.14	2	220
9	15.64	15.64	33.444	24.633	330.0	0.030	5.71	100.7	2.2	0.35	0.0	0.00	0.00	0.37	0.13	9	219
10 ISL	15.63 D	15.63	33.444 D	24.635	329.8	0.033	5.71	100.7	2.2	0.35	0.0	0.00	0.01	0.37	0.13	10	
20	15.64	15.64	33.441	24.631	330.5	0.066	5.71	100.7	2.3	0.36	0.0	0.00	0.06	0.41	0.11	20	218
30	15.63	15.63	33.443	24.635	330.5	0.099	5.71	100.7	2.2	0.35	0.0	0.00	0.00	0.36	0.15	30	217
41	15.59	15.58	33.440	24.642	330.1	0.135	5.70	100.4	2.4	0.36	0.0	0.02	0.00	0.41	0.19	41	216
50	15.34	15.33	33.415	24.678	326.9	0.165	5.62	98.5	2.9	0.41	0.4	0.08	0.00	0.41	0.19	50	215
60	14.15	14.14	33.339	24.875	308.4	0.197	5.33	91.1	4.6	0.60	2.8	0.14	0.00	0.23	0.21	60	214
70	13.36	13.35	33.292	25.001	296.6	0.227	5.17	87.0	5.9	0.75	5.0	0.03	0.00	0.16	0.15	70	213
75 ISL	12.65 D	12.64	33.316 D	25.160	281.6	0.241	4.95	82.0	7.3	0.87	6.7	0.02	0.00	0.13	0.13	75	
86	12.23	12.22	33.342	25.261	272.2	0.272	4.53	74.4	10.3	1.11	10.5	0.00	0.00	0.08	0.10	86	212
100	11.07	11.06	33.340	25.473	252.1	0.309	4.59	73.6	11.9	1.22	13.5	0.00	0.00	0.06	0.07	100	211
120	10.56	10.55	33.530	25.711	229.8	0.357	3.99	63.3	16.7	1.48	17.7	0.00	0.00	0.02	0.04	121	210
125 ISL	10.44 D	10.43	33.574 D	25.766	224.7	0.368	3.73	59.0	18.4	1.57	18.8	0.00	0.00	0.02	0.04	126	
142	10.48	10.46	33.813	25.946	208.0	0.405	2.90	46.0	23.6	1.85	22.2	0.00	0.00	0.01	0.03	143	209
150 ISL	9.82 D	9.80	33.751 D	26.010	202.0	0.421	2.85	44.6	24.7	1.89	23.0	0.00	0.00	0.01	0.03	151	
171	9.90	9.88	33.913	26.124	191.7	0.463	2.71	42.5	26.7	1.95	24.2	0.00	0.00	0.00	0.02	172	208
199	9.79	9.77	34.089	26.280	177.5	0.514	2.05	32.1	31.5	2.17	26.5	0.00	0.00	0.00	0.02	200	207
200 ISL	9.75 D	9.73	34.092 D	26.289	176.6	0.516	2.05	32.1	31.6	2.17	26.5	0.00	0.00			201	
232	9.12	9.09	34.089	26.390	167.4	0.571	2.19	33.8	34.0	2.18	27.6	0.00	0.00			233	206
250 ISL	9.02 D	8.99	34.126 D	26.435	163.5	0.601	1.93	29.7	36.2	2.28	28.4	0.00	0.00			251	
270	9.05	9.02	34.205	26.493	158.5	0.633	1.59	24.5	39.0	2.41	29.4	0.00	0.00			272	205
300 ISL	8.47 D	8.44	34.176 D	26.561	152.2	0.680	1.46	22.2	42.7	2.50	30.7	0.00	0.00			302	
320	8.29	8.26	34.194	26.603	148.6	0.710	1.41	21.4	45.3	2.55	31.6	0.00	0.00			322	204
381	7.58	7.54	34.250	26.752	135.0	0.796	0.85	12.7	55.4	2.81	34.7	0.00	0.00			383	203
400 ISL	7.30 D	7.26	34.239 D	26.783	132.1	0.822	0.73	10.8	58.3	2.88	35.5	0.00	0.00			403	
441	7.06	7.02	34.273	26.844	126.9	0.875	0.52	7.7	64.1	3.00	36.9	0.00	0.00			444	202
500 ISL	6.62 D	6.57	34.311 D	26.934	118.8	0.947	0.34	5.0	71.7	3.11	38.3	0.00	0.00			503	
516	6.48	6.43	34.315	26.956	116.9	0.966	0.29	4.2	73.8	3.14	38.7	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 15.0 N	118 14.9 W	19/01/10	0858 UTC	376 m	250 02 kn			1008.0 mb	15.9 C	12.5 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.82	15.82	33.487	24.625	330.4	0.000	5.72	101.3	2.4	0.35	0.0	0.00	0.00	0.39	0.11	0	
2	15.82	15.82	33.487	24.625	330.5	0.007	5.72	101.3	2.4	0.35	0.0	0.00	0.00	0.39	0.11	2	218
10	15.84	15.84	33.492	24.625	330.8	0.033	5.72	101.3	2.4	0.36	0.0	0.00	0.00	0.38	0.10	10	216
10	15.84	15.84	33.488	24.622	331.1	0.033										10	217
20	15.85	15.85	33.491	24.622	331.4	0.066	5.71	101.2	2.3	0.36	0.0	0.00	0.00	0.38	0.12	20	215
30	15.80	15.80	33.484	24.629	331.1	0.099	5.70	100.9	2.5	0.36	0.0	0.02	0.00	0.40	0.15	30	214
40	14.89	14.88	33.391	24.757	319.1	0.132	5.50	95.5	3.5	0.47	1.1	0.23	0.00	0.32	0.25	40	213
50	14.12	14.11	33.323	24.869	308.7	0.163	5.33	91.1	4.8	0.61	3.1	0.10	0.00	0.25	0.20	50	212
61	13.15	13.14	33.218	24.985	297.8	0.197	5.37	89.9	5.4	0.69	4.7	0.06	0.00	0.18	0.23	61	211
69	12.47	12.46	33.198	25.103	286.8	0.220	5.24	86.5	6.7	0.81	6.7	0.03	0.00	0.14	0.20	69	210
75 ISL	12.03 D	12.02	33.233 D	25.214	276.3	0.237	5.01	81.9	7.9	0.91	8.1	0.03	0.00	0.11	0.17	75	
85	12.00	11.99	33.335	25.299	268.5	0.264	4.62	75.5	10.0	1.06	10.4	0.03	0.00	0.08	0.12	85	209
100	11.18	11.17	33.392	25.494	250.1	0.303	4.39	70.5	12.7	1.25	14.2	0.00	0.00	0.06	0.09	100	208
119	10.64	10.63	33.535	25.701	230.8	0.349	3.95	62.8	16.8	1.47	17.7	0.00	0.00	0.03	0.06	120	207
125 ISL	10.51 D	10.50	33.590 D	25.767	224.7	0.362	3.85	61.0	17.9	1.52	18.6	0.00	0.00	0.02	0.05	126	
140	10.15	10.13	33.666	25.888	213.4	0.395	3.60	56.7	20.5	1.62	20.4	0.00	0.00	0.01	0.03	141	206
150 ISL	10.06 D	10.04	33.731 D	25.954	207.3	0.416	3.41	53.6	21.7	1.68	21.3	0.00	0.00	0.01	0.03	151	
170	9.94	9.92	33.859	26.075	196.3	0.457	3.00	47.1	24.7	1.82	23.1	0.00	0.00	0.01	0.02	171	205
199	9.23	9.21	34.072	26.359	169.8	0.510	2.29	35.4	33.0	2.12	27.0	0.00	0.00	0.00	0.02	200	204
200 ISL	9.18 D	9.16	34.075 D	26.369	168.8	0.511	2.28	35.2	33.1	2.13	27.1	0.00	0.00			201	
230	9.05	9.02	34.114	26.421	164.4	0.561	2.07	31.9	35.5	2.22	28.1	0.00	0.00			231	203
250 ISL	8.73 D	8.70	34.144 D	26.495	157.7	0.594	1.96	30.0	37.6	2.27	28.8	0.00	0.00			251	
270	8.64	8.61	34.142	26.508	156.8	0.625	1.82	27.8	40.1	2.34	29.7	0.00	0.00			272	202
300 ISL	8.28 D	8.25	34.217 D	26.622	146.3	0.670	1.40	21.2	45.4	2.52	31.5	0.00	0.00			302	
319	8.13	8.10	34.227	26.652	143.7	0.698	1.14	17.2	48.8	2.63	32.6	0.00	0.00			321	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 10.8 N	118 23.3 W	19/01/10	0511 UTC	1179 m	190 06 kn			1008.7 mb	16.1 C	12.7 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.86	15.86	33.491	24.620	331.0	0.000	5.71	101.2	2.0	0.38	0.0	0.00	0.00	0.34	0.09	0	
2	15.86	15.86	33.491	24.620	331.1	0.007	5.71	101.2	2.0	0.38	0.0	0.00	0.00	0.34	0.09	2	220
10	15.87	15.87	33.492	24.618	331.4	0.033	5.71	101.2	2.2	0.36	0.0	0.00	0.00	0.34	0.08	10	219
20	15.88	15.88	33.494	24.618	331.8	0.066	5.71	101.2	2.2	0.37	0.0	0.00	0.00	0.36	0.09	20	218
30	15.88	15.88	33.492	24.617	332.2	0.099	5.71	101.2	2.0	0.36	0.0	0.00	0.00	0.37	0.10	30	217
41	15.62	15.61	33.473	24.661	328.4	0.136	5.64	99.4	2.3	0.40	0.3	0.05	0.00	0.38	0.14	41	216
50	13.79	13.78	33.300	24.919	303.9	0.164	5.22	88.6	5.5	0.69	4.1	0.06	0.00	0.24	0.24	50	215
61	13.37	13.36	33.354	25.046	292.0	0.197	4.61	77.6	8.7	0.96	7.6	0.02	0.00	0.21	0.21	61	214
71	12.91	12.90	33.368	25.149	282.5	0.226	4.46	74.3	9.8	1.06	9.3	0.02	0.00	0.18	0.17	71	213
75 ISL	12.87 D	12.86	33.374 D	25.162	281.4	0.237	4.32	72.0	10.7	1.12	10.2	0.01	0.00	0.15	0.15	75	
86	12.27	12.26	33.449	25.336	265.0	0.267	4.00	65.8	13.1	1.28	12.7	0.00	0.00	0.06	0.09	86	212
100 ISL	11.05 D	11.04	33.444 D	25.558	244.1	0.303	4.24	68.0	13.6	1.32	14.6	0.00	0.00	0.04	0.06	100	
102	11.04	11.03	33.447	25.562	243.7	0.308	4.28	68.6	13.7	1.32	14.9	0.00	0.00	0.04	0.06	102	211
121	10.53	10.52	33.575	25.752	226.0	0.352	3.82	60.6	17.5	1.53	18.6	0.00	0.00	0.03	0.04	122	210
125 ISL	10.47 D	10.46	33.615 D	25.793	222.1	0.361	3.71	58.8	18.4	1.57	19.3	0.00	0.00	0.03	0.04	126	
140	10.05	10.03	33.738	25.961	206.5	0.393	3.33	52.3	21.7	1.72	21.7	0.00	0.00	0.01	0.03	141	209
150 ISL	9.76 D	9.74	33.761 D	26.028	200.3	0.414	3.19	49.8	23.6	1.79	22.8	0.00	0.00	0.00	0.03	151	
170	9.42	9.40	33.877	26.175	186.6	0.452	2.99	46.4	27.0	1.90	24.5	0.00	0.00	0.00	0.02	171	208
200 ISL	9.05 D	9.03	33.986 D	26.320	173.4	0.506	2.65	40.8	31.2	2.03	26.5	0.00	0.00	0.00	0.01	201	
203	9.06	9.04	33.994	26.325	173.0	0.512	2.60	40.0	31.7	2.05	26.7	0.00	0.00	0.00	0.01	204	207
232	8.99	8.96	34.191	26.491	157.8	0.560	1.55	23.9	39.1	2.41	29.4	0.00	0.00			233	206
250 ISL	8.89 D	8.86	34.194 D	26.509	156.4	0.588	1.55	23.8	41.2	2.44	30.2	0.00	0.00			251	
275	8.46	8.43	34.170	26.557	152.1	0.626	1.56	23.7	43.2	2.48	30.9	0.00	0.00			277	205
300 ISL	7.87 D	7.84	34.103 D	26.593	148.8	0.664	1.51	22.6	46.6	2.53	32.2	0.00	0.00			302	
322	7.70	7.67	34.139	26.647	144.0	0.696	1.41	21.1	49.7	2.59	33.3	0.00	0.00			324	204
382	7.43	7.39	34.240	26.766	133.6	0.779	0.86	12.8	56.8	2.82	34.8	0.00	0.00			384	203
400 ISL	7.18 D	7.14	34.234 D	26.796	130.8	0.803	0.80	11.8	58.9	2.86	35.5	0.00	0.00			403	
441	6.83	6.79	34.224	26.837	127.3	0.856	0.71	10.4	64.0	2.94	37.1	0.00	0.00			444	202
500 ISL	6.41 D	6.36	34.299 D	26.952	116.9	0.928	0.36	5.2	73.4	3.11	38.3	0.00	0.00			503	
516	6.43	6.38	34.316	26.963	116.1	0.947	0.26	3.8	75.9	3.15	38.6	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.8 N	118 55.6 W	18/01/10	2306 UTC	1715 m	190 20 kn	190 06 06	1	1004.5 mb	16.8 C	15.1 C	16m	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.78	15.78	33.473	24.624	330.6	0.000	5.74	101.5	2.4	0.34	0.0	0.01	0.00	0.45	0.15	0	
3	15.78	15.78	33.473	24.624	330.7	0.010	5.74	101.5	2.4	0.34	0.0	0.01	0.00	0.45	0.15	3	221
10	15.78	15.78	33.472	24.623	331.0	0.033	5.76	101.9	2.6	0.34	0.0	0.01	0.00	0.45	0.16	10	219
10	15.78	15.78	33.472	24.623	331.0	0.033										10	220
20 ISL	15.71 D	15.71	33.466 D	24.635	330.2	0.066	5.73	101.2	2.7	0.34	0.0	0.01	0.00	0.46	0.18	20	
21	15.73	15.73	33.468	24.632	330.5	0.069	5.73	101.3	2.7	0.34	0.0	0.01	0.00	0.46	0.18	21	218
30	15.67	15.67	33.467	24.645	329.6	0.099	5.74	101.3	2.5	0.35	0.0	0.02	0.00	0.48	0.19	30	217
41	15.58	15.57	33.459	24.659	328.5	0.135	5.70	100.4	2.7	0.35	0.1	0.04	0.00	0.53	0.21	41	216
50	15.45	15.44	33.453	24.683	326.5	0.165	5.68	99.8	2.9	0.36	0.2	0.07	0.00	0.52	0.25	50	215
59	14.64	14.63	33.382	24.805	315.1	0.194	5.44	94.0	4.2	0.52	2.0	0.16	0.00	0.36	0.18	59	214
70	12.82	12.81	33.247	25.073	289.7	0.227	5.16	85.8	6.6	0.80	6.4	0.02	0.00	0.18	0.21	70	213
75 ISL	12.38 D	12.37	33.258 D	25.167	280.8	0.241	5.05	83.2	7.6	0.88	7.8	0.02	0.00	0.16	0.18	75	
89	11.71	11.70	33.306	25.330	265.5	0.279	4.76	77.3	10.1	1.06	10.8	0.01	0.00	0.10	0.10	89	212
99	11.35	11.34	33.352	25.432	256.0	0.306	4.56	73.5	11.8	1.18	13.0	0.01	0.00	0.08	0.10	99	211
100 ISL	11.34 D	11.33	33.358 D	25.439	255.4	0.308	4.55	73.4	11.9	1.19	13.1	0.01	0.00	0.08	0.10	100	
121	11.00	10.99	33.425	25.552	245.1	0.361	4.30	68.8	13.6	1.31	15.2	0.01	0.00	0.06	0.08	122	210
125 ISL	10.56 D	10.55	33.525 D	25.708	230.3	0.370	4.20	66.6	14.6	1.36	16.1	0.01	0.00	0.05	0.07	126	
143	10.16	10.14	33.640	25.866	215.6	0.410	3.69	58.1	19.8	1.60	20.1	0.00	0.00	0.01	0.03	144	209
150 ISL	10.01 D	9.99	33.675 D	25.919	210.7	0.425	3.54	55.5	21.4	1.66	21.2	0.00	0.00	0.01	0.03	151	
171	9.54	9.52	33.839	26.125	191.4	0.467	3.14	48.8	25.7	1.81	23.7	0.00	0.00	0.00	0.02	172	208
200 ISL	9.17 D	9.15	33.965 D	26.284	176.8	0.521	2.69	41.5	30.4	1.98	26.1	0.00	0.00	0.00	0.02	201	
201	9.16	9.14	33.974	26.293	176.0	0.523	2.68	41.3	30.5	1.99	26.2	0.00	0.00	0.00	0.02	202	207
232	8.83	8.81	34.062	26.415	164.9	0.575	2.26	34.6	35.2	2.15	28.2	0.00	0.00			233	206
250 ISL	8.68 D	8.65	34.096 D	26.465	160.4	0.605	2.07	31.6	37.5	2.23	29.1	0.00	0.00			251	
270	8.57	8.54	34.122	26.503	157.2	0.636	1.87	28.5	39.8	2.31	29.9	0.00	0.00			272	205
300 ISL	8.33 D	8.30	34.145 D	26.558	152.4	0.683	1.54	23.3	43.1	2.44	30.9	0.00	0.00			302	
321	8.36	8.33	34.215	26.609	148.1	0.714	1.31	19.9	45.6	2.54	31.7	0.00	0.00			323	204
384	7.50	7.46	34.247	26.761	134.1	0.803	0.78	11.6	56.8	2.81	35.2	0.00	0.00			386	203
400 ISL	7.38 D	7.34	34.243 D	26.775	133.0	0.825	0.70	10.4	58.7	2.85	35.7	0.00	0.00			403	
441	7.07	7.03	34.276	26.845	126.8	0.878	0.55	8.1	63.3	2.95	36.9	0.00	0.00			444	202
500 ISL	6.49 D	6.44	34.316 D	26.955	116.7	0.950	0.41	6.0	71.8	3.08	38.7	0.00	0.00			503	
518	6.43	6.38	34.323	26.969	115.6	0.971	0.37	5.4	74.4	3.12	39.2	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.6 N	119 28.3 W	18/01/10	1736 UTC	1290 m	130 07 kn	160 04 05	2	1006.7 mb	15.4 C	14.6 C	13m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.65	14.65	33.387	24.805	313.4	0.000	5.98	103.4	2.8	0.36	0.1	0.01	0.00	0.48	0.15	0	
2	14.65	14.65	33.387	24.805	313.4	0.006	5.98	103.4	2.8	0.36	0.1	0.01	0.00	0.48	0.15	2	220
9	14.65	14.65	33.382	24.801	314.0	0.028	5.97	103.2	2.6	0.35	0.1	0.01	0.00	0.47	0.15	9	219
10 ISL	14.66 D	14.66	33.387 D	24.803	313.8	0.031	5.96	103.0	2.6	0.35	0.1	0.02	0.00	0.49	0.16	10	
20 ISL	14.11 D	14.11	33.365 D	24.902	304.7	0.062	5.80	99.1	3.5	0.45	1.3	0.12	0.00	0.70	0.30	20	
21	14.08	14.08	33.364	24.908	304.2	0.065	5.77	98.6	3.7	0.47	1.5	0.13	0.00	0.72	0.32	21	218
30 ISL	13.20 D	13.20	33.347 D	25.074	288.5	0.092	5.43	91.1	5.7	0.68	4.5	0.22	0.00	0.59	0.34	30	
33	13.13	13.13	33.347	25.088	287.3	0.101	5.31	88.9	6.4	0.75	5.6	0.23	0.00	0.52	0.34	33	217
40	12.78	12.77	33.343	25.154	281.1	0.121	5.11	84.9	7.4	0.83	7.2	0.19	0.00	0.41	0.28	40	216
50	11.98	11.97	33.368	25.327	264.9	0.148	4.73	77.3	10.2	1.06	10.9	0.10	0.00	0.25	0.18	50	215
60	11.08	11.07	33.460	25.564	242.5	0.173	4.19	67.2	14.6	1.33	15.5	0.04	0.00	0.10	0.11	60	214
71	10.82	10.81	33.512	25.651	234.5	0.199	4.01	64.0	16.3	1.42	17.0	0.03	0.00	0.06	0.09	71	213
75 ISL	10.79 D	10.78	33.520 D	25.662	233.5	0.209	3.97	63.3	16.5	1.44	17.3	0.03	0.00	0.06	0.09	75	
84	10.67	10.66	33.552	25.708	229.3	0.230	3.85	61.3	17.3	1.49	18.0	0.03	0.00	0.05	0.08	84	212
100 ISL	10.18 D	10.17	33.714 D	25.920	209.5	0.265	3.36	52.9	21.7	1.70	21.2	0.01	0.00	0.01	0.05	100	
101	10.18	10.17	33.713	25.919	209.6	0.267	3.33	52.5	22.0	1.71	21.4	0.01	0.00	0.01	0.05	102	211
120	9.96	9.95	33.779	26.008	201.6	0.306	3.10	48.6	24.1	1.80	22.7	0.04	0.00	0.01	0.05	121	210
125 ISL	9.78 D	9.77	33.844 D	26.089	193.9	0.316	3.00	46.9	25.3	1.84	23.4	0.04	0.00	0.01	0.05	126	
140	9.44	9.42	33.934	26.215	182.2	0.344	2.70	41.9	29.0	1.98	25.6	0.02	0.00	0.00	0.04	141	209
150 ISL	9.39 D	9.37	33.961 D	26.245	179.6	0.362	2.56	39.7	30.4	2.03	26.4	0.02	0.00	0.00	0.04	151	
171	9.10	9.08	34.015	26.334	171.4	0.399	2.32	35.8	32.7	2.11	27.5	0.03	0.00	0.00	0.03	172	208
200 ISL	8.78 D	8.76	34.079 D	26.435	162.3	0.447	2.05	31.4	36.7	2.24	29.0	0.02	0.00	0.00	0.04	201	
201	8.78	8.76	34.089	26.443	161.6	0.449	2.04	31.2	36.8	2.24	29.1	0.02	0.00	0.00	0.04	202	207
233	8.55	8.53	34.138	26.518	155.1	0.500	1.65	25.1	41.3	2.40	30.7	0.02	0.00			234	206
250 ISL	8.42 D	8.39	34.158 D	26.554	151.9	0.526	1.68	25.5	42.3	2.41	31.0	0.01	0.00			251	
272	8.09	8.06	34.126	26.578	149.8	0.559	1.74	26.2	43.8	2.42	31.5	0.00	0.00			274	205
300 ISL	7.75 D	7.72	34.170 D	26.663	142.1	0.600	1.42	21.2	48.7	2.56	33.1	0.00	0.00			302	
323	7.57	7.54	34.193	26.708	138.2	0.632	1.08	16.1	53.4	2.69	34.5	0.00	0.00			325	204
379	7.10	7.06	34.253	26.822	128.0	0.707	0.65	9.6	62.3	2.91	36.8	0.00	0.00			381	203
400 ISL	7.02 D	6.98	34.263 D	26.841	126.4	0.733	0.57	8.4	64.7	2.96	37.4	0.00	0.00			403	
443	6.68	6.64	34.280	26.901	121.1	0.786	0.47	6.9	69.2	3.03	38.4	0.00	0.00			446	202
500 ISL	6.18 D	6.14	34.291 D	26.975	114.4	0.854	0.39	5.6	76.2	3.13	39.9	0.00	0.14			503	
519	6.02	5.97	34.298	27.001	112.0	0.875	0.36	5.2	78.5	3.17	40.4	0.00	0.19			523	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 24.9 N	119 57.0 W	18/01/10	1208 UTC	941 m	100 13 kn			1008.0 mb	14.3 C	13.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.00	15.00	33.384	24.727	320.8	0.000	5.87	102.2	2.2	0.35	0.0	0.00	0.00	0.28	0.08	0	
2	15.00	15.00	33.384	24.727	320.8	0.006	5.87	102.2	2.2	0.35	0.0	0.00	0.00	0.28	0.08	2	220
10	15.00	15.00	33.389	24.731	320.7	0.032	5.89	102.5	2.3	0.35	0.0	0.00	0.00	0.29	0.08	10	219
19	15.00	15.00	33.389	24.732	320.9	0.061	5.86	102.0	2.5	0.35	0.0	0.00	0.00	0.28	0.08	19	218
20 ISL	15.00 D	15.00	33.388 D	24.731	321.0	0.064	5.86	102.0	2.5	0.35	0.0	0.00	0.00	0.31	0.08	20	
29	14.98	14.98	33.389	24.736	320.8	0.093	5.87	102.1	2.5	0.35	0.0	0.00	0.00	0.55	0.17	29	217
30 ISL	14.96 D	14.96	33.388 D	24.740	320.5	0.096	5.87	102.1	2.5	0.35	0.0	0.00	0.00	0.54	0.20	30	
41	14.94	14.93	33.389	24.745	320.3	0.131	5.84	101.5	2.3	0.35	0.0	0.00	0.00	0.41	0.44	41	216
49	14.57	14.56	33.360	24.802	315.0	0.157	5.67	97.8	3.0	0.44	0.8	0.20	0.05	0.42	0.21	49	215
50 ISL	14.54 D	14.53	33.361 D	24.810	314.4	0.160	5.65	97.4	3.1	0.45	0.9	0.20	0.05	0.41	0.21	50	
61	13.91	13.90	33.318	24.909	305.2	0.194	5.45	92.7	4.2	0.58	3.0	0.15	0.00	0.25	0.17	61	214
71	12.69	12.68	33.192	25.056	291.3	0.224	5.38	89.2	5.3	0.72	5.4	0.04	0.00	0.16	0.16	71	213
75 ISL	12.26 D	12.25	33.209 D	25.152	282.3	0.235	5.23	85.9	6.6	0.83	7.2	0.03	0.00	0.13	0.14	75	
86	11.15	11.14	33.286	25.417	257.2	0.265	4.71	75.6	10.9	1.14	12.5	0.01	0.00	0.06	0.09	86	212
100	10.68	10.67	33.495	25.663	234.0	0.299	4.13	65.7	15.7	1.39	16.7	0.01	0.00	0.02	0.06	100	211
122	10.40	10.39	33.584	25.781	223.2	0.350	3.79	60.0	18.4	1.54	19.0	0.01	0.00	0.01	0.04	123	210
125 ISL	10.28 D	10.27	33.642 D	25.847	217.0	0.356	3.67	57.9	19.3	1.58	19.7	0.01	0.00	0.01	0.04	126	
139	9.94	9.92	33.797	26.026	200.3	0.386	3.10	48.6	23.8	1.80	22.9	0.01	0.00	0.00	0.03	140	209
150 ISL	9.82 D	9.80	33.879 D	26.110	192.5	0.407	2.83	44.3	26.3	1.90	24.3	0.01	0.00	0.00	0.03	151	
173	9.46	9.44	33.989	26.256	179.0	0.450	2.49	38.7	30.1	2.02	25.9	0.00	0.00	0.00	0.03	174	208
200 ISL	9.20 D	9.18	34.057 D	26.352	170.4	0.497	2.25	34.8	33.1	2.12	27.3	0.00	0.00	0.00	0.02	201	
203	9.19	9.17	34.061	26.356	170.0	0.502	2.23	34.4	33.4	2.13	27.4	0.00	0.00	0.00	0.02	204	207
231	8.86	8.84	34.118	26.454	161.2	0.549	1.94	29.8	37.3	2.27	29.0	0.00	0.00			232	206
250 ISL	8.64 D	8.61	34.140 D	26.506	156.6	0.579	1.73	26.4	40.3	2.36	30.1	0.00	0.00			251	
272	8.37	8.34	34.174	26.574	150.4	0.613	1.49	22.6	44.0	2.47	31.4	0.00	0.00			274	205
300 ISL	7.98 D	7.95	34.201 D	26.654	143.1	0.654	1.23	18.5	48.7	2.60	32.9	0.00	0.00			302	
321	7.73	7.70	34.210	26.698	139.1	0.683	1.06	15.9	52.3	2.69	34.0	0.00	0.00			323	204
380	6.93	6.89	34.227	26.824	127.5	0.762	0.73	10.7	63.1	2.89	37.0	0.00	0.00			382	203
400 ISL	6.82 D	6.78	34.239 D	26.849	125.4	0.787	0.65	9.5	65.5	2.93	37.6	0.00	0.00			403	
441	6.55	6.51	34.255	26.898	121.2	0.838	0.52	7.6	69.6	3.00	38.5	0.00	0.00			444	202
500 ISL	6.29 D	6.24	34.261 D	26.938	118.1	0.908	0.41	5.9	75.0	3.08	39.6	0.00	0.00			503	
525	6.10	6.05	34.280	26.977	114.5	0.937	0.37	5.3	77.3	3.12	40.1	0.00	0.00			529	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.0 N	120 38.3 W	18/01/10	0504 UTC	3824 m	090 05 kn			1012.4 mb	15.0 C	14.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.08	15.08	33.252	24.608	332.1	0.000	5.90	102.8	2.4	0.37	0.0	0.00	0.00	0.22	0.06	0	
2	15.08	15.08	33.252	24.608	332.2	0.007	5.90	102.8	2.4	0.37	0.0	0.00	0.00	0.22	0.06	2	220
10	15.07	15.07	33.253	24.611	332.1	0.033	5.90	102.8	2.5	0.38	0.0	0.00	0.00	0.22	0.07	10	219
20	14.99	14.99	33.252	24.628	330.8	0.066	5.90	102.6	2.6	0.38	0.0	0.00	0.00	0.31	0.10	20	218
30	14.80	14.80	33.253	24.670	327.1	0.099	5.91	102.4	2.8	0.37	0.0	0.00	0.00	0.45	0.18	30	217
41	14.57	14.56	33.302	24.757	319.1	0.135	5.94	102.4	2.7	0.38	0.0	0.00	0.05	0.52	0.23	41	216
49	13.85	13.84	33.200	24.829	312.4	0.160	5.79	98.3	3.4	0.49	1.1	0.27	0.07	0.42	0.29	49	215
50 ISL	13.76 D	13.75	33.194 D	24.843	311.1	0.163	5.77	97.8	3.5	0.51	1.4	0.26	0.06	0.39	0.28	50	
60	12.41	12.40	33.092	25.032	293.3	0.193	5.55	91.4	5.3	0.72	5.0	0.04	0.00	0.15	0.12	60	214
70	11.59	11.58	33.073	25.171	280.2	0.222	5.37	86.9	7.1	0.87	7.7	0.01	0.00	0.11	0.10	70	213
75 ISL	11.25 D	11.24	33.078 D	25.236	274.0	0.236	5.29	85.0	8.0	0.94	8.9	0.01	0.00	0.09	0.09	75	
86	10.71	10.70	33.109	25.356	262.8	0.265	5.13	81.5	9.9	1.09	11.3	0.01	0.00	0.06	0.07	86	212
100 ISL	10.04 D	10.03	33.188 D	25.533	246.2	0.301	4.95	77.5	12.6	1.21	13.9	0.01	0.00	0.03	0.04	100	
102	10.03	10.02	33.199	25.543	245.3	0.306	4.91	76.9	13.1	1.23	14.3	0.01	0.00	0.03	0.04	102	211
120	9.97	9.96	33.547	25.825	218.9	0.348	4.10	64.2	18.6	1.51	19.1	0.01	0.00	0.01	0.02	121	210
125 ISL	9.75 D	9.74	33.590 D	25.896	212.3	0.359	3.91	61.0	20.0	1.58	20.2	0.01	0.00	0.01	0.02	126	
141	9.50	9.48	33.757	26.067	196.2	0.391	3.46	53.7	23.8	1.75	23.0	0.01	0.00	0.00	0.02	142	209
150 ISL	9.19 D	9.17	33.813 D	26.161	187.4	0.408	3.41	52.6	25.4	1.80	23.9	0.01	0.00	0.00	0.02	151	
171	8.82	8.80	33.881	26.273	177.1	0.447	3.31	50.6	28.6	1.86	25.1	0.00	0.00	0.00	0.01	172	208
200 ISL	8.40 D	8.38	33.986 D	26.421	163.5	0.496	3.07	46.6	32.4	1.96	26.6	0.00	0.00	0.00	0.01	201	
201	8.45	8.43	33.962	26.394	166.1	0.498	3.05	46.3	32.5	1.96	26.7	0.00	0.00	0.00	0.01	202	207
231	8.39	8.37	34.087	26.502	156.4	0.546	2.07	31.4	39.5	2.27	29.9	0.00	0.00			232	206
250 ISL	8.33 D	8.30	34.115 D	26.533	153.8	0.576	1.77	26.8	41.9	2.37	30.7	0.00	0.00			251	
270	8.24	8.21	34.168	26.589	148.9	0.606	1.59	24.0	44.1	2.45	31.2	0.00	0.00			272	205
300 ISL	7.74 D	7.71	34.179 D	26.672	141.3	0.649	1.36	20.3	50.0	2.58	33.2	0.00	0.00			302	
321	7.35	7.32	34.153	26.707	138.0	0.679	1.24	18.4	54.3	2.67	34.7	0.00	0.00			323	204
381	6.77	6.73	34.169	26.800	129.7	0.759	0.93	13.6	62.5	2.85	37.0	0.00	0.00			383	203
400 ISL	6.56 D	6.52	34.182 D	26.839	126.2	0.783	0.83	12.1	65.2	2.90	37.7	0.00	0.00			403	
441	6.34	6.30	34.206	26.887	122.0	0.834	0.64	9.3	70.7	2.99	38.9	0.00	0.00			444	202
500 ISL	6.12 D	6.08	34.277 D	26.972	114.6	0.904	0.43	6.2	76.5	3.10	40.0	0.00	0.00			503	
516	5.99	5.94	34.268	26.981	113.8	0.922	0.37	5.3	78.1	3.13	40.3	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 45.0 N	121 19.1 W	17/01/10	2218 UTC	3686 m	110 02 kn	260 03 09	1	1012.0 mb	15.9 C	14.8 C	20m	6/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.76	14.76	33.149	24.598	333.1	0.000	5.98	103.4	2.8	0.36	0.0	0.00	0.00	0.27	0.08	0	
2	14.76	14.76	33.149	24.598	333.1	0.007	5.98	103.4	2.8	0.36	0.0	0.00	0.00	0.27	0.08	2	220
10	14.67	14.67	33.160	24.626	330.7	0.033	6.00	103.6	2.7	0.36	0.0	0.00	0.00	0.30	0.08	10	219
20	14.76	14.76	33.198	24.636	330.0	0.066	5.96	103.1	2.8	0.36	0.0	0.00	0.00	0.33	0.10	20	218
30	14.84	14.84	33.242	24.653	328.7	0.099	5.95	103.1	2.7	0.37	0.0	0.00	0.00	0.37	0.12	30	217
41	14.81	14.80	33.241	24.659	328.4	0.135	5.93	102.7	2.4	0.40	0.0	0.00	0.14	0.42	0.13	41	216
50 ISL	14.52 D	14.51	33.265 D	24.740	321.0	0.165	5.98	103.0	2.8	0.38	0.0	0.02	0.02	0.60	0.24	50	
51	14.53	14.52	33.240	24.718	323.1	0.168	5.98	103.0	2.9	0.38	0.0	0.02	0.00	0.62	0.25	51	215
61	14.56	14.55	33.312	24.768	318.7	0.200	5.88	101.4	2.9	0.38	0.0	0.02	0.06	0.64	0.34	61	214
70	14.35	14.34	33.290	24.796	316.3	0.228	5.82	99.9	3.1	0.41	0.3	0.11	0.15	0.43	0.24	70	213
75 ISL	13.95 D	13.94	33.243 D	24.843	311.9	0.244	5.79	98.5	3.6	0.45	0.9	0.10	0.12	0.33	0.21	75	
86	12.09	12.08	33.076	25.081	289.2	0.277	5.67	92.7	4.6	0.62	3.6	0.08	0.00	0.15	0.15	86	212
99	10.58	10.57	33.034	25.321	266.4	0.313	5.34	84.5	9.2	0.99	9.9	0.01	0.00	0.06	0.06	99	211
100 ISL	10.57 D	10.56	33.052 D	25.337	264.9	0.316	5.30	83.9	9.6	1.02	10.4	0.01	0.00	0.06	0.06	100	
121	9.78	9.77	33.337	25.693	231.4	0.368	4.51	70.3	17.1	1.45	17.8	0.01	0.00	0.02	0.03	122	210
125 ISL	9.95 D	9.94	33.426 D	25.734	227.6	0.377	4.38	68.5	17.7	1.49	18.4	0.01	0.00	0.02	0.03	126	
140	9.77	9.75	33.548	25.860	216.0	0.411	3.97	61.9	19.3	1.58	20.0	0.00	0.00	0.01	0.03	141	209
150 ISL	9.43 D	9.41	33.659 D	26.002	202.6	0.431	3.74	57.9	21.7	1.68	21.7	0.00	0.00	0.01	0.03	151	
170	9.13	9.11	33.809	26.168	187.2	0.470	3.34	51.4	27.0	1.86	24.8	0.00	0.00	0.00	0.03	171	208
200 ISL	8.77 D	8.75	33.969 D	26.351	170.3	0.524	2.76	42.2	32.2	2.00	27.0	0.00	0.00	0.00	0.02	201	
201	8.77	8.75	33.974	26.355	170.0	0.526	2.75	42.1	32.3	2.00	27.0	0.00	0.00	0.00	0.02	202	207
231	8.26	8.24	34.008	26.460	160.4	0.575	2.62	39.6	36.6	2.10	28.5	0.00	0.00			232	206
250 ISL	8.00 D	7.97	34.031 D	26.517	155.2	0.605	2.30	34.6	40.8	2.24	30.3	0.00	0.00			251	
270	7.68	7.65	34.063	26.589	148.5	0.636	1.92	28.7	45.5	2.39	32.2	0.00	0.00			272	205
300 ISL	7.29 D	7.26	34.090 D	26.666	141.5	0.679	1.52	22.5	50.9	2.56	34.1	0.00	0.00			302	
322	7.19	7.16	34.115	26.700	138.6	0.710	1.31	19.3	54.4	2.65	35.1	0.00	0.00			324	204
380	6.58	6.55	34.120	26.787	130.8	0.788	1.09	15.9	62.8	2.79	37.2	0.00	0.00			382	203
400 ISL	6.47 D	6.43	34.153 D	26.828	127.1	0.814	0.98	14.2	65.7	2.85	37.9	0.00	0.00			402	
440	6.10	6.06	34.162	26.883	122.1	0.864	0.77	11.1	71.6	2.96	39.1	0.00	0.00			443	202
500 ISL	5.68 D	5.64	34.205 D	26.970	114.3	0.935	0.54	7.7	79.9	3.08	40.6	0.00	0.00			503	
517	5.61	5.57	34.217	26.988	112.8	0.954	0.48	6.8	82.3	3.11	41.0	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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	121 58.9 W	17/01/10	1358 UTC	3918 m	190 04 kn	260 03 07	2	1014.8 mb	15.1 C	14.7 C	18m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.96	14.96	33.127	24.538	338.8	0.000	5.90	102.5	2.4	0.36	0.0	0.00	0.00	0.26	0.08	0	
2	14.96	14.96	33.127	24.538	338.9	0.007	5.90	102.5	2.4	0.36	0.0	0.00	0.00	0.26	0.08	2	224
10 ISL	14.96 D	14.96	33.127 D	24.538	339.1	0.034	5.94	D103.1	2.5	0.35	0.0	0.00	0.00	0.27	0.09	10	
11	14.96	14.96	33.126	24.537	339.2	0.037	5.93	103.0	2.5	0.35	0.0	0.00	0.00	0.27	0.09	11	223
20	14.95	14.95	33.125	24.539	339.3	0.068	5.93	103.0	2.5	0.36	0.0	0.00	0.00	0.27	0.08	20	222
30 ISL	14.40 D	14.40	33.092 D	24.631	330.8	0.101	6.02	D103.3	2.7	0.38	0.0	0.00	0.00	0.49	0.25	30	
31	14.40	14.40	33.092	24.631	330.8	0.105	6.04	103.7	2.7	0.38	0.0	0.00	0.00	0.51	0.27	31	221
41	13.92	13.91	33.088	24.728	321.8	0.137	5.91	100.4	3.1	0.44	0.6	0.21	0.05	0.51	0.31	41	220
50	13.53	13.52	33.080	24.802	315.0	0.166	5.88	99.1	3.6	0.51	1.3	0.36	0.15	0.33	0.23	50	219
61	12.94	12.93	33.088	24.926	303.4	0.200	5.82	96.9	4.4	0.60	3.0	0.44	0.04	0.22	0.14	61	218
69	12.74	12.73	33.110	24.982	298.2	0.224	5.72	94.9	4.6	0.64	3.9	0.18	0.00	0.15	0.11	69	217
75 ISL	12.45 D	12.44	33.107 D	25.036	293.2	0.242	5.65	93.1	5.0	0.67	4.5	0.12	0.00	0.12	0.10	75	
86	11.44	11.43	33.079	25.203	277.5	0.273	5.54	89.4	6.1	0.76	6.0	0.01	0.00	0.08	0.08	86	216
99	10.85	10.84	33.111	25.334	265.2	0.308	5.41	86.2	8.3	0.94	9.0	0.01	0.00	0.06	0.06	99	215
100 ISL	10.77 D	10.76	33.118 D	25.353	263.4	0.311	5.41 D	86.0	8.5	0.95	9.2	0.01	0.00	0.06	0.06	100	
119	10.12	10.11	33.187	25.519	247.9	0.360	4.96	77.8	12.7	1.25	14.0	0.01	0.00	0.03	0.04	120	214
125 ISL	9.92 D	9.91	33.383 D	25.706	230.3	0.374	4.67	73.0	15.1	1.38	16.2	0.01	0.00	0.03	0.04	126	
139	9.69	9.67	33.544	25.870	215.0	0.405	3.93	61.2	20.9	1.68	21.3	0.00	0.00	0.02	0.03	140	213
150 ISL	9.00 D	8.98	33.617 D	26.038	199.0	0.428	3.49	53.5	24.2	1.82	23.6	0.00	0.00	0.01	0.02	151	
170	9.15	9.13	33.871	26.214	182.9	0.466	2.91	44.9	28.8	1.98	26.1	0.00	0.00	0.00	0.01	171	212
200 ISL	8.61 D	8.59	33.983 D	26.386	166.9	0.519	2.63	40.1	33.7	2.07	28.0	0.00	0.00	0.00	0.01	201	
201	8.61	8.59	33.981	26.385	167.0	0.520	2.63	40.1	33.8	2.07	28.0	0.00	0.00	0.00	0.01	202	211
230	8.08	8.06	33.994	26.476	158.7	0.567	2.67	40.2	37.2	2.11	28.8	0.00	0.00			231	210
250 ISL	7.86 D	7.84	34.017 D	26.526	154.2	0.599	2.49	37.3	40.2	2.19	29.8	0.00	0.00			251	
276	7.68	7.65	34.050	26.579	149.6	0.638	2.12	31.6	44.6	2.33	31.5	0.00	0.00			278	209
300 ISL	7.55 D	7.52	34.101 D	26.638	144.3	0.674	1.75	26.0	49.1	2.47	33.2	0.00	0.00			302	
320	7.25	7.22	34.102	26.681	140.4	0.702	1.46	21.6	52.9	2.59	34.5	0.00	0.00			322	208
380	6.62	6.59	34.122	26.783	131.2	0.783	1.04	15.1	62.4	2.82	37.0	0.00	0.00			382	207
400 ISL	6.49 D	6.45	34.146 D	26.820	127.9	0.809	0.90	13.1	64.4	2.88	37.5	0.00	0.00			402	
442	6.47	6.43	34.214	26.876	123.2	0.862	0.64	9.3	68.3	2.98	38.3	0.00	0.00			445	206
500 ISL	5.93 D	5.89	34.225 D	26.955	116.0	0.931	0.45	6.5	76.4	3.09	39.9	0.00	0.00			503	
517	5.89	5.85	34.250	26.980	113.9	0.951	0.41	5.9	79.0	3.12	40.4	0.00	0.00			520	205
600 CSL	5.27	5.22	34.285	27.083	104.4	1.042	0.28	4.0								604	200
700 CSL	4.96	4.90	34.375	27.191	95.0	1.141	0.22	3.1								705	200
800 CSL	4.52	4.46	34.416	27.273	87.6	1.233	0.29	4.0								806	200
900 CSL	4.28	4.21	34.447	27.324	83.3	1.318	0.37	5.1								907	200
1000 CSL	3.93	3.85	34.476	27.384	77.9	1.399	0.50	6.8								1008	200
1100 CSL	3.68	3.60	34.499	27.428	74.0	1.475	0.62	8.4								1109	200
1200 CSL	3.43	3.34	34.519	27.469	70.3	1.547	0.73	9.9								1211	200
1300 CSL	3.21	3.12	34.533	27.502	67.4	1.616	0.85	11.4								1312	200
1400 CSL	3.01	2.91	34.545	27.530	64.8	1.682	0.97	13.0								1413	200
1500 CSL	2.81	2.70	34.560	27.561	62.0	1.745	1.10	14.6								1514	200
1600 CSL	2.65	2.54	34.575	27.587	59.5	1.806	1.22	16.1								1616	200
1800 CSL	2.33	2.20	34.600	27.635	54.9	1.920	1.53	20.1								1819	200
2000 CSL	2.11	1.97	34.619	27.669	51.7	2.027	1.80	23.5								2022	200
2200 CSL	1.96	1.80	34.635	27.694	49.5	2.128	2.07	26.9								2225	200
2400 CSL	1.85	1.68	34.646	27.713	48.1	2.226	2.27	29.4								2429	200
2600 CSL	1.76	1.57	34.654	27.727	47.1	2.321	2.44	31.5								2632	200
2800 CSL	1.70	1.49	34.659	27.737	46.6	2.415	2.57	33.1								2836	200
3000 CSL	1.65	1.43	34.663	27.745	46.2	2.507	2.68	34.5								3040	200
3200 CSL	1.61	1.37	34.666	27.752	46.1	2.600	2.76	35.5								3244	200
3400 CSL	1.57	1.31	34.670	27.759	45.8	2.692	2.87	36.8								3449	200
3500	1.56	1.29	34.671	27.761	45.9	2.737	2.87	36.8	172.5	2.72	38.7	0.00	0.00			3551	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 25.1 N	121 58.8 W	17/01/10	1739 UTC	3932 m	190 04 kn	260 03 07	2	1014.8 mb	15.1 C	14.7 C	18m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.06	15.06	33.136	24.523	340.2	0.000	5.91	102.8	2.6	0.37	0.0	0.00	0.00	0.34	0.04	0	
2	15.06	15.06	33.136	24.523	340.3	0.007	5.91	102.8	2.6	0.37	0.0	0.00	0.00	0.34	0.04	2	206
10 ISL	15.01 D	15.01	33.133 D	24.532	339.7	0.034	5.92	102.9	2.6	0.36	0.0	0.00	0.00	0.33	0.06	10	
14	14.99	14.99	33.129	24.533	339.6	0.048	5.92	102.9	2.6	0.36	0.0	0.00	0.00	0.32	0.07	14	205
20 ISL	14.90 D	14.90	33.121 D	24.547	338.5	0.068	5.97	103.5	2.7	0.37	0.0	0.00	0.00	0.45	0.13	20	
30 ISL	14.39 D	14.39	33.094 D	24.635	330.4	0.101	6.03	103.5	2.9	0.38	0.0	0.01	0.00	0.64	0.22	30	
31	14.37	14.37	33.094	24.639	330.0	0.105	6.03	103.4	2.9	0.38	0.0	0.01	0.00	0.66	0.23	31	204
45	13.71	13.70	33.080	24.765	318.4	0.150	5.90	99.8	3.4	0.48	1.0	0.24	0.19	0.50	0.23	45	203
50 ISL	13.48 D	13.47	33.076 D	24.809	314.3	0.166	5.86	98.7	3.7	0.53	1.7	0.35	0.12	0.40	0.20	50	
57	13.03	13.02	33.096	24.914	304.5	0.188	5.79	96.6	4.3	0.61	2.8	0.48	0.00	0.27	0.15	57	202
75 ISL	11.89 D	11.88	33.121 D	25.153	282.1	0.240	5.58	90.9	6.6	0.81	6.4	0.18	0.00	0.14	0.10	75	
85	11.16	11.15	33.113	25.280	270.1	0.268	5.47	87.7	7.8	0.92	8.4	0.01	0.00	0.07	0.07	85	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 4.8 N	122 39.6 W	17/01/10	0529 UTC	4018 m	170 04 kn			1014.4 mb	16.3 C	15.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.80	15.80	33.188	24.400	351.9	0.000	5.77	101.9	2.0	0.34	0.0	0.00	0.00	0.14	0.04	0	
2	15.80	15.80	33.188	24.400	352.0	0.007	5.77	101.9	2.0	0.34	0.0	0.00	0.00	0.14	0.04	2	220
10 ISL	15.80 D	15.80	33.189 D	24.401	352.1	0.035	5.76	101.8	2.0	0.34	0.0	0.00	0.00	0.14	0.04	10	
11	15.80	15.80	33.191	24.403	352.0	0.039	5.76	101.8	2.0	0.34	0.0	0.00	0.00	0.14	0.04	11	219
20 ISL	15.74 D	15.74	33.189 D	24.415	351.1	0.070	5.76	101.6	1.9	0.33	0.0	0.00	0.00	0.15	0.05	20	
26	15.72	15.72	33.187	24.418	351.0	0.091	5.76	101.6	1.8	0.33	0.0	0.00	0.00	0.16	0.05	26	218
30 ISL	15.72 D	15.72	33.188 D	24.419	351.1	0.105	5.78	101.9	1.9	0.34	0.0	0.00	0.00	0.20	0.08	30	
41	15.27	15.26	33.154	24.492	344.3	0.144	5.84	102.1	2.2	0.35	0.0	0.00	0.00	0.34	0.19	41	217
50	14.91	14.90	33.141	24.561	338.1	0.174	5.90	102.3	2.5	0.35	0.0	0.00	0.00	0.45	0.25	50	216
62	14.52	14.51	33.145	24.648	330.1	0.215	5.83	100.3	2.5	0.41	0.2	0.07	0.07	0.40	0.28	62	215
75	14.00	13.99	33.131	24.746	321.1	0.257	5.79	98.6	3.0	0.47	0.6	0.33	0.09	0.21	0.20	75	214
87	12.84	12.83	33.080	24.940	302.8	0.294	5.74	95.4	3.9	0.55	2.1	0.15	0.00	0.15	0.14	87	213
100 ISL	11.42 D	11.41	33.030 D	25.169	281.1	0.332	5.55	89.4	5.7	0.73	5.4	0.02	0.00	0.07	0.07	100	
101	11.44	11.43	33.030	25.165	281.4	0.335	5.53	89.2	5.9	0.75	5.7	0.01	0.00	0.07	0.07	101	212
113	11.14	11.13	33.102	25.276	271.2	0.368	5.35	85.7	7.2	0.89	8.0	0.01	0.00	0.08	0.09	113	211
125 ISL	10.69 D	10.68	33.164 D	25.404	259.2	0.400	5.21	82.7	8.9	1.00	10.0	0.01	0.00	0.06	0.06	126	
126	10.72	10.70	33.163	25.398	259.8	0.403	5.20	82.6	9.1	1.01	10.2	0.01	0.00	0.06	0.06	127	210
142	10.45	10.43	33.256	25.517	248.7	0.443	5.00	79.0	11.3	1.13	12.4	0.01	0.00	0.04	0.05	143	209
150 ISL	10.24 D	10.22	33.404 D	25.669	234.5	0.463	4.67	73.5	14.0	1.27	14.8	0.01	0.00	0.03	0.04	151	
170	9.74	9.72	33.675	25.964	206.7	0.507	3.75	58.5	21.2	1.65	21.1	0.00	0.00	0.00	0.02	171	208
200	9.24	9.22	33.891	26.215	183.3	0.565	3.09	47.7	27.1	1.86	24.5	0.00	0.00	0.00	0.02	201	207
230	8.66	8.64	33.973	26.371	168.9	0.618	2.92	44.5	31.7	1.96	26.4	0.00	0.00			231	206
250 ISL	8.34 D	8.31	34.005 D	26.446	162.1	0.651	2.63	39.8	36.1	2.10	28.3	0.00	0.00			251	
270	7.97	7.94	34.040	26.529	154.4	0.683	2.28	34.2	40.6	2.26	30.3	0.00	0.00			271	205
300 ISL	7.73 D	7.70	34.075 D	26.592	148.8	0.728	1.71	25.5	46.1	2.46	32.3	0.00	0.00			302	
320	7.68	7.65	34.149	26.657	142.9	0.757	1.37	20.5	49.4	2.58	33.4	0.00	0.00			322	204
381	7.01	6.97	34.166	26.766	133.2	0.842	1.03	15.1	58.7	2.80	35.9	0.00	0.00			383	203
400 ISL	6.76 D	6.72	34.177 D	26.808	129.2	0.867	0.91	13.3	62.0	2.86	36.7	0.00	0.00			402	
441	6.35	6.31	34.196	26.878	122.9	0.918	0.68	9.8	69.1	2.98	38.4	0.00	0.00			444	202
500 ISL	5.91 D	5.87	34.235 D	26.965	115.0	0.988	0.48	6.9	77.0	3.10	39.9	0.00	0.00			503	
516	5.86	5.82	34.248	26.982	113.6	1.007	0.42	6.0	79.1	3.13	40.3	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 20.0 W	16/01/10	2246 UTC	4018 m	200 10 kn	270 03 10	1	1013.3 mb	18.1 C	16.4 C	38m	7/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.48	16.48	33.379	24.392	352.6	0.000	5.67	101.6	1.8	0.33	0.0	0.00	0.00	0.10	0.03	0	
2	16.48	16.48	33.379	24.392	352.7	0.007	5.67	101.6	1.8	0.33	0.0	0.00	0.00	0.10	0.03	2	220
10	16.46	16.46	33.381	24.399	352.3	0.035	5.66	101.4	1.8	0.33	0.0	0.00	0.00	0.10	0.03	10	219
20 ISL	16.43 D	16.43	33.403 D	24.423	350.4	0.070	5.65	101.2	1.9	0.33	0.0	0.00	0.00	0.11	0.04	20	
26	16.43	16.43	33.403	24.423	350.6	0.091	5.65	101.2	2.0	0.33	0.0	0.00	0.00	0.12	0.04	26	218
30 ISL	16.42 D	16.42	33.402 D	24.425	350.5	0.105	5.65	101.2	2.0	0.33	0.0	0.00	0.00	0.12	0.04	30	
40	16.44	16.43	33.410 D	24.427	350.7	0.140	5.65	D101.2								40	217
49	16.44	16.43	33.411	24.428	350.8	0.172	5.65	101.2	2.0	0.33	0.0	0.00	0.00	0.16	0.05	49	216
50 ISL	16.44 D	16.43	33.409 D	24.426	351.0	0.176	5.65	101.2	2.0	0.33	0.0	0.00	0.00	0.16	0.05	50	
62	16.18	16.17	33.356	24.446	349.6	0.218	5.67	101.0	1.9	0.33	0.0	0.00	0.00	0.22	0.09	62	215
75	15.62	15.61	33.289	24.520	342.8	0.263	5.71	100.6	2.1	0.36	0.0	0.00	0.00	0.27	0.13	75	214
89	14.10	14.09	33.219	24.794	317.0	0.309	5.77	98.5	3.3	0.44	0.7	0.21	0.00	0.23	0.20	89	213
99	13.07	13.06	33.114	24.922	304.9	0.340	5.71	95.3	3.9	0.54	2.0	0.14	0.00	0.22	0.17	99	212
100 ISL	13.05 D	13.04	33.115 D	24.926	304.5	0.343	5.70	95.1	3.9	0.55	2.1	0.13	0.00	0.22	0.17	100	
113	12.11	12.10	33.098	25.095	288.6	0.381	5.55	90.8	5.0	0.66	4.3	0.03	0.00	0.16	0.18	113	211
125 ISL	11.04 D	11.02	33.086 D	25.281	270.9	0.415	5.39	86.2	7.4	0.86	8.0	0.01	0.00	0.12	0.12	126	
126	11.06	11.04	33.088	25.279	271.1	0.418	5.38	86.1	7.6	0.88	8.3	0.01	0.00	0.12	0.11	127	210
141	10.35	10.33	33.208	25.497	250.6	0.457	5.09	80.2	11.4	1.12	12.4	0.01	0.00	0.05	0.07	142	209
150 ISL	10.13 D	10.11	33.335 D	25.633	237.8	0.479	4.76	74.7	14.3	1.28	15.1	0.01	0.00	0.03	0.05	151	
171	9.63	9.61	33.640	25.955	207.5	0.526	3.94	61.3	20.9	1.60	20.6	0.00	0.00	0.00	0.02	172	208
200 ISL	9.05 D	9.03	33.875 D	26.233	181.6	0.582	3.29	50.6	27.2	1.82	24.5	0.00	0.06	0.00	0.02	201	
201	9.05	9.03	33.880	26.237	181.2	0.584	3.27	50.3	27.4	1.83	24.6	0.00	0.06	0.00	0.02	202	207
229	8.58	8.56	33.982	26.391	167.0	0.633	2.80	42.6	33.1	2.01	27.3	0.00	0.00			230	206
250 ISL	8.33 D	8.30	33.999 D	26.442	162.4	0.667	2.60	39.4	36.3	2.10	28.6	0.00	0.00			251	
270	8.08	8.05	34.021	26.497	157.4	0.699	2.45	36.9	39.2	2.18	29.7	0.00	0.00			271	205
300 ISL	7.63 D	7.60	34.044 D	26.582	149.7	0.745	2.09	31.1	44.4	2.33	31.7	0.00	0.00			302	
320	7.43	7.40	34.059	26.622	146.1	0.775	1.84	27.3	48.1	2.44	33.1	0.00	0.00			322	204
381	6.78	6.74	34.114	26.756	133.9	0.860	1.15	16.8	59.7	2.75	36.8	0.00	0.00			383	203
400 ISL	6.61 D	6.57	34.134 D	26.794	130.4	0.885	1.01	14.7	62.7	2.83	37.5	0.00	0.00			402	
439	6.34	6.30	34.161	26.851	125.3	0.935	0.78	11.3	68.6	2.96	38.7	0.00	0.00			442	202
500 ISL	5.81 D	5.77	34.203 D	26.952	116.1	1.009	0.57	8.1	77.7	3.10	40.3	0.00	0.00			503	
516	5.73	5.69	34.206	26.964	115.1	1.027	0.51	7.3	80.1	3.14	40.7	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 24.8 N	123 59.8 W	16/01/10	1725 UTC	4312 m	190 10 kn	270 02 07	1	1015.6 mb	17.1 C	16.0 C	34m	7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.43	16.43	33.336	24.371	354.7	0.000	5.65	101.2	2.0	0.34	0.0	0.00	0.00	0.13	0.04	0	
2	16.43	16.43	33.336	24.371	354.8	0.007	5.65	101.2	2.0	0.34	0.0	0.00	0.00	0.13	0.04	2	222
10 ISL	16.41 D	16.41	33.337 D	24.377	354.5	0.035	5.65	101.1	1.9	0.33	0.0	0.00	0.00	0.13	0.04	10	
13	16.40	16.40	33.336	24.378	354.4	0.046	5.65	101.1	1.9	0.33	0.0	0.00	0.00	0.13	0.04	13	221
20 ISL	16.40 D	16.40	33.337 D	24.379	354.6	0.071	5.66	101.3	1.9	0.33	0.0	0.00	0.00	0.13	0.04	20	
26	16.40	16.40	33.336	24.379	354.8	0.092	5.67	101.5	2.0	0.34	0.0	0.00	0.00	0.13	0.04	26	220
30 ISL	16.40 D	16.40	33.337 D	24.380	354.8	0.106	5.67	101.5	2.0	0.34	0.0	0.00	0.00	0.13	0.04	30	
38	16.40	16.39	33.337	24.380	355.1	0.135	5.67	101.5	2.0	0.34	0.0	0.00	0.00	0.14	0.04	38	219
48	16.39	16.38	33.337	24.383	355.1	0.170	5.66	101.2	1.8	0.34	0.0	0.00	0.00	0.16	0.05	48	218
50 ISL	16.38 D	16.37	33.334 D	24.383	355.2	0.177	5.66	101.2	1.8	0.34	0.0	0.00	0.00	0.15	0.05	50	
57	16.19	16.18	33.290 D	24.392	354.5	0.202	5.65	D100.6	1.9	0.34	0.0	0.00	0.00	0.13	0.05	57	217
66	13.94	13.93	33.115	24.746	320.8	0.233	5.82	99.0	3.7	0.51	1.4	0.10	0.05	0.27	0.17	66	216
75 ISL	11.96 D	11.95	33.041 D	25.078	289.2	0.260	5.72	93.3	5.6	0.71	4.6	0.12	0.01	0.34	0.26	75	
76	11.97	11.96	33.040	25.075	289.5	0.263	5.70	93.0	5.8	0.73	5.0	0.12	0.00	0.34	0.27	76	215
86	11.28	11.27	33.073	25.227	275.1	0.291	5.46	87.8	7.9	0.92	8.5	0.04	0.00	0.26	0.28	86	214
99	10.70	10.69	33.216	25.442	255.0	0.326	5.01	79.6	11.6	1.18	13.0	0.01	0.00	0.13	0.15	99	213
100 ISL	10.64 D	10.63	33.242 D	25.473	252.1	0.328	4.99	79.2	11.8	1.19	13.2	0.01	0.00	0.13	0.14	100	
108	10.45	10.44	33.279	25.534	246.3	0.348	4.84	76.5	13.2	1.27	14.6	0.01	0.00	0.10	0.11	108	212
125 ISL	10.09 D	10.08	33.408 D	25.697	231.2	0.389	4.45	69.8	16.4	1.43	17.5	0.00	0.00	0.05	0.06	126	
126	10.09	10.08	33.413	25.701	230.9	0.391	4.43	69.5	16.6	1.44	17.6	0.00	0.00	0.05	0.06	127	211
143	9.62	9.60	33.559	25.893	212.8	0.429	4.15	64.5	19.4	1.53	19.5	0.00	0.00	0.01	0.02	144	210
150 ISL	9.51 D	9.49	33.659 D	25.989	203.8	0.443	3.95	61.3	20.9	1.59	20.6	0.00	0.00	0.00	0.02	151	
158	9.49	9.47	33.698	26.023	200.8	0.460	3.71	57.6	22.7	1.67	21.8	0.00	0.00	0.00	0.02	159	209
179	9.24	9.22	33.838	26.173	186.9	0.500	3.20	49.4	26.7	1.85	24.5	0.00	0.00	0.00	0.02	180	208
200 ISL	8.88 D	8.86	33.937 D	26.308	174.4	0.538	2.88	44.1	30.2	1.97	26.3	0.00	0.00	0.00	0.01	201	
201	8.89	8.87	33.936	26.306	174.6	0.540	2.87	44.0	30.4	1.97	26.4	0.00	0.00	0.00	0.01	202	207
232	8.40	8.38	33.996	26.429	163.3	0.592	2.64	40.0	35.1	2.08	28.1	0.00	0.00			233	206
250 ISL	8.12 D	8.09	34.014 D	26.486	158.2	0.621	2.50	37.7	38.1	2.15	29.2	0.00	0.00			251	
272	7.79	7.76	34.024	26.542	153.0	0.655	2.29	34.3	42.0	2.25	30.6	0.00	0.00			273	205
300 ISL	7.42 D	7.39	34.056 D	26.621	145.8	0.697	1.90	28.2	48.0	2.42	32.8	0.00	0.00			302	
322	7.13	7.10	34.070	26.673	141.1	0.729	1.59	23.4	52.7	2.55	34.5	0.00	0.00			324	204
385	6.47	6.44	34.110	26.794	130.1	0.814	1.09	15.8	63.3	2.79	37.5	0.00	0.00			387	203
400 ISL	6.36 D	6.32	34.122 D	26.818	128.0	0.834	1.01	14.6	65.7	2.84	38.0	0.00	0.00			402	
441	6.01	5.97	34.148	26.883	122.0	0.885	0.81	11.6	72.0	2.95	39.2	0.00	0.00			444	202
500 ISL	5.48 D	5.44	34.191 D	26.983	112.8	0.954	0.55	7.8	81.4	3.07	40.7	0.00	0.00			503	
517	5.46	5.42	34.214	27.003	111.1	0.973	0.48	6.8	84.1	3.11	41.1	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.8 N	117 27.9 W	13/01/10	0734 UTC	22 m	010 02 kn			1019.2 mb	13.9 C	12.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.53	15.53	33.425	24.642	328.8	0.000	5.93	104.4	2.5	0.37	0.0	0.02	0.05	1.09	0.61	0	
2	15.53	15.53	33.425	24.642	328.9	0.007	5.93	104.4	2.5	0.37	0.0	0.02	0.05	1.09	0.61	2	205
5	15.48	15.48	33.419	24.649	328.4	0.016	5.88	103.4	2.6	0.37	0.0	0.02	0.05	1.13	0.57	5	204
10	15.25	15.25	33.416	24.698	323.9	0.033	5.69	99.6	3.0	0.41	0.1	0.06	0.15	1.06	0.45	10	202
10	15.27	15.27				0.033										10	203
15	15.17	15.17	33.412	24.712	322.6	0.049	5.66	98.9	3.2	0.43	0.2	0.07	0.11	0.87	0.48	15	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 57.4 N	117 18.4 W	13/01/10	0242 UTC	71 m	270 01 kn			1018.4 mb	15.0 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.72	15.72	33.453	24.622	330.8	0.000	5.82	102.8	2.2	0.33	0.0	0.00	0.00	0.34	0.11	0	
2	15.72	15.72	33.453	24.622	330.9	0.007	5.82	102.8	2.2	0.33	0.0	0.00	0.00	0.34	0.11	2	208
5	15.69	15.69	33.453	24.629	330.3	0.017	5.82	102.8	2.2	0.33	0.0	0.00	0.00	0.34	0.10	5	207
10	15.54	15.54	33.439 D	24.651	328.3	0.033	5.85	103.0	2.2	0.34	0.0	0.00	0.00	0.48	0.18	10	206
20	15.01	15.01	33.394	24.733	320.8	0.065	5.92	103.1	3.2	0.36	0.0	0.00	0.08	1.25	0.49	20	205
30 ISL	14.77 D	14.77	33.376 D	24.771	317.4	0.097	5.68	98.4	3.5	0.41	0.0	0.22	0.05	1.07	0.55	30	
31	14.79	14.79	33.378	24.769	317.7	0.101	5.65	97.9	3.5	0.42	0.0	0.25	0.05	1.05	0.56	31	204
40	14.49	14.48	33.369	24.826	312.5	0.129	5.33	91.8	4.7	0.57	0.3	0.39	0.18	0.48	0.44	40	203
50 ISL	14.21 D	14.20	33.365 D	24.882	307.4	0.160	5.14	88.0	5.8	0.69	1.2	0.43	0.09	0.35	0.44	50	
51	14.14	14.13	33.369	24.900	305.8	0.163	5.13	87.7	5.9	0.70	1.3	0.43	0.08	0.34	0.44	51	202
62	13.92	13.91	33.364	24.942	302.0	0.196	4.93	83.9	6.8	0.79	2.6	0.32	0.00	0.22	0.27	62	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.5 N	117 23.9 W	13/01/10	1138 UTC	607 m	270 03 kn			1018.6 mb	15.2 C	13.7 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.78	15.78	33.465	24.617	331.2	0.000	5.77	102.1	2.0	0.33	0.0	0.00	0.00	0.28	0.08	0	
2	15.78	15.78	33.465	24.618	331.3	0.007	5.77	102.1	2.0	0.33	0.0	0.00	0.00	0.28	0.08	2	220
10	15.70	15.70	33.464	24.635	329.8	0.033	5.77	101.9	2.2	0.33	0.0	0.00	0.00	0.30	0.10	10	219
20	15.59	15.59	33.451	24.650	328.7	0.066	5.78	101.8	2.3	0.33	0.0	0.00	0.00	0.46	0.21	20	218
30	15.29	15.29	33.419	24.692	325.0	0.099	5.70	99.8	2.6	0.36	0.0	0.05	0.06	0.87	0.48	30	217
40	14.77	14.76	33.379	24.774	317.5	0.131	5.65	97.9	3.8	0.46	0.3	0.25	0.17	0.56	0.68	40	216
50	14.35	14.34	33.356	24.846	310.9	0.162	5.35	91.9	4.6	0.55	1.5	0.30	0.00	0.44	0.56	50	215
61	13.85	13.84	33.322	24.924	303.7	0.196	5.07	86.2	6.0	0.72	3.8	0.06	0.00	0.25	0.39	61	214
70	13.20	13.19	33.248	24.999	296.8	0.223	5.28	88.5	5.4	0.71	4.0	0.04	0.00	0.18	0.27	70	213
75 ISL	12.85 D	12.84	33.294 D	25.104	286.9	0.238	5.11	85.0	6.5	0.81	5.5	0.03	0.00	0.14	0.23	75	
86	12.18	12.17	33.337	25.266	271.6	0.268	4.52	74.2	10.0	1.09	9.8	0.01	0.00	0.08	0.17	86	212
100 ISL	11.71 D	11.70	33.460 D	25.450	254.4	0.305	4.00	65.0	13.4	1.32	13.2	0.01	0.00	0.03	0.12	100	
101	11.72	11.71	33.463	25.451	254.4	0.308	3.97	64.6	13.6	1.33	13.4	0.01	0.00	0.03	0.12	101	211
120	11.19	11.18	33.631	25.679	233.1	0.354	3.43	55.2	17.8	1.56	17.3	0.00	0.00	0.02	0.06	121	210
125 ISL	10.96 D	10.94	33.658 D	25.741	227.3	0.366	3.40	54.5	18.5	1.59	18.0	0.00	0.00	0.02	0.06	126	
140	10.59	10.57	33.730	25.862	216.0	0.399	3.31	52.6	20.6	1.68	19.7	0.00	0.00	0.01	0.05	141	209
150 ISL	10.46 D	10.44	33.795 D	25.936	209.2	0.420	3.03	48.1	22.7	1.79	21.0	0.00	0.00	0.01	0.05	151	
171	10.31	10.29	33.958	26.089	195.1	0.463	2.40	38.0	26.9	2.01	23.5	0.00	0.00	0.00	0.05	172	208
200 ISL	10.00 D	9.98	34.061 D	26.223	183.0	0.517	2.16	34.0	29.7	2.11	25.0	0.00	0.00	0.00	0.04	201	
202	9.98	9.96	34.063	26.228	182.5	0.521	2.16	34.0	29.8	2.11	25.1	0.00	0.00	0.00	0.04	203	207
232	9.44	9.41	34.111	26.356	170.9	0.574	2.04	31.7	33.3	2.20	26.6	0.00	0.00			233	206
250 ISL	9.30 D	9.27	34.139 D	26.401	166.9	0.604	1.89	29.3	35.5	2.27	27.5	0.00	0.00			251	
271	9.02	8.99	34.169	26.469	160.7	0.639	1.70	26.2	37.9	2.35	28.5	0.00	0.00			273	205
300 ISL	8.80 D	8.77	34.194 D	26.524	155.9	0.685	1.54	23.6	40.8	2.43	29.6	0.00	0.00			302	
321	8.54	8.51	34.203	26.572	151.7	0.717	1.44	21.9	43.0	2.49	30.3	0.00	0.00			323	204
381	7.82	7.78	34.217	26.691	140.9	0.805	1.07	16.0	51.5	2.70	33.1	0.00	0.00			383	203
400 ISL	7.67 D	7.63	34.235 D	26.727	137.7	0.831	0.97	14.5	53.7	2.75	33.8	0.00	0.00			403	
443	7.29	7.25	34.249	26.793	131.9	0.889	0.75	11.1	59.0	2.87	35.2	0.00	0.00			446	202
500 ISL	6.65 D	6.60	34.287 D	26.911	121.0	0.961	0.45	6.6	68.8	3.04	37.4	0.00	0.00			503	
516	6.58	6.53	34.303	26.933	119.1	0.981	0.37	5.4	71.5	3.09	38.0	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 32.2 W	13/01/10	1624 UTC	869 m	190 05 kn	270 02 06	2	1020.3 mb	15.0 C	13.9 C	24m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.93	15.93	33.471	24.588	334.0	0.000	5.72	101.5	2.0	0.33	0.0	0.00	0.00	0.23	0.06	0	
2	15.93	15.93	33.471	24.589	334.0	0.007	5.72	101.5	2.0	0.33	0.0	0.00	0.00	0.23	0.06	2	221
10	15.93	15.93	33.476	24.593	333.9	0.033	5.79	102.7	1.9	0.32	0.0	0.00	0.00	0.22	0.07	10	220
19	15.93	15.93	33.467	24.586	334.8	0.063	5.75	102.0	1.9	0.32	0.0	0.00	0.05	0.24	0.07	19	219
20 ISL	15.90 D	15.90	33.473 D	24.597	333.7	0.067	5.74	101.8	1.9	0.32	0.0	0.00	0.05	0.25	0.07	20	
29	15.85	15.85	33.460	24.599	333.9	0.097	5.70	101.0	1.9	0.32	0.0	0.00	0.00	0.34	0.14	29	218
30 ISL	15.85 D	15.85	33.469 D	24.606	333.2	0.100	5.70	101.0	1.9	0.32	0.0	0.00	0.00	0.35	0.15	30	
39	15.77	15.76	33.462	24.619	332.3	0.130	5.68	100.4	2.1	0.33	0.0	0.00	0.00	0.44	0.28	39	217
50 ISL	15.35 D	15.34	33.422 D	24.682	326.6	0.166	5.66	99.2	2.4	0.35	0.0	0.04	0.00	0.47	0.31	50	
51	15.41	15.40	33.430	24.675	327.3	0.170	5.66	99.4	2.5	0.35	0.0	0.05	0.00	0.47	0.31	51	216
60	14.50	14.49	33.325	24.791	316.5	0.199	5.47	94.2	3.3	0.50	1.2	0.09	0.00	0.31	0.25	60	215
75 ISL	12.49 D	12.48	33.294 D	25.173	280.2	0.243	4.85	80.1	8.0	0.92	7.4	0.01	0.00	0.11	0.15	75	
76	12.45	12.44	33.298	25.184	279.2	0.246	4.79	79.0	8.5	0.95	7.9	0.00	0.00	0.10	0.14	76	214
89	12.32	12.31	33.538	25.396	259.4	0.281	3.45	56.9	16.3	1.44	14.0	0.00	0.00	0.04	0.07	89	213
100	12.23	12.22	33.574	25.441	255.4	0.310	3.25	53.5	17.7	1.52	15.0	0.00	0.00	0.03	0.06	100	212
112	11.82	11.81	33.558	25.506	249.4	0.340	3.49	56.9	16.4	1.48	15.3	0.00	0.00	0.02	0.06	113	211
125 ISL	11.40 D	11.38	33.670 D	25.671	234.0	0.371	3.20	51.8	18.6	1.62	17.5	0.00	0.00	0.01	0.06	126	
126	11.42	11.40	33.661	25.660	235.1	0.374	3.17	51.3	18.8	1.63	17.7	0.00	0.00	0.01	0.06	127	210
141	10.70	10.68	33.712	25.829	219.2	0.408	3.30	52.6	20.8	1.69	19.6	0.00	0.00	0.01	0.04	142	209
150 ISL	10.95 D	10.93	33.864 D	25.904	212.4	0.427	3.09	49.6	22.3	1.77	20.6	0.00	0.00	0.01	0.03	151	
170	10.58	10.56	33.903	26.000	203.7	0.469	2.51	39.9	25.6	1.94	22.6	0.00	0.00	0.00	0.03	171	208
200 ISL	9.84 D	9.82	34.001 D	26.203	184.8	0.527	2.50	39.2	28.3	2.01	24.6	0.00	0.00	0.00	0.02	201	
201	9.81	9.79	33.978	26.190	186.0	0.529	2.50	39.1	28.4	2.01	24.7	0.00	0.00	0.00	0.02	202	207
230	9.54	9.51	34.125	26.350	171.4	0.581	1.93	30.1	33.2	2.21	26.9	0.00	0.00			231	206
250 ISL	9.32 D	9.29	34.147 D	26.404	166.6	0.614	1.77	27.4	35.6	2.29	27.7	0.00	0.00			251	
271	9.15	9.12	34.184	26.460	161.6	0.649	1.67	25.8	37.8	2.35	28.4	0.00	0.00			273	205
300 ISL	8.84 D	8.81	34.200 D	26.522	156.1	0.695	1.40	21.5	40.7	2.46	29.5	0.00	0.00			302	
321	8.80	8.77	34.257	26.574	151.7	0.727	1.22	18.7	42.9	2.53	30.3	0.00	0.00			323	204
382	7.95	7.91	34.223	26.677	142.4	0.817	1.10	16.5	50.3	2.66	32.9	0.00	0.00			384	203
400 ISL	7.62 D	7.58	34.231 D	26.732	137.3	0.842	1.00	14.9	53.1	2.72	33.8	0.00	0.00			402	
441	7.26	7.22	34.245	26.794	131.7	0.897	0.75	11.1	59.5	2.86	35.7	0.00	0.00			444	202
500 ISL	6.77 D	6.72	34.269 D	26.881	124.0	0.973	0.53	7.8	67.3	3.00	37.6	0.00	0.00			503	
517	6.64	6.59	34.274	26.902	122.1	0.994	0.47	6.9	69.5	3.04	38.1	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 40.8 N	117 52.6 W	13/01/10	1944 UTC	602 m	240 11 kn	290 04 08	1	1019.1 mb	16.6 C	15.0 C	20m	6/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.36	16.36	33.596	24.587	334.1	0.000	5.72	102.4	2.0	0.36	0.0	0.00	0.00	0.34	0.10	0	
1	16.36	16.36	33.596	24.587	334.2	0.003	5.72	102.4	2.0	0.36	0.0	0.00	0.00	0.34	0.10	1	220
10	16.31	16.31	33.596	24.598	333.3	0.033	5.73	102.5	2.1	0.36	0.0	0.00	0.02	0.39	0.12	10	219
20	15.98	15.98	33.550	24.639	329.8	0.067	5.58	99.1	2.3	0.43	0.0	0.00	0.06	0.83	0.40	20	218
30	15.35	15.35	33.430	24.687	325.5	0.099	5.79	101.5	2.6	0.34	0.0	0.00	0.06	0.81	0.49	30	217
40	14.94	14.93	33.437	24.782	316.7	0.131	5.45	94.8	3.2	0.51	1.0	0.22	0.05	0.43	0.38	40	216
50	13.98	13.97	33.379	24.941	301.8	0.162	4.92	83.9	6.2	0.78	4.7	0.04	0.06	0.19	0.21	50	215
60	13.28	13.27	33.335	25.050	291.7	0.192	4.86	81.6	6.7	0.85	6.2	0.03	0.06	0.14	0.19	60	214
71	12.92	12.91	33.450	25.211	276.7	0.223	4.17	69.6	9.8	1.15	10.4	0.01	0.07	0.09	0.15	71	213
75 ISL	12.78 D	12.77	33.460 D	25.246	273.4	0.234	4.04	67.2	10.6	1.19	11.3	0.01	0.07	0.08	0.16	75	
85	12.46	12.45	33.522	25.356	263.1	0.261	3.80	62.8	12.6	1.26	13.2	0.01	0.06	0.06	0.17	85	212
100	12.03	12.02	33.627	25.520	247.8	0.299	3.32	54.4	16.3	1.54	16.2	0.00	0.00	0.03	0.07	100	211
120	11.41	11.39	33.752	25.733	228.0	0.347	2.74	44.3	21.5	1.79	19.4	0.00	0.09	0.01	0.06	121	210
125 ISL	11.27 D	11.25	33.769 D	25.772	224.4	0.358	2.71	43.7	22.3	1.84	20.1	0.00	0.07	0.01	0.05	126	
141	11.04	11.02	33.869	25.891	213.4	0.393	2.61	41.9	24.3	1.94	21.9	0.00	0.00	0.01	0.02	142	209
150 ISL	10.70 D	10.68	33.947 D	26.012	202.0	0.412	2.75	43.9	25.0	1.93	22.7	0.00	0.00	0.01	0.02	151	
172	9.35	9.33	33.881	26.189	185.3	0.455	3.08	47.7	26.4	1.86	24.3	0.00	0.00	0.00	0.03	173	208
200	9.08	9.06	33.947	26.285	176.7	0.505	2.83	43.6	29.0	1.95	25.6	0.00	0.00	0.00	0.03	201	207
232	9.00	8.97	34.070	26.394	167.0	0.560	2.18	33.5	34.2	2.18	27.8	0.00	0.00			233	206
250 ISL	8.91 D	8.88	34.122 D	26.449	162.0	0.590	2.02	31.0	37.2	2.26	28.8	0.00	0.00			251	
272	8.35	8.32	34.100	26.519	155.6	0.625	1.88	28.5	40.5	2.34	29.9	0.00	0.00			274	205
300 ISL	8.42 D	8.39	34.182 D	26.573	151.0	0.668	1.49	22.6	43.6	2.47	30.8	0.00	0.00			302	
321	8.43	8.40	34.227	26.607	148.2	0.699	1.21	18.4	45.7	2.57	31.4	0.00	0.00			323	204
381	7.69	7.65	34.233	26.723	137.8	0.785	0.96	14.3	53.4	2.76	34.0	0.00	0.00			383	203
400 ISL	7.48 D	7.44	34.235 D	26.755	135.0	0.811	0.90	13.4	55.4	2.80	34.7	0.00	0.00			403	
438	7.22	7.18	34.239	26.795	131.6	0.862	0.77	11.4	59.5	2.87	35.9	0.00	0.00			441	202
500 ISL	6.62 D	6.57	34.269 D	26.901	121.9	0.940	0.53	7.7	68.6	3.02	38.0	0.00	0.00			503	
514	6.49	6.44	34.271	26.920	120.2	0.957	0.48	7.0	70.6	3.05	38.5	0.00	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 30.6 N	118 13.1 W	13/01/10	2359 UTC	1653 m	240 21 kn	300 06 06	1	1017.6 mb	16.0 C	14.0 C	14m	4/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.27	16.27	33.574	24.590	333.8	0.000	5.79	103.5	2.2	0.33	0.0	0.00	0.00	0.31	0.07	0	
2	16.27	16.27	33.574	24.590	333.8	0.007	5.79	103.5	2.2	0.33	0.0	0.00	0.00	0.31	0.07	2	221
10	16.29	16.29	33.580	24.591	334.1	0.033	5.73	102.5	2.2	0.32	0.0	0.00	0.05	0.32	0.07	10	219
10	16.27	16.27	33.574	24.591	334.1	0.033										10	220
20 ISL	16.21 D	16.21	33.563 D	24.596	333.9	0.067	5.75	102.6	2.2	0.33	0.0	0.00	0.01	0.31	0.09	20	
21	16.17	16.17	33.557	24.601	333.4	0.070	5.75	102.6	2.2	0.33	0.0	0.00	0.00	0.31	0.09	21	218
30	15.54	15.54	33.454 D	24.664	327.7	0.100	5.78	101.7								30	217
41	15.43	15.42	33.473	24.703	324.3	0.136	5.74	100.8	2.6	0.31	0.0	0.00	0.07	0.66	0.35	41	216
50	15.38	15.37	33.500	24.735	321.5	0.165	5.67	99.5	2.8	0.32	0.0	0.03	0.13	0.54	0.30	50	215
60	14.72	14.71	33.431	24.826	313.2	0.197	5.47	94.7	3.7	0.46	1.3	0.19	0.06	0.34	0.27	60	214
71	12.53	12.52	33.189	25.084	288.6	0.230	5.31	87.7	6.3	0.75	5.7	0.02	0.04	0.17	0.19	71	213
75 ISL	12.35 D	12.34	33.184 D	25.115	285.7	0.241	5.25	86.4	7.1	0.82	7.0	0.02	0.03	0.14	0.17	75	
85	11.39	11.38	33.167	25.281	270.1	0.269	5.12	82.5	8.7	0.96	9.4	0.01	0.00	0.11	0.12	85	212
100 ISL	10.97 D	10.96	33.231 D	25.406	258.4	0.309	4.96	79.3	10.4	1.09	11.4	0.00	0.00	0.07	0.10	100	
101	10.97	10.96	33.203	25.384	260.5	0.311	4.94	78.9	10.5	1.10	11.5	0.00	0.00	0.07	0.10	101	211
121	10.61	10.60	33.524	25.698	231.1	0.360	4.04	64.2	16.0	1.40	16.9	0.00	0.00	0.03	0.05	122	210
125 ISL	10.44 D	10.43	33.584 D	25.774	224.0	0.369	3.87	61.3	17.5	1.47	18.1	0.00	0.00	0.02	0.04	126	
140	10.15	10.13	33.763	25.964	206.2	0.402	3.34	52.6	22.4	1.72	21.7	0.00	0.00	0.01	0.03	141	209
150 ISL	9.97 D	9.95	33.798 D	26.022	200.9	0.422	3.19	50.1	23.5	1.75	22.2	0.00	0.02	0.00	0.02	151	
169	9.82	9.80	33.837	26.078	196.0	0.460	3.00	46.9	24.6	1.80	23.1	0.00	0.05	0.00	0.02	170	208
200	9.47	9.45	34.006	26.268	178.5	0.518	2.38	37.0	30.3	2.03	25.9	0.00	0.00	0.00	0.02	201	207
234	8.86	8.83	34.093	26.434	163.1	0.576	2.07	31.7	36.1	2.19	28.3	0.00	0.00			235	206
250 ISL	8.70 D	8.67	34.098 D	26.463	160.6	0.602	2.14	32.7	37.7	2.20	28.8	0.00	0.00			251	
269	8.24	8.21	34.066	26.509	156.4	0.632	2.22	33.6	39.5	2.21	29.3	0.00	0.00			271	205
300 ISL	7.87 D	7.84	34.111 D	26.599	148.2	0.679	1.91	28.6	44.9	2.37	31.2	0.00	0.00			302	
320	7.61	7.58	34.116	26.641	144.4	0.708	1.63	24.3	48.7	2.49	32.5	0.00	0.00			322	204
381	7.02	6.98	34.154	26.755	134.2	0.793	1.13	16.6	57.9	2.72	35.4	0.00	0.00			383	203
400 ISL	6.95 D	6.91	34.194 D	26.796	130.6	0.818	0.95	13.9	60.5	2.80	36.0	0.00	0.00			403	
441	6.77	6.73	34.251	26.866	124.5	0.871	0.61	8.9	65.6	2.94	37.1	0.00	0.00			444	202
500 ISL	6.39 D	6.34	34.284 D	26.943	117.7	0.942	0.44	6.4	71.5	3.04	38.3	0.00	0.00			503	
512	6.38	6.33	34.286	26.946	117.6	0.956	0.41	5.9	72.7	3.06	38.6	0.00	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 33.8 W	14/01/10	0417 UTC	1408 m	260 22 kn			1019.0 mb	15.9 C	13.6 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.70	15.70	33.476	24.644	328.7	0.000	5.79	102.3	2.3	0.32	0.0	0.00	0.00	0.27	0.07	0	
2	15.70	15.70	33.476	24.644	328.7	0.007	5.79	102.3	2.3	0.32	0.0	0.00	0.00	0.27	0.07	2	220
10	15.70	15.70	33.474	24.643	329.1	0.033	5.79	102.3	2.1	0.32	0.0	0.00	0.00	0.27	0.08	10	219
20	15.70	15.70	33.469	24.639	329.8	0.066	5.78	102.1	2.4	0.32	0.0	0.00	0.00	0.29	0.08	20	218
30	15.72	15.72	33.469	24.635	330.5	0.099	5.79	102.3	2.4	0.30	0.0	0.00	0.00	0.27	0.08	30	217
40	15.71	15.70	33.457	24.628	331.4	0.132	5.79	102.3	2.3	0.31	0.0	0.00	0.04	0.26	0.08	40	216
50	15.21	15.20	33.418	24.709	324.0	0.165	5.71	99.8	2.6	0.36	0.1	0.02	0.00	0.82	0.47	50	215
63	14.56	14.55	33.356	24.802	315.5	0.206	5.48	94.5	3.6	0.50	1.5	0.14	0.00	0.50	0.38	63	214
69	13.94	13.93	33.318	24.903	306.0	0.225	5.44	92.6	4.2	0.56	2.6	0.11	0.00	0.37	0.34	69	213
75 ISL	11.75 D	11.74	33.234 D	25.267	271.2	0.242	5.18	84.2	6.3	0.75	5.7	0.07	0.00	0.25	0.25	75	
86	11.46	11.45	33.356	25.415	257.4	0.271	4.57	73.9	10.9	1.14	11.9	0.01	0.00	0.08	0.08	86	212
99	11.02	11.01	33.507	25.612	238.9	0.304	4.10	65.7	14.1	1.33	15.4	0.00	0.00	0.04	0.06	99	211
100 ISL	11.00 D	10.99	33.520 D	25.626	237.6	0.306	4.08	65.4	14.3	1.34	15.6	0.00	0.00	0.04	0.06	100	
122	10.27	10.26	33.621	25.832	218.3	0.356	3.84	60.6	18.2	1.51	18.7	0.00	0.00	0.01	0.03	123	210
125 ISL	10.23 D	10.22	33.632 D	25.848	216.9	0.363	3.79	59.7	18.7	1.53	19.1	0.00	0.00	0.01	0.03	126	
141	9.89	9.87	33.725	25.978	204.8	0.396	3.50	54.8	21.7	1.66	21.1	0.00	0.00	0.00	0.03	142	209
150 ISL	9.86 D	9.84	33.810 D	26.050	198.2	0.415	3.25	50.9	23.4	1.75	22.2	0.00	0.00	0.00	0.03	151	
172	9.60	9.58	33.944	26.198	184.6	0.457	2.69	41.9	27.4	1.94	24.6	0.00	0.00	0.00	0.02	173	208
200 ISL	9.08 D	9.06	34.060 D	26.373	168.3	0.506	2.45	37.7	32.0	2.07	26.5	0.00	0.00	0.00	0.02	201	
202	9.06	9.04	34.061	26.377	168.0	0.509	2.44	37.6	32.4	2.08	26.6	0.00	0.00	0.00	0.02	203	207
229	8.43	8.41	34.078	26.489	157.6	0.553	2.20	33.4	38.3	2.20	28.9	0.00	0.00			230	206
250 ISL	8.27 D	8.24	34.112 D	26.540	153.1	0.586	1.92	29.1	41.2	2.33	30.0	0.00	0.00			251	
270	8.22	8.19	34.149	26.577	150.0	0.616	1.65	24.9	43.6	2.45	30.9	0.00	0.00			272	205
300 ISL	7.93 D	7.90	34.184 D	26.648	143.6	0.660	1.38	20.7	48.4	2.58	32.6	0.00	0.00			302	
324	7.56	7.53	34.170	26.691	139.7	0.694	1.21	18.0	52.1	2.66	33.9	0.00	0.00			326	204
380	7.22	7.18	34.211	26.772	132.8	0.771	0.92	13.6	58.3	2.80	35.4	0.00	0.00			382	203
400 ISL	7.08 D	7.04	34.231 D	26.807	129.6	0.797	0.79	11.6	61.1	2.86	36.1	0.00	0.00			403	
440	6.72	6.68	34.263	26.882	122.9	0.847	0.55	8.0	66.9	2.98	37.4	0.00	0.00			443	202
500 ISL	6.28 D	6.24	34.295 D	26.966	115.4	0.919	0.36	5.2	74.6	3.10	38.9	0.00	0.00			503	
516	6.19	6.14	34.308	26.988	113.5	0.937	0.31	4.5	76.6	3.13	39.3	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 10.6 N	118 54.0 W	14/01/10	0849 UTC	1477 m	250 26 kn			1019.5 mb	15.1 C	13.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.68	15.68	33.466	24.641	329.0	0.000	5.76	101.7	2.3	0.32	0.0	0.00	0.00	0.31	0.13	0	
3	15.68	15.68	33.466	24.641	329.1	0.010	5.76	101.7	2.3	0.32	0.0	0.00	0.00	0.31	0.13	3	220
10 ISL	15.69 D	15.69	33.469 D	24.641	329.3	0.033	5.78	102.1	2.1	0.32	0.0	0.00	0.00	0.34	0.09	10	
11	15.69	15.69	33.470	24.642	329.2	0.036	5.78	102.1	2.1	0.32	0.0	0.00	0.00	0.35	0.09	11	219
20	15.69	15.69	33.471	24.643	329.4	0.066	5.76	101.7	2.3	0.32	0.0	0.00	0.00	0.33	0.12	20	218
30	15.57	15.57	33.449	24.653	328.7	0.099	5.78	101.8	2.4	0.32	0.0	0.00	0.00	0.43	0.18	30	217
40	14.90	14.89	33.386	24.752	319.6	0.131	5.89	102.3	2.6	0.34	0.0	0.00	0.00	0.66	0.25	40	216
50	13.56	13.55	33.271	24.943	301.5	0.162	5.43	91.7	4.4	0.62	3.2	0.09	0.00	0.41	0.28	50	215
60	11.84	11.83	33.267	25.275	270.1	0.191	4.89	79.6	8.7	1.00	9.5	0.01	0.00	0.15	0.14	60	214
72	11.33	11.32	33.403	25.475	251.3	0.222	4.43	71.4	12.0	1.20	13.1	0.00	0.00	0.08	0.09	72	213
75 ISL	11.23 D	11.22	33.405 D	25.495	249.5	0.230	4.30	69.2	13.0	1.26	14.1	0.00	0.01	0.07	0.08	75	
84	10.81	10.80	33.523	25.661	233.8	0.251	3.94	62.9	15.9	1.42	16.9	0.00	0.05	0.04	0.07	84	212
100 ISL	10.50 D	10.49	33.648 D	25.813	219.7	0.288	3.55	56.3	18.9	1.58	19.4	0.00	0.05	0.03	0.06	100	
101	10.52	10.51	33.643	25.806	220.4	0.290	3.53	56.0	19.0	1.59	19.5	0.00	0.05	0.03	0.06	101	211
119	10.21	10.20	33.755	25.947	207.4	0.328	3.23	50.9	21.7	1.71	21.3	0.00	0.05	0.01	0.04	120	210
125 ISL	10.16 D	10.15	33.794 D	25.986	203.8	0.341	3.23	50.9	22.7	1.75	21.8	0.00	0.04	0.01	0.03	126	
140	9.90	9.88	33.878	26.096	193.7	0.370	3.25	50.9	25.1	1.84	23.1	0.00	0.00	0.00	0.02	141	209
150 ISL	9.75 D	9.73	33.924 D	26.157	188.0	0.390	3.07	48.0	26.6	1.89	23.9	0.00	0.00	0.00	0.02	151	
173	9.40	9.38	33.980	26.259	178.8	0.432	2.63	40.8	29.5	1.98	25.5	0.00	0.00	0.00	0.02	174	208
200 ISL	8.86 D	8.84	34.016 D	26.373	168.2	0.479	2.56	39.2	32.3	2.04	26.8	0.00	0.00	0.00	0.02	201	
201	8.85	8.83	34.011	26.371	168.4	0.480	2.56	39.2	32.4	2.04	26.8	0.00	0.00	0.00	0.02	202	207
229	8.53	8.51	34.060	26.459	160.5	0.526	2.29	34.8	36.6	2.17	28.5	0.00	0.00			230	206
250 ISL	8.37 D	8.34	34.119 D	26.531	154.1	0.559	1.89	28.7	41.0	2.32	30.1	0.00	0.00			251	
271	8.13	8.10	34.166	26.604	147.4	0.591	1.48	22.3	45.6	2.48	31.6	0.00	0.00			273	205
300 ISL	7.79 D	7.76	34.193 D	26.676	140.9	0.633	1.20	18.0	50.5	2.61	33.2	0.00	0.00			302	
321	7.55	7.52	34.199	26.715	137.4	0.662	1.07	15.9	53.6	2.69	34.1	0.00	0.00			323	204
379	7.01	6.97	34.239	26.823	127.8	0.739	0.70	10.3	62.0	2.88	36.4	0.00	0.00			381	203
400 ISL	7.04 D	7.00	34.254 D	26.831	127.4	0.766	0.59	8.7	64.2	2.93	36.9	0.00	0.00			403	
441	6.76	6.72	34.291	26.899	121.4	0.817	0.43	6.3	68.1	3.02	37.7	0.00	0.00			444	202
500 ISL	6.39 D	6.34	34.324 D	26.974	114.8	0.886	0.31	4.5	74.6	3.10	38.8	0.00	0.00			503	
513	6.33	6.28	34.327	26.985	113.9	0.901	0.28	4.1	76.0	3.12	39.1	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 0.8 N	119 14.8 W	14/01/10	1333 UTC	1617 m	260 22 kn			1018.6 mb	14.9 C	13.4 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.03	15.03	33.426	24.753	318.3	0.000	5.86	102.1	2.8	0.33	0.0	0.00	0.06	0.37	0.14	0	
3	15.03	15.03	33.426	24.753	318.4	0.010	5.86	102.1	2.8	0.33	0.0	0.00	0.06	0.37	0.14	3	221
10	15.02	15.02	33.429	24.758	318.1	0.032	5.86	102.1	2.6	0.33	0.0	0.00	0.00	0.37	0.15	10	219
10	15.03	15.03	33.426	24.753	318.6	0.032										10	220
20	15.02	15.02	33.425	24.755	318.7	0.064	5.86	102.1	2.8	0.33	0.0	0.00	0.00	0.37	0.14	20	218
30 ISL	14.92 D	14.92	33.413 D	24.768	317.8	0.096	5.85	101.7	2.9	0.34	0.0	0.02	0.05	0.43	0.15	30	
31	14.93	14.93	33.420	24.771	317.5	0.099	5.85	101.7	2.9	0.34	0.0	0.02	0.05	0.44	0.15	31	217
39	14.37	14.36	33.364	24.848	310.4	0.124	5.81	99.8	3.2	0.40	0.5	0.12	0.06	0.56	0.27	39	216
50 ISL	13.21 D	13.20	33.302 D	25.038	292.5	0.157	5.42	90.9	4.8	0.64	3.8	0.10	0.01	0.30	0.23	50	
51	13.09	13.08	33.306	25.065	290.0	0.160	5.37	89.8	5.1	0.67	4.3	0.10	0.00	0.27	0.23	51	215
60	11.95	11.94	33.339	25.311	266.7	0.185	4.75	77.6	9.9	1.03	10.4	0.01	0.00	0.11	0.16	60	214
71	11.52	11.51	33.335	25.387	259.6	0.214	4.66	75.4	10.8	1.11	11.6	0.00	0.00	0.10	0.14	71	213
75 ISL	11.43 D	11.42	33.364 D	25.426	256.0	0.224	4.56	73.7	11.6	1.16	12.4	0.00	0.00	0.09	0.14	75	
87	11.00	10.99	33.447	25.569	242.7	0.254	4.20	67.3	14.5	1.33	15.2	0.00	0.00	0.06	0.12	87	212
100 ISL	10.63 D	10.62	33.550 D	25.714	229.1	0.285	3.90	62.0	16.8	1.46	17.4	0.00	0.00	0.03	0.09	100	
102	10.65	10.64	33.545	25.707	229.9	0.289	3.86	61.4	17.2	1.48	17.7	0.00	0.00	0.03	0.09	102	211
119	10.14	10.13	33.687	25.906	211.3	0.327	3.45	54.3	21.3	1.66	20.5	0.00	0.00	0.01	0.05	120	210
125 ISL	10.07 D	10.06	33.730 D	25.951	207.1	0.339	3.35	52.7	22.7	1.72	21.4	0.00	0.00	0.01	0.05	126	
141	9.72	9.70	33.860	26.112	192.1	0.371	3.08	48.1	26.4	1.87	23.6	0.00	0.00	0.00	0.04	142	209
150 ISL	9.42 D	9.40	33.957 D	26.237	180.3	0.388	2.81	43.6	28.5	1.96	24.8	0.00	0.00	0.00	0.04	151	
171	9.21	9.19	34.056	26.349	170.1	0.425	2.21	34.1	32.9	2.13	27.1	0.00	0.00	0.00	0.03	172	208
200 ISL	8.86 D	8.84	34.121 D	26.456	160.4	0.473	1.89	29.0	37.1	2.28	28.8	0.00	0.00	0.00	0.03	201	
201	8.87	8.85	34.116	26.450	161.0	0.474	1.88	28.8	37.2	2.28	28.8	0.00	0.00	0.00	0.03	202	207
231	8.58	8.56	34.151	26.523	154.5	0.522	1.63	24.8	41.3	2.40	30.1	0.00	0.00			232	206
250 ISL	8.44 D	8.41	34.177 D	26.565	150.8	0.551	1.48	22.5	43.6	2.47	30.9	0.00	0.00			251	
272	8.20	8.17	34.184	26.608	147.1	0.584	1.32	19.9	46.4	2.55	31.9	0.00	0.00			274	205
300 ISL	7.84 D	7.81	34.202 D	26.675	141.0	0.624	1.13	16.9	50.5	2.65	33.3	0.00	0.00			302	
319	7.63	7.60	34.206	26.709	138.0	0.650	1.02	15.2	53.3	2.72	34.1	0.00	0.00			321	204
385	7.27	7.23	34.255	26.800	130.3	0.739	0.68	10.1	60.1	2.88	35.7	0.00	0.00			387	203
400 ISL	7.11 D	7.07	34.254 D	26.821	128.3	0.758	0.61	9.0	62.4	2.93	36.2	0.00	0.00			403	
444	6.74	6.70	34.295	26.905	120.8	0.813	0.43	6.3	68.8	3.05	37.7	0.00	0.00			447	202
500 ISL	6.56 D	6.51	34.310 D	26.941	118.1	0.880	0.38	5.5	72.1	3.09	38.3	0.00	0.00			503	
515	6.52	6.47	34.314	26.950	117.4	0.898	0.37	5.4	73.0	3.10	38.4	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 50.5 N	119 35.0 W	14/01/10	1739 UTC	1930 m	260 16 kn	300 06 05	0	1021.2 mb	15.5 C	14.0 C	15m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.20	15.20	33.432	24.720	321.4	0.000	5.84	102.1	2.5	0.34	0.0	0.00	0.00	0.32	0.12	0	
2	15.20	15.20	33.432	24.721	321.4	0.006	5.84	102.1	2.5	0.34	0.0	0.00	0.00	0.32	0.12	2	221
10 ISL	15.19 D	15.19	33.423 D	24.716	322.1	0.032	5.84	102.1	2.3	0.34	0.0	0.00	0.04	0.33	0.12	10	
12	15.19	15.19	33.424	24.717	322.1	0.039	5.84	102.1	2.3	0.34	0.0	0.00	0.05	0.33	0.12	12	220
18	15.18	15.18	33.425	24.720	322.0	0.058	5.82	101.7	2.5	0.33	0.0	0.00	0.00	0.34	0.13	18	219
20 ISL	15.17 D	15.17	33.422 D	24.720	322.0	0.064	5.83	101.8	2.5	0.33	0.0	0.00	0.01	0.34	0.13	20	
25	15.16	15.16	33.422	24.722	322.0	0.080	5.85	102.2	2.5	0.33	0.0	0.00	0.05	0.35	0.12	25	218
30 ISL	15.13 D	15.13	33.417 D	24.725	321.9	0.097	5.84	101.9	2.5	0.33	0.0	0.00	0.02	0.35	0.13	30	
32	15.14	15.14	33.422	24.727	321.8	0.103	5.83	101.8	2.5	0.33	0.0	0.00	0.00	0.35	0.13	32	217
39	15.02	15.01	33.411	24.745	320.3	0.125	5.84	101.7	2.3	0.33	0.0	0.00	0.00	0.42	0.17	39	216
50	14.38	14.37	33.366	24.847	310.8	0.160	5.82	100.0	3.1	0.39	0.2	0.10	0.13	0.49	0.29	50	215
58	14.12	14.11	33.347	24.887	307.2	0.185	5.64	96.4	3.6	0.47	1.3	0.27	0.06	0.32	0.25	58	214
71	13.26	13.25	33.318	25.041	292.8	0.224	5.34	89.6	5.5	0.68	4.7	0.11	0.00	0.17	0.15	71	213
75 ISL	12.96 D	12.95	33.312 D	25.096	287.6	0.236	5.18	86.4	6.5	0.78	6.4	0.07	0.00	0.15	0.15	75	
85	11.79	11.78	33.341	25.343	264.3	0.263	4.74	77.2	9.4	1.04	10.6	0.01	0.00	0.12	0.16	85	212
100 ISL	11.05 D	11.04	33.512 D	25.611	239.1	0.301	4.16	66.7	13.7	1.31	14.8	0.00	0.00	0.07	0.10	100	
103	11.04	11.03	33.506	25.608	239.4	0.308	4.06	65.1	14.6	1.35	15.5	0.00	0.00	0.06	0.08	103	211
121	10.38	10.37	33.672	25.853	216.4	0.349	3.58	56.6	19.3	1.59	19.4	0.00	0.00	0.02	0.05	122	210
125 ISL	10.15 D	10.14	33.676 D	25.896	212.4	0.358	3.48	54.8	20.3	1.64	20.1	0.00	0.00	0.01	0.05	126	
141	9.86	9.84	33.810	26.049	198.1	0.390	3.09	48.4	24.2	1.81	22.7	0.00	0.00	0.00	0.04	142	209
150 ISL	9.56 D	9.54	33.922 D	26.187	185.1	0.408	2.84	44.2	26.6	1.90	24.1	0.00	0.00	0.00	0.04	151	
171	9.26	9.24	34.022	26.314	173.4	0.445	2.32	35.9	31.8	2.09	26.7	0.00	0.00	0.00	0.04	172	208
200 ISL	8.89 D	8.87	34.104 D	26.438	162.2	0.494	1.95	29.9	36.4	2.24	28.6	0.00	0.00	0.00	0.06	201	
203	8.91	8.89	34.107	26.437	162.3	0.499	1.92	29.5	36.8	2.25	28.7	0.00	0.00	0.00	0.06	204	207
231	8.62	8.60	34.151	26.517	155.1	0.543	1.63	24.9	40.7	2.39	30.1	0.00	0.00			232	206
250 ISL	8.54 D	8.51	34.158 D	26.535	153.8	0.573	1.56	23.8	41.8	2.43	30.5	0.00	0.00			251	
269	8.45	8.42	34.166	26.556	152.1	0.602	1.52	23.1	42.7	2.45	30.9	0.00	0.00			271	205
300 ISL	8.22 D	8.19	34.196 D	26.614	147.0	0.648	1.29	19.5	46.6	2.55	32.0	0.00	0.00			302	
325	7.91	7.88	34.213	26.674	141.6	0.684	1.09	16.4	50.3	2.65	33.1	0.00	0.00			327	204
384	7.31	7.27	34.234 D	26.778	132.4	0.765	0.78	11.6	58.4	2.83	35.4	0.00	0.00			386	203
400 ISL	7.15 D	7.11	34.242 D	26.806	129.8	0.786	0.71	10.5	60.4	2.88	35.9	0.00	0.00			403	
444	6.78	6.74	34.260	26.872	124.0	0.842	0.56	8.2	65.6	2.99	37.2	0.00	0.00			447	202
500 ISL	6.50 D	6.45	34.298 D	26.939	118.1	0.910	0.40	5.8	72.4	3.07	38.7	0.00	0.00			503	
512	6.31	6.26	34.294	26.961	116.1	0.924	0.36	5.2	73.9	3.09	39.0	0.00	0.00			515	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 30.6 N	120 14.9 W	14/01/10	2348 UTC	3943 m	270 15 kn	310 07 07	0	1019.6 mb	15.0 C	13.3 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.17	15.17	33.249	24.586	334.2	0.000	5.86	102.3	1.8	0.35	0.0	0.00	0.00	0.23	0.09	0	
3	15.17	15.17	33.249	24.586	334.3	0.010	5.86	102.3	1.8	0.35	0.0	0.00	0.00	0.23	0.09	3	220
10	15.16	15.16	33.249	24.589	334.2	0.033	5.85	102.1	2.1	0.35	0.0	0.00	0.00	0.23	0.09	10	219
20 ISL	15.16 D	15.16	33.249 D	24.589	334.5	0.067	5.85	102.1	2.2	0.34	0.0	0.00	0.00	0.25	0.10	20	
25	15.13	15.13	33.251	24.597	333.9	0.084	5.85	102.0	2.2	0.34	0.0	0.00	0.00	0.27	0.10	25	218
30 ISL	15.10 D	15.10	33.248 D	24.602	333.6	0.100	5.85	101.9	2.3	0.35	0.0	0.01	0.00	0.34	0.15	30	
40	14.95	14.94	33.246 D	24.633	330.9	0.133	5.85	D101.6								40	217
50 ISL	14.73 D	14.72	33.220 D	24.660	328.6	0.166	5.83	100.8	2.5	0.38	0.1	0.04	0.00	0.47	0.31	50	
51	14.73	14.72	33.224	24.663	328.3	0.170	5.83	100.8	2.5	0.38	0.1	0.04	0.00	0.47	0.32	51	216
63	13.88	13.87	33.172	24.802	315.4	0.208	5.70	96.8	3.1	0.49	1.2	0.30	0.00	0.27	0.25	63	215
75	13.14	13.13	33.128	24.918	304.6	0.246	5.63	94.2	4.1	0.59	2.8	0.17	0.00	0.18	0.19	75	214
87	12.27	12.26	33.085	25.054	291.9	0.281	5.58	91.6	5.4	0.69	4.7	0.03	0.00	0.13	0.15	87	213
100	10.93	10.92	33.214	25.400	259.0	0.317	4.91	78.4	10.8	1.11	11.9	0.00	0.00	0.05	0.07	100	212
113	10.63	10.62	33.307	25.525	247.3	0.350	4.70	74.6	12.6	1.26	14.2	0.00	0.00	0.04	0.04	114	211
125	10.43	10.42	33.380	25.617	238.9	0.379	4.46	70.5	14.8	1.35	16.0	0.00	0.00	0.02	0.03	126	210
140	10.03	10.01	33.548	25.816	220.2	0.414	4.06	63.7	18.8	1.54	19.1	0.00	0.00	0.01	0.02	141	209
150 ISL	9.65 D	9.63	33.681 D	25.984	204.4	0.435	3.86	60.1	21.2	1.62	20.6	0.00	0.00	0.01	0.02	151	
170	9.12	9.10	33.811	26.171	186.9	0.474	3.50	53.9	25.8	1.76	23.2	0.00	0.00	0.00	0.01	171	208
200 ISL	8.51 D	8.49	33.939 D	26.367	168.6	0.527	2.95	44.8	32.3	1.99	26.9	0.00	0.00	0.00	0.01	201	
201	8.54	8.52	33.933	26.358	169.6	0.529	2.93	44.6	32.5	2.00	27.0	0.00	0.00	0.00	0.01	202	207
231	8.07	8.05	33.994	26.477	158.6	0.578	2.67	40.2	37.3	2.10	28.5	0.00	0.00			232	206
250 ISL	7.68 D	7.66	34.000 D	26.539	152.9	0.608	2.48	37.0	41.1	2.20	29.8	0.00	0.00			251	
274	7.36	7.33	34.019	26.600	147.3	0.644	2.22	32.9	46.2	2.33	31.5	0.00	0.00			276	205
300 ISL	6.94 D	6.91	34.020 D	26.659	141.9	0.681	1.95	28.6	51.7	2.45	33.4	0.00	0.00			302	
318	6.74	6.71	34.038	26.700	138.1	0.707	1.75	25.5	55.3	2.53	34.6	0.00	0.00			320	204
384	6.44	6.41	34.148	26.828	126.9	0.794	0.89	12.9	66.2	2.88	37.8	0.00	0.00			386	203
400 ISL	6.31 D	6.27	34.163 D	26.856	124.3	0.814	0.82	11.9	68.7	2.91	38.3	0.00	0.00			402	
439	5.92	5.88	34.164	26.907	119.7	0.862	0.73	10.5	74.1	2.97	39.2	0.00	0.00			442	202
500 ISL	6.00 D	5.96	34.272 D	26.983	113.5	0.933	0.43	6.2	79.5	3.10	40.0	0.00	0.00			503	
520	5.88	5.83	34.280	27.005	111.6	0.955	0.33	4.7	81.3	3.14	40.2	0.00	0.00			523	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 10.0 N	120 54.5 W	15/01/10	0719 UTC	3848 m	290 13 kn			1020.7 mb	15.0 C	13.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.65	14.65	33.113	24.593	333.5	0.000	5.98	103.2	2.8	0.36	0.0	0.00	0.00	0.38	0.16	0	
2	14.65	14.65	33.113	24.594	333.5	0.007	5.98	103.2	2.8	0.36	0.0	0.00	0.00	0.38	0.16	2	220
10	14.65	14.65	33.114	24.594	333.7	0.033	5.98	103.2	2.7	0.35	0.0	0.00	0.00	0.37	0.16	10	219
20	14.65	14.65	33.103	24.586	334.8	0.067	5.98	103.2	2.9	0.36	0.0	0.00	0.00	0.38	0.15	20	218
30	14.63	14.63	33.113	24.599	333.9	0.100	5.98	103.1	2.7	0.35	0.0	0.00	0.00	0.40	0.16	30	217
40	14.12	14.11	33.119	24.711	323.5	0.133	5.98	102.1	2.9	0.40	0.3	0.06	0.04	0.68	0.36	40	216
50 ISL	13.59 D	13.58	33.145 D	24.840	311.4	0.165	5.92	100.0	3.4	0.46	1.1	0.18	0.18	0.43	0.29	50	
51	13.58	13.57	33.139	24.837	311.7	0.168	5.91	99.8	3.5	0.47	1.2	0.19	0.19	0.39	0.28	51	215
61	13.08	13.07	33.138	24.937	302.4	0.199	5.79	96.7	4.0	0.54	2.2	0.23	0.07	0.23	0.18	61	214
71	12.59	12.58	33.113	25.014	295.3	0.229	5.70	94.2	4.6	0.60	3.4	0.14	0.00	0.16	0.17	71	213
75 ISL	12.62 D	12.61	33.172 D	25.054	291.6	0.240	5.63	93.2	5.2	0.67	4.7	0.10	0.00	0.13	0.15	75	
85	11.72	11.71	33.161	25.216	276.3	0.269	5.42	88.0	7.3	0.88	8.3	0.01	0.00	0.07	0.10	85	212
100 ISL	10.21	10.20	33.153 D	25.477	251.6	0.308	5.16	81.1	10.5	1.08	11.8	0.01	0.00	0.04	0.05	100	
101	10.20	10.19	33.126	25.458	253.4	0.311	5.14	80.7	10.7	1.09	12.0	0.01	0.00	0.04	0.05	101	211
119	9.55	9.54	33.326	25.722	228.5	0.354	4.63	71.8	15.6	1.35	16.6	0.00	0.00	0.02	0.02	120	210
125 ISL	9.79 D	9.78	33.544 D	25.853	216.3	0.367	4.37	68.2	17.2	1.43	18.0	0.00	0.00	0.02	0.02	126	
140	9.68	9.66	33.659	25.961	206.3	0.399	3.76	58.6	20.6	1.60	20.9	0.00	0.00	0.01	0.02	141	209
150 ISL	9.44 D	9.42	33.703 D	26.035	199.5	0.419	3.62	56.1	22.0	1.65	21.9	0.00	0.00	0.01	0.02	151	
171	9.17	9.15	33.832	26.180	186.1	0.460	3.49	53.8	24.6	1.72	23.3	0.00	0.00	0.00	0.01	172	208
200	8.63	8.61	33.937	26.347	170.6	0.512	2.97	45.3	31.0	1.94	26.8	0.00	0.00	0.00	0.02	201	207
231	8.18	8.16	33.994	26.461	160.2	0.563	2.87	43.3	34.8	2.01	27.7	0.00	0.00			232	206
250 ISL	8.07 D	8.04	34.045 D	26.517	155.1	0.593	2.46	37.0	38.3	2.14	29.4	0.00	0.00			251	
271	7.85	7.82	34.070	26.570	150.4	0.625	1.95	29.2	42.6	2.31	31.6	0.00	0.00			273	205
300 ISL	7.47 D	7.44	34.096 D	26.645	143.6	0.668	1.55	23.0	48.2	2.48	33.6	0.00	0.00			302	
320	7.31	7.28	34.119	26.686	139.9	0.696	1.36	20.1	51.8	2.57	34.7	0.00	0.00			322	204
381	6.64	6.61	34.130	26.787	130.8	0.779	1.07	15.6	60.8	2.74	37.2	0.00	0.00			383	203
400 ISL	6.44 D	6.40	34.140 D	26.821	127.7	0.803	0.96	13.9	64.0	2.80	37.9	0.00	0.00			402	
441	6.07	6.03	34.168	26.891	121.3	0.854	0.74	10.6	70.6	2.91	39.3	0.00	0.00			444	202
500 ISL	5.69 D	5.65	34.205 D	26.968	114.4	0.924	0.53	7.6	77.7	3.02	40.7	0.00	0.00			503	
516	5.62	5.58	34.212	26.983	113.2	0.942	0.47	6.7	79.6	3.05	41.1	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 50.9 N	121 35.8 W	15/01/10	1332 UTC	4107 m	300 06 kn			1018.9 mb	15.1 C	13.4 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.90	15.90	33.309	24.471	345.2	0.000	5.71	101.2	2.2	0.35	0.0	0.00	0.00	0.14	0.05	0	
2	15.90	15.90	33.309	24.471	345.3	0.007	5.71	101.2	2.2	0.35	0.0	0.00	0.00	0.14	0.05	2	220
10	15.90	15.90	33.313	24.474	345.2	0.035	5.73	101.5	2.1	0.35	0.0	0.00	0.00	0.14	0.05	10	219
20 ISL	15.90 D	15.90	33.309 D	24.471	345.8	0.069	5.72	101.3	1.9	0.34	0.0	0.00	0.00	0.14	0.05	20	
26	15.90	15.90	33.312	24.474	345.7	0.090	5.71	101.1	1.8	0.34	0.0	0.00	0.00	0.14	0.05	26	218
30 ISL	15.89 D	15.89	33.308 D	24.473	345.9	0.104	5.71	101.1	1.8	0.34	0.0	0.00	0.00	0.14	0.05	30	
40	15.83	15.82	33.309	24.488	344.8	0.138	5.72	101.2	2.0	0.34	0.0	0.00	0.00	0.14	0.05	40	217
50	15.51	15.50	33.284	24.540	340.1	0.172	5.75	101.0	2.2	0.35	0.0	0.00	0.00	0.24	0.12	50	216
62	15.12	15.11	33.220	24.577	337.0	0.213	5.78	100.7	2.2	0.37	0.0	0.00	0.00	0.38	0.34	62	215
75	14.64	14.63	33.207	24.670	328.4	0.256	5.73	98.9	2.2	0.43	0.2	0.13	0.06	0.38	0.29	75	214
88	13.90	13.89	33.156	24.786	317.6	0.298	5.67	96.4	3.2	0.50	1.2	0.25	0.00	0.23	0.29	88	213
100	12.18	12.17	33.065	25.056	292.0	0.335	5.50	90.1	5.5	0.73	5.1	0.02	0.00	0.14	0.16	100	212
112	11.30	11.29	33.169	25.299	268.9	0.369	5.04	81.1	9.5	1.06	10.7	0.01	0.00	0.07	0.11	112	211
125	10.43	10.42	33.447	25.669	233.9	0.401	4.08	64.5	16.6	1.51	18.2	0.00	0.00	0.03	0.04	126	210
142	9.87	9.85	33.785	26.028	200.1	0.438	2.84	44.5	25.4	1.95	24.7	0.00	0.00	0.01	0.03	143	209
150 ISL	9.72 D	9.70	33.865 D	26.116	191.9	0.454	2.50	39.0	27.9	2.06	26.3	0.00	0.00	0.01	0.03	151	
171	9.42	9.40	34.010	26.279	176.8	0.492	2.00	31.0	31.8	2.21	28.3	0.00	0.00	0.00	0.02	172	208
200 ISL	9.23 D	9.21	34.088 D	26.371	168.6	0.543	1.70	26.3	34.7	2.32	29.6	0.00	0.00	0.00	0.02	201	
201	9.23	9.21	34.088	26.371	168.6	0.544	1.70	26.3	34.8	2.32	29.6	0.00	0.00	0.00	0.02	202	207
230	9.07	9.04	34.139	26.437	162.9	0.592	1.49	23.0	37.7	2.43	30.5	0.00	0.00			231	206
250 ISL	8.95 D	8.92	34.168 D	26.479	159.3	0.625	1.36	20.9	39.3	2.48	31.1	0.00	0.00			251	
272	8.84	8.81	34.190	26.514	156.4	0.659	1.24	19.0	40.9	2.53	31.6	0.00	0.00			273	205
300 ISL	8.68 D	8.65	34.213 D	26.558	152.7	0.703	1.12	17.1	43.0	2.59	32.2	0.00	0.00			302	
321	8.58	8.55	34.226	26.584	150.6	0.734	1.04	15.9	44.5	2.63	32.6	0.00	0.00			323	204
381	8.21	8.17	34.234	26.647	145.4	0.823	0.85	12.9	49.1	2.76	33.9	0.00	0.00			383	203
400 ISL	8.03 D	7.99	34.255 D	26.691	141.5	0.850	0.79	11.9	51.1	2.80	34.4	0.00	0.00			402	
445	7.66	7.62	34.270	26.757	135.7	0.913	0.65	9.7	56.3	2.90	35.6	0.00	0.00			448	202
500 ISL	7.08 D	7.03	34.272 D	26.841	128.1	0.985	0.52	7.7	63.0	2.99	37.3	0.00	0.00			503	
516	6.97	6.92	34.278	26.861	126.3	1.006	0.48	7.1	65.0	3.02	37.8	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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	15/01/10	1953 UTC	4177 m	290 04 kn	300 03 06	1	1020.9 mb	16.5 C	14.9 C	35m	7/8	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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.40	16.40	33.389	24.418	350.2	0.000	5.63	100.8	1.8	0.34	0.0	0.00	0.00	0.10	0.04	0	
2	16.40	16.40	33.389	24.418	350.2	0.007	5.63	100.8	1.8	0.34	0.0	0.00	0.00	0.10	0.04	2	222
10 ISL	16.38 D	16.38	33.390 D	24.424	349.9	0.035	5.64	100.9	1.9	0.34	0.0	0.00	0.00	0.10	0.03	10	
15	16.30	16.30	33.391	24.443	348.3	0.052	5.64	100.8	1.9	0.34	0.0	0.00	0.00	0.10	0.03	15	221
20 ISL	16.30 D	16.30	33.390 D	24.443	348.5	0.070	5.64	100.8	1.9	0.34	0.0	0.00	0.00	0.10	0.03	20	
28	16.29	16.29	33.389	24.445	348.6	0.098	5.64	100.7	1.8	0.34	0.0	0.00	0.00	0.11	0.04	28	220
30 ISL	16.29 D	16.29	33.389 D	24.445	348.6	0.105	5.65	100.9	1.8	0.34	0.0	0.00	0.00	0.12	0.04	30	
38	15.91	15.90	33.322	24.480	345.5	0.133	5.69	100.8	1.8	0.35	0.0	0.00	0.00	0.16	0.07	38	219
48	15.62	15.61	33.284	24.516	342.4	0.167	5.72	100.7	2.1	0.35	0.0	0.00	0.00	0.21	0.13	48	218
50 ISL	15.27 D	15.26	33.248 D	24.565	337.7	0.174	5.73	100.2	2.1	0.36	0.0	0.00	0.01	0.23	0.14	50	
58	15.23	15.22	33.247	24.573	337.2	0.201	5.75	100.5	2.1	0.38	0.0	0.00	0.06	0.29	0.18	58	217
68	15.11	15.10	33.247	24.600	334.9	0.234	5.71	99.5	2.2	0.38	0.0	0.02	0.05	0.28	0.15	68	216
75 ISL	14.61 D	14.60	33.217 D	24.684	327.0	0.257	5.69	98.1	2.5	0.42	0.2	0.11	0.06	0.24	0.17	75	
77	14.54	14.53	33.214	24.697	325.9	0.264	5.69	98.0	2.6	0.43	0.3	0.14	0.06	0.23	0.18	77	215
88	13.48	13.47	33.171	24.883	308.3	0.299	5.66	95.4	3.6	0.53	1.5	0.16	0.00	0.18	0.21	88	214
100 ISL	12.78 D	12.77	33.140 D	24.999	297.5	0.335	5.57	92.5	4.3	0.60	3.0	0.07	0.00	0.16	0.16	100	
101	12.86	12.85	33.143	24.985	298.8	0.338	5.56	92.5	4.4	0.61	3.2	0.06	0.00	0.16	0.15	101	213
112	12.00	11.99	33.164	25.167	281.7	0.370	5.31	86.7	6.4	0.79	6.5	0.01	0.00	0.09	0.10	112	212
125 ISL	11.28 D	11.26	33.239 D	25.358	263.7	0.406	5.09	81.9	8.6	0.96	9.5	0.01	0.00	0.06	0.07	126	
130	11.18	11.16	33.244	25.379	261.7	0.419	5.00	80.3	9.5	1.02	10.5	0.01	0.00	0.05	0.06	131	211
146	10.66	10.64	33.369	25.569	244.0	0.459	4.59	72.9	13.1	1.26	14.4	0.00	0.00	0.03	0.05	147	210
150 ISL	10.61 D	10.59	33.395 D	25.598	241.3	0.469	4.45	70.6	14.2	1.32	15.4	0.00	0.00	0.02	0.05	151	
163	10.28	10.26	33.563	25.786	223.6	0.499	4.01	63.2	17.6	1.48	18.4	0.00	0.00	0.01	0.03	164	209
183	9.80	9.78	33.706	25.979	205.6	0.542	3.59	56.1	21.4	1.66	21.3	0.00	0.00	0.00	0.02	184	208
200	9.47	9.45	33.829	26.130	191.6	0.576	3.26	50.6	25.1	1.79	23.4	0.00	0.00	0.00	0.02	201	207
231	8.76	8.74	33.991	26.370	169.1	0.632	2.83	43.3	32.0	1.96	26.4	0.00	0.00			232	206
250 ISL	8.55 D	8.52	34.042 D	26.443	162.5	0.663	2.48	37.7	35.5	2.10	28.1	0.00	0.00			251	
271	8.35	8.32	34.070	26.495	157.8	0.697	2.12	32.1	39.2	2.25	29.8	0.00	0.00			272	205
300 ISL	7.74 D	7.71	34.081 D	26.595	148.5	0.741	1.83	27.3	45.0	2.40	31.9	0.00	0.00			302	
321	7.49	7.46	34.095	26.642	144.3	0.772	1.67	24.8	49.2	2.49	33.2	0.00	0.00			323	204
380	6.80	6.76	34.142	26.775	132.1	0.853	1.10	16.1	60.5	2.77	36.5	0.00	0.00			382	203
400 ISL	6.48 D	6.44	34.151 D	26.825	127.4	0.879	0.99	14.4	64.2	2.83	37.4	0.00	0.00			402	
441	6.13	6.09	34.163	26.880	122.5	0.931	0.81	11.7	71.2	2.94	39.0	0.00	0.00			444	202
500 ISL	5.90 D	5.86	34.220 D	26.954	116.0	1.001	0.57	8.2	78.1	3.07	40.4	0.00	0.00			503	
516	5.76	5.72	34.225	26.976	114.0	1.019	0.50	7.1	80.0	3.11	40.8	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 11.1 N	122 55.4 W	16/01/10	0201 UTC	3986 m	160 04 kn			1018.3 mb	16.0 C	14.6 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.54	16.54	33.326	24.338	357.8	0.000	5.61	100.7	1.7	0.34	0.0	0.00	0.00	0.09	0.01	0	
2	16.54	16.54	33.326	24.338	357.9	0.007	5.61	100.7	1.7	0.34	0.0	0.00	0.00	0.09	0.01	2	220
10	16.43	16.43	33.312	24.353	356.7	0.036	5.63	100.8	1.7	0.33	0.0	0.00	0.00	0.08	0.01	10	219
20 ISL	16.44 D	16.44	33.332 D	24.366	355.8	0.071	5.63	100.8	1.6	0.34	0.0	0.00	0.00	0.08	0.01	20	
25	16.45	16.45	33.342	24.372	355.4	0.089	5.63	100.8	1.6	0.34	0.0	0.00	0.00	0.08	0.01	25	218
30 ISL	16.53 D	16.53	33.398 D	24.396	353.2	0.107	5.62	100.9	1.6	0.33	0.0	0.00	0.00	0.09	0.01	30	
41	16.51	16.50	33.431	24.427	350.7	0.146	5.60	100.5	1.7	0.32	0.0	0.00	0.00	0.12	0.04	41	217
50	15.09	15.08	33.220	24.583	336.0	0.176	5.75	100.2	2.2	0.38	0.0	0.00	0.00	0.20	0.08	50	216
63	13.80	13.79	33.153	24.804	315.2	0.219	5.76	97.7	3.0	0.44	0.4	0.26	0.00	0.22	0.09	63	215
75 ISL	13.27 D	13.26	33.228 D	24.969	299.7	0.256	5.60	94.0	3.4	0.48	1.4	0.17	0.00	0.18	0.11	75	
76	13.29	13.28	33.228	24.965	300.1	0.259	5.58	93.7	3.4	0.48	1.5	0.15	0.00	0.18	0.11	76	214
88	12.76	12.75	33.205	25.053	292.1	0.294	5.51	91.5	4.1	0.56	2.9	0.04	0.00	0.16	0.11	88	213
100	11.39	11.38	33.102	25.230	275.2	0.328	5.42	87.3	6.0	0.77	6.2	0.01	0.00	0.10	0.13	100	212
112	10.89	10.88	33.160	25.365	262.6	0.361	5.19	82.8	8.5	0.96	9.5	0.01	0.00	0.07	0.12	112	211
125	10.26	10.25	33.233	25.531	246.9	0.394	4.96	78.0	11.2	1.14	12.6	0.00	0.00	0.04	0.07	126	210
141	10.05	10.03	33.377	25.679	233.2	0.432	4.72	74.0	15.4	1.38	16.5	0.00	0.00	0.03	0.05	142	209
150 ISL	9.79 D	9.77	33.560 D	25.866	215.6	0.452	4.43	69.1	17.7	1.48	18.4	0.00	0.00	0.02	0.04	151	
170	9.47	9.45	33.706	26.033	200.1	0.494	3.72	57.7	22.6	1.67	21.8	0.00	0.00	0.00	0.02	171	208
200	8.99	8.97	33.915 D	26.274	177.7	0.551	3.05 D	46.9								201	207
231	8.52	8.50	33.986	26.403	165.8	0.604	2.84	43.2	32.8	1.99	27.0	0.00	0.00			232	206
250 ISL	8.21 D	8.18	34.007 D	26.467	160.0	0.635	2.61	39.4	36.3	2.11	28.6	0.00	0.00			251	
271	7.92	7.89	34.027	26.526	154.7	0.668	2.29	34.4	40.6	2.24	30.3	0.00	0.00			272	205
300 ISL	7.48 D	7.45	34.057 D	26.613	146.6	0.711	1.78	26.4	47.6	2.45	33.0	0.00	0.00			302	
320	7.23	7.20	34.084	26.670	141.4	0.740	1.45	21.4	52.4	2.58	34.8	0.00	0.00			322	204
381	6.47	6.44	34.114	26.797	129.8	0.823	1.02	14.8	63.7	2.82	37.8	0.00	0.00			383	203
400 ISL	6.30 D	6.26	34.119 D	26.823	127.4	0.847	0.91	13.2	66.8	2.88	38.5	0.00	0.00			402	
441	5.98	5.94	34.155	26.892	121.1	0.898	0.72	10.3	72.9	3.00	39.6	0.00	0.00			444	202
500 ISL	5.56 D	5.52	34.190 D	26.972	113.9	0.968	0.53	7.5	81.0	3.10	41.0	0.00	0.00			503	
518	5.47	5.43	34.199	26.990	112.3	0.988	0.47	6.7	83.5	3.13	41.4	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 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 50.7 N	123 34.9 W	16/01/10	0921 UTC	4142 m	190 10 kn			1016.4 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	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.86	16.86	33.355	24.286	362.8	0.000	5.58	100.8	1.7	0.32	0.0	0.00	0.00	0.09	0.03	0	
3	16.86	16.86	33.355	24.286	362.9	0.011	5.58	100.8	1.7	0.32	0.0	0.00	0.00	0.09	0.03	3	220
10	16.87	16.87	33.356	24.285	363.2	0.036	5.59	101.0	1.8	0.32	0.0	0.00	0.00	0.09	0.04	10	219
20 ISL	16.86 D	16.86	33.354 D	24.286	363.5	0.073	5.59	100.9	1.7	0.32	0.0	0.00	0.00	0.09	0.03	20	
24	16.86	16.86	33.359	24.290	363.2	0.087	5.59	100.9	1.7	0.32	0.0	0.00	0.00	0.09	0.03	24	218
30 ISL	16.71 D	16.71	33.324 D	24.298	362.6	0.109	5.59	100.6	1.7	0.32	0.0	0.00	0.00	0.10	0.05	30	
40	16.73	16.72	33.350	24.314	361.5	0.145	5.59	100.7	1.7	0.32	0.0	0.00	0.00	0.14	0.08	40	217
50 ISL	16.61 D	16.60	33.373 D	24.360	357.4	0.181	5.62	101.0	1.8	0.32	0.0	0.00	0.00	0.19	0.09	50	
51	16.47	16.46	33.336	24.364	357.1	0.185	5.63	100.9	1.8	0.32	0.0	0.00	0.00	0.19	0.09	51	216
61	15.99	15.98	33.230	24.392	354.6	0.220	5.70	101.1	1.8	0.34	0.0	0.00	0.00	0.20	0.11	61	215
74	15.65	15.64	33.227	24.466	347.9	0.266	5.70	100.4	1.9	0.36	0.0	0.00	0.00	0.25	0.23	74	214
75 ISL	15.59 D	15.58	33.221 D	24.475	347.1	0.269	5.70	100.3	1.9	0.36	0.0	0.00	0.01	0.25	0.23	75	
88	15.10	15.09	33.184	24.554	339.9	0.314	5.71	99.4	2.1	0.39	0.0	0.05	0.14	0.23	0.22	88	213
100	13.88	13.87	33.119	24.762	320.2	0.354	5.76	97.8	3.0	0.47	0.7	0.36	0.00	0.13	0.15	100	212
112	12.54	12.53	33.041	24.969	300.6	0.391	5.71	94.2	4.1	0.59	2.7	0.06	0.00	0.13	0.18	112	211
125	11.52	11.50	33.118	25.220	276.8	0.428	5.38	86.9	6.4	0.80	6.7	0.01	0.00	0.06	0.08	125	210
141	10.70	10.68	33.143	25.386	261.2	0.471	5.23	83.0	8.8	0.97	9.7	0.01	0.00	0.04	0.05	142	209
150 ISL	10.17 D	10.15	33.232 D	25.546	246.0	0.494	4.96	77.9	10.9	1.10	12.0	0.01	0.00	0.03	0.04	151	
171	10.15	10.13	33.547	25.796	222.8	0.544	4.20	66.0	16.6	1.41	17.3	0.00	0.00	0.01	0.03	172	208
200 ISL	9.35 D	9.33	33.790 D	26.119	192.5	0.604	3.48	53.8	23.6	1.72	22.4	0.00	0.00			201	
201	9.35	9.33	33.796 D	26.123	192.1	0.606	3.46 D	53.5								202	207
232	8.80	8.78	33.936	26.321	173.8	0.662	2.91	44.5	30.9	1.98	26.4	0.00	0.00			233	206
250 ISL	8.37 D	8.34	33.992 D	26.431	163.5	0.693	2.66	40.3	34.8	2.09	28.1	0.00	0.00			251	
269	8.08	8.05	34.016	26.494	157.8	0.723	2.40	36.1	38.9	2.20	29.7	0.00	0.00			270	205
300 ISL	7.61 D	7.58	34.060 D	26.597	148.2	0.771	1.86	27.7	46.5	2.43	32.6	0.00	0.00			302	
320	7.34	7.31	34.079	26.651	143.3	0.800	1.54	22.8	51.1	2.57	34.3	0.00	0.00			322	204
382	6.77	6.73	34.129	26.769	132.7	0.885	1.02	14.9	61.0	2.82	37.2	0.00	0.00			384	203
400 ISL	6.63 D	6.59	34.142 D	26.798	130.1	0.909	0.92	13.4	63.7	2.87	37.8	0.00	0.00			402	
440	6.27	6.23	34.161	26.860	124.4	0.960	0.76	11.0	69.7	2.97	39.0	0.00	0.00			443	202
500 ISL	5.81 D	5.77	34.201 D	26.951	116.3	1.032	0.55	7.9	78.7	3.09	40.5	0.00	0.00			503	
515	5.67	5.63	34.205	26.971	114.4	1.049	0.50	7.1	81.0	3.12	40.9	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 1001 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 57.2 N	117 16.9 W	13/01/10	0440 UTC	24 m	010 01 kn			1018.7 mb	14.0 C	13.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.69	15.69	33.453	24.628	330.2	0.000	5.83	102.9	2.1	0.33	0.0	0.00	0.00	0.89	0.34	0	
2	15.69	15.69	33.453	24.628	330.2	0.007	5.83	102.9	2.1	0.33	0.0	0.00	0.00	0.89	0.34	2	204
5	15.57	15.57	33.446	24.650	328.3	0.016	5.84	102.9	2.3	0.33	0.0	0.00	0.05	0.77	0.32	5	203
10	15.38	15.38	33.434	24.683	325.3	0.033	5.90	103.5	2.6	0.33	0.0	0.00	0.00	0.56	0.17	10	202
15	15.32	15.32	33.423	24.688	325.0	0.049	5.94	104.1	2.6	0.33	0.0	0.00	0.00	0.43	0.13	15	201

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 3.0 N	122 56.7 W	30/01/10	1648 UTC	10 m	1225 - 1806 PST	1225 PST	1803 PST	276.0 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	13.55	32.925	24.677	6.14	103.5	3.6	0.41	0.5	0.03	1.03	0.23	74. A	3.8	2.9	3.4	0.08
8	13.55	32.924	24.676	6.13	103.3	3.6	0.41	0.5	0.03	1.00	0.25	29.	14.7	15.2	14.9	0.09
16	13.54	32.925	24.679	6.13	103.3	3.6	0.40	0.5	0.03	1.06	0.26	8.6	10.8	11.0	10.9	0.08
25	13.53	32.941	24.694	6.13	103.3	3.5	0.40	0.5	0.03	1.06	0.27	2.2	5.3	4.7	5.0	0.07
32	13.48	33.004	24.753	6.09	102.5	3.8	0.43	0.9	0.06	0.86	0.28	0.74	2.0	1.9	1.9	0.05
40	13.33	33.055	24.823	5.97	100.2	4.0	0.49	1.6	0.13	0.56	0.27					
47	13.15	33.052	24.856	5.86	98.0	4.2	0.54	2.3	0.19	0.31	0.20	0.07	0.13	0.16	0.15	0.02

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.1 N	121 50.8 W	28/01/10	2005 UTC	14 m	1307 - 1805 PST	1220 PST	1803 PST	266.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.83	33.064	24.727	5.99	101.6	3.4	0.46	0.9	0.07	0.73	0.21	80. A	7.0	6.8	6.9	0.07
11	13.74	33.062	24.744	6.01	101.8	3.3	0.45	0.8	0.07	0.77	0.22	30.	9.1	9.2	9.2	0.10
24	13.74	33.102	24.776	5.98	101.3	3.5	0.46	1.0	0.08	0.73	0.26	7.2	6.2	6.6	6.4	0.08
35	13.70	33.117	24.796	5.91	100.0	3.5	0.47	1.1	0.10	0.55	0.21	2.2	2.5	2.0	2.2	0.03
45	13.64	33.116	24.807	5.86	99.0	3.5	0.49	1.4	0.11	0.41	0.20	0.72	1.3	1.2	1.3	0.02
55	13.61	33.120	24.817	5.88	99.3	3.7	0.50	1.5	0.13	0.39	0.19					
65	13.41	33.118	24.856	5.79	97.4	3.7	0.53	2.1	0.17	0.26	0.15	0.08	0.07	0.10	0.09	0.01

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 48.8 N	123 54.5 W	29/01/10	1736 UTC	20 m	1225 - 1815 PST	1229 PST	1812 PST	205.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.84	32.988	24.456	5.84	101.1	2.0	0.35	0.0	0.00	0.32	0.19	86. A	2.4	2.9	2.7	0.07
8	14.83	32.988	24.459	5.84	101.1	2.3	0.34	0.0	0.00	0.37	0.13					
16	14.82	32.990	24.463	5.85	101.2	2.3	0.34	0.0	0.00	0.40	0.13	29.	5.1	4.5	4.8	0.08
24	14.82	32.993	24.465	5.87	101.6	2.1	0.34	0.0	0.00	0.41	0.13					
33	14.82	32.994	24.466	5.84	101.0	2.2	0.33	0.0	0.00	0.41	0.13	7.9	3.6	3.3	3.5	0.08
42	14.82	32.991	24.464	5.84	101.0	2.2	0.34	0.0	0.00	0.41	0.13					
51	14.81	32.992	24.468	5.84	101.0	2.0	0.34	0.0	0.00	0.41	0.14	2.0	1.7	1.6	1.7	0.05
57	14.62	32.961	24.484	5.80	99.9	2.3	0.37	0.1	0.02	0.43	0.19					
64	14.54	32.953	24.495	5.80	99.7	2.4	0.36	0.2	0.03	0.34	0.18	0.74	0.85	0.86	0.85	0.02
79	14.08	32.953	24.592	5.79	98.6	2.6	0.42	0.9	0.11	0.17	0.11					
94	13.03	32.954	24.805	5.82	97.0	3.7	0.52	2.2	0.10	0.12	0.10	0.07	0.06	0.08	0.07	0.01

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 13.7 N	119 25.0 W	27/01/10	1624 UTC	5 m	1213 - 1755 PST	1214 PST	1753 PST	170.5 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	14.68	33.306	24.736	5.65	97.7	3.6	0.50	1.0	0.30	0.85	0.42	54. A	4.8	3.2	4.0	0.05
4	14.68	33.310	24.739	5.66	97.8	3.6	0.52	1.0	0.30	0.91	0.38	29.	19.1	20.3	19.7	0.06
8	14.68	33.305	24.735	5.65	97.7	3.7	0.50	1.0	0.30	0.84	0.41	8.6	13.3	13.2	13.3	0.06
13	14.68	33.313	24.742	5.64	97.5	3.7	0.50	1.0	0.31	0.84	0.44	1.8	5.5	4.4	5.0	0.05
16	14.68	33.305	24.735	5.67	98.0	3.6	0.52	1.0	0.31	0.84	0.39	0.74	3.7	3.5	3.6	0.04
23	14.68	33.305	24.736	5.63	97.3	3.7	0.51	1.0	0.31	0.82	0.39	0.09	0.41	0.46	0.43	0.06

A) INCUBATION LIGHT INTENSITIES WERE 92, 30, 08, 2.1, 0.75, 0.08 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 34.9 N	120 45.9 W	26/01/10	2022 UTC	13 m	1217 - 1755 PST	1216 PST	1753 PST	192.1 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
3	14.06	33.179	24.768	5.95	101.5	3.2	0.44	0.9	0.08	0.73	0.21	70. A	12.4	10.1	11.3	0.06
10	13.97	33.210	24.811	5.91	100.6	3.3	0.45	1.0	0.10	0.76	0.24	31.	7.9	7.2	7.6	0.06
22	13.76	33.192	24.841	5.92	100.4	3.4	0.46	1.1	0.12	0.72	0.28	7.4	3.0	3.3	3.1	0.03
33	13.75	33.189	24.841	5.89	99.8	3.3	0.47	1.2	0.13	0.59	0.22	2.0	0.79	0.73	0.76	0.03
41	13.76	33.194	24.843	5.86	99.3	3.3	0.46	1.3	0.14	0.39	0.19	0.79	0.25	0.26	0.25	0.02
50	13.64	33.194	24.868	5.69	96.2	3.5	0.49	1.7	0.15	0.30	0.15					
60	13.12	33.176	24.959	5.69	95.2	4.3	0.61	3.5	0.16	0.16	0.11	0.08	0.01	0.02	0.02	0.01

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 14.8 N	123 29.0 W	25/01/10	1906 UTC	23 m	1228 - 1806 PST	1226 PST	1804 PST	142.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.28	33.055	24.413	5.76	100.6	2.2	0.33	0.0	0.00	0.20	0.07	88. A	1.3	1.1	1.2	0.09
10	15.28	33.051	24.410	5.77	100.8	2.1	0.33	0.0	0.00	0.20	0.08					
18	15.28	33.054	24.412	5.77	100.8	2.0	0.32	0.0	0.00	0.21	0.07	30.	2.8	2.6	2.7	0.09
28	15.27	33.051	24.413	5.77	100.8	2.2	0.33	0.0	0.00	0.20	0.08					
39	15.26	33.049	24.414	5.75	100.4	2.1	0.33	0.0	0.00	0.24	0.10	7.4	2.1	2.0	2.0	0.08
48	15.27	33.053	24.415	5.76	100.6	2.0	0.32	0.0	0.00	0.30	0.13					
58	15.30	33.067	24.419	5.73	100.1	2.1	0.32	0.0	0.00	0.29	0.13	2.1	1.6	1.5	1.6	0.03
74	15.20	33.164	24.516	5.72	99.8	2.5	0.36	0.2	0.11	0.17	0.10	0.72	0.45	0.51	0.48	0.02
90	13.81	33.115	24.773	5.83	98.9	3.2	0.44	1.0	0.22	0.13	0.14					
107	12.50	33.222	25.117	5.63	93.0	4.4	0.54	3.1	0.04	0.07	0.09	0.08	0.03	0.03	0.03	0.04

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 28.7 N	119 18.0 W	20/01/10	1844 UTC	15 m	1210 - 1740 PST	1208 PST	1735 PST	132.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	14.96	33.368	24.724	5.75	100.0	3.3	0.39	0.5	0.04	0.50	0.16	74. A	9.4	8.8	9.1	0.05
12	14.97	33.368	24.722	5.75	100.0	3.3	0.39	0.4	0.04	0.50	0.17	29.	3.8	4.2	4.0	0.05
20	14.95	33.367	24.725	5.76	100.1	3.1	0.40	0.5	0.04	0.51	0.16					
25	14.95	33.367	24.726	5.74	99.8	3.3	0.40	0.5	0.04	0.51	0.18	7.7	1.2	1.2	1.2	0.05
32	14.90	33.364	24.734	5.72	99.3	3.3	0.41	0.6	0.05	0.47	0.15					
38	14.64	33.351	24.780	5.63	97.3	3.5	0.46	1.4	0.06	0.41	0.16	2.0	0.26	0.24	0.25	0.04
50	13.80	33.312	24.926	5.34	90.7	5.3	0.65	4.0	0.07	0.24	0.21	0.60	0.09	0.10	0.09	0.04
62	12.68	33.297	25.139	4.94	81.9	8.0	0.90	8.0	0.04	0.19	0.18					
70	12.36	33.316	25.215	4.79	78.9	8.8	0.98	9.0	0.03	0.14	0.16	0.08	0.01	0.00	0.01	0.03

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.3 N	120 0.8 W	23/01/10	1707 UTC	22 m	1217 - 1800 PST	1215 PST	1754 PST	535.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.44	33.360	24.828	5.67	97.6	3.8	0.48	1.4	0.07	0.65	0.34	87. A	3.6	1.6	2.6	0.05
9	14.44	33.361	24.829	5.68	97.7	3.8	0.47	1.4	0.07	0.65	0.31					
17	14.44	33.360	24.829	5.70	98.1	3.7	0.47	1.4	0.07	0.69	0.35	31.	11.2	11.7	11.5	0.07
27	14.44	33.360	24.829	5.67	97.6	3.7	0.47	1.4	0.07	0.66	0.31					
36	14.44	33.358	24.828	5.67	97.6	3.7	0.47	1.4	0.07	0.63	0.33	8.1	10.6	10.5	10.5	0.06
46	14.44	33.362	24.831	5.67	97.6	3.7	0.47	1.4	0.07	0.64	0.32					
56	14.44	33.360	24.830	5.67	97.6	3.7	0.47	1.4	0.07	0.64	0.34	2.0	5.3	4.7	5.0	0.05
63	13.94	33.345	24.923	5.47	93.1	4.9	0.60	3.4	0.08	0.36	0.23					
71	13.53	33.339	25.003	5.28	89.1	5.9	0.69	4.9	0.08	0.28	0.22	0.71	1.1	1.0	1.0	0.04
86	11.38	33.333	25.412	4.67	75.3	10.7	1.13	12.3	0.02	0.08	0.10					
101	10.96	33.555	25.660	3.76	60.2	16.6	1.49	17.6	0.02	0.02	0.05	0.09	0.04	0.03	0.03	0.02

A) INCUBATION LIGHT INTENSITIES WERE 92, 30, 08, 2.1, 0.75, 0.08 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.1 N	122 23.5 W	24/01/10	1727 UTC	32 m	1232 - 1816 PST	1222 PST	1808 PST	251.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.47	33.173	24.462	5.71	100.2	2.0	0.34	0.0	0.00	0.25	0.12	91. A	0.84	0.53	0.69	0.04
14	15.46	33.171	24.463	5.72	100.4	1.9	0.34	0.0	0.00	0.25	0.12					
26	15.46	33.170	24.463	5.70	100.0	2.0	0.34	0.0	0.00	0.26	0.12	29.	3.9	3.8	3.9	0.05
35	15.46	33.173	24.465	5.71	100.2	2.0	0.33	0.0	0.00	0.26	0.12					
42	15.46	33.175	24.467	5.71	100.2	2.2	0.30	0.0	0.00	0.25	0.13					
52	15.46	33.173	24.466	5.71	100.2	2.1	0.32	0.0	0.00	0.26	0.13	8.3	3.4	3.6	3.5	0.04
63	15.46	33.172	24.465	5.70	100.0	2.0	0.33	0.0	0.00	0.25	0.13					
71	15.45	33.171	24.467	5.72	100.3	2.2	0.36	0.0	0.01	0.24	0.12					
81	15.29	33.176	24.506	5.72	100.0	2.3	0.38	0.1	0.07	0.19	0.11	2.1	1.6	1.3	1.5	0.03
93	13.93	33.205	24.818	5.81	98.8	3.2	0.43	0.6	0.30	0.12	0.14					
103	13.29	33.223	24.962	5.73	96.2	3.5	0.46	1.4	0.10	0.09	0.11	0.71	0.27	0.30	0.28	0.02
119	11.39	33.082	25.215	5.55	89.4	6.2	0.76	5.9	0.01	0.04	0.05					
135	10.61	33.072	25.346	5.36	84.9	8.4	0.95	9.2	0.00	0.03	0.04					
150	9.68	33.206	25.607	4.86	75.5	14.8	1.33	15.5	0.00	0.01	0.02	0.07	0.03	0.01	0.02	0.05

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.4 N	117 46.1 W	19/01/10	1703 UTC	12 m	1208 - 1736 PST	1202 PST	1739 PST	289.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.37	33.380	24.643	5.78	101.4	3.1	0.40	0.3	0.08	0.77	0.32	77. A	14.6	11.5	13.1	0.07
5	15.37	33.382	24.645	5.76	101.0	2.9	0.39	0.2	0.07	0.77	0.34					
9	15.38	33.382	24.643	5.77	101.2	2.9	0.38	0.2	0.07	0.81	0.30	32.	13.9	12.9	13.4	0.10
21	15.39	33.384	24.642	5.77	101.2	3.0	0.38	0.2	0.07	0.75	0.34	6.8	5.6	5.9	5.7	0.07
30	15.39	33.384	24.643	5.75	100.9	2.8	0.38	0.2	0.07	0.73	0.34	2.2	2.3	2.0	2.2	0.08
39	15.37	33.386	24.649	5.76	101.0	2.8	0.37	0.2	0.08	0.70	0.32	0.68	0.77	0.83	0.80	0.07
47	15.35	33.387	24.655	5.75	100.8	3.1	0.38	0.3	0.09	0.62	0.32					
56	15.03	33.368	24.710	5.61	97.7	3.8	0.48	0.9	0.15	0.48	0.30	0.08	0.03	0.05	0.04	0.07

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 39.6 N	119 28.3 W	18/01/10	1736 UTC	13 m	1205 - 1745 PST	1208 PST	1742 PST	291.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.65	33.387	24.805	5.98	103.4	2.8	0.36	0.1	0.01	0.48	0.15	79. A	18.8	16.3	17.5	0.08
9	14.65	33.382	24.801	5.97	103.2	2.6	0.35	0.1	0.01	0.47	0.15	35.	11.1	10.5	10.8	0.06
21	14.08	33.364	24.908	5.77	98.6	3.7	0.47	1.5	0.13	0.72	0.32	8.4	6.1	5.8	5.9	0.04
33	13.13	33.347	25.088	5.31	88.9	6.4	0.75	5.6	0.23	0.52	0.34	2.0	1.7	1.4	1.6	0.05
40	12.78	33.343	25.154	5.11	84.9	7.4	0.83	7.2	0.19	0.41	0.28	0.89	0.49	0.53	0.51	0.05
50	11.98	33.368	25.327	4.73	77.3	10.2	1.06	10.9	0.10	0.25	0.18					
60	11.08	33.460	25.564	4.19	67.2	14.6	1.33	15.5	0.04	0.10	0.11	0.08	0.02	0.02	0.02	0.03

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 25.1 N	121 58.8 W	17/01/10	1739 UTC	18 m	1218 - 1801 PST	1215 PST	1805 PST	196.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.06	33.136	24.523	5.91	102.8	2.6	0.37	0.0	0.00	0.34	0.04	84. A	3.6	3.1	3.3	0.08
14	14.99	33.129	24.533	5.92	102.9	2.6	0.36	0.0	0.00	0.32	0.07	30.	4.2	4.3	4.2	0.07
31	14.37	33.094	24.639	6.03	103.4	2.9	0.38	0.0	0.01	0.66	0.23	7.1	6.1	2.2	4.1	0.06
45	13.71	33.080	24.765	5.90	99.8	3.4	0.48	1.0	0.24	0.50	0.23	2.2	2.5	2.4	2.5	0.03
57	13.03	33.096	24.914	5.79	96.6	4.3	0.61	2.8	0.48	0.27	0.15	0.77	0.64	0.66	0.65	0.04
85	11.16	33.113	25.280	5.47	87.7	7.8	0.92	8.4	0.01	0.07	0.07	0.07	0.02	0.03	0.03	0.02

A) INCUBATION LIGHT INTENSITIES WERE 92, 30, 08, 2.1, 0.75, 0.08 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 24.8 N	123 59.8 W	16/01/10	1725 UTC	34 m	1225 - 1805 PST	1223 PST	1758 PST	184.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.43	33.336	24.371	5.65	101.2	2.0	0.34	0.0	0.00	0.13	0.04	91. A	2.1	1.9	2.0	0.06
13	16.40	33.336	24.378	5.65	101.1	1.9	0.33	0.0	0.00	0.13	0.04					
26	16.40	33.336	24.379	5.67	101.5	2.0	0.34	0.0	0.00	0.13	0.04	31.	2.4	2.6	2.5	0.05
38	16.40	33.337	24.380	5.67	101.5	2.0	0.34	0.0	0.00	0.14	0.04					
48	16.39	33.337	24.383	5.66	101.2	1.8	0.34	0.0	0.00	0.16	0.05					
57	16.19			5.65		1.9	0.34	0.0	0.00	0.13	0.05	7.6	1.4	1.4	1.4	0.06
66	13.94	33.115	24.746	5.82	99.0	3.7	0.51	1.4	0.10	0.27	0.17					
76	11.97	33.040	25.075	5.70	93.0	5.8	0.73	5.0	0.12	0.34	0.27					
86	11.28	33.073	25.227	5.46	87.8	7.9	0.92	8.5	0.04	0.26	0.28	2.1	1.4	1.3	1.4	0.05
99	10.70	33.216	25.442	5.01	79.6	11.6	1.18	13.0	0.01	0.13	0.15					
108	10.45	33.279	25.534	4.84	76.5	13.2	1.27	14.6	0.01	0.10	0.11	0.76	0.29	0.28	0.28	0.04
126	10.09	33.413	25.701	4.43	69.5	16.6	1.44	17.6	0.00	0.05	0.06					
143	9.62	33.559	25.893	4.15	64.5	19.4	1.53	19.5	0.00	0.01	0.02					
158	9.49	33.698	26.023	3.71	57.6	22.7	1.67	21.8	0.00	0.00	0.02	0.08	0.00	0.01	0.00	0.05

RV NEW HORIZON — CALCOFI CRUISE 1001 — 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 32.2 W	13/01/10	1624 UTC	24 m	1159 - 1732 PST	1159 PST	1732 PST	219.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.93	33.471	24.589	5.72	101.5	2.0	0.33	0.0	0.00	0.23	0.06	88. A	0.73	1.1	0.90	0.14
10	15.93	33.476	24.593	5.79	102.7	1.9	0.32	0.0	0.00	0.22	0.07					
19	15.93	33.467	24.586	5.75	102.0	1.9	0.32	0.0	0.00	0.24	0.07	30.	3.7	3.5	3.6	0.15
29	15.85	33.460	24.599	5.70	101.0	1.9	0.32	0.0	0.00	0.34	0.14					
39	15.77	33.462	24.619	5.68	100.4	2.1	0.33	0.0	0.00	0.44	0.28	8.3	5.2	5.4	5.3	0.13
51	15.41	33.430	24.675	5.66	99.4	2.5	0.35	0.0	0.05	0.47	0.31					
60	14.50	33.325	24.791	5.47	94.2	3.3	0.50	1.2	0.09	0.31	0.25	2.2	1.4	1.4	1.4	0.11
76	12.45	33.298	25.184	4.79	79.0	8.5	0.95	7.9	0.00	0.10	0.14	0.77	0.31	0.34	0.33	0.08
89	12.32	33.538	25.396	3.45	56.9	16.3	1.44	14.0	0.00	0.04	0.07					
100	12.23	33.574	25.441	3.25	53.5	17.7	1.52	15.0	0.00	0.03	0.06					
112	11.82	33.558	25.506	3.49	56.9	16.4	1.48	15.3	0.00	0.02	0.06	0.08	0.00	0.00	0.00	0.10

RV NEW HORIZON — CALCOFI CRUISE 1001 — STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 50.5 N	119 35.0 W	14/01/10	1739 UTC	15 m	1210 - 1750 PST	1209 PST	1745 PST	248.0 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	15.20	33.432	24.721	5.84	102.1	2.5	0.34	0.0	0.00	0.32	0.12	81. A	1.5	1.1	1.3	0.09
12	15.19	33.424	24.717	5.84	102.1	2.3	0.34	0.0	0.00	0.33	0.12	29.	6.5	6.3	6.4	0.09
18	15.18	33.425	24.720	5.82	101.7	2.5	0.33	0.0	0.00	0.34	0.13					
25	15.16	33.422	24.722	5.85	102.2	2.5	0.33	0.0	0.00	0.35	0.12	7.7	5.5	5.3	5.4	0.09
32	15.14	33.422	24.727	5.83	101.8	2.5	0.33	0.0	0.00	0.35	0.13					
39	15.02	33.411	24.745	5.84	101.7	2.3	0.33	0.0	0.00	0.42	0.17	1.8	3.4	3.1	3.3	0.06
50	14.38	33.366	24.847	5.82	100.0	3.1	0.39	0.2	0.10	0.49	0.29	0.60	3.1	3.0	3.1	0.05
58	14.12	33.347	24.887	5.64	96.4	3.6	0.47	1.3	0.27	0.32	0.25					
71	13.26	33.318	25.041	5.34	89.6	5.5	0.68	4.7	0.11	0.17	0.15	0.07	0.13	0.17	0.15	0.06

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LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 30.8 N	122 15.6 W	15/01/10	1953 UTC	35 m	1305 - 1805 PST	1219 PST	1800 PST	158.1 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	16.40	33.389	24.418	5.63	100.8	1.8	0.34	0.0	0.00	0.10	0.04	92. A	1.3	1.5	1.4	0.07
15	16.30	33.391	24.443	5.64	100.8	1.9	0.34	0.0	0.00	0.10	0.03					
28	16.29	33.389	24.445	5.64	100.7	1.8	0.34	0.0	0.00	0.11	0.04	29.	1.5	1.5	1.5	0.09
38	15.91	33.322	24.480	5.69	100.8	1.8	0.35	0.0	0.00	0.16	0.07					
48	15.62	33.284	24.516	5.72	100.7	2.1	0.35	0.0	0.00	0.21	0.13					
58	15.23	33.247	24.573	5.75	100.5	2.1	0.38	0.0	0.00	0.29	0.18	7.9	2.1	2.3	2.2	0.05
68	15.11	33.247	24.600	5.71	99.5	2.2	0.38	0.0	0.02	0.28	0.15					
77	14.54	33.214	24.697	5.69	98.0	2.6	0.43	0.3	0.14	0.23	0.18					
88	13.48	33.171	24.883	5.66	95.4	3.6	0.53	1.5	0.16	0.18	0.21	2.1	0.81	0.75	0.78	0.02
101	12.86	33.143	24.985	5.56	92.5	4.4	0.61	3.2	0.06	0.16	0.15					
112	12.00	33.164	25.167	5.31	86.7	6.4	0.79	6.5	0.01	0.09	0.10	0.74	0.21	0.19	0.20	0.02
130	11.18	33.244	25.379	5.00	80.3	9.5	1.02	10.5	0.01	0.05	0.06					
146	10.66	33.369	25.569	4.59	72.9	13.1	1.26	14.4	0.00	0.03	0.05					
163	10.28	33.563	25.786	4.01	63.2	17.6	1.48	18.4	0.00	0.01	0.03	0.08	0.01	0.02	0.02	0.03

A) INCUBATION LIGHT INTENSITIES WERE 92, 30, 08, 2.1, 0.75, 0.08 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
93.3	26.7	32 57.4	117 18.4	01-12	1933	1947	290	140	83	83
93.4	26.4	32 57.2	117 16.7	01-12	2056	2058	44	14	23	23
91.7	26.4	33 14.8	117 27.8	01-12	2352	2354	51	15	20	20
93.3	28.0	32 54.8	117 23.7	01-13	0513	0535	398	210	20	20
93.3	30.0	32 50.8	117 31.9	01-13	0703	0724	404	205	111	111
93.3	35.0	32 40.8	117 52.5	01-13	1310	1330	406	211	39	39
93.3	40.0	32 30.7	118 12.8	01-13	1717	1738	428	209	56	56
93.3	45.0	32 20.8	118 33.5	01-13	2128	2150	438	213	82	82
93.3	50.0	32 10.7	118 53.7	01-14	0207	0228	433	216	37	37
93.3	55.0	32 00.8	119 14.4	01-14	0645	0707	447	213	31	31
93.3	60.0	31 50.7	119 34.3	01-14	1052	1114	449	210	18	18
93.3	70.0	31 30.6	120 14.6	01-14	1658	1720	423	219	19	19
93.3	80.0	31 10.0	120 54.4	01-15	0019	0041	429	212	93	93
93.3	90.0	30 50.8	121 35.4	01-15	0643	0704	411	210	46	46
93.3	100.0	30 30.8	122 15.5	01-15	1307	1329	436	208	37	37
93.3	110.0	30 10.9	122 55.4	01-15	1858	1919	403	211	35	35
93.3	120.0	29 50.8	123 35.0	01-16	0234	0255	415	207	41	41
90.0	120.0	30 25.1	123 59.9	01-16	0811	0834	432	203	46	46
90.0	110.0	30 45.1	123 19.8	01-16	1617	1638	411	212	44	44
90.0	100.0	31 05.0	122 39.7	01-16	2244	2308	441	211	27	27
90.0	90.0	31 25.1	121 59.4	01-17	0819	0842	440	207	82	39
90.0	80.0	31 45.0	121 19.0	01-17	1552	1613	402	210	32	32
90.0	70.0	32 05.0	120 38.3	01-17	2222	2244	411	214	58	58
90.0	60.0	32 25.0	119 57.3	01-18	0538	0600	441	199	50	50
90.0	53.0	32 39.2	119 28.9	01-18	1104	1126	443	192	27	27
90.0	45.0	32 55.0	118 55.9	01-18	1637	1659	436	217	46	46
90.0	37.0	33 11.0	118 23.1	01-18	2249	2314	466	209	41	13
90.0	35.0	33 15.0	118 15.0	01-19	0220	0241	416	212	48	31
90.0	30.0	33 25.1	117 54.3	01-19	0725	0747	450	213	38	4
90.0	28.0	33 29.1	117 46.1	01-19	1011	1017	129	53	16	16
86.8	32.5	33 53.4	118 26.8	01-19	1758	1801	51	16	20	20
86.7	33.0	33 53.2	118 30.0	01-19	1940	1945	107	38	56	56
86.7	35.0	33 49.3	118 37.6	01-19	2310	2332	425	203	78	66
86.7	40.0	33 39.5	118 58.5	01-20	0537	0558	394	211	51	51
86.7	50.0	33 19.4	119 39.6	01-23	0450	0456	137	48	59	59
86.7	55.0	33 09.4	120 00.5	01-23	0750	0813	465	206	43	43
86.7	60.0	32 59.3	120 21.1	01-23	1446	1508	482	211	46	23
86.7	70.0	32 39.5	121 02.1	01-23	2052	2114	449	212	76	45
86.7	80.0	32 19.4	121 42.8	01-24	0355	0418	515	214	29	29
86.7	90.0	31 59.4	122 23.6	01-24	1034	1058	419	210	43	43
86.7	100.0	31 39.4	123 04.3	01-24	1640	1701	434	208	21	21
86.7	110.0	31 19.3	123 44.6	01-24	2320	2342	441	211	45	45
83.3	110.0	31 54.6	124 10.2	01-25	0550	0612	470	207	85	32
83.3	100.0	32 14.7	123 29.4	01-25	1208	1231	463	213	19	19
83.3	90.0	32 34.9	122 48.5	01-25	1750	1811	410	213	93	93
83.3	80.0	32 55.0	122 07.2	01-26	0050	0113	450	194	84	62
83.3	70.0	33 14.6	121 26.5	01-26	0654	0718	481	213	100	66
83.3	60.0	33 34.8	120 45.8	01-26	1359	1419	430	205	39	39
83.3	55.0	33 44.7	120 24.7	01-26	1806	1828	418	210	60	60
83.3	51.0	33 52.7	120 08.0	01-26	2227	2236	161	83	56	56
83.3	42.0	34 10.6	119 30.5	01-27	0436	0445	162	77	62	62
83.3	39.4	34 15.5	119 19.5	01-27	0621	0623	41	10	49	49
83.3	40.6	34 13.5	119 24.7	01-27	0739	0743	56	23	36	36
81.7	43.5	34 24.2	119 48.2	01-27	1310	1314	70	36	14	14
81.8	46.9	34 16.9	120 01.4	01-27	1645	1706	389	213	62	62
80.0	50.5	34 27.7	120 29.2	01-27	2041	2045	73	31	96	96
80.0	51.0	34 26.9	120 31.5	01-27	2214	2221	144	61	21	21
80.0	55.0	34 18.8	120 48.0	01-28	0301	0322	446	213	43	43
80.0	60.0	34 09.0	121 08.9	01-28	0700	0721	417	215	50	50
80.0	70.0	33 49.1	121 50.6	01-28	1329	1350	409	207	81	61
80.0	80.0	33 29.1	122 32.0	01-28	1938	1959	434	209	51	51
80.0	90.0	33 08.8	123 13.3	01-29	0430	0451	374	206	54	54
80.0	100.0	32 49.0	123 54.3	01-29	1055	1117	453	199	18	18
76.7	100.0	33 23.3	124 19.4	01-29	1720	1742	421	213	26	26
76.7	90.0	33 43.3	123 37.7	01-30	0115	0138	456	211	53	53
76.7	80.0	34 03.1	122 56.6	01-30	0740	0803	434	212	42	42
76.7	70.0	34 23.2	122 14.8	01-30	1551	1614	461	211	41	41
76.7	60.0	34 43.3	121 32.9	01-30	2218	2240	423	212	85	85
76.7	55.0	34 53.3	121 12.0	01-31	0405	0427	443	211	99	99
76.7	51.0	35 01.3	120 55.2	01-31	0755	0818	433	200	171	106
76.7	49.0	35 05.3	120 46.5	01-31	1027	1034	155	55	2196	13
73.3	50.0	35 38.6	121 15.3	01-31	1600	1604	76	29	13	13
73.3	55.0	35 28.6	121 36.6	01-31	1935	1959	440	212	93	93
66.7	50.0	36 47.1	122 02.3	02-01	1256	1317	429	208	224	191
66.7	55.0	36 37.1	122 24.8	02-01	1751	1815	426	213	200	200
66.7	60.0	36 27.3	122 46.9	02-01	2231	2253	420	208	193	162
66.7	70.0	36 07.3	123 29.0	02-02	0653	0717	449	213	80	80
66.7	80.0	35 47.5	124 11.9	02-02	1441	1502	437	196	46	46
66.7	90.0	35 27.2	124 54.2	02-02	2217	2239	423	206	104	78
70.0	90.0	34 53.0	124 28.7	02-03	0435	0456	390	207	59	59
70.0	80.0	35 12.9	123 46.7	02-03	1039	1101	441	201	86	48
70.0	70.0	35 33.0	123 04.3	02-03	1653	1716	455	200	114	114
70.0	60.0	35 52.8	122 21.6	02-03	2244	2307	436	210	83	83
70.0	55.0	36 02.9	122 00.7	02-04	0253	0315	417	211	139	113
70.0	51.0	36 10.9	121 43.7	02-04	0615	0637	428	210	442	175
73.3	60.0	35 18.7	121 57.1	02-04	1407	1429	448	200	56	56