UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 0901
7 – 24 January 2009

CC Reference 10-01
8 September 2010

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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CONTENTS

INTRODUCTION

The data presented in this report were collected during cruise 0901* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon* of Scripps Institution of Oceanography, University of California, San Diego. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruises were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. SIO staff members from the Ocean Data Facility participate in the chemical analysis of nutrient samples at sea. CalCOFI data presented in this report and collected on previous cruises can be accessed at http://www.calcofi.org.

STANDARD PROCEDURES

CTD/Rosette Cast Data

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911, Serial number 1049) with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-*a* and phaeopigments were determined at sea on samples from the top 200 meters, bottom depth permitting.

Pressures and temperatures assigned to the water sample data were derived from the CTD signals recorded just prior to the bottle trip. Pressures have been converted to depths by the Saunders (1981) pressure-to-depth conversion technique. CTD temperatures reported with the bottle data have been rounded to the nearest hundredth of a degree Celsius.

Salinity samples were collected from all rosette bottles and analyzed at sea using a Guildline model 8410 Portasal salinometer. Salinity samples were drawn into 200 ml Kimax high-alumina borosilicate bottles that were rinsed three times with sample prior to filling. The results were compared with the CTD salinity to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with standardized seawater. Periodic checks on the conductivity of the standardized seawater were made by comparison with IAPSO Standard Seawater batch P149. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

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

* 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 41.12 µCi of ^{14}C as $NaHCO_3$ (200 µl of 205 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). A Laser Optical Plankton Counter (LOPC, Dave Checkley, SIO) was routinely used in one side of the paired bongo net frame. The purpose of the LOPC is to obtain information on the vertical distributions of size categories of zooplankton, using data from the counter, without affecting the ongoing time series of data obtained from the catches of the integrative bongo net. An unfortunate failure of the hyrdo wire resulted in the loss of the bongo/LOPC on line 80, station 60. A replacement bongo without an LOPC was used for the remainder of the cruise.

Ancillary Programs

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

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

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

3) *Underway Sea Surface xCO2*. Continuous measurements of the partial pressure of CO2 were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a membrane contactor with a gas loop that was analyzed with a Licor 6262 infrared CO2/H2O analyzer. One-minute averages were recorded and the mole fraction of CO2 (xCO2) at sea surface temperature was calculated. The system was calibrated with standard gases traceable to CMDL every two hours; at that time absolute zero and atmospheric samples were also collected. (G. Friederich, MBARI)

4) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure. (M. Ohman, SIO)

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

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

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

8) *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.

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 0901

1. CalCOFI Cruise 0901 track and station positions.

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

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

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

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

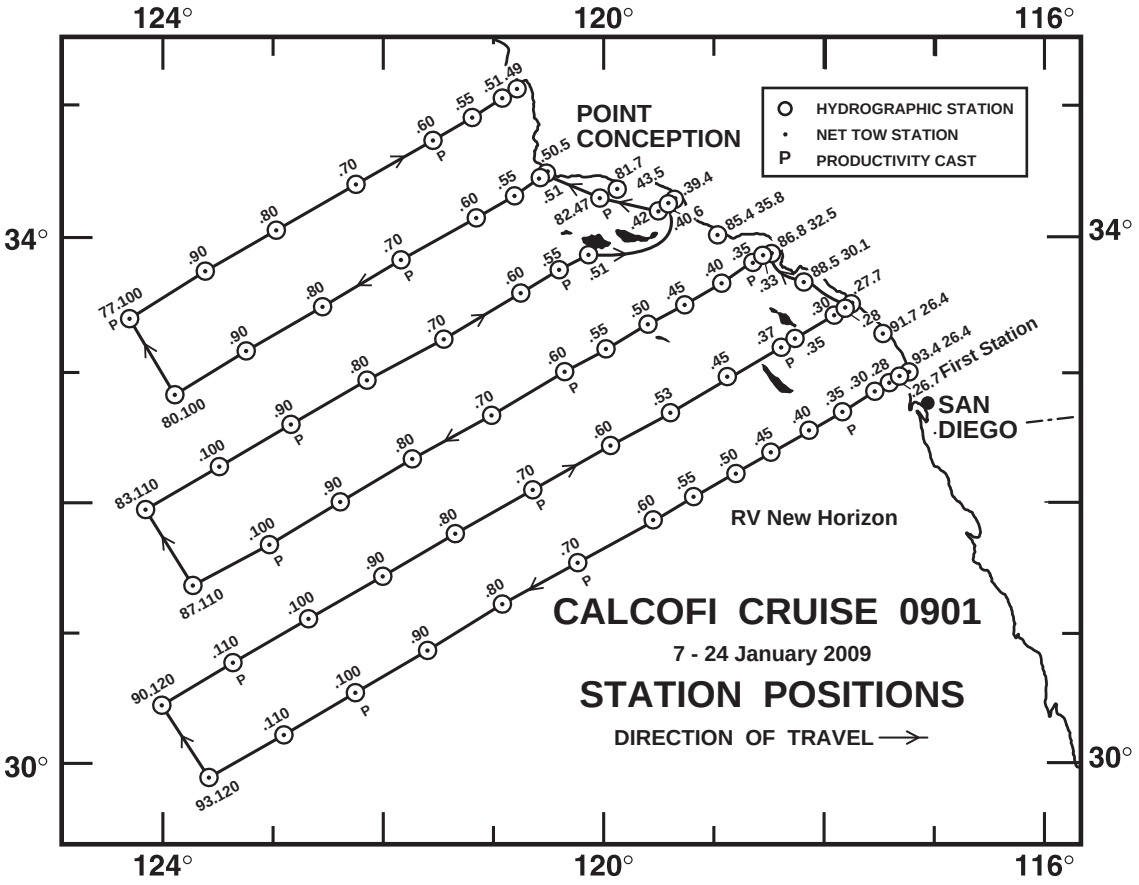

FIGURE 1

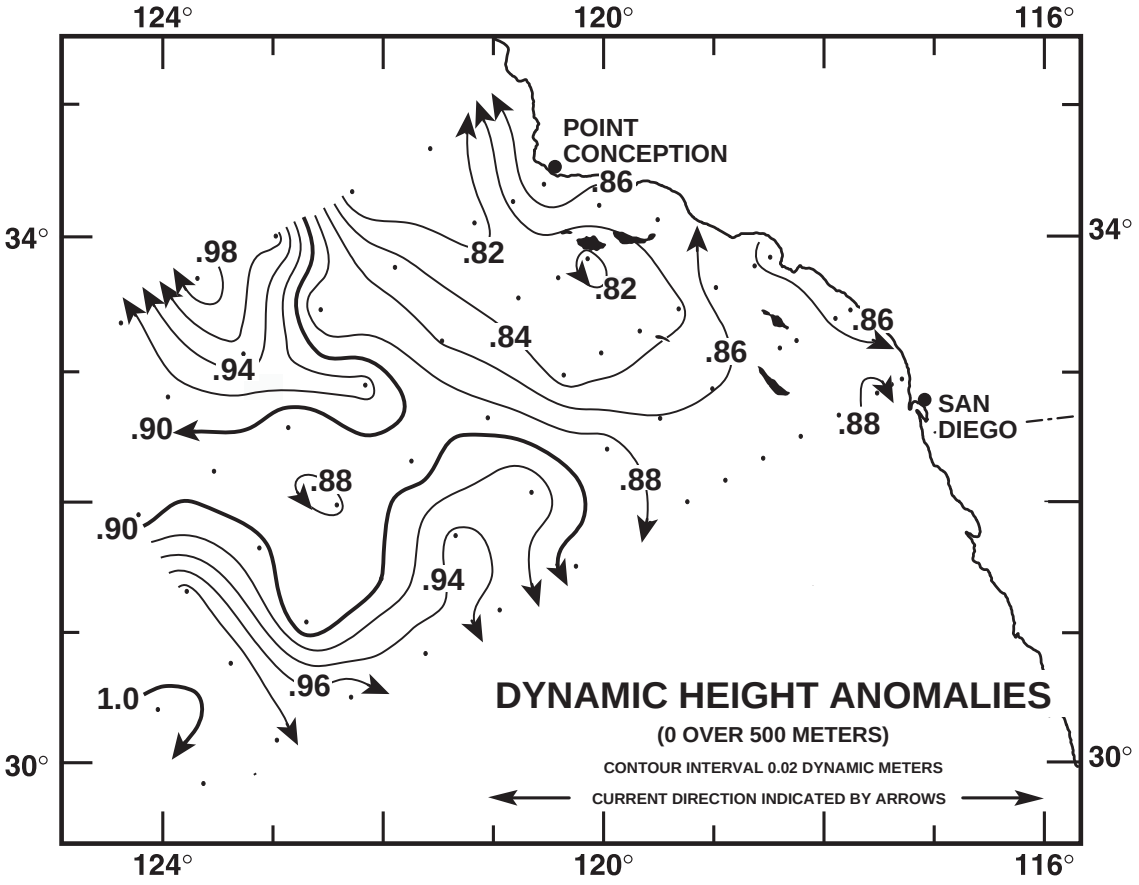

FIGURE 2

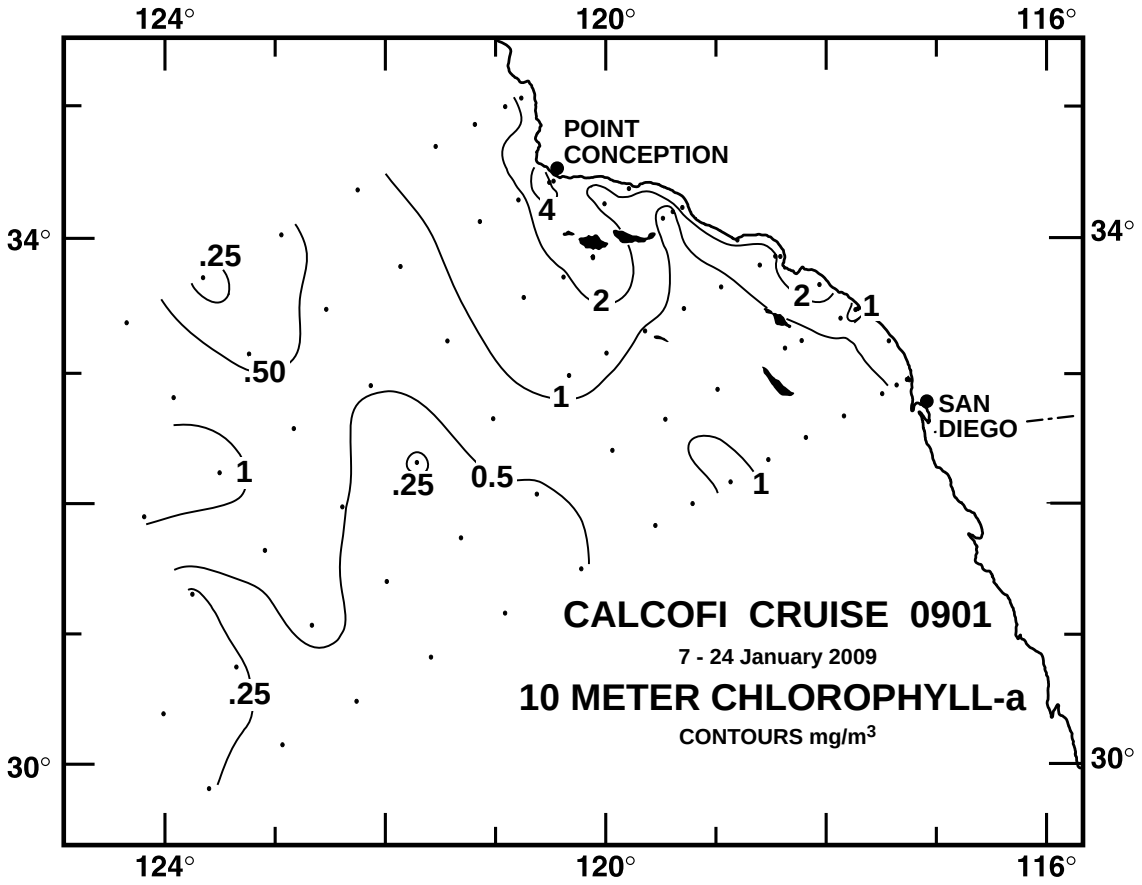

FIGURE 3A

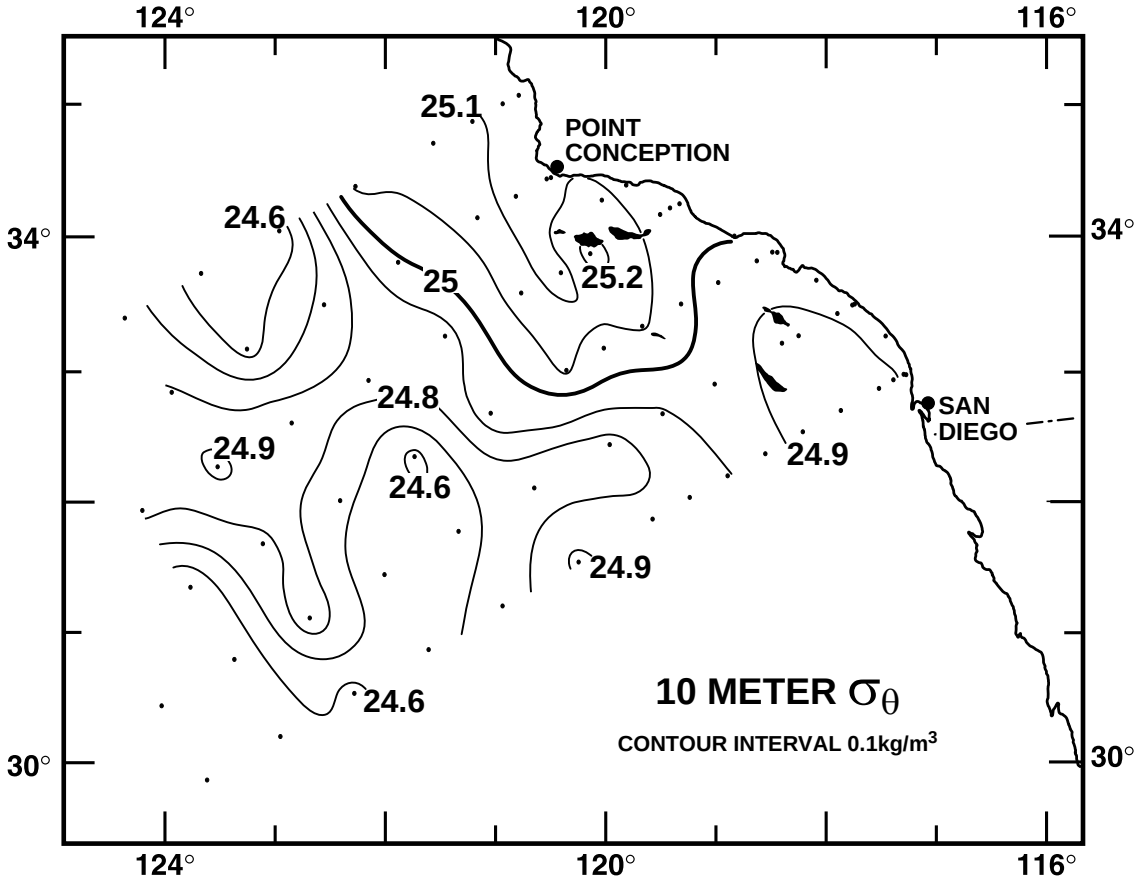

FIGURE 3B

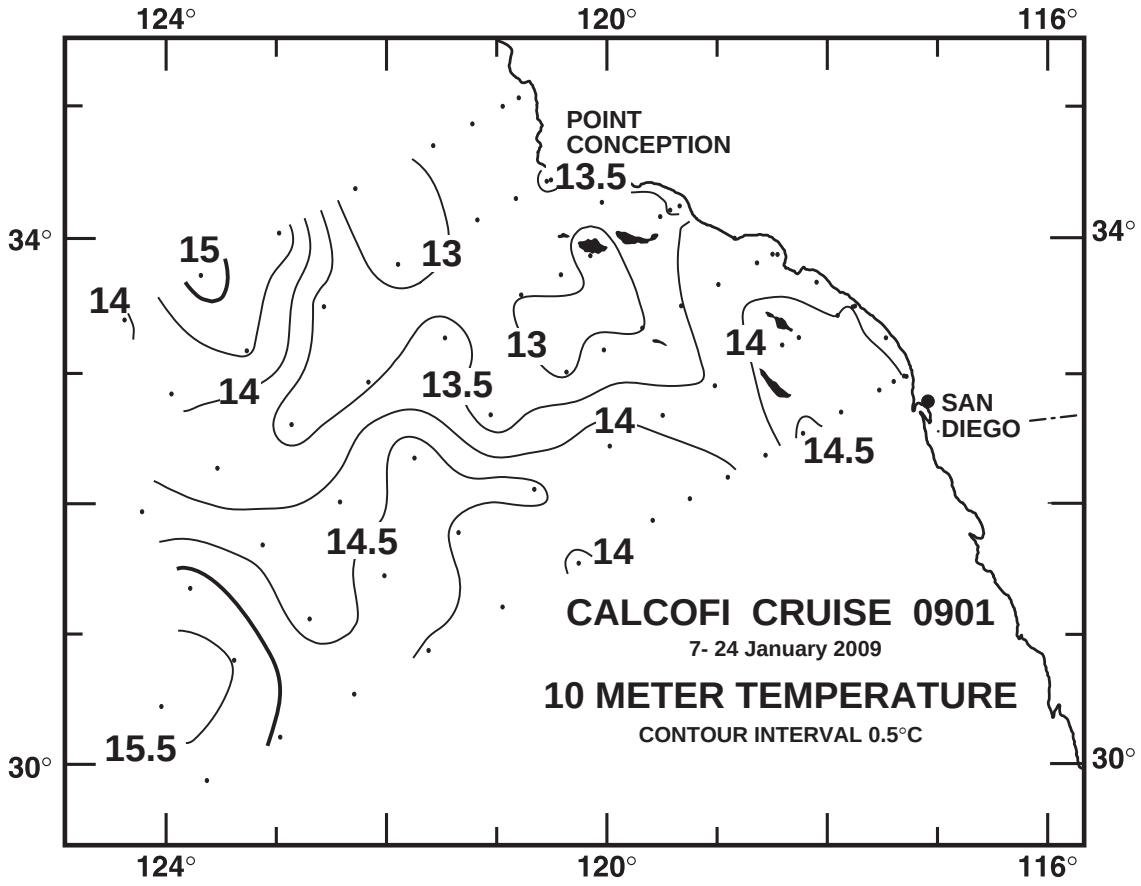

FIGURE 3C

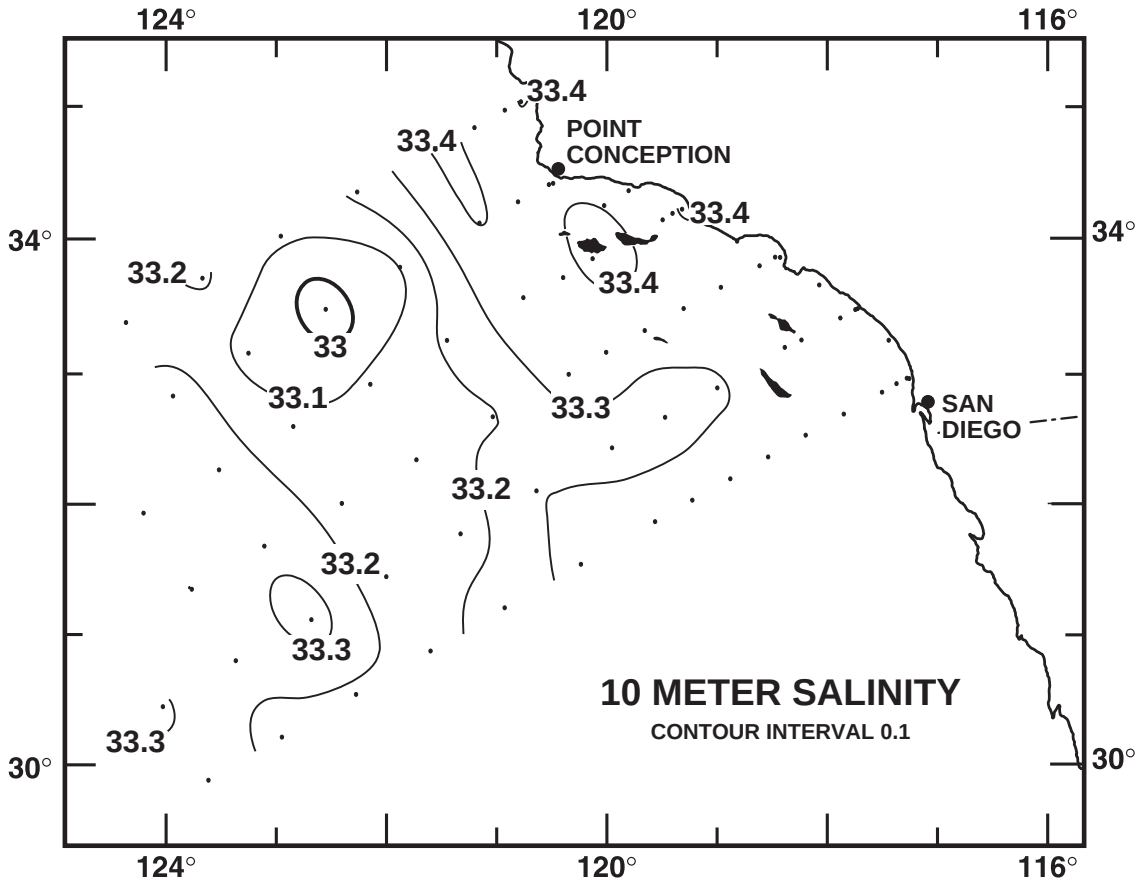

FIGURE 3D

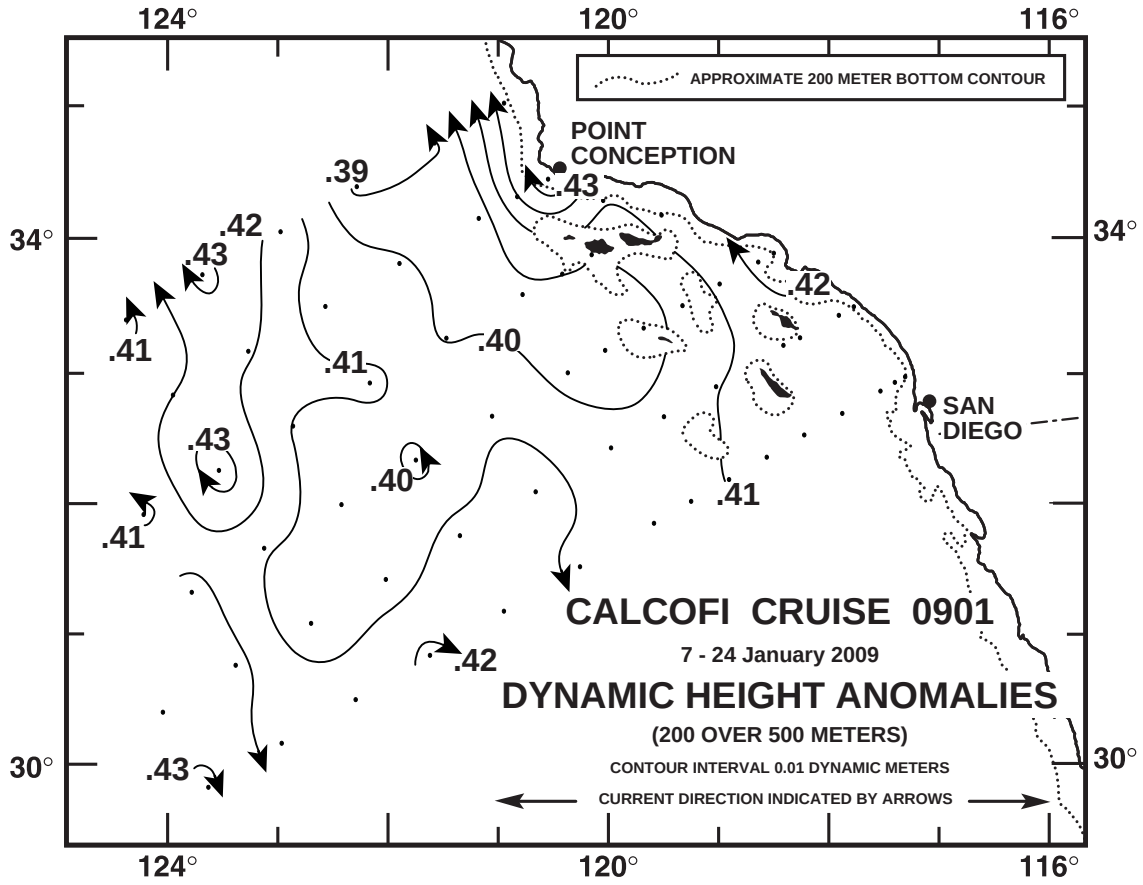

FIGURE 4A

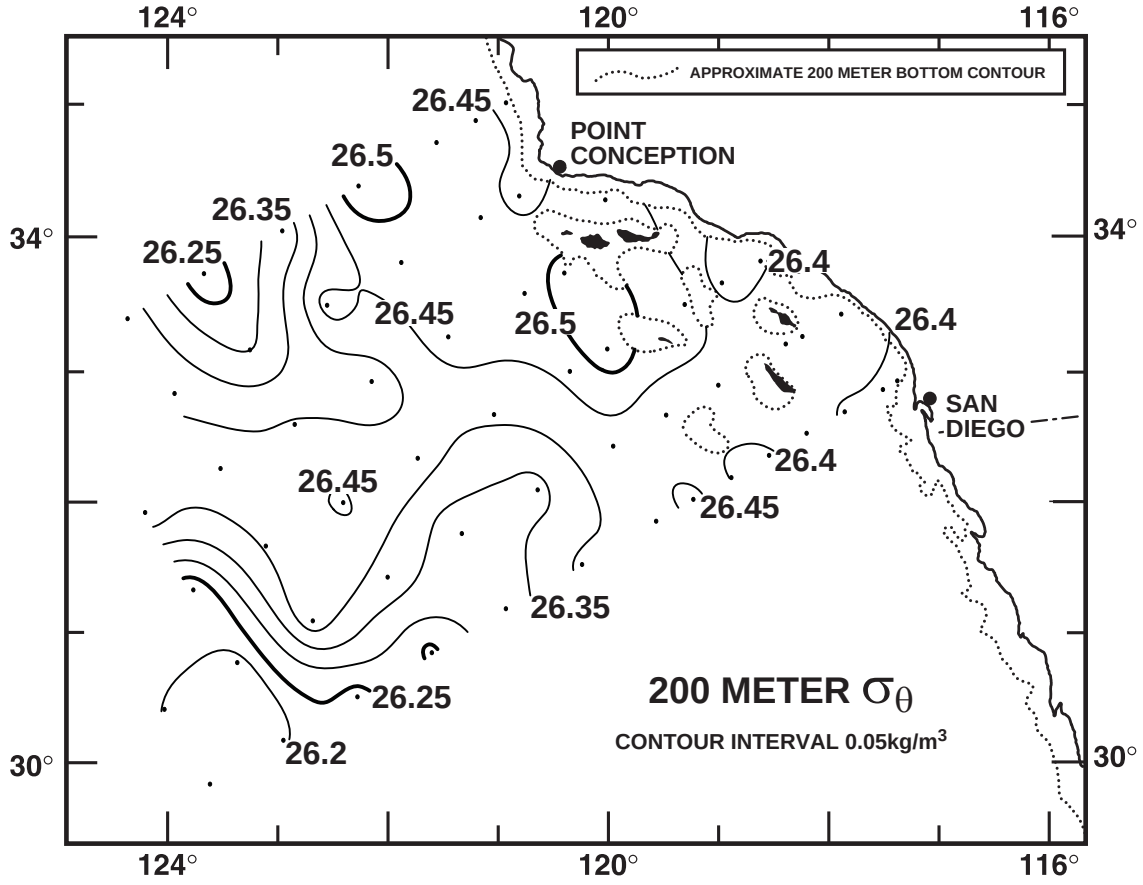

FIGURE 4B

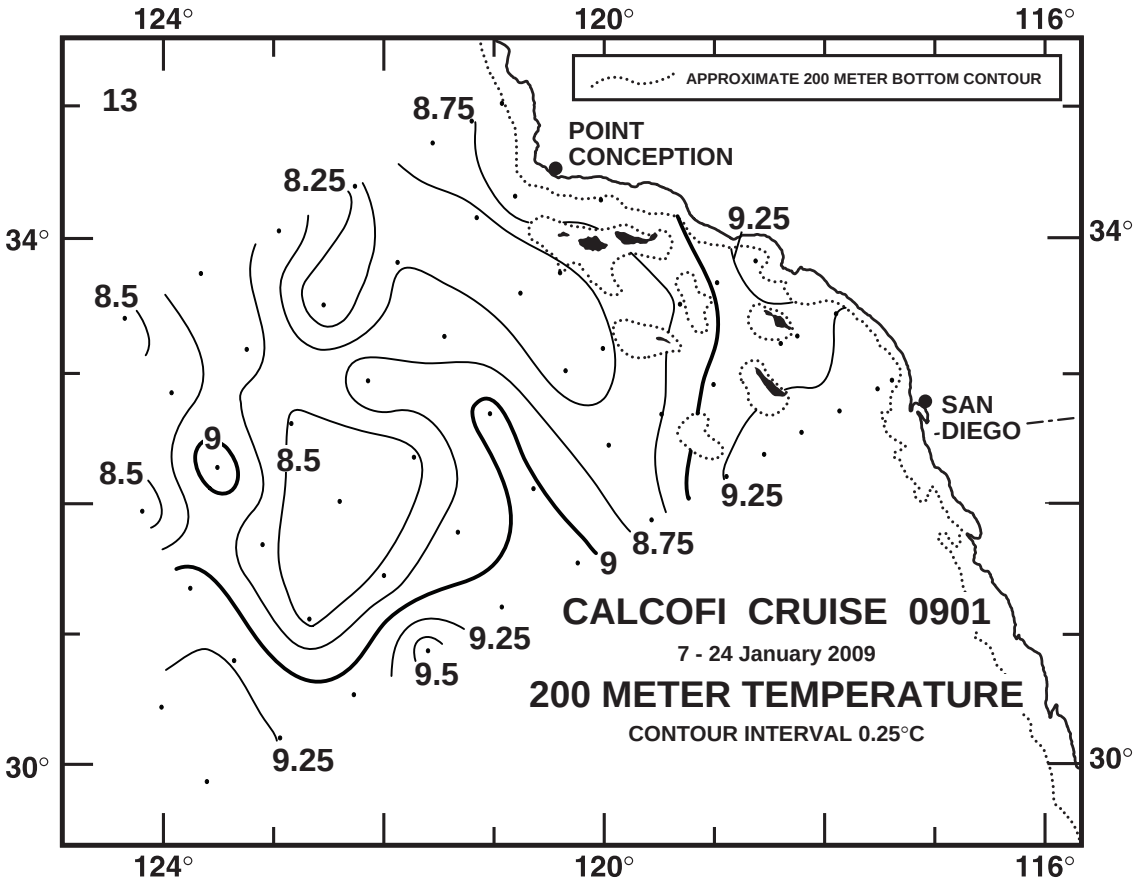

FIGURE 4C

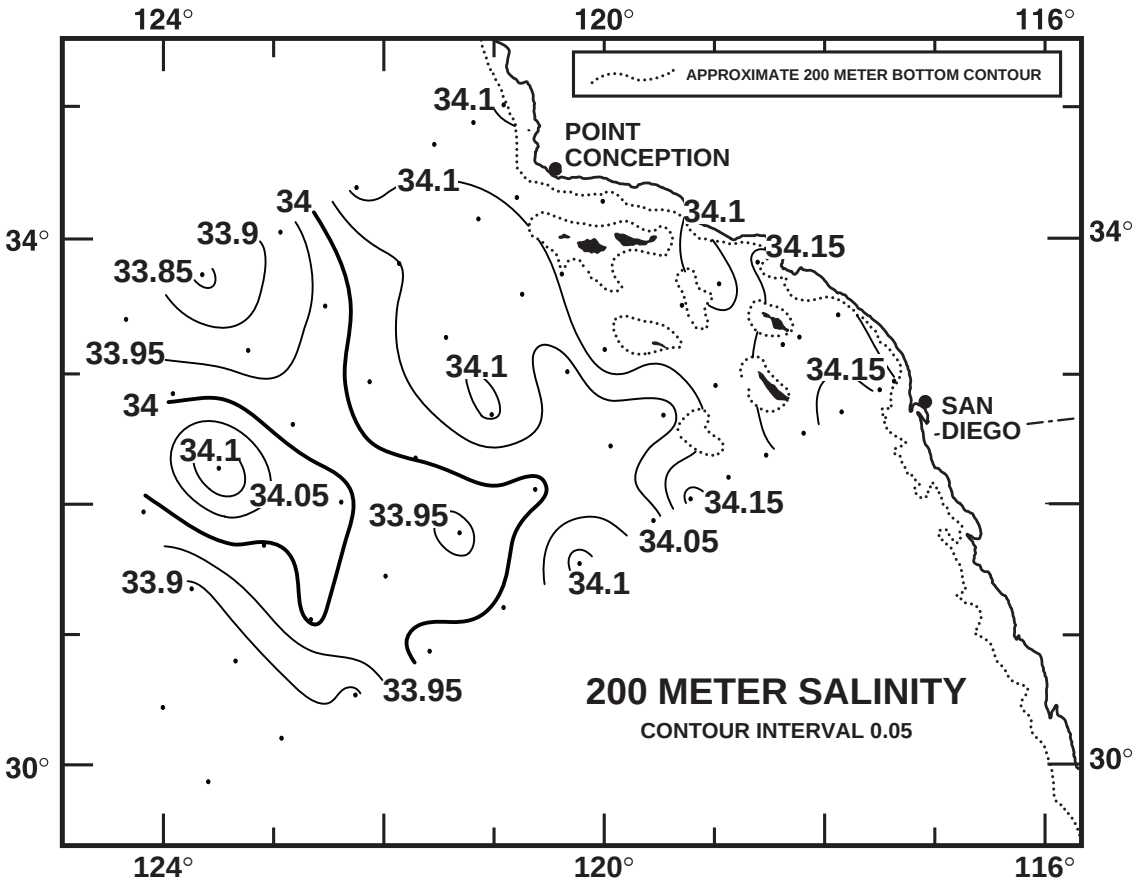

FIGURE 4D

CALCOFI CRUISE 0901

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POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

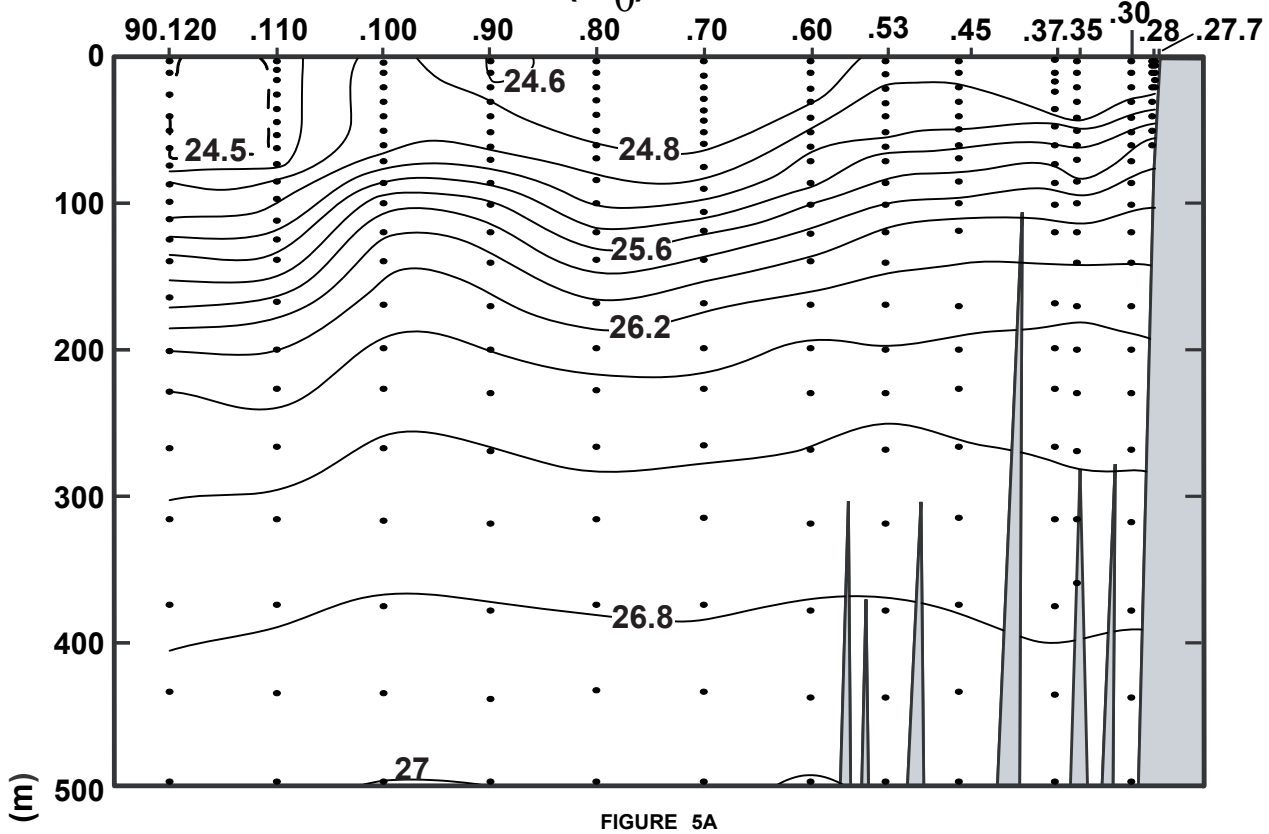

FIGURE 5A

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

DEPTH

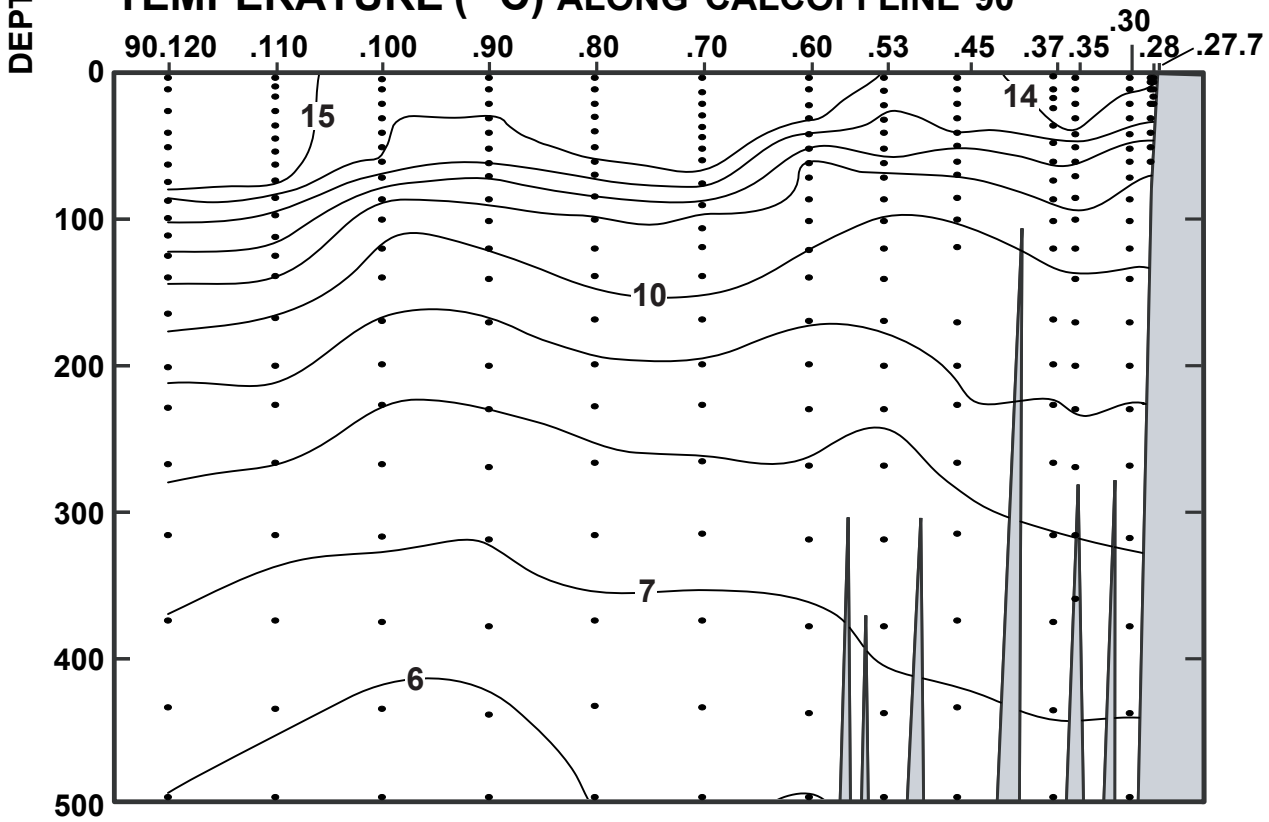

FIGURE 5B

CALCOFI CRUISE 0901

11 - 14 January 2009

SALINITY ALONG CALCOFI LINE 90

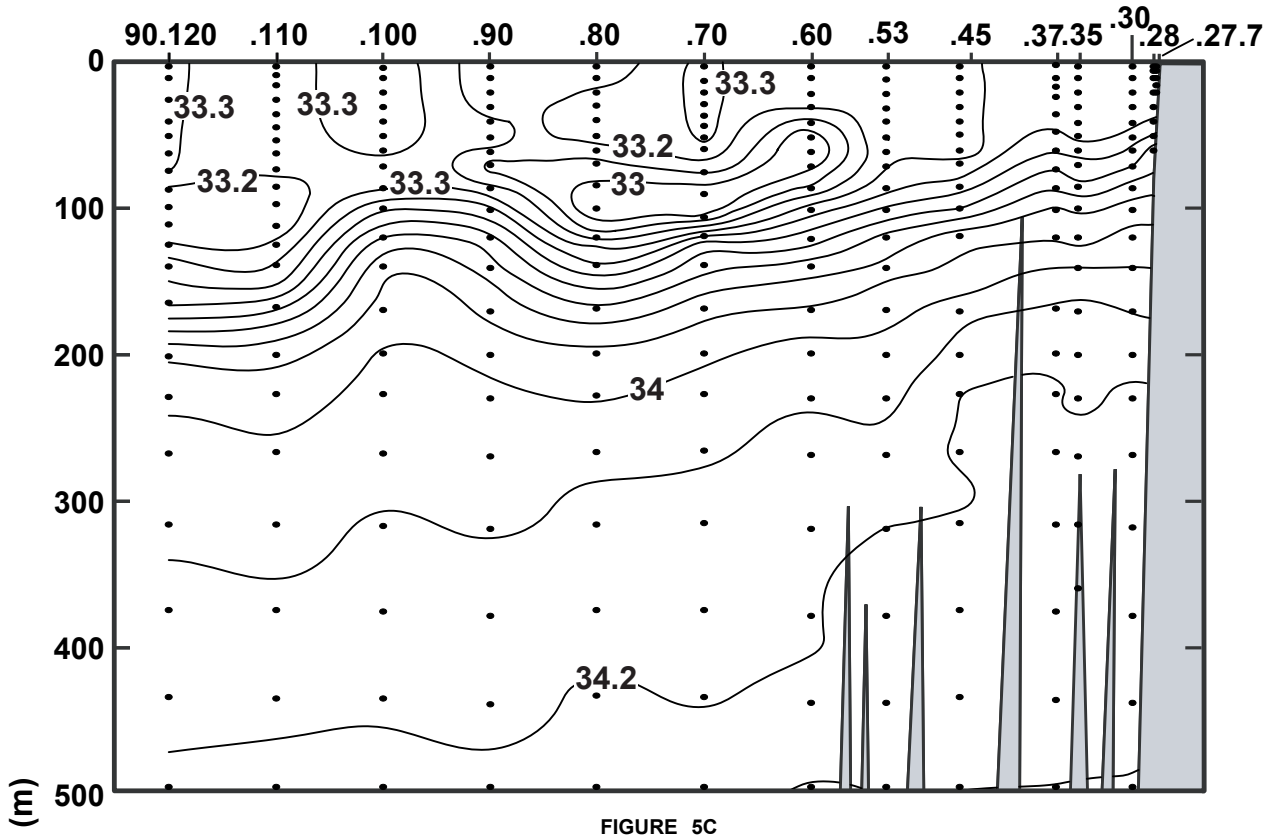

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

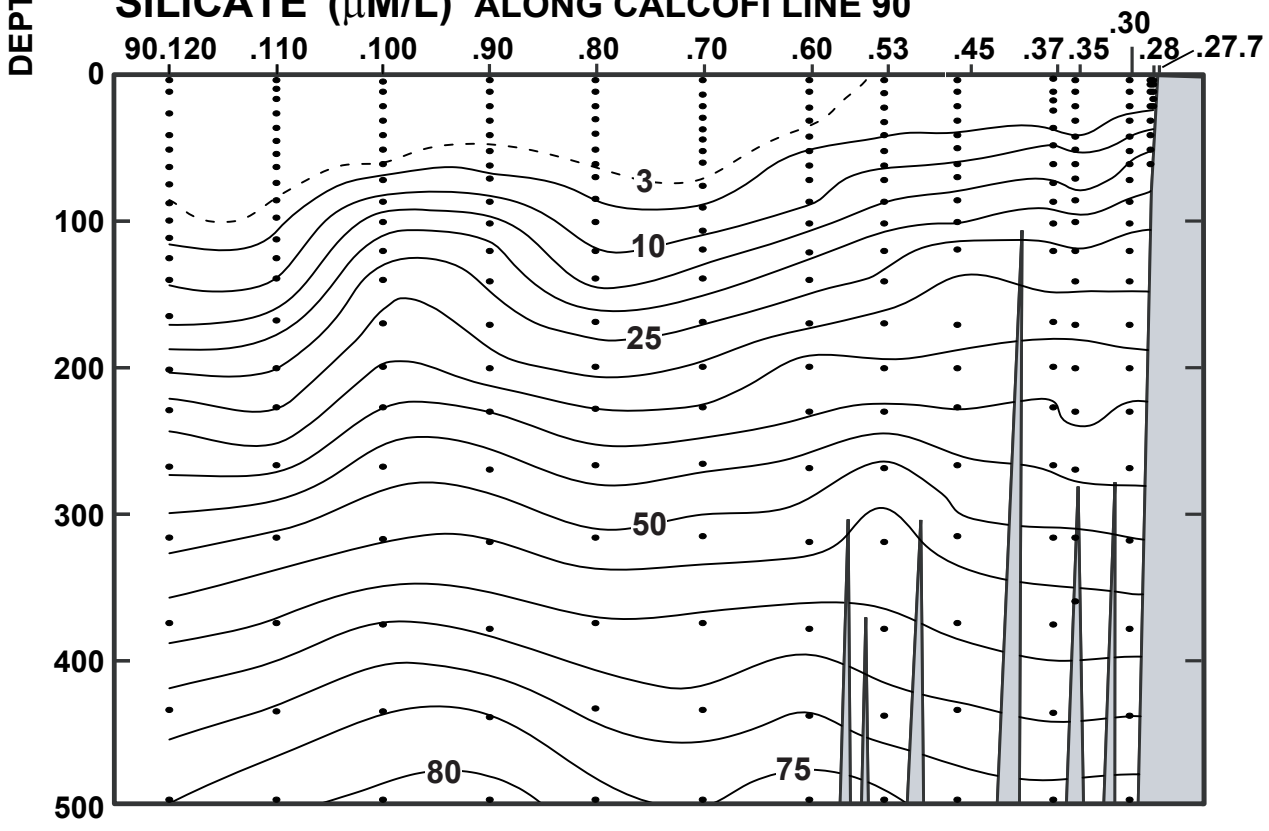

FIGURE 5D

CALCOFI CRUISE 0901

11 - 14 January 2009

NITRATE (μM/L) ALONG CALCOFI LINE 90

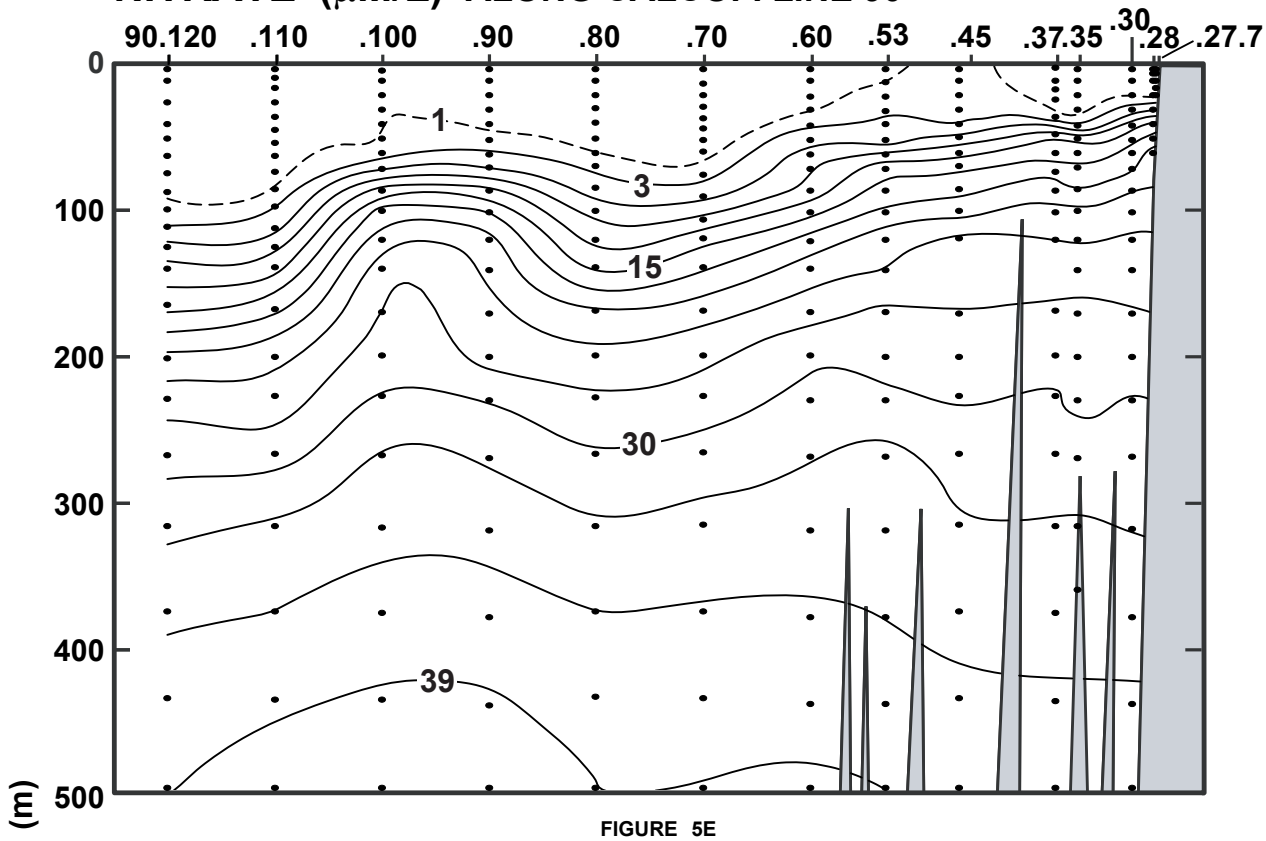

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

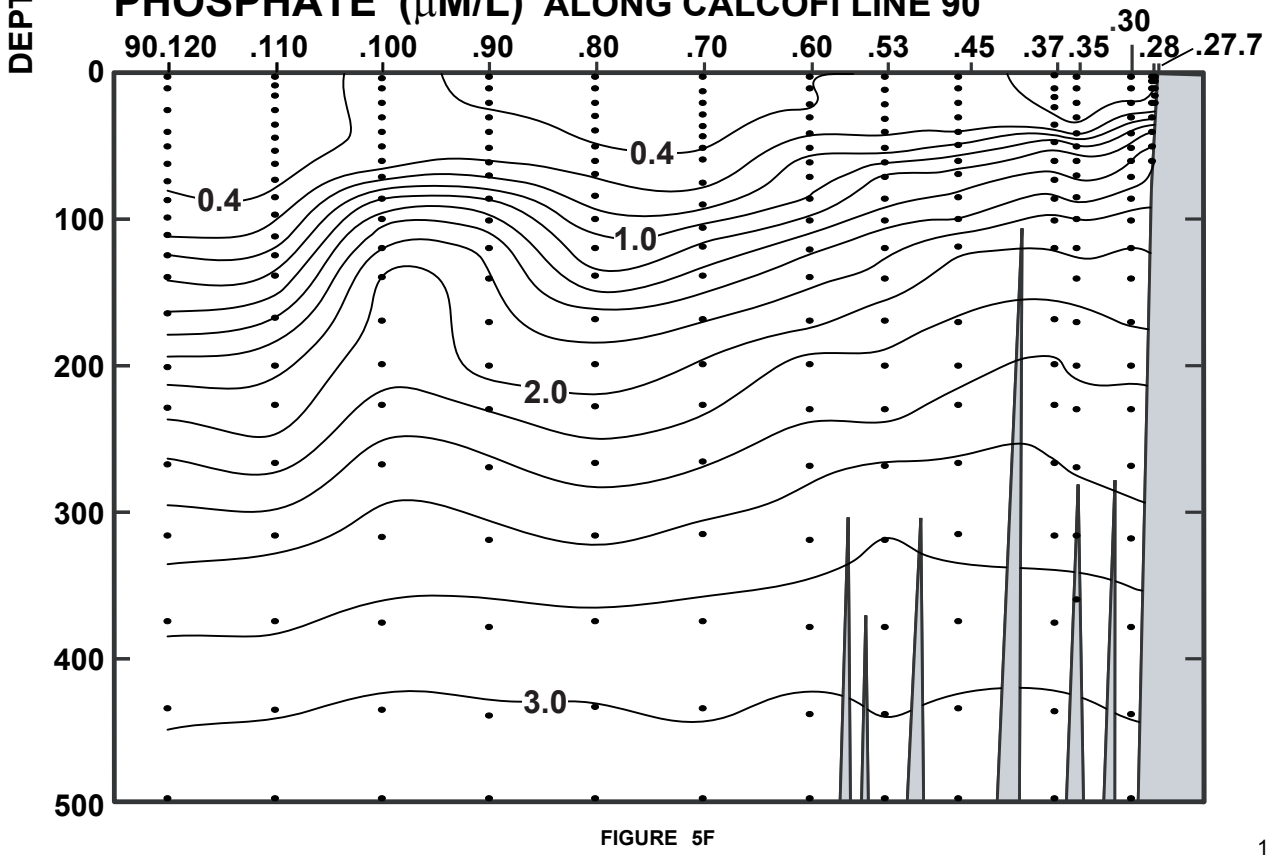

FIGURE 5F

CALCOFI CRUISE 0901

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

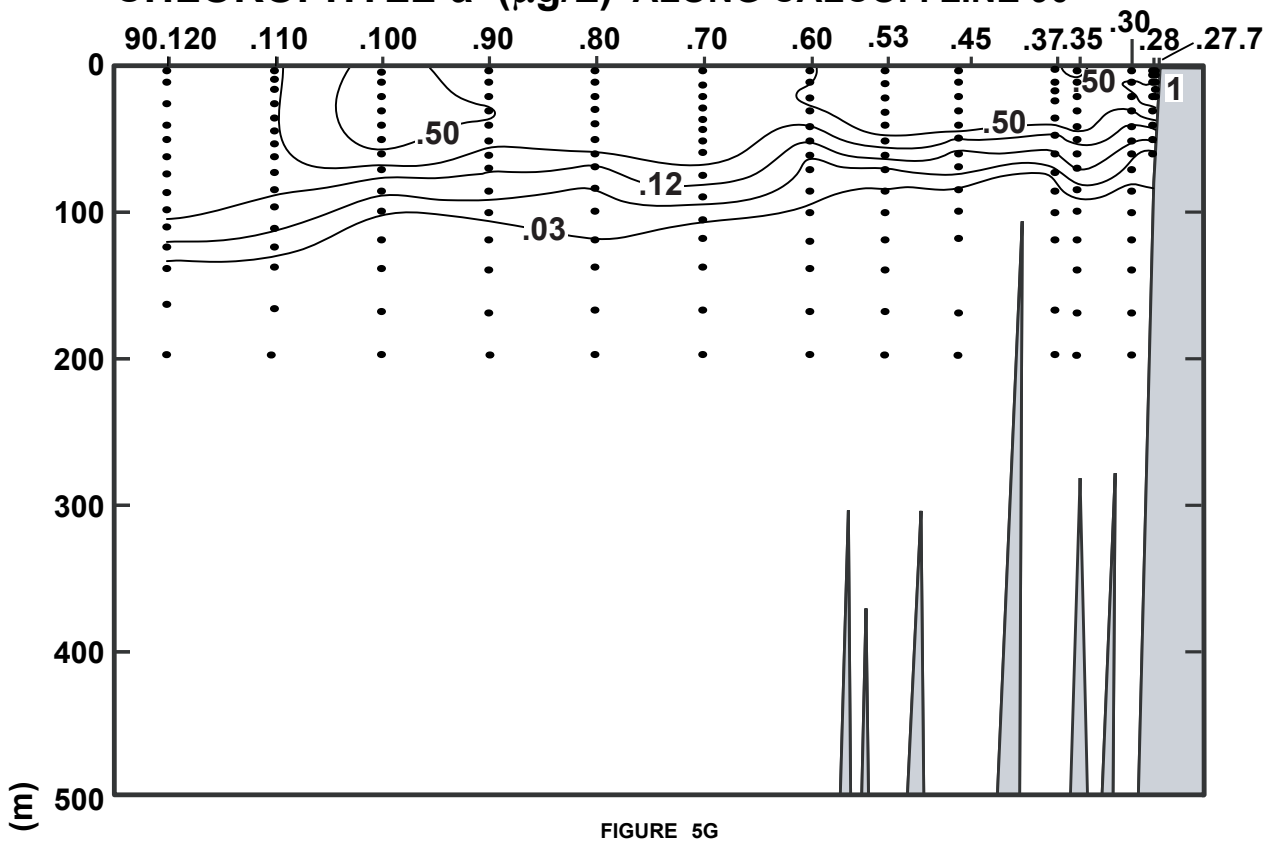

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

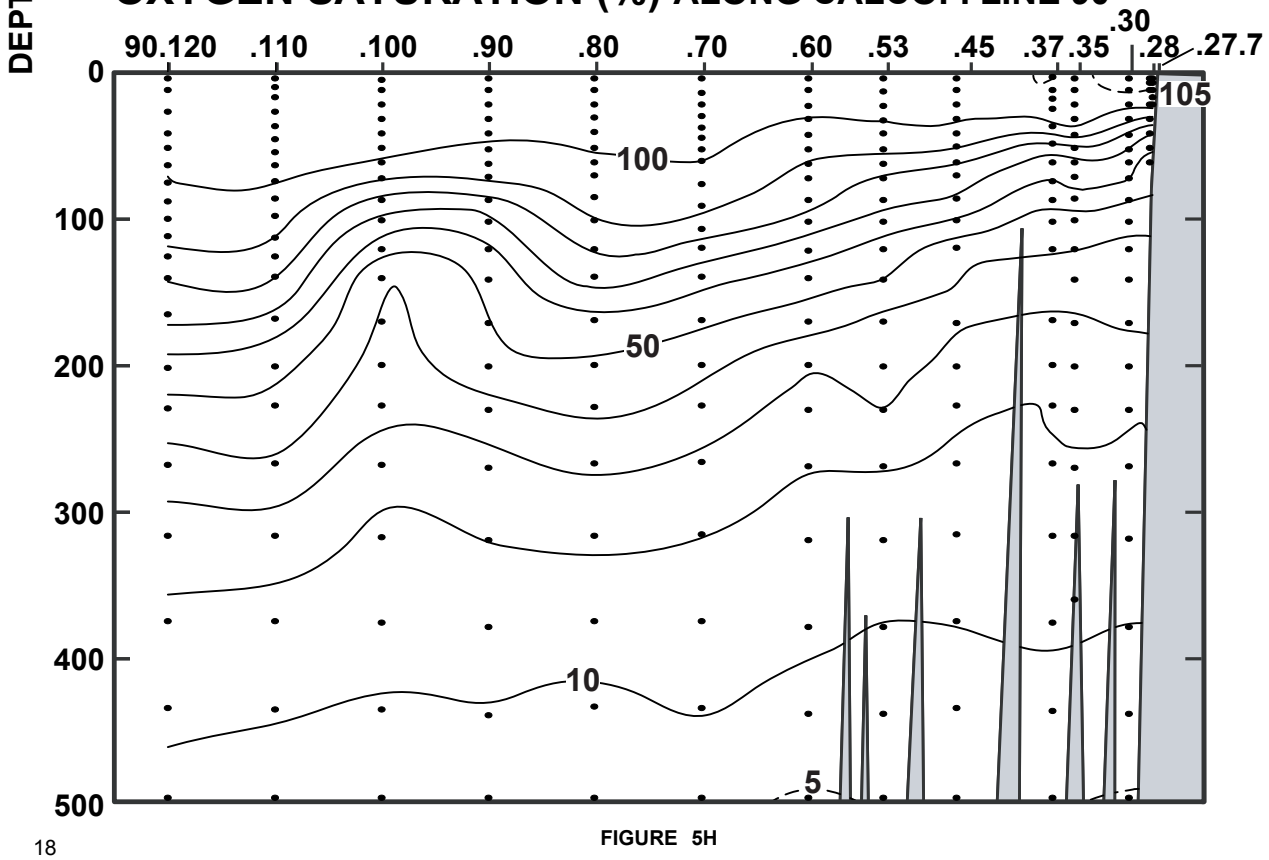

FIGURE 5H

CALCOFI CRUISE 0901

11 - 14 January 2009

OXYGEN (mL/L) ALONG CALCOFI LINE 90

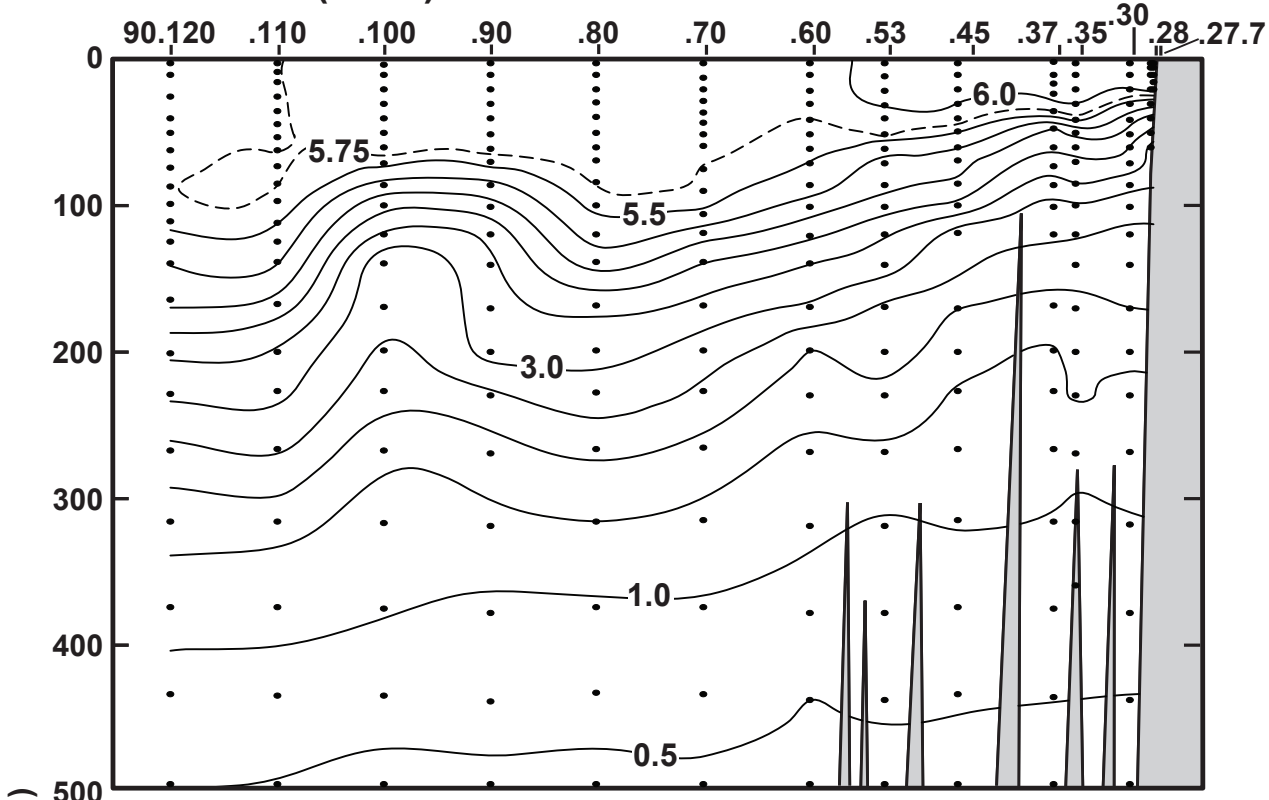

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

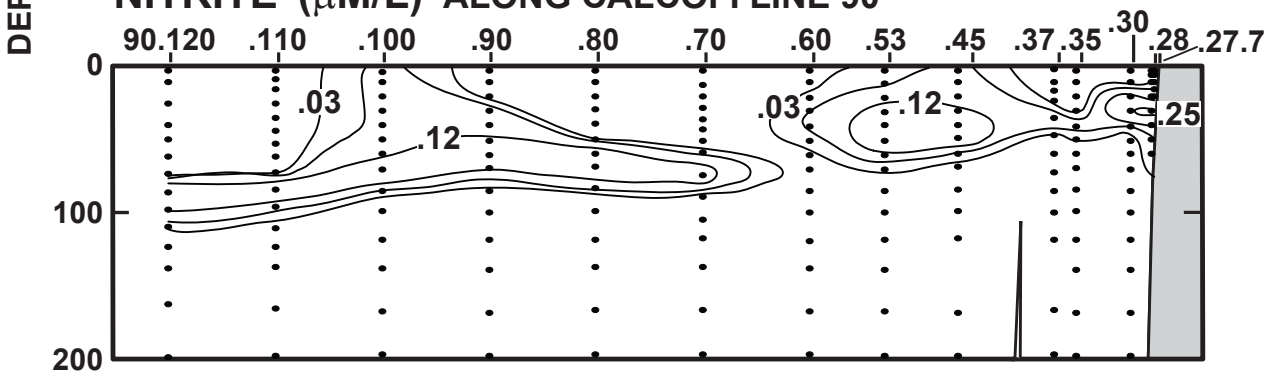

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

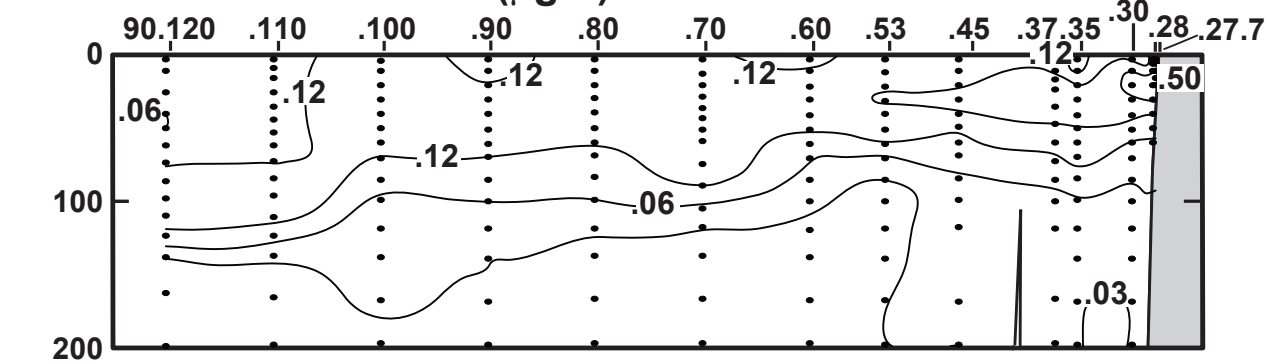

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0901

SHIP'S CAPTAIN

Chris Curl, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Wolgast, David M. (Chief Scientist)	Staff Research Associate, SIO	1,2
Camacho-Wylie, Dominique	Marine Mammal Observer, MPL	1,2
Dovel, Shonna L.	Staff Research Associate, SIO	1,2
Fowler-Gerace, Neva	Volunteer	1,2
Havron, Andrea M.	Marine Mammal Observer, MPL	1,2
Hays, Amy E.	Fishery Biologist, NMFS	1,2
Koslow, Tony, Dr.	Researcher/Director, CalCOFI	1
Liu, Jian	Staff Research Associate, SIO	1,2
Manion, Sue	Fishery Biologist, NMFS	1,2
Munger, Lisa	Post-Doc, SIO	1,2
Murdoch, Craig C.	Volunteer	1,2
Overcash, Brian J.	Staff Research Associate, SIO	1,2
Roadman, Megan	Staff Research Associate, SIO	1,2
Rodgers-Wolgast, Jennifer L.	Staff Research Associate, SIO	1,2
Susner, Micheal G.	Staff Research Associate, SIO	1,2
Wilkinson, James A.	Programmer Analyst, SIO	1,2

Leg 1: San Diego to Dana Point, California, 7-13 January, 2009
Leg 2: Dana Point to San Diego, California, 13-23 January, 2009

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 5.4 N	120 46.6 W	23/01/09	0359 UTC	70 m	270 05 kn			1014.2 mb	14.0 C	13.0 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.37		13.37		33.406	25.085	286.7	0.000	6.83	115.0	1.4	0.33	0.3	0.03	0.27	2.70	0.00	0	
2		13.37		13.37		33.406	25.085	286.7	0.006	6.83	115.0	1.4	0.33	0.3	0.03	0.27	2.70	0.00	2	209
5		13.35		13.35		33.406	25.089	286.4	0.014	6.84	115.1	1.5	0.32	0.3	0.03	0.28	2.20	0.49	5	208
10		13.25		13.25		33.406	25.109	284.6	0.029	6.78	113.9	1.5	0.31	0.4	0.04	0.31	2.53	0.30	10	206
10		13.26		13.26		33.411	25.111	284.5	0.029										10	207
20		13.13		13.13		33.408	25.135	282.5	0.057	6.68	111.9	1.6	0.36	0.6	0.05	0.49	2.94	0.26	20	205
30		12.99		12.99		33.412	25.166	279.8	0.085	6.50	108.6	2.2	0.43	1.1	0.08	0.69	3.29	A 0.32 A	30	204
41		12.59		12.58		33.435	25.263	270.9	0.115	5.64	93.4	6.5	0.81	5.1	0.23	1.17	1.93	0.92	41	203
50	ISL	12.40	D	12.39	D	33.450	D 25.311	266.5	0.140	5.30	87.5	8.5	0.96	6.8	0.27	1.20	1.42	0.86	50	
51		12.39		12.38		33.454	25.316	266.0	0.142	5.27	86.9	8.7	0.97	7.0	0.27	1.20	1.38	0.85	51	202
62		11.98		11.97		33.493	25.425	256.0	0.171	4.68	76.6	12.5	1.18	10.6	0.32	0.87	0.70	0.91	62	201

A) SECOND FLUOROMETER READING NOT ACCEPTED, 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 0901 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 55.3 W	23/01/09	0124 UTC	247 m	340 09 kn	290 03 09	2	1013.5 mb	15.0 C	13.2 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	13.42		13.42		33.376	25.052	289.9	0.000	6.47	109.0	5.2	0.42	1.1	0.04	0.18	0.91	0.22	0	
2		13.42		13.42		33.376	25.052	289.9	0.006	6.47	109.0	5.2	0.42	1.1	0.04	0.18	0.91	0.22	2	216
10	ISL	13.41	D	13.41		33.371	D 25.050	290.3	0.029	6.48	109.2	5.1	0.42	1.1	0.04	0.17	1.00	0.17	10	
11		13.40		13.40		33.376	25.056	289.8	0.032	6.48	109.2	5.1	0.42	1.1	0.04	0.17	1.01	0.17	11	214
11		13.41		13.41		33.375	25.053	290.0	0.032										11	215
20	ISL	13.18	D	13.18		33.380	D 25.103	285.5	0.058	6.38	107.0	5.5	0.48	1.8	0.06	0.24	1.05	0.24	20	
21		13.13		13.13		33.383	25.116	284.3	0.061	6.37	106.7	5.5	0.49	1.9	0.06	0.25	1.05	0.25	21	213
30	ISL	12.66	D	12.66		33.390	D 25.214	275.2	0.086	5.96	98.9	6.8	0.67	4.4	0.19	0.34	0.84	0.27	30	
31		12.67		12.67		33.394	25.215	275.1	0.089	5.91	98.1	7.0	0.69	4.7	0.21	0.34	0.81	0.27	31	212
41		12.36		12.35		33.410	25.288	268.5	0.116	5.47	90.2	8.8	0.84	7.3	0.33	0.07	0.51	0.37	41	211
50		11.81		11.80		33.439	25.414	256.6	0.139	4.84	78.9	12.0	1.12	11.8	0.15	0.01	0.27	0.26	50	210
60		11.28		11.27		33.534	25.585	240.5	0.164	4.16	67.1	15.8	1.39	15.7	0.14	0.01	0.19	0.23	60	209
71		10.94		10.93		33.622	25.715	228.4	0.190	3.71	59.4	18.9	1.58	18.1	0.15	0.01	0.15	0.22	71	208
75	ISL	10.70	D	10.69		33.645	D 25.776	222.7	0.199	3.59	57.2	19.7	1.62	18.8	0.13	0.01	0.13	0.21	75	
86		10.59		10.58		33.703	25.840	216.8	0.223	3.31	52.6	21.6	1.73	20.6	0.05	0.00	0.09	0.18	86	207
100	ISL	10.23	D	10.22		33.789	D 25.970	204.8	0.253	2.93	46.2	24.1	1.90	22.9	0.00	0.00	0.05	0.16	101	
101		10.22		10.21		33.794	25.975	204.3	0.255	2.91	45.9	24.3	1.91	23.0	0.00	0.00	0.05	0.16	102	206
122		9.77		9.76		33.872	26.112	191.6	0.296	2.69	42.0	27.6	2.01	24.7	0.00	0.00	0.03	0.14	123	205
125	ISL	9.75	D	9.74		33.876	D 26.119	191.1	0.302	2.68	41.9	27.9	2.02	24.9	0.00	0.00	0.03	0.14	126	
142		9.58		9.56		33.927	26.187	184.9	0.334	2.58	40.2	29.4	2.08	25.7	0.01	0.01	0.03	0.13	143	204
150	ISL	9.52	D	9.50		33.936	D 26.204	183.5	0.349	2.48	38.6	30.4	2.11	26.1	0.02	0.01	0.03	0.14	151	
171		9.24		9.22		34.009	26.307	174.1	0.386	2.15	33.2	33.5	2.22	27.2	0.07	0.03	0.02	0.19	172	203
200		8.91		8.89		34.083	26.418	164.0	0.435	1.75	26.9	38.5	2.40	29.1	0.11	0.12	0.00	0.23	201	202
237		8.66		8.63		34.128	26.493	157.5	0.495	1.40	21.4	42.9	2.55	30.5	0.15	0.15			238	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 53.4 N	121 11.7 W	22/01/09	2141 UTC	571 m	020 02 kn	280 03 09	2	1013.7 mb	14.8 C	13.2 C	13m	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	13.39		13.39		33.385	25.065	288.6	0.000	6.42	108.1	5.5	0.48	1.7	0.07	0.20	1.06	0.05	0	
2		13.39		13.39		33.385	25.065	288.7	0.006	6.42	108.1	5.5	0.48	1.7	0.07	0.20	1.06	0.05	2	221
9		13.17		13.17		33.401	25.121	283.5	0.026	6.52	109.3	5.1	0.48	1.6	0.07	0.20	1.40	0.11	9	219
9		13.18		13.18		33.400	25.119	283.7	0.026										9	220
10	ISL	13.13	D	13.13		33.399	D 25.128	282.9	0.029	6.51	109.1	4.9	0.48	1.6	0.07	0.21	1.40	0.12	10	
19		12.93		12.93		33.411	25.177	278.4	0.054	6.47	107.9	3.9	0.50	1.7	0.10	0.39	1.36	0.28	19	218
20	ISL	12.85	D	12.85		33.413	D 25.194	276.8	0.057	6.41	106.8	4.1	0.52	1.9	0.12	0.45	1.32	0.30	20	
30		12.38		12.38		33.423	25.293	267.6	0.084	5.60	92.4	7.3	0.81	6.0	0.35	0.81	0.78	0.46	30	217
39		11.77		11.77		33.459	25.437	254.2	0.107	4.96	80.8	12.0	1.12	11.4	0.38	0.12	0.41	0.37	39	216
49		11.46		11.45		33.550	25.565	242.2	0.132	4.20	68.0	15.2	1.35	14.9	0.27	0.03	0.39	0.32	49	215
50	ISL	11.38	D	11.37		33.557	D 25.585	240.3	0.135	4.12	66.6	15.6	1.38	15.4	0.25	0.03	0.37	0.31	50	
59		10.87		10.86		33.646	25.746	225.2	0.156	3.51	56.1	19.3	1.62	19.2	0.05	0.04	0.19	0.23	59	214
70		10.64		10.63		33.700	25.829	217.6	0.180	3.26	51.9	21.2	1.73	20.7	0.03	0.01	0.10	0.22	70	213
75	ISL	10.47	D	10.46		33.743	D 25.892	211.7	0.191	3.16	50.1	22.0	1.77	21.3	0.02	0.01	0.08	0.20	75	
84		10.37		10.36		33.765	25.927	208.6	0.210	3.00	47.5	23.4	1.83	22.2	0.02	0.00	0.07	0.17	84	212
99		9.96		9.95		33.829	26.047	197.4	0.240	2.85	44.7	25.4	1.92	23.7	0.02	0.00	0.03	0.25	100	211
100	ISL	9.94	D	9.93		33.853	D 26.069	195.3	0.242	2.83	44.4	25.6	1.93	23.8	0.02	0.00	0.03	0.25	101	
119		9.66		9.65		33.935	26.180	185.2	0.278	2.47	38.5	29.0	2.06	25.4	0.02	0.03	0.02	0.14	120	210
125	ISL	9.54	D	9.53		33.962	D 26.221	181.4	0.289	2.40	37.3	30.1	2.09	25.9	0.02	0.02	0.01	0.13	126	
139		9.20		9.18		34.014	26.317	172.5	0.314	2.26	34.9	32.5	2.16	27.0	0.01	0.00	0.00	0.11	140	209
150	ISL	8.98	D	8.96		34.044	D 26.376	167.1	0.333	2.10	32.3	34.5	2.23	27.8	0.01	0.00	0.00	0.10	151	
167		8.85		8.83		34.092	26.434	161.8	0.361	1.86	28.5	37.1	2.32	28.8	0.01	0.00	0.00	0.09	168	208
199		8.76		8.74		34.144	26.489	157.2	0.412	1.59	24.3	39.8	2.43	29.8	0.01	0.00	0.00	0.07	200	207
200	ISL	8.71	D	8.69		34.148	D 26.500	156.2	0.413	1.59	24.3	39.9	2.43	29.8	0.01	0.00			201	
228		8.50		8.48		34.139	26.526	154.1	0.457	1.56	23.7	42.0	2.46	30.6	0.00	0.00			229	206
250	ISL	8.31	D	8.28		34.141	D 26.557	151.6	0.490	1.50	22.7	44.0	2.50	31.4	0.00	0.00			252	
268		8.09		8.06		34.145	26.593	148.3	0.517	1.42	21.4	46.0	2.55	32.1	0.00	0.00			270	205
300	ISL	7.72	D	7.69		34.155	D 26.656	142.7	0.564	1.22	18.2	50.7	2.66	33.4	0.00	0.00			302	
318		7.53		7.50		34.178	26.702	138.6	0.589	1.10	16.4	53.5	2.72	34.1	0.00	0.00			320	204
377		6.94		6.90		34.206	26.807	129.2	0.668	0.83	12.2	61.7	2.89	35.7	0.00	0.00			380	203
400	ISL	6.80	D	6.76		34.214	D 26.832	127.0	0.698	0.71	10.4	65.1	2.96	36.3	0.00	0.00			403	
438		6.55		6.51		34.245	26.890	121.9	0.745	0.54	7.9	70.4	3.05	37.1	0.00	0.00			441	202
500	ISL	6.32	D	6.27		34.254	D 26.928	119.0	0.820	0.47	6.8	75.9	3.11	38.1	0.00	0.00			504	
515		6.16		6.11		34.266	26.958	116.2	0.837	0.45	6.5	77.2	3.13	38.4	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 0901 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 43.4 N	121 32.9 W	22/01/09	1749 UTC	933 m	100 09 kn	110 04 08	2	1015.0 mb	13.5 C	12.2 C	11m	8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.25		13.25		33.390	25.097	285.6	0.000	6.89	115.7	3.1	0.34	0.2	0.02	0.10	1.41	0.23	0	
1	A	13.25		13.25		33.390	25.097	285.6	0.003	6.89	115.7	3.1	0.34	0.2	0.02	0.10	1.41	0.23	1	223
5	A	13.26		13.26		33.390	25.095	285.9	0.014	6.95	116.7	3.1	0.34	0.2	0.01	0.09	1.39	0.26	5	222
9		13.20		13.20		33.402	25.116	284.0	0.026	6.83	114.6	3.4	0.38	0.4	0.02	0.16	1.33	0.25	9	221
10	ISL	13.07	D	13.07		33.407	D 25.146	281.1	0.029	6.78	113.5	3.6	0.40	0.7	0.03	0.19	1.33	0.27	10	
16	A	12.69		12.69		33.412	25.225	273.8	0.045	6.41	106.4	4.8	0.56	2.6	0.11	0.43	1.31	0.38	16	220
20	ISL	12.55	D	12.55		33.408	D 25.249	271.6	0.056	6.15	101.8	5.7	0.65	3.7	0.18	0.59	1.09	0.41	20	
21	A	12.55		12.55		33.413	25.253	271.3	0.059	6.09	100.8	5.9	0.67	3.9	0.20	0.63	1.02	0.41	21	219
30	ISL	12.46	D	12.46		33.409	D 25.267	270.1	0.083	5.86	96.8	6.6	0.73	4.6	0.32	0.74	0.59	0.44	30	
31	A	12.47		12.47		33.413	25.268	270.0	0.086	5.84	96.5	6.7	0.73	4.7	0.33	0.75	0.55	0.44	31	218
39		12.29		12.28		33.424	25.312	266.1	0.107	5.58	91.9	8.4	0.85	6.9	0.39	0.39	0.40	0.36	39	217
48	A	11.59		11.58		33.475	25.483	250.0	0.131	4.70	76.2	12.9	1.19	12.9	0.18	0.01	0.23	0.28	48	216
50	ISL	11.40	D	11.39		33.483	D 25.524	246.1	0.135	4.60	74.3	13.5	1.24	13.7	0.16	0.01	0.24	0.31	50	
53		11.21		11.20		33.486	25.561	242.7	0.143	4.46	71.8	14.6	1.32	14.9	0.13	0.01	0.24	0.35	53	215
59		10.65		10.64		33.545	25.706	229.0	0.157	3.92	62.3	18.2	1.56	18.7	0.03	0.02	0.12	0.25	59	214
70		10.18		10.17		33.702	25.910	209.8	0.181	3.33	52.5	22.1	1.75	21.7	0.02	0.01	0.04	0.15	70	213
75	ISL	10.02	D	10.01		33.709	D 25.942	206.8	0.192	3.28	51.5	22.8	1.78	22.3	0.02	0.01	0.04	0.15	75	
84		9.98		9.97		33.740	25.974	204.0	0.210	3.20	50.2	23.5	1.82	22.8	0.02	0.02	0.03	0.15	84	212
100		9.69		9.68		33.820	26.085	193.8	0.242	2.91	45.4	26.1	1.93	24.2	0.01	0.00	0.01	0.11	101	211
119		9.48		9.47		33.904	26.185	184.6	0.278	2.61	40.5	28.6	2.02	25.5	0.00	0.00	0.01	0.10	120	210
125	ISL	9.35	D	9.34		33.947	D 26.240	179.5	0.289	2.53	39.2	29.4	2.05	25.8	0.00	0.00	0.01	0.10	126	
139		9.30		9.28		33.972	26.268	177.1	0.314	2.38	36.8	31.0	2.10	26.5	0.00	0.00	0.01	0.10	140	209
150	ISL	9.17	D	9.15		33.996	D 26.308	173.5	0.333	2.31	35.7	31.9	2.13	26.9	0.00	0.00	0.01	0.09	151	
168		9.06		9.04		34.030	26.352	169.7	0.364	2.17	33.4	33.7	2.18	27.6	0.00	0.00	0.01	0.08	169	208
200		8.72		8.70		34.127	26.482	157.9	0.416	1.65	25.2	39.6	2.39	29.5	0.00	0.00	0.00	0.09	201	207
228		8.37		8.35		34.174	26.573	149.6	0.459	1.33	20.2	44.2	2.52	31.1	0.00	0.00			229	206
250	ISL	8.16	D	8.13		34.188	D 26.616	145.9	0.492	1.19	18.0	46.8	2.60	31.9	0.00	0.00			252	
269		8.03		8.00		34.204	26.649	143.1	0.519	1.11	16.7	49.1	2.66	32.5	0.00	0.00			271	205
300	ISL	7.37	D	7.34		34.186	D 26.730	135.5	0.562	0.94	13.9	54.6	2.76	33.8	0.00	0.00			302	
319		7.25		7.22		34.206	26.763	132.6	0.588	0.85	12.6	58.2	2.82	34.7	0.00	0.00			321	204
377		6.51		6.48		34.197	26.857	124.1	0.662	0.72	10.5	66.9	2.94	37.1	0.00	0.00			380	203
400	ISL	6.28	D	6.24		34.207	D 26.895	120.6	0.690	0.61	8.8	70.4	3.00	37.9	0.00	0.00			403	
438		6.09		6.05		34.250	26.954	115.4	0.735	0.43	6.2	75.5	3.08	39.0	0.00	0.00			441	202
500	ISL	5.77	D	5.73		34.285	D 27.022	109.5	0.805	0.33	4.7	80.7	3.14	39.7	0.00	0.00			504	
515		5.76		5.72		34.286	27.024	109.5	0.821	0.30	4.3	82.0	3.15	39.9	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 23.6 N	122 15.0 W	22/01/09	1138 UTC	4025 m	080 13 kn			1012.6 mb	12.9 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	12.66		12.66		33.094	24.984	296.3	0.000	6.28	104.0	6.0	0.60	3.5	0.09	0.09	0.86	0.22	0	
2		12.66		12.66		33.094	24.984	296.4	0.006	6.28	104.0	6.0	0.60	3.5	0.09	0.09	0.86	0.22	2	220
10		12.48		12.48		33.223	25.119	283.7	0.029	6.34	104.7	6.5	0.63	3.9	0.11	0.08	0.88	0.12	10	219
20		12.23		12.23		33.353	25.268	269.8	0.057	6.32	103.9	7.1	0.67	4.7	0.15	0.05	1.14	0.30	20	218
30		11.97		11.97		33.378	25.336	263.5	0.083	6.02	98.4	8.2	0.80	6.6	0.27	0.17	1.02	0.46	30	217
40		11.82		11.81		33.419	25.396	258.0	0.110	5.80	94.5	9.4	0.92	8.2	0.40	0.18	0.43	0.43	40	216
50		11.63		11.62		33.415	25.429	255.2	0.135	5.56	90.2	10.4	1.02	9.6	0.45	0.03	0.30	0.21	50	215
60		10.92		10.91		33.458	25.591	240.0	0.160	4.63	74.0	14.7	1.33	15.1	0.05	0.01	0.10	0.18	60	214
70		10.00		9.99		33.547	25.819	218.4	0.183	3.98	62.4	19.7	1.62	19.9	0.01	0.01	0.03	0.09	70	213
75	ISL	9.87	D	9.86		33.616	D 25.895	211.3	0.194	3.75	58.7	21.2	1.70	21.1	0.01	0.01	0.02	0.09	75	
84		9.87		9.86		33.693	25.955	205.8	0.212	3.42	53.5	23.2	1.80	22.5	0.01	0.00	0.01	0.09	84	212
100		9.41		9.40		33.820	26.130	189.4	0.244	2.96	45.9	27.3	1.98	25.0	0.00	0.00	0.01	0.07	101	211
119		9.00		8.99		33.903	26.261	177.3	0.279	2.72	41.8	30.5	2.06	26.5	0.00	0.01	0.00	0.05	120	210
125	ISL	8.95	D	8.94		33.921	D 26.284	175.3	0.289	2.62	40.2	31.5	2.09	26.9	0.00	0.01	0.00	0.05	126	
138		8.75		8.74		33.981	26.362	168.0	0.312	2.38	36.4	33.7	2.16	27.8	0.00	0.00	0.00	0.05	139	209
150	ISL	8.50	D	8.48		34.012	D 26.425	162.2	0.332	2.16	32.8	35.9	2.24	28.8	0.00	0.00	0.00	0.05	151	
169		8.38		8.36		34.059	26.481	157.3	0.362	1.82	27.6	39.4	2.37	30.3	0.00	0.00	0.00	0.05	170	208
200	ISL	8.19	D	8.17		34.119	D 26.557	150.5	0.410	1.36	20.5	44.1	2.54	32.1	0.02	0.00	0.00	0.03	201	
201		8.20		8.18		34.117	26.554	150.9	0.411	1.35	20.4	44.2	2.54	32.1	0.02	0.00	0.00	0.03	202	207
229		7.91		7.89		34.139	26.615	145.5	0.453	1.23	18.5	48.0	2.62	33.0	0.00	0.00			230	206
250	ISL	7.79	D	7.77		34.151	D 26.642	143.2	0.483	1.20	18.0	50.9	2.67	33.6	0.00	0.00			252	
269		7.37		7.34		34.132	26.687	139.0	0.510	1.17	17.3	53.4	2.71	34.1	0.00	0.00			271	205
300	ISL	7.18	D	7.15		34.164	D 26.740	134.5	0.552	0.95	14.0	56.9	2.81	34.7	0.00	0.00			302	
318		7.19		7.16		34.197	26.764	132.4	0.576	0.81	12.0	58.9	2.86	35.1	0.00	0.00			320	204
377		6.50		6.47		34.188	26.851	124.6	0.652	0.69	10.0	67.7	2.97	37.2	0.00	0.00			380	203
400	ISL	6.42	D	6.38		34.218	D 26.886	121.6	0.680	0.63	9.1	70.3	3.01	37.6	0.00	0.00			403	
437		6.14		6.10		34.213	26.918	118.8	0.725	0.54	7.8	74.1	3.07	38.0	0.00	0.00			440	202
500	ISL	5.85	D	5.81		34.248	D 26.983	113.3	0.798	0.39	5.6	80.2	3.15	39.1	0.00	0.00			504	
515		5.80		5.76		34.259	26.998	112.0	0.815	0.36	5.1	81.7	3.17	39.4	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 0901 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 3.1 N	122 56.2 W	22/01/09	0509 UTC	4236 m	100 09 kn			1013.8 mb	13.2 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	14.97		14.97		33.126	24.535	339.1	0.000	5.84	101.4	2.3	0.35	0.1	0.01	0.07	0.30	0.13	0	
2		14.97		14.97		33.126	24.535	339.1	0.007	5.84	101.4	2.3	0.35	0.1	0.01	0.07	0.30	0.13	2	220
10	ISL	14.97	D	14.97		33.122	D 24.532	339.6	0.034	5.84	101.4	2.3	0.36	0.1	0.01	0.03	0.37	0.10	10	
11		14.97		14.97		33.132	24.540	338.9	0.037	5.84	101.4	2.3	0.36	0.1	0.01	0.03	0.38	0.09	11	219
20	ISL	14.98	D	14.98		33.126	D 24.533	339.8	0.068	5.85	101.6	2.2	0.36	0.1	0.01	0.05	0.40	0.05	20	
26		14.98		14.98		33.128	24.535	339.8	0.088	5.85	101.6	2.2	0.35	0.1	0.01	0.07	0.41	0.04	26	218
30	ISL	14.97	D	14.97		33.120	D 24.531	340.3	0.102	5.85	101.6	2.2	0.35	0.1	0.01	0.07	0.41	0.05	30	
40		14.98		14.97		33.127	24.535	340.3	0.136	5.86	101.8	2.3	0.35	0.1	0.01	0.07	0.39	0.08	40	217
50	ISL	14.98	D	14.97		33.123	D 24.532	340.8	0.170	5.85	101.6	2.2	0.36	0.1	0.01	0.07	0.36	0.08	50	
51		14.97		14.96		33.125	24.536	340.5	0.173	5.85	101.6	2.2	0.36	0.1	0.01	0.07	0.36	0.08	51	216
63		14.94		14.93		33.118	24.537	340.7	0.214	5.83	101.2	2.1	0.36	0.1	0.01	0.10	0.31	0.10	63	215
75	ISL	14.53	D	14.52		33.046	D 24.569	337.9	0.255	5.82	100.1	2.4	0.41	0.5	0.07	0.22	0.33	0.13	75	
76		14.57		14.56		33.062	24.573	337.6	0.258	5.82	100.2	2.4	0.41	0.5	0.07	0.23	0.33	0.13	76	214
88		12.80		12.79		32.919	24.823	313.9	0.297	5.90	97.9	3.9	0.59	2.8	0.29	0.06	0.22	0.12	88	213
100		11.04		11.03		32.817	25.072	290.2	0.334	5.84	93.2	5.9	0.81	6.2	0.01	0.05	0.09	0.09	100	212
113		10.33		10.32		32.958	25.305	268.2	0.370	5.51	86.7	9.3	1.05	10.4	0.01	0.06	0.05	0.05	114	211
125		10.25		10.24		33.215	25.519	248.1	0.401	5.16	81.2	10.7	1.06	11.3	0.01	0.03	0.01	0.02	126	210
141		10.06		10.04		33.465	25.746	226.8	0.439	4.86	76.2	12.4	1.12	13.0	0.01	0.00	0.01	0.01	142	209
150	ISL	9.54	D	9.52		33.572	D 25.916	210.7	0.459	4.57	70.9	15.5	1.27	15.5	0.01	0.00	0.01	0.01	151	
171		9.04		9.02		33.766	26.149	189.0	0.501	3.89	59.8	23.5	1.65	21.6	0.00	0.00	0.00	0.01	172	208
200		8.73		8.71		33.902	26.304	174.7	0.553	3.41	52.1	28.4	1.82	24.5	0.00	0.00	0.00	0.01	201	207
231		8.23		8.21		33.965	26.431	163.1	0.606	3.06	46.2	33.8	1.97	26.8	0.00	0.00			232	206
250	ISL	7.74	D	7.72		33.971	D 26.508	155.9	0.636	3.05	45.6	37.3	2.01	27.5	0.00	0.00			251	
271		7.41		7.38		33.977	26.560	151.1	0.668	3.01	44.6	41.4	2.07	28.3	0.00	0.00			273	205
300	ISL	7.08	D	7.05		33.989	D 26.615	146.1	0.711	2.53	37.2	47.2	2.27	30.9	0.00	0.00			302	
320		6.92		6.89		34.013	26.656	142.4	0.740	2.13	31.2	51.2	2.42	32.8	0.00	0.00			322	204
382		6.36		6.33		34.068	26.775	131.8	0.825	1.31	19.0	62.6	2.74	36.6	0.00	0.00			384	203
400	ISL	6.14	D	6.10		34.046	D 26.786	130.8	0.849	1.14	16.4	65.4	2.82	37.3	0.00	0.00			403	
440		6.00		5.96		34.128	26.869	123.4	0.900	0.85	12.2	71.2	2.95	38.5	0.00	0.00			443	202
500	ISL	5.40	D	5.36		34.129	D 26.943	116.5	0.972	0.73	10.3	80.2	3.03	40.0	0.00	0.00			503	
513		5.36		5.32		34.141	26.957	115.2	0.987	0.70	9.9	82.1	3.05	40.3	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 0901 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 43.6 N	123 38.5 W	21/01/09	2303 UTC	4188 m	070 09 kn	340 04 08	2	1011.9 mb	15.2 C	13.5 C	25m	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	15.31		15.31		33.226	24.538	338.8	0.000	5.80	101.5	2.1	0.32	0.0	0.00	0.00	0.13	0.04	0	
2		15.31		15.31		33.226	24.538	338.9	0.007	5.80	101.5	2.1	0.32	0.0	0.00	0.00	0.13	0.04	2	220
9		15.31		15.31		33.230	24.541	338.7	0.030	5.77	101.0	2.1	0.32	0.0	0.00	0.01	0.13	0.04	9	219
10	ISL	15.31	D	15.31		33.221	D 24.534	339.4	0.034	5.77	101.0	2.1	0.32	0.0	0.00	0.01	0.13	0.04	10	
20	ISL	15.31	D	15.31		33.221	D 24.535	339.7	0.068	5.78	101.1	2.1	0.33	0.0	0.00	0.01	0.13	0.05	20	
25		15.31		15.31		33.228	24.540	339.3	0.085	5.78	101.1	2.1	0.33	0.0	0.00	0.01	0.13	0.05	25	218
30	ISL	15.31	D	15.31		33.220	D 24.534	340.1	0.102	5.78	101.1	2.1	0.33	0.0	0.00	0.00	0.14	0.05	30	
39		15.30		15.29		33.227	24.542	339.6	0.132	5.78	101.1	2.1	0.32	0.0	0.00	0.00	0.15	0.05	39	217
49		15.30		15.29		33.224	24.540	340.1	0.166	5.79	101.3	2.1	0.32	0.0	0.00	0.02	0.16	0.05	49	216
50	ISL	15.29	D	15.28		33.216	D 24.536	340.5	0.170	5.79	101.3	2.1	0.32	0.0	0.00	0.02	0.16	0.05	50	
61		15.23		15.22		33.225	24.557	338.9	0.207	5.79	101.1	2.1	0.32	0.0	0.00	0.00	0.22	0.12	61	215
74		14.24		14.23		33.188	24.740	321.7	0.250	5.82	99.6	2.5	0.35	0.2	0.10	0.00	0.29	0.27	74	214
75	ISL	13.74	D	13.73		33.132	D 24.800	315.9	0.253	5.82	98.6	2.6	0.36	0.3	0.10	0.00	0.28	0.27	75	
86		12.44		12.43		33.028	24.977	299.1	0.287	5.84	96.2	3.5	0.51	2.0	0.07	0.00	0.19	0.26	86	213
100		11.56		11.55		32.921	25.059	291.5	0.328	5.80	93.7	4.6	0.64	3.9	0.01	0.01	0.13	0.19	100	212
111		10.89		10.88		32.883	25.150	283.0	0.360	5.77	91.8	5.7	0.75	5.7	0.01	0.02	0.08	0.11	111	211
125		10.87		10.85		33.013	25.255	273.4	0.399	5.60	89.2	6.6	0.80	6.8	0.01	0.02	0.05	0.06	126	210
142		10.39		10.37		33.280	25.546	245.9	0.443	5.13	81.0	10.3	1.01	10.9	0.00	0.03	0.01	0.02	143	209
150	ISL	10.20	D	10.18		33.382	D 25.658	235.4	0.462	4.97	78.2	12.0	1.09	12.5	0.00	0.02	0.01	0.02	151	
167		9.60		9.58		33.529	25.873	215.2	0.501	4.69	72.9	15.5	1.25	15.3	0.00	0.00	0.01	0.01	168	208
200		9.02		9.00		33.830	26.203	184.4	0.567	4.18	64.2	22.5	1.51	20.0	0.00	0.00	0.00	0.01	201	207
229		8.58		8.56		33.947	26.363	169.6	0.618	3.56	54.2	29.3	1.77	23.8	0.00	0.00			230	206
250	ISL	8.39	D	8.36		34.006	D 26.439	162.8	0.653	2.55	D 38.7	34.8	2.00	26.9	0.00	0.00			251	
269		7.99		7.96		34.013	26.504	156.7	0.683	2.45	36.8	39.5	2.19	29.4	0.00	0.00			270	205
300	ISL	7.97	D	7.94		34.090	D 26.568	151.2	0.731	1.84	27.6	44.6	2.40	31.6	0.00	0.00			302	
320		7.75		7.72		34.106	26.613	147.1	0.761	1.59	23.8	47.4	2.49	32.4	0.00	0.00			322	204
378		6.68		6.65		34.047	26.716	137.5	0.843	1.71	24.9	56.9	2.58	34.4	0.00	0.00			380	203
400	ISL	6.46	D	6.42		34.058	D 26.754	134.1	0.873	1.51	21.9	60.3	2.67	35.5	0.00	0.00			402	
439		6.28		6.24		34.098	26.809	129.2	0.925	1.09	15.7	66.3	2.84	37.3	0.00	0.00			442	202
500	ISL	5.78	D	5.74		34.144	D 26.909	120.1	1.001	0.77	11.0	75.3	2.99	39.1	0.00	0.00			503	
512		5.72		5.68		34.148	26.920	119.2	1.015	0.71	10.1	77.1	3.02	39.4	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 0901 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.1 N	124 19.8 W	21/01/09	1736 UTC	4594 m	050 07 kn	320 04 06	2	1014.6 mb	14.9 C	13.0 C	14m	8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.94		13.94		33.109	24.739	319.6	0.000	6.17	104.9	2.8	0.39	0.2	0.02	0.03	0.60	0.14	0	
2	A	13.94		13.94		33.109	24.739	319.7	0.006	6.17	104.9	2.8	0.39	0.2	0.02	0.03	0.60	0.14	2	220
8	A	13.94		13.94		33.110	24.740	319.7	0.026	6.16	104.8	2.8	0.38	0.2	0.02	0.02	0.63	0.12	8	219
10	ISL	13.91	D	13.91		33.104	D 24.742	319.6	0.032	6.19	105.2	2.9	0.38	0.2	0.02	0.02	0.69	0.14	10	
18	A	13.67		13.67		33.115	24.800	314.4	0.057	6.27	106.0	3.1	0.40	0.2	0.03	0.03	0.88	0.24	18	218
20	ISL	13.57	D	13.57		33.108	D 24.815	313.0	0.064	6.23	105.1	3.1	0.41	0.4	0.04	0.04	0.84	0.27	20	
27	A	13.39		13.39		33.114	24.856	309.2	0.085	6.07	102.1	3.1	0.46	1.1	0.08	0.07	0.63	0.33	27	217
30	ISL	13.32	D	13.32		33.107	D 24.865	308.5	0.095	6.02	101.1	3.1	0.47	1.3	0.11	0.10	0.54	0.32	30	
39	A	13.29		13.28		33.115	24.877	307.5	0.122	5.94	99.7	3.1	0.50	1.6	0.17	0.18	0.32	0.24	39	216
50		13.16		13.15		33.118	24.906	305.1	0.156	5.97	99.9	3.3	0.53	2.0	0.18	0.22	0.29	0.20	50	215
61	A	13.08		13.07		33.129	24.930	303.1	0.190	5.88	98.2	3.6	0.56	2.4	0.25	0.25	0.20	0.16	61	214
71		12.13		12.12		33.042	25.047	292.1	0.219	5.72	93.6	5.1	0.72	5.1	0.13	0.01	0.12	0.11	71	213
75	ISL	11.21	D	11.20		32.943	D 25.139	283.3	0.231	5.63	90.3	6.1	0.82	6.6	0.09	0.01	0.10	0.10	75	
85		10.53		10.52		32.991	25.296	268.5	0.258	5.37	84.9	9.2	1.06	10.4	0.01	0.01	0.06	0.08	85	212
100	ISL	10.10	D	10.09		33.221	D 25.548	244.7	0.297	4.90	76.8	13.8	1.30	14.8	0.01	0.01	0.03	0.04	100	
101		10.10		10.09		33.228	25.554	244.2	0.299	4.86	76.2	14.1	1.31	15.1	0.01	0.01	0.03	0.04	101	211
120		10.38		10.37		33.553	25.760	225.1	0.344	3.90	61.7	18.9	1.60	19.6	0.01	0.00	0.02	0.06	121	210
125	ISL	10.21	D	10.20		33.589	D 25.818	219.8	0.355	3.79	59.7	19.7	1.65	20.3	0.01	0.00	0.02	0.06	126	
139		9.88		9.86		33.670	25.937	208.7	0.385	3.60	56.3	22.0	1.75	22.0	0.00	0.00	0.01	0.05	140	209
150	ISL	9.44	D	9.42		33.761	D 26.080	195.2	0.407	3.44	53.3	24.8	1.84	23.5	0.00	0.00	0.01	0.04	151	
169		8.75		8.73		33.830	26.244	179.8	0.443	3.19	48.7	29.7	1.96	25.8	0.00	0.00	0.00	0.03	170	208
200	ISL	8.37	D	8.35		33.930	D 26.381	167.2	0.497	2.95	44.7	33.6	2.04	27.4	0.00	0.00	0.00	0.02	201	
203		8.35		8.33		33.939	26.392	166.3	0.502	2.91	44.1	33.9	2.05	27.5	0.00	0.00	0.00	0.02	204	207
229		7.99		7.97		34.013	26.504	156.0	0.544	2.21	33.2	39.3	2.26	30.2	0.00	0.00			230	206
250	ISL	7.82	D	7.80		34.028	D 26.541	152.8	0.576	1.93	28.9	42.5	2.36	31.2	0.00	0.00			251	
268		7.77		7.74		34.075	26.585	148.9	0.603	1.79	26.8	44.9	2.42	31.8	0.00	0.00			270	205
300	ISL	7.54	D	7.51		34.127	D 26.660	142.3	0.650	1.47	21.9	49.8	2.55	33.3	0.00	0.00			302	
317		7.28		7.25		34.114	26.687	139.8	0.674	1.33	19.7	52.6	2.62	34.1	0.00	0.00			319	204
379		6.51		6.48		34.128	26.802	129.2	0.757	1.05	15.3	63.4	2.83	36.6	0.00	0.00			381	203
400	ISL	6.18	D	6.14		34.111	D 26.832	126.5	0.784	0.95	13.7	66.3	2.88	37.2	0.00	0.00			403	
438		6.03		5.99		34.154	26.885	121.8	0.831	0.78	11.2	71.3	2.96	38.2	0.00	0.00			441	202
500	ISL	5.46	D	5.42		34.178	D 26.975	113.6	0.904	0.57	8.1	80.9	3.08	39.9	0.00	0.00			503	
516		5.44		5.40		34.196	26.992	112.2	0.922	0.52	7.4	83.4	3.11	40.4	0.00	0.00			520	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 27.6 N	120 29.2 W	20/01/09	0002 UTC	19 m	290 08 kn	290 06 10	1	1018.7 mb	17.2 C	13.0 C		1/8	CS

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.83		13.83		33.377	24.969	297.7	0.000	6.77	115.1	2.0	0.31	0.2	0.04	0.06	4.05	0.48	0	
1		13.83		13.83		33.377	24.969	297.8	0.003	6.77	115.1	2.0	0.31	0.2	0.04	0.06	4.05	0.48	1	205
5		13.66		13.66		33.375	25.002	294.7	0.015	6.73	114.0	2.2	0.33	0.3	0.05	0.08	3.99	0.47	5	204
10		13.32		13.32		33.388	25.081	287.3	0.029	6.21	104.4	3.9	0.53	1.7	0.13	0.28	1.99	0.82	10	202
10		13.38		13.38		33.384	25.066	288.7	0.029										10	203
16		13.08		13.08		33.388	25.129	282.9	0.047	5.79	96.9	5.5	0.66	3.6	0.21	0.32	1.62	0.84	16	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.0 N	120 31.5 W	20/01/09	0046 UTC	77 m	340 04 kn	290 06 11	1	1018.6 mb	16.1 C	12.6 C	15m	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	14.09		14.09		33.370	24.910	303.4	0.000	6.93	118.4	0.6	0.21	0.1	0.00	0.01	0.81	0.18	0	
1		14.09		14.09		33.370	24.910	303.4	0.003	6.93	118.4	0.6	0.21	0.1	0.00	0.01	0.81	0.18	1	209
5		13.94		13.94		33.373	24.943	300.3	0.015	6.96	118.6	0.6	0.21	0.1	0.00	0.00	0.80	0.19	5	208
10		13.61		13.61		33.365	25.005	294.6	0.030	7.01	118.6	1.3	0.29	0.1	0.02	0.09	6.39	0.57	10	207
20		13.17		13.17		33.379	25.105	285.4	0.059	6.12	102.6	4.2	0.48	1.7	0.14	0.21	1.95	0.87	20	206
30		12.91		12.91		33.390	25.165	279.9	0.087	5.79	96.5	5.7	0.63	3.7	0.22	0.36	1.08	0.81	30	205
40		12.51		12.50		33.419	25.266	270.5	0.115	5.20	86.0	8.8	0.90	7.5	0.32	0.54	0.43	0.49	40	204
50		12.29		12.28		33.431	25.318	265.8	0.142	4.88	80.3	10.4	1.04	9.7	0.32	0.26	0.32	0.40	50	203
60		12.23		12.22		33.450	25.344	263.6	0.168	4.94	81.2	10.6	1.03	9.7	0.30	0.22	0.45	0.48	60	202
70		12.11		12.10		33.472	25.384	260.0	0.194	4.84	79.4	11.5	1.10	10.4	0.28	0.28	0.48	0.54	70	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 19.0 N	120 48.2 W	20/01/09	0357 UTC	841 m	110 08 kn			1019.1 mb	15.2 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	13.39		13.39		33.337	25.027	292.2	0.000	6.38		107.4	5.0	0.46	1.3	0.08	0.02	0.93	0.16	0	
1		13.39		13.39		33.337	25.028	292.2	0.003	6.38		107.4	5.0	0.46	1.3	0.08	0.02	0.93	0.16	1	221
10		13.18		13.18		33.333	25.067	288.7	0.029	6.35		106.5	5.1	0.48	1.5	0.09	0.02	1.02	0.20	10	219
10		13.19		13.19		33.332	25.064	288.9	0.029											10	220
20		13.00		13.00		33.374	25.135	282.5	0.058	6.09		101.7	6.2	0.57	2.8	0.13	0.04	1.36	0.51	20	218
30		12.66		12.66		33.421	25.238	272.9	0.085	5.52		91.6	8.2	0.77	5.5	0.23	0.27	0.71	0.49	30	217
40		12.45		12.44		33.440	25.293	267.9	0.112	5.23		86.4	9.5	0.89	7.2	0.27	0.25	0.61	0.42	40	216
50		11.60		11.59		33.520	25.516	246.9	0.138	4.32		70.1	14.2	1.27	13.6	0.23	0.01	0.25	0.27	50	215
60		11.18		11.17		33.566	25.628	236.4	0.162	3.95		63.6	16.5	1.44	16.5	0.10	0.01	0.17	0.21	60	214
70		10.73		10.72		33.685	25.801	220.2	0.185	3.43		54.7	20.3	1.64	19.3	0.12	0.01	0.11	0.15	70	213
75	ISL	10.65	D	10.64		33.701	D 25.828	217.8	0.196	3.23		51.4	21.8	1.72	20.4	0.11	0.01	0.09	0.13	75	
86		10.23		10.22		33.801	25.979	203.6	0.219	2.92		46.1	24.3	1.85	22.3	0.06	0.00	0.05	0.11	86	212
100		10.06		10.05		33.845	26.042	197.9	0.247	2.76		43.4	26.0	1.93	23.3	0.04	0.01	0.03	0.09	101	211
121		9.79		9.78		33.913	26.141	188.9	0.288	2.47		38.6	28.8	2.04	25.0	0.03	0.00	0.03	0.09	122	210
125	ISL	9.74	D	9.73		33.916	D 26.152	188.0	0.296	2.42		37.8	29.2	2.06	25.2	0.03	0.00	0.03	0.09	126	
141		9.58		9.56		33.970	26.221	181.7	0.325	2.24		34.9	30.8	2.13	26.0	0.01	0.01	0.02	0.09	142	209
150	ISL	9.38	D	9.36		34.015	D 26.289	175.4	0.341	2.16		33.5	31.7	2.17	26.5	0.01	0.01	0.02	0.08	151	
171		9.26		9.24		34.054	26.339	171.0	0.378	1.99		30.8	34.0	2.25	27.6	0.02	0.01	0.01	0.07	172	208
200		9.01		8.99		34.113	26.426	163.3	0.426	1.74		26.8	37.3	2.35	29.1	0.03	0.00	0.01	0.06	201	207
231		8.75		8.73		34.142	26.490	157.8	0.476	1.58		24.2	40.2	2.43	30.0	0.01	0.00			232	206
250	ISL	8.61	D	8.58		34.150	D 26.518	155.4	0.506	1.52		23.2	41.6	2.47	30.5	0.00	0.00			252	
272		8.40		8.37		34.151	26.552	152.5	0.539	1.45		22.0	43.3	2.51	31.1	0.00	0.00			274	205
300	ISL	8.23	D	8.20		34.182	D 26.602	148.2	0.582	1.26		19.1	46.3	2.60	32.0	0.00	0.00			302	
321		8.11		8.08		34.201	26.635	145.4	0.612	1.11		16.7	48.8	2.67	32.7	0.00	0.00			323	204
380		7.53		7.49		34.213	26.730	137.0	0.696	0.90		13.4	55.8	2.82	34.2	0.00	0.00			383	203
400	ISL	7.26	D	7.22		34.225	D 26.778	132.6	0.723	0.77		11.4	60.4	2.90	34.8	0.00	0.00			403	
440		6.77		6.73		34.243	26.860	125.1	0.774	0.51		7.5	70.1	3.06	36.2	0.00	0.00			443	202
500	ISL	6.16	D	6.12		34.280	D 26.969	115.0	0.846	0.36		5.2	79.5	3.17	38.3	0.01	0.00			504	
519		5.99		5.94		34.293	27.001	112.0	0.868	0.31		4.5	82.5	3.20	39.0	0.01	0.00			523	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 9.2 N	121 9.0 W	20/01/09	0807 UTC	2177 m	290 05 kn			1018.6 mb	14.1 C	13.0 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.49		13.49		33.403	25.058	289.2	0.000	6.63		111.9	4.9	0.47	1.2	0.06	0.31	0.78	0.12	0	
1		13.49		13.49		33.403	25.058	289.2	0.003	6.63		111.9	4.9	0.47	1.2	0.06	0.31	0.78	0.12	1	221
10		13.14		13.14		33.407	25.132	282.5	0.029	6.75		113.1	4.4	0.46	1.2	0.07	0.21	1.13	0.27	10	220
15		12.68		12.68		33.412	25.227	273.6	0.043	6.58		109.2	4.4	0.53	2.3	0.12	0.23	1.66	0.56	15	219
20		12.50		12.50		33.411	25.261	270.5	0.056	5.96		98.5	7.2	0.72	5.0	0.23	0.21	1.45	0.56	20	218
30		12.31		12.31		33.428	25.311	266.0	0.083	5.71		94.0	8.1	0.83	6.5	0.35	0.28	1.34	0.64	30	217
40		12.14		12.13		33.440	25.353	262.2	0.109	5.48		89.9	9.1	0.92	7.8	0.43	0.27	1.28	0.43	40	216
50		11.66		11.65		33.457	25.456	252.6	0.135	4.89		79.4	12.0	1.13	11.8	0.36	0.00	0.38	0.39	50	215
61		10.68		10.67		33.552	25.706	229.0	0.162	3.91		62.2	18.1	1.55	18.8	0.02	0.00	0.13	0.19	61	214
70		10.41		10.40		33.622	25.808	219.5	0.182	3.61		57.1	20.3	1.66	20.5	0.01	0.00	0.09	0.15	70	213
75	ISL	10.29	D	10.28		33.629	D 25.834	217.1	0.193	3.49		55.1	21.6	1.73	21.6	0.01	0.00	0.07	0.15	75	
85		9.80		9.79		33.704	25.975	203.8	0.214	3.31		51.7	23.9	1.85	23.5	0.01	0.00	0.03	0.14	85	212
100	ISL	9.59	D	9.58		33.794	D 26.081	194.1	0.244	3.04		47.3	26.1	1.94	24.8	0.01	0.00	0.02	0.10	101	
101		9.60		9.59		33.792	26.078	194.5	0.246	3.02		47.0	26.2	1.94	24.8	0.01	0.00	0.02	0.10	102	211
119		9.33		9.32		33.894	26.202	183.0	0.279	2.70		41.8	29.1	2.02	26.0	0.00	0.00	0.03	0.09	120	210
125	ISL	9.26	D	9.25		33.908	D 26.224	181.0	0.290	2.63		40.7	29.8	2.04	26.2	0.00	0.00	0.03	0.09	126	
140		9.13		9.11		33.964	26.289	175.1	0.317	2.49		38.4	31.4	2.08	26.8	0.00	0.00	0.01	0.08	141	209
150	ISL	8.84	D	8.82		33.961	D 26.333	171.1	0.334	2.63	D	40.3	32.6	2.11	27.3	0.00	0.00	0.00	0.07	151	
167		8.67		8.65		34.009	26.397	165.3	0.363	2.35		35.9	34.8	2.15	28.2	0.00	0.00	0.00	0.06	168	208
200		8.35		8.33		34.054	26.482	157.7	0.416	2.10		31.8	38.6	2.26	29.9	0.00	0.00	0.00	0.06	201	207
229		8.00		7.98		34.068	26.546	152.1	0.461	1.86		28.0	42.8	2.37	31.3	0.00	0.00			230	206
250	ISL	7.83	D	7.81		34.100	D 26.596	147.6	0.493	1.64		24.6	45.9	2.48	32.4	0.00	0.00			252	
268		7.66		7.63		34.118	26.635	144.1	0.519	1.44		21.5	48.6	2.57	33.3	0.00	0.00			270	205
300	ISL	7.45	D	7.42		34.157	D 26.696	138.8	0.564	1.14		16.9	53.5	2.69	34.4	0.00	0.00			302	
318		7.29		7.26		34.176	26.734	135.4	0.589	1.00		14.8	56.3	2.75	35.0	0.00	0.00			320	204
377		6.71		6.68		34.215	26.845	125.4	0.666	0.71		10.4	65.7	2.93	37.0	0.00	0.00			379	203
400	ISL	6.54	D	6.50		34.227	D 26.877	122.6	0.694	0.60		8.7	68.7	2.98	37.5	0.00	0.00			403	
437		6.39		6.35		34.273	26.933	117.7	0.739	0.44		6.4	73.1	3.05	38.1	0.00	0.00			440	202
500	ISL	6.07	D	6.03		34.290	D 26.989	113.0	0.811	0.35		5.0	79.8	3.13	39.5	0.00	0.00			504	
520		5.90		5.85		34.303	27.020	110.1	0.834	0.32		4.6	81.9	3.16	39.9	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 0901 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 48.7 N	121 51.9 W	20/01/09	1724	UTC	3666 m	010	04 kn	290 06 10	1	1019.3 mb	14.2 C	13.0 C	15m	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	13.09		13.09		33.105	24.908	303.5	0.000	6.24	104.3	4.5	0.52	2.2	0.07	0.05	0.63	0.17	0	
2	A	13.09		13.09		33.105	24.908	303.6	0.006	6.24	104.3	4.5	0.52	2.2	0.07	0.05	0.63	0.17	2	220
9	A	12.88		12.88		33.095	24.942	300.6	0.027	6.25	104.0	4.6	0.53	2.5	0.07	0.05	0.72	0.17	9	219
10	ISL	12.63	D	12.63		33.094	D 24.990	296.0	0.030	6.23	103.1	4.7	0.55	2.7	0.07	0.05	0.74	0.18	10	
19	A	11.84		11.84		33.053	25.108	285.0	0.056	6.04	98.3	5.7	0.70	4.8	0.13	0.03	0.83	0.24	19	218
20	ISL	11.89	D	11.89		33.079	D 25.119	284.0	0.059	6.03	98.2	5.8	0.71	5.0	0.15	0.03	0.80	0.24	20	
30	ISL	11.89	D	11.89		33.179	D 25.197	276.8	0.087	5.93	96.6	6.5	0.77	6.0	0.31	0.03	0.48	0.27	30	
31	A	11.88		11.88		33.185	25.203	276.2	0.090	5.93	96.6	6.5	0.77	6.1	0.32	0.03	0.44	0.27	31	217
41	A	11.89		11.88		33.225	25.233	273.6	0.117	5.92	96.5	6.9	0.79	6.3	0.34	0.06	0.35	0.25	41	216
50	ISL	12.21	D	12.20		33.337	D 25.260	271.3	0.142	5.91	97.1	7.1	0.79	6.3	0.36	0.18	0.28	0.22	50	
54		12.11		12.10		33.323	25.268	270.6	0.153	5.91	96.9	7.2	0.79	6.3	0.36	0.21	0.25	0.21	54	215
65	A	11.58		11.57		33.254	25.313	266.5	0.182	5.72	92.6	8.1	0.89	8.1	0.33	0.02	0.16	0.18	65	214
75		10.73		10.72		33.212	25.433	255.3	0.208	5.29	84.1	10.8	1.10	11.6	0.07	0.00	0.10	0.13	75	213
85		9.86		9.85		33.285	25.638	235.8	0.233	4.70	73.3	15.4	1.39	16.4	0.01	0.00	0.03	0.08	85	212
100		9.60		9.59		33.505	25.853	215.7	0.267	4.14	64.3	20.0	1.60	20.2	0.00	0.00	0.01	0.05	101	211
119		9.41		9.40		33.751	26.077	194.9	0.306	3.32	51.4	25.3	1.86	24.1	0.00	0.00	0.00	0.04	120	210
125	ISL	9.36	D	9.35		33.769	D 26.099	192.9	0.318	3.21	49.7	26.3	1.90	24.7	0.00	0.00	0.00	0.04	126	
138		9.13		9.12		33.839	26.191	184.3	0.342	3.06	47.1	28.1	1.96	25.6	0.00	0.00	0.00	0.03	139	209
150	ISL	8.89	D	8.87		33.901	D 26.278	176.3	0.364	2.92	44.8	29.9	1.99	26.3	0.00	0.00	0.00	0.03	151	
168		8.65		8.63		33.952	26.355	169.2	0.395	2.69	41.0	32.6	2.05	27.3	0.00	0.00	0.00	0.04	169	208
200		8.50		8.48		34.047	26.453	160.5	0.448	2.04	31.0	37.2	2.28	29.6	0.00	0.00	0.00	0.05	201	207
227		8.18		8.16		34.079	26.527	153.9	0.490	1.80	27.2	41.5	2.37	31.0	0.00	0.00			228	206
250	ISL	8.03	D	8.00		34.122	D 26.584	148.8	0.525	1.48	22.3	45.3	2.51	32.3	0.00	0.00			251	
268		7.89		7.86		34.142	26.620	145.6	0.551	1.26	18.9	48.1	2.61	33.2	0.00	0.00			270	205
300	ISL	7.40	D	7.37		34.117	D 26.672	141.0	0.597	1.20	17.8	52.0	2.67	34.2	0.00	0.00			302	
317		7.31		7.28		34.136	26.700	138.6	0.621	1.17	17.3	53.9	2.69	34.6	0.00	0.00			319	204
377		6.76		6.73		34.163	26.797	130.0	0.701	0.91	13.3	62.3	2.85	36.4	0.00	0.00			379	203
400	ISL	6.50	D	6.46		34.174	D 26.840	126.0	0.731	0.79	11.5	65.8	2.92	37.1	0.00	0.00			403	
437		6.19		6.15		34.196	26.898	120.7	0.777	0.61	8.8	71.6	3.01	38.3	0.00	0.00			440	202
500	ISL	5.56	D	5.52		34.208	D 26.986	112.6	0.850	0.48	6.8	81.1	3.10	40.1	0.00	0.00			503	
517		5.48		5.44		34.215	27.002	111.3	0.869	0.44	6.2	83.7	3.12	40.6	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 29.2 N	122 32.0 W	20/01/09	2214	UTC	4000 m	360	05 kn	290 06 11	1	1016.0 mb	14.9 C	12.9 C	13m	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	14.15		14.15		32.989	24.603	332.6	0.000	6.12	104.5	2.8	0.40	0.4	0.03	0.04	0.57	0.09	0	
2		14.15		14.15		32.989	24.603	332.6	0.007	6.12	104.5	2.8	0.40	0.4	0.03	0.04	0.57	0.09	2	220
10		13.21		13.21		32.903	24.728	320.9	0.033	6.27	104.9	3.3	0.45	1.2	0.06	0.03	0.61	0.12	10	219
20		12.70		12.70		32.901	24.827	311.8	0.064	6.03	99.8	3.8	0.57	2.7	0.21	0.04	0.41	0.19	20	218
30		11.79		11.79		32.891	24.992	296.3	0.095	5.84	94.8	5.0	0.73	5.1	0.07	0.03	0.19	0.20	30	217
40		10.90		10.90		32.870	25.136	282.7	0.124	5.75	91.6	6.4	0.86	7.1	0.03	0.03	0.15	0.12	40	216
50		11.38		11.37		33.113	25.240	273.1	0.152	5.85	94.3	7.4	0.87	7.6	0.22	0.04	0.26	0.14	50	215
59		11.72		11.71		33.267	25.297	267.9	0.176	5.91	96.0	7.6	0.85	7.2	0.33	0.17	0.22	0.14	59	214
69		10.90		10.89		33.241	25.426	255.9	0.202	5.38	85.9	10.7	1.09	11.3	0.15	0.02	0.11	0.11	69	213
75	ISL	10.47	D	10.46		33.249	D 25.507	248.2	0.217	5.07	80.2	12.6	1.22	13.5	0.08	0.02	0.07	0.10	75	
84		10.18		10.17		33.332	25.621	237.5	0.239	4.64	72.9	15.4	1.41	16.6	0.01	0.02	0.04	0.09	84	212
100	ISL	9.70	D	9.69		33.585	D 25.899	211.4	0.275	4.00	62.3	20.7	1.69	21.3	0.00	0.01	0.01	0.04	100	
101		9.69		9.68		33.596	25.910	210.4	0.277	3.97	61.8	21.0	1.70	21.5	0.00	0.01	0.01	0.04	101	211
119		9.25		9.24		33.733	26.089	193.7	0.313	3.56	55.0	24.7	1.82	23.6	0.01	0.02	0.00	0.03	120	210
125	ISL	9.05	D	9.04		33.777	D 26.155	187.5	0.325	3.56	54.7	25.3	1.81	23.6	0.01	0.02	0.00	0.02	126	
140		8.81		8.80		33.875	26.270	176.8	0.352	3.56	54.5	26.7	1.77	23.5	0.00	0.00	0.00	0.01	141	209
150	ISL	8.64	D	8.62		33.922	D 26.333	171.0	0.370	3.35	51.1	28.7	1.84	24.6	0.00	0.00	0.00	0.01	151	
170		8.39		8.37		33.958	26.400	164.9	0.403	2.97	45.0	32.6	2.00	26.8	0.00	0.00	0.00	0.02	171	208
200	ISL	7.93	D	7.91		33.965	D 26.474	158.2	0.452	3.35	50.3	34.4	1.91	26.0	0.00	0.00	0.00	0.01	201	
201		7.93		7.91		33.972	26.480	157.7	0.453	3.37	50.6	34.5	1.91	26.0	0.00	0.00	0.00	0.01	202	207
230		7.48		7.46		33.982	26.553	151.1	0.498	3.13	46.5	39.5	2.03	27.8	0.00	0.00			231	206
250	ISL	7.34	D	7.32		33.992	D 26.581	148.7	0.528	2.47	36.6	43.6	2.26	30.5	0.00	0.00			251	
269		7.44		7.41		34.058	26.619	145.5	0.556	1.79	26.6	47.5	2.48	33.1	0.00	0.00			271	205
300	ISL	7.45	D	7.42		34.123	D 26.669	141.3	0.600	1.34	19.9	52.4	2.64	34.6	0.00	0.00			302	
318		7.13		7.10		34.129	26.719	136.7	0.625	1.21	17.8	55.0	2.70	35.0	0.00	0.00			320	204
379		6.81		6.77		34.212	26.829	127.0	0.706	0.70	10.2	63.7	2.93	36.6	0.00	0.00			381	203
400	ISL	6.69	D	6.65		34.219	D 26.851	125.2	0.732	0.64	9.3	65.6	2.97	37.1	0.00	0.00			403	
438		6.41		6.37		34.215	26.885	122.2	0.779	0.59	8.6	69.2	3.01	37.9	0.00	0.00			441	202
500	ISL	5.73	D	5.69		34.209	D 26.967	114.7	0.853	0.52	7.4	78.7	3.09	39.8	0.00	0.00			503	
514		5.59		5.55		34.211	26.985	112.9	0.869	0.50	7.1	80.9	3.11	40.2	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 0901 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 8.9 N	123 13.7 W	21/01/09	0418 UTC	4221 m	040 03 kn			1016.0 mb	15.3 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	14.90		14.90		33.100	24.530	339.5	0.000	5.94	103.0	2.3	0.36	0.0	0.00	0.02	0.29	0.07	0	
2		14.90		14.90		33.100	24.530	339.6	0.007	5.94	103.0	2.3	0.36	0.0	0.00	0.02	0.29	0.07	2	220
10	ISL	14.60	D	14.60		33.051	D 24.557	337.3	0.034	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.39	0.05	10	
11		14.60		14.60		33.060	24.563	336.7	0.037	6.00	103.4	2.4	0.36	0.0	0.00	0.02	0.41	0.05	11	219
20	ISL	14.58	D	14.58		33.054	D 24.563	336.9	0.068	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.43	0.05	20	
21		14.58		14.58		33.068	24.574	335.9	0.071	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.43	0.05	21	218
30		14.56		14.56		33.074	24.583	335.3	0.101	6.00	103.3	2.3	0.36	0.0	0.00	0.02	0.50	0.13	30	217
41		14.34		14.33		33.057	24.617	332.4	0.138	5.97	102.3	2.4	0.40	0.3	0.02	0.04	0.51	0.21	41	216
50		14.17		14.16		33.036	24.637	330.8	0.168	5.92	101.1	2.5	0.42	0.6	0.06	0.08	0.41	0.18	50	215
61		13.10		13.09		33.011	24.835	312.1	0.203	5.98	99.9	3.7	0.54	2.3	0.14	0.26	0.30	0.11	61	214
71		12.94		12.93		33.023	24.876	308.5	0.234	5.92	98.5	3.9	0.56	2.7	0.16	0.25	0.27	0.15	71	213
75	ISL	12.63	D	12.62		32.986	D 24.908	305.5	0.246	5.89	97.4	4.0	0.57	2.8	0.13	0.19	0.24	0.15	75	
86		11.64		11.63		32.930	25.051	292.0	0.279	5.81	94.0	4.3	0.64	3.7	0.03	0.01	0.16	0.14	86	212
100	ISL	10.65	D	10.64		32.907	D 25.210	277.0	0.319	5.67	89.8	6.7	0.83	6.9	0.01	0.02	0.09	0.07	100	
101		10.64		10.63		32.912	25.215	276.5	0.322	5.66	89.6	6.9	0.85	7.2	0.01	0.02	0.09	0.07	101	211
121		10.27		10.26		33.174	25.484	251.4	0.375	5.10	80.2	12.0	1.17	12.9	0.01	0.01	0.04	0.05	122	210
125	ISL	10.06	D	10.05		33.273	D 25.596	240.7	0.384	4.94	77.4	13.4	1.25	14.2	0.01	0.01	0.03	0.05	126	
141		9.76		9.74		33.492	25.818	220.0	0.421	4.25	66.2	19.1	1.55	19.2	0.00	0.00	0.02	0.04	142	209
150	ISL	9.56	D	9.54		33.633	D 25.961	206.5	0.440	3.91	60.7	21.7	1.67	21.2	0.00	0.00	0.01	0.04	151	
171		9.22		9.20		33.784	26.134	190.4	0.482	3.27	50.5	26.5	1.88	24.6	0.00	0.00	0.00	0.03	172	208
200	ISL	8.88	D	8.86		33.922	D 26.297	175.5	0.535	2.75	42.1	30.9	2.03	26.9	0.00	0.01	0.00	0.03	201	
201		8.89		8.87		33.924	26.297	175.5	0.537	2.74	42.0	31.0	2.03	26.9	0.00	0.01	0.00	0.03	202	207
230		8.43		8.41		33.976	26.409	165.2	0.586	2.74	41.6	34.0	2.04	27.7	0.00	0.00			231	206
250	ISL	8.15	D	8.12		34.021	D 26.487	158.1	0.619	2.33	35.1	38.1	2.19	29.3	0.00	0.00			251	
270		8.04		8.01		34.073	26.544	153.0	0.650	1.87	28.1	42.6	2.36	31.1	0.00	0.00			272	205
300	ISL	7.58	D	7.55		34.060	D 26.601	147.8	0.695	1.67	24.9	46.9	2.47	32.5	0.00	0.00			302	
320		7.41		7.38		34.079	26.641	144.3	0.724	1.63	24.2	49.7	2.52	33.2	0.00	0.00			322	204
382		6.40		6.37		34.075	26.775	131.8	0.810	1.32	19.1	62.5	2.74	36.5	0.00	0.00			384	203
400	ISL	6.32	D	6.28		34.100	D 26.805	129.1	0.833	1.16	16.8	65.3	2.81	37.2	0.00	0.00			403	
442		6.07		6.03		34.142	26.871	123.3	0.886	0.80	11.5	71.2	2.96	38.4	0.00	0.00			445	202
500	ISL	5.68	D	5.64		34.177	D 26.948	116.4	0.956	0.61	8.7	79.0	3.06	39.9	0.00	0.00			503	
514		5.56		5.52		34.174	26.960	115.3	0.972	0.56	8.0	80.9	3.09	40.2	0.00	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 49.0 N	123 54.4 W	21/01/09	1018 UTC	4439 m	070 08 kn			1015.3 mb	15.1 C	13.1 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.41		14.41		33.176	24.693	324.0	0.000	6.04	103.8	2.5	0.37	0.1	0.00	0.02	0.44	0.12	0	
2		14.41		14.41		33.176	24.693	324.1	0.006	6.04	103.8	2.5	0.37	0.1	0.00	0.02	0.44	0.12	2	220
10		14.17		14.17		33.261	24.809	313.2	0.032	6.01	102.8	2.5	0.38	0.1	0.02	0.02	0.86	0.20	10	219
20		13.76		13.76		33.224	24.866	308.1	0.063	6.23	105.6	2.9	0.39	0.2	0.02	0.05	1.04	0.32	20	218
30		13.62		13.62		33.212	24.885	306.5	0.094	6.26	105.8	3.1	0.40	0.2	0.03	0.12	0.93	0.31	30	217
40		13.38		13.37		33.201	24.925	303.0	0.124	6.06	101.9	3.3	0.46	1.1	0.08	0.14	0.69	0.32	40	216
50		13.39		13.38		33.214	24.934	302.4	0.155	6.01	101.1	3.2	0.47	1.3	0.10	0.21	0.59	0.28	50	215
60		13.29		13.28		33.209	24.950	301.1	0.185	5.98	100.4	3.4	0.50	1.6	0.12	0.29	0.40	0.23	60	214
70		13.19		13.18		33.214	24.974	299.1	0.215	5.89	98.7	3.8	0.54	2.1	0.17	0.34	0.28	0.19	70	213
75	ISL	13.09	D	13.08		33.219	D 24.998	297.0	0.230	5.80	97.0	4.4	0.61	3.2	0.15	0.23	0.21	0.15	75	
84		11.71		11.70		33.038	25.122	285.2	0.256	5.59	90.7	6.1	0.78	6.1	0.09	0.01	0.10	0.09	84	212
100	ISL	10.54	D	10.53		33.222	D 25.474	251.9	0.299	5.05	79.9	11.1	1.14	12.3	0.01	0.01	0.04	0.05	100	
101		10.55		10.54		33.185	25.444	254.8	0.301	5.01	79.3	11.5	1.16	12.7	0.01	0.01	0.04	0.05	101	211
119		10.03		10.02		33.519	25.793	221.9	0.344	4.23	66.3	18.1	1.50	18.5	0.01	0.01	0.01	0.03	120	210
125	ISL	9.89	D	9.88		33.633	D 25.906	211.3	0.357	3.84	60.1	20.5	1.63	20.3	0.01	0.01	0.01	0.03	126	
139		9.71		9.69		33.808	26.073	195.8	0.386	3.02	47.1	25.5	1.88	23.9	0.00	0.00	0.00	0.04	140	209
150	ISL	9.39	D	9.37		33.874	D 26.177	186.0	0.407	2.90	44.9	28.0	1.93	25.3	0.00	0.00	0.00	0.04	151	
169		8.93		8.91		33.938	26.301	174.5	0.441	2.69	41.3	30.8	2.03	26.4	0.00	0.00	0.00	0.03	170	208
200	ISL	8.59	D	8.57		33.977	D 26.385	167.0	0.494	2.58	39.3	33.6	2.07	27.5	0.00	0.00	0.00	0.02	201	
201		8.59		8.57		33.983	26.390	166.6	0.496	2.58	39.3	33.7	2.07	27.5	0.00	0.00	0.00	0.02	202	207
229		8.57		8.55		34.074	26.464	160.0	0.541	1.87	28.5	38.5	2.31	29.9	0.00	0.00			230	206
250	ISL	8.32	D	8.29		34.088	D 26.514	155.6	0.574	1.93	29.2	40.9	2.34	30.6	0.00	0.00			251	
267		7.94		7.91		34.056	26.546	152.7	0.601	1.97	29.6	42.6	2.36	31.0	0.00	0.00			269	205
300	ISL	7.77	D	7.74		34.118	D 26.620	146.2	0.650	1.66	24.8	47.2	2.48	32.5	0.00	0.00			302	
318		7.55		7.52		34.112	26.647	143.8	0.676	1.44	21.4	49.8	2.56	33.3	0.00	0.00			320	204
377		6.97		6.93		34.135	26.747	134.9	0.758	1.12	16.4	57.8	2.74	35.3	0.00	0.00			379	203
400	ISL	6.71	D	6.67		34.142	D 26.787	131.2	0.789	1.02	14.9	61.4	2.80	36.2	0.00	0.00			403	
437		6.35		6.31		34.146	26.838	126.6	0.837	0.86	12.4	67.1	2.89	37.5	0.00	0.00			440	202
500	ISL	6.18	D	6.14		34.245	D 26.939	117.8	0.914	0.51	7.4	74.1	3.06	38.4	0.00	0.00			503	
517		6.16		6.11		34.257	26.951	116.9	0.933	0.41	5.9	76.0	3.10	38.6	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 24.2 N	119 48.5 W	19/01/09	1939 UTC	20 m	230 03 kn	180 01 07	1	1020.4 mb	16.9 C	15.0 C		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	13.79	13.79		33.381	24.980	296.7	0.000	6.93	117.7	1.3	0.22	0.1	0.00	0.01	1.42	0.40	0	
1		13.79	13.79		33.381	24.980	296.7	0.003	6.93	117.7	1.3	0.22	0.1	0.00	0.01	1.42	0.40	1	205
5		13.69	13.69		33.382	25.002	294.8	0.015	6.91	117.1	1.5	0.21	0.1	0.01	0.03	1.67	0.55	5	204
10		13.38	13.38		33.373	25.058	289.6	0.029	6.29	105.9	3.3	0.42	1.0	0.10	0.43	2.37	0.93	10	202
10		13.38	13.38		33.373	25.058	289.6	0.029										10	203
13		13.38	13.38		33.371	25.056	289.8	0.038	6.22	104.7	3.6	0.46	1.2	0.11	0.55	2.25	1.15	13	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 17.3 N	120 1.7 W	19/01/09	1729 UTC	581 m	020 03 kn	280 04 11	0	1021.3 mb	16.4 C	13.8 C	11m	0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.16	13.16		33.398	25.121	283.3	0.000	6.20	103.9	5.5	0.52	2.3	0.11	0.05	1.65	0.70	0	
1	A,B	13.16	13.16		33.398	25.121	283.3	0.003	6.20	103.9	5.5	0.52	2.3	0.11	0.05	1.65	0.70	1	224
6	B	13.13	13.13		33.400	25.129	282.7	0.017	6.20	103.9	5.7	0.53	2.5	0.12	0.06	1.74	0.81	6	223
10	ISL	13.11	D 13.11	D	33.397	D 25.130	282.6	0.028	6.15	103.0	5.8	0.54	2.7	0.13	0.07	1.66	0.78	10	
15	B	13.08	13.08		33.404	25.142	281.7	0.042	6.04	101.1	5.9	0.57	3.1	0.15	0.08	1.57	0.75	15	222
20	ISL	13.02	D 13.02	D	33.400	D 25.151	281.0	0.056	5.87	98.1	6.2	0.63	4.0	0.22	0.11	1.31	0.70	20	
22	B	12.88	12.88		33.397	25.176	278.6	0.062	5.79	96.5	6.4	0.66	4.4	0.25	0.12	1.19	0.68	22	221
30	ISL	12.69	D 12.69	D	33.420	D 25.231	273.6	0.084	5.38	89.3	7.7	0.82	6.6	0.33	0.23	0.78	0.65	30	
31	B	12.65	12.65		33.429	25.246	272.2	0.087	5.33	88.4	7.9	0.84	6.8	0.34	0.24	0.74	0.65	31	220
41		12.52	12.51		33.441	25.281	269.1	0.114	5.22	86.4	8.7	0.88	7.6	0.37	0.16	0.55	0.55	41	219
48	B	12.29	12.28		33.460	25.340	263.7	0.133	4.95	81.5	10.2	1.00	9.4	0.38	0.01	0.41	0.44	48	218
50	ISL	12.22	D 12.21	D	33.461	D 25.354	262.4	0.138	4.90	80.6	10.5	1.02	9.8	0.37	0.01	0.38	0.41	50	
54		12.17	12.16		33.476	25.375	260.4	0.148	4.81	79.0	11.0	1.06	10.5	0.33	0.01	0.32	0.37	54	217
60		12.04	12.03		33.483	25.406	257.7	0.164	4.67	76.5	11.7	1.10	11.4	0.27	0.00	0.29	0.36	60	216
74		11.55	11.54		33.521	25.526	246.5	0.199	4.24	68.7	14.3	1.32	14.5	0.17	0.00	0.18	0.26	74	215
75	ISL	11.48	D 11.47	D	33.520	D 25.539	245.4	0.202	4.21	68.2	14.5	1.33	14.7	0.16	0.00	0.17	0.25	75	
100		10.85	10.84		33.640	25.746	226.2	0.261	3.53	56.4	18.8	1.62	19.3	0.01	0.00	0.05	0.16	101	214
119		10.27	10.26		33.793	25.966	205.6	0.302	2.89	45.6	23.8	1.87	22.8	0.01	0.00	0.02	0.13	120	213
125	ISL	10.09	D 10.08	D	33.847	D 26.039	198.7	0.314	2.63	41.4	26.0	1.97	24.0	0.01	0.00	0.02	0.12	126	
139		9.59	9.57		34.017	26.256	178.4	0.340	2.05	31.9	31.2	2.18	26.7	0.01	0.00	0.01	0.09	140	212
150	ISL	9.39	D 9.37	D	34.079	D 26.337	170.8	0.359	1.77	27.5	34.0	2.29	28.0	0.01	0.00	0.01	0.09	151	
169		9.10	9.08		34.131	26.425	162.8	0.391	1.45	22.4	37.8	2.41	29.4	0.01	0.00	0.00	0.09	170	211
199		8.83	8.81		34.159	26.490	157.1	0.439	1.11	17.0	42.7	2.55	30.8	0.01	0.00	0.00	0.08	200	210
200	ISL	8.83	D 8.81	D	34.157	D 26.489	157.3	0.441	1.10	16.9	42.8	2.55	30.9	0.01	0.00			201	
227		8.70	8.68		34.183	26.530	153.9	0.483	0.80	12.2	46.2	2.67	32.1	0.00	0.00			228	209
250	ISL	8.48	D 8.45	D	34.194	D 26.573	150.2	0.518	0.64	9.7	50.1	2.76	32.8	0.00	0.02			252	
268		8.24	8.21		34.214	26.625	145.4	0.544	0.57	8.6	53.2	2.83	33.2	0.00	0.03			270	208
300	ISL	8.01	D 7.98	D	34.217	D 26.662	142.3	0.590	0.53	8.0	56.7	2.91	33.8	0.00	0.01			302	
317		7.85	7.82		34.231	26.697	139.3	0.614	0.52	7.8	58.4	2.94	34.0	0.00	0.00			319	207
377		7.32	7.28		34.239	26.780	132.1	0.696	0.37	5.5	66.9	3.04	34.4	0.00	0.00			379	206
400	ISL	7.09	D 7.05	D	34.243	D 26.816	128.9	0.726	0.30	4.4	71.4	3.11	34.3	0.00	0.00			403	
438		6.85	6.81		34.251	26.855	125.5	0.774	0.19	2.8	78.8	3.21	33.6	0.00	0.00			441	205
475		6.72	6.68		34.254	26.875	124.1	0.820	0.13	1.9	84.6	3.25	32.3	0.00	0.00			478	204
500	ISL	6.66	D 6.61	D	34.254	D 26.884	123.6	0.851	0.09	1.3	89.7	3.31	31.0	0.00	0.00			503	
511		6.62	6.57		34.255	26.890	123.1	0.865	0.08	1.2	91.7	3.34	30.4	0.00	0.00			515	203
541		6.56	6.51		34.256	26.899	122.7	0.901	0.07	1.0	94.7	3.37	29.4	0.00	0.00			545	202
565		6.55	6.50		34.259	26.903	122.6	0.931	0.07	1.0	97.3	3.40	28.1	0.01	0.00			569	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 15.6 N	119 19.6 W	19/01/09	0833 UTC	23 m	060 17 kn			1019.8 mb	21.0 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	13.36	13.36		33.413	25.092	286.0	0.000	6.19	104.2	5.0	0.49	1.5	0.12	0.39	2.45	1.34	0	
2		13.36	13.36		33.413	25.092	286.0	0.006	6.19	104.2	5.0	0.49	1.5	0.12	0.39	2.45	1.34	2	205
5		13.36	13.36		33.413	25.093	286.1	0.014	6.19	104.2	5.1	0.50	1.5	0.12	0.38	2.45	1.34	5	204
9		13.38	13.38		33.412	25.088	286.7	0.026										9	203
10		13.38	13.38		33.412	25.088	286.7	0.029	6.19	104.3	5.0	0.50	1.5	0.12	0.36	2.63	1.24	10	202
15		13.38	13.38		33.416	25.091	286.5	0.043	6.19	104.3	5.0	0.56	1.5	0.12	0.40	2.88	1.53	15	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 24.8 W	19/01/09	0944 UTC	38 m	060 13 kn			1020.3 mb	17.3 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	13.61	13.61	33.384	25.019	292.9	0.000	6.13	103.7	4.8	0.45	1.4	0.07	0.09	0.51	0.20	0	
2		13.61	13.61	33.384	25.019	293.0	0.006	6.13	103.7	4.8	0.45	1.4	0.07	0.09	0.51	0.20	2	206
5		13.60	13.60	33.388	25.025	292.6	0.015	6.14	103.9	4.8	0.45	1.4	0.07	0.09	0.47	0.32	5	205
9		13.60	13.60	33.383	25.021	293.0	0.026										9	204
10		13.54	13.54	33.383	25.033	291.9	0.029	6.13	103.6	5.0	0.48	1.7	0.08	0.07	0.60	0.21	10	203
20		13.29	13.29	33.387	25.087	287.1	0.058	6.06	101.9	5.9	0.55	2.6	0.12	0.08	1.18	0.39	20	202
29		13.25	13.25	33.395	25.101	285.9	0.084	5.98	100.4	6.0	0.60	2.6	0.14	0.47	1.51	0.81	29	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 10.7 N	119 30.1 W	19/01/09	1151 UTC	117 m	300 07 kn			1019.8 mb	15.6 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	13.36	13.36	33.379	25.066	288.5	0.000	6.15	103.5	5.2	0.52	2.0	0.09	0.09	0.72	0.20	0	
2		13.36	13.36	33.379	25.066	288.5	0.006	6.15	103.5	5.2	0.52	2.0	0.09	0.09	0.72	0.20	2	212
9		13.36	13.36	33.376	25.064	288.9	0.026										9	211
10		13.36	13.36	33.377	25.065	288.9	0.029	6.16	103.7	5.3	0.50	2.1	0.09	0.08	0.73	0.19	10	210
19		13.25	13.25	33.369	25.081	287.6	0.055	6.19	103.9	5.5	0.53	2.4	0.10	0.09	0.84	0.16	19	209
20	ISL	13.25 D	13.25	33.366 D	25.079	287.8	0.058	6.18	103.8	5.5	0.53	2.4	0.10	0.10	0.85	0.17	20	
30		12.92	12.92	33.366	25.144	281.8	0.086	6.07	101.2	5.9	0.60	3.5	0.15	0.14	0.92	0.29	30	208
40		12.53	12.52	33.387	25.237	273.3	0.114	5.51	91.1	8.0	0.80	6.6	0.26	0.13	0.66	0.31	40	207
49		11.82	11.81	33.458	25.427	255.4	0.138	4.53	73.8	12.8	1.21	13.2	0.11	0.02	0.25	0.17	49	206
50	ISL	11.70 D	11.69	33.456 D	25.448	253.4	0.140	4.48	72.8	13.0	1.23	13.5	0.10	0.02	0.24	0.17	50	
60		11.33	11.32	33.494	25.545	244.3	0.165	4.20	67.8	14.6	1.37	15.5	0.05	0.01	0.14	0.13	60	205
69		10.98	10.97	33.566	25.664	233.2	0.187	3.85	61.7	16.9	1.52	17.7	0.03	0.00	0.08	0.11	69	204
75	ISL	10.78 D	10.77	33.654 D	25.769	223.4	0.200	3.60	57.5	18.4	1.61	19.0	0.02	0.00	0.05	0.10	75	
85		10.60	10.59	33.720	25.852	215.7	0.222	3.20	50.9	20.9	1.74	20.8	0.01	0.00	0.02	0.10	85	203
100	ISL	10.34 D	10.33	33.819 D	25.974	204.4	0.254	2.79	44.1	24.2	1.90	22.6	0.01	0.00	0.02	0.09	101	
101		10.33	10.32	33.826	25.981	203.7	0.256	2.77	43.8	24.4	1.91	22.7	0.01	0.00	0.02	0.09	102	202
111		10.16	10.15	33.847	26.027	199.6	0.276	2.66	41.9	25.9	1.96	23.5	0.02	0.00	0.02	0.11	112	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 52.7 N	120 7.9 W	18/01/09	2015 UTC	100 m	080 09 kn	100 03 09	0	1021.4 mb	18.8 C	14.2 C	12m	0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	12.78	12.78	33.463	25.246	271.3	0.000	6.04	100.5	5.9	0.66	4.2	0.14	0.21	4.11	0.88	0	
2		12.78	12.78	33.463	25.246	271.4	0.005	6.04	100.5	5.9	0.66	4.2	0.14	0.21	4.11	0.88	2	211
5		12.77	12.77	33.461	25.247	271.4	0.014	6.06	100.8	5.8	0.66	4.1	0.15	0.22	3.78	0.84	5	210
10		12.75	12.75	33.461	25.251	271.2	0.027	6.03	100.3	5.7	0.71	4.1	0.14	0.21	4.12	0.82	10	208
10		12.76	12.76	33.463	25.250	271.2	0.027										10	209
20		12.72	12.72	33.460	25.256	270.9	0.054	6.00	99.7	5.8	0.71	4.2	0.14	0.21	4.46	0.85	20	207
30		12.68	12.68	33.461	25.265	270.3	0.081	5.89	97.8	6.1	0.71	4.5	0.14	0.23	4.21	0.83	30	206
40		12.32	12.31	33.490	25.357	261.8	0.108	5.32	87.7	9.0	0.94	7.4	0.17	0.43	2.42	0.94	40	205
50		11.74	11.73	33.588	25.543	244.4	0.133	4.51	73.5	13.8	1.21	12.3	0.18	0.35	0.85	0.65	50	204
60		11.28	11.27	33.632	25.662	233.3	0.157	3.96	63.9	17.6	1.44	16.0	0.17	0.16	0.37	0.57	60	203
70		10.78	10.77	33.706	25.809	219.5	0.180	3.45	55.1	20.8	1.66	19.1	0.13	0.04	0.19	0.38	70	202
75	ISL	10.56 D	10.55	33.749 D	25.881	212.7	0.191	3.32	52.8	21.6	1.71	19.9	0.11	0.03	0.16	0.35	75	
86		10.41	10.40	33.780	25.931	208.2	0.214	3.04	48.2	23.5	1.82	21.6	0.08	0.02	0.09	0.27	86	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 43.9 N	120 23.8 W	18/01/09	1744 UTC	814 m	070 05 kn	360 04 09	0	1022.6 mb	17.8 C	13.7 C	9m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.30		13.30		33.338	25.046	290.4	0.000	6.34	106.6	4.8	0.48	1.6	0.06	0.05	1.53	0.39	0	
1	A	13.30		13.30		33.338	25.046	290.4	0.003	6.34	106.6	4.8	0.48	1.6	0.06	0.05	1.53	0.39	1	223
5	A	13.29		13.29		33.340	25.050	290.1	0.015	6.34	106.5	5.0	0.49	1.5	0.06	0.04	1.55	0.41	5	222
10	ISL	13.24	D	13.24		33.337	D 25.058	289.5	0.029	6.33	106.3	5.0	0.52	1.7	0.07	0.03	1.68	0.42	10	
12	A	13.19		13.19		33.334	25.066	288.8	0.035	6.32	106.0	5.0	0.53	1.8	0.07	0.03	1.72	0.42	12	220
12		13.20		13.20		33.334	25.064	289.0	0.035										12	221
18	A	12.99		12.99		33.325	25.099	285.9	0.052	6.20	103.5	5.2	0.58	2.4	0.09	0.04	1.56	0.43	18	219
20	ISL	13.02	D	13.02		33.320	D 25.089	286.9	0.058	6.10	101.9	5.6	0.62	3.0	0.11	0.05	1.38	0.42	20	
26	A	12.72		12.72		33.347	25.169	279.4	0.075	5.83	96.8	6.6	0.73	4.7	0.16	0.07	0.89	0.41	26	218
30	ISL	12.72	D	12.72		33.347	D 25.169	279.5	0.086	5.81	96.5	6.8	0.75	4.7	0.16	0.08	0.90	0.42	30	
31		12.73		12.73		33.354	25.172	279.2	0.089	5.81	96.5	6.8	0.75	4.7	0.16	0.08	0.90	0.42	31	217
38	A	12.75		12.74		33.364	25.176	279.0	0.108	5.76	95.7	6.7	0.76	4.8	0.16	0.07	0.88	0.47	38	216
50		12.58		12.57		33.403	25.240	273.2	0.141	5.43	89.9	8.1	0.85	6.6	0.18	0.13	0.62	0.44	50	215
60		12.10		12.09		33.427	25.351	262.9	0.168	4.98	81.6	10.4	1.05	9.7	0.17	0.02	0.49	0.41	60	214
70		11.01		11.00		33.364	25.502	248.7	0.194	4.73	75.7	13.1	1.29	13.6	0.05	0.00	0.21	0.17	70	213
75	ISL	10.52	D	10.51		33.442	D 25.649	234.7	0.206	4.45	70.5	15.4	1.43	16.0	0.04	0.00	0.13	0.11	75	
85		9.88		9.87		33.579	25.865	214.4	0.228	3.86	60.4	20.2	1.69	20.4	0.01	0.00	0.04	0.07	85	212
100		9.53		9.52		33.752	26.058	196.3	0.259	3.37	52.4	24.6	1.87	23.3	0.01	0.00	0.01	0.05	101	211
119		9.26		9.25		33.890	26.210	182.2	0.295	2.79	43.1	29.0	2.04	25.5	0.00	0.00	0.00	0.04	120	210
125	ISL	9.19	D	9.18		33.914	D 26.240	179.5	0.306	2.70	41.7	29.7	2.05	25.9	0.00	0.00	0.00	0.04	126	
138		9.08		9.07		33.947	26.284	175.6	0.329	2.58	39.7	31.0	2.07	26.5	0.00	0.00	0.00	0.04	139	209
150	ISL	8.92	D	8.90		33.977	D 26.333	171.1	0.350	2.43	37.3	33.0	2.13	27.3	0.00	0.00	0.00	0.04	151	
168		8.56		8.54		34.041	26.439	161.3	0.380	2.21	33.7	36.3	2.24	28.6	0.00	0.00	0.00	0.03	169	208
200	ISL	8.37	D	8.35		34.105	D 26.519	154.2	0.430	1.82	27.6	40.7	2.40	30.0	0.01	0.00	0.00	0.03	201	
201		8.37		8.35		34.103	26.517	154.4	0.432	1.81	27.5	40.8	2.40	30.0	0.01	0.00	0.00	0.03	202	207
228		8.35		8.33		34.133	26.544	152.4	0.473	1.62	24.6	42.9	2.48	30.5	0.01	0.01			229	206
250	ISL	8.16	D	8.13		34.163	D 26.597	147.7	0.506	1.42	21.4	46.1	2.57	31.5	0.02	0.01			252	
268		7.97		7.94		34.179	26.638	144.1	0.532	1.25	18.8	48.9	2.65	32.3	0.02	0.01			270	205
300	ISL	7.72	D	7.69		34.200	D 26.691	139.4	0.578	1.05	15.7	52.4	2.76	33.2	0.01	0.02			302	
317		7.62		7.59		34.216	26.719	137.1	0.601	0.97	14.5	54.1	2.81	33.6	0.01	0.02			319	204
377		7.13		7.09		34.248	26.814	128.7	0.681	0.68	10.0	61.9	2.94	35.4	0.00	0.00			379	203
400	ISL	6.83	D	6.79		34.246	D 26.853	125.1	0.710	0.62	9.1	65.1	2.99	36.2	0.00	0.00			403	
437		6.54		6.50		34.249	26.895	121.5	0.756	0.54	7.9	70.1	3.06	37.4	0.00	0.00			440	202
500	ISL	6.21	D	6.17		34.284	D 26.966	115.3	0.830	0.39	5.6	77.0	3.14	38.6	0.00	0.00			503	
514		6.15		6.10		34.299	26.986	113.6	0.846	0.36	5.2	78.5	3.16	38.9	0.00	0.00			518	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 34.6 N	120 45.3 W	18/01/09	1159 UTC	1397 m	240 05 kn			1020.7 mb	11.0 C	10.7 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	13.06		13.06		33.388	25.133	282.1	0.000	6.43	107.6	6.0	0.55	2.2	0.08	0.12	1.65	0.32	0	
2		13.06		13.06		33.388	25.133	282.2	0.006	6.43	107.6	6.0	0.55	2.2	0.08	0.12	1.65	0.32	2	221
9		13.01		13.01		33.388	25.143	281.4	0.025										9	220
10		12.99		12.99		33.386	25.146	281.2	0.028	6.40	106.9	6.1	0.56	2.5	0.09	0.09	1.87	0.47	10	219
20		12.76		12.76		33.385	25.190	277.2	0.056	6.13	101.9	6.5	0.69	3.9	0.18	0.09	1.44	0.55	20	218
30		12.68		12.68		33.386	25.207	275.9	0.084	5.97	99.1	6.9	0.74	4.6	0.24	0.23	0.86	0.48	30	217
40		12.65		12.64		33.387	25.214	275.5	0.111	5.92	98.2	7.0	0.76	4.8	0.26	0.22	0.72	0.48	40	216
50		12.61		12.60		33.389	25.223	274.8	0.139	5.88	97.4	7.0	0.77	5.1	0.28	0.15	0.73	0.31	50	215
60		11.73		11.72		33.435	25.426	255.7	0.165	5.11	83.1	11.1	1.09	10.6	0.21	0.05	0.26	0.23	60	214
69		11.17		11.16		33.475	25.560	243.2	0.188	4.47	71.9	14.8	1.37	15.3	0.06	0.01	0.14	0.15	69	213
75	ISL	11.08	D	11.07		33.482	D 25.581	241.2	0.202	4.16	66.7	16.9	1.51	17.7	0.04	0.01	0.09	0.12	75	
84		10.35		10.34		33.595	25.797	220.8	0.223	3.77	59.6	19.9	1.69	20.5	0.01	0.00	0.04	0.10	84	212
100		9.59		9.58		33.770	26.062	195.9	0.256	3.11	48.4	25.6	1.97	24.7	0.01	0.01	0.01	0.09	101	211
119		9.31		9.30		33.850	26.171	186.0	0.293	2.81	43.5	28.2	2.07	26.1	0.01	0.00	0.00	0.08	120	210
125	ISL	9.16	D	9.15		33.905	D 26.238	179.7	0.304	2.70	41.6	29.0	2.10	26.6	0.01	0.00	0.00	0.08	126	
139		9.06		9.04		33.935	26.277	176.2	0.329	2.46	37.9	31.0	2.18	27.6	0.00	0.01	0.00	0.07	140	209
150	ISL	8.93	D	8.91		33.961	D 26.318	172.5	0.348	2.33	35.8	32.5	2.22	28.2	0.00	0.02	0.00	0.06	151	
169		8.72		8.70		34.015	26.394	165.6	0.380	2.14	32.7	35.0	2.28	29.0	0.00	0.03	0.00	0.05	170	208
200		8.41		8.39		34.060	26.477	158.2	0.430	1.80	27.3	38.8	2.42	30.7	0.00	0.00	0.00	0.05	201	207
228		8.12		8.10		34.101	26.554	151.4	0.473	1.58	23.8	43.1	2.55	32.2	0.01	0.00			229	206
250	ISL	7.65	D	7.63		34.090	D 26.614	145.8	0.506	1.46	21.8	46.6	2.62	33.1	0.01	0.00			252	
268		7.59		7.56		34.115	26.643	143.3	0.532	1.37	20.4	49.4	2.67	33.8	0.00	0.00			270	205
300	ISL	7.32	D	7.29		34.142	D 26.703	138.0	0.577	1.12	16.6	53.6	2.79	34.8	0.00	0.00			302	
317		7.33		7.30		34.171	26.724	136.3	0.600	0.98	14.5	55.6	2.85	35.2	0.00	0.00			319	204
376		6.94		6.90		34.218	26.816	128.3	0.679	0.69	10.1	62.9	3.02	36.8	0.00	0.00			378	203
400	ISL	6.69	D	6.65		34.220	D 26.852	125.1	0.709	0.63	9.2	65.9	3.07	37.4	0.00	0.00			403	
437		6.45		6.41		34.235	26.896	121.3	0.755	0.56	8.1	70.4	3.12	38.2	0.00	0.00			440	202
500	ISL	6.15	D	6.11		34.276	D 26.967	115.1	0.829	0.39	5.6	76.6	3.20	39.2	0.00	0.00			503	
519		6.04		5.99		34.293	26.995	112.7	0.851	0.34	4.9	78.5	3.22	39.5	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 0901 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 14.8 N	121 26.5 W	18/01/09	0538 UTC	3802 m	230 04 kn			1021.1 mb	15.6 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	13.85		13.85		33.225	24.847	309.3	0.000	6.18	105.0	2.7	0.40	0.3	0.02	0.02	0.71	0.02	0	
2		13.85		13.85		33.225	24.847	309.4	0.006	6.18	105.0	2.7	0.40	0.3	0.02	0.02	0.71	0.02	2	222
10	ISL	13.84		13.84		33.225	24.850	309.4	0.031	6.12	103.9	2.7	0.40	0.3	0.02	0.00	0.64	0.17	10	
10		13.85		13.85		33.225	24.848	309.6	0.031										10	221
11		13.84		13.84		33.225	24.850	309.4	0.034	6.11	103.8	2.7	0.40	0.3	0.02	0.00	0.63	0.19	11	220
20	ISL	13.47	D	13.47		33.226	D 24.926	302.4	0.062	6.11	103.0	3.2	0.46	1.2	0.07	0.02	0.68	0.20	20	
21		13.44		13.44		33.233	24.938	301.3	0.065	6.11	102.9	3.3	0.47	1.3	0.08	0.02	0.69	0.20	21	219
30	ISL	13.14	D	13.14		33.240	D 25.003	295.3	0.091	6.03	100.9	3.8	0.53	2.1	0.13	0.03	0.84	0.05	30	
31		13.12		13.12		33.244	25.010	294.6	0.094	6.02	100.7	3.8	0.53	2.2	0.14	0.03	0.85	0.04	31	218
41		13.10		13.09		33.245	25.015	294.4	0.124	5.98	100.0	3.7	0.55	2.4	0.16	0.06	0.62	0.21	41	217
50		13.02		13.01		33.241	25.028	293.4	0.150	5.91	98.7	4.0	0.57	2.7	0.19	0.20	0.36	0.19	50	216
61		12.45		12.44		33.173	25.087	288.1	0.182	5.82	96.0	5.0	0.68	4.3	0.20	0.11	0.30	0.14	61	215
70		11.89		11.88		33.161	25.184	279.0	0.208	5.59	91.1	6.8	0.84	7.1	0.18	0.00	0.19	0.13	70	214
75	ISL	11.14	D	11.13		33.168	D 25.326	265.5	0.221	5.23	83.9	9.7	1.03	10.3	0.13	0.00	0.13	0.10	75	
86		10.15		10.14		33.395	25.676	232.4	0.249	4.38	68.8	16.5	1.45	17.4	0.01	0.00	0.03	0.05	86	213
100	ISL	9.85	D	9.84		33.614	D 25.897	211.6	0.280	3.89	60.8	20.2	1.64	20.6	0.01	0.00	0.01	0.05	100	
101		9.90		9.89		33.589	25.869	214.3	0.282	3.87	60.6	20.4	1.65	20.7	0.01	0.00	0.01	0.05	101	212
121		9.43		9.42		33.757	26.078	194.8	0.323	3.38	52.4	24.8	1.83	23.6	0.00	0.00	0.00	0.04	122	211
125	ISL	9.28	D	9.27		33.795	D 26.132	189.7	0.331	3.25	50.2	25.7	1.87	24.1	0.00	0.00	0.00	0.04	126	
141		9.23		9.21		33.904	26.226	181.1	0.360	2.70	41.7	29.1	2.04	26.0	0.00	0.00	0.00	0.03	142	209
150	ISL	8.98	D	8.96		33.960	D 26.310	173.3	0.376	2.39	36.7	31.4	2.13	27.2	0.00	0.00	0.00	0.03	151	
171		8.89		8.87		34.059	26.402	165.0	0.412	1.80	27.6	36.2	2.32	29.8	0.00	0.00	0.00	0.03	172	208
200	ISL	8.61	D	8.59		34.102	D 26.480	158.0	0.459	1.52	23.2	39.7	2.44	31.4	0.00	0.00	0.00	0.03	201	
201		8.61		8.59		34.110	26.486	157.5	0.460	1.51	23.0	39.8	2.44	31.4	0.00	0.00	0.00	0.03	202	207
231		8.33		8.31		34.167	26.574	149.6	0.506	1.18	17.9	45.0	2.60	32.7	0.00	0.00			232	206
250	ISL	8.17	D	8.14		34.174	D 26.604	147.0	0.534	1.08	16.3	47.2	2.65	33.1	0.00	0.00			251	
270		8.03		8.00		34.192	26.639	144.0	0.563	1.03	15.5	49.3	2.68	33.4	0.00	0.00			272	205
300	ISL	7.63	D	7.60		34.198	D 26.703	138.3	0.606	0.94	14.0	53.1	2.76	34.3	0.00	0.00			302	
320		7.44		7.41		34.193	26.726	136.3	0.633	0.90	13.4	55.8	2.81	34.9	0.00	0.00			322	204
382		6.65		6.61		34.163	26.812	128.5	0.715	0.86	12.5	63.7	2.89	36.9	0.00	0.00			384	203
400	ISL	6.46	D	6.42		34.166	D 26.839	126.0	0.738	0.78	11.3	66.4	2.94	37.5	0.00	0.00			403	
441		6.20		6.16		34.206	26.905	120.2	0.789	0.58	8.4	72.4	3.05	38.6	0.00	0.00			444	202
500	ISL	5.97	D	5.93		34.248	D 26.968	114.8	0.858	0.41	5.9	79.0	3.15	39.7	0.00	0.00			503	
518		5.833		5.788		34.259	26.994	112.5	0.879	0.36	5.1	81.0	3.18	40.0	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.5 N	122 7.9 W	17/01/09	2332 UTC	4324 m	340 05 kn	310 07 15	1	1019.4 mb	13.8 C	12.2 C	13m	1/8 ST

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.80		13.80		33.157	24.805	313.3	0.000	6.20	105.2	2.9	0.42	0.6	0.04	0.04	0.56	0.11	0	
2		13.80		13.80		33.157	24.805	313.4	0.006	6.20	105.2	2.9	0.42	0.6	0.04	0.04	0.56	0.11	2	222
10		13.37		13.37		33.128	24.870	307.4	0.031	6.20	104.2	3.2	0.46	1.1	0.06	0.04	0.52	0.10	10	220
10		13.38		13.38		33.127	24.867	307.7	0.031										10	221
16		13.06		13.06		33.097	24.908	303.9	0.049	6.18	103.2	3.6	0.51	1.9	0.09	0.08	0.68	0.23	16	219
20		13.01		13.01		33.104	24.923	302.6	0.062	6.10	101.7	3.7	0.54	2.3	0.11	0.09	0.66	0.26	20	218
29		12.83		12.83		33.129	24.979	297.6	0.089	6.06	100.7	3.9	0.58	2.8	0.16	0.13	0.52	0.22	29	217
30	ISL	12.82	D	12.82		33.125	D 24.977	297.7	0.092	6.05	100.5	3.9	0.58	2.8	0.16	0.14	0.51	0.22	30	
40		12.74		12.73		33.137	25.002	295.6	0.121	6.00	99.5	4.0	0.59	2.9	0.19	0.18	0.39	0.20	40	216
49		12.55		12.54		33.130	25.034	292.8	0.148	5.98	98.8	4.4	0.62	3.5	0.20	0.17	0.28	0.15	49	215
50	ISL	12.55	D	12.54		33.127	D 25.032	293.0	0.151	5.98	98.8	4.4	0.63	3.6	0.20	0.17	0.28	0.15	50	
59		12.39		12.38		33.129	25.064	290.1	0.177	5.96	98.1	4.8	0.68	4.2	0.24	0.18	0.26	0.14	59	214
70		12.30		12.29		33.143	25.093	287.7	0.209	5.94	97.6	5.2	0.70	4.5	0.28	0.19	0.22	0.14	70	213
75	ISL	12.23	D	12.22		33.157	D 25.117	285.6	0.223	5.95	97.6	5.4	0.71	4.6	0.28	0.20	0.20	0.13	75	
84		12.17		12.16		33.168	25.137	283.8	0.249	5.96	97.7	5.6	0.72	4.9	0.27	0.22	0.18	0.12	84	212
100		12.07		12.06		33.177	25.163	281.7	0.294	5.95	97.3	5.9	0.75	5.3	0.28	0.20	0.15	0.11	100	211
119		10.94		10.93		33.162	25.358	263.4	0.346	5.34	85.2	9.8	1.05	10.5	0.10	0.00	0.08	0.09	120	210
125	ISL	10.36	D	10.35		33.194	D 25.484	251.5	0.361	5.01	79.0	12.1	1.20	13.0	0.06	0.00	0.06	0.08	126	
139		10.09		10.07		33.466	25.742	227.2	0.395	4.22	66.2	17.9	1.54	18.6	0.00	0.01	0.02	0.07	140	209
150	ISL	9.90	D	9.88		33.587	D 25.869	215.4	0.419	3.85	60.2	21.1	1.68	21.1	0.00	0.01	0.01	0.06	151	
169		9.34		9.32		33.779	26.111	192.6	0.458	3.31	51.2	25.7	1.86	23.9	0.00	0.00	0.00	0.04	170	208
200	ISL	9.03	D	9.01		34.030	D 26.358	169.8	0.514	2.08	32.0	33.9	2.22	28.5	0.00	0.00	0.00	0.03	201	
201		9.03		9.01		34.033	26.360	169.6	0.516	2.04	31.4	34.1	2.23	28.6	0.00	0.00	0.00	0.03	202	207
229		8.75		8.73		34.088	26.448	161.7	0.562	1.63	24.9	38.3	2.41	30.7	0.00	0.00			230	206
250	ISL	8.42	D	8.39		34.102	D 26.510	156.1	0.595	1.65	25.1	40.9	2.44	31.2	0.00	0.00			251	
270		8.10		8.07		34.096	26.553	152.1	0.626	1.66	25.0	43.5	2.46	31.6	0.00	0.00			272	205
300	ISL	7.70	D	7.67		34.122	D 26.633	144.9	0.671	1.38	20.6	49.0	2.61	33.2	0.00	0.00			302	
318		7.55		7.52		34.157	26.682	140.5	0.696	1.18	17.6	52.4	2.70	34.2	0.00	0.00			320	204
379		6.82		6.78		34.152	26.780	131.6	0.779	0.96	14.0	60.9	2.83	36.4	0.00	0.00			381	203
400	ISL	6.65	D	6.61		34.164	D 26.813	128.7	0.807	0.88	12.8	64.0	2.88	36.9	0.00	0.00			403	
437		6.30		6.26		34.181	26.872	123.3	0.853	0.72	10.4	69.3	2.98	37.7	0.00	0.00			440	202
500	ISL	5.92	D	5.88		34.235	D 26.964	115.2	0.928	0.45	6.4	77.8	3.12	39.3	0.00	0.00			503	
514		5.86		5.82		34.255	26.987	113.1	0.944	0.39	5.6	79.7	3.15	39.7	0.00	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 34.9 N	122 49.5 W	17/01/09	1808 UTC	4173 m	120 03 kn	320 06 14	2	1021.7 mb	12.3 C	10.8 C	16m	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	13.29		13.29		33.131	24.888	305.4	0.000	6.20	104.0	3.5	0.49	1.5	0.07	0.05	0.67	0.15	0	
1	A	13.29		13.29		33.131	24.888	305.4	0.003	6.20	104.0	3.5	0.49	1.5	0.07	0.05	0.67	0.15	1	221
8		13.25		13.25		33.131	24.896	304.8	0.024										8	220
9	A	13.26		13.26		33.133	24.896	304.9	0.027	6.22	104.3	3.5	0.50	1.5	0.07	0.01	0.70	0.15	9	219
10	ISL	13.25	D	13.25		33.128	D 24.894	305.1	0.031	6.22	104.3	3.5	0.50	1.5	0.07	0.01	0.71	0.16	10	
16		13.15		13.15		33.131	24.917	303.1	0.049	6.22	104.1	3.5	0.50	1.6	0.08	0.04	0.79	0.20	16	218
20	ISL	13.14	D	13.14		33.126	D 24.915	303.4	0.061	6.24	104.4	3.4	0.50	1.7	0.08	0.04	0.82	0.22	20	
21	A	13.10		13.10		33.129	24.925	302.5	0.064	6.24	104.3	3.4	0.50	1.7	0.08	0.04	0.82	0.23	21	217
30	ISL	12.87	D	12.87		33.096	D 24.945	300.8	0.091	6.10	101.4	3.6	0.54	2.3	0.10	0.01	0.77	0.27	30	
32	A	12.78		12.78		33.088	24.957	299.7	0.097	6.06	100.6	3.7	0.55	2.5	0.11	0.00	0.76	0.27	32	216
44	A	12.28		12.27		33.040	25.016	294.4	0.133	5.88	96.5	4.3	0.64	3.8	0.16	0.00	0.37	0.18	44	215
50	ISL	12.03	D	12.02		32.999	D 25.031	293.0	0.150	5.81	94.9	4.7	0.69	4.6	0.14	0.00	0.23	0.14	50	
57		11.77		11.76		33.002	25.082	288.3	0.171	5.72	92.9	5.4	0.75	5.6	0.09	0.00	0.12	0.11	57	214
68	A	11.42		11.41		33.022	25.162	281.0	0.202	5.57	89.8	7.1	0.88	7.8	0.03	0.01	0.08	0.09	68	213
75	ISL	11.27	D	11.26		33.148	D 25.287	269.2	0.221	5.28	84.9	8.9	1.01	10.0	0.02	0.01	0.06	0.08	75	
83		11.10		11.09		33.221	25.375	261.1	0.242	4.91	78.7	11.1	1.17	12.7	0.01	0.00	0.05	0.08	83	212
100		10.73		10.72		33.451	25.620	238.1	0.285	4.43	70.5	15.3	1.42	17.0	0.01	0.00	0.04	0.06	100	211
118		10.02		10.01		33.592	25.852	216.3	0.326	3.91	61.3	19.1	1.62	20.4	0.00	0.00	0.01	0.04	119	210
125	ISL	9.83	D	9.82		33.708	D 25.974	204.8	0.341	3.56	55.7	21.7	1.74	22.1	0.00	0.00	0.00	0.04	126	
138		9.62		9.60		33.812	26.091	194.0	0.366	2.94	45.8	26.4	1.94	24.9	0.00	0.00	0.00	0.05	139	209
150	ISL	9.41	D	9.39		33.867	D 26.168	186.8	0.389	2.84	44.0	28.7	1.98	26.1	0.00	0.00	0.00	0.04	151	
168		8.96		8.94		33.927	26.287	175.8	0.422	2.70	41.5	30.8	2.05	26.9	0.00	0.00	0.00	0.03	169	208
200		8.41		8.39		33.969	26.406	164.9	0.476	2.76	41.9	34.0	2.06	27.7	0.00	0.00	0.00	0.04	201	207
228		8.02		8.00		33.997	26.487	157.6	0.522	2.56	38.5	38.0	2.16	29.1	0.00	0.00			229	206
250	ISL	7.75	D	7.73		34.015	D 26.541	152.7	0.556	2.34	35.0	41.8	2.26	30.5	0.00	0.00			251	
267		7.53		7.50		34.022	26.578	149.4	0.581	2.14	31.8	44.9	2.35	31.6	0.00	0.00			269	205
300	ISL	7.11	D	7.08		34.042	D 26.653	142.6	0.630	1.73	25.5	50.7	2.51	33.9	0.00	0.00			302	
318		6.99		6.96		34.058	26.682	140.0	0.655	1.52	22.3	53.8	2.59	35.0	0.00	0.00			320	204
379		6.54		6.51		34.113	26.787	130.7	0.738	1.05	15.3	63.3	2.83	37.1	0.00	0.00			381	203
400	ISL	6.31	D	6.27		34.122	D 26.824	127.3	0.765	0.94	13.6	66.9	2.89	37.8	0.00	0.00			403	
438		6.00		5.96		34.151	26.887	121.6	0.812	0.77	11.1	72.9	2.99	39.0	0.00	0.00			441	202
500	ISL	5.90	D	5.86		34.233	D 26.965	115.1	0.885	0.49	7.0	78.9	3.10	39.8	0.00	0.00			503	
515		5.83		5.79		34.243	26.981	113.6	0.903	0.42	6.0	80.3	3.13	40.0	0.00	0.00			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 29.6 W	17/01/09	1100 UTC	4173 m	060 02 kn			1021.5 mb	12.0 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	13.60		13.60		33.241	24.911	303.3	0.000	6.26	105.8	3.3	0.42	0.5	0.03	0.02	1.22	0.25	0	
2		13.60		13.60		33.241	24.911	303.3	0.006	6.26	105.8	3.3	0.42	0.5	0.03	0.02	1.22	0.25	2	221
9		13.56		13.56		33.240	24.918	302.8	0.027										9	220
10		13.50		13.50		33.241	24.931	301.6	0.030	6.29	106.1	3.4	0.42	0.7	0.04	0.00	1.28	0.27	10	219
20		13.33		13.33		33.248	24.971	298.1	0.060	6.10	102.5	3.4	0.48	1.4	0.09	0.03	0.79	0.32	20	218
30	ISL	13.26	D	13.26		33.240	D 24.979	297.5	0.090	6.01	100.9	3.8	0.51	1.9	0.12	0.10	0.58	0.28	30	
31		13.27		13.27		33.243	24.980	297.5	0.093	6.00	100.7	3.8	0.51	1.9	0.12	0.11	0.57	0.27	31	217
40		13.22		13.21		33.246	24.992	296.6	0.120	5.92	99.3	3.8	0.53	2.2	0.14	0.18	0.38	0.22	40	216
50		12.89		12.88		33.237	25.051	291.3	0.149	5.74	95.6	4.8	0.64	3.8	0.15	0.14	0.27	0.17	50	215
60		12.26		12.25		33.218	25.158	281.2	0.178	5.44	89.4	6.8	0.81	6.8	0.12	0.00	0.17	0.12	60	214
70		11.43		11.42		33.324	25.395	258.9	0.205	4.78	77.2	11.7	1.17	12.8	0.02	0.00	0.09	0.10	70	213
75	ISL	10.93	D	10.92		33.480	D 25.606	238.8	0.217	4.41	70.5	14.3	1.34	15.5	0.01	0.00	0.07	0.09	75	
85		10.56		10.55		33.604	25.768	223.6	0.240	3.68	58.4	19.4	1.64	20.1	0.00	0.00	0.05	0.07	85	212
100		9.89		9.88		33.806	26.040	198.0	0.272	2.85	44.6	25.6	1.94	24.5	0.00	0.00	0.01	0.05	100	211
120		9.72		9.71		33.950	26.182	185.0	0.310	2.30	35.9	29.2	2.10	26.0	0.00	0.00	0.00	0.05	121	210
125	ISL	9.59	D	9.58		34.001	D 26.243	179.3	0.319	2.16	33.7	30.3	2.14	26.6	0.00	0.00	0.00	0.05	126	
139		9.43		9.41		34.039	26.299	174.2	0.344	1.83	28.4	33.0	2.26	28.1	0.00	0.00	0.00	0.05	140	209
150	ISL	9.29	D	9.27		34.056	D 26.335	171.0	0.363	1.66	25.7	34.4	2.32	28.9	0.00	0.00	0.00	0.05	151	
169		9.26		9.24		34.106	26.380	167.2	0.395	1.47	22.7	36.0	2.40	29.6	0.00	0.00	0.00	0.04	170	208
200	ISL	9.26	D	9.24		34.177	D 26.436	162.5	0.446	1.32	20.4	37.7	2.46	29.7	0.00	0.00	0.00	0.03	201	
201		9.26		9.24		34.179	26.437	162.4	0.448	1.32	20.4	37.7	2.46	29.7	0.00	0.00	0.00	0.03	202	207
228		9.15		9.12		34.220	26.488	158.1	0.491	1.13	17.5	39.8	2.55	30.4	0.00	0.00			229	206
250	ISL	9.05	D	9.02		34.243	D 26.522	155.3	0.526	1.03	15.9	41.6	2.59	30.8	0.00	0.00			251	
268		8.94		8.91		34.261	26.554	152.6	0.553	0.97	14.9	43.0	2.62	31.0	0.00	0.00			270	205
300	ISL	8.73	D	8.70		34.278	D 26.601	148.6	0.602	0.86	13.2	45.3	2.68	31.5	0.00	0.00			302	
317		8.65		8.62		34.280	26.615	147.6	0.627	0.82	12.5	46.5	2.71	31.8	0.00	0.00			319	204
378		8.33		8.29		34.293	26.675	142.8	0.715	0.75	11.4	50.0	2.78	32.7	0.00	0.00			380	203
400	ISL	8.16	D	8.12		34.284	D 26.694	141.3	0.747	0.72	10.9	51.4	2.81	33.0	0.00	0.00			403	
437		7.91		7.87		34.283	26.731	138.3	0.798	0.66	9.9	54.3	2.85	33.7	0.00	0.00			440	202
500	ISL	7.26	D	7.21		34.250	D 26.799	132.3	0.884	0.61	9.0	61.3	2.94	35.7	0.00	0.00			503	
520		7.04		6.99		34.241	26.822	130.1	0.910	0.60	8.8	63.5	2.97	36.3	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 0901 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 54.8 N	124 10.3 W	17/01/09	0505 UTC	4217 m	130 04 kn			1020.7 mb	13.8 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	14.32		14.32		33.205	24.734	320.1	0.000	6.15	105.5	2.5	0.36	0.0	0.00	0.02	0.77	0.16	0	
2		14.32		14.32		33.205	24.734	320.1	0.006	6.15	105.5	2.5	0.36	0.0	0.00	0.02	0.77	0.16	2	222
10		13.99		13.99		33.241	24.831	311.1	0.032	6.30	107.3	2.8	0.36	0.0	0.00	0.03	1.08	0.00	10	220
11		14.05		14.05		33.242	24.819	312.3	0.035										11	221
15		13.76		13.76		33.248	24.884	306.2	0.047	6.32	107.2	3.0	0.36	0.0	0.01	0.03	1.58	0.35	15	219
20		13.69		13.69		33.254	24.903	304.6	0.062	6.15	104.1	3.1	0.41	0.6	0.05	0.07	1.13	0.35	20	218
30	ISL	13.57	D	13.57	D	33.257	D 24.930	302.3	0.093	6.02	101.7	3.4	0.45	1.1	0.09	0.17	0.88	0.18	30	
31		13.57		13.57		33.261	24.933	302.0	0.096	6.02	101.7	3.4	0.45	1.1	0.09	0.18	0.87	0.16	31	217
41		13.44		13.43		33.274	24.970	298.8	0.126	5.98	100.7	3.6	0.49	1.6	0.14	0.31	0.52	0.22	41	216
50	ISL	13.31	D	13.30		33.272	D 24.995	296.7	0.153	5.95	100.0	3.8	0.53	2.0	0.19	0.41	0.34	0.31	50	
51		13.32		13.31		33.277	24.997	296.5	0.156	5.95	100.0	3.8	0.53	2.0	0.19	0.42	0.33	0.31	51	215
61		13.23		13.22		33.279	25.016	294.9	0.185	5.89	98.8	4.1	0.55	2.4	0.24	0.45	0.38	0.14	61	214
71		12.92		12.91		33.276	25.076	289.5	0.214	5.78	96.3	5.1	0.66	4.0	0.43	0.14	0.21	0.11	71	213
75	ISL	12.78	D	12.77		33.275	D 25.103	287.0	0.226	5.68	94.4	5.8	0.73	5.2	0.33	0.08	0.16	0.11	75	
85		11.66		11.65		33.207	25.262	271.9	0.254	5.33	86.4	8.3	0.95	9.1	0.02	0.01	0.08	0.12	85	212
100	ISL	10.60		10.59		33.351	25.564	243.3	0.292	4.51	71.6	14.5	1.36	16.0	0.01	0.01	0.04	0.07	100	
101		10.54		10.53		33.365	25.586	241.3	0.295	4.45	70.5	15.0	1.39	16.4	0.01	0.01	0.04	0.07	101	211
121		9.70		9.69		33.649	25.950	207.0	0.340	3.75	58.4	21.9	1.69	21.6	0.01	0.01	0.01	0.04	122	210
125	ISL	9.47	D	9.46		33.712	D 26.037	198.8	0.348	3.74	58.0	22.6	1.69	21.7	0.01	0.01	0.01	0.04	126	
140		9.13		9.11		33.838	26.190	184.5	0.377	3.70	57.0	24.4	1.70	22.2	0.01	0.01	0.00	0.02	141	209
150	ISL	8.98	D	8.96		33.880	D 26.247	179.2	0.395	3.71	57.0	25.3	1.70	22.4	0.01	0.01	0.00	0.01	151	
171		8.63		8.61		33.950	26.357	169.1	0.431	3.73	56.9	27.7	1.69	23.2	0.00	0.00	0.00	0.01	172	208
200	ISL	8.26	D	8.24		33.984	D 26.440	161.6	0.479	2.99	45.2	34.1	1.98	26.9	0.00	0.00	0.00	0.01	201	
201		8.25		8.23		33.987	26.444	161.3	0.481	2.96	44.7	34.3	1.99	27.0	0.00	0.00	0.00	0.01	202	207
231		7.78		7.76		34.013	26.535	153.0	0.528	2.51	37.5	41.0	2.19	29.5	0.00	0.00			232	206
250	ISL	7.60	D	7.58		34.023	D 26.569	150.0	0.557	2.14	31.9	44.6	2.33	31.2	0.00	0.00			251	
271		7.48		7.45		34.063	26.618	145.7	0.588	1.75	26.0	48.1	2.48	32.9	0.00	0.00			273	205
300	ISL	7.29	D	7.26		34.096	D 26.671	141.0	0.629	1.44	21.3	51.9	2.61	34.2	0.00	0.00			302	
321		7.17		7.14		34.107	26.696	138.9	0.659	1.30	19.2	54.4	2.67	34.9	0.00	0.00			323	204
381		6.62		6.59		34.126	26.786	130.9	0.740	1.03	15.0	62.6	2.83	36.8	0.00	0.00			383	203
400	ISL	6.39	D	6.35		34.124	D 26.815	128.2	0.764	0.95	13.8	65.4	2.88	37.4	0.00	0.00			403	
441		6.11		6.07		34.155	26.876	122.8	0.816	0.80	11.5	71.2	2.98	38.7	0.00	0.00			444	202
500	ISL	5.71	D	5.67		34.173	D 26.941	117.1	0.887	0.60	8.6	78.0	3.07	40.0	0.00	0.00			503	
521		5.67		5.63		34.197	26.965	115.1	0.911	0.53	7.5	80.4	3.10	40.5	0.00	0.00			525	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 0.8 N	118 49.9 W	19/01/09	0436 UTC	24 m	050 09 kn			1020.7 mb	23.0 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	13.68		13.68		33.383	25.004	294.4	0.000	6.31	106.9	3.0	0.35	0.4	0.05	0.22	1.96	0.55	0	
2		13.68		13.68		33.383	25.004	294.4	0.006	6.31	106.9	3.0	0.35	0.4	0.05	0.22	1.96	0.55	2	205
5		13.68		13.68		33.384	25.005	294.4	0.015	6.32	107.1	3.1	0.36	0.4	0.05	0.20	2.01	0.60	5	204
10		13.68		13.68		33.384	25.005	294.5	0.029	6.31	106.9	2.8	0.37	0.4	0.05	0.22	2.20	0.74	10	202
10		13.68		13.68		33.384	25.005	294.5	0.029										10	203
17		13.62		13.62		33.384	25.018	293.6	0.050	6.30	106.6	3.1	0.38	0.6	0.06	0.25	2.32	0.80	17	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 53.4 N	118 29.4 W	14/01/09	1616 UTC	56 m	190 01 kn	300 01 09	0	1018.6 mb	15.1 C	12.8 C	12m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.88		13.88		33.364	24.948	299.7	0.000	6.41	109.0	2.3	0.34	0.0	0.00	0.00	1.40	0.14	0	
1	A	13.88		13.88		33.364	24.948	299.7	0.003	6.41	109.0	2.3	0.34	0.0	0.00	0.00	1.40	0.14	1	208
6		13.81		13.81		33.366	24.965	298.3	0.018	6.40	108.7	2.8	0.35	0.0	0.00	0.01	1.16	0.05	6	207
10		13.63		13.63		33.360	24.997	295.3	0.030	6.18	104.6	3.8	0.38	0.4	0.05	0.11	1.64	0.00	10	205
10		13.67		13.67		33.361	24.990	296.0	0.030										10	206
20		13.13		13.13		33.347	25.088	287.0	0.059	5.42	90.8	7.2	0.79	5.2	0.31	3.56	1.18	0.21	20	204
30		12.22		12.22		33.307	25.234	273.3	0.087	4.35	71.5	14.2	1.49	12.7	0.50	15.63	A	0.34	0.28	30	203
40		12.17		12.16		33.442	25.349	262.6	0.114	4.17	68.5	13.5	1.38	12.6	0.43	3.36	0.56	0.41	40	202
50	ISL	11.68	D	11.67		33.531	D 25.510	247.5	0.139	3.73	60.6	16.6	1.54	15.3	0.38	2.62	0.42	0.37	50	
51		11.65		11.64		33.528	25.513	247.2	0.142	3.69	60.0	16.9	1.56	15.6	0.37	2.55	0.41	0.37	51	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 49.4 N	118 37.8 W	14/01/09	1842 UTC	665 m	120 02 kn	300 01 07	0	1018.9 mb	18.0 C	12.8 C	17m	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	14.03		14.03		33.364	24.917	302.6	0.000	6.43	109.7	2.6	0.37	0.1	0.01	0.02	1.19	0.26	0	
1	A	14.03		14.03		33.364	24.917	302.6	0.003	6.43	109.7	2.6	0.37	0.1	0.01	0.02	1.19	0.26	1	221
10	A	13.72		13.72		33.360	24.979	297.1	0.030	6.30	106.8	3.3	0.39	0.4	0.06	0.31	1.64	0.49	10	219
10		13.73		13.73		33.360	24.976	297.3	0.030	6.30	106.8	3.2	0.42	0.3	0.05	0.26	1.60	0.49	10	220
16		13.65		13.65		33.357	24.991	296.1	0.048	6.03	102.1	4.1	0.45	1.0	0.13	1.07	1.54	0.50	16	218
20	ISL	13.47	D	13.47		33.348 D	25.020	293.4	0.060	5.72	96.5	5.4	0.59	2.7	0.27	1.85	1.27	0.51	20	
23	A	13.29		13.29		33.354	25.061	289.5	0.068	5.48	92.1	6.4	0.71	4.2	0.36	2.28	1.05	0.52	23	217
30	ISL	13.12	D	13.12		33.370 D	25.108	285.3	0.088	5.12	85.7	7.7	0.87	6.8	0.29	1.29	0.79	0.47	30	
35	A	12.82		12.82		33.415	25.202	276.5	0.103	4.88	81.2	8.7	0.97	8.7	0.24	0.24	0.64	0.44	35	216
46	A	11.99		11.98		33.492	25.422	255.8	0.132	4.14	67.7	12.8	1.31	14.3	0.07	0.01	0.16	0.21	46	215
50	ISL	11.96	D	11.95		33.491 D	25.427	255.5	0.142	4.07	66.6	13.3	1.35	14.9	0.06	0.01	0.15	0.21	50	
60		11.67		11.66		33.514	25.499	248.8	0.167	3.98	64.7	14.2	1.39	15.7	0.05	0.01	0.12	0.22	60	214
73	A	11.15		11.14		33.625	25.680	231.8	0.198	3.51	56.5	18.0	1.59	18.7	0.07	0.01	0.06	0.14	73	213
75	ISL	11.06	D	11.05		33.641 D	25.709	229.2	0.203	3.44	55.2	18.5	1.62	19.0	0.07	0.01	0.06	0.14	75	
86		10.81		10.80		33.711	25.808	220.0	0.228	3.12	49.8	20.8	1.77	20.6	0.08	0.02	0.04	0.17	86	212
100		10.51		10.50		33.804	25.933	208.3	0.258	2.80	44.5	23.5	1.87	22.3	0.02	0.00	0.02	0.13	101	211
119		10.03		10.02		33.943	26.124	190.5	0.296	2.30	36.2	28.0	2.07	24.9	0.00	0.01	0.01	0.07	120	210
125	ISL	9.96	D	9.95		33.986 D	26.170	186.3	0.307	2.19	34.4	28.9	2.11	25.5	0.00	0.01	0.01	0.07	126	
139		9.82		9.80		34.037	26.233	180.6	0.333	2.00	31.3	30.6	2.19	26.5	0.00	0.01	0.02	0.07	140	209
150	ISL	9.84	D	9.82		34.053 D	26.243	179.9	0.352	1.88	29.5	31.8	2.23	27.0	0.00	0.01	0.02	0.07	151	
168		9.63		9.61		34.112	26.324	172.5	0.384	1.74	27.1	33.5	2.29	27.7	0.00	0.00	0.02	0.08	169	208
200		9.44		9.42		34.164	26.396	166.3	0.438	1.54	23.9	36.3	2.38	28.7	0.00	0.00	0.00	0.09	201	207
228		9.22		9.19		34.197	26.458	160.9	0.484	1.39	21.5	38.6	2.44	29.3	0.00	0.00			229	206
250	ISL	9.09	D	9.06		34.226 D	26.502	157.2	0.519	1.31	20.2	40.3	2.49	29.7	0.00	0.00			251	
268		8.91		8.88		34.233	26.537	154.2	0.547	1.24	19.0	41.9	2.54	30.1	0.00	0.00			270	205
300	ISL	8.52	D	8.49		34.248 D	26.610	147.7	0.596	1.05	16.0	46.3	2.64	31.4	0.00	0.00			302	
317		8.35		8.32		34.259	26.645	144.6	0.620	0.94	14.3	48.9	2.69	32.2	0.00	0.00			319	204
377		7.75		7.71		34.279	26.750	135.2	0.704	0.69	10.3	56.2	2.84	34.1	0.00	0.00			379	203
400	ISL	7.49	D	7.45		34.283 D	26.791	131.6	0.735	0.63	9.4	58.6	2.89	34.7	0.00	0.00			403	
438		7.24		7.20		34.290	26.832	128.1	0.784	0.53	7.8	63.0	2.97	35.7	0.00	0.00			441	202
500	ISL	6.59	D	6.54		34.319 D	26.944	117.8	0.861	0.34	5.0	74.1	3.11	37.6	0.00	0.02			503	
515		6.41		6.36		34.326	26.974	115.1	0.878	0.29	4.2	76.8	3.15	38.1	0.00	0.02			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 58.7 W	14/01/09	2301 UTC	752 m	310 12 kn	310 01 06	0	1016.6 mb	15.8 C	13.9 C	13m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.40		14.40		33.372	24.846	309.4	0.000	6.29	108.2	3.9	0.35	0.0	0.00	0.01	0.47	0.29	0	
1		14.40		14.40		33.372	24.846	309.4	0.003	6.29	108.2	3.9	0.35	0.0	0.00	0.01	0.47	0.29	1	224
10		13.93		13.93		33.358	24.934	301.3	0.031	6.38	108.6	3.5	0.30	0.0	0.00	0.06	0.60	0.33	10	223
19		13.83		13.83		33.370	24.964	298.8	0.058	6.26	106.4	4.3	0.33	0.0	0.01	0.03	0.68	0.55	19	222
20	ISL	13.83	D	13.83		33.366 D	24.961	299.1	0.061	6.23	105.9	4.4	0.34	0.1	0.02	0.03	0.72	0.59	20	
29		13.52		13.52		33.371	25.028	292.9	0.087	5.89	99.5	5.4	0.49	1.8	0.15	0.03	0.97	0.82	29	221
30	ISL	13.46	D	13.46		33.369 D	25.039	291.9	0.090	5.87	99.0	5.5	0.50	2.0	0.16	0.05	0.94	0.79	30	
40		12.97		12.96		33.392	25.155	281.1	0.119	5.58	93.2	6.9	0.69	4.8	0.25	0.16	0.53	0.35	40	220
50		12.36		12.35		33.408	25.286	268.8	0.146	4.91	80.9	9.8	0.99	9.7	0.17	0.01	0.24	0.21	50	219
60		11.88		11.87		33.435	25.398	258.4	0.173	4.58	74.7	12.0	1.17	12.5	0.08	0.00	0.17	0.16	60	218
70		11.36		11.35		33.479	25.528	246.2	0.198	4.19	67.6	14.3	1.37	15.7	0.02	0.00	0.11	0.16	70	217
75	ISL	11.19	D	11.18		33.538 D	25.605	239.0	0.210	4.02	64.7	15.6	1.45	17.0	0.02	0.00	0.09	0.14	75	
85		10.79		10.78		33.600	25.725	227.8	0.233	3.72	59.4	18.1	1.58	19.0	0.01	0.00	0.05	0.10	85	216
100		10.47		10.46		33.688	25.850	216.2	0.267	3.39	53.7	20.8	1.71	21.0	0.01	0.00	0.02	0.08	101	215
119		10.20		10.19		33.777	25.966	205.6	0.307	3.07	48.4	23.5	1.83	22.7	0.00	0.00	0.02	0.08	120	214
125	ISL	10.09	D	10.08		33.804 D	26.006	201.9	0.319	3.01	47.4	24.0	1.85	23.0	0.00	0.01	0.02	0.07	126	
139		10.01		9.99		33.835	26.044	198.6	0.347	2.87	45.1	25.1	1.91	23.5	0.00	0.02	0.02	0.06	140	213
150	ISL	9.78	D	9.76		33.891 D	26.126	190.9	0.368	2.72	42.5	26.8	1.97	24.3	0.00	0.02	0.02	0.06	151	
169		9.52		9.50		33.955	26.219	182.4	0.404	2.45	38.1	30.2	2.09	25.8	0.00	0.00	0.01	0.06	170	212
200	ISL	9.04	D	9.02		34.056 D	26.376	168.0	0.458	2.01	30.9	35.7	2.25	28.0	0.01	0.00	0.01	0.06	201	
201		9.03		9.01		34.059	26.380	167.7	0.460	2.00	30.8	35.9	2.25	28.1	0.01	0.00	0.01	0.06	202	211
229		8.70		8.68		34.123	26.483	158.4	0.506	1.69	25.8	40.0	2.40	29.8	0.01	0.00			230	210
250	ISL	8.52	D	8.49		34.148 D	26.530	154.2	0.538	1.48	22.5	43.2	2.49	30.9	0.01	0.00			251	
268		8.25		8.22		34.182	26.598	147.9	0.566	1.32	20.0	45.8	2.56	31.8	0.01	0.00			270	209
300	ISL	8.03	D	8.00		34.201 D	26.647	143.8	0.612	1.13	17.0	49.2	2.65	32.8	0.02	0.01			302	
317		7.88		7.85		34.208	26.674	141.4	0.636	1.05	15.8	51.0	2.70	33.3	0.02	0.01			319	208
377		7.31		7.27		34.252	26.792	130.9	0.718	0.71	10.5	59.6	2.88	35.4	0.00	0.00			379	207
400	ISL	7.25	D	7.21		34.272 D	26.816	129.0	0.748	0.59	8.7	62.7	2.95	36.0	0.00	0.00			403	
436		6.92		6.88		34.303	26.886	122.6	0.793	0.43	6.3	67.5	3.05	36.7	0.00	0.01			439	206
500	ISL	6.43	D	6.38		34.322 D	26.968	115.4	0.870	0.29	4.2	75.7	3.16	37.9	0.00	0.01			503	
512		6.36		6.31		34.329	26.982	114.1	0.883	0.27	3.9	77.3	3.17	38.1	0.00	0.01			516	205
586		5.85		5.80		34.356	27.069	106.4	0.965	0.18	2.6	88.3	3.27	38.6	0.00	0.00			590	204
600	ISL	5.82	D	5.77		34.355 D	27.072	106.2	0.980	0.17	2.4	90.0	3.28	38.6	0.00	0.02			604	
656		5.54		5.48		34.374	27.122	101.9	1.038	0.15	2.1	96.1	3.32	38.5	0.00	0.12			661	203
700	ISL	5.40	D	5.34		34.382 D	27.146	100.0	1.082	0.12	1.7	99.6	3.34	38.2	0.00	0.09			705	
746		5.28		5.22		34.392	27.168	98.3	1.128	0.10	1.4	105.3	3.39	37.1	0.00	0.06			752	202
751		5.26		5.20		34.395	27.173	97.8	1.133	0.10	1.4	106.3	3.40	36.9	0.00	0.85			757	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.6 N	119 18.8 W	15/01/09	0330 UTC	1652 m	240 05 kn			1017.1 mb	16.0 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	13.84		13.84	33.375	24.965	298.1	0.000	6.16	104.7	4.7	0.43	1.0	0.06	0.11	0.47	0.19	0	
2		13.84		13.84	33.375	24.965	298.1	0.006	6.16	104.7	4.7	0.43	1.0	0.06	0.11	0.47	0.19	2	221
10		13.48		13.48	33.372	25.037	291.6	0.030	6.13	103.4	4.9	0.45	1.4	0.08	0.07	0.70	0.32	10	219
10		13.48		13.48	33.373	25.037	291.5	0.030	6.13	103.4	4.9	0.44	1.4	0.08	0.02	0.76	0.31	10	220
20		13.46		13.46	33.373	25.042	291.3	0.059	6.10	102.9	4.8	0.46	1.3	0.09	0.03	0.92	0.32	20	218
30		13.45		13.45	33.372	25.043	291.5	0.088	6.08	102.5	4.7	0.44	1.3	0.10	0.08	0.96	0.39	30	217
40		13.25		13.24	33.374	25.085	287.7	0.117	5.77	96.9	5.6	0.57	3.1	0.22	0.09	0.68	0.31	40	216
50		11.94		11.93	33.385	25.348	262.9	0.144	4.72	77.1	10.8	1.12	11.7	0.04	0.00	0.18	0.17	50	215
60		11.16		11.15	33.498	25.579	241.1	0.170	4.13	66.4	15.2	1.40	16.5	0.01	0.00	0.08	0.12	60	214
71		10.58		10.57	33.577	25.743	225.7	0.195	3.82	60.7	18.2	1.58	19.1	0.01	0.00	0.04	0.10	71	213
75	ISL	10.38	D	10.37	33.629 D	25.819	218.6	0.204	3.73	59.0	19.0	1.62	19.7	0.01	0.00	0.03	0.10	75	
86		10.35		10.34	33.673	25.858	215.1	0.228	3.45	54.5	21.2	1.71	21.2	0.00	0.00	0.02	0.10	86	212
100	ISL	9.99	D	9.98	33.834 D	26.046	197.6	0.257	2.89	45.4	25.0	1.90	23.5	0.00	0.00	0.01	0.07	101	
102		9.99		9.98	33.842	26.052	197.0	0.261	2.82	44.3	25.5	1.92	23.8	0.00	0.00	0.01	0.07	103	211
121		9.78		9.77	33.912	26.142	188.8	0.297	2.61	40.8	27.5	2.00	24.9	0.00	0.00	0.01	0.06	122	210
125	ISL	9.68	D	9.67	33.933 D	26.175	185.7	0.305	2.57	40.1	28.0	2.02	25.2	0.00	0.00	0.01	0.06	126	
141		9.49		9.47	33.980	26.243	179.6	0.334	2.39	37.1	30.3	2.10	26.3	0.00	0.00	0.01	0.05	142	209
150	ISL	9.47	D	9.45	34.023 D	26.280	176.2	0.350	2.22	34.5	31.9	2.16	27.0	0.00	0.00	0.01	0.05	151	
171		9.15		9.13	34.112	26.402	165.0	0.386	1.85	28.6	35.7	2.30	28.6	0.00	0.00	0.00	0.04	172	208
200	ISL	8.75	D	8.73	34.133 D	26.482	157.9	0.433	1.65	25.2	39.5	2.41	30.1	0.00	0.00	0.00	0.04	201	
201		8.75		8.73	34.136	26.485	157.7	0.434	1.65	25.2	39.6	2.41	30.1	0.00	0.00	0.00	0.04	202	207
231		8.47		8.45	34.168	26.553	151.6	0.481	1.41	21.4	43.5	2.54	31.3	0.00	0.00			232	206
250	ISL	8.28	D	8.25	34.193 D	26.602	147.3	0.509	1.29	19.5	45.9	2.60	32.0	0.00	0.00			252	
271		8.10		8.07	34.201	26.636	144.4	0.540	1.17	17.6	48.6	2.66	32.8	0.00	0.00			273	205
300	ISL	7.83	D	7.80	34.207 D	26.681	140.5	0.581	0.99	14.8	52.2	2.75	33.6	0.00	0.00			302	
321		7.69		7.66	34.234	26.723	136.8	0.610	0.86	12.8	54.8	2.81	34.1	0.00	0.00			323	204
383		7.27		7.23	34.285	26.823	128.0	0.692	0.57	8.4	61.8	2.97	35.8	0.00	0.00			386	203
400	ISL	7.13	D	7.09	34.281 D	26.840	126.6	0.714	0.52	7.7	63.7	3.00	36.3	0.00	0.00			403	
442		6.85		6.81	34.299	26.893	122.0	0.766	0.42	6.2	68.7	3.08	37.4	0.00	0.00			445	202
500	ISL	6.35	D	6.30	34.326 D	26.981	114.1	0.835	0.29	4.2	76.7	3.18	38.7	0.00	0.01			503	
520		6.23		6.18	34.334	27.003	112.1	0.857	0.24	3.5	79.4	3.22	39.2	0.00	0.02			524	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 19.4 N	119 39.8 W	15/01/09	0751 UTC	83 m	320 05 kn			1017.0 mb	14.0 C	13.0 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.03		13.03	33.309	25.078	287.4	0.000	6.14	102.6	5.2	0.56	2.6	0.09	0.06	0.82	0.23	0	
2		13.03		13.03	33.309	25.078	287.4	0.006	6.14	102.6	5.2	0.56	2.6	0.09	0.06	0.82	0.23	2	210
6		13.02		13.02	33.316	25.085	286.8	0.017	6.10	101.9	5.4	0.58	2.9	0.10	0.06	1.09	0.13	6	209
10	CSL	12.96		12.96	33.335	25.112	284.4	0.029										10	200
10		12.96		12.96	33.336	25.113	284.3	0.029	5.99	100.0	5.9	0.61	3.5	0.12	0.07	0.90	0.30	10	208
11		12.95		12.95	33.342	25.119	283.7	0.031	5.96	99.4	5.8	0.63	3.5	0.12	0.07	0.84	0.33	11	207
20		12.87		12.87	33.354	25.145	281.5	0.057	5.80	96.6	6.6	0.69	4.5	0.16	0.08	0.93	0.36	20	206
30	ISL	12.86	D	12.86	33.357 D	25.149	281.4	0.085	5.77	96.1	6.9	0.69	4.8	0.17	0.08	0.87	0.36	30	
31		12.87		12.87	33.362	25.151	281.2	0.088	5.77	96.1	6.9	0.69	4.8	0.17	0.08	0.86	0.36	31	205
41		12.74		12.73	33.389	25.198	277.0	0.116	5.50	91.4	7.9	0.78	6.2	0.21	0.08	0.68	0.39	41	204
50		12.44		12.43	33.406	25.269	270.5	0.140	5.24	86.5	9.2	0.91	8.1	0.21	0.08	0.46	0.32	50	203
61		11.95		11.94	33.446	25.394	258.9	0.170	4.77	78.0	11.8	1.11	11.3	0.18	0.01	0.27	0.20	61	202
72		11.30		11.29	33.535	25.583	241.1	0.197	4.21	67.9	15.6	1.36	15.1	0.13	0.02	0.16	0.20	72	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 0.6 W	15/01/09	1121 UTC	1205 m	340 04 kn			1016.3 mb	14.5 C	12.9 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.30		13.30	33.346	25.053	289.8	0.000	6.18	103.9	5.4	0.48	1.9	0.06	0.00	1.10	0.35	0	
2		13.30		13.30	33.346	25.053	289.8	0.006	6.18	103.9	5.4	0.48	1.9	0.06	0.00	1.10	0.35	2	221
9		13.27		13.27	33.344	25.057	289.6	0.026										9	220
10		13.24		13.24	33.344	25.063	289.0	0.029	6.14	103.1	5.4	0.50	2.3	0.07	0.01	1.08	0.44	10	219
20		13.04		13.04	33.342	25.102	285.6	0.058	5.95	99.5	5.8	0.59	3.5	0.17	0.06	0.83	0.46	20	218
30		12.97		12.97	33.341	25.115	284.6	0.086	5.85	97.6	6.2	0.61	3.9	0.20	0.09	0.68	0.42	30	217
41		12.86		12.85	33.351	25.145	282.1	0.117	5.70	94.9	6.9	0.69	5.0	0.23	0.06	0.48	0.32	41	216
50		12.35		12.34	33.383	25.269	270.5	0.142	5.20	85.7	9.2	0.90	8.4	0.20	0.04	0.23	0.21	50	215
60		11.83		11.82	33.398	25.379	260.2	0.169	4.86	79.2	11.5	1.09	11.3	0.13	0.00	0.17	0.16	60	214
69		11.68		11.67	33.402	25.410	257.5	0.192	4.78	77.7	12.1	1.15	12.0	0.11	0.00	0.14	0.14	69	213
75	ISL	11.17	D	11.16	33.382 D	25.487	250.2	0.207	4.59	73.7	13.9	1.28	14.3	0.07	0.00	0.10	0.12	75	
84		10.44		10.43	33.456	25.674	232.6	0.229	4.21	66.6	17.3	1.51	18.3	0.01	0.00	0.04	0.08	84	212
100		9.81		9.80	33.663	25.942	207.3	0.264	3.57	55.8	22.9	1.77	22.5	0.00	0.00	0.01	0.05	101	211
119		9.26		9.25	33.824	26.158	187.1	0.302	3.10	47.9	27.4	1.90	24.9	0.01	0.00	0.00	0.03	120	210
125	ISL	9.06	D	9.05	33.883 D	26.236	179.8	0.313	2.99	46.0	28.9	1.94	25.6	0.01	0.00	0.00	0.03	126	
138		8.77		8.76	33.947	26.332	170.8	0.335	2.76	42.2	32.0	2.02	26.8	0.01	0.00	0.00	0.03	139	209
150	ISL	8.67	D	8.65	34.005 D	26.394	165.3	0.356	2.50	38.2	34.3	2.11	27.7	0.01	0.00	0.00	0.03	151	
168		8.60		8.58	34.070	26.456	159.7	0.385	2.11	32.2	37.4	2.24	28.9	0.00	0.00	0.00	0.03	169	208
200		8.45		8.43	34.155	26.546	151.7	0.435	1.58	24.0	42.5	2.45	30.5	0.00	0.00	0.00	0.03	201	207
228		8.07		8.05	34.173	26.618	145.3	0.476	1.33	20.0	47.3	2.56	32.3	0.00	0.00			229	206
250	ISL	7.86	D	7.83	34.184 D	26.658	141.8	0.508	1.21	18.1	50.0	2.63	33.1	0.00	0.00			251	
268		7.75		7.72	34.199	26.686	139.4	0.533	1.13	16.9	51.8	2.68	33.6	0.00	0.00			270	205
300	ISL	7.57	D	7.54	34.212 D	26.722	136.4	0.577	0.99	14.8	55.1	2.75	34.5	0.00	0.00			302	
318		7.33		7.30	34.206	26.752	133.7	0.602	0.92	13.6	57.0	2.79	35.0	0.00	0.00			320	204
377		6.93		6.89	34.222	26.821	127.9	0.679	0.72	10.6	63.5	2.90	36.3	0.00	0.00			379	203
400	ISL	6.58	D	6.54	34.222 D	26.868	123.5	0.708	0.68	9.9	66.0	2.94	36.9	0.00	0.00			403	
437		6.42		6.38	34.217	26.885	122.2	0.753	0.61	8.8	70.1	2.99	37.9	0.00	0.00			440	202
500	ISL	6.10	D	6.06	34.262 D	26.963	115.5	0.828	0.42	6.0	76.9	3.09	39.1	0.00	0.00			503	
518		6.02		5.97	34.278	26.986	113.5	0.849	0.37	5.3	78.8	3.12	39.4	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 59.1 N	120 20.8 W	15/01/09	1657 UTC	744 m	340 04 kn	300 02 07	0	1017.4 mb	14.8 C	13.0 C	10m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.10		13.10		33.337		25.086	286.6	0.000	6.31	105.6	5.3	0.53	2.6	0.08	0.04	1.38	0.24	0	
1	A	13.10		13.10		33.337		25.086	286.6	0.003	6.31	105.6	5.3	0.53	2.6	0.08	0.04	1.38	0.24	1	224
6	A	13.05		13.05		33.336		25.095	285.9	0.017	6.32	105.7	5.4	0.54	2.6	0.08	0.05	1.47	0.21	6	223
10		12.91		12.91		33.335		25.122	283.4	0.029	6.26	104.4	5.5	0.57	2.8	0.10	0.06	1.24	0.24	10	221
10		12.88		12.88		33.339		25.131	282.6	0.029			5.4	0.54	2.5	0.08	0.06			10	222
13	A	12.82		12.82		33.334		25.139	281.9	0.037	6.19	103.0	5.6	0.59	3.2	0.11	0.08	1.04	0.22	13	220
19	A	12.80		12.80		33.337		25.145	281.5	0.054	6.14	102.1	5.6	0.60	3.5	0.13	0.11	0.74	0.17	19	219
20	ISL	12.80	D	12.80		33.332	D	25.141	281.8	0.057	6.13	101.9	5.6	0.60	3.5	0.13	0.11	0.73	0.17	20	
28	A	12.70		12.70		33.337		25.165	279.8	0.079	6.06	100.6	5.8	0.62	3.8	0.16	0.15	0.69	0.18	28	218
30	ISL	12.70	D	12.70		33.335	D	25.163	280.0	0.085	6.05	100.4	5.8	0.62	3.8	0.16	0.16	0.68	0.20	30	
36		12.69		12.69		33.339		25.169	279.7	0.102	6.00	99.6	5.9	0.64	4.0	0.18	0.22	0.66	0.24	36	217
42	A	12.70		12.69		33.342		25.169	279.8	0.118	5.93	98.4	6.0	0.66	4.3	0.20	0.42	0.30	0.17	42	216
50	ISL	12.60	D	12.59		33.335	D	25.183	278.6	0.141	5.70	94.4	7.2	0.78	6.0	0.24	0.28	0.29	0.20	50	
51		12.51		12.50		33.341		25.205	276.6	0.144	5.67	93.7	7.4	0.79	6.2	0.24	0.24	0.29	0.20	51	215
60		10.95		10.94		33.416		25.553	243.6	0.167	4.36	69.7	15.1	1.40	16.3	0.03	0.00	0.11	0.13	60	214
69		10.42		10.41		33.518		25.725	227.3	0.188	4.01	63.4	18.2	1.58	19.1	0.01	0.01	0.05	0.08	69	213
75	ISL	10.19	D	10.18		33.592	D	25.822	218.2	0.201	3.91	61.6	19.2	1.63	19.9	0.01	0.01	0.04	0.08	75	
85		10.13		10.12		33.607		25.844	216.3	0.223	3.74	58.8	20.7	1.70	20.8	0.01	0.00	0.03	0.08	85	212
100		9.72		9.71		33.797		26.062	196.0	0.254	3.09	48.2	25.6	1.90	23.9	0.01	0.00	0.01	0.06	101	211
119		9.58		9.57		33.848		26.125	190.3	0.291	2.85	44.3	27.3	1.98	25.0	0.00	0.00	0.00	0.05	120	210
125	ISL	9.49	D	9.48		33.874	D	26.160	187.1	0.302	2.79	43.3	27.9	2.01	25.4	0.00	0.00	0.00	0.05	126	
138		9.35		9.33		33.903		26.206	183.0	0.326	2.67	41.3	29.2	2.06	26.3	0.00	0.01	0.00	0.05	139	209
150	ISL	9.15	D	9.13		33.934	D	26.262	177.8	0.348	2.58	39.8	30.4	2.09	26.9	0.00	0.01	0.00	0.05	151	
168		8.95		8.93		33.970		26.323	172.4	0.379	2.48	38.1	32.4	2.13	27.5	0.00	0.00	0.00	0.05	169	208
200		8.32		8.30		34.022		26.461	159.7	0.433	2.47	37.4	36.8	2.16	28.4	0.01	0.01	0.00	0.02	201	207
228		8.02		8.00		34.086		26.557	151.0	0.476	1.75	26.3	43.8	2.44	31.6	0.01	0.02			229	206
250	ISL	8.08	D	8.05		34.149	D	26.598	147.6	0.509	1.30	19.6	47.1	2.60	32.7	0.01	0.02			251	
268		8.05		8.02		34.194		26.638	144.1	0.535	1.02	15.4	49.1	2.70	33.1	0.01	0.01			270	205
300	ISL	7.85	D	7.82		34.227	D	26.694	139.3	0.580	0.83	12.4	52.5	2.79	33.7	0.00	0.00			302	
319		7.72		7.69		34.230		26.715	137.5	0.607	0.80	12.0	54.7	2.82	34.1	0.00	0.00			321	204
380		6.89		6.85		34.236		26.837	126.3	0.687	0.63	9.2	65.2	2.99	36.6	0.00	0.00			382	203
400	ISL	6.60	D	6.56		34.238	D	26.878	122.6	0.712	0.57	8.3	68.5	3.03	37.3	0.00	0.00			403	
438		6.21		6.17		34.242		26.932	117.6	0.758	0.48	6.9	74.2	3.09	38.5	0.00	0.00			441	202
500	ISL	5.82	D	5.78		34.267	D	27.002	111.5	0.829	0.38	5.4	81.0	3.17	39.8	0.00	0.00			503	
512		5.76		5.72		34.278		27.018	110.1	0.842	0.36	5.1	82.3	3.19	40.0	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 1.8 W	15/01/09	2205 UTC	3791 m	340 06 kn	330 01 06	0	1016.1 mb	14.9 C	13.6 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	13.40		13.40		33.185		24.908	303.5	0.000	6.18	104.0	4.7	0.55	2.6	0.10	0.02	0.70	0.11	0	
2		13.40		13.40		33.185		24.908	303.6	0.006	6.18	104.0	4.7	0.55	2.6	0.10	0.02	0.70	0.11	2	222
10		13.10		13.10		33.188		24.970	297.8	0.030	6.22	104.0	4.4	0.55	2.5	0.10	0.02	0.80	0.13	10	221
10		13.08		13.08		33.188		24.974	297.5	0.030										10	220
16		12.92		12.92		33.182		25.002	295.0	0.048	6.28	104.6	4.5	0.55	2.6	0.11	0.04	0.88	0.15	16	219
19		12.84		12.84		33.174		25.011	294.2	0.057	6.20	103.1	4.6	0.56	2.7	0.12	0.02	0.90	0.17	19	218
20	ISL	12.80	D	12.80		33.168	D	25.014	293.9	0.060	6.18	102.7	4.6	0.57	2.8	0.13	0.02	0.88	0.17	20	
30		12.60		12.60		33.160		25.047	291.1	0.089	6.02	99.6	4.7	0.62	3.4	0.18	0.11	0.61	0.20	30	217
40		12.51		12.50		33.171		25.073	288.8	0.118	5.95	98.2	4.9	0.65	3.9	0.21	0.20	0.38	0.17	40	216
49		12.43		12.42		33.180		25.096	286.9	0.144	5.98	98.6	5.3	0.65	4.2	0.21	0.19	0.38	0.19	49	215
50	ISL	12.43	D	12.42		33.178	D	25.094	287.1	0.147	5.98	98.6	5.3	0.65	4.2	0.21	0.19	0.38	0.19	50	
60		12.36		12.35		33.188		25.116	285.3	0.175	5.96	98.1	5.5	0.66	4.4	0.21	0.21	0.38	0.20	60	214
70		12.34		12.33		33.215		25.141	283.2	0.204	5.96	98.1	5.7	0.69	4.6	0.23	0.21	0.36	0.18	70	213
75	ISL	12.13	D	12.12		33.206	D	25.174	280.1	0.218	5.84	95.7	6.4	0.75	5.6	0.22	0.15	0.29	0.16	75	
85		11.49		11.48		33.188		25.279	270.3	0.245	5.45	88.1	8.6	0.92	8.8	0.17	0.02	0.14	0.12	85	212
100		10.76		10.75		33.299		25.496	249.9	0.284	4.68	74.5	13.4	1.27	14.8	0.02	0.00	0.05	0.07	100	211
119		10.09		10.08		33.552		25.809	220.4	0.329	4.08	64.1	18.9	1.56	19.3	0.01	0.00	0.01	0.04	120	210
125	ISL	9.83	D	9.82		33.653	D	25.931	208.9	0.342	3.75	58.6	20.9	1.67	20.8	0.01	0.00	0.01	0.04	126	
139		9.84		9.82		33.818		26.059	197.1	0.370	2.97	46.5	25.3	1.89	23.9	0.00	0.00	0.01	0.04	140	209
150	ISL	9.71	D	9.69		33.908	D	26.151	188.6	0.392	2.62	40.9	27.6	1.99	25.2	0.00	0.00	0.01	0.04	151	
169		9.52		9.50		33.991		26.248	179.8	0.427	2.21	34.4	30.7	2.12	26.7	0.00	0.00	0.00	0.05	170	208
200		9.12		9.10		34.117		26.411	164.7	0.480	1.64	25.3	36.4	2.35	29.5	0.00	0.00	0.00	0.04	201	207
228		8.90		8.88		34.156		26.477	159.0	0.525	1.42	21.8	39.1	2.44	30.3	0.00	0.00			229	206
250	ISL	8.68	D	8.65		34.177	D	26.528	154.4	0.560	1.30	19.9	41.5	2.51	30.9	0.00	0.00			251	
268		8.53		8.50		34.195		26.566	151.2	0.587	1.21	18.4	43.7	2.56	31.5	0.00	0.00			270	205
300	ISL	8.13	D	8.10		34.201	D	26.632	145.3	0.635	1.02	15.4	48.8	2.67	32.9	0.00	0.00			302	
317		7.84		7.81		34.213		26.684	140.5	0.659	0.94	14.1	51.8	2.73	33.7	0.00	0.00			319	204
378		6.74		6.71		34.159		26.797	130.0	0.741	0.95	13.9	62.2	2.85	36.4	0.00	0.00			380	203
400	ISL	6.51	D	6.47		34.166	D	26.833	126.7	0.770	0.86	12.5	66.1	2.91	37.2	0.00	0.00			403	
438		6.10		6.06		34.183		26.899	120.6	0.817	0.67	9.6	72.2	3.02	38.4	0.00	0.00			441	202
500	ISL	5.82	D	5.78		34.242	D	26.982	113.4	0.889	0.45	6.4	78.5	3.12	39.5	0.00	0.00			503	
515		5.80		5.76		34.257		26.996	112.2	0.906	0.40	5.7	80.0	3.15	39.8	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 0901 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	16/01/09	0445 UTC	4067 m	030 01 kn			1017.4 mb	14.7 C	13.3 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.16		15.16		33.170	24.527	339.8	0.000	5.92	103.2	2.1	0.36	0.1	0.00	0.03	0.18	0.09	0	
1		15.16		15.16		33.170	24.527	339.8	0.003	5.92	103.2	2.1	0.36	0.1	0.00	0.03	0.18	0.09	1	222
10	ISL	14.98		14.98		33.168	D 24.565	336.5	0.034	5.94	103.2	2.1	0.36	0.1	0.00	0.02	0.21	0.10	10	
10		14.95		14.95		33.161	24.566	336.4	0.034										10	221
11		14.95		14.95		33.167	24.571	335.9	0.037	5.94	103.2	2.1	0.36	0.1	0.00	0.02	0.21	0.10	11	220
20	ISL	14.80	D	14.80		33.135	D 24.579	335.5	0.067	5.92	102.5	2.2	0.36	0.0	0.00	0.02	0.32	0.03	20	
21		14.77		14.77		33.140	24.589	334.5	0.071	5.92	102.4	2.2	0.36	0.0	0.00	0.02	0.34	0.03	21	219
30	ISL	13.96	D	13.96		33.133	D 24.754	319.0	0.100	6.01	102.3	2.5	0.39	0.3	0.04	0.03	0.71	0.25	30	
31		13.97		13.97		33.140	24.758	318.7	0.103	6.02	102.5	2.5	0.40	0.3	0.05	0.03	0.74	0.27	31	218
36		13.75		13.74		33.174	24.829	312.0	0.119	5.95	100.8	2.9	0.44	1.0	0.11	0.04	0.68	0.22	36	217
40		13.63		13.62		33.197	24.872	308.1	0.132	5.90	99.7	3.1	0.47	1.3	0.13	0.06	0.68	0.14	40	216
50	ISL	13.07	D	13.06		33.136	D 24.937	302.1	0.162	5.81	97.0	3.8	0.55	2.5	0.16	0.16	0.35	0.18	50	
51		13.04		13.03		33.137	24.944	301.5	0.165	5.80	96.8	3.9	0.56	2.6	0.16	0.16	0.31	0.18	51	215
60		12.15		12.14		33.024	25.028	293.6	0.192	5.71	93.5	4.5	0.64	4.0	0.10	0.03	0.14	0.13	60	214
71		11.46		11.45		32.997	25.135	283.6	0.224	5.57	89.8	6.0	0.77	6.2	0.03	0.01	0.09	0.09	71	213
75	ISL	11.23	D	11.22		33.059	D 25.225	275.1	0.235	5.31	85.3	8.1	0.92	8.7	0.02	0.01	0.08	0.09	75	
86		10.83		10.82		33.324	25.503	248.9	0.264	4.58	73.0	14.0	1.34	15.4	0.01	0.00	0.06	0.09	86	212
100	ISL	9.97	D	9.96		33.438	D 25.740	226.6	0.297	4.46	69.8	16.3	1.41	17.1	0.01	0.00	0.02	0.05	100	
101		9.97		9.96		33.445	25.745	226.1	0.299	4.46	69.8	16.4	1.42	17.1	0.01	0.00	0.02	0.05	101	211
121		9.81		9.80		33.675	25.952	206.8	0.342	3.67	57.3	21.8	1.71	21.7	0.00	0.00	0.01	0.04	122	210
125	ISL	9.73	D	9.72		33.685	D 25.973	204.9	0.351	3.68	57.4	22.0	1.70	21.7	0.00	0.00	0.01	0.04	126	
141		9.42		9.40		33.754	26.078	195.2	0.383	3.72	57.6	22.8	1.68	21.8	0.01	0.00	0.00	0.02	142	209
150	ISL	9.24	D	9.22		33.814	D 26.154	188.1	0.400	3.49	53.9	24.8	1.76	22.9	0.01	0.00	0.00	0.02	151	
171		8.88		8.86		33.949	26.317	173.0	0.438	2.83	43.4	30.4	1.99	26.1	0.00	0.00	0.00	0.02	172	208
200	ISL	8.36	D	8.34		34.002	D 26.439	161.7	0.486	2.44	37.0	35.9	2.16	28.7	0.00	0.00	0.00	0.02	201	
201		8.34		8.32		34.005	26.445	161.2	0.488	2.43	36.8	36.1	2.16	28.8	0.00	0.00	0.00	0.02	202	207
231		7.88		7.86		34.028	26.532	153.3	0.535	2.16	32.4	41.5	2.30	30.7	0.00	0.01			232	206
250	ISL	7.68	D	7.66		34.038	D 26.569	150.0	0.564	1.96	29.2	45.2	2.39	31.8	0.00	0.01			251	
271		7.31		7.28		34.056	26.636	143.8	0.595	1.74	25.7	49.3	2.50	33.0	0.00	0.00			273	205
300	ISL	7.05	D	7.02		34.072	D 26.685	139.5	0.636	1.45	21.3	54.3	2.64	34.6	0.00	0.00			302	
321		6.80		6.77		34.086	26.730	135.4	0.665	1.27	18.6	57.8	2.73	35.7	0.00	0.00			323	204
381		6.26		6.23		34.131	26.837	125.7	0.743	0.92	13.3	67.5	2.92	37.7	0.00	0.00			383	203
400	ISL	6.11	D	6.07		34.146	D 26.869	122.9	0.767	0.79	11.4	70.1	2.97	38.2	0.00	0.00			403	
441		5.99		5.95		34.207	26.932	117.4	0.816	0.54	7.8	75.2	3.08	39.2	0.00	0.00			444	202
500	ISL	5.73	D	5.69		34.253	D 27.001	111.4	0.883	0.37	5.3	82.2	3.19	40.3	0.00	0.00			503	
519		5.60		5.56		34.272	27.033	108.6	0.904	0.32	4.6	84.5	3.22	40.7	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 0901 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 59.3 N	122 23.3 W	16/01/09	1040 UTC	4109 m	340 02 kn			1017.9 mb	12.0 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	14.22		14.22		33.147	24.710	322.4	0.000	6.06	103.7	2.6	0.39	0.1	0.00	0.01	0.52	0.13	0	
2		14.22		14.22		33.147	24.710	322.4	0.006	6.06	103.7	2.6	0.39	0.1	0.00	0.01	0.52	0.13	2	221
10		14.21		14.21		33.159	24.722	321.5	0.032	6.07	103.8	2.5	0.38	0.1	0.00	0.05	0.51	0.13	10	219
10		14.22		14.22		33.149	24.712	322.5	0.032										10	220
20		13.94		13.94		33.190	24.802	314.2	0.064	6.04	102.8	2.7	0.39	0.2	0.02	0.04	0.97	0.29	20	218
30		13.97		13.97		33.215	24.816	313.2	0.095	5.99	102.0	2.7	0.40	0.3	0.04	0.06	0.72	0.32	30	217
40		13.95		13.94		33.223	24.826	312.4	0.127	5.97	101.6	2.5	0.41	0.5	0.05	0.07	0.57	0.27	40	216
50		13.69		13.68		33.224	24.881	307.5	0.158	5.78	97.8	3.2	0.50	1.8	0.13	0.20	0.25	0.14	50	215
60		12.04		12.03		33.132	25.133	283.6	0.187	5.44	88.9	7.0	0.86	7.6	0.04	0.01	0.12	0.13	60	214
70		11.03		11.02		33.150	25.332	264.8	0.215	5.06	80.9	10.6	1.13	12.0	0.01	0.00	0.08	0.11	70	213
75	ISL	10.96	D	10.95		33.200	D 25.383	260.0	0.228	4.91	78.4	11.6	1.21	13.3	0.01	0.01	0.08	0.11	75	
84		11.24		11.23		33.390	25.481	251.0	0.251	4.68	75.3	12.9	1.30	14.9	0.01	0.02	0.08	0.11	84	212
100	ISL	10.61	D	10.60		33.508	D 25.685	231.9	0.289	4.30	68.3	16.4	1.48	17.9	0.01	0.00	0.04	0.06	100	
101		10.61		10.60		33.511	25.687	231.7	0.292	4.27	67.8	16.7	1.49	18.1	0.01	0.00	0.04	0.06	101	211
119		9.85		9.84		33.685	25.953	206.7	0.331	3.61	56.5	22.6	1.76	22.4	0.00	0.02	0.01	0.03	120	210
125	ISL	9.64	D	9.63		33.740	D 26.031	199.4	0.343	3.44	53.6	23.9	1.82	23.3	0.00	0.02	0.01	0.03	126	
139		9.39		9.37		33.817	26.132	190.0	0.371	3.12	48.3	26.5	1.91	24.9	0.00	0.00	0.01	0.03	140	209
150	ISL	9.18	D	9.16		33.885	D 26.219	181.9	0.391	2.93	45.2	28.5	1.97	25.8	0.00	0.00	0.01	0.03	151	
169		8.76		8.74		33.951	26.338	171.0	0.425	2.68	41.0	31.9	2.05	27.0	0.00	0.00	0.00	0.02	170	208
200	ISL	8.28	D	8.26		34.010	D 26.458	160.0	0.476	2.38	36.0	37.0	2.18	29.0	0.00	0.00	0.00	0.02	201	
201		8.27		8.25		34.013	26.462	159.6	0.477	2.37	35.8	37.2	2.18	29.1	0.00	0.00	0.00	0.02	202	207
228		7.96		7.94		34.043	26.532	153.3	0.520	2.03	30.5	41.8	2.33	31.1	0.00	0.00			229	206
250	ISL	7.68	D	7.66		34.060	D 26.586	148.4	0.553	1.76	26.3	46.1	2.45	32.6	0.00	0.00			251	
268		7.45		7.42		34.084	26.638	143.7	0.579	1.57	23.3	49.4	2.54	33.7	0.00	0.00			270	205
300	ISL	7.20	D	7.17		34.093	D 26.681	140.0	0.625	1.38	20.4	53.1	2.64	34.7	0.00	0.00			302	
317		7.11		7.08		34.101	26.700	138.4	0.648	1.30	19.2	54.8	2.68	35.1	0.00	0.00			319	204
377		6.72		6.69		34.152	26.794	130.2	0.729	0.89	13.0	62.5	2.87	36.9	0.00	0.00			379	203
400	ISL	6.50	D	6.46		34.166	D 26.834	126.6	0.758	0.77	11.2	65.8	2.94	37.6	0.00	0.00			403	
437		6.21		6.17		34.195	26.895	121.1	0.804	0.61	8.8	71.4	3.04	38.6	0.00	0.00			440	202
500	ISL	5.73	D	5.69		34.234	D 26.986	112.8	0.878	0.42	6.0	81.4	3.16	40.3	0.00	0.00			503	
518		5.54		5.50		34.249	27.022	109.5	0.898	0.36	5.1	84.2	3.19	40.8	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.5 N	123 5.1 W	16/01/09	1735 UTC	4211 m	180 05 kn	360 02 05	2	1020.2 mb	14.8 C	12.0 C	15m	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	14.49		14.49		33.273	24.751	318.5	0.000	5.96	102.6	2.2	0.37	0.1	0.01	0.02	0.51	0.13	0	
1	A	14.49		14.49		33.273	24.751	318.5	0.003	5.96	102.6	2.2	0.37	0.1	0.01	0.02	0.51	0.13	1	221
8	A	14.44		14.44		33.275	24.763	317.6	0.025	5.97	102.7	2.2	0.38	0.1	0.01	0.01	0.54	0.16	8	219
8		14.44		14.44		33.274	24.762	317.6	0.025										8	220
10	ISL	14.40	D	14.40		33.272	D 24.769	317.0	0.032	5.97	102.6	2.2	0.38	0.1	0.01	0.01	0.54	0.17	10	
19	A	14.26		14.26		33.279	24.804	313.9	0.060	5.96	102.1	2.3	0.37	0.2	0.02	0.01	0.56	0.19	19	218
20	ISL	14.26	D	14.26		33.268	D 24.796	314.8	0.063	5.96	102.1	2.3	0.37	0.2	0.02	0.01	0.56	0.19	20	
30	ISL	14.24	D	14.24		33.269	D 24.801	314.6	0.095	5.94	101.7	2.3	0.39	0.3	0.03	0.02	0.52	0.20	30	
31	A	14.24		14.24		33.272	24.804	314.4	0.098	5.94	101.7	2.3	0.39	0.3	0.03	0.02	0.51	0.20	31	217
41	A	14.21		14.20		33.273	24.811	314.0	0.129	5.91	101.2	2.3	0.40	0.4	0.04	0.01	0.49	0.24	41	216
50	ISL	14.17	D	14.16		33.266	D 24.814	313.9	0.158	5.88	100.6	2.4	0.41	0.5	0.05	0.08	0.43	0.21	50	
53		14.17		14.16		33.280	24.825	313.0	0.167	5.87	100.4	2.5	0.41	0.6	0.05	0.10	0.41	0.20	53	215
64	A	13.94		13.93		33.254	24.853	310.6	0.201	5.87	99.9	2.6	0.44	0.9	0.07	0.11	0.34	0.21	64	214
74		12.29		12.28		33.100	25.061	290.8	0.231	5.57	91.5	5.6	0.76	5.9	0.06	0.00	0.16	0.19	74	213
75	ISL	12.14	D	12.13		33.082	D 25.076	289.4	0.234	5.53	90.5	6.0	0.79	6.4	0.06	0.00	0.15	0.19	75	
84		11.00		10.99		33.116	25.311	267.1	0.259	5.19	82.9	9.4	1.05	10.8	0.01	0.00	0.07	0.15	84	212
100		10.59		10.58		33.336	25.554	244.3	0.300	4.71	74.7	13.3	1.27	14.7	0.01	0.00	0.03	0.06	100	211
119		10.00		9.99		33.534	25.810	220.3	0.344	4.20	65.8	18.1	1.52	18.9	0.00	0.00	0.01	0.03	120	210
125	ISL	9.83	D	9.82		33.606	D 25.895	212.4	0.357	4.00	62.5	19.9	1.61	20.3	0.00	0.00	0.01	0.03	126	
138		9.45		9.43		33.731	26.055	197.3	0.384	3.58	55.5	23.6	1.78	23.0	0.00	0.00	0.00	0.02	139	209
150	ISL	9.30	D	9.28		33.791	D 26.126	190.7	0.407	3.26	50.4	26.3	1.88	24.6	0.00	0.00	0.00	0.02	151	
168		8.92		8.90		33.908	26.279	176.6	0.440	2.89	44.3	29.6	1.98	26.1	0.00	0.00	0.00	0.02	169	208
200		8.52		8.50		33.987	26.403	165.2	0.495	2.62	39.8	34.1	2.09	27.9	0.00	0.00	0.00	0.02	201	207
228		8.21		8.19		34.014	26.472	159.1	0.540	2.34	35.3	38.0	2.20	29.6	0.00	0.00			229	206
250	ISL	7.99	D	7.96		34.025	D 26.514	155.4	0.575	2.18	32.8	40.8	2.27	30.6	0.00	0.00			251	
268		7.80		7.77		34.041	26.554	151.8	0.603	2.04	30.5	43.3	2.34	31.4	0.00	0.00			270	205
300	ISL	7.41	D	7.38		34.071	D 26.634	144.6	0.650	1.64	24.3	49.0	2.52	33.4	0.00	0.00			302	
320		7.21		7.18		34.090	26.677	140.7	0.679	1.38	20.4	52.8	2.63	34.7	0.00	0.00			322	204
378		6.65		6.62		34.148	26.800	129.6	0.757	0.94	13.7	62.4	2.84	36.8	0.00	0.00			380	203
400	ISL	6.50	D	6.46		34.156	D 26.826	127.3	0.785	0.81	11.8	65.2	2.90	37.4	0.00	0.00			403	
437		6.28		6.24		34.189	26.881	122.4	0.831	0.64	9.2	69.7	2.99	38.4	0.00	0.00			440	202
500	ISL	5.79	D	5.75		34.223	D 26.970	114.4	0.906	0.53	7.6	79.7	3.10	40.2	0.00	0.00			503	
514		5.58		5.54		34.207	26.984	113.1	0.922	0.51	7.2	81.9	3.13	40.6	0.00	0.00			517	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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	16/01/09	2253 UTC	4035 m	300 01 kn	360 02 06	2	1008.6 mb	14.8 C	12.9 C	30m	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	15.59		15.59		33.201	24.457	346.5	0.000	5.77	101.5	2.0	0.36	0.1	0.00	0.02	0.17	0.06	0	
2		15.59		15.59		33.201	24.457	346.6	0.007	5.77	101.5	2.0	0.36	0.1	0.00	0.02	0.17	0.06	2	221
10		15.41		15.41		33.197	24.494	343.3	0.035	5.78	101.3	1.8	0.36	0.1	0.00	0.02	0.18	0.07	10	219
10		15.41		15.41		33.200	24.496	343.1	0.035										10	220
20	ISL	15.39	D	15.39		33.194	D 24.496	343.4	0.069	5.78	101.3	1.9	0.35	0.1	0.00	0.01	0.19	0.08	20	
25		15.38		15.38		33.198	24.502	343.0	0.086	5.78	101.3	2.0	0.35	0.1	0.00	0.01	0.19	0.08	25	218
30	ISL	15.38	D	15.38		33.193	D 24.498	343.5	0.103	5.79	101.4	2.0	0.35	0.1	0.00	0.01	0.20	0.08	30	
39		15.37		15.36		33.197	24.504	343.2	0.134	5.80	101.6	2.0	0.35	0.1	0.00	0.01	0.21	0.09	39	217
49		15.36		15.35		33.196	24.505	343.4	0.168	5.78	101.2	1.8	0.36	0.1	0.00	0.01	0.24	0.10	49	216
50	ISL	15.36	D	15.35		33.191	D 24.502	343.8	0.172	5.78	101.2	1.8	0.36	0.1	0.00	0.01	0.24	0.10	50	
61		15.31		15.30		33.185	24.508	343.5	0.210	5.74	100.4	1.9	0.36	0.1	0.01	0.04	0.25	0.15	61	215
74		14.32		14.31		33.184	24.720	323.6	0.253	5.80	99.4	2.4	0.40	0.5	0.16	0.02	0.24	0.19	74	214
75	ISL	14.05	D	14.04		33.153	D 24.753	320.5	0.256	5.80	98.9	2.5	0.41	0.6	0.16	0.02	0.23	0.19	75	
86		12.82		12.81		33.046	24.918	304.9	0.291	5.75	95.5	3.3	0.52	2.0	0.07	0.02	0.15	0.22	86	213
100		12.15		12.14		33.020	25.026	294.8	0.333	5.69	93.1	4.0	0.61	3.6	0.02	0.03	0.10	0.13	100	212
110		11.64		11.63		33.044	25.140	284.1	0.362	5.56	90.0	5.4	0.72	5.5	0.01	0.03	0.05	0.08	110	211
123		11.23		11.21		33.167	25.310	268.1	0.397	5.32	85.5	8.1	0.92	9.0	0.01	0.03	0.03	0.05	124	210
125	ISL	11.25	D	11.23		33.167	D 25.307	268.5	0.403	5.28	84.9	8.5	0.95	9.5	0.01	0.03	0.03	0.05	126	
139		10.56		10.54		33.292	25.526	247.8	0.439	4.91	77.8	11.9	1.18	13.3	0.00	0.03	0.02	0.02	140	209
150	ISL	10.15	D	10.13		33.432	D 25.706	230.9	0.465	4.46	70.1	15.8	1.39	16.8	0.00	0.02	0.01	0.02	151	
163		9.78		9.76		33.649	25.937	209.1	0.494	3.96	61.8	20.1	1.61	20.4	0.00	0.00	0.00	0.02	164	208
200		9.25		9.23		33.882	26.207	184.2	0.567	3.74	57.8	23.7	1.64	21.7	0.00	0.00	0.00	0.01	201	207
228		8.75		8.73		33.957	26.345	171.4	0.616	3.45	52.7	28.2	1.78	24.0	0.00	0.00			229	206
250	ISL	8.32	D	8.29		33.991	D 26.438	162.8	0.653	2.97	45.0	33.1	1.97	26.7	0.00	0.00			251	
268		8.09		8.06		34.010	26.487	158.3	0.682	2.54	38.2	37.6	2.15	29.0	0.00	0.00			269	205
300	ISL	7.55	D	7.52		34.044	D 26.593	148.6	0.731	1.94	28.9	46.3	2.41	32.2	0.00	0.00			302	
318		7.28		7.25		34.070	26.652	143.1	0.757	1.67	24.7	50.9	2.53	33.7	0.00	0.00			320	204
378		6.64		6.61		34.113	26.774	132.1	0.840	1.15	16.8	60.7	2.77	36.3	0.00	0.00			380	203
400	ISL	6.41	D	6.37		34.111	D 26.802	129.5	0.869	1.00	14.5	64.3	2.85	37.2	0.00	0.00			402	
439		6.09		6.05		34.153	26.877	122.7	0.918	0.78	11.2	70.5	2.97	38.5	0.00	0.00			442	202
500	ISL	5.76	D	5.72		34.210	D 26.964	115.0	0.990	0.50	7.1	78.7	3.10	40.0	0.00	0.00			503	
512		5.69		5.65		34.222	26.982	113.3	1.004	0.45	6.4	80.3	3.13	40.3	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 0901 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 53.3 N	118 26.7 W	14/01/09	1526 UTC	29 m	110 03 kn	300 01 07	0	1017.9 mb	16.0 C	11.0 C		0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.90	13.90	33.336	24.923	302.1	0.000	6.64	113.0	1.6	0.33	0.2	0.08	0.08	3.63	1.05	0	
2		13.90	13.90	33.336	24.923	302.2	0.006	6.64	113.0	1.6	0.33	0.2	0.08	0.08	3.63	1.05	2	205
5		13.90	13.90	33.331	24.919	302.6	0.015	6.66	113.3	1.6	0.34	0.2	0.10	0.08	3.73	1.56	5	204
10		13.86	13.86	33.341	24.935	301.2	0.030	6.58	111.9	1.8	0.35	0.2	0.07	0.10	3.52	0.88	10	203
16		13.47	13.47	33.350	25.022	293.1	0.048	6.08	102.5	2.1	0.46	1.3	0.10	0.48	4.94	0.79	16	202
20	ISL	13.34 D	13.34	33.362 D	25.057	289.9	0.060	5.71	96.1	3.3	0.59	2.8	0.18	0.94	3.83	0.90	20	
21		13.31	13.31	33.364	25.065	289.2	0.063	5.62	94.5	3.6	0.62	3.2	0.20	1.05	3.55	0.93	21	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 5.6 W	14/01/09	1141 UTC	23 m	330 07 kn			1017.7 mb	14.6 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	13.79	13.79	33.302	24.919	302.5	0.000	6.19	105.1	2.8	0.36	0.6	0.05	0.11	1.69	0.57	0	
2		13.79	13.79	33.302	24.919	302.5	0.006	6.19	105.1	2.8	0.36	0.6	0.05	0.11	1.69	0.57	2	204
5		13.79	13.79	33.343	24.951	299.6	0.015	6.15	104.4	2.4	0.36	0.2	0.02	0.10	2.01	0.64	5	203
10		13.71	13.71	33.347	24.971	297.8	0.030	6.03	102.2	2.6	0.41	0.4	0.04	0.31	2.83	0.69	10	202
13		13.66	13.66	33.338	24.974	297.6	0.039	5.98	101.3	2.9	0.43	0.4	0.05	0.33	2.82	0.71	13	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.5 N	117 44.8 W	13/01/09	2310 UTC	23 m	290 04 kn	180 01 06	0	1018.5 mb	21.5 C	15.0 C		0/8

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.01	14.01	33.338	24.902	304.1	0.000	6.25	106.6	4.1	0.37	0.1	0.01	0.09	1.04	0.48	0	
2		14.01	14.01	33.338	24.902	304.2	0.006	6.25	106.6	4.1	0.37	0.1	0.01	0.09	1.04	0.48	2	205
5		14.04	14.04	33.336	24.894	305.0	0.015	6.27	107.0	4.1	0.37	0.2	0.02	0.13	1.00	0.52	5	204
10		13.88	13.88	33.337	24.928	301.9	0.030	6.16	104.8	4.2	0.41	0.3	0.04	0.16	1.05	0.62	10	203
15		13.75	13.75	33.336	24.954	299.6	0.045	6.06	102.8	4.5	0.44	0.7	0.07	0.24	1.27	0.55	15	202
20		13.71	13.71	33.337	24.963	298.8	0.060	6.13	103.9	4.4	0.41	0.5	0.06	0.18	1.10	0.63	20	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 29.1 N	117 46.1 W	13/01/09	2358 UTC	67 m	290 03 kn	170 01 06	0	1018.5 mb	21.2 C	14.8 C	14m	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	33.373	24.787	315.0	0.000	6.08	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.19	0	
2		14.68	14.68	33.373	24.787	315.1	0.006	6.08	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.19	2	208
5		14.21	14.21	33.363	24.879	306.4	0.016	6.12	104.8	3.7	0.33	0.0	0.00	0.03	0.68	0.24	5	207
10		14.09	14.09	33.359	24.901	304.4	0.031	6.15	105.1	3.9	0.33	0.0	0.00	0.02	0.77	0.33	10	206
20		13.90	13.90	33.344	24.929	302.0	0.061	6.11	104.0	4.0	0.35	0.1	0.03	0.03	1.66	0.72	20	205
30		13.28	13.28	33.343	25.055	290.3	0.091	5.24	88.0	6.9	0.74	5.4	0.31	0.01	0.92	0.55	30	204
40		12.26	12.25	33.422	25.316	265.7	0.119	4.23	69.6	12.0	1.24	13.4	0.12	0.02	0.29	0.24	40	203
50		11.82	11.81	33.517	25.473	251.0	0.144	3.87	63.1	14.6	1.40	16.0	0.05	0.04	0.13	0.14	50	202
60		11.15	11.14	33.667	25.712	228.5	0.168	3.27	52.6	18.9	1.63	19.6	0.05	0.04	0.04	0.11	60	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 25.2 N	117 54.2 W	14/01/09	0214 UTC	624 m	030 02 kn			1019.0 mb	18.0 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	14.56		14.56		33.352	24.797	314.1	0.000	6.19	106.8	3.8	0.33	0.0	0.00	0.03	0.63	0.23	0	
2		14.56		14.56		33.352	24.797	314.2	0.006	6.19	106.8	3.8	0.33	0.0	0.00	0.03	0.63	0.23	2	220
10		13.98		13.98		33.342	24.911	303.5	0.031	6.20	105.7	3.8	0.33	0.0	0.02	0.03	1.18	0.54	10	219
20		13.78		13.78		33.322	24.937	301.3	0.061	5.93	100.6	4.3	0.43	1.0	0.16	0.37	0.81	0.60	20	218
30		13.38		13.38		33.337	25.030	292.7	0.091	5.38	90.6	6.4	0.68	4.6	0.28	0.19	0.44	0.42	30	217
41		12.38		12.37		33.378	25.259	271.2	0.122	4.68	77.2	10.1	1.06	10.8	0.04	0.01	0.21	0.28	41	216
50	ISL	11.77	D	11.76		33.433	D 25.417	256.3	0.146	4.37	71.1	12.3	1.24	13.8	0.02	0.01	0.14	0.22	50	
51		11.77		11.76		33.437	25.420	256.1	0.148	4.34	70.7	12.5	1.26	14.1	0.02	0.01	0.14	0.21	51	215
60		11.33		11.32		33.520	25.566	242.4	0.171	4.06	65.5	15.2	1.39	16.3	0.01	0.01	0.06	0.11	60	214
71		11.24		11.23		33.592	25.638	235.8	0.197	3.78	60.9	16.3	1.48	17.6	0.02	0.02	0.05	0.10	71	213
75	ISL	10.94	D	10.93		33.649	D 25.736	226.5	0.206	3.62	58.0	17.4	1.54	18.5	0.02	0.02	0.04	0.09	75	
86		10.71		10.70		33.748	25.854	215.5	0.231	3.14	50.1	20.8	1.71	21.0	0.01	0.01	0.02	0.06	86	212
100	ISL	10.49	D	10.48		33.847	D 25.970	204.8	0.260	2.70	42.9	23.8	1.87	22.8	0.01	0.01	0.01	0.05	101	
101		10.50		10.49		33.849	25.970	204.9	0.262	2.68	42.6	24.0	1.88	22.9	0.01	0.01	0.01	0.05	102	211
120		10.19		10.18		33.940	26.095	193.4	0.300	2.39	37.7	27.1	2.00	24.4	0.01	0.00	0.00	0.05	121	210
125	ISL	10.10	D	10.09		33.925	D 26.099	193.1	0.310	2.35	37.0	27.7	2.02	24.7	0.01	0.00	0.00	0.05	126	
141		9.90		9.88		34.004	26.194	184.3	0.340	2.24	35.1	29.3	2.08	25.5	0.01	0.00	0.00	0.04	142	209
150	ISL	9.77	D	9.75		34.043	D 26.247	179.5	0.356	2.18	34.1	30.2	2.11	26.0	0.01	0.00	0.00	0.04	151	
171		9.52		9.50		34.095	26.329	172.1	0.393	2.01	31.3	32.5	2.18	27.2	0.01	0.00	0.00	0.03	172	208
200	ISL	9.25	D	9.23		34.166	D 26.429	163.1	0.442	1.63	25.2	36.7	2.34	28.7	0.01	0.06	0.00	0.03	201	
201		9.24		9.22		34.171	26.434	162.7	0.443	1.62	25.1	36.9	2.35	28.7	0.01	0.06	0.00	0.03	202	207
231		8.95		8.92		34.223	26.522	154.9	0.491	1.30	20.0	41.1	2.49	30.2	0.00	0.00			232	206
250	ISL	8.85	D	8.82		34.226	D 26.540	153.4	0.520	1.28	19.6	42.3	2.51	30.6	0.00	0.00			251	
270		8.67		8.64		34.229	26.571	150.8	0.551	1.26	19.3	43.5	2.53	30.9	0.00	0.01			272	205
300	ISL	8.22	D	8.19		34.224	D 26.636	144.9	0.595	1.09	16.5	47.4	2.62	32.1	0.01	0.01			302	
320		8.09		8.06		34.244	26.672	141.9	0.624	0.95	14.3	50.3	2.69	32.9	0.01	0.01			322	204
381		7.55		7.51		34.277	26.777	132.6	0.707	0.66	9.8	57.7	2.86	34.7	0.00	0.01			383	203
400	ISL	7.27	D	7.23		34.270	D 26.812	129.4	0.732	0.60	8.9	60.0	2.90	35.3	0.00	0.01			403	
441		7.02		6.98		34.286	26.859	125.3	0.784	0.49	7.2	65.0	2.99	36.5	0.00	0.00			444	202
500	ISL	6.53	D	6.48		34.303	D 26.940	118.2	0.856	0.32	4.7	72.6	3.10	37.8	0.00	0.00			503	
519		6.46		6.41		34.326	26.967	115.8	0.879	0.26	3.8	75.0	3.14	38.2	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 0901 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 15.2 W	14/01/09	0634 UTC	365 m	040 06 kn			1019.3 mb	15.4 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	14.66		14.66		33.376	24.794	314.4	0.000	6.00	103.7	3.0	0.33	0.0	0.00	0.00	0.45	0.09	0	
2		14.66		14.66		33.376	24.794	314.4	0.006	6.00	103.7	3.0	0.33	0.0	0.00	0.00	0.45	0.09	2	219
10		14.44		14.44		33.372	24.838	310.5	0.031	6.05	104.1	2.9	0.32	0.0	0.00	0.01	0.57	0.08	10	217
10		14.44		14.44		33.372	24.838	310.5	0.031										10	218
20		14.28		14.28		33.369	24.870	307.8	0.062	6.03	103.4	3.0	0.33	0.0	0.00	0.01	0.66	0.24	20	216
30		14.25		14.25		33.367	24.875	307.6	0.093	6.04	103.5	3.1	0.33	0.0	0.00	0.02	0.73	0.28	30	215
41		14.06		14.05		33.346	24.899	305.6	0.127	5.70	97.3	4.4	0.48	2.0	0.09	0.05	0.65	0.40	41	214
50		12.26		12.25		33.357	25.266	270.8	0.153	4.67	76.8	9.6	1.07	10.8	0.03	0.00	0.33	0.23	50	213
60		12.10		12.09		33.468	25.382	259.9	0.179	4.16	68.2	11.9	1.26	13.8	0.01	0.00	0.19	0.14	60	212
70		11.91		11.90		33.518	25.457	253.0	0.205	3.94	64.4	13.4	1.35	15.2	0.01	0.00	0.13	0.15	70	211
75	ISL	11.82	D	11.81		33.543	D 25.494	249.7	0.217	3.82	62.3	14.2	1.40	16.0	0.01	0.00	0.10	0.13	75	
85		11.50		11.49		33.615	25.609	238.9	0.242	3.53	57.2	16.3	1.52	17.8	0.01	0.00	0.05	0.08	85	210
100		10.74		10.73		33.772	25.868	214.6	0.276	2.98	47.5	21.1	1.78	21.4	0.02	0.01	0.02	0.06	100	209
120		10.32		10.31		33.886	26.030	199.5	0.317	2.55	40.3	25.1	1.95	23.7	0.01	0.00	0.01	0.05	121	208
125	ISL	10.31	D	10.30		33.887	D 26.033	199.4	0.327	2.47	39.1	26.0	1.98	24.1	0.01	0.01	0.01	0.05	126	
141		9.92		9.90		34.003	26.190	184.8	0.358	2.26	35.5	28.7	2.08	25.4	0.01	0.03	0.01	0.04	142	207
150	ISL	9.78	D	9.76		34.048	D 26.249	179.3	0.374	2.12	33.2	30.5	2.14	26.3	0.01	0.02	0.01	0.04	151	
171		9.37		9.35		34.133	26.383	166.9	0.411	1.84	28.5	34.3	2.27	28.0	0.01	0.00	0.00	0.03	172	206
200	ISL	9.12	D	9.10		34.156	D 26.442	161.9	0.458	1.71	26.4	36.7	2.34	28.8	0.02	0.04	0.00	0.03	201	
201		9.13		9.11		34.159	26.443	161.8	0.460	1.71	26.4	36.7	2.34	28.8	0.02	0.04	0.00	0.03	202	205
231		9.04		9.01		34.177	26.472	159.7	0.508	1.60	24.6	38.3	2.39	29.3	0.02	0.03			232	204
250	ISL	8.94	D	8.91		34.203	D 26.508	156.5	0.538	1.40	21.5	40.5	2.47	30.1	0.01	0.02			251	
271		8.70		8.67		34.233	26.570	151.0	0.571	1.16	17.7	43.6	2.58	31.2	0.01	0.00			273	203
300	ISL	8.35	D	8.32		34.234	D 26.625	146.1	0.614	0.97	14.7	48.3	2.69	32.6	0.02	0.00			302	
318		8.01		7.98		34.247	26.686	140.4	0.639	0.89	13.4	51.2	2.75	33.4	0.02	0.00			320	202
362		7.60		7.56		34.257	26.754	134.5	0.700	0.74	11.0	56.2	2.86	34.6	0.02	0.00			364	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.6 N	118 24.2 W	13/01/09	1826 UTC	1191 m	030 04 kn	050 01 03	0	1021.3 mb	19.5 C	15.2 C	17m	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	14.51		14.51		33.370	24.821	311.8	0.000	6.10		105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.18	0	
1	A	14.51		14.51		33.370	24.821	311.8	0.003	6.10		105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.18	1	220
10	A	14.28		14.28		33.364	24.866	307.9	0.031	6.12		105.0	3.7	0.34	0.1	0.00	0.00	0.61	0.22	10	219
16		14.21		14.21		33.360	24.877	306.9	0.049	6.11		104.6	3.7	0.34	0.1	0.00	0.04	0.82	0.33	16	218
20	ISL	14.17	D	14.17		33.353	D 24.880	306.7	0.062	6.10		104.4	3.7	0.35	0.1	0.01	0.05	1.00	0.42	20	
23	A	14.16		14.16		33.357	24.886	306.3	0.071	6.07		103.8	3.7	0.35	0.1	0.01	0.06	1.10	0.48	23	217
30	ISL	14.10	D	14.10		33.350	D 24.893	305.8	0.092	5.95		101.7	4.2	0.43	1.0	0.07	0.09	0.91	0.44	30	
35	A	13.99		13.99		33.357	24.921	303.3	0.108	5.73		97.7	4.6	0.48	1.6	0.10	0.10	0.65	0.42	35	216
47	A	12.40		12.39		33.406	25.277	269.6	0.142	4.48		73.9	10.3	1.11	11.3	0.02	0.01	0.19	0.22	47	215
50	ISL	12.28	D	12.27		33.451	D 25.335	264.2	0.150	4.34		71.4	11.0	1.18	12.3	0.02	0.01	0.17	0.20	50	
60		12.10		12.09		33.493	25.402	258.1	0.176	4.06		66.6	12.6	1.30	14.1	0.01	0.02	0.11	0.15	60	214
73	A	11.58		11.57		33.593	25.577	241.7	0.209	3.66		59.4	15.8	1.49	17.2	0.00	0.00	0.04	0.10	73	213
75	ISL	11.44	D	11.43		33.623	D 25.626	237.1	0.213	3.60		58.3	16.2	1.51	17.6	0.00	0.00	0.03	0.09	75	
86		11.09		11.08		33.696	25.746	225.8	0.239	3.27		52.5	18.6	1.65	19.6	0.00	0.01	0.02	0.07	86	212
100	ISL	10.58	D	10.57		33.814	D 25.929	208.8	0.269	2.80		44.5	23.0	1.85	22.2	0.00	0.00	0.01	0.05	100	
101		10.58		10.57		33.816	25.930	208.6	0.271	2.77		44.1	23.3	1.86	22.4	0.00	0.00	0.01	0.05	102	211
120		10.20		10.19		33.883	26.049	197.8	0.310	2.59		40.9	25.8	1.99	24.0	0.00	0.02	0.01	0.05	121	210
125	ISL	10.10	D	10.09		33.918	D 26.093	193.6	0.320	2.52		39.7	26.5	2.02	24.4	0.00	0.02	0.01	0.05	126	
139		9.88		9.86		34.019	D 26.209	182.9	0.346											140	209
150	ISL	9.83	D	9.81		34.055	D 26.246	179.6	0.366	2.13		33.4	30.1	2.17	26.2	0.00	0.01	0.00	0.05	151	
169		9.63		9.61		34.107	26.320	172.9	0.399	1.81		28.2	32.9	2.27	27.4	0.00	0.00	0.00	0.05	170	208
200		9.25		9.23		34.190	26.448	161.4	0.451	1.43		22.1	37.6	2.44	29.2	0.01	0.00	0.00	0.05	201	207
228		8.96		8.94		34.213	26.512	155.7	0.496	1.29		19.8	40.7	2.53	30.3	0.03	0.00			229	206
250	ISL	8.73	D	8.70		34.215	D 26.551	152.4	0.530	1.27		19.4	42.9	2.58	30.9	0.02	0.01			251	
268		8.49		8.46		34.213	26.586	149.2	0.557	1.25		19.0	44.7	2.61	31.4	0.00	0.01			270	205
300	ISL	8.15	D	8.12		34.227	D 26.649	143.7	0.604	1.08		16.3	48.6	2.69	32.5	0.00	0.01			302	
318		7.97		7.94		34.233	26.681	140.9	0.629	0.97		14.6	50.8	2.74	33.2	0.00	0.01			320	204
378		7.49		7.45		34.253	26.767	133.4	0.712	0.76		11.3	57.1	2.88	34.9	0.00	0.00			380	203
400	ISL	7.34	D	7.30		34.256	D 26.791	131.4	0.741	0.67		9.9	59.6	2.94	35.4	0.00	0.02			403	
439		7.08		7.04		34.288	26.853	126.0	0.791	0.51		7.5	64.1	3.04	36.4	0.00	0.05			442	202
500	ISL	6.53	D	6.48		34.301	D 26.938	118.3	0.865	0.37		5.4	71.5	3.12	38.1	0.00	0.02			503	
515		6.42		6.37		34.307	26.957	116.6	0.883	0.34		4.9	73.3	3.14	38.5	0.00	0.01			519	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 52.8 N	119 0.6 W	13/01/09	1045 UTC	1629 m	300 02 kn			1020.6 mb	16.3 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	13.56		13.56		33.281	24.950	299.5	0.000	6.10		103.0	4.2	0.48	1.7	0.07	0.03	0.81	0.14	0	
2		13.56		13.56		33.281	24.950	299.6	0.006	6.10		103.0	4.2	0.48	1.7	0.07	0.03	0.81	0.14	2	221
10		13.52		13.52		33.281	24.958	299.0	0.030	6.11		103.1	4.2	0.49	1.7	0.08	0.03	0.79	0.16	10	219
10		13.49		13.49		33.280	24.964	298.5	0.030											10	220
20		13.18		13.18		33.274	25.021	293.3	0.060	6.07		101.7	4.3	0.51	2.0	0.09	0.03	0.88	0.22	20	218
30		13.13		13.13		33.282	25.038	292.0	0.089	5.99		100.3	4.5	0.54	2.3	0.13	0.14	0.67	0.35	30	217
40		13.08		13.07		33.284	25.050	291.1	0.118	5.93		99.2	4.8	0.57	2.8	0.17	0.15	0.74	0.22	40	216
49		12.32		12.31		33.264	25.182	278.7	0.144	5.53		91.0	7.2	0.82	6.8	0.22	0.00	0.23	0.14	49	215
50	ISL	11.82	D	11.81		33.249	D 25.265	270.8	0.146	5.50		89.5	7.5	0.85	7.2	0.20	0.00	0.22	0.13	50	
60		11.07		11.06		33.192	25.357	262.2	0.173	5.09		81.5	10.5	1.09	11.3	0.03	0.00	0.09	0.10	60	214
69		11.23		11.22		33.390	25.483	250.5	0.196	4.50		72.4	13.0	1.27	14.2	0.03	0.00	0.08	0.10	69	213
75	ISL	10.71	D	10.70		33.357	D 25.549	244.2	0.211	4.67	D	74.3	14.2	1.34	15.4	0.02	0.00	0.06	0.08	75	
85		10.46		10.45		33.457	25.671	232.9	0.235	4.37		69.2	16.1	1.43	17.0	0.01	0.00	0.03	0.05	85	212
100		10.12		10.11		33.601	25.842	216.9	0.268	3.92		61.6	19.6	1.60	19.7	0.01	0.00	0.01	0.04	100	211
119		9.67		9.66		33.854	26.115	191.3	0.307	2.77		43.2	27.3	1.97	24.7	0.00	0.00	0.00	0.06	120	210
125	ISL	9.56	D	9.55		33.882	D 26.155	187.6	0.319	2.68		41.7	28.5	2.00	25.0	0.00	0.00	0.00	0.06	126	
139		9.42		9.40		33.912	D 26.202	183.5	0.345											140	209
150	ISL	9.39	D	9.37		33.925	D 26.217	182.2	0.365	2.54	D	39.4	32.1	2.12	26.1	0.00	0.00	0.00	0.05	151	
171		9.39		9.37		34.081	26.339	171.1	0.402	1.99		30.9	33.1	2.22	27.0	0.00	0.00	0.00	0.05	172	208
200	ISL	9.07	D	9.05		34.128	D 26.428	163.1	0.450	1.82		28.0	36.3	2.32	28.3	0.00	0.00	0.00	0.03	201	
201		9.07		9.05		34.126	26.426	163.3	0.452	1.81		27.9	36.4	2.32	28.3	0.00	0.00	0.00	0.03	202	207
228		8.97		8.95		34.204	26.504	156.5	0.495	1.43		22.0	39.7	2.47	29.6	0.02	0.00			229	206
250	ISL	8.54	D	8.51		34.207	D 26.574	150.1	0.529	1.28		19.5	43.1	2.56	30.7	0.01	0.01			251	
268		8.37		8.34		34.215	26.606	147.3	0.556	1.21		18.4	45.9	2.61	31.5	0.00	0.01			270	205
300	ISL	7.87	D	7.84		34.191	D 26.662	142.2	0.602	1.11		16.7	49.9	2.68	32.7	0.00	0.00			302	
317		7.77		7.74		34.211	26.693	139.6	0.626	1.06		15.9	51.9	2.72	33.3	0.00	0.00			319	204
377		7.36		7.32		34.262	26.793	130.9	0.707	0.69		10.2	58.7	2.90	34.9	0.00	0.00			379	203
400	ISL	7.15	D	7.11		34.262	D 26.822	128.3	0.737	0.62		9.1	61.4	2.95	35.6	0.00	0.00			403	
437		6.87		6.83		34.269	26.866	124.4	0.784	0.53		7.8	65.7	3.02	36.6	0.00	0.00			440	202
500	ISL	6.50	D	6.45		34.299	D 26.940	118.1	0.860	0.37		5.4	72.0	3.12	37.9	0.00	0.00			503	
520		6.39		6.34		34.312	26.965	115.9	0.883	0.32		4.6	74.0	3.15	38.3	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 0901 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 39.2 N	119 28.8 W	13/01/09	0534 UTC	1320 m	050 07 kn			1020.2 mb	16.1 C	13.0 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.94		13.94		33.264	24.859	308.2	0.000	6.07	103.3	3.2	0.41	0.7	0.04	0.04	0.91	0.16	0	
2		13.94		13.94		33.264	24.859	308.3	0.006	6.07	103.3	3.2	0.41	0.7	0.04	0.04	0.91	0.16	2	220
10	ISL	13.78	D	13.78		33.256	D 24.886	305.9	0.031	6.06	102.8	3.3	0.43	0.9	0.05	0.03	0.90	0.19	10	
11		13.77		13.77		33.269	24.898	304.8	0.034	6.06	102.8	3.3	0.43	1.0	0.05	0.03	0.90	0.19	11	219
20	ISL	13.10	D	13.10		33.266	D 25.031	292.4	0.061	6.12	102.4	4.1	0.49	2.0	0.09	0.04	0.88	0.22	20	
21		13.10		13.10		33.268	25.033	292.2	0.064	6.12	102.4	4.2	0.50	2.1	0.10	0.04	0.88	0.22	21	218
30	ISL	12.91	D	12.91		33.268	D 25.070	288.9	0.090	6.02	100.3	4.5	0.55	2.8	0.15	0.09	0.86	0.30	30	
31		12.91		12.91		33.271	25.073	288.7	0.093	6.00	100.0	4.5	0.56	2.9	0.15	0.10	0.86	0.30	31	217
40		12.84		12.83		33.279	25.093	287.0	0.119	5.93	98.7	4.9	0.59	3.3	0.17	0.19	0.77	0.10	40	216
50	ISL	12.71	D	12.70		33.304	D 25.138	282.9	0.147	5.86	97.2	5.6	0.64	4.0	0.20	0.30	0.39	0.17	50	
51		12.68		12.67		33.309	25.148	282.0	0.150	5.85	97.0	5.7	0.64	4.1	0.20	0.30	0.35	0.18	51	215
61		11.73		11.72		33.261	25.291	268.6	0.177	5.17	84.0	9.3	1.00	9.9	0.10	0.04	0.15	0.11	61	214
71		10.59		10.58		33.308	25.532	245.8	0.203	4.80	76.1	13.1	1.23	14.2	0.02	0.02	0.05	0.05	71	213
75	ISL	10.57	D	10.56		33.306	D 25.534	245.6	0.213	4.75	75.3	13.7	1.26	14.8	0.02	0.01	0.04	0.04	75	
86		10.29		10.28		33.370	25.632	236.5	0.239	4.65	73.3	14.7	1.32	15.6	0.01	0.00	0.03	0.03	86	212
100	ISL	9.95	D	9.94		33.514	D 25.802	220.6	0.271	4.25	66.5	18.3	1.52	18.7	0.01	0.00	0.01	0.02	100	
101		9.95		9.94		33.517	25.805	220.4	0.274	4.22	66.1	18.6	1.54	18.9	0.01	0.00	0.01	0.02	101	211
120		9.65		9.64		33.736	26.026	199.8	0.314	3.52	54.8	23.6	1.77	22.8	0.01	0.00	0.01	0.02	121	210
125	ISL	9.55	D	9.54		33.770	D 26.069	195.8	0.323	3.44	53.5	24.2	1.79	23.2	0.01	0.00	0.01	0.02	126	
141		9.43		9.41		33.812	26.122	191.1	0.354	3.24	50.2	25.7	1.85	24.0	0.01	0.00	0.01	0.02	142	209
150	ISL	9.23	D	9.21		33.907	D 26.229	181.1	0.371	2.97	45.9	27.5	1.94	25.1	0.01	0.00	0.01	0.02	151	
170		9.12		9.10		33.952	26.282	176.4	0.407	2.40	37.0	31.8	2.13	27.6	0.00	0.01	0.00	0.03	171	208
200	ISL	8.71	D	8.69		34.019	D 26.399	165.7	0.458	2.20	33.6	35.4	2.22	29.0	0.00	0.01	0.00	0.03	201	
201		8.70		8.68		34.022	26.403	165.3	0.460	2.20	33.6	35.5	2.22	29.0	0.00	0.01	0.00	0.03	202	207
231		8.14		8.12		34.066	26.523	154.3	0.508	2.01	30.3	41.1	2.33	30.6	0.01	0.00			232	206
250	ISL	7.86	D	7.84		34.103	D 26.594	147.8	0.536	1.72	25.8	46.2	2.47	32.3	0.01	0.00			251	
270		7.51		7.48		34.128	26.664	141.3	0.565	1.39	20.7	51.4	2.62	34.0	0.00	0.00			272	205
300	ISL	7.25	D	7.22		34.167	D 26.732	135.2	0.607	1.09	16.1	55.5	2.75	35.0	0.00	0.00			302	
321		7.29		7.26		34.202	26.754	133.5	0.635	0.94	13.9	57.3	2.81	35.2	0.00	0.00			323	204
381		7.17		7.13		34.257	26.815	128.7	0.714	0.65	9.6	61.7	2.93	36.0	0.00	0.00			383	203
400	ISL	7.11	D	7.07		34.259	D 26.825	128.0	0.738	0.62	9.1	63.0	2.95	36.4	0.00	0.00			403	
441		6.78		6.74		34.252	26.865	124.5	0.790	0.58	8.5	66.7	2.99	37.3	0.00	0.00			444	202
500	ISL	6.29	D	6.24		34.295	D 26.964	115.6	0.861	0.38	5.5	76.2	3.13	39.0	0.00	0.00			503	
519		6.06		6.01		34.305	27.002	112.0	0.882	0.32	4.6	79.2	3.18	39.6	0.00	0.00			523	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 25.0 N	119 57.4 W	13/01/09	0035 UTC	901 m	100 07 kn	360 02 05	0	1018.7 mb	16.5 C	14.5 C		0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.86		14.86		33.281	24.678	325.4	0.000	5.89	102.2	2.5	0.40	0.2	0.02	0.01	0.46	0.09	0	
2		14.86		14.86		33.281	24.678	325.5	0.007	5.89	102.2	2.5	0.40	0.2	0.02	0.01	0.46	0.09	2	220
10		14.52		14.52		33.272	24.744	319.4	0.032	5.90	101.6	2.5	0.40	0.1	0.03	0.04	0.48	0.13	10	219
20	ISL	14.42	D	14.42		33.253	D 24.751	319.1	0.064	5.90	101.4	2.5	0.39	0.2	0.03	0.02	0.57	0.16	20	
21		14.43		14.43		33.261	24.755	318.7	0.067	5.90	101.4	2.5	0.39	0.2	0.03	0.02	0.57	0.16	21	218
30		14.26		14.26		33.224	24.762	318.3	0.096	5.84	100.0	2.6	0.43	0.7	0.06	0.01	0.44	0.17	30	217
41		12.79		12.78		33.056	24.930	302.5	0.130	5.73	95.1	4.0	0.59	2.9	0.07	0.02	0.21	0.17	41	216
50	ISL	11.82	D	11.81		32.949	D 25.032	293.0	0.157	5.69	92.5	4.9	0.68	4.4	0.03	0.01	0.13	0.14	50	
51		11.82		11.81		32.954	25.036	292.6	0.160	5.69	92.5	5.0	0.69	4.6	0.03	0.01	0.12	0.13	51	215
61		10.85		10.84		32.900	25.169	280.1	0.189	5.61	89.2	7.1	0.89	7.6	0.02	0.01	0.06	0.07	61	214
71		10.74		10.73		32.986	25.255	272.1	0.216	5.47	86.9	8.2	0.96	9.0	0.02	0.00	0.05	0.06	71	213
75	ISL	10.89	D	10.88		33.052	D 25.280	269.8	0.227	5.44	86.7	8.3	0.96	9.1	0.02	0.00	0.05	0.06	75	
86		10.77		10.76		33.097	25.337	264.7	0.256	5.30	84.3	9.1	1.00	9.9	0.02	0.00	0.04	0.05	86	212
100	ISL	10.42	D	10.41		33.374	D 25.613	238.6	0.292	4.77	75.4	13.3	1.24	14.1	0.02	0.00	0.03	0.04	100	
101		10.44		10.43		33.355	25.595	240.4	0.294	4.73	74.8	13.6	1.26	14.4	0.02	0.00	0.03	0.04	101	211
121		9.97		9.96		33.568	25.842	217.4	0.340	4.09	64.1	18.9	1.57	19.3	0.01	0.00	0.01	0.02	122	210
125	ISL	9.93	D	9.92		33.587	D 25.863	215.4	0.348	3.96	62.0	19.9	1.61	20.0	0.01	0.00	0.01	0.02	126	
140		9.65		9.63		33.750	26.037	199.1	0.380	3.49	54.4	23.2	1.75	22.4	0.01	0.00	0.00	0.02	141	209
150	ISL	9.51	D	9.49		33.812	D 26.109	192.5	0.399	3.31	51.4	25.1	1.81	23.6	0.01	0.00	0.00	0.02	151	
170		9.00		8.98		33.911	26.269	177.6	0.436	2.95	45.3	29.1	1.94	25.7	0.00	0.00	0.00	0.02	171	208
200		8.62		8.60		34.051	26.438	162.0	0.487	1.97	30.0	37.2	2.28	29.8	0.00	0.01	0.00	0.02	201	207
231		8.49		8.47		34.081	26.482	158.4	0.537	1.75	26.6	39.3	2.36	30.7	0.00	0.00			232	206
250	ISL	8.22	D	8.19		34.124	D 26.557	151.5	0.566	1.55	23.4	42.8	2.46	31.7	0.00	0.00			251	
270		7.98		7.95		34.137	26.603	147.4	0.596	1.35	20.3	46.9	2.56	32.8	0.00	0.00			272	205
300	ISL	7.60	D	7.57		34.133	D 26.656	142.7	0.640	1.19	17.7	50.6	2.65	33.6	0.00	0.00			302	
321		7.54		7.51		34.171	26.695	139.3	0.669	1.11	16.5	53.0	2.70	34.1	0.00	0.00			323	204
381		6.80		6.76		34.190	26.813	128.5	0.750	0.81	11.9	62.7	2.88	36.5	0.00	0.00			383	203
400	ISL	6.58	D	6.54		34.187	D 26.840	126.1	0.774	0.70	10.2	65.3	2.94	37.1	0.00	0.00			403	
441		6.43		6.39		34.252	26.912	119.8	0.824	0.49	7.1	70.8	3.05	38.2	0.00	0.00			444	202
500	ISL	5.95	D	5.91		34.307	D 27.017	110.2	0.892	0.31	4.4	79.6	3.16	39.6	0.00	0.00			503	
519		5.88		5.83		34.330	27.044	107.8	0.913	0.25	3.6	82.4	3.19	40.0	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 0901 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.1 N	120 38.2 W	12/01/09	1815 UTC	3821 m	050 03 kn	050 02 05	0	1020.2 mb	16.9 C	15.0 C	21m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.67		14.67		33.299	24.733	320.2	0.000	5.83	100.8	2.2	0.37	0.1	0.01	0.00	0.43	0.13	0	
2	A	14.67		14.67		33.299	24.733	320.3	0.006	5.83	100.8	2.2	0.37	0.1	0.01	0.00	0.43	0.13	2	222
10	ISL	14.64	D	14.64		33.295	D 24.736	320.2	0.032	5.86	101.2	2.3	0.38	0.1	0.01	0.02	0.43	0.14	10	
12	A	14.62		14.62		33.297	24.742	319.7	0.038	5.87	101.3	2.3	0.38	0.1	0.01	0.02	0.43	0.14	12	220
20		14.61		14.61		33.298	24.745	319.6	0.064	5.84	100.8	2.3	0.37	0.1	0.01	0.01	0.43	0.14	20	219
28	A	14.61		14.61		33.298	24.745	319.8	0.090	5.84	100.8	2.2	0.36	0.1	0.01	0.02	0.44	0.16	28	218
30	ISL	14.61	D	14.61		33.294	D 24.742	320.2	0.096	5.84	100.8	2.2	0.36	0.1	0.01	0.01	0.44	0.16	30	
36		14.61		14.60		33.299	24.746	320.0	0.115	5.84	100.8	2.2	0.37	0.1	0.01	0.00	0.44	0.15	36	217
43	A	14.61		14.60		33.299	24.747	320.2	0.138	5.84	100.8	2.3	0.38	0.1	0.01	0.01	0.44	0.14	43	216
50	ISL	14.61	D	14.60		33.292	D 24.741	320.9	0.160	5.81	100.3	2.3	0.41	0.1	0.02	0.02	0.46	0.17	50	
51		14.60		14.59		33.297	24.748	320.3	0.163	5.81	100.3	2.3	0.41	0.1	0.02	0.02	0.46	0.17	51	215
59	A	14.57		14.56		33.293	24.751	320.2	0.189	5.81	100.2	2.2	0.41	0.2	0.03	0.05	0.37	0.15	59	214
75		13.28		13.27		33.115	24.880	308.2	0.239	5.73	96.1	3.4	0.56	2.0	0.18	0.00	0.16	0.19	75	213
90	A	11.50		11.49		32.927	25.074	289.8	0.284	5.70	92.0	5.1	0.74	4.9	0.01	0.00	0.08	0.12	90	212
100	ISL	10.69	D	10.68		32.967	D 25.250	273.2	0.312	5.56	88.2	7.5	0.93	8.1	0.01	0.00	0.04	0.07	100	
106		10.52		10.51		33.012	25.314	267.2	0.328	5.40	85.3	9.2	1.05	10.1	0.01	0.00	0.03	0.05	106	211
119		10.80		10.79		33.397	25.566	243.7	0.362	4.74	75.5	12.8	1.25	13.9	0.01	0.00	0.02	0.03	120	210
125	ISL	10.90	D	10.88		33.579	D 25.690	232.1	0.376	4.49	71.8	14.1	1.32	15.1	0.01	0.00	0.02	0.03	126	
139		10.48		10.46		33.650	25.819	220.0	0.407	4.01	63.6	17.0	1.46	17.5	0.01	0.00	0.01	0.02	140	209
150	ISL	10.08	D	10.06		33.738	D 25.956	207.1	0.431	3.74	58.8	19.8	1.59	19.5	0.01	0.00	0.01	0.01	151	
169		9.46		9.44		33.869	26.162	187.8	0.468	3.36	52.1	24.6	1.79	22.7	0.00	0.00	0.00	0.01	170	208
200		8.95		8.93		33.977	26.329	172.5	0.524	2.76	42.4	30.7	2.02	26.2	0.00	0.00	0.00	0.02	201	207
228		8.57		8.55		34.038	26.436	162.7	0.571	2.44	37.2	35.2	2.16	28.1	0.00	0.00			229	206
250	ISL	8.14	D	8.11		34.059	D 26.518	155.1	0.606	2.11	31.8	40.2	2.28	29.9	0.00	0.00			251	
267		7.93		7.90		34.084	26.569	150.5	0.632	1.85	27.8	44.1	2.38	31.3	0.00	0.00			268	205
300	ISL	7.56	D	7.53		34.123	D 26.654	142.8	0.681	1.52	22.6	49.8	2.56	33.1	0.00	0.00			302	
317		7.32		7.29		34.120	26.686	139.9	0.705	1.38	20.4	52.3	2.65	33.9	0.00	0.00			319	204
377		6.78		6.75		34.158	26.790	130.6	0.786	0.96	14.0	61.1	2.86	36.3	0.00	0.00			379	203
400	ISL	6.65	D	6.61		34.159	D 26.809	129.1	0.816	0.87	12.7	63.0	2.91	36.9	0.00	0.00			402	
437		6.48		6.44		34.187	26.854	125.2	0.863	0.74	10.7	66.0	2.97	37.6	0.00	0.00			440	202
500	ISL	6.17	D	6.13		34.252	D 26.946	117.2	0.939	0.46	6.6	74.4	3.09	39.1	0.00	0.00			503	
513		6.10		6.05		34.264	26.964	115.5	0.954	0.40	5.8	76.1	3.12	39.4	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 45.2 N	121 19.2 W	12/01/09	1139 UTC	3756 m	350 13 kn			1018.7 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	14.42		14.42		33.127	24.653	327.8	0.000	5.88	101.0	2.2	0.38	0.0	0.02	0.04	0.41	0.16	0	
2		14.42		14.42		33.127	24.653	327.9	0.007	5.88	101.0	2.2	0.38	0.0	0.02	0.04	0.41	0.16	2	221
10		14.44		14.44		33.128	24.650	328.4	0.033	5.88	101.0	2.2	0.38	0.0	0.02	0.02	0.40	0.16	10	219
20		14.67		14.67		33.241	24.688	325.0	0.065	5.86	101.2	2.2	0.37	0.0	0.01	0.02	0.38	0.13	20	218
29		14.63		14.63		33.247	24.702	324.0	0.095	5.85	101.0	2.0	0.37	0.0	0.01	0.01	0.40	0.15	29	217
30	ISL	14.61	D	14.61		33.239	D 24.700	324.2	0.098	5.85	100.9	2.0	0.37	0.0	0.01	0.01	0.40	0.15	30	
39		14.67		14.66		33.278	24.718	322.8	0.127	5.85	101.1	2.1	0.38	0.0	0.01	0.00	0.42	0.15	39	216
50		14.65		14.64		33.286	24.728	322.1	0.163	5.84	100.9	2.1	0.39	0.0	0.01	0.05	0.41	0.17	50	215
60		13.82		13.81		33.143	24.792	316.3	0.194	5.78	98.1	2.8	0.47	1.0	0.20	0.20	0.22	0.13	60	214
69		13.03		13.02		33.072	24.896	306.5	0.222	5.79	96.6	3.7	0.58	2.5	0.27	0.10	0.10	0.09	69	213
75	ISL	12.95	D	12.94		33.121	D 24.950	301.5	0.241	5.78	96.3	4.1	0.63	3.2	0.20	0.06	0.08	0.08	75	
84		11.84		11.83		32.942	25.023	294.6	0.268	5.77	93.8	4.8	0.69	4.3	0.05	0.02	0.06	0.07	84	212
100		10.84		10.83		32.897	25.169	280.9	0.314	5.65	89.8	6.9	0.87	7.3	0.01	0.02	0.05	0.06	100	211
120		10.45		10.44		33.143	25.429	256.6	0.367	5.20	82.1	10.2	1.07	11.1	0.01	0.01	0.03	0.04	121	210
125	ISL	10.52	D	10.51		33.297	D 25.537	246.5	0.380	5.10	80.7	10.8	1.10	11.8	0.01	0.01	0.03	0.03	126	
139		10.29		10.27		33.399	25.656	235.4	0.414	4.76	75.0	13.0	1.21	13.9	0.01	0.02	0.02	0.02	140	209
150	ISL	9.91	D	9.89		33.541	D 25.831	218.9	0.439	4.34	67.9	16.4	1.39	16.8	0.01	0.02	0.01	0.02	151	
169		9.59		9.57		33.715	26.020	201.3	0.479	3.63	56.4	22.6	1.71	21.7	0.00	0.02	0.00	0.02	170	208
200		8.88		8.86		33.924	26.298	175.3	0.537	3.18	48.7	28.3	1.86	24.6	0.00	0.05	0.00	0.02	201	207
229		8.22		8.20		33.988	26.450	161.2	0.586	2.81	42.4	35.0	2.05	27.4	0.00	0.00			230	206
250	ISL	8.03	D	8.00		34.039	D 26.519	155.0	0.619	2.45	36.9	39.2	2.19	29.0	0.00	0.00			251	
268		7.94		7.91		34.062	26.550	152.3	0.647	2.13	32.0	42.4	2.30	30.2	0.00	0.00			269	205
300	ISL	7.73	D	7.70		34.122	D 26.629	145.3	0.694	1.70	25.4	47.7	2.47	32.3	0.00	0.00			302	
318		7.45		7.42		34.115	26.663	142.2	0.720	1.50	22.3	50.6	2.56	33.3	0.00	0.00			320	204
377		6.86		6.82		34.171	26.790	130.7	0.801	0.94	13.8	60.5	2.83	36.0	0.00	0.00			379	203
400	ISL	6.64	D	6.60		34.180	D 26.827	127.4	0.830	0.78	11.4	63.7	2.91	36.7	0.00	0.00			402	
436		6.49		6.45		34.222	26.880	122.8	0.875	0.58	8.4	68.3	3.01	37.5	0.00	0.00			439	202
500	ISL	6.03	D	5.99		34.261	D 26.971	114.6	0.951	0.39	5.6	76.2	3.12	39.0	0.00	0.00			503	
519		5.97		5.92		34.282	26.995	112.6	0.973	0.33	4.7	78.6	3.15	39.4	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 25.3 N	121 59.3 W	12/01/09	0522 UTC	3866 m	360 10 kn			1022.3 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	14.75		14.75		33.134	24.588	334.0	0.000	5.88	101.7	2.2	0.38	0.0	0.01	0.02	0.34	0.09	0	
2		14.75		14.75		33.134	24.588	334.0	0.007	5.88	101.7	2.2	0.38	0.0	0.01	0.02	0.34	0.09	2	220
10		14.75		14.75		33.134	24.589	334.2	0.033	5.87	101.5	2.2	0.37	0.0	0.00	0.00	0.33	0.10	10	219
20		14.69		14.69		33.141	24.607	332.8	0.067	5.89	101.7	2.3	0.37	0.0	0.01	0.00	0.38	0.12	20	218
30		13.78		13.78		33.164	24.815	313.2	0.099	5.94	100.7	2.9	0.44	0.8	0.11	0.02	0.53	0.25	30	217
40		13.83		13.82		33.214	24.844	310.7	0.130	5.93	100.7	2.9	0.44	0.7	0.07	0.16	0.47	0.23	40	216
50	ISL	13.75	D	13.74	D	33.243	D 24.883	307.3	0.161	5.85	99.2	3.1	0.48	1.4	0.12	0.25	0.30	0.17	50	
51		13.69		13.68		33.233	24.888	306.9	0.164	5.84	98.9	3.2	0.49	1.5	0.13	0.25	0.28	0.16	51	215
61		13.08		13.07		33.189	24.977	298.6	0.195	5.81	97.1	4.2	0.61	3.1	0.24	0.23	0.21	0.14	61	214
70		12.04		12.03		33.061	25.078	289.1	0.221	5.67	92.6	5.5	0.73	5.4	0.12	0.01	0.13	0.12	70	213
75	ISL	11.73	D	11.72		33.092	D 25.160	281.4	0.235	5.44	88.3	7.2	0.87	7.7	0.07	0.01	0.11	0.11	75	
86		11.20		11.19		33.244	25.375	261.1	0.265	4.84	77.7	11.7	1.20	13.2	0.01	0.00	0.08	0.09	86	212
100	ISL	10.51	D	10.50		33.434	D 25.645	235.7	0.300	4.31	68.3	16.6	1.47	17.7	0.00	0.00	0.04	0.06	100	
101		10.51		10.50		33.437	25.647	235.5	0.302	4.28	67.8	16.9	1.49	18.0	0.00	0.00	0.04	0.06	101	211
120		10.11		10.10		33.627	25.864	215.2	0.345	3.63	57.1	21.6	1.73	21.9	0.00	0.00	0.02	0.05	121	210
125	ISL	9.90	D	9.89		33.676	D 25.938	208.3	0.356	3.55	55.6	22.3	1.76	22.4	0.00	0.00	0.02	0.05	126	
141		9.61		9.59		33.728	26.027	200.1	0.388	3.41	53.1	24.1	1.82	23.2	0.01	0.02	0.01	0.03	142	209
150	ISL	9.34	D	9.32		33.805	D 26.131	190.3	0.406	3.35	51.8	25.3	1.84	23.8	0.01	0.02	0.01	0.03	151	
171		8.93		8.91		33.870	26.248	179.6	0.445	3.27	50.2	28.1	1.88	25.0	0.01	0.03	0.00	0.02	172	208
200	ISL	8.50	D	8.48		33.965	D 26.389	166.6	0.495	3.19	48.5	31.3	1.90	25.8	0.00	0.03	0.00	0.02	201	
201		8.47		8.45		33.968	26.396	165.9	0.497	3.19	48.4	31.5	1.90	25.8	0.00	0.03	0.00	0.02	202	207
231		8.01		7.99		34.020	26.506	155.8	0.545	2.40	36.1	40.1	2.20	29.9	0.00	0.03			232	206
250	ISL	7.78	D	7.76		34.032	D 26.550	151.9	0.574	2.07	31.0	43.9	2.33	31.4	0.00	0.04			251	
271		7.55		7.52		34.063	26.608	146.7	0.605	1.80	26.8	47.3	2.44	32.6	0.00	0.05			273	205
300	ISL	7.16	D	7.13		34.070	D 26.668	141.2	0.647	1.53	22.6	52.2	2.57	34.3	0.01	0.02			302	
321		7.01		6.98		34.090	26.705	137.9	0.676	1.38	20.3	55.6	2.65	35.3	0.01	0.00			323	204
381		6.66		6.63		34.162	26.810	128.7	0.756	0.88	12.8	63.7	2.87	37.2	0.01	0.00			383	203
400	ISL	6.27	D	6.23		34.136	D 26.840	125.8	0.781	0.81	11.7	67.5	2.92	37.9	0.01	0.00			403	
442		5.82		5.78		34.155	26.912	119.1	0.832	0.69	9.9	75.7	3.02	39.5	0.00	0.00			445	202
500	ISL	5.50	D	5.46		34.212	D 26.997	111.5	0.899	0.44	6.2	82.7	3.14	40.7	0.00	0.00			503	
517		5.50		5.46		34.240	27.019	109.6	0.918	0.37	5.3	84.8	3.17	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 0901 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 5.4 N	122 39.7 W	11/01/09	2304 UTC	4005 m	360 11 kn	010 04 06	0	1023.2 mb	17.0 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	14.25		14.25		33.371	24.877	306.5	0.000	5.98	102.5	2.9	0.43	0.9	0.07	0.08	0.59	0.16	0	
3		14.25		14.25		33.371	24.877	306.6	0.009	5.98	102.5	2.9	0.43	0.9	0.07	0.08	0.59	0.16	3	220
10		14.22		14.22		33.371	24.884	306.1	0.031	5.95	101.9	2.9	0.43	0.9	0.07	0.08	0.61	0.16	10	219
20		14.09		14.09		33.361	24.903	304.6	0.061	5.95	101.7	2.8	0.43	1.0	0.07	0.09	0.66	0.17	20	218
30		14.07		14.07		33.358	24.905	304.6	0.092	5.92	101.1	2.6	0.43	1.0	0.07	0.09	0.68	0.18	30	217
40		14.06		14.05		33.356	24.906	304.8	0.122	5.89	100.6	2.7	0.43	1.0	0.07	0.10	0.64	0.19	40	216
50		14.05		14.04		33.357	24.909	304.8	0.153	5.89	100.5	2.7	0.44	1.1	0.08	0.11	0.60	0.19	50	215
60		13.92		13.91		33.341	24.924	303.7	0.183	5.87	99.9	2.8	0.45	1.2	0.09	0.18	0.48	0.17	60	214
71		12.66		12.65		33.221	25.084	288.6	0.216	5.62	93.1	5.6	0.73	5.5	0.25	0.07	0.15	0.11	71	213
75	ISL	12.14	D	12.13		33.211	D 25.176	279.9	0.227	5.43	89.0	7.2	0.86	7.6	0.21	0.06	0.13	0.10	75	
86		11.03		11.02		33.266	25.422	256.6	0.256	4.82	77.1	12.0	1.22	13.5	0.04	0.03	0.07	0.08	86	212
100		10.27		10.26		33.496	25.734	227.1	0.290	4.11	64.8	18.1	1.55	19.2	0.00	0.05	0.03	0.05	100	211
120		9.92		9.91		33.697	25.951	207.0	0.334	3.43	53.7	22.7	1.80	22.7	0.00	0.05	0.01	0.04	121	210
125	ISL	9.86	D	9.85		33.767	D 26.016	200.9	0.344	3.20	50.1	24.1	1.87	23.6	0.00	0.05	0.01	0.04	126	
140		9.60		9.58		33.871	26.140	189.4	0.373	2.62	40.8	27.8	2.04	25.9	0.00	0.05	0.01	0.04	141	209
150	ISL	9.43	D	9.41		33.902	D 26.192	184.6	0.392	2.61	40.5	29.3	2.05	26.6	0.00	0.05	0.01	0.04	151	
170		8.92		8.90		33.943	26.306	174.0	0.428	2.58	39.6	31.5	2.08	27.2	0.00	0.04	0.00	0.04	171	208
200		8.41		8.39		34.012	26.440	161.7	0.478	2.38	36.1	35.6	2.16	28.7	0.00	0.00	0.00	0.02	201	207
228		7.99		7.97		34.033	26.520	154.5	0.522	2.21	33.2	40.3	2.26	30.3	0.00	0.01			229	206
250	ISL	7.71	D	7.69		34.050	D 26.574	149.6	0.556	1.89	28.2	44.6	2.39	32.0	0.00	0.01			251	
269		7.54		7.51		34.085	D 26.626	144.9	0.584	1.59	23.7	48.2	2.51	33.4	0.00	0.00			271	205
300	ISL	7.20	D	7.17		34.089	D 26.678	140.3	0.628	1.34	19.8	52.2	2.62	34.6	0.00	0.00			302	
319		7.16		7.13		34.117	26.706	138.0	0.654	1.24	18.3	54.5	2.67	35.1	0.00	0.00			321	204
378		6.30		6.27		34.114	26.819	127.5	0.733	1.05	15.2	65.6	2.86	37.5	0.00	0.00			380	203
400	ISL	6.09	D	6.06		34.126	D 26.855	124.2	0.760	0.89	12.8	69.3	2.93	38.2	0.00	0.00			403	
438		5.91		5.87		34.188	26.927	117.7	0.806	0.61	8.7	75.0	3.04	39.3	0.00	0.00			441	202
500	ISL	5.75	D	5.71		34.257	D 27.002	111.3	0.877	0.39	5.6	81.0	3.14	40.4	0.00	0.00			503	
514		5.69		5.65		34.265	27.016	110.2	0.893	0.34	4.8	82.3	3.16	40.6	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 0901 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 46.4 N	123 20.5 W	11/01/09	1757 UTC	4058 m	020 17 kn	020 03 05	0	1027.4 mb	16.9 C	14.0 C	26m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.51		15.51		33.253	24.514	341.0	0.000	5.73	100.7	2.4	0.35	0.0	0.00	0.00	0.22	0.09	0	
2	A	15.51		15.51		33.253	24.515	341.1	0.007	5.73	100.7	2.4	0.35	0.0	0.00	0.00	0.22	0.09	2	222
8		15.51		15.51		33.254	24.516	341.1	0.027	5.75	101.0	2.3	0.34	0.0	0.00	0.00	0.22	0.10	8	221
10	ISL	15.51	D	15.51		33.253	D 24.515	341.3	0.034	5.75	101.0	2.3	0.34	0.0	0.00	0.00	0.22	0.10	10	
15	A	15.50		15.50		33.253	24.517	341.2	0.051	5.73	100.7	2.3	0.34	0.1	0.00	0.00	0.23	0.09	15	220
20	ISL	15.51	D	15.51		33.252	D 24.514	341.6	0.068	5.72	100.5	2.3	0.35	0.1	0.00	0.00	0.23	0.09	20	
25		15.50		15.50		33.252	24.517	341.6	0.085	5.72	100.5	2.4	0.35	0.0	0.00	0.00	0.23	0.09	25	219
30	ISL	15.50	D	15.50		33.251	D 24.516	341.8	0.102	5.72	100.5	2.4	0.35	0.0	0.00	0.00	0.23	0.10	30	
35	A	15.50		15.49		33.254	24.519	341.7	0.119	5.71	100.3	2.4	0.34	0.0	0.00	0.00	0.23	0.10	35	218
44		15.50		15.49		33.252	24.517	342.1	0.150	5.74	100.8	2.1	0.34	0.0	0.00	0.00	0.23	0.09	44	217
50	ISL	15.50	D	15.49		33.250	D 24.516	342.4	0.171	5.73	100.7	2.1	0.34	0.0	0.00	0.00	0.23	0.10	50	
53	A	15.49		15.48		33.252	24.520	342.1	0.181	5.72	100.5	2.2	0.34	0.0	0.00	0.00	0.23	0.10	53	216
62		15.50		15.49		33.252	24.518	342.6	0.212	5.75	101.0	2.3	0.33	0.0	0.00	0.00	0.23	0.09	62	215
73	A	15.48		15.47		33.249	24.521	342.7	0.250	5.73	100.6	2.3	0.34	0.0	0.01	0.01	0.23	0.10	73	214
75	ISL	15.13	D	15.12		33.237	D 24.588	336.3	0.256	5.74	100.1	2.4	0.36	0.1	0.05	0.02	0.21	0.12	75	
85		13.47		13.46		33.120	24.846	311.8	0.289	5.78	97.3	3.2	0.46	1.1	0.23	0.04	0.13	0.23	85	213
97		12.86		12.85		33.123	24.970	300.2	0.325	5.64	93.8	4.0	0.54	2.7	0.06	0.00	0.10	0.21	97	212
100	ISL	12.70	D	12.69		33.117	D 24.996	297.7	0.334	5.63	93.3	4.2	0.56	3.1	0.05	0.00	0.09	0.20	100	
112	A	12.24		12.23		33.125	25.091	288.9	0.370	5.55	91.1	5.4	0.67	5.0	0.02	0.00	0.07	0.14	112	211
125		11.61		11.59		33.228	25.289	270.3	0.406	5.27	85.4	7.5	0.87	8.3	0.01	0.01	0.04	0.07	126	210
139		11.05		11.03		33.304	25.450	255.2	0.443	5.07	81.2	9.8	1.02	10.8	0.01	0.00	0.02	0.04	140	209
150	ISL	10.63	D	10.61		33.360	D 25.567	244.2	0.470	4.83	76.7	12.3	1.16	13.2	0.01	0.00	0.01	0.02	151	
168		9.94		9.92		33.576	25.854	217.2	0.512	4.35	68.1	16.8	1.38	17.2	0.00	0.00	0.00	0.01	169	208
200	ISL	9.24	D	9.22		33.864	D 26.194	185.3	0.576	3.47	53.6	24.6	1.73	22.9	0.00	0.00	0.00	0.01	201	
201		9.26		9.24		33.860	26.188	186.0	0.578	3.45	53.3	24.8	1.74	23.0	0.00	0.00	0.00	0.01	202	207
228		8.78		8.76		33.944	26.330	172.8	0.626	3.15	48.2	29.3	1.87	25.1	0.00	0.02			229	206
250	ISL	8.37	D	8.34		33.989	D 26.429	163.7	0.664	2.86	43.3	34.1	2.00	27.0	0.00	0.03			251	
268		8.03		8.00		34.015	26.500	157.1	0.692	2.59	39.0	38.4	2.13	28.6	0.00	0.03			269	205
300	ISL	7.48	D	7.45		34.044	D 26.603	147.6	0.741	2.02	30.0	46.7	2.39	31.8	0.00	0.04			302	
318		7.20		7.17		34.066	26.660	142.3	0.767	1.72	25.4	51.1	2.53	33.5	0.00	0.04			320	204
377		6.63		6.60		34.107	26.770	132.4	0.848	1.23	17.9	60.4	2.76	36.0	0.00	0.04			379	203
400	ISL	6.44	D	6.40		34.130	D 26.813	128.4	0.878	1.04	15.1	64.3	2.85	37.0	0.00	0.03			402	
438		6.12		6.08		34.164	26.882	122.2	0.926	0.76	10.9	70.5	2.98	38.6	0.00	0.00			441	202
500	ISL	5.77	D	5.73		34.232	D 26.980	113.5	0.999	0.49	7.0	78.6	3.11	40.0	0.00	0.00			503	
518		5.70		5.66		34.239	26.994	112.3	1.019	0.41	5.8	80.9	3.15	40.4	0.00	0.00			521	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 25.1 N	123 59.9 W	11/01/09	0948 UTC	4328 m	060 15 kn			1026.6 mb	15.8 C	12.6 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	15.76		15.76		33.312	24.504	342.0	0.000	5.69	100.5	2.4	0.35	0.0	0.00	0.03	0.17	0.06	0	
2		15.76		15.76		33.312	24.504	342.0	0.007	5.69	100.5	2.4	0.35	0.0	0.00	0.03	0.17	0.06	2	220
10		15.76		15.76		33.314	24.506	342.1	0.034	5.68	100.3	2.4	0.36	0.0	0.00	0.05	0.17	0.06	10	219
20	ISL	15.76	D	15.76		33.304	D 24.499	343.1	0.068	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.17	0.07	20	
25		15.77		15.77		33.309	24.501	343.1	0.086	5.70	100.7	2.2	0.35	0.0	0.00	0.04	0.17	0.07	25	218
30	ISL	15.77	D	15.77		33.306	D 24.498	343.5	0.103	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.17	0.07	30	
40		15.77		15.76		33.309	24.501	343.5	0.137	5.68	100.4	2.5	0.35	0.0	0.00	0.05	0.19	0.06	40	217
50		15.76		15.75		33.307	24.502	343.8	0.172	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.21	0.06	50	216
62		15.76		15.75		33.305	24.501	344.2	0.213	5.67	100.1	2.1	0.35	0.0	0.00	0.00	0.22	0.08	62	215
74		15.75		15.74		33.305	24.504	344.4	0.254	5.66	99.9	2.2	0.36	0.0	0.00	0.03	0.21	0.09	74	214
75	ISL	15.75	D	15.74		33.307	D 24.505	344.2	0.258	5.67	100.1	2.3	0.37	0.0	0.02	0.03	0.21	0.10	75	
87		13.60		13.59		33.176	24.863	310.2	0.297	5.75	97.1	3.2	0.44	0.7	0.23	0.05	0.16	0.24	87	213
99		13.12		13.11		33.141	24.932	303.9	0.334	5.69	95.1	3.5	0.49	1.6	0.13	0.05	0.15	0.21	99	212
100	ISL	13.07	D	13.06		33.135	D 24.938	303.4	0.337	5.69	95.0	3.5	0.49	1.7	0.12	0.05	0.15	0.21	100	
111		12.65		12.64		33.116	25.005	297.1	0.370	5.60	92.7	4.2	0.58	3.1	0.03	0.04	0.09	0.18	111	211
125		11.83		11.81		33.210	25.234	275.6	0.410	5.35	87.1	6.9	0.81	7.1	0.01	0.05	0.05	0.09	126	210
140		11.19		11.17		33.365	25.472	253.2	0.449	5.02	80.7	9.5	0.98	10.1	0.01	0.06	0.02	0.03	141	209
150	ISL	10.76	D	10.74		33.398	D 25.574	243.6	0.474	4.88	77.7	10.9	1.07	11.6	0.01	0.04	0.02	0.02	151	
165		10.37		10.35		33.477	25.704	231.5	0.510	4.65	73.4	13.3	1.21	13.9	0.00	0.00	0.01	0.01	166	208
200	ISL	9.32	D	9.30		33.874	D 26.189	185.9	0.583	3.64	56.3	23.8	1.67	21.5	0.00	0.07	0.00	0.01	201	
202		9.30		9.28		33.885	26.201	184.8	0.587	3.58	55.4	24.5	1.70	21.9	0.00	0.07	0.00	0.01	203	207
230		8.50		8.48		33.983	26.404	165.8	0.636	3.09	47.0	32.4	1.94	25.7	0.00	0.00			231	206
250	ISL	8.33	D	8.30		34.010	D 26.451	161.6	0.668	2.71	41.0	36.1	2.10	27.5	0.00	0.02			251	
269		8.19		8.16		34.043	26.498	157.4	0.699	2.37	35.8	39.0	2.23	28.9	0.00	0.03			270	205
300	ISL	7.72	D	7.69		34.072	D 26.591	148.9	0.746	1.91	28.5	44.8	2.42	31.1	0.00	0.04			302	
318		7.59		7.56		34.092	26.625	145.8	0.773	1.69	25.2	48.1	2.52	32.3	0.00	0.04			320	204
377		6.96		6.92		34.121	26.737	135.8	0.856	1.19	17.5	57.7	2.76	35.3	0.00	0.00			379	203
400	ISL	6.64	D	6.60		34.129	D 26.786	131.2	0.887	1.04	15.2	61.5	2.85	36.3	0.00	0.00			402	
437		6.42		6.38		34.167	26.846	125.9	0.934	0.82	11.9	67.3	2.97	37.6	0.00	0.00			440	202
500	ISL	5.98	D	5.94		34.222	D 26.946	116.9	1.011	0.52	7.5	74.8	3.10	38.9	0.00	0.00			503	
518		5.99		5.94		34.245	26.963	115.5	1.032	0.43	6.2	76.9	3.14	39.3	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 0901 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 14.9 N	117 28.1 W	08/01/09	0709 UTC	23 m	060 05 kn			1017.2 mb	12.0 C	10.8 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	13.87		13.87		33.341	24.933	301.2	0.000	6.11	103.9	4.4	0.38	0.4	0.06	0.09	2.00	0.55	0	
1		13.87		13.87		33.341	24.933	301.2	0.003	6.11	103.9	4.4	0.38	0.4	0.06	0.09	2.00	0.55	1	205
5		13.86		13.86		33.340	24.934	301.2	0.015	6.11	103.9	4.2	0.38	0.3	0.06	0.08	1.78	0.76	5	204
10		13.84		13.84		33.340	24.938	300.9	0.030	6.09	103.5	4.3	0.38	0.4	0.06	0.05	2.09	0.53	10	202
16		13.82		13.82		33.342	24.944	300.5	0.048	6.07	103.1	4.4	0.41	0.4	0.06	0.07	1.95	0.77	16	201

RV NEW HORIZON CALCOFI CRUISE 0901 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 57.3 N	117 18.3 W	08/01/09	0236 UTC	69 m	020 04 kn			1017.0 mb	14.9 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	14.24		14.24		33.371	24.879	306.3	0.000	6.07	104.0	3.7	0.36	0.0	0.01	0.07	1.03	0.57	0	
2		14.24		14.24		33.371	24.879	306.3	0.006	6.07	104.0	3.7	0.36	0.0	0.01	0.07	1.03	0.57	2	208
6		14.23		14.23		33.369	24.880	306.4	0.018	6.06	103.8	3.6	0.36	0.0	0.01	0.03	1.08	0.63	6	207
10	ISL	14.11	D	14.11		33.365	D 24.902	304.4	0.031	6.06	103.6	3.7	0.37	0.0	0.01	0.05	1.28	0.58	10	
11		14.11		14.11		33.369	24.905	304.1	0.034	6.06	103.6	3.7	0.37	0.0	0.01	0.06	1.33	0.56	11	206
20	ISL	14.01	D	14.01		33.356	D 24.916	303.3	0.061	5.96	101.7	3.9	0.40	0.4	0.05	0.54	1.18	0.76	20	
21		14.00		14.00		33.360	24.921	302.9	0.064	5.95	101.5	3.9	0.40	0.5	0.05	0.59	1.16	0.78	21	205
30		13.26		13.26		33.367	25.078	288.2	0.091	5.03	84.5	7.8	0.84	5.9	0.39	0.35	0.60	0.51	30	204
41		12.36		12.35		33.479	25.341	263.4	0.121	4.07	67.1	12.4	1.29	13.3	0.13	0.47	0.21	0.25	41	203
50	ISL	11.91	D	11.90		33.548	D 25.480	250.4	0.144	3.74	61.1	14.7	1.44	15.9	0.08	0.05	0.10	0.18	50	
51		11.89		11.88		33.551	25.486	249.8	0.147	3.72	60.8	14.9	1.45	16.1	0.07	0.00	0.10	0.18	51	202
59		11.68		11.67		33.592	25.557	243.2	0.166	3.58	58.2	15.9	1.51	17.2	0.09	0.04	0.06	0.14	59	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.8 N	117 23.9 W	08/01/09	1008 UTC	630 m	070 02 kn			1016.8 mb	14.0 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	14.16		14.16		33.364	24.890	305.2	0.000	6.02	103.0	3.6	0.35	0.0	0.01	0.01	1.08	0.52	0	
2		14.16		14.16		33.364	24.890	305.3	0.006	6.02	103.0	3.6	0.35	0.0	0.01	0.01	1.08	0.52	2	220
10		14.15		14.15		33.370	24.897	304.8	0.031	6.03	103.2	3.7	0.35	0.0	0.01	0.00	1.11	0.54	10	219
19		14.13		14.13		33.365	24.898	305.0	0.058	6.03	103.1	3.6	0.35	0.0	0.00	0.00	1.24	0.50	19	218
20	ISL	14.12	D	14.12		33.363	D 24.899	305.0	0.061	6.02	102.9	3.6	0.35	0.0	0.00	0.00	1.23	0.50	20	
30		14.06		14.06		33.369	24.916	303.6	0.091	5.91	100.9	3.8	0.39	0.5	0.04	0.01	1.14	0.55	30	217
39		12.48		12.47		33.369	25.233	273.7	0.117	4.78	79.0	8.6	1.01	9.6	0.03	0.00	0.26	0.31	39	216
50		11.71		11.70		33.444	25.437	254.5	0.146	4.36	70.9	12.2	1.27	14.0	0.03	0.04	0.12	0.18	50	215
60		11.43		11.42		33.499	25.531	245.7	0.171	4.13	66.8	14.0	1.38	15.7	0.02	0.00	0.07	0.13	60	214
69		11.17		11.16		33.566	25.630	236.5	0.193	3.89	62.6	15.7	1.47	17.2	0.02	0.00	0.05	0.11	69	213
75	ISL	11.03	D	11.02		33.599	D 25.681	231.7	0.207	3.64	58.4	17.0	1.55	18.3	0.02	0.02	0.03	0.09	75	
84		11.03		11.02		33.718	25.774	223.1	0.228	3.25	52.2	18.9	1.67	19.8	0.01	0.04	0.01	0.07	84	212
100		10.64		10.63		33.809	25.914	210.1	0.262	2.83	45.1	22.3	1.82	22.2	0.01	0.01	0.01	0.05	101	211
119		10.32		10.31		33.902	26.043	198.3	0.301	2.46	38.9	25.7	1.98	24.1	0.01	0.02	0.00	0.05	120	210
125	ISL	10.28	D	10.27		33.932	D 26.073	195.6	0.313	2.35	37.2	26.8	2.03	24.6	0.01	0.02	0.00	0.05	126	
139		10.03		10.01		33.992	26.163	187.3	0.340	2.14	33.7	29.0	2.12	25.5	0.01	0.01	0.00	0.05	140	209
150	ISL	9.87	D	9.85		34.030	D 26.220	182.1	0.360	2.04	32.0	30.2	2.16	26.1	0.01	0.01	0.00	0.05	151	
169		9.70		9.68		34.076	26.284	176.4	0.394	1.91	29.8	31.9	2.22	27.0	0.01	0.02	0.00	0.04	170	208
200		9.42		9.40		34.152	26.390	166.9	0.447	1.73	26.9	34.9	2.32	28.0	0.01	0.10	0.00	0.04	201	207
228		9.08		9.06		34.214	26.494	157.5	0.493	1.39	21.4	39.5	2.47	29.6	0.01	0.04			229	206
250	ISL	8.89	D	8.86		34.221	D 26.530	154.4	0.527	1.32	20.3	41.3	2.51	30.1	0.00	0.01			251	
268		8.77		8.74		34.236	26.561	151.8	0.555	1.29	19.8	42.5	2.53	30.4	0.00	0.00			270	205
300	ISL	8.42	D	8.39		34.251	D 26.627	145.9	0.602	1.08	16.4	46.2	2.63	31.7	0.00	0.01			302	
317		8.28		8.25		34.261	26.657	143.4	0.627	0.97	14.7	48.4	2.69	32.5	0.00	0.01			319	204
377		7.62		7.58		34.254	26.749	135.2	0.710	0.81	12.1	55.6	2.82	34.6	0.00	0.04			379	203
400	ISL	7.40	D	7.36		34.264	D 26.789	131.7	0.741	0.73	10.8	58.2	2.87	35.2	0.00	0.03			403	
438		7.09		7.05		34.267	26.835	127.7	0.790	0.59	8.7	62.7	2.95	36.1	0.00	0.01			441	202
500	ISL	6.57	D	6.52		34.291	D 26.925	119.6	0.867	0.41	6.0	72.4	3.10	38.2	0.01	0.03			503	
520		6.32		6.27		34.301	26.965	115.8	0.891	0.35	5.1	75.5	3.15	38.9	0.01	0.04			524	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 50.8 N	117 31.7 W	08/01/09	1328 UTC	844 m	350 02 kn			1016.5 mb	14.0 C	13.1 C		

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.37		14.37		33.385	24.863	307.9	0.000	5.98	102.8	2.6	0.36	0.0	0.00	0.02	0.86	0.29	0	
2		14.37		14.37		33.385	24.863	307.9	0.006	5.98	102.8	2.6	0.36	0.0	0.00	0.02	0.86	0.29	2	220
9		14.37		14.37		33.384	24.862	308.2	0.028	5.98	102.8	2.5	0.36	0.0	0.00	0.01	0.86	0.31	9	219
10	ISL	14.37	D	14.37		33.382	D 24.860	308.3	0.031	5.98	102.8	2.5	0.36	0.0	0.00	0.01	0.86	0.31	10	
19		14.36		14.36		33.384	24.865	308.2	0.059	5.98	102.7	2.7	0.36	0.0	0.00	0.02	0.94	0.30	19	218
20	ISL	14.36	D	14.36		33.381	D 24.862	308.5	0.062	5.98	102.7	2.7	0.36	0.0	0.00	0.02	0.97	0.32	20	
29		14.15		14.15		33.371	24.899	305.2	0.089	5.97	102.1	3.2	0.38	0.2	0.03	0.07	1.16	0.56	29	217
30	ISL	14.13	D	14.13		33.367	D 24.900	305.2	0.092	5.97	102.1	3.3	0.38	0.2	0.03	0.07	1.15	0.57	30	
40		13.86		13.85		33.356	24.948	300.9	0.123	6.01	102.2	3.9	0.41	0.4	0.06	0.11	1.00	0.65	40	216
50		13.07		13.06		33.374	25.121	284.6	0.152	4.90	82.0	7.3	0.92	7.7	0.13	0.02	0.35	0.33	50	215
59		12.52		12.51		33.446	25.285	269.2	0.177	4.37	72.3	10.3	1.16	11.5	0.04	0.00	0.24	0.30	59	214
69		12.02		12.01		33.544	25.457	253.1	0.203	3.95	64.7	13.3	1.34	14.6	0.02	0.02	0.14	0.22	69	213
75	ISL	11.84	D	11.83		33.586	D 25.523	246.9	0.218	3.83	62.5	14.7	1.43	16.2	0.02	0.02	0.10	0.18	75	
85		11.09		11.08		33.604	25.675	232.6	0.242	3.71	59.6	16.7	1.54	18.2	0.02	0.03	0.06	0.14	85	212
99		10.81		10.80		33.670	25.776	223.2	0.274	3.45	55.1	19.0	1.66	19.8	0.01	0.01	0.04	0.12	99	211
100	ISL	10.81	D	10.80		33.676	D 25.781	222.8	0.276	3.43	54.8	19.1	1.67	19.9	0.01	0.01	0.04	0.12	100	
119		10.36		10.35		33.776	25.938	208.3	0.317	3.05	48.3	22.2	1.81	22.2	0.01	0.07	0.01	0.06	120	210
125	ISL	10.18	D	10.17		33.832	D 26.012	201.3	0.329	2.90	45.7	23.6	1.87	22.9	0.01	0.06	0.01	0.06	126	
139		9.97		9.95		33.911	26.110	192.3	0.357	2.56	40.2	26.9	1.99	24.4	0.01	0.02	0.00	0.06	140	209
150	ISL	9.88	D	9.86		33.964	D 26.167	187.2	0.378	2.38	37.3	28.3	2.05	25.2	0.01	0.03	0.00	0.05	151	
169		9.72		9.70		34.050	26.261	178.6	0.412	2.13	33.3	30.3	2.15	26.2	0.01	0.04	0.00	0.04	170	208
200		9.41		9.39		34.154	26.394	166.6	0.466	1.69	26.2	35.3	2.34	28.3	0.01	0.09	0.00	0.04	201	207
228		9.17		9.14		34.195	26.465	160.3	0.512	1.54	23.8	38.2	2.41	29.2	0.01	0.02			229	206
250	ISL	8.95	D	8.92		34.222	D 26.521	155.3	0.546	1.42	21.8	40.8	2.47	30.1	0.00	0.01			251	
266		8.67		8.64		34.222	26.566	151.3	0.571	1.33	20.3	42.7	2.52	30.7	0.00	0.01			268	205
300	ISL	8.46	D	8.43		34.252	D 26.622	146.5	0.622	1.08	16.4	46.8	2.63	31.9	0.00	0.03			302	
317		8.28		8.25		34.260	26.656	143.5	0.646	0.96	14.5	48.8	2.69	32.4	0.00	0.04			319	204
377		7.65		7.61		34.267	26.755	134.7	0.730	0.74	11.0	56.2	2.85	34.4	0.02	0.06			379	203
400	ISL	7.33	D	7.29		34.256	D 26.792	131.3	0.760	0.68	10.1	58.9	2.89	35.0	0.01	0.04			403	
437		7.03		6.99		34.264	26.841	127.0	0.808	0.59	8.7	63.4	2.96	36.1	0.00	0.00			440	202
500	ISL	6.32	D	6.27		34.279	D 26.948	117.2	0.885	0.41	5.9	73.1	3.09	38.4	0.01	0.02			503	
518		6.20		6.15		34.290	26.972	115.0	0.906	0.36	5.2	75.9	3.13	39.0	0.01	0.03			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 40.7 N	117 52.3 W	08/01/09	1742 UTC	618 m	330 03 kn	330 01 06	1	1017.3 mb	14.5 C	13.1 C	19m	7/8 AC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.40		14.40		33.380	24.852	308.8	0.000	5.96	102.5	2.8	0.35	0.0	0.01	0.01	0.47	0.14	0	
1	A	14.40		14.40		33.380	24.852	308.8	0.003	5.96	102.5	2.8	0.35	0.0	0.01	0.01	0.47	0.14	1	222
10	ISL	14.34	D	14.34		33.374	D 24.861	308.3	0.031	5.99	102.9	2.7	0.35	0.0	0.00	0.00	0.71	0.21	10	
11	A	14.31		14.31		33.377	24.869	307.5	0.034	5.99	102.8	2.7	0.35	0.0	0.00	0.00	0.76	0.23	11	221
18		14.26		14.26		33.371	24.875	307.2	0.055	5.99	102.7	2.8	0.36	0.0	0.02	0.00	1.15	0.38	18	220
20	ISL	14.23	D	14.23		33.365	D 24.877	307.0	0.062	5.95	101.9	3.0	0.37	0.1	0.05	0.01	1.11	0.41	20	
27	A	14.10		14.10		33.356	24.898	305.3	0.083	5.77	98.6	3.7	0.45	1.1	0.20	0.04	0.79	0.46	27	219
30	ISL	14.04	D	14.04		33.353	D 24.908	304.4	0.092	5.68	96.9	4.0	0.50	1.7	0.25	0.04	0.67	0.47	30	
32		13.86		13.86		33.350	24.943	301.1	0.098	5.62	95.6	4.3	0.54	2.2	0.28	0.04	0.61	0.48	32	218
38	A	13.62		13.61		33.335	24.980	297.7	0.116	5.43	91.9	5.3	0.67	3.9	0.27	0.01	0.57	0.47	38	217
46		12.82		12.81		33.370	25.168	280.0	0.139	4.80	79.9	8.4	1.00	8.9	0.04	0.00	0.17	0.29	46	216
50	ISL	12.46	D	12.45		33.430	D 25.284	269.0	0.150	4.54	75.0	10.0	1.13	11.0	0.03	0.00	0.11	0.23	50	
52	A	12.36		12.35		33.446	25.316	266.1	0.156	4.42	72.9	10.7	1.18	11.9	0.02	0.00	0.10	0.21	52	215
67		11.68		11.67		33.568	25.539	245.2	0.194	3.87	62.9	14.3	1.41	15.8	0.02	0.00	0.05	0.15	67	214
75	ISL	11.51	D	11.50		33.606	D 25.600	239.6	0.213	3.70	60.0	15.4	1.50	17.0	0.01	0.00	0.04	0.11	75	
81	A	11.40		11.39		33.644	25.650	235.0	0.228	3.58	57.9	16.3	1.55	17.8	0.01	0.00	0.03	0.09	81	213
90		11.14		11.13		33.697	25.738	226.7	0.248	3.34	53.7	18.5	1.63	19.0	0.01	0.03	0.01	0.06	90	212
100		10.90		10.89		33.750	25.823	218.9	0.271	3.06	49.0	20.2	1.75	20.5	0.01	0.00	0.01	0.06	100	211
119		10.41		10.40		33.868	26.001	202.3	0.311	2.63	41.7	23.8	1.93	23.0	0.00	0.01	0.01	0.05	120	210
125	ISL	10.29	D	10.28		33.907	D 26.052	197.6	0.323	2.51	39.7	25.0	1.98	23.7	0.00	0.01	0.01	0.05	126	
139		10.05		10.03		33.964	26.138	189.7	0.350	2.27	35.7	27.5	2.09	25.0	0.00	0.00	0.00	0.04	140	209
150	ISL	9.98	D	9.96		33.992	D 26.172	186.7	0.370	2.18	34.3	28.8	2.12	25.6	0.00	0.00	0.00	0.04	151	
168		9.74		9.72		34.051	26.258	178.8	0.403	2.10	32.8	30.5	2.15	26.2	0.00	0.00	0.01	0.05	169	208
200	ISL	9.27	D	9.25		34.124	D 26.393	166.6	0.459	1.85	28.6	34.9	2.30	27.9	0.00	0.00	0.00	0.04	201	
201		9.29		9.27		34.120	26.386	167.2	0.460	1.84	28.5	35.0	2.30	28.0	0.00	0.00	0.00	0.04	202	207
228		9.08		9.06		34.169	26.459	160.8	0.505	1.60	24.7	37.3	2.40	28.9	0.01	0.00			229	206
250	ISL	8.82	D	8.79		34.194	D 26.520	155.3	0.539	1.46	22.4	40.3	2.48	29.8	0.01	0.00			251	
269		8.64		8.61		34.210	26.561	151.8	0.569	1.34	20.5	43.3	2.55	30.7	0.00	0.00			271	205
300	ISL	8.15	D	8.12		34.240	D 26.659	142.7	0.614	1.10	16.6	47.9	2.67	31.9	0.00	0.00			302	
317		8.06		8.03		34.246	26.678	141.2	0.638	0.98	14.8	50.4	2.73	32.6	0.00	0.00			319	204
377		7.17		7.13		34.228	26.792	130.7	0.720	0.85	12.5	58.9	2.86	35.0	0.00	0.00			379	203
400	ISL	7.19	D	7.15		34.273	D 26.825	128.1	0.750	0.73	10.8	62.3	2.93	35.9	0.00	0.00			403	
437		6.69		6.65		34.261	26.884	122.6	0.796	0.53	7.7	67.8	3.03	37.3	0.00	0.00			440	202
500	ISL	6.17	D	6.13		34.290	D 26.976	114.3	0.871	0.37	5.3	76.4	3.14	39.1	0.00	0.00			503	
518		6.03		5.98		34.297	26.999	112.2	0.891	0.32	4.6	78.9	3.17	39.6	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 30.9 N	118 12.9 W	08/01/09	2147 UTC	1645 m	300 14 kn	290 02 05	1	1015.2 mb	13.2 C	12.8 C	09m	6/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.63		14.63		33.393	24.814	312.5	0.000	6.05	104.5	1.9	0.36	0.0	0.00	0.00	1.05	0.35	0	
2		14.63		14.63		33.393	24.814	312.6	0.006	6.05	104.5	1.9	0.36	0.0	0.00	0.00	1.05	0.35	2	221
9		14.62		14.62		33.395	24.818	312.4	0.028	6.06	104.7	2.0	0.37	0.0	0.01	0.00	1.05	0.38	9	219
9		14.62		14.62		33.395	24.818	312.4	0.028										9	220
10	ISL	14.61	D	14.61		33.392	D 24.817	312.5	0.031	6.06	104.7	2.0	0.37	0.0	0.01	0.00	1.05	0.38	10	
20		14.55		14.55		33.399	24.836	311.0	0.062	6.03	104.0	1.8	0.36	0.0	0.01	0.00	1.04	0.42	20	218
30		14.53		14.53		33.398	24.840	310.9	0.094	5.98	103.1	2.0	0.37	0.0	0.01	0.01	1.29	0.46	30	217
40		13.15		13.14		33.349	25.086	287.7	0.123	5.05	84.6	6.7	0.85	6.4	0.12	0.00	0.73	0.45	40	216
50		12.48		12.47		33.361	25.227	274.5	0.152	4.83	79.8	8.9	1.03	9.6	0.05	0.00	0.34	0.43	50	215
59		12.30		12.29		33.439	25.322	265.6	0.176	4.49	73.9	10.7	1.17	11.9	0.04	0.00	0.17	0.26	59	214
70		11.83		11.82		33.576	25.517	247.3	0.204	3.87	63.1	14.2	1.40	15.5	0.02	0.00	0.05	0.10	70	213
75	ISL	11.49	D	11.48		33.629	D 25.621	237.5	0.216	3.69	59.8	15.4	1.47	16.6	0.02	0.00	0.04	0.09	75	
85		11.31		11.30		33.674	25.690	231.2	0.240	3.42	55.2	17.5	1.59	18.4	0.01	0.00	0.03	0.07	85	212
100	ISL	10.91	D	10.90		33.769	D 25.836	217.7	0.273	3.01	48.2	20.5	1.76	20.8	0.01	0.00	0.01	0.06	100	
101		10.89		10.88		33.775	25.844	216.9	0.275	2.98	47.7	20.7	1.77	20.9	0.01	0.00	0.01	0.06	101	211
120		10.36		10.35		33.886	26.023	200.2	0.315	2.55	40.4	25.0	1.96	23.4	0.00	0.00	0.00	0.04	121	210
125	ISL	10.24	D	10.23		33.937	D 26.084	194.5	0.325	2.47	39.0	25.8	2.00	23.8	0.00	0.00	0.00	0.04	126	
140		10.06		10.04		33.972	26.142	189.3	0.354	2.26	35.6	28.0	2.08	24.9	0.00	0.00	0.00	0.03	141	209
150	ISL	9.87	D	9.85		34.035	D 26.224	181.7	0.372	2.16	33.9	29.3	2.13	25.4	0.00	0.00	0.00	0.03	151	
168		9.75		9.73		34.085	26.283	176.5	0.405	2.01	31.4	31.4	2.20	26.3	0.01	0.00	0.00	0.03	169	208
200		9.31		9.29		34.168	26.421	163.9	0.459	1.73	26.8	35.6	2.34	28.1	0.00	0.01	0.00	0.03	201	207
227		9.06		9.04		34.206	26.491	157.7	0.502	1.49	23.0	38.9	2.45	29.3	0.00	0.00			228	206
250	ISL	8.80	D	8.77		34.223	D 26.546	152.9	0.538	1.36	20.8	41.8	2.53	30.3	0.00	0.01			251	
268		8.40		8.37		34.223	26.608	147.1	0.565			44.1	2.58	31.1	0.00	0.02			270	205
300	ISL	8.06	D	8.03		34.217	D 26.655	143.1	0.612	1.13	17.0	48.4	2.67	32.3	0.00	0.01			302	
319		7.86		7.83		34.226	26.692	139.8	0.638	1.06	15.9	50.9	2.72	33.0	0.00	0.00			321	204
377		7.30		7.26		34.250	26.792	131.0	0.717	0.73	10.8	58.5	2.89	35.0	0.00	0.01			379	203
400	ISL	7.02	D	6.98		34.232	D 26.816	128.7	0.747	0.63	9.3	61.2	2.94	35.6	0.00	0.01			403	
438		6.93		6.89		34.275	26.863	124.9	0.795	0.49	7.2	65.5	3.02	36.4	0.00	0.00			441	202
500	ISL	6.52	D	6.47		34.302	D 26.940	118.1	0.870	0.39	5.7	72.0	3.12	37.9	0.00	0.00			503	
514		6.43		6.38		34.293	26.945	117.8	0.887	0.37	5.4	73.5	3.14	38.2	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 0901 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 33.2 W	09/01/09	0150 UTC	1335 m	330 10 kn			1014.2 mb	13.0 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	13.62		13.62		33.359	24.998	295.0	0.000	6.04	102.2	2.8	0.46	1.0	0.06	0.17	0.62	0.19	0	
2		13.62		13.62		33.359	24.998	295.0	0.006	6.04	102.2	2.8	0.46	1.0	0.06	0.17	0.62	0.19	2	220
10	ISL	13.62	D	13.62		33.356	D 24.996	295.4	0.030	6.05	102.4	2.9	0.47	1.0	0.06	0.22	0.60	0.18	10	
11		13.62		13.62		33.360	24.999	295.2	0.032	6.05	102.4	2.9	0.47	1.0	0.06	0.23	0.60	0.18	11	219
20	ISL	13.59	D	13.59		33.351	D 24.998	295.5	0.059	6.03	102.0	3.0	0.47	1.1	0.06	0.20	0.63	0.25	20	
21		13.59		13.59		33.357	25.003	295.1	0.062	6.03	102.0	3.0	0.47	1.1	0.06	0.20	0.64	0.26	21	218
30	ISL	13.33	D	13.33		33.332	D 25.036	292.1	0.088	5.94	99.9	4.0	0.53	2.0	0.10	0.25	0.69	0.33	30	
31		13.33		13.33		33.335	25.039	291.9	0.091	5.93	99.7	4.2	0.54	2.2	0.11	0.26	0.70	0.33	31	217
41		13.01		13.00		33.349	25.114	285.0	0.120	5.42	90.5	6.4	0.74	5.2	0.18	0.28	0.34	0.30	41	216
50	ISL	11.99	D	11.98		33.380	D 25.335	264.2	0.145	4.71	77.0	11.0	1.08	11.5	0.07	0.05	0.18	0.24	50	
51		11.92		11.91		33.387	25.353	262.4	0.148	4.64	75.8	11.5	1.12	12.2	0.05	0.02	0.17	0.23	51	215
61		11.30		11.29		33.410	25.485	250.0	0.173	4.41	71.1	13.6	1.27	14.8	0.02	0.00	0.11	0.19	61	214
71		11.31		11.30		33.560	25.601	239.4	0.198	3.91	63.1	15.5	1.40	16.7	0.03	0.00	0.06	0.15	71	213
75	ISL	11.33	D	11.32		33.608	D 25.634	236.3	0.207	3.79	61.2	16.3	1.45	17.4	0.03	0.00	0.05	0.14	75	
86		10.89		10.88		33.653	25.749	225.6	0.233	3.52	56.3	18.6	1.58	19.2	0.01	0.00	0.03	0.11	86	212
100	ISL	10.75	D	10.74		33.738	D 25.840	217.2	0.264	3.13	49.9	21.4	1.72	21.0	0.00	0.01	0.02	0.08	100	
101		10.67		10.66		33.758	25.869	214.4	0.266	3.10	49.4	21.6	1.73	21.1	0.00	0.01	0.02	0.08	102	211
120		10.30		10.29		33.857	26.011	201.3	0.305	2.70	42.7	25.0	1.89	23.3	0.00	0.00	0.01	0.06	121	210
125	ISL	10.19	D	10.18		33.929	D 26.086	194.3	0.315	2.59	40.9	25.8	1.93	23.7	0.00	0.01	0.01	0.06	126	
140		10.09		10.07		33.965	26.132	190.3	0.344	2.30	36.2	28.0	2.03	24.7	0.00	0.04	0.01	0.05	141	209
150	ISL	9.89	D	9.87		34.026	D 26.213	182.7	0.363	2.18	34.2	29.4	2.08	25.3	0.00	0.03	0.01	0.05	151	
170		9.72		9.70		34.086	26.289	176.0	0.398	2.03	31.7	31.9	2.15	26.4	0.00	0.00	0.01	0.04	171	208
200	ISL	9.37	D	9.35		34.148	D 26.395	166.4	0.450	1.85	28.7	35.1	2.24	27.8	0.00	0.01	0.00	0.03	201	
201		9.37		9.35		34.153	26.399	166.0	0.451	1.84	28.5	35.2	2.24	27.8	0.00	0.01	0.00	0.03	202	207
231		9.05		9.02		34.182	26.474	159.4	0.500	1.66	25.6	38.0	2.35	28.9	0.00	0.00			232	206
250	ISL	8.87	D	8.84		34.217	D 26.530	154.4	0.530	1.49	22.9	40.8	2.44	29.8	0.00	0.00			251	
271		8.53		8.50		34.215	26.582	149.7	0.562	1.30	19.8	44.1	2.53	30.9	0.00	0.00			273	205
300	ISL	8.25	D	8.22		34.219	D 26.628	145.8	0.605	1.14	17.3	47.6	2.62	31.9	0.00	0.00			302	
321		8.06		8.03		34.236	26.670	142.0	0.635	1.05	15.8	50.1	2.67	32.6	0.00	0.00			323	204
381		7.37		7.33		34.244	26.777	132.4	0.717	0.72	10.7	59.3	2.87	35.1	0.00	0.00			383	203
400	ISL	7.16	D	7.12		34.265	D 26.823	128.2	0.742	0.64	9.4	62.0	2.92	35.8	0.00	0.00			403	
440		6.80		6.76		34.273	26.879	123.2	0.793	0.50	7.3	67.4	3.00	37.0	0.00	0.00			443	202
500	ISL	6.35	D	6.30		34.297	D 26.958	116.2	0.864	0.37	5.4	74.4	3.10	38.5	0.00	0.00			503	
519		6.22		6.17		34.303	26.980	114.3	0.886	0.33	4.8	76.6	3.13	39.0	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 0901 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 10.7 N	118 53.6 W	09/01/09	0556 UTC	1472 m	290 10 kn			1015.3 mb	13.5 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	14.17		14.17		33.364	24.888	305.4	0.000	6.00	102.7	1.7	0.35	0.0	0.01	0.00	1.00	0.34	0	
1		14.17		14.17		33.364	24.888	305.4	0.003	6.00	102.7	1.7	0.35	0.0	0.01	0.00	1.00	0.34	1	220
10	ISL	14.16	D	14.16		33.363	D 24.890	305.5	0.031	6.00	102.7	1.7	0.38	0.0	0.01	0.00	1.02	0.33	10	
11		14.17		14.17		33.363	D 24.888	305.8	0.034										11	219
20		14.17		14.17		33.365	24.890	305.8	0.061	6.00	102.7	1.8	0.41	0.0	0.00	0.01	1.04	0.31	20	218
30		13.85		13.85		33.352	24.946	300.7	0.091	6.01	102.2	1.1	0.41	0.2	0.02	0.30	0.76	0.37	30	217
41		13.65		13.64		33.348	24.984	297.4	0.124	5.76	97.5	3.0	0.54	1.6	0.10	0.49	0.82	0.59	41	216
50		12.77		12.76		33.335	25.150	281.8	0.150	5.07	84.3	8.0	0.91	7.7	0.26	0.06	0.37	0.43	50	215
61		11.95		11.94		33.346	25.316	266.2	0.181	4.72	77.1	10.5	1.15	11.7	0.05	0.00	0.18	0.26	61	214
71		11.58		11.57		33.412	25.436	255.0	0.207	4.48	72.6	12.3	1.27	13.7	0.02	0.02	0.10	0.17	71	213
75	ISL	11.50	D	11.49		33.439	D 25.472	251.7	0.217	4.40	71.2	12.8	1.30	14.2	0.02	0.02	0.09	0.17	75	
86		11.35		11.34		33.496	25.544	245.1	0.244	4.15	67.0	14.2	1.40	15.5	0.02	0.01	0.07	0.17	86	212
100	ISL	10.90	D	10.89		33.638	D 25.735	227.2	0.277	3.66	58.6	17.7	1.60	18.4	0.01	0.00	0.03	0.10	100	
101		10.90		10.89		33.640	25.737	227.1	0.279	3.62	57.9	18.0	1.62	18.6	0.01	0.00	0.03	0.09	101	211
120		10.44		10.43		33.777	25.925	209.6	0.321	3.08	48.8	22.1	1.81	21.4	0.01	0.03	0.01	0.06	121	210
125	ISL	10.44	D	10.43		33.798	D 25.941	208.1	0.331	2.99	47.4	23.0	1.85	22.0	0.01	0.02	0.01	0.06	126	
140		10.07		10.05		33.863	26.055	197.5	0.362	2.76	43.4	25.4	1.96	23.4	0.00	0.00	0.01	0.08	141	209
150	ISL	9.83	D	9.81		33.960	D 26.172	186.7	0.381	2.57	40.2	27.2	2.04	24.4	0.00	0.00	0.01	0.07	151	
170		9.61		9.59		34.032	26.265	178.2	0.417	2.21	34.4	30.8	2.18	26.1	0.00	0.00	0.00	0.05	171	208
200	ISL	9.29	D	9.27		34.132	D 26.396	166.3	0.469	1.86	28.8	34.8	2.33	27.7	0.00	0.00	0.01	0.05	201	
201		9.29		9.27		34.127	26.392	166.7	0.471	1.85	28.6	34.9	2.33	27.7	0.00	0.00	0.01	0.05	202	207
231		8.96		8.93		34.176	26.484	158.5	0.520	1.59	24.4	38.8	2.44	29.0	0.00	0.00			232	206
250	ISL	8.78	D	8.75		34.200	D 26.531	154.3	0.549	1.41	21.6	41.3	2.53	29.8	0.00	0.01			251	
271		8.59		8.56		34.224	26.580	150.0	0.581	1.22	18.6	44.1	2.62	30.7	0.00	0.01			273	205
300	ISL	8.30	D	8.27		34.247	D 26.642	144.4	0.624	1.01	15.3	47.9	2.72	31.9	0.00	0.01			302	
321		8.06		8.03		34.254	26.684	140.7	0.654	0.89	13.4	50.7	2.79	32.8	0.00	0.00			323	204
382		7.31		7.27		34.261	26.799	130.4	0.737	0.66	9.8	59.3	2.95	35.0	0.00	0.00			384	203
400	ISL	7.11	D	7.07		34.261	D 26.827	127.8	0.760	0.58	8.6	62.1	3.00	35.7	0.00	0.00			403	
441		6.75		6.71		34.286	26.896	121.6	0.811	0.43	6.3	68.2	3.11	37.2	0.00	0.00			444	202
500	ISL	6.22	D	6.18		34.312	D 26.987	113.4	0.880	0.33	4.8	75.1	3.19	38.7	0.00	0.01			503	
520		6.18		6.13		34.314	26.994	113.0	0.903	0.29	4.2	77.5	3.22	39.2	0.00	0.02			524	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 14.1 W	09/01/09	1005 UTC	1593 m	300 14 kn			1014.8 mb	13.5 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	14.43		14.43		33.337	24.813	312.6	0.000	5.81	99.9	2.7	0.38	0.3	0.03	0.13	0.58	0.19	0	
2		14.43		14.43		33.337	24.813	312.6	0.006	5.81	99.9	2.7	0.38	0.3	0.03	0.13	0.58	0.19	2	221
10		14.44		14.44		33.341	24.814	312.8	0.031	5.82	100.1	2.6	0.39	0.3	0.03	0.15	0.57	0.19	10	219
10		14.44		14.44		33.339	24.813	312.9	0.031										10	220
19		14.43		14.43		33.337	24.813	313.1	0.059	5.80	99.8	2.6	0.39	0.3	0.03	0.14	0.60	0.19	19	218
20	ISL	14.43	D	14.43		33.335	D 24.812	313.3	0.063	5.80	99.8	2.6	0.39	0.3	0.03	0.14	0.60	0.19	20	
30		14.44		14.44		33.337	24.812	313.6	0.094	5.82	100.1	2.7	0.39	0.3	0.03	0.14	0.60	0.20	30	217
40		14.38		14.37		33.344	24.830	312.1	0.125	5.85	100.5	2.6	0.38	0.2	0.03	0.10	0.71	0.25	40	216
50		14.10		14.09		33.305	24.859	309.6	0.156	5.70	97.4	3.5	0.48	1.5	0.06	0.14	0.46	0.22	50	215
60		11.86		11.85		33.268	25.272	270.4	0.185	4.98	81.1	9.5	1.05	10.5	0.04	0.03	0.10	0.17	60	214
70		11.40		11.39		33.342	25.415	257.0	0.212	4.75	76.7	11.6	1.19	12.8	0.02	0.03	0.07	0.12	70	213
75	ISL	11.11	D	11.10		33.425	D 25.532	246.0	0.224	4.61	74.0	12.7	1.26	14.0	0.01	0.03	0.05	0.10	75	
85		10.90		10.89		33.489	25.619	237.9	0.248	4.35	69.5	14.9	1.38	16.1	0.01	0.04	0.03	0.06	85	212
100	ISL	10.55	D	10.54		33.575	D 25.748	225.9	0.283	4.06	64.4	17.2	1.51	18.1	0.01	0.03	0.02	0.04	100	
102		10.50		10.49		33.585	25.764	224.4	0.288	4.02	63.7	17.5	1.52	18.3	0.01	0.03	0.02	0.04	102	211
120		10.07		10.06		33.690	25.920	209.9	0.327	3.66	57.5	20.6	1.66	20.6	0.01	0.05	0.01	0.03	121	210
125	ISL	10.12	D	10.11		33.809	D 26.005	202.0	0.337	3.36	52.9	22.4	1.76	21.7	0.01	0.04	0.01	0.04	126	
139		9.86		9.84		33.946	26.156	187.9	0.364	2.49	39.0	27.7	2.03	24.7	0.01	0.00	0.01	0.07	140	209
150	ISL	9.25	D	9.23		33.925	D 26.239	180.0	0.385	2.34	36.2	30.1	2.12	25.8	0.01	0.00	0.01	0.06	151	
169		9.36		9.34		34.085	26.347	170.3	0.418	2.09	32.4	33.1	2.21	26.9	0.00	0.00	0.00	0.04	170	208
200		9.02		9.00		34.173	26.471	159.1	0.469	1.63	25.1	38.2	2.41	29.1	0.01	0.00	0.00	0.04	201	207
228		8.74		8.72		34.215	26.549	152.2	0.513	1.32	20.2	42.4	2.54	30.4	0.00	0.01			229	206
250	ISL	8.53	D	8.50		34.226	D 26.590	148.5	0.546	1.15	17.5	44.9	2.62	31.0	0.00	0.01			251	
268		8.37		8.34		34.244	26.629	145.1	0.572	1.04	15.8	46.9	2.67	31.5	0.00	0.01			270	205
300	ISL	7.93	D	7.90		34.255	D 26.704	138.4	0.617	0.85	12.8	51.6	2.78	33.0	0.00	0.01			302	
318		7.78		7.75		34.262	26.732	136.0	0.642	0.77	11.5	54.3	2.84	33.8	0.00	0.01			320	204
378		7.27		7.23		34.269	26.811	129.1	0.722	0.62	9.2	60.7	2.96	35.4	0.00	0.02			380	203
400	ISL	7.05	D	7.01		34.274	D 26.845	126.0	0.750	0.57	8.4	63.1	3.00	35.9	0.00	0.01			403	
436		6.77		6.73		34.278	26.887	122.4	0.794	0.50	7.3	67.2	3.05	36.8	0.00	0.00			439	202
500	ISL	6.36	D	6.31		34.312	D 26.969	115.2	0.870	0.33	4.8	74.4	3.16	38.3	0.00	0.00			503	
517		6.27		6.22		34.316	26.984	114.0	0.890	0.29	4.2	76.3	3.19	38.7	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 0901 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 50.8 N	119 34.2 W	09/01/09	1423 UTC	1839 m	360 13 kn			1015.4 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	14.35		14.35	33.345	24.836	310.4	0.000	5.83	100.1	2.6	0.39	0.2	0.03	0.14	0.60	0.22	0	
2		14.35		14.35	33.345	24.836	310.4	0.006	5.83	100.1	2.6	0.39	0.2	0.03	0.14	0.60	0.22	2	220
10	ISL	14.35	D	14.35	33.342	D 24.834	310.9	0.031	5.84	100.3	2.6	0.39	0.2	0.03	0.14	0.61	0.22	10	
20		14.35		14.35	33.348	24.839	310.7	0.062	5.85	100.5	2.6	0.39	0.2	0.03	0.13	0.61	0.22	20	218
30		14.35		14.35	33.345	24.837	311.2	0.093	5.82	99.9	2.6	0.39	0.2	0.03	0.15	0.60	0.22	30	217
40		14.35		14.34	33.346	24.838	311.4	0.124	5.83	100.1	2.5	0.39	0.2	0.03	0.15	0.58	0.22	40	216
50		14.34		14.33	33.344	24.839	311.6	0.156	5.82	99.9	2.6	0.39	0.3	0.03	0.15	0.59	0.25	50	215
60		13.33		13.32	33.257	24.979	298.4	0.186	5.52	92.8	5.1	0.65	4.0	0.06	0.09	0.31	0.22	60	214
69		11.80		11.79	33.301	25.309	267.0	0.211	4.88	79.4	10.2	1.11	11.3	0.03	0.05	0.10	0.17	69	213
75	ISL	11.46	D	11.45	33.352	D 25.412	257.4	0.227	4.76	76.9	11.4	1.17	12.9	0.02	0.03	0.09	0.14	75	
85		11.18		11.17	33.408	25.506	248.6	0.252	4.63	74.4	12.8	1.26	14.2	0.01	0.01	0.06	0.10	85	212
100	ISL	10.23	D	10.22	33.687	D 25.890	212.4	0.287	3.72	58.7	19.7	1.63	20.0	0.00	0.01	0.02	0.03	100	
101		10.23		10.22	33.687	25.890	212.4	0.289	3.66	57.7	20.2	1.65	20.4	0.00	0.01	0.02	0.03	101	211
120		9.95		9.94	33.755	25.991	203.2	0.329	3.48	54.6	22.0	1.71	21.4	0.00	0.00	0.01	0.03	121	210
125	ISL	9.87	D	9.86	33.774	D 26.019	200.6	0.339	3.40	53.2	22.8	1.74	21.9	0.00	0.00	0.01	0.03	126	
139		9.52		9.50	33.849	26.136	189.7	0.366	3.17	49.3	25.1	1.84	23.4	0.00	0.02	0.00	0.02	140	209
150	ISL	9.37	D	9.35	33.879	D 26.184	185.3	0.387	3.04	47.1	26.9	1.90	24.4	0.00	0.02	0.00	0.02	151	
170		8.98		8.96	33.946	26.299	174.7	0.423	2.81	43.2	30.1	2.00	25.9	0.00	0.00	0.00	0.02	171	208
200	ISL	8.60	D	8.58	34.025	D 26.421	163.6	0.473	2.38	36.3	35.2	2.17	27.9	0.00	0.00	0.00	0.02	201	
202		8.59		8.57	34.026	26.423	163.4	0.477	2.35	35.8	35.5	2.18	28.0	0.00	0.00	0.00	0.02	203	207
230		8.22		8.20	34.066	26.511	155.5	0.521	2.04	30.8	40.3	2.33	30.0	0.00	0.01			231	206
250	ISL	7.98	D	7.95	34.099	D 26.573	149.8	0.552	1.77	26.6	43.5	2.45	31.2	0.00	0.00			251	
272		7.92		7.89	34.142	26.616	146.1	0.584	1.49	22.4	46.7	2.56	32.3	0.00	0.00			274	205
300	ISL	7.77	D	7.74	34.173	D 26.663	142.1	0.625	1.31	19.6	50.2	2.65	33.3	0.00	0.02			302	
317		7.49		7.46	34.160	26.693	139.4	0.649	1.24	18.4	52.3	2.69	33.8	0.00	0.03			319	204
376		6.86		6.82	34.186	26.802	129.6	0.728	0.89	13.0	61.3	2.88	36.0	0.00	0.01			378	203
400	ISL	6.69	D	6.65	34.196	D 26.833	126.9	0.759	0.76	11.1	64.8	2.95	36.8	0.00	0.00			403	
436		6.45		6.41	34.230	26.892	121.7	0.804	0.59	8.6	69.5	3.05	37.8	0.00	0.00			439	202
500	ISL	6.22	D	6.18	34.311	D 26.986	113.4	0.879	0.36	5.2	75.7	3.16	38.9	0.00	0.00			503	
519		6.15		6.10	34.317	27.000	112.3	0.900	0.29	4.2	77.6	3.19	39.2	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 0901 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 31.1 N	120 14.2 W	09/01/09	2039 UTC	3938 m	050 10 kn	340 08 08	2	1018.2 mb	13.2 C	12.0 C	18m	8/8 ST

DEPTH m		TEMP DEG C		POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.85		13.85	33.337	24.934	301.1	0.000	5.87	99.8	2.8	0.41	0.6	0.06	0.20	0.44	0.16	0	
2	A	13.85		13.85	33.337	24.934	301.1	0.006	5.87	99.8	2.8	0.41	0.6	0.06	0.20	0.44	0.16	2	223
10	A	13.85		13.85	33.336	24.933	301.4	0.030	5.93	100.8	2.6	0.41	0.6	0.06	0.19	0.48	0.20	10	222
17		13.85		13.85	33.336	24.934	301.6	0.051	5.93	100.8	2.7	0.41	0.6	0.06	0.18	0.45	0.15	17	221
20	ISL	13.85	D	13.85	33.332	D 24.931	302.0	0.060	5.94	101.0	2.8	0.40	0.6	0.06	0.18	0.47	0.16	20	
24	A	13.85		13.85	33.335	24.933	301.8	0.072	5.95	101.1	2.9	0.40	0.6	0.06	0.19	0.50	0.20	24	220
30		13.85		13.85	33.336	24.934	301.9	0.090	5.94	101.0	2.8	0.41	0.6	0.06	0.18	0.56	0.26	30	218
37	A	13.80		13.79	33.335	24.944	301.2	0.112	5.94	100.9	2.8	0.41	0.7	0.07	0.17	0.56	0.21	37	217
44		13.79		13.78	33.331	24.943	301.5	0.133	5.92	100.5	3.0	0.41	0.7	0.07	0.17	0.57	0.24	44	216
50	A	13.74		13.73	33.324	24.948	301.1	0.151	5.92	100.4	2.9	0.42	0.8	0.08	0.27	0.58	0.28	50	215
64		12.60		12.59	33.258	25.124	284.6	0.192	5.30	87.7	7.1	0.81	7.0	0.15	0.02	0.21	0.25	64	214
75	ISL	11.74	D	11.73	33.379	D 25.381	260.4	0.222	4.78	77.7	10.8	1.11	11.9	0.06	0.00	0.10	0.19	75	
78	A	11.47		11.46	33.356	25.413	257.4	0.229	4.68	75.7	11.7	1.18	13.0	0.03	0.00	0.09	0.17	78	213
89		10.58		10.57	33.364	25.578	241.8	0.257	4.67	74.1	14.1	1.29	14.9	0.02	0.01	0.04	0.07	89	212
100	ISL	10.44	D	10.43	33.437	D 25.659	234.3	0.283	4.54	71.8	15.1	1.35	16.0	0.02	0.00	0.03	0.05	100	
101		10.44		10.43	33.424	25.649	235.3	0.285	4.52	71.5	15.2	1.36	16.1	0.02	0.00	0.03	0.05	101	211
120		10.03		10.02	33.611	25.865	215.1	0.328	3.77	59.2	21.0	1.68	20.9	0.00	0.00	0.02	0.05	121	210
125	ISL	9.96	D	9.95	33.630	D 25.892	212.7	0.339	3.67	57.5	22.0	1.71	21.5	0.00	0.00	0.01	0.05	126	
140		9.46		9.44	33.803	26.110	192.2	0.369	3.40	52.7	24.5	1.76	22.9	0.00	0.00	0.00	0.03	141	209
150	ISL	9.33	D	9.31	33.833	D 26.155	188.1	0.388	3.09	47.8	26.5	1.85	24.1	0.00	0.00	0.00	0.03	151	
169		9.34		9.32	33.997	26.281	176.5	0.423	2.49	38.6	30.3	2.05	26.2	0.00	0.00	0.00	0.03	170	208
200	ISL	9.15	D	9.13	34.129	D 26.416	164.3	0.476	1.88	29.0	35.0	2.25	28.0	0.00	0.00	0.00	0.03	201	
202		9.12		9.10	34.132	26.423	163.7	0.479	1.86	28.7	35.3	2.26	28.1	0.00	0.00	0.00	0.03	203	207
231		8.74		8.72	34.158	26.504	156.4	0.526	1.75	26.8	39.1	2.36	29.3	0.00	0.00			232	206
250	ISL	8.70	D	8.67	34.228	D 26.565	151.0	0.555	1.48	22.6	42.0	2.47	30.2	0.00	0.00			251	
270		8.46		8.43	34.231	26.605	147.5	0.585	1.20	18.2	45.0	2.58	31.2	0.00	0.00			272	205
300	ISL	7.87	D	7.84	34.191	D 26.662	142.2	0.628	1.19	17.9	48.9	2.63	32.5	0.01	0.00			302	
319		7.63		7.60	34.182	26.690	139.8	0.655	1.18	17.6	51.4	2.65	33.3	0.01	0.00			321	204
379		6.79		6.75	34.173	26.801	129.6	0.736	0.92	13.5	61.2	2.83	36.1	0.00	0.00			381	203
400	ISL	6.57	D	6.53	34.179	D 26.835	126.5	0.763	0.82	11.9	64.3	2.89	36.9	0.00	0.00			403	
437		6.29		6.25	34.201	26.889	121.7	0.808	0.66	9.5	69.5	2.98	38.1	0.00	0.01			440	202
500	ISL	6.03	D	5.99	34.264	D 26.973	114.4	0.883	0.43	6.2	76.8	3.09	39.4	0.00	0.02			503	
523		5.88		5.83	34.282	27.006	111.4	0.909	0.34	4.9	79.4	3.13	39.9	0.00	0.02			527	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 10.9 N	120 55.4 W	10/01/09	0306 UTC	3834 m	040 08 kn			1020.1 mb	14.8 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	14.46		14.46		33.279	24.762	317.5	0.000	5.87	101.0	2.3	0.39	0.2	0.03	0.03	0.47	0.14	0	
1		14.46		14.46		33.279	24.762	317.5	0.003	5.87	101.0	2.3	0.39	0.2	0.03	0.03	0.47	0.14	1	221
10	ISL	14.46	D	14.46		33.275	D 24.759	318.0	0.032	5.86	100.8	2.3	0.38	0.1	0.03	0.03	0.46	0.14	10	
11		14.46		14.46		33.278	24.761	317.8	0.035	5.86	100.8	2.3	0.38	0.1	0.03	0.03	0.46	0.14	11	219
20	ISL	14.46	D	14.46		33.275	D 24.759	318.3	0.064	5.86	100.8	2.3	0.39	0.1	0.04	0.04	0.47	0.15	20	
21		14.46		14.46		33.280	24.763	317.9	0.067	5.86	100.8	2.3	0.39	0.1	0.04	0.04	0.47	0.15	21	218
30		14.44		14.44		33.277	24.765	318.0	0.095	5.87	101.0	2.3	0.39	0.2	0.04	0.06	0.48	0.16	30	217
40		14.42		14.41		33.277	24.770	317.8	0.127	5.84	100.4	2.3	0.38	0.2	0.04	0.05	0.48	0.16	40	216
50		14.41		14.40		33.276	24.771	318.0	0.159	5.83	100.2	2.3	0.38	0.2	0.04	0.07	0.47	0.16	50	215
60		13.93		13.92		33.219	24.828	312.9	0.190	5.77	98.2	3.0	0.48	1.3	0.18	0.13	0.26	0.13	60	214
70		12.96		12.95		33.095	24.928	303.5	0.221	5.67	94.5	4.1	0.61	3.3	0.14	0.02	0.14	0.12	70	213
75	ISL	12.10	D	12.09		32.987	D 25.010	295.7	0.236	5.65	92.4	4.7	0.67	4.3	0.10	0.02	0.11	0.11	75	
85		11.37		11.36		32.953	25.118	285.5	0.265	5.59	90.0	6.1	0.79	6.3	0.02	0.01	0.08	0.08	85	212
100	ISL	11.35	D	11.34		33.147	D 25.273	271.2	0.307	5.31	85.5	8.2	0.94	9.1	0.02	0.00	0.06	0.07	100	
101		11.37		11.36		33.148	25.270	271.5	0.310	5.28	85.1	8.4	0.95	9.3	0.02	0.00	0.06	0.07	101	211
121		11.22		11.21		33.445	25.528	247.4	0.362	4.63	74.5	11.9	1.19	13.5	0.01	0.00	0.03	0.04	122	210
125	ISL	10.97	D	10.95		33.554	D 25.658	235.1	0.371	4.47	71.6	13.0	1.25	14.5	0.01	0.00	0.03	0.04	126	
141		10.52		10.50		33.699	D 25.850	217.1	0.408										142	209
150	ISL	10.03	D	10.01		33.745	D 25.970	205.8	0.427	3.59	56.4	20.1	1.60	19.9	0.00	0.00	0.01	0.02	151	
171		9.58		9.56		33.908	26.173	186.9	0.468	3.00	46.7	26.0	1.85	23.6	0.00	0.00	0.00	0.01	172	208
200		9.06		9.04		34.009	26.336	171.8	0.520	2.74	42.2	30.6	1.99	25.8	0.00	0.00	0.00	0.01	201	207
231		8.54		8.52		34.045	26.446	161.8	0.572	2.50	38.0	35.6	2.11	27.9	0.00	0.00			232	206
250	ISL	8.59	D	8.56		34.125	D 26.502	156.9	0.602	2.23	34.0	38.8	2.22	29.1	0.00	0.00			251	
271		8.19		8.16		34.109	26.550	152.5	0.634	1.90	28.7	42.3	2.36	30.4	0.00	0.00			273	205
300	ISL	8.17	D	8.14		34.188	D 26.616	146.9	0.678	1.49	22.5	46.8	2.52	31.9	0.00	0.00			302	
322		7.80		7.77		34.188	26.671	141.8	0.709	1.24	18.6	50.2	2.63	33.0	0.00	0.00			324	204
381		6.99		6.95		34.180	26.779	131.9	0.790	0.95	14.0	59.4	2.81	35.7	0.00	0.00			383	203
400	ISL	6.63	D	6.59		34.164	D 26.815	128.4	0.815	0.89	13.0	62.7	2.86	36.5	0.00	0.00			402	
442		6.20		6.16		34.160	26.869	123.6	0.868	0.76	11.0	69.9	2.96	38.1	0.00	0.00			445	202
500	ISL	5.93	D	5.89		34.220	D 26.951	116.4	0.937	0.55	7.9	77.4	3.07	39.7	0.00	0.00			503	
513		5.76		5.72		34.210	26.964	115.1	0.953	0.50	7.1	79.1	3.09	40.1	0.00	0.00			516	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 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 35.4 W	10/01/09	0916 UTC	4124 m	050 09 kn			1022.9 mb	14.9 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	14.43		14.43		33.150	24.669	326.3	0.000	5.88	101.0	2.3	0.40	0.1	0.03	0.03	0.48	0.16	0	
3		14.43		14.43		33.150	24.669	326.4	0.010	5.88	101.0	2.3	0.40	0.1	0.03	0.03	0.48	0.16	3	220
10		14.46		14.46		33.164	24.673	326.2	0.033	5.87	100.9	2.2	0.41	0.0	0.03	0.02	0.45	0.16	10	219
20	ISL	14.44	D	14.44		33.148	D 24.666	327.2	0.065	5.89	101.2	2.2	0.39	0.0	0.03	0.01	0.47	0.16	20	
21		14.43		14.43		33.149	24.668	326.9	0.069	5.89	101.2	2.2	0.39	0.0	0.03	0.01	0.47	0.16	21	218
30	ISL	14.78	D	14.78		33.278	D 24.694	324.8	0.098	5.88	101.8	2.1	0.40	0.0	0.03	0.01	0.45	0.16	30	
31		14.79		14.79		33.284	D 24.696	324.6	0.101	5.88	101.8	2.1	0.40	0.0	0.03	0.01	0.45	0.16	31	217
41		14.81		14.80		33.299	24.704	324.2	0.134	5.79	100.3	2.1	0.39	0.0	0.02	0.03	0.45	0.13	41	216
50	ISL	14.76	D	14.75		33.279	D 24.699	324.9	0.163	5.81	100.6	2.2	0.39	0.0	0.03	0.04	0.40	0.15	50	
51		14.76		14.75		33.282	24.702	324.7	0.166	5.81	100.6	2.2	0.39	0.0	0.03	0.04	0.39	0.15	51	215
61		13.78		13.77		33.157	24.811	314.5	0.198	5.78	98.0	2.9	0.52	1.3	0.31	0.15	0.19	0.14	61	214
70		13.25		13.24		33.145	24.909	305.3	0.226	5.81	97.4	3.9	0.61	2.7	0.28	0.18	0.11	0.09	70	213
75	ISL	13.31	D	13.30		33.167	D 24.914	305.0	0.241	5.80	97.4	4.1	0.64	3.1	0.22	0.13	0.09	0.09	75	
85		11.99		11.98		32.966	25.014	295.5	0.271	5.76	93.9	4.4	0.69	4.0	0.09	0.01	0.06	0.08	85	212
100	ISL	10.87	D	10.86		32.900	D 25.166	281.2	0.314	5.65	89.9	6.3	0.85	6.7	0.01	0.00	0.04	0.06	100	
101		10.85		10.84		32.895	25.166	281.3	0.317	5.64	89.7	6.5	0.86	6.9	0.01	0.00	0.04	0.06	101	211
119		11.14		11.13		33.297	25.428	256.9	0.366	4.97	79.7	10.4	1.11	11.6	0.01	0.00	0.03	0.05	120	210
125	ISL	11.20	D	11.18		33.483	D 25.562	244.3	0.381	4.71	75.8	12.0	1.21	13.1	0.01	0.00	0.03	0.04	126	
140		10.99		10.97		33.618	D 25.705	231.1	0.416										141	209
150	ISL	10.57	D	10.55		33.657	D 25.809	221.2	0.439	3.70	58.8	18.5	1.58	18.7	0.00	0.00	0.01	0.02	151	
168		10.21		10.19		33.829	26.006	202.9	0.477	3.05	48.1	23.1	1.82	21.8	0.00	0.00	0.00	0.01	169	208
200		9.72		9.70		34.022	26.239	181.3	0.539	2.38	37.2	29.3	2.08	24.9	0.00	0.00	0.00	0.02	201	207
228		9.34		9.31		34.094	26.359	170.4	0.588	2.21	34.3	32.8	2.18	26.5	0.00	0.00			229	206
250	ISL	9.00	D	8.97		34.116	D 26.431	163.9	0.625	2.03	31.2	35.4	2.26	27.6	0.00	0.00			251	
268		8.88		8.85		34.154	26.479	159.5	0.654	1.86	28.5	37.9	2.34	28.6	0.00	0.00			269	205
300	ISL	7.79	D	7.76		34.088	D 26.593	148.7	0.703	1.82	D 27.2	44.8	2.51	31.2	0.00	0.00			302	
319		7.75		7.72		34.162	26.657	143.0	0.731	1.35	20.2	49.2	2.62	32.8	0.00	0.00			321	204
380		7.05		7.01		34.206	26.792	130.8	0.814	0.85	12.5	59.4	2.88	35.4	0.00	0.00			382	203
400	ISL	6.76	D	6.72		34.190	D 26.819	128.3	0.840	0.76	11.1	62.2	2.94	36.1	0.00	0.00			402	
436		6.54		6.50		34.228	26.878	123.0	0.885	0.65	9.5	66.8	3.02	37.2	0.00	0.00			439	202
500	ISL	6.13	D	6.09		34.255	D 26.953	116.4	0.962	0.41	5.9	74.0	3.14	38.8	0.00	0.00			503	
514		6.12		6.07		34.269	26.966	115.4	0.978	0.36	5.2	75.6	3.17	39.1	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 0901 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	10/01/09	1648 UTC	4164 m	100 08 kn	110 03 06	0	1025.9 mb	16.3 C	14.2 C	24m	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	14.99		14.99		33.157	24.554	337.2	0.000	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.25	0.10	0	
1	A	14.99		14.99		33.157	24.554	337.2	0.003	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.25	0.10	1	222
8		14.98		14.98		33.155	24.555	337.4	0.027	5.80	100.8	2.0	0.37	0.0	0.01	0.03	0.26	0.10	8	221
10	ISL	14.97	D	14.97		33.154	D 24.557	337.3	0.034	5.80	100.8	2.0	0.37	0.0	0.01	0.03	0.26	0.10	10	
14	A	14.97		14.97		33.155	24.557	337.3	0.047	5.81	100.9	2.0	0.37	0.0	0.01	0.03	0.26	0.11	14	220
20	ISL	14.97	D	14.97		33.155	D 24.558	337.5	0.067	5.80	100.8	2.0	0.38	0.0	0.01	0.02	0.26	0.11	20	
22		14.97		14.97		33.155	D 24.558	337.5	0.074										22	219
30	ISL	14.97	D	14.97		33.155	D 24.558	337.8	0.101	5.78	100.4	2.0	0.38	0.0	0.01	0.02	0.27	0.10	30	
32	A	14.97		14.97		33.157	24.560	337.7	0.108	5.78	100.4	2.0	0.38	0.0	0.01	0.02	0.27	0.10	32	218
40		14.97		14.96		33.156	24.559	338.0	0.135	5.79	100.6	1.9	0.37	0.0	0.01	0.03	0.26	0.10	40	217
48	A	14.98		14.97		33.158	24.559	338.2	0.162	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.27	0.11	48	216
50	ISL	14.98	D	14.97		33.154	D 24.556	338.6	0.169	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.27	0.11	50	
58		14.96		14.95		33.156	24.562	338.2	0.196	5.80	100.7	2.0	0.37	0.0	0.02	0.02	0.26	0.12	58	215
66	A	14.04		14.03		33.087	24.703	324.9	0.222	5.86	99.8	2.4	0.45	0.6	0.15	0.12	0.22	0.15	66	214
75	ISL	13.66	D	13.65		33.092	D 24.786	317.3	0.251	5.80	98.0	2.9	0.51	1.3	0.29	0.06	0.13	0.14	75	
78		13.30		13.29		33.069	24.840	312.1	0.261	5.77	96.8	3.1	0.52	1.6	0.31	0.02	0.10	0.14	78	213
90		12.82		12.81		33.056	24.926	304.2	0.298	5.71	94.8	3.6	0.56	2.5	0.12	0.00	0.08	0.16	90	212
100	ISL	12.14	D	12.13		33.128	D 25.112	286.6	0.327	5.54	90.7	5.0	0.67	4.8	0.04	0.00	0.06	0.13	100	
103	A	12.06		12.05		33.132	25.130	284.9	0.336	5.49	89.8	5.5	0.71	5.5	0.03	0.00	0.06	0.12	103	211
119		11.52		11.51		33.179	25.267	272.2	0.380	5.33	86.2	6.9	0.84	7.7	0.02	0.01	0.04	0.07	120	210
125	ISL	11.29	D	11.27		33.182	D 25.311	268.1	0.397	5.20	83.6	8.1	0.92	9.0	0.02	0.01	0.03	0.06	126	
139		10.55		10.53		33.343	D 25.568	243.9	0.432										140	209
150	ISL	10.32	D	10.30		33.440	D 25.683	233.1	0.459	4.59	72.4	14.0	1.27	14.8	0.01	0.00	0.02	0.02	151	
169		9.81		9.79		33.644	25.929	210.1	0.501	4.03	62.9	19.3	1.55	19.3	0.00	0.00	0.01	0.01	170	208
200	ISL	9.17	D	9.15		33.886	D 26.223	182.6	0.562	3.28	50.6	26.1	1.82	23.8	0.00	0.00	0.00	0.01	201	
202		9.15		9.13		33.897	26.234	181.5	0.565	3.24	49.9	26.5	1.83	24.0	0.00	0.00	0.00	0.01	203	207
229		8.59		8.57		33.972	26.381	167.9	0.612	3.04	46.3	31.6	1.94	25.8	0.00	0.00			230	206
250	ISL	8.21	D	8.18		34.006	D 26.466	160.1	0.647	2.72	41.1	36.3	2.09	27.7	0.00	0.00			251	
270		7.89		7.86		34.027	26.530	154.2	0.678	2.38	35.7	40.8	2.24	29.6	0.00	0.00			271	205
300	ISL	7.42	D	7.39		34.061	D 26.625	145.5	0.723	1.94	28.8	47.1	2.43	31.9	0.00	0.00			302	
318		7.30		7.27		34.082	26.658	142.5	0.749	1.70	25.1	50.6	2.53	33.1	0.00	0.00			320	204
380		6.78		6.74		34.127	26.766	132.9	0.835	1.14	16.7	59.6	2.78	35.9	0.00	0.00			382	203
400	ISL	6.64	D	6.60		34.139	D 26.794	130.4	0.861	1.00	14.6	62.7	2.85	36.5	0.00	0.00			402	
441		6.26		6.22		34.171	26.870	123.6	0.913	0.75	10.8	69.0	2.98	37.6	0.00	0.00			444	202
500	ISL	5.86	D	5.82		34.235	D 26.971	114.4	0.983	0.50	7.2	77.2	3.11	39.2	0.00	0.00			503	
520		5.78		5.74		34.244	26.989	112.9	1.006	0.42	6.0	80.0	3.15	39.7	0.00	0.00			523	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 11.0 N	122 55.6 W	10/01/09	2155 UTC	3775 m	030 10 kn	210 03 06	0	1027.4 mb	16.0 C	14.3 C	23m	0/8

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.11		15.11		33.133	24.510	341.5	0.000	5.81	101.2	2.1	0.38	0.0	0.01	0.10	0.25	0.08	0	
3		15.11		15.11		33.133	24.510	341.5	0.010	5.81	101.2	2.1	0.38	0.0	0.01	0.10	0.25	0.08	3	221
10		14.93		14.93		33.137	24.552	337.7	0.034	5.84	101.4	2.1	0.38	0.0	0.01	0.09	0.28	0.09	10	220
20	ISL	14.91	D	14.91		33.132	D 24.553	337.9	0.068	5.81	100.8	2.1	0.38	0.0	0.01	0.11	0.27	0.10	20	
21		14.91		14.91		33.137	24.557	337.6	0.071	5.81	100.8	2.1	0.38	0.0	0.01	0.11	0.27	0.10	21	218
30		14.90		14.90		33.136	24.558	337.7	0.102	5.82	100.9	2.1	0.38	0.0	0.01	0.09	0.26	0.10	30	217
40		14.90		14.89		33.137	24.560	337.9	0.135	5.81	100.8	2.1	0.38	0.0	0.01	0.10	0.30	0.12	40	216
49		14.90		14.89		33.139	24.561	338.0	0.166	5.80	100.6	2.0	0.37	0.0	0.01	0.10	0.31	0.12	49	215
50	ISL	14.90	D	14.89		33.135	D 24.558	338.3	0.169	5.80	100.6	2.0	0.37	0.0	0.01	0.10	0.31	0.12	50	
60		14.90		14.89		33.139	24.562	338.3	0.203	5.80	100.6	2.0	0.37	0.0	0.01	0.11	0.31	0.12	60	214
70		14.85		14.84		33.139	24.573	337.5	0.237	5.80	100.5	2.1	0.38	0.0	0.02	0.13	0.28	0.11	70	213
75	ISL	14.55	D	14.54		33.147	D 24.643	330.9	0.253	5.77	99.4	2.2	0.41	0.2	0.11	0.23	0.22	0.10	75	
85		14.34		14.33		33.211	24.737	322.3	0.286	5.72	98.1	2.5	0.48	0.8	0.28	0.39	0.10	0.08	85	212
100	ISL	12.83	D	12.82		33.037	D 24.909	306.0	0.333	5.71	94.8	3.6	0.58	2.7	0.12	0.10	0.08	0.13	100	
101		12.73		12.72		33.028	24.922	304.9	0.336	5.71	94.6	3.7	0.59	2.9	0.10	0.08	0.08	0.13	101	211
121		11.21		11.20		33.114	25.273	271.6	0.394	5.34	85.7	8.1	0.94	8.8	0.01	0.08	0.04	0.05	122	210
125	ISL	11.08	D	11.06		33.168	D 25.338	265.5	0.405	5.24	83.9	9.0	1.00	9.9	0.01	0.08	0.03	0.04	126	
140		10.73		10.71		33.364	25.553	245.4	0.443	4.82	76.7	12.6	1.23	13.9	0.01	0.09	0.02	0.03	141	209
150	ISL	10.53	D	10.51		33.461	D 25.663	235.0	0.467	4.50	71.3	15.0	1.37	16.2	0.01	0.08	0.02	0.02	151	
168		10.09		10.07		33.634	25.874	215.4	0.508	3.94	61.9	19.2	1.60	19.7	0.00	0.07	0.01	0.02	169	208
200	ISL	9.25	D	9.23		33.864	D 26.193	185.5	0.572	3.16	48.8	26.6	1.89	24.5	0.00	0.06	0.00	0.02	201	
201		9.25		9.23		33.867	26.195	185.3	0.574	3.14	48.5	26.8	1.90	24.6	0.00	0.06	0.00	0.02	202	207
229		8.70		8.68		33.976	26.368	169.3	0.623	2.71	41.4	32.5	2.06	27.3	0.00	0.08			230	206
250	ISL	8.33	D	8.30		34.032	D 26.468	159.9	0.658	2.26	34.2	37.2	2.23	29.6	0.00	0.09			251	
268		8.15		8.12		34.065	26.521	155.1	0.686	1.86	28.1	41.4	2.38	31.4	0.00	0.10			269	205
300	ISL	7.78	D	7.75		34.138	D 26.634	144.9	0.734	1.33	19.9	48.6	2.61	33.7	0.00	0.10			302	
320		7.55		7.52		34.170	26.692	139.5	0.763	1.07	15.9	52.7	2.74	34.7	0.00	0.10			322	204
379		7.11		7.07		34.244	26.813	128.8	0.842	0.58	8.6	61.8	2.97	36.4	0.00	0.02			381	203
400	ISL	6.91	D	6.87		34.263	D 26.856	124.9	0.868	0.49	7.2	64.9	3.03	37.0	0.00	0.01			402	
437		6.64		6.60		34.287	26.911	120.0	0.914	0.40	5.8	70.0	3.11	37.9	0.00	0.00			440	202
500	ISL	6.24	D	6.20		34.314	D 26.986	113.5	0.987	0.35	5.1	76.8	3.19	39.0	0.00	0.00			503	
519		6.14		6.09		34.322	27.005	111.8	1.009	0.34	4.9	78.9	3.21	39.3	0.00	0.00			522	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
29 51.0 N	123 35.3 W	11/01/09	0352 UTC	4074 m	030 18 kn			1026.7 mb	15.9 C	12.6 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	15.36	15.36	33.275	24.564	336.2	0.000	5.75	100.8	2.0	0.37	0.0	0.00	0.02	0.23	0.08	0	
2	15.36	15.36	33.275	24.565	336.3	0.007	5.75	100.8	2.0	0.37	0.0	0.00	0.02	0.23	0.08	2	220
10 ISL	15.36 D	15.36	33.271 D	24.562	336.8	0.034	5.76	100.9	2.0	0.36	0.0	0.00	0.03	0.23	0.08	10	
11	15.36	15.36	33.274	24.564	336.6	0.037	5.76	100.9	2.0	0.36	0.0	0.00	0.03	0.23	0.08	11	219
20 ISL	15.34 D	15.34	33.268 D	24.564	336.9	0.067	5.77	101.1	2.0	0.36	0.0	0.00	0.03	0.23	0.09	20	
26	15.25	15.25	33.266	24.583	335.3	0.087	5.77	100.9	2.0	0.37	0.0	0.00	0.02	0.23	0.09	26	218
30 ISL	15.23 D	15.23	33.261 D	24.583	335.4	0.101	5.77	100.8	2.0	0.37	0.0	0.00	0.02	0.24	0.09	30	
40	15.22	15.21	33.263	24.587	335.3	0.134	5.77	100.8	2.0	0.37	0.0	0.01	0.02	0.27	0.10	40	217
50 ISL	15.21 D	15.20	33.257 D	24.585	335.8	0.168	5.76	100.6	2.0	0.37	0.0	0.01	0.01	0.28	0.09	50	
51	15.21	15.20	33.262	24.589	335.5	0.171	5.76	100.6	2.0	0.37	0.0	0.01	0.01	0.28	0.09	51	216
62	15.19	15.18	33.260	24.592	335.5	0.208	5.75	100.4	2.0	0.38	0.0	0.01	0.02	0.32	0.08	62	215
75 ISL	13.27 D	13.26	33.035 D	24.820	313.9	0.250	5.77	96.7	3.2	0.52	1.3	0.40	0.01	0.25	0.24	75	
76	13.19	13.18	33.044	24.843	311.8	0.254	5.77	96.6	3.3	0.53	1.5	0.42	0.01	0.24	0.25	76	214
87	12.25	12.24	32.981	24.977	299.2	0.287	5.65	92.7	4.6	0.66	4.1	0.02	0.01	0.13	0.19	87	213
100 ISL	11.52 D	11.51	33.003 D	25.130	284.8	0.325	5.49	88.7	6.5	0.84	7.3	0.01	0.01	0.07	0.12	100	
102	11.45	11.44	33.009	25.147	283.2	0.331	5.47	88.2	6.8	0.87	7.7	0.01	0.01	0.06	0.11	102	212
113	11.14	11.13	33.096	25.271	271.6	0.361	5.33	85.4	8.5	0.96	9.4	0.01	0.00	0.04	0.07	113	211
125 ISL	11.03 D	11.01	33.308 D	25.456	254.3	0.393	5.04	80.7	10.6	1.09	11.8	0.01	0.00	0.03	0.05	126	
126	11.03	11.01	33.309	25.457	254.2	0.395	5.01	80.2	10.8	1.10	12.0	0.01	0.00	0.03	0.05	127	210
140	10.77	10.75	33.438	25.603	240.6	0.430	4.72	75.2	12.8	1.22	14.0	0.00	0.00	0.02	0.03	141	209
150 ISL	10.59 D	10.57	33.526 D	25.704	231.2	0.454	4.37	69.4	15.5	1.36	16.4	0.00	0.00	0.01	0.03	151	
165	10.00	9.98	33.669	25.916	211.2	0.487	3.85	60.4	19.7	1.58	20.1	0.00	0.00	0.00	0.02	166	208
200	9.33	9.31	33.872	26.186	186.2	0.556	3.36	52.0	25.2	1.75	23.2	0.00	0.00	0.00	0.02	201	207
230	8.86	8.84	33.965	26.334	172.5	0.610	2.95	45.2	30.3	1.94	25.7	0.00	0.00			231	206
250 ISL	8.58 D	8.55	34.003 D	26.407	165.8	0.644	2.64	40.2	34.2	2.07	27.5	0.00	0.00			251	
271	8.24	8.21	34.045	26.492	158.0	0.678	2.32	35.1	38.6	2.20	29.3	0.00	0.00			272	205
300 ISL	7.84 D	7.81	34.079 D	26.579	150.1	0.723	1.90	28.5	44.7	2.38	31.6	0.00	0.00			302	
321	7.55	7.52	34.099	26.637	144.8	0.754	1.64	24.4	48.9	2.50	33.0	0.00	0.00			323	204
382	6.95	6.91	34.130	26.745	135.1	0.839	1.19	17.5	58.0	2.73	35.5	0.00	0.00			384	203
400 ISL	6.78 D	6.74	34.134 D	26.772	132.7	0.863	1.07	15.6	60.9	2.79	36.2	0.00	0.00			402	
439	6.40	6.36	34.162	26.844	126.1	0.914	0.82	11.9	67.1	2.92	37.7	0.00	0.00			442	202
500 ISL	5.93 D	5.89	34.221 D	26.952	116.3	0.988	0.53	7.6	76.0	3.06	39.5	0.00	0.00			503	
515	5.88	5.84	34.229	26.964	115.3	1.005	0.46	6.6	78.2	3.10	40.0	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 0901 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 57.1 N	117 17.0 W	08/01/09	0424 UTC	26 m	040 04 kn			1017.3 mb	13.7 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	13.89	13.89	33.317	24.910	303.3	0.000	6.15	104.6	5.0	0.44	0.5	0.08	0.10	1.99	0.59	0	
2	13.89	13.89	33.317	24.910	303.4	0.006	6.15	104.6	5.0	0.44	0.5	0.08	0.10	1.99	0.59	2	205
5	13.86	13.86	33.323	24.921	302.4	0.015	6.13	104.2	4.9	0.44	0.5	0.07	0.13	2.10	0.62	5	204
10	13.760	13.759	33.328	24.946	300.2	0.030	6.03	102.3	4.9	0.43	0.6	0.08	0.17	2.19	0.70	10	203
15	13.69	13.69	33.331	24.962	298.8	0.045	5.88	99.6	5.2	0.49	1.1	0.11	0.23	1.78	0.74	15	202
18	13.67	13.67	33.337	24.971	298.0	0.054	5.77	97.7	5.3	0.52	1.5	0.12	0.29	1.65	0.68	18	201

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 43.4 N	121 32.9 W	22/01/09	1749 UTC	11 m	1221 - 1805 PST	1221 PST	1805 PST	340.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.25	33.390	25.097	6.89	115.7	3.1	0.34	0.2	0.02	1.41	0.23	87. A	19.5	20.6	20.1	0.20
5	13.26	33.390	25.095	6.95	116.7	3.1	0.34	0.2	0.01	1.39	0.26	50.	20.5	20.1	20.3	0.95
9	13.20	33.402	25.116	6.83	114.6	3.4	0.38	0.4	0.02	1.33	0.25					
16	12.69	33.412	25.225	6.41	106.4	4.8	0.56	2.6	0.11	1.31	0.38	11.	10.9	11.5	11.2	0.13
21	12.55	33.413	25.253	6.09	100.8	5.9	0.67	3.9	0.20	1.02	0.41	5.3	3.5	3.0	3.2	0.08
31	12.47	33.413	25.268	5.84	96.5	6.7	0.73	4.7	0.33	0.55	0.44	1.3	0.99	1.1	1.0	0.06
39	12.29	33.424	25.312	5.58	91.9	8.4	0.85	6.9	0.39	0.40	0.36					
48	11.59	33.475	25.483	4.70	76.2	12.9	1.19	12.9	0.18	0.23	0.28	0.12	0.06	0.06	0.06	0.05

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 23.1 N	124 19.8 W	21/01/09	1736 UTC	14 m	1229 - 1800 PST	1229 PST	1800 PST	222.1 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	13.94	33.109	24.739	6.17	104.9	2.8	0.39	0.2	0.02	0.60	0.14	80. A	9.9	9.7	9.8	0.11
8	13.94	33.110	24.740	6.16	104.8	2.8	0.38	0.2	0.02	0.63	0.12	42.	9.3	8.9	9.1	0.09
18	13.67	33.115	24.800	6.27	106.0	3.1	0.40	0.2	0.03	0.88	0.24	14.	6.5	6.2	6.3	0.11
27	13.39	33.114	24.856	6.07	102.1	3.1	0.46	1.1	0.08	0.63	0.33	5.2	2.7	2.4	2.6	0.07
39	13.29	33.115	24.877	5.94	99.7	3.1	0.50	1.6	0.17	0.32	0.24	1.4	0.70	0.74	0.72	0.03
50	13.16	33.118	24.906	5.97	99.9	3.3	0.53	2.0	0.18	0.29	0.20					
61	13.08	33.129	24.930	5.88	98.2	3.6	0.56	2.4	0.25	0.20	0.16	0.12	0.07	0.09	0.08	0.04

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 48.7 N	121 51.9 W	20/01/09	1724 UTC	15 m	1220 - 1800 PST	1219 PST	1800 PST	329.6 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	13.09	33.105	24.908	6.24	104.3	4.5	0.52	2.2	0.07	0.63	0.17	81. A	12.9	12.1	12.5	0.10
9	12.88	33.095	24.942	6.25	104.0	4.6	0.53	2.5	0.07	0.72	0.17	40.	14.9	13.4	14.1	0.12
19	11.84	33.053	25.108	6.04	98.3	5.7	0.70	4.8	0.13	0.83	0.24	14.	9.0	9.4	9.2	0.06
31	11.88	33.185	25.203	5.93	96.6	6.5	0.77	6.1	0.32	0.44	0.27	4.2	2.4	2.3	2.3	0.05
41	11.89	33.225	25.233	5.92	96.5	6.9	0.79	6.3	0.34	0.35	0.25	1.5	0.76	0.87	0.81	0.17
54	12.11	33.323	25.268	5.91	96.9	7.2	0.79	6.3	0.36	0.25	0.21					
65	11.58	33.254	25.313	5.72	92.6	8.1	0.89	8.1	0.33	0.16	0.18	0.13	0.05	0.06	0.06	0.05

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 17.3 N	120 1.7 W	19/01/09	1729 UTC	11 m	1211 - 1749 PST	1211 PST	1749 PST	838.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.16	33.398	25.121	6.20	103.9	5.5	0.52	2.3	0.11	1.65	0.70	87. A	24.5	28.8	26.6	0.19
6	13.13	33.400	25.129	6.20	103.9	5.7	0.53	2.5	0.12	1.74	0.81	43.	59.3	59.3	59.3	0.24
15	13.08	33.404	25.142	6.04	101.1	5.9	0.57	3.1	0.15	1.57	0.75	12.	29.5	28.4	28.9	0.13
22	12.88	33.397	25.176	5.79	96.5	6.4	0.66	4.4	0.25	1.19	0.68	4.6	9.1	8.4	8.8	0.12
31	12.65	33.429	25.246	5.33	88.4	7.9	0.84	6.8	0.34	0.74	0.65	1.3	2.1	2.0	2.1	0.10
41	12.52	33.441	25.281	5.22	86.4	8.7	0.88	7.6	0.37	0.55	0.55					
48	12.29	33.460	25.340	4.95	81.5	10.2	1.00	9.4	0.38	0.41	0.44	0.12	0.10	0.11	0.11	0.09

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12.7, 4.4, 1.4, 0.13 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 43.9 N	120 23.8 W	18/01/09	1744 UTC	9 m	1212 - 1740 PST	1212 PST	1739 PST	498.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.30	33.338	25.046	6.34	106.6	4.8	0.48	1.6	0.06	1.53	0.39	84. A	16.1	14.7	15.4	0.14
5	13.29	33.340	25.050	6.34	106.5	5.0	0.49	1.5	0.06	1.55	0.41	43.	29.4	30.4	29.9	0.14
12	13.19	33.334	25.066	6.32	106.0	5.0	0.53	1.8	0.07	1.72	0.42	13.	26.4	26.0	26.2	0.12
18	12.99	33.325	25.099	6.20	103.5	5.2	0.58	2.4	0.09	1.56	0.43	4.6	12.0	10.6	11.3	0.09
26	12.72	33.347	25.169	5.83	96.8	6.6	0.73	4.7	0.16	0.89	0.41	1.2	4.3	2.7	3.5	0.05
31	12.73	33.354	25.172	5.81	96.5	6.8	0.75	4.7	0.16	0.90	0.42					
38	12.75	33.364	25.176	5.76	95.7	6.7	0.76	4.8	0.16	0.88	0.47	0.15	0.53	0.44	0.49	0.05

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 34.9 N	122 49.5 W	17/01/09	1808 UTC	16 m	1223 - 1750 PST	1222 PST	1750 PST	360.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.29	33.131	24.888	6.20	104.0	3.5	0.49	1.5	0.07	0.67	0.15	91. A	4.4	4.3	4.4	0.09
9	13.26	33.133	24.896	6.22	104.3	3.5	0.50	1.5	0.07	0.70	0.15	42.	11.6	12.1	11.9	0.09
16	13.15	33.131	24.917	6.22	104.1	3.5	0.50	1.6	0.08	0.79	0.20					
21	13.10	33.129	24.925	6.24	104.3	3.4	0.50	1.7	0.08	0.82	0.23	13.	10.0	9.6	9.8	0.07
32	12.78	33.088	24.957	6.06	100.6	3.7	0.55	2.5	0.11	0.76	0.27	4.6	6.6	6.3	6.4	0.05
44	12.28	33.040	25.016	5.88	96.5	4.3	0.64	3.8	0.16	0.37	0.18	1.5	2.1	1.6	1.8	0.02
57	11.77	33.002	25.082	5.72	92.9	5.4	0.75	5.6	0.09	0.12	0.11					
68	11.42	33.022	25.162	5.57	89.8	7.1	0.88	7.8	0.03	0.08	0.09	0.15	0.09	0.09	0.09	0.02

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.4 N	118 37.8 W	14/01/09	1842 UTC	17 m	1204 - 1738 PST	1204 PST	1738 PST	601.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.03	33.364	24.917	6.43	109.7	2.6	0.37	0.1	0.01	1.19	0.26	91. A	18.4	20.6	19.5	0.22
10	13.72	33.360	24.979	6.30	106.8	3.3	0.39	0.4	0.06	1.64	0.49	41.	26.8	26.3	26.6	0.17
16	13.65	33.357	24.991	6.03	102.1	4.1	0.45	1.0	0.13	1.54	0.50					
23	13.29	33.354	25.061	5.48	92.1	6.4	0.71	4.2	0.36	1.05	0.52	13.	10.2	11.3	10.8	0.10
35	12.82	33.415	25.202	4.88	81.2	8.7	0.97	8.7	0.24	0.64	0.44	4.2	5.2	4.5	4.9	0.05
46	11.99	33.492	25.422	4.14	67.7	12.8	1.31	14.3	0.07	0.16	0.21	1.6	0.52	0.56	0.54	0.04
60	11.67	33.514	25.499	3.98	64.7	14.2	1.39	15.7	0.05	0.12	0.22					
73	11.15	33.625	25.680	3.51	56.5	18.0	1.59	18.7	0.07	0.06	0.14	0.14	0.03	0.03	0.03	0.03

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 59.1 N	120 20.8 W	15/01/09	1657 UTC	10 m	1210 - 1748 PST	1210 PST	1748 PST	425.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	13.10	33.337	25.086	6.31	105.6	5.3	0.53	2.6	0.08	1.38	0.24	86. A	15.0	12.4	13.7	0.14
6	13.05	33.336	25.095	6.32	105.7	5.4	0.54	2.6	0.08	1.47	0.21	40.	35.1	36.3	35.7	0.13
10	12.91	33.335	25.122	6.26	104.4	5.5	0.57	2.8	0.10	1.24	0.24					
13	12.82	33.334	25.139	6.19	103.0	5.6	0.59	3.2	0.11	1.04	0.22	14.	14.6	15.0	14.8	0.09
19	12.80	33.337	25.145	6.14	102.1	5.6	0.60	3.5	0.13	0.74	0.17	5.4	5.8	5.2	5.5	0.06
28	12.70	33.337	25.165	6.06	100.6	5.8	0.62	3.8	0.16	0.69	0.18	1.4	2.2	2.3	2.2	0.07
36	12.69	33.339	25.169	6.00	99.6	5.9	0.64	4.0	0.18	0.66	0.24					
42	12.70	33.342	25.169	5.93	98.4	6.0	0.66	4.3	0.20	0.30	0.17	0.16	0.13	0.15	0.14	0.04

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12.7, 4.4, 1.4, 0.13 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 39.5 N	123 5.1 W	16/01/09	1735 UTC	15 m	1223 - 1759 PST	1222 PST	1759 PST	302.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.49	33.273	24.751	5.96	102.6	2.2	0.37	0.1	0.01	0.51	0.13	90. A	6.3	5.5	5.9	0.07
8	14.44	33.275	24.763	5.97	102.7	2.2	0.38	0.1	0.01	0.54	0.16	44.	11.5	11.4	11.4	0.08
19	14.26	33.279	24.804	5.96	102.1	2.3	0.37	0.2	0.02	0.56	0.19	14.	8.2	8.1	8.1	0.09
31	14.24	33.272	24.804	5.94	101.7	2.3	0.39	0.3	0.03	0.51	0.20	4.2	4.5	4.1	4.3	0.05
41	14.21	33.273	24.811	5.91	101.2	2.3	0.40	0.4	0.04	0.49	0.24	1.5	2.1	1.6	1.8	0.04
53	14.17	33.280	24.825	5.87	100.4	2.5	0.41	0.6	0.05	0.41	0.20					
64	13.94	33.254	24.853	5.87	99.9	2.6	0.44	0.9	0.07	0.34	0.21	0.14	0.23	0.27	0.25	0.03

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 11.6 N	118 24.2 W	13/01/09	1826 UTC	17 m	1212 - 1740 PST	1212 PST	1740 PST	494.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.51	33.370	24.821	6.10	105.1	3.6	0.33	0.0	0.00	0.53	0.18	91. A	7.2	7.2	7.2	0.17
10	14.28	33.364	24.866	6.12	105.0	3.7	0.34	0.1	0.00	0.61	0.22	41.	13.1	12.5	12.8	0.20
16	14.21	33.360	24.877	6.11	104.6	3.7	0.34	0.1	0.00	0.82	0.33					
23	14.16	33.357	24.886	6.07	103.8	3.7	0.35	0.1	0.01	1.10	0.48	13.	17.8	17.0	17.4	0.13
35	13.99	33.357	24.921	5.73	97.7	4.6	0.48	1.6	0.10	0.65	0.42	4.2	6.9	6.4	6.6	0.05
47	12.40	33.406	25.277	4.48	73.9	10.3	1.11	11.3	0.02	0.19	0.22	1.4	0.92	0.83	0.88	0.02
60	12.10	33.493	25.402	4.06	66.6	12.6	1.30	14.1	0.01	0.11	0.15					
73	11.58	33.593	25.577	3.66	59.4	15.8	1.49	17.2	0.00	0.04	0.10	0.14	0.03	0.04	0.03	0.03

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 5.1 N	120 38.2 W	12/01/09	1815 UTC	21 m	1211 - 1740 PST	1211 PST	1739 PST	381.6 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	14.67	33.299	24.733	5.83	100.8	2.2	0.37	0.1	0.01	0.43	0.13	86. A	1.4	1.9	1.6	0.05
12	14.62	33.297	24.742	5.87	101.3	2.3	0.38	0.1	0.01	0.43	0.14	42.	8.1	8.9	8.5	0.06
20	14.61	33.298	24.745	5.84	100.8	2.3	0.37	0.1	0.01	0.43	0.14					
28	14.61	33.298	24.745	5.84	100.8	2.2	0.36	0.1	0.01	0.44	0.16	13.	7.6	7.9	7.8	0.06
36	14.61	33.299	24.746	5.84	100.8	2.2	0.37	0.1	0.01	0.44	0.15					
43	14.61	33.299	24.747	5.84	100.8	2.3	0.38	0.1	0.01	0.44	0.14	4.3	5.3	5.1	5.2	0.03
51	14.60	33.297	24.748	5.81	100.3	2.3	0.41	0.1	0.02	0.46	0.17					
59	14.57	33.293	24.751	5.81	100.2	2.2	0.41	0.2	0.03	0.37	0.15	1.3	2.4	2.4	2.4	0.03
75	13.28	33.115	24.880	5.73	96.1	3.4	0.56	2.0	0.18	0.16	0.19					
90	11.50	32.927	25.074	5.70	92.0	5.1	0.74	4.9	0.01	0.08	0.12	0.14	0.12	0.14	0.13	0.02

RV NEW HORIZON | CALCOFI CRUISE 0901 | STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 46.4 N	123 20.5 W	11/01/09	1757 UTC	26 m	1220 - 1758 PST	1221 PST	1757 PST	214.4 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	15.51	33.253	24.515	5.73	100.7	2.4	0.35	0.0	0.00	0.22	0.09	89. A	0.07	0.11	0.09	0.03
8	15.51	33.254	24.516	5.75	101.0	2.3	0.34	0.0	0.00	0.22	0.10					
15	15.50	33.253	24.517	5.73	100.7	2.3	0.34	0.1	0.00	0.23	0.09	41.	3.5	3.9	3.7	0.03
25	15.50	33.252	24.517	5.72	100.5	2.4	0.35	0.0	0.00	0.23	0.09					
35	15.50	33.254	24.519	5.71	100.3	2.4	0.34	0.0	0.00	0.23	0.10	13.	3.5	3.4	3.5	0.03
44	15.50	33.252	24.517	5.74	100.8	2.1	0.34	0.0	0.00	0.23	0.09					
53	15.49	33.252	24.520	5.72	100.5	2.2	0.34	0.0	0.00	0.23	0.10	4.4	2.5	2.3	2.4	0.02
62	15.50	33.252	24.518	5.75	101.0	2.3	0.33	0.0	0.00	0.23	0.09					
73	15.48	33.249	24.521	5.73	100.6	2.3	0.34	0.0	0.01	0.23	0.10	1.3	1.3	1.3	1.3	0.02
85	13.47	33.120	24.846	5.78	97.3	3.2	0.46	1.1	0.23	0.13	0.23					
97	12.86	33.123	24.970	5.64	93.8	4.0	0.54	2.7	0.06	0.10	0.21					
112	12.24	33.125	25.091	5.55	91.1	5.4	0.67	5.0	0.02	0.07	0.14	0.13	0.10	0.12	0.11	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12.7, 4.4, 1.4, 0.13 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 0901 — STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 40.7 N	117 52.3 W	08/01/09	1742 UTC	19 m	1158 - 1729 PST	1158 PST	1729 PST	421.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.40	33.380	24.852	5.96	102.5	2.8	0.35	0.0	0.01	0.47	0.14	92. A	7.4	8.1	7.7	0.09
11	14.31	33.377	24.869	5.99	102.8	2.7	0.35	0.0	0.00	0.76	0.23	41.	15.1	14.9	15.0	0.09
18	14.26	33.371	24.875	5.99	102.7	2.8	0.36	0.0	0.02	1.15	0.38					
27	14.10	33.356	24.898	5.77	98.6	3.7	0.45	1.1	0.20	0.79	0.46	11.	9.7	10.0	9.8	0.04
32	13.86	33.350	24.943	5.62	95.6	4.3	0.54	2.2	0.28	0.61	0.48					
38	13.62	33.335	24.980	5.43	91.9	5.3	0.67	3.9	0.27	0.57	0.47	4.6	3.2	3.4	3.3	0.03
46	12.82	33.370	25.168	4.80	79.9	8.4	1.00	8.9	0.04	0.17	0.29					
52	12.36	33.446	25.316	4.42	72.9	10.7	1.18	11.9	0.02	0.10	0.21	1.5	0.30	0.33	0.31	0.03
67	11.68	33.568	25.539	3.87	62.9	14.3	1.41	15.8	0.02	0.05	0.15					
81	11.40	33.644	25.650	3.58	57.9	16.3	1.55	17.8	0.01	0.03	0.09	0.14	0.00	0.02	0.01	0.02

RV NEW HORIZON — CALCOFI CRUISE 0901 — STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 31.1 N	120 14.2 W	09/01/09	2039 UTC	18 m	1333 - 1745 PST	1333 PST	1745 PST	207.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.85	33.337	24.934	5.87	99.8	2.8	0.41	0.6	0.06	0.44	0.16	84. A	3.4	3.7	3.6	0.06
10	13.85	33.336	24.933	5.93	100.8	2.6	0.41	0.6	0.06	0.48	0.20	43.	6.3	6.3	6.3	0.06
17	13.85	33.336	24.934	5.93	100.8	2.7	0.41	0.6	0.06	0.45	0.15					
24	13.85	33.335	24.933	5.95	101.1	2.9	0.40	0.6	0.06	0.50	0.20	13.	4.6	4.5	4.6	0.07
30	13.85	33.336	24.934	5.94	101.0	2.8	0.41	0.6	0.06	0.56	0.26					
37	13.80	33.335	24.944	5.94	100.9	2.8	0.41	0.7	0.07	0.56	0.21	4.3	2.5	2.2	2.3	0.05
44	13.79	33.331	24.943	5.92	100.5	3.0	0.41	0.7	0.07	0.57	0.24					
50	13.74	33.324	24.948	5.92	100.4	2.9	0.42	0.8	0.08	0.58	0.28	1.4	1.2	1.2	1.2	0.03
64	12.60	33.258	25.124	5.30	87.7	7.1	0.81	7.0	0.15	0.21	0.25					
78	11.47	33.356	25.413	4.68	75.7	11.7	1.18	13.0	0.03	0.09	0.17	0.13	0.02	0.03	0.02	0.03

RV NEW HORIZON — CALCOFI CRUISE 0901 — STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 30.8 N	122 15.6 W	10/01/09	1648 UTC	24 m	1222 - 1756 PST	1222 PST	1755 PST	199.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.99	33.157	24.554	5.79	100.6	2.0	0.37	0.0	0.01	0.25	0.10	94. A	0.23	0.34	0.29	0.02
8	14.98	33.155	24.555	5.80	100.8	2.0	0.37	0.0	0.01	0.26	0.10					
14	14.97	33.155	24.557	5.81	100.9	2.0	0.37	0.0	0.01	0.26	0.11	41.	4.8	4.8	4.8	0.03
22	14.97	33.155 D	24.558													
32	14.97	33.157	24.560	5.78	100.4	2.0	0.38	0.0	0.01	0.27	0.10	13.	4.3	4.6	4.4	0.02
40	14.97	33.156	24.559	5.79	100.6	1.9	0.37	0.0	0.01	0.26	0.10					
48	14.98	33.158	24.559	5.79	100.6	2.0	0.37	0.0	0.01	0.27	0.11	4.6	2.4	1.8	2.1	0.03
58	14.96	33.156	24.562	5.80	100.7	2.0	0.37	0.0	0.02	0.26	0.12					
66	14.04	33.087	24.703	5.86	99.8	2.4	0.45	0.6	0.15	0.22	0.15	1.5	0.32	0.41	0.37	1.0
78	13.30	33.069	24.840	5.77	96.8	3.1	0.52	1.6	0.31	0.10	0.14					
90	12.82	33.056	24.926	5.71	94.8	3.6	0.56	2.5	0.12	0.08	0.16					
103	12.06	33.132	25.130	5.49	89.8	5.5	0.71	5.5	0.03	0.06	0.12	0.14	0.10	0.10	0.10	0.01

A) INCUBATION LIGHT INTENSITIES WERE 96, 41, 12.7, 4.4, 1.4, 0.13 PERCENT RESPECTIVELY.

CalCOFI Cruise 0901

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
76.7	100.0	33 23.3	124 19.4	01/21	0829	0829	458	208	24	24
76.7	90.0	33 43.2	123 38.1	01/21	1614	1614	476	210	15	15
76.7	80.0	34 03.2	122 56.4	01/21	2235	2235	404	214	42	42
76.7	70.0	34 23.3	122 14.9	01/22	0450	0450	442	207	158	158
76.7	60.0	34 43.3	121 32.9	01/22	1051	1051	398	213	96	96
76.7	55.0	34 53.7	121 12.0	01/22	1450	1450	417	213	101	101
76.7	51.0	35 01.3	120 55.1	01/22	1818	1818	383	210	107	107
76.7	49.0	35 05.3	120 46.6	01/22	2027	2027	119	48	118	118
80.0	50.5	34 27.7	120 28.9	01/19	1613	1613	42	14	95	95
80.0	51.0	34 27.0	120 31.4	01/19	1745	1745	125	62	367	367
80.0	55.0	34 19.0	120 48.2	01/19	2119	2119	428	215	86	86
80.0	60.0	34 09.1	121 09.0	01/20	0311	0311	431	211	100	100
80.0	70.0	33 48.7	121 51.9	01/20	0830	0830	406	215	54	54
80.0	80.0	33 29.4	122 31.9	01/20	1537	1537	437	210	16	16
80.0	90.0	33 09.0	123 13.5	01/20	2134	2134	436	213	48	48
80.0	100.0	32 49.0	123 54.3	01/21	0345	0345	429	209	47	47
81.7	43.5	34 24.5	119 48.1	01/19	1154	1154	45	13	22	22
81.8	46.9	34 16.5	120 01.5	01/19	0835	0835	411	216	90	90
83.3	110.0	31 54.7	124 10.2	01/16	2208	2208	434	210	76	76
83.3	100.0	32 14.8	123 29.5	01/17	0410	0410	437	212	41	41
83.3	90.0	32 34.7	122 48.7	01/17	0912	0912	416	209	38	38
83.3	80.0	32 54.7	122 07.7	01/17	1634	1634	429	213	56	56
83.3	70.0	33 14.8	121 26.5	01/17	2305	2305	437	211	57	57
83.3	60.0	33 34.6	120 45.3	01/18	0524	0524	451	209	124	124
83.3	55.0	33 44.7	120 24.6	01/18	0851	0851	444	202	32	32
83.3	51.0	33 52.7	120 08.0	01/18	1315	1315	107	59	177	177
83.3	39.4	34 15.5	119 19.4	01/19	0051	0051	40	15	51	51
83.3	40.6	34 13.6	119 24.6	01/19	0235	0235	62	20	130	130
83.3	42.0	34 10.7	119 30.2	01/19	0451	0451	183	79	71	71
85.4	35.8	34 00.8	118 49.9	01/18	2050	2050	46	13	87	87
86.7	33.0	33 53.4	118 29.4	01/14	0914	0914	92	48	65	65
86.7	35.0	33 49.4	118 37.7	01/14	1200	1200	417	215	48	48
86.7	40.0	33 39.4	118 58.4	01/14	1637	1637	395	217	48	48
86.7	45.0	33 29.5	119 19.0	01/14	2054	2054	428	191	82	82
86.7	50.0	33 19.4	119 39.8	01/15	0100	0100	112	43	107	107
86.7	55.0	33 09.4	120 00.5	01/15	0453	0453	412	212	80	61
86.7	60.0	32 59.4	120 20.9	01/15	0756	0756	439	222	59	59
86.7	70.0	32 39.5	121 01.9	01/15	1534	1534	442	211	57	57
86.7	80.0	32 19.4	121 43.0	01/15	2146	2146	407	210	57	57
86.7	90.0	31 59.3	122 23.4	01/16	0357	0357	425	213	612	33
86.7	100.0	31 39.4	123 04.2	01/16	0842	0842	420	214	74	33
86.7	110.0	31 19.4	123 44.6	01/16	1559	1559	416	213	31	31
86.8	32.5	33 53.2	118 26.7	01/14	0742	0742	49	13	61	61
88.5	30.1	33 40.5	118 05.6	01/14	0357	0357	43	13	47	47
90.0	120.0	30 25.0	123 59.8	01/11	0329	0329	447	204	31	31
90.0	110.0	30 45.1	123 19.9	01/11	0858	0858	481	200	23	23
90.0	100.0	31 05.4	122 39.8	01/11	1628	1628	435	211	44	44
90.0	90.0	31 25.1	121 59.3	01/11	2241	2241	439	208	52	52
90.0	80.0	31 45.1	121 19.0	01/12	0505	0505	430	213	30	30
90.0	70.0	32 05.1	120 38.3	01/12	1134	1134	434	211	28	28
90.0	60.0	32 25.1	119 57.6	01/12	1759	1759	411	215	49	49
90.0	53.0	32 39.2	119 28.9	01/12	2302	2302	485	200	47	47
90.0	45.0	32 52.9	119 00.6	01/13	0430	0430	425	211	71	71
90.0	37.0	33 11.1	118 23.2	01/13	0935	0935	473	191	25	25
90.0	27.7	33 29.6	117 44.8	01/13	1524	1524	43	16	70	70
90.0	28.0	33 29.1	117 46.1	01/13	1649	1649	83	36	12	12
90.0	30.0	33 25.1	117 54.2	01/13	1936	1936	410	215	68	68
90.0	35.0	33 15.1	118 15.1	01/13	2355	2355	458	191	107	107
91.7	26.4	33 14.9	117 28.0	01/07	2325	2325	48	14	42	42
93.3	26.7	32 57.4	117 18.3	01/07	1930	1930	178	83	67	67
93.3	28.0	32 54.8	117 23.8	01/08	0401	0401	408	215	51	51
93.3	30.0	32 50.8	117 31.8	01/08	0645	0645	402	213	37	37
93.3	35.0	32 40.8	117 52.4	01/08	1053	1053	398	205	53	53
93.3	40.0	32 30.9	118 12.8	01/08	1458	1458	403	212	35	35
93.3	45.0	32 20.8	118 33.3	01/08	1903	1903	393	214	79	79
93.3	50.0	32 10.8	118 53.6	01/08	2310	2310	486	206	76	76
93.3	55.0	32 00.9	119 13.9	01/09	0332	0332	473	224	42	42
93.3	60.0	31 50.8	119 34.2	01/09	0737	0737	586	196	46	32
93.3	70.0	31 31.4	120 14.0	01/09	1347	1347	433	222	32	32
93.3	80.0	31 10.9	120 55.2	01/09	2014	2014	515	205	47	47
93.3	90.0	30 50.9	121 35.3	01/10	0231	0231	435	203	28	28
93.3	100.0	30 30.9	122 15.3	01/10	0735	0735	424	213	14	14
93.3	110.0	30 10.8	122 55.5	01/10	1502	1502	470	211	38	38
93.3	120.0	29 50.9	123 35.2	01/10	2057	2057	466	209	60	60
93.4	26.4	32 57.2	117 17.0	01/07	2042	2042	54	13	37	37