UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 1108
27 July – 12 August 2011

CC Reference 12-04
2 November 2012

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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INTRODUCTION

The data presented in this report were collected during cruise 1108* 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 13.78 µCi of ^{14}C as $NaHCO_3$ (40µl of stock solution) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 meters to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Only one sample of each pair was retained and preserved. The biomass, as wet displacement volume, after removal of large (>5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al*. (1972).

Avifauna Observations (Farallon Institute of Advanced Ecosystem Research)

Sea birds were counted within a 300-meter wide strip off to one side of the ship. Counts were made while underway between stations during periods of daylight. These counts were summed over 20 nautical mile (nm) intervals, or the distance between consecutive stations, whichever was less.

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) *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)

4) *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)

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

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

7) *Nitrate isotope:* Seawater samples are acquired using the CTD-rosette and shipped frozen to Princeton University. The nitrogen and oxygen isotopic composition of nitrate is measured using strains of denitrifying bacteria that reduce nitrate to N2O. (P. Rafter, Princeton University).

8) *Micronekton trawling*: A Matsuda-Oozeki-Hu trawl (MOHT) with 5 m^2 mouth opening and 1.77 mm mesh is used to sample the micronekton (krill, small pelagic fishes, squids, etc) within the epipelagic (upper 200 m) and

mesopelagic (200 - 500 m) depth horizons. The samples provide size- and species composition data on the pelagic community, which is combined with Ek-60 multi-frequency acoustic data to estimate the distribution and abundance of the micronekton. (T. Koslow, SIO)

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

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 1108

1. CalCOFI Cruise 1108 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.

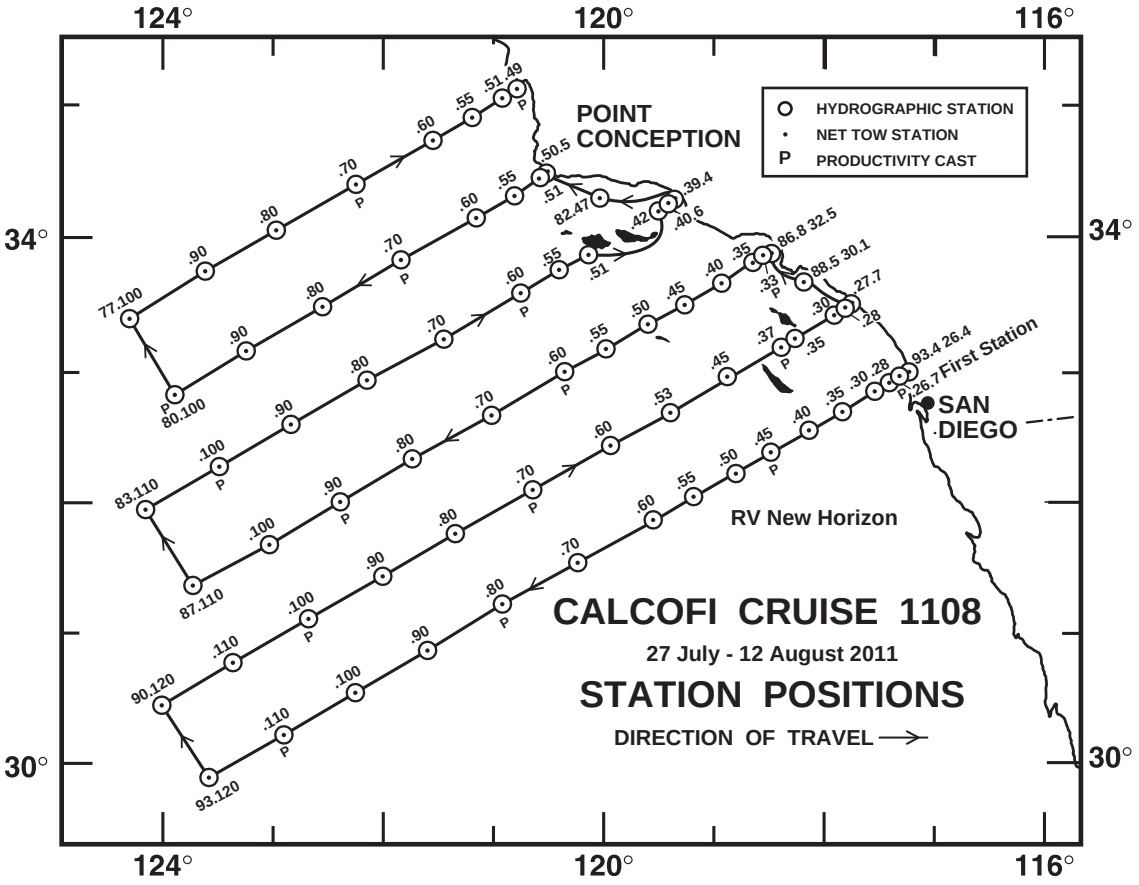

FIGURE 1

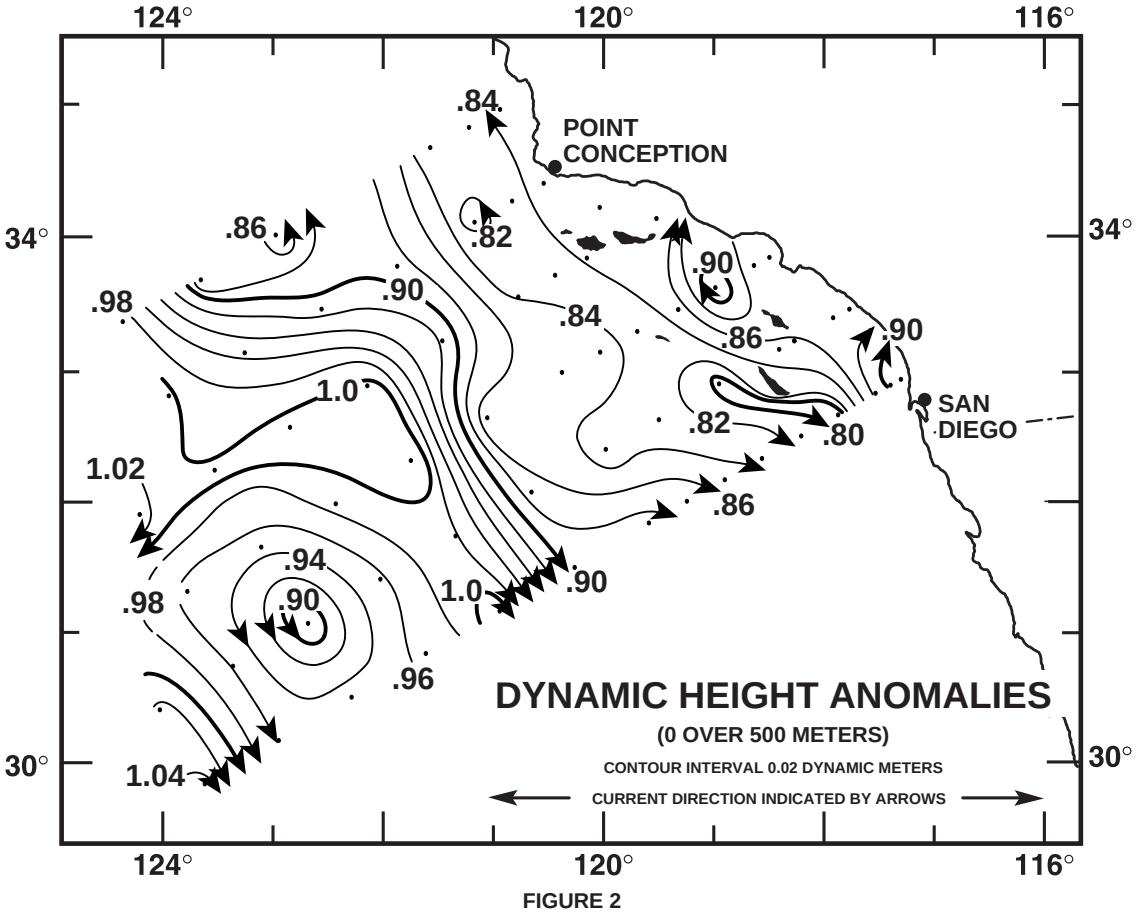

FIGURE 2

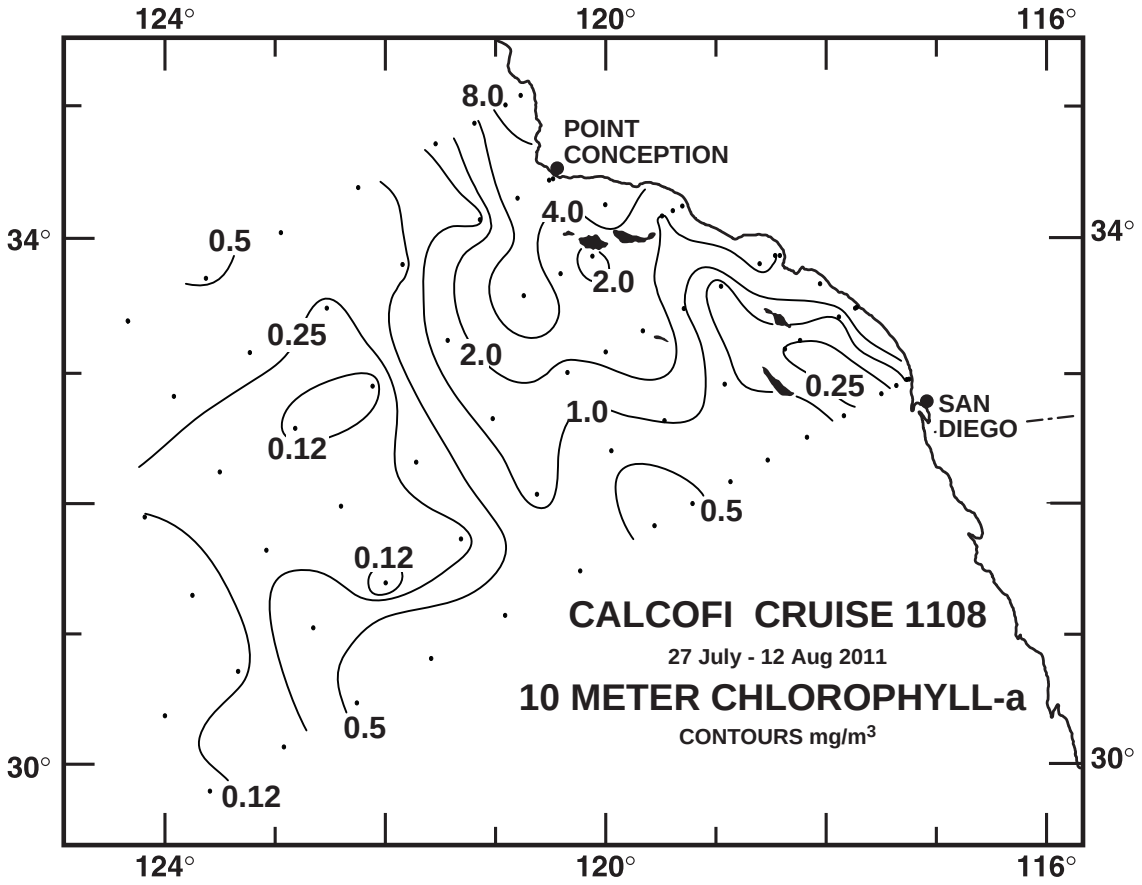

FIGURE 3A

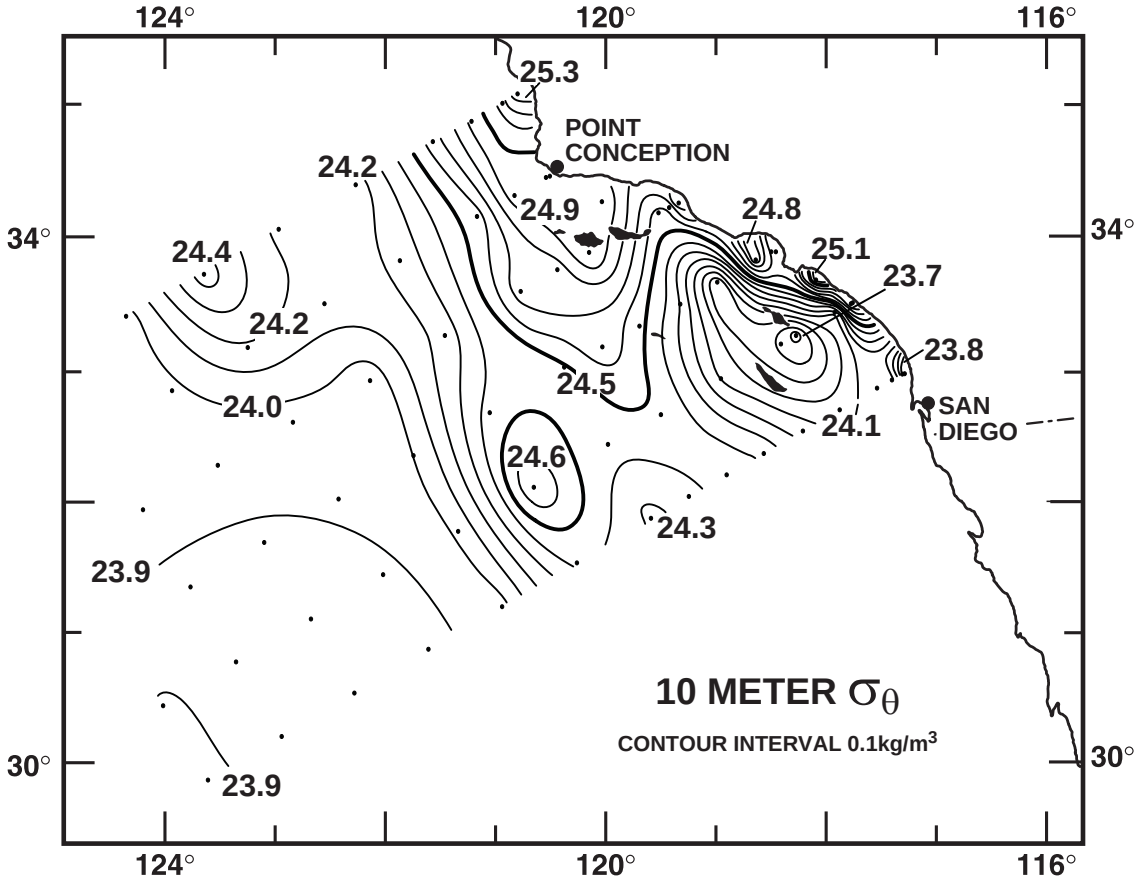

FIGURE 3B

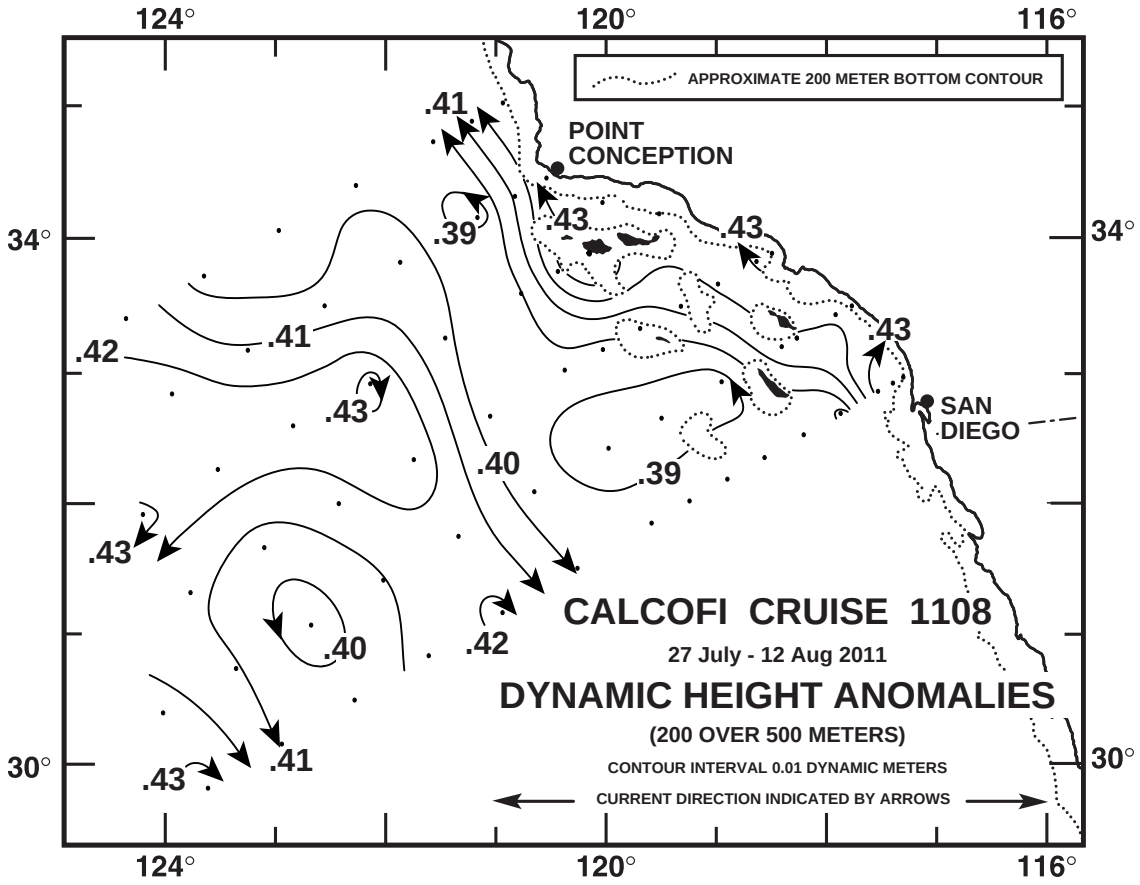

FIGURE 4A

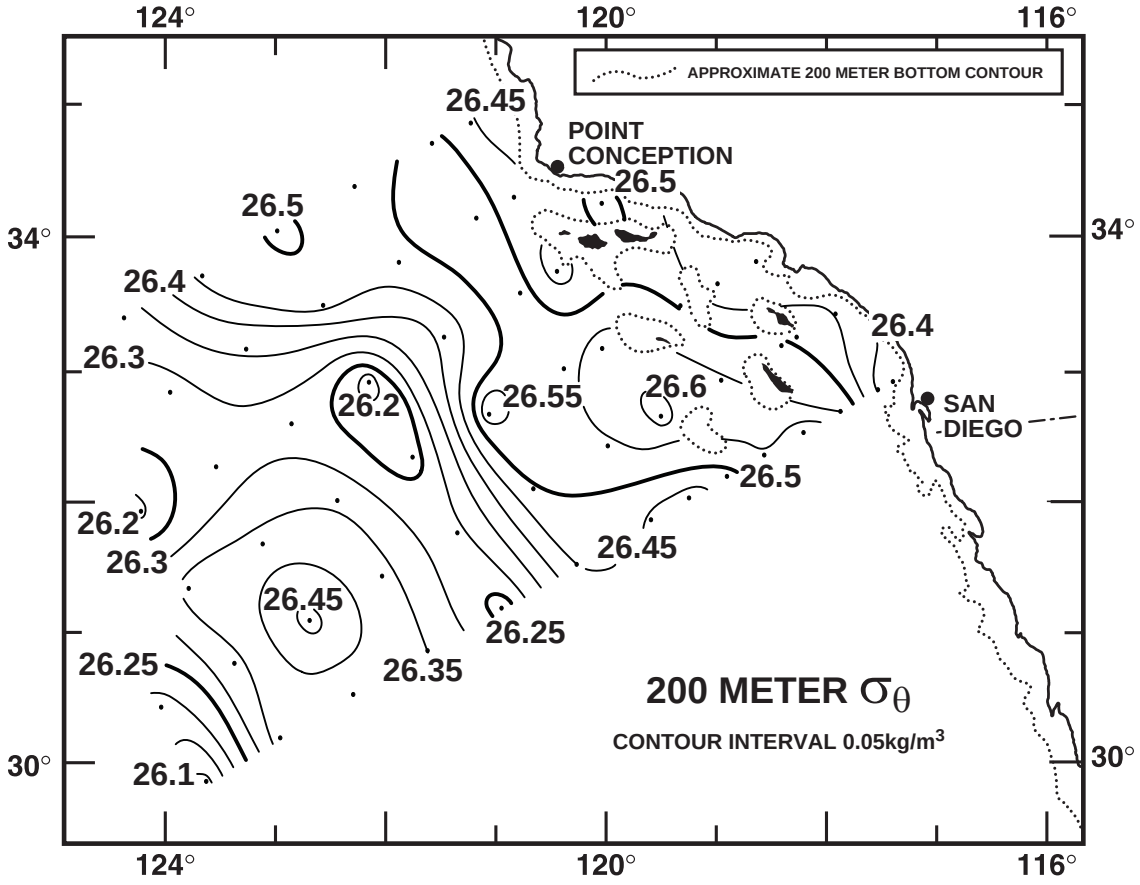

FIGURE 4B

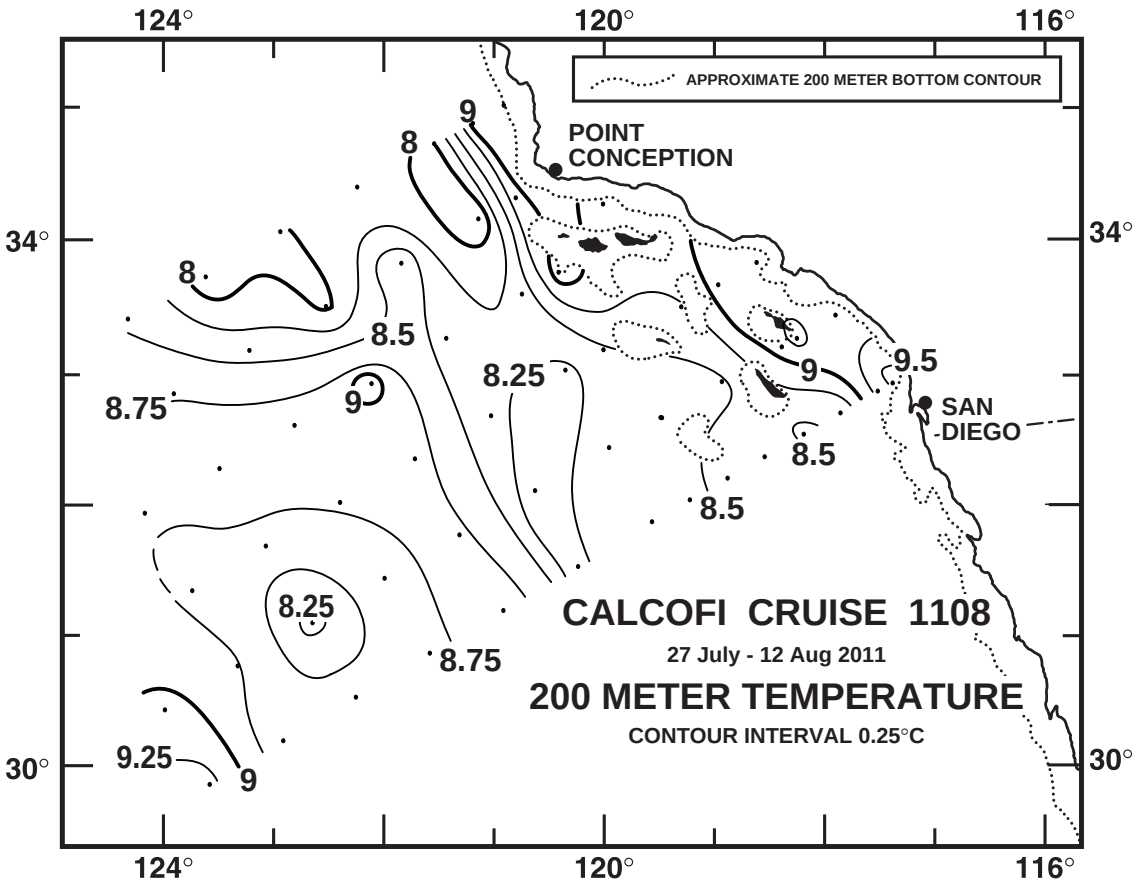

FIGURE 4C

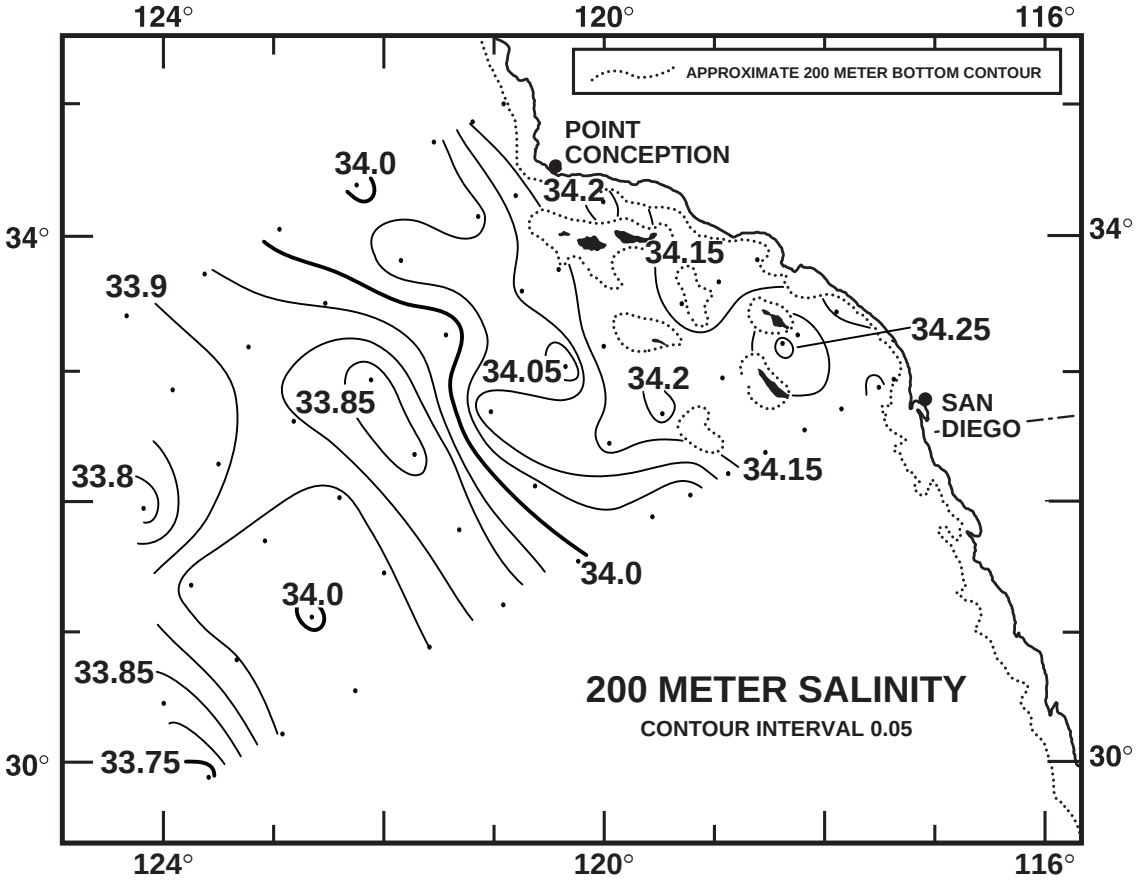

FIGURE 4D

CALCOFI CRUISE 1108

30 July - 3 August 2011

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

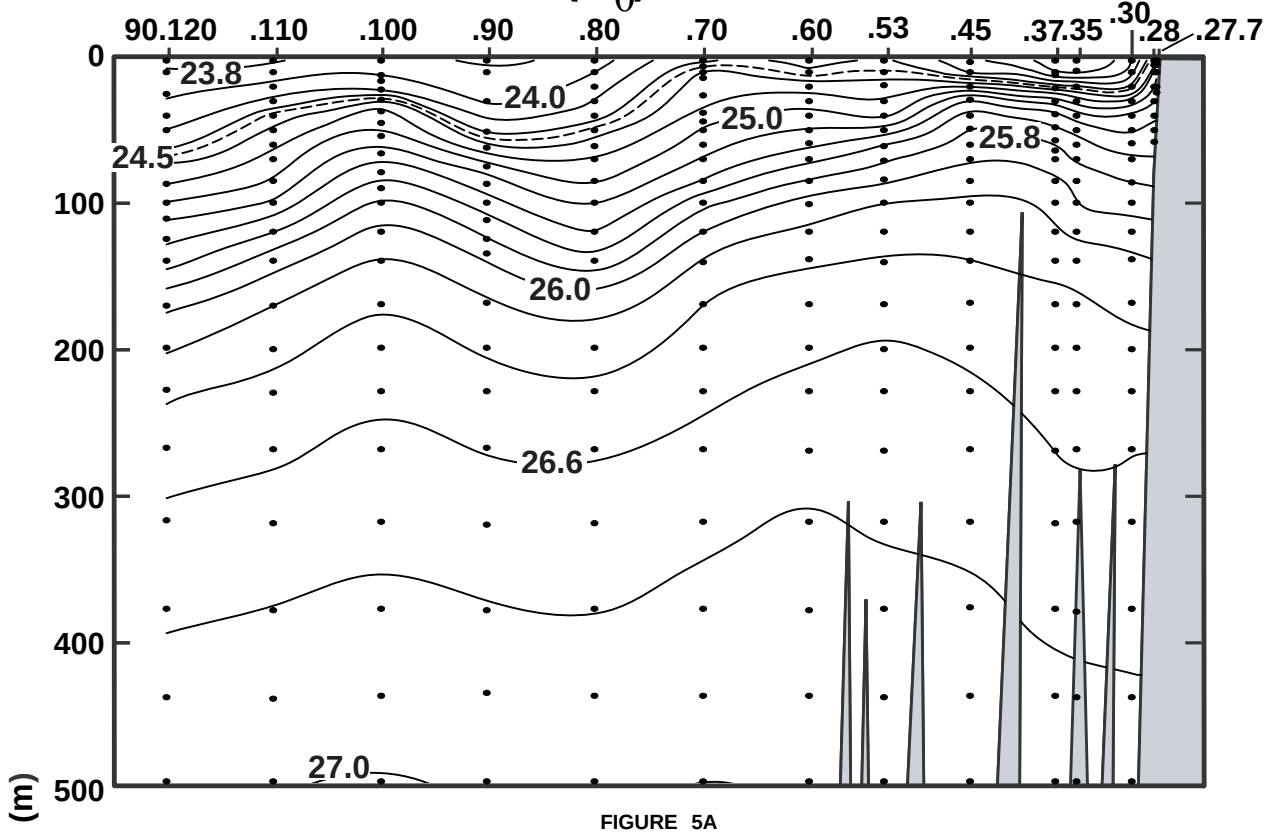

FIGURE 5A

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

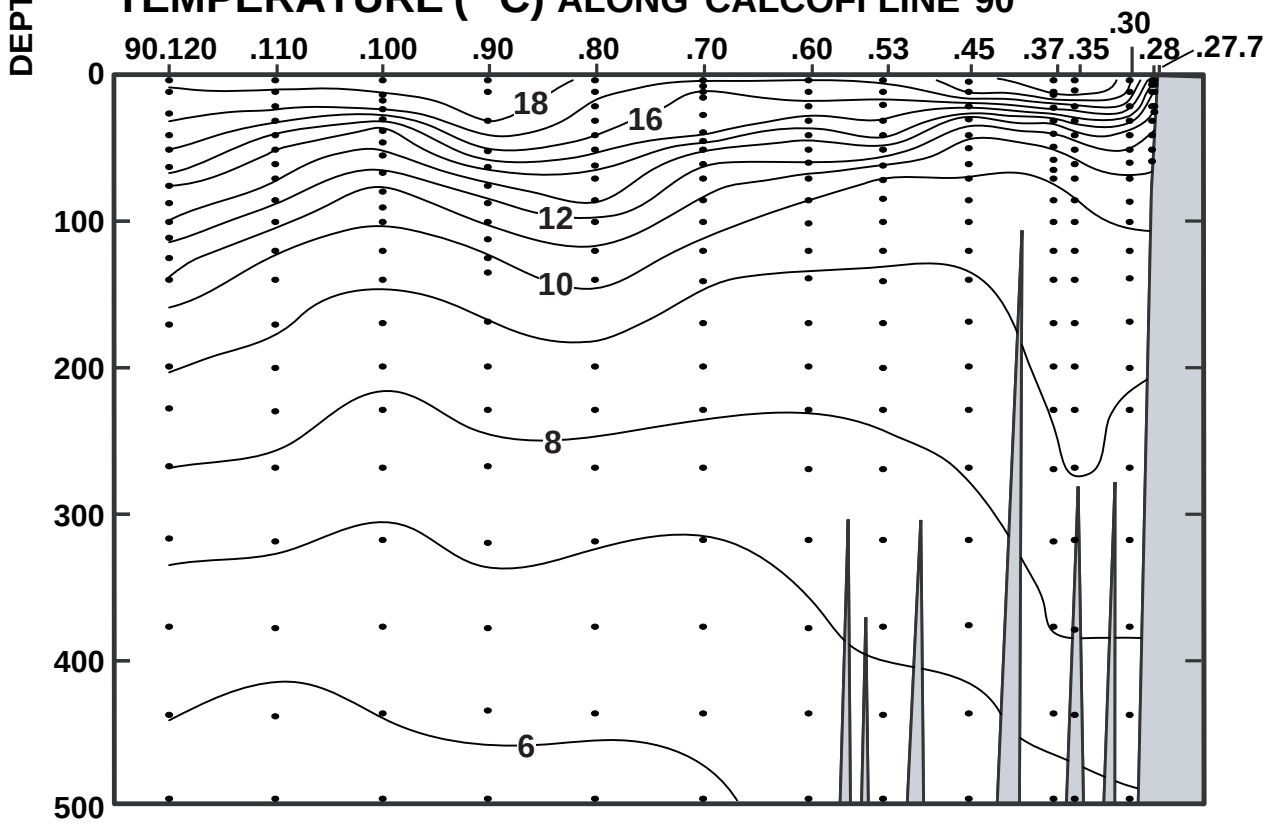

FIGURE 5B

CALCOFI CRUISE 1108

30 July - 3 August 2011

SALINITY ALONG CALCOFI LINE 90

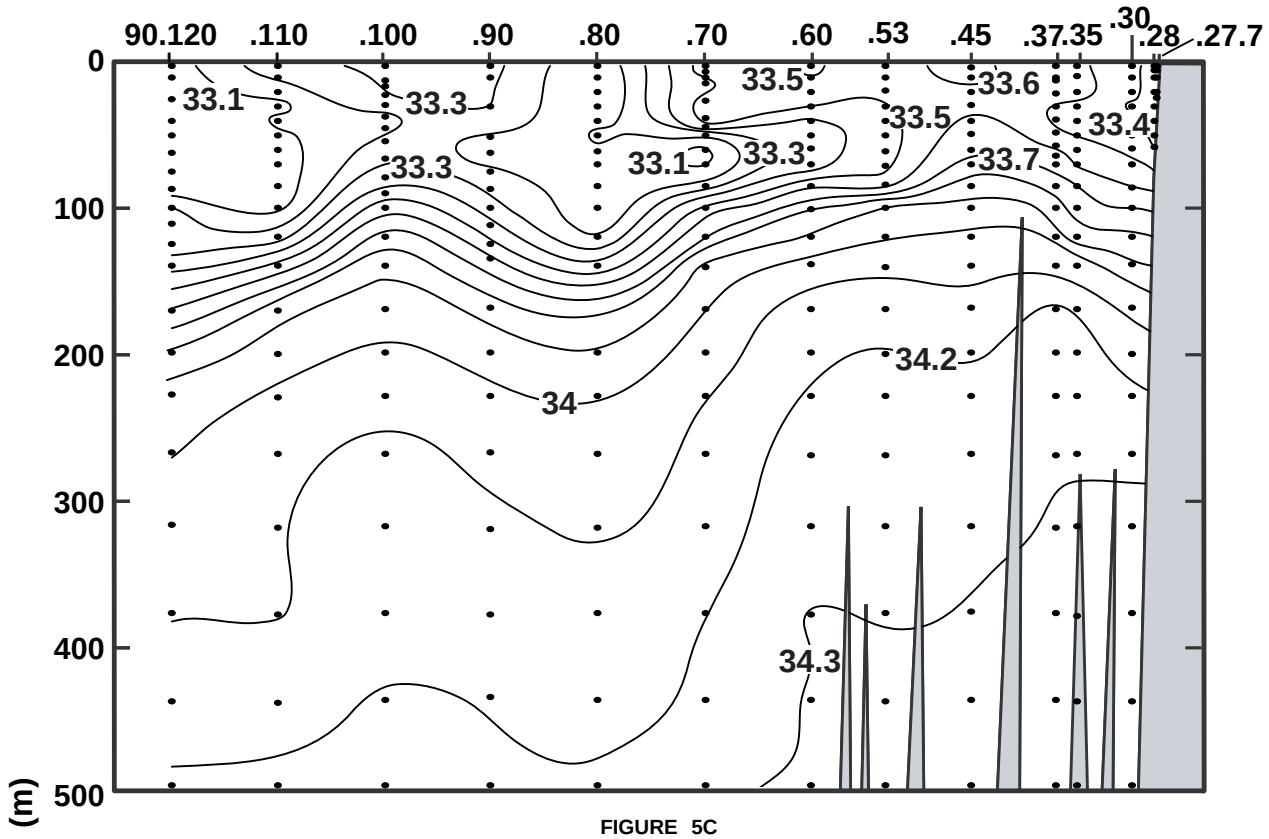

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

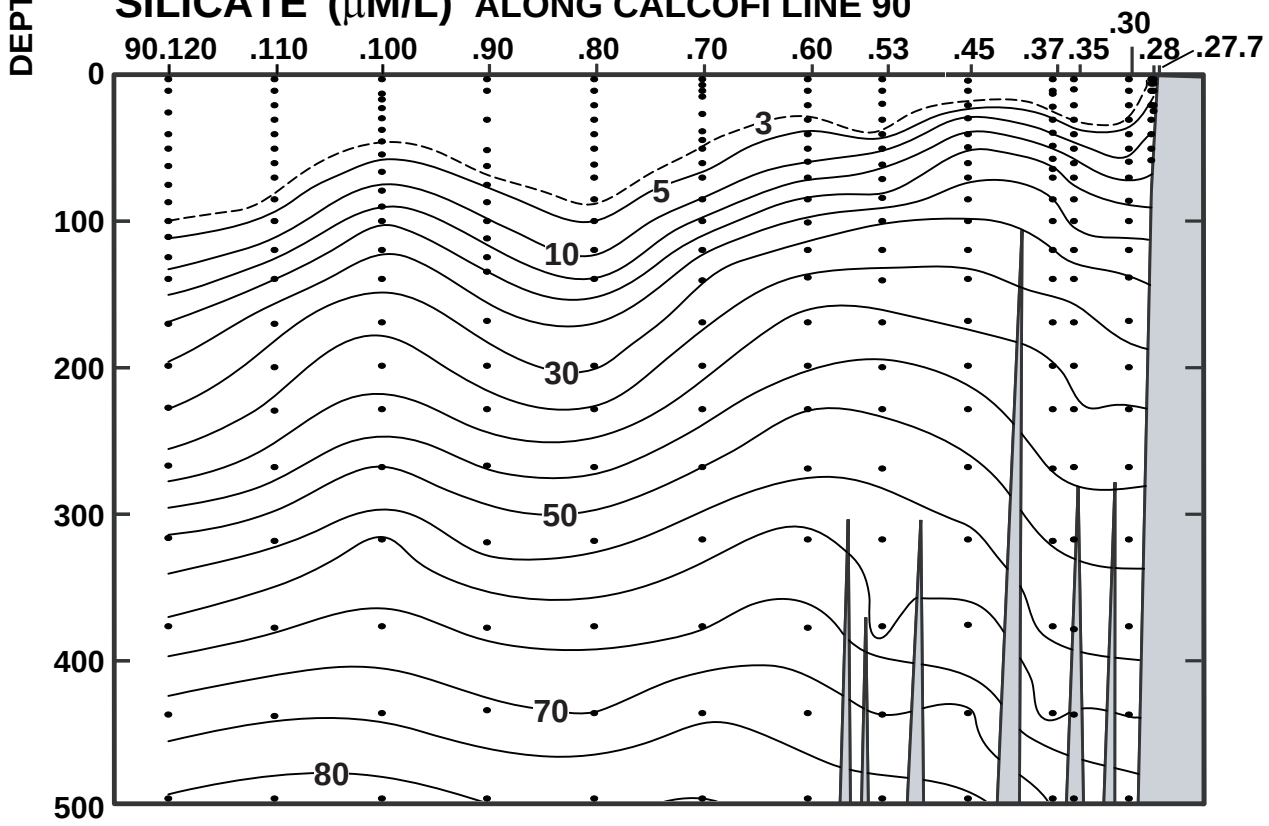

FIGURE 5D

CALCOFI CRUISE 1108

30 July - 3 August 2011

NITRATE (μM/L) ALONG CALCOFI LINE 90

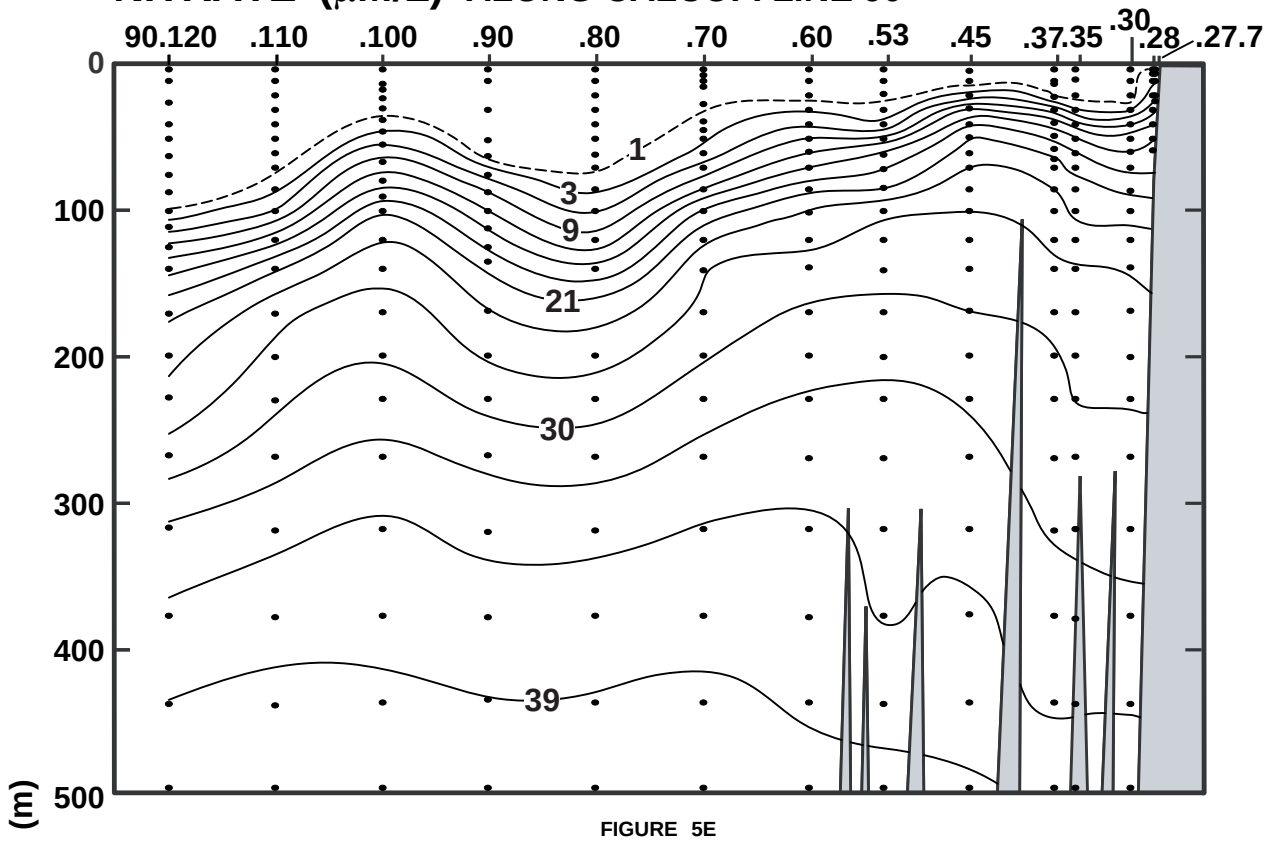

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

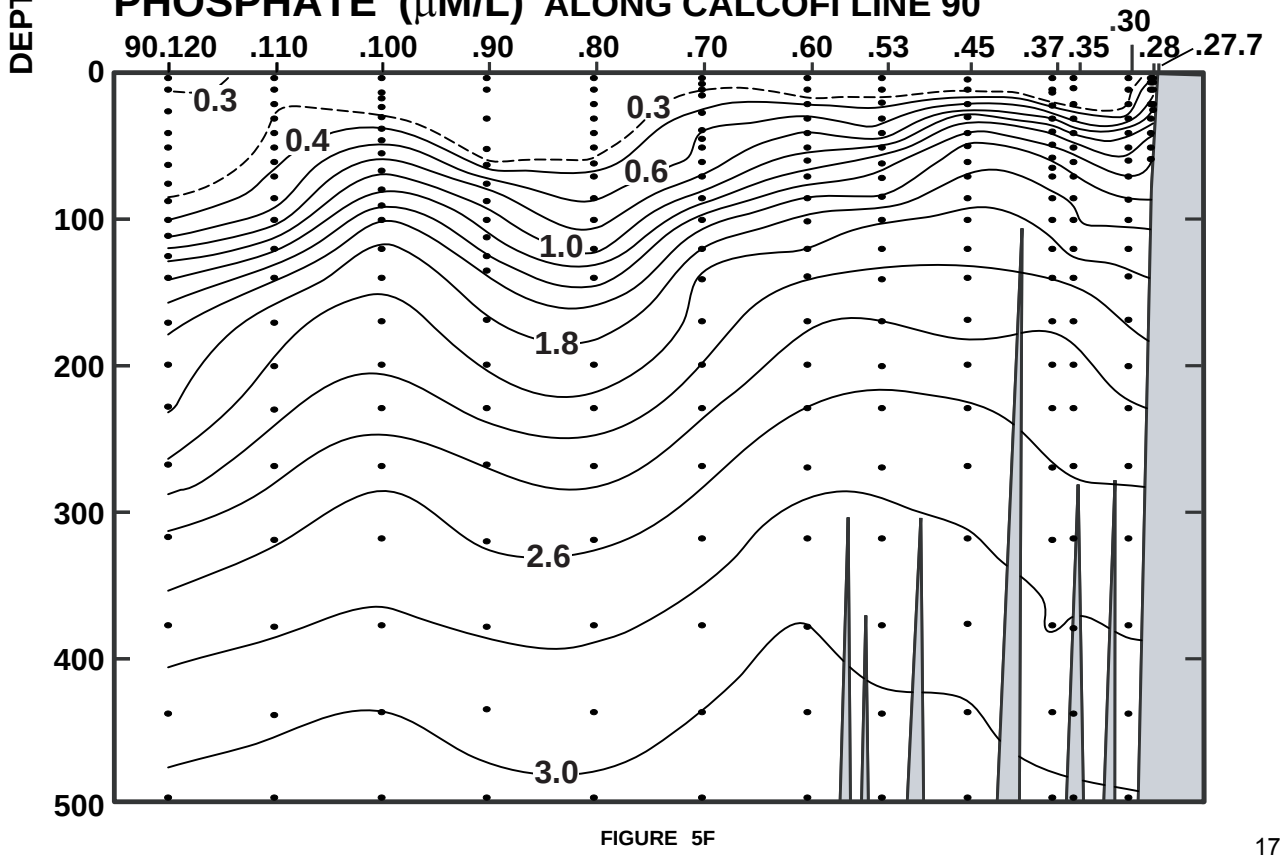

FIGURE 5F

CALCOFI CRUISE 1108

30 July - 3 August 2011

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

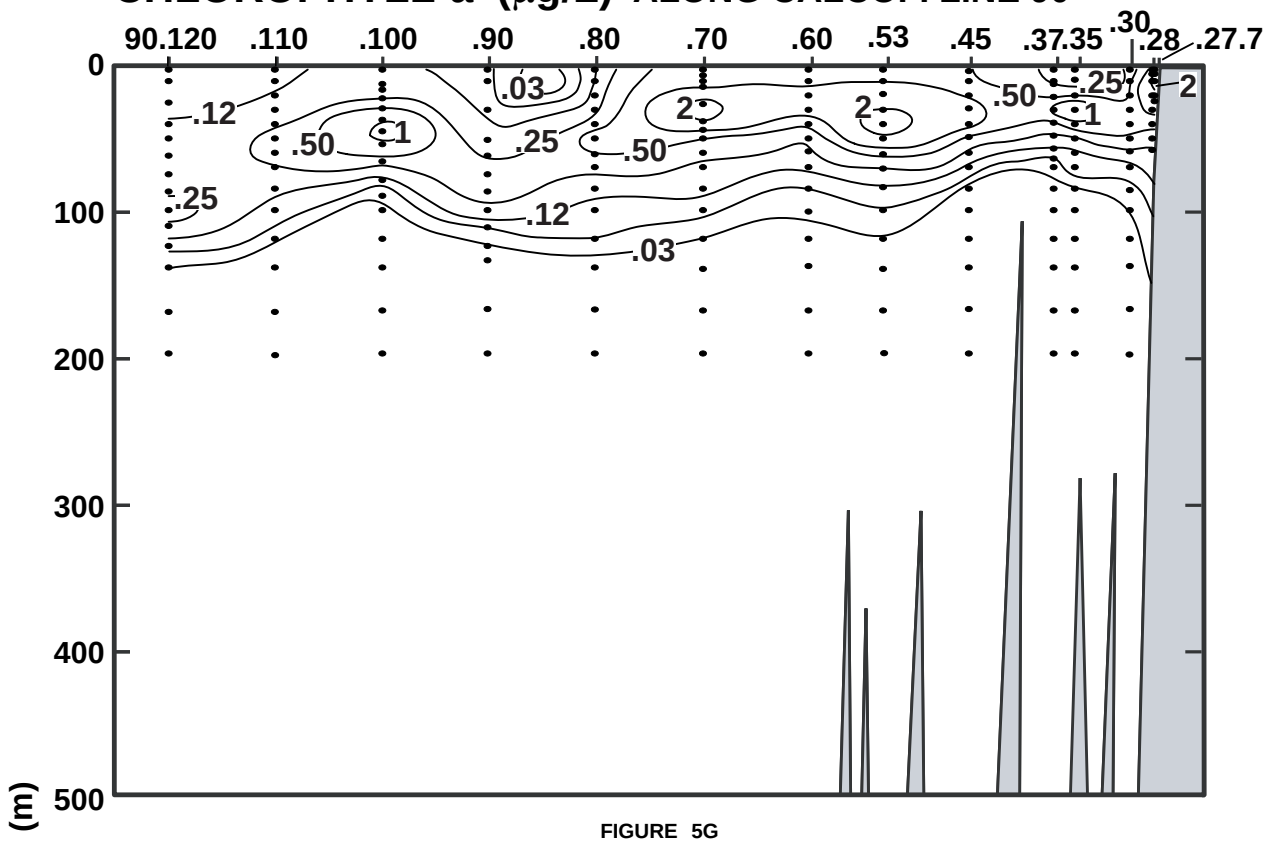

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

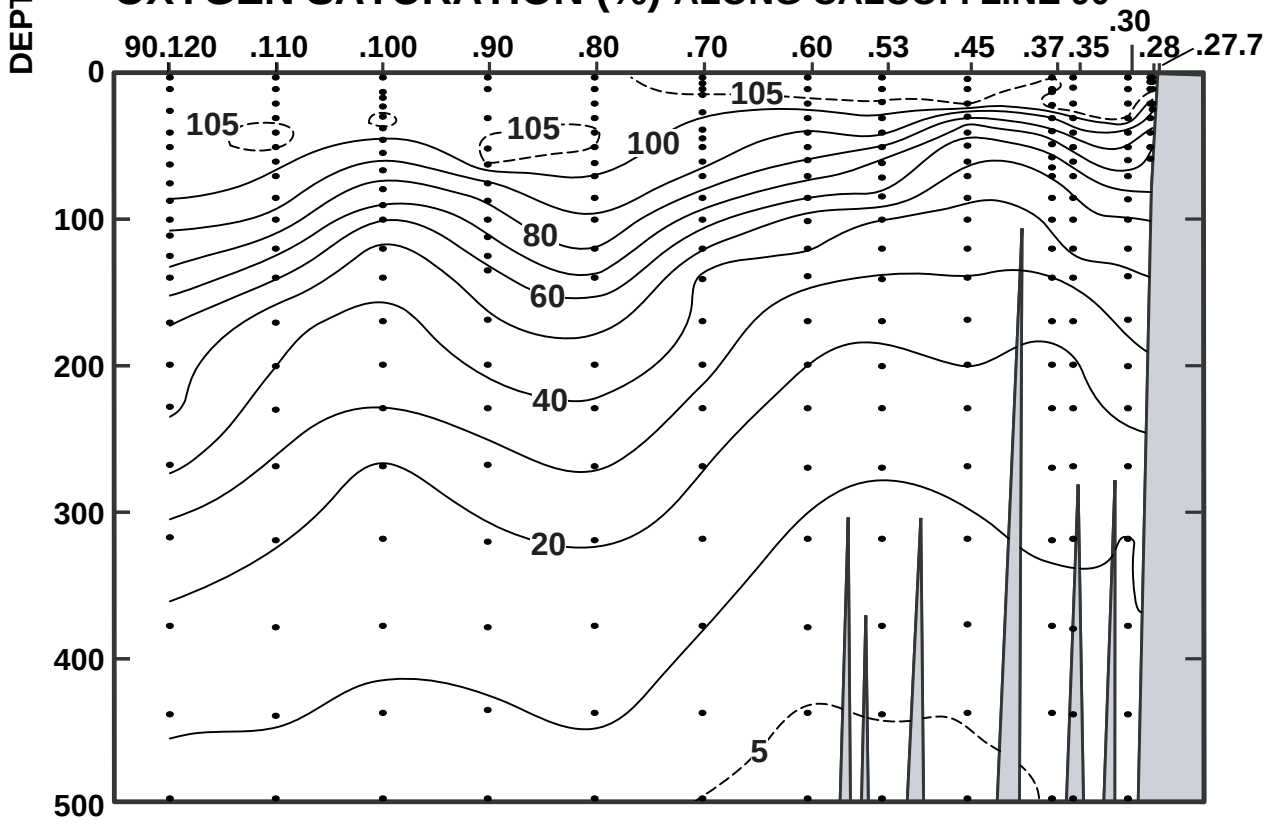

FIGURE 5H

CALCOFI CRUISE 1108

30 July - 3 August 2011

OXYGEN (mL/L) ALONG CALCOFI LINE 90

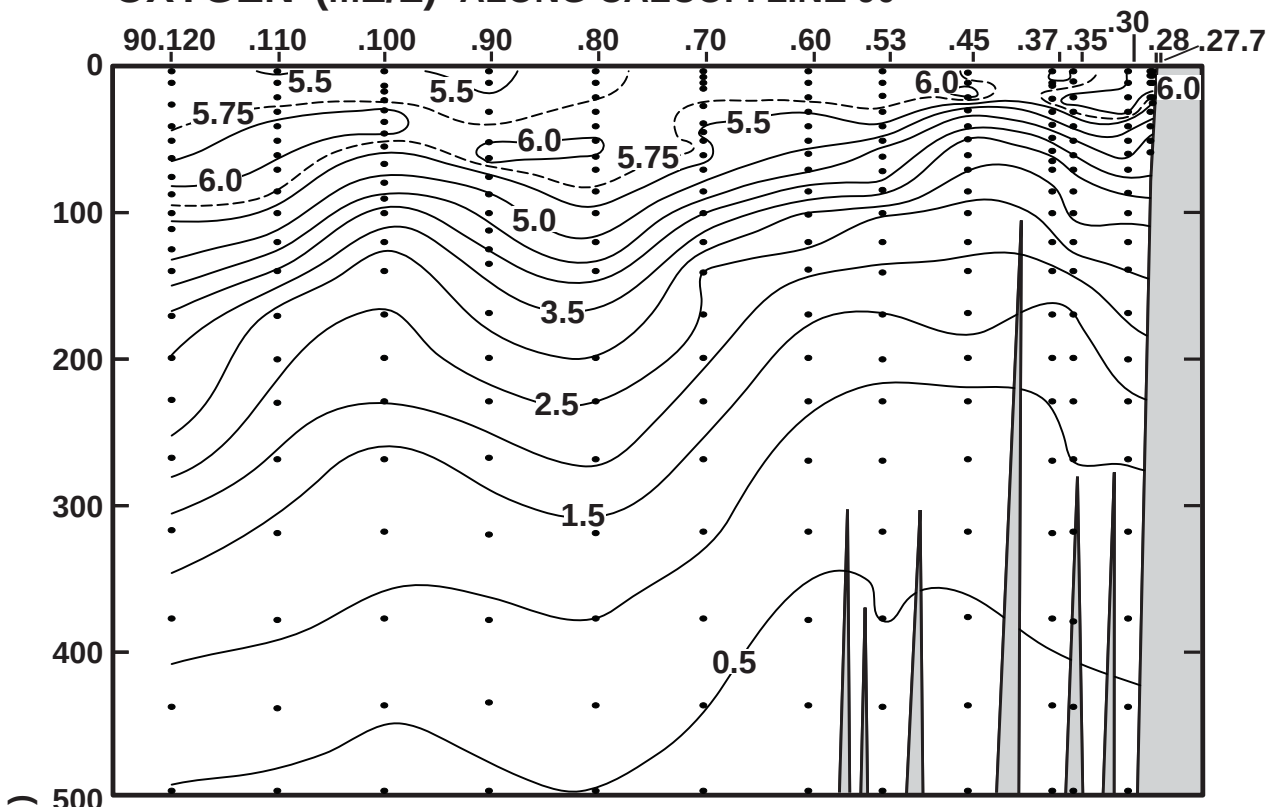

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

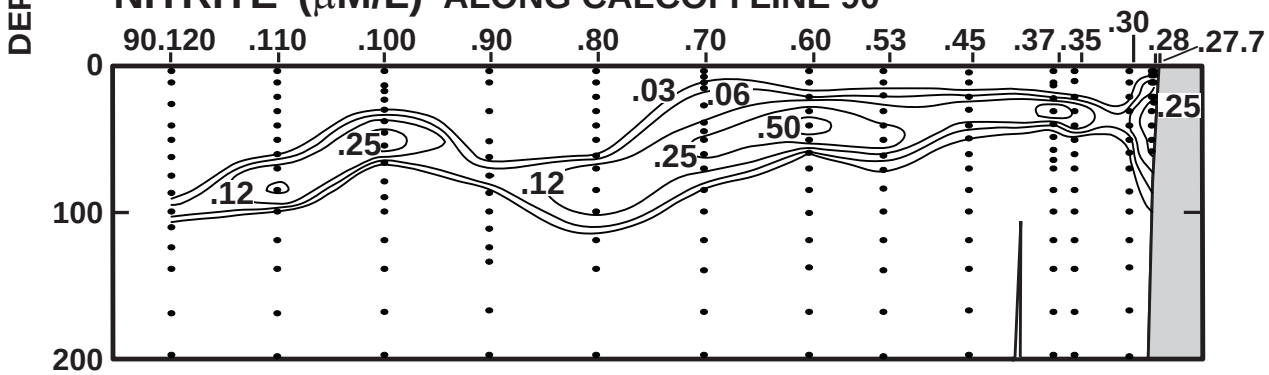

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

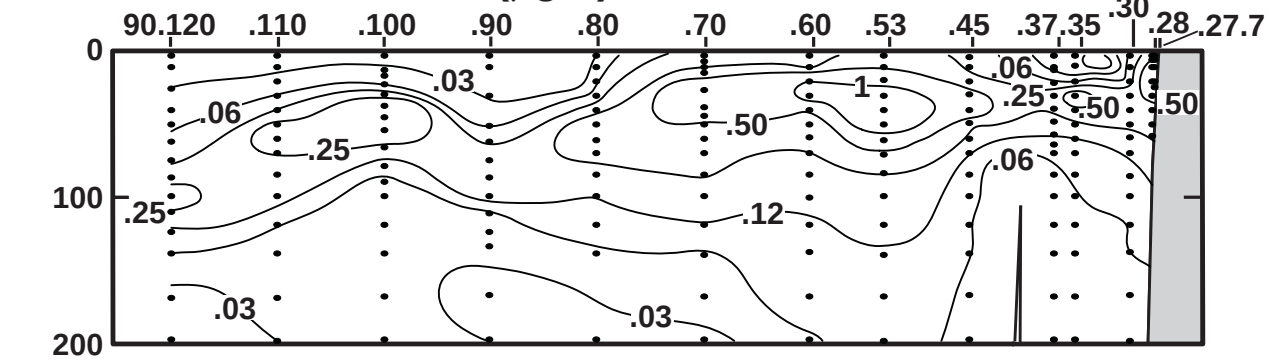

FIGURE 5K

PERSONNEL

CalCOFI Cruise 1108

SHIP'S CAPTAIN

Staff Research Associate, SIO

Murray Stein, R/V *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Leg)
Wolgast, David (Chief Scientist)	Staff Research Associate, SIO	1
Blinkow, Kayla	Volunteer, SIO	1
Breese, Dawn	Bird Observer, FIAER	1
Dovel, Shonna	Staff Research Associate, SIO	1
Hays, Amy	Fishery Biologist, NMFS	1
Liu, Jian	Staff Research Associate, SIO	1
Manion, Susan	Fishery Biologist, NMFS	1
Pryor, Rachel	Volunteer,SIO	1
Roadman, Megan	Staff Research Associate, SIO	1
Rodgers-Wolgast, Jennifer	Staff Research Associate, SIO	1
Schuller, Danial	Staff Research Associate, SIO	1
Shiosaka, Lauren	Volunteer, SIO	1
Simonas, Anne	Marine Mammal Acoustician, MPL	1
Susner, Michael	Staff Research Associate, SIO	1
Wilkinson, James	Programmer Analyst, SIO	1
Whitaker, Katherine	Marine Mammal Observer, MPL	1
Wylie, Dominique	Marine Mammal Observer, MPL	1

San Diego to San Diego, California, 27 Jul. – 13 Aug., 2011

RV NEW HORIZON CALCOFI CRUISE 1108 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 5.5 N	120 47.1 W	13/08/11	0155 UTC	74 m	280 05 kn	350 02 05	2	1014.8 mb	14.1 C	13.5 C	5m	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	13.01	13.01		33.576	25.288	267.3	0.000	7.17	120.0	2.0	0.32	0.8	0.04	0.07	15.61	1.63	0	
2	A	13.01	13.01		33.576	25.288	267.4	0.005	7.17	120.0	2.0	0.32	0.8	0.04	0.07	15.61	1.63	2	211
3	A	12.83	12.83		33.578	25.326	263.9	0.008	6.24	104.0	4.7	0.55	5.0	0.09	0.17	16.78	1.70	3	210
4	A	12.85	12.85		33.576	25.320	264.4	0.011	6.65	110.9	3.4	0.45	3.0	0.13	0.09	16.34	1.99	4	209
7	A	12.58	12.58		33.577	25.374	259.4	0.019	6.17	102.3	4.8	0.68	5.2	0.16	0.17	17.78	1.58	7	208
10		12.47	12.47		33.578	25.396	257.4	0.026	5.75	95.1	6.3	0.79	7.3	0.19	0.45	15.02	1.54	10	207
13	A	12.53	12.53		33.578	25.384	258.5	0.034	5.79	95.9	6.2	0.85	7.0	0.18	0.40	15.66	1.69	13	206
19	A	12.44	12.44		33.580	25.403	256.9	0.049	5.66	93.6	6.9	0.84	7.7	0.24	0.49	14.67	1.62	19	205
20	ISL	12.45	12.45	D	33.579	25.401	257.2	0.052	5.64	D 93.3	6.9	0.84	7.8	0.24	0.51	14.40	1.60	20	
30		12.13	12.13		33.581	25.464	251.4	0.077	5.18	85.1	9.4	1.02	10.2	0.27	0.68	9.85	1.30	30	204
40		10.98	10.98		33.593	25.685	230.6	0.102	3.76	60.2	18.3	1.57	18.3	0.30	0.52	1.75	0.83	40	203
50		10.69	10.68		33.626	25.762	223.5	0.124	3.38	53.8	21.9	1.72	20.2	0.20	0.62	0.64	0.62	50	202
60		10.67	10.66		33.660	25.792	220.8	0.146	3.19	50.8	24.6	1.80	20.2	0.21	1.13	0.70	0.84	60	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 1.2 N	120 55.3 W	12/08/11	2007 UTC	249 m	320 11 kn		0	1013.3 mb	14.5 C	13.1 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.68	13.68		33.511	25.103	285.0	0.000	6.27	106.3	1.6	0.45	2.4	0.15	0.06	12.00	1.94	0	
2		13.68	13.68		33.511	25.103	285.0	0.006	6.27	106.3	1.6	0.45	2.4	0.15	0.06	12.00	1.94	2	216
10	ISL	13.44	13.44		33.502	D 25.145	281.2	0.028	5.56	D 93.8	1.6	0.45	2.4	0.15	0.06	12.00	1.94	10	
10		13.44	13.44		33.502	25.145	281.2	0.028										10	215
11		13.32	13.32		33.503	25.170	278.9	0.031	5.96	100.3	2.7	0.57	4.1	0.19	0.18	10.54	1.91	11	214
20		11.61	11.61		33.435	25.447	252.7	0.055	4.70	76.3	9.8	1.14	12.2	0.32	0.50	0.63	0.60	20	213
30		10.54	10.54		33.438	25.641	234.5	0.079	4.19	66.4	15.0	1.40	17.0	0.18	0.09	0.22	0.23	30	212
40		10.37	10.37		33.437	25.670	231.9	0.103	4.16	65.7	15.4	1.43	17.4	0.16	0.07	0.22	0.26	40	211
50	ISL	10.12	10.11	D	33.456	D 25.728	226.7	0.126	4.03	D 63.3	16.0	1.46	18.2	0.10	0.02	0.14	0.22	50	
51		10.09	10.08		33.438	25.719	227.5	0.128	4.11	64.5	16.1	1.47	18.3	0.09	0.01	0.13	0.21	51	210
60		9.98	9.97		33.511	25.794	220.5	0.148	3.81	59.7	18.4	1.58	19.9	0.11	0.00	0.09	0.16	60	209
70		9.84	9.83		33.577	25.869	213.6	0.170	3.55	55.5	20.7	1.68	21.2	0.12	0.01	0.06	0.14	70	208
75	ISL	9.84	9.83	D	33.605	D 25.891	211.6	0.180	3.39	D 53.0	21.8	1.74	21.9	0.12	0.03	0.05	0.13	75	
85		9.81	9.80		33.698	25.969	204.4	0.201	3.03	47.4	23.9	1.85	23.4	0.12	0.06	0.04	0.12	85	207
100		9.79	9.78		33.798	26.051	197.0	0.231	2.62	40.9	26.4	1.98	25.1	0.10	0.08	0.04	0.14	101	206
120		9.73	9.72		33.901	26.142	188.8	0.270	2.20	34.4	29.0	2.12	26.7	0.09	0.09	0.03	0.13	121	205
125	ISL	9.73	9.72	D	33.920	D 26.157	187.5	0.279	2.08	D 32.5	29.5	2.14	27.0	0.09	0.08	0.03	0.13	126	
140		9.66	9.64		33.957	26.197	183.9	0.307	1.98	30.9	30.9	2.19	27.7	0.09	0.06	0.03	0.12	141	204
150	ISL	9.60	9.58	D	33.991	D 26.234	180.7	0.325	1.93	D 30.1	32.0	2.23	28.1	0.08	0.05	0.03	0.13	151	
170		9.44	9.42		34.064	26.318	173.1	0.361	1.66	25.8	34.6	2.31	28.9	0.06	0.04	0.02	0.14	171	203
200		9.26	9.24		34.142	26.408	165.1	0.412	1.30	20.1	38.8	2.47	29.9	0.10	0.13	0.03	0.20	201	202
230		8.98	8.96		34.175	26.480	158.8	0.460	0.99	15.2	45.4	2.65	30.3	0.12	0.86			231	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 52.9 N	121 12.1 W	12/08/11	1623 UTC	569 m	340 17 kn		0	1014.0 mb	14.9 C	13.8 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.88	14.88		33.520	24.858	308.3	0.000	6.17	107.2	1.4	0.30	1.4	0.01	0.04	2.73	0.80	0	
2		14.88	14.88		33.520	24.858	308.4	0.006	6.17	107.2	1.4	0.30	1.4	0.01	0.04	2.73	0.80	2	221
10		14.53	14.53		33.514	24.928	301.9	0.031	6.14	105.9	1.4	0.35	1.7	0.02	0.05	3.01	0.85	10	219
10		14.53	14.53		33.513	24.928	301.9	0.031										10	220
20		12.93	12.93		33.451	25.208	275.5	0.059	5.42	90.5	5.8	0.78	7.3	0.17	0.82	4.14	1.26	20	218
30		12.93	12.93		33.473	25.225	274.1	0.087	5.51	92.0	5.6	0.72	7.0	0.16	0.94	6.40	2.27	30	217
40		12.13	12.12		33.398	25.322	265.1	0.114	5.34	87.6	6.4	0.93	7.9	0.19	0.73	5.91	1.40	40	216
49		10.51	10.50		33.272	25.517	246.6	0.137	4.69	74.2	11.3	1.16	13.2	0.10	0.06	0.99	0.49	49	215
50	ISL	10.30	10.29	D	33.302	D 25.577	241.0	0.139	4.63	D 73.0	11.8	1.18	13.6	0.09	0.06	0.95	0.49	50	
60		10.02	10.01		33.380	25.685	230.9	0.163	4.25	66.6	15.5	1.39	17.1	0.03	0.01	0.57	0.54	60	214
70		9.71	9.70		33.447	25.789	221.2	0.186	4.11	64.0	18.0	1.48	19.1	0.00	0.00	0.43	0.36	70	213
75	ISL	10.05	10.04	D	33.672	D 25.908	210.0	0.196	3.44	D 54.0	20.4	1.60	20.9	0.00	0.00	0.35	0.37	75	
85		9.75	9.74		33.770	26.035	198.1	0.217	2.97	46.4	25.3	1.86	24.4	0.00	0.00	0.20	0.38	85	212
100		9.45	9.44		33.874	26.166	186.0	0.246	2.60	40.4	28.9	1.99	26.2	0.00	0.00	0.13	0.30	101	211
120		9.23	9.22		33.955	26.266	176.9	0.282	2.33	36.0	31.5	2.09	27.6	0.00	0.00	0.17	0.40	121	210
125	ISL	9.21	9.20	D	33.963	D 26.275	176.1	0.291	2.29	D 35.4	32.5	2.16	28.0	0.00	0.00	0.16	0.38	126	
140		9.40	9.38		34.095	26.348	169.6	0.317	1.57	24.4	35.4	2.35	29.2	0.00	0.00	0.13	0.28	141	209
150	ISL	9.30	9.28	D	34.125	D 26.388	166.0	0.333	1.47	D 22.8	36.5	2.35	29.3	0.00	0.00	0.10	0.22	151	
170		9.06	9.04		34.141	26.439	161.5	0.366	1.60	24.7	37.8	2.35	29.6	0.00	0.00	0.04	0.15	171	208
200		9.01	8.99		34.156	26.459	160.2	0.414	1.53	23.5	38.6	2.40	29.9	0.00	0.00	0.06	0.20	201	207
229		8.87	8.85		34.190	26.509	156.0	0.460	1.33	20.4	40.5	2.47	30.8	0.00	0.00			230	206
250	ISL	8.62	8.59	D	34.191	D 26.549	152.5	0.493	1.22	D 18.6	43.8	2.57	31.7	0.00	0.00			252	
271		8.52	8.49		34.273	26.629	145.3	0.524	0.84	12.8	47.3	2.67	32.6	0.00	0.00			273	205
300	ISL	8.37	8.34	D	34.281	D 26.658	143.0	0.566	0.74	D 11.2	50.1	2.71	33.7	0.00	0.00			302	
320		7.89	7.86		34.226	26.687	140.3	0.594	0.85	12.8	51.7	2.72	34.4	0.00	0.00			322	204
381		7.48	7.44		34.265	26.778	132.5	0.677	0.61	9.1	58.0	2.86	35.8	0.00	0.00			384	203
400	ISL	7.43	7.39	D	34.265	D 26.785	132.0	0.702	0.60	D 8.9	59.7	2.89	36.0	0.00	0.00			403	
440		7.06	7.02		34.264	26.837	127.5	0.754	0.54	8.0	63.9	2.95	36.6	0.00	0.00			443	202
500	ISL	6.45	6.40	D	34.261	D 26.917	120.2	0.829	0.41	D 6.0	75.3	3.07	38.3	0.04	0.00			504	
514		6.32	6.27		34.265	26.937	118.4	0.845	0.38	5.5	78.0	3.10	38.7	0.05	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 43.6 N	121 33.1 W	12/08/11	0952 UTC	906 m	340 16 kn	330 04 07	2	1013.9 mb	16.0 C	14.5 C		8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.71		15.71		33.496		24.657	327.4	0.000	5.99		105.8	0.0	0.28	0.6	0.03	0.05	1.26	0.37	0	
2		15.71		15.71		33.496		24.657	327.5	0.007	5.99		105.8	0.0	0.28	0.6	0.03	0.05	1.26	0.37	2	220
9		15.70		15.70		33.492		24.656	327.8	0.029	5.99		105.8	0.0	0.27	0.6	0.03	0.04	1.16	0.35	9	219
10	ISL	15.70	D	15.70		33.492	D	24.656	327.8	0.033	5.93	D	104.7	0.0	0.27	0.6	0.03	0.04	1.17	0.36	10	
20		15.48		15.48		33.481		24.697	324.2	0.065	5.95		104.6	0.0	0.29	0.7	0.03	0.07	1.20	0.44	20	218
30		15.36		15.36		33.470		24.716	322.8	0.098	5.89		103.3	0.0	0.33	1.0	0.05	0.17	0.89	0.40	30	217
39		13.27		13.26		33.206		24.951	300.5	0.126	5.74		96.3	2.3	0.60	4.0	0.37	0.66	0.40	0.37	39	216
50		13.34		13.33		33.536		25.193	277.8	0.158	5.23		88.1	2.9	0.84	6.0	0.51	2.45	0.20	0.26	50	215
60		12.06		12.05		33.512		25.424	255.9	0.184	4.73		77.5	7.1	1.16	11.3	0.76	1.33	0.12	0.22	60	214
70		10.51		10.50		33.580		25.758	224.3	0.208	3.91		62.0	15.6	1.57	19.9	0.08	0.02	0.07	0.16	70	213
75	ISL	9.58	D	9.57		33.499	D	25.851	215.4	0.219	3.84	D	59.6	18.4	1.61	20.8	0.05	0.03	0.05	0.13	75	
85		9.27		9.26		33.575		25.961	205.1	0.240	3.63		56.0	22.1	1.69	22.5	0.00	0.04	0.03	0.09	85	212
100		9.31		9.30		33.722		26.070	195.1	0.270	3.05		47.1	25.2	1.88	25.1	0.00	0.00	0.02	0.09	101	211
120		8.86		8.85		33.787		26.193	183.8	0.308	3.17		48.5	27.4	1.88	25.3	0.00	0.00	0.01	0.07	121	210
125	ISL	8.73	D	8.72		33.854	D	26.266	176.9	0.317	3.26	D	49.8	27.8	1.86	25.2	0.00	0.00	0.01	0.07	126	
139		8.60		8.59		33.899		26.321	171.9	0.342	3.35		51.0	29.1	1.81	25.1	0.00	0.00	0.01	0.07	140	209
150	ISL	8.40	D	8.38		33.934	D	26.379	166.5	0.360	3.22	D	48.8	30.8	1.86	25.8	0.00	0.00	0.01	0.07	151	
170		8.29		8.27		33.968		26.423	162.7	0.393	2.78		42.1	34.5	2.01	27.9	0.00	0.00	0.01	0.06	171	208
200		7.96		7.94		34.026		26.518	154.1	0.441	2.10		31.5	40.6	2.26	31.0	0.00	0.00	0.01	0.04	201	207
230		7.35		7.33		34.032		26.611	145.6	0.486	1.95		28.9	45.6	2.37	32.7	0.00	0.00			231	206
250	ISL	7.25	D	7.23		34.051	D	26.640	143.1	0.514	1.80	D	26.6	48.6	2.43	33.6	0.00	0.00			252	
270		7.15		7.12		34.059		26.661	141.4	0.543	1.68		24.8	51.3	2.49	34.3	0.00	0.00			272	205
300	ISL	7.55	D	7.52		34.200	D	26.716	137.0	0.585	0.90	D	13.4	54.7	2.62	35.3	0.00	0.00			302	
320		7.08		7.05		34.156		26.747	134.0	0.612	1.02		15.0	56.8	2.71	35.9	0.00	0.00			322	204
379		6.76		6.72		34.192		26.820	127.8	0.689	0.74		10.8	63.8	2.86	37.4	0.00	0.00			382	203
400	ISL	6.85	D	6.81		34.249	D	26.853	125.1	0.716	0.55	D	8.1	65.9	2.91	37.8	0.00	0.00			403	
440		6.56		6.52		34.273		26.911	120.0	0.765	0.44		6.4	69.8	2.99	38.4	0.00	0.00			443	202
500	ISL	6.22	D	6.18		34.301	D	26.978	114.2	0.835	0.33	D	4.8	75.5	3.08	39.3	0.00	0.00			504	
516		6.18		6.13		34.307		26.988	113.4	0.853	0.30		4.3	77.0	3.10	39.6	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 23.8 N	122 15.0 W	12/08/11	0308 UTC	4018 m	340 16 kn	350 04 06	2	1016.0 mb	17.7 C	15.8 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	16.66		16.66		33.118		24.150	375.7	0.000	5.75		103.3	1.3	0.29	0.1	0.00	0.06	0.39	0.07	0	
2	A	16.66		16.66		33.118		24.151	375.8	0.008	5.75		103.3	1.3	0.29	0.1	0.00	0.06	0.39	0.07	2	223
8	A	16.66		16.66		33.111		24.145	376.5	0.030	5.73		102.9	1.2	0.30	0.1	0.00	0.12	0.31	0.08	8	222
10	A	16.65		16.65		33.110		24.147	376.4	0.038	5.74		103.1	1.1	0.29	0.1	0.00	0.00	0.35	0.05	10	220
10		16.65		16.65		33.113		24.149	376.1	0.038											10	221
19	A	16.59		16.59		33.140		24.184	373.1	0.071	5.74		103.0	1.2	0.28	0.1	0.00	0.00	0.37	0.03	19	219
20	ISL	16.59	D	16.59		33.142	D	24.186	373.0	0.075	5.69	D	102.1	1.2	0.28	0.1	0.00	0.00	0.36	0.04	20	
28		16.55		16.55		33.146		24.198	372.0	0.105	5.75		103.1	1.1	0.29	0.2	0.00	0.05	0.32	0.12	28	218
30	ISL	16.38	D	16.38		33.155	D	24.244	367.7	0.112	5.73	D	102.4	1.1	0.33	0.7	0.01	0.08	0.38	0.14	30	
36	A	14.80		14.79		33.213		24.640	330.2	0.133	6.06		104.9	1.3	0.46	2.5	0.05	0.21	0.54	0.17	36	217
44		14.54		14.53		33.346		24.798	315.3	0.159	5.95		102.6	1.5	0.60	4.6	0.17	0.49	0.48	0.09	44	216
50	ISL	13.93	D	13.92		33.271	D	24.868	308.8	0.178	5.89	D	100.2	2.0	0.65	4.9	0.28	0.52	0.47	0.19	50	
53	A	13.77		13.76		33.268		24.898	305.9	0.187	5.88		99.7	2.4	0.66	5.1	0.35	0.54	0.46	0.24	53	215
62		11.65		11.64		33.054		25.145	282.5	0.213	5.81		94.1	4.2	0.66	5.0	0.59	0.13	0.35	0.19	62	214
70		11.10		11.09		33.048		25.240	273.6	0.236	5.56		89.0	4.9	0.69	6.1	0.04	0.01	0.26	0.12	70	213
75	ISL	10.84	D	10.83		33.089	D	25.318	266.2	0.249	5.32	D	84.7	6.6	0.81	8.1	0.03	0.01	0.22	0.11	75	
85		10.46		10.45		33.188		25.461	252.8	0.275	4.98		78.7	10.8	1.10	12.9	0.00	0.01	0.16	0.09	85	212
100		9.72		9.71		33.366		25.725	227.9	0.311	4.43		68.9	16.0	1.37	17.6	0.00	0.00	0.06	0.08	100	211
120		9.20		9.19		33.613		26.003	201.8	0.354	3.74		57.6	22.1	1.65	22.3	0.00	0.00	0.01	0.04	121	210
125	ISL	8.96	D	8.95		33.675	D	26.089	193.7	0.364	3.64	D	55.8	23.5	1.71	23.2	0.00	0.00	0.01	0.04	126	
140		8.79		8.78		33.754		26.178	185.5	0.392	3.25		49.7	27.3	1.85	25.4	0.00	0.00	0.01	0.04	141	209
150	ISL	8.72	D	8.70		33.852	D	26.266	177.3	0.411	2.82	D	43.0	28.9	1.88	26.0	0.00	0.00	0.01	0.04	151	
170		8.35		8.33		33.886		26.349	169.7	0.445	3.09		46.8	31.7	1.92	27.0	0.00	0.00	0.00	0.04	171	208
200		8.04		8.02		33.996		26.483	157.5	0.494	2.29		34.4	38.6	2.18	30.6	0.00	0.00	0.00	0.03	201	207
230		7.77		7.75		34.023		26.544	152.1	0.541	2.00		29.9	42.1	2.29	32.0	0.00	0.00			231	206
250	ISL	7.62	D	7.60		34.064	D	26.598	147.3	0.571	1.63	D	24.3	45.6	2.40	33.3	0.00	0.00			251	
270		7.45		7.42		34.081		26.636	143.9	0.600	1.45		21.5	49.4	2.51	34.5	0.00	0.00			272	205
300	ISL	7.10	D	7.07		34.089	D	26.692	138.9	0.642	1.28	D	18.9	54.2	2.62	35.9	0.00	0.00			302	
320		6.92		6.89		34.095		26.721	136.3	0.670	1.17		17.2	57.2	2.68	36.6	0.00	0.00			322	204
380		6.25		6.22		34.121		26.831	126.3	0.749	0.96		13.9	66.6	2.82	38.5	0.00	0.00			382	203
400	ISL	6.10	D	6.06		34.126	D	26.854	124.3	0.774	0.86	D	12.4	69.5	2.87	39.1	0.00	0.00			403	
440		5.78		5.74		34.141		26.906	119.6	0.822	0.74		10.6	75.5	2.96	40.2	0.00	0.00			443	202
500	ISL	5.24	D	5.20		34.175	D	26.998	111.1	0.892	0.56	D	7.9	85.6	3.07	41.8	0.00	0.00			503	
514		5.20		5.16		34.187		27.013	109.9	0.907	0.50		7.0	87.9	3.09	42.2	0.00	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 3.4 N	122 56.8 W	11/08/11	2116 UTC	4249 m	340 13 kn		0	1013.9 mb	16.5 C	15.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.75		16.75		33.174		24.172	373.6	0.000	5.70		102.6	1.1	0.32	0.3	0.00	0.00	0.25	0.08	0	
2		16.75		16.75		33.174		24.173	373.7	0.007	5.70		102.6	1.1	0.32	0.3	0.00	0.00	0.25	0.08	2	220
10		16.75		16.75		33.175		24.174	373.8	0.037	5.71		102.8	1.1	0.31	0.3	0.00	0.00	0.25	0.08	10	219
20		16.76		16.76		33.176		24.172	374.3	0.075	5.72		103.0	1.0	0.32	0.4	0.00	0.00	0.27	0.07	20	218
30		14.63		14.63		33.192		24.659	328.1	0.110	6.07		104.7	1.7	0.44	2.2	0.05	0.11	0.68	0.28	30	217
40		13.59		13.58		33.121		24.821	312.9	0.142	6.00		101.3	2.3	0.57	3.3	0.23	0.45	0.75	0.49	40	216
50	ISL	13.29	D	13.28		33.456	D	25.141	282.7	0.172	5.40	D	90.8	3.5	0.85	7.2	0.35	1.08	0.43	0.35	50	
51		13.00		12.99		33.443		25.189	278.2	0.175	5.61		93.7	3.7	0.88	7.7	0.36	1.11	0.39	0.33	51	215
60		12.12		12.11		33.441	D	25.358	262.3	0.199	5.32		87.3	6.7	1.05	10.7	0.48	0.35	0.23	0.21	60	214
70		10.43		10.42		33.326		25.574	241.8	0.224	4.59		72.5	13.0	1.34	16.2	0.00	0.02	0.14	0.16	70	213
75	ISL	10.05	D	10.04		33.346	D	25.654	234.2	0.236	4.46	D	69.9	14.4	1.39	17.1	0.00	0.01	0.12	0.14	75	
85		9.59		9.58		33.415		25.784	221.9	0.259	4.29		66.6	16.5	1.44	18.1	0.00	0.00	0.08	0.09	85	212
100		9.13		9.12		33.593		25.998	201.9	0.291	3.73		57.4	22.3	1.67	22.3	0.00	0.00	0.02	0.04	100	211
119		8.98		8.97		33.748		26.143	188.4	0.328	3.02		46.3	27.3	1.93	26.2	0.00	0.00	0.01	0.04	120	210
125	ISL	8.91	D	8.90		33.790	D	26.187	184.4	0.339	2.92	D	44.7	28.5	1.98	26.9	0.00	0.00	0.01	0.04	126	
141		8.73		8.72		33.887		26.292	174.7	0.368	2.59		39.6	31.3	2.06	28.2	0.00	0.00	0.01	0.04	142	209
150	ISL	8.65	D	8.63		33.935	D	26.342	170.1	0.383	2.40	D	36.6	32.9	2.10	28.9	0.00	0.00	0.01	0.04	151	
170		8.40		8.38		33.991		26.424	162.6	0.416	2.21		33.5	36.3	2.19	30.1	0.00	0.00	0.00	0.03	171	208
200		7.97		7.95		34.024		26.515	154.4	0.464	1.98		29.7	40.2	2.30	31.6	0.00	0.00	0.00	0.03	201	207
230		7.61		7.59		34.057		26.594	147.3	0.509	1.74		25.9	45.8	2.42	33.1	0.00	0.00			231	206
250	ISL	7.47	D	7.45		34.067	D	26.622	144.9	0.538	1.51	D	22.4	48.6	2.49	33.9	0.00	0.00			251	
270		7.31		7.28		34.089		26.662	141.4	0.567	1.44		21.3	51.3	2.56	34.6	0.00	0.00			272	205
300	ISL	6.97	D	6.94		34.103	D	26.720	136.1	0.609	1.23	D	18.1	56.1	2.65	35.8	0.00	0.00			302	
320		6.78		6.75		34.099		26.743	134.2	0.636	1.18		17.2	59.4	2.71	36.6	0.00	0.00			322	204
380		6.26		6.23		34.143		26.847	124.8	0.713	0.76		11.0	69.1	2.91	39.3	0.00	0.00			382	203
400	ISL	6.16	D	6.12		34.164	D	26.876	122.3	0.738	0.65	D	9.4	72.0	2.95	39.8	0.00	0.00			403	
440		5.76		5.72		34.170		26.932	117.2	0.786	0.61		8.7	77.4	3.02	40.6	0.00	0.00			443	202
500	ISL	5.55	D	5.51		34.241	D	27.014	110.0	0.854	0.36	D	5.1	85.6	3.12	41.6	0.00	0.00			503	
515		5.37		5.33		34.230		27.027	108.8	0.871	0.40		5.7	87.6	3.14	41.9	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 42.8 N	123 37.4 W	11/08/11	1509 UTC	4418 m	350 15 kn		0	1015.4 mb	17.5 C	16.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.63		15.63		33.223		24.465	345.7	0.000	5.99		105.5	1.7	0.39	1.6	0.01	0.04	0.62	0.22	0	
2		15.63		15.63		33.223		24.465	345.8	0.007	5.99		105.5	1.7	0.39	1.6	0.01	0.04	0.62	0.22	2	221
10		15.61		15.61		33.212		24.461	346.4	0.035	5.95		104.7	1.7	0.39	1.6	0.01	0.05	0.51	0.22	10	220
20		15.50		15.50		33.204	D	24.480	344.9	0.069	5.94		104.3	1.5	0.39	1.7	0.01	0.06	0.50	0.22	20	219
30		15.15		15.15		33.125		24.496	343.7	0.104	5.99		104.4	1.5	0.38	1.2	0.00	0.06	0.61	0.27	30	218
40		13.45		13.44		32.943		24.712	323.3	0.137	6.13		103.1	1.6	0.39	0.8	0.04	0.17	0.53	0.34	40	217
50		12.49		12.48		32.948		24.905	305.1	0.168	5.98		98.6	2.7	0.50	2.3	0.47	0.08	0.51	0.37	50	216
60		11.73		11.72		33.035		25.115	285.3	0.198	5.84		94.8	3.8	0.66	4.7	0.20	0.46	0.31	0.24	60	215
70		11.21		11.20		33.051		25.223	275.2	0.226	5.59		89.7	5.4	0.71	6.4	0.01	0.00	0.21	0.16	70	214
75	ISL	11.10	D	11.09		33.155	D	25.323	265.8	0.239	5.34	D	85.5	7.4	0.84	8.7	0.01	0.00	0.17	0.13	75	
85		10.52		10.51		33.258		25.505	248.6	0.265	4.90		77.6	12.3	1.19	14.3	0.00	0.00	0.10	0.10	85	213
100		10.45		10.44		33.661		25.832	217.9	0.300	3.93		62.3	18.4	1.73	22.2	0.00	0.00	0.08	0.08	100	212
120		10.01		10.00		33.762		25.986	203.6	0.342	2.80		44.0	24.1	1.94	25.0	0.13	0.06	0.03	0.07	121	211
125	ISL	9.67	D	9.66		33.810	D	26.081	194.7	0.352	2.62	D	40.8	25.4	1.94	25.5	0.10	0.05	0.02	0.07	126	
140		8.90		8.89		33.814		26.208	182.7	0.381	3.00		46.0	28.7	1.93	26.4	0.00	0.00	0.01	0.06	141	210
150	ISL	8.48	D	8.46		33.838	D	26.292	174.8	0.398	3.44	D	52.2	30.0	1.91	26.4	0.00	0.00	0.00	0.05	151	
170		8.23		8.21		33.891		26.371	167.5	0.433	3.29		49.7	31.8	1.88	26.3	0.00	0.00	0.00	0.03	171	209
200		7.80		7.78		33.944		26.477	157.9	0.481	3.15		47.1	35.5	1.95	27.6	0.00	0.00	0.00	0.02	201	208
230		7.45		7.43		33.984		26.559	150.5	0.528	2.45		36.4	42.4	2.20	31.2	0.00	0.00			231	207
250	ISL	7.37	D	7.35		34.030	D	26.607	146.3	0.557	1.94	D	28.7	46.5	2.34	32.9	0.00	0.00			251	
270		7.15		7.12		34.033		26.640	143.3	0.586	1.75		25.8	50.3	2.46	34.3	0.00	0.00			272	206
300	ISL	7.01	D	6.98		34.078	D	26.695	138.5	0.629	1.35	D	19.8	55.2	2.62	36.1	0.00	0.00			302	
319		6.91		6.88		34.109		26.733	135.2	0.655	1.08		15.8	58.2	2.71	37.0	0.00	0.00			321	205
380		6.25		6.22		34.150		26.854	124.2	0.734	0.73		10.5	69.2	2.90	39.4	0.00	0.00			382	204
394		6.18		6.15		34.161	D	26.871	122.7	0.751	0.68	D	9.8								397	203
400	ISL	6.13	D	6.09		34.163	D	26.879	121.9	0.758	0.67	D	9.6	71.6	2.94	39.8	0.00	0.00			403	
440		5.89		5.85		34.183		26.926	117.9	0.806	0.55		7.9	76.0	3.01	40.4	0.00	0.00			443	202
500	ISL	5.51	D	5.47		34.215	D	26.998	111.4	0.875	0.44	D	6.2	84.1	3.10	41.6	0.00	0.00			503	
516		5.43		5.39		34.227		27.017	109.7	0.893	0.39		5.5	86.2	3.12	41.9	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 23.5 N	124 19.7 W	11/08/11	0745 UTC	4549 m	350 15 kn	350 06 06	1	1014.7 mb	18.8 C	17.1 C	21m	5/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.10	17.10	32.983		23.944	395.4	0.000	5.64		102.1	1.7	0.29	0.0	0.00	0.00	0.12	0.03	0	
3		17.10	17.10	32.983		23.944	395.5	0.012	5.64		102.1	1.7	0.29	0.0	0.00	0.00	0.12	0.03	3	220
10		17.07	17.07	32.982		23.951	395.1	0.040	5.65		102.2	1.6	0.30	0.0	0.00	0.00	0.11	0.03	10	219
20	ISL	16.97	D 16.97	32.991	D	23.982	392.5	0.079	5.60	D	101.1	1.4	0.29	0.0	0.00	0.00	0.12	0.04	20	
25		16.94	16.94	32.991		23.989	391.9	0.099	5.66		102.1	1.3	0.28	0.0	0.00	0.00	0.12	0.04	25	218
30	ISL	16.93	D 16.93	32.989	D	23.990	392.0	0.118	5.60	D	101.0	1.3	0.28	0.0	0.00	0.00	0.12	0.04	30	
40		16.91	16.90	32.989		23.995	391.8	0.157	5.66		102.1	1.4	0.28	0.0	0.00	0.00	0.14	0.04	40	217
50		15.68	15.67	32.964		24.256	367.2	0.195	5.88		103.5	1.8	0.27	0.0	0.00	0.00	0.18	0.06	50	216
62		13.69	13.68	32.980		24.693	325.8	0.237	6.18		104.5	1.6	0.34	0.4	0.00	0.00	0.43	0.26	62	215
73		12.95	12.94	33.059		24.902	306.0	0.272	6.13		102.1	1.9	0.27	0.0	0.00	0.00	0.31	0.22	73	214
75	ISL	12.70	D 12.69	33.044	D	24.939	302.5	0.278	6.09	D	100.9	1.9	0.27	0.0	0.00	0.01	0.31	0.22	75	
88		12.48	12.47	33.032		24.973	299.6	0.317	6.00		98.9	2.2	0.33	0.1	0.01	0.05	0.32	0.21	88	213
100		12.35	12.34	33.258		25.173	280.9	0.352	5.63		92.7	3.1	0.41	1.8	0.10	0.04	0.21	0.16	100	212
112		11.33	11.32	33.225		25.337	265.3	0.384	5.39		86.8	4.9	0.60	5.3	0.01	0.01	0.14	0.12	112	211
125		10.52	10.51	33.213		25.471	252.7	0.418	5.14		81.3	8.0	0.86	9.4	0.00	0.00	0.10	0.09	126	210
141		9.64	9.62	33.341		25.719	229.3	0.457	4.68		72.7	14.2	1.20	15.1	0.00	0.00	0.03	0.04	142	209
150	ISL	9.41	D 9.39	33.466	D	25.854	216.6	0.477	4.45	D	68.8	16.2	1.30	16.8	0.00	0.00	0.02	0.03	151	
170		9.07	9.05	33.635		26.042	199.1	0.518	4.25		65.3	20.2	1.45	19.6	0.00	0.00	0.00	0.02	171	208
200		8.44	8.42	33.870		26.324	172.7	0.574	3.29		49.9	30.2	1.83	25.7	0.00	0.00	0.00	0.01	201	207
230		8.19	8.17	33.991		26.457	160.6	0.624	2.34		35.3	37.3	2.15	29.9	0.00	0.00			231	206
250	ISL	7.89	D 7.86	34.024	D	26.527	154.1	0.656	2.03	D	30.4	41.0	2.27	31.5	0.00	0.00			251	
269		7.72	7.69	34.042		26.567	150.6	0.684	1.87		27.9	44.2	2.34	32.5	0.00	0.00			270	205
300	ISL	7.26	D 7.23	34.058	D	26.645	143.5	0.730	1.62	D	23.9	49.9	2.47	34.3	0.00	0.00			302	
319		7.08	7.05	34.064		26.675	140.8	0.757	1.46		21.5	53.2	2.54	35.3	0.00	0.00			321	204
380		6.68	6.65	34.107		26.764	133.1	0.841	1.03		15.0	61.1	2.74	37.5	0.00	0.00			382	203
400	ISL	6.62	D 6.58	34.154	D	26.809	129.1	0.867	0.79	D	11.5	63.7	2.81	38.0	0.00	0.00			402	
440		6.43	6.39	34.196		26.867	123.9	0.917	0.60		8.7	68.8	2.94	38.9	0.00	0.00			443	202
500	ISL	6.10	D 6.06	34.235	D	26.941	117.5	0.990	0.44	D	6.3	75.4	3.03	39.8	0.00	0.00			503	
515		6.07	6.02	34.254		26.960	115.9	1.007	0.38		5.5	77.1	3.05	40.0	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.8 N	120 29.6 W	09/08/11	1027 UTC	33 m	310 19 kn	290 02 07	1	1010.9 mb	15.1 C	14.0 C		2/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.62	15.62	33.505	24.684	324.9	0.000	6.43	113.4	3.8	0.37	1.2	0.03	0.06	3.65	0.95	0	
2		15.62	15.62	33.505	24.684	324.9	0.006	6.43	113.4	3.8	0.37	1.2	0.03	0.06	3.65	0.95	2	206
5		15.62	15.62	33.508	24.687	324.8	0.016	6.42	113.2	3.9	0.39	1.1	0.03	0.07	3.88	0.92	5	205
10		15.73	15.73	33.506	24.661	327.4	0.033	6.37	112.6	4.3	0.40	1.4	0.03	0.07	3.85	1.02	10	203
10		15.73	15.73	33.507	24.661	327.3	0.033	6.37	112.6								10	204
20		12.60	12.60	33.489	25.302	266.6	0.062	4.75	78.7	11.1	1.02	9.8	0.18	0.23	2.54	1.17	20	202
24		12.39	12.39	33.491	25.344	262.6	0.073	4.64	76.6	11.2	1.12	11.4	0.18	0.18	2.56	1.23	24	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 27.2 N	120 31.7 W	09/08/11	1120 UTC	77 m	300 23 kn	300 04 06	1	1011.4 mb	14.8 C	13.8 C		2/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.22	14.22	33.492	24.977	297.0	0.000	5.83	100.0	5.9	0.62	4.2	0.12	0.10	4.82	1.31	0	
2		14.22	14.22	33.492	24.977	297.0	0.006	5.83	100.0	5.9	0.62	4.2	0.12	0.10	4.82	1.31	2	209
5		14.24	14.24	33.491	24.972	297.6	0.015	5.83	100.0	5.9	0.60	4.1	0.13	0.08	4.28	1.21	5	208
10		14.21	14.21	33.492	24.979	297.1	0.030	5.83	99.9	5.8	0.58	4.2	0.13	0.08	4.35	1.01	10	206
10		14.21	14.21	33.491	24.978	297.1	0.030										10	207
20	ISL	13.51	D 13.51	33.480	D 25.114	284.4	0.059	5.16	D	87.2	10.6	0.98	10.5	0.16	0.08	2.23	0.79	20	
21		13.58	13.58	33.482	25.102	285.7	0.062	4.74		80.2	11.3	1.04	11.3	0.16	0.08	1.95	0.77	21	205
29		11.31	11.31	33.483	25.540	244.1	0.083	3.91		63.1	16.0	1.36	16.5	0.17	0.08	0.57	0.48	29	204
30	ISL	11.20	D 11.20	33.491	D 25.566	241.7	0.085	3.85	D	61.9	16.4	1.38	16.9	0.17	0.08	0.54	0.47	30	
40		10.83	10.83	33.532	25.664	232.5	0.109	3.64		58.1	18.5	1.51	18.7	0.11	0.10	0.28	0.42	40	203
50	ISL	10.67	D 10.66	33.550	D 25.706	228.7	0.132	3.55	D	56.5	19.0	1.56	19.3	0.10	0.08	0.43	0.41	50	
51		10.67	10.66	33.546	25.703	229.0	0.134	3.58		57.0	19.0	1.56	19.3	0.10	0.08	0.45	0.41	51	202
65		10.66	10.65	33.556	25.713	228.4	0.166	3.53		56.2	19.4	1.58	19.6	0.09	0.10	0.21	0.36	65	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 18.9 N	120 48.8 W	09/08/11	1549 UTC	783 m	320 22 kn		0	1012.2 mb	15.0 C	13.7 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.09		14.09		33.439		24.963	298.3	0.000	6.12		104.6	0.1	0.47	1.2	0.04	0.21	6.61	1.09	0	
2		14.09		14.09		33.439		24.963	298.4	0.006	6.12		104.6	0.1	0.47	1.2	0.04	0.21	6.61	1.09	2	223
10		14.12		14.12		33.449		24.965	298.4	0.030	6.07		103.8	0.0	0.49	1.4	0.05	0.25	6.05	0.96	10	222
10		14.12		14.12		33.450		24.965	298.3	0.030	6.11		104.5	0.0	0.52	1.4	0.05	0.30	7.06	1.12	10	221
20		14.13		14.13		33.453		24.966	298.6	0.060	6.08		104.0	0.2	0.49	1.5	0.05	0.26	7.05	0.97	20	220
30		13.21		13.21		33.372		25.092	286.9	0.089	5.80		97.3	1.8	0.56	3.2	0.10	0.52	5.18	0.94	30	219
40		12.93		12.92		33.519		25.261	271.0	0.117	5.04		84.1	6.8	1.01	9.0	0.15	0.53	3.07	0.84	40	218
50	ISL	11.54	D	11.53		33.431	D	25.458	252.4	0.143	4.61	D	74.7	10.0	1.23	12.5	0.13	0.25	2.05	0.76	50	
51		11.30		11.29		33.432		25.502	248.2	0.146	4.67		75.3	10.4	1.25	12.8	0.13	0.22	1.96	0.74	51	217
60		10.53		10.52		33.463		25.663	233.1	0.167	4.06		64.4	15.9	1.48	17.9	0.06	0.03	0.36	0.43	60	216
70		10.04		10.03		33.692		25.926	208.3	0.189	3.30		51.8	21.8	1.79	22.4	0.02	0.01	0.30	0.39	70	215
75	ISL	9.96	D	9.95		33.739	D	25.976	203.6	0.200	3.12	D	48.9	23.0	1.83	22.9	0.01	0.00	0.30	0.39	75	
84		9.90		9.89		33.750		25.995	202.0	0.218	3.06		47.9	24.0	1.90	23.8	0.00	0.00	0.29	0.39	84	213
84		9.90		9.89		33.749		25.994	202.1	0.218	3.08		48.2	23.8	1.87	23.9	0.00	0.00	0.25	0.32	84	214
99		9.72		9.71		33.786		26.053	196.7	0.248	2.93		45.7	25.5	1.92	24.6	0.00	0.00	0.17	0.23	100	212
100	ISL	9.71	D	9.70		33.796	D	26.063	195.9	0.250	2.88	D	44.9	25.7	1.93	24.7	0.00	0.00	0.17	0.23	101	
120		9.28		9.27		33.928		26.236	179.7	0.287	2.43		37.6	30.3	2.09	27.0	0.00	0.00	0.14	0.25	121	211
125	ISL	9.26	D	9.25		33.952	D	26.258	177.7	0.296	2.34	D	36.2	30.7	2.10	27.2	0.00	0.00	0.12	0.25	126	
139		9.18		9.16		33.972		26.287	175.3	0.321	2.28		35.2	31.6	2.12	27.6	0.00	0.00	0.07	0.23	140	210
150	ISL	9.14	D	9.12		33.993	D	26.310	173.3	0.340	2.22	D	34.2	33.0	2.17	28.1	0.00	0.00	0.05	0.19	151	
169		8.98		8.96		34.067		26.394	165.7	0.372	1.96		30.1	35.5	2.27	28.9	0.00	0.00	0.03	0.12	170	208
169		8.98		8.96		34.065		26.392	165.9	0.372	1.95		30.0	35.3	2.25	28.9	0.00	0.00	0.03	0.10	170	209
199		8.94		8.92		34.126		26.447	161.3	0.421	1.69		26.0	37.7	2.35	29.8	0.00	0.00	0.03	0.12	200	207
200	ISL	8.91	D	8.89		34.131	D	26.456	160.5	0.423	1.66	D	25.5	37.8	2.35	29.8	0.00	0.00			201	
229		8.76		8.74		34.179		26.517	155.1	0.469	1.35		20.7	40.9	2.46	31.0	0.00	0.00			230	206
250	ISL	8.15	D	8.12		34.125	D	26.568	150.4	0.501	1.64	D	24.7	44.2	2.49	32.1	0.00	0.00			252	
270		7.80		7.77		34.124		26.620	145.7	0.530	1.47		22.0	47.3	2.52	33.2	0.00	0.00			272	205
300	ISL	7.76	D	7.73		34.172	D	26.663	142.1	0.574	1.16	D	17.4	50.5	2.61	34.2	0.00	0.00			302	
320		7.61		7.58		34.174		26.687	140.1	0.602	1.08		16.1	52.4	2.68	34.8	0.00	0.00			322	204
380		7.16		7.12		34.214		26.783	131.7	0.683	0.77		11.4	59.3	2.81	36.4	0.00	0.00			383	203
400	ISL	6.74	D	6.70		34.174	D	26.809	129.2	0.709	0.84	D	12.3	61.6	2.84	37.0	0.00	0.00			403	
440		6.64		6.60		34.201		26.844	126.4	0.761	0.68		9.9	66.3	2.91	38.1	0.00	0.00			443	202
500	ISL	6.30	D	6.25		34.270	D	26.943	117.5	0.834	0.42	D	6.1	74.3	3.05	39.4	0.00	0.00			504	
515		6.18		6.13		34.288		26.973	114.8	0.851	0.35		5.0	76.3	3.09	39.7	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 9.3 N	121 9.1 W	09/08/11	2038 UTC	2196 m	340 23 kn		0	1012.3 mb	15.0 C	14.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.16		16.16		33.482		24.545	338.1	0.000	5.75		102.5	0.6	0.30	1.0	0.02	0.23	0.60	0.29	0	
2		16.16		16.16		33.482		24.545	338.2	0.007	5.75		102.5	0.6	0.30	1.0	0.02	0.23	0.60	0.29	2	221
10		16.16		16.16		33.482		24.545	338.4	0.034	5.76		102.7	0.4	0.29	1.0	0.01	0.16	0.55	0.30	10	219
10		16.16		16.16		33.482		24.545	338.4	0.034											10	220
20		16.16		16.16		33.482		24.545	338.7	0.068	5.75		102.5	0.4	0.27	1.0	0.02	0.18	0.55	0.31	20	218
29		16.13		16.13		33.492		24.560	337.6	0.098	5.73		102.1	0.5	0.31	1.2	0.03	0.30	0.58	0.28	29	217
30	ISL	16.09	D	16.09		33.502	D	24.577	336.0	0.101	5.60	D	99.7	0.8	0.36	1.7	0.07	0.50	0.57	0.29	30	
40		12.86		12.85		33.566		25.311	266.2	0.132	4.84		80.7	4.8	0.99	8.2	0.53	2.23	0.40	0.34	40	216
50		11.75		11.74		33.608		25.557	243.1	0.157	4.24		69.1	9.2	1.31	13.6	0.72	1.37	0.23	0.24	50	215
60		10.77		10.76		33.686		25.795	220.6	0.180	3.42		54.6	18.2	1.75	22.8	0.07	0.03	0.09	0.17	60	214
70		10.35		10.34		33.720		25.895	211.3	0.202	3.32		52.5	20.8	1.84	24.0	0.13	0.02	0.09	0.17	70	213
75	ISL	10.19	D	10.18		33.760	D	25.953	205.8	0.212	3.27	D	51.6	22.6	1.88	24.8	0.10	0.01	0.07	0.17	75	
86		9.49		9.48		33.786		26.091	192.9	0.234	2.90		45.0	26.4	1.93	26.4	0.00	0.00	0.03	0.15	86	212
100	ISL	8.86	D	8.85		33.805	D	26.206	182.1	0.260	2.96	D	45.3	28.7	1.90	26.5	0.00	0.00	0.01	0.09	101	
101		8.85		8.84		33.803		26.206	182.1	0.262	2.98		45.6	28.8	1.90	26.5	0.00	0.00	0.01	0.09	102	211
120		8.63		8.62		33.895		26.313	172.3	0.296	3.43		52.3	28.5	1.75	24.8	0.00	0.00	0.01	0.05	121	210
125	ISL	8.63	D	8.62		33.893	D	26.312	172.5	0.305	3.43	D	52.3	29.1	1.78	25.1	0.00	0.00	0.01	0.04	126	
140		8.47		8.46		33.935		26.369	167.3	0.330	3.02		45.9	31.7	1.91	26.8	0.00	0.00	0.00	0.03	141	209
150	ISL	8.30	D	8.28		33.958	D	26.413	163.3	0.347	3.00	D	45.4	33.4	1.98	27.8	0.00	0.00	0.00	0.03	151	
170		8.03		8.01		33.984		26.474	157.7	0.379	2.52		37.9	37.0	2.09	29.5	0.00	0.00	0.00	0.03	171	208
200		7.75		7.73		34.033		26.554	150.6	0.425	2.13		31.8	42.3	2.24	31.5	0.00	0.00	0.00	0.02	201	207
230		7.37		7.35		34.027		26.604	146.2	0.469	1.95		28.9	46.9	2.34	33.1	0.00	0.00			231	206
250	ISL	7.06	D	7.04		34.027	D	26.647	142.3	0.498	1.91	D	28.1	50.3	2.40	34.0	0.00	0.00			252	
270		6.84		6.82		34.034		26.683	139.1	0.526	1.76		25.8	53.7	2.48	34.9	0.00	0.00			272	205
300	ISL	6.77	D	6.74		34.101	D	26.746	133.6	0.567	1.26	D	18.4	58.6	2.71	36.1	0.00	0.00			302	
319		7.09		7.06		34.228		26.803	128.8	0.592	0.67		9.9	61.2	2.84	36.7	0.00	0.00			321	204
380		6.87		6.83		34.246		26.848	125.3	0.670	0.59		8.6	64.6	2.89	37.5	0.00	0.00			383	203
400	ISL	6.82	D	6.78		34.261	D	26.866	123.8	0.695	0.51	D	7.5	66.5	2.93	37.8	0.00	0.00			403	
440		6.58		6.54		34.295		26.926	118.6	0.743	0.38		5.5	70.9	3.01	38.4	0.00	0.00			443	202
500	ISL	6.22	D	6.18		34.319	D	26.992	112.9	0.813	0.29	D	4.2	77.2	3.10	39.6	0.00	0.00			504	
516		6.14		6.09		34.323	D	27.006	111.7	0.831	0.28	D	4.0	78.9	3.12	39.9	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.0 N	121 51.0 W	10/08/11	0303 UTC	3512 m	320 15 kn	340 05 05	2	1014.6 mb	17.4 C	15.2 C	13m	8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.53		16.53		33.199	24.243	366.9	0.000	5.73		102.7		1.0	0.30	0.3	0.00	0.05	0.30	0.12	0	
3	A	16.53		16.53		33.199	24.243	367.0	0.011	5.73		102.7		1.0	0.30	0.3	0.00	0.05	0.30	0.12	3	222
8	A	16.53		16.53		33.191	24.237	367.7	0.029	5.72		102.5		1.0	0.31	0.3	0.00	0.06	0.31	0.13	8	221
10	ISL	16.52	D	16.52		33.192	D 24.240	367.5	0.037	5.71	D	102.3		1.0	0.30	0.3	0.00	0.07	0.32	0.13	10	
11	A	16.52		16.52		33.191	24.239	367.6	0.040	5.73		102.7		1.0	0.30	0.3	0.00	0.07	0.33	0.13	11	220
18	A	16.51		16.51		33.196	24.246	367.2	0.066	5.73		102.7		0.8	0.30	0.3	0.00	0.05	0.30	0.12	18	219
20	ISL	16.48	D	16.48		33.200	D 24.256	366.3	0.073	5.72	D	102.4		0.8	0.30	0.3	0.00	0.05	0.31	0.13	20	
26		16.43		16.43		33.203	24.270	365.2	0.095	5.75		102.9		1.0	0.33	0.4	0.00	0.05	0.32	0.15	26	218
30	ISL	15.06	D	15.06		33.113	D 24.506	342.7	0.110	5.82	D	101.3		1.1	0.36	0.6	0.01	0.07	0.39	0.24	30	
34	A	14.01		14.01		33.070	24.696	324.7	0.123	6.10		103.9		1.3	0.39	0.9	0.02	0.10	0.45	0.34	34	217
42		12.86		12.85		33.027	D 24.894	306.0	0.148	6.05		100.5		1.8	0.46	1.7	0.13	0.13	0.41	0.38	42	216
49	A	12.71		12.70		33.023	D 24.920	303.6	0.169	5.95	D	98.6		2.6	0.57	3.5	0.33	0.17	0.35	0.42	49	215
50	ISL	12.63	D	12.62		33.011	D 24.927	303.1	0.173	5.93	D	98.1		2.6	0.57	3.5	0.34	0.17	0.35	0.41	50	
60		12.32		12.31		33.067	25.030	293.5	0.202	5.75		94.5		3.3	0.63	4.1	0.39	0.10	0.31	0.32	60	214
70		11.02		11.01		33.137	25.323	265.6	0.230	5.30		84.7		5.9	0.86	8.3	0.14	0.03	0.22	0.26	70	213
75	ISL	10.74	D	10.73		33.234	D 25.448	253.8	0.243	4.80	D	76.3		9.6	1.09	12.1	0.07	0.02	0.17	0.21	75	
85		9.88		9.87		33.414	25.736	226.6	0.267	3.95		61.7		17.3	1.52	19.4	0.00	0.00	0.09	0.11	85	212
100		9.48		9.47		33.537	25.898	211.5	0.300	3.55		55.0		21.3	1.70	22.4	0.00	0.00	0.05	0.07	100	211
120		9.04		9.03		33.810	26.182	184.8	0.340	2.77		42.6		29.0	2.01	27.0	0.00	0.00	0.01	0.04	121	210
125	ISL	9.03	D	9.02		33.841	D 26.208	182.4	0.349	2.64	D	40.6		30.0	2.05	27.5	0.00	0.00	0.01	0.04	126	
140		8.91		8.90		33.909	26.281	175.8	0.376	2.38		36.5		32.1	2.12	28.4	0.00	0.00	0.01	0.06	141	209
150	ISL	8.89	D	8.87		33.971	D 26.333	171.1	0.393	2.15	D	33.0		33.7	2.17	29.1	0.00	0.00	0.01	0.06	151	
171		8.77		8.75		34.050	26.414	163.8	0.428	1.78		27.2		37.0	2.28	30.4	0.00	0.00	0.01	0.07	172	208
200	ISL	8.54	D	8.52		34.105	D 26.493	156.8	0.475	1.49	D	22.7		40.9	2.40	31.5	0.00	0.00	0.01	0.08	201	
201		8.51		8.49		34.109	26.501	156.1	0.476	1.50		22.8		41.0	2.40	31.5	0.00	0.00	0.01	0.08	202	207
230		8.33		8.31		34.146	26.557	151.1	0.521	1.27		19.2		44.4	2.50	32.5	0.00	0.00			231	206
250	ISL	8.14	D	8.11		34.148	D 26.588	148.5	0.551	1.23	D	18.6		46.8	2.56	33.1	0.00	0.00			251	
270		7.96		7.93		34.178	26.639	144.0	0.580	1.08		16.2		49.0	2.62	33.6	0.00	0.00			272	205
300	ISL	7.76	D	7.73		34.188	D 26.676	140.9	0.623	0.95	D	14.2		51.3	2.71	34.1	0.00	0.00			302	
321		7.82		7.79		34.246	26.713	137.8	0.652	0.79		11.8		52.9	2.76	34.4	0.00	0.00			323	204
380		7.18		7.14		34.221	26.786	131.5	0.732	0.66		9.7		61.0	2.85	36.5	0.00	0.00			382	203
400	ISL	7.07	D	7.03		34.232	D 26.810	129.4	0.758	0.61	D	9.0		63.0	2.87	36.9	0.00	0.00			403	
440		6.80		6.76		34.239	26.852	125.8	0.809	0.53		7.8		66.7	2.92	37.5	0.00	0.00			443	202
500	ISL	6.40	D	6.35		34.264	D 26.926	119.3	0.882	0.41	D	5.9		73.2	3.00	38.9	0.00	0.00			503	
515		6.29		6.24		34.274	26.948	117.3	0.900	0.40	D	5.8		74.8	3.02	39.2	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 29.3 N	122 32.0 W	10/08/11	1203 UTC	3999 m	320 20 kn		0	1013.0 mb	16.8 C	15.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.88		16.88		33.207	24.168	374.1	0.000	5.75		103.8		0.8	0.31	0.4	0.00	0.00	0.23	0.09	0	
2		16.88		16.88		33.207	24.168	374.1	0.007	5.75		103.8		0.8	0.31	0.4	0.00	0.00	0.23	0.09	2	221
10		16.88		16.88		33.203	24.165	374.6	0.037	5.73		103.4		0.8	0.32	0.4	0.00	0.00	0.24	0.09	10	220
20		16.88		16.88		33.205	24.167	374.8	0.075	5.73		103.4		1.0	0.30	0.4	0.00	0.00	0.23	0.11	20	219
29		16.10		16.10		33.206	24.347	357.9	0.108	5.93		105.4		0.7	0.34	1.0	0.01	0.00	0.43	0.19	29	218
30	ISL	15.98	D	15.98		33.274	D 24.427	350.3	0.111	5.91	D	104.8		0.8	0.35	1.3	0.01	0.01	0.45	0.20	30	
40		15.48		15.47		33.360	24.605	333.6	0.146	6.01		105.6		1.5	0.49	3.3	0.05	0.14	0.57	0.31	40	217
49		13.71		13.70		33.031	24.727	322.1	0.175	6.15		104.0		1.5	0.49	2.1	0.10	0.13	0.51	0.37	49	216
50	ISL	13.69	D	13.68		33.031	D 24.732	321.7	0.178	6.11	D	103.3		1.6	0.50	2.2	0.14	0.13	0.50	0.37	50	
60		12.50		12.49		33.062	24.991	297.1	0.209	5.95		98.2		3.6	0.66	4.7	0.51	0.13	0.43	0.35	60	215
71		11.48		11.47		33.083	25.199	277.6	0.241	5.53		89.3		5.7	0.81	7.4	0.23	0.05	0.26	0.26	71	214
75	ISL	11.31	D	11.30		33.135	D 25.270	270.8	0.252	5.30	D	85.3		7.0	0.91	9.2	0.15	0.04	0.22	0.24	75	
85		10.71		10.70		33.236	25.455	253.4	0.278	4.87		77.4		10.3	1.17	13.7	0.00	0.02	0.16	0.21	85	213
100		10.14		10.13		33.335	25.631	236.9	0.315	4.47		70.2		13.6	1.32	16.4	0.00	0.00	0.10	0.12	100	212
120		9.44		9.43		33.594	25.949	207.0	0.359	3.68		57.0		21.6	1.69	22.2	0.00	0.00	0.03	0.07	121	211
125	ISL	9.34	D	9.33		33.626	D 25.991	203.1	0.369	3.63	D	56.1		22.5	1.72	22.7	0.00	0.00	0.02	0.06	126	
140		8.90		8.89		33.680	26.103	192.7	0.399	3.58		54.8		24.4	1.76	23.6	0.00	0.00	0.01	0.04	141	210
150	ISL	8.58	D	8.56		33.752	D 26.209	182.7	0.418	3.57	D	54.3		26.7	1.83	24.8	0.00	0.00	0.01	0.04	151	
169		8.46		8.44		33.875	26.324	172.1	0.452	2.93		44.5		31.4	1.98	27.1	0.00	0.00	0.01	0.03	170	209
199		7.96		7.94		33.951	26.459	159.7	0.501	2.73		41.0		36.6	2.08	28.8	0.00	0.00	0.00	0.03	200	208
200	ISL	7.92	D	7.90		33.960	D 26.472	158.5	0.503	2.65	D	39.7		36.8	2.09	28.9	0.00	0.00			201	
230		7.83		7.81		34.016	26.530	153.5	0.550	2.06		30.8		41.5	2.32	31.6	0.00	0.00			231	206
250	ISL	7.64	D	7.62		34.039	D 26.576	149.4	0.580	1.85	D	27.6		44.0	2.38	32.6	0.00	0.00			251	
270		7.51		7.48		34.050	26.603	147.1	0.610	1.73		25.7		46.5	2.43	33.3	0.00	0.00			272	205
300	ISL	7.24	D	7.21		34.074	D 26.660	142.0	0.653	1.48	D	21.9		51.5	2.57	34.9	0.00	0.00			302	
320		7.03		7.00		34.092	26.704	138.1	0.681	1.26		18.5		55.0	2.66	35.9	0.00	0.00			322	204
379		6.43		6.40		34.121	26.807	128.7	0.760	0.94		13.6		65.0	2.84	38.2	0.00	0.00			381	203
400	ISL	6.24	D	6.20		34.140	D 26.847	125.1	0.786	0.80	D	11.5		67.8	2.91	38.7	0.00	0.00			403	
438		6.16		6.12		34.191	26.898	120.7	0.833	0.59		8.5		72.5	3.01	39.5	0.00	0.00			441	202
500	ISL	5.79	D	5.75		34.221	D 26.969	114.5	0.906	0.47	D	6.7		79.9	3.09	40.7	0.00	0.00			503	
515		5.62		5.58		34.216	26.986	112.9	0.923	0.43		6.1		81.7	3.11	41.0	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.2 N	123 13.6 W	10/08/11	1830 UTC	4222 m	330 17 kn		0	1013.6 mb	16.1 C	14.2 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.35		16.35		33.075		24.189	372.1	0.000	5.82		103.9		1.4	0.28	0.0	0.00	0.00	0.30	0.09	0	
3		16.35		16.35		33.075		24.189	372.1	0.011	5.82		103.9		1.4	0.28	0.0	0.00	0.00	0.30	0.09	3	220
10		16.35		16.35		33.075		24.189	372.3	0.037	5.82		103.9		1.3	0.28	0.0	0.00	0.00	0.30	0.09	10	219
20		16.35		16.35		33.073		24.188	372.8	0.074	5.82		103.9		1.1	0.27	0.0	0.00	0.00	0.29	0.12	20	218
30		16.35		16.35		33.074		24.189	373.0	0.112	5.83		104.0		1.2	0.27	0.0	0.00	0.00	0.31	0.10	30	217
40		16.15		16.14		33.065		24.228	369.6	0.149	5.83		103.6		1.3	0.27	0.0	0.00	0.00	0.29	0.10	40	216
50	ISL	14.48	D	14.47		32.976	D	24.525	341.4	0.184	6.11	D	105.0		1.1	0.29	0.1	0.00	0.00	0.56	0.32	50	
51		14.45		14.44		32.976		24.532	340.8	0.188	6.13		105.2		1.1	0.29	0.1	0.00	0.00	0.59	0.34	51	215
59		14.09		14.08		32.975		24.606	333.9	0.215	6.13		104.5		1.2	0.32	0.4	0.02	0.05	0.56	0.38	59	214
70		13.07		13.06		33.026		24.853	310.7	0.250	6.00		100.1		2.1	0.35	0.8	0.13	0.11	0.39	0.40	70	213
75	ISL	12.48	D	12.47		33.024	D	24.966	299.9	0.266	5.98	D	98.6		2.3	0.36	0.8	0.16	0.09	0.31	0.36	75	
85		12.02		12.01		33.038		25.064	290.7	0.295	5.84		95.3		2.6	0.38	0.8	0.22	0.02	0.18	0.25	85	212
100		11.07		11.06		33.073		25.265	271.8	0.337	5.41		86.6		6.1	0.79	8.0	0.01	0.00	0.12	0.14	100	211
118		9.98		9.97		33.258		25.598	240.4	0.383	4.74		74.1		12.8	1.16	14.5	0.00	0.00	0.05	0.07	119	210
125	ISL	9.82	D	9.81		33.310	D	25.665	234.1	0.400	4.53	D	70.6		15.1	1.28	16.6	0.00	0.00	0.04	0.06	126	
139		9.51		9.49		33.488		25.855	216.3	0.432	4.09		63.4		19.4	1.50	20.1	0.00	0.00	0.02	0.04	140	209
150	ISL	9.31	D	9.29		33.656	D	26.019	200.9	0.454	3.41	D	52.7		22.6	1.64	22.4	0.00	0.00	0.02	0.04	151	
169		8.85		8.83		33.769		26.181	185.8	0.491	3.23		49.4		27.5	1.83	25.4	0.00	0.00	0.01	0.04	170	208
200		8.41		8.39		33.908		26.358	169.5	0.546	2.77		42.0		32.9	2.00	27.9	0.00	0.00			201	207
231		8.05		8.03		34.002		26.486	157.7	0.597	2.30		34.6		38.6	2.17	30.4	0.00	0.00			232	206
250	ISL	7.88	D	7.85		34.028	D	26.532	153.7	0.627	2.06	D	30.9		41.7	2.26	31.7	0.00	0.00			251	
271		7.74		7.71		34.050		26.570	150.4	0.658	1.76		26.3		44.8	2.36	32.9	0.00	0.00			273	205
300	ISL	7.38	D	7.35		34.078	D	26.644	143.6	0.701	1.42	D	21.0		48.9	2.49	34.3	0.00	0.00			302	
320		7.30		7.27		34.106		26.677	140.7	0.730	1.26		18.6		51.8	2.58	35.2	0.00	0.00			322	204
380		6.63		6.60		34.142		26.798	129.8	0.811	0.89		13.0		62.0	2.78	37.6	0.00	0.00			382	203
400	ISL	6.43	D	6.39		34.139	D	26.822	127.7	0.836	0.84	D	12.2		64.7	2.83	38.0	0.00	0.00			403	
440	CSL	6.20		6.16		34.185	D	26.888	121.7	0.886	0.62	D	8.9									443	202
500	ISL	5.87	D	5.83		34.234	D	26.969	114.6	0.957	0.43	D	6.2		78.1	3.06	40.3	0.00	0.00			503	
515		5.87		5.83		34.264		26.993	112.6	0.974	0.37		5.3		80.1	3.09	40.6	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 2° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 49.4 N	123 54.7 W	11/08/11	0225 UTC	4352 m	350 16 kn	350 05 06	2	1016.1 mb	17.9 C	15.9 C	24m	8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.98		16.98		32.989		23.977	392.2	0.000	5.64		101.9		1.1	0.29	0.0	0.00	0.00	0.10	0.04	0	
2	A	16.98		16.98		32.989		23.977	392.3	0.008	5.64		101.9		1.1	0.29	0.0	0.00	0.00	0.10	0.04	2	222
10	ISL	16.99	D	16.99		32.990	D	23.976	392.7	0.039	5.60	D	101.2		1.4	0.29	0.0	0.00	0.00	0.12	0.03	10	
14	A	16.96		16.96		32.990		23.983	392.1	0.055	5.66		102.2		1.5	0.29	0.0	0.00	0.00	0.13	0.02	14	221
18	A	16.96		16.96		32.990		23.983	392.3	0.071	5.64		101.8		1.4	0.30	0.0	0.00	0.00	0.14	0.01	18	220
20	ISL	16.96	D	16.96		32.989	D	23.982	392.4	0.078	5.60	D	101.1		1.4	0.30	0.0	0.00	0.00	0.14	0.01	20	
30	ISL	16.96	D	16.96		32.989	D	23.983	392.7	0.118	5.60	D	101.1		1.3	0.29	0.0	0.00	0.00	0.13	0.02	30	
33	A	16.93		16.92		32.996		23.995	391.6	0.129	5.64		101.8		1.3	0.29	0.0	0.00	0.00	0.13	0.02	33	219
43		16.02		16.01		32.965		24.181	374.2	0.168	5.83		103.3		1.1	0.28	0.0	0.00	0.00	0.30	0.09	43	218
50	ISL	15.46	D	15.45		32.941	D	24.287	364.2	0.194	5.83	D	102.1		1.4	0.29	0.0	0.00	0.00	0.30	0.12	50	
53		15.34		15.33		32.939		24.312	361.9	0.205	5.88		102.8		1.5	0.29	0.0	0.00	0.00	0.30	0.13	53	217
62	A	13.67		13.66		32.916		24.647	330.1	0.236	6.12		103.4		1.8	0.30	0.0	0.00	0.00	0.47	0.03	62	216
72		12.96		12.95		32.873		24.756	319.9	0.268	6.16		102.5		1.4	0.33	0.0	0.00	0.00	0.41	0.10	72	215
75	ISL	12.80	D	12.79		32.858	D	24.776	318.1	0.278	6.17	D	102.3		1.5	0.32	0.0	0.00	0.00	0.40	0.11	75	
82		12.83		12.82		32.959		24.848	311.4	0.300	6.17		102.4		1.8	0.31	0.0	0.00	0.00	0.39	0.12	82	214
91	A	12.52		12.51		32.969		24.916	305.1	0.327	6.12		100.9		2.0	0.33	0.0	0.00	0.00	0.34	0.08	91	213
100		11.92		11.91		32.997		25.052	292.3	0.354	5.86		95.4		2.9	0.47	1.6	0.21	0.10	0.35	0.04	100	212
112		11.18		11.17		33.022		25.206	277.7	0.389	5.48		87.9		4.8	0.69	5.5	0.07	0.05	0.28	0.09	112	211
125		10.31		10.30		33.203		25.499	250.0	0.423	5.03		79.2		9.5	0.99	10.9	0.00	0.00	0.13	0.08	126	210
140		9.72		9.70		33.307		25.680	233.0	0.459	4.64		72.2		13.6	1.25	15.2	0.00	0.00	0.08	0.04	141	209
150	ISL	9.33	D	9.31		33.451	D	25.856	216.4	0.482	4.32	D	66.7		17.7	1.47	18.8	0.00	0.00	0.05	0.03	151	
170		9.05		9.03		33.702		26.097	193.8	0.523	3.14		48.2		25.6	1.87	25.1	0.00	0.00	0.01	0.02	171	208
200		8.74		8.72		33.868		26.276	177.3	0.578	2.65		40.5		30.9	2.07	28.0	0.00	0.00	0.00	0.03	201	207
230		8.21		8.19		33.947		26.419	164.1	0.630	2.64		39.9		35.6	2.10	28.9	0.00	0.00			231	206
250	ISL	8.05	D	8.02		33.998	D	26.484	158.3	0.662	2.26	D	34.0		38.7	2.20	30.1	0.00	0.00			251	
270		7.74		7.71		34.004		26.534	153.7	0.693	2.18		32.6		41.8	2.31	31.4	0.00	0.00			271	205
300	ISL	7.47	D	7.44		34.025	D	26.589	148.8	0.738	2.01	D	29.8		46.1	2.40	32.7	0.00	0.00			302	
320		7.14		7.11		34.021		26.633	144.8	0.768	1.94		28.6		49.1	2.45	33.5	0.00	0.00			322	204
381		6.37		6.34		34.051		26.760	133.1	0.852	1.44		20.8		60.7	2.70	36.7	0.00	0.00			383	203
400	ISL	6.27	D	6.23		34.065	D	26.784	131.0	0.878	1.26	D	18.2		66.0	2.80	37.8	0.00	0.00			402	
440		5.91		5.87		34.080	D	26.842	125.8	0.929	1.11	D	15.9		75.6	2.96	39.8	0.00	0.00			443	202
500	ISL	5.45	D	5.41		34.124	D	26.933	117.5	1.002	0.78	D	11.0		75.9	2.88	40.0	0.00	0.00			503	
515		5.37		5.33		34.133	D	26.950	116.0	1.019	0.73	D	10.3		76.0	2.86	40.1	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 16.1 N	120 1.3 W	09/08/11	0520 UTC	583 m	210 06 kn	230 02 05	1	1013.5 mb	17.4 C	16.0 C	8m	7/8	ST

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.66		16.66		33.533		24.469	345.3	0.000	6.28		113.1	2.1	0.21	0.0	0.00	0.11	1.11	0.26	0	
2		16.66		16.66		33.533		24.469	345.4	0.007	6.28		113.1	2.1	0.21	0.0	0.00	0.11	1.11	0.26	2	224
10		13.94		13.94		33.475		25.022	293.0	0.032	6.38		108.7	4.3	0.42	0.6	0.03	0.13	6.32	1.20	10	223
20		12.74		12.74		33.510		25.291	267.6	0.060	4.68		77.8	8.9	0.98	9.3	0.48	0.47	1.29	0.52	20	222
30		12.22		12.22		33.506		25.388	258.6	0.087	4.46		73.3	11.3	1.16	12.9	0.47	0.09	0.24	0.28	30	221
40		11.13		11.13		33.581		25.649	234.0	0.111	3.81		61.2	16.8	1.47	17.8	0.09	0.17	0.11	0.23	40	220
50		10.38		10.37		33.661		25.843	215.7	0.134	3.36		53.2	20.8	1.67	20.9	0.03	0.05	0.07	0.24	50	219
60		9.65		9.64		33.852		26.115	190.0	0.154	2.58		40.2	27.8	1.96	25.1	0.02	0.05	0.04	0.14	60	218
69		9.52		9.51		33.967		26.227	179.6	0.171	2.16		33.6	30.9	2.11	27.0	0.03	0.04	0.04	0.17	69	217
75	ISL	9.48	D	9.47	D	34.010	D	26.267	175.9	0.181	2.04	D	31.7	32.3	2.17	27.7	0.03	0.04	0.04	0.16	75	
86		9.43		9.42		34.078		26.329	170.3	0.201	1.76		27.3	34.1	2.25	28.3	0.04	0.03	0.03	0.15	86	216
100		9.41		9.40		34.130		26.373	166.4	0.224	1.50		23.3	36.1	2.34	29.1	0.04	0.03	0.02	0.12	101	215
120		9.34		9.33		34.157		26.406	163.7	0.257	1.41		21.9	37.6	2.38	29.3	0.02	0.03	0.03	0.13	121	214
125	ISL	9.32	D	9.31	D	34.170	D	26.419	162.5	0.265	1.32	D	20.5	38.1	2.40	29.5	0.02	0.03	0.36	0.24	126	
140		9.29		9.27		34.194	D	26.443	160.6	0.289	1.15	D	17.8								141	213
150	ISL	9.26	D	9.24	D	34.204	D	26.456	159.5	0.305	1.12	D	17.3	40.6	2.50	30.4	0.00	0.03	0.99	0.45	151	
170		9.14		9.12		34.218		26.487	157.0	0.337	0.85		13.1	42.6	2.58	31.3	0.00	0.03	0.03	0.15	171	212
200		8.92		8.90		34.227		26.529	153.5	0.384	0.72		11.1	44.6	2.62	32.3	0.00	0.00	0.03	0.17	201	211
229		8.63		8.61		34.225		26.573	149.8	0.428	0.65		9.9	48.4	2.68	33.2	0.00	0.00			230	210
250	ISL	8.48	D	8.45	D	34.216	D	26.590	148.5	0.459	0.63	D	9.6	49.5	2.70	33.5	0.00	0.00			252	
270		8.39		8.36		34.214		26.602	147.7	0.489	0.63		9.6	50.4	2.72	33.7	0.00	0.00			272	209
300	ISL	8.17	D	8.14	D	34.210	D	26.633	145.2	0.533	0.56	D	8.5	54.1	2.78	34.3	0.00	0.00			302	
320		7.92		7.89		34.215		26.674	141.5	0.561	0.51		7.7	57.2	2.83	34.6	0.00	0.00			322	208
380		7.46		7.42		34.221		26.746	135.4	0.644	0.34		5.1	66.4	3.02	34.7	0.00	0.00			383	207
400	ISL	7.42	D	7.38	D	34.221	D	26.752	135.2	0.671	0.31	D	4.6	70.2	3.08	34.5	0.00	0.00			403	
440		7.01		6.97		34.231		26.818	129.3	0.724	0.17		2.5	79.8	3.23	33.3	0.00	0.00			443	206
480		6.68		6.64		34.245		26.874	124.3	0.775	0.04		0.6	92.7	3.46	30.1	0.00	0.00			483	205
500	ISL	6.56	D	6.51	D	34.246	D	26.891	122.8	0.800	0.03	D	0.4	97.7	3.56	28.6	0.08	0.00			504	
516		6.52		6.47		34.248		26.898	122.4	0.819	0.02		0.3	102.8	3.70	26.2	0.14	0.00			520	204
540		6.47		6.42		34.248		26.904	122.0	0.849	0.02		0.3	115.8	4.14	18.3	1.45	0.00			544	203
566		6.45		6.40		34.252		26.911	121.8	0.880	0.02		0.3	120.2	4.33	14.1	2.77	0.00			570	202
570		6.45		6.40		34.252		26.911	121.9	0.885	0.03		0.4	120.4	4.35	13.9	2.82	0.00			574	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 15.5 N	119 19.6 W	08/08/11	2312 UTC	22 m	160 03 kn	300 01 07	2	1013.2 mb	17.1 C	15.9 C		8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.40		16.40		33.533		24.529	339.6	0.000	6.33		113.4	0.7	0.15	0.0	0.00	0.04	2.00	0.47	0	
2		16.40		16.40		33.533		24.529	339.7	0.007	6.33		113.4	0.7	0.15	0.0	0.00	0.04	2.00	0.47	2	205
5		15.33		15.33		33.526		24.765	317.4	0.017	6.40		112.2	0.6	0.15	0.1	0.00	0.04	2.81	0.61	5	204
10		14.69		14.69		33.522		24.901	304.5	0.032	5.62		97.3	3.1	0.46	2.8	0.08	0.26	3.69	0.95	10	202
10		14.69		14.69		33.522		24.901	304.5	0.032											10	203
19		14.30		14.30		33.507		24.972	298.0	0.059	4.94		84.8	7.5	0.88	5.5	0.29	1.50	2.84	0.86	19	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.4 N	119 24.8 W	08/08/11	2135 UTC	37 m	300 05 kn	320 01 07	2	1012.3 mb	16.4 C	15.2 C		8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.64		16.64		33.501		24.449	347.3	0.000	5.99		107.8	1.5	0.31	0.2	0.00	0.04	2.27	0.72	0	
2		16.64		16.64		33.501		24.449	347.3	0.007	5.99		107.8	1.5	0.31	0.2	0.00	0.04	2.27	0.72	2	206
5		16.43		16.43		33.500		24.497	342.8	0.017	6.00		107.5	1.2	0.28	0.2	0.00	0.03	2.57	0.73	5	205
10		15.85		15.85		33.493		24.624	330.9	0.034	5.94		105.2	1.3	0.32	0.6	0.00	0.12	3.28	0.86	10	203
10		15.85		15.85		33.494		24.624	330.9	0.034	5.94		105.2								10	204
20		15.21		15.21		33.510		24.779	316.4	0.067	6.19		108.3	0.8	0.27	0.2	0.00	0.06	5.64	1.09	20	202
30	ISL	14.20	D	14.20		33.518	D	25.002	295.5	0.097	5.19	D	89.0	5.5	0.70	4.3	0.15	0.70	2.44	0.80	30	
31		14.22		14.22		33.520		24.999	295.8	0.100	5.26		90.2	6.0	0.74	4.7	0.16	0.76	2.12	0.77	31	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 11.0 N	119 30.6 W	08/08/11	1936 UTC	105 m	020 04 kn		0	1011.8 mb	16.1 C	15.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.70		16.70		33.448		24.394	352.4	0.000	6.07		109.3	1.6	0.30	0.2	0.00	0.04	1.44	0.29	0	
2		16.70		16.70		33.448		24.395	352.5	0.007	6.07		109.3	1.6	0.30	0.2	0.00	0.04	1.44	0.29	2	211
10		15.94		15.94		33.437		24.560	336.9	0.035	6.13		108.8	1.9	0.33	0.4	0.00	0.07	1.59	0.75	10	209
10		15.94		15.94		33.435		24.559	337.1	0.035											10	210
20		14.59		14.59		33.410		24.836	311.0	0.067	5.87		101.3	3.6	0.50	2.7	0.06	0.16	1.14	0.47	20	208
30		13.43		13.43		33.475		25.127	283.5	0.097	4.97		83.8	8.2	0.92	8.7	0.19	0.26	0.42	0.60	30	207
40		12.73		12.72		33.506		25.290	268.2	0.124	4.56		75.8	11.2	1.10	11.5	0.23	0.24	0.40	0.37	40	206
50		11.86		11.85		33.502		25.454	252.9	0.150	4.38		71.5	12.5	1.23	14.0	0.17	0.11	0.41	0.32	50	205
60		10.59		10.58		33.566		25.733	226.4	0.174	3.78		60.0	17.4	1.52	19.0	0.03	0.00	0.17	0.18	60	204
70		10.09		10.08		33.633		25.871	213.5	0.196	3.36		52.8	20.5	1.70	21.7	0.00	0.00	0.06	0.31	70	203
75	ISL	9.87	D	9.86		33.713	D	25.971	204.1	0.207	3.13	D	49.0	22.0	1.75	22.5	0.00	0.01	0.07	0.30	75	
85		9.85		9.84		33.742		25.997	201.8	0.227	2.98		46.6	24.7	1.84	23.5	0.02	0.03	0.08	0.22	85	202
100		9.67		9.66		33.857		26.117	190.7	0.257	2.59		40.4	27.2	2.01	25.3	0.01	0.00	0.04	0.18	101	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 52.8 N	120 8.3 W	08/08/11	1327 UTC	102 m	330 25 kn		0	1012.3 mb	15.1 C	14.0 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.10	14.10	33.464	24.980	296.7	0.000	5.40	92.3	6.7	0.75	6.5	0.14	0.14	1.34	0.52	0	
2		14.10	14.10	33.464	24.980	296.7	0.006	5.40	92.3	6.7	0.75	6.5	0.14	0.14	1.34	0.52	2	211
10		13.91	13.91	33.461	25.018	293.4	0.030	5.36	91.3	6.8	0.81	6.9	0.15	0.15	1.21	0.70	10	209
10		13.91	13.91	33.461	25.018	293.4	0.030										10	210
20		10.94	10.94	33.530	25.642	234.1	0.056	4.02	64.3	15.5	1.43	16.9	0.11	0.05	0.43	0.28	20	208
30		10.62	10.62	33.533	25.701	228.7	0.079	3.78	60.1	16.9	1.54	18.9	0.03	0.05	0.17	0.20	30	207
40		10.59	10.59	33.539	25.711	228.0	0.102	3.76	59.7	17.2	1.55	19.0	0.03	0.04	0.20	0.17	40	206
50		10.31	10.30	33.575	25.788	220.9	0.124	3.61	57.0	18.7	1.59	20.1	0.01	0.03	0.12	0.15	50	205
60		10.07	10.06	33.653	25.890	211.4	0.146	3.32	52.2	21.8	1.71	21.7	0.02	0.04	0.10	0.15	60	204
75		10.00	9.99	33.714	25.950	206.1	0.177	3.10	48.7	24.1	1.80	22.7	0.04	0.05	0.08	0.20	75	203
85		9.79	9.78	33.790	26.044	197.3	0.197	2.83	44.2	26.3	1.90	24.1	0.05	0.03	0.06	0.17	85	202
95		9.67	9.66	33.841	26.104	191.8	0.217	2.68	41.8	27.9	1.96	25.0	0.04	0.03	0.05	0.14	96	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.9 N	120 25.5 W	08/08/11	0750 UTC	1186 m	320 28 kn	300 07 07	2	1012.2 mb	16.3 C	14.9 C	9m	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	15.43	15.43	33.483	24.709	322.5	0.000	5.73	100.7	4.8	0.53	3.3	0.04	0.10	2.48	0.99	0	
2		15.43	15.43	33.483	24.709	322.5	0.006	5.73	100.7	4.8	0.53	3.3	0.04	0.10	2.48	0.99	2	221
10		15.29	15.29	33.483	24.740	319.8	0.032	5.74	100.6	4.7	0.54	3.2	0.04	0.08	2.50	0.76	10	219
10		15.29	15.29	33.483	24.740	319.8	0.032										10	220
20	ISL	13.78 D	13.78	33.506 D	25.079	287.8	0.063	5.03 D	85.5	7.5	0.76	6.8	0.06	0.08	1.84	0.80	20	
21		13.73	13.73	33.495	25.081	287.7	0.065	5.15	87.4	8.0	0.80	7.4	0.06	0.08	1.75	0.80	21	218
30		11.39	11.39	33.522	25.555	242.7	0.089	4.14	66.9	14.8	1.38	15.8	0.09	0.06	0.93	0.46	30	217
40		10.36	10.36	33.572	25.777	221.8	0.112	3.68	58.2	18.2	1.54	19.4	0.03	0.05	0.26	0.21	40	216
50		9.98	9.97	33.624	25.882	211.9	0.134	3.48	54.6	20.7	1.62	21.2	0.00	0.03	0.07	0.12	50	215
61		9.85	9.84	33.660	25.932	207.4	0.157	3.34	52.2	22.0	1.72	22.1	0.00	0.00	0.06	0.12	61	214
69		9.64	9.63	33.738	26.028	198.5	0.173	3.10	48.3	23.9	1.83	23.6	0.00	0.00	0.03	0.10	69	213
75	ISL	9.58 D	9.57	33.837 D	26.116	190.3	0.185	2.78 D	43.3	25.9	1.93	24.8	0.00	0.00	0.03	0.10	75	
83		9.56	9.55	33.902	26.170	185.3	0.200	2.48	38.6	28.5	2.04	26.2	0.00	0.00	0.02	0.11	83	212
100	ISL	9.40 D	9.39	33.965 D	26.245	178.5	0.231	2.30 D	35.7	30.8	2.11	27.1	0.00	0.00	0.01	0.09	101	
101		9.39	9.38	33.964	26.246	178.4	0.233	2.29	35.5	30.9	2.11	27.1	0.00	0.00	0.01	0.09	102	211
117		9.32	9.31	34.004	26.289	174.7	0.261	2.16	33.5	32.3	2.16	27.5	0.00	0.00	0.01	0.08	118	210
125	ISL	9.21 D	9.20	34.005 D	26.308	173.0	0.275	2.20 D	34.0	32.8	2.18	27.8	0.00	0.00	0.01	0.08	126	
140		9.21	9.19	34.037	26.333	170.9	0.301	2.05	31.7	33.5	2.22	28.3	0.00	0.00	0.01	0.09	141	209
150	ISL	9.21 D	9.19	34.059 D	26.351	169.5	0.318	1.99 D	30.8	33.9	2.23	28.4	0.00	0.00	0.01	0.09	151	
170		9.12	9.10	34.063	26.369	168.2	0.352	1.96	30.2	34.7	2.26	28.6	0.00	0.00	0.01	0.08	171	208
200		9.14	9.12	34.134	26.422	163.8	0.401	1.66	25.6	37.0	2.37	29.5	0.00	0.00	0.01	0.07	201	207
232		8.97	8.94	34.216	26.513	155.7	0.453	1.22	18.8	40.7	2.51	30.9	0.00	0.00			233	206
250	ISL	8.90 D	8.87	34.237 D	26.541	153.4	0.480	1.12 D	17.2	41.6	2.56	31.2	0.00	0.00			252	
270		8.88	8.85	34.245	26.551	152.9	0.511	1.06	16.3	42.6	2.60	31.5	0.00	0.00			272	205
300	ISL	8.59 D	8.56	34.279 D	26.623	146.4	0.556	0.82 D	12.5	46.3	2.70	32.6	0.00	0.00			302	
320		8.46	8.43	34.293	26.655	143.8	0.585	0.71	10.8	48.9	2.76	33.3	0.00	0.00			322	204
381		8.16	8.12	34.293	26.701	140.3	0.672	0.67	10.1	51.6	2.80	33.9	0.00	0.00			384	203
400	ISL	8.02 D	7.98	34.288 D	26.718	139.0	0.698	0.67 D	10.1	52.8	2.83	34.3	0.00	0.00			403	
441		7.61	7.57	34.286	26.777	133.7	0.754	0.57	8.5	57.0	2.91	35.5	0.00	0.00			444	202
500	ISL	6.68 D	6.63	34.300 D	26.917	120.5	0.829	0.40 D	5.8	70.2	3.06	38.5	0.00	0.00			503	
515		6.50	6.45	34.304	26.944	117.9	0.847	0.35	5.1	73.5	3.10	39.2	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.9 N	120 45.4 W	08/08/11	0248 UTC	1372 m	320 19 kn	340 05 06	2	1014.6 mb	16.5 C	14.9 C	8m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.25	15.25	33.467	24.737	319.9	0.000	6.16	107.8	1.3	0.30	0.1	0.02	0.11	7.32	1.64	0	
2	A	15.25	15.25	33.467	24.737	319.9	0.006	6.16	107.8	1.3	0.30	0.1	0.02	0.11	7.32	1.64	2	221
5	A	15.26	15.26	33.480	24.745	319.3	0.016	6.15	107.7	0.6	0.29	0.0	0.00	0.14	7.38	1.77	5	223
6	A	15.26	15.26	33.491	24.753	318.5	0.019	6.11	107.0	1.0	0.30	0.0	0.02	0.09	7.33	1.75	6	222
10	A	15.23	15.23	33.495	24.763	317.7	0.032	6.12	107.1	1.0	0.37	0.3	0.03	0.12	7.37	1.68	10	219
10		15.23	15.23	33.504	24.770	317.0	0.032			1.2	0.33	0.1	0.02	0.11			10	220
20	A	15.05	15.05	33.448	24.766	317.6	0.064	6.03	105.1						6.74	1.43	20	218
30	A	14.00	14.00	33.255	24.840	310.8	0.095	6.03	102.8	0.9	0.37	0.6	0.10	0.13	3.62	0.94	30	217
40		11.81	11.80	33.001	25.074	288.7	0.125	5.75	93.4	3.5	0.54	2.6	0.27	0.08	0.31	0.32	40	216
50		10.79	10.78	33.090	25.327	264.8	0.153	5.34	84.9	6.4	0.78	7.3	0.04	0.08	0.20	0.20	50	215
60		9.89	9.88	33.309	25.652	234.1	0.178	4.55	71.1	14.2	1.26	15.2	0.01	0.07	0.06	0.07	60	214
70		9.83	9.82	33.323	25.673	232.3	0.201	4.54	70.8	14.5	1.28	15.6	0.00	0.00	0.05	0.05	70	213
75	ISL	9.77 D	9.76	33.348 D	25.702	229.6	0.213	4.51 D	70.3	15.8	1.36	16.9	0.00	0.00	0.04	0.04	75	
85		9.54	9.53	33.469	25.835	217.2	0.235	3.95	61.3	19.1	1.55	19.9	0.00	0.00	0.03	0.03	85	212
100		9.08	9.07	33.706	26.094	192.7	0.266	3.72	57.2	22.9	1.65	22.0	0.00	0.00	0.03	0.05	101	211
120		8.97	8.96	33.799	26.185	184.5	0.303	3.25	49.9	27.1	1.82	24.5	0.00	0.00	0.01	0.02	121	210
125	ISL	8.95 D	8.94	33.800 D	26.189	184.2	0.313	3.26 D	50.0	27.8	1.84	24.9	0.00	0.00	0.01	0.02	126	
140		8.65	8.64	33.868	26.289	174.9	0.339	3.15	48.0	29.6	1.89	25.9	0.00	0.00	0.01	0.01	141	209
150	ISL	8.57 D	8.55	33.899 D	26.326	171.6	0.357	3.07 D	46.7	31.1	1.96	26.7	0.00	0.00	0.01	0.02	151	
170		8.69	8.67	33.997	26.385	166.5	0.391	2.42	36.9	34.5	2.11	28.4	0.00	0.00	0.01	0.05	171	208
200		8.37	8.35	34.114	26.526	153.6	0.439	1.73	26.2	39.7	2.34	30.7	0.00	0.00	0.01	0.09	201	207
230		7.85	7.83	34.078	26.575	149.2	0.484	1.78	26.7	44.6	2.38	32.1	0.00	0.00			231	206
250	ISL	8.14 D	8.11	34.172 D	26.607	146.8	0.514	1.33 D	20.1	47.3	2.41	32.8	0.00	0.00			251	
270		7.39	7.36	34.071	26.636	143.8	0.543	1.72	25.5	49.8	2.46	33.5	0.00	0.00			272	205
300	ISL	7.33 D	7.30	34.143 D	26.702	138.1	0.585	1.20 D	17.8	53.4	2.61	35.0	0.00	0.00			302	
320		7.20	7.17	34.162	26.735	135.2	0.612	1.01	14.9	55.7	2.72	35.9	0.00	0.00			322	204
380		7.19	7.15	34.269	26.822	128.0	0.691	0.54	8.0	61.6	2.91	36.6	0.00	0.00			382	203
400	ISL	7.01 D	6.97	34.269 D	26.847	125.8	0.717	0.52 D	7.6	63.7	2.95	37.1	0.00	0.00			403	
440		6.74	6.70	34.289	26.900	121.2	0.766	0.42	6.1	68.0	3.00	38.1	0.00	0.00			443	202
500	ISL	6.41 D	6.36	34.311 D	26.962	116.0	0.837	0.32 D	4.6	73.5	3.08	39.5	0.00	0.00			503	
516		6.30	6.25	34.318	26.981	114.2	0.856	0.29	4.2	75.0	3.10	39.9	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 14.7 N	121 26.6 W	07/08/11	2023 UTC	3802 m	330 21 kn		0	1013.9 mb	17.0 C	15.3 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.66		16.66		33.230		24.236	367.5	0.000	5.80		104.3	1.4	0.29	0.0	0.00	0.06	0.32	0.11	0	
1		16.66		16.66		33.230		24.236	367.5	0.004	5.80		104.3	1.4	0.29	0.0	0.00	0.06	0.32	0.11	1	221
9		16.66		16.66		33.230		24.237	367.8	0.033	5.75		103.4	1.3	0.29	0.0	0.00	0.06	0.30	0.11	9	219
10	ISL	16.66		16.66		33.229	D	24.236	367.9	0.037	5.69	D	102.3	1.3	0.29	0.0	0.00	0.06	0.30	0.11	10	
10		16.66		16.66		33.230		24.237	367.8	0.037	5.75		103.4								10	220
20		16.67		16.67		33.230		24.235	368.3	0.074	5.77		103.7	1.0	0.29	0.0	0.00	0.06	0.32	0.11	20	218
30		16.66		16.66		33.241		24.246	367.6	0.110	5.81		104.4	1.3	0.36	1.0	0.00	0.10	0.30	0.12	30	217
40		15.29		15.28		33.268		24.576	336.4	0.146	5.89		103.0	1.6	0.46	2.3	0.03	0.20	0.27	0.15	40	216
50		13.14		13.13		32.955		24.783	316.7	0.178	6.16		102.9	1.7	0.34	0.1	0.00	0.14	0.30	0.27	50	215
59		12.89		12.88		32.955		24.833	312.3	0.207	6.11		101.6	1.8	0.37	0.3	0.02	0.19	0.29	0.26	59	214
70		12.20		12.19		32.961		24.970	299.3	0.240	5.99		98.1	2.6	0.41	0.7	0.15	0.15	0.24	0.26	70	213
75	ISL	11.77	D	11.76		32.988	D	25.072	289.8	0.255	5.87	D	95.3	3.4	0.51	2.3	0.11	0.09	0.20	0.24	75	
84		11.27		11.26		33.001		25.173	280.2	0.281	5.45		87.5	5.3	0.72	6.0	0.00	0.00	0.14	0.20	84	212
100		10.23		10.22		33.220		25.526	246.9	0.323	4.97		78.1	10.3	1.01	11.3	0.00	0.00	0.07	0.12	100	211
120		9.42		9.41		33.438		25.831	218.2	0.369	4.40		68.0	16.8	1.35	17.2	0.00	0.00	0.02	0.02	121	210
125	ISL	9.39	D	9.38		33.471	D	25.861	215.4	0.380	4.27	D	66.0	18.1	1.41	18.2	0.00	0.00	0.02	0.02	126	
140		9.15		9.13		33.580		25.985	203.9	0.412	4.02		61.9	21.3	1.55	20.5	0.00	0.00	0.01	0.01	141	209
150	ISL	9.01	D	8.99		33.681	D	26.087	194.4	0.431	3.75	D	57.6	23.1	1.60	21.5	0.00	0.00	0.01	0.01	151	
170		8.87		8.85		33.871		26.258	178.6	0.469	3.58		54.8	26.4	1.69	23.1	0.00	0.00	0.00	0.01	171	208
200		8.39		8.37		33.954		26.397	165.7	0.520	3.10		47.0	32.1	1.88	26.2	0.00	0.00	0.00	0.01	201	207
230		8.14		8.12		34.008		26.478	158.6	0.569	2.47		37.2	39.3	2.13	29.6	0.00	0.00			231	206
250	ISL	7.59	D	7.57		34.013	D	26.562	150.6	0.600	2.23	D	33.2	44.2	2.25	31.5	0.00	0.00			251	
270		7.20		7.17		34.028		26.629	144.4	0.629	2.02		29.8	48.7	2.36	33.0	0.00	0.00			272	205
300	ISL	7.63	D	7.60		34.197	D	26.702	138.3	0.672	1.15	D	17.2	53.6	2.63	34.6	0.00	0.00			302	
320		7.58		7.55		34.257		26.756	133.5	0.699	0.65		9.7	56.2	2.80	35.3	0.00	0.00			322	204
379		7.10		7.06		34.288		26.849	125.4	0.775	0.47		6.9	63.6	2.92	36.9	0.00	0.00			381	203
400	ISL	7.03	D	6.99		34.293	D	26.863	124.3	0.802	0.44	D	6.5	65.4	2.95	37.2	0.00	0.00			403	
441		6.79		6.75		34.301		26.903	121.0	0.852	0.39		5.7	68.6	3.00	37.8	0.00	0.00			444	202
500	ISL	6.36	D	6.31		34.319	D	26.974	114.7	0.921	0.30	D	4.3	74.8	3.08	39.2	0.00	0.00			503	
515		6.29		6.24		34.326		26.989	113.5	0.939	0.27		3.9	76.4	3.10	39.5	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 54.0 N	122 7.2 W	07/08/11	1414 UTC	4141 m	330 16 kn		0	1016.0 mb	16.9 C	15.7 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.37		17.37		33.050		23.932	396.6	0.000	5.62		102.3	1.4	0.29	0.0	0.00	0.06	0.10	0.03	0	
2		17.37		17.37		33.050		23.932	396.6	0.008	5.62		102.3	1.4	0.29	0.0	0.00	0.06	0.10	0.03	2	221
9		17.37		17.37		33.048		23.931	397.0	0.036											9	220
10		17.37		17.37		33.049		23.931	396.9	0.040	5.61		102.1	1.3	0.28	0.0	0.00	0.06	0.10	0.03	10	219
20	ISL	17.37	D	17.37		33.049	D	23.932	397.2	0.079	5.53	D	100.7	1.6	0.27	0.0	0.00	0.02	0.11	0.03	20	
25		17.37		17.37		33.052		23.934	397.2	0.099	5.59		101.8	1.8	0.27	0.0	0.00	0.00	0.11	0.04	25	218
30	ISL	17.19	D	17.19		33.058	D	23.982	392.8	0.119	5.55	D	100.7	1.8	0.27	0.0	0.00	0.02	0.13	0.04	30	
39		16.94		16.93		33.033		24.022	389.3	0.154	5.70		102.9	1.7	0.28	0.0	0.00	0.06	0.19	0.07	39	217
50		15.18		15.17		33.081		24.456	348.1	0.195	6.13		106.9	1.1	0.28	0.0	0.00	0.05	0.30	0.16	50	216
61		14.36		14.35		33.030		24.593	335.3	0.232	6.12		104.9	1.6	0.30	0.0	0.00	0.07	0.38	0.27	61	215
75		13.75		13.74		33.117		24.786	317.2	0.278	5.96		100.9	1.8	0.42	0.9	0.06	0.38	0.34	0.35	75	214
88		12.56		12.55		33.006		24.937	303.0	0.318	5.86		96.8	2.5	0.42	0.8	0.37	0.11	0.22	0.20	88	213
100		11.93		11.92		33.096		25.127	285.2	0.354	5.47		89.2	4.5	0.66	5.3	0.00	0.06	0.12	0.18	100	212
112		11.36		11.35		33.113		25.245	274.1	0.387	5.31		85.5	6.1	0.74	6.8	0.00	0.00	0.08	0.10	112	211
125	ISL	10.86	D	10.84		33.204	D	25.405	259.1	0.422	5.01	D	79.9	8.3	0.89	9.4	0.00	0.00	0.05	0.07	126	
126		10.83		10.81		33.198		25.406	259.0	0.424	5.06		80.6	8.5	0.91	9.7	0.00	0.00	0.05	0.07	127	210
140		10.08		10.06		33.300		25.614	239.3	0.459	4.64		72.7	13.1	1.17	14.2	0.00	0.00	0.02	0.05	141	209
150	ISL	9.78	D	9.76		33.400	D	25.743	227.3	0.483	4.42	D	68.9	15.8	1.32	16.6	0.00	0.00	0.01	0.04	151	
170		9.42		9.40		33.549		25.918	210.9	0.526	3.96		61.3	20.3	1.54	20.1	0.00	0.00	0.00	0.02	171	208
200	ISL	9.03	D	9.01		33.806	D	26.182	186.4	0.586	3.43	D	52.7	25.8	1.73	23.6	0.00	0.00	0.00	0.02	201	
201		9.01		8.99		33.800		26.181	186.5	0.588	3.42		52.5	26.0	1.73	23.7	0.00	0.00	0.00	0.02	202	207
229		8.75		8.73		33.921		26.317	174.1	0.638	2.81		42.9	31.2	1.94	26.9	0.00	0.00			230	206
250	ISL	8.52	D	8.49		33.998	D	26.413	165.3	0.674	2.65	D	40.3	34.5	2.05	28.4	0.00	0.00			251	
270		8.11		8.08		34.013		26.487	158.4	0.706	2.40		36.2	37.6	2.13	29.6	0.00	0.00			271	205
300	ISL	7.87	D	7.84		34.062	D	26.561	151.8	0.753	1.99	D	29.8	42.7	2.27	31.5	0.00	0.00			302	
320		7.47		7.44		34.044		26.605	147.7	0.783	1.92		28.5	46.4	2.36	32.8	0.00	0.00			322	204
382		6.53		6.50		34.070		26.754	133.8	0.870	1.34		19.5	60.1	2.66	36.9	0.00	0.00			384	203
400	ISL	6.44	D	6.40		34.097	D	26.787	130.9	0.894	1.21	D	17.5	63.5	2.74	37.8	0.00	0.00			402	
441		6.06		6.02		34.122		26.856	124.6	0.946	0.86		12.4	70.3	2.88	39.4	0.00	0.00			444	202
500	ISL	5.70	D	5.66		34.165	D	26.936	117.5	1.018	0.66	D	9.4	78.1	2.99	40.7	0.00	0.00			503	
516		5.59		5.55		34.175		26.957	115.6	1.037	0.58		8.2	80.2	3.02	41.1	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 49.1 W	07/08/11	0706 UTC	4291 m	360 16 kn	330 04 07	1	1016.1 mb	18.3 C	16.7 C	21m	7/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.45	17.45	33.047		23.910	398.6	0.000	5.62		102.5	1.9	0.28	0.0	0.00	0.00	0.10	0.03	0	
2		17.45	17.45	33.047		23.910	398.7	0.008	5.62		102.5	1.9	0.28	0.0	0.00	0.00	0.10	0.03	2	221
10		17.42	17.42	33.044		23.916	398.4	0.040	5.59		101.9	2.0	0.27	0.0	0.00	0.00	0.10	0.03	10	219
10		17.42	17.42	33.048		23.919	398.1	0.040											10	220
20	ISL	17.38	D 17.38	33.042	D	23.924	398.0	0.080	5.54	D	100.9	1.8	0.27	0.0	0.00	0.00	0.11	0.04	20	
25		16.99	16.99	33.039		24.014	389.5	0.099	5.66		102.3	1.7	0.27	0.0	0.00	0.00	0.11	0.04	25	218
30	ISL	16.49	D 16.49	33.032	D	24.125	379.1	0.119	5.72	D	102.3	1.6	0.27	0.0	0.00	0.00	0.15	0.07	30	
40		15.65	15.64	33.105		24.371	355.9	0.155	6.06		106.7	1.5	0.27	0.0	0.00	0.00	0.22	0.11	40	217
50		14.79	14.78	32.999		24.477	346.0	0.190	6.05		104.6	1.9	0.28	0.0	0.00	0.00	0.21	0.09	50	216
62		14.13	14.12	32.995		24.614	333.3	0.231	6.08		103.7	2.1	0.27	0.0	0.00	0.00	0.22	0.10	62	215
75		13.38	13.37	32.976		24.752	320.4	0.274	6.02		101.1	2.3	0.32	0.2	0.01	0.00	0.36	0.27	75	214
86		13.01	13.00	33.018		24.859	310.5	0.308	5.85		97.5	3.0	0.43	1.5	0.19	0.00	0.38	0.29	86	213
100		12.56	12.55	33.104		25.013	296.1	0.351	5.59		92.3	4.2	0.59	4.7	0.00	0.00	0.28	0.23	100	212
112		11.86	11.85	33.139		25.173	281.0	0.385	5.41		88.1	5.5	0.73	6.8	0.00	0.00	0.14	0.16	112	211
125		11.11	11.09	33.202		25.359	263.5	0.421	5.10		81.7	8.4	0.93	10.0	0.00	0.00	0.06	0.09	126	210
140		10.18	10.16	33.336		25.626	238.3	0.458	4.60		72.3	13.9	1.23	14.8	0.00	0.00	0.02	0.04	141	209
150	ISL	10.04	D 10.02	33.384	D	25.687	232.7	0.482	4.41	D	69.1	17.9	1.43	18.2	0.00	0.00	0.01	0.04	151	
170		9.24	9.22	33.688		26.056	197.8	0.525	3.34		51.5	25.0	1.77	23.9	0.00	0.00	0.00	0.03	171	208
200		8.95	8.93	33.902		26.270	178.0	0.581	2.66		40.8	30.4	1.99	27.1	0.00	0.00	0.01	0.03	201	207
230		8.58	8.56	33.996		26.402	166.0	0.633	2.37		36.1	35.0	2.11	29.0	0.00	0.00			231	206
250	ISL	8.44	D 8.41	34.041	D	26.459	160.9	0.666	2.12	D	32.2	37.7	2.18	30.1	0.00	0.00			251	
270		8.17	8.14	34.052		26.508	156.4	0.697	2.02		30.5	40.5	2.26	31.2	0.00	0.00			271	205
300	ISL	7.95	D 7.92	34.103	D	26.581	149.9	0.743	1.69	D	25.4	45.2	2.43	32.9	0.00	0.00			302	
320		7.82	7.79	34.154		26.641	144.6	0.773	1.29		19.3	48.4	2.54	33.9	0.00	0.00			322	204
380		7.09	7.05	34.172		26.759	133.8	0.856	0.95		14.0	57.5	2.74	36.5	0.00	0.00			382	203
400	ISL	6.81	D 6.77	34.185	D	26.808	129.3	0.883	0.79	D	11.6	60.7	2.81	37.3	0.00	0.00			402	
440		6.57	6.53	34.219		26.867	124.1	0.933	0.60		8.7	66.9	2.93	38.6	0.00	0.00			443	202
500	ISL	6.15	D 6.11	34.264	D	26.958	116.0	1.005	0.40	D	5.8	74.2	3.04	39.9	0.00	0.00			503	
516		6.12	6.07	34.274		26.970	115.1	1.024	0.37		5.3	76.2	3.07	40.3	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 15.2 N	123 29.9 W	07/08/11	0156 UTC	4128 m	330 15 kn	340 03 05	2	1017.7 mb	17.0 C	16.5 C	24m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.90	17.90	33.192		23.913	398.3	0.000	5.55		102.2	1.6	0.27	0.0	0.00	0.00	0.15	0.01	0	
2	A	17.90	17.90	33.192		23.913	398.4	0.008	5.55		102.2	1.6	0.27	0.0	0.00	0.00	0.15	0.01	2	224
10		17.90	17.90	33.192		23.914	398.6	0.040	5.60		103.1	1.7	0.27	0.0	0.00	0.00	0.16	0.01	10	222
10		17.90	17.90	33.192		23.914	398.6	0.040											10	223
14	A	17.89	17.89	33.191		23.915	398.6	0.056	5.54		102.0	2.3	0.26	0.0	0.00	0.00	0.14	0.02	14	221
18	A	17.88	17.88	33.192		23.919	398.4	0.072	5.53		101.8	2.5	0.26	0.0	0.00	0.00	0.15	0.02	18	220
20	ISL	17.88	D 17.88	33.191	D	23.918	398.6	0.080	5.48	D	100.8	2.5	0.26	0.0	0.00	0.00	0.15	0.02	20	
30	ISL	17.84	D 17.83	33.187	D	23.925	398.2	0.120	5.48	D	100.8	2.5	0.25	0.0	0.00	0.00	0.17	0.04	30	
33	A	17.48	17.47	33.184		24.010	390.3	0.131	5.56		101.5	2.5	0.25	0.0	0.00	0.00	0.17	0.04	33	219
43		16.08	16.07	33.142		24.303	362.5	0.169	5.91		105.0	2.9	0.26	0.0	0.00	0.00	0.28	0.10	43	218
50	ISL	14.88	D 14.87	33.155	D	24.578	336.4	0.193	6.13	D	106.3	3.3	0.27	0.0	0.00	0.00	0.43	0.15	50	
53		14.67	14.66	33.152		24.621	332.4	0.204	6.13		105.8	3.5	0.28	0.0	0.00	0.00	0.49	0.19	53	217
62	A	13.74	13.73	33.102		24.777	317.8	0.233	6.01		101.8	3.7	0.35	0.7	0.05	0.14	0.56	0.46	62	216
72		13.35	13.34	33.107		24.860	310.1	0.264	5.84		98.1	4.5	0.45	1.5	0.29	0.24	0.39	0.30	72	215
75	ISL	13.33	D 13.32	33.117	D	24.871	309.0	0.273	5.78	D	97.0	4.6	0.47	1.7	0.30	0.29	0.33	0.25	75	
82		13.12	13.11	33.157		24.944	302.3	0.295	5.74		96.0	5.0	0.51	2.4	0.32	0.37	0.19	0.15	82	214
91	A	12.77	12.76	33.156	D	25.013	295.9	0.322	5.60	D	93.0								91	213
100		12.13	12.12	33.160		25.139	284.1	0.348	5.53		90.6	6.8	0.66	5.7	0.05	0.00	0.10	0.11	100	212
111		11.27	11.26	33.152		25.291	269.7	0.378	5.26		84.6	9.1	0.79	8.1	0.00	0.00	0.07	0.08	111	211
125		11.15	11.13	33.362		25.477	252.4	0.415	4.82		77.4	12.9	1.13	13.1	0.00	0.00	0.04	0.06	126	210
140		10.39	10.37	33.435		25.667	234.4	0.451	4.34		68.6	17.7	1.32	16.5	0.00	0.00	0.03	0.05	141	209
150	ISL	10.01	D 9.99	33.567	D	25.835	218.6	0.474	3.78	D	59.3	21.3	1.49	19.3	0.00	0.00	0.02	0.04	151	
170		9.41	9.39	33.733		26.064	197.1	0.516	3.21		49.7	27.4	1.79	24.0	0.00	0.00	0.01	0.03	171	208
200		8.97	8.95	33.889		26.257	179.3	0.572	3.02		46.4	31.2	1.87	25.6	0.00	0.00	0.00	0.03	201	207
230		8.65	8.63	34.011		26.403	165.9	0.624	2.30		35.1	37.1	2.13	28.8	0.00	0.00			231	206
250	ISL	8.40	D 8.37	34.054	D	26.475	159.3	0.656	2.07	D	31.4	41.0	2.26	30.3	0.00	0.00			251	
270		8.19	8.16	34.088		26.534	154.1	0.688	1.76		26.6	44.6	2.35	31.5	0.00	0.00			271	205
300	ISL	7.90	D 7.87	34.119	D	26.601	148.0	0.733	1.52	D	22.8	48.9	2.44	33.0	0.00	0.00			302	
320		7.38	7.35	34.070		26.638	144.5	0.762	1.60		23.7	51.6	2.49	34.0	0.00	0.00			322	204
380		6.62	6.59	34.106		26.771	132.3	0.845	1.12		16.3	62.2	2.74	37.2	0.00	0.00			382	203
400	ISL	6.52	D 6.48	34.126	D	26.800	129.8	0.872	1.00	D	14.5	65.1	2.80	38.0	0.00	0.00			402	
441		6.10	6.06	34.154		26.877	122.8	0.923	0.77		11.1	71.1	2.92	39.3	0.00	0.00			444	202
500	ISL	5.62	D 5.58	34.199	D	26.972	114.0	0.993	0.51	D	7.3	81.2	3.07	41.1	0.00	0.00			503	
515		5.56	5.52	34.224		26.999	111.6	1.010	0.42		6.0	83.8	3.11	41.6	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 10.5 W	06/08/11	1831 UTC	3910 m	340	16 kn		0	1017.5 mb	17.5 C	15.5 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.52	17.52	33.082	23.920	397.6	0.000	5.56		101.5	1.8	0.26	0.1	0.00	0.00	0.08	0.02	0	
1		17.52	17.52	33.082	23.921	397.7	0.004	5.56		101.5	1.8	0.26	0.1	0.00	0.00	0.08	0.02	1	221
10		17.53	17.53	33.085	23.921	397.9	0.040	5.58		101.9	1.6	0.25	0.1	0.00	0.00	0.08	0.01	10	219
10		17.53	17.53	33.082	23.918	398.2	0.040											10	220
20	ISL	17.53 D	17.53	33.084 D	23.920	398.3	0.080	5.50	D	100.5	1.7	0.25	0.0	0.00	0.00	0.08	0.02	20	
24		17.47	17.47	33.087	23.937	396.8	0.096	5.58		101.8	1.8	0.25	0.0	0.00	0.00	0.08	0.02	24	218
30	ISL	17.12 D	17.12	33.110 D	24.038	387.4	0.119	5.59	D	101.3	1.8	0.24	0.0	0.00	0.00	0.08	0.02	30	
41		16.25	16.24	33.098	24.231	369.4	0.161	5.76		102.6	1.9	0.23	0.0	0.00	0.00	0.10	0.03	41	217
50	ISL	15.61 D	15.60	33.140 D	24.407	352.8	0.193	5.84	D	102.7	1.7	0.23	0.0	0.00	0.00	0.12	0.04	50	
51		15.53	15.52	33.158 D	24.439	349.8	0.197	5.89		103.5	1.7	0.23	0.0	0.00	0.00	0.12	0.04	51	216
62		14.55	14.54	33.180	24.668	328.2	0.234	6.04		104.0	1.9	0.22	0.0	0.00	0.00	0.14	0.05	62	215
75		13.90	13.89	33.169	24.796	316.3	0.276	6.00		102.0	2.0	0.23	0.0	0.00	0.00	0.16	0.10	75	214
88		13.90	13.89	33.267	24.872	309.4	0.317	5.91		100.5	2.1	0.22	0.0	0.00	0.00	0.18	0.18	88	213
99		13.19	13.18	33.259	25.010	296.5	0.350	5.66		94.8	2.5	0.31	0.5	0.12	0.00	0.24	0.21	99	212
100	ISL	13.16 D	13.15	33.255 D	25.013	296.3	0.353	5.60	D	93.8	2.6	0.32	0.6	0.12	0.00	0.24	0.21	100	
113		12.95	12.93	33.357	25.134	285.1	0.391	5.45		90.9	3.7	0.41	2.5	0.04	0.00	0.17	0.18	113	211
125		12.21	12.19	33.288	25.224	276.7	0.424	5.40		88.6	4.5	0.51	4.2	0.00	0.00	0.12	0.15	126	210
141		10.81	10.79	33.217	25.424	257.6	0.467	5.20		82.8	7.2	0.77	8.2	0.00	0.00	0.09	0.16	142	209
150	ISL	10.63 D	10.61	33.306 D	25.525	248.2	0.490	4.97	D	78.9	10.1	0.96	11.2	0.00	0.00	0.06	0.13	151	
171		9.39	9.37	33.446	25.843	218.1	0.539	4.36		67.4	17.6	1.37	17.8	0.00	0.00	0.01	0.03	172	208
200	ISL	8.77 D	8.75	33.758 D	26.185	186.0	0.597	3.69	D	56.3	25.7	1.66	23.0	0.00	0.00	0.00	0.01	201	
201		8.76	8.74	33.757	26.186	185.9	0.599	3.72		56.8	25.9	1.67	23.1	0.00	0.00	0.00	0.01	202	207
230		8.54	8.52	33.940	26.364	169.6	0.651	2.98		45.3	31.8	1.91	26.6	0.00	0.00			231	206
250	ISL	8.18 D	8.15	33.983 D	26.452	161.4	0.684	2.79	D	42.1	35.3	2.03	28.4	0.00	0.00			251	
270		8.00	7.97	34.003	26.495	157.6	0.716	2.47		37.1	38.6	2.12	29.8	0.00	0.00			271	205
300	ISL	7.54 D	7.51	34.017 D	26.573	150.4	0.762	2.29	D	34.1	44.0	2.26	31.7	0.00	0.00			302	
320		7.35	7.32	34.038	26.617	146.5	0.792	1.99		29.5	47.7	2.35	32.8	0.00	0.00			322	204
381		6.77	6.73	34.099	26.745	134.9	0.877	1.17		17.1	59.4	2.68	36.7	0.00	0.00			383	203
400	ISL	6.67 D	6.63	34.119 D	26.775	132.3	0.903	1.01	D	14.7	62.2	2.75	37.5	0.00	0.00			402	
441		6.34	6.30	34.152	26.844	126.0	0.956	0.77		11.1	67.8	2.87	38.8	0.00	0.00			444	202
500	ISL	5.80 D	5.76	34.166 D	26.924	118.7	1.028	0.64	D	9.1	75.9	3.00	40.2	0.00	0.00			503	
515		5.83	5.79	34.205	26.951	116.4	1.046	0.49		7.0	77.9	3.03	40.5	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.1 N	118 29.4 W	04/08/11	0101 UTC	61 m	220	03 kn	230 02 06	4	1010.9 mb	15.3 C	15.3 C	9m	8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.44	16.44	33.422	24.435	348.6	0.000	6.29		112.7	2.9	0.30	0.1	0.00	0.00	1.03	0.12	0	
2	A	16.44	16.44	33.422	24.435	348.7	0.007	6.29		112.7	2.9	0.30	0.1	0.00	0.00	1.03	0.12	2	209
5	A	16.16	16.16	33.419	24.496	342.9	0.017	6.30		112.3	2.8	0.29	0.0	0.00	0.00	1.30	0.12	5	208
7	A	15.93	15.93	33.410	24.542	338.6	0.024	6.38		113.2	3.0	0.32	0.1	0.00	0.00	1.69	0.14	7	207
10		15.30	15.30	33.404	24.677	325.8	0.034	6.46		113.1	3.2	0.32	0.0	0.00	0.00	2.11	0.01	10	206
12	A	15.46	15.46	33.402	24.641	329.4	0.041	6.51		114.4	3.1	0.32	0.0	0.00	0.00	2.08	0.27	12	205
20	ISL	13.33 D	13.33	33.335 D	25.039	291.6	0.066	6.05	D	101.7	4.6	0.53	2.9	0.17	0.21	1.72	0.25	20	
23	A	13.33	13.33	33.329	25.034	292.2	0.074	5.74		96.5	5.1	0.66	4.7	0.29	0.29	1.51	0.24	23	204
30	ISL	12.49 D	12.49	33.361 D	25.224	274.2	0.094	4.98	D	82.3	8.7	1.03	9.5	0.72	2.52	0.92	0.27	30	
34	A	12.19	12.19	33.387	25.302	266.9	0.105	4.51		74.1	11.1	1.23	12.2	0.89	3.37	0.60	0.30	34	203
42		11.61	11.60	33.443	25.454	252.6	0.126	3.93		63.8	15.6	1.41	15.9	0.66	0.91	0.27	0.42	42	202
50		10.78	10.77	33.519	25.663	232.9	0.145	3.41		54.4	18.6	1.62	20.5	0.22	0.04	0.09	0.20	50	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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	04/08/11	0322 UTC	664 m	280	14 kn	290 03 06	0	1011.2 mb	19.0 C	17.0 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.00	16.00	33.424	24.536	338.9	0.000	6.11		108.5	4.2	0.41	1.2	0.09	0.06	2.38	0.57	0	
2		16.00	16.00	33.424	24.536	339.0	0.007	6.11		108.5	4.2	0.41	1.2	0.09	0.06	2.38	0.57	2	221
10		13.79	13.79	33.365	24.968	298.1	0.032	5.94		100.9	4.6	0.60	3.8	0.17	0.06	2.31	0.97	10	219
10		13.79	13.79	33.364	24.967	298.2	0.032											10	220
20		13.08	13.08	33.361	25.109	285.0	0.061	5.68		95.0	5.3	0.72	5.6	0.24	0.05	1.76	0.81	20	218
30		11.97	11.97	33.359	25.322	264.9	0.089	4.92		80.4	8.4	1.02	10.8	0.60	0.04	0.73	0.24	30	217
40		11.71	11.70	33.417	25.415	256.2	0.115	4.54		73.8	11.0	1.20	13.9	0.42	0.03	0.52	0.35	40	216
50		11.05	11.04	33.383	25.509	247.5	0.140	4.52		72.4	11.8	1.20	13.9	0.02	0.01	0.35	0.25	50	215
60		10.94	10.93	33.502	25.621	237.1	0.164	3.77		60.3	15.8	1.47	18.1	0.00	0.02	0.24	0.17	60	214
70		10.46	10.45	33.520	25.720	227.9	0.188	3.77		59.7	17.2	1.52	18.9	0.00	0.00	0.11	0.11	70	213
75	ISL	10.38 D	10.37	33.572 D	25.774	222.8	0.199	3.56	D	56.3	18.9	1.61	20.1	0.00	0.00	0.07	0.11	75	
85		10.11	10.10	33.674	25.900	211.1	0.221	3.07		48.3	22.4	1.79	22.7	0.00	0.00	0.03	0.12	85	212
100		9.96	9.95	33.767	25.998	202.0	0.252	2.76		43.3	25.2	1.89	24.3	0.00	0.00	0.03	0.10	101	211
120		9.65	9.64	33.862	26.124	190.4	0.291	2.62		40.8	27.3	1.96	25.0	0.00	0.00	0.01	0.10	121	210
125	ISL	9.62 D	9.61	33.904 D	26.162	186.9	0.300	2.48	D	38.6	27.8	1.98	25.3	0.00	0.00	0.01	0.10	126	
140		9.54	9.52	33.931	26.197	184.0	0.328	2.39		37.2	29.2	2.04	26.1	0.00	0.00	0.01	0.09	141	209
150	ISL	9.52 D	9.50	33.990 D	26.246	179.5	0.346	2.24	D	34.8	30.6	2.11	26.7	0.00	0.00	0.01	0.08	151	
170		9.44	9.42	34.101	26.347	170.4	0.381	1.85		28.7	33.4	2.24	27.8	0.00	0.00	0.00	0.07	171	208
200		9.06	9.04	34.100	26.408	165.1	0.432	1.93		29.7	35.4	2.24	28.5	0.00	0.00	0.01	0.05	201	207
230		9.16	9.13	34.196	26.467	160.1	0.480	1.45		22.4	37.8	2.39	29.5	0.00	0.00			231	206
250	ISL	8.83 D	8.80	34.182 D	26.509	156.4	0.512	1.50	D	23.0	40.1	2.42	30.2	0.00	0.00			252	
270		8.56	8.53	34.186	26.554	152.3	0.543	1.44		21.9	42.4	2.44	30.9	0.00	0.00			272	205
300	ISL	8.75 D	8.72	34.285 D	26.603	148.5	0.588	0.92	D	14.1	45.0	2.55	31.6	0.00	0.00			302	
321		8.51	8.48	34.271	26.630	146.2	0.619	0.91		13.9	46.6	2.64	32.0	0.00	0.00			323	204
380		8.15	8.11	34.311	26.716	138.8	0.703	0.65		9.8	52.1	2.77	33.5	0.00	0.00			382	203
400	ISL	8.01 D	7.97	34.307 D	26.734	137.4	0.731	0.63	D	9.5	53.9	2.80	34.1	0.00	0.00			403	
440		7.59	7.55	34.281	26.776	133.8	0.785	0.60		8.9	57.6	2.85	35.3	0.00	0.00			443	202
500	ISL	7.16 D	7.11	34.318 D	26.866	125.8	0.863	0.41	D	6.1	64.4	2.97	36.8	0.00	0.00			503	
515		6.99	6.94	34.316	26.888	123.8	0.881	0.37		5.4	66.1	3.00	37.2	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 39.2 N	118 58.7 W	04/08/11	0734 UTC	700 m	280	15 kn	270 03 06	4	1009.7 mb	19.3 C	17.3 C	16m	8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.40	19.40	33.497		23.772	411.8	0.000	5.34		101.3	1.8	0.23	0.0	0.00	0.07	0.21	0.06	0	
1		19.40	19.40	33.497		23.772	411.8	0.004	5.34		101.3	1.8	0.23	0.0	0.00	0.07	0.21	0.06	1	224
10		19.27	19.27	33.493		23.803	409.2	0.041	5.75		108.8	2.0	0.22	0.0	0.00	0.08	0.20	0.08	10	223
20		18.24	18.24	33.458		24.034	387.5	0.081	5.95		110.4	2.0	0.23	0.0	0.00	0.07	0.21	0.07	20	222
30	ISL	15.32	15.32	33.308	D	24.600	333.8	0.117	6.53	D	114.3	2.0	0.29	0.0	0.00	0.07	0.66	0.24	30	
31		14.73	14.73	33.322		24.738	320.6	0.120	6.57		113.7	2.0	0.30	0.0	0.00	0.07	0.71	0.26	31	221
40		13.76	13.75	33.376		24.984	297.5	0.148	5.92		100.5	3.6	0.58	3.4	0.21	0.28	0.82	0.34	40	220
50		13.43	13.42	33.376		25.051	291.3	0.177	5.65		95.2	4.5	0.70	5.2	0.30	0.27	0.71	0.20	50	219
60		12.85	12.84	33.379		25.169	280.3	0.206	5.36		89.2	5.7	0.84	7.7	0.37	0.14	0.53	0.31	60	218
70		12.48	12.47	33.393		25.252	272.6	0.234	5.16		85.3	7.0	0.94	9.4	0.32	0.08	0.44	0.23	70	217
75	ISL	11.86	11.85	33.439	D	25.405	258.1	0.247	4.77	D	77.8	9.1	1.06	11.4	0.23	0.06	0.35	0.20	75	
85		11.07	11.06	33.467		25.572	242.4	0.272	4.35		69.8	13.5	1.30	15.5	0.04	0.03	0.18	0.15	85	216
100		10.63	10.62	33.512		25.685	231.9	0.308	4.03		64.0	16.0	1.42	17.6	0.01	0.03	0.12	0.13	100	215
120		9.85	9.84	33.729		25.987	203.5	0.351	3.08		48.2	23.7	1.79	22.9	0.00	0.00	0.04	0.12	121	214
125	ISL	9.75	9.74	33.785	D	26.048	197.8	0.361	2.90	D	45.3	24.8	1.84	23.5	0.00	0.00	0.04	0.12	126	
142		9.61	9.59	33.864		26.133	190.1	0.394	2.63		41.0	27.6	1.95	24.9	0.00	0.00	0.02	0.11	143	213
150	ISL	9.56	9.54	33.904	D	26.173	186.5	0.409	2.52	D	39.2	29.0	2.01	25.6	0.00	0.00	0.02	0.10	151	
169		9.45	9.43	34.023		26.284	176.3	0.444	2.13		33.1	31.8	2.13	26.9	0.00	0.00	0.01	0.09	170	212
200		9.16	9.14	34.118		26.406	165.3	0.497	1.86		28.7	34.8	2.22	28.1	0.00	0.00	0.01	0.06	201	211
230		8.99	8.97	34.183		26.484	158.4	0.545	1.52		23.4	38.3	2.36	29.5	0.00	0.00			231	210
250	ISL	8.94	8.91	34.209	D	26.513	156.1	0.577	1.40	D	21.5	40.7	2.41	30.2	0.00	0.00			251	
270		8.46	8.43	34.200		26.581	149.8	0.607	1.39		21.1	43.0	2.45	30.8	0.00	0.00			272	209
300	ISL	8.44	8.41	34.244	D	26.619	146.8	0.652	1.11	D	16.9	46.5	2.61	31.6	0.00	0.00			302	
320		8.52	8.49	34.318		26.665	142.8	0.681	0.69		10.5	48.8	2.71	32.1	0.00	0.00			322	208
380		7.89	7.85	34.307		26.752	135.3	0.764	0.58		8.7	54.9	2.81	33.9	0.00	0.00			382	207
400	ISL	7.76	7.72	34.316	D	26.778	133.0	0.791	0.52	D	7.8	57.4	2.85	34.7	0.00	0.00			403	
439		7.31	7.27	34.306		26.835	127.9	0.842	0.46		6.8	62.2	2.91	36.0	0.00	0.00			442	206
500	ISL	6.96	6.91	34.306	D	26.884	123.9	0.919	0.40	D	5.9	66.9	2.97	36.9	0.00	0.00			503	
516		6.87	6.82	34.306		26.897	122.9	0.938	0.37		5.4	68.1	2.99	37.1	0.00	0.00			520	205
575		6.39	6.34	34.320		26.972	116.1	1.009	0.29		4.2	75.7	3.08	38.5	0.00	0.00			579	204
600	ISL	6.20	6.15	34.325	D	27.001	113.5	1.037	0.27	D	3.9	78.9	3.11	38.9	0.00	0.00			604	
631		6.07	6.01	34.331		27.022	111.7	1.072	0.23		3.3	82.5	3.15	39.3	0.00	0.00			636	203
695		5.80	5.74	34.349		27.071	107.6	1.143	0.17		2.4	88.2	3.19	39.4	0.00	0.00			700	202
700		5.76	5.70	34.353		27.079	106.8	1.148	0.17		2.4	90.5	3.21	39.2	0.00	0.00			705	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 29.1 N	119 18.8 W	04/08/11	1241 UTC	1639 m	290	22 kn		0	1010.2 mb	16.9 C	15.2 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.34	17.34	33.441		24.239	367.3	0.000	5.90		107.6	1.5	0.29	0.0	0.00	0.00	0.83	0.35	0	
2		17.34	17.34	33.441		24.239	367.4	0.007	5.90		107.6	1.5	0.29	0.0	0.00	0.00	0.83	0.35	2	221
10		17.08	17.08	33.446		24.304	361.4	0.036	5.94		107.8	1.2	0.33	0.0	0.00	0.00	0.97	0.43	10	219
10		17.08	17.08	33.447		24.305	361.3	0.036											10	220
20		15.97	15.97	33.403		24.528	340.4	0.072	6.07		107.7	2.0	0.37	0.7	0.00	0.08	1.50	0.65	20	218
30		12.56	12.56	33.380		25.225	274.1	0.102	5.62		93.0	5.0	0.77	6.4	0.20	0.14	2.31	0.96	30	217
40		12.05	12.04	33.400		25.339	263.6	0.129	5.05		82.7	7.8	0.99	9.7	0.36	0.11	1.59	0.83	40	216
49		11.50	11.49	33.429		25.464	251.9	0.152	4.43		71.7	11.7	1.22	14.0	0.18	0.02	0.60	0.52	49	215
50	ISL	11.46	11.45	33.432	D	25.473	251.0	0.155	4.37	D	70.7	11.9	1.23	14.2	0.17	0.02	0.59	0.51	50	
60		11.21	11.20	33.445		25.529	245.9	0.180	4.24		68.2	13.1	1.30	15.3	0.07	0.00	0.45	0.42	60	214
70		10.58	10.57	33.507		25.689	230.8	0.204	3.94		62.5	16.3	1.45	17.9	0.00	0.00	0.17	0.28	70	213
75	ISL	10.31	10.30	33.567	D	25.782	222.0	0.215	3.71	D	58.6	17.7	1.53	19.0	0.00	0.00	0.14	0.23	75	
86		9.98	9.97	33.644		25.899	211.2	0.239	3.46		54.3	20.8	1.71	21.3	0.00	0.00	0.08	0.15	86	212
100		9.57	9.56	33.797		26.086	193.6	0.267	3.00		46.7	25.4	1.94	24.2	0.00	0.00	0.03	0.13	101	211
119		9.28	9.27	33.915		26.226	180.7	0.303	2.66		41.1	29.0	2.00	25.9	0.00	0.00	0.01	0.09	120	210
125	ISL	9.22	9.21	33.949	D	26.262	177.3	0.313	2.58	D	39.9	30.2	2.05	26.5	0.00	0.00	0.01	0.08	126	
140		9.27	9.25	34.050		26.334	170.9	0.339	2.05		31.7	32.9	2.19	27.7	0.00	0.00	0.01	0.07	141	209
150	ISL	9.09	9.07	34.065	D	26.375	167.2	0.356	2.04	D	31.4	34.2	2.24	28.2	0.00	0.00	0.01	0.06	151	
170		8.98	8.96	34.129		26.443	161.1	0.389	1.82		28.0	36.2	2.31	29.0	0.00	0.00	0.01	0.04	171	208
200		8.68	8.66	34.132		26.492	156.9	0.437	1.72		26.3	39.1	2.37	30.1	0.00	0.00	0.01	0.04	201	207
230		8.92	8.90	34.215		26.520	155.0	0.484	1.25		19.2	41.0	2.51	30.7	0.00	0.00			231	206
250	ISL	8.74	8.71	34.239	D	26.568	150.8	0.514	1.11	D	17.0	43.6	2.62	31.5	0.00	0.00			251	
270		8.50	8.47	34.261		26.622	145.9	0.544	0.92		14.0	46.5	2.72	32.3	0.00	0.00			272	205
300	ISL	8.28	8.25	34.275	D	26.667	142.0	0.587	0.78	D	11.8	49.4	2.79	33.2	0.00	0.00			302	
320		8.13	8.10	34.285		26.698	139.4	0.615	0.70		10.6	51.0	2.82	33.7	0.00	0.00			322	204
380		7.90	7.86	34.313		26.755	135.0	0.698	0.55		8.3	54.4	2.90	34.4	0.00	0.00			382	203
400	ISL	7.65	7.61	34.304	D	26.785	132.3	0.724	0.53	D	7.9	56.8	2.93	35.0	0.00	0.00			403	
441		7.23	7.19	34.299		26.841	127.3	0.778	0.45		6.7	62.5	3.00	36.5	0.00	0.00			444	202
500	ISL	6.68	6.63	34.310	D	26.925	119.7	0.850	0.35	D	5.1	69.4	3.10	38.0	0.00	0.00			503	
515		6.64	6.59	34.312		26.932	119.2	0.868	0.33		4.8	71.1	3.12	38.4	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 19.0 N	119 40.9 W	04/08/11	1658 UTC	68 m	300	25 kn		0	1010.8 mb	16.1 C	14.9 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.74	16.74	33.610		24.509	341.5	0.000	5.80		104.7	0.4	0.43	0.5	0.05	0.03	3.81	1.02	0	
3		16.74	16.74	33.610		24.510	341.6	0.010	5.80		104.7	0.4	0.43	0.5	0.05	0.03	3.81	1.02	3	209
5		16.74	16.74	33.609		24.509	341.7	0.017	5.81		104.8	0.2	0.41	0.4	0.05	0.03	3.79	1.14	5	208
10		16.74	16.74	33.610		24.510	341.8	0.034	5.80		104.7	0.1	0.39	0.3	0.06	0.00	3.77	1.06	10	207
10		16.74	16.74	33.610		24.510	341.8	0.034	5.80		104.7	0.0	0.38	0.3	0.04	0.06	3.76	1.12	10	206
20		15.52	15.52	33.576		24.762	318.1	0.067	5.78		101.8	1.1	0.48	1.5	0.10	0.06	5.19	1.63	20	205
30		12.64	12.64	33.487		25.293	267.7	0.096	5.00		83.0	7.7	1.06	9.4	0.22	0.07	2.82	1.07	30	204
40		11.29	11.29	33.474		25.537	244.7	0.122	4.22		68.0	13.3	1.41	15.4	0.16	0.00	0.64	0.44	40	203
49		10.68	10.67	33.588		25.734	226.1	0.143	3.67		58.4	18.3	1.57	19.1	0.11	0.00	0.35	0.32	49	202
50	ISL	10.54	10.53	33.624	D	25.787	221.1	0.145	3.54	D	56.2	18.9	1.60	19.5	0.10	0.00	0.33	0.31	50	
60		9.98	9.97	33.746		25.978	203.1	0.167	3.05		47.9	24.4	1.87	23.4	0.05	0.00	0.10	0.17	60	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.5 N	120 1.1 W	04/08/11	2034 UTC	1184 m	320 26 kn		0	1010.9 mb	16.1 C	14.9 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.86	15.86	33.566		24.677	325.5	0.000	5.70		101.1	0.8	0.44	1.2	0.03	0.22	2.42	0.59	0	
2		15.86	15.86	33.566		24.677	325.6	0.007	5.70		101.1	0.8	0.44	1.2	0.03	0.22	2.42	0.59	2	222
10	ISL	15.87	15.87	33.567	D	24.676	325.9	0.033	5.65	D	100.2	0.8	0.44	1.2	0.03	0.22	2.42	0.59	10	
10		15.87	15.87	33.567		24.676	325.9	0.033											10	221
11		15.87	15.87	33.566		24.675	326.0	0.036	5.70		101.1	0.5	0.42	1.2	0.06	0.20	2.49	0.60	11	220
20		15.87	15.87	33.566		24.676	326.3	0.065	5.71		101.2	0.6	0.39	1.1	0.08	0.20	2.49	0.55	20	219
30		15.88	15.88	33.566		24.674	326.8	0.098	5.69		100.9	0.6	0.43	1.2	0.07	0.23	2.46	0.57	30	217
40		15.76	15.75	33.564		24.699	324.6	0.130	5.67		100.3	0.8	0.41	1.4	0.08	0.25	2.40	0.61	40	216
50	ISL	15.66	D 15.65	33.559	D	24.718	323.2	0.163	5.59	D	98.7	0.7	0.47	1.6	0.09	0.32	2.25	0.60	50	
51		15.68	15.67	33.561		24.715	323.5	0.166	5.66		100.0	0.7	0.48	1.6	0.09	0.33	2.23	0.60	51	215
59		13.70	13.69	33.472		25.071	289.7	0.191	5.39		91.4	3.3	0.73	4.4	0.32	0.88	1.30	0.70	59	214
70		11.57	11.56	33.572		25.562	243.0	0.220	4.14		67.2	14.0	1.38	15.3	0.22	0.22	0.73	0.54	70	213
75	ISL	11.47	D 11.46	33.616	D	25.615	238.1	0.232	3.80	D	61.5	16.5	1.52	17.7	0.18	0.16	0.66	0.53	75	
85		10.37	10.36	33.676		25.857	215.2	0.255	3.40		53.8	19.9	1.68	20.5	0.11	0.04	0.59	0.52	85	212
100		9.59	9.58	33.838		26.115	190.9	0.285	2.70		42.0	26.6	1.95	25.1	0.01	0.03	0.17	0.32	100	211
119		9.43	9.42	33.926		26.210	182.2	0.320	2.42		37.6	29.6	2.06	26.4	0.01	0.03	0.12	0.55	120	210
125	ISL	9.29	D 9.28	33.966	D	26.265	177.2	0.331	2.32	D	35.9	30.8	2.09	26.9	0.01	0.02	0.11	0.48	126	
140		9.08	9.06	34.031		26.349	169.4	0.357	2.07		31.9	33.8	2.16	28.1	0.00	0.00	0.08	0.23	141	209
150	ISL	8.89	D 8.87	34.074	D	26.413	163.5	0.374	2.01	D	30.8	34.8	2.19	28.7	0.00	0.00	0.06	0.16	151	
170		8.71	8.69	34.092		26.456	159.8	0.406	1.85		28.3	36.7	2.27	29.6	0.00	0.00	0.02	0.09	171	208
199		8.50	8.48	34.198		26.572	149.3	0.451	1.30		19.8	43.0	2.48	31.2	0.00	0.00	0.02	0.08	200	207
200	ISL	8.48	D 8.46	34.200	D	26.577	148.8	0.452	1.29	D	19.6	43.1	2.48	31.2	0.00	0.00			201	
229		8.32	8.30	34.215		26.613	145.8	0.495	1.11		16.8	45.9	2.57	32.3	0.00	0.00			230	206
250	ISL	8.20	D 8.17	34.244	D	26.654	142.3	0.525	0.95	D	14.4	48.3	2.63	33.1	0.00	0.00			251	
270		7.97	7.94	34.243		26.688	139.3	0.554	0.94		14.1	50.5	2.68	33.7	0.00	0.00			272	205
300	ISL	7.77	D 7.74	34.257	D	26.729	135.9	0.595	0.75	D	11.2	53.0	2.72	34.4	0.00	0.00			302	
320		7.62	7.59	34.241		26.738	135.3	0.622	0.77		11.5	54.5	2.75	34.8	0.00	0.00			322	204
380		7.35	7.31	34.290		26.816	128.8	0.701	0.50		7.4	59.8	2.89	35.9	0.00	0.00			382	203
400	ISL	7.07	D 7.03	34.279	D	26.847	125.9	0.727	0.50	D	7.4	61.8	2.92	36.5	0.00	0.00			403	
440		6.87	6.83	34.291		26.884	122.9	0.776	0.44		6.5	65.9	2.96	37.6	0.00	0.00			443	202
500	ISL	6.37	D 6.32	34.321	D	26.975	114.7	0.848	0.31	D	4.5	72.8	3.06	38.8	0.00	0.00			503	
515		6.34	6.29	34.319		26.977	114.6	0.865	0.30		4.3	74.5	3.08	39.1	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 0.2 N	120 21.8 W	05/08/11	0137 UTC	662 m	320 21 kn	340 06 06	2	1013.9 mb	17.1 C	15.9 C	9m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.55	16.55	33.513		24.479	344.4	0.000	5.82		104.6	0.8	0.33	0.0	0.00	0.09	1.41	0.21	0	
2	A	16.55	16.55	33.513		24.479	344.4	0.007	5.82		104.6	0.8	0.33	0.0	0.00	0.09	1.41	0.21	2	223
5	A	16.55	16.55	33.512		24.479	344.6	0.017	5.82		104.6	0.7	0.28	0.0	0.00	0.08	1.26	0.33	5	222
7	A	16.55	16.55	33.511		24.478	344.7	0.024	5.85		105.1	0.7	0.32	0.0	0.00	0.10	1.24	0.34	7	221
10	ISL	16.54	D 16.54	33.512	D	24.481	344.5	0.034	5.77	D	103.6	0.8	0.30	0.0	0.00	0.10	1.20	0.34	10	
12	A	16.54	16.54	33.510		24.480	344.7	0.041	5.83		104.7	0.8	0.29	0.0	0.00	0.10	1.18	0.34	12	219
12		16.54	16.54	33.526		24.492	343.6	0.041	5.82		104.6								12	220
20	ISL	16.53	D 16.53	33.510	D	24.482	344.7	0.069	5.78	D	103.8	0.8	0.30	0.0	0.00	0.09	1.11	0.42	20	
23	A	16.50	16.50	33.508		24.488	344.3	0.079	5.81		104.3	0.8	0.31	0.0	0.00	0.09	1.10	0.45	23	218
30	ISL	16.47	D 16.47	33.503	D	24.491	344.2	0.103	5.76	D	103.3	0.6	0.32	0.0	0.00	0.11	1.18	0.38	30	
34	A	16.41	16.40	33.502		24.504	343.1	0.117	5.80		103.9	0.6	0.33	0.1	0.00	0.12	1.23	0.33	34	217
42		16.22	16.21	33.494		24.542	339.8	0.144	5.75		102.6	1.0	0.35	0.3	0.01	0.25	1.21	0.37	42	216
50		14.71	14.70	33.499		24.880	307.7	0.170	5.36		92.8	3.1	0.71	3.3	0.35	1.90	0.89	0.51	50	215
60		12.15	12.14	33.371		25.298	268.0	0.199	5.13		84.2	5.2	0.98	9.0	0.68	0.13	0.24	0.25	60	214
70		10.87	10.86	33.488		25.623	237.1	0.224	4.32		69.0	13.6	1.43	16.9	0.00	0.00	0.11	0.13	70	213
75	ISL	10.81	D 10.80	33.505	D	25.647	234.9	0.236	4.21	D	67.2	15.3	1.51	18.3	0.00	0.00	0.10	0.13	75	
84		10.44	10.43	33.560		25.755	224.9	0.257	3.89		61.6	17.3	1.58	19.5	0.00	0.00	0.08	0.12	84	212
100		9.46	9.45	33.681		26.014	200.5	0.291	3.21		49.8	24.0	1.83	23.8	0.00	0.00	0.04	0.10	100	211
120		9.24	9.23	33.854	D	26.185	184.6	0.329	2.57	D	39.7								121	210
125	ISL	9.20	D 9.19	33.881	D	26.213	182.1	0.339	2.52	D	38.9	29.7	2.05	27.1	0.00	0.00	0.02	0.10	126	
140		9.00	8.98	33.915		26.271	176.8	0.365	2.38		36.6	31.7	2.12	27.9	0.00	0.00	0.01	0.10	141	209
150	ISL	8.87	D 8.85	33.966	D	26.332	171.2	0.383	2.31	D	35.4	33.0	2.15	28.3	0.00	0.00	0.01	0.09	151	
170		8.64	8.62	34.021		26.411	164.0	0.416	2.15		32.8	36.2	2.22	29.3	0.00	0.00	0.01	0.07	171	208
200		8.09	8.07	34.035		26.506	155.3	0.464	2.27		34.2	39.8	2.21	29.9	0.00	0.00	0.01	0.04	201	207
230		7.78	7.76	34.021		26.541	152.4	0.510	2.34		35.0	41.5	2.23	30.5	0.00	0.00			231	206
250	ISL	7.48	D 7.46	34.023	D	26.586	148.4	0.540	2.18	D	32.4	44.4	2.31	31.6	0.00	0.00			251	
270		7.34	7.31	34.049		26.626	144.8	0.570	1.87		27.7	48.3	2.41	33.1	0.00	0.00			272	205
300	ISL	6.93	D 6.90	34.084	D	26.711	137.0	0.612	1.42	D	20.8	55.4	2.60	35.5	0.00	0.00			302	
320		6.67	6.64	34.091		26.751	133.3	0.639	1.16		16.9	59.7	2.72	36.9	0.00	0.00			322	204
380		6.79	6.75	34.214		26.833	126.6	0.717	0.68		9.9	63.8	2.89	37.5	0.00	0.00			382	203
400	ISL	6.39	D 6.35	34.179	D	26.859	124.1	0.742	0.74	D	10.7	65.6	2.93	37.8	0.00	0.00			403	
440		6.49	6.45	34.243		26.897	121.3	0.791	0.51		7.4	69.5	3.00	38.5	0.00	0.00			443	202
500	ISL	6.21	D 6.17	34.300	D	26.979	114.1	0.862	0.34	D	4.9	76.1	3.07	39.8	0.00	0.00			503	
516		6.10	6.05	34.314		27.004	111.8	0.880	0.29		4.2	77.9	3.09	40.1	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.3 N	121 2.2 W	05/08/11	1049 UTC	3774 m	330 23 kn	340 07 06	1	1013.5 mb	16.9 C	15.0 C		7/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.87	16.87		33.562	24.442	347.9	0.000	5.80		104.9		1.3	0.29	0.0	0.00	0.09	1.14	0.41	0	
2		16.87	16.87		33.562	24.442	347.9	0.007	5.80		104.9		1.3	0.29	0.0	0.00	0.09	1.14	0.41	2	221
9		16.87	16.87		33.566	24.446	347.9	0.031	5.81		105.1		1.3	0.28	0.0	0.00	0.07	1.14	0.40	9	219
10	ISL	16.87	16.87	D	33.563	24.443	348.1	0.035	5.76	D	104.2		1.3	0.28	0.0	0.00	0.07	1.14	0.40	10	
10		16.87	16.87		33.565	24.445	348.0	0.035												10	220
20		16.84	16.84		33.564	24.452	347.7	0.070	5.79		104.6		1.2	0.31	0.1	0.00	0.16	1.17	0.44	20	218
30		15.86	15.86		33.554	24.669	327.2	0.103	5.60		99.3		2.2	0.49	1.4	0.05	0.82	1.03	0.58	30	217
39		14.36	14.35		33.535	24.982	297.7	0.131	5.33		91.7		4.2	0.76	4.5	0.54	1.37	0.73	0.47	39	216
50		12.90	12.89		33.535	25.280	269.5	0.163	4.99		83.3		7.0	1.04	10.6	0.46	0.03	0.22	0.25	50	215
60		11.93	11.92		33.588	25.508	248.0	0.189	4.50		73.6		10.9	1.29	15.0	0.00	0.04	0.09	0.18	60	214
72		11.15	11.14		33.586	25.650	234.7	0.217	4.14		66.6		14.1	1.45	17.7	0.00	0.00	0.07	0.15	72	213
75	ISL	10.90	10.89	D	33.606	25.710	229.0	0.224	3.98	D	63.7		15.2	1.50	18.5	0.00	0.00	0.06	0.14	75	
85		10.36	10.35		33.663	25.849	216.0	0.247	3.53		55.8		19.4	1.68	21.2	0.00	0.00	0.05	0.13	85	212
99		9.73	9.72		33.797	26.060	196.1	0.276	2.75		42.9		25.9	1.93	25.2	0.00	0.00	0.04	0.12	99	211
100	ISL	9.58	9.57	D	33.827	26.108	191.5	0.277	2.68	D	41.7		26.2	1.94	25.3	0.00	0.00	0.04	0.12	100	
119		9.32	9.31		33.898	26.206	182.6	0.313	2.41		37.3		30.1	2.06	27.1	0.00	0.00	0.01	0.10	120	210
125	ISL	9.14	9.13	D	33.944	26.271	176.5	0.324	2.27	D	35.0		31.8	2.11	27.8	0.00	0.00	0.01	0.09	126	
139		8.94	8.93		34.039	26.378	166.6	0.348	1.94		29.8		35.8	2.22	29.2	0.00	0.00	0.00	0.08	140	209
150	ISL	8.82	8.80	D	34.083	26.431	161.7	0.366	1.67	D	25.6		38.1	2.28	30.0	0.00	0.00	0.00	0.07	151	
170		8.50	8.48		34.117	26.508	154.8	0.397	1.59		24.2		41.1	2.37	31.0	0.00	0.00	0.00	0.06	171	208
199		8.31	8.29		34.153	26.566	149.8	0.442	1.44		21.8		43.8	2.47	32.1	0.00	0.00	0.00	0.06	200	207
200	ISL	8.31	8.29	D	34.152	26.565	149.9	0.443	1.33	D	20.2		43.9	2.47	32.1	0.00	0.00			201	
230		7.95	7.93		34.140	26.609	146.0	0.488	1.36		20.4		46.7	2.51	33.0	0.00	0.00			231	206
250	ISL	7.62	7.60	D	34.137	26.655	141.8	0.516	1.26	D	18.8		49.3	2.54	33.8	0.00	0.00			251	
270		7.44	7.41		34.126	26.673	140.4	0.545	1.27		18.9		52.2	2.59	34.7	0.00	0.00			272	205
300	ISL	7.17	7.14	D	34.145	26.726	135.7	0.586	1.07	D	15.8		56.1	2.71	35.6	0.00	0.00			302	
320		7.23	7.20		34.200	26.761	132.8	0.613	0.83		12.3		58.6	2.78	36.2	0.00	0.00			322	204
378		6.58	6.55		34.165	26.823	127.4	0.688	0.81		11.8		64.8	2.84	38.1	0.00	0.00			380	203
400	ISL	6.42	6.38	D	34.166	26.845	125.5	0.716	0.79	D	11.5		67.1	2.88	38.6	0.00	0.00			403	
440		6.13	6.09		34.178	26.892	121.3	0.765	0.66		9.5		71.9	2.95	39.4	0.00	0.00			443	202
500	ISL	5.63	5.59	D	34.193	26.966	114.6	0.836	0.52	D	7.4		81.5	3.06	41.0	0.00	0.00			503	
517		5.53	5.49		34.221	27.001	111.4	0.855	0.42	D	6.0		84.2	3.09	41.4	0.00	0.00			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 19.6 N	121 43.6 W	05/08/11	1701 UTC	4045 m	330 19 kn		0	1015.1 mb	16.2 C	14.9 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.13	17.13		33.045	23.985	391.5	0.000	5.67		102.7		1.6	0.25	0.1	0.00	0.00	0.08	0.03	0	
2		17.13	17.13		33.045	23.985	391.6	0.008	5.67		102.7		1.6	0.25	0.1	0.00	0.00	0.08	0.03	2	221
9		17.13	17.13		33.045	23.985	391.8	0.035	5.63		102.0		1.7	0.25	0.1	0.00	0.00	0.08	0.03	9	219
10	ISL	17.13	17.13	D	33.045	23.985	391.8	0.039	5.57	D	100.9		1.7	0.25	0.1	0.00	0.00	0.08	0.03	10	
10		17.13	17.13		33.045	23.985	391.8	0.039	5.63		102.0									10	220
20	ISL	17.13	17.13	D	33.045	23.985	392.1	0.078	5.55	D	100.6		1.6	0.24	0.0	0.00	0.00	0.08	0.03	20	
25		17.13	17.13		33.047	23.987	392.1	0.098	5.63		102.0		1.6	0.24	0.0	0.00	0.00	0.08	0.03	25	218
30	ISL	17.06	17.06	D	33.043	24.001	391.0	0.118	5.56	D	100.6		1.6	0.27	0.0	0.00	0.00	0.10	0.04	30	
40		16.20	16.19		33.024	24.185	373.7	0.156	5.79		103.0		1.5	0.32	0.0	0.00	0.00	0.14	0.06	40	217
50		15.73	15.72		33.040	24.303	362.7	0.193	5.89		103.8		1.2	0.25	0.0	0.00	0.00	0.16	0.07	50	216
62		14.66	14.65		33.065	24.556	338.8	0.235	6.04		104.2		1.8	0.24	0.0	0.00	0.00	0.17	0.08	62	215
75		13.67	13.66		33.027	24.733	322.3	0.278	6.10		103.1		1.8	0.25	0.0	0.00	0.00	0.38	0.23	75	214
88		12.97	12.96		33.044	24.887	307.9	0.319	5.91		98.4		2.0	0.33	0.4	0.03	0.00	0.42	0.39	88	213
100		12.60	12.59		33.145	25.037	293.8	0.355	5.59		92.4		3.4	0.49	3.1	0.01	0.00	0.28	0.34	100	212
112		12.12	12.11		33.155	25.137	284.5	0.389	5.44		89.1		4.8	0.65	5.7	0.00	0.00	0.18	0.19	112	211
124		11.54	11.52		33.247	25.317	267.7	0.423	5.24		84.8		6.0	0.70	7.0	0.00	0.00	0.14	0.16	125	210
125	ISL	11.38	11.36	D	33.263	25.358	263.7	0.425	5.13	D	82.7		6.3	0.72	7.3	0.00	0.00	0.13	0.15	126	
140		10.31	10.29		33.333	25.601	240.7	0.463	4.78		75.3		11.6	1.07	12.9	0.00	0.00	0.05	0.06	141	209
150	ISL	9.97	9.95	D	33.383	25.698	231.6	0.487	4.61	D	72.1		14.8	1.24	15.8	0.00	0.00	0.03	0.05	151	
170		9.38	9.36		33.629	25.987	204.4	0.530	4.02		62.2		20.2	1.48	20.0	0.00	0.00	0.00	0.02	171	208
200	ISL	8.83	8.81	D	33.818	26.223	182.4	0.588	3.59	D	54.9		26.0	1.68	23.3	0.00	0.00	0.00	0.01	201	
201		8.79	8.77		33.815	26.227	182.1	0.590	3.60		55.0		26.2	1.69	23.4	0.00	0.00	0.00	0.01	202	207
231		8.49	8.47		33.943	26.374	168.6	0.643	2.81		42.7		33.0	1.98	27.5	0.00	0.00			232	206
250	ISL	8.22	8.19	D	33.983	26.446	161.9	0.674	2.55	D	38.5		36.1	2.05	28.7	0.00	0.00			251	
270		7.88	7.85		33.995	26.506	156.4	0.706	2.55		38.2		39.2	2.11	29.6	0.00	0.00			271	205
300	ISL	7.44	7.41	D	34.028	26.596	148.2	0.752	2.12	D	31.5		45.9	2.32	32.2	0.00	0.00			302	
320		7.46	7.43		34.085	26.638	144.6	0.781	1.58		23.5		50.3	2.47	33.8	0.00	0.00			322	204
380		7.36	7.32		34.221	26.760	134.0	0.864	0.79		11.7		57.4	2.75	35.5	0.00	0.00			382	203
400	ISL	7.22	7.18	D	34.243	26.797	130.7	0.891	0.65	D	9.6		59.9	2.81	36.1	0.00	0.00			402	
440		6.86	6.82		34.244	26.848	126.2	0.942	0.57		8.4		65.4	2.91	37.4	0.00	0.00			443	202
500	ISL	6.43	6.38	D	34.282	26.936	118.4	1.016	0.39	D	5.7		75.0	2.99	39.5	0.00	0.00			503	
516		5.84	5.80		34.204	26.949	116.6	1.034	0.53		7.6		77.6	3.01	40.1	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 59.7 N	122 24.3 W	06/08/11	0007 UTC	4124 m	340 19 kn	340 05 05	2	1016.0 mb	17.0 C	15.1 C	19m	8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.27	17.27		33.086	23.983	391.7	0.000	5.60		101.8	1.3	0.29	0.1	0.00	0.00	0.12	0.02	0	
2	A	17.27	17.27		33.086	23.983	391.7	0.008	5.60		101.8	1.3	0.29	0.1	0.00	0.00	0.12	0.02	2	221
10	A	17.27	17.27		33.084	23.982	392.1	0.039	5.61		102.0	1.6	0.28	0.0	0.00	0.00	0.12	0.03	10	219
10		17.27	17.27		33.085	23.983	392.0	0.039											10	220
14	A	17.28	17.28		33.087	23.982	392.2	0.055	5.60		101.8	1.6	0.27	0.0	0.00	0.00	0.18	0.03	14	218
20	ISL	17.26	D 17.26		33.088	D 23.988	391.9	0.078	5.55	D	100.8	1.5	0.28	0.0	0.00	0.00	0.20	0.04	20	
25	A	16.55	16.55		33.118	24.177	374.0	0.098	5.79		103.8	1.3	0.29	0.0	0.00	0.00	0.22	0.06	25	217
30	ISL	16.39	D 16.39		33.124	D 24.218	370.2	0.116	5.77	D	103.1	1.3	0.29	0.0	0.00	0.00	0.24	0.07	30	
38		16.07	16.06		33.129	24.295	363.1	0.145	5.88		104.4	1.2	0.28	0.0	0.00	0.00	0.27	0.09	38	216
50	A	15.71	15.70		33.144	24.388	354.6	0.189	5.93		104.5	1.3	0.30	0.1	0.00	0.00	0.55	0.26	50	215
60		14.48	14.47		33.039	24.574	337.1	0.223	6.03		103.6	1.6	0.28	0.0	0.00	0.00	0.42	0.27	60	214
72	A	13.60	13.59		33.000	24.727	322.8	0.263	6.06		102.2	2.0	0.28	0.0	0.00	0.00	0.32	0.28	72	213
75	ISL	13.48	D 13.47		32.996	D 24.748	320.8	0.272	5.96	D	100.3	2.0	0.29	0.2	0.05	0.00	0.31	0.30	75	
85		13.19	13.18		33.000	24.809	315.2	0.304	5.91		98.9	2.4	0.37	0.7	0.19	0.00	0.28	0.35	85	212
100		12.20	12.19		33.155	25.122	285.7	0.349	5.47		89.7	4.5	0.63	5.2	0.00	0.00	0.12	0.21	100	211
120		11.05	11.04		33.262	25.416	257.9	0.404	5.02		80.4	9.1	0.98	10.9	0.00	0.00	0.04	0.07	121	210
125	ISL	10.83	D 10.81		33.282	D 25.471	252.8	0.416	4.95	D	78.9	9.9	1.02	11.6	0.00	0.00	0.04	0.07	126	
140		10.09	10.07		33.331	25.637	237.2	0.453	4.70		73.7	12.7	1.14	13.8	0.00	0.00	0.03	0.06	141	209
150	ISL	9.81	D 9.79		33.400	D 25.738	227.8	0.476	4.49	D	70.0	16.9	1.35	17.1	0.00	0.00	0.02	0.05	151	
170		9.16	9.14		33.738	26.108	192.9	0.518	3.29		50.7	25.8	1.78	23.8	0.00	0.00	0.01	0.02	171	208
200	ISL	8.78	D 8.76		33.965	D 26.346	170.8	0.573	2.49	D	38.1	32.6	2.04	27.5	0.00	0.00	0.00	0.03	201	
201		8.76	8.74		33.963	26.348	170.6	0.575	2.53		38.7	32.7	2.04	27.5	0.00	0.00	0.00	0.03	202	207
231		8.45	8.43		34.000	26.425	163.8	0.625	2.48	D	37.7	35.1	2.02	28.0	0.00	0.00			232	206
250	ISL	8.36	D 8.33		34.057	D 26.483	158.5	0.655	2.00	D	30.3	39.0	2.17	29.8	0.00	0.00			251	
271		8.07	8.04		34.094	26.556	151.9	0.688	1.71		25.8	43.9	2.37	32.0	0.00	0.00			272	205
300	ISL	7.56	D 7.53		34.103	D 26.638	144.3	0.731	1.59	D	23.7	49.6	2.50	33.9	0.00	0.00			302	
321		7.28	7.25		34.112	26.685	140.0	0.761	1.35		20.0	53.3	2.57	34.9	0.00	0.00			323	204
380		6.76	6.72		34.150	26.787	131.0	0.841	0.98		14.3	61.4	2.75	37.1	0.00	0.00			382	203
400	ISL	6.71	D 6.67		34.171	D 26.810	129.0	0.867	0.83	D	12.1	64.0	2.82	37.7	0.00	0.00			402	
440		6.42	6.38		34.203	26.874	123.3	0.917	0.63		9.1	68.9	2.93	38.7	0.00	0.00			443	202
500	ISL	5.99	D 5.95		34.217	D 26.941	117.4	0.989	0.52	D	7.5	75.9	3.01	40.1	0.00	0.00			503	
515		5.93	5.89		34.226	26.956	116.1	1.007	0.48		6.9	77.7	3.03	40.4	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 39.8 N	123 4.7 W	06/08/11	0539 UTC	4123 m	350 19 kn	330 05 05	2	1017.4 mb	19.5 C	17.0 C	19m	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	18.36	18.36		33.294	23.879	401.6	0.000	5.56		103.3	1.5	0.27	0.1	0.00	0.00	0.11	0.02	0	
2		18.36	18.36		33.294	23.879	401.7	0.008	5.56		103.3	1.5	0.27	0.1	0.00	0.00	0.11	0.02	2	222
10		18.34	18.34		33.295	23.885	401.4	0.040	5.49		102.0	1.2	0.27	0.0	0.00	0.00	0.13	0.01	10	220
10		18.34	18.34		33.294	23.884	401.5	0.040											10	221
20	ISL	18.34	D 18.34		33.296	D 23.886	401.6	0.080	5.44	D	101.0	1.3	0.27	0.0	0.00	0.00	0.13	0.02	20	
25		18.32	18.32		33.296	23.891	401.3	0.100	5.50		102.1	1.3	0.27	0.0	0.00	0.00	0.13	0.02	25	219
30	ISL	18.32	D 18.31		33.297	D 23.892	401.4	0.120	5.44	D	101.0	1.3	0.27	0.0	0.00	0.00	0.14	0.02	30	
40		17.43	17.42		33.292	24.104	381.5	0.160	5.52		100.7	1.4	0.27	0.0	0.00	0.00	0.17	0.02	40	218
50		14.79	14.78		33.203	24.634	331.1	0.195	6.41		111.0	1.4	0.26	0.0	0.00	0.00	0.51	0.05	50	217
62		13.49	13.48		33.144	24.860	309.8	0.234	6.09		102.6	2.0	0.41	1.6	0.18	0.00	0.89	0.30	62	216
75		12.62	12.61		33.228	25.097	287.5	0.272	5.53		91.5	4.2	0.71	6.5	0.21	0.00	0.54	0.36	75	215
87		11.64	11.63		33.210	25.269	271.3	0.306	5.22		84.6	6.5	0.84	8.9	0.00	0.00	0.24	0.17	87	214
100		10.69	10.68		33.286	25.498	249.6	0.340	4.80		76.3	11.2	1.10	13.3	0.00	0.00	0.06	0.08	100	213
112		10.59	10.58		33.445	25.640	236.5	0.369	4.48		71.1	13.2	1.29	16.1	0.00	0.00	0.04	0.06	112	212
125		10.11	10.10		33.544	25.799	221.5	0.399	3.88		61.0	18.1	1.54	19.9	0.00	0.00	0.02	0.04	126	210
140		9.66	9.64		33.620	25.934	208.9	0.431	3.55		55.3	21.1	1.67	22.0	0.00	0.00	0.01	0.05	141	209
150	ISL	9.43	D 9.41		33.760	D 26.081	195.1	0.451	2.99	D	46.3	24.2	1.78	23.8	0.00	0.00	0.01	0.05	151	
170		8.88	8.86		33.898	26.277	176.7	0.488	2.68		41.1	30.2	1.98	27.1	0.00	0.00	0.00	0.04	171	208
200		8.64	8.62		33.965	26.368	168.7	0.540	2.47		37.7	33.3	2.06	28.4	0.00	0.00	0.00	0.04	201	207
230		8.25	8.23		34.017	26.468	159.5	0.590	2.36		35.7	37.1	2.13	29.4	0.00	0.00			231	206
250	ISL	8.10	D 8.07		34.068	D 26.531	153.9	0.621	1.99	D	30.0	41.1	2.25	30.9	0.00	0.00			251	
270		7.70	7.67		34.076	26.596	147.8	0.651	1.78		26.6	45.4	2.38	32.6	0.00	0.00			271	205
300	ISL	7.40	D 7.37		34.103	D 26.661	142.1	0.695	1.41	D	20.9	50.6	2.54	34.4	0.00	0.00			302	
320		7.19	7.16		34.129	26.711	137.5	0.722	1.19		17.6	54.0	2.63	35.4	0.00	0.00			322	204
380		6.29	6.26		34.126	26.829	126.5	0.802	0.90		13.0	66.5	2.84	38.6	0.00	0.00			382	203
400	ISL	6.18	D 6.14		34.139	D 26.854	124.4	0.827	0.83	D	12.0	69.6	2.90	39.3	0.00	0.00			402	
440		5.83	5.79		34.165	26.919	118.5	0.875	0.63		9.0	74.9	2.99	40.3	0.00	0.00			443	202
500	ISL	5.53	D 5.49		34.209	D 26.991	112.1	0.945	0.47	D	6.7	81.9	3.06	41.3	0.00	0.00			503	
514		5.43	5.39		34.222	27.013	110.1	0.960	0.44		6.2	83.5	3.08	41.5	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 19.4 N	123 44.7 W	06/08/11	1131 UTC	4016 m	340 16 kn	350 04 06	2	1017.0 mb	18.1 C	15.2 C		8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.29	18.29	33.284	23.888	400.7	0.000	5.51	102.2	1.3	0.26	0.1	0.00	0.00	0.09	0.03	0	
3		18.29	18.29	33.284	23.888	400.8	0.012	5.51	102.2	1.3	0.26	0.1	0.00	0.00	0.09	0.03	3	221
10		18.29	18.29	33.286	23.890	400.9	0.040	5.49	101.9	1.2	0.26	0.0	0.00	0.00	0.08	0.03	10	219
10		18.29	18.29	33.281	23.886	401.2	0.040										10	220
20	ISL	18.29 D	18.29	33.281 D	23.887	401.6	0.080	5.43	D100.8	1.2	0.26	0.0	0.00	0.00	0.09	0.03	20	
25		18.28	18.28	33.279	23.888	401.6	0.100	5.48	101.7	1.2	0.26	0.0	0.00	0.00	0.10	0.03	25	218
30	ISL	18.29 D	18.28	33.281 D	23.887	401.9	0.120	5.42	D100.6	1.1	0.26	0.0	0.00	0.00	0.11	0.04	30	
40		16.65	16.64	33.245	24.252	367.4	0.159	5.63	101.2	1.0	0.25	0.0	0.00	0.00	0.13	0.05	40	217
50		14.31	14.30	33.191	24.727	322.2	0.193	6.14	105.3	1.3	0.36	1.0	0.00	0.00	0.64	0.40	50	216
62		13.46	13.45	33.163	24.881	307.9	0.231	5.86	98.7	1.9	0.51	2.3	0.24	0.40	0.47	0.38	62	215
75		12.48	12.47	33.164	25.075	289.6	0.270	5.63	92.9	3.1	0.63	4.3	0.42	0.17	0.13	0.13	75	214
86		11.39	11.38	33.133	25.254	272.6	0.301	5.31	85.6	5.8	0.72	6.7	0.00	0.00	0.10	0.12	86	213
99		10.34	10.33	33.209	25.499	249.5	0.335	4.90	77.2	10.2	1.03	11.8	0.00	0.00	0.04	0.07	99	212
100	ISL	10.33 D	10.32	33.214 D	25.504	249.0	0.337	4.87	D 76.7	10.6	1.06	12.2	0.00	0.00	0.04	0.07	100	
111		10.29	10.28	33.437	25.685	232.0	0.364	4.33	68.3	15.0	1.35	16.8	0.00	0.00	0.01	0.05	111	211
123		9.97	9.96	33.535	25.816	219.8	0.391	3.89	60.9	18.5	1.55	19.8	0.00	0.00	0.01	0.05	124	210
125	ISL	9.86 D	9.85	33.564 D	25.857	215.9	0.395	3.79	D 59.2	19.2	1.58	20.3	0.00	0.00	0.01	0.05	126	
140		9.48	9.46	33.698	26.024	200.3	0.426	3.21	49.8	23.9	1.81	23.9	0.00	0.00	0.00	0.05	141	209
150	ISL	9.28 D	9.26	33.766 D	26.110	192.3	0.446	3.03	D 46.8	26.0	1.89	25.1	0.00	0.00	0.00	0.05	151	
169		9.08	9.06	33.851	26.209	183.3	0.482	2.77	42.6	29.1	1.97	26.5	0.00	0.00	0.00	0.04	170	208
200		8.69	8.67	33.981	26.372	168.2	0.536	2.42	36.9	33.8	2.10	28.6	0.00	0.00	0.00	0.04	201	207
229		8.24	8.22	34.050	26.496	156.9	0.583	2.02	30.5	39.2	2.22	30.8	0.00	0.00			230	206
250	ISL	8.08 D	8.05	34.052 D	26.521	154.8	0.616	2.02	D 30.4	42.1	2.30	31.7	0.00	0.00			251	
270		7.98	7.95	34.101	26.575	150.0	0.647	1.63	24.5	44.7	2.38	32.5	0.00	0.00			271	205
300	ISL	7.38 D	7.35	34.085 D	26.649	143.1	0.691	1.51	D 22.4	50.0	2.51	34.2	0.00	0.00			302	
322		7.09	7.06	34.113	26.712	137.4	0.721	1.28	18.8	53.9	2.59	35.5	0.00	0.00			324	204
380		6.70	6.67	34.124	26.774	132.1	0.800	1.04	15.2	61.7	2.73	37.5	0.00	0.00			382	203
400	ISL	6.75 D	6.71	34.187 D	26.818	128.4	0.826	0.77	D 11.3	64.4	2.80	38.1	0.00	0.00			402	
440		6.33	6.29	34.197	26.881	122.6	0.876	0.62	9.0	69.9	2.93	39.2	0.00	0.00			443	202
500	ISL	5.95 D	5.91	34.242 D	26.966	115.0	0.947	0.44	D 6.3	77.9	3.04	40.4	0.00	0.00			503	
514		5.86	5.82	34.251	26.984	113.4	0.963	0.40	5.7	79.8	3.07	40.7	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 53.1 N	118 26.9 W	03/08/11	2351 UTC	30 m	190 08 kn	220 03 05	4	1010.9 mb	15.8 C	15.7 C		8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.49	16.49	33.413	24.416	350.4	0.000	6.26	112.3	2.6	0.29	0.1	0.00	0.00	0.84	0.21	0	
2		16.49	16.49	33.413	24.416	350.4	0.007	6.26	112.3	2.6	0.29	0.1	0.00	0.00	0.84	0.21	2	206
5		16.44	16.44	33.412	24.427	349.5	0.018	6.30	112.9	2.5	0.28	0.0	0.00	0.00	0.83	0.23	5	205
10		16.18	16.18	33.411	24.486	344.0	0.035	6.31	112.5	2.7	0.28	0.0	0.00	0.00	1.03	0.26	10	204
15		13.84	13.84	33.388	24.976	297.5	0.051	6.32	107.4	4.0	0.38	0.4	0.02	0.03	2.18	0.36	15	203
20		12.62	12.62	33.385	25.218	274.6	0.065	4.84	80.2	10.1	1.03	9.1	0.60	1.48	0.77	0.12	20	202
25		12.18	12.18	33.401	25.314	265.5	0.079	4.39	72.1	12.3	1.21	12.8	0.77	1.34	0.44	0.15	25	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 40.2 N	118 5.1 W	03/08/11	1953 UTC	21 m	270 11 kn		0	1009.3 mb	16.1 C	15.0 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	14.65	14.65	33.285	24.726	320.9	0.000	6.57	113.5	0.7	0.25	0.2	0.00	0.00	6.14	0.00	0	
2		14.65	14.65	33.285	24.726	320.9	0.006	6.57	113.5	0.7	0.25	0.2	0.00	0.00	6.14 A	0.00 A	2	204
5		14.26	14.26	33.283	24.807	313.3	0.016	6.27	107.4	2.2	0.38	1.8	0.09	0.09	7.09 A	0.00 A	5	203
10		12.49	12.49	33.289	25.168	279.0	0.031	5.15	85.1	8.5	0.91	8.7	0.35	1.88	1.60 A	0.00 A	10	202
17		12.12	12.12	33.279	25.231	273.2	0.050	4.79	78.5	10.6	1.09	10.6	0.49	3.15	2.12	0.34	17	201

A) SECOND FLUOROMETER READING RECALCULATED BECAUSE ACID RATIO > TAU OF PURE CHL-A
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 29.7 N	117 45.2 W	03/08/11	1659 UTC	36 m	340 06 kn		0	1010.0 mb	14.1 C	15.1 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.06	15.06	33.359	24.695	323.8	0.000	6.52	113.6	4.1	0.41	0.3	0.00	0.00	1.43	0.29	0	
2		15.06	15.06	33.359	24.695	323.9	0.006	6.52	113.6	4.1	0.41	0.3	0.00	0.00	1.43	0.29	2	205
5		14.89	14.89	33.363	24.735	320.2	0.016	6.59	114.4	3.4	0.41	0.3	0.00	0.00	2.02	0.68	5	204
10		13.69	13.69	33.336	24.966	298.3	0.032	6.33	107.2	4.2	0.55	2.5	0.07	0.03	2.72	0.94	10	203
20		13.06	13.06	33.323	25.083	287.4	0.061	5.70	95.3	6.0	0.72	5.2	0.20	0.09	1.56	0.78	20	202
24		12.88	12.88	33.335	25.128	283.2	0.072	5.42	90.3	7.0	0.83	6.4	0.33	0.00	1.18	0.72	24	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 29.3 N	117 46.1 W	03/08/11	1521	UTC	65 m	340	07 kn		0	1010.2 mb	17.6 C	15.5 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.59	15.59		33.375	24.591	333.8	0.000	6.54		115.2	3.7	0.34	0.0	0.00	0.00	1.01	0.40	0	
2		15.59	15.59		33.375	24.591	333.8	0.007	6.54		115.2	3.7	0.34	0.0	0.00	0.00	1.01	0.40	2	208
5		15.20	15.20		33.381	24.681	325.3	0.017	6.50		113.6	3.1	0.37	0.3	0.01	0.00	1.35	0.43	5	207
10		13.65	13.65		33.329	24.969	298.0	0.032	6.15		104.1	4.9	0.56	3.2	0.14	0.00	1.91	0.77	10	206
20		13.33	13.33		33.333	25.037	291.8	0.062	6.00		100.9	5.7	0.60	3.7	0.11	0.06	2.11	0.85	20	205
30		12.46	12.46		33.326	25.203	276.2	0.090	5.24		86.5	7.5	0.92	8.5	0.32	0.26	1.18	0.59	30	204
40		11.88	11.87		33.368	25.346	262.9	0.117	4.73		77.2	10.2	1.15	11.8	0.52	0.18	0.61	0.39	40	203
50		11.22	11.21		33.378	25.475	250.8	0.143	4.34		69.8	13.3	1.38	15.2	0.30	0.88	0.25	0.31	50	202
58		11.16	11.15		33.390	25.495	249.0	0.163	4.26		68.4	14.1	1.40	15.8	0.31	0.89	0.24	0.28	58	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 25.3 N	117 54.9 W	03/08/11	1207	UTC	614 m	310	12 kn		0	1009.7 mb	18.9 C	17.5 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.33		18.33		33.415	23.979	392.1	0.000	5.99		111.3		0.5	0.24	0.0	0.00	0.00	0.33	0.13	0	
2		18.33		18.33		33.415	23.979	392.2	0.008	5.99		111.3		0.5	0.24	0.0	0.00	0.00	0.33	0.13	2	221
10		17.98		17.98		33.414	24.064	384.3	0.039	5.99		110.6		0.6	0.24	0.0	0.00	0.00	0.34	0.11	10	219
10		17.98		17.98		33.413	24.063	384.4	0.039												10	220
20		16.72		16.72		33.464	24.403	352.3	0.076	6.03		108.7		1.2	0.28	0.0	0.00	0.03	0.34	0.12	20	218
30		14.36		14.36		33.377	24.859	309.0	0.109	6.26		107.5		1.9	0.41	1.6	0.06	0.05	0.82	0.40	30	217
40		12.47		12.46		33.432	25.283	268.8	0.138	5.08		83.9		7.1	0.98	10.5	0.07	0.04	0.69	0.40	40	216
50		12.08		12.07		33.441	25.365	261.3	0.164	4.91		80.5		8.1	1.08	12.2	0.01	0.01	0.46	0.30	50	215
59		11.69		11.68		33.488	25.475	251.1	0.187	4.64		75.4		10.6	1.25	14.8	0.00	0.00	0.23	0.17	59	214
70		10.86		10.85		33.499	25.634	236.1	0.214	4.26		68.0		14.3	1.39	17.1	0.00	0.00	0.09	0.13	70	213
75	ISL	10.68	D	10.67		33.543	D 25.700	230.0	0.226	3.96	D	63.0		15.8	1.46	18.2	0.00	0.00	0.08	0.11	75	
86		10.38		10.37		33.606	25.801	220.5	0.250	3.57		56.5		19.0	1.61	20.5	0.00	0.00	0.05	0.09	86	212
100		10.12		10.11		33.707	25.924	209.1	0.281	3.10		48.8		22.6	1.77	22.9	0.00	0.00	0.03	0.09	100	211
120		9.64		9.63		33.827	26.099	192.9	0.321	2.70		42.1		26.9	1.94	25.3	0.00	0.00	0.01	0.06	121	210
125	ISL	9.54	D	9.53		33.848	D 26.132	189.8	0.330	2.66	D	41.4		27.9	1.96	25.8	0.00	0.00	0.01	0.06	126	
139		9.23		9.21		33.914	26.234	180.3	0.356	2.52		38.9		30.2	2.02	26.8	0.00	0.00	0.01	0.06	140	209
150	ISL	9.28	D	9.26		33.979	D 26.277	176.5	0.376	2.48	D	38.4		31.4	2.07	27.2	0.00	0.00	0.01	0.05	151	
169		9.25		9.23		34.066	26.350	170.0	0.409	2.12		32.8		33.0	2.16	27.6	0.00	0.00	0.00	0.03	170	208
200	ISL	9.03	D	9.01		34.155	D 26.455	160.5	0.460	1.77	D	27.3		36.7	2.28	28.7	0.00	0.00	0.00	0.03	201	
201		9.03		9.01		34.154	26.455	160.6	0.462	1.79		27.6		36.8	2.28	28.7	0.00	0.00	0.00	0.03	202	207
230		8.88		8.86		34.218	26.529	154.1	0.507	1.42		21.8		40.5	2.42	29.9	0.00	0.00			231	206
250	ISL	8.70	D	8.67		34.213	D 26.554	152.1	0.538	1.42	D	21.7		42.5	2.50	30.6	0.00	0.00			251	
270		8.75		8.72		34.283	26.601	148.1	0.568	1.02		15.6		44.4	2.57	31.2	0.00	0.00			272	205
300	ISL	8.10	D	8.07		34.216	D 26.648	143.8	0.612	1.10	D	16.6		47.6	2.68	32.0	0.00	0.00			302	
320		8.46		8.43		34.340	26.691	140.3	0.640	0.64		9.7		49.5	2.74	32.4	0.00	0.00			322	204
380		8.05		8.01		34.312	26.732	137.3	0.723	0.65		9.8		52.8	2.78	33.7	0.00	0.00			382	203
400	ISL	7.80	D	7.76		34.283	D 26.746	136.1	0.751	0.70	D	10.5		54.8	2.82	34.4	0.00	0.00			403	
441		7.43		7.39		34.312	26.823	129.2	0.805	0.46		6.8		59.8	2.90	35.8	0.00	0.00			444	202
500	ISL	6.91	D	6.86		34.315	D 26.898	122.5	0.879	0.36	D	5.3		67.4	3.01	37.4	0.00	0.00			503	
516		6.77		6.72		34.320	26.921	120.5	0.899	0.32		4.7		69.5	3.04	37.8	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 14.7 N	118 15.9 W	03/08/11	0702	UTC	678 m	280	18 kn	270 04 06	1	1009.6 mb	21.0 C	19.2 C	13m	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	19.99		19.99		33.521	23.638	424.6	0.000	5.51		105.7		1.5	0.24	0.0	0.00	0.00	0.19	0.04	0	
2		19.99		19.99		33.521	23.638	424.7	0.008	5.51		105.7		1.5	0.24	0.0	0.00	0.00	0.19	0.04	2	221
9		19.91		19.91		33.520	23.658	423.0	0.038	5.53		105.9		1.6	0.23	0.0	0.00	0.00	0.20	0.04	9	219
10	ISL	19.92		19.92		33.535	D 23.667	422.2	0.042	5.50	D	105.4		1.6	0.23	0.0	0.00	0.00	0.20	0.04	10	
10		19.92		19.92		33.522	23.657	423.1	0.042	5.58	D	106.9									10	220
20		16.59		16.59		33.535	24.487	344.2	0.081	6.11		109.9		1.5	0.26	0.0	0.00	0.00	0.43	0.10	20	218
30		14.60		14.60		33.471	24.881	307.0	0.113	5.79		100.0		2.4	0.51	2.6	0.25	0.10	1.56	0.72	30	217
40		12.47		12.46		33.423	25.276	269.5	0.142	5.15		85.1		6.7	0.96	9.8	0.19	0.00	0.74	0.45	40	216
50		11.36		11.35		33.501	25.545	244.1	0.168	4.50		72.7		12.1	1.31	15.5	0.00	0.00	0.22	0.20	50	215
60		10.81		10.80		33.551	25.683	231.2	0.192	3.98		63.5		16.1	1.50	18.3	0.00	0.00	0.10	0.12	60	214
70		10.48		10.47		33.580	25.763	223.8	0.214	3.60		57.1		18.2	1.60	19.8	0.00	0.00	0.10	0.10	70	213
75	ISL	10.22	D	10.21		33.636	D 25.852	215.5	0.225	3.42	D	53.9		20.0	1.67	21.0	0.00	0.00	0.08	0.09	75	
85		9.95		9.94		33.708	25.954	205.9	0.246	3.10		48.6		23.1	1.79	23.0	0.00	0.00	0.03	0.07	85	212
100		9.88		9.87		33.721	25.976	204.2	0.277	3.11		48.7		23.6	1.79	23.2	0.00	0.00	0.02	0.06	100	211
120		9.46		9.45		33.829	26.130	189.9	0.317	2.93		45.5		26.8	1.91	24.6	0.00	0.00	0.01	0.05	121	210
125	ISL	9.34	D	9.33		33.932	D 26.230	180.5	0.326	2.65	D	41.0		28.4	1.97	25.3	0.00	0.00	0.01	0.05	126	
140		9.29		9.27		34.073	26.349	169.5	0.352	2.07		32.0		33.0	2.17	27.4	0.00	0.00	0.00	0.06	141	209
150	ISL	9.35	D	9.33		34.119	D 26.375	167.2	0.369	1.99	D	30.9		34.7	2.26	28.1	0.00	0.00	0.00	0.06	151	
170		9.37		9.35		34.187	26.425	162.9	0.402	1.48		23.0		36.6	2.38	28.9	0.00	0.00	0.00	0.05	171	208
200		9.34		9.32		34.242	26.474	159.0	0.450	1.22		18.9		38.7	2.47	29.3	0.00	0.00	0.00	0.05	201	207
230		9.20		9.17		34.260	26.511	156.0	0.497	1.12		17.3		40.0	2.52	29.9	0.00	0.00			231	206
250	ISL	9.15	D	9.12		34.273	D 26.530	154.6	0.528	1.06	D	16.4		40.3	2.53	30.0	0.00	0.00			251	
270		9.16		9.13		34.274	26.529	155.1	0.559	1.04		16.1		41.0	2.54	30.2	0.00	0.00			272	205
300	ISL	9.04	D	9.01		34.281	D 26.554	153.2	0.606	1.01	D	15.6		44.5	2.64	31.2	0.00	0.00			302	
320		8.64		8.61		34.319	26.647	144.6	0.636	0.75		11.5		47.2	2.71	31.9	0.00	0.00			322	204
382		8.07		8.03		34.346	26.756	135.1	0.722	0.51		7.7		53.4	2.83	33.3	0.00	0.00			384	203
400	ISL	7.77	D	7.73		34.326	D 26.785	132.4	0.746	0.51	D	7.6		55.8	2.86	34.0	0.00	0.00			403	
441		7.25		7.21		34.325	26.859	125.7	0.799	0.42		6.2		61.3	2.93	35.8	0.00	0.00			444	202
500	ISL	6.80	D	6.75		34.320	D 26.917	120.6	0.872	0.35	D	5.1		67.4	3.03	37.4	0.00	0.00			503	
514		6.83		6.78		34.316	26.910	121.5	0.889	0.34		5.0		68.9	3.05	37.8	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 10.8 N	118 24.1 W	03/08/11	0320 UTC	1186 m	290 17 kn	270 03 06	1	1011.6 mb	20.9 C	18.9 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	19.81		19.81		33.536		23.696	419.0	0.000	5.49		105.0		1.3	0.23	0.0	0.00	0.00	0.21	0.04	0	
2	A	19.81		19.81		33.536		23.696	419.1	0.008	5.49		105.0		1.3	0.23	0.0	0.00	0.00	0.21	0.04	2	222
10	A	19.50		19.50		33.529		23.771	412.2	0.042	5.49		104.4		1.4	0.23	0.0	0.00	0.00	0.22	0.04	10	221
12	A	18.95		18.95		33.520		23.905	399.6	0.050	5.53		104.1		1.3	0.23	0.0	0.00	0.00	0.25	0.06	12	220
20	ISL	16.59	D	16.59		33.571	D	24.515	341.6	0.079	6.07	D	109.2		1.4	0.27	0.0	0.00	0.00	0.41	0.12	20	
21	A	16.42		16.42		33.570		24.554	338.0	0.083	6.10		109.3		1.4	0.27	0.0	0.00	0.00	0.44	0.13	21	219
30		13.38		13.38		33.479		25.140	282.3	0.111	5.21		87.8		6.0	0.85	8.2	0.50	0.00	1.04	0.39	30	218
39	A	11.80		11.80		33.484		25.451	252.9	0.135	4.70		76.6		9.7	1.17	13.7	0.01	0.00	0.41	0.27	39	217
48		11.15		11.14		33.520		25.598	239.1	0.157	4.05		65.1		15.1	1.39	17.1	0.00	0.00	0.21	0.18	48	216
50	ISL	11.05	D	11.04		33.528	D	25.622	236.8	0.162	3.96	D	63.5		15.7	1.42	17.6	0.00	0.00	0.18	0.17	50	
57	A	10.51		10.50		33.561		25.743	225.4	0.178	3.71		58.8		17.4	1.52	19.2	0.00	0.00	0.12	0.14	57	215
64		10.26		10.25		33.643		25.850	215.4	0.193	3.30		52.1		20.7	1.67	21.5	0.00	0.00	0.06	0.08	64	214
70		10.10		10.09		33.664		25.894	211.3	0.206	3.24		50.9		21.6	1.71	22.0	0.00	0.00	0.05	0.07	70	213
75	ISL	10.02	D	10.01		33.701	D	25.936	207.4	0.217	3.20	D	50.2		22.6	1.75	22.6	0.00	0.00	0.04	0.06	75	
85		9.79		9.78		33.765		26.025	199.2	0.237	2.95		46.1		24.8	1.83	24.0	0.00	0.00	0.02	0.05	85	212
100		9.48		9.47		33.875		26.162	186.4	0.266	2.67		41.5		27.8	1.94	25.5	0.00	0.00	0.01	0.05	100	211
120		9.55		9.54		34.002		26.250	178.5	0.302	2.19		34.1		30.6	2.09	26.6	0.00	0.00	0.01	0.06	121	210
125	ISL	9.56	D	9.55		34.016	D	26.260	177.7	0.311	2.14	D	33.3		31.1	2.11	26.8	0.00	0.00	0.01	0.06	126	
140		9.53		9.51		34.074		26.310	173.2	0.338	1.91		29.7		32.6	2.18	27.5	0.00	0.00	0.01	0.05	141	209
150	ISL	9.45	D	9.43		34.126	D	26.364	168.3	0.355	1.75	D	27.2		34.4	2.25	28.2	0.00	0.00	0.01	0.05	151	
170		9.27		9.25		34.215		26.463	159.3	0.387	1.34		20.8		38.1	2.39	29.6	0.00	0.00	0.01	0.04	171	208
200		9.14		9.12		34.261		26.521	154.4	0.434	1.11		17.1		40.6	2.48	30.3	0.00	0.00	0.01	0.04	201	207
230		9.07		9.04		34.278		26.546	152.6	0.480	1.01		15.6		41.9	2.53	30.5	0.00	0.00			231	206
250	ISL	8.91	D	8.88		34.298	D	26.587	149.0	0.511	0.92	D	14.1		43.4	2.57	30.9	0.00	0.00			251	
271		8.79		8.76		34.299		26.607	147.5	0.542	0.85		13.0		45.1	2.62	31.4	0.00	0.00			273	205
300	ISL	8.48	D	8.45		34.301	D	26.657	143.1	0.584	0.78	D	11.9		47.3	2.66	32.1	0.00	0.00			302	
321		8.43		8.40		34.303		26.667	142.6	0.614	0.74		11.2		48.9	2.69	32.5	0.00	0.00			323	204
380		8.10		8.06		34.323		26.733	137.2	0.696	0.60		9.1		52.6	2.78	33.5	0.00	0.00			382	203
400	ISL	8.00	D	7.96		34.328	D	26.752	135.7	0.724	0.54	D	8.1		53.8	2.81	33.8	0.00	0.00			403	
440		7.71		7.67		34.329		26.796	132.0	0.777	0.46		6.9		57.1	2.87	34.7	0.00	0.00			443	202
500	ISL	6.85	D	6.80		34.312	D	26.904	121.9	0.853	0.38	D	5.6		67.8	2.99	37.8	0.00	0.00			503	
514		6.64		6.59		34.304		26.926	119.8	0.870	0.36		5.3		70.3	3.02	38.5	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.9 N	118 56.7 W	02/08/11	1843 UTC	1692 m	310 14 kn		0	1012.0 mb	18.0 C	16.1 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.56		18.56		33.623		24.081	382.4	0.000	5.70		106.5		0.6	0.23	0.0	0.00	0.05	0.53	0.21	0	
3		18.56		18.56		33.623		24.081	382.5	0.011	5.70		106.5		0.6	0.23	0.0	0.00	0.05	0.53	0.21	3	221
10		18.55		18.55		33.625		24.085	382.3	0.038	5.71		106.7		0.5	0.22	0.0	0.00	0.05	0.54	0.21	10	219
10		18.55		18.55		33.626		24.086	382.2	0.038												10	220
20		15.29		15.29		33.574		24.811	313.4	0.073	6.38		111.8		3.3	0.45	1.4	0.04	0.15	0.91	0.33	20	218
29		12.33		12.33		33.590		25.433	254.4	0.099	4.63		76.4		11.9	1.18	13.4	0.25	0.08	1.23	0.60	29	217
30	ISL	12.04	D	12.04		33.597	D	25.493	248.6	0.101	4.47	D	73.3		12.4	1.22	14.0	0.24	0.08	1.23	0.62	30	
40		11.14		11.14		33.609		25.669	232.1	0.125	3.96		63.7		15.8	1.44	17.7	0.08	0.05	1.25	0.84	40	216
49		10.58		10.57		33.654		25.803	219.5	0.145	3.43		54.5		20.1	1.66	21.0	0.02	0.02	0.36	0.28	49	215
50	ISL	10.58	D	10.57		33.655	D	25.804	219.5	0.148	3.41	D	54.2		20.3	1.67	21.1	0.02	0.02	0.35	0.27	50	
60		10.31		10.30		33.672		25.864	214.0	0.169	3.23		51.0		21.5	1.72	22.1	0.01	0.03	0.22	0.21	60	214
70		9.97		9.96		33.739		25.974	203.7	0.190	2.94		46.1		24.4	1.85	24.2	0.00	0.16	0.09	0.11	70	213
75	ISL	9.82	D	9.81		33.788	D	26.038	197.8	0.200	2.83	D	44.3		25.6	1.89	24.8	0.00	0.13	0.06	0.10	75	
85		9.62		9.61		33.842		26.113	190.8	0.220	2.61		40.7		27.6	1.96	25.7	0.00	0.02	0.02	0.08	85	212
100		9.36		9.35		33.935		26.229	180.1	0.247	2.36		36.6		30.2	2.05	27.1	0.00	0.00	0.01	0.07	101	211
120		9.18		9.17		34.013		26.319	171.9	0.283	2.12		32.7		33.2	2.14	28.2	0.00	0.00	0.01	0.06	121	210
125	ISL	9.09	D	9.08		34.031	D	26.348	169.2	0.291	2.09	D	32.2		34.0	2.16	28.4	0.00	0.00	0.01	0.06	126	
140		8.89		8.88		34.065		26.406	163.9	0.316	1.97		30.2		36.1	2.23	29.1	0.00	0.00	0.01	0.06	141	209
150	ISL	8.78	D	8.76		34.084	D	26.438	161.0	0.332	1.91	D	29.2		36.8	2.25	29.4	0.00	0.00	0.01	0.06	151	
169		8.70		8.68		34.108		26.470	158.4	0.363	1.79		27.4		38.2	2.29	29.9	0.00	0.00	0.00	0.05	170	208
200		8.45		8.43		34.179		26.565	149.9	0.411	1.35		20.5		43.4	2.48	31.7	0.00	0.00	0.01	0.04	201	207
230		8.46		8.44		34.256		26.624	144.9	0.455	0.88		13.4		46.8	2.62	32.8	0.00	0.00			231	206
250	ISL	8.24	D	8.21		34.261	D	26.662	141.6	0.483	0.83	D	12.6		49.0	2.67	33.4	0.00	0.00			252	
270		8.04		8.01		34.265		26.695	138.7	0.511	0.76		11.5		51.2	2.71	34.0	0.00	0.00			272	205
300	ISL	7.74	D	7.71		34.276	D	26.748	134.1	0.552	0.63	D	9.4		54.6	2.78	35.0	0.00	0.00			302	
320		7.55		7.52		34.279		26.778	131.4	0.579	0.60		8.9		56.9	2.82	35.6	0.00	0.00			322	204
379		7.07		7.03		34.302		26.865	123.9	0.654	0.43		6.3		64.3	2.96	37.2	0.00	0.00			381	203
400	ISL	6.87	D	6.83		34.299	D	26.890	121.7	0.680	0.41	D	6.0		66.9	2.99	37.7	0.00	0.00			403	
440		6.58		6.54		34.312		26.939	117.4	0.728	0.34		5.0		71.5	3.03	38.6	0.00	0.00			443	202
500	ISL	6.21	D	6.17		34.332	D	27.004	111.7	0.797	0.27	D	3.9		77.3	3.09	39.9	0.00	0.00			503	
515		6.12		6.07		34.337		27.020	110.4	0.813	0.24		3.5		78.8	3.11	40.2	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 38.4 N	119 29.3 W	02/08/11	1237 UTC	1295 m	310 19 kn		0	1013.5 mb	17.9 C	16.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.94		16.94		33.578		24.438	348.3	0.000	5.95		107.8		0.5	0.25	0.0	0.00	0.07	0.93	0.36	0	
2		16.94		16.94		33.578		24.438	348.3	0.007	5.95		107.8		0.5	0.25	0.0	0.00	0.07	0.93	0.36	2	222
10		16.71		16.71		33.581		24.495	343.2	0.035	6.00		108.2		0.3	0.26	0.0	0.00	0.05	0.88	0.37	10	221
19		15.48		15.48		33.520		24.727	321.3	0.065	5.97		105.0		0.1	0.32	0.4	0.05	0.27	1.67	0.88	19	220
20	ISL	15.32	D	15.32		33.518	D	24.761	318.1	0.068	6.00	D	105.2		0.2	0.34	0.5	0.06	0.41	1.70	0.91	20	
30		15.00		15.00		33.492		24.811	313.7	0.099	5.67		98.8		1.2	0.58	1.7	0.15	1.66	1.97	1.21	30	219
40		14.46		14.45		33.465		24.906	304.8	0.130	5.48		94.4		2.6	0.62	2.9	0.23	1.18	2.77	1.79	40	218
50		12.45		12.44		33.452		25.303	267.2	0.159	4.77		78.8		8.7	1.07	10.2	0.44	0.47	1.76	1.38	50	217
61		10.95		10.94		33.515		25.630	236.3	0.187	4.15		66.4		15.1	1.39	16.8	0.06	0.02	0.50	0.73	61	216
71		9.82		9.81		33.468		25.788	221.4	0.209	4.20		65.6		16.6	1.42	17.6	0.03	0.02	0.24	0.43	71	215
75	ISL	9.57	D	9.56		33.458	D	25.821	218.2	0.218	4.19	D	65.0		17.6	1.46	18.3	0.03	0.02	0.19	0.35	75	
84		9.46		9.45		33.556		25.916	209.4	0.237	3.84		59.5		20.7	1.59	20.6	0.02	0.02	0.12	0.25	84	214
100		9.12		9.11		33.897		26.237	179.2	0.269	2.53		39.0		29.9	2.02	26.6	0.00	0.00	0.06	0.22	100	213
120		9.19		9.18		33.987		26.297	173.9	0.304	2.20		34.0		32.6	2.11	27.5	0.00	0.00	0.03	0.19	121	211
125	ISL	9.14	D	9.13		34.002	D	26.317	172.2	0.313	2.18	D	33.6		33.4	2.13	27.8	0.00	0.00	0.02	0.17	126	
141		8.85		8.83		34.078		26.422	162.4	0.339	1.92		29.4		36.3	2.22	29.0	0.00	0.00	0.01	0.10	142	210
150	ISL	8.71	D	8.69		34.117	D	26.475	157.5	0.354	1.77	D	27.1		37.9	2.28	29.6	0.00	0.00	0.01	0.10	151	
170		8.53		8.51		34.155		26.533	152.4	0.385	1.47		22.4		41.2	2.41	30.7	0.00	0.00	0.01	0.11	171	209
200	ISL	8.24	D	8.22		34.211	D	26.622	144.5	0.429	1.09	D	16.5		45.9	2.55	32.4	0.00	0.00	0.01	0.10	201	
201		8.23		8.21		34.207		26.620	144.6	0.431	1.10		16.6		46.0	2.55	32.4	0.00	0.00	0.01	0.10	202	208
230		8.10		8.08		34.241		26.667	140.7	0.472	0.92		13.9		49.3	2.64	33.5	0.00	0.00			231	207
250	ISL	7.92	D	7.89		34.260	D	26.708	137.0	0.500	0.77	D	11.6		51.8	2.71	34.0	0.00	0.00			251	
271		7.77		7.74		34.272		26.740	134.3	0.528	0.69		10.3		54.0	2.77	34.4	0.00	0.00			273	205
300	ISL	7.69	D	7.66		34.281	D	26.759	133.0	0.567	0.64	D	9.6		55.5	2.80	34.8	0.00	0.00			302	
320		7.64		7.61		34.285		26.770	132.3	0.594	0.61		9.1		56.1	2.81	35.0	0.00	0.00			322	204
380		7.43		7.39		34.292		26.806	129.7	0.672	0.52		7.7		59.0	2.87	35.6	0.00	0.00			382	203
400	ISL	7.32	D	7.28		34.297	D	26.826	128.1	0.698	0.50	D	7.4		62.2	2.91	36.4	0.00	0.00			403	
441		6.67		6.63		34.305		26.922	119.1	0.749	0.36		5.3		69.4	3.01	38.1	0.00	0.00			444	202
500	ISL	6.38	D	6.33		34.312	D	26.966	115.5	0.818	0.32	D	4.6		75.5	3.08	39.3	0.00	0.00			503	
517		6.19		6.14		34.334		27.008	111.6	0.837	0.25		3.6		77.3	3.10	39.6	0.00	0.00			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 24.8 N	119 58.0 W	02/08/11	0653 UTC	793 m	300 17 kn	300 04 05	0	1014.8 mb	18.3 C	16.0 C	8m	0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.99		16.99		33.481		24.352	356.5	0.000	5.93		107.4		0.6	0.22	0.0	0.00	0.00	0.47	0.15	0	
2		16.99		16.99		33.481		24.352	356.6	0.007	5.93		107.4		0.6	0.22	0.0	0.00	0.00	0.47	0.15	2	220
10		16.76		16.76		33.498		24.419	350.4	0.035	5.97		107.7		0.7	0.22	0.0	0.00	0.00	0.51	0.17	10	219
20		15.57		15.57		33.552		24.732	320.9	0.069	5.89		103.8		1.2	0.37	0.5	0.03	0.37	1.74	1.03	20	218
30		14.67		14.67		33.505		24.892	305.9	0.100	5.44		94.1		3.9	0.65	2.6	0.30	1.83	1.46	1.20	30	217
40		13.15		13.14		33.383		25.112	285.2	0.130	5.32		89.1		5.7	0.82	5.8	0.77	0.84	0.43	0.49	40	216
50		12.47		12.46		33.335		25.208	276.2	0.158	5.14		84.9		7.0	0.93	9.2	0.34	0.02	0.28	0.41	50	215
59		11.97		11.96		33.376		25.335	264.3	0.182	4.88		79.8		9.8	1.11	12.2	0.02	0.02	0.21	0.38	59	214
70		10.58		10.57		33.330		25.551	243.9	0.210	4.55		72.2		14.5	1.27	15.0	0.01	0.00	0.14	0.24	70	213
75	ISL	10.48	D	10.47		33.479	D	25.684	231.3	0.222	4.13	D	65.4		16.5	1.38	16.8	0.01	0.00	0.11	0.19	75	
85		10.20		10.19		33.582		25.813	219.3	0.245	3.75		59.1		20.7	1.62	20.4	0.00	0.00	0.06	0.14	85	212
100	ISL	9.42	D	9.41		33.822	D	26.130	189.4	0.275	2.87	D	44.5		27.8	1.89	24.7	0.00	0.00	0.04	0.17	100	
101		9.41		9.40		33.806		26.120	190.4	0.277	2.92		45.3		28.2	1.90	24.9	0.00	0.00	0.04	0.17	101	211
120		9.23		9.22		33.889		26.214	181.8	0.313	2.67		41.2		31.0	1.98	26.0	0.00	0.00	0.02	0.09	121	210
125	ISL	9.23	D	9.22		33.893	D	26.217	181.6	0.322	2.66	D	41.1		32.2	2.03	26.6	0.00	0.00	0.02	0.08	126	
139		8.97		8.96		34.026		26.363	168.0	0.346	2.10		32.3		35.6	2.18	28.3	0.00	0.00	0.01	0.07	140	209
150	ISL	8.84	D	8.82		34.079	D	26.425	162.3	0.364	1.96	D	30.0		38.0	2.27	29.2	0.00	0.00	0.01	0.08	151	
170		8.69		8.67		34.140		26.497	155.9	0.396	1.56		23.8		41.5	2.38	30.3	0.00	0.00	0.01	0.10	171	208
200		8.51		8.49		34.178		26.555	150.9	0.442	1.33		20.2		44.2	2.48	31.3	0.00	0.00	0.01	0.05	201	207
230		8.01		7.99		34.206		26.652	142.0	0.486	1.05		15.8		50.3	2.63	33.4	0.00	0.00			231	206
250	ISL	7.93	D	7.90		34.233	D	26.686	139.2	0.514	0.89	D	13.4		52.4	2.69	34.0	0.00	0.00			251	
271		7.73		7.70		34.244		26.724	135.8	0.543	0.79		11.8		54.2	2.75	34.5	0.00	0.00			273	205
300	ISL	7.47	D	7.44		34.269	D	26.781	130.7	0.582	0.61	D	9.1		58.9	2.85	35.8	0.00	0.00			302	
320		7.21		7.18		34.279		26.826	126.6	0.607	0.51		7.5		62.2	2.91	36.6	0.00	0.00			322	204
381		6.78		6.74		34.306		26.907	119.7	0.683	0.37		5.4		69.0	3.01	37.8	0.00	0.00			383	203
400	ISL	6.67	D	6.63		34.301	D	26.918	118.8	0.705	0.37	D	5.4		70.4	3.03	38.1	0.00	0.00			403	
440		6.52		6.48		34.312		26.947	116.6	0.752	0.33		4.8		72.8	3.05	38.5	0.00	0.00			443	202
500	ISL	6.33	D	6.28		34.316	D	26.976	114.5	0.822	0.30	D	4.3		75.5	3.09	39.2	0.00	0.00			503	
516		6.29		6.24		34.318		26.983	114.1	0.840	0.28		4.1		76.2	3.10	39.4	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 38.3 W	02/08/11	0128 UTC	3817 m	320 09 kn	340 03 07	1	1016.3 mb	18.0 C	16.1 C	10m	6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.18	17.18		33.547		24.358	355.9	0.000	5.96		108.4	0.3	0.26	0.0	0.00	0.00	0.67	0.13	0	
2	A	17.18	17.18		33.547		24.358	356.0	0.007	5.96		108.4	0.3	0.26	0.0	0.00	0.00	0.67	0.13	2	222
6	A	16.84	16.84		33.546		24.437	348.6	0.021	5.97		107.9	0.3	0.25	0.0	0.00	0.00	0.68	0.14	6	221
10	A	15.54	15.54		33.524		24.717	322.0	0.035	6.08		107.1	0.3	0.30	0.2	0.03	0.07	1.10	0.25	10	220
14	A	15.44	15.44		33.441		24.675	326.1	0.048	5.93		104.2	0.6	0.36	1.0	0.06	0.39	0.77	0.28	14	219
20	ISL	15.57	D 15.57		33.565	D	24.742	320.0	0.067	5.87	D	103.5	0.8	0.38	0.9	0.07	0.82	1.48	0.61	20	
26	A	15.53	15.53		33.566		24.752	319.2	0.086	5.73		100.9	0.9	0.40	0.8	0.08	1.19	2.44	0.97	26	218
30	ISL	15.42	D 15.42		33.552	D	24.766	318.0	0.099	5.72	D	100.5	1.1	0.46	1.0	0.09	1.38	2.33	0.96	30	
38	A	15.29	15.28		33.572		24.810	314.0	0.124	5.57		97.6	1.5	0.60	1.3	0.11	1.77	2.11	0.93	38	217
44		14.53	14.52		33.530		24.942	301.6	0.143	5.39		93.0	3.5	0.70	2.6	0.21	2.18	0.88	0.62	44	216
50		12.68	12.67		33.155		25.028	293.4	0.160	5.75		95.3	3.0	0.63	2.7	0.28	0.81	0.46	0.44	50	215
60		12.10	12.09		33.084		25.084	288.2	0.190	5.71		93.4	3.4	0.64	3.6	0.30	0.45	0.37	0.39	60	214
70		11.37	11.36		33.088		25.223	275.2	0.218	5.32		85.7	6.0	0.81	7.1	0.14	0.03	0.17	0.28	70	213
75	ISL	11.31	D 11.30		33.110	D	25.251	272.7	0.231	5.28	D	84.9	7.3	0.89	8.6	0.09	0.03	0.16	0.28	75	
85		10.98	10.97		33.234		25.406	258.1	0.258	4.83		77.2	10.1	1.09	12.0	0.02	0.04	0.15	0.27	85	212
100		10.55	10.54		33.567		25.741	226.5	0.294	3.94		62.5	16.0	1.53	18.9	0.00	0.00	0.07	0.16	100	211
120		9.51	9.50		33.692		26.015	200.8	0.337	3.23		50.1	24.4	1.81	23.6	0.00	0.00	0.03	0.12	121	210
125	ISL	9.43	D 9.42		33.837	D	26.141	188.9	0.347	2.76	D	42.8	26.1	1.88	24.6	0.00	0.00	0.02	0.10	126	
141		9.07	9.05		33.920		26.264	177.5	0.376	2.43		37.4	30.4	2.05	27.0	0.00	0.00	0.01	0.05	142	209
150	ISL	8.81	D 8.79		33.890	D	26.282	175.9	0.392	2.82	D	43.1	31.9	2.06	27.5	0.00	0.00	0.01	0.05	151	
170		8.59	8.57		33.998		26.401	164.9	0.426	2.48		37.8	34.3	2.07	27.9	0.00	0.00	0.01	0.05	171	208
200		8.17	8.15		34.040		26.498	156.1	0.474	2.25		34.0	38.8	2.19	29.8	0.00	0.00	0.01	0.02	201	207
230		8.08	8.06		34.096		26.556	151.2	0.520	1.69		25.5	43.1	2.37	31.8	0.00	0.00			231	206
250	ISL	7.88	D 7.85		34.112	D	26.598	147.4	0.550	1.60	D	24.0	46.6	2.47	32.9	0.00	0.00			251	
270		7.58	7.55		34.133		26.658	141.9	0.579	1.34		20.0	50.2	2.55	33.9	0.00	0.00			272	205
300	ISL	7.34	D 7.31		34.148	D	26.705	137.9	0.621	1.23	D	18.2	55.0	2.64	35.4	0.00	0.00			302	
320		6.94	6.91		34.138		26.752	133.4	0.648	1.12		16.4	57.9	2.69	36.2	0.00	0.00			322	204
380		6.60	6.57		34.199		26.847	125.1	0.726	0.71		10.3	64.5	2.87	37.7	0.00	0.00			382	203
400	ISL	6.31	D 6.27		34.175	D	26.866	123.4	0.751	0.74	D	10.7	67.9	2.92	38.5	0.00	0.00			403	
440		6.10	6.06		34.221		26.930	117.8	0.799	0.50		7.2	74.8	3.01	39.9	0.00	0.00			443	202
500	ISL	5.81	D 5.77		34.279	D	27.012	110.5	0.867	0.33	D	4.7	81.0	3.11	40.9	0.00	0.00			503	
515		5.79	5.75		34.296		27.028	109.1	0.884	0.29		4.1	82.5	3.13	41.2	0.00	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 44.9 N	121 19.4 W	01/08/11	1723 UTC	3738 m	290 12 kn		0	1015.2 mb	18.1 C	15.5 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.73	17.73		33.120		23.899	399.7	0.000	5.63		103.3	1.6	0.28	0.0	0.00	0.00	0.11	0.03	0	
2		17.73	17.73		33.120		23.899	399.7	0.008	5.63		103.3	1.6	0.28	0.0	0.00	0.00	0.11	0.03	2	220
10		17.28	17.28		33.120		24.007	389.7	0.040	5.65		102.7	1.5	0.27	0.0	0.00	0.00	0.11	0.04	10	219
20		16.75	16.75		33.118		24.130	378.3	0.078	5.74		103.3	1.3	0.27	0.0	0.00	0.00	0.14	0.05	20	218
30		16.53	16.53		33.143		24.201	371.9	0.115	5.82		104.3	1.4	0.25	0.0	0.00	0.00	0.19	0.07	30	217
40		16.14	16.13		33.164		24.306	362.1	0.152	5.92		105.3	1.4	0.24	0.0	0.00	0.00	0.34	0.17	40	216
50		15.21	15.20		33.227		24.562	338.0	0.187	6.02		105.1	1.2	0.28	0.1	0.00	0.05	0.66	0.38	50	215
61		14.27	14.26		33.120		24.681	326.9	0.224	6.00		102.7	1.8	0.31	0.1	0.00	0.17	0.49	0.42	61	214
70		13.62	13.61		33.132		24.824	313.4	0.253	5.90		99.7	2.1	0.47	0.8	0.18	0.48	0.30	0.32	70	213
75	ISL	13.41	D 13.40		33.122	D	24.859	310.2	0.268	5.85	D	98.4	2.2	0.52	1.2	0.20	0.58	0.23	0.26	75	
85		13.28	13.27		33.219		24.961	300.8	0.299	5.74		96.3	2.4	0.58	2.4	0.23	0.78	0.15	0.17	85	212
100		11.71	11.70		33.131		25.195	278.7	0.342	5.41		87.8	4.8	0.71	5.6	0.14	0.00	0.08	0.12	100	211
120		10.92	10.91		33.197		25.389	260.5	0.396	5.04		80.4	8.6	0.94	9.7	0.00	0.00	0.06	0.10	121	210
125	ISL	10.78	D 10.77		33.213	D	25.426	257.1	0.409	4.98	D	79.2	10.0	1.03	11.1	0.00	0.00	0.05	0.09	126	
140		10.29	10.27		33.418		25.671	234.0	0.446	4.39		69.2	14.5	1.29	15.5	0.00	0.00	0.02	0.05	141	209
150	ISL	9.90	D 9.88		33.538	D	25.830	219.0	0.469	3.85	D	60.2	17.3	1.42	17.8	0.00	0.00	0.02	0.05	151	
170		9.40	9.38		33.730	D	26.063	197.2	0.510	3.47	D	53.7								171	208
200		8.80	8.78		33.900		26.292	175.9	0.566	3.02		46.2	29.4	1.87	25.6	0.00	0.00	0.00	0.03	201	207
230		8.31	8.29		33.990		26.438	162.4	0.617	2.57		38.9	35.5	2.05	28.4	0.00	0.00			231	206
250	ISL	8.01	D 7.98		34.028	D	26.513	155.5	0.649	2.26	D	34.0	39.7	2.17	30.0	0.00	0.00			251	
270		7.62	7.59		34.032		26.573	150.0	0.679	2.10		31.3	43.8	2.28	31.4	0.00	0.00			271	205
300	ISL	7.27	D 7.24		34.064	D	26.648	143.1	0.723	1.71	D	25.3	49.7	2.46	33.7	0.00	0.00			302	
321		7.04	7.01		34.088		26.699	138.5	0.753	1.42		20.9	53.5	2.57	35.1	0.00	0.00			323	204
380		6.54	6.51		34.120		26.792	130.2	0.832	1.01		14.7	62.7	2.76	37.5	0.00	0.00			382	203
400	ISL	6.36	D 6.32		34.128	D	26.822	127.5	0.858	0.92	D	13.3	65.2	2.81	38.1	0.00	0.00			402	
440		6.12	6.08		34.145		26.867	123.7	0.908	0.78		11.2	69.9	2.89	39.1	0.00	0.00			443	202
500	ISL	5.73	D 5.69		34.194	D	26.955	115.8	0.980	0.54	D	7.7	77.4	3.00	40.4	0.00	0.00			503	
516		5.67	5.63		34.204		26.970	114.5	0.998	0.48		6.8	79.4	3.03	40.7	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 25.0 N	122 0.1 W	01/08/11	0859 UTC	3836 m	280 09 kn	280 03 08	1	1015.0 mb	21.0 C	17.2 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	18.95	18.95		33.327	23.757	413.3	0.000	5.46		102.6	1.3	0.30	0.0	0.00	0.00	0.07	0.02	0	
2		18.95	18.95		33.327	23.757	413.3	0.008	5.46		102.6	1.3	0.30	0.0	0.00	0.00	0.07	0.02	2	224
10		18.50	18.50		33.316	23.861	403.6	0.041	5.47		101.9	1.5	0.30	0.0	0.00	0.00	0.07	0.02	10	223
20	ISL	18.27	18.27	D	33.307	23.912	399.2	0.081	5.47	D	101.5	1.4	0.28	0.0	0.00	0.00	0.08	0.02	20	
30		18.16	18.15		33.308	23.940	396.8	0.121	5.52		102.2	1.2	0.26	0.0	0.00	0.00	0.08	0.02	30	222
50	ISL	16.06	16.05	D	33.201	24.353	358.0	0.196	5.95	D	105.7	1.4	0.28	0.0	0.00	0.00	0.13	0.05	50	
51		15.94	15.93		33.195	24.376	355.8	0.200	5.99		106.1	1.4	0.28	0.0	0.00	0.00	0.13	0.05	51	221
62		14.25	14.24		33.088	24.660	328.9	0.238	6.18		105.7	1.5	0.31	0.0	0.00	0.00	0.21	0.10	62	220
75		12.58	12.57		33.239	25.114	285.9	0.278	5.36		88.7	4.7	0.74	5.3	0.13	0.00	0.41	0.23	75	219
87		11.69	11.68		33.292	25.323	266.2	0.311	4.94		80.2	7.5	0.96	9.4	0.01	0.00	0.33	0.22	87	218
100		11.16	11.15		33.333	25.452	254.2	0.345	4.63		74.3	10.0	1.10	12.1	0.00	0.00	0.21	0.15	100	217
112		10.30	10.29		33.432	25.679	232.6	0.374	4.36		68.8	14.2	1.24	14.9	0.00	0.00	0.04	0.05	112	216
125		9.90	9.89		33.524	25.819	219.6	0.403	4.11		64.3	17.0	1.39	17.4	0.00	0.00	0.03	0.04	126	214
135		9.58	9.56		33.620	25.947	207.5	0.424	3.70		57.5	20.2	1.58	20.1	0.00	0.00	0.01	0.04	136	213
150	ISL	9.24	9.22	D	33.788	26.134	190.0	0.454	3.14	D	48.5	23.8	1.72	22.4	0.00	0.00	0.01	0.03	151	
169		8.98	8.96		33.856	26.229	181.3	0.490	3.18		48.8	27.4	1.81	24.1	0.00	0.00	0.00	0.02	170	212
200		8.60	8.58		33.963	26.372	168.2	0.544	2.76		42.0	32.3	1.97	26.5	0.00	0.00	0.00	0.03	201	211
230		8.24	8.22		34.024	26.475	158.8	0.593	2.33		35.2	36.4	2.13	28.9	0.00	0.00			231	210
250	ISL	8.12	8.09	D	34.060	26.522	154.8	0.624	2.05	D	30.9	40.4	2.27	30.6	0.00	0.00			251	
269		7.77	7.74		34.072	26.583	149.1	0.653	1.75		26.2	44.3	2.39	32.0	0.00	0.00			270	209
300	ISL	7.40	7.37	D	34.092	26.652	142.9	0.698	1.47	D	21.8	49.2	2.51	33.7	0.00	0.00			302	
322		7.33	7.30		34.124	26.687	139.9	0.729	1.25		18.5	52.6	2.57	34.7	0.00	0.00			324	208
381		6.53	6.50		34.141	26.810	128.5	0.809	0.91		13.2	63.6	2.77	37.6	0.00	0.00			383	207
400	ISL	6.58	6.54	D	34.189	26.842	125.9	0.833	0.76	D	11.1	66.1	2.82	38.1	0.00	0.00			402	
438		6.22	6.18		34.192	26.891	121.4	0.880	0.64		9.2	70.7	2.91	39.0	0.00	0.00			441	206
500	ISL	5.87	5.83	D	34.242	26.976	114.0	0.953	0.44	D	6.3	79.1	3.02	40.5	0.00	0.00			503	
518		5.65	5.61		34.231	26.994	112.2	0.973	0.41		5.8	81.5	3.05	40.9	0.00	0.00			521	205
600	ISL	5.18	5.13	D	34.285	27.093	103.3	1.061	0.29	D	4.1	91.5	3.15	42.4	0.00	0.00			604	
632		5.04	4.99		34.317	27.135	99.5	1.094	0.23		3.2	95.2	3.18	42.9	0.00	0.00			636	204
700	CSL	4.69	4.63		34.363	27.212	92.6	1.159	0.26		3.6								705	200
800	CSL	4.36	4.30		34.417	27.291	85.6	1.248	0.34		4.7								806	200
900	CSL	4.08	4.01		34.454	27.351	80.4	1.331	0.45		6.2								907	200
1000	CSL	3.84	3.76		34.482	27.398	76.3	1.410	0.56		7.6								1008	200
1100	CSL	3.60	3.52		34.503	27.439	72.8	1.484	0.67		9.1								1109	200
1200	CSL	3.38	3.29		34.520	27.475	69.7	1.555	0.78		10.5								1211	200
1300	CSL	3.17	3.08		34.536	27.508	66.7	1.624	0.88		11.8								1312	200
1400	CSL	2.97	2.87		34.552	27.539	63.8	1.689	1.00		13.3								1413	200
1500	CSL	2.77	2.66		34.565	27.568	61.1	1.751	1.12		14.9								1514	200
1600	CSL	2.58	2.47		34.578	27.595	58.5	1.811	1.26		16.6								1616	200
1800	CSL	2.28	2.15		34.606	27.644	53.8	1.923	1.58		20.7								1819	200
2000	CSL	2.08	1.94		34.624	27.675	51.0	2.028	1.84		24.0								2022	200
2200	CSL	1.94	1.79		34.637	27.698	49.1	2.128	2.07		26.9								2225	200
2400	CSL	1.84	1.67		34.648	27.715	47.8	2.225	2.25		29.1								2429	200
2600	CSL	1.75	1.56		34.656	27.730	46.8	2.320	2.43		31.4								2632	200
2800	CSL	1.69	1.48		34.661	27.739	46.3	2.413	2.54		32.7								2836	200
3000	CSL	1.64	1.42		34.665	27.747	45.9	2.505	2.66		34.2								3040	200
3200	CSL	1.60	1.36		34.669	27.755	45.7	2.597	2.75		35.3								3244	200
3400	CSL	1.56	1.30		34.672	27.761	45.5	2.688	2.85		36.6								3449	200
3498		1.55	1.28		34.678	27.768	45.2	2.733	2.89		37.1	171.8	2.63	38.6	0.00	0.00			3549	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 4.7 N	122 39.3 W	01/08/11	0136 UTC	4079 m	270 07 kn	260 03 06	1	1015.7 mb	18.9 C	16.8 C	21m	7/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.38	18.38		33.323	23.896	400.0	0.000	5.52		102.6	0.8	0.28	0.0	0.00	0.18	0.16	0.02	0	
2	A	18.38	18.38		33.323	23.896	400.0	0.008	5.52		102.6	0.8	0.28	0.0	0.00	0.18	0.16	0.02	2	222
10	ISL	17.93	17.93	D	33.304	23.992	391.1	0.040	5.54	D	102.1	0.9	0.27	0.0	0.00	0.04	0.15	0.04	10	
12	A	17.86	17.86		33.303	24.008	389.7	0.047	5.57		102.5	0.9	0.27	0.0	0.00	0.00	0.15	0.04	12	221
16	A	17.77	17.77		33.300	24.028	387.9	0.063	5.60		102.9	0.6	0.26	0.0	0.00	0.00	0.19	0.03	16	220
20	ISL	17.73	17.73	D	33.302	24.039	387.0	0.079	5.56	D	102.1	0.7	0.26	0.0	0.00	0.00	0.20	0.02	20	
22		17.71	17.71		33.302	24.044	386.6	0.086	5.59		102.6	0.8	0.26	0.0	0.00	0.00	0.21	0.02	22	219
29	A	15.11	15.11		33.276	24.621	331.7	0.111	6.09		106.2	1.1	0.28	0.0	0.00	0.06	0.38	0.13	29	218
30	ISL	14.80	14.80	D	33.235	24.656	328.4	0.115	6.52	D	112.9	1.3	0.30	0.1	0.01	0.06	0.45	0.18	30	
37		13.46	13.45		33.156	24.874	307.7	0.137	6.24		105.1	2.4	0.43	1.2	0.11	0.06	0.96	0.50	37	217
45		13.19	13.18		33.176	24.944	301.3	0.161	6.00		100.5	2.9	0.54	2.9	0.31	0.05	1.10	0.42	45	216
50	ISL	13.02	13.01	D	33.238	25.026	293.6	0.176	5.79	D	96.7	3.6	0.65	4.6	0.35	0.05	1.02	0.45	50	
54	A	12.91	12.90		33.247	25.055	291.0	0.188	5.62		93.6	4.3	0.74	6.1	0.39	0.05	0.89	0.47	54	215
66		11.83	11.82		33.288	25.293	268.5	0.221	5.18		84.4	7.2	0.97	10.3	0.00	0.00	0.30	0.20	66	214
75	ISL	10.97	10.96	D	33.290	25.452	253.6	0.245	4.96	D	79.3	10.4	1.13	12.9	0.00	0.00	0.10	0.09	75	
79	A	10.67	10.66		33.351	25.552	244.1	0.255	4.76		75.6	11.8	1.19	14.0	0.00	0.00	0.06	0.07	79	213
90		10.45	10.44		33.446	25.664	233.6	0.281	4.40		69.6	14.9	1.36	16.8	0.00	0.00	0.03	0.05	90	212
100		10.00	9.99		33.567	25.835	217.5	0.304	3.72		58.3	19.6	1.62	20.8	0.00	0.00	0.02	0.04	100	211
120		9.50	9.49		33.754	26.065	196.1	0.345	3.05		47.3	25.0	1.85	24.4	0.00	0.00	0.00	0.04	121	210
125	ISL	9.37	9.36	D	33.801	26.123	190.6	0.355	2.93	D	45.4	26.0	1.88	24.9	0.00	0.00	0.00	0.04	126	
140		9.13	9.11		33.873	26.218	181.9	0.383	2.74		42.2	28.6	1.96	26.1	0.00	0.00	0.01	0.04	141	209
150	ISL	9.02	9.00	D	33.906	26.261	177.9	0.401	2.73	D	42.0	30.6	2.01	27.0	0.00	0.00	0.01	0.04	151	
170		8.60	8.58		33.977	26.383	166.6	0.435	2.44		37.2	34.3	2.10	28.5	0.00	0.00	0.00	0.04	171	208
200		8.19	8.17		34.009	26.471	158.7	0.484	2.28		34.4	37.7	2.18	29.9	0.00	0.00	0.00	0.04	201	207
230		7.78	7.76		34.047	26.561	150.5	0.530	2.00		29.9	42.7	2.31	31.6	0.00	0.00			231	206
250	ISL	7.69	7.67	D	34.085	26.604	146.7	0.560	1.76	D	26.3	46.5	2.44	32.8	0.00	0.00			251	
270		7.56	7.53		34.137	26.664	141.3	0.589	1.28		19.1	50.6	2.57	33.9	0.00	0.00			272	205
300	ISL	7.08	7.05	D	34.130	26.727	135.6	0.630	1.14	D	16.8	57.0	2.69	35.7	0.00	0.00			302	
320		6.72	6.69		34.115	26.764	132.2	0.657	1.07		15.6	60.8	2.74	36.7	0.00	0.00			322	204
380		6.21	6.18		34.135	26.847	124.8	0.734	0.92		13.3	67.2	2.84	38.2	0.00	0.00			382	203
400	ISL	6.21	6.17	D	34.184	26.886	121.4	0.759	0.67	D	9.7	69.5	2.90	38.7	0.00	0.00			403	
440		6.03	5.99		34.219	26.937	117.0	0.807	0.51		7.3	74.4	3.01	39.5	0.00	0.00			443	202
500	ISL	5.77	5.73	D	34.281	27.019	109.8	0.875	0.33	D	4.7	82.2	3.11	40.6	0.00	0.00			503	
515		5.67	5.63		34.289	27.037	108.1	0.891	0.29		4.1	84.1	3.14	40.9	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 45.0 N	123 20.0 W	31/07/11	1708 UTC	4020 m	250 07 kn		0	1014.6 mb	19.1 C	16.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.83		18.83		33.296		23.763	412.6	0.000	5.47		102.6		1.4	0.27	0.0	0.00	0.00	0.10	0.02	0	
2		18.83		18.83		33.296		23.763	412.7	0.008	5.47		102.6		1.4	0.27	0.0	0.00	0.00	0.10	0.02	2	220
10		17.72		17.72		33.207		23.969	393.4	0.040	5.56		102.0		1.5	0.27	0.0	0.00	0.00	0.08	0.02	10	219
20		17.29		17.29		33.154		24.031	387.7	0.080	5.62		102.2		1.4	0.30	0.0	0.00	0.00	0.14	0.04	20	218
30		16.19		16.19		33.049		24.206	371.3	0.118	5.82		103.5		1.5	0.30	0.0	0.00	0.00	0.18	0.06	30	217
40		14.85		14.84		33.136		24.570	336.9	0.153	6.17		106.9		1.7	0.31	0.0	0.00	0.00	0.18	0.09	40	216
50		14.11		14.10		33.074		24.678	326.8	0.186	6.19		105.6		1.7	0.33	0.0	0.00	0.00	0.34	0.29	50	215
60		13.33		13.32		33.012		24.790	316.4	0.218	6.02		101.0		2.0	0.36	0.4	0.00	0.13	0.31	0.34	60	214
70		13.14		13.13		33.066		24.870	309.0	0.250	5.93		99.1		1.9	0.44	1.0	0.16	0.28	0.24	0.26	70	213
75	ISL	12.74	D	12.73		33.047	D	24.934	303.0	0.265	5.88	D	97.5		2.0	0.46	1.2	0.24	0.23	0.20	0.22	75	
85		12.17		12.16		33.018		25.021	294.9	0.295	5.76		94.3		2.8	0.50	2.1	0.31	0.07	0.14	0.16	85	212
100		11.30		11.29		33.071		25.223	275.9	0.338	5.42		87.1		5.5	0.71	6.2	0.00	0.00	0.09	0.15	100	211
120		9.97		9.96		33.246		25.590	241.2	0.389	4.76		74.4		12.4	1.16	13.7	0.00	0.00	0.03	0.06	121	210
125	ISL	9.83	D	9.82		33.378	D	25.717	229.2	0.401	4.37	D	68.2		14.3	1.27	15.6	0.00	0.00	0.02	0.05	126	
140		9.40		9.38		33.533		25.908	211.2	0.434	3.96		61.3		19.9	1.57	20.6	0.00	0.00	0.01	0.04	141	209
150	ISL	9.34	D	9.32		33.709	D	26.056	197.5	0.454	3.60	D	55.7		23.2	1.73	22.9	0.00	0.00	0.01	0.04	151	
171		9.12		9.10		33.855		26.206	183.6	0.495	2.80		43.1		28.6	1.95	26.1	0.00	0.00	0.01	0.04	172	208
200	ISL	8.78	D	8.76		33.947	D	26.332	172.1	0.546	2.60	D	39.8		31.8	2.02	27.5	0.00	0.00	0.01	0.03	201	
201		8.77		8.75		33.946		26.333	172.0	0.548	2.62		40.1		31.9	2.02	27.5	0.00	0.00	0.01	0.03	202	207
231		8.33		8.31		34.013		26.453	161.0	0.598	2.31		35.0		36.2	2.17	29.5	0.00	0.00			232	206
250	ISL	8.20	D	8.17		34.050	D	26.502	156.7	0.628	2.07	D	31.3		39.1	2.25	30.6	0.00	0.00			251	
270		7.92		7.89		34.058		26.550	152.3	0.659	1.92		28.8		42.4	2.33	31.7	0.00	0.00			271	205
300	ISL	7.51	D	7.48		34.111	D	26.651	143.0	0.703	1.45	D	21.6		48.8	2.48	33.7	0.00	0.00			302	
321		7.17		7.14		34.098		26.689	139.6	0.733	1.39		20.5		53.5	2.58	35.0	0.00	0.00			323	204
381		6.33		6.30		34.096		26.801	129.3	0.813	1.11		16.1		64.4	2.77	37.8	0.00	0.00			383	203
400	ISL	6.14	D	6.10		34.115	D	26.840	125.6	0.838	0.94	D	13.5		67.8	2.83	38.5	0.00	0.00			402	
442		5.77		5.73		34.136		26.903	119.9	0.889	0.77		11.0		74.6	2.95	39.9	0.00	0.00			445	202
500	ISL	5.63	D	5.59		34.213	D	26.982	113.1	0.957	0.46	D	6.5		81.4	3.05	40.9	0.00	0.00			503	
516		5.51		5.47		34.219		27.001	111.3	0.975	0.42		6.0		83.3	3.08	41.2	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 24.9 N	123 59.6 W	31/07/11	1050 UTC	4222 m	260 04 kn	230 04 08	1	1014.0 mb	20.0 C	17.7 C		1/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.60		18.60		33.058		23.639	424.5	0.000	5.55		103.5		1.9	0.39	0.1	0.00	0.30	0.09	0.03	0	
2		18.60		18.60		33.058		23.639	424.6	0.008	5.55		103.5		1.9	0.39	0.1	0.00	0.30	0.09	0.03	2	220
10		17.63		17.63		33.060		23.878	402.1	0.042	5.60		102.5		1.7	0.29	0.0	0.00	0.00	0.08	0.03	10	219
20	ISL	17.28	D	17.28		33.057	D	23.959	394.6	0.081	5.60	D	101.8		1.5	0.30	0.0	0.00	0.00	0.09	0.03	20	
25		17.21		17.21		33.055		23.974	393.3	0.101	5.63		102.2		1.5	0.30	0.0	0.00	0.00	0.09	0.03	25	218
30	ISL	17.19	D	17.19		33.055	D	23.979	393.0	0.121	5.61	D	101.8		1.5	0.30	0.0	0.00	0.00	0.11	0.04	30	
40		16.65		16.64		33.030		24.087	383.1	0.160	5.71		102.5		1.7	0.28	0.0	0.00	0.00	0.13	0.05	40	217
50		15.99		15.98		32.986		24.204	372.2	0.197	5.83		103.2		2.0	0.26	0.0	0.00	0.00	0.12	0.05	50	216
62		15.51		15.50		33.060		24.368	356.9	0.241	5.98		104.9		1.9	0.25	0.0	0.00	0.00	0.16	0.07	62	215
75		14.00		13.99		33.026		24.665	328.8	0.286	6.08		103.5		2.2	0.27	0.0	0.00	0.00	0.21	0.10	75	214
87		13.45		13.44		33.041		24.789	317.2	0.324	5.92		99.6		2.6	0.31	0.0	0.00	0.00	0.21	0.19	87	213
100		12.99		12.98		33.208		25.010	296.5	0.364	5.62		93.7		2.9	0.39	0.9	0.09	0.00	0.37	0.35	100	212
111		12.23		12.22		33.243		25.185	280.0	0.396	5.38		88.3		4.8	0.58	4.7	0.00	0.00	0.21	0.24	111	211
125		11.23		11.21		33.232		25.361	263.4	0.434	5.16		82.9		7.9	0.94	10.0	0.00	0.00	0.07	0.09	125	210
140		10.99		10.97		33.363		25.506	249.9	0.473	4.83		77.3		11.6	1.18	13.9	0.00	0.00	0.03	0.06	141	209
150	ISL	10.74	D	10.72		33.485	D	25.646	236.8	0.497	4.54	D	72.3		14.5	1.32	16.3	0.00	0.00	0.02	0.04	151	
171		9.45		9.43		33.609		25.960	207.0	0.543	3.92		60.7		20.3	1.54	20.3	0.00	0.00	0.01	0.02	172	208
200		9.08		9.06		33.803		26.172	187.4	0.601	3.48		53.5		25.4	1.71	23.2	0.00	0.00	0.00	0.02	201	207
229		8.49		8.47		33.940		26.372	168.8	0.652	3.43		52.1		29.8	1.77	24.6	0.00	0.00			230	206
250	ISL	8.28	D	8.25		33.974	D	26.430	163.5	0.687	3.10	D	46.9		33.3	1.88	26.3	0.00	0.00			251	
269		8.02		7.99		33.995		26.486	158.4	0.718	2.80		42.1		37.0	2.02	28.2	0.00	0.00			270	205
300	ISL	7.50	D	7.47		34.033	D	26.591	148.7	0.765	2.20	D	32.7		45.4	2.28	31.5	0.00	0.00			302	
319		7.18		7.15		34.054		26.653	142.9	0.793	1.80		26.6		50.6	2.43	33.4	0.00	0.00			321	204
380		6.58		6.55		34.097		26.769	132.5	0.877	1.21		17.6		61.0	2.70	36.6	0.00	0.00			382	203
400	ISL	6.32	D	6.28		34.115	D	26.817	128.0	0.903	1.03	D	14.9		64.8	2.78	37.5	0.00	0.00			402	
441		6.03		5.99		34.153		26.885	121.9	0.954	0.77		11.1		72.2	2.91	39.1	0.00	0.00			444	202
500	ISL	5.73	D	5.69		34.213	D	26.970	114.4	1.024	0.49	D	7.0		80.2	3.05	40.4	0.00	0.00			503	
516		5.64		5.60		34.240		27.002	111.4	1.042	0.38		5.4		82.4	3.09	40.8	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 57.0 N	117 18.2 W	28/07/11	0218 UTC	66 m	190 05 kn	200 01 05	2	1012.3 mb	19.1 C	17.2 C	20m	8/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	20.91		20.91		33.578		23.437	443.7	0.000	5.61		109.5		3.9	0.24	0.0	0.00	0.36	0.32	0.14	0	
2	A	20.91		20.91		33.578		23.437	443.8	0.009	5.61		109.5		3.9	0.24	0.0	0.00	0.36	0.32	0.14	2	209
5		20.88		20.88		33.583		23.449	442.8	0.022	5.61		109.5		4.1	0.23	0.0	0.00	0.29	0.31	0.13	5	208
10	ISL	19.28	D	19.28		33.520	D	23.821	407.5	0.043	6.09	D	115.3		4.5	0.26	0.0	0.00	0.32	0.34	0.14	10	
12	A	18.39		18.39		33.505		24.033	387.3	0.051	6.20		115.4		4.6	0.26	0.0	0.00	0.33	0.35	0.15	12	207
14	A	17.11		17.11		33.475		24.320	360.0	0.059	6.43		116.8		3.0	0.24	0.0	0.00	0.68	0.46	0.21	14	206
20	ISL	14.10	D	14.10		33.345	D	24.889	305.9	0.079	6.19	D	105.8		3.2	0.47	2.7	0.15	0.55	0.64	0.16	20	
22		13.67		13.67		33.333		24.968	298.4	0.085	6.07		102.8		3.3	0.57	3.8	0.21	0.50	0.67	0.13	22	205
28	A	13.36		13.36		33.366		25.057	290.1	0.103	6.00		101.0		3.9	0.61	4.5	0.23	0.53	0.75	0.29	28	204
30	ISL	12.85	D	12.85		33.349	D	25.145	281.8	0.108	6.08	D	101.2		4.5	0.66	5.3	0.23	0.53	0.73	0.29	30	
40		12.18		12.17		33.345		25.271	270.0	0.136	5.15		84.5		7.7	0.95	9.6	0.20	0.52	0.65	0.31	40	203
50	ISL	11.67	D	11.66		33.351	D	25.372	260.6	0.162	4.97	D	80.7		9.1	1.06	11.7	0.17	0.32	0.38	0.25	50	
52	A	11.63		11.62		33.363		25.388	259.1	0.168	4.88		79.2		9.6	1.09	12.1	0.16	0.30	0.33	0.24	52	202
58	A	11.43		11.42		33.410		25.462	252.2	0.183	4.42		71.4		13.0	1.26	14.4	0.33	0.44	0.33	0.44	58	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 54.3 N	117 23.8 W	28/07/11	0621 UTC	566 m	220 10 kn	210 01 07	1	1011.3 mb	21.0 C	18.3 C	21m	2/8	CC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	20.48		20.48		33.554		23.534	434.5	0.000	5.52		106.9	2.5	0.24	0.0	0.00	0.03	0.29	0.09	0	
2		20.48		20.48		33.554		23.534	434.6	0.009	5.52		106.9	2.5	0.24	0.0	0.00	0.03	0.29	0.09	2	220
10		17.90		17.90		33.536		24.177	373.5	0.041	5.82		107.4	3.4	0.25	0.0	0.00	0.02	0.29	0.09	10	219
20		14.37		14.37		33.319		24.812	313.2	0.075	6.43		110.5	2.5	0.36	0.6	0.06	0.16	0.87	0.14	20	218
30		13.69		13.69		33.385		25.005	295.2	0.106	6.23		105.6	5.0	0.48	2.0	0.12	0.34	0.78	0.27	30	217
40		12.90		12.89		33.359		25.143	282.2	0.135	5.77		96.2	5.5	0.65	4.7	0.33	0.35	0.84	0.22	40	216
50		11.74		11.73		33.293		25.314	266.2	0.162	5.12		83.2	7.3	0.90	9.4	0.02	0.04	0.30	0.21	50	215
60		11.14		11.13		33.348		25.466	251.9	0.188	4.71		75.6	10.9	1.08	12.5	0.00	0.00	0.18	0.19	60	214
70		10.85		10.84		33.389		25.550	244.1	0.213	4.45		71.0	12.9	1.20	14.3	0.00	0.00	0.13	0.07	70	213
75	ISL	10.61	D	10.60		33.461	D	25.648	234.9	0.225	4.32	D	68.6	15.3	1.34	16.3	0.00	0.04	0.10	0.07	75	
85		10.16		10.15		33.617		25.847	216.1	0.247	3.53		55.6	20.1	1.62	20.2	0.00	0.11	0.05	0.06	85	212
100		9.87		9.86		33.687		25.951	206.5	0.279	3.32		51.9	22.7	1.71	21.9	0.00	0.02	0.02	0.07	100	211
120		9.93		9.92		33.839		26.060	196.6	0.319	2.69		42.2	26.4	1.92	24.0	0.00	0.02	0.02	0.07	121	210
125	ISL	9.86	D	9.85		33.878	D	26.102	192.7	0.329	2.61	D	40.9	27.2	1.94	24.4	0.00	0.07	0.02	0.07	126	
140		9.58		9.56		33.933		26.192	184.5	0.357	2.51		39.1	29.3	2.00	25.5	0.00	0.19	0.01	0.06	141	209
150	ISL	9.46	D	9.44		33.944	D	26.220	181.9	0.376	2.49	D	38.7	30.6	2.07	26.2	0.00	0.14	0.01	0.08	151	
170		9.62		9.60		34.085		26.305	174.4	0.411	1.83		28.5	33.0	2.21	27.5	0.00	0.01	0.01	0.13	171	208
200		9.61		9.59		34.202		26.398	166.2	0.462	1.37		21.4	36.0	2.39	28.7	0.00	0.11	0.00	0.10	201	207
230		9.49		9.46		34.272		26.473	159.7	0.511	1.07		16.7	38.9	2.50	29.6	0.00	0.15			231	206
250	ISL	9.30	D	9.27		34.274	D	26.506	156.9	0.543	1.06	D	16.4	40.7	2.55	30.0	0.00	0.08			251	
270		9.22		9.19		34.312		26.549	153.2	0.574	0.88		13.6	42.3	2.59	30.4	0.00	0.00			272	205
300	ISL	8.90	D	8.87		34.314	D	26.602	148.6	0.619	0.79	D	12.1	44.4	2.63	31.0	0.00	0.02			302	
320		8.79		8.76		34.308		26.615	147.7	0.649	0.83		12.7	45.6	2.65	31.3	0.00	0.03			322	204
380		8.51		8.47		34.325		26.673	143.2	0.736	0.68		10.4	49.4	2.73	32.2	0.00	0.04			382	203
400	ISL	8.26	D	8.22		34.308	D	26.698	141.0	0.765	0.70	D	10.6	51.5	2.78	32.8	0.00	0.03			403	
440		7.91		7.87		34.331		26.769	134.8	0.820	0.49		7.4	56.1	2.87	34.2	0.00	0.01			443	202
500	ISL	7.36	D	7.31		34.327	D	26.845	128.0	0.899	0.40	D	5.9	62.5	2.96	36.0	0.00	0.00			503	
517		7.18		7.13		34.325		26.869	125.9	0.920	0.38		5.6	64.3	2.98	36.5	0.00	0.00			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 50.6 N	117 31.9 W	28/07/11	0940 UTC	859 m	210 09 kn	210 02 07	1	1010.7 mb	20.6 C	17.6 C		4/8	SC

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.54		18.54		33.441		23.946	395.2	0.000	5.60		104.5	0.8	0.28	0.0	0.00	0.02	0.18	0.05	0	
2		18.54		18.54		33.441		23.947	395.2	0.008	5.60		104.5	0.8	0.28	0.0	0.00	0.02	0.18	0.05	2	220
10		17.25		17.25		33.369		24.205	370.8	0.039	5.70		103.7	1.0	0.27	0.0	0.00	0.00	0.15	0.05	10	219
20		14.56		14.56		33.289		24.749	319.3	0.073	6.28		108.3	1.4	0.36	0.6	0.04	0.10	0.57	0.18	20	218
30	ISL	13.32	D	13.32		33.287	D	25.004	295.2	0.104	5.82	D	97.8	2.4	0.60	4.2	0.55	0.01	0.77	0.35	30	
31		13.26		13.26		33.286		25.015	294.2	0.107	5.85		98.2	2.6	0.63	4.7	0.58	0.00	0.77	0.36	31	217
40		12.66		12.65		33.357		25.188	277.9	0.132	5.34		88.6	5.2	0.90	9.1	0.12	0.00	0.66	0.36	40	216
50	ISL	12.02	D	12.01		33.368	D	25.320	265.6	0.160	5.11	D	83.6	7.3	1.02	11.1	0.01	0.01	0.40	0.25	50	
51		12.00		11.99		33.371		25.326	265.0	0.162	5.11		83.6	7.5	1.03	11.2	0.00	0.01	0.37	0.24	51	215
60		11.41		11.40		33.396		25.455	253.0	0.186	4.78		77.2	10.6	1.20	13.5	0.00	0.05	0.20	0.16	60	214
73		10.74		10.73		33.511	D	25.664	233.3	0.217	4.15	D	66.1								73	213
75	ISL	10.62	D	10.61		33.539	D	25.707	229.3	0.222	3.94	D	62.6	15.9	1.44	17.7	0.00	0.03	0.06	0.08	75	
84		9.96		9.95		33.588		25.858	215.0	0.242	3.68		57.7	19.3	1.58	20.1	0.00	0.00	0.03	0.07	84	212
100		9.77		9.76		33.825		26.075	194.7	0.275	2.94		45.9	26.1	1.89	23.0	0.00	0.00	0.03	0.09	100	211
122		9.55		9.54		34.010		26.257	177.9	0.316	2.28		35.5	30.4	2.07	26.1	0.00	0.00	0.05	0.00	123	210
125	ISL	9.54	D	9.53		34.033	D	26.276	176.1	0.321	2.20	D	34.2	30.8	2.08	26.3	0.00	0.00	0.04	0.01	126	
140		9.43		9.41		34.052		26.309	173.3	0.347	2.08		32.3	32.1	2.14	27.1	0.00	0.00	0.01	0.06	141	209
150	ISL	9.41	D	9.39		34.053	D	26.314	173.1	0.364	2.10	D	32.6	32.8	2.17	27.4	0.00	0.00	0.01	0.05	151	
171		9.40		9.38		34.117		26.366	168.6	0.400	1.86		28.9	33.8	2.22	27.8	0.00	0.00	0.01	0.04	172	208
198		9.36		9.34		34.135		26.387	167.1	0.446	1.74		27.0	34.9	2.26	28.1	0.00	0.00	0.01	0.05	199	207
200	ISL	9.35	D	9.33		34.135	D	26.388	167.0	0.449	1.75	D	27.1	35.1	2.27	28.2	0.00	0.00			201	
229		9.11		9.08		34.232		26.504	156.6	0.496	1.35		20.8	39.0	2.42	29.7	0.00	0.00			230	206
250	ISL	8.92	D	8.89		34.227	D	26.530	154.4	0.529	1.38	D	21.2	40.6	2.46	30.2	0.00	0.00			251	
270		8.80		8.77		34.238		26.558	152.1	0.559	1.25		19.2	41.5	2.47	30.5	0.00	0.00			272	205
300	ISL	8.83	D	8.80		34.243	D	26.558	152.8	0.605	1.23	D	18.9	42.3	2.50	30.7	0.00	0.13			302	
320		8.76		8.73		34.255		26.578	151.2	0.635	1.13		17.3	43.2	2.53	30.9	0.00	0.22			322	204
378		8.07		8.03		34.274		26.699	140.3	0.720	0.82		12.4	50.9	2.70	33.2	0.00	0.26			380	203
400	ISL	8.15	D	8.11		34.295	D	26.704	140.4	0.751	0.74	D	11.2	52.2	2.75	33.6	0.00	0.27			403	
439		7.93		7.89		34.328		26.763	135.3	0.805	0.51		7.7	54.5	2.82	34.1	0.00	0.30			442	202
500	ISL	7.20	D	7.15		34.324	D	26.865	125.9	0.884	0.41	D	6.1	62.6	2.95	36.2	0.00	0.09			503	
517		7.08		7.03		34.333		26.889	123.8	0.905	0.34		5.0	64.9	2.99	36.8	0.00	0.03			521	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 40.6 N	117 52.2 W	28/07/11	1459 UTC	626 m	170 04 kn		0	1012.3 mb	18.8 C	16.0 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	19.75		19.75		33.696		23.834	405.9	0.000	5.45		104.2		2.1	0.22	0.0	0.00	0.01	0.31	0.10	0	
3		19.75		19.75		33.696		23.834	406.0	0.012	5.45		104.2		2.1	0.22	0.0	0.00	0.01	0.31	0.10	3	220
10		18.85		18.85		33.692		24.061	384.6	0.040	5.47		102.8		2.2	0.22	0.0	0.00	0.01	0.32	0.11	10	219
20		13.97		13.97		33.600		25.113	284.6	0.073	5.97		101.9		6.4	0.59	4.3	0.09	0.02	0.89	0.37	20	218
30		12.04		12.04		33.628		25.517	246.3	0.100	4.30		70.5		14.3	1.30	15.3	0.17	0.01	1.07	0.53	30	217
39		11.48		11.48		33.647		25.636	235.2	0.122	3.90		63.2		16.9	1.48	18.3	0.08	0.00	0.79	0.45	39	216
49		10.93		10.92		33.681		25.762	223.4	0.144	3.48		55.7		20.0	1.65	21.0	0.02	0.00	0.57	0.36	49	215
50	ISL	10.69	D	10.68		33.697	D	25.817	218.2	0.147	3.48	D	55.4		20.4	1.67	21.3	0.02	0.00	0.54	0.34	50	
60		10.12		10.11		33.757		25.963	204.6	0.168	2.86		45.0		23.8	1.85	23.8	0.01	0.00	0.26	0.17	60	214
71		9.57		9.56		33.800		26.088	192.8	0.190	2.74		42.6		25.3	1.91	25.1	0.00	0.00	0.10	0.12	71	213
75	ISL	9.43	D	9.42		33.844	D	26.146	187.4	0.197	2.73	D	42.3		26.0	1.92	25.4	0.00	0.00	0.07	0.11	75	
86		9.34		9.33		33.851		26.166	185.7	0.218	2.75		42.6		28.1	1.95	26.0	0.00	0.00	0.02	0.09	86	212
100		9.25		9.24		33.936		26.247	178.3	0.243	2.48		38.3		30.3	2.04	27.0	0.00	0.00	0.01	0.08	101	211
120		9.09		9.08		34.000		26.323	171.4	0.278	2.30		35.4		32.2	2.09	27.8	0.00	0.00	0.01	0.08	121	210
125	ISL	9.07	D	9.06		34.023	D	26.344	169.5	0.287	2.25	D	34.7		33.0	2.12	28.1	0.00	0.00	0.01	0.09	126	
140		8.82		8.81		34.072		26.423	162.4	0.312	2.05		31.4		35.7	2.20	28.9	0.00	0.00	0.00	0.10	141	209
150	ISL	8.80	D	8.78		34.105	D	26.452	159.8	0.328	1.83	D	28.0		37.1	2.25	29.5	0.00	0.00	0.00	0.09	151	
171		8.63		8.61		34.133		26.500	155.5	0.361	1.66		25.3		39.6	2.35	30.5	0.00	0.00	0.00	0.06	172	208
200		8.48		8.46		34.180		26.561	150.3	0.405	1.35		20.5		43.1	2.47	31.5	0.00	0.00	0.00	0.06	201	207
230		8.22		8.20		34.209		26.624	144.8	0.449	1.12		16.9		46.9	2.58	32.8	0.00	0.00			231	206
250	ISL	7.86	D	7.83		34.191	D	26.663	141.3	0.478	1.13	D	16.9		49.6	2.64	33.7	0.00	0.00			252	
270		7.77		7.74		34.215		26.695	138.5	0.506	0.96		14.4		52.1	2.69	34.5	0.00	0.00			272	205
300	ISL	7.68	D	7.65		34.256	D	26.741	134.7	0.547	0.74	D	11.1		55.0	2.77	35.2	0.00	0.00			302	
320		7.54		7.51		34.262		26.766	132.6	0.574	0.69		10.3		56.7	2.82	35.5	0.00	0.00			322	204
381		7.30		7.26		34.319		26.846	125.9	0.653	0.38		5.6		62.2	2.98	36.3	0.00	0.00			384	203
400	ISL	7.17	D	7.13		34.353	D	26.891	121.8	0.676	0.32	D	4.7		63.9	3.00	36.7	0.00	0.00			403	
441		6.84		6.80		34.341		26.927	118.8	0.725	0.30		4.4		67.6	3.04	37.8	0.00	0.00			444	202
500	ISL	6.38	D	6.33		34.328	D	26.979	114.3	0.794	0.28	D	4.1		73.2	3.10	39.1	0.00	0.00			503	
516		6.40		6.35		34.337		26.984	114.1	0.813	0.25		3.6		74.7	3.12	39.4	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 12.2 W	28/07/11	1929 UTC	1709 m	080 02 kn		0	1011.6 mb	17.5 C	15.2 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.60		18.60		33.611		24.062	384.2	0.000	5.74		107.4		0.1	0.22	0.0	0.00	0.00	0.80	0.26	0	
2		18.60		18.60		33.611		24.062	384.2	0.008	5.74		107.4		0.1	0.22	0.0	0.00	0.00	0.80	0.26	2	221
10		18.19		18.19		33.610		24.163	374.9	0.038	5.83		108.2		0.3	0.22	0.0	0.00	0.00	0.99	0.29	10	219
10		18.19		18.19		33.614		24.166	374.6	0.038												10	220
20		15.85		15.85		33.582		24.693	324.7	0.073	5.93		105.1		2.3	0.39	1.4	0.07	0.10	2.46	1.34	20	218
30		12.69		12.69		33.501		25.294	267.6	0.103	5.21		86.5		9.6	0.97	10.2	0.12	0.12	1.92	0.94	30	217
40		11.88		11.87		33.512		25.458	252.3	0.129	4.53		74.0		12.1	1.22	14.3	0.09	0.02	1.33	0.65	40	216
50		10.82		10.81		33.562		25.689	230.4	0.153	3.93		62.7		16.2	1.44	17.8	0.04	0.00	0.60	0.49	50	215
60		10.61		10.60		33.682		25.820	218.2	0.175	3.31		52.6		20.9	1.69	21.5	0.00	0.00	0.29	0.26	60	214
70		10.08		10.07		33.765	D	25.976	203.5	0.196	2.83	D	44.5									70	213
75	ISL	9.92	D	9.91		33.797	D	26.028	198.7	0.206	2.75	D	43.1		26.0	1.94	25.0	0.00	0.00	0.14	0.17	75	
85		9.57		9.56		33.866		26.140	188.2	0.226	2.46		38.3		28.3	2.02	26.2	0.00	0.00	0.04	0.11	85	212
100		9.35		9.34		33.935		26.230	179.9	0.253	2.38		36.9		30.2	2.04	26.9	0.00	0.00	0.01	0.10	101	211
120		9.13		9.12		34.005		26.321	171.7	0.288	2.21		34.1		32.5	2.12	27.7	0.00	0.00	0.01	0.08	121	210
125	ISL	9.13	D	9.12		34.008	D	26.323	171.6	0.297	2.20	D	33.9		33.1	2.14	27.9	0.00	0.01	0.01	0.08	126	
141		8.90		8.88		34.068		26.407	163.9	0.324	2.00		30.7		35.0	2.20	28.7	0.00	0.03	0.00	0.08	142	209
150	ISL	8.84	D	8.82		34.094	D	26.437	161.2	0.338	1.88	D	28.8		36.5	2.25	29.2	0.00	0.02	0.00	0.07	151	
169		8.71		8.69		34.141		26.494	156.1	0.369	1.60		24.5		39.6	2.35	30.1	0.00	0.00	0.00	0.06	170	208
200	ISL	8.47	D	8.45		34.162	D	26.548	151.5	0.416	1.46	D	22.2		42.0	2.43	31.1	0.00	0.00	0.00	0.06	201	
201		8.46		8.44		34.161		26.549	151.4	0.418	1.45		22.0		42.1	2.43	31.1	0.00	0.00	0.00	0.06	202	207
230		8.24		8.22		34.211		26.622	145.0	0.461	1.12		16.9		46.4	2.57	32.5	0.00	0.03			231	206
250	ISL	8.15	D	8.12		34.224	D	26.646	143.0	0.490	1.03	D	15.6		48.2	2.62	33.0	0.00	0.02			252	
270		8.06		8.03		34.240		26.672	140.9	0.518	0.89		13.4		49.8	2.66	33.4	0.00	0.00			272	205
300	ISL	7.74	D	7.71		34.269	D	26.743	134.6	0.559	0.67	D	10.0		53.9	2.77	34.5	0.00	0.00			302	
320		7.61		7.58		34.286		26.775	131.8	0.586	0.55		8.2		56.8	2.84	35.2	0.00	0.00			322	204
380		7.09		7.05		34.284		26.848	125.5	0.663	0.50		7.4		62.7	2.93	36.6	0.00	0.00			382	203
400	ISL	6.87	D	6.83		34.282	D	26.876	122.9	0.688	0.46	D	6.7		65.0	2.96	37.1	0.00	0.00			403	
441		6.59		6.55		34.294		26.924	118.8	0.738	0.38		5.5		69.8	3.01	38.2	0.00	0.00			444	202
500	ISL	6.24	D	6.20		34.316	D	26.987	113.4	0.806	0.30	D	4.3		76.4	3.09	39.3	0.00	0.00			503	
515		6.16		6.11		34.323		27.003	112.0	0.823	0.28		4.0		78.1	3.11	39.6	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 20.6 N	118 33.4 W	29/07/11	0124 UTC	1415 m	260 09 kn	260 02 06	2	1012.9 mb	18.2 C	16.2 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	17.39	17.39		33.595		24.345	357.2	0.000	5.76		105.3		1.5	0.23	0.0	0.00	0.00	0.60	0.15	0	
2	A	17.39	17.39		33.595		24.345	357.3	0.007	5.76		105.2		1.5	0.23	0.0	0.00	0.00	0.60	0.15	2	224
7	A	17.31	17.31		33.594		24.363	355.7	0.025	5.77		105.3		1.6	0.23	0.0	0.00	0.00	0.63	0.18	7	223
10	A	17.20	17.20		33.594		24.389	353.3	0.036	5.77		105.0		1.6	0.22	0.0	0.00	0.01	0.62	0.18	10	221
10		17.20	17.20		33.599		24.393	352.9	0.036												10	222
15	A	17.07	17.07		33.595		24.421	350.4	0.053	5.75		104.4		1.6	0.23	0.0	0.00	0.04	0.65	0.21	15	220
20	ISL	16.44	D 16.44	D	33.593	D	24.567	336.7	0.070	5.76	D	103.3		1.3	0.28	0.2	0.00	0.19	1.17	0.43	20	
22		15.94	15.94		33.590		24.678	326.1	0.077	5.85		103.9		1.2	0.31	0.3	0.00	0.25	1.37	0.52	22	219
28	A	15.40	15.40		33.550		24.768	317.7	0.096	5.59		98.2		2.6	0.49	2.0	0.13	0.96	1.28	0.56	28	218
30	ISL	15.16	D 15.16	D	33.546	D	24.818	313.0	0.103	5.52	D	96.5		2.9	0.52	2.3	0.15	1.15	1.25	0.57	30	
35		14.78	14.77		33.510		24.873	307.9	0.118	5.48		95.0		3.6	0.60	3.3	0.22	1.36	1.17	0.60	35	217
42	A	12.98	12.97		33.460		25.206	276.3	0.139	5.24		87.5		5.0	0.82	7.1	0.57	0.68	0.54	0.39	42	216
50	ISL	12.07	D 12.06	D	33.370	D	25.312	266.4	0.160	5.02	D	82.2		7.1	1.01	11.1	0.17	0.05	0.26	0.29	50	
51		11.99	11.98		33.360		25.319	265.7	0.163	5.03		82.2		7.4	1.03	11.5	0.10	0.00	0.25	0.28	51	215
60		11.38	11.37		33.380		25.448	253.6	0.186	4.92		79.4		9.1	1.12	12.8	0.01	0.00	0.16	0.21	60	214
70		10.78	10.77		33.644		25.761	224.1	0.210	3.76		60.0		16.9	1.55	19.6	0.00	0.00	0.10	0.12	70	213
75	ISL	10.24	D 10.23	D	33.610	D	25.828	217.7	0.221	3.67	D	57.9		18.8	1.59	20.3	0.00	0.00	0.07	0.09	75	
85		9.73	9.72		33.635		25.933	207.8	0.243	3.54		55.2		21.3	1.67	21.8	0.00	0.00	0.03	0.06	85	212
100		9.51	9.50		33.807		26.104	191.9	0.273	2.87		44.6		26.4	1.87	24.8	0.00	0.00	0.02	0.06	100	211
120		9.24	9.23		33.890		26.213	181.9	0.310	2.65		40.9		29.2	1.96	26.2	0.00	0.00	0.02	0.05	121	210
125	ISL	9.17	D 9.16	D	33.940	D	26.263	177.2	0.319	2.55	D	39.3		30.3	2.00	26.7	0.00	0.00	0.02	0.05	126	
140		9.02	9.00		34.009		26.342	170.1	0.345	2.16		33.2		33.5	2.13	28.2	0.00	0.00	0.01	0.05	141	209
150	ISL	8.96	D 8.94	D	34.065	D	26.395	165.2	0.362	1.97	D	30.3		35.1	2.19	28.8	0.00	0.00	0.01	0.05	151	
170		8.79	8.77		34.122		26.467	158.7	0.394	1.78		27.3		38.0	2.28	29.7	0.00	0.00	0.00	0.04	171	208
200		8.67	8.65		34.204		26.550	151.4	0.441	1.29		19.7		42.6	2.46	31.2	0.00	0.00	0.00	0.04	201	207
230		8.44	8.42		34.246		26.619	145.4	0.485	0.96	D	14.6		46.0	2.60	32.3	0.00	0.00			231	206
250	ISL	8.36	D 8.33	D	34.267	D	26.648	143.0	0.514	0.97	D	14.7		48.0	2.65	32.7	0.00	0.00			251	
270		8.24	8.21		34.276		26.674	140.9	0.542	0.79		12.0		49.9	2.68	33.1	0.00	0.00			272	205
300	ISL	7.92	D 7.89	D	34.271	D	26.718	137.0	0.584	0.73	D	11.0		53.0	2.75	33.9	0.00	0.00			302	
320		7.84	7.81		34.304		26.756	133.8	0.611	0.61		9.1		55.1	2.79	34.4	0.00	0.00			322	204
380		7.31	7.27		34.290		26.822	128.2	0.690	0.51		7.6		61.0	2.89	36.1	0.00	0.00			382	203
400	ISL	7.14	D 7.10	D	34.294	D	26.849	125.8	0.715	0.47	D	6.9		63.6	2.93	36.7	0.00	0.00			403	
440		6.76	6.72		34.303		26.908	120.5	0.764	0.38		5.6		68.9	3.01	38.0	0.00	0.00			443	202
500	ISL	6.35	D 6.30	D	34.317	D	26.974	114.7	0.835	0.31	D	4.5		75.2	3.08	39.4	0.00	0.00			503	
515		6.28	6.23		34.325		26.990	113.4	0.852	0.27		3.9		76.8	3.10	39.7	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 10.8 N	118 53.6 W	29/07/11	0451 UTC	1469 m	280 09 kn	270 03 08	2	1013.2 mb	19.6 C	16.9 C	10m	8/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT		SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.25	17.25		33.593		24.376	354.2	0.000	5.85		106.6		1.3	0.24	0.0	0.00	0.02	0.64	0.16	0	
2		17.25	17.25		33.593		24.376	354.2	0.007	5.85		106.6		1.3	0.24	0.0	0.00	0.02	0.64	0.16	2	220
10		16.76	16.76		33.583		24.484	344.2	0.035	5.90		106.5		0.9	0.22	0.0	0.00	0.02	0.76	0.22	10	219
20		15.65	15.65		33.483	D	24.661	327.7	0.069	5.79	D	102.2									20	218
30		13.24	13.24		33.277	D	25.012	294.4	0.100	5.75		96.5		2.6	0.57	2.7	0.26	0.80	0.85	0.43	30	217
40		12.28	12.27		33.265		25.190	277.7	0.128	5.57		91.6		3.3	0.78	5.4	0.69	0.72	0.20	0.24	40	216
50		11.90	11.89		33.295		25.286	268.8	0.156	5.18		84.5		6.0	0.98	10.2	0.06	0.00	0.12	0.16	50	215
60		10.94	10.93		33.315		25.476	250.9	0.182	5.02		80.2		8.3	1.09	12.3	0.05	0.01	0.09	0.13	60	214
70		10.45	10.44		33.348		25.587	240.5	0.206	4.53		71.6		13.2	1.29	15.6	0.00	0.02	0.06	0.09	70	213
75	ISL	10.21	D 10.20	D	33.441	D	25.701	229.7	0.218	4.15	D	65.3		14.9	1.37	17.0	0.00	0.02	0.04	0.07	75	
85		10.28	10.27		33.530		25.759	224.5	0.241	3.90		61.5		18.0	1.53	19.5	0.00	0.01	0.02	0.05	85	212
100		9.69	9.68		33.675		25.971	204.5	0.273	3.29		51.3		23.2	1.76	23.0	0.00	0.00	0.01	0.05	100	211
120		9.19	9.18		33.791		26.144	188.5	0.312	3.04		46.9		26.9	1.86	24.8	0.00	0.00	0.01	0.04	121	210
125	ISL	9.11	D 9.10	D	33.859	D	26.210	182.3	0.321	3.06	D	47.1		27.7	1.87	25.1	0.00	0.00	0.01	0.04	126	
140		8.93	8.92		33.915		26.282	175.7	0.348	2.81		43.1		30.1	1.93	26.0	0.00	0.00	0.01	0.03	141	209
150	ISL	8.91	D 8.89	D	33.969	D	26.328	171.5	0.366	2.68	D	41.1		32.1	2.02	27.0	0.00	0.00	0.01	0.03	151	
170		8.92	8.90		34.077		26.411	164.1	0.399	1.88		28.9		35.8	2.22	28.9	0.00	0.00	0.01	0.04	171	208
200		8.73	8.71		34.130		26.483	157.8	0.447	1.67		25.5		39.4	2.32	29.8	0.00	0.00	0.01	0.04	201	207
230		8.40	8.38		34.172		26.567	150.3	0.494	1.37		20.8		43.5	2.47	31.4	0.00	0.00			231	206
250	ISL	8.31	D 8.28	D	34.240	D	26.635	144.2	0.523	1.12	D	17.0		46.0	2.56	32.1	0.00	0.00			251	
270		8.26	8.23		34.250		26.650	143.1	0.552	0.91		13.8		48.5	2.64	32.7	0.00	0.01			272	205
300	ISL	8.06	D 8.03	D	34.265	D	26.693	139.5	0.594	0.78	D	11.8		52.1	2.73	33.6	0.00	0.04			302	
320		7.72	7.69		34.263		26.741	135.1	0.622	0.73		10.9		54.5	2.77	34.2	0.00	0.05			322	204
380		7.15	7.11		34.286		26.841	126.2	0.700	0.52		7.7		62.0	2.89	36.0	0.00	0.03			382	203
400	ISL	7.08	D 7.04	D	34.301	D	26.863	124.4	0.725	0.44	D	6.5		64.5	2.91	36.7	0.00	0.03			403	
441		6.46	6.42		34.241		26.899	121.0	0.775	0.53		7.7		69.6	2.94	38.1	0.00	0.03			444	202
500	ISL	6.11	D 6.07	D	34.293	D	26.986	113.3	0.845	0.34	D	4.9		75.9	3.07	39.1	0.00	0.01			503	
515		6.14	6.09		34.305		26.992	113.0	0.862	0.31		4.5		77.5	3.10	39.4	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 0.9 N	119 14.1 W	29/07/11	0908 UTC	1588 m	290 11 kn	280 03 07	2	1012.2 mb	17.9 C	15.0 C		8/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	17.04	17.04		33.451	24.317	359.8	0.000	5.76		104.4	0.7	0.26	0.0	0.00	0.02	0.35	0.13	0	
3		17.04	17.04		33.451	24.317	359.9	0.011	5.76		104.4	0.7	0.26	0.0	0.00	0.02	0.35	0.13	3	221
9		16.96	16.96		33.448	24.334	358.5	0.032											9	220
10		16.89	16.89		33.449	24.351	356.9	0.036	5.76		104.1	0.8	0.26	0.0	0.00	0.03	0.33	0.13	10	219
20		16.84	16.84		33.445	24.360	356.4	0.072	5.75		103.8	0.8	0.25	0.0	0.00	0.05	0.42	0.18	20	218
30	ISL	16.23	D 16.23		33.403	D 24.469	346.3	0.107	5.78	D	103.1	0.5	0.30	0.4	0.02	0.22	0.56	0.29	30	
31		16.00	16.00		33.402	24.521	341.4	0.110	5.81		103.2	0.5	0.31	0.4	0.02	0.25	0.57	0.30	31	217
39		14.29	14.28		33.276	24.796	315.3	0.136	5.83		100.0	2.0	0.51	2.4	0.23	0.76	0.50	0.35	39	216
49		13.25	13.24		33.240	24.982	297.8	0.167	5.71		95.8	2.8	0.62	3.8	0.43	0.71	0.29	0.26	49	215
50	ISL	13.12	D 13.11		33.246	D 25.012	294.9	0.170	5.60	D	93.7	3.0	0.63	4.1	0.40	0.65	0.27	0.25	50	
60		12.17	12.16		33.261	25.209	276.4	0.199	5.31		87.1	5.2	0.79	7.7	0.00	0.09	0.14	0.19	60	214
70		11.50	11.49		33.350	25.403	258.2	0.225	5.02		81.2	8.6	1.06	12.0	0.00	0.00	0.06	0.09	70	213
75	ISL	11.19	D 11.18		33.368	D 25.473	251.6	0.238	4.87	D	78.3	10.3	1.16	13.6	0.00	0.00	0.04	0.08	75	
85		10.92	10.91		33.475	25.605	239.2	0.263	4.45		71.2	13.7	1.33	16.4	0.00	0.00	0.02	0.06	85	212
99		10.31	10.30		33.569	25.784	222.4	0.295	3.79		59.8	18.3	1.56	20.0	0.00	0.00	0.01	0.06	99	211
100	ISL	10.25	D 10.24		33.576	D 25.800	220.9	0.297	3.75	D	59.1	18.7	1.58	20.3	0.00	0.00	0.01	0.06	100	
119		9.50	9.49		33.734	26.049	197.5	0.337	3.13		48.6	24.6	1.80	24.1	0.00	0.03	0.01	0.05	120	210
125	ISL	9.31	D 9.30		33.790	D 26.124	190.5	0.349	3.10	D	47.9	25.6	1.83	24.6	0.00	0.02	0.01	0.05	126	
140		9.13	9.11		33.828	26.182	185.2	0.377	2.92		45.0	27.3	1.87	25.4	0.00	0.01	0.00	0.04	141	209
150	ISL	9.01	D 8.99		33.875	D 26.239	180.0	0.395	2.87	D	44.1	28.7	1.91	26.0	0.00	0.18	0.00	0.04	151	
170		8.77	8.75		33.935	26.323	172.3	0.430	2.67		40.8	31.6	1.99	27.0	0.00	0.49	0.00	0.04	171	208
200		8.33	8.31		34.004	26.446	161.1	0.480	2.54		38.5	35.1	2.05	28.2	0.00	0.16	0.00	0.03	201	207
230		8.24	8.22		34.135	26.563	150.6	0.527	1.68		25.4	42.3	2.35	30.9	0.00	0.00			231	206
250	ISL	8.11	D 8.08		34.158	D 26.600	147.3	0.557	1.45	D	21.9	44.2	2.41	31.6	0.00	0.00			251	
271		7.98	7.95		34.163	26.624	145.4	0.588	1.39		20.9	45.8	2.45	32.1	0.00	0.00			273	205
300	ISL	7.61	D 7.58		34.202	D 26.709	137.7	0.629	1.04	D	15.5	51.7	2.60	33.9	0.00	0.00			302	
320		7.33	7.30		34.213	26.757	133.2	0.656	0.87		12.9	56.3	2.71	35.2	0.00	0.00			322	204
381		6.45	6.42		34.181	26.852	124.5	0.734	0.71		10.3	66.4	2.85	38.2	0.00	0.00			383	203
400	ISL	6.45	D 6.41		34.216	D 26.880	122.2	0.758	0.62	D	9.0	67.8	2.88	38.3	0.00	0.00			403	
439		6.39	6.35		34.244	26.911	119.8	0.805	0.51		7.4	69.9	2.95	38.5	0.00	0.00			442	202
500	ISL	6.08	D 6.04		34.300	D 26.995	112.4	0.876	0.32	D	4.6	75.9	3.06	39.3	0.00	0.00			503	
514		6.16	6.11		34.336	27.014	111.0	0.891	0.26		3.8	77.3	3.08	39.5	0.00	0.00			517	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 50.9 N	119 34.7 W	29/07/11	1324 UTC	1900 m	320 09 kn		0	1013.9 mb	17.0 C	15.0 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.72	16.72		33.303	24.278	363.5	0.000	5.80		104.4	0.6	0.27	0.0	0.00	0.00	0.29	0.11	0	
3		16.72	16.72		33.303	24.279	363.6	0.011	5.80		104.4	0.6	0.27	0.0	0.00	0.00	0.29	0.11	3	220
10		16.72	16.72		33.313	24.286	363.1	0.036	5.80		104.4	0.8	0.26	0.0	0.00	0.00	0.27	0.10	10	219
20		15.68	15.68		33.322	24.531	340.1	0.071	6.05		106.7	0.6	0.30	0.2	0.00	0.10	0.56	0.26	20	218
29		14.33	14.33		33.162	24.700	324.2	0.101	6.00		102.9	1.5	0.41	1.1	0.09	0.39	0.69	0.46	29	217
30	ISL	14.07	D 14.07		33.155	D 24.749	319.6	0.105	6.01	D	102.5	1.5	0.42	1.2	0.09	0.48	0.68	0.46	30	
40		13.81	13.80		33.260	24.884	307.0	0.136	5.87		99.6	1.7	0.53	2.5	0.13	1.26	0.48	0.32	40	216
49		13.54	13.53		33.285	24.958	300.1	0.163	5.78		97.6	2.3	0.64	4.0	0.27	0.98	0.29	0.23	49	215
50	ISL	13.49	D 13.48		33.279	D 24.964	299.6	0.166	5.76	D	97.1	2.3	0.64	4.0	0.28	0.96	0.28	0.22	50	
60		12.66	12.65		33.206	25.072	289.5	0.196	5.60		92.8	3.2	0.65	4.3	0.34	0.72	0.18	0.18	60	214
70		12.13	12.12		33.242	25.202	277.3	0.224	5.34		87.5	6.0	0.96	9.5	0.02	2.70	0.13	0.16	70	213
75	ISL	12.01	D 12.00		33.291	D 25.262	271.7	0.238	5.22	D	85.3	7.1	1.06	10.8	0.01	2.43	0.11	0.14	75	
86		11.13	11.12		33.336	25.459	253.1	0.267	4.96		79.6	9.8	1.22	12.8	0.00	1.83	0.06	0.10	86	212
100	ISL	10.36	D 10.35		33.470	D 25.699	230.6	0.300	4.28	D	67.6	15.3	1.45	17.5	0.00	0.48	0.02	0.07	100	
102		10.14	10.13		33.479	25.743	226.3	0.305	4.16		65.4	16.1	1.48	18.1	0.00	0.31	0.02	0.07	102	211
119		9.54	9.53		33.632	25.963	205.7	0.342	3.76		58.4	20.8	1.56	20.8	0.00	0.06	0.01	0.04	120	210
125	ISL	9.42	D 9.41		33.695	D 26.032	199.3	0.354	3.61	D	55.9	22.5	1.63	22.0	0.00	0.04	0.01	0.04	126	
140		9.16	9.14		33.807	26.161	187.2	0.383	3.07		47.3	26.6	1.83	24.9	0.00	0.00	0.00	0.04	141	209
150	ISL	9.08	D 9.06		33.846	D 26.205	183.3	0.401	2.97	D	45.7	28.9	1.94	26.2	0.00	0.00	0.00	0.04	151	
171		8.95	8.93		33.973	26.325	172.2	0.439	2.29		35.2	32.9	2.09	28.0	0.00	0.01	0.00	0.05	172	208
199		8.33	8.31		34.014	26.453	160.4	0.485	2.37		35.9	36.2	2.11	28.9	0.00	0.00	0.00	0.03	200	207
200	ISL	8.33	D 8.31		34.011	D 26.451	160.6	0.487	2.37	D	35.9	36.4	2.11	29.0	0.00	0.00			201	
230		7.89	7.87		34.037	26.537	152.8	0.534	2.12		31.8	41.4	2.24	31.0	0.00	0.00			231	206
250	ISL	7.65	D 7.63		34.039	D 26.574	149.6	0.564	2.06	D	30.7	44.2	2.31	32.0	0.00	0.00			251	
270		7.36	7.33		34.050	26.624	145.0	0.594	1.84		27.3	47.1	2.38	32.9	0.00	0.00			272	205
300	ISL	7.07	D 7.04		34.091	D 26.697	138.4	0.636	1.41	D	20.8	53.1	2.54	34.8	0.00	0.00			302	
319		6.87	6.84		34.109	26.739	134.6	0.662	1.22		17.9	56.8	2.64	36.0	0.00	0.00			321	204
379		6.88	6.84		34.235	D 26.838	126.3	0.740	0.65	D	9.5								381	203
400	ISL	6.70	D 6.66		34.232	D 26.860	124.3	0.767	0.62	D	9.1	62.4	2.82	36.7	0.00	0.00			403	
439		6.52	6.48		34.236	26.887	122.2	0.815	0.64		9.3	63.4	2.86	37.0	0.00	0.00			442	202
500	ISL	6.11	D 6.07		34.297	D 26.989	113.0	0.886	0.33	D	4.8	68.3	2.95	37.9	0.00	0.00			503	
517		6.06	6.01		34.265	26.970	115.0	0.906	0.46		6.6	69.7	2.97	38.2	0.00	0.00			520	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 30.4 N	120 14.9 W	29/07/11	1917 UTC	3940 m	290	07 kn		0	1013.7 mb	16.9 C	14.1 C		0/8	CI

DEPTH m		TEMP DEG C		POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.71		16.71		33.456		24.398	352.1	0.000	5.86		105.6	0.6	0.27	0.1	0.00	0.02	0.67	0.17	0	
2		16.71		16.71		33.456		24.398	352.2	0.007	5.86		105.6	0.6	0.27	0.1	0.00	0.02	0.67	0.17	2	220
10		16.71		16.71		33.456		24.399	352.4	0.035	5.88		105.9	0.6	0.26	0.1	0.00	0.03	0.69	0.15	10	219
20		16.18		16.18		33.474		24.535	339.7	0.070	5.96		106.3	0.2	0.24	0.0	0.00	0.04	1.21	0.44	20	218
30		15.57		15.57		33.394		24.611	332.8	0.103	5.98		105.3	0.4	0.29	0.3	0.00	0.30	1.67	0.55	30	217
40		15.59		15.58		33.547		24.724	322.3	0.136	5.74		101.2	2.7	0.48	2.1	0.07	0.96	0.79	0.57	40	216
50		15.07		15.06		33.519		24.818	313.7	0.168	5.60		97.7	4.0	0.59	3.1	0.15	1.35	0.47	0.34	50	215
60		12.71		12.70		33.142		25.013	295.1	0.198	5.68		94.2	3.3	0.53	3.0	0.21	0.22	0.29	0.29	60	214
70		11.88		11.87		33.169		25.192	278.2	0.227	5.40		88.0	4.7	0.74	6.5	0.30	0.03	0.20	0.24	70	213
75	ISL	11.71	D	11.70		33.198	D	25.246	273.2	0.241	5.32	D	86.4	5.9	0.82	8.0	0.22	0.02	0.16	0.21	75	
85		10.87		10.86		33.225		25.419	256.9	0.267	5.00		79.7	9.0	0.99	11.0	0.02	0.00	0.11	0.16	85	212
100		10.29		10.28		33.392		25.650	235.2	0.304	4.33		68.2	14.8	1.37	17.1	0.00	0.01	0.06	0.10	100	211
119		9.97		9.96		33.704		25.948	207.2	0.346	3.28		51.4	22.6	1.76	23.0	0.00	0.02	0.02	0.08	120	210
125	ISL	9.93	D	9.92		33.725	D	25.971	205.2	0.359	3.18	D	49.8	24.0	1.82	23.9	0.00	0.01	0.02	0.08	126	
140		9.52		9.50		33.808		26.104	192.8	0.389	2.86		44.4	26.5	1.90	25.2	0.00	0.00	0.01	0.09	141	209
150	ISL	9.14	D	9.12		33.886	D	26.226	181.2	0.407	2.84	D	43.8	28.6	1.96	26.2	0.00	0.00	0.01	0.08	151	
171		8.79		8.77		33.964		26.343	170.5	0.444	2.42		37.0	32.5	2.06	27.9	0.00	0.01	0.00	0.05	172	208
200		8.25		8.23		33.997		26.452	160.5	0.492	2.49		37.6	35.9	2.10	29.0	0.00	0.01	0.01	0.04	201	207
231		7.81		7.79		34.036		26.548	151.8	0.541	2.10		31.4	41.8	2.27	31.2	0.00	0.00			232	206
250	ISL	7.58	D	7.56		34.049	D	26.592	147.8	0.569	1.92	D	28.6	45.1	2.36	32.4	0.00	0.00			251	
270		7.42		7.39		34.065		26.628	144.7	0.598	1.72		25.5	48.4	2.45	33.5	0.00	0.01			272	205
300	ISL	7.17	D	7.14		34.110	D	26.698	138.3	0.641	1.31	D	19.3	53.7	2.59	35.2	0.00	0.02			302	
320		6.96		6.93		34.115		26.731	135.4	0.668	1.17		17.2	57.1	2.67	36.2	0.00	0.02			322	204
380		6.55		6.52		34.168		26.829	126.8	0.747	0.78		11.3	65.0	2.86	38.0	0.00	0.02			382	203
400	ISL	6.38	D	6.34		34.170	D	26.853	124.7	0.772	0.74	D	10.7	67.5	2.91	38.5	0.00	0.02			403	
444		6.15		6.11		34.207		26.912	119.5	0.826	0.57		8.2	72.5	2.99	39.5	0.00	0.01			447	202
500	ISL	5.90	D	5.86		34.260	D	26.986	113.0	0.891	0.38	D	5.4	78.1	3.08	40.3	0.00	0.02			503	
516		5.85		5.81		34.267		26.998	112.1	0.909	0.36		5.2	79.7	3.10	40.5	0.00	0.02			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 10.3 N	120 55.5 W	30/07/11	0217 UTC	3840 m	260	11 kn	270 03 07	2	1015.1 mb	19.9 C	15.2 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	18.07		18.07		33.281		23.940	395.8	0.000	5.49		101.4	1.8	0.25	0.0	0.00	0.01	0.09	0.02	0	
2	A	18.07		18.07		33.281		23.940	395.8	0.008	5.49		101.4	1.8	0.25	0.0	0.00	0.01	0.09	0.02	2	222
10	ISL	18.01	D	18.01		33.290	D	23.962	394.0	0.040	5.47	D	101.0	1.8	0.24	0.0	0.00	0.03	0.10	0.03	10	
15	A	18.01		18.01		33.301		23.970	393.4	0.059	5.58		103.0	1.8	0.24	0.0	0.00	0.03	0.10	0.03	15	221
19	A	18.05		18.05		33.308		23.966	393.9	0.075	5.49		101.4	1.6	0.23	0.0	0.00	0.02	0.10	0.03	19	220
20	ISL	18.06	D	18.06		33.332	D	23.982	392.4	0.079	5.47	D	101.1	1.6	0.23	0.0	0.00	0.02	0.10	0.03	20	
30	ISL	17.96	D	17.95		33.314	D	23.993	391.7	0.118	5.49	D	101.2	1.7	0.23	0.0	0.00	0.01	0.11	0.03	30	
34	A	17.83		17.82		33.318		24.028	388.6	0.134	5.52		101.5	1.7	0.23	0.0	0.00	0.01	0.12	0.03	34	219
44		15.63		15.62		33.042		24.327	360.2	0.171	5.99		105.4	1.5	0.23	0.0	0.00	0.04	0.13	0.05	44	218
50	ISL	14.89	D	14.88		33.059	D	24.502	343.7	0.192	6.05	D	104.9	1.6	0.23	0.0	0.00	0.03	0.15	0.07	50	
55		14.59		14.58		33.064		24.570	337.3	0.209	6.05		104.2	1.7	0.24	0.0	0.00	0.02	0.16	0.08	55	217
65	A	14.34		14.33		33.088		24.642	330.8	0.243	6.03		103.4	1.8	0.27	0.0	0.00	0.01	0.28	0.21	65	216
75		14.16		14.15		33.176		24.748	321.0	0.275	5.87		100.3	2.2	0.26	0.1	0.02	0.00	0.39	0.34	75	215
85		13.76		13.75		33.281		24.911	305.6	0.307	5.64		95.6	2.9	0.33	1.0	0.27	0.01	0.32	0.32	85	214
95	A	13.26		13.25		33.263		24.999	297.5	0.337	5.53		92.8	3.3	0.42	2.5	0.13	0.00	0.27	0.31	95	213
100		12.82		12.81		33.255		25.080	289.8	0.351	5.47		90.9	3.7	0.47	3.5	0.05	0.01	0.24	0.25	100	212
112		12.04		12.03		33.272		25.243	274.5	0.385	5.21		85.2	6.1	0.75	8.1	0.00	0.05	0.14	0.14	112	211
125		11.91		11.89		33.476		25.426	257.4	0.420	5.07		82.8	6.8	0.66	7.5	0.00	0.01	0.07	0.12	126	210
140		10.45		10.43		33.421		25.646	236.5	0.457	4.49		71.0	13.1	1.14	14.7	0.00	0.00	0.03	0.05	141	209
150	ISL	10.17	D	10.15		33.509	D	25.762	225.5	0.480	4.17	D	65.6	16.2	1.32	17.5	0.00	0.00	0.02	0.04	151	
170		9.49		9.47		33.658		25.992	204.0	0.523	3.75		58.2	21.1	1.52	21.0	0.00	0.00	0.01	0.01	171	208
200		8.97		8.95		33.851		26.227	182.1	0.581	3.15		48.3	27.5	1.78	25.2	0.00	0.00	0.00	0.01	201	207
230		8.46		8.44		33.991		26.416	164.6	0.633	2.53		38.4	34.6	2.01	28.6	0.00	0.00			231	206
250	ISL	8.26	D	8.23		34.013	D	26.464	160.3	0.665	2.34	D	35.4	38.2	2.14	30.0	0.00	0.00			251	
270		8.21		8.18		34.090		26.532	154.2	0.697	1.83		27.6	41.3	2.25	31.0	0.00	0.00			271	205
300	ISL	7.65	D	7.62		34.071	D	26.600	148.0	0.742	1.73	D	25.8	45.8	2.36	32.8	0.00	0.00			302	
320		7.44		7.41		34.079		26.636	144.7	0.771	1.58		23.4	48.8	2.43	33.9	0.00	0.00			322	204
380		6.90		6.86		34.144		26.763	133.3	0.855	0.99		14.5	58.9	2.76	36.7	0.00	0.02			382	203
400	ISL	6.71	D	6.67		34.145	D	26.790	130.9	0.881	0.95	D	13.9	64.0	2.86	37.8	0.00	0.01			402	
440		6.37		6.33		34.182	D	26.864	124.2	0.932	0.70	D	10.1	72.8	3.01	39.5	0.00	0.00			443	202
500	ISL	5.80	D	5.76		34.215	D	26.963	115.1	1.004	0.51	D	7.3	73.1	3.00	39.7	0.00	0.00			503	
516		5.79		5.75		34.236	D	26.981	113.6	1.022	0.43	D	6.1	73.2	3.00	39.8	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; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 50.8 N	121 35.5 W	30/07/11	0912 UTC	4126 m	290 07 kn	310 04 08	1	1014.0 mb	20.3 C	16.3 C	21m	2/8	ST

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.63	18.63		33.281	23.802	409.0	0.000	5.50		102.7	1.2	0.28	0.0	0.00	0.08	0.11	0.04	0	
2		18.63	18.63		33.281	23.802	409.0	0.008	5.50		102.7	1.2	0.28	0.0	0.00	0.08	0.11	0.04	2	220
10	ISL	18.34	D 18.34		33.286	D 23.878	402.0	0.041	5.47	D	101.6	1.2	0.27	0.0	0.00	0.11	0.12	0.03	10	
11		18.33	18.33		33.286	23.880	401.8	0.045	5.50		102.1	1.2	0.27	0.0	0.00	0.11	0.12	0.03	11	219
20	ISL	18.17	D 18.17		33.301	D 23.932	397.3	0.081	5.49	D	101.6	1.1	0.26	0.0	0.00	0.09	0.12	0.04	20	
25		17.85	17.85		33.266	23.983	392.5	0.100	5.57		102.5	1.0	0.26	0.0	0.00	0.07	0.12	0.05	25	218
30	ISL	17.69	D 17.68		33.259	D 24.016	389.5	0.120	5.59	D	102.5	0.9	0.26	0.0	0.00	0.04	0.18	0.08	30	
39		16.51	16.50		33.221	24.266	366.0	0.154	5.96		106.8	0.8	0.26	0.0	0.00	0.00	0.30	0.14	39	217
50		14.89	14.88		33.164	24.583	336.0	0.193	6.22		107.9	1.2	0.28	0.0	0.00	0.04	0.31	0.19	50	216
60		13.57	13.56		33.015	24.744	320.8	0.225	6.12		103.2	1.9	0.31	0.1	0.00	0.04	0.59	0.45	60	215
74		13.03	13.02		33.058	24.885	307.6	0.269	5.84		97.4	2.5	0.47	2.1	0.42	0.19	0.47	0.45	74	214
75	ISL	13.01	D 13.00		33.054	D 24.886	307.6	0.272	5.83	D	97.2	2.6	0.49	2.4	0.41	0.19	0.46	0.44	75	
86		12.65	12.64		33.197	25.068	290.6	0.305	5.49		90.9	4.3	0.71	5.9	0.18	0.15	0.36	0.30	86	213
100	ISL	11.54	D 11.53		33.304	D 25.360	262.9	0.344	4.82	D	78.0	7.8	0.95	10.5	0.01	0.04	0.24	0.24	100	
102		11.48	11.47		33.303	25.370	262.0	0.349	4.84		78.2	8.4	0.99	11.2	0.00	0.03	0.22	0.23	102	212
111		11.08	11.07		33.355	25.483	251.4	0.372	4.48		71.8	11.8	1.18	14.3	0.00	0.06	0.12	0.14	111	211
124		10.29	10.28		33.402	25.658	234.9	0.404	4.60		72.5	12.8	1.15	14.1	0.00	0.10	0.03	0.05	125	210
125	ISL	10.26	D 10.25		33.435	D 25.689	232.0	0.406	4.45	D	70.1	13.2	1.17	14.4	0.00	0.10	0.03	0.05	126	
139		9.84	9.82		33.571	25.866	215.4	0.438	3.79		59.2	19.5	1.54	20.0	0.00	0.03	0.01	0.04	140	209
150	ISL	9.62	D 9.60		33.645	D 25.960	206.6	0.461	3.49	D	54.3	22.4	1.63	22.2	0.00	0.03	0.01	0.04	151	
170		9.12	9.10		33.780	26.147	189.2	0.500	3.25		50.0	25.7	1.78	24.0	0.00	0.04	0.00	0.04	171	208
200	ISL	8.68	D 8.66		33.950	D 26.350	170.4	0.554	3.12	D	47.6	29.5	1.81	24.9	0.00	0.00	0.00	0.02	201	
201		8.65	8.63		33.946	26.351	170.2	0.556	3.22		49.1	29.6	1.81	24.9	0.00	0.00	0.00	0.02	202	207
230		8.34	8.32		34.005	26.445	161.7	0.604	2.71		41.0	35.0	2.01	27.8	0.00	0.00			231	206
250	ISL	7.99	D 7.96		34.026	D 26.514	155.4	0.636	2.33	D	35.0	39.6	2.17	29.9	0.00	0.00			251	
270		7.74	7.71		34.064	26.581	149.3	0.666	1.89		28.2	44.1	2.32	31.8	0.00	0.00			271	205
300	ISL	7.46	D 7.43		34.073	D 26.629	145.1	0.711	1.65	D	24.5	48.8	2.46	33.6	0.00	0.00			302	
321		7.32	7.29		34.098	26.668	141.7	0.741	1.38		20.4	51.7	2.53	34.5	0.00	0.00			323	204
381		6.79	6.75		34.150	26.783	131.4	0.823	0.89		13.0	61.7	2.77	37.3	0.00	0.02			383	203
400	ISL	6.72	D 6.68		34.198	D 26.830	127.1	0.847	0.75	D	11.0	65.0	2.82	38.0	0.00	0.01			402	
439		6.07	6.03		34.150	26.877	122.6	0.896	0.75		10.8	71.3	2.89	39.2	0.00	0.00			442	202
500	ISL	5.94	D 5.90		34.233	D 26.960	115.6	0.968	0.46	D	6.6	78.1	3.01	40.2	0.00	0.00			503	
516		5.84	5.80		34.254	26.989	112.9	0.987	0.38		5.4	79.9	3.04	40.4	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 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 30.7 N	122 15.7 W	30/07/11	1622 UTC	3775 m	270 09 kn		0	1015.1 mb	18.9 C	15.7 C		0/8	CI

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.05	18.05		33.170	23.860	403.4	0.000	5.54		102.3	1.4	0.26	0.0	0.00	0.00	0.09	0.03	0	
2		18.05	18.05		33.170	23.860	403.5	0.008	5.54		102.3	1.4	0.26	0.0	0.00	0.00	0.09	0.03	2	220
10	ISL	17.88	D 17.88		33.173	D 23.904	399.6	0.040	5.55	D	102.1	1.4	0.25	0.0	0.00	0.00	0.09	0.03	10	
11		17.86	17.86		33.178	23.913	398.8	0.044	5.56		102.3	1.4	0.25	0.0	0.00	0.00	0.09	0.03	11	219
20	ISL	17.68	D 17.68		33.142	D 23.929	397.5	0.080	5.56	D	101.9	1.4	0.24	0.0	0.00	0.00	0.10	0.04	20	
25		17.61	17.61		33.154	23.955	395.2	0.100	5.59		102.3	1.4	0.24	0.0	0.00	0.00	0.11	0.04	25	218
30	ISL	17.41	D 17.41		33.152	D 24.002	390.9	0.119	5.62	D	102.4	1.4	0.25	0.0	0.00	0.00	0.13	0.06	30	
41		15.16	15.15		33.049	24.436	349.8	0.160	5.97		104.0	1.3	0.26	0.0	0.00	0.00	0.17	0.09	41	217
50		14.32	14.31		33.035	24.604	333.9	0.191	6.06		103.8	1.8	0.25	0.0	0.00	0.05	0.18	0.09	50	216
61		13.74	13.73		33.105	24.779	317.5	0.227	5.91		100.1	2.3	0.28	0.0	0.00	0.03	0.19	0.15	61	215
75	ISL	13.09	D 13.08		33.275	D 25.042	292.8	0.270	5.46	D	91.3	3.2	0.38	1.5	0.14	0.03	0.30	0.25	75	
76		13.07	13.06		33.271	25.042	292.8	0.272	5.53		92.4	3.3	0.39	1.7	0.15	0.03	0.30	0.25	76	214
86		12.41	12.40		33.265	25.167	281.1	0.301	5.37		88.5	4.7	0.55	4.7	0.02	0.02	0.20	0.19	86	213
100		10.88	10.87		33.212	25.407	258.3	0.339	5.01		79.9	9.1	0.96	10.9	0.00	0.01	0.06	0.09	100	212
113		10.56	10.55		33.260	25.501	249.7	0.372	4.82		76.4	11.1	1.07	12.8	0.00	0.00	0.04	0.07	113	211
125		9.99	9.98		33.388	25.698	231.1	0.401	4.45		69.7	15.0	1.27	16.2	0.00	0.00	0.02	0.05	126	210
140		9.78	9.76		33.581	25.884	213.7	0.434	3.66		57.1	20.4	1.58	21.0	0.00	0.00	0.01	0.04	141	209
150	ISL	9.55	D 9.53		33.666	D 25.988	203.9	0.455	3.42	D	53.1	22.5	1.66	22.4	0.00	0.00	0.01	0.04	151	
170		9.12	9.10		33.810	26.171	186.9	0.494	3.36		51.7	25.6	1.73	23.7	0.00	0.00	0.00	0.03	171	208
200	ISL	8.66	D 8.64		33.955	D 26.357	169.7	0.548	2.84	D	43.3	31.1	1.91	26.5	0.00	0.00	0.00	0.02	201	
202		8.64	8.62		33.948	26.354	170.0	0.551	2.87		43.8	31.5	1.92	26.7	0.00	0.00	0.00	0.02	203	207
230		8.24	8.22		34.017	26.470	159.4	0.597	2.46		37.2	37.4	2.10	29.1	0.00	0.00			231	206
250	ISL	7.96	D 7.93		34.053	D 26.540	153.0	0.628	2.09	D	31.4	41.4	2.23	30.8	0.00	0.00			251	
270		7.69	7.66		34.058	26.583	149.0	0.659	1.90		28.4	45.3	2.34	32.3	0.00	0.00			271	205
300	ISL	7.44	D 7.41		34.090	D 26.645	143.6	0.702	1.57	D	23.3	50.5	2.47	34.2	0.00	0.00			302	
320		7.04	7.01		34.088	26.699	138.5	0.731	1.46		21.5	53.8	2.55	35.2	0.00	0.00			322	204
380		6.52	6.49		34.140	26.811	128.5	0.811	0.94		13.7	63.9	2.79	37.7	0.00	0.00			382	203
400	ISL	6.33	D 6.29		34.142	D 26.837	126.1	0.836	0.85	D	12.3	67.3	2.85	38.5	0.00	0.00			402	
440		5.95	5.91		34.158	26.899	120.5	0.886	0.69		9.9	73.7	2.95	39.8	0.00	0.00			443	202
500	ISL	5.67	D 5.63		34.226	D 26.987	112.6	0.955	0.45	D	6.4	80.8	3.04	40.8	0.00	0.00			503	
516		5.61	5.57		34.232	27.000	111.6	0.973	0.41		5.8	82.7	3.07	41.1	0.00	0.00			519	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 10.8 N	122 55.2 W	30/07/11	2322 UTC	3822 m	260 08 kn	290 02 07	2	1015.6 mb	18.1 C	16.4 C	19m	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	18.04	18.04		33.186	23.875	402.0	0.000	5.55		102.4	1.1	0.29	0.0	0.00	0.00	0.20	0.02	0	
2	A	18.04	18.04		33.186	23.875	402.1	0.008	5.55		102.4	1.1	0.29	0.0	0.00	0.00	0.20	0.02	2	222
10	A	17.54	17.54		33.151	23.969	393.3	0.040	5.56		101.6	1.1	0.30	0.0	0.00	0.13	0.21	0.05	10	221
14	A	17.45	17.45		33.150	23.990	391.5	0.056	5.53		100.9	1.2	0.30	0.0	0.00	0.33	0.23	0.06	14	220
20	ISL	17.36	17.36	D	33.146	24.008 D	389.9	0.079	5.60	D	102.0	1.2	0.29	0.0	0.00	0.23	0.20	0.06	20	
25	A	17.31	17.31		33.147	24.021	388.8	0.098	5.64		102.6	1.2	0.27	0.0	0.00	0.03	0.18	0.06	25	219
30	ISL	16.80	16.80	D	33.142	24.137 D	377.9	0.118	5.65	D	101.8	1.2	0.25	0.0	0.00	0.02	0.23	0.08	30	
39		15.15	15.14		33.072	24.455	347.8	0.150	6.13		106.8	1.1	0.24	0.0	0.00	0.00	0.35	0.14	39	218
50	A	14.35	14.34		33.034	24.597	334.5	0.188	6.16		105.6	1.1	0.27	0.0	0.00	0.00	0.39	0.20	50	217
60		14.03	14.02		33.065	24.688	326.1	0.221	6.16		104.9	1.4	0.27	0.2	0.00	0.00	0.83	0.27	60	216
72	A	13.26	13.25		33.090	24.865	309.6	0.259	5.89		98.7	2.1	0.45	1.7	0.31	0.23	0.44	0.38	72	215
75	ISL	12.98	12.97	D	33.098	24.926	303.8	0.268	5.84	D	97.3	2.2	0.49	2.3	0.47	0.17	0.38	0.29	75	
78		12.79	12.78		33.095	24.961	300.5	0.277	5.73		95.1	2.4	0.54	3.0	0.58	0.09	0.33	0.20	78	214
85		12.49	12.48		33.127	25.044	292.7	0.298	5.59		92.2	3.6	0.65	5.3	0.20	0.00	0.25	0.16	85	213
95		12.43	12.42		33.269	25.166	281.4	0.327	5.39		88.9	5.3	0.85	8.6	0.00	0.00	0.16	0.12	95	212
100	ISL	12.03	12.02	D	33.326	25.286 D	270.0	0.341	5.28	D	86.4	6.8	0.94	10.1	0.00	0.00	0.11	0.09	100	
110		11.11	11.10		33.348	25.472	252.4	0.367	4.91		78.8	10.1	1.06	12.6	0.00	0.00	0.04	0.05	110	211
125		10.20	10.19		33.392	25.666	234.2	0.403	4.61		72.5	13.3	1.10	14.5	0.00	0.00	0.03	0.05	126	210
145		9.42	9.40		33.643	25.991	203.5	0.447	3.86		59.8	20.8	1.54	20.7	0.00	0.00	0.01	0.02	146	209
150	ISL	9.36	9.34	D	33.678	26.028 D	200.1	0.457	3.79	D	58.6	22.4	1.63	22.0	0.00	0.00	0.01	0.02	151	
170		9.09	9.07		33.841	26.200	184.2	0.495	2.96		45.6	27.8	1.87	25.8	0.00	0.00	0.00	0.02	171	208
200		8.53	8.51		33.959	26.380	167.5	0.548	3.00		45.6	31.7	1.89	26.5	0.00	0.00	0.00	0.02	201	207
229		8.21	8.19		34.017	26.474	158.9	0.595	2.31		34.9	37.9	2.14	29.8	0.00	0.00			230	206
250	ISL	7.92	7.89	D	34.051	26.544 D	152.5	0.628	2.09	D	31.4	41.5	2.27	31.3	0.00	0.00			251	
270		7.76	7.73		34.067	26.581	149.4	0.658	1.83		27.4	44.7	2.36	32.4	0.00	0.00			271	205
300	ISL	7.35	7.32	D	34.077	26.647 D	143.3	0.702	1.59	D	23.5	49.9	2.49	34.2	0.00	0.00			302	
320		7.17	7.14		34.109	26.698	138.7	0.730	1.27		18.7	53.5	2.57	35.3	0.00	0.00			322	204
380		6.47	6.44		34.136	26.814	128.1	0.811	0.88		12.8	64.7	2.77	38.2	0.00	0.00			382	203
400	ISL	6.41	6.37	D	34.150	26.833 D	126.6	0.836	0.81	D	11.7	66.3	2.81	38.5	0.00	0.00			402	
440		6.31	6.27		34.192	26.880 D	122.7	0.886	0.64	D	9.3								443	202
500	ISL	5.84	5.80	D	34.227	26.967 D	114.7	0.957	0.48	D	6.9	74.5	2.98	40.0	0.00	0.00			503	
515		5.69	5.65		34.224	26.984 D	113.2	0.974	0.44	D	6.3	75.7	3.01	40.2	0.00	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
29 50.8 N	123 35.2 W	31/07/11	0433 UTC	4080 m	280 04 kn	270 03 07	1	1015.8 mb	22.0 C	17.9 C	35m	2/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	18.75	18.75		33.212	23.719	416.8	0.000	5.49		102.7	1.7	0.24	0.0	0.00	0.00	0.09	0.02	0	
2		18.75	18.75		33.212	23.719	416.9	0.008	5.49		102.7	1.7	0.24	0.0	0.00	0.00	0.09	0.02	2	220
10		18.96	18.96		33.471	23.865	403.3	0.041	5.45		102.5	1.9	0.21	0.0	0.00	0.00	0.08	0.03	10	219
20	ISL	19.01	19.01	D	33.585	23.940 D	396.5	0.081	5.38	D	101.4	1.7	0.20	0.0	0.00	0.00	0.09	0.03	20	
25		18.92	18.92		33.587	23.964	394.4	0.101	5.60		105.3	1.6	0.19	0.0	0.00	0.00	0.09	0.03	25	218
30	ISL	18.49	18.48	D	33.489	23.997 D	391.4	0.121	5.46	D	101.8	1.5	0.20	0.0	0.00	0.00	0.09	0.03	30	
40		16.44	16.43		33.162	24.236	368.8	0.159	5.80		103.7	1.5	0.23	0.0	0.00	0.00	0.09	0.02	40	217
49		16.24	16.23		33.095	24.231	369.6	0.192	5.93		105.6	1.5	0.23	0.0	0.00	0.00	0.10	0.02	49	216
50	ISL	16.26	16.25	D	33.166	24.281 D	364.9	0.195	5.88	D	104.8	1.5	0.23	0.0	0.00	0.00	0.10	0.02	50	
62		15.35	15.34		33.189	24.503	344.0	0.238	5.99		104.9	1.5	0.23	0.0	0.00	0.00	0.16	0.05	62	215
73		14.58	14.57		33.094	24.596	335.4	0.275	6.01		103.5	1.7	0.25	0.0	0.00	0.00	0.27	0.13	73	214
75	ISL	14.38	14.37	D	33.085	24.631 D	332.1	0.282	5.98	D	102.6	1.7	0.26	0.1	0.04	0.00	0.31	0.15	75	
87		13.59	13.58		33.111	24.815	314.8	0.321	5.84		98.6	2.2	0.37	0.6	0.25	0.00	0.48	0.25	87	213
100		13.02	13.01		33.135	24.948	302.4	0.361	5.63		93.9	3.1	0.50	3.3	0.03	0.00	0.34	0.24	100	212
112		12.76	12.74		33.323	25.145	284.0	0.396	5.41		89.9	4.0	0.55	4.7	0.00	0.00	0.19	0.14	112	211
125		12.85	12.83		33.475	25.245	274.8	0.432	5.34		89.0	4.3	0.47	4.1	0.00	0.00	0.19	0.12	125	210
140		12.50	12.48		33.624	25.429	257.6	0.472	5.20		86.1	5.3	0.50	5.3	0.00	0.00	0.12	0.11	141	209
150	ISL	11.30	11.28	D	33.481	25.543 D	246.7	0.498	5.05	D	81.4	7.7	0.69	8.1	0.00	0.00	0.08	0.08	151	
170		10.17	10.15		33.527	25.777	224.6	0.545	4.53		71.3	14.2	1.17	15.0	0.00	0.00	0.03	0.03	171	208
200		9.33	9.31		33.738	26.081	196.1	0.608	3.58		55.4	23.3	1.65	22.3	0.00	0.00	0.00	0.01	201	207
231		8.79	8.77		33.925	26.314	174.5	0.665	3.07		46.9	29.7	1.86	25.7	0.00	0.00			232	206
250	ISL	8.51	8.48	D	33.960	26.385 D	168.0	0.698	3.33	D	50.6	32.0	1.87	26.0	0.00	0.00			251	
270		8.05	8.02		33.982	26.471	159.9	0.731	3.23		48.6	34.5	1.88	26.3	0.00	0.00			271	205
300	ISL	7.70	7.67	D	34.024	26.556 D	152.2	0.777	2.41	D	36.0	42.2	2.16	29.9	0.00	0.00			302	
320		7.39	7.36		34.048	26.619	146.3	0.807	1.94		28.8	47.6	2.38	32.6	0.00	0.00			322	204
381		6.75	6.71		34.078	26.731	136.2	0.893	1.44		21.0	57.2	2.63	35.8	0.00	0.00			383	203
400	ISL	6.61	6.57	D	34.104	26.771 D	132.6	0.919	1.33	D	19.4	60.8	2.71	36.8	0.00	0.00			402	
441		6.21	6.17		34.148	26.858	124.6	0.972	0.86		12.4	68.7	2.88	38.6	0.00	0.00			444	202
500	ISL	5.75	5.71	D	34.184	26.944 D	116.8	1.043	0.61	D	8.7	78.1	3.02	40.4	0.00	0.00			503	
515		5.65	5.61		34.196	26.966	114.8	1.060	0.54		7.7	80.5	3.06	40.8	0.00	0.00			518	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.2 N	117 16.9 W	28/07/11	0445 UTC	22 m	230 12 kn	220 01 07	1	1011.9 mb	20.8 C	18.3 C		3/8	CC

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l		OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	NH4 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	21.37	21.37		33.589	23.321	454.8	0.000	5.64		111.0	3.0	0.27	0.1	0.00	1.04	0.71	0.25	0	
2		21.37	21.37		33.589	23.321	454.9	0.009	5.64		111.0	3.0	0.27	0.1	0.00	1.04	0.71	0.25	2	204
5		21.34	21.34		33.590	23.330	454.2	0.023	5.64		111.0	2.8	0.23	0.1	0.00	0.80	0.72	0.24	5	203
10		20.03	20.03		33.585	23.677	421.3	0.045	5.71		109.7	2.6	0.24	0.1	0.00	0.99	0.89	0.38	10	202
15		17.03	17.03		33.466	24.332	358.9	0.064	6.49		117.7	2.6	0.36	0.1	0.00	0.27	2.45	1.33	15	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED 1° O2;

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.5 N	120 47.1 W	13/08/11	0155 UTC	5 m	1208 - 1920 PST	1208 PST	1919 PST	3019.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.01	33.576	25.288	7.17	120.0	2.0	0.32	0.8	0.04	15.61	1.63	54. A	409.8	411.0	410.4	0.91
3	12.83	33.578	25.326	6.24	104.0	4.7	0.55	5.0	0.09	16.78	1.70	40.	365.8	314.8	340.3	0.97
4	12.85	33.576	25.320	6.65	110.9	3.4	0.45	3.0	0.13	16.34	1.99	29.	387.7	386.3	387.0	0.65
7	12.58	33.577	25.374	6.17	102.3	4.8	0.68	5.2	0.16	17.78	1.58	12.	162.8	178.8	170.8	0.64
10	12.47	33.578	25.396	5.75	95.1	6.3	0.79	7.3	0.19	15.02	1.54					
13	12.53	33.578	25.384	5.79	95.9	6.2	0.85	7.0	0.18	15.66	1.69	1.8	15.4	16.3	15.9	0.45
19	12.44	33.580	25.403	5.66	93.6	6.9	0.84	7.7	0.24	14.67	1.62	0.29	5.7	4.6	5.2	0.44

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 23.8 N	122 15.0 W	12/08/11	0308 UTC	14 m	1221 - 1926 PST	1214 PST	1926 PST	229.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.66	33.118	24.151	5.75	103.3	1.3	0.29	0.1	0.00	0.39	0.07	80. A	11.0	10.4	10.7	0.09
8	16.66	33.111	24.145	5.73	102.9	1.2	0.30	0.1	0.00	0.31	0.08	42.	10.1	9.6	9.8	0.09
10	16.65	33.110	24.147	5.74	103.1	1.1	0.29	0.1	0.00	0.35	0.05	33.	8.9	8.6	8.8	0.10
19	16.59	33.140	24.184	5.74	103.0	1.2	0.28	0.1	0.00	0.37	0.03	12.	5.6	5.5	5.5	0.08
28	16.55	33.146	24.198	5.75	103.1	1.1	0.29	0.2	0.00	0.32	0.12					
36	14.80	33.213	24.640	6.06	104.9	1.3	0.46	2.5	0.05	0.54	0.17	1.9	0.70	0.90	0.80	0.09
44	14.54	33.346	24.798	5.95	102.6	1.5	0.60	4.6	0.17	0.48	0.09					
53	13.77	33.268	24.898	5.88	99.7	2.4	0.66	5.1	0.35	0.46	0.24	0.30	0.40	0.40	0.40	0.01

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.0 N	121 51.0 W	10/08/11	0303 UTC	13 m	1215 - 1940 PST	1213 PST	1923 PST	289.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	16.53	33.199	24.243	5.73	102.7	1.0	0.30	0.3	0.00	0.30	0.12	70. A	12.5	11.4	11.9	0.08
8	16.53	33.191	24.237	5.72	102.5	1.0	0.31	0.3	0.00	0.31	0.13	39.	11.0	10.9	11.0	0.08
11	16.52	33.191	24.239	5.73	102.7	1.0	0.30	0.3	0.00	0.33	0.13	27.	10.6	10.5	10.5	0.12
18	16.51	33.196	24.246	5.73	102.7	0.8	0.30	0.3	0.00	0.30	0.12	12.	6.5	6.4	6.5	0.10
26	16.43	33.203	24.270	5.75	102.9	1.0	0.33	0.4	0.00	0.32	0.15					
34 B	14.01	33.070	24.696	6.10	103.9	1.3	0.39	0.9	0.02	0.45	0.34	1.8	1.4	1.4	3.2	0.07
42	12.86	33.027D	24.894	6.05	100.5	1.8	0.46	1.7	0.13	0.41	0.38					
49	12.71	33.023D	24.920	5.95	98.6	2.6	0.57	3.5	0.33	0.35	0.42	0.31	0.40	0.50	0.40	0.03

B) PRODUCTIVITY REPLICATES POOR, UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 49.4 N	123 54.7 W	11/08/11	0225 UTC	24 m	1221 - 1930 PST	1221 PST	1933 PST	936.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.98	32.989	23.977	5.64	101.9	1.1	0.29	0.0	0.00	0.10	0.04	88. A	17.8	15.4	16.6	0.10
14	16.96	32.990	23.983	5.66	102.2	1.5	0.29	0.0	0.00	0.13	0.02	41.	18.1	18.6	18.4	0.10
18	16.96	32.990	23.983	5.64	101.8	1.4	0.30	0.0	0.00	0.14	0.01	32.	25.6	17.1	21.3	0.12
33	16.93	32.996	23.995	5.64	101.8	1.3	0.29	0.0	0.00	0.13	0.02	12.	17.4	18.6	18.0	0.07
43	16.02	32.965	24.181	5.83	103.3	1.1	0.28	0.0	0.00	0.30	0.09					
53	15.34	32.939	24.312	5.88	102.8	1.5	0.29	0.0	0.00	0.30	0.13					
62	13.67	32.916	24.647	6.12	103.4	1.8	0.30	0.0	0.00	0.47	0.03	1.9	1.6	1.7	1.6	0.04
72	12.96	32.873	24.756	6.16	102.5	1.4	0.33	0.0	0.00	0.41	0.10					
82	12.83	32.959	24.848	6.17	102.4	1.8	0.31	0.0	0.00	0.39	0.12					
91	12.52	32.969	24.916	6.12	100.9	2.0	0.33	0.0	0.00	0.34	0.08	0.30	0.80	0.80	0.80	0.11

A) INCUBATION LIGHT INTENSITIES WERE 60, 40, 31.7, 12.1, 1.9, 0.3 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1108 — STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 34.9 N	120 45.4 W	08/08/11	0248 UTC	8 m	1215 - 1940 PST	1209 PST	1923 PST	2209.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.25	33.467	24.737	6.16	107.8	1.3	0.30	0.1	0.02	7.32	1.64	68. A	218.2	210.7	214.4	0.85
5	15.26	33.480	24.745	6.15	107.7	0.6	0.29	0.0	0.00	7.38	1.77	38.	196.1	145.9	171.0	0.42
6	15.26	33.491	24.753	6.11	107.0	1.0	0.30	0.0	0.02	7.33	1.75	32.	148.0	146.9	147.5	0.42
10	15.23	33.495	24.763	6.12	107.1	1.0	0.37	0.3	0.03	7.37	1.68	15.	100.8	86.7	93.7	0.42
20	15.05	33.448	24.766	6.03	105.1					6.74	1.43	2.2	8.2	8.5	8.4	0.28
30	14.00	33.255	24.840	6.03	102.8	0.9	0.37	0.6	0.10	3.62	0.94	0.32	1.6	1.6	1.6	0.21

RV NEW HORIZON — CALCOFI CRUISE 1108 — STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 15.2 N	123 29.9 W	07/08/11	0156 UTC	24 m	1220 - 1935 PST	1220 PST	1929 PST	936.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.90	33.192	23.913	5.55	102.2	1.6	0.27	0.0	0.00	0.15	0.01	88. A	17.8	15.4	16.6	0.10
10	17.90	33.192	23.914	5.60	103.1	1.7	0.27	0.0	0.00	0.16	0.01					
14	17.89	33.191	23.915	5.54	102.0	2.3	0.26	0.0	0.00	0.14	0.02	41.	18.1	18.6	18.4	0.11
18	17.88	33.192	23.919	5.53	101.8	2.5	0.26	0.0	0.00	0.15	0.02	32.	25.6	17.1	21.3	0.12
33	17.48	33.184	24.010	5.56	101.5	2.5	0.25	0.0	0.00	0.17	0.04	12.	17.4	18.6	18.0	0.08
43	16.08	33.142	24.303	5.91	105.0	2.9	0.26	0.0	0.00	0.28	0.10					
53	14.67	33.152	24.621	6.13	105.8	3.5	0.28	0.0	0.00	0.49	0.19					
62	13.74	33.102	24.777	6.01	101.8	3.7	0.35	0.7	0.05	0.56	0.46	1.9	1.6	1.7	1.6	0.04
72	13.35	33.107	24.860	5.84	98.1	4.5	0.45	1.5	0.29	0.39	0.30					
82	13.12	33.157	24.944	5.74	96.0	5.0	0.51	2.4	0.32	0.19	0.15					
91	12.77	33.156D	25.013	5.60	93.0							0.30	0.90	0.80	0.80	0.11

RV NEW HORIZON — CALCOFI CRUISE 1108 — STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 53.1 N	118 29.4 W	04/08/11	0101 UTC	9 m	1210 - 1925 PST	1200 PST	1922 PST	947.8 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	16.44	33.422	24.435	6.29	112.7	2.9	0.30	0.1	0.00	1.03	0.12	71. A	35.3	33.8	34.6	5.0
5	16.16	33.419	24.496	6.30	112.3	2.8	0.29	0.0	0.00	1.30	0.12	43.	47.5	47.1	47.3	0.32
7	15.93	33.410	24.542	6.38	113.2	3.0	0.32	0.1	0.00	1.69	0.14	30.	55.4	55.9	55.6	0.31
10	15.30	33.404	24.677	6.46	113.1	3.2	0.32	0.0	0.00	2.11	0.01					
12	15.46	33.402	24.641	6.51	114.4	3.1	0.32	0.0	0.00	2.08	0.27	13.	50.1	49.9	50.0	1.1
23	13.33	33.329	25.034	5.74	96.5	5.1	0.66	4.7	0.29	1.51	0.24	2.0	10.8	8.2	9.5	0.14
34	12.19	33.387	25.302	4.51	74.1	11.1	1.23	12.2	0.89	0.60	0.30	0.30	1.7	1.7	1.7	0.14

RV NEW HORIZON — CALCOFI CRUISE 1108 — STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 0.2 N	120 21.8 W	05/08/11	0137 UTC	9 m	1210 - 1930 PST	1208 PST	1927 PST	504.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.55	33.513	24.479	5.82	104.6	0.8	0.33	0.0	0.00	1.41	0.21	71. A	35.3	34.4	34.9	0.20
5	16.55	33.512	24.479	5.82	104.6	0.7	0.28	0.0	0.00	1.26	0.33	43.	31.7	30.6	31.1	1.1
7	16.55	33.511	24.478	5.85	105.1	0.7	0.32	0.0	0.00	1.24	0.34	30.	31.9	31.8	31.9	0.18
12	16.54	33.510	24.480	5.83	104.7	0.8	0.29	0.0	0.00	1.18	0.34	13.	22.0	21.7	21.9	0.21
23 B	16.50	33.508	24.488	5.81	104.3	0.8	0.31	0.0	0.00	1.10	0.45	2.0	2.2	2.2	1.1	0.18
34	16.41	33.502	24.504	5.80	103.9	0.6	0.33	0.1	0.00	1.23	0.33	0.30	1.3	0.70	1.0	0.15

B) PRODUCTIVITY REPLICATES POOR, UNCERTAIN VALUE ELIMINATED

A) INCUBATION LIGHT INTENSITIES WERE 60, 40, 31.7, 12.1, 1.9, 0.3 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.7 N	122 24.3 W	06/08/11	0007 UTC	19 m	1220 - 1937 PST	1216 PST	1934 PST	180.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.27	33.086	23.983	5.60	101.8	1.3	0.29	0.1	0.00	0.12	0.02	85. A	3.5	3.2	3.4	0.07
10	17.27	33.084	23.982	5.61	102.0	1.6	0.28	0.0	0.00	0.12	0.03	45.	3.3	3.3	3.3	0.04
14 B	17.28	33.087	23.982	5.60	101.8	1.6	0.27	0.0	0.00	0.18	0.03	32.	3.3	3.3	5.6	0.05
25	16.55	33.118	24.177	5.79	103.8	1.3	0.29	0.0	0.00	0.22	0.06	13.	3.3	3.3	3.3	0.05
38	16.07	33.129	24.295	5.88	104.4	1.2	0.28	0.0	0.00	0.27	0.09					
50	15.71	33.144	24.388	5.93	104.5	1.3	0.30	0.1	0.00	0.55	0.26	1.8	1.7	1.4	1.5	0.06
60	14.48	33.039	24.574	6.03	103.6	1.6	0.28	0.0	0.00	0.42	0.27					
72	13.60	33.000	24.727	6.06	102.2	2.0	0.28	0.0	0.00	0.32	0.28	0.30	0.20	0.40	0.30	0.36

B) PRODUCTIVITY REPLICATES POOR, UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 10.8 N	118 24.1 W	03/08/11	0320 UTC	15 m	1219 - 1920 PST	1200 PST	1918 PST	318.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	19.81	33.536	23.696	5.49	105.0	1.3	0.23	0.0	0.00	0.21	0.04	81. A	10.1	8.7	9.4	0.12
10	19.50	33.529	23.771	5.49	104.4	1.4	0.23	0.0	0.00	0.22	0.04	36.	8.6	9.1	8.8	0.14
12	18.95	33.520	23.905	5.53	104.1	1.3	0.23	0.0	0.00	0.25	0.06	29.	9.2	9.5	9.3	0.15
21	16.42	33.570	24.554	6.10	109.3	1.4	0.27	0.0	0.00	0.44	0.13	12.	10.0	9.2	9.6	0.23
30	13.38	33.479	25.140	5.21	87.8	6.0	0.85	8.2	0.50	1.04	0.39					
39	11.80	33.484	25.451	4.70	76.6	9.7	1.17	13.7	0.01	0.41	0.27	1.8	2.0	1.7	1.9	0.05
48	11.15	33.520	25.598	4.05	65.1	15.1	1.39	17.1	0.00	0.21	0.18					
57	10.51	33.561	25.743	3.71	58.8	17.4	1.52	19.2	0.00	0.12	0.14	0.29	0.30	0.30	0.30	0.02

RV NEW HORIZON CALCOFI CRUISE 1108 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 38.3 W	02/08/11	0128 UTC	10 m	1209 - 1928 PST	1209 PST	1924 PST	623.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.18	33.547	24.358	5.96	108.4	0.3	0.26	0.0	0.00	0.67	0.13	74. A	25.3	25.2	25.3	0.20
6	16.84	33.546	24.437	5.97	107.9	0.3	0.25	0.0	0.00	0.68	0.14	40.	23.7	24.9	24.3	0.21
10	15.54	33.524	24.717	6.08	107.1	0.3	0.30	0.2	0.03	1.10	0.25	22.	29.5	28.4	29.0	0.98
14	15.44	33.441	24.675	5.93	104.2	0.6	0.36	1.0	0.06	0.77	0.28	12.	19.7	22.0	20.8	0.16
26	15.53	33.566	24.752	5.73	100.9	0.9	0.40	0.8	0.08	2.44	0.97	1.8	10.9	9.1	10.0	0.18
38	15.29	33.572	24.810	5.57	97.6	1.5	0.60	1.3	0.11	2.11	0.93	0.29	3.7	3.8	3.7	0.15

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 4.7 N	122 39.3 W	01/08/11	0136 UTC	21 m	1217 - 1938 PST	1217 PST	1931 PST	320.4 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	18.38	33.323	23.896	5.52	102.6	0.8	0.28	0.0	0.00	0.16	0.02	86. A	4.0	4.1	4.0	0.06
12	17.86	33.303	24.008	5.57	102.5	0.9	0.27	0.0	0.00	0.15	0.04	42.	3.4	4.2	3.8	0.84
16	17.77	33.300	24.028	5.60	102.9	0.6	0.26	0.0	0.00	0.19	0.03	31.	4.3	3.9	4.1	0.08
22	17.71	33.302	24.044	5.59	102.6	0.8	0.26	0.0	0.00	0.21	0.02					
29	15.11	33.276	24.621	6.09	106.2	1.1	0.28	0.0	0.00	0.38	0.13	12.	6.2	6.5	6.3	0.11
37	13.46	33.156	24.874	6.24	105.1	2.4	0.43	1.2	0.11	0.96	0.50					
45	13.19	33.176	24.944	6.00	100.5	2.9	0.54	2.9	0.31	1.10	0.42					
54	12.91	33.247	25.055	5.62	93.6	4.3	0.74	6.1	0.39	0.89	0.47	1.9	3.8	4.0	3.9	0.89
66	11.83	33.288	25.293	5.18	84.4	7.2	0.97	10.3	0.00	0.30	0.20					
79 B	10.67	33.351	25.552	4.76	75.6	11.8	1.19	14.0	0.00	0.06	0.07	0.31	1.1	1.1	1.1	0.01

B) PRODUCTIVITY REPLICATES POOR, UNCERTAIN VALUE ELIMINATED

A) INCUBATION LIGHT INTENSITIES WERE 60, 40, 31.7, 12.1, 1.9, 0.3 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.0 N	117 18.2 W	28/07/11	0218 UTC	20 m	1200 - 1920 PST	1156 PST	1919 PST	765.4 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	20.91	33.578	23.437	5.61	109.5	3.9	0.24	0.0	0.00	0.32	0.14	86. A	17.8	15.4	16.6	0.10
5	20.88	33.583	23.449	5.61	109.5	4.1	0.23	0.0	0.00	0.31	0.13					
12	18.39	33.505	24.033	6.20	115.4	4.6	0.26	0.0	0.00	0.35	0.15	40.	18.1	18.6	18.4	0.11
14	17.11	33.475	24.320	6.43	116.8	3.0	0.24	0.0	0.00	0.46	0.21	34.	25.6	17.1	21.3	0.12
22	13.67	33.333	24.968	6.07	102.8	3.3	0.57	3.8	0.21	0.67	0.13					
28	13.36	33.366	25.057	6.00	101.0	3.9	0.61	4.5	0.23	0.75	0.29	12.	17.4	18.6	18.0	0.08
40	12.18	33.345	25.271	5.15	84.5	7.7	0.95	9.6	0.20	0.65	0.31					
52	11.63	33.363	25.388	4.88	79.2	9.6	1.09	12.1	0.16	0.33	0.24	1.8	1.6	1.7	1.6	0.04
58	11.43	33.410	25.462	4.42	71.4	13.0	1.26	14.4	0.33	0.33	0.44	1.2	0.90	0.80	0.80	0.11

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 20.6 N	118 33.4 W	29/07/11	0124 UTC	11 m	1210 - 1920 PST	1201 PST	1920 PST	468.3 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	17.39	33.595	24.345	5.76	105.2	1.5	0.23	0.0	0.00	0.60	0.15	76. A	19.6	20.7	20.2	0.18
7	17.31	33.594	24.363	5.77	105.3	1.6	0.23	0.0	0.00	0.63	0.18	38.	21.4	21.9	21.7	0.23
10	17.20	33.594	24.389	5.77	105.0	1.6	0.22	0.0	0.00	0.62	0.18	25.	19.4	19.0	19.2	0.22
15	17.07	33.595	24.421	5.75	104.4	1.6	0.23	0.0	0.00	0.65	0.21	12.	14.5	15.7	15.1	0.17
22	15.94	33.590	24.678	5.85	103.9	1.2	0.31	0.3	0.00	1.37	0.52					
28	15.40	33.550	24.768	5.59	98.2	2.6	0.49	2.0	0.13	1.28	0.56	2.0	6.1	4.5	5.3	0.13
35	14.78	33.510	24.873	5.48	95.0	3.6	0.60	3.3	0.22	1.17	0.60					
42	12.98	33.460	25.206	5.24	87.5	5.0	0.82	7.1	0.57	0.54	0.39	0.28	0.90	0.90	0.90	0.06

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 10.3 N	120 55.5 W	30/07/11	0217 UTC	25 m	1215 - 1920 PST	1210 PST	1920 PST	192.9 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	18.07	33.281	23.940	5.49	101.4	1.8	0.25	0.0	0.00	0.09	0.02	88. A	2.1	2.1	2.1	1.3
15	18.01	33.301	23.970	5.58	103.0	1.8	0.24	0.0	0.00	0.10	0.03	40.	3.9	3.0	3.5	0.06
19	18.05	33.308	23.966	5.49	101.4	1.6	0.23	0.0	0.00	0.10	0.03	31.	2.8	2.7	2.7	0.06
34	17.83	33.318	24.028	5.52	101.5	1.7	0.23	0.0	0.00	0.12	0.03	12.	1.4	1.6	1.5	0.04
44	15.63	33.042	24.327	5.99	105.4	1.5	0.23	0.0	0.00	0.13	0.05					
55	14.59	33.064	24.570	6.05	104.2	1.7	0.24	0.0	0.00	0.16	0.08					
65	14.34	33.088	24.642	6.03	103.4	1.8	0.27	0.0	0.00	0.28	0.21	1.8	2.3	2.5	2.4	0.05
75	14.16	33.176	24.748	5.87	100.3	2.2	0.26	0.1	0.02	0.39	0.34					
85	13.76	33.281	24.911	5.64	95.6	2.9	0.33	1.0	0.27	0.32	0.32					
95	13.26	33.263	24.999	5.53	92.8	3.3	0.42	2.5	0.13	0.27	0.31	0.29	0.70	0.80	0.80	0.01

RV NEW HORIZON CALCOFI CRUISE 1108 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 10.8 N	122 55.2 W	30/07/11	2322 UTC	19 m	1220 - 1938 PST	1218 PST	1938 PST	236.8 mg C/m2

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	18.04	33.186	23.875	5.55	102.4	1.1	0.29	0.0	0.00	0.20	0.02	85. A	2.7	2.2	2.5	1.6
10	17.54	33.151	23.969	5.56	101.6	1.1	0.30	0.0	0.00	0.21	0.05	45.	5.3	5.8	5.6	1.5
14	17.45	33.150	23.990	5.53	100.9	1.2	0.30	0.0	0.00	0.23	0.06	32.	5.6	6.1	5.9	0.08
25	17.31	33.147	24.021	5.64	102.6	1.2	0.27	0.0	0.00	0.18	0.06	13.	3.9	4.0	4.0	0.32
39	15.15	33.072	24.455	6.13	106.8	1.1	0.24	0.0	0.00	0.35	0.14					
50	14.35	33.034	24.597	6.16	105.6	1.1	0.27	0.0	0.00	0.39	0.20	1.8	1.9	3.1	2.5	1.5
60	14.03	33.065	24.688	6.16	104.9	1.4	0.27	0.2	0.00	0.83	0.27					
72	13.26	33.090	24.865	5.89	98.7	2.1	0.45	1.7	0.31	0.44	0.38	0.30	1.3	1.0	1.2	0.01

A) INCUBATION LIGHT INTENSITIES WERE 60, 40, 31.7, 12.1, 1.9, 0.3 PERCENT RESPECTIVELY.

CalCOFI Cruise 1108

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	49.0	35 05.3	120 46.6	08/12	1045	1052	110	56	437	437
76.7	51.0	35 01.3	120 55.2	08/12	0502	0523	415	207	284	188
76.7	55.0	34 52.8	121 11.8	08/12	0126	0149	454	213	59	59
76.7	60.0	34 43.4	121 33.0	08/11	1900	1921	417	212	137	137
76.7	70.0	34 23.4	122 14.8	08/11	1218	1241	448	212	33	33
76.7	80.0	34 03.2	122 56.5	08/11	0608	0629	456	210	29	29
76.7	90.0	33 42.8	123 37.5	08/11	0015	0039	428	210	84	84
76.7	100.0	33 23.4	124 19.4	08/10	1652	1714	468	213	15	15
80.0	50.5	34 27.5	120 29.5	08/08	1842	1844	43	15	23	23
80.0	51.0	34 27.2	120 31.5	08/08	2018	2025	149	58	40	40
80.0	55.0	34 18.7	120 48.6	08/09	0121	0144	428	211	131	117
80.0	60.0	34 09.2	121 09.0	08/09	0557	0618	433	213	42	42
80.0	70.0	33 49.0	121 50.5	08/09	1241	1304	452	207	53	53
80.0	80.0	33 29.2	122 31.9	08/09	2128	2151	443	216	47	47
80.0	90.0	33 09.0	123 13.4	08/10	0402	0423	435	212	39	39
80.0	100.0	32 49.1	123 54.5	08/10	0920	0942	456	195	24	24
81.8	46.9	34 16.5	120 01.5	08/08	1455	1517	423	212	144	123
83.3	39.4	34 15.4	119 19.5	08/08	0738	0740	45	12	360	360
83.3	40.6	34 13.3	119 24.7	08/08	0623	0625	57	20	192	192
83.3	42.0	34 10.8	119 30.6	08/08	0435	0443	182	79	165	165
83.3	51.0	33 52.8	120 08.2	08/07	2227	2235	163	61	43	43
83.3	55.0	33 44.9	120 25.0	08/07	1720	1741	429	211	40	40
83.3	60.0	33 34.6	120 45.3	08/07	1220	1242	434	212	94	60
83.3	70.0	33 14.7	121 26.7	08/07	0542	0603	424	213	24	24
83.3	80.0	32 53.9	122 07.1	08/06	2319	2342	446	212	88	88
83.3	90.0	32 34.8	122 48.9	08/06	1618	1639	423	211	43	43
83.3	100.0	32 14.8	123 29.5	08/06	0841	0903	440	212	43	43
83.3	110.0	31 54.7	124 10.2	08/06	0328	0351	461	212	35	35
86.7	33.0	33 53.4	118 29.4	08/03	1001	1007	136	55	1293	242
86.7	35.0	33 49.4	118 37.7	08/03	1247	1309	397	212	81	81
86.7	40.0	33 39.4	118 58.5	08/03	1715	1737	415	207	106	106
86.7	45.0	33 29.2	119 18.5	08/03	2208	2230	432	204	171	171
86.7	50.0	33 19.1	119 40.8	08/04	0200	0.207	141	53	114	114
86.7	55.0	33 09.5	120 01.0	08/04	0609	0631	419	211	105	105
86.7	60.0	32 59.8	120 21.3	08/04	1119	1141	440	214	46	46
86.7	70.0	32 39.6	121 02.1	08/04	2016	2039	440	215	525	66
86.7	80.0	32 19.6	121 43.1	08/05	0202	0225	483	210	19	19
86.7	90.0	31 59.6	122 23.9	08/05	0641	0702	428	215	21	21
86.7	100.0	31 39.6	123 04.3	08/05	1451	1514	468	209	53	53
86.7	110.0	31 19.4	123 44.5	08/05	2032	2055	448	210	60	60
86.8	32.5	33 53.2	118 26.9	08/03	0807	0810	67	21	373	373
88.5	30.1	33 40.3	118 05.1	08/03	0408	0410	45	12	178	178
90.0	27.7	33 29.9	117 45.1	08/03	0116	0118	45	13	494	494
90.0	28.0	33 29.1	117 46.1	08/03	0020	0026	117	48	188	188
90.0	30.0	33 25.2	117 54.6	08/02	2132	2153	390	209	126	126
90.0	35.0	33 15.0	118 15.4	08/02	1639	1700	412	212	274	274
90.0	37.0	33 11.0	118 23.4	08/02	1247	1309	430	213	60	60
90.0	45.0	32 55.0	118 56.5	08/02	0414	0436	423	206	272	85
90.0	53.0	32 38.7	119 29.1	08/01	2208	2231	418	217	340	117
90.0	60.0	32 25.1	119 57.8	08/01	1631	1653	410	214	73	73
90.0	70.0	32 05.1	120 38.2	08/01	0816	0838	417	214	53	53
90.0	80.0	31 45.0	121 19.1	08/01	0244	0308	479	212	67	67
90.0	90.0	31 25.1	121 59.6	07/31	1927	1948	391	215	54	54
90.0	100.0	31 04.9	122 39.7	07/31	1107	1130	456	204	64	64
90.0	110.0	30 45.2	123 19.9	07/31	0234	0256	446	212	40	40
90.0	120.0	30 25.0	123 59.7	07/30	2015	2037	423	214	71	38
93.3	26.7	32 57.4	117 18.3	07/27	1126	1133	142	65	176	176
93.3	28.0	32 54.8	117 23.6	07/27	1559	1621	423	212	475	87
93.3	30.0	32 50.6	117 31.9	07/27	1902	1924	439	214	305	305
93.3	35.0	32 40.8	117 52.4	07/28	0019	0040	415	212	371	183
93.3	40.0	32 30.8	118 12.6	07/28	0445	0506	403	216	144	144
93.3	45.0	32 20.8	118 33.3	07/28	0906	0928	415	211	84	84
93.3	50.0	32 10.8	118 53.6	07/28	1411	1433	401	213	67	67
93.3	55.0	32 00.9	119 14.0	07/28	1824	1845	404	216	404	67
93.3	60.0	31 50.8	119 34.5	07/28	2242	2304	436	209	128	128
93.3	70.0	31 30.8	120 14.7	07/29	0429	0450	408	209	169	137
93.3	80.0	31 10.7	120 55.2	07/29	0903	0924	421	213	50	50
93.3	90.0	30 50.8	121 35.4	07/29	1827	1848	426	209	136	47
93.3	100.0	30 30.7	122 15.5	07/30	0128	0151	450	208	42	42
93.3	110.0	30 10.8	122 55.3	07/30	0620	0641	452	209	51	51
93.3	120.0	29 50.9	123 35.2	07/30	1347	1409	439	211	16	16
93.4	26.4	32 57.1	117 16.8	07/27	1258	1300	44	11	23	23