

data report

CalCOFI Cruise 0901
7 – 24 January 2009

CC Reference 10-01
8 September 2010

UNIVERSITY OF CALIFORNIA, SAN DIEGO
SCRIPPS INSTITUTION OF OCEANOGRAPHY
LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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INTRODUCTION

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

STANDARD PROCEDURES

CTD/Rosette Cast Data

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

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

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

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

* The first two digits represent the year and the last digits the month of the cruise.

solutions prepared ashore were run at the beginning of each run. Reagent and sea water blanks were determined to account for presence of oxidizing or reducing materials.

Nutrient samples were analyzed at sea by the Scripps Ocean Data Facility for dissolved silicate, phosphate, nitrate, nitrite, and ammonium using procedures similar to those described in Gordon et al. (1993) and Koroleff (1969, 1970). Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

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

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

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with 41.12 μCi of ^{14}C as NaHCO_3 (200 μl of 205 $\mu\text{Ci/ml}$ stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al.*, 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

Macrozooplankton Net Tows

Macrozooplankton was sampled with a 71 cm mouth diameter paired net (bongo net) equipped with 0.505mm plankton mesh. Bottom depth permitting, the nets were towed obliquely from 210 meters to the surface. The tow time for a standard tow was 21.5 minutes. Volumes filtered were determined from flowmeter readings and the mouth area of the net. Only one sample of each pair was retained and preserved. The biomass, as wet displacement volume, after removal of large (>5 ml) organisms, was determined in the laboratory ashore. These procedures are summarized in greater detail in Kramer *et al.* (1972). A Laser Optical Plankton Counter (LOPC, Dave Checkley, SIO) was routinely used in one side of the paired bongo net frame. The purpose of the LOPC is to obtain information on the vertical distributions of size categories of zooplankton, using data from the counter, without affecting the ongoing time series of data obtained from the catches of the integrative bongo net. An unfortunate failure of the hyrdo wire resulted in the loss of the bongo/LOPC on line 80, station 60. A replacement bongo without an LOPC was used for the remainder of the cruise.

Ancillary Programs

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

- 1) *Underway Data.* Continuous near surface measurements of temperature, salinity and *in vivo* chlorophyll fluorescence were recorded from seawater pumped through the ship's uncontaminated seawater system. Water was drawn from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 45 MicroTSG Thermosalinograph and a Wetlabs Wetstar fluorometer.
- 2) *ADCP.* Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP data were averaged over 3-minute intervals. Sixty 8-meter depth bins were recorded. (T. Chereskin, SIO)
- 3) *Underway Sea Surface xCO₂.* Continuous measurements of the partial pressure of CO₂ were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a membrane contactor with a gas loop that was analyzed with a Licor 6262 infrared CO₂/H₂O analyzer. One-minute averages were recorded and the mole fraction of CO₂ (xCO₂) at sea surface temperature was calculated. The system was calibrated with standard gases traceable to CMDL every two hours; at that time absolute zero and atmospheric samples were also collected. (G. Friederich, MBARI)
- 4) *California Current Ecosystem Long Term Ecological Research Program:* The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure. (M. Ohman, SIO)
- 5) *SCCOOS Nearshore Observations:* The objective of these observations is to extend CalCOFI time series to the nearshore. Nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. (R. Goericke, SIO)
- 6) *Inorganic Carbon System:* The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and pCO₂. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)
- 7) *Marine mammal observations.* During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys. (J. Hildebrand, SIO)
- 8) *ALF (Advanced Laser Fluorometer).* Continuous underway analysis of phytoplankton pigment groups and variable fluorescence (F_v/F_m). ALF, developed by A. Chekalyuk at Lamont-Doherty Earth Observatory, uses laser stimulated emission at 405 and 532 nm together with spectral deconvolution analysis to distinguish fluorescence from three types of phycoerythrin, chlorophyll-*a*, and chromophoric dissolved organic matter (CDOM). The ALF is useful for differentiating the contribution of cyanobacteria and cryptophytes from other phytoplankton taxa present in natural phytoplankton assemblages, as well as for assessing phytoplankton photophysiological status.

TABULATED DATA

CTD/Rosette Cast Data

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

Data values from discrete 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 (cm³/1000m³ strained) and as the total volume minus the volume of larger organisms under the heading "Small." Tow times are given in local PST (+8) time.

FOOTNOTES

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

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

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FIGURES

Cruise 0901

1. CalCOFI Cruise 0901 track and station positions.
2. Horizontal distribution of dynamic height anomaly (0 over 500m). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).
3. Horizontal distributions at 10 meters: A) chlorophyll-*a*; B) potential density; C) temperature; and D) salinity.
4. Horizontal distributions at 200 meters: A) dynamic height anomaly (200 over 500 m); B) potential density; C) temperature; and D) salinity.
5. Sections along CalCOFI line 90 (vertical exaggeration, 1000): A) potential density; B) temperature; C) salinity; D) silicate; E) nitrate; F) phosphate; G) chlorophyll-*a*; H) oxygen saturation; I) oxygen; J) nitrite; and K) phaeopigments.

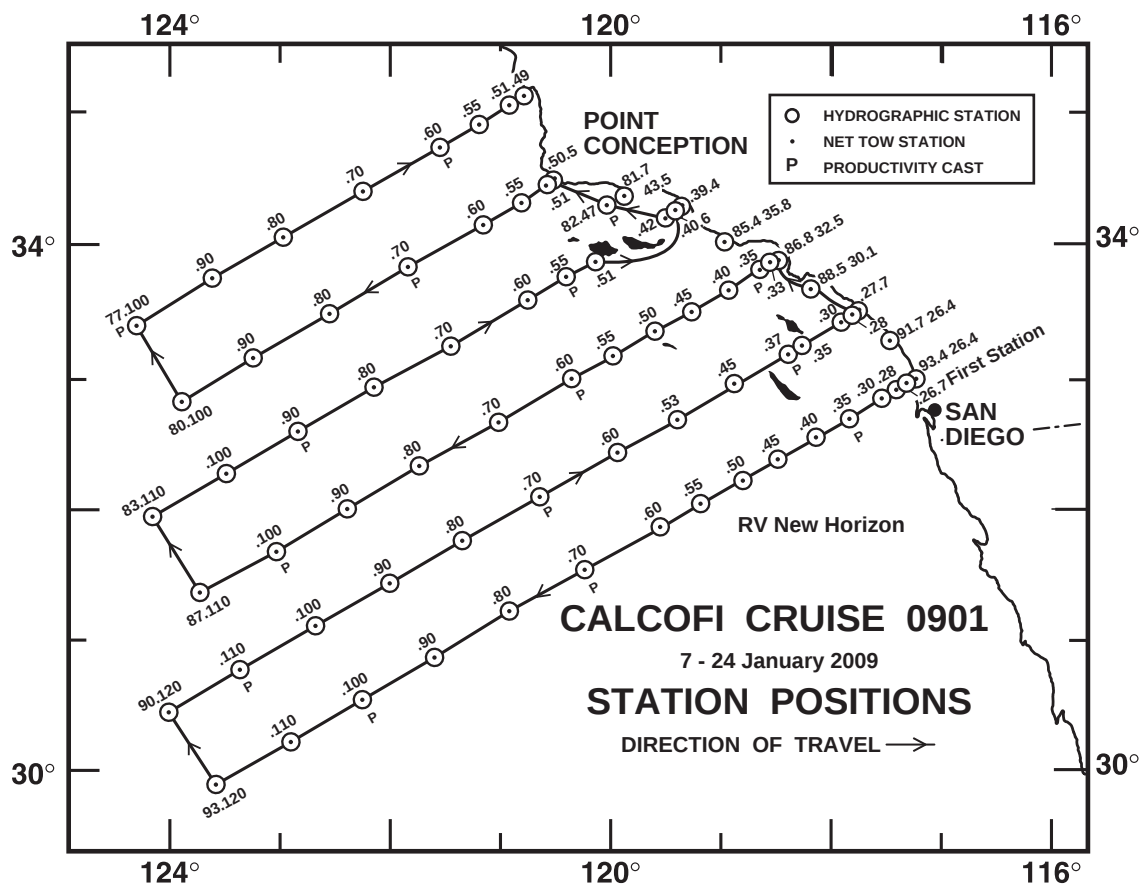


FIGURE 1

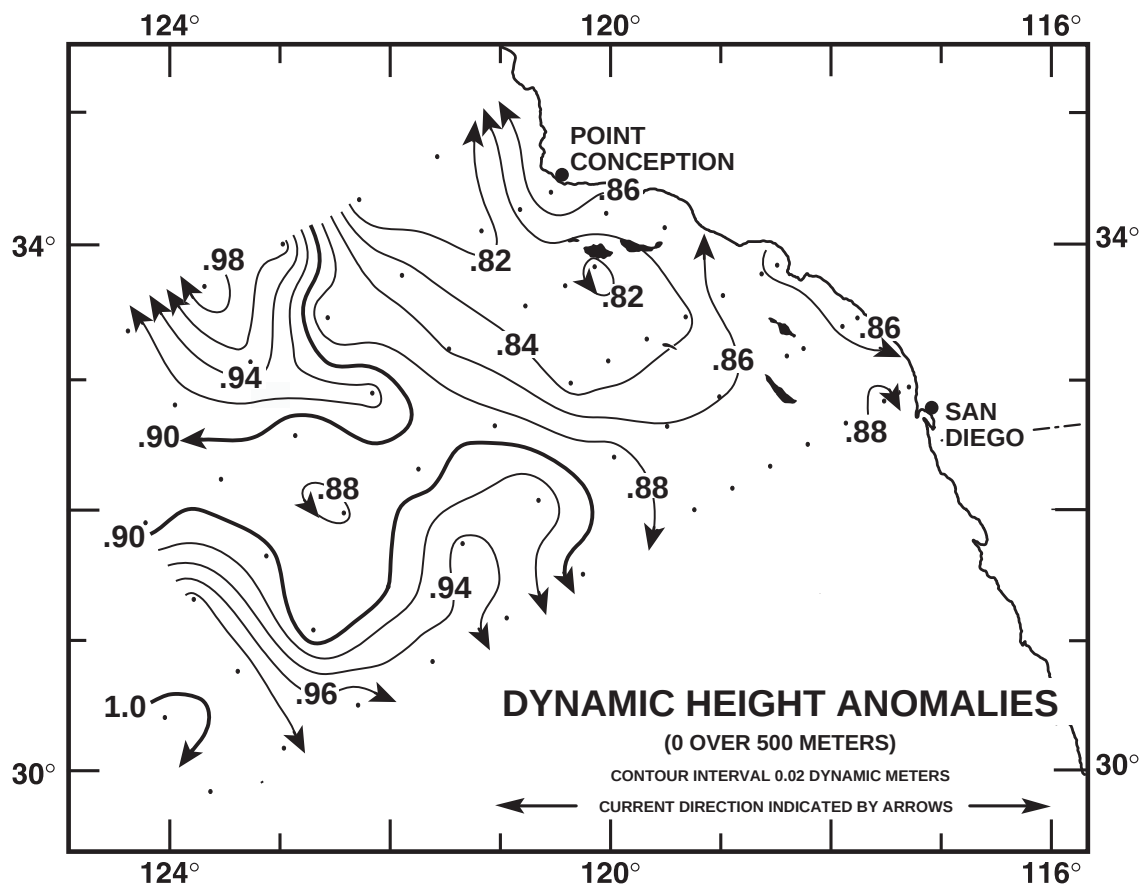


FIGURE 2

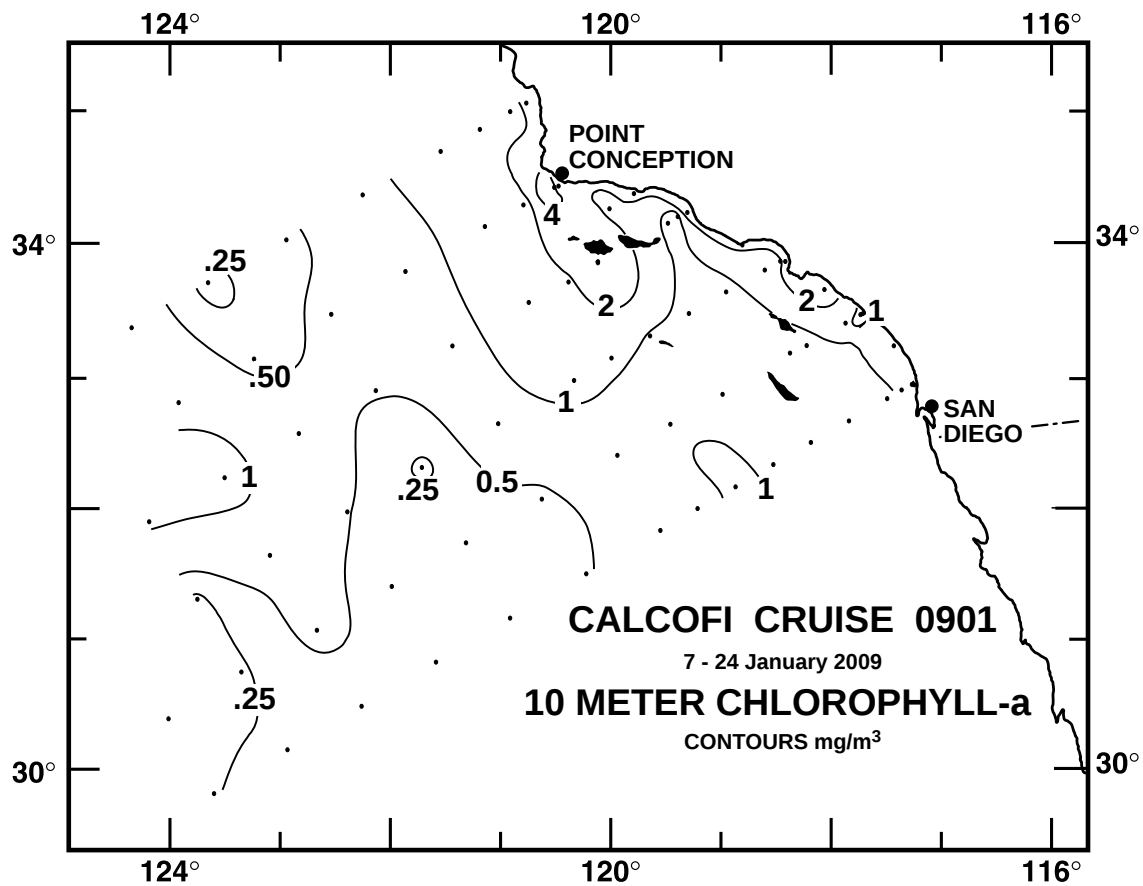


FIGURE 3A

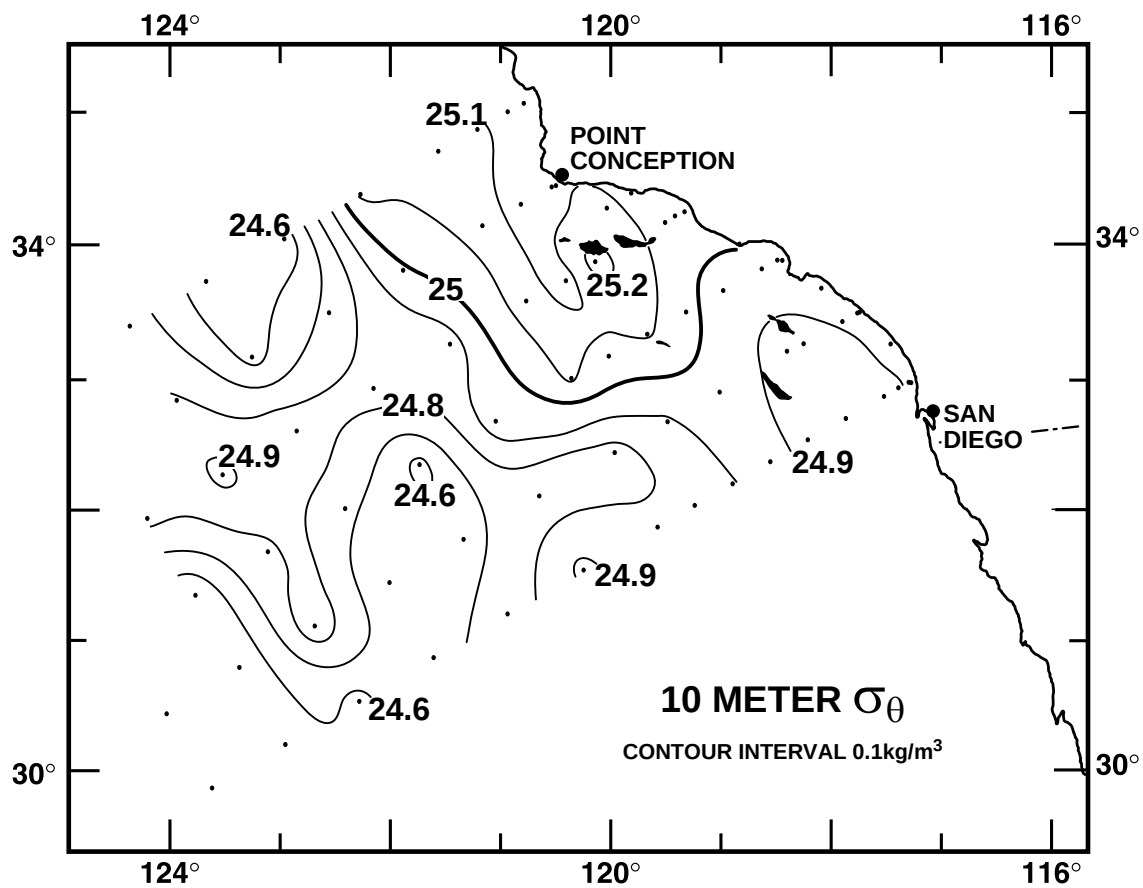


FIGURE 3B

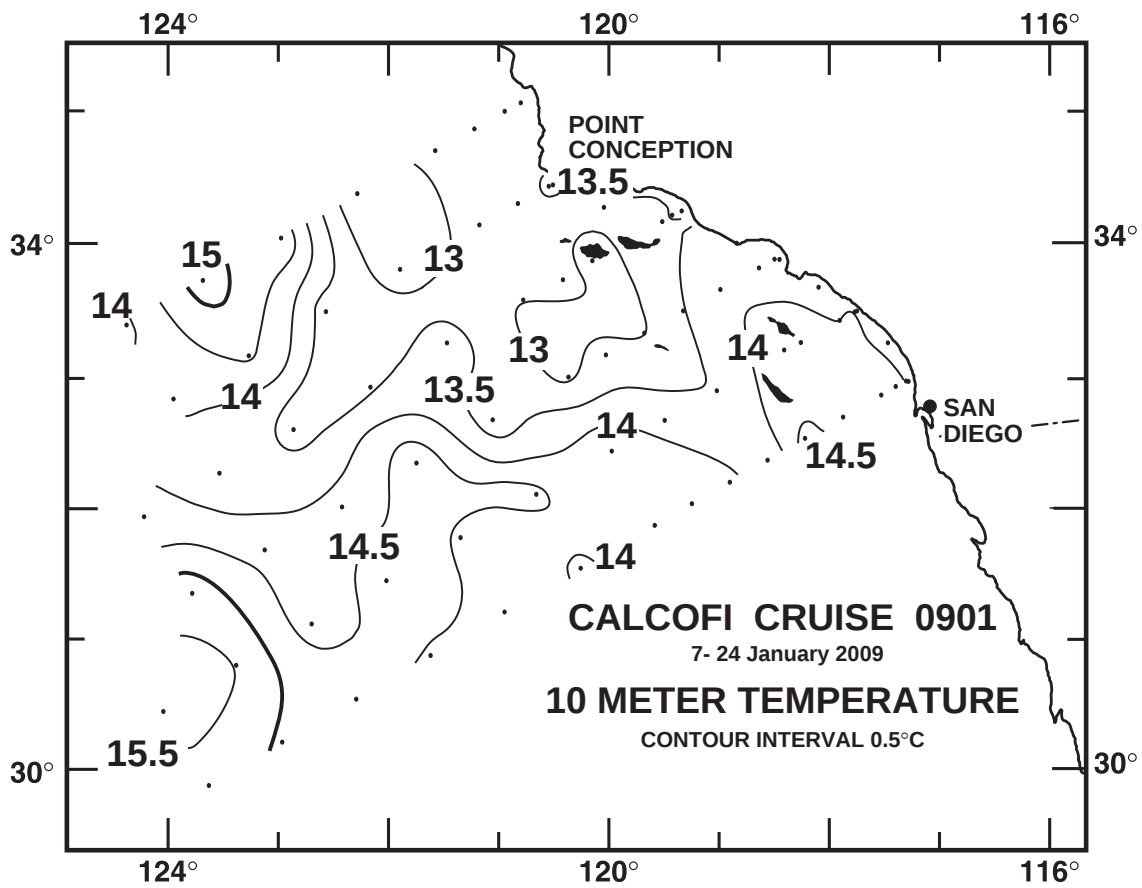


FIGURE 3C

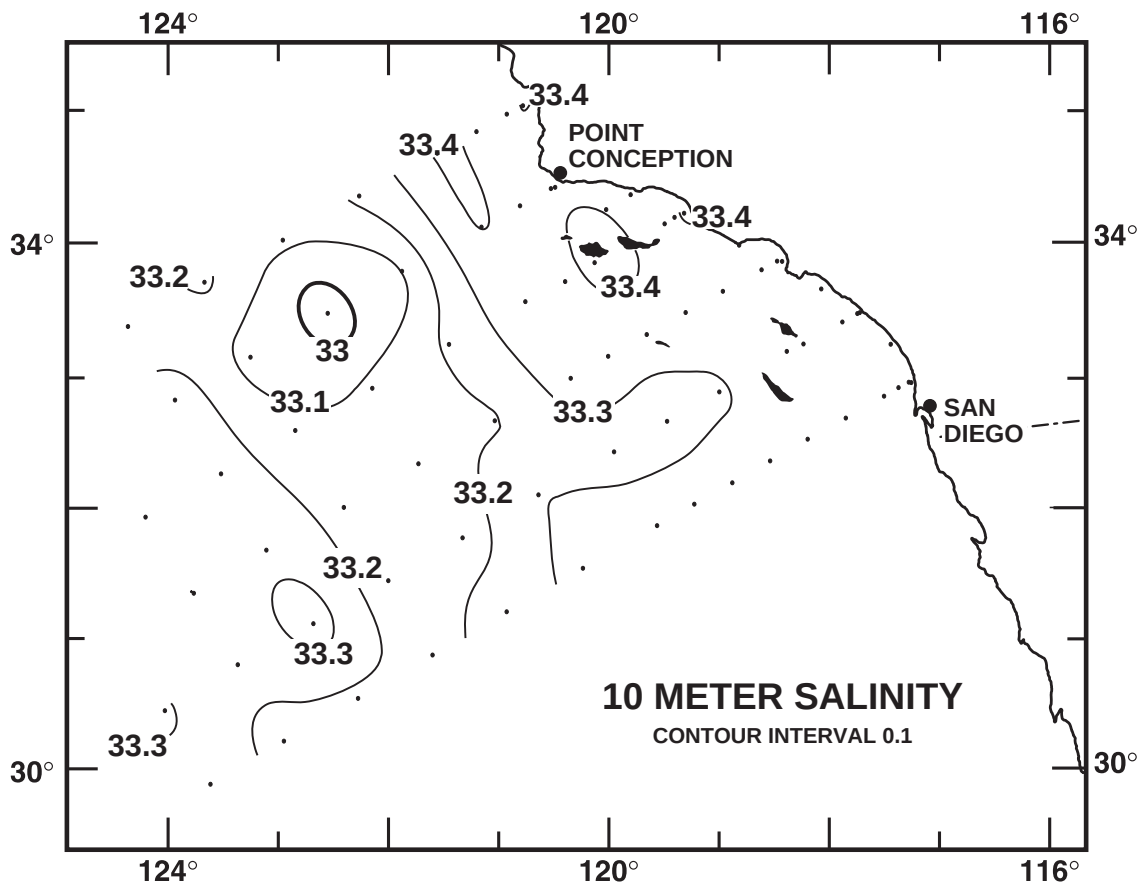


FIGURE 3D

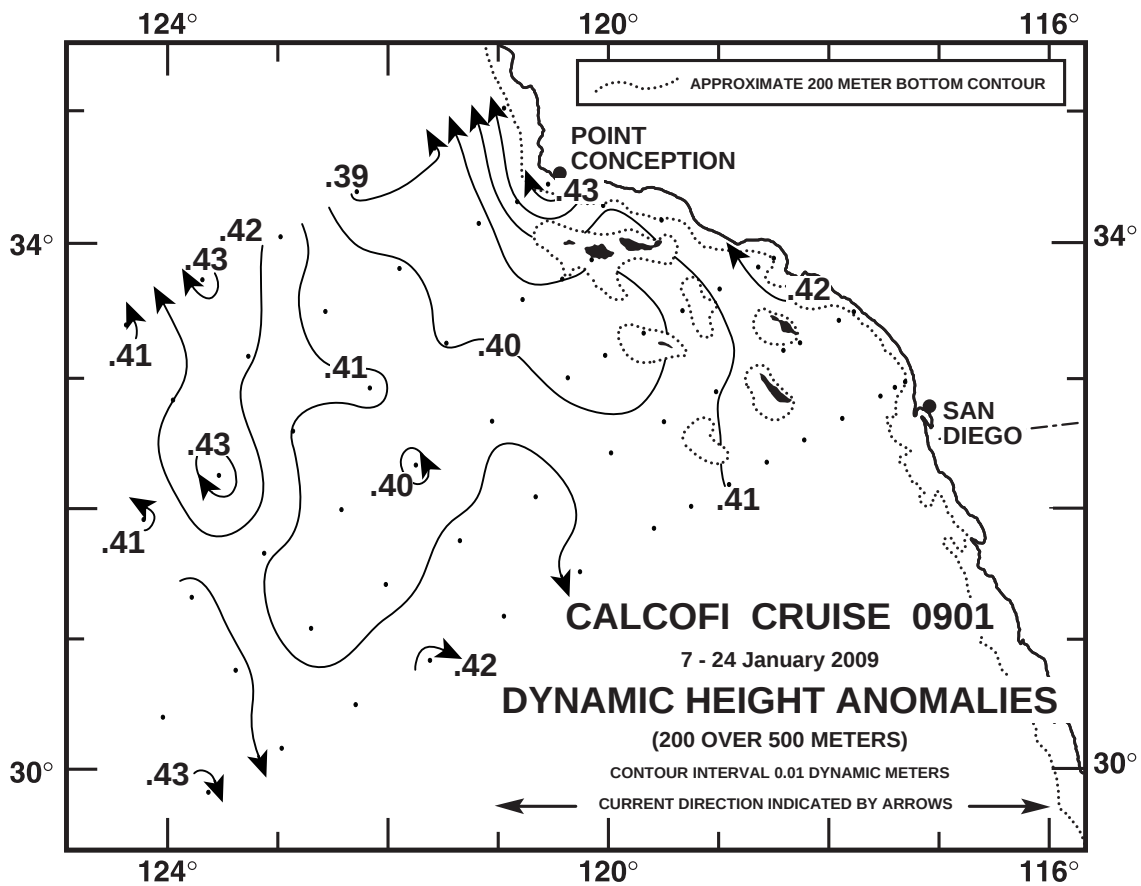


FIGURE 4A

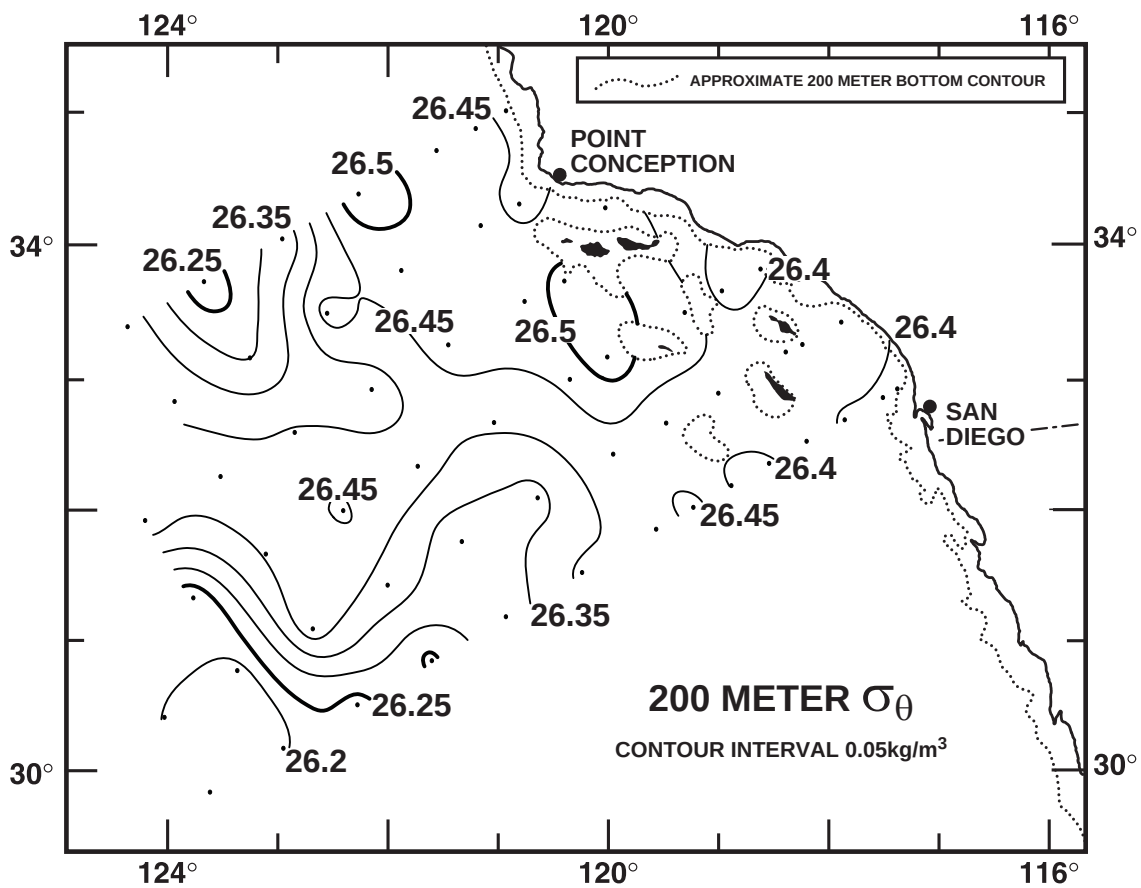


FIGURE 4B

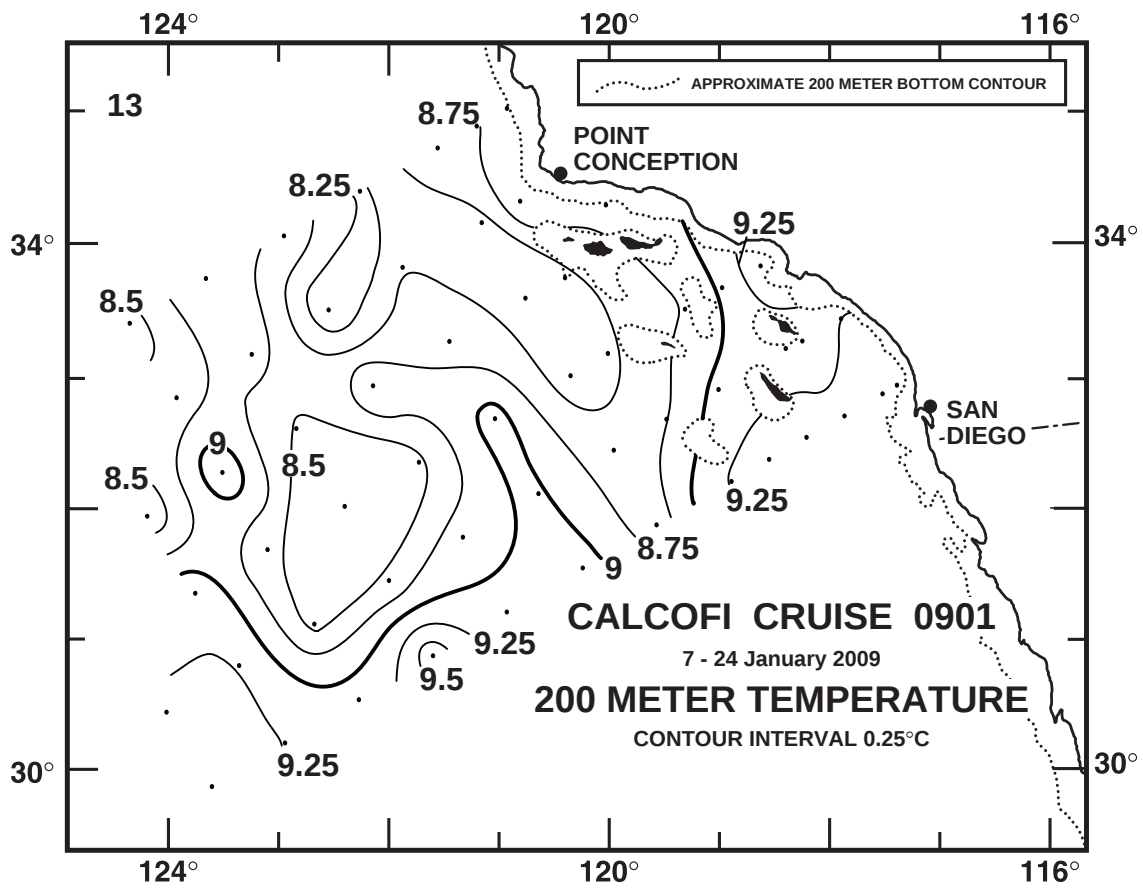


FIGURE 4C

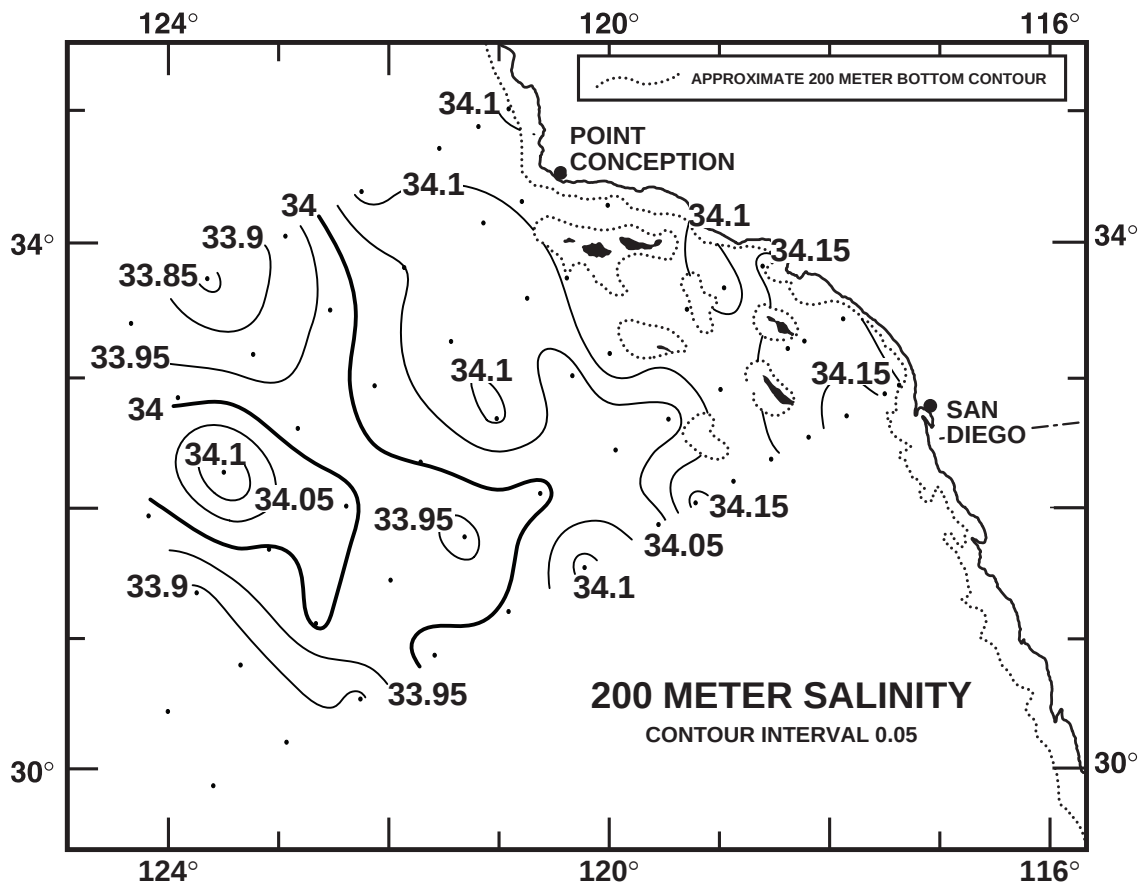


FIGURE 4D

CALCOFI CRUISE 0901

11 - 14 January 2009

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

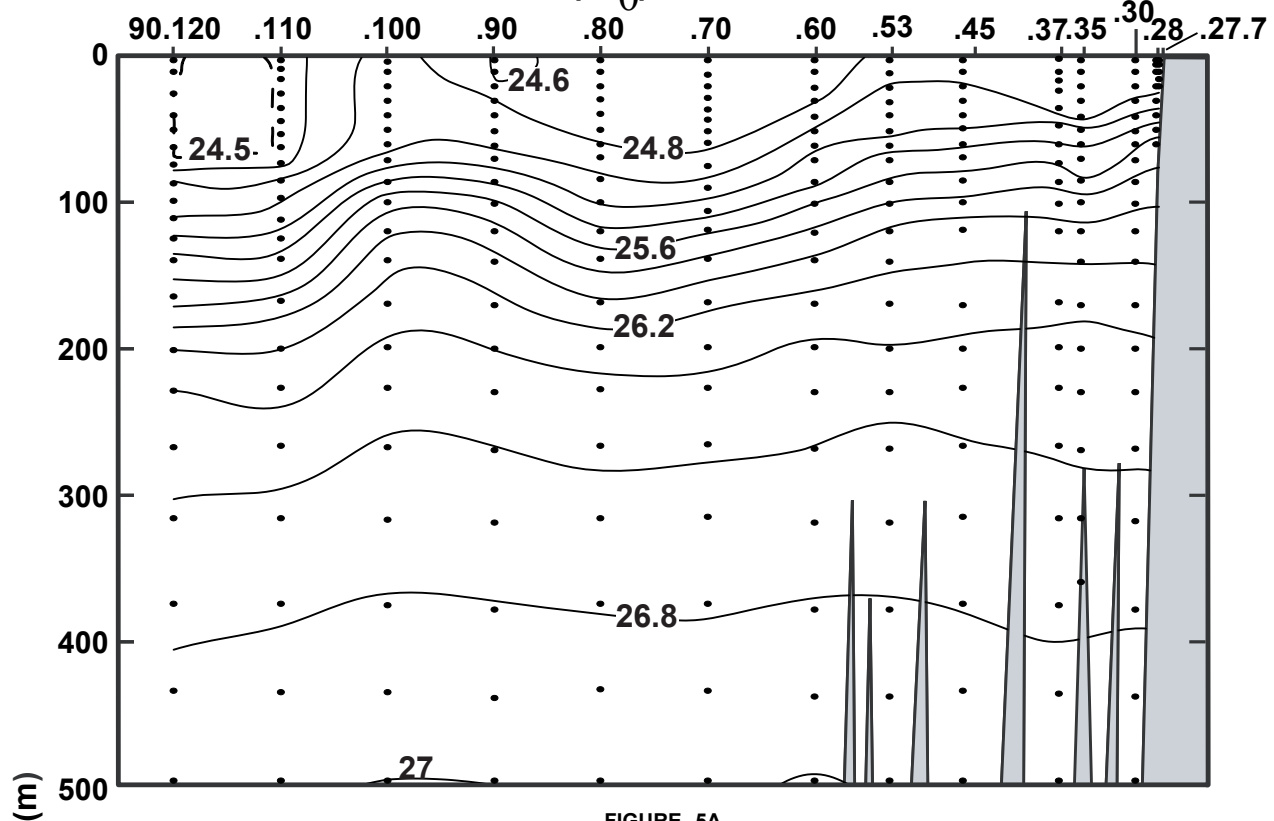


FIGURE 5A

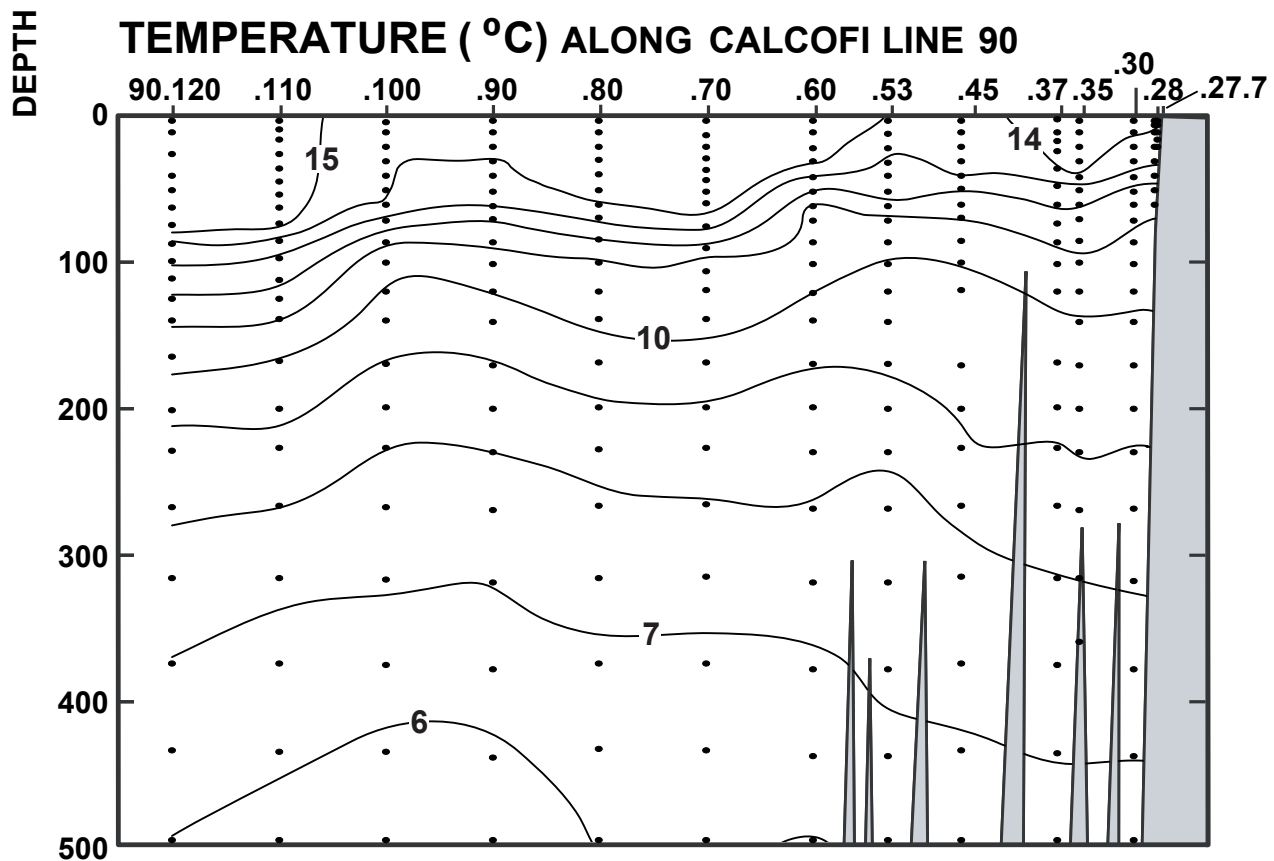


FIGURE 5B

CALCOFI CRUISE 0901

11 - 14 January 2009

SALINITY ALONG CALCOFI LINE 90

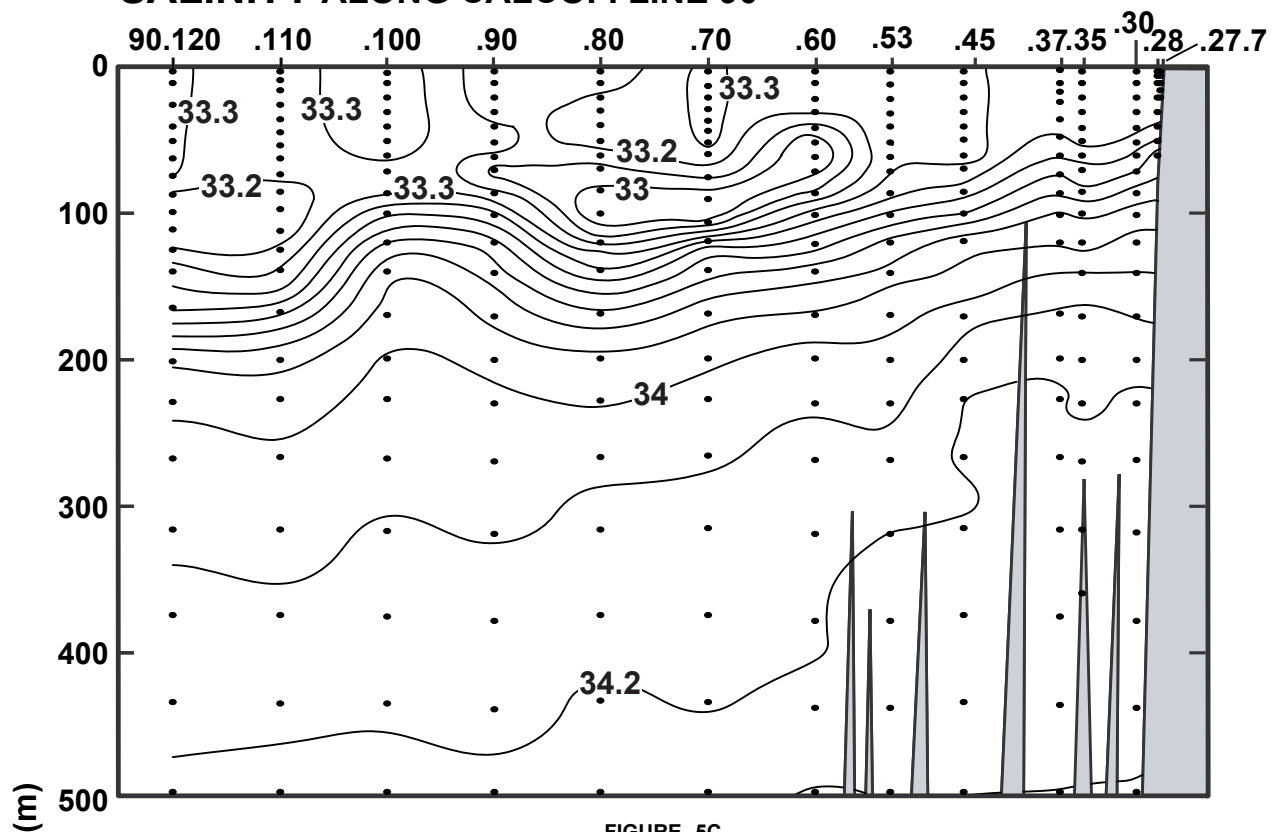


FIGURE 5C

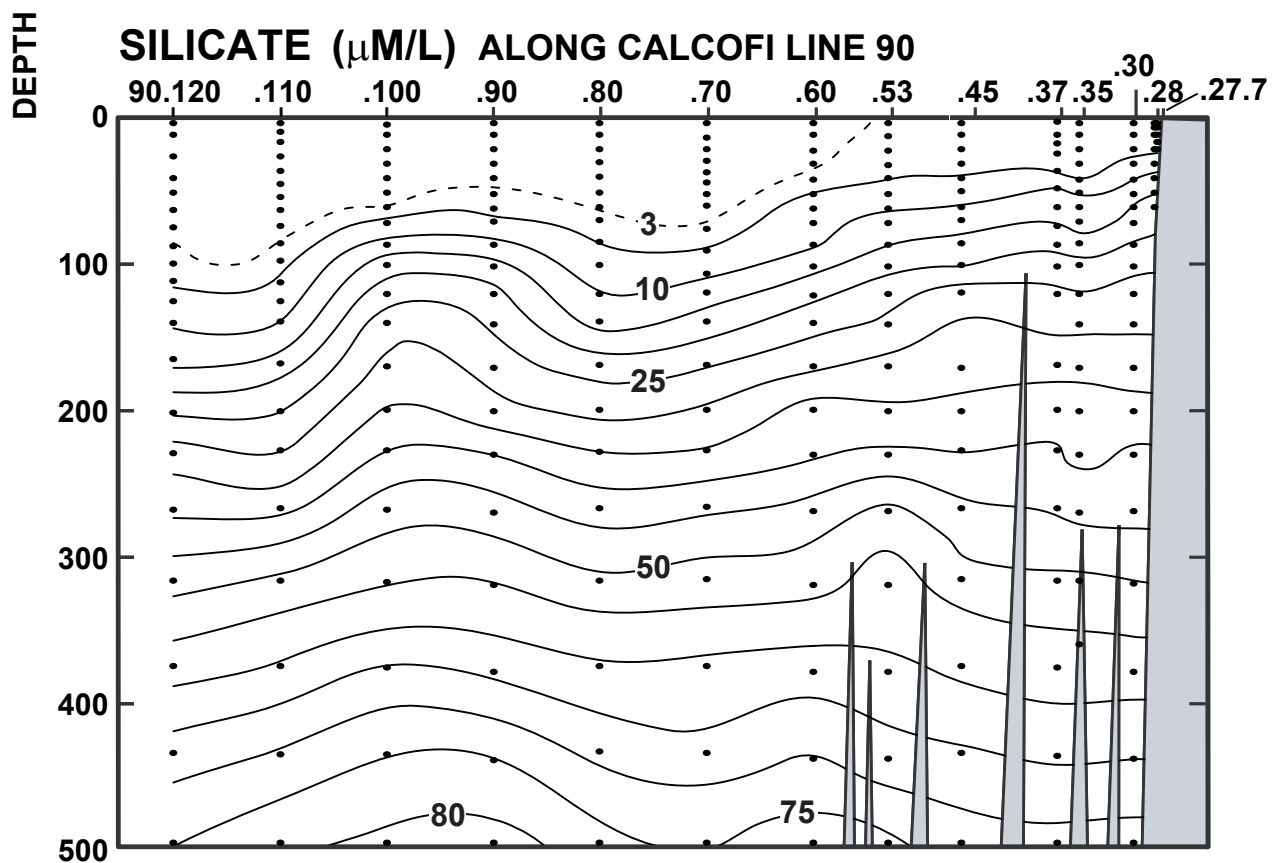


FIGURE 5D

CALCOFI CRUISE 0901

11 - 14 January 2009

NITRATE ($\mu\text{M/L}$) ALONG CALCOFI LINE 90

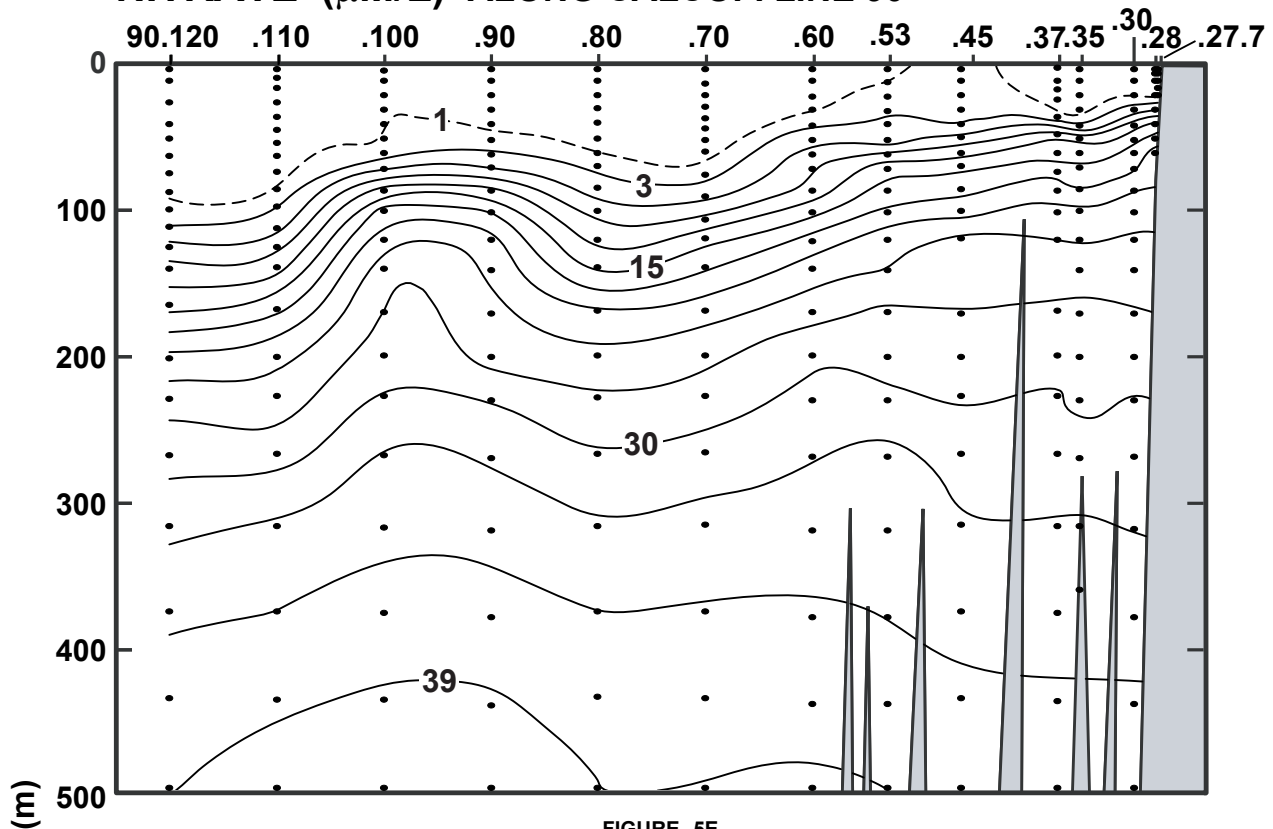


FIGURE 5E

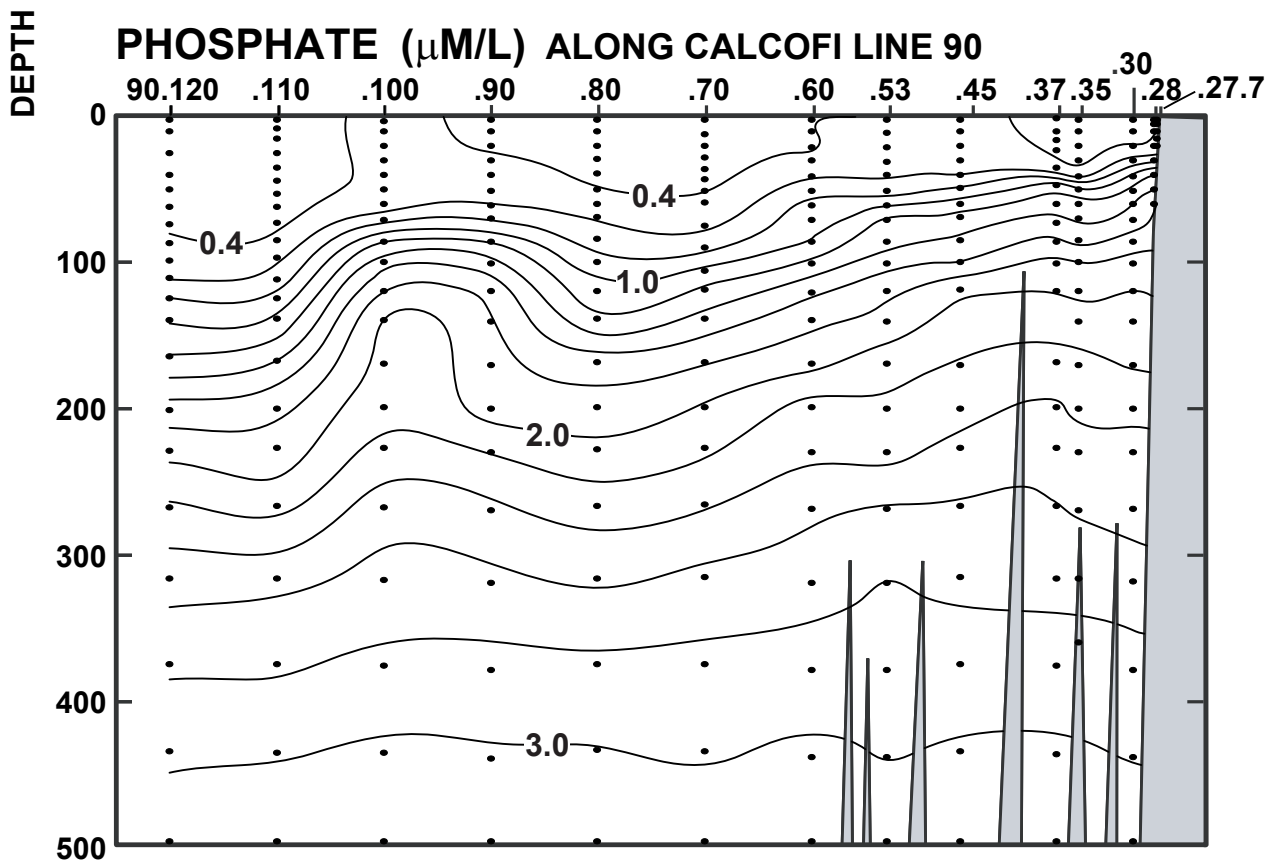


FIGURE 5F

CALCOFI CRUISE 0901

11 - 14 January 2009

CHLOROPHYLL-a ($\mu\text{g/L}$) ALONG CALCOFI LINE 90

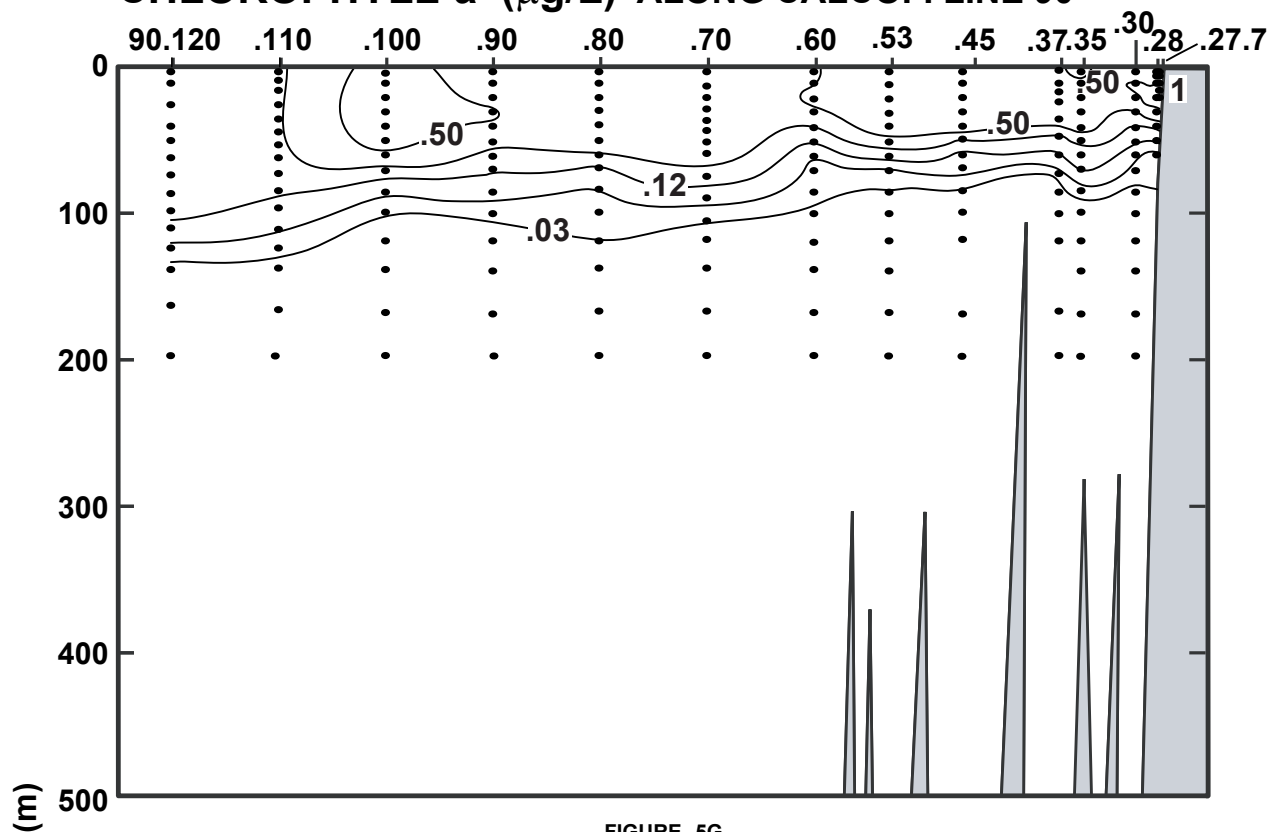


FIGURE 5G

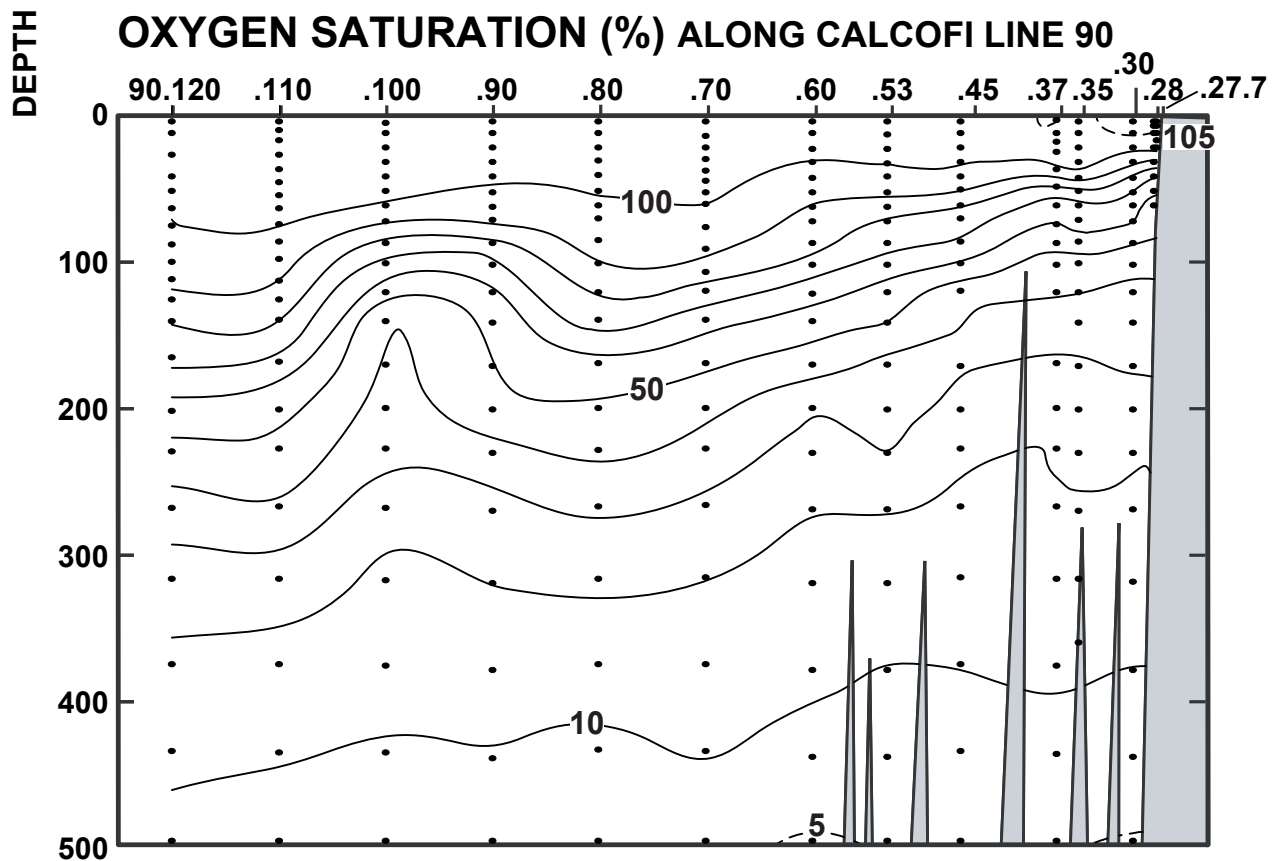
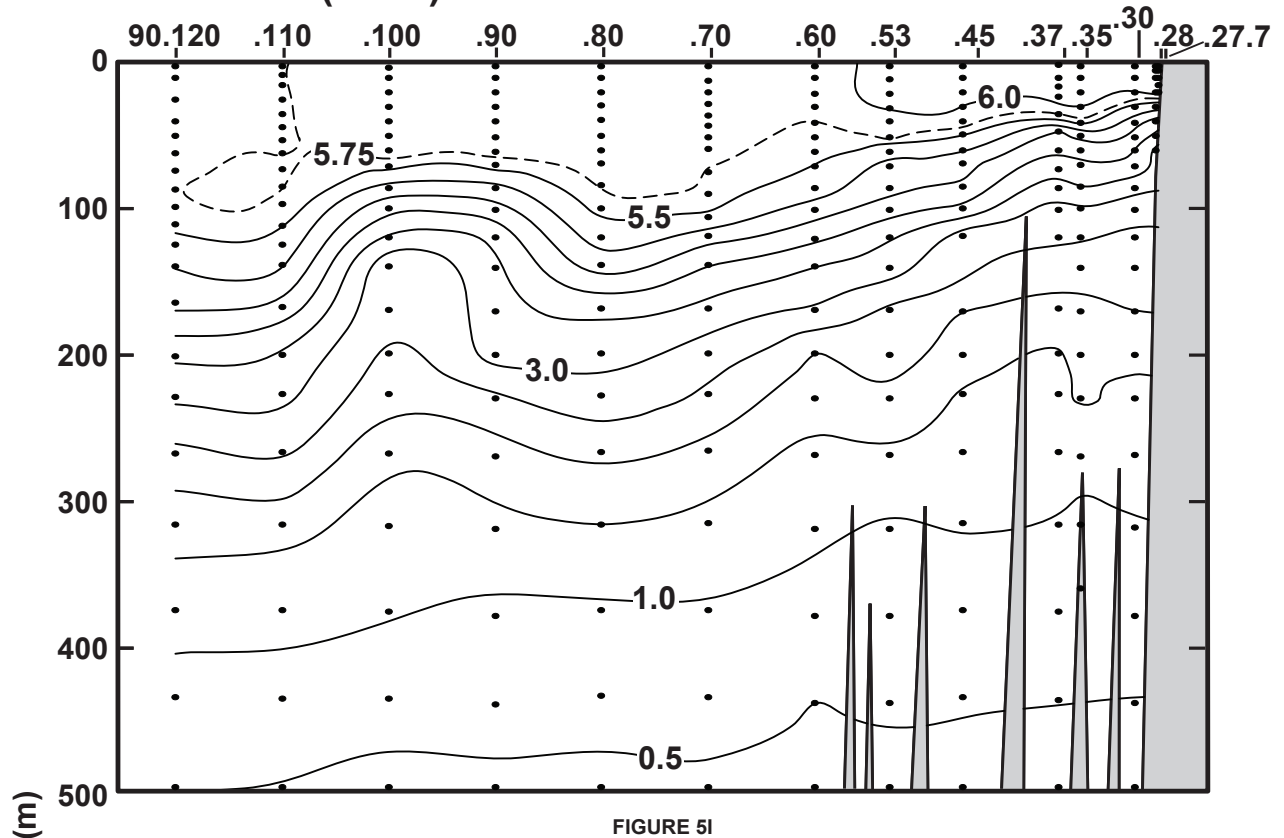


FIGURE 5H

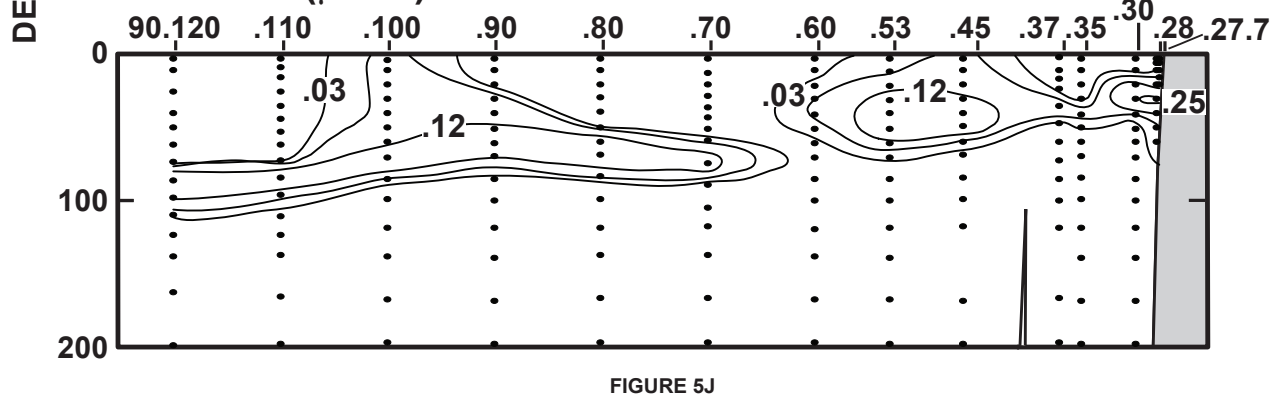
CALCOFI CRUISE 0901

11 - 14 January 2009

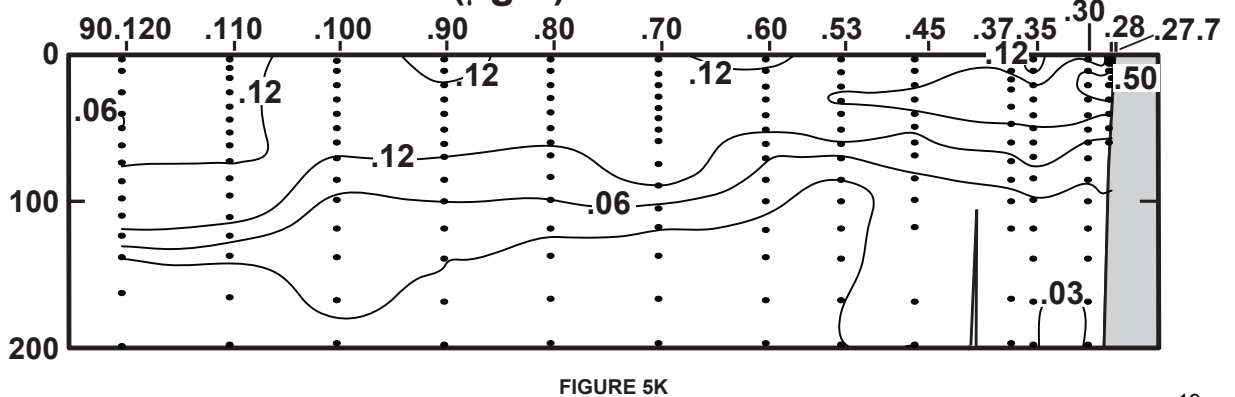
OXYGEN (mL/L) ALONG CALCOFI LINE 90



NITRITE ($\mu\text{M/L}$) ALONG CALCOFI LINE 90



PHAEOPIGMENTS ($\mu\text{g/L}$) ALONG CALCOFI LINE 90



PERSONNEL

CalCOFI Cruise 0901

SHIP'S CAPTAIN

Chris Curl, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

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

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

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 49.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
35 5.4 N	120 46.6 W	23/01/09	0359 UTC	70 m	270	05 kn			1014.2 mb	14.0 C	13.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.37	13.37	33.406	25.085	286.7	0.000	6.83	115.0	1.4	0.33	0.3	0.03	0.27	2.70	0.00	0	209
2	13.37	13.37	33.406	25.085	286.7	0.006	6.83	115.0	1.4	0.33	0.3	0.03	0.27	2.70	0.00	2	209
5	13.35	13.35	33.406	25.089	286.4	0.014	6.84	115.1	1.5	0.32	0.3	0.03	0.28	2.20	0.49	5	208
10	13.25	13.25	33.406	25.109	284.6	0.029	6.78	113.9	1.5	0.31	0.4	0.04	0.31	2.53	0.30	10	206
10	13.26	13.26	33.411	25.111	284.5	0.029										10	207
20	13.13	13.13	33.408	25.135	282.5	0.057	6.68	111.9	1.6	0.36	0.6	0.05	0.49	2.94	0.26	20	205
30	12.99	12.99	33.412	25.166	279.8	0.085	6.50	108.6	2.2	0.43	1.1	0.08	0.69	3.29	0.32	30	204
41	12.59	12.58	33.435	25.263	270.9	0.115	5.64	93.4	6.5	0.81	5.1	0.23	1.17	1.93	0.92	41	203
50 ISL	12.40 D	12.39	33.450 D	25.311	266.5	0.140	5.30	87.5	8.5	0.96	6.8	0.27	1.20	1.42	0.86	50	202
51	12.39	12.38	33.454	25.316	266.0	0.142	5.27	86.9	8.7	0.97	7.0	0.27	1.20	1.38	0.85	51	202
62	11.98	11.97	33.493	25.425	256.0	0.171	4.68	76.6	12.5	1.18	10.6	0.32	0.87	0.70	0.91	62	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 51.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE				
35 1.5 N	120 55.3 W	23/01/09	0124 UTC	247 m	340	09 kn	290 03 09	2	1013.5 mb	15.0 C	13.2 C		7/8	SC				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db		
0 ISL	13.42	13.42	33.376	25.052	289.9	0.000	6.47	109.0	5.2	0.42	1.1	0.04	0.18	0.91	0.22	0		
2	13.42	13.42	33.376	25.052	289.9	0.006	6.47	109.0	5.2	0.42	1.1	0.04	0.18	0.91	0.22	2	216	
10 ISL	13.41 D	13.41	33.371 D	25.050	290.3	0.029	6.48	109.2	5.1	0.42	1.1	0.04	0.17	1.00	0.17	10		
11	13.40	13.40	33.376	25.056	289.8	0.032	6.48	109.2	5.1	0.42	1.1	0.04	0.17	1.01	0.17	11	214	
11	13.41	13.41	33.375	25.053	290.0	0.032										11	215	
20 ISL	13.18 D	13.18	33.380 D	25.103	285.5	0.058	6.38	107.0	5.5	0.48	1.8	0.06	0.24	1.05	0.24	20		
21	13.13	13.13	33.383	25.116	284.3	0.061	6.37	106.7	5.5	0.49	1.9	0.06	0.25	1.05	0.25	21	213	
30 ISL	12.66 D	12.66	33.390 D	25.214	275.2	0.086	5.96	98.9	6.8	0.67	4.4	0.19	0.34	0.84	0.27	30		
31	12.67	12.67	33.394	25.215	275.1	0.089	5.91	98.1	7.0	0.69	4.7	0.21	0.34	0.81	0.27	31	212	
41	12.36	12.35	33.410	25.288	268.5	0.116	5.47	90.2	8.8	0.84	7.3	0.33	0.07	0.51	0.37	41	211	
50	11.81	11.80	33.439	25.414	256.6	0.139	4.84	78.9	12.0	1.12	11.8	0.15	0.01	0.27	0.26	50	210	
60	11.28	11.27	33.534	25.585	240.5	0.164	4.16	67.1	15.8	1.39	15.7	0.14	0.01	0.19	0.23	60	209	
71	10.94	10.93	33.622	25.715	228.4	0.190	3.71	59.4	18.9	1.58	18.1	0.15	0.01	0.15	0.22	71	208	
75 ISL	10.70 D	10.69	33.645 D	25.776	222.7	0.199	3.59	57.2	19.7	1.62	18.8	0.13	0.01	0.13	0.21	75		
86	10.59	10.58	33.703	25.840	216.8	0.223	3.31	52.6	21.6	1.73	20.6	0.05	0.00	0.09	0.18	86	207	
100 ISL	10.23 D	10.22	33.789 D	25.970	204.8	0.253	2.93	46.2	24.1	1.90	22.9	0.00	0.00	0.05	0.16	101		
101	10.22	10.21	33.794	25.975	204.3	0.255	2.91	45.9	24.3	1.91	23.0	0.00	0.00	0.05	0.16	102	206	
122	9.77	9.76	33.872	26.112	191.6	0.296	2.69	42.0	27.6	2.01	24.7	0.00	0.00	0.03	0.14	123	205	
125 ISL	9.75 D	9.74	33.876 D	26.119	191.1	0.302	2.68	41.9	27.9	2.02	24.9	0.00	0.00	0.03	0.14	126		
142	9.58	9.56	33.927	26.187	184.9	0.334	2.58	40.2	29.4	2.08	25.7	0.01	0.01	0.03	0.13	143	204	
150 ISL	9.52 D	9.50	33.936 D	26.204	183.5	0.349	2.48	38.6	30.4	2.11	26.1	0.02	0.01	0.03	0.14	151		
171	9.24	9.22	34.009	26.307	174.1	0.386	2.15	33.2	33.5	2.22	27.2	0.07	0.03	0.02	0.19	172	203	
200	8.91	8.89	34.083	26.418	164.0	0.435	1.75	26.9	38.5	2.40	29.1	0.11	0.12	0.00	0.23	201	202	
237	8.66	8.63	34.128	26.493	157.5	0.495	1.40	21.4	42.9	2.55	30.5	0.15	0.15			238	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 55.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
34 53.4 N	121 11.7 W	22/01/09	2141 UTC	571 m	020	02 kn	280 03 09	2	1013.7 mb	14.8 C	13.2 C	13m		7/8	TYPE SC		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.39	13.39	33.385	25.065	288.6	0.000	6.42	108.1	5.5	0.48	1.7	0.07	0.20	1.06	0.05	0	
2	13.39	13.39	33.385	25.065	288.7	0.006	6.42	108.1	5.5	0.48	1.7	0.07	0.20	1.06	0.05	2	221
9	13.17	13.17	33.401	25.121	283.5	0.026	6.52	109.3	5.1	0.48	1.6	0.07	0.20	1.40	0.11	9	219
9	13.18	13.18	33.400	25.119	283.7	0.026										9	220
10 ISL	13.13 D	13.13	33.399 D	25.128	282.9	0.029	6.51	109.1	4.9	0.48	1.6	0.07	0.21	1.40	0.12	10	
19	12.93	12.93	33.411	25.177	278.4	0.054	6.47	107.9	3.9	0.50	1.7	0.10	0.39	1.36	0.28	19	218
20 ISL	12.85 D	12.85	33.413 D	25.194	276.8	0.057	6.41	106.8	4.1	0.52	1.9	0.12	0.45	1.32	0.30	20	
30	12.38	12.38	33.423	25.293	267.6	0.084	5.60	92.4	7.3	0.81	6.0	0.35	0.81	0.78	0.46	30	217
39	11.77	11.77	33.459	25.437	254.2	0.107	4.96	80.8	12.0	1.12	11.4	0.38	0.12	0.41	0.37	39	216
49	11.46	11.45	33.550	25.565	242.2	0.132	4.20	68.0	15.2	1.35	14.9	0.27	0.03	0.39	0.32	49	215
50 ISL	11.38 D	11.37	33.557 D	25.585	240.3	0.135	4.12	66.6	15.6	1.38	15.4	0.25	0.03	0.37	0.31	50	
59	10.87	10.86	33.646	25.746	225.2	0.156	3.51	56.1	19.3	1.62	19.2	0.05	0.04	0.19	0.23	59	214
70	10.64	10.63	33.700	25.829	217.6	0.180	3.26	51.9	21.2	1.73	20.7	0.03	0.01	0.10	0.22	70	213
75 ISL	10.47 D	10.46	33.743 D	25.892	211.7	0.191	3.16	50.1	22.0	1.77	21.3	0.02	0.01	0.08	0.20	75	
84	10.37	10.36	33.765	25.927	208.6	0.210	3.00	47.5	23.4	1.83	22.2	0.02	0.00	0.07	0.17	84	212
99	9.96	9.95	33.829	26.047	197.4	0.240	2.85	44.7	25.4	1.92	23.7	0.02	0.00	0.03	0.25	100	211
100 ISL	9.94 D	9.93	33.853 D	26.069	195.3	0.242	2.83	44.4	25.6	1.93	23.8	0.02	0.00	0.03	0.25	101	
119	9.66	9.65	33.935	26.180	185.2	0.278	2.47	38.5	29.0	2.06	25.4	0.02	0.03	0.02	0.14	120	210
125 ISL	9.54 D	9.53	33.962 D	26.221	181.4	0.289	2.40	37.3	30.1	2.09	25.9	0.02	0.02	0.01	0.13	126	
139	9.20	9.18	34.014	26.317	172.5	0.314	2.26	34.9	32.5	2.16	27.0	0.01	0.00	0.00	0.11	140	209
150 ISL	8.98 D	8.96	34.044 D	26.376	167.1	0.333	2.10	32.3	34.5	2.23	27.8	0.01	0.00	0.00	0.10	151	
167	8.85	8.83	34.092	26.434	161.8	0.361	1.86	28.5	37.1	2.32	28.8	0.01	0.00	0.00	0.09	168	208
199	8.76	8.74	34.144	26.489	157.2	0.412	1.59	24.3	39.8	2.43	29.8	0.01	0.00	0.00	0.07	200	207
200 ISL	8.71 D	8.69	34.148 D	26.500	156.2	0.413	1.59	24.3	39.9	2.43	29.8	0.01	0.00			201	
228	8.50	8.48	34.139	26.526	154.1	0.457	1.56	23.7	42.0	2.46	30.6	0.00	0.00			229	206
250 ISL	8.31 D	8.28	34.141 D	26.557	151.6	0.490	1.50	22.7	44.0	2.50	31.4	0.00	0.00			252	
268	8.09	8.06	34.145	26.593	148.3	0.517	1.42	21.4	46.0	2.55	32.1	0.00	0.00			270	205
300 ISL	7.72 D	7.69	34.155 D	26.656	142.7	0.564	1.22	18.2	50.7	2.66	33.4	0.00	0.00			302	
318	7.53	7.50	34.178	26.702	138.6	0.589	1.10	16.4	53.5	2.72	34.1	0.00	0.00			320	204
377	6.94	6.90	34.206	26.807	129.2	0.668	0.83	12.2	61.7	2.89	35.7	0.00	0.00			380	203
400 ISL	6.80 D	6.76	34.214 D	26.832	127.0	0.698	0.71	10.4	65.1	2.96	36.3	0.00	0.00			403	
438	6.55	6.51	34.245	26.890	121.9	0.745	0.54	7.9	70.4	3.05	37.1	0.00	0.00			441	202
500 ISL	6.32 D	6.27	34.254 D	26.928	119.0	0.820	0.47	6.8	75.9	3.11	38.1	0.00	0.00			504	
515	6.16	6.11	34.266	26.958	116.2	0.837	0.45	6.5	77.2	3.13	38.4	0.00	0.00			519	201

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 60.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
34 43.4 N	121 32.9 W	22/01/09	1749 UTC	933 m	100	09 kn	110 04 08	2	1015.0 mb	13.5 C	12.2 C	11m	8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL	13.25	13.25	33.390	25.097	285.6	0.000	6.89	115.7	3.1	0.34	0.2	0.02	0.10	1.41	0.23	0
1	A	13.25	13.25	33.390	25.097	285.6	0.003	6.89	115.7	3.1	0.34	0.2	0.02	0.10	1.41	0.23	1 223
5	A	13.26	13.26	33.390	25.095	285.9	0.014	6.95	116.7	3.1	0.34	0.2	0.01	0.09	1.39	0.26	5 222
9		13.20	13.20	33.402	25.116	284.0	0.026	6.83	114.6	3.4	0.38	0.4	0.02	0.16	1.33	0.25	9 221
10	ISL	13.07 D	13.07	33.407 D	25.146	281.1	0.029	6.78	113.5	3.6	0.40	0.7	0.03	0.19	1.33	0.27	10
16	A	12.69	12.69	33.412	25.225	273.8	0.045	6.41	106.4	4.8	0.56	2.6	0.11	0.43	1.31	0.38	16 220
20	ISL	12.55 D	12.55	33.408 D	25.249	271.6	0.056	6.15	101.8	5.7	0.65	3.7	0.18	0.59	1.09	0.41	20
21	A	12.55	12.55	33.413	25.253	271.3	0.059	6.09	100.8	5.9	0.67	3.9	0.20	0.63	1.02	0.41	21 219
30	ISL	12.46 D	12.46	33.409 D	25.267	270.1	0.083	5.86	96.8	6.6	0.73	4.6	0.32	0.74	0.59	0.44	30
31	A	12.47	12.47	33.413	25.268	270.0	0.086	5.84	96.5	6.7	0.73	4.7	0.33	0.75	0.55	0.44	31 218
39		12.29	12.28	33.424	25.312	266.1	0.107	5.58	91.9	8.4	0.85	6.9	0.39	0.39	0.40	0.36	39 217
48	A	11.59	11.58	33.475	25.483	250.0	0.131	4.70	76.2	12.9	1.19	12.9	0.18	0.01	0.23	0.28	48 216
50	ISL	11.40 D	11.39	33.483 D	25.524	246.1	0.135	4.60	74.3	13.5	1.24	13.7	0.16	0.01	0.24	0.31	50
53		11.21	11.20	33.486	25.561	242.7	0.143	4.46	71.8	14.6	1.32	14.9	0.13	0.01	0.24	0.35	53 215
59		10.65	10.64	33.545	25.706	229.0	0.157	3.92	62.3	18.2	1.56	18.7	0.03	0.02	0.12	0.25	59 214
70		10.18	10.17	33.702	25.910	209.8	0.181	3.33	52.5	22.1	1.75	21.7	0.02	0.01	0.04	0.15	70 213
75	ISL	10.02 D	10.01	33.709 D	25.942	206.8	0.192	3.28	51.5	22.8	1.78	22.3	0.02	0.01	0.04	0.15	75
84		9.98	9.97	33.740	25.974	204.0	0.210	3.20	50.2	23.5	1.82	22.8	0.02	0.02	0.03	0.15	84 212
100		9.69	9.68	33.820	26.085	193.8	0.242	2.91	45.4	26.1	1.93	24.2	0.01	0.00	0.01	0.11	101 211
119		9.48	9.47	33.904	26.185	184.6	0.278	2.61	40.5	28.6	2.02	25.5	0.00	0.00	0.01	0.10	120 210
125	ISL	9.35 D	9.34	33.947 D	26.240	179.5	0.289	2.53	39.2	29.4	2.05	25.8	0.00	0.00	0.01	0.10	126
139		9.30	9.28	33.972	26.268	177.1	0.314	2.38	36.8	31.0	2.10	26.5	0.00	0.00	0.01	0.10	140 209
150	ISL	9.17 D	9.15	33.996 D	26.308	173.5	0.333	2.31	35.7	31.9	2.13	26.9	0.00	0.00	0.01	0.09	151
168		9.06	9.04	34.030	26.352	169.7	0.364	2.17	33.4	33.7	2.18	27.6	0.00	0.00	0.01	0.08	169 208
200		8.72	8.70	34.127	26.482	157.9	0.416	1.65	25.2	39.6	2.39	29.5	0.00	0.00	0.00	0.09	201 207
228		8.37	8.35	34.174	26.573	149.6	0.459	1.33	20.2	44.2	2.52	31.1	0.00	0.00			229 206
250	ISL	8.16 D	8.13	34.188 D	26.616	145.9	0.492	1.19	18.0	46.8	2.60	31.9	0.00	0.00			252
269		8.03	8.00	34.204	26.649	143.1	0.519	1.11	16.7	49.1	2.66	32.5	0.00	0.00			271 205
300	ISL	7.37 D	7.34	34.186 D	26.730	135.5	0.562	0.94	13.9	54.6	2.76	33.8	0.00	0.00			302
319		7.25	7.22	34.206	26.763	132.6	0.588	0.85	12.6	58.2	2.82	34.7	0.00	0.00			321 204
377		6.51	6.48	34.197	26.857	124.1	0.662	0.72	10.5	66.9	2.94	37.1	0.00	0.00			380 203
400	ISL	6.28 D	6.24	34.207 D	26.895	120.6	0.690	0.61	8.8	70.4	3.00	37.9	0.00	0.00			403
438		6.09	6.05	34.250	26.954	115.4	0.735	0.43	6.2	75.5	3.08	39.0	0.00	0.00			441 202
500	ISL	5.77 D	5.73	34.285 D	27.022	109.5	0.805	0.33	4.7	80.7	3.14	39.7	0.00	0.00			504
515		5.76	5.72	34.286	27.024	109.5	0.821	0.30	4.3	82.0	3.15	39.9	0.00	0.00			519 201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 70.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
34 23.6 N	122 15.0 W	22/01/09	1138 UTC	4025 m	080	13 kn			1012.6 mb	12.9 C	12.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL	12.66	12.66	33.094	24.984	296.3	0.000	6.28	104.0	6.0	0.60	3.5	0.09	0.09	0.86	0.22	0
2		12.66	12.66	33.094	24.984	296.4	0.006	6.28	104.0	6.0	0.60	3.5	0.09	0.09	0.86	0.22	2 220
10		12.48	12.48	33.223	25.119	283.7	0.029	6.34	104.7	6.5	0.63	3.9	0.11	0.08	0.88	0.12	10 219
20		12.23	12.23	33.353	25.268	269.8	0.057	6.32	103.9	7.1	0.67	4.7	0.15	0.05	1.14	0.30	20 218
30		11.97	11.97	33.378	25.336	263.5	0.083	6.02	98.4	8.2	0.80	6.6	0.27	0.17	1.02	0.46	30 217
40		11.82	11.81	33.419	25.396	258.0	0.110	5.80	94.5	9.4	0.92	8.2	0.40	0.18	0.43	0.43	40 216
50		11.63	11.62	33.415	25.429	255.2	0.135	5.56	90.2	10.4	1.02	9.6	0.45	0.03	0.30	0.21	50 215
60		10.92	10.91	33.458	25.591	240.0	0.160	4.63	74.0	14.7	1.33	15.1	0.05	0.01	0.10	0.18	60 214
70		10.00	9.99	33.547	25.819	218.4	0.183	3.98	62.4	19.7	1.62	19.9	0.01	0.01	0.03	0.09	70 213
75	ISL	9.87 D	9.86	33.616 D	25.895	211.3	0.194	3.75	58.7	21.2	1.70	21.1	0.01	0.01	0.02	0.09	75
84		9.87	9.86	33.693	25.955	205.8	0.212	3.42	53.5	23.2	1.80	22.5	0.01	0.00	0.01	0.09	84 212
100		9.41	9.40	33.820	26.130	189.4	0.244	2.96	45.9	27.3	1.98	25.0	0.00	0.00	0.01	0.07	101 211
119		9.00	8.99	33.903	26.261	177.3	0.279	2.72	41.8	30.5	2.06	26.5	0.00	0.01	0.00	0.05	120 210
125	ISL	8.95 D	8.94	33.921 D	26.284	175.3	0.289	2.62	40.2	31.5	2.09	26.9	0.00	0.01	0.00	0.05	126
138		8.75	8.74	33.981	26.362	168.0	0.312	2.38	36.4	33.7	2.16	27.8	0.00	0.00	0.00	0.05	139 209
150	ISL	8.50 D	8.48	34.012 D	26.425	162.2	0.332	2.16	32.8	35.9	2.24	28.8	0.00	0.00	0.00	0.05	151
169		8.38	8.36	34.059	26.481	157.3	0.362	1.82	27.6	39.4	2.37	30.3	0.00	0.00	0.00	0.05	170 208
200	ISL	8.19 D	8.17	34.119 D	26.557	150.5	0.410	1.36	20.5	44.1	2.54	32.1	0.02	0.00	0.00	0.03	201
201		8.20	8.18	34.117	26.554	150.9	0.411	1.35	20.4	44.2	2.54	32.1	0.02	0.00	0.00	0.03	202 207
229		7.91	7.89	34.139	26.615	145.5	0.453	1.23	18.5	48.0	2.62	33.0	0.00	0.00			230 206
250	ISL	7.79 D	7.77	34.151 D	26.642	143.2	0.483	1.20	18.0	50.9	2.67	33.6	0.00	0.00			252
269		7.37	7.34	34.132	26.687	139.0	0.510	1.17	17.3	53.4	2.71	34.1	0.00	0.00			271 205
300	ISL	7.18 D	7.15	34.164 D	26.740	134.5	0.552	0.95	14.0	56.9	2.81	34.7	0.00	0.00			302
318		7.19	7.16	34.197	26.764	132.4	0.576	0.81	12.0	58.9	2.86	35.1	0.00	0.00			320 204
377		6.50	6.47	34.188	26.851	124.6	0.652	0.69	10.0	67.7	2.97	37.2	0.00	0.00			380 203
400	ISL	6.42 D	6.38	34.218 D	26.886	121.6	0.680	0.63	9.1	70.3	3.01	37.6	0.00	0.00			403
437		6.14	6.10	34.213	26.918	118.8	0.725	0.54	7.8	74.1	3.07	38.0	0.00	0.00			440 202
500	ISL	5.85 D	5.81	34.248 D	26.983	113.3	0.798	0.39	5.6	80.2	3.15	39.1	0.00	0.00			504
515		5.80	5.76	34.259	26.998	112.0	0.815	0.36	5.1	81.7	3.17	39.4	0.00	0.00			519 201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 80.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 3.1 N	122 56.2 W	22/01/09	0509 UTC	4236 m	100	09 kn			1013.8 mb	13.2 c	11.7 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.97	14.97	33.126	24.535	339.1	0.000	5.84	101.4	2.3	0.35	0.1	0.01	0.07	0.30	0.13	0		
2	14.97	14.97	33.126	24.535	339.1	0.007	5.84	101.4	2.3	0.35	0.1	0.01	0.07	0.30	0.13	2	220	
10	ISL 14.97 D	14.97	33.122	24.532	339.6	0.034	5.84	101.4	2.3	0.36	0.1	0.01	0.03	0.37	0.10	10		
11	14.97	14.97	33.132	24.540	338.9	0.037	5.84	101.4	2.3	0.36	0.1	0.01	0.03	0.38	0.09	11	219	
20	ISL 14.98 D	14.98	33.126	24.533	339.8	0.068	5.85	101.6	2.2	0.36	0.1	0.01	0.05	0.40	0.05	20		
26	14.98	14.98	33.128	24.535	339.8	0.088	5.85	101.6	2.2	0.35	0.1	0.01	0.07	0.41	0.04	26	218	
30	ISL 14.97 D	14.97	33.120	24.531	340.3	0.102	5.85	101.6	2.2	0.35	0.1	0.01	0.07	0.41	0.05	30		
40	14.98	14.97	33.127	24.535	340.3	0.136	5.86	101.8	2.3	0.35	0.1	0.01	0.07	0.39	0.08	40	217	
50	ISL 14.98 D	14.97	33.123	24.532	340.8	0.170	5.85	101.6	2.2	0.36	0.1	0.01	0.07	0.36	0.08	50		
51	14.97	14.96	33.125	24.536	340.5	0.173	5.85	101.6	2.2	0.36	0.1	0.01	0.07	0.36	0.08	51	216	
63	14.94	14.93	33.118	24.537	340.7	0.214	5.83	101.2	2.1	0.36	0.1	0.01	0.10	0.31	0.10	63	215	
75	ISL 14.53 D	14.52	33.046	24.569	337.9	0.255	5.82	100.1	2.4	0.41	0.5	0.07	0.22	0.33	0.13	75		
76	14.57	14.56	33.062	24.573	337.6	0.258	5.82	100.2	2.4	0.41	0.5	0.07	0.23	0.33	0.13	76	214	
88	12.80	12.79	32.919	24.823	313.9	0.297	5.90	97.9	3.9	0.59	2.8	0.29	0.06	0.22	0.12	88	213	
100	11.04	11.03	32.817	25.072	290.2	0.334	5.84	93.2	5.9	0.81	6.2	0.01	0.05	0.09	0.09	100	212	
113	10.33	10.32	32.958	25.305	268.2	0.370	5.51	86.7	9.3	1.05	10.4	0.01	0.06	0.05	0.05	114	211	
125	10.25	10.24	32.215	25.519	248.1	0.401	5.16	81.2	10.7	1.06	11.3	0.01	0.03	0.01	0.02	126	210	
141	10.06	10.04	33.465	25.746	226.8	0.439	4.86	76.2	12.4	1.12	13.0	0.01	0.00	0.01	0.01	142	209	
150	ISL 9.54 D	9.52	33.572	25.916	210.7	0.459	4.57	70.9	15.5	1.27	15.5	0.01	0.00	0.01	0.01	151		
171	9.04	9.02	33.766	26.149	189.0	0.501	3.89	59.8	23.5	1.65	21.6	0.00	0.00	0.00	0.01	172	208	
200	8.73	8.71	33.902	26.304	174.7	0.553	3.41	52.1	28.4	1.82	24.5	0.00	0.00	0.00	0.01	201	207	
231	8.23	8.21	33.965	26.431	163.1	0.606	3.06	46.2	33.8	1.97	26.8	0.00	0.00	0.00	0.01	232	206	
250	ISL 7.74 D	7.72	33.971	26.508	155.9	0.636	3.05	45.6	37.3	2.01	27.5	0.00	0.00	0.00		251		
271	7.41	7.38	33.977	26.560	151.1	0.668	3.01	44.6	41.4	2.07	28.3	0.00	0.00	0.00		273	205	
300	ISL 7.08 D	7.05	33.989	26.615	146.1	0.711	2.53	37.2	47.2	2.27	30.9	0.00	0.00	0.00		302		
320	6.92	6.89	34.013	26.656	142.4	0.740	2.13	31.2	51.2	2.42	32.8	0.00	0.00	0.00		322	204	
382	6.36	6.33	34.068	26.775	131.8	0.825	1.31	19.0	62.6	2.74	36.6	0.00	0.00	0.00		384	203	
400	ISL 6.14 D	6.10	34.046	26.786	130.8	0.849	1.14	16.4	65.4	2.82	37.3	0.00	0.00	0.00		403		
440	6.00	5.96	34.128	26.869	123.4	0.900	0.85	12.2	71.2	2.95	38.5	0.00	0.00	0.00		443	202	
500	ISL 5.40 D	5.36	34.129	26.943	116.5	0.972	0.73	10.3	80.2	3.03	40.0	0.00	0.00	0.00		503		
513	5.36	5.32	34.141	26.957	115.2	0.987	0.70	9.9	82.1	3.05	40.3	0.00	0.00	0.00		516	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 90.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 43.6 N	123 38.5 W	21/01/09	2303 UTC	4188 m	070	09 kn	340 04 08	2	1011.9 mb	15.2 c	13.5 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 15.31	15.31	33.226	24.538	338.8	0.000	5.80	101.5	2.1	0.32	0.0	0.00	0.00	0.13	0.04	0		
2	15.31	15.31	33.226	24.538	338.9	0.007	5.80	101.5	2.1	0.32	0.0	0.00	0.00	0.13	0.04	2	220	
9	15.31	15.31	33.230	24.541	338.7	0.030	5.77	101.0	2.1	0.32	0.0	0.00	0.01	0.13	0.04	9	219	
10	ISL 15.31 D	15.31	33.221	24.534	339.4	0.034	5.77	101.0	2.1	0.32	0.0	0.00	0.01	0.13	0.04	10		
20	ISL 15.31 D	15.31	33.221	24.535	339.7	0.068	5.78	101.1	2.1	0.33	0.0	0.00	0.01	0.13	0.05	20		
25	15.31	15.31	33.228	24.540	339.3	0.085	5.78	101.1	2.1	0.33	0.0	0.00	0.01	0.13	0.05	25	218	
30	ISL 15.31 D	15.31	33.220	24.534	340.1	0.102	5.78	101.1	2.1	0.33	0.0	0.00	0.00	0.14	0.05	30		
39	15.30	15.29	33.227	24.542	339.6	0.132	5.78	101.1	2.1	0.32	0.0	0.00	0.00	0.15	0.05	39	217	
49	15.30	15.29	33.224	24.540	340.1	0.166	5.79	101.3	2.1	0.32	0.0	0.00	0.02	0.16	0.05	49	216	
50	ISL 15.29 D	15.28	33.216	24.536	340.5	0.170	5.79	101.3	2.1	0.32	0.0	0.00	0.02	0.16	0.05	50		
61	15.23	15.22	33.225	24.557	338.9	0.207	5.79	101.1	2.1	0.32	0.0	0.00	0.00	0.22	0.12	61	215	
74	14.24	14.23	33.188	24.740	321.7	0.250	5.82	99.6	2.5	0.35	0.2	0.10	0.00	0.29	0.27	74	214	
75	ISL 13.74 D	13.73	33.132	24.800	315.9	0.253	5.82	98.6	2.6	0.36	0.3	0.10	0.00	0.28	0.27	75		
86	12.44	12.43	33.028	24.977	299.1	0.287	5.84	96.2	3.5	0.51	2.0	0.07	0.00	0.19	0.26	86	213	
100	11.56	11.55	32.921	25.059	291.5	0.328	5.80	93.7	4.6	0.64	3.9	0.01	0.01	0.13	0.19	100	212	
111	10.89	10.88	32.883	25.150	283.0	0.360	5.77	91.8	5.7	0.75	5.7	0.01	0.02	0.08	0.11	111	211	
125	10.87	10.85	33.013	25.255	273.4	0.399	5.60	89.2	6.6	0.80	6.8	0.01	0.02	0.05	0.06	126	210	
142	10.39	10.37	33.280	25.546	245.9	0.443	5.13	81.0	10.3	1.01	10.9	0.00	0.03	0.01	0.02	143	209	
150	ISL 10.20 D	10.18	33.382	25.658	235.4	0.462	4.97	78.2	12.0	1.09	12.5	0.00	0.02	0.01	0.02	151		
167	9.60	9.58	33.529	25.873	215.2	0.501	4.69	72.9	15.5	1.25	15.3	0.00	0.00	0.01	0.01	168	208	
200	9.02	9.00	33.830	26.203	184.4	0.567	4.18	64.2	22.5	1.51	20.0	0.00	0.00	0.00	0.01	201	207	
229	8.58	8.56	33.947	26.363	169.6	0.618	3.56	54.2	29.3	1.77	23.8	0.00	0.00	0.00		230	206	
250	ISL 8.39 D	8.36	34.006	26.439	162.8	0.653	2.55	38.7	34.8	2.00	26.9	0.00	0.00	0.00		251		
269	7.99	7.96	34.013	26.504	156.7	0.683	2.45	36.8	39.5	2.19	29.4	0.00	0.00	0.00		270	205	
300	ISL 7.97 D	7.94	34.090	26.568	151.2	0.731	1.84	27.6	44.6	2.40	31.6	0.00	0.00	0.00		302		
320	7.75	7.72	34.106	26.613	147.1	0.761	1.59	23.8	47.4	2.49	32.4	0.00	0.00	0.00		322	204	
378	6.68	6.65	34.047	26.716	137.5	0.843	1.71	24.9	56.9	2.58	34.4	0.00	0.00	0.00		380	203	
400	ISL 6.46 D	6.42	34.058	26.754	134.1	0.873	1.51	21.9	60.3	2.67	35.5	0.00	0.00	0.00		402		
439	6.28	6.24	34.098	26.809	129.2	0.925	1.09	15.7	66.3	2.84	37.3	0.00	0.00	0.00		442	202	
500	ISL 5.78 D	5.74	34.144	26.909	120.1	1.001	0.77	11.0	75.3	2.99	39.1	0.00	0.00	0.00		503		
512	5.72	5.68	34.148	26.920	119.2	1.015	0.71	10.1	77.1	3.02	39.4	0.00	0.00	0.00		515	201	

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 76.7 100.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 23.1 N	124 19.8 W	21/01/09	1736 UTC	4594 m	050	07 kn	320 04 06	2	1014.6 mb	14.9 c	13.0 c	14m		8/8	SC			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.94	13.94	33.109	24.739	319.6	0.000	6.17	104.9	2.8	0.39	0.2	0.02	0.03	0.60	0.14	0		
2	A 13.94	13.94	33.109	24.739	319.7	0.006	6.17	104.9	2.8	0.39	0.2	0.02	0.03	0.60	0.14	2	220	
8	A 13.94	13.94	33.110	24.740	319.7	0.026	6.16	104.8	2.8	0.38	0.2	0.02	0.02	0.63	0.12	8	219	
10	ISL 13.91	D 13.91	33.104	D 24.742	319.6	0.032	6.19	105.2	2.9	0.38	0.2	0.02	0.02	0.69	0.14	10		
18	A 13.67	13.67	33.115	24.800	314.4	0.057	6.27	106.0	3.1	0.40	0.2	0.03	0.03	0.88	0.24	18	218	
20	ISL 13.57	D 13.57	33.108	D 24.815	313.0	0.064	6.23	105.1	3.1	0.41	0.4	0.04	0.04	0.84	0.27	20		
27	A 13.39	13.39	33.114	24.856	309.2	0.085	6.07	102.1	3.1	0.46	1.1	0.08	0.07	0.63	0.33	27	217	
30	ISL 13.32	D 13.32	33.107	D 24.865	308.5	0.095	6.02	101.1	3.1	0.47	1.3	0.11	0.10	0.54	0.32	30		
39	A 13.29	13.28	33.115	24.877	307.5	0.122	5.94	99.7	3.1	0.50	1.6	0.17	0.18	0.32	0.24	39	216	
50	13.16	13.15	33.118	24.906	305.1	0.156	5.97	99.9	3.3	0.53	2.0	0.18	0.22	0.29	0.20	50	215	
61	A 13.08	13.07	33.129	24.930	303.1	0.190	5.88	98.2	3.6	0.56	2.4	0.25	0.25	0.20	0.16	61	214	
71	12.13	12.12	33.042	25.047	292.1	0.219	5.72	93.6	5.1	0.72	5.1	0.13	0.01	0.12	0.11	71	213	
75	ISL 11.21	D 11.20	32.943	D 25.139	283.3	0.231	5.63	90.3	6.1	0.82	6.6	0.09	0.01	0.10	0.10	75		
85	10.53	10.52	32.991	25.296	268.5	0.258	5.37	84.9	9.2	1.06	10.4	0.01	0.01	0.06	0.08	85	212	
100	ISL 10.10	D 10.09	33.221	D 25.548	244.7	0.297	4.90	76.8	13.8	1.30	14.8	0.01	0.01	0.03	0.04	100		
101	10.10	10.09	33.228	25.554	244.2	0.299	4.86	76.2	14.1	1.31	15.1	0.01	0.01	0.03	0.04	101	211	
120	10.38	10.37	33.553	25.760	225.1	0.344	3.90	61.7	18.9	1.60	19.6	0.01	0.00	0.02	0.06	121	210	
125	ISL 10.21	D 10.20	33.589	D 25.818	219.8	0.355	3.79	59.7	19.7	1.65	20.3	0.01	0.00	0.02	0.06	126		
139	9.88	9.86	33.670	25.937	208.7	0.385	3.60	56.3	22.0	1.75	22.0	0.00	0.00	0.01	0.05	140	209	
150	ISL 9.44	D 9.42	33.761	D 26.080	195.2	0.407	3.44	53.3	24.8	1.84	23.5	0.00	0.00	0.01	0.04	151		
169	8.75	8.73	33.830	26.244	179.8	0.443	3.19	48.7	29.7	1.96	25.8	0.00	0.00	0.00	0.03	170	208	
200	ISL 8.37	D 8.35	33.930	D 26.381	167.2	0.497	2.95	44.7	33.6	2.04	27.4	0.00	0.00	0.00	0.02	201		
203	8.35	8.33	33.939	26.392	166.3	0.502	2.91	44.1	33.9	2.05	27.5	0.00	0.00	0.00	0.02	204	207	
229	7.99	7.97	34.013	26.504	156.0	0.544	2.21	33.2	39.3	2.26	30.2	0.00	0.00	0.00	0.00	230	206	
250	ISL 7.82	D 7.80	34.028	D 26.541	152.8	0.576	1.93	28.9	42.5	2.36	31.2	0.00	0.00	0.00	0.00	251		
268	7.77	7.74	34.075	26.585	148.9	0.603	1.79	26.8	44.9	2.42	31.8	0.00	0.00	0.00	0.00	270	205	
300	ISL 7.54	D 7.51	34.127	D 26.660	142.3	0.650	1.47	21.9	49.8	2.55	33.3	0.00	0.00	0.00	0.00	302		
317	7.28	7.25	34.114	26.687	139.8	0.674	1.33	19.7	52.6	2.62	34.1	0.00	0.00	0.00	0.00	319	204	
379	6.51	6.48	34.128	26.802	129.2	0.757	1.05	15.3	63.4	2.83	36.6	0.00	0.00	0.00	0.00	381	203	
400	ISL 6.18	D 6.14	34.111	D 26.832	126.5	0.784	0.95	13.7	66.3	2.88	37.2	0.00	0.00	0.00	0.00	403		
438	6.03	5.99	34.154	26.885	121.8	0.831	0.78	11.2	71.3	2.96	38.2	0.00	0.00	0.00	0.00	441	202	
500	ISL 5.46	D 5.42	34.178	D 26.975	113.6	0.904	0.57	8.1	80.9	3.08	39.9	0.00	0.00	0.00	0.00	503		
516	5.44	5.40	34.196	26.992	112.2	0.922	0.52	7.4	83.4	3.11	40.4	0.00	0.00	0.00	0.00	520	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 50.5				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 27.6 N	120 29.2 W	20/01/09	0002 UTC	19 m	290	08 kn	290 06 10	1	1018.7 mb	17.2 c	13.0 c			1/8	CS			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.83	13.83	33.377	24.969	297.7	0.000	6.77	115.1	2.0	0.31	0.2	0.04	0.06	4.05	0.48	0		
1	13.83	13.83	33.377	24.969	297.8	0.003	6.77	115.1	2.0	0.31	0.2	0.04	0.06	4.05	0.48	1	205	
5	13.66	13.66	33.375	25.002	294.7	0.015	6.73	114.0	2.2	0.33	0.3	0.05	0.08	3.99	0.47	5	204	
10	13.32	13.32	33.388	25.081	287.3	0.029	6.21	104.4	3.9	0.53	1.7	0.13	0.28	1.99	0.82	10	202	
10	13.38	13.38	33.384	25.066	288.7	0.029										10	203	
16	13.08	13.08	33.388	25.129	282.9	0.047	5.79	96.9	5.5	0.66	3.6	0.21	0.32	1.62	0.84	16	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 51.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 27.0 N	120 31.5 W	20/01/09	0046 UTC	77 m	340	04 kn	290 06 11	1	1018.6 mb	16.1 c	12.6 c	15m		2/8	CS			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.09	14.09	33.370	24.910	303.4	0.000	6.93	118.4	0.6	0.21	0.1	0.00	0.01	0.81	0.18	0		
1	14.09	14.09	33.370	24.910	303.4	0.003	6.93	118.4	0.6	0.21	0.1	0.00	0.01	0.81	0.18	1	209	
5	13.94	13.94	33.373	24.943	300.3	0.015	6.96	118.6	0.6	0.21	0.1	0.00	0.00	0.80	0.19	5	208	
10	13.61	13.61	33.365	25.005	294.6	0.030	7.01	118.6	1.3	0.29	0.1	0.02	0.09	6.39	0.57	10	207	
20	13.17	13.17	33.379	25.105	285.4	0.059	6.12	102.6	4.2	0.48	1.7	0.14	0.21	1.95	0.87	20	206	
30	12.91	12.91	33.390	25.165	279.9	0.087	5.79	96.5	5.7	0.63	3.7	0.22	0.36	1.08	0.81	30	205	
40	12.51	12.50	33.419	25.266	270.5	0.115	5.20	86.0	8.8	0.90	7.5	0.32	0.54	0.43	0.49	40	204	
50	12.29	12.28	33.431	25.318	265.8	0.142	4.88	80.3	10.4	1.04	9.7	0.32	0.26	0.32	0.40	50	203	
60	12.23	12.22	33.450	25.344	263.6	0.168	4.94	81.2	10.6	1.03	9.7	0.30	0.22	0.45	0.48	60	202	
70	12.11	12.10	33.472	25.384	260.0	0.194	4.84	79.4	11.5	1.10	10.4	0.28	0.28	0.48	0.54	70	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 55.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 19.0 N	120 48.2 W	20/01/09	0357 UTC	841 m	110	08 kn			1019.1 mb	15.2 c	12.5 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.39	13.39	33.337	25.027	292.2	0.000	6.38	107.4	5.0	0.46	1.3	0.08	0.02	0.93	0.16	0		
1	13.39	13.39	33.337	25.028	292.2	0.003	6.38	107.4	5.0	0.46	1.3	0.08	0.02	0.93	0.16	1	221	
10	13.18	13.18	33.333	25.067	288.7	0.029	6.35	106.5	5.1	0.48	1.5	0.09	0.02	1.02	0.20	10	219	
10	13.19	13.19	33.332	25.064	288.9	0.029										10	220	
20	13.00	13.00	33.374	25.135	282.5	0.058	6.09	101.7	6.2	0.57	2.8	0.13	0.04	1.36	0.51	20	218	
30	12.66	12.66	33.421	25.238	272.9	0.085	5.52	91.6	8.2	0.77	5.5	0.23	0.27	0.71	0.49	30	217	
40	12.45	12.44	33.440	25.293	267.9	0.112	5.23	86.4	9.5	0.89	7.2	0.27	0.25	0.61	0.42	40	216	
50	11.60	11.59	33.520	25.516	246.9	0.138	4.32	70.1	14.2	1.27	13.6	0.23	0.01	0.25	0.27	50	215	
60	11.18	11.17	33.566	25.628	236.4	0.162	3.95	63.6	16.5	1.44	16.5	0.10	0.01	0.17	0.21	60	214	
70	10.73	10.72	33.685	25.801	220.2	0.185	3.43	54.7	20.3	1.64	19.3	0.12	0.01	0.11	0.15	70	213	
75	ISL 10.65	D 10.64	33.701	D 25.828	217.8	0.196	3.23	51.4	21.8	1.72	20.4	0.11	0.01	0.09	0.13	75		
86	10.23	10.22	33.801	25.979	203.6	0.219	2.92	46.1	24.3	1.85	22.3	0.06	0.00	0.05	0.11	86	212	
100	10.06	10.05	33.845	26.042	197.9	0.247	2.76	43.4	26.0	1.93	23.3	0.04	0.01	0.03	0.09	101	211	
121	9.79	9.78	33.913	26.141	188.9	0.288	2.47	38.6	28.8	2.04	25.0	0.03	0.00	0.03	0.09	122	210	
125	ISL 9.74	D 9.73	33.916	D 26.152	188.0	0.296	2.42	37.8	29.2	2.06	25.2	0.03	0.00	0.03	0.09	126		
141	9.58	9.56	33.970	26.221	181.7	0.325	2.24	34.9	30.8	2.13	26.0	0.01	0.01	0.02	0.09	142	209	
150	ISL 9.38	D 9.36	34.015	D 26.289	175.4	0.341	2.16	33.5	31.7	2.17	26.5	0.01	0.01	0.02	0.08	151		
171	9.26	9.24	34.054	26.339	171.0	0.378	1.99	30.8	34.0	2.25	27.6	0.02	0.01	0.01	0.07	172	208	
200	9.01	8.99	34.113	26.426	163.3	0.426	1.74	26.8	37.3	2.35	29.1	0.03	0.00	0.01	0.06	201	207	
231	8.75	8.73	34.142	26.490	157.8	0.476	1.58	24.2	40.2	2.43	30.0	0.01	0.00			232	206	
250	ISL 8.61	D 8.58	34.150	D 26.518	155.4	0.506	1.52	23.2	41.6	2.47	30.5	0.00	0.00			252		
272	8.40	8.37	34.151	26.552	152.5	0.539	1.45	22.0	43.3	2.51	31.1	0.00	0.00			274	205	
300	ISL 8.23	D 8.20	34.182	D 26.602	148.2	0.582	1.26	19.1	46.3	2.60	32.0	0.00	0.00			302		
321	8.11	8.08	34.201	26.635	145.4	0.612	1.11	16.7	48.8	2.67	32.7	0.00	0.00			323	204	
380	7.53	7.49	34.213	26.730	137.0	0.696	0.90	13.4	55.8	2.82	34.2	0.00	0.00			383	203	
400	ISL 7.26	D 7.22	34.225	D 26.778	132.6	0.723	0.77	11.4	60.4	2.90	34.8	0.00	0.00			403		
440	6.77	6.73	34.243	26.860	125.1	0.774	0.51	7.5	70.1	3.06	36.2	0.00	0.00			443	202	
500	ISL 6.16	D 6.12	34.280	D 26.969	115.0	0.846	0.36	5.2	79.5	3.17	38.3	0.01	0.00			504		
519	5.99	5.94	34.293	27.001	112.0	0.868	0.31	4.5	82.5	3.20	39.0	0.01	0.00			523	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 60.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 9.2 N	121 9.0 W	20/01/09	0807 UTC	2177 m	290	05 kn			1018.6 mb	14.1 c	13.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.49	13.49	33.403	25.058	289.2	0.000	6.63	111.9	4.9	0.47	1.2	0.06	0.31	0.78	0.12	0		
1	13.49	13.49	33.403	25.058	289.2	0.003	6.63	111.9	4.9	0.47	1.2	0.06	0.31	0.78	0.12	1	221	
10	13.14	13.14	33.407	25.132	282.5	0.029	6.75	113.1	4.4	0.46	1.2	0.07	0.21	1.13	0.27	10	220	
15	12.68	12.68	33.412	25.227	273.6	0.043	6.58	109.2	4.4	0.53	2.3	0.12	0.23	1.66	0.56	15	219	
20	12.50	12.50	33.411	25.261	270.5	0.056	5.96	98.5	7.2	0.72	5.0	0.23	0.21	1.45	0.56	20	218	
30	12.31	12.31	33.428	25.311	266.0	0.083	5.71	94.0	8.1	0.83	6.5	0.35	0.28	1.34	0.64	30	217	
40	12.14	12.13	33.440	25.353	262.2	0.109	5.48	89.9	9.1	0.92	7.8	0.43	0.27	1.28	0.43	40	216	
50	11.66	11.65	33.457	25.456	252.6	0.135	4.89	79.4	12.0	1.13	11.8	0.36	0.00	0.38	0.39	50	215	
61	10.68	10.67	33.552	25.706	229.0	0.162	3.91	62.2	18.1	1.55	18.8	0.02	0.00	0.13	0.19	61	214	
70	10.41	10.40	33.622	25.808	219.5	0.182	3.61	57.1	20.3	1.66	20.5	0.01	0.00	0.09	0.15	70	213	
75	ISL 10.29	D 10.28	33.629	D 25.834	217.1	0.193	3.49	55.1	21.6	1.73	21.6	0.01	0.00	0.07	0.15	75		
85	9.80	9.79	33.704	25.975	203.8	0.214	3.31	51.7	23.9	1.85	23.5	0.01	0.00	0.03	0.14	85	212	
100	ISL 9.59	D 9.58	33.794	D 26.081	194.1	0.244	3.04	47.3	26.1	1.94	24.8	0.01	0.00	0.02	0.10	101		
101	9.60	9.59	33.792	26.078	194.5	0.246	3.02	47.0	26.2	1.94	24.8	0.01	0.00	0.02	0.10	102	211	
119	9.33	9.32	33.894	26.202	183.0	0.279	2.70	41.8	29.1	2.02	26.0	0.00	0.00	0.03	0.09	120	210	
125	ISL 9.26	D 9.25	33.908	D 26.224	181.0	0.290	2.63	40.7	29.8	2.04	26.2	0.00	0.00	0.03	0.09	126		
140	9.13	9.11	33.964	26.289	175.1	0.317	2.49	38.4	31.4	2.08	26.8	0.00	0.00	0.01	0.08	141	209	
150	ISL 8.84	D 8.82	33.961	D 26.333	171.1	0.334	2.63	D 40.3	32.6	2.11	27.3	0.00	0.00	0.00	0.07	151		
167	8.67	8.65	34.009	26.397	165.3	0.363	2.35	35.9	34.8	2.15	28.2	0.00	0.00	0.00	0.06	168	208	
200	8.35	8.33	34.054	26.482	157.7	0.416	2.10	31.8	38.6	2.26	29.9	0.00	0.00	0.00	0.06	201	207	
229	8.00	7.98	34.068	26.546	152.1	0.461	1.86	28.0	42.8	2.37	31.3	0.00	0.00			230	206	
250	ISL 7.83	D 7.81	34.100	D 26.596	147.6	0.493	1.64	24.6	45.9	2.48	32.4	0.00	0.00			252		
268	7.66	7.63	34.118	26.635	144.1	0.519	1.44	21.5	48.6	2.57	33.3	0.00	0.00			270	205	
300	ISL 7.45	D 7.42	34.157	D 26.696	138.8	0.564	1.14	16.9	53.5	2.69	34.4	0.00	0.00			302		
318	7.29	7.26	34.176	26.734	135.4	0.589	1.00	14.8	56.3	2.75	35.0	0.00	0.00			320	204	
377	6.71	6.68	34.215	26.845	125.4	0.666	0.71	10.4	65.7	2.93	37.0	0.00	0.00			379	203	
400	ISL 6.54	D 6.50	34.227	D 26.877	122.6	0.694	0.60	8.7	68.7	2.98	37.5	0.00	0.00			403		
437	6.39	6.35	34.273	26.933	117.7	0.739	0.44	6.4	73.1	3.05	38.1	0.00	0.00			440	202	
500	ISL 6.07	D 6.03	34.290	D 26.989	113.0	0.811	0.35	5.0	79.8	3.13	39.5	0.00	0.00			504		
520	5.90	5.85	34.303	27.020	110.1	0.834	0.32	4.6	81.9	3.16	39.9	0.00	0.00			524	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 70.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 48.7 N	121 51.9 W	20/01/09	1724 UTC	3666 m	010	04 kn	290 06 10	1	1019.3 mb	14.2 c	13.0 c	15m		3/8	CS			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.09	13.09	33.105	24.908	303.5	0.000	6.24	104.3	4.5	0.52	2.2	0.07	0.05	0.63	0.17	0		
2	A 13.09	13.09	33.105	24.908	303.6	0.006	6.24	104.3	4.5	0.52	2.2	0.07	0.05	0.63	0.17	2	220	
9	A 12.88	12.88	33.095	24.942	300.6	0.027	6.25	104.0	4.6	0.53	2.5	0.07	0.05	0.72	0.17	9	219	
10	ISL 12.63	D 12.63	33.094	D 24.990	296.0	0.030	6.23	103.1	4.7	0.55	2.7	0.07	0.05	0.74	0.18	10		
19	A 11.84	11.84	33.053	25.108	285.0	0.056	6.04	98.3	5.7	0.70	4.8	0.13	0.03	0.83	0.24	19	218	
20	ISL 11.89	D 11.89	33.079	D 25.119	284.0	0.059	6.03	98.2	5.8	0.71	5.0	0.15	0.03	0.80	0.24	20		
30	ISL 11.89	D 11.89	33.179	D 25.197	276.8	0.087	5.93	96.6	6.5	0.77	6.0	0.31	0.03	0.48	0.27	30		
31	A 11.88	11.88	33.185	25.203	276.2	0.090	5.93	96.6	6.5	0.77	6.1	0.32	0.03	0.44	0.27	31	217	
41	A 11.89	11.88	33.225	25.233	273.6	0.117	5.92	96.5	6.9	0.79	6.3	0.34	0.06	0.35	0.25	41	216	
50	ISL 12.21	D 12.20	33.337	D 25.260	271.3	0.142	5.91	97.1	7.1	0.79	6.3	0.36	0.18	0.28	0.22	50		
54	12.11	12.10	33.323	25.268	270.6	0.153	5.91	96.9	7.2	0.79	6.3	0.36	0.21	0.25	0.21	54	215	
65	A 11.58	11.57	33.254	25.313	266.5	0.182	5.72	92.6	8.1	0.89	8.1	0.33	0.02	0.16	0.18	65	214	
75	10.73	10.72	33.212	25.433	255.3	0.208	5.29	84.1	10.8	1.10	11.6	0.07	0.00	0.10	0.13	75	213	
85	9.86	9.85	33.285	25.638	235.8	0.233	4.70	73.3	15.4	1.39	16.4	0.01	0.00	0.03	0.08	85	212	
100	9.60	9.59	33.505	25.853	215.7	0.267	4.14	64.3	20.0	1.60	20.2	0.00	0.00	0.01	0.05	101	211	
119	9.41	9.40	33.751	26.077	194.9	0.306	3.32	51.4	25.3	1.86	24.1	0.00	0.00	0.00	0.04	120	210	
125	ISL 9.36	D 9.35	33.769	D 26.099	192.9	0.318	3.21	49.7	26.3	1.90	24.7	0.00	0.00	0.00	0.04	126		
138	9.13	9.12	33.839	26.191	184.3	0.342	3.06	47.1	28.1	1.96	25.6	0.00	0.00	0.00	0.03	139	209	
150	ISL 8.89	D 8.87	33.901	D 26.278	176.3	0.364	2.92	44.8	29.9	1.99	26.3	0.00	0.00	0.00	0.03	151		
168	8.65	8.63	33.952	26.355	169.2	0.395	2.69	41.0	32.6	2.05	27.3	0.00	0.00	0.00	0.04	169	208	
200	8.50	8.48	34.047	26.453	160.5	0.448	2.04	31.0	37.2	2.28	29.6	0.00	0.00	0.00	0.05	201	207	
227	8.18	8.16	34.079	26.527	153.9	0.490	1.80	27.2	41.5	2.37	31.0	0.00	0.00	0.00		228	206	
250	ISL 8.03	D 8.00	34.122	D 26.584	148.8	0.525	1.48	22.3	45.3	2.51	32.3	0.00	0.00			251		
268	7.89	7.86	34.142	26.620	145.6	0.551	1.26	18.9	48.1	2.61	33.2	0.00	0.00			270	205	
300	ISL 7.40	D 7.37	34.117	D 26.672	141.0	0.597	1.20	17.8	52.0	2.67	34.2	0.00	0.00			302		
317	7.31	7.28	34.136	26.700	138.6	0.621	1.17	17.3	53.9	2.69	34.6	0.00	0.00			319	204	
377	6.76	6.73	34.163	26.797	130.0	0.701	0.91	13.3	62.3	2.85	36.4	0.00	0.00			379	203	
400	ISL 6.50	D 6.46	34.174	D 26.840	126.0	0.731	0.79	11.5	65.8	2.92	37.1	0.00	0.00			403		
437	6.19	6.15	34.196	26.898	120.7	0.777	0.61	8.8	71.6	3.01	38.3	0.00	0.00			440	202	
500	ISL 5.56	D 5.52	34.208	D 26.986	112.6	0.850	0.48	6.8	81.1	3.10	40.1	0.00	0.00			503		
517	5.48	5.44	34.215	27.002	111.3	0.869	0.44	6.2	83.7	3.12	40.6	0.00	0.00			521	201	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 80.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 29.2 N	122 32.0 W	20/01/09	2214 UTC	4000 m	360	05 kn	290 06 11	1	1016.0 mb	14.9 c	12.9 c	13m		6/8	CS			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.15	14.15	32.989	24.603	332.6	0.000	6.12	104.5	2.8	0.40	0.4	0.03	0.04	0.57	0.09	0		
2	14.15	14.15	32.989	24.603	332.6	0.007	6.12	104.5	2.8	0.40	0.4	0.03	0.04	0.57	0.09	2	220	
10	13.21	13.21	32.903	24.728	320.9	0.033	6.27	104.9	3.3	0.45	1.2	0.06	0.03	0.61	0.12	10	219	
20	12.70	12.70	32.901	24.827	311.8	0.064	6.03	99.8	3.8	0.57	2.7	0.21	0.04	0.41	0.19	20	218	
30	11.79	11.79	32.891	24.992	296.3	0.095	5.84	94.8	5.0	0.73	5.1	0.07	0.03	0.19	0.20	30	217	
40	10.90	10.90	32.870	25.136	282.7	0.124	5.75	91.6	6.4	0.86	7.1	0.03	0.03	0.15	0.12	40	216	
50	11.38	11.37	33.113	25.240	273.1	0.152	5.85	94.3	7.4	0.87	7.6	0.22	0.04	0.26	0.14	50	215	
59	11.72	11.71	33.267	25.297	267.9	0.176	5.91	96.0	7.6	0.85	7.2	0.33	0.17	0.22	0.14	59	214	
69	10.90	10.89	33.241	25.426	255.9	0.202	5.38	85.9	10.7	1.09	11.3	0.15	0.02	0.11	0.11	69	213	
75	ISL 10.47	D 10.46	33.249	D 25.507	248.2	0.217	5.07	80.2	12.6	1.22	13.5	0.08	0.02	0.07	0.10	75		
84	10.18	10.17	33.332	25.621	237.5	0.239	4.64	72.9	15.4	1.41	16.6	0.01	0.02	0.04	0.09	84	212	
100	ISL 9.70	D 9.69	33.585	D 25.899	211.4	0.275	4.00	62.3	20.7	1.69	21.3	0.00	0.01	0.01	0.04	100		
101	9.69	9.68	33.596	25.910	210.4	0.277	3.97	61.8	21.0	1.70	21.5	0.00	0.01	0.01	0.04	101	211	
119	9.25	9.24	33.733	26.089	193.7	0.313	3.56	55.0	24.7	1.82	23.6	0.01	0.02	0.00	0.03	120	210	
125	ISL 9.05	D 9.04	33.777	D 26.155	187.5	0.325	3.56	54.7	25.3	1.81	23.6	0.01	0.02	0.00	0.02	126		
140	8.81	8.80	33.875	26.270	176.8	0.352	3.56	54.5	26.7	1.77	23.5	0.00	0.00	0.00	0.01	141	209	
150	ISL 8.64	D 8.62	33.922	D 26.333	171.0	0.370	3.35	51.1	28.7	1.84	24.6	0.00	0.00	0.00	0.01	151		
170	8.39	8.37	33.958	26.400	164.9	0.403	2.97	45.0	32.6	2.00	26.8	0.00	0.00	0.00	0.02	171	208	
200	ISL 7.93	D 7.91	33.965	D 26.474	158.2	0.452	3.35	50.3	34.4	1.91	26.0	0.00	0.00	0.00	0.01	201		
201	7.93	7.91	33.972	26.480	157.7	0.453	3.37	50.6	34.5	1.91	26.0	0.00	0.00	0.00	0.01	202	207	
230	7.48	7.46	33.982	26.553	151.1	0.498	3.13	46.5	39.5	2.03	27.8	0.00	0.00			231	206	
250	ISL 7.34	D 7.32	33.992	D 26.581	148.7	0.528	2.47	36.6	43.6	2.26	30.5	0.00	0.00			251		
269	7.44	7.41	34.058	26.619	145.5	0.556	1.79	26.6	47.5	2.48	33.1	0.00	0.00			271	205	
300	ISL 7.45	D 7.42	34.123	D 26.669	141.3	0.600	1.34	19.9	52.4	2.64	34.6	0.00	0.00			302		
318	7.13	7.10	34.129	26.719	136.7	0.625	1.21	17.8	55.0	2.70	35.0	0.00	0.00			320	204	
379	6.81	6.77	34.212	26.829	127.0	0.706	0.70	10.2	63.7	2.93	36.6	0.00	0.00			381	203	
400	ISL 6.69	D 6.65	34.219	D 26.851	125.2	0.732	0.64	9.3	65.6	2.97	37.1	0.00	0.00			403		
438	6.41	6.37	34.215	26.885	122.2	0.779	0.59	8.6	69.2	3.01	37.9	0.00	0.00			441	202	
500	ISL 5.73	D 5.69	34.209	D 26.967	114.7	0.853	0.52	7.4	78.7	3.09	39.8	0.00	0.00			503		
514	5.59	5.55	34.211	26.985	112.9	0.869	0.50	7.1	80.9	3.11	40.2	0.00	0.00			518	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 90.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 8.9 N	123 13.7 W	21/01/09	0418 UTC	4221 m	040	03 kn			1016.0 mb	15.3 c	13.4 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.90	14.90	33.100	24.530	339.5	0.000	5.94	103.0	2.3	0.36	0.0	0.00	0.02	0.29	0.07	0		
2	14.90	14.90	33.100	24.530	339.6	0.007	5.94	103.0	2.3	0.36	0.0	0.00	0.02	0.29	0.07	2	220	
10	ISL 14.60 D	14.60	33.051	24.557	337.3	0.034	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.39	0.05	10		
11	14.60	14.60	33.060	24.563	336.7	0.037	6.00	103.4	2.4	0.36	0.0	0.00	0.02	0.41	0.05	11	219	
20	ISL 14.58 D	14.58	33.054	24.563	336.9	0.068	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.43	0.05	20		
21	14.58	14.58	33.068	24.574	335.9	0.071	5.99	103.2	2.4	0.36	0.0	0.00	0.02	0.43	0.05	21	218	
30	14.56	14.56	33.074	24.583	335.3	0.101	6.00	103.3	2.3	0.36	0.0	0.00	0.02	0.50	0.13	30	217	
41	14.34	14.33	33.057	24.617	332.4	0.138	5.97	102.3	2.4	0.40	0.3	0.02	0.04	0.51	0.21	41	216	
50	14.17	14.16	33.036	24.637	330.8	0.168	5.92	101.1	2.5	0.42	0.6	0.06	0.08	0.41	0.18	50	215	
61	13.10	13.09	33.011	24.835	312.1	0.203	5.98	99.9	3.7	0.54	2.3	0.14	0.26	0.30	0.11	61	214	
71	12.94	12.93	33.023	24.876	308.5	0.234	5.92	98.5	3.9	0.56	2.7	0.16	0.25	0.27	0.15	71	213	
75	ISL 12.63 D	12.62	32.986	24.908	305.5	0.246	5.89	97.4	4.0	0.57	2.8	0.13	0.19	0.24	0.15	75		
86	11.64	11.63	32.930	25.051	292.0	0.279	5.81	94.0	4.3	0.64	3.7	0.03	0.01	0.16	0.14	86	212	
100	ISL 10.65 D	10.64	32.907	25.210	277.0	0.319	5.67	89.8	6.7	0.83	6.9	0.01	0.02	0.09	0.07	100		
101	10.64	10.63	32.912	25.215	276.5	0.322	5.66	89.6	6.9	0.85	7.2	0.01	0.02	0.09	0.07	101	211	
121	10.27	10.26	33.174	25.484	251.4	0.375	5.10	80.2	12.0	1.17	12.9	0.01	0.01	0.04	0.05	122	210	
125	ISL 10.06 D	10.05	33.273	25.596	240.7	0.384	4.94	77.4	13.4	1.25	14.2	0.01	0.01	0.03	0.05	126		
141	9.76	9.74	33.492	25.818	220.0	0.421	4.25	66.2	19.1	1.55	19.2	0.00	0.00	0.02	0.04	142	209	
150	ISL 9.56 D	9.54	33.633	25.961	206.5	0.440	3.91	60.7	21.7	1.67	21.2	0.00	0.00	0.01	0.04	151		
171	9.22	9.20	33.784	26.134	190.4	0.482	3.27	50.5	26.5	1.88	24.6	0.00	0.00	0.00	0.03	172	208	
200	ISL 8.88 D	8.86	33.922	26.297	175.5	0.535	2.75	42.1	30.9	2.03	26.9	0.00	0.01	0.00	0.03	201		
201	8.89	8.87	33.924	26.297	175.5	0.537	2.74	42.0	31.0	2.03	26.9	0.00	0.01	0.00	0.03	202	207	
230	8.43	8.41	33.976	26.409	165.2	0.586	2.74	41.6	34.0	2.04	27.7	0.00	0.00			231	206	
250	ISL 8.15 D	8.12	34.021	26.487	158.1	0.619	2.33	35.1	38.1	2.19	29.3	0.00	0.00			251		
270	8.04	8.01	34.073	26.544	153.0	0.650	1.87	28.1	42.6	2.36	31.1	0.00	0.00			272	205	
300	ISL 7.58 D	7.55	34.060	26.601	147.8	0.695	1.67	24.9	46.9	2.47	32.5	0.00	0.00			302		
320	7.41	7.38	34.079	26.641	144.3	0.724	1.63	24.2	49.7	2.52	33.2	0.00	0.00			322	204	
382	6.40	6.37	34.075	26.775	131.8	0.810	1.32	19.1	62.5	2.74	36.5	0.00	0.00			384	203	
400	ISL 6.32 D	6.28	34.100	26.805	129.1	0.833	1.16	16.8	65.3	2.81	37.2	0.00	0.00			403		
442	6.07	6.03	34.142	26.871	123.3	0.886	0.80	11.5	71.2	2.96	38.4	0.00	0.00			445	202	
500	ISL 5.68 D	5.64	34.177	26.948	116.4	0.956	0.61	8.7	79.0	3.06	39.9	0.00	0.00			503		
514	5.56	5.52	34.174	26.960	115.3	0.972	0.56	8.0	80.9	3.09	40.2	0.00	0.00			517	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 80.0 100.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
32 49.0 N	123 54.4 W	21/01/09	1018 UTC	4439 m	070	08 kn			1015.3 mb	15.1 c	13.1 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.41	14.41	33.176	24.693	324.0	0.000	6.04	103.8	2.5	0.37	0.1	0.00	0.02	0.44	0.12	0		
2	14.41	14.41	33.176	24.693	324.1	0.006	6.04	103.8	2.5	0.37	0.1	0.00	0.02	0.44	0.12	2	220	
10	14.17	14.17	33.261	24.809	313.2	0.032	6.01	102.8	2.5	0.38	0.1	0.02	0.02	0.86	0.20	10	219	
20	13.76	13.76	33.224	24.866	308.1	0.063	6.23	105.6	2.9	0.39	0.2	0.02	0.05	1.04	0.32	20	218	
30	13.62	13.62	33.212	24.885	306.5	0.094	6.26	105.8	3.1	0.40	0.2	0.03	0.12	0.93	0.31	30	217	
40	13.38	13.37	33.201	24.925	303.0	0.124	6.06	101.9	3.3	0.46	1.1	0.08	0.14	0.69	0.32	40	216	
50	13.39	13.38	33.214	24.934	302.4	0.155	6.01	101.1	3.2	0.47	1.3	0.10	0.21	0.59	0.28	50	215	
60	13.29	13.28	33.209	24.950	301.1	0.185	5.98	100.4	3.4	0.50	1.6	0.12	0.29	0.40	0.23	60	214	
70	13.19	13.18	33.214	24.974	299.1	0.215	5.89	98.7	3.8	0.54	2.1	0.17	0.34	0.28	0.19	70	213	
75	ISL 13.09 D	13.08	33.219	24.998	297.0	0.230	5.80	97.0	4.4	0.61	3.2	0.15	0.23	0.21	0.15	75		
84	11.71	11.70	33.038	25.122	285.2	0.256	5.59	90.7	6.1	0.78	6.1	0.09	0.01	0.10	0.09	84	212	
100	ISL 10.54 D	10.53	33.222	25.474	251.9	0.299	5.05	79.9	11.1	1.14	12.3	0.01	0.01	0.04	0.05	100		
101	10.55	10.54	33.185	25.444	254.8	0.301	5.01	79.3	11.5	1.16	12.7	0.01	0.01	0.04	0.05	101	211	
119	10.03	10.02	33.519	25.793	221.9	0.344	4.23	66.3	18.1	1.50	18.5	0.01	0.01	0.01	0.03	120	210	
125	ISL 9.89 D	9.88	33.633	25.906	211.3	0.357	3.84	60.1	20.5	1.63	20.3	0.01	0.01	0.01	0.03	126		
139	9.71	9.69	33.808	26.073	195.8	0.386	3.02	47.1	25.5	1.88	23.9	0.00	0.00	0.00	0.04	140	209	
150	ISL 9.39 D	9.37	33.874	26.177	186.0	0.407	2.90	44.9	28.0	1.93	25.3	0.00	0.00	0.00	0.04	151		
169	8.93	8.91	33.938	26.301	174.5	0.441	2.69	41.3	30.8	2.03	26.4	0.00	0.00	0.00	0.03	170	208	
200	ISL 8.59 D	8.57	33.977	26.385	167.0	0.494	2.58	39.3	33.6	2.07	27.5	0.00	0.00	0.00	0.02	201		
201	8.59	8.57	33.983	26.390	166.6	0.496	2.58	39.3	33.7	2.07	27.5	0.00	0.00	0.00	0.02	202	207	
229	8.57	8.55	34.074	26.464	160.0	0.541	1.87	28.5	38.5	2.31	29.9	0.00	0.00			230	206	
250	ISL 8.32 D	8.29	34.088	26.514	155.6	0.574	1.93	29.2	40.9	2.34	30.6	0.00	0.00			251		
267	7.94	7.91	34.056	26.546	152.7	0.601	1.97	29.6	42.6	2.36	31.0	0.00	0.00			269	205	
300	ISL 7.77 D	7.74	34.118	26.620	146.2	0.650	1.66	24.8	47.2	2.48	32.5	0.00	0.00			302		
318	7.55	7.52	34.112	26.647	143.8	0.676	1.44	21.4	49.8	2.56	33.3	0.00	0.00			320	204	
377	6.97	6.93	34.135	26.747	134.9	0.758	1.12	16.4	57.8	2.74	35.3	0.00	0.00			379	203	
400	ISL 6.71 D	6.67	34.142	26.787	131.2	0.789	1.02	14.9	61.4	2.80	36.2	0.00	0.00			403		
437	6.35	6.31	34.146	26.838	126.6	0.837	0.86	12.4	67.1	2.89	37.5	0.00	0.00			440	202	
500	ISL 6.18 D	6.14	34.245	26.939	117.8	0.914	0.51	7.4	74.1	3.06	38.4	0.00	0.00			503		
517	6.16	6.11	34.257	26.951	116.9	0.933	0.41	5.9	76.0	3.10	38.6	0.00	0.00			521	201	

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

RV NEW HORIZON					CALCOFI CRUISE 0901										STATION 81.7 43.5				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE					
34 24.2 N	119 48.5 W	19/01/09	1939 UTC	20 m	230	03 kn	180 01 07	1	1020.4 mb	16.9 C	15.0 C		2/8	CS					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP		
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
0 ISL	13.79	13.79	33.381	24.980	296.7	0.000	6.93	117.7	1.3	0.22	0.1	0.00	0.01	1.42	0.40	0			
1	13.79	13.79	33.381	24.980	296.7	0.003	6.93	117.7	1.3	0.22	0.1	0.00	0.01	1.42	0.40	1	205		
5	13.69	13.69	33.382	25.002	294.8	0.015	6.91	117.1	1.5	0.21	0.1	0.01	0.03	1.67	0.55	5	204		
10	13.38	13.38	33.373	25.058	289.6	0.029	6.29	105.9	3.3	0.42	1.0	0.10	0.43	2.37	0.93	10	202		
10	13.38	13.38	33.373	25.058	289.6	0.029										10	203		
13	13.38	13.38	33.371	25.056	289.8	0.038	6.22	104.7	3.6	0.46	1.2	0.11	0.55	2.25	1.15	13	201		

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

RV NEW HORIZON					CALCOFI CRUISE 0901										STATION 81.8 46.9				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
34 17.3 N		120 1.7 W		19/01/09	1729 UTC	581 m	020	03 kn	280 04 11	0	1021.3 mb	16.4 c	13.8 c	11m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP		
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
0 ISL	13.16	13.16	33.398	25.121	283.3	0.000	6.20	103.9	5.5	0.52	2.3	0.11	0.05	1.65	0.70	0			
1 A,B	13.16	13.16	33.398	25.121	283.3	0.003	6.20	103.9	5.5	0.52	2.3	0.11	0.05	1.65	0.70	1	224		
6 B	13.13	13.13	33.400	25.129	282.7	0.017	6.20	103.9	5.7	0.53	2.5	0.12	0.06	1.74	0.81	6	223		
10 ISL	13.11	D 13.11	33.397	D 25.130	282.6	0.028	6.15	103.0	5.8	0.54	2.7	0.13	0.07	1.66	0.78	10			
15 B	13.08	13.08	33.404	25.142	281.7	0.042	6.04	101.1	5.9	0.57	3.1	0.15	0.08	1.57	0.75	15	222		
20 ISL	13.02	D 13.02	33.400	D 25.151	281.0	0.056	5.87	98.1	6.2	0.63	4.0	0.22	0.11	1.31	0.70	20			
22 B	12.88	12.88	33.397	25.176	278.6	0.062	5.79	96.5	6.4	0.66	4.4	0.25	0.12	1.19	0.68	22	221		
30 ISL	12.69	D 12.69	33.420	D 25.231	273.6	0.084	5.38	89.3	7.7	0.82	6.6	0.33	0.23	0.78	0.65	30			
31 B	12.65	12.65	33.429	25.246	272.2	0.087	5.33	88.4	7.9	0.84	6.8	0.34	0.24	0.74	0.65	31	220		
41	12.52	12.51	33.441	25.281	269.1	0.114	5.22	86.4	8.7	0.88	7.6	0.37	0.16	0.55	0.55	41	219		
48 B	12.29	12.28	33.460	25.340	263.7	0.133	4.95	81.5	10.2	1.00	9.4	0.38	0.01	0.41	0.44	48	218		
50 ISL	12.22	D 12.21	33.461	D 25.354	262.4	0.138	4.90	80.6	10.5	1.02	9.8	0.37	0.01	0.38	0.41	50			
54	12.17	12.16	33.476	25.375	260.4	0.148	4.81	79.0	11.0	1.06	10.5	0.33	0.01	0.32	0.37	54	217		
60	12.04	12.03	33.483	25.406	257.7	0.164	4.67	76.5	11.7	1.10	11.4	0.27	0.00	0.29	0.36	60	216		
74	11.55	11.54	33.521	25.526	246.5	0.199	4.24	68.7	14.3	1.32	14.5	0.17	0.00	0.18	0.26	74	215		
75 ISL	11.48	D 11.47	33.520	D 25.539	245.4	0.202	4.21	68.2	14.5	1.33	14.7	0.16	0.00	0.17	0.25	75			
100	10.85	10.84	33.640	25.746	226.2	0.261	3.53	56.4	18.8	1.62	19.3	0.01	0.00	0.05	0.16	101	214		
119	10.27	10.26	33.793	25.966	205.6	0.302	2.89	45.6	23.8	1.87	22.8	0.01	0.00	0.02	0.13	120	213		
125 ISL	10.09	D 10.08	33.847	D 26.039	198.7	0.314	2.63	41.4	26.0	1.97	24.0	0.01	0.00	0.02	0.12	126			
139	9.59	9.57	34.017	26.256	178.4	0.340	2.05	31.9	31.2	2.18	26.7	0.01	0.00	0.01	0.09	140	212		
150 ISL	9.39	D 9.37	34.079	D 26.337	170.8	0.359	1.77	27.5	34.0	2.29	28.0	0.01	0.00	0.01	0.09	151			
169	9.10	9.08	34.131	26.425	162.8	0.391	1.45	22.4	37.8	2.41	29.4	0.01	0.00	0.00	0.09	170	211		
199	8.83	8.81	34.159	26.490	157.1	0.439	1.11	17.0	42.7	2.55	30.8	0.01	0.00	0.00	0.08	200	210		
200 ISL	8.83	D 8.81	34.157	D 26.489	157.3	0.441	1.10	16.9	42.8	2.55	30.9	0.01	0.00			201			
227	8.70	8.68	34.183	26.530	153.9	0.483	0.80	12.2	46.2	2.67	32.1	0.00	0.00			228	209		
250 ISL	8.48	D 8.45	34.194	D 26.573	150.2	0.518	0.64	9.7	50.1	2.76	32.8	0.00	0.02			252			
268	8.24	8.21	34.214	26.625	145.4	0.544	0.57	8.6	53.2	2.83	33.2	0.00	0.03			270	208		
300 ISL	8.01	D 7.98	34.217	D 26.662	142.3	0.590	0.53	8.0	56.7	2.91	33.8	0.00	0.01			302			
317	7.85	7.82	34.231	26.697	139.3	0.614	0.52	7.8	58.4	2.94	34.0	0.00	0.00			319	207		
377	7.32	7.28	34.239	26.780	132.1	0.696	0.37	5.5	66.9	3.04	34.4	0.00	0.00			379	206		
400 ISL	7.09	D 7.05	34.243	D 26.816	128.9	0.726	0.30	4.4	71.4	3.11	34.3	0.00	0.00			403			
438	6.85	6.81	34.251	26.855	125.5	0.774	0.19	2.8	78.8	3.21	33.6	0.00	0.00			441	205		
475	6.72	6.68	34.254	26.875	124.1	0.820	0.13	1.9	84.6	3.25	32.3	0.00	0.00			478	204		
500 ISL	6.66	D 6.61	34.254	D 26.884	123.6	0.851	0.09	1.3	89.7	3.31	31.0	0.00	0.00			503			
511	6.62	6.57	34.255	26.890	123.1	0.865	0.08	1.2	91.7	3.34	30.4	0.00	0.00			515	203		
541	6.56	6.51	34.256	26.899	122.7	0.901	0.07	1.0	94.7	3.37	29.4	0.00	0.00			545	202		
565	6.55	6.50	34.259	26.903	122.6	0.931	0.07	1.0	97.3	3.40	28.1	0.01	0.00			569	201		

A) SANTA BARBARA BASIN STATION.

B) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 39.4				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE			
34 15.6 N		119 19.6 W		19/01/09	0833 UTC	23 m	060	17 kn			1019.8 mb	21.0 C	12.0 C					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0 ISL	13.36	13.36	33.413	25.092	286.0	0.000	6.19	104.2	5.0	0.49	1.5	0.12	0.39	2.45	1.34	0		
2	13.36	13.36	33.413	25.092	286.0	0.006	6.19	104.2	5.0	0.49	1.5	0.12	0.39	2.45	1.34	2	205	
5	13.36	13.36	33.413	25.093	286.1	0.014	6.19	104.2	5.1	0.50	1.5	0.12	0.38	2.45	1.34	5	204	
9	13.38	13.38	33.412	25.088	286.7	0.026										9	203	
10	13.38	13.38	33.412	25.088	286.7	0.029	6.19	104.3	5.0	0.50	1.5	0.12	0.36	2.63	1.24	10	202	
15	13.38	13.38	33.416	25.091	286.5	0.043	6.19	104.3	5.0	0.56	1.5	0.12	0.40	2.88	1.53	15	201	

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

RV NEW HORIZON					CALCOFI CRUISE 0901										STATION 83.3 40.6				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE					
34 13.7 N	119 24.8 W	19/01/09	0944 UTC	38 m	060	13 kn			1020.3 mb	17.3 C	12.5 C								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP		
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
0 ISL	13.61	13.61	33.384	25.019	292.9	0.000	6.13	103.7	4.8	0.45	1.4	0.07	0.09	0.51	0.20	0			
2	13.61	13.61	33.384	25.019	293.0	0.006	6.13	103.7	4.8	0.45	1.4	0.07	0.09	0.51	0.20	2	206		
5	13.60	13.60	33.388	25.025	292.6	0.015	6.14	103.9	4.8	0.45	1.4	0.07	0.09	0.47	0.32	5	205		
9	13.60	13.60	33.383	25.021	293.0	0.026										9	204		
10	13.54	13.54	33.383	25.033	291.9	0.029	6.13	103.6	5.0	0.48	1.7	0.08	0.07	0.60	0.21	10	203		
20	13.29	13.29	33.387	25.087	287.1	0.058	6.06	101.9	5.9	0.55	2.6	0.12	0.08	1.18	0.39	20	202		
29	13.25	13.25	33.395	25.101	285.9	0.084	5.98	100.4	6.0	0.60	2.6	0.14	0.47	1.51	0.81	29	201		

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 42.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
34 10.7 N	119 30.1 W	19/01/09	1151 UTC	117 m	300	07 kn			1019.8 mb	15.6 C	12.4 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.36	13.36	33.379	25.066	288.5	0.000	6.15	103.5	5.2	0.52	2.0	0.09	0.09	0.72	0.20	0	
2	13.36	13.36	33.379	25.066	288.5	0.006	6.15	103.5	5.2	0.52	2.0	0.09	0.09	0.72	0.20	2	212
9	13.36	13.36	33.376	25.064	288.9	0.026										9	211
10	13.36	13.36	33.377	25.065	288.9	0.029	6.16	103.7	5.3	0.50	2.1	0.09	0.08	0.73	0.19	10	210
19	13.25	13.25	33.369	25.081	287.6	0.055	6.19	103.9	5.5	0.53	2.4	0.10	0.09	0.84	0.16	19	209
20 ISL	13.25 D	13.25	33.366 D	25.079	287.8	0.058	6.18	103.8	5.5	0.53	2.4	0.10	0.10	0.85	0.17	20	
30	12.92	12.92	33.366	25.144	281.8	0.086	6.07	101.2	5.9	0.60	3.5	0.15	0.14	0.92	0.29	30	208
40	12.53	12.52	33.387	25.237	273.3	0.114	5.51	91.1	8.0	0.80	6.6	0.26	0.13	0.66	0.31	40	207
49	11.82	11.81	33.458	25.427	255.4	0.138	4.53	73.8	12.8	1.21	13.2	0.11	0.02	0.25	0.17	49	206
50 ISL	11.70 D	11.69	33.456 D	25.448	253.4	0.140	4.48	72.8	13.0	1.23	13.5	0.10	0.02	0.24	0.17	50	
60	11.33	11.32	33.494	25.545	244.3	0.165	4.20	67.8	14.6	1.37	15.5	0.05	0.01	0.14	0.13	60	205
69	10.98	10.97	33.566	25.664	233.2	0.187	3.85	61.7	16.9	1.52	17.7	0.03	0.00	0.08	0.11	69	204
75 ISL	10.78 D	10.77	33.654 D	25.769	223.4	0.200	3.60	57.5	18.4	1.61	19.0	0.02	0.00	0.05	0.10	75	
85	10.60	10.59	33.720	25.852	215.7	0.222	3.20	50.9	20.9	1.74	20.8	0.01	0.00	0.02	0.10	85	203
100 ISL	10.34 D	10.33	33.819 D	25.974	204.4	0.254	2.79	44.1	24.2	1.90	22.6	0.01	0.00	0.02	0.09	101	
101	10.33	10.32	33.826	25.981	203.7	0.256	2.77	43.8	24.4	1.91	22.7	0.01	0.00	0.02	0.09	102	202
111	10.16	10.15	33.847	26.027	199.6	0.276	2.66	41.9	25.9	1.96	23.5	0.02	0.00	0.02	0.11	112	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 51.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
33 52.7 N	120 7.9 W	18/01/09	2015 UTC	100 m	080	09 kn	100 03 09	0	1021.4 mb	18.8 C	14.2 C	12m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	12.78	12.78	33.463	25.246	271.3	0.000	6.04	100.5	5.9	0.66	4.2	0.14	0.21	4.11	0.88	0	
2	12.78	12.78	33.463	25.246	271.4	0.005	6.04	100.5	5.9	0.66	4.2	0.14	0.21	4.11	0.88	2	211
5	12.77	12.77	33.461	25.247	271.4	0.014	6.06	100.8	5.8	0.66	4.1	0.15	0.22	3.78	0.84	5	210
10	12.75	12.75	33.461	25.251	271.2	0.027	6.03	100.3	5.7	0.71	4.1	0.14	0.21	4.12	0.82	10	208
10	12.76	12.76	33.463	25.250	271.2	0.027										10	209
20	12.72	12.72	33.460	25.256	270.9	0.054	6.00	99.7	5.8	0.71	4.2	0.14	0.21	4.46	0.85	20	207
30	12.68	12.68	33.461	25.265	270.3	0.081	5.89	97.8	6.1	0.71	4.5	0.14	0.23	4.21	0.83	30	206
40	12.32	12.31	33.490	25.357	261.8	0.108	5.32	87.7	9.0	0.94	7.4	0.17	0.43	2.42	0.94	40	205
50	11.74	11.73	33.588	25.543	244.4	0.133	4.51	73.5	13.8	1.21	12.3	0.18	0.35	0.85	0.65	50	204
60	11.28	11.27	33.632	25.662	233.3	0.157	3.96	63.9	17.6	1.44	16.0	0.17	0.16	0.37	0.57	60	203
70	10.78	10.77	33.706	25.809	219.5	0.180	3.45	55.1	20.8	1.66	19.1	0.13	0.04	0.19	0.38	70	202
75 ISL	10.56 D	10.55	33.749 D	25.881	212.7	0.191	3.32	52.8	21.6	1.71	19.9	0.11	0.03	0.16	0.35	75	
86	10.41	10.40	33.780	25.931	208.2	0.214	3.04	48.2	23.5	1.82	21.6	0.08	0.02	0.09	0.27	86	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 55.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
33 43.9 N	120 23.8 W	18/01/09	1744 UTC	814 m	070	05 kn	360 04 09	0	1022.6 mb	17.8 C	13.7 C	9m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 13.30	13.30	33.338	25.046	290.4	0.000	6.34	106.6	4.8	0.48	1.6	0.06	0.05	1.53	0.39	0	
1	A 13.30	13.30	33.338	25.046	290.4	0.003	6.34	106.6	4.8	0.48	1.6	0.06	0.05	1.53	0.39	1	223
5	A 13.29	13.29	33.340	25.050	290.1	0.015	6.34	106.5	5.0	0.49	1.5	0.06	0.04	1.55	0.41	5	222
10	ISL 13.24	D 13.24	33.337	D 25.058	289.5	0.029	6.33	106.3	5.0	0.52	1.7	0.07	0.03	1.68	0.42	10	
12	A 13.19	13.19	33.334	25.066	288.8	0.035	6.32	106.0	5.0	0.53	1.8	0.07	0.03	1.72	0.42	12	220
12	13.20	13.20	33.334	25.064	289.0	0.035										12	221
18	A 12.99	12.99	33.325	25.099	285.9	0.052	6.20	103.5	5.2	0.58	2.4	0.09	0.04	1.56	0.43	18	219
20	ISL 13.02	D 13.02	33.320	D 25.089	286.9	0.058	6.10	101.9	5.6	0.62	3.0	0.11	0.05	1.38	0.42	20	
26	A 12.72	12.72	33.347	25.169	279.4	0.075	5.83	96.8	6.6	0.73	4.7	0.16	0.07	0.89	0.41	26	218
30	ISL 12.72	D 12.72	33.347	D 25.169	279.5	0.086	5.81	96.5	6.8	0.75	4.7	0.16	0.08	0.90	0.42	30	
31	12.73	12.73	33.354	25.172	279.2	0.089	5.81	96.5	6.8	0.75	4.7	0.16	0.08	0.90	0.42	31	217
38	A 12.75	12.74	33.364	25.176	279.0	0.108	5.76	95.7	6.7	0.76	4.8	0.16	0.07	0.88	0.47	38	216
50	12.58	12.57	33.403	25.240	273.2	0.141	5.43	89.9	8.1	0.85	6.6	0.18	0.13	0.62	0.44	50	215
60	12.10	12.09	33.427	25.351	262.9	0.168	4.98	81.6	10.4	1.05	9.7	0.17	0.02	0.49	0.41	60	214
70	11.01	11.00	33.364	25.502	248.7	0.194	4.73	75.7	13.1	1.29	13.6	0.05	0.00	0.21	0.17	70	213
75	ISL 10.52	D 10.51	33.442	D 25.649	234.7	0.206	4.45	70.5	15.4	1.43	16.0	0.04	0.00	0.13	0.11	75	
85	9.88	9.87	33.579	25.865	214.4	0.228	3.86	60.4	20.2	1.69	20.4	0.01	0.00	0.04	0.07	85	212
100	9.53	9.52	33.752	26.058	196.3	0.259	3.37	52.4	24.6	1.87	23.3	0.01	0.00	0.01	0.05	101	211
119	9.26	9.25	33.890	26.210	182.2	0.295	2.79	43.1	29.0	2.04	25.5	0.00	0.00	0.00	0.04	120	210
125	ISL 9.19	D 9.18	33.914	D 26.240	179.5	0.306	2.70	41.7	29.7	2.05	25.9	0.00	0.00	0.00	0.04	126	
138	9.08	9.07	33.947	26.284	175.6	0.329	2.58	39.7	31.0	2.07	26.5	0.00	0.00	0.00	0.04	139	209
150	ISL 8.92	D 8.90	33.977	D 26.333	171.1	0.350	2.43	37.3	33.0	2.13	27.3	0.00	0.00	0.00	0.04	151	
168	8.56	8.54	34.041	26.439	161.3	0.380	2.21	33.7	36.3	2.24	28.6	0.00	0.00	0.00	0.03	169	208
200	ISL 8.37	D 8.35	34.105	D 26.519	154.2	0.430	1.82	27.6	40.7	2.40	30.0	0.01	0.00	0.00	0.03	201	
201	8.37	8.35	34.103	26.517	154.4	0.432	1.81	27.5	40.8	2.40	30.0	0.01	0.00	0.00	0.03	202	207
228	8.35	8.33	34.133	26.544	152.4	0.473	1.62	24.6	42.9	2.48	30.5	0.01	0.01			229	206
250	ISL 8.16	D 8.13	34.163	D 26.597	147.7	0.506	1.42	21.4	46.1	2.57	31.5	0.02	0.01			252	
268	7.97	7.94	34.179	26.638	144.1	0.532	1.25	18.8	48.9	2.65	32.3	0.02	0.01			270	205
300	ISL 7.72	D 7.69	34.200	D 26.691	139.4	0.578	1.05	15.7	52.4	2.76	33.2	0.01	0.02			302	
317	7.62	7.59	34.216	26.719	137.1	0.601	0.97	14.5	54.1	2.81	33.6	0.01	0.02			319	204
377	7.13	7.09	34.248	26.814	128.7	0.681	0.68	10.0	61.9	2.94	35.4	0.00	0.00			379	203
400	ISL 6.83	D 6.79	34.246	D 26.853	125.1	0.710	0.62	9.1	65.1	2.99	36.2	0.00	0.00			403	
437	6.54	6.50	34.249	26.895	121.5	0.756	0.54	7.9	70.1	3.06	37.4	0.00	0.00			440	202
500	ISL 6.21	D 6.17	34.284	D 26.966	115.3	0.830	0.39	5.6	77.0	3.14	38.6	0.00	0.00			503	
514	6.15	6.10	34.299	26.986	113.6	0.846	0.36	5.2	78.5	3.16	38.9	0.00	0.00			518	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 60.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
33 34.6 N	120 45.3 W	18/01/09	1159 UTC	1397 m	240	05 kn			1020.7 mb	11.0 C	10.7 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.06	13.06	33.388	25.133	282.1	0.000	6.43	107.6	6.0	0.55	2.2	0.08	0.12	1.65	0.32	0	
2	13.06	13.06	33.388	25.133	282.2	0.006	6.43	107.6	6.0	0.55	2.2	0.08	0.12	1.65	0.32	2	221
9	13.01	13.01	33.388	25.143	281.4	0.025										9	220
10	12.99	12.99	33.386	25.146	281.2	0.028	6.40	106.9	6.1	0.56	2.5	0.09	0.09	1.87	0.47	10	219
20	12.76	12.76	33.385	25.190	277.2	0.056	6.13	101.9	6.5	0.69	3.9	0.18	0.09	1.44	0.55	20	218
30	12.68	12.68	33.386	25.207	275.9	0.084	5.97	99.1	6.9	0.74	4.6	0.24	0.23	0.86	0.48	30	217
40	12.65	12.64	33.387	25.214	275.5	0.111	5.92	98.2	7.0	0.76	4.8	0.26	0.22	0.72	0.48	40	216
50	12.61	12.60	33.389	25.223	274.8	0.139	5.88	97.4	7.0	0.77	5.1	0.28	0.15	0.73	0.31	50	215
60	11.73	11.72	33.435	25.426	255.7	0.165	5.11	83.1	11.1	1.09	10.6	0.21	0.05	0.26	0.23	60	214
69	11.17	11.16	33.475	25.560	243.2	0.188	4.47	71.9	14.8	1.37	15.3	0.06	0.01	0.14	0.15	69	213
75 ISL	11.08 D	11.07	33.482 D	25.581	241.2	0.202	4.16	66.7	16.9	1.51	17.7	0.04	0.01	0.09	0.12	75	
84	10.35	10.34	33.595	25.797	220.8	0.223	3.77	59.6	19.9	1.69	20.5	0.01	0.00	0.04	0.10	84	212
100	9.59	9.58	33.770	26.062	195.9	0.256	3.11	48.4	25.6	1.97	24.7	0.01	0.01	0.01	0.09	101	211
119	9.31	9.30	33.850	26.171	186.0	0.293	2.81	43.5	28.2	2.07	26.1	0.01	0.00	0.00	0.08	120	210
125 ISL	9.16 D	9.15	33.905 D	26.238	179.7	0.304	2.70	41.6	29.0	2.10	26.6	0.01	0.00	0.00	0.08	126	
139	9.06	9.04	33.935	26.277	176.2	0.329	2.46	37.9	31.0	2.18	27.6	0.00	0.01	0.00	0.07	140	209
150 ISL	8.93 D	8.91	33.961 D	26.318	172.5	0.348	2.33	35.8	32.5	2.22	28.2	0.00	0.02	0.00	0.06	151	
169	8.72	8.70	34.015	26.394	165.6	0.380	2.14	32.7	35.0	2.28	29.0	0.00	0.03	0.00	0.05	170	208
200	8.41	8.39	34.060	26.477	158.2	0.430	1.80	27.3	38.8	2.42	30.7	0.00	0.00	0.00	0.05	201	207
228	8.12	8.10	34.101	26.554	151.4	0.473	1.58	23.8	43.1	2.55	32.2	0.01	0.00			229	206
250 ISL	7.65 D	7.63	34.090 D	26.614	145.8	0.506	1.46	21.8	46.6	2.62	33.1	0.01	0.00			252	
268	7.59	7.56	34.115	26.643	143.3	0.532	1.37	20.4	49.4	2.67	33.8	0.00	0.00			270	205
300 ISL	7.32 D	7.29	34.142 D	26.703	138.0	0.577	1.12	16.6	53.6	2.79	34.8	0.00	0.00			302	
317	7.33	7.30	34.171	26.724	136.3	0.600	0.98	14.5	55.6	2.85	35.2	0.00	0.00			319	204
376	6.94	6.90	34.218	26.816	128.3	0.679	0.69	10.1	62.9	3.02	36.8	0.00	0.00			378	203
400 ISL	6.69 D	6.65	34.220 D	26.852	125.1	0.709	0.63	9.2	65.9	3.07	37.4	0.00	0.00			403	
437	6.45	6.41	34.235	26.896	121.3	0.755	0.56	8.1	70.4	3.12	38.2	0.00	0.00			440	202
500 ISL	6.15 D	6.11	34.276 D	26.967	115.1	0.829	0.39	5.6	76.6	3.20	39.2	0.00	0.00			503	
519	6.04	5.99	34.293	26.995	112.7	0.851	0.34	4.9	78.5	3.22	39.5	0.00	0.00			523	201

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 70.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
33 14.8 N	121 26.5 W	18/01/09	0538 UTC	3802 m	230	04 kn			1021.1 mb	15.6 C	15.0 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 13.85	13.85	33.225	24.847	309.3	0.000	6.18	105.0	2.7	0.40	0.3	0.02	0.02	0.71	0.02	0	
2	13.85	13.85	33.225	24.847	309.4	0.006	6.18	105.0	2.7	0.40	0.3	0.02	0.02	0.71	0.02	2	222
10	ISL 13.84	13.84	33.225	24.850	309.4	0.031	6.12	103.9	2.7	0.40	0.3	0.02	0.00	0.64	0.17	10	
10	13.85	13.85	33.225	24.848	309.6	0.031										10	221
11	13.84	13.84	33.225	24.850	309.4	0.034	6.11	103.8	2.7	0.40	0.3	0.02	0.00	0.63	0.19	11	220
20	ISL 13.47	D 13.47	33.226	D 24.926	302.4	0.062	6.11	103.0	3.2	0.46	1.2	0.07	0.02	0.68	0.20	20	
21	13.44	13.44	33.233	24.938	301.3	0.065	6.11	102.9	3.3	0.47	1.3	0.08	0.02	0.69	0.20	21	219
30	ISL 13.14	D 13.14	33.240	D 25.003	295.3	0.091	6.03	100.9	3.8	0.53	2.1	0.13	0.03	0.84	0.05	30	
31	13.12	13.12	33.244	25.010	294.6	0.094	6.02	100.7	3.8	0.53	2.2	0.14	0.03	0.85	0.04	31	218
41	13.10	13.09	33.245	25.015	294.4	0.124	5.98	100.0	3.7	0.55	2.4	0.16	0.06	0.62	0.21	41	217
50	13.02	13.01	33.241	25.028	293.4	0.150	5.91	98.7	4.0	0.57	2.7	0.19	0.20	0.36	0.19	50	216
61	12.45	12.44	33.173	25.087	288.1	0.182	5.82	96.0	5.0	0.68	4.3	0.20	0.11	0.30	0.14	61	215
70	11.89	11.88	33.161	25.184	279.0	0.208	5.59	91.1	6.8	0.84	7.1	0.18	0.00	0.19	0.13	70	214
75	ISL 11.14	D 11.13	33.168	D 25.326	265.5	0.221	5.23	83.9	9.7	1.03	10.3	0.13	0.00	0.13	0.10	75	
86	10.15	10.14	33.395	25.676	232.4	0.249	4.38	68.8	16.5	1.45	17.4	0.01	0.00	0.03	0.05	86	213
100	ISL 9.85	D 9.84	33.614	D 25.897	211.6	0.280	3.89	60.8	20.2	1.64	20.6	0.01	0.00	0.01	0.05	100	
101	9.90	9.89	33.589	25.869	214.3	0.282	3.87	60.6	20.4	1.65	20.7	0.01	0.00	0.01	0.05	101	212
121	9.43	9.42	33.757	26.078	194.8	0.323	3.38	52.4	24.8	1.83	23.6	0.00	0.00	0.00	0.04	122	211
125	ISL 9.28	D 9.27	33.795	D 26.132	189.7	0.331	3.25	50.2	25.7	1.87	24.1	0.00	0.00	0.00	0.04	126	
141	9.23	9.21	33.904	26.226	181.1	0.360	2.70	41.7	29.1	2.04	26.0	0.00	0.00	0.00	0.03	142	209
150	ISL 8.98	D 8.96	33.960	D 26.310	173.3	0.376	2.39	36.7	31.4	2.13	27.2	0.00	0.00	0.00	0.03	151	
171	8.89	8.87	34.059	26.402	165.0	0.412	1.80	27.6	36.2	2.32	29.8	0.00	0.00	0.00	0.03	172	208
200	ISL 8.61	D 8.59	34.102	D 26.480	158.0	0.459	1.52	23.2	39.7	2.44	31.4	0.00	0.00	0.00	0.03	201	
201	8.61	8.59	34.110	26.486	157.5	0.460	1.51	23.0	39.8	2.44	31.4	0.00	0.00	0.00	0.03	202	207
231	8.33	8.31	34.167	26.574	149.6	0.506	1.18	17.9	45.0	2.60	32.7	0.00	0.00	0.00		232	206
250	ISL 8.17	D 8.14	34.174	D 26.604	147.0	0.534	1.08	16.3	47.2	2.65	33.1	0.00	0.00	0.00		251	
270	8.03	8.00	34.192	26.639	144.0	0.563	1.03	15.5	49.3	2.68	33.4	0.00	0.00	0.00		272	205
300	ISL 7.63	D 7.60	34.198	D 26.703	138.3	0.606	0.94	14.0	53.1	2.76	34.3	0.00	0.00	0.00		302	
320	7.44	7.41	34.193	26.726	136.3	0.633	0.90	13.4	55.8	2.81	34.9	0.00	0.00	0.00		322	204
382	6.65	6.61	34.163	26.812	128.5	0.715	0.86	12.5	63.7	2.89	36.9	0.00	0.00	0.00		384	203
400	ISL 6.46	D 6.42	34.166	D 26.839	126.0	0.738	0.78	11.3	66.4	2.94	37.5	0.00	0.00	0.00		403	
441	6.20	6.16	34.206	26.905	120.2	0.789	0.58	8.4	72.4	3.05	38.6	0.00	0.00	0.00		444	202
500	ISL 5.97	D 5.93	34.248	D 26.968	114.8	0.858	0.41	5.9	79.0	3.15	39.7	0.00	0.00	0.00		503	
518	5.833	5.788	34.259	26.994	112.5	0.879	0.36	5.1	81.0	3.18	40.0	0.00	0.00	0.00		522	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901											STATION 83.3 80.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
32 54.5 N	122 7.9 W	17/01/09	2332 UTC	4324 m	340	05 kn	310 07 15	1	1019.4 mb	13.8 c	12.2 c	13m						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.80	13.80	33.157	24.805	313.3	0.000	6.20	105.2	2.9	0.42	0.6	0.04	0.04	0.56	0.11	0		
2	13.80	13.80	33.157	24.805	313.4	0.006	6.20	105.2	2.9	0.42	0.6	0.04	0.04	0.56	0.11	2	222	
10	13.37	13.37	33.128	24.870	307.4	0.031	6.20	104.2	3.2	0.46	1.1	0.06	0.04	0.52	0.10	10	220	
10	13.38	13.38	33.127	24.867	307.7	0.031										10	221	
16	13.06	13.06	33.097	24.908	303.9	0.049	6.18	103.2	3.6	0.51	1.9	0.09	0.08	0.68	0.23	16	219	
20	13.01	13.01	33.104	24.923	302.6	0.062	6.10	101.7	3.7	0.54	2.3	0.11	0.09	0.66	0.26	20	218	
29	12.83	12.83	33.129	24.979	297.6	0.089	6.06	100.7	3.9	0.58	2.8	0.16	0.13	0.52	0.22	29	217	
30	ISL 12.82	D 12.82	33.125	D 24.977	297.7	0.092	6.05	100.5	3.9	0.58	2.8	0.16	0.14	0.51	0.22	30		
40	12.74	12.73	33.137	25.002	295.6	0.121	6.00	99.5	4.0	0.59	2.9	0.19	0.18	0.39	0.20	40	216	
49	12.55	12.54	33.130	25.034	292.8	0.148	5.98	98.8	4.4	0.62	3.5	0.20	0.17	0.28	0.15	49	215	
50	ISL 12.55	D 12.54	33.127	D 25.032	293.0	0.151	5.98	98.8	4.4	0.63	3.6	0.20	0.17	0.28	0.15	50		
59	12.39	12.38	33.129	25.064	290.1	0.177	5.96	98.1	4.8	0.68	4.2	0.24	0.18	0.26	0.14	59	214	
70	12.30	12.29	33.143	25.093	287.7	0.209	5.94	97.6	5.2	0.70	4.5	0.28	0.19	0.22	0.14	70	213	
75	ISL 12.23	D 12.22	33.157	D 25.117	285.6	0.223	5.95	97.6	5.4	0.71	4.6	0.28	0.20	0.20	0.13	75		
84	12.17	12.16	33.168	25.137	283.8	0.249	5.96	97.7	5.6	0.72	4.9	0.27	0.22	0.18	0.12	84	212	
100	12.07	12.06	33.177	25.163	281.7	0.294	5.95	97.3	5.9	0.75	5.3	0.28	0.20	0.15	0.11	100	211	
119	10.94	10.93	33.162	25.358	263.4	0.346	5.34	85.2	9.8	1.05	10.5	0.10	0.00	0.08	0.09	120	210	
125	ISL 10.36	D 10.35	33.194	D 25.484	251.5	0.361	5.01	79.0	12.1	1.20	13.0	0.06	0.00	0.06	0.08	126		
139	10.09	10.07	33.466	25.742	227.2	0.395	4.22	66.2	17.9	1.54	18.6	0.00	0.01	0.02	0.07	140	209	
150	ISL 9.90	D 9.88	33.587	D 25.869	215.4	0.419	3.85	60.2	21.1	1.68	21.1	0.00	0.01	0.01	0.06	151		
169	9.34	9.32	33.779	26.111	192.6	0.458	3.31	51.2	25.7	1.86	23.9	0.00	0.00	0.00	0.04	170	208	
200	ISL 9.03	D 9.01	34.030	D 26.358	169.8	0.514	2.08	32.0	33.9	2.22	28.5	0.00	0.00	0.00	0.03	201		
201	9.03	9.01	34.033	26.360	169.6	0.516	2.04	31.4	34.1	2.23	28.6	0.00	0.00	0.00	0.03	202	207	
229	8.75	8.73	34.088	26.448	161.7	0.562	1.63	24.9	38.3	2.41	30.7	0.00	0.00	0.00		230	206	
250	ISL 8.42	D 8.39	34.102	D 26.510	156.1	0.595	1.65	25.1	40.9	2.44	31.2	0.00	0.00	0.00		251		
270	8.10	8.07	34.096	26.553	152.1	0.626	1.66	25.0	43.5	2.46	31.6	0.00	0.00	0.00		272	205	
300	ISL 7.70	D 7.67	34.122	D 26.633	144.9	0.671	1.38	20.6	49.0	2.61	33.2	0.00	0.00	0.00		302		
318	7.55	7.52	34.157	26.682	140.5	0.696	1.18	17.6	52.4	2.70	34.2	0.00	0.00	0.00		320	204	
379	6.82	6.78	34.152	26.780	131.6	0.779	0.96	14.0	60.9	2.83	36.4	0.00	0.00	0.00		381	203	
400	ISL 6.65	D 6.61	34.164	D 26.813	128.7	0.807	0.88	12.8	64.0	2.88	36.9	0.00	0.00	0.00		403		
437	6.30	6.26	34.181	26.872	123.3	0.853	0.72	10.4	69.3	2.98	37.7	0.00	0.00	0.00		440	202	
500	ISL 5.92	D 5.88	34.235	D 26.964	115.2	0.928	0.45	6.4	77.8	3.12	39.3	0.00	0.00	0.00		503		
514	5.86	5.82	34.255	26.987	113.1	0.944	0.39	5.6	79.7	3.15	39.7	0.00	0.00	0.00		517	201	

STATION 83.3 90.0

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

STATION 83.3 100.0

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 83.3 110.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
31 54.8 N	124 10.3 W	17/01/09	0505 UTC	4217 m	130	04 kn			1020.7 mb	13.8 c	11.7 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.32	14.32	33.205	24.734	320.1	0.000	6.15	105.5	2.5	0.36	0.0	0.00	0.02	0.77	0.16	0		
2	14.32	14.32	33.205	24.734	320.1	0.006	6.15	105.5	2.5	0.36	0.0	0.00	0.02	0.77	0.16	2	222	
10	13.99	13.99	33.241	24.831	311.1	0.032	6.30	107.3	2.8	0.36	0.0	0.00	0.03	1.08	0.00	10	220	
11	14.05	14.05	33.242	24.819	312.3	0.035										11	221	
15	13.76	13.76	33.248	24.884	306.2	0.047	6.32	107.2	3.0	0.36	0.0	0.01	0.03	1.58	0.35	15	219	
20	13.69	13.69	33.254	24.903	304.6	0.062	6.15	104.1	3.1	0.41	0.6	0.05	0.07	1.13	0.35	20	218	
30	ISL 13.57	D 13.57	33.257	D 24.930	302.3	0.093	6.02	101.7	3.4	0.45	1.1	0.09	0.17	0.88	0.18	30		
31	13.57	13.57	33.261	24.933	302.0	0.096	6.02	101.7	3.4	0.45	1.1	0.09	0.18	0.87	0.16	31	217	
41	13.44	13.43	33.274	24.970	298.8	0.126	5.98	100.7	3.6	0.49	1.6	0.14	0.31	0.52	0.22	41	216	
50	ISL 13.31	D 13.30	33.272	D 24.995	296.7	0.153	5.95	100.0	3.8	0.53	2.0	0.19	0.41	0.34	0.31	50		
51	13.32	13.31	33.277	24.997	296.5	0.156	5.95	100.0	3.8	0.53	2.0	0.19	0.42	0.33	0.31	51	215	
61	13.23	13.22	33.279	25.016	294.9	0.185	5.89	98.8	4.1	0.55	2.4	0.24	0.45	0.38	0.14	61	214	
71	12.92	12.91	33.276	25.076	289.5	0.214	5.78	96.3	5.1	0.66	4.0	0.43	0.14	0.21	0.11	71	213	
75	ISL 12.78	D 12.77	33.275	D 25.103	287.0	0.226	5.68	94.4	5.8	0.73	5.2	0.33	0.08	0.16	0.11	75		
85	11.66	11.65	33.207	25.262	271.9	0.254	5.33	86.4	8.3	0.95	9.1	0.02	0.01	0.08	0.12	85	212	
100	ISL 10.60	10.59	33.351	25.564	243.3	0.292	4.51	71.6	14.5	1.36	16.0	0.01	0.01	0.04	0.07	100		
101	10.54	10.53	33.365	25.586	241.3	0.295	4.45	70.5	15.0	1.39	16.4	0.01	0.01	0.04	0.07	101	211	
121	9.70	9.69	33.649	25.950	207.0	0.340	3.75	58.4	21.9	1.69	21.6	0.01	0.01	0.01	0.04	122	210	
125	ISL 9.47	D 9.46	33.712	D 26.037	198.8	0.348	3.74	58.0	22.6	1.69	21.7	0.01	0.01	0.01	0.04	126		
140	9.13	9.11	33.838	26.190	184.5	0.377	3.70	57.0	24.4	1.70	22.2	0.01	0.01	0.00	0.02	141	209	
150	ISL 8.98	D 8.96	33.880	D 26.247	179.2	0.395	3.71	57.0	25.3	1.70	22.4	0.01	0.01	0.00	0.01	151		
171	8.63	8.61	33.950	26.357	169.1	0.431	3.73	56.9	27.7	1.69	23.2	0.00	0.00	0.00	0.01	172	208	
200	ISL 8.26	D 8.24	33.984	D 26.440	161.6	0.479	2.99	45.2	34.1	1.98	26.9	0.00	0.00	0.00	0.01	201		
201	8.25	8.23	33.987	26.444	161.3	0.481	2.96	44.7	34.3	1.99	27.0	0.00	0.00	0.00	0.01	202	207	
231	7.78	7.76	34.013	26.535	153.0	0.528	2.51	37.5	41.0	2.19	29.5	0.00	0.00			232	206	
250	ISL 7.60	D 7.58	34.023	D 26.569	150.0	0.557	2.14	31.9	44.6	2.33	31.2	0.00	0.00			251		
271	7.48	7.45	34.063	26.618	145.7	0.588	1.75	26.0	48.1	2.48	32.9	0.00	0.00			273	205	
300	ISL 7.29	D 7.26	34.096	D 26.671	141.0	0.629	1.44	21.3	51.9	2.61	34.2	0.00	0.00			302		
321	7.17	7.14	34.107	26.696	138.9	0.659	1.30	19.2	54.4	2.67	34.9	0.00	0.00			323	204	
381	6.62	6.59	34.126	26.786	130.9	0.740	1.03	15.0	62.6	2.83	36.8	0.00	0.00			383	203	
400	ISL 6.39	D 6.35	34.124	D 26.815	128.2	0.764	0.95	13.8	65.4	2.88	37.4	0.00	0.00			403		
441	6.11	6.07	34.155	26.876	122.8	0.816	0.80	11.5	71.2	2.98	38.7	0.00	0.00			444	202	
500	ISL 5.71	D 5.67	34.173	D 26.941	117.1	0.887	0.60	8.6	78.0	3.07	40.0	0.00	0.00			503		
521	5.67	5.63	34.197	26.965	115.1	0.911	0.53	7.5	80.4	3.10	40.5	0.00	0.00			525	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 85.4 35.8				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
34 0.8 N	118 49.9 W	19/01/09	0436 UTC	24 m	050	09 kn			1020.7 mb	23.0 c	12.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.68	13.68	33.383	25.004	294.4	0.000	6.31	106.9	3.0	0.35	0.4	0.05	0.22	1.96	0.55	0		
2	13.68	13.68	33.383	25.004	294.4	0.006	6.31	106.9	3.0	0.35	0.4	0.05	0.22	1.96	0.55	2	205	
5	13.68	13.68	33.384	25.005	294.4	0.015	6.32	107.1	3.1	0.36	0.4	0.05	0.20	2.01	0.60	5	204	
10	13.68	13.68	33.384	25.005	294.5	0.029	6.31	106.9	2.8	0.37	0.4	0.05	0.22	2.20	0.74	10	202	
10	13.68	13.68	33.384	25.005	294.5	0.029										10	203	
17	13.62	13.62	33.384	25.018	293.6	0.050	6.30	106.6	3.1	0.38	0.6	0.06	0.25	2.32	0.80	17	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 33.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 53.4 N	118 29.4 W	14/01/09	1616 UTC	56 m	190	01 kn	300 01 09	0	1018.6 mb	15.1 c	12.8 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.88	13.88	33.364	24.948	299.7	0.000	6.41	109.0	2.3	0.34	0.0	0.00	0.00	1.40	0.14	0		
1	A 13.88	13.88	33.364	24.948	299.7	0.003	6.41	109.0	2.3	0.34	0.0	0.00	0.00	1.40	0.14	1	208	
6	13.81	13.81	33.366	24.965	298.3	0.018	6.40	108.7	2.8	0.35	0.0	0.00	0.01	1.16	0.05	6	207	
10	13.63	13.63	33.360	24.997	295.3	0.030	6.18	104.6	3.8	0.38	0.4	0.05	0.11	1.64	0.00	10	205	
10	13.67	13.67	33.361	24.990	296.0	0.030										10	206	
20	13.13	13.13	33.347	25.088	287.0	0.059	5.42	90.8	7.2	0.79	5.2	0.31	3.56	1.18	0.21	20	204	
30	12.22	12.22	33.307	25.234	273.3	0.087	4.35	71.5	14.2	1.49	12.7	0.50	15.63	A 0.34	0.28	30	203	
40	12.17	12.16	33.442	25.349	262.6	0.114	4.17	68.5	13.5	1.38	12.6	0.43	3.36	0.56	0.41	40	202	
50	ISL 11.68	D 11.67	33.531	D 25.510	247.5	0.139	3.73	60.6	16.6	1.54	15.3	0.38	2.62	0.42	0.37	50		
51	11.65	11.64	33.528	25.513	247.2	0.142	3.69	60.0	16.9	1.56	15.6	0.37	2.55	0.41	0.37	51	201	

A) UNUSUAL PROFILES, ODD N03/P04 RATIOS AND HIGH AMMONIA MAY BE

DUE TO THE PROXIMITY OF THIS STATION TO THE HYPERION WASTE-WATER OUTFALL.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 35.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
33 49.4 N	118 37.8 W	14/01/09	1842 UTC	665 m	120	02 kn	300 01 07	0	1018.9 mb	18.0 C	12.8 C	17m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 14.03	14.03	33.364	24.917	302.6	0.000	6.43	109.7	2.6	0.37	0.1	0.01	0.02	1.19	0.26	0	
1	A 14.03	14.03	33.364	24.917	302.6	0.003	6.43	109.7	2.6	0.37	0.1	0.01	0.02	1.19	0.26	1	221
10	A 13.72	13.72	33.360	24.979	297.1	0.030	6.30	106.8	3.3	0.39	0.4	0.06	0.31	1.64	0.49	10	219
10	13.73	13.73	33.360	24.976	297.3	0.030	6.30	106.8	3.2	0.42	0.3	0.05	0.26	1.60	0.49	10	220
16	13.65	13.65	33.357	24.991	296.1	0.048	6.03	102.1	4.1	0.45	1.0	0.13	1.07	1.54	0.50	16	218
20	ISL 13.47	D 13.47	33.348	D 25.020	293.4	0.060	5.72	96.5	5.4	0.59	2.7	0.27	1.85	1.27	0.51	20	
23	A 13.29	13.29	33.354	25.061	289.5	0.068	5.48	92.1	6.4	0.71	4.2	0.36	2.28	1.05	0.52	23	217
30	ISL 13.12	D 13.12	33.370	D 25.108	285.3	0.088	5.12	85.7	7.7	0.87	6.8	0.29	1.29	0.79	0.47	30	
35	A 12.82	12.82	33.415	25.202	276.5	0.103	4.88	81.2	8.7	0.97	8.7	0.24	0.24	0.64	0.44	35	216
46	A 11.99	11.98	33.492	25.422	255.8	0.132	4.14	67.7	12.8	1.31	14.3	0.07	0.01	0.16	0.21	46	215
50	ISL 11.96	D 11.95	33.491	D 25.427	255.5	0.142	4.07	66.6	13.3	1.35	14.9	0.06	0.01	0.15	0.21	50	
60	11.67	11.66	33.514	25.499	248.8	0.167	3.98	64.7	14.2	1.39	15.7	0.05	0.01	0.12	0.22	60	214
73	A 11.15	11.14	33.625	25.680	231.8	0.198	3.51	56.5	18.0	1.59	18.7	0.07	0.01	0.06	0.14	73	213
75	ISL 11.06	D 11.05	33.641	D 25.709	229.2	0.203	3.44	55.2	18.5	1.62	19.0	0.07	0.01	0.06	0.14	75	
86	10.81	10.80	33.711	25.808	220.0	0.228	3.12	49.8	20.8	1.77	20.6	0.08	0.02	0.04	0.17	86	212
100	10.51	10.50	33.804	25.933	208.3	0.258	2.80	44.5	23.5	1.87	22.3	0.02	0.00	0.02	0.13	101	211
119	10.03	10.02	33.943	26.124	190.5	0.296	2.30	36.2	28.0	2.07	24.9	0.00	0.01	0.01	0.07	120	210
125	ISL 9.96	D 9.95	33.986	D 26.170	186.3	0.307	2.19	34.4	28.9	2.11	25.5	0.00	0.01	0.01	0.07	126	
139	9.82	9.80	34.037	26.233	180.6	0.333	2.00	31.3	30.6	2.19	26.5	0.00	0.01	0.02	0.07	140	209
150	ISL 9.84	D 9.82	34.053	D 26.243	179.9	0.352	1.88	29.5	31.8	2.23	27.0	0.00	0.01	0.02	0.07	151	
168	9.63	9.61	34.112	26.324	172.5	0.384	1.74	27.1	33.5	2.29	27.7	0.00	0.00	0.02	0.08	169	208
200	9.44	9.42	34.164	26.396	166.3	0.438	1.54	23.9	36.3	2.38	28.7	0.00	0.00	0.00	0.09	201	207
228	9.22	9.19	34.197	26.458	160.9	0.484	1.39	21.5	38.6	2.44	29.3	0.00	0.00			229	206
250	ISL 9.09	D 9.06	34.226	D 26.502	157.2	0.519	1.31	20.2	40.3	2.49	29.7	0.00	0.00			251	
268	8.91	8.88	34.233	26.537	154.2	0.547	1.24	19.0	41.9	2.54	30.1	0.00	0.00			270	205
300	ISL 8.52	D 8.49	34.248	D 26.610	147.7	0.596	1.05	16.0	46.3	2.64	31.4	0.00	0.00			302	
317	8.35	8.32	34.259	26.645	144.6	0.620	0.94	14.3	48.9	2.69	32.2	0.00	0.00			319	204
377	7.75	7.71	34.279	26.750	135.2	0.704	0.69	10.3	56.2	2.84	34.1	0.00	0.00			379	203
400	ISL 7.49	D 7.45	34.283	D 26.791	131.6	0.735	0.63	9.4	58.6	2.89	34.7	0.00	0.00			403	
438	7.24	7.20	34.290	26.832	128.1	0.784	0.53	7.8	63.0	2.97	35.7	0.00	0.00			441	202
500	ISL 6.59	D 6.54	34.319	D 26.944	117.8	0.861	0.34	5.0	74.1	3.11	37.6	0.00	0.02			503	
515	6.41	6.36	34.326	26.974	115.1	0.878	0.29	4.2	76.8	3.15	38.1	0.00	0.02			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 40.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
33 39.4 N	118 58.7 W	14/01/09	2301 UTC	752 m	310	12 kn	310 01 06	0	1016.6 mb	15.8 C	13.9 C	13m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 14.40	14.40	33.372	24.846	309.4	0.000	6.29	108.2	3.9	0.35	0.0	0.00	0.01	0.47	0.29	0	
1	14.40	14.40	33.372	24.846	309.4	0.003	6.29	108.2	3.9	0.35	0.0	0.00	0.01	0.47	0.29	1	224
10	13.93	13.93	33.358	24.934	301.3	0.031	6.38	108.6	3.5	0.30	0.0	0.00	0.06	0.60	0.33	10	223
19	13.83	13.83	33.370	24.964	298.8	0.058	6.26	106.4	4.3	0.33	0.0	0.01	0.03	0.68	0.55	19	222
20	ISL 13.83	D 13.83	33.366	D 24.961	299.1	0.061	6.23	105.9	4.4	0.34	0.1	0.02	0.03	0.72	0.59	20	
29	13.52	13.52	33.371	25.028	292.9	0.087	5.89	99.5	5.4	0.49	1.8	0.15	0.03	0.97	0.82	29	221
30	ISL 13.46	D 13.46	33.369	D 25.039	291.9	0.090	5.87	99.0	5.5	0.50	2.0	0.16	0.05	0.94	0.79	30	
40	12.97	12.96	33.392	25.155	281.1	0.119	5.58	93.2	6.9	0.69	4.8	0.25	0.16	0.53	0.35	40	220
50	12.36	12.35	33.408	25.286	268.8	0.146	4.91	80.9	9.8	0.99	9.7	0.17	0.01	0.24	0.21	50	219
60	11.88	11.87	33.435	25.398	258.4	0.173	4.58	74.7	12.0	1.17	12.5	0.08	0.00	0.17	0.16	60	218
70	11.36	11.35	33.479	25.528	246.2	0.198	4.19	67.6	14.3	1.37	15.7	0.02	0.00	0.11	0.16	70	217
75	ISL 11.19	D 11.18	33.538	D 25.605	239.0	0.210	4.02	64.7	15.6	1.45	17.0	0.02	0.00	0.09	0.14	75	
85	10.79	10.78	33.600	25.725	227.8	0.233	3.72	59.4	18.1	1.58	19.0	0.01	0.00	0.05	0.10	85	216
100	10.47	10.46	33.688	25.850	216.2	0.267	3.39	53.7	20.8	1.71	21.0	0.01	0.00	0.02	0.08	101	215
119	10.20	10.19	33.777	25.966	205.6	0.307	3.07	48.4	23.5	1.83	22.7	0.00	0.00	0.02	0.08	120	214
125	ISL 10.09	D 10.08	33.804	D 26.006	201.9	0.319	3.01	47.4	24.0	1.85	23.0	0.00	0.01	0.02	0.07	126	
139	10.01	9.99	33.835	26.044	198.6	0.347	2.87	45.1	25.1	1.91	23.5	0.00	0.02	0.02	0.06	140	213
150	ISL 9.78	D 9.76	33.891	D 26.126	190.9	0.368	2.72	42.5	26.8	1.97	24.3	0.00	0.02	0.02	0.06	151	
169	9.52	9.50	33.955	26.219	182.4	0.404	2.45	38.1	30.2	2.09	25.8	0.00	0.00	0.01	0.06	170	212
200	ISL 9.04	D 9.02	34.056	D 26.376	168.0	0.458	2.01	30.9	35.7	2.25	28.0	0.01	0.00	0.01	0.06	201	
201	9.03	9.01	34.059	26.380	167.7	0.460	2.00	30.8	35.9	2.25	28.1	0.01	0.00	0.01	0.06	202	211
229	8.70	8.68	34.123	26.483	158.4	0.506	1.69	25.8	40.0	2.40	29.8	0.01	0.00			230	210
250	ISL 8.52	D 8.49	34.148	D 26.530	154.2	0.538	1.48	22.5	43.2	2.49	30.9	0.01	0.00			251	
268	8.25	8.22	34.182	26.598	147.9	0.566	1.32	20.0	45.8	2.56	31.8	0.01	0.00			270	209
300	ISL 8.03	D 8.00	34.201	D 26.647	143.8	0.612	1.13	17.0	49.2	2.65	32.8	0.02	0.01			302	
317	7.88	7.85	34.208	26.674	141.4	0.636	1.05	15.8	51.0	2.70	33.3	0.02	0.01			319	208
377	7.31	7.27	34.252	26.792	130.9	0.718	0.71	10.5	59.6	2.88	35.4	0.00	0.00			379	207
400	ISL 7.25	D 7.21	34.272	D 26.816	129.0	0.748	0.59	8.7	62.7	2.95	36.0	0.00	0.00			403	
436	6.92	6.88	34.303	26.886	122.6	0.793	0.43	6.3	67.5	3.05	36.7	0.00	0.01			439	206
500	ISL 6.43	D 6.38	34.322	D 26.968	115.4	0.870	0.29	4.2	75.7	3.16	37.9	0.00	0.01			503	
512	6.36	6.31	34.329	26.982	114.1	0.883	0.27	3.9	77.3	3.17	38.1	0.00	0.01			516	205
586	5.85	5.80	34.356	27.069	106.4	0.965	0.18	2.6	88.3	3.27	38.6	0.00	0.00			590	204
600	ISL 5.82	D 5.77	34.355	D 27.072	106.2	0.980	0.17	2.4	90.0	3.28	38.6	0.00	0.02			604	
656	5.54	5.48	34.374	27.122	101.9	1.038	0.15	2.1	96.1	3.32	38.5	0.00	0.12			661	203
700	ISL 5.40	D 5.34	34.382	D 27.146	100.0	1.082	0.12	1.7	99.6	3.34	38.2	0.00	0.09			705	
746	5.28	5.22	34.392	27.168	98.3	1.128	0.10	1.4	105.3	3.39	37.1	0.00	0.06			752	202
751	5.26	5.20	34.395	27.173	97.8	1.133	0.10	1.4	106.3	3.40	36.9	0.00	0.85			757	201

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 45.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 29.6 N	119 18.8 W	15/01/09	0330 UTC	1652 m	240	05 kn			1017.1 mb	16.0 C	12.9 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL	13.84	13.84	33.375	24.965	298.1	0.000	6.16	104.7	4.7	0.43	1.0	0.06	0.11	0.47	0.19	0	
2		13.84	13.84	33.375	24.965	298.1	0.006	6.16	104.7	4.7	0.43	1.0	0.06	0.11	0.47	0.19	2	221
10		13.48	13.48	33.372	25.037	291.6	0.030	6.13	103.4	4.9	0.45	1.4	0.08	0.07	0.70	0.32	10	219
10		13.48	13.48	33.373	25.037	291.5	0.030	6.13	103.4	4.9	0.44	1.4	0.08	0.02	0.76	0.31	10	220
20		13.46	13.46	33.373	25.042	291.3	0.059	6.10	102.9	4.8	0.46	1.3	0.09	0.03	0.92	0.32	20	218
30		13.45	13.45	33.372	25.043	291.5	0.088	6.08	102.5	4.7	0.44	1.3	0.10	0.08	0.96	0.39	30	217
40		13.25	13.24	33.374	25.085	287.7	0.117	5.77	96.9	5.6	0.57	3.1	0.22	0.09	0.68	0.31	40	216
50		11.94	11.93	33.385	25.348	262.9	0.144	4.72	77.1	10.8	1.12	11.7	0.04	0.00	0.18	0.17	50	215
60		11.16	11.15	33.498	25.579	241.1	0.170	4.13	66.4	15.2	1.40	16.5	0.01	0.00	0.08	0.12	60	214
71		10.58	10.57	33.577	25.743	225.7	0.195	3.82	60.7	18.2	1.58	19.1	0.01	0.00	0.04	0.10	71	213
75	ISL	10.38	D 10.37	33.629	D 25.819	218.6	0.204	3.73	59.0	19.0	1.62	19.7	0.01	0.00	0.03	0.10	75	
86		10.35	10.34	33.673	25.858	215.1	0.228	3.45	54.5	21.2	1.71	21.2	0.00	0.00	0.02	0.10	86	212
100	ISL	9.99	D 9.98	33.834	D 26.046	197.6	0.257	2.89	45.4	25.0	1.90	23.5	0.00	0.00	0.01	0.07	101	
102		9.99	9.98	33.842	26.052	197.0	0.261	2.82	44.3	25.5	1.92	23.8	0.00	0.00	0.01	0.07	103	211
121		9.78	9.77	33.912	26.142	188.8	0.297	2.61	40.8	27.5	2.00	24.9	0.00	0.00	0.01	0.06	122	210
125	ISL	9.68	D 9.67	33.933	D 26.175	185.7	0.305	2.57	40.1	28.0	2.02	25.2	0.00	0.00	0.01	0.06	126	
141		9.49	9.47	33.980	26.243	179.6	0.334	2.39	37.1	30.3	2.10	26.3	0.00	0.00	0.01	0.05	142	209
150	ISL	9.47	D 9.45	34.023	D 26.280	176.2	0.350	2.22	34.5	31.9	2.16	27.0	0.00	0.00	0.01	0.05	151	
171		9.15	9.13	34.112	26.402	165.0	0.386	1.85	28.6	35.7	2.30	28.6	0.00	0.00	0.00	0.04	172	208
200	ISL	8.75	D 8.73	34.133	D 26.482	157.9	0.433	1.65	25.2	39.5	2.41	30.1	0.00	0.00	0.00	0.04	201	
201		8.75	8.73	34.136	26.485	157.7	0.434	1.65	25.2	39.6	2.41	30.1	0.00	0.00	0.00	0.04	202	207
231		8.47	8.45	34.168	26.553	151.6	0.481	1.41	21.4	43.5	2.54	31.3	0.00	0.00			232	206
250	ISL	8.28	D 8.25	34.193	D 26.602	147.3	0.509	1.29	19.5	45.9	2.60	32.0	0.00	0.00			252	
271		8.10	8.07	34.201	26.636	144.4	0.540	1.17	17.6	48.6	2.66	32.8	0.00	0.00			273	205
300	ISL	7.83	D 7.80	34.207	D 26.681	140.5	0.581	0.99	14.8	52.2	2.75	33.6	0.00	0.00			302	
321		7.69	7.66	34.234	26.723	136.8	0.610	0.86	12.8	54.8	2.81	34.1	0.00	0.00			323	204
383		7.27	7.23	34.285	26.823	128.0	0.692	0.57	8.4	61.8	2.97	35.8	0.00	0.00			386	203
400	ISL	7.13	D 7.09	34.281	D 26.840	126.6	0.714	0.52	7.7	63.7	3.00	36.3	0.00	0.00			403	
442		6.85	6.81	34.299	26.893	122.0	0.766	0.42	6.2	68.7	3.08	37.4	0.00	0.00			445	202
500	ISL	6.35	D 6.30	34.326	D 26.981	114.1	0.835	0.29	4.2	76.7	3.18	38.7	0.00	0.01			503	
520		6.23	6.18	34.334	27.003	112.1	0.857	0.24	3.5	79.4	3.22	39.2	0.00	0.02			524	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 50.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 19.4 N	119 39.8 W	15/01/09	0751 UTC	83 m	320	05 kn			1017.0 mb	14.0 C	13.0 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL	13.03	13.03	33.309	25.078	287.4	0.000	6.14	102.6	5.2	0.56	2.6	0.09	0.06	0.82	0.23	0	
2		13.03	13.03	33.309	25.078	287.4	0.006	6.14	102.6	5.2	0.56	2.6	0.09	0.06	0.82	0.23	2	210
6		13.02	13.02	33.316	25.085	286.8	0.017	6.10	101.9	5.4	0.58	2.9	0.10	0.06	1.09	0.13	6	209
10	CSL	12.96	12.96	33.335	25.112	284.4	0.029										10	200
10		12.96	12.96	33.336	25.113	284.3	0.029	5.99	100.0	5.9	0.61	3.5	0.12	0.07	0.90	0.30	10	208
11		12.95	12.95	33.342	25.119	283.7	0.031	5.96	99.4	5.8	0.63	3.5	0.12	0.07	0.84	0.33	11	207
20		12.87	12.87	33.354	25.145	281.5	0.057	5.80	96.6	6.6	0.69	4.5	0.16	0.08	0.93	0.36	20	206
30	ISL	12.86	D 12.86	33.357	D 25.149	281.4	0.085	5.77	96.1	6.9	0.69	4.8	0.17	0.08	0.87	0.36	30	
31		12.87	12.87	33.362	25.151	281.2	0.088	5.77	96.1	6.9	0.69	4.8	0.17	0.08	0.86	0.36	31	205
41		12.74	12.73	33.389	25.198	277.0	0.116	5.50	91.4	7.9	0.78	6.2	0.21	0.08	0.68	0.39	41	204
50		12.44	12.43	33.406	25.269	270.5	0.140	5.24	86.5	9.2	0.91	8.1	0.21	0.08	0.46	0.32	50	203
61		11.95	11.94	33.446	25.394	258.9	0.170	4.77	78.0	11.8	1.11	11.3	0.18	0.01	0.27	0.20	61	202
72		11.30	11.29	33.535	25.583	241.1	0.197	4.21	67.9	15.6	1.36	15.1	0.13	0.02	0.16	0.20	72	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 55.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 9.3 N	120 0.6 W	15/01/09	1121 UTC	1205 m	340	04 kn			1016.3 mb	14.5 C	12.9 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL	13.30	13.30	33.346	25.053	289.8	0.000	6.18	103.9	5.4	0.48	1.9	0.06	0.00	1.10	0.35	0	
2		13.30	13.30	33.346	25.053	289.8	0.006	6.18	103.9	5.4	0.48	1.9	0.06	0.00	1.10	0.35	2 221	
9		13.27	13.27	33.344	25.057	289.6	0.026										9 220	
10		13.24	13.24	33.344	25.063	289.0	0.029	6.14	103.1	5.4	0.50	2.3	0.07	0.01	1.08	0.44	10 219	
20		13.04	13.04	33.342	25.102	285.6	0.058	5.95	99.5	5.8	0.59	3.5	0.17	0.06	0.83	0.46	20 218	
30		12.97	12.97	33.341	25.115	284.6	0.086	5.85	97.6	6.2	0.61	3.9	0.20	0.09	0.68	0.42	30 217	
41		12.86	12.85	33.351	25.145	282.1	0.117	5.70	94.9	6.9	0.69	5.0	0.23	0.06	0.48	0.32	41 216	
50		12.35	12.34	33.383	25.269	270.5	0.142	5.20	85.7	9.2	0.90	8.4	0.20	0.04	0.23	0.21	50 215	
60		11.83	11.82	33.398	25.379	260.2	0.169	4.86	79.2	11.5	1.09	11.3	0.13	0.00	0.17	0.16	60 214	
69		11.68	11.67	33.402	25.410	257.5	0.192	4.78	77.7	12.1	1.15	12.0	0.11	0.00	0.14	0.14	69 213	
75	ISL	11.17	D 11.16	33.382	D 25.487	250.2	0.207	4.59	73.7	13.9	1.28	14.3	0.07	0.00	0.10	0.12	75	
84		10.44	10.43	33.456	25.674	232.6	0.229	4.21	66.6	17.3	1.51	18.3	0.01	0.00	0.04	0.08	84 212	
100		9.81	9.80	33.663	25.942	207.3	0.264	3.57	55.8	22.9	1.77	22.5	0.00	0.00	0.01	0.05	101 211	
119		9.26	9.25	33.824	26.158	187.1	0.302	3.10	47.9	27.4	1.90	24.9	0.01	0.00	0.00	0.03	120 210	
125	ISL	9.06	D 9.05	33.883	D 26.236	179.8	0.313	2.99	46.0	28.9	1.94	25.6	0.01	0.00	0.00	0.03	126	
138		8.77	8.76	33.947	26.332	170.8	0.335	2.76	42.2	32.0	2.02	26.8	0.01	0.00	0.00	0.03	139 209	
150	ISL	8.67	D 8.65	34.005	D 26.394	165.3	0.356	2.50	38.2	34.3	2.11	27.7	0.01	0.00	0.00	0.03	151	
168		8.60	8.58	34.070	26.456	159.7	0.385	2.11	32.2	37.4	2.24	28.9	0.00	0.00	0.00	0.03	169 208	
200		8.45	8.43	34.155	26.546	151.7	0.435	1.58	24.0	42.5	2.45	30.5	0.00	0.00	0.00	0.03	201 207	
228		8.07	8.05	34.173	26.618	145.3	0.476	1.33	20.0	47.3	2.56	32.3	0.00	0.00	0.00		229 206	
250	ISL	7.86	D 7.83	34.184	D 26.658	141.8	0.508	1.21	18.1	50.0	2.63	33.1	0.00	0.00	0.00		251	
268		7.75	7.72	34.199	26.686	139.4	0.533	1.13	16.9	51.8	2.68	33.6	0.00	0.00	0.00		270 205	
300	ISL	7.57	D 7.54	34.212	D 26.722	136.4	0.577	0.99	14.8	55.1	2.75	34.5	0.00	0.00	0.00		302	
318		7.33	7.30	34.206	26.752	133.7	0.602	0.92	13.6	57.0	2.79	35.0	0.00	0.00	0.00		320 204	
377		6.93	6.89	34.222	26.821	127.9	0.679	0.72	10.6	63.5	2.90	36.3	0.00	0.00	0.00		379 203	
400	ISL	6.58	D 6.54	34.222	D 26.868	123.5	0.708	0.68	9.9	66.0	2.94	36.9	0.00	0.00	0.00		403	
437		6.42	6.38	34.217	26.885	122.2	0.753	0.61	8.8	70.1	2.99	37.9	0.00	0.00	0.00		440 202	
500	ISL	6.10	D 6.06	34.262	D 26.963	115.5	0.828	0.42	6.0	76.9	3.09	39.1	0.00	0.00	0.00		503	
518		6.02	5.97	34.278	26.986	113.5	0.849	0.37	5.3	78.8	3.12	39.4	0.00	0.00	0.00		522 200	

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 60.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
32 59.1 N	120 20.8 W	15/01/09	1657 UTC	744 m	340	04 kn	300 02 07	0	1017.4 mb	14.8 C	13.0 C	10m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 13.10	13.10	33.337	25.086	286.6	0.000	6.31	105.6	5.3	0.53	2.6	0.08	0.04	1.38	0.24	0	
1	A 13.10	13.10	33.337	25.086	286.6	0.003	6.31	105.6	5.3	0.53	2.6	0.08	0.04	1.38	0.24	1	224
6	A 13.05	13.05	33.336	25.095	285.9	0.017	6.32	105.7	5.4	0.54	2.6	0.08	0.05	1.47	0.21	6	223
10	12.91	12.91	33.335	25.122	283.4	0.029	6.26	104.4	5.5	0.57	2.8	0.10	0.06	1.24	0.24	10	221
10	12.88	12.88	33.339	25.131	282.6	0.029			5.4	0.54	2.5	0.08	0.06			10	222
13	A 12.82	12.82	33.334	25.139	281.9	0.037	6.19	103.0	5.6	0.59	3.2	0.11	0.08	1.04	0.22	13	220
19	A 12.80	12.80	33.337	25.145	281.5	0.054	6.14	102.1	5.6	0.60	3.5	0.13	0.11	0.74	0.17	19	219
20	ISL 12.80	D 12.80	33.332	D 25.141	281.8	0.057	6.13	101.9	5.6	0.60	3.5	0.13	0.11	0.73	0.17	20	
28	A 12.70	12.70	33.337	25.165	279.8	0.079	6.06	100.6	5.8	0.62	3.8	0.16	0.15	0.69	0.18	28	218
30	ISL 12.70	D 12.70	33.335	D 25.163	280.0	0.085	6.05	100.4	5.8	0.62	3.8	0.16	0.16	0.68	0.20	30	
36	12.69	12.69	33.339	25.169	279.7	0.102	6.00	99.6	5.9	0.64	4.0	0.18	0.22	0.66	0.24	36	217
42	A 12.70	D 12.69	33.342	25.169	279.8	0.118	5.93	98.4	6.0	0.66	4.3	0.20	0.42	0.30	0.17	42	216
50	ISL 12.60	D 12.59	33.335	D 25.183	278.6	0.141	5.70	94.4	7.2	0.78	6.0	0.24	0.28	0.29	0.20	50	
51	12.51	12.50	33.341	25.205	276.6	0.144	5.67	93.7	7.4	0.79	6.2	0.24	0.24	0.29	0.20	51	215
60	10.95	10.94	33.416	25.553	243.6	0.167	4.36	69.7	15.1	1.40	16.3	0.03	0.00	0.11	0.13	60	214
69	10.42	10.41	33.518	25.725	227.3	0.188	4.01	63.4	18.2	1.58	19.1	0.01	0.01	0.05	0.08	69	213
75	ISL 10.19	D 10.18	33.592	D 25.822	218.2	0.201	3.91	61.6	19.2	1.63	19.9	0.01	0.01	0.04	0.08	75	
85	10.13	10.12	33.607	25.844	216.3	0.223	3.74	58.8	20.7	1.70	20.8	0.01	0.00	0.03	0.08	85	212
100	9.72	9.71	33.797	26.062	196.0	0.254	3.09	48.2	25.6	1.90	23.9	0.01	0.00	0.01	0.06	101	211
119	9.58	9.57	33.848	26.125	190.3	0.291	2.85	44.3	27.3	1.98	25.0	0.00	0.00	0.00	0.05	120	210
125	ISL 9.49	D 9.48	33.874	D 26.160	187.1	0.302	2.79	43.3	27.9	2.01	25.4	0.00	0.00	0.00	0.05	126	
138	9.35	9.33	33.903	26.206	183.0	0.326	2.67	41.3	29.2	2.06	26.3	0.00	0.01	0.00	0.05	139	209
150	ISL 9.15	D 9.13	33.934	D 26.262	177.8	0.348	2.58	39.8	30.4	2.09	26.9	0.00	0.01	0.00	0.05	151	
168	8.95	8.93	33.970	26.323	172.4	0.379	2.48	38.1	32.4	2.13	27.5	0.00	0.00	0.00	0.05	169	208
200	8.32	8.30	34.022	26.461	159.7	0.433	2.47	37.4	36.8	2.16	28.4	0.01	0.01	0.00	0.02	201	207
228	8.02	8.00	34.086	26.557	151.0	0.476	1.75	26.3	43.8	2.44	31.6	0.01	0.02			229	206
250	ISL 8.08	D 8.05	34.149	D 26.598	147.6	0.509	1.30	19.6	47.1	2.60	32.7	0.01	0.02			251	
268	8.05	8.02	34.194	26.638	144.1	0.535	1.02	15.4	49.1	2.70	33.1	0.01	0.01			270	205
300	ISL 7.85	D 7.82	34.227	D 26.694	139.3	0.580	0.83	12.4	52.5	2.79	33.7	0.00	0.00			302	
319	7.72	7.69	34.230	26.715	137.5	0.607	0.80	12.0	54.7	2.82	34.1	0.00	0.00			321	204
380	6.89	6.85	34.236	26.837	126.3	0.687	0.63	9.2	65.2	2.99	36.6	0.00	0.00			382	203
400	ISL 6.60	D 6.56	34.238	D 26.878	122.6	0.712	0.57	8.3	68.5	3.03	37.3	0.00	0.00			403	
438	6.21	6.17	34.242	26.932	117.6	0.758	0.48	6.9	74.2	3.09	38.5	0.00	0.00			441	202
500	ISL 5.82	D 5.78	34.267	D 27.002	111.5	0.829	0.38	5.4	81.0	3.17	39.8	0.00	0.00			503	
512	5.76	5.72	34.278	27.018	110.1	0.842	0.36	5.1	82.3	3.19	40.0	0.00	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 70.0			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	
32 39.4 N		121 1.8 W		15/01/09	2205 UTC	3791 m	340	06 kn	330 01 06	0	1016.1 mb	14.9 C	13.6 C	16m	0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 13.40	13.40	33.185	24.908	303.5	0.000	6.18	104.0	4.7	0.55	2.6	0.10	0.02	0.70	0.11	0	
2	13.40	13.40	33.185	24.908	303.6	0.006	6.18	104.0	4.7	0.55	2.6	0.10	0.02	0.70	0.11	2	222
10	13.10	13.10	33.188	24.970	297.8	0.030	6.22	104.0	4.4	0.55	2.5	0.10	0.02	0.80	0.13	10	221
10	13.08	13.08	33.188	24.974	297.5	0.030										10	220
16	12.92	12.92	33.182	25.002	295.0	0.048	6.28	104.6	4.5	0.55	2.6	0.11	0.04	0.88	0.15	16	219
19	12.84	12.84	33.174	25.011	294.2	0.057	6.20	103.1	4.6	0.56	2.7	0.12	0.02	0.90	0.17	19	218
20	ISL 12.80	D 12.80	33.168	D 25.014	293.9	0.060	6.18	102.7	4.6	0.57	2.8	0.13	0.02	0.88	0.17	20	
30	12.60	12.60	33.160	25.047	291.1	0.089	6.02	99.6	4.7	0.62	3.4	0.18	0.11	0.61	0.20	30	217
40	12.51	12.50	33.171	25.073	288.8	0.118	5.95	98.2	4.9	0.65	3.9	0.21	0.20	0.38	0.17	40	216
49	12.43	12.42	33.180	25.096	286.9	0.144	5.98	98.6	5.3	0.65	4.2	0.21	0.19	0.38	0.19	49	215
50	ISL 12.43	D 12.42	33.178	D 25.094	287.1	0.147	5.98	98.6	5.3	0.65	4.2	0.21	0.19	0.38	0.19	50	
60	12.36	12.35	33.188	25.116	285.3	0.175	5.96	98.1	5.5	0.66	4.4	0.21	0.21	0.38	0.20	60	214
70	12.34	12.33	33.215	25.141	283.2	0.204	5.96	98.1	5.7	0.69	4.6	0.23	0.21	0.36	0.18	70	213
75	ISL 12.13	D 12.12	33.206	D 25.174	280.1	0.218	5.84	95.7	6.4	0.75	5.6	0.22	0.15	0.29	0.16	75	
85	11.49	11.48	33.188	25.279	270.3	0.245	5.45	88.1	8.6	0.92	8.8	0.17	0.02	0.14	0.12	85	212
100	10.76	10.75	33.299	25.496	249.9	0.284	4.68	74.5	13.4	1.27	14.8	0.02	0.00	0.05	0.07	100	211
119	10.09	10.08	33.552	25.809	220.4	0.329	4.08	64.1	18.9	1.56	19.3	0.01	0.00	0.01	0.04	120	210
125	ISL 9.83	D 9.82	33.653	D 25.931	208.9	0.342	3.75	58.6	20.9	1.67	20.8	0.01	0.00	0.01	0.04	126	
139	9.84	9.82	33.818	26.059	197.1	0.370	2.97	46.5	25.3	1.89	23.9	0.00	0.00	0.01	0.04	140	209
150	ISL 9.71	D 9.69	33.908	D 26.151	188.6	0.392	2.62	40.9	27.6	1.99	25.2	0.00	0.00	0.01	0.04	151	
169	9.52	9.50	33.991	26.248	179.8	0.427	2.21	34.4	30.7	2.12	26.7	0.00	0.00	0.00	0.05	170	208
200	9.12	9.10	34.117	26.411	164.7	0.480	1.64	25.3	36.4	2.35	29.5	0.00	0.00	0.00	0.04	201	207
228	8.90	8.88	34.156	26.477	159.0	0.525	1.42	21.8	39.1	2.44	30.3	0.00	0.00			229	206
250	ISL 8.68	D 8.65	34.177	D 26.528	154.4	0.560	1.30	19.9	41.5	2.51	30.9	0.00	0.00			251	
268	8.53	8.50	34.195	26.566	151.2	0.587	1.21	18.4	43.7	2.56	31.5	0.00	0.00			270	205
300	ISL 8.13	D 8.10	34.201	D 26.632	145.3	0.635	1.02	15.4	48.8	2.67	32.9	0.00	0.00			302	
317	7.84	7.81	34.213	26.684	140.5	0.659	0.94	14.1	51.8	2.73	33.7	0.00	0.00			319	204
378	6.74	6.71	34.159	26.797	130.0	0.741	0.95	13.9	62.2	2.85	36.4	0.00	0.00			380	203
400	ISL 6.51	D 6.47	34.166	D 26.833	126.7	0.770	0.86	12.5	66.1	2.91	37.2	0.00	0.00			403	
438	6.10	6.06	34.183	26.899	120.6	0.817	0.67	9.6	72.2	3.02	38.4	0.00	0.00			441	202
500	ISL 5.82	D 5.78	34.242	D 26.982	113.4	0.889	0.45	6.4	78.5	3.12	39.5	0.00	0.00			503	
515	5.80	5.76	34.257	26.996	112.2	0.906	0.40	5.7	80.0	3.15	39.8	0.00	0.00			519	201

STATION 86.7 80.0

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

STATION 86.7 90.0

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 100.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
31 39.5 N	123 5.1 W	16/01/09	1735 UTC	4211 m	180	05 kn	360 02 05	2	1020.2 mb	14.8 C	12.0 C	15m	4/8	ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 14.49	14.49	33.273	24.751	318.5	0.000	5.96	102.6	2.2	0.37	0.1	0.01	0.02	0.51	0.13	0	
1	A 14.49	14.49	33.273	24.751	318.5	0.003	5.96	102.6	2.2	0.37	0.1	0.01	0.02	0.51	0.13	1	221
8	A 14.44	14.44	33.275	24.763	317.6	0.025	5.97	102.7	2.2	0.38	0.1	0.01	0.01	0.54	0.16	8	219
8	14.44	14.44	33.274	24.762	317.6	0.025										8	220
10	ISL 14.40	D 14.40	33.272	D 24.769	317.0	0.032	5.97	102.6	2.2	0.38	0.1	0.01	0.01	0.54	0.17	10	
19	A 14.26	D 14.26	33.279	D 24.804	313.9	0.060	5.96	102.1	2.3	0.37	0.2	0.02	0.01	0.56	0.19	19	218
20	ISL 14.26	D 14.26	33.268	D 24.796	314.8	0.063	5.96	102.1	2.3	0.37	0.2	0.02	0.01	0.56	0.19	20	
30	ISL 14.24	D 14.24	33.269	D 24.801	314.6	0.095	5.94	101.7	2.3	0.39	0.3	0.03	0.02	0.52	0.20	30	
31	A 14.24	14.24	33.272	24.804	314.4	0.098	5.94	101.7	2.3	0.39	0.3	0.03	0.02	0.51	0.20	31	217
41	A 14.21	14.20	33.273	24.811	314.0	0.129	5.91	101.2	2.3	0.40	0.4	0.04	0.01	0.49	0.24	41	216
50	ISL 14.17	D 14.16	33.266	D 24.814	313.9	0.158	5.88	100.6	2.4	0.41	0.5	0.05	0.08	0.43	0.21	50	
53	14.17	14.16	33.280	24.825	313.0	0.167	5.87	100.4	2.5	0.41	0.6	0.05	0.10	0.41	0.20	53	215
64	A 13.94	13.93	33.254	24.853	310.6	0.201	5.87	99.9	2.6	0.44	0.9	0.07	0.11	0.34	0.21	64	214
74	12.29	12.28	33.100	25.061	290.8	0.231	5.57	91.5	5.6	0.76	5.9	0.06	0.00	0.16	0.19	74	213
75	ISL 12.14	D 12.13	33.082	D 25.076	289.4	0.234	5.53	90.5	6.0	0.79	6.4	0.06	0.00	0.15	0.19	75	
84	11.00	10.99	33.116	25.311	267.1	0.259	5.19	82.9	9.4	1.05	10.8	0.01	0.00	0.07	0.15	84	212
100	10.59	10.58	33.336	25.554	244.3	0.300	4.71	74.7	13.3	1.27	14.7	0.01	0.00	0.03	0.06	100	211
119	10.00	9.99	33.534	25.810	220.3	0.344	4.20	65.8	18.1	1.52	18.9	0.00	0.00	0.01	0.03	120	210
125	ISL 9.83	D 9.82	33.606	D 25.895	212.4	0.357	4.00	62.5	19.9	1.61	20.3	0.00	0.00	0.01	0.03	126	
138	9.45	9.43	33.731	26.055	197.3	0.384	3.58	55.5	23.6	1.78	23.0	0.00	0.00	0.00	0.02	139	209
150	ISL 9.30	D 9.28	33.791	D 26.126	190.7	0.407	3.26	50.4	26.3	1.88	24.6	0.00	0.00	0.00	0.02	151	
168	8.92	8.90	33.908	26.279	176.6	0.440	2.89	44.3	29.6	1.98	26.1	0.00	0.00	0.00	0.02	169	208
200	8.52	8.50	33.987	26.403	165.2	0.495	2.62	39.8	34.1	2.09	27.9	0.00	0.00	0.00	0.02	201	207
228	8.21	8.19	34.014	26.472	159.1	0.540	2.34	35.3	38.0	2.20	29.6	0.00	0.00	0.00		229	206
250	ISL 7.99	D 7.96	34.025	D 26.514	155.4	0.575	2.18	32.8	40.8	2.27	30.6	0.00	0.00	0.00		251	
268	7.80	7.77	34.041	26.554	151.8	0.603	2.04	30.5	43.3	2.34	31.4	0.00	0.00	0.00		270	205
300	ISL 7.41	D 7.38	34.071	D 26.634	144.6	0.650	1.64	24.3	49.0	2.52	33.4	0.00	0.00	0.00		302	
320	7.21	7.18	34.090	26.677	140.7	0.679	1.38	20.4	52.8	2.63	34.7	0.00	0.00	0.00		322	204
378	6.65	6.62	34.148	26.800	129.6	0.757	0.94	13.7	62.4	2.84	36.8	0.00	0.00	0.00		380	203
400	ISL 6.50	D 6.46	34.156	D 26.826	127.3	0.785	0.81	11.8	65.2	2.90	37.4	0.00	0.00	0.00		403	
437	6.28	6.24	34.189	26.881	122.4	0.831	0.64	9.2	69.7	2.99	38.4	0.00	0.00	0.00		440	202
500	ISL 5.79	D 5.75	34.223	D 26.970	114.4	0.906	0.53	7.6	79.7	3.10	40.2	0.00	0.00	0.00		503	
514	5.58	5.54	34.207	26.984	113.1	0.922	0.51	7.2	81.9	3.13	40.6	0.00	0.00	0.00		517	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 86.7 110.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
31 19.5 N	123 44.3 W	16/01/09	2253 UTC	4035 m	300	01 kn	360 02 06	2	1008.6 mb	14.8 C	12.9 C	30m	5/8	ST			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 15.59	15.59	33.201	24.457	346.5	0.000	5.77	101.5	2.0	0.36	0.1	0.00	0.02	0.17	0.06	0	
2	15.59	15.59	33.201	24.457	346.6	0.007	5.77	101.5	2.0	0.36	0.1	0.00	0.02	0.17	0.06	2	221
10	15.41	15.41	33.197	24.494	343.3	0.035	5.78	101.3	1.8	0.36	0.1	0.00	0.02	0.18	0.07	10	219
10	15.41	15.41	33.200	24.496	343.1	0.035										10	220
20	ISL 15.39 D	15.39	33.194 D	24.496	343.4	0.069	5.78	101.3	1.9	0.35	0.1	0.00	0.01	0.19	0.08	20	
25	15.38	15.38	33.198	24.502	343.0	0.086	5.78	101.3	2.0	0.35	0.1	0.00	0.01	0.19	0.08	25	218
30	ISL 15.38 D	15.38	33.193 D	24.498	343.5	0.103	5.79	101.4	2.0	0.35	0.1	0.00	0.01	0.20	0.08	30	
39	15.37	15.36	33.197	24.504	343.2	0.134	5.80	101.6	2.0	0.35	0.1	0.00	0.01	0.21	0.09	39	217
49	15.36	15.35	33.196	24.505	343.4	0.168	5.78	101.2	1.8	0.36	0.1	0.00	0.01	0.24	0.10	49	216
50	ISL 15.36 D	15.35	33.191 D	24.502	343.8	0.172	5.78	101.2	1.8	0.36	0.1	0.00	0.01	0.24	0.10	50	
61	15.31	15.30	33.185	24.508	343.5	0.210	5.74	100.4	1.9	0.36	0.1	0.01	0.04	0.25	0.15	61	215
74	14.32	14.31	33.184	24.720	323.6	0.253	5.80	99.4	2.4	0.40	0.5	0.16	0.02	0.24	0.19	74	214
75	ISL 14.05 D	14.04	33.153 D	24.753	320.5	0.256	5.80	98.9	2.5	0.41	0.6	0.16	0.02	0.23	0.19	75	
86	12.82	12.81	33.046	24.918	304.9	0.291	5.75	95.5	3.3	0.52	2.0	0.07	0.02	0.15	0.22	86	213
100	12.15	12.14	33.020	25.026	294.8	0.333	5.69	93.1	4.0	0.61	3.6	0.02	0.03	0.10	0.13	100	212
110	11.64	11.63	33.044	25.140	284.1	0.362	5.56	90.0	5.4	0.72	5.5	0.01	0.03	0.05	0.08	110	211
123	11.23	11.21	33.167	25.310	268.1	0.397	5.32	85.5	8.1	0.92	9.0	0.01	0.03	0.03	0.05	124	210
125	ISL 11.25 D	11.23	33.167 D	25.307	268.5	0.403	5.28	84.9	8.5	0.95	9.5	0.01	0.03	0.03	0.05	126	
139	10.56	10.54	33.292	25.526	247.8	0.439	4.91	77.8	11.9	1.18	13.3	0.00	0.03	0.02	0.02	140	209
150	ISL 10.15 D	10.13	33.432 D	25.706	230.9	0.465	4.46	70.1	15.8	1.39	16.8	0.00	0.02	0.01	0.02	151	
163	9.78	9.76	33.649	25.937	209.1	0.494	3.96	61.8	20.1	1.61	20.4	0.00	0.00	0.00	0.02	164	208
200	9.25	9.23	33.882	26.207	184.2	0.567	3.74	57.8	23.7	1.64	21.7	0.00	0.00	0.00	0.01	201	207
228	8.75	8.73	33.957	26.345	171.4	0.616	3.45	52.7	28.2	1.78	24.0	0.00	0.00	0.00		229	206
250	ISL 8.32 D	8.29	33.991 D	26.438	162.8	0.653	2.97	45.0	33.1	1.97	26.7	0.00	0.00	0.00		251	
268	8.09	8.06	34.010	26.487	158.3	0.682	2.54	38.2	37.6	2.15	29.0	0.00	0.00	0.00		269	205
300	ISL 7.55 D	7.52	34.044 D	26.593	148.6	0.731	1.94	28.9	46.3	2.41	32.2	0.00	0.00	0.00		302	
318	7.28	7.25	34.070	26.652	143.1	0.757	1.67	24.7	50.9	2.53	33.7	0.00	0.00	0.00		320	204
378	6.64	6.61	34.113	26.774	132.1	0.840	1.15	16.8	60.7	2.77	36.3	0.00	0.00	0.00		380	203
400	ISL 6.41 D	6.37	34.111 D	26.802	129.5	0.869	1.00	14.5	64.3	2.85	37.2	0.00	0.00	0.00		402	
439	6.09	6.05	34.153	26.877	122.7	0.918	0.78	11.2	70.5	2.97	38.5	0.00	0.00	0.00		442	202
500	ISL 5.76 D	5.72	34.210 D	26.964	115.0	0.990	0.50	7.1	78.7	3.10	40.0	0.00	0.00	0.00		503	
512	5.69	5.65	34.222	26.982	113.3	1.004	0.45	6.4	80.3	3.13	40.3	0.00	0.00	0.00		515	201

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE				
33 53.3 N	118 26.7 W	14/01/09	1526 UTC	29 m	110 03 kn	300 01 07	0	1017.9 mb	16.0 c	11.0 c		0/8					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.90	13.90	33.336	24.923	302.1	0.000	6.64	113.0	1.6	0.33	0.2	0.08	0.08	3.63	1.05	0	
2	13.90	13.90	33.336	24.923	302.2	0.006	6.64	113.0	1.6	0.33	0.2	0.08	0.08	3.63	1.05	2	205
5	13.90	13.90	33.331	24.919	302.6	0.015	6.66	113.3	1.6	0.34	0.2	0.10	0.08	3.73	1.56	5	204
10	13.86	13.86	33.341	24.935	301.2	0.030	6.58	111.9	1.8	0.35	0.2	0.07	0.10	3.52	0.88	10	203
16	13.47	13.47	33.350	25.022	293.1	0.048	6.08	102.5	2.1	0.46	1.3	0.10	0.48	4.94	0.79	16	202
20 ISL	13.34 D	13.34	33.362 D	25.057	289.9	0.060	5.71	96.1	3.3	0.59	2.8	0.18	0.94	3.83	0.90	20	
21	13.31	13.31	33.364	25.065	289.2	0.063	5.62	94.5	3.6	0.62	3.2	0.20	1.05	3.55	0.93	21	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE				
33 40.5 N	118 5.6 W	14/01/09	1141 UTC	23 m	330 07 kn			1017.7 mb	14.6 c	12.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	13.79	13.79	33.302	24.919	302.5	0.000	6.19	105.1	2.8	0.36	0.6	0.05	0.11	1.69	0.57	0	
2	13.79	13.79	33.302	24.919	302.5	0.006	6.19	105.1	2.8	0.36	0.6	0.05	0.11	1.69	0.57	2	204
5	13.79	13.79	33.343	24.951	299.6	0.015	6.15	104.4	2.4	0.36	0.2	0.02	0.10	2.01	0.64	5	203
10	13.71	13.71	33.347	24.971	297.8	0.030	6.03	102.2	2.6	0.41	0.4	0.04	0.31	2.83	0.69	10	202
13	13.66	13.66	33.338	24.974	297.6	0.039	5.98	101.3	2.9	0.43	0.4	0.05	0.33	2.82	0.71	13	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE				
33 29.5 N	117 44.8 W	13/01/09	2310 UTC	23 m	290 04 kn	180 01 06	0	1018.5 mb	21.5 c	15.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.01	14.01	33.338	24.902	304.1	0.000	6.25	106.6	4.1	0.37	0.1	0.01	0.09	1.04	0.48	0	
2	14.01	14.01	33.338	24.902	304.2	0.006	6.25	106.6	4.1	0.37	0.1	0.01	0.09	1.04	0.48	2	205
5	14.04	14.04	33.336	24.894	305.0	0.015	6.27	107.0	4.1	0.37	0.2	0.02	0.13	1.00	0.52	5	204
10	13.88	13.88	33.337	24.928	301.9	0.030	6.16	104.8	4.2	0.41	0.3	0.04	0.16	1.05	0.62	10	203
15	13.75	13.75	33.336	24.954	299.6	0.045	6.06	102.8	4.5	0.44	0.7	0.07	0.24	1.27	0.55	15	202
20	13.71	13.71	33.337	24.963	298.8	0.060	6.13	103.9	4.4	0.41	0.5	0.06	0.18	1.10	0.63	20	201

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

RV NEW HORIZON CALCOFI CRUISE 0901 STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE				
33 29.1 N	117 46.1 W	13/01/09	2358 UTC	67 m	290 03 kn	170 01 06	0	1018.5 mb	21.2 c	14.8 c	14m	0/8					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	14.68	14.68	33.373	24.787	315.0	0.000	6.08	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.19	0	
2	14.68	14.68	33.373	24.787	315.1	0.006	6.08	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.19	2	208
5	14.21	14.21	33.363	24.879	306.4	0.016	6.12	104.8	3.7	0.33	0.0	0.00	0.03	0.68	0.24	5	207
10	14.09	14.09	33.359	24.901	304.4	0.031	6.15	105.1	3.9	0.33	0.0	0.00	0.02	0.77	0.33	10	206
20	13.90	13.90	33.344	24.929	302.0	0.061	6.11	104.0	4.0	0.35	0.1	0.03	0.03	1.66	0.72	20	205
30	13.28	13.28	33.343	25.055	290.3	0.091	5.24	88.0	6.9	0.74	5.4	0.31	0.01	0.92	0.55	30	204
40	12.26	12.25	33.422	25.316	265.7	0.119	4.23	69.6	12.0	1.24	13.4	0.12	0.02	0.29	0.24	40	203
50	11.82	11.81	33.517	25.473	251.0	0.144	3.87	63.1	14.6	1.40	16.0	0.05	0.04	0.13	0.14	50	202
60	11.15	11.14	33.667	25.712	228.5	0.168	3.27	52.6	18.9	1.63	19.6	0.05	0.04	0.04	0.11	60	201

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 30.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 25.2 N	117 54.2 W	14/01/09	0214 UTC	624 m	030	02 kn			1019.0 mb	18.0 c	12.9 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.56	14.56	33.352	24.797	314.1	0.000	6.19	106.8	3.8	0.33	0.0	0.00	0.03	0.63	0.23	0		
2	14.56	14.56	33.352	24.797	314.2	0.006	6.19	106.8	3.8	0.33	0.0	0.00	0.03	0.63	0.23	2	220	
10	13.98	13.98	33.342	24.911	303.5	0.031	6.20	105.7	3.8	0.33	0.0	0.02	0.03	1.18	0.54	10	219	
20	13.78	13.78	33.322	24.937	301.3	0.061	5.93	100.6	4.3	0.43	1.0	0.16	0.37	0.81	0.60	20	218	
30	13.38	13.38	33.337	25.030	292.7	0.091	5.38	90.6	6.4	0.68	4.6	0.28	0.19	0.44	0.42	30	217	
41	12.38	12.37	33.378	25.259	271.2	0.122	4.68	77.2	10.1	1.06	10.8	0.04	0.01	0.21	0.28	41	216	
50	ISL 11.77	D 11.76	33.433	D 25.417	256.3	0.146	4.37	71.1	12.3	1.24	13.8	0.02	0.01	0.14	0.22	50		
51	11.77	11.76	33.437	25.420	256.1	0.148	4.34	70.7	12.5	1.26	14.1	0.02	0.01	0.14	0.21	51	215	
60	11.33	11.32	33.520	25.566	242.4	0.171	4.06	65.5	15.2	1.39	16.3	0.01	0.01	0.06	0.11	60	214	
71	11.24	11.23	33.592	25.638	235.8	0.197	3.78	60.9	16.3	1.48	17.6	0.02	0.02	0.05	0.10	71	213	
75	ISL 10.94	D 10.93	33.649	D 25.736	226.5	0.206	3.62	58.0	17.4	1.54	18.5	0.02	0.02	0.04	0.09	75		
86	10.71	10.70	33.748	25.854	215.5	0.231	3.14	50.1	20.8	1.71	21.0	0.01	0.01	0.02	0.06	86	212	
100	ISL 10.49	D 10.48	33.847	D 25.970	204.8	0.260	2.70	42.9	23.8	1.87	22.8	0.01	0.01	0.01	0.05	101		
101	10.50	10.49	33.849	25.970	204.9	0.262	2.68	42.6	24.0	1.88	22.9	0.01	0.01	0.01	0.05	102	211	
120	10.19	10.18	33.940	26.095	193.4	0.300	2.39	37.7	27.1	2.00	24.4	0.01	0.00	0.00	0.05	121	210	
125	ISL 10.10	D 10.09	33.925	D 26.099	193.1	0.310	2.35	37.0	27.7	2.02	24.7	0.01	0.00	0.00	0.05	126		
141	9.90	9.88	34.004	26.194	184.3	0.340	2.24	35.1	29.3	2.08	25.5	0.01	0.00	0.00	0.04	142	209	
150	ISL 9.77	D 9.75	34.043	D 26.247	179.5	0.356	2.18	34.1	30.2	2.11	26.0	0.01	0.00	0.00	0.04	151		
171	9.52	9.50	34.095	26.329	172.1	0.393	2.01	31.3	32.5	2.18	27.2	0.01	0.00	0.00	0.03	172	208	
200	ISL 9.25	D 9.23	34.166	D 26.429	163.1	0.442	1.63	25.2	36.7	2.34	28.7	0.01	0.06	0.00	0.03	201		
201	9.24	9.22	34.171	26.434	162.7	0.443	1.62	25.1	36.9	2.35	28.7	0.01	0.06	0.00	0.03	202	207	
231	8.95	8.92	34.223	26.522	154.9	0.491	1.30	20.0	41.1	2.49	30.2	0.00	0.00	0.00	0.00	232	206	
250	ISL 8.85	D 8.82	34.226	D 26.540	153.4	0.520	1.28	19.6	42.3	2.51	30.6	0.00	0.00	0.00	0.00	251		
270	8.67	8.64	34.229	26.571	150.8	0.551	1.26	19.3	43.5	2.53	30.9	0.00	0.01	0.00	0.00	272	205	
300	ISL 8.22	D 8.19	34.224	D 26.636	144.9	0.595	1.09	16.5	47.4	2.62	32.1	0.01	0.01	0.00	0.00	302		
320	8.09	8.06	34.244	26.672	141.9	0.624	0.95	14.3	50.3	2.69	32.9	0.01	0.01	0.00	0.00	322	204	
381	7.55	7.51	34.277	26.777	132.6	0.707	0.66	9.8	57.7	2.86	34.7	0.00	0.01	0.00	0.00	383	203	
400	ISL 7.27	D 7.23	34.270	D 26.812	129.4	0.732	0.60	8.9	60.0	2.90	35.3	0.00	0.01	0.00	0.00	403		
441	7.02	6.98	34.286	26.859	125.3	0.784	0.49	7.2	65.0	2.99	36.5	0.00	0.00	0.00	0.00	444	202	
500	ISL 6.53	D 6.48	34.303	D 26.940	118.2	0.856	0.32	4.7	72.6	3.10	37.8	0.00	0.00	0.00	0.00	503		
519	6.46	6.41	34.326	26.967	115.8	0.879	0.26	3.8	75.0	3.14	38.2	0.00	0.00	0.00	0.00	523	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 35.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 15.0 N	118 15.2 W	14/01/09	0634 UTC	365 m	040	06 kn			1019.3 mb	15.4 c	13.7 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.66	14.66	33.376	24.794	314.4	0.000	6.00	103.7	3.0	0.33	0.0	0.00	0.00	0.45	0.09	0		
2	14.66	14.66	33.376	24.794	314.4	0.006	6.00	103.7	3.0	0.33	0.0	0.00	0.00	0.45	0.09	2	219	
10	14.44	14.44	33.372	24.838	310.5	0.031	6.05	104.1	2.9	0.32	0.0	0.00	0.01	0.57	0.08	10	217	
10	14.44	14.44	33.372	24.838	310.5	0.031										10	218	
20	14.28	14.28	33.369	24.870	307.8	0.062	6.03	103.4	3.0	0.33	0.0	0.00	0.01	0.66	0.24	20	216	
30	14.25	14.25	33.367	24.875	307.6	0.093	6.04	103.5	3.1	0.33	0.0	0.00	0.02	0.73	0.28	30	215	
41	14.06	14.05	33.346	24.899	305.6	0.127	5.70	97.3	4.4	0.48	2.0	0.09	0.05	0.65	0.40	41	214	
50	12.26	12.25	33.357	25.266	270.8	0.153	4.67	76.8	9.6	1.07	10.8	0.03	0.00	0.33	0.23	50	213	
60	12.10	12.09	33.468	25.382	259.9	0.179	4.16	68.2	11.9	1.26	13.8	0.01	0.00	0.19	0.14	60	212	
70	11.91	11.90	33.518	25.457	253.0	0.205	3.94	64.4	13.4	1.35	15.2	0.01	0.00	0.13	0.15	70	211	
75	ISL 11.82	D 11.81	33.543	D 25.494	249.7	0.217	3.82	62.3	14.2	1.40	16.0	0.01	0.00	0.10	0.13	75		
85	11.50	11.49	33.615	25.609	238.9	0.242	3.53	57.2	16.3	1.52	17.8	0.01	0.00	0.05	0.08	85	210	
100	10.74	10.73	33.772	25.868	214.6	0.276	2.98	47.5	21.1	1.78	21.4	0.02	0.01	0.02	0.06	100	209	
120	10.32	10.31	33.886	26.030	199.5	0.317	2.55	40.3	25.1	1.95	23.7	0.01	0.00	0.01	0.05	121	208	
125	ISL 10.31	D 10.30	33.887	D 26.033	199.4	0.327	2.47	39.1	26.0	1.98	24.1	0.01	0.01	0.01	0.05	126		
141	9.92	9.90	34.003	26.190	184.8	0.358	2.26	35.5	28.7	2.08	25.4	0.01	0.03	0.01	0.04	142	207	
150	ISL 9.78	D 9.76	34.048	D 26.249	179.3	0.374	2.12	33.2	30.5	2.14	26.3	0.01	0.02	0.01	0.04	151		
171	9.37	9.35	34.133	26.383	166.9	0.411	1.84	28.5	34.3	2.27	28.0	0.01	0.00	0.00	0.03	172	206	
200	ISL 9.12	D 9.10	34.156	D 26.442	161.9	0.458	1.71	26.4	36.7	2.34	28.8	0.02	0.04	0.00	0.03	201		
201	9.13	9.11	34.159	26.443	161.8	0.460	1.71	26.4	36.7	2.34	28.8	0.02	0.04	0.00	0.03	202	205	
231	9.04	9.01	34.177	26.472	159.7	0.508	1.60	24.6	38.3	2.39	29.3	0.02	0.03	0.00	0.00	232	204	
250	ISL 8.94	D 8.91	34.203	D 26.508	156.5	0.538	1.40	21.5	40.5	2.47	30.1	0.01	0.02	0.00	0.00	251		
271	8.70	8.67	34.233	26.570	151.0	0.571	1.16	17.7	43.6	2.58	31.2	0.01	0.00	0.00	0.00	273	203	
300	ISL 8.35	D 8.32	34.234	D 26.625	146.1	0.614	0.97	14.7	48.3	2.69	32.6	0.02	0.00	0.00	0.00	302		
318	8.01	7.98	34.247	26.686	140.4	0.639	0.89	13.4	51.2	2.75	33.4	0.02	0.00	0.00	0.00	320	202	
362	7.60	7.56	34.257	26.754	134.5	0.700	0.74	11.0	56.2	2.86	34.6	0.02	0.00	0.00	0.00	364	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 37.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
33 11.6 N	118 24.2 W	13/01/09	1826 UTC	1191 m	030	04 kn	050 01 03	0	1021.3 mb	19.5 c	15.2 c	17m		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.51	14.51	33.370	24.821	311.8	0.000	6.10	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.18	0		
1	A 14.51	14.51	33.370	24.821	311.8	0.003	6.10	105.1	3.6	0.33	0.0	0.00	0.02	0.53	0.18	1	220	
10	A 14.28	14.28	33.364	24.866	307.9	0.031	6.12	105.0	3.7	0.34	0.1	0.00	0.00	0.61	0.22	10	219	
16	14.21	14.21	33.360	24.877	306.9	0.049	6.11	104.6	3.7	0.34	0.1	0.00	0.04	0.82	0.33	16	218	
20	ISL 14.17 D	14.17	33.353 D	24.880	306.7	0.062	6.10	104.4	3.7	0.35	0.1	0.01	0.05	1.00	0.42	20		
23	A 14.16	14.16	33.357	24.886	306.3	0.071	6.07	103.8	3.7	0.35	0.1	0.01	0.06	1.10	0.48	23	217	
30	ISL 14.10 D	14.10	33.350 D	24.893	305.8	0.092	5.95	101.7	4.2	0.43	1.0	0.07	0.09	0.91	0.44	30		
35	A 13.99	13.99	33.357	24.921	303.3	0.108	5.73	97.7	4.6	0.48	1.6	0.10	0.10	0.65	0.42	35	216	
47	A 12.40	12.39	33.406	25.277	269.6	0.142	4.48	73.9	10.3	1.11	11.3	0.02	0.01	0.19	0.22	47	215	
50	ISL 12.28 D	12.27	33.451 D	25.335	264.2	0.150	4.34	71.4	11.0	1.18	12.3	0.02	0.01	0.17	0.20	50		
60	12.10	12.09	33.493	25.402	258.1	0.176	4.06	66.6	12.6	1.30	14.1	0.01	0.02	0.11	0.15	60	214	
73	A 11.58	11.57	33.593	25.577	241.7	0.209	3.66	59.4	15.8	1.49	17.2	0.00	0.00	0.04	0.10	73	213	
75	ISL 11.44 D	11.43	33.623 D	25.626	237.1	0.213	3.60	58.3	16.2	1.51	17.6	0.00	0.00	0.03	0.09	75		
86	11.09	11.08	33.696	25.746	225.8	0.239	3.27	52.5	18.6	1.65	19.6	0.00	0.01	0.02	0.07	86	212	
100	ISL 10.58 D	10.57	33.814 D	25.929	208.8	0.269	2.80	44.5	23.0	1.85	22.2	0.00	0.00	0.01	0.05	100		
101	10.58	10.57	33.816	25.930	208.6	0.271	2.77	44.1	23.3	1.86	22.4	0.00	0.00	0.01	0.05	102	211	
120	10.20	10.19	33.883	26.049	197.8	0.310	2.59	40.9	25.8	1.99	24.0	0.00	0.02	0.01	0.05	121	210	
125	ISL 10.10 D	10.09	33.918 D	26.093	193.6	0.320	2.52	39.7	26.5	2.02	24.4	0.00	0.02	0.01	0.05	126		
139	9.88	9.86	34.019 D	26.209	182.9	0.346										140	209	
150	ISL 9.83 D	9.81	34.055 D	26.246	179.6	0.366	2.13	33.4	30.1	2.17	26.2	0.00	0.01	0.00	0.05	151		
169	9.63	9.61	34.107	26.320	172.9	0.399	1.81	28.2	32.9	2.27	27.4	0.00	0.00	0.00	0.05	170	208	
200	9.25	9.23	34.190	26.448	161.4	0.451	1.43	22.1	37.6	2.44	29.2	0.01	0.00	0.00	0.05	201	207	
228	8.96	8.94	34.213	26.512	155.7	0.496	1.29	19.8	40.7	2.53	30.3	0.03	0.00			229	206	
250	ISL 8.73 D	8.70	34.215 D	26.551	152.4	0.530	1.27	19.4	42.9	2.58	30.9	0.02	0.01			251		
268	8.49	8.46	34.213	26.586	149.2	0.557	1.25	19.0	44.7	2.61	31.4	0.00	0.01			270	205	
300	ISL 8.15 D	8.12	34.227 D	26.649	143.7	0.604	1.08	16.3	48.6	2.69	32.5	0.00	0.01			302		
318	7.97	7.94	34.233	26.681	140.9	0.629	0.97	14.6	50.8	2.74	33.2	0.00	0.01			320	204	
378	7.49	7.45	34.253	26.767	133.4	0.712	0.76	11.3	57.1	2.88	34.9	0.00	0.00			380	203	
400	ISL 7.34 D	7.30	34.256 D	26.791	131.4	0.741	0.67	9.9	59.6	2.94	35.4	0.00	0.02			403		
439	7.08	7.04	34.288	26.853	126.0	0.791	0.51	7.5	64.1	3.04	36.4	0.00	0.05			442	202	
500	ISL 6.53 D	6.48	34.301 D	26.938	118.3	0.865	0.37	5.4	71.5	3.12	38.1	0.00	0.02			503		
515	6.42	6.37	34.307	26.957	116.6	0.883	0.34	4.9	73.3	3.14	38.5	0.00	0.01			519	201	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 45.0				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	
32 52.8 N		119 0.6 W		13/01/09	1045 UTC	1629 m	300	02 kn			1020.6 mb	16.3 c	12.2 c					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.56	13.56	33.281	24.950	299.5	0.000	6.10	103.0	4.2	0.48	1.7	0.07	0.03	0.81	0.14	0		
2	13.56	13.56	33.281	24.950	299.6	0.006	6.10	103.0	4.2	0.48	1.7	0.07	0.03	0.81	0.14	2	221	
10	13.52	13.52	33.281	24.958	299.0	0.030	6.11	103.1	4.2	0.49	1.7	0.08	0.03	0.79	0.16	10	219	
10	13.49	13.49	33.280	24.964	298.5	0.030										10	220	
20	13.18	13.18	33.274	25.021	293.3	0.060	6.07	101.7	4.3	0.51	2.0	0.09	0.03	0.88	0.22	20	218	
30	13.13	13.13	33.282	25.038	292.0	0.089	5.99	100.3	4.5	0.54	2.3	0.13	0.14	0.67	0.35	30	217	
40	13.08	13.07	33.284	25.050	291.1	0.118	5.93	99.2	4.8	0.57	2.8	0.17	0.15	0.74	0.22	40	216	
49	12.32	12.31	33.264	25.182	278.7	0.144	5.53	91.0	7.2	0.82	6.8	0.22	0.00	0.23	0.14	49	215	
50	ISL 11.82 D	11.81	33.249 D	25.265	270.8	0.146	5.50	89.5	7.5	0.85	7.2	0.20	0.00	0.22	0.13	50		
60	11.07	11.06	33.192	25.357	262.2	0.173	5.09	81.5	10.5	1.09	11.3	0.03	0.00	0.09	0.10	60	214	
69	11.23	11.22	33.390	25.483	250.5	0.196	4.50	72.4	13.0	1.27	14.2	0.03	0.00	0.08	0.10	69	213	
75	ISL 10.71 D	10.70	33.357 D	25.549	244.2	0.211	4.67 D	74.3	14.2	1.34	15.4	0.02	0.00	0.06	0.08	75		
85	10.46	10.45	33.457	25.671	232.9	0.235	4.37	69.2	16.1	1.43	17.0	0.01	0.00	0.03	0.05	85	212	
100	10.12	10.11	33.601	25.842	216.9	0.268	3.92	61.6	19.6	1.60	19.7	0.01	0.00	0.01	0.04	100	211	
119	9.67	9.66	33.854	26.115	191.3	0.307	2.77	43.2	27.3	1.97	24.7	0.00	0.00	0.00	0.06	120	210	
125	ISL 9.56 D	9.55	33.882 D	26.155	187.6	0.319	2.68	41.7	28.5	2.00	25.0	0.00	0.00	0.00	0.06	126		
139	9.42	9.40	33.912 D	26.202	183.5	0.345										140	209	
150	ISL 9.39 D	9.37	33.925 D	26.217	182.2	0.365	2.54 D	39.4	32.1	2.12	26.1	0.00	0.00	0.00	0.05	151		
171	9.39	9.37	34.081	26.339	171.1	0.402	1.99	30.9	33.1	2.22	27.0	0.00	0.00	0.00	0.05	172	208	
200	ISL 9.07 D	9.05	34.128 D	26.428	163.1	0.450	1.82	28.0	36.3	2.32	28.3	0.00	0.00	0.00	0.03	201		
201	9.07	9.05	34.126	26.426	163.3	0.452	1.81	27.9	36.4	2.32	28.3	0.00	0.00	0.00	0.03	202	207	
228	8.97	8.95	34.204	26.504	156.5	0.495	1.43	22.0	39.7	2.47	29.6	0.02	0.00			229	206	
250	ISL 8.54 D	8.51	34.207 D	26.574	150.1	0.529	1.28	19.5	43.1	2.56	30.7	0.01	0.01			251		
268	8.37	8.34	34.215	26.606	147.3	0.556	1.21	18.4	45.9	2.61	31.5	0.00	0.01			270	205	
300	ISL 7.87 D	7.84	34.191 D	26.662	142.2	0.602	1.11	16.7	49.9	2.68	32.7	0.00	0.00			302		
317	7.77	7.74	34.211	26.693	139.6	0.626	1.06	15.9	51.9	2.72	33.3	0.00	0.00			319	204	
377	7.36	7.32	34.262	26.793	130.9	0.707	0.69	10.2	58.7	2.90	34.9	0.00	0.00			379	203	
400	ISL 7.15 D	7.11	34.262 D	26.822	128.3	0.737	0.62	9.1	61.4	2.95	35.6	0.00	0.00			403		
437	6.87	6.83	34.269	26.866	124.4	0.784	0.53	7.8	65.7	3.02	36.6	0.00	0.00			440	202	
500	ISL 6.50 D	6.45	34.299 D	26.940	118.1	0.860	0.37	5.4	72.0	3.12	37.9	0.00	0.00			503		
520	6.39	6.34	34.312	26.965	115.9	0.883	0.32	4.6	74.0	3.15	38.3	0.00	0.00			524	201	

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 53.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
32 39.2 N	119 28.8 W	13/01/09	0534 UTC	1320 m	050	07 kn			1020.2 mb	16.1 c	13.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 13.94	13.94	33.264	24.859	308.2	0.000	6.07	103.3	3.2	0.41	0.7	0.04	0.04	0.91	0.16	0		
2	13.94	13.94	33.264	24.859	308.3	0.006	6.07	103.3	3.2	0.41	0.7	0.04	0.04	0.91	0.16	2	220	
10	ISL 13.78	D 13.78	33.256	D 24.886	305.9	0.031	6.06	102.8	3.3	0.43	0.9	0.05	0.03	0.90	0.19	10		
11	13.77	13.77	33.269	24.898	304.8	0.034	6.06	102.8	3.3	0.43	1.0	0.05	0.03	0.90	0.19	11	219	
20	ISL 13.10	D 13.10	33.266	D 25.031	292.4	0.061	6.12	102.4	4.1	0.49	2.0	0.09	0.04	0.88	0.22	20		
21	13.10	13.10	33.268	25.033	292.2	0.064	6.12	102.4	4.2	0.50	2.1	0.10	0.04	0.88	0.22	21	218	
30	ISL 12.91	D 12.91	33.268	D 25.070	288.9	0.090	6.02	100.3	4.5	0.55	2.8	0.15	0.09	0.86	0.30	30		
31	12.91	12.91	33.271	25.073	288.7	0.093	6.00	100.0	4.5	0.56	2.9	0.15	0.10	0.86	0.30	31	217	
40	12.84	12.83	33.279	25.093	287.0	0.119	5.93	98.7	4.9	0.59	3.3	0.17	0.19	0.77	0.10	40	216	
50	ISL 12.71	D 12.70	33.304	D 25.138	282.9	0.147	5.86	97.2	5.6	0.64	4.0	0.20	0.30	0.39	0.17	50		
51	12.68	12.67	33.309	25.148	282.0	0.150	5.85	97.0	5.7	0.64	4.1	0.20	0.30	0.35	0.18	51	215	
61	11.73	11.72	33.261	25.291	268.6	0.177	5.17	84.0	9.3	1.00	9.9	0.10	0.04	0.15	0.11	61	214	
71	10.59	10.58	33.308	25.532	245.8	0.203	4.80	76.1	13.1	1.23	14.2	0.02	0.02	0.05	0.05	71	213	
75	ISL 10.57	D 10.56	33.306	D 25.534	245.6	0.213	4.75	75.3	13.7	1.26	14.8	0.02	0.01	0.04	0.04	75		
86	10.29	10.28	33.370	25.632	236.5	0.239	4.65	73.3	14.7	1.32	15.6	0.01	0.00	0.03	0.03	86	212	
100	ISL 9.95	D 9.94	33.514	D 25.802	220.6	0.271	4.25	66.5	18.3	1.52	18.7	0.01	0.00	0.01	0.02	100		
101	9.95	9.94	33.517	25.805	220.4	0.274	4.22	66.1	18.6	1.54	18.9	0.01	0.00	0.01	0.02	101	211	
120	9.65	9.64	33.736	26.026	199.8	0.314	3.52	54.8	23.6	1.77	22.8	0.01	0.00	0.01	0.02	121	210	
125	ISL 9.55	D 9.54	33.770	D 26.069	195.8	0.323	3.44	53.5	24.2	1.79	23.2	0.01	0.00	0.01	0.02	126		
141	9.43	9.41	33.812	26.122	191.1	0.354	3.24	50.2	25.7	1.85	24.0	0.01	0.00	0.01	0.02	142	209	
150	ISL 9.23	D 9.21	33.907	D 26.229	181.1	0.371	2.97	45.9	27.5	1.94	25.1	0.01	0.00	0.01	0.02	151		
170	9.12	9.10	33.952	26.282	176.4	0.407	2.40	37.0	31.8	2.13	27.6	0.00	0.01	0.00	0.03	171	208	
200	ISL 8.71	D 8.69	34.019	D 26.399	165.7	0.458	2.20	33.6	35.4	2.22	29.0	0.00	0.01	0.00	0.03	201		
201	8.70	8.68	34.022	26.403	165.3	0.460	2.20	33.6	35.5	2.22	29.0	0.00	0.01	0.00	0.03	202	207	
231	8.14	8.12	34.066	26.523	154.3	0.508	2.01	30.3	41.1	2.33	30.6	0.01	0.00			232	206	
250	ISL 7.86	D 7.84	34.103	D 26.594	147.8	0.536	1.72	25.8	46.2	2.47	32.3	0.01	0.00			251		
270	7.51	7.48	34.128	26.664	141.3	0.565	1.39	20.7	51.4	2.62	34.0	0.00	0.00			272	205	
300	ISL 7.25	D 7.22	34.167	D 26.732	135.2	0.607	1.09	16.1	55.5	2.75	35.0	0.00	0.00			302		
321	7.29	7.26	34.202	26.754	133.5	0.635	0.94	13.9	57.3	2.81	35.2	0.00	0.00			323	204	
381	7.17	7.13	34.257	26.815	128.7	0.714	0.65	9.6	61.7	2.93	36.0	0.00	0.00			383	203	
400	ISL 7.11	D 7.07	34.259	D 26.825	128.0	0.738	0.62	9.1	63.0	2.95	36.4	0.00	0.00			403		
441	6.78	6.74	34.252	26.865	124.5	0.790	0.58	8.5	66.7	2.99	37.3	0.00	0.00			444	202	
500	ISL 6.29	D 6.24	34.295	D 26.964	115.6	0.861	0.38	5.5	76.2	3.13	39.0	0.00	0.00			503		
519	6.06	6.01	34.305	27.002	112.0	0.882	0.32	4.6	79.2	3.18	39.6	0.00	0.00			523	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 60.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
32 25.0 N	119 57.4 W	13/01/09	0035 UTC	901 m	100	07 kn	360 02 05	0	1018.7 mb	16.5 C	14.5 C							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.86	14.86	33.281	24.678	325.4	0.000	5.89	102.2	2.5	0.40	0.2	0.02	0.01	0.46	0.09	0		
2	14.86	14.86	33.281	24.678	325.5	0.007	5.89	102.2	2.5	0.40	0.2	0.02	0.01	0.46	0.09	2	220	
10	14.52	14.52	33.272	24.744	319.4	0.032	5.90	101.6	2.5	0.40	0.1	0.03	0.04	0.48	0.13	10	219	
20	ISL 14.42	D 14.42	33.253	D 24.751	319.1	0.064	5.90	101.4	2.5	0.39	0.2	0.03	0.02	0.57	0.16	20		
21	14.43	14.43	33.261	24.755	318.7	0.067	5.90	101.4	2.5	0.39	0.2	0.03	0.02	0.57	0.16	21	218	
30	14.26	14.26	33.224	24.762	318.3	0.096	5.84	100.0	2.6	0.43	0.7	0.06	0.01	0.44	0.17	30	217	
41	12.79	12.78	33.056	24.930	302.5	0.130	5.73	95.1	4.0	0.59	2.9	0.07	0.02	0.21	0.17	41	216	
50	ISL 11.82	D 11.81	32.949	D 25.032	293.0	0.157	5.69	92.5	4.9	0.68	4.4	0.03	0.01	0.13	0.14	50		
51	11.82	11.81	32.954	25.036	292.6	0.160	5.69	92.5	5.0	0.69	4.6	0.03	0.01	0.12	0.13	51	215	
61	10.85	10.84	32.900	25.169	280.1	0.189	5.61	89.2	7.1	0.89	7.6	0.02	0.01	0.06	0.07	61	214	
71	10.74	10.73	32.986	25.255	272.1	0.216	5.47	86.9	8.2	0.96	9.0	0.02	0.00	0.05	0.06	71	213	
75	ISL 10.89	D 10.88	33.052	D 25.280	269.8	0.227	5.44	86.7	8.3	0.96	9.1	0.02	0.00	0.05	0.06	75		
86	10.77	10.76	33.097	25.337	264.7	0.256	5.30	84.3	9.1	1.00	9.9	0.02	0.00	0.04	0.05	86	212	
100	ISL 10.42	D 10.41	33.374	D 25.613	238.6	0.292	4.77	75.4	13.3	1.24	14.1	0.02	0.00	0.03	0.04	100		
101	10.44	10.43	33.355	25.595	240.4	0.294	4.73	74.8	13.6	1.26	14.4	0.02	0.00	0.03	0.04	101	211	
121	9.97	9.96	33.568	25.842	217.4	0.340	4.09	64.1	18.9	1.57	19.3	0.01	0.00	0.01	0.02	122	210	
125	ISL 9.93	D 9.92	33.587	D 25.863	215.4	0.348	3.96	62.0	19.9	1.61	20.0	0.01	0.00	0.01	0.02	126		
140	9.65	9.63	33.750	26.037	199.1	0.380	3.49	54.4	23.2	1.75	22.4	0.01	0.00	0.00	0.02	141	209	
150	ISL 9.51	D 9.49	33.812	D 26.109	192.5	0.399	3.31	51.4	25.1	1.81	23.6	0.01	0.00	0.00	0.02	151		
170	9.00	8.98	33.911	26.269	177.6	0.436	2.95	45.3	29.1	1.94	25.7	0.00	0.00	0.00	0.02	171	208	
200	8.62	8.60	34.051	26.438	162.0	0.487	1.97	30.0	37.2	2.28	29.8	0.00	0.01	0.00	0.02	201	207	
231	8.49	8.47	34.081	26.482	158.4	0.537	1.75	26.6	39.3	2.36	30.7	0.00	0.00			232	206	
250	ISL 8.22	D 8.19	34.124	D 26.557	151.5	0.566	1.55	23.4	42.8	2.46	31.7	0.00	0.00			251		
270	7.98	7.95	34.137	26.603	147.4	0.596	1.35	20.3	46.9	2.56	32.8	0.00	0.00			272	205	
300	ISL 7.60	D 7.57	34.133	D 26.656	142.7	0.640	1.19	17.7	50.6	2.65	33.6	0.00	0.00			302		
321	7.54	7.51	34.171	26.695	139.3	0.669	1.11	16.5	53.0	2.70	34.1	0.00	0.00			323	204	
381	6.80	6.76	34.190	26.813	128.5	0.750	0.81	11.9	62.7	2.88	36.5	0.00	0.00			383	203	
400	ISL 6.58	D 6.54	34.187	D 26.840	126.1	0.774	0.70	10.2	65.3	2.94	37.1	0.00	0.00			403		
441	6.43	6.39	34.252	26.912	119.8	0.824	0.49	7.1	70.8	3.05	38.2	0.00	0.00			444	202	
500	ISL 5.95	D 5.91	34.307	D 27.017	110.2	0.892	0.31	4.4	79.6	3.16	39.6	0.00	0.00			503		
519	5.88	5.83	34.330	27.044	107.8	0.913	0.25	3.6	82.4	3.19	40.0	0.00	0.00			523	201	

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 70.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
32 5.1 N	120 38.2 W	12/01/09	1815 UTC	3821 m	050	03 kn	050 02 05	0	1020.2 mb	16.9 c	15.0 c	21m		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.67	14.67	33.299	24.733	320.2	0.000	5.83	100.8	2.2	0.37	0.1	0.01	0.00	0.43	0.13	0		
2	A 14.67	14.67	33.299	24.733	320.3	0.006	5.83	100.8	2.2	0.37	0.1	0.01	0.00	0.43	0.13	2	222	
10	ISL 14.64	D 14.64	33.295	D 24.736	320.2	0.032	5.86	101.2	2.3	0.38	0.1	0.01	0.02	0.43	0.14	10		
12	A 14.62	14.62	33.297	24.742	319.7	0.038	5.87	101.3	2.3	0.38	0.1	0.01	0.02	0.43	0.14	12	220	
20	14.61	14.61	33.298	24.745	319.6	0.064	5.84	100.8	2.3	0.37	0.1	0.01	0.01	0.43	0.14	20	219	
28	A 14.61	14.61	33.298	24.745	319.8	0.090	5.84	100.8	2.2	0.36	0.1	0.01	0.02	0.44	0.16	28	218	
30	ISL 14.61	D 14.61	33.294	D 24.742	320.2	0.096	5.84	100.8	2.2	0.36	0.1	0.01	0.01	0.44	0.16	30		
36	14.61	14.60	33.299	24.746	320.0	0.115	5.84	100.8	2.2	0.37	0.1	0.01	0.00	0.44	0.15	36	217	
43	A 14.61	14.60	33.299	24.747	320.2	0.138	5.84	100.8	2.3	0.38	0.1	0.01	0.01	0.44	0.14	43	216	
50	ISL 14.61	D 14.60	33.292	D 24.741	320.9	0.160	5.81	100.3	2.3	0.41	0.1	0.02	0.02	0.46	0.17	50		
51	14.60	14.59	33.297	24.748	320.3	0.163	5.81	100.3	2.3	0.41	0.1	0.02	0.02	0.46	0.17	51	215	
59	A 14.57	14.56	33.293	24.751	320.2	0.189	5.81	100.2	2.2	0.41	0.2	0.03	0.05	0.37	0.15	59	214	
75	13.28	13.27	33.115	24.880	308.2	0.239	5.73	96.1	3.4	0.56	2.0	0.18	0.00	0.16	0.19	75	213	
90	A 11.50	11.49	32.927	25.074	289.8	0.284	5.70	92.0	5.1	0.74	4.9	0.01	0.00	0.08	0.12	90	212	
100	ISL 10.69	D 10.68	32.967	D 25.250	273.2	0.312	5.56	88.2	7.5	0.93	8.1	0.01	0.00	0.04	0.07	100		
106	10.52	10.51	33.012	25.314	267.2	0.328	5.40	85.3	9.2	1.05	10.1	0.01	0.00	0.03	0.05	106	211	
119	10.80	10.79	33.397	25.566	243.7	0.362	4.74	75.5	12.8	1.25	13.9	0.01	0.00	0.02	0.03	120	210	
125	ISL 10.90	D 10.88	33.579	D 25.690	232.1	0.376	4.49	71.8	14.1	1.32	15.1	0.01	0.00	0.02	0.03	126		
139	10.48	10.46	33.650	25.819	220.0	0.407	4.01	63.6	17.0	1.46	17.5	0.01	0.00	0.01	0.02	140	209	
150	ISL 10.08	D 10.06	33.738	D 25.956	207.1	0.431	3.74	58.8	19.8	1.59	19.5	0.01	0.00	0.01	0.01	151		
169	9.46	9.44	33.869	26.162	187.8	0.468	3.36	52.1	24.6	1.79	22.7	0.00	0.00	0.00	0.01	170	208	
200	8.95	8.93	33.977	26.329	172.5	0.524	2.76	42.4	30.7	2.02	26.2	0.00	0.00	0.00	0.02	201	207	
228	8.57	8.55	34.038	26.436	162.7	0.571	2.44	37.2	35.2	2.16	28.1	0.00	0.00			229	206	
250	ISL 8.14	D 8.11	34.059	D 26.518	155.1	0.606	2.11	31.8	40.2	2.28	29.9	0.00	0.00			251		
267	7.93	7.90	34.084	26.569	150.5	0.632	1.85	27.8	44.1	2.38	31.3	0.00	0.00			268	205	
300	ISL 7.56	D 7.53	34.123	D 26.654	142.8	0.681	1.52	22.6	49.8	2.56	33.1	0.00	0.00			302		
317	7.32	7.29	34.120	26.686	139.9	0.705	1.38	20.4	52.3	2.65	33.9	0.00	0.00			319	204	
377	6.78	6.75	34.158	26.790	130.6	0.786	0.96	14.0	61.1	2.86	36.3	0.00	0.00			379	203	
400	ISL 6.65	D 6.61	34.159	D 26.809	129.1	0.816	0.87	12.7	63.0	2.91	36.9	0.00	0.00			402		
437	6.48	6.44	34.187	26.854	125.2	0.863	0.74	10.7	66.0	2.97	37.6	0.00	0.00			440	202	
500	ISL 6.17	D 6.13	34.252	D 26.946	117.2	0.939	0.46	6.6	74.4	3.09	39.1	0.00	0.00			503		
513	6.10	6.05	34.264	26.964	115.5	0.954	0.40	5.8	76.1	3.12	39.4	0.00	0.00			516	201	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 80.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
31 45.2 N	121 19.2 W	12/01/09	1139 UTC	3756 m	350	13 kn			1018.7 mb	15.0 c	13.0 c							
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.42	14.42	33.127	24.653	327.8	0.000	5.88	101.0	2.2	0.38	0.0	0.02	0.04	0.41	0.16	0		
2	14.42	14.42	33.127	24.653	327.9	0.007	5.88	101.0	2.2	0.38	0.0	0.02	0.04	0.41	0.16	2	221	
10	14.44	14.44	33.128	24.650	328.4	0.033	5.88	101.0	2.2	0.38	0.0	0.02	0.02	0.40	0.16	10	219	
20	14.67	14.67	33.241	24.688	325.0	0.065	5.86	101.2	2.2	0.37	0.0	0.01	0.02	0.38	0.13	20	218	
29	14.63	14.63	33.247	24.702	324.0	0.095	5.85	101.0	2.0	0.37	0.0	0.01	0.01	0.40	0.15	29	217	
30	ISL 14.61	D 14.61	33.239	D 24.700	324.2	0.098	5.85	100.9	2.0	0.37	0.0	0.01	0.01	0.40	0.15	30		
39	14.67	14.66	33.278	24.718	322.8	0.127	5.85	101.1	2.1	0.38	0.0	0.01	0.00	0.42	0.15	39	216	
50	14.65	14.64	33.286	24.728	322.1	0.163	5.84	100.9	2.1	0.39	0.0	0.01	0.05	0.41	0.17	50	215	
60	13.82	13.81	33.143	24.792	316.3	0.194	5.78	98.1	2.8	0.47	1.0	0.20	0.20	0.22	0.13	60	214	
69	13.03	13.02	33.072	24.896	306.5	0.222	5.79	96.6	3.7	0.58	2.5	0.27	0.10	0.10	0.09	69	213	
75	ISL 12.95	D 12.94	33.121	D 24.950	301.5	0.241	5.78	96.3	4.1	0.63	3.2	0.20	0.06	0.08	0.08	75		
84	11.84	11.83	32.942	25.023	294.6	0.268	5.77	93.8	4.8	0.69	4.3	0.05	0.02	0.06	0.07	84	212	
100	10.84	10.83	32.897	25.169	280.9	0.314	5.65	89.8	6.9	0.87	7.3	0.01	0.02	0.05	0.06	100	211	
120	10.45	10.44	33.143	25.429	256.6	0.367	5.20	82.1	10.2	1.07	11.1	0.01	0.01	0.03	0.04	121	210	
125	ISL 10.52	D 10.51	33.297	D 25.537	246.5	0.380	5.10	80.7	10.8	1.10	11.8	0.01	0.01	0.03	0.03	126		
139	10.29	10.27	33.399	25.656	235.4	0.414	4.76	75.0	13.0	1.21	13.9	0.01	0.02	0.02	0.02	140	209	
150	ISL 9.91	D 9.89	33.541	D 25.831	218.9	0.439	4.34	67.9	16.4	1.39	16.8	0.01	0.02	0.01	0.02	151		
169	9.59	9.57	33.715	26.020	201.3	0.479	3.63	56.4	22.6	1.71	21.7	0.00	0.02	0.00	0.02	170	208	
200	8.88	8.86	33.924	26.298	175.3	0.537	3.18	48.7	28.3	1.86	24.6	0.00	0.05	0.00	0.02	201	207	
229	8.22	8.20	33.988	26.450	161.2	0.586	2.81	42.4	35.0	2.05	27.4	0.00	0.00			230	206	
250	ISL 8.03	D 8.00	34.039	D 26.519	155.0	0.619	2.45	36.9	39.2	2.19	29.0	0.00	0.00			251		
268	7.94	7.91	34.062	26.550	152.3	0.647	2.13	32.0	42.4	2.30	30.2	0.00	0.00			269	205	
300	ISL 7.73	D 7.70	34.122	D 26.629	145.3	0.694	1.70	25.4	47.7	2.47	32.3	0.00	0.00			302		
318	7.45	7.42	34.115	26.663	142.2	0.720	1.50	22.3	50.6	2.56	33.3	0.00	0.00			320	204	
377	6.86	6.82	34.171	26.790	130.7	0.801	0.94	13.8	60.5	2.83	36.0	0.00	0.00			379	203	
400	ISL 6.64	D 6.60	34.180	D 26.827	127.4	0.830	0.78	11.4	63.7	2.91	36.7	0.00	0.00			402		
436	6.49	6.45	34.222	26.880	122.8	0.875	0.58	8.4	68.3	3.01	37.5	0.00	0.00			439	202	
500	ISL 6.03	D 5.99	34.261	D 26.971	114.6	0.951	0.39	5.6	76.2	3.12	39.0	0.00	0.00			503		
519	5.97	5.92	34.282	26.995	112.6	0.973	0.33	4.7	78.6	3.15	39.4	0.00	0.00			522	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 90.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
31 25.3 N	121 59.3 W	12/01/09	0522 UTC	3866 m	360	10 kn			1022.3 mb	15.0 c	13.0 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 14.75	14.75	33.134	24.588	334.0	0.000	5.88	101.7	2.2	0.38	0.0	0.01	0.02	0.34	0.09	0	
2	14.75	14.75	33.134	24.588	334.0	0.007	5.88	101.7	2.2	0.38	0.0	0.01	0.02	0.34	0.09	2	220
10	14.75	14.75	33.134	24.589	334.2	0.033	5.87	101.5	2.2	0.37	0.0	0.00	0.00	0.33	0.10	10	219
20	14.69	14.69	33.141	24.607	332.8	0.067	5.89	101.7	2.3	0.37	0.0	0.01	0.00	0.38	0.12	20	218
30	13.78	13.78	33.164	24.815	313.2	0.099	5.94	100.7	2.9	0.44	0.8	0.11	0.02	0.53	0.25	30	217
40	13.83	13.82	33.214	24.844	310.7	0.130	5.93	100.7	2.9	0.44	0.7	0.07	0.16	0.47	0.23	40	216
50	ISL 13.75	D 13.74	33.243	D 24.883	307.3	0.161	5.85	99.2	3.1	0.48	1.4	0.12	0.25	0.30	0.17	50	
51	13.69	13.68	33.233	24.888	306.9	0.164	5.84	98.9	3.2	0.49	1.5	0.13	0.25	0.28	0.16	51	215
61	13.08	13.07	33.189	24.977	298.6	0.195	5.81	97.1	4.2	0.61	3.1	0.24	0.23	0.21	0.14	61	214
70	12.04	12.03	33.061	25.078	289.1	0.221	5.67	92.6	5.5	0.73	5.4	0.12	0.01	0.13	0.12	70	213
75	ISL 11.73	D 11.72	33.092	D 25.160	281.4	0.235	5.44	88.3	7.2	0.87	7.7	0.07	0.01	0.11	0.11	75	
86	11.20	11.19	33.244	25.375	261.1	0.265	4.84	77.7	11.7	1.20	13.2	0.01	0.00	0.08	0.09	86	212
100	ISL 10.51	D 10.50	33.434	D 25.645	235.7	0.300	4.31	68.3	16.6	1.47	17.7	0.00	0.00	0.04	0.06	100	
101	10.51	10.50	33.437	25.647	235.5	0.302	4.28	67.8	16.9	1.49	18.0	0.00	0.00	0.04	0.06	101	211
120	10.11	10.10	33.627	25.864	215.2	0.345	3.63	57.1	21.6	1.73	21.9	0.00	0.00	0.02	0.05	121	210
125	ISL 9.90	D 9.89	33.676	D 25.938	208.3	0.356	3.55	55.6	22.3	1.76	22.4	0.00	0.00	0.02	0.05	126	
141	9.61	9.59	33.728	26.027	200.1	0.388	3.41	53.1	24.1	1.82	23.2	0.01	0.02	0.01	0.03	142	209
150	ISL 9.34	D 9.32	33.805	D 26.131	190.3	0.406	3.35	51.8	25.3	1.84	23.8	0.01	0.02	0.01	0.03	151	
171	8.93	8.91	33.870	26.248	179.6	0.445	3.27	50.2	28.1	1.88	25.0	0.01	0.03	0.00	0.02	172	208
200	ISL 8.50	D 8.48	33.965	D 26.389	166.6	0.495	3.19	48.5	31.3	1.90	25.8	0.00	0.03	0.00	0.02	201	
201	8.47	8.45	33.968	26.396	165.9	0.497	3.19	48.4	31.5	1.90	25.8	0.00	0.03	0.00	0.02	202	207
231	8.01	7.99	34.020	26.506	155.8	0.545	2.40	36.1	40.1	2.20	29.9	0.00	0.03			232	206
250	ISL 7.78	D 7.76	34.032	D 26.550	151.9	0.574	2.07	31.0	43.9	2.33	31.4	0.00	0.04			251	
271	7.55	7.52	34.063	26.608	146.7	0.605	1.80	26.8	47.3	2.44	32.6	0.00	0.05			273	205
300	ISL 7.16	D 7.13	34.070	D 26.668	141.2	0.647	1.53	22.6	52.2	2.57	34.3	0.01	0.02			302	
321	7.01	6.98	34.090	26.705	137.9	0.676	1.38	20.3	55.6	2.65	35.3	0.01	0.00			323	204
381	6.66	6.63	34.162	26.810	128.7	0.756	0.88	12.8	63.7	2.87	37.2	0.01	0.00			383	203
400	ISL 6.27	D 6.23	34.136	D 26.840	125.8	0.781	0.81	11.7	67.5	2.92	37.9	0.01	0.00			403	
442	5.82	5.78	34.155	26.912	119.1	0.832	0.69	9.9	75.7	3.02	39.5	0.00	0.00			445	202
500	ISL 5.50	D 5.46	34.212	D 26.997	111.5	0.899	0.44	6.2	82.7	3.14	40.7	0.00	0.00			503	
517	5.50	5.46	34.240	27.019	109.6	0.918	0.37	5.3	84.8	3.17	41.1	0.00	0.00			520	201

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

RV NEW HORIZON										CALCOFI CRUISE 0901										STATION 90.0 100.0							
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI		CLD AMT TYPE	
31 5.4 N		122 39.7 W		11/01/09		2304 UTC		4005 m		360		11 kn		010 04 06		0		1023.2 mb		17.0 c		14.0 c		15m		0/8	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP										
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db											
0	ISL 14.25	14.25	33.371	24.877	306.5	0.000	5.98	102.5	2.9	0.43	0.9	0.07	0.08	0.59	0.16	0											
3	14.25	14.25	33.371	24.877	306.6	0.009	5.98	102.5	2.9	0.43	0.9	0.07	0.08	0.59	0.16	3	220										
10	14.22	14.22	33.371	24.884	306.1	0.031	5.95	101.9	2.9	0.43	0.9	0.07	0.08	0.61	0.16	10	219										
20	14.09	14.09	33.361	24.903	304.6	0.061	5.95	101.7	2.8	0.43	1.0	0.07	0.09	0.66	0.17	20	218										
30	14.07	14.07	33.358	24.905	304.6	0.092	5.92	101.1	2.6	0.43	1.0	0.07	0.09	0.68	0.18	30	217										
40	14.06	14.05	33.356	24.906	304.8	0.122	5.89	100.6	2.7	0.43	1.0	0.07	0.10	0.64	0.19	40	216										
50	14.05	14.04	33.357	24.909	304.8	0.153	5.89	100.5	2.7	0.44	1.1	0.08	0.11	0.60	0.19	50	215										
60	13.92	13.91	33.341	24.924	303.7	0.183	5.87	99.9	2.8	0.45	1.2	0.09	0.18	0.48	0.17	60	214										
71	12.66	12.65	33.221	25.084	288.6	0.216	5.62	93.1	5.6	0.73	5.5	0.25	0.07	0.15	0.11	71	213										
75	ISL 12.14	D 12.13	33.211	D 25.176	279.9	0.227	5.43	89.0	7.2	0.86	7.6	0.21	0.06	0.13	0.10	75											
86	11.03	11.02	33.266	25.422	256.6	0.256	4.82	77.1	12.0	1.22	13.5	0.04	0.03	0.07	0.08	86	212										
100	10.27	10.26	33.496	25.734	227.1	0.290	4.11	64.8	18.1	1.55	19.2	0.00	0.05	0.03	0.05	100	211										
120	9.92	9.91	33.697	25.951	207.0	0.334	3.43	53.7	22.7	1.80	22.7	0.00	0.05	0.01	0.04	121	210										
125	ISL 9.86	D 9.85	33.767	D 26.016	200.9	0.344	3.20	50.1	24.1	1.87	23.6	0.00	0.05	0.01	0.04	126											
140	9.60	9.58	33.871	26.140	189.4	0.373	2.62	40.8	27.8	2.04	25.9	0.00	0.05	0.01	0.04	141	209										
150	ISL 9.43	D 9.41	33.902	D 26.192	184.6	0.392	2.61	40.5	29.3	2.05	26.6	0.00	0.05	0.01	0.04	151											
170	8.92	8.90	33.943	26.306	174.0	0.428	2.58	39.6	31.5	2.08	27.2	0.00	0.04	0.00	0.04	171	208										
200	8.41	8.39	34.012	26.440	161.7	0.478	2.38	36.1	35.6	2.16	28.7	0.00	0.00	0.00	0.02	201	207										
228	7.99	7.97	34.033	26.520	154.5	0.522	2.21	33.2	40.3	2.26	30.3	0.00	0.01			229	206										
250	ISL 7.71	D 7.69	34.050	D 26.574	149.6	0.556	1.89	28.2	44.6	2.39	32.0	0.00	0.01			251											
269	7.54	7.51	34.085	D 26.626	144.9	0.584	1.59	23.7	48.2	2.51	33.4	0.00	0.00			271	205										
300	ISL 7.20	D 7.17	34.089	D 26.678	140.3	0.628	1.34	19.8	52.2	2.62	34.6	0.00	0.00			302											
319	7.16	7.13	34.117	26.706	138.0	0.654	1.24	18.3	54.5	2.67	35.1	0.00	0.00			321	204										
378	6.30	6.27	34.114	26.819	127.5	0.733	1.05	15.2	65.6	2.86	37.5	0.00	0.00			380	203										
400	ISL 6.09	D 6.06	34.126	D 26.855	124.2	0.760	0.89	12.8	69.3	2.93	38.2	0.00	0.00			403											
438	5.91	5.87	34.188	26.927	117.7	0.806	0.61	8.7	75.0	3.04	39.3	0.00	0.00			441	202										
500	ISL 5.75	D 5.71	34.257	D 27.002	111.3	0.877	0.39	5.6	81.0	3.14	40.4	0.00	0.00			503											
514	5.69	5.65	34.265	27.016	110.2	0.893	0.34	4.8	82.3	3.16	40.6	0.00	0.00			517	201										

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 110.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE			
30 46.4 N	123 20.5 W	11/01/09	1757 UTC	4058 m	020	17 kn	020 03 05	0	1027.4 mb	16.9 c	14.0 c	26m		0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0 ISL	15.51	15.51	33.253	24.514	341.0	0.000	5.73	100.7	2.4	0.35	0.0	0.00	0.00	0.22	0.09	0		
2 A	15.51	15.51	33.253	24.515	341.1	0.007	5.73	100.7	2.4	0.35	0.0	0.00	0.00	0.22	0.09	2	222	
8	15.51	15.51	33.254	24.516	341.1	0.027	5.75	101.0	2.3	0.34	0.0	0.00	0.00	0.22	0.10	8	221	
10 ISL	15.51 D	15.51	33.253 D	24.515	341.3	0.034	5.75	101.0	2.3	0.34	0.0	0.00	0.00	0.22	0.10	10		
15 A	15.50	15.50	33.253	24.517	341.2	0.051	5.73	100.7	2.3	0.34	0.1	0.00	0.00	0.23	0.09	15	220	
20 ISL	15.51 D	15.51	33.252 D	24.514	341.6	0.068	5.72	100.5	2.3	0.35	0.1	0.00	0.00	0.23	0.09	20		
25	15.50	15.50	33.252	24.517	341.6	0.085	5.72	100.5	2.4	0.35	0.0	0.00	0.00	0.23	0.09	25	219	
30 ISL	15.50 D	15.50	33.251 D	24.516	341.8	0.102	5.72	100.5	2.4	0.35	0.0	0.00	0.00	0.23	0.10	30		
35 A	15.50	15.49	33.254	24.519	341.7	0.119	5.71	100.3	2.4	0.34	0.0	0.00	0.00	0.23	0.10	35	218	
44	15.50	15.49	33.252	24.517	342.1	0.150	5.74	100.8	2.1	0.34	0.0	0.00	0.00	0.23	0.09	44	217	
50 ISL	15.50 D	15.49	33.250 D	24.516	342.4	0.171	5.73	100.7	2.1	0.34	0.0	0.00	0.00	0.23	0.10	50		
53 A	15.49	15.48	33.252	24.520	342.1	0.181	5.72	100.5	2.2	0.34	0.0	0.00	0.00	0.23	0.10	53	216	
62	15.50	15.49	33.252	24.518	342.6	0.212	5.75	101.0	2.3	0.33	0.0	0.00	0.00	0.23	0.09	62	215	
73 A	15.48	15.47	33.249	24.521	342.7	0.250	5.73	100.6	2.3	0.34	0.0	0.01	0.01	0.23	0.10	73	214	
75 ISL	15.13 D	15.12	33.237 D	24.588	336.3	0.256	5.74	100.1	2.4	0.36	0.1	0.05	0.02	0.21	0.12	75		
85	13.47	13.46	33.120	24.846	311.8	0.289	5.78	97.3	3.2	0.46	1.1	0.23	0.04	0.13	0.23	85	213	
97	12.86	12.85	33.123	24.970	300.2	0.325	5.64	93.8	4.0	0.54	2.7	0.06	0.00	0.10	0.21	97	212	
100 ISL	12.70 D	12.69	33.117 D	24.996	297.7	0.334	5.63	93.3	4.2	0.56	3.1	0.05	0.00	0.09	0.20	100		
112 A	12.24	12.23	33.125	25.091	288.9	0.370	5.55	91.1	5.4	0.67	5.0	0.02	0.00	0.07	0.14	112	211	
125	11.61	11.59	33.228	25.289	270.3	0.406	5.27	85.4	7.5	0.87	8.3	0.01	0.01	0.04	0.07	126	210	
139	11.05	11.03	33.304	25.450	255.2	0.443	5.07	81.2	9.8	1.02	10.8	0.01	0.00	0.02	0.04	140	209	
150 ISL	10.63 D	10.61	33.360 D	25.567	244.2	0.470	4.83	76.7	12.3	1.16	13.2	0.01	0.00	0.01	0.02	151		
168	9.94	9.92	33.576	25.854	217.2	0.512	4.35	68.1	16.8	1.38	17.2	0.00	0.00	0.00	0.01	169	208	
200 ISL	9.24 D	9.22	33.864 D	26.194	185.3	0.576	3.47	53.6	24.6	1.73	22.9	0.00	0.00	0.00	0.01	201		
201	9.26	9.24	33.860	26.188	186.0	0.578	3.45	53.3	24.8	1.74	23.0	0.00	0.00	0.00	0.01	202	207	
228	8.78	8.76	33.944	26.330	172.8	0.626	3.15	48.2	29.3	1.87	25.1	0.00	0.02			229	206	
250 ISL	8.37 D	8.34	33.989 D	26.429	163.7	0.664	2.86	43.3	34.1	2.00	27.0	0.00	0.03			251		
268	8.03	8.00	34.015	26.500	157.1	0.692	2.59	39.0	38.4	2.13	28.6	0.00	0.03			269	205	
300 ISL	7.48 D	7.45	34.044 D	26.603	147.6	0.741	2.02	30.0	46.7	2.39	31.8	0.00	0.04			302		
318	7.20	7.17	34.066	26.660	142.3	0.767	1.72	25.4	51.1	2.53	33.5	0.00	0.04			320	204	
377	6.63	6.60	34.107	26.770	132.4	0.848	1.23	17.9	60.4	2.76	36.0	0.00	0.04			379	203	
400 ISL	6.44 D	6.40	34.130 D	26.813	128.4	0.878	1.04	15.1	64.3	2.85	37.0	0.00	0.03			402		
438	6.12	6.08	34.164	26.882	122.2	0.926	0.76	10.9	70.5	2.98	38.6	0.00	0.00			441	202	
500 ISL	5.77 D	5.73	34.232 D	26.980	113.5	0.999	0.49	7.0	78.6	3.11	40.0	0.00	0.00			503		
518	5.70	5.66	34.239	26.994	112.3	1.019	0.41	5.8	80.9	3.15	40.4	0.00	0.00			521	201	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 90.0 120.0				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE			
30 25.1 N		123 59.9 W		11/01/09	0948 UTC	4328 m	060	15 kn			1026.6 mb	15.8 C	12.6 C					
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0 ISL	15.76	15.76	33.312	24.504	342.0	0.000	5.69	100.5	2.4	0.35	0.0	0.00	0.03	0.17	0.06	0		
2	15.76	15.76	33.312	24.504	342.0	0.007	5.69	100.5	2.4	0.35	0.0	0.00	0.03	0.17	0.06	2	220	
10	15.76	15.76	33.314	24.506	342.1	0.034	5.68	100.3	2.4	0.36	0.0	0.00	0.05	0.17	0.06	10	219	
20 ISL	15.76 D	15.76	33.304 D	24.499	343.1	0.068	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.17	0.07	20		
25	15.77	15.77	33.309	24.501	343.1	0.086	5.70	100.7	2.2	0.35	0.0	0.00	0.04	0.17	0.07	25	218	
30 ISL	15.77 D	15.77	33.306 D	24.498	343.5	0.103	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.17	0.07	30		
40	15.77	15.76	33.309	24.501	343.5	0.137	5.68	100.4	2.5	0.35	0.0	0.00	0.05	0.19	0.06	40	217	
50	15.76	15.75	33.307	24.502	343.8	0.172	5.69	100.5	2.3	0.35	0.0	0.00	0.04	0.21	0.06	50	216	
62	15.76	15.75	33.305	24.501	344.2	0.213	5.67	100.1	2.1	0.35	0.0	0.00	0.00	0.22	0.08	62	215	
74	15.75	15.74	33.305	24.504	344.4	0.254	5.66	99.9	2.2	0.36	0.0	0.00	0.03	0.21	0.09	74	214	
75 ISL	15.75 D	15.74	33.307 D	24.505	344.2	0.258	5.67	100.1	2.3	0.37	0.0	0.02	0.03	0.21	0.10	75		
87	13.60	13.59	33.176	24.863	310.2	0.297	5.75	97.1	3.2	0.44	0.7	0.23	0.05	0.16	0.24	87	213	
99	13.12	13.11	33.141	24.932	303.9	0.334	5.69	95.1	3.5	0.49	1.6	0.13	0.05	0.15	0.21	99	212	
100 ISL	13.07 D	13.06	33.135 D	24.938	303.4	0.337	5.69	95.0	3.5	0.49	1.7	0.12	0.05	0.15	0.21	100		
111	12.65	12.64	33.116	25.005	297.1	0.370	5.60	92.7	4.2	0.58	3.1	0.03	0.04	0.09	0.18	111	211	
125	11.83	11.81	33.210	25.234	275.6	0.410	5.35	87.1	6.9	0.81	7.1	0.01	0.05	0.05	0.09	126	210	
140	11.19	11.17	33.365	25.472	253.2	0.449	5.02	80.7	9.5	0.98	10.1	0.01	0.06	0.02	0.03	141	209	
150 ISL	10.76 D	10.74	33.398 D	25.574	243.6	0.474	4.88	77.7	10.9	1.07	11.6	0.01	0.04	0.02	0.02	151		
165	10.37	10.35	33.477	25.704	231.5	0.510	4.65	73.4	13.3	1.21	13.9	0.00	0.00	0.01	0.01	166	208	
200 ISL	9.32 D	9.30	33.874 D	26.189	185.9	0.583	3.64	56.3	23.8	1.67	21.5	0.00	0.07	0.00	0.01	201		
202	9.30	9.28	33.885	26.201	184.8	0.587	3.58	55.4	24.5	1.70	21.9	0.00	0.07	0.00	0.01	203	207	
230	8.50	8.48	33.983	26.404	165.8	0.636	3.09	47.0	32.4	1.94	25.7	0.00	0.00			231	206	
250 ISL	8.33 D	8.30	34.010 D	26.451	161.6	0.668	2.71	41.0	36.1	2.10	27.5	0.00	0.02			251		
269	8.19	8.16	34.043	26.498	157.4	0.699	2.37	35.8	39.0	2.23	28.9	0.00	0.03			270	205	
300 ISL	7.72 D	7.69	34.072 D	26.591	148.9	0.746	1.91	28.5	44.8	2.42	31.1	0.00	0.04			302		
318	7.59	7.56	34.092	26.625	145.8	0.773	1.69	25.2	48.1	2.52	32.3	0.00	0.04			320	204	
377	6.96	6.92	34.121	26.737	135.8	0.856	1.19	17.5	57.7	2.76	35.3	0.00	0.00			379	203	
400 ISL	6.64 D	6.60	34.129 D	26.786	131.2	0.887	1.04	15.2	61.5	2.85	36.3	0.00	0.00			402		
437	6.42	6.38	34.167	26.846	125.9	0.934	0.82	11.9	67.3	2.97	37.6	0.00	0.00			440	202	
500 ISL	5.98 D	5.94	34.222 D	26.946	116.9	1.011	0.52	7.5	74.8	3.10	38.9	0.00	0.00			503		
518	5.99	5.94	34.245	26.963	115.5	1.032	0.43	6.2	76.9	3.14	39.3	0.00	0.00			521	201	

STATION 91.7 26.4

STATION 93.3 26.7

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

STATION 93.3 28.0

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

STATION 93.3 30.0

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

STATION 93.3 35.0

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

STATION 93.3 40.0

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

STATION 93.3 45.0

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

STATION 93.3 50.0

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

STATION 93.3 55.0

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 93.3 60.0				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE					
31 50.8 N	119 34.2 W	09/01/09	1423 UTC	1839 m	360 13 kn			1015.4 mb	13.5 C	12.4 C								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP	
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
0	ISL 14.35	14.35	33.345	24.836	310.4	0.000	5.83	100.1	2.6	0.39	0.2	0.03	0.14	0.60	0.22	0		
2	14.35	14.35	33.345	24.836	310.4	0.006	5.83	100.1	2.6	0.39	0.2	0.03	0.14	0.60	0.22	2	220	
10	ISL 14.35 D	14.35	33.342	24.834	310.9	0.031	5.84	100.3	2.6	0.39	0.2	0.03	0.14	0.61	0.22	10		
20	14.35	14.35	33.348	24.839	310.7	0.062	5.85	100.5	2.6	0.39	0.2	0.03	0.13	0.61	0.22	20	218	
30	14.35	14.35	33.345	24.837	311.2	0.093	5.82	99.9	2.6	0.39	0.2	0.03	0.15	0.60	0.22	30	217	
40	14.35	14.34	33.346	24.838	311.4	0.124	5.83	100.1	2.5	0.39	0.2	0.03	0.15	0.58	0.22	40	216	
50	14.34	14.33	33.344	24.839	311.6	0.156	5.82	99.9	2.6	0.39	0.3	0.03	0.15	0.59	0.25	50	215	
60	13.33	13.32	33.357	24.979	298.4	0.186	5.52	92.8	5.1	0.65	4.0	0.06	0.09	0.31	0.22	60	214	
69	11.80	11.79	33.301	25.309	267.0	0.211	4.88	79.4	10.2	1.11	11.3	0.03	0.05	0.10	0.17	69	213	
75	ISL 11.46 D	11.45	33.352	25.412	257.4	0.227	4.76	76.9	11.4	1.17	12.9	0.02	0.03	0.09	0.14	75		
85	11.18	11.17	33.408	25.506	248.6	0.252	4.63	74.4	12.8	1.26	14.2	0.01	0.01	0.06	0.10	85	212	
100	ISL 10.23 D	10.22	33.687	25.890	212.4	0.287	3.72	58.7	19.7	1.63	20.0	0.00	0.01	0.02	0.03	100		
101	10.23	10.22	33.687	25.890	212.4	0.289	3.66	57.7	20.2	1.65	20.4	0.00	0.01	0.02	0.03	101	211	
120	9.95	9.94	33.755	25.991	203.2	0.329	3.48	54.6	22.0	1.71	21.4	0.00	0.00	0.01	0.03	121	210	
125	ISL 9.87 D	9.86	33.774	26.019	200.6	0.339	3.40	53.2	22.8	1.74	21.9	0.00	0.00	0.01	0.03	126		
139	9.52	9.50	33.849	26.136	189.7	0.366	3.17	49.3	25.1	1.84	23.4	0.00	0.02	0.00	0.02	140	209	
150	ISL 9.37 D	9.35	33.879	26.184	185.3	0.387	3.04	47.1	26.9	1.90	24.4	0.00	0.02	0.00	0.02	151		
170	8.98	8.96	33.946	26.299	174.7	0.423	2.81	43.2	30.1	2.00	25.9	0.00	0.00	0.00	0.02	171	208	
200	ISL 8.60 D	8.58	34.025	26.421	163.6	0.473	2.38	36.3	35.2	2.17	27.9	0.00	0.00	0.00	0.02	201		
202	8.59	8.57	34.026	26.423	163.4	0.477	2.35	35.8	35.5	2.18	28.0	0.00	0.00	0.00	0.02	203	207	
230	8.22	8.20	34.066	26.511	155.5	0.521	2.04	30.8	40.3	2.33	30.0	0.00	0.01			231	206	
250	ISL 7.98 D	7.95	34.099	26.573	149.8	0.552	1.77	26.6	43.5	2.45	31.2	0.00	0.00			251		
272	7.92	7.89	34.142	26.616	146.1	0.584	1.49	22.4	46.7	2.56	32.3	0.00	0.00			274	205	
300	ISL 7.77 D	7.74	34.173	26.663	142.1	0.625	1.31	19.6	50.2	2.65	33.3	0.00	0.02			302		
317	7.49	7.46	34.160	26.693	139.4	0.649	1.24	18.4	52.3	2.69	33.8	0.00	0.03			319	204	
376	6.86	6.82	34.186	26.802	129.6	0.728	0.89	13.0	61.3	2.88	36.0	0.00	0.01			378	203	
400	ISL 6.69 D	6.65	34.196	26.833	126.9	0.759	0.76	11.1	64.8	2.95	36.8	0.00	0.00			403		
436	6.45	6.41	34.230	26.892	121.7	0.804	0.59	8.6	69.5	3.05	37.8	0.00	0.00			439	202	
500	ISL 6.22 D	6.18	34.311	26.986	113.4	0.879	0.36	5.2	75.7	3.16	38.9	0.00	0.00			503		
519	6.15	6.10	34.317	27.000	112.3	0.900	0.29	4.2	77.6	3.19	39.2	0.00	0.00			523	201	

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 93.3 70.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
31 31.1 N	120 14.2 W	09/01/09	2039 UTC	3938 m	050	10 kn	340 08 08	2	1018.2 mb	13.2 C	12.0 C	18m		8/8	ST		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 13.85	13.85	33.337	24.934	301.1	0.000	5.87	99.8	2.8	0.41	0.6	0.06	0.20	0.44	0.16	0	
2	A 13.85	13.85	33.337	24.934	301.1	0.006	5.87	99.8	2.8	0.41	0.6	0.06	0.20	0.44	0.16	2	223
10	A 13.85	13.85	33.336	24.933	301.4	0.030	5.93	100.8	2.6	0.41	0.6	0.06	0.19	0.48	0.20	10	222
17	13.85	13.85	33.336	24.934	301.6	0.051	5.93	100.8	2.7	0.41	0.6	0.06	0.18	0.45	0.15	17	221
20	ISL 13.85 D	13.85	33.332	24.931	302.0	0.060	5.94	101.0	2.8	0.40	0.6	0.06	0.18	0.47	0.16	20	
24	A 13.85	13.85	33.335	24.933	301.8	0.072	5.95	101.1	2.9	0.40	0.6	0.06	0.19	0.50	0.20	24	220
30	13.85	13.85	33.336	24.934	301.9	0.090	5.94	101.0	2.8	0.41	0.6	0.06	0.18	0.56	0.26	30	218
37	A 13.80	13.79	33.335	24.944	301.2	0.112	5.94	100.9	2.8	0.41	0.7	0.07	0.17	0.56	0.21	37	217
44	13.79	13.78	33.331	24.943	301.5	0.133	5.92	100.5	3.0	0.41	0.7	0.07	0.17	0.57	0.24	44	216
50	A 13.74	13.73	33.324	24.948	301.1	0.151	5.92	100.4	2.9	0.42	0.8	0.08	0.27	0.58	0.28	50	215
64	12.60	12.59	33.258	25.124	284.6	0.192	5.30	87.7	7.1	0.81	7.0	0.15	0.02	0.21	0.25	64	214
75	ISL 11.74 D	11.73	33.379	25.381	260.4	0.222	4.78	77.7	10.8	1.11	11.9	0.06	0.00	0.10	0.19	75	
78	A 11.47	11.46	33.356	25.413	257.4	0.229	4.68	75.7	11.7	1.18	13.0	0.03	0.00	0.09	0.17	78	213
89	10.58	10.57	33.364	25.578	241.8	0.257	4.67	74.1	14.1	1.29	14.9	0.02	0.01	0.04	0.07	89	212
100	ISL 10.44 D	10.43	33.437	25.659	234.3	0.283	4.54	71.8	15.1	1.35	16.0	0.02	0.00	0.03	0.05	100	
101	10.44	10.43	33.424	25.649	235.3	0.285	4.52	71.5	15.2	1.36	16.1	0.02	0.00	0.03	0.05	101	211
120	10.03	10.02	33.611	25.865	215.1	0.328	3.77	59.2	21.0	1.68	20.9	0.00	0.00	0.02	0.05	121	210
125	ISL 9.96 D	9.95	33.630	25.892	212.7	0.339	3.67	57.5	22.0	1.71	21.5	0.00	0.00	0.01	0.05	126	
140	9.46	9.44	33.803	26.110	192.2	0.369	3.40	52.7	24.5	1.76	22.9	0.00	0.00	0.00	0.03	141	209
150	ISL 9.33 D	9.31	33.833	26.155	188.1	0.388	3.09	47.8	26.5	1.85	24.1	0.00	0.00	0.00	0.03	151	
169	9.34	9.32	33.997	26.281	176.5	0.423	2.49	38.6	30.3	2.05	26.2	0.00	0.00	0.00	0.03	170	208
200	ISL 9.15 D	9.13	34.129	26.416	164.3	0.476	1.88	29.0	35.0	2.25	28.0	0.00	0.00	0.00	0.03	201	
202	9.12	9.10	34.132	26.423	163.7	0.479	1.86	28.7	35.3	2.26	28.1	0.00	0.00	0.00	0.03	203	207
231	8.74	8.72	34.158	26.504	156.4	0.526	1.75	26.8	39.1	2.36	29.3	0.00	0.00			232	206
250	ISL 8.70 D	8.67	34.228	26.565	151.0	0.555	1.48	22.6	42.0	2.47	30.2	0.00	0.00			251	
270	8.46	8.43	34.231	26.605	147.5	0.585	1.20	18.2	45.0	2.58	31.2	0.00	0.00			272	205
300	ISL 7.87 D	7.84	34.191	26.662	142.2	0.628	1.19	17.9	48.9	2.63	32.5	0.01	0.00			302	
319	7.63	7.60	34.182	26.690	139.8	0.655	1.18	17.6	51.4	2.65	33.3	0.01	0.00			321	204
379	6.79	6.75	34.173	26.801	129.6	0.736	0.92	13.5	61.2	2.83	36.1	0.00	0.00			381	203
400	ISL 6.57 D	6.53	34.179	26.835	126.5	0.763	0.82	11.9	64.3	2.89	36.9	0.00	0.00			403	
437	6.29	6.25	34.201	26.889	121.7	0.808	0.66	9.5	69.5	2.98	38.1	0.00	0.01			440	202
500	ISL 6.03 D	5.99	34.264	26.973	114.4	0.883	0.43	6.2	76.8	3.09	39.4	0.00	0.02			503	
523	5.88	5.83	34.282	27.006	111.4	0.909	0.34	4.9	79.4	3.13	39.9	0.00	0.02			527	201

STATION 93.3 80.0

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

STATION 93.3 90.0

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 93.3 100.0			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	
30 30.8 N		122 15.6 W		10/01/09	1648 UTC	4164 m	100	08 kn	110 03 06	0	1025.9 mb	16.3 C	14.2 C	24m	0/8		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL 14.99	14.99	33.157	24.554	337.2	0.000	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.25	0.10	0	
1	A 14.99	14.99	33.157	24.554	337.2	0.003	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.25	0.10	1	222
8	14.98	14.98	33.155	24.555	337.4	0.027	5.80	100.8	2.0	0.37	0.0	0.01	0.03	0.26	0.10	8	221
10	ISL 14.97	D 14.97	33.154	D 24.557	337.3	0.034	5.80	100.8	2.0	0.37	0.0	0.01	0.03	0.26	0.10	10	
14	A 14.97	14.97	33.155	24.557	337.3	0.047	5.81	100.9	2.0	0.37	0.0	0.01	0.03	0.26	0.11	14	220
20	ISL 14.97	D 14.97	33.155	D 24.558	337.5	0.067	5.80	100.8	2.0	0.38	0.0	0.01	0.02	0.26	0.11	20	
22	14.97	14.97	33.155	D 24.558	337.5	0.074										22	219
30	ISL 14.97	D 14.97	33.155	D 24.558	337.8	0.101	5.78	100.4	2.0	0.38	0.0	0.01	0.02	0.27	0.10	30	
32	A 14.97	14.97	33.157	24.560	337.7	0.108	5.78	100.4	2.0	0.38	0.0	0.01	0.02	0.27	0.10	32	218
40	14.97	14.96	33.156	24.559	338.0	0.135	5.79	100.6	1.9	0.37	0.0	0.01	0.03	0.26	0.10	40	217
48	A 14.98	14.97	33.158	24.559	338.2	0.162	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.27	0.11	48	216
50	ISL 14.98	D 14.97	33.154	D 24.556	338.6	0.169	5.79	100.6	2.0	0.37	0.0	0.01	0.02	0.27	0.11	50	
58	14.96	14.95	33.156	24.562	338.2	0.196	5.80	100.7	2.0	0.37	0.0	0.02	0.02	0.26	0.12	58	215
66	A 14.04	14.03	33.087	24.703	324.9	0.222	5.86	99.8	2.4	0.45	0.6	0.15	0.12	0.22	0.15	66	214
75	ISL 13.66	D 13.65	33.092	D 24.786	317.3	0.251	5.80	98.0	2.9	0.51	1.3	0.29	0.06	0.13	0.14	75	
78	13.30	13.29	33.069	24.840	312.1	0.261	5.77	96.8	3.1	0.52	1.6	0.31	0.02	0.10	0.14	78	213
90	12.82	12.81	33.056	24.926	304.2	0.298	5.71	94.8	3.6	0.56	2.5	0.12	0.00	0.08	0.16	90	212
100	ISL 12.14	D 12.13	33.128	D 25.112	286.6	0.327	5.54	90.7	5.0	0.67	4.8	0.04	0.00	0.06	0.13	100	
103	A 12.06	12.05	33.132	25.130	284.9	0.336	5.49	89.8	5.5	0.71	5.5	0.03	0.00	0.06	0.12	103	211
119	11.52	11.51	33.179	25.267	272.2	0.380	5.33	86.2	6.9	0.84	7.7	0.02	0.01	0.04	0.07	120	210
125	ISL 11.29	D 11.27	33.182	D 25.311	268.1	0.397	5.20	83.6	8.1	0.92	9.0	0.02	0.01	0.03	0.06	126	
139	10.55	10.53	33.343	D 25.568	243.9	0.432										140	209
150	ISL 10.32	D 10.30	33.440	D 25.683	233.1	0.459	4.59	72.4	14.0	1.27	14.8	0.01	0.00	0.02	0.02	151	
169	9.81	9.79	33.644	25.929	210.1	0.501	4.03	62.9	19.3	1.55	19.3	0.00	0.00	0.01	0.01	170	208
200	ISL 9.17	D 9.15	33.886	D 26.223	182.6	0.562	3.28	50.6	26.1	1.82	23.8	0.00	0.00	0.00	0.01	201	
202	9.15	9.13	33.897	26.234	181.5	0.565	3.24	49.9	26.5	1.83	24.0	0.00	0.00	0.00	0.01	203	207
229	8.59	8.57	33.972	26.381	167.9	0.612	3.04	46.3	31.6	1.94	25.8	0.00	0.00	0.00	0.00	230	206
250	ISL 8.21	D 8.18	34.006	D 26.466	160.1	0.647	2.72	41.1	36.3	2.09	27.7	0.00	0.00	0.00		251	
270	7.89	7.86	34.027	26.530	154.2	0.678	2.38	35.7	40.8	2.24	29.6	0.00	0.00	0.00		271	205
300	ISL 7.42	D 7.39	34.061	D 26.625	145.5	0.723	1.94	28.8	47.1	2.43	31.9	0.00	0.00	0.00		302	
318	7.30	7.27	34.082	26.658	142.5	0.749	1.70	25.1	50.6	2.53	33.1	0.00	0.00	0.00		320	204
380	6.78	6.74	34.127	26.766	132.9	0.835	1.14	16.7	59.6	2.78	35.9	0.00	0.00	0.00		382	203
400	ISL 6.64	D 6.60	34.139	D 26.794	130.4	0.861	1.00	14.6	62.7	2.85	36.5	0.00	0.00	0.00		402	
441	6.26	6.22	34.171	26.870	123.6	0.913	0.75	10.8	69.0	2.98	37.6	0.00	0.00	0.00		444	202
500	ISL 5.86	D 5.82	34.235	D 26.971	114.4	0.983	0.50	7.2	77.2	3.11	39.2	0.00	0.00	0.00		503	
520	5.78	5.74	34.244	26.989	112.9	1.006	0.42	6.0	80.0	3.15	39.7	0.00	0.00	0.00		523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

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

RV NEW HORIZON				CALCOFI CRUISE 0901										STATION 93.3 110.0			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE			
30 11.0 N	122 55.6 W	10/01/09	2155 UTC	3775 m	030	10 kn	210 03 06	0	1027.4 mb	16.0 C	14.3 C	23m	0/8				
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.11	15.11	33.133	24.510	341.5	0.000	5.81	101.2	2.1	0.38	0.0	0.01	0.10	0.25	0.08	0	
3	15.11	15.11	33.133	24.510	341.5	0.010	5.81	101.2	2.1	0.38	0.0	0.01	0.10	0.25	0.08	3	221
10	14.93	14.93	33.137	24.552	337.7	0.034	5.84	101.4	2.1	0.38	0.0	0.01	0.09	0.28	0.09	10	220
20 ISL	14.91 D	14.91	33.132 D	24.553	337.9	0.068	5.81	100.8	2.1	0.38	0.0	0.01	0.11	0.27	0.10	20	
21	14.91	14.91	33.137	24.557	337.6	0.071	5.81	100.8	2.1	0.38	0.0	0.01	0.11	0.27	0.10	21	218
30	14.90	14.90	33.136	24.558	337.7	0.102	5.82	100.9	2.1	0.38	0.0	0.01	0.09	0.26	0.10	30	217
40	14.90	14.89	33.137	24.560	337.9	0.135	5.81	100.8	2.1	0.38	0.0	0.01	0.10	0.30	0.12	40	216
49	14.90	14.89	33.139	24.561	338.0	0.166	5.80	100.6	2.0	0.37	0.0	0.01	0.10	0.31	0.12	49	215
50 ISL	14.90 D	14.89	33.135 D	24.558	338.3	0.169	5.80	100.6	2.0	0.37	0.0	0.01	0.10	0.31	0.12	50	
60	14.90	14.89	33.139	24.562	338.3	0.203	5.80	100.6	2.0	0.37	0.0	0.01	0.11	0.31	0.12	60	214
70	14.85	14.84	33.139	24.573	337.5	0.237	5.80	100.5	2.1	0.38	0.0	0.02	0.13	0.28	0.11	70	213
75 ISL	14.55 D	14.54	33.147 D	24.643	330.9	0.253	5.77	99.4	2.2	0.41	0.2	0.11	0.23	0.22	0.10	75	
85	14.34	14.33	33.211	24.737	322.3	0.286	5.72	98.1	2.5	0.48	0.8	0.28	0.39	0.10	0.08	85	212
100 ISL	12.83 D	12.82	33.037 D	24.909	306.0	0.333	5.71	94.8	3.6	0.58	2.7	0.12	0.10	0.08	0.13	100	
101	12.73	12.72	33.028	24.922	304.9	0.336	5.71	94.6	3.7	0.59	2.9	0.10	0.08	0.08	0.13	101	211
121	11.21	11.20	33.114	25.273	271.6	0.394	5.34	85.7	8.1	0.94	8.8	0.01	0.08	0.04	0.05	122	210
125 ISL	11.08 D	11.06	33.168 D	25.338	265.5	0.405	5.24	83.9	9.0	1.00	9.9	0.01	0.08	0.03	0.04	126	
140	10.73	10.71	33.364	25.553	245.4	0.443	4.82	76.7	12.6	1.23	13.9	0.01	0.09	0.02	0.03	141	209
150 ISL	10.53 D	10.51	33.461 D	25.663	235.0	0.467	4.50	71.3	15.0	1.37	16.2	0.01	0.08	0.02	0.02	151	
168	10.09	10.07	33.634	25.874	215.4	0.508	3.94	61.9	19.2	1.60	19.7	0.00	0.07	0.01	0.02	169	208
200 ISL	9.25 D	9.23	33.864 D	26.193	185.5	0.572	3.16	48.8	26.6	1.89	24.5	0.00	0.06	0.00	0.02	201	
201	9.25	9.23	33.867	26.195	185.3	0.574	3.14	48.5	26.8	1.90	24.6	0.00	0.06	0.00	0.02	202	207
229	8.70	8.68	33.976	26.368	169.3	0.623	2.71	41.4	32.5	2.06	27.3	0.00	0.08	0.00	0.00	230	206
250 ISL	8.33 D	8.30	34.032 D	26.468	159.9	0.658	2.26	34.2	37.2	2.23	29.6	0.00	0.09	0.00		251	
268	8.15	8.12	34.065	26.521	155.1	0.686	1.86	28.1	41.4	2.38	31.4	0.00	0.10	0.00		269	205
300 ISL	7.78 D	7.75	34.138 D	26.634	144.9	0.734	1.33	19.9	48.6	2.61	33.7	0.00	0.10	0.00		302	
320	7.55	7.52	34.170	26.692	139.5	0.763	1.07	15.9	52.7	2.74	34.7	0.00	0.10	0.00		322	204
379	7.11	7.07	34.244	26.813	128.8	0.842	0.58	8.6	61.8	2.97	36.4	0.00	0.02			381	203
400 ISL	6.91 D	6.87	34.263 D	26.856	124.9	0.868	0.49	7.2	64.9	3.03	37.0	0.00	0.01			402	
437	6.64	6.60	34.287	26.911	120.0	0.914	0.40	5.8	70.0	3.11	37.9	0.00	0.00			440	202
500 ISL	6.24 D	6.20	34.314 D	26.986	113.5	0.987	0.35	5.1	76.8	3.19	39.0	0.00	0.00			503	
519	6.14	6.09	34.322	27.005	111.8	1.009	0.34	4.9	78.9	3.21	39.3	0.00	0.00			522	201

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
29 51.0 N	123 35.3 W	11/01/09	0352 UTC	4074 m	030	18 kn			1026.7 mb	15.9 c	12.6 c						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0 ISL	15.36	15.36	33.275	24.564	336.2	0.000	5.75	100.8	2.0	0.37	0.0	0.00	0.02	0.23	0.08	0	
2	15.36	15.36	33.275	24.565	336.3	0.007	5.75	100.8	2.0	0.37	0.0	0.00	0.02	0.23	0.08	2	220
10 ISL	15.36 D	15.36	33.271 D	24.562	336.8	0.034	5.76	100.9	2.0	0.36	0.0	0.00	0.03	0.23	0.08	10	
11	15.36	15.36	33.274	24.564	336.6	0.037	5.76	100.9	2.0	0.36	0.0	0.00	0.03	0.23	0.08	11	219
20 ISL	15.34 D	15.34	33.268 D	24.564	336.9	0.067	5.77	101.1	2.0	0.36	0.0	0.00	0.03	0.23	0.09	20	
26	15.25	15.25	33.266	24.583	335.3	0.087	5.77	100.9	2.0	0.37	0.0	0.00	0.02	0.23	0.09	26	218
30 ISL	15.23 D	15.23	33.261 D	24.583	335.4	0.101	5.77	100.8	2.0	0.37	0.0	0.00	0.02	0.24	0.09	30	
40	15.22	15.21	33.263	24.587	335.3	0.134	5.77	100.8	2.0	0.37	0.0	0.01	0.02	0.27	0.10	40	217
50 ISL	15.21 D	15.20	33.257 D	24.585	335.8	0.168	5.76	100.6	2.0	0.37	0.0	0.01	0.01	0.28	0.09	50	
51	15.21	15.20	33.262	24.589	335.5	0.171	5.76	100.6	2.0	0.37	0.0	0.01	0.01	0.28	0.09	51	216
62	15.19	15.18	33.260	24.592	335.5	0.208	5.75	100.4	2.0	0.38	0.0	0.01	0.02	0.32	0.08	62	215
75 ISL	13.27 D	13.26	33.035 D	24.820	313.9	0.250	5.77	96.7	3.2	0.52	1.3	0.40	0.01	0.25	0.24	75	
76	13.19	13.18	33.044	24.843	311.8	0.254	5.77	96.6	3.3	0.53	1.5	0.42	0.01	0.24	0.25	76	214
87	12.25	12.24	32.981	24.977	299.2	0.287	5.65	92.7	4.6	0.66	4.1	0.02	0.01	0.13	0.19	87	213
100 ISL	11.52 D	11.51	33.003 D	25.130	284.8	0.325	5.49	88.7	6.5	0.84	7.3	0.01	0.01	0.07	0.12	100	
102	11.45	11.44	33.009	25.147	283.2	0.331	5.47	88.2	6.8	0.87	7.7	0.01	0.01	0.06	0.11	102	212
113	11.14	11.13	33.096	25.271	271.6	0.361	5.33	85.4	8.5	0.96	9.4	0.01	0.00	0.04	0.07	113	211
125 ISL	11.03 D	11.01	33.308 D	25.456	254.3	0.393	5.04	80.7	10.6	1.09	11.8	0.01	0.00	0.03	0.05	126	
126	11.03	11.01	33.309	25.457	254.2	0.395	5.01	80.2	10.8	1.10	12.0	0.01	0.00	0.03	0.05	127	210
140	10.77	10.75	33.438	25.603	240.6	0.430	4.72	75.2	12.8	1.22	14.0	0.00	0.00	0.02	0.03	141	209
150 ISL	10.59 D	10.57	33.526 D	25.704	231.2	0.454	4.37	69.4	15.5	1.36	16.4	0.00	0.00	0.01	0.03	151	
165	10.00	9.98	33.669	25.916	211.2	0.487	3.85	60.4	19.7	1.58	20.1	0.00	0.00	0.00	0.02	166	208
200	9.33	9.31	33.872	26.186	186.2	0.556	3.36	52.0	25.2	1.75	23.2	0.00	0.00	0.00	0.02	201	207
230	8.86	8.84	33.965	26.334	172.5	0.610	2.95	45.2	30.3	1.94	25.7	0.00	0.00	0.00	0.00	231	206
250 ISL	8.58 D	8.55	34.003 D	26.407	165.8	0.644	2.64	40.2	34.2	2.07	27.5	0.00	0.00	0.00	0.00	251	
271	8.24	8.21	34.045	26.492	158.0	0.678	2.32	35.1	38.6	2.20	29.3	0.00	0.00	0.00	0.00	272	205
300 ISL	7.84 D	7.81	34.079 D	26.579	150.1	0.723	1.90	28.5	44.7	2.38	31.6	0.00	0.00	0.00	0.00	302	
321	7.55	7.52	34.099	26.637	144.8	0.754	1.64	24.4	48.9	2.50	33.0	0.00	0.00	0.00	0.00	323	204
382	6.95	6.91	34.130	26.745	135.1	0.839	1.19	17.5	58.0	2.73	35.5	0.00	0.00	0.00	0.00	384	203
400 ISL	6.78 D	6.74	34.134 D	26.772	132.7	0.863	1.07	15.6	60.9	2.79	36.2	0.00	0.00	0.00	0.00	402	
439	6.40	6.36	34.162	26.844	126.1	0.914	0.82	11.9	67.1	2.92	37.7	0.00	0.00	0.00	0.00	442	202
500 ISL	5.93 D	5.89	34.221 D	26.952	116.3	0.988	0.53	7.6	76.0	3.06	39.5	0.00	0.00	0.00	0.00	503	
515	5.88	5.84	34.229	26.964	115.3	1.005	0.46	6.6	78.2	3.10	40.0	0.00	0.00	0.00	0.00	518	201

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

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE		
32 57.1 N	117 17.0 W	08/01/09	0424 UTC	26 m	040	04 kn			1017.3 mb	13.7 C	12.5 C						
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	NO3	NO2	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0 ISL	13.89	13.89	33.317	24.910	303.3	0.000	6.15	104.6	5.0	0.44	0.5	0.08	0.10	1.99	0.59	0	
2	13.89	13.89	33.317	24.910	303.4	0.006	6.15	104.6	5.0	0.44	0.5	0.08	0.10	1.99	0.59	2	205
5	13.86	13.86	33.323	24.921	302.4	0.015	6.13	104.2	4.9	0.44	0.5	0.07	0.13	2.10	0.62	5	204
10	13.760	13.759	33.328	24.946	300.2	0.030	6.03	102.3	4.9	0.43	0.6	0.08	0.17	2.19	0.70	10	203
15	13.69	13.69	33.331	24.962	298.8	0.045	5.88	99.6	5.2	0.49	1.1	0.11	0.23	1.78	0.74	15	202
18	13.67	13.67	33.337	24.971	298.0	0.054	5.77	97.7	5.3	0.52	1.5	0.12	0.29	1.65	0.68	18	201

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 76.7 60.0

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
34 43.4 N		121 32.9 W		22/01/09		1749 UTC		11 m		1221 - 1805 PST		1221 PST		1805 PST		340.2 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)				
													PCT	1	2	MEAN	DARK
1	13.25	33.390	25.097	6.89	115.7	3.1	0.34	0.2	0.02	1.41	0.23	87. A	19.5	20.6	20.1	0.20	
5	13.26	33.390	25.095	6.95	116.7	3.1	0.34	0.2	0.01	1.39	0.26	50.	20.5	20.1	20.3	0.95	
9	13.20	33.402	25.116	6.83	114.6	3.4	0.38	0.4	0.02	1.33	0.25						
16	12.69	33.412	25.225	6.41	106.4	4.8	0.56	2.6	0.11	1.31	0.38	11.	10.9	11.5	11.2	0.13	
21	12.55	33.413	25.253	6.09	100.8	5.9	0.67	3.9	0.20	1.02	0.41	5.3	3.5	3.0	3.2	0.08	
31	12.47	33.413	25.268	5.84	96.5	6.7	0.73	4.7	0.33	0.55	0.44	1.3	0.99	1.1	1.0	0.06	
39	12.29	33.424	25.312	5.58	91.9	8.4	0.85	6.9	0.39	0.40	0.36						
48	11.59	33.475	25.483	4.70	76.2	12.9	1.19	12.9	0.18	0.23	0.28	0.12	0.06	0.06	0.06	0.05	

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 76.7 100.0

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 23.1 N		124 19.8 W		21/01/09		1736 UTC		14 m		1229 - 1800 PST		1229 PST		1800 PST		222.1 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)				
													PCT	1	2	MEAN	DARK
2	13.94	33.109	24.739	6.17	104.9	2.8	0.39	0.2	0.02	0.60	0.14	80. A	9.9	9.7	9.8	0.11	
8	13.94	33.110	24.740	6.16	104.8	2.8	0.38	0.2	0.02	0.63	0.12	42.	9.3	8.9	9.1	0.09	
18	13.67	33.115	24.800	6.27	106.0	3.1	0.40	0.2	0.03	0.88	0.24	14.	6.5	6.2	6.3	0.11	
27	13.39	33.114	24.856	6.07	102.1	3.1	0.46	1.1	0.08	0.63	0.33	5.2	2.7	2.4	2.6	0.07	
39	13.29	33.115	24.877	5.94	99.7	3.1	0.50	1.6	0.17	0.32	0.24	1.4	0.70	0.74	0.72	0.03	
50	13.16	33.118	24.906	5.97	99.9	3.3	0.53	2.0	0.18	0.29	0.20						
61	13.08	33.129	24.930	5.88	98.2	3.6	0.56	2.4	0.25	0.20	0.16	0.12	0.07	0.09	0.08	0.04	

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 80.0 70.0

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 48.7 N		121 51.9 W		20/01/09		1724 UTC		15 m		1220 - 1800 PST		1219 PST		1800 PST		329.6 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)				
													PCT	1	2	MEAN	DARK
2	13.09	33.105	24.908	6.24	104.3	4.5	0.52	2.2	0.07	0.63	0.17	81. A	12.9	12.1	12.5	0.10	
9	12.88	33.095	24.942	6.25	104.0	4.6	0.53	2.5	0.07	0.72	0.17	40.	14.9	13.4	14.1	0.12	
19	11.84	33.053	25.108	6.04	98.3	5.7	0.70	4.8	0.13	0.83	0.24	14.	9.0	9.4	9.2	0.06	
31	11.88	33.185	25.203	5.93	96.6	6.5	0.77	6.1	0.32	0.44	0.27	4.2	2.4	2.3	2.3	0.05	
41	11.89	33.225	25.233	5.92	96.5	6.9	0.79	6.3	0.34	0.35	0.25	1.5	0.76	0.87	0.81	0.17	
54	12.11	33.323	25.268	5.91	96.9	7.2	0.79	6.3	0.36	0.25	0.21						
65	11.58	33.254	25.313	5.72	92.6	8.1	0.89	8.1	0.33	0.16	0.18	0.13	0.05	0.06	0.06	0.05	

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 81.8 46.9

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		INCUBATION TIME			LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
34 17.3 N		120 1.7 W		19/01/09		1729 UTC		11 m		1211 - 1749 PST			1211 PST		1749 PST		838.0 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)					
													PCT	1	2	MEAN	DARK	
1	13.16	33.398	25.121	6.20	103.9	5.5	0.52	2.3	0.11	1.65	0.70	87. A	24.5	28.8	26.6	0.19		
6	13.13	33.400	25.129	6.20	103.9	5.7	0.53	2.5	0.12	1.74	0.81	43.	59.3	59.3	59.3	0.24		
15	13.08	33.404	25.142	6.04	101.1	5.9	0.57	3.1	0.15	1.57	0.75	12.	29.5	28.4	28.9	0.13		
22	12.88	33.397	25.176	5.79	96.5	6.4	0.66	4.4	0.25	1.19	0.68	4.6	9.1	8.4	8.8	0.12		
31	12.65	33.429	25.246	5.33	88.4	7.9	0.84	6.8	0.34	0.74	0.65	1.3	2.1	2.0	2.1	0.10		
41	12.52	33.441	25.281	5.22	86.4	8.7	0.88	7.6	0.37	0.55	0.55							
48	12.29	33.460	25.340	4.95	81.5	10.2	1.00	9.4	0.38	0.41	0.44	0.12	0.10	0.11	0.11	0.09		

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 83.3 55.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	13.30	33.338	25.046	6.34	106.6	4.8	0.48	1.6	0.06	1.53	0.39	84. A	16.1	14.7	15.4	0.14
5	13.29	33.340	25.050	6.34	106.5	5.0	0.49	1.5	0.06	1.55	0.41	43.	29.4	30.4	29.9	0.14
12	13.19	33.334	25.066	6.32	106.0	5.0	0.53	1.8	0.07	1.72	0.42	13.	26.4	26.0	26.2	0.12
18	12.99	33.325	25.099	6.20	103.5	5.2	0.58	2.4	0.09	1.56	0.43	4.6	12.0	10.6	11.3	0.09
26	12.72	33.347	25.169	5.83	96.8	6.6	0.73	4.7	0.16	0.89	0.41	1.2	4.3	2.7	3.5	0.05
31	12.73	33.354	25.172	5.81	96.5	6.8	0.75	4.7	0.16	0.90	0.42					
38	12.75	33.364	25.176	5.76	95.7	6.7	0.76	4.8	0.16	0.88	0.47	0.15	0.53	0.44	0.49	0.05

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 83.3 90.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	13.29	33.131	24.888	6.20	104.0	3.5	0.49	1.5	0.07	0.67	0.15	91. A	4.4	4.3	4.4	0.09
9	13.26	33.133	24.896	6.22	104.3	3.5	0.50	1.5	0.07	0.70	0.15	42.	11.6	12.1	11.9	0.09
16	13.15	33.131	24.917	6.22	104.1	3.5	0.50	1.6	0.08	0.79	0.20					
21	13.10	33.129	24.925	6.24	104.3	3.4	0.50	1.7	0.08	0.82	0.23	13.	10.0	9.6	9.8	0.07
32	12.78	33.088	24.957	6.06	100.6	3.7	0.55	2.5	0.11	0.76	0.27	4.6	6.6	6.3	6.4	0.05
44	12.28	33.040	25.016	5.88	96.5	4.3	0.64	3.8	0.16	0.37	0.18	1.5	2.1	1.6	1.8	0.02
57	11.77	33.002	25.082	5.72	92.9	5.4	0.75	5.6	0.09	0.12	0.11					
68	11.42	33.022	25.162	5.57	89.8	7.1	0.88	7.8	0.03	0.08	0.09	0.15	0.09	0.09	0.09	0.02

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 86.7 35.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	14.03	33.364	24.917	6.43	109.7	2.6	0.37	0.1	0.01	1.19	0.26	91. A	18.4	20.6	19.5	0.22
10	13.72	33.360	24.979	6.30	106.8	3.3	0.39	0.4	0.06	1.64	0.49	41.	26.8	26.3	26.6	0.17
16	13.65	33.357	24.991	6.03	102.1	4.1	0.45	1.0	0.13	1.54	0.50					
23	13.29	33.354	25.061	5.48	92.1	6.4	0.71	4.2	0.36	1.05	0.52	13.	10.2	11.3	10.8	0.10
35	12.82	33.415	25.202	4.88	81.2	8.7	0.97	8.7	0.24	0.64	0.44	4.2	5.2	4.5	4.9	0.05
46	11.99	33.492	25.422	4.14	67.7	12.8	1.31	14.3	0.07	0.16	0.21	1.6	0.52	0.56	0.54	0.04
60	11.67	33.514	25.499	3.98	64.7	14.2	1.39	15.7	0.05	0.12	0.22					
73	11.15	33.625	25.680	3.51	56.5	18.0	1.59	18.7	0.07	0.06	0.14	0.14	0.03	0.03	0.03	0.03

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 86.7 60.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	13.10	33.337	25.086	6.31	105.6	5.3	0.53	2.6	0.08	1.38	0.24	86. A	15.0	12.4	13.7	0.14
6	13.05	33.336	25.095	6.32	105.7	5.4	0.54	2.6	0.08	1.47	0.21	40.	35.1	36.3	35.7	0.13
10	12.91	33.335	25.122	6.26	104.4	5.5	0.57	2.8	0.10	1.24	0.24					
13	12.82	33.334	25.139	6.19	103.0	5.6	0.59	3.2	0.11	1.04	0.22	14.	14.6	15.0	14.8	0.09
19	12.80	33.337	25.145	6.14	102.1	5.6	0.60	3.5	0.13	0.74	0.17	5.4	5.8	5.2	5.5	0.06
28	12.70	33.337	25.165	6.06	100.6	5.8	0.62	3.8	0.16	0.69	0.18	1.4	2.2	2.3	2.2	0.07
36	12.69	33.339	25.169	6.00	99.6	5.9	0.64	4.0	0.18	0.66	0.24					
42	12.70	33.342	25.169	5.93	98.4	6.0	0.66	4.3	0.20	0.30	0.17	0.16	0.13	0.15	0.14	0.04

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 86.7 100.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	14.49	33.273	24.751	5.96	102.6	2.2	0.37	0.1	0.01	0.51	0.13	90. A	6.3	5.5	5.9	0.07
8	14.44	33.275	24.763	5.97	102.7	2.2	0.38	0.1	0.01	0.54	0.16	44.	11.5	11.4	11.4	0.08
19	14.26	33.279	24.804	5.96	102.1	2.3	0.37	0.2	0.02	0.56	0.19	14.	8.2	8.1	8.1	0.09
31	14.24	33.272	24.804	5.94	101.7	2.3	0.39	0.3	0.03	0.51	0.20	4.2	4.5	4.1	4.3	0.05
41	14.21	33.273	24.811	5.91	101.2	2.3	0.40	0.4	0.04	0.49	0.24	1.5	2.1	1.6	1.8	0.04
53	14.17	33.280	24.825	5.87	100.4	2.5	0.41	0.6	0.05	0.41	0.20					
64	13.94	33.254	24.853	5.87	99.9	2.6	0.44	0.9	0.07	0.34	0.21	0.14	0.23	0.27	0.25	0.03

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 90.0 37.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	14.51	33.370	24.821	6.10	105.1	3.6	0.33	0.0	0.00	0.53	0.18	91. A	7.2	7.2	7.2	0.17
10	14.28	33.364	24.866	6.12	105.0	3.7	0.34	0.1	0.00	0.61	0.22	41.	13.1	12.5	12.8	0.20
16	14.21	33.360	24.877	6.11	104.6	3.7	0.34	0.1	0.00	0.82	0.33					
23	14.16	33.357	24.886	6.07	103.8	3.7	0.35	0.1	0.01	1.10	0.48	13.	17.8	17.0	17.4	0.13
35	13.99	33.357	24.921	5.73	97.7	4.6	0.48	1.6	0.10	0.65	0.42	4.2	6.9	6.4	6.6	0.05
47	12.40	33.406	25.277	4.48	73.9	10.3	1.11	11.3	0.02	0.19	0.22	1.4	0.92	0.83	0.88	0.02
60	12.10	33.493	25.402	4.06	66.6	12.6	1.30	14.1	0.01	0.11	0.15					
73	11.58	33.593	25.577	3.66	59.4	15.8	1.49	17.2	0.00	0.04	0.10	0.14	0.03	0.04	0.03	0.03

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 5.1 N	120 38.2 W	12/01/09	1815 UTC	21 m	1211 - 1740 PST	1211 PST	1739 PST	381.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	14.67	33.299	24.733	5.83	100.8	2.2	0.37	0.1	0.01	0.43	0.13	86. A	1.4	1.9	1.6	0.05
12	14.62	33.297	24.742	5.87	101.3	2.3	0.38	0.1	0.01	0.43	0.14	42.	8.1	8.9	8.5	0.06
20	14.61	33.298	24.745	5.84	100.8	2.3	0.37	0.1	0.01	0.43	0.14					
28	14.61	33.298	24.745	5.84	100.8	2.2	0.36	0.1	0.01	0.44	0.16	13.	7.6	7.9	7.8	0.06
36	14.61	33.299	24.746	5.84	100.8	2.2	0.37	0.1	0.01	0.44	0.15					
43	14.61	33.299	24.747	5.84	100.8	2.3	0.38	0.1	0.01	0.44	0.14	4.3	5.3	5.1	5.2	0.03
51	14.60	33.297	24.748	5.81	100.3	2.3	0.41	0.1	0.02	0.46	0.17					
59	14.57	33.293	24.751	5.81	100.2	2.2	0.41	0.2	0.03	0.37	0.15	1.3	2.4	2.4	2.4	0.03
75	13.28	33.115	24.880	5.73	96.1	3.4	0.56	2.0	0.18	0.16	0.19					
90	11.50	32.927	25.074	5.70	92.0	5.1	0.74	4.9	0.01	0.08	0.12	0.14	0.12	0.14	0.13	0.02

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 46.4 N	123 20.5 W	11/01/09	1757 UTC	26 m	1220 - 1758 PST	1221 PST	1757 PST	214.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	15.51	33.253	24.515	5.73	100.7	2.4	0.35	0.0	0.00	0.22	0.09	89. A	0.07	0.11	0.09	0.03
8	15.51	33.254	24.516	5.75	101.0	2.3	0.34	0.0	0.00	0.22	0.10					
15	15.50	33.253	24.517	5.73	100.7	2.3	0.34	0.1	0.00	0.23	0.09	41.	3.5	3.9	3.7	0.03
25	15.50	33.252	24.517	5.72	100.5	2.4	0.35	0.0	0.00	0.23	0.09					
35	15.50	33.254	24.519	5.71	100.3	2.4	0.34	0.0	0.00	0.23	0.10	13.	3.5	3.4	3.5	0.03
44	15.50	33.252	24.517	5.74	100.8	2.1	0.34	0.0	0.00	0.23	0.09					
53	15.49	33.252	24.520	5.72	100.5	2.2	0.34	0.0	0.00	0.23	0.10	4.4	2.5	2.3	2.4	0.02
62	15.50	33.252	24.518	5.75	101.0	2.3	0.33	0.0	0.00	0.23	0.09					
73	15.48	33.249	24.521	5.73	100.6	2.3	0.34	0.0	0.01	0.23	0.10	1.3	1.3	1.3	1.3	0.02
85	13.47	33.120	24.846	5.78	97.3	3.2	0.46	1.1	0.23	0.13	0.23					
97	12.86	33.123	24.970	5.64	93.8	4.0	0.54	2.7	0.06	0.10	0.21					
112	12.24	33.125	25.091	5.55	91.1	5.4	0.67	5.0	0.02	0.07	0.14	0.13	0.10	0.12	0.11	0.02

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 93.3 35.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	14.40	33.380	24.852	5.96	102.5	2.8	0.35	0.0	0.01	0.47	0.14	92. A	7.4	8.1	7.7	0.09
11	14.31	33.377	24.869	5.99	102.8	2.7	0.35	0.0	0.00	0.76	0.23	41.	15.1	14.9	15.0	0.09
18	14.26	33.371	24.875	5.99	102.7	2.8	0.36	0.0	0.02	1.15	0.38					
27	14.10	33.356	24.898	5.77	98.6	3.7	0.45	1.1	0.20	0.79	0.46	11.	9.7	10.0	9.8	0.04
32	13.86	33.350	24.943	5.62	95.6	4.3	0.54	2.2	0.28	0.61	0.48					
38	13.62	33.335	24.980	5.43	91.9	5.3	0.67	3.9	0.27	0.57	0.47	4.6	3.2	3.4	3.3	0.03
46	12.82	33.370	25.168	4.80	79.9	8.4	1.00	8.9	0.04	0.17	0.29					
52	12.36	33.446	25.316	4.42	72.9	10.7	1.18	11.9	0.02	0.10	0.21	1.5	0.30	0.33	0.31	0.03
67	11.68	33.568	25.539	3.87	62.9	14.3	1.41	15.8	0.02	0.05	0.15					
81	11.40	33.644	25.650	3.58	57.9	16.3	1.55	17.8	0.01	0.03	0.09	0.14	0.00	0.02	0.01	0.02

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 93.3 70.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	13.85	33.337	24.934	5.87	99.8	2.8	0.41	0.6	0.06	0.44	0.16	84. A	3.4	3.7	3.6	0.06
10	13.85	33.336	24.933	5.93	100.8	2.6	0.41	0.6	0.06	0.48	0.20	43.	6.3	6.3	6.3	0.06
17	13.85	33.336	24.934	5.93	100.8	2.7	0.41	0.6	0.06	0.45	0.15					
24	13.85	33.335	24.933	5.95	101.1	2.9	0.40	0.6	0.06	0.50	0.20	13.	4.6	4.5	4.6	0.07
30	13.85	33.336	24.934	5.94	101.0	2.8	0.41	0.6	0.06	0.56	0.26					
37	13.80	33.335	24.944	5.94	100.9	2.8	0.41	0.7	0.07	0.56	0.21	4.3	2.5	2.2	2.3	0.05
44	13.79	33.331	24.943	5.92	100.5	3.0	0.41	0.7	0.07	0.57	0.24					
50	13.74	33.324	24.948	5.92	100.4	2.9	0.42	0.8	0.08	0.58	0.28	1.4	1.2	1.2	1.2	0.03
64	12.60	33.258	25.124	5.30	87.7	7.1	0.81	7.0	0.15	0.21	0.25					
78	11.47	33.356	25.413	4.68	75.7	11.7	1.18	13.0	0.03	0.09	0.17	0.13	0.02	0.03	0.02	0.03

RV NEW HORIZON

CALCOFI CRUISE 0901

STATION 93.3 100.0

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

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	14.99	33.157	24.554	5.79	100.6	2.0	0.37	0.0	0.01	0.25	0.10	94. A	0.23	0.34	0.29	0.02
8	14.98	33.155	24.555	5.80	100.8	2.0	0.37	0.0	0.01	0.26	0.10					
14	14.97	33.155	24.557	5.81	100.9	2.0	0.37	0.0	0.01	0.26	0.11	41.	4.8	4.8	4.8	0.03
22	14.97	33.155 D	24.558													
32	14.97	33.157	24.560	5.78	100.4	2.0	0.38	0.0	0.01	0.27	0.10	13.	4.3	4.6	4.4	0.02
40	14.97	33.156	24.559	5.79	100.6	1.9	0.37	0.0	0.01	0.26	0.10					
48	14.98	33.158	24.559	5.79	100.6	2.0	0.37	0.0	0.01	0.27	0.11	4.6	2.4	1.8	2.1	0.03
58	14.96	33.156	24.562	5.80	100.7	2.0	0.37	0.0	0.02	0.26	0.12					
66	14.04	33.087	24.703	5.86	99.8	2.4	0.45	0.6	0.15	0.22	0.15	1.5	0.32	0.41	0.37	1.0
78	13.30	33.069	24.840	5.77	96.8	3.1	0.52	1.6	0.31	0.10	0.14					
90	12.82	33.056	24.926	5.71	94.8	3.6	0.56	2.5	0.12	0.08	0.16					
103	12.06	33.132	25.130	5.49	89.8	5.5	0.71	5.5	0.03	0.06	0.12	0.14	0.10	0.10	0.10	0.01

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

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

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