UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 1407
6 – 22 July 2014

CC Reference 15 - 02
1 Sept 2015

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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CONTENTS

Introduction 4

Literature Cited 8

CalCOFI Cruise 1407

List of Figures 10

Personnel 21

Tabulated Rosette Cast Data 22

Tabulated Primary Productivity Data 50

Tabulated Macrozooplankton Data 53

INTRODUCTION

The data presented in this report were collected during cruise 1407* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon.* 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 Wildlife, 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 cruise were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. 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 3161-936) with a rosette was deployed at each station on this cruise. 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 515 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. Additional bottle depths also appear in combined hydrographic and primary productivity casts. 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 were 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 P152. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

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

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

Nutrient samples were analyzed at sea using a QuAAtro continuous flow analyzer (SEAL Analytical). Dissolved silicate, nitrate, and nitrite were analyzed using a modification of the method described by Armstrong (1967) and Gordon et al. (1992). Phosphate was measured with a modification of the Murphy and Riley (1962) protocol and ammonium is analyzed using a modified fluorometric method described by Kerouel and Aminot (1997). Samples were collected in 45ml high-density polypropylene screw top tubes which were acid washed and rinsed with sample three times prior to filling. Standardizations and cadmium-reduction coil efficiency determinations were performed at the beginning of every run. Drift and baseline corrections were performed in each run using a high standard and blank respectively inserted before and after sample sets. A sample of reference material for nutrients in seawater (RMNS), produced by KANSO technos (www.kanso.co.jp) was included in every run and those data were monitored throughout the cruise and available to adjust values for nitrate, nitrite, phosphate, and silicate if appropriate. A separate reference sample was used to monitor ammonium stability throughout the cruise. Samples not analyzed immediately after collection were refrigerated and run the following day.

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 7.783 µCi of ^{14}C as $NaHCO_3$ (50µl of stock solution) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

Macrozooplankton Net Tows

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

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 raw data are collected and archived for potential data processing ashore. The National Centers for Environmental Information (NCEI) in collaboration with the E.Firing Acoustic Doppler Current Profiler (ADCP) Laboratory at the University of Hawaii have established the Joint Archive for Shipboard ADCP (JASADCP). The JASADCP is responsible for the acquisition, review, documentation, archival, and distribution of shipboard ADCP data sets. Data may be accessed through their website (http://ilikai.soest.hawaii.edu/sadcp/index.html). Shipboard ADCP data is acquired by University of Hawaii Data Acquisition System (UDHAS) and uses Common Ocean Data Access System (CODAS) processing to incrementally build a dataset of averaged, edited ocean velocities for each ADCP and ping type specified. Processed data and plots are served on the shipboard network, and daily status summaries are emailed and available online (http://currents.soest.hawaii.edu/uhdas_fromships.html).

3) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. Measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs and the determination of mesozooplankton size structure using a Laser Optical Plankton Counter are sampled for all CalCOFI stations. On CalCOFI lines 90 and 80 measurements also include microscopic counts of heterotrophic and autotrophic phytoplankton for biomass and abundance and mesozooplankton community structure sampled with the Planktonic Rate Processes in Oligotrophic Ocean Systems (PRPOOS) tow net. (M. Ohman, SIO)

4) *Advanced Laser Fluorometer Analyzer (ALFA)*: Continuous underway analysis of phytoplankton pigment groups and variable fluorescence (F_v/F_m). ALFA, 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 ALFA 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. (R. Goericke, SIO)

5) *Southern California Coastal Ocean Observing System (SCCOOS) Nearshore Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore. Nearshore observations consist of 8 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI hydrographic observations as well as a CalBOBL net tow, particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen and taxon-specific phytoplankton pigments data. (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 with 14 profile and 8 additional surface water stations. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and pCO_2. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)

7) *Marine Mammal Observations*: During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for

localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys. (J. Hildebrand, SIO)

8) Microbial Diversity and Gene Expression: Samples suitable for purification of DNA and RNA from bacterial and microbial eukaryotic biomass are collected for molecular diversity assays targeted to various genetic marker loci (16S and 18S rRNA). DNA samples are collected at every station, in parallel with particulate organic matter (POM) samples, on Whatman GF/F filters. RNA samples are collected in parallel with primary productivity samples on 0.2 µM sterivex filters with a maximum filtration time of 30 min. Additional samples from the mixed layer, chlorophyll max, and two depths below the euphotic zone are collected along lines 80 and 90. (A. Allen, SIO and JCVI)

9) APEX Profiling Float: NAVOCEANO (Naval Oceanographic Office) maintains operational ocean circulation models worldwide. Ocean conditions in the Southern California region can be extracted from the global HYCOM (Hybrid Coordinate Model) or the RNCOM-SOCAL (Regional Navy Coastal Ocean Model for the Southern California area). Output from public domain versions of the various NAVOCEANO models are available at http://www.opc.ncep.noaa.gov/newNCOM/NCOM_currents.shtml. NAVOCEANO uses real-time temperature and temperature-salinity profile data in various ways: Profiles are 1) assimilated into model nowcasts to make them more realistic, 2) used to assess ocean model forecasts, 3) stored in historical observation databases such as the Master Oceanographic Observation Data Set (MOODS), and 4) used in the construction of ocean climatologies such as the Generalized Digital Environmental Model (GDEM). Profiling float data has become a primary source of profile data because it is so well-distributed spatially around the world, provides data on a continuing basis, provides salinity as well as temperature data, and is of high quality. Profiling float trajectories are used to assess the depiction of fronts and eddies in ocean models (e.g., positioning, size, and associated current velocities). NAVOCEANO provided three APEX profiling floats for deployment on this cruise at stations 90.0 53, 86.7 45, and 86.7 55.

TABULATED DATA

CTD/Rosette Cast Data

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

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

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

Primary Productivity Data

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

Macrozooplankton Data

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

FOOTNOTES

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

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

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FIGURES

Cruise 1407

1. CalCOFI Cruise 1407 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.

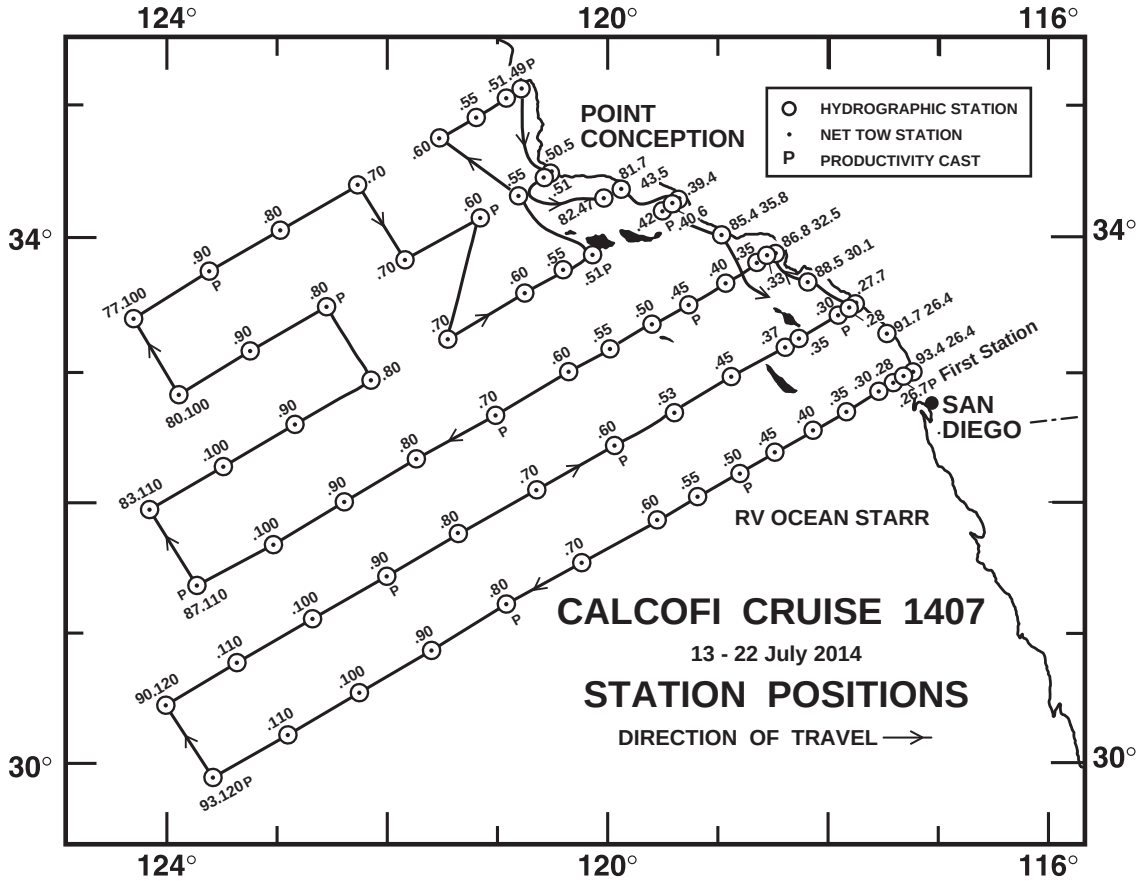

FIGURE 1

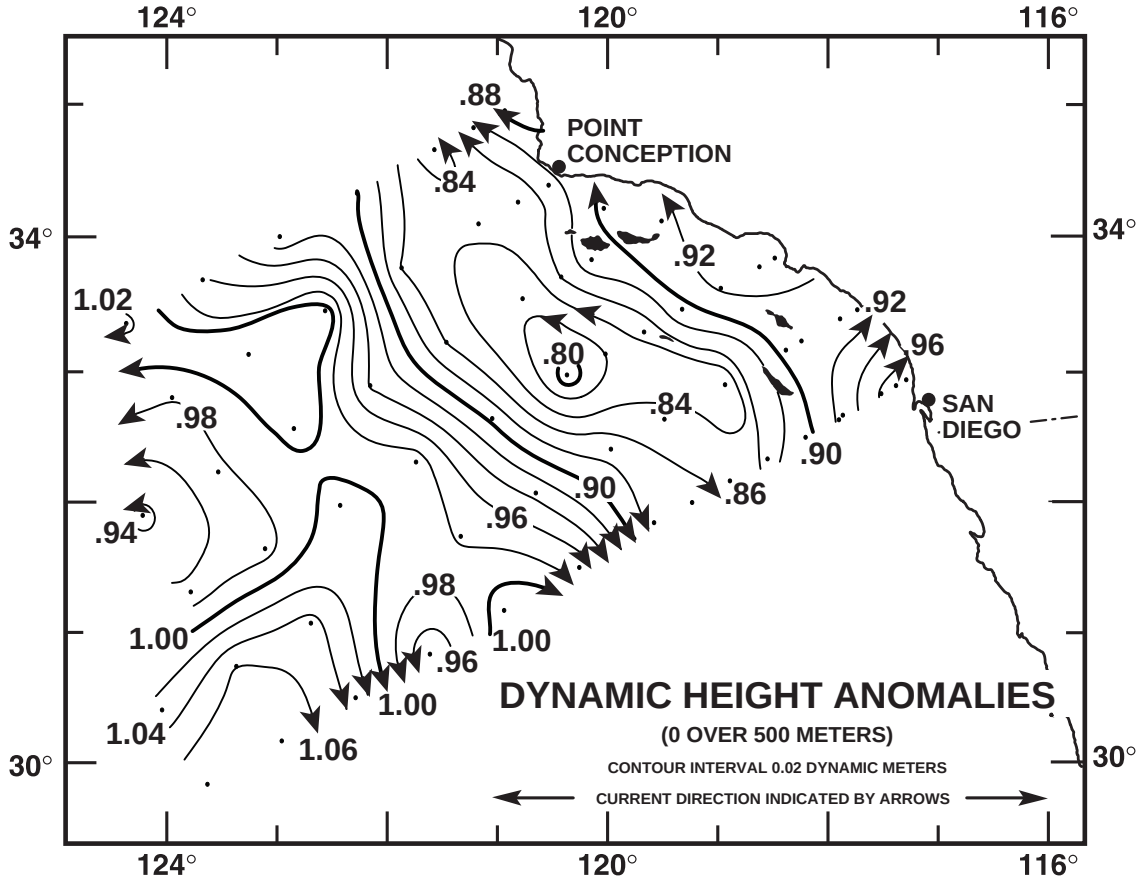

FIGURE 2

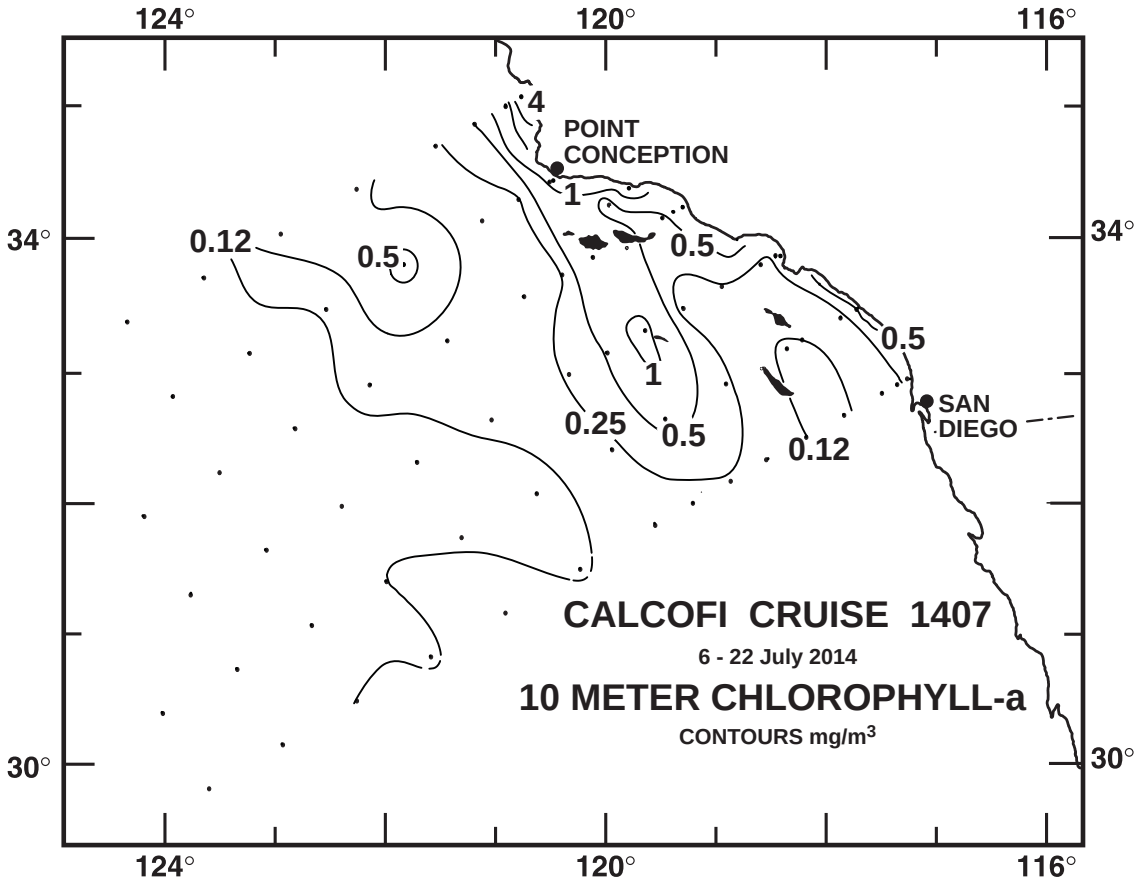

FIGURE 3A

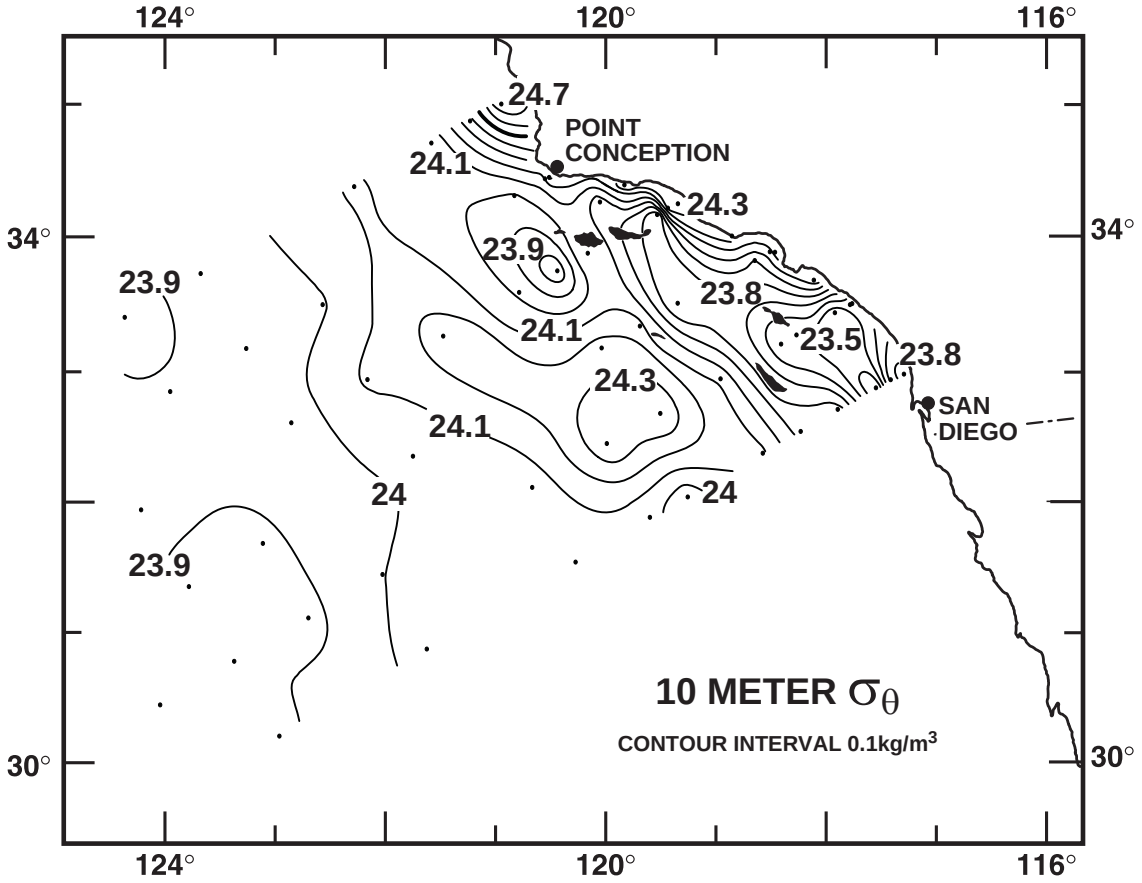

FIGURE 3B

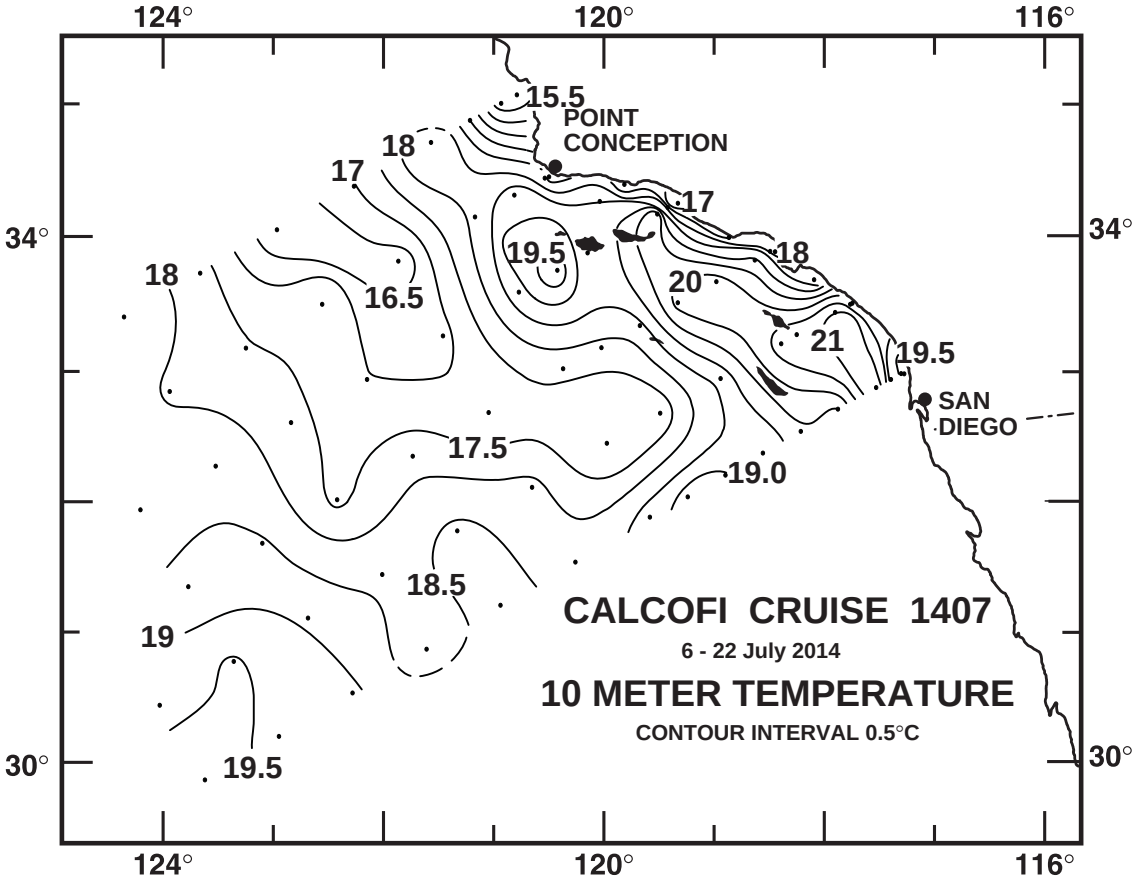

FIGURE 3C

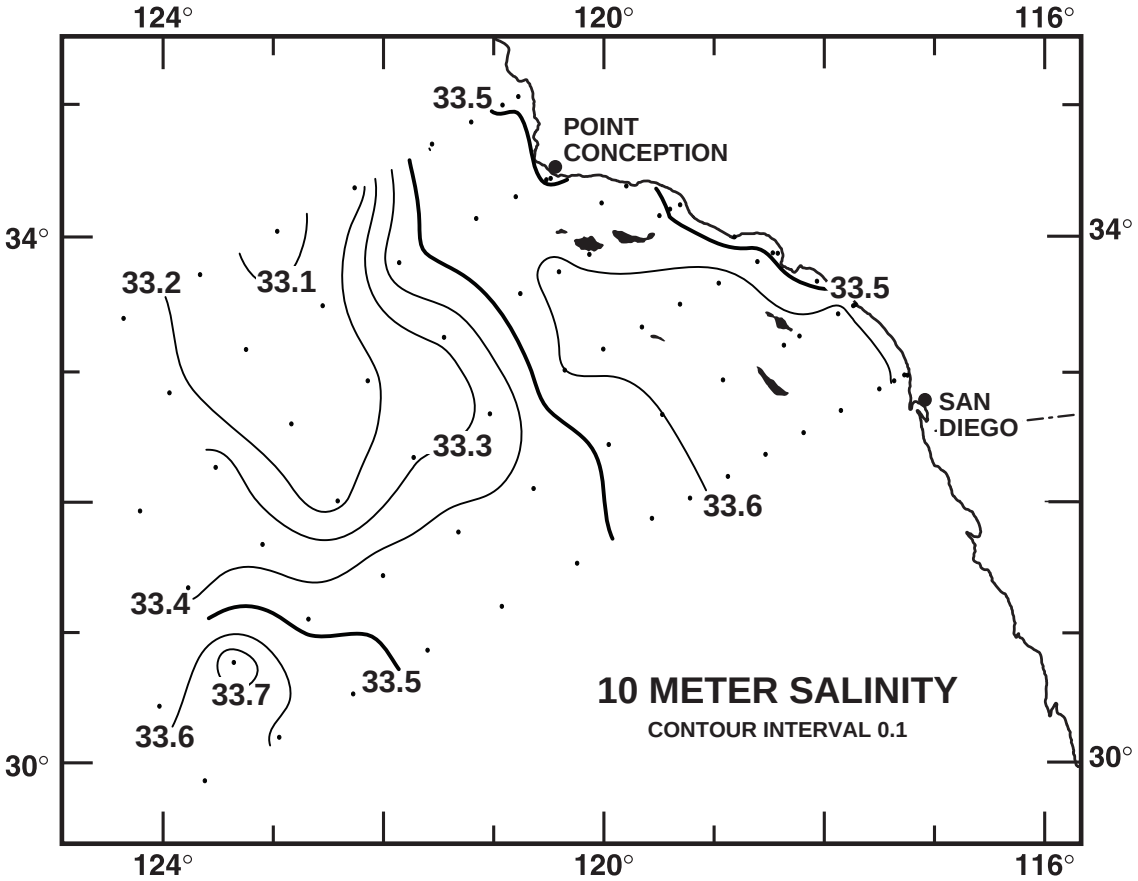

FIGURE 3D

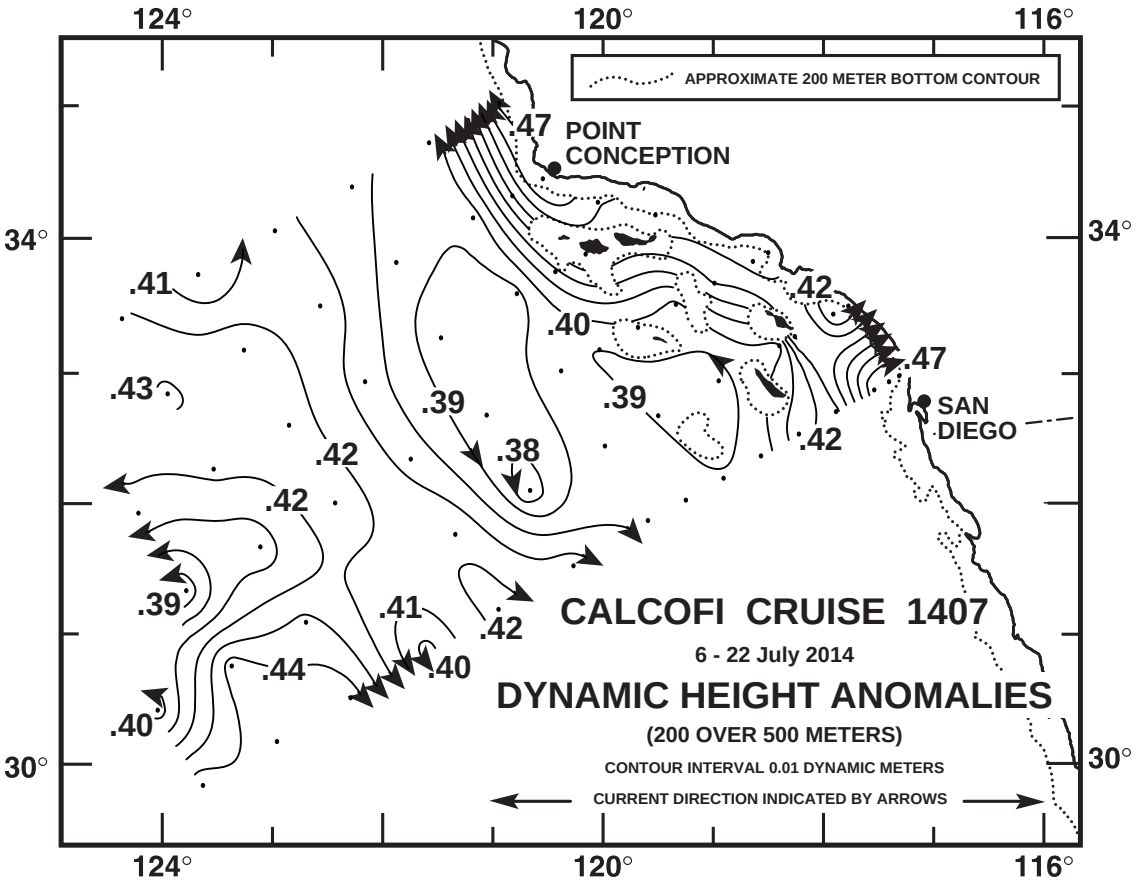

FIGURE 4A

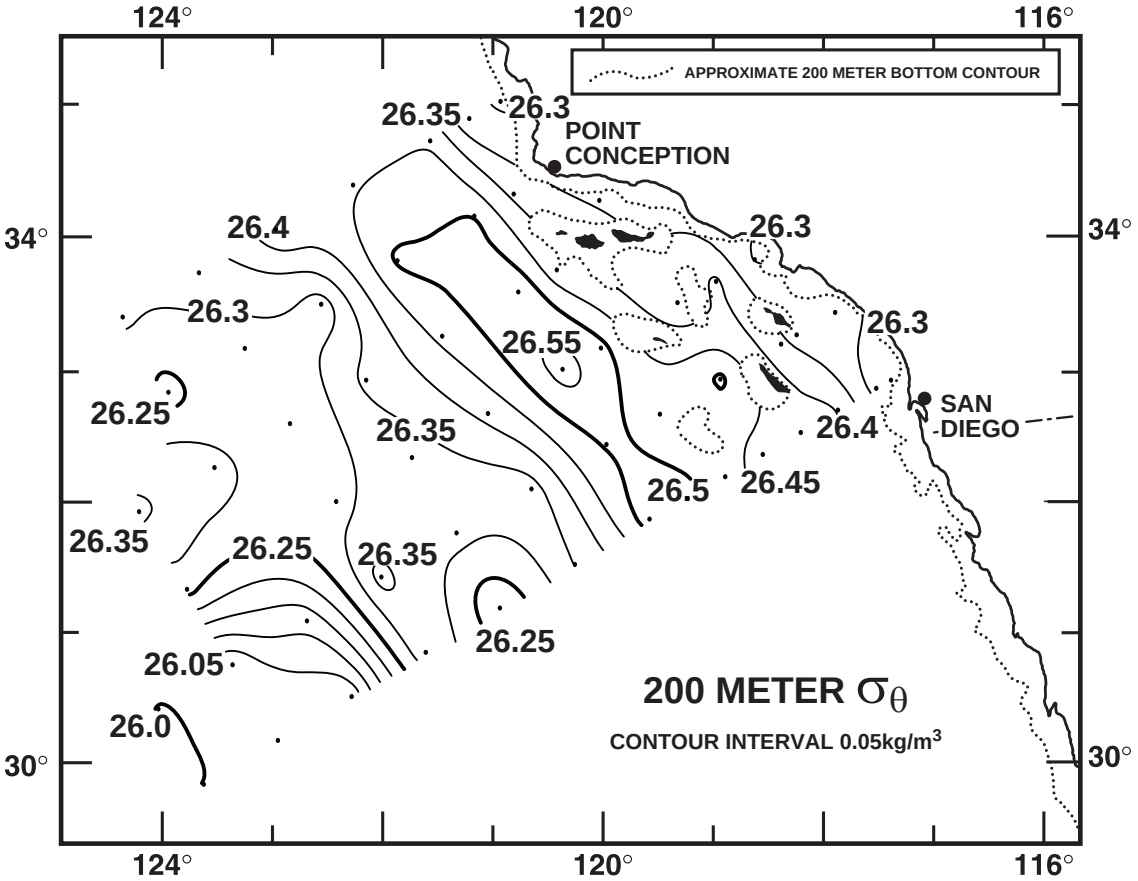

FIGURE 4B

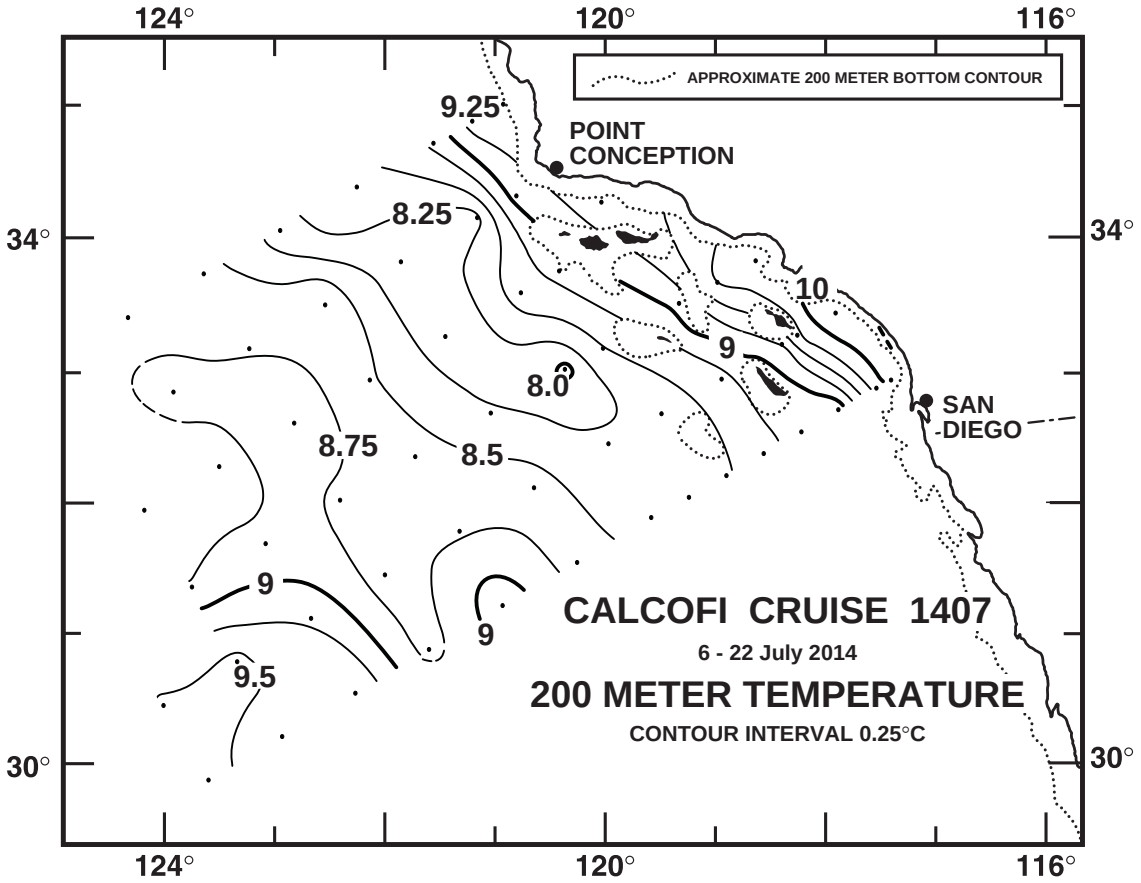

FIGURE 4C

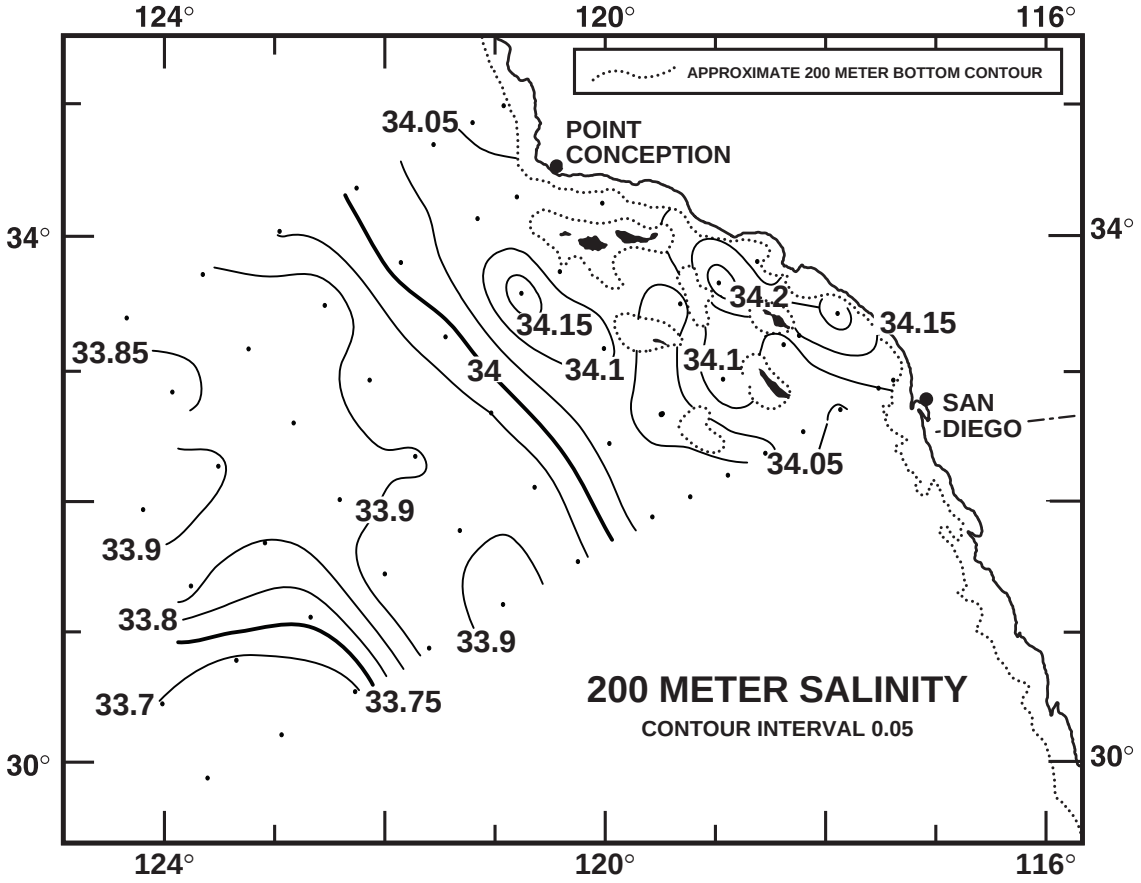

FIGURE 4D

CALCOFI CRUISE 1407

6 - 12 July 2014

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

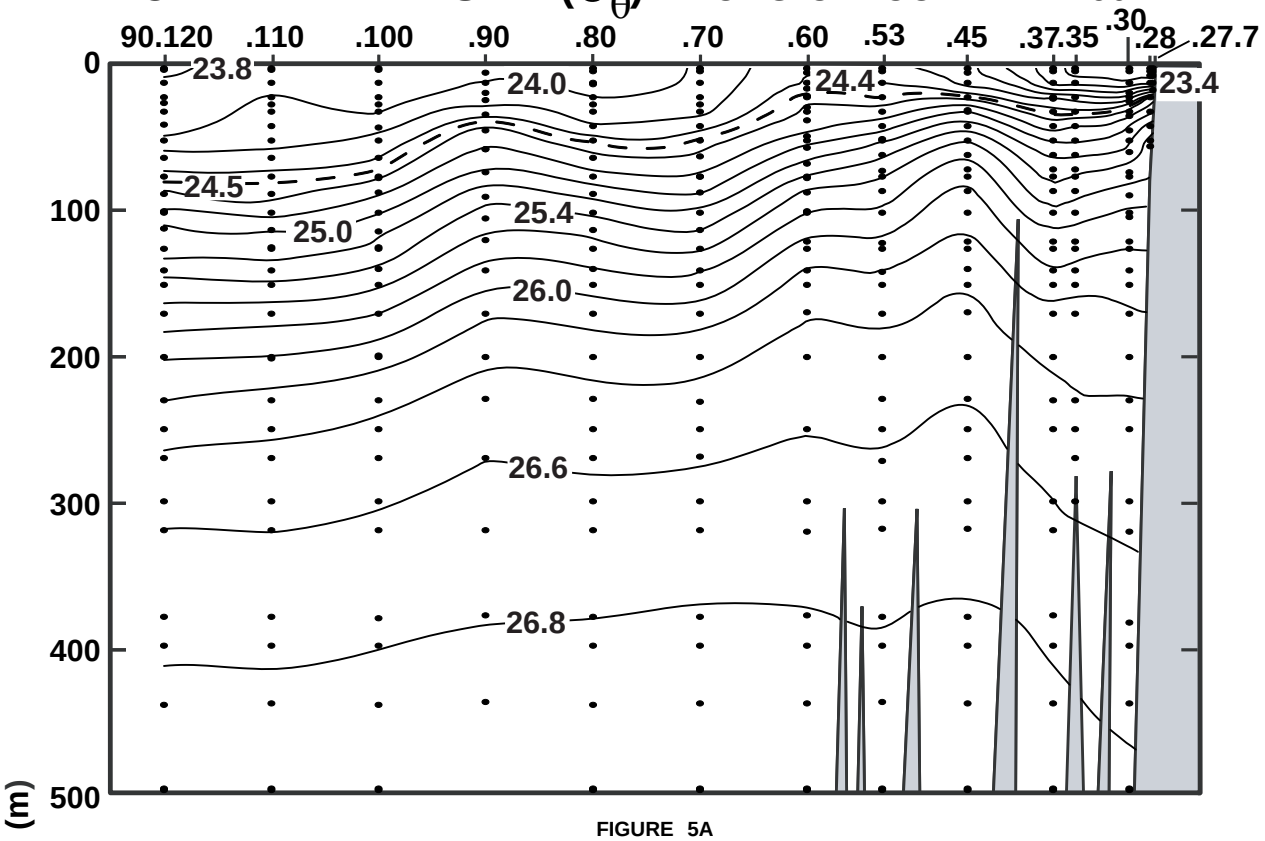

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

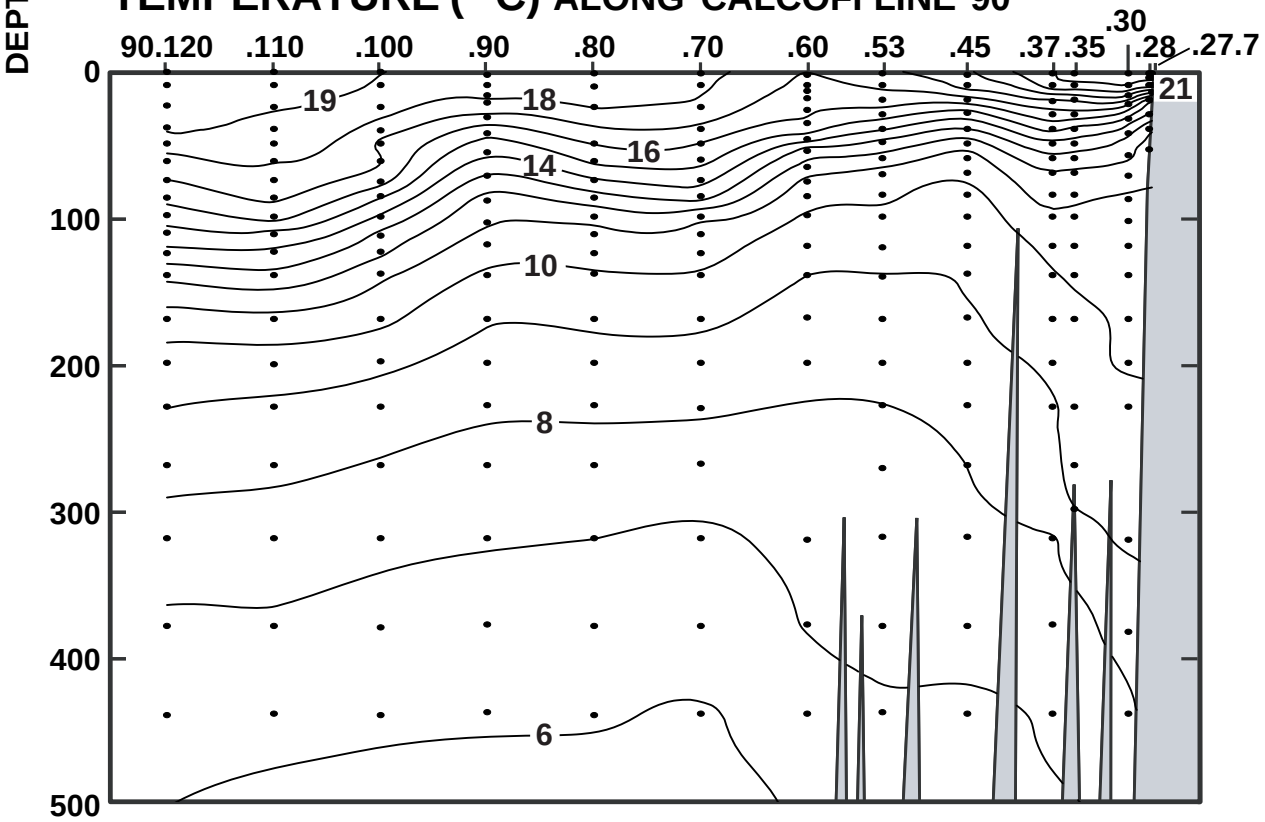

FIGURE 5B

CALCOFI CRUISE 1407

6 - 12 July 2014

SALINITY ALONG CALCOFI LINE 90

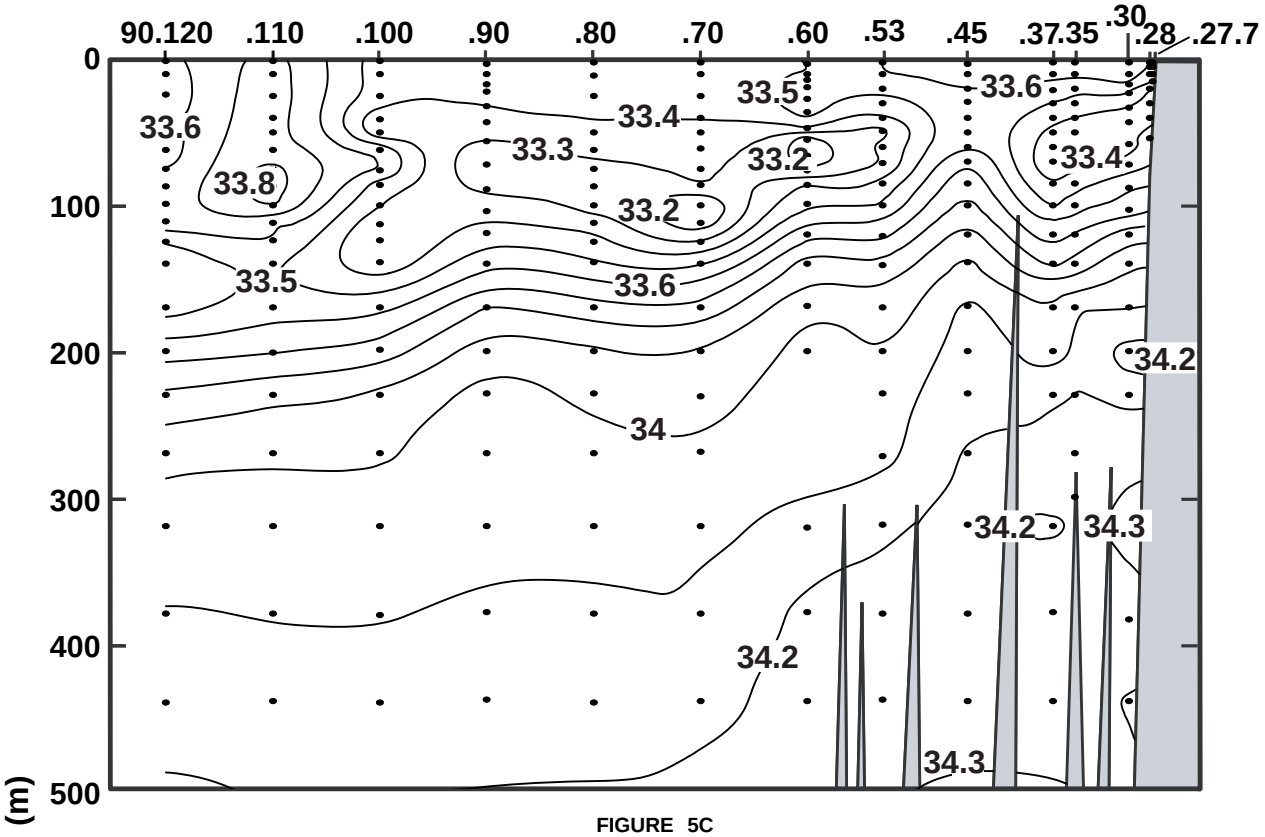

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

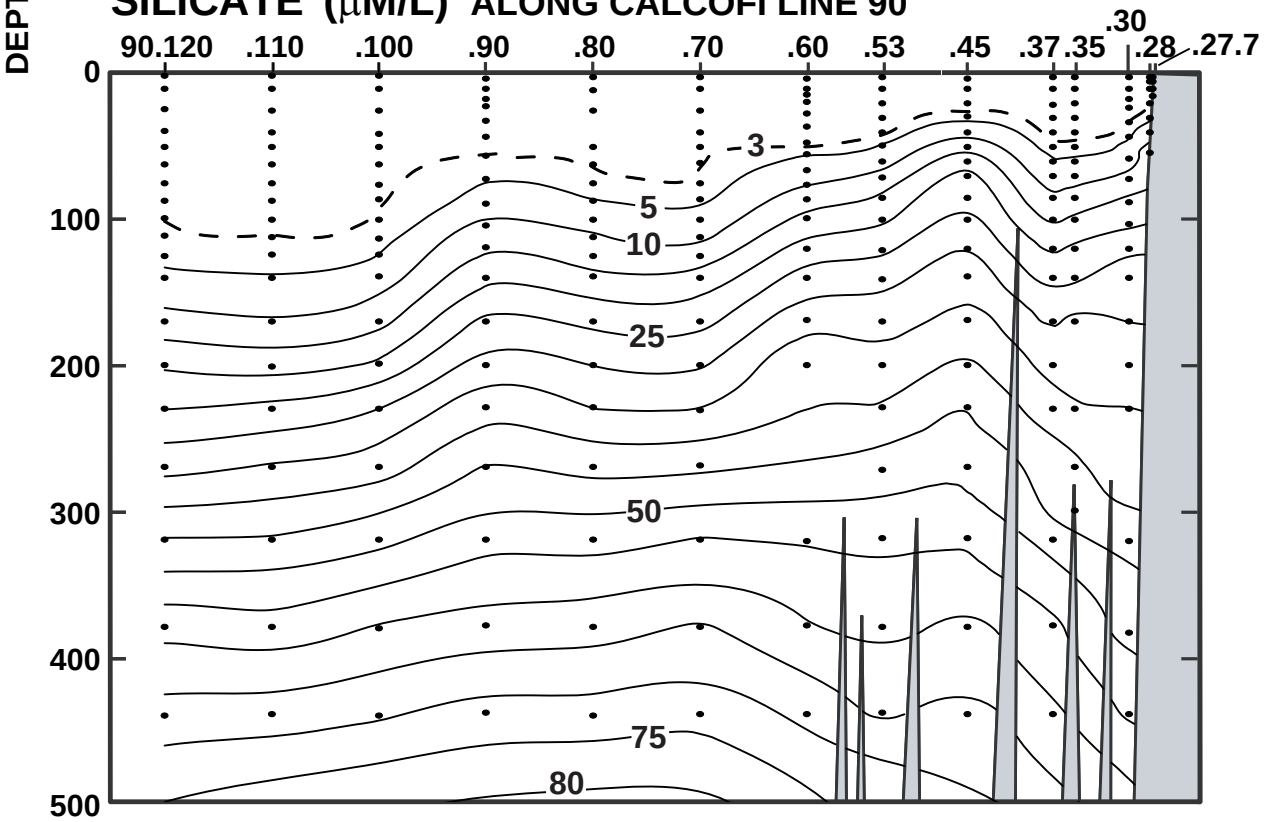

FIGURE 5D

CALCOFI CRUISE 1407

6 - 12 July 2014

NITRATE (μM/L) ALONG CALCOFI LINE 90

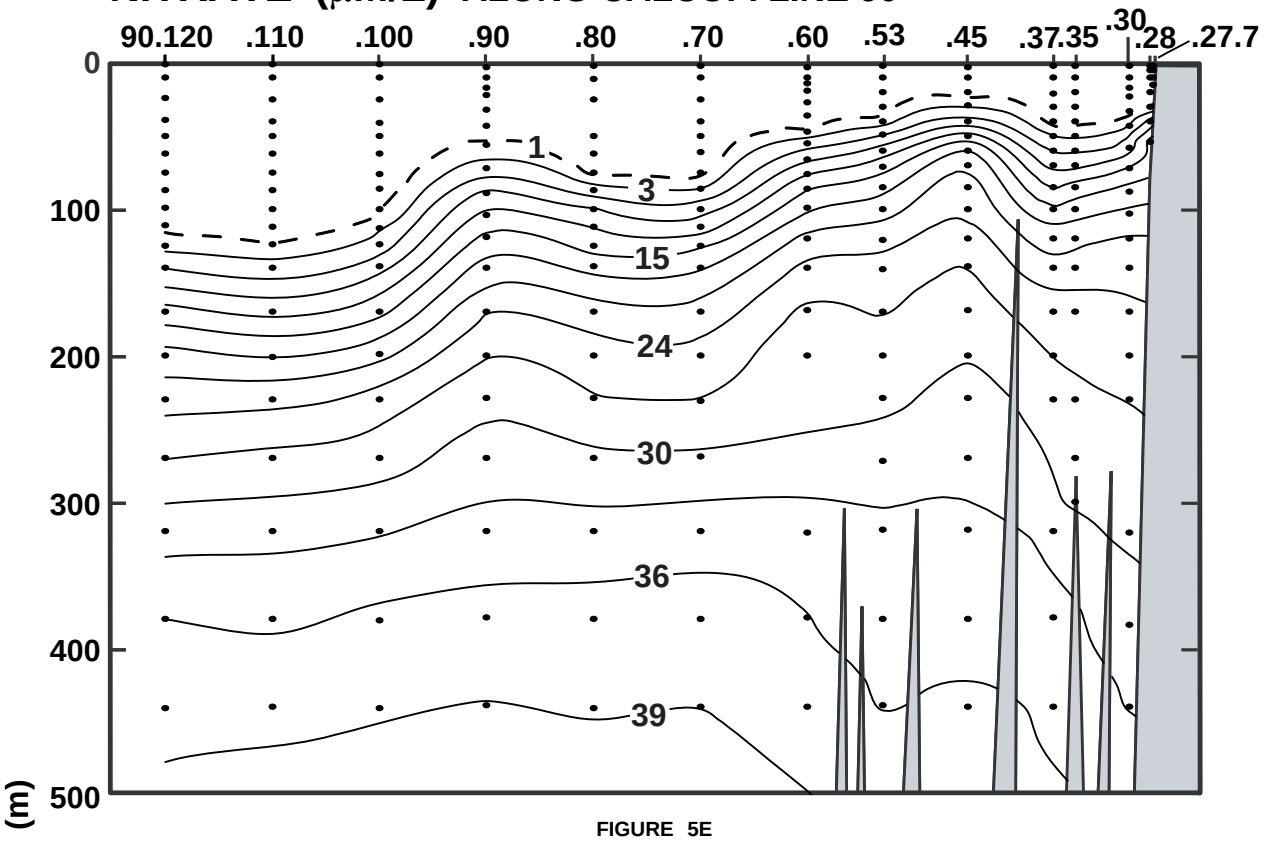

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

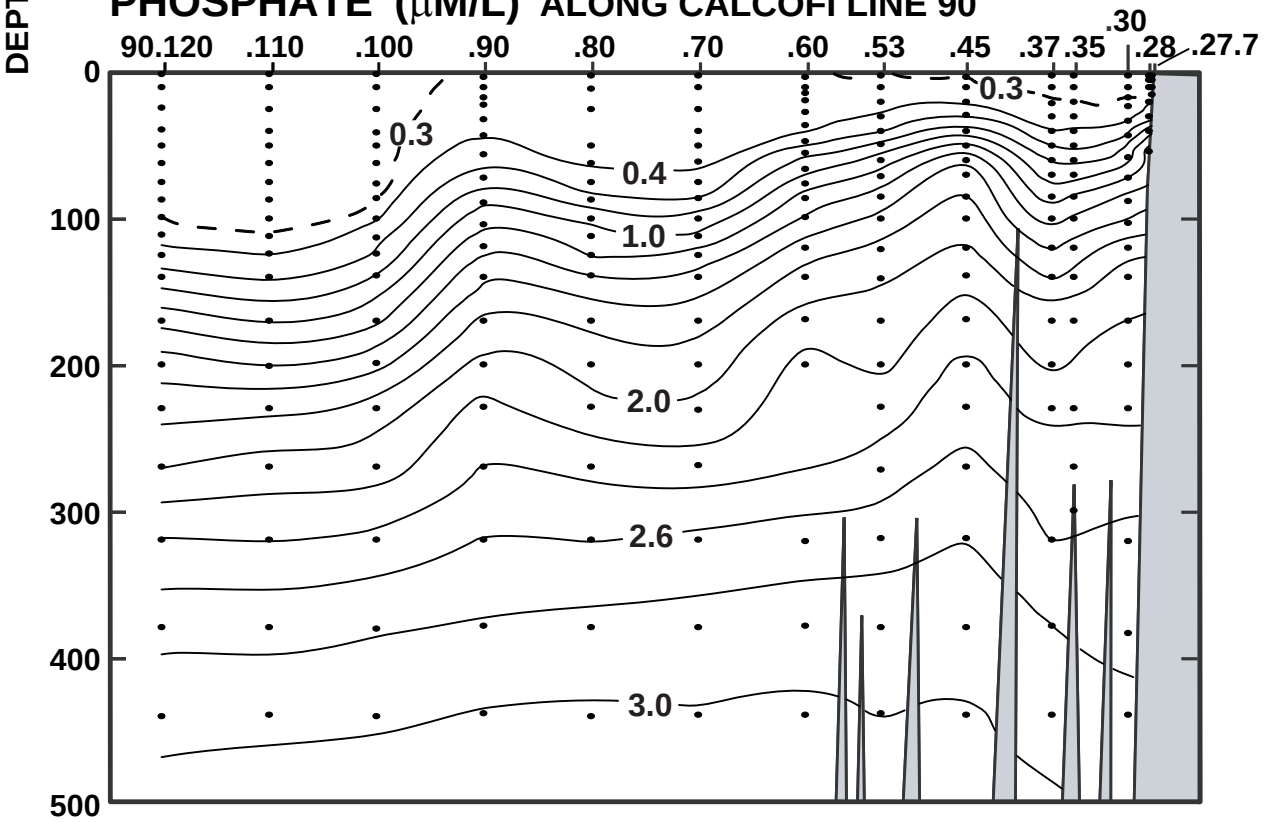

FIGURE 5F

CALCOFI CRUISE 1407

6 - 12 July 2014

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

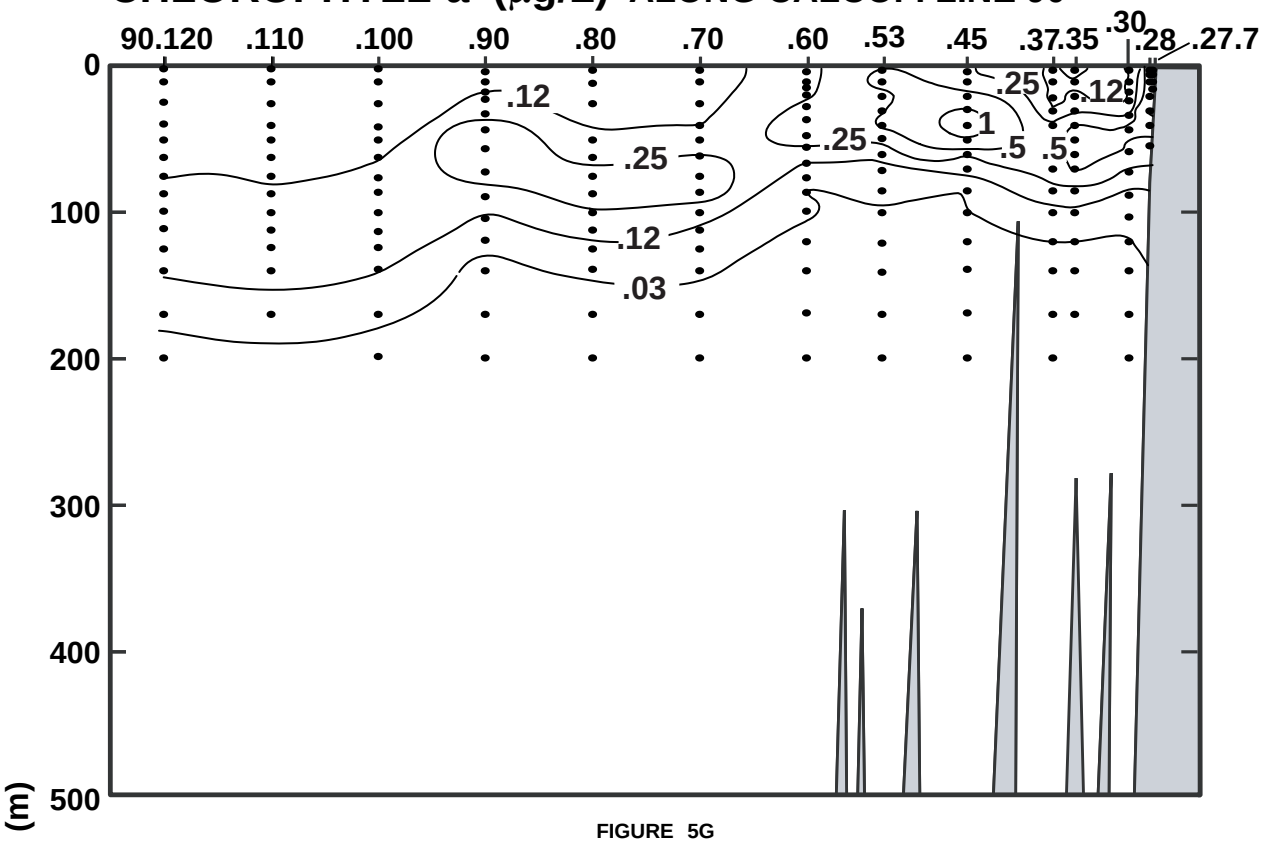

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

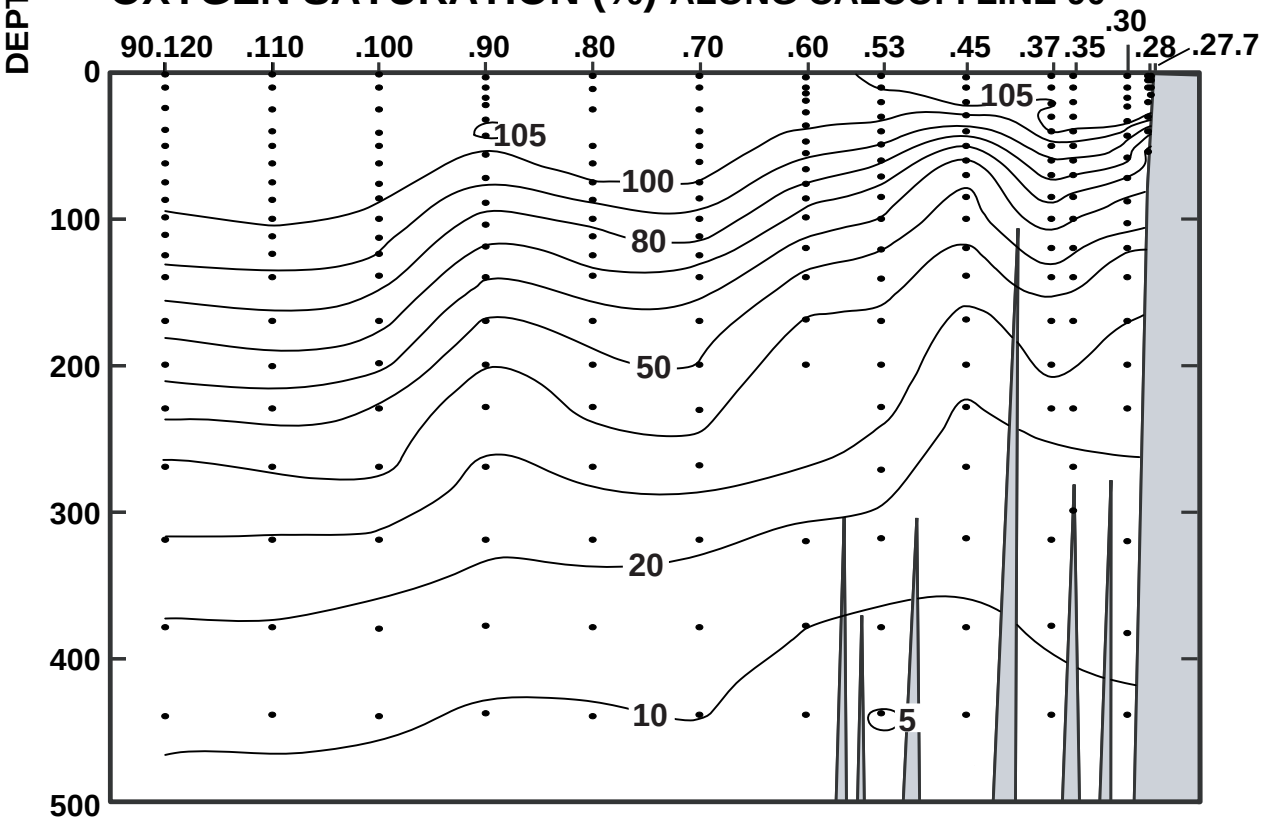

FIGURE 5H

CALCOFI CRUISE 1407

6 - 12 July 2014

OXYGEN (mL/L) ALONG CALCOFI LINE 90

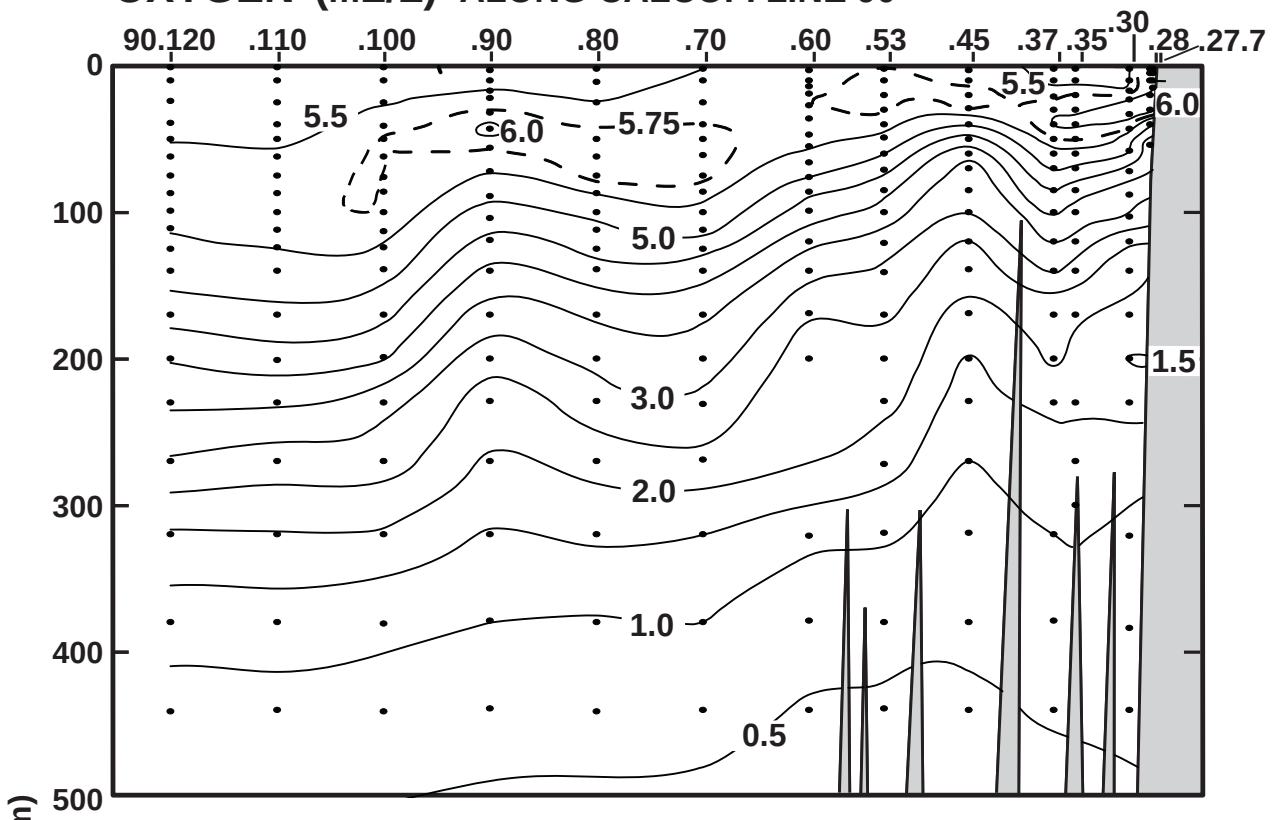

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

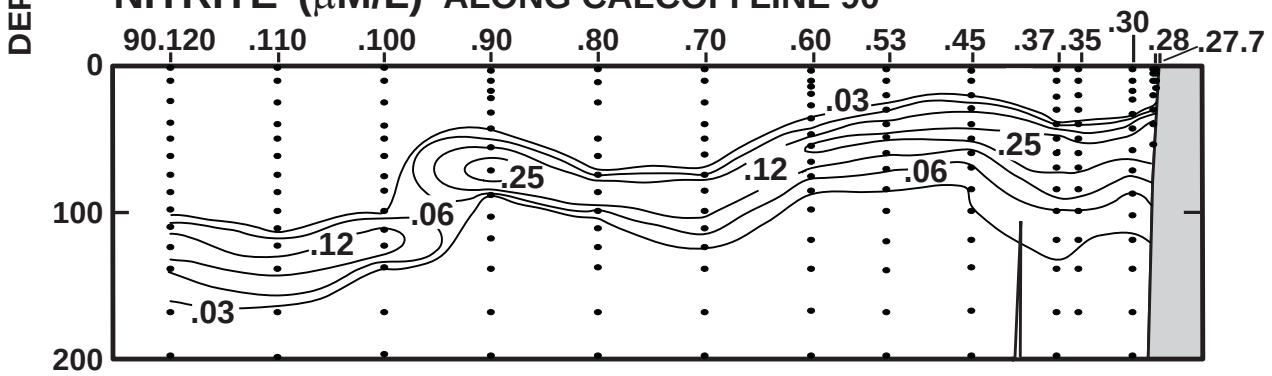

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

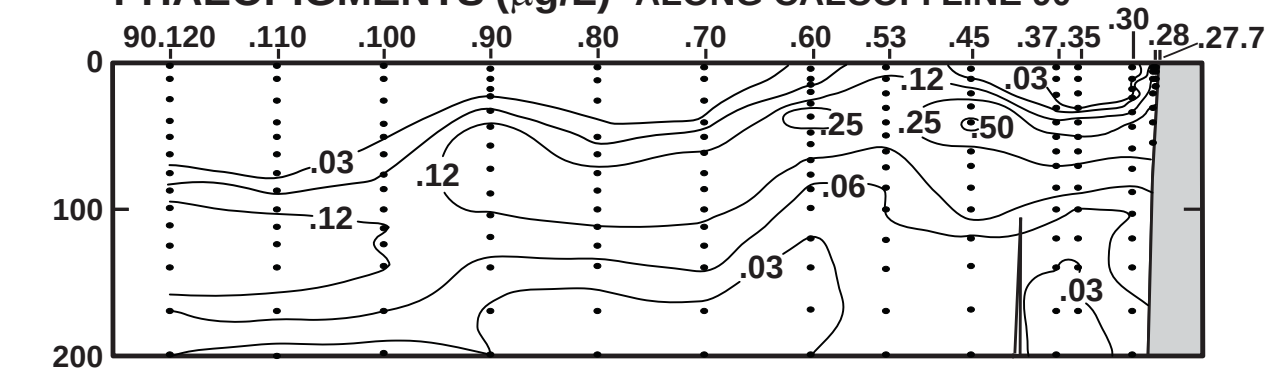

FIGURE 5K

PERSONNEL

CalCOFI Cruise 1407

SHIP'S CAPTAIN

Lawrence, Ian, RV New Horizon

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Leg)
Wolgast, David (Chief Scientist)	Staff Research Associate, SIO	1-2
Becker, Elizabeth	Marine Mammal Observer, MPL	2
Crane, Kathryn	Environmental Scientist, CDF&W	1
Dovel, Shonna	Staff Research Associate, SIO	1-2
Ekern, Lindsey	Staff Research Associate, SIO	1-2
Frasier, Kaitlin	Marine Mammal Observer, MPL	1
Fukada, Theresa	Volunteer, SIO	1-2
Griffith, David	Fishery Biologist, NMFS	1-2
Guazzo, Regina	Graduate Student, MPL	1-2
Harvey, Stephen	Volunteer, SIO	1-2
Hays, Amy	Fishery Biologist, NMFS	1-2
Kwon, Harvey	Volunteer, SIO	1-2
Jiorle, Ralph	Staff Research Associate, SIO	1-2
Lesyna, Kristine	Environmental Scientist, CDF&W	2
Rodgers-Wolgast, Jennifer	Staff Research Associate, SIO	1-2
Whitaker, Katherine	Marine Mammal Observer, MPL	1-2
Wilkinson, James	Staff Research Associate, SIO	1-2
Wolgast, David	Staff Research Associate, SIO	1-2

San Diego to Dana Point, California, 6 - 12 July 2014
Dana Point to San Diego, California, 12 - 22 July 2014

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
35 5.2 N	120 46.5 W	20/07/2014	1654 UTC	69 m	190 04 kn	240 02 06	1	1015.4 mb	18.4 C	17.0 C	05 m	7/8	SC	067

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	16.61	16.61	33.515	24.468	345.5	0.000	7.03	306.8	126.4	4.0	0.25	0.1	0.01	0.02	3.98	1.67	0	
1 A	16.61	16.60	33.515	24.468	345.5	0.004	7.03	306.8	126.4	4.0	0.25	0.1	0.01	0.02	3.98	1.67	1	12
3 A	16.12	16.12	33.511	24.576	335.3	0.010	6.94	303.2	123.7	3.9	0.27	0.1	0.02	0.02	6.28	1.17	3	11
5 A	15.84	15.84	33.511	24.640	329.2	0.017	6.86	299.3	121.4	3.7	0.35	0.1	0.02	0.03	4.79	2.23	5	10
7	15.76	15.76	33.510	24.657	327.7	0.025											7	09
8 A	15.69	15.69	33.511	24.674	326.1	0.027	6.81	297.2	120.2	3.6	0.31	0.1	0.02	0.05	5.03	2.34	8	08
10 ISL	15.44 D	15.44	33.506 D	24.726	321.2	0.029	6.78	D295.5	D119.2	3.5	0.32	0.1	0.02	0.05	6.67	2.48	10	
15 A	15.12	15.12	33.512	24.800	314.3	0.049	6.56	286.4	114.5	3.1	0.33	0.1	0.02	0.06	10.75	2.85	15	07
17 A	14.67	14.67	33.513	24.898	305.0	0.055	6.02	262.9	104.2	4.2	0.45	0.7	0.10	0.10	13.67	2.90	17	06
20 ISL	14.20 D	14.20	33.512 D	24.998	295.6	0.060	5.73	D249.5	D 98.1	5.5	0.59	2.3	0.16	0.27	10.23	2.13	20	
24	13.77	13.77	33.501	25.078	288.1	0.076	5.26	229.7	89.4	7.2	0.78	4.5	0.25	0.50	5.63	1.10	24	05
30	13.43	13.42	33.493	25.143	282.1	0.093	4.96	D216.1	D 83.7	8.5	0.90	6.9	0.31	1.01	1.65	0.65	30	04
41	12.96	12.96	33.516	25.254	271.8	0.124	4.37	190.9	73.0	13.0	1.14	8.6	0.36	2.12	1.32	0.77	41	03
50	12.69	12.68	33.529	25.318	266.0	0.148	3.99	174.1	66.3	18.0	1.37	10.3	0.41	3.10	0.56	0.74	50	02
60	12.45	12.44	33.534	25.368	261.5	0.174	3.95	172.3	65.2	18.2	1.39	11.1	0.45	2.71	0.42	0.67	60	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
35 1.3 N	120 55.0 W	20/07/2014	1311 UTC	235 m	220 01 kn	240 02 06	1	1013.5 mb	18.0 C	16.8 C	12 m	6/8	SC	066

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.03	17.03	33.507	24.363	355.5	0.000	6.15	268.5	111.5	0.6	0.27	0.1	0.01	0.05	0.69	0.17	0	
2	17.03	17.03	33.507	24.363	355.5	0.007	6.15	268.5	111.5	0.6	0.27	0.1	0.01	0.05	0.69	0.17	2	16
10	15.12	15.12	33.497	24.788	315.3	0.034	6.27	273.9	109.5	0.7	0.28	0.0	0.01	0.06	0.66	0.18	10	14
10	15.12	15.12	33.498	24.789	315.2	0.034											10	15
20	14.36	14.36	33.457	24.921	303.0	0.065	5.62	245.6	96.6	1.6	0.49	2.0	0.09	0.26	11.52	2.66	20	13
30	13.16	13.16	33.465	25.174	279.2	0.094	4.91	214.4	82.4	7.6	0.92	7.0	0.41	1.18	0.66	0.46	30	12
40	12.72	12.71	33.466	25.264	270.8	0.121	4.76	207.8	79.1	8.7	0.98	8.1	0.47	1.15	0.31	0.30	40	11
50	11.79	11.78	33.480	25.451	253.3	0.148	4.46	194.7	72.6	10.9	1.10	11.0	0.46	0.53	0.28	0.31	50	10
60	10.90	10.89	33.548	25.666	233.0	0.172	3.81	166.5	61.0	16.1	1.44	17.0	0.17	0.09	0.14	0.27	60	09
70	10.68	10.67	33.594	25.741	226.0	0.195	3.55	154.8	56.4	18.1	1.55	18.7	0.08	0.03	0.10	0.25	71	08
75 ISL	10.56 D	10.55	33.609 D	25.774	223.0	0.192	3.54	D153.9	D 56.1	18.9	1.59	19.3	0.07	0.04	0.09	0.24	76	
85	10.33	10.32	33.660	25.854	215.6	0.228	3.29	143.7	52.0	20.6	1.68	20.6	0.04	0.06	0.07	0.22	86	07
100	10.16	10.15	33.681	25.899	211.7	0.260	3.28	143.3	51.7	21.1	1.70	21.0	0.06	0.04	0.07	0.15	101	06
119	9.89	9.87	33.745	25.996	202.9	0.299	3.10	135.4	48.5	23.1	1.82	22.7	0.06	0.04	0.07	0.12	120	05
125 ISL	9.83 D	9.81	33.758 D	26.016	201.1	0.298	3.08	D134.1	D 48.2	23.7	1.84	23.0	0.05	0.04	0.06	0.11	126	
140	9.74	9.72	33.812	26.074	195.9	0.341	2.90	126.4	45.2	25.1	1.89	23.8	0.04	0.03	0.04	0.09	141	04
150 ISL	9.73 D	9.71	33.848 D	26.103	193.3	0.348	2.84	D123.7	D 44.4	26.9	1.96	24.7	0.06	0.03	0.03	0.09	151	
170	9.42	9.40	33.960	26.244	180.4	0.398	2.33	101.5	36.1	30.6	2.11	26.4	0.08	0.04	0.02	0.11	171	03
200 ISL	9.33 D	9.31	34.011 D	26.299	175.8	0.439	2.04	D 88.6	D 31.5	33.2	2.22	27.3	0.18	0.04	0.01	0.17	202	
201	9.33	9.31	34.008	26.296	176.1	0.453	2.04	89.0	31.6	33.3	2.22	27.3	0.19	0.04	0.01	0.17	203	02
225	9.26	9.24	34.043	26.336	172.9	0.495	1.86	81.1	28.8	35.1	2.29	28.2	0.20	0.19			227	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 53.5 N	121 11.9 W	20/07/2014	0951 UTC	567 m	140 03 kn			1013.2 mb	18.3 C	16.9 C				065

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.69	17.69	33.502	24.200	370.9	0.000	6.53	285.2	120.0	0.2	0.16	0.1	0.01	0.15	0.44	0.08	0	
2	17.69	17.69	33.502	24.201	371.0	0.007	6.53	285.2	120.0	0.2	0.16	0.1	0.01	0.15	0.44	0.08	2	21
10	17.00	17.00	33.510	24.373	354.9	0.036	6.57	286.7	119.0	0.2	0.14	0.0	0.02	0.05	0.50	0.09	10	19
10	17.00	17.00	33.501	24.366	355.5	0.037											10	20
20	14.23	14.23	33.439	24.935	301.6	0.069	6.93	302.5	118.8	0.8	0.16	0.0	0.03	0.03	4.42	0.58	20	18
30	12.14	12.13	33.454	25.365	260.9	0.097	4.88	213.0	80.1	9.1	0.93	9.0	0.46	0.21	2.87	0.65	30	17
40	11.36	11.36	33.522	25.561	242.5	0.123	4.03	175.9	65.1	14.5	1.32	14.7	0.45	0.14	0.22	0.31	40	16
50	10.68	10.68	33.602	25.746	225.1	0.146	3.59	156.6	57.1	18.2	1.53	18.4	0.19	0.02	0.14	0.21	50	15
60	10.47	10.46	33.627	25.802	219.9	0.168	3.47	151.4	55.0	19.2	1.59	19.4	0.10	0.06	0.11	0.18	60	14
70	10.39	10.38	33.640	25.827	217.8	0.190	3.41	148.7	53.9	19.7	1.63	19.9	0.07	0.06	0.09	0.16	71	13
75 ISL	10.36 D	10.35	33.647 D	25.837	217.0	0.185	3.37	D146.6	D 53.3	19.9	1.64	20.1	0.07	0.05	0.08	0.16	76	
86	10.26	10.25	33.665	25.869	214.2	0.225	3.31	144.5	52.2	20.5	1.66	20.5	0.07	0.02	0.07	0.14	87	12
100	10.06	10.05	33.737	25.959	206.0	0.254	3.03	132.1	47.6	23.0	1.79	22.2	0.05	0.04	0.05	0.12	101	11
120	9.91	9.90	33.793	26.030	199.7	0.295	2.84	124.1	44.6	24.8	1.88	23.3	0.04	0.02	0.04	0.12	121	10
125 ISL	9.88 D	9.87	33.816 D	26.053	197.6	0.289	2.79	D121.4	D 43.7	25.3	1.90	23.6	0.04	0.03	0.04	0.11	126	
140	9.78	9.76	33.869	26.112	192.3	0.334	2.62	114.2	40.9	26.9	1.96	24.4	0.04	0.05	0.03	0.10	141	09
150 ISL	9.74 D	9.73	33.888 D	26.133	190.6	0.337	2.55	D111.0	D 39.9	27.6	1.99	24.8	0.04	0.09	0.02	0.10	151	
170	9.60	9.58	33.933	26.192	185.3	0.391	2.37	103.6	37.0	29.1	2.06	25.6	0.03	0.16	0.02	0.09	171	08
200	9.37	9.35	34.031	26.307	175.0	0.445	2.01	87.8	31.2	32.7	2.23	27.3	0.04	0.02	0.02	0.09	202	07
230	9.08	9.05	34.124	26.428	164.1	0.496	1.60	69.6	24.6	37.8	2.37	29.2	0.03	0.03			232	06
250 ISL	8.99 D	8.96	34.147 D	26.460	161.5	0.514	1.46	D 63.6	D 22.5	39.2	2.43	29.8	0.03	0.04			252	
270	8.84	8.81	34.169	26.502	157.9	0.560	1.37	59.9	21.1	40.6	2.49	30.4	0.03	0.05			272	05
300 ISL	8.70 D	8.67	34.205 D	26.554	153.5	0.593	1.14	D 49.6	D 17.4	43.3	2.54	31.3	0.02	0.10			302	
319	8.34	8.30	34.171	26.583	150.9	0.636	1.24	54.1	18.8	45.0	2.57	31.9	0.02	0.13			322	04
380	7.95	7.91	34.235	26.692	141.5	0.725	0.82	35.6	12.3	51.8	2.76	33.7	0.02	0.03			383	03
400 ISL	7.83 D	7.78	34.245 D	26.719	139.2	0.741	0.76	D 33.2	D 11.4	53.3	2.79	34.1	0.02	0.04			403	
440	7.63	7.58	34.257	26.758	136.1	0.808	0.66	28.7	9.8	56.4	2.85	35.0	0.02	0.05			444	02
500 ISL	6.79 D	6.74	34.205 D	26.834	129.0	0.876	0.64	D 27.9	D 9.4	65.3	2.98	37.0	0.02	0.04			504	
515	6.77	6.72	34.243	26.866	126.2	0.907	0.50	21.8	7.3	67.5	3.01	37.5	0.02	0.04			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 43.4 N	121 33.0 W	20/07/2014	0555 UTC	938 m	210 03 kn			1013.7 mb	19.8 C	17.5 C				064

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.21	19.21	33.631	23.922	397.5	0.000	5.53	241.3	104.6	0.6	0.28	0.0	0.01	0.20	0.23	0.07	0	
3	19.21	19.21	33.631	23.922	397.6	0.012	5.53	241.3	104.6	0.6	0.28	0.0	0.01	0.20	0.23	0.07	3	21
10	18.78	18.78	33.619	24.023	388.3	0.039	5.64	246.0	105.8	0.7	0.37	0.0	0.00	0.16	0.22	0.06	10	20
20	17.95	17.94	33.575	24.197	372.0	0.077	5.87	256.0	108.3	1.2	0.31	0.0	0.02	0.07	0.20	0.07	20	19
29	15.45	15.45	33.567	24.771	317.6	0.108	5.69	248.4	100.1	3.2	0.47	1.2	0.06	0.28	0.55	0.26	29	18
30 ISL	15.22 D	15.21	33.602 D	24.850	310.1	0.112	5.45	D237.5 D	95.4	4.2	0.54	2.4	0.08	0.28	0.58	0.29	30	
40	11.44	11.44	33.580	25.592	239.5	0.139	4.20	183.3	68.0	13.6	1.28	14.0	0.29	0.33	0.87	0.57	40	17
50	10.63	10.62	33.630	25.777	222.1	0.162	3.53	153.9	56.1	18.8	1.59	19.0	0.23	0.11	0.37	0.30	50	16
61	10.40	10.40	33.668	25.846	215.8	0.186	3.32	144.9	52.5	20.5	1.67	20.5	0.18	0.04	0.22	0.18	62	15
70	10.04	10.03	33.752	25.975	203.7	0.205	2.98	129.9	46.8	23.6	1.82	22.5	0.12	0.03	0.10	0.11	71	14
75 ISL	9.93 D	9.92	33.765 D	26.003	201.2	0.217	2.97	D129.1 D	46.5	24.4	1.85	23.1	0.11	0.03	0.08	0.11	76	
85	9.73	9.72	33.816	26.076	194.4	0.235	2.76	120.4	43.1	26.1	1.91	24.2	0.08	0.04	0.05	0.11	86	13
100	9.68	9.66	33.827	26.094	193.1	0.264	2.74	119.5	42.7	26.5	1.93	24.5	0.08	0.04	0.06	0.08	101	12
120	9.40	9.38	33.914	26.208	182.6	0.302	2.49	108.5	38.5	29.6	2.05	26.1	0.06	0.06	0.03	0.06	121	11
125 ISL	9.36 D	9.34	33.927 D	26.225	181.1	0.313	2.44	D106.3 D	37.9	30.1	2.07	26.3	0.06	0.05	0.03	0.07	126	
140	9.25	9.23	33.954	26.265	177.7	0.338	2.30	100.1	35.5	31.6	2.12	27.0	0.04	0.03	0.02	0.07	141	10
150 ISL	9.23 D	9.22	33.960 D	26.272	177.2	0.358	2.29	D 99.5 D	35.3	32.5	2.15	27.4	0.04	0.04	0.02	0.07	151	
170	9.02	9.00	34.018	26.352	170.0	0.390	2.07	90.2	31.8	34.3	2.22	28.2	0.03	0.07	0.01	0.08	171	09
200	8.81	8.79	34.094	26.446	161.7	0.440	1.73	75.7	26.6	38.1	2.37	29.6	0.03	0.06	0.01	0.08	202	08
230	8.68	8.66	34.147	26.507	156.4	0.488	1.38	60.3	21.1	41.8	2.50	30.9	0.03	0.06			232	07
250 ISL	8.60 D	8.58	34.198 D	26.561	151.8	0.522	1.00	D 43.5 D	15.3	45.9	2.62	31.8	0.02	0.06			252	
270	8.38	8.35	34.215	26.610	147.4	0.548	0.82	35.9	12.5	49.9	2.73	32.6	0.02	0.06			272	05
300 ISL	8.18 D	8.15	34.233 D	26.654	143.7	0.574	0.80	D 34.7 D	12.0	52.4	2.78	33.1	0.02	0.07			302	
320	7.99	7.95	34.231	26.681	141.3	0.620	0.73	32.0	11.0	54.1	2.82	33.4	0.02	0.08			323	04
381	7.13	7.09	34.224	26.800	130.6	0.703	0.59	25.9	8.8	63.5	2.96	35.9	0.02	0.04			384	03
400 ISL	6.88 D	6.84	34.233 D	26.841	126.8	0.711	0.56	D 24.5 D	8.3	66.1	3.00	36.5	0.02	0.04			403	
440	6.61	6.57	34.258 D	26.898	121.8	0.761	0.45	D 19.6 D	6.6								444	02
500 ISL	5.99 D	5.94	34.301 D	27.013	111.2	0.832	0.31	D 13.5 D	4.5	80.1	3.19	39.9	0.02	0.02			504	
515	5.93	5.89	34.303	27.022	110.4	0.864	0.28	12.4	4.1	82.2	3.22	40.4	0.03	0.02			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 23.3 N	122 14.7 W	18/07/2014	0720 UTC	4018 m	330 02 kn			1016.1 mb	18.9 C	16.3 C				056

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.85	17.85	33.165	23.904	399.2	0.000	5.71	249.3	104.9	2.2	0.45	0.4	0.02	0.07	0.13	0.02	0	
2	17.85	17.85	33.165	23.905	399.2	0.008	5.71	249.3	104.9	2.2	0.45	0.4	0.02	0.07	0.13	0.02	2	20
10	16.97	16.96	33.165	24.116	379.3	0.039	5.77	252.1	104.3	2.1	0.39	0.0	0.01	0.01	0.14	0.03	10	19
20	15.81	15.80	33.143	24.365	355.9	0.076	6.01	262.3	106.1	1.7	0.37	0.0	0.01	0.02	0.22	0.06	20	18
30	14.69	14.69	33.099	24.575	336.2	0.111	6.00	262.0	103.6	2.5	0.41	0.2	0.03	0.11	0.39	0.22	30	17
40	14.16	14.15	33.129	24.712	323.5	0.144	6.01	262.6	102.7	2.5	0.55	2.0	0.10	0.46	0.28	0.28	40	16
50	13.71	13.71	33.306	24.941	301.9	0.175	5.87	256.3	99.4	2.3	0.78	5.1	0.27	1.28	0.32	0.13	50	15
60	13.43	13.42	33.335	25.021	294.6	0.205	5.83	254.5	98.2	2.9	0.86	6.1	0.34	1.32	0.31	0.15	60	14
70	12.79	12.78	33.430	25.222	275.6	0.233	5.64	246.2	93.8	3.3	0.92	7.3	0.43	1.46	0.28	0.15	71	13
75 ISL	11.54 D	11.53	33.273 D	25.337	264.7	0.249	5.36	D233.3 D	86.7	5.9	1.03	9.4	0.30	0.96	0.22	0.13	76	
84	10.55	10.54	33.236	25.486	250.6	0.270	5.10	222.7	80.7	10.5	1.23	13.2	0.05	0.06	0.12	0.10	85	12
100	9.85	9.84	33.406	25.736	227.0	0.308	4.46	194.6	69.6	15.5	1.51	17.8	0.03	0.02	0.06	0.05	101	11
120	9.01	9.00	33.493	25.940	207.9	0.352	4.78	208.7	73.3	17.0	1.35	17.0	0.01	0.04	0.03	0.03	121	10
125 ISL	8.94 D	8.93	33.551 D	25.997	202.6	0.365	4.63	D201.5 D	70.9	18.9	1.45	18.5	0.01	0.04	0.02	0.02	126	
140	8.87	8.86	33.708	26.132	190.2	0.391	3.77	164.5	57.7	24.4	1.76	22.9	0.01	0.03	0.01	0.01	141	09
150 ISL	8.80 D	8.78	33.789 D	26.207	183.2	0.413	3.41	D148.2 D	52.1	26.8	1.85	24.2	0.01	0.03	0.01	0.02	151	
170	8.59	8.57	33.930	26.350	170.0	0.445	2.90	126.6	44.2	31.7	2.02	26.9	0.02	0.03	0.00	0.02	171	08
199	8.35	8.33	34.012	26.452	160.9	0.493	2.12	92.7	32.2	37.4	2.26	30.1	0.01	0.04	0.00	0.02	201	07
200 ISL	8.40 D	8.38	34.012 D	26.445	161.6	0.499	2.09	D 91.1 D	31.8	37.5	2.26	30.1	0.01	0.04			202	
230	8.02	8.00	34.025	26.513	155.5	0.543	2.02	88.1	30.3	40.8	2.36	31.3	0.01	0.04			232	05
250 ISL	7.77 D	7.74	34.065 D	26.581	149.3	0.577	1.66	D 72.3 D	24.9	44.9	2.48	32.7	0.01	0.05			252	
270	7.59	7.56	34.093	26.630	145.0	0.602	1.44	63.0	21.5	49.1	2.59	34.1	0.02	0.05			272	06
300 ISL	7.08 D	7.05	34.092 D	26.701	138.4	0.650	1.24	D 54.1 D	18.3	53.7	2.71	35.3	0.01	0.05			302	
320	7.08	7.05	34.126	26.728	136.2	0.672	1.03	44.8	15.1	56.8	2.79	36.1	0.01	0.05			323	04
380	6.57	6.53	34.165	26.829	127.3	0.751	0.71	30.9	10.3	65.0	2.95	38.1	0.02	0.04			383	03
400 ISL	6.44 D	6.40	34.176 D	26.854	125.0	0.783	0.64	D 27.8 D	9.3	67.4	3.00	38.6	0.01	0.03			403	
440	6.19	6.15	34.204	26.910	120.2	0.826	0.50	21.9	7.2	72.3	3.10	39.5	0.01	0.02			444	02
500 ISL	5.86 D	5.81	34.264 D	27.000	112.2	0.902	0.31	D 13.7 D	4.5	80.1	3.21	40.7	0.01	0.02			504	
514	5.76	5.72	34.269	27.016	110.8	0.911	0.29	12.6	4.1	81.9	3.23	41.0	0.01	0.02			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 3.3 N	122 56.4 W	18/07/2014	0148 UTC	4231 m	260 01 kn	060 02 09	1	1015.1 mb	19.8 C	16.4 C	12 m	3/8	SC	055

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.22	17.22	33.099	24.006	389.5	0.000	6.08	265.6	110.4	1.8	0.42	0.4	0.03	0.08	0.61	0.06	0	
2	17.22	17.22	33.099	24.006	389.5	0.008	6.08	265.6	110.4	1.8	0.42	0.4	0.03	0.08	0.61	0.06	2	20
9	16.06	16.06	33.062	24.245	367.0	0.034	6.10	266.3	108.2	2.0	0.45	1.1	0.07	0.06	0.45	0.08	9	19
10 ISL	16.05 D	16.05	33.053 D	24.241	367.4	0.038	6.09	D265.5	D108.0	2.0	0.45	1.1	0.07	0.06	0.47	0.08	10	
20	15.87	15.87	33.084	24.305	361.6	0.075	6.07	265.2	107.3	1.9	0.45	1.2	0.07	0.08	0.57	0.12	20	18
30	14.96	14.95	33.093	24.514	342.1	0.110	6.05	264.3	105.0	2.2	0.58	3.1	0.13	0.38	0.55	0.16	30	17
40	14.08	14.07	33.081	24.691	325.4	0.143	6.09	266.2	103.9	2.7	0.59	2.9	0.12	0.58	0.54	0.19	40	16
50 ISL	13.23 D	13.23	33.274 D	25.013	295.0	0.175	5.90	D257.1	D 99.0	3.0	0.75	5.3	0.21	0.89	0.58	0.22	50	
51	13.32	13.31	33.234	24.965	299.7	0.177	6.00	262.1	100.8	3.0	0.77	5.5	0.21	0.92	0.58	0.23	51	15
60	12.91	12.90	33.377	25.157	281.6	0.203	5.66	247.2	94.3	3.8	0.94	7.3	0.49	1.28	0.33	0.16	60	14
70	11.21	11.20	33.255	25.383	260.1	0.230	5.33	232.8	85.7	7.5	1.09	10.6	0.36	0.21	0.18	0.11	71	13
75 ISL	10.74 D	10.74	33.172 D	25.401	258.5	0.245	5.22	D227.3	D 83.0	8.8	1.13	11.6	0.27	0.15	0.16	0.11	76	
85	10.19	10.18	33.202	25.519	247.4	0.269	5.09	222.5	80.0	11.5	1.22	13.7	0.09	0.03	0.11	0.10	86	12
98	10.18	10.17	33.374	25.656	234.6	0.300	4.66	203.6	73.3	13.8	1.37	16.2	0.06	0.02	0.06	0.06	99	11
100 ISL	10.21 D	10.20	33.462 D	25.720	228.7	0.307	4.58	D199.3	D 72.1	14.2	1.39	16.6	0.06	0.02	0.06	0.06	101	
120	9.67	9.65	33.529	25.864	215.4	0.349	4.00	174.6	62.2	19.1	1.61	20.2	0.05	0.03	0.03	0.04	121	10
125 ISL	9.37 D	9.36	33.537 D	25.918	210.3	0.362	4.01	D174.7	D 62.0	19.5	1.58	20.0	0.05	0.04	0.03	0.04	126	
140	8.73	8.71	33.597	26.067	196.2	0.390	4.49	196.0	68.4	20.5	1.49	19.5	0.05	0.08	0.02	0.02	141	09
150 ISL	8.57 D	8.56	33.754 D	26.214	182.4	0.411	3.96	D172.1	D 60.1	23.6	1.61	21.4	0.05	0.06	0.01	0.02	151	
170	8.46	8.44	33.888	26.338	171.1	0.444	3.40	148.5	51.6	29.7	1.86	25.3	0.04	0.03	0.00	0.02	171	08
200	8.06	8.04	33.957	26.451	160.8	0.494	3.20	139.6	48.1	34.2	1.96	26.8	0.02	0.06	0.00	0.02	202	07
230	7.76	7.73	33.988	26.522	154.5	0.541	2.45	107.0	36.6	40.7	2.25	30.3	0.03	0.01			232	06
250 ISL	7.60 D	7.58	33.998 D	26.552	151.9	0.576	2.33	D101.5	D 34.7	43.4	2.32	31.2	0.03	0.05			252	
269	7.37	7.35	34.011	26.595	148.1	0.601	2.17	94.8	32.2	45.9	2.38	32.1	0.03	0.08			271	05
300 ISL	6.99 D	6.96	34.012 D	26.649	143.2	0.650	2.01	D 87.6	D 29.6	50.7	2.52	33.8	0.02	0.06			302	
321	6.95	6.92	34.058	26.693	139.5	0.675	1.54	67.2	22.6	54.0	2.61	35.0	0.01	0.04			324	04
379	6.27	6.23	34.099	26.815	128.2	0.753	0.95	41.7	13.8	66.1	2.90	38.4	0.02	0.03			382	03
400 ISL	6.06 D	6.02	34.098 D	26.842	125.8	0.785	0.81	D 35.3	D 11.7	69.5	2.96	39.1	0.02	0.03			403	
440	5.74	5.71	34.139	26.913	119.3	0.829	0.65	28.5	9.3	76.0	3.07	40.3	0.03	0.04			444	02
500 ISL	5.56 D	5.52	34.198 D	26.984	113.3	0.905	0.47	D 20.3	D 6.6	82.3	3.17	41.3	0.02	0.14			504	
515	5.50	5.46	34.208	26.998	112.1	0.915	0.42	18.4	6.0	83.9	3.20	41.5	0.02	0.17			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 43.4 N	123 38.0 W	17/07/2014	2020 UTC	4242 m	100 03 kn	150 02 08	1	1016.6 mb	21.3 C	18.8 C	29 m	2/8	SC	054

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.86	18.86	33.183	23.670	421.5	0.000	5.60	244.4	104.9	2.9	0.35	0.0	0.01	0.05	0.09	0.01	0	
2 A	18.86	18.86	33.183	23.670	421.6	0.008	5.60	244.4	104.9	2.9	0.35	0.0	0.01	0.05	0.09	0.01	2	24
10	17.75	17.75	33.160	23.926	397.5	0.041	5.54	241.9	101.7	2.8	0.34	0.0	0.00	0.04	0.09	0.02	10	22
10	17.75	17.75	33.159	23.925	397.6	0.039											10	23
17 A	17.58	17.58	33.145	23.956	394.9	0.069	5.58	243.7	102.0	2.7	0.34	0.0	0.01	0.06	0.10	0.02	17	21
20 ISL	17.48 D	17.48	33.144 D	23.979	392.8	0.067	5.57	D242.9	D101.7	2.7	0.34	0.0	0.00	0.05	0.11	0.02	20	
23 A	17.41	17.41	33.146	23.997	391.2	0.093	5.60	244.4	102.0	2.7	0.34	0.0	0.00	0.04	0.12	0.02	23	20
30 ISL	17.22 D	17.22	33.141 D	24.039	387.4	0.107	5.65	D246.3	D102.6	2.3	0.34	0.0	0.00	0.04	0.16	0.04	30	
32	17.21	17.21	33.143	24.042	387.2	0.127	5.66	247.1	102.7	2.2	0.34	0.0	0.00	0.04	0.17	0.05	32	19
41 A	17.03	17.03	33.147	24.089	383.1	0.162	5.72	249.9	103.5	2.0	0.34	0.0	0.00	0.02	0.22	0.07	41	18
50 ISL	16.57 D	16.56	33.129 D	24.184	374.3	0.184	5.81	D253.4	D104.2	2.2	0.34	0.0	0.00	0.03	0.28	0.08	50	
56	16.12	16.11	33.093	24.258	367.4	0.219	5.85	255.4	103.9	2.3	0.34	0.0	0.01	0.04	0.32	0.10	56	17
71	13.67	13.66	33.151	24.830	313.1	0.270	6.00	261.9	101.4	3.2	0.37	0.0	0.00	0.04	0.29	0.20	72	16
75 ISL	13.40 D	13.39	33.157 D	24.890	307.5	0.270	6.13	D267.2	D103.1	3.8	0.46	1.4	0.03	0.05	0.31	0.21	76	
86 A	12.15	12.13	33.148	25.128	284.9	0.315	5.53	241.4	90.6	5.5	0.72	5.2	0.13	0.06	0.36	0.24	87	14
86	12.15	12.13	33.147	25.128	285.0	0.315											87	15
93	11.47	11.46	33.130	25.240	274.4	0.334	5.40	235.8	87.2	6.6	0.85	7.6	0.11	0.02	0.32	0.23	94	13
100 A	11.15	11.14	33.127	25.294	269.3	0.353	5.35	233.7	85.8	7.0	0.90	8.4	0.09	0.03	0.31	0.22	101	12
111	10.34	10.32	33.148	25.454	254.2	0.382	5.29	231.1	83.4	8.7	0.99	10.3	0.04	0.08	0.15	0.17	112	11
125	9.49	9.47	33.271	25.692	231.7	0.416	5.17	225.6	79.9	11.9	1.13	13.1	0.02	0.03	0.05	0.08	126	10
145	9.12	9.11	33.513	25.940	208.5	0.460	4.66	203.5	71.6	17.4	1.38	17.4	0.01	0.03	0.02	0.02	146	09
150 ISL	9.02 D	9.00	33.575 D	26.005	202.4	0.449	4.57	D198.7	D 70.0	18.2	1.40	17.8	0.01	0.03	0.01	0.02	151	
170	8.80	8.78	33.765	26.188	185.4	0.509	4.43	193.5	67.8	21.4	1.46	19.5	0.00	0.04	0.00	0.02	171	08
200	8.52	8.50	33.895	26.334	172.1	0.563	3.95	172.6	60.1	26.7	1.64	22.5	0.01	0.03	0.00	0.02	202	07
230	8.08	8.06	33.946	26.441	162.3	0.613	2.91	127.2	43.9	35.2	2.02	27.7	0.00	0.02			232	06
250 ISL	7.87 D	7.84	33.973 D	26.494	157.6	0.625	2.84	D123.6	D 42.5	38.8	2.15	29.3	0.00	0.04			252	
270	7.54	7.51	33.993	26.558	151.7	0.676	2.37	103.3	35.2	42.5	2.27	30.8	0.00	0.05			272	05
300 ISL	7.18 D	7.15	34.030 D	26.638	144.4	0.701	1.91	D 82.9	D 28.1	48.9	2.44	33.0	0.00	0.05			302	
320	6.88	6.85	34.036	26.685	140.1	0.749	1.63	71.1	23.8	53.2	2.56	34.5	0.00	0.05			323	04
370	6.51	6.48	34.073	26.764	133.2	0.817	1.21	52.8	17.6	60.5	2.75	36.8	0.00	0.03			373	03
400 ISL	6.20 D	6.16	34.089 D	26.817	128.3	0.838	1.05	D 45.8	D 15.2	65.6	2.85	37.9	0.00	0.03			403	
441	5.85	5.81	34.120	26.886	122.0	0.908	0.78	34.0	11.1	72.6	2.98	39.3	0.00	0.04			445	02
500 ISL	5.52 D	5.48	34.172 D	26.967	114.8	0.961	0.56	D 24.2	D 7.9	81.1	3.11	40.7	0.00	0.08			504	
518	5.42	5.38	34.192	26.996	112.3	0.998	0.45	19.8	6.4	83.7	3.15	41.1	0.00	0.09			522	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 23.3 N	124 19.2 W	17/07/2014	1419	UTC	4555 m	210 04 kn	210 03 08	1	1015.3 mb	19.0 C	17.0 C	33 m	6/8	SC	053

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.66	18.66	33.237	23.760	412.9	0.000	5.45	238.2	101.9	2.7	0.33	0.0	0.00	0.02	0.08	0.01	0	
2	18.66	18.66	33.237	23.761	413.0	0.008	5.45	238.2	101.9	2.7	0.33	0.0	0.00	0.02	0.08	0.01	2	20
10	18.47	18.47	33.269	23.834	406.3	0.041	5.46	238.5	101.7	2.6	0.32	0.0	0.00	0.04	0.07	0.01	10	19
20 ISL	18.34 D	18.34	33.274 D	23.869	403.3	0.082	5.46	D237.9	D101.3	2.6	0.31	0.0	0.00	0.03	0.07	0.01	20	
24	18.34	18.33	33.275	23.872	403.2	0.098	5.48	239.3	101.8	2.6	0.31	0.0	0.00	0.03	0.07	0.02	24	18
30 ISL	18.33 D	18.32	33.274 D	23.874	403.2	0.123	5.45	D237.8	D101.2	2.6	0.31	0.0	0.00	0.03	0.08	0.02	30	
40	18.17	18.16	33.273	23.913	399.9	0.162	5.49	239.6	101.5	2.6	0.31	0.0	0.00	0.04	0.10	0.02	40	17
50	16.81	16.80	33.159	24.150	377.5	0.201	5.72	250.0	103.1	2.7	0.32	0.0	0.00	0.02	0.12	0.03	50	16
62	16.00	15.99	33.181	24.355	358.4	0.245	5.90	257.7	104.6	2.5	0.30	0.0	0.00	0.01	0.15	0.05	63	15
75	15.20	15.19	33.124	24.488	346.1	0.291	5.92	258.5	103.3	2.5	0.33	0.0	0.00	0.00	0.18	0.07	76	14
87	13.73	13.71	33.164	24.830	313.6	0.331	5.92	258.5	100.2	3.1	0.38	0.0	0.00	0.02	0.24	0.16	88	13
99	12.80	12.78	33.065	24.940	303.3	0.368	5.75	251.2	95.5	3.8	0.51	1.6	0.08	0.03	0.28	0.19	100	12
100 ISL	12.46 D	12.45	33.091 D	25.024	295.3	0.374	5.73	D249.7 D	94.5	3.9	0.53	1.9	0.08	0.03	0.27	0.20	101	
112	11.27	11.25	33.083	25.241	274.7	0.405	5.55	242.5	89.2	5.4	0.75	5.8	0.07	0.01	0.22	0.21	113	11
124	10.31	10.29	33.105	25.426	257.2	0.437	5.42	236.7	85.3	7.9	0.93	9.3	0.01	0.01	0.12	0.17	125	10
125 ISL	10.27 D	10.26	33.124 D	25.447	255.2	0.443	5.28	D230.0 D	83.1	8.1	0.95	9.6	0.01	0.00	0.12	0.16	126	
140	9.91	9.89	33.243	25.602	240.7	0.477	4.94	215.7	77.1	11.8	1.17	13.3	0.02	0.00	0.07	0.09	141	09
150 ISL	9.73 D	9.71	33.402 D	25.755	226.3	0.503	4.67	D203.5 D	72.8	14.6	1.30	15.5	0.01	0.00	0.05	0.08	151	
170	9.23	9.21	33.574	25.971	206.2	0.543	4.14	180.9	63.9	20.1	1.57	19.9	0.01	0.05	0.01	0.06	171	08
199	8.66	8.64	33.874	26.296	175.7	0.599	3.67	160.3	56.0	26.9	1.72	23.3	0.00	0.04	0.00	0.02	201	07
200 ISL	8.65 D	8.63	33.888 D	26.310	174.5	0.604	3.66	D159.3 D	55.8	27.1	1.73	23.4	0.00	0.04			202	
229	8.17	8.15	33.960	26.438	162.6	0.649	3.29	143.4	49.6	33.0	1.89	25.9	0.00	0.02			231	06
250 ISL	7.93 D	7.90	33.980 D	26.491	157.9	0.687	2.83	D123.3 D	42.5	38.0	2.11	28.6	0.00	0.01			252	
270	7.62	7.59	34.014	26.563	151.2	0.714	2.20	96.0	32.8	42.7	2.31	31.1	0.00	0.00			272	05
300 ISL	7.28 D	7.25	34.049 D	26.639	144.4	0.763	1.73	D 75.3 D	25.6	48.1	2.50	33.1	0.00	0.01			302	
320	7.34	7.31	34.107	26.677	141.3	0.787	1.28	55.8	18.9	51.7	2.63	34.4	0.01	0.02			323	04
379	6.88	6.85	34.163	26.786	131.6	0.867	0.85	36.9	12.4	60.2	2.84	36.8	0.00	0.01			382	03
400 ISL	6.73 D	6.69	34.185 D	26.823	128.3	0.901	0.69	D 30.0 D	10.1	62.9	2.90	37.3	0.00	0.01			403	
440	6.50	6.46	34.209	26.873	124.0	0.945	0.54	23.4	7.8	67.9	3.01	38.3	0.00	0.01			444	02
500 ISL	6.20 D	6.15	34.251 D	26.947	117.6	1.025	0.39	D 17.0 D	5.6	75.1	3.11	39.7	0.00	0.01			504	
515	5.97	5.93	34.239	26.966	115.8	1.035	0.38	16.5	5.4	76.9	3.13	40.0	0.00	0.01			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 27.6 N	120 29.1 W	20/07/2014	2150	UTC	26 m	240 05 kn	200 02 09	1	1015.2 mb	22.8 C	19.7 C		4/8	SC	068

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.25	18.25	33.509	24.071	383.3	0.000	6.11	267.0	113.5	0.7	0.26	0.0	0.02	0.10	1.06	0.13	0	
2	18.25	18.25	33.509	24.071	383.4	0.008	6.11	267.0	113.5	0.7	0.26	0.0	0.02	0.10	1.06	0.13	2	05
5	17.92	17.92	33.499	24.145	376.4	0.019	6.17	269.6	113.9	0.7	0.30	0.0	0.01	0.07	1.03	0.11	5	04
10	17.14	17.13	33.487	24.323	359.6	0.038	6.23	271.9	113.1	1.0	0.32	0.1	0.01	0.12	1.36	0.19	10	02
10	17.14	17.13	33.489	24.325	359.5	0.038											10	03
15	16.96	16.95	33.486	24.365	355.8	0.055	6.16	268.8	111.4	1.9	0.38	0.2	0.04	0.15	1.91	0.39	15	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 27.0 N	120 31.4 W	20/07/2014	2240	UTC	73 m	230 06 kn	210 01 09	1	1014.8 mb	22.9 C	19.8 C	13 m	4/8	SC	069

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.50	19.50	33.551	23.787	410.4	0.000	6.01	262.4	114.2	0.1	0.18	0.1	0.01	0.10	0.55	0.06	0	
2	19.50	19.50	33.551	23.787	410.4	0.008	6.01	262.4	114.2	0.1	0.18	0.1	0.01	0.10	0.55	0.06	2	09
5	18.65	18.65	33.541	23.997	390.5	0.020	6.04	263.6	112.9	0.1	0.21	0.1	0.00	0.09	0.59	0.00	5	08
10	17.94	17.94	33.512	24.150	376.2	0.039	6.16	269.1	113.8	0.5	0.28	0.1	0.00	0.21	0.94	0.13	10	06
10	17.94	17.94	33.512	24.150	376.2	0.039											10	07
20	15.94	15.94	33.471	24.587	334.8	0.075	6.38	278.8	113.3	1.3	0.38	0.0	0.06	0.14	2.20	0.13	20	05
30	14.27	14.27	33.414	24.907	304.6	0.107	5.85	255.3	100.3	4.4	0.58	1.9	0.22	0.47	3.93	0.41	30	04
40	12.96	12.95	33.433	25.191	277.8	0.136	5.12	223.8	85.6	8.2	0.84	6.3	0.46	1.03	1.66	0.62	40	03
50	11.92	11.91	33.515 D	25.455	252.9	0.145	4.34	D189.0 D	70.9								50	02
65	10.64	10.63	33.659	25.798	220.5	0.198	3.28	143.1	52.1	21.4	1.72	19.2	0.25	0.25	0.18	0.39	66	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 19.2 N	120 47.9 W	19/07/2014	2334	UTC	763 m	270 05 kn	310 04 07	1	1013.5 mb	20.8 C	17.7 C	19 m	7/8	SC	063

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.45	19.45	33.582 D	23.824	406.8	0.000	5.66	247.1	107.6	2.4	0.30	0.0	0.02	0.12	0.22	0.08	0	
2	19.45	19.45	33.582 D	23.825	406.9	0.008	5.66	247.1	107.6	2.4	0.30	0.0	0.02	0.12	0.22	0.08	2	23
10	18.80	18.80	33.574	23.985	391.9	0.040	5.74	250.8	107.8	2.5	0.31	0.0	0.01	0.05	0.21	0.07	10	20
10	18.80	18.80	33.578	23.988	391.6	0.040											10	22
10	18.80	18.80	33.574	23.985	391.9	0.039											10	21
20	17.25	17.24	33.535	24.335	358.9	0.078	6.00	261.7	109.2	2.6	0.32	0.0	0.03	0.07	0.39	0.19	20	19
30	13.74	13.74	33.471	25.061	289.9	0.110	5.66	247.0	96.0	7.0	0.68	4.9	0.15	0.11	1.21	0.59	30	17
30	13.74	13.74	33.472	25.062	289.8	0.111											30	18
41	11.83	11.83	33.468	25.433	254.7	0.140	4.78	208.5	77.9	10.8	1.08	10.8	0.26	0.13	1.31	0.56	41	16
50	11.56	11.55	33.470	25.486	249.9	0.163	4.58	199.9	74.2	11.7	1.16	12.2	0.28	0.11	1.06	0.42	50	15
60	10.72	10.71	33.535	25.688	230.8	0.187	3.99	174.1	63.5	15.5	1.41	16.5	0.19	0.05	0.67	0.33	60	14
69	10.20	10.19	33.655	25.872	213.5	0.207	3.43	149.7	54.1	20.3	1.66	20.5	0.08	0.13	0.21	0.17	70	13
75 ISL	10.16 D	10.15	33.666 D	25.888	212.2	0.185	3.40	D148.0 D	53.5	20.8	1.69	20.9	0.07	0.09	0.18	0.17	76	
86	10.00	9.99	33.719	25.955	206.0	0.243	3.24	141.3	50.8	21.9	1.75	21.5	0.06	0.03	0.12	0.17	87	12
100	9.76	9.75	33.914	26.149	187.9	0.270	2.58	112.7	40.4	27.2	2.01	24.4	0.05	0.04	0.04	0.11	101	11
120	9.65	9.63	34.006	26.240	179.7	0.307	2.23	97.5	34.9	30.0	2.13	26.0	0.04	0.02	0.03	0.13	121	10
125 ISL	9.65 D	9.63	34.017 D	26.249	179.0	0.282	2.16 D	94.0 D	33.7	30.4	2.15	26.2	0.04	0.04	0.03	0.12	126	
140	9.62	9.60	34.049	26.279	176.4	0.343	2.06	89.8	32.1	31.4	2.21	26.6	0.04	0.08	0.02	0.08	141	09
150 ISL	9.62 D	9.60	34.076 D	26.300	174.7	0.327	1.97 D	85.8 D	30.7	31.8	2.22	26.7	0.03	0.08	0.02	0.07	151	
170	9.58	9.56	34.082	26.313	173.9	0.395	1.92	83.7	29.9	32.6	2.25	27.0	0.02	0.07	0.01	0.06	171	08
199	9.10	9.08	34.066	26.378	168.2	0.445	2.06	90.0	31.8	33.9	2.24	27.8	0.02	0.09	0.01	0.05	201	07
200 ISL	9.11 D	9.08	34.080 D	26.388	167.2	0.413	2.06 D	89.4 D	31.7	34.1	2.25	27.9	0.02	0.09			202	
230	9.11	9.09	34.199	26.481	159.1	0.495	1.36	59.2	20.9	39.2	2.50	29.6	0.03	0.12			232	06
250 ISL	9.01 D	8.98	34.226 D	26.520	155.9	0.495	1.20 D	52.2 D	18.5	40.9	2.55	30.3	0.03	0.08			252	
269	8.86	8.83	34.239	26.554	152.9	0.556	1.10	47.8	16.8	42.5	2.60	30.9	0.04	0.05			271	05
300 ISL	8.69 D	8.66	34.239 D	26.582	150.9	0.572	1.05 D	45.9 D	16.1	44.9	2.66	31.6	0.03	0.06			302	
320	8.45	8.41	34.243	26.622	147.3	0.633	0.98	42.8	14.9	46.4	2.70	32.1	0.03	0.07			323	04
380	7.98	7.94	34.235	26.688	141.9	0.720	0.87	38.0	13.1	50.9	2.76	33.6	0.02	0.02			383	03
400 ISL	7.84 D	7.80	34.248 D	26.719	139.2	0.718	0.78 D	33.8 D	11.7	53.4	2.80	34.2	0.02	0.05			403	
441	7.50	7.46	34.239 D	26.761	135.7	0.774	0.59 D	25.8 D	8.8								445	02
500 ISL	6.76 D	6.72	34.217 D	26.847	127.7	0.853	0.57 D	24.9 D	8.4	65.7	3.02	37.2	0.01	0.19			504	
516	6.70	6.65	34.227	26.863	126.4	0.902	0.53	23.2	7.8	67.7	3.06	37.7	0.01	0.21			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 9.2 N	121 9.2 W	18/07/2014	1907	UTC	2199 m	270 07 kn	340 02 05	2	1016.6 mb	19.0 C	17.5 C	18 m	8/8	SC	058

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.12	19.12	33.609	23.930	396.7	0.000	5.50	240.2	103.9	1.4	0.33	0.0	0.01	0.11	0.24	0.04	0	
2 A	19.12	19.12	33.609	23.930	396.8	0.008	5.50	240.2	103.9	1.4	0.33	0.0	0.01	0.11	0.24	0.04	2	22
9 A	18.17	18.16	33.589	24.153	375.8	0.035	5.62	245.1	104.2	1.4	0.33	0.0	0.01	0.14	0.22	0.04	9	20
9	18.17	18.16	33.586	24.151	376.0	0.037											9	21
10 ISL	18.10 D	18.10	33.588 D	24.167	374.5	0.023	5.61	D244.5	D103.9	1.4	0.33	0.0	0.01	0.12	0.22	0.04	10	
14 A	17.96	17.95	33.591	24.206	371.0	0.054	5.63	245.9	104.1	1.4	0.32	0.0	0.01	0.06	0.22	0.04	14	19
20 ISL	17.77 D	17.76	33.585 D	24.248	367.2	0.060	5.63	D245.4	D103.6	1.4	0.32	0.0	0.01	0.08	0.27	0.07	20	
26 A	16.94	16.93	33.570	24.435	349.5	0.097	5.66	247.2	102.6	1.3	0.32	0.0	0.01	0.10	0.31	0.09	26	18
30 ISL	15.08 D	15.07	33.505 D	24.806	314.3	0.096	6.04	D263.1	D105.3	1.6	0.41	1.0	0.11	0.23	0.71	0.26	30	
34	14.47	14.46	33.468	24.908	304.6	0.123	5.77	251.7	99.3	1.8	0.49	2.0	0.22	0.35	1.10	0.43	34	17
44	11.93	11.93	33.364	25.334	264.2	0.152	5.12	223.6	83.6	7.0	1.03	10.1	0.38	0.41	0.59	0.26	44	16
50 ISL	11.14 D	11.14	33.334 D	25.456	252.7	0.153	5.07	D221.0 D	81.5	9.2	1.18	12.7	0.18	0.16	0.37	0.15	50	
53 A	10.94	10.93	33.333	25.492	249.3	0.175	4.87	212.4	77.8	10.3	1.25	14.0	0.08	0.04	0.26	0.10	53	15
62 A	10.48	10.47	33.413	25.634	236.0	0.196	4.44	194.0	70.4	13.7	1.41	16.9	0.04	0.05	0.11	0.07	63	14
73	10.40	10.39	33.518	25.730	227.1	0.222	4.01	175.1	63.4	16.4	1.55	19.0	0.04	0.07	0.06	0.05	74	13
75 ISL	10.39 D	10.38	33.524 D	25.736	226.6	0.212	3.94	D171.7 D	62.3	17.0	1.58	19.5	0.03	0.06	0.05	0.05	76	
85	9.94	9.93	33.607	25.878	213.3	0.248	3.55	155.0	55.6	20.0	1.72	21.8	0.02	0.02	0.03	0.06	86	12
100	9.59	9.58	33.748	26.046	197.6	0.279	3.01	131.2	46.8	25.0	1.88	24.2	0.03	0.03	0.01	0.04	101	11
119	9.49	9.47	33.888	26.174	185.9	0.316	2.55	111.1	39.6	28.5	1.99	25.5	0.03	0.02	0.02	0.05	120	10
125 ISL	9.15 D	9.13	33.877 D	26.220	181.5	0.313	2.54	D110.6 D	39.2	29.5	2.03	26.2	0.03	0.02	0.01	0.06	126	
139	8.92	8.91	33.927	26.295	174.7	0.351	2.43	105.8	37.2	31.9	2.12	27.8	0.04	0.03	0.01	0.07	140	09
150 ISL	8.74 D	8.72	33.981 D	26.367	168.0	0.357	2.23 D	97.2 D	34.1	33.6	2.16	28.5	0.03	0.04	0.01	0.06	151	
170	8.39	8.37	34.007	26.440	161.3	0.403	2.18	95.2	33.1	36.7	2.23	29.8	0.02	0.07	0.01	0.06	171	08
200	8.19	8.17	34.044	26.501	156.2	0.451	1.94	84.8	29.4	40.1	2.34	30.8	0.02	0.04	0.01	0.05	202	07
230	8.27	8.24	34.162	26.583	149.0	0.497	1.32	57.5	20.0	44.0	2.53	31.7	0.02	0.05			232	06
250 ISL	8.21 D	8.18	34.185 D	26.611	146.8	0.514	1.18 D	51.5 D	17.9	46.1	2.60	32.3	0.01	0.05			252	
269	8.09	8.07	34.200	26.640	144.4	0.554	1.04	45.5	15.7	48.1	2.67	32.9	0.00	0.05			271	05
300 ISL	7.92 D	7.89	34.215 D	26.678	141.2	0.587	0.94 D	40.9 D	14.1	51.5	2.72	34.0	0.00	0.05			302	
319	7.58	7.55	34.197	26.714	137.9	0.625	0.90	39.4	13.4	53.5	2.75	34.6	0.00	0.05			322	04
379	7.03	7.00	34.201	26.795	130.9	0.706	0.74	32.4	10.9	60.5	2.87	36.5	0.00	0.07			382	03
400 ISL	6.84 D	6.80	34.209 D	26.828	127.9	0.722	0.68 D	29.4 D	9.9	62.4	2.91	36.9	0.00	0.06			403	
440	6.62	6.58	34.246	26.888	122.7	0.783	0.50	22.0	7.3	66.1	3.00	37.6	0.00	0.03			444	02
500 ISL	6.42 D	6.37	34.302 D	26.959	116.8	0.845	0.32 D	14.0 D	4.7	73.3	3.10	38.6	0.00	0.08			504	
515	6.35	6.30	34.306	26.972	115.7	0.872	0.30	13.0	4.3	75.1	3.13	38.9	0.00	0.09			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 48.9 N	121 50.7 W	18/07/2014	1323 UTC	3628 m	330 03 kn			1015.7 mb	18.3 C	16.5 C				057

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.84	17.84	33.393	24.081	382.4	0.000	5.94	259.3	109.3	0.7	0.38	0.7	0.04	0.07	0.94	0.12	0	
3	17.84	17.84	33.393	24.081	382.4	0.012	5.94	259.3	109.3	0.7	0.38	0.7	0.04	0.07	0.94	0.12	3	20
10 ISL	16.24 D	16.23	33.475 D	24.523	340.5	0.037	6.09	D265.3	D108.7	0.4	0.33	0.3	0.04	0.02	0.62	0.14	10	
11	16.22	16.21	33.487	24.537	339.3	0.040	6.12	267.2	109.2	0.4	0.32	0.2	0.03	0.01	0.57	0.14	11	19
20	16.01	16.00	33.484	24.582	335.3	0.071	6.07	264.8	107.8	0.4	0.35	0.5	0.04	0.08	0.63	0.17	20	18
30	15.33	15.32	33.431	24.693	325.0	0.104	5.91	258.0	103.6	0.8	0.44	1.6	0.09	0.32	0.56	0.23	30	17
40	13.45	13.44	33.288	24.980	297.9	0.135	5.87	256.1	98.9	2.7	0.75	5.1	0.24	0.94	0.61	0.32	40	16
50	12.42	12.42	33.319	25.206	276.6	0.163	5.62	245.5	92.8	4.4	1.00	8.1	0.42	1.39	0.43	0.22	50	15
59	11.47	11.46	33.341	25.402	258.0	0.188	5.03	219.4	81.3	8.7	1.20	12.6	0.28	0.07	0.25	0.16	59	14
70	10.97	10.97	33.408	25.544	244.8	0.215	4.66	203.4	74.6	11.6	1.33	15.3	0.05	0.02	0.15	0.10	71	13
75 ISL	10.67 D	10.67	33.431 D	25.615	238.1	0.229	4.53	D197.1 D	72.0	12.9	1.38	16.1	0.04	0.02	0.12	0.08	76	
85	9.98	9.97	33.420	25.725	227.8	0.251	4.39	191.7	68.8	15.6	1.48	17.7	0.02	0.01	0.07	0.04	86	12
100	9.43	9.42	33.481	25.865	214.8	0.284	4.11	179.5	63.6	19.0	1.60	19.8	0.03	0.01	0.04	0.03	101	11
120	9.47	9.45	33.713	26.040	198.6	0.325	3.08	134.3	47.7	24.5	1.92	24.4	0.02	0.02	0.02	0.04	121	10
125 ISL	9.31 D	9.30	33.751 D	26.095	193.5	0.337	3.01	D131.2 D	46.6	26.0	1.96	25.2	0.02	0.02	0.02	0.04	126	
140	9.01	8.99	33.885	26.248	179.1	0.363	2.53	110.5	38.9	30.5	2.09	27.4	0.02	0.02	0.01	0.04	141	09
150 ISL	8.95 D	8.93	33.936 D	26.299	174.6	0.383	2.23	D 97.2 D	34.3	32.0	2.13	28.0	0.03	0.02	0.01	0.04	151	
170	8.55	8.53	33.974	26.391	166.1	0.415	2.23	97.4	34.0	34.9	2.21	29.2	0.03	0.01	0.00	0.05	171	08
200	8.05	8.03	34.028	26.509	155.3	0.463	2.05	89.2	30.8	40.0	2.33	31.0	0.03	0.02	0.01	0.04	202	07
229	7.70	7.67	34.067	26.593	147.8	0.507	1.64	71.4	24.4	45.7	2.50	32.8	0.02	0.01			231	06
250 ISL	7.34 D	7.31	34.064 D	26.642	143.3	0.541	1.59	D 69.0 D	23.5	48.9	2.56	33.6	0.02	0.00			252	
270	7.17	7.15	34.065	26.666	141.3	0.566	1.52	66.4	22.5	52.0	2.61	34.4	0.02	0.00			272	05
300 ISL	6.94 D	6.91	34.099 D	26.726	135.9	0.611	1.17	D 50.9 D	17.2	56.9	2.71	35.7	0.02	0.00			302	
319	6.61	6.58	34.078	26.753	133.4	0.633	1.19	52.1	17.4	59.9	2.78	36.6	0.01	0.00			322	04
380	6.27	6.24	34.138	26.845	125.4	0.712	0.79	34.5	11.4	67.7	2.95	38.4	0.02	0.02			383	03
400 ISL	6.18 D	6.14	34.158 D	26.874	122.9	0.741	0.70	D 30.4 D	10.1	69.8	3.01	38.7	0.01	0.02			403	
440	6.10	6.06	34.224	26.937	117.6	0.785	0.49	21.4	7.1	74.1	3.12	39.3	0.01	0.03			444	02
500 ISL	5.82 D	5.77	34.287 D	27.023	110.0	0.859	0.30	D 13.1 D	4.3	80.6	3.19	40.4	0.01	0.05			504	
515	5.74	5.70	34.288	27.033	109.1	0.870	0.29	12.7	4.1	82.2	3.21	40.7	0.01	0.05			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 29.1 N	122 31.9 W	16/07/2014	2004 UTC	3990 m	100 10 kn	080 03 08	1	1016.2 mb	22.1 C	19.5 C	27 m	2/8	CS	050

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.80	17.80	33.149	23.904	399.2	0.000	5.61	245.0	103.0	2.9	0.33	0.0	0.00	0.04	0.10	0.03	0	
2 A	17.80	17.80	33.149	23.904	399.3	0.008	5.61	245.0	103.0	2.9	0.33	0.0	0.00	0.04	0.10	0.03	2	24
10	17.47	17.47	33.152	23.987	391.7	0.040	5.64	246.4	102.9	2.8	0.33	0.0	0.00	0.05	0.11	0.03	10	22
10	17.47	17.47	33.151	23.986	391.7	0.039											10	23
15 A	17.44	17.44	33.152	23.993	391.3	0.059	5.59	244.3	102.0	2.8	0.33	0.0	0.01	0.03	0.23	0.03	15	21
20 A	17.42	17.42	33.153	24.000	390.8	0.079	5.61	244.9	102.2	2.8	0.33	0.0	0.00	0.04	0.12	0.03	20	20
30	17.38	17.38	33.150	24.008	390.5	0.118	5.59	244.3	101.9	2.8	0.33	0.0	0.00	0.03	0.13	0.04	30	19
40 A	17.37	17.36	33.152	24.013	390.3	0.157	5.60	244.6	102.0	2.8	0.34	0.0	0.00	0.04	0.15	0.04	40	18
50 ISL	17.35 D	17.34	33.150 D	24.018	390.2	0.188	5.58	D243.3	D101.6	2.7	0.35	0.0	0.00	0.07	0.20	0.06	50	
53	17.29	17.28	33.155	24.036	388.6	0.208	5.61	244.9	102.0	2.7	0.35	0.0	0.00	0.08	0.21	0.06	53	17
67	15.76	15.75	33.124	24.364	357.7	0.260	5.84	255.2	103.1	2.7	0.35	0.0	0.00	0.06	0.34	0.17	68	16
75 ISL	15.86 D	15.85	33.398 D	24.553	340.0	0.280	5.77	D251.3	D102.1	2.7	0.40	0.2	0.02	0.21	0.32	0.22	76	
80 A	14.82	14.80	33.215	24.642	331.5	0.306	5.84	255.1	101.2	2.7	0.43	0.3	0.04	0.31	0.30	0.25	81	15
85	14.19	14.18	33.212	24.771	319.3	0.322	5.83	254.8	99.7	3.1	0.48	0.8	0.05	0.50	0.26	0.21	86	14
93 A	13.29	13.28	33.150	24.907	306.4	0.347	5.85	255.6	98.2	3.5	0.49	1.0	0.05	0.35	0.25	0.20	94	13
100 ISL	11.85 D	11.84	33.108 D	25.153	282.9	0.359	5.52	D240.4 D	89.8	5.4	0.72	5.0	0.15	0.12	0.20	0.19	101	
102	11.73	11.72	33.098	25.167	281.6	0.373	5.51	240.5	89.4	5.9	0.79	6.2	0.17	0.06	0.18	0.19	103	12
110	10.91	10.90	33.079	25.301	268.9	0.395	5.51	240.7	87.8	6.4	0.84	7.1	0.18	0.06	0.17	0.18	111	11
125 ISL	10.34 D	10.32	33.109 D	25.425	257.3	0.427	5.44	D236.8 D	85.6	8.0	0.93	9.4	0.08	0.01	0.12	0.16	126	
126	10.28	10.26	33.111	25.436	256.3	0.437	5.43	237.1	85.3	8.1	0.94	9.5	0.08	0.01	0.12	0.16	127	10
145	9.49	9.47	33.364	25.765	225.2	0.483	4.70	205.4	72.8	15.3	1.35	16.4	0.01	0.01	0.03	0.04	146	09
150 ISL	9.33 D	9.31	33.461 D	25.867	215.6	0.487	4.22	D183.7 D	65.1	17.2	1.46	18.0	0.01	0.02	0.03	0.04	151	
170	9.34	9.32	33.729	26.075	196.3	0.535	3.10	135.3	47.9	25.1	1.89	24.5	0.01	0.05	0.01	0.03	171	08
200	8.72	8.70	33.851	26.270	178.3	0.592	3.35	146.1	51.1	27.9	1.86	24.7	0.01	0.07	0.00	0.03	202	07
230	8.34	8.32	33.964	26.417	164.8	0.643	2.95	128.8	44.7	33.2	1.98	27.2	0.00	0.04			232	06
250 ISL	8.06 D	8.03	34.000 D	26.488	158.3	0.669	2.39	D103.9 D	36.0	37.6	2.17	29.4	0.00	0.06			252	
270	7.79	7.76	34.023	26.545	153.1	0.707	2.01	87.5	30.0	42.1	2.35	31.6	0.00	0.08			272	05
300 ISL	7.47 D	7.44	34.055 D	26.617	146.7	0.746	1.71	D 74.3 D	25.4	47.9	2.52	33.5	0.00	0.05			302	
320	7.24	7.21	34.081	26.670	141.8	0.780	1.39	60.6	20.5	51.8	2.63	34.8	0.00	0.03			323	04
380	6.75	6.71	34.137	26.783	131.7	0.862	0.85	37.1	12.4	61.0	2.88	37.3	0.00	0.06			383	03
400 ISL	6.58 D	6.55	34.142 D	26.809	129.5	0.884	0.82	D 35.6 D	11.9	64.1	2.91	37.9	0.00	0.05			403	
441	6.10	6.06	34.145	26.874	123.4	0.940	0.71	31.0	10.2	70.4	2.98	39.1	0.00	0.04			445	02
500 ISL	5.61 D	5.57	34.176 D	26.960	115.6	1.007	0.55	D 24.0 D	7.9	78.8	3.08	40.5	0.00	0.08			504	
515	5.55	5.50	34.182	26.973	114.5	1.028	0.52	22.8	7.4	80.9	3.10	40.8	0.00	0.09			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 9.0 N	123 13.2 W	17/07/2014	0225	UTC	4230 m	130 03 kn	160 02 08	1	1014.0 mb	21.9 C	19.3 C	32 m	2/8	SC	051

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.18	18.18	33.161	23.821	407.1	0.000	5.54	241.9	102.4	2.8	0.36	0.0	0.02	0.24	0.09	0.02	0	
2	18.18	18.18	33.161	23.821	407.2	0.008	5.54	241.9	102.4	2.8	0.36	0.0	0.02	0.24	0.09	0.02	2	20
10	17.54	17.54	33.145	23.965	393.8	0.040	5.57	243.6	101.9	2.9	0.36	0.0	0.00	0.09	0.09	0.02	10	19
20 ISL	17.48 D	17.47	33.142 D	23.978	392.9	0.080	5.57	D243.0	D101.7	2.9	0.37	0.0	0.01	0.06	0.11	0.02	20	
25	17.45	17.44	33.143	23.987	392.3	0.099	5.59	244.2	101.9	2.9	0.37	0.0	0.01	0.05	0.11	0.02	25	18
30 ISL	17.41 D	17.40	33.144 D	23.998	391.4	0.120	5.57	D243.0	D101.5	2.9	0.36	0.0	0.01	0.06	0.16	0.04	30	
40	16.70	16.70	33.138 D	24.158	376.4	0.158	5.70	249.1	102.5	2.9	0.35	0.0	0.00	0.08	0.24	0.08	40	17
50	15.13	15.12	33.083	24.470	346.9	0.193	5.94	259.6	103.5	2.6	0.35	0.0	0.00	0.07	0.30	0.12	50	16
62	14.21	14.20	33.048	24.640	331.0	0.234	5.99	261.9	102.4	2.8	0.38	0.0	0.01	0.11	0.30	0.17	63	15
75	13.52	13.51	33.144	24.857	310.7	0.276	5.85	255.4	98.5	3.5	0.45	0.5	0.06	0.12	0.32	0.21	76	14
87	12.19	12.18	33.131	25.107	287.0	0.312	5.69	248.6	93.3	4.3	0.60	3.1	0.19	0.07	0.27	0.19	88	13
99	11.23	11.22	33.074	25.240	274.5	0.345	5.49	239.8	88.1	6.2	0.81	7.1	0.07	0.02	0.22	0.21	100	12
100 ISL	11.21 D	11.19	33.091 D	25.257	272.9	0.351	5.44	D237.0	D 87.3	6.3	0.82	7.3	0.07	0.02	0.22	0.21	101	
112	10.84	10.83	33.134	25.356	263.7	0.380	5.25	229.3	83.6	8.0	0.97	9.9	0.03	0.04	0.14	0.15	113	11
125	10.11	10.10	33.279	25.595	241.1	0.413	4.77	208.6	74.9	12.5	1.24	14.5	0.03	0.01	0.09	0.08	126	10
141	9.72	9.70	33.397	25.753	226.4	0.450	4.39	191.9	68.4	16.0	1.43	17.7	0.02	0.10	0.04	0.04	142	09
150 ISL	9.48 D	9.47	33.510 D	25.879	214.5	0.474	4.04	D176.1	D 62.7	18.5	1.54	19.5	0.02	0.11	0.03	0.03	151	
169	9.10	9.08	33.689	26.082	195.6	0.509	3.59	156.8	55.2	23.8	1.78	23.3	0.01	0.13	0.01	0.02	170	08
199	8.74	8.72	33.850	26.265	178.7	0.565	3.16	137.8	48.2	28.6	1.92	25.8	0.02	0.06	0.00	0.02	201	07
200 ISL	8.73 D	8.71	33.855 D	26.271	178.1	0.571	3.16	D137.3	D 48.2	28.7	1.92	25.8	0.02	0.06			202	
230	8.33	8.31	33.941	26.400	166.4	0.619	3.31	144.7	50.2	31.3	1.90	25.8	0.00	0.10			232	06
250 ISL	8.04 D	8.01	33.978 D	26.474	159.6	0.656	2.70	D117.3	D 40.5	35.5	2.05	28.0	0.00	0.09			252	
269	7.85	7.82	33.991	26.512	156.3	0.681	2.47	107.7	36.9	39.6	2.20	30.0	0.01	0.08			271	05
300 ISL	7.41 D	7.39	33.997 D	26.579	150.2	0.734	2.34	D101.8	D 34.7	44.9	2.36	31.9	0.01	0.06			302	
321	7.21	7.17	34.026	26.632	145.4	0.760	1.89	82.4	27.8	48.5	2.46	33.2	0.01	0.04			324	04
379	6.62	6.59	34.085	26.758	134.0	0.841	1.16	50.5	16.9	59.7	2.79	36.8	0.00	0.11			382	03
400 ISL	6.31 D	6.28	34.080 D	26.795	130.5	0.875	1.13	D 48.9	D 16.3	63.1	2.85	37.6	0.00	0.09			403	
440	6.08	6.04	34.116	26.854	125.3	0.920	0.81	35.2	11.6	69.7	2.96	39.2	0.01	0.05			444	02
500 ISL	5.68 D	5.63	34.159 D	26.939	117.7	1.000	0.59	D 25.7	D 8.4	77.7	3.10	40.6	0.01	0.10			504	
515	5.62	5.57	34.167	26.953	116.5	1.010	0.55	23.9	7.8	79.7	3.13	40.9	0.01	0.11			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 49.1 N	123 54.5 W	17/07/2014	0825	UTC	4392 m	170 07 kn			1014.6 mb	18.9 C	17.3 C				052

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.62	18.62	33.168	23.718	416.9	0.000	5.54	241.9	103.3	2.8	0.35	0.1	0.01	0.03	0.09	0.01	0	
2	18.62	18.62	33.168	23.719	417.0	0.008	5.54	241.9	103.3	2.8	0.35	0.1	0.01	0.03	0.09	0.01	2	22
2	18.62	18.62	33.169	23.719	416.9	0.010											2	23
10	17.91	17.91	33.199	23.916	398.4	0.041	5.56	242.8	102.4	2.7	0.38	0.1	0.01	0.13	0.07	0.01	10	20
10	17.91	17.91	33.198	23.915	398.5	0.040											10	21
20 ISL	17.86 D	17.85	33.197 D	23.929	397.5	0.044	5.52	D240.6	D101.5	2.7	0.35	0.0	0.00	0.10	0.07	0.01	20	
25	17.84	17.84	33.197	23.933	397.4	0.101	5.53	241.7	101.8	2.7	0.33	0.0	0.00	0.08	0.07	0.02	25	19
30 ISL	17.83 D	17.83	33.196 D	23.935	397.4	0.085	5.53	D241.0	D101.6	2.7	0.33	0.0	0.00	0.06	0.08	0.02	30	
40	17.81	17.81	33.206	23.948	396.5	0.160	5.55	242.2	101.9	2.7	0.33	0.0	0.00	0.01	0.09	0.02	40	18
50	17.11	17.10	33.125	24.055	386.7	0.200	5.65	246.7	102.3	2.8	0.35	0.0	0.01	0.18	0.13	0.04	50	17
62	16.54	16.53	33.112	24.178	375.3	0.245	5.73	250.4	102.7	2.8	0.35	0.0	0.00	0.08	0.26	0.10	62	16
75 ISL	15.00 D	14.98	33.046 D	24.472	347.5	0.257	5.96	D259.8	D103.5	2.4	0.34	0.0	0.00	0.06	0.25	0.12	76	
76	15.01	15.00	33.048	24.471	347.7	0.296	5.98	261.4	104.0	2.4	0.34	0.0	0.00	0.06	0.25	0.12	77	15
87	14.01	14.00	33.112	24.732	323.0	0.333	6.00	261.9	102.1	3.2	0.40	0.0	0.01	0.11	0.27	0.16	88	13
87	14.01	14.00	33.111	24.731	323.1	0.332											88	14
100	12.17	12.16	33.112	25.095	288.4	0.372	5.72	249.8	93.7	4.3	0.61	3.1	0.17	0.12	0.24	0.17	101	12
112	11.28	11.27	33.112	25.260	272.9	0.406	5.40	236.0	86.9	6.3	0.84	7.4	0.02	0.02	0.17	0.11	113	11
125	10.61	10.59	33.207	25.454	254.7	0.440	5.02	219.4	79.6	9.5	1.08	11.6	0.02	0.02	0.10	0.06	126	10
141	9.92	9.90	33.306	25.649	236.3	0.480	4.69	205.0	73.3	13.3	1.31	15.3	0.00	0.01	0.06	0.05	142	09
150 ISL	9.79 D	9.77	33.388 D	25.735	228.3	0.446	4.44	D193.5	D 69.3	16.1	1.42	17.4	0.00	0.01	0.04	0.07	151	
170	9.26	9.24	33.633	26.013	202.2	0.544	3.71	162.0	57.3	22.2	1.66	22.0	0.01	0.01	0.01	0.11	171	08
200 ISL	8.83 D	8.81	33.823 D	26.230	182.1	0.548	3.34	D145.4	D 51.1	27.0	1.84	24.5	0.00	0.03	0.00	0.02	202	
201	8.82	8.80	33.827	26.234	181.7	0.603	3.36	146.6	51.4	27.2	1.85	24.6	0.00	0.03	0.00	0.02	203	07
229	8.45	8.43	33.936	26.378	168.5	0.652	2.92	127.2	44.2	32.4	2.03	27.2	0.00	0.03			231	06
250 ISL	8.18 D	8.16	33.989 D	26.460	161.0	0.634	2.53	D110.2	D 38.2	36.1	2.15	28.8	0.00	0.05			252	
270	7.93	7.90	34.002	26.509	156.6	0.718	2.29	100.1	34.4	39.7	2.27	30.4	0.00	0.06			272	05
300 ISL	7.50 D	7.47	34.031 D	26.593	148.9	0.712	1.98	D 85.9	D 29.4	44.5	2.38	31.9	0.00	0.04			302	
320	7.32	7.29	34.040	26.627	145.9	0.794	1.85	80.9	27.4	47.8	2.46	32.9	0.00	0.03			323	04
380	6.76	6.72	34.073	26.731	136.6	0.878	1.26	54.8	18.4	57.5	2.71	36.1	0.01	0.00			383	03
400 ISL	6.52 D	6.49	34.089 D	26.775	132.6	0.855	1.12	D 48.5	D 16.2	61.5	2.80	37.0	0.00	0.00			403	
439	6.16	6.12	34.134	26.859	124.9	0.956	0.75	32.7	10.8	69.3	2.99	38.9	0.00	0.00			443	02
500 ISL	5.72 D	5.68	34.183 D	26.953	116.5	0.980	0.53	D 23.0	D 7.5	77.4	3.09	40.2	0.00	0.03			504	
521	5.69	5.65	34.214	26.981	114.0	1.053	0.41	18.1	5.9	80.2	3.13	40.7	0.00	0.04			525	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 81.7 43.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 24.1 N	119 48.3 W	21/07/2014	1052	UTC	24 m	070 03 kn			1014.7 mb	19.2 C	17.7 C				071

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.75	18.75	33.549	23.977	392.3	0.000	6.15	268.3	115.3	0.3	0.21	0.1	0.03	0.01	0.78	0.16	0	
2	18.75	18.75	33.549	23.977	392.3	0.008	6.15	268.3	115.3	0.3	0.21	0.1	0.03	0.01	0.78	0.16	2	05
5	17.67	17.67	33.531	24.229	368.4	0.019	6.43	280.6	118.0	0.1	0.16	0.0	0.02	0.00	0.82	0.11	5	04
10	16.85	16.85	33.509	24.407	351.7	0.037	6.48	282.8	117.1	0.3	0.15	0.0	0.02	0.04	1.34	0.22	10	03
14	15.96	15.96	33.455	24.570	336.3	0.051	6.07	265.0	107.8	3.1	0.36	0.0	0.02	0.02	1.56	0.37	14	02
20	14.90	14.90	33.433	24.787	315.7	0.071	5.90	257.5	102.5	4.9	0.48	0.4	0.06	0.12	2.35	0.67	20	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 16.3 N	120 1.6 W	21/07/2014	0700 UTC	575 m	270 11 kn			1014.7 mb	19.5 C	17.7 C				070

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.28	19.28	33.574	23.862	403.2	0.000	5.67	247.4	107.3	0.2	0.19	0.1	0.03	0.05	0.38	0.00	0	
2	19.28	19.28	33.574	23.862	403.3	0.008	5.67	247.4	107.3	0.2	0.19	0.1	0.03	0.05	0.38	0.00	2	24
10	19.04	19.03	33.569	23.921	398.0	0.040	5.70	249.0	107.5	0.1	0.18	0.0	0.03	0.05	0.37	0.01	10	23
20	16.80	16.80	33.501	24.414	351.4	0.078	6.43	280.8	116.1	0.2	0.18	0.0	0.03	0.03	0.72	0.12	20	22
30	13.67	13.67	33.458	25.065	289.5	0.110	6.54	285.4	110.8	0.4	0.31	0.1	0.03	0.12	7.80	0.11	30	21
40	12.55	12.54	33.422	25.262	271.0	0.138	4.94	215.8	81.8	7.7	0.91	7.9	0.40	0.53	3.83	0.17	40	20
50	11.83	11.82	33.470	25.436	254.6	0.164	4.41	192.4	71.8	11.8	1.18	12.3	0.50	0.10	0.79	0.19	50	19
59	11.07	11.06	33.531	25.623	237.1	0.186	3.90	170.4	62.6	15.2	1.39	16.2	0.14	0.01	0.37	0.22	59	18
70	10.66	10.65	33.612	25.758	224.4	0.212	3.31	144.4	52.6	19.1	1.61	18.8	0.10	0.02	0.14	0.20	71	17
75 ISL	10.42 D	10.41	33.690 D	25.862	214.7	0.224	3.32	D144.3 D	52.5	20.4	1.67	19.7	0.09	0.02	0.13	0.19	76	
85	10.20	10.19	33.713	25.917	209.6	0.244	2.99	D130.2 D	47.2	22.9	1.80	21.4	0.06	0.03	0.10	0.18	86	16
99	9.87	9.85	33.864	26.091	193.3	0.272	2.56	111.6	40.1	26.8	1.98	24.2	0.04	0.00	0.04	0.10	100	15
100 ISL	9.92 D	9.91	33.848 D	26.070	195.4	0.276	2.59	D112.7 D	40.6	26.9	1.99	24.3	0.04	0.00	0.04	0.10	101	
119	9.78	9.76	33.932	26.160	187.2	0.310	2.31	101.0	36.2	28.8	2.09	25.4	0.07	0.01	0.03	0.11	120	14
125 ISL	9.75 D	9.74	33.954 D	26.182	185.3	0.324	2.25	D 97.9 D	35.2	29.3	2.11	25.6	0.06	0.01	0.03	0.11	126	
141	9.71	9.69	34.000	26.226	181.5	0.351	2.08	90.6	32.4	30.7	2.18	26.3	0.05	0.01	0.02	0.10	142	13
150 ISL	9.65 D	9.64	33.999 D	26.234	180.9	0.370	2.07	D 90.1 D	32.3	31.4	2.20	26.6	0.05	0.01	0.02	0.10	151	
170	9.52	9.50	34.053	26.299	175.2	0.403	1.83	79.8	28.5	32.9	2.26	27.4	0.04	0.01	0.02	0.10	171	12
200	9.43	9.40	34.092	26.346	171.4	0.455	1.64	71.5	25.4	34.7	2.34	28.4	0.03	0.00	0.02	0.11	202	11
229	9.36	9.34	34.117	26.377	169.1	0.504	1.52	66.5	23.6	35.6	2.39	28.9	0.03	0.03			231	10
250 ISL	9.20 D	9.17	34.143 D	26.424	165.0	0.543	1.27	D 55.0 D	19.6	39.0	2.50	30.2	0.04	0.03			252	
270	8.99	8.96	34.165	26.476	160.5	0.572	0.98	42.8	15.1	42.2	2.61	31.4	0.04	0.03			272	09
300 ISL	8.66 D	8.63	34.183 D	26.542	154.6	0.624	0.73	D 31.8 D	11.2	46.4	2.70	32.5	0.03	0.02			302	
321	8.48	8.44	34.186	26.573	152.0	0.651	0.66	28.9	10.1	49.3	2.76	33.2	0.03	0.01			324	08
380	7.88	7.84	34.208	26.681	142.5	0.738	0.49	21.5	7.4	58.4	2.92	34.2	0.02	0.03			383	07
400 ISL	7.76 D	7.72	34.217 D	26.706	140.4	0.772	0.44	D 18.9 D	6.5	62.7	3.00	33.7	0.02	0.03			403	
440	7.33	7.29	34.231	26.779	133.8	0.821	0.28	12.4	4.2	71.2	3.16	32.8	0.02	0.04			444	06
479	6.86	6.82	34.240	26.851	127.1	0.872	0.08	3.3	1.1	87.8	3.45	29.0	0.03	0.01			483	05
500 ISL	6.75 D	6.70	34.245 D	26.871	125.4	0.906	0.06	D 2.4 D	0.8	95.6	3.61	25.6	0.03	0.01			504	
514	6.66	6.61	34.246	26.885	124.3	0.916	0.02	0.8	0.3	100.8	3.71	23.4	0.03	0.01			518	04
536	6.60	6.55	34.248	26.894	123.7	0.943	0.02	0.7	0.2	108.9	3.90	16.4	1.23	0.03			541	03
560	6.57	6.52	34.247	26.897	123.8	0.973	0.02	0.7	0.2	119.5	4.11	8.0	3.78	0.01			565	02
566	6.58	6.52	34.250	26.899	123.7	0.980	0.02	0.9	0.3	120.1	4.14	7.9	3.81	0.00			571	01

A) SANTA BARBARA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 15.5 N	119 19.3 W	21/07/2014	1351 UTC	21 m	040 07 kn	230 01 07	1	1015.4 mb	18.7 C	16.8 C		3/8	SC	072

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.45	18.45	33.527	24.035	386.7	0.000	5.81	253.8	108.4	2.3	0.33	0.2	0.03	0.01	0.70	0.22	0	
2	18.45	18.45	33.527	24.035	386.8	0.008	5.81	253.8	108.4	2.3	0.33	0.2	0.03	0.01	0.70	0.22	2	04
5	17.07	17.07	33.482	24.334	358.4	0.019	6.15	268.4	111.6	2.5	0.35	0.1	0.01	0.02	0.52	0.15	5	03
10	16.72	16.72	33.466	24.404	351.9	0.037	6.20	270.5	111.7	3.4	0.36	0.0	0.03	0.01	0.72	0.21	10	02
15	16.51	16.50	33.453	24.444	348.3	0.054	6.00	262.0	107.7	6.4	0.54	0.1	0.06	0.07	1.39	0.49	15	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 13.5 N	119 24.8 W	21/07/2014	1500 UTC	33 m	280 07 kn	260 01 05	1	1016.5 mb	21.0 C	19.0 C	13 m	4/8	SC	073

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.97	19.97	33.556	23.669	421.6	0.000	5.73	250.2	110.0	1.1	0.23	0.1	0.02	0.02	0.45	0.10	0	
2	19.97	19.97	33.556	23.670	421.6	0.008	5.73	250.2	110.0	1.1	0.23	0.1	0.02	0.02	0.45	0.10	2	05
5	19.94	19.94	33.555	23.678	421.0	0.021	5.95	259.9	114.2	1.2	0.23	0.1	0.01	0.02	0.48	0.11	5	04
10	16.83	16.83	33.462	24.375	354.7	0.040	6.21	271.2	112.2	3.4	0.31	0.0	0.02	0.02	0.87	0.32	10	03
20	14.17	14.17	33.395	24.913	303.6	0.073	5.75	251.1	98.5	4.6	0.50	1.6	0.09	0.14	3.53	0.71	20	02
30	13.81	13.81	33.389	24.984	297.3	0.103	5.74	250.6	97.5	6.0	0.60	2.8	0.16	0.57	1.67	0.52	30	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 10.5 N	119 30.5 W	21/07/2014	1658 UTC	163 m	300 06 kn	250 01 05	1	1017.7 mb	21.5 C	19.6 C	20 m	3/8	SC	074

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.25	20.25	33.604	23.632	425.1	0.000	5.58	243.8	107.7	0.2	0.19	0.2	0.02	0.03	0.27	0.06	0	
2 A	20.25	20.25	33.604	23.632	425.2	0.009	5.58	243.8	107.7	0.2	0.19	0.2	0.02	0.03	0.27	0.06	2	15
10 A	20.09	20.08	33.594	23.670	422.0	0.042	5.62	D245.0 D	108.0	0.3	0.21	0.0	0.01	0.01	0.30	0.10	10	13
10	20.09	20.08	33.595	23.670	421.9	0.042											10	14
15 A	19.84	19.84	33.590	23.731	416.3	0.063	5.63	245.6	107.7	0.4	0.21	0.0	0.00	0.01	0.32	0.07	15	12
20 ISL	16.67 D	16.66	33.484 D	24.431	349.7	0.072	6.54	D285.1 D	117.7	1.8	0.30	0.0	0.01	0.01	0.85	0.27	20	
22	16.30	16.29	33.476	24.511	342.2	0.089	6.28	274.2	112.2	2.3	0.33	0.0	0.01	0.01	1.06	0.35	22	11
29 A	15.28	15.27	33.428	24.702	324.1	0.113	6.18	269.8	108.2	3.7	0.36	0.0	0.02	0.00	1.22	0.55	29	10
30 ISL	15.12 D	15.11	33.447 D	24.752	319.4	0.106	6.26	D272.9 D	109.3	3.3	0.35	0.1	0.02	0.01	1.91	0.59	30	
34	14.48	14.48	33.436	24.880	307.3	0.129	6.14	267.9	105.7	1.8	0.32	0.5	0.03	0.05	4.64	0.77	34	09
39	13.33	13.33	33.374	25.070	289.3	0.143	5.72	249.6	96.1	5.2	0.61	3.0	0.16	0.37	1.27	0.43	39	08
49	12.15	12.15	33.379	25.304	267.2	0.171	4.97	216.8	81.5	8.3	0.93	8.5	0.33	0.19	0.41	0.27	49	07
50 ISL	12.11 D	12.10	33.382 D	25.316	266.1	0.165	5.15	D224.2 D	84.4	8.6	0.96	8.9	0.32	0.17	0.40	0.26	50	
58 A	11.44	11.43	33.429	25.476	251.0	0.195	4.51	196.9	72.9	11.4	1.17	12.4	0.31	0.04	0.29	0.21	58	06
69 A	11.16	11.16	33.472	25.560	243.3	0.222	4.17	182.2	67.1	13.2	1.27	14.2	0.24	0.01	0.24	0.19	70	05
75 ISL	11.01 D	11.00	33.523 D	25.628	237.0	0.228	3.98	D173.5 D	63.8	15.3	1.40	16.1	0.17	0.02	0.19	0.16	76	
85	10.58	10.57	33.624	25.781	222.6	0.259	3.40	148.6	54.1	18.7	1.62	19.2	0.06	0.03	0.10	0.11	86	04
100	10.39	10.37	33.724	25.894	212.2	0.292	2.95	128.6	46.7	21.7	1.78	21.7	0.04	0.01	0.06	0.08	101	03
120	10.25	10.24	33.813	25.987	203.8	0.333	2.66	116.2	42.1	24.3	1.90	22.7	0.03	0.00	0.08	0.12	121	02
125 ISL	10.22 D	10.21	33.835 D	26.010	201.8	0.335	2.64	D114.8 D	41.6	24.9	1.94	23.1	0.04	0.00	0.07	0.11	126	
150	10.08	10.06	33.969	26.140	190.1	0.392	2.17	94.5	34.1	28.3	2.11	25.1	0.05	0.01	0.04	0.08	151	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 52.7 N	120 8.2 W	19/07/2014	1755 UTC	99 m	310 09 kn	250 01 08	1	1014.6 mb	19.2 C	17.5 C	13 m	4/8	SC	062

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.20	18.20	33.544	24.109	379.7	0.000	5.76	251.3	106.8	2.3	0.33	0.1	0.00	0.03	0.52	0.09	0	
2 A	18.20	18.20	33.544	24.109	379.7	0.008	5.76	251.3	106.8	2.3	0.33	0.1	0.00	0.03	0.52	0.09	2	12
7 A	18.06	18.06	33.544	24.144	376.6	0.027	5.82	254.0	107.6	2.2	0.34	0.2	0.00	0.04	0.73	0.12	7	11
10 A	18.00	18.00	33.541	24.156	375.5	0.038	5.85	255.3	108.1	2.0	0.34	0.1	0.00	0.04	0.99	0.14	10	09
10	18.00	18.00	33.541	24.156	375.6	0.036											10	10
18 A	14.43	14.43	33.420	24.877	307.0	0.065	5.84	254.8	100.4	4.3	0.55	2.5	0.08	0.08	1.05	0.35	18	08
20 ISL	13.67 D	13.67	33.423 D	25.039	291.7	0.057	5.72	D249.2 D	96.9	4.9	0.61	3.4	0.10	0.08	1.01	0.35	20	
29	12.58	12.58	33.404	25.240	272.7	0.096	5.19	226.6	85.9	7.7	0.86	7.7	0.16	0.09	0.86	0.35	29	07
30 ISL	12.43 D	12.42	33.408 D	25.273	269.6	0.085	5.17	D225.3 D	85.4	7.9	0.88	8.0	0.16	0.09	0.84	0.35	30	
39 A	11.86	11.86	33.419	25.389	258.8	0.123	4.84	211.1	78.9	9.7	1.02	10.4	0.18	0.09	0.70	0.30	39	06
45 A	11.30	11.30	33.440	25.509	247.5	0.138	4.59	200.5	74.0	11.2	1.14	12.1	0.17	0.05	0.55	0.27	45	05
50 ISL	11.10 D	11.10	33.488 D	25.583	240.6	0.137	4.39	D191.0 D	70.4	13.2	1.27	14.1	0.16	0.05	0.42	0.23	50	
52	11.06	11.05	33.492	25.593	239.7	0.155	4.20	183.3	67.3	14.1	1.32	14.9	0.15	0.05	0.37	0.22	52	04
60	10.94	10.94	33.509	25.628	236.6	0.174	4.12	179.9	65.9	14.6	1.36	15.4	0.15	0.08	0.35	0.19	60	03
70	10.24	10.23	33.669	25.876	213.2	0.197	3.42	149.4	54.0	20.6	1.66	20.0	0.11	0.06	0.14	0.12	71	02
75 ISL	10.00 D	9.99	33.762 D	25.988	202.6	0.194	3.12	D135.8 D	49.0	22.1	1.74	21.0	0.10	0.05	0.11	0.11	76	
90	9.81	9.80	33.869	26.104	192.0	0.237	2.70	118.0	42.3	26.7	1.98	23.9	0.06	0.03	0.03	0.07	91	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 44.7 N	120 24.6 W	19/07/2014	1355 UTC	973 m	320 13 kn	310 03 05	1	1013.5 mb	19.2 C	17.0 C	19 m	5/8	SC	061

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.03	20.03	33.623	23.706	418.0	0.000	5.48	239.4	105.3	1.6	0.32	0.2	0.00	0.02	0.20	0.04	0	
2	20.03	20.03	33.623	23.707	418.1	0.008	5.48	239.4	105.3	1.6	0.32	0.2	0.00	0.02	0.20	0.04	2	21
10	20.03	20.03	33.623	23.707	418.4	0.042	5.48	239.0	105.2	1.6	0.27	0.0	0.00	0.01	0.21	0.04	10	19
10	20.03	20.03	33.624	23.707	418.4	0.042											10	20
20	15.23	15.22	33.548	24.805	314.0	0.079	6.21	271.1	108.7	0.3	0.29	0.2	0.02	0.03	2.32	0.81	20	18
30	13.36	13.35	33.567	25.214	275.3	0.108	4.80	209.5	80.9	8.3	0.95	9.1	0.22	0.19	1.92	0.86	30	17
40	12.10	12.10	33.549	25.445	253.5	0.134	4.47	195.0	73.3	11.4	1.14	12.2	0.24	0.26	1.85	0.73	40	16
50	11.09	11.08	33.590	25.665	232.9	0.159	3.91	170.5	62.7	16.0	1.43	16.4	0.27	0.11	0.87	0.51	50	15
60	10.64	10.63	33.627	25.774	222.7	0.182	3.58	156.3	57.0	18.5	1.56	18.6	0.27	0.02	0.45	0.32	60	14
70	10.41	10.40	33.665	25.843	216.3	0.203	3.38	147.3	53.4	20.3	1.66	20.0	0.21	0.03	0.34	0.24	71	13
75 ISL	10.26 D	10.25	33.694 D	25.891	211.8	0.194	3.30	D143.8 D	52.1	21.2	1.70	20.7	0.17	0.03	0.27	0.21	76	
85	9.92	9.91	33.734	25.981	203.4	0.235	3.13	136.7	49.1	23.1	1.79	22.1	0.11	0.02	0.15	0.16	86	12
100	9.66	9.65	33.817	26.089	193.6	0.265	2.85	124.2	44.4	26.0	1.90	23.7	0.07	0.01	0.09	0.15	101	11
120	9.47	9.45	33.853	26.150	188.2	0.303	2.76	120.5	42.9	27.2	1.96	24.6	0.05	0.01	0.05	0.09	121	10
125 ISL	9.41 D	9.39	33.882 D	26.183	185.1	0.293	2.69	D116.9 D	41.6	27.8	1.98	24.9	0.05	0.01	0.04	0.09	126	
140	9.24	9.23	33.911	26.232	180.8	0.340	2.60	113.3	40.1	29.4	2.04	25.7	0.05	0.02	0.03	0.07	141	09
150 ISL	9.13 D	9.12	33.938 D	26.271	177.3	0.338	2.59	D112.5 D	39.9	30.2	2.06	26.1	0.04	0.02	0.02	0.07	151	
170	9.03	9.01	33.966	26.309	174.0	0.393	2.45	106.8	37.6	31.6	2.11	26.9	0.01	0.02	0.02	0.07	171	08
200	8.83	8.80	34.057	26.414	164.7	0.443	2.02	88.3	31.0	35.7	2.28	28.5	0.00	0.03	0.01	0.04	202	07
230	8.73	8.70	34.093	26.459	161.0	0.492	1.85	80.8	28.3	37.6	2.33	29.1	0.01	0.00			232	06
250 ISL	8.59 D	8.56	34.124 D	26.505	157.0	0.506	1.68	D 73.0 D	25.6	39.6	2.40	29.9	0.02	0.01			252	
270	8.47	8.44	34.144	26.540	154.1	0.555	1.54	67.0	23.4	41.7	2.47	30.6	0.02	0.01			272	05
300 ISL	8.33 D	8.29	34.189 D	26.598	149.1	0.583	1.23	D 53.4 D	18.6	44.9	2.57	31.7	0.01	0.01			302	
321	8.15	8.11	34.200	26.634	146.0	0.632	1.10	48.0	16.6	47.2	2.64	32.4	0.00	0.01			324	04
380	8.07	8.03	34.260	26.695	141.4	0.717	0.80	34.7	12.0	51.2	2.77	33.2	0.00	0.02			383	03
400 ISL	7.92 D	7.88	34.262 D	26.719	139.4	0.728	0.75	D 32.5 D	11.2	53.5	2.81	33.8	0.01	0.02			403	
440	7.49	7.45	34.267	26.785	133.4	0.799	0.62	27.2	9.3	58.2	2.89	35.0	0.01	0.01			444	02
500 ISL	6.82 D	6.78	34.286 D	26.893	123.5	0.861	0.45	D 19.6 D	6.6	66.0	3.02	36.9	0.01	0.03			504	
514	6.81	6.76	34.287	26.896	123.4	0.894	0.43	18.8	6.3	67.9	3.05	37.4	0.01	0.03			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 34.7 N	120 45.4 W	19/07/2014	0934 UTC	1366 m	300 12 kn			1013.4 mb	19.3 C	16.9 C				060

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.59	19.59	33.599	23.801	409.0	0.000	5.61	244.7	106.8	0.8	0.28	0.1	0.02	0.03	0.17	0.04	0	
2	19.59	19.59	33.599	23.801	409.1	0.008	5.61	244.7	106.8	0.8	0.28	0.1	0.02	0.03	0.17	0.04	2	21
10	18.79	18.79	33.568	23.981	392.3	0.040	5.76	251.5	108.2	1.2	0.27	0.1	0.01	0.05	0.18	0.04	10	19
10	18.79	18.79	33.569	23.983	392.1	0.040											10	20
20	16.57	16.57	33.541	24.497	343.4	0.077	5.96	260.3	107.2	2.3	0.36	0.2	0.03	0.09	0.48	0.20	20	18
30 ISL	14.42 D	14.41	33.521 D	24.960	299.6	0.091	5.31	D231.2 D	91.4	4.7	0.64	4.3	0.12	0.17	0.88	0.34	30	
31	13.93	13.93	33.531	25.068	289.2	0.112	5.53	241.4	94.3	4.9	0.67	4.7	0.13	0.18	0.92	0.35	31	17
40	12.35	12.35	33.538	25.389	258.9	0.137	4.63	202.3	76.4	10.9	1.12	11.7	0.23	0.13	1.54	0.61	40	16
50	10.50	10.49	33.624	25.795	220.4	0.161	3.64	159.0	57.8	18.6	1.60	19.0	0.13	0.03	0.47	0.33	50	15
59	10.22	10.21	33.671	25.880	212.5	0.180	3.41	148.6	53.7	20.8	1.69	20.7	0.08	0.02	0.24	0.23	59	14
70	9.90	9.89	33.721	25.973	203.9	0.203	3.21	140.0	50.2	23.0	1.79	22.3	0.04	0.02	0.12	0.17	71	13
75 ISL	9.77 D	9.76	33.756 D	26.022	199.3	0.195	3.10	D134.8 D	48.4	23.4	1.81	22.6	0.05	0.02	0.10	0.16	76	
85	9.76	9.75	33.759	26.027	199.1	0.233	3.07	133.9	47.9	24.3	1.85	23.1	0.05	0.02	0.08	0.13	86	12
100	9.49	9.47	33.834	26.131	189.5	0.262	2.85	124.2	44.2	26.6	1.94	24.5	0.02	0.01	0.03	0.08	101	11
119	9.34	9.32	33.881	26.192	184.1	0.298	2.73	119.3	42.3	28.0	1.99	25.4	0.01	0.02	0.02	0.08	120	10
125 ISL	9.29 D	9.28	33.900 D	26.215	182.0	0.291	2.72	D118.5 D	42.1	28.8	2.02	25.8	0.02	0.02	0.02	0.08	126	
140	9.08	9.06	33.950	26.289	175.3	0.336	2.54	110.7	39.1	30.8	2.09	26.8	0.03	0.03	0.02	0.08	141	09
150 ISL	9.02 D	9.00	34.012 D	26.347	170.0	0.336	2.31	D100.6 D	35.6	33.0	2.20	27.6	0.02	0.03	0.02	0.08	151	
170	9.06	9.04	34.158	26.456	160.2	0.386	1.59	69.4	24.5	37.5	2.41	29.1	0.02	0.02	0.01	0.08	171	08
200	8.69	8.67	34.196	26.543	152.4	0.433	1.32	57.7	20.2	41.5	2.54	30.6	0.02	0.02	0.02	0.08	202	07
231	8.33	8.31	34.195	26.599	147.6	0.479	1.21	52.7	18.3	45.5	2.62	32.1	0.02	0.02			233	06
250 ISL	8.25 D	8.22	34.206 D	26.621	145.8	0.491	1.10	D 47.9 D	16.7	47.7	2.67	32.5	0.02	0.02			252	
270	8.03	8.01	34.246	26.685	140.0	0.536	0.90	39.3	13.6	50.0	2.73	33.0	0.02	0.02			272	05
300 ISL	7.76 D	7.73	34.259 D	26.736	135.6	0.562	0.73	D 31.5 D	10.9	53.4	2.81	34.0	0.02	0.02			302	
319	7.63	7.60	34.258	26.755	134.1	0.603	0.68	29.4	10.1	55.6	2.86	34.7	0.02	0.02			322	04
381	7.32	7.28	34.268	26.808	130.0	0.685	0.56	24.5	8.3	60.1	2.93	35.6	0.01	0.02			384	03
400 ISL	7.18 D	7.15	34.278 D	26.835	127.6	0.695	0.50	D 21.7 D	7.4	61.7	2.96	36.1	0.01	0.02			403	
440	7.00	6.96	34.280	26.863	125.5	0.760	0.46	20.2	6.8	65.0	3.03	37.0	0.00	0.01			444	02
500 ISL	6.60 D	6.55	34.297 D	26.932	119.6	0.820	0.37	D 16.1 D	5.4	71.2	3.13	38.3	0.01	0.03			504	
515	6.50	6.45	34.304	26.951	117.9	0.851	0.31	13.5	4.5	72.7	3.16	38.6	0.01	0.03			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 14.6 N	121 26.5 W	19/07/2014	0309 UTC	3799 m	340 03 kn	010 02 06	1	1014.7 mb	20.8 C	17.2 C		6/8	SC	059

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.28	18.28	33.319	23.917	398.0	0.000	5.69	248.3	105.6	1.4	0.38	0.0	0.01	0.11	0.15	0.02	0	
2	18.28	18.28	33.319	23.917	398.1	0.008	5.69	248.3	105.6	1.4	0.38	0.0	0.01	0.11	0.15	0.02	2	21
10	16.86	16.86	33.304	24.247	366.8	0.039	5.88	256.9	106.2	1.5	0.36	0.0	0.00	0.06	0.16	0.03	10	19
10	16.86	16.86	33.304	24.247	366.9	0.039											10	20
20	16.14	16.14	33.333	24.436	349.2	0.074	6.05	264.2	107.7	1.3	0.37	0.0	0.00	0.05	0.25	0.06	20	18
30	15.80	15.80	33.353	24.529	340.7	0.109	6.06	264.4	107.1	1.2	0.36	0.1	0.02	0.07	0.46	0.15	30	17
40	14.98	14.98	33.381	24.731	321.7	0.142	5.96	260.3	103.8	1.4	0.48	1.3	0.10	0.32	0.73	0.20	40	16
50	13.99	13.99	33.377	24.938	302.2	0.173	5.65	246.7	96.4	2.8	0.72	4.0	0.49	0.96	0.59	0.22	50	15
60	11.69	11.68	33.302	25.332	264.8	0.202	5.14	224.5	83.5	7.3	1.05	10.7	0.12	0.02	0.28	0.14	60	14
70	11.30	11.29	33.366	25.453	253.5	0.228	4.82	210.2	77.6	10.2	1.23	13.6	0.05	0.03	0.17	0.10	71	13
75 ISL	10.70 D	10.69	33.380 D	25.571	242.4	0.223	4.78	D208.2 D	76.0	11.5	1.26	14.3	0.05	0.03	0.13	0.09	76	
85	9.74	9.73	33.301	25.673	232.7	0.264	4.73	206.5	73.6	14.2	1.33	15.8	0.04	0.04	0.06	0.07	86	12
100	9.44	9.43	33.479	25.861	215.1	0.297	4.11	179.2	63.5	18.9	1.59	19.8	0.02	0.04	0.03	0.03	101	11
120	9.18	9.17	33.643	26.031	199.3	0.339	3.59	156.7	55.3	23.3	1.79	23.0	0.01	0.02	0.01	0.02	121	10
125 ISL	9.10 D	9.09	33.702 D	26.090	193.8	0.332	3.48	D151.6 D	53.6	24.1	1.79	23.2	0.01	0.02	0.01	0.02	126	
139	8.73	8.71	33.813	26.236	180.2	0.375	3.58	156.4	54.7	26.4	1.79	23.8	0.00	0.02	0.01	0.02	140	09
150 ISL	8.63 D	8.61	33.869 D	26.296	174.7	0.378	3.65	D158.9 D	55.6	28.3	1.85	24.8	0.00	0.03	0.01	0.02	151	
170	8.41	8.39	33.944	26.390	166.2	0.428	3.06	133.4	46.4	31.8	1.97	26.5	0.01	0.04	0.00	0.02	171	08
200	8.08	8.06	33.974	26.463	159.6	0.477	2.80	122.1	42.1	36.2	2.09	28.2	0.00	0.07	0.00	0.02	202	07
230	7.63	7.61	33.999	26.548	152.0	0.524	2.37	103.5	35.4	42.3	2.28	30.6	0.00	0.01			232	06
250 ISL	7.58 D	7.55	34.023 D	26.576	149.6	0.539	2.06	D 89.5 D	30.6	46.3	2.41	32.1	0.00	0.02			252	
271	7.11	7.09	34.035	26.650	142.7	0.585	1.78	77.6	26.2	50.6	2.54	33.7	0.00	0.04			273	05
300 ISL	6.80 D	6.77	34.054 D	26.709	137.4	0.611	1.51	D 65.9 D	22.1	55.4	2.68	35.2	0.00	0.06			302	
321	6.67	6.64	34.075	26.743	134.4	0.654	1.26	55.1	18.4	58.9	2.78	36.3	0.00	0.07			324	04
380	6.20	6.16	34.129	26.848	125.1	0.730	0.85	37.0	12.2	67.8	2.96	38.6	0.00	0.04			383	03
400 ISL	6.08 D	6.05	34.151 D	26.880	122.2	0.742	0.71	D 30.8 D	10.2	71.0	3.01	39.2	0.00	0.03			403	
440	5.82	5.78	34.192	26.947	116.3	0.803	0.50	21.8	7.1	77.4	3.12	40.3	0.01	0.02			444	02
500 ISL	5.70 D	5.65	34.266 D	27.021	110.0	0.859	0.33	D 14.4 D	4.7	82.2	3.21	40.8	0.00	0.04			504	
515	5.65	5.61	34.279	27.037	108.6	0.887	0.30	D 13.2 D	4.3	83.5	3.23	40.9	0.00	0.04			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 54.6 N	122 7.6 W	16/07/2014	1417 UTC	4181 m	100 05 kn	320 03 06	2	1015.1 mb	18.3 C	17.4 C	25 m	8/8	SC	049

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.33	17.33	33.185	24.045	385.7	0.000	5.65	246.9	102.9	2.3	0.35	0.0	0.00	0.00	0.17	0.03	0	
3	17.33	17.33	33.185	24.046	385.8	0.012	5.65	246.9	102.9	2.3	0.35	0.0	0.00	0.00	0.17	0.03	3	21
10	17.02	17.02	33.183	24.118	379.2	0.038	5.69	248.6	103.0	1.8	0.36	0.0	0.00	0.01	0.14	0.04	10	19
10	17.02	17.02	33.182	24.117	379.2	0.039											10	20
20	16.72	16.72	33.216	24.213	370.4	0.076	5.74	250.5	103.2	1.5	0.37	0.0	0.00	0.04	0.17	0.05	20	18
30 ISL	16.41 D	16.40	33.224 D	24.293	363.2	0.095	5.75	D250.8	D102.9	1.8	0.38	0.0	0.00	0.08	0.25	0.09	30	
31	16.30	16.29	33.194	24.294	363.1	0.116	5.76	251.7	102.8	1.9	0.38	0.0	0.00	0.08	0.26	0.10	31	17
39	15.57	15.57	33.279	24.524	341.5	0.144	5.84	255.1	102.8	1.1	0.47	0.9	0.07	0.72	0.35	0.17	39	16
50	15.40	15.39	33.306	24.583	336.2	0.182	5.79	253.1	101.6	1.3	0.47	0.8	0.05	0.76	0.29	0.17	50	15
60	14.87	14.86	33.312	24.703	325.1	0.215	5.75	251.0	99.7	1.8	0.59	2.1	0.13	1.20	0.22	0.14	60	14
69	14.08	14.07	33.373	24.918	304.8	0.243	5.54	242.0	94.6	3.2	0.78	5.0	0.42	0.90	0.10	0.08	70	13
75 ISL	13.75 D	13.74	33.371 D	24.985	298.5	0.244	5.46	D237.7 D	92.6	4.4	0.86	6.7	0.32	0.57	0.08	0.07	76	
85	12.12	12.11	33.298	25.249	273.5	0.290	5.27	230.1	86.3	6.5	0.99	9.5	0.16	0.02	0.06	0.06	86	12
100	11.21	11.20	33.400	25.497	250.0	0.329	4.72	205.9	75.8	10.7	1.28	14.3	0.04	0.04	0.05	0.05	101	11
120	10.41	10.39	33.457	25.683	232.7	0.377	4.30	187.9	68.0	14.9	1.47	17.5	0.03	0.02	0.03	0.04	121	10
125 ISL	10.37 D	10.35	33.533 D	25.749	226.5	0.373	4.11	D179.1 D	65.0	16.6	1.55	18.7	0.03	0.02	0.03	0.04	126	
139	9.80	9.78	33.621	25.914	211.0	0.420	3.43	149.8	53.6	21.3	1.78	22.2	0.02	0.01	0.02	0.03	140	09
150 ISL	9.60 D	9.59	33.661 D	25.978	205.1	0.427	3.29	D143.2 D	51.1	23.6	1.85	23.4	0.02	0.01	0.01	0.04	151	
170	8.89	8.87	33.828	26.224	182.1	0.481	2.93	127.7	44.8	27.9	1.97	25.6	0.01	0.02	0.01	0.05	171	08
200	8.52	8.50	33.935	26.365	169.1	0.534	2.82	123.3	42.9	31.7	2.04	27.0	0.01	0.02	0.01	0.03	202	07
230	8.11	8.08	33.974	26.460	160.6	0.583	2.97	129.7	44.7	35.0	2.03	27.2	0.02	0.03			232	06
250 ISL	7.90 D	7.87	33.996 D	26.508	156.3	0.600	2.66	D115.8 D	39.9	38.9	2.18	29.0	0.02	0.03			252	
270	7.66	7.63	34.016	26.558	151.7	0.646	2.21	96.5	33.0	42.9	2.32	30.8	0.02	0.02			272	05
300 ISL	7.18 D	7.15	33.993 D	26.609	147.2	0.676	2.42	D105.1 D	35.6	47.9	2.44	32.4	0.01	0.04			302	
320	6.95	6.92	34.031	26.670	141.5	0.720	1.80	78.5	26.4	51.2	2.52	33.4	0.01	0.06			323	04
380	6.40	6.36	34.059	26.768	132.8	0.802	1.26	55.0	18.3	61.3	2.76	36.7	0.00	0.00			383	03
400 ISL	6.25 D	6.21	34.087 D	26.809	129.1	0.814	1.03	D 44.9 D	14.9	64.5	2.84	37.4	0.00	0.03			403	
440	5.97	5.93	34.114	26.866	124.0	0.879	0.82	35.6	11.7	70.8	2.99	38.9	0.00	0.08			444	02
500 ISL	5.80 D	5.76	34.212 D	26.966	115.3	0.938	0.47	D 20.4 D	6.7	78.1	3.13	40.0	0.00	0.02			504	
516	5.74	5.69	34.217	26.978	114.3	0.969	0.40	17.6	5.8	80.1	3.17	40.3	0.00	0.01			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 34.8 N	122 48.8 W	16/07/2014	0844	UTC	4273 m	110 05 kn			1014.2 mb	18.8 C	18.0 C				048

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.08	18.08	33.198	23.873	402.1	0.000	5.53	241.7	102.2	2.8	0.38	0.1	0.02	0.05	0.08	0.02	0	
2	18.08	18.08	33.198	23.873	402.2	0.008	5.53	241.7	102.2	2.8	0.38	0.1	0.02	0.05	0.08	0.02	2	21
10	17.67	17.67	33.181	23.962	394.0	0.040	5.55	242.5	101.7	2.7	0.35	0.1	0.01	0.05	0.09	0.02	10	19
10	17.67	17.67	33.175	23.957	394.5	0.039											10	20
20 ISL	17.65 D	17.64	33.171 D	23.960	394.7	0.060	5.55	D242.1	D101.7	2.7	0.35	0.1	0.00	0.06	0.10	0.02	20	
25	17.61	17.60	33.170	23.969	393.9	0.099	5.57	243.4	102.0	2.7	0.35	0.1	0.00	0.07	0.11	0.03	25	18
30 ISL	17.59 D	17.58	33.170 D	23.974	393.7	0.100	5.56	D242.3	D101.6	2.7	0.35	0.1	0.00	0.07	0.12	0.03	30	
40	17.29	17.29	33.198	24.067	385.1	0.158	5.63	246.1	102.5	2.7	0.36	0.1	0.00	0.07	0.14	0.03	40	17
50	16.28	16.27	33.211	24.314	361.9	0.195	5.80	253.2	103.4	2.0	0.39	0.1	0.00	0.22	0.31	0.11	50	16
62	15.85	15.84	33.223	24.421	352.1	0.238	5.82	254.3	102.9	2.0	0.41	0.1	0.00	0.28	0.41	0.25	62	15
75	15.10	15.09	33.189	24.560	339.1	0.283	5.79	252.9	100.8	2.3	0.44	0.1	0.00	0.55	0.34	0.20	76	14
87	14.42	14.41	33.222	24.732	323.1	0.322	5.77	252.2	99.2	2.9	0.50	0.6	0.06	0.82	0.19	0.13	88	13
100	13.01	12.99	33.158	24.971	300.4	0.363	5.63	246.1	93.9	4.3	0.64	3.1	0.21	0.27	0.13	0.11	101	12
113	11.90	11.88	33.248	25.254	273.7	0.400	5.52	241.1	90.0	4.9	0.68	4.1	0.20	0.20	0.11	0.10	114	11
125	11.49	11.47	33.325	25.390	261.0	0.432	5.21	227.7	84.3	7.2	0.83	7.8	0.06	0.04	0.09	0.10	126	10
140	11.07	11.05	33.344	25.481	252.6	0.471	5.05	220.6	80.9	8.8	0.95	9.9	0.04	0.06	0.08	0.10	141	09
150 ISL	10.39 D	10.37	33.406 D	25.648	236.7	0.480	4.82	D210.1 D	76.2	12.7	1.17	13.4	0.03	0.06	0.06	0.07	151	
170	9.44	9.43	33.631	25.981	205.3	0.540	3.90	170.2	60.4	20.5	1.62	20.5	0.00	0.05	0.01	0.03	171	08
199	9.05	9.03	33.824	26.197	185.3	0.596	3.25	142.0	50.0	26.4	1.86	24.2	0.01	0.02	0.00	0.02	201	07
200 ISL	8.93 D	8.90	33.876 D	26.257	179.6	0.583	3.15	D137.2 D	48.4	26.6	1.87	24.3	0.01	0.02			202	
230	8.52	8.50	33.989	26.408	165.7	0.650	2.58	112.7	39.3	33.9	2.13	27.5	0.00	0.04			232	06
250 ISL	8.32 D	8.29	34.044 D	26.483	158.9	0.668	2.19	D 95.4 D	33.2	37.9	2.27	29.2	0.00	0.04			252	
270	8.01	7.98	34.062	26.544	153.3	0.713	1.91	83.3	28.7	42.0	2.40	30.9	0.00	0.03			272	05
300 ISL	7.72 D	7.69	34.117 D	26.631	145.5	0.745	1.51	D 65.7 D	22.6	47.7	2.58	32.8	0.00	0.05			302	
321	7.57	7.53	34.158	26.685	140.7	0.788	1.14	49.9	17.0	51.7	2.70	34.1	0.00	0.06			324	04
381	7.01	6.97	34.184	26.785	131.8	0.870	0.81	35.5	12.0	59.3	2.87	36.1	0.00	0.04			384	03
400 ISL	6.86 D	6.82	34.197 D	26.816	129.1	0.883	0.72	D 31.3 D	10.5	62.0	2.92	36.7	0.00	0.05			403	
440	6.55	6.51	34.224	26.879	123.5	0.945	0.56	24.4	8.1	67.6	3.04	37.9	0.00	0.08			444	02
500 ISL	6.08 D	6.03	34.264 D	26.973	115.0	1.006	0.39	D 16.8 D	5.6	75.1	3.15	39.3	0.00	0.03			504	
515	6.04	5.99	34.274	26.986	114.0	1.034	0.34	14.9	4.9	77.0	3.18	39.6	0.00	0.02			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 14.8 N	123 29.6 W	16/07/2014	0308	UTC	4170 m	170 03 kn	320 04 06	2	1013.7 mb	19.9 C	17.8 C		8/8	SC	047

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.71	18.71	33.340	23.827	406.5	0.000	5.46	238.6	102.2	2.8	0.35	0.0	0.00	0.11	0.09	0.01	0	
2	18.71	18.71	33.340	23.828	406.6	0.008	5.46	238.6	102.2	2.8	0.35	0.0	0.00	0.11	0.09	0.01	2	21
10 ISL	18.45 D	18.45	33.337 D	23.890	400.9	0.041	5.50	D239.7	D102.3	2.8	0.37	0.0	0.01	0.08	0.09	0.02	10	
11	18.45	18.44	33.339	23.893	400.7	0.044	5.47	239.2	101.9	2.8	0.37	0.0	0.01	0.08	0.09	0.02	11	19
11	18.45	18.44	33.339	23.893	400.7	0.044											11	20
20 ISL	18.43 D	18.42	33.337 D	23.896	400.7	0.063	5.47	D238.5	D101.8	2.8	0.35	0.0	0.00	0.08	0.10	0.02	20	
25	18.42	18.42	33.348	23.907	399.9	0.101	5.47	239.1	101.9	2.7	0.34	0.0	0.00	0.08	0.10	0.02	25	18
30 ISL	18.42 D	18.41	33.337 D	23.900	400.8	0.103	5.50	D239.9	D102.3	2.7	0.35	0.0	0.00	0.12	0.11	0.03	30	
40	17.60	17.60	33.323	24.088	383.2	0.160	5.54	241.8	101.4	2.7	0.37	0.0	0.00	0.21	0.12	0.03	40	17
50	15.41	15.41	33.170	24.476	346.4	0.196	6.00	262.4	105.2	2.9	0.36	0.0	0.00	0.05	0.18	0.06	50	16
62	14.89	14.88	33.226	24.634	331.7	0.237	5.99	261.9	103.9	2.7	0.43	0.2	0.00	0.08	0.33	0.09	62	15
75	13.90	13.89	33.186	24.811	315.1	0.279	5.89	257.2	100.0	3.1	0.47	0.7	0.05	0.18	0.34	0.13	76	14
88	12.80	12.78	33.158	25.011	296.2	0.319	5.73	250.2	95.1	4.3	0.61	2.8	0.22	0.12	0.36	0.14	89	13
100 ISL	11.50 D	11.49	33.109 D	25.219	276.6	0.338	5.54	D241.1 D	89.4	6.1	0.81	6.6	0.13	0.06	0.31	0.10	101	
101	11.37	11.35	33.095	25.231	275.4	0.356	5.51	241.0	88.8	6.3	0.83	6.9	0.13	0.06	0.31	0.09	102	12
112	10.76	10.75	33.225	25.441	255.6	0.385	5.01	218.8	79.7	9.6	1.08	11.3	0.07	0.04	0.19	0.08	113	11
124	10.41	10.39	33.280	25.545	245.9	0.415	4.73	206.5	74.6	12.1	1.24	14.1	0.03	0.04	0.14	0.10	125	10
125 ISL	10.32 D	10.30	33.385 D	25.643	236.6	0.403	4.59	D199.7 D	72.3	12.4	1.26	14.4	0.03	0.04	0.14	0.09	126	
141	9.75	9.73	33.512	25.838	218.3	0.454	4.12	180.2	64.3	17.4	1.50	18.5	0.01	0.06	0.06	0.06	142	09
150 ISL	9.53 D	9.52	33.588 D	25.932	209.5	0.459	3.94	D171.3 D	61.1	20.4	1.62	20.5	0.01	0.06	0.05	0.05	151	
170	8.98	8.96	33.793	26.183	186.0	0.513	3.20	139.5	49.0	27.0	1.89	25.1	0.01	0.06	0.00	0.03	171	08
199	8.64	8.61	33.901	26.322	173.3	0.565	3.00	131.0	45.7	30.4	1.97	26.4	0.00	0.04	0.01	0.02	201	07
200 ISL	8.63 D	8.61	33.905 D	26.326	172.9	0.553	3.00	D130.6 D	45.7	30.5	1.97	26.4	0.00	0.04			202	
230	8.26	8.24	33.967	26.431	163.4	0.617	2.84	123.9	42.9	34.3	2.04	27.6	0.00	0.02			232	06
250 ISL	7.98 D	7.95	33.985 D	26.487	158.3	0.636	2.65	D115.1 D	39.7	37.8	2.14	29.0	0.00	0.02			252	
269	7.69	7.66	34.000	26.542	153.3	0.679	2.43	106.0	36.2	41.2	2.24	30.3	0.00	0.02			271	05
300 ISL	7.30 D	7.27	34.021 D	26.614	146.8	0.713	2.09	D 90.8 D	30.9	47.3	2.42	32.4	0.00	0.04			302	
320	7.01	6.98	34.032	26.663	142.3	0.754	1.81	78.9	26.5	51.2	2.53	33.8	0.00	0.05			323	04
380	6.47	6.44	34.074	26.770	132.7	0.837	1.17	50.9	16.9	61.6	2.78	37.1	0.00	0.03			383	03
400 ISL	6.35 D	6.31	34.090 D	26.799	130.1	0.852	1.03	D 44.7 D	14.9	64.5	2.84	37.7	0.00	0.03			403	
440	6.03	5.99	34.118	26.861	124.6	0.914	0.82	35.7	11.8	70.4	2.97	39.0	0.00	0.03			444	02
500 ISL	5.97 D	5.93	34.211 D	26.943	117.7	0.976	0.47	D 20.3 D	6.7	77.2	3.11	40.1	0.00	0.08			504	
515	5.74	5.70	34.197	26.961	115.9	1.004	0.47	20.6	6.7	78.9	3.15	40.4	0.00	0.09			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 54.8 N	124 10.3 W	15/07/2014	2132	UTC	4243 m	110 03 kn	320 06 06	1	1014.3 mb	22.1 C	18.9 C	33 m	7/8	SC	046

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.64	18.64	33.368	23.866	402.8	0.000	5.45	238.1	101.9	2.9	0.40	0.1	0.00	0.15	0.09	0.02	0	
2	18.64	18.64	33.368	23.866	402.9	0.008	5.45	238.1	101.9	2.9	0.40	0.1	0.00	0.15	0.09	0.02	2	21
10	18.45	18.45	33.367	23.912	398.8	0.040	5.46	238.4	101.6	2.8	0.33	0.0	0.00	0.06	0.10	0.02	10	19
10	18.45	18.45	33.366	23.912	398.9	0.041											10	20
20 ISL	18.44 D	18.44	33.365 D	23.915	399.0	0.061	5.47	D238.5	D101.8	2.8	0.33	0.0	0.00	0.05	0.11	0.02	20	
25	18.43	18.43	33.367	23.918	398.8	0.100	5.45	238.2	101.5	2.8	0.33	0.0	0.00	0.05	0.12	0.03	25	18
30 ISL	18.42 D	18.41	33.364 D	23.921	398.8	0.101	5.50	D239.9	D102.3	2.8	0.34	0.0	0.00	0.06	0.14	0.04	30	
39	17.43	17.43	33.337	24.140	378.2	0.155	5.61	244.9	102.4	2.8	0.36	0.0	0.00	0.09	0.19	0.05	39	17
50	14.93	14.93	33.325	24.700	325.0	0.194	6.08	265.8	105.7	3.1	0.37	0.0	0.00	0.04	0.22	0.07	50	16
62	13.81	13.81	33.282	24.902	306.0	0.232	6.11	267.0	103.8	3.7	0.46	0.2	0.01	0.17	0.33	0.11	62	15
74	12.54	12.53	33.277	25.153	282.3	0.267	5.41	236.4	89.4	5.6	0.79	5.7	0.27	0.11	0.42	0.14	75	14
75 ISL	12.56 D	12.55	33.277 D	25.149	282.8	0.252	5.41	D235.5	D 89.4	5.8	0.80	6.0	0.26	0.11	0.41	0.15	76	
86	11.82	11.80	33.257	25.275	270.9	0.300	5.14	224.4	83.6	7.4	0.94	8.7	0.18	0.05	0.29	0.16	87	13
100	10.84	10.83	33.301	25.486	251.0	0.337	4.71	205.7	75.1	11.1	1.20	13.3	0.07	0.05	0.16	0.12	101	12
112	10.11	10.10	33.370	25.665	234.1	0.366	4.38	191.5	68.8	14.6	1.39	16.6	0.04	0.02	0.09	0.08	113	11
125	9.58	9.57	33.554	25.898	212.2	0.395	3.70	161.8	57.5	20.1	1.68	21.4	0.03	0.03	0.02	0.04	126	10
141	9.26	9.24	33.692	26.058	197.3	0.428	3.29	143.7	50.8	24.1	1.87	24.1	0.03	0.12	0.01	0.03	142	09
150 ISL	9.14 D	9.12	33.761 D	26.132	190.4	0.428	3.10	D135.0	D 47.8	25.8	1.91	24.9	0.03	0.09	0.01	0.03	151	
171	8.86	8.84	33.879	26.268	177.9	0.484	2.79	121.9	42.7	29.6	2.01	26.6	0.03	0.02	0.00	0.03	172	08
199	8.49	8.47	33.932	26.368	168.8	0.532	2.77	120.8	42.0	32.3	2.05	27.4	0.03	0.03	0.00	0.02	201	07
200 ISL	8.51 D	8.49	33.934 D	26.366	169.0	0.517	2.81	D122.4	D 42.8	32.4	2.05	27.4	0.03	0.03			202	
229	8.15	8.13	33.976	26.454	161.1	0.582	2.76	120.4	41.6	35.5	2.08	28.0	0.00	0.04			231	06
250 ISL	7.85 D	7.82	33.992 D	26.512	155.8	0.599	2.67	D116.2	D 40.0	38.9	2.16	29.1	0.01	0.05			252	
270	7.51	7.48	33.998	26.566	150.9	0.646	2.45	107.1	36.4	42.2	2.23	30.2	0.01	0.06			272	05
300 ISL	7.15 D	7.13	34.023 D	26.636	144.6	0.675	2.03	D 88.4	D 29.9	48.0	2.40	32.4	0.01	0.05			302	
320	6.97	6.94	34.034	26.670	141.6	0.719	1.74	76.0	25.6	51.9	2.52	33.8	0.01	0.04			323	04
380	6.37	6.34	34.073	26.782	131.5	0.801	1.16	50.7	16.8	62.5	2.79	37.2	0.00	0.06			383	03
400 ISL	6.22 D	6.18	34.093 D	26.817	128.3	0.812	1.02	D 44.5	D 14.8	65.5	2.86	37.9	0.00	0.05			403	
441	5.95	5.91	34.124	26.877	123.0	0.878	0.76	33.3	10.9	71.5	2.99	39.2	0.00	0.03			445	02
500 ISL	5.52 D	5.48	34.169 D	26.966	115.0	0.935	0.56	D 24.2	D 7.9	80.7	3.11	40.6	0.00	0.07			504	
514	5.46	5.41	34.178	26.980	113.7	0.964	0.49	21.4	6.9	82.9	3.14	40.9	0.00	0.08			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
34 0.7 N	118 50.1 W	21/07/2014	2212	UTC	26 m	270 16 kn	230 02 04	1	1015.7 mb	22.3 C	19.8 C		2/8	SC	075

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.31	19.31	33.490	23.789	410.1	0.000	6.02	262.9	114.1	3.1	0.31	0.0	0.02	0.03	0.63	0.17	0	
2	19.31	19.31	33.490	23.790	410.2	0.008	6.02	262.9	114.1	3.1	0.31	0.0	0.02	0.03	0.63	0.17	2	05
5	19.23	19.23	33.489	23.809	408.4	0.021	5.85	255.2	110.6	3.1	0.32	0.0	0.00	0.06	0.64	0.18	5	04
10	17.22	17.22	33.455	24.278	363.9	0.040	6.15	268.4	111.9	3.4	0.34	0.0	0.02	0.02	0.61	0.25	10	03
15	16.45	16.44	33.434	24.443	348.3	0.058	6.23	272.1	111.7	3.6	0.34	0.0	0.02	0.03	0.59	0.26	15	02
20	15.78	15.78	33.418	24.583	335.2	0.075	6.21	271.1	109.8	4.8	0.40	0.0	0.03	0.06	1.20	0.58	20	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 53.4 N	118 29.4 W	13/07/2014	0618	UTC	57 m	270 01 kn			1012.9 mb	20.0 C	18.5 C				034

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.95	18.95	33.520	23.904	399.2	0.000	5.84	254.9	109.9	2.0	0.28	0.0	0.02	0.04	0.23	0.05	0	
2	18.95	18.95	33.520	23.904	399.2	0.008	5.84	254.9	109.9	2.0	0.28	0.0	0.02	0.04	0.23	0.05	2	08
5	18.83	18.83	33.514	23.931	396.8	0.020	5.86	255.7	110.0	2.0	0.31	0.0	0.01	0.10	0.25	0.05	5	07
10	18.27	18.27	33.497	24.056	385.1	0.039	6.06	264.4	112.5	2.1	0.30	0.0	0.00	0.04	0.24	0.04	10	05
10	18.27	18.27	33.498	24.057	385.0	0.038											10	06
20	13.42	13.42	33.368	25.047	290.9	0.073	6.08	265.5	102.5	4.5	0.47	0.9	0.04	0.09	1.26	0.44	20	04
30	12.27	12.27	33.385	25.285	268.5	0.101	5.18	226.0	85.2	8.0	0.85	7.1	0.32	0.40	0.89	0.39	30	03
40	11.39	11.38	33.442	25.495	248.7	0.127	3.98	173.9	64.3	14.7	1.34	13.5	0.62	1.23	0.18	0.30	40	02
50 ISL	10.90 D	10.89	33.534 D	25.655	233.8	0.133	3.70	D160.9	D 59.1	16.5	1.51	16.7	0.34	0.19	0.15	0.22	50	
51	10.90	10.89	33.534	25.655	233.8	0.153	3.69	160.9	58.9	16.7	1.53	17.0	0.32	0.09	0.15	0.21	51	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 49.4 N	118 37.7 W	13/07/2014	0844	UTC	653 m	150 03 kn			1012.4 mb	19.9 C	18.5 C				035

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.44	19.44	33.569	23.817	407.5	0.000	5.66	247.0	107.5	1.8	0.30	0.1	0.01	0.06	0.20	0.03	0	
2	19.44	19.44	33.569	23.818	407.5	0.008	5.66	247.0	107.5	1.8	0.30	0.1	0.01	0.06	0.20	0.03	2	21
10	19.19	19.19	33.577	23.888	401.2	0.040	5.70	248.7	107.7	1.9	0.31	0.1	0.00	0.02	0.21	0.03	10	19
10	19.19	19.19	33.559	23.874	402.5	0.040											10	20
20	17.14	17.14	33.480	24.317	360.6	0.079	6.14	268.2	111.6	2.6	0.32	0.0	0.01	0.05	0.22	0.05	20	18
30	15.32	15.31	33.407	24.677	326.5	0.113	6.24	272.4	109.3	2.9	0.38	0.0	0.00	0.02	0.22	0.07	30	17
40	13.45	13.45	33.297	24.986	297.3	0.144	5.75	251.0	96.9	7.6	0.80	3.6	0.41	8.47	1.34	0.60	40	16
50	12.07	12.06	33.375	25.317	266.0	0.172	4.98	217.3	81.5	8.8	0.96	9.2	0.31	0.49	0.61	0.41	50	15
60	11.70	11.70	33.408	25.412	257.2	0.199	4.67	204.0	75.9	10.1	1.08	10.7	0.35	0.28	0.46	0.31	60	14
70	11.41	11.40	33.464	25.509	248.2	0.224	4.32	188.5	69.8	12.2	1.22	13.2	0.34	0.11	0.34	0.22	71	13
75 ISL	11.01 D	11.00	33.518 D	25.624	237.3	0.218	3.94	D171.7 D	63.2	14.3	1.34	15.2	0.24	0.08	0.28	0.21	76	
85	10.59	10.58	33.613	25.771	223.6	0.259	3.45	150.4	54.8	18.3	1.59	19.1	0.05	0.02	0.15	0.18	86	12
100	10.38	10.37	33.727	25.898	211.8	0.292	3.07	133.8	48.5	21.2	1.74	21.0	0.03	0.05	0.08	0.11	101	11
120	10.27	10.25	33.811	25.984	204.1	0.333	2.73	118.9	43.0	23.9	1.88	22.7	0.01	0.05	0.05	0.09	121	10
125 ISL	10.25 D	10.24	33.823 D	25.995	203.2	0.326	2.68	D116.7 D	42.3	24.4	1.91	23.0	0.01	0.05	0.04	0.08	126	
139	10.19	10.17	33.891	26.061	197.3	0.371	2.43	106.1	38.4	26.0	1.99	24.0	0.02	0.04	0.03	0.07	140	09
150 ISL	10.18 D	10.16	33.900 D	26.069	196.8	0.376	2.40	D104.6 D	37.9	27.4	2.06	24.7	0.01	0.05	0.02	0.07	151	
169	10.08	10.06	34.034	26.191	185.7	0.429	1.93	84.1	30.4	29.9	2.19	26.0	0.00	0.08	0.01	0.06	170	08
200	9.93	9.91	34.133	26.295	176.5	0.486	1.67	72.7	26.2	32.4	2.29	27.0	0.01	0.05	0.01	0.05	202	07
230	9.91	9.88	34.220	26.368	170.3	0.538	1.30	56.8	20.4	34.9	2.42	27.9	0.01	0.03			232	06
250 ISL	9.88 D	9.85	34.266 D	26.409	166.9	0.555	1.16	D 50.3 D	18.2	36.0	2.46	28.4	0.01	0.04			252	
270	9.64	9.61	34.257	26.444	163.9	0.604	1.15	50.1	17.9	37.2	2.49	28.8	0.02	0.04			272	05
300 ISL	9.49 D	9.46	34.278 D	26.484	160.7	0.638	1.05	D 45.9 D	16.4	38.9	2.56	29.2	0.01	0.06			302	
319	9.56	9.53	34.333	26.516	158.2	0.683	0.85	37.1	13.3	39.9	2.60	29.4	0.00	0.08			322	04
380	8.54	8.50	34.271	26.632	147.7	0.777	0.95	41.6	14.5	46.0	2.64	31.5	0.00	0.03			383	03
400 ISL	8.44 D	8.39	34.321 D	26.688	142.8	0.792	0.68	D 29.4 D	10.3	48.4	2.71	32.3	0.00	0.05			403	
440	8.00	7.96	34.293	26.731	139.0	0.862	0.64	28.0	9.7	53.3	2.84	33.8	0.01	0.08			444	02
500 ISL	7.34 D	7.29	34.286 D	26.823	130.8	0.930	0.54	D 23.4 D	8.0	60.0	2.95	35.8	0.01	0.05			504	
514	7.26	7.21	34.290	26.837	129.6	0.961	0.48	21.1	7.2	61.5	2.98	36.3	0.02	0.04			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 39.5 N	118 58.5 W	13/07/2014	1308	UTC	758 m	160 03 kn	290 02 07	1	1011.7 mb	20.0 C	18.4 C	31 m	2/8	CS	036

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	21.56	21.56	33.665	23.328	454.2	0.000	5.23	228.4	103.4	2.1	0.29	0.2	0.00	0.08	0.15	0.00	0	
2	21.56	21.56	33.665	23.328	454.3	0.009	5.23	228.4	103.4	2.1	0.29	0.2	0.00	0.08	0.15	0.00	2	24
9	21.04	21.03	33.629	23.443	443.6	0.041	5.36	233.8	104.8	1.9	0.28	0.0	0.00	0.05	0.17	0.02	9	23
10 ISL	20.49 D	20.49	33.640 D	23.597	428.9	0.045	5.36	D234.0 D	103.9	2.0	0.28	0.0	0.00	0.05	0.16	0.02	10	
20	17.97	17.97	33.516	24.146	376.9	0.085	5.76	251.5	106.4	2.2	0.30	0.0	0.00	0.05	0.13	0.02	20	22
29	15.24	15.24	33.411	24.697	324.6	0.117	6.08	265.6	106.4	2.7	0.36	0.0	0.01	0.00	0.19	0.00	29	21
30 ISL	15.08 D	15.08	33.415 D	24.734	321.1	0.121	6.05	D263.6 D	105.5	2.8	0.37	0.0	0.01	0.01	0.24	0.01	30	
39	14.08	14.07	33.366	24.912	304.4	0.148	6.13	267.8	104.7	3.6	0.42	0.2	0.03	0.08	0.69	0.02	39	20
49	13.04	13.03	33.356	25.116	285.2	0.178	5.76	251.3	96.2	4.9	0.58	2.9	0.08	0.12	0.78	0.17	49	19
50 ISL	12.85 D	12.84	33.372 D	25.165	280.6	0.182	5.65	D246.3 D	94.1	5.2	0.61	3.4	0.09	0.12	0.77	0.18	50	
60	11.99	11.99	33.373	25.330	265.0	0.208	4.99	217.7	81.5	8.4	0.94	8.9	0.16	0.14	0.68	0.22	60	18
70	11.60	11.59	33.400	25.424	256.3	0.234	4.68	204.4	75.9	10.1	1.06	11.1	0.23	0.09	0.51	0.17	71	17
75 ISL	11.62 D	11.61	33.402 D	25.423	256.6	0.249	4.67	D203.4 D	75.8	10.8	1.11	11.9	0.23	0.07	0.44	0.17	76	
85	11.14	11.13	33.441	25.540	245.6	0.272	4.36	190.2	70.0	12.2	1.21	13.5	0.23	0.02	0.29	0.17	86	16
100 ISL	10.49 D	10.48	33.577 D	25.761	224.8	0.309	3.81	D166.0 D	60.4	16.3	1.45	17.4	0.07	0.03	0.10	0.07	101	
101	10.46	10.44	33.569	25.761	224.8	0.309	3.84	167.5	60.8	16.6	1.47	17.7	0.06	0.03	0.08	0.06	102	15
121	10.07	10.06	33.709	25.937	208.6	0.353	3.21	139.9	50.4	21.6	1.72	21.4	0.05	0.03	0.05	0.08	122	14
125 ISL	9.90 D	9.89	33.752 D	25.999	202.7	0.363	3.17	D137.9 D	49.6	22.5	1.75	21.9	0.04	0.03	0.04	0.07	126	
140	9.49	9.47	33.859	26.152	188.4	0.390	3.05	133.0	47.3	25.8	1.85	23.8	0.02	0.01	0.01	0.04	141	13
150 ISL	9.59 D	9.57	33.931 D	26.192	184.9	0.411	2.68	D116.6 D	41.7	27.8	1.97	24.8	0.02	0.01	0.01	0.04	151	
169	9.53	9.51	34.079	26.318	173.4	0.443	2.02	87.9	31.4	31.5	2.19	26.6	0.02	0.01	0.01	0.04	170	12
200	9.78	9.76	34.247	26.409	165.7	0.495	1.27	55.2	19.8	35.7	2.41	28.0	0.01	0.03	0.01	0.05	202	11
230	9.23	9.20	34.282	26.527	154.8	0.543	1.15	50.1	17.8	39.2	2.51	29.1	0.01	0.01			232	10
250 ISL	9.28 D	9.26	34.312 D	26.543	153.9	0.579	0.96	D 41.9 D	14.9	40.8	2.51	29.9	0.01	0.02			252	
271	8.46	8.43	34.168	26.561	152.1	0.606	1.53	66.8	23.3	42.4	2.51	30.7	0.00	0.04			273	09
300 ISL	8.42 D	8.38	34.238 D	26.623	146.8	0.655	1.08	D 46.8 D	16.3	44.8	2.64	31.2	0.01	0.07			302	
319	8.63	8.60	34.318	26.653	144.6	0.677	0.78	34.2	12.0	46.4	2.72	31.6	0.01	0.09			322	08
380	7.74	7.70	34.263	26.744	136.4	0.763	0.74	32.1	11.0	53.7	2.82	34.2	0.01	0.02			383	07
400 ISL	7.67 D	7.63	34.282 D	26.770	134.3	0.797	0.62	D 27.1 D	9.3	55.9	2.87	34.8	0.01	0.02			403	
439	7.35	7.31	34.293	26.826	129.4	0.842	0.49	21.6	7.3	60.3	2.96	36.1	0.01	0.02			443	06
500 ISL	6.85 D	6.80	34.301 D	26.902	122.7	0.926	0.38	D 16.5 D	5.6	66.6	3.05	37.4	0.01	0.01			504	
515	6.80	6.75	34.302	26.909	122.2	0.937	0.37	16.1	5.4	68.2	3.07	37.7	0.02	0.01			519	05
600	6.17	6.12	34.327	27.013	112.9	1.037	0.22	9.6	3.2	80.1	3.22	39.0	0.02	0.01			605	04
690	5.79	5.73	34.356	27.086	106.8	1.136	0.13	5.4	1.8	90.4	3.33	38.9	0.01	0.01			696	03
700 ISL	5.76 D	5.70	34.359 D	27.092	106.3	1.156	0.12 D	5.4 D	1.8	92.8	3.36	38.2	0.01	0.01			706	
765	5.31	5.25	34.391	27.171	99.0	1.213	0.05	2.2	0.7	108.5	3.52	33.5	0.03	0.01			772	02
769	5.31	5.25	34.391	27.171	99.0	1.217	0.03	1.4	0.5	108.9	3.54	33.2	0.04	0.04			776	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 29.8 N	119 19.4 W	13/07/2014	1744 UTC	1647 m	260 03 kn	290 03 07	1	1012.2 mb	21.9 C	20.0 C	27 m	1/8	SC	037

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.39	20.39	33.641	23.625	425.8	0.000	5.35	233.7	103.6	2.1	0.30	0.0	0.00	0.06	0.11	0.02	0	
3 A	20.39	20.39	33.641	23.625	425.9	0.013	5.35	233.7	103.6	2.1	0.30	0.0	0.00	0.06	0.11	0.02	3	24
10	20.20	20.19	33.627	23.666	422.3	0.043	5.36	233.9	103.3	2.1	0.30	0.0	0.00	0.09	0.12	0.02	10	21
10	20.20	20.19	33.626	23.665	422.4	0.042											10	23
10	20.20	20.19	33.640	23.676	421.4	0.043											10	22
16 A	19.45	19.45	33.605	23.843	405.6	0.067	5.49	239.6	104.3	2.1	0.31	0.0	0.00	0.05	0.12	0.03	16	20
20 A	18.80	18.80	33.581	23.989	391.9	0.083	5.61	244.6	105.2	2.1	0.30	0.0	0.00	0.04	0.12	0.03	20	19
30	17.04	17.04	33.513	24.367	356.2	0.121	5.88	256.6	106.6	2.3	0.34	0.0	0.01	0.02	0.14	0.05	30	18
39 A	14.37	14.36	33.405	24.881	307.3	0.151	5.94	259.1	102.0	3.5	0.46	1.0	0.05	0.10	0.47	0.22	39	17
50 ISL	13.33 D	13.33	33.368 D	25.065	290.1	0.172	5.69	D248.0 D	95.8	4.6	0.60	3.1	0.11	0.12	0.56	0.29	50	
53	13.27	13.26	33.369	25.080	288.7	0.192	5.66	247.0	95.0	4.8	0.64	3.7	0.13	0.13	0.58	0.30	53	15
53	13.27	13.26	33.368	25.080	288.8	0.192											53	16
67	11.91	11.90	33.449	25.405	258.0	0.231	4.71	205.4	76.8	10.0	1.10	11.4	0.27	0.09	0.46	0.28	68	14
75 ISL	11.04 D	11.03	33.408 D	25.532	246.1	0.220	4.58	D199.3 D	73.4	11.7	1.20	13.2	0.17	0.07	0.33	0.23	76	
81 A	10.84	10.83	33.428	25.584	241.3	0.265	4.43	193.3	70.7	12.9	1.27	14.5	0.10	0.05	0.23	0.19	82	13
94 A	10.71	10.69	33.508	25.670	233.4	0.296	4.08	178.2	65.0	15.3	1.41	16.5	0.09	0.04	0.21	0.16	95	12
100 ISL	10.39 D	10.38	33.573 D	25.776	223.4	0.279	3.76	D163.7 D	59.5	17.1	1.50	18.0	0.07	0.04	0.15	0.14	101	
106	10.23	10.22	33.618	25.838	217.6	0.323	3.60	157.1	56.8	19.0	1.59	19.5	0.05	0.03	0.09	0.11	107	11
119	9.89	9.88	33.745	25.996	202.9	0.350	3.07	133.9	48.0	23.4	1.80	22.6	0.07	0.04	0.11	0.10	120	10
125 ISL	9.82 D	9.80	33.757 D	26.017	200.9	0.332	3.05	D132.5 D	47.6	24.2	1.83	23.1	0.06	0.04	0.09	0.11	126	
141	9.53	9.52	33.846	26.134	190.2	0.394	2.81	122.5	43.6	26.4	1.92	24.6	0.04	0.03	0.06	0.12	142	09
150 ISL	9.48 D	9.46	33.872 D	26.164	187.5	0.381	2.72	D118.4 D	42.2	27.5	1.97	25.1	0.04	0.04	0.05	0.11	151	
171	9.31	9.29	33.941	26.246	180.2	0.449	2.43	105.8	37.5	30.2	2.08	26.4	0.04	0.05	0.04	0.09	172	08
200	9.08	9.05	34.026	26.351	170.8	0.500	2.16	94.1	33.2	33.4	2.20	27.8	0.03	0.06	0.03	0.12	202	07
229	8.88	8.86	34.108	26.446	162.3	0.549	1.76	76.9	27.0	37.4	2.34	29.4	0.02	0.07			231	06
250 ISL	8.71 D	8.68	34.146 D	26.504	157.2	0.553	1.56	D 67.9 D	23.9	40.4	2.44	30.5	0.02	0.04			252	
273	8.48	8.45	34.190	26.575	150.8	0.617	1.24	54.2	18.9	43.7	2.55	31.6	0.01	0.01			275	05
300 ISL	8.19 D	8.16	34.221 D	26.643	144.8	0.629	1.04	D 45.4 D	15.8	47.1	2.65	32.6	0.01	0.04			302	
321	8.08	8.04	34.237	26.673	142.2	0.688	0.87	37.8	13.1	49.8	2.73	33.4	0.01	0.06			324	04
382	7.57	7.53	34.267	26.773	133.5	0.772	0.60	26.2	8.9	57.2	2.90	35.4	0.02	0.11			385	03
400 ISL	7.43 D	7.39	34.270 D	26.795	131.7	0.768	0.57	D 25.0 D	8.5	58.5	2.92	35.7	0.02	0.10			403	
440	7.26	7.22	34.275	26.824	129.5	0.848	0.50	21.9	7.4	61.5	2.98	36.4	0.01	0.09			444	02
500 ISL	6.78 D	6.73	34.292 D	26.904	122.4	0.897	0.38	D 16.5 D	5.5	68.4	3.08	37.8	0.01	0.03			504	
515	6.71	6.66	34.296	26.917	121.4	0.942	0.34	15.0	5.0	70.1	3.10	38.1	0.01	0.02			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 19.3 N	119 39.9 W	13/07/2014	2159 UTC	78 m	310 12 kn	280 06 04	1	1011.4 mb	19.1 C	18.2 C	11 m	4/8	SC	038

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.40	18.40	33.612	24.113	379.2	0.000	5.80	253.1	108.0	1.1	0.31	0.0	0.01	0.04	1.15	0.19	0	
3	18.40	18.39	33.612	24.114	379.3	0.011	5.80	253.1	108.0	1.1	0.31	0.0	0.01	0.04	1.15	0.19	3	10
5	18.30	18.30	33.613	24.138	377.1	0.019	5.76	251.6	107.2	1.0	0.31	0.0	0.01	0.06	1.17	0.19	5	09
10	18.27	18.27	33.610	24.143	376.8	0.038	5.79	252.5	107.5	1.1	0.31	0.0	0.03	0.09	1.25	0.19	10	07
10	18.27	18.27	33.610	24.143	376.8	0.038											10	08
20	16.87	16.87	33.586	24.462	346.8	0.074	5.74	250.6	103.8	1.9	0.41	0.9	0.06	0.12	1.76	0.30	20	06
30	11.85	11.85	33.511	25.462	251.6	0.104	5.27	229.8	85.9	5.9	0.76	5.7	0.19	0.32	1.21	0.34	30	05
40	11.27	11.27	33.455	25.526	245.8	0.129	4.59	200.5	74.0	11.0	1.14	11.9	0.21	0.22	0.61	0.34	40	04
50	10.73	10.73	33.584	25.723	227.3	0.153	3.84	167.4	61.1	17.2	1.48	17.4	0.14	0.20	0.35	0.26	50	03
60	10.65	10.64	33.602	25.753	224.7	0.175	3.72	162.2	59.1	18.0	1.54	18.2	0.13	0.31	0.33	0.24	60	02
70	10.33	10.32	33.650	25.845	216.1	0.197	3.45	150.7	54.6	20.3	1.66	20.1	0.13	0.20	0.18	0.20	71	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 9.2 N	120 0.7 W	14/07/2014	0406 UTC	1203 m	310 14 kn			1010.6 mb	19.0 C	16.4 C				039

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.86	17.86	33.620	24.252	366.1	0.000	5.70	248.8	105.1	1.8	0.32	0.0	0.02	0.09	0.49	0.10	0	
3	17.86	17.86	33.620	24.252	366.2	0.011	5.70	248.8	105.1	1.8	0.32	0.0	0.02	0.09	0.49	0.10	3	21
10	17.86	17.86	33.620	24.252	366.4	0.037	5.69	248.2	104.9	1.8	0.33	0.0	0.02	0.09	0.51	0.10	10	19
10	17.86	17.86	33.621	24.252	366.4	0.036											10	20
20 ISL	17.28 D	17.27	33.618 D	24.390	353.6	0.055	5.68	D247.6 D	103.6	1.5	0.34	0.1	0.03	0.14	0.54	0.14	20	
21	17.11	17.11	33.624	24.434	349.4	0.076	5.69	248.5	103.5	1.5	0.34	0.1	0.03	0.15	0.55	0.14	21	18
30	14.05	14.04	33.572	25.077	288.4	0.105	5.00	218.2	85.5	5.6	0.87	6.0	0.16	1.21	0.69	0.36	30	17
39	12.37	12.36	33.579	25.418	256.1	0.129	4.34	189.5	71.7	11.4	1.18	11.3	0.32	0.92	0.58	0.35	39	16
50	10.93	10.92	33.546	25.659	233.3	0.156	3.82	166.8	61.2	16.2	1.50	17.5	0.24	0.17	0.14	0.13	50	15
60	10.80	10.79	33.605	25.728	227.0	0.179	3.59	156.8	57.3	17.9	1.58	18.6	0.24	0.23	0.14	0.15	60	14
70	9.65	9.65	33.593	25.914	209.5	0.201	3.50	152.6	54.4	20.8	1.73	21.9	0.04	0.09	0.04	0.08	71	13
75 ISL	9.63 D	9.63	33.595 D	25.919	209.1	0.195	3.51	D152.8 D	54.6	21.5	1.77	22.5	0.04	0.12	0.04	0.07	76	
85	9.43	9.42	33.652	25.997	201.9	0.232	3.33	145.2	51.5	23.1	1.85	23.6	0.02	0.17	0.03	0.07	86	12
100	9.17	9.16	33.761	26.124	190.1	0.262	3.07	133.8	47.2	26.1	1.91	24.9	0.03	0.07	0.03	0.08	101	11
120	8.97	8.96	33.850	26.227	180.7	0.299	2.96	129.1	45.4	28.0	1.94	25.6	0.02	0.07	0.03	0.06	121	10
125 ISL	8.93 D	8.92	33.892 D	26.267	177.1	0.291	2.87	D124.8 D	44.0	28.9	1.97	25.9	0.02	0.07	0.02	0.06	126	
140	8.84	8.82	33.937	26.316	172.6	0.334	2.65	115.8	40.6	31.4	2.05	26.8	0.02	0.07	0.01	0.05	141	09
150 ISL	8.94 D	8.92	33.989 D	26.342	170.4	0.335	2.33	D101.5 D	35.8	32.7	2.12	27.4	0.02	0.07	0.01	0.05	151	
170	8.85	8.83	34.062	26.414	164.1	0.384	2.01	87.5	30.7	35.3	2.26	28.7	0.02	0.08	0.01	0.05	171	08
200	8.49	8.46	34.121	26.517	154.7	0.432	1.69	73.6	25.7	39.9	2.41	30.4	0.03	0.05	0.01	0.04	202	07
230	8.24	8.22	34.179	26.600	147.4	0.477	1.27	55.5	19.2	45.0	2.58	31.9	0.03	0.13			232	06
250 ISL	8.01 D	7.98	34.235 D	26.680	140.1	0.491	0.90	D 39.1 D	13.5	48.3	2.68	32.8	0.04	0.08			252	
269	7.91	7.88	34.243	26.701	138.5	0.533	0.84	36.5	12.6	51.5	2.78	33.7	0.04	0.04			271	05
300 ISL	7.81 D	7.78	34.253 D	26.725	136.7	0.561	0.77	D 33.5 D	11.5	53.2	2.82	34.1	0.04	0.06			302	
320	7.70	7.67	34.270	26.754	134.3	0.602	0.70	30.5	10.5	54.3	2.85	34.3	0.04	0.08			323	04
379	7.43	7.39	34.272	26.797	131.1	0.681	0.57	24.9	8.5	58.3	2.91	35.3	0.03	0.05			382	03
400 ISL	7.30 D	7.27	34.276 D	26.817	129.4	0.695	0.54	D 23.4 D	8.0	58.8	2.93	35.5	0.02	0.09			403	
438	7.07	7.03	34.274	26.849	126.9	0.757	0.53	23.1	7.8	59.6	2.97	35.8	0.01	0.15			442	02
500 ISL	6.52 D	6.47	34.293 D	26.939	118.8	0.820	0.36	D 15.5 D	5.2	70.3	3.11	37.9	0.01	0.14			504	
516	6.45	6.40	34.296	26.951	117.8	0.852	0.33	14.5	4.8	73.0	3.15	38.5	0.01	0.14			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 59.5 N	120 21.5 W	14/07/2014	0843	UTC	718 m	300 06 kn			1011.9 mb	17.3 C	16.1 C				040

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.66	17.66	33.614	24.294	362.0	0.000	5.64	246.2	103.6	1.0	0.30	0.1	0.02	0.10	0.48	0.11	0	
2	17.66	17.66	33.614	24.294	362.1	0.007	5.64	246.2	103.6	1.0	0.30	0.1	0.02	0.10	0.48	0.11	2	22
9	17.66	17.66	33.613	24.295	362.3	0.033	5.68	247.7	104.3	1.0	0.31	0.1	0.01	0.13	0.48	0.13	9	20
9	17.66	17.66	33.613	24.295	362.3	0.034											9	21
10 ISL	17.66 D	17.66	33.611 D	24.293	362.5	0.035	5.61	D244.4	D103.0	1.0	0.31	0.1	0.01	0.13	0.48	0.13	10	
20	17.59	17.59	33.621	24.317	360.5	0.072	5.66	246.9	103.8	1.0	0.29	0.1	0.02	0.13	0.47	0.14	20	18
30	13.33	13.33	33.576	25.225	274.2	0.104	4.69	204.6	79.0	8.7	1.01	8.5	0.27	1.16	0.82	0.32	30	17
40	11.74	11.73	33.580	25.538	244.7	0.130	4.05	176.5	65.9	14.0	1.32	13.6	0.36	1.02	0.38	0.23	40	16
50	10.43	10.42	33.676	25.848	215.4	0.153	3.28	143.0	51.9	20.4	1.68	20.1	0.27	0.12	0.15	0.16	50	15
61	10.07	10.06	33.735	25.956	205.4	0.176	2.97	129.6	46.7	23.3	1.82	22.6	0.12	0.07	0.09	0.11	61	14
70	9.66	9.65	33.793	26.069	194.7	0.194	2.85	124.2	44.4	25.6	1.89	24.1	0.09	0.06	0.06	0.11	71	13
75 ISL	9.61 D	9.60	33.799 D	26.082	193.6	0.185	2.82	D122.6	D 43.8	26.5	1.92	24.6	0.09	0.05	0.05	0.11	76	
85	9.25	9.24	33.843	26.176	184.8	0.223	2.79	121.8	43.1	28.1	1.97	25.6	0.09	0.03	0.04	0.11	86	12
100	9.08	9.07	33.873	26.227	180.3	0.250	2.70	117.9	41.6	29.5	2.02	26.1	0.08	0.08	0.04	0.12	101	11
121	8.85	8.83	33.932	26.310	172.8	0.287	2.52	110.2	38.7	31.8	2.07	27.3	0.05	0.04	0.03	0.10	122	10
125 ISL	8.83 D	8.82	33.956 D	26.332	170.8	0.276	2.41	D104.8	D 36.9	32.7	2.11	27.6	0.05	0.05	0.03	0.10	126	
141	8.72	8.71	34.031	26.408	164.0	0.321	2.02	88.2	30.9	36.2	2.27	29.0	0.03	0.10	0.02	0.10	142	09
150 ISL	8.66 D	8.64	34.060 D	26.441	161.0	0.317	1.86	D 80.9	D 28.4	37.3	2.31	29.5	0.03	0.09	0.02	0.10	151	
170	8.49	8.47	34.097	26.496	156.1	0.367	1.69	73.6	25.7	40.0	2.40	30.5	0.04	0.08	0.02	0.10	171	08
200 ISL	7.95 D	7.93	34.096 D	26.577	148.8	0.395	1.71	D 74.4	D 25.7	44.0	2.43	31.6	0.03	0.09	0.01	0.07	202	
201	7.94	7.92	34.100	26.583	148.3	0.415	1.74	75.8	26.1	44.2	2.43	31.6	0.03	0.09	0.01	0.07	203	07
230	7.87	7.85	34.156	26.638	143.6	0.457	1.33	57.9	19.9	47.7	2.59	32.9	0.02	0.03			232	06
250 ISL	7.90 D	7.87	34.192 D	26.662	141.7	0.469	1.12	D 48.5	D 16.7	49.6	2.66	33.4	0.01	0.06			252	
270	7.81	7.78	34.217	26.695	138.9	0.513	0.88	38.3	13.2	51.5	2.73	33.9	0.01	0.09			272	05
300 ISL	7.57 D	7.54	34.231 D	26.742	134.9	0.538	0.76	D 32.9	D 11.3	54.6	2.80	34.7	0.02	0.07			302	
319	7.47	7.44	34.239	26.763	133.2	0.580	0.67	29.2	9.9	56.6	2.85	35.2	0.03	0.06			322	04
380	7.19	7.15	34.261	26.821	128.7	0.660	0.54	23.4	7.9	61.3	2.93	36.1	0.02	0.01			383	03
400 ISL	7.06 D	7.02	34.268 D	26.844	126.6	0.670	0.51	D 22.2	D 7.5	63.4	2.96	36.6	0.02	0.04			403	
439	6.74	6.70	34.283	26.900	121.7	0.734	0.40	17.6	5.9	67.7	3.02	37.6	0.02	0.10			443	02
500 ISL	6.41 D	6.36	34.305 D	26.963	116.3	0.792	0.32	D 14.1	D 4.7	73.8	3.11	38.7	0.01	0.08			504	
514	6.30	6.25	34.310	26.981	114.8	0.823	0.29	12.7	4.2	75.2	3.13	38.9	0.01	0.07			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 39.4 N	121 1.8 W	14/07/2014	1631	UTC	3790 m	350 04 kn	320 06 06	2	1013.4 mb	17.1 C	15.8 C	21 m	8/8	ST	041

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.00	17.00	33.298	24.209	370.1	0.000	5.69	248.3	102.9	1.7	0.34	0.0	0.01	0.01	0.19	0.04	0	
3 A	17.00	17.00	33.298	24.209	370.2	0.011	5.69	248.3	102.9	1.7	0.34	0.0	0.01	0.01	0.19	0.04	3	24
10 ISL	16.99 D	16.98	33.292 D	24.209	370.5	0.037	5.67	D247.3	D102.6	1.7	0.35	0.0	0.01	0.03	0.19	0.04	10	
12 A	16.93	16.93	33.293	24.223	369.2	0.044	5.67	247.6	102.5	1.7	0.35	0.0	0.01	0.03	0.19	0.04	12	21
12	16.93	16.93	33.293	24.223	369.3	0.043											12	23
12	16.93	16.93	33.293	24.223	369.3	0.043											12	22
16 A	16.95	16.95	33.289	24.215	370.1	0.059	5.69	248.6	102.9	1.7	0.35	0.0	0.02	0.04	0.19	0.05	16	20
20 ISL	16.82 D	16.82	33.268 D	24.229	369.0	0.067	5.70	D248.3	D102.7	1.8	0.34	0.0	0.01	0.02	0.19	0.05	20	
22	16.81	16.81	33.269	24.233	368.7	0.081	5.70	249.1	102.8	1.8	0.34	0.0	0.01	0.01	0.19	0.05	22	19
29 A	15.75	15.74	33.247	24.459	347.3	0.107	5.92	258.5	104.5	2.1	0.35	0.0	0.01	0.02	0.33	0.12	29	18
30 ISL	15.73 D	15.72	33.240 D	24.458	347.5	0.103	5.89	D256.6	D103.9	2.1	0.36	0.0	0.01	0.05	0.34	0.13	30	
40	15.84	15.83	33.392	24.552	338.9	0.144	5.80	253.5	102.7	1.4	0.41	0.4	0.03	0.33	0.53	0.21	40	16
40	15.84	15.83	33.394	24.553	338.7	0.144											40	17
50 ISL	14.44 D	14.43	33.197 D	24.706	324.4	0.154	5.96	D259.5	D102.4	2.5	0.43	0.3	0.03	0.22	0.47	0.24	50	
52	14.21	14.20	33.185	24.746	320.6	0.184	5.91	258.3	101.1	2.8	0.43	0.3	0.03	0.20	0.45	0.25	52	15
62 A	13.74	13.73	33.357	24.976	299.0	0.215	5.68	248.0	96.3	2.8	0.71	4.1	0.32	1.04	0.28	0.16	62	14
71 A	12.40	12.39	33.261	25.168	280.8	0.241	5.40	235.8	89.0	5.3	0.86	7.5	0.39	0.04	0.19	0.14	72	13
75 ISL	11.79 D	11.78	33.196 D	25.232	274.7	0.229	5.43	D236.5	D 88.3	6.1	0.89	8.2	0.30	0.04	0.17	0.14	76	
86	10.70	10.69	33.122	25.371	261.6	0.281	5.25	229.2	83.3	8.2	0.98	10.0	0.05	0.04	0.12	0.13	87	12
99	10.19	10.18	33.216	25.531	246.6	0.314	4.95	216.4	77.8	10.9	1.17	13.1	0.03	0.03	0.09	0.09	100	11
100 ISL	10.31 D	10.30	33.224 D	25.517	248.0	0.295	4.86	D211.6	D 76.5	11.2	1.18	13.3	0.03	0.03	0.09	0.08	101	
120	9.60	9.59	33.399	25.773	224.0	0.364	4.37	190.8	67.8	16.4	1.46	18.1	0.02	0.03	0.03	0.04	121	10
125 ISL	9.40 D	9.38	33.439 D	25.838	217.9	0.353	4.37	D190.3	D 67.6	17.8	1.50	19.0	0.02	0.03	0.03	0.04	126	
139	9.19	9.18	33.645	26.031	199.7	0.404	3.85	168.3	59.4	21.6	1.63	21.4	0.02	0.02	0.01	0.03	140	09
150 ISL	9.13 D	9.11	33.730 D	26.109	192.6	0.404	3.67	D159.9	D 56.5	23.7	1.70	22.6	0.02	0.03	0.01	0.02	151	
170	8.76	8.74	33.863	26.272	177.4	0.463	3.31	144.5	50.6	27.5	1.82	24.7	0.02	0.05	0.00	0.02	171	08
200	8.26	8.24	33.950	26.417	164.1	0.514	2.88	125.9	43.6	33.2	2.00	27.5	0.02	0.03	0.00	0.02	202	07
230	7.82	7.80	33.992	26.515	155.2	0.562	2.50	109.1	37.4	39.0	2.16	29.6	0.01	0.02			232	06
250 ISL	7.51 D	7.49	34.013 D	26.577	149.5	0.572	2.23	D 97.2	D 33.2	42.7	2.28	31.0	0.01	0.02			252	
270	7.40	7.37	34.033	26.610	146.7	0.622	1.99	86.7	29.5	46.3	2.39	32.4	0.01	0.01			272	05
300 ISL	7.15 D	7.12	34.082 D	26.683	140.2	0.645	1.46	D 63.5	D 21.5	52.0	2.59	34.4	0.01	0.01			302	
320	7.01	6.98	34.113	26.727	136.2	0.693	1.06	46.2	15.6	55.8	2.73	35.8	0.01	0.01			323	04
380	6.60	6.56	34.181	26.837	126.5	0.771	0.63	27.5	9.2	64.8	2.92	37.8	0.00	0.02			383	03
400 ISL	6.49 D	6.45	34.208 D	26.874	123.3	0.777	0.53	D 23.2	D 7.7	67.3	2.97	38.2	0.00	0.02			403	
440	6.23	6.19	34.232	26.926	118.7	0.845	0.42	18.2	6.0	72.3	3.06	39.1	0.01	0.01			444	02
500 ISL	5.99 D	5.95	34.277 D	26.994	113.0	0.896	0.32	D 13.8	D 4.6	77.9	3.14	40.1	0.01	0.02			504	
514	5.91	5.87	34.286	27.011	111.5	0.930	0.28	12.3	4.0	79.2	3.16	40.3	0.01	0.02			518	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 19.4 N	121 42.9 W	14/07/2014	2148 UTC	4059 m	270 02 kn	330 02 04	1	1013.7 mb	19.3 C	17.5 C	34 m	6/8	SC	042

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.02	18.02	33.286	23.957	394.2	0.000	5.53	241.4	102.0	2.8	0.35	0.0	0.03	0.16	0.07	0.01	0	
2	18.02	18.01	33.286	23.957	394.2	0.008	5.53	241.4	102.0	2.8	0.35	0.0	0.03	0.16	0.07	0.01	2	21
10	17.85	17.85	33.292	24.002	390.3	0.039	5.53	241.4	101.7	2.8	0.34	0.0	0.01	0.12	0.08	0.02	10	19
10	17.85	17.85	33.291	24.001	390.3	0.040											10	20
20 ISL	17.85 D	17.84	33.294 D	24.006	390.2	0.059	5.52	D240.6	D101.5	2.7	0.34	0.0	0.01	0.07	0.08	0.03	20	
25	17.84	17.84	33.297	24.009	390.1	0.098	5.53	241.4	101.7	2.7	0.34	0.0	0.01	0.05	0.08	0.03	25	18
30 ISL	17.84 D	17.83	33.296 D	24.010	390.2	0.099	5.51	D240.5	D101.4	2.7	0.34	0.0	0.01	0.06	0.10	0.03	30	
40	17.61	17.61	33.250	24.030	388.7	0.156	5.59	244.1	102.3	2.7	0.33	0.0	0.00	0.07	0.12	0.03	40	17
50	16.90	16.89	33.190	24.154	377.2	0.195	5.71	249.3	103.0	2.7	0.34	0.0	0.01	0.08	0.18	0.05	50	16
61	16.10	16.09	33.222	24.364	357.5	0.235	5.85	255.5	103.9	2.2	0.36	0.0	0.01	0.03	0.29	0.11	61	15
74	15.56	15.55	33.311	24.553	339.9	0.280	5.85	255.8	103.0	2.5	0.35	0.0	0.02	0.10	0.32	0.17	75	14
75 ISL	15.56 D	15.55	33.329 D	24.566	338.6	0.266	5.82	D253.8	D102.4	2.5	0.36	0.0	0.02	0.13	0.31	0.17	76	
86	14.63	14.61	33.260	24.718	324.5	0.320	5.82	254.2	100.4	2.6	0.46	0.5	0.05	0.50	0.23	0.15	87	13
99	13.53	13.52	33.273	24.955	302.1	0.361	5.73	250.4	96.7	3.6	0.49	1.1	0.12	0.20	0.23	0.09	100	12
100 ISL	13.45 D	13.43	33.277 D	24.976	300.1	0.347	5.65	D246.0	D 95.1	3.7	0.51	1.5	0.12	0.19	0.23	0.09	101	
112	11.25	11.24	33.091	25.249	273.9	0.398	5.50	240.3	88.4	5.7	0.78	6.1	0.16	0.05	0.20	0.17	113	11
125	10.46	10.45	33.166	25.447	255.2	0.433	5.21	227.5	82.3	8.9	1.02	10.4	0.04	0.01	0.09	0.10	126	10
140	9.70	9.68	33.346	25.716	229.8	0.469	4.51	197.0	70.1	14.7	1.39	16.4	0.02	0.05	0.03	0.04	141	09
150 ISL	9.56 D	9.54	33.521 D	25.876	214.9	0.474	4.25	D185.1	D 66.0	17.3	1.48	18.1	0.02	0.04	0.03	0.03	151	
170	9.19	9.17	33.716	26.089	194.9	0.532	3.75	163.9	57.9	22.5	1.67	21.5	0.02	0.03	0.01	0.02	171	08
200	8.58	8.56	33.895	26.325	173.0	0.587	3.16	138.1	48.1	29.8	1.92	25.6	0.01	0.05	0.00	0.02	202	07
229	8.15	8.12	33.984	26.461	160.4	0.636	2.62	114.4	39.5	36.3	2.10	28.3	0.01	0.06			231	06
250 ISL	8.08 D	8.05	34.021 D	26.501	157.0	0.653	2.31	D100.5	D 34.8	39.1	2.20	29.4	0.01	0.05			252	
270	7.70	7.67	34.016	26.553	152.3	0.700	2.26	98.7	33.8	41.7	2.29	30.5	0.01	0.04			272	05
300 ISL	7.57 D	7.54	34.069 D	26.615	146.9	0.729	1.76	D 76.5	D 26.2	47.5	2.47	32.5	0.00	0.05			302	
320	7.23	7.20	34.074	26.666	142.2	0.774	1.56	68.0	23.0	51.3	2.59	33.8	0.00	0.06			323	04
381	6.90	6.86	34.160	26.781	132.1	0.857	0.88	38.3	12.9	59.5	2.85	36.2	0.00	0.06			384	03
400 ISL	6.79 D	6.76	34.178 D	26.809	129.6	0.868	0.80	D 34.7	D 11.7	62.5	2.90	37.0	0.00	0.06			403	
440	6.30	6.26	34.167	26.866	124.4	0.933	0.64	28.0	9.3	68.9	3.00	38.6	0.01	0.05			444	02
500 ISL	6.09 D	6.04	34.225 D	26.941	118.1	0.992	0.44	D 19.3	D 6.4	75.2	3.14	39.5	0.01	0.07			504	
516	6.01	5.97	34.240	26.962	116.2	1.025	0.37	16.2	5.3	76.9	3.18	39.8	0.01	0.08			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 59.4 N	122 23.8 W	15/07/2014	0326 UTC	4111 m	340 06 kn			1013.1 mb	18.8 C	16.7 C				043

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.55	17.55	33.174	23.984	391.6	0.000	5.59	244.1	102.2	2.7	0.34	0.0	0.00	0.14	0.10	0.02	0	
2	17.55	17.55	33.174	23.984	391.6	0.008	5.59	244.1	102.2	2.7	0.34	0.0	0.00	0.14	0.10	0.02	2	21
10 ISL	17.37 D	17.37	33.174 D	24.027	387.9	0.039	5.62	D244.9	D102.3	2.6	0.34	0.0	0.01	0.10	0.11	0.02	10	
10	17.37	17.37	33.179	24.031	387.5	0.040											10	20
11	17.34	17.34	33.174	24.034	387.2	0.043	5.61	245.1	102.2	2.6	0.34	0.0	0.01	0.09	0.11	0.02	11	19
20 ISL	17.26 D	17.25	33.181 D	24.061	385.0	0.076	5.61	D244.8	D102.0	2.5	0.35	0.0	0.01	0.09	0.13	0.03	20	
24	17.19	17.19	33.196	24.088	382.6	0.093	5.65	246.6	102.5	2.5	0.35	0.0	0.00	0.09	0.14	0.03	24	18
30 ISL	17.13 D	17.13	33.185 D	24.094	382.2	0.115	5.65	D246.5	D102.5	2.4	0.35	0.0	0.00	0.09	0.18	0.04	30	
40	16.72	16.72	33.211	24.210	371.5	0.154	5.73	250.3	103.1	2.2	0.35	0.0	0.01	0.10	0.25	0.07	40	17
50	16.03	16.02	33.201	24.362	357.3	0.190	5.81	253.7	103.1	2.0	0.36	0.0	0.01	0.16	0.31	0.15	50	16
62	15.88	15.87	33.290	24.464	348.0	0.232	5.92	258.4	104.8	1.7	0.36	0.0	0.02	0.17	0.46	0.20	62	15
75	15.44	15.42	33.322	24.589	336.5	0.277	5.78	252.6	101.5	1.8	0.43	0.4	0.03	0.56	0.47	0.21	76	14
88	13.80	13.79	33.243	24.876	309.3	0.319	5.79	253.0	98.3	3.0	0.59	2.3	0.16	0.86	0.25	0.16	89	13
100	11.96	11.95	33.094	25.122	285.9	0.355	5.52	241.2	90.1	5.7	0.76	5.5	0.26	0.16	0.15	0.13	101	12
112	11.06	11.05	33.057	25.257	273.1	0.388	5.39	235.3	86.2	7.6	0.94	8.9	0.11	0.05	0.11	0.11	113	11
125	10.37	10.36	33.243	25.523	248.0	0.422	5.06	221.1	79.9	9.5	1.03	10.9	0.07	0.05	0.07	0.07	126	10
140	10.11	10.09	33.392	25.684	233.0	0.458	4.45	194.5	69.9	14.2	1.34	16.0	0.02	0.03	0.04	0.05	141	09
150 ISL	9.85 D	9.83	33.455 D	25.776	224.4	0.481	4.13	D179.6	D 64.4	17.3	1.49	18.3	0.02	0.05	0.03	0.04	151	
170	9.19	9.17	33.704	26.080	195.8	0.523	3.45	150.7	53.2	23.5	1.78	22.9	0.01	0.08	0.01	0.03	171	08
200	8.71	8.69	33.865	26.282	177.1	0.579	2.95	128.7	45.0						0.00	0.03	202	07
230	8.38	8.36	33.966	26.412	165.2	0.630	2.49	108.5	37.7	34.4	2.14	28.6	0.02	0.03			232	06
250 ISL	8.08 D	8.05	34.006 D	26.490	158.1	0.663	2.34	D101.6	D 35.2	38.0	2.23	29.8	0.02	0.04			252	
270	7.82	7.80	34.018	26.537	153.9	0.694	2.14	93.4	32.0	41.5	2.32	31.0	0.02	0.04			272	05
300 ISL	7.47 D	7.44	34.048 D	26.611	147.2	0.740	1.80	D 78.4	D 26.8	46.2	2.45	32.6	0.02	0.03			302	
320	7.33	7.30	34.056	26.639	144.8	0.768	1.64	71.4	24.2	49.3	2.53	33.6	0.02	0.03			323	04
380	7.07	7.03	34.164	26.761	134.1	0.852	0.84	36.6	12.4	58.1	2.83	36.4	0.02	0.02			383	03
400 ISL	7.00 D	6.97	34.203 D	26.801	130.6	0.881	0.67	D 29.0	D 9.8	60.9	2.89	36.9	0.02	0.03			403	
440	6.63	6.59	34.217	26.863	125.0	0.930	0.51	22.5	7.5	66.4	3.02	38.0	0.03	0.04			444	02
500 ISL	6.30 D	6.25	34.278 D	26.956	116.9	1.005	0.38	D 16.3	D 5.4	73.6	3.15	39.1	0.02	0.08			504	
517	6.22	6.18	34.286	26.972	115.5	1.022	0.33	14.4	4.8	75.6	3.19	39.4	0.02	0.09			521	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 39.4 N	123 4.3 W	15/07/2014	0917 UTC	4141 m	040 02 kn			1013.5 mb	17.8 C	16.2 C				044

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.57	18.57	33.361	23.877	401.8	0.000	5.46	238.2	101.8	2.7	0.31	0.2	0.01	0.03	0.08	0.02	0	
2	18.57	18.57	33.361	23.877	401.8	0.008	5.46	238.2	101.8	2.7	0.31	0.2	0.01	0.03	0.08	0.02	2	21
10	18.57	18.57	33.356	23.874	402.5	0.040	5.46	238.2	101.8	2.7	0.32	0.0	0.00	0.02	0.09	0.02	10	19
10	18.57	18.57	33.356	23.874	402.5	0.038											10	20
20 ISL	18.57 D	18.57	33.355 D	23.874	402.9	0.061	5.44	D237.2	D101.5	2.7	0.31	0.0	0.01	0.01	0.09	0.02	20	
24	18.57	18.57	33.356	23.875	402.9	0.097	5.46	238.5	101.9	2.7	0.31	0.0	0.01	0.01	0.09	0.02	24	18
30 ISL	18.55 D	18.54	33.362 D	23.887	402.0	0.102	5.43	D237.0	D101.4	2.6	0.31	0.0	0.02	0.01	0.10	0.02	30	
40	17.63	17.62	33.376	24.123	379.9	0.160	5.62	245.5	103.0	2.6	0.30	0.0	0.02	0.02	0.12	0.03	40	17
50 ISL	16.13 D	16.12	33.184 D	24.326	360.7	0.179	5.90	D257.0	D104.8	2.7	0.34	0.0	0.01	0.02	0.14	0.05	50	
51	16.17	16.17	33.215	24.340	359.4	0.200	5.87	256.4	104.5	2.7	0.34	0.0	0.01	0.02	0.15	0.05	51	16
62	14.72	14.71	33.157	24.615	333.4	0.239	6.17	269.7	106.7	3.0	0.37	0.0	0.02	0.03	0.17	0.07	62	15
74	13.89	13.88	33.241	24.856	310.8	0.277	6.01	262.4	102.1	3.4	0.44	0.2	0.05	0.09	0.23	0.08	75	14
75 ISL	13.47 D	13.46	33.201 D	24.911	305.5	0.262	5.90	D257.0	D 99.4	3.5	0.46	0.5	0.06	0.08	0.24	0.08	76	
88	11.82	11.81	33.095	25.148	283.1	0.319	5.60	244.7	91.1	5.1	0.70	4.8	0.16	0.01	0.28	0.09	89	13
100	10.73	10.72	33.083	25.336	265.3	0.352	5.42	236.8	86.1	7.3	0.91	8.5	0.06	0.02	0.18	0.08	101	12
113	10.11	10.09	33.137	25.484	251.3	0.385	5.17	225.8	81.0	10.2	1.10	12.0	0.04	0.02	0.10	0.06	114	11
125	9.63	9.62	33.235	25.639	236.8	0.414	4.94	215.9	76.7	12.9	1.25	14.4	0.04	0.01	0.07	0.06	126	10
140	9.72	9.71	33.500	25.833	218.7	0.449	3.90	170.5	60.8	18.8	1.60	19.7	0.02	0.01	0.03	0.03	141	09
150 ISL	9.65 D	9.63	33.581 D	25.909	211.7	0.453	3.70	D161.0	D 57.5	20.6	1.68	21.0	0.02	0.01	0.02	0.03	151	
169	9.28	9.26	33.679	26.045	199.2	0.509	3.36	146.7	51.9	23.9	1.82	23.5	0.02	0.01	0.01	0.03	170	08
200	8.81	8.79	33.848	26.253	179.9	0.568	3.08	134.7	47.2	28.8	1.92	25.5	0.02	0.02	0.00	0.03	202	07
229	8.41	8.38	33.926	26.377	168.6	0.618	2.97	129.9	45.1	32.0	1.95	26.3	0.01	0.02			231	06
250 ISL	8.07 D	8.05	33.990 D	26.477	159.3	0.637	2.81	D122.3	D 42.3	36.1	2.04	27.6	0.02	0.01			252	
270	7.69	7.66	33.994	26.538	153.7	0.684	2.71	118.1	40.4	40.1	2.13	28.9	0.02	0.01			272	05
300 ISL	7.15 D	7.12	34.016 D	26.631	145.0	0.713	2.19	D 95.3	D 32.3	47.5	2.41	32.1	0.02	0.01			302	
320	7.13	7.10	34.068	26.675	141.2	0.758	1.52	66.3	22.4	52.4	2.59	34.2	0.02	0.01			323	04
379	6.37	6.33	34.102	26.805	129.3	0.837	1.03	44.9	14.9	64.1	2.83	37.4	0.02	0.01			382	03
400 ISL	6.21 D	6.18	34.121 D	26.841	126.1	0.849	0.89	D 38.8	D 12.9	67.3	2.89	38.1	0.02	0.01			403	
440	5.91	5.87	34.136	26.891	121.6	0.914	0.73	31.9	10.5	73.4	3.00	39.4	0.01	0.01			444	02
500 ISL	5.92 D	5.88	34.251 D	26.981	114.0	0.971	0.37	D 16.1	D 5.3	78.8	3.14	40.0	0.02	0.01			504	
515	5.85	5.81	34.258	26.997	112.7	1.001	0.32	14.0	4.6	80.1	3.18	40.2	0.02	0.01			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 19.5 N	123 44.4 W	15/07/2014	1626 UTC	4032 m	010 03 kn	330 06 07	5	1014.6 mb	17.5 C	16.8 C	35 m	8/8	SC	045

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.51	18.51	33.350	23.883	401.2	0.000	5.45	237.9	101.5	2.8	0.32	0.1	0.02	0.07	0.10	0.02	0	
2 A	18.51	18.51	33.350	23.884	401.2	0.008	5.45	237.9	101.5	2.8	0.32	0.1	0.02	0.07	0.10	0.02	2	24
10	18.50	18.50	33.352	23.888	401.1	0.040	5.46	238.7	101.8	2.8	0.33	0.0	0.02	0.02	0.08	0.01	10	21
10	18.50	18.50	33.350	23.887	401.2	0.039											10	23
10	18.50	18.50	33.350	23.887	401.2	0.040											10	22
20 A	18.50	18.49	33.352	23.891	401.2	0.080	5.47	238.9	101.9	2.7	0.33	0.0	0.01	0.02	0.08	0.01	20	20
27 A	18.49	18.49	33.351	23.891	401.5	0.108	5.45	238.1	101.6	2.7	0.33	0.0	0.01	0.03	0.08	0.02	27	19
30 ISL	18.50 D	18.49	33.350 D	23.890	401.7	0.101	5.44	D237.1	D101.3	2.7	0.33	0.0	0.01	0.03	0.08	0.02	30	
37	18.14	18.13	33.342	23.973	394.0	0.148	5.51	240.5	101.9	2.7	0.32	0.0	0.01	0.02	0.09	0.03	37	18
49 A	17.96	17.95	33.344	24.019	390.1	0.195	5.55	242.2	102.3	2.6	0.31	0.0	0.01	0.02	0.12	0.01	49	17
50 ISL	17.95 D	17.95	33.347 D	24.023	389.8	0.181	5.54	D241.7	D102.2	2.7	0.31	0.0	0.01	0.02	0.13	0.02	50	
67	15.57	15.56	33.160	24.435	350.9	0.262	5.94	259.6	104.5	2.7	0.34	0.0	0.01	0.04	0.17	0.07	68	16
75 ISL	14.64 D	14.63	33.238 D	24.697	326.1	0.271	5.92	D258.1	D102.2	3.3	0.44	1.0	0.07	0.09	0.22	0.10	76	
85	12.95	12.94	33.161	24.983	298.9	0.321	5.86	255.8	97.6	4.0	0.56	2.2	0.15	0.16	0.27	0.13	86	14
86	13.03	13.01	33.158	24.967	300.5	0.323											87	15
100 ISL	11.23 D	11.22	33.085 D	25.248	273.7	0.324	5.45	D237.4	D 87.5	6.3	0.82	6.7	0.08	0.06	0.19	0.10	101	
104 A	10.86	10.85	33.070	25.303	268.5	0.375	5.45	237.9	86.7	6.9	0.89	7.9	0.06	0.03	0.17	0.09	105	13
111	10.49	10.48	33.121	25.406	258.8	0.393	5.25	229.3	83.0	8.8	1.02	10.5	0.03	0.02	0.11	0.09	112	12
121 A	10.11	10.09	33.176	25.515	248.6	0.419	5.15	224.9	80.7	10.2	1.09	11.8	0.03	0.01	0.10	0.10	122	11
125 ISL	10.03 D	10.01	33.284 D	25.613	239.3	0.388	5.10	D222.3	D 79.9	11.1	1.14	12.7	0.03	0.01	0.08	0.10	126	
133	9.65	9.64	33.310	25.695	231.6	0.448	4.83	211.1	75.1	13.1	1.24	14.4	0.03	0.02	0.06	0.09	134	10
144	9.71	9.69	33.425	25.776	224.2	0.473	4.58	199.9	71.3	15.7	1.35	16.6	0.02	0.02	0.04	0.05	145	09
150 ISL	9.81 D	9.79	33.525 D	25.839	218.5	0.445	4.40	D191.7	D 68.7	16.9	1.41	17.5	0.02	0.02	0.03	0.04	151	
169	9.28	9.26	33.686	26.051	198.6	0.526	3.94	171.9	60.8	20.7	1.58	20.4	0.01	0.03	0.01	0.03	170	08
200	8.76	8.74	33.861	26.271	178.2	0.585	3.43	149.6	52.4	27.0	1.81	24.1	0.00	0.02	0.00	0.02	202	07
230	8.26	8.24	33.953	26.420	164.5	0.636	3.08	134.6	46.6	32.6	1.96	26.3	0.00	0.03			232	06
250 ISL	7.95 D	7.92	33.982 D	26.490	158.0	0.628	2.78	D120.9	D 41.7	36.3	2.07	27.8	0.00	0.03			252	
270	7.56	7.53	33.993	26.555	152.0	0.699	2.63	114.8	39.1	40.0	2.17	29.3	0.00	0.03			272	05
300 ISL	7.30 D	7.27	34.002 D	26.599	148.2	0.704	2.43	D105.7	D 35.9	45.8	2.33	31.3	0.00	0.02			302	
320	7.01	6.98	34.019	26.653	143.2	0.773	2.05	89.5	30.1	49.7	2.43	32.7	0.00	0.01			323	04
380	6.38	6.35	34.076	26.782	131.5	0.856	1.19	51.9	17.2	62.5	2.79	36.9	0.00	0.02			383	03
400 ISL	6.23 D	6.19	34.098 D	26.820	128.0	0.843	1.07	D 46.4	D 15.4	65.3	2.84	37.4	0.00	0.02			403	
439	6.04	6.00	34.144 D	26.881	122.7	0.892	0.76	D 33.0	D 10.9								443	02
500 ISL	5.70 D	5.65	34.195 D	26.965	115.3	0.965	0.53	D 23.1	D 7.6	79.1	3.09	40.1	0.00	0.01			504	
514	5.62	5.58	34.213	26.989	113.1	1.019	0.45	19.5	6.4	81.0	3.13	40.5	0.01	0.01			518	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 53.2 N	118 26.7 W	13/07/2014	0523 UTC	26 m	260 04 kn			1012.8 mb	20.0 C	18.5 C				033

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.58	19.58	33.523	23.746	414.3	0.000	5.80	253.3	110.5	2.1	0.28	0.0	0.01	0.05	0.50	0.07	0	
2	19.58	19.58	33.523	23.746	414.3	0.008	5.80	253.3	110.5	2.1	0.28	0.0	0.01	0.05	0.50	0.07	2	05
5	19.15	19.15	33.513	23.849	404.7	0.021	6.24	272.4	117.8	2.2	0.32	0.0	0.02	0.07	0.44	0.10	5	04
10	17.65	17.64	33.478	24.195	371.9	0.040	5.99	261.7	110.0	2.6	0.35	0.1	0.02	0.08	0.44	0.10	10	03
15	15.48	15.48	33.412	24.645	329.1	0.058	6.30	D274.8	D110.8	3.2	0.37	0.1	0.02	0.07	0.36	0.10	15	02
20	14.36	14.35	33.397	24.876	307.2	0.073	5.11	223.0	87.7	8.3	0.69	2.5	0.29	1.66	1.54	0.48	20	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 88.5 30.1

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 40.4 N	118 5.6 W	13/07/2014	0139 UTC	20 m	250 13 kn	260 02 05	1	1011.9 mb	21.8 C	19.4 C		3/8	CS	032

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.09	19.09	33.495	23.851	404.3	0.000	5.84	254.9	110.1	2.8	0.43	0.1	0.02	0.06	0.43	0.14	0	
2	19.09	19.08	33.495	23.851	404.3	0.008	5.84	254.9	110.1	2.8	0.43	0.1	0.02	0.06	0.43	0.14	2	04
5	18.92	18.92	33.496	23.893	400.5	0.020	5.90	257.6	110.9	2.8	0.37	0.0	0.03	0.04	0.41	0.14	5	03
10	18.13	18.13	33.486	24.083	382.5	0.040	5.89	257.4	109.2	3.1	0.37	0.0	0.01	0.09	0.52	0.22	10	02
16	15.83	15.82	33.434	24.584	334.9	0.061	6.02	263.0	106.6	7.0	0.52	0.1	0.09	0.08	2.29	0.91	16	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 29.6 N	117 44.9 W	12/07/2014	2253 UTC	23 m	280 03 kn	270 01 05	1	1013.8 mb	24.9 C	21.4 C		4/8	CS	031

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	21.61	21.61	33.589	23.255	461.1	0.000	5.92	258.6	117.1	1.9	0.28	0.1	0.02	0.18	0.44	0.07	0	
2	21.61	21.61	33.589	23.255	461.2	0.009	5.92	258.6	117.1	1.9	0.28	0.1	0.02	0.18	0.44	0.07	2	04
5	21.39	21.39	33.574	23.304	456.7	0.023	5.89	257.3	116.0	2.2	0.29	0.0	0.03	0.08	0.52	0.10	5	03
10	20.66	20.66	33.556	23.489	439.3	0.045	5.94	259.5	115.5	2.5	0.27	0.0	0.03	0.11	0.76	0.16	10	02
15	18.30	18.30	33.517	24.064	384.5	0.066	5.99	261.8	111.4	2.4	0.27	0.0	0.02	0.04	1.11	0.35	15	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 29.1 N	117 46.0 W	12/07/2014	2106 UTC	62 m	230 07 kn	270 01 06	1	1014.6 mb	23.0 C	20.1 C	12 m	5/8	CS	030

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	21.92	21.92	33.614	23.190	467.4	0.000	6.21	271.1	123.5	1.3	0.22	0.0	0.02	0.09	0.39	0.07	0	
2	21.92	21.92	33.614	23.190	467.5	0.009	6.21	271.1	123.5	1.3	0.22	0.0	0.02	0.09	0.39	0.07	2	07
5	21.07	21.07	33.602	23.414	446.2	0.023	6.11	266.6	119.6	1.4	0.17	0.0	0.02	0.10	0.37	0.07	5	06
10	20.20	20.20	33.560	23.613	427.4	0.045	6.16	269.0	118.7	1.9	0.21	0.0	0.01	0.05	0.37	0.07	10	05
20	15.01	15.01	33.385	24.727	321.4	0.082	6.09	266.1	106.1	2.7	0.39	0.0	0.01	0.04	0.26	0.06	20	04
30	13.78	13.77	33.360	24.968	298.7	0.113	6.23	272.3	105.8	4.1	0.46	0.4	0.04	0.04	1.17	0.30	30	03
40	12.10	12.09	33.372	25.309	266.4	0.142	4.97	217.2	81.5	8.4	0.96	8.0	0.34	0.51	0.73	0.36	40	02
50 ISL	11.47 D	11.46	33.451 D	25.487	249.7	0.169	4.38	D190.6 D	70.8	12.3	1.23	12.1	0.42	0.41	0.40	0.33	50	
54	11.36	11.35	33.471	25.523	246.4	0.177	4.04	176.5	65.3	13.8	1.34	13.8	0.45	0.37	0.27	0.32	54	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 25.4 N	117 54.2 W	12/07/2014	1752 UTC	611 m	220 03 kn	310 02 05	1	1015.4 mb	23.0 C	20.3 C	20 m	6/8	SC	029

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	21.69	21.69	33.650	23.281	458.7	0.000	5.35	233.8	106.0	1.6	0.29	0.1	0.01	0.04	0.12	0.02	0	
2 A	21.69	21.68	33.650	23.281	458.8	0.009	5.35	233.8	106.0	1.6	0.29	0.1	0.01	0.04	0.12	0.02	2	22
10	21.23	21.23	33.641	23.399	447.8	0.046	5.39	235.2	105.8	1.6	0.28	0.0	0.01	0.09	0.13	0.03	10	20
10	21.23	21.23	33.639	23.399	447.9	0.043											10	21
17 A	19.11	19.10	33.588	23.919	398.5	0.075	5.55	242.5	104.9	1.8	0.30	0.0	0.01	0.06	0.13	0.03	17	19
20 ISL	18.45 D	18.45	33.542 D	24.048	386.3	0.053	5.81	D253.2	D108.2	1.9	0.32	0.0	0.00	0.06	0.13	0.03	20	
23 A	17.26	17.26	33.497	24.302	362.2	0.098	6.00	262.0	109.3	2.0	0.34	0.0	0.00	0.06	0.13	0.03	23	18
30 ISL	15.40 D	15.39	33.415 D	24.667	327.5	0.089	6.15	D268.2	D108.0	2.6	0.37	0.0	0.00	0.05	0.21	0.08	30	
33	14.87	14.86	33.399	24.770	317.8	0.132	6.21	271.0	107.7	2.9	0.38	0.0	0.00	0.05	0.24	0.10	33	17
43 A	13.30	13.29	33.334	25.047	291.6	0.162	5.71	249.4	96.0	4.0	0.60	2.5	0.15	0.07	0.57	0.30	43	15
43	13.30	13.29	33.335	25.048	291.5	0.162											43	16
50 ISL	12.94 D	12.93	33.361 D	25.138	283.1	0.140	5.48	D238.7 D	91.4	5.4	0.74	4.7	0.23	0.07	0.53	0.29	50	
58	12.31	12.30	33.349	25.252	272.5	0.205	5.12	223.5	84.2	7.0	0.89	7.2	0.32	0.07	0.48	0.29	58	14
72	11.36	11.36	33.448	25.505	248.6	0.241	4.30	188.0	69.5	11.7	1.20	12.3	0.13	0.03	0.20	0.19	73	13
75 ISL	11.31 D	11.30	33.470 D	25.533	246.0	0.206	4.23	D184.4 D	68.3	12.6	1.26	13.1	0.12	0.03	0.18	0.17	76	
88 A	10.89	10.88	33.594	25.705	230.0	0.280	3.63	158.3	58.0	16.3	1.50	16.3	0.05	0.05	0.09	0.10	89	12
100 ISL	10.32 D	10.31	33.633 D	25.834	217.8	0.264	3.46	D150.7 D	54.7	18.5	1.60	18.1	0.04	0.03	0.05	0.07	101	
103 A	10.28	10.27	33.646	25.851	216.3	0.313	3.48	151.8	54.9	19.1	1.62	18.6	0.04	0.02	0.05	0.06	104	11
120	10.54	10.53	33.853	25.969	205.6	0.349	2.57	112.2	40.9	24.2	1.92	21.3	0.03	0.02	0.03	0.08	121	10
125 ISL	10.55 D	10.53	33.895 D	26.001	202.7	0.317	2.45	D106.7 D	39.0	25.1	1.97	21.7	0.02	0.04	0.03	0.09	126	
140	10.54	10.52	33.983	26.071	196.4	0.389	2.03	88.8	32.4	27.6	2.11	23.0	0.01	0.09	0.02	0.09	141	09
150 ISL	10.40 D	10.38	34.004 D	26.113	192.7	0.367	2.09	D 91.0 D	33.1	28.4	2.14	23.5	0.01	0.07	0.01	0.08	151	
170	10.18	10.16	34.094	26.220	182.9	0.446	1.93	84.0	30.4	29.9	2.20	24.4	0.01	0.04	0.00	0.05	171	08
200	10.23	10.20	34.234	26.324	173.9	0.499	1.45	63.3	22.9	32.6	2.35	25.5	0.01	0.12	0.01	0.04	202	07
230	9.37	9.34	34.162	26.411	165.9	0.550	1.72	75.1	26.7	35.1	2.35	27.0	0.01	0.03			232	06
250 ISL	9.71 D	9.68	34.317 D	26.478	160.3	0.543	1.19	D 51.8 D	18.6	36.8	2.43	27.4	0.01	0.04			252	
270	9.47	9.44	34.318 D	26.517	156.9	0.575	0.96	D 41.7 D	14.9								272	05
300 ISL	9.32 D	9.28	34.326 D	26.550	154.3	0.622	0.83	D 36.2 D	12.9	41.1	2.62	28.5	0.01	0.05			302	
321	9.28	9.25	34.351	26.577	152.3	0.696	0.71	31.1	11.0	42.9	2.70	29.0	0.01	0.06			324	04
384	8.36	8.32	34.282	26.669	144.2	0.789	0.84	36.6	12.7	48.1	2.72	31.1	0.01	0.03			387	03
400 ISL	7.71 D	7.67	34.194 D	26.695	141.3	0.771	1.04	D 45.3 D	15.6	49.8	2.76	31.6	0.01	0.03			403	
440	7.95	7.91	34.304	26.748	137.4	0.866	0.57	24.9	8.6	54.2	2.86	32.8	0.02	0.02			444	02
500 ISL	7.29 D	7.24	34.291 D	26.834	129.6	0.909	0.50	D 21.8 D	7.4	60.5	2.94	34.6	0.02	0.09			504	
512	7.23	7.18	34.293	26.845	128.8	0.961	0.46	20.0	6.8	61.8	2.96	34.9	0.02	0.10			516	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 15.2 N	118 15.0 W	12/07/2014	1327 UTC	301 m	270 12 kn	300 03 06	1	1014.3 mb	19.9 C	17.8 C	23 m	3/8	CS	028

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	21.55	21.55	33.666	23.329	454.0	0.000	5.25	229.1	103.7	1.8	0.29	0.2	0.00	0.02	0.14	0.03	0	
2	21.55	21.55	33.666	23.330	454.1	0.009	5.25	229.1	103.7	1.8	0.29	0.2	0.00	0.02	0.14	0.03	2	18
10	20.79	20.79	33.629	23.509	437.3	0.045	5.38	235.0	104.9	1.9	0.27	0.1	0.00	0.05	0.12	0.03	10	16
10	20.79	20.79	33.653	23.528	435.6	0.043											10	17
20	18.00	18.00	33.508	24.131	378.3	0.085	5.82	254.0	107.5	2.1	0.31	0.0	0.00	0.02	0.15	0.00	20	15
30	16.72	16.71	33.482	24.419	351.2	0.122	5.93	259.1	106.9	2.1	0.33	0.0	0.00	0.04	0.22	0.02	30	14
40	14.60	14.59	33.398	24.826	312.6	0.155	6.03	263.3	104.1	2.5	0.43	0.7	0.05	0.02	0.54	0.17	40	13
50	13.61	13.60	33.311	24.966	299.5	0.186	5.79	252.7	97.9	3.6	0.54	2.5	0.17	0.07	0.67	0.25	50	12
60	12.55	12.54	33.309	25.176	279.7	0.215	5.33	232.6	88.1	5.9	0.77	5.8	0.32	0.17	0.56	0.31	60	11
70	11.82	11.81	33.375	25.365	261.9	0.242	4.90	214.0	79.8	8.3	0.92	8.2	0.29	0.12	0.55	0.24	71	10
75 ISL	11.71 D	11.70	33.409 D	25.411	257.7	0.235	4.66	D202.9 D	75.7	9.7	1.03	10.0	0.25	0.10	0.43	0.21	76	
85	11.27	11.26	33.470	25.540	245.6	0.280	4.17	182.2	67.2	12.5	1.24	13.5	0.16	0.06	0.19	0.15	86	09
100	10.66	10.65	33.567	25.725	228.3	0.316	3.76	164.1	59.8	16.1	1.44	16.7	0.06	0.06	0.11	0.06	101	08
120	10.15	10.14	33.715	25.928	209.4	0.359	3.27	142.9	51.5	21.2	1.69	20.4	0.03	0.07	0.03	0.04	121	07
125 ISL	10.09 D	10.07	33.736 D	25.956	206.9	0.350	3.28	D142.6 D	51.5	22.0	1.73	20.9	0.03	0.07	0.03	0.03	126	
140	10.05	10.03	33.838	26.042	199.0	0.400	2.81	122.6	44.2	24.3	1.85	22.4	0.02	0.05	0.02	0.03	141	06
150 ISL	9.90 D	9.88	33.984 D	26.182	186.0	0.400	2.40	D104.3 D	37.6	26.8	1.96	23.6	0.01	0.04	0.01	0.03	151	
170	9.69	9.67	34.094	26.303	174.9	0.456	2.00	87.1	31.2	31.6	2.18	26.0	0.01	0.03	0.00	0.02	171	05
200	9.80	9.78	34.153 D	26.332	172.9	0.489	1.79	D 77.9 D	28.0								202	04
230	9.72	9.69	34.231	26.407	166.5	0.559	1.45	63.1	22.6	35.4	2.38	27.0	0.01	0.04			232	03
250 ISL	9.37 D	9.34	34.264 D	26.492	158.7	0.573	1.24	D 54.0 D	19.3	38.0	2.45	28.0	0.01	0.04			252	
270	9.14	9.11	34.271	26.534	155.1	0.623	1.16	50.6	17.9	40.7	2.52	29.0	0.00	0.03			272	02
300	9.01	8.97	34.255	26.545	154.6	0.669	1.18	51.4	18.2	41.5	2.52	29.4	0.00	0.08			302	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 11.0 N	118 23.4 W	12/07/2014	1008 UTC	1176 m	300 11 kn			1014.0 mb	19.8 C	17.9 C				027

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.79	20.79	33.626	23.507	437.1	0.000	5.39	235.5	105.1	1.6	0.27	0.0	0.00	0.03	0.11	0.02	0	
2	20.79	20.79	33.626	23.507	437.2	0.009	5.39	235.5	105.1	1.6	0.27	0.0	0.00	0.03	0.11	0.02	2	22
10	20.76	20.76	33.628	23.516	436.7	0.044	5.41	236.2	105.4	1.6	0.28	0.0	0.00	0.04	0.11	0.02	10	21
10	20.76	20.86	33.625	23.487	439.4	0.043											10	23
20 ISL	18.29 D	18.29	33.553 D	24.095	381.7	0.063	5.63	D245.7 D	104.7	1.7	0.31	0.0	0.01	0.00	0.09	0.02	20	
21	17.62	17.62	33.561	24.264	365.7	0.088	5.68	248.0	104.2	1.8	0.31	0.0	0.01	0.00	0.09	0.02	21	19
30	16.65	16.65	33.493	24.443	348.9	0.121	5.93	258.9	106.7	1.9	0.37	0.0	0.01	0.04	0.12	0.04	30	18
40	15.41	15.40	33.442	24.685	326.2	0.154	6.06	264.8	106.5	2.2	0.38	0.0	0.02	0.01	0.25	0.13	40	17
50	13.74	13.73	33.369	24.985	297.8	0.186	5.73	250.0	97.1	3.6	0.60	3.0	0.33	0.05	0.39	0.28	50	15
50	13.74	13.73	33.372	24.987	297.5	0.185											50	16
60	12.78	12.77	33.356	25.167	280.6	0.215	5.37	234.6	89.3	5.2	0.79	5.7	0.57	0.13	0.46	0.34	60	14
70	11.94	11.93	33.304	25.286	269.4	0.242	5.11	222.9	83.4	7.2	0.88	7.9	0.27	0.04	0.32	0.25	71	13
75 ISL	11.71 D	11.70	33.323 D	25.345	264.0	0.220	5.00	D217.8 D	81.2	8.3	0.95	9.1	0.24	0.03	0.28	0.22	76	
85	11.52	11.51	33.400	25.440	255.2	0.281	4.56	199.0	73.8	10.4	1.10	11.5	0.19	0.00	0.20	0.15	86	12
100	10.87	10.85	33.487	25.626	237.7	0.318	4.11	179.4	65.6	14.0	1.31	15.2	0.05	0.01	0.09	0.08	101	11
120	10.18	10.17	33.641	25.865	215.4	0.364	3.55	155.1	55.9	19.0	1.57	19.1	0.05	0.01	0.03	0.04	121	10
125 ISL	10.15 D	10.14	33.700 D	25.916	210.7	0.340	3.41	D148.3 D	53.6	19.9	1.62	19.7	0.05	0.01	0.03	0.04	126	
140	10.01	9.99	33.774	25.999	203.1	0.405	3.10	135.5	48.7	22.7	1.77	21.4	0.03	0.02	0.02	0.03	141	09
150 ISL	9.94 D	9.92	33.869 D	26.085	195.2	0.391	2.87	D125.1 D	45.1	24.7	1.86	22.5	0.03	0.02	0.01	0.03	151	
170	9.79	9.77	34.002	26.215	183.3	0.463	2.33	101.7	36.5	28.8	2.05	24.8	0.02	0.01	0.00	0.03	171	08
200	9.18	9.15	34.060	26.361	169.8	0.516	2.13	93.0	32.9	33.1	2.16	26.9	0.02	0.02	0.01	0.02	202	07
230	8.76	8.74	34.089	26.450	161.9	0.566	1.99	86.8	30.4	36.6	2.26	28.3	0.00	0.01			232	06
250 ISL	8.71 D	8.69	34.129 D	26.490	158.5	0.565	1.86	D 81.0 D	28.5	39.1	2.33	29.2	0.00	0.01			252	
270	8.68	8.66	34.177 D	26.533	154.9	0.597	1.52	D 66.3 D	23.3								272	05
300 ISL	8.05 D	8.02	34.147 D	26.606	148.1	0.643	1.56	D 68.0 D	23.5	45.5	2.52	31.4	0.00	0.02			302	
320	7.90	7.87	34.171	26.647	144.5	0.704	1.23	53.7	18.5	48.0	2.59	32.3	0.00	0.02			323	04
379	7.45	7.41	34.231	26.761	134.5	0.786	0.77	33.6	11.4	56.1	2.80	34.3	0.00	0.01			382	03
400 ISL	7.35 D	7.31	34.241 D	26.783	132.7	0.784	0.71	D 30.8 D	10.5	57.9	2.83	34.7	0.00	0.01			403	
440	7.12	7.08	34.267	26.836	128.2	0.867	0.56	24.3	8.2	61.2	2.90	35.5	0.00	0.01			444	02
500 ISL	6.88 D	6.83	34.314 D	26.909	122.1	0.912	0.35	D 15.3 D	5.2	67.3	3.03	36.9	0.00	0.02			504	
515	6.72	6.67	34.308	26.925	120.6	0.960	0.36	15.5	5.2	68.9	3.06	37.2	0.01	0.02			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 55.0 N	118 56.2 W	12/07/2014	0413 UTC	1695 m	300 18 kn			1014.8 mb	18.5 C	17.0 C				026

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.65	18.65	33.648	24.078	382.6	0.000	5.61	245.1	105.1	2.2	0.31	0.0	0.01	0.24	0.28	0.05	0	
3	18.65	18.65	33.648	24.079	382.7	0.012	5.61	245.1	105.1	2.2	0.31	0.0	0.01	0.24	0.28	0.05	3	21
10	18.62	18.61	33.646	24.085	382.3	0.038	5.62	245.4	105.1	2.1	0.30	0.0	0.01	0.14	0.28	0.06	10	19
10	18.62	18.61	33.647	24.086	382.3	0.039											10	20
20	16.62	16.62	33.594	24.526	340.7	0.075	5.93	258.9	106.7	1.7	0.36	0.1	0.01	0.19	0.62	0.16	20	18
29	14.56	14.56	33.576	24.971	298.5	0.103	5.82	254.1	100.5	3.8	0.56	2.4	0.09	0.30	1.04	0.35	29	17
30 ISL	14.38 D	14.38	33.583 D	25.015	294.3	0.088	5.55	D241.8 D	95.5	4.2	0.59	2.8	0.10	0.31	1.06	0.37	30	
40	12.99	12.99	33.577	25.295	267.9	0.134	5.06	221.1	84.7	8.2	0.89	7.2	0.21	0.46	1.34	0.56	40	16
50	11.43	11.42	33.579	25.594	239.6	0.160	4.28	187.0	69.3	13.5	1.25	13.3	0.31	0.20	0.94	0.47	50	15
60	10.54	10.53	33.590	25.761	223.8	0.183	3.70	161.7	58.8	18.0	1.55	18.4	0.05	0.04	0.24	0.14	60	14
70	10.26	10.25	33.699	25.896	211.3	0.205	3.21	140.0	50.6	21.5	1.72	20.7	0.05	0.06	0.16	0.10	71	13
75 ISL	10.14 D	10.13	33.712 D	25.926	208.5	0.198	3.15	D137.2 D	49.6	22.5	1.76	21.4	0.04	0.05	0.12	0.09	76	
85	9.68	9.67	33.758	26.038	198.0	0.236	3.04	132.5	47.3	24.5	1.83	22.7	0.03	0.04	0.03	0.06	86	12
100	9.39	9.38	33.827	26.141	188.5	0.265	2.98	130.1	46.2	26.1	1.87	23.5	0.03	0.07	0.03	0.17	101	11
120	9.29	9.27	33.934	26.241	179.4	0.301	2.48	108.2	38.4	30.0	2.03	25.6	0.03	0.04	0.01	0.05	121	10
125 ISL	9.28 D	9.26	33.947 D	26.254	178.4	0.293	2.41	D104.9 D	37.3	30.8	2.07	26.0	0.02	0.05	0.01	0.05	126	
139	9.07	9.05	34.017	26.343	170.2	0.335	2.17	94.5	33.4	33.2	2.17	27.1	0.02	0.07	0.01	0.04	140	09
150 ISL	8.96 D	8.95	34.066 D	26.398	165.2	0.337	2.06	D 89.6 D	31.6	34.8	2.23	27.7	0.02	0.06	0.01	0.04	151	
169	8.87	8.85	34.119	26.454	160.3	0.384	1.71	74.5	26.2	37.7	2.34	28.8	0.01	0.03	0.01	0.04	170	08
200	8.66	8.64	34.149	26.512	155.4	0.433	1.45	63.3	22.2	40.9	2.45	30.0	0.01	0.10	0.01	0.05	202	07
229	8.28	8.26	34.189	26.602	147.2	0.477	1.17	50.9	17.7	45.2	2.58	31.4	0.02	0.10			231	06
250 ISL	8.14 D	8.11	34.210 D	26.641	143.9	0.492	1.01	D 43.7 D	15.2	47.5	2.64	32.0	0.02	0.07			252	
270	8.00	7.97	34.213	26.665	142.0	0.536	0.97	42.4	14.6	49.6	2.69	32.6	0.02	0.04			272	05
300 ISL	7.78 D	7.75	34.234 D	26.713	137.8	0.563	0.81	D 35.3 D	12.2	52.8	2.76	33.5	0.02	0.09			302	
319	7.59	7.56	34.238	26.744	135.1	0.604	0.77	33.4	11.4	54.8	2.81	34.1	0.02	0.12			322	04
380	7.19	7.15	34.274	26.831	127.7	0.684	0.53	23.0	7.8	61.3	2.94	35.3	0.02	0.12			383	03
400 ISL	7.05 D	7.01	34.282 D	26.857	125.5	0.696	0.47	D 20.2 D	6.9	63.3	2.97	35.8	0.01	0.09			403	
440	6.78	6.74	34.286	26.898	122.0	0.759	0.41	17.9	6.0	67.2	3.03	36.8	0.00	0.03			444	02
500 ISL	6.52 D	6.48	34.301 D	26.945	118.2	0.818	0.34	D 15.0 D	5.0	71.6	3.09	37.7	0.00	0.07			504	
515	6.45	6.40	34.314	26.966	116.4	0.849	0.30	13.0	4.3	72.7	3.10	37.9	0.01	0.08			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 39.1 N	119 28.9 W	11/07/2014	2039	UTC	1315 m	290 11 kn	320 03 06	1	1016.3 mb	20.2 C	18.0 C	11 m	7/8	ST	025

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	17.70	17.70	33.601	24.275	363.9	0.000	5.75	250.9	105.6	0.6	0.31	0.0	0.01	0.04	0.51	0.09	0	
2	17.70	17.70	33.601	24.275	363.9	0.007	5.75	250.9	105.6	0.6	0.31	0.0	0.01	0.04	0.51	0.09	2	22
9	17.34	17.33	33.597 D	24.360	356.1	0.020											9	21
10	17.14	17.14	33.599	24.408	351.6	0.036	5.78	252.5	105.1	0.6	0.31	0.0	0.00	0.06	0.61	0.13	10	20
20	16.67	16.67	33.552	24.482	344.8	0.071	5.77	252.1	104.0	0.7	0.32	0.0	0.02	0.04	0.41	0.14	20	19
30	15.42	15.41	33.433	24.675	326.7	0.104	5.78	252.3	101.4	1.1	0.43	0.4	0.05	0.68	0.48	0.16	30	17
30	15.42	15.41	33.434	24.676	326.6	0.103											30	18
40	14.17	14.17	33.402	24.920	303.7	0.136	5.64	246.3	96.5	2.2	0.56	1.5	0.14	0.97	0.55	0.19	40	16
49	12.73	12.73	33.261 D	25.102	286.5	0.135	5.41	236.2	89.8	5.3	0.85	5.8	0.32	0.67	0.29	0.17	49	15
50 ISL	12.14 D	12.14	33.247 D	25.204	276.7	0.138	5.30	D230.8 D	86.8	5.5	0.87	6.2	0.30	0.61	0.28	0.16	50	
60	11.68	11.67	33.334	25.359	262.3	0.192	5.02	219.1	81.5	7.8	1.10	10.5	0.11	0.04	0.15	0.10	60	14
71	10.56	10.55	33.301	25.534	245.7	0.220	4.66	203.7	73.9	12.0	1.27	13.7	0.06	0.08	0.09	0.08	72	13
75 ISL	10.50 D	10.49	33.371 D	25.599	239.6	0.202	4.50	D196.0 D	71.3	13.1	1.33	14.6	0.05	0.08	0.08	0.07	76	
85	10.29	10.28	33.433	25.682	231.9	0.254	4.14	180.6	65.2	15.7	1.48	17.0	0.03	0.07	0.06	0.06	86	12
100	9.76	9.75	33.506	25.829	218.2	0.287	3.86	168.3	60.1	18.9	1.64	19.4	0.03	0.13	0.03	0.06	101	11
121	9.40	9.38	33.679	26.024	200.1	0.331	3.26	142.2	50.4	24.0	1.85	22.9	0.01	0.05	0.02	0.05	122	10
125 ISL	9.32 D	9.30	33.723 D	26.072	195.6	0.312	3.20	D139.2 D	49.4	24.8	1.87	23.3	0.01	0.05	0.02	0.05	126	
141	8.97	8.95	33.822	26.206	183.2	0.369	2.94	128.4	45.2	28.1	1.96	24.9	0.02	0.05	0.02	0.05	142	09
150 ISL	8.96 D	8.94	33.829 D	26.213	182.7	0.359	2.94	D128.0 D	45.1	29.4	1.99	25.5	0.01	0.05	0.02	0.04	151	
170	8.64	8.62	33.925	26.339	171.1	0.421	2.62	114.2	39.9	32.1	2.07	26.7	0.00	0.05	0.01	0.04	171	08
200	8.27	8.25	33.994	26.451	160.9	0.471	2.50	109.1	37.8	36.2	2.14	27.6	0.02	0.07	0.00	0.04	202	07
229	7.99	7.96	34.031	26.522	154.6	0.517	2.25	98.2	33.8	40.1	2.25	28.9	0.01	0.11			231	06
250 ISL	7.88 D	7.86	34.065 D	26.564	151.0	0.524	2.03	D 88.3 D	30.4	43.5	2.36	30.1	0.00	0.08			252	
272	7.58	7.55	34.073	26.615	146.4	0.582	1.77	77.1	26.3	47.0	2.47	31.4	0.00	0.04			274	05
300 ISL	7.54 D	7.51	34.132 D	26.667	141.9	0.597	1.34	D 58.4 D	20.0	50.6	2.60	32.5	0.01	0.06			302	
319	7.49	7.45	34.151	26.691	140.0	0.649	1.15	50.3	17.1	53.0	2.68	33.2	0.01	0.07			322	04
380	7.45	7.41	34.268	26.790	131.8	0.732	0.60	26.0	8.8	58.1	2.89	34.2	0.01	0.07			383	03
400 ISL	7.34 D	7.30	34.272 D	26.809	130.3	0.734	0.57	D 24.7 D	8.4	60.1	2.92	34.7	0.01	0.08			403	
439	6.95	6.91	34.267	26.859	125.8	0.808	0.50	21.8	7.3	64.0	2.99	35.7	0.01	0.10			443	02
500 ISL	6.43 D	6.39	34.280 D	26.940	118.5	0.860	0.41	D 17.7 D	5.9	71.8	3.10	37.4	0.00	0.09			504	
514	6.37	6.32	34.296	26.961	116.7	0.899	0.34	14.8	4.9	73.6	3.13	37.8	0.00	0.09			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 25.3 N	119 57.8 W	11/07/2014	1712	UTC	879 m	330 10 kn	310 03 08	2	1016.2 mb	18.2 C	13.6 C	19 m	8/8	SC	024

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	16.84	16.84	33.499	24.400	351.9	0.000	5.67	247.5	102.4	0.7	0.32	0.0	0.01	0.05	0.19	0.04	0	
3 A	16.84	16.84	33.499	24.401	352.0	0.011	5.67	247.5	102.4	0.7	0.32	0.0	0.01	0.05	0.19	0.04	3	24
10 A	16.82	16.81	33.501	24.409	351.4	0.035	5.68	248.1	102.6	0.6	0.32	0.0	0.01	0.06	0.20	0.04	10	22
10	16.82	16.81	33.501	24.409	351.4	0.035											10	23
14 A	16.81	16.81	33.519	24.425	350.1	0.049	5.68	248.1	102.6	0.6	0.32	0.0	0.01	0.04	0.21	0.05	14	21
19	16.47	16.46	33.537	24.518	341.3	0.067	5.74	250.6	103.0	0.6	0.32	0.0	0.01	0.05	0.22	0.08	19	20
20 ISL	16.22 D	16.22	33.528 D	24.567	336.7	0.063	5.72	D249.5 D	102.2	0.6	0.32	0.0	0.01	0.05	0.23	0.09	20	
27 A	16.04	16.04	33.535	24.614	332.4	0.093	5.75	251.1	102.3	0.6	0.32	0.0	0.01	0.03	0.29	0.13	27	18
27	16.04	16.04	33.532	24.612	332.6	0.093											27	19
30 ISL	15.97 D	15.96	33.530 D	24.627	331.3	0.092	5.71	D248.8 D	101.4	0.6	0.32	0.0	0.01	0.06	0.30	0.24	30	
36	15.92	15.91	33.538	24.644	329.9	0.123	5.69	248.4	101.0	0.6	0.33	0.0	0.02	0.11	0.31B	0.46B	36	17
47	14.49	14.49	33.408	24.857	309.9	0.158	5.57	243.1	95.9	1.7	0.50	1.1	0.08	1.49	0.38	0.17	47	16
50 ISL	14.21 D	14.21	33.407 D	24.915	304.4	0.157	5.56	D242.1 D	95.2	3.0	0.60	2.5	0.16	1.22	0.32	0.18	50	
55 A	12.40	12.39	33.131	25.065	290.2	0.183	5.55	242.6	91.5	5.2	0.76	4.7	0.29	0.78	0.23	0.19	55	15
66 A	11.69	11.68	33.177	25.234	274.2	0.214	5.29	230.9	85.8	7.0	0.93	8.5	0.20	0.05	0.11	0.11	67	14
75 ISL	10.73 D	10.72	33.191 D	25.419	256.8	0.227	5.04	D219.5 D	80.1	9.5	1.09	11.6	0.07	0.04	0.08	0.10	76	
76	10.71	10.70	33.193	25.424	256.3	0.240	5.03	219.6	79.9	9.8	1.11	11.9	0.05	0.04	0.07	0.10	77	13
86	10.42	10.41	33.419	25.650	235.1	0.265	4.56	199.0	72.0	13.1	1.29	14.9	0.03	0.04	0.03	0.04	87	12
99	9.90	9.89	33.475	25.782	222.7	0.295	4.30	187.9	67.3	16.2	1.41	17.4	0.02	0.04	0.04	0.06	100	11
100 ISL	9.84 D	9.83	33.496 D	25.808	220.2	0.287	4.23	D184.0 D	66.0	16.5	1.42	17.6	0.02	0.04	0.04	0.06	101	
120	9.33	9.32	33.673	26.031	199.4	0.339	3.61	157.5	55.7	22.4	1.70	22.0	0.02	0.02	0.01	0.03	121	10
125 ISL	9.31 D	9.29	33.740 D	26.087	194.2	0.339	3.44	D149.9 D	53.2	23.6	1.75	22.7	0.02	0.02	0.01	0.03	126	
140	9.00	8.98	33.841	26.216	182.2	0.377	3.12	136.3	48.0	27.3	1.88	24.8	0.02	0.02	0.00	0.03	141	09
150 ISL	8.91 D	8.90	33.889 D	26.268	177.5	0.385	3.00	D130.6 D	46.0	29.5	1.95	25.8	0.01	0.02	0.00	0.03	151	
169	8.60	8.58	33.978	26.387	166.5	0.428	2.55	111.5	38.9	33.7	2.09	27.6	0.01	0.02	0.00	0.03	170	08
200	8.31	8.29	34.070	26.504	155.9	0.478	1.96	85.6	29.7	39.7	2.31	29.3	0.00	0.02	0.01	0.03	202	07
230	8.23	8.21	34.120 D	26.555	151.6	0.514	1.60	D 69.7 D	24.2								232	06
250 ISL	8.14 D	8.12	34.151 D	26.594	148.3	0.545	1.40	D 60.8 D	21.1	45.8	2.48	31.6	0.00	0.02			252	
269	7.99	7.96	34.162 D	26.626	145.6	0.573	1.26	D 54.6 D	18.9								271	05
300 ISL	7.60 D	7.57	34.157 D	26.679	140.9	0.617	1.17	D 51.1 D	17.5	52.0	2.65	33.8	0.01	0.03			302	
321	7.25	7.21	34.154	26.727	136.4	0.656	1.08	47.3	16.0	54.5	2.72	34.8	0.01	0.03			324	04
379	7.06	7.02	34.223	26.808	129.6	0.734	0.69	29.9	10.1	60.3	2.88	36.1	0.01	0.05			382	03
400 ISL	6.98 D	6.94	34.237 D	26.831	127.8	0.752	0.62	D 27.1 D	9.2	63.1	2.94	36.7	0.01	0.04			403	
440	6.57	6.53	34.272	26.914	120.2	0.810	0.43	18.6	6.2	68.5	3.05	37.8	0.01	0.02			444	02
500 ISL	6.23 D	6.19	34.301 D	26.983	114.3	0.873	0.32	D 14.1 D	4.7	75.4	3.14	39.2	0.00	0.01			504	
515	6.11	6.07	34.309	27.004	112.4	0.898	0.28	12.1	4.0	77.1	3.16	39.5	0.00	0.01			519	01

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 5.1 N	120 38.3 W	11/07/2014	0900 UTC	3816 m	310 11 kn			1014.7 mb	17.8 C	16.7 C				023

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.20	18.20	33.441	24.030	387.2	0.000	5.49	240.0	101.9	2.7	0.33	0.0	0.00	0.06	0.08	0.02	0	
2	18.20	18.20	33.441	24.030	387.3	0.008	5.49	240.0	101.9	2.7	0.33	0.0	0.00	0.06	0.08	0.02	2	22
10	18.17	18.17	33.439	24.037	386.9	0.039	5.51	240.8	102.2	2.7	0.33	0.0	0.01	0.03	0.08	0.02	10	21
10	18.17	18.17	33.439	24.037	386.9	0.038											10	23
20 ISL	17.91 D	17.91	33.430 D	24.094	381.9	0.058	5.55	D242.2	D102.4	2.7	0.33	0.0	0.01	0.02	0.09	0.02	20	
25	17.83	17.82	33.430	24.115	380.1	0.096	5.54	241.9	101.9	2.7	0.33	0.0	0.01	0.01	0.09	0.02	25	19
30 ISL	17.74 D	17.73	33.429 D	24.136	378.2	0.097	5.57	D242.7	D102.3	2.7	0.33	0.0	0.01	0.02	0.10	0.02	30	
40	16.77	16.77	33.399	24.343	358.8	0.152	5.76	251.5	103.8	2.8	0.34	0.0	0.00	0.05	0.12	0.04	40	18
50	15.93	15.93	33.393	24.531	341.2	0.187	5.84	255.0	103.5	2.9	0.36	0.0	0.00	0.03	0.19	0.08	50	17
61	15.38	15.37	33.348	24.622	332.9	0.224	5.87	256.3	102.9	2.9	0.38	0.0	0.00	0.02	0.26	0.12	61	16
75	14.53	14.51	33.309	24.776	318.5	0.268											75	15
75	14.27	14.26	33.308	24.828	313.5	0.270	5.84	255.0	100.1	3.2	0.42	0.4	0.03	0.04	0.33	0.24	76	14
86	13.56	13.55	33.305	24.973	300.0	0.303	5.62	245.3	94.8	4.1	0.60	2.8	0.29	0.22	0.35	0.19	87	13
100	11.15	11.14	33.098	25.272	271.4	0.343	5.39	235.5	86.4	7.0	0.90	8.0	0.15	0.02	0.15	0.13	101	12
112	10.70	10.69	33.142	25.386	260.7	0.375	5.20	227.3	82.6	8.8	1.02	10.2	0.08	0.02	0.11	0.12	113	11
125	10.38	10.37	33.308	25.571	243.4	0.408	4.62	202.0	73.0	12.8	1.30	14.7	0.03	0.02	0.06	0.07	126	10
140	9.92	9.90	33.492	25.794	222.5	0.443	4.24	185.3	66.4	16.8	1.45	17.6	0.02	0.01	0.05	0.07	141	09
150 ISL	9.76 D	9.75	33.542 D	25.859	216.5	0.427	4.16	D180.9	D 64.8	18.9	1.54	19.0	0.01	0.01	0.03	0.05	151	
170	9.21	9.20	33.727	26.094	194.5	0.506	3.62	157.9	55.8	23.2	1.71	21.9	0.00	0.02	0.01	0.02	171	08
200	8.64	8.62	33.908	26.326	172.9	0.561	3.29	143.7	50.1	29.4	1.88	24.8	0.01	0.01	0.00	0.02	202	07
231	8.15	8.13	33.976	26.455	161.1	0.613	2.91	127.0	43.9	35.2	2.04	27.1	0.00	0.02			233	06
250 ISL	7.74 D	7.72	33.996 D	26.530	154.1	0.606	2.68	D116.6	D 40.0	39.5	2.16	28.8	0.00	0.03			252	
269	7.46	7.44	34.008	26.580	149.5	0.672	2.39	104.5	35.5	43.8	2.28	30.4	0.00	0.03			271	05
300 ISL	7.03 D	7.00	34.034 D	26.661	142.1	0.680	1.86	D 81.0	D 27.4	50.8	2.50	33.0	0.00	0.04			302	
320	6.85	6.82	34.060	26.707	138.0	0.745	1.51	65.8	22.1	55.3	2.64	34.6	0.00	0.04			323	04
380	6.29	6.26	34.103	26.815	128.3	0.825	1.01	44.2	14.6	65.6	2.87	37.5	0.00	0.02			383	03
400 ISL	6.18 D	6.14	34.119 D	26.843	125.8	0.815	0.90	D 39.0	D 12.9	68.4	2.92	38.0	0.00	0.05			403	
440	5.88	5.84	34.143	26.900	120.7	0.900	0.73	31.8	10.4	73.9	3.01	39.0	0.00	0.10			444	02
500 ISL	5.57 D	5.53	34.198 D	26.983	113.4	0.935	0.48	D 21.0	D 6.9	81.4	3.13	40.1	0.00	0.04			504	
515	5.53	5.48	34.216	27.002	111.7	0.987	0.41	17.9	5.8	83.3	3.16	40.4	0.00	0.02			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 45.1 N	121 18.8 W	11/07/2014	0211 UTC	3705 m	300 10 kn	290 03 07	1	1013.7 mb	19.5 C	17.0 C		6/8	SC	022

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.70	18.70	33.450	23.913	398.4	0.000	5.49	239.8	102.8	2.8	0.35	0.0	0.00	0.04	0.08	0.02	0	
2	18.70	18.70	33.450	23.913	398.4	0.008	5.49	239.8	102.8	2.8	0.35	0.0	0.00	0.04	0.08	0.02	2	20
10 ISL	18.65 D	18.65	33.447 D	23.924	397.7	0.040	5.44	D237.1	D101.7	2.7	0.39	0.0	0.00	0.06	0.08	0.01	10	
11	18.62	18.62	33.449	23.935	396.7	0.044	5.45	238.0	101.8	2.7	0.39	0.0	0.00	0.06	0.08	0.01	11	19
20 ISL	18.37 D	18.36	33.452 D	23.999	390.9	0.080	5.46	D238.0	D101.5	2.7	0.36	0.0	0.00	0.07	0.08	0.02	20	
25	18.09	18.08	33.442	24.061	385.2	0.099	5.49	239.8	101.6	2.8	0.34	0.0	0.00	0.08	0.08	0.02	25	18
30 ISL	18.01 D	18.01	33.433 D	24.073	384.2	0.119	5.54	D241.7	D102.4	2.8	0.34	0.0	0.00	0.07	0.09	0.02	30	
40	17.37	17.36	33.413 D	24.213	371.2	0.157	5.62	245.5	102.6	2.8	0.32	0.0	0.00	0.03	0.13	0.03	40	17
50	16.04	16.03	33.377	24.495	344.6	0.191	5.84	255.0	103.7	2.9	0.35	0.0	0.00	0.03	0.14	0.04	50	16
62	15.23	15.22	33.324	24.636	331.5	0.232	5.91	258.1	103.3	2.9	0.38	0.0	0.00	0.03	0.18	0.08	62	15
75	13.91	13.90	33.277	24.880	308.5	0.274	5.87	256.2	99.8	3.4	0.46	0.3	0.03	0.06	0.34	0.14	76	14
87	12.58	12.57	33.267	25.138	284.1	0.309	5.52	241.1	91.3	5.1	0.68	4.3	0.28	0.04	0.31	0.17	88	13
100	11.33	11.32	33.250	25.359	263.2	0.345	5.14	224.3	82.7	8.1	0.95	9.3	0.04	0.03	0.24	0.14	101	12
112	10.71	10.70	33.359	25.553	244.9	0.375	4.86	212.1	77.2	10.7	1.09	11.9	0.01	0.03	0.15	0.12	113	11
125	10.44	10.42	33.431	25.658	235.2	0.407	4.67	203.9	73.8	12.6	1.18	13.7	0.02	0.01	0.10	0.09	126	10
139	9.92	9.90	33.507	25.806	221.4	0.439	4.33	189.2	67.8	16.0	1.40	16.8	0.02	0.02	0.05	0.04	140	09
150 ISL	9.60 D	9.58	33.589 D	25.923	210.4	0.466	4.14	D180.2	D 64.3	18.8	1.52	18.7	0.01	0.02	0.03	0.04	151	
170	9.17	9.15	33.737	26.108	193.2	0.503	3.61	157.6	55.6	23.7	1.74	22.2	0.00	0.03	0.00	0.02	171	08
200	8.71	8.69	33.914	26.320	173.5	0.558	3.13	136.5	47.7	29.9	1.92	25.3	0.01	0.01	0.00	0.02	202	07
229	8.20	8.17	33.974	26.446	161.9	0.606	2.86	124.7	43.1	34.8	2.04	27.1	0.01	0.02			231	06
250 ISL	7.95 D	7.92	33.997 D	26.502	156.9	0.645	2.60	D113.3	D 39.1	39.1	2.19	28.8	0.01	0.06			252	
270	7.63	7.61	34.020	26.566	151.0	0.671	2.22	97.0	33.1	43.2	2.34	30.5	0.01	0.09			272	05
300 ISL	7.23 D	7.20	34.047 D	26.644	143.9	0.720	1.82	D 79.2	D 26.9	48.9	2.49	32.5	0.01	0.05			302	
320	7.01	6.98	34.055	26.682	140.5	0.743	1.62	70.5	23.7	52.7	2.59	33.9	0.01	0.03			323	04
380	6.57	6.54	34.127	26.798	130.2	0.824	0.96	41.7	13.9	62.4	2.85	36.9	0.01	0.03			383	03
400 ISL	6.48 D	6.44	34.147 D	26.826	127.7	0.857	0.83	D 35.9	D 12.0	65.4	2.91	37.5	0.01	0.03			403	
441	6.13	6.09	34.169	26.890	122.0	0.901	0.64	28.1	9.3	71.7	3.03	38.7	0.01	0.02			445	02
500 ISL	5.71 D	5.66	34.217 D	26.981	113.8	0.978	0.44	D 19.0	D 6.2	80.2	3.17	40.1	0.01	0.04			504	
516	5.61	5.57	34.216	26.992	112.9	0.989	0.42	18.2	5.9	82.5	3.21	40.5	0.01	0.05			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 25.1 N	121 59.4 W	10/07/2014	1730 UTC	3861 m	320 05 kn	340 03 07	2	1015.2 mb	19.0 C	16.9 C	30 m	8/8	SC	020

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.47	18.47	33.477	23.991	390.9	0.000	5.33	232.6	99.3	2.7	0.32	0.1	0.01	0.35	0.11	0.02	0	
2	18.49	18.49	33.477	23.986	391.5	0.008											2	23
3 A	18.47	18.47	33.477	23.991	391.0	0.012	5.33	232.6	99.3	2.7	0.32	0.1	0.01	0.35	0.11	0.02	3	22
9	18.44	18.44	33.476	23.999	390.5	0.036											9	21
10	18.44	18.44	33.476	23.998	390.7	0.039	5.46	238.4	101.7	2.6	0.33	0.0	0.00	0.07	0.12	0.02	10	20
17 A	18.06	18.06	33.458	24.079	383.2	0.066	5.50	240.0	101.6	2.6	0.32	0.0	0.00	0.06	0.11	0.02	17	19
20 ISL	18.02 D	18.01	33.449 D	24.084	382.8	0.058	5.55	D241.9	D102.5	2.6	0.33	0.0	0.00	0.04	0.13	0.03	20	
22 A	17.93	17.93	33.456	24.109	380.5	0.085	5.52	241.1	101.9	2.7	0.33	0.0	0.00	0.03	0.14	0.03	22	18
30 ISL	17.18 D	17.18	33.410 D	24.255	366.9	0.096	5.73	D249.7	D104.1	2.4	0.35	0.0	0.00	0.05	0.18	0.06	30	
32	16.73	16.72	33.378	24.336	359.2	0.122	5.80	253.1	104.4	2.4	0.36	0.0	0.00	0.06	0.19	0.06	32	17
43 A	15.19	15.18	33.415	24.713	323.6	0.160	6.07	264.9	106.0	2.2	0.38	0.0	0.01	0.13	0.35	0.14	43	16
50 ISL	14.42 D	14.41	33.275 D	24.771	318.2	0.165	5.97	D260.4	D102.7	2.7	0.45	0.7	0.06	0.33	0.37	0.16	50	
56	14.24	14.23	33.290	24.820	313.7	0.201	5.75	251.0	98.4	3.1	0.51	1.3	0.10	0.50	0.38	0.18	56	14
56	14.24	14.23	33.288	24.819	313.8	0.201											56	15
72	12.92	12.91	33.211	25.027	294.3	0.250	5.56	242.7	92.6	4.6	0.68	4.2	0.43	0.19	0.33	0.17	73	13
75 ISL	12.43 D	12.42	33.194 D	25.109	286.5	0.216	5.56	D242.1	D 91.6	5.2	0.73	5.2	0.36	0.17	0.30	0.17	76	
89 A	11.53	11.51	33.288	25.352	263.6	0.297	5.08	221.8	82.2	7.9	0.98	9.7	0.03	0.08	0.17	0.16	90	12
100 ISL	11.11 D	11.09	33.315 D	25.450	254.5	0.284	4.96	D215.9	D 79.5	10.2	1.11	12.0	0.02	0.06	0.12	0.13	101	
104 A	11.10	11.08	33.359	25.486	251.2	0.335	4.73	206.7	75.9	11.0	1.16	12.8	0.02	0.05	0.10	0.11	105	11
119	10.56	10.55	33.446	25.648	236.1	0.372	4.38	191.1	69.4	14.2	1.35	15.7	0.02	0.06	0.05	0.09	120	10
125 ISL	10.28 D	10.27	33.503 D	25.741	227.3	0.344	4.22	D183.8	D 66.6	15.6	1.42	16.8	0.02	0.06	0.04	0.08	126	
140	9.84	9.82	33.572	25.870	215.3	0.419	3.86	168.4	60.3	19.2	1.58	19.5	0.02	0.06	0.02	0.04	141	09
150 ISL	9.55 D	9.53	33.657 D	25.984	204.6	0.399	3.76	D163.6	D 58.4	21.6	1.67	21.0	0.02	0.06	0.01	0.04	151	
170	9.07	9.05	33.805	26.177	186.5	0.479	3.17	138.4	48.8	26.3	1.85	24.0	0.01	0.07	0.00	0.03	171	08
200	8.62	8.60	33.948	26.361	169.6	0.533	2.64	115.1	40.2	32.2	2.07	26.9	0.01	0.09	0.00	0.03	202	07
229	8.17	8.15	34.031	26.495	157.3	0.580	2.16	94.2	32.6	38.7	2.27	29.5	0.00	0.07			231	06
250 ISL	7.95 D	7.92	34.051 D	26.544	152.9	0.572	2.05	D 89.3	D 30.8	42.1	2.34	30.6	0.00	0.06			252	
270	7.60	7.58	34.054	26.597	148.1	0.643	1.90	82.7	28.2	45.4	2.41	31.6	0.01	0.05			272	05
300 ISL	7.23 D	7.20	34.064 D	26.658	142.6	0.647	1.67	D 72.6	D 24.6	50.3	2.53	33.3	0.00	0.04			302	
320	7.09	7.06	34.080	26.691	139.7	0.714	1.44	62.6	21.1	53.7	2.61	34.4	0.00	0.03			323	04
379	6.57	6.54	34.116	26.790	130.9	0.794	1.01	43.9	14.6	62.2	2.82	37.0	0.00	0.07			382	03
400 ISL	6.38 D	6.35	34.132 D	26.827	127.5	0.783	0.87	D 37.8	D 12.6	65.6	2.89	37.7	0.00	0.08			403	
439	6.13	6.09	34.167	26.888	122.2	0.870	0.64	27.9	9.2	72.0	3.01	39.1	0.00	0.09			443	02
500 ISL	5.72 D	5.67	34.194 D	26.962	115.6	0.905	0.50	D 21.9	D 7.2	80.2	3.15	40.5	0.00	0.07			504	
515	5.61	5.56	34.211	26.988	113.2	0.959	0.42	18.4	6.0	82.2	3.18	40.8	0.00	0.06			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 25.1 N	121 59.4 W	10/07/2014	2046 UTC	3928 m	320 05 kn	340 03 07	2	1015.3 mb	19.0 C	16.9 C		8/8	SC	021

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
649	5.20	5.14	34.344	27.145	99.6	1.563	0.20	8.6	2.8	92.8	3.33	41.7	0.00	0.05			655	08
649	5.20	5.14	34.343	27.144	99.7	1.563	0.21	8.9	2.9	93.1	3.29	41.7	0.00	0.05			655	07
3498	1.55	1.28	34.675	27.783	45.4	3.631		237.7									3552	05
3498	1.55	1.28	34.675	27.784	45.4	3.631		120.1									3552	03
3499	1.55	1.28	34.675	27.784	45.4	3.631	2.90	126.6	37.2	170.3	2.73	37.8	0.00	0.04			3553	01
3499	1.55	1.28	34.648	27.762	47.3	3.631		237.5									3553	06
3499	1.55	1.28	34.677	27.785	45.3	3.631		237.4									3553	04
3499	1.55	1.28	34.674	27.783	45.4	3.631		119.9									3553	02

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 5.1 N	122 39.6 W	10/07/2014	1108 UTC	4012 m	280 08 kn			1014.8 mb	18.0 C	15.9 C				019

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.00	19.00	33.456	23.842	405.1	0.000	5.40	235.6	101.6	2.5	0.28	0.0	0.01	0.02	0.08	0.01	0	
1	19.00	19.00	33.456	23.842	405.2	0.004	5.40	235.6	101.6	2.5	0.28	0.0	0.01	0.02	0.08	0.01	1	20
10	18.92	18.92	33.459	23.866	403.2	0.041	5.40	235.7	101.5	2.5	0.28	0.0	0.01	0.03	0.08	0.02	10	19
20 ISL	18.57 D	18.57	33.455 D	23.951	395.5	0.081	5.46	D237.9	D101.9	2.4	0.27	0.0	0.00	0.03	0.07	0.01	20	
25	18.60	18.60	33.470	23.956	395.3	0.100	5.45	238.2	101.9	2.4	0.27	0.0	0.00	0.03	0.07	0.01	25	18
30 ISL	18.47 D	18.47	33.460 D	23.980	393.1	0.121	5.43	D237.0	D101.3	2.4	0.27	0.0	0.00	0.04	0.08	0.02	30	
41	17.37	17.37	33.323	24.143	377.9	0.162	5.70	249.1	104.0	2.4	0.27	0.0	0.00	0.05	0.10	0.02	41	17
50	16.78	16.77	33.320	24.281	365.1	0.196	5.77	252.2	104.1	2.4	0.28	0.0	0.00	0.03	0.10	0.03	50	16
62	17.14	17.13	33.578	24.396	354.6	0.239	5.73	250.0	104.1	2.4	0.22	0.0	0.00	0.06	0.11	0.05	62	15
75 ISL	16.46 D	16.45	33.593 D	24.566	338.8	0.286	5.68	D247.6	D101.9	2.5	0.23	0.0	0.00	0.06	0.15	0.06	76	
76	16.43	16.41	33.601	24.581	337.5	0.287	5.68	248.1	101.9	2.5	0.23	0.0	0.00	0.06	0.15	0.06	77	14
86	15.08	15.07	33.450	24.766	319.9	0.320	5.77	252.0	100.6	2.7	0.29	0.0	0.00	0.07	0.15	0.07	87	13
100	13.88	13.86	33.403	24.985	299.3	0.364	5.73	250.1	97.4	3.2	0.37	0.2	0.01	0.08	0.18	0.11	101	12
113	12.67	12.66	33.330	25.170	281.8	0.401	5.56	242.8	92.2	4.4	0.55	2.7	0.14	0.18	0.16A	0.12A	114	11
124	12.25	12.23	33.311	25.238	275.6	0.432	5.48	239.1	90.0	5.0	0.61	4.1	0.16	0.04	0.16	0.11	125	10
125 ISL	12.23 D	12.21	33.307 D	25.238	275.6	0.438	5.46	D238.0	D 89.7	5.1	0.62	4.3	0.15	0.04	0.16	0.11	126	
139	11.23	11.21	33.319	25.433	257.2	0.472	5.26	229.9	84.6	7.1	0.80	7.7	0.03	0.07	0.13	0.13	140	09
150 ISL	10.67 D	10.65	33.369 D	25.570	244.2	0.504	5.18	D225.4	D 82.2	9.3	0.92	9.9	0.02	0.06	0.10	0.10	151	
170	10.27	10.25	33.572	25.798	223.0	0.547	4.66	203.2	73.4	13.3	1.15	14.0	0.00	0.03	0.05	0.06	171	08
199	9.25	9.23	33.737	26.096	194.9	0.607	4.09	178.7	63.2	20.6	1.52	19.9	0.00	0.05	0.01	0.02	201	07
200 ISL	9.22 D	9.20	33.756 D	26.116	193.1	0.614	4.00	D174.1	D 61.7	20.9	1.53	20.1	0.00	0.05			202	
230	8.58	8.55	33.920	26.346	171.6	0.664	3.21	140.3	48.9	30.0	1.88	25.3	0.00	0.06			232	06
250 ISL	8.23 D	8.20	33.968 D	26.437	163.2	0.703	3.03	D131.8	D 45.8	33.6	1.98	26.8	0.00	0.06			252	
270	7.93	7.90	33.986	26.496	157.8	0.729	2.83	123.6	42.5	37.3	2.08	28.2	0.00	0.06			272	05
300 ISL	7.49 D	7.46	34.018 D	26.585	149.7	0.782	2.26	D 98.1	D 33.5	44.0	2.30	30.9	0.00	0.05			302	
320	7.23	7.20	34.030	26.632	145.4	0.805	1.96	85.6	29.0	48.5	2.44	32.7	0.00	0.05			323	04
381	6.60	6.56	34.094	26.769	132.9	0.890	1.15	50.1	16.7	60.6	2.78	36.7	0.01	0.05			384	03
400 ISL	6.48 D	6.44	34.107 D	26.795	130.7	0.922	1.03	D 45.0	D 15.0	63.4	2.84	37.3	0.01	0.07			403	
441	6.17	6.13	34.139	26.861	124.8	0.967	0.79	34.4	11.4	69.4	2.96	38.7	0.00	0.10			445	02
500 ISL	5.75 D	5.70	34.194 D	26.958	116.0	1.047	0.53	D 23.0	D 7.6	78.5	3.11	40.1	0.00	0.12			504	
513	5.66	5.62	34.207	26.979	114.1	1.053	0.47	20.3	6.6	80.5	3.14	40.4	0.01	0.12			517	01

A) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
30 45.2 N	123 19.8 W	10/07/2014	0456	UTC	4061 m	280 07 kn			1015.6 mb	19.0 C	17.0 C				018

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.63	19.63	33.730	23.891	400.4	0.000	5.40	D235.5	D103.0	2.3	0.25	0.0	0.01	0.20	0.07	0.01	0	
1	19.63	19.63	33.730	23.891	400.5	0.004	5.40	D235.5	D103.0	2.3	0.25	0.0	0.01	0.20	0.07	0.01	1	21
10	19.56	19.56	33.729	23.909	399.1	0.040	5.37	234.3	102.3	2.3	0.26	0.0	0.01	0.08	0.07	0.01	10	19
20 ISL	19.20 D	19.19	33.750 D	24.018	389.1	0.062	5.43	D236.6	D102.7	2.3	0.30	0.0	0.01	0.09	0.07	0.01	20	
25	19.04	19.03	33.740	24.052	386.1	0.099	5.42	236.7	102.3	2.3	0.32	0.0	0.01	0.09	0.07	0.02	25	18
30 ISL	19.00 D	18.99	33.747 D	24.068	384.8	0.101	5.43	D236.9	D102.4	2.3	0.30	0.0	0.01	0.07	0.07	0.02	30	
40	18.86	18.85	33.738	24.098	382.3	0.157	5.42	236.7	101.9	2.3	0.25	0.0	0.01	0.02	0.07	0.02	40	17
50	18.79	18.78	33.720	24.101	382.4	0.195	5.42	236.8	101.9	2.3	0.27	0.0	0.02	0.11	0.08	0.01	50	16
62	18.02	18.01	33.740	24.309	363.0	0.239	5.56	242.8	102.9	2.3	0.25	0.0	0.01	0.06	0.10	0.03	62	15
75	17.71	17.70	33.822	24.447	350.3	0.286	5.63	245.9	103.7	2.4	0.23	0.0	0.01	0.07	0.10	0.03	76	14
87	17.15	17.13	33.831	24.591	337.0	0.327	5.61	245.1	102.2	2.5	0.25	0.0	0.01	0.07	0.14	0.04	88	13
100	16.52	16.51	33.812	24.722	324.9	0.370	5.65	246.5	101.5	2.7	0.27	0.0	0.00	0.07	0.17	0.10	101	12
112	14.60	14.58	33.612	24.996	298.9	0.407	5.64	246.2	97.5	3.1	0.31	0.1	0.01	0.06	0.23	0.18	113	11
124	13.88	13.86	33.602	25.140	285.4	0.443	5.51	240.6	93.9	3.6	0.39	1.0	0.10	0.07	0.21	0.19	125	10
125 ISL	14.10 D	14.08	33.592 D	25.087	290.5	0.431	5.51	D240.1	D 94.3	3.7	0.40	1.2	0.10	0.07	0.21	0.19	126	
140	12.76	12.74	33.511	25.295	270.7	0.488	5.31	231.8	88.3	5.3	0.57	4.2	0.15	0.03	0.16	0.18	141	09
150 ISL	11.97 D	11.95	33.490 D	25.430	258.0	0.500	5.11	D222.4	D 83.5	7.1	0.71	6.5	0.10	0.05	0.13	0.14	151	
170	10.75	10.73	33.563	25.709	231.6	0.563	4.85	211.8	77.3	10.6	0.98	11.1	0.01	0.08	0.08	0.07	171	08
200 ISL	9.61 D	9.58	33.693 D	26.005	203.8	0.615	4.20	D182.9	D 65.4	18.0	1.39	17.7	0.01	0.04	0.02	0.02	202	
201	9.57	9.54	33.696	26.013	203.0	0.630	4.26	185.9	66.2	18.3	1.40	17.9	0.01	0.04	0.02	0.02	203	07
230	8.84	8.82	33.872	26.268	179.2	0.686	3.57	156.0	54.7	26.4	1.75	23.1	0.01	0.04			232	06
250 ISL	8.54 D	8.51	33.939 D	26.368	169.9	0.708	3.28	D142.8	D 49.9	31.0	1.92	25.4	0.01	0.04			252	
270	8.25	8.22	33.983	26.446	162.7	0.754	2.72	118.6	41.1	35.6	2.09	27.7	0.01	0.04			272	05
300 ISL	7.87 D	7.83	34.025 D	26.537	154.5	0.790	2.27	D 98.9	D 34.1	41.5	2.27	30.2	0.00	0.04			302	
320	7.58	7.54	34.045	26.595	149.2	0.832	1.97	85.9	29.3	45.5	2.39	31.8	0.00	0.04			323	04
380	6.92	6.89	34.095	26.727	137.2	0.918	1.30	56.9	19.1	56.6	2.71	35.3	0.00	0.04			383	03
400 ISL	6.67 D	6.63	34.104 D	26.768	133.4	0.935	1.18	D 51.3	D 17.2	60.1	2.79	36.2	0.00	0.05			403	
440	6.33	6.29	34.136	26.838	127.1	0.997	0.87	37.8	12.5	67.1	2.94	38.0	0.01	0.06			444	02
500 ISL	5.87 D	5.82	34.184 D	26.935	118.3	1.061	0.60	D 26.3	D 8.6	76.7	3.08	39.6	0.00	0.08			504	
514	5.74	5.70	34.198	26.962	115.8	1.087	0.52	22.8	7.5	78.9	3.11	40.0	0.00	0.08			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
30 25.1 N	123 59.9 W	09/07/2014	2231	UTC	4323 m	020 03 kn	350 04 07	2	1016.0 mb	20.0 C	18.1 C	34 m	8/8	ST	017

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.63	19.63	33.575	23.772	411.8	0.000	5.36	234.3	102.3	2.4	0.29	0.0	0.01	0.06	0.07	0.01	0	
1	19.63	19.63	33.575	23.772	411.8	0.004	5.36	234.3	102.3	2.4	0.29	0.0	0.01	0.06	0.07	0.01	1	22
1	19.63	19.63	33.576	23.773	411.7	0.004	5.36	234.2	102.3								1	23
10	19.37	19.37	33.550	23.821	407.5	0.041	5.38	235.0	102.1	2.4	0.29	0.0	0.01	0.04	0.07	0.01	10	20
10	19.37	19.37	33.551	23.822	407.4	0.040											10	21
20 ISL	19.11 D	19.11	33.539 D	23.880	402.3	0.043	5.42	D236.5	D102.3	2.4	0.30	0.0	0.01	0.07	0.07	0.01	20	
24	19.10	19.09	33.541	23.885	402.0	0.098	5.41	236.2	102.1	2.4	0.31	0.0	0.02	0.08	0.07	0.01	24	19
30 ISL	19.05 D	19.04	33.545 D	23.901	400.7	0.083	5.42	D236.3	D102.1	2.4	0.30	0.0	0.01	0.20	0.08	0.01	30	
39	19.02	19.02	33.548 D	23.910	400.2	0.120	5.42	236.7	102.2	2.4	0.28	0.0	0.01	0.39	0.10	0.02	39	18
50	18.93	18.92	33.683	24.038	388.5	0.201	5.43	236.9	102.2	2.4	0.27	0.0	0.01	0.08	0.11	0.02	50	17
62	17.27	17.26	33.508	24.312	362.6	0.246	5.74	250.6	104.5	2.4	0.27	0.0	0.01	0.02	0.10	0.02	62	16
75	17.03	17.02	33.599	24.438	351.1	0.293	5.73	250.1	103.9	2.4	0.27	0.0	0.00	0.10	0.12	0.04	76	15
87	16.27	16.25	33.626	24.637	332.4	0.334	5.70	249.0	101.9	2.5	0.27	0.0	0.00	0.05	0.15	0.07	88	14
99	15.54	15.53	33.647	24.817	315.6	0.373	5.62	245.2	98.9	2.9	0.30	0.1	0.00	0.06	0.24	0.15	100	12
100 ISL	15.24 D	15.23	33.636 D	24.874	310.2	0.338	5.62	D244.9	D 98.4	3.0	0.30	0.1	0.01	0.06	0.24	0.15	101	
101	15.19	15.17	33.641	24.891	308.6	0.378											102	13
111	14.65	14.63	33.672	25.032	295.4	0.409	5.51	240.4	95.3	3.3	0.34	0.5	0.08	0.09	0.21	0.14	112	11
125	13.70	13.68	33.511	25.106	288.6	0.450	5.47	238.8	92.7	4.0	0.46	2.0	0.20	0.05	0.17	0.15	126	10
140	12.26	12.24	33.411	25.313	268.9	0.492	5.24	229.0	86.2	6.0	0.69	5.9	0.06	0.07	0.13	0.22	141	09
150 ISL	11.41 D	11.39	33.436 D	25.492	251.9	0.464	5.13	D223.3	D 82.8	8.0	0.84	8.3	0.05	0.08	0.10	0.17	151	
170	10.54	10.52	33.456	25.661	236.0	0.566	4.69	204.9	74.4	12.0	1.14	13.2	0.02	0.11	0.05	0.06	171	08
200	9.56	9.54	33.659	25.986	205.5	0.633	4.04	176.3	62.7	19.4	1.51	19.2	0.01	0.06	0.01	0.03	202	07
230	9.02	8.99	33.817	26.197	185.9	0.691	3.59	156.6	55.1	24.9	1.72	22.8	0.01	0.05			232	06
250 ISL	8.69 D	8.67	33.925 D	26.333	173.3	0.675	3.18	D138.4	D 48.5	29.1	1.86	24.9	0.01	0.06			252	
270	8.33	8.30	33.969	26.423	165.0	0.761	2.95	128.9	44.7	33.4	1.99	26.9	0.00	0.06			272	05
300 ISL	7.87 D	7.84	34.020 D	26.532	154.9	0.757	2.39	D104.1	D 35.9	40.5	2.24	29.8	0.01	0.05			302	
320	7.56	7.53	34.053	26.604	148.3	0.839	1.94	84.5	28.8	45.3	2.41	31.8	0.01	0.04			323	04
380	6.80	6.76	34.105	26.751	134.8	0.924	1.18	51.6	17.3	58.6	2.75	36.0	0.00	0.04			383	03
400 ISL	6.73 D	6.69	34.128 D	26.779	132.4	0.900	1.05	D 45.8	D 15.4	61.4	2.81	36.7	0.00	0.04			403	
441	6.39	6.35	34.157	26.847	126.3	1.004	0.79	34.3	11.4	67.3	2.92	38.2	0.00	0.03			445	02
500 ISL	6.02 D	5.98	34.218 D	26.943	117.8	1.027	0.54	D 23.4	D 7.7	74.8	3.09	39.5	0.01	0.05			504	
514	5.95	5.91	34.230	26.962	116.1	1.092	0.48	21.0	6.9	76.5	3.13	39.8	0.01	0.06			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 57.3 N	117 18.5 W	06/07/2014	1829	UTC	68 m	290 08 kn	300 02 06	1	1015.0 mb	24.3 C	22.8 C	23 m	1/8	CU	001

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	22.57	22.57	33.659	23.042	481.5	0.000	5.36	233.8	107.8	1.9	0.28	0.0	0.08	0.72	0.17	0.04	0	
2 A	22.57	22.56	33.659	23.043	481.5	0.010	5.36	233.8	107.8	1.9	0.28	0.0	0.08	0.72	0.17	0.04	2	10
10 ISL	19.54 D	19.54	33.590 D	23.808	408.8	0.046	5.61	D244.9	D106.8	2.1	0.30	0.0	0.07	0.34	0.14	0.03	10	
12	19.46	19.46	33.577	23.819	407.8	0.052											12	11
13 A	17.90	17.90	33.574	24.206	370.9	0.057	5.64	246.3	104.1	2.1	0.31	0.0	0.06	0.20	0.13	0.03	13	08
17 A	15.88	15.88	33.455	24.588	334.6	0.071	6.47	282.6	114.7	3.4	0.32	0.0	0.06	0.47	0.28	0.11	17	07
20 ISL	15.03 D	15.02	33.432 D	24.760	318.3	0.076	6.52	D283.9	D113.5	3.9	0.35	0.0	0.07	0.83	0.43	0.19	20	
25	14.20	14.19	33.410 D	24.919	303.3	0.092	6.46	281.9	110.6	4.8	0.39	0.0	0.08	1.43	0.69	0.33	25	06
30 ISL	13.14 D	13.13	33.366 D	25.102	285.9	0.106	6.14	D267.7	D102.9	5.3	0.54	1.9	0.11	1.30	1.23	0.52	30	
32 A	13.03	13.03	33.374	25.129	283.4	0.117	5.84	255.2	97.7	5.5	0.60	2.7	0.12	1.25	1.45	0.60	32	04
32	13.03	13.03	33.371	25.127	283.6	0.117											32	05
39	12.33	12.33	33.377	25.268	270.4	0.137	5.17	225.6	85.1	7.8	0.84	6.7	0.19	0.82	0.89	0.47	39	03
50	12.07	12.06	33.415	25.348	263.1	0.166	5.09	222.2	83.4	8.5	0.90	6.8	0.29	0.90	1.04	0.70	50	02
66 A	11.56	11.56	33.456	25.474	251.4	0.207	4.36	190.2	70.6	12.0	1.20	12.2	0.46	0.57	0.49	0.44	67	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 54.6 N	117 24.0 W	06/07/2014	2156 UTC	613 m	290 09 kn	260 02 05	1	1013.0 mb	24.0 C	22.0 C	30 m	2/8	CU	003

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	22.67	22.67	33.650	23.006	485.0	0.000	5.30	231.3	106.8	2.1	0.31	0.1	0.01	0.29	0.16	0.02	0	
2	22.67	22.67	33.650	23.006	485.0	0.010	5.30	231.3	106.8	2.1	0.31	0.1	0.01	0.29	0.16	0.02	2	20
10	19.70	19.70	33.590	23.767	412.6	0.046	5.53	241.2	105.5	2.1	0.31	0.0	0.08	0.32	0.11	0.02	10	19
20	16.37	16.36	33.465	24.486	344.5	0.084	6.04	263.8	108.1	2.2	0.38	0.0	0.08	0.18	0.15	0.04	20	18
30	14.32	14.32	33.450	24.924	303.0	0.116	6.01	262.3	103.2	6.1	0.54	1.0	0.10	0.86	2.47	0.82	30	17
41	13.26	13.26	33.448	25.141	282.6	0.148	5.52	241.1	92.8	7.0	0.70	2.4	0.18	1.77	1.26	0.67	41	16
50 ISL	11.96 D	11.95	33.436 D	25.386	259.5	0.174	4.60	D200.4 D	75.2	9.4	1.07	7.8	0.35	2.06	0.47	0.36	50	
51	11.92	11.92	33.441	25.396	258.5	0.175	4.53	197.8	74.0	9.7	1.11	8.4	0.37	2.09	0.38	0.33	51	15
60	11.61	11.60	33.465	25.473	251.4	0.198	4.23	184.7	68.7	11.7	1.23	11.9	0.50	0.93	0.34	0.38	60	14
70	11.28	11.27	33.510	25.569	242.5	0.223	3.92	171.1	63.2	13.8	1.36	14.7	0.38	0.20	0.27	0.32	71	13
75 ISL	11.11 D	11.10	33.552 D	25.632	236.6	0.237	3.77	D164.0 D	60.5	14.9	1.43	15.8	0.31	0.31	0.24	0.30	76	
85	11.01	11.00	33.583	25.674	232.8	0.258	3.41	149.0	54.7	17.0	1.57	17.9	0.18	0.52	0.18	0.26	86	12
100	10.45	10.44	33.712	25.873	214.2	0.292	3.08	134.4	48.8	21.0	1.75	20.6	0.09	0.42	0.08	0.12	101	11
120	10.42	10.41	33.827	25.970	205.5	0.334	2.59	113.2	41.1	24.4	1.93	22.6	0.08	0.49	0.04	0.11	121	10
125 ISL	10.34 D	10.32	33.829 D	25.985	204.1	0.346	2.64	D115.0 D	41.8	24.9	1.95	22.9	0.08	0.46	0.04	0.11	126	
140	10.11	10.09	33.870 D	26.057	197.6	0.377	2.68	D116.5 D	42.1								141	09
150 ISL	10.02 D	10.01	33.935 D	26.123	191.6	0.396	2.55	D110.9 D	40.1	27.3	2.06	24.1	0.08	0.29	0.03	0.08	151	
170	10.07	10.05	34.042	26.199	184.9	0.431	2.10	91.5	33.0	29.2	2.15	25.1	0.08	0.16	0.01	0.06	171	08
200	10.11	10.08	34.123	26.257	180.1	0.486	1.67	72.9	26.4	31.8	2.29	26.5	0.06	0.19	0.01	0.08	202	07
230	10.03	10.01	34.187 D	26.321	174.8	0.543	1.55	D 67.6 D	24.5								232	06
250 ISL	10.06 D	10.03	34.248 D	26.365	171.2	0.578	1.27	D 55.1 D	20.0	34.8	2.43	27.6	0.07	0.13			252	
270	9.94	9.91	34.274	26.406	167.7	0.608	1.15	50.3	18.1	36.0	2.48	28.0	0.08	0.11			272	05
300 ISL	9.88 D	9.84	34.298 D	26.437	165.4	0.662	1.07	D 46.5 D	16.8	37.7	2.55	28.5	0.08	0.25			302	
320	9.71	9.67	34.319	26.483	161.5	0.690	0.99	43.1	15.5	38.9	2.59	28.8	0.07	0.35			323	04
380	9.21	9.17	34.309	26.557	155.5	0.785	0.86	37.6	13.3	42.2	2.65	30.0	0.09	0.23			383	03
400 ISL	8.89 D	8.85	34.300 D	26.601	151.4	0.823	0.84	D 36.6 D	12.9	45.2	2.71	30.9	0.09	0.26			403	
440	8.26	8.21	34.308	26.706	141.7	0.875	0.63	27.6	9.6	51.2	2.82	32.7	0.09	0.32			444	02
500 ISL	7.67 D	7.62	34.299 D	26.786	134.7	0.966	0.56	D 24.3 D	8.3	57.0	2.91	34.5	0.07	0.18			504	
515	7.56	7.50	34.294	26.799	133.5	0.978	0.53	23.1	7.9	58.4	2.93	35.0	0.07	0.14			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 50.9 N	117 32.0 W	07/07/2014	0205 UTC	854 m	280 06 kn	330 02 06	1	1012.0 mb	23.0 C	20.0 C		1/8	CU	004

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	22.75	22.75	33.667	22.996	485.9	0.000	5.60	244.5	113.1	1.9	0.26	0.0	0.02	0.12	0.17	0.04	0	
2	22.75	22.75	33.667	22.996	485.9	0.010	5.60	244.5	113.1	1.9	0.26	0.0	0.02	0.12	0.17	0.04	2	20
10	21.67	21.67	33.638	23.277	459.5	0.048	6.01	262.2	119.0	1.5	0.17	0.1	0.02	0.10	0.25	0.05	10	19
20	16.66	16.66	33.499	24.445	348.4	0.088	7.07	308.4	127.2	2.7	0.17	0.1	0.01	0.14	1.04	0.35	20	18
30	14.39	14.38	33.399	24.872	307.9	0.121	6.45	281.7	110.9	4.4	0.37	0.1	0.02	0.17	1.17	0.30	30	17
40	13.23	13.22	33.408	25.117	284.8	0.150	5.83	254.7	97.9	6.1	0.58	2.6	0.16	0.32	1.34	0.43	40	16
50	12.06	12.06	33.431	25.362	261.8	0.178	4.76	207.6	77.9	9.4	0.98	8.9	0.48	0.51	0.88	0.37	50	15
60	11.29	11.28	33.450	25.519	247.0	0.203	4.35	189.7	70.0	11.6	1.17	12.9	0.20	0.15	0.24	0.18	60	14
70	11.03	11.02	33.514	25.617	237.9	0.227	3.99	174.3	64.0	14.2	1.33	15.3	0.10	0.19	0.23	0.18	71	13
75 ISL	10.81 D	10.80	33.609 D	25.730	227.2	0.241	3.64	D158.3 D	58.1	15.9	1.42	16.6	0.09	0.18	0.18	0.15	76	
85	10.65	10.63	33.675	25.810	219.8	0.261	3.32	144.8	52.8	19.1	1.61	19.2	0.06	0.17	0.10	0.09	86	12
100 ISL	10.56 D	10.55	33.775 D	25.904	211.3	0.296	2.87	D125.0 D	45.6	22.1	1.79	21.1	0.06	0.10	0.06	0.10	101	
101	10.56	10.55	33.775	25.904	211.3	0.296	2.85	124.4	45.3	22.3	1.80	21.2	0.06	0.10	0.06	0.10	102	11
120	10.35	10.34	33.882	26.024	200.3	0.335	2.38	103.9	37.7	25.6	2.00	23.5	0.06	0.27	0.05	0.13	121	10
125 ISL	10.26 D	10.24	33.877 D	26.036	199.3	0.347	2.53	D110.2 D	40.0	26.4	2.04	23.9	0.05	0.28	0.04	0.12	126	
140	10.30	10.29	34.004	26.128	190.9	0.374	1.97	85.9	31.2	28.8	2.15	25.0	0.03	0.30	0.02	0.10	141	09
150 ISL	10.20 D	10.18	34.039 D	26.175	186.8	0.396	1.94	D 84.4 D	30.6	29.3	2.17	25.3	0.03	0.23	0.02	0.09	151	
170	10.15	10.13	34.071	26.208	184.1	0.430	1.83	80.0	28.9	30.4	2.22	25.9	0.03	0.10	0.01	0.07	171	08
200	9.85	9.83	34.097	26.280	177.9	0.484	2.00	87.3	31.4	31.1	2.21	26.3	0.03	0.39	0.01	0.05	202	07
230	9.97	9.94	34.201	26.342	172.7	0.537	1.33	57.9	20.9	34.1	2.40	27.5	0.02	0.45			232	06
250 ISL	9.87 D	9.85	34.227 D	26.380	169.6	0.576	1.27	D 55.3 D	19.9	35.5	2.46	28.1	0.02	0.33			252	
270	9.84	9.81	34.278	26.426	165.8	0.605	1.05	45.9	16.5	36.9	2.51	28.6	0.02	0.21			272	05
300 ISL	9.53 D	9.49	34.248 D	26.456	163.4	0.659	1.11	D 48.3 D	17.3	38.3	2.55	28.9	0.02	0.35			302	
320	9.61	9.57	34.308	26.490	160.7	0.686	0.95	41.5	14.8	39.2	2.57	29.1	0.02	0.45			323	04
380	9.15	9.11	34.322	26.576	153.5	0.781	0.79	34.6	12.3	43.2	2.68	30.2	0.03	0.14			383	03
400 ISL	8.91 D	8.87	34.309 D	26.605	151.0	0.818	0.80	D 34.8 D	12.3	45.0	2.72	30.9	0.03	0.17			403	
440	8.50	8.45	34.314	26.674	145.0	0.870	0.67	29.4	10.3	48.7	2.79	32.3	0.02	0.23			444	02
500 ISL	7.74 D	7.69	34.300 D	26.777	135.6	0.963	0.56	D 24.4 D	8.4	56.9	2.93	34.7	0.03	0.26			504	
515	7.53	7.48	34.297	26.805	133.0	0.975	0.51	22.2	7.6	58.9	2.97	35.3	0.03	0.27			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 41.0 N	117 52.7 W	07/07/2014	0617 UTC	619 m	280 04 kn			1013.0 mb	21.5 C	20.0 C				005

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.25	20.25	33.641	23.662	422.3	0.000	5.34	232.9	102.9	1.5	0.27	0.0	0.02	0.17	0.14	0.02	0	
3	20.25	20.24	33.641	23.663	422.4	0.013	5.34	232.9	102.9	1.5	0.27	0.0	0.02	0.17	0.14	0.02	3	20
10	19.38	19.38	33.619	23.872	402.7	0.042	5.43	237.2	103.1	2.0	0.30	0.0	0.01	0.09	0.10	0.02	10	19
20	18.00	17.99	33.567	24.178	373.9	0.080	5.66	247.0	104.6	2.2	0.31	0.0	0.01	0.12	0.12	0.03	20	18
30	16.11	16.10	33.484	24.561	337.7	0.116	6.02	262.8	107.2	2.1	0.36	0.0	0.02	0.15	0.18	0.07	30	17
40	14.00	14.00	33.394	24.949	300.9	0.148	5.72	249.6	97.5	3.3	0.60	2.8	0.29	0.36	0.46	0.17	40	16
50 ISL	13.58 D	13.57	33.386 D	25.030	293.5	0.179	5.63	D245.1 D	95.1	3.9	0.67	3.8	0.45	0.45	0.47	0.20	50	
51	13.44	13.43	33.383	25.057	290.9	0.181	5.63	245.5	94.8	4.0	0.68	3.9	0.46	0.46	0.48	0.20	51	15
60	12.51	12.50	33.365	25.227	274.9	0.206	5.25	228.9	86.7	6.4	0.86	7.5	0.42	0.12	0.36	0.18	60	14
70	11.59	11.58	33.336	25.377	260.7	0.233	5.08	221.8	82.4	7.7	0.96	9.2	0.13	0.10	0.26	0.16	71	13
75 ISL	11.35 D	11.34	33.331 D	25.418	257.0	0.248	4.92	D214.4 D	79.4	9.0	1.03	10.5	0.11	0.11	0.23	0.17	76	
86	11.12	11.11	33.408	25.519	247.6	0.274	4.47	194.9	71.7	11.8	1.18	13.4	0.07	0.14	0.15	0.21	87	12
100 ISL	10.73 D	10.72	33.547 D	25.697	231.0	0.309	3.87	D168.5 D	61.6	15.6	1.43	16.9	0.06	0.17	0.08	0.09	101	
101	10.69	10.68	33.547	25.704	230.3	0.309	3.79	165.4	60.3	15.8	1.45	17.1	0.06	0.17	0.08	0.08	102	11
119	9.98	9.97	33.670	25.922	209.9	0.349	3.53	154.2	55.4	20.1	1.63	20.2	0.06	0.10	0.03	0.05	120	10
125 ISL	9.86 D	9.84	33.715 D	25.978	204.7	0.364	3.46	D150.6 D	54.1	21.2	1.68	20.9	0.05	0.11	0.03	0.04	126	
140	9.58	9.56	33.786	26.080	195.3	0.391	3.18	138.8	49.5	23.9	1.80	22.7	0.04	0.13	0.02	0.04	141	09
150 ISL	9.45 D	9.43	33.810 D	26.120	191.7	0.414	3.17	D137.8 D	49.1	26.3	1.94	23.9	0.03	0.18	0.01	0.04	151	
170	9.86	9.84	34.098	26.278	177.3	0.448	2.00	87.3	31.4	31.0	2.22	26.4	0.03	0.27	0.00	0.03	171	08
200	8.83	8.80	34.042	26.402	165.8	0.499	2.18	95.0	33.4	34.9	2.20	28.2	0.02	0.10	0.00	0.03	202	07
231	8.64	8.61	34.112	26.487	158.3	0.549	1.87	81.6	28.5	38.7	2.34	29.5	0.01	0.15			233	06
250 ISL	8.60 D	8.57	34.137 D	26.514	156.2	0.583	1.77	D 77.0 D	27.0	40.8	2.41	30.2	0.01	0.16			252	
271	8.33	8.30	34.152	26.568	151.4	0.611	1.55	67.6	23.5	43.2	2.48	31.0	0.02	0.18			273	05
300 ISL	8.41 D	8.38	34.239 D	26.624	146.7	0.659	1.11	D 48.1 D	16.8	47.1	2.57	32.2	0.01	0.17			302	
321	8.14	8.11	34.232 D	26.660	143.6	0.690	1.04	D 45.0 D	15.6								324	04
379	7.19	7.15	34.190	26.765	133.9	0.766	0.88	38.5	13.0	57.9	2.82	35.5	0.01	0.13			382	03
400 ISL	7.31 D	7.27	34.236 D	26.785	132.5	0.799	0.70	D 30.2 D	10.3	60.0	2.87	35.9	0.01	0.14			403	
441	6.96	6.92	34.258	26.851	126.6	0.847	0.52	22.7	7.6	63.9	2.97	36.8	0.02	0.17			445	02
500 ISL	6.53 D	6.49	34.291 D	26.936	119.1	0.926	0.37	D 16.1 D	5.4	70.2	3.08	38.2	0.02	0.21			504	
514	6.51	6.46	34.298	26.945	118.5	0.936	0.33	14.5	4.8	71.7	3.10	38.5	0.02	0.22			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 30.8 N	118 12.8 W	07/07/2014	1031 UTC	1652 m	280 07 kn			1012.0 mb	19.2 C	18.1 C				006

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.02	20.02	33.640	23.721	416.6	0.000	5.40	235.7	103.7	2.0	0.31	0.0	0.02	0.07	0.13	0.02	0	
2	20.02	20.02	33.640	23.722	416.7	0.008	5.40	235.7	103.7	2.0	0.31	0.0	0.02	0.07	0.13	0.02	2	21
10	19.45	19.45	33.626	23.859	403.9	0.041	5.49	239.5	104.3	2.3	0.32	0.0	0.01	0.10	0.12	0.02	10	19
11	19.45	19.45	33.626	23.859	403.9	0.043											10	20
20	17.22	17.21	33.592	24.385	354.1	0.079	5.73	250.1	104.3	2.8	0.34	0.0	0.01	0.10	0.13	0.04	20	18
30	16.32	16.31	33.555	24.567	337.1	0.114	5.79	252.7	103.6	3.1	0.39	0.3	0.05	0.29	0.22	0.07	30	17
40	15.04	15.03	33.507	24.816	313.6	0.146	5.65	246.5	98.4	3.9	0.54	2.2	0.26	0.40	0.39	0.15	40	16
50 ISL	14.01 D	14.00	33.480 D	25.014	295.0	0.158	5.32	D231.8 D	90.8	4.9	0.71	4.3	0.60	0.42	0.40	0.25	50	
51	13.99	13.98	33.489	25.025	294.0	0.180	5.38	234.6	91.7	5.0	0.73	4.5	0.64	0.42	0.40	0.26	51	15
59	13.04	13.03	33.424	25.169	280.5	0.203	5.10	222.5	85.2	6.3	0.89	7.7	0.46	0.08	0.44	0.30	59	14
70	11.42	11.41	33.355	25.424	256.3	0.232	4.81	209.9	77.6	9.7	1.10	11.9	0.06	0.06	0.24	0.18	71	13
75 ISL	11.04 D	11.03	33.322 D	25.465	252.4	0.226	4.86	D211.7 D	77.9	10.5	1.14	12.5	0.05	0.07	0.21	0.17	76	
85	10.64	10.63	33.370	25.574	242.2	0.269	4.63	202.3	73.6	12.1	1.21	13.8	0.05	0.10	0.14	0.13	86	12
100	10.15	10.14	33.469	25.735	227.3	0.305	4.27	186.3	67.1	15.1	1.38	16.4	0.04	0.09	0.08	0.08	101	11
119	9.89	9.87	33.694	25.956	206.7	0.346	3.49	152.5	54.7	20.8	1.68	20.7	0.04	0.12	0.04	0.05	120	10
125 ISL	9.89 D	9.87	33.734 D	25.987	203.8	0.341	3.36	D146.3 D	52.6	22.2	1.74	21.5	0.04	0.13	0.03	0.05	126	
141	9.68	9.66	33.879	26.137	190.0	0.390	2.85	124.4	44.5	25.8	1.90	23.7	0.03	0.15	0.01	0.04	142	09
150 ISL	9.44 D	9.42	33.871 D	26.169	187.1	0.389	2.95	D128.6 D	45.8	27.0	1.95	24.4	0.03	0.14	0.01	0.04	151	
170	9.25	9.23	33.966	26.275	177.4	0.443	2.53	110.3	39.1	29.7	2.06	25.9	0.03	0.13	0.00	0.03	171	08
200 ISL	8.88 D	8.86	34.074 D	26.419	164.3	0.478	2.13	D 92.8 D	32.7	35.4	2.22	28.0	0.02	0.11	0.00	0.03	202	
201	8.87	8.84	34.079	26.425	163.7	0.496	2.10	91.6	32.2	35.6	2.23	28.1	0.02	0.11	0.00	0.03	203	07
231	8.69	8.66	34.120	26.486	158.5	0.544	1.87	81.4	28.5	38.1	2.34	29.2	0.01	0.07			233	06
250 ISL	8.42 D	8.39	34.135 D	26.539	153.6	0.558	1.72	D 74.6 D	26.0	41.3	2.44	30.3	0.02	0.08			252	
271	8.18	8.15	34.161	26.597	148.5	0.606	1.44	62.7	21.7	44.9	2.55	31.6	0.02	0.09			273	05
300 ISL	7.91 D	7.88	34.172 D	26.646	144.3	0.633	1.20	D 52.3 D	18.1	48.4	2.64	32.8	0.02	0.08			302	
321	7.77	7.74	34.189	26.681	141.3	0.678	1.07	46.5	16.0	50.8	2.70	33.6	0.01	0.08			324	04
379	7.41	7.37	34.260	26.790	131.8	0.757	0.64	27.8	9.5	58.0	2.88	35.1	0.01	0.09			382	03
400 ISL	7.33 D	7.29	34.285 D	26.820	129.2	0.771	0.54	D 23.6 D	8.1	60.4	2.93	35.8	0.01	0.10			403	
440	6.99	6.95	34.292	26.875	124.4	0.835	0.42	18.4	6.2	65.1	3.02	37.0	0.01	0.13			444	02
500 ISL	6.57 D	6.52	34.308 D	26.945	118.3	0.895	0.34	D 14.6 D	4.9	72.0	3.13	38.7	0.01	0.11			504	
514	6.41	6.36	34.318	26.974	115.6	0.924	0.28	12.4	4.1	73.6	3.16	39.1	0.01	0.10			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 20.8 N	118 33.3 W	07/07/2014	1436	UTC	1356 m	280 10 kn	300 03 06	1	1013.0 mb	18.7 C	17.3 C	19 m	6/8	SC	007

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.62	19.62	33.636	23.821	407.1	0.000	5.42	236.7	103.4	2.3	0.30	0.0	0.03	0.08	0.16	0.03	0	
2	19.62	19.62	33.636	23.821	407.2	0.008	5.42	236.7	103.4	2.3	0.30	0.0	0.03	0.08	0.16	0.03	2	21
10	18.41	18.41	33.626	24.121	378.9	0.040	5.53	241.5	103.1	2.5	0.30	0.0	0.02	0.08	0.17	0.03	10	19
10	18.41	18.41	33.628	24.122	378.8	0.038											10	22
20	17.13	17.13	33.561	24.381	354.5	0.076	5.73	250.0	104.1	2.6	0.34	0.0	0.00	0.10	0.24	0.06	20	18
30	15.64	15.63	33.500	24.678	326.5	0.110	5.88	256.8	103.8	2.6	0.37	0.0	0.02	0.10	0.29	0.13	30	17
39	13.72	13.71	33.379	24.996	296.4	0.138	5.65	246.4	95.7	3.9	0.61	2.8	0.36	0.19	0.63	0.39	39	16
50	12.35	12.34	33.437	25.313	266.4	0.169	4.94	215.5	81.4	7.6	0.94	9.7	0.25	0.19	0.47	0.36	50	15
60	12.02	12.01	33.463	25.395	258.9	0.195	4.60	200.8	75.3	10.6	1.19	12.8	0.08	0.14	0.29	0.19	60	14
69	11.16	11.15	33.464	25.555	243.7	0.218	4.44	193.7	71.3	12.6	1.31	14.6	0.05	0.10	0.19	0.14	70	13
75 ISL	10.68 D	10.67	33.452 D	25.631	236.6	0.215	4.46	D194.2 D	70.9	13.6	1.35	15.3	0.04	0.11	0.15	0.12	76	
84	10.38	10.37	33.463	25.691	231.0	0.253	4.26	186.0	67.3	15.0	1.42	16.4	0.04	0.12	0.09	0.08	85	12
100 ISL	10.03 D	10.02	33.533 D	25.805	220.6	0.273	4.02	D174.9 D	63.0	17.1	1.50	18.0	0.04	0.09	0.05	0.06	101	
101	10.01	10.00	33.536	25.811	220.0	0.292	4.07	177.5	63.8	17.2	1.50	18.1	0.04	0.09	0.05	0.05	102	11
119	10.03	10.02	33.724	25.956	206.7	0.330	3.29	143.7	51.7	21.8	1.76	21.3	0.04	0.18	0.03	0.04	120	10
125 ISL	9.86 D	9.85	33.803 D	26.046	198.3	0.325	3.10	D134.8 D	48.5	22.8	1.79	22.0	0.04	0.15	0.03	0.04	126	
140	9.45	9.44	33.812	26.121	191.4	0.371	3.05	133.2	47.3	25.5	1.88	23.7	0.02	0.07	0.01	0.04	141	09
150 ISL	9.27 D	9.25	33.865 D	26.192	184.8	0.374	3.01	D131.1 D	46.6	26.5	1.90	24.1	0.03	0.09	0.01	0.03	151	
169	9.06	9.04	33.901	26.254	179.2	0.425	2.95	128.7	45.4	28.5	1.94	25.0	0.04	0.13	0.00	0.03	170	08
200	8.65	8.63	34.041	26.429	163.1	0.478	2.12	92.6	32.4	36.1	2.27	28.8	0.03	0.06	0.00	0.03	202	07
230	8.37	8.35	34.130	26.543	152.9	0.525	1.64	71.7	24.9	41.4	2.46	30.9	0.02	0.10			232	06
250 ISL	8.31 D	8.29	34.158 D	26.574	150.4	0.540	1.43	D 62.3 D	21.7	43.9	2.56	31.5	0.02	0.09			252	
270	8.28	8.25	34.206	26.617	146.6	0.585	1.17	50.9	17.7	46.4	2.65	32.1	0.02	0.07			272	05
300 ISL	8.28 D	8.25	34.259 D	26.659	143.3	0.614	0.92	D 39.9 D	13.9	48.8	2.75	32.6	0.02	0.09			302	
320	8.19	8.15	34.285	26.694	140.3	0.657	0.75	32.9	11.4	50.5	2.81	32.9	0.02	0.10			323	04
379	7.34	7.31	34.284	26.817	129.1	0.737	0.52	22.6	7.7	60.0	2.96	35.7	0.02	0.11			382	03
400 ISL	7.22 D	7.18	34.286 D	26.837	127.5	0.750	0.50	D 21.8 D	7.4	62.1	3.01	36.3	0.02	0.10			403	
440	6.98	6.94	34.321	26.899	122.1	0.814	0.34	14.9	5.0	66.3	3.10	37.3	0.02	0.08			444	02
500 ISL	6.46 D	6.42	34.320 D	26.968	116.0	0.872	0.30	D 12.9 D	4.3	73.3	3.16	38.8	0.01	0.11			504	
514	6.37	6.32	34.326	26.985	114.5	0.901	0.26	11.2	3.7	74.9	3.17	39.1	0.01	0.12			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 10.7 N	118 53.6 W	07/07/2014	1856	UTC	1466 m	300 08 kn	340 03 05	2	1013.6 mb	18.4 C	17.7 C	19 m	7/8	ST	008

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.46	19.46	33.630	23.858	403.6	0.000	5.48	239.0	104.1	2.4	0.30	0.0	0.02	0.12	0.15	0.02	0	
2 A	19.46	19.46	33.630	23.858	403.7	0.008	5.48	239.0	104.1	2.4	0.30	0.0	0.02	0.12	0.15	0.02	2	24
10 ISL	19.01 D	19.01	33.617 D	23.963	394.0	0.040	5.54	D241.7 D	104.5	2.6	0.33	0.0	0.02	0.21	0.19	0.04	10	
11 A	18.30	18.29	33.615	24.141	377.1	0.044	5.60	244.3	104.1	2.6	0.33	0.0	0.02	0.22	0.19	0.04	11	22
11	18.30	18.29	33.609	24.136	377.5	0.042											11	23
14 A	17.39	17.39	33.583	24.336	358.6	0.055	5.71	249.2	104.3	2.9	0.35	0.0	0.02	0.31	0.21	0.05	14	21
20	17.21	17.21	33.558	24.360	356.5	0.076	5.78	252.4	105.3	2.9	0.34	0.0	0.03	0.18	0.25	0.06	20	20
27 A	16.94	16.94	33.552	24.419	351.1	0.101	5.78	252.5	104.7	2.8	0.35	0.0	0.01	0.16	0.29	0.08	27	19
30 ISL	16.67 D	16.67	33.541 D	24.474	346.0	0.107	5.82	D253.8 D	104.9	3.4	0.40	0.5	0.05	0.20	0.45	0.14	30	
36	14.89	14.89	33.543	24.875	307.9	0.133											36	18
37	14.28	14.28	33.535	24.999	296.1	0.134	5.85	255.4	100.5	4.6	0.52	1.6	0.15	0.29	0.83	0.28	37	17
47	12.29	12.28	33.452	25.336	264.2	0.162	4.93	215.4	81.2	8.4	1.02	10.1	0.17	0.13	0.56	0.33	47	16
50 ISL	11.99 D	11.98	33.437 D	25.381	259.9	0.155	4.87	D211.9 D	79.6	9.5	1.10	11.4	0.13	0.12	0.45	0.28	50	
55 A	11.52	11.51	33.441	25.471	251.4	0.183	4.55	198.7	73.7	11.5	1.22	13.5	0.05	0.10	0.26	0.20	55	15
65 A	10.75	10.74	33.421	25.594	239.9	0.208	4.48	195.6	71.3	12.8	1.28	14.4	0.04	0.12	0.18	0.15	66	14
75 ISL	10.46 D	10.45	33.532 D	25.731	227.1	0.216	4.07	D177.2 D	64.4	15.6	1.41	16.6	0.08	0.24	0.12	0.10	76	
76	10.40	10.39	33.534	25.742	226.0	0.233	4.01	175.0	63.4	15.9	1.42	16.8	0.08	0.25	0.11	0.10	77	13
84	10.31	10.30	33.589	25.802	220.6	0.251	3.77	164.6	59.6	17.7	1.52	18.2	0.08	0.09	0.09	0.07	85	12
100	9.99	9.98	33.673	25.923	209.4	0.286	3.48	151.7	54.5	20.5	1.66	20.4	0.06	0.14	0.03	0.04	101	11
120	9.40	9.39	33.809	26.125	190.5	0.326	3.07	134.1	47.6	25.2	1.86	23.3	0.03	0.20	0.01	0.03	121	10
125 ISL	9.34 D	9.33	33.826 D	26.149	188.3	0.321	3.08	D134.1 D	47.7	26.0	1.89	23.7	0.03	0.20	0.01	0.04	126	
139	9.07	9.06	33.885	26.239	180.1	0.361	2.92	127.4	44.9	28.2	1.96	24.9	0.03	0.20	0.00	0.04	140	09
150 ISL	8.88 D	8.87	33.962 D	26.329	171.7	0.366	2.84	D123.6 D	43.5	30.4	2.05	25.9	0.02	0.28	0.00	0.04	151	
171	8.75	8.73	34.023	26.399	165.5	0.416	2.25	98.1	34.4	34.7	2.21	27.9	0.02	0.42	0.00	0.03	172	08
200	8.47	8.45	34.064	26.474	158.8	0.463	2.02	88.3	30.8	38.0	2.31	29.2	0.02	0.17	0.00	0.03	202	07
231	8.23	8.21	34.125	26.559	151.3	0.511	1.55	67.5	23.4	43.0	2.47	31.2	0.01	0.29			233	06
250 ISL	8.06 D	8.03	34.159 D	26.613	146.5	0.526	1.34	D 58.2 D	20.2	45.4	2.55	31.8	0.02	0.24			252	
270	8.04	8.01	34.199	26.648	143.6	0.568	1.12	48.9	16.9	48.0	2.64	32.5	0.02	0.19			272	05
300 ISL	7.88 D	7.85	34.232 D	26.697	139.4	0.598	0.87	D 37.7 D	13.0	51.8	2.73	33.5	0.02	0.17			302	
320	7.72	7.69	34.246 D	26.732	136.4	0.626	0.75	D 32.6 D	11.2								323	04
380	7.14	7.10	34.272	26.836	127.1	0.718	0.52	22.6	7.6	61.8	2.96	36.1	0.01	0.10			383	03
400 ISL	7.04 D	7.00	34.274 D	26.852	125.9	0.731	0.49	D 21.1 D	7.1	64.0	3.00	36.6	0.01	0.14			403	
440	6.73	6.69	34.288	26.906	121.2	0.792	0.38	16.8	5.6	68.3	3.08	37.5	0.01	0.23			444	02
500 ISL	6.39 D	6.35	34.308 D	26.967	116.0	0.853	0.30	D 13.2 D	4.4	73.7	3.16	38.5	0.01	0.25			504	
516	6.33	6.28	34.316	26.983	114.7	0.882	0.28	12.2	4.1	75.2	3.18	38.8	0.01	0.25			520	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 0.7 N	119 14.0 W	07/07/2014	2302 UTC	1589 m	290 13 kn	290 03 05	2	1012.4 mb	18.0 C	17.0 C	25 m	8/8	ST	009

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.27	19.27	33.586	23.875	402.0	0.000	5.51	240.3	104.3	2.1	0.31	0.0	0.03	0.20	0.13	0.03	0	
2	19.27	19.27	33.586	23.875	402.1	0.008	5.51	240.3	104.3	2.1	0.31	0.0	0.03	0.20	0.13	0.03	2	20
10	19.09	19.09	33.587	23.920	398.1	0.040	5.52	241.0	104.2	2.7	0.30	0.1	0.01	0.18	0.13	0.02	10	19
19	18.17	18.16	33.534	24.111	380.2	0.075	5.72	249.4	106.0	2.4	0.33	0.1	0.01	0.44	0.17	0.03	19	18
20 ISL	17.01 D	17.01	33.540 D	24.394	353.3	0.079	5.89	D256.7	D106.8	2.5	0.34	0.1	0.01	0.42	0.27	0.05	20	
29	15.09	15.08	33.406	24.727	321.8	0.109	6.09	265.9	106.2	3.4	0.40	0.1	0.02	0.24	1.20	0.23	29	17
30 ISL	14.96 D	14.95	33.409 D	24.758	318.8	0.113	6.09	D265.5	D106.0	3.5	0.41	0.2	0.02	0.25	1.25	0.25	30	
40	13.95	13.95	33.382	24.950	300.8	0.143	5.88	256.7	100.2	4.2	0.50	1.6	0.06	0.30	1.85	0.40	40	16
50 ISL	12.72 D	12.71	33.367 D	25.187	278.5	0.174	5.35	D233.2	D 88.9	6.5	0.74	5.2	0.19	0.27	1.32	0.41	50	
52	12.49	12.49	33.372	25.234	274.0	0.178	5.24	228.9	86.6	6.9	0.79	5.9	0.22	0.26	1.21	0.41	52	15
59	12.25	12.24	33.386	25.292	268.6	0.197	5.00	218.4	82.2	8.2	0.89	7.5	0.25	0.26	0.99	0.45	59	14
69	11.64	11.63	33.430	25.441	254.7	0.223	4.56	199.1	74.1	10.7	1.08	11.0	0.27	0.27	0.63	0.35	70	13
75 ISL	11.30 D	11.29	33.469 D	25.533	246.0	0.240	4.33	D188.6	D 69.8	12.0	1.17	12.6	0.24	0.19	0.47	0.26	76	
80	11.14	11.13	33.480	25.570	242.6	0.250	4.19	182.8	67.3	13.0	1.25	13.9	0.22	0.13	0.33	0.19	81	12
100	10.09	10.08	33.684	25.914	210.3	0.296	3.40	148.3	53.4	19.9	1.66	20.1	0.06	0.21	0.07	0.08	101	11
120	9.58	9.57	33.792	26.083	194.5	0.336	3.03	132.2	47.1	25.0	1.87	23.6	0.04	0.08	0.02	0.06	121	10
125 ISL	9.48 D	9.47	33.820 D	26.121	191.0	0.348	3.00	D130.7	D 46.6	26.0	1.89	24.0	0.03	0.09	0.01	0.06	126	
140	9.04	9.02	33.922	26.273	176.8	0.373	2.93	127.9	45.1	29.0	1.96	25.0	0.02	0.11	0.01	0.04	141	09
150 ISL	9.03 D	9.01	33.964 D	26.308	173.8	0.393	2.62	D114.1	D 40.3	30.8	2.06	26.1	0.02	0.10	0.01	0.04	151	
168	8.88	8.86	34.028	26.382	167.0	0.421	2.18	95.0	33.4	34.2	2.25	28.1	0.03	0.09	0.00	0.04	169	08
200	8.37	8.35	34.104	26.520	154.4	0.473	1.73	75.5	26.2	40.9	2.42	30.7	0.03	0.06	0.00	0.03	202	07
230	8.04	8.02	34.156	26.612	146.1	0.518	1.34	58.6	20.2	46.1	2.56	32.2	0.02	0.04			232	06
250 ISL	8.02 D	8.00	34.181 D	26.635	144.4	0.551	1.21	D 52.8	D 18.3	48.4	2.64	32.7	0.02	0.10			252	
271	7.89	7.86	34.223	26.688	139.7	0.577	0.94	41.0	14.1	50.8	2.73	33.3	0.02	0.16			273	05
300 ISL	7.93 D	7.90	34.274 D	26.723	136.9	0.621	0.75	D 32.5	D 11.2	53.5	2.82	34.0	0.02	0.09			302	
320	7.70	7.67	34.286	26.767	133.1	0.644	0.62	26.9	9.2	55.4	2.89	34.4	0.03	0.04			323	04
381	7.00	6.96	34.280	26.862	124.5	0.723	0.45	19.7	6.6	64.6	3.05	36.8	0.03	0.13			384	03
400 ISL	6.83 D	6.79	34.287 D	26.891	122.0	0.751	0.42	D 18.4	D 6.2	67.1	3.08	37.3	0.02	0.14			403	
440	6.52	6.48	34.303	26.945	117.2	0.794	0.31	13.5	4.5	72.2	3.13	38.2	0.02	0.15			444	02
500 ISL	6.37 D	6.33	34.312 D	26.973	115.4	0.870	0.29	D 12.7	D 4.3	75.2	3.18	38.9	0.02	0.15			504	
518	6.30	6.25	34.316	26.986	114.3	0.884	0.26	11.2	3.7	76.2	3.19	39.1	0.02	0.15			522	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 51.4 N	119 34.5 W	08/07/2014	0313 UTC	2170 m	290 16 kn	300 03 05	2	1011.8 mb	17.0 C	16.0 C		8/8	ST	010

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.82	18.82	33.606	24.002	389.9	0.000	5.54	241.9	104.1	2.4	0.31	0.0	0.02	0.27	0.17	0.03	0	
3	18.82	18.82	33.606	24.002	390.0	0.012	5.54	241.9	104.1	2.4	0.31	0.0	0.02	0.27	0.17	0.03	3	20
10	18.79	18.78	33.605	24.012	389.3	0.039	5.54	241.7	103.9	2.3	0.31	0.0	0.02	0.28	0.17	0.03	10	19
20	17.93	17.93	33.589	24.211	370.7	0.077	5.69	248.2	105.0	2.5	0.31	0.0	0.01	0.06	0.24	0.06	20	18
30 ISL	17.48 D	17.48	33.595 D	24.325	360.2	0.114	5.75	D250.5	D105.2	2.7	0.33	0.0	0.02	0.22	0.28	0.08	30	
31	17.19	17.18	33.585	24.387	354.3	0.117	5.75	251.1	104.7	2.7	0.33	0.0	0.02	0.24	0.29	0.08	31	17
40	16.22	16.21	33.568	24.600	334.3	0.148	5.83	254.5	104.1	3.4	0.39	0.5	0.07	0.15	0.64	0.20	40	16
50	13.17	13.17	33.489	25.192	278.0	0.179	5.20	227.0	87.2	7.4	0.88	7.7	0.37	0.15	0.72	0.31	50	15
61	11.90	11.89	33.469	25.423	256.2	0.208	4.73	206.3	77.2	10.3	1.11	11.6	0.18	0.18	0.59	0.29	61	14
69	11.06	11.05	33.493	25.595	239.9	0.228	4.24	185.2	68.0	14.1	1.34	15.5	0.05	0.23	0.35	0.25	70	13
75 ISL	10.71 D	10.70	33.535 D	25.690	231.0	0.244	3.97	D172.8	D 63.2	15.7	1.42	16.8	0.05	0.17	0.27	0.20	76	
84	10.61	10.60	33.583	25.745	226.0	0.263	3.73	163.0	59.3	18.1	1.55	18.8	0.04	0.09	0.14	0.12	85	12
100 ISL	9.92 D	9.91	33.724 D	25.972	204.7	0.299	3.06	D133.1	D 47.9	23.6	1.80	22.6	0.02	0.08	0.04	0.07	101	
101	9.89	9.88	33.726	25.980	204.0	0.299	3.03	132.3	47.5	24.0	1.82	22.8	0.02	0.08	0.04	0.06	102	11
120	9.40	9.38	33.869	26.173	185.9	0.336	2.57	112.2	39.9	28.8	2.03	25.5	0.02	0.13	0.01	0.04	121	10
125 ISL	9.35 D	9.34	33.892 D	26.198	183.7	0.348	2.54	D110.4	D 39.3	29.4	2.05	25.9	0.02	0.13	0.01	0.04	126	
140	9.21	9.20	33.966	26.280	176.3	0.372	2.30	100.2	35.5	31.4	2.12	27.0	0.02	0.11	0.01	0.05	141	09
150 ISL	9.07 D	9.05	34.002 D	26.331	171.5	0.393	2.21	D 96.1	D 34.0	33.1	2.18	27.7	0.02	0.13	0.00	0.05	151	
170	8.85	8.83	34.078	26.426	162.9	0.423	1.88	82.0	28.8	36.6	2.29	29.0	0.03	0.16	0.00	0.04	171	08
200 ISL	8.30 D	8.28	34.098 D	26.527	153.7	0.474	1.84	D 80.1	D 27.9	40.7	2.37	30.4	0.02	0.18	0.00	0.03	202	
201	8.25	8.23	34.096	26.533	153.1	0.472	1.80	78.7	27.3	40.8	2.37	30.4	0.02	0.18	0.00	0.03	203	07
230	7.84	7.82	34.075	26.578	149.3	0.516	1.87	81.4	28.0	43.8	2.40	31.3	0.02	0.21			232	06
250 ISL	7.86 D	7.84	34.182 D	26.659	142.0	0.549	1.17	D 50.9	D 17.6	47.3	2.54	32.5	0.02	0.19			252	
270	7.66	7.63	34.180	26.688	139.6	0.573	1.10	48.1	16.5	50.8	2.68	33.7	0.02	0.16			272	05
300 ISL	7.61 D	7.58	34.222 D	26.729	136.2	0.619	0.86	D 37.5	D 12.9	53.7	2.78	34.4	0.01	0.11			302	
320	7.53	7.49	34.245	26.759	133.6	0.642	0.76	33.3	11.4	55.7	2.84	34.8	0.01	0.07			323	04
380	7.04	7.00	34.274	26.852	125.6	0.720	0.48	21.0	7.1	63.3	2.99	36.5	0.02	0.06			383	03
400 ISL	6.94 D	6.90	34.279 D	26.870	124.1	0.750	0.45	D 19.8	D 6.7	65.1	3.02	36.9	0.01	0.05			403	
440	6.71	6.67	34.292	26.912	120.6	0.793	0.40	17.3	5.8	68.7	3.08	37.6	0.01	0.03			444	02
500 ISL	6.31 D	6.26	34.313 D	26.982	114.4	0.871	0.29	D 12.6	D 4.2	74.4	3.15	38.7	0.01	0.05			504	
514	6.26	6.21	34.318	26.993	113.6	0.880	0.26	11.4	3.8	75.7	3.17	39.0	0.01	0.06			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 30.8 N	120 14.8 W	08/07/2014	0916 UTC	3937 m	290 12 kn			1013.3 mb	17.0 C	15.9 C				011

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.25	18.25	33.430	24.011	389.0	0.000	5.50	239.9	102.0	2.7	0.34	0.0	0.02	0.08	0.03	0.18	0	
2	18.25	18.24	33.430	24.011	389.1	0.008	5.50	239.9	102.0	2.7	0.34	0.0	0.02	0.08	0.03A	0.18A	2	21
10	18.15	18.15	33.428	24.033	387.3	0.039	5.54	242.0	102.7	2.8	0.41	0.0	0.02	0.09	0.11	0.02	10	20
20 ISL	17.31 D	17.31	33.432 D	24.241	367.8	0.077	5.67	D247.0	D103.2	2.8	0.38	0.0	0.02	0.05	0.12	0.02	20	
25	17.25	17.24	33.434	24.257	366.5	0.095	5.62	245.5	102.4	2.9	0.37	0.0	0.02	0.03	0.13	0.02	25	19
30 ISL	17.17 D	17.16	33.431 D	24.275	365.0	0.114	5.67	D247.1	D103.0	2.8	0.37	0.0	0.02	0.02	0.14	0.03	30	
40	16.76	16.76	33.450	24.384	354.9	0.149	5.66	247.0	102.0	2.8	0.37	0.0	0.01	0.01	0.17	0.05	40	18
50	16.34	16.33	33.386	24.433	350.5	0.185	5.77	252.1	103.2	1.9	0.38	0.0	0.02	0.04	0.22	0.07	50	17
61	16.19	16.18	33.449	24.516	343.0	0.223	5.73	250.3	102.2	2.8	0.38	0.0	0.02	0.03	0.30	0.16	61	16
75	14.27	14.26	33.335	24.849	311.6	0.269	5.74	250.6	98.4	3.2	0.50	0.9	0.13	0.29	0.38	0.22	76	15
87	13.00	12.98	33.369	25.136	284.4	0.304	5.38	235.0	89.9	4.9	0.78	6.2	0.11	0.03	0.17	0.12	88	14
99	11.98	11.97	33.272	25.255	273.2	0.338	5.28	230.4	86.2	6.6	0.83	7.4	0.11	0.03	0.21	0.15	100	13
100 ISL	11.86 D	11.85	33.270 D	25.277	271.1	0.343	5.31	D231.2 D	86.5	7.0	0.86	7.9	0.10	0.03	0.20	0.15	101	
112	11.28	11.27	33.417	25.498	250.3	0.372	4.71	205.7	75.9	11.6	1.22	13.5	0.03	0.01	0.06	0.07	113	12
124	10.99	10.97	33.436	25.566	244.1	0.402	4.59	200.3	73.4	12.8	1.27	14.5	0.01	0.02	0.04	0.06	125	10
125 ISL	10.91 D	10.89	33.447 D	25.588	242.0	0.407	4.62	D201.1 D	73.8	12.9	1.28	14.7	0.01	0.02	0.04	0.06	126	
130	10.78	10.76	33.451	25.615	239.5	0.416	4.51	196.9	71.9	13.6	1.32	15.4	0.01	0.02	0.03	0.06	131	09
141	10.52	10.50	33.545	25.733	228.5	0.442	4.07	177.5	64.5	17.5	1.51	18.3	0.02	0.03	0.02	0.05	142	11
150 ISL	10.13 D	10.11	33.574 D	25.822	220.1	0.466	3.96	D172.4 D	62.3	19.9	1.62	20.0	0.02	0.03	0.01	0.05	151	
170	9.22	9.20	33.742	26.104	193.5	0.503	3.30	143.9	50.8	25.1	1.86	23.9	0.03	0.04	0.01	0.04	171	08
200	8.61	8.59	33.934	26.352	170.4	0.558	2.69	117.3	40.9	32.1	2.10	27.6	0.01	0.04	0.00	0.04	202	07
230	8.24	8.22	34.008	26.466	160.1	0.608	2.42	105.5	36.6	37.2	2.22	29.1	0.01	0.03			232	06
250 ISL	7.97 D	7.94	34.046 D	26.537	153.6	0.643	2.13	D 92.5 D	32.0	41.3	2.36	30.6	0.01	0.04			252	
269	7.87	7.84	34.100	26.594	148.5	0.668	1.64	71.6	24.6	45.1	2.50	32.0	0.02	0.04			271	05
300 ISL	7.66 D	7.63	34.155 D	26.668	141.9	0.718	1.23	D 53.6 D	18.4	49.9	2.66	33.5	0.02	0.06			302	
320	7.51	7.47	34.174	26.707	138.6	0.741	1.05	45.7	15.6	53.0	2.76	34.4	0.03	0.08			323	04
381	7.28	7.25	34.257 D	26.805	130.2	0.829	0.60	D 26.0 D	8.8								384	03
400 ISL	7.05 D	7.02	34.257 D	26.837	127.3	0.853	0.54	D 23.4 D	7.9	64.1	3.00	36.9	0.02	0.06			403	
441	6.63	6.59	34.286	26.918	119.9	0.898	0.41	17.9	6.0	69.7	3.13	38.2	0.02	0.05			445	02
500 ISL	6.25 D	6.21	34.312 D	26.988	113.8	0.974	0.29	D 12.4 D	4.1	76.9	3.21	39.7	0.02	0.03			504	
516	6.07	6.02	34.310	27.011	111.7	0.985	0.25	11.1	3.6	78.9	3.23	40.1	0.03	0.03			520	01

A) SECOND FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
31 11.0 N	120 55.4 W	08/07/2014	1630 UTC	3839 m	330 14 kn	330 04 06	2	1014.7 mb	18.0 C	16.9 C	27 m	8/8	SC	012

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.72	18.72	33.451	23.910	398.7	0.000	5.43	237.2	101.8	2.7	0.32	0.0	0.00	0.07	0.10	0.02	0	
2 A	18.72	18.72	33.451	23.910	398.7	0.008	5.43	237.2	101.8	2.7	0.32	0.0	0.00	0.07	0.10	0.02	2	24
9	18.71	18.71	33.451	23.913	398.7	0.036	5.45	237.9	102.0	2.7	0.32	0.0	0.00	0.07	0.11	0.02	9	23
9	18.71	18.71	33.451	23.913	398.7	0.037											9	22
10 ISL	18.71 D	18.71	33.448 D	23.911	399.0	0.038	5.45	D237.5	D102.0	2.7	0.32	0.0	0.00	0.07	0.11	0.02	10	
15 A	18.64	18.64	33.455	23.933	397.1	0.060	5.45	237.8	101.9	2.7	0.32	0.0	0.00	0.06	0.11	0.02	15	21
19 A	18.30	18.29	33.439	24.007	390.2	0.076	5.49	239.7	102.0	2.7	0.33	0.0	0.00	0.04	0.10	0.02	19	20
20 ISL	18.21 D	18.21	33.433 D	24.023	388.6	0.078	5.51	D240.2	D102.1	2.7	0.33	0.0	0.00	0.04	0.10	0.02	20	
29	18.06	18.06	33.438	24.064	385.1	0.114	5.51	240.4	101.9	2.7	0.34	0.0	0.00	0.03	0.09	0.02	29	19
30 ISL	18.06 D	18.05	33.434 D	24.063	385.2	0.117	5.52	D240.7	D102.0	2.7	0.34	0.0	0.00	0.03	0.10	0.02	30	
38 A	17.94	17.93	33.440	24.097	382.3	0.149	5.52	240.8	101.8	2.7	0.33	0.0	0.00	0.04	0.12	0.03	38	18
50 ISL	17.10 D	17.09	33.436 D	24.295	363.8	0.193	5.70	D248.5	D103.5	2.6	0.31	0.0	0.00	0.03	0.14	0.04	50	
53	16.69	16.68	33.420	24.380	355.8	0.204	5.78	252.1	104.0	2.6	0.30	0.0	0.00	0.03	0.15	0.04	53	17
67	15.64	15.63	33.366	24.577	337.4	0.253	5.80	253.2	102.2	2.7	0.35	0.0	0.00	0.01	0.19	0.09	68	16
75 ISL	14.69 D	14.67	33.354 D	24.777	318.5	0.279	5.83	D254.2	D100.8	2.9	0.37	0.1	0.01	0.02	0.31	0.18	76	
79 A	14.48	14.46	33.359	24.825	314.0	0.292	5.75	250.9	99.0	3.0	0.38	0.1	0.02	0.03	0.38	0.22	80	15
86	13.88	13.87	33.335	24.930	304.1	0.313	5.68	247.7	96.5	3.1	0.44	0.9	0.10	0.09	0.36	0.24	87	14
94 A	13.57	13.56	33.317	24.980	299.5	0.337	5.62	245.1	94.9	3.7	0.50	2.2	0.25	0.14	0.32	0.24	95	13
100 ISL	13.31 D	13.30	33.329 D	25.043	293.7	0.356	5.58	D242.9	D 93.7	4.2	0.53	3.2	0.32	0.06	0.27	0.18	101	
101	13.26	13.24	33.327	25.053	292.8	0.358	5.48	239.2	92.0	4.3	0.54	3.4	0.33	0.05	0.26	0.17	102	12
110	12.10	12.09	33.316	25.268	272.3	0.384	5.18	226.2	84.9	6.5	0.78	7.1	0.05	0.02	0.18	0.16	111	11
124	11.54	11.52	33.332	25.386	261.3	0.421	4.99	217.6	80.7	8.0	0.90	9.2	0.01	0.03	0.12	0.12	125	10
125 ISL	11.18 D	11.16	33.384 D	25.492	251.2	0.425	4.95	D215.6	D 79.6	8.4	0.93	9.6	0.01	0.03	0.11	0.12	126	
144	10.39	10.38	33.531	25.744	227.5	0.469	3.95	172.2	62.4	16.2	1.44	17.5	0.00	0.04	0.03	0.05	145	09
150 ISL	10.23 D	10.21	33.583 D	25.814	221.0	0.484	3.83	D166.9	D 60.4	17.4	1.49	18.3	0.00	0.04	0.02	0.04	151	
170	9.75	9.73	33.690	25.978	205.7	0.526	3.49	152.3	54.4	21.4	1.67	21.1	0.01	0.05	0.01	0.03	171	08
198	9.22	9.19	33.834	26.178	187.2	0.581	3.11	135.6	48.0	25.8	1.84	23.7	0.00	0.02	0.00	0.02	200	07
200 ISL	9.21 D	9.19	33.857 D	26.197	185.4	0.586	3.05	D132.6	D 47.0	26.2	1.85	23.9	0.00	0.02			202	
228	8.47	8.44	33.940 D	26.379	168.4	0.636	3.06	D133.2	D 46.5								230	06
250 ISL	8.13 D	8.10	33.972 D	26.456	161.4	0.673	2.71	D118.0	D 40.9	36.6	2.13	28.3	0.01	0.01			252	
269	7.77	7.74	34.003	26.533	154.2	0.701	2.40	104.5	35.8	40.5	2.23	30.0	0.01	0.01			271	05
300 ISL	7.29 D	7.26	34.031 D	26.623	145.9	0.750	1.95	D 84.7	D 28.8	47.4	2.43	32.5	0.00	0.03			302	
319	7.07	7.04	34.054	26.672	141.4	0.774	1.64	71.7	24.2	51.6	2.56	34.0	0.00	0.04			322	04
381	6.53	6.50	34.121	26.799	130.1	0.859	0.95	41.6	13.9	62.8	2.84	37.2	0.00	0.01			384	03
400 ISL	6.48 D	6.44	34.141 D	26.822	128.1	0.887	0.87	D 38.0	D 12.7	65.2	2.88	37.7	0.00	0.01			403	
442	6.14	6.10	34.161	26.882	122.8	0.936	0.70	30.3	10.0	70.4	2.97	38.7	0.00	0.01			446	02
500 ISL	5.62 D	5.57	34.188 D	26.969	114.8	1.010	0.53	D 23.1	D 7.6	79.4	3.09	40.2	0.00	0.02			504	
513	5.56	5.51	34.197	26.984	113.5	1.020	0.48	20.8	6.8	81.4	3.12	40.5	0.01	0.02			517	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
30 50.8 N	121 35.4 W	08/07/2014	2136 UTC	4122 m	350 05 kn	320 03 05	2	1015.9 mb	19.5 C	18.0 C	28 m	8/8	ST	013

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	18.91	18.91	33.436	23.850	404.4	0.000	5.45	237.6	102.3	2.8	0.34	0.0	0.00	0.22	0.13	0.02	0	
2	18.91	18.91	33.436	23.850	404.4	0.008	5.45	237.6	102.3	2.8	0.34	0.0	0.00	0.22	0.13	0.02	2	21
10	18.11	18.11	33.438	24.052	385.5	0.040	5.52	241.1	102.2	2.8	0.39	0.0	0.01	0.13	0.11	0.03	10	20
20 ISL	17.95 D	17.95	33.447 D	24.097	381.6	0.079	5.54	D241.6	D102.2	2.8	0.38	0.0	0.01	0.09	0.11	0.03	20	
25	17.93	17.93	33.452	24.107	380.9	0.097	5.53	241.3	102.0	2.8	0.38	0.0	0.00	0.07	0.12	0.03	25	19
30 ISL	17.91 D	17.91	33.448 D	24.109	380.8	0.117	5.54	D241.6	D102.2	2.8	0.37	0.0	0.00	0.07	0.16	0.02	30	
40	17.49	17.48	33.421	24.192	373.3	0.154	5.59	244.1	102.3	2.8	0.36	0.0	0.01	0.06	0.25	0.01	40	18
50	16.09	16.09	33.358	24.468	347.2	0.190	5.90	257.6	105.0	2.8	0.38	0.0	0.01	0.07	0.32	0.04	50	17
62	14.91	14.90	33.331	24.710	324.5	0.230	6.02	262.6	104.5	2.9	0.41	0.0	0.02	0.08	0.38	0.22	62	16
65	14.54	14.53	33.329	24.788	317.1	0.241											66	15
75	13.52	13.51	33.333	25.003	296.8	0.271	5.61	244.8	94.6	4.0	0.66	3.1	0.50	0.19	0.41	0.29	76	14
87	12.24	12.23	33.298	25.227	275.6	0.305	5.36	233.8	88.0	5.6	0.82	6.4	0.24	0.10	0.33	0.34	88	13
99	10.87	10.86	33.266	25.453	254.2	0.337	4.95	216.0	78.9	9.8	1.13	11.7	0.04	0.06	0.16	0.16	100	12
100 ISL	10.69 D	10.68	33.313 D	25.522	247.6	0.321	4.93	D214.7	D 78.4	10.1	1.14	11.9	0.04	0.06	0.15	0.15	101	
112	10.42	10.41	33.372	25.615	239.0	0.368	4.56	198.9	72.0	13.2	1.30	14.8	0.02	0.05	0.08	0.07	113	11
125 ISL	9.99 D	9.97	33.496 D	25.785	223.1	0.381	4.12	D179.4	D 64.6	16.6	1.48	17.8	0.02	0.05	0.03	0.05	126	
126	10.00	9.98	33.483	25.774	224.1	0.401	4.20	183.3	65.8	16.9	1.49	18.0	0.02	0.05	0.03	0.05	127	10
140	9.57	9.55	33.560	25.905	211.9	0.431	3.91	170.7	60.7	20.0	1.65	20.4	0.01	0.21	0.02	0.04	141	09
150 ISL	9.34 D	9.32	33.641 D	26.005	202.5	0.434	3.76	D163.5	D 58.1	22.6	1.74	21.9	0.02	0.16	0.01	0.03	151	
170	8.91	8.89	33.821	26.215	182.9	0.490	3.19	139.0	48.8	27.8	1.93	25.0	0.02	0.05	0.00	0.02	171	08
200	8.66	8.64	33.923	26.335	172.0	0.544	2.86	124.9	43.6	31.4	2.03	26.6	0.01	0.03	0.00	0.02	202	07
230	8.29	8.27	34.024	26.472	159.6	0.593	2.31	100.9	35.0	37.5	2.24	29.1	0.01	0.02			232	06
250 ISL	8.03 D	8.00	34.061 D	26.541	153.3	0.608	2.02	D 87.8	D 30.3	40.8	2.35	30.2	0.01	0.03			252	
270	7.83	7.81	34.075	26.581	149.8	0.655	1.84	80.4	27.6	44.1	2.45	31.3	0.02	0.04			272	05
300 ISL	7.75 D	7.72	34.108 D	26.620	146.6	0.684	1.53	D 66.7	D 22.9	50.1	2.63	33.4	0.02	0.04			302	
319	7.32	7.29	34.136	26.702	138.9	0.726	1.14	49.7	16.9	53.9	2.74	34.7	0.02	0.04			322	04
381	6.68	6.65	34.154	26.805	129.6	0.810	0.85	36.9	12.3	63.0	2.91	37.1	0.03	0.03			384	03
400 ISL	6.53 D	6.49	34.163 D	26.833	127.1	0.820	0.76	D 33.0	D 11.0	65.7	2.96	37.6	0.02	0.04			403	
440	6.24	6.20	34.194	26.896	121.6	0.884	0.59	25.6	8.5	71.3	3.08	38.8	0.02	0.07			444	02
500 ISL	5.74 D	5.70	34.223 D	26.981	113.8	0.941	0.42	D 18.4	D 6.1	79.4	3.19	40.1	0.02	0.09			504	
514	5.72	5.68	34.244	27.001	112.1	0.970	0.36	15.7	5.1	81.3	3.21	40.4	0.02	0.10			518	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
30 30.7 N	122 15.5 W	09/07/2014	0416	UTC	4175 m	330 08 kn			1015.4 mb	19.0 C	17.5 C				014

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.53	19.53	33.572	23.796	409.5	0.000	5.37	234.2	102.1	2.5	0.26	0.0	0.03	0.11	0.07	0.01	0	
2	19.53	19.53	33.572	23.796	409.6	0.008	5.37	234.2	102.1	2.5	0.26	0.0	0.03	0.11	0.07	0.01	2	22
10 ISL	19.11 D	19.11	33.591 D	23.919	398.2	0.041	5.41	D236.1	D102.2	2.5	0.26	0.0	0.01	0.11	0.07	0.01	10	
10	19.11	19.11	33.589	23.918	398.3	0.040											10	21
20	18.88	18.87	33.611	23.993	391.5	0.080	5.43	237.1	102.1	2.5	0.26	0.0	0.00	0.12	0.06	0.01	20	20
30 ISL	18.81 D	18.81	33.607 D	24.008	390.5	0.100	5.41	D235.7	D101.5	2.4	0.28	0.0	0.00	0.16	0.07	0.01	30	
40	18.75	18.74	33.614	24.031	388.7	0.158	5.43	236.8	101.8	2.4	0.30	0.0	0.00	0.19	0.07	0.01	40	19
50 ISL	18.41 D	18.40	33.659 D	24.151	377.7	0.178	5.49	D239.2	D102.2	2.4	0.29	0.0	0.00	0.13	0.08	0.02	50	
60	18.23	18.22	33.648	24.187	374.6	0.234	5.58	243.4	103.6	2.3	0.27	0.0	0.00	0.06	0.09	0.02	60	18
62	18.20	18.19	33.645	24.191	374.3	0.240											62	17
75 ISL	17.17 D	17.16	33.635 D	24.434	351.5	0.243	5.73	D249.9	D104.3	2.5	0.26	0.0	0.01	0.05	0.10	0.02	76	
80	16.99	16.98	33.666	24.499	345.5	0.306	5.72	249.7	103.8	2.5	0.25	0.0	0.01	0.05	0.11	0.02	81	16
100	15.58	15.57	33.613	24.783	318.9	0.373	5.70	248.8	100.5	2.8	0.33	0.0	0.02	0.10	0.16	0.09	101	15
110	15.23	15.21	33.713	24.937	304.5	0.404	5.61	244.6	98.2	3.1	0.28	0.0	0.02	0.09	0.23	0.20	111	14
121	14.35	14.33	33.669	25.094	289.8	0.436	5.48	239.3	94.3	3.7	0.36	0.8	0.08	0.08	0.22	0.22	122	13
125 ISL	13.82 D	13.80	33.590 D	25.142	285.1	0.403	5.47	D238.3	D 93.1	4.0	0.41	1.5	0.11	0.08	0.21	0.22	126	
129	13.58	13.56	33.568	25.175	282.1	0.459	5.43	236.8	91.8	4.3	0.46	2.1	0.15	0.07	0.20	0.22	130	12
140	12.55	12.53	33.487	25.316	268.7	0.490	5.26	229.8	87.1	5.7	0.64	5.0	0.17	0.07	0.16	0.21	141	11
149	11.93	11.91	33.491	25.439	257.1	0.513	5.10	222.7	83.4	7.4	0.77	7.5	0.05	0.03	0.14	0.14	150	10
150 ISL	11.75 D	11.73	33.466 D	25.452	255.8	0.472	5.14	D223.8	D 83.6	7.7	0.79	7.8	0.05	0.03	0.14	0.14	151	
160	10.68	10.66	33.470	25.648	237.1	0.540	4.87	212.4	77.4	10.3	0.99	11.0	0.03	0.03	0.10	0.11	161	09
175	10.38	10.36	33.527	25.745	228.1	0.575	4.76	207.9	75.3	11.4	1.03	11.9	0.03	0.06	0.07	0.08	176	08
195	9.61	9.59	33.659	25.976	206.4	0.619	4.34	189.3	67.4	17.7	1.39	17.8	0.02	0.06	0.02	0.02	196	07
200 ISL	9.53 D	9.51	33.684 D	26.010	203.3	0.586	4.23	D184.1	D 65.7	18.7	1.42	18.4	0.02	0.06			202	
230	8.92	8.89	33.875	26.258	180.1	0.686	3.82	166.8	58.6	24.6	1.63	21.9	0.02	0.04			232	06
250 ISL	8.63 D	8.60	33.922 D	26.341	172.6	0.680	3.52	D153.3	D 53.7	30.1	1.85	24.8	0.02	0.04			252	
269	8.23	8.20	33.978	26.446	162.7	0.754	2.81	122.5	42.4	35.2	2.06	27.6	0.01	0.04			271	05
300 ISL	7.84 D	7.81	34.012 D	26.530	155.2	0.761	2.36	D102.6	D 35.3	41.7	2.26	30.2	0.01	0.05			302	
320	7.47	7.44	34.032	26.600	148.6	0.833	2.02	88.0	30.0	45.8	2.39	31.9	0.01	0.05			323	04
380	6.77	6.73	34.094 D	26.746	135.3	0.878	1.23	D 53.5	D 18.0								383	03
400 ISL	6.61 D	6.58	34.100 D	26.772	133.0	0.905	1.11	D 48.4	D 16.2	60.3	2.75	36.2	0.02	0.08			403	
439	6.25	6.21	34.128	26.842	126.6	0.996	0.86	37.7	12.5	67.4	2.92	38.3	0.02	0.09			443	02
500 ISL	5.81 D	5.77	34.169 D	26.931	118.6	1.032	0.62	D 27.1	D 8.9	76.1	3.08	39.9	0.02	0.09			504	
515	5.75	5.71	34.179	26.946	117.3	1.088	0.56	24.5	8.0	78.3	3.12	40.3	0.02	0.09			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
30 10.8 N	122 55.3 W	09/07/2014	1012	UTC	3844 m	020 06 kn			1015.9 mb	18.9 C	17.0 C				015

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	19.72	19.72	33.575	23.748	414.1	0.000	5.40	235.6	103.1	2.4	0.28	0.0	0.02	0.03	0.07	0.01	0	
2	19.72	19.72	33.575	23.748	414.2	0.008	5.40	235.6	103.1	2.4	0.28	0.0	0.02	0.03	0.07	0.01	2	20
10	19.24	19.24	33.578	23.875	402.4	0.041	5.38	234.7	101.8	2.4	0.27	0.0	0.02	0.03	0.06	0.01	10	19
20 ISL	19.01 D	19.00	33.584 D	23.940	396.5	0.081	5.40	D235.4	D101.7	2.4	0.27	0.0	0.03	0.04	0.06	0.01	20	
24	18.98	18.97	33.589	23.953	395.6	0.097	5.42	236.6	102.1	2.4	0.27	0.0	0.03	0.04	0.06	0.01	24	18
30 ISL	18.92 D	18.92	33.582 D	23.961	395.0	0.121	5.41	D236.1	D101.8	2.4	0.27	0.0	0.03	0.04	0.06	0.01	30	
40	18.90	18.90	33.636	24.008	390.9	0.160	5.45	237.9	102.5	2.4	0.27	0.0	0.03	0.03	0.07	0.01	40	17
49	18.87	18.86	33.729	24.089	383.6	0.195	5.45	237.9	102.5	2.4	0.25	0.0	0.01	0.05	0.07	0.02	49	16
50 ISL	18.87 D	18.86	33.731 D	24.090	383.5	0.200	5.45	D237.7	D102.5	2.4	0.25	0.0	0.01	0.05	0.07	0.02	50	
62	18.47	18.46	33.734	24.193	374.1	0.244	5.49	239.8	102.5	2.4	0.25	0.0	0.01	0.03	0.09	0.02	62	15
74	17.89	17.88	33.709	24.316	362.8	0.288	5.61	244.8	103.5	2.4	0.25	0.0	0.02	0.03	0.10	0.02	75	14
75 ISL	17.53 D	17.51	33.697 D	24.396	355.2	0.294	5.65	D246.3	D103.5	2.4	0.25	0.0	0.02	0.03	0.10	0.03	76	
88	15.93	15.92	33.537	24.644	331.8	0.336	5.76	251.6	102.3	2.6	0.28	0.0	0.02	0.03	0.13	0.05	89	13
100	14.99	14.98	33.551	24.865	311.0	0.375	5.72	249.9	99.7	3.0	0.31	0.0	0.03	0.04	0.18	0.15	101	12
113	14.11	14.09	33.537	25.041	294.5	0.414	5.57	243.2	95.3	3.7	0.39	0.9	0.07	0.08	0.20	0.21	114	11
124	12.81	12.79	33.440	25.229	276.6	0.446	5.42	236.5	90.1	4.8	0.56	3.4	0.20	0.06	0.18A	0.18A	125	10
125 ISL	12.75 D	12.73	33.415 D	25.222	277.3	0.452	5.38	D234.4	D 89.4	5.0	0.58	3.7	0.19	0.06	0.18	0.18	126	
140	11.78	11.76	33.410	25.402	260.3	0.489	5.15	224.7	83.8	7.4	0.80	7.7	0.05	0.03	0.14	0.14	141	09
150 ISL	11.30 D	11.28	33.434 D	25.509	250.2	0.518	5.00	D217.9	D 80.6	9.5	0.93	10.0	0.04	0.04	0.11	0.11	151	
170	10.26	10.24	33.532	25.769	225.7	0.562	4.54	198.1	71.5	13.7	1.20	14.5	0.02	0.05	0.05	0.06	171	08
200 ISL	9.32 D	9.30	33.731 D	26.080	196.5	0.630	3.78	D164.5	D 58.4	21.9	1.61	20.9	0.02	0.04	0.01	0.02	202	
201	9.32	9.30	33.731	26.081	196.5	0.627	3.78	165.0	58.4	22.2	1.62	21.1	0.02	0.04	0.01	0.02	203	07
231	8.78	8.75	33.863	26.270	178.9	0.684	3.34	145.8	51.1	27.3	1.81	24.1	0.01	0.03			233	06
250 ISL	8.50 D	8.47	33.944 D	26.378	169.0	0.722	2.99	D130.2	D 45.4	31.4	1.96	26.1	0.01	0.04			252	
269	8.27	8.24	33.986	26.446	162.8	0.748	2.66	116.0	40.2	35.6	2.11	28.0	0.01	0.05			271	05
300 ISL	7.82 D	7.79	34.024 D	26.542	153.9	0.803	2.26	D 98.1	D 33.8	42.1	2.30	30.6	0.01	0.04			302	
320	7.51	7.47	34.047	26.607	148.0	0.827	1.90	83.0	28.3	46.3	2.42	32.3	0.02	0.03			322	04
380	6.95	6.92	34.083	26.713	138.5	0.913	1.37	59.8	20.1	55.4	2.68	35.3	0.01	0.03			383	03
400 ISL	6.70 D	6.66	34.104 D	26.764	133.8	0.947	1.16	D 50.5	D 17.0	58.6	2.75	36.1	0.01	0.03			403	
440	6.40	6.36	34.127	26.821	128.8	0.993	0.94	41.2	13.7	65.0	2.88	37.7	0.01	0.03			444	02
500 ISL	6.05 D	6.01	34.189 D	26.917	120.2	1.076	0.64	D 27.7	D 9.2	73.9	3.04	39.4	0.01	0.04			504	
515	5.91	5.86	34.198	26.941	118.0	1.086	0.57	24.9	8.2	76.1	3.08	39.8	0.01	0.04			519	01

A) SECOND FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
29 50.8 N	123 35.4 W	09/07/2014	1713	UTC	4055 m	020 07 kn	350 04 07	2	1016.6 mb	20.0 C	18.7 C	33 m	8/8	SC	016

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	20.02	20.02	33.709	23.772	411.8	0.000	5.33	232.8	102.5	2.3	0.26	0.0	0.01	0.16	0.07	0.02	0	
2 A	20.02	20.02	33.709	23.772	411.9	0.008	5.33	232.8	102.5	2.3	0.26	0.0	0.01	0.16	0.07	0.02	2	23
9	19.98	19.98	33.694	23.773	412.1	0.037	5.32	232.1	102.1	2.4	0.26	0.0	0.01	0.03	0.07	0.01	9	21
9	19.98	19.98	33.694	23.773	412.1	0.037											9	22
10 ISL	19.71 D	19.71	33.679 D	23.832	406.5	0.040	5.37	D234.2	D102.6	2.4	0.26	0.0	0.01	0.04	0.07	0.01	10	
19 A	19.15	19.14	33.582	23.904	400.0	0.077	5.39	235.5	101.9	2.4	0.27	0.0	0.02	0.10	0.07	0.01	19	20
20 ISL	19.16 D	19.16	33.609 D	23.919	398.6	0.080	5.37	D234.4	D101.6	2.4	0.27	0.0	0.02	0.09	0.07	0.01	20	
24 A	19.03	19.03	33.585	23.936	397.2	0.097	5.40	235.7	101.8	2.4	0.27	0.0	0.02	0.03	0.07	0.02	24	19
30 ISL	19.03 D	19.03	33.598 D	23.946	396.5	0.120	5.39	D235.0	D101.6	2.4	0.27	0.0	0.02	0.03	0.07	0.02	30	
37	19.25	19.24	33.693	23.963	395.1	0.149	5.39	235.3	102.1	2.4	0.26	0.0	0.02	0.03	0.07	0.02	37	18
47 A	18.67	18.66	33.536	23.992	392.7	0.188	5.47	238.8	102.4	2.4	0.28	0.0	0.01	0.05	0.08	0.02	47	17
50 ISL	18.55 D	18.54	33.529 D	24.015	390.6	0.199	5.47	D238.4	D102.1	2.4	0.28	0.0	0.01	0.05	0.09	0.01	50	
64	17.24	17.23	33.418	24.249	368.7	0.253	5.73	250.3	104.3	2.5	0.29	0.0	0.01	0.03	0.10	0.01	64	16
75 ISL	16.92 D	16.91	33.441 D	24.343	360.1	0.293	5.74	D250.4	D103.9	2.5	0.29	0.0	0.01	0.11	0.11	0.02	76	
81	16.31	16.30	33.406 D	24.458	349.3	0.315	5.78	252.4	103.3	2.6	0.29	0.0	0.01	0.16	0.11	0.03	82	15
98 A	15.23	15.22	33.406	24.700	326.6	0.372	5.76	251.4	100.7	2.8	0.32	0.0	0.00	0.03	0.14	0.09	99	14
100 ISL	15.15 D	15.13	33.413 D	24.724	324.5	0.379	5.74	D250.0	D100.1	2.8	0.32	0.0	0.00	0.03	0.15	0.10	101	
107	14.49	14.48	33.403	24.857	311.8	0.401	5.70	248.9	98.2	2.9	0.34	0.0	0.00	0.03	0.19	0.14	108	13
113 A	13.98	13.97	33.381	24.947	303.3	0.419	5.65	246.7	96.3	3.4	0.41	0.6	0.05	0.09	0.21	0.15	114	11
114	13.87	13.85	33.383	24.972	301.0	0.422											115	12
125 ISL	13.54 D	13.52	33.372 D	25.032	295.5	0.438	5.57	D242.7	D 94.1	4.3	0.54	2.4	0.17	0.06	0.17	0.15	126	
130	13.26	13.24	33.368	25.084	290.6	0.470	5.48	239.0	91.9	4.7	0.59	3.1	0.22	0.05	0.16	0.15	131	10
145	12.30	12.28	33.330	25.244	275.6	0.512	5.30	231.4	87.2	5.8	0.71	5.7	0.08	0.02	0.13	0.13	146	09
150 ISL	11.86 D	11.84	33.331 D	25.326	267.8	0.509	5.29	D230.2	D 86.2	6.9	0.79	7.0	0.06	0.02	0.11	0.12	151	
170	10.79	10.77	33.424	25.594	242.5	0.577	4.78	208.5	76.1	11.0	1.09	12.0	0.01	0.03	0.06	0.07	171	08
199	9.67	9.65	33.636	25.949	209.1	0.642	4.00	174.4	62.2	18.8	1.52	18.9	0.01	0.02	0.01	0.03	201	07
200 ISL	9.60 D	9.58	33.678 D	25.994	204.8	0.629	3.79	D164.8	D 58.9	19.2	1.53	19.1	0.01	0.02			202	
229	9.08	9.05	33.911	26.261	179.9	0.701	2.95	128.9	45.5	28.6	1.93	25.1	0.01	0.02			231	06
250 ISL	9.16 D	9.14	34.072 D	26.375	169.7	0.722	2.11	D 91.9	D 32.6	32.4	2.08	26.7	0.01	0.03			252	
270	8.73	8.70	34.064	26.438	163.9	0.772	2.13	92.8	32.5	36.0	2.23	28.3	0.01	0.03			272	05
300 ISL	8.30 D	8.27	34.119 D	26.547	153.9	0.803	1.68	D 73.3	D 25.5	41.7	2.43	30.6	0.00	0.03			302	
320	8.17	8.13	34.155	26.596	149.6	0.850	1.31	57.3	19.8	45.6	2.57	32.2	0.00	0.03			322	04
381	7.63	7.59	34.207 D	26.717	138.9	0.923	0.81	D 35.2	D 12.1								384	03
400 ISL	7.43 D	7.39	34.218 D	26.753	135.6	0.949	0.75	D 32.7	D 11.2	57.5	2.84	35.3	0.00	0.04			403	
443	6.93	6.89	34.242	26.843	127.4	1.021	0.53	23.0	7.7	64.0	2.99	36.9	0.00	0.04			447	02
500 ISL	6.46 D	6.42	34.254 D	26.916	120.9	1.077	0.46	D 19.8	D 6.6	70.3	3.06	38.1	0.00	0.03			504	
516	6.42	6.37	34.267	26.932	119.6	1.110	0.38	16.5	5.5	72.0	3.08	38.4	0.00	0.03			520	01

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

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 57.2 N	117 16.8 W	06/07/2014	2023	UTC	21 m	280 08 kn	300 02 06	1	1014.0 mb	23.0 C	22.1 C		1/8	CU	002

DEPTH m	TEMP DEG C	POTTEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXYGEN µmol/Kg	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	PRES db	SAMP
0	23.07	23.07	33.657	22.897	495.3	0.000	5.76	251.5	116.9	1.6	0.21	0.1	0.01	0.35	0.36	0.07	0	
1	23.07	23.07	33.657	22.897	495.4	0.005	5.76	251.5	116.9	1.6	0.21	0.1	0.01	0.35	0.36	0.07	1	04
5	21.62	21.62	33.631	23.286	458.4	0.024	5.96	260.1	117.8	1.8	0.20	0.0	0.06	0.24	0.38	0.10	5	03
10	19.20	19.20	33.554	23.868	403.1	0.046	6.44	281.0	121.7	2.4	0.21	0.0	0.08	0.20	0.45	0.17	10	02
15	16.55	16.54	33.483	24.458	346.9	0.064	6.45	281.7	115.9	3.4	0.32	0.0	0.07	0.13	0.85	0.32	15	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED O2;

RV NEW HORIZON — CALCOFI CRUISE 1407 — STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
35 5.2 N	120 46.5 W	20/07/2014	1654 UTC	05 m	1210 - 1943 PST	1209 PST	1941 PST	1610.0 mg C/m2	067

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	16.61	33.515	24.468	7.03	126.4	4.0	0.25	0.1	0.01	0.02	3.98	1.67	74. A	181.0B	181.0B	181.0	1.5
3	16.12	33.511	24.576	6.94	123.7	3.9	0.27	0.1	0.02	0.02	6.28	1.17	40.	169.4	146.3	157.9	1.5
5	15.84	33.511	24.640	6.86	121.4	3.7	0.35	0.1	0.02	0.03	4.79	2.23	22.	111.9	122.6	117.2	1.2
8	15.69	33.511	24.674	6.81	120.2	3.6	0.31	0.1	0.02	0.05	5.03	2.34	8.6	108.3	108.4	108.3	1.5
15	15.12	33.512	24.800	6.56	114.5	3.1	0.33	0.1	0.02	0.06	10.75	2.85	1.00	24.5	24.0	24.3	1.6
17	14.67	33.513	24.898	6.02	104.2	4.2	0.45	0.7	0.10	0.10	13.67	2.90	0.54	10.8	10.8	10.8	1.3

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON — CALCOFI CRUISE 1407 — STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 43.4 N	123 38.0 W	17/07/2014	2020 UTC	29 m	1318 - 1954 PST	1221 PST	1951 PST	294.4 mg C/m2	054

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.86	33.183	23.670	5.60	104.9	2.9	0.35	0.0	0.01	0.05	0.09	0.01	90. A	2.9 B	2.9 B	2.9	0.28
10	17.75	33.160	23.926	5.54	101.7	2.8	0.34	0.0	0.00	0.04	0.09	0.02					
17	17.58	33.145	23.956	5.58	102.0	2.7	0.34	0.0	0.01	0.06	0.10	0.02	41.	2.6	3.7	3.1	0.37
23	17.41	33.146	23.997	5.60	102.0	2.7	0.34	0.0	0.00	0.04	0.12	0.02	30.	2.9	2.8	2.8	0.38
32	17.21	33.143	24.042	5.66	102.7	2.2	0.34	0.0	0.00	0.04	0.17	0.05					
41	17.03	33.147	24.089	5.72	103.5	2.0	0.34	0.0	0.00	0.02	0.22	0.07	11.	4.5	4.1	4.3	0.34
56	16.12	33.093	24.258	5.85	103.9	2.3	0.34	0.0	0.01	0.04	0.32	0.10					
71	13.67	33.151	24.830	6.00	101.4	3.2	0.37	0.0	0.00	0.04	0.29	0.20					
86	12.15	33.148	25.128	5.53	90.6	5.5	0.72	5.2	0.13	0.06	0.36	0.24	1.1	1.9	2.2	2.0	0.17
93	11.47	33.130	25.240	5.40	87.2	6.6	0.85	7.6	0.11	0.02	0.32	0.23					
100	11.15	33.127	25.294	5.35	85.8	7.0	0.90	8.4	0.09	0.03	0.31	0.22	0.50	0.63	0.64	0.64	0.27

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON — CALCOFI CRUISE 1407 — STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 9.2 N	121 9.2 W	18/07/2014	1907 UTC	18 m	1212 - 1945 PST	1211 PST	1942 PST	309.6 mg C/m2	058

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	19.12	33.609	23.930	5.50	103.9	1.4	0.33	0.0	0.01	0.11	0.24	0.04	84. A	9.6	9.4	9.5	0.89
9	18.17	33.589	24.153	5.62	104.2	1.4	0.33	0.0	0.01	0.14	0.22	0.04	46.	6.9	9.1	8.0	0.46
14	17.96	33.591	24.206	5.63	104.1	1.4	0.32	0.0	0.01	0.06	0.22	0.04	30.	7.9	6.7	7.3	0.54
26	16.94	33.570	24.435	5.66	102.6	1.3	0.32	0.0	0.01	0.10	0.31	0.09	11.	6.3	6.9	6.6	0.94
34	14.47	33.468	24.908	5.77	99.3	1.8	0.49	2.0	0.22	0.35	1.10	0.43					
44	11.93	33.364	25.334	5.12	83.6	7.0	1.03	10.1	0.38	0.41	0.59	0.26					
53	10.94	33.333	25.492	4.87	77.8	10.3	1.25	14.0	0.08	0.04	0.26	0.10	1.1	0.98	0.93	0.96	0.35
62	10.48	33.413	25.634	4.44	70.4	13.7	1.41	16.9	0.04	0.05	0.11	0.07	0.51	0.21	0.13	0.17	0.33

RV NEW HORIZON — CALCOFI CRUISE 1407 — STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 29.1 N	122 31.9 W	16/07/2014	2004 UTC	27 m	1310 - 1950 PST	1216 PST	1950 PST	180.8 mg C/m2	050

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	17.80	33.149	23.904	5.61	103.0	2.9	0.33	0.0	0.00	0.04	0.10	0.03	89. A	2.2 B	2.2 B	2.2	0.42
10	17.47	33.152	23.987	5.64	102.9	2.8	0.33	0.0	0.00	0.05	0.11	0.03					
15	17.44	33.152	23.993	5.59	102.0	2.8	0.33	0.0	0.01	0.03	0.23	0.03	43.	3.0	2.7	2.8	0.35
20	17.42	33.153	24.000	5.61	102.2	2.8	0.33	0.0	0.00	0.04	0.12	0.03	32.	2.3	2.4	2.4	0.43
30	17.38	33.150	24.008	5.59	101.9	2.8	0.33	0.0	0.00	0.03	0.13	0.04					
40	17.37	33.152	24.013	5.60	102.0	2.8	0.34	0.0	0.00	0.04	0.15	0.04	10.	2.2	2.2	2.2	0.31
53	17.29	33.155	24.036	5.61	102.0	2.7	0.35	0.0	0.00	0.08	0.21	0.06					
67	15.76	33.124	24.364	5.84	103.1	2.7	0.35	0.0	0.00	0.06	0.34	0.17					
80	14.82	33.215	24.642	5.84	101.2	2.7	0.43	0.3	0.04	0.31	0.30	0.25	1.1	1.5	1.3	1.4	0.31
85	14.19	33.212	24.771	5.83	99.7	3.1	0.48	0.8	0.05	0.50	0.26	0.21					
93	13.29	33.150	24.907	5.85	98.2	3.5	0.49	1.0	0.05	0.35	0.25	0.20	0.51	0.39	0.73	0.56	0.39

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 41.7; 31.2; 11.2; 1.06; 0.50 PERCENT RESPECTIVELY.
B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 10.5 N	119 30.5 W	21/07/2014	1658 UTC	20 m	1208 - 1932 PST	1204 PST	1930 PST	820.5 mg C/m2	074

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	20.25	33.604	23.632	5.58	107.7	0.2	0.19	0.2	0.02	0.03	0.27	0.06	86. A	10.8 B	10.8 B	10.8	0.64
10	20.09	33.594	23.670	5.62D	108.0	0.3	0.21	0.0	0.01	0.01	0.30	0.10	46.	10.1	10.4	10.3	1.00
15	19.84	33.590	23.731	5.63	107.7	0.4	0.21	0.0	0.00	0.01	0.32	0.07	32.	10.1	11.1	10.6	0.74
22	16.30	33.476	24.511	6.28	112.2	2.3	0.33	0.0	0.01	0.01	1.06	0.35					
29	15.28	33.428	24.702	6.18	108.2	3.7	0.36	0.0	0.02	0.00	1.22	0.55	11.	25.4	26.2	25.8	0.90
34	14.48	33.436	24.880	6.14	105.7	1.8	0.32	0.5	0.03	0.05	4.64	0.77					
39	13.33	33.374	25.070	5.72	96.1	5.2	0.61	3.0	0.16	0.37	1.27	0.43					
49	12.15	33.379	25.304	4.97	81.5	8.3	0.93	8.5	0.33	0.19	0.41	0.27					
58	11.44	33.429	25.476	4.51	72.9	11.4	1.17	12.4	0.31	0.04	0.29	0.21	1.2	1.3	1.8	1.6	0.41
69	11.16	33.472	25.560	4.17	67.1	13.2	1.27	14.2	0.24	0.01	0.24	0.19	0.50	0.52	0.48	0.50	0.36

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 52.7 N	120 8.2 W	19/07/2014	1755 UTC	13 m	1207 - 1948 PST	1207 PST	1946 PST	631.6 mg C/m2	062

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.20	33.544	24.109	5.76	106.8	2.3	0.33	0.1	0.00	0.03	0.52	0.09	79. A	16.8 B	16.8 B	16.8	0.68
7	18.06	33.544	24.144	5.82	107.6	2.2	0.34	0.2	0.00	0.04	0.73	0.12	44.	24.5	23.1	23.8	0.52
10	18.00	33.541	24.156	5.85	108.1	2.0	0.34	0.1	0.00	0.04	0.99	0.14	31.	28.0	29.8	28.9	0.57
18	14.43	33.420	24.877	5.84	100.4	4.3	0.55	2.5	0.08	0.08	1.05	0.35	12.	20.3	18.0	19.1	0.44
29	12.58	33.404	25.240	5.19	85.9	7.7	0.86	7.7	0.16	0.09	0.86	0.35					
39	11.86	33.419	25.389	4.84	78.9	9.7	1.02	10.4	0.18	0.09	0.70	0.30	1.00	1.9	2.1	2.0	0.27
45	11.30	33.440	25.509	4.59	74.0	11.2	1.14	12.1	0.17	0.05	0.55	0.27	0.49	0.57	0.56	0.56	0.49

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 29.8 N	119 19.4 W	13/07/2014	1744 UTC	27 m	1204 - 1945 PST	1203 PST	1939 PST	594.1 mg C/m2	037

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	20.39	33.641	23.625	5.35	103.6	2.1	0.30	0.0	0.00	0.06	0.11	0.02	84. A	5.1 B	5.1 B	5.1	0.51
10	20.20	33.627	23.666	5.36	103.3	2.1	0.30	0.0	0.00	0.09	0.12	0.02					
16	19.45	33.605	23.843	5.49	104.3	2.1	0.31	0.0	0.00	0.05	0.12	0.03	40.	8.1 C	8.1 C	8.1	0.46
20	18.80	33.581	23.989	5.61	105.2	2.1	0.30	0.0	0.00	0.04	0.12	0.03	32.	4.5	4.7	4.6	0.39
30	17.04	33.513	24.367	5.88	106.6	2.3	0.34	0.0	0.01	0.02	0.14	0.05					
39	14.37	33.405	24.881	5.94	102.0	3.5	0.46	1.0	0.05	0.10	0.47	0.22	11.	11.7	11.2	11.4	0.49
53	13.27	33.369	25.080	5.66	95.0	4.8	0.64	3.7	0.13	0.13	0.58	0.30					
67	11.91	33.449	25.405	4.71	76.8	10.0	1.10	11.4	0.27	0.09	0.46	0.28					
81	10.84	33.428	25.584	4.43	70.7	12.9	1.27	14.5	0.10	0.05	0.23	0.19	1.00	3.9	1.4	2.7	0.24
94	10.71	33.508	25.670	4.08	65.0	15.3	1.41	16.5	0.09	0.04	0.21	0.16	0.48	0.68	0.59	0.63	0.29

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED
C) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 39.4 N	121 1.8 W	14/07/2014	1631 UTC	21 m	1210 - 1948 PST	1210 PST	1945 PST	243.6 mg C/m2	041

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	17.00	33.298	24.209	5.69	102.9	1.7	0.34	0.0	0.01	0.01	0.19	0.04	80. A	4.3 B	4.3 B	4.3	1.8
12	16.93	33.293	24.223	5.67	102.5	1.7	0.35	0.0	0.01	0.03	0.19	0.04	42.	5.6	5.8	5.7	0.42
16	16.95	33.289	24.215	5.69	102.9	1.7	0.35	0.0	0.02	0.04	0.19	0.05	31.	4.9	4.9	4.9	0.37
22	16.81	33.269	24.233	5.70	102.8	1.8	0.34	0.0	0.01	0.01	0.19	0.05					
29	15.75	33.247	24.459	5.92	92.6	2.1	0.35	0.0	0.01	0.02	0.33	0.12	12.	4.9	5.2	5.1	0.36
40	15.84	33.392	24.552	5.80	102.7	1.4	0.41	0.4	0.03	0.33	0.53	0.21					
52	14.21	33.185	24.746	5.91	101.1	2.8	0.43	0.3	0.03	0.20	0.45	0.25					
62	13.74	33.357	24.976	5.68	96.3	2.8	0.71	4.1	0.32	1.04	0.28	0.16	1.1	0.87	0.77	0.82	0.36
71	12.40	33.261	25.168	5.40	89.0	5.3	0.86	7.5	0.39	0.04	0.19	0.14	0.56	0.40	0.20	0.30	0.25

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 19.5 N	123 44.4 W	15/07/2014	1626 UTC	35 m	1224 - 1950 PST	1221 PST	1949 PST	221.4 mg C/m2	045

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.51	33.350	23.884	5.45	101.5	2.8	0.32	0.1	0.02	0.07	0.10	0.02	92. A	2.3 B	2.3 B	2.3	0.26
10	18.50	33.352	23.888	5.46	101.8	2.8	0.33	0.0	0.02	0.02	0.08	0.01					
20	18.50	33.352	23.891	5.47	101.9	2.7	0.33	0.0	0.01	0.02	0.08	0.01	42.	7.5 C	7.5 C	7.5	0.37
27	18.49	33.351	23.891	5.45	101.6	2.7	0.33	0.0	0.01	0.03	0.08	0.02	31.	1.9	1.9	1.9	0.24
37	18.14	33.342	23.973	5.51	101.9	2.7	0.32	0.0	0.01	0.02	0.09	0.03					
49	17.96	33.344	24.019	5.55	102.3	2.6	0.31	0.0	0.01	0.02	0.12	0.01	12.	1.4	1.6	1.5	0.33
67	15.57	33.160	24.435	5.94	104.5	2.7	0.34	0.0	0.01	0.04	0.17	0.07					
85	12.95	33.161	24.983	5.86	97.6	4.0	0.56	2.2	0.15	0.16	0.27	0.13					
104	10.86	33.070	25.303	5.45	86.7	6.9	0.89	7.9	0.06	0.03	0.17	0.09	1.0	0.35	0.45	0.40	0.26
111	10.49	33.121	25.406	5.25	83.0	8.8	1.02	10.5	0.03	0.02	0.11	0.09					
121	10.11	33.176	25.515	5.15	80.7	10.2	1.09	11.8	0.03	0.01	0.10	0.10	0.50	0.10	0.62	0.36	0.26

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 41.7; 31.2; 11.2; 1.06; 0.50 PERCENT RESPECTIVELY.
B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED
C) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 25.4 N	117 54.2 W	12/07/2014	1752 UTC	20 m	1202 - 1938 PST	1157 PST	1935 PST	639.8 mg C/m2	029

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	21.69	33.650	23.281	5.35	106.0	1.6	0.29	0.1	0.01	0.04	0.12	0.02	86. A	5.1 B	5.1 B	5.1	0.38
10	21.23	33.641	23.399	5.39	105.8	1.6	0.28	0.0	0.01	0.09	0.13	0.03					
17	19.11	33.588	23.919	5.55	104.9	1.8	0.30	0.0	0.01	0.06	0.13	0.03	27.	7.0	6.9	6.9	0.52
23	17.26	33.497	24.302	6.00	109.3	2.0	0.34	0.0	0.00	0.06	0.13	0.03	17.	5.4	5.1	5.2	0.66
33	14.87	33.399	24.770	6.21	107.7	2.9	0.38	0.0	0.00	0.05	0.24	0.10					
43	13.30	33.334	25.047	5.71	96.0	4.0	0.60	2.5	0.15	0.07	0.57	0.30	3.7	12.9	14.5	13.7	0.79
58	12.31	33.349	25.252	5.12	84.2	7.0	0.89	7.2	0.32	0.07	0.48	0.29					
72	11.36	33.448	25.505	4.30	69.5	11.7	1.20	12.3	0.13	0.03	0.20	0.19					
88	10.89	33.594	25.705	3.63	58.0	16.3	1.50	16.3	0.05	0.05	0.09	0.10	0.12	0.14	0.20	0.17	0.52
103	10.28	33.646	25.851	3.48	54.9	19.1	1.62	18.6	0.04	0.02	0.05	0.06	0.04	0.18	0.17	0.17	0.20

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 25.3 N	119 57.8 W	11/07/2014	1712 UTC	19 m	1208 - 1939 PST	1205 PST	1935 PST	394.7 mg C/m2	024

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	16.84	33.499	24.401	5.67	102.4	0.7	0.32	0.0	0.01	0.05	0.19	0.04	78. A	16.3 B	16.3 B	16.3	0.23
10	16.82	33.501	24.409	5.68	102.6	0.6	0.32	0.0	0.01	0.06	0.20	0.04	45.	5.3	4.2	4.8	4.9
14	16.81	33.519	24.425	5.68	102.6	0.6	0.32	0.0	0.01	0.04	0.21	0.05	32.	8.8	8.2	8.5	0.39
19	16.47	33.537	24.518	5.74	103.0	0.6	0.32	0.0	0.01	0.05	0.22	0.08					
27	16.04	33.535	24.614	5.75	102.3	0.6	0.32	0.0	0.01	0.03	0.29	0.13	11.	8.2	8.5	8.3	0.41
36	15.92	33.538	24.644	5.69	101.0	0.6	0.33	0.0	0.02	0.11	0.31C	0.46C					
47	14.49	33.408	24.857	5.57	95.9	1.7	0.50	1.1	0.08	1.49	0.38	0.17					
55	12.40	33.131	25.065	5.55	91.5	5.2	0.76	4.7	0.29	0.78	0.23	0.19	1.2	1.3	1.3	1.3	0.31
66	11.69	33.177	25.234	5.29	85.8	7.0	0.93	8.5	0.20	0.05	0.11	0.11	0.48	0.27	0.28	0.28	0.30

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED
C) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 25.1 N	121 59.4 W	10/07/2014	1730 UTC	30 m	1216 - 1946 PST	1213 PST	1941 PST	388.0 mg C/m2	020

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
3	18.47	33.477	23.991	5.33	99.3	2.7	0.32	0.1	0.01	0.35	0.11	0.02	86. A	3.8 B	3.8 B	3.8	0.38
10	18.44	33.476	23.998	5.46	101.7	2.6	0.33	0.0	0.00	0.07	0.12	0.02					
17	18.06	33.458	24.079	5.50	101.6	2.6	0.32	0.0	0.00	0.06	0.11	0.02	42.	4.1	4.1	4.1	0.32
22	17.93	33.456	24.109	5.52	101.9	2.7	0.33	0.0	0.00	0.03	0.14	0.03	32.	3.5	3.5	3.5	0.35
32	16.73	33.378	24.336	5.80	104.4	2.4	0.36	0.0	0.00	0.06	0.19	0.06					
43	15.19	33.415	24.713	6.07	106.0	2.2	0.38	0.0	0.01	0.13	0.35	0.14	11.	6.7	7.3	7.0	0.52
56	14.24	33.290	24.820	5.75	98.4	3.1	0.51	1.3	0.10	0.50	0.38	0.18					
72	12.92	33.211	25.027	5.56	92.6	4.6	0.68	4.2	0.43	0.19	0.33	0.17					
89	11.53	33.288	25.352	5.08	82.2	7.9	0.98	9.7	0.03	0.08	0.17	0.16	1.1	0.89	0.97	0.93	0.27
104	11.10	33.359	25.486	4.73	75.9	11.0	1.16	12.8	0.02	0.05	0.10	0.11	0.49	0.34	0.36	0.35	0.19

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 57.3 N	117 18.5 W	06/07/2014	1829 UTC	23 m	1158 - 1932 PST	1154 PST	1930 PST	1108.5 mg C/m2	001

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	22.57	33.659	23.043	5.36	107.8	1.9	0.28	0.0	0.08	0.72	0.17	0.04	88. A	12.0 B	12.0 B	12.0	0.33
13	17.90	33.574	24.206	5.64	104.1	2.1	0.31	0.0	0.06	0.20	0.13	0.03	42.	6.0	6.1	6.1	0.38
17	15.88	33.455	24.588	6.47	114.7	3.4	0.32	0.0	0.06	0.47	0.28	0.11	32.	11.4	11.9	11.7	0.75
25	14.20	33.410D	24.919	6.46	110.6	4.8	0.39	0.0	0.08	1.43	0.69	0.33					
32	13.03	33.374	25.129	5.84	97.7	5.5	0.60	2.7	0.12	1.25	1.45	0.60	12.	33.3	34.6	33.9	0.59
39	12.33	33.377	25.268	5.17	85.1	7.8	0.84	6.7	0.19	0.82	0.89	0.47					
50	12.07	33.415	25.348	5.09	83.4	8.5	0.90	6.8	0.29	0.90	1.04	0.70					
66	11.56	33.456	25.474	4.36	70.6	12.0	1.20	12.2	0.46	0.57	0.49	0.44	1.2	2.5	2.5	2.5	0.57

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 10.7 N	118 53.6 W	07/07/2014	1856 UTC	19 m	1210 - 1935 PST	1201 PST	1935 PST	271.1 mg C/m2	008

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	19.46	33.630	23.858	5.48	104.1	2.4	0.30	0.0	0.02	0.12	0.15	0.02	85. A	3.7	5.9	4.8	0.29
11	18.30	33.615	24.141	5.60	104.1	2.6	0.33	0.0	0.02	0.22	0.19	0.04	41.	7.3	7.4	7.4	0.51
14	17.39	33.583	24.336	5.71	104.3	2.9	0.35	0.0	0.02	0.31	0.21	0.05	32.	5.4	5.6	5.5	1.8
20	17.21	33.558	24.360	5.78	105.3	2.9	0.34	0.0	0.03	0.18	0.25	0.06					
27	16.94	33.552	24.419	5.78	104.7	2.8	0.35	0.0	0.01	0.16	0.29	0.08	11.	6.4	5.9	6.2	0.67
37	14.28	33.535	24.999	5.85	100.5	4.6	0.52	1.6	0.15	0.29	0.83	0.28					
47	12.29	33.452	25.336	4.93	81.2	8.4	1.02	10.1	0.17	0.13	0.56	0.33					
55	11.52	33.441	25.471	4.55	73.7	11.5	1.22	13.5	0.05	0.10	0.26	0.20	1.2	1.2	1.2	1.2	0.32
65	10.75	33.421	25.594	4.48	71.3	12.8	1.28	14.4	0.04	0.12	0.18	0.15	0.52	0.43	0.40	0.41	0.21

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 41.7; 31.2; 11.2; 1.06; 0.50 PERCENT RESPECTIVELY.

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 11.0 N	120 55.4 W	08/07/2014	1630 UTC	27 m	1212 - 1945 PST	1209 PST	1932 PST	170.0 mg C/m2	012

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	18.72	33.451	23.910	5.43	101.8	2.7	0.32	0.0	0.00	0.07	0.10	0.02	89. A	3.6 B	3.6 B	3.6	0.31
9	18.71	33.451	23.913	5.45	102.0	2.7	0.32	0.0	0.00	0.07	0.11	0.02					
15	18.64	33.455	23.933	5.45	101.9	2.7	0.32	0.0	0.00	0.06	0.11	0.02	43.	3.6	3.6	3.6	0.09
19	18.30	33.439	24.007	5.49	102.0	2.7	0.33	0.0	0.00	0.04	0.10	0.02	34.	2.2	2.5	2.3	0.48
29	18.06	33.438	24.064	5.51	101.9	2.7	0.34	0.0	0.00	0.03	0.09	0.02					
38	17.94	33.440	24.097	5.52	101.8	2.7	0.33	0.0	0.00	0.04	0.12	0.03	12.	1.7	1.7	1.7	0.49
53	16.69	33.420	24.380	5.78	104.0	2.6	0.30	0.0	0.00	0.03	0.15	0.04					
67	15.64	33.366	24.577	5.80	102.2	2.7	0.35	0.0	0.00	0.01	0.19	0.09					
79	14.48	33.359	24.825	5.75	99.0	3.0	0.38	0.1	0.02	0.03	0.38	0.22	1.1	0.97	1.2	1.1	0.30
86	13.88	33.335	24.930	5.68	96.5	3.1	0.44	0.9	0.10	0.09	0.36	0.24					
94	13.57	33.317	24.980	5.62	94.9	3.7	0.50	2.2	0.25	0.14	0.32	0.24	0.48	0.40	0.52	0.46	0.21

B) PRODUCTIVITY REPLICATES POOR UNCERTAIN VALUE ELIMINATED

RV NEW HORIZON CALCOFI CRUISE 1407 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
29 50.8 N	123 35.4 W	09/07/2014	1713 UTC	33 m	1224 - 1942 PST	1220 PST	1937 PST	129.3 mg C/m2	016

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/L	OXY PCT	SIO3* µM	PO4* µM	NO3* µM	NO2* µM	NH4* µM	CHL-A µg/L	PHAEO µg/L	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	20.02	33.709	23.772	5.33	102.5	2.3	0.26	0.0	0.01	0.16	0.07	0.02	91. A	1.2	1.2	1.2	0.30
9	19.98	33.694	23.773	5.32	102.1	2.4	0.26	0.0	0.01	0.03	0.07	0.01					
19	19.15	33.582	23.904	5.39	101.9	2.4	0.27	0.0	0.02	0.10	0.07	0.01	41.	1.6	1.8	1.7	1.1
24	19.03	33.585	23.936	5.40	101.8	2.4	0.27	0.0	0.02	0.03	0.07	0.02	33.	2.0	2.1	2.1	0.44
37	19.25	33.693	23.963	5.39	102.1	2.4	0.26	0.0	0.02	0.03	0.07	0.02					
47	18.67	33.536	23.992	5.47	102.4	2.4	0.28	0.0	0.01	0.05	0.08	0.02	11.	1.3	1.4	1.3	0.43
64	17.24	33.418	24.249	5.73	104.3	2.5	0.29	0.0	0.01	0.03	0.10	0.01					
81	16.31	33.406D	24.458	5.78	103.3	2.6	0.29	0.0	0.01	0.16	0.11	0.03					
98	15.23	33.406	24.700	5.76	100.7	2.8	0.32	0.0	0.00	0.03	0.14	0.09	1.0	0.77	0.19	0.48	0.45
107	14.49	33.403	24.857	5.70	98.2	2.9	0.34	0.0	0.00	0.03	0.19	0.14					
113	13.98	33.381	24.947	5.65	96.3	3.4	0.41	0.6	0.05	0.09	0.21	0.15	0.52	0.47	0.37	0.42	0.20

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 41.7; 31.2; 11.2; 1.06; 0.50 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
76.7	49.0	35 05.0	120 46.3	07/20	0822	0829	137	58	51	51
76.7	51.0	35 01.3	120 55.1	07/20	0611	0630	354	189	192	164
76.7	55.0	34 53.4	121 11.9	07/20	0256	0318	401	209	90	90
76.7	60.0	34 43.3	121 32.8	07/19	2305	2327	398	208	251	176
76.7	70.0	34 23.2	122 14.8	07/18	0034	0055	403	214	544	159
76.7	80.0	34 03.3	122 56.5	07/17	1856	1918	417	209	1280	554
76.7	90.0	33 43.3	123 38.0	07/17	1321	1342	394	214	122	122
76.7	100.0	33 23.3	124 19.3	07/17	0726	0748	427	211	7	7
80.0	50.5	34 27.7	120 29.1	07/20	1403	1407	61	17	164	164
80.0	51.0	34 27.0	120 31.4	07/20	1542	1551	164	72	213	158
80.0	55.0	34 18.9	120 48.0	07/19	1701	1722	368	217	217	217
80.0	60.0	34 09.0	121 09.0	07/18	1233	1253	389	211	360	252
80.0	70.0	33 49.0	121 50.8	07/18	0614	0635	384	217	1219	724
80.0	80.0	33 29.0	122 32.0	07/16	1325	1347	425	214	104	33
80.0	90.0	33 09.0	123 13.2	07/16	1946	2008	409	214	46	46
80.0	100.0	32 49.0	123 54.4	07/17	0141	0202	397	213	113	53
81.7	43.5	34 24.2	119 48.3	07/21	0304	0306	47	13	108	108
81.8	46.9	34 16.5	120 01.5	07/21	0038	0100	400	209	93	80
83.3	39.4	34 15.5	119 19.3	07/21	0602	0604	38	14	263	263
83.3	40.6	34 13.5	119 24.6	07/21	0748	0751	62	27	371	371
83.3	42.0	34 10.5	119 30.5	07/21	1004	1018	256	141	86	86
83.3	51.0	33 52.7	120 08.1	07/19	1056	1104	143	72	77	77
83.3	55.0	33 44.7	120 24.4	07/19	0719	0740	393	213	165	107
83.3	60.0	33 34.7	120 45.3	07/19	0254	0316	410	205	224	207
83.3	70.0	33 14.8	121 26.6	07/18	2035	2056	396	214	720	202
83.3	80.0	32 54.6	122 07.5	07/16	0719	0741	393	211	341	112
83.3	90.0	32 34.6	122 48.8	07/16	0142	0204	420	209	157	83
83.3	100.0	32 14.6	123 29.5	07/15	2010	2033	438	210	123	64
83.3	110.0	31 54.7	124 10.2	07/15	1435	1455	370	211	54	54
85.4	35.8	34 00.8	118 50.4	07/21	1428	1431	63	18	111	111
86.7	33.0	33 53.4	118 29.4	07/12	2319	2325	116	41	173	173
86.7	35.0	33 49.4	118 37.7	07/13	0225	0247	408	212	98	98
86.7	40.0	33 39.5	118 58.5	07/13	0651	0713	398	212	63	63
86.7	45.0	33 29.4	119 19.1	07/13	1112	1133	396	213	58	38
86.7	50.0	33 19.3	119 39.8	07/13	1509	1516	138	49	224	224
86.7	55.0	33 09.4	120 00.4	07/13	2141	2203	423	217	123	123
86.7	60.0	32 59.5	120 21.4	07/14	0221	0245	473	216	199	178
86.7	70.0	32 39.5	121 01.8	07/14	0731	0753	444	218	149	56
86.7	80.0	32 19.4	121 42.9	07/14	1455	1516	411	211	51	51
86.7	90.0	31 59.3	122 23.6	07/14	2037	2060	442	215	106	106
86.7	100.0	31 39.4	123 04.2	07/15	0220	0241	390	216	118	61
86.7	110.0	31 19.4	123 44.4	07/15	0726	0749	453	209	26	26
86.8	32.5	33 53.3	118 26.7	07/12	2140	2143	53	18	244	244
88.5	30.1	33 40.3	118 05.6	07/12	1756	1759	57	21	211	211
90.0	27.7	33 29.7	117 44.8	07/12	1511	1518	69	18	44	44
90.0	28.0	33 29.2	117 45.9	07/12	1412	1418	131	42	183	183
90.0	30.0	33 25.1	117 54.4	07/12	1114	1135	410	209	93	93
90.0	35.0	33 15.2	118 15.0	07/12	0653	0715	387	211	62	62
90.0	37.0	33 11.0	118 23.3	07/12	0338	0360	416	203	99	99
90.0	45.0	32 55.1	118 56.0	07/11	2149	2213	422	216	299	90
90.0	53.0	32 39.0	119 28.9	07/11	1408	1430	414	211	300	140
90.0	60.0	32 25.2	119 57.6	07/11	0754	0816	400	212	155	155
90.0	70.0	32 05.0	120 38.2	07/11	0234	0256	412	214	121	107
90.0	80.0	31 45.1	121 18.7	07/10	1940	2002	421	215	48	48
90.0	90.0	31 25.0	121 59.5	07/10	1054	1115	411	214	80	80
90.0	100.0	31 05.1	122 39.6	07/10	0437	0459	415	213	24	24
90.0	110.0	30 45.1	123 19.8	07/09	2221	2243	447	216	29	29
90.0	120.0	30 25.0	123 59.8	07/09	1607	1629	421	214	28	28
93.3	26.7	32 57.4	117 18.4	07/06	1131	1136	108	38	214	214
93.3	28.0	32 54.7	117 23.7	07/06	1629	1651	379	216	69	69
93.3	30.0	32 50.8	117 31.9	07/06	1931	1954	397	215	151	151
93.3	35.0	32 40.7	117 52.4	07/06	2337	2360	414	215	123	123
93.3	40.0	32 30.8	118 12.7	07/07	0350	0412	411	211	192	192
93.3	45.0	32 20.7	118 33.2	07/07	0758	0820	428	215	112	94
93.3	50.0	32 10.7	118 53.6	07/07	1218	1242	479	212	65	52
93.3	55.0	32 00.8	119 14.0	07/07	1629	1652	432	212	93	93
93.3	60.0	31 51.6	119 34.4	07/07	2042	2104	451	215	109	109
93.3	70.0	31 30.8	120 14.8	07/08	0237	0260	461	214	180	117
93.3	80.0	31 10.9	120 55.4	07/08	0725	0747	440	209	36	36
93.3	90.0	30 50.7	121 35.4	07/08	1448	1511	460	209	161	46
93.3	100.0	30 30.6	122 15.4	07/08	2122	2145	459	214	24	24
93.3	110.0	30 10.8	122 55.4	07/09	0318	0340	441	215	29	29
93.3	120.0	29 50.8	123 35.2	07/09	0807	0829	434	212	25	25
93.4	26.4	32 57.2	117 16.7	07/06	1241	1243	53	13	152	152