UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

CalCOFI Cruise 1307
6– 22 July 2013

CC Reference 14 -07
06 Oct 2014

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 1307
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INTRODUCTION

The data presented in this report were collected during cruise 1307* 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 cruises 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.

* 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 corrections were performed in each run using a high standard 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 used to adjust values for nitrate, nitrite, phosphate, and silicate if appropriate. 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 11.47 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).

Avifauna Observations (Farallon Institute of Advanced Ecosystem Research)

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

Ancillary Programs

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

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

2) ADCP: Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP raw data are collected and archived for potential data processing ashore.

3) California Current Ecosystem Long Term Ecological Research Program: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure with a Planktonic Rate Processes in Oligotrophic Ocean Systems (PRPOOS) 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. 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) Nitrate Isotope: Seawater samples are acquired using the CTD-rosette and shipped frozen to Princeton University. The nitrogen and oxygen isotopic composition of nitrate is measured using strains of denitrifying bacteria that reduce nitrate to N_2O. (P. Rafter, Princeton University).

9) BioArgo Profling Float: An Apex Profiling float with nitrate and oxygen sensors was deployed at CalCOFI station 83.110 on cruise 1307NH. The float is profiling from 1000 m depth to the surface every 5 days. Chemical measurements are made at 60 depths on each profiling with spacing varying from every 5 m in the upper 100 m, every 10 m to 360 m, to every 50 m from 400 to 1000 m. This float should continue to operate for about 5 years. It shows the nitracline near 90 m depth, but shoaling to the surface in January, before relaxing back to depths near 90 m in April. A persistent shallow oxygen maximum (an oceanographic feature first named by Eric Schulenberger and Joe Reid at SIO) is formed in August through October by net community production and then eroded during winter. All data from the float is available at http://www.mbari.org/chemsensor/floatviz.htm. This float is identified as 7618CalCurrent, and is one of three operating along the US West Coast. (Ken Johnson, MBARI)

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

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 1307

1. CalCOFI Cruise 1307 track and station positions.

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

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

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

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

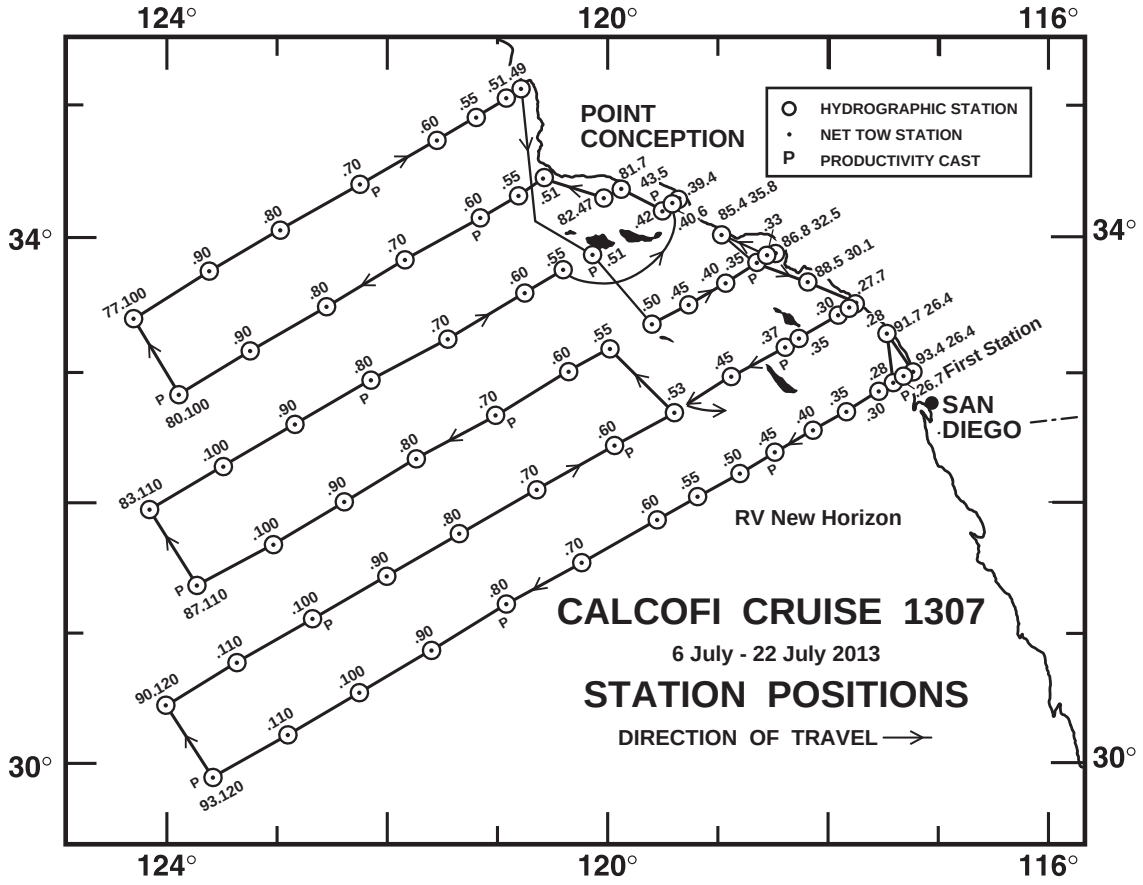

FIGURE 1

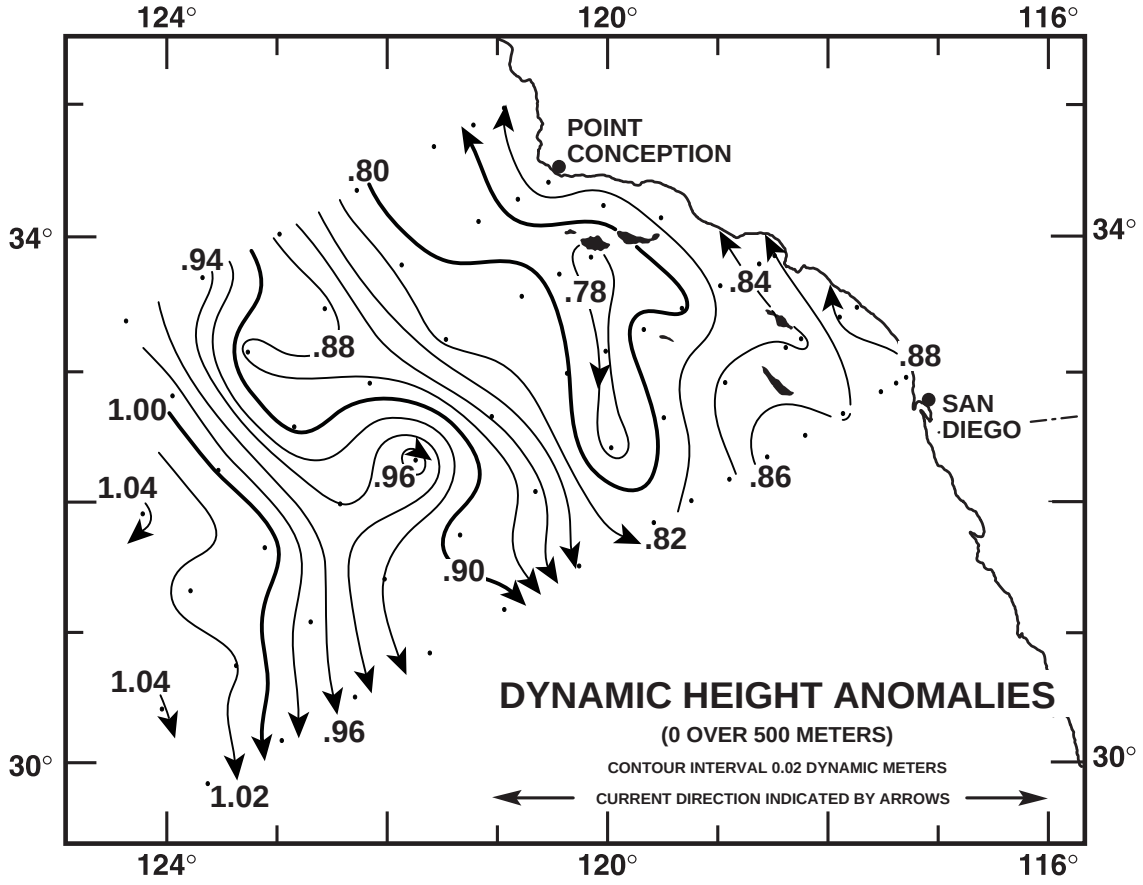

FIGURE 2

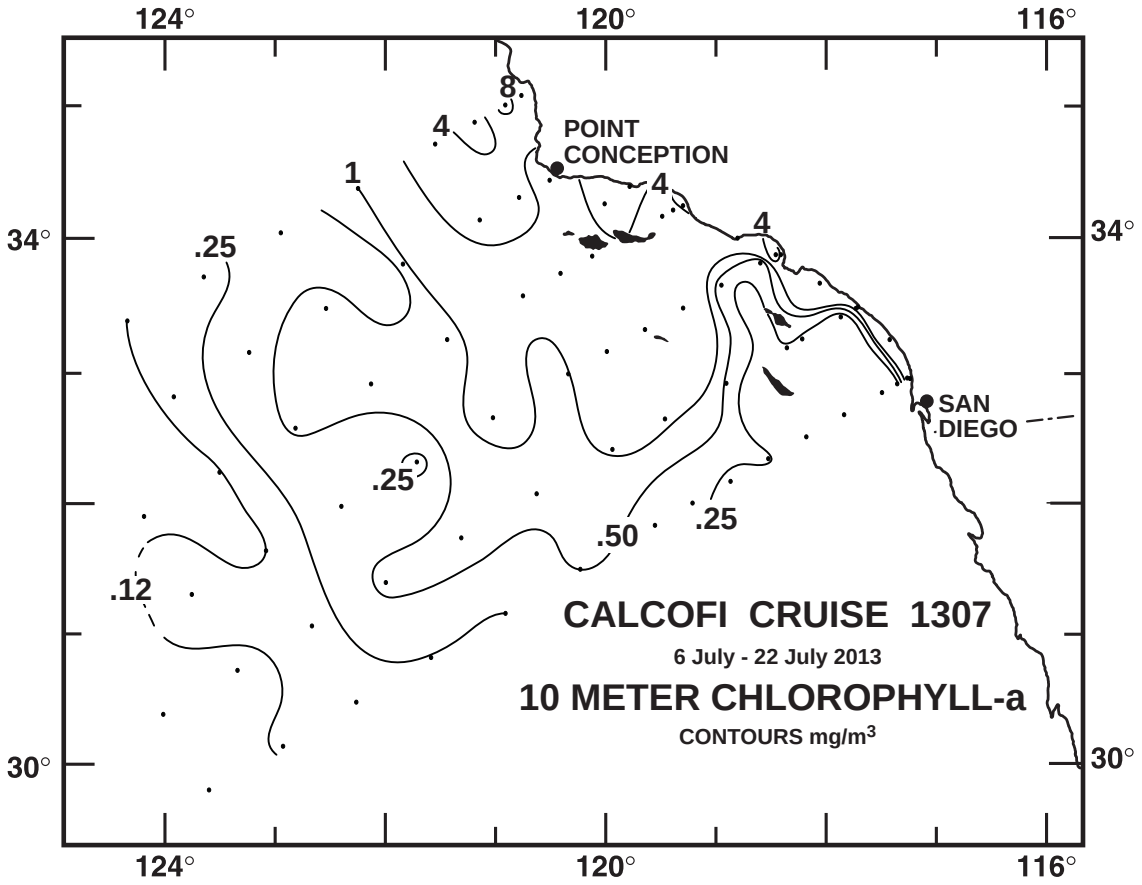

FIGURE 3A

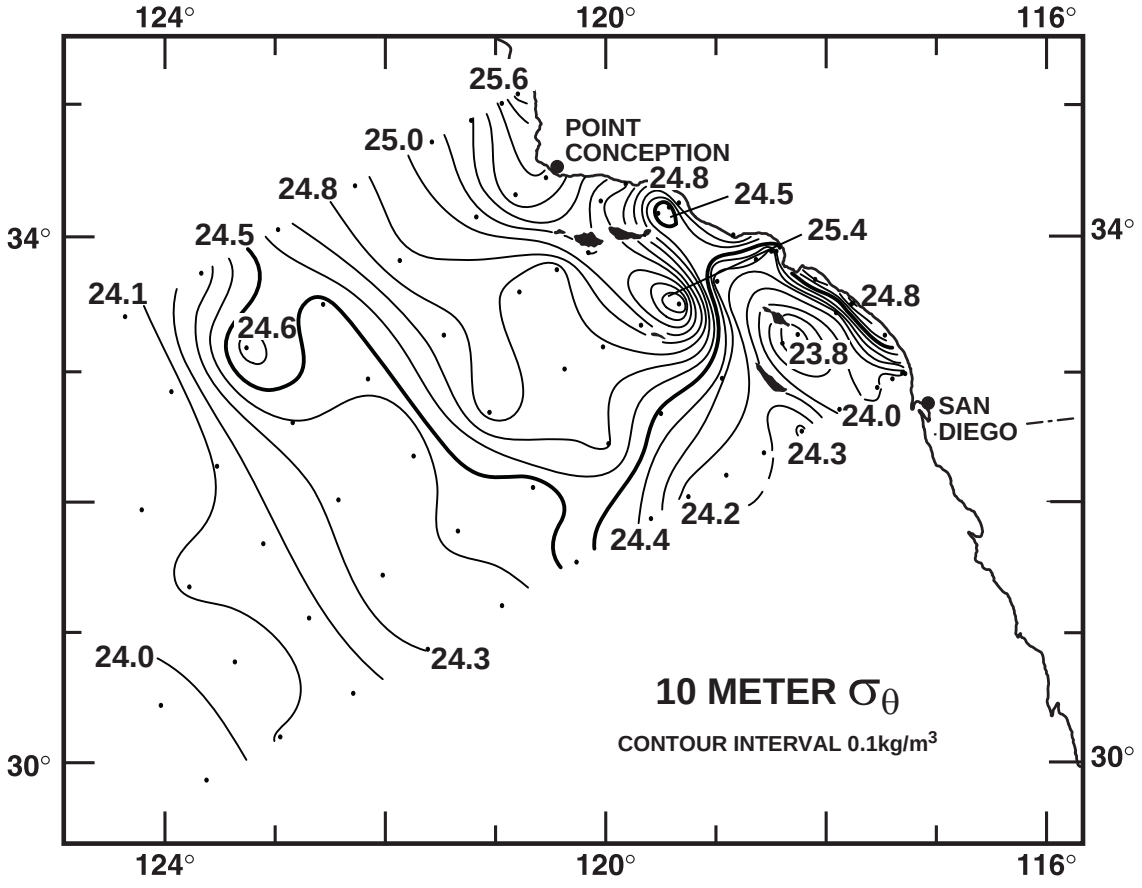

FIGURE 3B

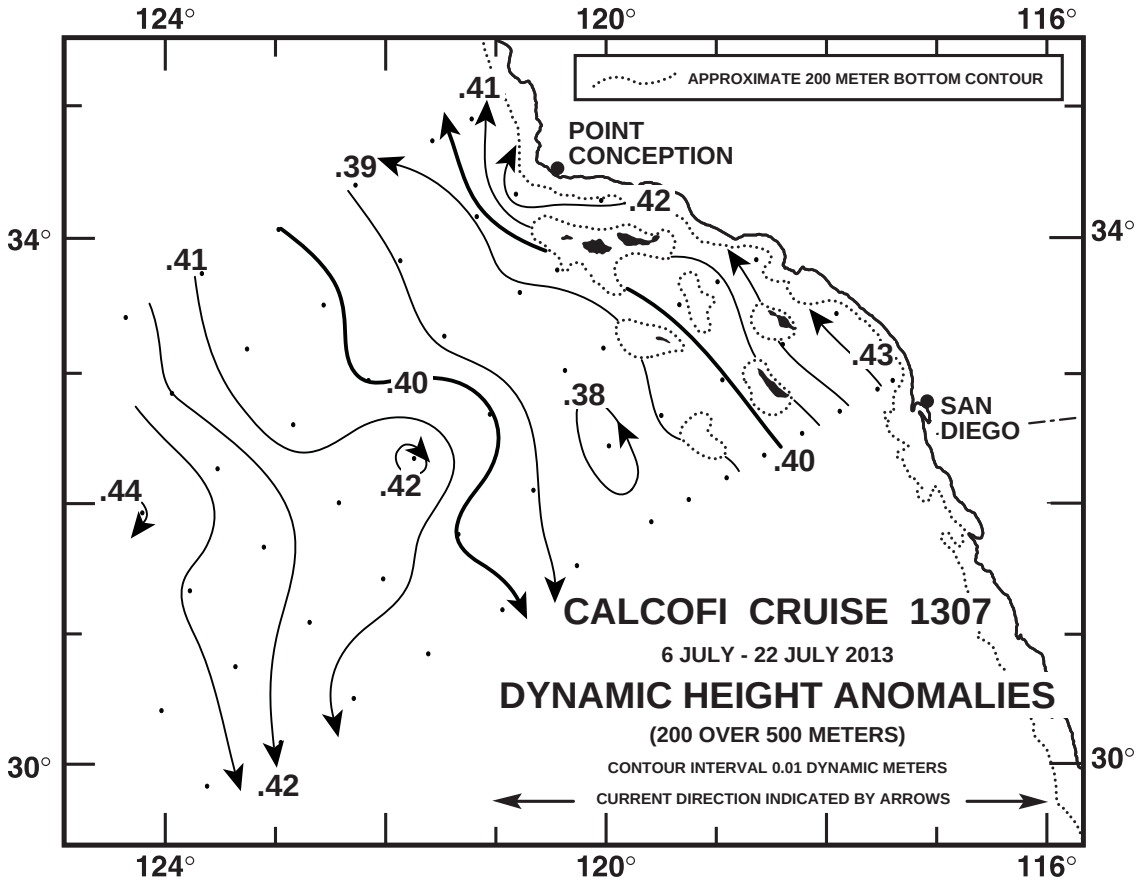

FIGURE 4A

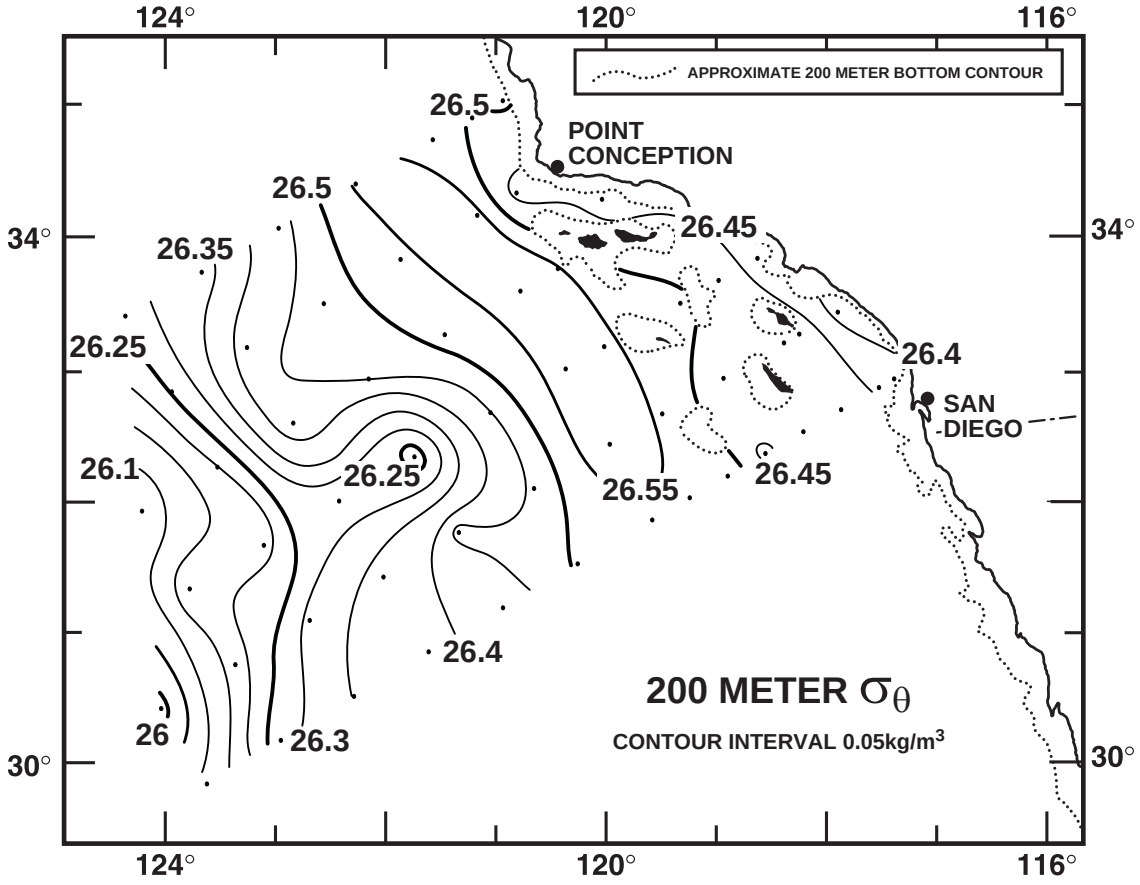

FIGURE 4B

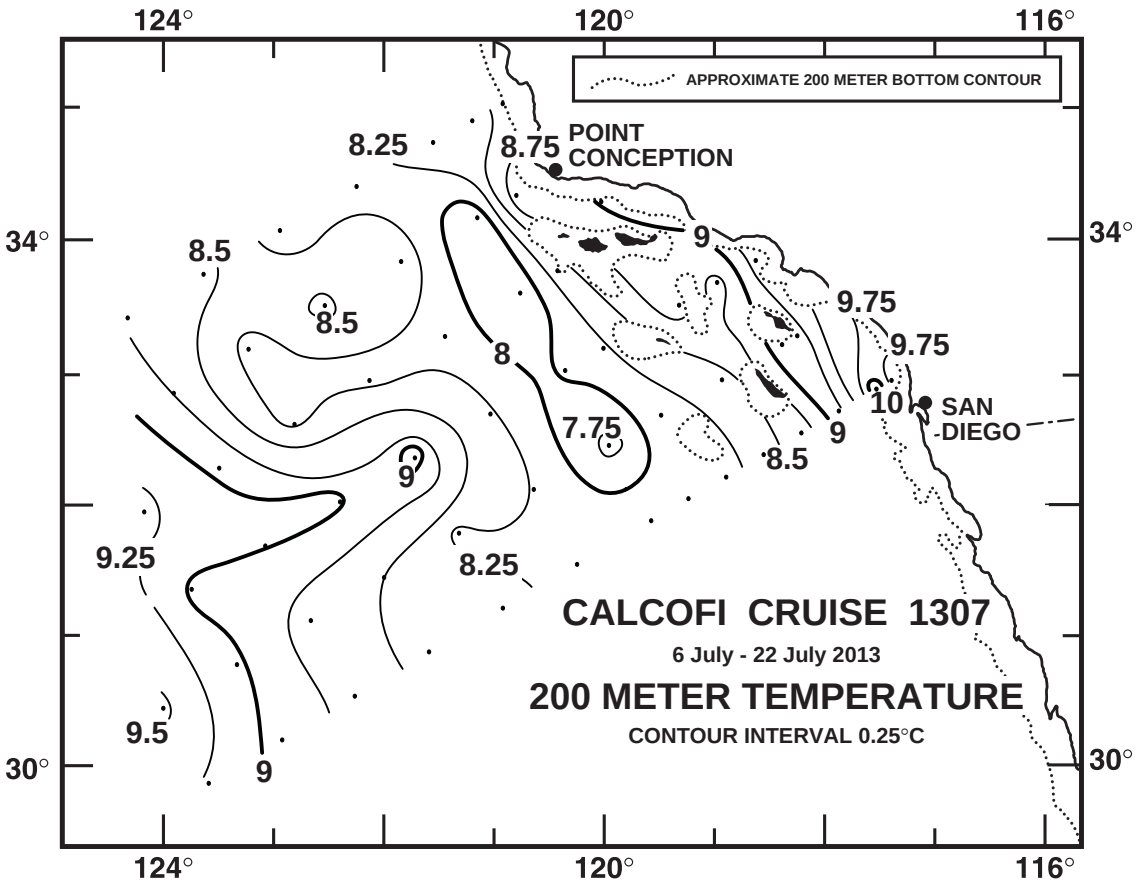

FIGURE 4C

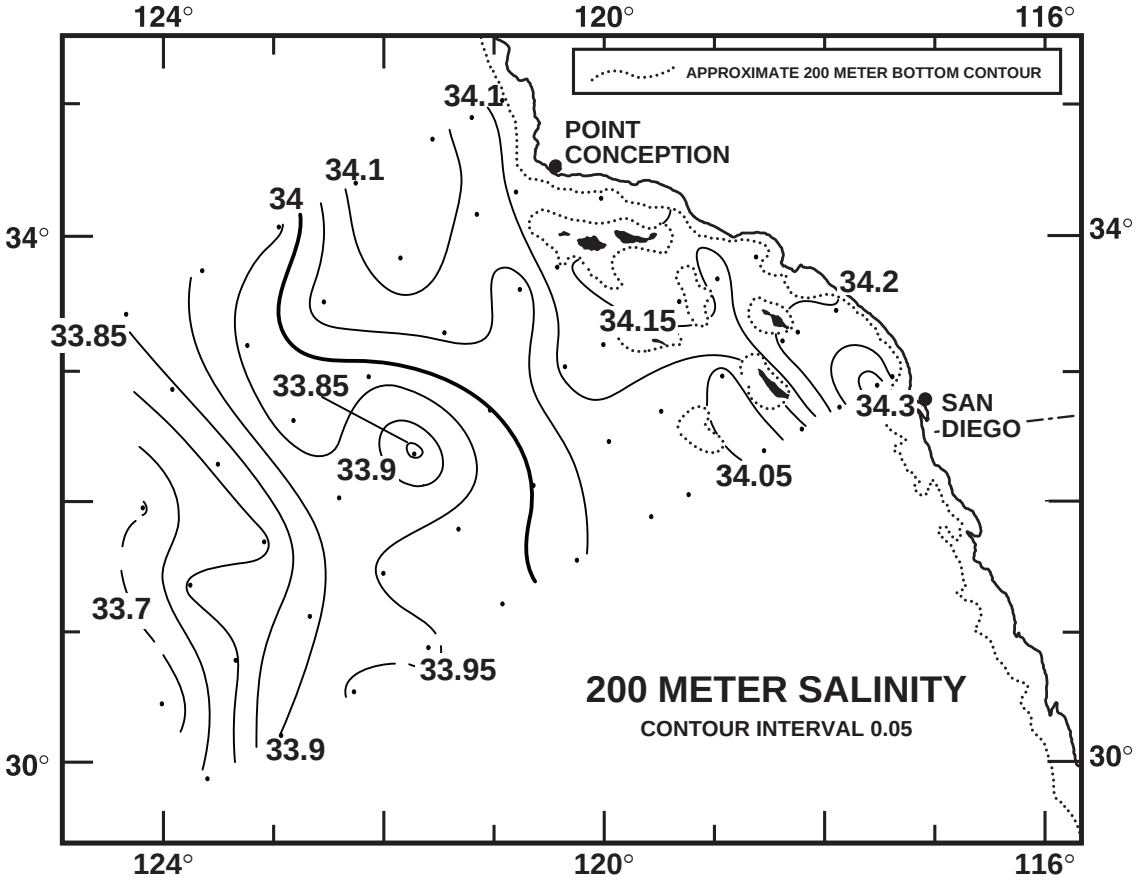

FIGURE 4D

CALCOFI CRUISE 1307

9 - 12, 20 - 21, July 2013

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

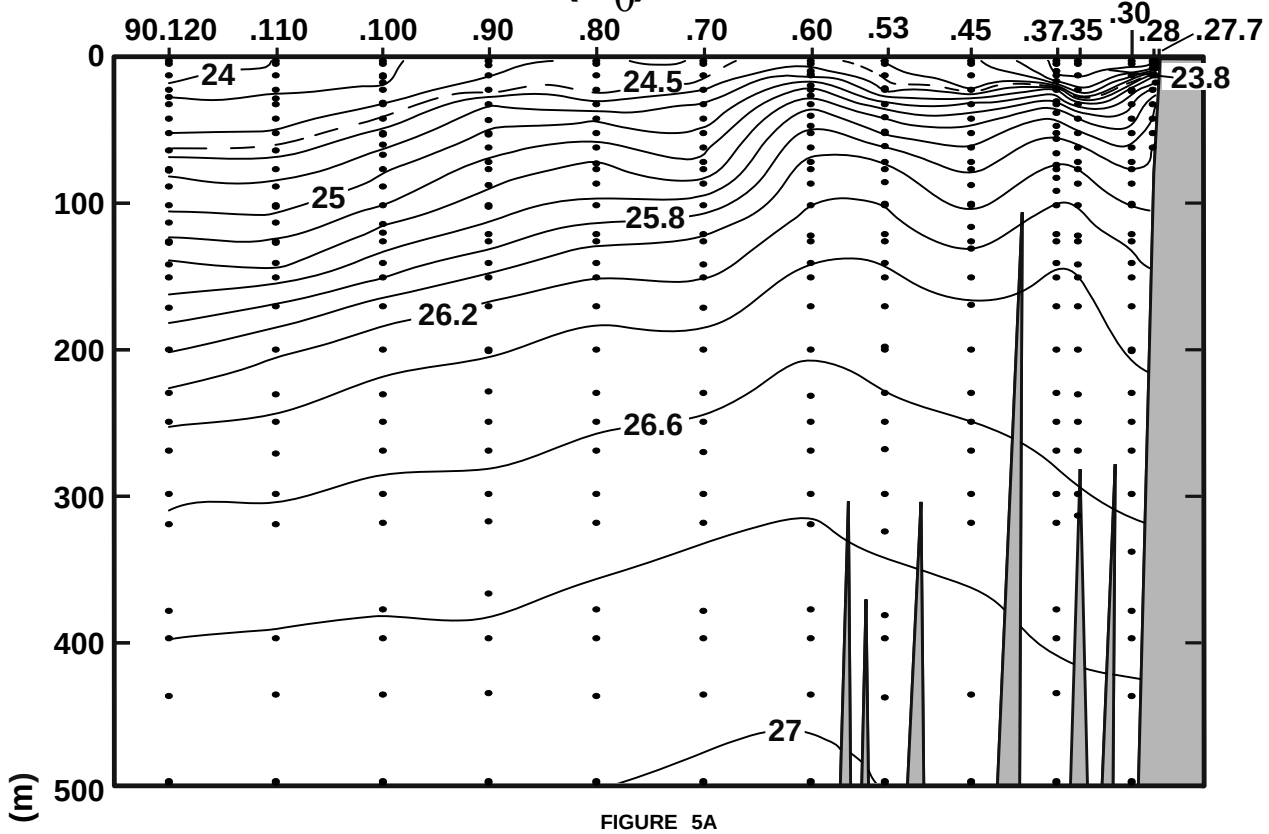

FIGURE 5A

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

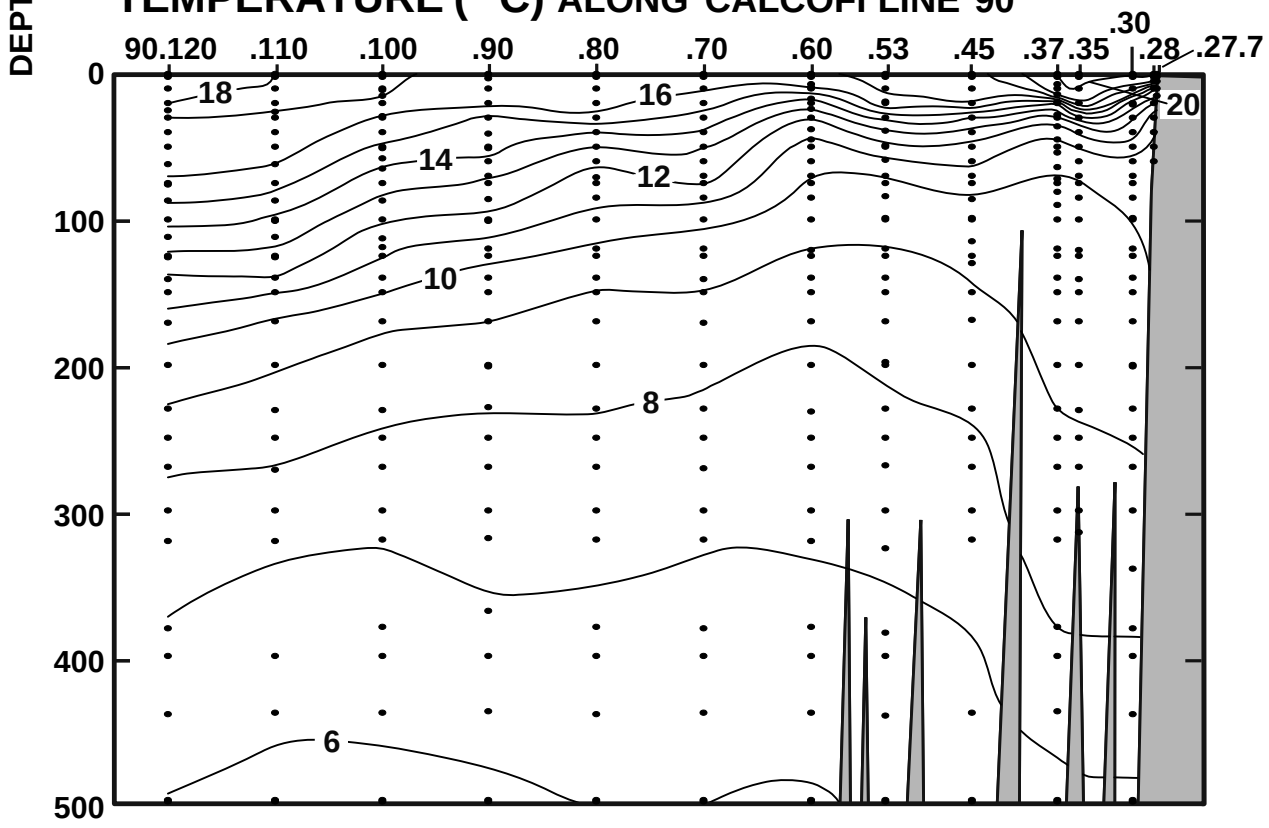

FIGURE 5B

CALCOFI CRUISE 1307

9 - 12, 20 - 21, July 2013

SALINITY ALONG CALCOFI LINE 90

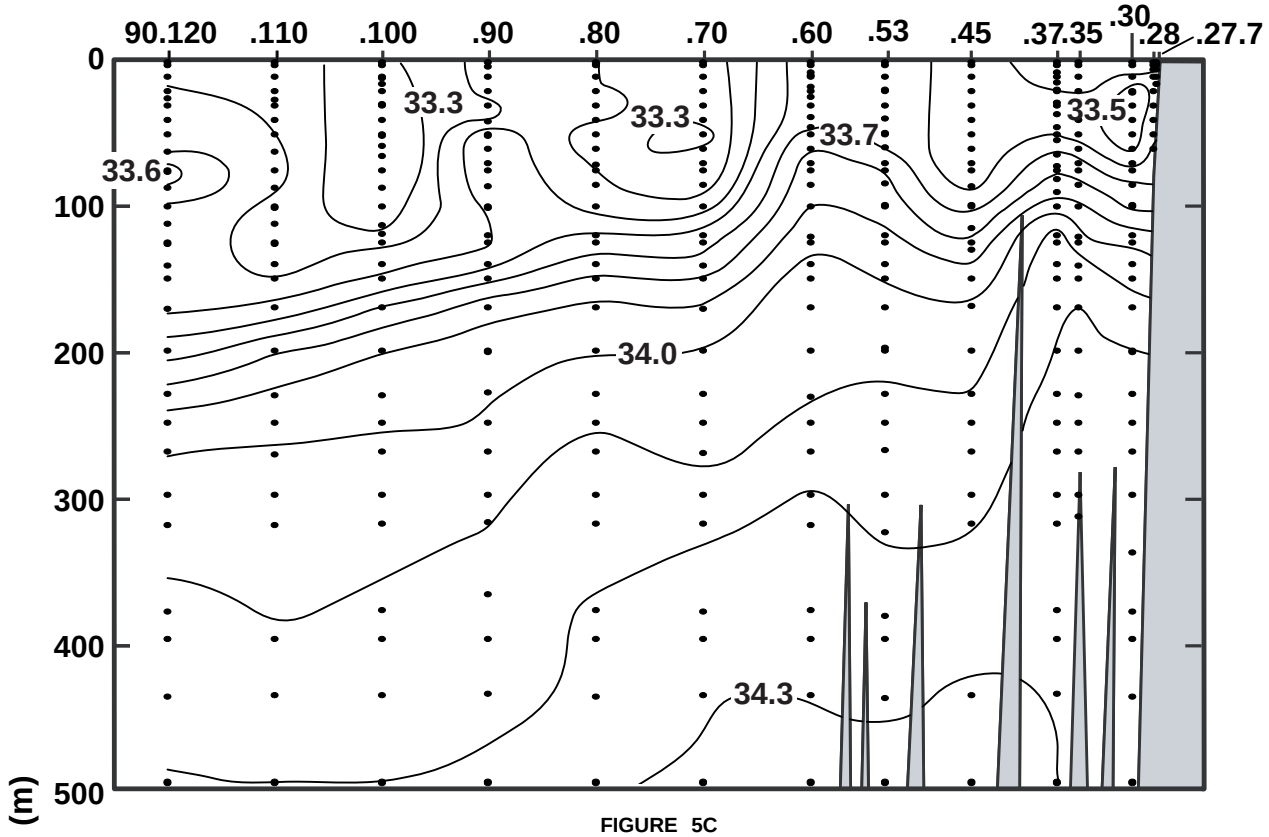

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

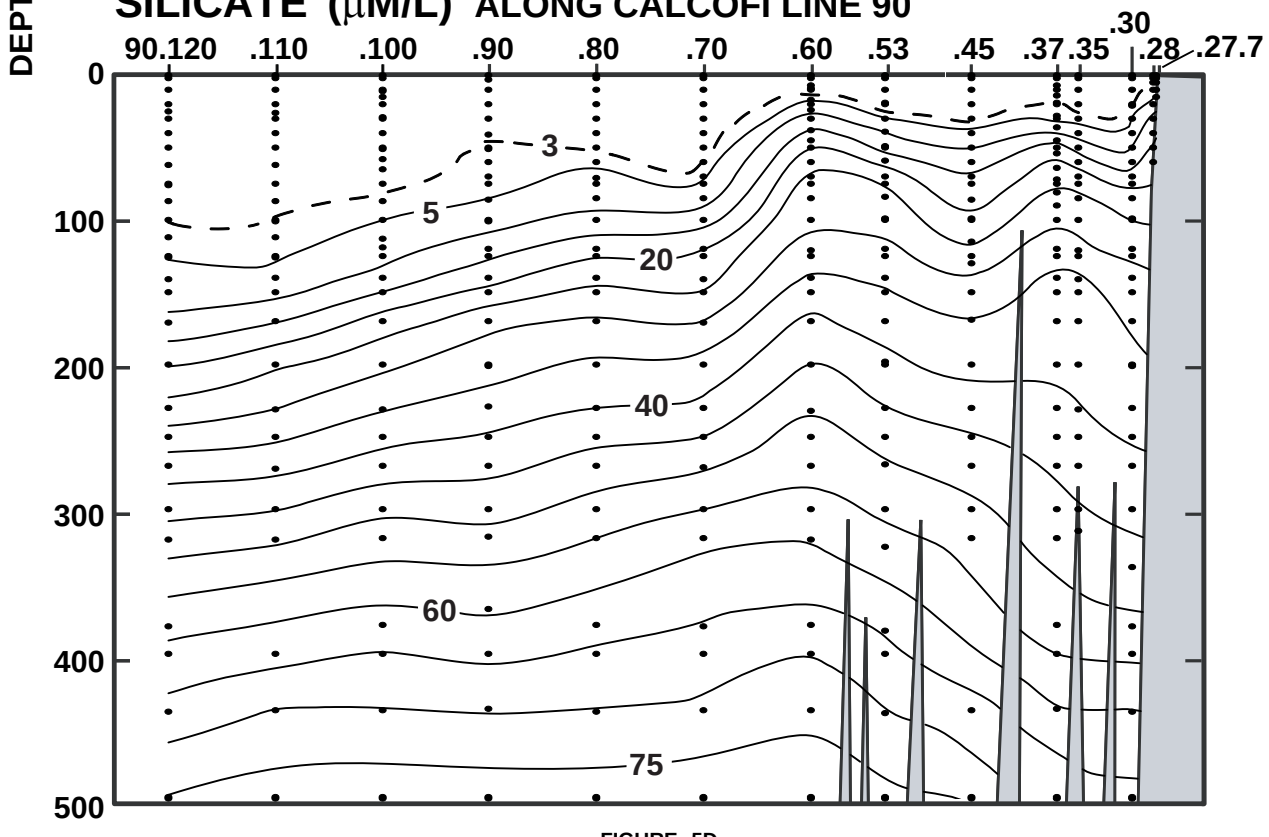

FIGURE 5D

CALCOFI CRUISE 1307

9 - 12, 20 - 21, July 2013

NITRATE (μM/L) ALONG CALCOFI LINE 90

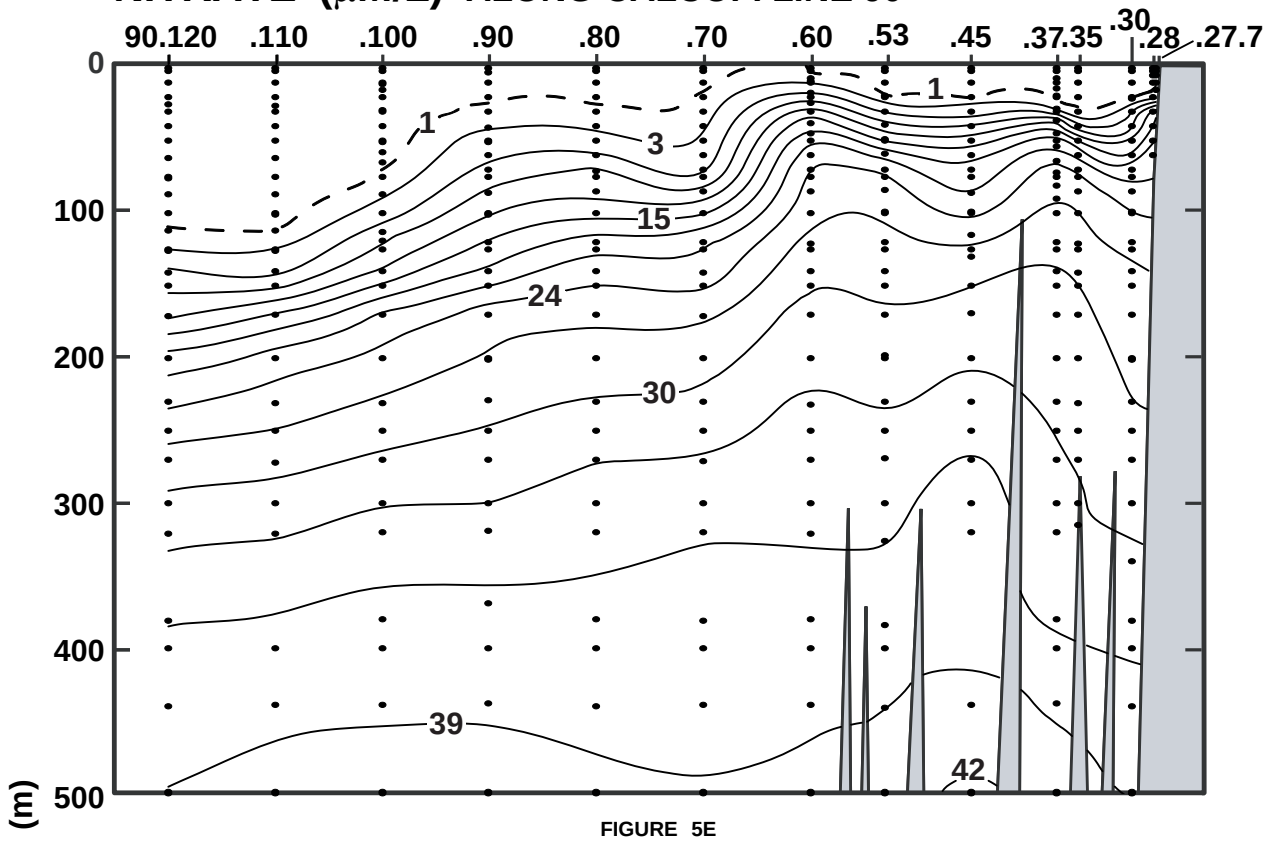

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

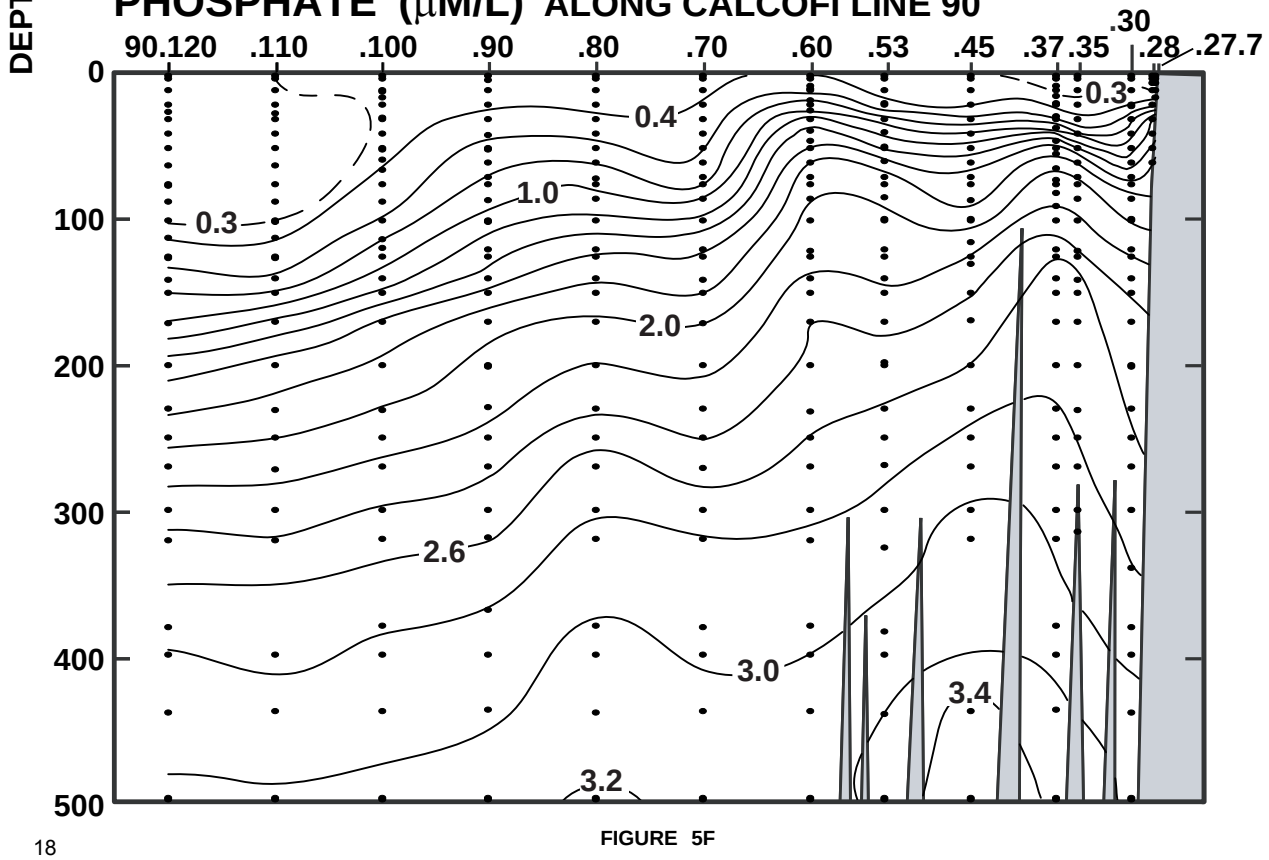

FIGURE 5F

CALCOFI CRUISE 1307

9 - 12, 20 - 21, July 2013

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

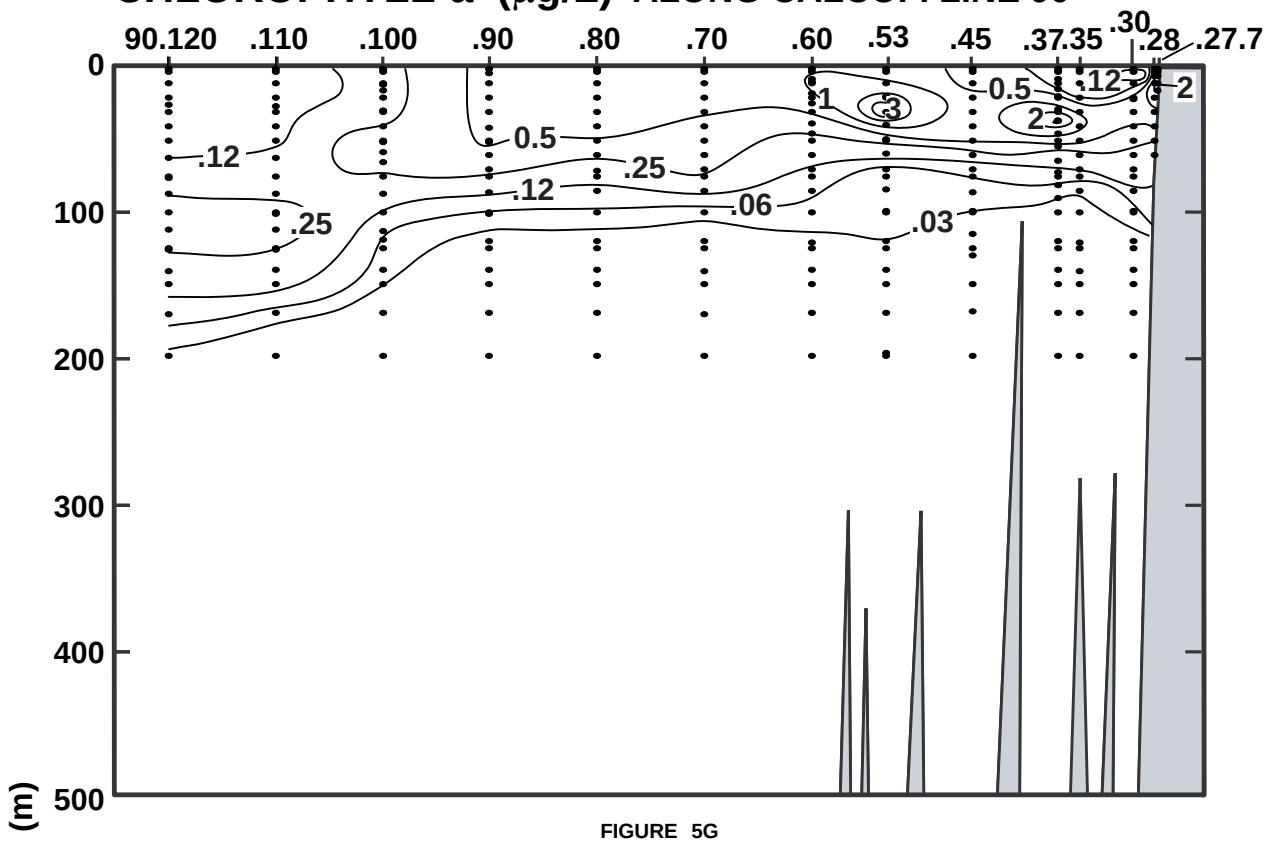

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

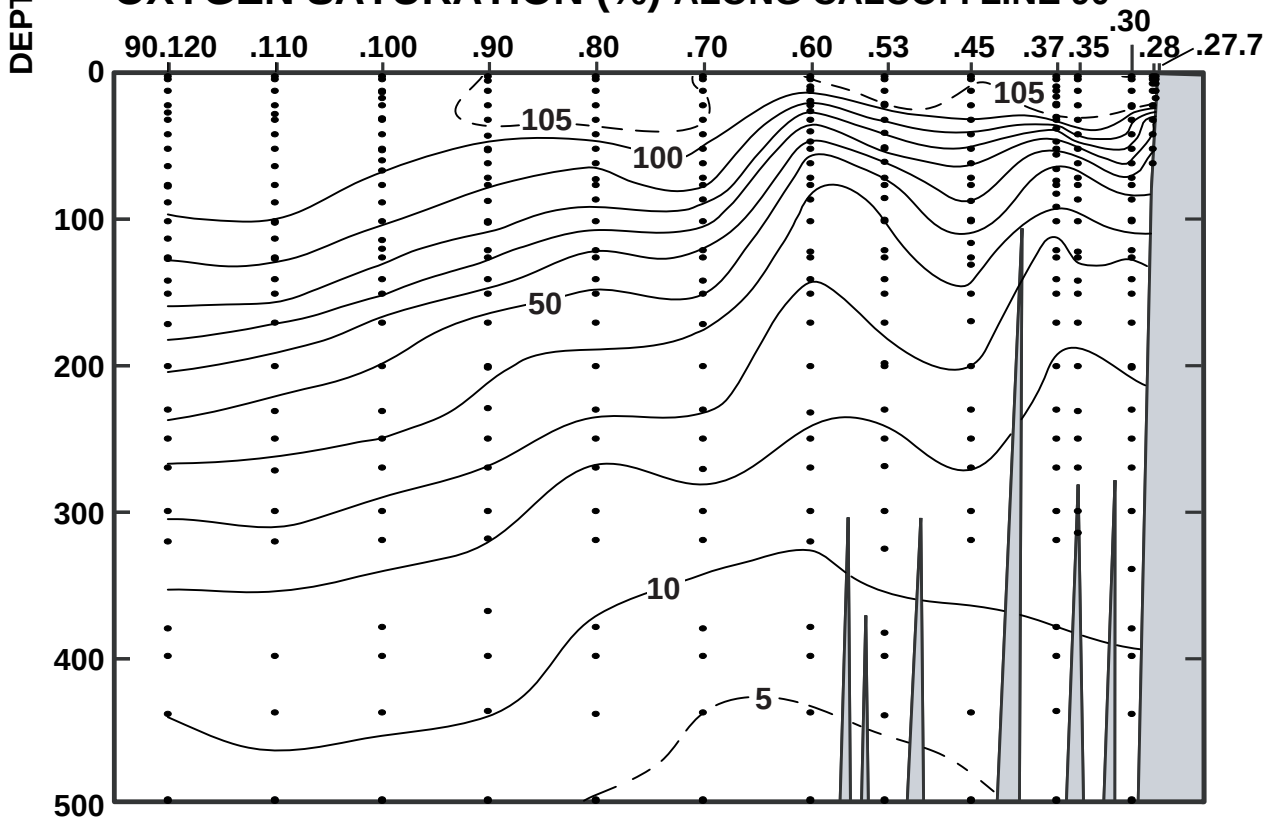

FIGURE 5H

CALCOFI CRUISE 1307

9 - 12, 20 - 21, July 2013

OXYGEN (mL/L) ALONG CALCOFI LINE 90

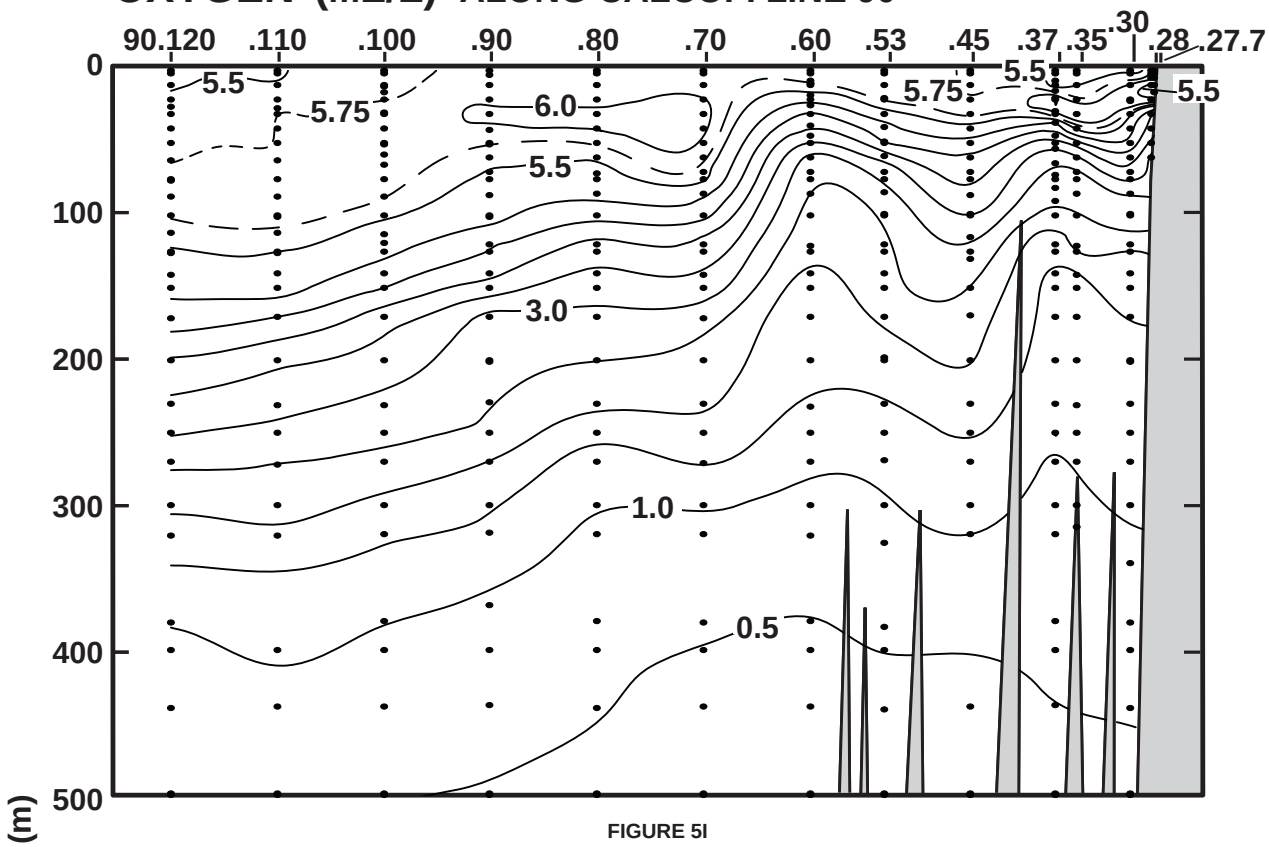

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

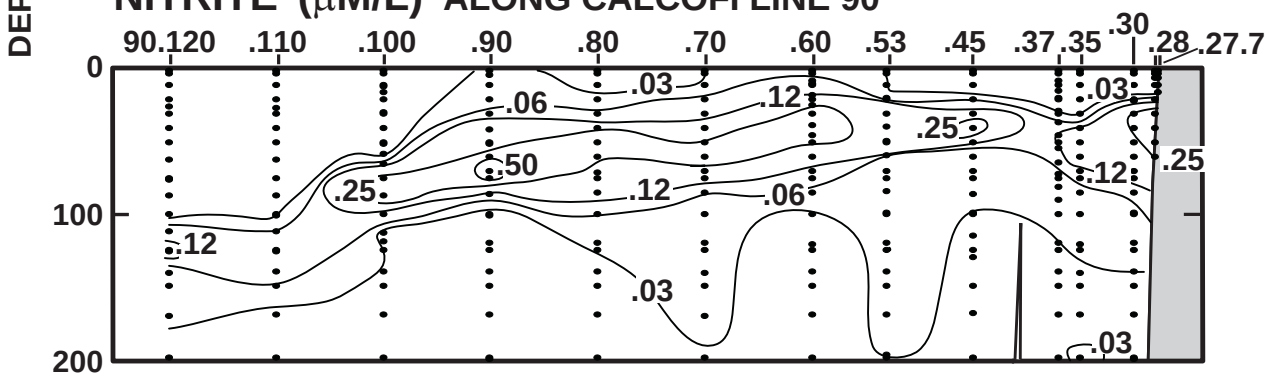

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

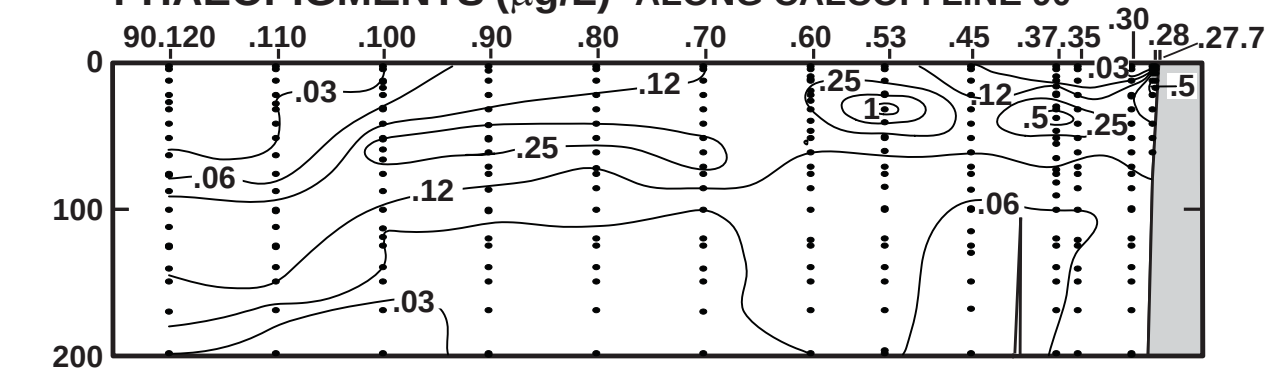

FIGURE 5K

PERSONNEL

CalCOFI Cruise 1307

SHIP'S CAPTAIN

Lawrence, Ian, RV New Horizon

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Wolgast, David (Chief Scientist)	Staff Research Associate, SIO
Breese, Dawn	Bird Observer, FIAER
Dovel, Shonna	Staff Research Associate, SIO
Engel, Eric	Volunteer
Faber, David	Staff Research Associate, SIO
Haas, Patty	Marine Mammal Observer, MPL
Hays, Amy	Fishery Biologist, NMFS
Jiorle, Ralph	Staff Research Associate, SIO
Overcash, Bryan	Fishery Biologist, NMFS
Rodgers-Wolgast, Jennifer	Staff Research Associate, SIO
Shultz, Dana	Volunteer
Vu, Elizabeth	Marine Mammal Acoustician, MPL
Whitaker, Katherine	Marine Mammal Observer, MPL
Wilkinson, James	Staff Research Associate, SIO

San Diego to San Diego, California, 6 - 22 July 2013

RV NEW HORIZON CALCOFI CRUISE 1307 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 5.4 N	120 46.6 W	19/07/2013	1108 UTC	68 m	320 15 kn			1012.2 mb	12.0 C	11.3 C				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	11.92	11.92	33.785	25.661	231.9	0.000	4.36	189.7	71.3	19.4	1.45	16.7	0.34	1.13	4.67	0.67	0	
3	11.92	11.92	33.785	25.661	232.0	0.007	4.36	189.7	71.3	19.4	1.45	16.7	0.34	1.13	4.67	0.67	3	08
5	11.92	11.92	33.779	25.657	232.4	0.012	4.35	189.5	71.3	19.3	1.43	16.7	0.33	1.19	4.46	0.83	5	07
10	11.92	11.92	33.776	25.655	232.8	0.023	4.35	189.2	71.1	19.3	1.44	16.6	0.33	1.12	4.45	0.69	10	06
20	11.92	11.91	33.779	25.658	232.7	0.047	4.35	189.4	71.2	18.8	1.42	16.6	0.33	1.10	4.41	0.70	20	05
30	11.06	11.06	33.760	25.800	219.4	0.069	3.64	158.6	58.5	19.8	1.57	18.5	0.33	0.87	2.43	0.53	30	04
40	10.43	10.43	33.770	25.920	208.3	0.091	2.96	129.0	47.0	24.0	1.82	21.7	0.29	0.37	0.64	0.43	40	03
50	10.22	10.21	33.786	25.969	203.8	0.111	2.68	116.8	42.3	27.2	2.00	22.4	0.30	0.73	0.30	0.89	50	02
55	10.22	10.21	33.794	25.976	203.3	0.121	2.61	113.6	41.2	28.5	2.05	22.5	0.30	0.97	0.29	1.19	55	01

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

RV NEW HORIZON CALCOFI CRUISE 1307 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 1.1 N	120 55.3 W	19/07/2013	0829 UTC	238 m	330 15 kn			1013.0 mb	13.0 C	12.5 C				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	12.87	12.87	33.701	25.413	255.5	0.000	5.49	239.0	91.6	7.1	0.73	8.7	0.23	0.36	8.74	1.20	0	
3	12.87	12.87	33.701	25.413	255.6	0.008	5.49	239.0	91.6	7.1	0.73	8.7	0.23	0.36	8.74	1.20	3	15
10	12.86	12.86	33.700	25.415	255.6	0.026	5.47	238.1	91.3	7.2	0.82	8.6	0.23	0.35	8.84	1.92	10	14
20 ISL	12.50 D	12.49	33.699 D	25.485	249.2	0.051	5.15	224.4	85.3	9.8	0.90	10.3	0.26	0.53	6.94	1.36	20	
21	12.46	12.46	33.699	25.492	248.6	0.053	5.12	223.0	84.8	10.1	0.91	10.5	0.26	0.55	6.75	1.31	21	13
30	12.06	12.06	33.690	25.561	242.2	0.075	4.43	192.9	72.7	16.0	1.36	14.3	0.33	0.89	0.86	1.12	30	12
41	10.88	10.87	33.693	25.782	221.4	0.101	3.65	158.9	58.4	19.5	1.57	18.3	0.31	0.41	0.56	0.87	41	11
50	10.25	10.24	33.788	25.965	204.2	0.120	2.88	125.3	45.4	25.1	1.84	22.6	0.26	0.12	0.29	0.63	50	10
60	10.16	10.15	33.796	25.988	202.3	0.140	2.83	123.0	44.5	25.4	1.86	22.8	0.25	0.10	0.22	0.55	60	09
70	10.03	10.02	33.812	26.023	199.2	0.161	2.74	119.2	43.0	26.1	1.90	23.5	0.22	0.05	0.19	0.46	71	08
75 ISL	9.83 D	9.82	33.842 D	26.079	193.9	0.171	2.59	D112.6 D	40.5	27.1	1.94	24.2	0.18	0.03	0.17	0.45	76	
85	9.62	9.61	33.883	26.147	187.7	0.189	2.41	105.0	37.6	29.1	2.02	25.5	0.10	0.00	0.11	0.44	86	07
100	9.48	9.47	33.929	26.206	182.4	0.217	2.24	97.5	34.8	31.4	2.10	26.4	0.10	0.00	0.10	0.54	101	06
120	9.41	9.40	33.953	26.237	179.9	0.253	2.16	93.9	33.5	31.9	2.13	26.8	0.07	0.00	0.07	0.32	121	05
125 ISL	9.40 D	9.39	33.962 D	26.245	179.2	0.264	2.11	D 91.9 D	32.8	32.2	2.14	27.0	0.07	0.00	0.07	0.32	126	
141	9.31	9.30	33.989	26.281	176.1	0.291	2.01	87.4	31.1	33.3	2.19	27.5	0.08	0.00	0.07	0.32	142	04
150 ISL	9.30 D	9.28	33.997 D	26.291	175.4	0.308	1.97	D 85.8 D	30.5	34.0	2.21	27.7	0.09	0.00	0.07	0.34	151	
170	9.16	9.14	34.024	26.334	171.7	0.341	1.84	80.2	28.4	35.5	2.26	28.2	0.10	0.02	0.06	0.38	171	03
200 ISL	8.65 D	8.62	34.148 D	26.513	155.2	0.393	1.26	D 55.0 D	19.3	43.7	2.51	31.2	0.07	0.02	0.03	0.22	202	
201	8.80	8.78	34.160	26.499	156.7	0.392	1.23	53.3	18.8	44.0	2.52	31.3	0.07	0.02	0.03	0.22	203	02
225	8.46	8.44	34.174	26.563	151.0	0.429	1.12	48.8	17.1	45.6	2.57	31.6	0.06	0.01			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 1307 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 53.3 N	121 11.9 W	19/07/2013	0512 UTC	571 m	340 21 kn			1013.9 mb	14.2 C	13.5 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	14.04	14.04	33.700	25.175	278.1	0.000	5.70	248.1	97.4	4.0	0.61	4.6	0.15	0.47	1.79	0.79	0	
2	14.04	14.04	33.700	25.175	278.1	0.006	5.70	248.1	97.4	4.0	0.61	4.6	0.15	0.47	1.79	0.79	2	21
10	14.03	14.02	33.700	25.178	278.1	0.028											10	20
10	14.03	14.02	33.700	25.179	278.1	0.028	5.67	247.1	97.0	4.2	0.63	4.8	0.15	0.49	1.67	0.37	10	19
20	13.95	13.95	33.701	25.195	276.8	0.056	5.61	244.3	95.8	4.5	0.64	5.1	0.15	0.51	1.49	0.88	20	18
30	12.65	12.65	33.683	25.443	253.5	0.082	4.66	203.1	77.5	11.1	1.18	11.0	0.25	1.12	0.50	0.32	30	17
40	11.09	11.08	33.597	25.669	232.2	0.106	4.50	195.9	72.2	14.0	1.51	16.0	0.25	0.83	0.12	0.16	40	16
50	10.44	10.44	33.653	25.827	217.3	0.129	3.89	169.2	61.6	19.1	1.78	20.6	0.09	0.03	0.04	0.18	50	15
60	10.26	10.26	33.687	25.885	212.1	0.150	3.64	158.3	57.4	20.4	1.84	21.5	0.06	0.06	0.03	0.15	60	14
70	9.94	9.93	33.722	25.968	204.3	0.171	3.30	143.7	51.8	23.1	1.96	23.2	0.05	0.06	0.03	0.12	71	13
75 ISL	9.91 D	9.90	33.763 D	26.005	201.0	0.182	3.20	D139.4 D	50.2	23.8	1.98	23.5	0.05	0.04	0.03	0.13	76	
85	9.76	9.75	33.786	26.048	197.1	0.201	2.99	130.3	46.8	25.3	2.02	24.2	0.05	0.01	0.03	0.15	86	12
99	9.38	9.37	33.814	26.133	189.3	0.228	2.81	122.2	43.5	27.4	2.10	25.6	0.04	0.00	0.03	0.19	100	11
100 ISL	9.37 D	9.36	33.824 D	26.141	188.5	0.231	2.77	D120.7 D	43.0	27.5	2.10	25.7	0.04	0.00	0.03	0.19	101	
120	9.11	9.09	33.885	26.232	180.3	0.267	2.55	110.8	39.2	30.3	2.19	26.9	0.03	0.03	0.03	0.21	121	10
125 ISL	9.10 D	9.08	33.913 D	26.256	178.1	0.277	2.31	D100.6 D	35.6	31.1	2.22	27.2	0.03	0.02	0.03	0.21	126	
140	8.97	8.96	33.991	26.338	170.7	0.302	2.13	92.6	32.7	33.6	2.31	28.0	0.04	0.00	0.03	0.19	141	09
150 ISL	8.76 D	8.74	34.006 D	26.383	166.5	0.320	2.07	D 90.1 D	31.7	34.8	2.34	28.6	0.04	0.00	0.03	0.19	151	
171	8.52	8.50	34.009	26.424	163.0	0.354	2.02	87.7	30.7	37.3	2.41	29.9	0.03	0.00	0.02	0.19	172	08
200	8.23	8.21	34.052	26.502	156.1	0.400	1.77	77.1	26.8	40.9	2.52	31.2	0.05	0.02	0.03	0.23	202	07
230	7.83	7.81	34.069	26.575	149.5	0.446	1.62	70.6	24.3	44.9	2.61	32.4	0.10	0.07			232	06
250 ISL	7.77 D	7.75	34.097 D	26.606	146.9	0.478	1.41	D 61.4 D	21.1	47.3	2.68	33.2	0.09	0.06			252	
270	7.61	7.58	34.111	26.641	143.9	0.505	1.29	56.2	19.2	49.7	2.75	33.9	0.09	0.04			272	05
300 ISL	7.51 D	7.48	34.139 D	26.679	140.8	0.550	1.13	D 49.2 D	16.8	52.5	2.83	34.6	0.07	0.02			302	
320	7.40	7.37	34.148	26.700	139.1	0.575	1.04	45.0	15.4	54.3	2.88	35.1	0.06	0.00			323	04
380	6.76	6.72	34.172	26.809	129.3	0.656	0.77	33.5	11.3	62.3	3.04	37.1	0.03	0.02			383	03
400 ISL	6.72 D	6.68	34.182 D	26.823	128.3	0.686	0.73	D 31.9 D	10.7	64.3	3.08	37.5	0.02	0.02			403	
439	6.49	6.45	34.200	26.868	124.5	0.731	0.59	25.6	8.5	68.2	3.15	38.3	0.02	0.03			443	02
500 ISL	6.40 D	6.36	34.289 D	26.951	117.5	0.810	0.33	D 14.4 D	4.8	77.0	3.29	38.3	0.06	0.06			504	
515	6.25	6.20	34.299	26.979	114.9	0.822	0.28	12.2	4.1	79.2	3.33	38.3	0.07	0.07			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 1307 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 33.2 W	19/07/2013	0126	UTC	948 m	320 26 kn	330 08 06	2	1013.5 mb	15.1 C	14.1 C		8/8	ST	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		14.45		14.45	33.647	25.048	290.2	0.000	6.06		263.9		104.4		0.8	0.34	1.7	0.05	0.34	6.31	0.71	0	
3		14.45		14.45	33.647	25.048	290.3	0.009	6.06		263.9		104.4		0.8	0.34	1.7	0.05	0.34	6.31	0.71	3	20
10		14.45		14.45	33.645	25.046	290.7	0.029	6.07		264.3		104.6		0.8	0.30	1.6	0.05	0.31	5.83	0.52	10	19
20		14.06		14.05	33.637	25.124	283.6	0.058	5.96		259.5		101.9		1.8	0.35	2.6	0.06	0.44	7.13	0.91	20	18
30	ISL	12.67	D	12.67	33.613	D 25.385	259.0	0.085	4.94	D	215.2	D	82.1		9.3	0.99	9.1	0.15	1.01	3.08	0.65	30	
31		12.48		12.48	33.617	25.425	255.2	0.087	4.99		217.3		82.6		10.0	1.05	9.8	0.15	1.07	2.68	0.62	31	17
40		10.66		10.65	33.681	25.811	218.7	0.109	3.60		156.7		57.3		19.3	1.76	19.9	0.19	0.38	0.20	0.29	40	16
49		10.20		10.20	33.719	25.920	208.5	0.128	3.24		141.1		51.1		22.1	1.88	22.2	0.17	0.07	0.22	0.44	49	15
50	ISL	10.16	D	10.15	33.729	D 25.935	207.1	0.131	3.18	D	138.5	D	50.1		22.4	1.89	22.3	0.17	0.07	0.21	0.45	50	
61		9.98		9.97	33.807	26.026	198.6	0.152	2.85		124.2		44.8		25.6	2.03	23.9	0.12	0.04	0.19	0.50	62	14
70		9.86		9.85	33.837	26.070	194.7	0.170	2.73		118.7		42.7		26.8	2.09	24.9	0.10	0.05	0.14	0.31	71	13
75	ISL	9.79	D	9.78	33.855	D 26.096	192.3	0.181	2.65	D	115.1	D	41.4		27.4	2.12	25.3	0.09	0.05	0.14	0.35	76	
86		9.63		9.62	33.879	26.143	188.1	0.201	2.54		110.5		39.6		28.7	2.17	26.1	0.06	0.05	0.16	0.44	87	12
100		9.35		9.34	33.922	26.221	180.9	0.226	2.40		104.3		37.1		30.5	2.24	27.1	0.05	0.03	0.11	0.40	101	11
120		9.05		9.03	33.996	26.329	171.1	0.262	2.15		93.5		33.1		33.8	2.36	28.6	0.05	0.05	0.10	0.53	121	10
125	ISL	9.04	D	9.03	34.001	D 26.334	170.7	0.272	2.10	D	91.2	D	32.3		34.1	2.37	28.7	0.05	0.05	0.10	0.51	126	
140		8.96		8.94	34.014	26.358	168.8	0.296	2.06		89.6		31.6		34.9	2.39	29.0	0.05	0.05	0.10	0.47	141	09
150	ISL	8.82	D	8.81	34.053	D 26.410	164.0	0.314	1.93	D	83.9	D	29.5		36.3	2.44	29.4	0.05	0.04	0.09	0.42	151	
170		8.68		8.66	34.100	26.470	158.7	0.345	1.75		76.0		26.7		39.1	2.54	30.3	0.04	0.03	0.05	0.30	171	08
200		8.47		8.45	34.136	26.531	153.4	0.391	1.54		66.8		23.4		41.8	2.63	31.6	0.05	0.05	0.05	0.26	202	07
231		8.15		8.13	34.184	26.618	145.7	0.438	1.13		49.2		17.1		47.3	2.81	33.4	0.03	0.01			233	06
250	ISL	8.00	D	7.97	34.224	D 26.673	140.8	0.468	0.89	D	38.8	D	13.4		49.8	2.89	34.0	0.03	0.02			252	
270		7.90		7.87	34.247	26.705	138.0	0.493	0.79		34.3		11.8		52.5	2.97	34.7	0.03	0.03			272	05
300	ISL	7.58	D	7.55	34.222	D 26.733	135.8	0.538	0.77	D	33.3	D	11.4		54.8	3.00	35.5	0.03	0.02			302	
322		7.49		7.46	34.226	26.749	134.6	0.564	0.74		32.3		11.1		56.5	3.03	36.0	0.03	0.01			325	04
378		7.13		7.09	34.263	26.831	127.5	0.637	0.53		23.0		7.8		63.0	3.16	37.1	0.01	0.02			381	03
400	ISL	6.98	D	6.94	34.275	D 26.861	125.0	0.670	0.47	D	20.4	D	6.9		65.0	3.19	37.6	0.01	0.02			403	
438		6.78		6.73	34.281	26.895	122.2	0.712	0.41		17.6		5.9		68.4	3.25	38.4	0.01	0.01			442	02
500	ISL	6.39	D	6.35	34.290	D 26.953	117.3	0.792	0.36	D	15.8	D	5.3		74.6	3.30	39.4	0.01	0.02			504	
514		6.07		6.02	34.233	26.950	117.4	0.803	0.41		17.8		5.9		76.0	3.31	39.6	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 1307 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 14.8 W	18/07/2013	1855	UTC	4024 m	320 20 kn	340 05 07	2	1017.9 mb	16.1 C	15.1 C	10 m	8/8	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		15.49		15.49	33.697	24.860	308.1	0.000	5.86		255.1		103.1		1.4	0.35	1.6	0.08	0.21	0.93	0.19	0	
2	A	15.49		15.49	33.697	24.860	308.2	0.006	5.86		255.1		103.1		1.4	0.35	1.6	0.08	0.21	0.93	0.19	2	22
6	A	15.49		15.49	33.696	24.860	308.3	0.019	5.87		255.6		103.3		1.3	0.35	1.6	0.08	0.20	0.94	0.20	6	21
8	A	15.49		15.49	33.696	24.860	308.4	0.025	5.84		254.6		102.9		1.3	0.35	1.6	0.07	0.19	0.93	0.22	8	20
10	ISL	15.50	D	15.49	33.697	D 24.860	308.4	0.031	5.82	D	253.7	D	102.6		1.3	0.35	1.6	0.07	0.20	0.94	0.22	10	
15	A	15.48		15.48	33.699	24.865	308.1	0.046	5.87		255.6		103.3		1.3	0.36	1.6	0.07	0.22	0.97	0.22	15	19
20	ISL	15.48	D	15.47	33.697	D 24.865	308.3	0.062	5.80	D	252.6	D	102.1		1.3	0.36	1.6	0.07	0.22	0.97	0.22	20	
28	A	15.46		15.46	33.699	24.870	308.1	0.086	5.83		254.2		102.7		1.3	0.35	1.6	0.07	0.22	0.97	0.23	28	18
30	ISL	15.46	D	15.46	33.698	D 24.870	308.2	0.093	5.82	D	253.8	D	102.5		1.3	0.35	1.6	0.07	0.26	0.97	0.23	30	
33	A	15.43		15.43	33.699	24.878	307.6	0.102	5.84		254.4		102.7		1.3	0.36	1.6	0.08	0.31	0.96	0.23	33	17
42		13.12		13.11	33.686	25.355	262.3	0.127	5.39		234.9		90.5		3.1	0.84	5.4	0.22	2.37	0.54	0.18	42	16
50		12.30		12.29	33.682	25.512	247.5	0.148	5.01		218.3		82.7		7.6	1.25	9.5	0.41	2.69	0.34	0.13	50	15
61		11.06		11.05	33.719	25.771	223.1	0.174	4.08		177.6		65.5		17.0	1.68	18.0	0.41	1.21	0.06	0.07	62	14
69		10.36		10.35	33.731	25.902	210.7	0.191	3.56		155.1		56.4		20.8	1.83	21.0	0.31	0.29	0.04	0.08	70	13
75	ISL	9.85	D	9.84	33.771	D 26.021	199.4	0.205	3.16	D	137.5	D	49.4		23.1	1.90	22.8	0.20	0.19	0.03	0.08	76	
85		9.48		9.47	33.793	26.100	192.1	0.223	2.89		125.9		44.9		27.0	2.02	25.7	0.04	0.03	0.02	0.08	86	12
100		9.16		9.15	33.877	26.217	181.3	0.251	2.47		107.6		38.1		30.0	2.18	27.2	0.03	0.02	0.02	0.10	101	11
120		8.96		8.94	33.935	26.296	174.2	0.287	2.30		99.9		35.2		32.5	2.23	28.2	0.03	0.03	0.01	0.09	121	10
125	ISL	8.96	D	8.94	33.956	D 26.312	172.7	0.296	2.21	D	96.1	D	33.9		33.1	2.23	28.3	0.02	0.03	0.01	0.10	126	
139		8.55		8.54	33.971	26.387	165.8	0.319	2.37		103.0		36.0		34.6	2.23	28.5	0.02	0.02	0.01	0.11	140	09
150	ISL	8.31	D	8.29	33.984	D 26.435	161.4	0.338	2.42	D	105.3	D	36.6		36.0	2.25	28.9	0.02	0.01	0.01	0.10	151	
170		8.04		8.03	33.994	26.482	157.2	0.369	2.36		102.6		35.5		38.5	2.28	29.7	0.02	0.00	0.01	0.09	171	08
200	ISL	8.19	D	8.17	34.117	D 26.558	150.7	0.417	1.28	D	55.6	D	19.3		44.5	2.61	32.6	0.00	0.00	0.01	0.10	202	
201		8.20		8.18	34.117	26.558	150.8	0.417	1.29		56.1		19.5		44.7	2.62	32.7	0.00	0.00	0.01	0.10	203	07
230		8.05		8.02	34.160	26.614	145.9	0.460	1.04		45.1		15.6		47.8	2.72	33.2	0.00	0.02			232	06
250	ISL	7.84	D	7.81	34.173	D 26.656	142.3	0.491	0.97	D	42.0	D	14.5		50.2	2.77	33.8	0.00	0.02			252	
279		7.62		7.59	34.198	26.708	137.8	0.529	0.85		37.0		12.7		53.7	2.84	34.7	0.00	0.02			281	05
300	ISL	7.47	D	7.44	34.217	D 26.745	134.6	0.561	0.71	D	31.1	D	10.6		56.2	2.90	35.1	0.00	0.01			302	
320		7.41		7.37	34.241	26.773	132.2	0.584	0.64		28.0		9.6		58.6	2.96	35.5	0.00	0.00			323	04
381		6.93		6.90	34.256	26.851	125.5	0.663	0.51		22.0		7.4		65.1	3.07	37.0	0.00	0.00			384	03
400	ISL	6.81	D	6.78	34.258	D 26.870	124.0	0.691	0.49	D	21.4	D	7.2		67.2	3.10	37.4	0.00	0.00			403	
438		6.49		6.45	34.266	26.920	119.5	0.733	0.39		17.1		5.7		71.5	3.16	38.2	0.00	0.00			442	02
500	ISL	5.91	D	5.86	34.284	D 27.009	111.4	0.810	0.31	D	13.6	D	4.5		79.8	3.25	39.8	0.00	0.02			504	
516		5.84		5.80	34.287	27.020	110.5	0.822	0.28		12.3		4.1		82.0	3.27	40.2	0.00	0.02			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; SECONDARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1307 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 3.2 N	122 56.5 W	18/07/2013	1250	UTC	4234 m	310 20 kn			1017.8 mb	15.0 C	13.5 C				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		15.56		15.56	33.481	24.680	325.2	0.000	5.85		254.9		103.0		1.4	0.60	4.0	0.11	0.25	0.23	0.06	0	
2		15.56		15.55	33.481	24.680	325.3	0.007	5.85		254.9		103.0		1.4	0.60	4.0	0.11	0.25	0.23	0.06	2	20
10		15.56		15.56	33.480	24.679	325.6	0.033	5.86		255.3		103.2		1.3	0.60	4.0	0.11	0.29	0.24	0.06	10	19
20		15.54		15.53	33.479	24.684	325.6	0.065	5.86		255.3		103.1		1.3	0.60	4.0	0.11	0.25	0.27	0.04	20	18
30		14.79		14.78	33.324	24.728	321.6	0.098	5.97		260.2		103.5		1.5	0.54	2.7	0.10	0.31	0.28	0.08	30	17
40		12.75		12.74	33.098	D 24.972	298.6	0.130	6.10		265.9		101.2		2.8	0.49	1.1	0.17	0.29	0.32	0.13	40	16
50		11.51		11.50	33.029	25.152	281.6	0.158	5.88		256.3		95.0		4.6	0.67	4.3	0.18	0.16	0.32	0.16	50	15
61		10.93		10.92	33.015	25.246	272.9	0.188	5.72		249.3		91.3		6.1	0.75	5.8	0.13	0.12	0.27	0.15	61	14
70		10.64		10.63	33.064	25.334	264.7	0.212	5.52		240.2		87.4		8.3	0.90	8.4	0.07	0.03	0.27	0.12	71	13
75	ISL	10.56	D	10.55	33.126	D 25.398	258.7	0.227	5.42	D	235.9	D	85.7		8.8	1.00	9.9	0.13	0.13	0.25	0.11	76	
85		11.35		11.34	33.438	25.500	249.4	0.251	5.32		231.8		85.9		10.0	1.20	12.8	0.27	0.33	0.20	0.11	86	12
100		10.98		10.96	33.667	D 25.746	226.3	0.288	4.84		210.9		77.6		16.4	1.56	17.9	0.35	0.50	0.12	0.08	101	11
120		10.49		10.47	33.747	25.896	212.5	0.330	4.64		202.1		73.6		22.5	1.79	22.3	0.17	0.02	0.12	0.12	121	10
125	ISL	10.30	D	10.29	33.770	D 25.946	207.9	0.342	4.40	D	191.4	D	69.5		23.6	1.83	23.0	0.14	0.31	0.10	0.13	126	
140		9.02		9.00	33.792	26.175	186.1	0.370	3.47		150.8		53.2		27.0	1.95	25.1	0.05	1.17	0.06	0.14	141	09
150	ISL	8.76	D	8.74	33.819	D 26.236	180.4	0.391	3.30	D	143.7	D	50.5		28.3	1.95	25.4	0.04	0.78	0.04	0.10	151	
170		8.46		8.44	33.898	26.345	170.4	0.424	3.05		132.6		46.3		31.1	1.95	26.0	0.02	0.01	0.01	0.03	171	08
200		8.10		8.08	33.938	26.431	162.7	0.474	3.23		140.4		48.6		33.1	1.91	26.2	0.00	0.04	0.00	0.03	202	07
230		7.80		7.78	34.005	26.528	153.9	0.521	2.40		104.2		35.8		40.6	2.22	29.4	0.00	0.03			232	06
250	ISL	7.52	D	7.49	34.023	D 26.584	148.9	0.555	2.08	D	90.6	D	31.0		44.7	2.35	31.2	0.00	0.03			252	
270		7.26		7.23	34.039	26.633	144.4	0.581	1.79		77.9		26.5		48.8	2.47	33.0	0.00	0.02			272	05
300	ISL	6.82	D	6.80	34.035	D 26.690	139.2	0.628	1.65	D	71.7	D	24.1		54.4	2.60	34.7	0.00	0.02			302	
320		6.61		6.58	34.052	26.732	135.4	0.651	1.39		60.3		20.2		58.1	2.68	35.9	0.00	0.02			323	04
380		6.21		6.17	34.095	26.820	127.7	0.730	0.99		42.9		14.2		66.5	2.87	38.1	0.00	0.02			383	03
400	ISL	6.01	D	5.98	34.104	D 26.852	124.8	0.760	0.92	D	40.1	D	13.2		69.3	2.91	38.5	0.00	0.03			403	
440		5.80		5.76	34.141	26.908	119.9	0.804	0.70		30.5		10.0		74.7	3.00	39.2	0.00	0.05			444	02
500	ISL	5.81	D	5.77	34.236	D 26.983	113.8	0.880	0.39	D	17.1	D	5.6		79.9	3.11	39.7	0.00	0.13			504	
515		5.76		5.71	34.250	27.002	112.1	0.891	0.32		14.0		4.6		81.2	3.14	39.8	0.00	0.15			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 1307 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 43.2 N	123 38.1 W	18/07/2013	0634	UTC	4327 m	330 13 kn			1020.1 mb	16.2 C	14.2 C				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		16.54		16.54	33.152	24.205	370.5	0.000	5.71		249.0		102.4		1.7	0.35	0.0	0.01	0.03	0.17	0.04	0	
2		16.54		16.54	33.152	24.205	370.6	0.007	5.71		249.0		102.4		1.7	0.35	0.0	0.01	0.03	0.17	0.04	2	20
10		16.54		16.54	33.152	24.205	370.8	0.037	5.70		248.7		102.2		1.7	0.35	0.0	0.01	0.03	0.16	0.04	10	19
20		16.46		16.45	33.154	24.226	369.2	0.074	5.73		249.7		102.5		1.6	0.35	0.0	0.01	0.02	0.19	0.05	20	18
30		16.29		16.28	33.161	24.272	365.2	0.111	5.76		251.3		102.8		1.6	0.36	0.0	0.01	0.05	0.30	0.08	30	17
40		15.84		15.84	33.189	24.394	353.9	0.147	5.88		256.5		104.0		1.5	0.38	0.3	0.02	0.12	0.42	0.14	40	16
50		14.38		14.37	33.216	24.733	321.8	0.181	6.03		262.8		103.5		1.7	0.49	1.2	0.10	0.42	0.37	0.15	50	15
60		14.12		14.11	33.353	24.894	306.8	0.212	5.94		258.9		101.6		2.2	0.62	3.3	0.21	0.67	0.30	0.12	60	14
70		13.69		13.68	33.370	24.997	297.2	0.242	5.90		257.2		100.0		2.4	0.65	3.8	0.27	0.74	0.21	0.13	71	13
75	ISL	13.45	D	13.44	33.333	D 25.017	295.4	0.259	5.82	D	253.5	D	98.1		3.3	0.66	4.2	0.28	0.51	0.20	0.12	76	
85		11.58		11.57	33.045	25.153	282.4	0.286	5.79		252.4		93.7		5.1	0.69	5.0	0.29	0.05	0.17	0.11	86	12
100		10.78		10.77	33.089	25.330	265.8	0.327	5.58		243.1		88.7		8.4	0.90	8.6	0.04	0.03	0.12	0.06	101	11
120		10.25		10.23	33.249	25.548	245.5	0.378	5.34		232.7		84.1		12.9	1.17	13.6	0.02	0.00	0.02	0.04	121	10
125	ISL	10.14	D	10.13	33.285	D 25.594	241.2	0.393	5.21	D	226.9	D	81.8		13.9	1.23	14.6	0.02	0.00	0.02	0.04	126	
140		9.72		9.70	33.410	25.763	225.3	0.425	4.74		206.2		73.7		17.0	1.40	17.7	0.03	0.00	0.01	0.04	141	09
150	ISL	9.54	D	9.53	33.477	D 25.844	217.8	0.450	4.43	D	192.8	D	68.7		19.2	1.50	19.4	0.02	0.01	0.01	0.04	151	
170		8.99		8.97	33.652	26.071	196.6	0.489	3.74		162.7		57.3		23.6	1.71	22.7	0.02	0.03	0.01	0.04	171	08
200	ISL	8.60	D	8.58	33.902	D 26.328	172.7	0.547	3.01	D	131.1	D	45.9		30.4	1.92	26.7	0.02	0.00	0.01	0.04	202	
201		8.58		8.56	33.902	26.331	172.4	0.546	3.04		132.2		46.2		30.6	1.93	26.8	0.02	0.00	0.01	0.04	203	07
231		8.46		8.43	34.031	26.452	161.5	0.596	1.89		82.3		28.7		38.7	2.30	31.2	0.01	0.00			233	06
250	ISL	8.17	D	8.14	34.086	D 26.539	153.5	0.629	1.59	D	69.2	D	24.0		42.4	2.41	32.6	0.01	0.00			252	
270		7.89		7.86	34.097	26.589	149.1	0.656	1.41		61.5		21.2		46.3	2.52	34.0	0.01	0.00			272	05
300	ISL	7.54	D	7.51	34.140	D 26.673	141.4	0.704	1.10	D	47.9	D	16.4		51.5	2.65	35.4	0.01	0.00			302	
320		7.38		7.35	34.155	26.709	138.2	0.728	0.94		40.9		13.9		54.9	2.73	36.3	0.01	0.00			323	04
380		6.80		6.77	34.183	26.812	129.0	0.808	0.66		28.8		9.7		64.2	2.90	38.5	0.01	0.00			383	03
400	ISL	6.69	D	6.65	34.207	D 26.847	126.0	0.838	0.57	D	24.9	D	8.4		66.6	2.94	39.1	0.01	0.03			403	
439		6.34		6.30	34.216	26.901	121.2	0.882	0.48		20.7		6.9		71.2	3.01	40.2	0.01	0.08			443	02
500	ISL	6.02	D	5.98	34.274	D 26.988	113.5	0.959	0.33	D	14.5	D	4.8		78.3	3.11	41.1	0.00	0.08			504	
515		5.90		5.86	34.276	27.004	112.1	0.970	0.30		13.0		4.3		80.0	3.13	41.3	0.00	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 1307 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 19.4 W	18/07/2013	0027	UTC	4577 m	340 11 kn	340 03 07	2	1020.0 mb	18.0 C	15.2 C	19 m	8/8	SC	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		17.28		17.28	33.145	24.027	387.5	0.000	5.64		246.0		102.6		1.8	0.35	0.0	0.01	0.00	0.12	0.02	0	
2		17.28		17.28	33.145	24.027	387.6	0.008	5.64		246.0		102.6		1.8	0.35	0.0	0.01	0.00	0.12	0.02	2	20
10		17.23		17.23	33.141	24.035	387.0	0.039	5.65		246.5		102.7		1.8	0.34	0.0	0.01	0.00	0.12	0.02	10	19
20	ISL	16.98	D	16.98	33.121	D 24.080	383.2	0.078	5.66	D	246.8	D	102.3		1.9	0.34	0.0	0.01	0.02	0.15	0.03	20	
25		16.97		16.96	33.123	24.084	383.0	0.097	5.68		247.8		102.7		1.9	0.34	0.0	0.01	0.03	0.17	0.03	25	18
30	ISL	16.79	D	16.79	33.138	D 24.138	378.0	0.116	5.68	D	247.8	D	102.0		2.0	0.34	0.0	0.01	0.02	0.19	0.04	30	
40		14.70		14.69	33.002	24.500	343.7	0.152	6.05		263.6		104.3		2.3	0.34	0.0	0.01	0.00	0.25	0.07	40	17
50		14.14		14.14	33.183	24.757	319.5	0.185	6.15		268.2		105.1		2.5	0.32	0.0	0.01	0.00	0.37	0.13	50	16
62		13.43		13.42	33.290	24.988	297.8	0.222	6.02		262.4		101.4		2.9	0.32	0.0	0.04	0.02	0.47	0.22	63	15
75		13.72		13.71	33.447	25.050	292.4	0.260	5.83		253.9		98.9		3.0	0.34	0.4	0.09	0.06	0.30	0.20	76	14
86		12.55		12.54	33.263	25.141	283.8	0.292	5.67		247.2		93.8		4.0	0.48	2.4	0.07	0.02	0.20	0.15	87	13
100		11.73		11.71	33.249	25.286	270.2	0.331	5.47		238.1		88.8		5.9	0.66	5.3	0.03	0.00	0.14	0.12	101	12
111		10.99		10.98	33.264	25.431	256.6	0.360	5.28		230.0		84.4		8.0	0.83	8.0	0.02	0.00	0.10	0.09	112	11
125		10.24		10.23	33.314	25.600	240.7	0.395	5.10		221.9		80.2		12.6	1.20	13.6	0.01	0.00	0.02	0.04	126	10
140		9.75		9.73	33.401	25.751	226.5	0.430	4.78		208.0		74.4		15.4	1.37	16.2	0.01	0.00	0.01	0.04	141	09
150	ISL	9.51	D	9.50	33.517	D 25.880	214.4	0.453	4.48	D	195.1	D	69.5		16.9	1.41	17.2	0.01	0.00	0.01	0.03	151	
170		9.19		9.17	33.668	26.052	198.5	0.493	4.23		183.9		65.1		19.7	1.50	19.3	0.01	0.00	0.01	0.02	171	08
200		8.71		8.69	33.861	26.278	177.4	0.549	3.98		173.3		60.8		24.6	1.62	21.6	0.01	0.00	0.00	0.02	202	07
230		8.30		8.27	33.946	26.409	165.5	0.601	3.60		156.6		54.4		30.4	1.87	24.4	0.01	0.00			232	06
250	ISL	7.92	D	7.89	33.963	D 26.480	159.0	0.636	3.24	D	140.8	D	48.5		35.3	2.11	27.2	0.01	0.00			252	
270		7.81		7.79	34.001	26.524	155.1	0.664	2.36		102.8		35.3		40.2	2.34	30.0	0.00	0.00			272	05
300	ISL	7.35	D	7.32	33.989	D 26.582	149.8	0.714	2.43	D	105.5	D	35.9		44.5	2.42	31.1	0.00	0.00			302	
320		7.12		7.09	33.995	26.619	146.5	0.740	2.20		95.8		32.4		47.3	2.47	31.8	0.01	0.00			323	04
380		6.57		6.54	34.069	26.753	134.4	0.824	1.23		53.4		17.9		59.9	2.87	36.6	0.00	0.00			383	03
400	ISL	6.46	D	6.43	34.090	D 26.784	131.7	0.855	1.10	D	47.9	D	16.0		62.5	2.93	37.3	0.00	0.00			403	
440		6.21		6.17	34.120	26.840	126.7	0.902	0.84		36.6		12.1		67.6	3.05	38.7	0.00	0.00			444	02
500	ISL	5.61	D	5.56	34.143	D 26.935	118.0	0.981	0.68	D	29.8	D	9.7		77.4	3.18	40.4	0.00	0.00			504	
516		5.52		5.47	34.157	26.957	116.0	0.994	0.60		26.3		8.6		80.0	3.21	40.9	0.00	0.00			520	01

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

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	16/07/2013	1027	UTC	75 m	320 14 kn			1011.0 mb	14.0 C	12.5 C				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	12.68	12.68	33.626 D	25.392	257.4	0.000	4.77	208.2	79.3	13.1	1.14	11.6	0.28	0.19	1.39	0.04	0	
2	12.68	12.68	33.626 D	25.392	257.5	0.005	4.77	208.2	79.3	13.1	1.14	11.6	0.28	0.19	1.39	0.04	2	09
5	12.68	12.68	33.628	25.394	257.4	0.013	4.81	209.5	79.9	13.0	1.14	11.7	0.28	0.18	1.32	0.12	5	08
10	12.67	12.66	33.630	25.399	257.1	0.026	4.76	207.5	79.1	13.1	1.14	11.8	0.27	0.20	1.45	0.02	10	06
10	12.67	12.66	33.625	25.395	257.5	0.026											10	07
20	12.06	12.05	33.632	25.517	246.1	0.051	4.61	200.9	75.7	15.5	1.29	14.4	0.27	0.12	1.00	0.03	20	05
30	11.65	11.65	33.637	25.598	238.7	0.075	4.51	196.2	73.3	16.8	1.39	16.2	0.25	0.07	0.82	0.01	30	04
40	11.37	11.37	33.640	25.652	233.9	0.099	3.99	173.8	64.5	18.3	1.50	17.8	0.25	0.07	0.88	0.03	40	03
50	10.49	10.48	33.669	25.832	216.9	0.121	3.27	142.5	51.9	21.4	1.73	21.3	0.22	0.04	0.32	0.18	50	02
60	10.32	10.32	33.707	25.890	211.6	0.143	3.17	137.8	50.0	22.4	1.77	22.0	0.21	0.04	0.28	0.30	60	01

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

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	16/07/2013	1327	UTC	746 m	340 17 kn	330 03 06	2	1012.8 mb	14.8 C	13.4 C	07 m	8/8	ST	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	12.85	12.85	33.640	25.370	259.6	0.000	5.37	233.8	89.5	9.5	0.95	9.3	0.18	0.06	5.78	1.19	0	
1	12.85	12.85	33.640	25.370	259.6	0.003	5.37	233.8	89.5	9.5	0.95	9.3	0.18	0.06	5.78	1.19	1	22
10	12.73	12.73	33.638	25.393	257.7	0.025											10	21
10	12.73	12.73	33.639	25.393	257.7	0.026	5.35	232.9	89.0	9.5	0.90	9.3	0.18	0.05	6.01	0.84	10	20
15	11.92	11.92	33.645	25.553	242.6	0.038	4.71	205.3	77.1	14.4	1.25	14.1	0.22	0.06	2.13	0.53	15	19
20	11.45	11.45	33.662	25.653	233.2	0.050	4.30	187.3	69.7	16.8	1.46	16.6	0.23	0.12	0.98	0.41	20	18
30	11.10	11.10	33.667	25.721	227.0	0.073	3.87	168.5	62.2	18.5	1.54	18.6	0.20	0.05	0.65	0.33	30	17
41	10.36	10.36	33.719	25.892	211.0	0.097	3.05	132.6	48.2	22.6	1.83	22.4	0.12	0.07	0.26	0.18	41	16
50	10.29	10.28	33.724	25.909	209.6	0.116	2.99	129.9	47.2	22.9	1.85	22.9	0.11	0.02	0.25	0.18	50	15
60	9.84	9.83	33.795	26.041	197.2	0.137	2.68	116.5	41.9	25.8	1.97	24.5	0.08	0.02	0.09	0.14	60	14
70	9.76	9.75	33.847	26.095	192.3	0.156	2.57	111.8	40.1	27.1	2.02	25.5	0.06	0.00	0.05	0.15	71	13
75 ISL	9.71 D	9.70	33.870 D	26.122	189.8	0.167	2.52 D	109.6 D	39.3	27.7	2.05	25.8	0.06	0.01	0.04	0.14	76	
86	9.54	9.53	33.918	26.187	183.9	0.186	2.37	103.1	36.8	29.2	2.10	26.4	0.05	0.04	0.02	0.13	87	12
100 ISL	9.51 D	9.50	33.937 D	26.207	182.3	0.213	2.27 D	98.8 D	35.3	30.2	2.15	27.0	0.05	0.04	0.03	0.10	101	
101	9.51	9.50	33.939	26.209	182.2	0.214	2.27	98.7	35.3	30.3	2.15	27.0	0.05	0.04	0.03	0.10	102	11
120	9.46	9.45	33.949	26.226	181.0	0.248	2.23	97.0	34.6	30.9	2.17	27.4	0.05	0.02	0.02	0.09	121	10
125 ISL	9.45 D	9.43	33.953 D	26.231	180.6	0.259	2.22 D	96.5 D	34.4	31.6	2.19	27.7	0.07	0.03	0.02	0.10	126	
140	9.30	9.28	34.005	26.296	174.7	0.284	1.99	86.8	30.9	33.6	2.26	28.4	0.14	0.06	0.03	0.13	141	09
150 ISL	9.17 D	9.16	34.025 D	26.333	171.4	0.303	1.98 D	86.0 D	30.5	34.0	2.28	28.7	0.11	0.05	0.03	0.12	151	
170	9.12	9.10	34.041	26.354	169.8	0.335	1.94	84.6	30.0	34.9	2.31	29.2	0.07	0.04	0.02	0.10	171	08
200	8.96	8.94	34.108	26.432	163.0	0.385	1.47	64.1	22.7	38.8	2.52	30.5	0.05	0.03	0.03	0.17	202	07
230	8.72	8.69	34.157	26.511	156.1	0.433	1.33	58.0	20.4	41.8	2.62	30.5	0.04	0.00			232	06
250 ISL	8.59 D	8.56	34.180 D	26.549	152.8	0.467	1.15 D	49.9 D	17.5	43.5	2.65	31.8	0.04	0.04			252	
270	8.44	8.41	34.193	26.582	150.0	0.494	1.18	51.5	18.0	45.1	2.68	33.0	0.03	0.07			272	05
300 ISL	8.14 D	8.11	34.189 D	26.625	146.4	0.543	1.11 D	48.2 D	16.7	47.3	2.74	33.7	0.03	0.05			302	
320	8.12	8.09	34.205	26.641	145.3	0.568	1.03	44.9	15.6	48.7	2.78	34.1	0.03	0.04			323	04
379	7.80	7.76	34.240	26.718	138.9	0.652	0.77	33.4	11.5	53.6	2.91	35.3	0.02	0.04			382	03
400 ISL	7.71 D	7.67	34.247 D	26.736	137.5	0.686	0.72 D	31.3 D	10.8	55.3	2.94	35.8	0.02	0.03			403	
440	7.39	7.35	34.257	26.791	132.7	0.735	0.63	27.3	9.3	58.6	3.01	36.7	0.02	0.02			444	02
500 ISL	6.95 D	6.90	34.269 D	26.864	126.4	0.819	0.50 D	21.7 D	7.3	67.0	3.11	39.0	0.02	0.05			504	
514	6.68	6.63	34.227	26.867	126.0	0.830	0.51	22.1	7.4	69.0	3.13	39.5	0.02	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
34 9.0 N	121 9.1 W	16/07/2013	1736	UTC	2186 m	330 14 kn	340 03 06	2	1014.6 mb	16.8 C	14.2 C	09 m	8/8	ST	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	14.28	14.28	33.601	25.049	290.1	0.000	6.05	263.9	103.8	4.3	0.53	3.5	0.14	0.05	5.72	1.05	0	
2 A	14.28	14.27	33.601	25.050	290.1	0.006	6.05	263.9	103.8	4.3	0.53	3.5	0.14	0.05	5.72	1.05	2	23
5 A	14.26	14.26	33.601	25.054	289.8	0.015	6.04	263.5	103.7	4.2	0.56	3.5	0.13	0.04	5.47	0.95	5	22
6 A	14.26	14.26	33.603	25.054	289.9	0.017	6.04	263.5	103.6	4.2	0.52	3.5	0.13	0.06	5.56	1.02	6	21
10 ISL	14.25 D	14.24	33.602 D	25.057	289.7	0.029	6.00 D	261.3 D	103.0	4.2	0.52	3.5	0.13	0.06	5.60	0.98	10	
14 A	14.23	14.23	33.601	25.059	289.6	0.041	6.02	262.5	103.2	4.2	0.52	3.5	0.13	0.05	5.63	0.95	14	19
14	14.23	14.23	33.601	25.059	289.6	0.041											14	20
20 ISL	14.21 D	14.21	33.602 D	25.064	289.3	0.050	5.91 D	257.6 D	101.4	4.3	0.53	3.8	0.14	0.09	5.86	0.94	20	
24 A	14.15	14.15	33.607	25.081	287.8	0.070	5.90	257.4	101.0	4.4	0.54	4.0	0.14	0.11	6.02	0.93	24	18
30 A	13.67	13.66	33.606	25.181	278.5	0.087	5.82	254.1	98.7	4.6	0.60	4.5	0.17	0.36	5.54	0.86	30	17
40	11.27	11.27	33.659	25.684	230.7	0.112	4.68	204.0	75.4	12.1	1.45	14.3	0.60	1.41	0.16	0.21	40	16
50	9.90	9.89	33.688	25.947	205.9	0.134	3.76	164.0	58.8	21.3	1.81	21.7	0.16	0.13	0.07	0.16	50	15
60	9.56	9.55	33.711	26.021	199.1	0.154	3.43	149.8	53.4	23.7	1.88	23.1	0.04	0.04	0.06	0.13	60	14
70	9.43	9.42	33.758	26.080	193.6	0.174	3.13	136.5	48.5	25.5	1.96	24.1	0.03	0.01	0.05	0.16	71	13
75 ISL	9.31 D	9.30	33.800 D	26.132	188.9	0.176	2.96 D	128.8 D	45.8	26.5	1.99	24.6	0.03	0.01	0.05	0.16	76	
85	9.28	9.27	33.856	26.181	184.4	0.202	2.75	119.9	42.5	28.5	2.06	25.5	0.03	0.02	0.05	0.18	86	12
100	8.85	8.84	33.867	26.259	177.2	0.229	3.06	133.5	46.8	28.7	1.97	25.2	0.04	0.02	0.05	0.16	101	11
120	8.60	8.59	33.920	26.339	170.0	0.264	2.96	129.0	45.0	31.0	2.02	26.0	0.04	0.00	0.03	0.17	121	10
125 ISL	8.57 D	8.56	33.928 D	26.350	169.1	0.265	2.91 D	126.7 D	44.3	31.7	2.04	26.3	0.04	0.00	0.03	0.16	126	
140	8.41	8.39	33.963	26.403	164.3	0.297	2.71	118.4	41.2	33.8	2.11	27.2	0.04	0.00	0.02	0.12	141	09
150 ISL	8.33 D	8.32	33.981 D	26.428	162.1	0.307	2.51 D	109.3 D	38.0	35.1	2.16	27.9	0.04	0.01	0.02	0.11	151	
169	8.19	8.17	34.000	26.466	158.8	0.344	2.37	103.6	35.8	37.6	2.25	29.2	0.03	0.03	0.02	0.10	170	08
200 ISL	7.80 D	7.78	34.076 D	26.583	148.2	0.386	1.65 D	71.6 D	24.6	44.0	2.50	31.9	0.03	0.03	0.02	0.13	202	
201	7.78	7.76	34.067	26.579	148.6	0.393	1.70	74.1	25.4	44.3	2.51	32.0	0.03	0.03	0.02	0.13	203	07
229	7.36	7.34	34.051	26.628	144.3	0.434	1.73	75.6	25.7	48.6	2.56	32.9	0.03	0.00			231	06
250 ISL	7.21 D	7.19	34.079 D	26.671	140.5	0.459	1.46 D	63.3 D	21.5	51.2	2.64	33.6	0.03	0.00			252	
270	7.14	7.11	34.096	26.695	138.5	0.492	1.35	58.7	19.8	53.6	2.72	34.2	0.03	0.00			272	05
300 ISL	7.10 D	7.07	34.157 D	26.749	133.9	0.528	0.93 D	40.5 D	13.7	57.0	2.83	35.5	0.03	0.01			302	
320	6.93	6.90	34.150	26.767	132.4	0.559	0.90	39.1	13.2	59.3	2.90	36.3	0.03	0.02			323	04
379	6.52	6.49	34.174	26.841	126.0	0.636	0.72	31.4	10.5	65.5	3.01	37.4	0.02	0.00			382	03
400 ISL	6.52 D	6.48	34.183 D	26.850	125.5	0.659	0.68 D	29.7 D	9.9	67.2	3.05	37.6	0.02	0.00			403	
440	6.42	6.38	34.238	26.907	120.7	0.711	0.47	20.5	6.8	70.4	3.12	38.1	0.02	0.01			444	02
500 ISL	6.40 D	6.35	34.304 D	26.964	116.3	0.780	0.33 D	14.2 D	4.7	73.8	3.18	38.6	0.02	0.02			504	
517	6.36	6.31	34.307	26.971	115.9	0.802	0.30	12.9	4.3	74.8	3.20	38.7	0.02	0.02			521	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 1307 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 49.0 N	121 50.6 W	16/07/2013	2357	UTC	3628 m	330 14 kn	340 03 06	1	1015.4 mb	16.8 C	14.9 C	12 m	7/8	SC	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		15.37		15.37		33.669	24.865	307.6	0.000	5.88		256.1		103.2		0.8	0.49	2.6	0.10	0.64	0.53	0.17	0	
2		15.37		15.37		33.669	24.865	307.7	0.006	5.88		256.1		103.2		0.8	0.49	2.6	0.10	0.64	0.53	0.17	2	20
10	ISL	15.24	D	15.23		33.666	D 24.894	305.2	0.031	5.85	D	254.9	D	102.5		0.8	0.47	2.6	0.10	0.54	0.55	0.18	10	
11		15.20		15.19		33.667	24.903	304.4	0.034	5.88		256.1		102.9		0.8	0.47	2.6	0.10	0.53	0.55	0.18	11	19
20		15.09		15.09		33.669	24.928	302.3	0.061	5.96		259.8		104.2		0.8	0.40	2.4	0.10	0.17	0.83	0.28	20	18
30		13.76		13.76		33.548	25.116	284.6	0.090	5.86		255.4		99.6		3.2	0.75	5.6	0.21	0.79	0.67	0.26	30	17
40		12.62		12.61		33.562	25.356	262.0	0.118	5.66		246.3		93.8		5.3	1.04	8.2	0.28	1.52	0.44	0.19	40	16
50		11.79		11.78		33.515	25.478	250.7	0.143	5.43		236.7		88.6		9.2	1.20	12.2	0.40	0.53	0.29	0.15	50	15
60		11.43		11.42		33.518	25.547	244.3	0.168	5.28		229.8		85.3		10.7	1.29	14.1	0.31	0.19	0.18	0.10	60	14
70		10.59		10.58		33.441	25.637	235.9	0.192	4.91		214.0		78.0		14.1	1.37	15.9	0.07	0.02	0.09	0.08	71	13
75	ISL	10.92	D	10.91		33.622	D 25.721	228.1	0.205	4.77	D	207.8	D	76.4		16.0	1.45	17.3	0.07	0.02	0.08	0.08	76	
85		9.52		9.51		33.561	25.911	210.1	0.226	4.15		180.5		64.3		19.8	1.62	20.0	0.06	0.02	0.06	0.09	86	12
100		9.13		9.12		33.703	26.085	193.8	0.256	3.43		149.3		52.8		26.2	1.91	24.4	0.03	0.02	0.03	0.10	101	11
120		8.83		8.82		33.831	26.234	180.1	0.293	3.06		133.3		46.9		29.3	1.97	25.7	0.05	0.02	0.01	0.07	121	10
125	ISL	8.79	D	8.78		33.838	D 26.246	179.0	0.304	2.96	D	128.9	D	45.3		30.7	2.05	26.5	0.04	0.03	0.02	0.08	126	
140		9.00		8.98		33.992	26.335	171.0	0.328	1.94		84.2		29.8		34.8	2.29	28.9	0.03	0.04	0.02	0.14	141	09
150	ISL	8.98	D	8.96		34.037	D 26.373	167.6	0.347	1.75	D	76.2	D	26.9		36.3	2.35	29.4	0.03	0.03	0.02	0.13	151	
170		8.56		8.55		34.065	26.460	159.6	0.378	1.64		71.2		24.9		39.1	2.46	30.3	0.03	0.00	0.02	0.13	171	08
200		8.39		8.37		34.138	26.545	152.1	0.425	1.27		55.2		19.3		43.6	2.60	31.6	0.00	0.00	0.01	0.13	202	07
230		7.90		7.88		34.114	26.600	147.2	0.470	1.31		57.0		19.7		46.7	2.63	32.9	0.00	0.00			232	06
250	ISL	7.84	D	7.81		34.153	D 26.641	143.7	0.502	1.13	D	49.1	D	16.9		49.4	2.72	33.4	0.00	0.00			252	
270		7.82		7.79		34.198	26.679	140.5	0.527	0.87		38.0		13.1		52.0	2.81	33.9	0.00	0.00			272	05
300	ISL	7.59	D	7.56		34.214	D 26.725	136.5	0.573	0.80	D	34.6	D	11.9		55.9	2.88	35.0	0.00	0.00			302	
320		7.17		7.14		34.195	26.770	132.4	0.596	0.76		33.1		11.2		58.6	2.92	35.7	0.00	0.00			323	04
379		6.58		6.54		34.192	26.848	125.4	0.672	0.63		27.5		9.2		66.3	3.03	37.5	0.00	0.00			382	03
400	ISL	6.18	D	6.15		34.152	D 26.868	123.5	0.703	0.71	D	30.9	D	10.2		69.3	3.07	38.2	0.00	0.00			403	
438		6.01		5.97		34.199	26.929	118.2	0.744	0.49		21.4		7.1		74.8	3.15	39.4	0.00	0.00			442	02
500	ISL	5.71	D	5.67		34.244	D 27.001	111.9	0.821	0.36	D	15.5	D	5.1									504	
514		5.63		5.59		34.258	27.023	110.0	0.830	0.31		13.4		4.4									518	01

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

RV NEW HORIZON CALCOFI CRUISE 1307 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 28.9 N	122 32.1 W	17/07/2013	0558	UTC	3996 m	310 16 kn			1017.2 mb	15.5 C	13.9 C				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		16.01		16.01		33.359	24.484	343.9	0.000	5.95		259.5		105.7		1.8	0.40	0.7	0.05	0.11	0.68	0.14	0	
2		16.01		16.01		33.359	24.484	344.0	0.007	5.95		259.5		105.7		1.8	0.40	0.7	0.05	0.11	0.68	0.14	2	20
10		16.01		16.01		33.359	24.485	344.2	0.034	5.94		258.8		105.4		1.7	0.39	0.7	0.05	0.02	0.66	0.14	10	19
20		15.98		15.97		33.356	24.491	344.0	0.069	5.92		258.2		105.1		1.7	0.40	0.7	0.04	0.15	0.79	0.18	20	18
30		15.16		15.16		33.356	24.672	327.0	0.102	6.00		261.3		104.7		1.8	0.45	1.3	0.06	0.14	0.77	0.20	30	17
40		13.99		13.98		33.380	24.940	301.7	0.134	6.13		266.9		104.5		2.5	0.60	3.5	0.15	0.16	0.72	0.32	40	16
50		13.73		13.72		33.412	25.020	294.4	0.164	5.96		259.5		101.0		2.7	0.68	4.5	0.21	0.36	0.52	0.31	50	15
61		13.14		13.13		33.412	25.139	283.4	0.195	5.80		252.8		97.2		3.7	0.78	5.7	0.31	0.50	0.38	0.14	61	14
70		12.63		12.62		33.389	25.222	275.6	0.221	5.75		250.4		95.3		4.4	0.81	6.4	0.37	0.40	0.29	0.15	71	13
75	ISL	11.99	D	11.98		33.341	D 25.308	267.5	0.236	5.59	D	243.4	D	91.3		5.5	0.86	7.6	0.27	0.27	0.24	0.13	76	
85		11.48		11.47		33.335	25.397	259.2	0.261	5.41		235.6		87.5		7.7	0.96	9.9	0.07	0.00	0.16	0.10	86	12
100	ISL	10.21	D	10.20		33.443	D 25.706	230.0	0.299	4.53	D	197.4	D	71.3		15.2	1.36	16.5	0.03	0.00	0.08	0.07	101	
101		10.17		10.16		33.472	25.735	227.2	0.300	4.49		195.5		70.6		15.7	1.39	16.9	0.03	0.00	0.07	0.07	102	11
119		9.70		9.68		33.647	25.950	207.1	0.339	3.62		157.5		56.4		21.9	1.72	22.0	0.02	0.00	0.03	0.06	120	10
125	ISL	9.46	D	9.45		33.748	D 26.069	196.0	0.353	3.32	D	144.4	D	51.5		24.3	1.83	23.6	0.02	0.00	0.02	0.06	126	
140		9.24		9.22		33.882	26.209	182.9	0.379	2.41		105.0		37.3		30.3	2.09	27.5	0.02	0.00	0.01	0.06	141	09
150	ISL	9.17	D	9.16		33.916	D 26.248	179.5	0.400	2.23	D	96.9	D	34.3		32.2	2.15	28.3	0.02	0.02	0.01	0.06	151	
170		8.88		8.86		34.009	26.367	168.5	0.432	1.84		80.2		28.3		35.9	2.28	29.8	0.01	0.06	0.01	0.06	171	08
200		8.57		8.55		34.086	26.476	158.7	0.481	1.48		64.5		22.6		40.4	2.42	31.3	0.02	0.08	0.01	0.05	202	07
228		8.33		8.31		34.127	26.546	152.6	0.525	1.26		55.0		19.2		44.0	2.51	32.2	0.02	0.03			230	06
250	ISL	8.21	D	8.19		34.164	D 26.593	148.4	0.561	1.11	D	48.4	D	16.8		46.1	2.57	32.8	0.01	0.02			252	
270		8.12		8.09		34.179	26.620	146.2	0.587	1.02		44.2		15.3		48.1	2.62	33.3	0.01	0.01			272	05
300	ISL	7.84	D	7.80		34.204	D 26.682	140.8	0.635	0.88	D	38.2	D	13.2		51.5	2.69	34.0	0.01	0.08			302	
320		7.70		7.67		34.209	26.706	138.7	0.658	0.81		35.4		12.2		53.7	2.74	34.5	0.01	0.12			323	04
379		7.32		7.28		34.244	26.789	131.7	0.738	0.60		26.1		8.9		59.8	2.86	36.1	0.01	0.02			382	03
400	ISL	7.16	D	7.12		34.253	D 26.820	129.1	0.771	0.53	D	23.2	D	7.9		62.5	2.89	36.7	0.01	0.01			403	
442		6.74		6.70		34.262	26.884	123.3	0.819	0.43		18.8		6.3		67.7	2.96	37.9	0.01	0.00			446	02
500	ISL	6.36	D	6.31		34.291	D 26.959	116.7	0.894	0.33	D	14.4	D	4.8		74.7	3.06	39.1	0.01	0.00			504	
515		6.17		6.13		34.286	26.979	114.8	0.906	0.33		14.1		4.7		76.5	3.09	39.4	0.01	0.00			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 1307 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 13.6 W	17/07/2013	1149	UTC	4257 m	340 13 kn			1017.7 mb	15.8 C	13.9 C				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		15.72		15.72		33.496	24.655	327.6	0.000	5.92		258.0		104.6		1.0	0.47	2.3	0.10	0.11	0.43	0.09	0	
2		15.72		15.72		33.496	24.655	327.7	0.007	5.92		258.0		104.6		1.0	0.47	2.3	0.10	0.11	0.43	0.09	2	20
10		15.60		15.60		33.494	24.680	325.6	0.033	5.93		258.5		104.6		1.0	0.47	2.3	0.10	0.09	0.47	0.10	10	19
20		15.57		15.56		33.489	24.685	325.4	0.065	5.92		258.2		104.3		1.0	0.50	2.3	0.10	0.13	0.54	0.13	20	18
30	ISL	15.56	D	15.56		33.491	D 24.688	325.6	0.099	5.82	D	253.5	D	102.5		1.0	0.48	2.2	0.10	0.14	0.55	0.13	30	
31		15.56		15.55		33.493	24.691	325.2	0.101	5.93		258.4		104.4		1.0	0.48	2.2	0.10	0.14	0.55	0.13	31	17
41		13.65		13.64		33.329	24.971	298.8	0.132	6.17		269.0		104.5		2.3	0.54	2.5	0.15	0.15	0.68	0.27	41	16
50		13.81		13.80		33.472	25.049	291.7	0.159	5.96		259.8		101.4		2.6	0.72	4.9	0.22	0.40	0.39	0.30	50	15
60		13.17		13.16		33.482	25.186	278.8	0.187	5.84		254.4		97.9		3.7	0.83	6.0	0.37	0.59	0.30	0.23	60	14
70		12.58		12.57		33.463	25.289	269.3	0.215	5.68		247.2		94.0		5.0	0.93	7.5	0.60	0.51	0.22	0.14	71	13
75	ISL	12.26	D	12.25		33.461	D 25.348	263.8	0.230	5.57	D	242.8	D	91.7		6.1	1.01	9.2	0.41	0.34	0.18	0.12	76	
85		11.37		11.36		33.505	25.549	244.7	0.254	5.23		227.9		84.5		8.4	1.18	12.6	0.04	0.00	0.09	0.08	86	12
100		10.45		10.43		33.565	25.760	224.9	0.289	4.38		190.6		69.3		14.7	1.50	17.3	0.02	0.00	0.03	0.05	101	11
120		9.36		9.35		33.679	26.030	199.5	0.331	3.65		158.7		56.4		22.4	1.75	21.8	0.02	0.00	0.02	0.05	121	10
125	ISL	9.21	D	9.20		33.701	D 26.073	195.5	0.344	3.56	D	154.9	D	54.9		23.3	1.78	22.3	0.02	0.00	0.01	0.04	126	
140		8.88		8.86		33.776	26.184	185.1	0.370	3.40		147.8		52.0		26.0	1.85	23.8	0.02	0.00	0.01	0.03	141	09
150	ISL	8.84	D	8.82		33.824	D 26.228	181.2	0.391	3.18	D	138.5	D	48.7		27.6	1.90	24.5	0.01	0.00	0.00	0.03	151	
170		8.55		8.53		33.915	26.344	170.5	0.423	3.01		131.1		45.8		30.8	1.99	26.0	0.01	0.00	0.00	0.04	171	08
200		8.18		8.16		33.963	26.440	161.9	0.473	2.85		123.8		42.9		34.7	2.08	27.2	0.02	0.00	0.00	0.03	202	07
230		7.74		7.72		33.998	26.532	153.5	0.520	2.42		105.3		36.2		40.7	2.26	29.9	0.02	0.00			232	06
250	ISL	7.57	D	7.54		34.013	D 26.569	150.3	0.555	2.27	D	98.6	D	33.7		43.7	2.36	30.9	0.01	0.01			252	
270		7.27		7.24		34.017	26.615	146.1	0.580	2.13		92.6		31.5		46.6	2.46	31.8	0.01	0.01			272	05
300	ISL	6.90	D	6.88		34.036	D 26.680	140.2	0.628	1.74	D	75.7	D	25.5		52.1	2.62	33.7	0.01	0.00			302	
320		6.70		6.67		34.044	26.714	137.2	0.651	1.57		68.3		22.9		55.7	2.72	34.9	0.01	0.00			323	04
380		6.11		6.07		34.083	26.823	127.3	0.730	1.05		45.7		15.1		66.9	2.96	37.8	0.01	0.00			383	03
400	ISL	5.97	D	5.93		34.098	D 26.853	124.7	0.761	0.94	D	40.8	D	13.5		69.7	3.01	38.4	0.00	0.00			403	
440		5.70		5.66		34.126	26.909	119.7	0.804	0.74		32.3		10.6		75.4	3.12	39.6	0.00	0.00			444	02
500	ISL	5.38	D	5.34		34.180	D 26.990	112.4	0.881	0.52	D	22.6	D	7.4		83.1	3.23	40.7	0.00	0.02			504	
514		5.34		5.30		34.203	27.014	110.4	0.890	0.44		19.2		6.3		84.9	3.26	40.9	0.00	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 1307 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 48.9 N	123 54.3 W	17/07/2013	1802	UTC	4429 m	350 09 kn	340 03 07	2	1020.5 mb	18.0 C	14.8 C	23 m	8/8	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		17.21		17.21		33.115	24.020	388.2	0.000	5.65	246.3		102.6		1.9	0.34	0.0	0.01	0.22	0.14	0.04	0	
2	A	17.21		17.21		33.115	24.020	388.2	0.008	5.65	246.3		102.6		1.9	0.34	0.0	0.01	0.22	0.14	0.04	2	23
10		17.19		17.19		33.115	24.026	388.0	0.039	5.65	246.4		102.5		1.8	0.34	0.0	0.00	0.14	0.15	0.03	10	22
14	A	17.18		17.18		33.119	24.031	387.6	0.054	5.64	245.8		102.3		1.8	0.34	0.0	0.01	0.00	0.15	0.04	14	21
18	A	17.12		17.12		33.114	24.041	386.8	0.070	5.65	246.5		102.4		1.8	0.34	0.0	0.00	0.00	0.15	0.03	18	20
20	ISL	17.07	D	17.07		33.113	D 24.051	385.9	0.078	5.62	D244.9	D	101.7		1.9	0.34	0.0	0.00	0.00	0.15	0.03	20	
30	ISL	16.93	D	16.93		33.130	D 24.099	381.7	0.117	5.62	D245.3	D	101.6		2.1	0.33	0.0	0.00	0.00	0.18	0.05	30	
35	A	15.34		15.34		33.034	24.385	354.5	0.134	5.98	260.8		104.6		2.2	0.33	0.0	0.00	0.00	0.20	0.05	35	19
44		14.96		14.95		33.041	24.474	346.3	0.166	6.04	263.3		104.8		2.1	0.34	0.0	0.00	0.00	0.26	0.08	44	18
50	ISL	14.59	D	14.58		33.125	D 24.619	332.7	0.188	6.09	D265.4	D	104.9		1.9	0.35	0.0	0.00	0.01	0.30	0.12	50	
53		14.25		14.25		33.116	24.683	326.6	0.196	6.26	272.7		107.1		1.8	0.36	0.0	0.00	0.02	0.33	0.13	53	17
62	A	13.56		13.55		33.071	24.791	316.5	0.225	6.26	272.7		105.6		2.5	0.35	0.0	0.00	0.03	0.40	0.18	62	16
70		13.42		13.41		33.134	24.869	309.4	0.250	6.12	266.7		103.0		2.7	0.34	0.1	0.01	0.02	0.51	0.24	71	15
75	ISL	13.46	D	13.45		33.195	D 24.909	305.7	0.267	6.02	D262.3	D	101.4		2.8	0.33	0.0	0.01	0.01	0.43	0.28	76	
77	A	13.31		13.30		33.186	24.930	303.7	0.272	6.02	262.3		101.1		2.8	0.32	0.0	0.00	0.00	0.40	0.30	78	14
86		13.15		13.14		33.202	24.976	299.6	0.299	5.96	259.6		99.7		2.9	0.35	0.0	0.04	0.02	0.40	0.27	87	13
95		13.23		13.22		33.218	24.972	300.2	0.326	5.88	256.3		98.6		3.1	0.45	1.3	0.26	0.03	0.24	0.20	96	12
100	ISL	13.70	D	13.69		33.527	D 25.117	286.7	0.343	5.75	D250.6	D	97.6		3.4	0.44	1.4	0.24	0.02	0.22	0.20	101	
110		12.83		12.81		33.418	25.208	278.2	0.369	5.64	245.7		93.9		3.9	0.43	1.7	0.20	0.00	0.17	0.19	111	11
125		11.79		11.77		33.380	25.377	262.3	0.409	5.35	233.1		87.1		6.3	0.68	5.8	0.05	0.03	0.14	0.15	126	10
141		10.56		10.54		33.369	25.590	242.1	0.449	5.07	220.6		80.3		9.7	0.96	10.2	0.02	0.00	0.09	0.09	142	09
150	ISL	10.13	D	10.11		33.435	D 25.714	230.4	0.474	4.87	D212.2	D	76.6		12.1	1.10	12.5	0.02	0.00	0.07	0.07	151	
169		9.36		9.35		33.577	25.952	208.0	0.512	4.47	194.5		69.1		17.4	1.40	17.4	0.01	0.00	0.01	0.03	170	08
199		8.77		8.74		33.835	26.250	180.2	0.571	3.10	134.9		47.4		28.8	2.03	25.4	0.01	0.00	0.00	0.03	201	07
200	ISL	8.75	D	8.73		33.842	D 26.258	179.4	0.576	3.12	D135.8	D	47.6		28.9	2.03	25.4	0.01	0.00			202	
230		8.35		8.32		33.935	26.393	167.0	0.624	3.42	148.8		51.8		30.5	1.93	24.8	0.01	0.00			232	06
250	ISL	8.01	D	7.98		33.982	D 26.481	158.9	0.661	2.72	D118.1	D	40.8		34.8	2.11	26.9	0.00	0.00			252	
271		7.83		7.80		33.999	26.521	155.4	0.690	2.56	111.3		38.3		39.4	2.29	29.2	0.00	0.00			273	05
300	ISL	7.32	D	7.29		34.014	D 26.606	147.5	0.739	2.19	D 95.1	D	32.3		45.5	2.47	31.4	0.00	0.00			302	
321		7.07		7.04		34.037	26.659	142.7	0.764	1.86	80.7		27.3		50.0	2.60	33.0	0.01	0.00			324	04
378		6.34		6.31		34.074	26.787	131.0	0.842	1.24	53.8		17.9		62.8	2.91	37.0	0.01	0.00			381	03
400	ISL	6.14	D	6.10		34.093	D 26.828	127.2	0.877	1.04	D 45.2	D	15.0		66.1	2.98	37.6	0.00	0.00			403	
439		5.88		5.84		34.121	26.882	122.4	0.919	0.85	36.8		12.1		71.9	3.10	38.8	0.00	0.00			443	02
500	ISL	5.46	D	5.41		34.168	D 26.973	114.2	0.999	0.58	D 25.4	D	8.3		80.9	3.24	40.4	0.00	0.00			504	
515		5.40		5.36		34.184	26.992	112.6	1.009	0.51	22.1		7.2		83.2	3.27	40.8	0.01	0.00			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; SECONDARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1307 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 24.2 N	119 48.2 W	16/07/2013	0303	UTC	22 m	100 06 kn	220 03 05	0	1008.3 mb	18.6 C	16.3 C		0/8	cc	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		17.67		17.67		33.610	24.289	362.5	0.000	6.03	262.9		110.8		7.6	0.29	0.0	0.02	0.07	1.23	0.36	0	
2		17.67		17.67		33.610	24.289	362.6	0.007	6.03	262.9		110.8		7.6	0.29	0.0	0.02	0.07	1.23	0.36	2	03
4		17.07		17.07		33.608	24.430	349.2	0.014	6.00	261.7		109.0		7.9	0.30	0.0	0.02	0.09	1.54	0.44	4	02
10	ISL	14.21	D	14.21		33.573	D 25.041	291.2	0.034	5.24	D228.2	D	89.8		12.5	0.63	1.2	0.16	0.24	5.35	1.43	10	
11		14.35		14.35		33.579	25.017	293.5	0.037	5.13	223.3		88.2		13.3	0.69	1.4	0.18	0.26	5.99	1.60	11	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 1307 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 1.7 W	16/07/2013	0505	UTC	581 m	270 20 kn			1008.9 mb	16.1 C	14.1 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		14.69		14.69		33.654	25.001	294.6	0.000	5.76	251.1		99.9		6.9	0.54	3.5	0.11	0.28	6.03	0.59	0	
2		14.69		14.69		33.654	25.002	294.7	0.006	5.76	251.1		99.9		6.9	0.54	3.5	0.11	0.28	6.03	0.59	2	24
10		14.66		14.66		33.648	25.004	294.7	0.030	5.67	247.2		98.3		7.2	0.56	4.1	0.13	0.24	5.64	0.69	10	23
20		12.29		12.29		33.571	25.425	254.9	0.057	4.71	205.0		77.6		11.6	1.07	10.7	0.30	0.24	0.96	0.33	20	22
30		11.26		11.25		33.618	D 25.655	233.3	0.082	4.21	183.3		67.9		14.3	1.31	14.8	0.31	0.15	0.48	0.19	30	21
40		10.87		10.86		33.738	25.819	217.9	0.104	3.22	140.4		51.6		22.8	1.69	19.8	0.36	0.14	0.21	0.22	40	20
50		10.32		10.31		33.772	25.942	206.4	0.125	2.94	127.9		46.5		25.1	1.82	21.6	0.29	0.05	0.17	0.24	50	19
60		9.90		9.89		33.826	26.054	195.9	0.145	2.62	114.2		41.1		27.0	1.94	23.5	0.19	0.03	0.10	0.19	60	18
70		9.77		9.76		33.898	26.133	188.7	0.165	2.23	96.8		34.8		31.8	2.11	25.3	0.26	0.08	0.08	0.25	71	17
75	ISL	9.66	D	9.65		33.918	D 26.167	185.6	0.175	2.23	D 96.8	D	34.7		31.4	2.11	25.5	0.20	0.07	0.06	0.21	76	
86		9.53		9.52		33.937	26.204	182.3	0.194	2.22	96.4		34.5		30.7	2.12	26.0	0.06	0.04	0.02	0.12	87	16
100	ISL	9.46	D	9.44		33.979	D 26.249	178.3	0.220	2.11	D 91.8	D	32.8		32.0	2.16	26.5	0.06	0.01	0.02	0.13	101	
102		9.44		9.43		33.983	26.255	177.8	0.223	2.07	90.2		32.2		32.2	2.17	26.6	0.06	0.01	0.02	0.13	103	15
120		9.44		9.42		34.002	26.271	176.7	0.255	2.02	88.1		31.4		32.3	2.18	26.5	0.05	0.04	0.02	0.11	121	14
125	ISL	9.42	D	9.40		34.011	D 26.282	175.8	0.265	2.01	D 87.3	D	31.1		32.6	2.19	26.7	0.05	0.04	0.02	0.11	126	
140		9.35		9.33		34.039	26.315	172.9	0.290	1.95	84.7		30.2		33.5	2.21	27.3	0.04	0.02	0.02	0.10	141	13
150	ISL	9.27	D	9.26		34.071	D 26.353	169.6	0.309	1.87	D 81.4	D	29.0		34.4	2.25	27.7	0.04	0.03	0.02	0.12	151	
170		9.11		9.09		34.088	26.393	166.1	0.341	1.72	74.8		26.5		36.3	2.32	28.4	0.03	0.06	0.03	0.16	171	12
199		9.03		9.00		34.119	26.431	163.1	0.388	1.40	60.7		21.5		38.6	2.45	29.9	0.02	0.18	0.03	0.26	201	11
200	ISL	9.02	D	9.00		34.119	D 26.432	163.1	0.392	1.40	D 60.8	D	21.5		38.7	2.45	29.9	0.02	0.18			202	
230		8.86		8.84		34.150	26.482	158.9	0.438	1.34	58.3		20.5		40.4	2.46	30.3	0.02	0.03			232	10
250	ISL	8.71	D	8.69		34.173	D 26.524	155.2	0.473	1.04	D 45.3	D	15.9		43.1	2.55	31.1	0.02	0.03			252	
270		8.60		8.57		34.183	26.551	153.1	0.500	0.92	40.1		14.0		45.9	2.63	31.8	0.02	0.02			272	09
300	ISL	8.23	D	8.19		34.197	D 26.619	147.0	0.549	0.60	D 26.3	D	9.1		51.5	2.74	32.7	0.02	0.01			302	
320		8.07		8.04		34.199	26.645	144.9	0.575	0.55	24.0		8.3		55.2	2.82	33.3	0.02	0.00			323	08
380		7.41		7.37		34.223	26.759	134.6	0.658	0.33	14.4		4.9		67.0	3.03	33.7	0.02	0.00			383	07
400	ISL	7.23	D	7.19		34.235	D 26.795	131.4	0.690	0.31	D 13.4	D	4.6		71.2	3.09	33.3	0.02	0.00			403	
440		6.91		6.86		34.244	26.848	126.8	0.737	0.21	9.0		3.0		79.5	3.21	32.5	0.02	0.00			444	06
481		6.67		6.62		34.248	26.883	123.9	0.788	0.07	2.9		1.0		91.9	3.45	28.5	0.02	0.00			485	05
500	ISL	6.66	D	6.61		34.250	D 26.887	123.8	0.818	0.07	D 3.1	D	1.1		93.2	3.47	28.1	0.02	0.00			504	
513		6.64		6.59		34.252	26.891	123.7	0.828	0.07	3.2		1.1		94.1	3.49	27.8	0.02	0.00			517	04
535		6.57		6.52		34.250	26.900	123.1	0.855	0.03	1.4		0.5		100.1	3.63	25.1	0.02	0.00			540	03
561		6.52		6.47		34.252	26.908	122.7	0.887	0.03	1.2		0.4		107.2	3.84	22.0	0.65	0.00			566	02
568		6.52		6.47		34.254	26.910	122.6	0.895	0.02	0.7		0.3		110.5	3.93	19.1	2.08	0.00			573	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 1307 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 19.4 W	15/07/2013	2343	UTC	22 m	280	20 kn	250 03 06	0	1009.2 mb	17.6 C	16.0 C		0/8	CC	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		17.54	17.54	33.597	24.310	360.5	0.000	6.43	280.4	117.9	6.1	0.19	0.0	0.03	0.22	2.62	0.45	0	
2		17.54	17.54	33.597	24.310	360.6	0.007	6.43	280.4	117.9	6.1	0.19	0.0	0.03	0.22	2.62	0.45	2	05
5		17.48	17.48	33.597	24.326	359.2	0.018	6.44	280.7	117.9	6.1	0.20	0.0	0.02	0.22	2.58	0.51	5	04
10		15.03	15.03	33.574	24.868	307.7	0.035	6.50	283.0	113.3	7.9	0.36	0.0	0.03	0.17	5.13	1.18	10	02
10		15.03	15.03	33.575	24.868	307.7	0.035											10	03
15		14.48	14.48	33.568	24.981	297.1	0.050	5.49	239.3	94.7	9.8	0.68	0.8	0.14	0.26	5.92	1.63	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 1307 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 24.7 W	15/07/2013	2157	UTC	36 m	280	14 kn	250 03 06	0	1010.2 mb	17.3 C	16.2 C	10 m	0/8	CC	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		18.32	18.32	33.628	24.145	376.2	0.000	5.85	255.1	108.8	4.2	0.25	0.0	0.01	0.03	0.70	0.23	0	
3		18.32	18.32	33.628	24.145	376.3	0.011	5.85	255.1	108.8	4.2	0.25	0.0	0.01	0.03	0.70	0.23	3	06
5		18.04	18.04	33.627	24.212	370.1	0.019	5.88	256.3	108.8	4.3	0.26	0.0	0.02	0.43	0.71	0.21	5	05
10		17.33	17.33	33.620	24.379	354.3	0.036											10	04
10		17.33	17.33	33.621	24.380	354.2	0.037	6.06	264.2	110.6	4.4	0.26	0.0	0.02	0.00	0.99	0.29	10	03
20		13.12	13.11	33.529	25.232	273.3	0.068	5.56	242.0	93.1	8.3	0.76	6.4	0.22	0.09	1.81	0.55	20	02
29		12.68	12.68	33.551	25.335	263.8	0.093	4.83	210.4	80.3	12.4	1.09	9.2	0.41	0.56	1.04	0.67	29	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 1307 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 10.7 N	119 30.6 W	15/07/2013	1938	UTC	141 m	280	18 kn	250 04 08	0	1011.0 mb	18.0 C	16.2 C	08 m	0/8	CC	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		17.24	17.24	33.645	24.418	350.2	0.000	5.90	257.3	107.6	4.0	0.26	0.1	0.03	0.05	1.66	0.35	0	
2	A	17.24	17.24	33.645	24.418	350.3	0.007	5.90	257.3	107.6	4.0	0.26	0.1	0.03	0.05	1.66	0.35	2	15
5	A	17.25	17.25	33.644	24.415	350.6	0.018	5.89	256.6	107.3	4.0	0.27	0.1	0.03	0.07	1.62	0.35	5	14
6	A	17.24	17.24	33.647	24.420	350.3	0.021	5.87	256.1	107.1	4.1	0.26	0.1	0.03	0.03	1.56	0.36	6	13
10	ISL	17.18	D 17.18	33.647	D 24.436	348.9	0.035	5.89	D256.6	D107.1	4.0	0.25	0.1	0.03	0.03	1.76	0.43	10	
12		17.15	17.15	33.652	24.445	348.1	0.042											12	12
12	A	17.15	17.15	33.646	24.440	348.5	0.042	5.92	258.0	107.7	3.9	0.24	0.1	0.03	0.03	1.86	0.46	12	11
20	ISL	16.84	D 16.84	33.627	D 24.501	343.0	0.070	5.83	D254.2	D105.4	4.2	0.29	0.5	0.04	0.04	1.84	0.51	20	
21	A	16.32	16.32	33.630	24.623	331.4	0.073	5.84	254.7	104.6	4.2	0.30	0.6	0.04	0.04	1.83	0.52	21	10
27	A	13.18	13.18	33.499	25.196	276.9	0.091	5.52	240.4	92.6	7.3	0.73	5.8	0.20	0.22	1.03	0.38	27	09
30	ISL	12.59	D 12.58	33.484	D 25.302	266.9	0.100	5.31	D231.2	D 88.0	8.1	0.81	7.0	0.27	0.32	0.89	0.33	30	
35		12.39	12.39	33.508	25.358	261.7	0.113	5.06	220.4	83.5	9.3	0.94	9.0	0.40	0.49	0.65	0.26	35	08
40		11.74	11.74	33.530	25.498	248.5	0.125	4.54	197.5	73.8	12.0	1.16	12.5	0.73	1.31	0.62	0.29	40	07
50		10.72	10.71	33.597	25.735	226.1	0.149	3.66	159.5	58.4	16.2	1.51	17.7	0.32	0.33	0.32	0.29	50	06
60		10.29	10.28	33.675	25.872	213.3	0.171	2.98	129.9	47.1	22.0	1.77	22.4	0.32	0.01	0.14	0.17	60	05
70		9.98	9.97	33.780	26.006	200.8	0.192	2.42	105.4	38.0	25.9	1.98	24.9	0.37	0.02	0.07	0.13	71	04
75	ISL	9.89	D 9.88	33.822	D 26.054	196.3	0.203	2.37	D103.3	D 37.2	26.7	2.00	25.1	0.26	0.03	0.06	0.12	76	
86		9.75	9.74	33.869	26.115	190.8	0.223	2.32	100.9	36.2	28.3	2.04	25.5	0.03	0.04	0.05	0.09	87	03
99		9.70	9.69	33.891	26.141	188.6	0.248	2.29	99.5	35.7	28.8	2.06	25.8	0.04	0.02	0.02	0.09	100	02
100	ISL	9.65	D 9.64	33.917	D 26.169	186.0	0.251	2.26	D 98.2	D 35.2	28.9	2.06	25.8	0.04	0.02	0.02	0.09	101	
125	ISL	9.58	D 9.57	33.956	D 26.212	182.5	0.298	2.18	D 94.7	D 33.9	30.5	2.11	26.4	0.05	0.01	0.02	0.09	126	
126		9.58	9.57	33.957	26.212	182.4	0.298	2.15	93.4	33.4	30.6	2.11	26.4	0.05	0.01	0.02	0.09	127	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 1307 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 52.6 N	120 8.4 W	19/07/2013	2044	UTC	100 m	310	25 kn	290 05 05	1	1011.6 mb	16.0 C	15.0 C	08 m	3/8	ST	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		16.52	16.52	33.589	24.545	338.1	0.000	5.98	261.0	107.4	5.5	0.39	1.1	0.04	0.04	2.05	0.52	0	
2	A	16.52	16.52	33.589	24.545	338.2	0.007	5.98	261.0	107.4	5.5	0.39	1.1	0.04	0.04	2.05	0.52	2	13
5	A	16.00	16.00	33.589	24.664	326.9	0.017	5.96	260.2	106.0	5.6	0.42	1.4	0.04	0.06	2.20	0.49	5	12
6	A	16.49	16.49	33.587	D 24.549	337.9	0.020	5.85	D254.8	D105.0								6	11
10	ISL	14.09	D 14.09	33.630	D 25.111	284.6	0.033	5.84	D254.3	D 99.9	8.9	0.75	6.3	0.09	0.08	2.90	0.61	10	
12		12.45	12.45	33.558	25.384	258.6	0.037											12	10
12	A	12.45	12.45	33.591	D 25.410	256.1	0.038	5.08	D221.3	D 84.0								12	09
20	ISL	11.10	D 11.10	33.622	D 25.686	230.1	0.058	3.97	D173.0	D 63.8	15.5	1.42	16.1	0.20	0.12	0.78	0.27	20	
21	A	11.08	11.08	33.622	25.690	229.7	0.060	3.96	172.6	63.5	16.1	1.49	17.1	0.21	0.12	0.46	0.22	21	08
28	A	10.44	10.43	33.675	25.845	215.1	0.075	3.40	148.4	53.9	19.6	1.73	20.7	0.18	0.11	0.26	0.14	28	07
30	ISL	10.41	D 10.40	33.680	D 25.853	214.4	0.080	3.36	D146.3	D 53.2	19.8	1.74	20.9	0.18	0.11	0.25	0.14	30	
33		10.36	10.36	33.689	25.868	213.0	0.086	3.28	143.2	51.9	20.2	1.76	21.1	0.18	0.12	0.23	0.14	33	06
41		9.98	9.97	33.774	26.000	200.6	0.102	2.85	124.4	44.7	24.3	1.92	23.6	0.12	0.04	0.09	0.10	41	05
49		9.93	9.93	33.777	26.011	199.8	0.118	2.86	124.9	44.9	24.4	1.92	23.6	0.12	0.03	0.10	0.11	49	04
50	ISL	9.93	D 9.92	33.781	D 26.014	199.5	0.122	2.86	D124.4	D 44.8	24.4	1.92	23.6	0.12	0.03	0.10	0.11	50	
63		9.93	9.92	33.789	26.022	199.1	0.146	2.85	124.2	44.6	24.9	1.92	23.8	0.11	0.04	0.10	0.12	64	03
72		9.89	9.88	33.793	26.032	198.3	0.164	2.80	122.3	43.9	25.1	1.94	24.0	0.11	0.03	0.08	0.10	73	02
75	ISL	9.88	D 9.87	33.794	D 26.033	198.3	0.172	2.81	D122.2	D 44.0	25.1	1.94	24.0	0.11	0.03	0.08	0.10	76	
91		9.86	9.85	33.801	26.044	197.7	0.202	2.77	121.0	43.4	25.3	1.94	24.2	0.11	0.04	0.08	0.10	92	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 1307 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 44.8 N	120 25.5 W	15/07/2013	1213	UTC	1900 m	320 31 kn			1010.6 mb	15.0 C	13.4 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		15.78		15.78		33.630	24.745	319.0	0.000	5.37		234.1		95.1		6.5	0.63	4.4	0.12	0.12	1.27	0.33	0	
3		15.78		15.78		33.630	24.746	319.1	0.010	5.37		234.1		95.1		6.5	0.63	4.4	0.12	0.12	1.27	0.33	3	20
10		15.74		15.74		33.634	24.757	318.3	0.032	5.36		233.6		94.8		6.5	0.63	4.5	0.11	0.11	1.18	0.30	10	19
20		15.72		15.72		33.630	24.759	318.5	0.064	5.35		233.3		94.7		6.5	0.64	4.5	0.11	0.11	1.40	0.16	20	18
30		15.51		15.50		33.642	24.817	313.2	0.095	5.28		230.0		93.0		6.6	0.67	5.0	0.13	0.14	1.18	0.35	30	17
41		12.00		11.99		33.744	25.617	237.3	0.126	4.16		180.9		68.1		14.3	1.29	13.5	0.29	0.45	1.30	0.33	41	16
50		10.20		10.19		33.808	25.989	201.9	0.146	3.03		131.9		47.8		23.7	1.80	21.5	0.33	0.26	0.50	0.33	50	15
60		9.81		9.80		33.869	26.103	191.3	0.165	2.57		112.0		40.3		27.8	1.98	24.5	0.28	0.05	0.22	0.30	60	14
70		9.49		9.49		33.917	26.193	183.0	0.184	2.37		103.2		36.9		30.3	2.08	26.0	0.10	0.02	0.09	0.15	71	13
75	ISL	9.34	D	9.33	D	33.952	26.247	178.0	0.194	2.29	D	99.5	D	35.4		30.9	2.10	26.2	0.09	0.02	0.07	0.15	76	
85		9.13		9.12		33.966	26.292	173.9	0.211	2.28		99.4		35.2		32.2	2.13	26.7	0.08	0.03	0.04	0.14	86	12
100		9.06		9.05		33.983	26.316	171.9	0.236	2.24		97.4		34.5		32.9	2.15	27.4	0.07	0.04	0.02	0.10	101	11
120		8.94		8.93		34.020	26.364	167.7	0.270	2.02		87.9		31.0		35.2	2.24	28.3	0.06	0.07	0.03	0.11	121	10
125	ISL	8.88	D	8.86	D	34.043	26.393	165.1	0.280	1.90	D	82.9	D	29.2		36.1	2.27	28.6	0.06	0.06	0.03	0.11	126	
140		8.80		8.79		34.087	26.439	161.0	0.303	1.70		74.1		26.1		38.7	2.35	29.6	0.04	0.02	0.02	0.12	141	09
150	ISL	8.74	D	8.72	D	34.106	26.464	158.8	0.321	1.64	D	71.4	D	25.1		39.3	2.37	29.7	0.05	0.04	0.02	0.13	151	
170		8.62		8.60		34.117	26.493	156.5	0.351	1.61		69.9		24.5		40.4	2.40	30.0	0.06	0.08	0.02	0.13	171	08
200		8.36		8.34		34.149	26.557	150.9	0.397	1.45		62.9		21.9		43.5	2.49	30.9	0.07	0.05	0.02	0.10	202	07
231		8.02		7.99		34.214	26.661	141.5	0.442	0.98		42.5		14.7		49.6	2.68	32.7	0.12	0.03			233	06
250	ISL	7.99	D	7.97	D	34.246	26.690	139.1	0.471	0.87	D	37.7	D	13.1		51.4	2.72	33.2	0.08	0.03			252	
270		7.75		7.72		34.234	26.718	136.8	0.496	0.85		37.1		12.8		53.3	2.76	33.7	0.04	0.03			272	05
300	ISL	7.73	D	7.70	D	34.281	26.757	133.6	0.540	0.64	D	27.8	D	9.6		55.8	2.82	34.3	0.04	0.03			302	
320		7.52		7.49		34.261	26.772	132.4	0.564	0.66		28.5		9.8		57.4	2.86	34.7	0.04	0.03			323	04
380		7.21		7.17		34.269	26.825	128.3	0.642	0.54		23.4		7.9		61.7	2.93	35.8	0.03	0.03			383	03
400	ISL	7.10	D	7.06	D	34.275	26.846	126.5	0.671	0.51	D	22.1	D	7.5		63.6	2.96	36.2	0.03	0.03			403	
440		6.82		6.78		34.285	26.891	122.7	0.717	0.42		18.4		6.2		67.4	3.01	36.9	0.02	0.04			444	02
500	ISL	6.41	D	6.37	D	34.283	26.945	118.1	0.794	0.39	D	16.9	D	5.6		72.4	3.08	38.2	0.02	0.07			504	
514		6.38		6.34		34.298	26.961	116.8	0.806	0.34		14.9		5.0		73.6	3.10	38.5	0.02	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 1307 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 34.6 N	120 45.8 W	15/07/2013	0736	UTC	1422 m	320 29 kn			1011.7 mb	15.0 C	14.0 C				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		15.67		15.67		33.628	24.767	316.9	0.000	5.89		256.6		104.0		0.8	0.37	1.1	0.09	0.29	1.26	0.15	0	
3		15.67		15.67		33.628	24.767	317.0	0.010	5.89		256.6		104.0		0.8	0.37	1.1	0.09	0.29	1.26	0.15	3	21
10		15.67		15.67		33.630	24.770	317.0	0.032	5.89		256.8		104.1		0.8	0.38	1.1	0.08	0.33	1.09	0.31	10	19
20	ISL	15.67	D	15.67		33.628	D 24.768	317.5	0.064	5.91		D257.6		D104.4		0.8	0.38	1.1	0.05	0.28	1.09	0.26	20	
21		15.67		15.67		33.627	24.768	317.6	0.067	5.88		256.3		103.9		0.8	0.38	1.1	0.05	0.28	1.09	0.26	21	18
30		15.59		15.59		33.627	24.786	316.2	0.095	5.89		256.8		104.0		0.8	0.38	1.2	0.05	0.31	1.11	0.32	30	17
41		14.23		14.22		33.625	25.081	288.4	0.128	5.73		249.5		98.3		1.5	0.58	3.1	0.14	1.36	1.00	0.38	41	16
50	ISL	12.97	D	12.96	D	33.601	25.319	265.9	0.154	5.36		D233.6	D	89.6		4.5	0.88	6.3	0.46	1.99	0.35	0.21	50	
51		12.66		12.65		33.584	25.366	261.4	0.156	5.34		232.8		88.7		4.8	0.91	6.6	0.49	2.06	0.27	0.19	51	15
60		11.13		11.12		33.563	25.637	235.7	0.178	4.75		207.0		76.4		11.9	1.34	14.6	0.49	0.63	0.12	0.12	60	14
70		10.19		10.18		33.634	25.856	215.0	0.201	4.16		180.9		65.5		19.4	1.65	20.5	0.08	0.03	0.04	0.10	71	13
75	ISL	10.21	D	10.20	D	33.658	25.872	213.6	0.213	4.09		D177.9	D	64.4							0.04	0.10	76	
85		9.74		9.73		33.739	26.014	200.3	0.232	3.39		147.5		52.9							0.05	0.11	86	12
100		9.25		9.24		33.829	26.166	186.2	0.261	2.76		120.0		42.6		27.9	1.99	25.6	0.04	0.05	0.02	0.08	101	11
120		8.80		8.79		33.884	26.279	175.7	0.297	2.96		128.9		45.3		29.5	1.92	25.6	0.04	0.04	0.01	0.06	121	10
125	ISL	8.74	D	8.73	D	33.906	26.307	173.2	0.308	2.84		D123.4	D	43.3		30.2	1.95	26.0	0.04	0.07	0.01	0.06	126	
140		8.69		8.68		33.932	26.336	170.8	0.332	2.62		114.1		40.0		32.2	2.04	27.1	0.04	0.16	0.01	0.07	141	09
150	ISL	8.60	D	8.59	D	33.971	26.380	166.8	0.351	2.41		D104.7	D	36.6		33.8	2.08	27.7	0.04	0.12	0.01	0.07	151	
172		8.25		8.23		34.001	26.458	159.7	0.385	2.31		100.7		35.0		37.3	2.16	29.0	0.04	0.04	0.01	0.07	173	08
200	ISL	7.81	D	7.79	D	34.020	26.539	152.4	0.431	2.20	D	95.8	D	33.0		41.5	2.25	30.4	0.02	0.07	0.00	0.04	202	
201		7.81		7.79		34.028	26.545	151.8	0.430	2.20		95.7		32.9		41.6	2.25	30.5	0.02	0.07	0.00	0.04	203	07
231		7.63		7.61		34.061	26.597	147.4	0.475	1.73		75.3		25.8		46.2	2.42	32.4	0.02	0.04			233	06
250	ISL	7.46	D	7.43	D	34.094	26.648	142.7	0.505	1.42	D	61.6	D	21.0		49.9	2.49	33.5	0.01	0.04			252	
269		7.01		6.98		34.065	26.688	139.0	0.529	1.49		64.9		21.9		53.7	2.56	34.5	0.00	0.04			271	05
300	ISL	6.74	D	6.72	D	34.095	26.748	133.7	0.575	1.20	D	52.2	D	17.5		57.9	2.68	35.8	0.00	0.04			302	
320		6.67		6.64		34.109	26.770	131.9	0.598	1.05		45.5		15.3		60.6	2.75	36.6	0.00	0.04			323	04
381		6.73		6.70		34.224	26.853	125.1	0.677	0.57		24.9		8.4		66.3	2.93	37.3	0.00	0.08			384	03
400	ISL	6.66	D	6.63	D	34.270	26.900	121.0	0.704	0.46	D	19.9	D	6.7		68.0	2.96	37.5	0.00	0.06			403	
442		6.42		6.38		34.271	26.934	118.2	0.750	0.40		17.2		5.7		71.6	3.02	37.8	0.00	0.03			446	02
500	ISL	6.14	D	6.09	D	34.313	27.004	112.2	0.823	0.28	D	12.4	D	4.1		78.3	3.11	39.1	0.00	0.06			504	
517		6.02		5.98		34.329	27.031	109.7	0.836	0.24		10.4		3.4		80.2	3.13	39.5	0.00	0.07			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 1307 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 14.8 N	121 26.7 W	15/07/2013	0038	UTC	3803 m	330 25 kn	340 06 05	1	1013.1 mb	16.3 C	15.0 C	10 m	4/8	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		15.96		15.96		33.672		24.736	319.9	0.000	5.87		255.9		104.4		1.9	0.35	0.9	0.06	0.16	0.70	0.17	0	
2		15.96		15.96		33.672		24.736	320.0	0.006	5.87		255.9		104.4		1.9	0.35	0.9	0.06	0.16	0.70	0.17	2	21
10		15.98		15.97		33.671		24.733	320.6	0.030														10	20
10		15.98		15.97		33.672		24.733	320.6	0.032	5.87		255.9		104.4		1.8	0.35	0.9	0.05	0.17	0.71	0.19	10	19
20		15.89		15.89		33.673		24.754	318.9	0.064	5.88		256.3		104.4		1.8	0.36	1.0	0.05	0.11	0.69	0.21	20	18
30		13.53		13.52		33.588		25.196	277.1	0.094	5.99		260.8		101.2		1.8	0.66	5.2	0.16	0.87	0.54	0.16	30	17
40		12.04		12.04		33.424		25.359	261.7	0.121	5.53		241.0		90.6		7.0	1.00	9.7	0.27	0.96	0.48	0.20	40	16
50		11.13		11.13		33.319		25.445	253.7	0.147	5.27		229.7		84.6		8.7	1.05	10.9	0.27	0.52	0.19	0.09	50	15
60		11.43		11.42		33.558		25.578	241.4	0.171	4.98		216.6		80.5		12.2	1.32	15.1	0.42	0.51	0.07	0.06	60	14
70		10.02		10.01		33.495		25.777	222.5	0.195	4.61		200.7		72.3		17.3	1.47	18.9	0.09	0.06	0.05	0.07	71	13
75	ISL	9.81	D	9.80	D	33.494	D	25.811	219.3	0.207	4.50	D	195.8	D	70.2		18.6	1.53	19.9	0.07	0.05	0.05	0.08	76	
85		9.55		9.54		33.583		25.923	208.9	0.227	4.19		182.6		65.1		21.3	1.66	22.0	0.03	0.02	0.05	0.09	86	12
100		9.34		9.33		33.701		26.051	197.1	0.257	3.62		157.4		55.9		25.1	1.82	24.6	0.02	0.04	0.04	0.11	101	11
121		9.02		9.00		33.839		26.211	182.3	0.297	2.89		125.9		44.4		29.1	1.95	27.1	0.02	0.03	0.01	0.11	122	10
125	ISL	9.06	D	9.05	D	33.899	D	26.250	178.7	0.306	2.52	D	109.6	D	38.8		30.1	1.99	27.6	0.02	0.03	0.01	0.11	126	
140		8.73		8.71		33.964		26.354	169.0	0.331	2.29		99.4		34.9		33.9	2.13	29.4	0.01	0.02	0.01	0.10	141	09
150	ISL	8.69	D	8.67	D	34.003	D	26.392	165.6	0.349	1.98	D	86.2	D	30.3		35.3	2.18	30.1	0.01	0.02	0.01	0.10	151	
170		8.52		8.50		34.030		26.440	161.5	0.380	1.81		78.9		27.6		38.0	2.29	31.4	0.02	0.03	0.01	0.10	171	08
200	ISL	8.13	D	8.11	D	34.069	D	26.529	153.5	0.430	1.62	D	70.6	D	24.5		42.3	2.39	32.9	0.02	0.03	0.01	0.10	202	
201		8.13		8.11		34.067		26.529	153.5	0.429	1.62		70.4		24.4		42.4	2.39	33.0	0.02	0.03	0.01	0.10	203	07
230		7.83		7.81		34.097		26.597	147.5	0.472	1.39		60.6		20.9		46.6	2.51	34.5	0.02	0.09			232	06
250	ISL	7.61	D	7.58	D	34.127	D	26.652	142.5	0.504	1.25	D	54.2	D	18.6		49.9	2.58	35.2	0.02	0.05			252	
269		7.51		7.49		34.151		26.685	139.6	0.528	1.03		44.6		15.3		52.9	2.65	35.8	0.02	0.01			271	05
300	ISL	7.21	D	7.18	D	34.175	D	26.749	134.0	0.574	0.85	D	36.8	D	12.5		58.0	2.74	37.4	0.02	0.01			302	
320		6.98		6.95		34.162		26.769	132.2	0.597	0.81		35.0		11.8		61.3	2.80	38.4	0.02	0.01			323	04
379		6.47		6.44		34.216		26.881	122.2	0.672	0.53		23.0		7.7		68.6	2.94	39.4	0.01	0.05			382	03
400	ISL	6.38	D	6.35	D	34.229	D	26.904	120.3	0.701	0.49	D	21.5	D	7.2		70.7	2.97	39.8	0.01	0.05			403	
441		6.16		6.12		34.256		26.955	115.9	0.746	0.39		16.9		5.6		74.8	3.04	40.5	0.01	0.06			445	02
500	ISL	5.90	D	5.85	D	34.303	D	27.026	109.8	0.818	0.28	D	12.3	D	4.1		80.9	3.10	41.5	0.01	0.12			504	
514		5.81		5.76		34.308		27.041	108.5	0.828	0.26		11.3		3.7		82.4	3.12	41.7	0.01	0.13			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 1307 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 54.7 N	122 7.8 W	14/07/2013	1820	UTC	4185 m	340 19 kn	340 04 06	2	1015.8 mb	15.9 C	15.1 C	12 m	8/8	SC	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		16.27		16.27		33.344		24.413	350.6	0.000	5.86		255.3		104.5		1.5	0.38	0.7	0.03	0.00	0.56	0.11	0		
2	A	16.27		16.27		33.344		24.413	350.7	0.007	5.86		255.3		104.5		1.5	0.38	0.7	0.03	0.00	0.56	0.11	2	23	
7	A	16.27		16.27		33.344		24.415	350.7	0.025	5.85		255.2		104.5		1.4	0.37	0.6	0.03	0.00	0.52	0.11	7	22	
9	A	16.27		16.27		33.343		24.413	351.0	0.032	5.86		255.4		104.6		1.4	0.37	0.6	0.03	0.00	0.61	0.11	9	20	
9		16.27		16.27		33.341		24.411	351.2	0.033														9	21	
10	ISL	16.27	D	16.26	D	33.342	D	24.414	351.0	0.035	5.87	D	256.1	D	104.8		1.4	0.37	0.6	0.03	0.00	0.61	0.11	10		
18	A	16.17		16.17		33.347		24.439	348.8	0.063	5.89		256.6		104.9		1.4	0.38	0.6	0.03	0.00	0.59	0.12	18	19	
20	ISL	16.07	D	16.07	D	33.358	D	24.471	345.9	0.070	5.91	D	257.4	D	105.0		1.5	0.39	0.7	0.04	0.00	0.61	0.14	20		
25		14.91		14.90		33.290		24.676	326.4	0.087	6.08		264.9		105.5		1.7	0.42	1.0	0.05	0.00	0.63	0.21	25	18	
30	ISL	14.15	D	14.14	D	33.269	D	24.821	312.7	0.104	6.19	D	269.7	D	105.8		2.1	0.46	1.5	0.09	0.00	0.61	0.26	30		
32	A	13.98		13.97		33.246		24.839	311.1	0.109	6.12		266.7		104.2		2.3	0.48	1.7	0.10	0.00	0.61	0.28	32	17	
41	A	12.77		12.76		33.155		25.012	294.8	0.136	5.93		258.4		98.4		3.3	0.57	2.7	0.39	0.00	0.50	0.33	41	16	
50		12.05		12.04		33.131		25.132	283.6	0.162	5.77		251.4		94.3		4.6	0.63	4.0	0.33	0.00	0.32	0.26	50	15	
60		11.36		11.35		33.116		25.248	272.7	0.190	5.67		246.8		91.2		6.5	0.78	6.8	0.07	0.00	0.22	0.16	60	14	
70		11.51		11.50		33.185		25.274	270.5	0.217	5.57		242.6		90.0		7.2	0.86	7.9	0.09	0.00	0.16	0.12	71	13	
75	ISL	11.78	D	11.77	D	33.413	D	25.402	258.5	0.232	5.47	D	238.3	D	89.1		8.1	0.96	9.6	0.07	0.00	0.14	0.11	76		
86		10.99		10.98		33.441		25.567	243.0	0.258	5.16		224.7		82.6		10.2	1.18	13.2	0.03	0.00	0.08	0.07	87	12	
100		10.17		10.16		33.409		25.685	232.0	0.291	4.76		207.3		74.9		14.9	1.35	16.1	0.03	0.00	0.05	0.08	101	11	
120		9.83		9.82		33.579		25.876	214.2	0.336	4.05		176.3		63.3		18.4	1.56	19.3	0.02	0.00	0.02	0.05	121	10	
125	ISL	9.71	D	9.70	D	33.643	D	25.945	207.7	0.348	3.72	D	162.1	D	58.0		19.5	1.58	19.8	0.02	0.00	0.02	0.05	126		
141		9.08		9.06		33.739		26.123	191.0	0.378	3.77		164.0		57.9		22.8	1.63	21.3	0.03	0.00	0.01	0.03	142	09	
150	ISL	8.85	D	8.83	D	33.839	D	26.238	180.2	0.397	3.62	D	157.7	D	55.5		25.2	1.71	22.6	0.02	0.00	0.00	0.03	151		
170		8.51		8.49		33.914		26.349	170.0	0.430	3.13		136.2		47.6		30.6	1.89	25.6	0.01	0.00	0.00	0.03	171	08	
200		8.10		8.08		33.971		26.458	160.2	0.480	2.89		125.8		43.5		35.4	2.00	27.2	0.00	0.00	0.00	0.02	202	07	
229		7.70		7.68		33.998		26.537	153.0	0.525	2.44		106.1		36.4		41.1	2.19	29.6	0.00	0.00			231	06	
250	ISL	7.38	D	7.36	D	34.019	D	26.599	147.3	0.560	2.08	D	90.4	D	30.8		44.6	2.30	30.9	0.00	0.00			252		
270		7.21		7.19		34.029		26.632	144.5	0.586	1.93		83.8		28.4		48.0	2.40	32.2	0.00	0.00			272	05	
300	ISL	6.99	D	6.96	D	34.039	D	26.672	141.1	0.632	1.71	D	74.3	D	25.1		52.5	2.53	33.9	0.00	0.00			302		
321		6.82		6.79		34.062		26.713	137.5	0.658	1.42		61.6		20.7		55.7	2.62	35.1	0.00	0.00			324	04	
380		6.55		6.52		34.169		26.834	126.8	0.736	0.71		30.7		10.3		65.0	2.88	37.5	0.00	0.00			383	03	
400	ISL	6.43	D	6.40	D	34.191	D	26.867	123.9	0.765	0.64	D	27.9	D	9.3		67.8	2.93	37.9	0.00	0.00			403		
439		6.18		6.14		34.221		26.924	118.8	0.808	0.46		19.9		6.6		73.1	3.02	38.7	0.00	0.00			443	02	
500	ISL	5.83	D	5.79	D	34.250	D	26.992	112.9	0.885	0.37	D	16.2	D	5.3		79.9	3.09	40.0	0.00	0.00			504		
513		5.76		5.72		34.260		27.008	111.5	0.893	0.32		13.7		4.5		81.3	3.11	40.3	0.00	0.00			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 1307 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 34.7 N	122 48.6 W	14/07/2013	1209	UTC	4270 m	340 18 kn			1014.7 mb	15.9 C	14.8 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		16.39		16.39		33.337		24.381		353.7	0.000	5.81		253.4		104.0		1.5	0.40	0.7	0.04	0.00	0.54	0.11	0	
2		16.39		16.39		33.337		24.381		353.8	0.007	5.81		253.4		104.0		1.5	0.40	0.7	0.04	0.00	0.54	0.11	2	21
10		16.39		16.39		33.338		24.381		354.0	0.035	5.82		253.6		104.1		1.4	0.43	0.7	0.04	0.00	0.54	0.10	10	19
10		16.39		16.39		33.337		24.381		354.1	0.037														10	20
20		16.33		16.32		33.357		24.412		351.5	0.071	5.82		253.6		104.0		1.4	0.40	0.7	0.04	0.00	0.61	0.10	20	18
30		15.29		15.28		33.361		24.649		329.2	0.105	6.02		262.3		105.4		1.6	0.48	1.8	0.07	0.00	0.63	0.21	30	17
40		14.06		14.05		33.325		24.884		307.1	0.137	6.18		269.1		105.4		2.4	0.55	2.5	0.10	0.00	0.60	0.23	40	16
50		13.19		13.18		33.275		25.023		294.0	0.167	5.98		260.6		100.2		3.5	0.67	3.9	0.22	0.00	0.46	0.26	50	15
60		11.99		11.98		33.145		25.153		281.8	0.195	5.94		258.6		96.9		4.9	0.75	5.1	0.27	0.00	0.29	0.22	60	14
70		11.35		11.34		33.122		25.254		272.4	0.223	5.63		245.3		90.7		6.4	0.79	6.5	0.06	0.00	0.23	0.22	71	13
75	ISL	11.25	D	11.24	D	33.133	D	25.280		270.0	0.221	5.64	D	245.8	D	90.7		7.1	0.83	7.3	0.05	0.00	0.20	0.18	76	
85		10.72		10.71		33.205		25.431		255.9	0.263	5.40		235.3		85.9		8.5	0.92	8.8	0.03	0.00	0.13	0.10	86	12
100		10.14		10.13		33.324		25.624		237.8	0.300	4.97		216.2		78.0		12.5	1.20	13.3	0.03	0.00	0.04	0.05	101	11
120		9.36		9.34		33.535		25.919		210.0	0.345	4.21		183.2		65.0		18.8	1.51	18.7	0.03	0.00	0.02	0.04	121	10
125	ISL	9.25	D	9.24	D	33.593	D	25.981		204.2	0.339	4.04	D	175.9	D	62.3		20.3	1.59	19.8	0.03	0.00	0.02	0.04	126	
141		9.08		9.06		33.729		26.116		191.7	0.387	3.41		148.3		52.4		25.2	1.84	23.5	0.02	0.00	0.01	0.04	142	09
150	ISL	8.98	D	8.96	D	33.822	D	26.204		183.5	0.388	3.07	D	133.5	D	47.1		26.9	1.92	24.5	0.02	0.00	0.01	0.04	151	
169		8.91		8.89		33.888		26.267		177.9	0.438	2.67		116.2		40.9		30.7	2.08	26.7	0.02	0.00	0.01	0.04	170	08
200		8.20		8.18		33.981		26.451		160.9	0.491	2.58		112.2		38.9		36.0	2.14	28.4	0.00	0.00	0.00	0.03	202	07
230		7.88		7.85		34.016		26.526		154.2	0.538	2.17		94.6		32.6		41.2	2.37	30.5	0.00	0.00			232	06
250	ISL	7.70	D	7.67	D	34.031	D	26.564		150.9	0.553	2.09	D	91.1	D	31.2		44.3	2.47	31.7	0.00	0.00			252	
270		7.57		7.54		34.064		26.609		146.9	0.598	1.66		72.3		24.8		47.4	2.57	32.8	0.00	0.00			272	05
300	ISL	7.38	D	7.36	D	34.095	D	26.661		142.4	0.627	1.38	D	59.9	D	20.4		51.5	2.71	34.0	0.00	0.00			302	
320		7.28		7.25		34.127		26.700		139.0	0.670	1.10		47.8		16.2		54.3	2.81	34.8	0.00	0.00			323	04
380		6.57		6.53		34.135		26.805		129.5	0.750	0.85		37.0		12.4		64.0	2.98	37.4	0.00	0.00			383	03
400	ISL	6.15	D	6.11	D	34.114	D	26.843		125.8	0.762	0.89	D	38.6	D	12.8		67.5	3.02	38.1	0.00	0.00			403	
439		5.86		5.82		34.139		26.900		120.7	0.824	0.73		31.7		10.4		74.3	3.09	39.4	0.00	0.00			443	02
500	ISL	5.24	D	5.20	D	34.175	D	27.003		111.1	0.882	0.51	D	22.1	D	7.2		85.1	3.21	41.1	0.00	0.00			504	
515		5.21		5.16		34.183		27.014		110.2	0.911	0.45		19.6		6.3		87.8	3.24	41.5	0.00	0.00			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 1307 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 14.7 N	123 29.6 W	14/07/2013	0555	UTC	4166 m	350 17 kn			1016.1 mb	16.6 C	15.0 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		17.35		17.35		33.259		24.098		380.7	0.000	5.58		243.3		101.7		2.2	0.32	0.0	0.01	0.04	0.11	0.01	0	
2		17.35		17.34		33.259		24.098		380.8	0.008	5.58		243.3		101.7		2.2	0.32	0.0	0.01	0.04	0.11	0.01	2	21
10		17.35		17.35		33.264		24.102		380.7	0.038	5.57		243.0		101.5		2.2	0.32	0.0	0.01	0.06	0.11	0.01	10	19
10		17.35		17.35		33.260		24.099		381.0	0.040														10	20
20	ISL	17.34	D	17.34	D	33.261	D	24.101		381.2	0.077	5.58	D	243.4	D	101.7		2.2	0.32	0.0	0.01	0.05	0.11	0.02	20	
25		17.17		17.16		33.262		24.145		377.2	0.095	5.61		244.4		101.8		2.2	0.32	0.0	0.01	0.04	0.12	0.02	25	18
30	ISL	16.87	D	16.87	D	33.325	D	24.262		366.2	0.115	5.69	D	248.1	D	102.8		2.4	0.31	0.0	0.01	0.05	0.13	0.02	30	
40		16.23		16.23		33.409		24.475		346.2	0.149	5.81		253.1		103.6		2.7	0.28	0.0	0.01	0.06	0.15	0.02	40	17
50		14.64		14.63		33.240		24.698		325.2	0.183	6.04		263.2		104.2		2.3	0.32	0.0	0.01	0.02	0.29	0.08	50	16
62		13.87		13.86		33.137		24.778		317.8	0.222	6.14		267.5		104.3		2.3	0.41	0.4	0.04	0.07	0.67	0.25	62	15
75		13.20		13.19		33.153		24.927		304.0	0.262	6.01		261.7		100.6		2.9	0.46	1.1	0.17	0.23	0.43	0.29	76	14
86		13.14		13.13		33.234		25.003		297.0	0.295	5.89		256.7		98.6		3.1	0.44	0.9	0.24	0.21	0.23	0.22	87	13
100	ISL	12.73	D	12.71	D	33.228	D	25.079		290.1	0.339	5.86	D	255.2	D	97.2		3.5	0.51	2.0	0.41	0.16	0.20	0.18	101	
101		12.64		12.63		33.223		25.092		288.9	0.339	5.83		254.0		96.5		3.5	0.52	2.1	0.42	0.16	0.20	0.18	102	12
113		11.74		11.73		33.160		25.214		277.4	0.373	5.75		250.6		93.4		4.7	0.61	4.4	0.06	0.02	0.20	0.13	114	11
125		11.31		11.29		33.250		25.365		263.3	0.406	5.48		238.6		88.2		6.8	0.77	7.1	0.03	0.06	0.12	0.10	126	10
140		10.41		10.39		33.349		25.600		241.1	0.443	5.04		219.6		79.7		10.2	0.99	11.4	0.02	0.04	0.07	0.05	141	09
150	ISL	10.17	D	10.15	D	33.485	D	25.746		227.3	0.470	4.90	D	213.5	D	77.1		12.2	1.10	13.5	0.02	0.05	0.05	0.04	151	
170		9.67		9.65		33.604		25.923		210.9	0.511	4.45		193.7		69.3		16.3	1.31	17.6	0.02	0.06	0.02	0.02	171	08
199		8.99		8.97		33.801		26.188		186.1	0.568	3.61		157.2		55.4		24.8	1.70	24.3	0.01	0.01	0.00	0.01	201	07
200	ISL	8.96	D	8.94	D	33.815	D	26.204		184.6	0.574	3.59	D	156.3	D	55.1		24.9	1.71	24.4	0.01	0.01			202	
231		8.60		8.57		33.924		26.346		171.6	0.625	3.14		136.8		47.9		30.0	1.88	26.9	0.01	0.00			233	06
250	ISL	8.27	D	8.24	D	33.968	D	26.431		163.8	0.661	2.92	D	127.2	D	44.2		33.7	1.98	28.4	0.01	0.00			252	
270		7.95		7.93		33.991		26.496		157.8	0.689	2.68		116.6		40.2		37.5	2.09	30.0	0.01	0.01			272	05
300	ISL	7.52	D	7.49	D	34.010	D	26.575		150.6	0.741	2.31	D	100.5	D	34.3		43.4	2.28	32.6	0.01	0.01			302	
320		7.24		7.21		34.020		26.622		146.3	0.765	2.03		88.4		30.0		47.4	2.40	34.3	0.01	0.01			323	04
380		6.49		6.45		34.061		26.757		134.0	0.849	1.31		56.9		19.0		60.1	2.69	38.4	0.01	0.00			383	03
400	ISL	6.34	D	6.30	D	34.086	D	26.796		130.4	0.882	1.12	D	48.6	D	16.2		63.6	2.77	39.4	0.01	0.01			403	
441		5.98		5.94		34.121		26.870		123.7	0.928	0.81		35.1		11.6		70.9	2.92	41.4	0.01	0.03			445	02
500	ISL	5.64	D	5.60	D	34.172	D	26.953		116.3	1.006	0.58	D	25.3	D	8.3		78.8	3.02	43.0	0.01	0.02			504	
515		5.50		5.46		34.175		26.973		114.4	1.016	0.52		22.8		7.4		80.9	3.05	43.4	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 1307 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 54.7 N	124 10.4 W	13/07/2013	2339	UTC	4196 m	350	18 kn	340 04 06	1	1015.6 mb	18.4 C	16.5 C	29 m	3/8	ST	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	17.62	17.62	33.252	24.027	387.5	0.000	5.54	241.5	101.4	2.4	0.31	0.0	0.00	0.02	0.09	0.02	0	
3	17.62	17.62	33.252	24.027	387.6	0.012	5.54	241.5	101.4	2.4	0.31	0.0	0.00	0.02	0.09	0.02	3	21
10	17.49	17.48	33.246	24.056	385.1	0.039	5.55	242.0	101.4	2.3	0.30	0.0	0.00	0.03	0.10	0.02	10	19
10	17.49	17.48	33.244	24.054	385.3	0.040											10	20
20 ISL	17.41 D	17.40	33.267 D	24.091	382.1	0.077	5.59 D	243.6 D	101.9	2.4	0.30	0.0	0.00	0.02	0.12	0.02	20	
25	16.80	16.80	33.250	24.221	369.9	0.096	5.68	247.7	102.4	2.5	0.30	0.0	0.00	0.01	0.13	0.03	25	18
30 ISL	16.13 D	16.13	33.244 D	24.370	355.8	0.115	5.83 D	254.0 D	103.6	2.5	0.30	0.0	0.00	0.01	0.12	0.03	30	
41	16.14	16.13	33.286	24.402	353.2	0.153	5.77	251.3	102.6	2.7	0.29	0.0	0.00	0.02	0.11	0.03	41	17
50	16.08	16.07	33.286	24.416	352.2	0.185	5.76	251.2	102.4	2.7	0.29	0.0	0.00	0.03	0.15	0.03	50	16
62	15.79	15.78	33.267	24.467	347.6	0.227	5.81	253.1	102.6	2.6	0.30	0.0	0.01	0.02	0.23	0.06	62	15
74	15.21	15.19	33.258	24.590	336.3	0.268	5.83	254.3	101.9	2.6	0.30	0.0	0.01	0.07	0.29	0.11	75	14
75 ISL	14.96 D	14.95	33.260 D	24.644	331.1	0.273	5.94 D	258.7 D	103.2	2.6	0.30	0.0	0.01	0.07	0.29	0.11	76	
87	14.14	14.13	33.254	24.815	315.1	0.310	5.96	259.5	101.8	2.8	0.31	0.0	0.01	0.02	0.29	0.16	88	13
100	13.26	13.24	33.202	24.955	302.0	0.350	5.89	256.7	98.8	3.1	0.37	0.1	0.09	0.09	0.27	0.24	101	12
113	12.67	12.66	33.183	25.056	292.7	0.389	5.77	251.5	95.6	3.7	0.45	1.2	0.15	0.01	0.26	0.20	114	11
125 ISL	12.20 D	12.18	33.243 D	25.194	279.8	0.426	5.59 D	243.5 D	91.7	4.9	0.58	3.7	0.05	0.00	0.19	0.13	126	
126	12.07	12.05	33.244	25.220	277.3	0.426	5.53	240.9	90.5	5.0	0.59	3.9	0.04	0.00	0.18	0.13	127	10
140	11.32	11.30	33.269	25.377	262.5	0.464	5.23	227.9	84.3	7.5	0.81	7.5	0.03	0.01	0.09	0.08	141	09
150 ISL	11.02 D	11.00	33.305 D	25.460	254.8	0.493	5.09 D	221.5 D	81.4	9.1	0.92	9.5	0.02	0.03	0.08	0.07	151	
171	10.16	10.14	33.439	25.713	231.0	0.540	4.64	201.8	72.9	12.6	1.16	13.6	0.02	0.07	0.05	0.07	172	08
200	9.33	9.31	33.699	26.054	199.0	0.603	3.72	161.8	57.5	21.9	1.63	21.1	0.00	0.02	0.00	0.02	202	07
229	8.79	8.77	33.855	26.262	179.6	0.658	3.28	142.8	50.2	27.9	1.83	24.4	0.00	0.01			231	06
250 ISL	8.43 D	8.40	33.947 D	26.391	167.6	0.698	3.07 D	133.6 D	46.6	31.8	1.95	26.0	0.00	0.03			252	
270	8.21	8.18	33.976	26.448	162.6	0.727	2.72	118.4	41.1	35.5	2.07	27.6	0.00	0.04			272	05
300 ISL	7.79 D	7.76	34.011 D	26.537	154.4	0.779	2.43 D	105.6 D	36.3	40.8	2.20	29.5	0.00	0.02			302	
321	7.43	7.40	34.005	26.585	150.0	0.807	2.27	98.7	33.7	44.5	2.29	30.9	0.00	0.00			324	04
380	6.77	6.73	34.072	26.729	136.8	0.891	1.34	58.1	19.5	57.3	2.67	35.4	0.00	0.00			383	03
400 ISL	6.57 D	6.54	34.088 D	26.768	133.3	0.924	1.20 D	52.1 D	17.4	60.6	2.74	36.3	0.00	0.00			403	
440	6.22	6.18	34.119	26.839	126.9	0.970	0.92	40.1	13.3	67.2	2.87	38.1	0.00	0.00			444	02
500 ISL	5.84 D	5.79	34.178 D	26.934	118.4	1.051	0.60 D	25.9 D	8.5	75.7	3.02	39.7	0.00	0.00			504	
517	5.75	5.71	34.190	26.954	116.6	1.064	0.52	22.4	7.4	78.1	3.06	40.1	0.00	0.00			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 1307 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 0.8 N	118 49.9 W	20/07/2013	2040	UTC	23 m	290	03 kn	220 01 07	2	1010.1 mb	18.9 C	17.9 C		8/8	ST	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	18.04	18.04	33.589	24.183	372.6	0.000	6.13	267.3	113.4	5.9	0.24	0.0	0.02	0.10	1.25	0.36	0	
2	18.04	18.04	33.589	24.183	372.7	0.008	6.13	267.3	113.4	5.9	0.24	0.0	0.02	0.10	1.25	0.36	2	06
5	17.30	17.30	33.589	24.362	355.7	0.018	6.11	266.4	111.5	5.8	0.24	0.0	0.03	0.08	1.19	0.32	5	05
10	14.88	14.88	33.561	24.890	305.6	0.035	5.78 D	252.0 D	100.5	6.9	0.34	0.7	0.10	0.23	2.08	0.90	10	03
10	14.88	14.88	33.571	24.898	304.8	0.036											10	04
15	12.69	12.68	33.531	25.318	264.9	0.049	5.18	225.7	86.1	11.2	0.96	8.2	0.64	1.16	1.88	0.92	15	02
18	12.63	12.62	33.529	25.329	264.0	0.057	5.05	219.8	83.7	11.7	1.03	9.0	0.70	1.41	1.73	0.85	18	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 1307 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 53.3 N	118 29.3 W	20/07/2013	2311	UTC	59 m	270	07 kn	230 01 06	2	1008.6 mb	19.0 C	17.8 C	12 m	8/8	ST	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	18.91	18.91	33.586	23.965	393.4	0.000	6.02	262.3	113.1	4.6	0.25	0.0	0.02	0.06	0.53	0.10	0	
2	18.91	18.91	33.586	23.965	393.5	0.008	6.02	262.3	113.1	4.6	0.25	0.0	0.02	0.06	0.53	0.10	2	08
5	18.88	18.87	33.586	23.974	392.7	0.020	6.01	262.3	113.0	4.6	0.25	0.0	0.01	0.03	0.52	0.14	5	07
10	17.65	17.65	33.572	24.265	365.1	0.039	6.35	276.8	116.6	4.6	0.26	0.0	0.02	0.00	5.78	1.36	10	05
10	17.65	17.65	33.571	24.265	365.2	0.040											10	06
20	12.41	12.41	33.507	25.353	261.8	0.070	6.11	266.0	100.9	8.1	0.60	3.5	0.06	0.01	1.27	0.46	20	04
30	11.40	11.40	33.479	25.520	246.1	0.096	4.30	187.4	69.6	13.9	1.56	15.0	0.66	5.04	0.35	0.30	30	03
40	11.14	11.13	33.558	25.630	235.8	0.120	3.76	163.7	60.4	16.2	1.56	17.4	0.70	2.28	0.30	0.27	40	02
50	10.94	10.93	33.574	25.679	231.4	0.143	3.69	160.7	59.1	16.8	1.60	18.3	0.55	1.53	0.58	0.01	50	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 1307 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 49.5 N	118 37.6 W	20/07/2013	1809	UTC	642 m	230 05 kn	260 02 07	2	1010.6 mb	19.0 C	18.1 C	14 m	8/8	ST	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		18.83		18.83		33.594	23.991	390.9	0.000	5.99		261.0		112.4		4.4	0.28	0.0	0.02	0.10	0.29	0.08	0	
2	A	18.83		18.83		33.594	23.991	391.0	0.008	5.99		261.0		112.4		4.4	0.28	0.0	0.02	0.10	0.29	0.08	2	23
8	A	18.64		18.64		33.592	24.038	386.7	0.031	6.06		264.5		113.5		4.4	0.26	0.0	0.00	0.10	0.32	0.10	8	22
10	ISL	17.34	D	17.34	D	33.578	D 24.263	365.3	0.039	6.27	D	273.2	D	114.3		5.2	0.27	0.0	0.01	0.11	0.46	0.16	10	
11	A	14.96		14.96		33.571	24.880	306.6	0.042	6.61		288.2		115.2		5.5	0.27	0.0	0.02	0.11	0.53	0.19	11	20
11		14.96		14.96		33.572	24.881	306.5	0.042														11	21
20	ISL	12.13	D	12.12		33.509	D 25.408	256.5	0.067	5.79	D	252.0	D	95.0		8.7	0.72	5.7	0.06	0.11	4.16	0.68	20	
21	A	12.10		12.10		33.510	25.414	255.9	0.070	5.78		251.7		94.8		9.1	0.77	6.3	0.07	0.11	4.56	0.73	21	19
30		11.38		11.37		33.550	25.580	240.4	0.092	4.32		188.0		69.8		12.5	1.37	13.9	0.60	0.42	1.28	0.49	30	18
38	A	10.91		10.91		33.572	25.681	231.0	0.111	3.85		167.4		61.5		15.2	1.58	16.9	0.57	0.30	0.62	0.39	38	17
47	A	10.80		10.79		33.582	25.710	228.4	0.132	3.72		161.9		59.4		15.8	1.64	17.5	0.60	0.30	0.68	0.36	47	16
50	ISL	10.74	D	10.74		33.583	D 25.720	227.5	0.139	3.70	D	161.2	D	59.0		16.2	1.65	17.9	0.54	0.37	0.56	0.33	50	
54		10.59		10.58		33.584	25.748	225.0	0.148	3.67		160.0		58.4		16.7	1.67	18.4	0.45	0.46	0.38	0.27	54	15
60		10.35		10.34		33.621	25.819	218.3	0.161	3.43		149.5		54.3		18.6	1.79	20.4	0.44	0.02	0.21	0.21	60	14
70		10.18		10.17		33.647	25.868	213.9	0.183	3.32		144.5		52.3		20.0	1.84	21.4	0.27	0.02	0.15	0.15	71	13
75	ISL	10.09	D	10.08		33.671	D 25.904	210.6	0.194	3.24	D	141.0	D	50.9		20.7	1.88	22.0	0.22	0.02	0.12	0.13	76	
85		9.99		9.98		33.708	25.948	206.6	0.214	3.09		134.4		48.4		22.3	1.96	23.2	0.13	0.02	0.07	0.10	86	12
100		9.89		9.88		33.769	26.014	200.7	0.245	2.80		121.7		43.8		24.5	2.08	24.7	0.10	0.02	0.05	0.09	101	11
120		9.70		9.69		33.944	26.182	185.2	0.283	2.16		94.1		33.7		29.6	2.33	27.1	0.04	0.03	0.02	0.10	121	10
125	ISL	9.66	D	9.65		33.946	D 26.191	184.5	0.294	2.29	D	99.8	D	35.8		30.2	2.36	27.3	0.04	0.03	0.02	0.10	126	
140		9.74		9.73		34.046	26.256	178.7	0.320	1.86		80.8		29.0		31.9	2.45	28.0	0.03	0.03	0.01	0.08	141	09
150	ISL	9.78	D	9.76		34.102	D 26.294	175.4	0.339	1.72	D	74.7	D	26.9		33.0	2.50	28.4	0.03	0.04	0.01	0.08	151	
170		9.68		9.66		34.170	26.365	169.0	0.372	1.43		62.2		22.3		35.1	2.61	29.2	0.03	0.05	0.01	0.08	171	08
200		9.37		9.35		34.180	26.423	164.1	0.422	1.44		62.6		22.3		36.7	2.63	30.0	0.03	0.03	0.01	0.11	202	07
231		9.27		9.24		34.210	26.465	160.8	0.472	1.28		55.7		19.8		38.4	2.70	30.6	0.02	0.03			233	06
250	ISL	8.76	D	8.73		34.155	D 26.503	157.3	0.505	1.54	D	66.8	D	23.5		39.9	2.70	31.2	0.03	0.03			252	
280		8.43		8.40		34.155	26.554	152.9	0.549	1.53		66.4		23.2		42.3	2.69	32.1	0.04	0.03			282	05
300	ISL	8.39	D	8.35		34.194	D 26.593	149.6	0.583	1.27	D	55.0	D	19.2		44.3	2.81	32.7	0.03	0.03			302	
320		8.45		8.42		34.256	26.632	146.3	0.609	0.95		41.4		14.5		46.4	2.92	33.2	0.02	0.02			323	04
380		7.81		7.77		34.264	26.736	137.2	0.694	0.72		31.1		10.7		53.7	3.07	35.5	0.02	0.02			383	03
400	ISL	7.76	D	7.72		34.288	D 26.762	135.1	0.726	0.63	D	27.5	D	9.5		55.6	3.11	36.1	0.02	0.02			403	
439		7.36		7.31		34.274	26.810	130.9	0.773	0.57		24.8		8.5		59.4	3.18	37.2	0.02	0.02			443	02
500	ISL	6.76	D	6.71		34.294	D 26.908	122.0	0.856	0.40	D	17.6	D	5.9		68.6	3.34	39.3	0.02	0.13			504	
514		6.62		6.58		34.300	26.931	119.9	0.867	0.34		14.8		5.0		70.7	3.38	39.8	0.03	0.16			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 1307 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 58.6 W	20/07/2013	1237	UTC	765 m	200 04 kn			1009.7 mb	17.1 C	16.1 C	14 m			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		19.14		19.14		33.617	23.929	396.8	0.000	5.52		240.8		104.3		2.0	0.33	0.0	0.01	0.31	0.31	0.07	0	
2		19.14		19.14		33.617	23.929	396.9	0.008	5.52		240.8		104.3		2.0	0.33	0.0	0.01	0.31	0.31	0.07	2	24
10	ISL	17.74	D	17.73		33.558	D 24.234	368.1	0.039	5.70	D	248.5	D	104.8		2.2	0.36	0.3	0.04	0.20	0.42	0.12	10	
11		17.14		17.14		33.571	24.387	353.6	0.042	5.83		254.0		105.9		2.2	0.36	0.3	0.04	0.19	0.43	0.13	11	23
20		12.71		12.70		33.476	25.272	269.5	0.070	5.53		240.9		91.9		6.0	0.87	7.2	0.18	0.08	0.61	0.19	20	22
30		12.23		12.22		33.507	25.388	258.7	0.097	5.12		223.2		84.3		8.3	1.12	10.4	0.13	0.04	0.60	0.21	30	21
40		11.48		11.47		33.515	25.536	244.9	0.122	4.63		201.7		75.0		11.3	1.31	13.0	0.10	0.01	0.43	0.18	40	20
50		11.02		11.01		33.553	25.648	234.4	0.146	4.11		179.1		65.9		14.6	1.49	16.0	0.10	0.04	0.35	0.22	50	19
60		10.56		10.55		33.603	25.768	223.2	0.169	3.70		160.9		58.7		17.3	1.68	18.4	0.15	0.13	0.22	0.13	60	18
71		10.17		10.16		33.652	25.874	213.3	0.193	3.57		155.6		56.3		19.7	1.76	20.1	0.07	0.06	0.10	0.09	72	17
75	ISL	10.18	D	10.17		33.686	D 25.899	211.1	0.202	3.41	D	148.5	D	53.7		20.9	1.82	20.9	0.07	0.05	0.08	0.08	76	
85		9.72		9.71		33.755	26.030	198.8	0.222	3.09		134.4		48.2		24.0	1.96	22.9	0.07	0.02	0.04	0.07	86	16
100		9.30		9.29		33.827	26.156	187.1	0.251	2.90		126.0		44.8		26.9	2.08	24.7	0.03	0.02	0.01	0.05	101	15
120		9.30		9.28		33.978	26.275	176.3	0.287	2.37		103.2		36.7		30.8	2.26	26.3	0.02	0.00	0.01	0.05	121	14
125	ISL	9.31	D	9.30		34.004	D 26.293	174.7	0.297	2.29	D	99.8	D	35.5		31.3	2.28	26.5	0.03	0.00	0.01	0.05	126	
141		9.27		9.25		34.055	D 26.340	170.5	0.325	2.09		90.8		32.3		32.9	2.36	27.2	0.04	0.00	0.01	0.06	142	13
150	ISL	9.17	D	9.16		34.082	D 26.377	167.2	0.340	1.99	D	86.6	D	30.7		34.2	2.41	27.7	0.04	0.00	0.01	0.06	151	
169		8.98		8.96		34.123	26.441	161.5	0.370	1.79		77.8		27.5		36.8	2.50	28.6	0.04	0.00	0.01	0.06	170	12
200		8.68		8.65		34.132	26.496	156.8	0.419	1.66		72.2		25.3		39.5	2.58	29.6	0.07	0.01	0.01	0.05	202	11
229		8.32		8.29		34.140	26.558	151.4	0.464	1.52		66.0		23.0		43.0	2.66	30.9	0.06	0.00			231	10
250	ISL	8.05	D	8.03		34.156	D 26.611	146.6	0.498	1.35	D	58.6	D	20.3		45.6	2.74	31.7	0.04	0.03			252	
271		7.95		7.92		34.173	26.641	144.2	0.525	1.23		53.3		18.4		48.2	2.82	32.5	0.03	0.06			273	09
300	ISL	7.86	D	7.83		34.223	D 26.692	139.8	0.570	0.96	D	41.9	D	14.5		50.8	2.93	33.1	0.03	0.03			302	
321		7.86		7.82		34.256	26.720	137.6	0.596	0.78		33.9		11.7		52.8	3.01	33.6	0.02	0.01			324	08
380		7.36		7.32		34.274	26.807	130.1	0.675	0.57		24.8		8.5		59.5	3.15	35.3	0.02	0.03			383	07
400	ISL	7.32	D	7.28		34.278	D 26.816	129.5	0.705	0.55	D	23.8	D	8.1		61.4	3.18	35.7	0.02	0.04			403	
440		6.95		6.91		34.278	26.868	125.0	0.752	0.45		19.7		6.7		65.3	3.24	36.6	0.01	0.05			444	06
500	ISL	6.65	D	6.60		34.297	D 26.925	120.3	0.831	0.35	D	15.1	D	5.1		70.6	3.32	37.6	0.02	0.05			504	
515		6.57		6.52		34.301	26.939	119.1	0.843	0.33		14.2		4.8		72.0	3.34	37.8	0.02	0.05			519	05
590		6.13		6.07		34.326	27.018	112.2	0.930	0.23		10.0		3.3		80.4	3.44	38.7	0.02	0.06			595	04
600	ISL	6.11	D	6.06		34.333	D 27.026	111.6	0.948	0.22	D	9.7	D	3.2		81.4	3.45	38.7	0.02	0.06			605	
670		5.81		5.75		34.352	27.079	107.2	1.018	0.14		6.1		2.0		87.9	3.51	39.0	0.02	0.06			676	03
700	ISL	5.71	D	5.65		34.362	D 27.100	105.5	1.057	0.14	D	5.9	D	1.9		92.5	3.56	38.2	0.02	0.04			706	
750		5.36		5.30		34.380	27.156	100.3	1.101	0.08		3.4		1.1		100.2	3.63	36.8	0.03	0.00			757	02
769		5.27		5.20		34.391	27.177	98.4	1.120	0.05		2.0		0.7		107.9	3.73	34.3	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 1307 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 29.1 N	119 19.3 W	20/07/2013	0749	UTC	1631 m	280 12 kn			1010.7 mb	16.0 C	15.1 C				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		18.59	18.59	33.631	24.080	382.4	0.000	5.64		245.9		105.4		3.7	0.29	0.0	0.02	0.05	0.55	0.18	0	
2		18.59	18.59	33.631	24.080	382.5	0.008	5.64		245.9		105.4		3.7	0.29	0.0	0.02	0.05	0.55	0.18	2	21
10		11.94	11.94	33.544	25.470	250.3	0.032														10	20
10		11.94	11.94	33.567	25.488	248.7	0.033	5.57		242.4		91.0		5.4	0.66	4.9	0.16	0.03	2.57	0.67	10	19
20		11.28	11.28	33.557	25.603	238.0	0.057	4.43		192.7		71.4		13.1	1.25	13.8	0.24	0.06	0.94	0.26	20	18
30		10.99	10.99	33.594	25.684	230.5	0.080	3.98		173.2		63.8		15.6	1.41	16.3	0.27	0.07	0.69	0.27	30	17
41		10.53	10.52	33.644	25.806	219.2	0.105	3.52		153.3		55.9		18.7	1.60	19.3	0.20	0.09	0.37	0.18	41	16
50		10.35	10.34	33.669	25.857	214.5	0.125	3.37		146.9		53.4		20.0	1.66	20.3	0.14	0.10	0.31	0.16	50	15
60		10.05	10.05	33.717	25.944	206.4	0.146	3.16		137.4		49.6		22.4	1.76	21.9	0.10	0.06	0.21	0.14	60	14
70		10.00	9.99	33.721	25.957	205.5	0.166	3.17		138.1		49.8		22.7	1.77	22.0	0.11	0.03	0.19	0.15	71	13
75	ISL	9.95	D 9.94	33.737	D 25.978	203.5	0.178	3.14	D	136.5	D	49.2		24.2	1.84	22.9	0.09	0.03	0.14	0.13	76	
85		9.70	9.69	33.852	26.110	191.2	0.196	2.59		112.8		40.4		27.1	1.98	24.7	0.04	0.03	0.04	0.09	86	12
100		9.60	9.59	33.920	26.180	184.9	0.224	2.40		104.2		37.3		29.0	2.06	25.6	0.04	0.05	0.02	0.08	101	11
120		9.46	9.45	33.985	26.254	178.3	0.261	2.20		95.7		34.2		31.2	2.14	26.5	0.04	0.07	0.01	0.09	121	10
125	ISL	9.39	D 9.38	34.027	D 26.298	174.3	0.272	2.10	D	91.3	D	32.6		31.7	2.16	26.7	0.04	0.06	0.01	0.08	126	
140		9.40	9.38	34.065	26.328	171.7	0.295	1.95		84.6		30.2		33.4	2.23	27.4	0.03	0.04	0.01	0.07	141	09
150	ISL	9.49	D 9.47	34.137	D 26.369	168.1	0.315	1.70	D	73.8	D	26.4		35.0	2.29	28.0	0.03	0.06	0.01	0.08	151	
171		9.13	9.11	34.185	26.466	159.3	0.347	1.43		62.4		22.1		38.3	2.43	29.2	0.02	0.11	0.01	0.09	172	08
200		8.92	8.90	34.198	26.509	155.7	0.392	1.38		60.0		21.2		40.4	2.47	29.9	0.02	0.09	0.01	0.07	202	07
229		8.73	8.70	34.201	26.544	153.0	0.437	1.31		57.1		20.1		42.3	2.51	30.5	0.02	0.06			231	06
250	ISL	8.18	D 8.15	34.230	D 26.650	143.1	0.471	0.98	D	42.7	D	14.8		46.9	2.64	31.8	0.02	0.07			252	
271		7.99	7.96	34.245	26.691	139.5	0.498	0.82		35.6		12.3		51.6	2.77	33.0	0.02	0.07			273	05
300	ISL	7.84	D 7.81	34.252	D 26.720	137.2	0.541	0.74	D	32.1	D	11.1		53.7	2.81	33.4	0.02	0.08			302	
320		7.61	7.58	34.250	26.751	134.4	0.565	0.68		29.5		10.1		55.1	2.84	33.6	0.02	0.08			323	04
379		7.35	7.32	34.264	26.800	130.7	0.644	0.58		25.0		8.5		59.0	2.88	34.9	0.01	0.08			382	03
400	ISL	7.22	D 7.18	34.268	D 26.823	128.8	0.675	0.54	D	23.3	D	7.9		60.8	2.92	35.4	0.01	0.07			403	
441		7.04	7.00	34.273	26.852	126.6	0.723	0.49		21.4		7.2		64.3	2.99	36.5	0.02	0.05			445	02
500	ISL	6.60	D 6.56	34.301	D 26.935	119.3	0.801	0.34	D	14.9	D	5.0		70.9	3.10	37.7	0.02	0.07			504	
517		6.55	6.50	34.302	26.942	118.8	0.816	0.29		12.8		4.3		72.8	3.13	38.0	0.02	0.08			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 1307 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 19.4 N	119 39.9 W	20/07/2013	0353	UTC	84 m	300 22 kn			1010.5 mb	15.0 C	14.0 C				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		15.06	15.06	33.669	24.934	301.1	0.000	5.89		256.5		102.8		3.5	0.62	4.2	0.15	0.09	3.68	1.02	0	
2		15.06	15.06	33.669	24.934	301.1	0.006	5.89		256.5		102.8		3.5	0.62	4.2	0.15	0.09	3.68	1.02	2	10
5		15.05	15.05	33.670	24.937	301.0	0.015	5.87		255.9		102.5		3.4	0.60	4.2	0.15	0.08	3.80	0.94	5	09
10		15.06	15.06	33.671	24.936	301.2	0.030	5.88		256.3		102.7		3.4	0.61	4.2	0.15	0.05	4.03	0.77	10	07
10		15.06	15.06	33.670	24.935	301.3	0.031														10	08
20		12.12	12.11	33.670	25.536	244.4	0.058	5.81		253.0		95.4		3.6	0.64	4.7	0.15	0.08	3.88	0.73	20	06
29		11.39	11.39	33.626	25.637	235.0	0.079	4.08		177.8		66.0		14.7	1.40	15.7	0.23	0.23	0.80	0.38	29	05
30	ISL	11.37	D 11.36	33.628	D 25.643	234.4	0.082	4.08		177.6		65.9		14.7	1.40	15.8	0.22	0.22	0.79	0.37	30	
40		11.15	11.15	33.623	25.678	231.3	0.105	4.05		176.2		65.1		15.1	1.42	16.4	0.19	0.16	0.67	0.27	40	04
50		10.56	10.55	33.633	25.792	220.7	0.127	3.85		167.5		61.1		16.5	1.50	17.7	0.16	0.18	0.47	0.23	50	03
61		10.01	10.00	33.758	25.984	202.6	0.151	2.97		129.3		46.6		24.0	1.85	22.6	0.15	0.15	0.12	0.19	61	02
71		9.91	9.90	33.789	26.025	199.0	0.171	2.80		121.8		43.8		25.2	1.89	23.4	0.14	0.15	0.11	0.18	72	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 1307 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 9.4 N	120 0.5 W	12/07/2013	0604	UTC	1201 m	300 11 kn			1012.5 mb	16.0 C	15.1 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		15.81	15.81	33.686	24.781	315.7	0.000	6.14		267.5		108.8		0.3	0.40	0.7	0.08	0.41	4.00	0.13	0	
2		15.81	15.81	33.686	24.781	315.7	0.006	6.14		267.5		108.8		0.3	0.40	0.7	0.08	0.41	4.00	0.13	2	21
10		15.79	15.79	33.688	24.787	315.4	0.032	6.13		267.1		108.6		0.3	0.39	0.7	0.07	0.20	3.49	0.88	10	19
20		13.02	13.02	33.638	25.336	263.4	0.060	5.41		235.7		90.6		6.9	0.89	6.9	0.29	0.69	1.21	0.38	20	18
29		12.70	12.69	33.670	25.425	255.2	0.084	4.78		208.1		79.5		11.0	1.20	11.5	0.47	0.57	0.78	0.28	29	17
30	ISL	12.64	D 12.64	33.670	D 25.435	254.2	0.087	4.68	D	203.7	D	77.7		11.4	1.22	12.0	0.45	0.54	0.74	0.28	30	
40		11.60	11.60	33.706	25.661	233.0	0.111	4.11		178.7		66.7		16.0	1.47	16.6	0.26	0.21	0.32	0.23	40	16
50		11.02	11.01	33.733	25.789	221.0	0.133	3.72		162.1		59.7		19.0	1.63	19.3	0.14	0.09	0.20	0.17	50	15
59		10.34	10.34	33.707	25.887	211.9	0.153	3.59		156.2		56.7		20.3	1.69	20.8	0.05	0.10	0.18	0.10	59	14
70		9.96	9.95	33.762	25.995	201.8	0.176	3.17		138.0		49.7		23.5	1.84	23.1	0.04	0.09	0.08	0.11	71	13
75	ISL	9.56	D 9.55	33.853	D 26.133	188.7	0.187	2.71	D	117.8	D	42.1		25.3	1.91	24.0	0.04	0.08	0.07	0.09	76	
85		9.42	9.41	33.870	26.170	185.5	0.204	2.56		111.3		39.7		28.9	2.04	25.9	0.03	0.05	0.03	0.07	86	12
99		9.11	9.10	33.964	26.293	174.1	0.229	2.13		92.6		32.8		33.2	2.18	27.8	0.03	0.05	0.02	0.08	100	11
100	ISL	9.10	D 9.09	33.966	D 26.296	173.8	0.232	2.16	D	94.2	D	33.4		33.2	2.18	27.8	0.03	0.05	0.02	0.08	101	
120		9.01	8.99	33.995	26.334	170.6	0.265	2.00		87.0		30.8		34.7	2.22	28.5	0.03	0.09	0.02	0.09	121	10
125	ISL	9.00	D 8.98	33.997	D 26.338	170.3	0.276	2.01	D	87.3	D	30.8		35.4	2.24	28.8	0.03	0.09	0.01	0.09	126	
140		8.76	8.75	34.044	26.412	163.6	0.299	1.77		77.1		27.1		37.5	2.31	29.5	0.02	0.07	0.01	0.10	141	09
150	ISL	8.73	D 8.72	34.058	D 26.428	162.2	0.317	1.75	D	76.0	D	26.7		38.4	2.33	29.8	0.02	0.08	0.01	0.09	151	
170		8.51	8.50	34.075	26.476	158.1	0.347	1.68		73.1		25.6		40.2	2.37	30.3	0.02	0.09	0.01	0.08	171	08
200		8.21	8.18	34.134	26.570	149.6	0.393	1.48		64.4		22.4		44.3	2.47	31.1	0.05	0.09	0.01	0.08	202	07
231		8.07	8.05	34.179	26.626	144.9	0.439	1.22		53.2		18.4		47.3	2.57	32.1	0.03	0.11			233	06
250	ISL	7.95	D 7.93	34.212	D 26.670	141.0	0.469	1.03	D	44.6	D	15.4		50.2	2.63	32.9	0.04	0.10			252	
272		7.57	7.55	34.194	26.711	137.3	0.497	0.96		41.6		14.2		53.4	2.71	33.9	0.04	0.09			274	05
300	ISL	7.50	D 7.47	34.259	D 26.773	131.9	0.538	0.67	D	28.9	D	9.9		57.7	2.79	34.9	0.03	0.11			302	
320		7.04	7.01	34.216	26.804	129.0	0.561	0.73		31.8		10.8		60.8	2.85	35.6	0.02	0.13			323	04
380		6.87	6.84	34.281	26.880	122.8	0.636	0.44		19.0		6.4		66.4	2.98	36.8	0.07	0.04			383	03
400	ISL	6.63	D 6.59	34.277	D 26.909	120.1	0.665	0.42	D	18.2	D	6.1		68.4	3.00	37.2	0.07	0.06			403	
441		6.42	6.38	34.286	26.945	117.1	0.709	0.37		15.9		5.3		72.5	3.05	38.1	0.07	0.09			445	02
500	ISL	6.22	D 6.18	34.316	D 26.996	113.1	0.783	0.29	D	12.5	D	4.2		77.0	3.11	38.7	0.07	0.07			504	
515		6.13	6.08	34.320	27.011	111.8	0.794	0.27		11.8		3.9		78.2	3.12	38.8	0.07	0.07			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 1307 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 59.3 N	120 21.3 W	12/07/2013	1023	UTC	721 m	340 10 kn			1012.2 mb	15.0 C	14.2 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		16.08		16.08		33.652		24.693	324.0	0.000	5.85		255.0		104.2		1.1	0.42	1.0	0.07	0.18	0.86	0.22	0	
2		16.08		16.08		33.652		24.693	324.0	0.007	5.85		255.0		104.2		1.1	0.42	1.0	0.07	0.18	0.86	0.22	2	21
10		15.76		15.75		33.646		24.763	317.7	0.031														10	20
10		15.76		15.75		33.627		24.748	319.1	0.032	5.92		257.9		104.7		1.4	0.45	1.8	0.08	0.16	0.81	0.25	10	19
20		13.75		13.75		33.566		25.132	282.8	0.062	5.98		260.4		101.5		2.6	0.67	4.9	0.17	0.34	0.79	0.30	20	18
30		13.38		13.37		33.560		25.204	276.2	0.090	5.73		249.5		96.5		2.9	0.76	5.5	0.23	1.00	0.70	0.31	30	17
40		12.71		12.71		33.479		25.274	269.9	0.118	5.58		243.0		92.7		4.7	0.88	6.8	0.32	1.07	0.34	0.22	40	16
50	ISL	12.18	D	12.17		33.478	D	25.376	260.4	0.145	5.49	D	238.9	D	90.1		6.0	0.97	8.0	0.34	0.94	0.23	0.21	50	
51		12.06		12.06		33.475		25.396	258.5	0.147	5.48		238.5		89.7		6.2	0.98	8.1	0.34	0.93	0.22	0.21	51	15
60		11.25		11.24		33.400		25.488	249.9	0.170	5.26		228.9		84.6		9.3	1.13	11.4	0.37	0.26	0.16	0.16	60	14
70		10.10		10.09		33.428		25.712	228.7	0.194	4.62		201.3		72.6		13.9	1.27	14.9	0.04	0.11	0.06	0.09	71	13
75	ISL	9.98	D	9.97		33.492	D	25.781	222.2	0.206	4.43	D	192.7	D	69.3		15.7	1.37	16.5	0.04	0.08	0.06	0.09	76	
85		9.73		9.72		33.567		25.881	212.9	0.227	4.04		175.7		62.9		19.3	1.57	19.6	0.03	0.03	0.04	0.09	86	12
100		9.30		9.29		33.731		26.080	194.3	0.257	3.33		145.1		51.5		24.6	1.80	23.3	0.02	0.06	0.02	0.07	101	11
120		9.07		9.06		33.877		26.232	180.3	0.295	2.65		115.5		40.8		30.0	2.01	26.1	0.06	0.07	0.02	0.10	121	10
125	ISL	8.96	D	8.94		33.912	D	26.277	176.1	0.305	2.56	D	111.5	D	39.4		31.4	2.06	26.8	0.05	0.08	0.02	0.10	126	
140		8.79		8.78		33.993		26.367	167.8	0.329	2.04		88.8		31.2		35.6	2.22	28.8	0.02	0.10	0.01	0.10	141	09
150	ISL	8.68	D	8.67		34.015	D	26.402	164.7	0.348	1.91	D	83.2	D	29.2		37.2	2.27	29.4	0.02	0.11	0.01	0.11	151	
169		8.45		8.43		34.057		26.471	158.4	0.377	1.71		74.2		25.9		40.2	2.36	30.6	0.03	0.13	0.01	0.11	170	08
200	ISL	8.03	D	8.01		34.111	D	26.577	148.8	0.427	1.41	D	61.3	D	21.2		45.3	2.51	32.2	0.02	0.11	0.01	0.08	202	
201		8.05		8.03		34.111		26.575	149.1	0.426	1.39		60.6		21.0		45.4	2.51	32.2	0.02	0.11	0.01	0.07	203	07
230		7.68		7.66		34.140		26.652	142.2	0.468	1.18		51.4		17.6		50.2	2.61	33.6	0.03	0.11			232	06
250	ISL	7.54	D	7.51		34.161	D	26.689	138.9	0.499	1.05	D	45.5	D	15.6		52.0	2.66	34.1	0.03	0.10			252	
270		7.50		7.48		34.173		26.704	137.9	0.524	0.97		42.3		14.5		53.8	2.70	34.5	0.02	0.09			272	05
300	ISL	7.32	D	7.29		34.216	D	26.765	132.5	0.568	0.74	D	32.1	D	10.9		58.3	2.81	35.4	0.03	0.09			302	
320		7.06		7.03		34.228	D	26.811	128.4	0.595	0.65		28.1		9.5		61.4	2.88	36.0	0.03	0.09			323	04
380		6.76		6.73		34.257		26.876	123.0	0.668	0.49		21.2		7.1		66.6	2.97	37.2	0.01	0.11			383	03
400	ISL	6.64	D	6.60		34.273	D	26.905	120.5	0.695	0.44	D	19.3	D	6.5		69.1	3.01	37.6	0.01	0.09			403	
440		6.35		6.31		34.301		26.966	115.1	0.739	0.32		13.7		4.6		74.1	3.08	38.3	0.00	0.05			444	02
500	ISL	6.05	D	6.01		34.325	D	27.024	110.2	0.811	0.27	D	11.7	D	3.9		78.7	3.13	39.2	0.04	0.03			504	
516		6.03		5.98		34.330		27.031	109.8	0.824	0.24		10.3		3.4		80.0	3.14	39.4	0.05	0.02			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 1307 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 2.0 W	12/07/2013	1806	UTC	3713 m	310 10 kn	300 04 08	2	1014.3 mb	16.0 C	14.3 C	10 m	8/8	ST	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		15.43		15.43		33.652		24.839	310.1	0.000	5.97		260.3		105.0		2.3	0.40	1.4	0.05	0.09	1.26	0.43	0	
1	A	15.43		15.43		33.652		24.839	310.2	0.003	5.97		260.3		105.0		2.3	0.40	1.4	0.05	0.09	1.26	0.43	1	22
6	A	15.38		15.38		33.653		24.852	309.1	0.019	5.98		260.4		105.0		2.2	0.40	1.4	0.07	0.09	1.23	0.45	6	21
8	A	15.37		15.37		33.655		24.855	308.8	0.025	6.01		261.8		105.5		2.2	0.40	1.4	0.05	0.11	1.44	0.54	8	20
10	ISL	15.36	D	15.36		33.651	D	24.853	309.1	0.031	6.01	D	261.9	D	105.5		2.2	0.41	1.4	0.05	0.11	1.41	0.53	10	
15	A	15.36		15.36		33.652		24.855	309.1	0.047	5.98		260.4		104.9		2.1	0.44	1.4	0.05	0.11	1.35	0.49	15	19
20	ISL	15.36	D	15.36		33.650	D	24.855	309.3	0.062	5.97	D	260.1	D	104.8		2.1	0.42	1.4	0.05	0.13	1.31	0.50	20	
27	A	15.34		15.33		33.645		24.856	309.4	0.084	5.95		259.4		104.5		2.1	0.40	1.5	0.05	0.15	1.26	0.51	27	18
30	ISL	15.27	D	15.26		33.632	D	24.862	308.9	0.094	5.99	D	260.9	D	105.0		2.0	0.44	1.8	0.06	0.19	1.08	0.46	30	
34	A	13.65		13.65		33.384	D	25.012	294.6	0.106	5.97		260.1		101.2		2.0	0.49	2.3	0.07	0.25	0.85	0.41	34	17
42		12.97		12.97		33.324		25.103	286.3	0.128	5.94		258.6		99.1		3.3	0.70	4.6	0.16	0.39	0.55	0.34	42	16
50		12.48		12.48		33.352		25.221	275.2	0.150	5.86		255.3		96.8		4.1	0.77	5.8	0.23	0.40	0.46	0.29	50	15
60		11.89		11.88		33.319		25.307	267.2	0.177	5.60		244.0		91.4		6.5	0.91	8.1	0.22	0.26	0.35	0.22	60	14
70		11.28		11.27		33.284		25.393	259.2	0.204	5.40		235.3		86.9		8.0	0.92	8.9	0.09	0.07	0.16	0.13	71	13
75	ISL	10.95	D	10.94		33.330	D	25.488	250.3	0.218	5.25	D	228.4	D	83.8		9.4	1.03	10.6	0.12	0.06	0.13	0.15	76	
85		10.62		10.60		33.436		25.630	237.0	0.241	4.90		213.5		77.8		12.3	1.24	14.1	0.19	0.04	0.08	0.17	86	12
100		9.78		9.77		33.505		25.825	218.6	0.275	4.46		194.1		69.5		17.9	1.49	17.9	0.06	0.01	0.04	0.07	101	11
120		9.28		9.26		33.727		26.081	194.6	0.316	3.48		151.6		53.8		26.1	1.89	24.5	0.05	0.03	0.02	0.07	121	10
125	ISL	9.25	D	9.24		33.759	D	26.111	191.9	0.328	3.34	D	145.2	D	51.5		26.9	1.91	24.9	0.05	0.03	0.02	0.07	126	
140		9.02		9.01		33.814		26.191	184.6	0.354	3.10		135.0		47.7		29.1	1.98	26.1	0.05	0.04	0.01	0.07	141	09
150	ISL	8.81	D	8.79		33.854	D	26.256	178.6	0.375	3.07	D	133.8	D	47.0		31.1	2.06	27.2	0.05	0.04	0.01	0.08	151	
170		8.78		8.76		33.969		26.352	169.9	0.407	2.22		96.6		33.9		35.1	2.23	29.3	0.05	0.05	0.01	0.08	171	08
200		8.28		8.26		33.997		26.450	161.0	0.457	2.35		102.1		35.5		37.9	2.23	29.6	0.05	0.06	0.01	0.06	202	07
230		8.12		8.09		34.060		26.525	154.4	0.504	1.76		76.4		26.5		43.1	2.43	31.5	0.02	0.03			232	06
250	ISL	7.76	D	7.74		34.069	D	26.585	149.0	0.538	1.69	D	73.6	D	25.3		46.0	2.53	32.7	0.02	0.04			252	
270		7.82		7.79		34.116		26.615	146.5	0.564	1.33		57.8		19.9		49.0	2.62	33.8	0.02	0.04			272	05
300	ISL	7.04	D	7.01		34.050	D	26.673	141.0	0.611	1.67	D	72.5	D	24.5		54.0	2.66	35.2	0.02	0.03			302	
320		6.79		6.76		34.056		26.712	137.5	0.635	1.48		64.2		21.6		57.3	2.68	36.1	0.02	0.03			323	04
380		6.42		6.38		34.132		26.822	127.7	0.714	0.88		38.4		12.8		66.9	2.93	38.8	0.01	0.02			383	03
400	ISL	6.43	D	6.39		34.168	D	26.850	125.5	0.745	0.73	D	31.9	D	10.6		69.6	2.99	39.2	0.02	0.02			403	
439		6.15		6.11		34.223		26.930	118.2	0.787	0.49		21.4		7.1		74.8	3.11	39.9	0.03	0.03			443	02
500	ISL	5.89	D	5.84		34.268	D	26.999	112.3	0.864	0.36	D	15.7	D	5.2		80.6	3.19	40.6	0.03	0.05			504	
514		5.85		5.80		34.273		27.009	111.6	0.873	0.32		13.7		4.5		81.9	3.21	40.8	0.03	0.05			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 1307 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 43.1 W	12/07/2013	2311	UTC	3797 m	340	14 kn	330 04 06	2	1014.0 mb	16.8 C	15.0 C	17 m	8/8	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		16.77		16.77	33.373	24.321	359.4	0.000	5.69	247.9	102.5	1.4	0.38	0.3	0.01	0.60	0.25	0.03	0	
2		16.77		16.77	33.373	24.321	359.5	0.007	5.69	247.9	102.5	1.4	0.38	0.3	0.01	0.60	0.25	0.03	2	21
10		16.77		16.77	33.374	24.323	359.6	0.036	5.68	247.7	102.4	1.4	0.35	0.0	0.02	0.12	0.21	0.05	10	19
10		16.77		16.77	33.373	24.322	359.7	0.037											10	20
20		16.73		16.73	33.377	24.335	358.9	0.072	5.67	247.4	102.2	1.4	0.35	0.0	0.02	0.05	0.23	0.06	20	18
30		16.72		16.71	33.373	24.335	359.2	0.108	5.68	247.6	102.3	1.4	0.35	0.0	0.01	0.05	0.25	0.08	30	17
40		15.04		15.04	33.362	24.703	324.4	0.142	6.09	265.4	106.1	1.3	0.36	0.0	0.01	0.05	0.43	0.14	40	16
50		14.44		14.43	33.353	24.826	313.0	0.174	6.03	262.9	103.8	1.8	0.44	1.2	0.04	0.13	0.48	0.21	50	15
60		14.06		14.05	33.366	24.917	304.6	0.205	5.92	257.7	101.0	2.0	0.53	2.4	0.08	0.31	0.36	0.18	60	14
71		13.81		13.80	33.397	24.994	297.6	0.238	5.87	255.7	99.7	2.1	0.59	3.1	0.10	0.44	0.39	0.11	72	13
75	ISL	13.70	D	13.69	33.437	D 25.046	292.7	0.251	5.86	D255.3	D 99.3	2.2	0.61	3.4	0.16	0.41	0.35	0.12	76	
86		13.58		13.57	33.478	25.103	287.6	0.282	5.62	244.8	95.0	2.4	0.67	4.2	0.34	0.32	0.25	0.16	87	12
99		13.06		13.05	33.479	25.209	277.8	0.319	5.52	240.3	92.3	3.0	0.75	6.3	0.23	0.09	0.16	0.08	100	11
100	ISL	13.03	D	13.02	33.481	D 25.216	277.2	0.323	5.56	D242.3	D 93.0	3.1	0.76	6.4	0.22	0.09	0.16	0.08	101	
120		12.20		12.19	33.440	25.346	265.2	0.376	5.39	234.6	88.5	5.8	0.92	8.9	0.05	0.02	0.11	0.09	121	10
125	ISL	11.94	D	11.92	33.461	D 25.412	259.0	0.391	5.28	D229.8	D 86.2	7.1	0.99	10.0	0.04	0.03	0.09	0.09	126	
140		11.21		11.19	33.483	25.564	244.8	0.426	4.79	208.5	77.0	11.1	1.18	13.3	0.01	0.04	0.03	0.07	141	09
150	ISL	10.55	D	10.54	33.554	D 25.735	228.6	0.453	4.36	D189.9	D 69.2	14.4	1.34	15.9	0.01	0.03	0.03	0.08	151	
170		9.68		9.66	33.636	25.947	208.6	0.494	3.69	160.7	57.5	20.9	1.65	21.1	0.01	0.02	0.01	0.11	171	08
200	ISL	9.01	D	8.99	33.839	D 26.214	183.7	0.556	3.00	D130.5	D 46.1	27.6	1.89	25.1	0.01	0.04	0.01	0.05	202	
202		8.95		8.93	33.844	26.227	182.5	0.556	2.99	130.2	45.9	28.0	1.91	25.4	0.01	0.04	0.01	0.05	204	07
231		8.47		8.44	33.957	26.392	167.2	0.607	2.73	118.7	41.4	33.1	2.03	27.4	0.01	0.05			233	06
250	ISL	8.27	D	8.25	34.005	D 26.460	161.1	0.642	2.39	D103.8	D 36.1	37.2	2.16	29.1	0.01	0.04			252	
272		8.01		7.98	34.044	26.531	154.6	0.673	2.01	87.5	30.2	42.0	2.32	31.1	0.01	0.02			274	05
300	ISL	8.03	D	8.00	34.135	D 26.600	148.7	0.720	1.27	D 55.2	D 19.1	46.7	2.51	32.6	0.01	0.04			302	
321		7.80		7.77	34.163	26.655	143.7	0.746	1.08	47.1	16.2	50.2	2.65	33.8	0.02	0.05			324	04
378		7.11		7.08	34.185	26.771	133.2	0.825	0.81	35.1	11.9	59.3	2.82	36.3	0.02	0.03			381	03
400	ISL	6.92	D	6.88	34.203	D 26.812	129.5	0.860	0.73	D 31.8	D 10.7	62.3	2.87	37.0	0.02	0.02			403	
438		6.53		6.49	34.201	26.864	124.9	0.902	0.61	26.4	8.8	67.5	2.96	38.2	0.01	0.01			442	02
500	ISL	6.06	D	6.02	34.238	D 26.954	116.7	0.984	0.44	D 19.3	D 6.4	74.6	3.06	39.4	0.01	0.03			504	
514		6.05		6.00	34.238	26.956	116.8	0.993	0.43	18.5	6.1	76.1	3.08	39.7	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 1307 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 59.3 N	122 23.8 W	13/07/2013	0502	UTC	4111 m	330	16 kn			1014.0 mb	15.4 C	14.2 C				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		16.65		16.65	33.338	24.322	359.3	0.000	5.72	249.3	102.8	1.6	0.33	0.0	0.01	0.05	0.27	0.07	0	
2		16.65		16.65	33.338	24.322	359.4	0.007	5.72	249.3	102.8	1.6	0.33	0.0	0.01	0.05	0.27	0.07	2	21
10		16.65		16.65	33.337	24.321	359.8	0.036	5.72	249.6	102.9	1.6	0.33	0.0	0.01	0.04	0.28	0.05	10	19
10		16.65		16.65	33.339	24.322	359.7	0.036											10	20
20		16.65		16.65	33.335	24.320	360.3	0.072	5.72	249.4	102.9	1.6	0.33	0.0	0.01	0.08	0.28	0.05	20	18
30		15.52		15.51	33.433	24.654	328.8	0.107	6.07	264.7	106.8	1.3	0.43	1.3	0.07	0.16	0.53	0.14	30	17
40		14.52		14.51	33.373	24.825	312.7	0.139	6.15	267.8	105.9	1.8	0.44	1.2	0.09	0.11	0.55	0.11	40	16
50		14.26		14.26	33.484	24.965	299.8	0.169	6.01	261.9	103.1	3.3	0.58	3.3	0.17	0.22	0.44	0.23	50	15
60		13.87		13.86	33.479	25.043	292.5	0.199	5.88	256.2	100.1	3.2	0.63	3.9	0.28	0.31	0.37	0.23	60	14
70		13.43		13.42	33.449	25.111	286.3	0.228	5.71	248.8	96.3	3.8	0.69	4.6	0.48	0.26	0.27	0.22	71	13
75	ISL	12.92	D	12.91	33.407	D 25.179	279.9	0.243	5.69	D247.9	D 94.9	3.9	0.72	5.4	0.47	0.19	0.22	0.19	76	
86		12.71		12.70	33.451	25.255	273.0	0.272	5.54	241.3	92.0	4.0	0.80	7.0	0.46	0.05	0.12	0.12	87	12
100		12.00		11.98	33.455	25.395	259.9	0.310	5.33	232.3	87.2	6.2	0.93	9.3	0.04	0.07	0.09	0.07	101	11
120		10.98		10.97	33.515	25.628	238.1	0.359	4.90	213.4	78.5	10.8	1.23	13.9	0.05	0.03	0.05	0.06	121	10
125	ISL	10.80	D	10.79	33.514	D 25.659	235.2	0.374	4.53	D197.0	D 72.2	12.2	1.29	15.0	0.05	0.04	0.04	0.06	126	
141		10.24		10.22	33.571	25.802	221.9	0.408	3.98	173.5	62.8	17.0	1.50	18.6	0.05	0.08	0.02	0.07	142	09
150	ISL	9.99	D	9.97	33.650	D 25.905	212.2	0.430	3.63	D158.2	D 57.0	19.9	1.62	20.5	0.04	0.07	0.02	0.08	151	
170		9.30		9.28	33.787	26.127	191.4	0.468	2.98	129.7	46.1	26.3	1.88	24.7	0.02	0.05	0.01	0.12	171	08
200	ISL	9.06	D	9.04	33.945	D 26.289	176.6	0.526	2.23	D 97.0	D 34.3	32.7	2.12	27.6	0.02	0.04	0.01	0.07	202	
201		9.04		9.02	33.943	26.291	176.4	0.525	2.22	96.7	34.2	32.9	2.13	27.7	0.02	0.04	0.01	0.07	203	07
230		8.63		8.60	34.021	26.418	164.8	0.574	1.96	85.5	29.9	36.7	2.24	29.3	0.02	0.04			232	06
250	ISL	8.25	D	8.23	34.050	D 26.498	157.5	0.610	1.82	D 79.4	D 27.6	40.2	2.32	30.4	0.02	0.05			252	
270		7.93		7.90	34.071	26.563	151.5	0.637	1.74	75.5	26.0	43.6	2.39	31.5	0.02	0.05			272	05
300	ISL	7.44	D	7.41	34.070	D 26.633	145.1	0.686	1.82	D 79.3	D 27.1	48.5	2.49	33.1	0.02	0.05			302	
320		7.19		7.16	34.092	26.687	140.2	0.710	1.41	61.4	20.8	51.8	2.56	34.1	0.02	0.05			323	04
381		6.81		6.78	34.148	26.783	131.8	0.793	0.87	37.7	12.7	60.9	2.80	36.6	0.02	0.02			384	03
400	ISL	6.50	D	6.46	34.137	D 26.817	128.7	0.824	0.84	D 36.6	D 12.2	63.5	2.84	37.1	0.02	0.03			403	
441		6.32		6.28	34.183	26.876	123.5	0.870	0.62	26.8	8.9	69.3	2.94	38.3	0.02	0.06			445	02
500	ISL	5.95	D	5.90	34.229	D 26.961	116.0	0.947	0.46	D 19.8	D 6.5	77.1	3.05	39.8	0.02	0.04			504	
514		5.85		5.81	34.235	26.978	114.4	0.957	0.40	17.5	5.8	79.0	3.08	40.1	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 1307 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 39.2 N	123 4.5 W	13/07/2013	1049	UTC	4640 m	350 13 kn			1014.7 mb	16.3 C	14.8 C				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		17.11	17.11	33.266	24.159	374.8	0.000	5.59	243.9	101.4	2.3	0.31	0.0	0.01	0.02	0.13	0.03	0	
3		17.11	17.11	33.266	24.160	374.9	0.011	5.59	243.9	101.4	2.3	0.31	0.0	0.01	0.02	0.13	0.03	3	21
10		17.11	17.11	33.270	24.162	374.9	0.036											10	20
10		17.11	17.11	33.271	24.163	374.9	0.038	5.60	244.2	101.6	2.3	0.31	0.0	0.01	0.06	0.13	0.04	10	19
20	ISL	17.12 D	17.11	33.266 D	24.158	375.7	0.075	5.60 D	244.0 D	101.5	2.3	0.31	0.0	0.01	0.05	0.13	0.04	20	
25		17.12	17.11	33.266	24.159	375.8	0.094	5.60	244.4	101.7	2.3	0.31	0.0	0.01	0.04	0.13	0.04	25	18
30	ISL	17.12 D	17.12	33.267 D	24.160	375.9	0.113	5.60 D	244.3 D	101.6	2.3	0.31	0.0	0.01	0.03	0.14	0.04	30	
39		16.01	16.01	33.206	24.369	356.3	0.146	5.82	253.8	103.3	2.5	0.31	0.0	0.01	0.02	0.17	0.05	39	17
50		15.62	15.61	33.191	24.445	349.3	0.184	5.84	254.4	102.7	2.5	0.31	0.0	0.01	0.02	0.27	0.09	50	16
62		15.17	15.16	33.180	24.537	341.0	0.226	5.90	257.2	102.9	2.3	0.33	0.0	0.01	0.03	0.35	0.15	62	15
75	ISL	14.24 D	14.23	33.213 D	24.762	319.8	0.271	5.97 D	260.3 D	102.2	2.3	0.38	0.4	0.04	0.19	0.37	0.31	76	
76		14.23	14.22	33.208	24.760	320.0	0.272	5.94	259.0	101.7	2.3	0.38	0.4	0.04	0.20	0.37	0.32	77	14
85		13.85	13.84	33.231	24.856	311.1	0.300	5.93	258.5	100.8	2.5	0.41	0.6	0.06	0.24	0.29	0.23	86	13
100		13.19	13.18	33.201	24.967	300.9	0.346	5.84	254.6	97.9	3.1	0.46	1.1	0.27	0.22	0.18	0.19	101	12
112		12.71	12.70	33.173	25.041	294.1	0.382	5.79	252.1	95.9	3.4	0.47	1.4	0.30	0.03	0.16	0.20	113	11
125		12.18	12.17	33.281	25.226	276.7	0.419	5.47	238.1	89.7	5.0	0.59	3.8	0.10	0.00	0.17	0.14	126	10
140		11.43	11.41	33.360	25.428	257.7	0.459	5.15	224.1	83.1	7.4	0.77	7.5	0.03	0.00	0.10	0.09	141	09
150	ISL	10.63 D	10.61	33.412 D	25.611	240.4	0.487	4.97 D	216.5 D	79.0	10.3	0.96	10.6	0.03	0.00	0.08	0.07	151	
169		9.83	9.81	33.514	25.827	220.0	0.528	4.38	190.6	68.4	15.7	1.33	16.5	0.03	0.00	0.02	0.03	170	08
199		9.05	9.03	33.782	26.163	188.5	0.589	3.52	153.2	54.1	24.8	1.73	22.6	0.01	0.02	0.00	0.02	201	07
200	ISL	9.02 D	9.00	33.794 D	26.178	187.1	0.595	3.54 D	153.9 D	54.3	25.0	1.73	22.7	0.01	0.02			202	
231		8.59	8.56	33.908	26.336	172.6	0.647	3.37	146.4	51.2	29.2	1.81	24.5	0.01	0.00			233	06
250	ISL	8.18 D	8.15	33.968 D	26.445	162.4	0.683	2.97 D	129.1 D	44.7	34.5	1.98	26.8	0.01	0.00			252	
270		7.77	7.74	34.000	26.531	154.4	0.710	2.52	109.7	37.7	40.2	2.16	29.3	0.01	0.00			272	05
300	ISL	7.38 D	7.35	34.017 D	26.600	148.1	0.761	2.20 D	95.6 D	32.6	45.6	2.31	31.4	0.01	0.00			302	
321		7.20	7.17	34.036	26.641	144.5	0.786	1.88	81.9	27.8	49.4	2.42	32.9	0.01	0.00			324	04
381		6.51	6.48	34.083	26.772	132.6	0.869	1.17	50.7	16.9	61.7	2.74	36.7	0.01	0.00			384	03
400	ISL	6.35 D	6.31	34.106 D	26.811	129.0	0.900	1.00 D	43.6 D	14.5	64.9	2.80	37.4	0.01	0.00			403	
442		6.01	5.97	34.149	26.889	121.9	0.947	0.73	31.8	10.5	71.9	2.94	38.8	0.01	0.00			446	02
500	ISL	5.72 D	5.67	34.203 D	26.969	114.9	1.023	0.51 D	22.1 D	7.3	80.4	3.08	40.2	0.01	0.02			504	
514		5.58	5.54	34.220	26.999	112.1	1.032	0.42	18.1	5.9	82.5	3.11	40.5	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 1307 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 19.4 N	123 44.6 W	13/07/2013	1750	UTC	4021 m	010 15 kn	340 03 07	2	1016.8 mb	17.5 C	15.9 C	19 m	8/8	SC	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		17.15	17.15	33.226	24.118	378.8	0.000	5.64	245.8	102.3	2.1	0.32	0.0	0.01	0.05	0.19	0.04	0	
2	A	17.15	17.15	33.226	24.118	378.9	0.008	5.64	245.8	102.3	2.1	0.32	0.0	0.01	0.05	0.19	0.04	2	21
10	A	17.15	17.14	33.224	24.119	379.0	0.038	5.64	246.1	102.4	2.1	0.32	0.0	0.01	0.11	0.19	0.04	10	19
11		17.14	17.14	33.225	24.121	378.9	0.043											11	20
16	A	17.12	17.12	33.226	24.127	378.6	0.061	5.64	246.0	102.3	2.1	0.32	0.0	0.01	0.21	0.20	0.04	16	24
20	ISL	17.12 D	17.11	33.221 D	24.124	378.9	0.065	5.64 D	246.1 D	102.3	2.2	0.32	0.0	0.01	0.17	0.20	0.05	20	
30	A	16.42	16.41	33.248	24.308	361.8	0.113	5.66	246.7	101.2	2.3	0.31	0.0	0.01	0.06	0.22	0.05	30	23
40		15.67	15.66	33.213	24.451	348.5	0.148	5.84	254.4	102.8	2.4	0.31	0.0	0.01	0.11	0.22	0.06	40	18
50	ISL	15.54 D	15.53	33.246 D	24.505	343.6	0.155	5.89 D	256.8 D	103.6	2.1	0.33	0.0	0.01	0.08	0.31	0.11	50	
51	A	15.53	15.52	33.248	24.511	343.1	0.186	5.93	258.5	104.2	2.1	0.33	0.0	0.01	0.08	0.32	0.12	51	17
58		15.29	15.28	33.268	24.578	336.9	0.210	5.94	259.0	103.9	2.0	0.33	0.0	0.01	0.12	0.34	0.17	58	16
65	A	14.97	14.96	33.286	24.662	329.1	0.233	5.92	257.9	102.9	1.9	0.34	0.0	0.01	0.11	0.38	0.24	66	15
75		14.08	14.07	33.268	24.838	312.6	0.265	5.96	259.8	101.7	2.5	0.32	0.0	0.01	0.09	0.32	0.24	76	14
85		13.82	13.80	33.270	24.894	307.5	0.296	5.96	259.9	101.2	3.0	0.32	0.0	0.01	0.19	0.25	0.19	86	13
94		13.30	13.29	33.256	24.987	298.8	0.324	5.89	256.6	98.9	3.3	0.36	0.0	0.04	0.21	0.20	0.19	95	12
100	ISL	13.19 D	13.18	33.278 D	25.028	295.1	0.315	5.84 D	254.6 D	97.9	3.6	0.41	0.8	0.09	0.15	0.18	0.17	101	
109		12.76	12.75	33.279	25.113	287.2	0.368	5.64	245.7	93.7	4.1	0.48	2.1	0.16	0.06	0.14	0.15	110	11
125		12.12	12.10	33.373	25.309	268.8	0.412	5.37	234.0	88.1	5.6	0.61	4.9	0.08	0.05	0.11	0.13	126	10
146		10.80	10.79	33.376	25.552	245.9	0.466	4.97	216.6	79.3	9.4	0.93	10.5	0.02	0.06	0.07	0.08	147	09
150	ISL	10.52 D	10.50	33.424 D	25.640	237.6	0.450	4.91 D	213.9 D	77.8	10.7	1.01	11.9	0.02	0.06	0.06	0.07	151	
170		9.69	9.67	33.550	25.877	215.2	0.521	4.21	183.5	65.6	17.3	1.41	18.7	0.01	0.08	0.01	0.03	171	08
200		8.96	8.94	33.805	26.195	185.4	0.581	3.57	155.4	54.8	25.0	1.72	24.0	0.00	0.18	0.00	0.02	202	07
230		8.58	8.56	33.924	26.348	171.4	0.635	3.48	151.5	53.0	28.8	1.76	24.9	0.00	0.04			232	06
250	ISL	8.26 D	8.23	33.967 D	26.433	163.6	0.644	3.29 D	143.1 D	49.7	33.2	1.89	27.0	0.00	0.10			252	
271		7.83	7.81	33.985	26.510	156.5	0.702	2.91	126.6	43.5	37.9	2.03	29.2	0.00	0.17			273	05
300	ISL	7.50 D	7.47	34.020 D	26.586	149.6	0.722	2.37 D	102.9 D	35.2	44.1	2.25	32.1	0.00	0.21			302	
320		7.22	7.19	34.027	26.631	145.5	0.776	2.00	86.8	29.5	48.4	2.40	34.1	0.00	0.23			323	04
380		6.61	6.57	34.088	26.763	133.5	0.860	1.25	54.3	18.2	59.7	2.71	37.9	0.00	0.08			383	03
400	ISL	6.42 D	6.39	34.095 D	26.793	130.8	0.863	1.10 D	47.8 D	15.9	63.1	2.78	38.9	0.00	0.12			403	
439		6.10	6.06	34.135	26.866	124.1	0.936	0.79	34.5	11.4	69.5	2.93	40.8	0.00	0.20			443	02
500	ISL	5.65 D	5.61	34.180 D	26.958	115.8	0.987	0.56 D	24.5 D	8.0	79.1	3.06	42.3	0.00	0.09			504	
514		5.59	5.54	34.196	26.979	114.0	1.025	0.47	20.4	6.7	81.3	3.09	42.6	0.00	0.06			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 1307 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 53.3 N	118 26.6 W	21/07/2013	0044	UTC	28 m	230 04 kn	170 01 07	1	1008.2 mb	19.3 C	17.8 C		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		19.33	19.33	33.596	23.866	402.8	0.000	5.95	259.5	112.8	4.7	0.23	0.0	0.01	0.03	0.80	0.13	0	
2		19.33	19.33	33.596	23.866	402.9	0.008	5.95	259.5	112.8	4.7	0.23	0.0	0.01	0.03	0.80	0.13	2	04
5		19.18	19.18	33.595	23.903	399.5	0.020	5.96	259.8	112.6	4.7	0.23	0.0	0.02	0.02	2.99	0.97	5	03
10	ISL	15.62 D	15.62	33.547 D	24.717	322.1	0.039	6.51 D	283.6 D	114.8	6.2	0.28	0.0	0.04	0.00	2.95	1.04	10	
11		14.30	14.29	33.553	25.009	294.3	0.041	6.61	287.8	113.5	6.5	0.29	0.0	0.04	0.00	2.94A	1.05A	11	02
19		11.79	11.79	33.499	25.464	251.1	0.063	4.46	194.4	72.8	13.2	1.28	12.8	0.60	3.70	1.58	0.60	19	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 1307 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 5.5 W	21/07/2013	0355 UTC	23 m	170 04 kn			1008.8 mb	19.0 C	17.5 C				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	17.54	17.54	33.595	24.309	360.6	0.000	6.15	268.1	112.7	4.6	0.28	0.0	0.02	0.10	0.87	0.38	0	
2	17.54	17.54	33.595	24.309	360.6	0.007	6.15	268.1	112.7	4.6	0.28	0.0	0.02	0.10	0.87	0.38	2	04
5	16.95	16.95	33.566	24.428	349.4	0.018	6.40	279.1	116.0	5.5	0.29	0.0	0.02	0.03	1.61	0.59	5	03
10	15.53	15.53	33.552	24.740	319.9	0.035	6.43	280.0	113.2	6.8	0.35	0.0	0.02	0.04	3.58	1.28	10	02
14	13.32	13.32	33.520	25.184	277.7	0.047	5.80	252.8	97.7	8.5	0.63	2.0	0.08	0.33	2.44	1.00	14	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 1307 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	21/07/2013	0620 UTC	24 m	120 02 kn			1009.5 mb	19.4 C	17.8 C				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	19.97	19.97	33.647	23.739	414.9	0.000	5.78	252.0	110.9	3.5	0.26	0.0	0.01	0.02	0.91	0.25	0	
2	19.97	19.97	33.647	23.740	415.0	0.008	5.78	252.0	110.9	3.5	0.26	0.0	0.01	0.02	0.91	0.25	2	04
5	18.66	18.66	33.605	24.043	386.2	0.020	6.04	263.5	113.1	4.2	0.27	0.0	0.02	0.03	1.51	0.48	5	03
10	15.08	15.08	33.539	24.830	311.3	0.038	6.65	289.9	116.1	4.6	0.34	0.0	0.02	0.07	2.58	0.78	10	02
15	14.29	14.29	33.522	24.986	296.6	0.053	6.87	299.2	117.9	5.0	0.36	0.0	0.02	0.04	2.03	0.61	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 1307 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 29.0 N	117 46.0 W	21/07/2013	0701 UTC	67 m	180 05 kn			1009.6 mb	19.8 C	17.9 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	20.16	20.16	33.673	23.711	417.6	0.000	5.57	243.0	107.3	2.9	0.25	0.0	0.01	0.01	0.37	0.07	0	
2	20.16	20.15	33.673	23.711	417.7	0.008	5.57	243.0	107.3	2.9	0.25	0.0	0.01	0.01	0.37	0.07	2	08
5	20.14	20.14	33.674	23.715	417.4	0.021	5.57	243.0	107.3	2.9	0.25	0.0	0.01	0.04	0.36	0.08	5	07
10	15.30	15.29	33.542	24.785	315.6	0.039	6.71	292.3	117.5	4.2	0.31	0.0	0.02	0.00	0.61	0.20	10	06
20	12.85	12.85	33.501	25.262	270.4	0.069	6.48	282.1	107.9	6.6	0.50	1.5	0.05	0.07	1.42	0.46	20	05
30	11.27	11.27	33.531	25.585	239.9	0.094	4.29	186.8	69.1	12.9	1.26	14.4	0.37	0.45	0.68	0.39	30	04
40	11.04	11.03	33.537	25.632	235.7	0.118	4.24	184.8	68.1	13.9	1.32	15.7	0.34	0.30	0.52	0.23	40	03
50	10.65	10.64	33.573	25.729	226.6	0.141	3.79	164.8	60.2	16.4	1.47	18.1	0.30	0.26	0.22	0.24	50	02
60	10.33	10.32	33.640	25.838	216.6	0.163	3.24	141.0	51.2	19.8	1.67	21.0	0.37	0.27	0.11	0.19	60	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 1307 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 25.1 N	117 54.2 W	21/07/2013	0912 UTC	611 m	170 06 kn			1009.1 mb	19.6 C	17.9 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	20.07	20.07	33.650	23.716	417.2	0.000	5.44	237.4	104.7	2.0	0.32	0.0	0.01	0.08	0.18	0.05	0	
2	20.07	20.07	33.650	23.716	417.2	0.008	5.44	237.4	104.7	2.0	0.32	0.0	0.01	0.08	0.18	0.05	2	22
10	18.40	18.40	33.584	24.092	381.7	0.040	6.04	263.5	112.6	2.4	0.33	0.0	0.01	0.02	0.21	0.06	10	20
10	18.40	18.40	33.587	24.094	381.4	0.040											10	21
20 ISL	14.20 D	14.19	33.432 D	24.937	301.4	0.075	6.35	276.5	108.7	2.5	0.41	0.5	0.06	0.02	0.53	0.22	20	
21	14.28	14.27	33.469	24.949	300.3	0.077	6.38	277.8	109.4	2.5	0.42	0.6	0.06	0.02	0.56	0.24	21	19
30	13.18	13.18	33.457	25.163	280.1	0.104	5.64	245.6	94.6	4.3	0.72	5.4	0.28	0.07	0.55	0.18	30	18
40	12.76	12.76	33.500	25.280	269.3	0.131	5.33	232.1	88.6	5.6	0.88	8.0	0.28	0.12	0.47	0.22	40	17
50	11.50	11.49	33.439	25.472	251.2	0.157	4.87	212.1	78.8	9.3	1.08	11.5	0.10	0.12	0.30	0.12	50	16
60	10.97	10.96	33.471	25.594	239.8	0.182	4.47	194.6	71.5	12.3	1.24	14.5	0.11	0.06	0.24	0.13	60	15
70	10.59	10.58	33.589	25.753	224.9	0.205	3.75	163.4	59.6	16.4	1.53	18.3	0.21	0.30	0.22	0.13	71	14
75 ISL	10.50 D	10.49	33.608 D	25.784	222.1	0.217	3.62 D	157.4 D	57.3	18.5	1.64	19.8	0.16	0.20	0.17	0.11	76	
85	10.12	10.11	33.720	25.936	207.8	0.237	3.01	131.1	47.4	22.8	1.87	22.8	0.06	0.01	0.07	0.08	86	13
99	10.08	10.07	33.776	25.987	203.3	0.266	2.75	119.8	43.3	24.5	1.97	23.9	0.05	0.01	0.05	0.07	100	11
100 ISL	10.09 D	10.08	33.778 D	25.986	203.4	0.270	2.70 D	117.6 D	42.5	24.7	1.98	24.0	0.05	0.01	0.04	0.07	101	
120	9.92	9.90	33.938	26.142	189.1	0.307	2.32	101.0	36.4	28.3	2.15	26.0	0.03	0.01	0.01	0.06	121	10
125 ISL	9.97 D	9.95	33.994 D	26.177	185.8	0.319	1.87 D	81.4 D	29.4	29.2	2.20	26.4	0.03	0.02	0.01	0.07	126	
140	9.96	9.94	34.045	26.218	182.3	0.344	1.76	76.6	27.7	31.8	2.34	27.6	0.03	0.03	0.01	0.08	141	09
150 ISL	9.83 D	9.81	34.062 D	26.254	179.1	0.365	1.74 D	75.9 D	27.3	32.6	2.38	28.0	0.02	0.04	0.01	0.08	151	
170	9.83	9.81	34.139	26.315	173.8	0.398	1.51	65.8	23.7	34.1	2.46	28.7	0.02	0.07	0.01	0.07	171	08
200 ISL	9.71 D	9.68	34.200 D	26.384	167.9	0.452	1.31 D	56.9 D	20.5	35.7	2.54	29.4	0.02	0.04	0.01	0.09	202	
201	9.78	9.75	34.207	26.378	168.6	0.451	1.30	56.5	20.3	35.8	2.54	29.4	0.02	0.04	0.01	0.09	203	07
230	9.58	9.55	34.248	26.444	162.9	0.499	1.21	52.6	18.8	37.3	2.58	30.0	0.02	0.03			232	06
250 ISL	9.05 D	9.02	34.202 D	26.494	158.3	0.534	1.36 D	59.0 D	20.9	39.4	2.61	30.9	0.02	0.02			252	
270	8.89	8.86	34.224	26.538	154.5	0.562	1.21	52.8	18.6	41.4	2.63	31.7	0.02	0.00			272	05
300 ISL	8.78 D	8.75	34.247 D	26.574	151.7	0.612	1.07 D	46.6 D	16.4	43.8	2.70	32.5	0.02	0.00			302	
340	8.43	8.39	34.260	26.639	146.1	0.668	0.90	39.3	13.7	47.0	2.80	33.5	0.02	0.00			343	04
381	8.07	8.03	34.272	26.704	140.5	0.727	0.76	32.9	11.4	51.3	2.90	34.8	0.02	0.00			384	03
400 ISL	7.81 D	7.77	34.292 D	26.758	135.5	0.758	0.63 D	27.3 D	9.4	54.2	2.95	35.6	0.02	0.00			403	
440	7.31	7.27	34.284	26.823	129.6	0.806	0.52	22.6	7.7	60.3	3.07	37.3	0.03	0.00			444	02
500 ISL	6.83 D	6.78	34.290 D	26.896	123.3	0.888	0.41 D	17.7 D	6.0	66.8	3.17	38.9	0.02	0.02			504	
515	6.75	6.70	34.297	26.913	121.8	0.900	0.37	16.3	5.5	68.4	3.19	39.3	0.02	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 1307 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 15.1 N	118 15.0 W	21/07/2013	1321	UTC	338 m	170	11 kn	240 02 09	2	1008.1 mb	18.9 C	16.2 C	26 m	6/8	ST	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		20.00		20.00		33.680		23.755	413.4	0.000	5.42		236.6		104.2		2.1		0.30	0.0	0.01	0.04	0.19	0.05	0		
2		20.00		20.00		33.680		23.755	413.5	0.008	5.42		236.6		104.2		2.1		0.30	0.0	0.01	0.04	0.19	0.05	2		18
10		19.98		19.98		33.685		23.767	412.7	0.041	5.43		236.9		104.3		2.2		0.30	0.0	0.02	0.09	0.22	0.06	10		16
10		19.98		19.98		33.679		23.762	413.2	0.041															10		17
20		19.33		19.33		33.648		23.907	399.8	0.082	5.63		245.7		106.9		2.4		0.31	0.0	0.01	0.04	0.26	0.08	20		15
30		14.75		14.75		33.531		24.895	305.7	0.117	6.54		284.8		113.3		3.9		0.41	0.5	0.02	0.08	0.70	0.26	30		14
40		12.23		12.23		33.535		25.410	256.8	0.145	5.75		250.3		94.5		7.5		0.77	5.8	0.07	0.28	1.14	0.46	40		13
50		11.15		11.14		33.550		25.623	236.8	0.170	4.35		189.6		70.0		13.1		1.40	15.1	0.19	0.23	0.49	0.25	50		12
60		10.33		10.32		33.654		25.847	215.6	0.193	3.37		146.6		53.2		17.5		1.81	19.9	0.24	0.51	0.23	0.14	60		11
70		9.98		9.98		33.732		25.968	204.4	0.214	3.00		130.7		47.1		22.6		1.98	23.7	0.09	0.00	0.07	0.09	71		10
75	ISL	9.94	D	9.94	D	33.759	D	25.996	201.9	0.225	2.87	D	125.1	D	45.1		23.6		2.03	24.3	0.08	0.01	0.06	0.09	76		
85		9.75		9.74		33.821		26.076	194.5	0.244	2.70		117.6		42.2		25.7		2.12	25.5	0.05	0.02	0.03	0.08	86		09
100		9.46		9.45		33.919		26.202	182.8	0.272	2.51		109.1		38.9		28.8		2.22	27.0	0.04	0.06	0.02	0.06	101		08
121		9.38		9.37		33.988		26.269	176.9	0.310	2.28		99.0		35.3		30.8		2.32	27.9	0.04	0.10	0.01	0.07	122		07
125	ISL	9.42	D	9.40		34.024	D	26.291	174.9	0.318	2.22	D	96.6	D	34.4		31.7		2.38	28.2	0.04	0.08	0.01	0.07	126		
141		9.67		9.65		34.197		26.386	166.3	0.344	1.40		60.7		21.8		35.5		2.62	29.6	0.03	0.02	0.01	0.06	142		06
150	ISL	9.41	D	9.39		34.163	D	26.403	164.9	0.361	1.49	D	64.7	D	23.1		36.1		2.63	29.8	0.03	0.02	0.01	0.06	151		
170		9.34		9.32		34.203		26.446	161.2	0.392	1.35		58.6		20.9		37.3		2.66	30.4	0.02	0.01	0.01	0.06	171		05
200		9.09		9.07		34.211		26.493	157.3	0.439	1.27		55.3		19.6		39.6		2.72	31.3	0.04	0.06	0.01	0.07	202		04
231		9.04		9.01		34.227		26.515	155.9	0.488	1.20		52.2		18.5		40.3		2.75	31.5	0.04	0.02			233		03
250	ISL	8.80	D	8.77		34.232	D	26.557	152.2	0.520	1.10	D	47.9	D	16.9		41.8		2.79	32.1	0.03	0.02			252		
270		8.75		8.73		34.241		26.572	151.3	0.548	1.05		45.7		16.1		43.4		2.84	32.7	0.03	0.02			272		02
300	ISL	8.74	D	8.70		34.272	D	26.600	149.2	0.597	0.91	D	39.6	D	13.9		45.3		2.90	33.1	0.03	0.03			302		
315		8.60		8.57		34.279		26.627	146.9	0.615	0.85		37.2		13.0		46.2		2.93	33.3	0.03	0.03			318		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 1307 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 11.1 N	118 23.3 W	21/07/2013	1735	UTC	1177 m	190	03 kn	240 02 08	2	1011.1 mb	19.3 C	17.9 C	25 m	8/8	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		20.00		20.00		33.687		23.763	412.7	0.000	5.44		237.4		104.5		1.9		0.30	0.0	0.02	0.03	0.23	0.06	0		
2	A	20.00		19.99		33.687		23.763	412.7	0.008	5.44		237.4		104.5		1.9		0.30	0.0	0.02	0.03	0.23	0.06	2		23
7		19.92		19.92		33.689		23.785	410.9	0.029	5.44		237.2		104.3		1.9		0.30	0.0	0.02	0.02	0.21	0.05	7		22
10	ISL	19.89	D	19.89		33.679	D	23.785	411.0	0.042	5.42	D	236.4	D	103.9		1.9		0.30	0.0	0.02	0.04	0.22	0.06	10		
14	A	19.54		19.53		33.680		23.878	402.3	0.058	5.46		238.2		104.0		1.9		0.31	0.0	0.02	0.07	0.23	0.06	14		21
19	A	15.55		15.55		33.559		24.742	320.0	0.076	6.54		284.9		115.2		3.5		0.37	0.0	0.01	0.18	0.38	0.18	19		24
20	ISL	15.09	D	15.08		33.554	D	24.893	305.6	0.079	6.54	D	284.9	D	114.3		3.5		0.38	0.2	0.01	0.17	0.47	0.20	20		
28		13.23		13.22		33.510		25.196	276.9	0.102	6.46		281.3		108.5		3.4		0.46	1.9	0.03	0.12	1.26	0.34	28		19
30	ISL	12.80	D	12.80		33.515	D	25.284	268.6	0.108	6.17	D	268.6	D	102.7		4.2		0.60	4.2	0.04	0.12	1.88	0.45	30		
36	A	11.55		11.55		33.536		25.538	244.5	0.123	5.02		218.8		81.5		6.8		1.00	10.9	0.08	0.12	3.72	0.78	36		18
45		10.98		10.97		33.567		25.666	232.5	0.144	4.11		178.9		65.8		14.4		1.53	17.0	0.14	0.05	0.47	0.25	45		17
50	ISL	10.69	D	10.68		33.595	D	25.739	225.7	0.157	3.73	D	162.5	D	59.4		16.7		1.67	19.1	0.11	0.04	0.34	0.20	50		
54		10.37		10.36		33.629		25.822	217.9	0.165	3.53		153.8		55.9		18.5		1.78	20.8	0.09	0.04	0.24	0.16	54		16
64	A	10.09		10.08		33.721		25.941	206.8	0.186	3.01		130.9		47.3		22.4		2.00	23.9	0.06	0.03	0.15	0.15	65		15
72		9.96		9.95		33.762		25.996	201.8	0.202	2.86		124.3		44.8		23.8		2.06	24.8	0.04	0.01	0.12	0.12	73		14
75	ISL	9.86	D	9.85		33.791	D	26.034	198.2	0.209	2.83	D	123.1	D	44.3		24.6		2.09	25.3	0.04	0.01	0.10	0.11	76		
81	A	9.73		9.72		33.823		26.082	193.8	0.220	2.69		117.0		42.0		26.0		2.16	26.2	0.03	0.00	0.07	0.09	82		13
90		9.54		9.53		33.865		26.147	187.8	0.237	2.61		113.4		40.5		27.4		2.20	26.9	0.03	0.00	0.04	0.08	91		12
100		9.64		9.63		33.963		26.206	182.4	0.256	2.27		98.6		35.3		29.7		2.32	27.8	0.03	0.00	0.01	0.06	101		11
120		10.03		10.02		34.206		26.332	171.1	0.291	1.43		62.4		22.6		33.3		2.61	29.0	0.03	0.01	0.01	0.05	121		10
125	ISL	9.64	D	9.62		34.164	D	26.365	167.9	0.301	1.48	D	64.2	D	23.0		34.0		2.62	29.4	0.03	0.01	0.01	0.06	126		
140		9.47		9.46		34.160		26.390	165.9	0.325	1.43		62.2		22.2		36.0		2.63	30.4	0.02	0.02	0.01	0.06	141		09
150	ISL	9.43	D	9.41		34.181	D	26.413	163.9	0.342	1.37	D	59.5	D	21.3		36.6		2.66	30.6	0.02	0.01	0.01	0.07	151		
170		9.37		9.35		34.201		26.439	161.9	0.374	1.27		55.2		19.7		37.9		2.71	31.0	0.02	0.00	0.01	0.09	171		08
200		9.21		9.19		34.214		26.476	159.0	0.422	1.20		52.0		18.5		39.2		2.77	31.6	0.02	0.00	0.01	0.07	202		07
230		9.04		9.02		34.245		26.529	154.6	0.469	1.08		47.1		16.7		41.4		2.83	32.3	0.02	0.00			232		06
250	ISL	8.97	D	8.94		34.259	D	26.552	152.8	0.502	0.99	D	43.0	D	15.2		42.9		2.87	32.8	0.02	0.00			252		
270		8.77		8.74		34.265		26.589	149.6	0.530	0.92		40.2		14.1		44.3		2.91	33.3	0.02	0.00			272		05
300	ISL	8.61	D	8.58		34.279	D	26.625	146.7	0.577	0.86	D	37.6	D	13.2		46.0		2.95	33.8	0.02	0.00			302		
320		8.49		8.46		34.282		26.646	145.1	0.604	0.83		36.0		12.6		47.2		2.98	34.1	0.01	0.00			323		04
380		8.04		8.00		34.299		26.729	138.1	0.688	0.66		28.6		9.9		52.1		3.10	35.6	0.02	0.00			383		03
400	ISL	7.73	D	7.69		34.297	D	26.773	134.0	0.720	0.59	D	25.8	D	8.9		54.9		3.15	36.5	0.01	0.01			403		
438		7.37		7.32		34.295		26.825	129.5	0.766	0.51		22.1		7.5		60.1		3.24	38.1	0.01	0.02			442		02
500	ISL	6.98	D	6.93		34.300	D	26.883	124.6	0.850	0.43	D	18.7	D	6.3		65.9		3.34	39.8	0.01	0.00			504		
516		6.80		6.75		34.305		26.912	121.9	0.864	0.39		16.8		5.7		67.5		3.36	40.2	0.01	0.00			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; SECONDARY CRUISE-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1307 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 56.0 W	21/07/2013	2202 UTC	1695 m	240 05 kn	210 03 05	2	1011.5 mb	17.2 C	15.9 C	22 m	8/8	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	17.57	17.57	33.538	24.257	365.5	0.000	5.71	249.1	104.7	1.0	0.33	0.0	0.02	0.03	0.32	0.06	0	
2	17.57	17.57	33.538	24.257	365.6	0.007	5.71	249.1	104.7	1.0	0.33	0.0	0.02	0.03	0.32	0.06	2	20
10	17.43	17.42	33.537	24.292	362.6	0.036	5.69	248.1	104.0	1.1	0.33	0.0	0.02	0.04	0.31	0.09	10	19
20	17.13	17.12	33.538	24.365	356.0	0.072	5.75	250.5	104.4	1.1	0.34	0.1	0.02	0.02	0.51	0.07	20	18
30	13.82	13.82	33.552	25.108	285.5	0.104	5.96	259.6	101.4	2.0	0.65	4.2	0.19	0.11	0.79	0.17	30	17
40	12.76	12.75	33.515	25.294	268.0	0.132	5.29	230.4	88.0	6.3	1.05	9.5	0.32	0.07	0.60	0.22	40	16
50	11.61	11.60	33.493	25.495	249.0	0.158	4.86	211.7	78.9	9.7	1.28	13.3	0.06	0.02	0.33	0.19	50	15
60	11.26	11.26	33.553	25.604	238.9	0.182	4.40	191.5	70.9	13.4	1.52	17.2	0.03	0.06	0.13	0.09	60	14
70	10.56	10.55	33.542	25.722	227.8	0.206	4.22	183.9	67.0	15.1	1.60	18.4	0.03	0.02	0.08	0.08	71	13
75 ISL	10.27 D	10.27	33.556 D	25.781	222.3	0.218	4.14	D180.3 D	65.3	15.9	1.64	19.2	0.03	0.02	0.07	0.07	76	
86	9.93	9.92	33.571	25.851	215.8	0.241	3.91	170.1	61.2	17.9	1.73	20.8	0.03	0.01	0.04	0.07	87	12
99	9.72	9.71	33.654	25.952	206.5	0.268	3.55	154.5	55.3	21.0	1.91	23.3	0.02	0.01	0.03	0.05	100	11
100 ISL	9.67 D	9.66	33.681 D	25.981	203.8	0.272	3.47	D151.1 D	54.1	21.2	1.92	23.5	0.02	0.01	0.03	0.05	101	
115	9.49	9.48	33.750	26.065	196.1	0.301	3.15	137.1	48.9	24.4	2.08	25.8	0.01	0.01	0.01	0.05	116	10
125 ISL	9.27 D	9.26	33.828 D	26.162	187.1	0.321	2.87	D124.7 D	44.3	26.9	2.19	27.5	0.02	0.01	0.01	0.04	126	
130	9.15	9.13	33.850	26.199	183.6	0.329	2.77	120.5	42.7	28.1	2.25	28.3	0.02	0.01	0.01	0.04	131	09
150 ISL	8.94 D	8.93	33.916 D	26.284	176.0	0.367	2.62	D113.9 D	40.2	31.7	2.38	29.9	0.02	0.00	0.01	0.04	151	
169	8.55	8.53	34.007	26.417	163.6	0.397	2.27	98.9	34.6	35.1	2.50	31.5	0.02	0.00	0.00	0.03	170	08
200	8.37	8.34	34.045	26.475	158.6	0.447	2.10	91.5	31.9	38.0	2.58	32.6	0.02	0.01	0.00	0.03	202	07
230	8.06	8.04	34.096	26.562	150.9	0.494	1.73	75.3	26.1	42.9	2.76	34.5	0.02	0.00			232	06
250 ISL	7.86 D	7.84	34.109 D	26.601	147.4	0.526	1.55	D 67.4 D	23.2	45.3	2.83	35.4	0.02	0.00			252	
270	7.73	7.70	34.124	26.633	144.7	0.553	1.41	61.2	21.0	47.7	2.90	36.3	0.02	0.00			272	05
300 ISL	7.65 D	7.62	34.171 D	26.683	140.6	0.599	1.18	D 51.2 D	17.6	51.2	3.03	37.3	0.02	0.00			302	
320	7.47	7.44	34.184	26.719	137.3	0.623	1.02	44.4	15.2	53.6	3.11	38.0	0.02	0.00			323	04
379	7.03	7.00	34.258 D	26.840	126.6	0.705	0.58	D 25.1 D	8.5								382	03
400 ISL	6.87 D	6.83	34.275 D	26.876	123.4	0.732	0.50	D 21.6 D	7.3								403	
439	6.76	6.72	34.315	26.923	119.6	0.775	0.34	14.7	4.9	67.9	3.51	41.5	0.01	0.00			443	02
500 ISL	6.28 D	6.23	34.323 D	26.994	113.3	0.851	0.29	D 12.8 D	4.3	74.6	3.57	43.0	0.01	0.00			504	
515	6.22	6.17	34.327	27.005	112.5	0.863	0.27	11.7	3.9	76.3	3.59	43.4	0.01	0.00			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 1307 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 38.9 N	119 29.1 W	11/07/2013	2339 UTC	1320 m	310 05 kn	270 03 05	2	1012.4 mb	18.1 C	17.1 C	08 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	17.48	17.48	33.692	24.398	352.1	0.000	5.93	258.6	108.7	0.4	0.33	0.0	0.03	0.01	0.85	0.15	0	
2	17.48	17.48	33.692	24.398	352.2	0.007	5.93	258.6	108.6	0.4	0.33	0.0	0.03	0.01	0.85	0.15	2	20
10	17.08	17.08	33.675	24.481	344.6	0.035	5.99	261.1	108.8	0.4	0.34	0.0	0.03	0.01	1.06	0.21	10	19
19	16.83	16.83	33.673	24.537	339.5	0.066	5.97	260.0	107.9	0.4	0.35	0.1	0.03	0.01	1.16	0.24	19	18
20 ISL	16.93 D	16.93	33.691 D	24.529	340.4	0.070	5.90	D257.4	D107.0	0.8	0.40	0.6	0.05	0.10	1.40	0.35	20	
30	14.25	14.25	33.661	25.102	286.1	0.100	5.31	231.4	91.2	5.1	0.91	5.8	0.16	1.01	3.73	1.49	30	17
39	12.82	12.81	33.661	25.395	258.4	0.125	4.80	208.8	79.9	10.5	1.15	9.9	0.22	1.23	0.47	0.31	39	16
49	11.87	11.86	33.625	25.549	243.9	0.150	4.58	199.5	74.9	12.5	1.33	14.2	0.24	0.30	0.36	0.20	49	15
50 ISL	11.82 D	11.82	33.636 D	25.566	242.3	0.153	4.54	D197.8 D	74.1	13.1	1.36	14.7	0.22	0.27	0.34	0.19	50	
59	10.86	10.85	33.693	25.786	221.5	0.173	3.77	164.2	60.3	17.9	1.63	19.6	0.04	0.01	0.12	0.16	59	14
70	9.95	9.94	33.769	26.003	201.1	0.197	3.10	134.8	48.6	23.3	1.88	23.5	0.03	0.00	0.06	0.10	71	13
75 ISL	9.88 D	9.87	33.795 D	26.035	198.1	0.208	3.11	D135.5 D	48.7	24.5	1.92	24.2	0.03	0.00	0.05	0.10	76	
84	9.45	9.44	33.823	26.127	189.5	0.224	2.76	120.3	42.9	26.6	1.99	25.4	0.03	0.00	0.04	0.11	85	12
99	9.25	9.24	33.860	26.190	183.8	0.252	2.62	113.8	40.4	28.2	2.04	26.4	0.03	0.00	0.04	0.10	100	11
100 ISL	9.23 D	9.22	33.869 D	26.200	183.0	0.255	2.61	D113.8 D	40.4	28.3	2.05	26.5	0.03	0.00	0.04	0.10	101	
120	9.06	9.04	33.932	26.278	176.0	0.290	2.30	100.0	35.4	31.4	2.16	27.8	0.03	0.00	0.03	0.08	121	10
125 ISL	8.93 D	8.92	33.935 D	26.300	173.9	0.300	2.45	D106.4 D	37.5	32.0	2.16	28.0	0.03	0.00	0.02	0.08	126	
140	8.50	8.48	33.979	26.402	164.4	0.324	2.40	104.4	36.5	33.9	2.16	28.7	0.03	0.00	0.01	0.08	141	09
150 ISL	8.37 D	8.35	33.990 D	26.431	161.8	0.342	2.40	D104.5 D	36.4	35.4	2.22	29.2	0.03	0.00	0.01	0.08	151	
170	8.15	8.13	34.029	26.495	156.1	0.372	2.15	93.7	32.5	38.4	2.34	30.2	0.04	0.00	0.01	0.08	171	08
198	8.13	8.11	34.065	26.525	153.7	0.415	1.76	76.6	26.6	40.9	2.47	31.5	0.03	0.00	0.01	0.07	200	07
200 ISL	8.14 D	8.12	34.067 D	26.526	153.7	0.421	1.78	D 77.5 D	26.9	41.2	2.48	31.6	0.03	0.00			202	
230	7.97	7.95	34.123	26.596	147.6	0.464	1.43	62.0	21.4	44.9	2.61	32.7	0.03	0.00			232	06
250 ISL	7.77 D	7.75	34.145 D	26.643	143.4	0.496	1.25	D 54.2 D	18.6	47.7	2.69	33.4	0.03	0.00			252	
269	7.64	7.62	34.164	26.678	140.4	0.520	1.10	48.0	16.5	50.4	2.76	34.0	0.03	0.00			271	05
300 ISL	7.36 D	7.33	34.182 D	26.732	135.7	0.566	0.95	D 41.2 D	14.1	53.8	2.83	35.0	0.03	0.01			302	
326	7.20	7.17	34.188	26.760	133.4	0.597	0.87	37.8	12.8	56.7	2.89	35.8	0.02	0.02			329	04
384	6.72	6.69	34.231	26.860	124.5	0.672	0.60	26.1	8.8	64.6	3.05	37.7	0.02	0.00			387	03
400 ISL	6.70 D	6.66	34.254 D	26.882	122.7	0.697	0.52	D 22.8 D	7.7	66.1	3.08	38.0	0.02	0.00			403	
441	6.48	6.44	34.283	26.935	118.1	0.741	0.40	17.5	5.8	69.9	3.15	38.6	0.02	0.00			445	02
500 ISL	6.23 D	6.18	34.314 D	26.993	113.3	0.816	0.30	D 13.0 D	4.3	75.5	3.24	39.6	0.02	0.00			504	
515	6.12	6.07	34.320	27.012	111.6	0.827	0.26	11.2	3.7	76.9	3.26	39.8	0.02	0.00			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 1307 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 25.1 N	119 57.5 W	11/07/2013	1837	UTC	879 m	320 12 kn	310 03 07	2	1014.0 mb	17.2 C	15.6 C	11 m	8/8	ST	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		16.60		16.60		33.672		24.590	333.8	0.000	5.84		254.3		105.0		1.0	0.42	1.1	0.06	0.21	0.95	0.16	0	
2	A	16.60		16.60		33.672		24.591	333.8	0.007	5.84		254.3		105.0		1.0	0.42	1.1	0.06	0.21	0.95B	0.16B	2	23
7	A	16.56		16.56		33.673		24.599	333.2	0.023	5.83		254.2		104.9		0.9	0.41	0.9	0.06	0.17	1.05	0.18	7	22
9	A	16.26		16.26		33.671		24.667	326.8	0.030	5.82		253.6		104.0		0.9	0.42	0.9	0.07	0.19	1.12	0.18	9	21
10	ISL	16.09	D	16.09		33.684	D	24.716	322.2	0.034	5.77	D	251.3	D	102.8		1.4	0.47	1.6	0.08	0.31	1.10	0.20	10	
17	A	13.80		13.80		33.646		25.184	277.8	0.054	5.39		234.8		91.7		4.5	0.83	6.2	0.20	1.18	0.93	0.32	17	20
20	ISL	13.47	D	13.47		33.662	D	25.264	270.3	0.063	5.14	D	223.9	D	86.9		6.3	0.92	7.6	0.22	1.04	0.85	0.31	20	
24		13.17		13.17		33.684		25.340	263.1	0.073	4.85		211.0		81.4		8.7	1.04	9.5	0.24	0.85	0.76	0.30	24	19
30	A	12.13		12.13		33.667		25.531	245.1	0.088	4.41		191.8		72.4		12.5	1.28	13.3	0.29	0.70	0.53	0.25	30	18
38	A	11.11		11.11		33.643		25.701	229.1	0.107	4.05		176.1		65.0		15.6	1.47	17.0	0.32	0.22	0.19	0.12	38	17
45		11.06		11.06		33.673		25.734	226.2	0.123	3.86		167.9		61.9		16.9	1.52	17.8	0.31	0.23	0.20	0.14	45	16
50		10.67		10.66		33.758		25.870	213.3	0.134	3.21		139.6		51.1		21.1	1.72	20.7	0.25	0.17	0.16	0.12	50	15
60		10.32		10.32		33.792		25.956	205.3	0.155	2.88		125.5		45.6		23.3	1.81	22.4	0.18	0.09	0.16	0.12	60	14
70		9.95		9.94		33.849		26.064	195.3	0.175	2.63		114.3		41.2		25.9	1.93	24.2	0.08	0.05	0.09	0.09	71	13
75	ISL	9.91	D	9.90		33.851	D	26.073	194.5	0.186	2.62	D	114.1	D	41.1		26.4	1.95	24.5	0.07	0.05	0.09	0.09	76	
85		9.73		9.72		33.874		26.121	190.1	0.204	2.47		107.6		38.6		27.2	1.98	25.1	0.05	0.04	0.07	0.09	86	12
100		9.41		9.40		33.913		26.204	182.5	0.232	2.31		100.5		35.8		29.1	2.05	26.0	0.03	0.07	0.05	0.09	101	11
121		8.97		8.96		33.968		26.319	172.0	0.269	2.11		91.8		32.4		33.1	2.16	28.0	0.00	0.00	0.02	0.11	122	10
125	ISL	8.90	D	8.89		33.986	D	26.345	169.7	0.278	2.07	D	90.1	D	31.8		33.6	2.17	28.2	0.00	0.01	0.02	0.11	126	
140		8.75		8.73		34.012		26.389	165.7	0.301	1.95		84.8		29.8		35.5	2.23	29.1	0.00	0.04	0.02	0.10	141	09
150	ISL	8.56	D	8.54		34.063	D	26.459	159.3	0.320	1.77	D	76.9	D	26.9		37.7	2.29	29.8	0.00	0.03	0.02	0.09	151	
170		8.26		8.24		34.100		26.533	152.5	0.349	1.50		65.1		22.6		42.0	2.42	31.3	0.00	0.00	0.01	0.09	171	08
200		7.73		7.71		34.084		26.600	146.5	0.394	1.59		69.1		23.8		45.3	2.44	32.2	0.00	0.06	0.01	0.06	202	07
232		7.33		7.31		34.090		26.663	141.0	0.440	1.42		61.8		21.0		50.1	2.55	33.7	0.00	0.04			234	06
250	ISL	7.42	D	7.39		34.123	D	26.677	140.0	0.468	1.24	D	53.9	D	18.4		51.7	2.61	34.1	0.00	0.04			252	
270		7.31		7.29		34.155		26.717	136.5	0.493	1.07		46.4		15.8		53.5	2.67	34.5	0.01	0.04			272	05
300	ISL	7.24	D	7.21		34.208	D	26.771	132.0	0.537	0.82	D	35.6	D	12.1		57.2	2.77	35.2	0.00	0.03			302	
321		7.10		7.07		34.231		26.808	128.6	0.560	0.68		29.4		10.0		59.8	2.84	35.7	0.00	0.02			324	04
380		6.57		6.54		34.260		26.903	120.3	0.634	0.47		20.6		6.9		67.4	2.96	37.5	0.00	0.00			383	03
400	ISL	6.46	D	6.42		34.269	D	26.925	118.4	0.662	0.43	D	18.7	D	6.3		69.9	3.00	37.9	0.00	0.01			403	
439		6.17		6.13		34.299		26.987	112.8	0.703	0.31		13.6		4.5		74.8	3.08	38.8	0.00	0.02			443	02
500	ISL	5.88	D	5.83		34.319	D	27.041	108.4	0.776	0.28	D	12.0	D	3.9		79.2	3.12	39.6	0.00	0.00			504	
517		5.85		5.81		34.321		27.046	108.1	0.789	0.25		10.8		3.6		80.4	3.13	39.8	0.00	0.00			521	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 1307 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 5.0 N	120 38.4 W	11/07/2013	1203	UTC	3815 m	330 14 kn			1013.1 mb	15.8 C	15.0 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		16.14		16.14		33.330		24.433	348.8	0.000	5.87		255.9		104.5		0.5	0.35	0.2	0.03	0.03	0.50	0.12	0	
2		16.14		16.14		33.330		24.433	348.9	0.007	5.87		255.9		104.5		0.5	0.35	0.2	0.03	0.03	0.50	0.12	2	20
10		16.14		16.14		33.331		24.434	349.0	0.035	5.88		256.3		104.6		0.5	0.35	0.2	0.03	0.03	0.52	0.11	10	19
20		15.57		15.56		33.367		24.591	334.4	0.069	6.06		264.0		106.6		0.5	0.42	1.3	0.06	0.09	0.70	0.21	20	18
30		14.50		14.49		33.376		24.831	311.9	0.101	6.08		264.9		104.7		0.9	0.47	2.0	0.09	0.22	0.54	0.23	30	17
40		13.96		13.96		33.308		24.891	306.4	0.132	6.09		265.3		103.7		1.6	0.52	2.4	0.13	0.27	0.37	0.18	40	16
50		12.99		12.99		33.272		25.059	290.7	0.162	5.99		260.8		99.9		2.4	0.59	3.4	0.24	0.25	0.41	0.26	50	15
60		12.74		12.74		33.342		25.163	281.0	0.191	5.80		252.7		96.4		2.9	0.64	4.2	0.27	0.27	0.39	0.30	60	14
70		12.38		12.37		33.327		25.223	275.6	0.219	5.64		245.5		92.9		3.8	0.68	5.0	0.21	0.07	0.34	0.28	71	13
75	ISL	12.08	D	12.07		33.335	D	25.285	269.7	0.234	5.63	D	245.4	D	92.3		5.2	0.77	6.6	0.16	0.05	0.26	0.22	76	
85		11.25		11.24		33.358		25.456	253.6	0.258	5.10		222.3		82.1		8.0	0.96	9.9	0.05	0.00	0.10	0.09	86	12
100		10.28		10.27		33.450		25.698	230.8	0.295	4.67		203.3		73.6		12.6	1.26	14.7	0.03	0.00	0.04	0.06	101	11
120		9.35		9.34		33.652		26.011	201.3	0.338	3.81		165.8		58.9		20.5	1.60	20.6	0.03	0.00	0.01	0.04	121	10
125	ISL	9.33	D	9.31		33.665	D	26.025	200.0	0.350	3.81	D	165.6	D	58.8		21.1	1.62	21.0	0.03	0.00	0.01	0.04	126	
141		9.14		9.12		33.734		26.110	192.3	0.379	3.55		154.3		54.6		23.1	1.70	22.3	0.03	0.00	0.01	0.03	142	09
150	ISL	9.00	D	8.98		33.812	D	26.194	184.5	0.399	3.32	D	144.3	D	50.9		25.2	1.79	23.6	0.03	0.00	0.01	0.04	151	
171		8.77		8.75		33.910		26.307	174.2	0.434	2.71		117.8		41.4		30.1	1.99	26.5	0.04	0.00	0.01	0.05	172	08
200		8.23		8.21		34.000		26.460	160.0	0.483	2.34		101.9		35.4		36.3	2.15	28.8	0.03	0.00	0.01	0.03	202	07
230		7.90		7.87		34.032		26.536	153.3	0.530	2.08		90.3		31.1		40.8	2.28	30.5	0.03	0.28			232	06
250	ISL	7.49	D	7.47		34.062	D	26.618	145.6	0.562	1.84	D	80.0	D	27.3		45.0	2.39	31.9	0.02	0.35			252	
271		7.29		7.26		34.066		26.651	142.8	0.590	1.59		69.3		23.6		49.3	2.50	33.3	0.02	0.42			273	05
300	ISL	7.08	D	7.05		34.134	D	26.734	135.3	0.634	1.07	D	46.7	D	15.8		54.9	2.68	34.8	0.02	0.18			302	
320		7.05		7.02		34.182		26.776	131.6	0.657	0.81		35.4		12.0		58.8	2.80	35.8	0.02	0.02			323	04
381		6.69		6.66		34.223		26.858	124.6	0.735	0.58		25.2		8.5		65.3	2.93	37.2	0.01	0.14			384	03
400	ISL	6.58	D	6.54		34.248	D	26.893	121.6	0.763	0.50	D	21.8	D	7.3		67.1	2.97	37.4	0.01	0.11			403	
439		6.44		6.40		34.297		26.951	116.6	0.805	0.34		14.7		4.9		70.7	3.04	37.7	0.01	0.05			443	02
500	ISL	6.01	D	5.97		34.312	D	27.019	110.7	0.880	0.29	D	12.5	D	4.1		77.7	3.12	39.2	0.01	0.11			504	
515		5.96		5.91		34.320	D	27.033	109.5	0.896	0.26		11.1		3.7		79.5	3.14	39.6	0.01	0.12			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 1307 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 45.0 N	121 19.1 W	11/07/2013	0517	UTC	3398 m	340 16 kn			1014.1 mb	16.6 C	15.4 C				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		16.38		16.38		33.403	24.434	348.7	0.000	5.83		254.0		104.3		0.2	0.35	0.2	0.03	0.02	0.56	0.09	0	
2		16.38		16.38		33.403	24.434	348.8	0.007	5.83		254.0		104.3		0.2	0.35	0.2	0.03	0.02	0.56	0.09	2	21
10		16.38		16.38		33.403	24.434	349.1	0.035	5.86		255.4		104.8		0.6	0.36	0.4	0.03	0.08	0.63	0.08	10	20
20		16.38		16.38		33.406	24.437	349.1	0.070	5.85		255.0		104.7		0.6	0.35	0.3	0.03	0.07	0.55	0.12	20	19
30		15.87		15.86		33.506	24.631	331.0	0.104	5.99		261.2		106.2		0.5	0.42	1.4	0.06	0.24	0.74	0.21	30	18
40		13.87		13.86		33.410	24.989	297.1	0.135	6.05		263.5		102.9		1.5	0.58	3.1	0.15	0.39	0.61	0.23	40	17
50		13.01		13.00		33.324	25.097	287.0	0.164	5.77		251.3		96.3		2.6	0.65	3.6	0.55	0.26	0.48	0.33	50	16
60		12.22		12.21		33.347	25.268	270.9	0.192	5.54		241.4		91.0		4.2	0.78	6.4	0.23	0.06	0.26	0.17	60	14
71		11.60		11.59		33.398	25.422	256.5	0.221	5.34		232.5		86.6		6.6	0.98	9.7	0.24	0.00	0.13	0.10	72	13
75	ISL	11.51	D	11.50	D	33.410	25.448	254.1	0.233	5.37	D	233.8	D	86.9		7.1	1.01	10.1	0.23	0.01	0.12	0.10	76	
85		11.30		11.29		33.421	25.497	249.7	0.257	5.14		223.9		82.8		8.1	1.07	11.0	0.18	0.04	0.10	0.10	86	12
100		10.66		10.64		33.469	25.649	235.5	0.293	4.65		202.6		74.0		11.7	1.25	14.0	0.03	0.01	0.05	0.08	101	11
120		9.84		9.82		33.609	25.898	212.1	0.338	3.83		166.7		59.8		18.3	1.59	19.4	0.03	0.10	0.02	0.05	121	10
125	ISL	9.51	D	9.50	D	33.666	25.996	202.9	0.351	3.71	D	161.6	D	57.6		19.7	1.64	20.3	0.03	0.08	0.02	0.05	126	
140		9.20		9.18		33.735	26.101	193.2	0.378	3.41		148.2		52.5		23.7	1.78	22.9	0.03	0.01	0.01	0.06	141	09
150	ISL	9.03	D	9.01	D	33.818	26.194	184.5	0.399	3.19	D	138.6	D	48.9		26.1	1.87	24.0	0.02	0.01	0.01	0.06	151	
170		8.55		8.53		33.928	26.355	169.5	0.432	2.88		125.4		43.8		30.8	2.04	26.3	0.02	0.00	0.01	0.05	171	08
200		8.19		8.17		33.990	26.458	160.2	0.482	2.51		109.4		38.0		35.9	2.21	28.4	0.00	0.02	0.00	0.05	202	07
230		8.04		8.01		34.065	D 26.541	152.8	0.532	2.10		91.2		31.6		40.0	2.37	30.2	0.00	0.00			232	06
250	ISL	7.84	D	7.82		34.080	D 26.583	149.2	0.563	1.67	D	72.5	D	25.0		43.7	2.54	31.6	0.00	0.00			252	
270		7.89		7.86		34.149	26.630	145.2	0.588	1.20		52.2		18.0		47.3	2.70	32.9	0.00	0.00			272	05
300	ISL	7.63	D	7.60	D	34.175	D 26.689	140.0	0.635	1.01	D	43.7	D	15.0		52.0	2.80	34.2	0.00	0.00			302	
320		7.31		7.27		34.170	26.731	136.1	0.659	0.92		40.1		13.7		55.0	2.87	35.0	0.00	0.00			323	04
380		6.75		6.72		34.211	26.840	126.3	0.738	0.64		27.9		9.4		63.4	3.03	36.8	0.00	0.00			383	03
400	ISL	6.61	D	6.57		34.220	D 26.868	124.0	0.768	0.58	D	25.2	D	8.4		65.7	3.07	37.3	0.00	0.00			403	
440		6.33		6.29		34.231	26.913	120.0	0.811	0.53		23.0		7.6		70.3	3.14	38.4	0.00	0.00			444	02
500	ISL	6.05	D	6.01		34.286	D 26.993	113.1	0.888	0.34	D	14.6	D	4.8		77.3	3.24	39.5	0.00	0.02			504	
516		5.92		5.88		34.290	27.013	111.3	0.899	0.30		12.9		4.3		79.2	3.27	39.8	0.00	0.02			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 1307 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 24.8 N	121 59.8 W	10/07/2013	2152	UTC	4172 m	350 14 kn	340 02 06	2	1016.0 mb	17.0 C	15.9 C	11 m	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
0		16.67		16.67		33.434	24.391	352.8	0.000	5.84		254.7		105.1		1.0	0.37	0.5	0.04	0.42	0.54	0.08	0	
3		16.67		16.67		33.434	24.391	352.9	0.011	5.84		254.7		105.1		1.0	0.37	0.5	0.04	0.42	0.54	0.08	3	24
10		16.66		16.66		33.433	24.393	352.9	0.035	5.85		254.8		105.2		0.9	0.36	0.5	0.04	0.18	0.58	0.10	10	23
20		16.62		16.62		33.432	24.401	352.5	0.071	5.85		255.0		105.2		0.9	0.36	0.5	0.04	0.17	0.53	0.08	20	22
30		14.65		14.65		33.377	24.798	315.0	0.104	6.24		271.8		107.8		1.7	0.44	1.4	0.08	0.13	0.46	0.14	30	21
41		14.09		14.08		33.387	24.926	303.1	0.138	5.85		255.0		100.0		2.0	0.56	2.7	0.23	0.81	0.55	0.28	41	20
50	ISL	14.33	D	14.32		33.590	D 25.032	293.3	0.165	5.80	D	252.5	D	99.6		3.9	0.69	4.5	0.17	1.05	0.51	0.25	50	
51		14.32		14.31		33.586	25.032	293.4	0.168	5.72		249.4		98.4		4.1	0.70	4.7	0.17	1.08	0.50	0.25	51	19
60		13.82		13.81		33.533	25.095	287.6	0.194	5.63		245.3		95.8		3.9	0.74	5.1	0.36	0.88	0.40	0.28	60	18
70		13.09		13.08		33.525	25.238	274.2	0.222	5.46		237.9		91.5		3.3	0.81	6.9	0.67	0.03	0.27	0.17	71	17
75	ISL	12.80	D	12.79		33.536	D 25.302	268.3	0.236	5.46	D	237.7	D	90.9		3.6	0.84	7.7	0.47	0.05	0.23	0.15	76	
86		12.55		12.54		33.568	25.376	261.5	0.265	5.24		228.4		86.9		4.3	0.92	9.5	0.02	0.08	0.13	0.09	87	16
100	ISL	11.67	D	11.66		33.506	D 25.496	250.3	0.302	5.24	D	228.3	D	85.2		7.6	1.11	11.7	0.02	0.13	0.05	0.07	101	
101		11.65		11.64		33.508	25.500	249.9	0.303	5.19		225.8		84.2		7.8	1.12	11.9	0.02	0.13	0.05	0.07	102	15
120		10.62		10.60		33.503	25.682	232.8	0.349	4.53		197.2		72.0		13.3	1.31	15.3	0.02	0.08	0.02	0.05	121	14
125	ISL	10.24	D	10.23		33.480	D 25.730	228.3	0.362	4.50	D	196.1	D	71.0		14.4	1.35	16.1	0.02	0.07	0.02	0.05	126	
140		9.58		9.56		33.572	25.913	211.1	0.393	4.13		179.7		64.1		17.9	1.46	18.5	0.03	0.05	0.01	0.04	141	13
150	ISL	9.31	D	9.29		33.672	D 26.034	199.7	0.416	3.79	D	164.8	D	58.5		21.5	1.62	20.9	0.02	0.04	0.01	0.04	151	
170		9.02		9.00		33.860	26.228	181.7	0.452	2.83		123.0		43.4		28.7	1.95	25.7	0.02	0.03	0.01	0.04	171	12
200	ISL	8.50	D	8.48	D	33.955	D 26.384	167.3	0.507	2.74	D	119.3	D	41.7		32.5	2.04	27.2	0.02	0.09	0.00	0.04	202	
201		8.52		8.50		33.947	26.375	168.2	0.506	2.71		117.7		41.1		32.6	2.04	27.2	0.02	0.09	0.00	0.04	203	11
229		8.06		8.04		33.991	26.480	158.6	0.552	2.53		110.2		38.1		37.4	2.14	28.9	0.02	0.07			231	10
250	ISL	7.77	D	7.75	D	34.003	D 26.532	153.9	0.588	2.42	D	105.4	D	36.2		40.4	2.25	30.2	0.02	0.04			252	
270		7.75		7.72		34.038	26.564	151.3	0.615	1.99		86.6		29.7		43.4	2.35	31.5	0.02	0.01			272	09
300	ISL	7.52	D	7.49	D	34.089	D 26.636	144.9	0.663	1.55	D	67.6	D	23.1		48.2	2.49	33.0	0.02	0.02			302	
319		7.32		7.29		34.094	26.669	142.0	0.687	1.41		61.3		20.8		51.3	2.58	34.0	0.02	0.02			322	08
369		6.93		6.89		34.156	26.773	132.7	0.755	0.92		40.0		13.5		59.2	2.80	36.5	0.01	0.05			372	07
400	ISL	6.50	D	6.46		34.138	D 26.817	128.7	0.801	0.89	D	38.5	D	12.9		63.8	2.87	37.5	0.01	0.06			403	
438		6.19		6.15		34.155	26.871	123.8	0.844	0.72		31.1		10.3		69.5	2.95	38.7	0.02	0.07			442	06
500	ISL	5.87	D	5.83		34.219	D 26.963	115.7	0.924	0.47	D	20.4	D	6.7		77.4	3.07	39.9	0.01	0.09			504	
514		5.79		5.74		34.231	26.983	113.9	0.934	0.40		17.3		5.7		79.1	3.10	40.2	0.01	0.09			518	05
600	ISL	5.40	D	5.35		34.312	D 27.094	104.1	1.035	0.25	D	10.9	D	3.5		89.0	3.19	41.5	0.01	0.10			605	
651		5.10		5.05		34.342	27.155	98.6	1.080	0.22		9.4		3.1		94.8	3.25	42.2	0.01	0.10			657	04
700	ISL	4.82	D	4.76	D	34.368	D 27.208	93.7	1.135	0.25	D	10.7	D	3.4									706	
800	ISL	4.46	D	4.39	D	34.411	D 27.283	87.2	1.226	0.31	D	13.3	D	4.2									807	
900	ISL	4.15	D	4.08	D	34.442	D 27.341	82.1	1.312	0.40	D	17.4	D	5.5									908	
1000	ISL	3.87	D	3.80	D	34.473	D 27.395	77.4	1.392	0.52	D	22.8	D	7.2									1009	
1100	ISL	3.58	D	3.50	D	34.498	D 27.445	72.9	1.468	0.67	D	29.1	D	9.1									1111	
1200	ISL	3.35	D	3.26	D	34.515	D 27.482	69.6	1.541	0.78	D	34.1	D	10.6									1212	
1800	ISL	2.29	D	2.16	D	34.602	D 27.650	54.2	1.917	1.56	D	68.0	D	20.5									1820	
2000	ISL	2.08	D	1.94	D	34.622	D 27.684	51.2	2.024	1.85	D	80.3	D	24.1									2024	
2200	ISL	1.94	D	1.78	D	34.636	D 27.708	49.2	2.127	2.06	D	89.4	D	26.7									2227	
2400	ISL	1.84	D	1.67	D	34.646	D 27.726	47.9	2.225	2.27	D	98.7	D	29.4									2431	
2600	ISL	1.74	D	1.55	D	34.655	D 27.743	46.7	2.322	2.45	D	106.4	D	31.6									2635	
2800	ISL	1.68	D	1.47	D	34.660	D 27.754	46.2	2.417	2.56	D	111.2	D	33.0									2839	
3000	ISL	1.62	D	1.40	D	34.664	D 27.763	45.8	2.511	2.68	D	116.3	D	34.4									3043	
3200	ISL	1.58	D	1.34	D	34.668	D 27.772	45.5	2.604	2.80	D	121.8	D	36.0									3247	
3400	ISL	1.56	D	1.29	D	34.671	D 27.778	45.5	2.697	2.87	D	124.9	D	36.9									3452	
3497		1.55		1.27		34.663	27.774	46.2	3.141	2.91		126.6		37.4		170.1	2.68	38.0	0.01	0.13			3551	03
3499		1.55		1.27		34.668	27.778	45.9	3.142	2.90		125.8		37.1		169.9	2.67	38.0	0.01	0.06			3553	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 1307 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 39.7 W	10/07/2013	1547 UTC	4014 m	340 15 kn	330 03 08	2	1016.8 mb	16.4 C	15.1 C	19 m	8/8	ST	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		17.09		17.09		33.273		24.170	373.8	0.000	5.64	245.8		102.2		1.9	0.32	0.0	0.01	0.00	0.18	0.03	0	
2	A	17.09		17.09		33.273		24.170	373.9	0.008	5.64	245.8		102.2		1.9	0.32	0.0	0.01	0.00	0.18	0.03	2	22
10	ISL	17.09	D	17.08		33.270	D	24.168	374.4	0.038	5.67	D247.1	D	102.7		1.9	0.32	0.0	0.01	0.13	0.17	0.03	10	
11	A	17.09		17.08		33.274		24.172	374.1	0.041	5.64	245.9		102.2		1.9	0.32	0.0	0.02	0.15	0.17	0.03	11	21
15	A	17.05		17.04		33.269		24.177	373.7	0.056	5.65	246.3		102.3		1.9	0.32	0.0	0.01	0.18	0.17	0.04	15	23
20	ISL	16.77	D	16.77		33.258	D	24.234	368.5	0.066	5.73	D249.8	D	103.2		2.0	0.32	0.0	0.01	0.12	0.17	0.04	20	
29	A	15.84		15.84		33.209		24.409	352.1	0.107	5.92	258.1		104.7		2.1	0.31	0.0	0.01	0.00	0.18	0.04	29	19
30	ISL	15.77	D	15.76		33.202	D	24.420	351.0	0.102	5.93	D258.4	D	104.6		2.1	0.31	0.0	0.01	0.00	0.18	0.05	30	
40		15.68		15.67		33.251		24.479	345.8	0.145	5.86	255.3		103.3		2.2	0.31	0.0	0.01	0.00	0.24	0.08	40	18
50	ISL	14.78	D	14.77		33.226	D	24.656	329.1	0.171	5.96	D259.7	D	103.1		2.0	0.34	0.0	0.01	0.01	0.40	0.24	50	
51	A	14.65		14.64		33.230		24.687	326.3	0.182	5.95	259.2		102.7		2.0	0.34	0.0	0.01	0.01	0.42	0.26	51	17
58		14.43		14.42		33.252		24.751	320.3	0.205	5.91	257.5		101.6		2.0	0.37	0.0	0.02	0.13	0.48	0.31	58	16
65	A	13.89		13.88		33.245		24.858	310.3	0.227	5.89	256.7		100.2		2.4	0.39	0.3	0.07	0.23	0.39	0.29	66	15
75		13.36		13.35		33.267		24.982	298.7	0.258	5.81	253.2		97.8		2.7	0.49	1.3	0.31	0.37	0.20	0.17	76	14
87		12.82		12.81		33.225		25.059	291.7	0.293	5.78	251.7		96.1		3.3	0.51	2.0	0.38	0.06	0.16	0.14	88	13
100		12.23		12.22		33.256		25.197	278.8	0.330	5.58	243.0		91.6		4.4	0.59	4.0	0.08	0.13	0.12	0.12	101	12
113		11.25		11.24		33.286		25.402	259.5	0.365	5.24	228.2		84.3		7.5	0.83	8.1	0.02	0.00	0.06	0.06	114	11
119		11.23		11.21		33.305		25.421	257.8	0.381	5.19	226.0		83.4		7.9	0.86	8.6	0.03	0.08	0.06	0.06	120	10
125	ISL	11.06	D	11.04		33.400	D	25.525	248.0	0.389	5.12	D223.1	D	82.1		8.9	0.92	9.7	0.03	0.07	0.05	0.06	126	
140		10.42		10.40		33.466		25.689	232.6	0.432	4.75	206.7		75.1		11.5	1.06	12.4	0.03	0.04	0.04	0.06	141	09
150	ISL	10.05	D	10.03		33.515	D	25.791	223.1	0.449	4.52	D196.9	D	71.0		15.1	1.25	15.5	0.02	0.03	0.03	0.05	151	
170		9.17		9.15		33.709		26.087	195.1	0.496	3.71	161.5		57.2		22.4	1.64	21.6	0.02	0.01	0.00	0.02	171	08
200		8.61		8.59		33.894		26.320	173.5	0.552	3.30	143.7		50.3		28.9	1.83	24.8	0.00	0.04	0.00	0.02	202	07
231		8.17		8.14		33.970		26.447	161.8	0.604	2.86	124.3		43.1		34.7	2.01	27.4	0.00	0.00			233	06
250	ISL	7.91	D	7.89		33.989	D	26.501	157.0	0.629	2.67	D116.0	D	40.0		38.6	2.12	28.9	0.00	0.05			252	
270		7.60		7.58		34.014		26.565	151.1	0.665	2.33	101.2		34.6		42.6	2.24	30.5	0.00	0.10			272	05
300	ISL	7.27	D	7.25		34.047	D	26.639	144.4	0.705	1.87	D 81.4	D	27.7		48.8	2.42	32.8	0.00	0.04			302	
320		7.04		7.01		34.061		26.683	140.5	0.738	1.57	68.4		23.1		52.9	2.54	34.3	0.00	0.00			323	04
380		6.54		6.51		34.117		26.794	130.5	0.819	1.01	43.8		14.7		62.6	2.79	37.1	0.00	0.03			383	03
400	ISL	6.43	D	6.39		34.131	D	26.821	128.2	0.842	0.91	D 39.4	D	13.1		65.2	2.84	37.6	0.00	0.04			403	
439		6.18		6.14		34.158		26.874	123.5	0.894	0.74	32.0		10.6		70.2	2.93	38.6	0.00	0.06			443	02
500	ISL	5.82	D	5.78		34.201	D	26.954	116.4	0.965	0.53	D 23.2	D	7.6		77.8	3.05	40.0	0.00	0.05			504	
515		5.73		5.68		34.214		26.977	114.4	0.984	0.45	19.5		6.4		79.7	3.08	40.3	0.00	0.05			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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1307 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 45.0 N	123 19.9 W	10/07/2013	0755 UTC	3632 m	320 16 kn			1017.0 mb	17.9 C	15.6 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		17.98		17.98		33.339	D	24.007	389.4	0.000	5.49	239.3		101.2		2.5	0.30	0.0	0.02	0.02	0.08	0.02	0	
2		17.98		17.98		33.339	D	24.007	389.5	0.008	5.49	239.3		101.2		2.5	0.30	0.0	0.02	0.02	0.08	0.02	2	20
10		17.97		17.97		33.340		24.010	389.5	0.039	5.50	239.7		101.4		2.4	0.30	0.0	0.01	0.01	0.09	0.01	10	19
20	ISL	17.60	D	17.60		33.355	D	24.111	380.3	0.078	5.61	D244.5	D	102.7		2.6	0.29	0.0	0.01	0.04	0.09	0.03	20	
26		16.87		16.86		33.386		24.310	361.5	0.100	5.70	248.6		103.0		2.6	0.28	0.0	0.01	0.06	0.10	0.04	26	18
30	ISL	16.79	D	16.78		33.390	D	24.332	359.5	0.115	5.78	D251.9	D	104.2		2.6	0.28	0.0	0.01	0.05	0.10	0.03	30	
40		16.67		16.67		33.391		24.360	357.2	0.150	5.71	248.7		102.7		2.6	0.28	0.0	0.01	0.04	0.10	0.02	40	17
50		16.50		16.49		33.398		24.405	353.2	0.186	5.71	249.1		102.5		2.6	0.28	0.0	0.01	0.10	0.10	0.03	50	16
62		16.01		16.00		33.412		24.529	341.8	0.227	5.81	253.3		103.2		2.7	0.26	0.0	0.02	0.05	0.15	0.04	62	15
75		15.24		15.22		33.439		24.723	323.7	0.271	5.92	257.8		103.5		2.7	0.26	0.0	0.01	0.05	0.16	0.04	76	14
87		14.70		14.68		33.438		24.840	312.8	0.309	5.89	256.7		101.9		2.7	0.27	0.0	0.01	0.04	0.21	0.07	88	13
100	ISL	13.75	D	13.73		33.339	D	24.962	301.5	0.351	5.92	D258.1	D	100.5		3.1	0.32	0.0	0.02	0.03	0.32	0.16	101	
101		13.71		13.70		33.342		24.972	300.6	0.352	5.85	254.7		99.1		3.1	0.32	0.0	0.02	0.03	0.33	0.16	102	12
112		13.47		13.45		33.360		25.036	294.7	0.384	5.73	249.7		96.6		3.5	0.37	0.5	0.06	0.10	0.32	0.16	113	11
125	ISL	12.56	D	12.54		33.393	D	25.242	275.3	0.425	5.52	D240.4	D	91.3		4.8	0.52	3.3	0.11	0.03	0.25	0.19	126	
126		12.55		12.54		33.368		25.223	277.1	0.424	5.45	237.4		90.2		4.9	0.53	3.5	0.11	0.02	0.24	0.19	127	10
140		12.05		12.03		33.377		25.327	267.6	0.462	5.34	232.7		87.5		5.6	0.60	4.8	0.07	0.04	0.21	0.19	141	09
150	ISL	11.00	D	10.98		33.403	D	25.539	247.3	0.492	5.27	D229.5	D	84.3		8.6	0.82	8.3	0.06	0.05	0.15	0.14	151	
170		9.90		9.88		33.522		25.822	220.5	0.535	4.49	195.7		70.3		14.6	1.25	15.4	0.02	0.06	0.04	0.04	171	08
200		9.09		9.07		33.791		26.164	188.4	0.596	3.60	156.5		55.3		24.3	1.68	22.4	0.00	0.04	0.00	0.02	202	07
231		8.66		8.63		33.920		26.334	172.8	0.652	3.12	135.7		47.6		30.0	1.86	25.3	0.00	0.06			233	06
250	ISL	8.32	D	8.30		33.970	D	26.424	164.5	0.689	2.89	D125.9	D	43.8		34.1	1.99	27.1	0.00	0.04			252	
272		7.96		7.94		34.007		26.507	156.8	0.719	2.48	107.7		37.2		38.8	2.14	29.1	0.00	0.02			274	05
300	ISL	7.56	D	7.53		34.021	D	26.578	150.4	0.768	2.23	D 97.2	D	33.2		44.7	2.29	31.2	0.00	0.03			302	
321		7.16		7.13		34.039		26.648	143.8	0.793	1.89	82.1		27.8		49.1	2.41	32.7	0.00	0.03			324	04
382		6.49		6.45		34.095	D	26.784	131.4	0.884	1.19	D 51.6	D	17.2									385	03
400	ISL	6.38	D	6.34		34.107	D	26.808	129.4	0.908	1.10	D 47.8	D	15.9		63.2	2.73	36.6	0.00	0.01			403	
439		6.06		6.02		34.137		26.874	123.4	0.950	0.84	36.7		12.1		70.2	2.89	38.5	0.00	0.00			443	02
500	ISL	5.78	D	5.73		34.193	D	26.954	116.4	1.032	0.59	D 25.4	D	8.4		77.6	3.01	39.7	0.00	0.03			504	
514		5.71		5.67		34.211		26.976	114.4	1.039	0.50	21.6		7.1		79.3	3.04	40.0	0.00	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 1307 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	124 0.0 W	10/07/2013	0138	UTC	3713 m	340 12 kn	320 03 08	1	1017.1 mb	19.0 C	16.3 C		7/8	SC	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		18.35		18.35	33.398		23.962	393.7	0.000	5.49		239.6		102.1		2.6		0.29		0.0		0.01		0.04	0.07	0.01	0	
2		18.35		18.35	33.398		23.962	393.7	0.008	5.49		239.6		102.1		2.6		0.29		0.0		0.01		0.04	0.07	0.01	2	20
10		18.31		18.31	33.396		23.969	393.4	0.039	5.48		238.9		101.8		2.6		0.29		0.1		0.01		0.06	0.08	0.01	10	19
20	ISL	18.10	D	18.10	33.402	D	24.027	388.3	0.079	5.53	D	241.2	D	102.3		2.6		0.30		0.0		0.01		0.04	0.09	0.01	20	
25		17.42		17.42	33.417		24.202	371.7	0.098	5.57		242.7		101.6		2.6		0.30		0.0		0.01		0.03	0.10	0.01	25	18
30	ISL	16.91	D	16.90	33.431	D	24.335	359.2	0.116	5.76	D	251.1	D	104.2		2.7		0.29		0.0		0.01		0.04	0.10	0.01	30	
40		16.78		16.77	33.419		24.357	357.4	0.152	5.69		248.1		102.6		2.7		0.28		0.0		0.01		0.06	0.09	0.01	40	17
50		16.70		16.69	33.442		24.393	354.4	0.187	5.68		247.7		102.3		2.7		0.28		0.0		0.01		0.05	0.09	0.01	50	16
62		16.38		16.37	33.493		24.507	343.9	0.229	5.73		249.7		102.5		2.7		0.27		0.0		0.01		0.06	0.12	0.04	62	15
75	ISL	15.78	D	15.76	33.653	D	24.769	319.4	0.274	5.87	D	255.6	D	103.8		2.6		0.24		0.0		0.01		0.03	0.16	0.05	76	
76		15.78		15.77	33.639		24.757	320.6	0.275	5.82		253.5		103.0		2.6		0.24		0.0		0.01		0.03	0.16	0.05	77	14
87		15.09		15.07	33.593		24.876	309.6	0.310	5.79		252.4		101.1		2.6		0.26		0.0		0.01		0.03	0.25	0.10	88	13
100		14.34		14.32	33.483		24.952	302.6	0.350	5.78		251.8		99.3		2.9		0.28		0.0		0.01		0.02	0.27	0.17	101	12
112		13.50		13.49	33.438		25.089	289.7	0.385	5.63		245.4		95.1		3.6		0.39		0.9		0.09		0.07	0.28	0.18	113	11
125	ISL	12.87	D	12.86	33.458	D	25.230	276.5	0.425	5.47	D	238.2	D	91.1		4.7		0.51		3.0		0.13		0.06	0.26	0.19	126	
126		12.77		12.75	33.457		25.250	274.6	0.425	5.42		236.0		90.1		4.8		0.52		3.2		0.14		0.06	0.26	0.19	127	10
141		11.79		11.77	33.456		25.436	257.1	0.465	5.15		224.1		83.8		6.8		0.71		6.7		0.02		0.04	0.18	0.13	142	09
150	ISL	11.60	D	11.58	33.479	D	25.490	252.2	0.490	5.12	D	222.9	D	83.0		8.1		0.80		8.2		0.03		0.04	0.15	0.11	151	
171		10.51		10.48	33.480		25.686	233.7	0.539	4.77		207.5		75.5		11.1		1.01		11.6		0.04		0.03	0.08	0.08	172	08
200		9.55		9.53	33.655		25.984	205.7	0.603	3.95		172.1		61.4		19.7		1.50		19.2		0.01		0.04	0.02	0.03	202	07
230		8.94		8.91	33.835		26.224	183.3	0.661	3.40		147.8		52.1		26.6		1.76		23.4		0.01		0.03			232	06
250	ISL	8.47	D	8.44	33.945	D	26.383	168.4	0.699	3.05	D	132.9	D	46.4		32.1		1.94		25.9		0.01		0.03			252	
270		8.10		8.07	33.994		26.477	159.7	0.729	2.59		112.6		39.0		37.6		2.11		28.3		0.01		0.03			272	05
300	ISL	7.67	D	7.64	34.047	D	26.582	150.1	0.779	2.11	D	92.0	D	31.5		43.4		2.31		30.7		0.01		0.02			302	
321		7.56		7.53	34.068		26.616	147.2	0.807	1.72		74.7		25.6		47.5		2.45		32.3		0.01		0.02			324	04
381		6.94		6.90	34.130		26.752	134.8	0.891	1.02		44.4		15.0		58.7		2.76		35.9		0.01		0.05			384	03
400	ISL	6.74	D	6.70	34.157	D	26.800	130.4	0.921	0.90	D	39.2	D	13.2		61.2		2.81		36.4		0.01		0.04			403	
440		6.53		6.49	34.184		26.851	126.1	0.968	0.69		29.9		10.0		66.6		2.92		37.5		0.01		0.03			444	02
500	ISL	5.96	D	5.91	34.206	D	26.942	117.8	1.047	0.55	D	23.8	D	7.9		75.3		3.04		39.1		0.01		0.05			504	
517		5.89		5.84	34.226		26.967	115.6	1.061	0.43		18.5		6.1		77.8		3.08		39.5		0.01		0.05			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 1307 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
33 14.8 N	117 27.8 W	06/07/2013	2243	UTC	19 m	240 08 kn	240 02 06	1	1007.5 mb	21.1 C	19.3 C		6/8	SC	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		21.10		21.10	33.698	D	23.477	440.0	0.000	5.58		243.3		109.3		2.5		0.26		0.3		0.02		1.09	0.45	0.12	0	
2		21.10		21.10	33.698	D	23.477	440.1	0.009	5.58		243.3		109.3		2.5		0.26		0.3		0.02		1.09	0.45	0.12	2	05
5		19.76		19.76	33.656	D	23.802	409.1	0.022	5.83		254.5		111.5		2.0		0.27		0.0		0.02		0.27	0.38	0.13	5	04
10		15.80		15.80	33.587	D	24.707	323.0	0.040	6.46		281.7		114.5		3.3		0.42		1.1		0.05		1.33	2.36	0.70	10	02
10		15.80		15.80	33.587	D	24.707	323.0	0.040																		10	03
15		13.62		13.62	33.522	D	25.124	283.4	0.055	6.31		275.0		106.9		4.8		0.55		2.7		0.09		1.71	2.50	0.75	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 1307 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 57.4 N	117 18.3 W	06/07/2013	1817	UTC	64 m	260 05 kn	220 04 08	2	1009.1 mb	19.3 C	20.8 C	15 m	8/8	ST	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		21.06		21.06	33.699	D	23.489	438.8	0.000	5.49		239.7		107.6		2.4		0.28		0.0		0.02		0.18	0.44	0.11	0	
2	A	21.06		21.06	33.699	D	23.489	438.9	0.009	5.49		239.7		107.6		2.4		0.28		0.0		0.02		0.18	0.44	0.11	2	08
9	A	18.16		18.16	33.634	D	24.189	372.4	0.038	5.81		253.3		107.7		2.2		0.32		0.4		0.02		1.39	0.43	0.17	9	07
10	ISL	17.16	D	17.16	33.614	D	24.414	350.9	0.041	6.11	D	266.3	D	111.1		2.4		0.34		0.3		0.02		1.04	0.55	0.23	10	
12	A	15.65		15.65	33.567	D	24.725	321.4	0.048	6.31		275.0		111.4		2.8		0.37		0.1		0.02		0.33	0.79	0.34	12	06
20	ISL	12.39	D	12.38	33.529	D	25.375	259.7	0.071	5.82	D	253.5	D	96.1		7.1		0.77		6.4		0.15		0.94	0.98	0.44	20	
24	A	11.96		11.96	33.488	D	25.424	255.1	0.082	5.15		224.4		84.3		9.2		0.97		9.5		0.22		1.25	1.08	0.49	24	05
30	ISL	11.64	D	11.64	33.504	D	25.496	248.4	0.097	4.62	D	201.2	D	75.0		11.0		1.14		12.1		0.33		1.15	0.75	0.38	30	
32		11.36		11.35	33.517	D	25.559	242.5	0.102	4.52		196.8		73.0		11.6		1.19		12.9		0.37		1.12	0.65	0.34	32	04
40	A	10.92		10.91	33.612	D	25.712	228.1	0.121	3.84		167.1		61.4		14.4		1.46		15.2		0.30		0.96	0.42	0.30	40	03
50	ISL	10.73	D	10.72	33.644	D	25.770	222.8	0.144	3.24	D	141.0	D	51.6		17.3		1.68		17.4		0.30		2.42	0.28	0.47	50	
51	A	10.67		10.66	33.643	D	25.780	221.9	0.146	3.27		142.4		52.1		17.6		1.70		17.6		0.30		2.57	0.27	0.49	51	02
58		10.57		10.56	33.654	D	25.806	219.5	0.161	3.13		136.1		49.7		19.7		1.76		18.8		0.29		1.41	0.27	0.56	58	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 1307 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 54.8 N	117 23.7 W	07/07/2013	0145	UTC	646 m	300 01 kn	250 01 07	2	1007.3 mb	20.1 C	18.1 C		7/8	SC	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		21.01		21.01		33.682	D	23.489	438.8	0.000	5.45		237.6		106.6		2.6	0.28	0.3	0.02	6.67	0.18	0.05	0	
2		21.01		21.01		33.682	D	23.490	438.8	0.009	5.45		237.6		106.6		2.6	0.28	0.3	0.02	6.67	0.18	0.05	2	20
10		19.82		19.82		33.648	D	23.781	411.4	0.043	5.76		251.4		110.3		2.5	0.26	0.0	0.03	3.92	0.23	0.05	10	19
20		13.50		13.50		33.507	D	25.137	282.3	0.078	6.21		270.4		104.9		5.2	0.54	2.5	0.08	1.16	0.76	0.25	20	18
30		12.23		12.22		33.438	D	25.335	263.7	0.106	5.14		223.9		84.5		7.6	0.88	8.4	0.18	2.21	0.44	0.21	30	17
40		11.86		11.85		33.529	D	25.476	250.6	0.132	4.74		206.3		77.3		9.9	1.14	12.6	0.09	3.41	0.24	0.16	40	16
50		11.02		11.01		33.525	D	25.626	236.5	0.156	4.21		183.4		67.5		13.7	1.30	15.1	0.12	3.39	0.22	0.16	50	15
60		10.34		10.33		33.544	D	25.760	223.9	0.179	3.97		172.8		62.7		16.4	1.41	17.3	0.05	0.67	0.09	0.09	60	14
70		10.06		10.05		33.639	D	25.883	212.4	0.201	3.50		152.2		54.9		19.9	1.62	20.0	0.03	0.41	0.05	0.07	71	13
75	ISL	10.22	D	10.21		33.739	D	25.933	207.8	0.212	2.83	D	123.1	D	44.6		21.4	1.73	21.1	0.03	0.45	0.06	0.08	76	
85		10.10		10.09		33.796	D	25.999	201.8	0.232	2.56		111.5		40.3		24.6	1.94	23.4	0.03	0.53	0.07	0.10	86	12
100		9.98		9.96		33.876	D	26.083	194.2	0.262	2.30		100.1		36.1		27.8	2.03	24.5	0.04	0.38	0.04	0.12	101	11
120		9.83		9.81		33.979	D	26.189	184.6	0.301	2.09		91.0		32.7		30.3	2.12	25.3	0.04	0.48	0.03	0.13	121	10
125	ISL	9.83	D	9.82		34.004	D	26.207	182.9	0.310	1.95	D	84.7	D	30.5		30.9	2.14	25.6	0.04	0.49	0.03	0.14	126	
140		9.81		9.79		34.054	D	26.252	179.1	0.337	1.78		77.6		27.9		32.5	2.21	26.6	0.03	0.50	0.03	0.15	141	09
150	ISL	9.89	D	9.87		34.113	D	26.284	176.3	0.355	1.71	D	74.2	D	26.8		33.3	2.26	26.9	0.03	0.52	0.02	0.15	151	
171		9.68		9.66		34.150	D	26.349	170.6	0.392	1.42		61.7		22.2		35.1	2.36	27.6	0.03	0.57	0.01	0.14	172	08
200		9.68		9.66		34.240	D	26.420	164.6	0.441	1.14		49.4		17.7		37.3	2.46	28.1	0.03	0.32	0.03	0.09	202	07
229		9.58		9.56		34.269	D	26.460	161.4	0.488	1.02		44.5		15.9		38.7	2.51	28.7	0.03	0.47			231	06
250	ISL	9.29	D	9.26		34.262	D	26.504	157.6	0.522	1.07	D	46.6	D	16.6		39.7	2.54	29.0	0.03	0.56			252	
269		9.34		9.31		34.299	D	26.524	156.1	0.552	0.94		40.8		14.6		40.7	2.56	29.2	0.04	0.65			271	05
300	ISL	9.22	D	9.19		34.307	D	26.551	154.2	0.601	0.90	D	39.1	D	13.9		42.9	2.59	29.9	0.03	0.74			302	
320		8.68		8.65		34.265	D	26.603	149.3	0.631	0.95		41.4		14.6		44.4	2.61	30.4	0.03	0.80			323	04
379		8.09		8.05		34.267	D	26.697	141.2	0.718	0.82		35.6		12.3		51.0	2.72	32.6	0.03	0.79			382	03
400	ISL	7.87	D	7.83		34.261	D	26.725	138.7	0.747	0.78	D	33.8	D	11.7		53.5	2.77	33.3	0.02	0.72			403	
442		7.37		7.32		34.267	D	26.802	131.7	0.805	0.61		26.7		9.1		58.6	2.86	34.8	0.02	0.59			446	02
500	ISL	6.87	D	6.82		34.286	D	26.888	124.1	0.879	0.46	D	19.9	D	6.7		66.2	2.98	36.3	0.04	0.59			504	
515		6.78		6.73		34.291	D	26.904	122.6	0.898	0.39		16.8		5.7		68.1	3.01	36.7	0.05	0.59			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 1307 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 50.8 N	117 31.9 W	07/07/2013	0456	UTC	850 m	220 04 kn			1008.5 mb	19.8 C	17.3 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		20.03		20.03		33.646		23.724	416.4	0.000	5.49		239.6		105.5		2.4	0.32	0.2	0.00	2.75	0.23	0.08	0	
2		20.03		20.02		33.646		23.724	416.5	0.008	5.49		239.6		105.5		2.4	0.32	0.2	0.00	2.75	0.23	0.08	2	20
10		18.44		18.44		33.592		24.088	382.0	0.040	5.68		247.7		105.9		2.3	0.36	0.1	0.00	2.21	0.17	0.05	10	19
20		15.42		15.42		33.562		24.774	317.0	0.075	6.08		265.1		106.9		3.0	0.42	0.6	0.07	2.02	0.31	0.07	20	18
30		12.79		12.79		33.503		25.276	269.4	0.105	5.18		225.6		86.2		6.1	0.90	8.1	0.26	2.80	0.34	0.17	30	17
40		12.52		12.51		33.554		25.370	260.7	0.131	4.93		214.7		81.6		7.7	1.06	11.0	0.11	2.86	0.28	0.16	40	16
50		11.45		11.44		33.518		25.543	244.5	0.156	4.64		202.0		75.1		10.9	1.19	13.1	0.06	1.27	0.20	0.14	50	15
60		10.74		10.74		33.522		25.673	232.2	0.180	4.19		182.6		66.8		14.4	1.35	16.2	0.06	1.71	0.14	0.13	60	14
70		10.35		10.34		33.553		25.766	223.6	0.203	3.95		171.8		62.3		16.4	1.44	17.6	0.05	1.32	0.08	0.10	71	13
75	ISL	10.18	D	10.17		33.618	D	25.846	216.1	0.215	3.86	D	168.1	D	60.8		18.7	1.58	19.3	0.04	1.03	0.09	0.10	76	
86		10.16		10.15		33.755		25.956	206.0	0.237	2.67		116.4		42.1		23.6	1.89	22.9	0.03	0.38	0.09	0.10	87	12
100		10.03		10.02		33.841		26.046	197.7	0.265	2.39		103.8		37.5		26.5	1.99	24.1	0.02	0.31	0.05	0.12	101	11
119		9.75		9.74		33.949		26.178	185.6	0.302	2.19		95.2		34.2		29.7	2.10	25.5	0.02	0.28	0.06	0.14	120	10
125	ISL	9.77	D	9.76		33.990	D	26.207	183.0	0.315	2.11	D	91.7	D	32.9		30.7	2.15	25.8	0.02	0.26	0.05	0.14	126	
140		10.01		9.99		34.088		26.244	179.9	0.340	1.58		68.6		24.8		33.0	2.28	26.7	0.01	0.21	0.03	0.15	141	09
150	ISL	9.72	D	9.70		34.089	D	26.294	175.3	0.360	1.57	D	68.2	D	24.5		33.9	2.32	27.1	0.01	0.22	0.02	0.13	151	
171		9.85		9.83		34.204		26.363	169.4	0.394	1.32		57.3		20.7		35.6	2.39	28.0	0.02	0.23	0.02	0.11	172	08
200		10.02		9.99		34.342		26.443	162.5	0.442	0.83		35.9		13.0		37.5	2.54	28.4	0.01	0.24	0.01	0.09	202	07
230		9.67		9.64		34.340		26.501	157.5	0.490	0.82		35.6		12.8		39.3	2.57	28.9	0.01	0.29			232	06
250	ISL	9.23	D	9.20		34.280	D	26.527	155.3	0.525	0.95	D	41.1	D	14.6		41.3	2.59	29.7	0.01	0.24			252	
270		9.13		9.10		34.292		26.553	153.3	0.552	0.84		36.6		13.0		43.3	2.61	30.4	0.02	0.19			272	05
300	ISL	8.83	D	8.79		34.270	D	26.585	150.7	0.602	0.92	D	40.1	D	14.1		45.9	2.63	31.4	0.03	0.23			302	
320		8.39		8.35		34.256		26.642	145.4	0.628	0.94		41.0		14.3		47.7	2.65	32.0	0.04	0.25			323	04
380		8.06		8.03		34.322		26.744	136.7	0.712	0.54		23.5		8.1		53.4	2.82	33.3	0.01	0.27			383	03
400	ISL	7.84	D	7.80		34.299	D	26.759	135.4	0.745	0.61	D	26.4	D	9.1		55.0	2.84	33.9	0.01	0.26			403	
440		7.50		7.46		34.293		26.804	131.6	0.793	0.53		23.1		7.9		58.3	2.88	35.1	0.01	0.25			444	02
500	ISL	7.05	D	7.01		34.285	D	26.862	126.8	0.877	0.50	D	21.7	D	7.3		64.3	2.95	36.6	0.01	0.42			504	
514		6.92		6.88		34.293		26.885	124.6	0.888	0.42		18.2		6.2		65.8	2.97	36.9	0.01	0.46			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 1307 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 40.8 N	117 52.4 W	07/07/2013	0907	UTC	621 m	340 04 kn			1008.2 mb	18.5 C	17.0 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		19.81		19.81		33.624		23.763	412.6	0.000	5.52		240.7		105.6		2.1	0.31	0.0	0.02	2.01	0.17	0.04	0	
2		19.81		19.81		33.624		23.763	412.7	0.008	5.52		240.7		105.6		2.1	0.31	0.0	0.02	2.01	0.17	0.04	2	20
10		18.90		18.90		33.591		23.973	393.1	0.041	5.70		248.7		107.3		2.0	0.30	0.0	0.02	0.24	0.17	0.04	10	19
20		16.48		16.48		33.563		24.535	339.8	0.077	6.24		272.2		112.1		2.0	0.31	0.0	0.02	0.10	0.51	0.16	20	18
30		13.80		13.79		33.531		25.097	286.5	0.108	6.39		278.2		108.6		4.0	0.46	1.5	0.05	0.29	1.24	0.34	30	17
40		11.81		11.80		33.506		25.467	251.4	0.135	5.04		219.3		82.1		9.3	0.98	9.7	0.18	0.33	0.91	0.37	40	16
50		11.37		11.36		33.520		25.559	242.9	0.160	4.49		195.6		72.6		11.8	1.19	12.9	0.21	0.29	0.53	0.27	50	15
61		10.99		10.98		33.569		25.666	233.0	0.186	3.94		171.6		63.2		14.4	1.39	16.1	0.26	0.42	0.25	0.18	61	14
70		10.59		10.58		33.619		25.775	222.8	0.207	3.47		151.0		55.1		17.4	1.58	18.8	0.18	0.52	0.15	0.14	71	13
75	ISL	10.37	D	10.36		33.640	D	25.830	217.7	0.219	3.49	D	151.8	D	55.1		18.8	1.62	19.7	0.14	0.41	0.11	0.12	76	
86		9.71		9.70		33.695		25.984	203.1	0.241	3.27		142.1		50.9		21.9	1.71	21.7	0.05	0.17	0.03	0.07	87	12
100		9.46		9.44		33.762		26.079	194.4	0.269	3.12		136.0		48.5		24.6	1.80	23.3	0.04	0.15	0.01	0.05	101	11
120		9.18		9.17		33.856		26.199	183.5	0.306	2.83		123.3		43.7		27.8	1.92	25.3	0.02	0.07	0.01	0.05	121	10
125	ISL	9.15	D	9.14		33.881	D	26.223	181.3	0.318	2.85	D	124.2	D	44.0		28.7	1.95	25.6	0.02	0.14	0.01	0.05	126	
140		9.02		9.00		33.965		26.310	173.3	0.342	2.51		109.1		38.6		31.2	2.04	26.6	0.03	0.33	0.01	0.05	141	09
150	ISL	8.86	D	8.84		33.972	D	26.341	170.5	0.362	2.48	D	108.1	D	38.1		33.0	2.15	27.1	0.03	0.28	0.01	0.06	151	
170		9.40		9.38		34.196		26.431	162.6	0.393	1.46		63.4		22.6		36.5	2.36	28.1	0.03	0.19	0.01	0.07	171	08
200		9.14		9.12		34.233		26.503	156.4	0.441	1.25		54.6		19.4		39.6	2.46	29.3	0.03	0.31	0.01	0.08	202	07
229		8.89		8.86		34.250		26.556	151.9	0.485	1.05		45.6		16.1		42.7	2.55	30.4	0.02	0.25			231	06
250	ISL	8.80	D	8.77		34.265	D	26.584	149.7	0.521	0.97	D	42.2	D	14.9		44.0	2.59	30.6	0.02	0.22			252	
269		8.73		8.70		34.280		26.607	147.9	0.545	0.88		38.4		13.5		45.2	2.63	30.7	0.03	0.19			271	05
300	ISL	8.63	D	8.59		34.292	D	26.633	146.0	0.595	0.82	D	35.6	D	12.5		46.3	2.66	31.2	0.03	0.37			302	
320		8.61		8.58		34.298		26.641	145.7	0.620	0.79		34.2		12.0		47.0	2.68	31.5	0.03	0.48			323	04
379		7.93		7.89		34.303		26.748	136.2	0.703	0.61		26.5		9.2		53.6	2.81	33.4	0.02	0.25			382	03
400	ISL	7.67	D	7.63		34.290	D	26.776	133.7	0.738	0.62	D	27.0	D	9.3		56.2	2.85	34.1	0.02	0.26			403	
439		7.30		7.25		34.300		26.839	128.1	0.782	0.47		20.3		6.9		61.1	2.93	35.5	0.02	0.27			443	02
500	ISL	6.62	D	6.58		34.312	D	26.940	118.8	0.865	0.38	D	16.4	D	5.5		70.1	3.05	37.7	0.03	1.10			504	
515		6.51		6.46		34.322		26.963	116.8	0.875	0.30		13.1		4.4		72.4	3.08	38.2	0.03	1.30			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 1307 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	07/07/2013	1332	UTC	1654 m	310 05 kn	290 04 07	2	1008.5 mb	17.6 C	16.1 C	21 m	8/8	ST	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		18.38		18.38		33.595		24.104	380.1	0.000	5.58		243.4		103.9		1.8	0.32	0.0	0.01	0.64	0.18	0.04	0	
2		18.38		18.38		33.595		24.105	380.2	0.008	5.58		243.4		103.9		1.8	0.32	0.0	0.01	0.64	0.18	0.04	2	22
10		17.39		17.39		33.594		24.344	357.6	0.037	5.78		252.0		105.6		1.8	0.32	0.0	0.01	0.37	0.20	0.06	10	20
10		17.39		17.39		33.587		24.338	358.2	0.038														10	21
20	ISL	16.07	D	16.07		33.596	D	24.654	328.4	0.072	6.04	D	263.4	D	107.6		2.1	0.38	0.6	0.09	0.42	0.29	0.08	20	
21		15.53		15.53		33.569		24.754	318.9	0.075	5.91		257.7		104.2		2.2	0.39	0.7	0.10	0.42	0.30	0.08	21	19
30	ISL	14.64	D	14.63		33.552	D	24.936	301.9	0.103	5.84	D	254.4	D	101.0		2.8	0.52	2.5	0.26	0.49	0.38	0.15	30	
31		14.60		14.59		33.548		24.942	301.3	0.106	5.83		254.1		100.8		2.8	0.53	2.7	0.28	0.50	0.39	0.16	31	18
42		13.52		13.52		33.526		25.149	281.8	0.138	5.53		240.7		93.4		4.0	0.73	5.6	0.47	0.60	0.48	0.22	42	17
50	ISL	13.03	D	13.03		33.518	D	25.241	273.3	0.161	5.32	D	231.8	D	89.0		5.3	0.85	7.6	0.39	0.74	0.42	0.23	50	
51		12.82		12.82		33.514		25.280	269.7	0.163	5.25		228.7		87.5		5.5	0.87	7.9	0.38	0.76	0.42	0.23	51	16
61		12.22		12.22		33.488		25.376	260.7	0.189	4.99		217.4		82.1		7.5	0.97	9.7	0.15	1.17	0.30	0.21	61	15
71		11.45		11.44		33.484		25.517	247.5	0.214	4.63		201.8		74.9		10.7	1.15	12.4	0.04	0.66	0.12	0.11	72	14
75	ISL	11.40	D	11.39		33.487	D	25.529	246.4	0.226	4.65	D	202.7	D	75.2		11.2	1.18	13.0	0.04	0.57	0.10	0.11	76	
86		10.95		10.93		33.505		25.626	237.4	0.251	4.39		191.1		70.2		12.9	1.26	14.5	0.04	0.31	0.07	0.08	87	13
100	ISL	10.36	D	10.35		33.557	D	25.768	224.2	0.286	4.00	D	174.2	D	63.2		16.2	1.43	17.2	0.03	0.24	0.05	0.08	101	
101		10.29		10.28		33.557		25.781	223.0	0.285	3.96		172.6		62.5		16.5	1.44	17.4	0.03	0.23	0.05	0.08	102	11
120		9.61		9.59		33.733		26.033	199.3	0.326	3.29		143.2		51.2		22.9	1.74	21.8	0.02	0.28	0.02	0.15	121	10
125	ISL	9.45	D	9.44		33.786	D	26.100	193.0	0.338	3.14	D	136.8	D	48.7		24.5	1.81	22.8	0.02	0.39	0.01	0.12	126	
140		9.08		9.06		33.894		26.245	179.5	0.363	2.68		116.7		41.3		29.4	2.00	25.7	0.02	0.72	0.00	0.04	141	09
150	ISL	9.03	D	9.01		33.912	D	26.267	177.6	0.384	2.63	D	114.4	D	40.4		30.6	2.03	26.3	0.02	0.71	0.00	0.04	151	
170		8.79		8.77		33.976		26.356	169.5	0.416	2.45		106.5		37.5		32.9	2.09	27.5	0.02	0.68	0.00	0.04	171	08
200		8.61		8.59		34.081		26.466	159.6	0.465	1.99		86.8		30.4		37.7	2.27	28.7	0.02	0.80	0.00	0.03	202	07
231		8.75		8.73		34.206		26.544	153.0	0.514	1.35		58.9		20.7		41.4	2.48	29.8	0.02	0.51			233	06
250	ISL	8.42	D	8.39		34.213	D	26.601	147.9	0.547	1.25	D	54.3	D	19.0		44.0	2.55	30.7	0.02	0.35			252	
270		8.29		8.26		34.232		26.636	144.8	0.572	1.07		46.5		16.2		46.8	2.62	31.6	0.01	0.19			272	05
300	ISL	8.13	D	8.10		34.283	D	26.700	139.3	0.619	0.78	D	34.1	D	11.8		50.3	2.72	32.5	0.01	0.43			302	
321		7.91		7.88		34.282		26.733	136.5	0.643	0.70		30.5		10.5		52.8	2.79	33.1	0.01	0.59			324	04
381		7.40		7.36		34.314		26.833	127.7	0.722	0.46		20.1		6.8		59.0	2.93	34.5	0.01	0.39			384	03
400	ISL	7.18	D	7.14		34.277	D	26.835	127.6	0.753	0.52	D	22.7	D	7.7		61.1	2.95	35.0	0.01	0.47			403	
440		6.96		6.92		34.303		26.887	123.2	0.797	0.39		17.1		5.8		65.4	3.00	36.2	0.01	0.63			444	02
500	ISL	6.43	D	6.38		34.308	D	26.963	116.4	0.876	0.31	D	13.5	D	4.5		72.2	3.09	37.9	0.01	0.58			504	
515		6.37		6.32		34.316		26.977	115.3	0.886	0.29		12.7		4.2		73.9	3.11	38.3	0.02	0.57			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 20.9 N	118 33.3 W	07/07/2013	1740	UTC	1336 m	310 12 kn	310 02 05	2	1010.1 mb	17.1 C	16.0 C	18 m	8/8	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		18.55		18.55		33.535		24.016	388.6	0.000	5.57		242.8		104.0		1.7	0.31	0.0	0.02	0.58	0.23	0.04	0	
2	A	18.55		18.55		33.535		24.016	388.6	0.008	5.57		242.8		104.0		1.7	0.31	0.0	0.02	0.58	0.23	0.04	2	23
10	ISL	18.21	D	18.21		33.541	D	24.105	380.4	0.039	5.71	D	249.0	D	105.9		1.5	0.31	0.0	0.02	0.84	0.27	0.06	10	
11	A	18.14		18.14		33.547		24.126	378.4	0.042	5.69		248.0		105.4		1.5	0.31	0.0	0.02	0.87	0.27	0.06	11	21
11		18.14		18.14		33.544		24.124	378.7	0.042														11	22
14	A	17.74		17.73		33.546		24.225	369.1	0.054	5.72		249.5		105.2		1.4	0.30	0.0	0.02	0.33	0.33	0.06	14	20
20		17.20		17.19		33.535		24.346	357.8	0.075	5.85		255.0		106.4		1.3	0.31	0.0	0.02	0.31	0.35	0.08	20	19
27	A	15.63		15.63		33.477		24.661	328.0	0.099	6.17		268.7		108.7		1.6	0.34	0.1	0.03	0.49	0.53	0.16	27	18
30	ISL	15.23	D	15.22		33.456	D	24.735	321.0	0.110	6.26	D	273.0	D	109.6		1.8	0.35	0.2	0.03	0.48	0.59	0.19	30	
38		13.58		13.57		33.411		25.049	291.2	0.134	6.18		269.2		104.5		2.2	0.39	0.6	0.05	0.45	0.73	0.29	38	17
48	A	13.09		13.09		33.379		25.122	284.6	0.162	5.85		254.8		97.9		3.8	0.61	3.8	0.17	0.73	0.58	0.34	48	16
50	ISL	13.04	D	13.03		33.382	D	25.134	283.5	0.170	5.88	D	256.0	D	98.2		4.0	0.64	4.2	0.20	0.76	0.55	0.34	50	
54		12.83		12.82		33.409		25.197	277.6	0.179	5.69		247.9		94.7		4.4	0.71	5.1	0.25	0.82	0.50	0.34	54	15
60	A	12.72		12.71		33.509		25.296	268.3	0.196	5.43		236.7		90.3		5.1	0.86	7.6	0.42	0.62	0.33	0.25	60	14
70		11.91		11.90		33.505		25.450	253.9	0.222	4.99		217.2		81.5		8.7	1.07	11.3	0.04	0.26	0.19	0.12	71	13
75	ISL	11.54	D	11.53		33.516	D	25.527	246.7	0.236	4.78	D	208.0	D	77.4		10.1	1.14	12.4	0.04	0.29	0.16	0.11	76	
86		10.99		10.97		33.508		25.621	237.9	0.261	4.40		191.6		70.5		13.1	1.29	14.9	0.03	0.35	0.08	0.08	87	12
100		10.16		10.15		33.594		25.831	218.2	0.293	3.80		165.5		59.8		18.2	1.54	19.0	0.03	0.31	0.03	0.06	101	11
121		9.44		9.43		33.744		26.068	195.9	0.336	3.21		139.5		49.7		24.2	1.81	23.0	0.03	0.28	0.02	0.04	122	10
125	ISL	9.37	D	9.35		33.786	D	26.113	191.7	0.346	3.17	D	137.8	D	49.0		25.2	1.84	23.5	0.02	0.27	0.02	0.04	126	
140		9.08		9.07		33.875		26.229	181.0	0.372	2.80		121.7		43.1		28.9	1.97	25.5	0.02	0.22	0.01	0.03	141	09
150	ISL	9.00	D	8.98		33.901	D	26.263	177.9	0.393	2.74	D	119.2	D	42.1		30.5	2.02	26.3	0.02	0.29	0.01	0.03	151	
170		8.70		8.68		33.960		26.356	169.4	0.425	2.44		106.0		37.2		33.6	2.13	27.8	0.02	0.43	0.00	0.04	171	08
200		8.42		8.40		34.023		26.451	161.0	0.474	2.14		93.0		32.4		37.7	2.25	29.4	0.03	0.24	0.00	0.03	202	07
230		8.06		8.04		34.061		26.535	153.5	0.522	1.89		82.3		28.5		41.8	2.36	30.9	0.02	0.30			232	06
250	ISL	7.79	D	7.77		34.103	D	26.607	146.9	0.555	1.57	D	68.4	D	23.5		45.6	2.47	32.2	0.02	0.27			252	
270		7.65		7.63		34.119		26.640	144.0	0.581	1.41		61.4		21.1		49.4	2.57	33.4	0.02	0.24			272	05
300	ISL	7.39	D	7.36		34.147	D	26.701	138.6	0.627	1.19	D	51.8	D	17.7		53.8	2.68	34.3	0.02	0.83			302	
320		7.19		7.15		34.165		26.744	134.8	0.650	1.02		44.4		15.1		56.7	2.76	34.9	0.02	1.22			323	04
380		6.83		6.79		34.231		26.846	125.9	0.729	0.65		28.2		9.5		64.3	2.94	35.9	0.02	0.18			383	03
400	ISL	6.70	D	6.66		34.252	D	26.881	122.8	0.758	0.54	D	23.5	D	7.9		65.6	2.96	36.2	0.02	0.20			403	
438		6.61		6.57		34.297		26.929	118.9	0.799	0.50		21.8		7.3		68.1	2.99	36.7	0.02	0.24			442	02
500	ISL	6.21	D	6.17		34.327	D	27.005	112.2	0.877	0.29	D	12.5	D	4.2		77.4	3.15	39.4	0.01	0.31			504	
518		6.04		5.99		34.337		27.036	109.3	0.891	0.22		9.7		3.2		80.1	3.20	40.2	0.00	0.33			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 1307 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE	ORD
32 10.6 N	118 53.7 W	07/07/2013	2148	UTC	1467 m	320	10 kn	300 04 06	1	1009.9 mb	17.0 C	15.8 C	13 m	4/8	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		18.23		18.23		33.550	24.108	379.8	0.000	5.62		244.9		104.2		1.2	0.30	0.0	0.02	0.21	0.21	0.04	0	
2		18.23		18.23		33.550	24.108	379.9	0.008	5.62		244.9		104.2		1.2	0.30	0.0	0.02	0.21	0.21	0.04	2	20
10		18.13		18.13		33.548	24.130	378.1	0.038	5.63		245.6		104.4		1.2	0.31	0.0	0.02	0.23	0.20	0.04	10	19
20		15.24		15.23		33.565	24.816	313.0	0.073	6.16		268.4		107.8		1.2	0.37	0.7	0.07	0.72	0.81	0.21	20	18
30		13.98		13.97		33.462	25.006	295.1	0.103	5.86		255.2		99.9		2.6	0.54	3.3	0.24	0.45	0.77	0.31	30	17
40		12.80		12.79		33.432	25.221	274.9	0.131	5.52		240.6		91.9		4.8	0.72	6.2	0.37	0.31	0.63	0.34	40	16
49		12.52		12.51		33.514	25.339	263.9	0.156	5.40		235.0		89.3		6.2	0.89	8.9	0.61	0.48	0.40	0.28	49	15
50	ISL	12.49	D	12.48		33.487	D 25.325	265.3	0.159	5.35	D	232.9	D	88.4		6.5	0.91	9.2	0.56	0.45	0.38	0.26	50	
60		11.89		11.88		33.533	25.475	251.3	0.184	4.93		214.8		80.6		9.6	1.08	12.7	0.04	0.20	0.14	0.12	60	14
70		11.21		11.20		33.533	25.599	239.6	0.209	4.63		201.6		74.5		11.7	1.19	14.8	0.04	0.22	0.09	0.11	71	13
75	ISL	10.94	D	10.93		33.532	D 25.647	235.2	0.222	4.46	D	194.1	D	71.3		13.9	1.31	16.6	0.03	0.18	0.07	0.10	76	
86		10.08		10.07		33.629	25.872	213.9	0.245	3.75		163.4		59.0		18.7	1.58	20.7	0.03	0.10	0.03	0.07	87	12
100		9.47		9.46		33.745	26.064	195.8	0.274	3.19		138.8		49.5		23.9	1.79	24.1	0.02	0.11	0.01	0.05	101	11
119		9.09		9.08		33.859	26.215	181.9	0.310	2.77		120.6		42.6		28.4	1.97	26.8	0.02	0.36	0.01	0.04	120	10
125	ISL	9.02	D	9.01		33.887	D 26.247	178.9	0.322	2.75	D	119.8	D	42.3		29.3	2.00	27.2	0.02	0.31	0.01	0.04	126	
140		8.86		8.85		33.932	26.309	173.3	0.347	2.58		112.1		39.5		31.4	2.06	28.2	0.02	0.20	0.01	0.03	141	09
150	ISL	8.74	D	8.73		33.962	D 26.351	169.5	0.366	2.50	D	108.7	D	38.2		32.8	2.10	29.0	0.02	0.16	0.00	0.03	151	
169		8.52		8.50		34.007	26.421	163.2	0.396	2.25		97.9		34.2		35.5	2.19	30.4	0.02	0.07	0.00	0.03	170	08
200		8.14		8.12		34.078	26.535	152.9	0.445	1.85		80.4		27.9		41.4	2.37	32.6	0.02	0.50	0.00	0.03	202	07
230		7.87		7.85		34.114	26.604	146.8	0.490	1.56		67.7		23.4		45.4	2.48	33.8	0.03	0.14			232	06
250	ISL	7.70	D	7.68		34.172	D 26.675	140.4	0.522	1.15	D	49.9	D	17.2		49.0	2.60	34.5	0.02	0.09			252	
269		7.63		7.61		34.196	26.704	138.0	0.545	0.99		43.0		14.8		52.3	2.71	35.2	0.02	0.05			271	05
300	ISL	7.46	D	7.43		34.216	D 26.745	134.5	0.591	0.83	D	36.0	D	12.3		55.2	2.79	36.1	0.02	0.07			302	
320		7.38		7.35		34.243	26.778	131.7	0.614	0.72		31.2		10.6		57.0	2.84	36.7	0.01	0.09			323	04
382		6.94		6.90		34.283	26.873	123.5	0.693	0.46		20.2		6.8		64.4	2.98	38.9	0.02	0.07			385	03
400	ISL	6.86	D	6.82		34.302	D 26.899	121.3	0.720	0.40	D	17.2	D	5.8		65.9	3.00	39.2	0.02	0.07			403	
441		6.61		6.57		34.309	26.938	118.0	0.764	0.34		14.7		4.9		69.2	3.06	39.9	0.02	0.07			445	02
500	ISL	6.15	D	6.11		34.332	D 27.017	111.0	0.837	0.25	D	11.0	D	3.6		77.0	3.15	41.5	0.01	0.06			504	
515		6.04		6.00		34.332	27.031	109.8	0.848	0.22		9.6		3.2		78.9	3.17	41.9	0.01	0.06			519	01

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

RV NEW HORIZON CALCOFI CRUISE 1307 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 0.8 N	119 14.2 W	08/07/2013	0202	UTC	1589 m	320	16 kn	300 04 05	1	1009.3 mb	16.9 C	15.2 C		7/8	SC	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		18.29		18.29		33.598	24.129	377.8	0.000	5.65		246.3		105.0		0.8	0.31	0.0	0.01	0.15	0.33	0.07	0	
2		18.29		18.29		33.598	24.129	377.8	0.008	5.65		246.3		105.0		0.8	0.31	0.0	0.01	0.15	0.33	0.07	2	21
10		18.23		18.23		33.600	24.146	376.5	0.038	5.66		246.7		105.1		0.8	0.32	0.0	0.01	0.08	0.32	0.08	10	19
10		18.23		18.23		33.599	24.145	376.6	0.039														10	20
20	ISL	16.79	D	16.78		33.617	D 24.505	342.6	0.074	5.86		255.6		105.9		1.5	0.47	1.7	0.12	0.24	0.62	0.22	20	
21		16.43		16.42		33.609	24.583	335.3	0.077	5.88		256.4		105.5		1.6	0.48	1.9	0.13	0.26	0.65	0.23	21	18
30	ISL	14.67	D	14.66		33.584	D 24.954	300.1	0.107	5.79	D	252.2	D	100.2		1.7	0.50	2.3	0.15	0.30	0.68	0.23	30	
31		14.04		14.03		33.601	25.101	286.2	0.109	5.86		255.1		100.1		1.7	0.50	2.3	0.15	0.30	0.68	0.23	31	17
40		11.95		11.94		33.406	25.363	261.3	0.133	5.25		228.8		85.8		6.9	0.90	8.5	0.23	0.15	0.54	0.28	40	16
50		11.84		11.83		33.528	25.479	250.5	0.159	4.97		216.4		81.1		8.4	1.08	12.1	0.05	0.10	0.19	0.12	50	15
60		11.38		11.37		33.556	25.587	240.5	0.184	4.58		199.4		74.0		12.3	1.26	14.8	0.04	0.10	0.11	0.10	60	14
70		10.23		10.22		33.564	25.795	220.9	0.207	3.97		172.8		62.6		16.9	1.49	18.5	0.03	0.10	0.04	0.07	71	13
75	ISL	10.18	D	10.17		33.593	D 25.827	217.9	0.219	3.87	D	168.7	D	61.0		18.5	1.56	19.7	0.03	0.09	0.04	0.07	76	
86		10.02		10.01		33.637	D 25.887	212.4	0.243	3.62	D	157.6	D	56.8									87	12
100		9.67		9.66		33.716	D 26.009	201.1	0.272	3.30	D	143.6	D	51.4									101	11
120		9.21		9.19		33.829	26.172	186.0	0.309	2.85		123.8		43.9		27.7	1.92	25.8	0.02	0.01	0.01	0.05	121	10
125	ISL	9.14	D	9.13		33.851	D 26.200	183.4	0.320	2.81	D	122.5	D	43.4		28.5	1.95	26.3	0.02	0.03	0.01	0.05	126	
140		8.81		8.79		33.921	26.309	173.3	0.345	2.54		110.7		38.9		31.0	2.04	27.8	0.03	0.08	0.01	0.04	141	09
150	ISL	8.73	D	8.71		33.957	D 26.350	169.7	0.364	2.51	D	109.3	D	38.4		32.8	2.10	28.4	0.03	0.09	0.01	0.04	151	
170		8.53		8.51		34.021	26.431	162.3	0.395	2.15		93.7		32.8		36.2	2.22	29.7	0.03	0.12	0.00	0.03	171	08
200		8.25		8.22		34.100	26.536	152.8	0.443	1.66		72.1		25.0		41.9	2.39	31.3	0.02	0.06	0.00	0.03	202	07
230		7.85		7.83		34.119	26.611	146.2	0.487	1.45		63.1		21.7		46.2	2.51	33.1	0.02	0.09			232	06
250	ISL	7.58	D	7.56		34.133	D 26.661	141.6	0.519	1.31	D	57.1	D	19.6		50.1	2.60	34.3	0.02	0.07			252	
270		7.32		7.29		34.146	26.710	137.2	0.544	1.09		47.5		16.2		53.9	2.69	35.5	0.02	0.05			272	05
300	ISL	7.06	D	7.03		34.148	D 26.747	134.0	0.589	1.01	D	44.0	D	14.9		57.6	2.75	36.1	0.02	0.05			302	
320		6.85		6.82		34.154	26.781	131.0	0.611	0.90		39.2		13.2		60.0	2.79	36.5	0.02	0.05			323	04
379		6.56		6.52		34.212	26.868	123.6	0.686	0.61		26.5		8.9		66.8	2.94	38.7	0.01	0.05			382	03
400	ISL	6.44	D	6.41		34.242	D 26.906	120.2	0.717	0.53	D	23.1	D	7.7		68.7	2.98	39.0	0.01	0.04			403	
441		6.33		6.29		34.283	26.954	116.2	0.761	0.37		16.0		5.3		72.3	3.05	39.7	0.02	0.03			445	02
500	ISL	6.05	D	6.00		34.336	D 27.033	109.4	0.832	0.26	D	11.5	D	3.8		78.6	3.13	40.9	0.02	0.02			504	
514		5.94		5.90		34.338	27.048	108.0	0.842	0.21		9.3		3.1		80.2	3.15	41.2	0.02	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 1307 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 50.7 N	119 34.5 W	08/07/2013	0606	UTC	1917 m	320 18 kn			1011.2 mb	16.3 C	15.0 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		17.46		17.46		33.639	24.362	355.6	0.000	5.75	250.8		105.3		1.0	0.35	0.0	0.02	0.19	0.47	0.11	0	
2		17.46		17.46		33.639	24.362	355.6	0.007	5.75	250.8		105.3		1.0	0.35	0.0	0.02	0.19	0.47	0.11	2	20
9		17.46		17.46		33.634	24.358	356.2	0.032	5.76	251.2		105.5		0.9	0.33	0.0	0.01	0.11	0.37	0.08	9	19
10	ISL	17.46	D	17.46	D	33.632	24.356	356.5	0.036	5.74	D250.3	D	105.1		0.9	0.33	0.0	0.01	0.11	0.37	0.08	10	
20		17.24		17.24		33.631	24.409	351.8	0.071	5.78	251.9		105.3		0.9	0.35	0.0	0.02	0.12	0.35	0.11	20	18
30		15.79		15.79		33.607	24.726	321.9	0.105	5.84	254.7		103.5		1.5	0.53	1.8	0.10	0.30	1.05	0.34	30	17
40		12.90		12.90		33.566	25.304	267.0	0.134	5.30	230.7		88.4		5.9	0.92	8.5	0.52	0.05	0.67	0.22	40	16
50		11.99		11.98		33.576	25.488	249.7	0.160	4.89	212.9		80.0		9.5	1.16	12.9	0.20	0.08	0.43	0.20	50	15
60		11.22		11.21		33.583	25.636	235.8	0.184	4.32	188.2		69.6		13.8	1.37	16.4	0.03	0.08	0.15	0.10	60	14
70		10.52		10.51		33.637	25.802	220.2	0.207	3.86	168.1		61.3		17.6	1.56	19.6	0.02	0.10	0.08	0.09	71	13
75	ISL	10.28	D	10.27	D	33.670	25.869	214.0	0.219	3.69	D160.7	D	58.3		19.0	1.61	20.5	0.02	0.08	0.07	0.08	76	
85		9.84		9.83		33.694	25.963	205.2	0.239	3.40	147.8		53.1		21.7	1.71	22.4	0.02	0.03	0.03	0.06	86	12
100		9.27		9.26		33.812	26.148	187.8	0.268	2.94	128.0		45.4		26.7	1.90	25.7	0.02	0.08	0.01	0.05	101	11
120		8.93		8.92		33.913	26.282	175.5	0.305	2.68	116.4		41.1		30.4	2.02	27.5	0.03	0.05	0.01	0.03	121	10
125	ISL	8.92	D	8.91	D	33.918	26.288	175.0	0.316	2.65	D115.5	D	40.7		31.1	2.05	27.9	0.03	0.05	0.01	0.03	126	
140		8.76		8.75		33.979	26.362	168.3	0.339	2.36	102.9		36.2		33.4	2.12	28.9	0.03	0.05	0.01	0.03	141	09
150	ISL	8.63	D	8.61	D	34.020	26.414	163.5	0.358	2.29	D 99.5	D	34.9		35.3	2.18	29.6	0.03	0.05	0.01	0.03	151	
170		8.35		8.33		34.069	26.496	156.1	0.388	1.88	81.8		28.5		39.0	2.31	31.1	0.02	0.06	0.00	0.03	171	08
200		8.20		8.18		34.088	26.534	153.0	0.434	1.73	75.4		26.2		41.5	2.36	32.1	0.02	0.07	0.00	0.03	202	07
230		7.66		7.64		34.127	26.645	142.8	0.479	1.38	60.2		20.7		48.2	2.53	34.4	0.02	0.08			232	06
250	ISL	7.42	D	7.40	D	34.132	26.684	139.4	0.510	1.29	D 56.2	D	19.2		51.4	2.61	35.1	0.02	0.08			252	
270		7.29		7.26		34.151	26.717	136.5	0.534	1.08	47.0		16.0		54.5	2.68	35.8	0.02	0.07			272	05
300	ISL	7.08	D	7.05	D	34.170	26.763	132.6	0.579	0.94	D 41.0	D	13.9		58.1	2.78	37.0	0.02	0.07			302	
320		7.10		7.07		34.207	26.789	130.4	0.601	0.76	33.2		11.2		60.5	2.84	37.8	0.01	0.07			323	04
379		6.87		6.84		34.289	26.886	122.1	0.676	0.44	19.0		6.4		65.0	2.98	38.4	0.01	0.11			382	03
400	ISL	6.65	D	6.61	D	34.293	26.920	119.1	0.705	0.40	D 17.6	D	5.9		67.5	3.01	38.9	0.01	0.09			403	
442		6.40		6.36		34.296	26.956	116.1	0.750	0.33	14.4		4.8		72.6	3.06	39.8	0.01	0.06			446	02
500	ISL	6.06	D	6.01	D	34.320	27.020	110.6	0.822	0.27	D 11.9	D	3.9		78.3	3.11	41.3	0.02	0.11			504	
513		6.03		5.98		34.327	27.029	109.9	0.830	0.23	10.2		3.4		79.5	3.12	41.6	0.02	0.12			517	01

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

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 93.3 70.0

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	08/07/2013	1206	UTC	3940 m	340 15 kn			1012.4 mb	15.8 C	14.3 C				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		16.50		16.50		33.581	24.542	338.3	0.000	5.85	254.8		105.0		1.3	0.42	1.0	0.05	0.16	0.53	0.10	0	
2		16.50		16.50		33.581	24.543	338.4	0.007	5.85	254.8		105.0		1.3	0.42	1.0	0.05	0.16	0.53	0.10	2	20
10		16.48		16.47		33.588	24.555	337.6	0.034	5.85	254.8		104.9		1.3	0.42	1.0	0.04	0.13	0.50	0.12	10	19
20		13.68		13.68		33.302	24.942	300.9	0.066	5.99	260.9		101.4		2.3	0.38	0.5	0.06	0.07	0.63	0.15	20	18
30		13.07		13.07		33.286	25.053	290.6	0.095	5.84	254.3		97.6		3.0	0.51	2.0	0.21	0.11	0.60	0.37	30	17
40		12.51		12.51		33.286	25.163	280.4	0.124	5.64	245.6		93.2		4.2	0.61	4.0	0.19	0.08	0.48	0.28	40	16
50		12.30		12.29		33.370	25.270	270.5	0.151	5.63	245.2		92.7		4.4	0.77	6.3	0.21	0.04	0.41	0.23	50	15
60		11.85		11.84		33.358	25.345	263.5	0.178	5.47	238.3		89.2		5.9	0.84	7.6	0.04	0.07	0.31	0.12	60	14
70		11.00		10.99		33.322	25.473	251.5	0.204	5.17	225.3		82.8		8.5	0.93	9.5	0.03	0.09	0.14	0.12	71	13
75	ISL	10.45	D	10.44	D	33.344	25.586	240.9	0.218	4.82	D209.9	D	76.2		10.8	1.08	11.9	0.03	0.08	0.11	0.09	76	
85		10.35		10.34		33.531	25.749	225.5	0.239	4.24	184.7		67.0		15.4	1.39	16.8	0.02	0.07	0.03	0.04	86	12
100		9.90		9.89		33.600	25.880	213.4	0.272	3.76	163.9		58.9		18.9	1.56	19.9	0.02	0.02	0.02	0.04	101	11
120		9.24		9.23		33.789	26.136	189.4	0.313	2.95	128.5		45.6		26.2	1.89	25.0	0.01	0.02	0.01	0.04	121	10
125	ISL	9.11	D	9.09	D	33.838	26.196	183.8	0.324	2.97	D129.4	D	45.8		26.9	1.90	25.2	0.01	0.02	0.01	0.04	126	
140		8.79		8.78		33.886	26.284	175.7	0.349	2.99	130.0		45.7		29.0	1.92	25.7	0.01	0.02	0.01	0.04	141	09
150	ISL	8.70	D	8.69	D	33.906	26.314	173.0	0.369	3.05	D132.5	D	46.5		30.6	1.96	26.3	0.01	0.01	0.01	0.04	151	
170		8.40		8.38		33.969	26.410	164.3	0.400	2.72	118.5		41.3		33.6	2.03	27.6	0.01	0.00	0.01	0.03	171	08
200		8.12		8.10		34.046	26.514	154.9	0.448	1.98	86.3		29.9		40.3	2.30	30.5	0.01	0.00	0.00	0.03	202	07
230		7.75		7.73		34.076	26.592	147.9	0.493	1.64	71.4		24.5		45.9	2.45	32.7	0.01	0.00			232	06
250	ISL	7.64	D	7.62	D	34.105	26.631	144.5	0.526	1.43	D 62.3	D	21.4		49.1	2.55	33.7	0.01	0.00			252	
270		7.39		7.36		34.122	26.680	140.0	0.551	1.19	51.9		17.7		52.3	2.64	34.7	0.01	0.00			272	05
300	ISL	7.06	D	7.03	D	34.153	26.751	133.6	0.596	1.00	D 43.5	D	14.7		59.0	2.75	36.5	0.01	0.00			302	
319		6.47		6.44		34.116	26.801	128.8	0.617	0.95	41.3		13.8		63.2	2.82	37.7	0.01	0.00			322	04
382		6.20		6.17		34.186	26.893	120.9	0.696	0.58	25.2		8.4		70.1	2.97	39.1	0.01	0.00			385	03
400	ISL	6.05	D	6.01	D	34.174	26.903	120.0	0.723	0.62	D 27.0	D	8.9		72.1	3.00	39.4	0.01	0.00			403	
438		5.92		5.88		34.226	26.961	115.0	0.762	0.42	18.1		6.0		76.6	3.07	40.0	0.01	0.00			442	02
500	ISL	5.53	D	5.49	D	34.259	27.036	108.4	0.838	0.34	D 14.7	D	4.8		83.2	3.15	41.1	0.01	0.02			504	
514		5.57		5.53		34.284	27.051	107.3	0.847	0.26	11.5		3.8		84.7	3.17	41.3	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 1307 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 10.8 N	120 55.2 W	08/07/2013	1822	UTC	3826 m	340 11 kn	340 04 07	2	1014.9 mb	17.2 C	15.8 C	18 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		17.05		17.05		33.453	24.318	359.8	0.000	5.71	249.1	103.6	0.8	0.32	0.0	0.01	0.07	0.28	0.01	0	
3	A	17.05		17.05		33.453	24.318	359.9	0.011	5.71	249.1	103.6	0.8	0.32	0.0	0.01	0.07	0.28	0.01	3	21
10	ISL	17.02	D	17.02		33.452	D 24.323	359.7	0.036	5.84	D254.5	D105.8	0.8	0.32	0.0	0.01	0.06	0.25	0.03	10	
11	A	17.01		17.01		33.457	24.330	359.0	0.040	5.84	D254.6	D105.8	0.8	0.32	0.0	0.01	0.06	0.25	0.04	11	20
14	A	17.00		16.99		33.451	24.329	359.2	0.050	5.81	253.4	105.3	0.8	0.32	0.0	0.01	0.06	0.28	0.03	14	19
20		16.98		16.98		33.461	24.341	358.3	0.072	5.83	D254.4	D105.7	0.8	0.32	0.0	0.01	0.05	0.31	0.03	20	18
27	A	16.96		16.95		33.449	24.337	358.9	0.097	5.85	D255.0	D105.9	0.8	0.32	0.0	0.01	0.06	0.32	0.05	27	17
30	ISL	15.61	D	15.60		33.373	D 24.587	335.2	0.108	5.84	254.6	102.9	0.8	0.33	0.0	0.01	0.07	0.39	0.07	30	
39		15.12		15.12		33.397	24.713	323.4	0.137	6.16	268.3	107.4	1.0	0.36	0.0	0.02	0.09	0.60	0.12	39	16
48	A	14.31		14.30		33.292	24.806	314.7	0.166	6.01	261.8	103.0	1.9	0.39	0.4	0.05	0.21	0.47	0.25	48	22
50	ISL	14.35	D	14.34		33.361	D 24.852	310.5	0.173	5.98	260.6	102.7	1.9	0.40	0.5	0.05	0.22	0.46	0.26	50	
54		13.88		13.87		33.302	24.905	305.5	0.184	5.93	258.4	100.8	1.8	0.43	0.7	0.06	0.23	0.45	0.28	54	15
61	A	13.60		13.59		33.287	24.951	301.3	0.206	5.92	257.7	100.0	2.7	0.42	0.5	0.12	0.13	0.54	0.35	61	14
70		13.27		13.26		33.306	25.031	293.9	0.232	5.88	256.0	98.7	3.5	0.41	0.3	0.07	0.11	0.39	0.20	71	13
75	ISL	12.89	D	12.88		33.284	D 25.090	288.4	0.248	5.89	D256.4	D 98.0	3.9	0.50	2.0	0.06	0.09	0.32	0.16	76	
85		12.01		12.00		33.293	25.266	271.7	0.275	5.50	239.8	90.0	4.8	0.69	5.3	0.03	0.04	0.17	0.09	86	12
100	ISL	11.08	D	11.07		33.369	D 25.496	250.1	0.316	5.16	D224.5	D 82.7	8.7	0.97	10.0	0.02	0.02	0.07	0.06	101	
101		11.05		11.03		33.365	25.499	249.9	0.317	5.08	221.1	81.3	9.0	0.99	10.3	0.02	0.02	0.07	0.06	102	11
119		10.21		10.20		33.524	25.768	224.5	0.359	4.18	181.9	65.8	16.2	1.41	17.2	0.02	0.03	0.03	0.04	120	10
125	ISL	10.30	D	10.29		33.627	D 25.834	218.5	0.374	3.88	D169.0	D 61.3	18.0	1.50	18.6	0.02	0.05	0.02	0.04	126	
141		9.52		9.51		33.708	26.028	200.2	0.406	3.36	146.1	52.1	22.7	1.74	22.2	0.02	0.12	0.02	0.05	142	09
150	ISL	9.35	D	9.33		33.770	D 26.105	193.0	0.426	3.21	D139.7	D 49.7	24.6	1.81	23.2	0.02	0.11	0.01	0.05	151	
171		8.96		8.94		33.873	26.247	179.9	0.463	2.79	121.3	42.8	29.1	1.96	25.5	0.02	0.10	0.01	0.05	172	08
200		8.37		8.35		33.963	26.411	164.8	0.513	2.71	117.8	41.0	33.3	2.03	27.0	0.02	0.08	0.00	0.04	202	07
230		7.90		7.88		33.989	26.501	156.5	0.561	2.53	110.2	38.0	38.4	2.14	28.7	0.02	0.09			232	06
250	ISL	7.73	D	7.71		34.035	D 26.563	151.0	0.594	2.22	D 96.7	D 33.2	42.2	2.30	30.5	0.02	0.07			252	
271		7.78		7.75		34.089	26.599	148.0	0.623	1.55	67.5	23.2	46.1	2.47	32.3	0.02	0.05			273	05
300	ISL	7.39	D	7.36		34.096	D 26.661	142.4	0.669	1.46	D 63.6	D 21.7	50.8	2.56	33.7	0.01	0.04			302	
320		7.09		7.06		34.094	26.702	138.7	0.694	1.31	57.1	19.3	54.0	2.62	34.6	0.01	0.04			323	04
368		6.75		6.72		34.151	26.793	130.6	0.758	0.89	38.8	13.0	61.2	2.80	36.3	0.02	0.04			371	03
400	ISL	6.54	D	6.50		34.192	D 26.855	125.1	0.803	0.62	D 26.8	D 9.0	65.6	2.89	37.2	0.01	0.08			403	
440		6.32		6.28		34.222	26.907	120.6	0.848	0.46	20.1	6.7	71.2	3.01	38.4	0.01	0.12			444	02
500	ISL	5.85	D	5.80		34.243	D 26.985	113.6	0.923	0.38	D 16.4	D 5.4	78.9	3.08	39.7	0.01	0.10			504	
515		5.75		5.70		34.239	26.994	112.8	0.935	0.37	16.1	5.3	80.8	3.10	40.0	0.01	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 1307 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	09/07/2013	0044	UTC	3873 m	330 15 kn	320 04 07	1	1014.2 mb	18.0 C	16.0 C		7/8	SC	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		17.22		17.22		33.389	24.226	368.4	0.000	5.72	249.2	104.0	1.1	0.37	0.0	0.02	0.13	0.23	0.05	0	
2		17.22		17.22		33.389	24.226	368.5	0.007	5.72	249.2	104.0	1.1	0.37	0.0	0.02	0.13	0.23	0.05	2	20
10	ISL	16.86	D	16.85		33.381	D 24.307	361.0	0.038	5.74	250.4	103.7	1.1	0.34	0.0	0.01	0.12	0.23	0.05	10	
11		16.84		16.83		33.384	24.313	360.5	0.040	5.75	250.5	103.7	1.1	0.34	0.0	0.01	0.12	0.23	0.05	11	19
20	ISL	16.72	D	16.71		33.384	D 24.334	358.9	0.073	5.88	D256.4	D105.9	0.9	0.36	0.1	0.02	0.13	0.34	0.10	20	
21		16.25		16.24		33.384	24.449	347.9	0.076	5.89	256.6	105.1	0.9	0.36	0.1	0.02	0.13	0.36	0.10	21	18
30		14.87		14.86		33.385	24.758	318.8	0.106	6.11	266.1	106.0	1.2	0.43	0.9	0.06	0.24	0.33	0.12	30	17
50	ISL	13.73	D	13.72		33.446	D 24.976	298.6	0.168	5.81	D253.3	D 98.6	1.2	0.57	2.1	0.14	0.71	0.30	0.19	50	
51		14.06		14.05		33.450	24.980	298.3	0.171	5.90	257.0	100.8	1.2	0.58	2.2	0.14	0.73	0.30	0.19	51	16
61		12.69		12.68		33.245	25.097	287.2	0.200	5.70	248.5	94.6	3.6	0.52	2.2	0.28	0.20	0.24	0.28	61	15
70		12.09		12.08		33.222	25.195	278.1	0.226	5.55	241.8	90.9	4.9	0.62	4.2	0.05	0.18	0.18	0.16	71	14
75	ISL	11.98	D	11.96		33.247	D 25.236	274.0	0.242	5.57	D242.6	D 91.0	5.6	0.70	5.4	0.04	0.20	0.15	0.14	76	
85		12.07		12.05		33.341	25.293	269.2	0.267	5.30	231.0	86.9	6.9	0.85	7.7	0.03	0.24	0.10	0.10	86	13
100		11.34		11.33		33.472	25.529	247.0	0.305	4.86	211.5	78.4	10.5	1.14	12.4	0.03	0.06	0.04	0.05	101	12
120		9.80		9.78		33.480	25.804	221.0	0.352	4.33	188.6	67.6	16.2	1.38	16.8	0.03	0.12	0.02	0.04	121	11
125	ISL	9.58	D	9.56		33.553	D 25.898	212.0	0.366	4.23	D184.1	D 65.7	17.6	1.45	17.9	0.02	0.11	0.02	0.04	126	
140		9.23		9.21		33.658	26.037	199.2	0.394	3.85	D167.5	D 59.4	21.7	1.64	21.0	0.02	0.08	0.01	0.05	141	10
150	ISL	9.09	D	9.07		33.757	D 26.136	190.0	0.417	3.68	D160.3	D 56.6	23.2	1.68	21.8	0.02	0.09	0.01	0.04	151	
170		8.91		8.89		33.839	26.230	181.4	0.450	3.45	150.3	52.9	26.1	1.76	23.3	0.02	0.10	0.01	0.03	171	09
200		8.41		8.39		33.944	26.390	166.7	0.503	3.09	134.6	46.9	31.6	1.91	25.7	0.02	0.08	0.00	0.02	202	08
230		7.96		7.94		34.001	26.502	156.5	0.551	2.57	111.9	38.6	38.7	2.16	28.8	0.02	0.12			232	07
250	ISL	7.71	D	7.69		34.018	D 26.552	151.0	0.587	2.34	D101.6	D 34.9	42.7	2.28	30.4	0.02	0.11			252	
270		7.41		7.38		34.036	26.611	146.6	0.612	2.00	87.0	29.6	46.7	2.39	31.9	0.02	0.09			272	06
300	ISL	7.07	D	7.04		34.065	D 26.681	140.0	0.660	1.59	D 69.2	D 23.4	52.5	2.55	33.9	0.01	0.07			302	
320		6.85		6.82		34.078	26.720	136.7	0.683	1.35	58.9	19.8	56.3	2.65	35.2	0.01	0.05			323	05
380		6.49		6.46		34.165	26.838	126.2	0.761	0.72	31.1	10.4	66.1	2.91	37.6	0.01	0.09			383	04
381		6.50		6.46		34.167	26.840	126.1	0.763	0.71	31.1	10.4	66.0	2.92	37.7	0.01	0.13			384	03
400	ISL	6.33	D	6.29		34.168	D 26.862	124.0	0.793	0.71	D 30.8	D 10.3	68.4	2.95	38.1	0.01	0.12			403	
441		6.02		5.98		34.177	26.910	119.9	0.837	0.60	26.1	8.6	73.4	3.01	39.0	0.01	0.10			445	02
500	ISL	5.69	D	5.65		34.238	D 27.000	112.0	0.912	0.41	D 17.6	D 5.8	81.7	3.11	40.4	0.01	0.07			504	
515		5.59		5.54		34.248	27.021	110.0	0.922	0.33	14.3	4.7	83.8	3.14	40.7	0.01	0.06			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 1307 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 30.6 N	122 15.8 W	09/07/2013	0820 UTC	3920 m	320 16 kn			1015.9 mb	16.4 C	15.2 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	17.14	17.14	33.235	24.129	377.7	0.000	5.63	245.3	102.1	2.0	0.33	0.0	0.01	0.08	0.17	0.04	0	
2	17.14	17.14	33.235	24.129	377.8	0.008	5.63	245.3	102.1	2.0	0.33	0.0	0.01	0.08	0.17	0.04	2	20
10	17.14	17.14	33.237	24.131	377.9	0.038	5.63	245.6	102.2	2.0	0.33	0.0	0.01	0.06	0.16	0.03	10	19
20	16.54	16.54	33.255	24.285	363.6	0.075	5.79	252.6	103.9	1.8	0.33	0.0	0.01	0.04	0.19	0.04	20	18
30	15.49	15.49	33.192	24.474	345.9	0.110	5.94	259.0	104.3	2.2	0.33	0.0	0.01	0.05	0.27	0.05	30	17
40	15.08	15.07	33.206	24.575	336.5	0.145	6.01	262.1	104.7	2.1	0.35	0.0	0.01	0.13	0.34	0.06	40	16
50	14.75	14.74	33.227	24.664	328.4	0.178	6.03	262.7	104.3	2.0	0.36	0.0	0.01	0.13	0.45	0.13	50	15
60	14.34	14.33	33.255	24.771	318.5	0.210	5.95	259.2	102.1	2.1	0.36	0.0	0.01	0.13	0.42	0.28	60	14
70	13.64	13.63	33.240	24.906	305.9	0.241	5.89	256.6	99.6	2.5	0.40	0.3	0.10	0.22	0.36	0.29	71	13
75 ISL	13.47 D	13.46	33.245 D	24.945	302.3	0.258	5.95	D259.2	D100.3	2.8	0.43	0.8	0.18	0.19	0.30	0.27	76	
85	12.46	12.45	33.182	25.094	288.2	0.286	5.78	251.7	95.3	3.4	0.50	1.7	0.34	0.12	0.19	0.21	86	12
99	11.84	11.82	33.255	25.269	271.8	0.325	5.50	239.7	89.6	5.4	0.67	5.1	0.03	0.05	0.10	0.11	100	11
100 ISL	11.74 D	11.73	33.255 D	25.288	270.0	0.330	5.50	D239.4	D 89.3	5.6	0.69	5.4	0.03	0.05	0.10	0.10	101	
120	10.76	10.75	33.336	25.527	247.6	0.380	4.95	215.5	78.8	9.9	1.00	10.7	0.02	0.01	0.05	0.05	121	10
125 ISL	10.65 D	10.64	33.364 D	25.569	243.8	0.395	4.93	D214.7	D 78.3	11.3	1.09	12.1	0.02	0.02	0.05	0.04	126	
140	9.97	9.96	33.500	25.791	222.8	0.427	4.33	188.3	67.8	15.6	1.35	16.3	0.02	0.04	0.02	0.03	141	09
150 ISL	9.64 D	9.63	33.670 D	25.978	205.2	0.451	3.93	D171.2	D 61.2	18.7	1.49	18.6	0.02	0.04	0.02	0.03	151	
171	9.21	9.19	33.793	26.146	189.6	0.490	3.28	142.7	50.6	25.2	1.78	23.3	0.02	0.04	0.01	0.02	172	08
200 ISL	8.69 D	8.67	33.958 D	26.358	169.9	0.546	2.63	D114.3	D 40.1	32.6	2.07	27.1	0.01	0.08	0.00	0.02	202	
201	8.68	8.66	33.961	26.361	169.6	0.544	2.58	112.4	39.4	32.8	2.08	27.2	0.01	0.08	0.00	0.02	203	07
229	8.27	8.25	34.029	26.478	159.0	0.590	2.18	94.9	33.0	38.1	2.23	29.4	0.01	0.08			231	06
250 ISL	8.01 D	7.99	34.063 D	26.544	153.0	0.627	1.93	D 84.1	D 29.1	41.8	2.34	30.7	0.01	0.07			252	
271	7.77	7.75	34.078	26.591	148.8	0.654	1.72	74.8	25.7	45.5	2.44	32.0	0.01	0.06			273	05
300 ISL	7.46 D	7.43	34.103 D	26.656	142.9	0.701	1.45	D 62.9	D 21.5	50.7	2.58	33.6	0.01	0.05			302	
320	7.18	7.15	34.116	26.707	138.3	0.724	1.24	53.9	18.3	54.3	2.67	34.7	0.01	0.05			323	04
383	6.52	6.49	34.146	26.819	128.2	0.808	0.88	38.3	12.8	64.6	2.84	37.3	0.01	0.03			386	03
400 ISL	6.36 D	6.32	34.158 D	26.851	125.3	0.836	0.78	D 33.9	D 11.3	67.2	2.89	37.8	0.01	0.04			403	
440	6.07	6.03	34.194	26.917	119.4	0.879	0.56	24.3	8.0	73.3	3.01	39.1	0.01	0.08			444	02
500 ISL	5.71 D	5.66	34.234 D	26.994	112.5	0.956	0.44	D 18.9	D 6.2	80.6	3.09	40.2	0.01	2.86			504	
516	5.66	5.62	34.249	27.013	111.0	0.966	0.36	15.5	5.1	82.5	3.11	40.5	0.01	3.60			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 1307 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 10.6 N	122 55.3 W	09/07/2013	1346 UTC	4614 m	360 15 kn	330 05 10	2	1017.0 mb	17.6 C	15.7 C	20 m	8/8	ST	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	17.84	17.84	33.411	24.096	380.9	0.000	5.51	240.2	101.4	2.3	0.30	0.0	0.01	0.07	0.13	0.03	0	
2	17.84	17.83	33.411	24.097	380.9	0.008	5.51	240.2	101.4	2.3	0.30	0.0	0.01	0.07	0.13	0.03	2	20
10	17.84	17.84	33.420	24.103	380.6	0.038	5.51	240.3	101.5	2.3	0.30	0.0	0.01	0.17	0.13	0.03	10	19
20 ISL	17.62 D	17.62	33.413 D	24.151	376.4	0.076	5.59	D243.8	D102.5	2.4	0.31	0.0	0.01	0.20	0.12	0.03	20	
26	16.50	16.49	33.320	24.345	358.1	0.098	5.74	250.3	102.9	2.4	0.31	0.0	0.01	0.21	0.11	0.02	26	18
30 ISL	16.72 D	16.72	33.396 D	24.352	357.5	0.113	5.75	D250.8	D103.6	2.5	0.30	0.0	0.01	0.19	0.11	0.02	30	
40	16.74	16.73	33.504	24.432	350.4	0.148	5.68	247.5	102.4	2.6	0.27	0.0	0.01	0.13	0.12	0.03	40	17
50	15.99	15.98	33.444	24.557	338.7	0.182	5.78	252.1	102.7	2.6	0.28	0.0	0.01	0.35	0.17	0.04	50	16
62	15.11	15.10	33.415	24.730	322.5	0.222	5.93	258.6	103.5	2.6	0.28	0.0	0.01	0.12	0.20	0.06	62	15
75	14.56	14.54	33.420	24.855	311.0	0.263	5.89	256.6	101.6	2.7	0.29	0.0	0.01	0.24	0.25	0.10	76	14
87	13.62	13.60	33.286	24.947	302.5	0.300	5.88	256.4	99.5	2.9	0.34	0.0	0.01	0.19	0.25	0.19	88	13
100	13.25	13.24	33.374	25.089	289.3	0.338	5.64	245.8	94.7	3.6	0.41	1.0	0.13	0.17	0.20	0.18	101	12
112	12.19	12.18	33.322	25.256	273.5	0.372	5.44	236.9	89.3	5.1	0.60	4.3	0.09	0.06	0.09	0.09	113	11
125 ISL	11.39 D	11.38	33.335 D	25.414	258.6	0.410	5.17	D225.3	D 83.5	7.4	0.82	7.9	0.03	0.48	0.16	0.15	126	
126	11.32	11.30	33.338	25.431	257.0	0.409	5.14	224.0	82.9	7.6	0.84	8.2	0.03	0.51	0.16	0.16	127	10
140	10.73	10.71	33.449	25.622	239.1	0.444	4.52	197.0	72.0	12.2	1.16	13.6	0.03	0.68	0.08	0.08	141	09
150 ISL	10.10 D	10.09	33.542 D	25.802	222.0	0.471	4.27	D185.7	D 67.0	14.7	1.29	15.6	0.02	0.51	0.06	0.06	151	
171	9.54	9.52	33.659	25.988	204.7	0.512	3.81	166.0	59.2	20.1	1.56	19.9	0.02	0.15	0.01	0.03	172	08
200	8.87	8.85	33.905	26.288	176.6	0.567	2.81	122.2	43.0	30.0	1.98	26.0	0.00	0.13	0.00	0.02	202	07
230	8.48	8.45	33.986	26.413	165.2	0.619	2.55	111.0	38.8	34.6	2.09	27.8	0.00	0.07			232	06
250 ISL	8.23 D	8.20	34.039 D	26.493	157.9	0.655	2.23	D 97.2	D 33.7	38.5	2.22	29.4	0.00	0.07			252	
270	7.95	7.92	34.055	26.548	152.9	0.682	1.95	84.8	29.3	42.5	2.34	30.9	0.00	0.06			272	05
300 ISL	7.47 D	7.44	34.078 D	26.635	144.9	0.731	1.66	D 72.1	D 24.6	48.8	2.51	33.1	0.00	0.12			302	
320	7.26	7.23	34.107	26.688	140.1	0.755	1.28	55.6	18.9	53.0	2.63	34.5	0.00	0.16			322	04
380	6.77	6.73	34.159	26.798	130.4	0.836	0.86	37.2	12.5	61.4	2.83	36.7	0.00	0.19			383	03
400 ISL	6.60 D	6.57	34.163 D	26.823	128.2	0.868	0.82	D 35.8	D 12.0	63.8	2.87	37.2	0.00	0.17			403	
440	6.35	6.31	34.181	26.871	124.0	0.913	0.63	27.4	9.1	68.8	2.94	38.3	0.00	0.12			444	02
500 ISL	5.94 D	5.89	34.219 D	26.955	116.5	0.992	0.51	D 22.2	D 7.3	76.3	3.05	39.6	0.00	0.04			504	
512	5.87	5.83	34.227	26.969	115.3	0.999	0.43	18.6	6.1	77.8	3.07	39.9	0.00	0.02			516	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
29 50.8 N	123 35.3 W	09/07/2013	1936 UTC	4134 m	350 11 kn	320 03 09	1	1019.1 mb	19.8 C	16.0 C	27 m	5/8	sc	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		18.73		18.73		33.422		23.885	401.0	0.000	5.42	236.6		101.6		2.6	0.29	0.1	0.01	0.20	0.08	0.01	0	
2	A	18.73		18.73		33.422		23.885	401.1	0.008	5.42	236.6		101.6		2.6	0.29	0.1	0.01	0.20	0.08	0.01	2	22
10	ISL	18.67	D	18.67		33.423	D	23.901	399.9	0.040	5.45	D237.8		D102.0		2.6	0.30	0.0	0.01	0.14	0.09	0.01	10	
16	A	18.63		18.63		33.421		23.910	399.2	0.064	5.43	236.6		101.4		2.6	0.30	0.0	0.01	0.10	0.09	0.01	16	21
20	ISL	18.61	D	18.60		33.417	D	23.913	399.1	0.080	5.45	D237.9		D101.9		2.6	0.28	0.0	0.01	0.11	0.09	0.02	20	
21	A	18.62		18.62		33.422		23.913	399.2	0.084	5.47	238.8		102.3		2.6	0.28	0.0	0.01	0.11	0.09	0.02	21	20
30	ISL	17.23	D	17.22		33.350	D	24.198	372.3	0.120	5.72	D249.3		D104.0		2.6	0.29	0.0	0.01	0.13	0.08	0.02	30	
32		17.16		17.15		33.347		24.212	371.1	0.126	5.67	247.1		102.9		2.6	0.29	0.0	0.01	0.14	0.08	0.02	32	19
42	A	16.99		16.98		33.354		24.258	367.0	0.163	5.67	247.3		102.7		2.6	0.29	0.0	0.01	0.11	0.09	0.02	42	18
50	ISL	16.66	D	16.65		33.393	D	24.364	357.1	0.193	5.76	D251.1		D103.6		2.6	0.28	0.0	0.01	0.16	0.10	0.02	50	
51		16.63		16.62		33.391		24.370	356.6	0.196	5.73	249.6		102.9		2.6	0.28	0.0	0.01	0.17	0.10	0.02	51	17
60		16.34		16.33		33.423		24.463	348.1	0.227	5.75	250.7		102.8		2.6	0.28	0.0	0.02	0.18	0.13	0.04	60	16
72	A	15.37		15.36		33.516		24.752	320.8	0.267	5.85	255.0		102.7		2.6	0.27	0.0	0.02	0.18	0.16	0.05	73	15
75	ISL	14.84	D	14.83		33.350	D	24.741	321.9	0.279	5.96	D259.7		D103.3		2.6	0.28	0.0	0.01	0.16	0.18	0.06	76	
82		14.36		14.35		33.299		24.803	316.2	0.299	5.95	259.1		102.1		2.7	0.30	0.0	0.01	0.10	0.22	0.09	83	14
92	A	14.35		14.34		33.437		24.912	306.1	0.330	5.86	255.3		100.7		2.7	0.29	0.0	0.01	0.10	0.24	0.13	93	13
99		13.70		13.69		33.330		24.965	301.2	0.352	5.86	255.1		99.2		2.9	0.32	0.0	0.02	0.05	0.28	0.17	100	12
100	ISL	13.73	D	13.71		33.332	D	24.961	301.6	0.358	5.83	D254.2	D	98.9		3.0	0.33	0.1	0.03	0.05	0.28	0.17	101	
112		13.00		12.98		33.312		25.092	289.3	0.390	5.69	247.8		95.0		3.6	0.42	1.1	0.14	0.05	0.26	0.18	113	11
125	ISL	12.19	D	12.17		33.357	D	25.285	271.1	0.430	5.36	D233.5	D	88.0		4.7	0.54	3.4	0.11	0.05	0.20	0.15	126	
126		12.46		12.45		33.361		25.235	276.0	0.429	5.44	237.0		89.8		4.8	0.55	3.6	0.11	0.05	0.20	0.15	127	10
141		11.42		11.40		33.379		25.445	256.1	0.469	5.10	222.2		82.4		7.6	0.80	7.9	0.04	0.09	0.12	0.12	142	09
150	ISL	10.85	D	10.83		33.418	D	25.577	243.6	0.496	4.98	D216.6	D	79.4		9.8	0.94	10.2	0.04	0.11	0.10	0.10	151	
171		10.08		10.06		33.507		25.780	224.7	0.541	4.36	189.7		68.4		14.8	1.28	15.7	0.03	0.14	0.04	0.06	172	08
200		9.22		9.20		33.760		26.119	192.8	0.601	3.60	156.8		55.6		23.0	1.65	21.7	0.00	0.05	0.00	0.02	202	07
230		8.81		8.79		33.919		26.309	175.2	0.657	3.46	150.4		52.9		27.7	1.75	23.4	0.00	0.20			232	06
250	ISL	8.49	D	8.46		33.961	D	26.392	167.6	0.695	3.11	D135.3	D	47.3		32.3	1.93	25.9	0.00	0.13			252	
270		8.20		8.17		33.996		26.464	161.0	0.724	2.57	111.7		38.8		36.8	2.10	28.3	0.00	0.06			272	05
300	ISL	7.86	D	7.83		34.034	D	26.546	153.6	0.776	2.24	D 97.3	D	33.5		42.6	2.29	30.6	0.00	0.07			302	
320		7.56		7.53		34.062		26.611	147.7	0.801	1.81	78.9		27.0		46.5	2.41	32.1	0.00	0.07			322	04
379		7.01		6.97		34.122		26.736	136.4	0.885	1.18	51.4		17.4		56.8	2.69	35.3	0.00	0.05			382	03
400	ISL	6.73	D	6.70		34.139	D	26.787	131.7	0.919	0.99	D 43.0	D	14.4		60.5	2.77	36.2	0.00	0.05			403	
439		6.39		6.35		34.173		26.859	125.1	0.963	0.75	32.6		10.9		67.5	2.92	37.9	0.00	0.04			443	02
500	ISL	5.90	D	5.85		34.187	D	26.934	118.4	1.045	0.63	D 27.2	D	9.0		76.0	3.02	39.4	0.00	0.07			504	
516		5.77		5.73		34.199		26.960	116.1	1.056	0.54	23.4		7.7		78.3	3.05	39.8	0.00	0.08			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;

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	06/07/2013	2000 UTC	19 m	260 05 kn	270 02 08	2	1008.8 mb	21.8 C	20.5 C		7/8	sc	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		21.29		21.29		33.691	D	23.420	445.4	0.000	5.72	249.2		112.4		2.1	0.29	0.0	0.03	0.17	1.68	0.40	0	
2		21.29		21.29		33.691	D	23.420	445.5	0.009	5.72	249.2		112.4		2.1	0.29	0.0	0.03	0.17	1.68	0.40	2	05
6		20.84		20.84		33.689	D	23.540	434.2	0.027	5.67	247.4		110.6		2.1	0.27	0.0	0.02	0.15	1.29	0.33	6	03
10		19.44		19.44		33.658	D	23.885	401.4	0.044	5.83	254.4		110.8		2.7	0.38	0.1	0.04	0.11	2.97	1.02	10	02
15		15.51		15.51		33.616	D	24.795	314.8	0.062	5.75	250.6		101.3		3.5	0.51	0.9	0.08	0.51	2.46	1.02	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 1307 — STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 23.3 N	122 14.8 W	18/07/2013	1855 UTC	10 m	1213 - 2022 PST	1215 PST	1945 PST	659.8 mg C/m2	055

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	15.49	33.697	24.860	5.86	103.1	1.4	0.35	1.6	0.08	0.21	0.93	0.19	74. A	30.0	30.4	30.2	0.44
6	15.49	33.696	24.860	5.87	103.3	1.3	0.35	1.6	0.08	0.20	0.94	0.20	40.	37.0	37.0	37.0	0.39
8	15.49	33.696	24.860	5.84	102.9	1.3	0.35	1.6	0.07	0.19	0.93	0.22	29.	30.3	29.3	29.8	0.39
15	15.48	33.699	24.865	5.87	103.3	1.3	0.36	1.6	0.07	0.22	0.97	0.22	10.0	25.5	27.3	26.4	0.41
28	15.46	33.699	24.870	5.83	102.7	1.3	0.35	1.6	0.07	0.22	0.97	0.23	1.4	3.2	2.8	3.0	0.40
33	15.43	33.699	24.878	5.84	102.7	1.3	0.36	1.6	0.08	0.31	0.96	0.23	0.63	1.2	1.0	1.1	0.35

RV NEW HORIZON — CALCOFI CRUISE 1307 — STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 9.0 N	121 9.1 W	16/07/2013	1736 UTC	09 m	1208 - 1948 PST	1211 PST	1948 PST	2585.9 mg C/m2	047

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	14.26	33.601	25.054	6.05	103.8	4.3	0.53	3.5	0.14	0.05	5.72	1.05	75. A	160.6	160.5	160.5	0.43
5	14.26	33.601	25.054	6.04	103.7	4.2	0.56	3.5	0.13	0.04	5.47	0.95	43.	134.3	134.3	134.3	0.44
6	14.26	33.603	25.054	6.04	103.6	4.2	0.52	3.5	0.13	0.06	5.56	1.02	36.	144.4	136.6	140.5	0.40
14	14.23	33.601	25.059	6.02	103.2	4.2	0.52	3.5	0.13	0.05	5.63	0.95	9.2	108.8	114.8	111.8	0.41
24	14.15	33.607	25.081	5.90	101.0	4.4	0.54	4.0	0.14	0.11	6.02	0.93	1.7	14.3	12.7	13.5	0.50
30	13.67	33.606	25.181	5.82	98.7	4.6	0.60	4.5	0.17	0.36	5.54	0.86	0.60	3.8	4.7	4.3	0.33

RV NEW HORIZON — CALCOFI CRUISE 1307 — STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 48.9 N	123 54.3 W	17/07/2013	1802 UTC	23 m	1221 - 1953 PST	1222 PST	1953 PST	219.8 mg C/m2	051

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	17.21	33.115	24.020	5.65	102.6	1.9	0.34	0.0	0.01	0.22	0.14	0.04	88. A	5.0	4.4	4.7	0.16
10	17.19	33.115	24.026	5.65	102.5	1.8	0.34	0.0	0.00	0.14	0.15	0.03					
14	17.18	33.119	24.032	5.64	102.3	1.8	0.34	0.0	0.01	0.00	0.15	0.04	39.	5.2	5.2	5.2	0.18
18	17.12	33.114	24.041	5.65	102.4	1.8	0.34	0.0	0.00	0.00	0.15	0.03	30.	3.6	3.8	3.7	0.33
35	15.34	33.034	24.385	5.98	104.6	2.2	0.33	0.0	0.00	0.00	0.20	0.05	9.7	3.5	3.6	3.6	0.20
44	14.96	33.041	24.474	6.04	104.8	2.1	0.34	0.0	0.00	0.00	0.26	0.08					
53	14.25	33.116	24.683	6.26	107.1	1.8	0.36	0.0	0.00	0.02	0.33	0.13					
62	13.56	33.071	24.791	6.26	105.6	2.5	0.35	0.0	0.00	0.03	0.40	0.18	1.6	0.84	1.0	0.94	0.28
70	13.42	33.134	24.869	6.12	103.0	2.7	0.34	0.1	0.01	0.02	0.51	0.24					
77	13.31	33.186	24.930	6.02	101.1	2.8	0.32	0.0	0.00	0.00	0.40	0.30	0.59	0.42	0.44	0.43	0.15

RV NEW HORIZON — CALCOFI CRUISE 1307 — STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 10.7 N	119 30.6 W	15/07/2013	1938 UTC	08 m	1225 - 1941 PST	1204 PST	1941 PST	972.3 mg C/m2	040

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	17.24	33.645	24.418	5.90	107.6	4.0	0.26	0.1	0.03	0.05	1.66	0.35	68. A	64.0	58.2	61.1	0.52
5	17.25	33.644	24.415	5.89	107.3	4.0	0.27	0.1	0.03	0.07	1.62	0.35	38.	58.9	58.9	58.9	0.47
6	17.24	33.647	24.420	5.87	107.1	4.1	0.26	0.1	0.03	0.03	1.56	0.36	32.	52.8	61.5	57.1	0.51
12	17.15	33.646	24.440	5.92	107.7	3.9	0.24	0.1	0.03	0.03	1.86	0.46	10.0	47.3	51.8	49.5	0.58
21	16.32	33.630	24.623	5.84	104.6	4.2	0.30	0.6	0.04	0.04	1.83	0.52	1.8	7.9	9.1	8.5	0.36
27	13.18	33.499	25.196	5.52	92.6	7.3	0.73	5.8	0.20	0.22	1.03	0.38	0.56	1.8	2.0	1.9	0.19

RV NEW HORIZON — CALCOFI CRUISE 1307 — STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 52.6 N	120 8.4 W	19/07/2013	2044 UTC	08 m	1314 - 1935 PST	1207 PST	1935 PST	736.6 mg C/m2	060

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	16.52	33.589	24.545	5.98	107.4	5.5	0.39	1.1	0.04	0.04	2.05	0.52	68.	52.1	52.2	52.1	0.56
5	16.00	33.589	24.664	5.96	106.0	5.6	0.42	1.4	0.04	0.06	2.20	0.49	38.	57.0	57.0	57.0	0.48
21	11.08	33.622	25.690	3.96	63.5	16.1	1.49	17.1	0.21	0.12	0.46	0.22	1.8	1.5	1.5	1.5	0.18
28	10.44	33.675	25.845	3.40	53.9	19.6	1.73	20.7	0.18	0.11	0.26	0.14	0.46	0.31	0.17	0.24	0.16

RV NEW HORIZON — CALCOFI CRUISE 1307 — STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 54.7 N	122 7.8 W	14/07/2013	1820 UTC	12 m	1212 - 1947 PST	1214 PST	1947 PST	379.4 mg C/m2	036

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	16.27	33.344	24.414	5.86	104.5	1.5	0.38	0.7	0.03	0.00	0.56	0.11	77. A	13.9	11.6	12.7	0.18
7	16.27	33.344	24.415	5.85	104.5	1.4	0.37	0.6	0.03	0.00	0.52	0.11	41.	14.2	14.2	14.2	0.15
9	16.27	33.343	24.413	5.86	104.6	1.4	0.37	0.6	0.03	0.00	0.61	0.11	32.	14.6	13.6	14.1	0.14
18	16.17	33.347	24.439	5.89	104.9	1.4	0.38	0.6	0.03	0.00	0.59	0.12	10.0	14.3	12.6	13.5	0.17
25	14.91	33.290	24.676	6.08	105.5	1.7	0.42	1.0	0.05	0.00	0.63	0.21					
32	13.98	33.246	24.839	6.12	104.2	2.3	0.48	1.7	0.10	0.00	0.61	0.28	1.7	3.0	3.0	3.0	0.13
41	12.77	33.155	25.012	5.93	98.4	3.3	0.57	2.7	0.39	0.00	0.50	0.33	0.53	1.1	1.2	1.1	0.09

A) INCUBATION LIGHT INTENSITIES WERE 60.0, 40.5, 29.97, 9.72, 1.63, 0.55 PERCENT RESPECTIVELY.

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 49.5 N	118 37.6 W	20/07/2013	1809 UTC	14 m	1201 - 1927 PST	1201 PST	1927 PST	1216.5 mg C/m2	064

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	18.83	33.594	23.991	5.99	112.4	4.4	0.28	0.0	0.02	0.10	0.29	0.08	80. A	17.7	16.0	16.9	0.35
8	18.64	33.592	24.038	6.06	113.5	4.4	0.26	0.0	0.00	0.10	0.32	0.10	42.	15.0	15.0	15.0	0.32
11	14.96	33.571	24.880	6.61	115.2	5.5	0.27	0.0	0.02	0.11	0.53	0.19	30.	20.6	17.8	19.2	0.57
21	12.10	33.510	25.414	5.78	94.8	9.1	0.77	6.3	0.07	0.11	4.56	0.73	10.0	66.6	69.5	68.1	0.45
30	11.38	33.550	25.580	4.32	69.8	12.5	1.37	13.9	0.60	0.42	1.28	0.49					
38	10.91	33.572	25.681	3.85	61.5	15.2	1.58	16.9	0.57	0.30	0.62	0.39	1.6	1.6	1.3	1.4	0.51
47	10.80	33.582	25.710	3.72	59.4	15.8	1.64	17.5	0.60	0.30	0.68	0.36	0.58	0.59	0.50	0.55	0.25

RV NEW HORIZON CALCOFI CRUISE 1307 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 2.0 W	12/07/2013	1806 UTC	10 m	1210 - 1945 PST	1210 PST	1945 PST	920.4 mg C/m2	028

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	15.43	33.652	24.839	5.97	105.0	2.3	0.40	1.4	0.05	0.09	1.26	0.43	86. A	52.3	51.2	51.8	0.43
6	15.38	33.653	24.852	5.98	105.0	2.2	0.40	1.4	0.07	0.09	1.23	0.45	40.	49.6	49.6	49.6	0.41
8	15.37	33.655	24.855	6.01	105.5	2.2	0.40	1.4	0.05	0.11	1.44	0.54	29.	47.7	47.9	47.8	0.33
15	15.36	33.652	24.855	5.98	104.9	2.1	0.44	1.4	0.05	0.11	1.35	0.49	10.0	34.0	32.1	33.0	0.30
27	15.34	33.645	24.856	5.95	104.5	2.1	0.40	1.5	0.05	0.15	1.26	0.51	1.6	4.0	3.2	3.6	0.28
34	13.65	33.384D	25.015	5.97	101.2	2.0	0.49	2.3	0.07	0.25	0.85	0.41	0.54	0.66	0.65	0.65	0.22

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 19.4 N	123 44.6 W	13/07/2013	1750 UTC	19 m	1220 - 1950 PST	1221 PST	1950 PST	213.1 mg C/m2	032

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
16	17.12	33.226	24.127	5.64	102.3	2.1	0.32	0.0	0.01	0.21	0.20	0.04	27.	5.8	5.4	5.6	0.22
30	16.42	33.248	24.308	5.66	101.2	2.3	0.31	0.0	0.01	0.06	0.22	0.05	8.9	4.9	5.7	5.3	0.41
2	17.15	33.226	24.118	5.64	102.3	2.1	0.32	0.0	0.01	0.05	0.19	0.04	85.	5.7	5.2	5.4	0.18
10	17.15	33.224	24.119	5.64	102.4	2.1	0.32	0.0	0.01	0.11	0.19	0.04	45.	5.4	5.4	5.4	0.17
40	15.67	33.213	24.451	5.84	102.8	2.4	0.31	0.0	0.01	0.11	0.22	0.06					
51	15.53	33.248	24.511	5.93	104.2	2.1	0.33	0.0	0.01	0.08	0.32	0.12	1.6	1.1	1.7	1.4	0.11
58	15.29	33.268	24.578	5.94	103.9	2.0	0.33	0.0	0.01	0.12	0.34	0.17					
65	14.97	33.286	24.662	5.92	102.9	1.9	0.34	0.0	0.01	0.11	0.38	0.24	0.52	0.55	1.1	0.80	0.13

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 11.1 N	118 23.3 W	21/07/2013	1735 UTC	25 m	1200 - 1925 PST	1200 PST	1925 PST	1471.0 mg C/m2	073

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
19	15.55	33.559	24.742	6.54	115.2	3.5	0.37	0.0	0.01	0.18	0.38	0.18	31.	35.6	36.3	35.9	0.37
2	20.00	33.687	23.763	5.44	104.5	1.9	0.30	0.0	0.02	0.03	0.23	0.06	88.	25.2	26.4	25.8	0.30
7	19.92	33.689	23.785	5.44	104.3	1.9	0.30	0.0	0.02	0.02	0.21	0.05					
14	19.54	33.680	23.878	5.46	104.0	1.9	0.31	0.0	0.02	0.07	0.23	0.06	42.	29.2	29.2	29.2	0.25
28	13.23	33.510	25.196	6.46	108.5	3.4	0.46	1.9	0.03	0.12	1.26	0.34					
36	11.55	33.536	25.538	5.02	81.5	6.8	1.00	10.9	0.08	0.12	3.72	0.78	11.	25.5	24.6	25.1	0.54
45	10.98	33.567	25.666	4.11	65.8	14.4	1.53	17.0	0.14	0.05	0.47	0.25					
54	10.37	33.629	25.822	3.53	55.9	18.5	1.78	20.8	0.09	0.04	0.24	0.16					
64	10.09	33.721	25.941	3.01	47.3	22.4	2.00	23.9	0.06	0.03	0.15	0.15	2.0	1.5	1.3	1.4	0.12
72	9.96	33.762	25.996	2.86	44.8	23.8	2.06	24.8	0.04	0.01	0.12	0.12					
81	9.73	33.823	26.082	2.69	42.0	26.0	2.16	26.2	0.03	0.00	0.07	0.09	0.69	0.26	0.29	0.28	0.16

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 25.1 N	119 57.5 W	11/07/2013	1837 UTC	11 m	1205 - 1933 PST	1205 PST	1933 PST	742.5 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
2	16.60	33.672	24.591	5.84	105.0	1.0	0.42	1.1	0.06	0.21	0.95B	0.16B	76. A	42.6	37.6	40.1	0.31
7	16.56	33.673	24.599	5.83	104.9	0.9	0.41	0.9	0.06	0.17	1.05	0.18	38.	38.0	38.0	38.0	0.32
9	16.26	33.671	24.667	5.82	104.0	0.9	0.42	0.9	0.07	0.19	1.12	0.18	28.	34.0	37.6	35.8	0.33
17	13.80	33.646	25.184	5.39	91.7	4.5	0.83	6.2	0.20	1.18	0.93	0.32	9.3	22.3	21.8	22.1	0.23
24	13.17	33.684	25.341	4.85	81.4	8.7	1.04	9.5	0.24	0.85	0.76	0.30					
30	12.13	33.667	25.531	4.41	72.4	12.5	1.28	13.3	0.29	0.70	0.53	0.25	1.5	1.8	1.6	1.7	0.16
38	11.11	33.643	25.701	4.05	65.0	15.6	1.47	17.0	0.32	0.22	0.19	0.12	0.50	0.15	0.17	0.16	0.12

B) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
A) INCUBATION LIGHT INTENSITIES WERE 60.0, 40.5, 29.97, 9.72, 1.63, 0.55 PERCENT RESPECTIVELY.

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 5.1 N	122 39.7 W	10/07/2013	1547 UTC	19 m	1215 - 1941 PST	1216 PST	1941 PST	92.5 mg C/m2	020

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	NH4	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	µM	µM	µM	µM	µM	µg/L	µg/L	PCT	1	2	MEAN	DARK
15	17.05	33.269	24.177	5.65	102.3	1.9	0.32	0.0	0.01	0.18	0.17	0.04	30.	2.9	2.9	2.9	0.12
2	17.09	33.273	24.170	5.64	102.2	1.9	0.32	0.0	0.01	0.00	0.18	0.03	85.	3.3	3.5	3.4	0.15
11	17.09	33.274	24.172	5.64	102.2	1.9	0.32	0.0	0.02	0.15	0.17	0.03	41.	3.5	1.1	2.3	0.13
29	15.84	33.209	24.409	5.92	104.7	2.1	0.31	0.0	0.01	0.00	0.18	0.04	9.6	1.5	1.6	1.5	0.11
40	15.68	33.251	24.479	5.86	103.3	2.2	0.31	0.0	0.01	0.00	0.24	0.08					
51	14.65	33.230	24.687	5.95	102.7	2.0	0.34	0.0	0.01	0.01	0.42	0.26	1.6	0.54	0.68	0.61	0.10
58	14.43	33.252	24.752	5.91	101.6	2.0	0.37	0.0	0.02	0.13	0.48	0.31					
65	13.89	33.245	24.858	5.89	100.2	2.4	0.39	0.3	0.07	0.23	0.39	0.29	0.52	0.22	0.24	0.23	0.08

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 57.4 N	117 18.3 W	06/07/2013	1817 UTC	15 m	1150 - 1930 PST	1154 PST	1930 PST	929.3 mg C/m2	001

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	NH4	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	µM	µM	µM	µM	µM	µg/L	µg/L	PCT	1	2	MEAN	DARK
2	21.06	33.699D	23.490	5.49	107.6	2.4	0.28	0.0	0.02	0.18	0.44	0.11	81. A	25.2	26.4	25.8	0.30
9	18.16	33.634D	24.181	5.81	107.8	2.2	0.32	0.4	0.02	1.39	0.43	0.17	40.	29.2	29.2	29.2	0.25
12	15.65	33.567D	24.712	6.31	111.4	2.8	0.37	0.1	0.02	0.33	0.79	0.34	29.	35.6	36.3	35.9	0.37
24	11.96	33.488D	25.423	5.15	84.3	9.2	0.97	9.5	0.22	1.25	1.08	0.49	8.6	25.5	24.6	25.1	0.54
32	11.36	33.517D	25.555	4.52	73.0	11.6	1.19	12.9	0.37	1.12	0.65	0.34					
40	10.92	33.612D	25.709	3.84	61.4	14.4	1.46	15.2	0.30	0.96	0.42	0.30	1.7	1.5	1.3	1.4	0.12
51	10.67	33.643D	25.780	3.27	52.1	17.6	1.70	17.6	0.30	2.57	0.27	0.49	0.54	0.26	0.29	0.28	0.16

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 20.9 N	118 33.3 W	07/07/2013	1740 UTC	18 m	1158 - 1935 PST	1159 PST	1934 PST	439.5 mg C/m2	008

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	NH4	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	µM	µM	µM	µM	µM	µg/L	µg/L	PCT	1	2	MEAN	DARK
2	18.55	33.535	24.016	5.57	104.0	1.7	0.31	0.0	0.02	0.58	0.23	0.04	84. A	7.8	7.6	7.7	0.21
11	18.14	33.547	24.126	5.69	105.4	1.5	0.31	0.0	0.02	0.87	0.27	0.06	39.	9.2	9.9	9.6	0.19
14	17.74	33.546	24.225	5.72	105.2	1.4	0.30	0.0	0.02	0.33	0.33	0.06	30.	9.3	7.5	8.4	0.23
20	17.20	33.535	24.346	5.85	106.4	1.3	0.31	0.0	0.02	0.31	0.35	0.08					
27	15.63	33.477	24.661	6.17	108.7	1.6	0.34	0.1	0.03	0.49	0.53	0.16	10.0	11.4	12.2	11.8	0.28
38	13.58	33.411	25.049	6.18	104.5	2.2	0.39	0.6	0.05	0.45	0.73	0.29					
48	13.09	33.379	25.122	5.85	97.9	3.8	0.61	3.8	0.17	0.73	0.58	0.34	1.7	3.7	3.5	3.6	0.13
54	12.83	33.409	25.198	5.69	94.7	4.4	0.71	5.1	0.25	0.82	0.50	0.34					
60	12.72	33.509	25.296	5.43	90.3	5.1	0.86	7.6	0.42	0.62	0.33	0.25	0.60	0.87	0.85	0.86	0.12

RV NEW HORIZON CALCOFI CRUISE 1307 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 10.8 N	120 55.2 W	08/07/2013	1822 UTC	18 m	1206 - 1941 PST	1209 PST	1941 PST	187.7 mg C/m2	013

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	NH4	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	µM	µM	µM	µM	µM	µg/L	µg/L	PCT	1	2	MEAN	DARK
48	14.31	33.292	24.806	6.01	103.0	1.9	0.39	0.4	0.05	0.21	0.47	0.25	1.7	2.5	2.2	2.3	0.11
3	17.05	33.453	24.318	5.71	103.6	0.8	0.32	0.0	0.01	0.07	0.28	0.01	77.	7.1	6.1	6.6	0.17
11	17.01	33.457	24.330	5.84D	105.8	0.8	0.32	0.0	0.01	0.06	0.25	0.04	39.	6.8	7.2	7.0	0.21
14	17.00	33.451	24.329	5.81	105.3	0.8	0.32	0.0	0.01	0.06	0.28	0.03	30.	6.2	6.3	6.3	0.22
20	16.98	33.461	24.341	5.83D	105.7	0.8	0.32	0.0	0.01	0.05	0.31	0.03					
27	16.96	33.449	24.337	5.85D	105.9	0.8	0.32	0.0	0.01	0.06	0.32	0.05	10.0	6.0	6.7	6.3	0.23
39	15.12	33.397	24.713	6.16	107.4	1.0	0.36	0.0	0.02	0.09	0.60	0.12					
54	13.88	33.302	24.905	5.93	100.8	1.8	0.43	0.7	0.06	0.23	0.45	0.28					
61	13.60	33.287	24.951	5.92	100.0	2.7	0.42	0.5	0.12	0.13	0.54	0.35	0.55	0.95	0.47	0.71	0.10

RV NEW HORIZON CALCOFI CRUISE 1307 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 35.3 W	09/07/2013	1936 UTC	27 m	1235 - 1947 PST	1220 PST	1947 PST	132.8 mg C/m2	017

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SIO3	PO4	NO3	NO2	NH4	CHL-A	PHAEO	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	µM	µM	µM	µM	µM	µg/L	µg/L	PCT	1	2	MEAN	DARK
2	18.73	33.422	23.885	5.42	101.6	2.6	0.29	0.1	0.01	0.20	0.08	0.01	89. A	2.4	2.4	2.4	0.18
16	18.63	33.421	23.910	5.43	101.4	2.6	0.30	0.0	0.01	0.10	0.09	0.01	40.	2.9	2.5	2.7	0.12
21	18.62	33.422	23.913	5.47	102.3	2.6	0.28	0.0	0.01	0.11	0.09	0.02	30.	2.8	2.6	2.7	0.13
32	17.16	33.347	24.212	5.67	102.9	2.6	0.29	0.0	0.01	0.14	0.08	0.02					
42	16.99	33.354	24.258	5.67	102.7	2.6	0.29	0.0	0.01	0.11	0.09	0.02	9.2	1.5	1.6	1.5	0.08
51	16.63	33.391	24.370	5.73	102.9	2.6	0.28	0.0	0.01	0.17	0.10	0.02					
60	16.34	33.423	24.463	5.75	102.8	2.6	0.28	0.0	0.02	0.18	0.13	0.04					
72	15.37	33.516	24.752	5.85	102.7	2.6	0.27	0.0	0.02	0.18	0.16	0.05	1.7	0.27	0.43	0.35	0.13
82	14.36	33.299	24.803	5.95	102.1	2.7	0.30	0.0	0.01	0.10	0.22	0.09					
92	14.35	33.437	24.912	5.86	100.7	2.7	0.29	0.0	0.01	0.10	0.24	0.13	0.53	0.20	0.21	0.21	0.09

A) INCUBATION LIGHT INTENSITIES WERE 60.0, 40.5, 29.97, 9.72, 1.63, 0.55 PERCENT RESPECTIVELY.

CalCOFI Cruise 1307NH

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	35 05.6	120 46.6	07/19	0351	0358	123	51	49136	236
76.7	51	35 01.3	120 55.1	07/19	0124	0147	440	214	293	293
76.7	55	34 53.3	121 11.9	07/18	2146	2209	438	212	251	251
76.7	70	34 23.3	122 14.8	07/18	1204	1227	440	214	209	209
76.7	80	34 03.3	122 56.5	07/18	0547	0610	440	213	98	98
76.7	90	33 43.2	123 38.1	07/17	2335	2357	437	213	53	53
76.7	100	33 23.3	124 19.5	07/17	1731	1755	437	215	21	21
80.0	51	34 27.0	120 31.3	07/16	0323	0330	130	56	1209	1209
80.0	55	34 19.0	120 48.1	07/16	0650	0713	441	208	291	291
80.0	60	34 09.0	121 09.0	07/16	1110	1132	412	211	352	330
80.0	70	33 49.0	121 50.6	07/16	1712	1735	421	216	147	147
80.0	80	33 28.9	122 32.0	07/16	2318	2340	435	209	92	92
80.0	90	33 09.0	123 13.3	07/17	0503	0525	423	211	83	83
80.0	100	32 49.0	123 54.3	07/17	1128	1151	446	211	99	27
81.7	43.5	34 24.4	119 48.1	07/15	1913	1915	48	13	41	41
81.8	46.9	34 16.5	120 01.5	07/15	2306	2328	425	210	111	111
83.3	39.4	34 15.6	119 19.4	07/15	1557	1559	44	15	68	68
83.3	40.6	34 13.6	119 24.7	07/15	1447	1451	79	28	290	290
83.3	42	34 10.7	119 30.5	07/15	1242	1257	299	130	144	144
83.3	51	33 52.7	120 08.0	07/19	1342	1355	262	116	279	279
83.3	70	33 14.7	121 26.6	07/14	1804	1826	433	208	208	208
83.3	80	32 54.7	122 07.7	07/14	1128	1151	445	216	31	31
83.3	90	32 34.7	122 48.6	07/14	0510	0533	420	215	69	69
83.3	100	32 14.7	123 29.5	07/13	2304	2327	453	213	44	44
83.3	110	31 54.7	124 10.3	07/13	1641	1703	438	213	16	16
85.4	35.8	34 00.8	118 49.9	07/20	1300	1303	62	20	276	276
86.7	33	33 53.3	118 29.4	07/20	1605	1611	108	42	344	344
86.7	35	33 49.4	118 37.7	07/20	0913	0935	406	212	138	138
86.7	40	33 39.4	118 58.2	07/20	0608	0630	417	212	79	79
86.7	45	33 29.3	119 19.2	07/20	0125	0146	423	212	125	125
86.7	50	33 19.4	119 39.8	07/19	2054	2101	150	55	301	301
86.7	55	33 09.4	120 00.5	07/11	2338	0000	416	214	175	175
86.7	60	32 59.3	120 21.0	07/12	0347	0410	465	206	144	144
86.7	70	32 39.4	121 02.0	07/12	0905	0927	405	214	133	133
86.7	80	32 19.4	121 43.0	07/12	1616	1638	435	216	46	46
86.7	90	31 59.3	122 23.6	07/12	2210	2233	449	214	147	94
86.7	100	31 39.3	123 04.3	07/13	0402	0424	458	207	41	41
86.7	110	31 19.4	123 44.6	07/13	0845	0908	444	211	29	29
86.8	32.5	33 53.3	118 26.7	07/20	1656	1659	62	21	177	177
88.5	30.1	33 40.4	118 05.6	07/20	2008	2010	42	13	988	988
90.0	27.7	33 29.6	117 44.9	07/20	2232	2234	47	13	451	451
90.0	28	33 29.1	117 46.1	07/20	2354	0002	147	62	327	238
90.0	30	33 25.1	117 54.1	07/21	0233	0255	400	211	92	92
90.0	35	33 15.1	118 15.0	07/21	0636	0658	416	210	103	89
90.0	37	33 11.2	118 23.3	07/21	0834	0857	441	211	109	109
90.0	45	32 55.1	118 56.1	07/21	1522	1543	421	210	50	50
90.0	53	32 39.1	119 29.0	07/11	1703	1725	439	206	112	112
90.0	60	32 25.1	119 57.6	07/11	1201	1222	397	212	149	149
90.0	70	32 05.0	120 38.3	07/11	0528	0550	421	213	104	85
90.0	80	31 45.1	121 18.9	07/10	2240	2302	458	207	116	116
90.0	90	31 25.1	121 59.5	07/10	1610	1633	430	216	105	105
90.0	100	31 05.1	122 39.7	07/10	0645	0707	436	214	46	46
90.0	110	30 45.1	123 19.9	07/10	0121	0143	449	211	45	29
90.0	120	30 25.1	123 59.9	07/09	1854	1916	442	215	45	18
91.7	26.4	33 14.8	117 27.8	07/06	1502	1504	39	15	536	536
93.3	26.7	32 57.4	117 18.3	07/06	1112	1120	156	71	270	270
93.3	28	32 54.8	117 23.7	07/06	1918	1940	405	210	163	163
93.3	30	32 50.8	117 31.9	07/06	2216	2238	409	214	103	103
93.3	35	32 40.8	117 52.4	07/07	0241	0303	425	205	141	141
93.3	40	32 30.6	118 12.3	07/07	0643	0705	417	212	70	70
93.3	45	32 20.8	118 33.3	07/07	1103	1125	434	214	217	217
93.3	50	32 10.8	118 53.6	07/07	1510	1532	440	216	45	45
93.3	55	32 00.8	119 14.0	07/07	1911	1933	433	213	220	203
93.3	60	31 50.8	119 34.3	07/07	2323	2346	428	215	73	73
93.3	70	31 30.8	120 14.5	07/08	0513	0536	430	207	100	100
93.3	80	31 10.8	120 55.2	07/08	1149	1211	435	215	90	67
93.3	90	30 50.8	121 35.4	07/08	1752	1815	462	208	97	80
93.3	100	30 30.8	122 15.5	07/08	2320	2343	442	215	156	57
93.3	110	30 10.7	122 55.3	07/09	0646	0708	451	214	20	20
93.3	120	29 50.8	123 35.2	07/09	1238	1301	454	212	20	20
93.4	26.4	32 57.2	117 16.8	07/06	1226	1228	44	15	46	46