UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

# data report

**CalCOFI Cruise 1504**
**4 - 19 April 2015**

**CC Reference 16 - 02**
**11 Oct 2016**

**UNIVERSITY OF CALIFORNIA, SAN DIEGO**

**SCRIPPS INSTITUTION OF OCEANOGRAPHY**

**LA JOLLA, CALIFORNIA 92093-0227**

# PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

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## INTRODUCTION

The data presented in this report were collected during cruise 1504* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV New Horizon. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Wildlife, and the Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruise were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. CalCOFI data presented in this report and collected on previous cruises can be accessed at http://www.calcofi.org.

## STANDARD PROCEDURES

### *CTD/Rosette Cast Data*

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911+, Serial number 3161-936) with a rosette was deployed at each station on this cruise. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 515 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. Additional bottle depths also appear in combined hydrographic and primary productivity casts. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-*a* and phaeopigments were determined at sea on samples from the top 200 meters, bottom depth permitting.

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

Salinity samples were collected from all rosette bottles and analyzed at sea using a Guildline model 8410 Portasal salinometer. Salinity samples were drawn into 200 ml Kimax high-alumina borosilicate bottles that were rinsed three times with sample prior to filling. The results were compared with the CTD salinity to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with standardized seawater. Periodic checks on the conductivity of the standardized seawater were made by comparison with IAPSO Standard Seawater batch P155. Salinity values were calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and are reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen analyses were performed with an Ocean Data Facility of Scripps Institution of Oceanography designed automated oxygen titrator using photometric end-point detection based on the absorption of 365nm wavelength ultra-violet light. A computer using PC software controlled the titration of the samples and the data logging. The method used a modified Winkler titration following the technique of Carpenter (1965) with modifications by Culberson (1991), but with higher concentrations of thiosulfate solution (50 g/l). Standard KIO3 solutions prepared ashore were run at the beginning of each run. Reagent and sea water blanks were determined to account for presence of oxidizing or reducing materials.

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

Nutrient samples were analyzed at sea using a QuAAtro continuous flow analyzer (SEAL Analytical). Dissolved silicate, nitrate, and nitrite were analyzed using a modification of the method described by Armstrong (1967) and Gordon et al. (1992). Phosphate was measured with a modification of the Murphy and Riley (1962) protocol and ammonium is analyzed using a modified fluorometric method described by Kerouel and Aminot (1997). Samples were collected in 30ml high-density polypropylene screw top tubes which were acid washed and rinsed with sample three times prior to filling. Standardizations and cadmium-reduction coil efficiency determinations were performed at the beginning of every run. Drift and baseline corrections were performed in each run using a high standard and blank respectively inserted before and after sample sets. A sample of reference material for nutrients in seawater (RMNS), produced by KANSO technos (www.kanso.co.jp) was included in every run and those data were monitored throughout the cruise and available to adjust values for nitrate, nitrite, phosphate, and silicate if appropriate. A separate reference sample was used to monitor ammonium stability throughout the cruise. Samples not analyzed immediately after collection were refrigerated and run the following day.

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

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

*Primary Productivity Sampling*

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from $^{14}C$ uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the rosette up-cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. Triplicate samples (two light and one dark control) were drawn from each productivity sample depth into 250 ml polycarbonate incubation bottles. Samples were inoculated with a cruise average of 12.18 µCi of $^{14}C$ as $NaHCO_3$ (200µl of stock solution) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982), the specific activity decreased throughout the cruise. 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. The National Centers for Environmental Information (NCEI) in collaboration with the E.Firing Acoustic Doppler Current Profiler (ADCP) Laboratory at the University of Hawaii have established the Joint Archive for Shipboard ADCP (JASADCP). The JASADCP is responsible for the acquisition, review, documentation, archival, and distribution of shipboard ADCP data sets, data may be accessed through their website (http://ilikai.soest.hawaii.edu/sadcp/index.html). Shipboard ADCP data is acquired by University of Hawaii Data Acquisition System (UDHAS) and uses Common Ocean Data Access System (CODAS) processing to incrementally build a dataset of averaged, edited ocean velocities for each ADCP and ping type specified. Processed data and plots are served on the shipboard network, and daily status summaries are emailed and available online (http://currents.soest.hawaii.edu/uhdas_fromships.html).

*3)* Underway Sea Surface pCO2 and pH measurements: Automated shipboard analysis of the partial pressure of CO2 and pH were made from the ship's underway flow-through system. pCO2 measurements were taken with the Shipboard Underway pCO2 Environmental Recorder (SUPER-CO2) sold by Sunburst Sensors designed with a showered equilibrator and a LI-COR 840A CO2/H2O non-dispersive infrared gas analyzer. pH measurements were taken with a Honeywell Durafet based on Ion Selective Field Effect Transistor (ISFET) technology. The Durafet pH sensor was calibrated before and after the cruise. pCO2 was calibrated with standard gases traceable to NIST every 4 hours, along with an atmospheric sample. Temperature and salinity were also sampled using a SeaBird Thermosalinograph (SBE45). Measurements were recorded every 4 seconds. (T. Martz, SIO)

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

*5)* *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)

*6)* *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 9 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)

*7)* *Inorganic Carbon System*: The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track with 14 profile and 8 additional surface water stations. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and $pCO_2$. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)

*8)* *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)

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

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

*11)* The Global Drifter Program (GDP) is the principal component of the Global Surface Drifting Buoy Array, a branch of NOAA's Global Ocean Observing System (GOOS) and a scientific project of the Data Buoy Cooperation Panel (DBCP). The DBCP is an international program coordinating the use of autonomous data buoys to observe atmospheric and oceanographic conditions, over ocean areas where few other measurements are taken and a joint body of the World Meteorological Organization (WMO) and Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO). The overall objectives of the GDP are to: 1) maintain a near-operational ocean-observing network of at least 1250 Lagrangian drifters that, through the Argos and Iridium satellite systems, returns data of meteo-marine variables including near-surface ocean currents, sea surface temperature (SST), sea surface salinity (SSS), sea-level atmospheric pressure (SLP), sea-level winds (SLW) and subsurface temperature (Tz) and 2) to provide a data processing system for the scientific use of the data. The GDP provides Surface Velocity Program (SVP) drifters drogued at 15 m depth to partners that have ongoing deployment opportunities such as CALCOFI. Data is available at http://gdp.ucsd.edu/calcofi and http://www.aoml.noaa.gov/phod/dac/dacdata.php. Ten drifters (ID # 139491,

139492, 139494, 139496, 139497, 139498, i62411660, i62410700, 300234062410710, 300234062411610) were deployed on this cruise. (L.Centurioni, SIO)

*12) Cesium-134 survey:* Collaboration between Scripps Intuition of Oceanography and Woods Hole Oceanographic has led to samples being collected for radioactive isotopes of cesium-137 and -134 analysis using the ratio of the two isotopes to distinguish cesium from the more recent Fukushima source over fallout from weapons testing. Twenty liters of unfiltered seawater was collected primarily from the surface, but also one 5 point vertical profile into two 10L plastic sample containers and shipped to the Center for Marine and Environmental Radioactivity at the Woods Hole Oceanographic for analysis. Final radioactive cesium concentrations are reported in units of Bq per cubic meter where one Becquerel equals one disintegration per second. http://ourradioactiveocean.org/results.html (Mitchell SIO, Buesseler WHOI)

## TABULATED DATA

*CTD/Rosette Cast Data*

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

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

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

*Primary Productivity Data*

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

*Macrozooplankton Data*

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

## FOOTNOTES

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

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

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FIGURES

Cruise 1504

1. CalCOFI Cruise 1504 track and station positions.

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

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

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

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

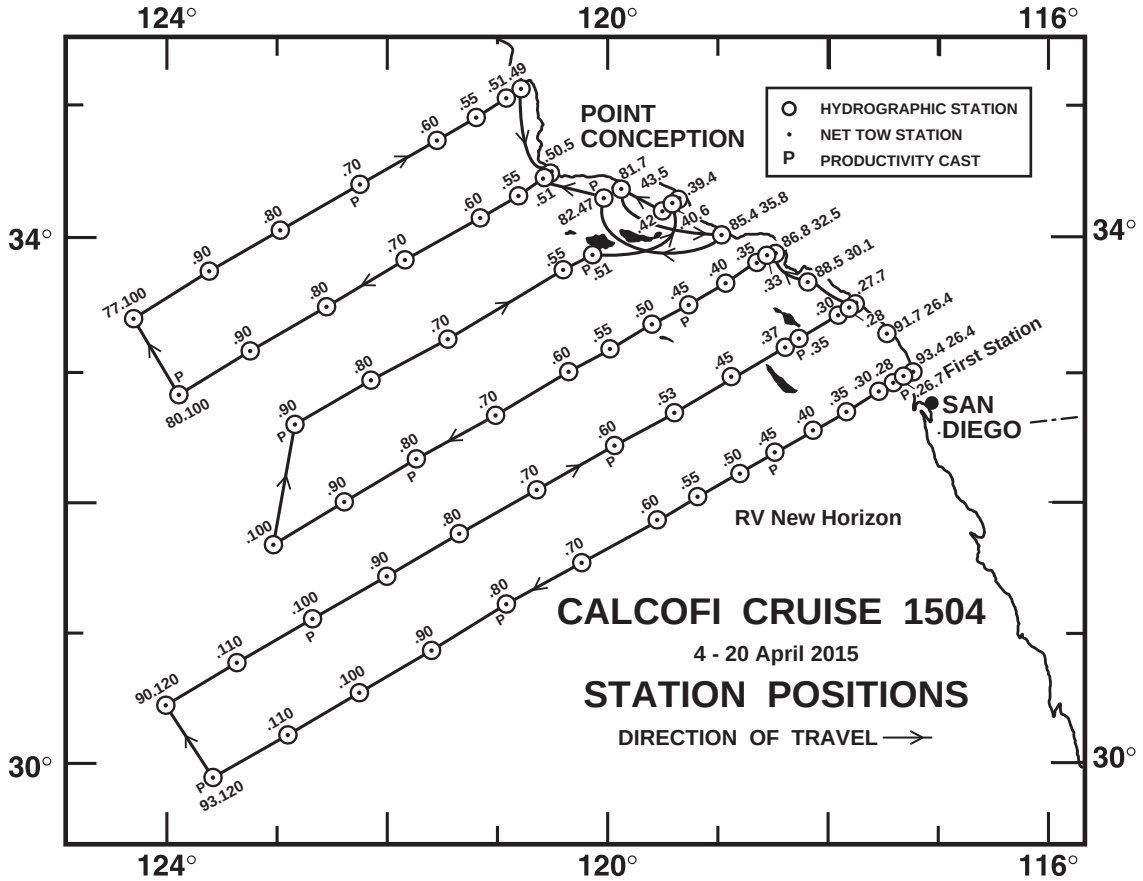


FIGURE 1

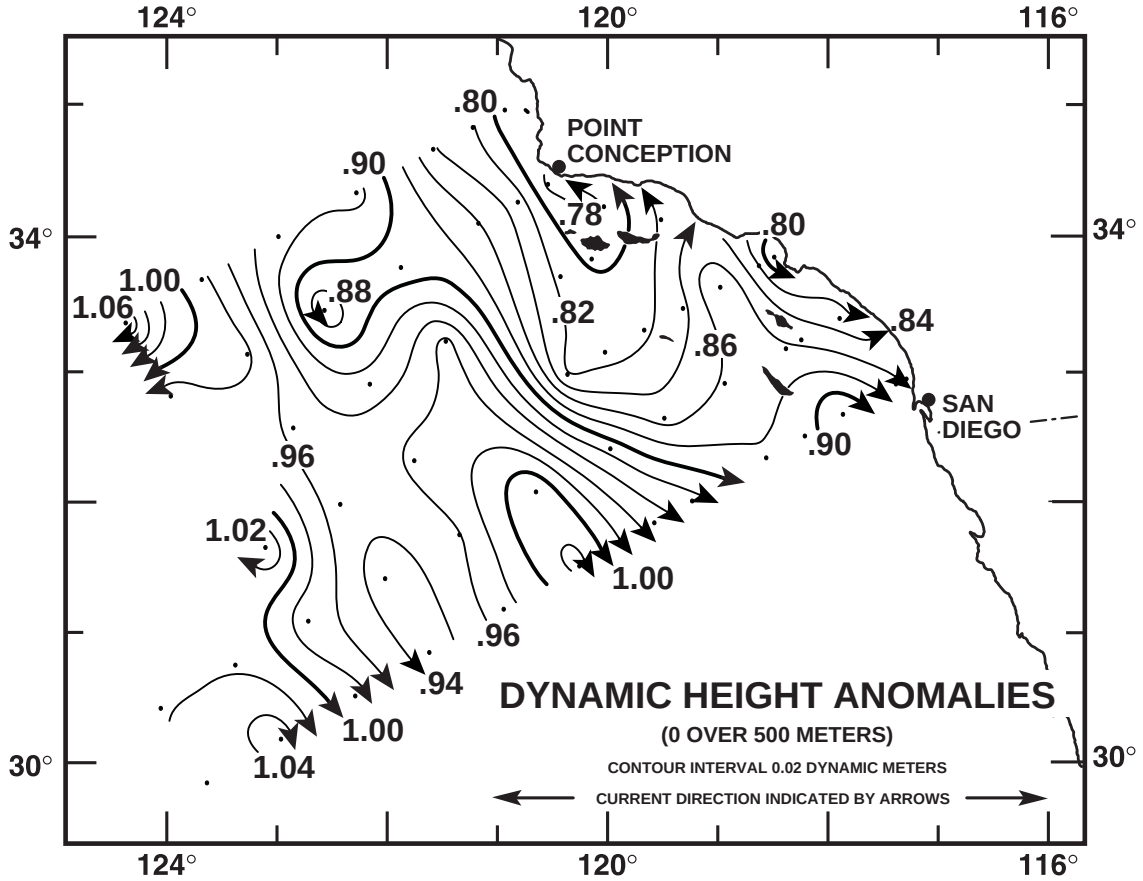


FIGURE 2

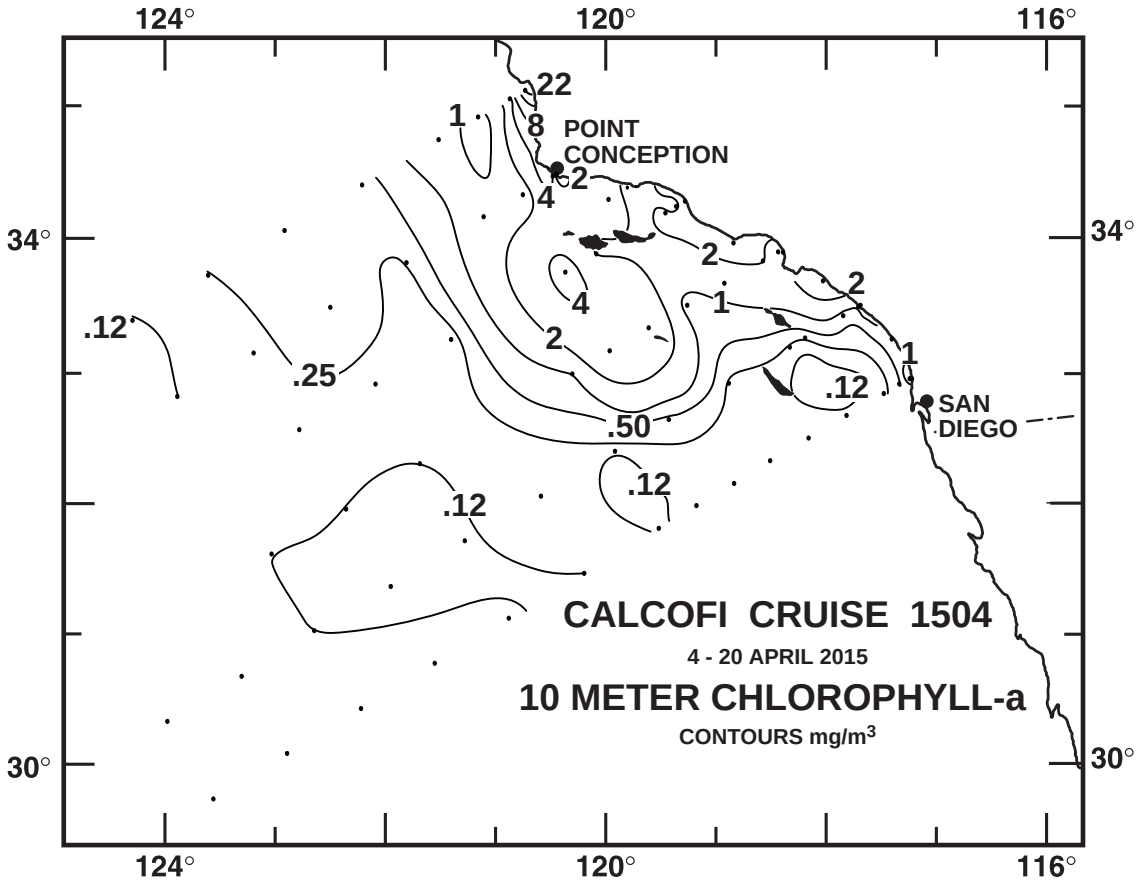


FIGURE 3A

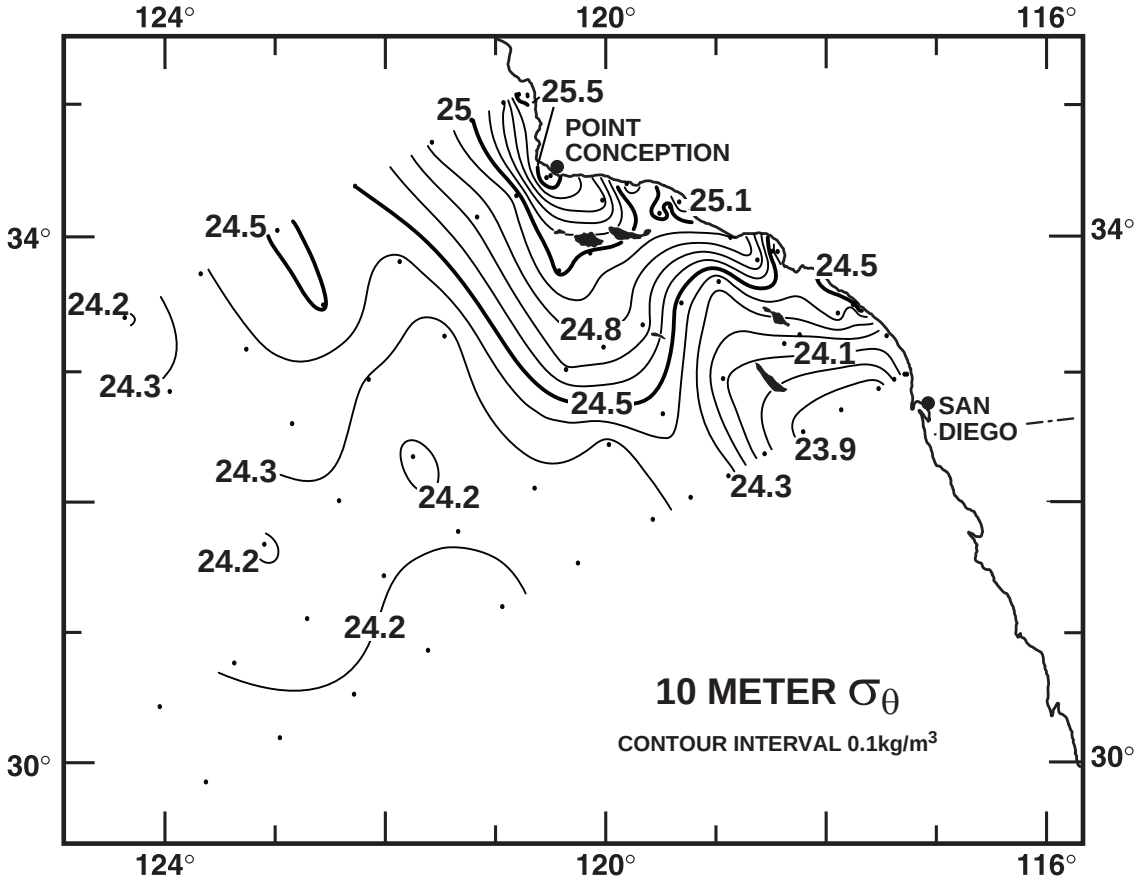


FIGURE 3B

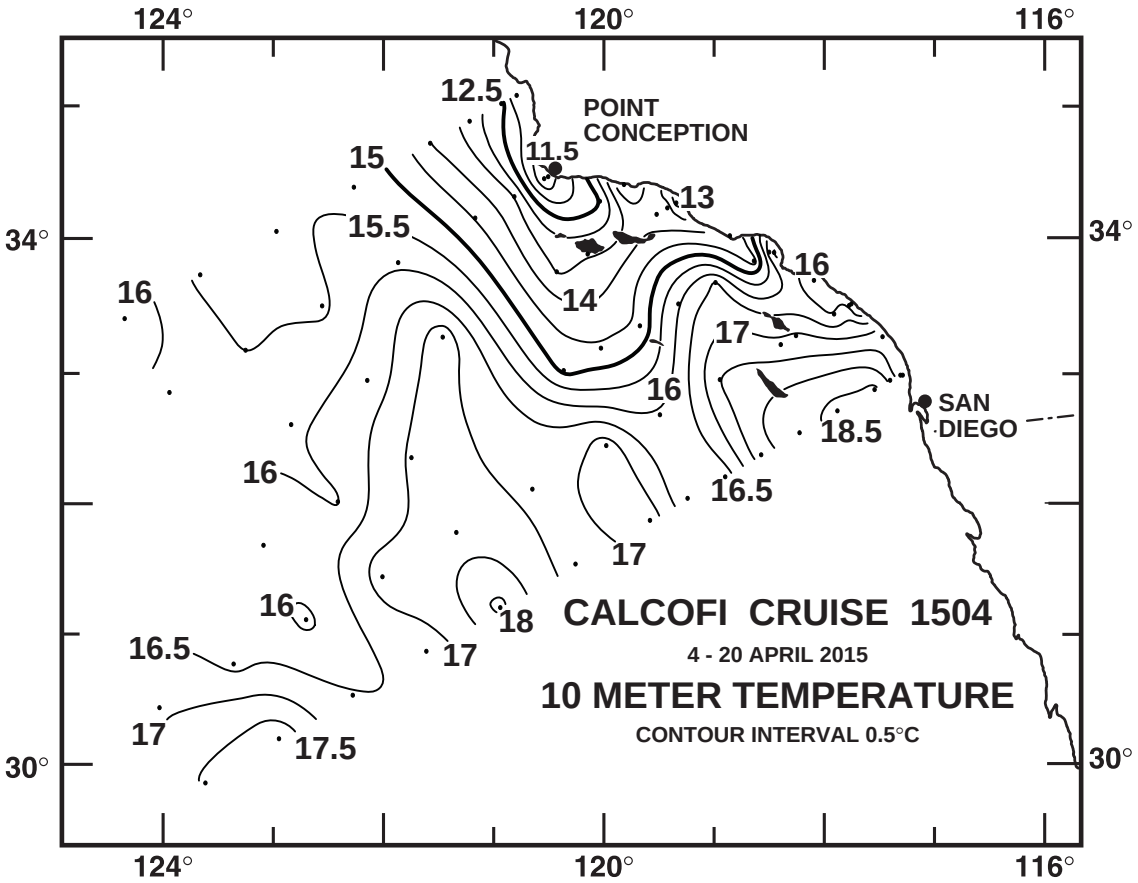


FIGURE 3C

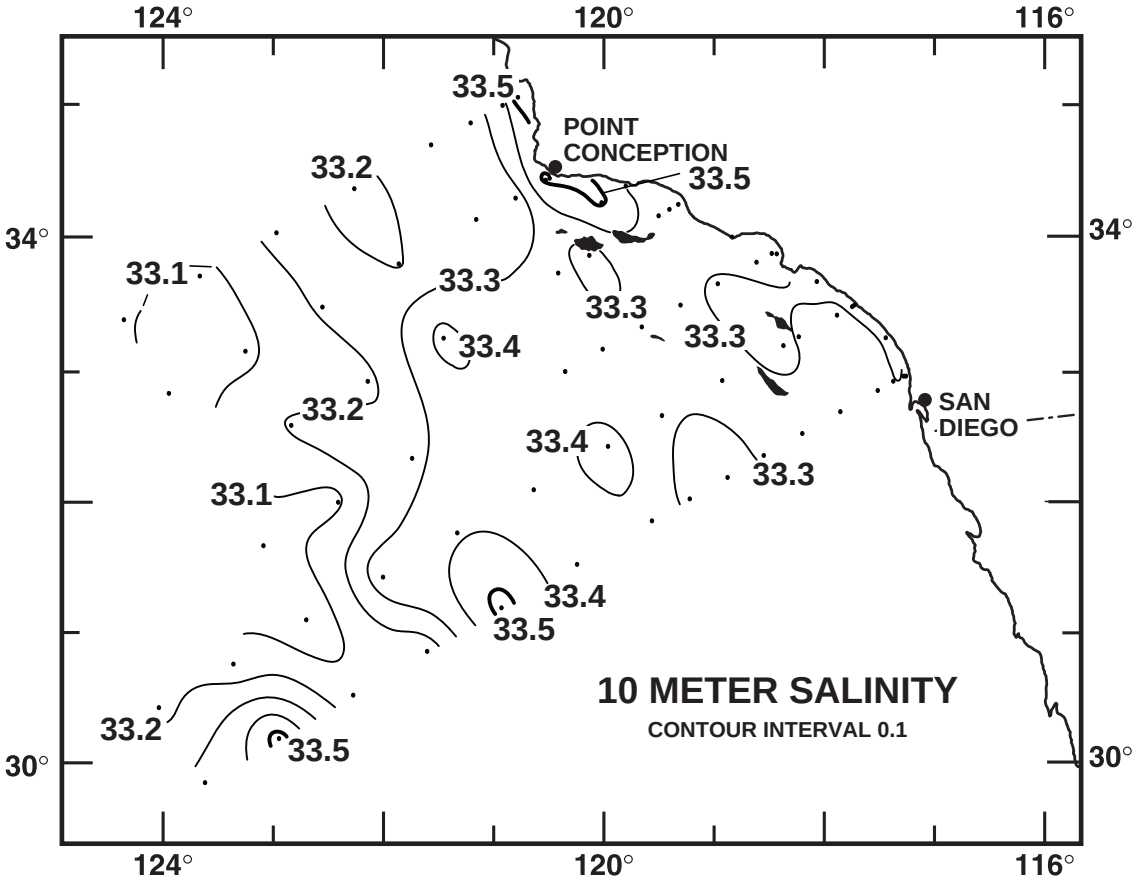


FIGURE 3D

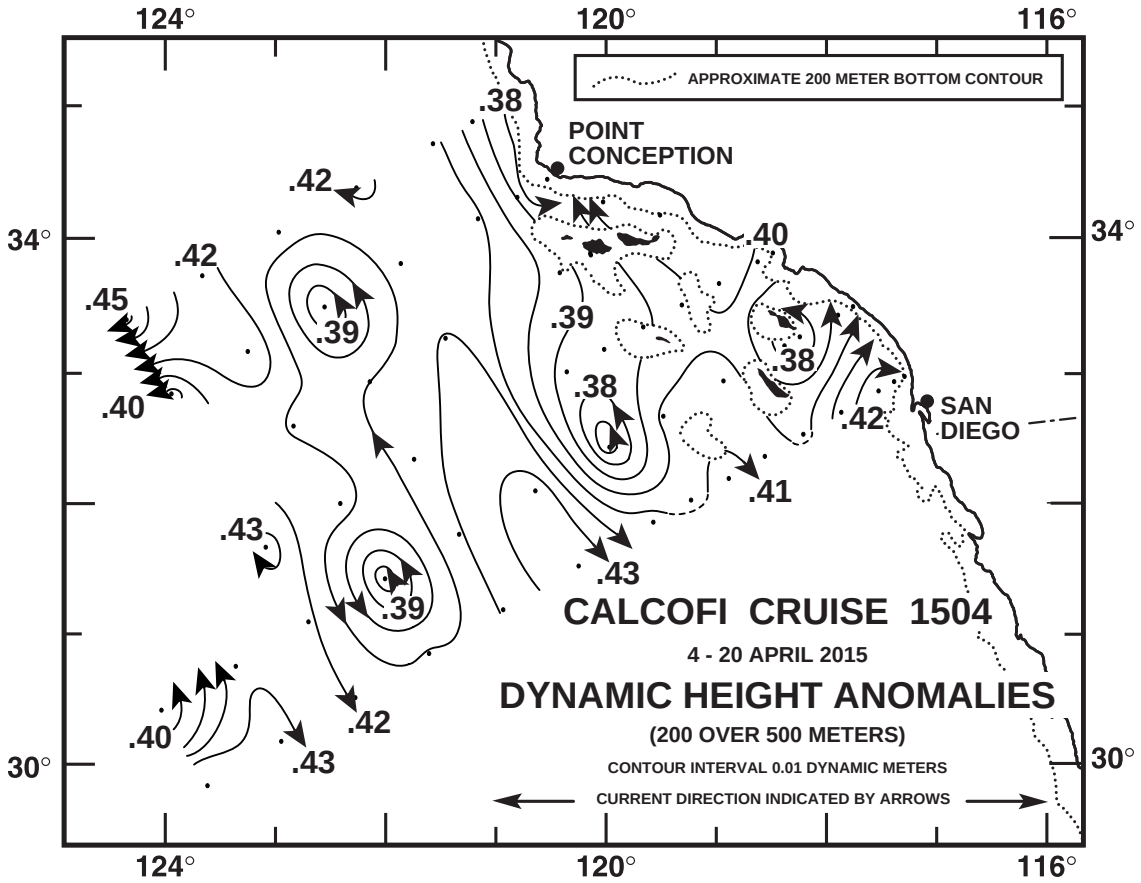


FIGURE 4A

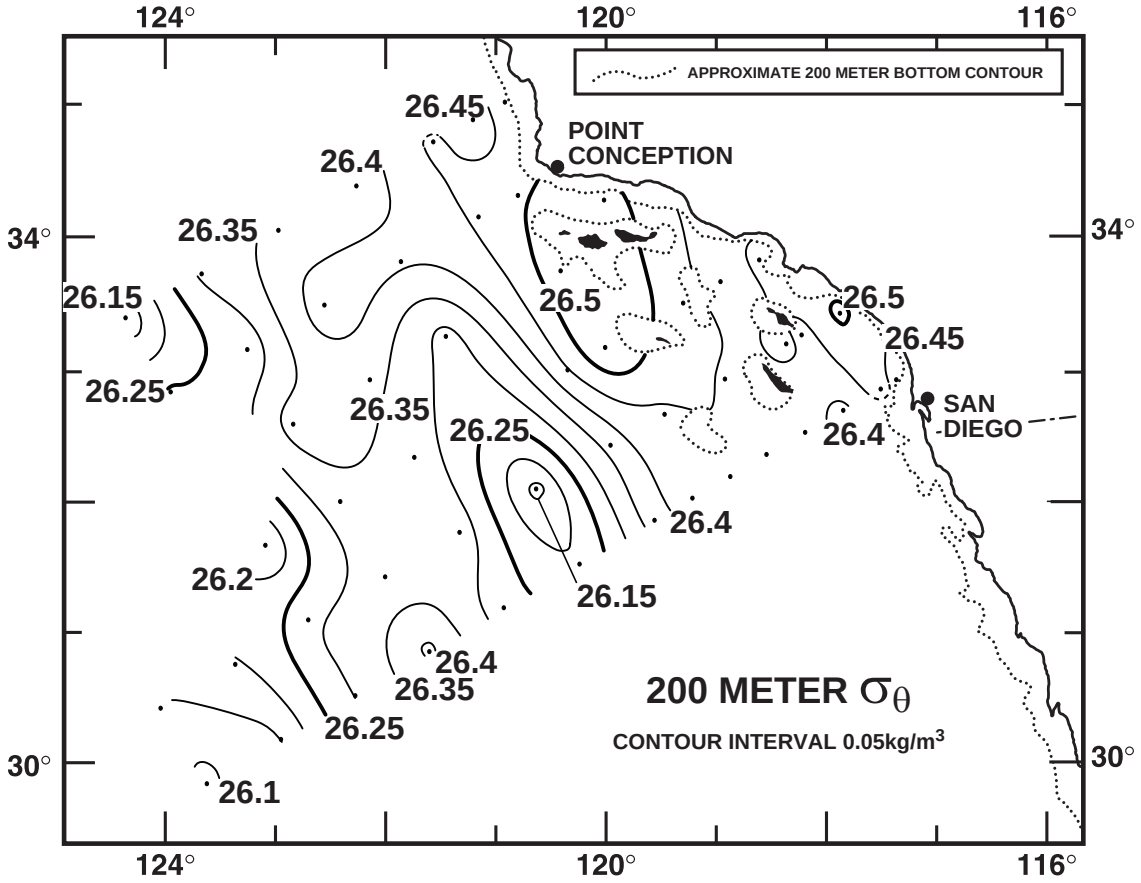


FIGURE 4B

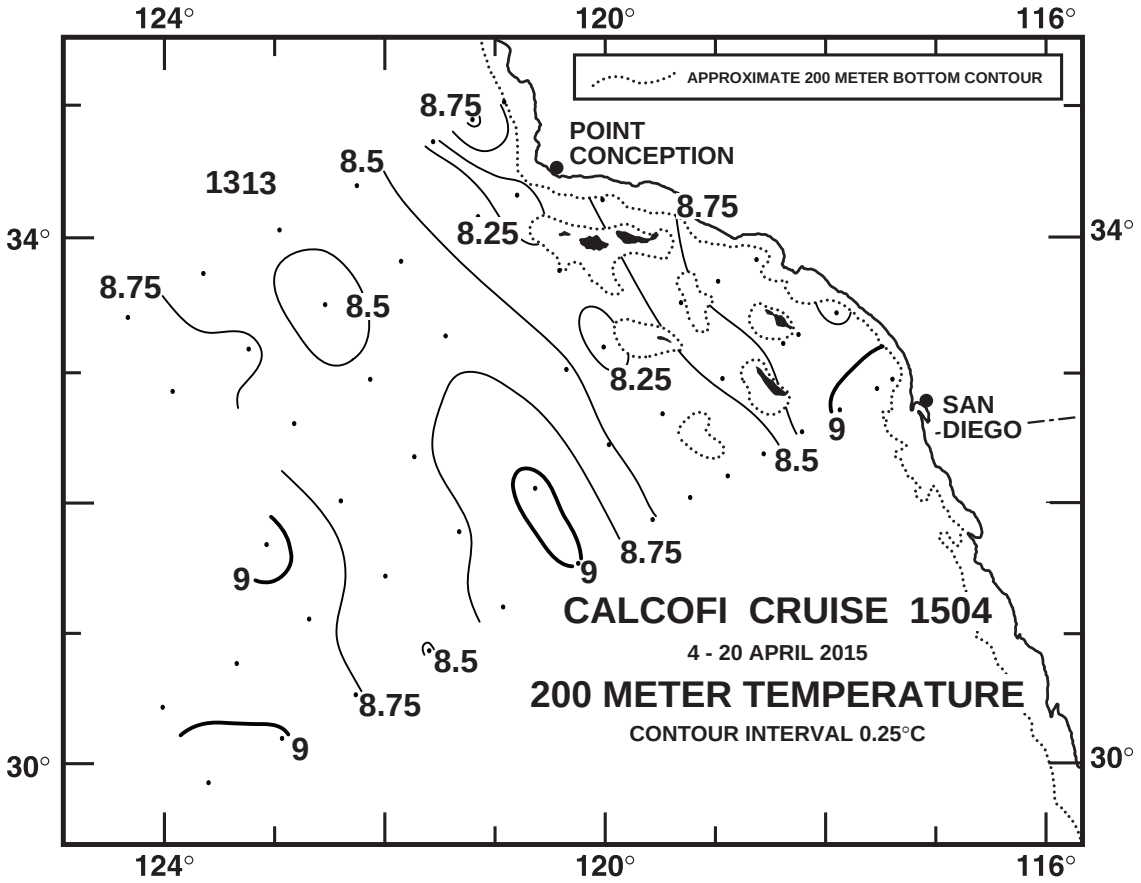


FIGURE 4C

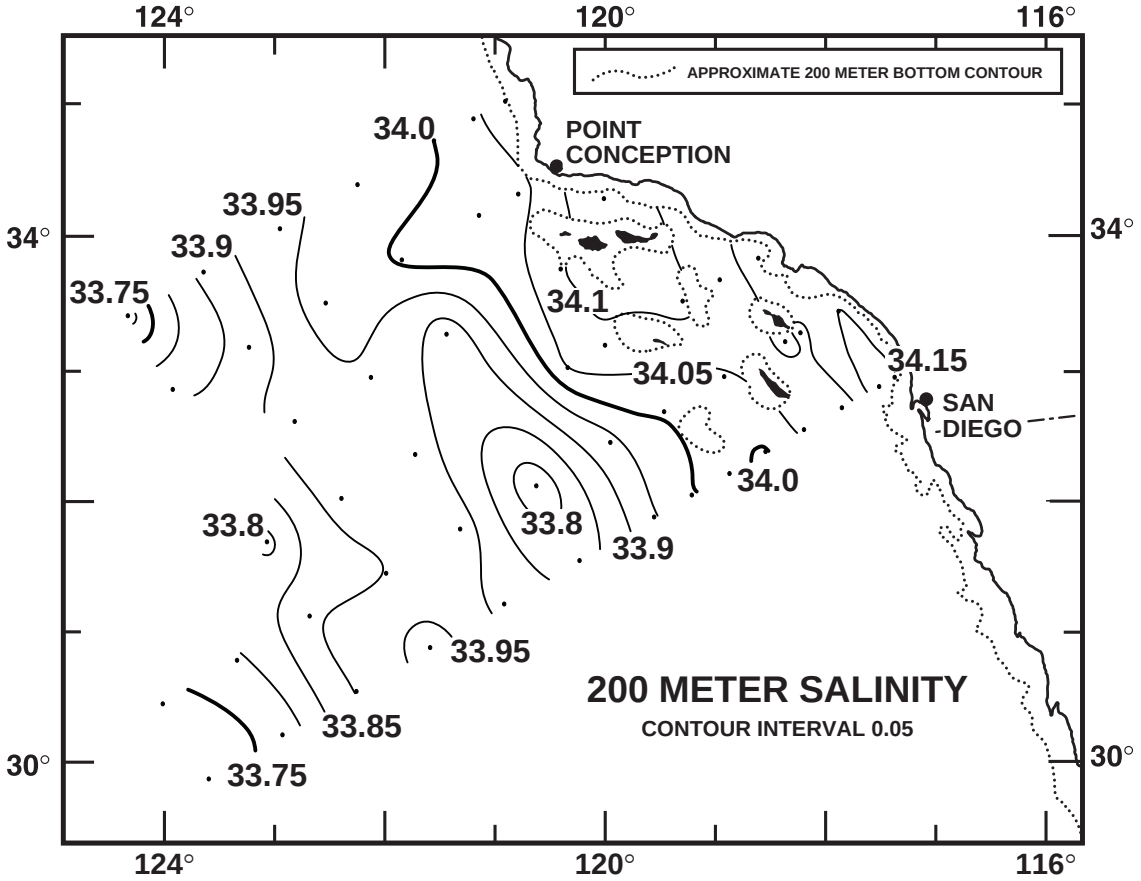


FIGURE 4D

# CALCOFI CRUISE 1504

**7 - 10 April 2015**

## POTENTIAL DENSITY ($\sigma_\theta$) ALONG CALCOFI LINE 90

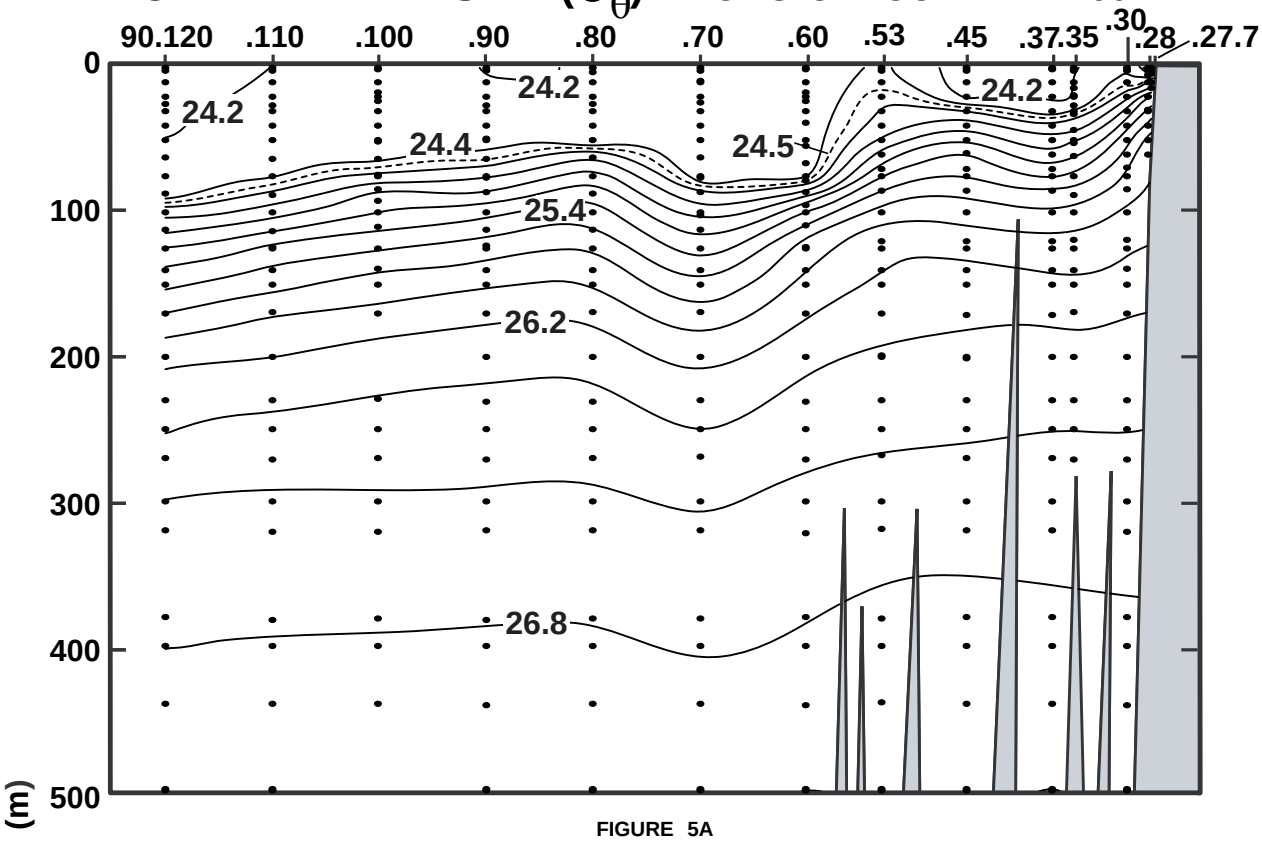


FIGURE 5A

## TEMPERATURE ( °C) ALONG CALCOFI LINE 90

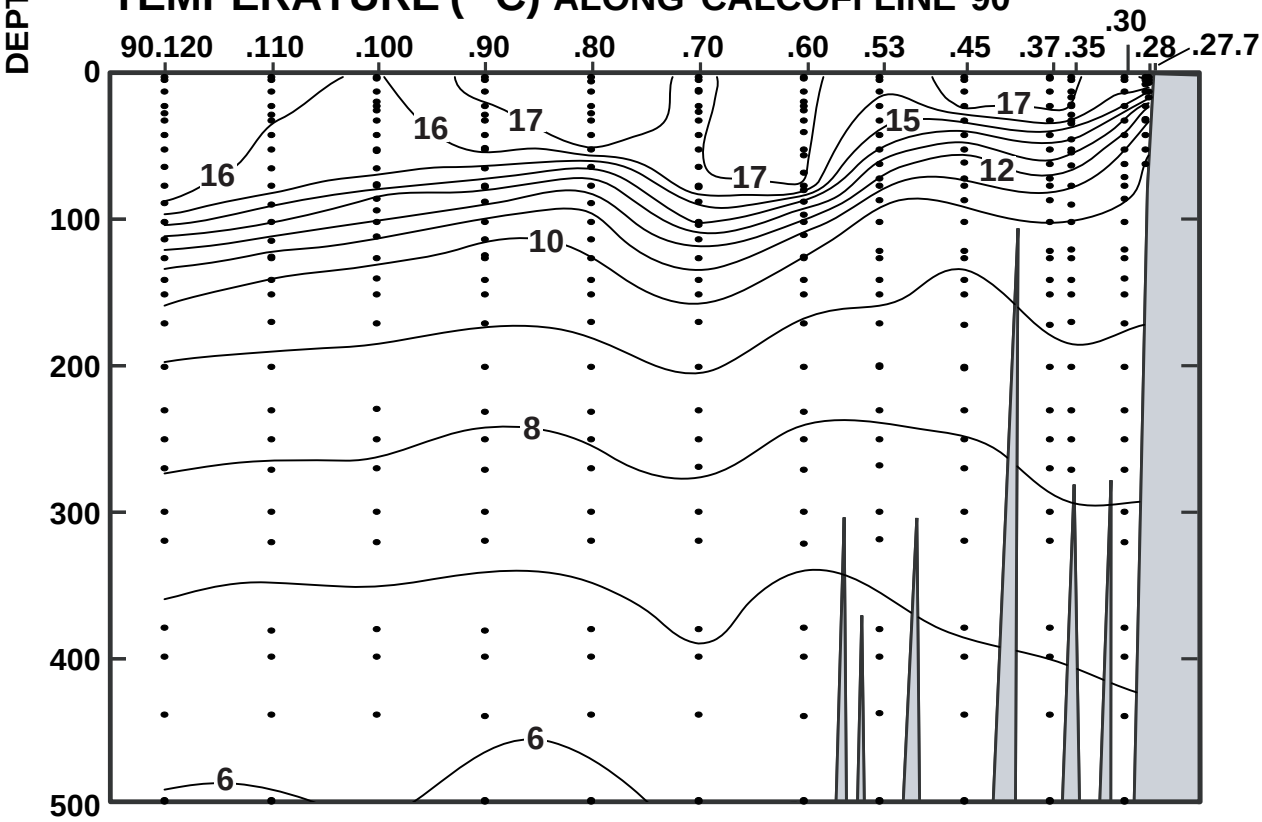


FIGURE 5B

# CALCOFI CRUISE 1504

**7- 10 April 2015**

## SALINITY ALONG CALCOFI LINE 90

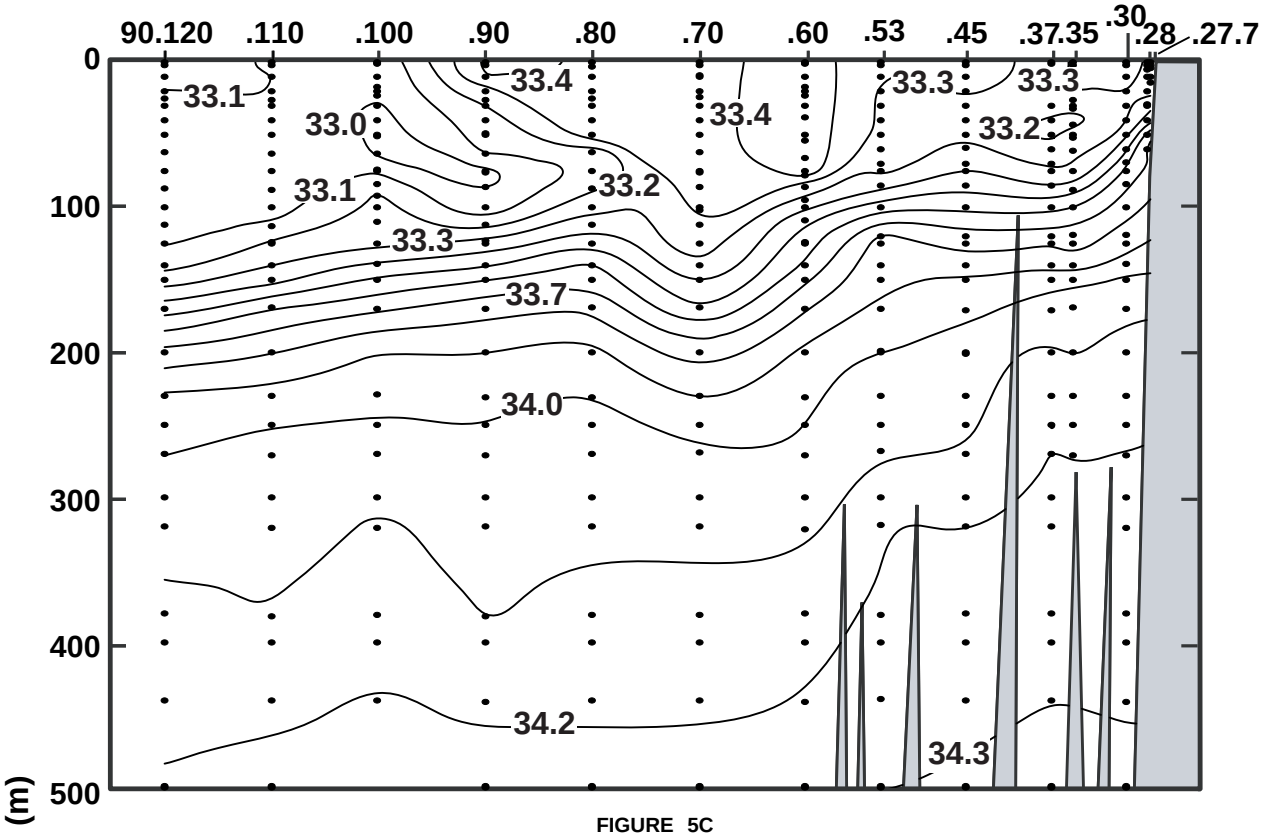


FIGURE 5C

## SILICATE (μM/L) ALONG CALCOFI LINE 90

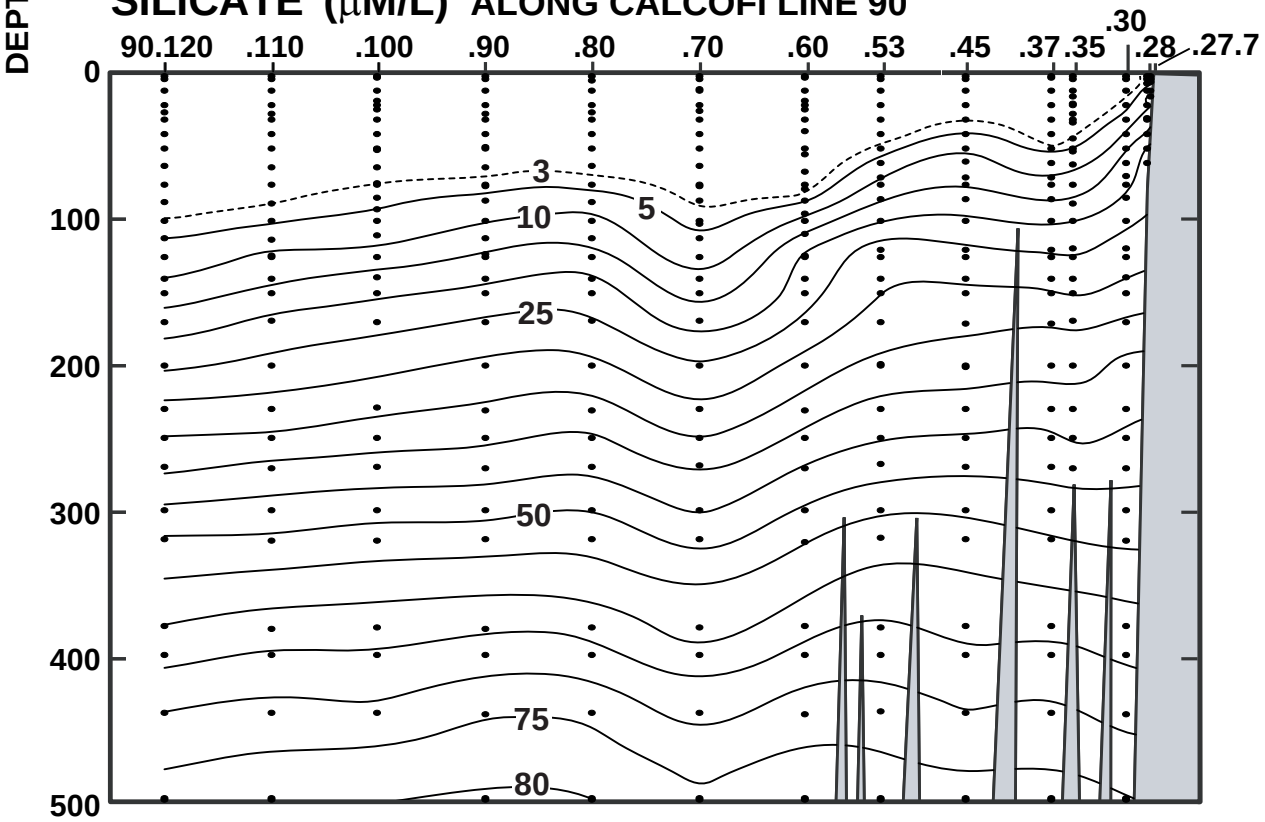


FIGURE 5D

# CALCOFI CRUISE 1504

**7 - 10 April 2015**

## NITRATE (μM/L) ALONG CALCOFI LINE 90

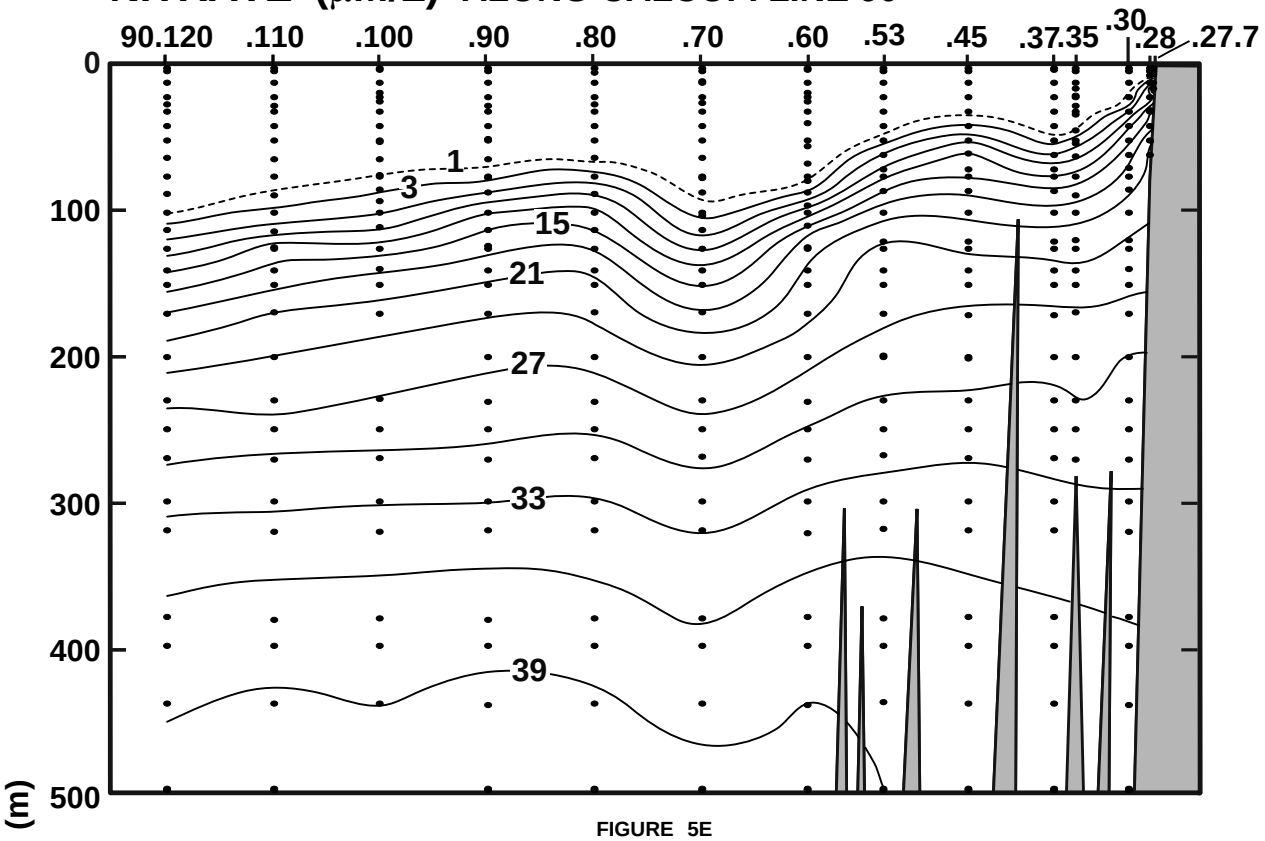


FIGURE 5E

## PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

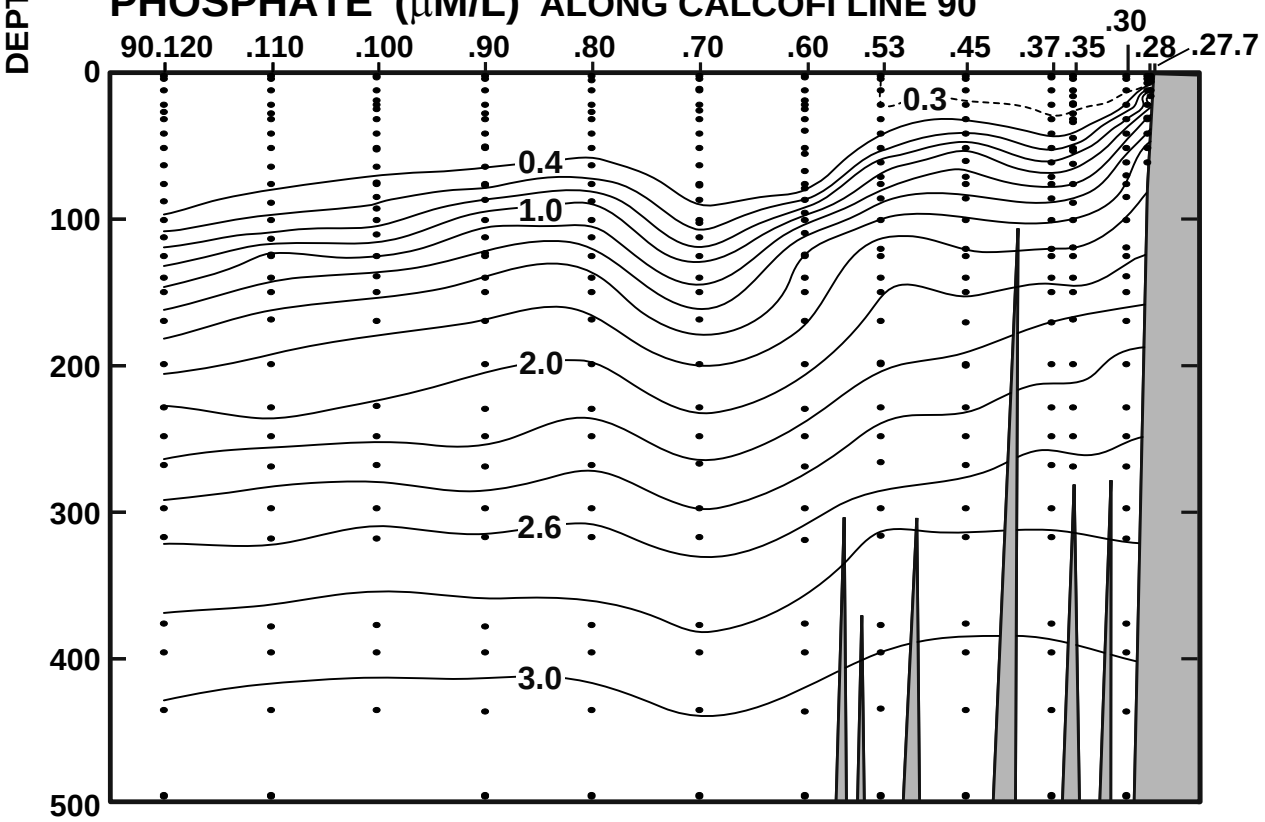


FIGURE 5F

# CALCOFI CRUISE 1504

**7 - 10 April 2015**

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

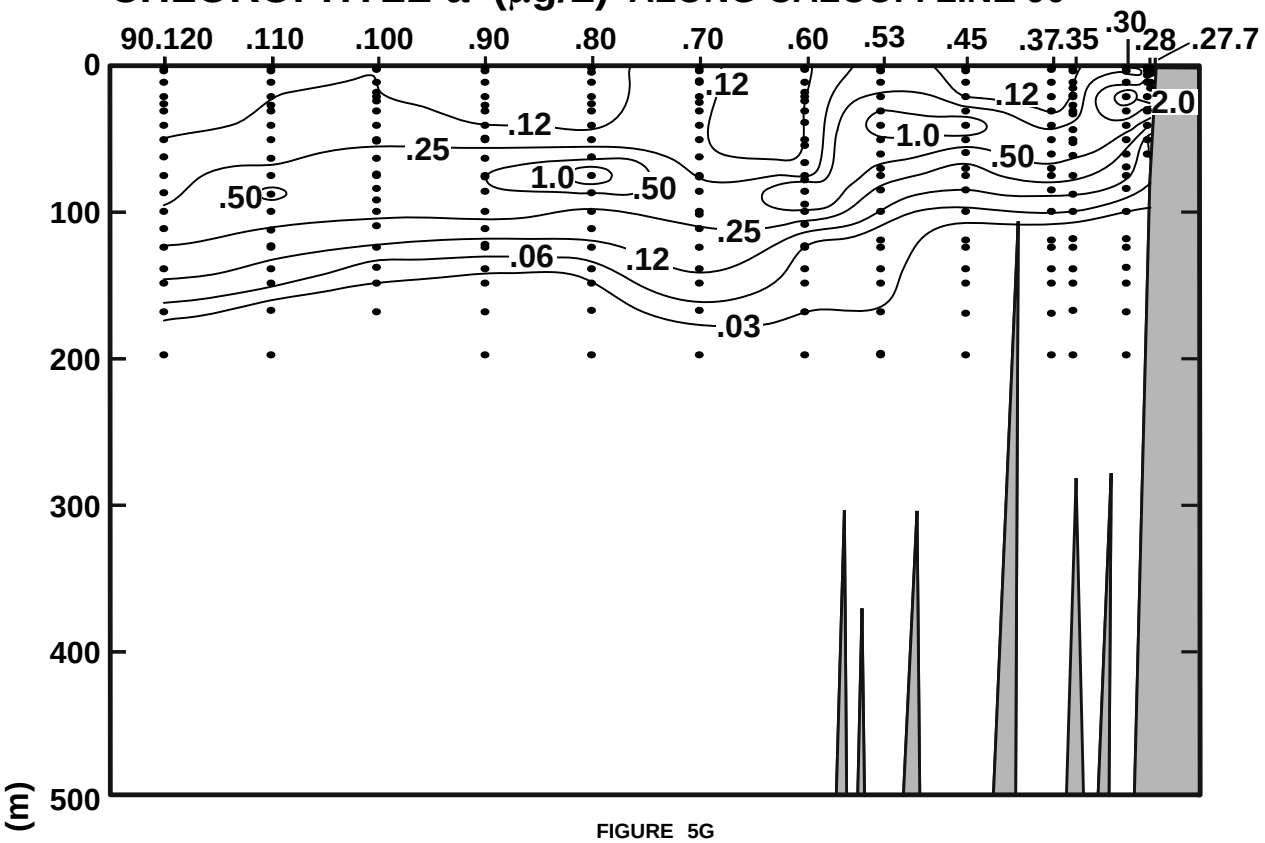


FIGURE 5G

## OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

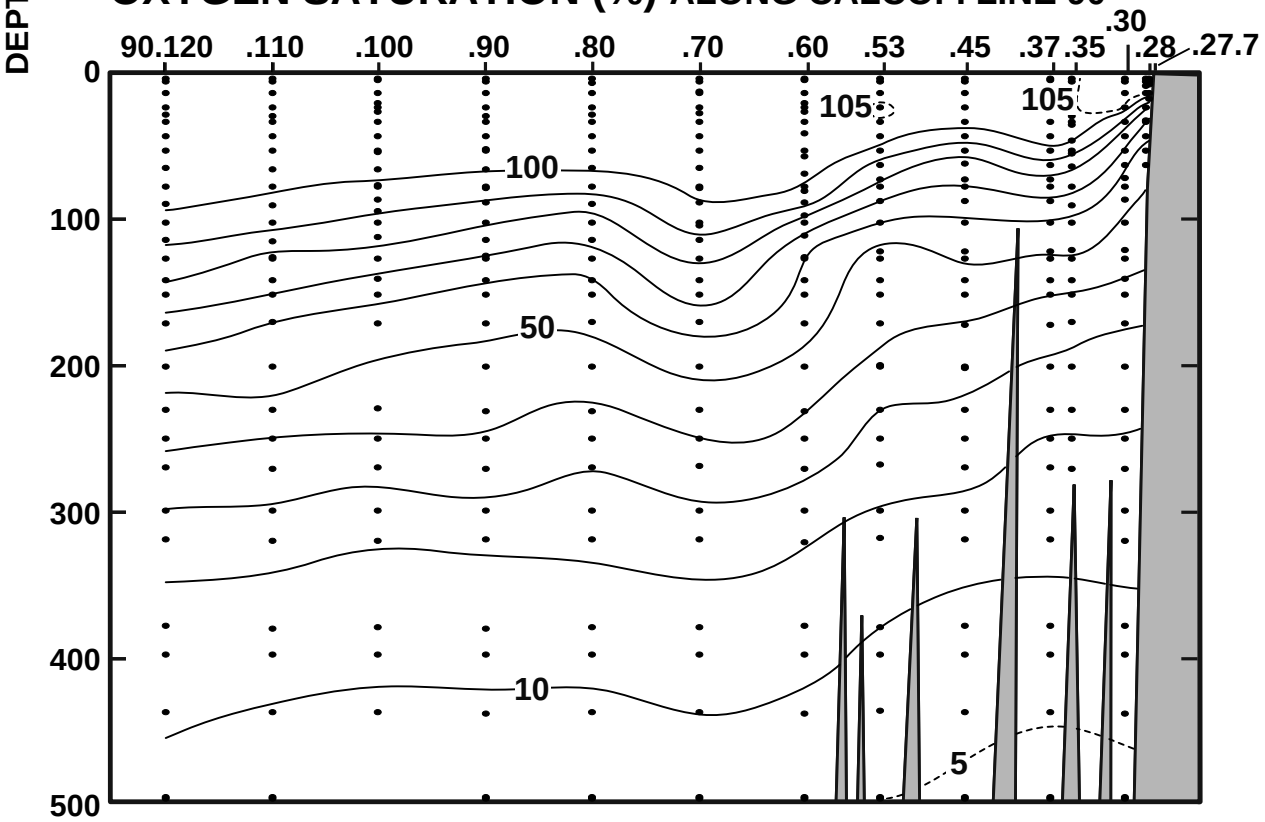


FIGURE 5H

# CALCOFI CRUISE 1504

**7 - 10 April 2015**

## OXYGEN (mL/L) ALONG CALCOFI LINE 90

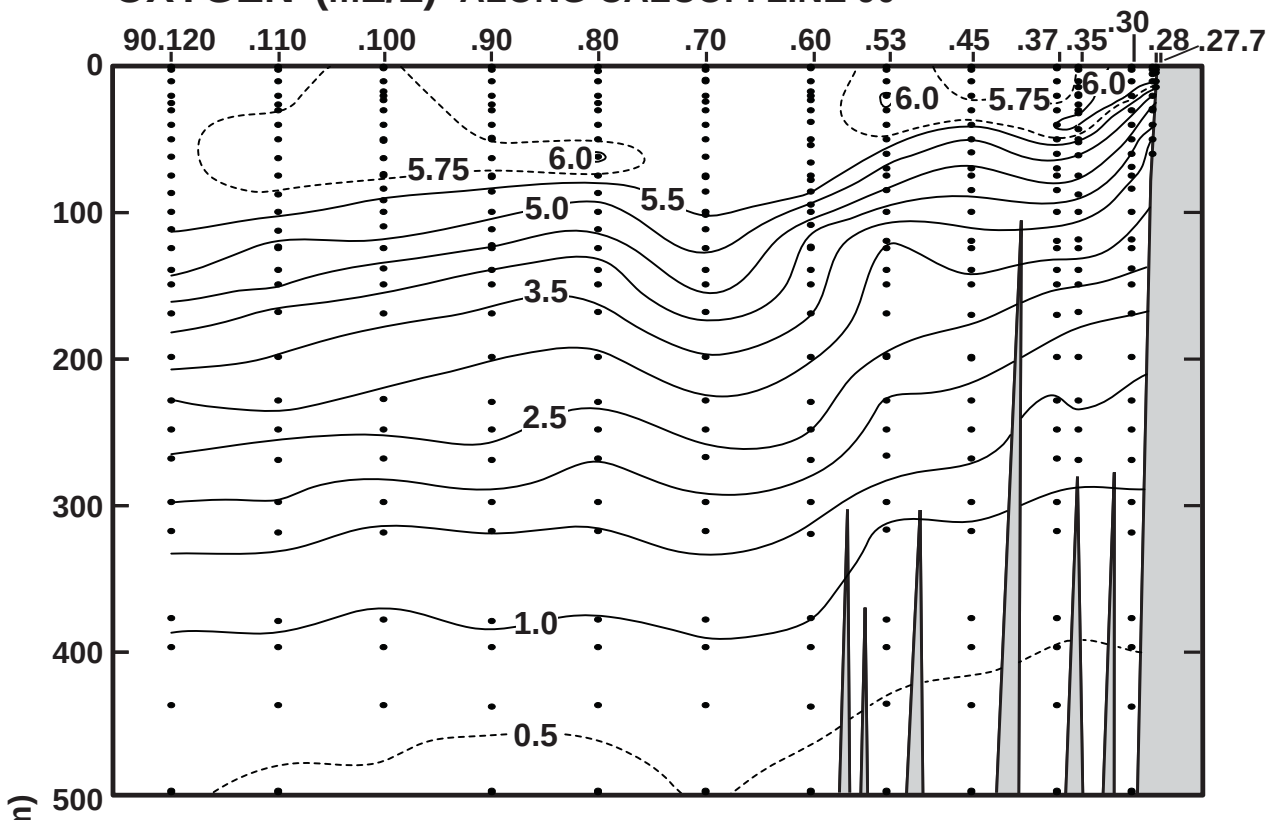


FIGURE 5I

## NITRITE (μM/L) ALONG CALCOFI LINE 90

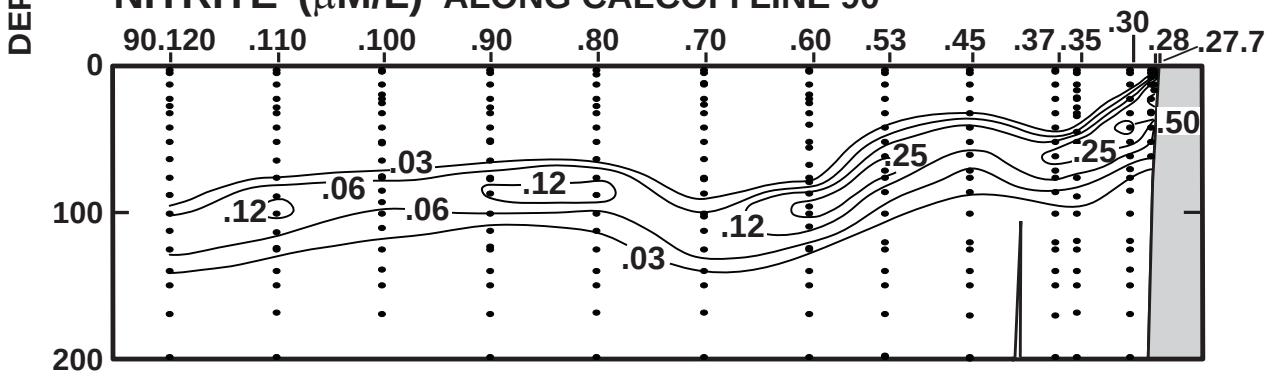


FIGURE 5J

## PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

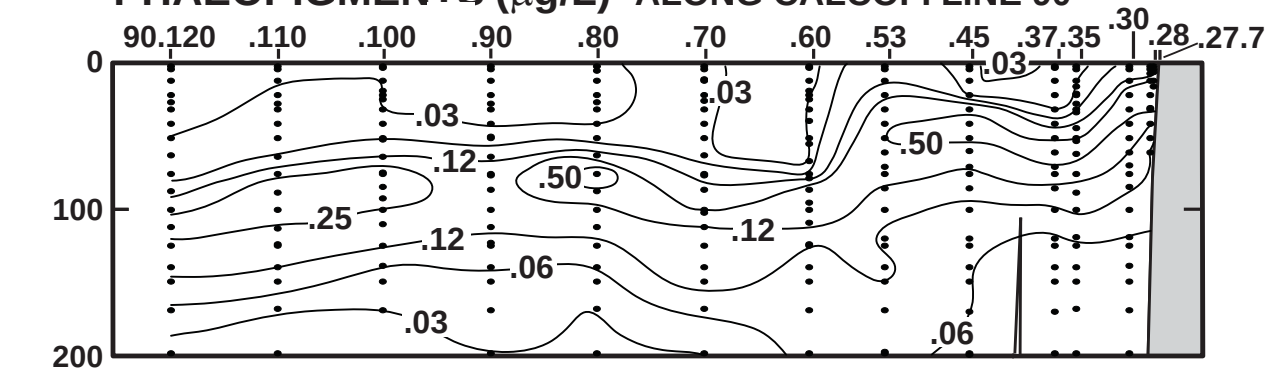


FIGURE 5K

PERSONNEL

CalCOFI Cruise 1504

SHIP'S CAPTAIN

Ian Lawrence, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

| | | Participating (Legs) |
|---|---|---|
| Hays, Amy (Chief Scientist) | Fisheries Biologist, NMFS | 1,2 |
| Chang, Kylee | Graduate Student, SIO | 1 |
| Dovel, Shonna | Staff Research Associate, SIO | 1,2 |
| Ekern, Lindsey | Staff Research Associate, SIO | 1,2 |
| Faber, David | Staff Research Associate, SIO | 1,2 |
| Johnson, Zachariah | Volunteer | 1,2 |
| Klemmedson, Angela | Scientific Aid, CDFW | 1,2 |
| Manion, Sue | Fishery Biologist, NMFS | 1,2 |
| Miller, Kelsey | Volunteer | 1,2 |
| Rodgers-Wolgast, Jennifer | Staff Research Associate, SIO | 1,2 |
| Taylor, Katlyn | Marine Mammal Observer, MPL | 1,2 |
| Trickey, Jennifer | Acoustic Technician, SIO | 1,2 |
| Webb, Sophie | Bird Observer, FAIER | 1,2 |
| Whitaker, Katherine | Marine Mammal Observer, MPL | 1,2 |
| Wilkinson, James | Programmer Analyst, SIO | 1,2 |
| Wolgast, David | Staff Research Associate, SIO | 1,2 |
| Yu, Symphony | Volunteer | 1,2 |

Leg 1: San Diego to Dana Point, California, 4-10 April, 2015
Leg 2: Dana Point to San Diego, California, 10-19 April, 2015

RV NEW HORIZON CALCOFI CRUISE 1504 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 5.1 N | 120 46.3 W | 19/04/2015 | 1147 UTC | 68 m | 010 03 kn | | | 1013.8 mb | 11.3 C | 10.8 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 | 11.51 | 11.51 | 33.560 D | 25.562 | 241.3 | 0.000 | 7.11 | 309.8 | 115.3 | 1.4 | 0.39 | 1.7 | 0.07 | 0.01 | 22.63 | 2.54 | 0 | |
| 2 | 11.51 | 11.51 | 33.561 | 25.564 | 241.2 | 0.005 | 7.11 | 309.8 | 115.3 | 1.4 | 0.39 | 1.7 | 0.07 | 0.01 | 22.63 | 2.54 | 2 | 09 |
| 4 | 11.48 | 11.48 | 33.562 | 25.570 | 240.7 | 0.010 | 7.12 | 310.0 | 115.3 | 1.4 | 0.39 | 1.8 | 0.07 | 0.01 | 22.38 | 2.56 | 4 | 08 |
| 10 | 11.50 | 11.50 | 33.569 | 25.571 | 240.7 | 0.024 | 7.15 | 311.4 | 115.9 | 1.0 | 0.38 | 1.4 | 0.06 | 0.02 | 23.71 | 1.62 | 10 | 06 |
| 10 | 11.50 | 11.50 | 33.560 | 25.565 | 241.3 | 0.023 | | | | | | | | | | | 10 | 07 |
| 20 | 11.44 | 11.44 | 33.569 | 25.583 | 239.9 | 0.048 | 6.93 | 301.9 | 112.2 | 1.4 | 0.44 | 2.3 | 0.09 | 0.03 | 24.09 | 1.10 | 20 | 05 |
| 30 | 11.16 | 11.15 | 33.566 | 25.633 | 235.4 | 0.072 | 6.12 | 266.3 | 98.3 | 4.2 | 0.75 | 6.9 | 0.15 | 0.15 | 21.75 | 1.16 | 30 | 04 |
| 40 | 10.97 | 10.96 | 33.567 | 25.668 | 232.3 | 0.095 | 5.86 | 254.9 | 93.8 | 6.7 | 0.88 | 8.8 | 0.13 | 0.15 | 20.90 | 0.99 | 40 | 03 |
| 50 | 9.80 | 9.79 | 33.570 | 25.871 | 213.1 | 0.118 | 3.94 | 171.4 | 61.5 | 20.0 | 1.61 | 19.5 | 0.12 | 0.10 | 2.74 | 0.72 | 50 | 02 |
| 59 | 9.65 | 9.64 | 33.691 | 25.991 | 201.9 | 0.136 | 3.25 | 141.5 | 50.6 | 25.7 | 1.85 | 22.2 | 0.19 | 0.08 | 0.61 | 0.62 | 59 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 76.7 51.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 1.3 N | 120 54.6 W | 19/04/2015 | 0908 UTC | 220 m | 320 04 kn | | | 1014.2 mb | 12.1 C | 11.9 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 | 12.68 | 12.68 | 33.354 D | 25.182 | 277.4 | 0.000 | 6.65 | 289.6 | 110.3 | 0.5 | 0.56 | 3.0 | 0.16 | 0.55 | 2.52 | 1.04 | 0 | |
| 2 | 12.68 | 12.67 | 33.355 | 25.183 | 277.4 | 0.006 | 6.65 | 289.6 | 110.3 | 0.5 | 0.56 | 3.0 | 0.16 | 0.55 | 2.52 | 1.04 | 2 | 16 |
| 9 | 12.67 | 12.67 | 33.355 | 25.184 | 277.6 | 0.026 | | | | | | | | | | | 9 | 15 |
| 10 | 12.67 | 12.67 | 33.355 | 25.185 | 277.5 | 0.028 | 6.59 | 287.1 | 109.3 | 0.5 | 0.57 | 3.0 | 0.16 | 0.56 | 2.49 | 1.09 | 10 | 14 |
| 20 | 11.69 | 11.68 | 33.277 | 25.311 | 265.7 | 0.055 | 6.06 | 264.1 | 98.5 | 4.6 | 0.86 | 7.4 | 0.19 | 0.35 | 7.09 | 1.78 | 20 | 13 |
| 30 | 11.55 | 11.55 | 33.320 | 25.369 | 260.5 | 0.081 | 6.01 | 261.9 | 97.4 | 6.3 | 0.91 | 7.9 | 0.19 | 0.60 | 6.97 | 1.93 | 30 | 12 |
| 40 | 11.47 | 11.47 | 33.323 | 25.387 | 259.0 | 0.107 | 5.81 | 253.1 | 93.9 | 7.5 | 1.01 | 8.9 | 0.20 | 0.65 | 6.34A | 1.92A | 40 | 11 |
| 50 | 11.14 | 11.13 | 33.397 | 25.505 | 248.0 | 0.133 | 5.79 | 252.2 | 93.0 | 6.3 | 1.00 | 8.7 | 0.18 | 1.31 | 7.59 | 2.64 | 50 | 10 |
| 60 | 10.58 | 10.57 | 33.405 | 25.611 | 238.2 | 0.157 | 5.43 | 236.5 | 86.2 | 8.7 | 1.17 | 10.8 | 0.19 | 1.31 | 10.24 | 3.01 | 60 | 09 |
| 70 | 10.01 | 10.00 | 33.499 | 25.781 | 222.1 | 0.180 | 4.07 | 177.1 | 63.8 | 18.7 | 1.59 | 18.6 | 0.18 | 0.22 | 4.67 | 2.19 | 71 | 08 |
| 75 ISL | 10.00 D | 9.99 | 33.594 D | 25.858 | 214.9 | 0.181 | 3.62 | D157.7 D | 56.8 | 21.1 | 1.68 | 20.0 | 0.15 | 0.00 | 3.19 | 1.60 | 76 | |
| 85 | 9.57 | 9.56 | 33.735 | 26.039 | 197.9 | 0.212 | 3.02 | 131.5 | 47.0 | 25.8 | 1.86 | 22.9 | 0.09 | 0.00 | 0.21 | 0.42 | 86 | 07 |
| 100 | 9.17 | 9.15 | 33.804 | 26.159 | 186.7 | 0.241 | 3.02 | 131.5 | 46.6 | 27.8 | 1.91 | 24.5 | 0.04 | 0.00 | 0.10 | 0.33 | 101 | 06 |
| 120 | 9.05 | 9.04 | 33.976 | 26.313 | 172.6 | 0.276 | 2.07 | 90.1 | 31.9 | 36.9 | 2.24 | 27.4 | 0.16 | 0.04 | 0.07 | 0.43 | 121 | 05 |
| 125 ISL | 9.04 D | 9.02 | 33.977 D | 26.316 | 172.4 | 0.274 | 2.11 | D 91.7 D | 32.4 | 37.0 | 2.25 | 27.5 | 0.16 | 0.05 | 0.07 | 0.42 | 126 | |
| 140 | 9.01 | 9.00 | 33.987 | 26.329 | 171.6 | 0.311 | 2.02 | 88.0 | 31.1 | 37.5 | 2.26 | 27.6 | 0.15 | 0.07 | 0.07 | 0.39 | 141 | 04 |
| 150 ISL | 8.88 D | 8.87 | 34.018 D | 26.373 | 167.5 | 0.318 | 1.97 | D 85.8 D | 30.2 | 38.7 | 2.30 | 28.1 | 0.15 | 0.09 | 0.06 | 0.35 | 151 | |
| 171 | 8.73 | 8.72 | 34.049 | 26.421 | 163.3 | 0.363 | 1.79 | 77.9 | 27.4 | 41.1 | 2.37 | 29.1 | 0.14 | 0.12 | 0.04 | 0.28 | 172 | 03 |
| 200 | 8.45 | 8.43 | 34.093 | 26.500 | 156.3 | 0.409 | 1.61 | 69.9 | 24.4 | 44.3 | 2.45 | 30.2 | 0.11 | 0.12 | 0.02 | 0.25 | 202 | 02 |
| 216 | 8.47 | 8.45 | 34.098 | 26.501 | 156.6 | 0.434 | 1.51 | 65.6 | 22.9 | 45.8 | 2.52 | 30.2 | 0.15 | 0.31 | | | 218 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 11.8 W | 19/04/2015 | 0510 UTC | 571 m | 320 13 kn | | | 1014.4 mb | 13.9 C | 11.9 C | | | | 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 | 13.67 | 13.67 | 33.247 D | 24.901 | 304.2 | 0.000 | 6.21 | 270.6 | 105.1 | 3.5 | 0.61 | 3.6 | 0.13 | 0.11 | 0.72 | 0.25 | 0 | |
| 2 | 13.67 | 13.67 | 33.249 | 24.903 | 304.1 | 0.006 | 6.21 | 270.6 | 105.1 | 3.5 | 0.61 | 3.6 | 0.13 | 0.11 | 0.72 | 0.25 | 2 | 22 |
| 10 | 13.23 | 13.23 | 33.250 | 24.992 | 295.8 | 0.030 | 6.22 | 270.9 | 104.3 | 3.5 | 0.64 | 3.8 | 0.14 | 0.23 | 0.66 | 0.29 | 10 | 20 |
| 10 | 13.23 | 13.23 | 33.249 | 24.992 | 295.9 | 0.030 | | | | | | | | | | | 10 | 21 |
| 20 | 12.84 | 12.84 | 33.273 | 25.089 | 286.9 | 0.059 | 6.09 | 265.4 | 101.3 | 4.0 | 0.70 | 4.8 | 0.18 | 0.18 | 1.64 | 0.77 | 20 | 19 |
| 30 | 12.19 | 12.19 | 33.327 | 25.256 | 271.2 | 0.087 | 5.78 | 251.8 | 94.9 | 6.5 | 0.88 | 7.2 | 0.22 | 0.57 | 2.77 | 1.28 | 30 | 18 |
| 40 | 11.82 | 11.81 | 33.348 | 25.344 | 263.2 | 0.114 | 5.88 | 255.9 | 95.7 | 6.4 | 0.91 | 7.6 | 0.21 | 0.86 | 3.95 | 1.61 | 40 | 16 |
| 40 | 11.82 | 11.81 | 33.346 | 25.342 | 263.4 | 0.114 | | | | | | | | | | | 40 | 17 |
| 50 | 11.44 | 11.44 | 33.381 | 25.438 | 254.4 | 0.140 | 5.42 | 236.2 | 87.7 | 9.4 | 1.09 | 10.0 | 0.23 | 0.96 | 4.06 | 1.65 | 50 | 15 |
| 60 | 10.86 | 10.85 | 33.421 | 25.574 | 241.6 | 0.165 | 4.86 | 211.4 | 77.5 | 13.2 | 1.28 | 13.3 | 0.25 | 0.64 | 2.61 | 1.38 | 60 | 14 |
| 70 | 10.25 | 10.24 | 33.476 | 25.722 | 227.7 | 0.188 | 4.15 | 180.7 | 65.4 | 18.1 | 1.52 | 17.9 | 0.22 | 0.02 | 0.43 | 0.49 | 71 | 13 |
| 75 ISL | 10.00 D | 9.99 | 33.599 D | 25.862 | 214.6 | 0.173 | 3.72 | D162.0 D | 58.4 | 19.7 | 1.59 | 19.0 | 0.19 | 0.00 | 0.36 | 0.46 | 76 | |
| 85 | 9.89 | 9.88 | 33.656 | 25.925 | 208.8 | 0.221 | 3.38 | 147.1 | 52.9 | 23.1 | 1.74 | 21.2 | 0.11 | 0.00 | 0.23 | 0.41 | 86 | 12 |
| 100 | 9.51 | 9.49 | 33.797 | 26.099 | 192.6 | 0.251 | 2.81 | 122.3 | 43.6 | 27.9 | 1.94 | 24.1 | 0.04 | 0.00 | 0.11 | 0.32 | 101 | 11 |
| 120 | 9.25 | 9.23 | 33.899 | 26.221 | 181.3 | 0.288 | 2.51 | 109.1 | 38.7 | 31.6 | 2.07 | 25.9 | 0.03 | 0.00 | 0.05 | 0.22 | 121 | 10 |
| 125 ISL | 9.20 D | 9.18 | 33.903 D | 26.232 | 180.4 | 0.271 | 2.52 | D109.8 D | 39.0 | 32.3 | 2.09 | 26.2 | 0.03 | 0.00 | 0.05 | 0.21 | 126 | |
| 140 | 9.00 | 8.99 | 33.954 | 26.304 | 173.9 | 0.324 | 2.34 | 101.8 | 36.0 | 34.1 | 2.14 | 26.9 | 0.02 | 0.00 | 0.04 | 0.19 | 141 | 09 |
| 150 ISL | 8.97 D | 8.95 | 33.968 D | 26.320 | 172.6 | 0.315 | 2.31 | D100.6 D | 35.5 | 34.6 | 2.16 | 27.2 | 0.02 | 0.00 | 0.04 | 0.18 | 151 | |
| 170 | 8.89 | 8.87 | 33.986 | 26.348 | 170.3 | 0.375 | 2.22 | 96.7 | 34.1 | 35.7 | 2.19 | 27.7 | 0.02 | 0.00 | 0.03 | 0.18 | 171 | 08 |
| 200 | 8.85 | 8.82 | 34.039 | 26.397 | 166.3 | 0.426 | 1.95 | 84.8 | 29.9 | 37.9 | 2.29 | 28.6 | 0.02 | 0.00 | 0.03 | 0.16 | 202 | 07 |
| 230 | 8.45 | 8.43 | 34.131 | 26.531 | 154.0 | 0.474 | 1.52 | 65.9 | 23.0 | 43.6 | 2.48 | 30.7 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.30 D | 8.27 | 34.140 D | 26.562 | 151.4 | 0.479 | 1.46 | D 63.6 D | 22.1 | 45.7 | 2.53 | 31.3 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.11 | 8.09 | 34.145 | 26.594 | 148.7 | 0.534 | 1.36 | 59.2 | 20.5 | 47.8 | 2.58 | 31.9 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.82 D | 7.79 | 34.173 D | 26.660 | 142.9 | 0.553 | 1.17 | D 50.9 D | 17.5 | 50.8 | 2.65 | 32.9 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.72 | 7.69 | 34.172 | 26.674 | 141.8 | 0.608 | 1.12 | 48.6 | 16.7 | 52.9 | 2.70 | 33.6 | 0.01 | 0.00 | | | 324 | 04 |
| 382 | 7.41 | 7.37 | 34.164 | 26.714 | 138.9 | 0.694 | 1.06 | 46.2 | 15.8 | 56.0 | 2.75 | 34.7 | 0.01 | 0.00 | | | 385 | 03 |
| 400 ISL | 6.90 D | 6.86 | 34.149 D | 26.773 | 133.2 | 0.695 | 0.98 | D 42.8 D | 14.4 | 59.9 | 2.82 | 35.6 | 0.01 | 0.00 | | | 403 | |
| 442 | 6.56 | 6.52 | 34.200 | 26.858 | 125.5 | 0.772 | 0.66 | 28.7 | 9.6 | 69.0 | 2.99 | 37.8 | 0.02 | 0.00 | | | 446 | 02 |
| 500 ISL | 6.07 D | 6.02 | 34.237 D | 26.953 | 116.9 | 0.821 | 0.43 | D 18.5 D | 6.1 | 78.0 | 3.11 | 39.2 | 0.02 | 0.00 | | | 504 | |
| 516 | 5.94 | 5.89 | 34.238 | 26.970 | 115.4 | 0.861 | 0.39 | 17.1 | 5.7 | 80.4 | 3.14 | 39.5 | 0.02 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 43.2 N | 121 33.2 W | 19/04/2015 | 0045 | UTC | 943 m | 310 15 kn | 350 02 07 | 2 | 1014.3 mb | 15.3 C | 13.1 C | 11 m | 7/8 | SC | 066 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.15 | 14.15 | 33.248 D | 24.802 | 313.6 | 0.000 | 6.32 | 275.4 | 108.0 | 1.7 | 0.52 | 2.0 | 0.11 | 0.09 | 1.54 | 0.32 | 0 | |
| 2 | 14.15 | 14.15 | 33.252 | 24.806 | 313.3 | 0.006 | 6.32 | 275.4 | 108.0 | 1.7 | 0.52 | 2.0 | 0.11 | 0.09 | 1.54 | 0.32 | 2 | 20 |
| 10 | 14.00 | 14.00 | 33.252 | 24.837 | 310.6 | 0.031 | 6.29 | 274.1 | 107.2 | 1.8 | | 2.2 | 0.12 | | 1.53 | 0.48 | 10 | 19 |
| 20 | 12.76 | 12.76 | 33.282 | 25.111 | 284.8 | 0.061 | 6.50 | 283.0 | 107.9 | 1.4 | 0.64 | 4.2 | 0.17 | 0.18 | 2.28 | 0.93 | 20 | 18 |
| 30 | 12.58 | 12.58 | 33.267 | 25.135 | 282.8 | 0.090 | 6.03 | 262.7 | 99.8 | 3.7 | 0.76 | 5.8 | 0.17 | 0.28 | 3.58 | 1.47 | 30 | 17 |
| 40 | 12.53 | 12.53 | 33.264 D | 25.142 | 282.4 | 0.119 | 5.93 | D258.4 | D 98.0 | | | | | | | | 40 | 16 |
| 50 | 11.83 | 11.82 | 33.300 | 25.304 | 267.2 | 0.145 | 5.20 | 226.5 | 84.7 | 9.3 | 1.06 | 9.9 | 0.23 | 0.41 | 1.83 | 1.10 | 50 | 15 |
| 60 | 10.59 | 10.58 | 33.455 | 25.648 | 234.6 | 0.170 | 4.24 | 184.8 | 67.3 | 17.0 | 1.46 | 16.5 | 0.28 | 0.14 | 0.36 | 0.50 | 60 | 14 |
| 71 | 9.97 | 9.97 | 33.559 | 25.834 | 217.1 | 0.195 | 3.82 | 166.4 | 59.9 | 20.3 | 1.63 | 19.0 | 0.31 | 0.10 | 0.41 | 0.56 | 72 | 13 |
| 75 ISL | 9.93 D | 9.92 | 33.626 D | 25.894 | 211.5 | 0.205 | 3.51 | D152.6 | D 54.9 | 21.2 | 1.67 | 19.7 | 0.27 | 0.00 | 0.37 | 0.53 | 76 | |
| 85 | 9.72 | 9.71 | 33.667 | 25.961 | 205.3 | 0.225 | 3.37 | 146.6 | 52.5 | 23.6 | 1.78 | 21.6 | 0.17 | 0.00 | 0.28 | 0.45 | 86 | 12 |
| 100 | 9.20 | 9.19 | 33.730 | 26.096 | 192.8 | 0.255 | 3.40 | 148.0 | 52.4 | 25.2 | 1.82 | 23.2 | 0.05 | 0.01 | 0.22 | 0.33 | 101 | 11 |
| 120 | 8.91 | 8.90 | 33.827 | 26.218 | 181.5 | 0.292 | 3.23 | 140.5 | 49.5 | 28.1 | 1.89 | 24.6 | 0.03 | 0.04 | 0.17 | 0.23 | 121 | 10 |
| 125 ISL | 8.88 D | 8.87 | 33.836 D | 26.230 | 180.5 | 0.303 | 3.26 | D142.0 | D 50.0 | 28.5 | 1.90 | 24.8 | 0.03 | 0.00 | 0.17 | 0.23 | 126 | |
| 139 | 8.75 | 8.74 | 33.877 | 26.282 | 175.8 | 0.326 | 3.13 | 136.3 | 47.9 | 29.8 | 1.93 | 25.3 | 0.03 | 0.00 | 0.17 | 0.24 | 140 | 09 |
| 150 ISL | 8.59 D | 8.57 | 33.921 D | 26.343 | 170.2 | 0.347 | 3.06 | D133.1 | D 46.6 | 31.9 | 2.00 | 26.2 | 0.02 | 0.00 | 0.15 | 0.23 | 151 | |
| 170 | 8.35 | 8.33 | 33.977 | 26.424 | 162.9 | 0.379 | 2.65 | 115.1 | 40.1 | 35.9 | 2.12 | 27.9 | 0.02 | 0.00 | 0.12 | 0.21 | 171 | 08 |
| 200 | 8.21 | 8.19 | 34.000 | 26.463 | 159.7 | 0.427 | 2.48 | 107.8 | 37.4 | 38.2 | 2.20 | 28.9 | 0.02 | 0.00 | 0.11 | 0.23 | 202 | 07 |
| 232 | 7.88 | 7.86 | 34.032 | 26.538 | 153.1 | 0.477 | 2.17 | 94.3 | 32.5 | 42.7 | 2.33 | 30.5 | 0.02 | 0.00 | | | 234 | 06 |
| 250 ISL | 7.69 D | 7.67 | 34.063 D | 26.590 | 148.4 | 0.507 | 1.89 | D 82.3 | D 28.2 | 45.5 | 2.42 | 31.5 | 0.02 | 0.00 | | | 252 | |
| 270 | 7.56 | 7.54 | 34.073 | 26.617 | 146.2 | 0.534 | 1.71 | 74.4 | 25.4 | 48.6 | 2.52 | 32.7 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.40 D | 7.37 | 34.081 D | 26.648 | 143.6 | 0.581 | 1.58 | D 68.7 | D 23.4 | 52.0 | 2.60 | 33.8 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.13 | 7.10 | 34.090 | 26.693 | 139.6 | 0.605 | 1.42 | 61.8 | 20.9 | 54.2 | 2.65 | 34.5 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.72 | 6.69 | 34.137 | 26.786 | 131.4 | 0.687 | 0.94 | 41.0 | 13.8 | 62.9 | 2.86 | 37.0 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.66 D | 6.63 | 34.177 D | 26.826 | 128.0 | 0.718 | 0.79 | D 34.2 | D 11.5 | 65.8 | 2.92 | 37.5 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.35 | 6.31 | 34.206 | 26.890 | 122.2 | 0.763 | 0.57 | 25.0 | 8.3 | 71.4 | 3.04 | 38.6 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.95 D | 5.91 | 34.249 D | 26.976 | 114.6 | 0.840 | 0.38 | D 16.5 | D 5.4 | 79.5 | 3.15 | 39.9 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.85 | 5.80 | 34.261 | 26.999 | 112.5 | 0.851 | 0.35 | 15.2 | 5.0 | 81.5 | 3.18 | 40.2 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 23.1 N | 122 14.6 W | 18/04/2015 | 1745 | UTC | 4022 m | 310 13 kn | 330 02 06 | 2 | 1017.7 mb | 16.0 C | 13.1 C | 21 m | 8/8 | SC | 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 | 15.32 | 15.32 | 33.174 D | 24.496 | 342.8 | 0.000 | 5.88 | 256.2 | 102.8 | 2.3 | 0.38 | 0.0 | 0.01 | 0.03 | 0.27 | 0.08 | 0 | |
| 2 A | 15.32 | 15.32 | 33.176 | 24.498 | 342.7 | 0.007 | 5.88 | 256.2 | 102.8 | 2.3 | 0.38 | 0.0 | 0.01 | 0.03 | 0.27 | 0.08 | 2 | 24 |
| 10 ISL | 15.30 D | 15.30 | 33.174 D | 24.500 | 342.7 | 0.035 | 5.89 | D256.5 | D102.9 | 2.3 | 0.38 | 0.0 | 0.01 | 0.02 | 0.26 | 0.07 | 10 | |
| 12 | 15.29 | 15.29 | 33.176 | 24.504 | 342.5 | 0.042 | | | | | | | | | | | 12 | 23 |
| 13 A | 15.29 | 15.29 | 33.176 | 24.504 | 342.5 | 0.045 | 5.87 | 256.0 | 102.7 | 2.3 | 0.38 | 0.0 | 0.01 | 0.02 | 0.26 | 0.07 | 13 | 22 |
| 17 A | 15.29 | 15.29 | 33.176 | 24.506 | 342.4 | 0.058 | 5.88 | 256.2 | 102.8 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.26 | 0.08 | 17 | 21 |
| 20 ISL | 15.28 D | 15.28 | 33.175 D | 24.505 | 342.5 | 0.064 | 5.87 | D255.7 | D102.6 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.29 | 0.09 | 20 | |
| 25 | 15.11 | 15.11 | 33.188 | 24.554 | 338.1 | 0.086 | 5.90 | 257.4 | 102.9 | 2.2 | 0.38 | 0.0 | 0.01 | 0.02 | 0.33 | 0.11 | 25 | 20 |
| 30 A | 15.04 | 15.04 | 33.187 | 24.568 | 336.9 | 0.102 | 5.92 | 258.1 | 103.0 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.38 | 0.12 | 30 | 19 |
| 40 | 15.02 | 15.01 | 33.187 | 24.574 | 336.7 | 0.136 | 5.90 | 257.2 | 102.6 | 2.3 | 0.38 | 0.0 | 0.01 | 0.01 | 0.48 | 0.14 | 40 | 17 |
| 40 | 15.02 | 15.01 | 33.186 | 24.573 | 336.7 | 0.136 | | | | | | | | | | | 40 | 18 |
| 49 | 15.01 | 15.00 | 33.190 | 24.579 | 336.5 | 0.166 | 5.90 | 257.1 | 102.6 | 2.3 | 0.40 | 0.0 | 0.01 | 0.02 | 0.53 | 0.18 | 49 | 15 |
| 50 ISL | 15.01 D | 15.00 | 33.188 D | 24.578 | 336.6 | 0.151 | 5.88 | D256.1 | D102.2 | 2.3 | 0.40 | 0.0 | 0.01 | 0.02 | 0.54 | 0.18 | 50 | |
| 56 A | 15.00 | 14.99 | 33.191 | 24.583 | 336.3 | 0.190 | 5.89 | 256.7 | 102.4 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.58 | 0.18 | 56 | 16 |
| 62 | 14.99 | 14.98 | 33.193 | 24.585 | 336.3 | 0.210 | 5.89 | 256.7 | 102.3 | 2.3 | 0.38 | 0.0 | 0.01 | 0.04 | 0.62 | 0.20 | 63 | 14 |
| 69 A | 14.74 | 14.73 | 33.168 | 24.621 | 333.1 | 0.234 | 5.82 | 253.5 | 100.5 | 2.6 | 0.41 | 0.4 | 0.04 | 0.11 | 0.51 | 0.23 | 70 | 13 |
| 75 ISL | 13.40 D | 13.38 | 33.110 D | 24.855 | 310.8 | 0.235 | 5.81 | D253.0 | D 97.6 | 5.0 | 0.64 | 4.0 | 0.05 | 0.08 | 0.42 | 0.26 | 76 | |
| 85 | 11.51 | 11.50 | 33.083 | 25.196 | 278.3 | 0.282 | 5.06 | 220.3 | 81.7 | 8.9 | 1.02 | 9.9 | 0.07 | 0.02 | 0.27 | 0.30 | 86 | 12 |
| 100 | 10.26 | 10.25 | 33.129 | 25.452 | 254.1 | 0.322 | 4.88 | 212.7 | 76.8 | 12.2 | 1.24 | 13.6 | 0.04 | 0.02 | 0.16 | 0.16 | 101 | 11 |
| 119 | 9.44 | 9.43 | 33.341 | 25.753 | 225.7 | 0.368 | 4.33 | 188.5 | 66.9 | 18.3 | 1.56 | 18.9 | 0.02 | 0.01 | 0.04 | 0.05 | 120 | 10 |
| 125 ISL | 9.31 D | 9.29 | 33.470 D | 25.876 | 214.1 | 0.363 | 3.96 | D172.3 | D 61.1 | 20.0 | 1.63 | 20.0 | 0.02 | 0.01 | 0.03 | 0.05 | 126 | |
| 140 | 9.12 | 9.11 | 33.611 | 26.016 | 201.1 | 0.413 | 3.55 | 154.3 | 54.5 | 24.3 | 1.80 | 22.9 | 0.01 | 0.01 | 0.01 | 0.04 | 141 | 09 |
| 150 ISL | 9.10 D | 9.08 | 33.690 D | 26.082 | 195.1 | 0.414 | 3.39 | D147.6 | D 52.1 | 25.7 | 1.85 | 23.8 | 0.01 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 8.90 | 8.88 | 33.792 | 26.193 | 184.9 | 0.471 | 3.06 | 133.4 | 46.9 | 28.5 | 1.95 | 25.5 | 0.02 | 0.00 | 0.00 | 0.03 | 171 | 08 |
| 199 | 8.61 | 8.59 | 33.943 | 26.359 | 169.7 | 0.522 | 2.66 | 115.7 | 40.5 | 33.4 | 2.09 | 27.6 | 0.02 | 0.01 | 0.00 | 0.03 | 201 | 07 |
| 200 ISL | 8.59 D | 8.57 | 33.958 D | 26.373 | 168.4 | 0.506 | 2.59 | D112.5 | D 39.4 | 33.5 | 2.10 | 27.6 | 0.01 | 0.00 | | | 202 | |
| 230 | 8.28 | 8.25 | 34.015 | 26.466 | 160.1 | 0.573 | 2.27 | 98.7 | 34.3 | 38.5 | 2.25 | 29.5 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.10 D | 8.08 | 34.038 D | 26.511 | 156.1 | 0.588 | 2.10 | D 91.3 | D 31.6 | 41.4 | 2.34 | 30.6 | 0.01 | 0.00 | | | 252 | |
| 271 | 7.86 | 7.83 | 34.055 | 26.561 | 151.6 | 0.637 | 1.89 | 82.4 | 28.4 | 44.4 | 2.43 | 31.7 | 0.01 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.44 D | 7.41 | 34.048 D | 26.616 | 146.7 | 0.664 | 1.85 | D 80.7 | D 27.5 | 49.0 | 2.53 | 33.1 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.31 | 7.28 | 34.082 | 26.662 | 142.7 | 0.710 | 1.51 | 65.8 | 22.4 | 52.4 | 2.61 | 34.1 | 0.01 | 0.00 | | | 324 | 04 |
| 380 | 6.84 | 6.80 | 34.146 | 26.778 | 132.3 | 0.791 | 0.91 | 39.4 | 13.3 | 62.0 | 2.86 | 36.9 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.64 D | 6.60 | 34.149 D | 26.807 | 129.7 | 0.803 | 0.84 | D 36.4 | D 12.2 | 64.5 | 2.91 | 37.5 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.32 | 6.28 | 34.156 | 26.855 | 125.5 | 0.870 | 0.71 | 30.8 | 10.3 | 69.8 | 3.00 | 38.7 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.99 D | 5.95 | 34.193 D | 26.927 | 119.3 | 0.928 | 0.53 | D 23.0 | D 7.6 | 75.7 | 3.09 | 39.5 | 0.01 | 0.00 | | | 504 | |
| 517 | 6.01 | 5.96 | 34.221 | 26.948 | 117.6 | 0.962 | 0.45 | 19.5 | 6.5 | 77.4 | 3.12 | 39.7 | 0.01 | 0.00 | | | 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 2.9 N | 122 56.6 W | 18/04/2015 | 1129 | UTC | 4234 m | 350 16 kn | | | 1017.8 mb | 14.0 C | 12.5 C | | | | 064 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.42 | 15.42 | 33.225 D | 24.512 | 341.2 | 0.000 | 5.84 | 254.6 | 102.4 | 2.2 | 0.36 | 0.0 | 0.01 | 0.02 | 0.27 | 0.10 | 0 | |
| 2 | 15.42 | 15.42 | 33.226 | 24.514 | 341.2 | 0.007 | 5.84 | 254.6 | 102.4 | 2.2 | 0.36 | 0.0 | 0.01 | 0.02 | 0.27 | 0.10 | 2 | 20 |
| 10 | 15.42 | 15.42 | 33.227 | 24.514 | 341.4 | 0.034 | 5.84 | 254.6 | 102.4 | 2.2 | 0.36 | 0.0 | 0.01 | 0.02 | 0.27 | 0.09 | 10 | 19 |
| 20 | 15.42 | 15.42 | 33.226 | 24.515 | 341.6 | 0.068 | 5.84 | 254.7 | 102.5 | 2.2 | 0.36 | 0.0 | 0.01 | 0.02 | 0.26 | 0.09 | 20 | 18 |
| 30 | 15.25 | 15.24 | 33.220 | 24.549 | 338.7 | 0.102 | 5.88 | 256.4 | 102.8 | 2.3 | 0.37 | 0.0 | 0.01 | 0.00 | 0.37 | 0.10 | 30 | 17 |
| 39 | 15.22 | 15.21 | 33.224 | 24.559 | 338.1 | 0.133 | 5.89 | 256.9 | 102.9 | 2.3 | 0.37 | 0.0 | 0.01 | 0.00 | 0.52 | 0.16 | 39 | 16 |
| 50 | 15.20 | 15.19 | 33.222 | 24.562 | 338.1 | 0.170 | 5.85 | 254.8 | 102.1 | 2.3 | 0.38 | 0.1 | 0.02 | 0.04 | 0.59 | 0.21 | 50 | 15 |
| 60 | 15.11 | 15.10 | 33.224 | 24.584 | 336.4 | 0.204 | 5.84 | 254.6 | 101.8 | 2.4 | 0.39 | 0.2 | 0.03 | 0.07 | 0.56 | 0.19 | 60 | 14 |
| 71 | 12.93 | 12.92 | 33.231 | 25.041 | 293.0 | 0.238 | 5.77 | 251.4 | 96.2 | 3.9 | 0.60 | 2.8 | 0.15 | 0.21 | 0.58 | 0.35 | 72 | 13 |
| 75 ISL | 12.43 D | 12.42 | 33.196 D | 25.111 | 286.4 | 0.252 | 5.49 | D239.0 D | 90.4 | 5.7 | 0.75 | 5.0 | 0.19 | 0.24 | 0.51 | 0.34 | 76 | |
| 85 | 11.70 | 11.69 | 33.215 | 25.264 | 271.9 | 0.278 | 5.09 | 221.9 | 82.7 | 10.1 | 1.11 | 10.4 | 0.29 | 0.31 | 0.36 | 0.31 | 86 | 12 |
| 100 | 10.41 | 10.40 | 33.322 | 25.577 | 242.3 | 0.316 | 4.32 | 188.2 | 68.3 | 14.4 | 1.41 | 15.6 | 0.18 | 0.00 | 0.21 | 0.31 | 101 | 11 |
| 120 | 9.76 | 9.75 | 33.457 | 25.792 | 222.2 | 0.363 | 4.06 | 176.7 | 63.3 | 18.3 | 1.57 | 18.8 | 0.06 | 0.00 | 0.17 | 0.19 | 121 | 10 |
| 125 ISL | 9.75 D | 9.74 | 33.522 D | 25.844 | 217.4 | 0.376 | 4.01 | D174.4 D | 62.5 | 19.4 | 1.62 | 19.6 | 0.05 | 0.00 | 0.14 | 0.18 | 126 | |
| 140 | 9.25 | 9.23 | 33.624 | 26.006 | 202.2 | 0.405 | 3.56 | 154.9 | 54.9 | 22.8 | 1.76 | 21.9 | 0.02 | 0.00 | 0.05 | 0.12 | 141 | 09 |
| 150 ISL | 9.21 D | 9.19 | 33.727 D | 26.093 | 194.1 | 0.427 | 3.27 | D142.2 D | 50.4 | 24.9 | 1.84 | 23.1 | 0.02 | 0.00 | 0.03 | 0.10 | 151 | |
| 170 | 8.94 | 8.92 | 33.817 | 26.208 | 183.6 | 0.463 | 3.01 | 130.9 | 46.1 | 29.0 | 1.99 | 25.6 | 0.01 | 0.00 | 0.01 | 0.06 | 171 | 08 |
| 200 | 8.59 | 8.57 | 33.935 | 26.356 | 170.1 | 0.516 | 2.69 | 117.1 | 41.0 | 33.4 | 2.12 | 27.3 | 0.01 | 0.00 | 0.01 | 0.06 | 202 | 07 |
| 230 | 8.18 | 8.15 | 34.002 | 26.471 | 159.6 | 0.566 | 2.40 | 104.4 | 36.2 | 38.7 | 2.25 | 29.6 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.92 D | 7.89 | 34.016 D | 26.521 | 155.0 | 0.600 | 2.27 | D 98.6 D | 34.0 | 42.0 | 2.33 | 30.5 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.62 | 7.59 | 34.025 | 26.572 | 150.4 | 0.628 | 2.10 | 91.3 | 31.3 | 45.4 | 2.41 | 31.4 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.22 D | 7.20 | 34.044 D | 26.643 | 144.0 | 0.676 | 1.75 | D 76.0 D | 25.8 | 51.1 | 2.58 | 33.5 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.04 | 7.01 | 34.060 | 26.681 | 140.6 | 0.700 | 1.48 | 64.5 | 21.8 | 54.9 | 2.69 | 34.8 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.60 | 6.56 | 34.142 | 26.807 | 129.4 | 0.781 | 0.85 | 37.1 | 12.4 | 65.1 | 2.95 | 37.7 | 0.00 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.46 D | 6.43 | 34.159 D | 26.838 | 126.6 | 0.812 | 0.74 | D 32.2 D | 10.7 | 67.7 | 3.00 | 38.0 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.26 | 6.22 | 34.193 | 26.893 | 121.9 | 0.857 | 0.56 | 24.3 | 8.1 | 72.9 | 3.10 | 38.5 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.75 D | 5.71 | 34.221 D | 26.979 | 114.0 | 0.933 | 0.40 | D 17.5 D | 5.7 | 81.3 | 3.20 | 40.2 | 0.01 | 0.00 | | | 504 | |
| 516 | 5.69 | 5.65 | 34.240 | 27.001 | 112.1 | 0.945 | 0.37 | 16.0 | 5.3 | 83.6 | 3.23 | 40.6 | 0.01 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 43.0 N | 123 37.9 W | 18/04/2015 | 0514 | UTC | 4328 m | 350 15 kn | | | 1018.2 mb | 15.0 C | 13.3 C | | | | 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 | 15.44 | 15.44 | 33.052 D | 24.375 | 354.3 | 0.000 | 5.86 | 255.3 | 102.6 | 2.4 | 0.37 | 0.0 | 0.01 | 0.01 | 0.17 | 0.04 | 0 | |
| 2 | 15.44 | 15.44 | 33.053 | 24.376 | 354.3 | 0.007 | 5.86 | 255.3 | 102.6 | 2.4 | 0.37 | 0.0 | 0.01 | 0.01 | 0.17 | 0.04 | 2 | 20 |
| 10 | 15.39 | 15.39 | 33.055 | 24.388 | 353.4 | 0.035 | 5.87 | 255.7 | 102.7 | 2.4 | 0.37 | 0.0 | 0.01 | 0.01 | 0.22 | 0.05 | 10 | 19 |
| 20 ISL | 15.27 D | 15.27 | 33.056 D | 24.417 | 350.9 | 0.071 | 5.87 | D255.8 D | 102.5 | 2.4 | 0.38 | 0.0 | 0.01 | 0.02 | 0.19 | 0.04 | 20 | |
| 25 | 15.24 | 15.23 | 33.066 | 24.432 | 349.7 | 0.088 | 5.90 | 257.0 | 102.9 | 2.5 | 0.38 | 0.0 | 0.01 | 0.02 | 0.17 | 0.04 | 25 | 18 |
| 30 ISL | 15.17 D | 15.16 | 33.081 D | 24.459 | 347.3 | 0.106 | 5.90 | D257.2 D | 102.8 | 2.5 | 0.39 | 0.0 | 0.01 | 0.03 | 0.20 | 0.05 | 30 | |
| 40 | 15.04 | 15.03 | 33.090 | 24.496 | 344.1 | 0.140 | 5.92 | 258.2 | 103.0 | | | | | | 0.28 | 0.08 | 40 | 17 |
| 50 ISL | 14.70 D | 14.69 | 33.055 D | 24.542 | 340.0 | 0.176 | 5.95 | D259.2 D | 102.7 | 2.8 | 0.41 | 0.2 | 0.03 | 0.05 | 0.40 | 0.12 | 50 | |
| 50 | 14.70 | 14.69 | 33.055 D | 24.542 | 340.0 | 0.176 | 5.95 | D259.2 D | 102.7 | | | | | | | | 50 | 16 |
| 62 | 14.16 | 14.15 | 33.044 | 24.648 | 330.2 | 0.215 | 5.90 | 257.1 | 100.7 | 3.0 | 0.42 | 0.3 | 0.04 | 0.06 | 0.56 | 0.18 | 63 | 15 |
| 75 | 13.79 | 13.78 | 33.046 | 24.726 | 323.1 | 0.257 | 5.80 | 252.7 | 98.2 | 3.5 | 0.48 | 1.1 | 0.09 | 0.08 | 0.47 | 0.20 | 76 | 14 |
| 87 | 13.31 | 13.30 | 33.044 | 24.821 | 314.4 | 0.295 | 5.63 | 245.3 | 94.4 | 4.4 | 0.61 | 2.9 | 0.19 | 0.04 | 0.26 | 0.18 | 88 | 13 |
| 100 | 12.19 | 12.18 | 32.986 | 24.994 | 298.1 | 0.335 | 5.48 | 238.6 | 89.7 | 5.7 | 0.77 | 5.4 | 0.13 | 0.00 | 0.21 | 0.21 | 101 | 12 |
| 112 | 11.16 | 11.14 | 33.020 | 25.211 | 277.5 | 0.370 | 5.26 | 229.2 | 84.3 | 8.6 | 1.01 | 9.5 | 0.07 | 0.02 | 0.15 | 0.15 | 113 | 11 |
| 125 | 10.33 | 10.32 | 33.067 | 25.393 | 260.4 | 0.405 | 5.11 | 222.7 | 80.5 | 11.1 | 1.20 | 12.5 | 0.04 | 0.00 | 0.11 | 0.11 | 126 | 10 |
| 140 | 9.53 | 9.51 | 33.219 | 25.644 | 236.6 | 0.442 | 4.80 | 208.8 | 74.3 | 15.2 | 1.42 | 16.0 | 0.03 | 0.00 | 0.04 | 0.05 | 141 | 09 |
| 150 ISL | 9.26 D | 9.25 | 33.338 D | 25.780 | 223.8 | 0.468 | 4.51 | D196.5 D | 69.5 | 18.3 | 1.55 | 18.3 | 0.02 | 0.00 | 0.03 | 0.04 | 151 | |
| 169 | 8.94 | 8.92 | 33.557 | 26.004 | 202.9 | 0.505 | 3.83 | 166.6 | 58.6 | 24.1 | 1.81 | 22.6 | 0.01 | 0.00 | 0.00 | 0.03 | 170 | 08 |
| 200 | 8.51 | 8.49 | 33.863 | 26.311 | 174.2 | 0.564 | 3.21 | 139.7 | 48.8 | 30.8 | 1.98 | 25.7 | 0.01 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 230 | 8.34 | 8.32 | 33.981 | 26.430 | 163.6 | 0.615 | 2.62 | 114.1 | 39.7 | 36.7 | 2.17 | 28.3 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.94 D | 7.91 | 34.008 D | 26.512 | 155.9 | 0.650 | 2.32 | D101.1 D | 34.9 | 40.7 | 2.28 | 29.8 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.66 | 7.63 | 34.015 | 26.558 | 151.8 | 0.677 | 2.19 | 95.1 | 32.6 | 44.6 | 2.39 | 31.3 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.16 D | 7.13 | 34.016 D | 26.630 | 145.2 | 0.727 | 2.07 | D 90.0 D | 30.5 | 49.9 | 2.51 | 32.9 | 0.01 | 0.00 | | | 302 | |
| 320 | 6.90 | 6.87 | 34.028 | 26.675 | 141.0 | 0.750 | 1.78 | 77.4 | 26.1 | 53.5 | 2.59 | 34.0 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.48 | 6.45 | 34.107 | 26.794 | 130.4 | 0.832 | 0.99 | 43.0 | 14.4 | 65.1 | 2.92 | 37.8 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.32 D | 6.29 | 34.126 D | 26.830 | 127.2 | 0.864 | 0.87 | D 37.9 D | 12.6 | 67.9 | 2.97 | 38.4 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.06 | 6.02 | 34.147 | 26.880 | 122.8 | 0.908 | 0.68 | 29.4 | 9.7 | 73.6 | 3.08 | 39.5 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.71 D | 5.67 | 34.191 D | 26.960 | 115.7 | 0.986 | 0.54 | D 23.3 D | 7.6 | 81.3 | 3.18 | 40.3 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.62 | 5.57 | 34.198 | 26.977 | 114.3 | 0.997 | 0.44 | 19.3 | 6.3 | 83.2 | 3.20 | 40.5 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 23.0 N | 124 18.9 W | 17/04/2015 | 2301 UTC | 4578 m | 350 17 kn | 350 03 06 | 1 | 1018.4 mb | 17.4 C | 14.9 C | 25 m | 4/8 | SC | 062 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 16.52 | 16.52 | 33.103 D | 24.170 | 373.8 | 0.000 | 5.76 | 251.0 | 103.1 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 0 | |
| 3 | 16.52 | 16.52 | 33.105 | 24.172 | 373.8 | 0.011 | 5.76 | 251.0 | 103.1 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 3 | 20 |
| 10 | 16.46 | 16.46 | 33.104 | 24.187 | 372.5 | 0.037 | 5.70 | 248.7 | 102.0 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.09 | 0.02 | 10 | 19 |
| 20 | 16.31 | 16.31 | 33.091 | 24.211 | 370.7 | 0.075 | 5.72 | 249.3 | 102.0 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 20 | 18 |
| 30 | 16.30 | 16.29 | 33.088 | 24.214 | 370.8 | 0.112 | 5.72 | 249.5 | 102.0 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 30 | 17 |
| 39 | 16.28 | 16.27 | 33.092 | 24.221 | 370.3 | 0.145 | 5.73 | 249.8 | 102.1 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 39 | 16 |
| 50 | 16.27 | 16.26 | 33.091 | 24.224 | 370.5 | 0.186 | 5.72 | 249.2 | 101.9 | 1.8 | 0.32 | 0.0 | 0.01 | 0.00 | 0.13 | 0.04 | 50 | 15 |
| 60 | 16.29 | 16.28 | 33.098 | 24.226 | 370.6 | 0.223 | 5.70 | 248.7 | 101.7 | 1.8 | 0.32 | 0.0 | 0.01 | 0.00 | 0.16 | 0.04 | 60 | 14 |
| 70 | 16.29 | 16.28 | 33.100 | 24.226 | 371.0 | 0.260 | 5.71 | 248.9 | 101.8 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.17 | 0.04 | 71 | 13 |
| 75 ISL | 16.30 D | 16.28 | 33.100 D | 24.226 | 371.1 | 0.280 | 5.69 | D248.1 | D101.4 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.18 | 0.05 | 76 | |
| 84 | 16.38 | 16.37 | 33.141 | 24.239 | 370.3 | 0.312 | 5.71 | 249.2 | 102.1 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.22 | 0.06 | 85 | 12 |
| 100 | 14.88 | 14.87 | 33.170 | 24.593 | 336.8 | 0.368 | 5.74 | 250.1 | 99.5 | 2.6 | 0.36 | 0.2 | 0.02 | 0.01 | 0.38 | 0.27 | 101 | 11 |
| 120 | 12.99 | 12.97 | 33.060 | 24.900 | 307.8 | 0.433 | 5.63 | 245.3 | 93.8 | 4.3 | 0.60 | 3.0 | 0.12 | 0.04 | 0.26 | 0.27 | 121 | 10 |
| 125 ISL | 12.21 D | 12.19 | 33.051 D | 25.043 | 294.1 | 0.452 | 5.52 | D240.4 | D 90.5 | 5.6 | 0.72 | 5.0 | 0.10 | 0.00 | 0.23 | 0.24 | 126 | |
| 140 | 10.96 | 10.94 | 33.109 | 25.317 | 268.1 | 0.490 | 5.05 | 219.8 | 80.5 | 9.5 | 1.09 | 11.0 | 0.05 | 0.00 | 0.15 | 0.17 | 141 | 09 |
| 150 ISL | 10.34 D | 10.32 | 33.234 D | 25.522 | 248.7 | 0.520 | 4.83 | D210.3 | D 76.1 | 12.2 | 1.24 | 13.5 | 0.04 | 0.00 | 0.11 | 0.13 | 151 | |
| 170 | 9.45 | 9.43 | 33.364 | 25.772 | 225.1 | 0.563 | 4.37 | 190.4 | 67.6 | 17.5 | 1.53 | 18.6 | 0.02 | 0.00 | 0.03 | 0.06 | 171 | 08 |
| 200 | 8.92 | 8.90 | 33.681 | 26.105 | 194.0 | 0.626 | 3.54 | 154.3 | 54.3 | 25.5 | 1.84 | 23.8 | 0.01 | 0.00 | 0.00 | 0.02 | 202 | 07 |
| 230 | 8.65 | 8.62 | 33.878 | 26.302 | 175.8 | 0.682 | 3.03 | 132.0 | 46.2 | 30.7 | 1.99 | 26.4 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.46 D | 8.43 | 33.942 D | 26.383 | 168.5 | 0.721 | 2.88 | D125.1 | D 43.7 | 33.5 | 2.06 | 27.6 | 0.01 | 0.00 | | | 252 | |
| 272 | 8.20 | 8.17 | 33.973 | 26.447 | 162.7 | 0.753 | 2.65 | 115.4 | 40.0 | 36.5 | 2.14 | 28.9 | 0.01 | 0.00 | | | 274 | 05 |
| 300 ISL | 7.84 D | 7.81 | 34.004 D | 26.525 | 155.6 | 0.803 | 2.37 | D102.9 | D 35.4 | 41.7 | 2.29 | 30.5 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.59 | 7.56 | 34.020 | 26.574 | 151.2 | 0.828 | 2.10 | 91.5 | 31.3 | 45.4 | 2.39 | 31.7 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 6.93 | 6.89 | 34.069 | 26.705 | 139.3 | 0.917 | 1.38 | 60.0 | 20.2 | 56.6 | 2.71 | 35.8 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.79 D | 6.75 | 34.077 D | 26.731 | 137.0 | 0.950 | 1.28 | D 55.5 | D 18.7 | 59.7 | 2.77 | 36.6 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.31 | 6.27 | 34.089 | 26.804 | 130.3 | 0.998 | 1.03 | 44.6 | 14.8 | 66.2 | 2.91 | 38.2 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.82 D | 5.78 | 34.147 D | 26.911 | 120.5 | 1.080 | 0.65 | D 28.4 | D 9.3 | 75.8 | 3.06 | 40.0 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.75 | 5.71 | 34.157 | 26.928 | 119.0 | 1.090 | 0.61 | 26.7 | 8.8 | 78.2 | 3.10 | 40.5 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 50.5

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 27.9 N | 120 29.2 W | 19/04/2015 | 1726 UTC | 24 m | 210 06 kn | 290 01 08 | 1 | 1014.3 mb | 14.8 C | 12.7 C | | 7/8 | ST | 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 | 12.38 | 12.38 | 33.479 D | 25.337 | 262.7 | 0.000 | 5.03 | 219.0 | 82.9 | 10.5 | 1.05 | 8.9 | 0.29 | 0.84 | 0.51 | 0.39 | 0 | |
| 1 | 12.38 | 12.38 | 33.483 | 25.340 | 262.4 | 0.003 | 5.03 | 219.0 | 82.9 | 10.5 | 1.05 | 8.9 | 0.29 | 0.84 | 0.51 | 0.39 | 1 | 05 |
| 5 | 11.75 | 11.75 | 33.487 | 25.462 | 251.0 | 0.013 | 4.53 | 197.1 | 73.7 | 11.9 | 1.22 | 11.3 | 0.33 | 1.00 | 0.61 | 0.31 | 5 | 04 |
| 10 | 11.30 | 11.30 | 33.496 | 25.552 | 242.5 | 0.025 | 4.05 | 176.4 | 65.3 | 13.6 | 1.39 | 13.7 | 0.38 | 1.03 | 0.45 | 0.29 | 10 | 02 |
| 10 | 11.30 | 11.30 | 33.496 | 25.552 | 242.5 | 0.025 | | | | | | | | | | | 10 | 03 |
| 19 | 10.97 | 10.97 | 33.518 | 25.627 | 235.6 | 0.047 | 3.77 | 164.2 | 60.4 | 15.2 | 1.51 | 15.1 | 0.39 | 1.00 | 0.48 | 0.74 | 19 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 51.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 27.0 N | 120 31.4 W | 15/04/2015 | 2259 UTC | 75 m | 320 27 kn | 300 05 05 | 1 | 1012.7 mb | 14.8 C | 11.7 C | 06 m | 1/8 | CS | 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 | 10.84 | 10.84 | 33.529 D | 25.660 | 232.0 | 0.000 | 5.12 | 223.1 | 81.8 | 14.0 | 1.25 | 13.6 | 0.26 | 0.27 | 5.30 | 0.96 | 0 | |
| 2 | 10.84 | 10.84 | 33.533 | 25.663 | 231.7 | 0.005 | 5.12 | 223.1 | 81.8 | 14.0 | 1.25 | 13.6 | 0.26 | 0.27 | 5.30 | 0.96 | 2 | 10 |
| 5 | 10.91 | 10.90 | 33.533 | 25.651 | 233.0 | 0.012 | 5.12 | 223.0 | 81.9 | 13.9 | 1.27 | 13.5 | 0.27 | 0.27 | 5.05 | 1.44 | 5 | 09 |
| 10 | 10.96 | 10.95 | 33.529 | 25.639 | 234.2 | 0.023 | 5.19 | 226.2 | 83.2 | 13.7 | 1.23 | 13.4 | 0.27 | 0.26 | 5.64 | 1.12 | 10 | 07 |
| 10 | 10.96 | 10.95 | 33.530 | 25.640 | 234.2 | 0.023 | | | | | | | | | | | 10 | 08 |
| 19 | 10.81 | 10.80 | 33.532 | 25.668 | 231.7 | 0.044 | 5.02 | 218.5 | 80.1 | 14.0 | 1.26 | 13.9 | 0.27 | 0.26 | 5.59 | 1.53 | 19 | 06 |
| 20 ISL | 10.74 D | 10.73 | 33.539 D | 25.686 | 230.0 | 0.036 | 4.88 | D212.3 | D 77.7 | 14.8 | 1.30 | 14.4 | 0.27 | 0.26 | 5.13 | 1.45 | 20 | |
| 29 | 10.19 | 10.18 | 33.614 | 25.840 | 215.6 | 0.067 | 3.58 | 155.9 | 56.4 | 21.1 | 1.66 | 19.3 | 0.28 | 0.25 | 1.03 | 0.70 | 29 | 05 |
| 30 ISL | 10.16 D | 10.16 | 33.621 D | 25.849 | 214.8 | 0.059 | 3.54 | D154.0 | D 55.7 | 21.4 | 1.67 | 19.5 | 0.27 | 0.23 | 0.97 | 0.68 | 30 | |
| 40 | 9.90 | 9.90 | 33.674 | 25.935 | 206.8 | 0.090 | 3.20 | 139.2 | 50.1 | 24.1 | 1.80 | 21.7 | 0.22 | 0.06 | 0.32 | 0.56 | 40 | 04 |
| 50 | 9.82 | 9.81 | 33.696 | 25.967 | 204.0 | 0.111 | 3.12 | 135.8 | 48.8 | 24.8 | 1.82 | 22.2 | 0.21 | 0.03 | 0.32 | 0.54 | 50 | 03 |
| 61 | 9.80 | 9.80 | 33.697 | 25.970 | 204.0 | 0.133 | 3.15 | 137.2 | 49.2 | 24.9 | 1.83 | 22.2 | 0.18 | 0.12 | 0.31 | 0.69 | 62 | 02 |
| 66 | 9.81 | 9.80 | 33.698 | 25.971 | 204.0 | 0.143 | 3.14 | 136.6 | 49.1 | 24.9 | 1.83 | 22.1 | 0.19 | 0.10 | 0.29 | 0.60 | 67 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 55.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 18.8 N | 120 47.6 W | 16/04/2015 | 1002 UTC | 766 m | 340 16 kn | | | 1012.4 mb | 14.1 C | 12.1 C | | | | 056 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 13.57 | 13.57 | 33.242 D | 24.919 | 302.5 | 0.000 | 6.05 | 263.6 | 102.2 | 1.6 | 0.51 | 2.1 | 0.11 | 0.22 | 1.19 | 0.56 | 0 | |
| 2 | 13.57 | 13.56 | 33.243 | 24.920 | 302.5 | 0.006 | 6.05 | 263.6 | 102.2 | 1.6 | 0.51 | 2.1 | 0.11 | 0.22 | 1.19 | 0.56 | 2 | 23 |
| 9 | 13.57 | 13.57 | 33.242 | 24.919 | 302.8 | 0.028 | | | | | | | | | | | 9 | 22 |
| 9 | 13.57 | 13.57 | 33.243 | 24.920 | 302.7 | 0.028 | | | | | | | | | | | 9 | 21 |
| 10 ISL | 13.57 D | 13.57 | 33.241 D | 24.918 | 302.9 | 0.018 | 6.12 | D266.6 | D103.4 | 1.6 | 0.51 | 2.1 | 0.11 | 0.22 | 1.11 | 0.58 | 10 | |
| 11 | 13.57 | 13.57 | 33.245 | 24.921 | 302.6 | 0.033 | 6.15 | D267.8 | D103.8 | 1.6 | 0.51 | 2.1 | 0.11 | 0.22 | 1.10 | 0.58 | 11 | 20 |
| 15 | 13.57 | 13.57 | 33.246 | 24.922 | 302.7 | 0.045 | 6.07 | 264.4 | 102.5 | 1.6 | 0.50 | 2.1 | 0.11 | 0.21 | 1.27 | 0.44 | 15 | 19 |
| 20 | 13.57 | 13.57 | 33.243 | 24.919 | 303.1 | 0.060 | 6.07 | 264.3 | 102.5 | 1.6 | 0.50 | 2.1 | 0.11 | 0.23 | 1.29 | 0.41 | 20 | 18 |
| 30 ISL | 13.15 D | 13.14 | 33.260 D | 25.018 | 293.9 | 0.079 | 6.02 | D262.4 | D100.9 | 1.9 | 0.55 | 2.4 | 0.12 | 0.53 | 0.85 | 0.66 | 30 | |
| 31 | 13.24 | 13.24 | 33.262 | 25.001 | 295.6 | 0.093 | 6.08 | 264.8 | 102.0 | 1.9 | 0.56 | 2.4 | 0.12 | 0.56 | 0.81 | 0.69 | 31 | 17 |
| 40 | 12.15 | 12.14 | 33.249 | 25.204 | 276.5 | 0.119 | 5.47 | 238.4 | 89.7 | 6.6 | 0.88 | 6.8 | 0.20 | 0.68 | 0.56 | 0.57 | 40 | 16 |
| 50 | 11.57 | 11.57 | 33.250 | 25.312 | 266.4 | 0.146 | 5.06 | 220.4 | 82.0 | 9.7 | 1.09 | 10.1 | 0.22 | 0.52 | 0.65 | 0.54 | 50 | 15 |
| 60 | 11.14 | 11.13 | 33.296 | 25.428 | 255.6 | 0.172 | 4.64 | 202.0 | 74.4 | 12.2 | 1.24 | 12.6 | 0.20 | 0.27 | 0.48 | 0.46 | 60 | 14 |
| 70 | 10.88 | 10.87 | 33.365 | 25.527 | 246.4 | 0.197 | 4.25 | 185.1 | 67.9 | 14.6 | 1.38 | 15.4 | 0.11 | 0.07 | 0.38 | 0.49 | 71 | 13 |
| 75 ISL | 10.64 D | 10.63 | 33.380 D | 25.582 | 241.3 | 0.199 | 4.20 | D183.0 | D 66.8 | 15.3 | 1.42 | 16.2 | 0.09 | 0.05 | 0.32 | 0.41 | 76 | |
| 85 | 10.03 | 10.02 | 33.403 | 25.703 | 229.9 | 0.233 | 4.16 | 181.2 | 65.2 | 16.8 | 1.51 | 17.9 | 0.06 | 0.02 | 0.19 | 0.27 | 86 | 12 |
| 100 | 9.53 | 9.52 | 33.524 | 25.881 | 213.2 | 0.266 | 3.84 | 167.3 | 59.6 | 20.2 | 1.66 | 20.4 | 0.03 | 0.01 | 0.09 | 0.16 | 101 | 11 |
| 121 | 8.85 | 8.84 | 33.813 | 26.216 | 181.7 | 0.308 | 3.10 | 134.9 | 47.4 | 28.4 | 1.95 | 25.5 | 0.02 | 0.01 | 0.02 | 0.14 | 122 | 10 |
| 125 ISL | 8.82 D | 8.81 | 33.859 D | 26.257 | 177.9 | 0.304 | 3.04 | D132.4 | D 46.6 | 29.2 | 1.98 | 25.8 | 0.02 | 0.01 | 0.02 | 0.13 | 126 | |
| 140 | 8.66 | 8.65 | 33.926 D | 26.335 | 170.8 | 0.331 | 2.75 | 119.7 | 41.9 | 32.3 | 2.07 | 27.3 | 0.01 | 0.01 | 0.01 | 0.08 | 141 | 09 |
| 150 ISL | 8.58 D | 8.56 | 33.950 D | 26.367 | 168.0 | 0.348 | 2.73 | D118.6 | D 41.5 | 33.5 | 2.10 | 27.8 | 0.01 | 0.01 | 0.01 | 0.08 | 151 | |
| 170 | 8.31 | 8.29 | 33.983 | 26.435 | 161.8 | 0.396 | 2.51 | 109.3 | 38.0 | 36.1 | 2.17 | 28.8 | 0.01 | 0.01 | 0.01 | 0.08 | 171 | 08 |
| 200 | 8.13 | 8.11 | 34.024 | 26.495 | 156.7 | 0.444 | 2.27 | 98.9 | 34.3 | 40.0 | 2.28 | 30.0 | 0.01 | 0.02 | 0.01 | 0.06 | 202 | 07 |
| 230 | 7.77 | 7.75 | 34.051 | 26.569 | 150.0 | 0.490 | 1.96 | 85.1 | 29.3 | 44.9 | 2.43 | 31.7 | 0.01 | 0.01 | | | 232 | 06 |
| 250 ISL | 7.65 D | 7.63 | 34.076 D | 26.607 | 146.8 | 0.505 | 1.75 | D 76.2 | D 26.1 | 47.2 | 2.49 | 32.6 | 0.01 | 0.01 | | | 252 | |
| 271 | 7.42 | 7.39 | 34.071 | 26.636 | 144.3 | 0.551 | 1.66 | 72.3 | 24.6 | 49.5 | 2.56 | 33.5 | 0.01 | 0.01 | | | 273 | 05 |
| 300 ISL | 7.12 D | 7.09 | 34.084 D | 26.689 | 139.6 | 0.578 | 1.42 | D 61.9 | D 21.0 | 54.1 | 2.68 | 34.8 | 0.01 | 0.01 | | | 302 | |
| 320 | 6.99 | 6.96 | 34.106 | 26.725 | 136.5 | 0.619 | 1.22 | 52.9 | 17.9 | 57.4 | 2.76 | 35.6 | 0.01 | 0.01 | | | 323 | 04 |
| 380 | 6.60 | 6.56 | 34.155 | 26.817 | 128.4 | 0.699 | 0.83 | 35.9 | 12.0 | 65.5 | 2.95 | 38.0 | 0.01 | 0.01 | | | 383 | 03 |
| 400 ISL | 6.46 D | 6.42 | 34.162 D | 26.841 | 126.3 | 0.711 | 0.76 | D 32.8 | D 11.0 | 67.7 | 3.00 | 38.4 | 0.01 | 0.01 | | | 403 | |
| 440 | 6.30 | 6.26 | 34.198 | 26.891 | 122.1 | 0.774 | 0.58 | 25.3 | 8.4 | 72.1 | 3.09 | 39.3 | 0.01 | 0.02 | | | 444 | 02 |
| 500 ISL | 6.01 D | 5.96 | 34.236 D | 26.959 | 116.2 | 0.833 | 0.43 | D 18.6 | D 6.2 | 78.2 | 3.16 | 39.8 | 0.01 | 0.01 | | | 504 | |
| 514 | 5.91 | 5.86 | 34.240 | 26.975 | 114.8 | 0.862 | 0.39 | 17.0 | 5.6 | 79.6 | 3.18 | 40.0 | 0.01 | 0.01 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 9.0 N | 121 8.8 W | 16/04/2015 | 1433 UTC | 2158 m | 010 11 kn | 360 04 06 | 0 | 1013.3 mb | 15.1 C | 13.1 C | | 0/8 | | 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 | 14.48 | 14.48 | 33.242 D | 24.729 | 320.6 | 0.000 | 6.09 | 265.4 | 104.8 | 0.8 | 0.38 | 0.3 | 0.05 | 0.08 | 1.42 | 0.33 | 0 | |
| 2 | 14.48 | 14.48 | 33.244 | 24.731 | 320.5 | 0.006 | 6.09 | 265.4 | 104.8 | 0.8 | 0.38 | 0.3 | 0.05 | 0.08 | 1.42 | 0.33 | 2 | 21 |
| 10 | 14.48 | 14.47 | 33.244 | 24.732 | 320.6 | 0.032 | 6.09 | 265.5 | 104.8 | 0.8 | 0.38 | 0.3 | 0.04 | 0.08 | 1.30 | 0.39 | 10 | 19 |
| 10 | 14.48 | 14.47 | 33.246 | 24.734 | 320.4 | 0.030 | | | | | | | | | | | 10 | 20 |
| 20 | 14.37 | 14.37 | 33.246 | 24.756 | 318.7 | 0.064 | 6.10 | 265.7 | 104.7 | 0.8 | 0.38 | 0.4 | 0.05 | 0.08 | 1.38 | 0.52 | 20 | 18 |
| 30 ISL | 13.54 D | 13.54 | 33.238 D | 24.922 | 303.1 | 0.080 | 6.22 | D270.8 | D104.9 | 1.0 | 0.48 | 1.7 | 0.10 | 0.25 | 2.44 | 1.18 | 30 | |
| 31 | 13.52 | 13.52 | 33.241 | 24.928 | 302.5 | 0.098 | 6.20 | 270.1 | 104.6 | 1.0 | 0.49 | 1.9 | 0.10 | 0.27 | 2.55 | 1.24 | 31 | 17 |
| 40 | 13.44 | 13.44 | 33.240 | 24.944 | 301.3 | 0.125 | 6.22 | 270.9 | 104.7 | 1.1 | 0.51 | 2.1 | 0.11 | 0.33 | | | 40 | 16 |
| 50 | 13.16 | 13.15 | 33.262 | 25.018 | 294.5 | 0.155 | 6.26 | 272.8 | 104.9 | 1.1 | 0.53 | 2.2 | 0.11 | 0.49 | 2.51 | 1.25 | 50 | 15 |
| 60 | 11.92 | 11.92 | 33.227 | 25.230 | 274.6 | 0.184 | 5.32 | 231.7 | 86.8 | 7.7 | 0.97 | 8.7 | 0.19 | 0.41 | 3.48 | 1.91 | 60 | 14 |
| 69 | 10.87 | 10.86 | 33.332 | 25.503 | 248.7 | 0.207 | 4.33 | 188.4 | 69.0 | 14.0 | 1.34 | 14.9 | 0.15 | 0.02 | 1.81 | 1.52 | 70 | 13 |
| 75 ISL | 10.83 D | 10.82 | 33.350 D | 25.525 | 246.7 | 0.208 | 4.28 | D186.2 | D 68.2 | 15.3 | 1.41 | 16.0 | 0.12 | 0.02 | 1.24 | 1.13 | 76 | |
| 84 | 10.43 | 10.42 | 33.463 | 25.682 | 231.9 | 0.243 | 3.90 | 169.6 | 61.6 | 17.2 | 1.51 | 17.6 | 0.07 | 0.01 | 0.39 | 0.56 | 85 | 12 |
| 100 | 10.02 | 10.01 | 33.604 | 25.863 | 215.0 | 0.279 | 3.47 | 151.0 | 54.4 | 21.4 | 1.70 | 20.8 | 0.04 | 0.01 | 0.21 | 0.35 | 101 | 11 |
| 120 | 9.44 | 9.43 | 33.663 | 26.005 | 201.9 | 0.321 | 3.45 | 150.0 | 53.4 | 22.9 | 1.76 | 22.1 | 0.03 | 0.00 | 0.09 | 0.27 | 121 | 10 |
| 125 ISL | 9.29 D | 9.27 | 33.686 D | 26.049 | 197.8 | 0.317 | 3.51 | D152.6 | D 54.1 | 24.1 | 1.80 | 22.9 | 0.03 | 0.00 | 0.08 | 0.23 | 126 | |
| 140 | 8.97 | 8.95 | 33.812 | 26.198 | 183.9 | 0.359 | 3.16 | 137.6 | 48.5 | 27.8 | 1.92 | 25.2 | 0.02 | 0.00 | 0.02 | 0.11 | 141 | 09 |
| 150 ISL | 8.87 D | 8.86 | 33.856 D | 26.248 | 179.3 | 0.364 | 3.06 | D133.0 | D 46.8 | 29.5 | 1.98 | 25.9 | 0.02 | 0.00 | 0.01 | 0.10 | 151 | |
| 170 | 8.64 | 8.62 | 33.948 | 26.358 | 169.3 | 0.413 | 2.69 | 117.1 | 41.0 | 33.0 | 2.09 | 27.5 | 0.01 | 0.00 | 0.01 | 0.07 | 171 | 08 |
| 199 | 8.29 | 8.27 | 34.013 | 26.461 | 159.9 | 0.460 | 2.30 | 100.2 | 34.8 | 38.0 | 2.25 | 29.7 | 0.01 | 0.00 | 0.01 | 0.05 | 201 | 07 |
| 200 ISL | 8.30 D | 8.28 | 34.017 D | 26.463 | 159.8 | 0.449 | 2.28 | D 99.2 | D 34.5 | 38.1 | 2.25 | 29.7 | 0.01 | 0.00 | | | 202 | |
| 229 | 7.99 | 7.96 | 34.013 | 26.508 | 155.9 | 0.508 | 2.15 | 93.4 | 32.2 | 41.1 | 2.33 | 30.9 | 0.01 | 0.01 | | | 231 | 06 |
| 250 ISL | 7.78 D | 7.75 | 34.035 D | 26.556 | 151.7 | 0.528 | 2.09 | D 90.8 | D 31.2 | 44.0 | 2.40 | 31.8 | 0.01 | 0.00 | | | 252 | |
| 272 | 7.63 | 7.61 | 34.058 | 26.596 | 148.2 | 0.573 | 1.82 | 79.3 | 27.2 | 47.0 | 2.48 | 32.8 | 0.02 | 0.00 | | | 274 | 05 |
| 300 ISL | 7.45 D | 7.42 | 34.093 D | 26.650 | 143.5 | 0.602 | 1.50 | D 65.1 | D 22.2 | 50.9 | 2.60 | 34.1 | 0.02 | 0.00 | | | 302 | |
| 321 | 7.26 | 7.23 | 34.110 | 26.691 | 139.8 | 0.644 | 1.31 | 57.2 | 19.4 | 53.9 | 2.69 | 35.0 | 0.02 | 0.00 | | | 324 | 04 |
| 381 | 6.67 | 6.63 | 34.139 | 26.795 | 130.6 | 0.725 | 0.90 | 38.9 | 13.1 | 63.7 | 2.90 | 37.7 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.56 D | 6.52 | 34.148 D | 26.817 | 128.7 | 0.739 | 0.83 | D 36.0 | D 12.0 | 66.5 | 2.95 | 38.4 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.18 | 6.14 | 34.172 | 26.886 | 122.4 | 0.800 | 0.64 | 27.8 | 9.2 | 72.4 | 3.05 | 40.0 | 0.02 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.95 D | 5.91 | 34.229 D | 26.960 | 116.1 | 0.862 | 0.44 | D 19.1 | D 6.3 | 77.9 | 3.14 | 40.4 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.91 | 5.86 | 34.236 | 26.972 | 115.1 | 0.889 | 0.41 | 17.9 | 5.9 | 79.3 | 3.16 | 40.5 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 48.6 N | 121 50.6 W | 16/04/2015 | 2106 UTC | 3626 m | 010 12 kn | 360 05 06 | 0 | 1015.3 mb | 18.1 C | 15.9 C | 21 m | 0/8 | | 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 | 16.07 | 16.07 | 33.184 D | 24.335 | 358.1 | 0.000 | 5.78 | 252.1 | 102.7 | 2.2 | 0.35 | 0.0 | 0.01 | 0.00 | 0.29 | 0.08 | 0 | |
| 3 | 16.07 | 16.07 | 33.186 | 24.337 | 358.1 | 0.011 | 5.78 | 252.1 | 102.7 | 2.2 | 0.35 | 0.0 | 0.01 | 0.00 | 0.29 | 0.08 | 3 | 22 |
| 10 | 15.90 | 15.90 | 33.189 | 24.380 | 354.2 | 0.036 | 5.81 | 253.3 | 102.8 | 2.2 | 0.37 | 0.0 | 0.01 | 0.01 | 0.25 | 0.05 | 10 | 20 |
| 10 | 15.90 | 15.90 | 33.189 | 24.380 | 354.2 | 0.036 | | | | | | | | | | | 10 | 21 |
| 20 ISL | 15.84 D | 15.84 | 33.196 D | 24.397 | 352.9 | 0.054 | 5.79 | 252.5 | 102.4 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.31 | 0.07 | 20 | |
| 21 | 15.84 | 15.84 | 33.198 | 24.399 | 352.7 | 0.075 | 5.79 | 252.4 | 102.4 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.31 | 0.07 | 21 | 19 |
| 30 | 15.83 | 15.82 | 33.200 | 24.404 | 352.5 | 0.106 | 5.78 | 252.1 | 102.2 | 2.3 | 0.36 | 0.0 | 0.01 | 0.00 | 0.35 | 0.09 | 30 | 18 |
| 40 | 15.70 | 15.69 | 33.197 | 24.432 | 350.3 | 0.141 | 5.79 | 252.5 | 102.1 | 2.2 | 0.38 | 0.0 | 0.01 | 0.00 | 0.39 | 0.11 | 40 | 17 |
| 50 | 15.47 | 15.46 | 33.187 | 24.476 | 346.4 | 0.176 | 5.82 | 253.5 | 102.0 | 2.2 | 0.38 | 0.2 | 0.02 | 0.00 | 0.57 | 0.16 | 50 | 16 |
| 58 | 14.01 | 14.00 | 33.184 | 24.787 | 316.9 | 0.203 | | | | | | | | | | | 58 | 15 |
| 59 | 13.52 | 13.51 | 33.188 | 24.888 | 307.2 | 0.206 | 5.73 | 249.9 | 96.7 | 3.5 | 0.55 | 2.2 | 0.11 | 0.05 | 0.91 | 0.43 | 59 | 14 |
| 69 | 11.83 | 11.82 | 33.155 | 25.192 | 278.4 | 0.235 | 5.10 | D222.0 D | 82.9 | 7.3 | 0.89 | 7.6 | 0.25 | 0.02 | 0.74 | 0.57 | 70 | 13 |
| 75 ISL | 11.04 D | 11.03 | 33.190 D | 25.363 | 262.1 | 0.222 | 4.96 | D216.2 D | 79.4 | 9.2 | 1.03 | 10.0 | 0.20 | 0.00 | 0.60 | 0.45 | 76 | |
| 86 | 10.50 | 10.49 | 33.251 | 25.506 | 248.7 | 0.279 | 4.46 | D194.2 D | 70.6 | 12.7 | 1.29 | 14.5 | 0.11 | 0.00 | 0.33 | 0.24 | 87 | 12 |
| 99 | 10.11 | 10.10 | 33.444 | 25.723 | 228.4 | 0.310 | 4.05 | 176.3 | 63.6 | 17.3 | 1.50 | 17.9 | 0.04 | 0.00 | 0.10 | 0.12 | 100 | 11 |
| 100 ISL | 10.08 D | 10.07 | 33.475 D | 25.752 | 225.6 | 0.283 | 3.90 | D169.6 D | 61.2 | 17.5 | 1.51 | 18.1 | 0.04 | 0.00 | 0.10 | 0.12 | 101 | |
| 120 | 9.69 | 9.67 | 33.660 | 25.962 | 206.0 | 0.356 | 3.37 | 146.6 | 52.5 | 23.1 | 1.78 | 22.1 | 0.03 | 0.00 | 0.05 | 0.11 | 121 | 10 |
| 125 ISL | 9.57 D | 9.56 | 33.702 D | 26.014 | 201.1 | 0.337 | 3.22 | D140.2 D | 50.1 | 24.2 | 1.83 | 22.8 | 0.03 | 0.00 | 0.04 | 0.11 | 126 | |
| 138 | 9.41 | 9.39 | 33.811 | 26.127 | 190.7 | 0.392 | 2.91 | 126.5 | 45.0 | 27.3 | 1.95 | 24.6 | 0.03 | 0.00 | 0.03 | 0.10 | 139 | 09 |
| 150 ISL | 9.18 D | 9.16 | 33.854 D | 26.198 | 184.2 | 0.385 | 2.80 | D121.6 D | 43.1 | 29.0 | 1.99 | 25.4 | 0.02 | 0.00 | 0.02 | 0.09 | 151 | |
| 168 | 8.94 | 8.92 | 33.919 | 26.287 | 176.0 | 0.447 | 2.67 | 116.1 | 40.9 | 31.5 | 2.06 | 26.5 | 0.02 | 0.00 | 0.01 | 0.08 | 169 | 08 |
| 200 ISL | 8.66 D | 8.64 | 34.013 D | 26.405 | 165.5 | 0.473 | 2.17 | D 94.4 D | 33.1 | 36.5 | 2.23 | 28.6 | 0.02 | 0.00 | 0.02 | 0.08 | 202 | |
| 201 | 8.65 | 8.62 | 34.017 | 26.411 | 164.9 | 0.503 | 2.22 | 96.4 | 33.8 | 36.6 | 2.24 | 28.6 | 0.02 | 0.00 | 0.02 | 0.08 | 203 | 07 |
| 232 | 8.08 | 8.06 | 34.014 | 26.495 | 157.3 | 0.553 | 2.37 | 102.9 | 35.6 | 39.4 | 2.23 | 29.6 | 0.02 | 0.00 | | | 234 | 06 |
| 250 ISL | 7.98 D | 7.95 | 34.053 D | 26.541 | 153.2 | 0.553 | 2.04 | D 88.7 D | 30.6 | 42.5 | 2.33 | 30.6 | 0.02 | 0.00 | | | 252 | |
| 270 | 7.74 | 7.71 | 34.059 | 26.581 | 149.7 | 0.611 | 1.88 | 81.9 | 28.1 | 45.9 | 2.44 | 31.7 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.51 D | 7.48 | 34.110 D | 26.655 | 143.1 | 0.628 | 1.43 | D 62.3 D | 21.3 | 51.3 | 2.61 | 33.4 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.37 | 7.33 | 34.135 | 26.696 | 139.5 | 0.684 | 1.20 | 52.2 | 17.8 | 54.8 | 2.72 | 34.6 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 6.88 | 6.85 | 34.192 | 26.808 | 129.5 | 0.766 | 0.75 | 32.8 | 11.0 | 64.5 | 2.94 | 37.0 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.72 D | 6.68 | 34.194 D | 26.832 | 127.5 | 0.764 | 0.69 | D 29.9 D | 10.0 | 66.7 | 2.98 | 37.6 | 0.01 | 0.00 | | | 403 | |
| 442 | 6.33 | 6.29 | 34.217 | 26.902 | 121.1 | 0.842 | 0.55 | 24.0 | 8.0 | 71.6 | 3.06 | 38.8 | 0.01 | 0.00 | | | 446 | 02 |
| 500 ISL | 6.02 D | 5.98 | 34.264 D | 26.979 | 114.3 | 0.886 | 0.36 | D 15.5 D | 5.1 | 78.9 | 3.15 | 40.0 | 0.01 | 0.00 | | | 504 | |
| 516 | 5.89 | 5.84 | 34.262 | 26.995 | 113.0 | 0.929 | 0.35 | 15.3 | 5.0 | 81.0 | 3.18 | 40.4 | 0.01 | 0.00 | | | 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 1504 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 28.8 N | 122 31.8 W | 17/04/2015 | 0322 UTC | 3987 m | 340 12 kn | | | 1014.7 mb | 16.0 C | 14.8 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 | 15.37 | 15.37 | 33.206 D | 24.510 | 341.5 | 0.000 | 5.90 | 257.2 | 103.4 | 2.0 | 0.37 | 0.1 | 0.02 | 0.01 | 0.45 | 0.12 | 0 | |
| 2 | 15.36 | 15.36 | 33.208 D | 24.512 | 341.3 | 0.007 | 5.88 | 256.5 | 103.1 | 2.1 | 0.39 | 0.1 | 0.02 | 0.10 | 0.43 | 0.11 | 2 | 22 |
| 10 | 15.37 | 15.37 | 33.212 | 24.515 | 341.3 | 0.034 | 5.90 | 257.2 | 103.4 | 2.0 | 0.37 | 0.1 | 0.02 | 0.01 | 0.45 | 0.12 | 10 | 20 |
| 10 | 15.37 | 15.37 | 33.208 | 24.512 | 341.6 | 0.036 | | | | 2.1 | 0.36 | 0.1 | 0.02 | 0.01 | | | 10 | 21 |
| 20 | 15.30 | 15.29 | 33.204 | 24.526 | 340.6 | 0.068 | 5.87 | 255.7 | 102.6 | 2.1 | 0.36 | 0.1 | 0.02 | 0.02 | 0.48 | 0.14 | 20 | 19 |
| 30 | 15.20 | 15.19 | 33.210 | 24.551 | 338.5 | 0.102 | 5.88 | 256.2 | 102.6 | 2.1 | 0.37 | 0.1 | 0.01 | 0.01 | 0.57 | 0.17 | 30 | 18 |
| 40 | 15.16 | 15.15 | 33.218 | 24.567 | 337.3 | 0.136 | 5.90 | 257.1 | 102.9 | 2.0 | 0.37 | 0.1 | 0.02 | 0.01 | 0.58 | 0.15 | 40 | 16 |
| 40 | 15.16 | 15.15 | 33.222 | 24.570 | 337.1 | 0.136 | | | | | | | | | | | 40 | 17 |
| 50 | 12.53 | 12.52 | 32.990 D | 24.931 | 302.7 | 0.135 | 5.81 | 253.2 | 95.9 | 2.8 | 0.45 | 1.1 | 0.05 | 0.04 | 0.54 | 0.26 | 50 | 15 |
| 60 | 11.70 | 11.69 | 32.979 | 25.079 | 288.9 | 0.198 | 5.45 | 237.4 | 88.3 | 6.5 | 0.84 | 6.8 | 0.10 | 0.01 | 0.63 | 0.47 | 60 | 14 |
| 70 | 10.89 | 10.88 | 33.048 | 25.279 | 269.9 | 0.226 | 5.10 | 222.0 | 81.2 | 9.8 | 1.11 | 11.3 | 0.05 | 0.00 | 0.35 | 0.37 | 71 | 13 |
| 75 ISL | 10.66 D | 10.65 | 33.122 D | 25.377 | 260.7 | 0.206 | 5.00 | D217.6 D | 79.3 | 11.3 | 1.20 | 12.8 | 0.04 | 0.00 | 0.28 | 0.30 | 76 | |
| 85 | 10.04 | 10.03 | 33.213 | 25.554 | 244.0 | 0.264 | 4.63 | 201.5 | 72.5 | 14.3 | 1.38 | 15.8 | 0.03 | 0.00 | 0.14 | 0.17 | 86 | 12 |
| 100 | 9.72 | 9.71 | 33.472 | 25.809 | 220.1 | 0.299 | 3.93 | 171.2 | 61.3 | 18.5 | 1.58 | 19.4 | 0.02 | 0.00 | 0.05 | 0.08 | 101 | 11 |
| 120 | 9.32 | 9.30 | 33.628 | 25.998 | 202.6 | 0.341 | 3.53 | 153.7 | 54.6 | 23.0 | 1.75 | 22.3 | 0.01 | 0.00 | 0.01 | 0.05 | 121 | 10 |
| 125 ISL | 9.26 D | 9.25 | 33.704 D | 26.066 | 196.2 | 0.318 | 3.48 | D151.6 D | 53.8 | 24.1 | 1.79 | 22.9 | 0.01 | 0.00 | 0.01 | 0.05 | 126 | |
| 140 | 8.98 | 8.97 | 33.782 | 26.172 | 186.4 | 0.380 | 3.13 | 136.1 | 48.0 | 27.4 | 1.91 | 24.8 | 0.02 | 0.00 | 0.01 | 0.04 | 141 | 09 |
| 150 ISL | 8.81 D | 8.79 | 33.865 D | 26.265 | 177.7 | 0.365 | 3.05 | D132.8 D | 46.7 | 29.1 | 1.95 | 25.6 | 0.02 | 0.00 | 0.01 | 0.04 | 151 | |
| 170 | 8.58 | 8.56 | 33.917 | 26.342 | 170.7 | 0.434 | 2.82 | 122.8 | 43.0 | 32.5 | 2.04 | 27.2 | 0.02 | 0.00 | 0.01 | 0.04 | 171 | 08 |
| 200 | 8.25 | 8.23 | 33.980 | 26.442 | 161.7 | 0.483 | 2.57 | 111.8 | 38.8 | 36.4 | 2.15 | 28.6 | 0.01 | 0.00 | 0.01 | 0.03 | 202 | 07 |
| 231 | 7.88 | 7.86 | 34.033 D | 26.539 | 153.0 | 0.499 | 2.15 | D 93.4 D | 32.2 | | | | | | | | 233 | 06 |
| 250 ISL | 7.70 D | 7.67 | 34.052 D | 26.581 | 149.2 | 0.528 | 1.96 | D 85.1 D | 29.2 | 45.1 | 2.40 | 31.7 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.50 | 7.47 | 34.057 | 26.614 | 146.4 | 0.591 | 1.78 | 77.6 | 26.5 | 48.5 | 2.50 | 32.9 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.42 D | 7.39 | 34.090 D | 26.651 | 143.3 | 0.602 | 1.56 | D 67.6 D | 23.1 | 52.1 | 2.61 | 34.1 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.21 | 7.18 | 34.104 | 26.693 | 139.7 | 0.664 | 1.34 | 58.1 | 19.7 | 54.6 | 2.68 | 34.9 | 0.01 | 0.00 | | | 324 | 04 |
| 381 | 6.65 | 6.61 | 34.129 | 26.790 | 131.0 | 0.745 | 0.94 | 40.7 | 13.6 | 64.1 | 2.88 | 37.5 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.69 D | 6.65 | 34.183 D | 26.828 | 127.8 | 0.738 | 0.73 | D 31.6 D | 10.6 | 66.5 | 2.93 | 38.0 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.26 | 6.22 | 34.179 | 26.882 | 122.9 | 0.821 | 0.62 | 26.8 | 8.9 | 71.5 | 3.03 | 38.9 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.80 D | 5.75 | 34.201 D | 26.957 | 116.1 | 0.861 | 0.49 | D 21.4 D | 7.0 | 79.0 | 3.11 | 40.2 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.76 | 5.72 | 34.205 | 26.965 | 115.5 | 0.910 | 0.45 | 19.7 | 6.5 | 80.8 | 3.13 | 40.5 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 8.5 N | 123 13.3 W | 17/04/2015 | 0938 | UTC | 4219 m | 360 11 kn | | | 1016.9 mb | 15.0 C | 14.0 C | | | | 060 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.47 | 15.47 | 33.067 D | 24.380 | 353.8 | 0.000 | 5.86 | 255.5 | 102.8 | 2.1 | 0.35 | 0.0 | 0.01 | 0.01 | 0.17 | 0.06 | 0 | |
| 2 | 15.47 | 15.47 | 33.069 | 24.381 | 353.7 | 0.007 | 5.86 | 255.5 | 102.8 | 2.1 | 0.35 | 0.0 | 0.01 | 0.01 | 0.17 | 0.06 | 2 | 20 |
| 10 | 15.48 | 15.48 | 33.068 | 24.380 | 354.2 | 0.035 | 5.82 | 253.8 | 102.1 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.17 | 0.04 | 10 | 19 |
| 20 ISL | 15.47 D | 15.47 | 33.067 D | 24.381 | 354.4 | 0.071 | 5.80 | D253.0 | D101.8 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.18 | 0.05 | 20 | |
| 25 | 15.42 | 15.42 | 33.074 | 24.398 | 352.9 | 0.089 | 5.83 | 254.0 | 102.1 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.19 | 0.05 | 25 | 18 |
| 30 ISL | 15.39 D | 15.39 | 33.067 D | 24.399 | 353.0 | 0.107 | 5.83 | D254.3 | D102.1 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.21 | 0.06 | 30 | |
| 40 | 15.31 | 15.31 | 33.077 | 24.425 | 350.9 | 0.141 | 5.85 | 254.9 | 102.2 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.25 | 0.08 | 40 | 17 |
| 50 | 15.31 | 15.31 | 33.075 | 24.424 | 351.3 | 0.176 | 5.84 | 254.6 | 102.1 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.06 | 50 | 16 |
| 63 | 15.17 | 15.16 | 33.081 | 24.461 | 348.2 | 0.222 | 5.84 | 254.7 | 101.8 | 2.2 | 0.35 | 0.0 | 0.01 | 0.00 | 0.27 | 0.10 | 64 | 15 |
| 75 | 14.43 | 14.42 | 33.092 | 24.629 | 332.5 | 0.263 | 5.83 | 254.1 | 100.1 | 2.5 | 0.40 | 0.3 | 0.04 | 0.02 | 0.52 | 0.24 | 76 | 14 |
| 87 | 12.26 | 12.24 | 33.008 | 24.998 | 297.3 | 0.301 | 5.40 | 235.2 | 88.6 | 6.3 | 0.80 | 6.4 | 0.08 | 0.00 | 0.28 | 0.44 | 88 | 13 |
| 100 | 11.05 | 11.04 | 33.007 | 25.220 | 276.3 | 0.338 | 5.22 | 227.4 | 83.5 | 8.9 | 1.04 | 10.2 | 0.04 | 0.00 | 0.17 | 0.30 | 101 | 12 |
| 112 | 10.12 | 10.11 | 33.086 | 25.441 | 255.4 | 0.370 | 5.00 | 217.6 | 78.3 | 12.4 | 1.26 | 14.0 | 0.02 | 0.00 | 0.10 | 0.10 | 113 | 11 |
| 125 | 9.56 | 9.55 | 33.207 | 25.629 | 237.6 | 0.402 | 4.74 | 206.2 | 73.4 | 15.6 | 1.42 | 16.7 | 0.02 | 0.00 | 0.04 | 0.06 | 126 | 10 |
| 140 | 9.28 | 9.27 | 33.341 | 25.780 | 223.6 | 0.436 | 4.41 | 191.9 | 67.9 | 18.4 | 1.55 | 18.9 | 0.02 | 0.00 | 0.02 | 0.04 | 141 | 09 |
| 150 ISL | 9.09 D | 9.08 | 33.553 D | 25.976 | 205.2 | 0.461 | 3.95 | D172.0 D | 60.7 | 20.7 | 1.64 | 20.4 | 0.02 | 0.00 | 0.01 | 0.04 | 151 | |
| 171 | 9.00 | 8.98 | 33.662 | 26.077 | 196.1 | 0.501 | 3.46 | 150.8 | 53.1 | 25.5 | 1.84 | 23.6 | 0.01 | 0.00 | 0.00 | 0.03 | 172 | 08 |
| 200 | 8.84 | 8.82 | 33.862 | 26.259 | 179.4 | 0.556 | 2.84 | 123.4 | 43.4 | 30.6 | 2.02 | 26.4 | 0.01 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 231 | 8.52 | 8.49 | 33.973 | 26.397 | 166.8 | 0.609 | 2.45 | 106.7 | 37.3 | 35.6 | 2.17 | 28.4 | 0.01 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.01 D | 7.99 | 33.981 D | 26.479 | 159.1 | 0.643 | 2.72 | D118.2 D | 40.8 | 38.6 | 2.21 | 29.3 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.76 | 7.73 | 33.999 | 26.531 | 154.4 | 0.671 | 2.45 | 106.8 | 36.7 | 41.7 | 2.26 | 30.2 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.48 D | 7.45 | 34.024 D | 26.592 | 149.0 | 0.721 | 2.08 | D 90.5 D | 30.9 | 46.7 | 2.41 | 32.1 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.31 | 7.28 | 34.047 | 26.634 | 145.2 | 0.746 | 1.81 | 78.5 | 26.7 | 49.9 | 2.51 | 33.4 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 6.78 | 6.74 | 34.114 | 26.761 | 133.9 | 0.831 | 1.05 | 45.5 | 15.3 | 61.0 | 2.82 | 36.8 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.65 D | 6.61 | 34.127 D | 26.789 | 131.4 | 0.862 | 0.93 | D 40.5 D | 13.6 | 63.9 | 2.88 | 37.4 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.30 | 6.26 | 34.152 | 26.855 | 125.5 | 0.908 | 0.73 | 31.7 | 10.5 | 69.9 | 3.00 | 38.8 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.76 D | 5.72 | 34.191 D | 26.954 | 116.4 | 0.987 | 0.51 | D 22.2 D | 7.3 | 79.6 | 3.12 | 40.3 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.67 | 5.63 | 34.204 | 26.975 | 114.5 | 0.998 | 0.46 | 20.0 | 6.5 | 82.0 | 3.15 | 40.6 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 80.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 49.2 N | 123 54.6 W | 17/04/2015 | 1719 | UTC | 4350 m | 360 16 kn | 020 03 06 | 1 | 1018.2 mb | 17.0 C | 15.0 C | 26 m | 1/8 | ST | 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 | 15.80 | 15.80 | 33.075 D | 24.312 | 360.3 | 0.000 | 5.79 | 252.4 | 102.2 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.14 | 0.03 | 0 | |
| 3 A | 15.80 | 15.80 | 33.078 | 24.315 | 360.1 | 0.011 | 5.79 | 252.4 | 102.2 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.14 | 0.03 | 3 | 23 |
| 10 | 15.79 | 15.79 | 33.077 | 24.317 | 360.2 | 0.036 | 5.83 | 254.1 | 102.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.04 | 10 | 22 |
| 10 | 15.79 | 15.79 | 33.078 | 24.317 | 360.1 | 0.037 | | | | | | | | | | | 10 | 24 |
| 16 A | 15.77 | 15.77 | 33.081 | 24.326 | 359.5 | 0.058 | 5.78 | 252.1 | 102.0 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.15 | 0.02 | 16 | 21 |
| 20 ISL | 15.77 D | 15.77 | 33.075 D | 24.321 | 360.1 | 0.062 | 5.81 | D253.2 | D102.5 | 2.0 | 0.33 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 20 | |
| 21 A | 15.77 | 15.76 | 33.078 | 24.325 | 359.8 | 0.076 | 5.79 | 252.5 | 102.2 | 2.0 | 0.33 | 0.0 | 0.01 | 0.00 | 0.14 | 0.05 | 21 | 20 |
| 30 ISL | 15.75 D | 15.75 | 33.075 D | 24.326 | 360.0 | 0.098 | 5.80 | D252.9 | D102.3 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 30 | |
| 38 A | 15.70 | 15.70 | 33.080 | 24.341 | 358.9 | 0.137 | 5.89 | 256.8 | 103.8 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.15 | 0.04 | 38 | 19 |
| 48 | 14.89 | 14.88 | 33.123 | 24.552 | 339.0 | 0.173 | | | | | | | | | | | 48 | 18 |
| 49 | 14.89 | 14.88 | 33.121 | 24.551 | 339.1 | 0.175 | 5.92 | D258.1 | D102.7 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.34 | 0.15 | 49 | 17 |
| 50 ISL | 14.89 D | 14.88 | 33.125 D | 24.555 | 338.8 | 0.150 | 5.94 | D258.8 | D103.0 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.36 | 0.17 | 50 | |
| 60 | 14.83 | 14.82 | 33.140 | 24.580 | 336.8 | 0.212 | 5.90 | 257.0 | 102.1 | 2.2 | 0.37 | 0.0 | 0.01 | 0.05 | 0.54 | 0.28 | 60 | 16 |
| 70 A | 14.73 | 14.72 | 33.144 | 24.604 | 334.8 | 0.246 | 5.83 | 254.3 | 100.8 | 2.2 | 0.38 | 0.0 | 0.02 | 0.16 | 0.41 | 0.23 | 71 | 15 |
| 75 ISL | 14.67 D | 14.66 | 33.135 D | 24.611 | 334.3 | 0.235 | 5.83 | D253.9 | D100.6 | 2.4 | 0.42 | 0.4 | 0.07 | 0.21 | 0.31 | 0.21 | 76 | |
| 77 | 14.49 | 14.48 | 33.125 | 24.641 | 331.4 | 0.269 | 5.77 | 251.5 | 99.2 | 2.5 | 0.43 | 0.5 | 0.09 | 0.23 | 0.27 | 0.21 | 78 | 14 |
| 85 A | 14.30 | 14.29 | 33.115 | 24.675 | 328.5 | 0.296 | 5.72 | 249.3 | 98.0 | 2.8 | 0.47 | 0.9 | 0.13 | 0.23 | 0.22 | 0.17 | 86 | 13 |
| 95 | 13.29 | 13.27 | 33.076 | 24.852 | 311.7 | 0.328 | 5.59 | 243.4 | 93.7 | 4.1 | 0.59 | 3.0 | 0.26 | 0.07 | 0.16 | 0.19 | 96 | 12 |
| 100 ISL | 12.08 D | 12.06 | 33.018 D | 25.041 | 293.6 | 0.316 | 5.57 | D242.7 D | 91.0 | 5.9 | 0.74 | 5.5 | 0.19 | 0.00 | 0.16 | 0.17 | 101 | |
| 110 | 10.63 | 10.62 | 33.015 | 25.300 | 268.9 | 0.371 | 5.23 | 227.7 | 82.8 | 9.3 | 1.05 | 10.5 | 0.05 | 0.00 | 0.14 | 0.13 | 111 | 11 |
| 125 ISL | 9.78 D | 9.77 | 33.201 D | 25.589 | 241.6 | 0.383 | 4.92 | D214.2 D | 76.6 | 13.9 | 1.32 | 15.0 | 0.03 | 0.00 | 0.06 | 0.06 | 126 | |
| 126 | 9.76 | 9.74 | 33.198 | 25.590 | 241.5 | 0.412 | 4.83 | 210.1 | 75.1 | 14.2 | 1.34 | 15.4 | 0.03 | 0.00 | 0.05 | 0.06 | 127 | 10 |
| 140 | 9.27 | 9.25 | 33.348 | 25.788 | 222.8 | 0.444 | 4.41 | 192.1 | 68.0 | 18.5 | 1.56 | 18.9 | 0.02 | 0.00 | 0.02 | 0.03 | 141 | 09 |
| 150 ISL | 9.17 D | 9.15 | 33.433 D | 25.871 | 215.2 | 0.440 | 4.27 | D185.7 D | 65.6 | 20.7 | 1.64 | 20.4 | 0.02 | 0.00 | 0.01 | 0.03 | 151 | |
| 170 | 9.03 | 9.01 | 33.696 | 26.098 | 194.0 | 0.507 | 3.60 | 156.6 | 55.3 | 25.0 | 1.81 | 23.3 | 0.02 | 0.00 | 0.00 | 0.03 | 171 | 08 |
| 200 | 8.78 | 8.76 | 33.848 | 26.258 | 179.4 | 0.563 | 3.47 | 151.1 | 53.1 | 27.5 | 1.82 | 24.1 | 0.02 | 0.00 | 0.00 | 0.02 | 202 | 07 |
| 231 | 8.29 | 8.27 | 33.962 | 26.422 | 164.3 | 0.616 | 2.96 | 128.9 | 44.8 | 34.0 | 2.02 | 26.9 | 0.01 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.08 D | 8.06 | 33.992 D | 26.478 | 159.2 | 0.621 | 2.58 | D112.1 D | 38.8 | 37.7 | 2.15 | 28.7 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.78 | 7.75 | 34.008 | 26.536 | 154.0 | 0.678 | 2.35 | 102.3 | 35.2 | 41.6 | 2.28 | 30.5 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.34 D | 7.31 | 34.041 D | 26.624 | 145.9 | 0.698 | 1.96 | D 85.2 D | 29.0 | 47.7 | 2.47 | 32.7 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.23 | 7.20 | 34.060 | 26.656 | 143.2 | 0.752 | 1.59 | 69.3 | 23.5 | 51.8 | 2.60 | 34.2 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 6.69 | 6.66 | 34.119 | 26.776 | 132.4 | 0.836 | 1.02 | 44.2 | 14.8 | 61.3 | 2.86 | 36.9 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.51 D | 6.47 | 34.130 D | 26.810 | 129.3 | 0.837 | 0.90 | D 39.0 D | 13.0 | 64.5 | 2.92 | 37.6 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.16 | 6.12 | 34.164 | 26.881 | 122.8 | 0.912 | 0.65 | 28.4 | 9.4 | 71.3 | 3.05 | 39.2 | 0.02 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.78 D | 5.74 | 34.208 D | 26.965 | 115.4 | 0.960 | 0.50 | D 21.6 D | 7.1 | 80.4 | 3.15 | 40.3 | 0.02 | 0.00 | | | 504 | |
| 514 | 5.66 | 5.62 | 34.216 | 26.986 | 113.5 | 0.999 | 0.44 | 18.9 | 6.2 | 82.5 | 3.17 | 40.6 | 0.02 | 0.00 | | | 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 24.3 N | 119 48.1 W | 15/04/2015 | 1533 | UTC | 19 m | 030 04 kn | 260 02 06 | 0 | 1015.0 mb | 15.0 C | 13.0 C | | 0/8 | | 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 | 14.76 | 14.76 | 33.389 D | 24.782 | 315.5 | 0.000 | 6.44 | 280.8 | 111.6 | 1.4 | 0.31 | 0.1 | 0.04 | 0.06 | 1.00 | 0.39 | 0 | |
| 2 | 14.76 | 14.76 | 33.390 | 24.783 | 315.5 | 0.006 | 6.44 | 280.8 | 111.6 | 1.4 | 0.31 | 0.1 | 0.04 | 0.06 | 1.00 | 0.39 | 2 | 03 |
| 5 | 14.72 | 14.72 | 33.390 | 24.792 | 314.8 | 0.016 | 6.45 | 281.3 | 111.7 | 1.4 | 0.31 | 0.1 | 0.04 | 0.07 | 0.98 | 0.42 | 5 | 02 |
| 10 | 14.63 | 14.63 | 33.392 | 24.812 | 313.0 | 0.032 | 6.53 | 284.5 | 112.8 | 1.3 | 0.29 | 0.1 | 0.02 | 0.07 | 0.77 | 0.31 | 10 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 16.7 N | 120 1.2 W | 15/04/2015 | 1745 | UTC | 583 m | 220 06 kn | 290 03 07 | 0 | 1015.4 mb | 15.1 C | 13.2 C | 10 m | 0/8 | | 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 | 13.49 | 13.49 | 33.470 D | 25.110 | 284.3 | 0.000 | 6.47 | 282.0 | 109.3 | 1.4 | 0.23 | 0.3 | 0.04 | 0.02 | 2.78 | 0.47 | 0 | |
| 2 A | 13.49 | 13.49 | 33.472 | 25.112 | 284.2 | 0.006 | 6.47 | 282.0 | 109.3 | 1.4 | 0.23 | 0.3 | 0.04 | 0.02 | 2.78 | 0.47 | 2 | 24 |
| 6 A | 13.30 | 13.30 | 33.471 | 25.150 | 280.7 | 0.017 | 6.48 | 282.4 | 109.0 | 1.4 | 0.22 | 0.3 | 0.05 | 0.03 | 3.10 | 0.46 | 6 | 23 |
| 8 A | 13.08 | 13.07 | 33.474 | 25.197 | 276.2 | 0.023 | 6.45 | 281.1 | 108.0 | 2.0 | 0.28 | 0.8 | 0.06 | 0.06 | 3.38 | 0.66 | 8 | 22 |
| 10 ISL | 12.42 D | 12.42 | 33.526 D | 25.365 | 260.3 | 0.028 | 6.31 | D274.9 | D104.3 | 5.5 | 0.56 | 4.6 | 0.11 | 0.11 | 2.89 | 0.58 | 10 | |
| 14 A | 11.14 | 11.14 | 33.550 | 25.622 | 236.0 | 0.038 | 4.53 | 197.4 | 72.9 | 12.4 | 1.13 | 12.3 | 0.20 | 0.20 | 1.89 | 0.41 | 14 | 21 |
| 20 ISL | 10.09 D | 10.08 | 33.626 D | 25.866 | 212.9 | 0.052 | 3.51 | D152.7 | D 55.1 | 16.7 | 1.42 | 16.4 | 0.16 | 0.12 | 1.14 | 0.31 | 20 | |
| 27 A | 9.97 | 9.97 | 33.655 | 25.909 | 209.0 | 0.066 | 3.25 | 141.3 | 50.9 | 21.6 | 1.75 | 21.2 | 0.11 | 0.02 | 0.26 | 0.19 | 27 | 20 |
| 30 ISL | 9.94 D | 9.94 | 33.681 D | 25.934 | 206.7 | 0.073 | 3.22 | D140.0 D | 50.4 | 22.0 | 1.78 | 21.5 | 0.12 | 0.02 | 0.26 | 0.20 | 30 | |
| 33 A | 9.89 | 9.89 | 33.688 | 25.947 | 205.5 | 0.079 | 3.16 | 137.7 | 49.5 | 22.4 | 1.80 | 21.8 | 0.14 | 0.02 | 0.26 | 0.21 | 33 | 19 |
| 50 | 9.66 | 9.66 | 33.764 | 26.045 | 196.5 | 0.113 | 2.95 | 128.5 | 46.0 | 24.9 | 1.90 | 23.2 | 0.13 | 0.00 | 0.23 | 0.23 | 50 | 18 |
| 60 | 9.57 | 9.57 | 33.800 | 26.088 | 192.7 | 0.132 | 2.88 | 125.3 | 44.8 | 26.2 | 1.94 | 23.9 | 0.10 | 0.07 | 0.20 | 0.22 | 60 | 17 |
| 75 ISL | 9.38 D | 9.37 | 33.899 D | 26.198 | 182.5 | 0.161 | 2.60 | D113.0 D | 40.2 | 29.7 | 2.08 | 25.7 | 0.08 | 0.08 | 0.21 | 0.22 | 76 | |
| 76 | 9.37 | 9.36 | 33.904 D | 26.204 | 182.0 | 0.163 | 2.59 | D112.7 D | 40.1 | | | | | | | | 77 | 16 |
| 85 | 9.22 | 9.21 | 33.970 | 26.279 | 175.1 | 0.178 | 2.26 | 98.2 | 34.9 | 32.1 | 2.18 | 26.9 | 0.06 | 0.08 | 0.22 | 0.23 | 86 | 15 |
| 99 | 9.19 | 9.18 | 34.007 | 26.314 | 172.1 | 0.203 | 2.13 | 92.7 | 32.9 | 33.8 | 2.23 | 27.5 | 0.05 | 0.02 | 0.11 | 0.16 | 100 | 14 |
| 100 ISL | 9.19 D | 9.17 | 34.010 D | 26.317 | 171.8 | 0.205 | 2.16 | D 94.1 D | 33.4 | 34.0 | 2.24 | 27.5 | 0.04 | 0.00 | 0.11 | 0.16 | 101 | |
| 120 | 9.07 | 9.06 | 34.060 | 26.375 | 166.7 | 0.238 | 1.64 | 71.5 | 25.3 | 38.4 | 2.39 | 29.1 | 0.02 | 0.00 | 0.07 | 0.16 | 121 | 13 |
| 125 ISL | 9.05 D | 9.04 | 34.075 D | 26.390 | 165.4 | 0.248 | 1.58 | D 68.8 D | 24.4 | 38.8 | 2.40 | 29.2 | 0.02 | 0.00 | 0.07 | 0.16 | 126 | |
| 139 | 8.94 | 8.93 | 34.097 | 26.425 | 162.3 | 0.270 | 1.61 | 70.2 | 24.8 | 39.8 | 2.42 | 29.6 | 0.02 | 0.00 | 0.07 | 0.17 | 140 | 12 |
| 150 ISL | 8.85 D | 8.83 | 34.110 D | 26.451 | 160.1 | 0.289 | 1.70 | D 73.8 D | 26.0 | 41.0 | 2.46 | 30.0 | 0.02 | 0.00 | 0.07 | 0.16 | 151 | |
| 170 | 8.78 | 8.76 | 34.125 | 26.474 | 158.3 | 0.319 | 1.36 | 59.4 | 20.9 | 43.1 | 2.53 | 30.6 | 0.02 | 0.00 | 0.07 | 0.15 | 171 | 11 |
| 200 | 8.56 | 8.54 | 34.156 | 26.533 | 153.3 | 0.366 | 0.92 | 39.9 | 14.0 | 49.0 | 2.69 | 32.0 | 0.02 | 0.00 | 0.06 | 0.16 | 202 | 10 |
| 230 | 8.32 | 8.29 | 34.175 | 26.586 | 148.8 | 0.411 | 0.79 | 34.4 | 12.0 | 52.7 | 2.78 | 32.9 | 0.01 | 0.00 | | | 232 | 09 |
| 250 ISL | 8.18 D | 8.16 | 34.183 D | 26.613 | 146.5 | 0.443 | 0.73 | D 31.9 D | 11.1 | 55.4 | 2.84 | 33.2 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.99 | 7.96 | 34.195 | 26.652 | 143.1 | 0.470 | 0.58 | 25.4 | 8.8 | 58.2 | 2.89 | 33.5 | 0.01 | 0.00 | | | 272 | 08 |
| 300 ISL | 7.78 D | 7.75 | 34.206 D | 26.691 | 139.9 | 0.515 | 0.50 | D 21.8 D | 7.5 | 61.8 | 2.95 | 33.7 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.69 | 7.66 | 34.208 | 26.706 | 138.7 | 0.540 | 0.45 | 19.5 | 6.7 | 64.2 | 2.99 | 33.8 | 0.01 | 0.00 | | | 323 | 07 |
| 380 | 7.22 | 7.18 | 34.222 | 26.786 | 132.0 | 0.621 | 0.35 | 15.2 | 5.2 | 73.0 | 3.11 | 33.7 | 0.01 | 0.00 | | | 383 | 06 |
| 400 ISL | 7.01 D | 6.97 | 34.227 D | 26.819 | 129.0 | 0.652 | 0.29 | D 12.4 D | 4.2 | 78.5 | 3.19 | 32.6 | 0.01 | 0.00 | | | 403 | |
| 442 | 6.74 | 6.70 | 34.239 | 26.866 | 125.0 | 0.701 | 0.16 | 6.7 | 2.3 | 90.1 | 3.37 | 30.4 | 0.01 | 0.00 | | | 446 | 05 |
| 500 ISL | 6.66 D | 6.62 | 34.245 D | 26.883 | 124.3 | 0.778 | 0.07 D | 3.1 D | 1.0 | 98.8 | 3.56 | 26.0 | 0.00 | 0.00 | | | 504 | |
| 515 | 6.64 | 6.60 | 34.250 | 26.889 | 123.9 | 0.792 | 0.06 | 2.8 | 0.9 | 101.1 | 3.61 | 24.9 | 0.00 | 0.00 | | | 519 | 04 |
| 541 | 6.63 | 6.58 | 34.249 | 26.891 | 124.1 | 0.824 | 0.03 | 1.3 | 0.4 | 108.4 | 3.84 | 19.8 | 0.01 | 0.00 | | | 546 | 03 |
| 564 | 6.62 | 6.56 | 34.247 | 26.892 | 124.4 | 0.852 | 0.02 | 0.7 | 0.2 | 116.8 | 4.07 | 13.1 | 0.01 | 0.02 | | | 569 | 02 |
| 571 | 6.62 | 6.56 | 34.249 | 26.893 | 124.4 | 0.861 | 0.01 | 0.4 | 0.2 | 117.2 | 4.06 | 12.9 | 0.01 | 0.02 | | | 576 | 01 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SANTA BARBARA BASIN STATION.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 15.9 N | 119 19.8 W | 15/04/2015 | 0420 | UTC | 21 m | 150 03 kn | | | 1013.7 mb | 16.3 C | 13.9 C | | | | 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 | 15.68 | 15.68 | 33.388 D | 24.580 | 334.7 | 0.000 | 6.52 | 284.3 | 115.1 | 0.7 | 0.22 | 0.0 | 0.02 | 0.00 | 0.94 | 0.29 | 0 | |
| 2 | 15.68 | 15.68 | 33.393 | 24.585 | 334.4 | 0.007 | 6.52 | 284.3 | 115.1 | 0.7 | 0.22 | 0.0 | 0.02 | 0.00 | 0.94 | 0.29 | 2 | 05 |
| 5 | 14.41 | 14.40 | 33.393 | 24.862 | 308.1 | 0.016 | 6.53 | 284.6 | 112.3 | 0.9 | 0.24 | 0.0 | 0.03 | 0.00 | 1.07 | 0.41 | 5 | 04 |
| 10 | 12.64 | 12.64 | 33.398 | 25.224 | 273.7 | 0.031 | 6.81 | 296.8 | 113.0 | 2.5 | 0.38 | 0.8 | 0.07 | 0.09 | 4.41 | 0.84 | 10 | 02 |
| 10 | 12.64 | 12.64 | 33.403 | 25.228 | 273.4 | 0.030 | | | | | | | | | | | 10 | 03 |
| 16 | 12.13 | 12.12 | 33.386 | 25.313 | 265.4 | 0.047 | 4.85 | 211.3 | 79.6 | 8.1 | 1.11 | 7.5 | 0.41 | 1.10 | 7.91 | 1.96 | 16 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 13.6 N | 119 24.6 W | 15/04/2015 | 0239 | UTC | 36 m | 290 03 kn | 290 02 06 | 1 | 1013.2 mb | 16.0 C | 14.0 C | | 1/8 | CS | 050 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.83 | 14.83 | 33.403 D | 24.778 | 315.9 | 0.000 | 6.61 | 288.0 | 114.7 | 0.7 | 0.23 | 0.0 | 0.01 | 0.03 | 1.07 | 0.16 | 0 | |
| 2 | 14.83 | 14.83 | 33.405 | 24.780 | 315.8 | 0.006 | 6.61 | 288.0 | 114.7 | 0.7 | 0.23 | 0.0 | 0.01 | 0.03 | 1.07 | 0.16 | 2 | 10 |
| 5 | 14.60 | 14.60 | 33.408 | 24.831 | 311.1 | 0.016 | 6.60 | 287.7 | 114.0 | 0.6 | 0.23 | 0.0 | 0.01 | 0.03 | 1.27 | 0.15 | 5 | 09 |
| 10 | 13.90 | 13.90 | 33.398 | 24.971 | 297.9 | 0.031 | 6.69 | 291.5 | 113.9 | 0.7 | 0.25 | 0.0 | 0.01 | 0.07 | 1.02 | 0.17 | 10 | 03 |
| 10 | 13.90 | 13.90 | 33.399 | 24.971 | 297.9 | 0.031 | | | | | | | | | | | 10 | 04 |
| 20 | 12.77 | 12.77 | 33.395 | 25.197 | 276.6 | 0.060 | 5.98 | 260.5 | 99.4 | 3.7 | 0.63 | 2.6 | 0.10 | 1.22 | 2.50 | 0.62 | 20 | 02 |
| 29 | 12.15 | 12.15 | 33.422 | 25.336 | 263.6 | 0.084 | 5.25 | 228.8 | 86.2 | 6.8 | 0.92 | 6.7 | 0.18 | 1.38 | 2.58 | 0.46 | 29 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 30.4 W | 15/04/2015 | 0025 | UTC | 146 m | 260 09 kn | 250 03 06 | 0 | 1014.0 mb | 16.0 C | 13.9 C | 10 m | 0/8 | | 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 | 14.26 | 14.26 | 33.391 D | 24.890 | 305.2 | 0.000 | 6.80 | 296.2 | 116.6 | 1.1 | 0.28 | 0.1 | 0.02 | 0.04 | 2.02 | 0.39 | 0 | |
| 1 | 14.26 | 14.26 | 33.403 | 24.899 | 304.4 | 0.003 | 6.80 | 296.2 | 116.6 | 1.1 | 0.28 | 0.1 | 0.02 | 0.04 | 2.02 | 0.39 | 1 | 13 |
| 9 | 13.57 | 13.56 | 33.393 | 25.036 | 291.6 | 0.027 | 6.80 | 296.4 | 115.0 | 1.2 | 0.32 | 0.1 | 0.02 | 0.03 | 2.57 | 0.75 | 9 | 11 |
| 10 ISL | 13.50 D | 13.50 | 33.386 D | 25.044 | 290.9 | 0.030 | 6.69 | D291.7 | D113.0 | 1.3 | 0.32 | 0.1 | 0.02 | 0.06 | 2.59 | 0.74 | 10 | |
| 10 | 13.50 | 13.50 | 33.394 | 25.050 | 290.3 | 0.028 | | | | | | | | | | | 10 | 12 |
| 19 | 13.41 | 13.41 | 33.394 | 25.068 | 288.9 | 0.056 | 6.51 | 283.6 | 109.7 | 1.7 | 0.36 | 0.4 | 0.03 | 0.32 | 2.74 | 0.71 | 19 | 10 |
| 20 ISL | 13.35 D | 13.35 | 33.386 D | 25.074 | 288.3 | 0.046 | 6.40 | D278.7 | D107.6 | 2.0 | 0.39 | 0.7 | 0.03 | 0.41 | 2.65 | 0.73 | 20 | |
| 29 | 12.47 | 12.46 | 33.382 | 25.246 | 272.1 | 0.084 | 5.76 | 250.7 | 95.1 | 5.0 | 0.69 | 3.6 | 0.09 | 1.26 | 1.84 | 0.90 | 29 | 09 |
| 30 ISL | 12.45 D | 12.45 | 33.375 D | 25.244 | 272.4 | 0.074 | 5.60 | D243.8 | D 92.4 | 5.8 | 0.74 | 4.4 | 0.10 | 1.19 | 1.71 | 0.87 | 30 | |
| 39 | 11.43 | 11.42 | 33.400 | 25.455 | 252.5 | 0.110 | 4.65 | 202.4 | 75.1 | 12.6 | 1.19 | 11.9 | 0.16 | 0.55 | 0.54 | 0.67 | 39 | 08 |
| 50 | 10.98 | 10.97 | 33.482 | 25.600 | 239.0 | 0.137 | 4.14 | 180.4 | 66.3 | 14.6 | 1.42 | 14.6 | 0.30 | 1.05 | 0.83 | 0.85 | 50 | 07 |
| 60 | 10.75 | 10.75 | 33.500 | 25.654 | 234.0 | 0.161 | 3.94 | 171.4 | 62.7 | 16.5 | 1.52 | 16.7 | 0.33 | 0.41 | 0.65 | 0.70 | 60 | 06 |
| 70 | 10.58 | 10.57 | 33.563 | 25.735 | 226.6 | 0.184 | 3.53 | 153.7 | 56.1 | 18.3 | 1.64 | 18.6 | 0.32 | 0.25 | 0.61 | 0.66 | 71 | 05 |
| 75 ISL | 10.16 D | 10.15 | 33.637 D | 25.864 | 214.4 | 0.184 | 3.34 | D145.5 | D 52.6 | 20.3 | 1.72 | 19.9 | 0.29 | 0.18 | 0.59 | 0.67 | 76 | |
| 84 | 9.90 | 9.89 | 33.712 | 25.967 | 204.8 | 0.214 | 3.00 | 130.6 | 47.0 | 24.0 | 1.85 | 22.1 | 0.22 | 0.05 | 0.56 | 0.69 | 85 | 04 |
| 100 | 9.45 | 9.44 | 33.860 | 26.157 | 187.0 | 0.245 | 2.69 | 116.9 | 41.7 | 28.5 | 2.01 | 24.9 | 0.10 | 0.06 | 0.34 | 0.57 | 101 | 03 |
| 119 | 9.32 | 9.30 | 33.944 D | 26.245 | 179.1 | 0.269 | 2.36 | D102.6 | D 36.5 | | | | | | | | 120 | 02 |
| 125 ISL | 9.29 D | 9.27 | 33.958 D | 26.261 | 177.7 | 0.280 | 2.34 | D101.7 | D 36.1 | 32.2 | 2.16 | 26.6 | 0.09 | 0.02 | 0.35 | 0.84 | 126 | |
| 132 | 9.21 | 9.20 | 33.985 | 26.295 | 174.7 | 0.303 | 2.26 | 98.1 | 34.8 | 33.2 | 2.20 | 27.1 | 0.08 | 0.01 | 0.35 | 0.91 | 133 | 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 1504 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 52.5 N | 120 7.8 W | 14/04/2015 | 1854 | UTC | 105 m | 310 27 kn | 320 05 04 | 0 | 1018.7 mb | 11.0 C | 9.1 C | 08 m | 0/8 | | 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 | 15.22 | 15.22 | 33.276 D | 24.596 | 333.2 | 0.000 | 6.04 | 263.2 | 105.5 | 1.1 | 0.31 | 0.1 | 0.02 | 0.00 | 1.56 | 0.44 | 0 | |
| 2 A | 15.22 | 15.22 | 33.278 | 24.598 | 333.1 | 0.007 | 6.04 | 263.2 | 105.5 | 1.1 | 0.31 | 0.1 | 0.02 | 0.00 | 1.56 | 0.44 | 2 | 15 |
| 4 A | 15.22 | 15.22 | 33.277 | 24.598 | 333.2 | 0.013 | 6.03 | 262.9 | 105.4 | 1.1 | 0.31 | 0.2 | 0.03 | 0.01 | 1.70 | 0.36 | 4 | 14 |
| 8 A | 14.28 | 14.27 | 33.276 | 24.799 | 314.2 | 0.026 | 6.02 | 262.4 | 103.2 | 1.2 | 0.32 | 0.2 | 0.03 | 0.00 | 1.47 | 0.42 | 8 | 13 |
| 10 ISL | 13.49 D | 13.49 | 33.240 D | 24.933 | 301.5 | 0.033 | 5.98 | D260.7 | D100.9 | 2.3 | 0.43 | 1.3 | 0.06 | 0.00 | 1.83 | 0.51 | 10 | |
| 12 A | 13.35 | 13.35 | 33.241 | 24.962 | 298.8 | 0.038 | 5.90 | 256.9 | 99.1 | 3.5 | 0.54 | 2.3 | 0.09 | 0.08 | 2.19 | 0.60 | 12 | 11 |
| 12 | 13.35 | 13.35 | 33.241 | 24.962 | 298.8 | 0.039 | | | | | | | | | | | 12 | 12 |
| 20 A | 13.21 | 13.21 | 33.351 | 25.075 | 288.2 | 0.062 | 5.77 | 251.4 | 96.8 | 4.5 | 0.61 | 3.4 | 0.08 | 0.33 | 3.67 | 1.22 | 20 | 10 |
| 26 A | 12.60 | 12.59 | 33.320 | 25.172 | 279.1 | 0.079 | 5.44 | 237.2 | 90.2 | 6.5 | 0.77 | 5.8 | 0.14 | 0.46 | 3.86 | 1.14 | 26 | 08 |
| 26 | 12.60 | 12.59 | 33.324 | 25.175 | 278.9 | 0.079 | | | | | | | | | | | 26 | 09 |
| 30 ISL | 12.18 D | 12.17 | 33.320 D | 25.253 | 271.6 | 0.073 | 5.29 | D230.4 | D 86.8 | 8.1 | 0.90 | 7.6 | 0.16 | 0.40 | 2.64 | 0.94 | 30 | |
| 33 | 11.92 | 11.92 | 33.312 | 25.295 | 267.6 | 0.098 | 5.03 | 219.2 | 82.1 | 9.3 | 0.99 | 9.0 | 0.18 | 0.36 | 1.73 | 0.79 | 33 | 07 |
| 40 | 10.28 | 10.27 | 33.529 | 25.759 | 223.6 | 0.115 | 3.89 | 169.2 | 61.3 | 18.6 | 1.52 | 18.2 | 0.11 | 0.08 | 0.64 | 0.56 | 40 | 06 |
| 49 | 10.01 | 10.01 | 33.595 | 25.855 | 214.6 | 0.135 | 3.67 | 160.0 | 57.6 | 20.6 | 1.62 | 19.6 | 0.10 | 0.06 | 0.46 | 0.50 | 49 | 05 |
| 50 ISL | 10.00 D | 10.00 | 33.620 D | 25.877 | 212.6 | 0.120 | 3.67 | D159.6 | D 57.5 | 20.8 | 1.63 | 19.8 | 0.09 | 0.06 | 0.44 | 0.49 | 50 | |
| 61 A | 9.80 | 9.79 | 33.682 | 25.959 | 205.0 | 0.160 | 3.39 | 147.7 | 53.0 | 23.2 | 1.74 | 21.5 | 0.07 | 0.05 | 0.30 | 0.47 | 61 | 04 |
| 69 | 9.78 | 9.77 | 33.692 | 25.970 | 204.1 | 0.176 | 3.39 | 147.4 | 52.9 | 23.3 | 1.74 | 21.6 | 0.07 | 0.05 | 0.30 | 0.49 | 70 | 03 |
| 75 ISL | 9.74 D | 9.74 | 33.694 D | 25.978 | 203.5 | 0.172 | 3.38 | D147.0 | D 52.7 | 23.5 | 1.75 | 21.7 | 0.06 | 0.05 | 0.29 | 0.51 | 76 | |
| 87 | 9.72 | 9.71 | 33.706 | 25.992 | 202.4 | 0.213 | 3.32 | 144.6 | 51.8 | 24.0 | 1.77 | 22.0 | 0.06 | 0.04 | 0.27 | 0.54 | 88 | 02 |
| 95 | 9.71 | 9.70 | 33.711 | 25.998 | 202.1 | 0.229 | 3.31 | 144.1 | 51.6 | 24.0 | 1.76 | 21.9 | 0.06 | 0.04 | 0.22 | 0.40 | 96 | 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 1504 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 44.4 N | 120 24.6 W | 14/04/2015 | 1511 | UTC | 951 m | 320 30 kn | 320 07 07 | 0 | 1019.0 mb | 14.2 C | 13.0 C | 07 m | 0/8 | | 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 | 13.48 | 13.48 | 33.337 D | 25.010 | 293.8 | 0.000 | 6.33 | 275.8 | 106.8 | 1.5 | 0.35 | 0.4 | 0.04 | 0.05 | 4.89 | 1.97 | 0 | |
| 2 | 13.48 | 13.48 | 33.339 | 25.012 | 293.7 | 0.006 | 6.33 | 275.8 | 106.8 | 1.5 | 0.35 | 0.4 | 0.04 | 0.05 | 4.89 | 1.97 | 2 | 21 |
| 9 | 13.47 | 13.47 | 33.338 | 25.012 | 293.9 | 0.027 | | | | | | | | | | | 9 | 20 |
| 10 | 13.47 | 13.46 | 33.346 | 25.020 | 293.2 | 0.029 | 6.32 | 275.4 | 106.6 | 1.5 | 0.37 | 0.5 | 0.04 | 0.05 | 5.10 | 1.80 | 10 | 19 |
| 19 | 13.02 | 13.01 | 33.336 | 25.103 | 285.6 | 0.055 | 6.23 | 271.5 | 104.1 | 1.9 | 0.41 | 1.1 | 0.05 | 0.13 | 5.24 | 1.95 | 19 | 18 |
| 20 ISL | 13.09 D | 13.08 | 33.335 D | 25.088 | 287.0 | 0.047 | 5.98 | D260.3 | D100.0 | 2.3 | 0.44 | 1.5 | 0.06 | 0.19 | 5.18 | 1.93 | 20 | |
| 30 | 12.49 | 12.49 | 33.353 | 25.218 | 274.9 | 0.086 | 5.68 | 247.5 | 93.9 | 5.6 | 0.75 | 5.4 | 0.12 | 0.83 | 4.57 | 1.69 | 30 | 17 |
| 40 | 12.05 | 12.04 | 33.395 | 25.337 | 263.9 | 0.113 | 5.43 | 236.6 | 88.9 | 8.1 | 0.93 | 7.4 | 0.15 | 1.18 | 2.56 | 1.22 | 40 | 16 |
| 50 | 10.13 | 10.12 | 33.346 | 25.641 | 234.9 | 0.138 | 4.51 | 196.5 | 70.9 | 13.7 | 1.33 | 14.8 | 0.09 | 0.25 | 3.01 | 1.73 | 50 | 15 |
| 60 | 10.05 | 10.04 | 33.381 | 25.682 | 231.3 | 0.162 | 4.23 | 184.1 | 66.3 | 16.1 | 1.46 | 17.5 | 0.04 | 0.04 | 0.98 | 0.97 | 60 | 14 |
| 71 | 9.84 | 9.84 | 33.448 | 25.769 | 223.2 | 0.187 | 4.07 | 177.4 | 63.6 | 17.7 | 1.53 | 18.8 | 0.03 | 0.01 | 0.61 | 0.78 | 72 | 13 |
| 75 ISL | 9.70 D | 9.69 | 33.498 D | 25.832 | 217.3 | 0.185 | 3.99 | D173.6 | D 62.1 | 18.8 | 1.57 | 19.5 | 0.02 | 0.01 | 0.48 | 0.66 | 76 | |
| 85 | 9.40 | 9.39 | 33.577 | 25.944 | 206.9 | 0.217 | 3.75 | 163.2 | 58.0 | 21.3 | 1.68 | 21.3 | 0.01 | 0.01 | 0.15 | 0.34 | 86 | 12 |
| 100 | 9.11 | 9.10 | 33.730 | 26.110 | 191.4 | 0.247 | 3.43 | 149.4 | 52.8 | 25.2 | 1.80 | 23.6 | 0.00 | 0.01 | 0.05 | 0.12 | 101 | 11 |
| 120 | 8.87 | 8.85 | 33.854 | 26.246 | 178.9 | 0.284 | 3.12 | 135.6 | 47.7 | 28.9 | 1.91 | 25.4 | 0.00 | 0.00 | 0.03 | 0.07 | 121 | 10 |
| 125 ISL | 8.81 D | 8.79 | 33.884 D | 26.280 | 175.8 | 0.282 | 3.14 | D136.7 | D 48.1 | 30.2 | 1.97 | 25.9 | 0.01 | 0.00 | 0.03 | 0.08 | 126 | |
| 140 | 8.90 | 8.88 | 33.989 | 26.347 | 169.7 | 0.318 | 2.37 | 103.2 | 36.4 | 34.2 | 2.15 | 27.5 | 0.04 | 0.00 | 0.02 | 0.10 | 141 | 09 |
| 150 ISL | 8.83 D | 8.81 | 34.034 D | 26.394 | 165.5 | 0.325 | 2.15 | D 93.3 | D 32.9 | 35.7 | 2.21 | 28.1 | 0.04 | 0.00 | 0.02 | 0.10 | 151 | |
| 170 | 8.66 | 8.64 | 34.068 | 26.448 | 160.7 | 0.368 | 1.95 | 84.6 | 29.7 | 38.8 | 2.32 | 29.5 | 0.03 | 0.00 | 0.02 | 0.09 | 171 | 08 |
| 200 | 8.27 | 8.25 | 34.100 | 26.533 | 153.2 | 0.415 | 1.71 | 74.4 | 25.9 | 43.2 | 2.43 | 31.0 | 0.03 | 0.00 | 0.03 | 0.32 | 202 | 07 |
| 231 | 8.18 | 8.16 | 34.118 | 26.561 | 151.1 | 0.462 | 1.59 | 69.0 | 24.0 | 45.1 | 2.47 | 31.6 | 0.03 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.09 D | 8.07 | 34.151 D | 26.601 | 147.6 | 0.481 | 1.40 | D 60.8 | D 21.1 | 47.3 | 2.54 | 32.3 | 0.03 | 0.00 | | | 252 | |
| 270 | 7.84 | 7.82 | 34.155 | 26.642 | 144.0 | 0.520 | 1.30 | 56.7 | 19.5 | 49.6 | 2.61 | 33.1 | 0.03 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.88 D | 7.85 | 34.212 D | 26.682 | 140.8 | 0.554 | 1.09 | D 47.2 | D 16.3 | 52.3 | 2.71 | 33.8 | 0.03 | 0.00 | | | 302 | |
| 320 | 7.79 | 7.76 | 34.222 | 26.704 | 139.1 | 0.591 | 0.90 | 38.9 | 13.4 | 54.1 | 2.77 | 34.3 | 0.03 | 0.00 | | | 323 | 04 |
| 381 | 7.20 | 7.17 | 34.230 | 26.795 | 131.1 | 0.673 | 0.73 | 31.8 | 10.8 | 60.9 | 2.88 | 36.2 | 0.03 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.99 D | 6.95 | 34.228 D | 26.823 | 128.6 | 0.690 | 0.71 | D 30.8 | D 10.4 | 63.6 | 2.92 | 36.8 | 0.03 | 0.00 | | | 403 | |
| 440 | 6.65 | 6.60 | 34.240 | 26.879 | 123.6 | 0.748 | 0.55 | 23.8 | 8.0 | 69.3 | 3.01 | 38.1 | 0.03 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.38 D | 6.33 | 34.274 D | 26.943 | 118.2 | 0.814 | 0.42 | D 18.4 | D 6.1 | 74.3 | 3.07 | 38.9 | 0.02 | 0.00 | | | 504 | |
| 516 | 6.30 | 6.25 | 34.278 | 26.956 | 117.2 | 0.840 | 0.40 | 17.3 | 5.7 | 75.6 | 3.08 | 39.1 | 0.02 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 14.5 N | 121 26.4 W | 14/04/2015 | 0528 UTC | 3802 m | 330 22 kn | | | 1019.8 mb | 15.2 C | 12.8 C | | | | 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 | 17.28 | 17.28 | 33.443 D | 24.255 | 365.7 | 0.000 | 5.58 | 243.1 | 101.6 | 2.1 | 0.31 | 0.0 | 0.01 | 0.02 | 0.11 | 0.03 | 0 | |
| 2 | 17.28 | 17.28 | 33.457 | 24.266 | 364.8 | 0.007 | 5.58 | 243.1 | 101.6 | 2.1 | 0.31 | 0.0 | 0.01 | 0.02 | 0.11 | 0.03 | 2 | 23 |
| 10 | 17.29 | 17.29 | 33.444 | 24.253 | 366.3 | 0.037 | 5.60 | 244.1 | 102.0 | 2.1 | 0.31 | 0.0 | 0.01 | 0.01 | 0.11 | 0.02 | 10 | 19 |
| 10 | 17.29 | 17.29 | 33.444 | 24.253 | 366.3 | 0.035 | | | | | | | | | | | 10 | 20 |
| 20 ISL | 17.29 D | 17.29 | 33.443 D | 24.253 | 366.7 | 0.055 | 5.60 | D244.1 | D102.0 | 2.1 | 0.32 | 0.0 | 0.01 | 0.01 | 0.11 | 0.02 | 20 | |
| 25 | 17.29 | 17.29 | 33.449 | 24.258 | 366.4 | 0.092 | 5.58 | 243.5 | 101.7 | 2.1 | 0.32 | 0.0 | 0.01 | 0.01 | 0.11 | 0.02 | 25 | 18 |
| 30 ISL | 17.29 D | 17.29 | 33.443 D | 24.253 | 367.0 | 0.092 | 5.58 | D243.3 | D101.7 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.11 | 0.02 | 30 | |
| 40 | 17.29 | 17.28 | 33.442 | 24.255 | 367.3 | 0.147 | 5.57 | 243.0 | 101.5 | 2.0 | 0.31 | 0.0 | 0.01 | 0.00 | 0.11 | 0.02 | 40 | 17 |
| 50 | 17.29 | 17.28 | 33.444 | 24.257 | 367.4 | 0.183 | 5.59 | 243.7 | 101.8 | 2.1 | 0.32 | 0.0 | 0.00 | 0.01 | 0.11 | 0.02 | 50 | 16 |
| 62 | 17.27 | 17.26 | 33.449 | 24.266 | 367.0 | 0.227 | 5.59 | 243.9 | 101.9 | 2.1 | 0.31 | 0.0 | 0.00 | 0.00 | 0.11 | 0.02 | 63 | 15 |
| 75 | 14.43 | 14.42 | 33.093 | 24.630 | 332.4 | 0.273 | 5.97 | 260.0 | 102.4 | 2.5 | 0.39 | 0.0 | 0.01 | 0.01 | 0.40 | 0.15 | 76 | 14 |
| 87 | 12.64 | 12.62 | 33.000 | 24.920 | 304.9 | 0.311 | 5.67 | 247.1 | 93.8 | 5.0 | 0.68 | 3.9 | 0.09 | 0.03 | 0.95 | 0.38 | 88 | 13 |
| 100 | 10.87 | 10.86 | 33.020 | 25.261 | 272.4 | 0.349 | 5.15 | 224.4 | 82.0 | 9.7 | 1.11 | 11.2 | 0.06 | 0.01 | 0.42 | 0.28 | 101 | 12 |
| 111 | 10.08 | 10.07 | 33.203 | 25.540 | 246.0 | 0.377 | 4.74 | 206.6 | 74.3 | 13.6 | 1.35 | 15.4 | 0.02 | 0.01 | 0.18 | 0.14 | 112 | 11 |
| 125 | 9.81 | 9.79 | 33.354 | 25.704 | 230.6 | 0.410 | 4.35 | 189.5 | 67.9 | 16.4 | 1.48 | 17.8 | 0.02 | 0.00 | 0.08 | 0.09 | 126 | 10 |
| 140 | 9.54 | 9.52 | 33.517 | 25.876 | 214.6 | 0.444 | 3.89 | 169.2 | 60.3 | 20.0 | 1.65 | 20.5 | 0.01 | 0.01 | 0.03 | 0.05 | 141 | 09 |
| 150 ISL | 9.35 D | 9.33 | 33.626 D | 25.993 | 203.7 | 0.450 | 3.66 | D159.4 | D 56.6 | 22.0 | 1.72 | 21.7 | 0.01 | 0.00 | 0.02 | 0.05 | 151 | |
| 170 | 9.02 | 9.00 | 33.746 | 26.139 | 190.1 | 0.504 | 3.37 | 146.5 | 51.7 | 26.1 | 1.85 | 24.2 | 0.01 | 0.00 | 0.00 | 0.03 | 171 | 08 |
| 200 ISL | 8.72 D | 8.70 | 33.865 D | 26.280 | 177.3 | 0.545 | 3.18 | D138.3 | D 48.5 | 29.4 | 1.94 | 25.8 | 0.01 | 0.00 | 0.00 | 0.02 | 202 | |
| 201 | 8.72 | 8.70 | 33.863 | 26.279 | 177.4 | 0.561 | 3.16 | 137.6 | 48.3 | 29.5 | 1.94 | 25.8 | 0.01 | 0.00 | 0.00 | 0.02 | 203 | 07 |
| 230 | 8.28 | 8.25 | 33.991 | 26.447 | 161.9 | 0.611 | 2.59 | 112.6 | 39.1 | 36.7 | 2.14 | 28.5 | 0.01 | 0.02 | | | 232 | 06 |
| 250 ISL | 8.17 D | 8.14 | 34.024 D | 26.490 | 158.1 | 0.628 | 2.27 | D 98.6 | D 34.2 | 40.2 | 2.27 | 30.0 | 0.01 | 0.02 | | | 252 | |
| 271 | 7.79 | 7.77 | 34.050 | 26.566 | 151.1 | 0.675 | 1.97 | 85.5 | 29.4 | 43.8 | 2.40 | 31.6 | 0.01 | 0.01 | | | 273 | 05 |
| 300 ISL | 7.49 D | 7.46 | 34.092 D | 26.643 | 144.2 | 0.704 | 1.62 | D 70.6 | D 24.1 | 49.4 | 2.56 | 33.3 | 0.01 | 0.01 | | | 302 | |
| 320 | 7.41 | 7.38 | 34.125 | 26.682 | 140.9 | 0.746 | 1.28 | 55.8 | 19.0 | 53.2 | 2.67 | 34.5 | 0.01 | 0.01 | | | 323 | 04 |
| 379 | 6.91 | 6.87 | 34.154 | 26.775 | 132.7 | 0.827 | 0.93 | 40.4 | 13.6 | 60.6 | 2.84 | 36.4 | 0.01 | 0.00 | | | 382 | 03 |
| 400 ISL | 6.75 D | 6.71 | 34.173 D | 26.812 | 129.3 | 0.842 | 0.77 | D 33.5 | D 11.3 | 64.2 | 2.90 | 37.3 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.32 | 6.28 | 34.180 | 26.874 | 123.7 | 0.906 | 0.63 | 27.5 | 9.2 | 71.0 | 3.02 | 38.9 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.73 D | 5.68 | 34.187 D | 26.955 | 116.2 | 0.966 | 0.50 | D 21.6 | D 7.1 | 80.2 | 3.11 | 40.7 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.63 | 5.59 | 34.197 | 26.975 | 114.5 | 0.995 | 0.46 | 19.8 | 6.5 | 82.5 | 3.13 | 41.2 | 0.01 | 0.01 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 7.3 W | 13/04/2015 | 2316 UTC | 4185 m | 320 18 kn | 320 05 08 | 1 | 1019.8 mb | 16.5 C | 13.9 C | 24 m | 7/8 | SC | 045 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 16.24 | 16.24 | 33.171 D | 24.289 | 362.5 | 0.000 | 5.74 | 250.3 | 102.3 | 2.1 | 0.36 | 0.0 | 0.01 | 0.00 | 0.13 | 0.03 | 0 | |
| 2 | 16.24 | 16.24 | 33.173 | 24.290 | 362.4 | 0.007 | 5.74 | 250.3 | 102.3 | 2.1 | 0.36 | 0.0 | 0.01 | 0.00 | 0.13 | 0.03 | 2 | 21 |
| 10 | 16.24 | 16.23 | 33.173 | 24.291 | 362.7 | 0.036 | 5.74 | 250.4 | 102.3 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.13 | 0.03 | 10 | 19 |
| 10 | 16.24 | 16.23 | 33.173 | 24.290 | 362.7 | 0.034 | | | | | | | | | | | 10 | 20 |
| 20 ISL | 16.22 D | 16.22 | 33.175 D | 24.296 | 362.5 | 0.055 | 5.76 | D251.1 | D102.6 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.15 | 0.03 | 20 | |
| 26 | 16.21 | 16.21 | 33.175 D | 24.298 | 362.5 | 0.077 | 5.73 | 250.0 | 102.1 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.16 | 0.03 | 26 | 18 |
| 30 ISL | 16.21 D | 16.21 | 33.175 D | 24.299 | 362.6 | 0.091 | 5.75 | D250.9 | D102.5 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.17 | 0.04 | 30 | |
| 39 | 16.17 | 16.16 | 33.172 | 24.306 | 362.2 | 0.141 | 5.75 | 250.7 | 102.3 | 2.1 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.05 | 39 | 17 |
| 49 | 15.91 | 15.91 | 33.163 | 24.359 | 357.6 | 0.177 | 5.78 | 251.8 | 102.2 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.35 | 0.09 | 49 | 16 |
| 50 ISL | 15.92 D | 15.91 | 33.176 D | 24.368 | 356.7 | 0.164 | 5.78 | D252.1 | D102.4 | 2.2 | 0.37 | 0.0 | 0.01 | 0.00 | 0.37 | 0.10 | 50 | |
| 61 | 14.78 | 14.77 | 33.135 | 24.587 | 336.1 | 0.219 | 5.85 | 255.0 | 101.2 | 2.8 | 0.44 | 0.4 | 0.03 | 0.05 | 0.67 | 0.19 | 61 | 15 |
| 75 | 12.27 | 12.26 | 33.064 | 25.040 | 293.1 | 0.263 | 5.44 | 236.9 | 89.2 | 6.3 | 0.84 | 6.4 | 0.20 | 0.07 | 0.59 | 0.28 | 76 | 14 |
| 86 | 11.12 | 11.11 | 33.120 | 25.295 | 268.9 | 0.294 | 4.98 | 217.0 | 79.8 | 9.7 | 1.13 | 11.2 | 0.14 | 0.01 | 0.53 | 0.40 | 87 | 13 |
| 100 | 10.62 | 10.61 | 33.196 | 25.442 | 255.1 | 0.331 | 4.74 | 206.5 | 75.2 | 11.9 | 1.27 | 13.8 | 0.07 | 0.00 | 0.30 | 0.24 | 101 | 12 |
| 112 | 10.01 | 10.00 | 33.308 | 25.634 | 237.1 | 0.360 | 4.45 | 193.6 | 69.6 | 15.2 | 1.45 | 16.7 | 0.03 | 0.00 | 0.17 | 0.23 | 113 | 11 |
| 125 | 9.67 | 9.66 | 33.467 | 25.815 | 220.1 | 0.390 | 4.02 | 175.1 | 62.6 | 18.8 | 1.59 | 19.5 | 0.02 | 0.00 | 0.07 | 0.11 | 126 | 10 |
| 139 | 9.56 | 9.54 | 33.594 | 25.932 | 209.2 | 0.420 | 3.62 | 157.8 | 56.3 | 21.6 | 1.72 | 21.5 | 0.02 | 0.00 | 0.03 | 0.08 | 140 | 09 |
| 150 ISL | 9.41 D | 9.39 | 33.647 D | 25.999 | 203.1 | 0.427 | 3.55 | D154.4 | D 54.9 | 23.9 | 1.80 | 22.9 | 0.02 | 0.00 | 0.02 | 0.06 | 151 | |
| 170 | 9.05 | 9.03 | 33.807 | 26.182 | 186.1 | 0.481 | 3.05 | 132.7 | 46.9 | 28.0 | 1.95 | 25.4 | 0.01 | 0.00 | 0.01 | 0.04 | 171 | 08 |
| 200 ISL | 8.58 D | 8.56 | 33.943 D | 26.363 | 169.4 | 0.520 | 2.66 | D115.8 | D 40.5 | 33.7 | 2.12 | 27.9 | 0.01 | 0.00 | 0.01 | 0.04 | 202 | |
| 202 | 8.53 | 8.51 | 33.948 | 26.375 | 168.3 | 0.538 | 2.62 | 113.8 | 39.8 | 34.1 | 2.13 | 28.0 | 0.01 | 0.00 | 0.01 | 0.04 | 204 | 07 |
| 231 | 8.06 | 8.03 | 34.003 | 26.489 | 157.8 | 0.585 | 2.40 | 104.2 | 36.0 | 39.3 | 2.24 | 30.0 | 0.01 | 0.00 | | | 233 | 06 |
| 250 ISL | 7.86 D | 7.83 | 34.016 D | 26.530 | 154.2 | 0.601 | 2.24 | D 97.3 | D 33.5 | 42.7 | 2.32 | 31.1 | 0.01 | 0.00 | | | 252 | |
| 272 | 7.56 | 7.53 | 34.039 | 26.591 | 148.6 | 0.648 | 1.96 | 85.2 | 29.1 | 46.5 | 2.42 | 32.4 | 0.01 | 0.00 | | | 274 | 05 |
| 300 ISL | 7.08 D | 7.05 | 34.035 D | 26.656 | 142.6 | 0.676 | 1.79 | D 78.0 | D 26.4 | 52.1 | 2.55 | 34.3 | 0.01 | 0.00 | | | 302 | |
| 321 | 6.84 | 6.81 | 34.052 | 26.702 | 138.5 | 0.718 | 1.51 | 65.6 | 22.1 | 56.3 | 2.65 | 35.7 | 0.01 | 0.00 | | | 324 | 04 |
| 380 | 6.42 | 6.38 | 34.130 | 26.820 | 127.9 | 0.797 | 0.90 | 38.9 | 13.0 | 66.2 | 2.90 | 38.1 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.23 D | 6.20 | 34.134 D | 26.848 | 125.4 | 0.811 | 0.79 | D 34.2 | D 11.3 | 69.3 | 2.96 | 38.8 | 0.01 | 0.00 | | | 403 | |
| 440 | 5.99 | 5.95 | 34.171 | 26.908 | 120.1 | 0.871 | 0.58 | 25.1 | 8.3 | 75.4 | 3.07 | 40.0 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.56 D | 5.52 | 34.236 D | 27.013 | 110.5 | 0.930 | 0.34 | D 14.9 | D 4.9 | 84.4 | 3.19 | 41.2 | 0.01 | 0.00 | | | 504 | |
| 516 | 5.48 | 5.44 | 34.239 | 27.026 | 109.5 | 0.958 | 0.34 | 14.6 | 4.8 | 86.9 | 3.22 | 41.5 | 0.01 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 34.5 N | 122 48.6 W | 13/04/2015 | 1657 | UTC | 4195 m | 350 14 kn | 360 04 06 | 2 | 1019.6 mb | 15.9 C | 13.2 C | 24 m | 8/8 | SC | 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 | 15.97 | 15.97 | 33.213 D | 24.382 | 353.6 | 0.000 | 5.79 | 252.4 | 102.7 | 1.9 | 0.35 | 0.1 | 0.01 | 0.00 | 0.17 | 0.03 | 0 | |
| 2 A | 15.97 | 15.97 | 33.215 | 24.383 | 353.6 | 0.007 | 5.79 | 252.4 | 102.7 | 1.9 | 0.35 | 0.1 | 0.01 | 0.00 | 0.17 | 0.03 | 2 | 24 |
| 10 | 15.97 | 15.97 | 33.214 | 24.383 | 353.9 | 0.035 | 5.77 | 251.3 | 102.2 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.17 | 0.04 | 10 | 22 |
| 10 | 15.97 | 15.97 | 33.214 | 24.383 | 353.9 | 0.035 | | | | | | | | | | | 10 | 23 |
| 15 A | 15.97 | 15.96 | 33.214 | 24.384 | 354.0 | 0.053 | 5.77 | 251.7 | 102.4 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.18 | 0.04 | 15 | 21 |
| 20 A | 15.96 | 15.95 | 33.212 | 24.385 | 354.0 | 0.071 | 5.77 | 251.7 | 102.3 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 20 | 20 |
| 30 ISL | 15.95 D | 15.95 | 33.211 D | 24.386 | 354.3 | 0.098 | 5.75 | D250.8 | D102.0 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 30 | |
| 34 A | 15.95 | 15.94 | 33.213 | 24.388 | 354.2 | 0.120 | 5.76 | 251.3 | 102.1 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 34 | 19 |
| 45 | 15.92 | 15.92 | 33.210 | 24.392 | 354.2 | 0.159 | 5.76 | 251.1 | 102.0 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | 45 | 18 |
| 50 ISL | 15.89 D | 15.88 | 33.203 D | 24.395 | 354.1 | 0.170 | 5.73 | D250.0 | D101.5 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.22 | 0.06 | 50 | |
| 55 | 15.58 | 15.57 | 33.178 | 24.446 | 349.4 | 0.195 | 5.82 | 253.8 | 102.4 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.24 | 0.07 | 55 | 17 |
| 64 A | 15.53 | 15.52 | 33.193 | 24.467 | 347.7 | 0.226 | 5.85 | 254.9 | 102.7 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.27 | 0.08 | 65 | 16 |
| 72 | 15.48 | 15.47 | 33.193 | 24.480 | 346.7 | 0.254 | 5.81 | 253.1 | 101.9 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.30 | 0.12 | 73 | 15 |
| 75 ISL | 15.47 D | 15.45 | 33.190 D | 24.481 | 346.7 | 0.257 | 5.81 | D253.1 | D101.9 | 2.1 | 0.38 | 0.2 | 0.02 | 0.00 | 0.36 | 0.15 | 76 | |
| 80 A | 14.83 | 14.81 | 33.164 | 24.600 | 335.4 | 0.281 | 5.72 | 249.4 | 99.1 | 2.3 | 0.41 | 0.4 | 0.04 | 0.07 | 0.45 | 0.20 | 81 | 14 |
| 88 | 12.53 | 12.52 | 33.053 | 24.981 | 299.1 | 0.307 | 5.36 | 233.5 | 88.5 | 5.9 | 0.79 | 6.0 | 0.16 | 0.00 | 0.46 | 0.39 | 89 | 13 |
| 96 | 10.93 | 10.91 | 33.078 | 25.296 | 269.0 | 0.330 | 5.08 | 221.2 | 81.0 | 10.0 | 1.11 | 11.5 | 0.07 | 0.00 | 0.29 | 0.28 | 97 | 12 |
| 100 ISL | 10.79 D | 10.78 | 33.066 D | 25.312 | 267.6 | 0.334 | 5.10 | D222.0 D | 81.1 | 11.1 | 1.17 | 12.5 | 0.06 | 0.00 | 0.25 | 0.25 | 101 | |
| 110 | 10.06 | 10.05 | 33.136 D | 25.491 | 250.6 | 0.360 | 4.91 | D213.7 D | 76.9 | 10.4 | | | | | | | 111 | 11 |
| 124 | 9.44 | 9.42 | 33.298 | 25.721 | 229.0 | 0.400 | 4.49 | 195.5 | 69.4 | 17.3 | 1.50 | 18.2 | 0.02 | 0.00 | 0.04 | 0.05 | 125 | 10 |
| 125 ISL | 9.39 D | 9.38 | 33.334 D | 25.757 | 225.5 | 0.396 | 4.47 | D194.7 D | 69.1 | 17.5 | 1.51 | 18.4 | 0.02 | 0.00 | 0.04 | 0.05 | 126 | |
| 142 | 9.14 | 9.12 | 33.551 | 25.967 | 205.9 | 0.439 | 3.87 | 168.2 | 59.4 | 22.3 | 1.70 | 21.9 | 0.01 | 0.00 | 0.01 | 0.03 | 143 | 09 |
| 150 ISL | 9.06 D | 9.05 | 33.662 D | 26.066 | 196.7 | 0.450 | 3.58 | D155.9 D | 55.0 | 24.2 | 1.77 | 23.0 | 0.01 | 0.00 | 0.01 | 0.03 | 151 | |
| 167 | 8.91 | 8.89 | 33.809 | 26.206 | 183.7 | 0.487 | 3.14 | 136.6 | 48.1 | 28.2 | 1.92 | 25.4 | 0.01 | 0.00 | 0.00 | 0.03 | 168 | 08 |
| 200 | 8.49 | 8.47 | 33.942 | 26.376 | 168.1 | 0.545 | 2.85 | 124.2 | 43.4 | 33.1 | 2.03 | 27.4 | 0.01 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 232 | 8.04 | 8.01 | 34.007 | 26.496 | 157.2 | 0.598 | 2.44 | 105.9 | 36.6 | 38.9 | 2.21 | 29.7 | 0.01 | 0.00 | | | 234 | 06 |
| 250 ISL | 7.71 D | 7.68 | 34.014 D | 26.550 | 152.2 | 0.621 | 2.37 | D103.2 D | 35.4 | 42.7 | 2.30 | 31.0 | 0.01 | 0.00 | | | 252 | |
| 273 | 7.42 | 7.40 | 34.029 | 26.602 | 147.5 | 0.660 | 2.01 | 87.4 | 29.8 | 47.5 | 2.42 | 32.6 | 0.01 | 0.00 | | | 275 | 05 |
| 300 ISL | 7.12 D | 7.09 | 34.040 D | 26.654 | 142.8 | 0.695 | 1.79 | D 77.7 D | 26.3 | 51.5 | 2.51 | 34.0 | 0.01 | 0.00 | | | 302 | |
| 319 | 6.94 | 6.91 | 34.041 | 26.680 | 140.6 | 0.726 | 1.68 | 72.9 | 24.6 | 54.3 | 2.58 | 35.0 | 0.01 | 0.00 | | | 322 | 04 |
| 383 | 6.26 | 6.22 | 34.086 | 26.807 | 129.1 | 0.812 | 1.08 | 47.1 | 15.6 | 66.4 | 2.85 | 38.3 | 0.01 | 0.00 | | | 386 | 03 |
| 400 ISL | 6.13 D | 6.09 | 34.099 D | 26.833 | 126.7 | 0.831 | 0.96 | D 41.7 D | 13.8 | 69.0 | 2.90 | 38.8 | 0.01 | 0.00 | | | 403 | |
| 440 | 5.85 | 5.82 | 34.125 | 26.889 | 121.7 | 0.884 | 0.76 | 33.2 | 10.9 | 75.2 | 3.01 | 40.2 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.61 D | 5.56 | 34.207 D | 26.985 | 113.2 | 0.953 | 0.46 | D 19.8 D | 6.5 | 82.2 | 3.15 | 41.2 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.59 | 5.55 | 34.212 | 26.992 | 112.8 | 0.970 | 0.43 | 18.7 | 6.1 | 83.8 | 3.18 | 41.5 | 0.01 | 0.00 | | | 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 0.9 N | 118 50.7 W | 15/04/2015 | 0817 | UTC | 36 m | 090 04 kn | | | 1012.8 mb | 16.2 C | 13.1 C | | | | 052 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.26 | 15.26 | 33.324 D | 24.624 | 330.6 | 0.000 | 6.20 | 270.2 | 108.4 | 5.7 | 0.36 | 0.2 | 0.06 | 0.06 | 1.48 | 0.48 | 0 | |
| 2 | 15.26 | 15.26 | 33.326 | 24.626 | 330.5 | 0.007 | 6.20 | 270.2 | 108.4 | 5.7 | 0.36 | 0.2 | 0.06 | 0.06 | 1.48 | 0.48 | 2 | 06 |
| 5 | 15.02 | 15.01 | 33.325 | 24.678 | 325.6 | 0.016 | 6.19 | 269.7 | 107.7 | 5.7 | 0.37 | 0.2 | 0.06 | 0.06 | 1.43 | 0.46 | 5 | 05 |
| 10 | 14.00 | 14.00 | 33.361 | 24.922 | 302.5 | 0.032 | 6.14 | 267.6 | 104.7 | 3.2 | 0.48 | 1.3 | 0.09 | 0.18 | 2.62 | 1.44 | 10 | 03 |
| 10 | 14.00 | 14.00 | 33.358 | 24.920 | 302.8 | 0.031 | | | | | | | | | | | 10 | 04 |
| 20 | 12.69 | 12.69 | 33.321 | 25.154 | 280.7 | 0.061 | 4.91 | 213.7 | 81.4 | 8.7 | 0.92 | 7.7 | 0.70 | 0.26 | 1.21 | 0.71 | 20 | 02 |
| 24 | 12.48 | 12.47 | 33.326 | 25.200 | 276.5 | 0.072 | 4.69 | 204.3 | 77.5 | 9.9 | 1.03 | 9.4 | 0.65 | 0.38 | 0.89 | 0.59 | 24 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 86.7 33.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 53.4 N | 118 29.4 W | 11/04/2015 | 0726 | UTC | 59 m | 250 08 kn | | | 1014.3 mb | 15.2 C | 13.2 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 | 16.95 | 16.95 | 33.334 D | 24.249 | 366.3 | 0.000 | 6.04 | 263.4 | 109.3 | 3.1 | 0.27 | 0.1 | 0.05 | 0.01 | 1.17 | 0.30 | 0 | |
| 2 | 16.95 | 16.95 | 33.336 | 24.251 | 366.2 | 0.007 | 6.04 | 263.4 | 109.3 | 3.1 | 0.27 | 0.1 | 0.05 | 0.01 | 1.17 | 0.30 | 2 | 08 |
| 5 | 16.94 | 16.94 | 33.337 | 24.254 | 366.0 | 0.018 | 6.04 | 263.5 | 109.3 | 3.2 | 0.27 | 0.1 | 0.05 | 0.03 | 1.18 | 0.32 | 5 | 07 |
| 10 | 16.19 | 16.18 | 33.329 | 24.422 | 350.2 | 0.036 | 6.15 | 268.0 | 109.5 | 3.3 | 0.29 | 0.1 | 0.04 | 0.00 | 1.58 | 0.44 | 10 | 05 |
| 10 | 16.19 | 16.18 | 33.329 | 24.422 | 350.2 | 0.036 | | | | | | | | | | | 10 | 06 |
| 20 | 11.70 | 11.69 | 33.334 | 25.354 | 261.6 | 0.067 | 4.63 | 201.8 | 75.3 | 16.7 | 1.47 | 17.4 | 0.58 | 2.85 | 2.17 | 0.71 | 20 | 04 |
| 30 | 10.64 | 10.64 | 33.427 | 25.615 | 237.0 | 0.092 | 3.92 | 170.9 | 62.4 | 16.7 | 1.47 | 17.3 | 0.58 | 2.86 | 0.60 | 0.31 | 30 | 03 |
| 40 | 10.41 | 10.40 | 33.537 | 25.743 | 225.1 | 0.115 | 3.65 | 159.0 | 57.8 | 18.3 | 1.57 | 18.6 | 0.16 | 0.00 | 0.24 | 0.21 | 40 | 02 |
| 50 | 10.38 | 10.38 | 33.587 D | 25.786 | 221.3 | 0.121 | 3.41 | 148.4 | 53.9 | 19.7 | 1.64 | 19.5 | 0.29 | 0.06 | 0.19 | 0.18 | 50 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 86.7 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 49.4 N | 118 37.6 W | 11/04/2015 | 0942 UTC | 651 m | 320 07 kn | | | 1013.6 mb | 15.0 C | 13.0 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 | 14.74 | 14.74 | 33.330 D | 24.743 | 319.3 | 0.000 | 6.69 | 291.7 | 115.9 | 0.6 | 0.27 | 0.0 | 0.01 | 0.00 | 1.21 | 0.37 | 0 | |
| 2 | 14.74 | 14.73 | 33.331 | 24.744 | 319.2 | 0.006 | 6.69 | 291.7 | 115.9 | 0.6 | 0.27 | 0.0 | 0.01 | 0.00 | 1.21 | 0.37 | 2 | 21 |
| 9 | 14.42 | 14.42 | 33.306 | 24.791 | 315.0 | 0.030 | | | | | | | | | | | 9 | 20 |
| 10 | 14.33 | 14.33 | 33.307 | 24.811 | 313.1 | 0.032 | 6.62 | 288.3 | 113.6 | 0.9 | 0.29 | 0.0 | 0.02 | 0.00 | 2.05 | 0.74 | 10 | 19 |
| 20 | 14.00 | 14.00 | 33.309 | 24.883 | 306.6 | 0.063 | 6.01 | 261.8 | 102.4 | 2.3 | 0.47 | 1.0 | 0.05 | 0.35 | 5.78 | 1.52 | 20 | 18 |
| 30 | 13.68 | 13.67 | 33.312 | 24.952 | 300.3 | 0.093 | 5.71 | 248.9 | 96.7 | 4.0 | 0.59 | 2.7 | 0.10 | 0.43 | 5.20 | 1.39 | 30 | 17 |
| 40 | 11.69 | 11.69 | 33.349 | 25.367 | 260.9 | 0.121 | 4.77 | 207.8 | 77.5 | 10.5 | 1.08 | 10.2 | 0.25 | 0.27 | 1.77 | 0.97 | 40 | 16 |
| 50 | 10.31 | 10.31 | 33.447 | 25.689 | 230.5 | 0.146 | 4.14 | 180.2 | 65.3 | 16.1 | 1.43 | 16.6 | 0.06 | 0.00 | 0.36 | 0.31 | 50 | 15 |
| 61 | 10.11 | 10.11 | 33.550 | 25.804 | 219.8 | 0.171 | 3.82 | 166.3 | 60.0 | 18.8 | 1.57 | 18.8 | 0.04 | 0.00 | 0.15 | 0.22 | 61 | 14 |
| 70 | 9.95 | 9.94 | 33.589 | 25.862 | 214.5 | 0.190 | 3.70 | 161.0 | 57.9 | 19.9 | 1.63 | 19.6 | 0.04 | 0.00 | 0.13 | 0.19 | 71 | 13 |
| 75 ISL | 9.89 D | 9.88 | 33.649 D | 25.918 | 209.2 | 0.189 | 3.58 | D156.0 D | 56.1 | 21.6 | 1.72 | 20.8 | 0.03 | 0.00 | 0.12 | 0.17 | 76 | |
| 85 | 9.80 | 9.79 | 33.797 | 26.051 | 196.9 | 0.221 | 2.95 | 128.4 | 46.1 | 24.9 | 1.89 | 23.0 | 0.03 | 0.00 | 0.10 | 0.14 | 86 | 12 |
| 100 | 9.53 | 9.52 | 33.870 | 26.152 | 187.5 | 0.250 | 2.79 | 121.5 | 43.4 | 27.3 | 1.97 | 24.2 | 0.03 | 0.00 | 0.05 | 0.10 | 101 | 11 |
| 120 | 9.51 | 9.49 | 33.956 | 26.224 | 181.2 | 0.287 | 2.48 | 107.8 | 38.5 | 29.7 | 2.08 | 25.3 | 0.02 | 0.00 | 0.04 | 0.09 | 121 | 10 |
| 125 ISL | 9.46 D | 9.44 | 33.986 D | 26.255 | 178.3 | 0.285 | 2.43 | D105.7 D | 37.7 | 30.4 | 2.10 | 25.6 | 0.03 | 0.00 | 0.04 | 0.09 | 126 | |
| 140 | 9.31 | 9.29 | 34.030 | 26.314 | 173.0 | 0.322 | 2.27 | 98.6 | 35.1 | 32.3 | 2.17 | 26.4 | 0.03 | 0.00 | 0.03 | 0.09 | 141 | 09 |
| 150 ISL | 9.18 D | 9.16 | 34.046 D | 26.348 | 169.9 | 0.329 | 2.11 | D 91.7 D | 32.5 | 33.7 | 2.22 | 26.9 | 0.05 | 0.00 | 0.03 | 0.09 | 151 | |
| 170 | 9.11 | 9.09 | 34.102 | 26.404 | 165.1 | 0.373 | 1.85 | 80.4 | 28.5 | 36.5 | 2.33 | 28.0 | 0.08 | 0.00 | 0.02 | 0.09 | 171 | 08 |
| 200 | 8.95 | 8.92 | 34.143 | 26.463 | 160.1 | 0.422 | 1.68 | 73.1 | 25.8 | 39.1 | 2.41 | 29.0 | 0.03 | 0.00 | 0.01 | 0.06 | 202 | 07 |
| 230 | 8.79 | 8.76 | 34.181 | 26.518 | 155.5 | 0.469 | 1.47 | 64.1 | 22.6 | 41.5 | 2.50 | 29.8 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.59 D | 8.56 | 34.187 D | 26.555 | 152.3 | 0.490 | 1.37 | D 59.4 D | 20.8 | 44.1 | 2.59 | 30.6 | 0.02 | 0.00 | | | 252 | |
| 270 | 8.45 | 8.42 | 34.240 | 26.618 | 146.7 | 0.529 | 1.06 | 46.2 | 16.2 | 46.8 | 2.68 | 31.4 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 8.02 D | 7.99 | 34.214 D | 26.663 | 142.7 | 0.564 | 1.06 | D 46.2 D | 16.0 | 50.9 | 2.75 | 32.8 | 0.02 | 0.00 | | | 302 | |
| 320 | 7.71 | 7.68 | 34.220 | 26.713 | 138.1 | 0.600 | 0.93 | 40.6 | 14.0 | 53.7 | 2.80 | 33.7 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 7.34 | 7.30 | 34.269 | 26.806 | 130.2 | 0.681 | 0.57 | 24.7 | 8.4 | 61.4 | 2.99 | 35.5 | 0.02 | 0.00 | | | 383 | 03 |
| 400 ISL | 7.16 D | 7.12 | 34.282 D | 26.842 | 127.0 | 0.700 | 0.48 | D 20.9 D | 7.1 | 64.3 | 3.04 | 36.2 | 0.02 | 0.00 | | | 403 | |
| 440 | 6.78 | 6.74 | 34.298 | 26.907 | 121.1 | 0.756 | 0.35 | 15.4 | 5.2 | 70.1 | 3.14 | 37.5 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.42 D | 6.37 | 34.320 D | 26.974 | 115.4 | 0.821 | 0.25 | D 11.1 D | 3.7 | 76.7 | 3.20 | 38.2 | 0.01 | 0.00 | | | 504 | |
| 514 | 6.34 | 6.29 | 34.324 | 26.988 | 114.2 | 0.843 | 0.24 | 10.6 | 3.5 | 78.2 | 3.22 | 38.3 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 86.7 40.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 39.5 N | 118 58.5 W | 11/04/2015 | 1405 UTC | 743 m | 040 03 kn | 330 01 06 | 0 | 1013.2 mb | 15.5 C | 13.8 C | 21 m | 0/8 | | 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 | 16.58 | 16.58 | 33.287 D | 24.297 | 361.7 | 0.000 | 5.77 | 251.4 | 103.5 | 1.5 | 0.32 | 0.0 | 0.01 | 0.00 | 0.23 | 0.05 | 0 | |
| 2 | 16.58 | 16.58 | 33.295 | 24.304 | 361.1 | 0.007 | 5.77 | 251.4 | 103.5 | 1.5 | 0.32 | 0.0 | 0.01 | 0.00 | 0.23 | 0.05 | 2 | 24 |
| 10 | 16.58 | 16.57 | 33.286 D | 24.300 | 361.8 | 0.037 | 5.78 | D252.2 D | 103.8 | | | | | | | | 10 | 23 |
| 20 | 16.52 | 16.51 | 33.286 | 24.314 | 360.8 | 0.072 | 5.80 | 252.8 | 103.9 | 1.6 | 0.32 | 0.0 | 0.01 | 0.00 | 0.25 | 0.07 | 20 | 22 |
| 30 | 16.11 | 16.10 | 33.275 | 24.400 | 353.0 | 0.108 | 5.83 | 254.3 | 103.7 | 1.7 | 0.33 | 0.0 | 0.01 | 0.00 | 0.32 | 0.12 | 30 | 21 |
| 40 | 13.30 | 13.29 | 33.254 | 24.984 | 297.5 | 0.140 | 5.80 | 252.5 | 97.3 | 4.2 | 0.52 | 1.6 | 0.08 | 0.01 | 1.75 | 0.86 | 40 | 20 |
| 50 | 11.56 | 11.55 | 33.246 | 25.312 | 266.4 | 0.169 | 4.92 | 214.4 | 79.7 | 9.3 | 1.02 | 9.7 | 0.19 | 0.02 | 0.48 | 0.43 | 50 | 19 |
| 60 | 11.10 | 11.10 | 33.294 | 25.432 | 255.2 | 0.195 | 4.69 | 204.2 | 75.2 | 11.5 | 1.17 | 12.3 | 0.13 | 0.00 | 0.34 | 0.36 | 60 | 18 |
| 71 | 10.68 | 10.67 | 33.407 | 25.595 | 240.0 | 0.222 | 4.33 | 188.5 | 68.8 | 14.2 | 1.33 | 14.8 | 0.07 | 0.00 | 0.19 | 0.25 | 72 | 17 |
| 75 ISL | 10.57 D | 10.56 | 33.455 D | 25.652 | 234.6 | 0.233 | 4.20 | D182.8 D | 66.6 | 15.8 | 1.41 | 16.0 | 0.06 | 0.00 | 0.16 | 0.21 | 76 | |
| 85 | 10.07 | 10.06 | 33.586 | 25.841 | 216.8 | 0.254 | 3.73 | 162.4 | 58.6 | 19.7 | 1.60 | 19.2 | 0.04 | 0.00 | 0.07 | 0.12 | 86 | 16 |
| 100 | 9.77 | 9.76 | 33.687 | 25.969 | 204.9 | 0.286 | 3.41 | 148.6 | 53.3 | 22.7 | 1.73 | 21.2 | 0.03 | 0.00 | 0.04 | 0.09 | 101 | 15 |
| 120 | 9.51 | 9.49 | 33.785 | 26.090 | 193.9 | 0.326 | 3.09 | 134.3 | 47.9 | 26.1 | 1.87 | 23.1 | 0.02 | 0.00 | 0.02 | 0.08 | 121 | 14 |
| 125 ISL | 9.47 D | 9.46 | 33.805 D | 26.111 | 192.0 | 0.337 | 3.07 | D133.6 D | 47.6 | 26.4 | 1.88 | 23.2 | 0.02 | 0.00 | 0.02 | 0.08 | 126 | |
| 140 | 9.42 | 9.41 | 33.827 | 26.137 | 189.9 | 0.364 | 2.96 | 128.7 | 45.8 | 27.4 | 1.92 | 23.8 | 0.02 | 0.00 | 0.02 | 0.07 | 141 | 13 |
| 150 ISL | 9.32 D | 9.31 | 33.878 D | 26.194 | 184.7 | 0.385 | 2.83 | D123.0 D | 43.7 | 28.6 | 1.97 | 24.4 | 0.02 | 0.00 | 0.02 | 0.07 | 151 | |
| 170 | 9.20 | 9.19 | 33.926 | 26.251 | 179.6 | 0.419 | 2.62 | 113.8 | 40.4 | 30.9 | 2.06 | 25.6 | 0.02 | 0.00 | 0.01 | 0.06 | 171 | 12 |
| 199 | 8.85 | 8.83 | 34.045 | 26.401 | 165.9 | 0.469 | 2.13 | 92.7 | 32.6 | 36.0 | 2.25 | 28.0 | 0.01 | 0.00 | 0.01 | 0.07 | 201 | 11 |
| 200 ISL | 8.82 D | 8.79 | 34.056 D | 26.415 | 164.6 | 0.474 | 2.09 | D 91.0 D | 32.0 | 36.2 | 2.26 | 28.1 | 0.01 | 0.00 | | | 202 | |
| 230 | 8.48 | 8.45 | 34.125 | 26.522 | 154.9 | 0.519 | 1.62 | 70.5 | 24.7 | 42.2 | 2.47 | 30.3 | 0.01 | 0.00 | | | 232 | 10 |
| 250 ISL | 8.36 D | 8.34 | 34.176 D | 26.580 | 149.8 | 0.553 | 1.32 | D 57.2 D | 20.0 | 45.4 | 2.57 | 31.2 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.24 | 8.21 | 34.200 | 26.619 | 146.5 | 0.579 | 1.12 | 48.7 | 16.9 | 48.5 | 2.67 | 32.1 | 0.01 | 0.00 | | | 272 | 09 |
| 300 ISL | 8.05 D | 8.02 | 34.233 D | 26.673 | 141.8 | 0.626 | 0.94 | D 40.8 D | 14.1 | 51.5 | 2.76 | 33.0 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.88 | 7.85 | 34.244 | 26.707 | 138.9 | 0.651 | 0.81 | 35.1 | 12.1 | 53.4 | 2.82 | 33.6 | 0.01 | 0.00 | | | 323 | 08 |
| 381 | 7.31 | 7.27 | 34.274 | 26.815 | 129.3 | 0.733 | 0.54 | 23.4 | 8.0 | 62.1 | 2.98 | 35.7 | 0.01 | 0.00 | | | 384 | 07 |
| 400 ISL | 7.16 D | 7.13 | 34.284 D | 26.843 | 126.9 | 0.762 | 0.49 | D 21.3 D | 7.2 | 65.0 | 3.02 | 36.1 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.77 | 6.73 | 34.301 | 26.911 | 120.8 | 0.806 | 0.35 | 15.3 | 5.2 | 71.2 | 3.11 | 37.1 | 0.01 | 0.00 | | | 444 | 06 |
| 500 ISL | 6.49 D | 6.44 | 34.316 D | 26.962 | 116.6 | 0.883 | 0.29 | D 12.7 D | 4.3 | 76.2 | 3.17 | 37.9 | 0.01 | 0.00 | | | 504 | |
| 515 | 6.42 | 6.37 | 34.319 | 26.973 | 115.7 | 0.895 | 0.27 | 11.7 | 3.9 | 77.4 | 3.19 | 38.1 | 0.01 | 0.00 | | | 519 | 05 |
| 600 | 5.88 | 5.82 | 34.351 | 27.069 | 107.3 | 0.990 | 0.18 | 7.7 | 2.6 | 88.7 | 3.29 | 38.9 | 0.01 | 0.00 | | | 605 | 04 |
| 690 | 5.57 | 5.51 | 34.355 | 27.111 | 104.0 | 1.085 | 0.17 | 7.5 | 2.5 | 88.7 | 3.30 | 38.9 | 0.01 | 0.00 | | | 696 | 03 |
| 700 ISL | 5.53 D | 5.47 | 34.377 D | 27.134 | 102.0 | 1.102 | 0.13 D | 5.7 D | 1.9 | 91.4 | 3.32 | 38.4 | 0.01 | 0.00 | | | 706 | |
| 744 | 5.40 | 5.33 | 34.386 | 27.157 | 100.2 | 1.140 | 0.10 | 4.2 | 1.4 | 103.3 | 3.43 | 36.4 | 0.01 | 0.00 | | | 751 | 02 |
| 749 | 5.39 | 5.33 | 34.386 | 27.157 | 100.2 | 1.145 | 0.09 | 3.9 | 1.3 | 103.5 | 3.42 | 36.0 | 0.01 | 0.00 | | | 756 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 29.7 N | 119 18.6 W | 11/04/2015 | 1840 UTC | 1653 m | 010 01 kn | 320 02 05 | 1 | 1014.3 mb | 17.5 C | 14.1 C | 12 m | 1/8 | CS | 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 | 16.83 | 16.83 | 33.314 D | 24.262 | 365.1 | 0.000 | 5.85 | 255.3 | 105.6 | | | | | | 0.34 | 0.11 | 0 | |
| 2 A | 16.83 | 16.83 | 33.314 | 24.262 | 365.1 | 0.007 | 5.85 | 255.3 | 105.6 | | | | | | 0.34 | 0.11 | 2 | 24 |
| 7 A | 16.41 | 16.41 | 33.316 | 24.361 | 355.9 | 0.025 | 5.93 | 258.4 | 106.1 | | | | | | 0.61 | 0.28 | 7 | 23 |
| 9 | 16.38 | 16.38 | 33.317 | 24.369 | 355.2 | 0.034 | | | | | | | | | | | 9 | 22 |
| 10 A | 16.06 | 16.06 | 33.329 | 24.450 | 347.5 | 0.036 | 6.01 | 261.9 | 106.8 | 0.5 | 0.25 | 0.0 | 0.01 | 0.00 | 0.72 | 0.36 | 10 | 21 |
| 16 A | 15.61 | 15.60 | 33.323 | 24.549 | 338.3 | 0.057 | 6.38 | 278.2 | 112.4 | 0.2 | 0.22 | 0.0 | 0.01 | 0.00 | 1.54 | 1.37 | 16 | 20 |
| 20 ISL | 14.86 D | 14.86 | 33.322 D | 24.712 | 322.9 | 0.065 | 6.34 | D276.2 | D110.0 | 0.2 | 0.25 | 0.0 | 0.01 | 0.00 | 2.51 | 1.62 | 20 | |
| 24 | 14.65 | 14.64 | 33.324 | 24.758 | 318.6 | 0.083 | 6.23 | 271.5 | 107.6 | 0.3 | 0.27 | 0.1 | 0.01 | 0.00 | 3.48 | 1.86 | 24 | 18 |
| 24 | 14.65 | 14.64 | 33.326 | 24.759 | 318.5 | 0.081 | | | | | | | | | | | 24 | 19 |
| 30 ISL | 14.01 D | 14.00 | 33.331 D | 24.899 | 305.4 | 0.087 | 5.57 | D242.8 | D 95.0 | 2.9 | 0.52 | 2.5 | 0.10 | 0.00 | 2.66 | 1.10 | 30 | |
| 32 A | 13.54 | 13.53 | 33.334 | 24.996 | 296.1 | 0.107 | 5.54 | 241.2 | 93.5 | 3.7 | 0.60 | 3.3 | 0.12 | 0.47 | 2.38 | 0.85 | 32 | 17 |
| 40 A | 13.08 | 13.07 | 33.362 | 25.112 | 285.3 | 0.131 | 5.12 | 222.9 | 85.6 | 7.9 | 0.86 | 7.1 | 0.19 | 0.43 | 0.71 | 0.51 | 40 | 16 |
| 50 | 11.96 | 11.95 | 33.405 | 25.361 | 261.8 | 0.158 | 4.64 | 202.0 | 75.8 | 11.6 | 1.09 | 11.0 | 0.21 | 0.23 | 0.43 | 0.45 | 50 | 15 |
| 60 | 10.99 | 10.98 | 33.444 | 25.569 | 242.2 | 0.183 | 4.27 | 185.7 | 68.3 | 15.0 | 1.32 | 14.8 | 0.19 | 0.06 | 0.17 | 0.39 | 60 | 14 |
| 71 | 10.23 | 10.22 | 33.519 | 25.759 | 224.2 | 0.209 | 4.05 | 176.4 | 63.8 | 17.6 | 1.48 | 17.5 | 0.12 | 0.00 | 0.16 | 0.27 | 72 | 13 |
| 75 ISL | 10.11 D | 10.11 | 33.527 D | 25.786 | 221.8 | 0.204 | 3.99 | D173.9 | D 62.8 | 18.6 | 1.52 | 18.1 | 0.12 | 0.00 | 0.14 | 0.26 | 76 | |
| 84 | 9.58 | 9.57 | 33.664 D | 25.981 | 203.4 | 0.224 | 3.50 | D152.2 | D 54.4 | | | | | | | | 85 | 12 |
| 100 ISL | 9.37 D | 9.36 | 33.731 D | 26.069 | 195.3 | 0.256 | 3.35 | D145.7 | D 51.8 | 24.6 | 1.77 | 21.9 | 0.07 | 0.00 | 0.08 | 0.16 | 101 | |
| 101 | 9.36 | 9.35 | 33.732 D | 26.072 | 195.1 | 0.258 | 3.35 | D145.9 | D 51.9 | | | | | | | | 102 | 11 |
| 120 | 9.11 | 9.10 | 33.860 | 26.213 | 182.1 | 0.309 | 2.89 | 125.9 | 44.6 | 29.4 | 1.97 | 24.9 | 0.04 | 0.00 | 0.02 | 0.08 | 121 | 10 |
| 125 ISL | 9.07 D | 9.06 | 33.900 D | 26.250 | 178.6 | 0.303 | 2.83 | D123.2 | D 43.6 | 29.8 | 1.98 | 25.2 | 0.03 | 0.00 | 0.02 | 0.07 | 126 | |
| 140 | 8.88 | 8.87 | 33.930 | 26.304 | 173.9 | 0.345 | 2.78 | 120.8 | 42.5 | 31.2 | 2.02 | 26.0 | 0.02 | 0.00 | 0.01 | 0.05 | 141 | 09 |
| 150 ISL | 8.93 D | 8.91 | 33.958 D | 26.320 | 172.6 | 0.347 | 2.69 | D117.2 | D 41.3 | 33.1 | 2.10 | 26.8 | 0.02 | 0.00 | 0.01 | 0.05 | 151 | |
| 170 | 8.76 | 8.74 | 34.066 | 26.430 | 162.5 | 0.395 | 2.12 | 92.2 | 32.4 | 36.7 | 2.25 | 28.3 | 0.02 | 0.00 | 0.00 | 0.05 | 171 | 08 |
| 200 | 8.70 | 8.68 | 34.119 | 26.482 | 158.1 | 0.443 | 1.77 | 77.2 | 27.1 | 39.6 | 2.41 | 29.4 | 0.02 | 0.00 | 0.00 | 0.05 | 202 | 07 |
| 231 | 8.48 | 8.45 | 34.171 | 26.558 | 151.5 | 0.491 | 1.33 | 58.0 | 20.3 | 44.5 | 2.55 | 31.1 | 0.02 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.40 D | 8.37 | 34.194 D | 26.589 | 148.9 | 0.506 | 1.21 | D 52.6 | D 18.4 | 46.0 | 2.60 | 31.6 | 0.02 | 0.00 | | | 252 | |
| 269 | 8.28 | 8.26 | 34.208 | 26.618 | 146.6 | 0.548 | 1.10 | 47.7 | 16.6 | 47.6 | 2.65 | 32.1 | 0.02 | 0.00 | | | 271 | 05 |
| 300 ISL | 8.00 D | 7.97 | 34.242 D | 26.688 | 140.3 | 0.579 | 0.84 | D 36.5 | D 12.6 | 51.7 | 2.74 | 33.2 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.84 | 7.81 | 34.257 | 26.723 | 137.3 | 0.622 | 0.76 | 33.2 | 11.5 | 54.5 | 2.80 | 33.9 | 0.01 | 0.00 | | | 324 | 04 |
| 380 | 7.30 | 7.26 | 34.277 | 26.818 | 129.0 | 0.700 | 0.52 | 22.6 | 7.7 | 62.5 | 2.96 | 35.8 | 0.02 | 0.00 | | | 383 | 03 |
| 400 ISL | 7.10 D | 7.06 | 34.288 D | 26.855 | 125.7 | 0.714 | 0.45 | D 19.4 | D 6.6 | 65.4 | 3.00 | 36.3 | 0.02 | 0.00 | | | 403 | |
| 444 | 6.72 | 6.68 | 34.304 | 26.920 | 119.9 | 0.780 | 0.33 | 14.4 | 4.8 | 71.9 | 3.09 | 37.4 | 0.02 | 0.00 | | | 448 | 02 |
| 500 ISL | 6.31 D | 6.26 | 34.327 D | 26.994 | 113.4 | 0.834 | 0.24 | D 10.4 | D 3.4 | 79.9 | 3.16 | 38.2 | 0.02 | 0.00 | | | 504 | |
| 513 | 6.20 | 6.16 | 34.331 | 27.010 | 111.9 | 0.860 | 0.22 | 9.6 | 3.2 | 81.7 | 3.18 | 38.4 | 0.02 | 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 1504 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 19.7 N | 119 39.5 W | 11/04/2015 | 2307 UTC | 77 m | 310 14 kn | 300 03 06 | 1 | 1012.3 mb | 16.9 C | 13.8 C | 08 m | 1/8 | CS | 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 | 14.87 | 14.87 | 33.317 D | 24.704 | 323.0 | 0.000 | 6.33 | 275.8 | 109.8 | 0.1 | 0.24 | 0.0 | 0.02 | 0.00 | 2.68 | 0.88 | 0 | |
| 5 | 14.87 | 14.87 | 33.321 | 24.707 | 322.8 | 0.016 | 6.33 | 275.8 | 109.8 | 0.1 | 0.24 | 0.0 | 0.02 | 0.00 | 2.68 | 0.88 | 5 | 09 |
| 10 | 14.60 | 14.60 | 33.317 | 24.762 | 317.8 | 0.032 | 6.38 | 278.0 | 110.1 | 0.2 | 0.25 | 0.0 | 0.02 | 0.00 | 3.57 | 0.85 | 10 | 07 |
| 10 | 14.60 | 14.60 | 33.318 | 24.763 | 317.7 | 0.032 | | | | | | | | | | | 10 | 08 |
| 20 | 14.18 | 14.17 | 33.319 | 24.854 | 309.3 | 0.064 | 5.96 | 259.7 | 102.0 | 1.2 | 0.40 | 1.2 | 0.07 | 0.22 | 3.52 | 0.92 | 20 | 06 |
| 30 | 12.82 | 12.82 | 33.318 | 25.127 | 283.6 | 0.093 | 5.34 | 232.8 | 88.9 | 5.9 | 0.73 | 5.3 | 0.18 | 0.41 | 1.84 | 1.07 | 30 | 05 |
| 41 | 11.54 | 11.53 | 33.329 | 25.380 | 259.7 | 0.123 | 4.69 | 204.2 | 75.9 | 11.4 | 1.12 | 11.7 | 0.20 | 0.08 | 0.66 | 0.48 | 41 | 04 |
| 50 | 10.63 | 10.62 | 33.399 | 25.597 | 239.2 | 0.146 | 4.32 | 188.1 | 68.6 | 14.8 | 1.34 | 15.3 | 0.12 | 0.01 | 0.31 | 0.41 | 50 | 03 |
| 60 | 9.89 | 9.88 | 33.541 | 25.833 | 216.9 | 0.168 | 3.86 | 167.9 | 60.3 | 19.4 | 1.57 | 19.3 | 0.05 | 0.00 | 0.13 | 0.17 | 60 | 02 |
| 64 | 9.89 | 9.88 | 33.552 | 25.843 | 216.1 | 0.177 | 3.83 | 166.5 | 59.8 | 19.8 | 1.58 | 19.4 | 0.06 | 0.02 | 0.10 | 0.16 | 65 | 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 1504 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 9.5 N | 120 0.6 W | 12/04/2015 | 0305 UTC | 1198 m | 320 22 kn | | | 1011.9 mb | 16.2 C | 13.7 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 | 14.67 | 14.67 | 33.324 D | 24.752 | 318.3 | 0.000 | 6.20 | 270.0 | 107.1 | 0.3 | 0.34 | 0.2 | 0.03 | 0.11 | 3.57 | 1.37 | 0 | |
| 2 | 14.67 | 14.67 | 33.325 | 24.753 | 318.3 | 0.006 | 6.20 | 270.0 | 107.1 | 0.3 | 0.34 | 0.2 | 0.03 | 0.11 | 3.57 | 1.37 | 2 | 21 |
| 10 | 14.57 | 14.57 | 33.324 | 24.774 | 316.6 | 0.032 | 6.14 | 267.6 | 105.9 | 0.3 | 0.37 | 0.4 | 0.04 | 0.19 | 3.46 | 1.27 | 10 | 19 |
| 10 | 14.57 | 14.57 | 33.327 | 24.776 | 316.4 | 0.030 | | | | | | | | | | | 10 | 20 |
| 20 | 13.82 | 13.81 | 33.320 | 24.929 | 302.2 | 0.063 | 5.78 | 251.9 | 98.2 | 2.0 | 0.50 | 2.1 | 0.09 | 0.43 | 3.14 | 1.13 | 20 | 18 |
| 30 | 12.45 | 12.45 | 33.313 | 25.195 | 277.0 | 0.092 | 5.09 | 221.6 | 84.0 | 8.1 | 0.91 | 8.1 | 0.24 | 0.35 | 0.95 | 0.77 | 30 | 17 |
| 39 | 12.06 | 12.06 | 33.327 | 25.281 | 269.1 | 0.116 | 4.87 | 212.3 | 79.8 | 9.9 | 1.03 | 10.0 | 0.23 | 0.28 | 0.73 | 0.60 | 39 | 16 |
| 50 | 11.62 | 11.62 | 33.333 | 25.368 | 261.1 | 0.146 | 4.69 | 204.2 | 76.1 | 11.4 | 1.12 | 11.6 | 0.26 | 0.15 | 0.49 | 0.54 | 50 | 15 |
| 60 | 10.87 | 10.87 | 33.395 | 25.552 | 243.8 | 0.171 | 4.32 | 188.1 | 69.0 | 14.5 | 1.30 | 15.0 | 0.16 | 0.03 | 0.24 | 0.34 | 60 | 14 |
| 70 | 10.42 | 10.41 | 33.444 | 25.669 | 232.8 | 0.195 | 4.15 | 180.6 | 65.6 | 16.2 | 1.40 | 16.7 | 0.10 | 0.03 | 0.18 | 0.28 | 71 | 13 |
| 75 ISL | 10.11 D | 10.11 | 33.589 D | 25.834 | 217.2 | 0.191 | 3.77 | D164.3 | D 59.3 | 17.9 | 1.48 | 17.9 | 0.08 | 0.03 | 0.14 | 0.26 | 76 | |
| 86 | 10.01 | 10.00 | 33.619 | 25.876 | 213.5 | 0.230 | 3.55 | 154.6 | 55.7 | 21.4 | 1.64 | 20.5 | 0.04 | 0.02 | 0.07 | 0.21 | 87 | 12 |
| 100 | 9.71 | 9.69 | 33.719 | 26.005 | 201.5 | 0.259 | 3.20 | 139.3 | 49.9 | 24.8 | 1.79 | 22.6 | 0.03 | 0.02 | 0.05 | 0.16 | 101 | 11 |
| 120 | 9.30 | 9.29 | 33.853 | 26.176 | 185.6 | 0.298 | 2.81 | 122.3 | 43.5 | 28.7 | 1.95 | 24.9 | 0.03 | 0.01 | 0.03 | 0.17 | 121 | 10 |
| 125 ISL | 9.29 D | 9.27 | 33.886 D | 26.204 | 183.1 | 0.292 | 2.79 | D121.3 | D 43.1 | 29.6 | 1.97 | 25.4 | 0.03 | 0.01 | 0.03 | 0.15 | 126 | |
| 140 | 8.87 | 8.86 | 33.924 | 26.301 | 174.1 | 0.334 | 2.73 | 118.9 | 41.9 | 32.1 | 2.04 | 26.8 | 0.03 | 0.01 | 0.02 | 0.11 | 141 | 09 |
| 150 ISL | 8.70 D | 8.69 | 33.943 D | 26.342 | 170.4 | 0.337 | 2.83 | D122.9 | D 43.1 | 34.1 | 2.11 | 27.7 | 0.03 | 0.00 | 0.02 | 0.10 | 151 | |
| 170 | 8.37 | 8.35 | 34.029 | 26.462 | 159.3 | 0.384 | 2.21 | 95.9 | 33.4 | 38.3 | 2.24 | 29.3 | 0.02 | 0.00 | 0.01 | 0.08 | 171 | 08 |
| 200 | 8.10 | 8.08 | 34.096 | 26.555 | 151.0 | 0.430 | 1.76 | 76.7 | 26.6 | 44.3 | 2.43 | 31.5 | 0.01 | 0.00 | 0.02 | 0.13 | 202 | 07 |
| 230 | 7.87 | 7.85 | 34.115 | 26.605 | 146.8 | 0.475 | 1.56 | 67.9 | 23.4 | 48.1 | 2.53 | 32.8 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.76 D | 7.73 | 34.151 D | 26.650 | 142.8 | 0.491 | 1.35 | D 58.7 | D 20.2 | 51.4 | 2.64 | 33.8 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.54 | 7.51 | 34.181 | 26.706 | 137.7 | 0.532 | 1.22 | 53.1 | 18.2 | 54.8 | 2.74 | 34.8 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.47 D | 7.44 | 34.198 D | 26.730 | 135.9 | 0.561 | 0.99 | D 42.8 | D 14.6 | 57.1 | 2.79 | 35.3 | 0.01 | 0.00 | | | 302 | |
| 319 | 7.32 | 7.28 | 34.204 | 26.757 | 133.6 | 0.599 | 0.87 | 38.0 | 12.9 | 58.5 | 2.82 | 35.6 | 0.01 | 0.00 | | | 322 | 04 |
| 380 | 6.82 | 6.78 | 34.224 | 26.842 | 126.2 | 0.678 | 0.71 | 30.7 | 10.3 | 65.4 | 2.94 | 37.8 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.72 D | 6.68 | 34.229 D | 26.859 | 124.9 | 0.692 | 0.66 | D 28.5 | D 9.6 | 67.9 | 2.98 | 38.3 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.44 | 6.40 | 34.259 | 26.920 | 119.5 | 0.752 | 0.48 | 20.7 | 6.9 | 72.8 | 3.07 | 39.2 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.11 D | 6.06 | 34.296 D | 26.994 | 113.1 | 0.812 | 0.37 | D 16.0 | D 5.3 | 78.9 | 3.14 | 40.1 | 0.01 | 0.00 | | | 504 | |
| 515 | 6.04 | 6.00 | 34.303 | 27.008 | 111.9 | 0.839 | 0.32 | 13.8 | 4.6 | 80.4 | 3.16 | 40.4 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 59.2 N | 120 20.8 W | 12/04/2015 | 0733 UTC | 731 m | 320 27 kn | | | 1012.7 mb | 15.9 C | 14.1 C | | | | 040 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 14.87 | 14.87 | 33.304 D | 24.693 | 324.0 | 0.000 | 6.21 | 270.7 | 107.8 | 0.3 | 0.26 | 0.0 | 0.01 | 0.00 | 1.06 | 0.50 | 0 | |
| 2 | 14.87 | 14.87 | 33.305 | 24.694 | 324.0 | 0.007 | 6.21 | 270.7 | 107.8 | 0.3 | 0.26 | 0.0 | 0.01 | 0.00 | 1.06 | 0.50 | 2 | 21 |
| 10 | 14.86 | 14.86 | 33.310 | 24.701 | 323.6 | 0.032 | 6.22 | 271.1 | 107.9 | 0.2 | 0.27 | 0.0 | 0.01 | 0.00 | 0.95 | 0.56 | 10 | 19 |
| 10 | 14.86 | 14.86 | 33.306 | 24.698 | 323.9 | 0.032 | | | | | | | | | | | 10 | 20 |
| 20 | 14.77 | 14.77 | 33.300 | 24.712 | 322.8 | 0.065 | 6.26 | 272.7 | 108.4 | 0.3 | 0.28 | 0.0 | 0.01 | 0.00 | 1.14 | 0.70 | 20 | 18 |
| 30 | 13.00 | 12.99 | 33.282 | 25.064 | 289.5 | 0.095 | 6.14 | 267.4 | 102.5 | 1.7 | 0.52 | 2.3 | 0.08 | 0.38 | 3.08 | 1.35 | 30 | 17 |
| 40 | 11.68 | 11.68 | 33.300 | 25.330 | 264.4 | 0.123 | 5.11 | 222.4 | 82.9 | 9.6 | 1.06 | 10.2 | 0.18 | 0.37 | 2.74 | 1.38 | 40 | 16 |
| 50 | 10.83 | 10.82 | 33.387 | 25.553 | 243.4 | 0.149 | 4.44 | 193.3 | 70.8 | 13.1 | 1.28 | 14.4 | 0.19 | 0.13 | 2.38 | 1.77 | 50 | 15 |
| 60 | 10.30 | 10.29 | 33.491 | 25.726 | 227.2 | 0.172 | 3.99 | 173.8 | 63.0 | 17.5 | 1.48 | 17.9 | 0.11 | 0.00 | 0.80 | 0.89 | 60 | 14 |
| 71 | 9.87 | 9.86 | 33.605 | 25.888 | 212.0 | 0.196 | 3.61 | 157.1 | 56.4 | 21.0 | 1.63 | 20.5 | 0.08 | 0.01 | 0.35 | 0.70 | 72 | 13 |
| 75 ISL | 9.81 D | 9.81 | 33.633 D | 25.919 | 209.1 | 0.189 | 3.59 | D156.1 D | 56.0 | 21.7 | 1.66 | 20.9 | 0.07 | 0.00 | 0.31 | 0.63 | 76 | |
| 85 | 9.67 | 9.66 | 33.686 | 25.985 | 203.1 | 0.225 | 3.36 | 146.3 | 52.3 | 23.6 | 1.74 | 21.9 | 0.05 | 0.00 | 0.21 | 0.46 | 86 | 12 |
| 100 | 9.54 | 9.53 | 33.735 | 26.045 | 197.6 | 0.255 | 3.18 | 138.5 | 49.5 | 25.3 | 1.81 | 23.1 | 0.04 | 0.00 | 0.17 | 0.34 | 101 | 11 |
| 120 | 9.30 | 9.29 | 33.834 | 26.162 | 187.0 | 0.294 | 2.84 | 123.4 | 43.8 | 28.7 | 1.95 | 25.0 | 0.03 | 0.00 | 0.06 | 0.16 | 121 | 10 |
| 125 ISL | 9.24 D | 9.23 | 33.877 D | 26.204 | 183.1 | 0.288 | 2.74 | D119.4 D | 42.4 | 29.4 | 1.98 | 25.4 | 0.02 | 0.00 | 0.05 | 0.16 | 126 | |
| 141 | 9.06 | 9.04 | 33.926 | 26.273 | 176.9 | 0.332 | 2.55 | 111.1 | 39.3 | 31.9 | 2.06 | 26.6 | 0.02 | 0.00 | 0.04 | 0.16 | 142 | 09 |
| 150 ISL | 8.99 D | 8.97 | 33.954 D | 26.306 | 173.9 | 0.333 | 2.53 | D109.9 D | 38.8 | 32.7 | 2.09 | 27.0 | 0.02 | 0.00 | 0.04 | 0.16 | 151 | |
| 171 | 8.77 | 8.75 | 33.985 | 26.366 | 168.6 | 0.384 | 2.39 | 103.8 | 36.5 | 34.6 | 2.15 | 28.1 | 0.02 | 0.00 | 0.04 | 0.15 | 172 | 08 |
| 200 | 8.58 | 8.56 | 34.053 | 26.449 | 161.3 | 0.432 | 2.06 | 89.6 | 31.4 | 38.4 | 2.27 | 29.5 | 0.02 | 0.00 | 0.02 | 0.11 | 202 | 07 |
| 230 | 8.04 | 8.01 | 34.095 | 26.565 | 150.6 | 0.478 | 1.74 | 75.7 | 26.2 | 44.6 | 2.42 | 31.8 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.77 D | 7.74 | 34.103 D | 26.611 | 146.4 | 0.494 | 1.58 | D 68.6 D | 23.6 | 48.0 | 2.52 | 32.9 | 0.02 | 0.00 | | | 252 | |
| 270 | 7.63 | 7.60 | 34.133 | 26.656 | 142.5 | 0.537 | 1.40 | 60.7 | 20.8 | 51.3 | 2.61 | 34.0 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.26 D | 7.23 | 34.161 D | 26.730 | 135.8 | 0.565 | 1.11 | D 48.3 D | 16.4 | 56.2 | 2.73 | 35.4 | 0.02 | 0.00 | | | 302 | |
| 320 | 7.11 | 7.08 | 34.173 | 26.761 | 133.1 | 0.606 | 0.96 | 41.8 | 14.2 | 59.5 | 2.81 | 36.4 | 0.02 | 0.00 | | | 323 | 04 |
| 379 | 6.89 | 6.86 | 34.208 | 26.820 | 128.4 | 0.683 | 0.76 | 33.0 | 11.1 | 63.9 | 2.89 | 37.2 | 0.02 | 0.00 | | | 382 | 03 |
| 400 ISL | 6.69 D | 6.65 | 34.227 D | 26.863 | 124.5 | 0.697 | 0.64 | D 28.0 D | 9.4 | 67.1 | 2.95 | 37.9 | 0.02 | 0.00 | | | 403 | |
| 440 | 6.33 | 6.29 | 34.242 | 26.921 | 119.3 | 0.758 | 0.50 | 21.7 | 7.2 | 73.2 | 3.06 | 39.3 | 0.02 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.95 D | 5.90 | 34.267 D | 26.992 | 113.1 | 0.816 | 0.37 | D 16.0 D | 5.3 | 80.0 | 3.13 | 40.3 | 0.01 | 0.00 | | | 504 | |
| 516 | 5.88 | 5.84 | 34.284 | 27.013 | 111.2 | 0.846 | 0.34 | 14.6 | 4.8 | 81.8 | 3.15 | 40.5 | 0.01 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 43.4 W | 12/04/2015 | 1949 UTC | 4063 m | 330 26 kn | 350 06 06 | 1 | 1016.5 mb | 17.0 C | 15.0 C | 23 m | 1/8 | SC | 041 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 17.08 | 17.08 | 33.278 D | 24.175 | 373.3 | 0.000 | 5.62 | 244.9 | 101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.02 | 0.11 | 0.02 | 0 | |
| 3 A | 17.08 | 17.08 | 33.281 | 24.178 | 373.2 | 0.011 | 5.62 | 244.9 | 101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.02 | 0.11 | 0.02 | 3 | 24 |
| 9 | 17.09 | 17.09 | 33.278 | 24.174 | 373.8 | 0.034 | 5.63 | 245.6 | 102.1 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.12B | 0.01B | 9 | 22 |
| 10 ISL | 17.09 D | 17.09 | 33.278 D | 24.173 | 373.9 | 0.038 | 5.62 | D245.0 D | 101.9 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.12 | 0.01 | 10 | |
| 11 | 17.09 | 17.09 | 33.279 | 24.174 | 373.8 | 0.039 | | | | | | | | | | | 10 | 23 |
| 14 A | 17.07 | 17.07 | 33.279 | 24.179 | 373.5 | 0.052 | 5.61 | 244.5 | 101.6 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.13 | 0.01 | 14 | 21 |
| 20 A | 17.08 | 17.07 | 33.287 | 24.184 | 373.2 | 0.075 | 5.62 | 244.9 | 101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14C | 0.01C | 20 | 20 |
| 30 ISL | 17.08 D | 17.08 | 33.279 D | 24.177 | 374.3 | 0.105 | 5.61 | D244.7 D | 101.7 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.13 | 0.01 | 30 | |
| 33 A | 17.07 | 17.06 | 33.280 | 24.182 | 373.9 | 0.123 | 5.61 | 244.6 | 101.6 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.12 | 0.01 | 33 | 19 |
| 44 | 17.05 | 17.04 | 33.282 | 24.188 | 373.7 | 0.164 | 5.62 | 245.2 | 101.9 | 1.9 | 0.33 | 0.0 | 0.01 | 0.01 | 0.14 | 0.00 | 44 | 18 |
| 50 ISL | 17.05 D | 17.04 | 33.278 D | 24.187 | 374.1 | 0.181 | 5.61 | D244.4 D | 101.5 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.16 | 0.00 | 50 | |
| 52 | 17.05 | 17.04 | 33.279 | 24.188 | 374.1 | 0.194 | 5.62 | 244.9 | 101.7 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.16 | 0.00 | 52 | 17 |
| 62 A | 16.81 | 16.80 | 33.275 | 24.240 | 369.4 | 0.232 | 5.63 | 245.7 | 101.6 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.20 | 0.03 | 62 | 16 |
| 69 | 14.55 | 14.54 | 33.117 | 24.622 | 333.0 | 0.256 | 5.90 | 257.1 | 101.6 | 2.7 | 0.40 | 0.1 | 0.02 | 0.00 | 0.56 | 0.05 | 70 | 15 |
| 75 ISL | 13.76 D | 13.75 | 33.115 D | 24.785 | 317.5 | 0.270 | 5.89 | D256.5 D | 99.7 | 3.3 | 0.48 | 1.1 | 0.05 | 0.00 | 0.63 | 0.14 | 76 | |
| 79 A | 13.18 | 13.17 | 33.118 | 24.904 | 306.2 | 0.288 | 5.76 | 251.1 | 96.5 | 3.7 | 0.54 | 1.7 | 0.07 | 0.04 | 0.68 | 0.20 | 80 | 14 |
| 85 | 12.70 | 12.69 | 33.167 | 25.036 | 293.8 | 0.306 | 5.55 | 241.7 | 92.0 | 4.8 | 0.63 | 3.6 | 0.09 | 0.02 | 0.59 | 0.23 | 86 | 13 |
| 95 | 11.90 | 11.88 | 33.232 | 25.241 | 274.4 | 0.335 | 5.28 | 229.9 | 86.0 | 6.6 | 0.80 | 6.9 | 0.08 | 0.00 | 0.34 | 0.32 | 96 | 12 |
| 100 ISL | 11.49 D | 11.48 | 33.226 D | 25.311 | 267.8 | 0.343 | 5.26 | D229.3 D | 85.1 | 7.9 | 0.90 | 8.6 | 0.07 | 0.00 | 0.31 | 0.27 | 101 | |
| 111 | 10.77 | 10.76 | 33.283 | 25.484 | 251.5 | 0.377 | 4.83 | 210.3 | 76.9 | 10.7 | 1.12 | 12.3 | 0.05 | 0.00 | 0.24 | 0.17 | 112 | 11 |
| 125 | 10.23 | 10.22 | 33.386 | 25.658 | 235.2 | 0.411 | 4.51 | 196.6 | 71.1 | 14.1 | 1.32 | 15.6 | 0.03 | 0.00 | 0.19 | 0.11 | 126 | 10 |
| 140 | 9.68 | 9.66 | 33.543 | 25.873 | 214.9 | 0.444 | 3.98 | 173.4 | 62.0 | 18.8 | 1.54 | 19.4 | 0.02 | 0.00 | 0.06 | 0.06 | 141 | 09 |
| 150 ISL | 9.52 D | 9.50 | 33.635 D | 25.971 | 205.8 | 0.461 | 3.88 | D168.8 D | 60.2 | 21.1 | 1.62 | 20.8 | 0.02 | 0.00 | 0.04 | 0.05 | 151 | |
| 170 | 9.12 | 9.10 | 33.773 | 26.145 | 189.6 | 0.505 | 3.42 | 149.0 | 52.7 | 25.6 | 1.78 | 23.6 | 0.01 | 0.00 | 0.01 | 0.03 | 171 | 08 |
| 197 | 8.72 | 8.70 | 33.920 | 26.323 | 173.2 | 0.554 | 2.93 | 127.5 | 44.7 | 31.3 | 1.99 | 26.5 | 0.01 | 0.00 | 0.00 | 0.02 | 199 | 07 |
| 200 ISL | 8.72 D | 8.70 | 33.923 D | 26.326 | 173.0 | 0.555 | 2.92 | D127.0 D | 44.6 | 31.8 | 2.00 | 26.7 | 0.01 | 0.00 | | | 202 | |
| 230 | 8.35 | 8.33 | 33.999 | 26.443 | 162.3 | 0.610 | 2.50 | 109.0 | 37.9 | 36.1 | 2.15 | 28.6 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.97 D | 7.94 | 34.016 D | 26.514 | 155.8 | 0.638 | 2.36 | D102.8 D | 35.5 | 40.2 | 2.25 | 30.2 | 0.01 | 0.00 | | | 252 | |
| 273 | 7.65 | 7.62 | 34.034 | 26.575 | 150.3 | 0.677 | 2.05 | 89.2 | 30.6 | 45.0 | 2.37 | 32.1 | 0.01 | 0.00 | | | 275 | 05 |
| 300 ISL | 7.32 D | 7.29 | 34.079 D | 26.658 | 142.7 | 0.713 | 1.58 | D 68.5 D | 23.3 | 50.9 | 2.53 | 34.0 | 0.01 | 0.00 | | | 302 | |
| 324 | 6.96 | 6.93 | 34.082 | 26.709 | 138.0 | 0.750 | 1.38 | 60.2 | 20.3 | 56.1 | 2.67 | 35.7 | 0.01 | 0.00 | | | 327 | 04 |
| 382 | 6.31 | 6.28 | 34.128 | 26.833 | 126.6 | 0.827 | 0.86 | 37.2 | 12.4 | 68.6 | 2.93 | 39.0 | 0.01 | 0.00 | | | 385 | 03 |
| 400 ISL | 6.20 D | 6.17 | 34.141 D | 26.857 | 124.5 | 0.848 | 0.76 | D 32.9 D | 10.9 | 71.3 | 2.98 | 39.4 | 0.01 | 0.00 | | | 403 | |
| 442 | 5.92 | 5.88 | 34.198 | 26.939 | 117.1 | 0.900 | 0.50 | 21.9 | 7.2 | 77.5 | 3.09 | 40.5 | 0.01 | 0.00 | | | 446 | 02 |
| 500 ISL | 5.66 D | 5.62 | 34.241 D | 27.005 | 111.4 | 0.966 | 0.36 | D 15.5 D | 5.1 | 82.9 | 3.15 | 41.0 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.65 | 5.61 | 34.255 | 27.018 | 110.4 | 0.983 | 0.36 | 15.6 | 5.1 | 84.2 | 3.17 | 41.2 | 0.01 | 0.00 | | | 519 | 01 |

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
C) 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 59.2 N | 122 23.3 W | 13/04/2015 | 0209 | UTC | 4112 m | 330 19 kn | 340 06 06 | 1 | 1016.6 mb | 15.8 C | 13.4 C | | 7/8 | SC | 042 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.95 | 15.95 | 33.067 D | 24.273 | 364.0 | 0.000 | 5.80 | 253.0 | 102.7 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 0 | |
| 2 | 15.95 | 15.95 | 33.072 | 24.277 | 363.7 | 0.007 | 5.80 | 253.0 | 102.7 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 2 | 21 |
| 10 | 15.95 | 15.95 | 33.069 | 24.276 | 364.1 | 0.036 | 5.80 | 252.8 | 102.7 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 10 | 19 |
| 10 | 15.95 | 15.95 | 33.067 | 24.274 | 364.2 | 0.036 | | | | | | | | | | | 10 | 20 |
| 20 ISL | 15.92 D | 15.92 | 33.068 D | 24.282 | 363.8 | 0.055 | 5.80 | D252.8 | D102.6 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 20 | |
| 25 | 15.90 | 15.89 | 33.068 | 24.287 | 363.5 | 0.091 | 5.78 | 252.2 | 102.3 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 25 | 18 |
| 30 ISL | 15.80 D | 15.80 | 33.053 D | 24.298 | 362.7 | 0.092 | 5.80 | D253.1 | D102.5 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.14 | 0.03 | 30 | |
| 40 | 15.56 | 15.56 | 33.032 | 24.335 | 359.4 | 0.145 | 5.83 | 254.2 | 102.4 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.18 | 0.04 | 40 | 17 |
| 50 | 15.73 | 15.72 | 33.113 | 24.361 | 357.3 | 0.181 | 5.81 | 253.5 | 102.5 | 2.1 | 0.36 | 0.0 | 0.01 | 0.01 | 0.26 | 0.07 | 50 | 16 |
| 61 | 15.74 | 15.73 | 33.129 | 24.372 | 356.7 | 0.220 | 5.79 | 252.6 | 102.2 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.32 | 0.10 | 61 | 15 |
| 75 | 13.14 | 13.13 | 32.990 | 24.812 | 314.8 | 0.267 | 5.82 | 253.5 | 97.2 | 3.6 | 0.54 | 1.6 | 0.06 | 0.06 | 0.59 | 0.27 | 76 | 14 |
| 87 | 11.50 | 11.49 | 32.989 | 25.124 | 285.2 | 0.303 | 5.34 | 232.6 | 86.2 | 7.4 | 0.93 | 8.3 | 0.09 | 0.00 | 0.44 | 0.40 | 88 | 13 |
| 100 | 10.30 | 10.28 | 33.135 | 25.450 | 254.3 | 0.338 | 4.88 | 212.5 | 76.8 | 11.0 | 1.20 | 12.9 | 0.03 | 0.01 | 0.23 | 0.27 | 101 | 12 |
| 112 | 9.84 | 9.83 | 33.148 | 25.538 | 246.1 | 0.368 | 4.86 | 211.7 | 75.7 | 13.0 | 1.31 | 14.9 | 0.02 | 0.00 | 0.14 | 0.13 | 113 | 11 |
| 125 ISL | 9.46 D | 9.45 | 33.269 D | 25.694 | 231.5 | 0.384 | 4.60 | D200.1 | D 71.1 | 16.5 | 1.47 | 17.5 | 0.01 | 0.00 | 0.07 | 0.10 | 126 | |
| 126 | 9.44 | 9.42 | 33.270 | 25.699 | 231.1 | 0.402 | 4.59 | 199.9 | 71.0 | 16.8 | 1.48 | 17.8 | 0.01 | 0.00 | 0.06 | 0.10 | 127 | 10 |
| 140 | 9.25 | 9.23 | 33.451 | 25.871 | 215.0 | 0.433 | 4.18 | 181.9 | 64.4 | 19.6 | 1.59 | 20.0 | 0.01 | 0.01 | 0.02 | 0.06 | 141 | 09 |
| 150 ISL | 9.20 D | 9.18 | 33.574 D | 25.976 | 205.2 | 0.439 | 3.91 | D170.2 | D 60.2 | 22.1 | 1.68 | 21.5 | 0.01 | 0.00 | 0.02 | 0.05 | 151 | |
| 170 | 8.95 | 8.93 | 33.783 | 26.180 | 186.3 | 0.493 | 3.32 | 144.4 | 50.9 | 27.0 | 1.86 | 24.5 | 0.01 | 0.00 | 0.00 | 0.03 | 171 | 08 |
| 198 | 8.70 | 8.68 | 33.913 | 26.320 | 173.4 | 0.544 | 2.85 | 124.0 | 43.5 | 31.6 | 2.02 | 26.9 | 0.01 | 0.00 | 0.00 | 0.03 | 200 | 07 |
| 200 ISL | 8.68 D | 8.66 | 33.921 D | 26.331 | 172.5 | 0.533 | 2.85 | D124.2 | D 43.5 | 31.8 | 2.02 | 27.0 | 0.01 | 0.00 | | | 202 | |
| 229 | 8.35 | 8.33 | 33.968 | 26.418 | 164.6 | 0.596 | 2.74 | 119.2 | 41.5 | 34.8 | 2.08 | 27.9 | 0.01 | 0.00 | | | 231 | 06 |
| 250 ISL | 8.01 D | 7.98 | 34.008 D | 26.502 | 156.9 | 0.616 | 2.45 | D106.6 | D 36.8 | 39.1 | 2.22 | 29.7 | 0.01 | 0.00 | | | 252 | |
| 269 | 7.88 | 7.85 | 34.038 | 26.544 | 153.2 | 0.659 | 2.08 | 90.5 | 31.2 | 43.0 | 2.35 | 31.3 | 0.01 | 0.01 | | | 271 | 05 |
| 300 ISL | 7.51 D | 7.48 | 34.071 D | 26.624 | 146.0 | 0.692 | 1.69 | D 73.4 | D 25.1 | 48.9 | 2.51 | 33.2 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.27 | 7.24 | 34.086 | 26.671 | 141.8 | 0.735 | 1.47 | 64.0 | 21.8 | 52.7 | 2.62 | 34.5 | 0.01 | 0.00 | | | 323 | 04 |
| 378 | 6.66 | 6.63 | 34.146 | 26.801 | 129.9 | 0.813 | 0.94 | 40.8 | 13.7 | 63.5 | 2.87 | 37.7 | 0.01 | 0.01 | | | 381 | 03 |
| 400 ISL | 6.44 D | 6.40 | 34.153 D | 26.837 | 126.7 | 0.830 | 0.81 | D 35.0 | D 11.7 | 67.1 | 2.94 | 38.3 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.16 | 6.12 | 34.194 | 26.905 | 120.6 | 0.891 | 0.56 | 24.1 | 8.0 | 73.6 | 3.07 | 39.6 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.86 D | 5.82 | 34.253 D | 26.991 | 113.0 | 0.950 | 0.36 | D 15.7 | D 5.2 | 80.7 | 3.15 | 40.4 | 0.00 | 0.00 | | | 504 | |
| 518 | 5.78 | 5.73 | 34.263 | 27.009 | 111.5 | 0.981 | 0.33 | 14.4 | 4.7 | 82.8 | 3.18 | 40.6 | 0.00 | 0.01 | | | 522 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 39.3 N | 123 3.6 W | 13/04/2015 | 0817 | UTC | 4134 m | 330 16 kn | | | 1018.9 mb | 15.0 C | 12.9 C | | | | 043 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 16.31 | 16.31 | 33.052 D | 24.180 | 372.9 | 0.000 | 5.70 | 248.6 | 101.7 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 0 | |
| 2 | 16.31 | 16.31 | 33.052 | 24.180 | 372.9 | 0.008 | 5.70 | 248.6 | 101.7 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 2 | 21 |
| 9 | 16.32 | 16.32 | 33.053 | 24.180 | 373.2 | 0.034 | | | | | | | | | | | 9 | 20 |
| 10 ISL | 16.32 D | 16.32 | 33.051 D | 24.178 | 373.4 | 0.023 | 5.73 | D250.0 | D102.2 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.10 | 0.03 | 10 | |
| 11 | 16.32 | 16.32 | 33.052 | 24.179 | 373.3 | 0.041 | 5.71 | 248.8 | 101.8 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.10 | 0.04 | 11 | 19 |
| 20 ISL | 16.32 D | 16.32 | 33.051 D | 24.179 | 373.7 | 0.060 | 5.72 | D249.5 | D102.0 | 1.8 | 0.34 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 20 | |
| 24 | 16.32 | 16.32 | 33.053 | 24.180 | 373.7 | 0.090 | 5.71 | 249.0 | 101.8 | 1.8 | 0.34 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 24 | 18 |
| 30 ISL | 16.32 D | 16.31 | 33.052 D | 24.180 | 373.9 | 0.098 | 5.72 | D249.3 | D102.0 | 1.8 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 30 | |
| 40 | 15.97 | 15.96 | 33.016 | 24.233 | 369.3 | 0.149 | 5.76 | 251.0 | 101.9 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.15 | 0.03 | 40 | 17 |
| 50 | 15.90 | 15.89 | 33.010 | 24.244 | 368.5 | 0.186 | 5.78 | 252.0 | 102.2 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 50 | 16 |
| 62 | 15.73 | 15.72 | 33.002 | 24.277 | 365.7 | 0.230 | 5.78 | 252.1 | 101.9 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.24 | 0.06 | 62 | 15 |
| 75 | 15.67 | 15.66 | 33.000 | 24.290 | 365.0 | 0.278 | 5.80 | 252.7 | 102.0 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.28 | 0.08 | 76 | 14 |
| 87 | 15.29 | 15.28 | 33.013 | 24.383 | 356.4 | 0.321 | 5.83 | 254.0 | 101.7 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.44 | 0.16 | 88 | 13 |
| 100 | 13.36 | 13.35 | 32.984 D | 24.766 | 320.0 | 0.353 | 5.64 | D245.9 | D 94.7 | | | | | | | | 101 | 12 |
| 112 | 11.94 | 11.92 | 32.967 | 25.028 | 295.1 | 0.402 | 5.47 | 238.1 | 89.0 | 5.8 | 0.78 | 5.9 | 0.11 | 0.01 | 0.33 | 0.38 | 113 | 11 |
| 125 ISL | 11.52 D | 11.50 | 33.143 D | 25.243 | 274.9 | 0.427 | 5.28 | D230.1 | D 85.4 | 7.1 | 0.86 | 7.7 | 0.06 | 0.00 | 0.18 | 0.19 | 126 | |
| 126 | 11.50 | 11.49 | 33.137 | 25.241 | 275.2 | 0.442 | 5.28 | 230.0 | 85.3 | 7.2 | 0.87 | 7.9 | 0.06 | 0.00 | 0.17 | 0.17 | 127 | 10 |
| 141 | 10.38 | 10.37 | 33.182 | 25.474 | 253.0 | 0.481 | 5.00 | 217.9 | 78.9 | 10.2 | 1.11 | 11.8 | 0.03 | 0.00 | 0.14 | 0.13 | 142 | 09 |
| 150 ISL | 9.99 D | 9.97 | 33.324 D | 25.652 | 236.2 | 0.491 | 4.74 | D206.4 | D 74.2 | 12.8 | 1.24 | 14.1 | 0.03 | 0.00 | 0.10 | 0.10 | 151 | |
| 170 | 9.60 | 9.58 | 33.516 | 25.867 | 216.2 | 0.549 | 4.16 | 181.1 | 64.6 | 18.5 | 1.52 | 19.0 | 0.02 | 0.00 | 0.02 | 0.04 | 171 | 08 |
| 200 | 9.18 | 9.16 | 33.781 | 26.142 | 190.6 | 0.610 | 4.24 | 184.5 | 65.3 | 21.2 | 1.47 | 19.5 | 0.01 | 0.00 | 0.00 | 0.02 | 202 | 07 |
| 230 | 8.77 | 8.74 | 33.860 | 26.270 | 178.9 | 0.665 | 3.65 | 158.7 | 55.7 | 26.7 | 1.73 | 23.4 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.52 D | 8.49 | 33.929 D | 26.363 | 170.4 | 0.688 | 3.21 | D139.5 | D 48.7 | 31.1 | 1.88 | 25.6 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.18 | 8.15 | 33.971 | 26.448 | 162.5 | 0.734 | 2.93 | 127.6 | 44.2 | 35.4 | 2.03 | 27.7 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.77 D | 7.74 | 34.022 D | 26.549 | 153.3 | 0.770 | 2.19 | D 95.3 | D 32.7 | 42.3 | 2.26 | 30.6 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.48 | 7.45 | 34.030 | 26.597 | 148.9 | 0.812 | 2.03 | 88.2 | 30.1 | 46.9 | 2.41 | 32.5 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.96 | 6.93 | 34.093 | 26.720 | 137.9 | 0.898 | 1.25 | 54.5 | 18.4 | 57.5 | 2.72 | 36.3 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.84 D | 6.80 | 34.113 D | 26.753 | 135.0 | 0.914 | 1.12 | D 48.6 | D 16.4 | 60.4 | 2.79 | 37.0 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.54 | 6.50 | 34.146 | 26.819 | 129.1 | 0.978 | 0.80 | 34.9 | 11.7 | 66.1 | 2.92 | 38.4 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.10 D | 6.06 | 34.213 D | 26.929 | 119.1 | 1.043 | 0.52 | D 22.5 | D 7.5 | 75.3 | 3.07 | 39.9 | 0.01 | 0.00 | | | 504 | |
| 516 | 5.97 | 5.92 | 34.223 | 26.954 | 116.9 | 1.071 | 0.45 | 19.5 | 6.4 | 77.8 | 3.11 | 40.2 | 0.01 | 0.00 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 86.8 32.5

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 53.2 N | 118 26.7 W | 11/04/2015 | 0621 | UTC | 29 m | 250 09 kn | | | 1014.3 mb | 16.0 C | 12.9 C | | | | 033 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 17.11 | 17.11 | 33.327 D | 24.206 | 370.4 | 0.000 | 6.12 | 266.9 | 111.0 | 3.4 | 0.26 | 0.1 | 0.09 | 0.00 | 1.63 | 0.36 | 0 | |
| 1 | 17.11 | 17.11 | 33.331 | 24.209 | 370.1 | 0.004 | 6.12 | 266.9 | 111.0 | 3.4 | 0.26 | 0.1 | 0.09 | 0.00 | 1.63 | 0.36 | 1 | 05 |
| 5 | 17.12 | 17.12 | 33.330 | 24.206 | 370.6 | 0.019 | 6.10 | 266.2 | 110.8 | 3.4 | 0.26 | 0.1 | 0.09 | 0.00 | 1.62 | 0.39 | 5 | 04 |
| 10 | 16.75 | 16.75 | 33.324 | 24.287 | 363.0 | 0.037 | 6.12 | 266.9 | 110.3 | 3.5 | 0.27 | 0.1 | 0.10 | 0.01 | 1.75 | 0.37 | 10 | 03 |
| 15 | 15.06 | 15.06 | 33.311 | 24.658 | 327.8 | 0.054 | 6.32 | 275.5 | 110.1 | 5.1 | 0.36 | 0.0 | 0.03 | 0.00 | 2.47 | 0.93 | 15 | 02 |
| 20 | 13.48 | 13.48 | 33.317 | 24.995 | 295.9 | 0.070 | 5.40 | 235.2 | 91.1 | 7.0 | 0.72 | 5.4 | 0.43 | 0.40 | 2.60 | 0.89 | 20 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 40.5 N | 118 5.1 W | 11/04/2015 | 0234 UTC | 19 m | 270 15 kn | 270 01 05 | 1 | 1013.3 mb | 16.4 C | 13.9 C | | 5/8 | CS | 032 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15.86 | 15.86 | 33.279 D | 24.457 | 346.5 | 0.000 | 6.40 | 279.2 | 113.3 | 5.5 | 0.26 | 0.0 | 0.03 | 0.00 | 3.08 | 0.94 | 0 | |
| 2 | 15.86 | 15.86 | 33.283 | 24.461 | 346.2 | 0.007 | 6.40 | 279.2 | 113.3 | 5.5 | 0.26 | 0.0 | 0.03 | 0.00 | 3.08 | 0.94 | 2 | 04 |
| 4 | 15.84 | 15.84 | 33.279 | 24.460 | 346.3 | 0.014 | 6.42 | 279.7 | 113.5 | 5.5 | 0.26 | 0.0 | 0.03 | 0.00 | 3.13 | 0.69 | 4 | 03 |
| 10 | 15.61 | 15.61 | 33.273 | 24.508 | 342.0 | 0.034 | 6.48 | 282.3 | 114.0 | 5.7 | 0.27 | 0.1 | 0.05 | 0.00 | 3.89 | 0.85 | 10 | 02 |
| 15 | 13.59 | 13.59 | 33.263 | 24.930 | 301.9 | 0.051 | 5.33 | 232.3 | 90.1 | 8.8 | 0.72 | 5.6 | 1.34 | 0.08 | 5.13 | 1.21 | 15 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 29.7 N | 117 44.8 W | 10/04/2015 | 2351 UTC | 18 m | 280 05 kn | 270 01 04 | 1 | 1013.5 mb | 18.1 C | 14.8 C | | 2/8 | CS | 031 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 17.24 | 17.24 | 33.286 D | 24.143 | 376.4 | 0.000 | 6.13 | 267.1 | 111.4 | 3.9 | 0.25 | 0.0 | 0.01 | 0.00 | 0.71 | 0.16 | 0 | |
| 2 | 17.24 | 17.24 | 33.288 | 24.144 | 376.4 | 0.008 | 6.13 | 267.1 | 111.4 | 3.9 | 0.25 | 0.0 | 0.01 | 0.00 | 0.71 | 0.16 | 2 | 04 |
| 4 | 17.01 | 17.01 | 33.289 | 24.199 | 371.2 | 0.015 | 6.13 | 267.4 | 111.0 | 4.0 | 0.26 | 0.0 | 0.01 | 0.00 | 0.80 | 0.17 | 4 | 03 |
| 10 | 14.63 | 14.63 | 33.294 | 24.738 | 320.1 | 0.036 | 6.00 | 261.4 | 103.6 | 8.5 | 0.83 | 7.1 | 0.67 | 0.00 | 2.17 | 0.70 | 10 | 02 |
| 14 | 14.54 | 14.54 | 33.289 | 24.753 | 318.7 | 0.049 | 5.65 | 246.2 | 97.4 | 13.0 | 1.27 | 15.1 | 0.38 | 0.00 | 1.92 | 0.98 | 14 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 | 10/04/2015 | 2207 UTC | 74 m | 250 08 kn | 230 01 05 | 1 | 1014.3 mb | 19.0 C | 15.7 C | 09 m | 2/8 | CS | 030 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 17.45 | 17.45 | 33.294 D | 24.099 | 380.6 | 0.000 | 6.03 | 263.1 | 110.2 | 3.9 | 0.25 | 0.0 | 0.02 | 0.04 | 0.61 | 0.12 | 0 | |
| 2 | 17.45 | 17.45 | 33.295 | 24.100 | 380.6 | 0.008 | 6.03 | 263.1 | 110.2 | 3.9 | 0.25 | 0.0 | 0.02 | 0.04 | 0.61 | 0.12 | 2 | 08 |
| 5 | 17.05 | 17.05 | 33.289 | 24.190 | 372.1 | 0.019 | 6.06 | 264.2 | 109.8 | 3.9 | 0.25 | 0.0 | 0.01 | 0.00 | 0.53 | 0.11 | 5 | 07 |
| 10 | 16.49 | 16.49 | 33.286 | 24.319 | 360.0 | 0.037 | 6.15 | 268.2 | 110.3 | 4.0 | 0.26 | 0.0 | 0.02 | 0.00 | 0.82 | 0.21 | 10 | 06 |
| 20 | 12.06 | 12.05 | 33.267 | 25.235 | 273.0 | 0.069 | 4.81 | D209.4 D | 78.7 | 8.5 | 0.83 | 7.1 | 0.68 | 0.01 | 1.50 | 0.97 | 20 | 05 |
| 29 | 11.29 | 11.29 | 33.336 | 25.430 | 254.7 | 0.093 | 4.24 | 184.6 | 68.3 | 13.0 | 1.27 | 15.2 | 0.38 | 0.00 | 0.78 | 0.64 | 29 | 04 |
| 30 ISL | 11.16 D | 11.16 | 33.363 D | 25.474 | 250.5 | 0.096 | 4.21 | D183.4 D | 67.6 | 13.2 | 1.28 | 15.3 | 0.36 | 0.00 | 0.73 | 0.60 | 30 | |
| 40 | 10.43 | 10.42 | 33.448 | 25.669 | 232.1 | 0.119 | 4.13 | 179.9 | 65.4 | 15.7 | 1.40 | 16.6 | 0.09 | 0.00 | 0.24 | 0.24 | 40 | 03 |
| 50 | 10.15 | 10.15 | 33.662 | 25.884 | 211.9 | 0.142 | 3.31 | 144.1 | 52.1 | 21.3 | 1.71 | 20.8 | 0.08 | 0.06 | 0.05 | 0.13 | 50 | 02 |
| 60 | 9.96 | 9.95 | 33.730 | 25.970 | 204.0 | 0.162 | 3.17 | 138.0 | 49.7 | 23.3 | 1.79 | 21.7 | 0.08 | 0.02 | 0.06 | 0.10 | 60 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 | 10/04/2015 | 1923 UTC | 612 m | 210 05 kn | 230 01 05 | 1 | 1015.7 mb | 18.8 C | 15.0 C | 14 m | 1/8 | ST | 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 | 16.16 | 16.16 | 33.323 D | 24.422 | 349.9 | 0.000 | 6.08 | 265.1 | 108.3 | 1.8 | 0.27 | 0.0 | 0.01 | 0.02 | 0.51 | 0.15 | 0 | |
| 2 | 16.16 | 16.16 | 33.323 | 24.422 | 349.9 | 0.007 | 6.08 | 265.1 | 108.3 | 1.8 | 0.27 | 0.0 | 0.01 | 0.02 | 0.51 | 0.15 | 2 | 21 |
| 10 | 15.90 | 15.90 | 33.321 | 24.481 | 344.6 | 0.035 | 6.11 | 266.4 | 108.3 | 2.0 | 0.29 | 0.0 | 0.01 | 0.00 | 0.71 | 0.22 | 10 | 19 |
| 10 | 15.90 | 15.90 | 33.321 | 24.481 | 344.6 | 0.033 | | | | | | | | | | | 10 | 20 |
| 20 | 14.94 | 14.94 | 33.307 | 24.682 | 325.7 | 0.068 | 6.15 | 267.9 | 106.8 | 3.8 | 0.36 | 0.1 | 0.03 | 0.01 | 2.40 | 0.77 | 20 | 18 |
| 30 | 13.06 | 13.05 | 33.280 | 25.052 | 290.7 | 0.099 | 5.28 | 229.8 | 88.2 | 6.7 | 0.77 | 5.3 | 0.37 | 0.06 | 1.51 | 0.62 | 30 | 17 |
| 40 | 11.69 | 11.68 | 33.279 | 25.313 | 266.1 | 0.127 | 4.65 | 202.3 | 75.4 | 10.6 | 1.11 | 11.6 | 0.72 | 0.02 | 0.77 | 0.51 | 40 | 16 |
| 50 | 10.84 | 10.83 | 33.346 | 25.519 | 246.7 | 0.153 | 4.41 | 191.8 | 70.3 | 13.2 | 1.28 | 14.4 | 0.31 | 0.14 | 0.34 | 0.35 | 50 | 15 |
| 60 | 10.52 | 10.51 | 33.455 | 25.661 | 233.4 | 0.177 | 4.11 | 178.8 | 65.1 | 15.6 | 1.42 | 16.5 | 0.06 | 0.01 | | | 60 | 14 |
| 69 | 10.37 | 10.36 | 33.550 | 25.760 | 224.1 | 0.197 | 3.76 | 163.5 | 59.4 | 17.8 | 1.54 | 18.3 | 0.04 | 0.00 | 0.16 | 0.20 | 70 | 13 |
| 75 ISL | 10.23 D | 10.22 | 33.626 D | 25.844 | 216.3 | 0.194 | 3.60 | D156.6 D | 56.7 | 19.2 | 1.61 | 19.3 | 0.03 | 0.00 | 0.13 | 0.17 | 76 | |
| 84 | 10.06 | 10.05 | 33.681 | 25.916 | 209.7 | 0.230 | 3.35 | 145.9 | 52.7 | 21.3 | 1.71 | 20.7 | 0.02 | 0.00 | 0.08 | 0.13 | 85 | 12 |
| 100 | 9.69 | 9.67 | 33.757 | 26.038 | 198.4 | 0.262 | 3.14 | 136.7 | 49.0 | 24.1 | 1.82 | 22.5 | 0.02 | 0.00 | 0.03 | 0.08 | 101 | 11 |
| 119 | 9.46 | 9.44 | 33.849 | 26.148 | 188.3 | 0.299 | 2.88 | 125.5 | 44.8 | 27.1 | 1.93 | 24.2 | 0.02 | 0.00 | 0.01 | 0.06 | 120 | 10 |
| 125 ISL | 9.36 D | 9.35 | 33.878 D | 26.186 | 184.8 | 0.295 | 2.81 | D122.4 D | 43.6 | 28.0 | 1.97 | 24.6 | 0.02 | 0.00 | 0.01 | 0.05 | 126 | |
| 139 | 9.36 | 9.34 | 33.937 | 26.234 | 180.6 | 0.336 | 2.57 | 112.0 | 39.9 | 29.9 | 2.05 | 25.5 | 0.02 | 0.00 | 0.01 | 0.05 | 140 | 09 |
| 150 ISL | 9.28 D | 9.26 | 34.022 D | 26.314 | 173.3 | 0.340 | 2.28 | D 99.2 D | 35.3 | 31.9 | 2.12 | 26.4 | 0.02 | 0.00 | 0.01 | 0.05 | 151 | |
| 170 | 9.04 | 9.02 | 34.073 | 26.392 | 166.2 | 0.390 | 2.02 | 87.7 | 31.0 | 35.7 | 2.26 | 27.9 | 0.02 | 0.00 | 0.01 | 0.05 | 171 | 08 |
| 200 | 8.66 | 8.63 | 34.153 | 26.516 | 154.9 | 0.438 | 1.55 | 67.4 | 23.6 | 41.8 | 2.47 | 30.2 | 0.02 | 0.03 | 0.00 | 0.06 | 202 | 07 |
| 230 | 8.45 | 8.43 | 34.172 | 26.563 | 151.0 | 0.484 | 1.41 | 61.2 | 21.4 | 43.9 | 2.53 | 30.9 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.31 D | 8.29 | 34.186 D | 26.596 | 148.2 | 0.499 | 1.30 | D 56.6 D | 19.7 | 46.2 | 2.59 | 31.6 | 0.01 | 0.00 | | | 252 | |
| 271 | 8.15 | 8.12 | 34.203 | 26.634 | 144.9 | 0.544 | 1.12 | 48.8 | 16.9 | 48.6 | 2.65 | 32.3 | 0.01 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.94 D | 7.91 | 34.227 D | 26.685 | 140.6 | 0.572 | 0.94 | D 41.0 D | 14.2 | 51.8 | 2.73 | 33.3 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.77 | 7.73 | 34.232 | 26.715 | 138.0 | 0.615 | 0.86 | 37.5 | 12.9 | 54.2 | 2.79 | 34.0 | 0.01 | 0.00 | | | 324 | 04 |
| 380 | 7.26 | 7.23 | 34.283 | 26.827 | 128.1 | 0.694 | 0.55 | 23.9 | 8.1 | 62.1 | 2.96 | 35.9 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 7.18 D | 7.14 | 34.277 D | 26.836 | 127.5 | 0.707 | 0.51 | D 22.0 D | 7.5 | 64.1 | 2.99 | 36.4 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.87 | 6.83 | 34.291 | 26.889 | 122.9 | 0.770 | 0.40 | 17.5 | 5.9 | 68.2 | 3.06 | 37.3 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 6.43 D | 6.39 | 34.317 D | 26.970 | 115.8 | 0.830 | 0.28 | D 12.3 D | 4.1 | 75.2 | 3.14 | 38.5 | 0.01 | 0.00 | | | 504 | |
| 514 | 6.36 | 6.31 | 34.322 | 26.983 | 114.6 | 0.857 | 0.27 | 11.8 | 3.9 | 76.8 | 3.16 | 38.8 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 90.0 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 15.2 N | 118 14.8 W | 10/04/2015 | 1630 UTC | 286 m | 220 02 kn | 280 01 06 | 1 | 1015.7 mb | 17.2 C | 14.0 C | 23 m | 1/8 | AC | 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 | 17.14 | 17.14 | 33.304 D | 24.180 | 372.8 | 0.000 | 5.73 | 250.0 | 104.1 | 1.3 | 0.29 | 0.0 | 0.01 | 0.00 | 0.21 | 0.04 | 0 | |
| 2 A | 17.14 | 17.14 | 33.304 | 24.181 | 372.9 | 0.008 | 5.73 | 250.0 | 104.1 | 1.3 | 0.29 | 0.0 | 0.01 | 0.00 | 0.21 | 0.04 | 2 | 21 |
| 10 | 17.09 | 17.09 | 33.305 | 24.194 | 371.9 | 0.037 | 5.75 | 250.8 | 104.3 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.23 | 0.06 | 10 | 18 |
| 10 | 17.09 | 17.09 | 33.305 | 24.194 | 371.9 | 0.037 | | | | | | | | | | | 10 | 20 |
| 10 | 17.09 | 17.09 | 33.305 | 24.195 | 371.9 | 0.036 | | | | | | | | | | | 10 | 19 |
| 14 A | 17.07 | 17.07 | 33.304 | 24.198 | 371.7 | 0.052 | 5.75 | 250.9 | 104.3 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.24 | 0.06 | 14 | 17 |
| 19 A | 17.06 | 17.05 | 33.304 | 24.202 | 371.5 | 0.071 | 5.77 | 251.4 | 104.5 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.24 | 0.06 | 19 | 16 |
| 20 ISL | 17.05 D | 17.04 | 33.303 D | 24.203 | 371.4 | 0.052 | 5.76 | D251.0 | D104.3 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.25 | 0.06 | 20 | |
| 26 | 16.78 | 16.78 | 33.283 | 24.251 | 367.1 | 0.097 | 5.82 | 253.6 | 104.8 | 1.3 | 0.30 | 0.0 | 0.01 | 0.00 | 0.30 | 0.08 | 26 | 15 |
| 30 ISL | 15.86 D | 15.86 | 33.239 D | 24.428 | 350.3 | 0.089 | 5.97 | D260.4 | D105.7 | 1.7 | 0.34 | 0.0 | 0.01 | 0.00 | 0.31 | 0.11 | 30 | |
| 32 A | 15.29 | 15.29 | 33.206 D | 24.529 | 340.7 | 0.096 | 6.01 | 262.0 | 105.1 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.32 | 0.13 | 32 | 14 |
| 43 | 14.18 | 14.17 | 33.187 | 24.753 | 319.6 | 0.154 | 6.00 | 261.3 | 102.5 | 2.5 | 0.41 | 0.0 | 0.01 | 0.00 | 0.71 | 0.31 | 43 | 12 |
| 43 | 14.18 | 14.17 | 33.187 | 24.753 | 319.6 | 0.154 | | | | | | | | | | | 43 | 13 |
| 50 ISL | 13.15 D | 13.15 | 33.230 D | 24.995 | 296.8 | 0.143 | 5.54 | D241.5 | D 92.8 | 5.7 | 0.69 | 4.4 | 0.29 | 0.00 | 0.85 | 0.50 | 50 | |
| 52 | 13.09 | 13.08 | 33.256 | 25.028 | 293.6 | 0.181 | 5.22 | 227.5 | 87.3 | 6.6 | 0.77 | 5.6 | 0.38 | 0.01 | 0.89 | 0.55 | 52 | 11 |
| 61 A | 12.39 | 12.38 | 33.264 | 25.170 | 280.3 | 0.207 | 4.97 | 216.4 | 81.9 | 8.4 | 0.92 | 8.2 | 0.26 | 0.00 | 0.52 | 0.53 | 61 | 10 |
| 75 A | 10.98 | 10.97 | 33.315 | 25.471 | 251.8 | 0.244 | 4.60 | 200.5 | 73.6 | 12.0 | 1.18 | 12.9 | 0.08 | 0.00 | 0.25 | 0.30 | 76 | 09 |
| 88 | 10.35 | 10.34 | 33.463 | 25.696 | 230.6 | 0.276 | 4.13 | 179.8 | 65.2 | 16.1 | 1.42 | 16.8 | 0.04 | 0.00 | 0.13 | 0.19 | 89 | 08 |
| 100 | 10.00 | 9.99 | 33.599 | 25.862 | 215.1 | 0.302 | 3.71 | 161.5 | 58.2 | 19.8 | 1.60 | 19.5 | 0.03 | 0.00 | 0.06 | 0.14 | 101 | 07 |
| 119 | 9.60 | 9.59 | 33.737 | 26.037 | 198.9 | 0.342 | 3.28 | 142.6 | 51.0 | 24.2 | 1.79 | 22.5 | 0.02 | 0.00 | 0.01 | 0.07 | 120 | 06 |
| 125 ISL | 9.54 D | 9.53 | 33.760 D | 26.066 | 196.3 | 0.322 | 3.25 | D141.6 | D 50.6 | 25.0 | 1.83 | 22.9 | 0.02 | 0.00 | 0.01 | 0.06 | 126 | |
| 140 | 9.50 | 9.48 | 33.853 | 26.145 | 189.1 | 0.382 | 2.89 | 125.7 | 44.9 | 27.1 | 1.93 | 24.2 | 0.02 | 0.00 | 0.01 | 0.05 | 141 | 05 |
| 150 ISL | 9.36 D | 9.35 | 33.969 D | 26.258 | 178.6 | 0.370 | 2.53 | D110.1 | D 39.2 | 29.3 | 2.03 | 25.2 | 0.02 | 0.00 | 0.01 | 0.05 | 151 | |
| 169 | 9.37 | 9.35 | 34.055 | 26.325 | 172.6 | 0.435 | 2.08 | 90.5 | 32.2 | 33.4 | 2.23 | 27.2 | 0.02 | 0.00 | 0.00 | 0.05 | 170 | 04 |
| 200 | 8.87 | 8.84 | 34.088 | 26.432 | 163.0 | 0.487 | 1.98 | 86.2 | 30.4 | 37.1 | 2.30 | 28.6 | 0.01 | 0.00 | 0.00 | 0.05 | 202 | 03 |
| 230 | 8.66 | 8.63 | 34.134 | 26.502 | 156.9 | 0.535 | 1.67 | 72.6 | 25.5 | 40.5 | 2.42 | 29.8 | 0.02 | 0.00 | | | 232 | 02 |
| 250 ISL | 8.28 D | 8.26 | 34.184 D | 26.599 | 148.0 | 0.535 | 1.31 | D 56.8 | D 19.8 | 43.9 | 2.52 | 30.8 | 0.02 | 0.00 | | | 252 | |
| 271 | 8.20 | 8.18 | 34.191 | 26.617 | 146.6 | 0.596 | 1.20 | 52.1 | 18.1 | 47.4 | 2.62 | 31.9 | 0.02 | 0.00 | | | 273 | 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 1504 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 23.1 W | 10/04/2015 | 1227 UTC | 1175 m | 340 05 kn | | | 1013.5 mb | 14.9 C | 12.1 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 | 17.10 | 17.10 | 33.287 D | 24.178 | 373.1 | 0.000 | 5.72 | 249.6 | 103.8 | 1.6 | 0.31 | 0.0 | 0.01 | 0.00 | 0.22 | 0.04 | 0 | |
| 1 | 17.10 | 17.10 | 33.286 | 24.177 | 373.2 | 0.004 | 5.72 | 249.6 | 103.8 | 1.6 | 0.31 | 0.0 | 0.01 | 0.00 | 0.22 | 0.04 | 1 | 22 |
| 10 | 17.11 | 17.11 | 33.286 | 24.175 | 373.8 | 0.037 | 5.76 | 251.3 | 104.6 | 1.5 | 0.30 | 0.0 | 0.01 | 0.00 | 0.21 | 0.05 | 10 | 20 |
| 10 | 17.11 | 17.11 | 33.287 | 24.175 | 373.7 | 0.036 | | | | | | | | | | | 10 | 21 |
| 20 | 17.08 | 17.08 | 33.283 | 24.181 | 373.5 | 0.075 | 5.73 | 249.9 | 103.9 | 1.6 | 0.30 | 0.0 | 0.01 | 0.00 | 0.23 | 0.05 | 20 | 19 |
| 30 | 16.57 | 16.56 | 33.279 | 24.297 | 362.8 | 0.112 | 5.75 | 250.8 | 103.2 | 1.6 | 0.30 | 0.0 | 0.01 | 0.00 | 0.25 | 0.06 | 30 | 18 |
| 40 | 14.48 | 14.48 | 33.185 D | 24.687 | 325.9 | 0.128 | 6.06 | 264.1 | 104.2 | 2.6 | 0.37 | 0.0 | 0.01 | 0.04 | 0.32 | 0.16 | 40 | 17 |
| 50 | 13.51 | 13.50 | 33.178 | 24.884 | 307.3 | 0.178 | 5.79 | 252.1 | 97.6 | 2.9 | 0.53 | 1.6 | 0.09 | 0.07 | 0.91 | 0.47 | 50 | 15 |
| 50 | 13.51 | 13.50 | 33.171 | 24.879 | 307.8 | 0.178 | | | | | | | | | | | 50 | 16 |
| 60 | 12.86 | 12.85 | 33.239 | 25.061 | 290.7 | 0.208 | 5.23 | 227.9 | 87.0 | 6.9 | 0.81 | 6.0 | 0.35 | 0.06 | 0.79 | 0.66 | 60 | 14 |
| 70 | 11.90 | 11.89 | 33.297 | 25.289 | 269.2 | 0.236 | 4.73 | 205.9 | 77.1 | 10.2 | 1.06 | 10.5 | 0.18 | 0.00 | 0.37 | 0.47 | 71 | 13 |
| 75 ISL | 11.53 D | 11.52 | 33.312 D | 25.370 | 261.5 | 0.217 | 4.68 | D203.9 | D 75.8 | 11.7 | 1.16 | 12.2 | 0.14 | 0.00 | 0.30 | 0.38 | 76 | |
| 85 | 10.45 | 10.44 | 33.407 | 25.636 | 236.3 | 0.274 | 4.31 | 187.5 | 68.1 | 14.6 | 1.35 | 15.6 | 0.05 | 0.02 | 0.15 | 0.20 | 86 | 12 |
| 100 | 10.06 | 10.05 | 33.571 | 25.831 | 218.1 | 0.308 | 3.78 | 164.7 | 59.4 | 19.1 | 1.57 | 19.1 | 0.02 | 0.00 | 0.06 | 0.10 | 101 | 11 |
| 120 | 9.58 | 9.56 | 33.755 | 26.055 | 197.2 | 0.349 | 3.24 | 141.1 | 50.4 | 24.6 | 1.81 | 22.6 | 0.02 | 0.00 | 0.01 | 0.05 | 121 | 10 |
| 125 ISL | 9.54 D | 9.52 | 33.792 D | 26.091 | 193.9 | 0.328 | 3.14 | D136.8 | D 48.8 | 25.6 | 1.85 | 23.2 | 0.02 | 0.00 | 0.01 | 0.05 | 126 | |
| 140 | 9.37 | 9.36 | 33.878 | 26.185 | 185.3 | 0.387 | 2.80 | 122.0 | 43.4 | 28.5 | 1.97 | 24.8 | 0.02 | 0.00 | 0.01 | 0.06 | 141 | 09 |
| 150 ISL | 9.29 D | 9.28 | 33.948 D | 26.253 | 179.0 | 0.375 | 2.57 | D111.7 | D 39.7 | 30.5 | 2.05 | 25.7 | 0.02 | 0.00 | 0.01 | 0.06 | 151 | |
| 171 | 9.02 | 9.00 | 34.054 | 26.380 | 167.3 | 0.442 | 2.13 | 92.5 | 32.7 | 34.7 | 2.22 | 27.6 | 0.01 | 0.00 | 0.00 | 0.04 | 172 | 08 |
| 200 | 8.78 | 8.76 | 34.116 | 26.467 | 159.6 | 0.490 | 1.82 | 79.3 | 27.9 | 38.9 | 2.36 | 29.2 | 0.01 | 0.00 | 0.01 | 0.04 | 202 | 07 |
| 230 | 8.60 | 8.57 | 34.180 | 26.547 | 152.6 | 0.536 | 1.39 | 60.4 | 21.2 | 43.4 | 2.53 | 30.8 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.40 D | 8.37 | 34.203 D | 26.596 | 148.3 | 0.536 | 1.23 | D 53.5 | D 18.7 | 46.0 | 2.59 | 31.7 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.14 | 8.12 | 34.203 | 26.635 | 144.9 | 0.596 | 1.13 | 49.3 | 17.1 | 48.6 | 2.65 | 32.5 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.95 D | 7.92 | 34.234 D | 26.689 | 140.3 | 0.609 | 0.91 | D 39.4 | D 13.6 | 52.6 | 2.75 | 33.7 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.72 | 7.69 | 34.240 | 26.727 | 136.8 | 0.667 | 0.79 | 34.4 | 11.8 | 55.2 | 2.82 | 34.4 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 7.11 | 7.07 | 34.268 | 26.837 | 127.0 | 0.746 | 0.54 | 23.4 | 7.9 | 63.9 | 2.98 | 36.5 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 7.00 D | 6.96 | 34.280 D | 26.862 | 124.9 | 0.742 | 0.48 | D 20.9 | D 7.1 | 66.4 | 3.02 | 37.0 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.69 | 6.65 | 34.300 | 26.920 | 119.8 | 0.820 | 0.35 | 15.3 | 5.1 | 71.4 | 3.10 | 38.0 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.25 D | 6.20 | 34.329 D | 27.003 | 112.4 | 0.862 | 0.25 | D 10.8 | D 3.6 | 78.2 | 3.17 | 38.9 | 0.01 | 0.00 | | | 504 | |
| 514 | 6.21 | 6.16 | 34.330 | 27.009 | 112.1 | 0.906 | 0.25 | 10.8 | 3.6 | 79.8 | 3.19 | 39.2 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 55.1 N | 118 56.1 W | 10/04/2015 | 0638 | UTC | 1702 m | 280 14 kn | | | 1014.3 mb | 16.0 C | 13.1 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 | 17.52 | 17.52 | 33.321 D | 24.103 | 380.2 | 0.000 | 5.63 | 245.5 | 103.0 | 1.8 | 0.29 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 0 | |
| 2 | 17.52 | 17.52 | 33.321 | 24.103 | 380.3 | 0.008 | 5.63 | 245.5 | 102.9 | 1.8 | 0.29 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 2 | 21 |
| 10 | 17.52 | 17.52 | 33.320 | 24.103 | 380.6 | 0.038 | 5.64 | 245.9 | 103.1 | 1.7 | 0.29 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 10 | 19 |
| 10 | 17.52 | 17.52 | 33.321 | 24.104 | 380.5 | 0.037 | | | | | | | | | | | 10 | 20 |
| 20 | 17.39 | 17.38 | 33.321 | 24.137 | 377.8 | 0.076 | 5.65 | 246.3 | 103.0 | 1.7 | 0.30 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | 20 | 18 |
| 30 | 14.96 | 14.95 | 33.256 | 24.640 | 330.0 | 0.111 | 5.97 | 260.0 | 103.7 | 2.4 | 0.38 | 0.0 | 0.01 | 0.02 | 0.62 | 0.31 | 30 | 17 |
| 40 | 13.63 | 13.62 | 33.230 | 24.899 | 305.6 | 0.143 | 5.63 | 245.2 | 95.1 | 5.1 | 0.60 | 2.9 | 0.15 | 0.00 | 1.52 | 0.84 | 40 | 16 |
| 50 | 12.37 | 12.36 | 33.260 | 25.171 | 279.9 | 0.172 | 4.96 | 216.0 | 81.7 | 9.0 | 0.95 | 8.7 | 0.21 | 0.00 | 0.78 | 0.54 | 50 | 15 |
| 59 | 11.30 | 11.29 | 33.334 | 25.427 | 255.7 | 0.197 | 4.56 | 198.6 | 73.5 | 12.5 | 1.18 | 12.7 | 0.07 | 0.00 | 0.28 | 0.28 | 59 | 14 |
| 70 | 11.05 | 11.05 | 33.343 | 25.479 | 250.9 | 0.224 | 4.49 | 195.5 | 71.9 | 13.2 | 1.23 | 13.7 | 0.05 | 0.00 | 0.23 | 0.26 | 71 | 13 |
| 75 ISL | 10.64 D | 10.63 | 33.408 D | 25.602 | 239.3 | 0.219 | 4.35 | D189.4 D | 69.1 | 14.6 | 1.30 | 14.9 | 0.05 | 0.00 | 0.19 | 0.23 | 76 | |
| 85 | 10.18 | 10.17 | 33.475 | 25.735 | 226.9 | 0.260 | 4.10 | 178.3 | 64.4 | 17.3 | 1.45 | 17.4 | 0.03 | 0.00 | 0.12 | 0.16 | 86 | 12 |
| 100 | 9.69 | 9.68 | 33.591 | 25.908 | 210.7 | 0.293 | 3.75 | 163.2 | 58.4 | 21.1 | 1.62 | 20.3 | 0.02 | 0.00 | 0.05 | 0.09 | 101 | 11 |
| 120 | 9.30 | 9.28 | 33.727 | 26.078 | 194.9 | 0.334 | 3.35 | 146.0 | 51.8 | 25.4 | 1.79 | 22.8 | 0.01 | 0.00 | 0.02 | 0.08 | 121 | 10 |
| 125 ISL | 9.20 D | 9.19 | 33.761 D | 26.120 | 191.0 | 0.326 | 3.33 | D144.8 D | 51.3 | 26.4 | 1.83 | 23.5 | 0.01 | 0.00 | 0.02 | 0.07 | 126 | |
| 140 | 8.87 | 8.86 | 33.858 | 26.249 | 179.0 | 0.371 | 3.04 | 132.3 | 46.6 | 29.4 | 1.93 | 25.4 | 0.01 | 0.00 | 0.01 | 0.06 | 141 | 09 |
| 150 ISL | 8.84 D | 8.82 | 33.910 D | 26.295 | 174.9 | 0.372 | 2.93 | D127.7 D | 44.9 | 30.8 | 1.98 | 26.0 | 0.01 | 0.00 | 0.01 | 0.06 | 151 | |
| 171 | 8.69 | 8.67 | 33.971 | 26.367 | 168.4 | 0.425 | 2.62 | 114.1 | 40.0 | 33.8 | 2.09 | 27.3 | 0.01 | 0.00 | 0.00 | 0.06 | 172 | 08 |
| 200 ISL | 8.55 D | 8.53 | 34.043 D | 26.445 | 161.6 | 0.456 | 2.24 | D 97.6 D | 34.2 | 37.5 | 2.23 | 28.8 | 0.01 | 0.00 | 0.00 | 0.05 | 202 | |
| 201 | 8.54 | 8.52 | 34.037 | 26.442 | 161.9 | 0.474 | 2.24 | 97.6 | 34.1 | 37.7 | 2.23 | 28.8 | 0.01 | 0.00 | 0.00 | 0.04 | 203 | 07 |
| 230 | 8.28 | 8.26 | 34.078 | 26.516 | 155.4 | 0.520 | 1.92 | 83.4 | 29.0 | 41.6 | 2.37 | 30.3 | 0.00 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.89 D | 7.86 | 34.077 D | 26.573 | 150.2 | 0.535 | 1.85 | D 80.5 D | 27.7 | 45.4 | 2.46 | 31.6 | 0.00 | 0.00 | | | 252 | |
| 270 | 7.68 | 7.65 | 34.105 | 26.626 | 145.4 | 0.580 | 1.56 | 68.0 | 23.3 | 49.1 | 2.55 | 32.9 | 0.00 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.51 D | 7.48 | 34.142 D | 26.680 | 140.8 | 0.608 | 1.29 | D 56.0 D | 19.2 | 54.0 | 2.71 | 34.3 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.36 | 7.33 | 34.197 | 26.745 | 134.8 | 0.650 | 0.92 | 40.0 | 13.6 | 57.2 | 2.81 | 35.2 | 0.00 | 0.00 | | | 323 | 04 |
| 380 | 7.14 | 7.11 | 34.261 | 26.827 | 128.0 | 0.729 | 0.56 | 24.4 | 8.3 | 63.4 | 2.98 | 36.5 | 0.00 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.83 D | 6.79 | 34.234 D | 26.849 | 125.9 | 0.741 | 0.63 | D 27.2 D | 9.2 | 65.6 | 3.02 | 37.0 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.68 | 6.64 | 34.277 | 26.904 | 121.3 | 0.803 | 0.43 | 18.7 | 6.3 | 70.1 | 3.10 | 37.9 | 0.00 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.34 D | 6.29 | 34.312 D | 26.977 | 115.0 | 0.862 | 0.31 | D 13.6 D | 4.5 | 76.1 | 3.16 | 38.7 | 0.00 | 0.00 | | | 504 | |
| 517 | 6.25 | 6.21 | 34.316 | 26.992 | 113.7 | 0.894 | 0.28 | 12.1 | 4.0 | 77.8 | 3.18 | 39.0 | 0.00 | 0.00 | | | 521 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 90.0 53.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 39.0 N | 119 28.6 W | 10/04/2015 | 0057 | UTC | 1299 m | 300 19 kn | 300 03 05 | 1 | 1013.4 mb | 16.6 C | 13.2 C | 12 m | 2/8 | CS | 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 | 16.06 | 16.06 | 33.311 D | 24.437 | 348.4 | 0.000 | 5.84 | 254.7 | 103.8 | 1.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.34 | 0.11 | 0 | |
| 2 | 16.06 | 16.06 | 33.311 | 24.437 | 348.5 | 0.007 | 5.84 | 254.7 | 103.8 | 1.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.34 | 0.11 | 2 | 22 |
| 10 | 16.04 | 16.04 | 33.310 | 24.440 | 348.4 | 0.035 | 5.85 | 255.1 | 104.0 | 1.1 | 0.30 | 0.0 | 0.01 | 0.00 | 0.36 | 0.11 | 10 | 20 |
| 10 | 16.04 | 16.04 | 33.310 | 24.440 | 348.5 | 0.034 | | | | | | | | | | | 10 | 21 |
| 20 | 15.37 | 15.37 | 33.290 | 24.576 | 335.9 | 0.069 | 6.02 | 262.4 | 105.5 | 0.5 | 0.30 | 0.0 | 0.01 | 0.00 | 0.51 | 0.20 | 20 | 19 |
| 30 | 15.22 | 15.21 | 33.289 | 24.608 | 333.1 | 0.103 | 6.00 | 261.7 | 104.9 | 0.6 | 0.31 | 0.0 | 0.01 | 0.00 | 1.02 | 0.37 | 30 | 18 |
| 40 | 14.87 | 14.86 | 33.286 | 24.683 | 326.2 | 0.136 | 5.92 | 258.1 | 102.7 | 1.1 | 0.36 | 0.2 | 0.03 | 0.04 | 1.25 | 0.45 | 40 | 16 |
| 40 | 14.87 | 14.86 | 33.286 | 24.683 | 326.3 | 0.135 | | | | | | | | | | | 40 | 17 |
| 50 | 14.22 | 14.21 | 33.282 | 24.817 | 313.8 | 0.168 | 5.74 | 250.1 | 98.2 | 2.7 | 0.52 | 1.7 | 0.09 | 0.34 | 0.94 | 0.52 | 50 | 15 |
| 60 | 12.66 | 12.66 | 33.241 | 25.100 | 287.0 | 0.198 | 5.16 | 224.9 | 85.5 | 7.6 | 0.90 | 7.2 | 0.26 | 0.38 | 0.57 | 0.41 | 60 | 14 |
| 70 | 11.93 | 11.92 | 33.259 | 25.254 | 272.5 | 0.226 | 4.92 | 214.3 | 80.3 | 9.6 | 1.04 | 9.6 | 0.30 | 0.18 | 0.48 | 0.33 | 71 | 13 |
| 75 ISL | 11.03 D | 11.02 | 33.291 D | 25.444 | 254.4 | 0.206 | 4.83 | D210.5 D | 77.4 | 11.2 | 1.14 | 11.5 | 0.22 | 0.00 | 0.38 | 0.30 | 76 | |
| 85 | 10.21 | 10.20 | 33.352 | 25.634 | 236.5 | 0.263 | 4.46 | 194.3 | 70.2 | 14.4 | 1.35 | 15.4 | 0.07 | 0.00 | 0.20 | 0.24 | 86 | 12 |
| 100 | 9.74 | 9.72 | 33.557 | 25.873 | 214.0 | 0.297 | 3.82 | 166.3 | 59.5 | 20.2 | 1.62 | 19.8 | 0.04 | 0.00 | 0.09 | 0.15 | 101 | 11 |
| 120 | 9.30 | 9.29 | 33.814 | 26.146 | 188.5 | 0.337 | 2.99 | 130.0 | 46.2 | 27.5 | 1.92 | 24.2 | 0.02 | 0.01 | 0.04 | 0.10 | 121 | 10 |
| 125 ISL | 9.29 D | 9.28 | 33.827 D | 26.158 | 187.5 | 0.315 | 2.98 | D129.7 D | 46.1 | 27.9 | 1.94 | 24.4 | 0.02 | 0.00 | 0.04 | 0.11 | 126 | |
| 140 | 9.21 | 9.19 | 33.861 | 26.198 | 184.0 | 0.375 | 2.86 | 124.6 | 44.2 | 29.1 | 1.98 | 25.1 | 0.02 | 0.00 | 0.04 | 0.13 | 141 | 09 |
| 150 ISL | 9.18 D | 9.16 | 33.866 D | 26.207 | 183.3 | 0.361 | 2.86 | D124.6 D | 44.2 | 30.0 | 2.00 | 25.5 | 0.02 | 0.00 | 0.04 | 0.12 | 151 | |
| 170 | 8.81 | 8.79 | 33.923 | 26.310 | 173.8 | 0.429 | 2.71 | 118.0 | 41.5 | 32.0 | 2.05 | 26.4 | 0.02 | 0.00 | 0.03 | 0.09 | 171 | 08 |
| 199 | 8.44 | 8.42 | 33.990 | 26.421 | 163.8 | 0.478 | 2.47 | 107.6 | 37.5 | 36.4 | 2.17 | 28.3 | 0.02 | 0.00 | 0.01 | 0.08 | 201 | 07 |
| 200 ISL | 8.39 D | 8.37 | 34.003 D | 26.438 | 162.2 | 0.448 | 2.47 | D107.3 D | 37.4 | 36.5 | 2.18 | 28.3 | 0.02 | 0.00 | | | 202 | |
| 230 | 8.21 | 8.18 | 34.072 | 26.522 | 154.8 | 0.527 | 1.94 | 84.2 | 29.3 | 41.8 | 2.37 | 30.3 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.95 D | 7.92 | 34.084 D | 26.570 | 150.5 | 0.527 | 1.82 | D 79.0 D | 27.3 | 44.7 | 2.44 | 31.3 | 0.01 | 0.00 | | | 252 | |
| 268 | 7.81 | 7.78 | 34.097 | 26.601 | 147.7 | 0.584 | 1.66 | 72.1 | 24.8 | 47.4 | 2.50 | 32.2 | 0.01 | 0.00 | | | 270 | 05 |
| 300 ISL | 7.34 D | 7.31 | 34.142 D | 26.705 | 138.2 | 0.600 | 1.22 | D 53.0 D | 18.0 | 54.3 | 2.70 | 34.2 | 0.01 | 0.00 | | | 302 | |
| 319 | 7.29 | 7.26 | 34.201 | 26.758 | 133.6 | 0.655 | 0.90 | 39.3 | 13.4 | 58.5 | 2.82 | 35.4 | 0.01 | 0.00 | | | 322 | 04 |
| 381 | 6.85 | 6.81 | 34.239 | 26.850 | 125.5 | 0.736 | 0.68 | 29.4 | 9.9 | 66.0 | 2.97 | 37.2 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.67 D | 6.63 | 34.246 D | 26.880 | 122.8 | 0.731 | 0.55 | D 24.1 D | 8.1 | 68.1 | 3.00 | 37.6 | 0.01 | 0.00 | | | 403 | |
| 439 | 6.45 | 6.41 | 34.259 | 26.919 | 119.6 | 0.807 | 0.47 | 20.6 | 6.9 | 72.5 | 3.07 | 38.5 | 0.01 | 0.00 | | | 443 | 02 |
| 500 ISL | 6.25 D | 6.20 | 34.294 D | 26.975 | 115.1 | 0.851 | 0.35 | D 15.2 D | 5.1 | 77.4 | 3.13 | 39.0 | 0.01 | 0.00 | | | 504 | |
| 517 | 6.21 | 6.16 | 34.312 | 26.995 | 113.4 | 0.897 | 0.31 | 13.4 | 4.5 | 78.7 | 3.15 | 39.1 | 0.01 | 0.00 | | | 521 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 24.9 N | 119 57.7 W | 09/04/2015 | 1914 | UTC | 875 m | 300 16 kn | 300 04 08 | 1 | 1015.3 mb | 17.5 C | 14.5 C | 29 m | 1/8 | 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 | 17.29 | 17.29 | 33.451 D | 24.259 | 365.4 | 0.000 | 5.57 | 243.0 | 101.6 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 0 | |
| 1 A | 17.29 | 17.29 | 33.458 | 24.264 | 364.9 | 0.004 | 5.57 | 243.0 | 101.6 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 1 | 24 |
| 8 | 17.28 | 17.28 | 33.455 | 24.264 | 365.1 | 0.030 | | | | | | | | | | | 8 | 23 |
| 10 | 17.29 | 17.29 | 33.453 | 24.259 | 365.7 | 0.036 | 5.56 | 242.4 | 101.3 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 10 | 22 |
| 17 A | 17.25 | 17.24 | 33.452 | 24.271 | 364.9 | 0.062 | 5.56 | 242.4 | 101.2 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.11 | 0.02 | 17 | 21 |
| 20 ISL | 17.23 D | 17.23 | 33.453 D | 24.275 | 364.6 | 0.057 | 5.59 | D243.5 | D101.7 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 20 | |
| 23 A | 17.23 | 17.23 | 33.452 | 24.275 | 364.7 | 0.084 | 5.55 | 242.1 | 101.1 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 23 | 20 |
| 30 ISL | 17.22 D | 17.22 | 33.453 D | 24.278 | 364.7 | 0.094 | 5.60 | D244.0 | D101.8 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 30 | |
| 38 A | 17.21 | 17.21 | 33.453 | 24.281 | 364.7 | 0.139 | 5.56 | 242.4 | 101.2 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 38 | 18 |
| 50 ISL | 17.21 D | 17.20 | 33.453 D | 24.283 | 365.0 | 0.145 | 5.59 | D243.9 | D101.8 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 50 | |
| 54 | 17.21 | 17.20 | 33.454 | 24.284 | 365.0 | 0.197 | 5.56 | 242.5 | 101.2 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 54 | 17 |
| 66 | 17.20 | 17.19 | 33.453 | 24.287 | 365.2 | 0.241 | 5.55 | 242.1 | 101.0 | 2.1 | 0.33 | 0.0 | 0.00 | 0.00 | 0.13 | 0.03 | 67 | 16 |
| 75 ISL | 17.00 D | 16.99 | 33.434 D | 24.319 | 362.4 | 0.237 | 5.62 | D244.9 | D101.7 | 2.1 | 0.33 | 0.0 | 0.01 | 0.00 | 0.20 | 0.06 | 76 | |
| 78 A | 16.33 | 16.32 | 33.433 | 24.473 | 347.7 | 0.284 | 5.58 | 243.3 | 99.8 | 2.2 | 0.33 | 0.0 | 0.01 | 0.00 | 0.22 | 0.06 | 79 | 14 |
| 78 | 16.33 | 16.32 | 33.432 | 24.473 | 347.8 | 0.285 | | | | | | | | | | | 79 | 15 |
| 86 | 13.70 | 13.69 | 33.211 | 24.872 | 309.6 | 0.310 | 5.67 | 246.9 | 95.9 | 4.3 | 0.60 | 3.0 | 0.11 | 0.18 | 1.16 | 0.49 | 87 | 13 |
| 95 A | 12.23 | 12.22 | 33.349 | 25.269 | 271.8 | 0.337 | 4.87 | 212.0 | 80.0 | 9.2 | 0.96 | 8.4 | 0.38 | 0.32 | 0.64 | 0.42 | 96 | 12 |
| 100 ISL | 11.64 D | 11.62 | 33.396 D | 25.417 | 257.8 | 0.300 | 4.89 | D213.1 | D 79.4 | 11.4 | 1.10 | 10.9 | 0.30 | 0.00 | 0.47 | 0.37 | 101 | |
| 109 | 10.81 | 10.79 | 33.438 | 25.599 | 240.5 | 0.372 | 4.15 | 180.6 | 66.1 | 15.4 | 1.36 | 15.5 | 0.15 | 0.00 | 0.17 | 0.29 | 110 | 11 |
| 124 | 9.50 | 9.49 | 33.576 | 25.927 | 209.4 | 0.406 | 3.81 | 165.7 | 59.0 | 20.9 | 1.66 | 20.8 | 0.03 | 0.00 | 0.05 | 0.12 | 125 | 10 |
| 125 ISL | 9.56 D | 9.55 | 33.567 D | 25.911 | 211.0 | 0.358 | 3.86 | D168.1 | D 60.0 | 20.9 | 1.66 | 20.8 | 0.03 | 0.00 | 0.05 | 0.12 | 126 | |
| 140 | 9.41 | 9.39 | 33.607 | 25.967 | 205.9 | 0.439 | 3.78 | 164.4 | 58.5 | 21.5 | 1.67 | 21.2 | 0.02 | 0.00 | 0.05 | 0.09 | 141 | 09 |
| 150 ISL | 9.22 D | 9.20 | 33.687 D | 26.060 | 197.3 | 0.410 | 3.72 | D162.1 | D 57.4 | 23.0 | 1.71 | 21.9 | 0.02 | 0.00 | 0.04 | 0.09 | 151 | |
| 170 | 8.92 | 8.90 | 33.799 | 26.196 | 184.7 | 0.498 | 3.53 | 153.6 | 54.1 | 26.1 | 1.78 | 23.4 | 0.02 | 0.00 | 0.03 | 0.07 | 171 | 08 |
| 200 | 8.50 | 8.48 | 33.930 | 26.365 | 169.1 | 0.551 | 3.05 | 132.5 | 46.3 | 32.1 | 1.97 | 26.4 | 0.01 | 0.00 | 0.02 | 0.07 | 202 | 07 |
| 231 | 8.04 | 8.02 | 33.984 | 26.477 | 158.9 | 0.602 | 2.66 | 115.8 | 40.0 | 37.9 | 2.14 | 28.8 | 0.01 | 0.00 | | | 233 | 06 |
| 250 ISL | 7.82 D | 7.80 | 33.999 D | 26.522 | 154.9 | 0.583 | 2.55 | D110.8 | D 38.1 | 41.5 | 2.25 | 30.2 | 0.01 | 0.00 | | | 252 | |
| 271 | 7.52 | 7.50 | 34.020 | 26.581 | 149.5 | 0.664 | 2.22 | 96.6 | 33.0 | 45.5 | 2.38 | 31.8 | 0.01 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.15 D | 7.12 | 34.056 D | 26.663 | 142.0 | 0.658 | 1.69 | D 73.6 | D 24.9 | 50.9 | 2.53 | 33.6 | 0.01 | 0.00 | | | 302 | |
| 322 | 7.00 | 6.96 | 34.070 | 26.695 | 139.2 | 0.737 | 1.45 | 63.2 | 21.3 | 55.1 | 2.65 | 35.1 | 0.01 | 0.00 | | | 325 | 04 |
| 380 | 6.63 | 6.59 | 34.131 | 26.794 | 130.6 | 0.815 | 1.02 | 44.3 | 14.8 | 63.2 | 2.87 | 37.3 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.59 D | 6.55 | 34.158 D | 26.821 | 128.3 | 0.794 | 0.86 | D 37.5 | D 12.6 | 66.6 | 2.93 | 37.9 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.18 | 6.14 | 34.200 | 26.908 | 120.4 | 0.892 | 0.60 | 25.9 | 8.6 | 73.7 | 3.06 | 39.1 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 6.01 D | 5.96 | 34.289 D | 27.001 | 112.3 | 0.915 | 0.38 | D 16.5 | D 5.5 | 79.9 | 3.16 | 39.7 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.89 | 5.85 | 34.303 | 27.027 | 109.9 | 0.978 | 0.32 | 13.7 | 4.5 | 81.5 | 3.18 | 39.9 | 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; PRIMARY STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 37.8 W | 09/04/2015 | 1230 | UTC | 3820 m | 320 16 kn | | | 1015.1 mb | 15.0 C | 12.2 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 | 16.90 | 16.90 | 33.350 D | 24.273 | 364.0 | 0.000 | 5.61 | 244.7 | 101.4 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 0 | |
| 2 | 16.90 | 16.90 | 33.349 | 24.273 | 364.1 | 0.007 | 5.61 | 244.7 | 101.4 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 2 | 22 |
| 9 | 16.91 | 16.91 | 33.351 | 24.272 | 364.5 | 0.033 | 5.61 | 244.7 | 101.5 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.15 | 0.04 | 9 | 20 |
| 9 | 16.91 | 16.91 | 33.349 | 24.270 | 364.6 | 0.033 | | | | | | | | | | | 9 | 21 |
| 10 ISL | 16.91 D | 16.91 | 33.350 D | 24.271 | 364.6 | 0.035 | 5.62 | D244.8 | D101.5 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.15 | 0.04 | 10 | |
| 20 ISL | 16.91 D | 16.91 | 33.350 D | 24.271 | 364.9 | 0.072 | 5.62 | D245.1 | D101.6 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 20 | |
| 24 | 16.91 | 16.91 | 33.349 | 24.271 | 365.1 | 0.088 | 5.61 | 244.7 | 101.4 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.13 | 0.04 | 24 | 19 |
| 30 ISL | 16.92 D | 16.91 | 33.350 D | 24.272 | 365.3 | 0.108 | 5.63 | D245.6 | D101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 30 | |
| 40 | 16.91 | 16.91 | 33.358 | 24.278 | 365.0 | 0.146 | 5.61 | 244.7 | 101.4 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 40 | 18 |
| 50 | 16.91 | 16.91 | 33.353 | 24.276 | 365.6 | 0.183 | 5.61 | 244.8 | 101.5 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 50 | 17 |
| 62 | 16.92 | 16.90 | 33.349 | 24.273 | 366.3 | 0.226 | 5.61 | 244.7 | 101.4 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 62 | 16 |
| 75 ISL | 16.68 D | 16.67 | 33.327 D | 24.311 | 363.1 | 0.274 | 5.66 | D246.7 | D101.8 | 2.0 | 0.32 | 0.0 | 0.01 | 0.00 | 0.23 | 0.08 | 76 | |
| 76 | 16.69 | 16.68 | 33.323 | 24.307 | 363.6 | 0.277 | 5.65 | 246.3 | 101.6 | 2.0 | 0.32 | 0.0 | 0.01 | 0.00 | 0.23 | 0.08 | 77 | 15 |
| 86 | 15.28 | 15.26 | 33.345 | 24.642 | 331.7 | 0.312 | 5.72 | 249.1 | 100.0 | 2.6 | 0.35 | 0.0 | 0.01 | 0.00 | 0.27 | 0.15 | 87 | 14 |
| 100 ISL | 14.25 D | 14.23 | 33.375 D | 24.886 | 308.8 | 0.358 | 5.59 | D243.4 | D 95.7 | 4.0 | 0.51 | 1.9 | 0.07 | 0.00 | 0.29 | 0.25 | 101 | |
| 102 | 13.46 | 13.44 | 33.304 | 24.994 | 298.5 | 0.364 | 5.52 | 240.7 | 93.1 | 4.2 | 0.53 | 2.2 | 0.08 | 0.00 | 0.29 | 0.26 | 103 | 12 |
| 102 | 13.46 | 13.44 | 33.303 | 24.993 | 298.5 | 0.364 | | | | | | | | | | | 103 | 13 |
| 112 | 12.68 | 12.66 | 33.294 | 25.141 | 284.5 | 0.393 | 5.36 | 233.4 | 88.8 | 5.4 | 0.66 | 4.6 | 0.09 | 0.00 | 0.24 | 0.25 | 113 | 11 |
| 125 | 11.58 | 11.56 | 33.245 | 25.311 | 268.4 | 0.429 | 5.13 | 223.5 | 83.1 | 7.8 | 0.90 | 8.5 | 0.08 | 0.00 | 0.20 | 0.21 | 126 | 10 |
| 140 | 10.63 | 10.61 | 33.326 | 25.543 | 246.5 | 0.467 | 4.79 | 208.6 | 76.0 | 11.3 | 1.14 | 12.7 | 0.03 | 0.00 | 0.13 | 0.20 | 141 | 09 |
| 150 ISL | 10.27 D | 10.25 | 33.393 D | 25.658 | 235.7 | 0.478 | 4.72 | D205.5 | D 74.4 | 13.3 | 1.25 | 14.5 | 0.02 | 0.00 | 0.10 | 0.15 | 151 | |
| 169 | 9.68 | 9.67 | 33.505 | 25.844 | 218.3 | 0.535 | 4.17 | 181.6 | 64.9 | 17.3 | 1.46 | 17.9 | 0.01 | 0.00 | 0.05 | 0.07 | 170 | 08 |
| 200 | 9.10 | 9.07 | 33.754 D | 26.134 | 191.3 | 0.584 | 3.48 | 151.6 | 53.6 | 25.5 | 1.79 | 23.3 | 0.02 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 230 | 8.73 | 8.71 | 33.894 | 26.302 | 175.9 | 0.653 | 2.96 | 128.7 | 45.2 | 30.7 | 1.97 | 26.1 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.53 D | 8.50 | 33.975 D | 26.398 | 167.1 | 0.674 | 2.63 | D114.6 | D 40.0 | 34.9 | 2.09 | 27.7 | 0.01 | 0.00 | | | 252 | |
| 269 | 8.16 | 8.13 | 34.009 | 26.481 | 159.4 | 0.719 | 2.41 | 104.9 | 36.4 | 38.9 | 2.21 | 29.2 | 0.01 | 0.00 | | | 271 | 05 |
| 300 ISL | 7.71 D | 7.68 | 34.059 D | 26.586 | 149.8 | 0.753 | 1.93 | D 84.1 | D 28.9 | 44.5 | 2.39 | 31.3 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.57 | 7.54 | 34.074 | 26.618 | 146.9 | 0.797 | 1.73 | 75.2 | 25.7 | 48.1 | 2.50 | 32.7 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 7.13 | 7.10 | 34.145 | 26.737 | 136.5 | 0.883 | 1.09 | 47.2 | 16.0 | 57.8 | 2.78 | 35.7 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.92 D | 6.88 | 34.161 D | 26.779 | 132.6 | 0.896 | 0.96 | D 41.7 | D 14.1 | 61.1 | 2.84 | 36.4 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.49 | 6.45 | 34.184 | 26.855 | 125.7 | 0.960 | 0.72 | 31.1 | 10.4 | 68.0 | 2.98 | 38.0 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.12 D | 6.07 | 34.221 D | 26.933 | 118.8 | 1.022 | 0.54 | D 23.5 | D 7.8 | 75.0 | 3.08 | 39.2 | 0.01 | 0.00 | | | 504 | |
| 515 | 6.04 | 5.99 | 34.231 | 26.951 | 117.2 | 1.051 | 0.46 | 20.1 | 6.7 | 76.8 | 3.11 | 39.4 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 45.2 N | 121 19.0 W | 09/04/2015 | 0551 | UTC | 3670 m | 330 15 kn | | | 1018.0 mb | 16.1 C | 12.7 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 | 17.28 | 17.28 | 33.386 D | 24.210 | 370.0 | 0.000 | 5.60 | 244.0 | 101.9 | 2.0 | 0.34 | 0.1 | 0.01 | 0.03 | 0.11 | 0.03 | 0 | |
| 3 | 17.28 | 17.28 | 33.386 | 24.210 | 370.1 | 0.011 | 5.60 | 244.0 | 101.9 | 2.0 | 0.34 | 0.1 | 0.01 | 0.03 | 0.11 | 0.03 | 3 | 20 |
| 10 | 17.28 | 17.28 | 33.390 | 24.214 | 370.1 | 0.037 | 5.59 | 243.9 | 101.9 | 2.0 | 0.34 | 0.1 | 0.01 | 0.02 | 0.10 | 0.02 | 10 | 19 |
| 20 ISL | 17.28 D | 17.28 | 33.386 D | 24.213 | 370.5 | 0.074 | 5.61 | D244.5 | D102.1 | 2.0 | 0.34 | 0.1 | 0.00 | 0.02 | 0.10 | 0.02 | 20 | |
| 25 | 17.29 | 17.28 | 33.387 | 24.212 | 370.8 | 0.093 | 5.59 | 243.8 | 101.8 | 2.0 | 0.34 | 0.1 | 0.00 | 0.02 | 0.10 | 0.02 | 25 | 18 |
| 30 ISL | 17.29 D | 17.28 | 33.386 D | 24.211 | 371.0 | 0.112 | 5.63 | D245.5 | D102.5 | 2.0 | 0.34 | 0.1 | 0.00 | 0.02 | 0.11 | 0.02 | 30 | |
| 40 | 17.27 | 17.26 | 33.384 | 24.215 | 371.1 | 0.148 | 5.59 | 243.9 | 101.8 | 2.0 | 0.34 | 0.1 | 0.01 | 0.02 | 0.11 | 0.03 | 40 | 17 |
| 50 | 17.23 | 17.22 | 33.382 | 24.223 | 370.6 | 0.185 | 5.59 | 243.8 | 101.7 | 2.0 | 0.34 | 0.1 | 0.01 | 0.02 | 0.15 | 0.04 | 50 | 16 |
| 62 | 13.76 | 13.75 | 33.135 | 24.800 | 315.7 | 0.226 | 6.08 | 264.7 | 102.9 | 2.8 | 0.44 | 0.1 | 0.01 | 0.02 | 0.29 | 0.14 | 62 | 15 |
| 75 | 12.28 | 12.27 | 33.113 | 25.074 | 289.8 | 0.266 | 5.80 | 252.5 | 95.2 | 3.1 | 0.67 | 4.1 | 0.12 | 0.06 | 1.62 | 0.71 | 76 | 14 |
| 87 | 11.33 | 11.32 | 33.188 | 25.311 | 267.5 | 0.299 | 5.12 | 223.2 | 82.5 | 8.3 | 0.98 | 9.4 | 0.16 | 0.03 | 0.40 | 0.46 | 88 | 13 |
| 100 | 10.60 | 10.59 | 33.270 | 25.504 | 249.3 | 0.333 | 4.79 | 208.7 | 76.0 | 11.4 | 1.18 | 12.9 | 0.04 | 0.01 | 0.23 | 0.22 | 101 | 12 |
| 112 | 10.29 | 10.28 | 33.355 | 25.623 | 238.2 | 0.362 | 4.54 | 197.6 | 71.5 | 13.5 | 1.31 | 14.9 | 0.03 | 0.01 | 0.16 | 0.17 | 113 | 11 |
| 125 | 9.95 | 9.93 | 33.470 | 25.772 | 224.3 | 0.392 | 4.21 | 183.1 | 65.8 | 16.9 | 1.48 | 17.8 | 0.02 | 0.02 | 0.09 | 0.09 | 126 | 10 |
| 140 | 9.54 | 9.53 | 33.612 | 25.950 | 207.6 | 0.425 | 3.77 | 164.2 | 58.6 | 20.9 | 1.65 | 20.6 | 0.01 | 0.01 | 0.04 | 0.06 | 141 | 09 |
| 150 ISL | 9.47 D | 9.46 | 33.643 D | 25.985 | 204.4 | 0.448 | 3.74 | D162.8 | D 58.0 | 22.6 | 1.71 | 21.6 | 0.01 | 0.01 | 0.03 | 0.05 | 151 | |
| 169 | 9.12 | 9.10 | 33.779 | 26.150 | 189.1 | 0.482 | 3.38 | 147.0 | 52.0 | 25.9 | 1.83 | 23.4 | 0.01 | 0.01 | 0.01 | 0.03 | 170 | 08 |
| 200 | 8.69 | 8.66 | 33.928 | 26.335 | 172.1 | 0.538 | 2.91 | 126.5 | 44.4 | 31.7 | 2.01 | 26.3 | 0.01 | 0.01 | 0.00 | 0.03 | 202 | 07 |
| 231 | 8.26 | 8.23 | 33.998 | 26.456 | 161.1 | 0.590 | 2.53 | 110.2 | 38.3 | 37.3 | 2.17 | 28.6 | 0.01 | 0.01 | | | 233 | 06 |
| 250 ISL | 8.02 D | 7.99 | 34.035 D | 26.521 | 155.1 | 0.625 | 2.26 | D 98.1 | D 33.9 | 40.6 | 2.28 | 29.9 | 0.01 | 0.01 | | | 252 | |
| 270 | 7.84 | 7.82 | 34.053 | 26.561 | 151.6 | 0.651 | 2.00 | 86.9 | 29.9 | 44.0 | 2.39 | 31.2 | 0.01 | 0.01 | | | 272 | 05 |
| 300 ISL | 7.49 D | 7.46 | 34.078 D | 26.632 | 145.2 | 0.700 | 1.69 | D 73.6 | D 25.1 | 49.9 | 2.55 | 33.3 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.21 | 7.18 | 34.084 | 26.676 | 141.2 | 0.724 | 1.46 | 63.3 | 21.5 | 53.8 | 2.65 | 34.6 | 0.01 | 0.00 | | | 323 | 04 |
| 381 | 6.65 | 6.62 | 34.135 | 26.794 | 130.6 | 0.807 | 0.95 | 41.5 | 13.9 | 63.6 | 2.89 | 37.3 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 6.33 D | 6.30 | 34.137 D | 26.838 | 126.5 | 0.837 | 0.83 | D 36.0 | D 12.0 | 67.0 | 2.95 | 38.0 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.10 | 6.07 | 34.185 | 26.905 | 120.5 | 0.880 | 0.57 | 24.7 | 8.2 | 74.3 | 3.07 | 39.5 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.87 D | 5.83 | 34.248 D | 26.986 | 113.6 | 0.958 | 0.36 | D 15.7 | D 5.2 | 80.4 | 3.17 | 40.2 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.80 | 5.76 | 34.257 | 27.001 | 112.2 | 0.967 | 0.34 | 14.7 | 4.8 | 81.8 | 3.19 | 40.4 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 24.9 N | 121 59.1 W | 08/04/2015 | 2304 | UTC | 3932 m | 350 13 kn | 340 03 07 | 1 | 1019.4 mb | 18.1 C | 13.6 C | 38 m | 4/8 | 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 | 17.44 | 17.44 | 33.416 D | 24.195 | 371.4 | 0.000 | 5.60 | 244.3 | 102.4 | 2.0 | 0.32 | 0.0 | 0.01 | 0.01 | 0.07 | 0.01 | 0 | |
| 2 | 17.44 | 17.44 | 33.419 | 24.198 | 371.3 | 0.007 | 5.60 | 244.3 | 102.4 | 2.0 | 0.32 | 0.0 | 0.01 | 0.01 | 0.07 | 0.01 | 2 | 22 |
| 10 | 17.35 | 17.35 | 33.397 | 24.203 | 371.0 | 0.037 | 5.58 | 243.4 | 101.8 | 2.0 | 0.32 | 0.0 | 0.01 | 0.01 | 0.08 | 0.02 | 10 | 20 |
| 10 | 17.35 | 17.35 | 33.399 | 24.205 | 370.9 | 0.038 | | | | | | | | | | | 10 | 21 |
| 20 ISL | 16.74 D | 16.73 | 33.248 D | 24.234 | 368.5 | 0.041 | 5.67 | D247.3 | D102.1 | 2.0 | 0.33 | 0.0 | 0.01 | 0.00 | 0.09 | 0.02 | 20 | |
| 26 | 16.61 | 16.61 | 33.241 | 24.258 | 366.4 | 0.096 | 5.67 | 247.1 | 101.8 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.09 | 0.02 | 26 | 19 |
| 30 ISL | 16.55 D | 16.54 | 33.201 D | 24.243 | 368.0 | 0.078 | 5.68 | D247.6 | D101.8 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 30 | |
| 40 | 16.25 | 16.24 | 33.147 | 24.270 | 365.7 | 0.147 | 5.72 | 249.4 | 101.9 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 40 | 18 |
| 49 | 16.21 | 16.20 | 33.143 | 24.276 | 365.5 | 0.180 | 5.73 | 249.7 | 102.0 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.15 | 0.03 | 49 | 17 |
| 50 ISL | 16.20 D | 16.19 | 33.138 D | 24.275 | 365.6 | 0.152 | 5.73 | D249.6 | D101.9 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.16 | 0.04 | 50 | |
| 63 | 15.15 | 15.14 | 33.100 | 24.479 | 346.5 | 0.230 | 5.81 | 253.4 | 101.3 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.34 | 0.09 | 63 | 16 |
| 75 ISL | 13.34 D | 13.33 | 32.985 D | 24.769 | 319.0 | 0.239 | 5.74 | D250.0 | D 96.3 | 3.7 | 0.53 | 1.7 | 0.09 | 0.00 | 0.51 | 0.22 | 76 | |
| 76 | 13.19 | 13.18 | 32.969 | 24.787 | 317.2 | 0.273 | 5.79 | 252.4 | 96.9 | 3.8 | 0.55 | 1.8 | 0.10 | 0.04 | 0.52 | 0.23 | 77 | 14 |
| 76 | 13.19 | 13.18 | 32.971 | 24.789 | 317.1 | 0.272 | | | | | | | | | | | 77 | 15 |
| 86 | 12.26 | 12.25 | 33.001 | 24.992 | 297.9 | 0.304 | 5.42 | 236.2 | 88.9 | 6.1 | 0.81 | 6.3 | 0.14 | 0.01 | 0.43 | 0.20 | 87 | 13 |
| 100 | 10.60 | 10.59 | 33.038 | 25.323 | 266.5 | 0.343 | 5.11 | 222.4 | 80.8 | 10.1 | 1.14 | 11.9 | 0.05 | 0.01 | 0.28 | 0.21 | 101 | 12 |
| 112 | 9.98 | 9.97 | 33.171 | 25.532 | 246.8 | 0.374 | 4.81 | 209.4 | 75.2 | 13.5 | 1.33 | 15.2 | 0.02 | 0.00 | 0.15 | 0.13 | 113 | 11 |
| 123 | 9.79 | 9.78 | 33.300 | 25.664 | 234.4 | 0.401 | 4.57 | 199.0 | 71.2 | 15.1 | 1.40 | 16.6 | 0.02 | 0.00 | 0.09 | 0.09 | 124 | 10 |
| 125 ISL | 9.72 D | 9.71 | 33.354 D | 25.718 | 229.3 | 0.359 | 4.46 | D194.2 | D 69.4 | 15.6 | 1.42 | 17.0 | 0.02 | 0.00 | 0.08 | 0.09 | 126 | |
| 140 | 9.61 | 9.59 | 33.479 | 25.835 | 218.5 | 0.439 | 4.00 | 174.1 | 62.1 | 19.1 | 1.60 | 19.9 | 0.02 | 0.00 | 0.03 | 0.06 | 141 | 09 |
| 150 ISL | 9.44 D | 9.42 | 33.609 D | 25.965 | 206.4 | 0.414 | 3.63 | D157.8 | D 56.2 | 21.3 | 1.67 | 21.1 | 0.01 | 0.00 | 0.03 | 0.06 | 151 | |
| 170 | 9.00 | 8.98 | 33.754 | 26.149 | 189.2 | 0.500 | 3.49 | 151.7 | 53.5 | 25.7 | 1.80 | 23.7 | 0.01 | 0.00 | 0.01 | 0.05 | 171 | 08 |
| 200 | 8.66 | 8.64 | 33.896 | 26.314 | 174.0 | 0.555 | 3.02 | 131.3 | 46.0 | 31.0 | 1.98 | 26.4 | 0.01 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 231 | 8.23 | 8.21 | 33.976 | 26.442 | 162.3 | 0.607 | 2.82 | 122.8 | 42.6 | 35.8 | 2.07 | 27.9 | 0.01 | 0.01 | | | 233 | 06 |
| 250 ISL | 7.84 D | 7.82 | 34.002 D | 26.521 | 155.0 | 0.592 | 2.62 | D114.1 | D 39.3 | 39.0 | 2.16 | 29.2 | 0.01 | 0.00 | | | 252 | |
| 271 | 7.69 | 7.66 | 34.004 | 26.545 | 153.1 | 0.670 | 2.42 | 105.3 | 36.1 | 42.6 | 2.26 | 30.5 | 0.01 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.42 D | 7.39 | 34.054 D | 26.624 | 146.0 | 0.668 | 1.87 | D 81.5 | D 27.8 | 48.5 | 2.47 | 32.9 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.23 | 7.20 | 34.070 | 26.663 | 142.5 | 0.742 | 1.53 | 66.6 | 22.6 | 52.5 | 2.61 | 34.5 | 0.01 | 0.00 | | | 323 | 04 |
| 382 | 6.48 | 6.45 | 34.097 | 26.787 | 131.2 | 0.827 | 1.07 | 46.6 | 15.6 | 64.2 | 2.85 | 37.8 | 0.01 | 0.00 | | | 385 | 03 |
| 400 ISL | 6.40 D | 6.36 | 34.128 D | 26.822 | 128.1 | 0.806 | 0.91 | D 39.5 | D 13.1 | 67.4 | 2.92 | 38.4 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.06 | 6.02 | 34.175 | 26.904 | 120.6 | 0.901 | 0.59 | 25.6 | 8.5 | 74.7 | 3.08 | 39.8 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.86 D | 5.82 | 34.244 D | 26.984 | 113.7 | 0.927 | 0.37 | D 16.0 | D 5.3 | 80.7 | 3.17 | 40.4 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.80 | 5.75 | 34.258 | 27.003 | 112.0 | 0.986 | 0.34 | 14.7 | 4.8 | 82.1 | 3.19 | 40.6 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 5.3 N | 122 40.5 W | 08/04/2015 | 1721 | UTC | 4000 m | 020 11 kn | 330 03 07 | 1 | 1021.0 mb | 17.0 C | 13.9 C | 28 m | 4/8 | AC | 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 | 15.90 | 15.90 | 33.018 D | 24.248 | 366.4 | 0.000 | 5.77 | 251.6 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 0 | |
| 1 A | 15.90 | 15.90 | 33.018 | 24.248 | 366.5 | 0.004 | 5.77 | 251.6 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 1 | 24 |
| 10 | 15.88 | 15.88 | 33.018 | 24.251 | 366.4 | 0.037 | 5.80 | 252.7 | 102.4 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 10 | 22 |
| 17 A | 15.86 | 15.86 | 33.019 | 24.257 | 366.1 | 0.062 | 5.79 | 252.2 | 102.2 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 17 | 21 |
| 20 ISL | 15.85 D | 15.84 | 33.017 D | 24.259 | 366.0 | 0.061 | 5.81 | D253.5 | D102.7 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 20 | |
| 23 A | 15.76 | 15.76 | 33.012 | 24.275 | 364.6 | 0.084 | 5.79 | 252.4 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.13 | 0.03 | 23 | 20 |
| 30 ISL | 15.60 D | 15.59 | 32.997 D | 24.300 | 362.4 | 0.098 | 5.86 | D255.3 | D102.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.14 | 0.03 | 30 | |
| 40 A | 15.58 | 15.58 | 32.997 | 24.305 | 362.4 | 0.146 | 5.80 | 253.1 | 102.0 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.16 | 0.04 | 40 | 18 |
| 50 ISL | 15.58 D | 15.57 | 33.001 D | 24.308 | 362.4 | 0.171 | 5.83 | D254.2 | D102.4 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.21 | 0.06 | 50 | |
| 51 | 15.58 | 15.57 | 33.003 | 24.311 | 362.1 | 0.186 | 5.80 | 252.8 | 101.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.21 | 0.06 | 51 | 17 |
| 63 | 15.51 | 15.50 | 32.997 | 24.322 | 361.5 | 0.229 | 5.81 | 253.3 | 101.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.31 | 0.11 | 63 | 16 |
| 74 A | 14.50 | 14.49 | 33.084 | 24.608 | 334.5 | 0.267 | 5.78 | 252.1 | 99.5 | 2.9 | 0.41 | 0.3 | 0.04 | 0.01 | 0.43 | 0.35 | 75 | 15 |
| 75 ISL | 14.52 D | 14.51 | 33.128 D | 24.637 | 331.7 | 0.260 | 5.72 | D249.4 | D 98.4 | 3.0 | 0.43 | 0.6 | 0.05 | 0.00 | 0.42 | 0.35 | 76 | |
| 75 | 14.52 | 14.51 | 33.079 | 24.600 | 335.3 | 0.270 | | | | | | | | | | | 76 | 19 |
| 84 | 12.79 | 12.78 | 33.087 | 24.957 | 301.2 | 0.299 | 5.62 | 244.8 | 93.3 | 4.3 | 0.59 | 2.8 | 0.10 | 0.00 | 0.35 | 0.36 | 85 | 14 |
| 92 A | 12.46 | 12.44 | 33.229 | 25.133 | 284.8 | 0.323 | 5.45 | 237.4 | 89.9 | 4.9 | 0.61 | 3.9 | 0.07 | 0.00 | 0.29 | 0.33 | 93 | 13 |
| 100 | 12.07 | 12.06 | 33.208 | 25.190 | 279.5 | 0.345 | 5.37 | 234.0 | 87.9 | 5.9 | 0.73 | 5.8 | 0.05 | 0.00 | 0.28 | 0.23 | 101 | 12 |
| 110 | 11.06 | 11.04 | 33.202 | 25.371 | 262.2 | 0.373 | 5.25 | 228.5 | 84.0 | 7.5 | 0.87 | 8.2 | 0.04 | 0.00 | 0.22 | 0.18 | 111 | 11 |
| 125 | 10.13 | 10.12 | 33.261 | 25.577 | 242.8 | 0.410 | 4.88 | 212.3 | 76.5 | 12.0 | 1.19 | 13.5 | 0.02 | 0.00 | 0.10 | 0.13 | 126 | 10 |
| 139 | 9.68 | 9.67 | 33.413 | 25.771 | 224.5 | 0.443 | 4.35 | 189.3 | 67.6 | 16.9 | 1.47 | 17.9 | 0.02 | 0.00 | 0.04 | 0.05 | 140 | 09 |
| 150 ISL | 9.50 D | 9.49 | 33.521 D | 25.885 | 213.9 | 0.442 | 4.17 | D181.4 | D 64.6 | 19.1 | 1.56 | 19.4 | 0.02 | 0.00 | 0.03 | 0.04 | 151 | |
| 170 | 9.26 | 9.24 | 33.682 | 26.050 | 198.6 | 0.509 | 3.66 | 159.2 | 56.5 | 23.2 | 1.73 | 22.2 | 0.01 | 0.00 | 0.00 | 0.03 | 171 | 08 |
| 200 | 8.79 | 8.77 | 33.899 D | 26.296 | 175.8 | 0.540 | 3.18 | D138.2 | D 48.6 | | | | | | | | 202 | 07 |
| 229 | 8.38 | 8.35 | 33.963 | 26.411 | 165.3 | 0.614 | 2.91 | 126.6 | 44.1 | 33.8 | 2.02 | 27.1 | 0.01 | 0.00 | | | 231 | 06 |
| 250 ISL | 8.16 D | 8.14 | 34.011 D | 26.481 | 159.0 | 0.624 | 2.58 | D112.1 | D 38.9 | 38.0 | 2.18 | 28.9 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.94 | 7.91 | 34.042 | 26.538 | 153.8 | 0.680 | 2.13 | 92.8 | 32.0 | 42.0 | 2.33 | 30.7 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.61 D | 7.58 | 34.081 D | 26.618 | 146.6 | 0.701 | 1.80 | D 78.1 | D 26.8 | 48.2 | 2.52 | 32.8 | 0.01 | 0.00 | | | 302 | |
| 321 | 7.37 | 7.34 | 34.111 | 26.675 | 141.4 | 0.755 | 1.37 | 59.6 | 20.3 | 52.5 | 2.66 | 34.3 | 0.01 | 0.01 | | | 324 | 04 |
| 381 | 6.80 | 6.76 | 34.149 | 26.786 | 131.5 | 0.837 | 0.92 | 39.9 | 13.4 | 62.8 | 2.90 | 37.2 | 0.01 | 0.14 | | | 384 | 03 |
| 400 ISL | 6.69 D | 6.65 | 34.174 D | 26.821 | 128.5 | 0.839 | 0.85 | D 36.8 | D 12.4 | 65.4 | 2.95 | 37.8 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.45 | 6.41 | 34.213 | 26.883 | 123.0 | 0.912 | 0.55 | 24.0 | 8.0 | 70.8 | 3.06 | 38.9 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.07 D | 6.03 | 34.243 D | 26.957 | 116.5 | 0.962 | 0.51 | D 22.0 | D 7.3 | | | | | | | | 504 | |
| 515 | 5.99 | 5.95 | 34.257 | 26.978 | 114.6 | 1.001 | 0.38 | 16.3 | 5.4 | | | | | | | | 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 1504 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 19.8 W | 08/04/2015 | 0916 | UTC | 4008 m | 020 10 kn | | | 1019.5 mb | 15.9 C | 12.7 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 | 16.31 | 16.31 | 33.083 D | 24.203 | 370.7 | 0.000 | 5.72 | 249.3 | 102.0 | 1.9 | 0.35 | 0.0 | 0.02 | 0.00 | 0.10 | 0.03 | 0 | |
| 2 | 16.31 | 16.31 | 33.083 | 24.204 | 370.7 | 0.007 | 5.72 | 249.3 | 102.0 | 1.9 | 0.35 | 0.0 | 0.02 | 0.00 | 0.10 | 0.03 | 2 | 20 |
| 10 | 16.34 | 16.34 | 33.104 | 24.214 | 370.0 | 0.037 | 5.70 | 248.7 | 101.8 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 10 | 19 |
| 20 ISL | 16.23 D | 16.22 | 33.096 D | 24.235 | 368.3 | 0.074 | 5.74 | D250.1 | D102.1 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 20 | |
| 26 | 16.17 | 16.17 | 33.092 | 24.245 | 367.6 | 0.096 | 5.72 | 249.5 | 101.8 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.13 | 0.04 | 26 | 18 |
| 30 ISL | 16.06 D | 16.05 | 33.077 D | 24.259 | 366.4 | 0.111 | 5.75 | D250.6 | D102.0 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.13 | 0.04 | 30 | |
| 40 | 15.84 | 15.84 | 33.059 | 24.294 | 363.4 | 0.147 | 5.78 | 251.9 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 40 | 17 |
| 50 | 15.83 | 15.83 | 33.068 | 24.303 | 362.9 | 0.184 | 5.77 | 251.7 | 102.0 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 50 | 16 |
| 63 | 15.84 | 15.83 | 33.077 | 24.311 | 362.5 | 0.231 | 5.77 | 251.4 | 101.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.06 | 63 | 15 |
| 75 | 15.57 | 15.55 | 33.073 | 24.369 | 357.4 | 0.274 | 5.77 | 251.6 | 101.4 | 2.1 | 0.35 | 0.1 | 0.02 | 0.00 | 0.34 | 0.15 | 76 | 14 |
| 88 | 14.08 | 14.07 | 33.039 | 24.662 | 329.7 | 0.319 | 5.77 | 251.5 | 98.3 | 2.9 | 0.47 | 0.9 | 0.12 | 0.01 | 0.59 | 0.47 | 89 | 13 |
| 100 | 12.94 | 12.92 | 33.069 | 24.916 | 305.7 | 0.357 | 5.55 | 241.9 | 92.4 | 4.7 | 0.66 | 3.8 | 0.14 | 0.00 | 0.33 | 0.38 | 101 | 12 |
| 113 | 11.70 | 11.68 | 33.114 | 25.187 | 279.9 | 0.395 | 5.31 | 231.3 | 86.1 | 6.9 | 0.87 | 7.6 | 0.07 | 0.00 | 0.24 | 0.19 | 114 | 11 |
| 124 | 10.69 | 10.67 | 33.212 | 25.444 | 255.5 | 0.424 | 4.79 | 208.4 | 76.0 | 11.7 | 1.26 | 13.8 | 0.03 | 0.00 | 0.15 | 0.18 | 125 | 10 |
| 125 ISL | 10.58 D | 10.57 | 33.213 D | 25.463 | 253.8 | 0.429 | 4.84 | D210.9 | D 76.7 | 11.8 | 1.27 | 13.9 | 0.03 | 0.00 | 0.14 | 0.18 | 126 | |
| 140 | 9.95 | 9.93 | 33.297 | 25.637 | 237.4 | 0.464 | 4.63 | 201.7 | 72.4 | 13.8 | 1.36 | 15.6 | 0.03 | 0.00 | 0.10 | 0.12 | 141 | 09 |
| 150 ISL | 9.76 D | 9.74 | 33.359 D | 25.717 | 229.9 | 0.489 | 4.57 | D199.2 | D 71.2 | 16.4 | 1.47 | 17.5 | 0.02 | 0.00 | 0.07 | 0.09 | 151 | |
| 169 | 9.28 | 9.26 | 33.597 | 25.981 | 205.2 | 0.528 | 3.86 | 168.1 | 59.6 | 21.3 | 1.68 | 21.2 | 0.02 | 0.00 | 0.01 | 0.03 | 170 | 08 |
| 200 | 8.89 | 8.87 | 33.791 | 26.196 | 185.4 | 0.588 | 3.48 | 151.3 | 53.2 | 26.5 | 1.83 | 24.1 | 0.02 | 0.00 | 0.00 | 0.02 | 202 | 07 |
| 230 | 8.55 | 8.52 | 33.927 | 26.356 | 170.6 | 0.642 | 3.23 | 140.6 | 49.1 | 31.0 | 1.92 | 25.8 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.26 D | 8.23 | 33.996 D | 26.455 | 161.5 | 0.678 | 2.62 | D114.0 | D 39.6 | 36.0 | 2.12 | 28.1 | 0.02 | 0.00 | | | 252 | |
| 271 | 7.88 | 7.86 | 34.027 | 26.535 | 154.1 | 0.708 | 2.21 | 96.1 | 33.1 | 41.4 | 2.33 | 30.6 | 0.02 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.35 D | 7.32 | 34.037 D | 26.620 | 146.2 | 0.756 | 2.00 | D 87.1 | D 29.7 | 46.9 | 2.47 | 32.5 | 0.02 | 0.00 | | | 302 | |
| 321 | 7.30 | 7.27 | 34.055 | 26.641 | 144.6 | 0.782 | 1.71 | 74.3 | 25.3 | 50.9 | 2.57 | 33.9 | 0.01 | 0.00 | | | 324 | 04 |
| 382 | 6.58 | 6.54 | 34.099 | 26.775 | 132.3 | 0.867 | 1.08 | 47.0 | 15.7 | 62.6 | 2.85 | 37.5 | 0.01 | 0.00 | | | 385 | 03 |
| 400 ISL | 6.50 D | 6.47 | 34.129 D | 26.809 | 129.3 | 0.895 | 0.92 | D 39.9 | D 13.3 | 65.5 | 2.92 | 38.1 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.19 | 6.16 | 34.167 | 26.880 | 123.0 | 0.941 | 0.66 | 28.8 | 9.6 | 71.8 | 3.06 | 39.4 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.96 D | 5.91 | 34.240 D | 26.969 | 115.2 | 1.018 | 0.41 | D 17.8 | D 5.9 | 78.8 | 3.17 | 40.3 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.87 | 5.82 | 34.249 | 26.987 | 113.6 | 1.029 | 0.38 | 16.3 | 5.4 | 80.4 | 3.19 | 40.5 | 0.01 | 0.00 | | | 518 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 25.0 N | 124 0.0 W | 08/04/2015 | 0235 | UTC | 4266 m | 350 11 kn | 340 03 06 | 1 | 1017.8 mb | 17.2 C | 13.8 C | | 1/8 | 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 | 16.94 | 16.94 | 33.165 D | 24.121 | 378.5 | 0.000 | 5.66 | 246.7 | 102.2 | 1.8 | 0.33 | 0.0 | 0.01 | 0.01 | 0.08 | 0.02 | 0 | |
| 2 | 16.94 | 16.94 | 33.164 | 24.121 | 378.6 | 0.008 | 5.66 | 246.7 | 102.2 | 1.8 | 0.33 | 0.0 | 0.01 | 0.01 | 0.08 | 0.02 | 2 | 22 |
| 10 | 16.92 | 16.92 | 33.164 | 24.126 | 378.4 | 0.038 | 5.68 | 247.8 | 102.6 | 1.8 | 0.32 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 10 | 20 |
| 10 | 16.92 | 16.92 | 33.164 | 24.126 | 378.4 | 0.037 | | | | | | | | | | | 10 | 21 |
| 20 ISL | 16.44 D | 16.44 | 33.091 D | 24.182 | 373.4 | 0.057 | 5.73 | D250.0 | D102.5 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.09 | 0.03 | 20 | |
| 25 | 16.36 | 16.36 | 33.075 | 24.188 | 373.0 | 0.094 | 5.72 | 249.4 | 102.1 | 1.8 | 0.34 | 0.0 | 0.01 | 0.00 | 0.09 | 0.03 | 25 | 19 |
| 30 ISL | 16.33 D | 16.33 | 33.071 D | 24.192 | 372.8 | 0.095 | 5.75 | D250.8 | D102.6 | 1.8 | 0.34 | 0.0 | 0.00 | 0.00 | 0.10 | 0.03 | 30 | |
| 40 | 16.30 | 16.29 | 33.067 | 24.197 | 372.6 | 0.150 | 5.72 | 249.4 | 102.0 | 1.8 | 0.34 | 0.0 | 0.00 | 0.01 | 0.11 | 0.03 | 40 | 18 |
| 50 | 16.28 | 16.28 | 33.067 | 24.201 | 372.6 | 0.187 | 5.73 | 249.9 | 102.2 | 1.8 | 0.34 | 0.0 | 0.00 | 0.01 | 0.12 | 0.03 | 50 | 17 |
| 62 | 16.29 | 16.28 | 33.068 | 24.203 | 372.9 | 0.232 | 5.72 | 249.3 | 101.9 | 1.8 | 0.34 | 0.0 | 0.01 | 0.00 | 0.16 | 0.05 | 62 | 16 |
| 75 | 16.33 | 16.32 | 33.080 | 24.202 | 373.5 | 0.280 | 5.71 | 249.2 | 101.9 | 1.8 | 0.33 | 0.0 | 0.01 | 0.00 | 0.19 | 0.05 | 76 | 15 |
| 87 | 16.05 | 16.04 | 33.092 | 24.276 | 366.8 | 0.325 | 5.69 | 248.2 | 101.0 | 1.8 | 0.33 | 0.0 | 0.00 | 0.01 | 0.20 | 0.07 | 88 | 14 |
| 100 | 14.29 | 14.28 | 33.187 | 24.733 | 323.4 | 0.370 | 5.72 | 249.3 | 98.0 | 3.2 | 0.43 | 0.7 | 0.05 | 0.06 | 0.27 | 0.22 | 101 | 12 |
| 100 | 14.29 | 14.28 | 33.186 | 24.732 | 323.5 | 0.371 | | | | | | | | | | | 101 | 13 |
| 112 | 12.73 | 12.71 | 33.058 | 24.949 | 302.8 | 0.407 | 5.53 | 241.1 | 91.7 | 5.0 | 0.69 | 4.3 | 0.12 | 0.01 | 0.34 | 0.32 | 113 | 11 |
| 125 | 11.47 | 11.45 | 33.095 | 25.214 | 277.7 | 0.445 | 5.31 | 231.4 | 85.7 | 6.9 | 0.89 | 7.6 | 0.07 | 0.00 | 0.24 | 0.21 | 126 | 10 |
| 140 | 10.56 | 10.55 | 33.169 | 25.432 | 257.0 | 0.485 | 5.08 | 221.4 | 80.5 | 10.1 | 1.12 | 11.7 | 0.03 | 0.00 | 0.15 | 0.14 | 141 | 09 |
| 150 ISL | 10.22 D | 10.20 | 33.251 D | 25.555 | 245.5 | 0.475 | 4.88 | D212.6 | D 76.8 | 12.5 | 1.24 | 13.9 | 0.03 | 0.00 | 0.11 | 0.11 | 151 | |
| 170 | 9.69 | 9.67 | 33.456 | 25.804 | 222.2 | 0.557 | 4.26 | 185.3 | 66.2 | 17.3 | 1.49 | 18.2 | 0.01 | 0.00 | 0.04 | 0.05 | 171 | 08 |
| 200 | 8.92 | 8.90 | 33.730 | 26.143 | 190.4 | 0.619 | 3.70 | 161.1 | 56.7 | 24.1 | 1.74 | 22.5 | 0.01 | 0.00 | 0.00 | 0.02 | 202 | 07 |
| 230 | 8.60 | 8.58 | 33.913 | 26.337 | 172.5 | 0.673 | 2.99 | 130.1 | 45.5 | 31.5 | 2.01 | 26.6 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.48 D | 8.45 | 33.950 D | 26.385 | 168.3 | 0.672 | 2.80 | D121.7 | D 42.5 | 35.2 | 2.12 | 28.1 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.07 | 8.04 | 33.998 | 26.485 | 158.9 | 0.740 | 2.45 | 106.6 | 36.9 | 38.9 | 2.22 | 29.6 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.53 D | 7.50 | 34.052 D | 26.606 | 147.7 | 0.752 | 2.01 | D 87.2 | D 29.8 | 45.9 | 2.44 | 32.1 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.37 | 7.34 | 34.069 | 26.642 | 144.5 | 0.815 | 1.65 | 71.6 | 24.4 | 50.5 | 2.58 | 33.8 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.85 | 6.81 | 34.127 | 26.761 | 133.9 | 0.899 | 1.06 | 46.1 | 15.5 | 60.1 | 2.83 | 36.6 | 0.03 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.71 D | 6.67 | 34.146 D | 26.796 | 130.8 | 0.892 | 0.94 | D 40.9 | D 13.7 | 63.4 | 2.89 | 37.3 | 0.02 | 0.00 | | | 403 | |
| 440 | 6.28 | 6.24 | 34.164 | 26.867 | 124.3 | 0.976 | 0.76 | 33.0 | 11.0 | 70.1 | 3.02 | 38.7 | 0.01 | 0.02 | | | 444 | 02 |
| 500 ISL | 5.96 D | 5.92 | 34.211 D | 26.945 | 117.5 | 1.017 | 0.58 | D 25.1 | D 8.3 | 77.3 | 3.12 | 39.8 | 0.00 | 0.00 | | | 504 | |
| 515 | 5.87 | 5.83 | 34.222 | 26.966 | 115.7 | 1.066 | 0.49 | 21.1 | 7.0 | 79.1 | 3.15 | 40.0 | 0.00 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 14.7 N | 117 27.9 W | 04/04/2015 | 2344 | UTC | 26 m | 350 07 kn | 300 02 06 | 1 | 1010.6 mb | 19.9 C | 17.8 C | | 2/8 | ST | 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 | 18.42 | 18.42 | 33.310 D | 23.876 | 401.9 | 0.000 | 5.94 | 259.1 | 110.5 | 2.4 | 0.25 | 0.0 | 0.01 | 0.00 | 0.43 | 0.07 | 0 | |
| 2 | 18.42 | 18.42 | 33.310 | 23.876 | 402.0 | 0.008 | 5.94 | 259.1 | 110.5 | 2.4 | 0.25 | 0.0 | 0.01 | 0.00 | 0.43 | 0.07 | 2 | 04 |
| 4 | 18.32 | 18.32 | 33.308 | 23.899 | 399.8 | 0.016 | 5.94 | 259.2 | 110.3 | 2.4 | 0.25 | 0.0 | 0.01 | 0.00 | 0.43 | 0.11 | 4 | 03 |
| 10 | 17.43 | 17.43 | 33.296 | 24.106 | 380.3 | 0.039 | 6.05 | 263.6 | 110.3 | 2.8 | 0.27 | 0.0 | 0.03 | 0.00 | 0.68 | 0.26 | 10 | 02 |
| 17 | 15.42 | 15.42 | 33.258 | 24.539 | 339.2 | 0.065 | 6.15 | 267.9 | 107.8 | 4.4 | 0.38 | 0.4 | 0.09 | 0.03 | 1.68 | 0.59 | 17 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 57.1 N | 117 18.2 W | 04/04/2015 | 1920 | UTC | 61 m | 240 07 kn | 280 02 07 | 1 | 1013.1 mb | 19.9 C | 18.4 C | 13 m | 3/8 | 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 | 18.62 | 18.62 | 33.326 D | 23.838 | 405.5 | 0.000 | 5.94 | 259.1 | 111.0 | 1.7 | 0.22 | 0.0 | 0.02 | 0.16 | 0.29 | 0.11 | 0 | |
| 2 A | 18.62 | 18.62 | 33.323 | 23.836 | 405.8 | 0.008 | 5.94 | 259.1 | 111.0 | 1.7 | 0.22 | 0.0 | 0.02 | 0.16 | 0.29 | 0.11 | 2 | 10 |
| 8 A | 18.06 | 18.06 | 33.316 | 23.970 | 393.2 | 0.032 | 6.03 | 262.9 | 111.4 | 1.7 | 0.21 | 0.0 | 0.01 | 0.00 | 0.41 | 0.08 | 8 | 09 |
| 10 ISL | 17.03 D | 17.03 | 33.272 D | 24.184 | 372.9 | 0.040 | 6.54 | 285.3 | 118.5 | 2.6 | 0.22 | 0.0 | 0.01 | 0.00 | 0.85 | 0.23 | 10 | |
| 11 A | 16.37 | 16.37 | 33.255 | 24.323 | 359.6 | 0.044 | 6.80 | 296.4 | 121.5 | 3.1 | 0.22 | 0.0 | 0.02 | 0.08 | 1.07 | 0.31 | 11 | 07 |
| 11 | 16.37 | 16.37 | 33.253 | 24.322 | 359.7 | 0.043 | | | | | | | | | | | 11 | 08 |
| 19 A | 12.96 | 12.96 | 33.255 | 25.050 | 290.5 | 0.070 | 6.36 | 277.0 | 106.0 | 5.3 | 0.44 | 0.1 | 0.03 | 0.09 | 3.09 | 1.32 | 19 | 05 |
| 19 | 12.96 | 12.96 | 33.255 | 25.051 | 290.5 | 0.069 | | | | | | | | | | | 19 | 06 |
| 20 ISL | 12.83 D | 12.82 | 33.267 D | 25.087 | 287.1 | 0.057 | 6.13 | 267.1 | 102.0 | 6.0 | 0.53 | 1.6 | 0.11 | 0.00 | 2.83 | 1.24 | 20 | |
| 27 | 11.84 | 11.84 | 33.307 | 25.306 | 266.4 | 0.092 | 4.55 | 198.1 | 74.1 | 11.2 | 1.14 | 12.7 | 0.66 | 0.00 | 0.98 | 0.69 | 27 | 04 |
| 30 ISL | 11.71 D | 11.70 | 33.325 D | 25.345 | 262.8 | 0.084 | 4.51 | 196.2 | 73.2 | 11.4 | 1.16 | 12.9 | 0.51 | 0.00 | 0.88 | 0.63 | 30 | |
| 35 A | 11.41 | 11.41 | 33.346 | 25.416 | 256.1 | 0.113 | 4.43 | 193.1 | 71.6 | 11.7 | 1.20 | 13.2 | 0.27 | 0.15 | 0.71 | 0.54 | 35 | 03 |
| 45 A | 11.01 | 11.01 | 33.470 | 25.584 | 240.4 | 0.138 | 4.10 | 178.6 | 65.7 | 15.7 | 1.44 | 16.9 | 0.07 | 0.02 | 0.41 | 0.38 | 45 | 02 |
| 50 ISL | 10.87 D | 10.87 | 33.517 D | 25.646 | 234.6 | 0.134 | 3.84 | 167.2 | 61.3 | 16.9 | 1.50 | 17.8 | 0.07 | 0.03 | 0.33 | 0.32 | 50 | |
| 56 | 10.72 | 10.72 | 33.551 | 25.699 | 229.7 | 0.163 | 3.52 | 153.4 | 56.1 | 18.3 | 1.58 | 18.9 | 0.07 | 0.04 | 0.22 | 0.24 | 56 | 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;

| 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 23.8 W | 05/04/2015 | 0225 | UTC | 600 m | 220 04 kn | 310 02 06 | 1 | 1011.0 mb | 19.2 C | 17.0 C | | 2/8 | ST | 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 | 19.12 | 19.12 | 33.333 D | 23.718 | 416.9 | 0.000 | 6.12 | 266.9 | 115.4 | 0.5 | 0.13 | 0.1 | 0.00 | 0.00 | 0.36 | 0.13 | 0 | |
| 2 | 19.12 | 19.12 | 33.333 | 23.718 | 417.0 | 0.008 | 6.12 | 266.9 | 115.4 | 0.5 | 0.13 | 0.1 | 0.00 | 0.00 | 0.36 | 0.13 | 2 | 20 |
| 10 | 17.92 | 17.92 | 33.314 | 24.003 | 390.1 | 0.041 | 6.37 | 277.6 | 117.3 | 0.4 | 0.15 | 0.1 | 0.02 | 0.05 | 0.45 | 0.17 | 10 | 19 |
| 20 | 14.11 | 14.11 | 33.221 | 24.791 | 315.3 | 0.076 | 6.43 | 280.2 | 109.8 | 2.6 | 0.37 | 0.1 | 0.02 | 0.02 | 0.39 | 0.22 | 20 | 18 |
| 29 | 11.81 | 11.81 | 33.211 | 25.237 | 273.0 | 0.102 | 5.08 | 221.4 | 82.7 | 8.1 | 0.96 | 8.5 | 0.52 | 0.11 | 0.81 | 0.44 | 29 | 17 |
| 30 ISL | 11.98 D | 11.97 | 33.210 D | 25.205 | 276.0 | 0.106 | 5.16 | D224.7 D | 84.2 | 8.4 | 0.98 | 8.8 | 0.48 | 0.00 | 0.78 | 0.43 | 30 | |
| 40 | 11.25 | 11.25 | 33.305 | 25.413 | 256.5 | 0.132 | 4.61 | 200.7 | 74.1 | 11.4 | 1.19 | 12.7 | 0.17 | 0.00 | 0.48 | 0.31 | 40 | 16 |
| 50 | 10.88 | 10.88 | 33.340 | 25.506 | 247.8 | 0.157 | 4.52 | 196.7 | 72.1 | 12.6 | 1.27 | 13.9 | 0.10 | 0.03 | 0.32 | 0.26 | 50 | 15 |
| 60 | 10.29 | 10.28 | 33.439 | 25.687 | 230.9 | 0.181 | 4.23 | 184.2 | 66.7 | 15.6 | 1.41 | 16.4 | 0.03 | 0.06 | 0.19 | 0.19 | 60 | 14 |
| 70 | 10.07 | 10.06 | 33.578 | 25.833 | 217.2 | 0.203 | 3.74 | 163.0 | 58.8 | 19.1 | 1.60 | 19.4 | 0.03 | 0.00 | 0.07 | 0.14 | 71 | 13 |
| 75 ISL | 10.02 D | 10.01 | 33.633 D | 25.885 | 212.4 | 0.215 | 3.64 | D158.2 D | 57.0 | 20.3 | 1.66 | 20.2 | 0.02 | 0.00 | 0.06 | 0.12 | 76 | |
| 85 | 9.85 | 9.84 | 33.719 | 25.980 | 203.6 | 0.235 | 3.30 | 143.5 | 51.6 | 22.8 | 1.79 | 21.7 | 0.01 | 0.14 | 0.03 | 0.08 | 86 | 12 |
| 100 | 9.74 | 9.73 | 33.820 D | 26.078 | 194.6 | 0.266 | 2.97 | 129.2 | 46.4 | 25.4 | 1.92 | 23.3 | 0.02 | 0.01 | 0.01 | 0.06 | 101 | 11 |
| 120 | 9.66 | 9.65 | 33.922 | 26.172 | 186.2 | 0.303 | 2.56 | 111.6 | 40.0 | 28.3 | 2.06 | 25.0 | 0.02 | 0.00 | 0.01 | 0.06 | 121 | 10 |
| 125 ISL | 9.61 D | 9.59 | 33.940 D | 26.195 | 184.1 | 0.313 | 2.58 | D112.3 D | 40.2 | 29.0 | 2.09 | 25.3 | 0.02 | 0.00 | 0.01 | 0.06 | 126 | |
| 140 | 9.47 | 9.45 | 33.985 | 26.253 | 178.8 | 0.339 | 2.34 | 102.0 | 36.4 | 30.9 | 2.16 | 26.3 | 0.02 | 0.01 | 0.01 | 0.07 | 141 | 09 |
| 150 ISL | 9.45 D | 9.44 | 34.020 D | 26.283 | 176.2 | 0.358 | 2.27 | D 98.7 D | 35.2 | 32.1 | 2.21 | 26.8 | 0.02 | 0.00 | 0.01 | 0.06 | 151 | |
| 170 | 9.33 | 9.31 | 34.083 | 26.353 | 170.0 | 0.392 | 1.93 | 83.9 | 29.9 | 34.5 | 2.32 | 27.9 | 0.02 | 0.00 | 0.01 | 0.04 | 171 | 08 |
| 200 | 9.22 | 9.20 | 34.155 | 26.428 | 163.6 | 0.442 | 1.61 | 69.9 | 24.8 | 37.5 | 2.43 | 29.0 | 0.02 | 0.00 | 0.00 | 0.04 | 202 | 07 |
| 229 | 8.72 | 8.70 | 34.140 | 26.496 | 157.5 | 0.488 | 1.70 | 74.1 | 26.0 | 40.3 | 2.45 | 30.0 | 0.01 | 0.02 | | | 231 | 06 |
| 250 ISL | 8.85 D | 8.82 | 34.218 D | 26.539 | 154.0 | 0.524 | 1.39 | D 60.4 D | 21.3 | 42.4 | 2.53 | 30.7 | 0.01 | 0.02 | | | 252 | |
| 270 | 8.53 | 8.50 | 34.197 | 26.572 | 151.0 | 0.552 | 1.32 | D 57.5 D | 20.1 | 44.5 | 2.60 | 31.3 | 0.01 | 0.02 | | | 272 | 05 |
| 300 ISL | 8.36 D | 8.33 | 34.233 D | 26.627 | 146.4 | 0.599 | 1.13 | D 49.1 D | 17.1 | 47.6 | 2.68 | 32.3 | 0.02 | 0.00 | | | 302 | |
| 320 | 8.15 | 8.12 | 34.229 | 26.655 | 143.9 | 0.626 | 1.03 | 44.6 | 15.5 | 49.6 | 2.74 | 33.0 | 0.02 | 0.00 | | | 323 | 04 |
| 380 | 7.59 | 7.55 | 34.241 | 26.749 | 135.8 | 0.710 | 0.78 | 33.9 | 11.6 | 56.9 | 2.90 | 35.1 | 0.02 | 0.01 | | | 383 | 03 |
| 400 ISL | 7.45 D | 7.41 | 34.255 D | 26.780 | 133.1 | 0.740 | 0.74 | D 32.1 D | 11.0 | 60.1 | 2.96 | 35.9 | 0.02 | 0.00 | | | 403 | |
| 440 | 6.91 | 6.87 | 34.272 | 26.869 | 124.8 | 0.789 | 0.50 | 21.6 | 7.3 | 66.4 | 3.08 | 37.5 | 0.02 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.54 D | 6.49 | 34.309 D | 26.949 | 117.9 | 0.866 | 0.38 | D 16.4 D | 5.5 | 72.9 | 3.17 | 38.7 | 0.02 | 0.00 | | | 504 | |
| 517 | 6.45 | 6.40 | 34.311 | 26.963 | 116.7 | 0.882 | 0.35 | 15.2 | 5.1 | 74.8 | 3.19 | 39.0 | 0.02 | 0.00 | | | 521 | 01 |

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



| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 50.5 N | 117 32.2 W | 05/04/2015 | 0513 | UTC | 865 m | 330 01 kn | | | 1011.8 mb | 18.0 C | 16.0 C | | | | 005 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 18.99 | 18.99 | 33.343 D | 23.757 | 413.2 | 0.000 | 5.68 | 247.8 | 106.9 | 0.7 | 0.24 | 0.0 | 0.01 | 0.02 | 0.18 | 0.05 | 0 | |
| 1 | 18.99 | 18.99 | 33.351 | 23.764 | 412.6 | 0.004 | 5.68 | 247.8 | 106.9 | 0.7 | 0.24 | 0.0 | 0.01 | 0.02 | 0.18 | 0.05 | 1 | 20 |
| 10 | 18.67 | 18.67 | 33.341 | 23.837 | 406.0 | 0.041 | 5.72 | 249.6 | 107.0 | 0.7 | 0.24 | 0.0 | 0.01 | 0.01 | 0.18 | 0.05 | 10 | 19 |
| 20 | 15.82 | 15.82 | 33.262 | 24.453 | 347.5 | 0.079 | 6.01 | 262.1 | 106.3 | 1.8 | 0.35 | 0.0 | 0.00 | 0.00 | 0.23 | 0.08 | 20 | 18 |
| 30 | 14.19 | 14.19 | 33.202 | 24.760 | 318.5 | 0.112 | 6.10 | 265.9 | 104.4 | 1.9 | 0.41 | 0.1 | 0.01 | 0.00 | 0.42 | 0.20 | 30 | 17 |
| 40 | 12.35 | 12.34 | 33.230 | 25.151 | 281.6 | 0.142 | 5.43 | 236.4 | 89.3 | 5.7 | 0.72 | 4.5 | 0.26 | 0.05 | 1.17 | 0.77 | 40 | 16 |
| 50 | 11.42 | 11.41 | 33.322 | 25.396 | 258.4 | 0.169 | 4.67 | 203.3 | 75.4 | 10.9 | 1.14 | 11.9 | 0.09 | 0.01 | 0.43 | 0.50 | 50 | 15 |
| 60 | 10.63 | 10.63 | 33.412 | 25.606 | 238.6 | 0.194 | 4.31 | 187.5 | 68.4 | 14.0 | 1.33 | 15.1 | 0.04 | 0.00 | 0.24 | 0.22 | 60 | 14 |
| 70 | 10.32 | 10.31 | 33.516 | 25.742 | 225.9 | 0.217 | 3.96 | 172.5 | 62.5 | 17.1 | 1.51 | 17.8 | 0.03 | 0.00 | 0.11 | 0.15 | 71 | 13 |
| 75 ISL | 10.16 D | 10.15 | 33.581 D | 25.820 | 218.6 | 0.230 | 3.82 | D166.1 D | 60.0 | 18.9 | 1.60 | 19.1 | 0.03 | 0.00 | 0.08 | 0.13 | 76 | |
| 85 | 9.92 | 9.91 | 33.717 | 25.967 | 204.8 | 0.249 | 3.29 | 143.3 | 51.6 | 22.6 | 1.78 | 21.7 | 0.03 | 0.02 | 0.02 | 0.08 | 86 | 12 |
| 100 | 9.76 | 9.75 | 33.837 | 26.087 | 193.7 | 0.279 | 2.84 | 123.7 | 44.4 | 25.8 | 1.94 | 23.6 | 0.08 | 0.00 | 0.01 | 0.06 | 101 | 11 |
| 120 | 9.63 | 9.61 | 33.974 | 26.218 | 181.8 | 0.317 | 2.45 | 106.7 | 38.2 | 29.7 | 2.10 | 25.5 | 0.03 | 0.00 | | | 121 | 10 |
| 125 ISL | 9.54 D | 9.53 | 34.050 D | 26.292 | 174.9 | 0.328 | 2.19 | D 95.1 D | 34.0 | 30.6 | 2.14 | 25.9 | 0.05 | 0.00 | | | 126 | |
| 140 | 9.42 | 9.41 | 34.058 | 26.318 | 172.7 | 0.352 | 2.02 | 87.8 | 31.3 | 33.6 | 2.26 | 27.1 | 0.10 | 0.00 | 0.00 | 0.06 | 141 | 09 |
| 150 ISL | 9.35 D | 9.33 | 34.079 D | 26.346 | 170.2 | 0.371 | 2.08 | D 90.5 D | 32.3 | 34.7 | 2.30 | 27.6 | 0.07 | 0.00 | 0.00 | 0.05 | 151 | |
| 170 | 9.19 | 9.17 | 34.128 | 26.412 | 164.4 | 0.403 | 1.78 | 77.6 | 27.6 | 36.9 | 2.38 | 28.5 | 0.01 | 0.00 | 0.00 | 0.04 | 171 | 08 |
| 200 | 9.11 | 9.08 | 34.192 | 26.476 | 158.9 | 0.451 | 1.45 | 62.9 | 22.3 | 39.8 | 2.51 | 29.5 | 0.02 | 0.00 | 0.00 | 0.04 | 202 | 07 |
| 230 | 8.86 | 8.83 | 34.184 | 26.510 | 156.3 | 0.498 | 1.47 | 64.0 | 22.6 | 41.3 | 2.51 | 30.1 | 0.02 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.76 D | 8.73 | 34.198 D | 26.537 | 154.1 | 0.533 | 1.41 | D 61.1 D | 21.5 | 42.3 | 2.54 | 30.5 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.70 | 8.67 | 34.201 | 26.549 | 153.4 | 0.560 | 1.35 | D 58.6 D | 20.6 | 43.3 | 2.57 | 30.8 | 0.00 | 0.00 | | | 272 | 05 |
| 300 ISL | 8.53 D | 8.50 | 34.212 D | 26.585 | 150.5 | 0.610 | 1.27 | D 55.2 D | 19.3 | 45.8 | 2.65 | 31.6 | 0.01 | 0.00 | | | 302 | |
| 320 | 8.44 | 8.41 | 34.237 | 26.619 | 147.6 | 0.636 | 1.06 | 46.1 | 16.1 | 47.4 | 2.70 | 32.1 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 7.94 | 7.90 | 34.264 | 26.716 | 139.2 | 0.722 | 0.79 | 34.4 | 11.9 | 53.7 | 2.85 | 34.0 | 0.02 | 0.01 | | | 383 | 03 |
| 400 ISL | 7.64 D | 7.60 | 34.256 D | 26.755 | 135.6 | 0.754 | 0.79 | D 34.2 D | 11.7 | 56.9 | 2.91 | 34.9 | 0.01 | 0.00 | | | 403 | |
| 440 | 7.16 | 7.12 | 34.274 | 26.836 | 128.2 | 0.802 | 0.54 | 23.5 | 8.0 | 63.3 | 3.02 | 36.6 | 0.01 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.58 D | 6.53 | 34.294 D | 26.932 | 119.5 | 0.882 | 0.39 | D 16.9 D | 5.7 | 71.6 | 3.14 | 38.4 | 0.01 | 0.00 | | | 504 | |
| 515 | 6.47 | 6.42 | 34.304 | 26.955 | 117.5 | 0.894 | 0.32 | 14.0 | 4.7 | 73.7 | 3.17 | 38.8 | 0.01 | 0.00 | | | 519 | 01 |

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

| 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 | 05/04/2015 | 0857 | UTC | 616 m | 320 03 kn | | | 1011.3 mb | 16.1 C | 15.1 C | | | | 006 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 18.68 | 18.68 | 33.314 D | 23.815 | 407.7 | 0.000 | 5.56 | 242.4 | 103.9 | 1.8 | 0.30 | 0.1 | 0.02 | 0.00 | 0.14 | 0.03 | 0 | |
| 2 | 18.68 | 18.68 | 33.313 | 23.815 | 407.8 | 0.008 | 5.56 | 242.4 | 103.9 | 1.8 | 0.30 | 0.1 | 0.02 | 0.00 | 0.14 | 0.03 | 2 | 21 |
| 10 | 18.67 | 18.67 | 33.312 | 23.817 | 407.9 | 0.041 | 5.57 | 243.1 | 104.2 | 1.8 | 0.31 | 0.1 | 0.01 | 0.00 | 0.14 | 0.03 | 10 | 20 |
| 20 ISL | 18.27 D | 18.26 | 33.296 D | 23.905 | 399.9 | 0.082 | 5.74 | D250.5 | D106.5 | 1.8 | 0.31 | 0.0 | 0.01 | 0.00 | 0.15 | 0.03 | 20 | |
| 26 | 17.72 | 17.71 | 33.283 | 24.030 | 388.2 | 0.105 | 5.74 | 250.2 | 105.3 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.15 | 0.03 | 26 | 19 |
| 30 ISL | 17.45 D | 17.44 | 33.276 D | 24.089 | 382.7 | 0.121 | 5.86 | D255.6 | D107.0 | 1.8 | 0.32 | 0.0 | 0.01 | 0.00 | 0.22 | 0.06 | 30 | |
| 40 | 15.37 | 15.36 | 33.235 | 24.535 | 340.4 | 0.156 | 6.09 | 265.6 | 106.8 | 1.6 | 0.34 | 0.1 | 0.01 | 0.01 | 0.39 | 0.14 | 40 | 18 |
| 50 | 14.13 | 14.12 | 33.198 | 24.771 | 318.1 | 0.189 | 5.88 | 256.1 | 100.4 | 2.7 | 0.47 | 1.1 | 0.06 | 0.05 | 1.40 | 0.66 | 50 | 17 |
| 61 | 12.49 | 12.48 | 33.273 D | 25.159 | 281.4 | 0.224 | 5.28 | D230.1 | D 87.2 | | | | | | | | 61 | 16 |
| 75 | 11.51 | 11.50 | 33.307 | 25.370 | 261.6 | 0.260 | 4.69 | 204.5 | 75.9 | 10.6 | 1.11 | 11.5 | 0.13 | 0.03 | 0.39 | 0.42 | 76 | 15 |
| 87 | 11.09 | 11.08 | 33.367 | 25.492 | 250.2 | 0.291 | 4.42 | 192.6 | 70.9 | 12.5 | 1.23 | 13.6 | 0.08 | 0.00 | 0.26 | 0.32 | 88 | 14 |
| 100 | 10.49 | 10.47 | 33.530 | 25.726 | 228.2 | 0.322 | 3.83 | 166.9 | 60.7 | 17.3 | 1.50 | 18.0 | 0.02 | 0.00 | 0.11 | 0.14 | 101 | 13 |
| 110 | 10.24 | 10.23 | 33.592 | 25.817 | 219.7 | 0.345 | 3.64 | 158.5 | 57.4 | 19.1 | 1.60 | 19.5 | 0.03 | 0.00 | 0.07 | 0.12 | 111 | 12 |
| 124 | 9.95 | 9.94 | 33.660 | 25.919 | 210.3 | 0.375 | 3.49 | 151.8 | 54.7 | 21.2 | 1.68 | 20.9 | 0.02 | 0.00 | 0.03 | 0.07 | 125 | 11 |
| 125 ISL | 9.92 D | 9.90 | 33.671 D | 25.933 | 209.0 | 0.379 | 3.47 | D151.2 | D 54.4 | 21.5 | 1.69 | 21.1 | 0.02 | 0.00 | 0.03 | 0.07 | 126 | |
| 139 | 9.77 | 9.75 | 33.826 | 26.080 | 195.4 | 0.405 | 2.91 | 126.4 | 45.4 | 25.7 | 1.89 | 23.5 | 0.01 | 0.00 | 0.01 | 0.06 | 140 | 09 |
| 150 ISL | 9.48 D | 9.46 | 33.906 D | 26.191 | 185.0 | 0.418 | 2.86 | D124.3 | D 44.4 | 27.5 | 1.96 | 24.4 | 0.01 | 0.00 | 0.01 | 0.05 | 151 | |
| 171 | 9.40 | 9.38 | 33.999 | 26.277 | 177.3 | 0.464 | 2.47 | 107.3 | 38.3 | 30.9 | 2.08 | 26.1 | 0.01 | 0.00 | 0.01 | 0.04 | 172 | 08 |
| 200 ISL | 9.05 D | 9.03 | 34.065 D | 26.385 | 167.5 | 0.506 | 2.17 | D 94.6 | D 33.5 | 35.0 | 2.23 | 28.0 | 0.01 | 0.00 | 0.00 | 0.05 | 202 | |
| 201 | 9.09 | 9.06 | 34.066 | 26.380 | 168.0 | 0.516 | 2.15 | 93.3 | 33.1 | 35.2 | 2.23 | 28.0 | 0.01 | 0.00 | 0.00 | 0.05 | 203 | 07 |
| 229 | 8.86 | 8.84 | 34.116 | 26.456 | 161.3 | 0.562 | 1.89 | 82.3 | 29.0 | 37.7 | 2.33 | 29.0 | 0.01 | 0.00 | | | 231 | 06 |
| 250 ISL | 8.56 D | 8.53 | 34.134 D | 26.518 | 155.8 | 0.588 | 1.67 | D 72.8 | D 25.5 | 40.9 | 2.41 | 30.2 | 0.02 | 0.00 | | | 252 | |
| 269 | 8.30 | 8.27 | 34.138 | 26.561 | 151.9 | 0.625 | 1.59 | 69.2 | 24.1 | 43.8 | 2.48 | 31.3 | 0.03 | 0.00 | | | 271 | 05 |
| 300 ISL | 7.91 D | 7.88 | 34.191 D | 26.661 | 142.9 | 0.664 | 1.18 | D 51.1 | D 17.6 | 49.4 | 2.64 | 33.2 | 0.02 | 0.00 | | | 302 | |
| 320 | 7.73 | 7.70 | 34.202 | 26.697 | 139.7 | 0.699 | 1.00 | 43.6 | 15.0 | 53.1 | 2.75 | 34.4 | 0.01 | 0.00 | | | 323 | 04 |
| 379 | 7.33 | 7.29 | 34.265 | 26.805 | 130.2 | 0.778 | 0.62 | 27.1 | 9.2 | 60.8 | 2.94 | 36.2 | 0.01 | 0.00 | | | 382 | 03 |
| 400 ISL | 7.09 D | 7.05 | 34.257 D | 26.832 | 127.8 | 0.800 | 0.56 | D 24.5 | D 8.3 | 63.6 | 2.98 | 36.9 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.69 | 6.65 | 34.260 | 26.889 | 122.7 | 0.855 | 0.50 | 21.5 | 7.2 | 69.0 | 3.05 | 38.2 | 0.02 | 0.00 | | | 444 | 02 |
| 500 ISL | 6.41 D | 6.36 | 34.308 D | 26.965 | 116.2 | 0.923 | 0.30 | D 12.9 | D 4.3 | 74.9 | 3.14 | 39.2 | 0.00 | 0.00 | | | 504 | |
| 517 | 6.29 | 6.24 | 34.315 | 26.987 | 114.2 | 0.947 | 0.30 | 12.9 | 4.3 | 76.6 | 3.17 | 39.5 | 0.00 | 0.00 | | | 521 | 01 |

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



| 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 12.9 W | 05/04/2015 | 1306 | UTC | 1640 m | 300 19 kn | | | 1011.3 mb | 15.1 C | 13.3 C | | | | 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 | 18.53 | 18.53 | 33.318 D | 23.855 | 403.9 | 0.000 | 5.62 | 245.2 | 104.8 | 1.5 | 0.29 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 0 | |
| 2 | 18.53 | 18.53 | 33.317 | 23.855 | 404.0 | 0.008 | 5.62 | 245.2 | 104.8 | 1.5 | 0.29 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 2 | 21 |
| 9 | 18.54 | 18.54 | 33.320 | 23.854 | 404.3 | 0.037 | | | | | | | | | | | 9 | 20 |
| 10 | 18.52 | 18.52 | 33.318 | 23.859 | 403.9 | 0.040 | 5.63 | 245.4 | 104.9 | 1.5 | 0.29 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 10 | 19 |
| 19 | 16.63 | 16.62 | 33.257 | 24.266 | 365.4 | 0.075 | 6.15 | 268.2 | 110.5 | 1.6 | 0.27 | 0.0 | 0.01 | 0.00 | 0.33 | 0.10 | 19 | 18 |
| 20 ISL | 16.41 D | 16.41 | 33.250 D | 24.310 | 361.2 | 0.063 | 6.20 | D270.2 | D110.9 | 1.7 | 0.28 | 0.0 | 0.01 | 0.00 | 0.32 | 0.10 | 20 | |
| 30 | 14.61 | 14.61 | 33.212 | 24.679 | 326.3 | 0.113 | 6.22 | 271.0 | 107.3 | 2.0 | 0.33 | 0.0 | 0.01 | 0.00 | 0.30 | 0.12 | 30 | 17 |
| 40 | 13.64 | 13.63 | 33.234 | 24.900 | 305.6 | 0.145 | 6.12 | 266.7 | 103.5 | 2.8 | 0.40 | 0.1 | 0.00 | 0.00 | 0.31 | 0.16 | 40 | 16 |
| 50 | 12.85 | 12.84 | 33.246 | 25.068 | 289.7 | 0.174 | 5.28 | 229.9 | 87.8 | 5.9 | 0.74 | 5.2 | 0.29 | 0.08 | 0.74 | 0.63 | 50 | 15 |
| 60 | 12.15 | 12.14 | 33.292 | 25.237 | 273.8 | 0.203 | 4.82 | 209.9 | 79.0 | 8.5 | 0.96 | 8.9 | 0.27 | 0.00 | 0.60 | 0.48 | 60 | 14 |
| 70 | 11.33 | 11.32 | 33.356 | 25.441 | 254.7 | 0.229 | 4.47 | 194.8 | 72.1 | 11.4 | 1.17 | 12.7 | 0.08 | 0.00 | 0.30 | 0.34 | 71 | 13 |
| 75 ISL | 11.01 D | 11.00 | 33.398 D | 25.529 | 246.3 | 0.227 | 4.37 | D190.1 | D 69.9 | 12.4 | 1.22 | 13.6 | 0.07 | 0.00 | 0.26 | 0.30 | 76 | |
| 86 | 10.80 | 10.79 | 33.438 | 25.599 | 240.0 | 0.268 | 4.18 | 182.0 | 66.6 | 14.4 | 1.34 | 15.6 | 0.04 | 0.00 | 0.16 | 0.21 | 87 | 12 |
| 100 | 10.43 | 10.42 | 33.505 | 25.716 | 229.1 | 0.301 | 3.95 | 172.1 | 62.5 | 16.5 | 1.45 | 17.3 | 0.04 | 0.00 | 0.10 | 0.19 | 101 | 11 |
| 120 | 9.95 | 9.93 | 33.656 | 25.917 | 210.4 | 0.345 | 3.49 | 152.1 | 54.7 | 21.2 | 1.67 | 20.8 | 0.04 | 0.00 | 0.03 | 0.10 | 121 | 10 |
| 125 ISL | 9.77 D | 9.75 | 33.730 D | 26.004 | 202.2 | 0.341 | 3.38 | D147.3 | D 52.8 | 22.3 | 1.71 | 21.4 | 0.03 | 0.00 | 0.03 | 0.10 | 126 | |
| 141 | 9.59 | 9.58 | 33.810 | 26.096 | 193.8 | 0.387 | 3.05 | 132.9 | 47.5 | 25.6 | 1.85 | 23.5 | 0.01 | 0.00 | 0.02 | 0.09 | 142 | 09 |
| 150 ISL | 9.44 D | 9.43 | 33.889 D | 26.183 | 185.7 | 0.390 | 2.87 | D124.7 | D 44.5 | 27.6 | 1.92 | 24.4 | 0.01 | 0.00 | 0.01 | 0.09 | 151 | |
| 170 | 9.13 | 9.11 | 33.968 | 26.297 | 175.3 | 0.441 | 2.52 | 109.7 | 38.8 | 31.8 | 2.08 | 26.6 | 0.02 | 0.00 | 0.01 | 0.09 | 171 | 08 |
| 200 | 8.82 | 8.80 | 34.061 | 26.418 | 164.3 | 0.492 | 2.12 | 92.2 | 32.4 | 36.4 | 2.24 | 28.6 | 0.00 | 0.00 | 0.01 | 0.07 | 202 | 07 |
| 231 | 8.65 | 8.63 | 34.116 | 26.489 | 158.2 | 0.542 | 1.79 | 77.9 | 27.3 | 40.0 | 2.38 | 29.9 | 0.02 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.36 D | 8.34 | 34.131 D | 26.545 | 153.0 | 0.557 | 1.66 | D 72.2 | D 25.2 | 43.0 | 2.48 | 31.0 | 0.03 | 0.00 | | | 252 | |
| 271 | 8.15 | 8.13 | 34.162 | 26.601 | 148.1 | 0.603 | 1.40 | 60.8 | 21.1 | 46.4 | 2.58 | 32.1 | 0.03 | 0.00 | | | 273 | 05 |
| 300 ISL | 7.87 D | 7.84 | 34.195 D | 26.669 | 142.0 | 0.632 | 1.13 | D 49.1 | D 16.9 | 51.0 | 2.69 | 33.6 | 0.02 | 0.00 | | | 302 | |
| 319 | 7.69 | 7.66 | 34.214 | 26.711 | 138.3 | 0.672 | 0.93 | 40.5 | 13.9 | 54.0 | 2.77 | 34.5 | 0.01 | 0.00 | | | 322 | 04 |
| 379 | 7.25 | 7.21 | 34.252 | 26.806 | 130.1 | 0.752 | 0.64 | 27.6 | 9.4 | 61.0 | 2.94 | 36.3 | 0.02 | 0.00 | | | 382 | 03 |
| 400 ISL | 7.04 D | 7.00 | 34.263 D | 26.844 | 126.7 | 0.767 | 0.56 | D 24.2 | D 8.2 | 63.7 | 2.98 | 36.9 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.71 | 6.67 | 34.257 | 26.884 | 123.2 | 0.831 | 0.51 | 22.2 | 7.5 | 68.9 | 3.05 | 38.1 | 0.00 | 0.00 | | | 445 | 02 |
| 500 ISL | 6.34 D | 6.29 | 34.302 D | 26.969 | 115.7 | 0.889 | 0.37 | D 16.1 | D 5.3 | 75.2 | 3.12 | 38.9 | 0.01 | 0.00 | | | 504 | |
| 515 | 6.29 | 6.24 | 34.307 | 26.980 | 114.8 | 0.918 | 0.33 | 14.5 | 4.8 | 76.8 | 3.14 | 39.1 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 20.7 N | 118 33.7 W | 05/04/2015 | 1730 UTC | 1364 m | 300 21 kn | 300 05 06 | 0 | 1012.9 mb | 16.1 C | 14.5 C | 22 m | 0/8 | | 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 | 17.82 | 17.82 | 33.309 D | 24.022 | 388.0 | 0.000 | 5.65 | 246.2 | 103.9 | 1.7 | 0.30 | 0.0 | 0.02 | 0.00 | 0.20 | 0.04 | 0 | |
| 2 A | 17.82 | 17.82 | 33.309 | 24.022 | 388.0 | 0.008 | 5.65 | 246.2 | 103.9 | 1.7 | 0.30 | 0.0 | 0.02 | 0.00 | 0.20 | 0.04 | 2 | 24 |
| 9 | 17.82 | 17.82 | 33.310 | 24.024 | 388.1 | 0.035 | 5.63 | 245.7 | 103.6 | 1.7 | 0.29 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | 9 | 23 |
| 10 ISL | 17.82 D | 17.82 | 33.309 D | 24.023 | 388.2 | 0.039 | 5.71 | D249.0 | D105.0 | 1.7 | 0.29 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | 10 | |
| 14 A | 17.81 | 17.81 | 33.308 | 24.025 | 388.2 | 0.054 | 5.65 | 246.3 | 103.9 | 1.7 | 0.29 | 0.1 | 0.00 | 0.00 | 0.20 | 0.03 | 14 | 21 |
| 14 | 17.81 | 17.81 | 33.308 | 24.025 | 388.2 | 0.054 | | | | | | | | | | | 14 | 22 |
| 19 A | 17.80 | 17.80 | 33.310 | 24.029 | 388.0 | 0.074 | 5.70 | 248.4 | 104.7 | 1.7 | 0.30 | 0.1 | 0.01 | 0.00 | 0.21 | 0.03 | 19 | 20 |
| 20 ISL | 17.80 D | 17.80 | 33.308 D | 24.027 | 388.2 | 0.068 | 5.69 | D248.3 | D104.7 | 1.7 | 0.30 | 0.0 | 0.01 | 0.00 | 0.21 | 0.03 | 20 | |
| 24 | 17.79 | 17.79 | 33.307 | 24.029 | 388.2 | 0.093 | 5.65 | 246.5 | 103.9 | 1.7 | 0.30 | 0.0 | 0.02 | 0.00 | 0.22 | 0.04 | 24 | 19 |
| 30 ISL | 17.65 D | 17.64 | 33.303 D | 24.061 | 385.3 | 0.108 | 5.73 | D249.8 | D105.0 | 1.7 | 0.31 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 30 | |
| 32 A | 17.59 | 17.58 | 33.303 | 24.076 | 384.0 | 0.124 | 5.69 | 248.3 | 104.2 | 1.7 | 0.31 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 32 | 18 |
| 41 | 15.16 | 15.15 | 33.233 | 24.579 | 336.2 | 0.157 | 6.00 | 261.5 | 104.6 | 1.6 | 0.36 | 0.0 | 0.01 | 0.00 | 1.12 | 0.40 | 41 | 17 |
| 49 | 14.21 | 14.20 | 33.219 | 24.772 | 318.0 | 0.182 | | | | | | | | | | | 49 | 16 |
| 50 ISL | 14.32 D | 14.31 | 33.219 D | 24.748 | 320.3 | 0.163 | 6.06 | D264.0 | D103.9 | 3.1 | 0.44 | 0.3 | 0.04 | 0.00 | 1.10 | 0.44 | 50 | |
| 52 | 13.40 | 13.40 | 33.219 | 24.936 | 302.4 | 0.192 | 5.96 | 259.7 | 100.3 | 3.5 | 0.46 | 0.4 | 0.04 | 0.02 | 1.10 | 0.45 | 52 | 15 |
| 59 A | 12.47 | 12.46 | 33.203 | 25.108 | 286.1 | 0.213 | 5.53 | 240.9 | 91.2 | 5.7 | 0.69 | 4.0 | 0.15 | 0.01 | 0.31 | 0.20 | 59 | 14 |
| 74 A | 10.71 | 10.70 | 33.297 D | 25.504 | 248.6 | 0.231 | 4.92 | 214.1 | 78.2 | 10.3 | 1.11 | 11.5 | 0.08 | 0.01 | 0.10 | 0.09 | 75 | 13 |
| 75 ISL | 10.46 D | 10.45 | 33.360 D | 25.597 | 239.8 | 0.233 | 4.77 | D207.5 | D 75.4 | 10.8 | 1.14 | 12.0 | 0.07 | 0.00 | 0.10 | 0.09 | 76 | |
| 87 | 10.21 | 10.20 | 33.472 | 25.728 | 227.6 | 0.284 | 4.13 | 179.7 | 65.0 | 16.7 | 1.46 | 17.4 | 0.04 | 0.00 | 0.06 | 0.08 | 88 | 12 |
| 100 | 9.80 | 9.79 | 33.529 | 25.840 | 217.1 | 0.313 | 4.11 | 178.8 | 64.1 | 18.1 | 1.50 | 18.5 | 0.04 | 0.00 | 0.02 | 0.05 | 101 | 11 |
| 121 | 9.41 | 9.40 | 33.658 | 26.006 | 201.8 | 0.357 | 3.61 | 156.9 | 55.8 | 22.7 | 1.72 | 21.9 | 0.03 | 0.00 | 0.01 | 0.05 | 122 | 10 |
| 125 ISL | 9.28 D | 9.26 | 33.724 D | 26.080 | 194.9 | 0.343 | 3.57 | D155.4 | D 55.1 | 23.4 | 1.75 | 22.3 | 0.03 | 0.00 | 0.01 | 0.05 | 126 | |
| 142 | 9.13 | 9.11 | 33.781 | 26.148 | 188.7 | 0.398 | 3.27 | 142.2 | 50.3 | 26.5 | 1.87 | 24.2 | 0.02 | 0.00 | 0.00 | 0.05 | 143 | 09 |
| 150 ISL | 9.06 D | 9.05 | 33.822 D | 26.192 | 184.8 | 0.391 | 3.17 | D137.9 | D 48.7 | 27.9 | 1.93 | 24.9 | 0.01 | 0.00 | 0.00 | 0.05 | 151 | |
| 171 | 9.03 | 9.01 | 33.968 | 26.311 | 173.9 | 0.450 | 2.57 | 111.8 | 39.5 | 31.8 | 2.10 | 26.7 | 0.00 | 0.00 | 0.00 | 0.04 | 172 | 08 |
| 196 | 8.33 | 8.31 | 33.985 | 26.434 | 162.5 | 0.492 | 2.56 | 111.3 | 38.7 | 36.5 | 2.16 | 28.7 | 0.01 | 0.00 | 0.00 | 0.04 | 198 | 07 |
| 200 ISL | 8.27 D | 8.25 | 33.995 D | 26.451 | 160.9 | 0.477 | 2.53 | D109.9 | D 38.2 | 37.3 | 2.18 | 29.0 | 0.01 | 0.00 | | | 202 | |
| 231 | 7.93 | 7.91 | 34.042 | 26.539 | 153.0 | 0.547 | 2.10 | 91.5 | 31.6 | 42.8 | 2.36 | 31.0 | 0.01 | 0.00 | | | 233 | 06 |
| 250 ISL | 7.78 D | 7.75 | 34.055 D | 26.572 | 150.2 | 0.556 | 1.99 | D 86.5 | D 29.8 | 45.8 | 2.44 | 32.1 | 0.01 | 0.00 | | | 252 | |
| 272 | 7.56 | 7.53 | 34.084 | 26.627 | 145.2 | 0.609 | 1.66 | 72.0 | 24.7 | 49.2 | 2.54 | 33.3 | 0.00 | 0.00 | | | 274 | 05 |
| 300 ISL | 7.28 D | 7.25 | 34.111 D | 26.688 | 139.8 | 0.629 | 1.37 | D 59.5 | D 20.2 | 53.7 | 2.69 | 34.6 | 0.01 | 0.00 | | | 302 | |
| 318 | 7.24 | 7.21 | 34.149 | 26.724 | 136.7 | 0.673 | 1.11 | 48.2 | 16.4 | 56.6 | 2.78 | 35.5 | 0.02 | 0.00 | | | 321 | 04 |
| 383 | 6.71 | 6.68 | 34.198 | 26.836 | 126.8 | 0.759 | 0.71 | 30.7 | 10.3 | 65.9 | 2.97 | 37.9 | 0.03 | 0.00 | | | 386 | 03 |
| 400 ISL | 6.61 D | 6.57 | 34.209 D | 26.858 | 124.8 | 0.761 | 0.62 | D 26.8 | D 9.0 | 67.4 | 3.00 | 38.2 | 0.02 | 0.00 | | | 403 | |
| 442 | 6.56 | 6.52 | 34.244 | 26.894 | 122.1 | 0.832 | 0.51 | 22.0 | 7.4 | 71.1 | 3.09 | 38.9 | 0.00 | 0.00 | | | 446 | 02 |
| 500 ISL | 6.23 D | 6.19 | 34.286 D | 26.970 | 115.5 | 0.883 | 0.33 | D 14.4 | D 4.8 | 77.1 | 3.18 | 39.9 | 0.01 | 0.00 | | | 504 | |
| 522 | 6.12 | 6.08 | 34.307 | 27.002 | 112.7 | 0.926 | 0.30 | 13.0 | 4.3 | 79.4 | 3.22 | 40.3 | 0.02 | 0.00 | | | 526 | 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 1504 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 53.2 W | 05/04/2015 | 2147 UTC | 1450 m | 300 21 kn | 310 06 07 | 1 | 1012.6 mb | 17.2 C | 15.8 C | 16 m | 2/8 | CS | 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 | 16.24 | 16.24 | 33.258 D | 24.354 | 356.3 | 0.000 | 5.75 | 250.7 | 102.5 | 1.6 | 0.32 | 0.1 | 0.00 | 0.02 | 0.18 | 0.04 | 0 | |
| 1 | 16.24 | 16.24 | 33.258 | 24.354 | 356.4 | 0.004 | 5.75 | 250.7 | 102.5 | 1.6 | 0.32 | 0.1 | 0.00 | 0.02 | 0.18 | 0.04 | 1 | 20 |
| 10 ISL | 16.24 D | 16.24 | 33.258 D | 24.355 | 356.6 | 0.036 | 5.76 | D251.0 | D102.7 | 1.6 | 0.32 | 0.1 | 0.00 | 0.00 | 0.18 | 0.04 | 10 | |
| 11 | 16.25 | 16.25 | 33.271 | 24.364 | 355.8 | 0.039 | 5.75 | 250.5 | 102.5 | 1.6 | 0.32 | 0.1 | 0.01 | 0.00 | 0.18 | 0.04 | 11 | 19 |
| 20 | 16.22 | 16.21 | 33.257 | 24.360 | 356.4 | 0.071 | 5.75 | 250.5 | 102.4 | 1.6 | 0.32 | 0.1 | 0.01 | 0.02 | 0.18 | 0.04 | 20 | 18 |
| 30 ISL | 16.13 D | 16.12 | 33.252 D | 24.377 | 355.1 | 0.108 | 5.76 | D251.2 | D102.5 | 1.6 | 0.33 | 0.1 | 0.00 | 0.04 | 0.22 | 0.06 | 30 | |
| 31 | 16.00 | 15.99 | 33.252 | 24.408 | 352.3 | 0.110 | 5.76 | 251.1 | 102.2 | 1.6 | 0.33 | 0.1 | 0.00 | 0.04 | 0.23 | 0.06 | 31 | 17 |
| 39 | 13.87 | 13.86 | 33.167 | 24.801 | 314.9 | 0.137 | 5.75 | 250.7 | 97.7 | 3.7 | 0.50 | 1.4 | 0.10 | 0.04 | 0.85 | 0.37 | 39 | 16 |
| 50 | 12.55 | 12.54 | 33.165 | 25.063 | 290.1 | 0.170 | 5.19 | 226.3 | 85.8 | 7.3 | 0.86 | 7.3 | 0.13 | 0.07 | 0.41 | 0.29 | 50 | 15 |
| 60 | 11.58 | 11.57 | 33.216 | 25.286 | 269.2 | 0.198 | 4.89 | 212.9 | 79.1 | 9.8 | 1.05 | 10.7 | 0.05 | 0.06 | 0.24 | 0.18 | 60 | 14 |
| 70 | 10.77 | 10.76 | 33.298 | 25.494 | 249.5 | 0.224 | 4.65 | 202.6 | 74.1 | 12.5 | 1.22 | 13.7 | 0.04 | 0.03 | 0.14 | 0.15 | 71 | 13 |
| 75 ISL | 10.55 D | 10.54 | 33.296 D | 25.530 | 246.1 | 0.238 | 4.68 | D203.7 | D 74.1 | 13.0 | 1.26 | 14.3 | 0.03 | 0.10 | 0.13 | 0.14 | 76 | |
| 85 | 10.31 | 10.30 | 33.340 | 25.607 | 239.1 | 0.261 | 4.52 | 196.6 | 71.2 | 14.2 | 1.33 | 15.5 | 0.03 | 0.23 | 0.10 | 0.12 | 86 | 12 |
| 100 ISL | 10.03 D | 10.02 | 33.436 D | 25.730 | 227.7 | 0.298 | 4.30 | D187.1 | D 67.4 | 16.5 | 1.43 | 17.3 | 0.01 | 1.37 | 0.05 | 0.08 | 101 | |
| 102 | 9.93 | 9.92 | 33.447 | 25.756 | 225.2 | 0.300 | 4.24 | 184.7 | 66.3 | 16.8 | 1.44 | 17.5 | 0.01 | 1.52 | 0.05 | 0.08 | 103 | 11 |
| 121 | 9.40 | 9.38 | 33.608 | 25.969 | 205.3 | 0.341 | 3.85 | 167.5 | 59.6 | 21.4 | 1.65 | 21.1 | 0.02 | 0.00 | 0.02 | 0.05 | 122 | 10 |
| 125 ISL | 9.37 D | 9.36 | 33.625 D | 25.987 | 203.7 | 0.352 | 3.82 | D166.4 | D 59.1 | 22.1 | 1.68 | 21.5 | 0.01 | 0.00 | 0.02 | 0.05 | 126 | |
| 139 | 9.22 | 9.20 | 33.706 | 26.075 | 195.6 | 0.377 | 3.51 | 152.6 | 54.1 | 24.5 | 1.78 | 23.1 | 0.00 | 0.02 | 0.01 | 0.05 | 140 | 09 |
| 150 ISL | 9.20 D | 9.18 | 33.744 D | 26.108 | 192.7 | 0.402 | 3.42 | D148.6 | D 52.7 | 26.4 | 1.84 | 24.0 | 0.01 | 0.02 | 0.01 | 0.04 | 151 | |
| 170 | 8.85 | 8.83 | 33.876 | 26.268 | 177.8 | 0.436 | 3.04 | 132.2 | 46.5 | 29.9 | 1.95 | 25.8 | 0.01 | 0.03 | 0.00 | 0.04 | 171 | 08 |
| 200 | 8.35 | 8.33 | 34.010 | 26.450 | 161.0 | 0.486 | 2.43 | 105.8 | 36.8 | 37.7 | 2.20 | 29.0 | 0.01 | 0.04 | 0.00 | 0.04 | 202 | 07 |
| 231 | 8.06 | 8.04 | 34.031 | 26.511 | 155.7 | 0.535 | 2.22 | 96.7 | 33.5 | 40.8 | 2.29 | 30.2 | 0.00 | 0.03 | | | 233 | 06 |
| 250 ISL | 7.78 D | 7.76 | 34.070 D | 26.583 | 149.2 | 0.568 | 1.88 | D 81.7 | D 28.1 | 44.3 | 2.41 | 31.5 | 0.01 | 0.09 | | | 252 | |
| 271 | 7.75 | 7.73 | 34.106 | 26.616 | 146.4 | 0.596 | 1.60 | 69.4 | 23.9 | 48.3 | 2.55 | 33.0 | 0.02 | 0.15 | | | 273 | 05 |
| 300 ISL | 7.78 D | 7.75 | 34.183 D | 26.674 | 141.5 | 0.642 | 1.17 | D 50.8 | D 17.5 | 51.7 | 2.68 | 33.9 | 0.01 | 0.09 | | | 302 | |
| 330 | 7.67 | 7.64 | 34.227 | 26.725 | 137.2 | 0.679 | 0.88 | 38.2 | 13.1 | 55.2 | 2.82 | 34.8 | 0.01 | 0.02 | | | 333 | 04 |
| 381 | 7.33 | 7.30 | 34.268 | 26.806 | 130.1 | 0.748 | 0.57 | 24.8 | 8.5 | 61.4 | 2.97 | 36.2 | 0.01 | 0.00 | | | 384 | 03 |
| 400 ISL | 7.08 D | 7.04 | 34.272 D | 26.845 | 126.6 | 0.777 | 0.51 | D 22.4 | D 7.6 | 63.6 | 3.00 | 36.8 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.79 | 6.75 | 34.272 | 26.886 | 123.1 | 0.823 | 0.45 | 19.6 | 6.6 | 68.4 | 3.07 | 38.0 | 0.01 | 0.01 | | | 445 | 02 |
| 500 ISL | 6.40 D | 6.36 | 34.313 D | 26.970 | 115.7 | 0.900 | 0.31 | D 13.4 | D 4.5 | 76.0 | 3.18 | 39.0 | 0.02 | 0.62 | | | 504 | |
| 516 | 6.31 | 6.26 | 34.320 | 26.988 | 114.2 | 0.912 | 0.28 | 12.1 | 4.0 | 78.1 | 3.21 | 39.3 | 0.02 | 0.79 | | | 520 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 13.6 W | 06/04/2015 | 0215 UTC | 1574 m | 320 20 kn | 290 05 06 | 1 | 1011.7 mb | 16.2 C | 13.1 C | | 2/8 | 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 | 16.07 | 16.07 | 33.257 D | 24.393 | 352.6 | 0.000 | 5.76 | 251.3 | 102.4 | 1.6 | 0.36 | 0.0 | 0.03 | 0.01 | 0.18 | 0.06 | 0 | |
| 2 | 16.07 | 16.07 | 33.257 | 24.393 | 352.7 | 0.007 | 5.76 | 251.3 | 102.4 | 1.6 | 0.36 | 0.0 | 0.03 | 0.01 | 0.18 | 0.06 | 2 | 20 |
| 10 | 16.08 | 16.08 | 33.264 | 24.397 | 352.6 | 0.035 | 5.77 | 251.6 | 102.6 | | | | | | 0.17 | 0.06 | 10 | 19 |
| 20 ISL | 16.07 D | 16.06 | 33.256 D | 24.393 | 353.3 | 0.071 | 5.80 | D253.0 | D103.1 | 1.5 | 0.36 | 0.0 | 0.02 | 0.00 | 0.18 | 0.05 | 20 | |
| 25 | 16.06 | 16.05 | 33.261 | 24.400 | 352.8 | 0.088 | 5.76 | 250.9 | 102.2 | 1.5 | 0.36 | 0.0 | 0.02 | 0.00 | 0.18 | 0.05 | 25 | 18 |
| 30 ISL | 16.06 D | 16.05 | 33.256 D | 24.397 | 353.3 | 0.107 | 5.81 | D253.4 | D103.3 | 1.5 | 0.36 | 0.0 | 0.02 | 0.00 | 0.18 | 0.06 | 30 | |
| 40 | 15.98 | 15.97 | 33.253 | 24.412 | 352.1 | 0.141 | 5.79 | 252.3 | 102.7 | 1.6 | 0.36 | 0.0 | 0.02 | 0.02 | 0.20 | 0.07 | 40 | 17 |
| 50 | 15.89 | 15.88 | 33.266 | 24.443 | 349.6 | 0.176 | 5.79 | 252.3 | 102.5 | 1.6 | 0.36 | 0.0 | 0.03 | 0.02 | 0.22 | 0.07 | 50 | 16 |
| 62 | 14.32 | 14.31 | 33.179 | 24.717 | 323.6 | 0.217 | 5.77 | 251.4 | 98.9 | 3.0 | 0.47 | 1.1 | 0.08 | 0.03 | 0.77 | 0.42 | 62 | 15 |
| 75 ISL | 13.30 D | 13.29 | 33.220 D | 24.959 | 300.9 | 0.259 | 5.40 | D235.2 | D 90.6 | 4.1 | 0.60 | 2.7 | 0.21 | 0.33 | 0.58 | 0.36 | 76 | |
| 76 | 13.16 | 13.15 | 33.246 | 25.007 | 296.4 | 0.260 | 5.48 | 238.6 | 91.7 | 4.2 | 0.61 | 2.8 | 0.22 | 0.35 | 0.56 | 0.35 | 77 | 14 |
| 87 | 11.74 | 11.73 | 33.213 | 25.254 | 272.9 | 0.291 | 4.95 | 215.8 | 80.5 | 8.9 | 1.01 | 9.4 | 0.15 | 0.01 | 0.25 | 0.24 | 88 | 13 |
| 100 | 10.72 | 10.71 | 33.365 D | 25.557 | 244.3 | 0.327 | 4.48 | D195.2 | D 71.3 | | | | | | | | 101 | 12 |
| 112 | 10.12 | 10.11 | 33.394 | 25.682 | 232.5 | 0.354 | 4.35 | 189.5 | 68.3 | 15.0 | 1.36 | 16.0 | 0.04 | 0.00 | 0.07 | 0.14 | 113 | 11 |
| 125 | 9.65 | 9.64 | 33.535 | 25.871 | 214.8 | 0.383 | 4.02 | 174.9 | 62.5 | 19.0 | 1.57 | 19.3 | 0.04 | 0.01 | 0.02 | 0.06 | 126 | 10 |
| 140 | 9.48 | 9.47 | 33.626 | 25.970 | 205.7 | 0.414 | 3.85 | 167.7 | 59.7 | 21.1 | 1.64 | 20.7 | 0.02 | 0.01 | 0.02 | 0.05 | 141 | 09 |
| 150 ISL | 9.13 D | 9.11 | 33.753 D | 26.127 | 190.9 | 0.437 | 3.68 | D160.1 | D 56.6 | 23.6 | 1.73 | 22.1 | 0.03 | 0.00 | 0.01 | 0.05 | 151 | |
| 170 | 8.90 | 8.88 | 33.864 | 26.250 | 179.6 | 0.472 | 3.17 | 137.7 | 48.5 | 28.6 | 1.91 | 24.9 | 0.03 | 0.00 | 0.00 | 0.04 | 171 | 08 |
| 200 | 8.39 | 8.37 | 34.000 | 26.436 | 162.4 | 0.523 | 2.54 | 110.4 | 38.5 | 36.4 | 2.17 | 28.4 | 0.03 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 230 | 8.09 | 8.07 | 34.041 | 26.514 | 155.5 | 0.571 | 2.22 | 96.5 | 33.4 | 41.1 | 2.30 | 30.3 | 0.02 | 0.01 | | | 232 | 06 |
| 250 ISL | 8.26 D | 8.24 | 34.140 D | 26.568 | 150.9 | 0.605 | 1.61 | D 70.2 | D 24.4 | 44.3 | 2.44 | 31.4 | 0.02 | 0.00 | | | 252 | |
| 270 | 7.80 | 7.78 | 34.148 | 26.642 | 144.0 | 0.631 | 1.45 | 62.9 | 21.6 | 47.6 | 2.58 | 32.5 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.34 D | 7.31 | 34.126 D | 26.691 | 139.5 | 0.678 | 1.29 | D 56.3 | D 19.2 | 53.3 | 2.75 | 34.1 | 0.02 | 0.00 | | | 302 | |
| 321 | 7.46 | 7.43 | 34.238 | 26.763 | 133.2 | 0.701 | 0.76 | 32.9 | 11.3 | 57.2 | 2.87 | 35.2 | 0.03 | 0.00 | | | 324 | 04 |
| 380 | 7.06 | 7.02 | 34.248 | 26.829 | 127.7 | 0.778 | 0.61 | 26.4 | 8.9 | 63.6 | 2.98 | 36.9 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.90 D | 6.86 | 34.267 D | 26.865 | 124.5 | 0.810 | 0.52 | D 22.6 | D 7.6 | 65.8 | 3.02 | 37.3 | 0.02 | 0.00 | | | 403 | |
| 441 | 6.62 | 6.58 | 34.278 | 26.913 | 120.4 | 0.854 | 0.42 | 18.1 | 6.1 | 70.4 | 3.09 | 38.2 | 0.00 | 0.00 | | | 445 | 02 |
| 500 ISL | 6.26 D | 6.22 | 34.301 D | 26.979 | 114.7 | 0.930 | 0.33 | D 14.4 | D 4.8 | 76.5 | 3.18 | 39.3 | 0.02 | 0.00 | | | 504 | |
| 515 | 6.19 | 6.14 | 34.308 | 26.994 | 113.4 | 0.940 | 0.30 | 13.1 | 4.3 | 78.0 | 3.20 | 39.6 | 0.02 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 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 34.0 W | 06/04/2015 | 0626 UTC | 1830 m | 310 17 kn | | | 1013.0 mb | 16.5 C | 13.8 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 | 17.28 | 17.28 | 33.389 D | 24.212 | 369.8 | 0.000 | 5.58 | 243.2 | 101.6 | 1.9 | 0.33 | 0.0 | 0.02 | 0.00 | 0.10 | 0.03 | 0 | |
| 2 | 17.28 | 17.28 | 33.389 | 24.213 | 369.9 | 0.007 | 5.58 | 243.2 | 101.6 | 1.9 | 0.33 | 0.0 | 0.02 | 0.00 | 0.10 | 0.03 | 2 | 20 |
| 10 | 17.28 | 17.28 | 33.386 | 24.211 | 370.4 | 0.037 | 5.58 | 243.2 | 101.6 | 1.9 | 0.33 | 0.0 | 0.02 | 0.00 | 0.09 | 0.03 | 10 | 19 |
| 20 ISL | 17.29 D | 17.28 | 33.386 D | 24.210 | 370.8 | 0.075 | 5.62 | D245.0 | D102.3 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.09 | 0.02 | 20 | |
| 25 | 17.29 | 17.28 | 33.387 | 24.212 | 370.8 | 0.093 | 5.58 | 243.4 | 101.7 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.09 | 0.02 | 25 | 18 |
| 30 ISL | 17.22 D | 17.22 | 33.378 D | 24.220 | 370.2 | 0.112 | 5.64 | D245.8 | D102.5 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.13 | 0.04 | 30 | |
| 41 | 16.07 | 16.06 | 33.265 | 24.401 | 353.3 | 0.151 | 5.76 | 250.9 | 102.3 | 1.8 | 0.36 | 0.0 | 0.02 | 0.00 | 0.20 | 0.06 | 41 | 17 |
| 50 | 15.38 | 15.38 | 33.373 | 24.638 | 331.0 | 0.182 | 5.77 | 251.3 | 101.1 | 2.7 | 0.35 | 0.0 | 0.02 | 0.00 | 0.19 | 0.11 | 50 | 16 |
| 62 | 14.01 | 14.00 | 33.268 | 24.851 | 310.9 | 0.220 | 5.65 | 246.4 | 96.4 | 3.7 | 0.50 | 1.3 | 0.06 | 0.01 | 0.37 | 0.25 | 62 | 15 |
| 75 ISL | 12.88 D | 12.87 | 33.173 D | 25.007 | 296.3 | 0.262 | 5.53 | D240.8 | D 92.0 | 5.0 | 0.67 | 4.0 | 0.11 | 0.00 | 0.33 | 0.28 | 76 | |
| 76 | 12.82 | 12.81 | 33.172 | 25.017 | 295.3 | 0.263 | 5.45 | 237.6 | 90.6 | 5.1 | 0.68 | 4.2 | 0.12 | 0.00 | 0.32 | 0.29 | 77 | 14 |
| 87 | 12.03 | 12.01 | 33.180 | 25.176 | 280.4 | 0.295 | 5.31 | 231.4 | 86.8 | 6.3 | 0.80 | 6.4 | 0.10 | 0.00 | 0.28 | 0.29 | 88 | 13 |
| 100 | 11.12 | 11.11 | 33.264 D | 25.407 | 258.6 | 0.332 | 4.83 | D210.3 | D 77.4 | | | | | | | | 101 | 12 |
| 111 | 10.77 | 10.76 | 33.310 | 25.504 | 249.5 | 0.357 | 4.57 | 199.1 | 72.8 | 12.8 | 1.26 | 14.0 | 0.04 | 0.00 | 0.11 | 0.12 | 112 | 11 |
| 124 | 10.04 | 10.02 | 33.443 | 25.735 | 227.7 | 0.388 | 4.20 | 182.9 | 65.9 | 16.7 | 1.46 | 17.5 | 0.02 | 0.00 | 0.05 | 0.10 | 125 | 10 |
| 125 ISL | 9.90 D | 9.88 | 33.485 D | 25.791 | 222.4 | 0.393 | 4.22 | D183.8 | D 66.0 | 17.0 | 1.47 | 17.7 | 0.02 | 0.00 | 0.05 | 0.10 | 126 | |
| 140 | 9.51 | 9.49 | 33.610 | 25.954 | 207.2 | 0.423 | 3.75 | 163.0 | 58.1 | 21.6 | 1.68 | 21.0 | 0.02 | 0.00 | 0.02 | 0.07 | 141 | 09 |
| 150 ISL | 9.41 D | 9.39 | 33.669 D | 26.016 | 201.5 | 0.446 | 3.65 | D159.0 | D 56.6 | 23.8 | 1.76 | 22.3 | 0.03 | 0.00 | 0.02 | 0.08 | 151 | |
| 170 | 8.97 | 8.95 | 33.822 | 26.207 | 183.7 | 0.482 | 3.16 | 137.5 | 48.5 | 28.2 | 1.93 | 24.9 | 0.03 | 0.01 | 0.01 | 0.11 | 171 | 08 |
| 200 | 8.51 | 8.48 | 33.946 | 26.377 | 168.0 | 0.535 | 2.87 | 125.0 | 43.7 | 33.0 | 2.04 | 27.0 | 0.02 | 0.00 | 0.00 | 0.03 | 202 | 07 |
| 230 | 8.18 | 8.16 | 34.007 | 26.475 | 159.2 | 0.584 | 2.45 | 106.7 | 37.0 | 38.1 | 2.26 | 29.1 | 0.02 | 0.01 | | | 232 | 06 |
| 250 ISL | 7.83 D | 7.80 | 34.049 D | 26.560 | 151.3 | 0.619 | 2.10 | D 91.4 | D 31.4 | 43.3 | 2.40 | 31.1 | 0.02 | 0.00 | | | 252 | |
| 270 | 7.57 | 7.55 | 34.075 | 26.618 | 146.1 | 0.645 | 1.71 | 74.4 | 25.5 | 48.4 | 2.54 | 33.0 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.29 D | 7.26 | 34.098 D | 26.676 | 140.9 | 0.692 | 1.43 | D 62.1 | D 21.1 | 52.0 | 2.65 | 34.2 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.33 | 7.30 | 34.117 | 26.686 | 140.4 | 0.716 | 1.30 | 56.3 | 19.2 | 54.5 | 2.72 | 35.0 | 0.00 | 0.00 | | | 323 | 04 |
| 380 | 6.69 | 6.66 | 34.141 | 26.793 | 130.7 | 0.797 | 0.95 | 41.4 | 13.9 | 63.5 | 2.90 | 37.4 | 0.02 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.83 D | 6.79 | 34.214 D | 26.833 | 127.4 | 0.828 | 0.69 | D 30.1 | D 10.1 | 65.1 | 2.96 | 37.5 | 0.02 | 0.00 | | | 403 | |
| 440 | 6.69 | 6.65 | 34.252 D | 26.883 | 123.2 | 0.879 | 0.48 | 20.9 | 7.0 | 68.1 | 3.07 | 37.7 | 0.01 | 0.02 | | | 444 | 02 |
| 500 ISL | 6.10 D | 6.05 | 34.275 D | 26.979 | 114.5 | 0.951 | 0.37 | D 16.0 | D 5.3 | 76.9 | 3.15 | 39.4 | 0.00 | 0.00 | | | 504 | |
| 515 | 6.01 | 5.96 | 34.269 D | 26.986 | 114.0 | 0.968 | 0.38 | 16.3 | 5.4 | 79.1 | 3.17 | 39.9 | 0.00 | 0.00 | | | 519 | 01 |

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

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 30.7 N | 120 14.4 W | 06/04/2015 | 1242 | UTC | 3929 m | 320 13 kn | | | 1014.0 mb | 15.0 C | 13.1 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 | 16.77 | 16.77 | 33.341 D | 24.295 | 361.9 | 0.000 | 5.62 | 245.2 | 101.4 | 2.0 | 0.33 | 0.0 | 0.02 | 0.00 | 0.12 | 0.03 | 0 | |
| 1 | 16.77 | 16.77 | 33.341 | 24.295 | 362.0 | 0.004 | 5.62 | 245.2 | 101.4 | 2.0 | 0.33 | 0.0 | 0.02 | 0.00 | 0.12 | 0.03 | 1 | 20 |
| 10 | 16.78 | 16.78 | 33.338 | 24.292 | 362.6 | 0.036 | 5.63 | 245.6 | 101.5 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 10 | 19 |
| 20 ISL | 16.77 D | 16.77 | 33.336 D | 24.294 | 362.8 | 0.073 | 5.65 | D246.2 | D101.8 | 1.9 | 0.33 | 0.0 | 0.00 | 0.00 | 0.13 | 0.03 | 20 | |
| 25 | 16.74 | 16.73 | 33.332 | 24.298 | 362.5 | 0.091 | 5.63 | 245.7 | 101.5 | 1.9 | 0.33 | 0.1 | 0.00 | 0.00 | 0.13 | 0.04 | 25 | 18 |
| 30 ISL | 16.68 D | 16.67 | 33.323 D | 24.306 | 362.0 | 0.110 | 5.65 | D246.2 | D101.6 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.14 | 0.04 | 30 | |
| 40 | 16.61 | 16.61 | 33.314 | 24.314 | 361.5 | 0.145 | 5.66 | 246.7 | 101.7 | 1.9 | 0.33 | 0.0 | 0.02 | 0.01 | 0.16 | 0.04 | 40 | 17 |
| 50 | 16.46 | 16.45 | 33.302 | 24.341 | 359.3 | 0.181 | 5.68 | 247.8 | 101.8 | 1.9 | 0.33 | 0.0 | 0.00 | 0.00 | 0.18 | 0.05 | 50 | 16 |
| 62 | 15.90 | 15.89 | 33.258 | 24.436 | 350.6 | 0.224 | 5.77 | 251.6 | 102.2 | 1.8 | 0.36 | 0.0 | 0.00 | 0.01 | 0.27 | 0.10 | 62 | 15 |
| 75 ISL | 15.61 D | 15.60 | 33.246 D | 24.492 | 345.7 | 0.271 | 5.83 | D254.1 | D102.6 | 1.4 | 0.36 | 0.0 | 0.02 | 0.02 | 0.40 | 0.17 | 76 | |
| 76 | 15.54 | 15.53 | 33.243 | 24.506 | 344.4 | 0.272 | 5.82 | 253.9 | 102.4 | 1.4 | 0.36 | 0.0 | 0.02 | 0.02 | 0.41 | 0.18 | 77 | 14 |
| 87 | 15.04 | 15.03 | 33.218 | 24.596 | 336.2 | 0.310 | 5.80 | 252.8 | 100.9 | 1.9 | 0.40 | 0.2 | 0.04 | 0.15 | 0.57 | 0.35 | 88 | 13 |
| 100 | 14.50 | 14.48 | 33.213 | 24.709 | 325.7 | 0.353 | 5.73 | 249.7 | 98.6 | 2.8 | 0.50 | 1.1 | 0.07 | 0.34 | 0.38 | 0.25 | 101 | 12 |
| 111 | 12.95 | 12.93 | 33.193 | 25.010 | 297.1 | 0.387 | 5.49 | 239.0 | 91.4 | 5.1 | 0.68 | 4.0 | 0.15 | 0.42 | 0.24 | 0.25 | 112 | 11 |
| 125 | 11.00 | 10.98 | 33.208 | 25.387 | 261.1 | 0.426 | 4.96 | 215.9 | 79.3 | 9.9 | 1.07 | 11.1 | 0.07 | 0.00 | 0.14 | 0.14 | 126 | 10 |
| 140 | 10.14 | 10.12 | 33.383 | 25.672 | 234.1 | 0.463 | 4.50 | 195.9 | 70.7 | 14.1 | 1.31 | 15.4 | 0.03 | 0.02 | 0.08 | 0.11 | 141 | 09 |
| 150 ISL | 9.98 D | 9.96 | 33.483 D | 25.777 | 224.3 | 0.489 | 4.24 | D184.6 | D 66.4 | 16.5 | 1.41 | 17.2 | 0.03 | 0.00 | 0.06 | 0.09 | 151 | |
| 171 | 9.47 | 9.45 | 33.697 | 26.029 | 200.8 | 0.531 | 3.75 | 163.1 | 58.1 | 21.7 | 1.63 | 20.9 | 0.02 | 0.00 | 0.02 | 0.04 | 172 | 08 |
| 200 | 9.00 | 8.98 | 33.827 | 26.206 | 184.4 | 0.587 | 3.27 | 142.5 | 50.3 | 27.4 | 1.85 | 24.5 | 0.02 | 0.00 | 0.01 | 0.04 | 202 | 07 |
| 230 | 8.63 | 8.61 | 33.922 | 26.340 | 172.2 | 0.640 | 2.98 | 129.5 | 45.4 | 31.5 | 1.98 | 26.4 | 0.01 | 0.00 | | | 232 | 06 |
| 250 ISL | 8.41 D | 8.39 | 33.984 D | 26.422 | 164.7 | 0.679 | 2.65 | D115.4 | D 40.2 | 35.0 | 2.10 | 27.9 | 0.00 | 0.00 | | | 252 | |
| 270 | 8.20 | 8.17 | 34.015 | 26.479 | 159.6 | 0.706 | 2.37 | 103.0 | 35.7 | 38.6 | 2.22 | 29.4 | 0.00 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.88 D | 7.85 | 34.068 D | 26.569 | 151.5 | 0.758 | 1.89 | D 82.3 | D 28.4 | 44.4 | 2.39 | 31.6 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.53 | 7.50 | 34.073 | 26.623 | 146.5 | 0.783 | 1.72 | 74.7 | 25.6 | 48.3 | 2.51 | 33.1 | 0.00 | 0.00 | | | 323 | 04 |
| 380 | 7.09 | 7.05 | 34.149 | 26.746 | 135.5 | 0.868 | 1.02 | 44.4 | 15.0 | 58.3 | 2.80 | 36.1 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.92 D | 6.89 | 34.165 D | 26.782 | 132.4 | 0.901 | 0.88 | D 38.3 | D 12.9 | 61.4 | 2.86 | 36.8 | 0.01 | 0.00 | | | 403 | |
| 440 | 6.54 | 6.50 | 34.179 | 26.844 | 126.7 | 0.947 | 0.71 | 30.8 | 10.3 | 67.6 | 2.98 | 38.3 | 0.00 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.93 D | 5.89 | 34.201 D | 26.941 | 117.9 | 1.027 | 0.53 | D 23.1 | D 7.6 | 76.6 | 3.09 | 39.9 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.85 | 5.80 | 34.208 | 26.957 | 116.4 | 1.036 | 0.50 | 21.5 | 7.1 | 78.7 | 3.11 | 40.2 | 0.01 | 0.00 | | | 518 | 01 |

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



| 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 | 06/04/2015 | 1858 | UTC | 3853 m | 310 06 kn | 340 03 07 | 1 | 1016.8 mb | 17.9 C | 14.0 C | 37 m | 6/8 | AS | 013 |

| DEPTH m | TEMP DEG C | POTTEMP DEG C | SALINITY | SIGMA THETA | SVA | DYN HT | OXYGEN ml/L | OXYGEN µmol/Kg | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | PRES db | SAMP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 18.33 | 18.33 | 33.550 D | 24.083 | 382.1 | 0.000 | 5.45 | 237.9 | 101.4 | 2.0 | 0.30 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 0 | |
| 1 A | 18.33 | 18.33 | 33.551 | 24.083 | 382.1 | 0.004 | 5.45 | 237.9 | 101.4 | 2.0 | 0.30 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 1 | 23 |
| 10 ISL | 18.11 D | 18.11 | 33.545 D | 24.133 | 377.7 | 0.021 | 5.51 | D240.3 | D102.1 | 2.0 | 0.29 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 10 | |
| 11 | 18.11 | 18.11 | 33.544 | 24.133 | 377.8 | 0.043 | | | | | | | | | | | 11 | 22 |
| 12 | 18.10 | 18.10 | 33.544 | 24.134 | 377.7 | 0.046 | 5.48 | 238.8 | 101.4 | 2.0 | 0.29 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 12 | 21 |
| 20 ISL | 18.09 D | 18.09 | 33.546 D | 24.138 | 377.6 | 0.055 | 5.49 | D239.2 | D101.6 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 20 | |
| 23 A | 18.09 | 18.09 | 33.556 | 24.147 | 376.9 | 0.087 | 5.51 | 240.4 | 102.1 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 23 | 20 |
| 30 A | 18.09 | 18.09 | 33.547 | 24.141 | 377.8 | 0.113 | 5.47 | 238.6 | 101.3 | 2.0 | 0.31 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 30 | 19 |
| 42 | 18.09 | 18.08 | 33.554 | 24.148 | 377.6 | 0.159 | 5.47 | 238.7 | 101.3 | 2.0 | 0.29 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 42 | 18 |
| 50 ISL | 18.09 D | 18.08 | 33.547 D | 24.143 | 378.3 | 0.169 | 5.46 | D238.1 | D101.1 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 50 | |
| 53 A | 18.08 | 18.07 | 33.550 | 24.148 | 378.1 | 0.200 | 5.48 | 239.1 | 101.5 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 53 | 17 |
| 69 | 17.65 | 17.64 | 33.524 | 24.232 | 370.6 | 0.260 | 5.49 | 239.4 | 100.8 | 2.0 | 0.30 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | 70 | 16 |
| 75 ISL | 15.60 D | 15.59 | 33.158 D | 24.427 | 351.9 | 0.263 | 5.93 | D258.3 | D104.2 | 2.3 | 0.34 | 0.0 | 0.01 | 0.00 | 0.16 | 0.06 | 76 | |
| 84 | 14.49 | 14.48 | 33.142 | 24.655 | 330.3 | 0.311 | 5.86 | 255.3 | 100.8 | 2.8 | 0.40 | 0.0 | 0.02 | 0.00 | 0.22 | 0.13 | 85 | 15 |
| 100 A | 12.57 | 12.55 | 33.136 | 25.039 | 293.9 | 0.361 | 5.53 | 241.0 | 91.4 | 5.1 | 0.67 | 4.1 | 0.11 | 0.01 | 0.33 | 0.26 | 101 | 13 |
| 100 | 12.57 | 12.55 | 33.142 | 25.044 | 293.4 | 0.362 | | | | | | | | | | | 101 | 14 |
| 111 | 11.47 | 11.46 | 33.184 | 25.283 | 270.8 | 0.392 | 5.30 | 231.0 | 85.7 | 6.7 | 0.82 | 7.1 | 0.07 | 0.00 | 0.25 | 0.24 | 112 | 12 |
| 123 A | 10.85 | 10.83 | 33.294 | 25.480 | 252.2 | 0.424 | 4.96 | 216.1 | 79.1 | 9.7 | 1.03 | 10.9 | 0.04 | 0.00 | 0.18 | 0.18 | 124 | 11 |
| 125 ISL | 10.78 D | 10.77 | 33.302 D | 25.497 | 250.6 | 0.396 | 5.01 | D218.1 | D 79.7 | 10.0 | 1.05 | 11.2 | 0.04 | 0.00 | 0.17 | 0.17 | 126 | |
| 131 | 10.50 | 10.49 | 33.346 | 25.581 | 242.7 | 0.444 | 4.86 | 211.8 | 77.0 | 11.0 | 1.09 | 12.2 | 0.03 | 0.00 | 0.15 | 0.16 | 132 | 10 |
| 141 | 10.14 | 10.12 | 33.415 | 25.697 | 231.8 | 0.467 | 4.70 | 204.6 | 73.8 | 12.7 | 1.17 | 13.7 | 0.03 | 0.00 | 0.10 | 0.09 | 142 | 09 |
| 150 ISL | 10.10 D | 10.08 | 33.571 D | 25.826 | 219.7 | 0.455 | 4.49 | D195.3 | D 70.5 | 16.0 | 1.34 | 16.3 | 0.03 | 0.00 | 0.07 | 0.07 | 151 | |
| 170 | 9.29 | 9.27 | 33.715 | 26.072 | 196.6 | 0.530 | 3.58 | 156.0 | 55.3 | 23.5 | 1.72 | 22.3 | 0.02 | 0.00 | 0.01 | 0.03 | 171 | 08 |
| 200 ISL | 8.90 D | 8.88 | 33.879 D | 26.263 | 179.0 | 0.554 | 3.10 | D134.8 | D 47.5 | 28.7 | 1.91 | 25.1 | 0.02 | 0.00 | 0.00 | 0.03 | 202 | |
| 201 | 8.89 | 8.87 | 33.871 | 26.259 | 179.4 | 0.588 | 3.09 | 134.3 | 47.3 | 28.9 | 1.92 | 25.2 | 0.02 | 0.00 | 0.00 | 0.03 | 203 | 07 |
| 231 | 8.44 | 8.42 | 33.986 | 26.418 | 164.7 | 0.640 | 2.75 | 119.7 | 41.8 | 34.8 | 2.07 | 27.4 | 0.02 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.11 D | 8.08 | 34.020 D | 26.496 | 157.6 | 0.638 | 2.47 | D107.6 | D 37.2 | 38.7 | 2.22 | 29.2 | 0.02 | 0.00 | | | 252 | |
| 270 | 8.00 | 7.98 | 34.060 | 26.543 | 153.4 | 0.701 | 1.98 | 86.2 | 29.8 | 42.9 | 2.37 | 31.1 | 0.02 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.72 D | 7.69 | 34.121 D | 26.634 | 145.2 | 0.715 | 1.59 | D 69.2 | D 23.8 | 48.2 | 2.55 | 32.8 | 0.02 | 0.00 | | | 302 | |
| 322 | 7.52 | 7.49 | 34.139 | 26.677 | 141.4 | 0.778 | 1.27 | 55.1 | 18.9 | 52.2 | 2.68 | 34.1 | 0.02 | 0.00 | | | 325 | 04 |
| 381 | 7.29 | 7.25 | 34.246 | 26.795 | 131.2 | 0.859 | 0.66 | 28.6 | 9.7 | 60.0 | 2.93 | 36.1 | 0.02 | 0.00 | | | 384 | 03 |
| 400 ISL | 7.10 D | 7.06 | 34.256 D | 26.830 | 128.0 | 0.852 | 0.57 | D 24.7 | D 8.4 | 63.0 | 2.97 | 36.8 | 0.02 | 0.00 | | | 403 | |
| 443 | 6.63 | 6.59 | 34.254 | 26.892 | 122.4 | 0.937 | 0.47 | 20.4 | 6.9 | 69.6 | 3.07 | 38.3 | 0.02 | 0.00 | | | 447 | 02 |
| 500 ISL | 6.20 D | 6.16 | 34.284 D | 26.973 | 115.2 | 0.975 | 0.35 | D 15.3 | D 5.1 | 79.0 | 3.14 | 40.1 | 0.00 | 0.00 | | | 504 | |
| 513 | 5.77 | 5.72 | 34.232 | 26.986 | 113.6 | 1.021 | 0.42 | 18.1 | 5.9 | 81.2 | 3.15 | 40.5 | 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 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 35.3 W | 07/04/2015 | 0109 | UTC | 4125 m | 260 03 kn | 340 03 07 | 1 | 1015.0 mb | 17.2 C | 13.9 C | 35 m | 5/8 | 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 | 17.52 | 17.52 | 33.143 D | 23.968 | 393.1 | 0.000 | 5.65 | 246.3 | 103.2 | 1.8 | 0.35 | 0.0 | 0.01 | 0.01 | 0.07 | 0.01 | 0 | |
| 2 | 17.52 | 17.52 | 33.147 | 23.971 | 392.9 | 0.008 | 5.65 | 246.3 | 103.2 | 1.8 | 0.35 | 0.0 | 0.01 | 0.01 | 0.07 | 0.01 | 2 | 24 |
| 10 | 16.64 | 16.64 | 33.128 | 24.163 | 374.9 | 0.039 | 5.70 | 248.4 | 102.3 | 1.8 | 0.36 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 10 | 19 |
| 10 | 16.64 | | 33.129 D | 250.784 | 0.4 | 0.039 | | | | | | | | | | | 10 | 23 |
| 10 | 16.64 | | 33.129 D | 250.784 | 0.4 | 0.039 | | | | | | | | | | | 10 | 22 |
| 10 | 16.64 | | 33.129 D | 250.784 | 0.4 | 0.039 | | | | | | | | | | | 10 | 21 |
| 10 | 16.64 | | 33.129 D | 250.784 | 0.4 | 0.039 | | | | | | | | | | | 10 | 20 |
| 20 ISL | 16.60 D | 16.59 | 33.128 D | 24.175 | 374.1 | 0.058 | 5.72 | D249.6 | D102.7 | 1.8 | 0.35 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 20 | |
| 25 | 16.57 | 16.56 | 33.134 | 24.186 | 373.2 | 0.095 | 5.68 | 247.9 | 101.9 | 1.8 | 0.35 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 25 | 18 |
| 30 ISL | 16.54 D | 16.54 | 33.124 D | 24.185 | 373.5 | 0.096 | 5.71 | D248.9 | D102.3 | 1.8 | 0.35 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 30 | |
| 40 | 16.45 | 16.44 | 33.123 | 24.205 | 371.9 | 0.151 | 5.69 | 248.2 | 101.8 | 1.8 | 0.36 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 40 | 17 |
| 50 | 15.55 | 15.54 | 33.104 | 24.394 | 354.2 | 0.187 | 5.79 | 252.3 | 101.7 | 2.0 | 0.38 | 0.0 | 0.00 | 0.00 | 0.17 | 0.06 | 50 | 16 |
| 62 | 14.28 | 14.27 | 33.087 | 24.656 | 329.4 | 0.228 | 5.94 | 258.8 | 101.6 | 3.0 | 0.44 | 0.1 | 0.01 | 0.01 | 0.44 | 0.17 | 62 | 15 |
| 75 | 12.59 | 12.58 | 33.065 | 24.978 | 299.0 | 0.269 | 5.58 | 243.1 | 92.2 | 5.0 | 0.69 | 4.1 | 0.17 | 0.01 | 0.44 | 0.22 | 76 | 14 |
| 87 | 11.22 | 11.21 | 33.078 | 25.245 | 273.7 | 0.303 | 5.21 | 227.0 | 83.7 | 7.9 | 0.99 | 9.1 | 0.08 | 0.00 | 0.33 | 0.17 | 88 | 13 |
| 100 | 10.17 | 10.16 | 33.208 | 25.528 | 246.9 | 0.337 | 4.96 | 216.0 | 77.9 | 11.4 | 1.18 | 13.0 | 0.02 | 0.01 | 0.18 | 0.13 | 101 | 12 |
| 112 | 9.78 | 9.77 | 33.344 | 25.700 | 230.7 | 0.366 | 4.56 | 198.6 | 71.1 | 15.1 | 1.38 | 16.3 | 0.01 | 0.00 | 0.09 | 0.09 | 113 | 11 |
| 125 | 9.60 | 9.59 | 33.533 | 25.878 | 214.1 | 0.395 | 3.87 | 168.6 | 60.2 | 20.0 | 1.65 | 20.3 | 0.00 | 0.00 | 0.03 | 0.06 | 126 | 10 |
| 140 | 9.37 | 9.36 | 33.631 | 25.992 | 203.6 | 0.426 | 3.57 | 155.5 | 55.3 | 22.9 | 1.76 | 22.1 | 0.00 | 0.00 | 0.01 | 0.04 | 141 | 09 |
| 150 ISL | 9.15 D | 9.13 | 33.731 D | 26.106 | 192.9 | 0.430 | 3.59 | D156.4 | D 55.4 | 24.7 | 1.82 | 23.2 | 0.00 | 0.00 | 0.01 | 0.04 | 151 | |
| 169 | 8.86 | 8.84 | 33.839 | 26.237 | 180.7 | 0.481 | 3.20 | 139.4 | 49.1 | 28.3 | 1.92 | 25.1 | 0.00 | 0.00 | 0.00 | 0.03 | 170 | 08 |
| 199 | 8.47 | 8.45 | 33.956 | 26.390 | 166.8 | 0.534 | 2.82 | 122.5 | 42.8 | 33.4 | 2.07 | 27.2 | 0.00 | 0.00 | 0.00 | 0.02 | 201 | 07 |
| 200 ISL | 8.47 D | 8.45 | 33.979 D | 26.408 | 165.1 | 0.519 | 2.69 | D117.2 | D 40.9 | 33.5 | 2.08 | 27.3 | 0.00 | 0.00 | | | 202 | |
| 230 | 8.18 | 8.16 | 34.020 | 26.484 | 158.3 | 0.584 | 2.42 | 105.5 | 36.6 | 38.7 | 2.23 | 29.3 | 0.00 | 0.00 | | | 232 | 06 |
| 250 ISL | 7.98 D | 7.95 | 34.043 D | 26.533 | 153.9 | 0.600 | 2.17 | D 94.3 | D 32.6 | 42.0 | 2.33 | 30.5 | 0.00 | 0.00 | | | 252 | |
| 270 | 7.78 | 7.76 | 34.062 | 26.577 | 150.1 | 0.646 | 1.89 | 82.4 | 28.3 | | | | | | | | 272 | 05 |
| 300 ISL | 7.45 D | 7.42 | 34.095 D | 26.651 | 143.4 | 0.675 | 1.56 | D 67.9 | D 23.2 | 50.3 | 2.58 | 33.5 | 0.00 | 0.00 | | | 302 | |
| 320 | 7.24 | 7.21 | 34.095 | 26.682 | 140.7 | 0.718 | 1.40 | 61.0 | 20.7 | 53.6 | 2.68 | 34.7 | 0.00 | 0.00 | | | 323 | 04 |
| 380 | 6.66 | 6.63 | 34.156 | 26.809 | 129.2 | 0.799 | 0.86 | 37.6 | 12.6 | 63.8 | 2.93 | 37.4 | 0.00 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.51 D | 6.47 | 34.174 D | 26.844 | 126.1 | 0.811 | 0.75 | D 32.5 | D 10.9 | 67.1 | 2.98 | 38.1 | 0.00 | 0.00 | | | 403 | |
| 440 | 6.20 | 6.16 | 34.208 | 26.911 | 120.1 | 0.874 | 0.52 | 22.7 | 7.5 | 73.7 | 3.09 | 39.4 | 0.00 | 0.00 | | | 444 | 02 |
| 500 ISL | 5.84 D | 5.79 | 34.242 D | 26.985 | 113.6 | 0.931 | 0.42 | D 18.4 | D 6.1 | 80.4 | 3.16 | 40.3 | 0.00 | 0.00 | | | 504 | |
| 515 | 5.78 | 5.74 | 34.257 | 27.004 | 111.9 | 0.961 | 0.34 | 14.7 | 4.8 | 82.1 | 3.18 | 40.5 | 0.00 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 30.7 N | 122 15.2 W | 07/04/2015 | 0727 | UTC | 4190 m | 230 06 kn | | | 1016.6 mb | 17.0 C | 13.7 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 | 17.34 | 17.34 | 33.292 D | 24.125 | 378.1 | 0.000 | 5.59 | 243.9 | 101.9 | 2.0 | 0.33 | 0.0 | 0.00 | 0.01 | 0.09 | 0.02 | 0 | |
| 2 | 17.34 | 17.34 | 33.320 | 24.146 | 376.2 | 0.008 | 5.59 | 243.9 | 101.9 | 2.0 | 0.33 | 0.0 | 0.00 | 0.01 | 0.09 | 0.02 | 2 | 20 |
| 10 | 16.53 | 16.53 | 33.122 | 24.185 | 372.8 | 0.038 | 5.70 | 248.5 | 102.1 | 2.0 | 0.33 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 10 | 19 |
| 20 ISL | 16.50 D | 16.49 | 33.129 D | 24.198 | 371.9 | 0.075 | 5.71 | D248.8 | D102.2 | 2.0 | 0.33 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 20 | |
| 25 | 16.49 | 16.48 | 33.128 | 24.200 | 371.9 | 0.093 | 5.69 | 248.3 | 101.9 | 2.0 | 0.33 | 0.0 | 0.00 | 0.00 | 0.09 | 0.03 | 25 | 18 |
| 30 ISL | 16.30 D | 16.30 | 33.081 D | 24.207 | 371.4 | 0.113 | 5.72 | D249.5 | D102.0 | 2.0 | 0.33 | 0.0 | 0.00 | 0.00 | 0.11 | 0.03 | 30 | |
| 40 | 16.30 | 16.29 | 33.078 | 24.205 | 371.9 | 0.149 | 5.72 | 249.2 | 101.9 | 2.0 | 0.34 | 0.0 | 0.00 | 0.00 | 0.13 | 0.03 | 40 | 17 |
| 50 | 16.43 | 16.42 | 33.124 | 24.211 | 371.7 | 0.186 | 5.70 | 248.6 | 101.9 | 2.0 | 0.33 | 0.0 | 0.00 | 0.00 | 0.15 | 0.03 | 50 | 16 |
| 62 | 15.20 | 15.19 | 33.036 | 24.420 | 352.1 | 0.230 | 5.91 | 257.4 | 103.0 | 2.2 | 0.36 | 0.0 | 0.00 | 0.00 | 0.23 | 0.08 | 62 | 15 |
| 75 | 14.11 | 14.10 | 33.030 | 24.648 | 330.6 | 0.274 | 5.81 | 253.4 | 99.1 | 3.1 | 0.45 | 0.6 | 0.06 | 0.01 | 0.62 | 0.24 | 76 | 14 |
| 87 | 12.60 | 12.58 | 32.994 | 24.923 | 304.6 | 0.312 | 5.50 | 239.8 | 90.9 | 5.3 | 0.73 | 4.9 | 0.15 | 0.01 | 0.58 | 0.23 | 88 | 13 |
| 100 | 11.81 | 11.79 | 33.034 | 25.104 | 287.5 | 0.351 | 5.27 | 229.6 | 85.6 | 7.3 | 0.93 | 8.2 | 0.08 | 0.00 | 0.32 | 0.27 | 101 | 12 |
| 112 | 10.75 | 10.74 | 33.169 | 25.399 | 259.5 | 0.383 | 5.03 | 219.0 | 79.9 | 9.9 | 1.09 | 11.5 | 0.04 | 0.00 | 0.20 | 0.13 | 113 | 11 |
| 124 | 10.10 | 10.09 | 33.266 | 25.586 | 241.9 | 0.413 | 4.66 | 202.8 | 73.0 | 13.3 | 1.32 | 15.1 | 0.03 | 0.00 | 0.11 | 0.11 | 125 | 10 |
| 125 ISL | 10.02 D | 10.01 | 33.301 D | 25.627 | 238.0 | 0.418 | 4.67 | D203.4 | D 73.2 | 13.5 | 1.33 | 15.2 | 0.03 | 0.00 | 0.11 | 0.11 | 126 | |
| 140 | 9.69 | 9.68 | 33.373 | 25.738 | 227.7 | 0.451 | 4.48 | 195.2 | 69.7 | 16.0 | 1.41 | 17.0 | 0.02 | 0.00 | 0.06 | 0.07 | 141 | 09 |
| 150 ISL | 9.42 D | 9.40 | 33.538 D | 25.912 | 211.4 | 0.476 | 4.18 | D181.9 | D 64.7 | 18.5 | 1.52 | 18.8 | 0.02 | 0.00 | 0.04 | 0.06 | 151 | |
| 170 | 9.24 | 9.22 | 33.666 | 26.041 | 199.5 | 0.515 | 3.61 | 157.3 | 55.7 | 23.4 | 1.74 | 22.4 | 0.01 | 0.00 | 0.01 | 0.04 | 171 | 08 |
| 199 | 8.78 | 8.76 | 33.884 | 26.285 | 176.8 | 0.569 | 3.17 | 138.0 | 48.5 | 29.3 | 1.90 | 25.3 | 0.01 | 0.00 | 0.00 | 0.03 | 201 | 07 |
| 200 ISL | 8.77 D | 8.75 | 33.903 D | 26.302 | 175.3 | 0.573 | 3.22 | D140.0 | D 49.2 | 29.5 | 1.91 | 25.4 | 0.01 | 0.00 | | | 202 | |
| 231 | 8.34 | 8.32 | 33.968 | 26.420 | 164.5 | 0.624 | 2.70 | 117.5 | 40.9 | 35.2 | 2.10 | 28.2 | 0.01 | 0.01 | | | 233 | 06 |
| 250 ISL | 8.05 D | 8.03 | 34.002 D | 26.490 | 158.0 | 0.657 | 2.48 | D107.9 | D 37.3 | 39.2 | 2.22 | 29.6 | 0.01 | 0.00 | | | 252 | |
| 270 | 7.75 | 7.72 | 34.033 D | 26.559 | 151.7 | 0.689 | 2.23 | D 97.2 | D 33.4 | | | | | | | | 272 | 05 |
| 300 ISL | 7.38 D | 7.35 | 34.062 D | 26.635 | 144.9 | 0.733 | 1.75 | D 75.9 | D 25.9 | 49.7 | 2.53 | 33.5 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.20 | 7.16 | 34.089 | 26.683 | 140.6 | 0.760 | 1.39 | 60.3 | 20.5 | 53.9 | 2.65 | 35.0 | 0.01 | 0.00 | | | 323 | 04 |
| 380 | 6.68 | 6.64 | 34.137 | 26.792 | 130.8 | 0.841 | 0.91 | 39.5 | 13.3 | 63.6 | 2.88 | 37.6 | 0.01 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.53 D | 6.49 | 34.158 D | 26.829 | 127.5 | 0.870 | 0.85 | D 36.8 | D 12.3 | 66.6 | 2.93 | 38.2 | 0.01 | 0.00 | | | 403 | |
| 441 | 6.23 | 6.19 | 34.196 | 26.898 | 121.3 | 0.918 | 0.57 | 24.6 | 8.2 | 72.8 | 3.04 | 39.4 | 0.01 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.93 D | 5.89 | 34.250 D | 26.980 | 114.2 | 0.992 | 0.44 | D 19.0 | D 6.3 | 79.5 | 3.13 | 40.3 | 0.01 | 0.00 | | | 504 | |
| 515 | 5.85 | 5.80 | 34.259 | 26.998 | 112.6 | 1.004 | 0.34 | 14.6 | 4.8 | 81.2 | 3.15 | 40.6 | 0.01 | 0.00 | | | 519 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 110.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 10.8 N | 122 55.2 W | 07/04/2015 | 1347 | UTC | 3863 m | 230 10 kn | | | 1015.8 mb | 15.0 C | 14.0 C | | | | 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 | 17.99 | 17.99 | 33.551 D | 24.166 | 374.2 | 0.000 | 5.48 | 239.1 | 101.3 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 0 | |
| 2 | 17.99 | 17.99 | 33.558 | 24.172 | 373.7 | 0.008 | 5.48 | 239.1 | 101.3 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 2 | 20 |
| 10 ISL | 18.01 D | 18.01 | 33.555 D | 24.166 | 374.6 | 0.038 | 5.49 | D239.3 | D101.4 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 10 | |
| 20 | 18.12 | 18.12 | 33.576 | 24.155 | 376.0 | 0.075 | 5.49 | 239.2 | 101.6 | 2.1 | 0.27 | 0.0 | 0.00 | 0.00 | 0.06 | 0.02 | 20 | 19 |
| 30 ISL | 17.96 D | 17.96 | 33.571 D | 24.191 | 373.0 | 0.113 | 5.50 | D239.6 | D101.5 | 2.1 | 0.28 | 0.0 | 0.00 | 0.00 | 0.06 | 0.02 | 30 | |
| 40 | 17.95 | 17.95 | 33.567 | 24.190 | 373.5 | 0.150 | 5.49 | 239.3 | 101.3 | 2.1 | 0.28 | 0.0 | 0.00 | 0.00 | 0.06 | 0.02 | 40 | 18 |
| 50 ISL | 17.94 D | 17.93 | 33.568 D | 24.196 | 373.3 | 0.188 | 5.49 | D239.3 | D101.3 | 2.1 | 0.28 | 0.0 | 0.00 | 0.00 | 0.07 | 0.02 | 50 | |
| 61 | 17.94 | 17.92 | 33.568 | 24.197 | 373.6 | 0.228 | 5.50 | 239.9 | 101.6 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 61 | 17 |
| 75 ISL | 17.91 D | 17.89 | 33.560 D | 24.200 | 373.9 | 0.282 | 5.50 | D239.8 | D101.4 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.09 | 0.03 | 76 | |
| 80 | 17.87 | 17.85 | 33.550 | 24.202 | 373.9 | 0.299 | 5.50 | 239.8 | 101.4 | 2.1 | 0.28 | 0.0 | 0.01 | 0.00 | 0.10 | 0.03 | 81 | 16 |
| 100 | 15.46 | 15.45 | 33.323 | 24.586 | 337.6 | 0.370 | 5.73 | 249.7 | 100.6 | 2.8 | 0.32 | 0.0 | 0.00 | 0.00 | 0.20 | 0.14 | 101 | 15 |
| 110 | 13.41 | 13.39 | 33.179 | 24.907 | 306.9 | 0.403 | 5.66 | 246.8 | 95.3 | 3.6 | 0.46 | 1.1 | 0.07 | 0.01 | 0.25 | 0.14 | 111 | 14 |
| 120 | 12.23 | 12.21 | 33.174 | 25.134 | 285.3 | 0.432 | 5.46 | 238.0 | 89.7 | 5.2 | 0.65 | 4.3 | 0.08 | 0.02 | 0.23 | 0.17 | 121 | 13 |
| 125 ISL | 11.23 D | 11.22 | 33.136 D | 25.289 | 270.5 | 0.449 | 5.33 | D232.2 | D 85.6 | 6.5 | 0.78 | 6.5 | 0.06 | 0.00 | 0.20 | 0.15 | 126 | |
| 130 | 11.12 | 11.11 | 33.134 | 25.307 | 268.9 | 0.460 | 5.27 | 229.6 | 84.5 | 7.8 | 0.91 | 8.7 | 0.04 | 0.00 | 0.18 | 0.13 | 131 | 12 |
| 141 | 10.60 | 10.58 | 33.226 | 25.471 | 253.4 | 0.488 | 5.03 | 218.9 | 79.7 | 9.8 | 1.04 | 11.2 | 0.03 | 0.00 | 0.15 | 0.13 | 142 | 11 |
| 150 ISL | 10.18 D | 10.16 | 33.313 D | 25.611 | 240.2 | 0.514 | 4.79 | D208.4 | D 75.2 | 12.4 | 1.21 | 13.9 | 0.02 | 0.00 | 0.11 | 0.13 | 151 | |
| 151 | 10.17 | 10.15 | 33.308 | 25.609 | 240.4 | 0.513 | 4.74 | 206.5 | 74.5 | 12.7 | 1.23 | 14.2 | 0.02 | 0.00 | 0.10 | 0.13 | 152 | 10 |
| 160 | 9.88 | 9.86 | 33.385 | 25.717 | 230.2 | 0.534 | 4.59 | 199.8 | 71.7 | 14.7 | 1.32 | 15.9 | 0.01 | 0.00 | 0.06 | 0.12 | 161 | 09 |
| 175 | 9.66 | 9.64 | 33.557 | 25.889 | 214.2 | 0.567 | 4.31 | 187.8 | 67.1 | 17.5 | 1.41 | 17.7 | 0.01 | 0.00 | 0.03 | 0.05 | 176 | 08 |
| 195 | 9.09 | 9.07 | 33.713 | 26.103 | 194.1 | 0.608 | 3.68 | 160.0 | 56.5 | 24.0 | 1.73 | 22.6 | 0.01 | 0.00 | 0.00 | 0.04 | 196 | 07 |
| 200 ISL | 9.03 D | 9.01 | 33.755 D | 26.145 | 190.2 | 0.622 | 3.58 | D155.6 | D 54.9 | 24.9 | 1.76 | 23.0 | 0.01 | 0.00 | | | 202 | |
| 231 | 8.66 | 8.64 | 33.905 | 26.321 | 174.0 | 0.674 | 3.16 | 137.4 | 48.2 | 30.3 | 1.91 | 25.7 | 0.00 | 0.00 | | | 233 | 06 |
| 250 ISL | 8.49 D | 8.46 | 33.960 D | 26.392 | 167.6 | 0.711 | 2.96 | D128.9 | D 45.0 | 33.8 | 2.03 | 27.2 | 0.00 | 0.00 | | | 252 | |
| 269 | 8.17 | 8.14 | 34.003 | 26.474 | 160.0 | 0.738 | 2.54 | 110.4 | 38.3 | 37.2 | 2.15 | 28.7 | 0.00 | 0.00 | | | 271 | 05 |
| 300 ISL | 7.64 D | 7.61 | 34.039 D | 26.580 | 150.3 | 0.791 | 2.32 | D101.0 | D 34.6 | 44.1 | 2.33 | 31.2 | 0.00 | 0.00 | | | 302 | |
| 321 | 7.33 | 7.30 | 34.054 | 26.636 | 145.1 | 0.817 | 1.88 | 81.9 | 27.9 | 48.7 | 2.46 | 32.9 | 0.00 | 0.00 | | | 324 | 04 |
| 380 | 6.80 | 6.76 | 34.116 | 26.760 | 133.9 | 0.900 | 1.11 | 48.4 | 16.3 | 59.7 | 2.79 | 36.6 | 0.00 | 0.00 | | | 383 | 03 |
| 400 ISL | 6.66 D | 6.62 | 34.146 D | 26.802 | 130.2 | 0.931 | 0.91 | D 39.4 | D 13.2 | 63.0 | 2.86 | 37.3 | 0.00 | 0.00 | | | 403 | |
| 441 | 6.35 | 6.31 | 34.179 | 26.869 | 124.2 | 0.979 | 0.68 | 29.4 | 9.8 | 69.8 | 3.00 | 38.8 | 0.00 | 0.00 | | | 445 | 02 |
| 500 ISL | 5.94 D | 5.90 | 34.237 D | 26.968 | 115.3 | 1.055 | 0.45 | D 19.6 | D 6.5 | 78.4 | 3.12 | 40.3 | 0.00 | 0.00 | | | 504 | |
| 517 | 5.83 | 5.79 | 34.241 | 26.985 | 113.8 | 1.069 | 0.39 | 17.0 | 5.6 | 80.9 | 3.16 | 40.7 | 0.00 | 0.00 | | | 521 | 01 |

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

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 120.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 50.6 N | 123 35.1 W | 07/04/2015 | 2010 | UTC | 4071 m | 280 11 kn | 290 02 07 | 1 | 1018.4 mb | 19.0 C | 15.9 C | 40 m | 1/8 | 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 | 17.79 | 17.79 | 33.328 D | 24.043 | 385.9 | 0.000 | 5.56 | 242.6 | 102.3 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 0 | |
| 2 A | 17.79 | 17.79 | 33.327 | 24.043 | 386.0 | 0.008 | 5.56 | 242.6 | 102.3 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 2 | 24 |
| 10 ISL | 17.56 D | 17.55 | 33.330 D | 24.103 | 380.6 | 0.039 | 5.55 | D242.0 | D101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 10 | |
| 13 | 17.54 | 17.54 | 33.339 | 24.113 | 379.8 | 0.050 | 5.57 | 242.7 | 101.8 | 1.9 | 0.31 | 0.0 | 0.01 | 0.01 | 0.06 | 0.01 | 13 | 22 |
| 20 ISL | 17.53 D | 17.53 | 33.360 D | 24.132 | 378.2 | 0.063 | 5.56 | D242.3 | D101.7 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 20 | |
| 25 A | 17.51 | 17.50 | 33.362 | 24.140 | 377.7 | 0.095 | 5.56 | 242.3 | 101.6 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 25 | 21 |
| 30 ISL | 17.49 D | 17.48 | 33.360 D | 24.144 | 377.5 | 0.102 | 5.56 | D242.4 | D101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.06 | 0.02 | 30 | |
| 33 A | 17.48 | 17.48 | 33.359 | 24.145 | 377.5 | 0.125 | 5.56 | 242.6 | 101.7 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 33 | 20 |
| 40 | 17.47 | 17.46 | 33.361 | 24.149 | 377.4 | 0.152 | 5.56 | 242.6 | 101.7 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 40 | 19 |
| 49 | 17.45 | 17.44 | 33.356 | 24.150 | 377.6 | 0.186 | 5.56 | 242.6 | 101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 49 | 18 |
| 50 ISL | 17.45 D | 17.44 | 33.357 D | 24.151 | 377.5 | 0.177 | 5.57 | D242.9 | D101.7 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 50 | |
| 57 A | 17.44 | 17.43 | 33.354 | 24.153 | 377.6 | 0.216 | 5.57 | 242.7 | 101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 57 | 17 |
| 72 | 17.41 | 17.40 | 33.349 D | 24.156 | 377.8 | 0.261 | 5.56 | D242.6 | D101.5 | | | | | | | | 73 | 16 |
| 75 ISL | 17.41 D | 17.40 | 33.348 D | 24.156 | 378.0 | 0.273 | 5.56 | D242.5 | D101.5 | 2.0 | 0.31 | 0.0 | 0.01 | 0.00 | | | 76 | |
| 90 | 16.56 | 16.54 | 33.326 | 24.341 | 360.8 | 0.339 | 5.65 | 246.4 | 101.4 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.16 | 0.07 | 91 | 15 |
| 100 ISL | 14.77 D | 14.76 | 33.177 D | 24.622 | 334.0 | 0.363 | 5.85 | D254.9 | D101.2 | 2.8 | 0.38 | 0.2 | 0.02 | 0.00 | 0.22 | 0.11 | 101 | |
| 107 A | 14.26 | 14.24 | 33.153 | 24.714 | 325.4 | 0.397 | 5.77 | 251.7 | 98.8 | 3.2 | 0.43 | 0.3 | 0.03 | 0.02 | 0.26 | 0.13 | 108 | 14 |
| 114 | 13.20 | 13.18 | 33.207 D | 24.971 | 300.9 | 0.409 | 5.54 | D241.4 | D 92.8 | | | | | | | | 115 | 12 |
| 114 | 13.20 | 13.18 | 33.217 | 24.979 | 300.2 | 0.419 | | | | | | | | | | | 115 | 13 |
| 125 | 12.09 | 12.08 | 33.187 | 25.171 | 282.0 | 0.451 | 5.47 | 238.4 | 89.6 | 5.3 | 0.67 | 4.5 | 0.08 | 0.02 | 0.26 | 0.19 | 126 | 11 |
| 133 A | 11.25 | 11.23 | 33.162 | 25.307 | 269.0 | 0.473 | 5.33 | 232.0 | 85.6 | 7.1 | 0.85 | 7.8 | 0.05 | 0.00 | 0.22 | 0.19 | 134 | 10 |
| 150 ISL | 10.28 D | 10.26 | 33.285 D | 25.573 | 243.8 | 0.491 | 4.92 | D214.2 | D 77.5 | 12.3 | 1.22 | 13.9 | 0.02 | 0.00 | 0.12 | 0.12 | 151 | |
| 151 | 10.24 | 10.22 | 33.295 | 25.586 | 242.6 | 0.519 | 4.75 | 206.7 | 74.7 | 12.6 | 1.24 | 14.3 | 0.02 | 0.00 | 0.12 | 0.11 | 152 | 09 |
| 171 | 9.71 | 9.69 | 33.473 | 25.815 | 221.2 | 0.565 | 4.33 | 188.6 | 67.4 | 17.0 | 1.44 | 17.8 | 0.01 | 0.00 | 0.04 | 0.05 | 172 | 08 |
| 200 ISL | 9.17 D | 9.15 | 33.694 D | 26.076 | 196.8 | 0.601 | 3.71 | D161.3 | D 57.1 | 23.5 | 1.73 | 22.4 | 0.01 | 0.00 | 0.01 | 0.03 | 202 | |
| 201 | 9.14 | 9.12 | 33.695 | 26.082 | 196.3 | 0.628 | 3.67 | 159.6 | 56.4 | 23.7 | 1.74 | 22.6 | 0.01 | 0.00 | 0.00 | 0.02 | 203 | 07 |
| 232 | 8.73 | 8.71 | 33.877 | 26.289 | 177.1 | 0.686 | 3.34 | 145.2 | 51.0 | 28.9 | 1.86 | 24.9 | 0.01 | 0.00 | | | 234 | 06 |
| 250 ISL | 8.50 D | 8.48 | 33.956 D | 26.386 | 168.1 | 0.692 | 3.12 | D135.9 | D 47.5 | 32.4 | 1.96 | 26.3 | 0.01 | 0.00 | | | 252 | |
| 270 | 8.22 | 8.19 | 33.987 | 26.454 | 162.0 | 0.750 | 2.79 | 121.2 | 42.1 | 36.3 | 2.08 | 27.9 | 0.01 | 0.00 | | | 272 | 05 |
| 300 ISL | 7.81 D | 7.78 | 34.029 D | 26.547 | 153.5 | 0.773 | 2.35 | D102.3 | D 35.2 | 42.4 | 2.27 | 30.2 | 0.01 | 0.00 | | | 302 | |
| 320 | 7.51 | 7.48 | 34.045 | 26.604 | 148.3 | 0.828 | 2.12 | 92.2 | 31.5 | 46.5 | 2.39 | 31.8 | 0.01 | 0.01 | | | 322 | 04 |
| 379 | 6.84 | 6.81 | 34.083 | 26.727 | 137.1 | 0.912 | 1.43 | 62.2 | 20.9 | 57.8 | 2.69 | 35.6 | 0.01 | 0.00 | | | 382 | 03 |
| 400 ISL | 6.64 D | 6.60 | 34.115 D | 26.781 | 132.1 | 0.917 | 1.15 | D 50.2 | D 16.8 | 61.2 | 2.77 | 36.4 | 0.01 | 0.00 | | | 403 | |
| 442 | 6.33 | 6.29 | 34.137 | 26.839 | 127.1 | 0.995 | 0.92 | 39.8 | 13.2 | 68.1 | 2.94 | 38.1 | 0.01 | 0.00 | | | 446 | 02 |
| 500 ISL | 5.77 D | 5.72 | 34.181 D | 26.946 | 117.2 | 1.043 | 0.69 | D 29.9 | D 9.8 | 78.1 | 3.07 | 39.7 | 0.01 | 0.00 | | | 504 | |
| 514 | 5.68 | 5.64 | 34.192 | 26.964 | 115.5 | 1.082 | 0.59 | 25.5 | 8.4 | 80.5 | 3.10 | 40.1 | 0.01 | 0.00 | | | 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 STA-CORRECTED O2;

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.4 26.4

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST | TIME | BOTTOM | WIND SPEED | WAVES | WEA | BAROMETER | DRY | WET | SECCHI | CLD AMT | TYPE | ORD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 57.1 N | 117 17.0 W | 04/04/2015 | 2101 | UTC | 27 m | 220 05 kn | 290 02 07 | 1 | 1011.7 mb | 20.0 C | 19.1 C | | 4/8 | ST | 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 | 19.01 | 19.01 | 33.331 D | 23.744 | 414.4 | 0.000 | 5.94 | 259.2 | 111.8 | 2.2 | 0.23 | 0.0 | 0.01 | 0.00 | 0.71 | 0.04 | 0 | |
| 2 | 19.01 | 19.01 | 33.327 | 23.741 | 414.8 | 0.008 | 5.94 | 259.2 | 111.8 | 2.2 | 0.23 | 0.0 | 0.01 | 0.00 | 0.71 | 0.04 | 2 | 04 |
| 5 | 18.53 | 18.53 | 33.328 | 23.864 | 403.2 | 0.021 | 5.97 | 260.6 | 111.4 | 2.2 | 0.23 | 0.0 | 0.01 | 0.00 | 0.73 | 0.11 | 5 | 03 |
| 10 | 17.18 | 17.17 | 33.317 | 24.183 | 373.0 | 0.040 | 6.08 | 265.0 | 110.4 | 2.7 | 0.25 | 0.0 | 0.02 | 0.00 | 1.36 | 0.29 | 10 | 02 |
| 16 | 14.23 | 14.23 | 33.272 | 24.806 | 313.8 | 0.061 | 6.12 | 266.6 | 104.8 | 5.5 | 0.49 | 1.0 | 0.10 | 0.00 | 5.83 | 0.66 | 16 | 01 |

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

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 76.7 70.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 34 23.1 N | 122 14.6 W | 18/04/2015 | 1745 UTC | 21 m | 1208 - 1908 PST | 1208 PST | 1909 PST | 306.9 mg C/m2 | 065 |

| 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 | 15.32 | 33.176 | 24.498 | 5.88 | 102.8 | 2.3 | 0.38 | 0.0 | 0.01 | 0.03 | 0.27 | 0.08 | 86. A | 7.2 | 7.2 | 7.2 | 0.57 |
| 13 | 15.29 | 33.176 | 24.504 | 5.87 | 102.7 | 2.3 | 0.38 | 0.0 | 0.01 | 0.02 | 0.26 | 0.07 | 39. | 6.9 | 6.3 | 6.6 | 0.40 |
| 17 | 15.29 | 33.176 | 24.506 | 5.88 | 102.8 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.26 | 0.08 | 29. | 3.7 | 3.7 | 3.7 | 0.51 |
| 25 | 15.11 | 33.188 | 24.554 | 5.90 | 102.9 | 2.2 | 0.38 | 0.0 | 0.01 | 0.02 | 0.33 | 0.11 | | | | | |
| 30 | 15.04 | 33.187 | 24.568 | 5.92 | 103.0 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.38 | 0.12 | 11. | 6.1 | 7.8 | 6.9 | 0.46 |
| 40 | 15.02 | 33.187 | 24.574 | 5.90 | 102.6 | 2.3 | 0.38 | 0.0 | 0.01 | 0.01 | 0.48 | 0.14 | | | | | |
| 56 | 15.00 | 33.191 | 24.583 | 5.89 | 102.4 | 2.3 | 0.37 | 0.0 | 0.01 | 0.02 | 0.58 | 0.18 | 1.7 | 2.0 | 1.6 | 1.8 | 0.39 |
| 49 | 15.01 | 33.190 | 24.579 | 5.90 | 102.6 | 2.3 | 0.40 | 0.0 | 0.01 | 0.02 | 0.53 | 0.18 | | | | | |
| 62 | 14.99 | 33.193 | 24.585 | 5.89 | 102.3 | 2.3 | 0.38 | 0.0 | 0.01 | 0.04 | 0.62 | 0.20 | | | | | |
| 69 | 14.74 | 33.168 | 24.621 | 5.82 | 100.5 | 2.6 | 0.41 | 0.4 | 0.04 | 0.11 | 0.51 | 0.23 | 0.64 | 0.64 | 0.69 | 0.67 | 0.37 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 80.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 49.2 N | 123 54.6 W | 17/04/2015 | 1719 UTC | 26 m | 1215 - 1913 PST | 1215 PST | 1913 PST | 138.2 mg C/m2 | 061 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 15.80 | 33.078 | 24.315 | 5.79 | 102.2 | 2.1 | 0.34 | 0.0 | 0.01 | 0.00 | 0.14 | 0.03 | 84. A | 2.7 | 0.68 | 1.7 | 0.35 |
| 10 | 15.79 | 33.077 | 24.317 | 5.83 | 102.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.04 | | | | | |
| 16 | 15.77 | 33.081 | 24.326 | 5.78 | 102.0 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.15 | 0.02 | 39. | 0.75 | 0.75 | 0.75 | 0.43 |
| 21 | 15.77 | 33.078 | 24.325 | 5.79 | 102.2 | 2.0 | 0.33 | 0.0 | 0.01 | 0.00 | 0.14 | 0.05 | 29. | 1.6 | 2.0 | 1.8 | 0.44 |
| 38 | 15.70 | 33.080 | 24.341 | 5.89 | 103.8 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.15 | 0.04 | 11. | 2.2 | 2.9 | 2.5 | 0.47 |
| 49 | 14.89 | 33.121 | 24.551 | 5.91D | 102.5 | 2.2 | 0.36 | 0.0 | 0.01 | 0.00 | 0.34 | 0.15 | | | | | |
| 60 | 14.83 | 33.140 | 24.580 | 5.90 | 102.1 | 2.2 | 0.37 | 0.0 | 0.01 | 0.05 | 0.54 | 0.28 | | | | | |
| 70 | 14.73 | 33.144 | 24.604 | 5.83 | 100.8 | 2.2 | 0.38 | 0.0 | 0.02 | 0.16 | 0.41 | 0.23 | 1.6 | 1.1 | 1.5 | 1.3 | 0.45 |
| 77 | 14.49 | 33.125 | 24.641 | 5.77 | 99.2 | 2.5 | 0.43 | 0.5 | 0.09 | 0.23 | 0.27 | 0.21 | | | | | |
| 85 | 14.30 | 33.115 | 24.675 | 5.72 | 98.0 | 2.8 | 0.47 | 0.9 | 0.13 | 0.23 | 0.22 | 0.17 | 0.66 | 0.42 | 0.46 | 0.44 | 0.34 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 81.8 46.9

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 34 16.7 N | 120 1.2 W | 15/04/2015 | 1745 UTC | 10 m | 1202 - 1900 PST | 1200 PST | 1858 PST | 582.3 mg C/m2 | 054 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 13.49 | 33.472 | 25.112 | 6.47 | 109.3 | 1.4 | 0.23 | 0.3 | 0.04 | 0.02 | 2.78 | 0.47 | 74. A | 39.7 | 40.3 | 40.0 | 0.45 |
| 6 | 13.30 | 33.471 | 25.150 | 6.48 | 109.0 | 1.4 | 0.22 | 0.3 | 0.05 | 0.03 | 3.10 | 0.46 | 40. | 7.9 | 7.9 | 7.9 | 0.73 |
| 8 | 13.08 | 33.474 | 25.197 | 6.45 | 108.0 | 2.0 | 0.28 | 0.8 | 0.06 | 0.06 | 3.38 | 0.66 | 29. | 48.3 | 48.3 | 48.3 | 0.73 |
| 14 | 11.14 | 33.550 | 25.622 | 4.53 | 72.9 | 12.4 | 1.13 | 12.3 | 0.20 | 0.20 | 1.89 | 0.41 | 12. | 21.5 | 21.5 | 21.5 | 0.47 |
| 27 | 9.97 | 33.655 | 25.909 | 3.25 | 50.9 | 21.6 | 1.75 | 21.2 | 0.11 | 0.02 | 0.26 | 0.19 | 1.6 | 0.14 | 0.11 | 0.13 | 0.32 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 83.3 51.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 33 52.5 N | 120 7.8 W | 14/04/2015 | 1854 UTC | 08 m | 1202 - 1854 PST | 1201 PST | 1857 PST | 104.4 mg C/m2 | 048 |

| 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 | 15.22 | 33.278 | 24.598 | 6.04 | 105.5 | 1.1 | 0.31 | 0.1 | 0.02 | 0.00 | 1.56 | 0.44 | 68. A | 30.4 | 30.4 | 30.4 | 0.66 |
| 4 | 15.22 | 33.277 | 24.598 | 6.03 | 105.4 | 1.1 | 0.31 | 0.2 | 0.03 | 0.01 | 1.70 | 0.36 | 46. | | | | |
| 8 | 14.28 | 33.276 | 24.799 | 6.02 | 103.2 | 1.2 | 0.32 | 0.2 | 0.03 | 0.00 | 1.47 | 0.42 | 22. | 8.5 | 8.5 | 8.5 | 0.77 |
| 12 | 13.35 | 33.241 | 24.962 | 5.90 | 99.1 | 3.5 | 0.54 | 2.3 | 0.09 | 0.08 | 2.19 | 0.60 | 10.0 | 9.7 | 9.7 | 9.7 | 0.55 |
| 20 | 13.21 | 33.351 | 25.075 | 5.77 | 96.8 | 4.5 | 0.61 | 3.4 | 0.08 | 0.33 | 3.67 | 1.22 | 2.2 | 0.07 | 0.07 | 0.07 | 0.53 |
| 26 | 12.60 | 33.320 | 25.172 | 5.44 | 90.2 | 6.5 | 0.77 | 5.8 | 0.14 | 0.46 | 3.86 | 1.14 | 0.68 | 0.82 | 0.05 | 0.44 | 0.30 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 83.3 90.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 34.5 N | 122 48.6 W | 13/04/2015 | 1657 UTC | 24 m | 1213 - 1903 PST | 1212 PST | 1905 PST | 154.2 mg C/m2 | 044 |

| 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 | 15.97 | 33.215 | 24.383 | 5.79 | 102.7 | 1.9 | 0.35 | 0.1 | 0.01 | 0.00 | 0.17 | 0.03 | 88. A | 4.4 | 2.2 | 3.3 | 0.34 |
| 10 | 15.97 | 33.214 | 24.383 | 5.77 | 102.2 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.17 | 0.04 | | | | | |
| 15 | 15.97 | 33.214 | 24.384 | 5.77 | 102.4 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.18 | 0.04 | 38. | 2.2 | 2.2 | 2.2 | 0.34 |
| 20 | 15.96 | 33.212 | 24.385 | 5.77 | 102.3 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 28. | 4.1 | 4.1 | 4.1 | 0.38 |
| 34 | 15.95 | 33.213 | 24.388 | 5.76 | 102.1 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.19 | 0.04 | 11. | 2.8 | 2.6 | 2.7 | 0.29 |
| 45 | 15.92 | 33.210 | 24.392 | 5.76 | 102.0 | 1.9 | 0.34 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | | | | | |
| 55 | 15.58 | 33.178 | 24.446 | 5.82 | 102.4 | 1.9 | 0.35 | 0.0 | 0.01 | 0.00 | 0.24 | 0.07 | | | | | |
| 64 | 15.53 | 33.193 | 24.467 | 5.85 | 102.7 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.27 | 0.08 | 1.7 | 0.39 | 0.10 | 0.25 | 0.30 |
| 72 | 15.48 | 33.193 | 24.480 | 5.81 | 101.9 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.30 | 0.12 | | | | | |
| 80 | 14.83 | 33.164 | 24.600 | 5.72 | 99.1 | 2.3 | 0.41 | 0.4 | 0.04 | 0.07 | 0.45 | 0.20 | 0.60 | 0.37 | 0.35 | 0.36 | 0.31 |

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 38.8; 28.7; 10.9; 1.6; 0.63 PERCENT RESPECTIVELY.

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 86.7 45.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 33 29.7 N | 119 18.6 W | 11/04/2015 | 1840 UTC | 12 m | 1159 - 1852 PST | 1158 PST | 1850 PST | 432.0 mg C/m2 | 037 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 16.83 | 33.314 | 24.262 | 5.85 | 105.6 | | | | | | 0.34 | 0.11 | 77. A | 8.4 | 3.3 | 5.8 | 0.38 |
| 7 | 16.41 | 33.316 | 24.361 | 5.93 | 106.1 | | | | | | 0.61 | 0.28 | 41. | 2.8 | 4.3 | 3.6 | 0.69 |
| 10 | 16.06 | 33.329 | 24.450 | 6.01 | 106.8 | 0.5 | 0.25 | 0.0 | 0.01 | 0.00 | 0.72 | 0.36 | 28. | 13.2 | 13.2 | 13.2 | 0.88 |
| 16 | 15.61 | 33.323 | 24.549 | 6.38 | 112.4 | 0.2 | 0.22 | 0.0 | 0.01 | 0.00 | 1.54 | 1.37 | 13. | 23.1 | 23.1 | 23.1 | 0.60 |
| 24 | 14.65 | 33.324 | 24.758 | 6.23 | 107.6 | 0.3 | 0.27 | 0.1 | 0.01 | 0.00 | 3.48 | 1.86 | | | | | |
| 32 | 13.54 | 33.334 | 24.996 | 5.54 | 93.5 | 3.7 | 0.60 | 3.3 | 0.12 | 0.47 | 2.38 | 0.85 | 1.7 | 5.3 | 7.2 | 6.2 | 0.45 |
| 40 | 13.08 | 33.362 | 25.112 | 5.12 | 85.6 | 7.9 | 0.86 | 7.1 | 0.19 | 0.43 | 0.71 | 0.51 | 0.60 | 0.87 | 0.79 | 0.83 | 0.32 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 86.7 80.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 19.4 N | 121 43.4 W | 12/04/2015 | 1949 UTC | 23 m | 1307 - 1900 PST | 1208 PST | 1859 PST | 60.0 mg C/m2 | 041 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 17.08 | 33.281 | 24.178 | 5.62 | 101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.02 | 0.11 | 0.02 | 82. A | 1.8 | 1.5 | 1.6 | 0.32 |
| 9 | 17.09 | 33.278 | 24.174 | 5.63 | 102.1 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.12B | 0.01B | | | | | |
| 14 | 17.07 | 33.279 | 24.179 | 5.61 | 101.6 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.13 | 0.01 | 39. | 1.6 | 1.6 | 1.6 | 0.33 |
| 20 | 17.08 | 33.287 | 24.184 | 5.62 | 101.8 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.14C | 0.01C | 26. | 0.95 | 0.95 | 0.95 | 0.41 |
| 33 | 17.07 | 33.280 | 24.182 | 5.61 | 101.6 | 1.9 | 0.32 | 0.0 | 0.01 | 0.00 | 0.12 | 0.01 | 11. | 0.79 | 1.1 | 0.96 | 0.38 |
| 44 | 17.05 | 33.282 | 24.188 | 5.62 | 101.9 | 1.9 | 0.33 | 0.0 | 0.01 | 0.01 | 0.14 | 0.00 | | | | | |
| 52 | 17.05 | 33.279 | 24.188 | 5.62 | 101.7 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.16 | 0.00 | | | | | |
| 62 | 16.81 | 33.275 | 24.240 | 5.63 | 101.6 | 1.9 | 0.33 | 0.0 | 0.01 | 0.00 | 0.20 | 0.03 | 1.6 | 0.02 | 0.12 | 0.07 | 0.37 |
| 69 | 14.55 | 33.117 | 24.622 | 5.90 | 101.6 | 2.7 | 0.40 | 0.1 | 0.02 | 0.00 | 0.56 | 0.05 | | | | | |
| 79 | 13.18 | 33.118 | 24.904 | 5.76 | 96.5 | 3.7 | 0.54 | 1.7 | 0.07 | 0.04 | 0.68 | 0.20 | 0.51 | 0.16 | 0.17 | 0.17 | 0.27 |

B) FIRST FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS
C) SECOND FLUOROMETER READING NOT RECORDED CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 90.0 35.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 33 15.2 N | 118 14.8 W | 10/04/2015 | 1630 UTC | 23 m | 1158 - 1845 PST | 1154 PST | 1845 PST | 210.1 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 17.14 | 33.304 | 24.181 | 5.73 | 104.1 | 1.3 | 0.29 | 0.0 | 0.01 | 0.00 | 0.21 | 0.04 | 88. A | 6.3 | 5.4 | 5.9 | 0.36 |
| 10 | 17.09 | 33.305 | 24.194 | 5.75 | 104.3 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.23 | 0.06 | | | | | |
| 14 | 17.07 | 33.304 | 24.198 | 5.75 | 104.3 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.24 | 0.06 | 39. | 4.5 | 3.1 | 3.8 | 0.41 |
| 19 | 17.06 | 33.304 | 24.202 | 5.77 | 104.5 | 1.2 | 0.29 | 0.0 | 0.01 | 0.00 | 0.24 | 0.06 | 28. | | | | |
| 26 | 16.78 | 33.283 | 24.251 | 5.82 | 104.8 | 1.3 | 0.30 | 0.0 | 0.01 | 0.00 | 0.30 | 0.08 | | | | | |
| 32 | 15.29 | 33.206D | 24.529 | 6.01 | 105.1 | 2.0 | 0.36 | 0.0 | 0.01 | 0.00 | 0.32 | 0.13 | 12. | 6.1 | 1.8 | 4.0 | 0.37 |
| 43 | 14.18 | 33.187 | 24.753 | 6.00 | 102.5 | 2.5 | 0.41 | 0.0 | 0.01 | 0.00 | 0.71 | 0.31 | | | | | |
| 52 | 13.09 | 33.256 | 25.028 | 5.22 | 87.3 | 6.6 | 0.77 | 5.6 | 0.38 | 0.01 | 0.89 | 0.55 | | | | | |
| 61 | 12.39 | 33.264 | 25.170 | 4.97 | 81.9 | 8.4 | 0.92 | 8.2 | 0.26 | 0.00 | 0.52 | 0.53 | 1.7 | 2.3 | 1.7 | 2.0 | 0.42 |
| 75 | 10.98 | 33.315 | 25.471 | 4.60 | 73.6 | 12.0 | 1.18 | 12.9 | 0.08 | 0.00 | 0.25 | 0.30 | 0.67 | 0.44 | 0.37 | 0.40 | 0.34 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 90.0 60.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 24.9 N | 119 57.7 W | 09/04/2015 | 1914 UTC | 29 m | 1235 - 1850 PST | 1201 PST | 1850 PST | 94.7 mg C/m2 | 024 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.29 | 33.458 | 24.264 | 5.57 | 101.6 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | 95. A | 1.8 | 0.79 | 1.3 | 0.37 |
| 10 | 17.29 | 33.453 | 24.259 | 5.56 | 101.3 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.10 | 0.02 | | | | | |
| 17 | 17.25 | 33.452 | 24.271 | 5.56 | 101.2 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.11 | 0.02 | 41. | 1.5 | 1.4 | 1.5 | 0.38 |
| 23 | 17.23 | 33.452 | 24.275 | 5.55 | 101.1 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 30. | 1.8 | 0.91 | 1.4 | 0.34 |
| 38 | 17.21 | 33.453 | 24.281 | 5.56 | 101.2 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.11 | 0.03 | 13. | 1.3 | 1.3 | 1.3 | 0.45 |
| 54 | 17.21 | 33.454 | 24.284 | 5.56 | 101.2 | 2.1 | 0.32 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | | | | | |
| 66 | 17.20 | 33.453 | 24.287 | 5.55 | 101.0 | 2.1 | 0.33 | 0.0 | 0.00 | 0.00 | 0.13 | 0.03 | | | | | |
| 78 | 16.33 | 33.433 | 24.473 | 5.58 | 99.8 | 2.2 | 0.33 | 0.0 | 0.01 | 0.00 | 0.22 | 0.06 | 1.6 | 0.61 | 0.35 | 0.48 | 0.42 |
| 86 | 13.70 | 33.211 | 24.872 | 5.67 | 95.9 | 4.3 | 0.60 | 3.0 | 0.11 | 0.18 | 1.16 | 0.49 | | | | | |
| 95 | 12.23 | 33.349 | 25.269 | 4.87 | 80.0 | 9.2 | 0.96 | 8.4 | 0.38 | 0.32 | 0.64 | 0.42 | 0.65 | 0.63 | 0.18 | 0.40 | 0.26 |

RV NEW HORIZON — CALCOFI CRUISE 1504 — STATION 90.0 100.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 31 5.3 N | 122 40.5 W | 08/04/2015 | 1721 UTC | 28 m | 1217 - 1900 PST | 1212 PST | 1859 PST | 192.3 mg C/m2 | 020 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15.90 | 33.018 | 24.248 | 5.77 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 95. A | 1.6 | 1.6 | 1.6 | 0.23 |
| 10 | 15.88 | 33.018 | 24.251 | 5.80 | 102.4 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | | | | | |
| 17 | 15.86 | 33.019 | 24.257 | 5.79 | 102.2 | 2.0 | 0.34 | 0.0 | 0.01 | 0.00 | 0.12 | 0.03 | 39. | 3.0 | 3.0 | 3.0 | 0.23 |
| 23 | 15.76 | 33.012 | 24.275 | 5.79 | 102.1 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.13 | 0.03 | 28. | 2.8 | 2.9 | 2.9 | 0.24 |
| 40 | 15.58 | 32.997 | 24.305 | 5.80 | 102.0 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.16 | 0.04 | 11. | 2.6 | 2.6 | 2.6 | 0.27 |
| 51 | 15.58 | 33.003 | 24.311 | 5.80 | 101.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.21 | 0.06 | | | | | |
| 63 | 15.51 | 32.997 | 24.322 | 5.81 | 101.9 | 2.0 | 0.35 | 0.0 | 0.01 | 0.00 | 0.31 | 0.11 | | | | | |
| 74 | 14.50 | 33.084 | 24.608 | 5.78 | 99.5 | 2.9 | 0.41 | 0.3 | 0.04 | 0.01 | 0.43 | 0.35 | 1.7 | 1.7 | 1.4 | 1.6 | 0.20 |
| 84 | 12.79 | 33.087 | 24.957 | 5.62 | 93.3 | 4.3 | 0.59 | 2.8 | 0.10 | 0.00 | 0.35 | 0.36 | | | | | |
| 92 | 12.46 | 33.229 | 25.133 | 5.45 | 89.9 | 4.9 | 0.61 | 3.9 | 0.07 | 0.00 | 0.29 | 0.33 | 0.64 | 0.46 | 0.64 | 0.55 | 0.16 |

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 38.8; 28.7; 10.9; 1.6; 0.63 PERCENT RESPECTIVELY.

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 26.7

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 57.1 N | 117 18.2 W | 04/04/2015 | 1920 UTC | 13 m | 1212 - 1837 PST | 1152 PST | 1836 PST | 1147.3 mg C/m2 | 001 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 18.62 | 33.323 | 23.836 | 5.94 | 111.0 | 1.7 | 0.22 | 0.0 | 0.02 | 0.16 | 0.29 | 0.11 | 79. A | 17.2 | 17.0 | 17.1 | 0.37 |
| 8 | 18.06 | 33.316 | 23.970 | 6.03 | 111.4 | 1.7 | 0.21 | 0.0 | 0.01 | 0.00 | 0.41 | 0.08 | 39. | 21.6 | 17.2 | 19.4 | 0.48 |
| 11 | 16.37 | 33.255 | 24.323 | 6.80 | 121.5 | 3.1 | 0.22 | 0.0 | 0.02 | 0.08 | 1.07 | 0.31 | 27. | 29.2 | 31.5 | 30.4 | 1.0 |
| 19 | 12.96 | 33.255 | 25.050 | 6.36 | 106.0 | 5.3 | 0.44 | 0.1 | 0.03 | 0.09 | 3.09 | 1.32 | 11. | 65.3 | 61.3 | 63.3 | 0.96 |
| 27 | 11.84 | 33.307 | 25.306 | 4.55 | 74.1 | 11.2 | 1.14 | 12.7 | 0.66 | 0.00 | 0.98 | 0.69 | | | | | |
| 35 | 11.41 | 33.346 | 25.416 | 4.43 | 71.6 | 11.7 | 1.20 | 13.2 | 0.27 | 0.15 | 0.71 | 0.54 | 1.6 | 3.6 | 3.0 | 3.3 | 0.20 |
| 45 | 11.01 | 33.470 | 25.584 | 4.10 | 65.7 | 15.7 | 1.44 | 16.9 | 0.07 | 0.02 | 0.41 | 0.38 | 0.49 | 0.75 | 0.81 | 0.78 | 0.19 |

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 45.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 32 20.7 N | 118 33.7 W | 05/04/2015 | 1730 UTC | 22 m | 1200 - 1845 PST | 1157 PST | 1842 PST | 248.6 mg C/m2 | 008 |

| DEPTH m | TEMP DEG C | SALINITY | SIGMA THETA | OXYGEN ml/L | OXY PCT | SIO3* µM | PO4* µM | NO3* µM | NO2* µM | NH4* µM | CHL-A µg/L | PHAEO µg/L | LIGHT PCT | UPTAKE (mg C/m3) 1 | 2 | MEAN | DARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 17.82 | 33.309 | 24.022 | 5.65 | 103.9 | 1.7 | 0.30 | 0.0 | 0.02 | 0.00 | 0.20 | 0.04 | 87. A | 3.5 | 5.2 | 4.4 | 0.23 |
| 9 | 17.82 | 33.310 | 24.024 | 5.63 | 103.6 | 1.7 | 0.29 | 0.0 | 0.01 | 0.00 | 0.20 | 0.04 | | | | | |
| 14 | 17.81 | 33.308 | 24.025 | 5.65 | 103.9 | 1.7 | 0.29 | 0.1 | 0.00 | 0.00 | 0.20 | 0.03 | 38. | 4.6 | 4.7 | 4.6 | 0.22 |
| 19 | 17.80 | 33.310 | 24.029 | 5.70 | 104.7 | 1.7 | 0.30 | 0.1 | 0.01 | 0.00 | 0.21 | 0.03 | 27. | 4.8 | 3.5 | 4.1 | 0.25 |
| 24 | 17.79 | 33.307 | 24.029 | 5.65 | 103.9 | 1.7 | 0.30 | 0.0 | 0.02 | 0.00 | 0.22 | 0.04 | | | | | |
| 32 | 17.59 | 33.303 | 24.076 | 5.69 | 104.2 | 1.7 | 0.31 | 0.0 | 0.02 | 0.00 | 0.22 | 0.05 | 11. | 4.3 | 2.8 | 3.6 | 0.25 |
| 41 | 15.16 | 33.233 | 24.579 | 6.00 | 104.6 | 1.6 | 0.36 | 0.0 | 0.01 | 0.00 | 1.12 | 0.40 | | | | | |
| 52 | 13.40 | 33.219 | 24.936 | 5.96 | 100.3 | 3.5 | 0.46 | 0.4 | 0.04 | 0.02 | 1.10 | 0.45 | | | | | |
| 59 | 12.47 | 33.203 | 25.108 | 5.53 | 91.2 | 5.7 | 0.69 | 4.0 | 0.15 | 0.01 | 0.31 | 0.20 | 1.6 | 3.6 | 2.2 | 2.9 | 0.24 |
| 74 | 10.71 | 33.297D | 25.504 | 4.92 | 78.2 | 10.3 | 1.11 | 11.5 | 0.08 | 0.01 | 0.10 | 0.09 | 0.57 | 0.66 | 0.71 | 0.68 | 0.15 |

RV NEW HORIZON CALCOFI CRUISE 1504 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 | 06/04/2015 | 1858 UTC | 37 m | 1223 - 1851 PST | 1206 PST | 1851 PST | 161.2 mg C/m2 | 013 |

| 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 | 18.33 | 33.551 | 24.083 | 5.45 | 101.4 | 2.0 | 0.30 | 0.0 | 0.00 | 0.00 | 0.08 | 0.02 | 96. A | 1.8 | 1.1 | 1.4 | 0.18 |
| 12 | 18.10 | 33.544 | 24.134 | 5.48 | 101.4 | 2.0 | 0.29 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | | | | | |
| 23 | 18.09 | 33.556 | 24.147 | 5.51 | 102.1 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 39. | 1.3 | 2.0 | 1.6 | 0.21 |
| 30 | 18.09 | 33.547 | 24.141 | 5.47 | 101.3 | 2.0 | 0.31 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | 29. | 0.65 | 1.9 | 1.3 | 0.20 |
| 42 | 18.09 | 33.554 | 24.148 | 5.47 | 101.3 | 2.0 | 0.29 | 0.0 | 0.00 | 0.00 | 0.09 | 0.02 | | | | | |
| 53 | 18.08 | 33.550 | 24.148 | 5.48 | 101.5 | 2.0 | 0.28 | 0.0 | 0.00 | 0.00 | 0.10 | 0.02 | 11. | 1.5 | 1.4 | 1.4 | 0.20 |
| 69 | 17.65 | 33.524 | 24.232 | 5.49 | 100.8 | 2.0 | 0.30 | 0.0 | 0.01 | 0.00 | 0.12 | 0.02 | | | | | |
| 84 | 14.49 | 33.142 | 24.655 | 5.86 | 100.8 | 2.8 | 0.40 | 0.0 | 0.02 | 0.00 | 0.22 | 0.13 | | | | | |
| 100 | 12.57 | 33.136 | 25.039 | 5.53 | 91.4 | 5.1 | 0.67 | 4.1 | 0.11 | 0.01 | 0.33 | 0.26 | 1.6 | 1.3 | 1.3 | 1.3 | 0.19 |
| 111 | 11.47 | 33.184 | 25.283 | 5.30 | 85.7 | 6.7 | 0.82 | 7.1 | 0.07 | 0.00 | 0.25 | 0.24 | | | | | |
| 123 | 10.85 | 33.294 | 25.480 | 4.96 | 79.1 | 9.7 | 1.03 | 10.9 | 0.04 | 0.00 | 0.18 | 0.18 | 0.61 | 0.47 | 0.49 | 0.48 | 0.17 |

RV NEW HORIZON CALCOFI CRUISE 1504 STATION 93.3 120.0

| LATITUDE | LONGITUDE | DAY/MO/YR | CAST TIME | SECCHI | INCUBATION TIME | LAN | CIVIL TWILIGHT | INTEGRATED VALUE | ORD |
|---|---|---|---|---|---|---|---|---|---|
| 29 50.6 N | 123 35.1 W | 07/04/2015 | 2010 UTC | 40 m | 1316 - 1905 PST | 1216 PST | 1901 PST | 108.8 mg C/m2 | 017 |

| 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 | 17.79 | 33.327 | 24.043 | 5.56 | 102.3 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 93. A | 1.4 | 1.4 | 1.4 | 0.19 |
| 13 | 17.54 | 33.339 | 24.113 | 5.57 | 101.8 | 1.9 | 0.31 | 0.0 | 0.01 | 0.01 | 0.06 | 0.01 | | | | | |
| 25 | 17.51 | 33.362 | 24.140 | 5.56 | 101.6 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.06 | 0.01 | 38. | 1.2 | 1.2 | 1.2 | 0.24 |
| 33 | 17.48 | 33.359 | 24.145 | 5.56 | 101.7 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | 28. | 1.2 | 0.72 | 0.95 | 0.26 |
| 40 | 17.47 | 33.361 | 24.149 | 5.56 | 101.7 | 1.9 | 0.30 | 0.0 | 0.01 | 0.00 | 0.07 | 0.02 | | | | | |
| 49 | 17.45 | 33.356 | 24.150 | 5.56 | 101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | | | | | |
| 57 | 17.44 | 33.354 | 24.153 | 5.57 | 101.6 | 1.9 | 0.31 | 0.0 | 0.01 | 0.00 | 0.08 | 0.02 | 11. | 1.1 | 0.56 | 0.85 | 0.26 |
| 72 | 17.41 | 33.349D | 24.156 | 5.56D | 101.5 | | | | | | | | | | | | |
| 90 | 16.56 | 33.326 | 24.341 | 5.65 | 101.4 | 2.1 | 0.31 | 0.0 | 0.01 | 0.00 | 0.16 | 0.07 | | | | | |
| 107 | 14.26 | 33.153 | 24.714 | 5.77 | 98.8 | 3.2 | 0.43 | 0.3 | 0.03 | 0.02 | 0.26 | 0.13 | 1.6 | 0.39 | 0.65 | 0.52 | 0.20 |
| 114 | 13.20 | 33.207D | 24.971 | 5.54D | 92.8 | | | | | | | | | | | | |
| 125 | 12.09 | 33.187 | 25.171 | 5.47 | 89.6 | 5.3 | 0.67 | 4.5 | 0.08 | 0.02 | 0.26 | 0.19 | | | | | |
| 133 | 11.25 | 33.162 | 25.307 | 5.33 | 85.6 | 7.1 | 0.85 | 7.8 | 0.05 | 0.00 | 0.22 | 0.19 | 0.61 | 0.33 | 0.37 | 0.35 | 0.19 |

A) INCUBATION LIGHT INTENSITIES WERE 61.6; 38.8; 28.7; 10.9; 1.6; 0.63 PERCENT RESPECTIVELY.

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

| Line | Sta. | Latitude N | Longitude W | Date Mo/Day | Time (PST) Start | Time (PST) End | Water Volume Strained ($m^3$) | Max. Tow Depth (m) | Volume per 1000 $m^3$ Strained Total ($cm^3$) | Volume per 1000 $m^3$ Strained Small ($cm^3$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 76.7 | 49.0 | 35 05.2 | 120 46.3 | 04/19 | 0438 | 0443 | 97 | 39 | 1017 | 627 |
| 76.7 | 51.0 | 35 01.3 | 120 54.4 | 04/19 | 0206 | 0228 | 401 | 207 | 523 | 411 |
| 76.7 | 55.0 | 34 53.3 | 121 11.6 | 04/18 | 2217 | 2239 | 418 | 206 | 411 | 270 |
| 76.7 | 60.0 | 34 43.2 | 121 33.1 | 04/18 | 1754 | 1817 | 427 | 211 | 370 | 223 |
| 76.7 | 70.0 | 34 23.0 | 122 14.5 | 04/18 | 1059 | 1122 | 439 | 213 | 501 | 36 |
| 76.7 | 80.0 | 34 02.8 | 122 56.5 | 04/18 | 0436 | 0457 | 439 | 216 | 1398 | 594 |
| 76.7 | 90.0 | 33 43.0 | 123 37.9 | 04/17 | 2220 | 2243 | 421 | 213 | 647 | 100 |
| 76.7 | 100.0 | 33 23.0 | 124 18.8 | 04/17 | 1613 | 1635 | 429 | 209 | 14 | 14 |
| 80.0 | 50.5 | 34 27.9 | 120 29.1 | 04/19 | 0938 | 0940 | 46 | 12 | 216 | 216 |
| 80.0 | 51.0 | 34 27.0 | 120 31.4 | 04/19 | 1041 | 1049 | 147 | 63 | 211 | 170 |
| 80.0 | 55.0 | 34 18.8 | 120 47.6 | 04/16 | 0329 | 0354 | 457 | 210 | 885 | 392 |
| 80.0 | 60.0 | 34 08.9 | 121 08.8 | 04/16 | 0751 | 0813 | 454 | 202 | 478 | 313 |
| 80.0 | 70.0 | 33 48.5 | 121 50.6 | 04/16 | 1434 | 1457 | 455 | 212 | 125 | 59 |
| 80.0 | 80.0 | 33 28.8 | 122 31.9 | 04/16 | 2044 | 2106 | 432 | 216 | 268 | 125 |
| 80.0 | 90.0 | 33 08.4 | 123 13.2 | 04/17 | 0303 | 0326 | 473 | 208 | 494 | 95 |
| 80.0 | 100.0 | 32 49.2 | 123 54.6 | 04/17 | 0826 | 0848 | 433 | 215 | 90 | 37 |
| 81.7 | 43.5 | 34 24.3 | 119 48.1 | 04/15 | 0744 | 0746 | 50 | 14 | 80 | 80 |
| 81.8 | 46.9 | 34 16.5 | 120 01.4 | 04/15 | 1121 | 1144 | 443 | 212 | 95 | 54 |
| 83.3 | 39.4 | 34 15.9 | 119 19.8 | 04/14 | 2034 | 2036 | 56 | 11 | 89 | 89 |
| 83.3 | 40.6 | 34 13.5 | 119 24.6 | 04/14 | 1925 | 1928 | 66 | 27 | 181 | 106 |
| 83.3 | 42.0 | 34 10.6 | 119 30.4 | 04/14 | 1731 | 1741 | 187 | 91 | 209 | 182 |
| 83.3 | 51.0 | 33 52.7 | 120 07.8 | 04/19 | 1539 | 1547 | 164 | 59 | 195 | 195 |
| 83.3 | 55.0 | 33 44.4 | 120 24.6 | 04/14 | 0803 | 0825 | 450 | 207 | 64 | 64 |
| 83.3 | 70.0 | 33 14.5 | 121 26.4 | 04/13 | 2254 | 2316 | 458 | 212 | 109 | 48 |
| 83.3 | 80.0 | 32 54.7 | 122 07.2 | 04/13 | 1626 | 1649 | 437 | 209 | 53 | 53 |
| 83.3 | 90.0 | 32 34.2 | 122 48.5 | 04/13 | 1016 | 1038 | 443 | 212 | 284 | 41 |
| 85.4 | 35.8 | 34 01.0 | 118 52.5 | 04/15 | 0031 | 0034 | 74 | 18 | 296 | 296 |
| 86.7 | 33.0 | 33 53.4 | 118 29.4 | 04/11 | 0023 | 0029 | 113 | 40 | 141 | 141 |
| 86.7 | 35.0 | 33 49.4 | 118 37.6 | 04/11 | 0308 | 0332 | 431 | 203 | 109 | 109 |
| 86.7 | 40.0 | 33 39.4 | 118 58.6 | 04/11 | 0740 | 0802 | 419 | 211 | 72 | 57 |
| 86.7 | 45.0 | 33 29.4 | 119 18.8 | 04/11 | 1208 | 1231 | 445 | 199 | 72 | 72 |
| 86.7 | 50.0 | 33 19.7 | 119 39.4 | 04/11 | 1615 | 1622 | 133 | 63 | 181 | 151 |
| 86.7 | 55.0 | 33 09.4 | 120 00.5 | 04/11 | 2017 | 2040 | 465 | 210 | 174 | 99 |
| 86.7 | 60.0 | 32 59.2 | 120 20.8 | 04/12 | 0031 | 0058 | 589 | 186 | 110 | 105 |
| 86.7 | 80.0 | 32 19.1 | 121 42.8 | 04/12 | 1248 | 1311 | 543 | 199 | 22 | 22 |
| 86.7 | 90.0 | 31 59.1 | 122 23.3 | 04/12 | 1918 | 1941 | 460 | 207 | 368 | 30 |
| 86.7 | 100.0 | 31 39.3 | 123 03.6 | 04/13 | 0126 | 0150 | 479 | 214 | 146 | 83 |
| 86.8 | 32.5 | 33 53.3 | 118 26.8 | 04/10 | 2234 | 2237 | 60 | 21 | 167 | 167 |
| 88.5 | 30.1 | 33 40.5 | 118 05.1 | 04/10 | 1845 | 1847 | 39 | 14 | 155 | 155 |
| 90.0 | 27.7 | 33 29.7 | 117 44.8 | 04/10 | 1603 | 1605 | 41 | 14 | 48 | 48 |
| 90.0 | 28.0 | 33 29.0 | 117 46.0 | 04/10 | 1518 | 1523 | 116 | 36 | 52 | 52 |
| 90.0 | 30.0 | 33 25.1 | 117 54.2 | 04/10 | 1248 | 1311 | 440 | 211 | 45 | 45 |
| 90.0 | 35.0 | 33 15.2 | 118 14.7 | 04/10 | 0721 | 0743 | 435 | 211 | 44 | 44 |
| 90.0 | 37.0 | 33 11.1 | 118 23.2 | 04/10 | 0553 | 0614 | 415 | 214 | 63 | 51 |
| 90.0 | 45.0 | 32 55.2 | 118 56.1 | 04/10 | 0003 | 0026 | 457 | 209 | 79 | 79 |
| 90.0 | 53.0 | 32 39.0 | 119 28.5 | 04/09 | 1820 | 1841 | 424 | 216 | 425 | 71 |
| 90.0 | 60.0 | 32 25.0 | 119 57.4 | 04/09 | 1245 | 1310 | 539 | 202 | 45 | 45 |
| 90.0 | 70.0 | 32 05.0 | 120 37.7 | 04/09 | 0554 | 0616 | 448 | 216 | 65 | 20 |
| 90.0 | 80.0 | 31 45.1 | 121 18.9 | 04/08 | 2317 | 2340 | 453 | 216 | 22 | 22 |
| 90.0 | 90.0 | 31 24.9 | 121 59.0 | 04/08 | 1638 | 1659 | 436 | 215 | 28 | 28 |
| 90.0 | 100.0 | 31 05.1 | 122 39.7 | 04/08 | 0828 | 0850 | 451 | 207 | 364 | 40 |
| 90.0 | 110.0 | 30 44.9 | 123 19.6 | 04/08 | 0238 | 0302 | 466 | 211 | 225 | 39 |
| 90.0 | 120.0 | 30 25.0 | 124 00.0 | 04/07 | 1957 | 2020 | 449 | 213 | 570 | 58 |
| 91.7 | 26.4 | 33 14.7 | 117 27.9 | 04/04 | 1558 | 1600 | 39 | 15 | 51 | 51 |
| 93.3 | 26.7 | 32 57.3 | 117 18.4 | 04/04 | 1216 | 1221 | 79 | 37 | 63 | 63 |
| 93.3 | 28.0 | 32 54.6 | 117 23.7 | 04/04 | 1940 | 2002 | 435 | 211 | 55 | 55 |
| 93.3 | 30.0 | 32 50.6 | 117 32.1 | 04/04 | 2220 | 2242 | 441 | 212 | 61 | 50 |
| 93.3 | 35.0 | 32 40.9 | 117 52.4 | 04/05 | 0213 | 0237 | 478 | 213 | 33 | 33 |
| 93.3 | 40.0 | 32 30.8 | 118 12.9 | 04/05 | 0622 | 0645 | 432 | 216 | 46 | 46 |
| 93.3 | 45.0 | 32 20.7 | 118 33.0 | 04/05 | 1051 | 1114 | 432 | 209 | 42 | 42 |
| 93.3 | 50.0 | 32 10.6 | 118 53.1 | 04/05 | 1507 | 1533 | 530 | 203 | 160 | 87 |
| 93.3 | 55.0 | 32 00.7 | 119 13.5 | 04/05 | 1926 | 1948 | 442 | 212 | 719 | 131 |
| 93.3 | 60.0 | 31 50.6 | 119 33.9 | 04/05 | 2345 | 0008 | 465 | 210 | 39 | 39 |
| 93.3 | 70.0 | 31 30.7 | 120 14.3 | 04/06 | 0551 | 0613 | 434 | 212 | 97 | 83 |
| 93.3 | 80.0 | 31 10.7 | 120 54.9 | 04/06 | 1213 | 1236 | 447 | 210 | 9 | 9 |
| 93.3 | 90.0 | 30 50.8 | 121 35.3 | 04/06 | 1827 | 1849 | 422 | 213 | 246 | 246 |
| 93.3 | 100.0 | 30 30.6 | 122 15.2 | 04/07 | 0039 | 0104 | 505 | 206 | 301 | 44 |
| 93.3 | 110.0 | 30 10.8 | 122 55.4 | 04/07 | 0652 | 0715 | 440 | 217 | 9 | 9 |
| 93.3 | 120.0 | 29 50.7 | 123 35.2 | 04/07 | 1311 | 1337 | 496 | 211 | 20 | 20 |
| 93.4 | 26.4 | 32 57.1 | 117 16.4 | 04/04 | 1318 | 1320 | 44 | 14 | 90 | 90 |