

UNIVERSITY OF CALIFORNIA, SAN DIEGO   SCRIPPS INSTITUTION OF OCEANOGRAPHY

# data report

CalCOFI Cruise 1202  
27 January – 12 February 2012

CC Reference 14 -01  
22 May 2014

**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 1202\* of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the RV *New Horizon* of Scripps Institution of Oceanography, University of California, San Diego. The CalCOFI program was organized in the late 1940's to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by NOAA's National Marine Fisheries Service Southwest Fisheries Science Center, the California Department of Fish and Game, and the Integrative Oceanography Division (IOD) at Scripps Institution of Oceanography (SIO). IOD contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from the cruises were collected and processed by personnel of the Integrative Oceanography Division and the Southwest Fisheries Science Center. SIO staff members from the Ocean Data Facility participate in the chemical analysis of nutrient samples at sea. CalCOFI data presented in this report and collected on previous cruises can be accessed at <http://www.calcofi.org>.

## STANDARD PROCEDURES

### *CTD/Rosette Cast Data*

A Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument (Seabird 911, Serial number 3161-936) with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles equipped with epoxy-coated springs and Viton O-rings. Each CTD/rosette cast usually sampled 20 depths to a maximum sampling depth of 525 meters, bottom depth permitting. Occasional stations have multiple bottles tripped at the same depth to provide more water for ancillary programs. The sample spacing was designed to sample depth intervals as close as 10 meters around the sharp upper thermocline features such as the chlorophyll, oxygen, nitrite maxima and the shallow salinity minimum. Salinity, oxygen and nutrients were determined at sea for all depths sampled. Chlorophyll-*a* and phaeopigments were determined at sea on samples from the top 200 meters, bottom depth permitting.

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

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

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

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

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

Nutrient samples were analyzed at sea by the Scripps Ocean Data Facility using a AA3 continuous flow analyzer (SEAL Analytical) for dissolved silicate, phosphate, nitrate, nitrite, and ammonium using procedures similar to those described in Gordon et al. (1993) and Koroleff (1969, 1970). Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were acid washed and rinsed with sample three times prior to filling. Daily standardizations and drift corrections were accomplished by running freshly prepared mid-range standards at the beginning and end of each group of samples. Samples not analyzed immediately after collection were refrigerated and run the following day. In addition to daily standardizations, periodic full calibrations were performed with sets of six different concentration standards.

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

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

#### *Primary Productivity Sampling*

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from  $^{14}\text{C}$  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 upcast. 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 12.36  $\mu\text{Ci}$  of  $^{14}\text{C}$  as  $\text{NaHCO}_3$  (40  $\mu\text{l}$  of stock solution) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al.*, 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation cocktail were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter. Salinity, oxygen, nutrients, chlorophyll-*a* and phaeopigments were determined from all rosette productivity bottles.

#### *Macrozooplankton Net Tows*

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

#### *Avifauna Observations (Farallon Institute of Advanced Ecosystem Research)*

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

## Ancillary Programs

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

- 1) *Underway Data*: Continuous near surface measurements of temperature, salinity and *in vivo* chlorophyll fluorescence were recorded from seawater pumped through the ship's uncontaminated seawater system. Water was drawn from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 45 MicroTSG Thermosalinograph and a Wetlabs Wetstar fluorometer.
- 2) *ADCP*: Continuous profiles of ocean currents and acoustic backscatter between 20 and 500 meters deep were measured along the shiptrack from a hull-mounted 150 kHz Acoustic Doppler Current Profiler (ADCP). The ADCP data were averaged over 3-minute intervals. Sixty 8-meter depth bins were recorded. (T. Chereskin, SIO)
- 3) *California Current Ecosystem Long Term Ecological Research Program*: The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure with a Planktonic Rate Processes in Oligotrophic Ocean Systems (PRPOOS) net. (M. Ohman, SIO)
- 4) *SCCOOS Nearshore Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore. Nearshore observations consist of 9 stations at the ends and interspersed with current CalCOFI lines on the 20 m isobath with a standard set of CalCOFI observations. (R. Goericke, SIO)
- 5) *Inorganic Carbon System*: The CalCOFI group collected samples for the characterization of the inorganic carbon system at selected locations along the cruise track. Total inorganic carbon and alkalinity will be measured which will allow the calculation of pH and pCO<sub>2</sub>. The objectives of these measurements are first the long-term characterization of the inorganic carbon system and its response to changing ocean climate and second measurements of pH in the coastal zone in order to monitor the impact of 'corrosive' waters on benthic ecosystems in the Southern California Bight. (R. Goericke, SIO)
- 6) *Marine Mammal Observations*: During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys. (J. Hildebrand, SIO)
- 7) *Nitrate Isotope*: Seawater samples are acquired using the CTD-rosette and shipped frozen to Princeton University. The nitrogen and oxygen isotopic composition of nitrate is measured using strains of denitrifying bacteria that reduce nitrate to N<sub>2</sub>O. (P. Rafter, Princeton University)
- 8) *Micronekton Trawling*: A Matsuda-Oozeki-Hu trawl (MOHT) with 5 m<sup>2</sup> mouth opening and 1.77 mm mesh is used to sample the micronekton (krill, small pelagic fishes, squids, etc) within the epipelagic (upper 200 m) and mesopelagic (200 - 500 m) depth horizons. The samples provide size- and species composition data on the pelagic community, which is combined with Ek-60 multi-frequency acoustic data to estimate the distribution and abundance of the micronekton. (T. Koslow, SIO)
- 9) *ALF (Advanced Laser Fluorometer)*: Continuous underway analysis of phytoplankton pigment groups and variable fluorescence (F<sub>v</sub>/F<sub>m</sub>). ALF, developed by A. Chekalyuk at Lamont-Doherty Earth Observatory, uses laser

stimulated emission at 405 and 532 nm together with spectral deconvolution analysis to distinguish fluorescence from three types of phycoerythrin, chlorophyll-*a*, and chromophoric dissolved organic matter (CDOM). The ALF is useful for differentiating the contribution of cyanobacteria and cryptophytes from other phytoplankton taxa present in natural phytoplankton assemblages, as well as for assessing phytoplankton photophysiological status.

## TABULATED DATA

### *CTD/Rosette Cast Data*

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

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

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

### *Primary Productivity Data*

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

### *Macrozooplankton Data*

Macrozooplankton biomass volumes are tabulated as total biomass volume ( $\text{cm}^3/1000\text{m}^3$  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 1202

1. CalCOFI Cruise 1202 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.

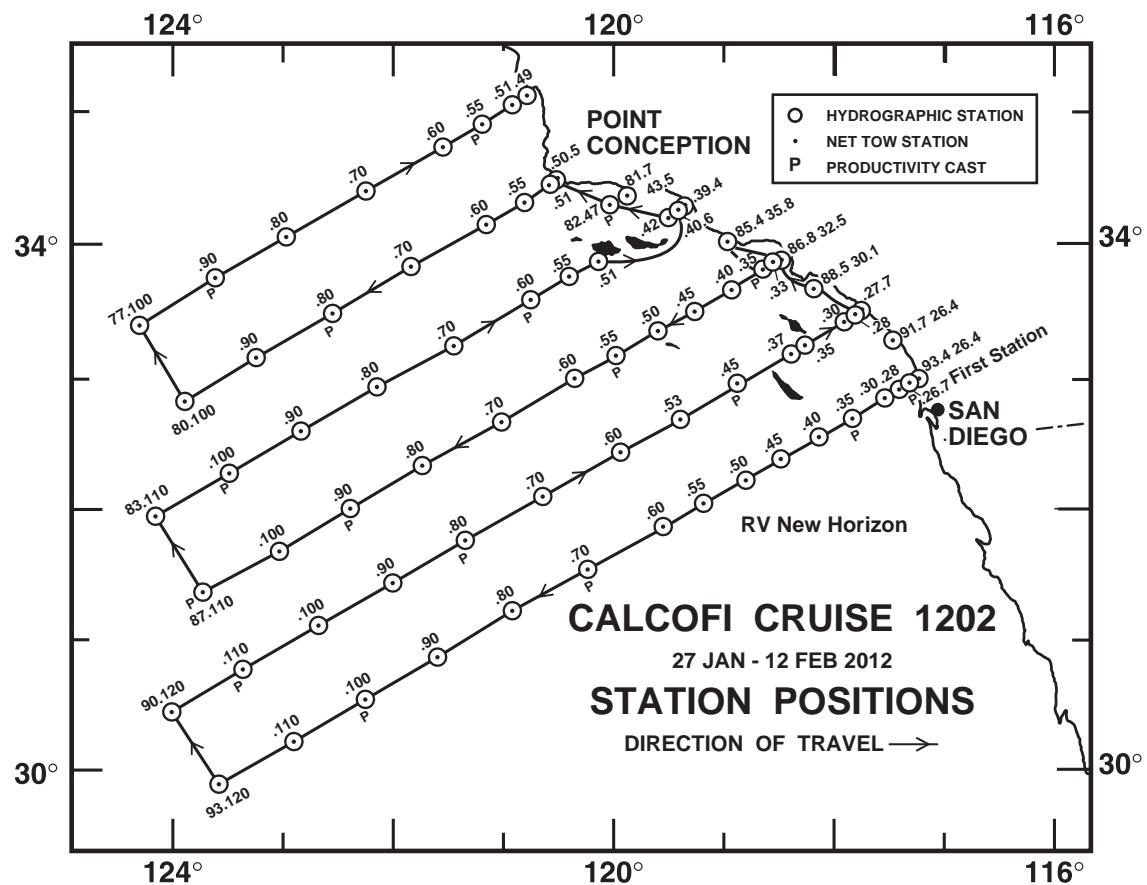


FIGURE 1

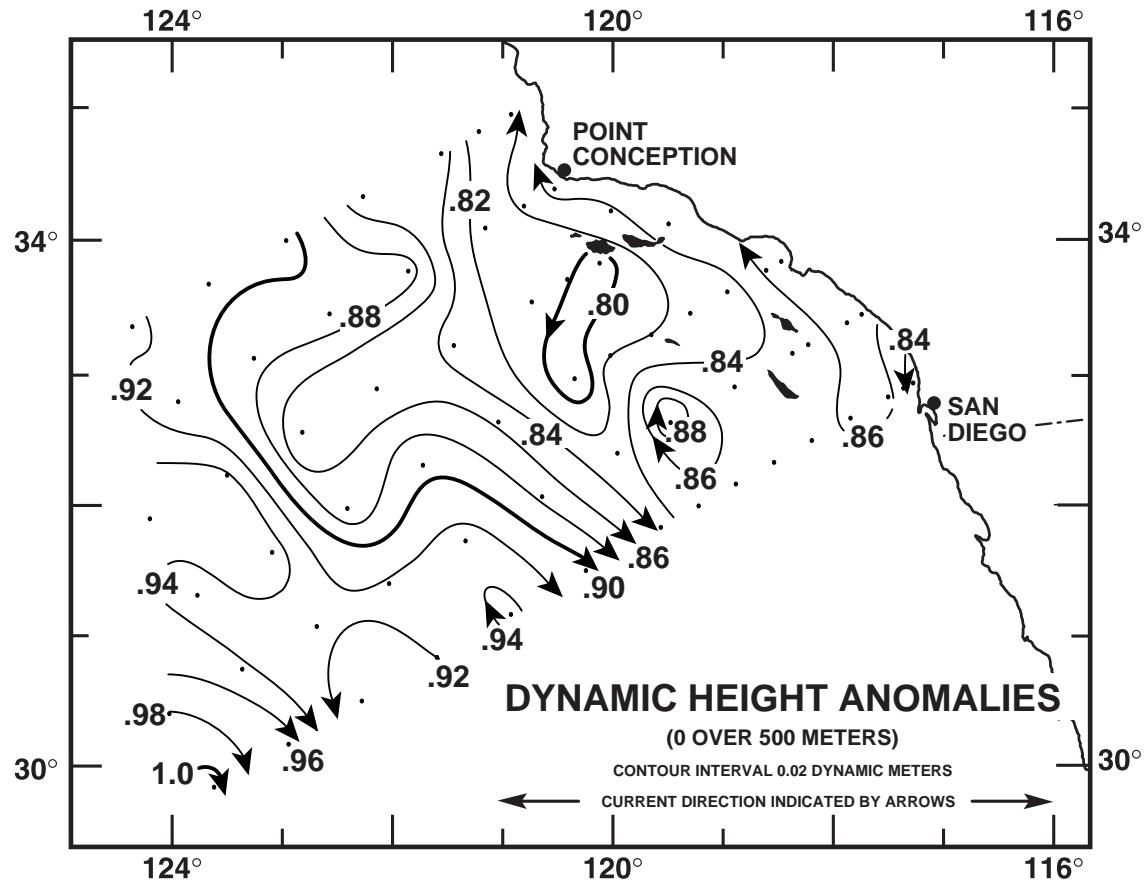


FIGURE 2

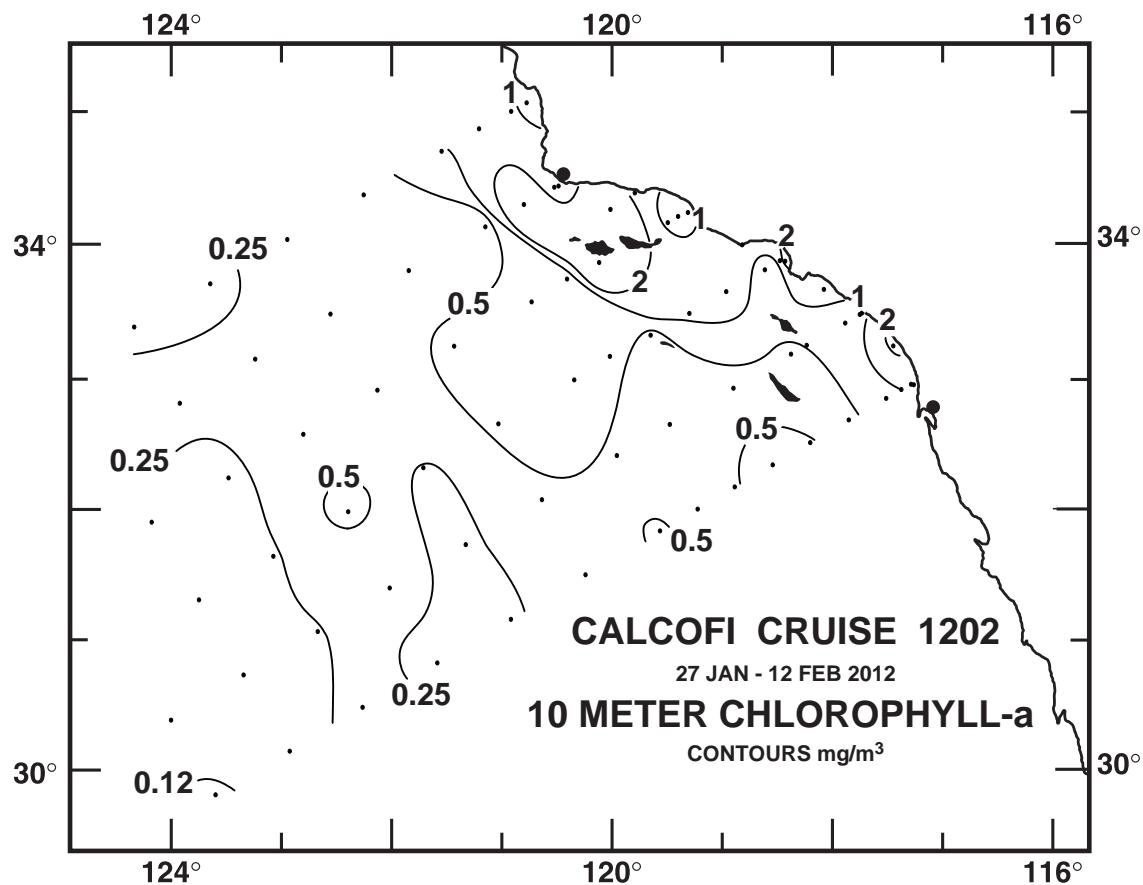


FIGURE 3A

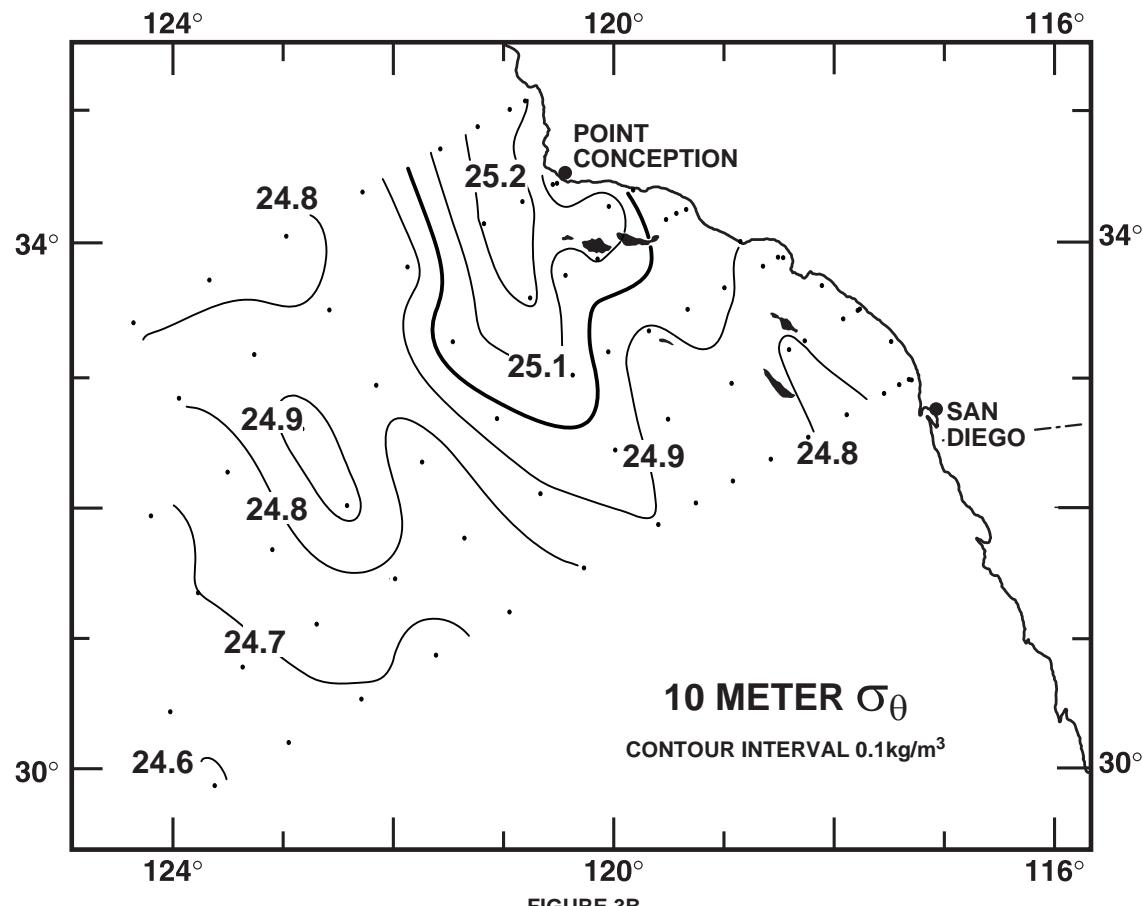


FIGURE 3B

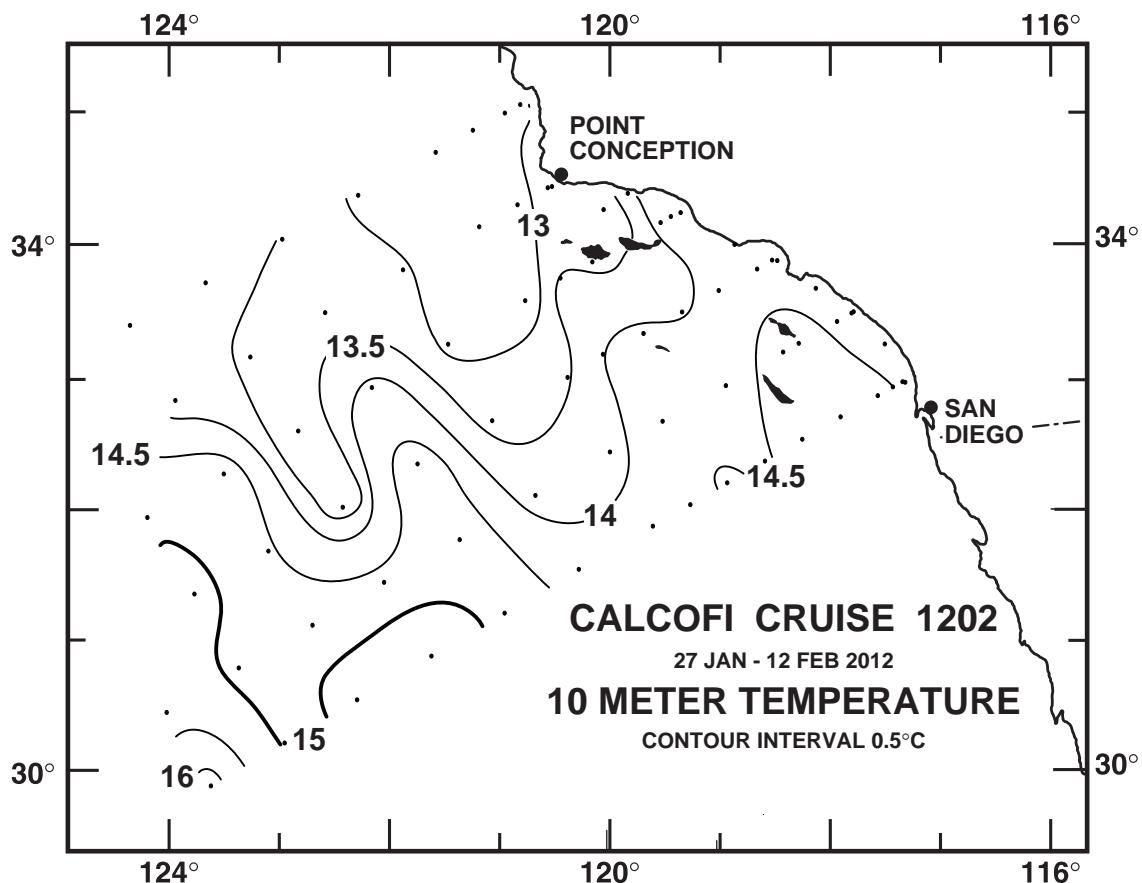


FIGURE 3C

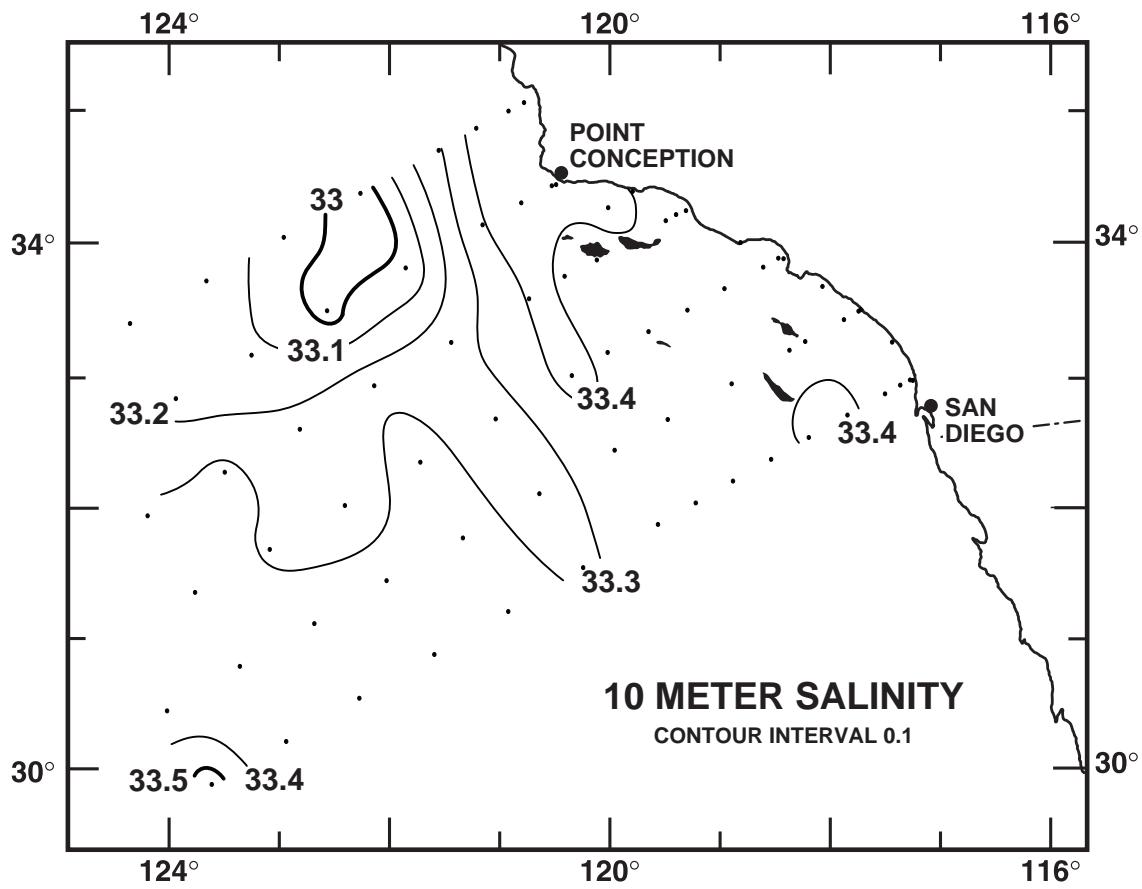


FIGURE 3D

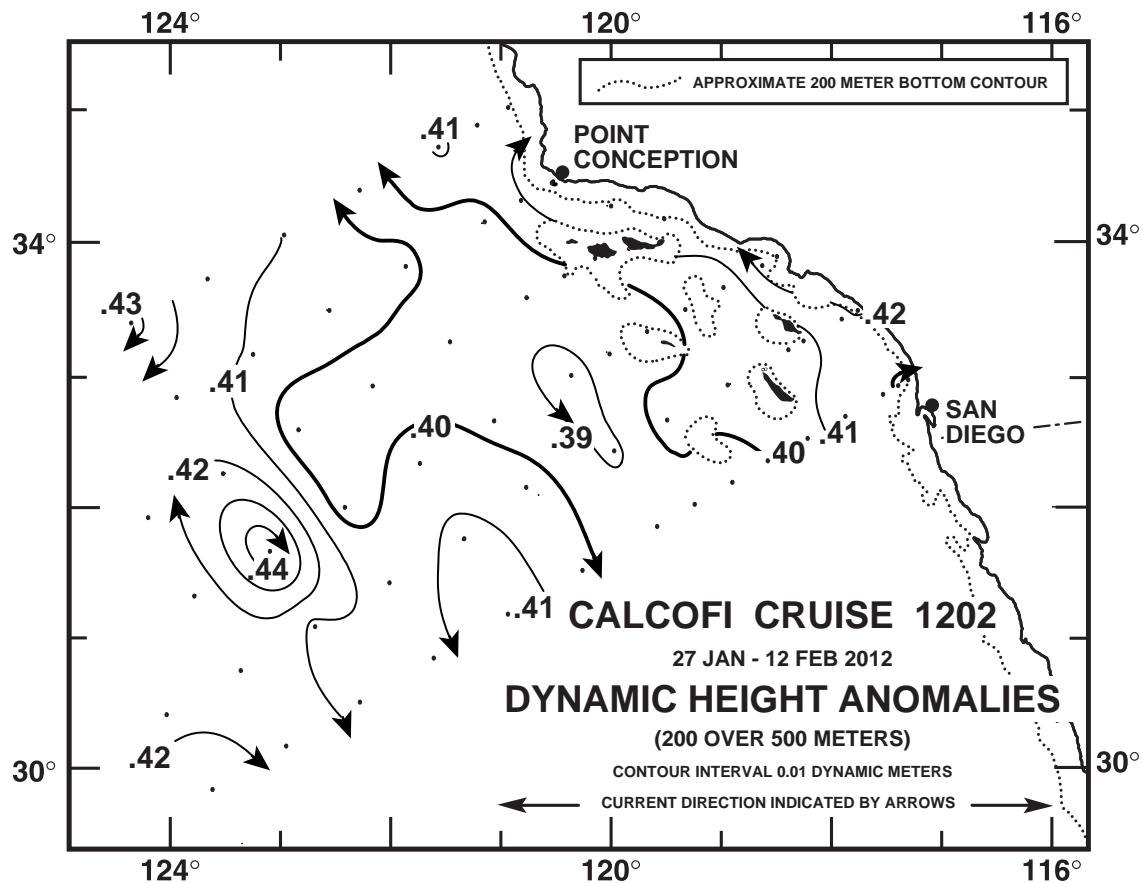


FIGURE 4A

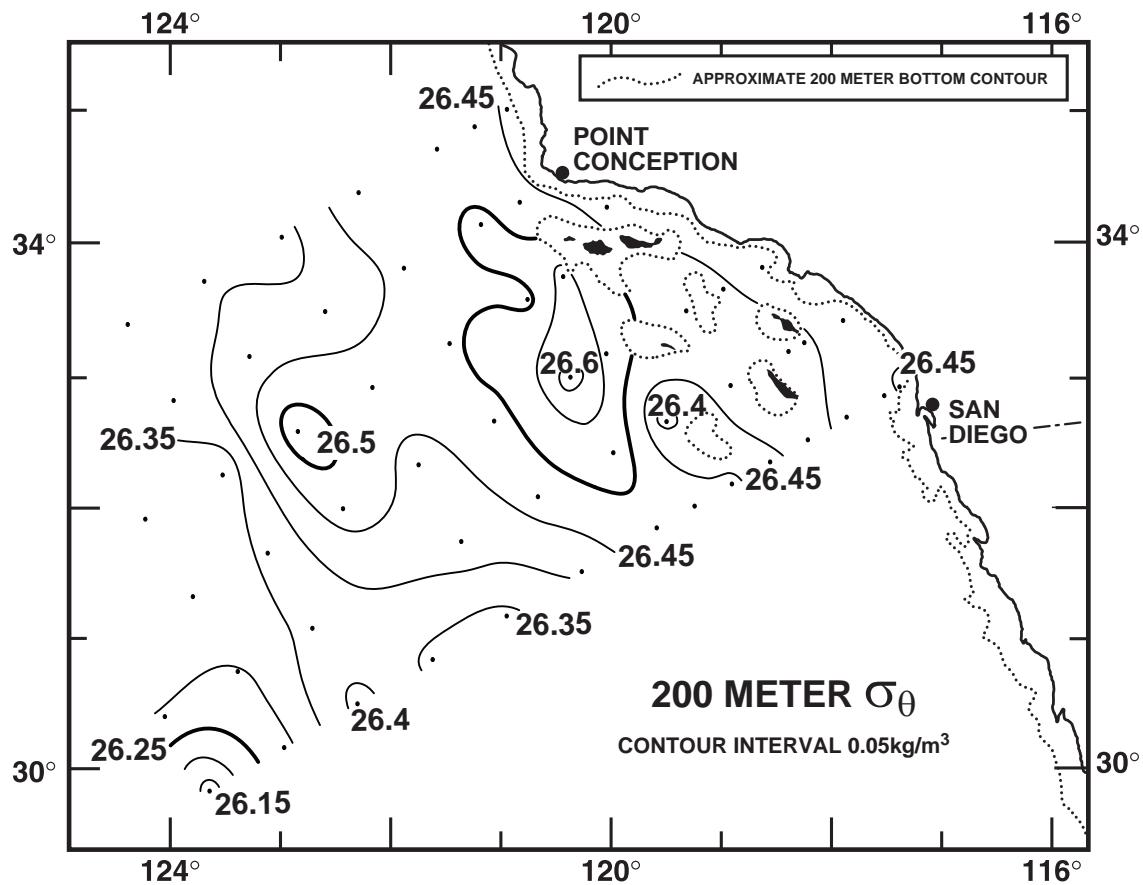


FIGURE 4B

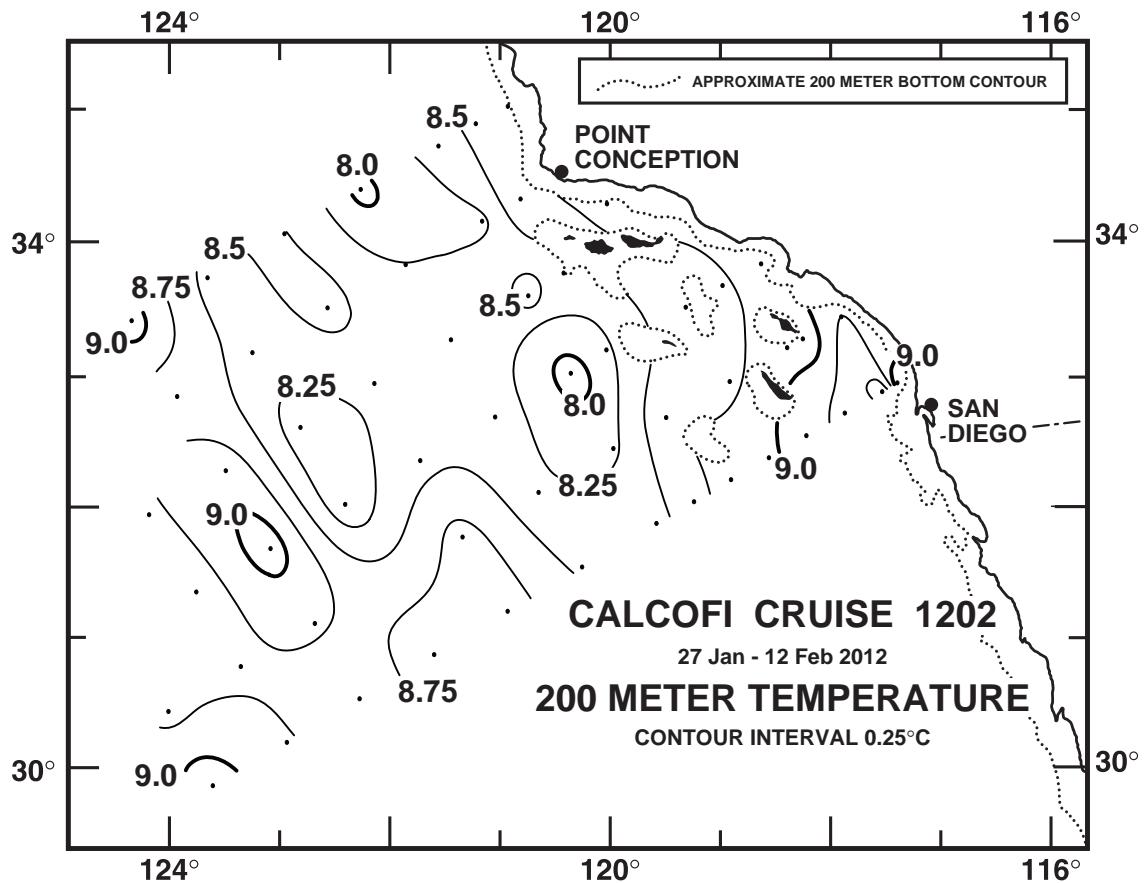


FIGURE 4C

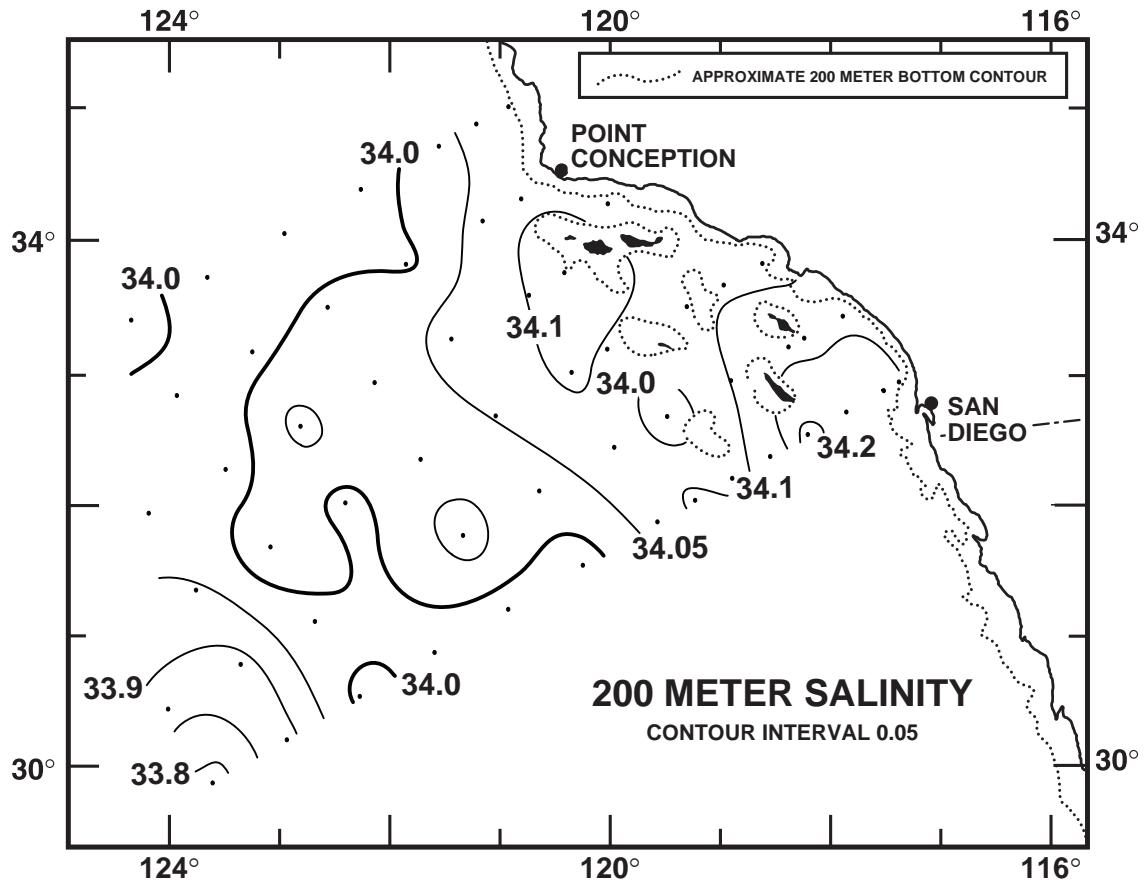
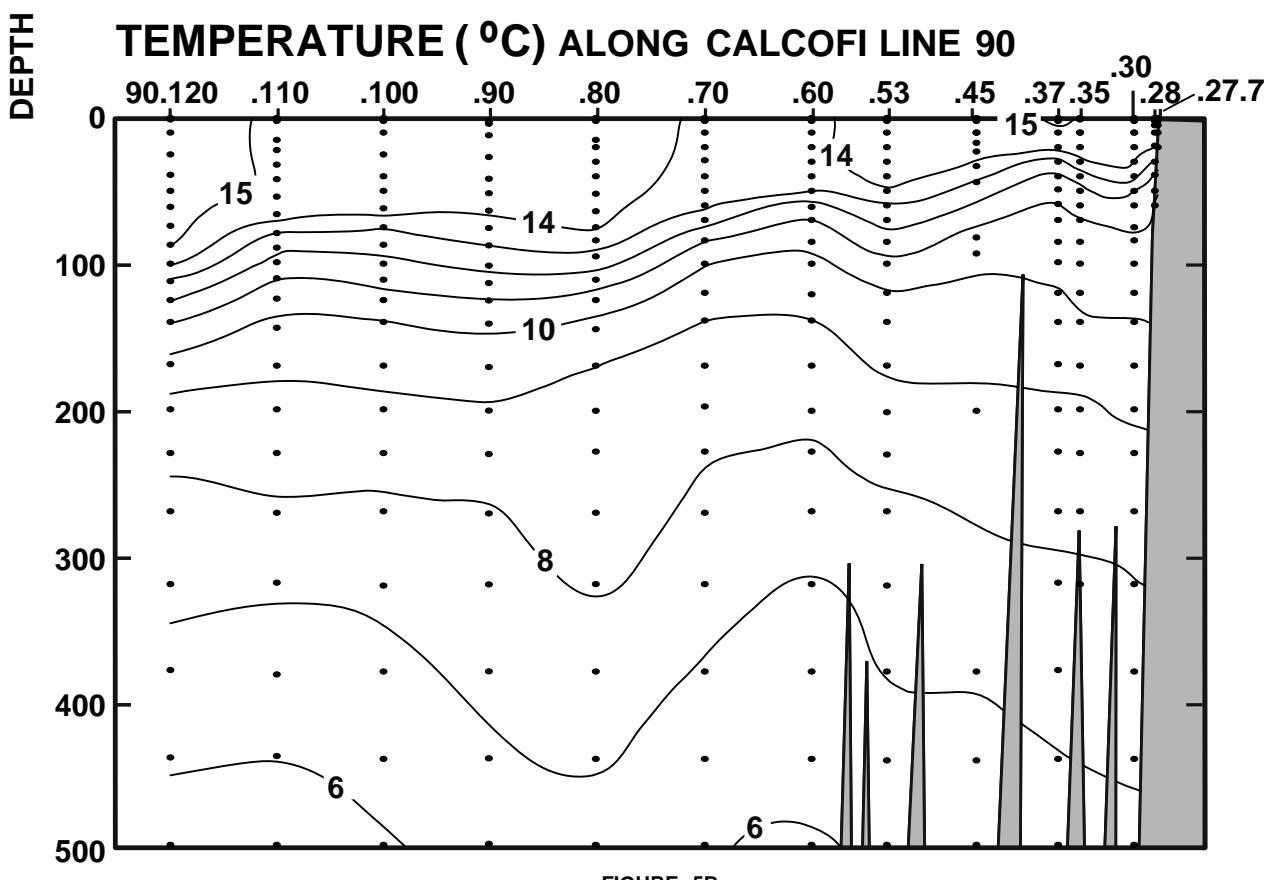
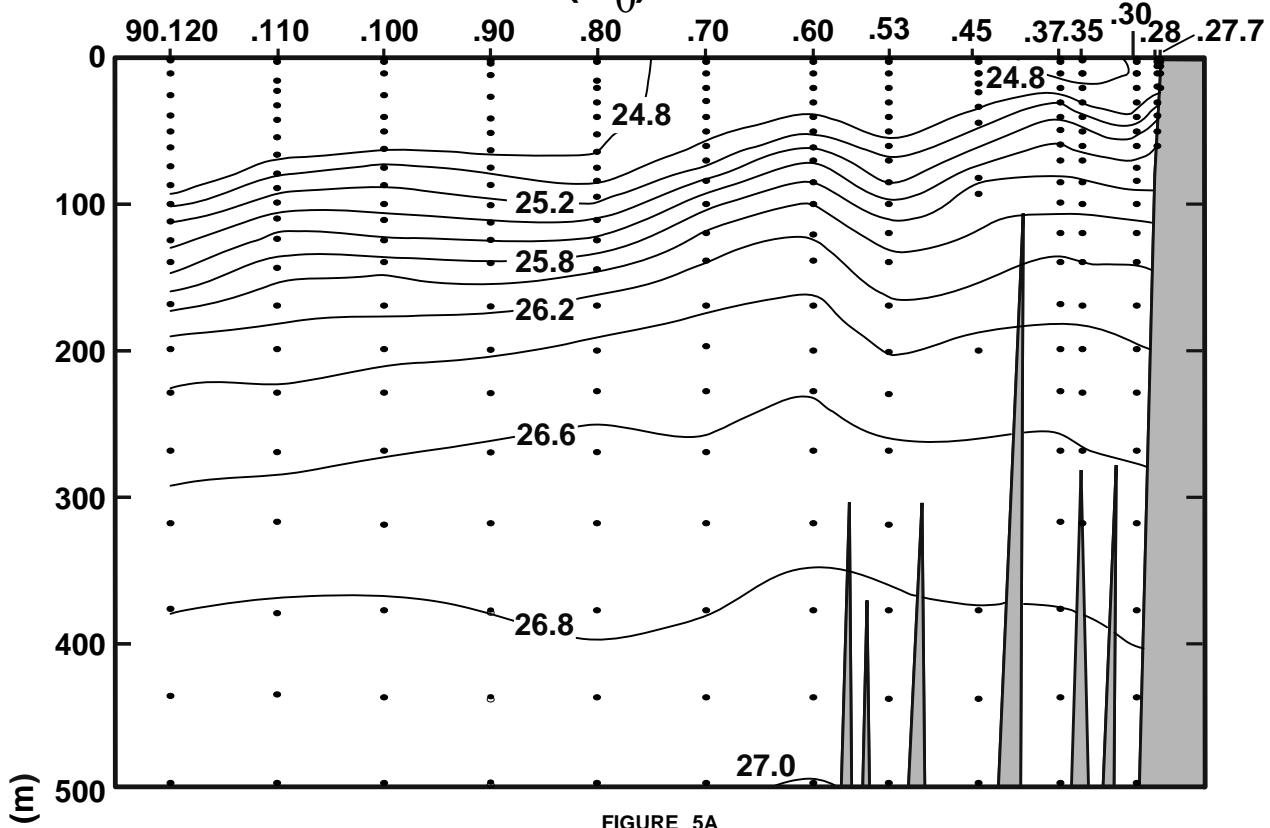


FIGURE 4D

# CALCOFI CRUISE 1202

27 JAN - 12 FEB 2012

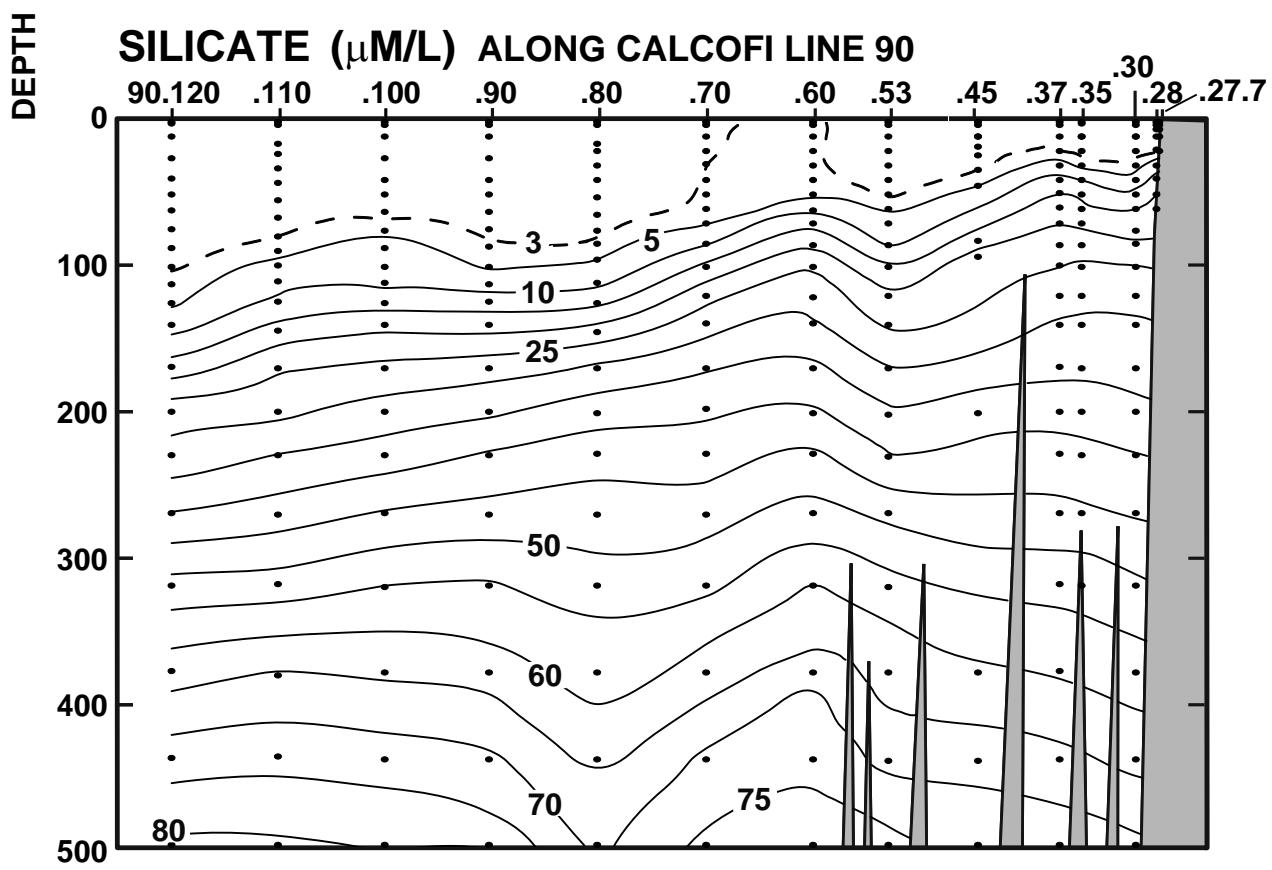
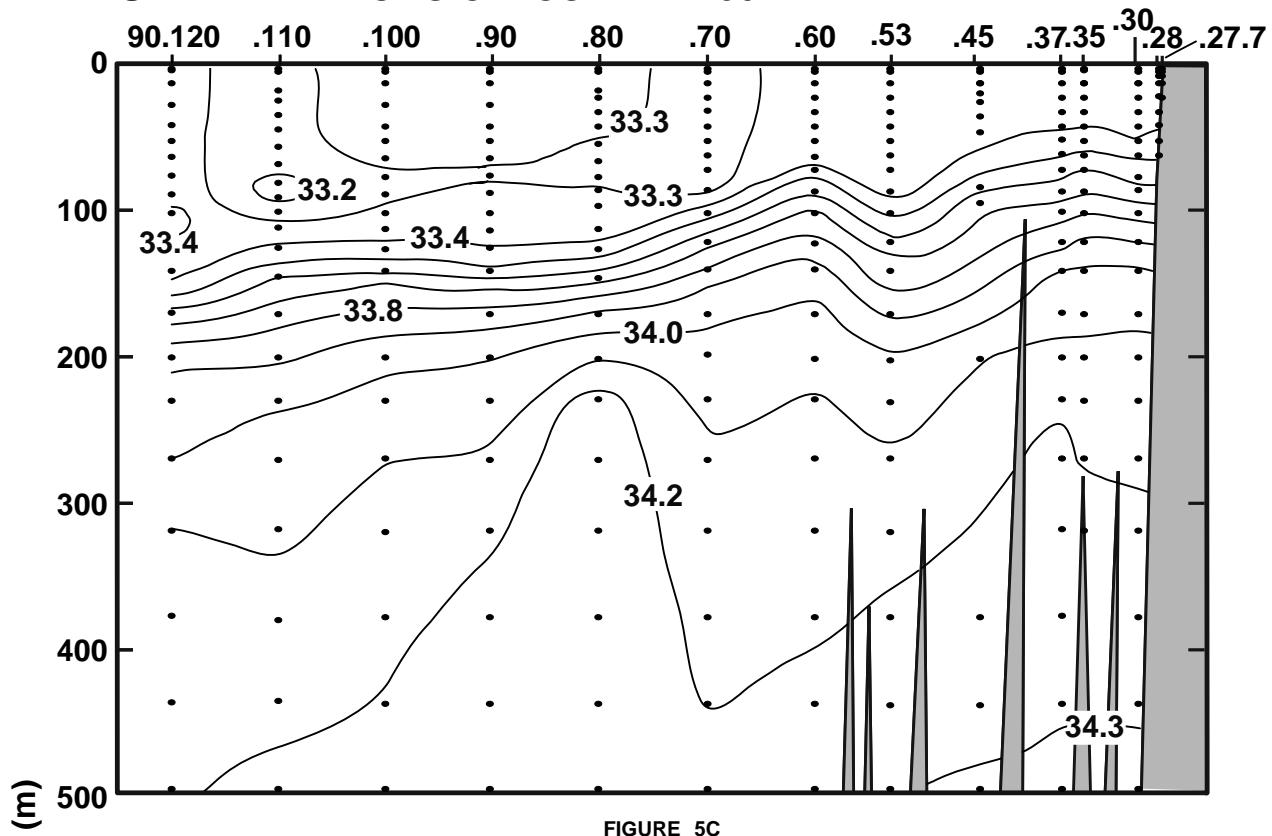
## POTENTIAL DENSITY ( $\sigma_0$ ) ALONG CALCOFI LINE 90



# CALCOFI CRUISE 1202

27 Jan - 12 Feb 2012

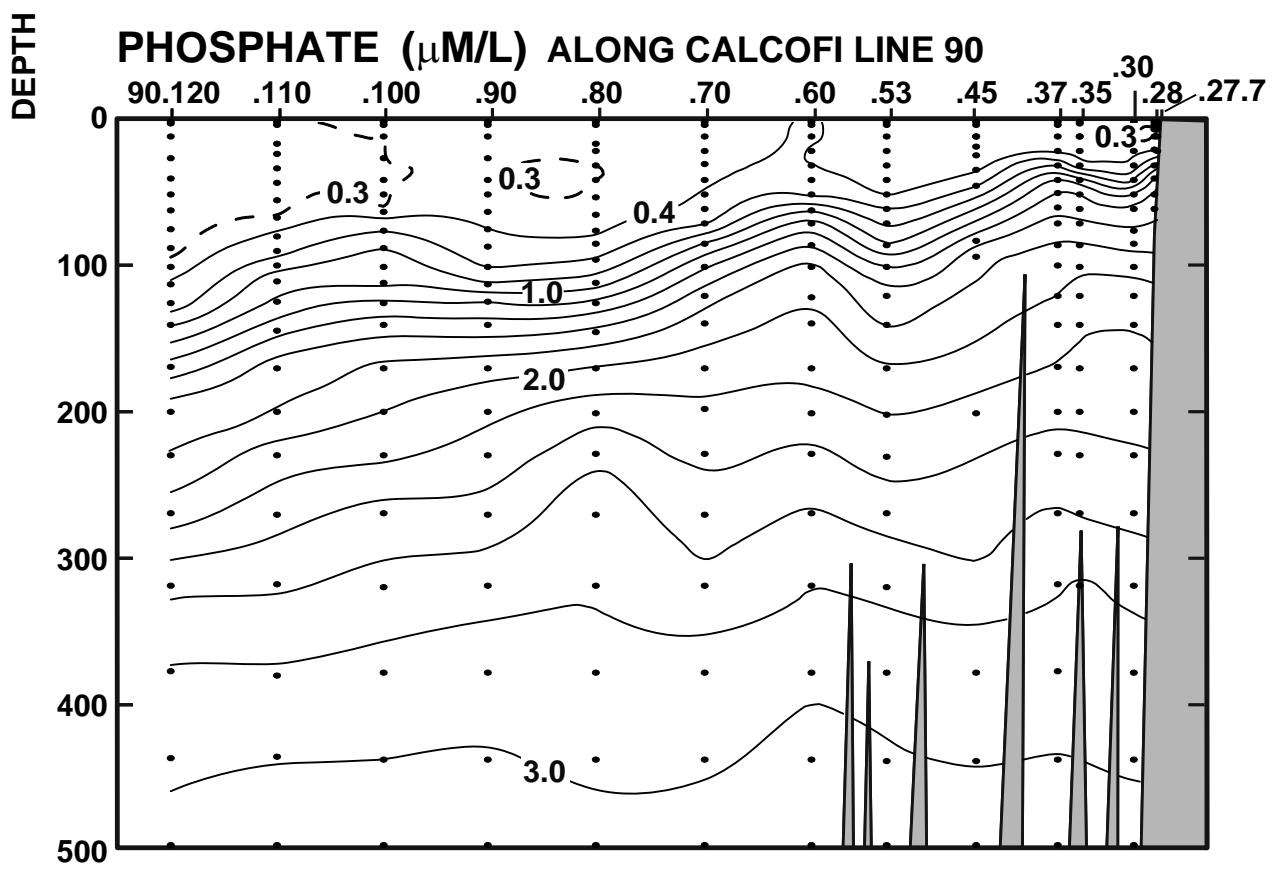
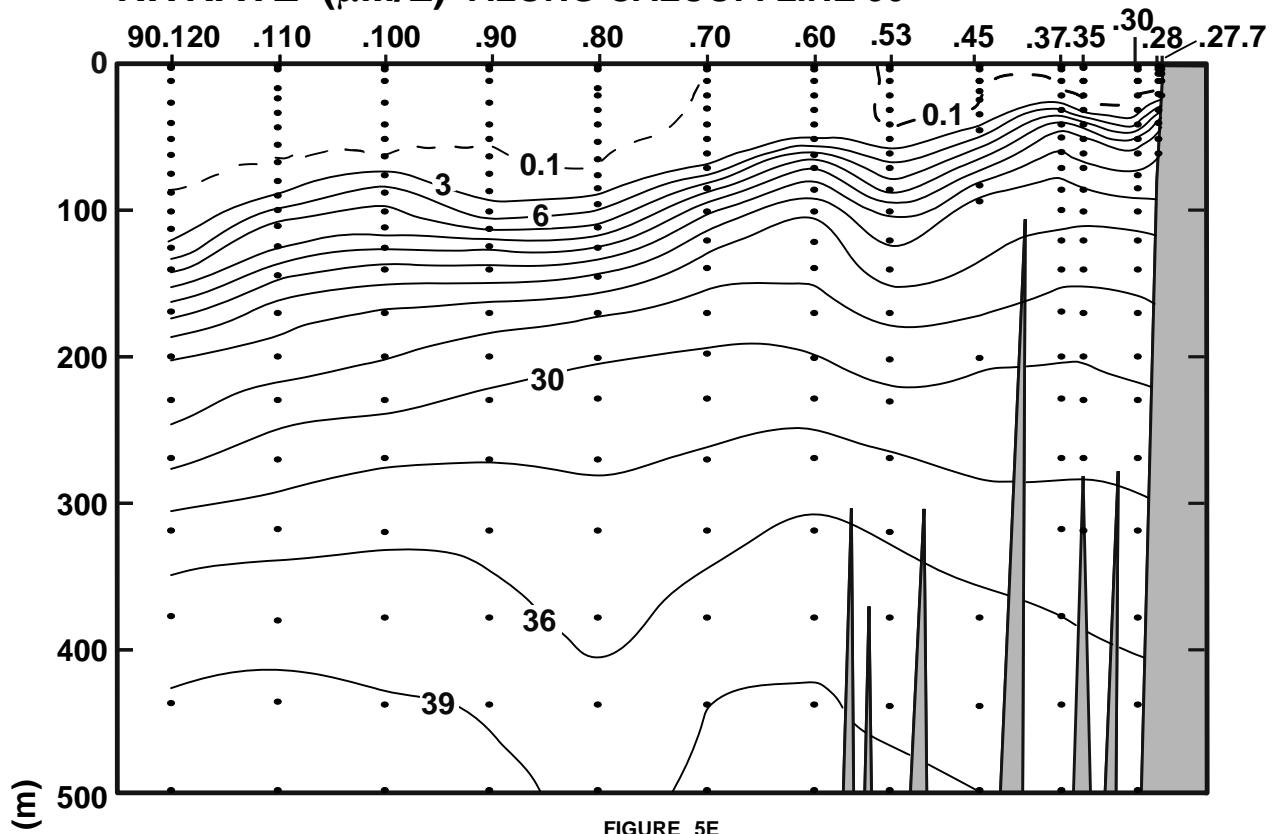
## SALINITY ALONG CALCOFI LINE 90



# CALCOFI CRUISE 1202

27 JAN - 12 FEB 2012

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



# CALCOFI CRUISE 1202

27 Jan - 12 Feb 2012

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

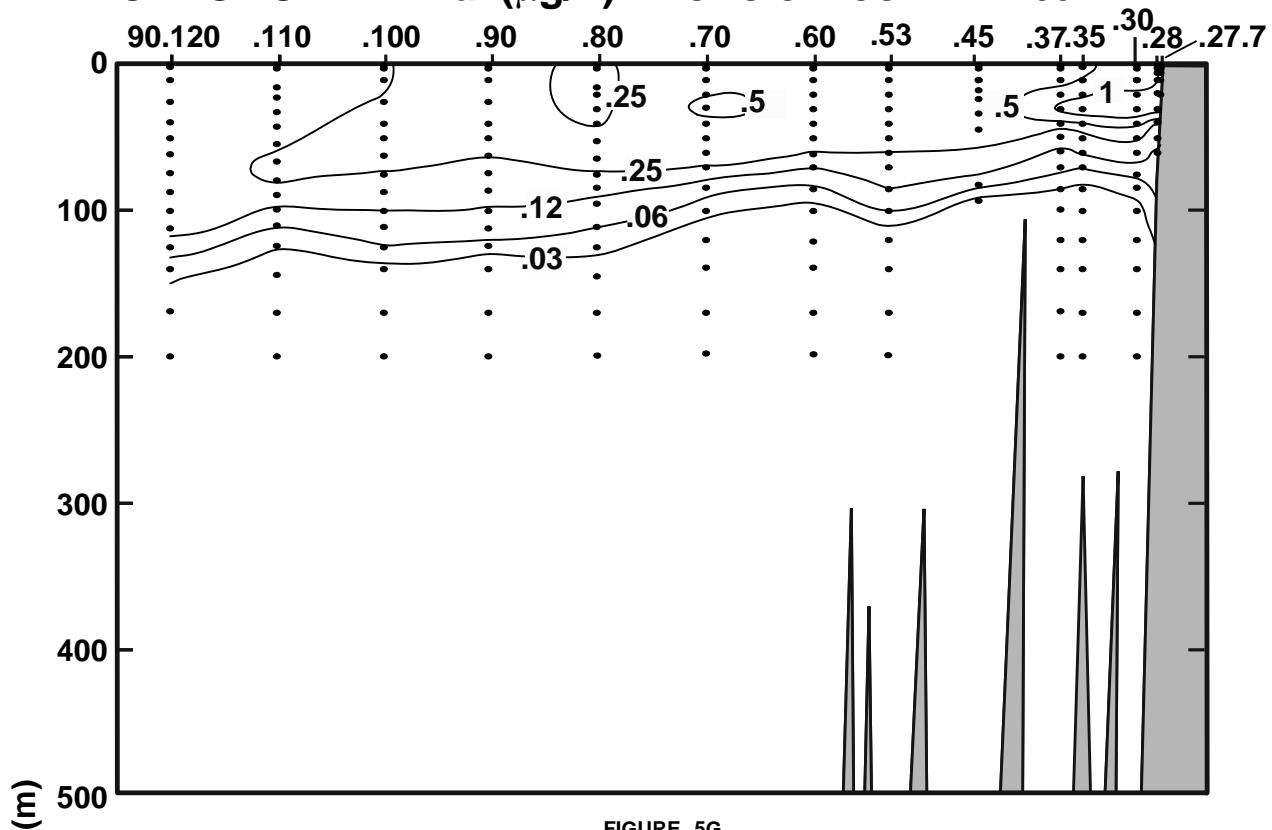


FIGURE 5G

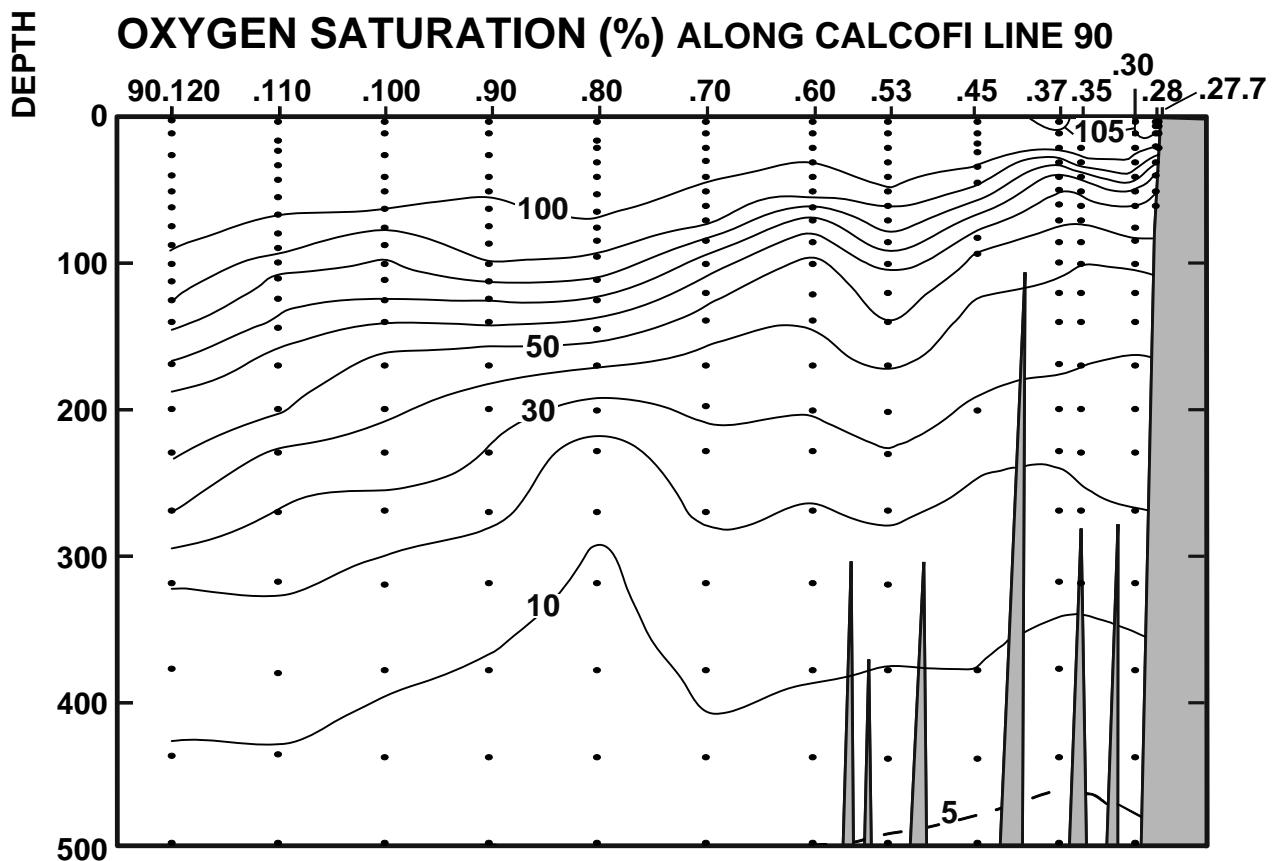
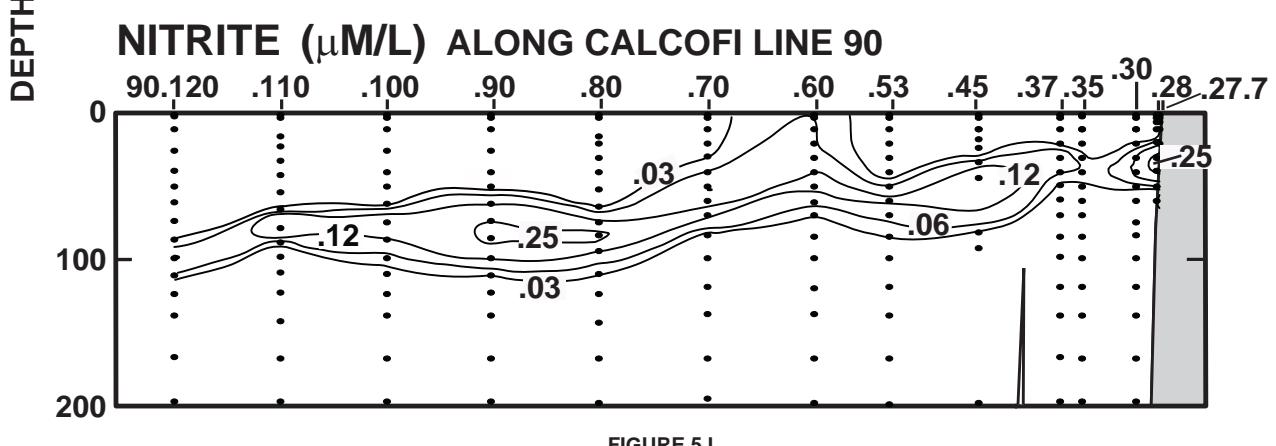
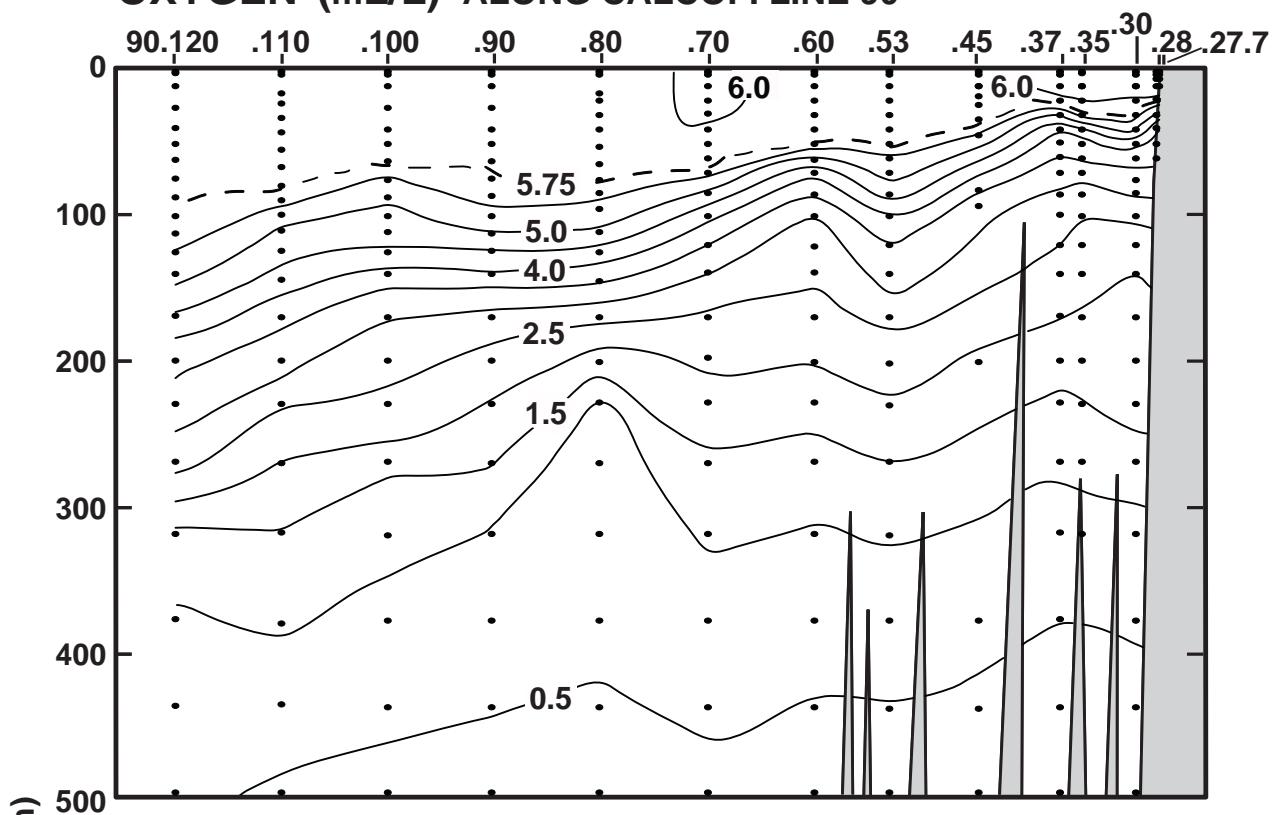


FIGURE 5H

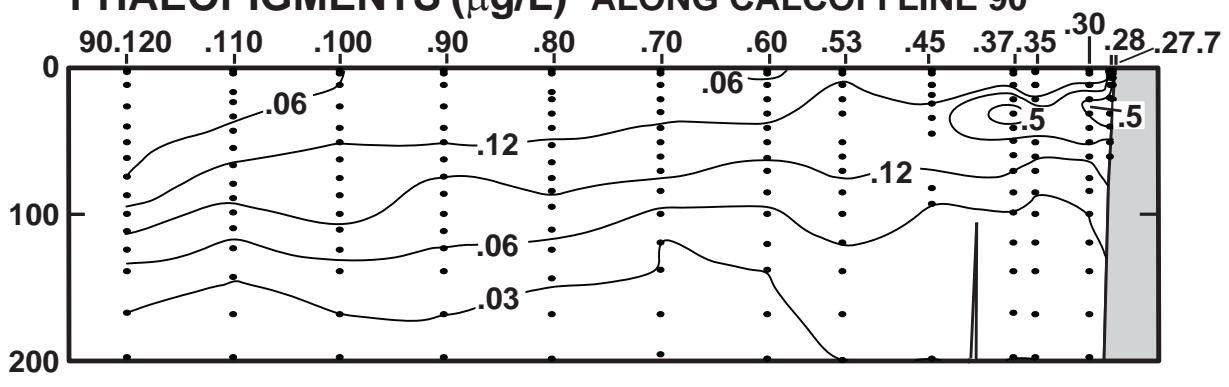
# CALCOFI CRUISE 2012

27 Jan - 12 Feb 2012

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



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



## PERSONNEL

### CalCOFI Cruise 1202

#### SHIP'S CAPTAIN

Richard Vullo, RV New Horizon

#### PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Wolgast, David M. (Chief Scientist)	Staff Research Associate, SIO
Baran, Melody	Marine Mammal Observer, MPL
Becker, Susan	Staff Research Associate, SIO
Brady, George	Volunteer
Breese, Dawn	Bird Observer, FIAER
Davison, Peter	Post-Doc, SIO
Dovel, Shonna	Staff Research Associate, SIO
Faber, David	Staff Research Associate, SIO
Griffith, David	Fishery Biologist, NMFS
Hays, Amy	Fishery Biologist, NMFS
Hennes, Lindsay	Volunteer
Manion, Susan	Fishery Biologist, NMFS
Roadman, Megan	Staff Research Associate, SIO
Roche, Lauren	Staff Research Associate, SIO
Rodgers-Wolgast, Jennifer	Staff Research Associate, SIO
Whitaker, Katherine	Marine Mammal Observer, MPL
Wilkinson, James A.	Programmer Analyst, SIO

San Diego to San Diego, California, 27 January -12 February, 2012

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
35	5.2 N	120 46.8 W	12/02/2012	0359 UTC	71 m	310	24 kn			1015.9 mb	12.5 C	11.0 C					075
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C															
0	12.85	12.85	33.438	25.213	274.6	0.000	5.61	93.5	4.7	0.72	4.4	0.13	0.68	0.64	0.28	0	
2	12.85	12.85	33.438	25.213	274.6	0.006	5.61	93.5	4.7	0.72	4.4	0.13	0.68	0.64	0.28	2	
5	12.85	12.85	33.436	25.211	274.8	0.014	5.63	93.8	4.6	0.69	4.3	0.13	0.68	0.67	0.26	5	
9	12.86	12.86	33.439	25.212	274.8	0.026										9	
10	12.86	12.86	33.439	25.213	274.8	0.027	5.63	93.8	4.6	0.69	4.3	0.13	0.67	0.64	0.26	10	
20	ISL	12.52	12.51	33.453 D	25.291	267.7	0.055	5.13 D	84.9	6.7	0.84	6.5	0.16	0.69	0.55	0.35	20
21	12.25	12.25	33.454	25.342	262.8	0.057	5.20	85.6	6.9	0.85	6.7	0.16	0.69	0.54	0.36	21	
30	11.75	11.75	33.508	25.478	250.1	0.080	4.06	66.2	14.0	1.30	13.9	0.25	0.34	0.38	0.51	30	
40	11.47	11.47	33.524	25.543	244.2	0.105	3.93	63.7	15.3	1.36	14.9	0.26	0.31	0.40	0.54	40	
50	11.10	11.10	33.561	25.639	235.3	0.129	3.77	60.5	17.8	1.48	16.1	0.29	0.39	0.37	0.57	50	
61	10.96	10.96	33.613	25.705	229.3	0.154	3.47	55.6	21.7	1.64	18.2	0.28	0.52	0.41	1.09	62	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
35	1.3 N	120 55.2 W	12/02/2012	0912 UTC	244 m	320	23 kn	300 05 05	1	1015.2 mb	13.0 C	11.1 C					074
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C															
0	12.85	12.85	33.441	25.215	274.3	0.000	6.15	102.4	2.4	0.54	2.3	0.08	0.52	1.25	0.44	0	
2	12.85	12.85	33.441	25.215	274.3	0.006	6.15	102.4	2.4	0.54	2.3	0.08	0.52	1.25	0.44	2	
10	12.86	12.85	33.441	25.214	274.7	0.027										10	
10	12.86	12.85	33.439	25.213	274.8	0.028	6.15	102.4	2.2	0.56	2.3	0.08	0.58	1.16	0.68	10	
20	12.84	12.84	33.438	25.216	274.8	0.055	6.16	102.6	2.4	0.54	2.4	0.08	0.52	1.18	0.34	20	
30	12.55	12.55	33.444	25.277	269.2	0.082	6.08	100.6	2.4	0.56	2.7	0.08	0.63	0.92	0.41	30	
40	12.32	12.31	33.469	25.342	263.4	0.109	5.62	92.6	4.7	0.75	5.3	0.10	0.71	1.01	0.90	40	
50	11.77	11.77	33.499	25.469	251.6	0.135	4.74	77.2	10.0	1.09	10.5	0.15	0.62	0.95	0.57	50	
60	10.99	10.98	33.516	25.625	236.9	0.159	4.11	65.8	13.7	1.34	14.6	0.19	0.51	0.64	0.56	60	
70	10.28	10.27	33.586	25.803	220.1	0.182	3.41	53.8	19.7	1.65	20.5	0.12	0.00	0.60	0.64	71	
75	ISL	10.09	10.09	33.701 D	25.925	208.6	0.194	2.91 D	45.8	21.9	21.9	0.09	0.00	0.57	0.64	76	
85	9.81	9.80	33.763	26.022	199.6	0.213	2.66	41.7	26.2	1.93	24.6	0.04	0.00	0.49	0.66	86	
100	9.49	9.47	33.859	26.150	187.7	0.242	2.44	37.8	29.9	2.05	26.7	0.02	0.00	0.21	0.40	101	
120	9.27	9.26	33.925	26.237	179.8	0.279	2.26	34.9	32.2	2.14	28.0	0.00	0.00	0.18	0.39	121	
125	ISL	9.27	9.26	33.925 D	26.238	179.9	0.289	2.26 D	35.0	32.9	2.16	28.2	0.00	0.00	0.16	0.39	126
140	9.11	9.09	33.979	26.307	173.6	0.314	2.03	31.3	35.0	2.22	28.9	0.00	0.00	0.13	0.39	141	
150	ISL	9.02	9.00	34.000 D	26.338	170.8	0.333	2.02 D	31.0	35.7	2.25	29.3	0.00	0.00	0.12	0.37	151
169	8.82	8.80	34.037	26.399	165.4	0.363	1.91	29.3	37.1	2.30	30.2	0.00	0.00	0.10	0.32	170	
200	ISL	8.64	8.62	34.051 D	26.438	162.3	0.417	1.79 D	27.3	39.9	2.34	31.0	0.05	0.00	0.11	0.41	202
201	8.64	8.62	34.053	26.441	162.1	0.416	1.78	27.2	40.0	2.34	31.0	0.05	0.00	0.11	0.41	203	
231	8.41	8.39	34.075	26.492	157.7	0.464	1.63	24.7	43.2	2.44	31.8	0.07	0.06			233	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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	53.4 N	121 12.6 W	12/02/2012	0318 UTC	571 m	310	20 kn	310 04 06	1	1018.2 mb	13.2 C	11.2 C					073
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C															
0	12.79	12.79	33.439	25.225	273.5	0.000	6.05	100.6	2.6	0.58	2.5	0.10	0.71	1.08	0.52	0	
3 A	12.79	12.79	33.439	25.225	273.5	0.008	6.05	100.6	2.6	0.58	2.5	0.10	0.71	1.08	0.52	3	
10	12.76	12.76	33.438	25.232	273.0	0.027										10	
10 A	12.76	12.76	33.440	25.233	272.9	0.027	6.11	101.6	2.4	0.55	2.5	0.10	0.64	1.02	0.64	10	
14 A	12.70	12.69	33.440	25.245	271.8	0.038	6.05	100.4	2.5	0.57	2.5	0.10	0.61	1.16	0.73	14	
20	ISL	12.22	12.22	33.453 D	25.347	262.3	0.055	5.30 D	87.1	5.2	0.73	5.1	0.14	0.58	0.93	0.70	20
27 A	12.08	12.08	33.451	25.372	260.1	0.073	5.18	84.9	8.4	0.92	8.1	0.19	0.55	0.66	0.67	19	
30 ISL	12.08	12.07	33.449 D	25.372	260.2	0.081	5.15 D	84.3	8.9	0.95	8.6	0.19	0.52	0.63	0.63	30	
38	11.56	11.56	33.464	25.481	250.1	0.101	4.94	80.1	10.3	1.02	9.8	0.20	0.44	0.52	0.52	38	
50 A	11.24	11.24	33.539	25.597	239.3	0.130	3.97	63.9	15.3	1.39	15.8	0.19	0.29	0.62	0.67	17	
58 A	11.07	11.06	33.536	25.627	236.7	0.149	3.84	61.6	15.1	1.44	16.6	0.17	0.37	0.86	0.90	16	
66	10.16	10.15	33.530	25.781	222.1	0.167	3.68	57.9	17.5	1.57	19.4	0.12	0.12	1.22	0.94	15	
75	9.91	9.90	33.637	25.907	210.3	0.187	3.30	51.6	22.0	1.74	22.6	0.07	0.01	0.76	0.80	14	
85	9.77	9.76	33.704	25.983	203.3	0.208	3.08	48.1	24.1	1.83	23.9	0.06	0.00	0.39	0.60	13	
95	9.71	9.70	33.746	26.026	199.4	0.228	2.88	44.9	25.5	1.90	24.5	0.05	0.00	0.38	0.54	12	
100 ISL	9.68	9.67	33.776 D	26.054	196.9	0.239	2.78 D	43.4	26.5	1.93	25.1	0.04	0.00	0.35	0.58	101	
110	9.48	9.47	33.831	26.130	189.8	0.257	2.63	40.8	28.4	2.00	26.2	0.03	0.00	0.29	0.65	111	
125	9.30	9.28	33.916</														

RV NEW HORIZON

## CALCOFI CRUISE 1202

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 32.9 W	11/02/2012	2359	UTC	941 m	310	15 kn	310 03 06	1	1018.0 mb	12.2 C	11.1 C	7/8	SC	072			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP	
m	DEG C	DEG C	THETA				ml/l	pct	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db		
0	12.63	12.63	33.288	25.139	281.5	0.000	6.13	101.6	5.0	0.47	1.8	0.14	0.07	0.90	0.33	0		
1	12.63	12.63	33.288	25.139	281.5	0.003	6.13	101.6	5.0	0.47	1.8	0.14	0.07	0.90	0.33	1	20	
10	12.64	12.63	33.287	25.138	281.9	0.028	6.14	101.7	5.0	0.47	1.8	0.14	0.07	0.92	0.29	10	19	
20	12.64	12.64	33.287	25.138	282.2	0.056	6.14	101.8	4.9	0.47	1.7	0.14	0.06	0.92	0.30	20	18	
30	12.60	12.60	33.286	25.145	281.9	0.085	6.09	100.8	5.0	0.49	2.1	0.17	0.10	0.83	0.34	30	17	
40	12.26	12.25	33.305	25.226	274.4	0.112	5.65	92.9	6.6	0.68	5.2	0.20	0.12	0.34	0.21	40	16	
50	11.92	11.91	33.388	25.355	262.3	0.139	5.40	88.2	10.1	0.88	8.1	0.42	0.17	0.39	0.28	50	15	
60	11.69	11.68	33.403	25.410	257.4	0.165	5.06	82.3	11.2	1.00	10.2	0.40	0.08	0.31	0.30	60	14	
70	11.09	11.08	33.410	25.526	246.6	0.190	4.72	75.8	12.5	1.14	12.7	0.27	0.00	0.22	0.28	71	13	
75	ISL	10.85	D 10.84	33.425	D 25.580	241.4	0.204	4.42	D 70.5	13.7	1.24	14.3	0.20	0.00	0.19	0.27	76	
85	10.48	10.47	33.456	25.669	233.2	0.226	4.12	65.2	16.0	1.43	17.6	0.06	0.00	0.14	0.25	86	12	
100	9.76	9.74	33.670	25.959	205.9	0.259	3.16	49.3	23.6	1.81	23.5	0.05	0.00	0.22	0.50	101	11	
120	9.18	9.16	33.778	26.138	189.3	0.299	3.00	46.2	27.5	1.95	26.2	0.00	0.00	0.02	0.21	121	10	
125	ISL	9.14	D 9.13	33.788	D 26.151	188.0	0.310	2.96	D 45.6	28.1	1.97	26.5	0.00	0.00	0.02	0.20	126	
141	8.95	8.93	33.852	26.232	180.7	0.338	2.77	42.4	29.8	2.03	27.5	0.00	0.00	0.02	0.18	142	09	
150	ISL	8.89	D 8.87	33.878	D 26.262	178.0	0.356	2.70	D 41.4	31.2	2.07	28.1	0.00	0.00	0.01	0.15	151	
170	8.65	8.64	33.965	26.368	168.4	0.388	2.37	36.2	34.3	2.16	29.4	0.00	0.00	0.01	0.09	171	08	
200	8.35	8.33	33.999	26.442	161.8	0.438	2.29	34.7	37.1	2.22	30.4	0.00	0.00	0.00	0.06	202	07	
231	8.17	8.14	34.023	26.489	157.8	0.487	2.13	32.1	39.6	2.28	31.4	0.00	0.00		233	06		
250	ISL	7.87	D 7.85	34.070	D 26.570	150.4	0.520	1.76	D 26.3	42.7	2.37	32.3	0.00	0.00		252		
270	7.82	7.79	34.090	26.594	148.5	0.547	1.65	24.7	45.9	2.46	33.3	0.00	0.00		272			
300	ISL	7.74	D 7.71	34.168	D 26.668	142.0	0.594	1.13	D 16.9	50.9	2.62	34.9	0.00	0.00		302		
320	7.44	7.40	34.158	26.703	138.8	0.618	1.04	15.5	54.2	2.72	36.0	0.00	0.00		323	04		
380	7.14	7.11	34.195	26.775	132.9	0.700	0.79	11.7	59.5	2.84	37.3	0.00	0.00		383	03		
400	ISL	7.09	D 7.05	34.202	D 26.789	131.8	0.731	0.75	D 11.0	62.1	2.88	37.9	0.00	0.00		403		
441	6.59	6.55	34.205	26.859	125.5	0.779	0.65	9.5	67.3	2.96	39.0	0.00	0.00		445	02		
500	ISL	6.00	D 5.95	34.264	D 26.983	114.0	0.856	0.39	D 5.5	76.7	3.09	40.7	0.00	0.00		504		
516		5.98	5.93	34.269	26.989	113.6	0.868	0.38		5.4	79.3	3.12	41.2	0.00	0.00		520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

## CALCOFI CRUISE 1202

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 23.4 N	122 15.1 W	11/02/2012	1652	UTC	4026 m	310	13 kn	310 03 06	1	1019.8 mb	13.1 C	11.7 C	7/8	SC	071		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	pct	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	12.88	12.88	32.930	24.813	312.6	0.000	6.17	102.6	3.7	0.37	0.5	0.03	0.00	0.41	0.07	0	
2	12.88	12.88	32.930	24.813	312.6	0.006	6.17	102.6	3.7	0.37	0.5	0.03	0.00	0.41	0.07	2	20
10	12.86	12.85	32.929	24.819	312.3	0.031	6.18	102.6	3.6	0.36	0.5	0.03	0.00	0.43	0.04	10	19
20	12.45	12.45	32.951	24.913	303.6	0.062	6.21	102.4	4.1	0.33	1.1	0.06	0.00	0.41	0.11	20	18
30	12.13	12.12	33.005	25.018	293.9	0.092	6.16	100.7	5.0	0.45	1.9	0.09	0.05	0.52	0.07	30	17
40	11.12	11.11	33.043	25.234	273.5	0.120	5.73	91.7	6.5	0.74	5.6	0.05	0.07	0.33	0.10	40	16
50	10.65	10.65	33.061	25.330	264.6	0.147	5.59	88.6	7.7	0.87	7.9	0.03	0.00	0.21	0.10	50	15
60	10.41	10.41	33.176	25.460	252.4	0.173	5.29	83.5	8.6	0.97	9.6	0.03	0.00	0.11	0.08	60	14
70	9.90	9.89	33.190	25.559	243.2	0.198	5.05	78.9	11.5	1.13	12.5	0.02	0.00	0.05	0.08	71	13
75	ISL	9.80	D 9.79	33.274	D 25.641	235.5	0.211	4.84	D 75.4	12.7	1.14	13.6	0.01	0.00	0.05	0.07	76
85	9.76	9.75	33.300	25.668	233.2	0.233	4.66	72.5	15.1	1.16	15.9	0.00	0.00	0.04	0.05	86	12
100	9.37	9.36	33.487	25.879	213.4	0.267	3.98	61.6	20.8	1.63	21.1	0.00	0.00	0.03	0.05	101	11
119	8.96	8.94	33.611	26.042	198.2	0.306	3.69	56.5	24.6	1.75	23.7	0.00	0.00	0.01	0.05	120	10
125	ISL	8.93	D 8.92	33.692	D 26.109	192.0	0.319	3.54	D 54.2	25.5	1.76	23.9	0.00	0.00	0.01	0.04	126
140	8.68	8.66	33.805	26.238	180.0	0.346	3.58	54.5	27.6	1.77	24.5	0.00	0.00	0.00	0.03	141	09
150	ISL	8.63	D 8.61	33.826	D 26.262	177.9	0.365	3.60	D 54.8	29.1	1.81	25.2	0.00	0.00	0.00	0.03	151
170	8.34	8.32	33.918	26.379	167.2	0.398	3.27	49.5	32.0	1.89	26.6	0.00	0.00	0.00	0.03	171	08
200	7.89	7.87	33.989	26.502	155.9	0.447	2.38	35.6	40.0	2.20	31.0	0.00	0.00	0.00	0.02	202	07
230	7.55	7.53	33.998	26.559	150.9	0.493	2.29	34.1	44.3	2.29	32.1	0.00	0.00		232	06	
250	ISL	7.30	D 7.28	34.028	D 26.619	145.4	0.525	1.97	D 29.1	48.1	2.43	33.7	0.00	0.00		252	
270	7.27	7.24	34.067	26.654	142.4	0.551	1.52	22.5	51.9	2.56	35.3	0.00	0.00		272	05	
300	ISL	6.95	D 6.92	34.070	D 26.701	138.3	0.597	1.37	D 20.1	56.1	2.68	36.5	0.00	0.00		302	
320	7.02	6.99	34.137	26.745	134.5	0.620	1.01	14.9	58.9	2.76	37.3	0.00	0.00		323	04	
380	6.55	6.51	34.180	26.843	125.9	0.698	0.71	10.3	66.1	2.95	39.2	0.00	0.00		383	03	
400	ISL	6.44	D 6.40	34.199	D 26.873	123.2	0.728	0.61	D 8.8	68.6	2.99	39.6	0.00	0.00		403	
440	6.18	6.14	34.226	26.928													

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
34 3.1 N	122 56.5 W	11/02/2012	0929	UTC	4236 m	290	10 kn	270 04 07	1	1020.8 mb	15.0 C	13.4 C	4/8	SC	070		
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	pct	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0	13.75	13.75	33.091	24.764	317.3	0.000	6.05	102.4	2.8	0.33	0.0	0.00	0.00	0.29	0.07	0	
2	13.75	13.75	33.091	24.764	317.3	0.006	6.05	102.4	2.8	0.33	0.0	0.00	0.00	0.29	0.07	2	20
10	13.48	13.48	33.051	24.789	315.2	0.032	6.09	102.6	2.8	0.32	0.0	0.00	0.00	0.29	0.09	10	19
20	13.43	13.43	33.049	24.798	314.6	0.063	6.09	102.5	2.8	0.32	0.0	0.00	0.00	0.34	0.10	20	18
30	13.41	13.41	33.045	24.799	314.8	0.095	6.08	102.2	2.8	0.32	0.0	0.00	0.00	0.39	0.11	30	17
40	13.43	13.42	33.052	24.802	314.8	0.126	6.06	101.9	2.8	0.31	0.0	0.00	0.00	0.42	0.12	40	16
50	13.36	13.35	33.044	24.810	314.4	0.158	6.03	101.3	2.8	0.33	0.0	0.01	0.05	0.39	0.15	50	15
60	13.32	13.31	33.117	24.874	308.5	0.189	5.93	99.6	3.0	0.37	0.4	0.09	0.17	0.24	0.12	60	14
70	12.41	12.40	33.111	25.049	292.0	0.219	5.76	94.9	4.1	0.54	2.9	0.23	0.00	0.11	0.10	71	13
75 ISL	11.71 D	11.69	33.045 D	25.131	284.3	0.235	5.81 D	94.2	4.8	0.61	4.1	0.16	0.00	0.09	0.09	76	
86	11.08	11.07	33.107	25.291	269.2	0.264	5.54	88.6	6.4	0.76	6.6	0.02	0.00	0.06	0.07	87	12
100	10.20	10.18	33.256	25.562	243.6	0.300	4.91	77.2	11.2	1.09	12.5	0.01	0.00	0.03	0.05	101	11
120	9.64	9.62	33.439	25.798	221.5	0.346	4.25	66.1	17.3	1.45	18.6	0.01	0.00	0.02	0.03	121	10
125 ISL	9.55 D	9.54	33.503 D	25.863	215.5	0.359	4.04 D	62.8	18.5	1.50	19.4	0.01	0.00	0.02	0.03	126	
140	9.21	9.19	33.608	26.000	202.7	0.388	3.87	59.6	21.9	1.65	21.9	0.00	0.00	0.01	0.03	141	09
150 ISL	8.96 D	8.94	33.722 D	26.129	190.6	0.410	3.67 D	56.3	24.4	1.75	23.5	0.00	0.00	0.01	0.03	151	
170	8.84	8.82	33.828	26.232	181.3	0.445	3.00	46.0	29.3	1.96	26.7	0.00	0.00	0.00	0.03	171	08
200	8.51	8.49	33.952	26.380	167.7	0.498	2.60	39.5	33.9	2.10	28.8	0.00	0.00	0.00	0.02	202	07
230	8.23	8.20	34.021	26.479	158.9	0.547	2.10	31.7	39.2	2.29	31.3	0.00	0.00	0.00	0.06	232	06
250 ISL	8.07 D	8.04	34.054 D	26.529	154.4	0.582	1.86 D	28.1	42.5	2.38	32.4	0.00	0.00	0.00	0.00	252	
270	7.78	7.76	34.081	26.592	148.6	0.608	1.67	25.0	45.8	2.47	33.5	0.00	0.00	0.00	0.00	272	05
300 ISL	7.45 D	7.41	34.116 D	26.669	141.7	0.656	1.28 D	19.0	51.0	2.61	35.1	0.00	0.00	0.00	0.00	302	
320	7.31	7.28	34.134	26.702	138.8	0.680	1.12	16.5	54.5	2.71	36.2	0.00	0.00	0.00	0.00	323	04
379	6.85	6.81	34.167	26.793	130.9	0.760	0.82	12.0	62.6	2.87	38.1	0.00	0.00	0.00	0.00	382	03
400 ISL	6.68 D	6.64	34.179 D	26.826	128.0	0.792	0.74 D	10.8	65.6	2.91	38.8	0.00	0.00	0.00	0.00	403	
440	6.25	6.21	34.181	26.884	122.7	0.837	0.64	9.3	71.3	2.99	40.0	0.00	0.00	0.00	0.00	444	02
500 ISL	5.89 D	5.85	34.220 D	26.961	115.9	0.915	0.46 D	6.6	78.4	3.11	41.1	0.00	0.00	0.00	0.00	504	
515	5.88	5.83	34.242	26.981	114.3	0.926	0.41	5.9	80.2	3.14	41.4	0.00	0.00	0.00	0.00	519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 38.3 W	11/02/2012	0326	UTC	4138 m	240	09 kn	250 03 08	2	1024.1 mb	15.1 C	14.9 C	19 m	8/8	ST	069	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	pct	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
0	13.93	13.93	33.156	24.778	316.0	0.000	6.00	102.1	2.6	0.33	0.0	0.00	0.00	0.23	0.06	0	
2 A	13.93	13.93	33.156	24.778	316.0	0.006	6.00	102.1	2.6	0.33	0.0	0.00	0.00	0.23	0.06	2	21
10 ISL	13.87 D	13.86	33.159 D	24.794	314.7	0.032	6.00	102.0	2.6	0.33	0.0	0.00	0.00	0.25	0.06	10	
13 A	13.86	13.86	33.159	24.795	314.7	0.041	5.99	101.6	2.6	0.33	0.0	0.00	0.00	0.25	0.06	13	20
18 A	13.79	13.79	33.154	24.805	313.9	0.057	6.01	101.9	2.6	0.33	0.0	0.00	0.00	0.29	0.08	18	
20 ISL	13.78 D	13.78	33.156 D	24.810	313.5	0.063	6.02 D	102.0	2.6	0.33	0.0	0.00	0.00	0.31	0.09	20	
26	13.71	13.71	33.143	24.814	313.3	0.082	6.01	101.7	2.6	0.33	0.0	0.00	0.00	0.37	0.13	26	18
30 ISL	13.68 D	13.68	33.137 D	24.815	313.3	0.095	6.01 D	101.6	2.6	0.33	0.0	0.00	0.00	0.40	0.14	30	
35 A	13.71	13.70	33.135	24.809	314.1	0.110	5.99	101.4	2.6	0.33	0.0	0.00	0.00	0.44	0.16	35	17
46	13.63	13.63	33.169	24.851	310.3	0.144	5.96	100.7	2.6	0.35	0.1	0.03	0.12	0.33	0.14	46	16
50 ISL	13.53 D	13.53	33.173 D	24.874	308.3	0.158	5.97 D	100.8	2.8	0.38	0.4	0.08	0.18	0.28	0.13	50	
54	13.31	13.30	33.165	24.914	304.5	0.169	5.90	99.1	3.0	0.40	0.7	0.13	0.23	0.23	0.12	54	15
65 A	12.23	12.22	33.092	25.067	290.2	0.202	5.83	95.7	3.9	0.51	2.2	0.30	0.09	0.13	0.10	66	14
75 A	11.83	11.82	33.124	25.169	280.7	0.230	5.60	91.0	4.9	0.64	4.6	0.06	0.00	0.10	0.10	76	13
86	10.86	10.85	33.251	25.443	254.8	0.260	4.99	79.6	9.2	0.99	10.6	0.01	0.00	0.06	0.07	87	12
100	9.88	9.87	33.314	25.660	234.3	0.294	4.82	75.3	12.2	1.13	13.3	0.01	0.00	0.03	0.04	101	11
121	9.58	9.57	33.451	25.817	219.8	0.342	4.17	64.7	18.0	1.49	19.1	0.00	0.00	0.02	0.03	122	10
125 ISL	9.53 D	9.51	33.506 D	25.869	214.9	0.352	4.08 D	63.3	18.8	1.52	19.6	0.00	0.00	0.02	0.03	126	
139	9.25	9.23	33.654 D	26.029	199.9	0.379	3.85	59.4	21.4	1.64	21.5	0.00	0.00	0.01	0.03	140	09
150 ISL	9.06 D	9.04	33.764 D	26.147	189.0	0.403	3.09 D	47.6	24.8	1.79	23.9	0.00	0.00	0.01	0.03	151	
170	8.72	8.70	33.864	26.279	176.7	0.437	2.69	41.0	31.0	2.06	28.2	0.00	0.00	0.00	0.03	171	08
200	8.42	8.40	33.955	26.397	166.1	0.489	2.66	40.3	34.5	2.09	28.5	0.00	0.00	0.00	0.03	202	07
228	8.09	8.07	33.989	26.474	159.2	0.534	2.57	38.6	38.0	2.14	29.9	0.00	0.00	0.00	0.00	230	06
250 ISL	7.62 D	7.60	33.980 D	26.535	153.5	0.572	2.86 D	42.6	41.2	2.18	30.7	0.00	0.00	0.00			

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
33 23.4 N	124 19.5 W	10/02/2012	2118	UTC	4389 m	230	04 kn			1022.5 mb	14.2 C	14.0 C					068
0	13.90	13.90	33.170	24.795	314.4	0.000	6.01	102.1	2.6	0.33	0.0	0.00	0.00	0.25	0.06	0	
2	13.90	13.90	33.170	24.795	314.4	0.006	6.01	102.1	2.6	0.33	0.0	0.00	0.00	0.25	0.06	2	
10	13.89	13.89	33.169	24.796	314.5	0.032	6.01	102.2	2.5	0.32	0.0	0.00	0.00	0.25	0.06	10	
20	13.78	13.77	33.162	24.815	313.0	0.063	6.02	102.1	2.6	0.33	0.0	0.00	0.00	0.27	0.09	20	
29	13.76	13.75	33.165	24.822	312.6	0.091	6.02	101.9	2.5	0.32	0.0	0.00	0.00	0.30	0.10	29	
30	ISL 13.76 D	13.75	33.168	24.825	312.4	0.095	6.01	D101.9	2.5	0.32	0.0	0.00	0.00	0.31	0.10	30	
40	13.74	13.73	33.165	24.826	312.6	0.125	6.02	101.9	2.5	0.33	0.0	0.00	0.00	0.37	0.11	40	
50	13.52	13.52	33.158	24.866	309.1	0.157	6.00	101.2	2.7	0.34	0.1	0.02	0.00	0.52	0.17	50	
60	13.37	13.36	33.152	24.893	306.8	0.187	6.01	101.0	2.9	0.36	0.3	0.05	0.06	0.44	0.17	60	
70	12.77	12.76	33.137	24.999	296.8	0.218	5.84	96.9	3.8	0.48	2.0	0.22	0.03	0.35	0.18	71	
75	ISL 12.30 D	12.23	33.139	25.103	287.0	0.234	5.88	D 96.6	4.8	0.59	3.8	0.16	0.02	0.28	0.15	76	
86	11.36	11.35	33.197	25.311	267.4	0.263	5.34	86.1	6.9	0.82	7.7	0.02	0.00	0.11	0.10	87	
100	10.82	10.80	33.298	25.488	250.9	0.299	4.71	75.1	10.9	1.11	12.5	0.01	0.00	0.10	0.09	101	
121	9.80	9.78	33.642	25.931	209.0	0.347	3.00	46.9	23.6	1.91	25.1	0.00	0.00	0.04	0.05	122	
125	ISL 9.74 D	9.73	33.726	D 26.006	202.0	0.357	2.62	D 41.0	24.8	1.97	25.9	0.00	0.00	0.04	0.05	126	
140	9.71	9.69	33.821	26.085	194.8	0.385	2.12	33.1	29.1	2.20	29.0	0.00	0.00	0.01	0.05	141	
150	ISL 9.57 D	9.55	33.886	D 26.160	187.9	0.406	1.91	D 29.7	30.7	2.25	29.6	0.00	0.00	0.01	0.05	151	
171	9.37	9.35	33.963	26.254	179.4	0.443	1.64	25.4	34.1	2.35	31.0	0.00	0.00	0.00	0.05	172	
200	9.16	9.13	34.041	26.350	170.9	0.494	1.36	21.0	37.3	2.45	32.2	0.00	0.00	0.00	0.04	202	
230	8.94	8.92	34.090	26.423	164.5	0.544	1.23	18.9	39.5	2.50	32.9	0.00	0.00			232	
250	ISL 8.83 D	8.81	34.112	D 26.458	161.6	0.580	1.19	D 18.2	41.2	2.53	33.2	0.00	0.00			252	
270	8.62	8.59	34.134	26.509	157.1	0.609	1.10	16.7	42.9	2.56	33.5	0.00	0.00			272	
300	ISL 8.35 D	8.32	34.159	D 26.570	151.7	0.658	1.04	D 15.8	46.3	2.63	34.3	0.00	0.00			302	
320	8.15	8.12	34.166	26.606	148.6	0.685	0.98	14.7	48.5	2.67	34.8	0.00	0.00			323	
380	7.52	7.48	34.162	26.697	140.6	0.772	0.92	13.6	54.2	2.76	36.5	0.00	0.00			383	
400	ISL 7.34 D	7.31	34.179	D 26.735	137.2	0.804	0.83	D 12.2	57.3	2.81	37.1	0.00	0.00			403	
439	6.96	6.92	34.199	26.805	130.9	0.852	0.67	9.9	63.3	2.91	38.3	0.00	0.00			443	
500	ISL 6.38 D	6.33	34.211	D 26.892	123.0	0.935	0.54	D 7.8	72.2	3.02	40.1	0.00	0.00			504	
515	6.16	6.11	34.195	26.908	121.4	0.948	0.54	7.8	74.4	3.05	40.5	0.00	0.00			519	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY STA-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
34 27.4 N	120 29.5 W	09/02/2012	0506	UTC	32 m	280	09 kn	270	06 06 0	1017.5 mb	17.0 C	14.4 C		0/8			060
0	13.66	13.65	33.389	25.014	293.5	0.000	6.23	105.6	2.6	0.57	1.4	0.10	0.63	1.10	0.78	0	
2	13.66	13.65	33.389	25.014	293.5	0.006	6.23	105.6	2.6	0.57	1.4	0.10	0.63	1.10	0.78	2	
5	13.64	13.64	33.390	25.019	293.1	0.015	6.26	106.0	2.6	0.59	1.5	0.11	0.67	1.04	0.80	5	
10	ISL 13.57 D	13.57	33.390	D 25.032	292.1	0.030	6.12	D 103.4	2.4	0.53	1.4	0.09	0.55	1.13	0.74	10	
10	13.57	13.57	33.388	25.030	292.2	0.030										04	
11	13.56	13.55	33.388	25.035	291.8	0.032	6.11	103.3	2.4	0.52	1.4	0.08	0.53	1.15	0.73	11	
14	13.55	13.55	33.390	25.037	291.7	0.041	6.09	103.0	2.5	0.55	1.6	0.08	0.54	1.20	0.75	14	
20	ISL 13.51 D	13.51	33.392	D 25.047	290.9	0.059	6.03	D 101.8	2.5	0.55	1.7	0.07	0.52	1.25	0.79	20	
21	13.50	13.49	33.392	25.050	290.6	0.061	6.04	102.0	2.5	0.55	1.7	0.07	0.52	1.26	0.79	21	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
34 26.9 N	120 31.8 W	09/02/2012	0607	UTC	79 m	310	19 kn	280	04 05 0	1017.2 mb	16.3 C	13.3 C		09 m	0/8		061
0	13.73	13.73	33.385	24.996	295.3	0.000	6.19	105.0	0.8	0.37	0.3	0.05	0.24	1.26	0.32	0	
2	13.73	13.73	33.385	24.996	295.3	0.006	6.19	105.0	0.8	0.37	0.3	0.05	0.24	1.26	0.32	2	
5	13.74	13.74	33.386	24.995	295.4	0.015	6.18	104.8	0.8	0.38	0.3	0.02	0.24	1.27	0.34	5	
9	13.66	13.66	33.387	25.012	293.9	0.027	6.20	104.9	0.9	0.40	0.4	0.02	0.25	1.17	0.33	9	
9	13.66	13.66	33.387	25.012	293.9	0.028										08	
10	ISL 13.50 D	13.54	33.398	D 25.044	290.9	0.030	6.09	D 103.0	1.8	0.47	1.4	0.04	0.26	1.13	0.35	10	
20	12.14	12.14	33.428	25.343	262.7	0.057	4.32	70.8	11.0	1.13	11.2	0.23	0.39	0.82	0.55	20	
30	11.99	11.98	33.429	25.374	260.1	0.083	4.13	67.5	12.1	1.22	12.4	0.28	0.31	0.83	0.60	30	
41	11.52	11.52	33.431	25.462	251.9	0.111	4.02	65.1	12.2	1.29	13.8	0.20	0.19	0.85	0.54	41	
50	ISL 11.39 D	11.39	33.458	D 25.507	247.9	0											

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					768 m	340	17 kn	320	04 07	1018.0 mb	14.3 C	12.2 C		0/8			062
34 19.0 N	120 48.3 W	09/02/2012	0921	UTC													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	12.64	12.64	33.433	25.251	270.9	0.000	6.43	106.6	1.7	0.47	2.2	0.09	0.29	3.90	0.53	0	
1	12.64	12.64	33.433	25.251	270.9	0.003	6.43	106.6	1.7	0.47	2.2	0.09	0.29	3.90	0.53	1	21
10	12.63	12.63	33.430	25.250	271.3	0.027											10 20
10	12.63	12.63	33.430	25.250	271.3	0.027	6.43	106.7	1.6	0.50	2.2	0.09	0.30	3.86	0.79	10	19
20	12.52	12.52	33.431	25.273	269.4	0.054	6.39	105.7	1.7	0.52	2.4	0.09	0.32	3.87	0.79	20	18
30	12.49	12.49	33.436	25.283	268.7	0.081	6.29	103.9	1.7	0.56	2.4	0.09	0.50	4.04	0.79	30	17
40	12.26	12.25	33.454	25.343	263.3	0.108	5.73	94.2	4.8	0.82	5.2	0.12	0.82	4.29	1.20	40	16
50	11.01	11.00	33.540	25.641	235.1	0.133	4.18	67.0	14.7	1.41	15.5	0.19	0.32	3.06	1.27	50	15
60	10.64	10.63	33.575	25.733	226.6	0.156	3.79	60.3	17.7	1.56	18.2	0.15	0.06	1.99	0.93	60	14
70	10.41	10.40	33.605	25.797	220.7	0.178	3.56	56.3	19.4	1.63	19.9	0.10	0.00	1.20	0.80	71	13
75 ISL	10.14 D	10.13	33.631 D	25.863	214.5	0.190	3.39	53.3	20.6	1.70	21.0	0.08	0.00	0.97	0.74	76	
85	9.95	9.94	33.677	25.931	208.3	0.210	3.20	50.1	23.0	1.83	23.1	0.04	0.00	0.51	0.60	86	12
100	9.68	9.66	33.753	26.036	198.6	0.241	2.95	45.9	25.6	1.90	24.4	0.03	0.00	0.28	0.38	101	11
120	9.42	9.41	33.816	26.128	190.2	0.279	2.81	43.6	27.6	2.00	25.7	0.02	0.00	0.23	0.40	121	10
125 ISL	9.40 D	9.38	33.825 D	26.139	189.3	0.291	2.79	43.2	28.1	2.02	26.0	0.02	0.00	0.20	0.37	126	
140	9.20	9.18	33.895	26.227	181.2	0.317	2.65	41.0	29.7	2.07	26.8	0.01	0.00	0.11	0.26	141	09
150 ISL	9.14 D	9.13	33.966 D	26.291	175.3	0.337	2.22	34.3	31.7	2.14	27.7	0.01	0.00	0.09	0.22	151	
170	8.82	8.81	34.007	26.374	167.8	0.369	2.09	32.0	35.6	2.28	29.6	0.01	0.00	0.04	0.15	171	08
200	8.73	8.71	34.086	26.452	161.0	0.418	1.76	26.9	38.5	2.35	30.6	0.00	0.00	0.03	0.16	202	07
231	8.23	8.21	34.120	26.556	151.6	0.467	1.52	23.0	43.3	2.49	32.5	0.00	0.00			233	06
250 ISL	8.14 D	8.12	34.137 D	26.583	149.4	0.499	1.39	21.0	45.4	2.55	33.1	0.00	0.00			252	
270	8.05	8.02	34.168	26.622	146.0	0.525	1.23	18.5	47.5	2.61	33.8	0.00	0.00			272	05
300 ISL	7.69 D	7.67	34.175 D	26.680	140.9	0.572	1.10	16.5	51.2	2.68	34.7	0.00	0.00			302	
320	7.59	7.56	34.184	26.702	139.1	0.596	1.03	15.3	53.6	2.72	35.3	0.00	0.00			323	04
380	7.18	7.14	34.210	26.782	132.2	0.677	0.79	11.6	59.4	2.82	37.1	0.00	0.00			383	03
400 ISL	7.08 D	7.04	34.228 D	26.810	129.9	0.709	0.67	9.9	61.8	2.87	37.6	0.00	0.00			403	
440	6.76	6.72	34.247	26.869	124.6	0.754	0.54	7.9	66.6	2.98	38.5	0.00	0.00			444	02
500 ISL	6.36 D	6.31	34.275 D	26.945	118.0	0.834	0.39	5.7	72.8	3.07	39.8	0.00	0.00			504	
515	6.31	6.27	34.278	26.954	117.3	0.845	0.39	5.6	74.4	3.09	40.1	0.00	0.00			519	01

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

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					2186 m	350	08 kn			1020.8 mb	13.8 C	12.3 C		0/8			063
34 8.9 N	121 9.2 W	09/02/2012	1422	UTC													
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	12.73	12.73	33.407	25.214	274.5	0.000	6.16	102.4	1.9	0.60	2.1	0.10	1.05	0.22	0.16	0	
3	12.73	12.73	33.407	25.214	274.5	0.008	6.16	102.4	1.9	0.60	2.1	0.10	1.05	0.22	0.16	3	21
9	12.73	12.73	33.407	25.213	274.7	0.026											9 20
10	12.72	12.72	33.407	25.214	274.7	0.027	6.16	102.3	1.9	0.61	2.1	0.10	1.21	0.23	0.23	10	19
20 ISL	12.69 D	12.69	33.406 D	25.220	274.4	0.055	6.20	102.9	1.7	0.58	2.0	0.09	1.07	0.40	0.44	20	
25	12.65	12.64	33.407	25.230	273.6	0.069	6.24	103.4	1.6	0.56	2.0	0.09	1.00	0.48	0.55	25	18
30 ISL	12.64 D	12.63	33.407 D	25.232	273.5	0.083	6.20	102.8	2.8	0.66	3.1	0.12	1.16	0.51	0.58	30	
40	12.44	12.44	33.432	25.290	268.3	0.109	5.72	94.4	5.2	0.85	5.3	0.18	1.49	0.56	0.64	40	17
50	11.89	11.88	33.448	25.407	257.4	0.136	5.16	84.2	8.3	1.05	8.4	0.24	1.34	0.42	1.06	50	16
62	10.59	10.58	33.580	25.745	225.5	0.165	3.73	59.2	17.2	1.53	17.7	0.29	0.47	0.61	1.53	63	15
74	9.79	9.78	33.692	25.968	204.4	0.190	3.10	48.5	23.3	1.82	23.3	0.07	0.00	0.61	0.70	75	14
75 ISL	9.75 D	9.74	33.729 D	26.004	201.0	0.194	3.02	47.2	23.6	1.83	23.4	0.07	0.00	0.60	0.69	76	
87	9.54	9.53	33.787	26.084	193.6	0.216	2.86	44.4	26.5	1.96	25.1	0.05	0.00	0.46	0.61	88	13
100	9.28	9.27	33.876	26.197	183.2	0.241	2.77	42.8	28.5	2.00	26.3	0.03	0.00	0.29	0.64	101	12
112	9.24	9.22	33.894	26.218	181.4	0.263	2.73	42.1	28.9	2.01	26.5	0.03	0.00	0.31	0.46	113	11
125	9.04	9.02	33.951	26.296	174.3	0.286	2.60	39.9	31.0	2.07	27.6	0.02	0.00	0.28	0.76	126	10
140	8.93	8.92	33.968	26.325	171.8	0.312	2.51	38.5	32.2	2.11	28.1	0.02	0.00	0.15	0.32	141	09
150 ISL	8.87 D	8.85	33.999 D	26.360	168.7	0.330	2.42	37.2	33.4	2.15	28.6	0.01	0.00	0.14	0.34	151	
171	8.66	8.64	34.043	26.429	162.6	0.363	2.21	33.7	36.0	2.23	29.6	0.00	0.00	0.14	0.36	172	08
200	8.19	8.17	34.071	26.523	154.1	0.409	1.89	28.6	41.5	2.37	31.4	0.00	0.00	0.09	0.26	202	07
230	7.86	7.84	34.104	26.598	147.4	0.455	1.58	23.7	46.2	2.51	33.5	0.00	0.00			232	06
250 ISL	7.71 D	7.67	34.127 D	26.640	143.7	0.487	1.34	20.0	49.4	2.60	34.5	0.00	0.00			252	
270	7.45	7.43	34.138	26.684	139.7	0.512	1.21	18.0	52.5	2.68	35.5	0.00	0.00			272	05
300 ISL	7.13 D	7.10	34.149 D	26.739	134.9	0.557	1.04	15.3	56.6	2.76	36.7	0.00	0.00			302	
320	6.97	6.94	34.150	26.761	133.0	0.580	0.97	14.3	59.4	2.81	37.5	0.00	0.00			323	04
380	6.50	6.46	34.167	26.839	126.2	0.658	0.78	11.3	65.9	2.93							

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					3633 m	340	08 kn			1021.5 mb	13.0 C	12.5 C					064
33 49.0 N	121 50.7 W	09/02/2012	2035	UTC	3633 m	340	08 kn										
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0	13.05	13.05	33.007	24.841	310.0	0.000	6.11	101.9	3.2	0.35	0.2	0.02	0.00	0.32	0.08	0	
2	13.05	13.05	33.007	24.841	310.0	0.006	6.11	101.9	3.2	0.35	0.2	0.02	0.00	0.32	0.08	2	20
10	13.05	13.05	33.006	24.839	310.4	0.031	6.11	101.9	3.1	0.35	0.1	0.02	0.05	0.33	0.13	10	19
19	13.01	13.01	33.042	24.876	307.2	0.059	6.10	101.8	3.2	0.36	0.4	0.04	0.13	0.29	0.09	19	18
20 ISL	13.01 D	13.01	33.046 D	24.879	306.9	0.062	6.10	D101.7	3.2	0.36	0.4	0.04	0.13	0.31	0.10	20	
30	13.15	13.15	33.109	24.900	305.1	0.093	6.07	101.6	3.2	0.37	0.3	0.05	0.11	0.45	0.15	30	17
40	13.17	13.16	33.121	24.907	304.8	0.123	6.06	101.4	3.1	0.37	0.4	0.05	0.16	0.29	0.16	40	16
50 ISL	12.87 D	12.87	33.111 D	24.958	300.2	0.154	5.98	D 99.4	3.4	0.42	0.9	0.11	0.25	0.20	0.14	50	
51	12.73	12.73	33.119	24.991	297.0	0.156	6.01	99.6	3.4	0.42	0.9	0.12	0.26	0.19	0.14	51	15
60	12.25	12.24	33.079	25.053	291.3	0.183	5.96	97.8	4.2	0.52	2.2	0.27	0.29	0.19	0.14	60	14
70	12.09	12.08	33.146	25.137	283.6	0.211	5.89	96.4	4.7	0.59	3.4	0.37	0.00	0.12	0.13	71	13
75 ISL	12.03 D	12.01	33.176 D	25.174	280.3	0.227	5.93	D 96.8	4.9	0.61	3.7	0.38	0.00	0.11	0.12	76	
86	11.84	11.83	33.223	25.244	273.9	0.256	5.83	95.0	5.3	0.65	4.3	0.40	0.00	0.09	0.10	87	12
100 ISL	10.75 D	10.70	33.213 D	25.440	255.4	0.295	5.31	D 84.4	8.4	0.90	9.0	0.03	0.00	0.06	0.08	101	
101	10.68	10.66	33.208	25.442	255.2	0.296	5.26	83.5	8.6	0.92	9.3	0.00	0.00	0.06	0.08	102	11
121	9.67	9.66	33.363	25.734	227.7	0.344	4.44	69.0	16.4	1.41	17.5	0.00	0.00	0.03	0.05	122	10
125 ISL	9.46 D	9.42	33.453 D	25.842	217.5	0.355	4.31	D 66.8	17.5	1.46	18.4	0.00	0.00	0.03	0.05	126	
140	9.19	9.18	33.589	25.988	203.9	0.385	3.85	59.3	21.4	1.64	21.6	0.00	0.00	0.01	0.04	141	9
150 ISL	8.90 D	8.89	33.763 D	26.170	186.7	0.406	3.59	D 54.9	24.0	1.73	23.1	0.00	0.00	0.01	0.04	151	
170	8.68	8.67	33.836	26.262	178.3	0.441	3.16	48.2	29.2	1.91	26.1	0.00	0.00	0.00	0.03	171	8
200	8.26	8.24	33.993	26.451	160.9	0.491	2.34	35.4	37.0	2.21	30.3	0.00	0.00	0.00	0.03	202	7
230	7.94	7.92	34.045	26.540	152.9	0.539	1.92	28.8	42.7	2.37	32.4	0.00	0.00		0.00	232	6
250 ISL	7.74 D	7.71	34.074 D	26.593	148.2	0.571	1.64	D 24.6	45.8	2.46	33.4	0.00	0.00		0.00	252	
270	7.59	7.57	34.091	26.627	145.2	0.598	1.48	22.1	48.8	2.55	34.4	0.00	0.00		0.00	272	5
300 ISL	7.33 D	7.30	34.114 D	26.683	140.3	0.644	1.29	D 19.0	52.8	2.65	35.1	0.00	0.00		0.00	302	
320	7.19	7.16	34.126	26.713	137.7	0.669	1.13	16.7	55.5	2.72	35.6	0.00	0.00		0.00	323	4
380	6.65	6.62	34.171	26.823	127.9	0.748	0.75	10.9	65.4	2.91	37.9	0.00	0.00		0.00	383	3
400 ISL	6.49 D	6.46	34.183 D	26.853	125.2	0.778	0.67	D 9.8	68.1	2.96	38.4	0.00	0.00		0.00	403	
440	6.18	6.14	34.210	26.916	119.6	0.823	0.52	7.5	73.4	3.05	39.4	0.00	0.00		0.00	444	2
500 ISL	5.80 D	5.75	34.231 D	26.981	113.9	0.898	0.41	D 5.8	80.6	3.13	40.7	0.00	0.00		0.00	504	
515	5.71	5.66	34.238	26.997	112.4	0.910	0.38	5.4	82.4	3.15	41.0	0.00	0.00		0.00	519	1

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

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					3984 m	350	07 kn	350 04 07	2	1023.6 mb	11.9 C	11.5 C	15 m	8/8	SC	065	
32 29.3 N	122 33.1 W	10/02/2012	0258	UTC	3984 m	350	07 kn	350 04 07	2								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0	13.01	13.00	32.944	24.800	313.9	0.000	6.16	102.7	3.1	0.34	0.1	0.02	0.00	0.34	0.08	0	
3 A	13.01	13.00	32.944	24.800	313.9	0.009	6.16	102.7	3.1	0.34	0.1	0.02	0.00	0.34	0.08	3	22
10 A	12.98	12.98	32.940	24.803	313.8	0.031	6.14	102.3	3.0	0.34	0.1	0.02	0.00	0.36	0.10	10	21
14 A	12.97	12.97	32.942	24.806	313.6	0.044	6.15	102.3	3.1	0.34	0.1	0.02	0.06	0.35	0.09	14	20
20	12.96	12.96	32.940	24.807	313.7	0.063	6.14	102.2	3.0	0.33	0.1	0.02	0.00	0.36	0.08	20	19
27 A	12.88	12.88	32.935	24.819	312.8	0.085	6.14	102.0	3.2	0.34	0.1	0.02	0.00	0.44	0.09	27	18
30 ISL	12.79 D	12.78	32.947 D	24.847	310.2	0.095	6.17	D 102.4	3.3	0.35	0.2	0.03	0.00	0.45	0.10	30	
39	12.74	12.73	32.973	24.876	307.6	0.122	6.15	102.0	3.5	0.36	0.5	0.05	0.00	0.48	0.13	39	17
50 ISL	12.77 D	12.77	33.062 D	24.939	302.0	0.156	6.12	D 101.6	3.6	0.39	0.8	0.06	0.05	0.46	0.14	50	
52 A	12.73	12.73	33.059	24.945	301.5	0.161	6.13	101.6	3.6	0.39	0.8	0.06	0.06	0.46	0.14	52	16
57 A	12.51	12.50	33.065	24.994	296.9	0.176	6.09	100.5	3.8	0.42	1.2	0.11	0.12	0.38	0.15	57	15
64	12.33	12.33	33.077	25.037	293.1	0.197	5.95	97.7	4.2	0.49	2.2	0.22	0.09	0.25	0.14	65	14
70	12.29	12.28	33.200	25.140	283.4	0.214	5.62	92.4	5.1	0.63	4.5	0.17	0.00	0.14	0.11	71	13
75 ISL	11.88 D	11.87	33.188 D	25.210	276.9	0.229	5.65	D 92.1	5.9	0.70	5.7	0.13	0.00	0.13	0.11	76	
86	11.20	11.19	33.203	25.344	264.2	0.258	5.34	85.7	7.5	0.85	8.2	0.05	0.00	0.10	0.11	87	12
100	10.35	10.34	33.396	25.645	235.8	0.293	4.20	66.3	15.0	1.38	17.0	0.03	0.00	0.08	0.12	101	11
120	9.91	9.90	33.566	25.852	216.6	0.338	3.60	56.4	20.1	1.63	21.3	0.00	0.00	0.03	0.10	121	10
125 ISL	9.84 D	9.82	33.635 D	25.919	210.3	0.351	3.46	D 54.0	21.7	1.69	22.3	0.00	0.00	0.03	0.10	126	
141	9.37	9.35	33.785	26.114	192.1	0.381	2.96	45.8	26.8	1.90	25.5	0.00	0.00	0.01	0.07	142	9
150 ISL	9.32 D	9.30	33.867 D	26.186	185.4	0.401	2.73	D 42.2	28.5	1.96	26.3	0.00	0.00	0.01	0.07	151	
171	9.04	9.03	33.954	26.298	175.1	0.436	2.38	36.6	32.5	2.10	28.1	0.00	0.00	0.01	0.06	172	8
200	8.62	8.60	34.018	26.416	164.4	0.485	2.18	33.2	36.6	2.20	29.9	0.00	0.00	0.00	0.07	202	7
232	8.38	8.36	34.093</														

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	13.31	13.31	33.097	24.857	308.5	0.000	6.13	102.9	3.1	0.36	0.3	0.03	0.00	0.32	0.08	0	
2	13.31	13.31	33.097	24.857	308.5	0.006	6.13	102.9	3.1	0.36	0.3	0.03	0.00	0.32	0.08	2	
10	13.31	13.30	33.097	24.859	308.5	0.031	6.16	103.3	3.1	0.35	0.2	0.03	0.00	0.32	0.07	10	
20	13.20	13.19	33.109	24.891	305.7	0.062	6.15	103.0	3.1	0.36	0.3	0.03	0.00	0.39	0.09	20	
30	13.16	13.15	33.125	24.911	304.1	0.092	6.18	103.5	3.2	0.33	0.2	0.03	0.00	0.53	0.12	30	
40	13.11	13.11	33.131	24.926	303.0	0.123	6.15	102.8	3.2	0.34	0.3	0.04	0.00	0.56	0.14	40	
50	13.11	13.10	33.135	24.930	302.9	0.153	6.12	102.4	3.2	0.34	0.3	0.04	0.00	0.61	0.16	50	
60	13.08	13.07	33.155	24.952	301.1	0.183	6.08	101.6	3.2	0.36	0.5	0.06	0.07	0.45	0.16	60	
70	12.46	12.45	33.170	25.084	288.7	0.213	5.77	95.2	4.6	0.56	3.4	0.30	0.00	0.20	0.13	71	
75 ISL	12.18 D	12.13	33.335 D	25.274	270.7	0.227	5.25 D	86.0	6.7	0.74	6.5	0.21	0.00	0.16	0.13	76	
85	11.16	11.15	33.345	25.463	252.9	0.253	4.64	74.6	10.8	1.11	12.6	0.04	0.00	0.07	0.12	86	
100	10.14	10.13	33.477	25.744	226.4	0.289	3.89	61.1	17.4	1.51	19.2	0.02	0.00	0.04	0.11	101	
121	9.71	9.70	33.694	25.985	203.9	0.334	3.14	48.9	23.8	1.80	23.6	0.01	0.00	0.02	0.10	122	
125 ISL	9.67 D	9.66	33.731 D	26.022	200.5	0.343	3.01 D	46.9	24.6	1.83	24.0	0.01	0.00	0.02	0.09	126	
141	9.42	9.40	33.822	26.134	190.1	0.373	2.74 D	42.5	27.8	1.96	25.8	0.01	0.00	0.01	0.07	142	
150 ISL	9.31 D	9.28	33.863 D	26.186	185.4	0.392	2.63 D	40.6	29.0	2.00	26.5	0.01	0.00	0.01	0.07	151	
170	9.02	9.01	33.923	26.277	177.1	0.426	2.47	37.9	31.7	2.08	27.9	0.01	0.00	0.01	0.07	171	
200	8.40	8.38	33.976	26.416	164.3	0.478	2.46	37.3	35.5	2.15	29.5	0.00	0.00	0.00	0.04	202	
231	7.84	7.81	33.993	26.514	155.3	0.527	2.50	37.5	39.4	2.18	30.4	0.00	0.00		233	10	
250 ISL	7.62 D	7.60	34.011 D	26.559	151.2	0.559	2.31 D	34.4	42.3	2.27	31.5	0.00	0.00		252		
270	7.53	7.50	34.025	26.584	149.2	0.586	2.10	31.2	45.3	2.36	32.6	0.00	0.00		272	08	
300 ISL	7.42 D	7.39	34.080 D	26.644	144.1	0.634	1.60 D	23.7	50.0	2.54	34.5	0.00	0.00		302		
320	7.34	7.31	34.115	26.683	140.7	0.659	1.25	18.4	53.2	2.66	35.7	0.00	0.00		323	07	
380	6.63	6.60	34.121	26.786	131.4	0.740	1.00	14.5	62.6	2.81	38.1	0.00	0.00		383	06	
400 ISL	6.49 D	6.45	34.154 D	26.831	127.3	0.771	0.76 D	11.0	65.4	2.87	38.7	0.00	0.00		403		
441	6.24	6.20	34.185	26.889	122.2	0.817	0.64	9.2	71.2	2.99	39.9	0.00	0.00		445	05	
500 ISL	5.87 D	5.83	34.237 D	26.977	114.3	0.893	0.40 D	5.8	80.1	3.12	41.3	0.00	0.00		504		
515	5.71	5.66	34.231	26.993	112.9	0.904	0.39	5.6	82.3	3.15	41.7	0.00	0.00		519	04	
600 ISL	5.24 D	5.19	34.291 D	27.097	103.6	0.003	0.23 D	3.3	90.4	3.21	42.7	0.00	0.00		605		
700 ISL	4.92 D	4.87	34.354 D	27.184	96.1	1.104	0.21 D	2.9	99.8	3.28	43.9	0.00	0.00		706		
725	4.83	4.77	34.369	27.208	94.1	1.120	0.22	3.0	102.2	3.30	44.2	0.00	0.00		731	03	
800 ISL	4.54 D	4.48	34.406 D	27.270	88.6	1.197	0.27 D	3.7	108.3	3.31	44.7	0.00	0.00		807		
851	4.35	4.28	34.433	27.312	84.8	1.233	0.33	4.5	112.5	3.31	45.0	0.00	0.00		859	02	
900 ISL	4.20 D	4.13	34.448 D	27.341	82.3	1.283	0.37 D	5.1	116.1	3.31	45.1	0.00	0.00		908		
1000	3.87	3.80	34.467	27.391	77.9	1.354	0.45	6.2	123.3	3.30	45.3	0.00	0.00		1010	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	13.60	13.60	33.106	24.806	313.3	0.000	6.08	102.7	2.8	0.33	0.0	0.00	0.00	0.35	0.02	0	
2	13.60	13.60	33.106	24.806	313.3	0.006	6.08	102.7	2.8	0.33	0.0	0.00	0.00	0.35	0.02	20	
10	13.68	13.68	33.131	24.809	313.2	0.031	6.06	102.6	2.7	0.33	0.0	0.00	0.00	0.31	0.03	10	
20	13.60	13.60	33.134	24.830	311.6	0.063	6.07	102.4	2.7	0.33	0.0	0.00	0.00	0.31	0.09	18	
30	13.60	13.59	33.149	24.842	310.7	0.094	6.06	102.3	2.7	0.33	0.0	0.00	0.00	0.37	0.11	17	
40	13.57	13.56	33.154	24.852	310.1	0.125	6.05	102.1	2.6	0.33	0.0	0.01	0.00	0.47	0.14	40	
50	13.49	13.48	33.162	24.875	308.2	0.156	6.04	101.8	2.8	0.35	0.1	0.04	0.03	0.41	0.15	50	
60	12.66	12.66	33.133	25.016	295.0	0.186	5.88	97.4	3.6	0.47	1.7	0.23	0.10	0.26	0.15	60	
70	11.97	11.96	33.130	25.147	282.7	0.215	5.67	92.6	4.8	0.61	4.1	0.14	0.00	0.16	0.13	71	
75 ISL	11.75 D	11.73	33.151 D	25.206	277.1	0.230	5.65 D	91.8	5.4	0.67	5.2	0.10	0.00	0.14	0.12	76	
85	11.17	11.16	33.168	25.323	266.2	0.256	5.45	87.5	6.6	0.80	7.4	0.01	0.00	0.10	0.10	86	
100	10.49	10.48	33.229	25.490	250.6	0.295	5.04	79.7	9.6	1.01	11.1	0.01	0.00	0.05	0.07	101	
120	9.86	9.85	33.466	25.782	223.2	0.342	4.17	65.1	16.8	1.43	18.3	0.01	0.00	0.03	0.04	121	
125 ISL	9.88 D	9.78	33.523 D	25.837	218.0	0.355	3.94 D	61.5	18.7	1.52	19.8	0.01	0.00	0.02	0.04	126	
140	9.28	9.27	33.704	26.064	196.7	0.384	3.36	51.9	24.4	1.79	24.1	0.00	0.00	0.01	0.03	141	
150 ISL	9.14 D	9.12	33.765 D	26.134	190.2	0.406	3.33 D	51.3	25.7	1.82	24.7	0.00	0.00	0.01	0.03	151	
170	8.86	8.84	33.844	26.241	180.4	0.441	3.22	49.2	28.4	1.88	25.8	0.00	0.00	0.00	0.03	171	
200	8.54	8.52	33.963	26.385	167.2	0.493	2.55	38.8	34.3	2.10	28.9	0.00	0.00	0.00	0.03	202	
230	8.22	8.19	34.036	26.491	157.7	0.541	2.02	30.4	39.7	2.31	31.5	0.00	0.00		232	06	
250 ISL	7.95 D	7.93	34.064 D	26.553	152.0	0.576	1.73 D	26.0	43.2	2.43	32.8	0.00	0.00		252		
270	8.00	7.98	34.125	26.594	148.6	0.603	1.27	19.0	46.7	2.55	34.0	0.00	0.00		272	05	
300 ISL	7.68 D	7.65	34.137 D	26.652	143.5	0.650	1.13 D	16.9	50.8	2.63	35.3	0.00	0.00		302		
320	7.34	7.30	34.116	26.685	140.5	0.675	1.20	17.8	53.6</								

RV NEW HORIZON

CALCOFI CRUISE 1202

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 16.8 N	120 1.4 W	09/02/2012	0128	UTC	585 m	200	05 kn	190 01 07	0	1018.3 mb	14.1 C	13.2 C	12 m	0/8			059
DEPTH	TEMP	POT TEMP	Salinity	SIGMA THETA	SVA	DYN HT	OXYGEN ml/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL ug/l	PHAE0 ug/l	PRES db	SAMP
m	deg C	deg C															
0	13.03	13.03	33.430	25.171	278.5	0.000	6.06	101.3	2.8	0.54	2.4	0.08	0.49	2.97	0.68	0	
1 A	13.03	13.03	33.430	25.171	278.5	0.003	6.06	101.3	2.8	0.54	2.4	0.08	0.49	2.97	0.68	1	
8 A	12.85	12.85	33.430	25.208	275.2	0.022	6.07	101.1	2.8	0.55	2.4	0.09	0.49	3.90	1.07	8	
10 ISL	12.84	12.84	33.432 D	25.211	275.0	0.028	6.02	100.2	2.7	0.58	2.4	0.08	0.53	3.69	0.99	10	
11 A	12.84	12.84	33.430	25.209	275.2	0.031	6.04	100.5	2.7	0.59	2.4	0.08	0.55	3.59	0.95	11	
20 ISL	12.80	12.79	33.436 D	25.223	274.1	0.056	5.98	99.6	2.7	0.58	2.6	0.08	0.57	3.87	1.00	20	
22 A	12.79	12.79	33.438	25.226	273.9	0.061	6.01	100.1	2.7	0.58	2.6	0.08	0.57	3.93	1.01	22	
30 ISL	12.78	12.78	33.439 D	25.229	273.8	0.083	5.99	99.6	2.7	0.60	2.7	0.08	0.64	3.89	0.92	30	
31	12.77	12.76	33.442	25.234	273.5	0.085	6.01	100.0	2.7	0.60	2.7	0.08	0.65	3.88	0.91	31	
41 A	12.21	12.20	33.474	25.368	260.9	0.112	5.57	91.5	5.3	0.78	5.4	0.12	1.00	3.04	1.30	41	
48 A	11.95	11.95	33.506	25.441	254.2	0.130	4.83	79.0	10.0	1.06	9.5	0.16	1.05	1.58	1.01	48	
50 ISL	11.86	11.85	33.519 D	25.468	251.7	0.136	4.78	78.0	10.8	1.12	10.4	0.17	0.99	1.57	1.00	50	
58	11.31	11.30	33.547	25.592	240.0	0.155	4.21	68.0	14.0	1.34	14.0	0.22	0.74	1.54	0.98	58	
70	10.65	10.64	33.607	25.756	224.6	0.183	3.26	51.8	19.0	1.65	20.2	0.07	0.03	1.44	0.80	71	
75 ISL	10.51	10.50	33.666 D	25.827	218.0	0.195	3.15	50.0	21.4	1.74	21.5	0.06	0.02	1.09	0.70	76	
85	10.06	10.05	33.763	25.981	203.6	0.215	2.67	42.0	26.2	1.91	24.0	0.04	0.00	0.38	0.52	86	
100	9.79	9.77	33.876	26.114	191.2	0.245	2.34	36.6	29.3	2.10	26.1	0.02	0.00	0.19	0.29	101	
119	9.66	9.65	33.939	26.185	184.9	0.280	2.19	34.2	30.7	2.12	26.9	0.02	0.00	0.15	0.37	120	
125 ISL	9.52	9.50	33.941 D	26.211	182.5	0.293	2.18	33.8	31.3	2.13	27.2	0.02	0.00	0.14	0.33	126	
140	9.37	9.36	33.968	26.255	178.6	0.318	2.10	32.6	32.9	2.17	28.0	0.02	0.00	0.12	0.25	141	
150 ISL	9.33	9.31	33.970 D	26.265	177.9	0.338	2.07	32.0						0.10	0.23	151	
170	9.14	9.12	34.034	26.345	170.7	0.371	1.89	29.2						0.07	0.18	171	
200 ISL	8.92	8.90	34.085 D	26.421	164.1	0.424	1.65	25.4						0.05	0.15	202	
201	8.94	8.92	34.087	26.420	164.2	0.423	1.70	26.1	38.4	2.34	30.1	0.01	0.00	0.05	0.15	203	
229	8.68	8.65	34.128	26.494	157.6	0.468	1.28	19.6	45.3	2.48	31.4	0.01	0.00		231	09	
250 ISL	8.49	8.46	34.150 D	26.541	153.6	0.504	0.97	14.8	48.6	2.60	32.5	0.01	0.00		252		
270	8.35	8.32	34.189	26.593	149.0	0.531	0.79	12.0	51.7	2.72	33.6	0.01	0.00		272	08	
300 ISL	8.13	8.10	34.192 D	26.630	145.9	0.580	0.59	8.9	52.5	2.70	34.3	0.00	0.00		302		
319	7.77	7.74	34.158	26.655	143.6	0.603	1.01	15.2	53.0	2.68	34.7	0.00	0.00		322	07	
375	7.28	7.24	34.213	26.771	133.3	0.680	0.31	4.6	70.9	3.08	34.8	0.00	0.00		378	06	
400 ISL	7.04	7.00	34.224 D	26.814	129.5	0.719	0.19	2.8	76.6	3.18	34.1	0.00	0.00		403		
440	6.72	6.68	34.231	26.862	125.3	0.764	0.14	2.0	85.7	3.35	33.0	0.00	0.00		444	05	
480	6.55	6.50	34.242	26.895	122.7	0.814	0.07	1.0	96.4	3.54	29.5	0.00	0.00		484	04	
500 ISL	6.51	6.47	34.245 D	26.902	122.2	0.845	0.06	0.8	100.7	3.65	27.3	0.00	0.00		504		
515	6.50	6.46	34.256	26.912	121.5	0.856	0.02	0.4	103.9	3.74	25.7	0.00	0.00		519	03	
566	6.49	6.43	34.250	26.911	122.5	0.919	0.04	0.6	125.3	4.42	3.8	6.82	0.00		571		
570	6.49	6.43	34.250	26.911	122.5	0.924	0.04	0.6	125.1	4.42	3.7	6.82	0.00		575	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 CRUISE-CORRECTED O2;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAE0	PRES	SAMP
m	DEG C	DEG C			m	17 m	160	04 kn	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
34 15.4 N	119 19.4 W	08/02/2012	1829	UTC	295.0	0.000	6.10	103.5	1.0	0.45	0.0	0.05	0.51	0.78	0.24	0	
0	13.74	13.74	33.392	24.998	295.0	0.000	6.10	103.5	1.0	0.45	0.0	0.05	0.51	0.78	0.24	0	
2	13.74	13.74	33.392	24.998	295.0	0.006	6.10	103.5	1.0	0.45	0.0	0.05	0.51	0.78	0.24	2	
4	13.75	13.75	33.391	24.995	295.3	0.012	6.11	103.6	1.0	0.44	0.1	0.05	0.48	0.77	0.29	4	
9	13.76	13.76	33.395	24.997	295.3	0.027										9	
10	13.76	13.76	33.392	24.996	295.5	0.030	6.08	103.1	0.9	0.45	0.1	0.05	0.61	0.84	0.26	10	

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

RV NEW HORIZON

CALCOFI CRUISE 1202

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		
DEPTH	TEMP	POT TEMP	DEG C	DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/l	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	deg C																		
0	14.21	14.21			33.387	24.897	304.6	0.000	5.91	101.3	2.2	0.42	0.2	0.02	0.10	0.70	0.20	0	
1	14.21	14.21			33.387	24.897	304.6	0.003	5.91	101.3	2.2	0.42	0.2	0.02	0.10	0.70	0.20	1 06	
5	14.22	14.22			33.386	24.896	304.8	0.015	5.92	101.4	2.3	0.38	0.1	0.02	0.02	0.74	0.14	5 05	
9	14.21	14.21			33.387	24.898	304.8	0.027										9 04	
10	14.21	14.20			33.386	24.899	304.8	0.030	5.93	101.6	2.1	0.38	0.2	0.02	0.07	0.73	0.23	10 03	
20	14.10	14.09			33.393	24.927	302.3	0.061	5.96	101.9	1.8	0.37	0.1	0.02	0.11	1.15	0.38	20 02	
25	14.10	14.09			33.393	24.928	302.5	0.076	5.97	102.0	1.8	0.39	0.2	0.02	0.00	1.11	0.33	25 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 1202

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	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN m/l	OXY PCT	SIO3 uM/L	PO4 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAE0 ug/l	PRES db	SAMP	
m	DEG C	DEG C																
0	14.16	14.16	33.384	24.905	303.8	0.000	6.04	103.3	2.8	0.39	0.2	0.02	0.10	1.12	0.02	0		
2	14.16	14.16	33.384	24.905	303.8	0.006	6.04	103.3	2.8	0.39	0.2	0.02	0.10	1.12	0.02	2	11	
10	14.16	14.16	33.383	24.905	304.2	0.030										10	10	
10	14.16	14.16	33.383	24.905	304.2	0.030	6.01	102.8	2.7	0.41	0.2	0.02	0.10	0.85	0.15	10	09	
20	14.13	14.12	33.382	24.913	303.7	0.061	5.96	102.0	2.9	0.40	0.4	0.03	0.09	0.93	0.40	20	08	
30	13.18	13.18	33.369	D	25.095	286.7	0.091	5.06	84.8	6.4	0.80	6.0	0.26	0.05	0.82	0.31	30	07
41	12.33	12.33	33.369	25.262	271.0	0.121	4.54	74.8	9.2	1.05	10.3	0.17	0.07	0.61	0.32	41	06	
50	11.60	11.59	33.388	25.415	256.6	0.145	4.10	66.5	12.3	1.27	14.1	0.05	0.00	0.33	0.19	50	05	
60	10.92	10.91	33.472	25.603	238.9	0.170	3.69	59.0	16.0	1.50	17.5	0.03	0.00	0.14	0.16	60	04	
70	10.67	10.66	33.554	25.712	228.8	0.193	3.36	53.4	19.2	1.66	19.8	0.02	0.00	0.08	0.14	71	03	
75	ISL	10.45	10.47	33.627	D	25.802	220.3	0.205	3.11	49.3	20.5	1.72	20.7	0.02	0.00	0.06	0.12	76
85		10.28	10.27	33.674	25.874	213.8	0.226	2.94	46.4	23.2	1.85	22.6	0.01	0.00	0.03	0.09	86	02
100		10.02	10.01	33.761	25.985	203.5	0.257	2.73	42.9	25.8	1.97	24.3	0.02	0.00	0.03	0.11	101	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 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SV	DYN HT	OXYGEN	OXY PCT	S103 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C			100 m	090	13 kn	090 07 06	6	1010.8 mb	13.8 C	12.7 C					
0	13.31	13.31	33.361	25.062	289.0	0.000	6.35	106.7	0.5	0.32	0.1	0.01	0.05	4.60	0.64	0	
2	13.31	13.31	33.361	25.062	289.0	0.006	6.35	106.7	0.5	0.32	0.1	0.01	0.05	4.60	0.64	2	
10	13.10	13.10	33.369	25.110	284.6	0.029	6.26	104.9	0.9	0.35	0.5	0.02	0.06	3.52	1.79	10	
10	13.10	13.10	33.371	25.112	284.4	0.029										10	
20	12.74	12.74	33.420	25.222	274.2	0.057	5.57	92.6	5.1	0.64	4.5	0.09	0.32	3.30	0.22	20	
30	12.10	12.09	33.464	25.380	259.4	0.083	4.74	77.8	10.3	1.01	9.9	0.13	0.38	1.73	0.58	30	
40	11.52	11.52	33.539	25.545	244.0	0.109	4.37	70.9	13.6	1.19	12.4	0.12	0.42	1.42	0.61	40	
49	10.12	10.12	33.739	25.949	205.7	0.129	2.88	45.3	25.2	1.83	23.0	0.09	0.06	0.24	0.34	49	
50	ISL	10.10	D 10.08	33.746 D	25.960	204.7	0.132	2.87 D 45.2	25.6	1.85	23.3	0.09	0.05	0.23	0.33	50	
60	9.68	9.67	33.858	26.117	190.0	0.151	2.48	38.7	29.1	2.02	25.8	0.05	0.00	0.11	0.20	60	
70	9.60	9.59	33.870	26.140	188.0	0.170	2.45	38.2	29.9	2.03	26.1	0.06	0.00	0.12	0.20	71	
75	ISL	9.55	D 9.53	33.886 D	26.162	186.1	0.180	2.43 D 37.8	30.3	2.05	26.4	0.06	0.00	0.10	0.19	76	
80	9.52	9.51	33.893	26.171	185.3	0.188	2.38	37.1	30.7	2.06	26.6	0.05	0.00	0.07	0.18	81	
89	9.50	9.49	33.895	26.176	185.0	0.205	2.38	37.0	30.7	2.06	26.7	0.05	0.00	0.07	0.16	90	
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D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SV	DYN HT	OXYGEN	OXY PCT	S103 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C			1010 m	080	28 kn	080 08 06	6	1008.0 mb	13.6 C	12.6 C					
0	13.56	13.56	33.386	25.031	291.9	0.000	6.02	101.8	3.8	0.42	1.1	0.05	0.13	0.90	0.23	0	
2	13.56	13.56	33.386	25.031	291.9	0.006	6.02	101.8	3.8	0.42	1.1	0.05	0.13	0.90	0.23	2	
10	13.56	13.56	33.389	25.034	291.9	0.028										10	
10	13.56	13.56	33.391	25.036	291.7	0.029	6.02	101.7	3.8	0.41	1.1	0.05	0.11	0.92	0.22	10	
20	ISL	13.55	D 13.54	33.401 D	25.046	291.0	0.059	5.99 D 101.3	3.6	0.40	1.1	0.05	0.13	0.93	0.25	20	
21	13.55	13.55	33.395	25.041	291.5	0.061	6.02	101.7	3.6	0.40	1.1	0.05	0.13	0.93	0.25	18	
29	13.08	13.08	33.443	25.173	279.1	0.084	5.54	92.7	5.5	0.62	4.2	0.18	0.35	0.45	0.22	29	
30	ISL	13.26	D 13.19	33.443 D	25.151	281.3	0.087	5.31 D 89.1	6.0	0.66	4.9	0.18	0.32	0.43	0.21	30	
40	11.47	11.47	33.493	25.519	246.5	0.113	4.52	73.1	11.3	1.08	12.2	0.15	0.00	0.25	0.16	40	
50	10.96	10.95	33.547	25.655	233.8	0.137	3.90	62.5	15.9	1.40	17.3	0.05	0.00	0.15	0.11	50	
60	10.39	10.38	33.630	25.819	218.3	0.160	3.34	52.8	20.5	1.65	21.4	0.02	0.00	0.07	0.08	60	
70	10.00	9.99	33.709	25.947	206.4	0.181	2.95	46.3	24.1	1.83	24.2	0.02	0.00	0.04	0.07	71	
75	ISL	9.79	D 9.79	33.731 D	25.999	201.6	0.193	2.89 D 45.1	25.0	1.87	24.8	0.02	0.00	0.03	0.07	76	
85	9.46	9.45	33.780	26.092	192.8	0.211	2.73	42.4	26.9	2.60	0.01	0.00	0.02	0.06	86		
100	ISL	9.12	D 9.11	33.887 D	26.231	179.9	0.240	2.59 D 39.9	30.0	2.02	27.3	0.01	0.00	0.01	0.05	101	
101	9.12	9.11	33.879	26.225	180.5	0.241	2.60	40.0	30.2	2.02	27.4	0.01	0.00	0.01	0.05	102	
122	8.92	8.90	33.961	26.322	171.7	0.278	2.51	38.6	32.8	2.09	28.2	0.00	0.00	0.01	0.04	123	
125	ISL	8.87	D 8.85	33.964 D	26.332	170.8	0.285	2.50 D 38.4	33.2	2.11	28.4	0.00	0.00	0.01	0.04	126	
140	8.79	8.78	34.005	26.377	166.9	0.308	2.28	34.8	34.9	2.18	29.2	0.00	0.00	0.00	0.04	141	
150	ISL	8.74	D 8.72	34.013 D	26.392	165.7	0.327	2.24 D 34.2	36.2	2.23	29.6	0.00	0.00	0.00	0.04	151	
169	8.59	8.58	34.056	26.448	160.7	0.356	1.91	29.2	38.8	2.32	30.5	0.00	0.00	0.00	0.04	170	
200	ISL	8.29	D 8.27	34.152 D	26.570	149.6	0.407	1.34 D 20.3	44.6	2.51	32.8	0.00	0.00	0.00	0.03	202	
201	8.29	8.27	34.148	26.568	149.9	0.406	1.35	20.4	44.8	2.52	32.9	0.00	0.00	0.00	0.03	203	
229	8.13	8.11	34.161	26.602	147.1	0.447	1.27	19.2	46.7	2.57	33.5	0.00	0.00		231		
250	ISL	7.95	D 7.92	34.169 D	26.637	144.2	0.481	1.21 D 18.1	49.0	2.62	34.1	0.00	0.00		252		
272	7.79	7.76	34.184	26.672	141.1	0.509	1.06	15.9	51.4	2.67	34.8	0.00	0.00		274		
300	ISL	7.50	D 7.47	34.166 D	26.700	138.8	0.552	1.08 D 16.0	53.9	2.68	35.7	0.00	0.00		302		
314	7.30	7.27	34.148	26.714	137.6	0.568	1.11	16.4	55.1	2.69	36.1	0.00	0.00		317		
381	7.09	7.06	34.247	26.823	128.4	0.657	0.59	8.7	62.6	2.90	37.7	0.00	0.00		384		
400	ISL	6.99	D 6.96	34.251 D	26.840	127.0	0.686	0.56 D 8.2	64.9	2.99	38.2	0.00	0.00		403		
444	6.64	6.60	34.265	26.900	121.7	0.736	0.44	6.5	70.2	3.19	39.2	0.00	0.00		448		
500	ISL	6.22	D 6.18	34.290 D	26.975	115.0	0.808	0.35 D 5.1	75.7	3.21	40.3	0.00	0.00		504		
525	6.15	6.10	34.297	26.991	113.8	0.831	0.31	4.5	78.1	3.22	40.8	0.00	0.00		529		
															01		

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SV	DYN HT	OXYGEN	OXY PCT	S103 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEAO ug/l	PRES db	SAMP
m	DEG C	DEG C			1334 m	120	27 kn	130 08 05	2	1007.4 mb	13.4 C	12.9 C					
0	12.66	12.66	33.413	25.231	272.8	0.000	6.18	102.6	3.2	0.61	3.3	0.12	0.64	0.71	0.50	0	
1 A	12.66	12.66	33.413	25.231	272.8	0.003	6.18	102.6	3.								

RV NEW HORIZON

CALCOFI CRUISE 1202

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 14.7 N	121 26.1 W	07/02/2012	2027	UTC	3802 m	140	22 kn			1006.0 mb	13.1 C	13.1 C					051
0	12.85	12.85	33.266	25.081	287.2	0.000	6.21	103.4	2.6	0.48	1.6	0.10	0.34	0.62	0.17	0	
2	12.85	12.85	33.266	25.081	287.2	0.006	6.21	103.4	2.6	0.48	1.6	0.10	0.34	0.62	0.17	2	21
10	12.85	12.85	33.285	25.094	286.1	0.029	6.19	103.1	2.5	0.48	1.6	0.10	0.34	0.62	0.19	10	19
20	12.65	12.65	33.368	25.199	276.4	0.057	6.14	101.8	2.8	0.57	2.5	0.13	0.67	0.79	0.29	20	18
30	12.66	12.66	33.417	25.235	273.3	0.084	6.10	101.2	3.3	0.62	2.9	0.14	1.13	0.41	0.31	30	17
40	12.31	12.31	33.411	25.298	267.5	0.111	6.03	99.3	3.7	0.65	3.2	0.15	1.14	0.43	0.39	40	16
50	ISL 11.44 D	11.39	33.286 D	25.373	260.6	0.139	5.14 D	83.0	7.7	0.91	8.7	0.12	0.43	0.30	0.48	50	
51	11.31	11.31	33.285	25.387	259.3	0.140	5.14	82.8	8.1	0.94	9.2	0.12	0.36	0.28	0.49	51	15
60	10.73	10.73	33.258	25.469	251.6	0.163	4.89	77.7	10.4	1.07	11.9	0.06	0.00	0.25	0.56	60	14
70	10.29	10.28	33.369	25.632	236.3	0.188	4.31	67.9	14.5	1.37	16.7	0.03	0.00	0.18	0.41	71	13
75	ISL 10.12 D	10.10	33.402 D	25.690	230.9	0.201	4.24 D	66.5	15.9	1.44	18.0	0.03	0.00	0.17	0.44	76	
86	9.86	9.85	33.498	25.806	220.1	0.224	3.78	59.0	18.9	1.60	20.8	0.03	0.00	0.16	0.51	87	12
100	9.50	9.49	33.688	26.014	200.6	0.254	3.22	50.0	24.5	1.83	24.3	0.03	0.00	0.14	0.38	101	11
120	9.28	9.26	33.860	26.186	184.7	0.292	2.81	43.4	28.5	1.97	26.2	0.02	0.00	0.09	0.34	121	10
125	ISL 9.24 D	9.22	33.868 D	26.199	183.6	0.303	2.80 D	43.2	29.3	2.00	26.7	0.02	0.00	0.09	0.37	126	
140	9.01	8.99	33.931	26.285	175.7	0.328	2.47	38.0	31.8	2.08	28.0	0.01	0.00	0.08	0.47	141	09
150	ISL 8.92 D	8.90	33.972 D	26.331	171.5	0.348	2.43 D	37.3	33.3	2.13	28.6	0.01	0.00	0.07	0.38	151	
171	8.68	8.66	34.020	26.407	164.7	0.381	2.15	32.8	36.4	2.22	29.8	0.01	0.00	0.04	0.21	172	08
200	ISL 8.36 D	8.34	34.080 D	26.503	156.0	0.430	1.85 D	28.0	40.6	2.35	31.3	0.01	0.00	0.04	0.16	202	
201	8.36	8.34	34.077	26.502	156.2	0.429	1.85	28.0	40.7	2.35	31.4	0.01	0.00	0.04	0.16	203	07
230	8.08	8.05	34.102	26.564	150.7	0.474	1.68	25.2	44.1	2.43	32.6	0.01	0.00		232	06	
250	ISL 7.85 D	7.83	34.123 D	26.614	146.2	0.507	1.50 D	22.5	47.3	2.51	33.6	0.01	0.00		252		
271	7.65	7.62	34.140	26.658	142.4	0.534	1.29	19.3	50.6	2.60	34.6	0.01	0.00		273	05	
300	ISL 7.44 D	7.41	34.158 D	26.703	138.5	0.578	1.12 D	16.7	54.5	2.70	35.8	0.00	0.00		302		
320	7.23	7.20	34.172	26.743	135.0	0.602	0.96	14.2	57.1	2.77	36.7	0.00	0.00		323	04	
380	6.61	6.58	34.205	26.855	124.8	0.680	0.65	9.5	67.2	2.95	39.1	0.00	0.00		383	03	
400	ISL 6.56 D	6.52	34.242 D	26.891	121.7	0.709	0.54 D	7.8	68.7	2.99	39.3	0.00	0.00		403		
440	6.46	6.42	34.269	26.926	119.0	0.752	0.42	6.1	71.8	3.06	39.7	0.00	0.00		444	02	
500	ISL 5.98 D	5.93	34.289 D	27.005	111.9	0.828	0.33 D	4.7	79.4	3.14	41.1	0.00	0.00		504		
512	5.94	5.90	34.291	27.010	111.5	0.835	0.31	4.4	80.9	3.16	41.4	0.00	0.00		516	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 7.7 W	07/02/2012	1441	UTC	4166 m	150	30 kn			1007.5 mb	14.0 C	13.1 C					050
0	14.23	14.23	33.291	24.818	312.1	0.000	5.93	101.6	2.4	0.32	0.1	0.00	0.00	0.27	0.08	0	
2	14.23	14.23	33.291	24.818	312.1	0.006	5.93	101.6	2.4	0.32	0.1	0.00	0.00	0.27	0.08	2	21
10	14.22	14.22	33.292	24.822	312.0	0.031	5.92	101.4	2.3	0.31	0.0	0.01	0.00	0.27	0.07	10	20
20	14.13	14.13	33.288	24.839	310.7	0.062	5.94	101.5	2.4	0.31	0.0	0.01	0.00	0.31	0.06	20	18
30	13.50	13.49	33.239	24.931	302.2	0.093	6.03	101.6	2.9	0.34	0.3	0.04	0.00	0.36	0.11	30	17
40	13.39	13.39	33.228	24.945	301.3	0.123	6.01	101.2	2.9	0.36	0.5	0.07	0.06	0.36	0.14	40	16
50	13.07	13.06	33.224	25.007	295.5	0.153	5.97	99.8	3.2	0.37	0.8	0.10	0.13	0.34	0.12	50	15
61	12.03	12.02	33.174	25.169	280.4	0.185	5.64	92.2	5.0	0.62	4.7	0.17	0.02	0.21	0.15	61	14
70	11.26	11.25	33.237	25.361	262.3	0.209	5.16	82.9	7.3	0.83	8.5	0.02	0.00	0.12	0.10	71	13
75	ISL 11.09 D	11.06	33.254 D	25.407	257.9	0.224	5.04 D	80.7	8.3	0.90	9.7	0.02	0.00	0.11	0.09	76	
85	10.60	10.59	33.296	25.523	247.1	0.247	4.79	76.0	10.3	1.05	12.0	0.01	0.00	0.08	0.08	86	12
100	9.98	9.97	33.453	25.751	225.7	0.283	4.11	64.4	16.7	1.42	18.4	0.01	0.00	0.04	0.05	101	11
122	9.30	9.28	33.673	26.036	198.9	0.330	3.55	54.9	23.1	1.70	23.1	0.00	0.00	0.01	0.05	123	10
125	ISL 9.28 D	9.26	33.726 D	26.081	194.7	0.337	3.38 D	52.2	23.8	1.73	23.5	0.00	0.00	0.01	0.04	126	
140	9.08	9.07	33.813	26.181	185.5	0.364	3.15	48.5	27.2	1.85	25.4	0.00	0.00	0.00	0.03	141	09
150	ISL 8.82 D	8.80	33.915 D	26.302	174.2	0.384	2.51 D	38.4	29.8	1.95	26.8	0.00	0.00	0.00	0.03	151	
170	8.66	8.64	33.972	26.373	167.8	0.416	2.29	34.9	34.9	2.15	29.6	0.00	0.00	0.00	0.04	171	08
200	8.27	8.25	34.027	26.476	158.6	0.465	2.05	31.0	38.9	2.28	31.1	0.00	0.00	0.00	0.04	202	07
231	7.74	7.72	34.073	26.591	148.0	0.513	1.74	25.9	46.0	2.43	33.3	0.00	0.00		233	06	
250	ISL 7.63 D	7.61	34.091 D	26.621	145.4	0.543	1.58 D	23.6	48.3	2.51	33.7	0.00	0.00		252		
270	7.87	7.84	34.182	26.659	142.4	0.569	1.00	15.0	50.7	2.60	34.1	0.00	0.00		272	05	
300	ISL 7.55 D	7.52	34.189 D	26.711	137.9	0.614	0.90 D	13.5	54.2	2.71	35.5	0.00	0.00		302		
321	7.37	7.34	34.194	26.742	135.2	0.640	0.81	12.1	56.7	2.79	36.5	0.00	0.00		324	04	
381	6.63	6.59	34.203	26.851	125.2	0.718	0.62	9.0	67.1	2.94	39.0	0.00	0.00		384	03	
400	ISL 6.56 D	6.52	34.226 D	26.879	122.9	0.746	0.54 D	7.9	69.3	2.97	39.4	0.00	0.00		403		
440	6.18	6.14	34.222	26.925	118.7	0.790	0.49	7.0	73.8	3.04	40.2	0.00	0.00		444	02	
500	ISL 5.67 D	5.63	34.236 D	27.001	111.9	0.864	0.39 D	5.6	81.2	3.13	41.6	0.00	0.00		504		
516	5.66	5.61	34.257	27.019	110.4	0.877	0.35	4.9	83.2	3.15	42.0	0.00	0.00		520	01	

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

RV NEW HORIZON

CALCOFI CRUISE 1202

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
			0741	UTC	4272 m	150	20 kn	140 04 06	2	1009.4 mb	14.7 C	13.2 C	10 m	8/8	SC	049	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	13.39	13.39	33.241	24.953	299.3	0.000	6.09	102.4	3.3	0.38	0.6	0.06	0.00	0.48	0.10	0	
2	13.39	13.39	33.241	24.953	299.3	0.006	6.09	102.4	3.3	0.38	0.6	0.06	0.00	0.48	0.10	2	21
10	13.39	13.39	33.235	24.949	299.9	0.030										10	20
10	13.39	13.39	33.238	24.952	299.6	0.030	6.08	102.3	3.3	0.37	0.6	0.06	0.00	0.50	0.10	10	19
20	13.38	13.38	33.238	24.953	299.8	0.060	6.09	102.4	3.3	0.37	0.6	0.06	0.00	0.51	0.10	20	18
30	13.36	13.36	33.238	24.958	299.7	0.090	6.08	102.3	3.3	0.37	0.7	0.06	0.00	0.54	0.12	30	17
40	13.29	13.28	33.236	24.972	298.6	0.120	6.04	101.5	3.2	0.38	0.7	0.08	0.04	0.50	0.13	40	16
50	13.26	13.25	33.236	24.979	298.3	0.150	6.01	100.8	3.3	0.39	0.9	0.10	0.10	0.36	0.13	50	15
60	13.00	12.99	33.226	25.023	294.4	0.179	5.86	97.7	3.8	0.47	2.0	0.19	0.12	0.26	0.12	60	14
70	11.25	11.24	33.240	25.364	261.9	0.207	5.01	80.6	8.3	0.95	10.2	0.02	0.00	0.18	0.15	71	13
75 ISL	10.79	D 10.77	33.308	D 25.501	249.0	0.221	4.66	D 74.2	10.5	1.09	12.5	0.02	0.00	0.14	0.12	76	
86	10.12	10.11	33.412	25.696	230.6	0.246	4.20	66.0	15.4	1.39	17.6	0.01	0.00	0.06	0.07	87	12
100	9.37	9.35	33.642	26.000	201.9	0.277	3.61	55.8	22.5	1.68	22.7	0.00	0.00	0.02	0.04	101	11
120	8.99	8.98	33.801	26.185	184.7	0.315	3.05	46.8	28.0	1.90	26.2	0.00	0.00	0.01	0.03	121	10
125 ISL	8.87	D 8.85	33.856	D 26.249	178.7	0.326	2.97	D 45.4	29.1	1.94	26.7	0.00	0.00	0.01	0.03	126	
141	8.66	8.65	33.934	26.342	170.2	0.352	2.64	40.3	32.7	2.05	28.3	0.00	0.00	0.00	0.03	142	9
150 ISL	8.54	D 8.51	33.984	D 26.401	164.7	0.370	2.30	D 34.9	34.2	2.09	28.9	0.00	0.00	0.00	0.03	151	
170	8.33	8.31	34.006	26.450	160.4	0.400	2.29	34.7	37.5	2.19	30.3	0.00	0.00	0.00	0.03	171	8
200	8.08	8.06	34.076	26.543	152.1	0.447	1.74	26.2	42.9	2.39	32.5	0.00	0.00	0.00	0.02	202	7
231	7.76	7.74	34.104	26.612	146.0	0.493	1.47	22.1	48.5	2.51	34.2	0.00	0.00			233	6
250 ISL	7.76	D 7.74	34.136	D 26.638	144.0	0.524	1.25	D 18.8	49.0	2.53	34.2	0.00	0.00			252	
270	7.47	7.45	34.116	26.664	141.7	0.549	1.41	21.0	49.6	2.55	34.2	0.00	0.00			272	5
300 ISL	7.58	D 7.55	34.200	D 26.715	137.5	0.595	0.85	D 12.7	54.3	2.70	35.6	0.00	0.00			302	
319	7.43	7.40	34.210	26.746	134.8	0.617	0.76	11.3	57.2	2.80	36.5	0.00	0.00			322	4
382	6.77	6.73	34.217	26.843	126.1	0.699	0.62	9.0	65.9	2.93	38.6	0.00	0.00			385	3
400 ISL	6.47	D 6.43	34.213	D 26.880	122.7	0.727	0.57	D 8.3	68.7	2.96	39.1	0.00	0.00			403	
442	6.18	6.14	34.236	26.936	117.8	0.772	0.44	6.4	75.2	3.04	40.4	0.00	0.00			446	2
500 ISL	5.76	D 5.71	34.247	D 26.999	112.2	0.845	0.37	D 5.3	82.4	3.13	41.7	0.00	0.00			504	
515	5.66	5.62	34.254	27.016	110.7	0.855	0.34	4.8	84.2	3.15	42.0	0.00	0.00			519	1

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

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
			0129	UTC	4205 m	150	19 kn	240 02 04	2	1011.6 mb	15.5 C	14.0 C	21 m	8/8	SC	048	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.91	14.91	33.336	24.709	322.5	0.000	5.82	101.1	2.1	0.30	0.0	0.00	0.00	0.15	0.04	0	
2 A	14.91	14.91	33.336	24.709	322.5	0.007	5.82	101.1	2.1	0.30	0.0	0.00	0.00	0.15	0.04	2	23
10	14.91	14.91	33.337	24.710	322.7	0.032										10	22
10 ISL	14.91	D 14.91	33.338	D 24.711	322.6	0.033	5.82	D 101.2	2.0	0.29	0.0	0.00	0.00	0.15	0.05	10	
15 A	14.92	14.91	33.336	24.709	322.9	0.048	5.86	101.8	2.0	0.29	0.0	0.00	0.00	0.15	0.05	15	21
20 A	14.92	14.91	33.336	24.709	323.1	0.065	5.82	101.1	2.0	0.29	0.0	0.00	0.00	0.15	0.04	20	20
29	14.92	14.91	33.335	24.708	323.5	0.094	5.82	101.1	2.0	0.28	0.0	0.00	0.00	0.15	0.05	29	19
30 ISL	14.92	D 14.91	33.338	D 24.712	323.2	0.097	5.82	D 101.1	2.0	0.28	0.0	0.00	0.00	0.15	0.05	30	
37 A	14.91	14.90	33.336	24.712	323.4	0.120	5.82	101.1	2.0	0.29	0.0	0.00	0.00	0.16	0.04	37	18
50	14.89	14.88	33.334	24.716	323.5	0.162	5.82	101.0	2.0	0.29	0.0	0.00	0.00	0.22	0.06	50	17
61	14.49	14.48	33.317	24.789	316.8	0.197	5.83	100.4	2.1	0.29	0.0	0.01	0.00	0.29	0.11	61	16
72 A	13.54	13.53	33.239	24.925	304.1	0.231	5.69	96.1	3.1	0.43	1.5	0.19	0.00	0.32	0.16	73	15
75 ISL	13.23	D 13.19	33.234	D 24.990	297.9	0.241	5.67	D 95.0	3.4	0.47	2.1	0.18	0.00	0.30	0.16	76	
81 A	12.88	12.87	33.242	25.060	291.4	0.258	5.50	91.6	4.1	0.54	3.4	0.17	0.00	0.26B	0.16B	82	14
88	12.39	12.38	33.272	25.178	280.3	0.278	5.21	85.8	5.6	0.71	6.3	0.06	0.00	0.19	0.15	89	13
96	11.83	11.82	33.301	25.307	268.2	0.300	4.84	78.8	8.0	0.92	9.9	0.04	0.00	0.12	0.14	97	
100 ISL	11.61	D 11.59	33.320	D 25.364	262.8	0.312	4.77	D 77.3	9.0	0.97	10.8	0.03	0.00	0.11	0.12	101	
110	10.95	10.94	33.371	25.521	248.0	0.336	4.55	72.7	11.4	1.10	13.2	0.01	0.00	0.08	0.07	111	11
125	10.40	10.38	33.445	25.676	233.5	0.372	4.31	68.1	14.6	1.28	16.2	0.00	0.00	0.04	0.05	126	10
140	10.03	10.01	33.577	25.842	218.0	0.406	3.70	58.0	19.2	1.56	20.4	0.00	0.00	0.02	0.04	141	9
150 ISL	9.81	D 9.79	33.676	D 25.957	207.2	0.429	3.41	D 53.2	21.3	1.65	21.8	0.00	0.00	0.01	0.04	151	
172	9.45	9.43	33.807	26.118	192.3	0.471	2.99	46.4	25.9	1.84	24.8	0.00	0.00	0.00	0.03	173	8
200 ISL	8.97	D 8.95	33.959	D 26.315	174.2	0.525	2.63	D 40.4	31.3	2.00	27.4	0.00	0.00	0.00	0.03	202	
203	8.94	8.92	33.964	26.324	173.3	0.527	2.60	39.9	31.9	2.02	27.7	0.00	0.00	0.00	0.03	205	7
232	8.42	8.39	34.025	26.453	161.4	0.576	2.36	35.8	36.3	2.13	29.5						

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD	
31 54.8 N	124 10.0 W	06/02/2012	1934	UTC	4212 m	160	16 kn			1011.3 mb	15.1 C	13.0 C					047	
0	14.96	14.96	33.305	24.675	325.8	0.000	5.81	101.0	2.1	0.28	0.0	0.00	0.00	0.19	0.06	0		
2	14.96	14.96	33.305	24.675	325.8	0.007	5.81	101.0	2.1	0.28	0.0	0.00	0.00	0.19	0.06	2	21	
10	14.96	14.96	33.306	24.676	326.0	0.031										10	20	
10	14.96	14.96	33.310	24.679	325.7	0.033	5.81	101.0	2.0	0.28	0.0	0.00	0.00	0.19	0.06	10	19	
20	ISL	14.97	14.97	33.307	D 24.676	326.3	0.066	5.82	D 101.1	2.0	0.28	0.0	0.00	0.20	0.06	20		
25	14.97	14.97	33.314	24.681	326.0	0.082	5.83	101.4	2.0	0.28	0.0	0.00	0.00	0.20	0.07	25	18	
30	ISL	14.97	14.97	33.308	D 24.676	326.6	0.098	5.81	D 101.0	2.0	0.28	0.0	0.00	0.20	0.06	30		
40	14.97	14.97	33.306	24.676	327.0	0.131	5.83	101.3	2.0	0.28	0.0	0.00	0.00	0.19	0.06	40	17	
50	ISL	14.97	14.97	33.307	D 24.677	327.2	0.164	5.80	D 100.9	2.0	0.28	0.0	0.00	0.00	0.22	0.06	50	
51	14.98	14.97	33.305	24.675	327.4	0.167	5.82	101.1	2.0	0.28	0.0	0.00	0.00	0.22	0.06	51	16	
62	14.97	14.96	33.304	24.676	327.7	0.203	5.82	101.3	2.0	0.27	0.0	0.00	0.00	0.25	0.09	62	15	
75	14.45	14.44	33.289	24.776	318.5	0.245	5.80	99.7	2.1	0.29	0.0	0.00	0.00	0.37	0.18	76	14	
87	12.85	12.84	33.185	25.022	295.2	0.281	5.76	95.8	3.0	0.42	1.0	0.55	0.00	0.35	0.30	88	13	
100	11.77	11.76	33.188	25.230	275.6	0.318	5.48	89.0	4.9	0.60	4.8	0.04	0.00	0.14	0.13	101	12	
112	11.30	11.29	33.257	25.370	262.5	0.351	5.10	82.1	7.3	0.80	8.4	0.03	0.00	0.10	0.09	113	11	
124	10.30	10.28	33.401	25.658	235.1	0.381	4.58	72.1	12.8	1.13	14.7	0.00	0.00	0.04	0.05	125	10	
125	ISL	10.27	D 10.24	33.392	D 25.658	235.1	0.386	4.82	D 75.9	12.9	1.13	14.8	0.00	0.00	0.04	0.05	126	
140	9.81	9.80	33.541	25.850	217.2	0.417	4.58	71.5	15.1	1.18	16.2	0.00	0.00	0.01	0.03	141	09	
150	ISL	9.57	D 9.55	33.675	D 25.995	203.6	0.441	4.41	D 68.5	18.3	1.33	18.5	0.00	0.00	0.02	0.03	151	
170	9.08	9.06	33.803	D 26.174	186.8	0.477										171	08	
200	8.71	8.69	33.968	26.363	169.5	0.530	2.35	35.8	34.3	2.06	29.8	0.00	0.00	0.00	0.03	202	07	
231	8.25	8.23	34.021	26.475	159.3	0.581	2.17	32.7	38.8	2.15	31.5	0.00	0.00			233	06	
250	ISL	7.89	D 7.85	34.038	D 26.544	152.9	0.615	2.06	D 30.9	41.5	2.18	32.2	0.00	0.00			252	
271	7.69	7.66	34.036	26.571	150.6	0.643	2.05	30.5	44.5	2.22	32.9	0.00	0.00			273	05	
300	ISL	7.46	D 7.43	34.069	D 26.629	145.5	0.690	1.71	D 25.5	49.1	2.36	34.7	0.00	0.00			302	
320	7.26	7.23	34.081	26.667	142.1	0.715	1.47	21.7	52.2	2.46	36.0	0.00	0.00			323	04	
380	6.88	6.84	34.146	26.773	132.8	0.797	0.95	13.9	61.3	2.68	38.5	0.00	0.00			383	03	
400	ISL	6.35	D 6.31	34.132	D 26.832	127.0	0.828	0.91	D 13.2	64.6	2.73	39.2	0.00	0.00			403	
441	6.15	6.12	34.165	26.884	122.6	0.874	0.71	10.2	71.4	2.83	40.7	0.00	0.00			445	02	
500	ISL	5.78	D 5.73	34.201	D 26.960	115.8	0.951	0.52	D 7.5	79.1	2.92	42.1	0.00	0.00			504	
516		5.70	5.65	34.217	26.983	113.8	0.963	0.46	6.6	81.2	2.94	42.5	0.00	0.00			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
34 0.7 N	118 50.0 W	04/02/2012	0432	UTC	26 m	050	04 kn	190 01 08	1	1014.5 mb	21.2 C	11.8 C		1/8	CS	035	
0	14.35	14.35	33.368	24.853	308.8	0.000	6.46	111.0	0.2	0.25	0.0	0.00	0.00	1.87	0.19	0	
1	14.35	14.35	33.368	24.853	308.8	0.003	6.46	111.0	0.2	0.25	0.0	0.00	0.00	1.87	0.19	1	05
5	14.23	14.23	33.371	24.882	306.2	0.015	6.45	110.5	0.1	0.24	0.0	0.00	0.00	1.88	0.20	5	04
10	14.09	14.08	33.359	24.903	304.4	0.031	6.44	110.0	0.2	0.25	0.0	0.00	0.00	1.84	0.28	10	03
15	14.05	14.05	33.362	24.912	303.6	0.046	6.39	109.1	0.2	0.25	0.0	0.00	0.00	2.14	0.27	15	02
20	14.03	14.03	33.361	24.916	303.4	0.061	6.28	107.2	0.4	0.28	0.1	0.02	0.08	2.70	0.34	20	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 53.5 N	118 29.5 W	04/02/2012	0124	UTC	59 m	070	02 kn	280 01 06	0	1015.9 mb	15.5 C	10.5 C		11 m	0/8	034	
0	14.35	14.35	33.372	24.856	308.5	0.000	6.10	104.8	2.1	0.31	0.0	0.00	0.00	0.90	0.25	0	
2 A	14.35	14.35	33.372	24.856	308.5	0.006	6.10	104.8	2.1	0.31	0.0	0.00	0.00	0.90	0.25	2	09
8 A	14.33	14.32	33.370	24.861	308.3	0.025	6.09	104.6	2.1	0.31	0.0	0.00	0.00	0.99	0.28	8	08
10 ISL	14.32	D 14.32	33.371	D 24.863	308.1	0.031	6.07	D 104.2	2.1	0.31	0.0	0.00	0.00	1.00	0.28		
11	14.32	14.31	33.371	24.864	308.1	0.034										11	07
11 A	14.32	14.31	33.371	24.864	308.1	0.034	6.09	104.5	2.1	0.31	0.0	0.00	0.00	1.01	0.28	11	06
20 A	14.19	14.19	33.369	24.889	306.0	0.062	6.04	103.3	2.2	0.34	0.1	0.03	0.00	1.10	0.30	20	05
29	12.76	12.76	33.346	25.161	280.2	0.088	4.50	74.8	8.7	1.01	10.2	0.48	0.53	0.73	0.48	29	04
30 ISL	12.74	D 12.74	33.351	D 25.168	279.7	0.091	4.39	D 73.0	9.1	1.04	10.6	0.49	0.59	0.69	0.47	30	
38 A	12.11	12.11	33.380	25.313	266.1	0.113	3.95	64.7	12.2	1.27	13.7	0.53	1.03	0.42	0.38	38	03
43 A	11.60	11.59	33.409	25.430	255.0	0.126	3.60	58.4	15.8	1.46	16.7	0.47	3.93	0.28	0.29	43	02
49	11.28	11.28	33.453	25.523	246.3	0.141	3.41	55.0	18.0	1.57	18.0	0.44	3.74	0.22	0.29	49	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 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
33 49.4 N	118 37.7 W	04/02/2012	0652	UTC	656 m	220	08 kn	230	01 06	1013.8 mb	19.2 C	13.8 C	14 m	2/8	CS	036	
0	14.94	14.94	33.363	24.725	321.0	0.000	6.36	110.5	0.7	0.23	0.0	0.00	0.00	0.51	0.09	0	
2	14.94	14.94	33.363	24.725	321.0	0.006	6.36	110.5	0.7	0.23	0.0	0.00	0.00	0.51	0.09	2	21
10	14.42	14.42	33.367	24.838	310.5	0.030										10	20
10	14.42	14.42	33.367	24.838	310.5	0.032	6.36	109.3	0.8	0.25	0.0	0.00	0.00	0.50	0.10	10	19
19	14.34	14.34	33.367	24.856	309.1	0.060	6.25	107.4	1.1	0.27	0.0	0.00	0.00	0.50	0.14	19	
20	ISL	14.37 D	14.36	33.370 D	24.854	309.4	0.063	6.18	D 106.2	1.5	0.30	0.4	0.02	0.00	0.57	0.18	20
30	13.45	13.44	33.346	25.024	293.4	0.093	5.28	89.0	4.9	0.65	4.3	0.23	0.05	1.34	0.57	30	17
40	12.54	12.54	33.343	25.201	276.8	0.121	4.41	73.0	8.4	1.02	11.0	0.22	0.12	0.94	0.73	40	16
50	11.49	11.48	33.427	25.466	251.8	0.148	3.69	59.8	14.6	1.40	16.5	0.44	0.90	0.54	0.43	50	15
60	11.01	11.01	33.489	25.600	239.3	0.172	3.45	55.2	17.4	1.56	18.3	0.28	0.68	0.27	0.35	60	14
69	10.55	10.55	33.557	25.734	226.7	0.193	3.38	53.6	19.2	1.65	19.8	0.04	0.00	0.23	0.26	70	13
75	ISL	10.38 D	10.36	33.582 D	25.758	222.0	0.208	3.31	D 52.3	20.2	1.69	20.6	0.03	0.00	0.21	0.26	76
85	10.06	10.05	33.639	25.883	212.8	0.229	3.20	50.3	21.9	1.76	21.9	0.02	0.00	0.18	0.26	86	12
100	9.86	9.85	33.713	25.975	204.4	0.260	2.98	46.6	24.1	1.86	23.3	0.01	0.00	0.10	0.17	101	11
120	9.69	9.68	33.865	26.122	190.9	0.299	2.50	39.0	28.1	2.13	25.3	0.00	0.00	0.06	0.13	121	10
125	ISL	9.56 D	9.54	33.879 D	26.156	187.8	0.311	2.48	D 38.5	28.6	2.12	25.6	0.00	0.00	0.06	0.14	126
139	9.41	9.40	33.912	26.205	183.3	0.335	2.43	37.7	29.8	2.08	26.4	0.00	0.00	0.06	0.16	140	09
150	ISL	9.33 D	9.31	33.965 D	26.260	178.3	0.357	2.27	D 35.1	30.9	2.12	26.9	0.00	0.00	0.05	0.15	151
170	9.21	9.19	34.011	26.316	173.4	0.390	2.12	32.8	32.8	2.19	27.7	0.00	0.00	0.05	0.13	171	08
200	8.97	8.94	34.087	26.416	164.6	0.441	1.82	28.0	36.4	2.30	29.1	0.00	0.00	0.06	0.14	202	07
229	8.74	8.72	34.127	26.483	158.8	0.488	1.61	24.6	39.2	2.39	30.1	0.00	0.00		231	06	
250	ISL	8.58 D	8.55	34.139 D	26.519	155.7	0.524	1.52	D 23.2	41.2	2.45	30.8	0.00	0.00		252	
270	8.46	8.43	34.158	26.551	153.0	0.551	1.39	21.1	43.0	2.50	31.4	0.00	0.00		272	05	
300	ISL	8.27 D	8.24	34.182 D	26.600	148.9	0.601	1.19	D 18.0	45.9	2.59	32.3	0.00	0.00		302	
319	8.15	8.12	34.204	26.636	145.7	0.625	1.04	15.7	47.7	2.64	32.9	0.00	0.00		322	04	
380	7.71	7.67	34.265	26.750	135.8	0.711	0.61	9.1	55.2	2.84	34.9	0.00	0.00		383	03	
400	ISL	7.56 D	7.52	34.274 D	26.779	133.3	0.743	0.54	D 8.1	57.8	2.88	35.4	0.00	0.00		403	
439	7.21	7.17	34.296	26.847	127.2	0.788	0.41	6.1	63.0	2.97	36.4	0.00	0.00		443	02	
500	ISL	6.78 D	6.73	34.305 D	26.915	121.4	0.871	0.34	D 5.0	70.2	3.06	37.8	0.00	0.00		504	
515	6.60	6.55	34.310	26.942	118.9	0.882	0.31	4.5	72.0	3.08	38.1	0.00	0.00		519	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
33 39.5 N	118 58.6 W	04/02/2012	1115	UTC	763 m	350	05 kn			1013.9 mb	14.5 C	12.7 C	14 m	2/8	CS	037	
0	14.40	14.40	33.385	24.857	308.4	0.000	6.26	107.7	1.0	0.31	0.0	0.00	0.00	0.85	0.25	0	
2	14.40	14.40	33.385	24.857	308.4	0.006	6.26	107.7	1.0	0.31	0.0	0.00	0.00	0.85	0.25	2	24
10	14.08	14.08	33.382	24.922	302.5	0.031	6.35	108.5	2.3	0.34	0.0	0.00	0.05	1.47	0.25	10	23
20	13.19	13.19	33.378	25.101	285.8	0.060	5.40	90.6	5.9	0.69	4.5	0.20	0.47	1.74	0.85	20	22
30	12.56	12.55	33.399	25.241	272.7	0.088	4.82	79.8	8.9	0.94	8.8	0.22	0.00	0.57	0.21	30	21
40	11.90	11.90	33.430	25.391	258.7	0.115	4.31	70.4	11.9	1.17	12.5	0.10	0.00	0.24	0.15	40	20
50	11.30	11.29	33.475	25.538	244.9	0.140	3.88	62.5	15.0	1.39	15.8	0.04	0.00	0.13	0.10	50	19
60	10.91	10.91	33.513	25.636	235.8	0.164	3.62	57.8	17.0	1.53	17.8	0.03	0.00	0.10	0.10	60	18
70	10.57	10.56	33.605	25.769	223.4	0.187	3.26	51.8	20.4	1.69	20.2	0.02	0.00	0.07	0.11	71	17
75	ISL	10.48 D	10.47	33.633 D	25.807	219.8	0.199	3.18	D 50.5	21.5	1.74	20.9	0.02	0.02	0.06	0.10	76
85	10.11	10.10	33.705	25.925	208.8	0.219	2.94	66.3	23.6	1.84	22.4	0.02	0.06	0.04	0.08	86	16
100	9.81	9.79	33.794	26.047	197.6	0.250	2.68	42.0	26.5	1.96	24.3	0.01	0.00	0.03	0.08	101	15
120	9.56	9.55	33.858	26.138	189.3	0.288	2.52	39.2	28.8	2.04	25.5	0.01	0.00	0.02	0.09	121	14
125	ISL	9.46 D	9.45	33.903 D	26.190	184.5	0.299	2.42	D 37.5	29.7	2.07	26.0	0.01	0.00	0.02	0.08	126
140	9.25	9.23	33.960	26.269	177.3	0.325	2.25	34.8	32.4	2.16	27.3	0.01	0.00	0.02	0.06	141	13
150	ISL	9.19 D	9.17	33.976 D	26.292	175.3	0.344	2.18	D 33.7	33.0	2.18	27.6	0.01	0.00	0.01	0.06	151
170	9.07	9.05	34.017	26.343	170.8	0.377	2.07	31.9	34.2	2.23	28.3	0.01	0.00	0.01	0.05	171	12
200	8.70	8.68	34.088	26.458	160.5	0.427	1.80	27.5	38.4	2.36	29.7	0.01	0.00	0.01	0.05	202	11
230	8.21	8.19	34.149	26.581	149.2	0.473	1.32	20.0	46.2	2.55	32.3	0.02	0.00		232	10	
250	ISL	8.12 D	8.09	34.168 D	26.610	146.8	0.506	1.21	D 18.3	47.5	2.60	32.9	0.01	0.00		252	
270	8.04	8.02	34.192	26.641	144.2	0.532	1.06	16.0	48.7	2.65	33.4	0.00	0.00		272	09	
300	ISL	7.90 D	7.87	34.216 D	26.682	140.9	0.578	0.91	D 13.6	52.7	2.76	34.5	0.00	0.00		302	
320	7.64	7.61	34.249	26.746	135.0	0.602	0.70	10.4	55.4	2.83	35.2	0.00	0.00		323	08	
380	7.23	7.19	34.281	26.831	127.7	0.681	0.48	7.1	61.4	2.97	36.4	0.00	0.00		383	07	
400	ISL	7.03 D	7.00	34.293 D	26.868	124.4	0.711	0.40	D 5.9	63.2	2.99	36.8	0.00	0.00		403	
440	6.92	6.88	34.299	26.889	123.0	0.756	0.38	5.5	66.9	3.03	37.6	0.00	0.00		444	06	
500	ISL	6.52 D	6.48	34.315 D	26.956	117.2	0.834	0.29	D 4.2	73.5	3.06	38.6	0.00	0.00		504	
515	6.44	6.40	34.320	26.971	115.9	0.845	0.28	4.1	75.1	3.07	38.8	0.00	0.00		519	05	
600	5.77	5.72	34.355	27.085	105.6												

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					1657 m	300	07 kn			1014.7 mb	14.4 C	12.4 C					038
33 29.6 N	119 18.6 W	04/02/2012	1613	UTC	1657 m	300	07 kn										
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA		ml/l	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0	14.11	14.11	33.384	24.916	302.8	0.000	6.24	106.7	2.2	0.33	0.0	0.01	0.00	0.84	0.23	0	
2	14.11	14.11	33.384	24.916	302.8	0.006	6.24	106.7	2.2	0.33	0.0	0.01	0.00	0.84	0.23	2	21
9	13.96	13.96	33.382	24.946	300.2	0.028											9 20
10	13.96	13.96	33.379	24.944	300.4	0.030	6.23	106.2	2.5	0.35	0.0	0.01	0.00	1.12	0.45	10	19
20	13.45	13.45	33.385	25.054	290.3	0.060	5.96	100.5	4.2	0.48	1.4	0.07	0.27	1.75	0.58	20	18
30	13.07	13.07	33.389	25.133	283.0	0.088	5.93	99.2	4.7	0.53	2.5	0.09	0.10	0.89	0.40	30	17
40	12.24	12.23	33.426	25.325	265.0	0.116	5.14	84.6	7.4	0.84	7.4	0.21	0.00	0.40	0.23	40	16
50	11.23	11.23	33.457	25.535	245.2	0.141	3.95	63.5	14.4	1.35	15.1	0.05	0.00	0.21	0.16	50	15
60	10.63	10.62	33.580	25.738	226.0	0.165	3.28	52.1	19.8	1.68	19.8	0.02	0.00	0.09	0.10	60	14
70	10.37	10.37	33.663	25.848	215.9	0.187	2.99	47.3	22.6	1.81	21.6	0.02	0.00	0.05	0.08	71	13
75 ISL	10.28	D 10.29	33.723 D	25.908	210.2	0.199	2.80	44.2	23.4	1.83	22.1	0.02	0.00	0.04	0.08	76	
85	9.92	9.91	33.749	25.993	202.4	0.218	2.89	45.3	25.1	1.87	23.0	0.01	0.00	0.02	0.07	86	12
100	9.73	9.72	33.876	26.123	190.3	0.248	2.47	38.6	28.4	2.05	25.2	0.01	0.00	0.01	0.07	101	11
120	9.52	9.51	33.910	26.185	184.8	0.285	2.42	37.7	29.7	2.08	26.0	0.01	0.00	0.01	0.05	121	10
125 ISL	9.50	D 9.48	33.925 D	26.201	183.5	0.296	2.39	37.1	30.7	2.11	26.5	0.01	0.00	0.01	0.05	126	
140	9.08	9.06	34.003	26.331	171.3	0.321	2.16	33.2	33.6	2.20	27.8	0.00	0.00	0.01	0.05	141	09
150 ISL	8.92	D 8.90	34.037 D	26.383	166.6	0.340	2.01	30.9	34.5	2.23	28.2	0.00	0.00	0.01	0.04	151	
170	8.86	8.84	34.050	26.403	165.1	0.371	1.97	30.2	36.4	2.28	29.1	0.00	0.00	0.01	0.04	171	08
200	8.58	8.56	34.109	26.493	157.1	0.419	1.68	25.7	40.2	2.40	30.5	0.00	0.00	0.00	0.04	202	07
230	8.27	8.24	34.162	26.583	149.0	0.465	1.29	19.5	45.4	2.57	32.3	0.00	0.00			232	06
250 ISL	8.22	D 8.19	34.175 D	26.601	147.7	0.498	1.19	18.0	46.9	2.60	32.7	0.00	0.00			252	
270	7.96	7.93	34.180	26.644	143.9	0.524	1.15	17.3	48.4	2.63	33.1	0.00	0.00			272	05
300 ISL	7.76	D 7.73	34.229 D	26.713	137.8	0.570	0.81	12.1	52.5	2.74	34.2	0.00	0.00			302	
320	7.65	7.62	34.236	26.734	136.1	0.594	0.75	11.1	55.2	2.82	35.0	0.00	0.00			323	04
380	7.26	7.23	34.281	26.826	128.2	0.673	0.48	7.1	62.4	2.97	36.5	0.00	0.00			383	03
400 ISL	7.15	D 7.12	34.289 D	26.848	126.4	0.703	0.43	6.4	63.8	2.99	36.8	0.00	0.00			403	
440	6.95	6.91	34.296	26.883	123.6	0.749	0.38	5.6	66.7	3.04	37.3	0.00	0.00			444	02
500 ISL	6.60	D 6.55	34.313 D	26.945	118.4	0.827	0.31	4.5	73.5	3.14	38.7	0.00	0.00			504	
515	6.41	6.36	34.318	26.974	115.6	0.839	0.28	4.1	75.2	3.16	39.0	0.00	0.00			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					80 m	090	06 kn			1014.5 mb	14.0 C	13.0 C					039
33 19.7 N	119 39.6 W	04/02/2012	2016	UTC	1657 m	080	06 kn										
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA		ml/l	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0	14.09	14.09	33.343	24.889	305.4	0.000	5.92	101.1	2.6	0.38	0.2	0.02	0.07	0.30	0.09	0	
2	14.09	14.09	33.343	24.889	305.4	0.006	5.92	101.1	2.6	0.38	0.2	0.02	0.07	0.30	0.09	2	10
4	14.10	14.10	33.344	24.888	305.6	0.012	5.93	101.3	2.7	0.37	0.1	0.02	0.08	0.30	0.10	4	09
9	14.12	14.12	33.343	24.884	306.1	0.028										9 08	
10	14.12	14.12	33.345	24.884	306.2	0.031	5.93	101.4	2.6	0.36	0.1	0.01	0.09	0.28	0.09	10	07
20	14.10	14.10	33.343	24.888	306.1	0.061	5.93	101.3	2.5	0.36	0.1	0.02	0.09	0.31	0.09	20	06
30	14.00	14.00	33.343	24.909	304.4	0.092	5.88	100.3	2.8	0.37	0.4	0.04	0.07	0.36	0.12	30	05
40	13.06	13.05	33.343	25.101	286.3	0.121	5.35	89.5	5.1	0.65	4.3	0.19	0.10	0.29	0.16	40	04
50	12.58	12.57	33.355	25.205	276.7	0.149	5.14	85.1	6.7	0.79	6.6	0.16	0.07	0.27	0.17	50	03
60	11.48	11.48	33.402	25.447	253.8	0.176	4.58	74.0	10.6	1.08	11.1	0.11	0.09	0.13	0.14	60	02
69	11.01	11.00	33.455	25.575	241.8	0.198	4.13	66.2	14.0	1.32	15.0	0.07	0.08	0.06	0.10	70	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
					1161 m	080	06 kn	030	01 05 0	1016.4 mb	14.8 C	13.2 C	11 m	0/8	040		
33 10.1 N	120 1.7 W	05/02/2012	0144	UTC	1161 m	080	06 kn	030	01 05 0								
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SWA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA		ml/l	PCT	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
0	14.10	14.10	33.371	24.907	303.6	0.000	5.97	102.0	3.0	0.37	0.4	0.03	0.00	0.62	0.07	0	
1 A	14.10	14.10	33.371	24.907	303.6	0.003	5.97	102.0	3.0	0.37	0.4	0.03	0.00	0.62	0.07	1	23
10 ISL	14.02	D 14.02	33.370 D	24.926	302.2	0.031	5.91	D 100.9	3.0	0.37	0.4	0.03	0.00	0.58	0.17	10	
12	14.01	14.01	33.370	24.927	302.1	0.036										12 22	
12 A	14.01	14.01	33.370	24.927	302.1	0.036	5.95	101.4	3.0	0.37	0.4	0.03	0.00	0.55	0.14	20	20
20 ISL	14.00	D 14.00	33.370 D	24.930	302.1	0.061	5.91	D 100.8	3.0	0.37	0.4	0.04	0.00	0.59	0.12	20	
24	14.00	14.00	33.376	24.934	301.8	0.073	5.94	101.3	3.0	0.37	0.4	0.04	0.0				

RV NEW HORIZON

CALCOFI CRUISE 1202

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			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	DEG C	DEG C	THETA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	deg C	deg C			m	m		ml/l	pct	um/l	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
32 59.4 N	120 21.0 W	05/02/2012	0452	UTC	721	m	040	02	kn	320	02	05	1	1014.9	mb	15.1	C	14.0	C	041
0	13.70	13.70	33.443	25.047	290.4		0.000	6.08	103.0	3.9	0.44	1.7	0.07	0.00	0.73	0.12	0.12	0		
2	13.70	13.70	33.443	25.047	290.4		0.006	6.08	103.0	3.9	0.44	1.7	0.07	0.00	0.73	0.12	0.12	2	21	
9	13.50	13.50	33.442	25.086	286.8		0.027												9	20
10	13.47	13.47	33.443	25.094	286.1		0.029	6.04	101.9	3.8	0.43	1.6	0.07	0.00	0.86	0.13	0.13	10	19	
20	13.38	13.38	33.447	25.116	284.4		0.057	5.98	100.8	4.0	0.46	2.0	0.08	0.06	0.93	0.19	0.19	20	18	
30	13.33	13.32	33.453	25.132	283.2		0.086	5.91	99.4	4.1	0.48	2.3	0.09	0.22	0.74	0.18	0.18	30	17	
40	12.11	12.11	33.519	25.420	255.9		0.113	4.84	79.4	9.2	0.94	9.3	0.21	0.13	0.32	0.15	0.15	40	16	
50 ISL	10.64 D	10.64	33.664 D	25.801	219.9		0.137	3.36 D	53.5	17.0	1.47	17.6	0.06	0.01	0.15	0.09	0.09	50		
51	10.59	10.57	33.666 D	25.815	218.6		0.140	3.27 D	51.9	17.8	1.52	18.4	0.05	0.00	0.13	0.08	0.08	51	15	
59	10.39	10.38	33.675	25.854	215.0		0.156	3.10	49.1	21.6	1.73	21.8	0.02	0.00	0.08	0.09	0.09	59	14	
70	9.78	9.77	33.734	26.003	201.0		0.179	2.84	44.4	24.5	1.86	23.9	0.02	0.00	0.05	0.06	0.06	71	13	
75 ISL	9.53 D	9.52	33.804 D	26.099	192.0		0.190	2.71 D	42.1	25.9	1.92	24.7	0.02	0.00	0.04	0.05	0.05	76		
85	9.36	9.35	33.840	26.156	186.8		0.208	2.54	39.4	28.8	2.03	26.4	0.02	0.00	0.02	0.04	0.04	86	12	
100	9.06	9.05	33.906	26.256	177.5		0.235	2.52	38.8	30.8	2.07	27.0	0.01	0.00	0.01	0.03	0.03	101	11	
120	8.93	8.91	33.999	26.350	169.1		0.270	2.42	37.1	32.9	2.11	27.4	0.00	0.00	0.00	0.03	0.03	121	10	
125 ISL	8.78 D	8.76	34.022 D	26.392	165.2		0.279	2.36 D	36.2	34.0	2.15	27.9	0.00	0.00	0.00	0.03	0.03	126		
140	8.54	8.53	34.055	26.455	159.4		0.303	2.11	32.1	37.3	2.25	29.3	0.00	0.00	0.00	0.02	0.02	141	09	
150 ISL	8.38 D	8.37	34.072 D	26.492	156.0		0.320	2.02 D	30.7	38.7	2.29	29.8	0.00	0.00	0.00	0.02	0.02	151		
170	8.24	8.22	34.086	26.526	153.2		0.349	1.85	27.9	41.5	2.36	30.7	0.00	0.00	0.00	0.02	0.02	171	08	
199	7.82	7.80	34.114	26.611	145.6		0.393	1.53	22.9	46.5	2.51	32.6	0.00	0.00	0.00	0.02	0.02	201		
200 ISL	7.83 D	7.82	34.115 D	26.609	145.8		0.396	1.55 D	23.3	46.6	2.51	32.6	0.00	0.00	0.00	0.02	0.02	202		
230	7.58	7.55	34.114	26.647	142.6		0.437	1.44	21.5	49.5	2.56	33.4	0.00	0.00				232	06	
250 ISL	7.54 D	7.51	34.131 D	26.666	141.2		0.468	1.36 D	20.3	51.4	2.62	34.0	0.00	0.00				252		
270	7.43	7.40	34.152	26.699	138.4		0.494	1.14	16.9	53.2	2.67	34.6	0.00	0.00				272	05	
300 ISL	7.25 D	7.22	34.161 D	26.731	135.7		0.538	1.06 D	15.7	56.8	2.76	35.6	0.00	0.00				302		
319	7.02	6.99	34.173	26.773	131.9		0.560	0.91	13.3	59.0	2.81	36.2	0.00	0.00				322	04	
379	6.64	6.61	34.203	26.849	125.4		0.637	0.68	9.9	66.1	2.93	37.8	0.00	0.00				382	03	
400 ISL	6.48 D	6.45	34.220 D	26.884	122.3		0.668	0.60 D	8.7	68.8	2.98	38.3	0.00	0.00				403		
440	6.20	6.16	34.247	26.943	117.1		0.711	0.46	6.6	74.0	3.07	39.3	0.00	0.00				444	02	
500 ISL	5.81 D	5.76	34.282 D	27.020	110.2		0.785	0.35 D	5.0	80.7	3.15	40.4	0.00	0.00				504		
515	5.78	5.73	34.287	27.028	109.7		0.796	0.30	4.3	82.4	3.17	40.7	0.00	0.00				519	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY STA-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD			
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	DEG C	DEG C	THETA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	deg C	deg C			m	m		ml/l	pct	um/l	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	db	
32 39.4 N	121 2.1 W	05/02/2012	1105	UTC	3682	m	360	01	kn										042	
0	13.42	13.42	33.225	24.935	301.0		0.000	6.10	102.7	3.3	0.38	0.6	0.05	0.00	0.52	0.11	0.11	0		
2	13.42	13.42	33.225	24.935	301.0		0.006	6.10	102.7	3.3	0.38	0.6	0.05	0.00	0.52	0.11	0.11	2	21	
10	13.32	13.31	33.233	24.962	298.7		0.030											10	20	
10	13.32	13.31	33.235	24.964	298.5		0.030	6.12	102.8	3.3	0.37	0.6	0.05	0.00	0.55	0.03	0.03	10	19	
20	13.29	13.29	33.235	24.970	298.2		0.060	6.12	102.7	3.4	0.37	0.6	0.05	0.00	0.59	0.10	0.10	20	18	
30	13.21	13.21	33.257	25.003	295.4		0.090	6.06	101.6	3.6	0.40	1.0	0.07	0.06	0.61	0.13	0.13	30	17	
40	13.17	13.17	33.269	25.021	294.0		0.119	6.04	101.2	3.6	0.41	1.1	0.08	0.11	0.53	0.17	0.17	40	16	
50	12.98	12.97	33.286	25.073	289.3		0.148	5.91	98.7	4.3	0.49	2.2	0.14	0.24	0.56	0.09	0.09	50	15	
60	12.90	12.89	33.360	25.145	282.7		0.177	5.97	99.5	5.2	0.55	3.0	0.11	0.30	0.61	0.18	0.18	60	14	
71	12.65	12.64	33.348	25.187	279.0		0.208	5.81	96.3	5.5	0.61	4.0	0.15	0.26	0.45	0.15	0.15	72	13	
75 ISL	11.94 D	11.96	33.309 D	25.285	269.7		0.220	5.32 D	86.9	6.7	0.72	5.9	0.13	0.19	0.37	0.14	0.14	76		
85	11.16	11.15	33.310	25.436	255.5		0.245	4.92	78.9	9.7	1.01	10.7	0.08	0.00	0.18	0.11	0.11	86	12	
100	10.35	10.34	33.420	25.664	234.0		0.282	4.14	65.3	15.2	1.42	17.3	0.01	0.00	0.09	0.06	0.06	101	11	
120	9.38	9.36	33.693	26.039	198.6		0.325	3.26	50.4	24.5	1.83	24.0	0.01	0.00	0.02	0.04	0.04	121	10	
125 ISL	9.22 D	9.21	33.739 D	26.100	192.9		0.337	3.22 D	49.6	25.6	1.87	24.5	0.01	0.00	0.01	0.04	0.04	126		
140	9.06	9.04	33.841	26.207	183.1		0.363	2.90	44.6	28.8	1.98	25.9	0.01	0.00	0.01	0.03	0.03	141	09	
150 ISL	9.05 D	9.03	33.882 D	26.240	180.2		0.383	2.70 D	41.5	30.2	2.02	26.5	0.01	0.00	0.01	0.03	0.03	151		
170	8.72	8.70	33.963	26.357	169.4		0.416	2.50	38.2	32.9	2.10	27.8	0.00	0.00	0.00	0.03	0.03	171	08	
200	8.38	8.36	34.051	26.478	158.4		0.465	2.11	31.9</											

RV NEW HORIZON

CALCOFI CRUISE 1202

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 19.5 N	121 42.8 W	05/02/2012	1759	UTC	3777 m	070	04 kn			1015.8 mb	13.2 C	12.5 C					043
0	14.86	14.86	33.367	24.716	321.9	0.000	5.83	101.1	2.1	0.31	0.0	0.00	0.00	0.26	0.05	0	
2	14.86	14.86	33.330 D	24.716	321.9	0.006	5.83	101.1	2.1	0.31	0.0	0.00	0.00	0.26	0.05	2	21
9	14.86	14.86	33.366	24.744	319.4	0.029										9	20
10	14.87	14.87	33.330 D	24.714	322.3	0.033	5.83	101.2	2.1	0.30	0.0	0.00	0.00	0.24	0.06	10	19
20	ISL	14.86 D	14.86	33.328 D	24.715	322.6	0.065	5.86 D	101.7	2.1	0.30	0.0	0.00	0.00	0.23	0.06	20
25	14.87	14.86	33.331 D	24.716	322.6	0.081	5.83	101.1	2.1	0.30	0.0	0.00	0.00	0.23	0.06	25	18
30	ISL	14.87 D	14.86	33.331 D	24.717	322.7	0.097	5.87 D	101.9	2.1	0.30	0.0	0.00	0.00	0.27	0.08	30
40	14.46	14.47	33.263 D	24.749	319.9	0.130	5.88	101.2	2.2	0.31	0.0	0.00	0.00	0.34	0.11	40	17
50	14.29	14.28	33.239 D	24.771	318.2	0.162	5.91	101.2	2.2	0.31	0.0	0.01	0.05	0.38	0.14	50	16
62	13.40	13.39	33.190 D	24.917	304.6	0.199	5.72	96.3	3.2	0.45	1.7	0.21	0.00	0.27	0.18	62	15
75	12.04	12.03	33.186 D	25.177	280.0	0.238	5.44	89.0	5.0	0.63	4.8	0.02	0.00	0.20	0.18	76	14
87	10.96	10.95	33.217	25.397	259.1	0.268	5.50	87.8	5.4	0.64	5.3	0.01	0.00	0.11	0.09	88	13
100	10.40	10.40	33.336 D	25.587	241.3	0.303	4.80	75.7	11.0	1.09	12.6	0.01	0.00	0.07	0.07	101	12
112	9.91	9.90	33.453	25.764	224.7	0.329	4.03	63.0	17.3	1.50	19.2	0.00	0.00	0.03	0.06	113	11
125	9.23	9.18	33.696 D	26.071	195.7	0.359	3.35	51.7	23.5	1.81	24.0	0.00	0.00	0.01	0.05	126	10
140	9.10	9.08	33.747	26.126	190.7	0.385	3.34	51.4	25.7	1.82	24.6	0.00	0.00	0.00	0.04	141	09
150	ISL	9.04 D	9.02	33.767 D	26.152	188.5	0.408	3.13 D	48.0	27.2	1.86	25.3	0.00	0.00	0.04	0.15	
170	8.75	8.74	33.883	26.288	175.9	0.441	3.01	46.0	30.3	1.95	26.8	0.00	0.00	0.00	0.04	171	08
200	ISL	8.42 D	8.42	33.996 D	26.426	163.4	0.495	2.19 D	33.2	37.0	2.24	30.2	0.00	0.00	0.03	0.03	202
201	8.47	8.45	34.025	26.445	161.6	0.493	2.14	32.5	37.2	2.25	30.3	0.00	0.00	0.00	0.03	203	
231	8.17	8.14	34.021 D	26.487	158.1	0.546	1.92	29.0	41.0	2.35	31.8	0.00	0.00		233	06	
250	ISL	8.06 D	8.03	34.090 D	26.558	151.7	0.575	1.71 D	25.7	43.9	2.45	32.7	0.00	0.00		252	
270	7.93	7.90	34.124	26.604	147.6	0.600	1.38	20.7	47.0	2.55	33.7	0.00	0.00		272	05	
300	ISL	7.64 D	7.61	34.148 D	26.666	142.1	0.649	1.18 D	17.6	51.4	2.68	35.1	0.00	0.00		302	
320	7.51	7.48	34.176	26.707	138.6	0.672	0.95	14.2	54.3	2.76	36.0	0.00	0.00		323	04	
380	6.36	6.32	34.137	26.834	126.5	0.751	0.92	13.3	64.2	2.86	38.5	0.00	0.00		383	03	
400	ISL	6.42 D	6.38	34.160 D	26.845	125.9	0.784	0.82 D	11.8	67.0	2.92	39.1	0.00	0.00		403	
440	6.17	6.13	34.189	26.901	121.0	0.826	0.58	8.3	72.6	3.03	40.2	0.00	0.00		444	02	
500	ISL	5.75 D	5.71	34.232 D	26.988	113.2	0.904	0.43 D	6.1	80.6	3.14	41.6	0.00	0.00		504	
515	5.72	5.67	34.250	27.006	111.6	0.913	0.37	5.2	82.6	3.17	42.0	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 1202

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 59.5 N	122 23.5 W	06/02/2012	0108	UTC	4097 m	360	06 kn	340 03 10 2		1016.6 mb	13.1 C	11.2 C	14 m	8/8	SC	044	
0	13.41	13.40	33.223	24.937	300.8	0.000	6.13	103.2	3.2	0.36	0.3	0.03	0.05	0.55	0.11	0	
1 A	13.41	13.40	33.223	24.937	300.8	0.003	6.13	103.2	3.2	0.36	0.3	0.03	0.05	0.55	0.11	1	23
10	13.40	13.40	33.224	24.939	300.9	0.029										10	22
10 A	13.40	13.40	33.229	24.942	300.6	0.030	6.11	102.9	3.2	0.34	0.3	0.04	0.04	0.52	0.11	10	21
13 A	13.40	13.40	33.223 D	24.938	301.0	0.039	6.17 D	103.9								13	20
20	13.39	13.39	33.223	24.940	301.1	0.060	6.11	102.7	3.2	0.34	0.4	0.03	0.06	0.51	0.13	20	19
25 A	13.38	13.37	33.223	24.943	301.0	0.075	6.10	102.5	3.2	0.35	0.4	0.04	0.06	0.58	0.13	25	18
30	ISL	13.35 D	13.34	33.221 D	24.948	300.7	0.091	6.10 D	102.6	3.2	0.35	0.5	0.05	0.06	0.53	0.13	30
36	13.34	13.34	33.224	24.952	300.5	0.108	6.05	101.6	3.2	0.36	0.6	0.06	0.09	0.46	0.14	36	17
48 A	13.34	13.34	33.229	24.956	300.4	0.144	6.04	101.5	3.2	0.36	0.6	0.07	0.13	0.39	0.15	48	16
50 ISL	13.34 D	13.34	33.234 D	24.960	300.1	0.152	6.04 D	101.5	3.2	0.36	0.6	0.07	0.14	0.39	0.16	50	
54 A	13.33	13.32	33.240	24.968	299.4	0.162	6.01	101.0	3.2	0.37	0.6	0.08	0.15	0.40	0.17	54	15
62	12.92	12.91	33.259	25.063	290.6	0.186	5.87	97.7	3.7	0.43	1.5	0.18	0.22	0.31	0.19	62	14
70	12.28	12.27	33.314	25.230	274.8	0.209	5.56	91.4	6.0	0.68	5.3	0.30	0.13	0.17	0.16	71	13
75 ISL	11.21 D	11.18	33.249 D	25.382	260.3	0.223	5.02 D	80.7	7.3	0.80	7.5	0.21	0.09	0.15	0.15	76	
85	10.96	10.95	33.263	25.435	255.6	0.248	4.85	77.4	9.9	1.05	11.9	0.02	0.00	0.12	0.13	86	12
100	10.15	10.14	33.363	25.653	235.0	0.285	4.41	69.3	13.9	1.28	16.0	0.01	0.00	0.07	0.07	101	11
120	9.46	9.45	33.620	25.968	205.4	0.329	3.40	52.7	23.2	1.76	23.7	0.00	0.00	0.01	0.05	121	10
125 ISL	9.26 D	9.25	33.689 D	26.055	197.2	0.341	3.27 D	50.4	24.6	1.80	24.5	0.00	0.00	0.01	0.05	126	
140	8.89	8.87	33.808	26.207	183.0	0.367	3.02	46.3	28.8	1.92	26.7	0.00	0.00	0.00	0.05	141	09
150 ISL	8.82 D	8.80	33.859 D	26.258	178.4	0.387	2.83 D	43.3	30.4	1.97	27.5	0.00	0.00	0.00	0.04	151	
170	8.54	8.52	33.927	26.355	169.5	0.420	2.59	39.4	33.7	2.07	29.0	0.00	0.00	0.04	0.04	171	08
200	8.02	8.00	33.982	26.477	158.3	0.469	2.44	36.8	38.3	2.18	30.6	0.00	0.00	0.00	0.03	202	07
230	7.80	7.78	34.037	26.554	151.5	0.516	1.89	28.2	44.0	2.36	33.1	0.00	0.00		232	06	
250 ISL	7.66 D	7.65	34.080 D	26.606	146.9	0.549	1.74 D	26.0	46.9	2.45	34.0	0.00	0.00		252		
270	7.51	7.49	34.096	26.642	143.7	0.575	1.46	21.7	49.8	2.54	34.9	0.00	0.00		272	05	
300 ISL	7.23 D	7.20	34.126 D	26.707	138.0	0.620	1.17 D	17.3	54.8	2.66	36.4	0.00	0.00		302		
320	7.00	6.97	34.137	26.747	134.3	0.644	1.00	14.7	58.2	2.74	37.4	0.00	0.00		323	04	
381	6.46	6.43	34.168	26.845													

RV NEW HORIZON

CALCOFI CRUISE 1202

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 4.1 W	06/02/2012	0628	UTC	4154 m	240	06 kn	210 01 19	2	1014.8 mb	14.1 C	11.6 C	21 m	8/8	SC	045	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.53	14.53	33.284	24.750	318.7	0.000	5.90	101.6	2.2	0.31	0.0	0.00	0.00	0.24	0.08	0	
2	14.53	14.53	33.284	24.750	318.7	0.006	5.90	101.6	2.2	0.31	0.0	0.00	0.00	0.24	0.08	2	21
10	14.52	14.52	33.283	24.753	318.6	0.031											10 20
10	14.52	14.52	33.284	24.753	318.6	0.032	5.90	101.6	2.2	0.30	0.0	0.00	0.00	0.23	0.08	10	19
20	ISL	14.49 D	14.48	33.289 D	24.765	317.8	0.064	5.87	D101.1	2.2	0.30	0.0	0.00	0.00	0.24	0.08	20
25	14.47	14.47	33.287	24.768	317.7	0.080	5.90	101.5	2.2	0.30	0.0	0.00	0.00	0.25	0.09	25	18
30	ISL	14.46 D	14.46	33.288 D	24.770	317.6	0.096	5.87	D101.1	2.2	0.30	0.0	0.00	0.00	0.27	0.10	30
39	14.45	14.45	33.289	24.774	317.6	0.124	5.90	101.4	2.2	0.30	0.0	0.00	0.00	0.29	0.11	39	17
50	14.44	14.43	33.284	24.774	317.9	0.159	5.88	101.1	2.2	0.30	0.0	0.00	0.00	0.34	0.13	50	16
62	14.34	14.33	33.280	24.792	316.5	0.197	5.87	100.7	2.2	0.31	0.0	0.01	0.00	0.36	0.14	62	15
74	12.74	12.73	33.202	25.057	291.5	0.234	5.47	90.8	4.5	0.58	4.1	0.03	0.00	0.17	0.20	75	14
75	ISL	12.66 D	12.63	33.211 D	25.082	289.1	0.238	5.44	D90.1	4.7	0.59	4.3	0.03	0.00	0.17	0.20	76
87	11.60	11.59	33.237	25.299	268.6	0.270	5.20	84.2	6.5	0.75	7.2	0.01	0.00	0.13	0.12	88	13
100	10.84	10.82	33.321	25.502	249.5	0.304	4.68	74.6	11.0	1.08	12.6	0.01	0.00	0.08	0.08	101	12
112	10.18	10.17	33.489	25.747	226.4	0.332	3.88	61.0	17.4	1.49	19.3	0.00	0.00	0.04	0.05	113	11
124	9.92	9.91	33.655	25.920	210.2	0.359	3.08	48.2	23.0	1.82	24.0	0.00	0.00	0.01	0.04	125	10
125	ISL	9.88 D	9.87	33.678 D	25.945	207.8	0.363	3.15	D49.3	23.3	1.83	24.2	0.00	0.00	0.01	0.04	126
140	9.75	9.73	33.816	26.075	195.8	0.391	2.39	37.3	27.8	2.05	27.0	0.00	0.00	0.00	0.03	141	09
150	ISL	9.63 D	9.61	33.885 D	26.149	189.0	0.413	2.20	D34.3	29.4	2.11	27.7	0.00	0.00	0.00	0.03	151
169	9.45	9.43	33.975	26.250	179.8	0.445	1.93	29.9	32.4	2.21	29.0	0.00	0.00	0.00	0.03	170	08
200	9.17	9.15	34.056	26.359	170.1	0.499	1.84	28.4	34.9	2.28	29.8	0.00	0.00	0.00	0.03	202	07
229	9.10	9.08	34.116	26.418	165.1	0.548	1.58	24.4	37.3	2.36	30.8	0.00	0.00			231	06
250	ISL	9.04 D	9.01	34.147 D	26.453	162.2	0.586	1.43	D22.1	38.2	2.40	30.9	0.00	0.00			252
270	8.98	8.95	34.157	26.471	160.9	0.615	1.43	22.0	39.1	2.43	31.0	0.00	0.00			272	05
300	ISL	8.82 D	8.78	34.195 D	26.527	156.1	0.666	1.16	D17.8	42.0	2.53	32.3	0.00	0.00			302
320	8.70	8.66	34.214	26.561	153.3	0.693	1.03	15.8	44.0	2.59	33.1	0.00	0.00			323	04
380	8.39	8.35	34.234	26.626	148.2	0.784	0.85	12.9	48.1	2.68	34.1	0.00	0.00			383	
400	ISL	8.29 D	8.25	34.237 D	26.644	146.8	0.819	0.81	D12.2	50.0	2.71	34.6	0.00	0.00			403
439	7.82	7.78	34.226	26.706	141.2	0.869	0.78	11.6	53.8	2.77	35.7	0.00	0.00			443	02
500	ISL	6.87 D	6.82	34.219 D	26.834	129.1	0.959	0.62	D9.0	63.6	2.92	38.2	0.00	0.00			504
515	6.82	6.77	34.220	26.843	128.5	0.971	0.60	8.8	66.0	2.96	38.8	0.00	0.00			519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
31 19.5 N	123 44.4 W	06/02/2012	1259	UTC	4039 m	160	10 kn			1014.4 mb	15.1 C	12.5 C	21 m	8/8	SC	046	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	15.17	15.17	33.397	24.701	323.3	0.000	5.80	101.3	1.9	0.32	0.0	0.00	0.00	0.22	0.03	0	
2	15.17	15.17	33.397	24.701	323.3	0.007	5.80	101.3	1.9	0.32	0.0	0.00	0.00	0.22	0.03	2	21
10	15.17	15.17	33.398	24.700	323.6	0.031	5.80	101.4	1.9	0.32	0.0	0.00	0.00	0.25	0.04	10	20
20	ISL	15.16 D	15.16	33.396 D	24.702	323.8	0.065	5.79	D101.1	1.9	0.31	0.0	0.00	0.00	0.29	0.04	20
25	15.16	15.16	33.396	24.703	323.9	0.081	5.79	101.2	1.9	0.31	0.0	0.00	0.00	0.30	0.04	25	18
30	ISL	15.16 D	15.15	33.395 D	24.703	324.1	0.098	5.76	D100.5	1.9	0.32	0.0	0.00	0.00	0.34	0.03	30
40	15.14	15.14	33.394	24.706	324.1	0.130	5.79	101.1	1.9	0.34	0.0	0.00	0.00	0.40	0.01	40	17
50	15.14	15.13	33.393	24.707	324.4	0.162	5.79	101.0	1.8	0.26	0.0	0.00	0.00	0.42	0.01	50	16
62	14.90	14.89	33.367	24.740	321.5	0.201	5.77	100.3	1.8	0.32	0.0	0.03	0.04	0.36	0.06	62	15
75	14.05	14.04	33.310	24.875	309.0	0.242	5.71	97.5	2.6	0.39	0.7	0.26	0.09	0.32	0.11	76	14
87	12.56	12.55	33.244	25.123	285.5	0.278	5.35	88.4	4.8	0.64	4.8	0.16	0.00	0.22	0.11	88	13
100	11.72	11.70	33.279	25.311	267.8	0.314	5.04	81.8	7.0	0.84	8.4	0.08	0.00	0.19	0.04	101	12
112	11.30	11.29	33.314	25.414	258.3	0.345	4.80	77.3	8.9	0.98	10.9	0.04	0.00	0.13	0.09	113	11
125	10.17	10.15	33.410	25.687	232.4	0.377	4.52	71.0	13.0	1.19	14.7	0.01	0.00	0.05	0.04	126	10
140	9.62	9.61	33.554	25.891	213.2	0.410	4.22	65.5	17.9	1.42	18.8	0.00	0.00	0.01	0.02	141	09
150	ISL	9.41 D	9.40	33.646 D	25.997	203.3	0.434	4.02	D62.2	20.4	1.52	20.5	0.00	0.00	0.01	0.02	151
170	9.02	9.00	33.794	26.177	186.5	0.470	3.59	55.2	25.5	1.72	24.0	0.00	0.00	0.00	0.02	171	08
200	8.55	8.53	33.946	26.370	168.7	0.524	2.84	43.2	32.4	2.01	28.0	0.00	0.00	0.00	0.02	202	07
230	8.26	8.24	34.003	26.460	160.7	0.573	2.39	36.2	37.6	2.18	30.5	0.00	0.00			232	06
250	ISL	8.02 D	8.00	34.025 D	26.512	156.0	0.609	2.27	D34.1	40.4	2.23	31.3	0.00	0.00			252
270	7.68	7.65	34.016	26.557	151.9	0.635	2.29	34.1	43.1	2.27	32.1	0.00	0.00			272	05
300	ISL	7.43 D	7.40	34.079 D	26.641	144.3	0.684	1.63	D24.1	48.9	2.46	34.3	0.00	0.00			302
320	7.13	7.10	34.074	26.679	140.8	0.708	1.55	22.9	52.7	2.58	35.8	0.00	0.00			323	04
380	6.59	6.56	34.127	26.795	130.4	0.790	0.99	14.5	63.3	2.82</							

RV NEW HORIZON

CALCOFI CRUISE 1202

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 5.7 W	03/02/2012	2104	UTC	19 m	030	05 kn			1013.4 mb	13.5 C	9.6 C					032
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
0	14.34	14.33	33.324	24.823	311.7	0.000	6.39	109.8	0.1	0.20	0.0	0.00	0.00	1.58	0.30	0	
2	14.34	14.33	33.324	24.823	311.7	0.006	6.39	109.8	0.1	0.20	0.0	0.00	0.00	1.58	0.30	2	04
5	14.33	14.33	33.324	24.824	311.7	0.016	6.39	109.7	0.1	0.20	0.0	0.00	0.00	1.63	0.31	5	03
10	14.28	14.28	33.345	24.852	309.2	0.031	6.36	109.1	0.2	0.21	0.0	0.00	0.00	1.23	0.31	10	02
15	14.18	14.18	33.347	24.873	307.3	0.047	6.21	106.3	0.5	0.25	0.0	0.01	0.07	2.24	0.50	15	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 45.1 W	03/02/2012	1836	UTC	28 m	270	02 kn			1013.4 mb	12.9 C	10.4 C					031
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
0	14.27	14.27	33.353	24.859	308.3	0.000	6.18	106.0	1.8	0.31	0.1	0.02	0.00	1.40	0.62	0	
2	14.27	14.27	33.353	24.859	308.3	0.006	6.18	106.0	1.8	0.31	0.1	0.02	0.00	1.40	0.62	2	04
5	14.27	14.27	33.352	24.859	308.3	0.015	6.18	105.9	1.8	0.30	0.1	0.02	0.07	1.45	0.62	5	03
10	14.19	14.19	33.351	24.874	307.1	0.031	6.11	104.6	1.9	0.31	0.0	0.03	0.06	1.50	0.67	10	02
20	13.97	13.97	33.353	24.923	302.7	0.061	5.79	98.7	2.9	0.41	1.0	0.11	0.16	2.02	0.98	20	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
33 29.1 N	117 46.2 W	03/02/2012	1639	UTC	65 m	020	02 kn			1013.5 mb	13.2 C	11.2 C					030
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
0	14.54	14.54	33.357	24.805	313.4	0.000	6.17	106.3	1.4	0.28	0.0	0.00	0.00	0.46	0.19	0	
2	14.54	14.54	33.357	24.805	313.4	0.006	6.17	106.3	1.4	0.28	0.0	0.00	0.00	0.46	0.19	2	08
5	14.52	14.52	33.358	24.810	313.1	0.016	6.18	106.6	1.4	0.27	0.0	0.00	0.00	0.51	0.18	5	07
10	14.47	14.47	33.357	24.820	312.2	0.031	6.19	106.5	1.4	0.28	0.0	0.00	0.00	0.53	0.17	10	06
19	14.23	14.23	33.362	24.875	307.3	0.059	6.05	103.6	1.5	0.33	0.1	0.02	0.00	0.91	0.38	19	05
20 ISL	14.13 D	14.09	33.366 D	24.908	304.1	0.063	5.86	D100.1	2.0	0.38	0.8	0.05	0.01	0.94	0.42	20	
30	12.73	12.72	33.340	25.163	280.1	0.092	4.80	79.7	7.4	0.89	8.1	0.34	0.11	1.21	0.82	30	04
39	11.64	11.64	33.387	25.405	257.3	0.116	3.99	64.8	12.9	1.31	14.5	0.31	0.17	0.16	0.51	39	03
50	11.09	11.08	33.454	25.558	242.9	0.143	3.71	59.6	15.5	1.47	17.0	0.02	0.00	0.12	0.17	50	02
60	10.89	10.89	33.483	25.616	237.7	0.167	3.63	58.0	16.7	1.54	18.0	0.03	0.00	0.09	0.17	60	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 25.2 N	117 54.1 W	03/02/2012	1352	UTC	626 m	110	05 kn			1013.1 mb	14.8 C	13.0 C					029
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
2	14.58	14.58	33.390	24.822	311.8	0.003	6.04	104.4	2.8	0.36	0.0	0.01	0.11	0.76	0.17	2	21
10	14.39	14.38	33.388	24.862	308.2	0.027										10	20
10	14.39	14.38	33.388	24.862	308.2	0.028										19	
20	14.26	14.25	33.387	24.889	306.0	0.059	5.89	101.1	3.0	0.40	0.3	0.04	0.09	1.45	0.58	20	18
30	14.19	14.18	33.378	24.897	305.5	0.089	5.76	98.8	3.3	0.43	0.9	0.09	0.07	1.52	0.47	30	17
40	13.59	13.58	33.384	25.025	293.6	0.119	5.16	87.3	6.0	0.72	5.0	0.14	0.06	0.62	0.41	40	16
50	12.09	12.07	33.391	25.327	265.0	0.147	4.17	68.3	11.2	1.20	12.4	0.04	0.03	0.30	0.29	50	15
60	11.62	11.61	33.484	25.486	250.1	0.173	3.69	59.9	14.8	1.44	15.6	0.02	0.04	0.20	0.13	60	14
75	11.12	11.11	33.565	25.640	235.7	0.209	3.30	53.0	18.6	1.62	18.4	0.01	0.00	0.07	0.10	76	13
84	10.93	10.92	33.624	25.720	228.3	0.230	3.09	49.5	20.5	1.72	19.7	0.01	0.00	0.04	0.08	85	12
100	10.47	10.45	33.760	25.908	210.8	0.265	2.60	41.4	25.3	1.94	22.5	0.00	0.00	0.02	0.06	101	11
120	10.20	10.18	33.894	26.061	196.8	0.306	2.26	35.8	28.3	2.08	24.6	0.01	0.05	0.01	0.05	121	10
125 ISL	10.13 D	10.11	33.937 D	26.106	192.0	0.932	2.16	D 34.2	28.9	2.11	25.0	0.01	0.04	0.01	0.05	126	
140	9.97	9.95	34.010	26.191	184.9	0.344	1.99	31.3	30.7	2.19	26.1	0.00	0.00	0.00	0.04	141	09
150 ISL	9.85 D	9.84	34.037 D	26.230	181.0	0.927	1.99	D 31.2	31.5	2.21	26.6	0.00	0.00	0.00	0.04	151	
170	9.60	9.58	34.076	26.305	174.6	0.398	1.86	29.1	33.3	2.25	27.5	0.00	0.00	0.00	0.04	171	08
200	9.28	9.26	34.142	26.409	165.4	0.449	1.68	26.0	35.9	2.33	28.7	0.00	0.00	0.00	0.04	202	07
230	8.64	8.62	34.130	26.501	156.9	0.498	1.60	24.5	40.2	2.42	30.7	0.00	0.00			232	06
250 ISL	8.58 D	8.55	34.145 D	26.524	155.0	0.915	1.50	D 22.9	42.3	2.48	31.4	0.00	0.00			252	
270	8.37	8.34	34.171	26.577	150.4	0.559	1.29	19.7	44.5	2.54	32.0	0.00	0.00			272	05
300 ISL	8.07 D	8.04	34.210 D	26.653	143.0	0.912	0.98	D 14.9	48.2	2.66	33.2	0.00	0.00			302	
320	7.99	7.95	34.227	26.679	141.5	0.632	0.86	13.0	50.8	2.74	34.0	0.00	0.00			323	04
380	7.61	7.57	34.274	26.772	133.6	0.715	0.55	8.3	57.4	2.88	35.5	0.00	0.00			383	03
400 ISL	7.54 D	7.50	34.284 D	26.791	132.0	0.903											

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	S103 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEOPHAEO ug/l	PRES db	SAMP
m	DEG C	DEG C			352 m	330	06 kn	180 02 06		1012.1 mb	15.0 C	13.0 C					028
0	14.91	14.91	33.395	24.755	318.1	0.000	5.97	103.7	2.7	0.34	0.0	0.00	0.00	0.38	0.12	0	
1	14.91	14.91	33.395	24.755	318.1	0.003	5.97	103.7	2.7	0.34	0.0	0.00	0.00	0.38	0.12	1	18
10	14.66	14.66	33.392	24.807	313.4	0.030											10 17
20	14.59	14.59	33.392	24.822	312.4	0.063	6.00	103.6	2.8	0.35	0.0	0.00	0.00	0.86	0.10	20	15
30	13.89	13.89	33.378	24.958	299.7	0.094	5.77	98.2	3.5	0.43	1.0	0.03	0.04	1.40	0.36	30	14
40	12.50	12.49	33.392	25.248	272.3	0.122	4.36	72.0	10.1	1.10	10.8	0.06	0.00	0.40	0.38	40	13
50	11.70	11.70	33.480	25.467	251.7	0.148	3.72	60.5	14.6	1.42	15.4	0.02	0.00	0.19	0.15	50	12
60	11.55	11.55	33.516	25.523	246.6	0.173	3.58	58.0	15.5	1.48	16.3	0.02	0.00	0.13	0.13	60	11
70	10.99	10.98	33.593	25.685	231.4	0.197	3.25	52.1	19.1	1.64	19.0	0.00	0.00	0.06	0.08	71	10
75 ISL	10.88	D 10.87	33.652	D 25.751	225.3	0.210	3.01	D 48.1	20.3	1.70	19.7	0.00	0.00	0.05	0.07	76	
85	10.70	10.69	33.689	25.812	219.7	0.231	2.85	45.5	22.6	1.82	21.1	0.00	0.00	0.02	0.06	86	09
100	10.41	10.39	33.802	25.951	206.8	0.263	2.52	40.0	26.0	1.97	23.1	0.00	0.00	0.01	0.05	101	08
120	10.15	10.14	33.921	26.089	194.2	0.303	2.23	35.2	28.6	2.09	25.0	0.00	0.00	0.01	0.05	121	07
125 ISL	10.11	D 10.10	33.950	D 26.118	191.5	0.314	2.19	D 34.5	29.2	2.11	25.3	0.00	0.00	0.01	0.05	126	
140	9.95	9.94	34.012	26.194	184.6	0.341	2.00	31.4	30.9	2.18	26.3	0.00	0.00	0.00	0.05	141	06
150 ISL	9.63	D 9.61	34.012	D 26.248	179.6	0.361	2.08	D 32.4	32.0	2.20	26.9	0.00	0.00	0.00	0.04	151	
170	9.23	9.21	34.061	26.353	170.0	0.394	1.94	29.9	34.1	2.25	28.2	0.00	0.00	0.00	0.04	171	05
200	8.77	8.75	34.116	26.468	159.5	0.443	1.72	26.4	38.2	2.35	29.9	0.00	0.00	0.00	0.03	202	04
230	8.50	8.48	34.145	26.534	153.8	0.490	1.50	22.8	41.6	2.45	31.2	0.00	0.00		232	03	
250 ISL	8.37	D 8.34	34.171	D 26.576	150.2	0.524	1.35	D 20.5	43.7	2.52	31.9	0.00	0.00		252		
270	8.26	8.23	34.182	26.602	148.1	0.551	1.20	18.2	45.8	2.59	32.5	0.00	0.00		272	02	
300 ISL	8.00	D 7.97	34.224	D 26.674	141.7	0.598	0.94	D 14.1	50.6	2.73	33.9	0.00	0.00		302		
320	7.78	7.75	34.247	26.724	137.2	0.622	0.71	10.6	53.8	2.83	34.8	0.00	0.00		323	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN	OXY PCT	S103 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	NH4 uM/L	CHL-A ug/l	PHAEOPHAEO ug/l	PRES db	SAMP
m	DEG C	DEG C			1182 m	260	05 kn	270 03 07	1	1012.5 mb	16.1 C	13.5 C					027
0	15.20	15.20	33.390	24.687	324.6	0.000	6.07	106.0	2.5	0.34	0.0	0.00	0.00	0.32	0.10	0	
2	15.20	15.20	33.390	24.687	324.6	0.007	6.07	106.0	2.5	0.34	0.0	0.00	0.00	0.32	0.10	2	20
10	14.76	14.76	33.383	24.779	316.2	0.032	6.04	104.6	2.4	0.32	0.0	0.00	0.00	0.34	0.13	10	19
20	14.41	14.40	33.377	24.850	309.7	0.063	5.96	102.5	2.9	0.37	0.4	0.02	0.00	0.74	0.35	20	18
30	12.49	12.49	33.350	25.216	275.1	0.093	4.98	82.3	6.8	0.80	6.4	0.13	0.00	1.12	0.77	30	17
40	11.84	11.84	33.385	25.367	261.0	0.119	4.07	66.4	12.1	1.24	13.6	0.06	0.00	0.33	0.40	40	16
49	11.20	11.20	33.447	25.533	245.4	0.142	3.74	60.2	15.0	1.41	16.5	0.02	0.00	0.16	0.22	49	15
50 ISL	11.30	D 11.29	33.446	D 25.515	247.1	0.146	3.75	D 60.4	15.2	1.42	16.7	0.02	0.00	0.16	0.21	50	
59	10.94	10.93	33.485	25.609	238.3	0.167	3.50	56.0	17.1	1.53	18.2	0.00	0.00	0.11	0.19	59	14
70	10.70	10.69	33.566	25.716	228.5	0.192	3.18	50.7	1.68	2.02	2.00	0.00	0.00	0.07	0.12	71	13
75 ISL	10.61	D 10.60	33.588	D 25.748	225.5	0.204	3.17	D 50.3	20.8	1.73	20.8	0.00	0.02	0.06	0.11	76	
85	10.42	10.41	33.654	25.833	217.6	0.226	2.91	46.0	22.6	1.82	21.9	0.00	0.05	0.03	0.09	86	12
99	10.33	10.32	33.742	25.918	209.9	0.256	2.66	42.0	24.8	1.92	22.9	0.00	0.00	0.01	0.06	100	11
100 ISL	10.22	D 10.20	33.754	D 25.947	207.1	0.259	2.70	D 42.6	24.9	1.92	23.0	0.00	0.00	0.01	0.06	101	
120	9.94	9.93	33.870	26.085	194.5	0.298	2.53	39.6	27.1	2.00	24.4	0.00	0.00	0.01	0.05	121	10
125 ISL	9.88	D 9.87	33.897	D 26.116	191.7	0.309	2.48	D 38.9	28.0	2.04	24.9	0.00	0.00	0.01	0.05	126	
140	9.67	9.65	34.002	26.234	180.7	0.336	2.16	33.7	30.8	2.14	26.5	0.00	0.00	0.00	0.04	141	09
150 ISL	9.55	D 9.54	34.043	D 26.286	176.0	0.355	2.07	D 32.3	31.7	2.16	26.9	0.00	0.00	0.00	0.05	151	
169	9.31	9.29	34.060	26.339	171.4	0.386	2.04	31.6	33.4	2.21	27.7	0.00	0.00	0.00	0.07	170	08
200	8.90	8.87	34.142	26.470	159.4	0.438	1.64	25.2	38.6	2.37	29.8	0.00	0.00	0.00	0.03	202	07
229	8.71	8.69	34.186	26.534	153.9	0.483	1.39	21.2	41.4	2.47	30.7	0.00	0.00		231	06	
250 ISL	8.50	D 8.47	34.213	D 26.589	149.0	0.518	1.19	D 18.1	44.1	2.55	31.5	0.00	0.00		252		
270	8.38	8.35	34.231	26.622	146.2	0.544	1.04	15.7	46.6	2.62	32.2	0.00	0.00		272	05	
300 ISL	7.96	D 7.93	34.230	D 26.684	140.7	0.591	0.84	D 12.7	50.6	2.71	33.7	0.00	0.00		302		
319	7.82	7.79	34.241	26.714	138.2	0.614	0.73	11.0	53.1	2.77	34.6	0.00	0.00		322	04	
379	7.41	7.37	34.276	26.802	130.6	0.694	0.51	7.5	59.4	2.91	36.0	0.00	0.00		382	03	
400 ISL	7.26	D 7.22	34.294	D 26.838	127.4	0.726	0.42	D 6.2	61.9	2.94	36.3	0.00	0.00		403		
440	6.96	6.91	34.300	26.885	123.4	0.772	0.36	5.2	66.6	3.01	36.9	0.00	0.00		444	02	
500 ISL	6.54	D 6.49	34.316	D 26.954	117.4	0.850	0.28	D 4.1	74.1	3.11	38.6	0.00	0.00		504		
516	6.37	6.32	34.319	26.980	115.0	0.863	0.24	3.5	76.1	3.14	39.0	0.00	0.00		520	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	

RV NEW HORIZON

CALCOFI CRUISE 1202

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 39.2 N	119 29.2 W	02/02/2012	1828	UTC	1320 m	320	15 kn			1017.2 mb	14.1 C	13.1 C					025
0	14.32	14.32	33.327	24.828	311.3	0.000	5.92	101.5	2.3	0.34	0.0	0.00	0.00	0.38	0.10	0	
2	14.32	14.32	33.327	24.828	311.3	0.006	5.92	101.5	2.3	0.34	0.0	0.00	0.00	0.38	0.10	2	20
10	14.33	14.32	33.326	24.827	311.5	0.031	5.91	101.4	2.4	0.33	0.0	0.00	0.00	0.36	0.13	10	19
20	14.33	14.32	33.327	24.828	311.8	0.062	5.91	101.4	2.4	0.33	0.0	0.00	0.00	0.37	0.13	20	18
30	14.33	14.32	33.328	24.829	312.0	0.094	5.91	101.5	2.3	0.34	0.0	0.00	0.00	0.37	0.12	30	17
40	14.33	14.32	33.326	24.829	312.4	0.125	5.91	101.4	2.3	0.33	0.0	0.00	0.00	0.36	0.12	40	16
50	13.95	13.94	33.320	24.904	305.5	0.156	5.85	99.6	2.6	0.37	0.5	0.06	0.06	0.36	0.14	50	15
60	12.81	12.81	33.294	25.112	285.9	0.185	5.40	89.8	4.6	0.62	4.3	0.14	0.00	0.23	0.14	60	14
70	12.27	12.26	33.303	25.224	275.4	0.213	5.14	84.5	6.5	0.77	7.0	0.07	0.00	0.16	0.13	71	13
75 ISL	12.08 D	11.99	33.314 D	25.285	269.7	0.228	5.04	82.4	7.5	0.85	8.2	0.06	0.00	0.15	0.12	76	
85	11.65	11.64	33.348	25.375	261.3	0.254	4.70	76.3	9.5	1.01	10.7	0.03	0.00	0.12	0.11	86	12
100	10.74	10.73	33.481	25.644	236.0	0.291	3.95	62.9	15.8	1.40	17.1	0.01	0.00	0.06	0.08	101	11
120	9.95	9.94	33.612	25.881	213.8	0.336	3.53	55.3	20.4	1.66	20.5	0.01	0.00	0.02	0.06	121	10
125 ISL	9.74 D	9.72	33.695 D	25.982	204.3	0.348	3.33 D	51.9	21.4	1.69	21.1	0.01	0.00	0.02	0.06	126	
140	9.65	9.63	33.713	26.011	201.8	0.377	3.23	50.2	24.4	1.79	22.7	0.01	0.00	0.01	0.05	141	09
150 ISL	9.46 D	9.45	33.779 D	26.093	194.2	0.399	3.09 D	47.9	26.3	1.87	23.8	0.01	0.00	0.01	0.05	151	
170	9.15	9.13	33.883	26.226	182.0	0.434	2.65	40.9	30.1	2.02	26.1	0.01	0.00	0.00	0.05	171	08
200 ISL	8.75 D	8.72	34.008 D	26.388	167.1	0.489	2.25 D	34.5	35.4	2.19	28.4	0.00	0.00	0.00	0.03	202	
202	8.73	8.71	34.006	26.388	167.1	0.490	2.27	34.7	35.7	2.20	28.5	0.00	0.00	0.00	0.03	204	07
231	8.32	8.30	34.062	26.497	157.2	0.537	1.96	29.7	40.2	2.31	30.6	0.00	0.00			233	06
250 ISL	8.10 D	8.07	34.083 D	26.548	152.7	0.570	1.81 D	27.2	44.3	2.41	31.9	0.00	0.00			252	
270	7.66	7.63	34.111	26.633	144.7	0.596	1.50	22.4	48.6	2.52	33.3	0.00	0.00			272	05
300 ISL	7.37 D	7.34	34.150 D	26.706	138.1	0.642	1.14 D	16.9	53.4	2.66	34.7	0.00	0.00			302	
321	7.20	7.17	34.153	26.733	135.8	0.667	1.06	15.6	56.8	2.76	35.7	0.00	0.00			324	04
380	7.07	7.03	34.233	26.816	129.0	0.745	0.66	9.8	62.3	2.91	36.8	0.00	0.00			383	03
400 ISL	6.92 D	6.88	34.234 D	26.837	127.1	0.776	0.61 D	9.0	64.2	2.95	37.2	0.00	0.00			403	
441	6.67	6.63	34.259	26.891	122.5	0.822	0.49	7.2	68.1	3.02	38.0	0.00	0.00			445	02
500 ISL	6.27 D	6.23	34.298 D	26.975	115.1	0.898	0.33 D	4.8	76.1	3.11	39.6	0.00	0.00			504	
516	6.08	6.04	34.289	26.992	113.5	0.911	0.34	4.8	78.3	3.13	40.0	0.00	0.00			520	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
32 25.0 N	119 57.9 W	02/02/2012	1317	UTC	903 m	320	23 kn			1019.7 mb	13.0 C	12.0 C					024
0	13.83	13.83	33.359	24.955	299.1	0.000	5.90	100.2	3.2	0.41	0.9	0.06	0.11	0.44	0.04	0	
2	13.83	13.83	33.359	24.955	299.1	0.006	5.90	100.2	3.2	0.41	0.9	0.06	0.11	0.44	0.04	2	20
10	13.83	13.83	33.359	24.955	299.4	0.030	5.93	100.8	3.1	0.41	0.9	0.06	0.12	0.41	0.08	10	19
20	13.84	13.83	33.359	24.955	299.7	0.060	5.91	100.5	3.1	0.40	0.9	0.06	0.09	0.40	0.08	20	18
30	13.82	13.82	33.357	24.956	299.9	0.090	5.90	100.2	3.2	0.40	1.0	0.07	0.10	0.45	0.07	30	17
40	13.53	13.52	33.356	25.017	294.4	0.120	5.81	98.1	3.6	0.46	1.8	0.13	0.15	0.46	0.14	40	16
50	13.03	13.02	33.411	25.159	281.1	0.148	5.81	97.2	4.1	0.54	2.4	0.15	0.51	0.49	0.19	50	15
61	11.43	11.42	33.325	25.397	258.6	0.178	4.82	77.8	9.1	0.99	10.6	0.07	0.00	0.20	0.13	61	14
70	11.02	11.01	33.447	25.566	242.7	0.201	4.20	67.4	13.6	1.28	15.1	0.03	0.00	0.12	0.07	71	13
75 ISL	10.70 D	10.68	33.504 D	25.669	233.0	0.214	3.90 D	62.1	15.5	1.38	16.7	0.02	0.00	0.10	0.08	76	
85	10.26	10.25	33.582	25.804	220.4	0.235	3.55	56.0	19.3	1.59	20.0	0.00	0.00	0.05	0.08	86	12
100	9.72	9.71	33.725	26.008	201.3	0.267	2.99	46.6	24.8	2.84	23.9	0.00	0.00	0.02	0.05	101	11
121	9.22	9.21	33.837	26.177	185.6	0.308	2.68	41.4	28.8	2.00	26.1	0.00	0.00	0.01	0.05	122	10
125 ISL	9.18 D	9.17	33.871 D	26.210	182.5	0.317	2.71 D	41.8	29.2	2.00	26.1	0.00	0.00	0.01	0.05	126	
139	8.98	8.96	33.926	26.286	175.6	0.340	2.78	42.7	30.4	1.98	26.2	0.00	0.00	0.01	0.03	140	09
150 ISL	8.76 D	8.74	33.989 D	26.369	167.8	0.361	2.44 D	37.3	32.5	2.04	27.0	0.00	0.00	0.01	0.03	151	
170	8.51	8.49	34.033	26.443	161.1	0.392	2.40	36.5	36.3	2.15	28.4	0.00	0.00	0.00	0.03	171	08
200 ISL	8.21 D	8.19	34.082 D	26.529	153.5	0.442	2.02 D	30.6	40.8	2.30	30.1	0.00	0.00	0.00	0.03	202	
201	8.19	8.17	34.084	26.533	153.1	0.441	2.01	30.4	40.9	2.31	30.2	0.00	0.00	0.00	0.03	203	07
229	7.88	7.85	34.108	26.598	147.3	0.483	1.71	25.6	45.9	2.44	32.0	0.00	0.00			231	06
250 ISL	7.77 D	7.74	34.132 D	26.634	144.3	0.516	1.50 D	22.5	49.0	2.53	33.0	0.00	0.00			252	
270	7.51	7.49	34.149	26.684	139.8	0.542	1.27	19.0	51.9	2.62	34.0	0.00	0.00			272	05
300 ISL	7.20 D	7.17	34.154 D	26.733	135.5	0.587	1.08 D	16.0	56.9	2.73	35.6	0.00	0.00			302	
320	6.92	6.89	34.161	26.777	131.4	0.610	0.95	13.9	60.3	2.80	36.6	0.00	0.00			323	04
380	6.30	6.27	34.168	26.865	123.6	0.686	0.76	11.0	69.1	2.95	38.6	0.00	0.00			383	03
400 ISL	6.26 D	6.23	34.202 D	26.898	120.8	0.715	0.60 D	8.6	70.9	3.00	38.9	0.00	0.00			403	
440	6.14	6.10	34.242	26.946	116.7	0.758	0.47	6.7	74.6	3.09	39.5	0.00	0.00			444	02
500 ISL	5.87 D	5.83	34.275 D	27.007	111.5	0.833	0.35 D	5.0	79.9	3.15	40.4	0.00	0.00			504	
515	5.83	5.79	34.284	27.020	110.5	0.843	0.33	4.7	81.2	3.16	40.6	0.00	0.00				

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
32 5.0 N	120 38.5 W	02/02/2012	0639	UTC	3847 m	330	20 kn	300 05 05	1	1020.6 mb	14.2 C	12.4 C	14 m	1/8	CU	023	
0	13.76	13.75	33.245	24.882	306.0	0.000	6.03	102.2	2.9	0.35	0.3	0.03	0.00	0.46	0.09	0	
2	13.76	13.75	33.245	24.882	306.0	0.006	6.03	102.2	2.9	0.35	0.3	0.03	0.00	0.46	0.09	2	
10	13.76	13.76	33.246	24.883	306.2	0.031	6.04	102.3	2.9	0.34	0.3	0.03	0.00	0.46	0.09	10	
20	13.73	13.73	33.247	24.891	305.8	0.061	6.05	102.4	2.9	0.34	0.3	0.03	0.00	0.48	0.10	20	
29	13.69	13.69	33.258	24.907	304.5	0.089	6.03	102.2	3.0	0.34	0.3	0.03	0.00	0.59	0.11	29	
30	ISL	13.67 D	13.66	33.260 D	24.913	304.0	0.092	6.02	D101.9	3.0	0.34	0.3	0.03	0.01	0.57	0.12	30
40		13.58	13.57	33.251	24.925	303.1	0.122	5.98	101.0	3.1	0.37	0.6	0.06	0.09	0.43	0.12	40
50		13.31	13.31	33.243	24.973	298.9	0.152	5.91	99.3	3.3	0.42	1.3	0.13	0.14	0.42	0.14	50
60		13.22	13.21	33.293	25.032	293.5	0.182	5.97	100.0	3.7	0.43	1.4	0.09	0.11	0.55	0.17	60
70		12.42	12.41	33.211	25.123	285.0	0.211	5.63	92.9	4.5	0.57	3.5	0.15	0.03	0.19	0.14	71
75	ISL	11.98 D	11.87	33.213 D	25.228	275.1	0.226	5.38	D 87.6	6.3	0.73	6.1	0.10	0.02	0.15	0.12	76
84		11.04	11.03	33.280	25.434	255.6	0.249	4.89	78.3	9.6	1.02	10.9	0.01	0.00	0.08	0.09	85
100		10.06	10.05	33.458	25.742	226.5	0.287	4.14	64.9	16.3	1.38	17.5	0.01	0.00	0.04	0.05	101
120		9.32	9.31	33.663	26.025	200.0	0.330	3.50	54.0	23.4	1.71	22.7	0.01	0.00	0.01	0.03	121
125	ISL	9.28 D	9.26	33.710 D	26.068	196.0	0.341	3.32 D	51.3	24.6	1.76	23.4	0.01	0.00	0.01	0.03	126
139		9.01	9.00	33.804	26.185	185.1	0.367	3.04	46.7	27.9	1.90	25.5	0.00	0.00	0.00	0.03	140
150	ISL	8.80 D	8.78	33.895 D	26.290	175.3	0.388	2.72 D	41.7	30.2	1.97	26.6	0.00	0.00	0.00	0.03	151
170		8.60	8.59	33.969	26.378	167.3	0.421	2.44	37.1	34.5	2.10	28.5	0.00	0.00	0.00	0.03	171
198		8.28	8.26	34.029	26.476	158.5	0.466	2.13	32.2	38.9	2.23	30.2	0.00	0.00	0.00	0.03	200
200	ISL	8.27 D	8.24	34.029 D	26.479	158.3	0.472	2.13 D	32.2	39.1	2.24	30.3	0.00	0.00	0.00	0.02	202
229		8.04	8.02	34.062	26.539	153.1	0.515	1.85	27.9	42.4	2.34	31.7	0.00	0.00		0.03	231
250	ISL	7.92 D	7.89	34.096 D	26.584	149.2	0.549	1.59 D	23.9	45.1	2.43	32.5	0.00	0.00		0.03	252
271		7.76	7.73	34.104	26.614	146.6	0.578	1.47	21.9	47.8	2.51	33.3	0.00	0.00		0.03	273
300	ISL	7.49 D	7.46	34.131 D	26.675	141.2	0.623	1.24 D	18.4	51.2	2.59	34.3	0.00	0.00		0.03	302
320		7.37	7.34	34.135	26.694	139.7	0.647	1.15	17.0	53.6	2.65	35.0	0.00	0.00		0.03	323
380		6.90	6.87	34.175	26.792	131.0	0.729	0.79	11.6	62.2	2.85	37.2	0.00	0.00		0.03	383
400	ISL	6.62 D	6.59	34.174 D	26.829	127.6	0.759	0.74 D	10.8	65.2	2.89	37.8	0.00	0.00		0.03	403
440		6.25	6.21	34.186	26.888	122.3	0.804	0.62	9.0	71.2	2.96	39.0	0.00	0.00		0.03	444
500	ISL	6.08 D	6.03	34.264 D	26.973	115.0	0.881	0.39 D	5.6	76.4	3.08	39.7	0.00	0.00		0.03	504
517		6.12	6.08	34.296	26.993	113.5	0.895	0.30	4.4	77.9	3.11	39.9	0.00	0.00		0.03	517

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 44.6 N	121 19.8 W	02/02/2012	0108	UTC	3762 m	350	03 kn	340 04 06	1	1022.4 mb	14.7 C	12.5 C	22 m	1/8	ST	022	
0	14.86	14.86	33.355	24.735	320.0	0.000	5.83	101.2	1.9	0.32	0.0	0.00	0.00	0.21	0.07	0	
2 A	14.86	14.86	33.355	24.735	320.0	0.006	5.83	101.2	1.9	0.32	0.0	0.00	0.00	0.21	0.07	2	
10 ISL	14.86 D	14.86	33.357 D	24.737	320.1	0.032	5.80 D	100.6	2.0	0.31	0.0	0.00	0.00	0.21	0.07	10	
15 A	14.86	14.85	33.357	24.738	320.2	0.048	5.82	101.0	2.0	0.31	0.0	0.00	0.00	0.21	0.07	15	
20 A	14.86	14.86	33.354	24.736	320.6	0.064	5.83	101.2	2.0	0.31	0.0	0.00	0.00	0.21	0.07	20	
30		14.85	14.85	33.353	24.738	320.8	0.096	5.84	101.3	2.0	0.30	0.0	0.00	0.00	0.22	0.07	30
40 A	14.83	14.83	33.350	24.740	320.9	0.128	5.83	101.1	2.1	0.30	0.0	0.00	0.00	0.23	0.08	40	
50 ISL	14.39 D	14.38	33.285 D	24.784	316.9	0.161	5.90 D	101.4	2.2	0.31	0.0	0.00	0.03	0.33	0.13	50	
52		14.38	14.37	33.282	24.784	317.0	0.166	5.89	101.2	2.2	0.31	0.0	0.00	0.04	0.35	0.14	52
64		14.32	14.31	33.279	24.796	316.2	0.204	5.87	100.7	2.2	0.32	0.0	0.02	0.07	0.35	0.15	65
75 A	14.11	14.09	33.279	24.841	312.3	0.239	5.78	98.8	2.6	0.37	0.5	0.13	0.14	0.22	0.13	76	
84 A	13.59	13.58	33.309	24.970	300.2	0.267	5.61	94.8	3.4	0.47	1.9	0.33	0.05	0.15	0.13	85	
95		12.62	12.60	33.325	25.176	280.7	0.299	5.34	88.5	4.9	0.62	4.8	0.11	0.00	0.10	0.09	96
100 ISL	12.47 D	12.43	33.326 D	25.211	277.5	0.314	5.26 D	86.8	6.1	0.71	6.3	0.08	0.00	0.09	0.09	101	
111		11.41	11.40	33.352	25.424	257.3	0.342	4.88	78.7	8.8	0.91	9.7	0.02	0.00	0.06	0.07	112
125		10.61	10.59	33.440	25.636	237.3	0.377	4.30	68.3	14.1	1.26	15.2	0.01	0.00	0.04	0.05	126
145		9.59	9.57	33.659	25.978	205.0	0.421	3.54	55.0	22.2	1.66	21.6	0.01	0.00	0.01	0.04	146
150 ISL	9.45 D	9.42	33.727 D	26.057	197.7	0.433	3.38 D	52.3	24.0	1.73	22.6	0.01	0.00	0.01	0.03	151	
170		9.00	8.98	33.919	26.278	177.0	0.468	2.64	40.6	31.1	2.02	26.7	0.00	0.00	0.00	0.02	171
200 ISL	8.87 D	8.85	34.095 D	26.437	162.5	0.521	1.73	26.6	37.9	2.32	29.7	0.00	0.00	0.00	0.03	202	
201		8.87	8.85	34.094	26.437	162.5	0.521	1.73	26.6	37.9	2.32	29.7	0.00	0.00	0.00	0.03	203
229		8.84	8.82	34.235	26.552	152.3	0.565	0.99	15.2	43.0	2.58	31.5	0.00	0.00		0.03	231
250 ISL	8.70 D	8.67	34.264 D	26.598	148.3	0.600	0.83 D	12.7	45.3	2.64	32.1	0.00	0.00		0.03	252	
271		8.57	8.54	34.282	26.632	145.5	0.628	0.71	10.8	47.6	2.70	32.7	0.00	0.00		0.03	273
300 ISL	8.32 D	8.29	34.299 D	26.685	140.9	0.673	0.58 D	8.8	50.2	2.75	33.3	0.00	0.00		0.03	302	
320		8.17	8.14	34.293	26.704	139.4	0.697	0.58	8.7	52.0	2.79	33.7	0.00	0.00		0.03	323
380		7.67	7.63	34.287	26.774	133.5	0.779	0.53	7.9	57.6	2.87	35.2	0.00	0.00		0.03	383
400 ISL	7.50 D	7.46	34.289 D	26.799	131.3	0.810	0.50 D	7.4	59.6	2.90	35.6	0.00	0.00	</td			

RV NEW HORIZON

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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	122 1.0 W	01/02/2012	1450	UTC	3844 m	350	04 kn			1021.8 mb	13.1 C	10.7 C					021	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP	
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db		
0	14.74	14.74	33.338	24.748	318.8	0.000	5.85	101.3	2.0	0.32	0.0	0.00	0.17	0.33	0.12	0		
2	14.74	14.74	33.338	24.748	318.8	0.006	5.85	101.3	2.0	0.32	0.0	0.00	0.17	0.33	0.12	2	24	
10	14.74	14.74	33.341	24.750	318.9	0.032	5.87	101.6	2.0	0.32	0.0	0.00	0.00	0.35	0.09	10	23	
20	ISL	14.75 D	14.74	33.341 D	24.750	319.3	0.064	5.86	D101.5	2.1	0.31	0.0	0.00	0.33	0.11	20		
25	14.75	14.74	33.339	24.748	319.6	0.080	5.87	101.6	2.1	0.30	0.0	0.00	0.00	0.32	0.12	25	22	
30	ISL	14.75 D	14.74	33.341 D	24.750	319.5	0.096	5.85	D101.3	2.0	0.30	0.0	0.00	0.33	0.11	30		
40	14.75	14.75	33.338	24.748	320.1	0.128	5.85	101.3	1.9	0.31	0.0	0.00	0.00	0.35	0.10	40	21	
50	14.69	14.69	33.333	24.757	319.6	0.160	5.82	100.7	2.1	0.31	0.0	0.01	0.00	0.37	0.12	50	20	
62	14.31	14.30	33.309	24.821	313.8	0.198	5.76	98.7	2.3	0.36	0.4	0.11	0.18	0.25	0.13	62	19	
74	13.96	13.95	33.288	24.878	308.7	0.235	5.72	97.5	2.6	0.40	0.9	0.26	0.18	0.20	0.12	75	18	
75	ISL	13.91 D	13.90	33.297 D	24.894	307.2	0.240	5.72	D 97.2	2.7	0.41	1.0	0.26	0.17	0.20	0.12	76	
86	13.35	13.34	33.313	25.022	295.3	0.271	5.60	94.1	3.3	0.47	2.1	0.29	0.04	0.16	0.10	87	17	
100	12.82	12.81	33.337	25.146	283.8	0.312	5.38	89.4	4.5	0.59	4.2	0.12	0.00	0.11	0.09	101	16	
112	11.65	11.64	33.392	25.412	258.6	0.344	4.95	80.4	7.7	0.82	8.6	0.02	0.00	0.10	0.08	113	15	
124	10.58	10.56	33.385	25.598	240.9	0.374	4.46	70.7	12.8	1.21	14.4	0.01	0.00	0.04	0.06	125	14	
125	ISL	10.46 D	10.43	33.418 D	25.647	236.3	0.379	4.42	D 69.9	13.1	1.23	14.7	0.01	0.00	0.04	0.05	126	
140	9.93	9.91	33.516	25.811	220.9	0.411	3.98	62.3	18.0	1.47	18.8	0.01	0.00	0.01	0.04	141	13	
150	ISL	9.56 D	9.55	33.679 D	25.998	203.3	0.435	3.43	D 53.3	21.3	1.62	21.1	0.01	0.00	0.01	0.04	151	
170	9.24	9.22	33.834	26.172	187.1	0.471	2.86	44.1	27.8	2.56	0.00	0.00	0.00	0.03	171	12		
200	8.78	8.76	33.991	26.370	168.8	0.525	2.33	35.6	34.0	2.14	28.2	0.00	0.00	0.00	0.03	202	11	
230	8.25	8.23	34.066	26.510	155.9	0.573	1.95	29.6	40.6	2.29	30.6	0.00	0.00	0.00	0.00	232	10	
250	ISL	7.99 D	7.96	34.079 D	26.561	151.4	0.608	1.80	D 27.1	43.7	2.38	31.7	0.00	0.00	0.00	0.00	252	
271	7.76	7.74	34.105	26.614	146.6	0.635	1.56	23.3	46.9	2.48	32.9	0.00	0.00	0.00	0.00	273	09	
300	ISL	7.57 D	7.54	34.159 D	26.685	140.3	0.681	1.11	D 16.5	52.1	2.62	34.4	0.00	0.00	0.00	0.00	302	
320	7.37	7.34	34.172	26.725	136.8	0.705	0.98	14.5	55.6	2.72	35.5	0.00	0.00	0.00	0.00	323	08	
380	6.98	6.94	34.233	26.827	127.8	0.784	0.64	9.4	2.90	37.0	0.00	0.00	0.00	0.00	383	07		
400	ISL	6.78 D	6.74	34.233 D	26.856	125.3	0.814	0.59	D 8.6	65.8	2.94	37.6	0.00	0.00	0.00	0.00	403	
440	6.39	6.35	34.232	26.906	120.8	0.859	0.52	7.5	71.2	3.02	38.9	0.00	0.00	0.00	0.00	444	06	
500	ISL	5.93 D	5.89	34.272 D	26.997	112.6	0.935	0.35	D 5.0	79.6	3.12	40.3	0.00	0.00	0.00	0.00	504	
515	5.87	5.83	34.286	27.016	110.9	0.945	0.32	4.6	81.7	3.14	40.6	0.00	0.00	0.00	0.00	519	05	
600	ISL	5.50 D	5.45	34.328 D	27.096	104.1	1.044	0.23	D 3.3	88.4	3.16	41.2	0.00	0.00	0.00	0.00	605	
700	ISL	5.03 D	4.97	34.371 D	27.187	96.1	1.145	0.23	D 3.2	96.3	3.19	41.9	0.00	0.00	0.00	0.00	706	
800	ISL	4.65 D	4.59	34.414 D	27.264	89.3	1.238	0.28	D 3.9	104.2	3.22	42.7	0.00	0.00	0.00	0.00	807	
900	ISL	4.34 D	4.27	34.446 D	27.325	84.2	1.326	0.36	D 5.0	112.0	3.25	43.4	0.00	0.00	0.00	0.00	908	
1000	4.04	3.96	34.469	27.376	79.6	1.398	0.45	6.2	119.9	3.28	44.1	0.00	0.00	0.00	0.00	1009	04	
1100	ISL	3.73 D	3.65	34.496 D	27.429	74.8	1.487	0.60	D 8.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1111	
1200	ISL	3.50 D	3.42	34.515 D	27.468	71.5	1.561	0.71	D 9.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1212	
1300	ISL	3.26 D	3.16	34.535 D	27.508	67.8	1.632	0.84	D 11.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1313	
1400	ISL	3.05 D	2.95	34.550 D	27.539	65.0	1.699	0.95	D 12.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1415	
1500	ISL	2.85 D	2.74	34.564 D	27.570	62.1	1.764	1.08	D 14.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1516	
1600	ISL	2.69 D	2.58	34.575 D	27.593	60.0	1.826	1.20	D 15.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1617	
1800	ISL	2.35 D	2.22	34.597 D	27.641	55.3	1.943	1.47	D 19.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1820	
2000	ISL	2.11 D	1.97	34.619 D	27.680	51.7	2.051	1.77	D 23.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2024	
2001	2.11	1.96	34.620	27.681	51.6	2.055	1.79	23.3	165.5	2.97	41.7	0.00	0.00	0.00	0.00	2025	03	
2200	ISL	1.97 D	1.81	34.635 D	27.705	49.7	2.154	2.02	D 26.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2227	
2400	ISL	1.85 D	1.67	34.645 D	27.725	48.1	2.254	2.20	D 28.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2431	
2600	ISL	1.76 D	1.57	34.653 D	27.740	47.1	2.351	2.37	D 30.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2635	
2800	ISL	1.69 D	1.48	34.659 D	27.753	46.4	2.446	2.51	D 32.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2839	
3000	ISL	1.63 D	1.40	34.663 D	27.762	45.9	2.540	2.60	D 33.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3043	
3200	ISL	1.58 D	1.34	34.668 D	27.772	45.5	2.634	2.73	D 35.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3247	
3400	ISL	1.56 D	1.29	34.671 D	27.778	45.5	2.727	2.81	D 36.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3452	
3500		1.55	1.28	34.677	27.785	45.3	2.781	2.90	37.2	172.9	2.68	38.5	0.00	0.00	0.00	0.00	3554	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
31 5.1 N	122 40.0 W	01/02/2012	0720	UTC	4026 m	350	12 kn	340	04 06 2	1020.0 mb	13.9 C	12.0 C	15 m	8/8	SC	020	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.76	14.75	33.337	24.744	319.2	0.000	5.86	101.6	2.0	0.31	0.0	0.00	0.00	0.24	0.06	0	
2	14.76	14.75	33.337	24													

RV NEW HORIZON

CALCOFI CRUISE 1202

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 45.4 N	123 20.2 W	01/02/2012	0055	UTC	4046 m	020	09 kn	020 03 05	2	1020.5 mb	13.9 C	13.3 C	23 m	8/8	SC	019	
0	14.90	14.89	33.282	24.671	326.1	0.000	5.85	101.6	2.1	0.30	0.0	0.00	0.00	0.17	0.06	0	
2 A	14.90	14.89	33.282	24.671	326.1	0.007	5.85	101.6	2.1	0.30	0.0	0.00	0.00	0.17	0.06	2	21
10 ISL	14.89	D 14.89	33.283 D	24.673	326.3	0.033	5.91	D 102.6	2.0	0.29	0.0	0.00	0.00	0.18	0.06	10	
15 A	14.89	14.89	33.281	24.672	326.5	0.049	5.84	101.3	2.0	0.29	0.0	0.00	0.00	0.18	0.07	15	20
20 ISL	14.89	D 14.89	33.283 D	24.674	326.5	0.066	5.84	D 101.4	2.1	0.29	0.0	0.00	0.00	0.18	0.06	20	
22 A	14.89	14.89	33.280	24.671	326.8	0.072	5.83	101.2	2.1	0.29	0.0	0.00	0.00	0.17	0.06	22	19
30 ISL	14.89	D 14.89	33.283 D	24.674	326.8	0.099	5.86	D 101.8	2.1	0.29	0.0	0.00	0.00	0.18	0.06	30	
32	14.90	14.89	33.285	24.675	326.8	0.104	5.84	101.4	2.1	0.29	0.0	0.00	0.00	0.18	0.06	32	18
42 A	14.90	14.89	33.285	24.676	327.0	0.137	5.84	101.4	2.0	0.29	0.0	0.00	0.00	0.18	0.06	42	
50 ISL	14.90	D 14.89	33.283 D	24.675	327.4	0.165	5.85	D 101.5	2.1	0.28	0.0	0.00	0.00	0.20	0.07	50	
54	14.88	14.87	33.284	24.680	327.1	0.176	5.85	101.4	2.1	0.28	0.0	0.00	0.00	0.21	0.07	54	
66	14.57	14.56	33.276	24.741	321.6	0.215	5.82	100.3	2.1	0.30	0.0	0.01	0.04	0.29	0.13	67	
75 ISL	13.46	D 13.44	33.179 D	24.897	306.8	0.245	5.84	D 98.3	2.7	0.40	1.0	0.20	0.01	0.28	0.19	76	
79 A	12.94	12.93	33.148 D	24.975	299.4	0.256	5.76	96.0	3.0	0.44	1.5	0.28	0.00	0.27	0.22	80	
89 A	12.10	12.08	33.169 D	25.156	282.4	0.285	5.68	92.9	4.0	0.53	3.1	0.02	0.00	0.16	0.13	90	
99	11.82	11.81	33.270	25.284	270.4	0.312	5.25	85.4	6.0	0.71	6.3	0.01	0.00	0.11	0.10	100	
100 ISL	11.76	D 11.71	33.271 D	25.303	268.6	0.317	5.25	D 85.4	6.3	0.73	6.7	0.01	0.00	0.10	0.10	101	
110	11.04	11.02	33.325	25.470	252.9	0.341	4.88	78.2	9.1	0.96	10.4	0.01	0.00	0.06	0.07	111	
124	10.34	10.35	33.427 D	25.668	234.2	0.375	4.84	76.3	10.6	1.02	11.6	0.01	0.00	0.04	0.05	125	
125 ISL	10.58	D 10.57	33.396 D	25.605	240.3	0.380	4.60	D 72.9	10.9	1.04	11.9	0.01	0.00	0.03	0.05	126	
144	9.58	9.57	33.603 D	25.936	209.0	0.420	4.37	68.0	17.3	1.34	17.4	0.00	0.00	0.01	0.03	145	
150 ISL	9.54	D 9.52	33.632 D	25.966	206.3	0.436	4.13	D 64.2	18.9	1.43	18.6	0.00	0.00	0.01	0.03	151	
170	9.18	9.16	33.754	26.120	192.1	0.473	3.56	54.8	24.4	1.71	22.8	0.00	0.00	0.00	0.02	171	
200	8.72	8.70	33.880	26.292	176.2	0.528	3.38	51.6	28.6	1.80	24.7	0.00	0.00	0.00	0.02	202	
230	8.42	8.40	33.980	26.417	164.8	0.579	2.55	38.6	35.2	2.10	28.5	0.00	0.00	0.00	0.06	232	
250 ISL	8.15	D 8.13	34.028 D	26.496	157.6	0.616	2.21	D 33.3	38.8	2.21	30.0	0.00	0.00	0.00	0.06	252	
271	7.86	7.83	34.046	26.553	152.4	0.644	1.98	29.7	42.6	2.33	31.6	0.00	0.00	0.00	0.06	273	
300 ISL	7.50	D 7.47	34.081 D	26.634	145.1	0.692	1.63	D 24.2	48.3	2.47	33.4	0.00	0.00	0.00	0.06	302	
319	7.19	7.16	34.081	26.676	141.1	0.714	1.49	22.1	52.1	2.56	34.6	0.00	0.00	0.00	0.06	322	
382	6.26	6.23	34.104	26.820	127.8	0.799	1.06	15.4	65.6	2.82	38.0	0.00	0.00	0.00	0.06	385	
400 ISL	6.19	D 6.15	34.124 D	26.846	125.6	0.828	0.95	D 13.7	68.1	2.87	38.5	0.00	0.00	0.00	0.06	403	
438	6.02	5.98	34.170	26.904	120.5	0.868	0.66	9.5	73.3	2.99	39.7	0.00	0.00	0.00	0.06	442	
500 ISL	5.66	D 5.62	34.222 D	26.991	112.8	0.948	0.47	D 6.7	80.8	3.10	40.8	0.00	0.00	0.00	0.06	504	
515	5.61	5.57	34.230	27.003	111.8	0.958	0.40	5.7	82.6	3.13	41.1	0.00	0.00	0.00	0.06	519	

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 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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 24.9 N	123 59.5 W	31/01/2012	1844	UTC	4236 m	010	09 kn	020 03 05	2	1018.7 mb	14.0 C	13.1 C	23 m	8/8	SC	018	
0	15.28	15.28	33.317	24.615	331.5	0.000	5.80	101.5	2.2	0.28	0.0	0.00	0.00	0.15	0.05	0	
1	15.28	15.28	33.317	24.615	331.5	0.003	5.80	101.5	2.2	0.28	0.0	0.00	0.00	0.15	0.05	1	
10 ISL	15.28	D 15.27	33.319 D	24.618	331.8	0.067	5.80	D 101.4	2.1	0.28	0.0	0.00	0.00	0.14	0.05	10	
25	15.28	15.28	33.317	24.616	332.2	0.083	5.79	101.3	2.1	0.28	0.0	0.00	0.00	0.15	0.06	18	
30 ISL	15.28	D 15.28	33.318 D	24.617	332.3	0.100	5.78	D 101.1	2.1	0.28	0.0	0.00	0.00	0.15	0.05	30	
39	15.28	15.28	33.318	24.617	332.6	0.129	5.79	101.3	2.1	0.27	0.0	0.00	0.00	0.16	0.03	39	
50	15.28	15.27	33.316	24.616	333.0	0.166	5.79	101.3	2.1	0.27	0.0	0.00	0.00	0.15	0.05	50	
61	15.28	15.27	33.317	24.618	333.2	0.203	5.80	101.5	2.1	0.27	0.0	0.00	0.00	0.17	0.05	61	
74	15.27	15.26	33.317	24.622	333.2	0.246	5.78	101.2	2.1	0.27	0.0	0.00	0.00	0.17	0.06	75	
75 ISL	15.27	D 15.26	33.318 D	24.623	333.2	0.251	5.76	D 100.8	2.1	0.27	0.0	0.00	0.00	0.18	0.06	76	
87	15.11	15.10	33.306	24.649	331.1	0.289	5.78	100.8	2.2	0.27	0.0	0.00	0.04	0.23	0.08	88	
100	14.13	14.11	33.450	24.970	300.9	0.330	5.69	97.2	2.8	0.33	0.9	0.14	0.00	0.24	0.15	101	
112	12.83	12.82	33.408	25.199	279.1	0.365	5.57	92.7	3.6	0.42	2.3	0.03	0.00	0.15	0.13	113	
125	12.05	D 12.04	33.390	25.336	266.3	0.401	5.51	90.3	4.3	0.47	3.3	0.01	0.00	0.08	0.08	126	
140	11.04	11.02	33.374	25.509	249.9	0.439	5.12	82.0	7.9	0.79	8.4	0.01	0.00	0.04	0.05	141	
150 ISL	10.58	D 10.51	33.417 D	25.632	238.3	0.466	4.97	D 78.7	11.0	0.96	11.3	0.01	0.00	0.03	0.04	151	
169	9.70	9.68	33.634	25.943	209.0	0.506	4.43	69.0	17.0	1.28	16.8	0.00	0.00	0.01	0.03	170	
200	8.65	8.63	33.870	26.296	175.8	0.566	3.59	54.7	28.0	1.72	23.9	0.00	0.00	0.00	0.02	202	
230	8.30	8.28	33.951	26.412	165.2	0.617	3.39	51.3	31.6	1.81	25.3	0.00	0.00	0.00	0.02	232	
250 ISL	7.92	D 7.88	33.991 D	26.502	156.9	0.653	2.98	D 44.8	35.9	1.96	27.3	0.00	0.00	0.00	0.06	252	
270	7.73	7.70	33.996	26.534	154.1	0.680	2.71	40.4	40.2	2.10	29.2	0.00	0.00	0.00	0.06	272	
300 ISL	7.43	D 7.40	34.048 D	26.618	146.5	0.730	1.94	D 28.8	47.2	2.38	32.3	0.00	0.00	0.00	0.06	302	
320	7.34	7.31	34.104	26.675	141.4	0.754	1.38	20.4	51.8	2.56	34.4	0.00	0.00	0.00	0.06	323	
379	6.69	6.66	34.145	26.796	130.4	0.834	0.89	12.9	62.7	2.82	37.4	0.00</td					

RV NEW HORIZON

CALCOFI CRUISE 1202

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	
					73 m	340	02 kn	300 02 06	1	1012.3 mb	16.0 C	14.9 C	08 m	3/8		CS	001	
32 57.4 N	117 18.4 W	28/01/2012	0800	UTC														
DEPTH	TEMP	POT TEMP	TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C			THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.54	14.54	33.367	24.812	312.7	0.000	6.56	113.1	0.5	0.24	0.0	0.00	0.00	1.83	0.24	0		
2	14.54	14.54	33.367	24.812	312.7	0.006	6.56	113.1	0.5	0.24	0.0	0.00	0.00	1.83	0.24	2	08	
5	14.34	14.34	33.368	24.857	308.6	0.016	6.60	113.3	0.5	0.24	0.0	0.00	0.00	1.58	0.30	5	07	
10	14.02	14.02	33.369	24.924	302.3	0.031	6.69	114.1	0.4	0.23	0.0	0.00	0.18	1.93	0.43	10	06	
20	13.02	13.02	33.348	25.112	284.8	0.060	5.01	83.8	6.3	0.80	6.6	0.19	0.21	2.31	0.74	20	05	
30	12.24	12.24	33.361	25.273	269.6	0.088	4.32	71.0	10.1	1.12	11.4	0.07	0.09	0.46	0.35	30	04	
40	11.63	11.63	33.441	25.449	253.1	0.114	3.69	59.9	14.7	1.41	15.5	0.16	0.07	0.39	0.35	40	03	
50	11.36	11.35	33.527	25.566	242.2	0.139	3.18	51.4	18.3	1.61	18.3	0.13	0.00	0.55	0.49	50	02	
59	11.13	11.12	33.577	25.647	234.7	0.160	3.00	48.3	20.2	1.71	19.7	0.13	0.00	0.60	0.53	59	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 1202

STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD	
					645 m	230	12 kn			1016.8 mb	18.0 C	12.2 C	004					
32 55.0 N	117 23.7 W	28/01/2012	1549	UTC														
DEPTH	TEMP	POT TEMP	TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C			THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.60	14.60	33.363	24.796	314.2	0.000	6.10	105.2	2.0	0.32	0.0	0.00	0.00	0.78	0.29	0		
2	14.60	14.60	33.363	24.796	314.2	0.006	6.10	105.2	2.0	0.32	0.0	0.00	0.00	0.78	0.29	2	20	
10	14.58	14.58	33.362	24.801	314.0	0.031	6.08	104.9	2.0	0.32	0.0	0.00	0.00	0.86	0.34	10	19	
20	14.03	14.03	33.361	24.916	303.4	0.062	5.82	99.3	2.9	0.40	0.7	0.08	0.00	1.89	0.62	20	18	
30	12.60	12.59	33.346	25.193	277.2	0.091	4.65	77.0	8.0	0.95	8.7	0.12	0.00	0.51	0.46	30	17	
40	11.96	11.96	33.392	25.350	262.6	0.118	4.01	65.5	12.2	1.27	13.5	0.04	0.00	0.24	0.29	40	16	
49	11.34	11.34	33.447	25.507	247.8	0.141	3.79	61.2	14.4	1.40	15.8	0.03	0.00	0.13	0.16	49	15	
50 ISL	11.27 D	11.26	33.495 D	25.558	243.0	0.145	3.63	58.5	14.8	1.42	16.1	0.03	0.00	0.12	0.15	50		
60	11.02	11.01	33.561	25.654	234.1	0.168	3.30	53.0	18.7	1.62	18.7	0.02	0.00	0.05	0.10	60	14	
70	10.45	10.44	33.552	25.749	225.2	0.191	3.48	55.0	19.1	1.64	19.5	0.02	0.00	0.03	0.08	71	13	
75 ISL	10.44 D	10.44	33.607 D	25.792	221.3	0.203	3.30	52.3	20.6	1.72	20.5	0.01	0.00	0.03	0.07	76		
84	10.27	10.26	33.693	25.889	212.3	0.221	2.94	46.4	23.2	1.85	22.3	0.00	0.00	0.01	0.06	85	12	
100	9.95	9.94	33.757	25.994	202.6	0.255	2.83	44.4	24.9	1.92	23.9	0.00	0.00	0.01	0.05	101	11	
120	9.77	9.76	33.924	26.155	187.8	0.294	2.31	36.2	29.0	2.11	25.7	0.00	0.14	0.00	0.05	121	10	
125 ISL	9.74 D	9.73	33.920 D	26.157	187.7	0.305	2.35	36.8	29.6	2.13	26.0	0.00	0.11	0.00	0.05	126		
140	9.62	9.60	34.007	26.246	179.6	0.331	2.10	32.8	31.5	2.19	27.0	0.00	0.00	0.01	0.04	141	09	
150 ISL	9.54 D	9.52	34.043 D	26.287	175.9	0.350	1.99	31.0	32.3	2.21	27.4	0.00	0.00	0.01	0.04	151		
170	9.28	9.26	34.062	26.345	170.7	0.383	1.98	30.6	34.0	2.26	28.3	0.00	0.00	0.00	0.04	171	08	
200	8.99	8.97	34.159	26.468	159.6	0.433	1.57	24.1	38.2	2.42	29.8	0.00	0.00	0.00	0.04	202	07	
231	8.52	8.49	34.179	26.559	151.5	0.481	1.37	20.9	42.9	2.53	31.6	0.00	0.00			233	06	
250 ISL	8.45 D	8.42	34.196 D	26.583	149.6	0.513	1.27	19.3	44.4	2.57	32.0	0.00	0.00			252		
271	8.26	8.24	34.204	26.618	146.6	0.541	1.16	17.6	46.1	2.62	32.5	0.00	0.00			273	05	
300 ISL	8.02 D	7.99	34.212 D	26.662	142.8	0.586	0.96	14.4	49.3	2.71	33.6	0.00	0.00			302		
320	7.92	7.88	34.232	26.693	140.2	0.611	0.87	13.1	51.5	2.77	34.3	0.00	0.00			323	04	
380	7.54	7.50	34.287	26.792	131.7	0.692	0.53	7.9	58.2	2.92	35.8	0.00	0.00			383	03	
400 ISL	7.40 D	7.36	34.287 D	26.812	130.0	0.724	0.47	7.0	60.7	2.96	36.3	0.00	0.00			403		
440	7.06	7.01	34.307	26.877	124.2	0.770	0.38	5.6	65.7	3.05	37.4	0.00	0.00			444	02	
500 ISL	6.63 D	6.58	34.312 D	26.940	118.8	0.849	0.29	4.3	73.1	3.14	38.7	0.00	0.00			504		
517	6.42	6.37	34.312	26.967	116.3	0.862	0.26	3.8	75.2	3.17	39.1	0.00	0.00			521	01	

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

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD	
					847 m	040	14 kn			1017.7 mb	14.5 C	11.0 C	005					
32 51.0 N	117 31.9 W	28/01/2012	2045	UTC														
DEPTH	TEMP	POT TEMP	TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C			THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.61	14.61	33.377	24.805	313.4	0.000	6.05	104.5	2.2	0.33	0.0	0.00	0.07	0.83	0.27	0		
2	14.61	14.61	33.377	24.805	313.4	0.006	6.05	104.5	2.2	0.33	0.0	0.00	0.07	0.83	0.27	2	20	
10	14.62	14.61	33.378	24.806	313.6	0.031	6.05	104.4	2.2	0.33	0.0	0.00	0.07	0.79	0.29	10	19	
20	14.41	14.40	33.371	24.845	310.1	0.063	5.94	102.1	2.8	0.36	0.0	0.02	0.00	1.67	0.64	20	18	
30	13.84	13.83	33.366	24.960	299.5	0.093	5.52	93.8	3.8	0.52	2.1	0.11	0.00	1.26	0.55	30	17	
40	12.11	12.10	33.372	25.308	266.6	0.121	4.20	68.8	10.9	1.16	11.9	0.03	0.00	0.33	0.38	40	16	
50	11.74	11.73	33.445	25.433	254.9	0.148	3.75	61.0	14.2	1.37	15.0	0.02	0.00	0.17	0.22	50	15	
61	11.27	11.26	33.528	25.585	240.7	0.175	3.19	51.4	18.3	1.63	18.5	0.00	0.27	0.07	0.11	61	14	
70	10.9																	

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
32 41.2 N	117 52.2 W	29/01/2012	0101	UTC	641 m	070	11 kn	080 02 04	0	1020.3 mb	17.1 C	13.0 C	15 m	0/8		006	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.84	14.83	33.409	24.782	315.6	0.000	6.06	105.1	2.6	0.34	0.0	0.00	0.00	0.41	0.12	0	
2 A	14.84	14.83	33.409	24.782	315.6	0.006	6.06	105.1	2.6	0.34	0.0	0.00	0.00	0.41	0.12	2	22
10 A	14.82	14.82	33.411	24.787	315.4	0.032	5.98	103.7	2.7	0.35	0.0	0.00	0.00	0.43	0.12	10	21
14 A	14.77	14.77	33.410	24.797	314.6	0.044	5.93	102.8	2.7	0.34	0.0	0.00	0.05	0.43	0.13	14	20
20	14.57	14.57	33.394	24.828	311.8	0.063	5.94	102.5	2.6	0.35	0.0	0.00	0.04	0.55	0.19	20	19
27 A	14.54	14.54	33.393	24.834	311.5	0.085	5.92	102.1	2.9	0.34	0.0	0.00	0.11	0.58	0.24	27	
30 ISL	14.46 D	14.46	33.387 D	24.846	310.4	0.095	5.83	100.3	4.2	0.48	2.0	0.02	0.11	0.57	0.32	30	
39	12.83	12.83	33.336	25.139	282.7	0.121	4.78	79.6	8.0	0.89	7.9	0.08	0.11	0.53	0.56	39	17
50 ISL	12.22 D	12.20	33.414 D	25.321	265.6	0.152	4.12	67.7	11.6	1.17	12.0	0.04	0.07	0.28	0.34	50	
52 A	12.00	11.99	33.421	25.366	261.4	0.156	4.09	67.0	12.3	1.22	12.7	0.03	0.06	0.24	0.30	52	16
57 A	11.78	11.77	33.498	25.468	251.8	0.169	3.61	58.7	15.9	1.44	15.8	0.00	0.00	0.14	0.18	57	15
64	11.23	11.22	33.509	25.577	241.6	0.186	3.50	56.3	17.4	1.51	17.1	0.00	0.00	0.11	0.16	65	14
70	10.99	10.99	33.553	25.653	234.4	0.201	3.42	54.8	18.8	1.59	18.4	0.00	0.00	0.05	0.09	71	13
75 ISL	10.99 D	10.95	33.580 D	25.680	232.0	0.214	3.31	52.9	20.7	1.69	19.5	0.00	0.00	0.04	0.08	76	
84	10.73	10.72	33.672	25.794	221.3	0.233	2.72	43.4	24.2	1.86	21.6	0.00	0.00	0.01	0.06	85	12
100	10.49	10.47	33.752	25.899	211.8	0.267	2.57	40.8	26.3	1.94	22.7	0.00	0.00	0.01	0.06	101	11
120	10.10	10.08	33.865	26.055	197.4	0.308	2.48	39.1	28.4	2.03	24.4	0.00	0.00	0.05	0.12	10	
125 ISL	10.04 D	10.02	33.926 D	26.114	191.9	0.320	2.25	35.4	29.1	2.07	24.8	0.00	0.00	0.00	0.05	126	
139	9.98	9.96	34.007	26.186	185.3	0.344	2.05	32.3	31.2	2.18	25.9	0.00	0.00	0.05	0.14	140	09
150 ISL	9.80 D	9.78	34.030 D	26.234	181.0	0.367	2.02	31.5	32.4	2.21	26.5	0.00	0.00	0.00	0.05	151	
170	9.57	9.55	34.102	26.328	172.5	0.400	1.83	28.5	34.6	2.27	27.7	0.00	0.00	0.05	0.17	171	08
200	9.34	9.32	34.184	26.432	163.2	0.450	1.58	24.4	37.5	2.38	28.7	0.00	0.00	0.04	0.20	207	
230	9.02	8.99	34.228	26.520	155.5	0.498	1.36	21.0	41.1	2.48	29.9	0.00	0.00		0.23	232	06
250 ISL	8.91 D	8.88	34.247 D	26.551	152.8	0.532	1.23	18.8	43.0	2.53	30.5	0.00	0.04		0.25		
270	8.68	8.65	34.241	26.583	150.1	0.559	1.17	17.9	44.8	2.58	31.1	0.00	0.08		0.27	272	05
300 ISL	8.39 D	8.36	34.255 D	26.641	145.1	0.607	0.99	15.0	47.5	2.65	32.1	0.00	0.03		0.30		
320	8.23	8.19	34.248	26.659	143.6	0.632	0.98	14.8	49.3	2.69	32.7	0.00	0.00		0.32	323	04
380	7.65	7.61	34.274	26.766	134.2	0.716	0.67	10.0	57.2	2.86	35.0	0.00	0.00		0.38	383	03
400 ISL	7.27 D	7.24	34.268 D	26.815	129.6	0.747	0.56	8.3	60.1	2.91	35.8	0.00	0.00		0.40		
439	6.91	6.87	34.259	26.859	125.8	0.792	0.55	8.0	65.8	3.00	37.4	0.00	0.00		0.43	443	02
500 ISL	6.39 D	6.34	34.289 D	26.954	117.2	0.872	0.35	5.1	73.4	3.11	39.1	0.00	0.00		0.50		
516	6.32	6.28	34.292	26.964	116.4	0.885	0.34	4.9	75.4	3.14	39.5	0.00	0.00		0.52	0.01	

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 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
32 30.9 N	118 13.1 W	29/01/2012	0523	UTC	1628 m	070	09 kn	340 02 07	0	1019.5 mb	17.0 C	14.2 C	12 m	0/8		007	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.93	14.93	33.404	24.758	317.9	0.000	5.97	103.8	2.6	0.35	0.0	0.00	0.00	0.49	0.13	0	
2	14.93	14.93	33.404	24.758	317.9	0.006	5.97	103.8	2.6	0.35	0.0	0.00	0.00	0.49	0.13	2	21
9	14.85	14.84	33.403	24.776	316.4	0.028										9	20
10	14.74	14.74	33.409	24.803	313.9	0.032	5.99	103.7	2.7	0.35	0.0	0.00	0.00	0.52	0.14	10	19
20	14.62	14.62	33.409	24.829	311.7	0.063	5.99	103.4	2.6	0.36	0.0	0.00	0.00	0.82	0.22	20	18
29	14.27	14.26	33.395	24.894	305.8	0.091	5.82	99.9	3.3	0.41	0.6	0.03	0.00	1.41	0.47	29	17
30 ISL	14.22 D	14.24	33.394 D	24.898	305.5	0.095	5.58	95.7	3.7	0.46	1.3	0.04	0.00	1.33	0.46	30	
40	12.55	12.54	33.374	25.225	274.5	0.123	4.74	78.4	7.9	0.91	8.0	0.10	0.00	0.51	0.43	40	16
50	11.77	11.76	33.441	25.425	255.7	0.150	3.95	64.3	13.1	1.30	14.2	0.02	0.00	0.19	0.25	50	15
59	11.46	11.45	33.553	25.569	242.2	0.172	3.40	55.0	17.1	1.53	17.2	0.01	0.12	0.10	0.12	59	14
70	11.19	11.18	33.665	25.706	229.4	0.198	2.90	46.8	21.0	1.74	19.7	0.01	0.00	0.04	0.07	71	13
75 ISL	10.95 D	10.94	33.692 D	25.769	223.5	0.210	2.88	46.2	22.3	1.80	20.6	0.01	0.00	0.03	0.06	76	
84	10.83	10.82	33.806	25.880	213.2	0.229	2.51	40.1	24.5	1.92	22.1	0.00	0.00	0.01	0.05	85	12
100	10.50	10.49	33.873	25.990	203.1	0.262	2.38	37.8	25.9	1.99	23.3	0.00	0.10	0.01	0.04	101	11
120	10.02	10.01	33.946	26.131	190.2	0.301	2.33	36.7	28.3	2.06	24.9	0.00	0.09	0.00	0.04	121	10
125 ISL	9.95 D	9.93	33.971 D	26.163	187.2	0.313	2.31	36.2	28.9	2.08	25.2	0.00	0.07	0.00	0.04	126	
140	9.75	9.74	34.042	26.251	179.1	0.338	2.14	33.5	30.5	2.12	26.1	0.00	0.00	0.00	0.04	141	09
150 ISL	9.59 D	9.58	34.072 D	26.300	174.7	0.358	2.08	32.4	31.8	2.17	26.6	0.00	0.02	0.00	0.04	151	
169	9.51	9.50	34.124 D	26.355	169.8	0.389	1.84	28.6	38.5	2.41	29.2	0.00	0.14	0.00	0.04	170	08
200	9.21	9.19	34.210	26.473	159.3	0.440	1.39	21.4	38.5	2.41	29.2	0.00	0.14	0.00	0.04	202	07
231	8.86	8.84	34.231	26.546</td													

RV NEW HORIZON

## CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.72	14.72	33.381	24.785	315.2	0.000	6.04	104.6	2.5	0.36	0.0	0.00	0.59	0.79	0.20	0	
1	14.72	14.72	33.381	24.785	315.2	0.003	6.04	104.6	2.5	0.36	0.0	0.00	0.59	0.79	0.20	1	
10	14.47	14.46	33.379	24.838	310.5	0.031										10	
10	14.47	14.46	33.381	24.840	310.3	0.031	6.03	103.8	2.5	0.35	0.0	0.00	0.16	0.74	0.20	10	
20	14.36	14.36	33.377	24.859	308.8	0.062	6.04	103.8	2.4	0.35	0.1	0.00	4.12	0.89	0.23	20	
30	14.34	14.34	33.376	24.863	308.8	0.093	6.03	103.5	2.4	0.36	0.0	0.00	0.12	0.99	0.26	30	
40	14.27	14.26	33.371	24.876	307.9	0.124	6.01	103.1	2.3	0.35	0.0	0.00	0.14	1.14	0.32	40	
50	12.00	12.00	33.324	25.290	268.5	0.153	4.74	77.6	8.1	0.95	9.3	0.03	0.33	0.19	0.25	50	
60	11.37	11.37	33.378	25.449	253.7	0.179	4.34	70.0	11.4	1.18	13.0	0.02	0.08	0.13	0.18	60	
71	10.93	10.92	33.419	25.560	243.3	0.206	4.23	67.7	13.0	1.26	14.8	0.01	0.00	0.08	0.10	72	
75 ISL	10.68 D	10.66	33.494 D	25.665	233.4	0.217	3.97	63.1	14.3	1.34	15.9	0.01	0.00	0.07	0.09	76	
85	10.46	10.45	33.553	25.747	225.8	0.239	3.70	58.5	17.6	1.53	18.7	0.01	0.00	0.04	0.07	86	
100	10.04	10.03	33.659	25.903	211.3	0.272	3.32	52.1	21.6	1.71	21.6	0.00	0.00	0.02	0.05	101	
120	9.85	9.84	33.841	26.077	195.2	0.312	2.69	42.1	26.1	1.95	24.2	0.00	0.13	0.01	0.04	121	
125 ISL	9.85 D	9.83	33.870 D	26.101	193.1	0.323	2.58 D	40.4	27.0	1.98	24.6	0.00	0.10	0.01	0.07	126	
140	9.71	9.69	33.967	26.200	183.9	0.350	2.32	36.2	29.5	2.08	25.9	0.00	0.00	0.01	0.14	141	
150 ISL	9.60 D	9.58	34.022 D	26.262	178.3	0.370	2.20 D	34.3	30.7	2.12	26.4	0.00	0.00	0.01	0.10	151	
170	9.40	9.38	34.063	26.327	172.5	0.403	2.05	31.8	33.1	2.19	27.5	0.00	0.00	0.00	0.04	171	
199	9.05	9.03	34.103	26.415	164.7	0.452	1.89	29.1	35.8	2.27	28.7	0.00	0.00	0.00	0.03	201	
200 ISL	8.95 D	8.94	34.114 D	26.438	162.5	0.456	1.83 D	28.2	36.0	2.28	28.8	0.00	0.00	0.00	0.03	202	
230	8.65	8.62	34.163	26.526	154.6	0.501	1.49	22.8	41.3	2.44	30.7	0.00	0.00		232	06	
250 ISL	8.40 D	8.37	34.184 D	26.582	149.6	0.535	1.32 D	20.1	44.5	2.51	31.8	0.00	0.00		252		
270	7.94	7.91	34.171	26.640	144.3	0.561	1.24	18.6	47.7	2.58	32.9	0.00	0.00		272	05	
300 ISL	7.55 D	7.52	34.181 D	26.705	138.4	0.607	1.03 D	15.3	52.5	2.69	34.4	0.00	0.00		302		
320	7.42	7.38	34.191	26.733	136.0	0.631	0.91	13.5	55.7	2.77	35.4	0.00	0.00		323	04	
380	6.87	6.84	34.229	26.839	126.6	0.710	0.61	9.0	64.5	2.94	37.3	0.00	0.00		383	03	
400 ISL	6.67 D	6.63	34.228 D	26.866	124.2	0.739	0.58 D	8.4	66.6	2.98	37.8	0.00	0.00		403		
440	6.44	6.40	34.248	26.912	120.2	0.784	0.48	7.0	70.8	3.05	38.7	0.00	0.00		444	02	
500 ISL	6.22 D	6.18	34.301 D	26.984	114.2	0.859	0.31 D	4.4	78.2	3.15	39.9	0.00	0.00		504		
515	6.05	6.00	34.315	27.016	111.1	0.871	0.26	3.8	80.0	3.17	40.2	0.00	0.00		519	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

## CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.56	14.56	33.394	24.830	311.0	0.000	5.95	102.7	2.4	0.35	0.0	0.00	0.50	0.11	0		
2	14.56	14.56	33.394	24.830	311.0	0.006	5.95	102.7	2.4	0.35	0.0	0.00	0.50	0.11	2	20	
10	14.56	14.56	33.397	24.832	311.1	0.031	5.95	102.6	2.4	0.34	0.0	0.00	0.47	0.11	10	19	
20	14.42	14.41	33.393	24.861	308.7	0.062	5.96	102.6	2.4	0.34	0.0	0.00	0.56	0.12	20	18	
30	14.40	14.40	33.390	24.861	308.9	0.093	5.94	102.2	2.4	0.34	0.0	0.01	0.67	0.10	30	17	
40	14.27	14.27	33.384	24.885	307.0	0.124	5.89	101.1	2.5	0.35	0.2	0.02	0.10	0.62	0.04	40	
50	12.39	12.38	33.331	25.222	275.1	0.153	5.27	86.9	5.7	0.70	5.5	0.11	0.06	0.40	0.16	50	
60	11.54	11.53	33.351	25.398	258.5	0.180	4.73	76.6	9.0	0.98	10.0	0.03	0.00	0.19	0.14	60	
70	11.24	11.23	33.413	25.501	248.9	0.205	4.26	68.6	12.5	1.22	13.8	0.02	0.00	0.13	0.10	71	
75 ISL	10.93 D	10.91	33.473 D	25.604	239.2	0.218	4.05 D	64.7	14.5	1.34	15.6	0.02	0.00	0.10	0.09	76	
85	10.43	10.42	33.545	25.746	225.9	0.241	3.57	56.5	18.4	1.57	19.1	0.01	0.00	0.04	0.07	86	
100	9.95	9.94	33.664	25.920	209.6	0.273	3.21	50.3	21.7	1.74	21.4	0.01	0.00	0.02	0.04	101	
120	9.63	9.62	33.779	26.064	196.3	0.314	2.93	45.6	25.9	1.89	24.1	0.01	0.00	0.00	0.04	121	
125 ISL	9.58 D	9.57	33.859 D	26.136	189.6	0.325	2.71 D	42.2	27.0	1.93	24.6	0.01	0.00	0.00	0.04	126	
140	9.45	9.43	33.934	26.217	182.3	0.351	2.43	37.7	30.1	2.06	26.2	0.00	0.00	0.00	0.04	141	
150 ISL	9.39 D	9.37	33.966 D	26.252	179.2	0.371	2.35 D	36.5	31.3	2.10	26.7	0.00	0.00	0.00	0.04	151	
171	9.08	9.06	34.032	26.354	169.9	0.406	2.14	32.9	33.8	2.19	27.9	0.00	0.00	0.00	0.04	172	
200	8.78	8.76	34.100	26.456	160.7	0.454	1.85	28.3	38.2	2.31	29.5	0.00	0.00	0.00	0.03	202	
230	8.43	8.40	34.147	26.548	152.4	0.501	1.50	22.7	42.9	2.47	31.2	0.00	0.00		232	06	
250 ISL	8.09 D	8.06	34.160 D	26.609	146.9	0.534	1.34 D	20.2	46.4	2.55	32.3	0.00	0.00		252		
270	7.80	7.77	34.163	26.655	142.7	0.560	1.23	18.3	49.8	2.62	33.4	0.00	0.00		272	05	
300 ISL	7.38 D	7.35	34.191 D	26.738	135.2	0.605	0.95 D	14.0	55.9	2.75	35.1	0.00	0.00		302		
320	7.11	7.08	34.193	26.776	131.7	0.628	0.83	12.3	59.9	2.83	36.3	0.00	0.00		323	04	
380	6.65	6.61	34.241	26.878	122.7	0.705	0.53	7.8	68.1	2.99	37.9	0.00	0.00		383	03	
400 ISL	6.53 D	6.48	34.262 D	26.912	119.7	0.733	0.45 D	6.5	69.8	3.02	38.2	0.00	0.00		403		
440	6.45	6.41	34.293	26.946	117.1	0.776	0.34	5.0	73.2	3.09	38.8	0.00	0.00		444	02	
500 ISL	6.28 D	6.24	34.317 D	26.988	113.8	0.850	0.28 D	4.0	77.0	3.13	39.2	0.00	0.00		504		
517	6.18	6.13	34.312	26.999	113.0	0.865	0.28	4.0	78.1	3.14	39.3</td						

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.36	14.36	33.391	24.870	307.2	0.000	5.98	102.7	2.4	0.33	0.0	0.00	0.00	0.39	0.14	0	
1	14.36	14.36	33.391	24.870	307.2	0.003	5.98	102.7	2.4	0.33	0.0	0.00	0.00	0.39	0.14	1	
9	14.36	14.36	33.389	24.869	307.6	0.029										9	
10	14.36	14.36	33.390	24.869	307.5	0.031	5.99	102.9	2.5	0.32	0.0	0.00	0.00	0.41	0.13	10	
20	14.30	14.30	33.388	24.880	306.9	0.061	5.98	102.6	2.4	0.32	0.0	0.00	0.00	0.46	0.16	20	
30	14.03	14.03	33.383	24.933	302.1	0.092	5.89	100.6	2.6	0.36	0.4	0.05	0.06	0.53	0.22	30	
40	12.74	12.73	33.350	25.169	279.8	0.121	5.34	88.7	5.0	0.70	5.4	0.29	0.00	0.31	0.20	40	
50	12.21	12.21	33.346	25.267	270.7	0.148	5.08	83.4	6.6	0.83	7.7	0.07	0.00	0.21	0.17	50	
60	11.51	11.50	33.363	25.412	257.2	0.175	4.70	76.1	9.6	1.03	11.1	0.04	0.00	0.13	0.11	60	
69	11.37	11.36	33.390	25.459	253.0	0.198	4.49	72.5	11.2	1.14	12.8	0.02	0.00	0.10	0.10	70	
75 ISL	11.13 D	11.11	33.414 D	25.523	246.9	0.214	4.38	70.3	12.3	1.21	13.9	0.02	0.00	0.08	0.10	76	
85	10.64	10.63	33.447	25.633	236.6	0.237	4.17	66.2	14.2	1.32	15.6	0.02	0.00	0.06	0.09	86	
100	10.04	10.02	33.575	25.838	217.5	0.271	3.68	57.7	19.4	1.59	19.9	0.02	0.00	0.02	0.05	101	
120	9.57	9.55	33.783	26.079	195.0	0.312	3.04	47.3	25.5	1.87	24.0	0.00	0.00	0.00	0.04	121	
125 ISL	9.44 D	9.39	33.795 D	26.115	191.6	0.324	3.00 D	46.5	26.5	1.91	24.6	0.00	0.00	0.00	0.04	126	
140	9.15	9.14	33.862	26.208	183.0	0.350	2.69	41.5	29.4	2.02	26.4	0.00	0.00	0.00	0.04	141	
150 ISL	9.12 D	9.10	33.886 D	26.233	180.9	0.370	2.64 D	40.7	31.0	2.08	27.0	0.00	0.00	0.00	0.04	151	
170	8.98	8.96	34.033	26.371	168.2	0.403	2.17	33.4	34.2	2.19	28.2	0.00	0.00	0.00	0.04	171	
200	8.72	8.70	34.114	26.475	158.8	0.452	1.86	28.5	38.3	2.32	29.5	0.00	0.00	0.00	0.03	202	
230	8.42	8.40	34.154	26.553	151.9	0.499	1.53	23.2	42.5	2.47	31.0	0.00	0.00		232	06	
250 ISL	8.27 D	8.25	34.182 D	26.598	148.0	0.532	1.33 D	20.2	45.1	2.56	31.8	0.00	0.00		252		
270	8.19	8.16	34.210	26.634	145.0	0.558	1.11	16.7	47.7	2.64	32.6	0.00	0.00		272	05	
300 ISL	7.81 D	7.78	34.216 D	26.695	139.5	0.604	0.97 D	14.5	51.6	2.72	33.7	0.00	0.00		302		
320	7.67	7.63	34.233	26.730	136.5	0.629	0.84	12.6	54.2	2.78	34.5	0.00	0.00		323	04	
380	6.98	6.95	34.240	26.833	127.3	0.708	0.62	9.0	62.3	2.94	36.7	0.00	0.00		383	03	
400 ISL	6.84 D	6.81	34.264 D	26.871	123.9	0.737	0.50 D	7.4	64.8	2.98	37.3	0.00	0.00		403		
441	6.52	6.48	34.266	26.916	120.0	0.783	0.44	6.3	69.8	3.07	38.4	0.00	0.00		445	02	
500 ISL	6.15 D	6.11	34.269 D	26.967	115.7	0.858	0.38 D	5.5	74.8	3.15	39.3	0.00	0.00		504		
516	6.22	6.17	34.298	26.982	114.6	0.871	0.31	4.4	76.1	3.17	39.5	0.00	0.00		520	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.20	14.20	33.386	24.899	304.4	0.000	5.90	101.0	2.6	0.39	0.6	0.05	0.04	0.53	0.14	0	
2	14.20	14.20	33.386	24.899	304.4	0.006	5.90	101.0	2.6	0.39	0.6	0.05	0.04	0.53	0.14	2	
10	14.20	14.20	33.385	24.899	304.7	0.031	5.90	101.1	2.6	0.38	0.6	0.05	0.05	0.53	0.14	10	
19	14.13	14.13	33.379	24.909	304.0	0.058	5.89	100.7	2.7	0.39	0.7	0.05	0.07	0.52	0.17	19	
20 ISL	14.02 D	14.00	33.369 D	24.928	302.2	0.061	5.88	100.3	2.7	0.39	0.7	0.05	0.07	0.50	0.17	20	
30	13.85	13.85	33.367	24.958	299.7	0.091	5.87	99.8	3.1	0.42	1.2	0.08	0.11	0.37	0.15	30	
40	13.05	13.05	33.362	25.117	284.9	0.120	5.70	95.3	4.2	0.55	2.7	0.20	0.28	0.39	0.23	40	
50	12.67	12.66	33.356	25.188	278.3	0.148	5.40	89.5	5.6	0.70	5.3	0.34	0.04	0.22	0.17	50	
60	11.22	11.21	33.340	25.446	253.9	0.175	4.77	76.7	9.6	1.00	10.8	0.03	0.00	0.10	0.10	60	
70	11.25	11.24	33.384	25.476	251.3	0.200	4.44	71.5	11.4	1.15	12.9	0.03	0.00	0.11	0.14	71	
75 ISL	10.93 D	10.94	33.430 D	25.565	242.9	0.214	4.25 D	68.0	12.7	1.22	14.2	0.03	0.00	0.09	0.11	76	
85	10.47	10.46	33.471	25.682	231.9	0.236	4.09	64.8	15.3	1.37	16.7	0.02	0.00	0.05	0.06	86	
100	9.80	9.78	33.653	25.939	207.8	0.269	3.39	53.0	22.1	1.70	21.9	0.01	0.00	0.01	0.04	101	
120	9.53	9.52	33.809	26.105	192.5	0.309	2.82	43.9	26.4	1.91	24.5	0.01	0.00	0.01	0.04	121	
125 ISL	9.37 D	9.36	33.808 D	26.130	190.1	0.321	2.89 D	44.8	27.4	1.94	25.0	0.01	0.00	0.01	0.04	126	
140	9.10	9.08	33.938	26.276	176.5	0.346	2.53	39.0	30.4	2.04	26.6	0.00	0.00	0.00	0.04	141	
150 ISL	9.06 D	9.04	33.966 D	26.305	174.0	0.366	2.51 D	38.6	31.7	2.08	27.1	0.00	0.00	0.00	0.04	151	
170	8.84	8.82	34.016	26.379	167.4	0.398	2.30	35.2	34.2	2.15	28.2	0.00	0.00	0.00	0.03	171	
200 ISL	8.39 D	8.37	34.072 D	26.492	157.1	0.449	1.94 D	29.4	39.3	2.29	30.3	0.00	0.00	0.00	0.03	202	
201	8.39	8.37	34.069	26.491	157.2	0.448	1.95	29.6	39.5	2.29	30.4	0.00	0.00	0.00	0.03	203	
230	8.09	8.06	34.099	26.561	151.0	0.493	1.74	26.2	43.3	2.40	31.5	0.00	0.00		232	06	
250 ISL	7.89 D	7.87	34.138 D	26.620	145.7	0.526	1.52 D	22.8	46.6	2.49	32.6	0.00	0.00		252		
270	7.65	7.62	34.133	26.653	142.9	0.552	1.33	19.8	49.9	2.58	33.7	0.00	0.00		272	05	
300 ISL	7.41 D	7.38	34.161 D	26.709	137.9	0.597	1.14 D	16.9	53.9	2.68	34.7	0.00	0.00		302		
320	7.23	7.20	34.186	26.755	133.8	0.621	0.95	14.1	56.6	2.75	35.4	0.00	0.00		323	04	
380	6.63	6.60	34.218	26.862	124.1	0.698	0.65	9.5	65.5	2.93	37.6	0.00	0.00		383	03	
400 ISL	6.58 D	6.55	34.252 D	26.896	121.3	0.727	0.52 D	7.5	67.9	2.97	38.0	0.00	0.00		403		
441	6.35	6.31	34.275	26.945	117.0	0.772	0.40	5.8	72.7	3.05	38.9	0.00	0.00		445	02	
500 ISL	6.02 D	5.98	34.304 D	27.011	111.4	0.845	0.32 D	4.5	78.0								

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
31 30.9 N	120 14.9 W	30/01/2012	0326	UTC	3944 m	360	10 kn	360 03 03	1	1021.3 mb	16.0 C	14.3 C	20 m	3/8	ST	012	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.44	14.44	33.281	24.767	317.1	0.000	5.95	102.3	2.5	0.33	0.0	0.01	0.03	0.33	0.10	0	
2 A	14.44	14.44	33.281	24.767	317.1	0.006	5.95	102.3	2.5	0.33	0.0	0.01	0.03	0.33	0.10	2	22
8	14.34	14.34	33.283	24.790	315.0	0.025	5.93	101.8	2.4	0.32	0.0	0.01	0.06	0.34	0.10	8	21
10 ISL	14.31 D	14.31	33.284 D	24.798	314.3	0.032	5.97	D102.4	2.4	0.32	0.0	0.01	0.08	0.34	0.10	10	
14 A	14.30	14.30	33.283	24.799	314.3	0.044	5.93	101.7	2.4	0.33	0.0	0.01	0.13	0.35	0.09	14	20
18 A	14.28	14.28	33.285	24.805	314.0	0.057	5.94	101.8	2.4	0.32	0.0	0.01	0.08	0.40	0.09	18	19
20 ISL	14.25 D	14.24	33.283 D	24.811	313.4	0.063	5.97	D102.3	2.4	0.32	0.0	0.01	0.08	0.40	0.10	20	
28	14.24	14.23	33.279	24.810	313.7	0.088	6.01	102.9	2.4	0.32	0.0	0.01	0.06	0.41	0.13	28	18
30 ISL	14.23 D	14.23	33.282 D	24.813	313.5	0.095	5.93	D101.6	2.4	0.32	0.0	0.01	0.06	0.42	0.12	30	
36 A	14.22	14.22	33.288	24.820	313.0	0.113	5.93	101.5	2.4	0.32	0.0	0.01	0.04	0.45	0.11	36	17
46	14.21	14.20	33.277	24.816	313.8	0.145	5.93	101.4	2.4	0.32	0.0	0.01	0.19	0.48	0.10	46	16
50 ISL	14.20 D	14.19	33.279 D	24.819	313.6	0.159	5.90	D101.0	2.6	0.32	0.0	0.01	0.23	0.45	0.11	50	
58	14.18	14.17	33.279	24.824	313.3	0.182	5.91	101.0	2.9	0.32	0.1	0.02	0.31	0.39	0.13	58	15
68 A	14.01	14.00	33.265	24.849	311.3	0.213	5.87	100.0	2.6	0.35	0.3	0.05	0.16	0.30	0.14	69	
75 ISL	13.85 D	13.84	33.261 D	24.879	308.6	0.237	5.84	D99.2	2.9	0.40	1.0	0.09	0.13	0.24	0.14	76	
77 A	13.61	13.60	33.267	24.934	303.4	0.241	5.75	97.2	3.0	0.41	1.2	0.10	0.12	0.23	0.14	78	13
88	12.46	12.45	33.364	25.235	274.9	0.273	5.22	86.3	5.6	0.65	5.6	0.05	0.06	0.15	0.16	89	12
100	11.86	11.85	33.385	25.367	262.6	0.305	4.98	81.1	7.7	0.82	8.3	0.02	0.18	0.10	0.12	101	11
120	10.24	10.23	33.515	25.756	225.7	0.354	3.88	61.1	17.4	1.48	18.5	0.00	0.23	0.03	0.04	121	10
125 ISL	10.04 D	10.02	33.567 D	25.832	218.6	0.368	3.80	D59.6	18.5	1.51	19.1	0.00	0.17	0.02	0.04	126	
139	9.62	9.60	33.659	25.974	205.3	0.395	3.69	57.4	21.5	1.61	20.9	0.00	0.00	0.01	0.03	140	09
150 ISL	9.43 D	9.42	33.694 D	26.032	200.0	0.420	3.79	D58.7	24.2	1.71	22.5	0.00	0.00	0.01	0.03	151	
170	8.97	8.95	33.887	26.258	178.9	0.455	3.01	46.2	29.0	1.90	25.4	0.00	0.00	0.00	0.02	171	08
199	8.44	8.41	33.966	26.403	165.5	0.505	2.82	42.8	33.8	1.99	27.4	0.00	0.00	0.00	0.02	201	07
200 ISL	8.45 D	8.43	33.969 D	26.404	165.5	0.510	2.82	D42.8	34.0	2.00	27.5	0.00	0.00	0.00	0.02	202	
230	7.98	7.96	34.009	26.506	156.1	0.555	2.46	37.0	38.9	2.16	29.5	0.00	0.00			232	06
250 ISL	7.70 D	7.68	34.038 D	26.569	150.4	0.590	2.17	D32.4	43.3	2.29	31.2	0.00	0.00			252	
270	7.49	7.46	34.062	26.620	145.8	0.615	1.82	27.0	47.7	2.42	32.8	0.00	0.00			272	05
300 ISL	7.20 D	7.18	34.084 D	26.677	140.8	0.663	1.53	D22.5	52.4	2.55	34.4	0.00	0.00			302	
320	7.01	6.98	34.104	26.720	136.9	0.686	1.33	19.5	55.5	2.64	35.4	0.00	0.00			323	04
380	6.69	6.66	34.181	26.825	127.7	0.765	0.77	11.2	64.6	2.89	37.6	0.00	0.00			383	03
400 ISL	6.45 D	6.42	34.197 D	26.869	123.6	0.797	0.64	D9.2	67.2	2.94	38.1	0.00	0.00			403	
440	6.33	6.29	34.246	26.925	118.9	0.839	0.47	6.9	72.4	3.03	39.0	0.00	0.00			444	02
500 ISL	6.10 D	6.06	34.304 D	27.001	112.4	0.916	0.30	D4.3	79.1	3.13	40.2	0.00	0.00			504	
515	5.91	5.87	34.301	27.022	110.4	0.925	0.28	4.0	80.8	3.16	40.5	0.00	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 CRUISE-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE	ORD
31 10.7 N	120 55.3 W	30/01/2012	1054	UTC	3833 m	340	15 kn			1019.2 mb	15.0 C	13.5 C	20 m	3/8	ST	013	
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SIO3	PO4	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
0	14.94	14.94	33.361	24.723	321.2	0.000	5.83	101.3	2.0	0.31	0.0	0.00	0.00	0.21	0.07	0	
2	14.94	14.94	33.361	24.723	321.2	0.006	5.83	101.3	2.0	0.31	0.0	0.00	0.00	0.21	0.07	2	20
10	14.94	14.94	33.360	24.722	321.5	0.032	5.84	101.6	2.0	0.30	0.0	0.00	0.00	0.21	0.07	10	19
20 ISL	14.93 D	14.92	33.360 D	24.727	321.5	0.065	5.82	D101.2	2.0	0.30	0.0	0.00	0.00	0.23	0.08	20	
25	14.85	14.84	33.358	24.742	320.2	0.080	5.84	101.3	2.0	0.30	0.0	0.00	0.00	0.24	0.09	25	18
30 ISL	14.84 D	14.84	33.360 D	24.745	320.1	0.097	5.83	D101.1	2.0	0.30	0.0	0.00	0.00	0.26	0.10	30	
40	14.82	14.81	33.357	24.748	320.1	0.128	5.85	101.5	2.0	0.30	0.0	0.00	0.00	0.30	0.11	40	17
50	14.77	14.76	33.354	24.756	319.6	0.160	5.85	101.2	2.0	0.30	0.0	0.00	0.00	0.31	0.11	50	16
62	14.56	14.55	33.343	24.793	316.5	0.198	5.85	100.8	2.0	0.31	0.0	0.01	0.07	0.34	0.13	62	15
75	14.28	14.27	33.329	24.842	312.2	0.239	5.83	99.9	2.3	0.33	0.2	0.04	0.14	0.23	0.10	76	14
87	13.28	13.26	33.329	25.050	292.7	0.276	5.71	95.9	3.7	0.50	2.1	0.24	0.33	0.15	0.12	88	13
100	12.53	12.52	33.312	25.183	280.2	0.313	5.24	86.7	5.8	0.73	6.1	0.14	0.10	0.12	0.12	101	12
112	11.67	11.65	33.311	25.345	264.9	0.346	4.81	78.0	8.3	0.95	10.0	0.03	0.00	0.11	0.13	113	11
125 ISL	10.75 D	10.74	33.374	25.559	244.7	0.379	4.53	72.2	11.9	1.14	13.4	0.01	0.07	0.05	0.07	126	10
140	10.06	10.05	33.507	25.781	223.8	0.414	4.03	63.2	17.2	1.43	18.2	0.01	0.24	0.02	0.04	141	09
150 ISL	9.89 D	9.87	33.574 D	25.864	216.1	0.439	3.83	D59.9	20.0	1.55	20.1	0.01	0.17	0.02	0.03	151	
170	9.20	9.19	33.798	26.150	189.2	0.476	3.26	50.4	25.7	1.79	24.0	0.00	0.03	0.00	0.02	171	08
200 ISL	8.87 D	8.85	33.959 D	26.330	172.6</												

RV NEW HORIZON

## CALCOFI CRUISE 1202

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 50.9 N	121 35.2 W	30/01/2012	1635	UTC	4106 m	330	10 kn			1019.6 mb	14.0 C	13.1 C					014	
0	15.41	15.41	33.394	24.645	328.6	0.000	5.77	101.2	1.7	0.30	0.0	0.00	0.00	0.15	0.05	0		
2	15.41	15.41	33.394	24.645	328.6	0.007	5.77	101.2	1.7	0.30	0.0	0.00	0.00	0.15	0.05	2	20	
10	15.42	15.42	33.394	24.644	329.0	0.033	5.79	101.6	1.8	0.29	0.0	0.00	0.00	0.16	0.05	10	19	
20	ISL	15.43 D	15.42	33.396 D	24.644	329.3	0.066	5.78	D101.5	1.7	0.29	0.0	0.00	0.00	0.16	0.05	20	
25	15.42	15.42	33.394	24.644	329.6	0.082	5.77	101.4	1.7	0.29	0.0	0.00	0.00	0.17	0.05	25	18	
30	ISL	15.42 D	15.42	33.396 D	24.645	329.6	0.099	5.75	D101.0	1.7	0.29	0.0	0.00	0.00	0.17	0.06	30	
40	15.38	15.37	33.398	24.658	328.7	0.132	5.76	101.0	1.7	0.29	0.0	0.00	0.00	0.18	0.06	40	17	
50	15.35	15.34	33.397	24.663	328.5	0.165	5.78	101.3	1.7	0.29	0.0	0.00	0.00	0.22	0.07	50	16	
62	15.31	15.30	33.396	24.674	328.0	0.204	5.75	100.7	1.8	0.30	0.0	0.00	0.00	0.34	0.10	62	15	
74	12.46	12.45	33.238	25.138	283.7	0.241	5.26	86.8	5.4	0.70	5.8	0.07	0.00	0.30	0.21	75	14	
75	ISL	12.26 D	12.26	33.250 D	25.184	279.4	0.245	5.16	D 84.9	5.6	0.72	6.1	0.07	0.00	0.30	0.21	76	
87	11.75	11.74	33.293	25.315	267.1	0.276	4.83	78.6	8.2	0.95	9.9	0.03	0.00	0.21	0.17	88	13	
100	11.03	11.02	33.358	25.496	250.1	0.310	4.48	71.8	11.5	1.15	13.4	0.02	0.00	0.12	0.12	101	12	
112	10.43	10.42	33.428	25.656	235.1	0.339	4.36	68.9	13.7	1.26	15.2	0.01	0.00	0.05	0.06	113	11	
124	9.99	9.98	33.515	25.799	221.7	0.366	4.29	67.2	16.2	1.34	16.9	0.01	0.00	0.03	0.04	125	10	
125	ISL	9.97 D	9.94	33.527 D	25.815	220.2	0.371	4.20	D 65.8	16.6	1.36	17.2	0.01	0.00	0.02	0.04	126	
140	9.75	9.73	33.668	25.959	206.8	0.401	3.38	52.8	22.4	1.71	22.0	0.01	0.00	0.01	0.04	141	09	
150	ISL	9.55 D	9.52	33.745 D	26.055	197.9	0.423	3.18	D 49.4	24.2	1.77	23.1	0.01	0.00	0.01	0.03	151	
170	9.17	9.15	33.858	26.202	184.2	0.459	2.92	45.1	27.9	1.90	25.2	0.00	0.00	0.00	0.03	171	08	
200	8.92	8.90	33.984	26.343	171.5	0.512	2.47	37.8	32.5	2.06	27.4	0.00	0.00	0.00	0.03	202	07	
230	8.51	8.48	34.048	26.458	161.0	0.562	2.17	33.0	37.4	2.21	29.3	0.00	0.00			232	06	
250	ISL	7.96 D	7.94	34.043 D	26.535	153.8	0.597	2.17	D 32.6	41.3	2.29	30.7	0.00	0.00			252	
270	7.72	7.69	34.059	26.585	149.3	0.624	1.90	28.4	45.1	2.37	32.0	0.00	0.00			272	05	
300	ISL	7.43 D	7.40	34.095 D	26.654	143.1	0.672	1.54	D 22.9	50.5	2.52	33.8	0.00	0.00			302	
320	7.18	7.15	34.099	26.693	139.6	0.696	1.35	19.9	54.1	2.62	35.0	0.00	0.00			323	04	
380	6.72	6.68	34.186	26.825	127.7	0.777	0.78	11.4	63.5	2.86	37.2	0.00	0.00			383	03	
400	ISL	6.53 D	6.49	34.184 D	26.850	125.6	0.806	0.72	D 10.5	66.4	2.91	37.8	0.00	0.00			403	
440	6.23	6.19	34.212	26.911	120.1	0.851	0.54	7.8	72.2	3.01	39.0	0.00	0.00			444	02	
500	ISL	5.86 D	5.81	34.284 D	27.016	110.7	0.926	0.33	D 4.7	80.0	3.14	40.3	0.00	0.00			504	
515	5.79	5.75	34.293	27.031	109.5	0.937	0.28	4.0	82.0	3.17	40.6	0.00	0.00			519	01	

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY CRUISE-CORRECTED 02;

RV NEW HORIZON

## CALCOFI CRUISE 1202

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 15.7 W	30/01/2012	2344	UTC	4173 m	320	06 kn	320 03 05	1	1018.2 mb	14.1 C	12.7 C	21 m	3/8	ST	015	
0	15.24	15.23	33.395	24.685	324.9	0.000	5.79	101.2	1.8	0.33	0.0	0.00	0.00	0.26	0.09	0	
2 A	15.24	15.23	33.395	24.685	324.9	0.007	5.79	101.2	1.8	0.33	0.0	0.00	0.00	0.26	0.09	2	22
10 ISL	15.24 D	15.24	33.399 D	24.687	324.9	0.033	5.82	D101.8	1.8	0.32	0.0	0.00	0.00	0.27	0.09	10	
15 A	15.24	15.24	33.396	24.685	325.3	0.049	5.78	101.2	1.8	0.31	0.0	0.00	0.00	0.27	0.10	15	21
19 A	15.24	15.23	33.396	24.686	325.3	0.062	5.81	101.5	1.8	0.31	0.0	0.00	0.00	0.30	0.10	19	20
20 ISL	15.23 D	15.23	33.397 D	24.688	325.2	0.065	5.79	D101.2	1.8	0.31	0.0	0.00	0.00	0.30	0.10	20	
29	15.24	15.23	33.394	24.685	325.8	0.094	5.79	101.3	1.8	0.31	0.0	0.00	0.00	0.29	0.10	29	19
30 ISL	15.24 D	15.23	33.398 D	24.688	325.5	0.098	5.77	D100.9	1.8	0.31	0.0	0.00	0.00	0.29	0.10	30	
38 A	15.22	15.21	33.395	24.690	325.6	0.124	5.80	101.3	1.8	0.30	0.0	0.00	0.02	0.29	0.09	38	18
49	15.20	15.19	33.390	24.693	325.7	0.160	5.77	100.8	1.8	0.31	0.0	0.00	0.02	0.40	0.14	49	17
50 ISL	15.19 D	15.17	33.393 D	24.698	325.2	0.164	5.73	D100.0	1.9	0.32	0.1	0.01	0.02	0.39	0.14	50	
60	13.91	13.90	33.335	24.925	303.8	0.194	5.65	96.2	2.6	0.40	1.2	0.10	0.05	0.30	0.18	60	16
72 A	12.35	12.34	33.263	25.178	279.9	0.229	5.02	82.7	6.6	0.85	7.9	0.08	0.00	0.26	0.24	73	15
75 ISL	12.01 D	12.00	33.296 D	25.268	271.4	0.240	4.80	D 78.5	7.2	0.89	8.7	0.06	0.00	0.23	0.22	76	
81 A	11.58	11.57	33.305	25.355	263.1	0.254	4.76	77.1	8.5	0.97	10.4	0.03	0.00	0.16	0.18	82	14
88	11.20	11.19	33.342	25.453	253.9	0.272	4.75	76.4	9.5	1.01	11.1	0.03	0.00	0.12	0.11	89	13
95	10.77	10.76	33.405	25.578	242.1	0.289	4.55	72.5	11.7	1.13	13.2	0.01	0.00	0.07	0.07	96	12
100 ISL	10.53 D	10.49	33.448 D	25.659	234.5	0.303	4.38	D 69.4	13.6	1.24	14.9	0.01	0.00	0.06	0.07	101	
110	10.23	10.22	33.514	25.758	225.4	0.324	3.90	61.5	17.3	1.47	18.4	0.01	0.00	0.04	0.05	111	11
125	9.86	9.84	33.630	25.912	211.0	0.357	3.52	55.0	20.9	1.64	21.1	0.00	0.00	0.01	0.04	126	10
145	9.49	9.47	33.779	26.089	194.5	0.397	3.13	48.6	25.1	1.82	23.7	0.00	0.00	0.00	0.03	146	09
150 ISL	9.35 D	9.33	33.824 D	26.147	189.1	0.410	3.09	D 47.8	26.0	1.85	24.1	0.00	0.00	0.00	0.03	151	
170	9.03	9.01	33.916	26.270	177.7	0.444	2.83	43.4	29.6	1.95	25.7	0.00	0.00	0.00	0.03	171	08
199	8.60	8.58	34.008	26.411	164.9	0.493	2.42	36.8	34.8	2.11	28.2	0.00	0.00	0.00	0.03	201	07
200 ISL	8.58 D	8.56	34.013 D	26.417	164.3	0.498	2.41	D 36.7	34.9	2.11	28.3	0.00	0.00	0.00	0.02	202	
230	8.35	8.33	34.060	26.490	157.8	0.543	2.05	31.0	38.9	2.25	29.9	0.00	0.00			232	06
250 ISL	8.08 D	8.06	34.094 D	26.558	151.7	0.578	1.77	D 26.7	42.6	2.35	31.2	0.00	0.00</				

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
30	10.8 N	122 55.2 W	31/01/2012	0617 UTC	3982 m	320	08 kn	320 03 05	1	1016.5 mb	15.9 C	13.8 C	18 m	7/8	SC	016	
0	15.07	15.07	33.270	24.625	330.6	0.000	5.84	101.7	2.1	0.29	0.0	0.00	0.00	0.15	0.05	0	
2	15.07	15.07	33.270	24.625	330.6	0.007	5.84	101.7	2.1	0.29	0.0	0.00	0.00	0.15	0.05	2	20
10	14.96	14.95	33.268	24.648	328.7	0.033	5.84	101.4	2.1	0.29	0.0	0.00	0.00	0.15	0.05	10	19
20	ISL	14.92 D	14.91	33.270 D	24.659	327.9	0.066	5.85	D101.6	2.0	0.28	0.0	0.00	0.00	0.17	0.06	20
25	14.91	14.91	33.268	24.658	328.1	0.082	5.85	101.5	2.0	0.28	0.0	0.00	0.00	0.18	0.06	25	18
30	ISL	14.91 D	14.90	33.269 D	24.661	328.0	0.099	5.85	D101.6	2.0	0.28	0.0	0.00	0.00	0.19	0.07	30
39	14.90	14.90	33.268	24.662	328.3	0.128	5.85	101.5	2.1	0.28	0.0	0.00	0.00	0.21	0.08	39	17
50	14.89	14.89	33.267	24.663	328.5	0.164	5.84	101.3	2.1	0.28	0.0	0.00	0.00	0.24	0.08	50	16
61	14.81	14.80	33.254	24.672	328.1	0.200	5.82	100.8	2.0	0.28	0.0	0.00	0.00	0.26	0.11	61	15
75	14.47	14.46	33.231	24.726	323.3	0.246	5.84	100.5	2.2	0.30	0.0	0.04	0.06	0.26	0.14	76	14
87	13.82	13.80	33.236	24.867	310.1	0.284	5.77	97.9	2.6	0.37	0.6	0.28	0.00	0.20	0.13	88	13
100	13.01	12.99	33.279	25.065	291.5	0.323	5.75	96.0	3.0	0.38	1.3	0.10	0.00	0.13	0.14	101	12
112	12.25	12.24	33.315	25.239	275.1	0.357	5.61	92.2	3.7	0.45	2.6	0.02	0.00	0.10	0.11	113	11
125	11.13	11.11	33.266	25.409	259.1	0.392	5.18	83.1	7.2	0.80	7.9	0.01	0.00	0.06	0.07	126	10
139	10.65	10.64	33.366	25.571	243.9	0.427	4.68	74.3	11.2	1.08	12.6	0.00	0.00	0.04	0.05	140	09
150	ISL	10.34 D	10.32	33.496 D	25.726	229.3	0.456	3.94	D 62.3	13.8	1.18	14.6	0.00	0.03	0.04	151	
170	9.50	9.48	33.661	25.996	203.9	0.496	4.26	66.0	18.5	1.37	18.1	0.00	0.00	0.00	0.02	171	08
200	8.77	8.74	33.880	26.284	176.9	0.553	3.51	53.7	27.3	1.73	23.8	0.00	0.00	0.00	0.02	202	07
230	8.33	8.30	33.990	26.440	162.6	0.604	2.48	37.5	36.0	2.11	28.8	0.00	0.00	0.00	0.02	232	06
250	ISL	7.94 D	7.92	34.000 D	26.504	156.7	0.640	2.51	D 37.7	38.6	2.13	29.3	0.00	0.00	0.00	0.02	252
269	7.65	7.62	33.993	26.543	153.2	0.666	2.62	39.0	41.0	2.15	29.8	0.00	0.00	0.10	0.01	271	05
300	ISL	7.29 D	7.26	34.028 D	26.621	146.1	0.716	2.07	D 30.6	46.8	2.33	32.0	0.00	0.00	0.00	0.02	302
320	7.11	7.08	34.037	26.654	143.2	0.741	1.87	27.6	50.6	2.45	33.5	0.00	0.00	0.00	0.02	322	04
380	6.50	6.47	34.110	26.794	130.5	0.823	1.07	15.5	62.7	2.78	37.3	0.00	0.00	0.00	0.02	383	03
400	ISL	6.35 D	6.31	34.122 D	26.824	127.8	0.854	0.99	D 14.4	65.8	2.84	37.9	0.00	0.00	0.00	0.02	403
440	6.05	6.01	34.165	26.897	121.3	0.899	0.70	10.0	71.9	2.97	39.2	0.00	0.00	0.00	0.02	444	
500	ISL	5.73 D	5.69	34.214 D	26.975	114.4	0.976	0.50	D 7.2	79.0	3.07	40.4	0.00	0.00	0.00	0.02	504
515	5.68	5.63	34.218	26.986	113.5	0.986	0.45	6.3	80.8	3.09	40.7	0.00	0.00	0.00	0.02	519	01

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS; PRIMARY T; PRIMARY CORRECTED SALINITY; PRIMARY STA-CORRECTED 02;

RV NEW HORIZON

CALCOFI CRUISE 1202

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
DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAEAO	PRES	SAMP
m	DEG C	DEG C	THETA				ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db	
29	51.0 N	123 35.4 W	31/01/2012	1208 UTC	4063 m	020	16 kn										017
0	16.29	16.29	33.563	24.578	335.0	0.000	5.65	100.9	1.9	0.24	0.0	0.00	0.00	0.09	0.01	0	
2	16.29	16.29	33.563	24.578	335.0	0.007	5.65	100.9	1.9	0.24	0.0	0.00	0.00	0.09	0.01	2	20
10	16.29	16.29	33.564	24.579	335.2	0.034	5.66	101.2	2.1	0.24	0.0	0.00	0.00	0.11	0.02	10	19
20	ISL	16.28 D	16.28	33.561 D	24.579	335.0	0.060	5.63	D 100.7	2.0	0.23	0.0	0.00	0.00	0.10	0.02	20
25	16.30	16.30	33.564	24.578	335.9	0.084	5.64	100.9	2.0	0.23	0.0	0.00	0.00	0.09	0.02	25	18
30	ISL	16.30 D	16.30	33.566 D	24.578	336.0	0.101	5.63	D 100.7	2.0	0.23	0.0	0.00	0.00	0.10	0.01	30
40	16.36	16.35	33.592	24.586	335.6	0.134	5.63	100.9	2.0	0.23	0.0	0.00	0.00	0.11	0.01	40	17
50	16.35	16.34	33.589	24.587	335.9	0.168	5.64	100.9	2.1	0.22	0.0	0.00	0.00	0.09	0.02	50	16
62	16.20	16.19	33.563	24.603	334.8	0.208	5.65	100.7	2.0	0.23	0.0	0.00	0.00	0.12	0.01	62	15
75	16.10	16.09	33.527	24.597	335.8	0.252	5.64	100.5	1.9	0.23	0.0	0.00	0.00	0.15	0.03	76	14
87	15.06	15.04	33.654	24.929	304.5	0.290	5.73	100.0	2.5	0.22	0.0	0.00	0.00	0.28	0.14	88	13
100	14.45	14.43	33.692	25.090	289.5	0.329	5.60	96.6	2.8	0.25	0.3	0.12	0.00	0.24	0.15	101	12
112	14.01	14.00	33.683	25.174	281.8	0.363	5.48	93.6	3.2	0.32	1.3	0.04	0.03	0.20	0.12	113	11
124	13.63	13.61	33.651	25.229	276.8	0.396	5.39	91.4	3.5	0.37	2.2	0.02	0.04	0.19	0.07	125	10
125	ISL	13.65 D	13.65	33.666 D	25.233	276.5	0.402	5.40	D 91.6	3.6	0.38	2.3	0.02	0.04	0.19	0.07	126
140	12.81	12.79	33.581	25.339	266.6	0.440	5.38	89.6	4.4	0.46	3.5	0.01	0.00	0.10	0.07	141	09
150	ISL	11.86 D	11.84	33.496 D	25.456	255.5	0.470	5.25	D 85.7	6.9	0.65	6.5	0.01	0.00	0.07	0.06	151
170	10.35	10.33	33.494	25.723	230.1	0.515	4.77	75.3	11.8	1.03	12.4	0.00	0.00	0.02	0.03	171	08
200	ISL	9.22 D	9.19	33.758 D	26.120	192.7	0.582	3.95	D 60.9	21.6	1.52	20.5	0.00	0.00	0.00	0.02	202
201	9.17	9.15	33.745	26.116	193.0	0.580	3.95	60.8	21.9	1.54	20.8	0.00	0.00	0.00	0.02	203	07
230	8.76	8.74	33.905	26.306	175.5	0.633	3.42	52.2								232	06
270	8.05	8.03	33.985	26.477	159.7	0.700	2.89	43.5	36.2	2.01	27.9	0.00	0.00			272	05
300	ISL	7.56 D	7.53	34.031 D	26.585	149.7	0.752	2.18	D 32.4	43.6	2.26	31.0	0.00	0.00			302
320	7.34	7.31	34.048	26.631	145.6	0.776	1.88	27.8	48.5	2.42	33.0	0.00	0.00			322	04
381	6.66	6.63	34.098	26.764	133.5	0.861	1.20	17.5	60.3	2.72	36.8	0.00	0.00			384	03
400	ISL	6.44 D</td															

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 53.4 N	121 12.6 W	12/02/2012	0318 UTC	15 m	1236 - 1809 PST	1219 PST	1809 PST	352.8 mg C/m <sup>2</sup>	073

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	chl-a	phaeo	light	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	pct	1	2	mean	dark
3	12.79	33.439	25.225	6.05	100.6	2.6	0.58	2.5	0.10	0.71	1.08	0.52	74. A	10.3	12.5	11.4	0.15
10	12.76	33.440	25.233	6.11	101.6	2.4	0.55	2.5	0.10	0.64	1.02	0.64	36.	13.3	12.0	12.7	0.12
14	12.70	33.440	25.245	6.05	100.4	2.5	0.57	2.5	0.10	0.61	1.16	0.73	24.	11.4	10.6	11.0	0.15
27	12.08	33.451	25.372	5.18	84.9	8.4	0.92	8.1	0.19	0.55	0.66	0.67	6.3	5.9	5.2	5.6	0.10
38	11.56	33.464	25.481	4.94	80.1	10.3	1.02	9.8	0.20	0.44	0.52	0.52					
50	11.24	33.539	25.597	3.97	63.9	15.3	1.39	15.8	0.19	0.29	0.62	0.67	0.60	0.95	0.86	0.90	0.09
58	11.07	33.536	25.627	3.84	61.6	15.1	1.44	16.6	0.17	0.37	0.86	0.90	0.26	0.49	0.41	0.45	0.11

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 43.0 N	123 38.3 W	11/02/2012	0326 UTC	19 m	1235 - 1816 PST	1227 PST	1818 PST	229.0 mg C/m <sup>2</sup>	069

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	chl-a	phaeo	light	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	pct	1	2	mean	dark
2	13.93	33.156	24.778	6.00	102.1	2.6	0.33	0.0	0.00	0.00	0.23	0.06	85. A	4.4	4.4	4.4	0.10
13	13.86	33.159	24.795	5.99	101.6	2.6	0.33	0.0	0.00	0.00	0.25	0.06	35.	4.3	4.5	4.4	0.09
18	13.79	33.154	24.805	6.01	101.9	2.6	0.33	0.0	0.00	0.00	0.29	0.08	23.	4.4	4.9	4.6	0.10
26	13.71	33.143	24.814	6.01	101.7	2.6	0.33	0.0	0.00	0.00	0.37						
35	13.71	33.135	24.809	5.99	101.4	2.6	0.33	0.0	0.00	0.00	0.44	0.16	5.9	4.7	4.5	4.6	0.09
46	13.63	33.169	24.851	5.96	100.7	2.6	0.35	0.1	0.03	0.12	0.33	0.14					
54	13.31	33.165	24.914	5.90	99.1	3.0	0.40	0.7	0.13	0.23	0.23	0.23					
65	12.23	33.092	25.067	5.83	95.7	3.9	0.51	2.2	0.30	0.09	0.13	0.10	0.52	0.02	0.14	0.08	0.41
75	11.83	33.124	25.169	5.60	91.0	4.9	0.64	4.6	0.06	0.00	0.10	0.10	0.23	0.12	0.12	0.12	0.05

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 29.3 N	122 33.1 W	10/02/2012	0258 UTC	15 m	1248 - 1815 PST	1224 PST	1815 PST	136.5 mg C/m <sup>2</sup>	065

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	chl-a	phaeo	light	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	pct	1	2	mean	dark
3	13.01	32.944	24.800	6.16	102.7	3.1	0.34	0.1	0.02	0.00	0.34	0.08	74. A	5.8	5.8	5.8	0.07
10	12.98	32.940	24.803	6.14	102.3	3.0	0.34	0.1	0.02	0.00	0.36	0.10	36.	5.6	5.7	5.7	0.08
14	12.97	32.942	24.806	6.15	102.3	3.1	0.34	0.1	0.02	0.06	0.35	0.09	24.	5.3	5.0	5.1	0.10
20	12.96	32.940	24.807	6.14	102.2	3.0	0.33	0.1	0.02	0.00	0.36	0.08					
27	12.88	32.935	24.819	6.14	102.0	3.2	0.34	0.1	0.02	0.00	0.44	0.09	6.3	0.83	0.49	0.66	3.7
39	12.74	32.973	24.876	6.15	102.0	3.5	0.36	0.5	0.05	0.00	0.48	0.13					
52	12.73	33.059	24.945	6.13	101.6	3.6	0.39	0.8	0.06	0.06	0.46	0.14	0.49	0.79	0.66	0.73	0.06
57	12.51	33.065	24.994	6.09	100.5	3.8	0.42	1.2	0.11	0.12	0.38	0.15	0.29	0.30	0.21	0.26	0.05

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
34 16.8 N	120 1.4 W	09/02/2012	0128 UTC	12 m	1215 - 1803 PST	1214 PST	1803 PST	1504.3 mg C/m <sup>2</sup>	059

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	chl-a	phaeo	light	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	pct	1	2	mean	dark
1	13.03	33.430	25.171	6.06	101.3	2.8	0.54	2.4	0.08	0.49	2.97	0.68	88. A	44.2	43.4	43.8	0.17
8	12.85	33.430	25.208	6.07	101.1	2.8	0.55	2.4	0.09	0.49	3.90	1.07	36.	53.2	53.7	53.5	0.18
11	12.84	33.430	25.209	6.04	100.5	2.7	0.59	2.4	0.08	0.55	3.59	0.95	24.	50.8	49.6	50.2	0.16
22	12.79	33.438	25.226	6.01	100.1	2.7	0.58	2.6	0.08	0.57	3.93	1.01	6.0	41.8	41.0	41.4	0.16
31	12.77	33.442	25.234	6.01	100.0	2.7	0.60	2.7	0.08	0.65	3.88	0.91					
41	12.21	33.474	25.368	5.57	91.5	5.3	0.78	5.4	0.12	1.00	3.04	1.30	0.53	5.5	4.5	5.0	0.15
48	11.95	33.506	25.441	4.83	79.0	10.0	1.06	9.5	0.16	1.05	1.58	1.01	0.22	0.76	0.81	0.79	0.11

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 34.8 N	120 44.1 W	08/02/2012	0259 UTC	11 m	1215 - 1745 PST	1217 PST	1806 PST	205.8 mg C/m <sup>2</sup>	052

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	chl-a	phaeo	light	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	um/l	um/l	um/l	um/l	um/l	um/l	ug/l	ug/l	pct	1	2	mean	dark
1	12.66	33.413	25.231	6.18	102.6	3.2	0.61	3.3	0.12	0.64	0.71	0.50	87. A	13.1	11.7	12.4	0.12
8	12.66	33.409	25.227	6.17	102.3	3.1	0.60	3.3	0.12	0.63	0.72	0.48	33.	9.8	10.7	10.2	0.11
11	12.66	33.410	25.229	6.16	102.2	3.2	0.60	3.3	0.12	0.63	0.76	0.42	22.	7.8	7.9	7.8	0.06
20	12.66	33.413	25.233	6.14	101.9	3.2	0.60	3.4	0.12	0.64	0.71	0.38	6.1	3.6	3.4	3.5	0.13
30	12.63	33.416	25.241	6.12	101.5	3.3	0.60	3.4	0.13	0.66	0.74	0.45					
39	12.58	33.419	25.254	6.09	100.8	3.6	0.62	3.7	0.13	0.71	0.73	0.54	0.43	0.28	0.23	0.26	0.11
44	12.51	33.430	25.275	5.91	97.7	5.1	0.70	4.7	0.16	0.82	0.62	0.59	0.22	0.02	0.12	0.07	0.17

A) INCUBATION LIGHT INTENSITIES WERE 50.0, 34.6, 23.1, 6.1, 0.5, 0.26 PERCENT RESPECTIVELY.

RV NEW HORIZON CALCOFI CRUISE 1202 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 14.9 N	123 28.4 W	07/02/2012	0129 UTC	21 m	1228 - 1817 PST	1228 PST	1817 PST	102.3 mg C/m <sup>2</sup>	048

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	LIGHT	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.91	33.336	24.709	5.82	101.1	2.1	0.30	0.0	0.00	0.00	0.15	0.04	86. A	2.2	2.4	2.3	0.08
15	14.92	33.336	24.709	5.86	101.8	2.0	0.29	0.0	0.00	0.00	0.15	0.05	33.	2.1	2.1	2.1	0.06
20	14.92	33.336	24.709	5.82	101.1	2.0	0.29	0.0	0.00	0.00	0.15	0.04	23.	1.9	1.9	1.9	0.07
29	14.92	33.335	24.708	5.82	101.1	2.0	0.28	0.0	0.00	0.00	0.15	0.05					
37	14.91	33.336	24.712	5.82	101.1	2.0	0.29	0.0	0.00	0.00	0.16	0.04	6.7	1.3	1.2	1.2	0.08
50	14.89	33.334	24.716	5.82	101.0	2.0	0.29	0.0	0.00	0.00	0.22	0.06					
61	14.49	33.317	24.789	5.83	100.4	2.1	0.29	0.0	0.01	0.00	0.29	0.11					
72	13.54	33.239	24.925	5.69	96.1	3.1	0.43	1.5	0.19	0.00	0.32	0.16	0.52	0.42	0.42	0.47	0.03
81	12.88	33.242	25.060	5.50	91.6	4.1	0.54	3.4	0.17	0.00	0.26	0.16	0.27	0.17	0.17	0.17	0.04

RV NEW HORIZON CALCOFI CRUISE 1202 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 53.5 N	118 29.5 W	04/02/2012	0124 UTC	11 m	1208 - 1755 PST	1208 PST	1752 PST	478.8 mg C/m <sup>2</sup>	034

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	LIGHT	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.35	33.372	24.856	6.10	104.8	2.1	0.31	0.0	0.00	0.00	0.90	0.25	76. A	17.2	17.8	17.5	0.16
8	14.33	33.370	24.861	6.09	104.6	2.1	0.31	0.0	0.00	0.00	0.99	0.28	33.	19.0	19.8	19.4	0.17
11	14.32	33.371	24.864	6.09	104.5	2.1	0.31	0.0	0.00	0.00	1.01	0.28	22.	18.2	18.4	18.3	0.16
20	14.19	33.369	24.889	6.04	103.3	2.2	0.34	0.1	0.03	0.00	1.10	0.30	6.1	14.0	13.4	13.7	0.13
29	12.76	33.346	25.161	4.50	74.8	8.7	1.01	10.2	0.48	0.53	0.73	0.48					
38	12.11	33.380	25.313	3.95	64.7	12.2	1.27	13.7	0.53	1.03	0.42	0.38	0.50	0.81	0.62	0.72	0.17
43	11.60	33.409	25.430	3.60	58.4	15.8	1.46	16.7	0.47	3.93	0.28	0.29	0.25	0.23	0.20	0.21	0.13

RV NEW HORIZON CALCOFI CRUISE 1202 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
33 10.1 N	120 1.7 W	05/02/2012	0144 UTC	11 m	1222 - 1809 PST	1222 PST	1809 PST	369.5 mg C/m <sup>2</sup>	040

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	LIGHT	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
1	14.10	33.371	24.907	5.97	102.0	3.0	0.37	0.4	0.03	0.00	0.62	0.07	87. A	9.3	9.5	9.4	0.04
12	14.01	33.370	24.927	5.95	101.4	3.0	0.37	0.4	0.03	0.00	0.57	0.19	19.	9.5	9.7	9.6	0.11
16	14.01	33.370	24.929	5.95	101.5	3.0	0.37	0.4	0.03	0.00	0.55	0.14	11.	8.6	9.2	8.9	0.09
24	14.00	33.376	24.934	5.94	101.3	3.0	0.37	0.4	0.04	0.00	0.63	0.09					
31	13.98	33.373	24.937	5.94	101.2	3.0	0.37	0.4	0.04	0.03	0.65	0.08	1.3	7.2	6.7	7.0	0.03
40	13.77	33.367	24.976	5.79	98.2	3.5	0.44	1.3	0.11	0.08	0.48	0.16					
48	12.70	33.352	25.179	5.27	87.4	5.9	0.72	5.7	0.30	0.00	0.36	0.14					
58	10.95	33.397	25.538	4.49	71.8	11.5	1.15	12.9	0.03	0.00	0.16	0.09	0.03	0.44	0.18	0.31	0.05
66	10.28	33.506	25.742	3.87	61.1	16.6	1.45	17.6	0.02	0.00	0.07	0.07	0.01	0.09	0.08	0.08	0.02

RV NEW HORIZON CALCOFI CRUISE 1202 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
31 59.5 N	122 23.5 W	06/02/2012	0108 UTC	14 m	1224 - 1818 PST	1224 PST	1812 PST	284.8 mg C/m <sup>2</sup>	044

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	LIGHT	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
1	13.41	33.223	24.937	6.13	103.2	3.2	0.36	0.3	0.03	0.05	0.55	0.11	90. A	10.3	10.0	10.1	0.06
10	13.40	33.229	24.942	6.11	102.9	3.2	0.34	0.3	0.04	0.04	0.52	0.11	33.	8.8	9.2	9.0	0.04
13	13.40	33.223D	24.938	6.17D	103.9								24.	8.4	8.6	8.5	0.07
20	13.39	33.223	24.940	6.11	102.7	3.2	0.34	0.4	0.03	0.06	0.51	0.13					
25	13.38	33.223	24.943	6.10	102.5	3.2	0.35	0.4	0.04	0.04	0.58	0.13	6.4	5.8	5.5	5.6	0.08
36	13.34	33.224	24.952	6.05	101.6	3.2	0.36	0.6	0.06	0.09	0.46	0.14					
48	13.34	33.229	24.956	6.04	101.5	3.2	0.36	0.6	0.07	0.13	0.39	0.15	0.52	0.83	0.76	0.79	0.04
54	13.33	33.240	24.968	6.01	101.0	3.2	0.37	0.6	0.08	0.15	0.40	0.17	0.27	0.31	0.28	0.30	0.03

RV NEW HORIZON CALCOFI CRUISE 1202 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD
32 55.6 N	118 54.7 W	03/02/2012	0104 UTC	24 m	1239 - 1751 PST	1209 PST	1755 PST	365.9 mg C/m <sup>2</sup>	026

DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	NH4	CHL-A	PHAE0	LIGHT	UPTAKE	(mg C/m <sup>3</sup> )		
m	DEG C	THETA	ml/l	PCT	uM/l	uM/l	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	14.24	33.381	24.886	5.97	102.3	2.6	0.33	0.0	0.00	0.00	0.28	0.09	88. A	6.3	6.9	6.6	0.08
10	14.22	33.381	24.891	5.96	102.2	2.6	0.31	0.0	0.00	0.04	0.28	0.11					
17	14.22	33.381	24.892	5.97	102.4	2.6	0.34	0.0	0.00	0.19	0.28	0.09	34.	7.4	7.2	7.3	0.08
23	14.19	33.382	24.900	5.97	102.1	2.6	0.31	0.0	0.00	0.04	0.31	0.11	23.	7.0	6.8	6.9	0.06
33	13.82	33.380	24.977	5.89	100.0	2.9	0.37	0.6	0.06	0.17	0.48	0.18					
44	12.89	33.359	25.146	5.48	91.3	4.8	0.58	4.0	0.29	0.08	0.37	0.18	6.0	4.5	4.5	4.5	0.03
82	10.47	33.359	25.751	3.58	56.7	17.8	1.53	18.9	0.02	0.00	0.07	0.08	0.53	0.05	0.07	0.06	0.13
93	10.15	33.688	25.907	3.12	49.1	22.1	1.74	21.8	0.01	0.00	0.02	0.06	0.26	0.04	0.04	0.04	0.02

A) INCUBATION LIGHT INTENSITIES WERE 50.0, 34.6, 23.1, 6.1, 0.5, 0.26 PERCENT RESPECTIVELY.

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD								
DEPTH m	TEMP DEG C	SALINITY SIGMA THETA	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	NH4 uM/l	CHL-A ug/l	PHAE0 ug/l	LIGHT PCT	UPTAKE 1	(mg C/m3)	MEAN	DARK	
31	44.6 N	121 19.8 W	02/02/2012	0108 UTC	22 m	1220 - 1805 PST	1219 PST	1805 PST		180.2	mg C/m2	022					
2	14.86	33.355	24.735	5.83	101.2	1.9	0.32	0.0	0.00	0.00	0.21	0.07	87. A	2.1	1.7	1.9	0.06
15	14.86	33.357	24.738	5.82	101.0	2.0	0.31	0.0	0.00	0.00	0.21	0.07	35.	3.1	3.2	3.1	0.06
20	14.86	33.354	24.736	5.83	101.2	2.0	0.31	0.0	0.00	0.00	0.21	0.07	25.	2.8	3.0	2.9	0.06
30	14.85	33.353	24.738	5.84	101.3	2.0	0.30	0.0	0.00	0.00	0.22	0.07					
40	14.83	33.350	24.740	5.83	101.1	2.1	0.30	0.0	0.00	0.00	0.23	0.08	6.1	2.9	2.9	2.9	0.08
52	14.38	33.282	24.784	5.89	101.2	2.2	0.31	0.0	0.00	0.04	0.35	0.14					
64	14.32	33.279	24.796	5.87	100.7	2.2	0.32	0.0	0.02	0.07	0.35	0.15					
75	14.11	33.279	24.841	5.78	98.8	2.6	0.37	0.5	0.13	0.14	0.22	0.13	0.53	0.89	0.83	0.86	0.02
84	13.59	33.309	24.970	5.61	94.8	3.4	0.47	1.9	0.33	0.05	0.15	0.13	0.28	0.38	0.22	0.30	0.01

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD								
DEPTH m	TEMP DEG C	SALINITY SIGMA THETA	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	NH4 uM/l	CHL-A ug/l	PHAE0 ug/l	LIGHT PCT	UPTAKE 1	(mg C/m3)	MEAN	DARK	
30	45.4 N	123 20.2 W	01/02/2012	0055 UTC	23 m	1225 - 1807 PST	1227 PST	1813 PST		141.2	mg C/m2	019					
2	14.90	33.282	24.671	5.85	101.6	2.1	0.30	0.0	0.00	0.00	0.17	0.06	88. A	2.6	2.8	2.7	0.08
15	14.89	33.281	24.672	5.84	101.3	2.0	0.29	0.0	0.00	0.00	0.18	0.07	37.	2.6	2.7	2.6	0.05
22	14.89	33.280	24.671	5.83	101.2	2.1	0.29	0.0	0.00	0.00	0.17	0.06	23.	2.4	2.4	2.4	0.08
32	14.90	33.285	24.675	5.84	101.4	2.1	0.29	0.0	0.00	0.00	0.18	0.06					
42	14.90	33.285	24.676	5.84	101.4	2.0	0.29	0.0	0.00	0.00	0.18	0.06	6.1	1.6	1.6	1.6	0.04
54	14.88	33.284	24.680	5.85	101.4	2.1	0.28	0.0	0.00	0.00	0.21	0.07					
66	14.57	33.276	24.741	5.82	100.3	2.1	0.30	0.0	0.01	0.04	0.29	0.13					
79	12.94	33.148D	24.975	5.76	96.0	3.0	0.44	1.5	0.28	0.00	0.27	0.22	0.51	0.63	0.53	0.58	0.03
89	12.10	33.169D	25.156	5.68	92.9	4.0	0.53	3.1	0.02	0.00	0.16	0.13	0.26	0.19	0.02	0.10	0.02

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD								
DEPTH m	TEMP DEG C	SALINITY SIGMA THETA	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	NH4 uM/l	CHL-A ug/l	PHAE0 ug/l	LIGHT PCT	UPTAKE 1	(mg C/m3)	MEAN	DARK	
32	41.2 N	117 52.2 W	29/01/2012	0101 UTC	15 m	1206 - 1750 PST	1204 PST	1746 PST		344.0	mg C/m2	006					
2	14.84	33.409	24.782	6.06	105.1	2.6	0.34	0.0	0.00	0.00	0.41	0.12	81. A	7.1	6.9	7.0	1.1
10	14.82	33.411	24.787	5.98	103.7	2.7	0.35	0.0	0.00	0.04	0.43	0.12	36.	8.7	9.1	8.9	0.22
14	14.77	33.410	24.797	5.93	102.8	2.7	0.34	0.0	0.00	0.05	0.43	0.13	24.	8.1	8.4	8.3	0.18
20	14.57	33.394	24.828	5.94	102.5	2.6	0.35	0.0	0.00	0.04	0.55	0.19					
27	14.54	33.393	24.834	5.92	102.1	2.9	0.34	0.0	0.00	0.11	0.58	0.24	6.3	8.3	8.8	8.6	0.12
39	12.83	33.336	25.139	4.78	79.6	8.0	0.89	7.9	0.08	0.11	0.53	0.56					
52	12.00	33.421	25.366	4.09	67.0	12.3	1.22	12.7	0.03	0.06	0.24	0.30	0.49	0.97	1.0	1.0	0.03
57	11.78	33.498	25.468	3.61	58.7	15.9	1.44	15.8	0.00	0.00	0.14	0.18	0.29	0.25	0.25	0.25	0.01

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD								
DEPTH m	TEMP DEG C	SALINITY SIGMA THETA	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	NH4 uM/l	CHL-A ug/l	PHAE0 ug/l	LIGHT PCT	UPTAKE 1	(mg C/m3)	MEAN	DARK	
31	30.9 N	120 14.9 W	30/01/2012	0326 UTC	20 m	1230 - 1758 PST	1214 PST	1758 PST		232.5	mg C/m2	012					
2	14.44	33.281	24.767	5.95	102.3	2.5	0.33	0.0	0.01	0.03	0.10	0.09	86. A	5.8	5.5	5.7	0.05
8	14.34	33.283	24.790	5.93	101.8	2.4	0.32	0.0	0.01	0.06	0.34	0.10					
14	14.30	33.283	24.799	5.93	101.7	2.4	0.33	0.0	0.01	0.13	0.35	0.09	34.	6.0	5.7	5.9	0.08
18	14.28	33.285	24.805	5.94	101.8	2.4	0.32	0.0	0.01	0.08	0.40	0.09	25.	5.1	4.9	5.0	0.03
28	14.24	33.279	24.810	5.95D	101.9	2.4	0.32	0.0	0.01	0.06	0.41	0.13					
36	14.22	33.288	24.820	5.93	101.5	2.4	0.32	0.0	0.01	0.04	0.45	0.11	6.3	2.7	2.7	2.7	0.03
46	14.21	33.277	24.816	5.93	101.4	2.4	0.32	0.0	0.01	0.19	0.48	0.10					
58	14.18	33.279	24.824	5.91	101.0	2.9	0.32	0.1	0.02	0.31	0.39	0.13					
68	14.01	33.265	24.849	5.87	100.0	2.6	0.35	0.3	0.05	0.16	0.30	0.14	0.54	0.74	0.85	0.80	0.02
77	13.61	33.267	24.934	5.75	97.2	3.0	0.41	1.2	0.10	0.12	0.23	0.14	0.27	0.40	0.37	0.39	0.02

RV NEW HORIZON

CALCOFI CRUISE 1202

STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE	ORD								
DEPTH m	TEMP DEG C	SALINITY SIGMA THETA	OXYGEN ml/l	OXY PCT	SI03 uM/l	P04 uM/l	N03 uM/l	N02 uM/l	NH4 uM/l	CHL-A ug/l	PHAE0 ug/l	LIGHT PCT	UPTAKE 1	(mg C/m3)	MEAN	DARK	
30	30.7 N	122 15.7 W	30/01/2012	2344 UTC	21 m	1222 - 1809 PST	1222 PST	1809 PST		248.2	mg C/m2	015					
2	15.24	33.395	24.685	5.79	101.2	1.8	0.33	0.0	0.00	0.00	0.26	0.09	86. A	3.7	3.7	3.7	0.01
15	15.24	33.396	24.685	5.78	101.2	1.8	0.31	0.0	0.00	0.00	0.27	0.10	33.	4.4	4.6	4.5	0.05
19	15.24	33.394	24.686	5.81	101.5	1.8	0.31	0.0	0.00	0.00	0.30	0.10	25.	4.7	4.5	4.6	0.05
29	15.24	33.394	24.685	5.79	101.3	1.8	0.31	0.0	0.00	0.00	0.29	0.10					
38	15.22	33.395	24.690	5.80	101.3	1.8	0.30	0.0	0.00	0.02	0.29	0.09	6.2	3.8	4.1		

## CalCOFI Cruise 1202

## MACROZOOPLANKTON BIOMASS

Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST)		Water Volume Strained (m <sup>3</sup> )	Max. Tow Depth (m)	Volume per 1000 m <sup>3</sup> Strained	
					Start	End			Total (cm <sup>3</sup> )	Small (cm <sup>3</sup> )
83.3	90.0	32 34.7	122 48.6	02/06	1649	1713	478	203	285	285
83.3	100.0	32 14.8	123 29.0	02/06	1043	1105	469	204	23	23
83.3	110.0	31 54.6	124 10.2	02/06	0438	0504	468	210	30	30
85.4	35.8	34 00.7	118 50.0	02/03	1246	1248	59	17	338	338
86.7	33.0	33 53.2	118 29.3	02/03	1018	1023	109	39	146	146
86.7	35.0	33 49.4	118 37.7	02/03	1623	1646	429	207	84	84
86.7	40.0	33 39.5	118 58.5	02/03	2047	2109	417	214	72	72
86.7	45.0	33 29.7	119 18.5	02/04	0136	0159	450	203	87	87
86.7	50.0	33 19.6	119 39.7	02/04	0523	0530	136	57	155	155
86.7	55.0	33 10.0	120 01.4	02/04	0839	0901	425	218	54	54
86.7	60.0	32 59.5	120 21.0	02/04	1422	1444	456	212	81	81
86.7	70.0	32 39.4	121 02.0	02/04	2032	2054	454	210	110	51
86.7	80.0	32 19.4	121 42.7	02/05	0303	0326	477	212	52	52
86.7	90.0	31 59.4	122 23.7	02/05	0754	0816	455	207	99	66
86.7	100.0	31 39.3	123 04.1	02/05	1539	1601	479	196	19	19
86.7	110.0	31 19.4	123 44.5	02/05	2208	2230	459	213	44	44
86.8	32.5	33 53.2	118 26.7	02/03	0842	0844	50	10	200	200
88.5	30.1	33 40.4	118 05.6	02/03	0515	0517	36	12	394	394
90.0	27.7	33 29.6	117 45.0	02/03	0248	0250	59	21	101	101
90.0	28.0	33 29.1	117 46.1	02/03	0132	0150	345	160	104	104
90.0	30.0	33 25.1	117 54.2	02/02	2320	2342	417	215	58	58
90.0	35.0	33 15.0	118 15.1	02/02	1910	1932	388	211	219	219
90.0	37.0	33 11.1	118 23.3	02/02	1559	1621	419	219	62	62
90.0	45.0	32 55.6	118 54.5	02/02	0810	0832	425	208	82	82
90.0	53.0	32 39.1	119 28.9	02/02	0335	0359	467	227	56	56
90.0	70.0	32 05.1	120 38.3	02/01	1557	1622	460	208	113	33
90.0	80.0	31 44.8	121 19.6	02/01	0811	0833	429	215	21	21
90.0	90.0	31 25.0	121 59.8	02/01	0113	0135	444	212	63	47
90.0	100.0	31 05.1	122 39.9	01/31	1642	1705	450	212	42	42
90.0	110.0	30 45.1	123 20.0	01/31	1021	1043	420	215	14	14
90.0	120.0	30 24.8	123 59.3	01/31	0401	0422	331	220	24	24
91.7	26.4	33 14.8	117 27.9	01/27	2110	2112	49	14	123	123
93.3	26.7	32 57.4	117 18.3	01/27	1659	1718	347	183	86	86
93.3	28.0	32 54.9	117 23.6	01/28	0119	0141	409	208	54	54
93.3	30.0	32 50.9	117 31.9	01/28	0550	0611	442	197	57	57
93.3	35.0	32 40.8	117 52.2	01/28	1018	1040	454	212	37	37
93.3	40.0	32 30.9	118 12.9	01/28	1439	1501	454	213	42	26
93.3	45.0	32 20.8	118 33.3	01/28	1836	1857	453	200	71	71
93.3	50.0	32 10.8	118 53.7	01/28	2247	2309	456	212	44	44
93.3	55.0	32 00.7	119 13.8	01/29	0241	0305	491	202	65	51
93.3	60.0	31 50.8	119 34.3	01/29	0638	0659	425	207	35	35
93.3	70.0	31 30.9	120 14.8	01/29	1240	1302	449	211	45	45
93.3	80.0	31 10.8	120 55.1	01/29	1955	2017	447	212	49	49
93.3	90.0	30 50.8	121 35.1	01/30	0135	0157	454	207	53	53
93.3	100.0	30 30.8	122 15.6	01/30	0649	0710	433	203	37	37
93.3	110.0	30 10.8	122 55.1	01/30	1526	1548	452	209	18	18
93.3	120.0	29 50.8	123 35.3	01/30	2114	2136	446	211	16	16
93.4	26.4	32 57.2	117 16.9	01/27	1833	1835	45	13	89	89