UNIVERSITY OF CALIFORNIA, SAN DIEGO

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093-0227

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 0701
11 – 30 January 2007

CC Reference 08-05
25 June 2008

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INTRODUCTION

The data in this report were collected during cruises 0701 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program aboard the NOAA ship RV *David Starr Jordan.* 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. Volunteers and other SIO staff members also assisted in the collection of data and chemical analyses 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 with a rosette was deployed at each station on these cruises. The rosette was equipped with 24 ten-liter plastic (PVC) bottles. The 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 within 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 in to 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 in order to verify that the rosette bottle did not mis-trip or leak. The salinometer was standardized before and after each group of samples with substandard seawater. Periodic checks on the conductivity of the substandard were made by comparison with IAPSO Standard Seawater batch P144. Salinity values have been calculated using the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and were reported to three decimal places, provided that accepted standards were met.

Dissolved oxygen samples were collected in calibrated 100 ml iodine flasks, allowing at least 200% overflow. The dissolved oxygen samples were analyzed at sea by the Winkler method, as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). Percent oxygen saturation was calculated from the equations of Weiss (1970).

Nutrient samples were analyzed at sea for dissolved silicate, phosphate, nitrate and nitrite using procedures similar to those described in Gordon et al., 1993. Samples were collected in 45 ml high-density polypropylene screw-capped tubes which were rinsed three times prior to filling. Standardizations were done at the beginning and end of each group of samples with a set of mid-concentration range standards prepared fresh for each run. Samples

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

not analyzed immediately after collection were refrigerated and run the following day. Sets of six different concentration standards were analyzed periodically to determine the deviation from linearity as a function of concentration, primarily for the silicate and nitrate analyses. Final sample concentrations were corrected for deviations from linearity.

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 with a cold extraction technique in 90% acetone (Venrick and Hayward, 1984), and the fluorescence determined before and after acidification with a Turner Designs Fluorometer Model 10-AU-005-CE (Yentsch and Menzel, 1963; Holm-Hansen *et al*., 1965).

As part of broadening CalCOFI program, phytoplankton pigment concentrations have been added to the reugular sampling during cruises. They were made by filtering sufficient 10m water samples to anlalyze pigments using HPLC and absorption coefficients of particulate soluble material.

Evaluation of the water sample data involved comparisons with the CTD cast profiles, 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 the routine analyses were made on CalCOFI cruise 9003 and are reported in SIO Ref. 91-4.

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN). Primary production was estimated from ^{14}C uptake using a simulated *in situ* technique. Light penetration was estimated from the Secchi depth (assuming that the 1% light level is three times the Secchi depth). The depths with ambient light intensities corresponding to light levels simulated by the on-deck incubators were identified and sampled on the up rosette cast. Occasionally an extra bottle or two were tripped in addition to the usual 20 levels sampled in the combined rosette-productivity cast in order to maintain the normal sampling depth resolution. The ten-liter bottles were equipped with epoxy-coated springs and Viton O-rings. 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 44.00 µCi of ^{14}C as $NaHCO_3$ (200 µl of 335.90 µCi/ml stock) prepared in a 0.3 g/liter solution of sodium carbonate (Fitzwater *et al*., 1982). Samples were incubated from LAN to civil twilight in seawater-cooled incubators with neutral-density screens which simulate *in situ* light levels. At the end of the incubation, the samples were filtered onto Millipore HA filters and placed in scintillation vials. One half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation fluor 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). An Optical Plankton Counter (OPC) was routinely used in one side of the paired bongo net frame. The purpose of the OPC is to obtain information on the vertical distributions of size categories of zooplankton, using data from the counter, without affecting the ongoing time series of data obtained from the catches of the integrative bongo net.

Avifauna Observations

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. Included at the end of this report are individual maps of the most numerous bird species (individuals/nm).

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 from a depth of approximately 3 meters. The data were logged in one-minute averages using a Sea-Bird Electronics, Inc., SBE 21 TSG Thermosalinograph and a Turner Designs SCUFA®II 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 5-minute intervals. Sixty 8-meter depth bins were recorded.

3) *Organic carbon.* At each station several samples were drawn from the CTD for total organic carbon concentration profiles. At half of the stations 10 to 15L of surface water were filtered for stable isotope measurements of particulate organic carbon. Several solid phase extracts from filtered seawater were taken for chemical and isotope analyses of dissolved organic carbon. (L. Aluwihare, SIO)

4) *California Current Ecosystem Long Term Ecological Research Progran.* The CCE-LTER program augments standard CalCOFI measurements to further characterize the lower trophic levels as well as the carbon system. These additional samples, taken at all CalCOFI stations, are for measurements of particulate organic carbon and nitrogen, dissolved organic carbon and nitrogen, taxon-specific phytoplankton pigments, flow-cytometric counts of bacteria and picoautotrophs, microscopic counts of nano- microplankton, determination of mesozooplankton size structure using a Laser Optical Plankton Counter, and mesozooplankton community structure. (M. Ohman, SIO)

5) *SCCOOS Nearshore and Bio-optical Observations*: The objective of these observations is to extend CalCOFI time series to the nearshore and make bio-optical observations for the development of empirical proxies for particle size load and structure and phytoplankton biomass and rates of primary production. The 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. Bio-optical measurements at all CalCOFI and SCCOOS stations consist of irradiance at 9 wavelengths, light transmission at three wavelengths, fluorescence of Chl a, CDOM and phycoerythrin and light scattering at three wavelengths.

6) *Underway Sea Surface xCO2*. Continuous measurements of the partial pressure of CO2 were made from the ship's uncontaminated seawater system. The seawater was equilibrated in a membrane contactor with a gas loop that was analyzed with a Licor 6262 infrared CO2/H2O analyzer. One-minute averages were recorded and the mole fraction of CO2 (xCO2) at sea surface temperature was calculated. The system was calibrated with standard gases traceable to CMDL every two hours; at that time absolute zero and atmospheric samples were also collected.

7) *Marine mammal observations*. During daylight transits, visual line-transect surveys were conducted by marine mammal observers focusing on cetaceans. Acoustic line-transect surveys were performed using a towed hydrophone array which consists of multiple hydrophone elements that sample sounds up to 100 kHz allowing for localization of calling animals. Acoustic monitoring also takes place on individual stations using sonobuoys.

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.

Observed data from individual CTD/rosette trip levels are interpolated and 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 also 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 have been presented to two significant digits (values <1.00) or one decimal (values >1.00). Precision of the higher production values may not warrant all of the digits presented. Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to UTC, add eight hours to the PST time. Incubation light intensities are listed in a footnote at the bottom of each page.

Macrozooplankton Data

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

FOOTNOTES

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

ISL: Values for standard levels from CTD sensors corrected as noted, nutrients calculated as double reciprocal regression.
CSL: Values for standard levels from CTD sensors corrected as noted, nutrients not calculated due to uncertainty.
D: CTD values listed in place of ship board analysis, corrected as noted.
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 0701

1. CalCOFI Cruise 0701 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.

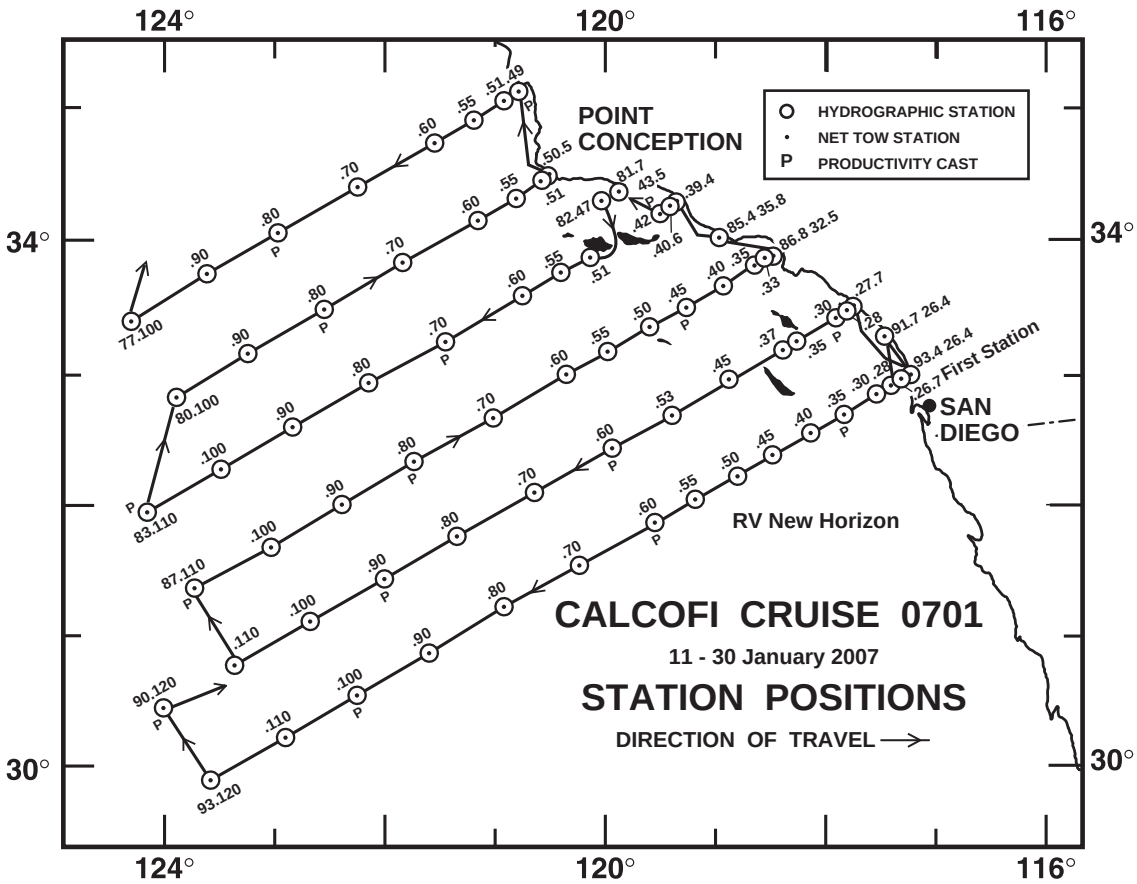

FIGURE 1

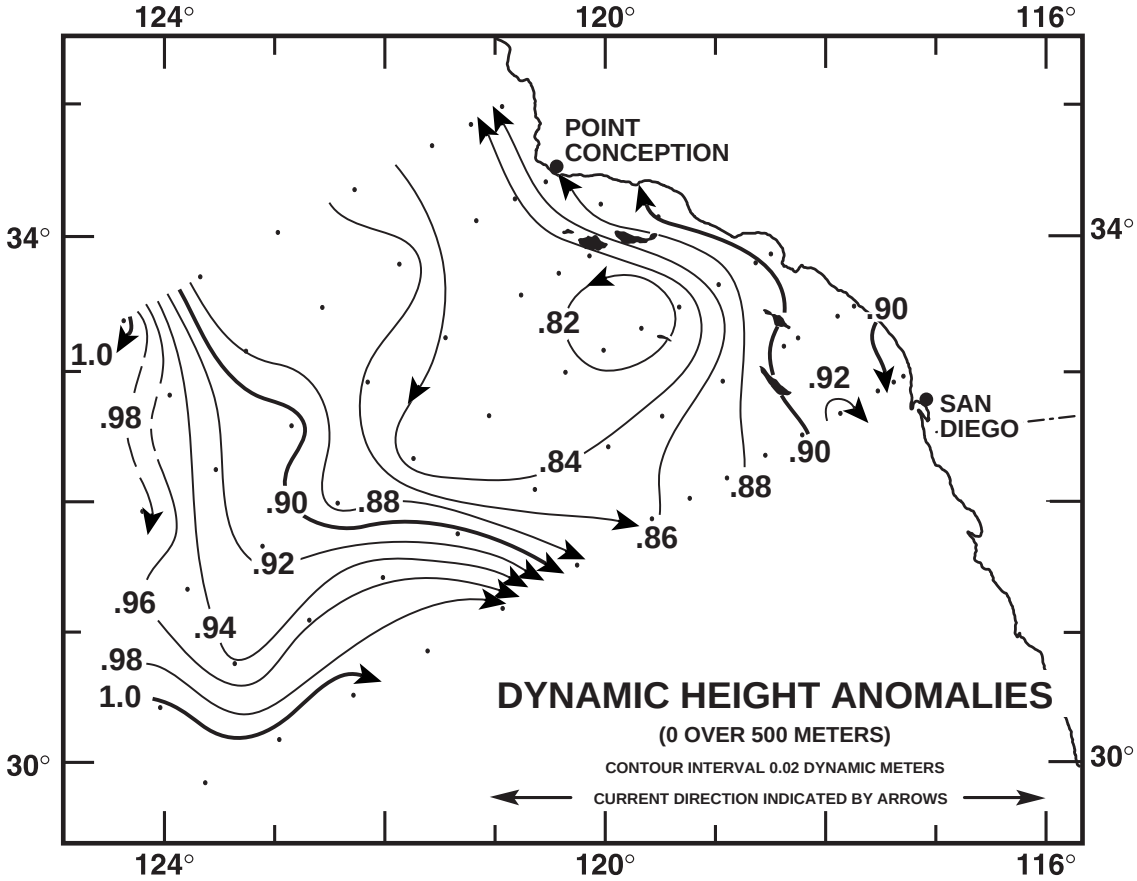

FIGURE 2

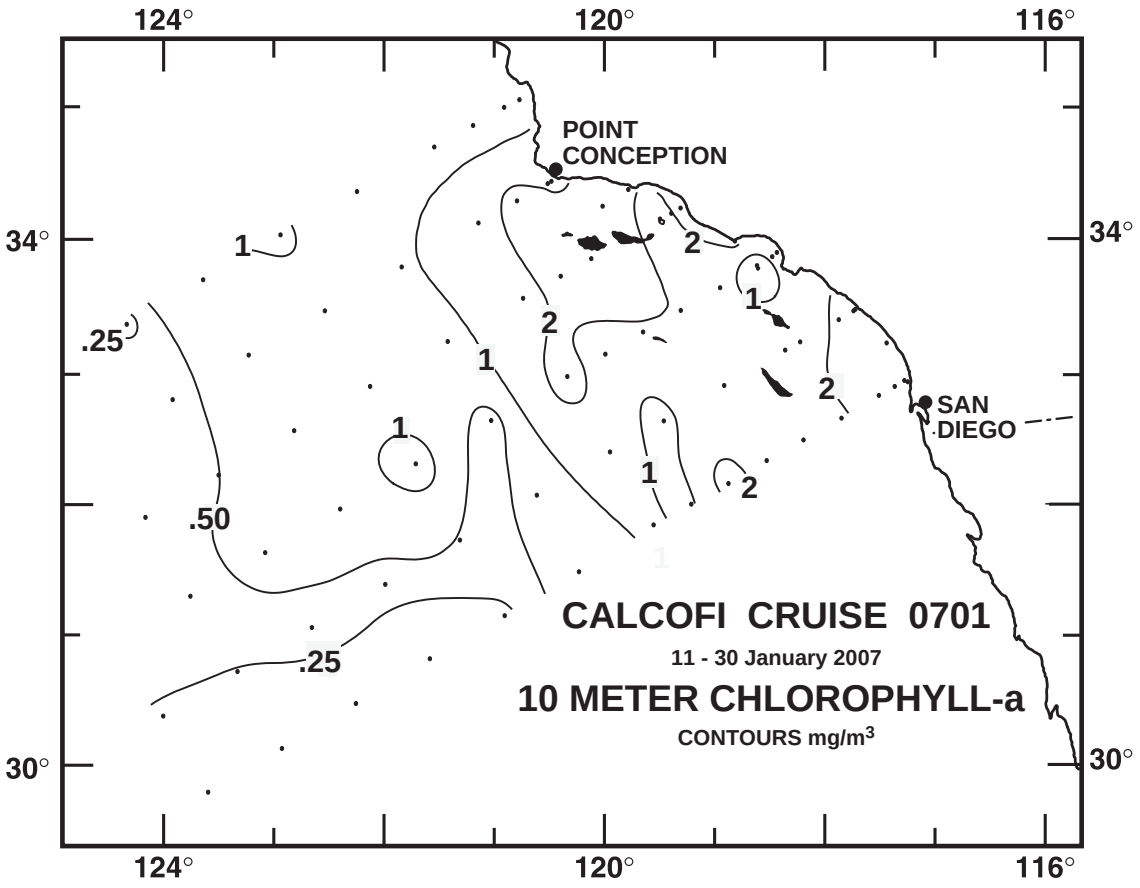

FIGURE 3A

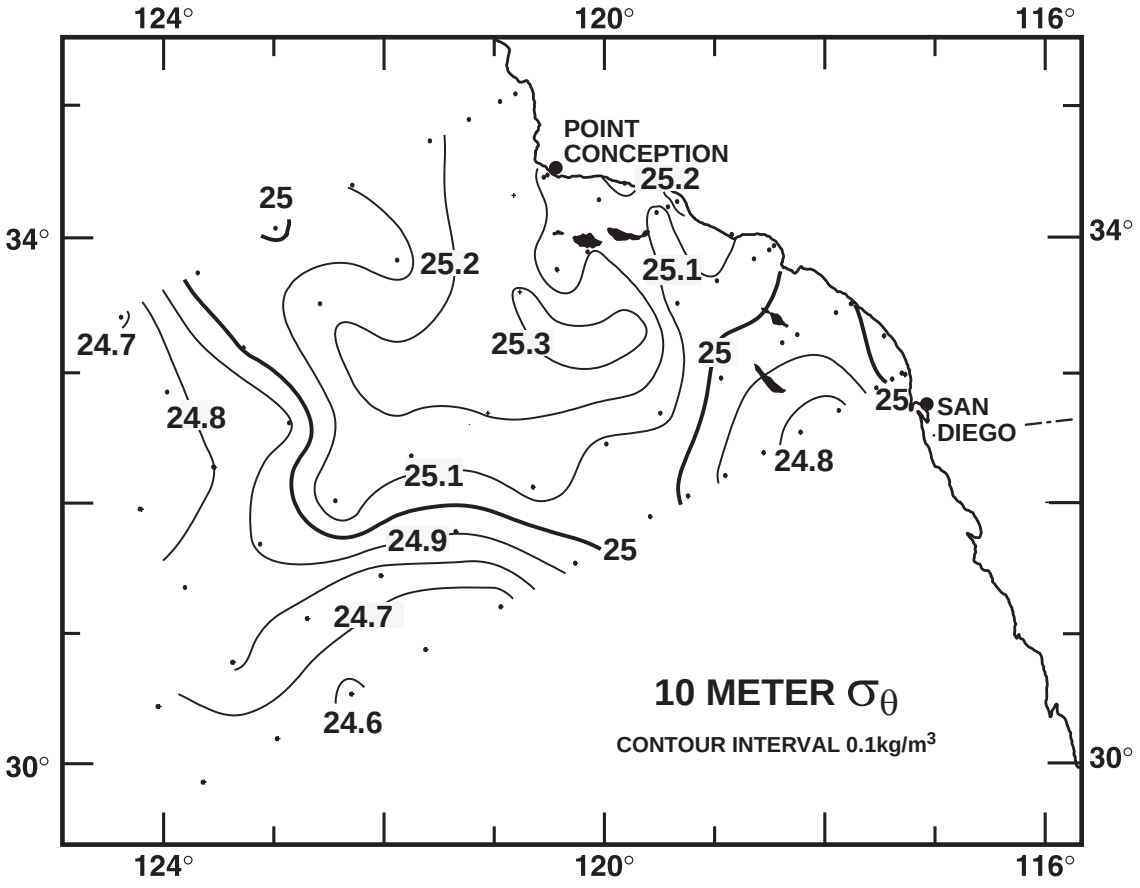

FIGURE 3B

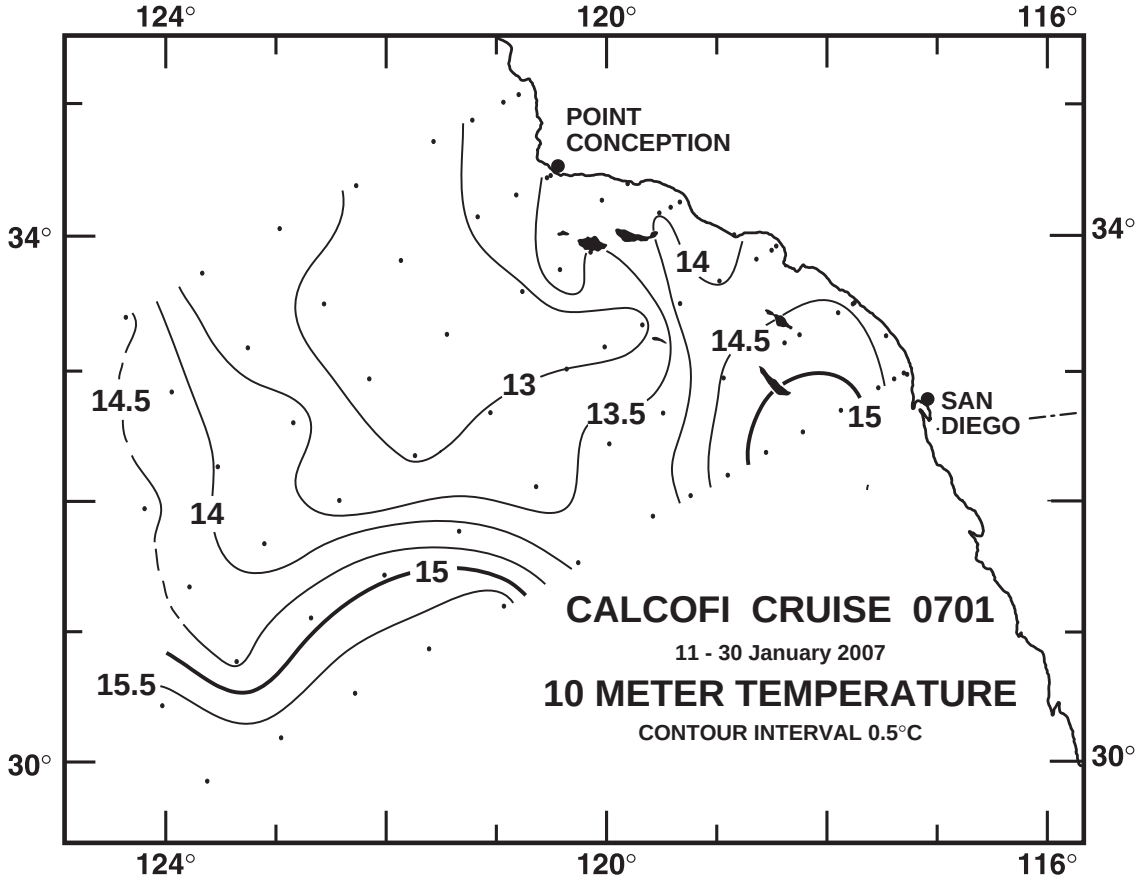

FIGURE 3C

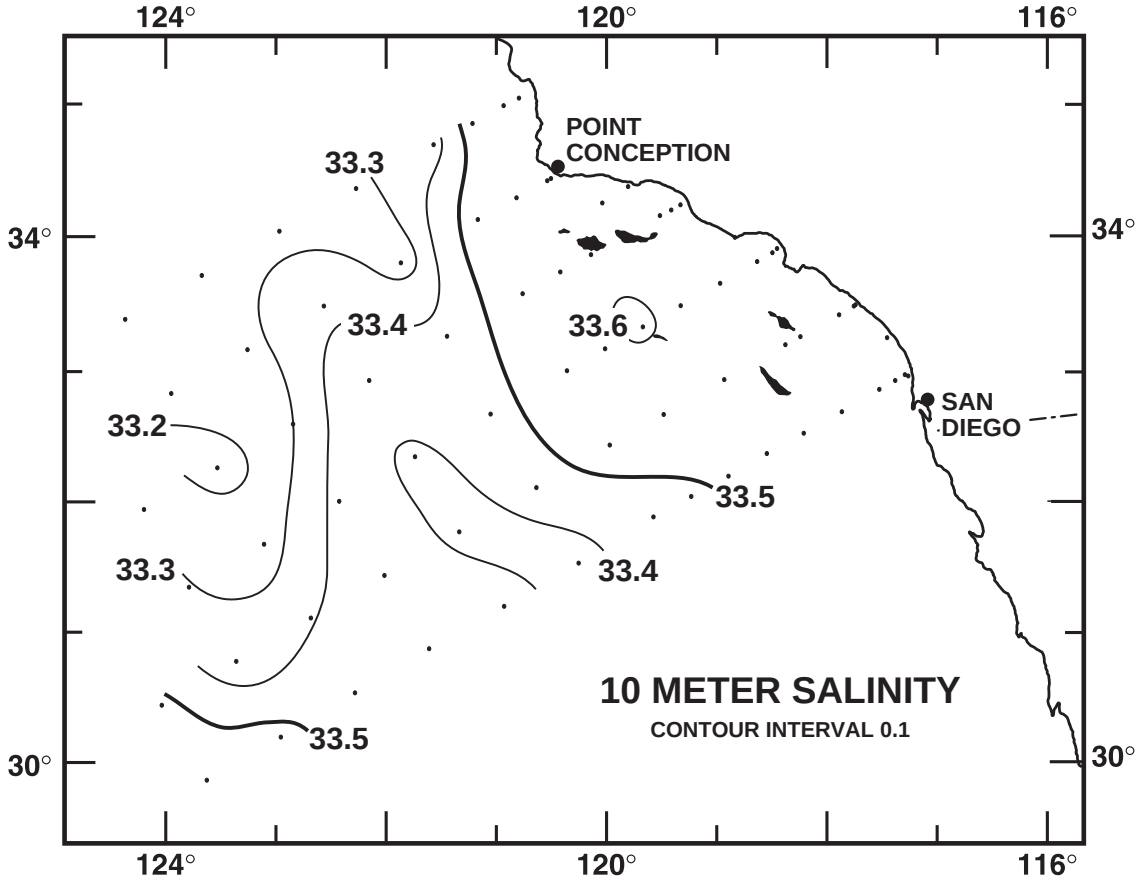

FIGURE 3D

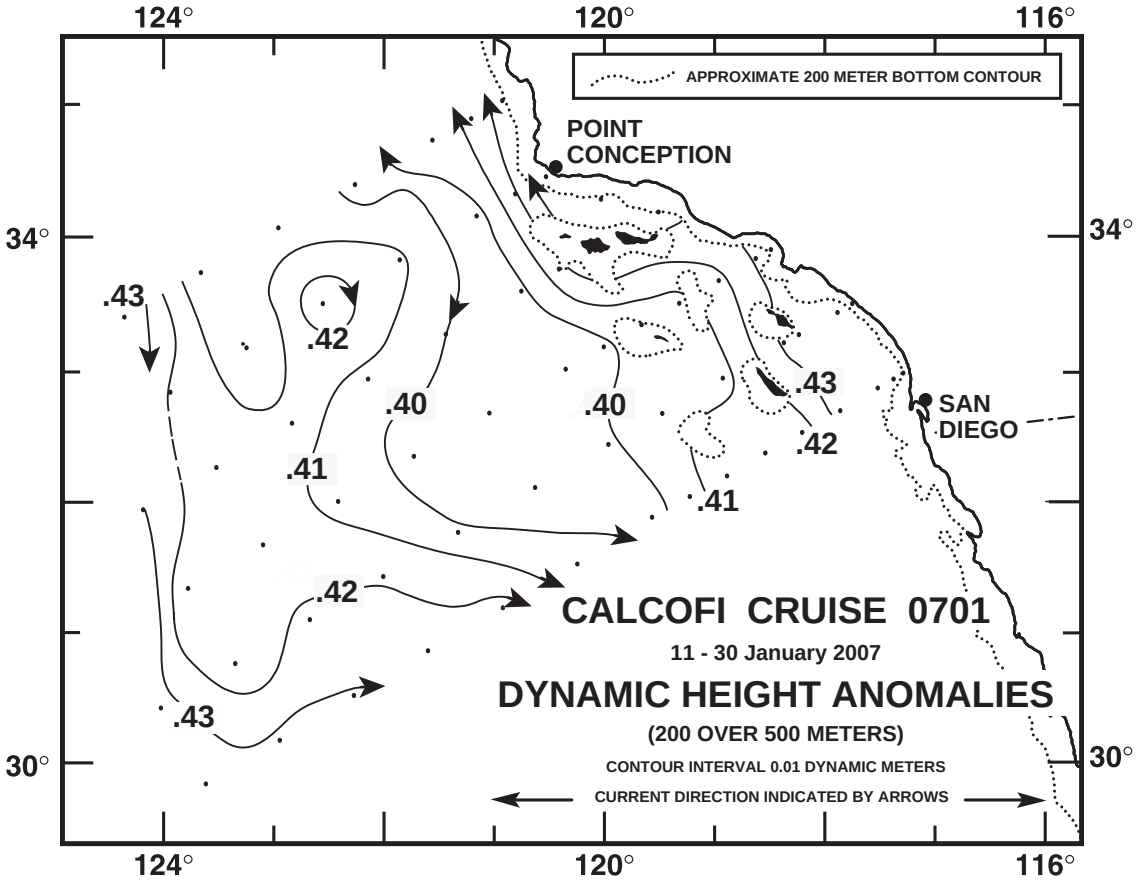

FIGURE 4A

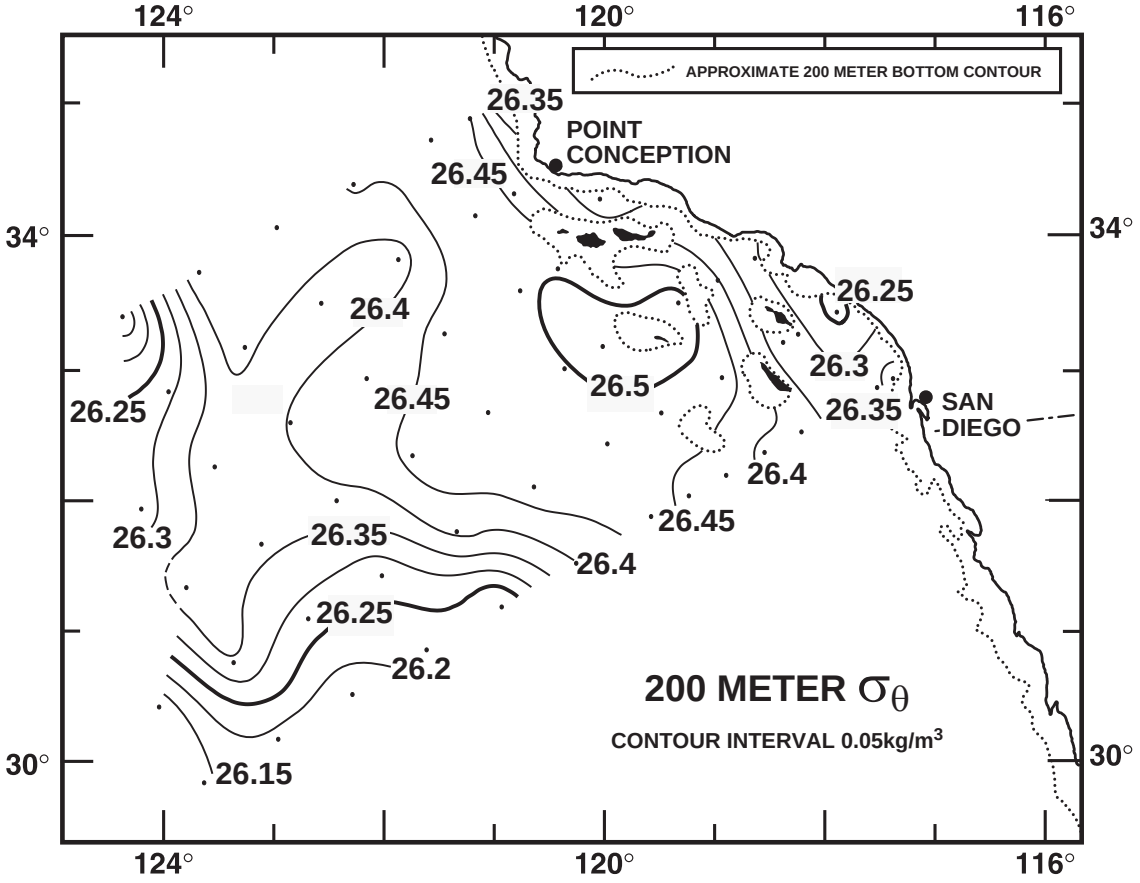

FIGURE 4B

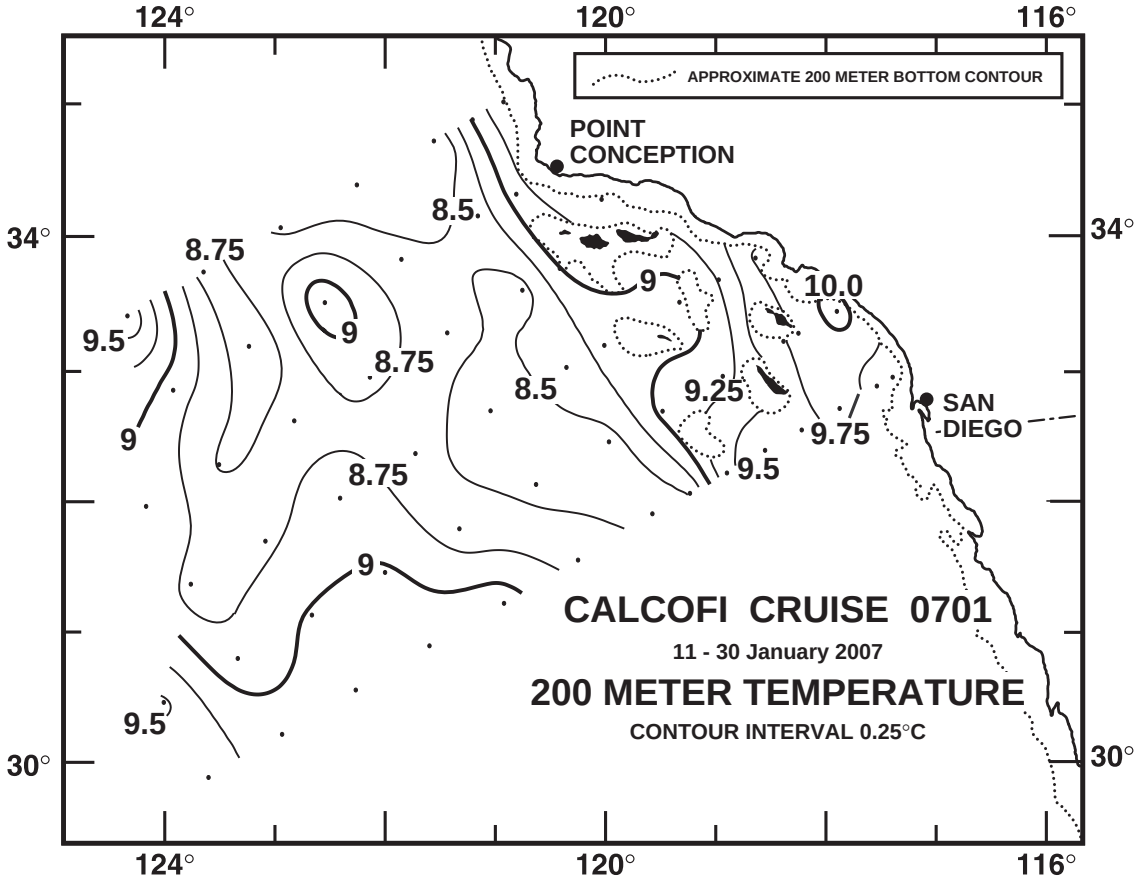

FIGURE 4C

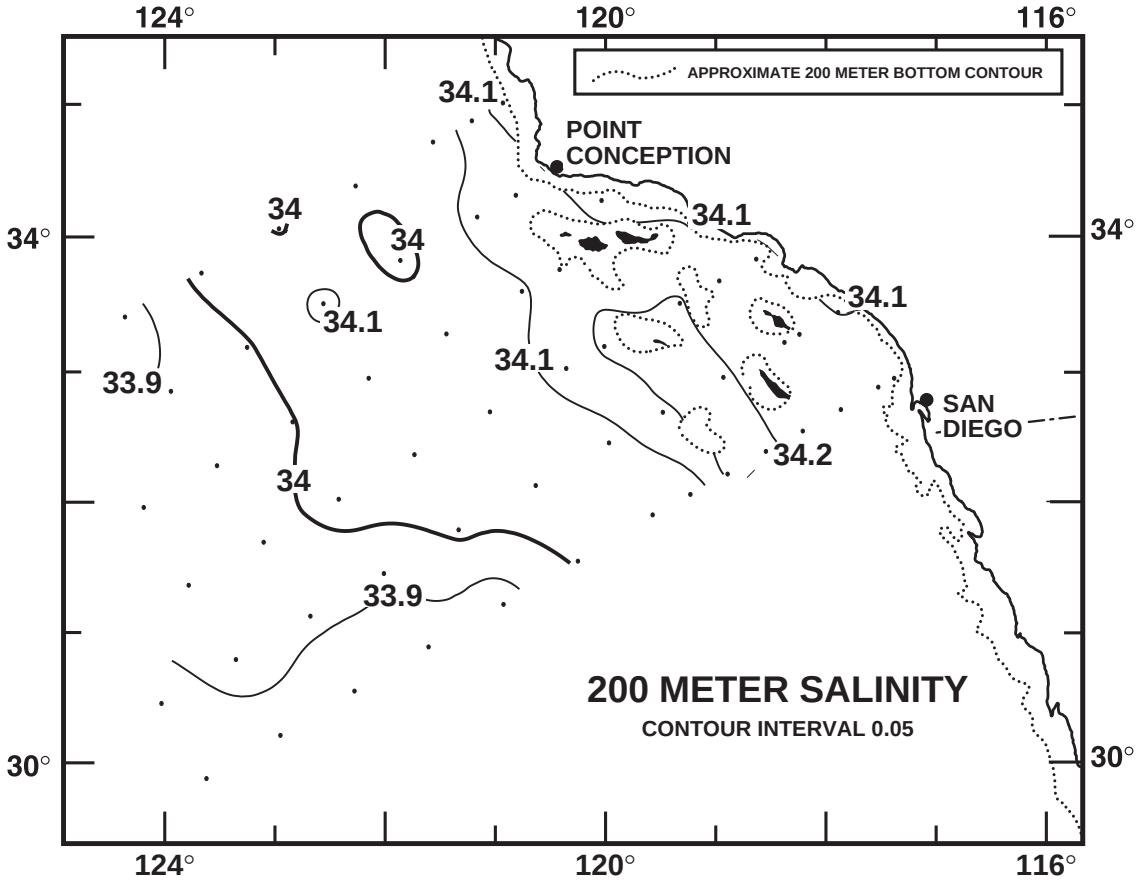

FIGURE 4D

CALCOFI CRUISE 0701

16 - 21 January 2007

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

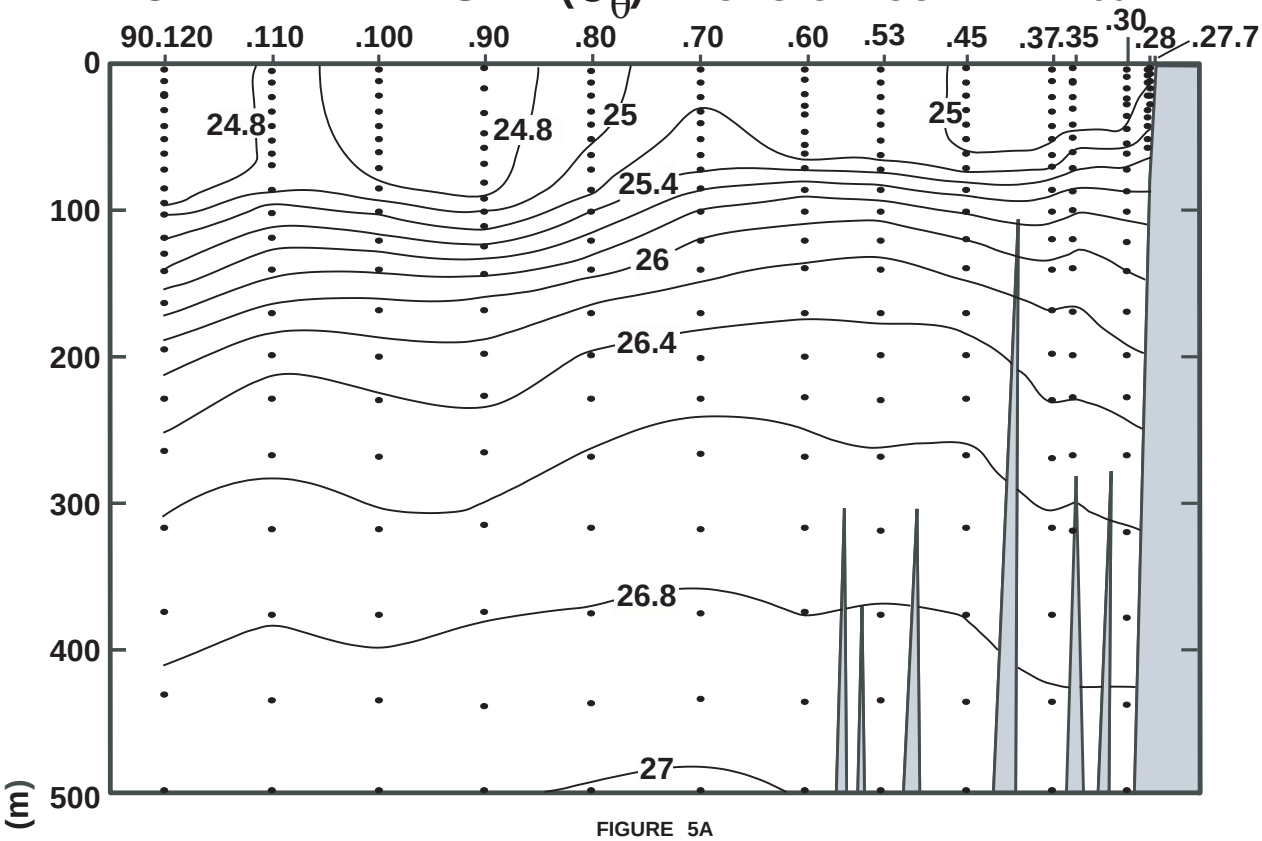

FIGURE 5A

TEMPERATURE (°C) ALONG CALCOFI LINE 90

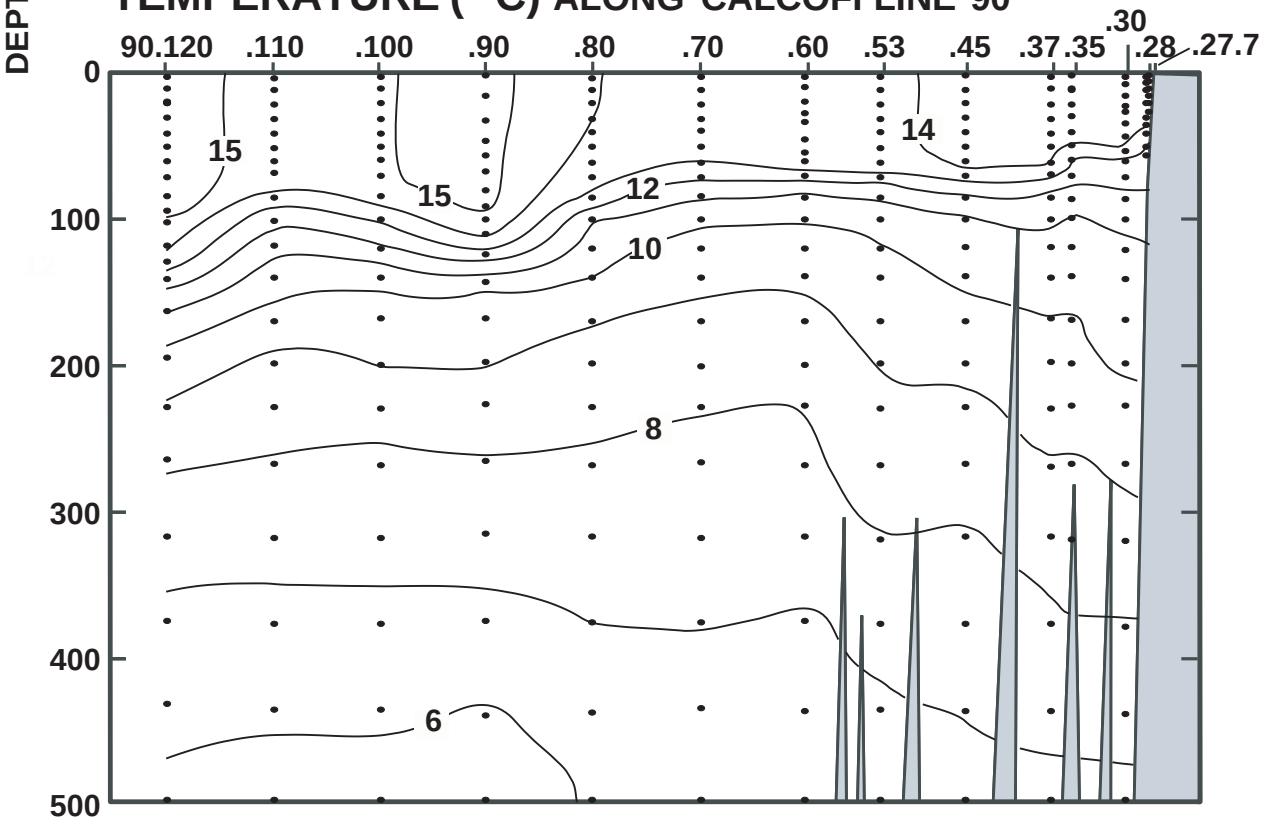

FIGURE 5B

CALCOFI CRUISE 0701

16 - 21 January 2007

SALINITY ALONG CALCOFI LINE 90

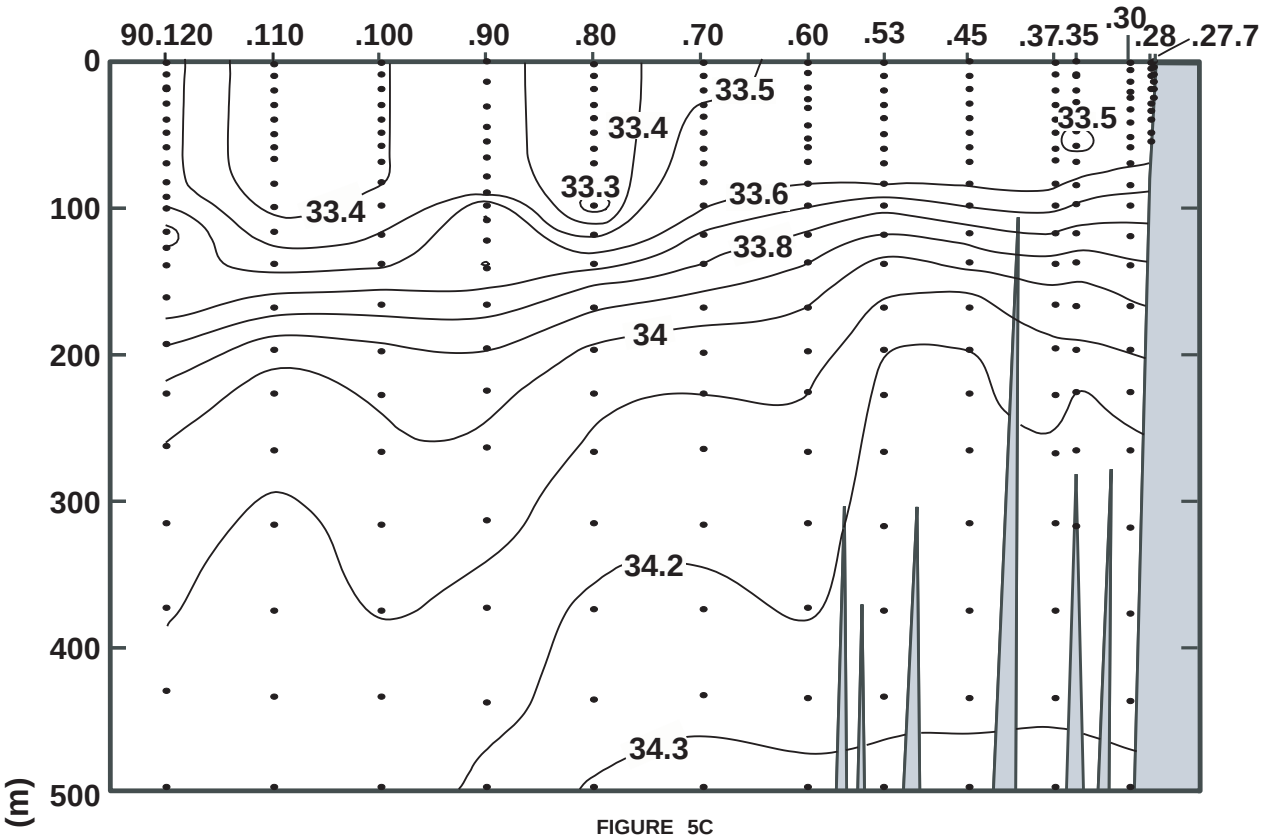

FIGURE 5C

SILICATE (μM/L) ALONG CALCOFI LINE 90

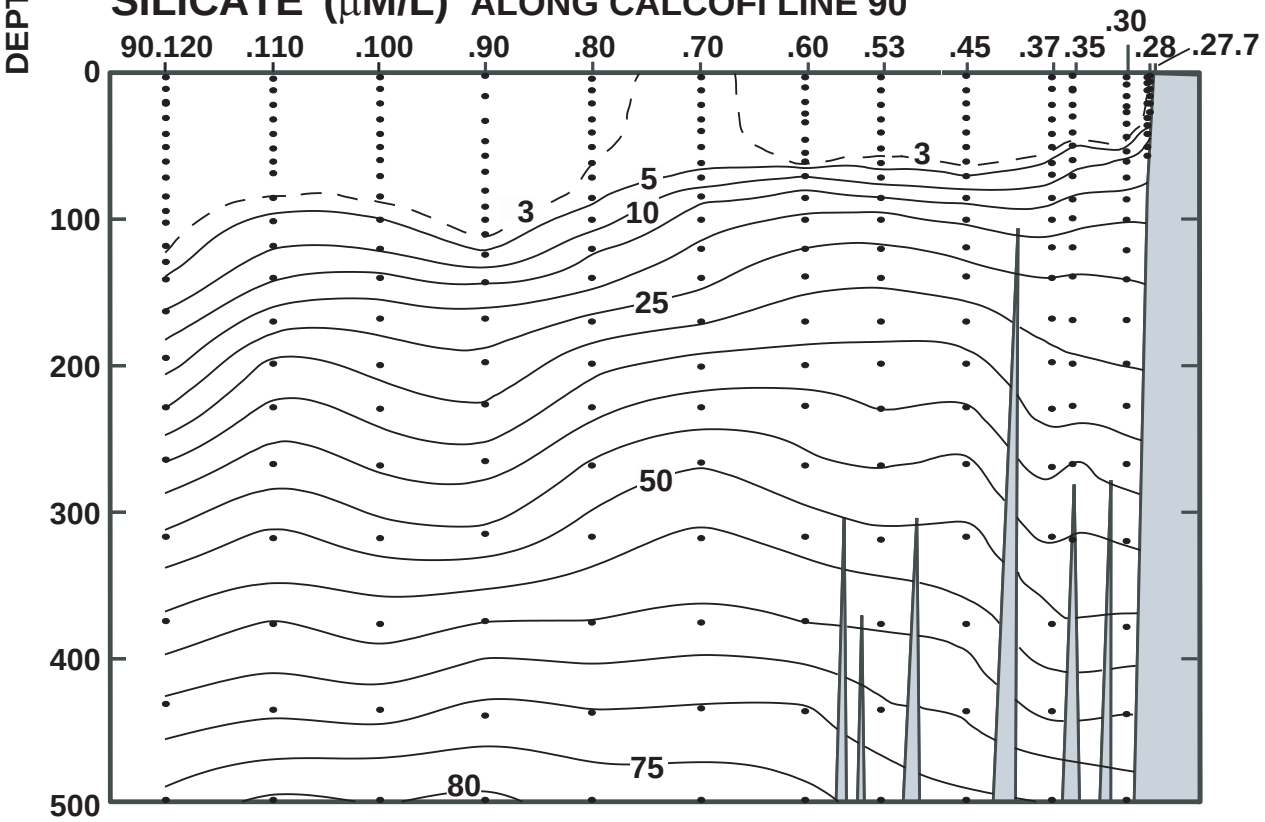

FIGURE 5D

CALCOFI CRUISE 0701

16 - 21 January 2007

NITRATE (μM/L) ALONG CALCOFI LINE 90

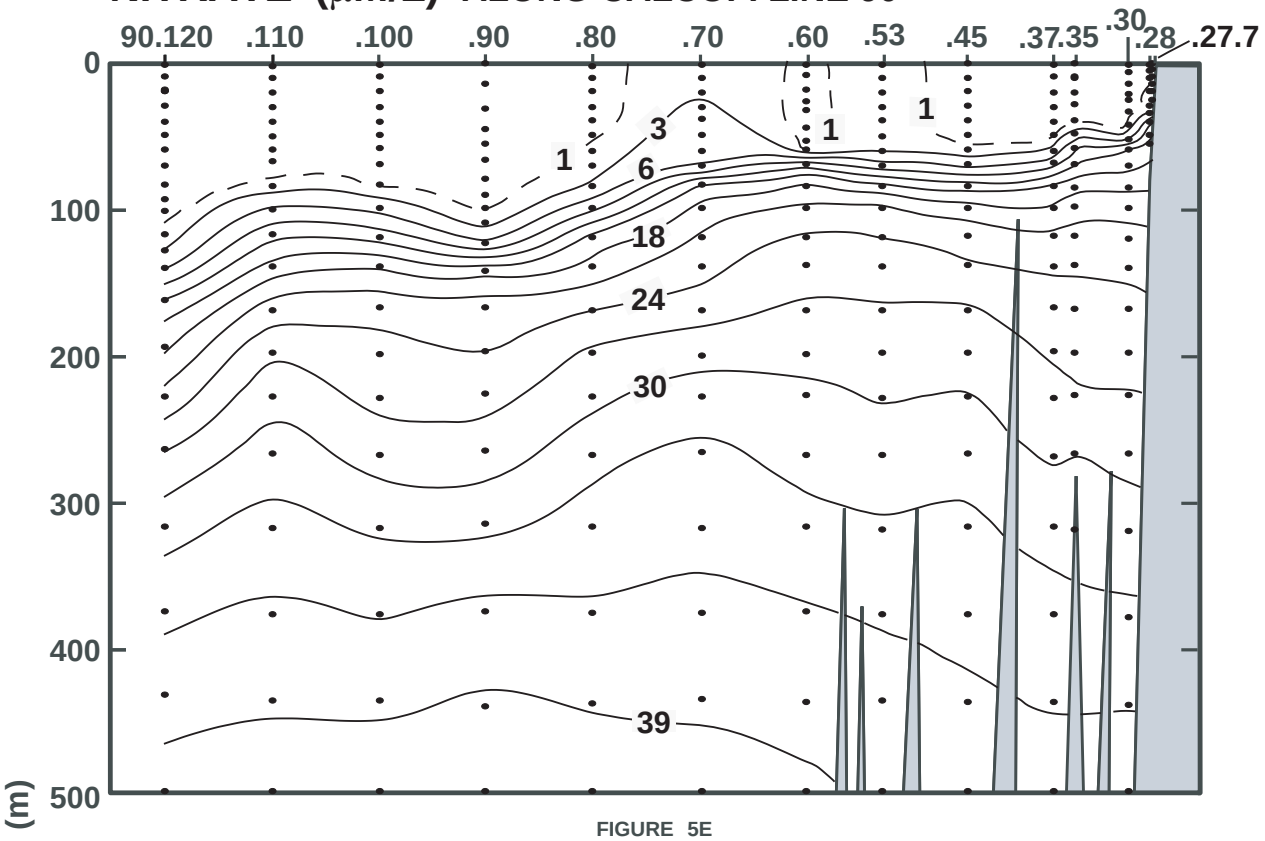

FIGURE 5E

PHOSPHATE (μM/L) ALONG CALCOFI LINE 90

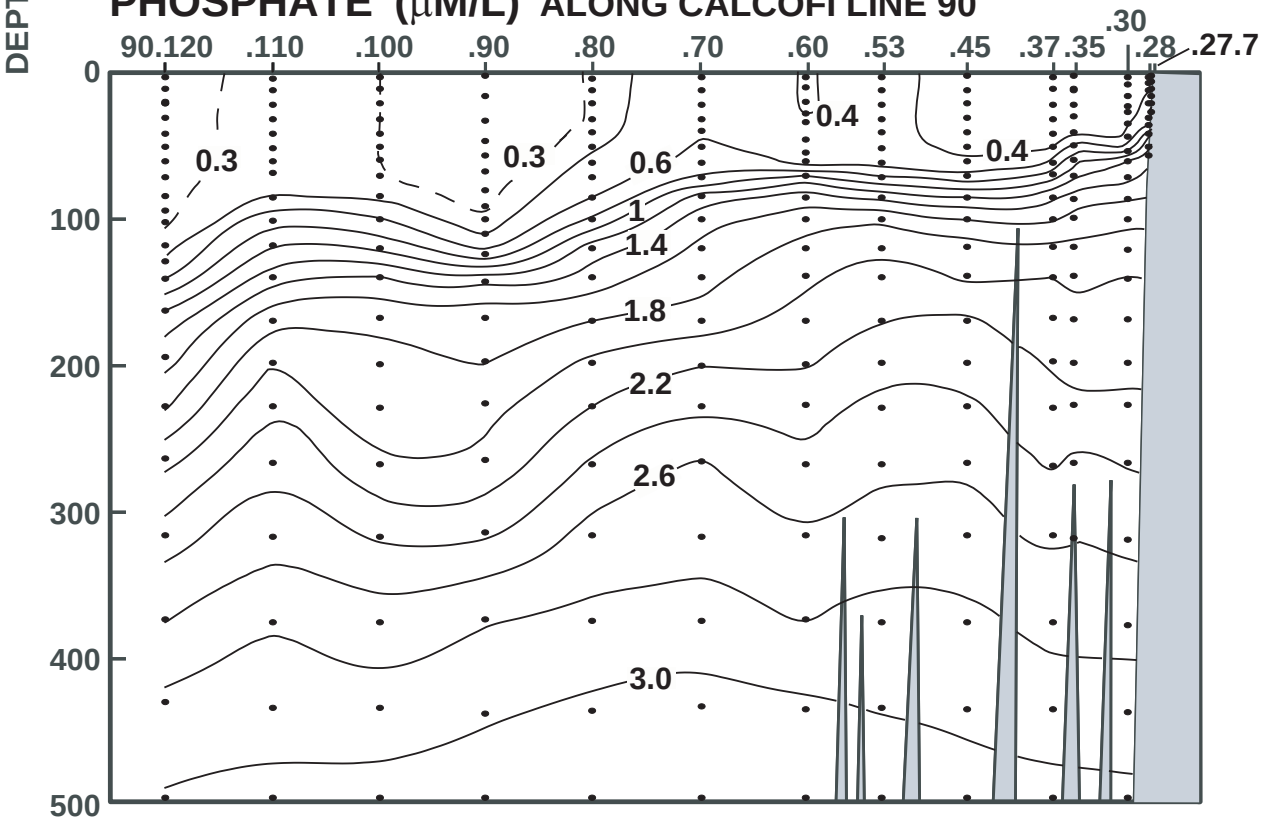

FIGURE 5F

CALCOFI CRUISE 0701

16 - 21 January 2007

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

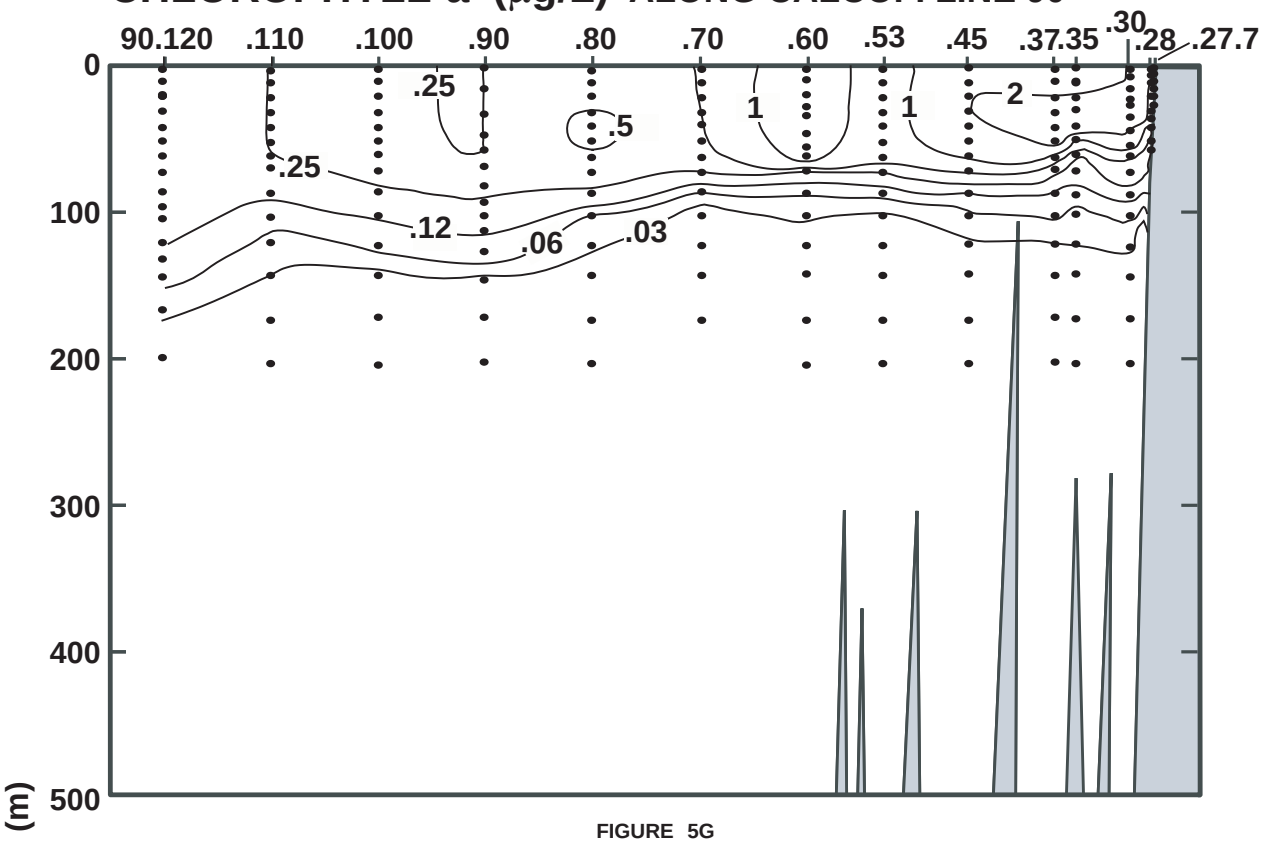

FIGURE 5G

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

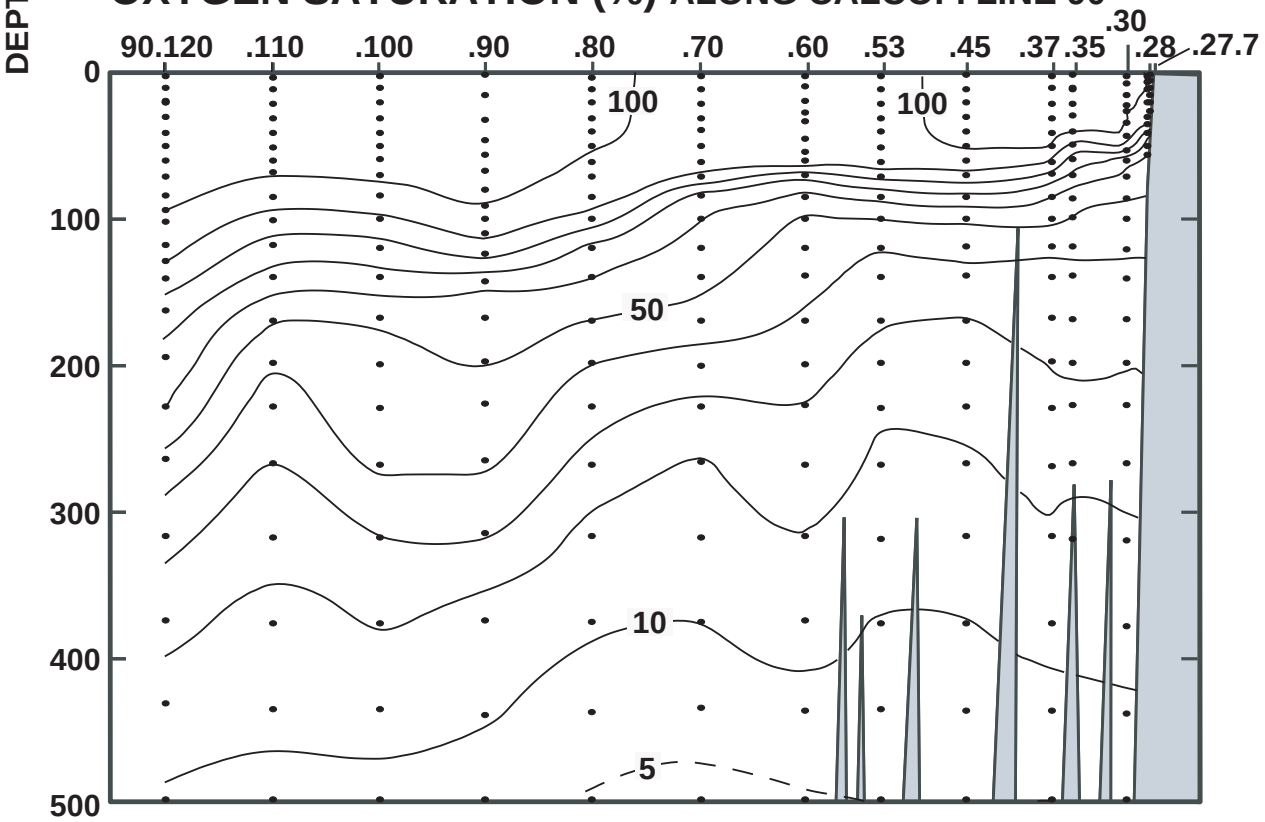

FIGURE 5H

CALCOFI CRUISE 0701

16 - 21 January 2007

OXYGEN (mL/L) ALONG CALCOFI LINE 90

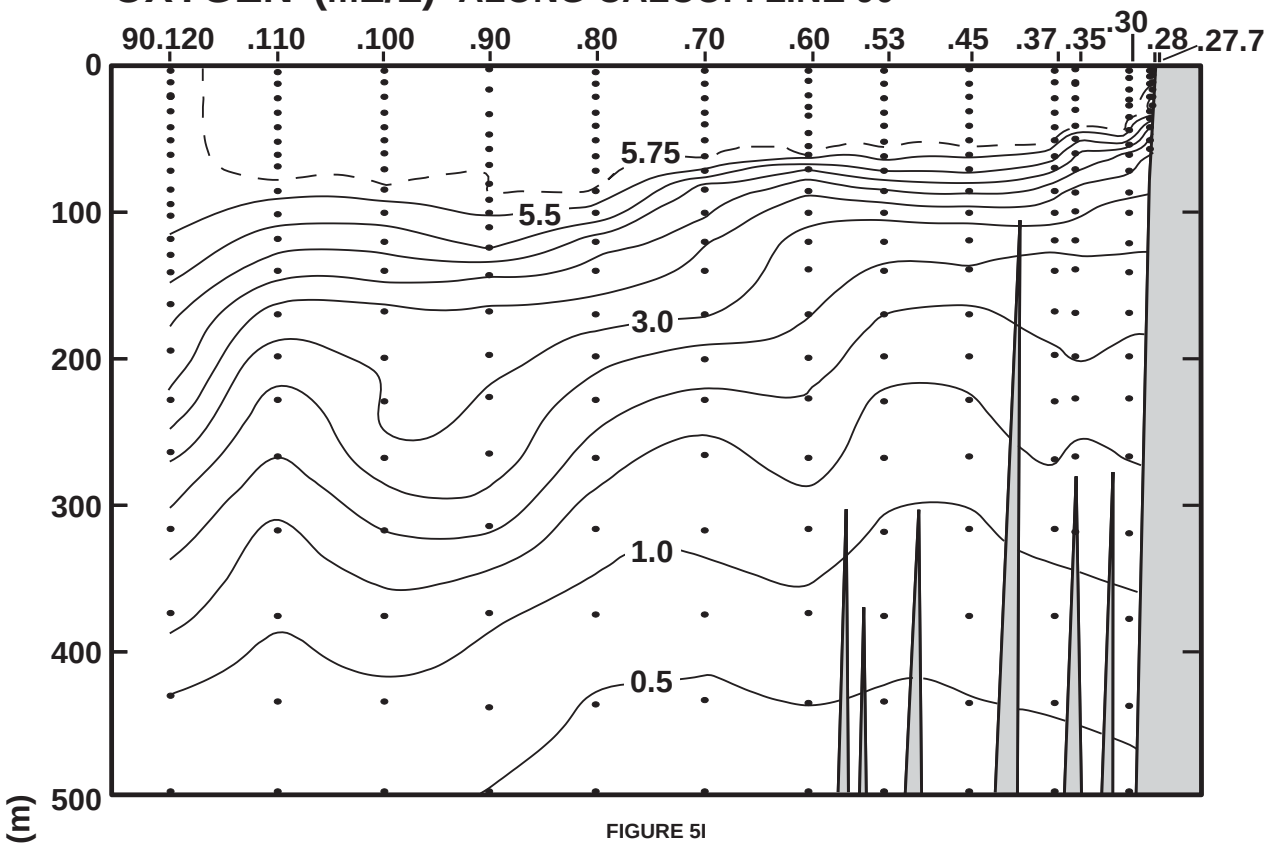

FIGURE 5I

NITRITE (μM/L) ALONG CALCOFI LINE 90

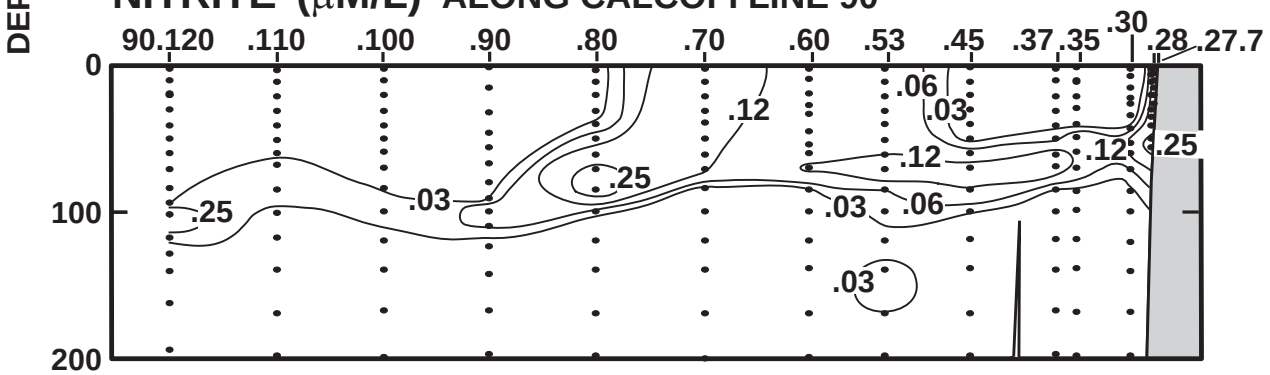

FIGURE 5J

PHAEOPIGMENTS (μg/L) ALONG CALCOFI LINE 90

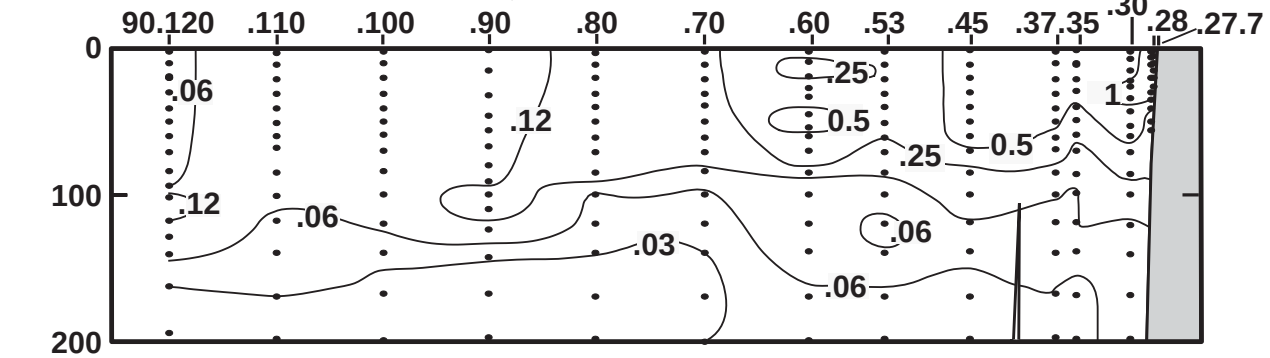

FIGURE 5K

PERSONNEL

CalCOFI Cruise 0701

SHIP'S CAPTAIN

Keith Roberts, RV *David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participating (Legs)
Griffith, David A. (Chief Scientist)	Fishery Biologist, NMFS	1-4
Becker, Susan	Staff Research Associate, SIO	1-3
Blum, Marguerite	Research Assistant, MBARI	4
Campbell, Gregory S.	Staff Research Associate, SIO	1-2
Dotson, Ronald C.	Fishery Biologist, NMFS	1-4
Douglas, Annie B.	Marine Mammal Observer, Cascadia Research	1-4
Dovel, Shonna L.	Staff Research Associate, SIO	1-3
Hays, Amy E.	Fishery Biologist, NMFS	1
Lewis, Jeffery T.	Volunteer	1-3
Manion, Susan M.	Fishery Biologist, NMFS	1-4
Overcash, Bryan J.	Scientific Aid, Cal. Department of Fish and Game	1-4
Roadman, Megan J.	Staff Research Associate, SIO	1-3
Rubio-Cisneros, Nadia	Scientific Technician, Aquatic Farms	3-4
Sheffield, Lisa M.	Seabird Biologist, Pt. Reyes Bird Observatory	1-4
Sheldon, Jennifer L.	Staff Research Associate, SIO	1-4
Stanaway, Kathryn E.	Staff Research Associate, SIO	1-3
Wilkinson, James R.	Programmer Analyst, SIO	1-3
Wolgast, David M.	Staff Research Associate, SIO	1-4

Leg 1: San Diego to Dana Point, California 12-18 January, 2007
Leg 2: Dana Point to Avila, California 18-28 January, 2007
Leg 3: Avila to Monterrey, California 28-31 January, 2007
Leg 4: Monterey to San Diego, California 31 January to 3 February, 2007

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 46.0 N	122 5.6 W	31/01/07	1941	UTC	1128 m	340	04 kn	280 02 05	1	1016.2 mb	13.2 C	10.9 C	15m	2/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.04	12.04	33.566	25.468	250.2	0.000	6.08	99.7	7.7	0.52	6.8	0.27	0.78	0.27	0	
2	12.04	12.04	33.566	25.469	250.3	0.005	6.08	99.7	7.7	0.52	6.8	0.27	0.78	0.27	2	223
10	12.03	12.03	33.566	25.471	250.3	0.025	6.06 D	99.3	7.7	0.55	6.8	0.26	0.72	0.23	10	221
20	12.00	12.00	33.569	25.479	249.7	0.050	5.96 D	97.6	7.9	0.57	7.1	0.27	0.68	0.22	20	219
30	11.85	11.85	33.585	25.520	246.1	0.075	5.64 D	92.1	9.8	0.69	9.2	0.33	0.34	0.21	30	217
40	11.78	11.77	33.593	25.539	244.5	0.099	5.51 D	89.8	10.3	0.70	9.6	0.33	0.31	0.25	40	215
50 ISL	11.68 D	11.67	33.609 D	25.570	241.8	0.124	5.23 D	85.1	11.9	0.85	11.7	0.36	0.23	0.23	50	
60	11.39	11.38	33.633	25.642	235.1	0.148	4.47 D	72.3	13.7	1.03	14.1	0.38	0.16	0.21	60	213
75 ISL	11.25 D	11.24	33.666 D	25.694	230.6	0.182	4.28 D	69.0	15.6	1.12	15.8	0.30	0.14	0.17	75	
80	11.21	11.20	33.673	25.707	229.5	0.194	4.14 D	66.7	16.1	1.14	16.1	0.28	0.14	0.15	80	211
100	10.85	10.84	33.687	25.782	222.7	0.239	4.01 D	64.1	18.3	1.41	17.2	0.39	0.10	0.11	101	209
125 ISL	10.34 D	10.33	33.750 D	25.921	210.0	0.293	3.33 D	52.7	22.2	1.58	20.4	0.32	0.06	0.08	126	
149	9.90	9.88	33.844	26.069	196.3	0.342	2.66 D	41.7	26.2	1.68	23.7	0.18	0.03	0.06	150	207
150 ISL	9.86 D	9.84	33.854 D	26.084	195.0	0.344	2.66 D	41.6	26.4	1.69	23.8	0.18	0.03	0.06	151	
199	9.11	9.09	34.006	26.326	172.8	0.434	2.12 D	32.7	33.4	1.94	27.4	0.05	0.01	0.07	200	205
200 ISL	9.08 D	9.06	34.007 D	26.332	172.3	0.436	2.12 D	32.7	33.5	1.94	27.5	0.05	0.01	0.07	201	
250 CSL	8.66	8.63	34.056	26.437	163.1	0.520	1.98	30.2							252	200
300 CSL	8.09	8.06	34.107	26.564	151.7	0.598	1.61	24.3							302	200
400 CSL	7.27	7.23	34.172	26.735	136.7	0.743	1.04	15.4							403	200
500 CSL	6.59	6.54	34.205	26.854	126.3	0.874	0.71	10.3							504	200
516	6.47	6.42	34.218	26.880	123.9	0.894	0.65	9.4	69.3	2.78	37.6	0.04	0.00	0.02	520	203
600 CSL	5.71	5.66	34.290	27.034	109.6	0.992	0.42	6.0							604	200
700 CSL	5.17	5.11	34.344	27.142	99.9	1.097	0.27	3.8							705	200
800 CSL	4.66	4.60	34.384	27.233	91.7	1.193	0.29	4.0							806	200
900 CSL	4.30	4.23	34.415	27.297	85.9	1.281	0.35	4.8							908	200
1000 CSL	3.88	3.80	34.452	27.370	79.1	1.364	0.48	6.6							1009	200
1027	3.81	3.73	34.460	27.384	77.9	1.385	0.48	6.5	123.7	3.07	42.9	0.03	0.00	0.04	1036	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 52.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 42.5 N	122 13.2 W	31/01/07	2233	UTC	1019 m	300	07 kn	290 02 07	1	1015.1 mb	11.3 C	9.9 C		7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.90	11.90	33.590	25.513	245.9	0.000	5.98	97.7	9.6	0.48	8.3	0.26			0	
1	11.90	11.90	33.590	25.513	245.9	0.002	5.98	97.7	9.6	0.48	8.3	0.26			1	223
10 ISL	11.78 D	11.78	33.593 D	25.538	243.8	0.024	5.81 D	94.7	10.0	0.53	8.9	0.30			10	
20 ISL	11.75 D	11.75	33.597 D	25.547	243.2	0.049	5.65 D	92.1	10.6	0.60	9.7	0.34			20	
30 ISL	11.72 D	11.72	33.609 D	25.562	242.0	0.073	5.35 D	87.1	11.4	0.69	10.7	0.38			30	
40 CSL	11.52	11.51	33.632	25.617	237.0	0.097	4.97	80.6							40	200
50 ISL	11.43 D	11.42	33.645 D	25.644	234.7	0.121	4.75 D	76.9	13.8	0.92	13.5	0.44			50	
51	11.43	11.42	33.647	25.646	234.6	0.123	4.71 D	76.2	13.9	0.93	13.7	0.44			51	221
75 ISL	11.17 D	11.16	33.686 D	25.724	227.7	0.178	4.06 D	65.4	17.0	1.15	16.7	0.29			75	
100	10.79	10.78	33.737	25.832	218.0	0.234	3.28 D	52.4	20.2	1.35	19.6	0.09			101	219
125 ISL	10.53 D	10.52	33.775 D	25.908	211.3	0.288	2.86 D	45.4	22.0	1.47	21.4				126	
150 ISL	10.24 D	10.22	33.797 D	25.975	205.4	0.340	2.67 D	42.1	23.9	1.58	22.9				151	
199 A	9.80	9.78	33.922	26.148	190.0	0.437	2.19 D	34.3	27.8	1.72	25.1				200	217
200 ISL	9.75 D	9.73	33.930 D	26.162	188.6	0.439	2.19 D	34.2	27.9	1.72	25.2				201	
250 ISL	8.77 D	8.74	34.072 D	26.432	163.6	0.527	1.77 D	27.1	35.8	1.92	28.4				252	
293	8.15	8.12	34.114	26.560	151.9	0.595	1.50 D	22.6	43.1	2.08	31.1				295	215
300 ISL	8.11 D	8.08	34.116 D	26.568	151.3	0.605	1.46 D	22.0	44.1	2.10	31.4				302	
397	7.14	7.10	34.173	26.753	134.7	0.744			57.3	2.43	35.1				400	213
400 ISL	7.11 D	7.07	34.171 D	26.756	134.5	0.748	0.83 D	12.2	57.7	2.44	35.2				403	
497	6.37	6.32	34.229	26.902	121.5	0.872	0.35 D	5.1	70.6	2.76	37.5				501	211
500 ISL	6.36 D	6.31	34.228 D	26.902	121.5	0.876	0.34 D	4.9	70.9	2.77	37.6				504	
596	5.82	5.77	34.274	27.008	112.2	0.988	0.14 D	2.0	81.6	2.90	39.6				600	209
600 ISL	5.79 D	5.74	34.276 D	27.014	111.7	0.992	0.13 D	1.9	82.1	2.90	39.7				604	
695	5.18	5.12	34.345	27.142	99.9	1.093	0.03 D	0.4	93.9	2.97	40.9				700	207
700 ISL	5.16 D	5.10	34.345 D	27.144	99.7	1.098	0.03 D	0.4	94.4	2.97	41.0				705	
798	4.75	4.69	34.388	27.226	92.5	1.192	0.03 D	0.4	103.1	3.06	42.2				804	205
800 ISL	4.72 D	4.66	34.389 D	27.230	92.0	1.194	0.04 D	0.6	103.3	3.06	42.2				806	
898	4.34	4.27	34.422	27.298	85.9	1.281	0.10 D	1.4	111.6	3.11	42.8				906	203
900 CSL	4.34	4.27	34.421	27.297	86.0	1.283	0.10	1.4							908	200
1000 CSL	4.04	3.96	34.442	27.346	81.7	1.367	0.18	2.5							1009	200
1017	4.04	3.96	34.444	27.348	81.7	1.381	0.38	5.2	117.5	3.06	42.0	0.00			1026	201

A) NUTRIENTS WERE FROZEN AND RUN FOLLOWING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 37.4 N	122 24.8 W	01/02/07	0051	UTC	2561 m	290 10 kn	280 02 06	1	1015.0 mb	12.5 C	10.1 C	13m	1/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.46	12.46	33.520	25.353	261.2	0.000	6.23	103.0	5.3	0.24	4.1	0.21	0.91	0.20	0	
2	12.46	12.46	33.520	25.353	261.3	0.005	6.23	103.0	5.3	0.24	4.1	0.21	0.91	0.20	2	223
10	12.47	12.47	33.520	25.351	261.6	0.026	6.26 D	103.5	5.1	0.31	4.1	0.21	0.86	0.20	10	221
20	12.36	12.36	33.536	25.385	258.7	0.052	5.95 D	98.2	5.6	0.37	5.2	0.23	0.80	0.25	20	219
30	12.24	12.24	33.570	25.434	254.2	0.078	5.76 D	94.8	6.5	0.48	6.4	0.26	0.65	0.38	30	217
40	12.01	12.00	33.589	25.493	248.9	0.103	5.43 D	88.9	8.9	0.76	8.7	0.32	0.34	0.29	40	215
50 ISL	11.83 D	11.82	33.618 D	25.549	243.8	0.128	5.22 D	85.2	10.7	0.86	10.8	0.34	0.26	0.25	50	
60	11.56	11.55	33.641	25.618	237.5	0.152	4.08 D	66.2	12.7	0.93	13.1	0.36	0.19	0.23	60	213
75 ISL	10.89 D	10.88	33.737 D	25.814	219.2	0.186	3.37 D	53.9	17.9	1.26	18.0	0.17	0.10	0.15	75	
80	10.84	10.83	33.746	25.830	217.7	0.197	3.32	53.1	19.6	1.37	19.5	0.10	0.07	0.13	80	211
100	10.30	10.29	33.845	26.001	201.8	0.239	2.63 D	41.6	23.9	1.64	22.8	0.05	0.02	0.12	101	209
125 ISL	10.02 D	10.01	33.915 D	26.104	192.6	0.288	2.39 D	37.6	26.5	1.75	24.7	0.04	0.01	0.08	126	
149	9.60	9.58	33.967	26.215	182.4	0.333	2.38 D	37.1	28.1	1.79	25.5	0.03	0.00	0.05	150	207
150 ISL	9.59 D	9.57	33.971 D	26.220	182.0	0.335	2.37 D	36.9	28.2	1.80	25.5	0.03	0.00	0.05	151	
198	9.19	9.17	34.096	26.384	167.4	0.419	1.86 D	28.7	33.5	2.15	27.7	0.04	0.00	0.05	199	205
200 ISL	9.12 D	9.10	34.099 D	26.397	166.1	0.422	1.85 D	28.5	33.8	2.15	27.8	0.04	0.00	0.05	201	
250 CSL	8.84	8.81	34.154	26.485	158.6	0.503	1.65	25.3							252	200
300 CSL	8.06	8.03	34.139	26.594	148.9	0.580	1.52	22.9							302	200
400 CSL	6.70	6.66	34.123	26.774	132.4	0.721	1.14	16.6							403	200
500 CSL	6.20	6.16	34.218	26.915	120.1	0.847	0.60	8.7							504	200
515	6.05	6.00	34.227	26.941	117.6	0.865	0.54 D	7.8	74.1	2.85	38.8	0.01	0.00	0.01	519	203
600 CSL	5.66	5.61	34.292	27.042	108.8	0.961	0.34	4.8							605	200
700 CSL	5.13	5.07	34.350	27.152	98.9	1.065	0.29	4.1							705	200
800 CSL	4.66	4.60	34.387	27.235	91.4	1.160	0.32	4.5							807	200
900 CSL	4.33	4.26	34.414	27.293	86.4	1.249	0.35	4.8							908	200
1000 CSL	3.99	3.91	34.446	27.354	80.8	1.333	0.45	6.2							1009	200
1028	3.89	3.81	34.459	27.375	78.9	1.355	0.42	5.7	121.3	3.15	43.0	0.01	0.00	0.01	1037	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 27.4 N	122 45.9 W	01/02/07	0454	UTC	2912 m	330 13 kn			1016.1 mb	11.9 C	10.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.97	11.97	33.565	25.481	249.0	0.000	6.01	98.4	9.4	0.52	8.1	0.32	0.48	0.14	0	
2	11.97	11.97	33.565	25.481	249.1	0.005	6.01	98.4	9.4	0.52	8.1	0.32	0.48	0.14	2	223
10	11.96	11.96	33.564	25.482	249.2	0.025	6.04 D	98.8	9.3	0.63	8.1	0.31	0.49	0.14	10	221
20 ISL	11.95 D	11.95	33.562 D	25.483	249.3	0.050	6.03 D	98.6	9.2	0.66	8.1	0.31	0.47	0.14	20	
21	11.96	11.96	33.563	25.482	249.5	0.052	6.02 D	98.5	9.2	0.66	8.1	0.31	0.47	0.14	21	219
30	11.91	11.91	33.563	25.491	248.8	0.075	5.98 D	97.7	9.3	0.63	8.2	0.30	0.50	0.17	30	217
40 CSL	11.91	11.90	33.570	25.497	248.5	0.100	5.87	95.9							40	200
41	11.91	11.90	33.572	25.499	248.4	0.102	5.83 D	95.3	9.5	0.68	8.7	0.32	0.30	0.13	41	215
50 ISL	11.86 D	11.85	33.588 D	25.521	246.5	0.124	5.67 D	92.6	9.9	0.73	9.3	0.35	0.21	0.11	50	
61	11.79	11.78	33.586	25.532	245.7	0.151	5.37 D	87.5	10.5	0.79	10.1	0.38	0.14	0.10	61	213
75 ISL	10.60 D	10.59	33.627 D	25.779	222.4	0.184	3.70 D	58.8	17.3	1.23	17.9	0.16	0.05	0.07	75	
82	10.14	10.13	33.700	25.915	209.6	0.199	3.18	50.1	20.9	1.45	21.7	0.04	0.02	0.06	82	211
99	9.66	9.65	33.782	26.060	196.1	0.234	2.98 D	46.4	23.5	1.55	23.2	0.02	0.01	0.05	100	209
100 ISL	9.67 D	9.66	33.777 D	26.054	196.6	0.236	2.98 D	46.4	23.7	1.56	23.3	0.02	0.01	0.05	101	
125 ISL	9.41 D	9.40	33.949 D	26.232	180.3	0.283	2.47 D	38.3	27.5	1.70	25.2	0.03	0.00	0.04	126	
148	9.29	9.27	34.032	26.317	172.7	0.323	2.16 D	33.4	30.9	1.82	26.8	0.03	0.00	0.04	149	207
150 ISL	9.26 D	9.24	34.044 D	26.331	171.4	0.327	2.13 D	32.9	31.2	1.83	26.9	0.03	0.00	0.04	151	
200 ISL	8.79 D	8.77	34.139 D	26.481	158.0	0.409	1.78 D	27.3	37.8	2.08	29.6	0.02	0.00	0.02	201	
205	8.74	8.72	34.161	26.506	155.7	0.417	1.63 D	24.9	38.4	2.10	29.8	0.02	0.00	0.02	206	205
250 CSL	8.37	8.34	34.184	26.582	149.3	0.486	1.41	21.4							252	200
300 CSL	7.74	7.71	34.162	26.658	142.5	0.559	1.37	20.5							302	200
400 CSL	6.64	6.60	34.169	26.818	128.2	0.694	0.89	13.0							403	200
500 CSL	5.92	5.88	34.225	26.956	115.9	0.816	0.48	6.9							504	200
517	5.82	5.78	34.236	26.977	114.0	0.836	0.43 D	6.1	77.0	2.88	39.8	0.01	0.00	0.01	521	203
600 CSL	5.12	5.07	34.226	27.054	106.9	0.927	0.38	5.3							605	200
700 CSL	4.98	4.92	34.335	27.157	98.2	1.030	0.23	3.2							706	200
800 CSL	4.55	4.49	34.383	27.244	90.4	1.124	0.25	3.5							807	200
900 CSL	4.19	4.12	34.417	27.310	84.5	1.212	0.31	4.3							908	200
1000 CSL	3.93	3.85	34.448	27.362	79.9	1.294	0.40	5.5							1009	200
1013	3.91	3.83	34.452	27.367	79.5	1.304	0.39	5.3	119.0	3.06	43.5	0.00	0.00	0.00	1022	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 65.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
36 17.1 N	123 8.2 W	01/02/07	0904 UTC	3255 m	050 03 kn			1016.0 mb	11.9 C	9.7 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.90	11.90	33.209	25.218	274.1	0.000	6.32	103.1	5.9	0.32	3.5	0.16	0.52	0.18	0	
2	11.90	11.90	33.209	25.218	274.1	0.005	6.32	103.1	5.9	0.32	3.5	0.16	0.52	0.18	2	223
10	11.90	11.90	33.209	25.218	274.3	0.027	6.47 D	105.5	5.0	0.36	3.2	0.15	0.52	0.17	10	221
20	11.90	11.90	33.210	25.219	274.4	0.055	6.40 D	104.4							20	219
30	11.69	11.69	33.247	25.287	268.2	0.082	5.93 D	96.3	7.2	0.48	6.5	0.38	0.27	0.12	30	217
40	11.57	11.56	33.308	25.356	261.8	0.108	5.82 D	94.3	7.2	0.56	7.1	0.34	0.16	0.09	40	215
50 ISL	11.41 D	11.40	33.362 D	25.428	255.3	0.134	5.72 D	92.4	8.3	0.64	8.1	0.34	0.19	0.10	50	
61	11.74	11.73	33.547	25.511	247.7	0.162	5.88 D	95.7	9.9	0.71	9.4	0.35	0.25	0.12	61	213
75 ISL	11.63 D	11.62	33.598 D	25.572	242.3	0.196	5.63 D	91.5	11.1	0.76	10.7	0.35	0.19	0.13	75	
80	11.57	11.56	33.605	25.588	240.8	0.208	5.41	87.8	11.8	0.80	11.5	0.35	0.16	0.13	80	211
100	10.69	10.68	33.672	25.799	221.1	0.255	3.54 D	56.4	18.2	1.30	19.0	0.09	0.06	0.08	101	209
125 ISL	10.01 D	10.00	33.862 D	26.064	196.3	0.307	2.66 D	41.8	23.8	1.59	23.6	0.05	0.03	0.05	126	
149	9.58	9.56	33.940	26.198	184.1	0.352	2.52 D	39.2	27.4	1.70	25.2	0.02	0.00	0.04	150	207
150 ISL	9.49 D	9.47	33.959 D	26.227	181.3	0.354	2.52 D	39.2	27.5	1.70	25.2	0.02	0.00	0.04	151	
200	8.82	8.80	34.015	26.379	167.7	0.441	2.84 D	43.5	31.2	1.85	26.2	0.03	0.00	0.04	201	205
250 CSL	8.26	8.23	34.080	26.517	155.3	0.522	1.94	29.3							252	200
300 CSL	7.75	7.72	34.126	26.629	145.3	0.597	1.49	22.3							302	200
400 CSL	6.65	6.61	34.190	26.833	126.8	0.733	0.85	12.4							403	200
497	6.00	5.96	34.241	26.959	115.7	0.851	0.47 D	6.7	75.4	2.63	39.2	0.02	0.00	0.01	501	203
500 CSL	5.93	5.89	34.238	26.965	115.1	0.855	0.47	6.7							504	200
600 CSL	5.39	5.34	34.284	27.068	106.0	0.965	0.30	4.2							604	200
700 CSL	4.93	4.87	34.342	27.168	97.1	1.067	0.25	3.5							705	200
800 CSL	4.49	4.43	34.386	27.253	89.5	1.160	0.28	3.9							806	200
900 CSL	4.22	4.15	34.422	27.311	84.5	1.247	0.34	4.7							908	200
1000 CSL	3.94	3.86	34.452	27.364	79.8	1.329	0.45	6.2							1009	200
1022	3.85	3.77	34.464	27.383	78.0	1.346	0.44	6.0	120.7	3.05	43.5	0.02	0.00	0.01	1031	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
36 7.2 N	123 29.3 W	01/02/07	1212 UTC	3562 m	220 01 kn			1016.4 mb	11.9 C	9.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.80	11.80	33.212	25.239	272.1	0.000	6.33	103.0	6.1	0.25	3.8	0.17	0.54	0.14	0	
2	11.80	11.80	33.212	25.239	272.1	0.005	6.33	103.0	6.1	0.25	3.8	0.17	0.54	0.14	2	223
10	11.81	11.81	33.212	25.237	272.5	0.027	6.45 D	105.0	6.1	0.43	3.8	0.17	0.50	0.16	10	221
20	11.81	11.81	33.231	25.252	271.3	0.054	6.42 D	104.5	6.3	0.37	4.1	0.18	0.53	0.15	20	219
30	11.77	11.77	33.276	25.295	267.5	0.081	6.30 D	102.5	7.1	0.47	5.0	0.21	0.56	0.18	30	217
40	11.73	11.72	33.461	25.446	253.4	0.107	5.93 D	96.5	9.2	0.53	8.2	0.28	0.42	0.18	40	215
50 ISL	11.72 D	11.71	33.563 D	25.527	245.9	0.132	5.83 D	94.9	10.2	0.62	9.4	0.31	0.31	0.21	50	
60	11.60	11.59	33.581	25.564	242.6	0.157	5.43 D	88.2	11.3	0.75	10.7	0.34	0.22	0.22	60	213
75 ISL	10.68 D	10.67	33.558 D	25.711	228.8	0.192	4.41 D	70.2	15.3	1.03	16.3	0.11	0.08	0.11	75	
79	10.51	10.50	33.552	25.736	226.5	0.201	4.21	66.7	16.5	1.11	17.9	0.05	0.05	0.08	79	211
99	9.86	9.85	33.712	25.972	204.5	0.244	3.32 D	51.9	21.9	1.45	22.3	0.02	0.01	0.05	100	209
100 ISL	9.75 D	9.74	33.705 D	25.985	203.3	0.246	3.31 D	51.7	22.1	1.46	22.4	0.02	0.01	0.05	101	
125 ISL	9.42 D	9.41	33.859 D	26.160	187.1	0.295	2.89 D	44.8	26.2	1.65	25.0	0.03	0.00	0.03	126	
149	9.41	9.39	33.968	26.247	179.3	0.339	2.50 D	38.8	29.1	1.72	26.2	0.03	0.00	0.03	150	207
150 ISL	9.41 D	9.39	33.974 D	26.252	178.9	0.341	2.47 D	38.3	29.2	1.72	26.3	0.03	0.00	0.03	151	
199	8.29	8.27	34.026	26.469	158.9	0.424	2.48 D	37.5	35.8	1.86	28.7	0.02	0.00	0.01	200	205
200 ISL	8.27 D	8.25	34.026 D	26.472	158.6	0.425	2.47 D	37.4	35.9	1.86	28.7	0.02	0.00	0.01	201	
250 CSL	7.86	7.84	34.087	26.581	149.0	0.502	1.83	27.4							252	200
300 CSL	7.40	7.37	34.131	26.683	140.0	0.574	1.39	20.6							302	200
400 CSL	6.46	6.42	34.151	26.828	127.1	0.708	0.99	14.4							403	200
498	5.75	5.71	34.199	26.956	115.6	0.827	0.62 D	8.8	77.1	2.79	39.6	0.01	0.00	0.00	502	203
500 CSL	5.74	5.70	34.205	26.962	115.1	0.829	0.62	8.8							504	200
600 CSL	5.13	5.08	34.258	27.078	104.7	0.939	0.38	5.3							605	200
700 CSL	4.71	4.65	34.339	27.190	94.6	1.039	0.30	4.2							705	200
800 CSL	4.34	4.28	34.392	27.273	87.2	1.130	0.34	4.7							807	200
900 CSL	4.07	4.00	34.432	27.334	81.9	1.214	0.43	5.9							908	200
1000 CSL	3.81	3.74	34.465	27.388	77.3	1.294	0.55	7.5							1009	200
1023	3.74	3.66	34.473	27.401	76.0	1.311	0.47	6.4	122.4	3.03	43.7	0.00	0.00	0.01	1032	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 75.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 57.4 N	123 50.2 W	01/02/07	1629	UTC	3870 m	330	11 kn	340 02 05	1	1017.1 mb	11.7 C	9.0 C		7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.28	12.28	33.122	25.078	287.3	0.000	6.27	103.0	4.2	0.17	1.9	0.09	0.52	0.14	0	
2	12.28	12.28	33.122	25.078	287.4	0.006	6.27	103.0	4.2	0.17	1.9	0.09	0.52	0.14	2	223
10 ISL	12.28 D	12.28	33.120 D	25.077	287.7	0.029	6.27 D	103.0	4.1	0.26	1.9	0.10	0.49	0.14	10	
11	12.28	12.28	33.122	25.079	287.6	0.032	6.27 D	103.0	4.1	0.27	1.9	0.10	0.48	0.14	11	221
20 ISL	12.30 D	12.30	33.139 D	25.088	286.9	0.057	6.26 D	102.9	4.4	0.22	2.3	0.13	0.47	0.15	20	
21 A	12.30	12.30	33.143	25.091	286.6	0.060	6.25 D	102.7	4.4	0.22	2.4	0.13	0.47	0.15	21	219
30	12.32	12.32	33.175	25.113	284.8	0.086	6.10 D	100.3	4.5		3.0	0.25	0.31	0.12	30	217
40	12.23	12.22	33.181	25.135	283.0	0.114	6.08 D	99.8	4.8	0.38	3.5	0.30	0.21	0.09	40	215
50 ISL	12.14 D	12.13	33.186 D	25.156	281.2	0.143	6.03 D	98.8	5.2	0.39	4.4	0.30	0.15	0.07	50	
61	11.78	11.77	33.170	25.211	276.2	0.173	5.93 D	96.4	6.2	0.40	5.8	0.29	0.11	0.06	61	213
75 ISL	11.29 D	11.28	33.362 D	25.450	253.7	0.210	5.86 D	94.4	9.2	0.66	8.5	0.49	0.12	0.07	75	
80	11.20	11.19	33.366	25.470	252.0	0.223	5.84 D	93.9	10.5	0.77	9.8	0.53	0.12	0.07	80	211
100	10.47	10.46	33.419	25.640	236.1	0.272	4.02 D	63.6	15.0	1.09	17.0	0.02	0.02	0.04	101	209
125 ISL	9.34 D	9.33	33.675 D	26.029	199.5	0.326	3.58 D	55.4	20.0	1.31	21.5	0.01	0.01	0.03	126	
150	9.08	9.06	33.804	26.172	186.4	0.375	3.24 D	49.8	24.7	1.44	23.6	0.01	0.00	0.02	151	207
199	8.58	8.56	34.020	26.420	163.7	0.460	2.32 D	35.3	33.9	1.78	27.9	0.02	0.00	0.01	200	205
200 ISL	8.60 D	8.58	34.021 D	26.418	163.9	0.462	2.31 D	35.2	34.1	1.79	28.0	0.02	0.00	0.01	201	
250 CSL	7.83	7.81	34.062	26.566	150.4	0.541	2.02	30.3							252	200
300 CSL	7.33	7.30	34.105	26.672	140.9	0.613	1.44	21.3							302	200
400 CSL	6.19	6.15	34.111	26.831	126.6	0.747	0.97	14.0							403	200
500 CSL	5.58	5.54	34.191	26.971	114.1	0.867	0.54	7.7							504	200
511	5.46	5.42	34.191	26.985	112.7	0.880	0.54	7.7	81.1	2.74	40.2	0.01	0.00	0.00	515	203
600 CSL	5.13	5.08	34.258	27.078	104.7	0.977	0.31	4.4							604	200
700 CSL	4.69	4.63	34.317	27.175	96.0	1.077	0.21	2.9							705	200
800 CSL	4.48	4.42	34.379	27.248	89.8	1.170	0.23	3.2							806	200
900 CSL	4.14	4.07	34.428	27.324	83.1	1.256	0.31	4.3							908	200
1000 CSL	3.88	3.80	34.458	27.375	78.6	1.337	0.42	5.7							1009	200
1017	3.83	3.75	34.464	27.385	77.7	1.350	0.43	5.9	116.0	2.96	42.0	0.02	0.00	0.00	1026	201

A) NUTRIENTS WERE FROZEN AND RUN FOLLOWING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 47.3 N	124 11.7 W	01/02/07	1946	UTC	3948 m	320	10 kn	340 02 05	2	1019.5 mb	12.5 C	10.1 C		8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.90	12.90	33.088	24.932	301.2	0.000	6.12	101.8	2.9	0.10	0.8	0.06	0.27	0.07	0	
2	12.90	12.90	33.088	24.932	301.3	0.006	6.12	101.8	2.9	0.10	0.8	0.06	0.27	0.07	2	223
10	12.60	12.60	33.121	25.016	293.5	0.030	6.19 D	102.4	3.5	0.22	1.3	0.09	0.38	0.10	10	221
20 ISL	12.41 D	12.41	33.155 D	25.080	287.7	0.059	6.23 D	102.6	4.1	0.26	1.8	0.10	0.46	0.13	20	
21	12.42	12.42	33.152	25.075	288.1	0.062	6.23 D	102.7	4.1	0.26	1.9	0.10	0.46	0.13	21	219
30	12.26	12.26	33.191	25.136	282.5	0.087	6.15 D	101.0	4.6	0.33	3.0	0.19	0.46	0.21	30	217
40	12.15	12.14	33.197	25.162	280.3	0.116	6.12 D	100.3	5.0	0.35	3.5	0.24	0.36	0.14	40	215
50 ISL	12.02 D	12.01	33.203 D	25.192	277.8	0.143	6.02 D	98.4	5.3	0.39	4.0	0.37	0.26	0.11	50	
60	11.96	11.95	33.212	25.210	276.3	0.171	5.97 D	97.5	5.8	0.47	4.8	0.45	0.17	0.09	60	213
75 ISL	11.19 D	11.18	33.145 D	25.299	268.0	0.212	5.48 D	88.0	7.2	0.68	7.3	0.18	0.06	0.04	75	
80	11.14	11.13	33.190	25.344	264.0	0.225	5.18 D	83.1	7.6	0.77	8.7	0.07	0.04	0.03	80	211
99	10.47	10.46	33.520	25.719	228.6	0.272	3.79 D	60.0	15.9	1.17	18.2	0.03	0.01	0.03	100	209
100 ISL	10.42 D	10.41	33.534 D	25.738	226.8	0.274	3.63 D	57.4	16.2	1.18	18.3	0.03	0.01	0.03	101	
125 ISL	9.70 D	9.69	33.769 D	26.044	198.2	0.328	3.04 D	47.4	22.6	1.47	21.7	0.02	0.00	0.03	126	
149	9.32	9.30	33.851	26.170	186.6	0.374	2.70 D	41.8	26.2	1.61	25.0	0.02	0.00	0.02	150	207
150 ISL	9.29 D	9.27	33.858 D	26.181	185.6	0.376	2.67 D	41.3	26.3	1.62	25.1	0.02	0.00	0.02	151	
198	8.81	8.79	33.990	26.361	169.3	0.461	2.46 D	37.7	31.8	1.85	27.4	0.03	0.00	0.02	199	205
200 ISL	8.72 D	8.70	33.994 D	26.378	167.7	0.464	2.46 D	37.6	32.1	1.86	27.5	0.03	0.00	0.02	201	
250 CSL	8.67	8.64	34.142	26.503	156.9	0.545	1.52	23.2							252	200
300 CSL	8.28	8.25	34.196	26.605	147.9	0.621	1.18	17.9							302	200
400 CSL	7.24	7.20	34.210	26.769	133.4	0.762	0.84	12.4							403	200
500 CSL	6.07	6.03	34.183	26.904	121.0	0.889	0.67	9.6							504	200
515	5.93	5.89	34.173	26.914	120.1	0.907	0.68	9.7	71.6	2.72	38.6	0.02	0.00	0.01	519	203
600 CSL	5.76	5.71	34.266	27.009	112.1	1.006	0.35	5.0							604	200
700 CSL	5.11	5.05	34.342	27.148	99.3	1.112	0.23	3.2							705	200
800 CSL	4.65	4.59	34.391	27.239	91.0	1.207	0.26	3.6							806	200
900 CSL	4.29	4.22	34.425	27.306	85.1	1.295	0.33	4.6							907	200
1000 CSL	3.99	3.91	34.459	27.365	79.9	1.377	0.45	6.2							1009	200
1029	3.85	3.77	34.469	27.387	77.7	1.400	0.45	6.1	120.6	3.07	43.6	0.01	0.00	0.01	1038	201

D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; STATION CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 66.7 85.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 37.1 N	124 33.0 W	01/02/07	2345 UTC	4189 m	310 15 kn	340 02 05	2	1018.9 mb	12.4 C	10.1 C		8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.71	12.71	33.107	24.984	296.3	0.000	6.07	100.6	3.5	0.23	1.7	0.13	0.23	0.06	0	
2	12.71	12.71	33.107	24.984	296.3	0.006	6.07	100.6	3.5	0.23	1.7	0.13	0.23	0.06	2	223
10 ISL	12.71 D	12.71	33.105 D	24.983	296.7	0.030	6.05 D	100.3	3.4	0.34	1.8	0.15	0.24	0.07	10	
11	12.71	12.71	33.107	24.984	296.6	0.033	6.05 D	100.3	3.4	0.36	1.8	0.15	0.24	0.07	11	221
20 ISL	12.58 D	12.58	33.118 D	25.018	293.5	0.059	6.10 D	100.8	3.7	0.34	1.9	0.15	0.29	0.09	20	
21	12.58	12.58	33.119	25.019	293.5	0.062	6.11 D	101.0	3.7	0.33	1.9	0.15	0.30	0.09	21	219
30 ISL	12.44 D	12.44	33.136 D	25.059	289.9	0.088	6.15 D	101.4	3.9	0.37	1.9	0.14	0.48	0.15	30	
31	12.45	12.45	33.137	25.058	290.0	0.091	6.16 D	101.6	3.9	0.37	1.9	0.14	0.50	0.16	31	217
40	12.34	12.33	33.148	25.088	287.4	0.117	6.13 D	100.8	4.1	0.30	2.4	0.16	0.42	0.15	40	215
50 ISL	12.23 D	12.22	33.162 D	25.120	284.6	0.146	6.06 D	99.5	4.4	0.34	3.1	0.26	0.29	0.12	50	
60	12.16	12.15	33.179	25.147	282.3	0.174	5.95 D	97.5	4.9	0.42	3.9	0.37	0.17	0.09	60	213
75 ISL	11.88 D	11.87	33.200 D	25.216	276.1	0.216	5.78 D	94.2	5.9	0.49	5.3	0.44	0.11	0.07	75	
80	11.86	11.85	33.225	25.239	274.0	0.230	5.26 D	85.7	6.2	0.51	5.8	0.46	0.10	0.06	80	211
100	11.18	11.17	33.528	25.600	240.1	0.281	3.49 D	56.1	15.3	1.21	17.4	0.05	0.03	0.04	101	209
125 ISL	10.27 D	10.26	33.721 D	25.910	211.0	0.338	2.79 D	44.0	21.1	1.45	20.4		0.01	0.03	126	
148 A	9.93	9.91	33.818	26.044	198.7	0.385	2.49 D	39.0	23.8	1.68	23.1		0.00	0.03	149	207
150 ISL	9.88 D	9.86	33.837 D	26.067	196.6	0.389	2.46 D	38.5	24.1	1.69	23.3		0.00	0.03	151	
198 A	9.44	9.42	34.014	26.279	177.4	0.478	1.95 D	30.3	29.6	1.87	26.4		0.00	0.02	199	205
200 ISL	9.43 D	9.41	34.015 D	26.282	177.2	0.482	1.94 D	30.1	29.8	1.88	26.5		0.00	0.02	201	
250 CSL	9.10	9.07	34.127	26.423	164.6	0.567	1.57	24.2							251	200
300 CSL	8.79	8.76	34.196	26.527	155.7	0.647	1.26	19.3							302	200
400 CSL	7.63	7.59	34.216	26.718	138.6	0.795	0.94	14.0							403	200
500 CSL	6.75	6.70	34.237	26.858	126.1	0.927	0.60	8.8							503	200
516	6.61	6.56	34.243	26.882	123.9	0.947	0.56	8.2	64.3	2.60	36.4		0.00	0.01	520	203
600 CSL	5.83	5.78	34.256	26.993	113.7	1.047	0.39	5.6							604	200
700 CSL	5.31	5.25	34.321	27.108	103.4	1.155	0.24	3.4							705	200
800 CSL	4.82	4.76	34.370	27.204	94.7	1.254	0.24	3.4							806	200
900 CSL	4.37	4.30	34.413	27.288	86.9	1.345	0.30	4.1							907	200
1000 CSL	4.08	4.00	34.443	27.343	82.1	1.430	0.39	5.3							1009	200
1027	4.03	3.95	34.450	27.354	81.2	1.452	0.38	5.2	114.2	2.98	42.5		0.00	0.01	1036	201

A) NUTRIENTS WERE FROZEN AND RUN FOLLOWING THE CRUISE. VALUES THAT WERE SUSPECT WERE OMITTED.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S; CRUISE CORRECTED O2;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 67.1 47.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
36 47.8 N	121 50.8 W	31/01/07	1716 UTC	248 m	110	270 01 04	2	1016.9 mb	12.0 C	9.3 C	16m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	11.86	11.86	33.607	25.534	244.0	0.000	5.65	92.3	10.2	0.61	8.9	0.29	0.73	0.17	0	
2	11.86	11.86	33.607	25.534	244.0	0.005	5.65	92.3	10.2	0.61	8.9	0.29	0.73	0.17	2	223
5	11.85	11.85	33.608	25.537	243.8	0.012	5.57 D	91.0	10.3	0.71	9.0	0.30	0.48	0.16	5	221
10	11.81	11.81	33.613	25.548	242.9	0.024	5.37 D	87.6	11.2	0.79	9.9	0.31	0.31	0.15	10	219
20	11.77	11.77	33.617	25.559	242.1	0.049	5.33 D	86.9	11.6	0.87	10.4	0.33	0.26	0.17	20	217
30	11.72	11.72	33.621	25.572	241.1	0.073	5.27 D	85.8	11.9	0.88	10.9	0.35	0.20	0.16	30	215
40	11.68	11.67	33.622	25.580	240.6	0.097	5.20 D	84.6	12.2	0.92	11.2	0.36	0.21	0.19	40	213
50	11.65	11.64	33.625	25.588	240.1	0.121	5.16 D	83.9	12.1	0.91	11.5	0.37	0.19	0.16	50	211
60	11.64	11.63	33.625	25.590	240.1	0.145	5.13 D	83.4	12.3	1.04	11.9	0.39	0.18	0.15	60	209
75 ISL	11.61 D	11.60	33.626 D	25.597	239.8	0.181	5.09 D	82.7	12.5	0.97	12.0	0.39	0.18	0.14	75	
80	11.60	11.59	33.628	25.601	239.6	0.193	5.05 D	82.0	12.6	0.93	12.0	0.39	0.18	0.14	80	207
100	11.55	11.54	33.629	25.611	239.1	0.241	5.03 D	81.6	13.3	0.99	12.3	0.41	0.18	0.14	101	205
125 ISL	10.85 D	10.83	33.702 D	25.795	222.1	0.298	4.47 D	71.5	23.3	1.34	17.6	0.33	0.13	0.12	126	
149	9.47	9.45	33.874	26.164	187.2	0.348	2.82 D	43.8	34.6	1.74	23.8	0.23	0.08	0.09	150	203
150 ISL	9.24 D	9.22	33.903 D	26.224	181.5	0.349	2.82 D	43.6	34.8	1.75	23.9	0.23	0.08	0.09	151	
200 ISL	8.62 D	8.60	33.992 D	26.392	166.4	0.436	2.22 D	33.8	42.3	2.10	28.4	0.18	0.03	0.05	201	
201	8.59	8.57	33.997	26.401	165.5	0.438	2.16	32.9	42.5	2.11	28.5	0.18	0.03	0.05	202	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 5.0 N	120 46.8 W	28/01/07	1947 UTC	1134 m	130 01 kn	300 03 10	2	1017.9 mb	13.0 C	12.0 C	21m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.93	12.93	33.558	25.290	267.1	0.000	6.01	100.4	1.8	0.56	2.2	0.10	0.81	0.27	0	
2 A	12.93	12.93	33.558	25.290	267.2	0.005	6.01	100.4	1.8	0.56	2.2	0.10	0.81	0.27	2	209
9	12.92	12.92	33.563	25.296	266.8	0.024	5.99	100.0	1.8	0.55	2.2	0.11	0.70	0.22	9	207
9	12.91	12.91	33.559	25.295	266.9	0.024									9	208
10 ISL	12.91 D	12.91	33.557 D	25.294	267.1	0.027	6.00	100.2	1.8	0.55	2.2	0.11	0.70	0.22	10	
14 A	12.90	12.90	33.559	25.297	266.8	0.037	6.02	100.5	1.8	0.55	2.2	0.10			14	206
20 ISL	12.89 D	12.89	33.557 D	25.298	267.0	0.053	5.98	99.8	2.0	0.56	2.4	0.11	0.80	0.23	20	
22	12.89	12.89	33.563	25.303	266.6	0.059	5.97	99.6	2.0	0.56	2.4	0.11	0.83	0.23	22	205
29 A	12.83	12.83	33.581	25.329	264.3	0.077	5.74	95.7	3.8	0.68	3.9	0.14	0.86	0.32	29	204
30 ISL	12.75 D	12.75	33.586 D	25.348	262.4	0.080	5.67	94.3	4.3	0.71	4.3	0.15	0.83	0.33	30	
41 A	12.30	12.29	33.622	25.464	251.7	0.108	4.93	81.3	9.4	1.02	8.7	0.22	0.52	0.38	41	203
50 ISL	12.22 D	12.21	33.626 D	25.482	250.2	0.131	4.92	81.0	10.0	1.06	9.0	0.22	0.55	0.45	50	
51 A	12.22	12.21	33.626	25.482	250.2	0.133	4.92	81.0	10.1	1.06	9.0	0.22	0.55	0.46	51	202
65	12.09	12.08	33.638	25.516	247.3	0.168	4.64	76.2	11.3	1.14	10.3	0.22	0.44	0.51	65	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
35 1.5 N	120 55.1 W	28/01/07	2357 UTC	232 m	010 05 kn	080 01 08	1	1016.1 mb	13.9 C	12.5 C	23m	1/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.23	13.23	33.549	25.224	273.5	0.000	6.08	102.2	2.5	0.58	2.4	0.12	0.64	0.15	0	
2	13.23	13.23	33.549	25.224	273.5	0.005	6.08	102.2	2.5	0.58	2.4	0.12	0.64	0.15	2	216
10 ISL	13.01 D	13.01	33.556 D	25.273	269.0	0.027	6.06	101.4	2.4	0.58	2.4	0.13	0.72	0.22	10	
11	13.00	13.00	33.564	25.281	268.3	0.030	6.06	101.4	2.4	0.58	2.4	0.13	0.73	0.23	11	214
11	12.99	12.99	33.558	25.279	268.6	0.030									11	215
20	12.96	12.96	33.568	25.293	267.5	0.054	6.03	100.8	2.4	0.58	2.6	0.13	0.85	0.35	20	213
30	12.91	12.91	33.585	25.316	265.5	0.081	5.93	99.0	2.7	0.61	2.8	0.14	0.65	0.36	30	212
41	12.89	12.88	33.597	25.329	264.5	0.110	5.81	97.0	2.8	0.64	3.0	0.12	0.52	0.40	41	211
50 ISL	12.78 D	12.77	33.598 D	25.352	262.6	0.134	5.53	92.1	4.2	0.74	4.3	0.14	0.38	0.55	50	
51	12.78	12.77	33.597	25.351	262.7	0.136	5.48	91.2	4.5	0.76	4.6	0.14	0.37	0.56	51	210
60	12.39	12.38	33.611	25.438	254.6	0.159	4.70	77.6	8.5	1.03	8.8	0.19	0.30	0.39	60	209
70	12.14	12.13	33.625	25.497	249.3	0.185	4.24	69.7	11.1	1.19	11.5	0.21	0.33	0.42	70	208
75 ISL	11.72 D	11.71	33.654 D	25.599	239.7	0.197	3.90	63.5	13.6	1.33	14.1	0.19	0.29	0.39	75	
85	10.95	10.94	33.680	25.759	224.6	0.220	3.30	52.9	18.3	1.60	18.9	0.14	0.18	0.31	85	207
100	10.68	10.67	33.719	25.837	217.5	0.253	3.08	49.1	20.0	1.70	20.4	0.09	0.12	0.25	101	206
120	10.30	10.29	33.837	25.995	202.8	0.295	2.63	41.6	23.9	1.89	23.0	0.06	0.05	0.22	121	205
125 ISL	10.19 D	10.18	33.876 D	26.045	198.2	0.305	2.55	40.2	24.7	1.93	23.4	0.07	0.05	0.22	126	
141	10.03	10.01	33.926	26.111	192.2	0.336	2.33	36.6	27.2	2.03	24.5	0.10	0.04	0.23	142	204
150 ISL	9.98 D	9.96	33.945 D	26.135	190.2	0.354	2.23	35.0	28.6	2.08	25.2	0.10	0.04	0.22	151	
170	9.61	9.59	34.030	26.263	178.3	0.391	2.07	32.3	31.0	2.16	26.4	0.08	0.03	0.20	171	203
199	9.50	9.48	34.051	26.298	175.6	0.442	2.01	31.3	32.1	2.19	27.0	0.08	0.01	0.17	200	202
200 ISL	9.49 D	9.47	34.054 D	26.302	175.2	0.444	2.00	31.1	32.2	2.19	27.0	0.08			201	
224	9.24	9.22	34.092	26.373	168.9	0.485	1.87	28.9	35.1	2.28	28.0	0.06			225	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 53.3 N	121 11.9 W	29/01/07	0335 UTC	564 m	150 14 kn			1016.8 mb	13.0 C	12.5 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.06	13.06	33.544	25.254	270.6	0.000	6.04	101.1	2.7	0.56	2.0	0.12	0.52	0.04	0	
2	13.06	13.06	33.544	25.254	270.7	0.005	6.04	101.1	2.7	0.56	2.0	0.12	0.52	0.04	2	221
10	13.06	13.06	33.548	25.257	270.6	0.027	6.04	101.1	2.6	0.55	2.0	0.11	0.44	0.17	10	219
10	13.06	13.06	33.550	25.259	270.4	0.027									10	220
20	13.04	13.04	33.564	25.274	269.3	0.054	6.01	100.6	2.7	0.56	2.2	0.11	0.50	0.16	20	218
30	12.66	12.66	33.600 D	25.377	259.7	0.080									30	217
40	12.44	12.43	33.602	25.421	255.8	0.106	5.32	88.0	8.4	0.90	7.5	0.23	0.72	0.25	40	216
50	11.57	11.56	33.636	25.612	237.8	0.131	3.80	61.7	14.7	1.36	15.2	0.22	0.30	0.32	50	215
60	10.97	10.96	33.744	25.805	219.7	0.154	2.89	46.3	20.2	1.72	20.4	0.10	0.31	0.36	60	214
71	10.66	10.65	33.830	25.927	208.3	0.177	2.57	41.0	22.9	1.87	22.2	0.03	0.13	0.19	71	213
75 ISL	10.61 D	10.60	33.846 D	25.948	206.4	0.186	2.52	40.1	23.3	1.89	22.5	0.03	0.12	0.19	75	
85	10.52	10.51	33.876	25.987	202.9	0.206	2.45	38.9	24.2	1.92	23.0	0.02	0.11	0.20	85	212
100	10.07	10.06	33.949	26.122	190.4	0.236	2.33	36.7	27.0	2.02	24.6	0.02	0.11	0.17	101	211
120	9.83	9.82	34.035	26.230	180.5	0.273	2.10	32.9	29.7	2.12	25.9	0.02	0.09	0.16	121	210
125 ISL	9.81 D	9.80	34.038 D	26.235	180.1	0.282	2.09	32.7	30.0	2.12	26.1	0.02	0.08	0.17	126	
139	9.73	9.71	34.055	26.262	177.8	0.307	2.07	32.4	30.5	2.13	26.4	0.02	0.07	0.18	140	209
150 ISL	9.68 D	9.66	34.080 D	26.290	175.4	0.326	2.03	31.7	31.0	2.14	26.6	0.02	0.06	0.17	151	
168	9.56	9.54	34.115	26.338	171.2	0.357	1.92	29.9	32.3	2.19	27.2	0.01	0.04	0.13	169	208
198	9.05	9.03	34.153	26.451	161.0	0.407	1.66	25.6	37.1	2.35	29.2	0.01	0.04	0.09	199	207
200 ISL	9.02 D	9.00	34.157 D	26.459	160.2	0.410	1.64	25.2	37.4	2.36	29.3	0.01			201	
229	8.76	8.74	34.191	26.527	154.3	0.456	1.42	21.7	40.9	2.45	30.5	0.01			230	206
250 ISL	8.60 D	8.57	34.207 D	26.564	151.0	0.488	1.32	20.1	42.7	2.51	31.1	0.01			252	
268	8.48	8.45	34.218	26.592	148.7	0.515	1.24	18.9	44.2	2.55	31.5	0.01			270	205
300 ISL	8.23 D	8.20	34.230 D	26.640	144.6	0.562	1.05	15.9	48.3	2.64	32.2	0.01			302	
318	8.08	8.05	34.235	26.666	142.4	0.588	0.95	14.3	50.8	2.69	32.7	0.01			320	204
377	7.40	7.36	34.254	26.781	132.1	0.669	0.76	11.3	57.3	2.83	35.3	0.01			380	203
400 ISL	7.13 D	7.09	34.247 D	26.813	129.1	0.699	0.71	10.5	60.1	2.88	36.1	0.01			403	
437	6.83	6.79	34.247	26.855	125.5	0.746	0.64	9.4	64.6	2.94	37.1	0.01			440	202
500 ISL	6.27 D	6.23	34.243 D	26.926	119.1	0.823	0.56	8.1	71.9	3.02	38.5	0.01			504	
513	6.21	6.16	34.240	26.931	118.8	0.838	0.54	7.8	73.4	3.04	38.8	0.01			517	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 43.5 N	121 32.9 W	29/01/07	0742 UTC	812 m	220 01 kn			1017.2 mb	12.9 C	11.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.76	12.76	33.351	25.163	279.2	0.000	6.19	102.9	4.3	0.49	2.0	0.20	0.74	0.09	0	
1	12.76	12.76	33.351	25.163	279.2	0.003	6.19	102.9	4.3	0.49	2.0	0.20	0.74	0.09	1	220
10	12.73	12.73	33.351	25.170	278.9	0.028	6.21	103.1	4.3	0.49	2.0	0.20	0.66	0.20	10	219
20	12.60	12.60	33.355	25.198	276.4	0.056	6.18	102.4	4.4	0.49	2.0	0.20	1.05	0.04	20	218
30	12.59	12.59	33.372 D	25.214	275.2	0.083									30	217
40	12.52	12.51	33.384	25.237	273.3	0.111	5.89	97.4	5.0	0.61	3.6	0.51	0.45	0.22	40	216
50	12.33	12.32	33.396	25.283	269.2	0.138	5.64	92.9	6.2	0.73	5.5	0.43	0.29	0.17	50	215
60	11.79	11.78	33.426	25.408	257.5	0.164	5.00	81.4	9.4	0.99	10.1	0.14	0.12	0.18	60	214
70	10.83	10.82	33.429	25.584	240.8	0.189	4.36	69.6	13.0	1.27	15.0	0.03	0.06	0.11	70	213
75 ISL	10.35 D	10.34	33.508 D	25.729	227.1	0.201	4.05	64.0	15.3	1.41	17.3	0.02	0.05	0.09	75	
85	9.96	9.95	33.618	25.882	212.8	0.223	3.55	55.6	19.3	1.64	21.0	0.01	0.03	0.07	85	212
100	9.65	9.64	33.693	25.992	202.6	0.254	3.32	51.7	21.8	1.75	22.6	0.01	0.01	0.07	101	211
119	9.19	9.18	33.829	26.173	185.6	0.291	3.06	47.2	25.8	1.87	24.5	0.01	0.00	0.06	120	210
125 ISL	9.16 D	9.15	33.833 D	26.181	185.0	0.302	3.02	46.6	26.6	1.89	24.8	0.01	0.00	0.06	126	
139	8.93	8.92	33.893	26.265	177.3	0.327	2.98	45.7	28.0	1.92	25.4	0.01	0.00	0.05	140	209
150 ISL	8.82 D	8.80	33.925 D	26.307	173.4	0.347	2.95	45.2	29.1	1.94	25.8	0.01	0.00	0.05	151	
169	8.60	8.58	33.969	26.376	167.2	0.379	2.89	44.0	31.2	1.97	26.6	0.01	0.00	0.06	170	208
199	8.26	8.24	34.008	26.459	159.8	0.428	2.71	41.0	35.2	2.06	28.1	0.02	0.00	0.04	200	207
200 ISL	8.25 D	8.23	34.011 D	26.463	159.4	0.430	2.69	40.7	35.4	2.07	28.2	0.02			201	
229	8.09	8.07	34.072	26.535	153.1	0.475	2.14	32.2	40.4	2.27	30.3	0.01			230	206
250 ISL	7.91 D	7.88	34.096 D	26.581	149.0	0.507	1.86	27.9	43.6	2.38	31.5	0.01			252	
268	7.81	7.78	34.124	26.618	145.8	0.533	1.67	25.0	46.0	2.46	32.3	0.01			270	205
300 ISL	7.48 D	7.45	34.127 D	26.668	141.4	0.579	1.35	20.1	49.7	2.60	33.6	0.01			302	
317	7.46	7.43	34.164	26.700	138.7	0.603	1.21	18.0	51.7	2.66	34.2	0.01			319	204
378	6.62	6.59	34.144	26.801	129.5	0.685	1.04	15.1	61.7	2.81	36.9	0.01			381	203
400 ISL	6.31 D	6.27	34.149 D	26.845	125.3	0.713	0.96	13.9	65.7	2.87	37.8	0.01			403	
437	5.95	5.91	34.149	26.891	121.1	0.758	0.81	11.6	72.3	2.96	39.1	0.01			440	202
500 ISL	5.61 D	5.57	34.205 D	26.978	113.4	0.832	0.56	8.0	81.0	3.08	40.6	0.01			504	
515	5.49	5.45	34.204	26.992	112.2	0.849	0.50	7.1	83.1	3.11	40.9	0.01			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 23.3 N	122 14.7 W	29/01/07	1331 UTC	4013 m	100 01 kn			1017.0 mb	12.9 C	11.4 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.82	12.82	33.294	25.107	284.5	0.000	6.14	102.1	3.6	0.41	0.8	0.08	0.92	0.17	0	
2	12.82	12.82	33.294	25.108	284.6	0.006	6.14	102.1	3.6	0.41	0.8	0.08	0.92	0.17	2	221
10	12.81	12.81	33.296	25.111	284.5	0.028	6.16	102.4	3.6	0.41	0.8	0.08	0.89	0.17	10	220
20	12.78	12.78	33.311	25.129	283.0	0.057	6.13	101.9	3.8	0.44	1.3	0.11	0.82	0.19	20	219
30	12.64	12.64	33.353	25.189	277.6	0.085	6.07	100.6	4.3	0.51	2.2	0.24	0.99	0.37	30	218
40	12.47	12.46	33.367	25.233	273.6	0.112	5.92	97.8	5.1	0.60	3.4	0.41	0.65	0.29	40	216
50	12.28	12.27	33.378	25.278	269.6	0.140	6.02	99.0	5.8	0.66	4.1	0.39	0.46	0.21	50	215
60	12.13	12.12	33.387	25.314	266.4	0.166	5.80	95.1	6.7	0.75	5.7	0.51	0.22	0.17	60	214
70	12.01	12.00	33.433	25.373	261.1	0.193	5.70	93.3	7.6	0.81	6.9	0.51	0.16	0.14	70	213
75 ISL	11.96 D	11.95	33.462 D	25.405	258.2	0.206	5.46	89.3	8.6	0.89	8.4	0.41	0.14	0.14	75	
85	11.16	11.15	33.478	25.564	243.1	0.231	4.77	76.7	11.8	1.15	12.8	0.16	0.09	0.13	85	212
99	9.84	9.83	33.612	25.897	211.6	0.263	3.55	55.5	19.7	1.67	21.3	0.01	0.03	0.05	100	211
100 ISL	9.89 D	9.88	33.610 D	25.887	212.5	0.265	3.55	55.5	19.9	1.67	21.4	0.01	0.03	0.05	101	
120	9.27	9.26	33.762	26.108	191.9	0.305	3.50	54.1	22.8	1.72	22.5	0.01	0.01	0.03	121	210
125 ISL	9.17 D	9.16	33.803 D	26.156	187.4	0.315	3.35	51.6	24.1	1.78	23.3	0.01	0.01	0.03	126	
139	9.02	9.01	33.872	26.234	180.2	0.340	2.94	45.2	27.6	1.93	25.4	0.01	0.00	0.03	140	209
150 ISL	8.99 D	8.97	33.907 D	26.267	177.4	0.360	2.96	45.5	29.0	1.93	25.5	0.01	0.00	0.03	151	
170	8.72	8.70	33.962	26.352	169.6	0.395	2.99	45.7	30.3	1.93	25.7	0.01	0.00	0.02	171	208
199	8.35	8.33	33.986	26.428	162.8	0.443	3.39	51.4	31.6	1.84	25.0	0.01	0.00	0.02	200	207
200 ISL	8.29 D	8.27	34.013 D	26.459	159.9	0.445	3.37	51.0	31.8	1.85	25.1	0.01			201	
229	8.09	8.07	34.034	26.505	155.9	0.490	2.44	36.8	38.4	2.17	29.3	0.01			230	206
250 ISL	7.83 D	7.81	34.063 D	26.567	150.3	0.523	1.97	29.5	43.6	2.36	31.5	0.01			252	
269	7.54	7.51	34.095	26.634	144.1	0.550	1.67	24.8	48.1	2.50	33.1	0.01			271	205
300 ISL	7.01 D	6.98	34.081 D	26.698	138.3	0.594	1.48	21.7	54.0	2.62	34.8	0.01			302	
319	6.68	6.65	34.090	26.749	133.5	0.620	1.42	20.7	57.2	2.67	35.6	0.01			321	204
377	6.43	6.40	34.167	26.844	125.2	0.695	0.82	11.9	66.4	2.91	38.0	0.01			379	203
400 ISL	5.80 D	5.77	34.106 D	26.876	122.0	0.724	0.82	11.7	70.4	2.95	38.9	0.01			403	
437	5.63	5.59	34.138	26.922	117.9	0.768	0.81	11.5	76.3	2.99	40.0	0.01			440	202
500 ISL	5.58 D	5.54	34.229 D	27.001	111.3	0.840	0.47	6.7	82.4	3.12	40.8	0.01			504	
515	5.56	5.52	34.236	27.009	110.7	0.857	0.39	5.5	83.8	3.15	41.0	0.01			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 3.6 N	122 56.1 W	29/01/07	1932	UTC	4226 m	130 01 kn	320 02 06	2	1017.5 mb	13.7 C	12.0 C	16m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.63	13.63	33.268	24.926	301.9	0.000	6.16	104.2	2.7	0.34	0.0	0.01	0.86	0.01	0	
2 A	13.63	13.63	33.268	24.926	301.9	0.006	6.16	104.2	2.7	0.34	0.0	0.01	0.86	0.01	2	220
10 A	13.40	13.40	33.267	24.972	297.7	0.030	6.16	103.7	2.7	0.34	0.0	0.01	1.02	0.01	10	219
20 ISL	13.38 D	13.38	33.265 D	24.974	297.7	0.060	6.16	103.6	2.7	0.34	0.0	0.01	0.96	0.06	20	
22 A	13.37	13.37	33.267	24.978	297.5	0.066	6.16	103.6	2.7	0.34	0.0	0.01	0.95	0.08	22	218
30 ISL	13.34 D	13.34	33.263 D	24.981	297.4	0.090	6.14	103.2	2.6	0.34	0.1	0.02	0.87	0.25	30	
31 A	13.35	13.35	33.265	24.981	297.5	0.093	6.13	103.1	2.6	0.34	0.1	0.02	0.86	0.26	31	217
38 A	13.27	13.26	33.263	24.995	296.2	0.113	6.06	101.7	2.8	0.38	0.4	0.07	0.85	0.11	38	216
49	13.15	13.14	33.267	25.023	293.9	0.146	6.01	100.6	3.1	0.46	0.9	0.12	0.60	0.20	49	215
50 ISL	13.12 D	13.11	33.257 D	25.021	294.1	0.149	6.02	100.7	3.1	0.45	0.9	0.12	0.62	0.19	50	
61 A	13.00	12.99	33.256	25.044	292.2	0.181	6.08	101.5	3.1	0.40	0.6	0.08	0.75	0.05	61	214
74	12.29	12.28	33.263	25.188	278.8	0.218	5.45	89.6	5.6	0.67	5.3	0.11	0.11	0.08	74	213
75 ISL	12.30 D	12.29	33.265 D	25.187	278.9	0.221	5.41	89.0	5.8	0.69	5.7	0.10	0.11	0.08	75	
84	11.16	11.15	33.292	25.419	256.8	0.245	5.02	80.6	8.1	0.90	9.3	0.04	0.09	0.05	84	212
100	10.35	10.34	33.534	25.750	225.7	0.284	3.73	58.9	17.2	1.62	19.1	0.01	0.05	0.05	100	211
119	9.68	9.67	33.674	25.973	204.8	0.324	3.28	51.1	21.9	1.76	22.9	0.01	0.01	0.04	120	210
125 ISL	9.47 D	9.46	33.711 D	26.036	198.9	0.337	3.28	50.9	23.0	1.78	23.4	0.01	0.01	0.04	126	
139	9.07	9.06	33.798	26.169	186.5	0.364	3.28	50.4	25.1	1.80	24.2	0.01	0.00	0.03	140	209
150 ISL	8.96 D	8.94	33.851 D	26.228	181.1	0.384	3.21	49.3	26.5	1.83	24.8	0.01	0.00	0.03	151	
168	8.81	8.79	33.906	26.295	175.0	0.416	3.05	46.7	28.6	1.90	25.7	0.01	0.00	0.03	169	208
198	8.44	8.42	33.987	26.416	164.0	0.467	2.76	41.9	33.2	2.03	27.4	0.01	0.00	0.03	199	207
200 ISL	8.43 D	8.41	33.993 D	26.422	163.4	0.470	2.73	41.4	33.6	2.04	27.6	0.01			201	
228	8.07	8.05	34.042	26.515	155.0	0.515	2.30	34.6	38.7	2.19	30.2	0.01			229	206
250 ISL	7.85 D	7.83	34.064 D	26.565	150.5	0.548	2.08	31.2	42.2	2.30	31.6	0.01			251	
268	7.61	7.58	34.064	26.600	147.4	0.575	1.93	28.8	45.0	2.38	32.5	0.01			270	205
300 ISL	7.43 D	7.40	34.117 D	26.667	141.4	0.621	1.68	24.9	50.9	2.51	34.0	0.01			302	
318	6.99	6.96	34.093	26.710	137.4	0.646	1.54	22.6	54.2	2.58	34.8	0.01			320	204
377	6.62	6.59	34.149	26.805	129.1	0.725	1.01	14.7	62.7	2.82	37.1	0.01			379	203
400 ISL	6.37 D	6.33	34.155 D	26.842	125.7	0.754	0.91	13.2	66.7	2.88	38.1	0.01			403	
437	5.86	5.82	34.146	26.900	120.2	0.800	0.80	11.4	73.2	2.96	39.7	0.01			440	202
500 ISL	5.53 D	5.49	34.197 D	26.981	113.0	0.873	0.56	8.0	83.0	3.08	41.3	0.01			503	
514	5.31	5.27	34.189	27.001	111.0	0.889	0.51	7.2	85.2	3.11	41.7	0.01			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 43.2 N	123 38.0 W	30/01/07	0120	UTC	4284 m	170 01 kn	170 01 07	1	1015.9 mb	13.1 C	11.1 C		6/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.07	13.07	33.278	25.046	290.4	0.000	6.16	103.0	3.6	0.41	0.9	0.06	0.79	0.20	0	
2	13.07	13.07	33.278	25.046	290.5	0.006	6.16	103.0	3.6	0.41	0.9	0.06	0.79	0.20	2	220
10	12.97	12.97	33.282	25.069	288.5	0.029	6.17	102.9	3.6	0.41	0.9	0.07	1.00	0.27	10	219
20	12.93	12.93	33.286	25.080	287.7	0.058	6.09	101.5	3.7	0.43	1.2	0.10	0.86	0.29	20	218
30	12.87	12.87	33.290	25.095	286.5	0.086	6.01	100.1	3.7	0.45	1.4	0.14	0.67	0.25	30	217
40	12.83	12.82	33.310	25.119	284.5	0.115	6.08	101.2	4.1	0.48	1.7	0.17	0.68	0.24	40	216
50	12.76	12.75	33.331	25.149	281.9	0.143	6.04	100.4	4.2	0.49	1.8	0.27	0.56	0.24	50	215
60	12.60	12.59	33.309	25.164	280.8	0.171	6.04	100.0	4.5	0.53	2.3	0.30	0.58	0.25	60	214
70	12.67	12.66	33.343	25.177	279.8	0.200	5.92	98.2	4.6	0.55	2.6	0.45	0.28	0.17	70	213
75 ISL	12.61 D	12.60	33.365 D	25.205	277.2	0.213	5.72	94.8	5.4	0.63	4.0	0.38	0.20	0.15	75	
85	11.88	11.87	33.397	25.369	261.8	0.240	5.07	82.7	8.7	0.91	8.9	0.17	0.11	0.12	85	212
100	10.25	10.24	33.548	25.778	223.0	0.277	3.60	56.7	18.5	1.62	20.3	0.02	0.05	0.07	100	211
120	9.65	9.64	33.685	25.986	203.5	0.319	3.61	56.2	20.6	1.63	21.0	0.02	0.02	0.04	121	210
125 ISL	9.51 D	9.50	33.731 D	26.045	198.0	0.329	3.43	53.3	22.2	1.70	22.0	0.02	0.01	0.04	126	
140	9.24	9.22	33.859	26.189	184.6	0.358	2.87	44.3	27.1	1.92	25.1	0.02	0.00	0.04	141	209
150 ISL	9.04 D	9.02	33.891 D	26.246	179.3	0.376	2.90	44.6	28.5	1.93	25.4	0.02	0.00	0.04	151	
169	8.76	8.74	33.953	26.339	170.8	0.410	2.95	45.1	30.3	1.94	25.9	0.02	0.00	0.03	170	208
200	8.46	8.44	34.028	26.445	161.3	0.461	2.49	37.8	35.4	2.11	28.1	0.01	0.00	0.02	201	207
229	7.84	7.82	34.052	26.557	151.0	0.506	2.16	32.4	42.1	2.26	30.8	0.01			230	206
250 ISL	7.68 D	7.66	34.080 D	26.602	146.9	0.538	2.07	30.9	45.6	2.33	31.9	0.01			251	
269	7.30	7.27	34.054	26.636	143.8	0.565	2.00	29.6	48.2	2.38	32.6	0.01			271	205
300 ISL	7.05 D	7.02	34.074 D	26.687	139.4	0.609	1.64	24.1	52.6	2.52	34.5	0.01			302	
318	6.91	6.88	34.089	26.718	136.6	0.634	1.42	20.8	55.2	2.61	35.5	0.01			320	204
378	6.34	6.31	34.115	26.814	127.9	0.713	1.06	15.3	64.1	2.81	37.6	0.01			380	203
400 ISL	6.13 D	6.09	34.118 D	26.844	125.3	0.741	0.97	14.0	66.5	2.86	38.1	0.01			403	
436	6.06	6.02	34.141	26.871	123.1	0.786	0.85	12.2	70.0	2.93	38.7	0.01			439	202
500 ISL	5.68 D	5.64	34.179 D	26.949	116.3	0.863	0.57	8.1	76.6	3.03	39.9	0.01			503	
515	5.69	5.65	34.207	26.970	114.5	0.880	0.51	7.3	78.1	3.05	40.2	0.01			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 76.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.0 N	124 19.3 W	30/01/07	0703	UTC	4558 m	130 01 kn			1016.8 mb	13.5 C	11.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.68	14.68	33.230	24.677	325.5	0.000	5.88	101.6	2.1	0.30	0.1	0.00	0.18	0.07	0	
1	14.68	14.68	33.230	24.677	325.5	0.003	5.88	101.6	2.1	0.30	0.1	0.00	0.18	0.07	1	220
10 ISL	14.65 D	14.65	33.232 D	24.685	325.0	0.033	5.89	101.7	2.0	0.30	0.0	0.00	0.19	0.07	10	
15	14.65	14.65	33.233	24.686	325.1	0.049	5.89	101.7	1.9	0.30	0.0	0.00	0.19	0.07	15	219
20 ISL	14.65 D	14.65	33.233 D	24.687	325.2	0.065	5.89	101.7	1.9	0.30	0.0	0.00	0.19	0.07	20	
30 ISL	14.65 D	14.65	33.235 D	24.688	325.3	0.098	5.88	101.5	2.0	0.30	0.0	0.00	0.20	0.08	30	
31	14.65	14.65	33.235	24.688	325.4	0.101	5.88	101.5	2.0	0.30	0.0	0.00	0.20	0.08	31	218
45	14.70	14.69	33.254	24.693	325.4	0.146	5.89	101.8	1.9	0.30	0.0	0.00	0.23	0.09	45	217
50 ISL	14.82 D	14.81	33.283 D	24.690	325.8	0.163	5.85	101.4	1.9	0.29	0.0	0.00	0.23	0.10	50	
55	14.93	14.92	33.328	24.701	324.9	0.179	5.81	100.9	1.8	0.28	0.0	0.00	0.22	0.10	55	216
65	15.01	15.00	33.348	24.699	325.4	0.211	5.81	101.1	1.7	0.28	0.0	0.01	0.21	0.09	65	215
75	15.12	15.11	33.387	24.706	325.1	0.244	5.74	100.1	1.7	0.28	0.0	0.01	0.15	0.08	75	214
85	15.10	15.09	33.394	24.716	324.4	0.276	5.75	100.3	1.7	0.28	0.1	0.02	0.14	0.08	85	213
95	13.89	13.88	33.293	24.894	307.5	0.308	5.74	97.6	2.1	0.37	0.8	0.07	0.09	0.07	95	212
100 ISL	13.83 D	13.82	33.471 D	25.044	293.4	0.323	5.69	96.7	2.2	0.36	0.9	0.07	0.09	0.09	100	
109	14.14	14.12	33.640	25.111	287.4	0.349	5.58	95.6	2.3	0.32	1.0	0.06	0.08	0.13	109	211
124	13.94	13.92	33.728	25.221	277.3	0.392	5.50	93.9	2.5	0.34	1.5	0.03	0.06	0.09	125	210
125 ISL	13.75 D	13.73	33.699 D	25.238	275.7	0.394	5.49	93.3	2.6	0.35	1.6	0.03	0.06	0.09	126	
144	12.23	12.21	33.544	25.419	258.6	0.445	5.21	85.7	5.4	0.64	5.9	0.02	0.03	0.04	145	209
150 ISL	11.23 D	11.21	33.421 D	25.509	250.0	0.460	5.06	81.4	6.9	0.76	7.9	0.02	0.02	0.03	151	
169	10.44	10.42	33.662	25.836	219.1	0.505	4.65	73.6	11.9	1.10	13.7	0.01	0.01	0.02	170	208
199	9.77	9.75	33.844	26.092	195.2	0.567	4.59	71.7	16.1	1.25	16.5	0.01	0.00	0.01	200	207
200 ISL	9.74 D	9.72	33.848 D	26.100	194.5	0.569	4.58	71.5	16.3	1.26	16.6	0.01			201	
229	9.10	9.08	33.943	26.279	177.9	0.623	4.24	65.3	22.1	1.46	19.9	0.01			230	206
250 ISL	8.75 D	8.72	33.976 D	26.360	170.4	0.660	4.19	64.0	24.6	1.52	20.9	0.01			251	
269	8.54	8.51	33.980	26.396	167.3	0.692	4.11	62.5	27.0	1.57	21.8	0.01			270	205
300 ISL	7.78 D	7.75	33.986 D	26.514	156.1	0.742	3.52	52.6	35.2	1.84	25.7	0.00			302	
319	7.43	7.40	33.991	26.569	151.1	0.771	3.05	45.2	40.8	2.04	28.5	0.00			321	204
378	6.84	6.80	34.053	26.700	139.2	0.857	1.65	24.1	53.7	2.56	35.1	0.00			380	203
400 ISL	6.59 D	6.55	34.075 D	26.750	134.5	0.887	1.59	23.1	57.8	2.64	36.2	0.00			402	
437	5.92	5.88	34.038	26.807	129.0	0.935	1.50	21.5	64.8	2.73	37.6	0.00			440	202
500 ISL	5.23 D	5.19	34.106 D	26.945	116.1	1.013	0.90	12.7	80.3	2.98	40.8	0.00			503	
511	5.14	5.10	34.112	26.960	114.7	1.025	0.80	11.2	83.0	3.02	41.3	0.00			514	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 50.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.9 N	120 29.5 W	28/01/07	1454	UTC	27 m	090 15 kn	220 02 07	5	1016.1 mb	12.0 C	11.1 C		6/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.44	13.44	33.545	25.178	277.8	0.000	5.89	99.4	2.9	0.51	1.5	0.13	1.55	0.34	0	
2	13.44	13.44	33.545	25.178	277.9	0.006	5.89	99.4	2.9	0.51	1.5	0.13	1.55	0.34	2	205
5	13.44	13.44	33.548	25.181	277.7	0.014	5.89	99.4	2.9	0.51	1.5	0.13	1.43	0.37	5	204
10	13.44	13.44	33.553	25.185	277.5	0.028	5.89	99.4	2.8	0.53	1.5	0.14	1.37	0.56	10	203
15	13.44	13.44	33.553	25.185	277.6	0.042	5.89	99.4	2.7	0.52	1.5	0.14	1.40	0.46	15	202
20	13.44	13.44	33.553	25.185	277.7	0.056	5.90	99.6	2.7	0.53	1.4	0.14	1.74	0.49	20	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 26.9 N	120 31.5 W	28/01/07	1314	UTC	75 m	090 14 kn			1015.9 mb	12.8 C	11.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.62	13.62	33.560	25.153	280.2	0.000	5.90	100.0	2.7	0.43	1.2	0.11	1.59	0.24	0	
1	13.62	13.62	33.560	25.153	280.2	0.003	5.90	100.0	2.7	0.43	1.2	0.11	1.59	0.24	1	209
5	13.63	13.63	33.554	25.147	280.9	0.014	5.90	100.0	2.7	0.44	1.2	0.11	1.63	0.42	5	208
10	13.55	13.55	33.559	25.167	279.1	0.028	5.92	100.1	2.6	0.46	1.4	0.12	1.83	0.42	10	207
20	13.41	13.41	33.567	25.202	276.1	0.056	5.80	97.8	3.6	0.53	2.2	0.17	0.95	0.43	20	206
30	13.34	13.34	33.574	25.222	274.5	0.083	5.61	94.5	4.3	0.61	3.1	0.23	0.77	0.46	30	205
40	13.16	13.15	33.584	25.266	270.6	0.111	5.33	89.4	5.9	0.75	4.4	0.33	0.53	0.38	40	204
50	12.87	12.86	33.582	25.322	265.5	0.137	4.55	75.9	8.9	0.98	9.0	0.34	0.23	0.30	50	203
61	12.82	12.81	33.584	25.334	264.7	0.167	4.77	79.5	8.7	0.95	8.2	0.36	0.26	0.31	61	202
71	12.75	12.74	33.592	25.354	263.0	0.193	4.96	82.5	8.3	0.93	7.6	0.31	0.31	0.33	71	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 19.0 N	120 48.1 W	28/01/07	0917	UTC	777 m	060 01 kn			1015.9 mb	13.0 C	11.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.88	12.88	33.525	25.275	268.6	0.000	6.01	100.2	3.9	0.60	3.5	0.16	1.91	0.41	0	
2	12.88	12.88	33.525	25.275	268.7	0.005	6.01	100.2	3.9	0.60	3.5	0.16	1.91	0.41	2	221
10	12.97	12.97	33.598	25.314	265.2	0.027	6.08	101.6	3.7	0.58	3.2	0.15	2.42	0.63	10	219
10	12.97	12.97	33.603	25.318	264.8	0.027									10	220
20	12.93	12.93	33.602	25.325	264.4	0.053	6.00	100.2	3.7	0.60	3.3	0.15	2.45	0.61	20	218
30	12.90	12.90	33.603	25.332	264.0	0.080	5.98	99.8	3.8	0.60	3.4	0.15	2.44	0.80	30	217
40	12.49	12.48	33.611	25.418	256.0	0.106	5.47	90.5	7.3	0.87	6.7	0.19	1.45	0.72	40	216
50 ISL	11.22 D	11.21	33.708 D	25.731	226.4	0.130	3.76	60.6	15.3	1.42	15.4	0.20	0.63	0.53	50	
51	11.54	11.53	33.672	25.645	234.7	0.132	3.59	58.2	16.1	1.47	16.3	0.20	0.56	0.51	51	215
60	11.00	10.99	33.737	25.794	220.7	0.153	2.97	47.7	20.1	1.71	19.9	0.07	0.15	0.27	60	214
70	10.84	10.83	33.757	25.838	216.7	0.174	2.89	46.2	21.0	1.76	20.7	0.04	0.09	0.18	70	213
75 ISL	10.83 D	10.82	33.759 D	25.841	216.5	0.185	2.83	45.2	21.4	1.79	21.0	0.04	0.08	0.17	75	
85	10.66	10.65	33.794	25.899	211.3	0.207	2.71	43.2	22.3	1.84	21.7	0.04	0.06	0.16	85	212
100	10.44	10.43	33.854	25.984	203.5	0.238	2.52	40.0	24.0	1.92	23.0	0.02	0.04	0.14	101	211
119	9.97	9.96	33.946	26.137	189.3	0.275	2.24	35.2	27.8	2.05	25.0	0.02	0.02	0.10	120	210
125 ISL	9.90 D	9.89	33.965 D	26.163	186.9	0.286	2.17	34.0	28.7	2.08	25.5	0.02	0.02	0.10	126	
140	9.68	9.66	34.015	26.239	180.0	0.314	2.03	31.7	30.5	2.15	26.4	0.02	0.01	0.09	141	209
150 ISL	9.61 D	9.59	34.041 D	26.271	177.1	0.332	1.96	30.6	31.5	2.18	26.8	0.02	0.01	0.09	151	
170	9.43	9.41	34.097	26.345	170.5	0.366	1.85	28.7	33.2	2.23	27.6	0.01	0.01	0.08	171	208
199	9.15	9.13	34.145	26.428	163.1	0.415	1.73	26.7	35.9	2.31	28.8	0.01	0.01	0.07	200	207
200 ISL	9.13 D	9.11	34.147 D	26.433	162.7	0.416	1.72	26.5	36.0	2.31	28.9	0.01			201	
229	8.77	8.75	34.182	26.518	155.1	0.463	1.46	22.4	40.0	2.44	30.3	0.01			230	206
250 ISL	8.59 D	8.56	34.211 D	26.569	150.6	0.495	1.32	20.1	42.3	2.50	31.0	0.01			252	
269	8.51	8.48	34.220	26.589	149.0	0.523	1.22	18.6	44.1	2.55	31.5	0.01			271	205
300 ISL	8.32 D	8.29	34.230 D	26.626	146.0	0.569	1.09	16.5	46.6	2.62	32.3	0.01			302	
318	8.16	8.13	34.240	26.658	143.2	0.595	1.03	15.6	48.0	2.65	32.8	0.01			320	204
378	7.66	7.62	34.245	26.736	136.5	0.679	0.88	13.1	53.9	2.76	34.4	0.01			381	203
400 ISL	7.42 D	7.38	34.255 D	26.779	132.6	0.708	0.80	11.9	56.4	2.81	35.1	0.01			403	
437	7.13	7.09	34.261	26.825	128.7	0.757	0.65	9.6	61.2	2.90	36.3	0.01			440	202
500 ISL	6.46 D	6.41	34.276 D	26.927	119.2	0.835	0.45	6.5	71.8	3.04	38.4	0.01			504	
514	6.31	6.26	34.273	26.945	117.6	0.851	0.41	5.9	74.1	3.07	38.9	0.01			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 9.0 N	121 9.0 W	28/01/07	0513	UTC	2182 m	150 02 kn			1015.1 mb	13.0 C	11.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.17	13.17	33.563	25.246	271.3	0.000	6.20	104.1	1.3	0.46	1.4	0.10	0.93	0.27	0	
2	13.17	13.17	33.563	25.247	271.4	0.005	6.20	104.1	1.3	0.46	1.4	0.10	0.93	0.27	2	220
10	13.21	13.21	33.586	25.257	270.6	0.027	6.26	105.2	0.9	0.43	1.1	0.09	1.53	0.32	10	219
20	13.14	13.14	33.589	25.273	269.3	0.054	6.22	104.3	0.6	0.41	0.7	0.07	1.89	0.52	20	218
30	12.90	12.90	33.588	25.320	265.1	0.081	6.23	104.0	0.7	0.43	0.7	0.07	1.91	0.57	30	217
40	12.88	12.87	33.578	25.317	265.7	0.107	5.80	96.8	5.1	0.64	4.1	0.27	0.45	0.29	40	216
50	12.73	12.72	33.580	25.348	263.0	0.134	5.59	93.0	6.2	0.74	5.4	0.28	0.30	0.26	50	215
60	11.28	11.27	33.615	25.648	234.5	0.159	4.03	65.0	14.9	1.31	15.5	0.09	0.15	0.25	60	214
70	10.28	10.27	33.689	25.882	212.4	0.181	3.26	51.5	20.4	1.65	20.9	0.02	0.06	0.12	70	213
75 ISL	10.09 D	10.08	33.681 D	25.909	210.0	0.192	3.23	50.8	20.9	1.67	21.3	0.02	0.05	0.12	75	
85	9.98	9.97	33.709	25.949	206.4	0.212	3.17	49.7	21.8	1.71	22.1	0.02	0.04	0.12	85	212
100	9.61	9.60	33.808	26.088	193.4	0.242			24.7	1.83	23.7	0.02	0.03	0.09	101	211
119	9.34	9.33	33.908	26.211	182.1	0.278	2.69	41.7	27.8	1.96	25.4	0.01	0.02	0.09	120	210
125 ISL	9.29 D	9.28	33.924 D	26.232	180.3	0.289	2.63	40.7	28.6	1.99	25.7	0.01	0.02	0.08	126	
139	9.15	9.13	33.978	26.297	174.4	0.314	2.51	38.7	30.3	2.04	26.3	0.01	0.01	0.07	140	209
150 ISL	9.12 D	9.10	34.013 D	26.329	171.5	0.333	2.38	36.7	31.8	2.09	27.0	0.01	0.01	0.07	151	
169	8.85	8.83	34.075	26.421	163.1	0.365	2.14	32.8	34.6	2.19	28.2	0.01	0.01	0.07	170	208
199	8.65	8.63	34.142	26.505	155.7	0.412	1.72	26.3	39.1	2.35	30.1	0.01	0.01	0.05	200	207
200 ISL	8.63 D	8.61	34.147 D	26.512	155.0	0.414	1.72	26.2	39.2	2.35	30.1	0.01			201	
228	8.28	8.26	34.138	26.559	150.9	0.457	1.65	25.0	42.1	2.42	31.3	0.01			229	206
250 ISL	7.98 D	7.95	34.151 D	26.614	146.0	0.489	1.49	22.4	46.0	2.51	32.5	0.01			252	
268	7.67	7.64	34.155	26.663	141.5	0.515	1.35	20.2	49.2	2.58	33.5	0.01			270	205
300 ISL	7.41 D	7.38	34.168 D	26.710	137.4	0.560	1.21	18.0	52.6	2.65	34.4	0.01			302	
317	7.29	7.26	34.170	26.729	135.8	0.583	1.14	16.9	54.2	2.69	34.8	0.01			319	204
377	6.79	6.75	34.211	26.831	126.8	0.662	0.78	11.4	62.9	2.89	37.0	0.00			380	203
400 ISL	6.60 D	6.56	34.217 D	26.861	124.1	0.691	0.68	9.9	65.1	2.92	37.5	0.00			403	
437	6.55	6.51	34.257	26.900	121.0	0.736	0.54	7.9	68.4	2.96	38.1	0.00			440	202
500 ISL	6.26 D	6.22	34.307 D	26.978	114.3	0.810	0.35	5.1	76.6	3.11	39.5	0.00			504	
513	6.09	6.04	34.310	27.002	112.0	0.825	0.31	4.5	78.3	3.14	39.8	0.00			517	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.0 N	121 50.5 W	27/01/07	2250 UTC	3623 m	220 08 kn	230 03 07	1	1014.7 mb	16.1 C	13.9 C	12m	7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.04	13.04	33.275	25.049	290.1	0.000	6.16	102.9	3.3	0.40	0.7	0.08	1.03	0.10	0	
1	13.04	13.04	33.275	25.049	290.1	0.003	6.16	102.9	3.3	0.40	0.7	0.08	1.03	0.10	1	220
10	13.02	13.02	33.276	25.054	289.9	0.029	6.17	103.1	3.3	0.40	0.8	0.08	0.98	0.17	10	219
20	12.76	12.76	33.370	25.179	278.3	0.057	6.06	100.7	4.0	0.48	2.0	0.23	1.08	0.32	20	218
30 ISL	12.74 D	12.74	33.369 D	25.182	278.2	0.085	6.00	99.7	4.0	0.50	2.1	0.27	0.86	0.32	30	
31	12.74	12.74	33.370	25.183	278.2	0.088	6.00	99.7	4.0	0.50	2.1	0.27	0.84	0.32	31	217
40	12.73	12.72	33.371	25.186	278.1	0.113	6.00	99.7	3.9	0.51	2.2	0.28	0.81	0.31	40	216
50	12.72	12.71	33.370	25.187	278.3	0.141	5.96	99.0	4.0	0.51	2.3	0.31	0.60	0.26	50	215
61	12.71	12.70	33.369	25.189	278.4	0.171	5.95	98.8	4.0	0.51	2.3	0.31	0.51	0.23	61	214
69	12.68	12.67	33.367	25.193	278.2	0.194	5.91	98.0	4.1	0.52	2.6	0.33	0.36	0.19	69	213
75 ISL	12.62 D	12.61	33.365 D	25.203	277.4	0.210	5.71	94.6	4.8	0.60	3.9	0.26	0.26	0.17	75	
85	11.76	11.75	33.325	25.336	264.9	0.238	5.17	84.1	7.4	0.83	7.9	0.12	0.14	0.13	85	212
99	10.44	10.43	33.498	25.707	229.8	0.272	4.14	65.5	14.8	1.36	16.7	0.02	0.04	0.07	99	211
100 ISL	10.33 D	10.32	33.492 D	25.721	228.4	0.274	4.12	65.0	15.1	1.38	17.0	0.02	0.04	0.07	100	
118	9.68	9.67	33.595	25.911	210.6	0.314	3.90	60.7	18.4	1.54	19.9	0.01	0.02	0.03	119	210
125 ISL	9.42 D	9.41	33.677 D	26.017	200.6	0.328	3.64	56.4	20.4	1.65	21.5	0.01	0.02	0.03	126	
139	9.32	9.30	33.764	26.102	192.9	0.356	3.14	48.6	24.3	1.84	24.2	0.01	0.01	0.04	140	209
150 ISL	9.06 D	9.04	33.846 D	26.208	183.0	0.377	3.19	49.1	25.7	1.83	24.3	0.01	0.01	0.03	151	
169	8.83	8.81	33.896	26.284	176.1	0.411	3.28	50.2	27.3	1.82	24.5	0.01	0.00	0.02	170	208
198	8.57	8.55	33.961	26.375	167.9	0.461	2.97	45.2	31.1	1.94	26.3	0.01	0.00	0.02	199	207
200 ISL	8.58 D	8.56	33.963 D	26.375	167.9	0.464	2.94	44.8	31.4	1.95	26.4	0.01			201	
229	8.36	8.34	34.019	26.453	161.0	0.512	2.52	38.2	35.4	2.10	28.4	0.01			230	206
250 ISL	8.09 D	8.06	34.051 D	26.519	155.0	0.545	2.55	38.4	38.5	2.13	29.3	0.01			251	
268	7.57	7.54	34.013	26.565	150.7	0.572	2.60	38.7	41.6	2.16	30.0	0.01			270	205
300 ISL	6.92 D	6.89	34.003 D	26.648	142.9	0.619	2.28	33.4	48.7	2.33	32.5	0.00			302	
318	6.76	6.73	34.023	26.686	139.5	0.645	2.03	29.6	52.7	2.44	34.0	0.00			320	204
377	6.26	6.23	34.067	26.787	130.5	0.724	1.37	19.8	62.4	2.71	37.2	0.00			379	203
400 ISL	6.19 D	6.15	34.099 D	26.821	127.5	0.754	1.23	17.7	65.6	2.78	37.9	0.00			403	
436	5.86	5.82	34.100	26.864	123.6	0.799	1.06	15.2	70.3	2.86	38.8	0.00			439	202
500 ISL	5.75 D	5.71	34.179 D	26.941	117.2	0.876	0.70	10.0	78.0	3.01	40.4	0.00			503	
515	5.54	5.50	34.167	26.957	115.6	0.894	0.61	8.7	79.8	3.04	40.8	0.00			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.1 N	122 32.1 W	27/01/07	1743 UTC	3995 m	210 13 kn	280 03 08	1	1016.0 mb	14.9 C	13.2 C	15m	5/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.76	12.76	33.393	25.196	276.1	0.000	6.12	101.7	4.3	0.49	2.1	0.22	0.94	0.30	0	
2 A	12.76	12.76	33.393	25.196	276.2	0.006	6.12	101.7	4.3	0.49	2.1	0.22	0.94	0.30	2	220
10 A	12.76	12.76	33.395	25.198	276.2	0.028	6.11	101.6	4.4	0.49	2.1	0.23	0.94	0.28	10	219
20 A	12.74	12.74	33.397	25.203	276.0	0.055	6.08	101.0	4.4	0.49	2.2	0.23	0.94	0.32	20	218
28 A	12.73	12.73	33.394	25.203	276.2	0.077	6.06	100.7	4.5	0.50	2.2	0.25	0.88	0.30	28	217
30 ISL	12.73 D	12.73	33.393 D	25.203	276.3	0.083	6.04	100.3	4.5	0.51	2.3	0.28	0.81	0.30	30	
36 A	12.70	12.70	33.398	25.212	275.5	0.099	5.96	98.9	4.7	0.54	2.6	0.37	0.60	0.28	36	216
47	12.65	12.64	33.403	25.226	274.5	0.130	5.93	98.3	5.0	0.55	2.9	0.45	0.44	0.21	47	215
50 ISL	12.62 D	12.61	33.406 D	25.234	273.8	0.138	5.93	98.3	4.9	0.56	3.0	0.47	0.43	0.22	50	
58 A	12.59	12.58	33.411	25.245	273.0	0.160	5.94	98.4	4.6	0.57	3.2	0.52	0.41	0.26	58	214
70	12.56	12.55	33.414	25.253	272.5	0.192	5.89	97.5	4.6	0.59	3.5	0.60	0.29	0.18	70	213
75 ISL	12.64 D	12.63	33.453 D	25.268	271.3	0.206	5.82	96.5	4.7	0.63	4.0	0.53	0.27	0.17	75	
84	12.64	12.63	33.508	25.311	267.4	0.230	5.69	94.4	5.0	0.70	5.0	0.33	0.22	0.16	84	212
99	10.46	10.45	33.624	25.802	220.8	0.267	3.69	58.5	17.0	1.50	18.9	0.02	0.02	0.08	99	211
100 ISL	10.46 D	10.45	33.627 D	25.804	220.6	0.269	3.61	57.2	17.6	1.53	19.4	0.02	0.02	0.08	100	
119	9.81	9.80	33.837	26.078	194.8	0.309	2.69	42.1	24.7	1.90	24.1	0.01	0.01	0.05	120	210
125 ISL	9.75 D	9.74	33.875 D	26.118	191.1	0.320	2.54	39.7	25.9	1.95	24.8	0.01	0.01	0.05	126	
139	9.64	9.62	33.941	26.188	184.8	0.346	2.34	36.5	27.8	2.03	25.7	0.01	0.00	0.04	140	209
150 ISL	9.53 D	9.51	33.994 D	26.248	179.3	0.367	2.21	34.4	29.3	2.09	26.5	0.01	0.00	0.04	151	
169	9.36	9.34	34.053	26.322	172.7	0.400	2.04	31.6	31.5	2.17	27.5	0.01	0.00	0.04	170	208
199	9.26	9.24	34.110	26.383	167.4	0.451	1.84	28.5	33.5	2.25	28.4	0.01	0.00	0.04	200	207
200 ISL	9.25 D	9.23	34.114 D	26.388	167.0	0.453	1.83	28.3	33.6	2.25	28.4	0.01			201	
228	9.07	9.05	34.156	26.450	161.6	0.499	1.64	25.3	36.2	2.34	29.4	0.01			229	206
250 ISL	8.93 D	8.90	34.185 D	26.496	157.7	0.534	1.49	22.9	38.0	2.39	30.1	0.01			251	
269	8.85	8.82	34.201	26.521	155.6	0.564	1.37	21.0	39.6	2.44	30.6	0.01			271	205
300 ISL	8.61 D	8.58	34.228 D	26.580	150.5	0.611	1.18	18.0	43.0	2.53	31.6	0.00			302	
320	8.42	8.39	34.240	26.619	147.1	0.641	1.06	16.1	45.4	2.59	32.3	0.00			322	204
379	7.67	7.63	34.248	26.737	136.4	0.724	0.79	11.8	53.5	2.77	34.7	0.00			381	203
400 ISL	7.55 D	7.51	34.259 D	26.764	134.2	0.753	0.73	10.9	55.7	2.81	35.3	0.00			403	
440	7.17	7.13	34.256	26.815	129.6	0.806	0.65	9.6	60.1	2.88	36.5	0.00			443	202
500 ISL	6.37 D	6.32	34.237 D	26.908	120.9	0.881	0.59	8.5	70.0	2.98	38.8	0.00			503	
509	6.19	6.14	34.218	26.917	120.1	0.892	0.58	8.4	71.5	3.00	39.2	0.00			513	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 9.0 N	123 13.3 W	27/01/07	0938 UTC	4230 m	220 12 kn			1015.9 mb	13.8 C	12.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.18	13.18	33.254	25.005	294.3	0.000	6.13	102.7	3.2	0.38	0.5	0.05	0.67	0.16	0	
2	13.18	13.18	33.254	25.005	294.3	0.006	6.13	102.7	3.2	0.38	0.5	0.05	0.67	0.16	2	220
10	13.17	13.17	33.259	25.011	293.9	0.029	6.14	102.9	3.2	0.37	0.5	0.05	0.71	0.17	10	219
20	13.05	13.05	33.263	25.039	291.6	0.059	6.11	102.1	3.2	0.40	0.8	0.08	0.78	0.25	20	218
30	13.03	13.03	33.265	25.044	291.3	0.088	6.08	101.6	3.2	0.41	0.9	0.09	0.74	0.24	30	217
40	13.02	13.01	33.277	25.056	290.5	0.117	6.08	101.5	3.3	0.41	1.0	0.09	0.84	0.27	40	216
50	12.97	12.96	33.289	25.075	288.9	0.146	5.99	99.9	3.5	0.46	1.5	0.15	0.47	0.19	50	215
60	12.93	12.92	33.318	25.106	286.3	0.175	5.93	98.9	3.8	0.50	2.0	0.22	0.33	0.17	60	214
70	12.93	12.92	33.325	25.112	286.0	0.203	5.94	99.0	3.8	0.50	2.0	0.19	0.41	0.20	70	213
75 ISL	12.92 D	12.91	33.328 D	25.116	285.7	0.218	5.94	99.0	3.8	0.50	2.0	0.19	0.38	0.19	75	
86	12.91	12.90	33.332	25.122	285.5	0.249	5.94	99.0	3.9	0.51	2.1	0.18	0.33	0.17	86	212
100	10.66	10.65	33.384	25.580	241.9	0.286	4.65	73.9	11.3	1.12	12.8	0.01	0.05	0.05	100	211
119	9.77	9.76	33.655	25.943	207.7	0.329	3.43	53.5	20.7	1.71	21.8	0.01	0.01	0.04	120	210
125 ISL	9.50 D	9.49	33.696 D	26.019	200.5	0.341	3.43	53.2	22.0	1.73	22.3	0.01	0.01	0.04	126	
139	9.10	9.08	33.769	26.141	189.1	0.368	3.42	52.6	24.0	1.76	23.4	0.01	0.00	0.03	140	209
150 ISL	8.91 D	8.89	33.856 D	26.239	179.9	0.388	3.32	50.9	26.2	1.81	24.3	0.01	0.00	0.02	151	
169	8.61	8.59	33.927	26.342	170.5	0.422	3.11	47.4	29.8	1.90	25.7	0.00	0.00	0.02	170	208
199	8.37	8.35	33.986	26.425	163.0	0.472	2.98	45.2	32.9	1.96	26.7	0.00	0.00	0.03	200	207
200 ISL	8.28 D	8.26	33.992 D	26.444	161.3	0.473	2.95	44.6	33.1	1.97	26.8	0.00			201	
229	8.06	8.04	34.071	26.539	152.7	0.519	2.02	30.4	40.9	2.31	30.9	0.00			230	206
250 ISL	7.75 D	7.73	34.089 D	26.599	147.3	0.550	1.71	25.6	44.9	2.44	32.4	0.00			251	
268	7.62	7.59	34.112	26.636	144.0	0.577	1.57	23.4	47.7	2.51	33.2	0.00			270	205
300 ISL	7.38 D	7.35	34.130 D	26.685	139.8	0.622	1.36	20.2	51.9	2.61	34.5	0.00			302	
317	7.14	7.11	34.125	26.715	137.1	0.646	1.27	18.7	54.0	2.66	35.1	0.00			319	204
377	6.52	6.49	34.150	26.818	127.7	0.725	0.94	13.7	63.0	2.84	37.3	0.00			379	203
400 ISL	6.34 D	6.30	34.155 D	26.846	125.3	0.754	0.84	12.2	66.5	2.90	38.1	0.00			403	
437	6.00	5.96	34.171	26.903	120.2	0.799	0.72	10.3	72.6	2.98	39.4	0.00			440	202
500 ISL	5.03 D	4.99	34.146 D	27.000	110.7	0.872	0.59	8.3	84.9	3.08	41.5	0.00			503	
516	5.06	5.02	34.168	27.014	109.6	0.890	0.56	7.9	88.0	3.10	42.0	0.00			520	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 80.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 48.8 N	123 54.5 W	27/01/07	0319 UTC	4343 m	230 10 kn			1016.0 mb	15.0 C	12.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.16	14.16	33.206	24.768	316.8	0.000	5.97	102.0	2.3	0.34	0.1	0.01	0.39	0.11	0	
2	14.16	14.16	33.206	24.768	316.9	0.006	5.97	102.0	2.3	0.34	0.1	0.01	0.39	0.11	2	220
10 ISL	14.15 D	14.15	33.205 D	24.770	316.9	0.032	5.97	102.0	2.2	0.30	0.0	0.01	0.38	0.11	10	
11	14.15	14.15	33.206	24.771	316.9	0.035	5.97	102.0	2.2	0.30	0.0	0.01	0.38	0.11	11	219
20 ISL	14.14 D	14.14	33.209 D	24.776	316.7	0.063	5.96	101.8	2.1	0.32	0.0	0.01	0.42	0.13	20	
21	14.14	14.14	33.212	24.778	316.5	0.067	5.96	101.8	2.1	0.32	0.0	0.01	0.43	0.13	21	218
30	14.00	14.00	33.181	24.783	316.3	0.095	5.96	101.5	2.2	0.31	0.1	0.02	0.50	0.16	30	217
41	13.95	13.94	33.171	24.786	316.3	0.130	5.96	101.4	2.1	0.33	0.1	0.02	0.45	0.16	41	216
50	13.93	13.92	33.166	24.787	316.5	0.158	5.95	101.2	2.1	0.33	0.1	0.02	0.44	0.16	50	215
61	13.93	13.92	33.166	24.787	316.8	0.193	5.94	101.0	2.1	0.33	0.1	0.03	0.41	0.15	61	214
69	13.91	13.90	33.160	24.787	317.0	0.218	5.94	101.0	2.1	0.35	0.2	0.03	0.36	0.14	69	213
75 ISL	13.90 D	13.89	33.158 D	24.787	317.1	0.237	5.88	99.9	2.2	0.39	0.7	0.04	0.26	0.12	75	
85	12.72	12.71	33.102	24.980	298.8	0.268	5.73	95.0	2.8	0.48	2.1	0.06	0.10	0.08	85	212
99	11.59	11.58	33.106	25.197	278.4	0.309	5.53	89.5	4.5	0.65	4.7	0.02	0.07	0.06	99	211
100 ISL	11.56 D	11.55	33.108 D	25.204	277.7	0.311	5.51	89.1	4.7	0.66	5.0	0.02	0.07	0.06	100	
119	10.66	10.65	33.187	25.427	256.9	0.362	5.02	79.7	9.2	0.97	10.4	0.01	0.03	0.03	120	210
125 ISL	10.41 D	10.40	33.248 D	25.517	248.3	0.377	4.83	76.3	11.0	1.09	12.3	0.01	0.03	0.03	126	
139	9.97	9.95	33.398	25.709	230.3	0.411	4.44	69.5	14.9	1.31	16.1	0.01	0.02	0.03	140	209
150 ISL	9.82 D	9.80	33.611 D	25.901	212.3	0.435	4.43	69.2	15.6	1.30	16.7	0.01	0.01	0.03	151	
169	9.61	9.59	33.768	26.058	197.7	0.474	4.41	68.6	17.1	1.29	17.5	0.01	0.00	0.02	170	208
200	8.86	8.84	33.911	26.291	176.0	0.532	2.97	45.5	28.7	1.91	25.7	0.00	0.00	0.03	201	207
229	8.50	8.48	33.999	26.416	164.6	0.582	2.56	38.9	33.8	2.05	28.1	0.01			230	206
250 ISL	8.19 D	8.16	34.042 D	26.497	157.1	0.615	2.47	37.3	36.9	2.11	29.1	0.01			251	
268	7.95	7.92	34.037	26.529	154.3	0.643	2.41	36.2	39.5	2.17	29.9	0.01			270	205
300 ISL	7.65 D	7.62	34.074 D	26.602	147.7	0.692	1.96	29.2	44.7	2.35	32.0	0.00			302	
318	7.46	7.43	34.085	26.638	144.5	0.718	1.72	25.5	47.9	2.45	33.2	0.00			320	204
378	6.12	6.09	34.021	26.768	132.1	0.801	1.77	25.5	60.9	2.60	36.1	0.00			380	203
400 ISL	5.91 D	5.88	34.026 D	26.799	129.3	0.830	1.63	23.3	65.1	2.68	37.1	0.00			402	
437	5.54	5.50	34.047	26.861	123.6	0.876	1.32	18.7	71.8	2.82	38.8	0.00			440	202
500 ISL	5.12 D	5.08	34.109 D	26.960	114.5	0.951	0.85	11.9	83.1	2.99	41.0	0.00			503	
513	5.06	5.02	34.120	26.976	113.1	0.966	0.75	10.5	85.4	3.03	41.5	0.00			516	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 81.7 43.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 24.2 N	119 47.9 W	24/01/07	2144 UTC	19 m	260 08 kn	240 01 09	0	1019.5 mb	15.4 C	14.6 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.63	13.63	33.588	25.173	278.3	0.000	5.76	97.6	5.2	0.63	2.6	0.19	2.14	0.10	0	
2	13.63	13.63	33.588	25.173	278.4	0.006	5.76	97.6	5.2	0.63	2.6	0.19	2.14	0.10	2	204
5A	13.42	13.42	33.585	25.213	274.6	0.014	5.81	98.0	5.2	0.62	2.6	0.20	2.97	0.14	5	203
10	13.21	13.21	33.583	25.254	270.8	0.027	5.67	95.3	5.6	0.65	3.1	0.23	2.23	0.11	10	202
16	13.21	13.21	33.585	25.256	270.8	0.044	5.66	95.1	5.3	0.65	2.8	0.21	1.95	0.18	16	201

CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 81.8 46.9

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 16.6 N	120 1.8 W	24/01/07	2351 UTC	581 m	240 08 kn	270 01 07	0	1019.4 mb	15.0 C	13.5 C	11m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.97	13.97	33.582	25.098	285.4	0.000	6.36	108.5	0.7	0.32	0.1	0.02	1.96	0.32	0	
2 A	13.97	13.97	33.582	25.098	285.5	0.006	6.36	108.5	0.7	0.32	0.1	0.02	1.96	0.32	2	224
10	13.76	13.76	33.581	25.141	281.6	0.028	6.26	106.4	0.9	0.32	0.1	0.03	3.22	0.45	10	222
10	13.76	13.76	33.580	25.140	281.7	0.028									10	223
20	13.71	13.71	33.581	25.152	280.9	0.057	6.15	104.4	1.0	0.35	0.2	0.04	3.67	0.66	20	221
30	13.56	13.56	33.578	25.180	278.5	0.084	5.75	97.3	3.0	0.50	1.8	0.14	1.25	0.56	30	220
40	13.39	13.38	33.576	25.214	275.6	0.112	5.41	91.2	4.9	0.64	3.5	0.27	0.51	0.41	40	219
50	13.02	13.01	33.570	25.283	269.2	0.139	4.71	78.8	8.1	0.92	7.6	0.46	0.34	0.31	50	218
60	12.64	12.63	33.583	25.368	261.3	0.166	4.24	70.4	10.7	1.12	10.8	0.33	0.28	0.26	60	217
70	12.13	12.12	33.605	25.483	250.6	0.192	3.54	58.1	14.0	1.39	15.0	0.04	0.14	0.22	70	216
75 ISL	12.02 D	12.01	33.619 D	25.515	247.7	0.204	3.58	58.7	14.4	1.40	15.2	0.07	0.15	0.26	75	
85	11.78	11.77	33.639	25.576	242.1	0.228	3.67	59.8	15.0	1.42	15.5	0.13	0.20	0.32	85	215
100	10.95	10.94	33.730	25.798	221.2	0.263	2.97	47.6	20.1	1.71	20.1	0.03	0.10	0.18	101	214
120	10.54	10.53	33.791	25.918	210.2	0.306	2.74	43.5	22.4	1.82	21.9	0.02	0.04	0.10	121	213
125 ISL	10.42 D	10.41	33.821 D	25.963	206.1	0.317	2.66	42.2	23.1	1.85	22.4	0.02	0.03	0.09	126	
139	10.18	10.16	33.868	26.041	198.9	0.345	2.46	38.8	25.2	1.94	23.8	0.01	0.02	0.08	140	212
150 ISL	10.02 D	10.00	33.940 D	26.124	191.2	0.367	2.40	37.7	26.7	2.01	24.7	0.01	0.01	0.07	151	
169	9.90	9.88	34.006	26.196	184.8	0.402	2.31	36.2	29.2	2.11	25.9	0.01	0.01	0.06	170	211
199	9.51	9.49	34.063	26.306	174.9	0.456	1.85	28.8	32.4	2.21	27.4	0.01	0.01	0.08	200	210
200 ISL	9.50 D	9.48	34.062 D	26.307	174.8	0.458	1.84	28.6	32.5	2.21	27.4	0.01			201	
228	9.22	9.19	34.110	26.390	167.4	0.506	1.55	24.0	36.2	2.34	28.8	0.00			229	209
250 ISL	9.08 D	9.05	34.137 D	26.434	163.6	0.542	1.29	19.9	39.9	2.45	29.9	0.00			251	
268	8.87	8.84	34.173	26.496	158.0	0.571	1.10	16.9	43.0	2.54	30.7	0.00			270	208
300 ISL	8.60 D	8.57	34.200 D	26.560	152.4	0.621	0.87	13.3	47.8	2.66	31.8	0.00			302	
318	8.42	8.39	34.212	26.597	149.1	0.648	0.78	11.8	50.3	2.72	32.3	0.00			320	207
396	7.65	7.61	34.232	26.728	137.6	0.760	0.55	8.2	61.3	2.92	33.5	0.00			399	206
400 ISL	7.63 D	7.59	34.233 D	26.732	137.3	0.765	0.54	8.1	61.8	2.93	33.4	0.00			403	
476	6.91	6.86	34.242	26.840	127.6	0.866	0.31	4.5	79.9	3.21	31.3	0.00			479	205
500 ISL	6.73 D	6.68	34.246 D	26.868	125.1	0.896	0.14	2.0	90.8	3.40	28.2	0.00			503	
512	6.64	6.59	34.244	26.879	124.2	0.911	0.07	1.0	97.0	3.54	25.9	0.00			516	204
536	6.55	6.50	34.240	26.888	123.6	0.941	0.02	0.3	110.5	3.96	18.4	0.00			540	203
565	6.51	6.46	34.238	26.892	123.6	0.977	0.01	0.1	117.4	4.18	13.3	0.00			569	202
569	6.51	6.46	34.238	26.892	123.7	0.982	0.01	0.1	117.6	4.24	13.1	0.01			573	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 15.8 N	119 19.6 W	24/01/07	1431 UTC	17 m	040 11 kn			1020.8 mb	8.2 C	5.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.10	13.10	33.599	25.288	267.3	0.000	6.04	101.3	3.7	0.46	0.8	0.09	2.78	0.45	0	
2	13.10	13.10	33.599	25.288	267.4	0.005	6.04	101.3	3.7	0.46	0.8	0.09	2.78	0.45	2	205
6	13.10	13.10	33.600	25.289	267.4	0.016	6.02	100.9	3.7	0.45	0.8	0.09	2.85	0.26	6	204
10 ISL	13.10 D	13.10	33.597 D	25.287	267.7	0.027	6.04	101.3	3.7	0.47	0.8	0.10	2.93	0.19	10	
11	13.10	13.10	33.599	25.289	267.6	0.029	6.04	101.3	3.7	0.47	0.8	0.10	2.95	0.17	11	202
11	13.10	13.10	33.599	25.289	267.6	0.029									11	203
15	13.10	13.10	33.600	25.290	267.6	0.040	6.02	100.9	3.6	0.46	0.8	0.09	3.01	0.40	15	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.4 N	119 24.6 W	24/01/07	1540	UTC	32 m	010	01 kn	360 0	1	1021.5 mb	13.0 C	11.3 C	20m	2/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.93	13.93	33.583	25.107	284.5	0.000	5.80	98.9	2.1	0.43	0.7	0.06	2.31	0.34	0	
2	13.93	13.93	33.583	25.107	284.6	0.006	5.80	98.9	2.1	0.43	0.7	0.06	2.31	0.34	2	206
6	13.93	13.93	33.585	25.109	284.6	0.017	5.78	98.6	2.1	0.43	0.7	0.06	2.61	0.58	6	205
10 ISL	13.92 D	13.92	33.581 D	25.108	284.8	0.028	5.76	98.2	2.1	0.44	0.9	0.07	1.88	0.71	10	
11	13.92	13.92	33.583	25.110	284.6	0.031	5.76	98.2	2.1	0.44	0.9	0.07	1.66	0.73	11	203
11	13.91	13.91	33.583	25.112	284.5	0.031									11	204
20 ISL	13.82 D	13.82	33.583 D	25.131	282.9	0.057	5.80	98.7	2.4	0.45	1.0	0.08	1.67	0.56	20	
21 A	13.82	13.82	33.585	25.132	282.8	0.060	5.80	98.7	2.4	0.45	1.0	0.08	1.67	0.52	21	202
29	13.71	13.71	33.588	25.157	280.6	0.082	5.88	99.8	2.6	0.46	1.0	0.09	1.42	0.28	29	201

CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 10.8 N	119 30.7 W	24/01/07	1750	UTC	121 m	280	08 kn	230 01 08	0	1021.5 mb	14.9 C	13.3 C	24m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.14	14.14	33.579	25.061	289.0	0.000	5.76	98.6	2.3	0.43	0.7	0.06	0.74	0.27	0	
1 A	14.14	14.14	33.579	25.061	289.0	0.003	5.76	98.6	2.3	0.43	0.7	0.06	0.74	0.27	1	215
8	14.13	14.13	33.580	25.064	288.9	0.023	5.74	98.3	2.4	0.43	0.7	0.06	0.78	0.28	8	214
10	14.13	14.13	33.579	25.063	289.1	0.029	5.75	98.5	2.3	0.42	0.7	0.06	0.76	0.27	10	213
16 A	14.12	14.12	33.579	25.065	289.0	0.046	5.76	98.6	2.4	0.42	0.7	0.06	0.77	0.23	16	211
20 ISL	14.12 D	14.12	33.577 D	25.064	289.3	0.058	5.78	98.9	2.3	0.43	0.7	0.06	0.81	0.29	20	
24	14.10	14.10	33.582	25.072	288.6	0.069			2.2	0.43	0.7	0.06	0.85	0.34	24	210
30 ISL	14.00 D	14.00	33.581 D	25.092	286.9	0.087	5.84	99.7	2.2	0.42	0.8	0.06	1.35	0.23	30	
33 A	13.97	13.97	33.584	25.101	286.1	0.095	5.86	100.0	2.2	0.42	0.8	0.07	1.53	0.19	33	209
41	13.76	13.75	33.584	25.144	282.2	0.118	5.68	96.5	2.9	0.50	1.6	0.10	0.83	0.41	41	208
46 A	13.70	13.69	33.585	25.158	281.1	0.132	5.70	96.7	3.0	0.50	1.6	0.10	0.80	0.35	46	207
50 ISL	13.51 D	13.50	33.585 D	25.197	277.5	0.143	5.60	94.7	3.5	0.54	2.1	0.11	0.68	0.32	50	
57 A	13.40	13.39	33.588	25.221	275.3	0.163	5.30	89.4	4.8	0.67	3.7	0.14	0.46	0.30	57	206
68	13.00	12.99	33.586	25.300	268.1	0.192	4.74	79.3	7.6	0.90	7.1	0.18	0.40	0.29	68	205
75 ISL	12.78 D	12.77	33.581 D	25.340	264.5	0.211	4.51	75.1	8.7	0.99	8.5	0.20	0.36	0.27	75	
80	12.66	12.65	33.591	25.371	261.6	0.224	4.30	71.4	9.9	1.08	9.8	0.21	0.32	0.26	80	204
94 A	11.50	11.49	33.711	25.684	232.1	0.259	3.05	49.5	18.1	1.65	17.8	0.12	0.13	0.27	94	203
100 ISL	11.12 D	11.11	33.752 D	25.785	222.5	0.272	2.81	45.2	20.0	1.76	19.7	0.09	0.08	0.23	101	
108	10.88	10.87	33.796	25.862	215.3	0.290	2.65	42.4	21.6	1.84	21.2	0.05	0.05	0.17	109	202
121	10.64	10.63	33.848	25.945	207.7	0.317	2.55	40.6	23.3	1.90	22.4	0.04	0.05	0.14	122	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 51.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 52.8 N	120 7.9 W	25/01/07	0543	UTC	90 m	300	13 kn			1020.9 mb	13.1 C	12.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.45	13.45	33.595	25.215	274.3	0.000	5.80	97.9	2.8	0.54	2.4	0.09	3.77	0.69	0	
2	13.45	13.45	33.595	25.215	274.4	0.005	5.80	97.9	2.8	0.54	2.4	0.09	3.77	0.69	2	211
10	13.44	13.44	33.593	25.216	274.5	0.027	5.79	97.7	2.8	0.55	2.4	0.09	3.99	0.78	10	209
10	13.44	13.44	33.594	25.216	274.4	0.027									10	210
20	13.39	13.39	33.596	25.228	273.6	0.055	5.76	97.1	2.9	0.55	2.5	0.10	3.69	0.71	20	208
30	12.87	12.87	33.623	25.353	262.0	0.082	5.10	85.1	6.7	0.83	6.2	0.13	2.35	0.80	30	207
40	12.18	12.17	33.674	25.527	245.7	0.107	4.18	68.8	12.2	1.22	11.6	0.14	1.10	0.72	40	206
50	11.14	11.13	33.791	25.811	218.9	0.130	2.93	47.2	20.5	1.70	19.4	0.10	0.26	0.36	50	205
60	10.98	10.97	33.814	25.857	214.7	0.152	2.74	44.0	21.6	1.78	20.6	0.07	0.15	0.26	60	204
70	10.84	10.83	33.841	25.903	210.5	0.173	2.65	42.4	22.7	1.84	21.3	0.07	0.15	0.27	70	203
75 ISL	10.84 D	10.83	33.841 D	25.904	210.6	0.184	2.62	41.9	23.4	1.86	21.6	0.08	0.17	0.31	75	
80	10.59	10.58	33.881	25.979	203.5	0.194	2.54	40.4	24.4	1.89	22.2	0.09	0.18	0.34	80	202
87	10.27	10.26	33.945	26.084	193.7	0.208	2.28	36.0	27.1	1.99	24.0	0.08	0.11	0.35	87	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 44.8 N	120 24.5 W	25/01/07	0907	UTC	978 m	330 18 kn			1020.8 mb	12.8 C	11.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.90	13.90	33.588	25.117	283.6	0.000	6.27	106.9	0.0	0.29	0.0	0.01	3.27	0.70	0	
2	13.90	13.90	33.588	25.117	283.6	0.006	6.27	106.9	0.0	0.29	0.0	0.01	3.27	0.70	2	221
10 ISL	13.89 D	13.89	33.585 D	25.118	283.9	0.028	6.28	107.0	0.0	0.29	0.0	0.01	3.14	0.68	10	
10	13.90	13.90	33.588	25.118	283.9	0.028									10	220
11	13.90	13.90	33.588	25.118	283.9	0.031	6.28	107.0	0.0	0.29	0.0	0.01	3.12	0.68	11	219
20 ISL	13.78 D	13.78	33.584 D	25.140	282.0	0.057	6.23	105.9	0.2	0.31	0.0	0.01	4.49	1.15	20	
21	13.77	13.77	33.587	25.144	281.7	0.059	6.22	105.7	0.2	0.31	0.0	0.01	4.65	1.20	21	218
30	13.68	13.68	33.585	25.161	280.3	0.085	6.04	102.5	0.9	0.40	0.7	0.04	4.87	1.21	30	217
40	12.53	12.52	33.588	25.393	258.4	0.112	4.38	72.5	9.7	1.06	10.1	0.14	0.64	0.47	40	216
50	11.46	11.45	33.660	25.651	234.1	0.136	3.50	56.7	16.2	1.47	16.7	0.16	0.40	0.43	50	215
60	11.18	11.17	33.701	25.734	226.4	0.159	3.24	52.2	18.3	1.59	18.4	0.11	0.28	0.41	60	214
70	10.65	10.64	33.818	25.919	209.0	0.181	2.72	43.3	22.3	1.82	21.5	0.05	0.15	0.29	70	213
75 ISL	10.58 D	10.57	33.850 D	25.956	205.6	0.192	2.54	40.4	23.8	1.90	22.5	0.03	0.11	0.25	75	
85	10.35	10.34	33.927	26.057	196.3	0.212	2.31	36.6	25.8	2.00	23.7	0.02	0.07	0.19	85	212
100	10.18	10.17	33.944	26.099	192.5	0.241	2.28	36.0	26.5	2.01	24.2	0.01	0.04	0.16	101	211
120	9.90	9.89	34.015	26.202	183.1	0.278	2.12	33.3	28.8	2.09	25.5	0.01	0.03	0.12	121	210
125 ISL	9.83 D	9.82	34.031 D	26.227	180.9	0.287	2.06	32.3	29.7	2.12	25.9	0.01	0.03	0.11	126	
140	9.51	9.49	34.109	26.341	170.3	0.314	1.89	29.4	32.6	2.21	27.2	0.01	0.02	0.10	141	209
150 ISL	9.36 D	9.34	34.139 D	26.389	165.9	0.331	1.81	28.1	33.8	2.25	27.7	0.01	0.02	0.10	151	
169	9.22	9.20	34.166	26.433	162.1	0.362	1.69	26.1	35.6	2.30	28.5	0.01	0.02	0.09	170	208
200	8.98	8.96	34.198	26.497	156.6	0.411	1.53	23.5	38.0	2.38	29.5	0.00	0.01	0.07	201	207
228	8.85	8.83	34.211	26.528	154.1	0.455	1.41	21.6	39.8	2.43	29.9	0.00			229	206
250 ISL	8.72 D	8.69	34.225 D	26.560	151.5	0.488	1.30	19.9	41.8	2.49	30.5	0.00			252	
269	8.54	8.51	34.234	26.595	148.5	0.517	1.20	18.3	43.7	2.54	31.1	0.00			271	205
300 ISL	8.30 D	8.27	34.242 D	26.639	144.8	0.562	1.08	16.4	46.1	2.60	31.9	0.00			302	
318	8.22	8.19	34.251	26.658	143.3	0.588	1.02	15.4	47.5	2.63	32.3	0.00			320	204
378	7.77	7.73	34.269	26.739	136.3	0.672	0.79	11.8	53.2	2.76	34.0	0.00			380	203
400 ISL	7.54 D	7.50	34.268 D	26.772	133.4	0.702	0.72	10.7	56.4	2.81	34.9	0.00			403	
438	7.01	6.97	34.264	26.844	126.8	0.751	0.62	9.1	62.1	2.90	36.4	0.00			441	202
500 ISL	6.56 D	6.51	34.280 D	26.917	120.3	0.828	0.48	7.0	68.6	3.00	37.8	0.00			503	
516	6.49	6.44	34.287	26.932	119.0	0.847	0.44	6.4	70.3	3.03	38.1	0.00			520	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.8 N	120 44.8 W	25/01/07	1319	UTC	1250 m	330 12 kn			1020.1 mb	12.0 C	10.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.92	12.92	33.582	25.311	265.2	0.000	5.93	99.0	4.3	0.60	3.6	0.17	1.10	0.32	0	
2	12.92	12.92	33.582	25.311	265.2	0.005	5.93	99.0	4.3	0.60	3.6	0.17	1.10	0.32	2	221
10	12.93	12.93	33.582	25.309	265.6	0.027	5.93	99.0	4.2	0.59	3.6	0.18	1.09	0.32	10	220
15	12.92	12.92	33.582	25.311	265.6	0.040	5.93	99.0	4.2	0.59	3.6	0.17	1.07	0.35	15	219
20 ISL	12.93 D	12.93	33.581 D	25.309	265.9	0.053	5.93	99.0	4.2	0.59	3.6	0.17	1.05	0.35	20	
30	12.92	12.92	33.583	25.313	265.9	0.080	5.92	98.9	4.2	0.60	3.6	0.18	1.00	0.36	30	218
45	12.92	12.91	33.581	25.311	266.4	0.120	5.92	98.8	4.2	0.60	3.7	0.18	0.96	0.37	45	217
50 ISL	12.93 D	12.92	33.580 D	25.309	266.7	0.133	5.91	98.7	4.2	0.60	3.7	0.18	0.93	0.34	50	
55	12.92	12.91	33.581	25.312	266.6	0.146	5.90	98.5	4.2	0.61	3.7	0.18	0.90	0.32	55	216
64	12.85	12.84	33.580	25.325	265.6	0.170	5.83	97.2	4.5	0.63	4.0	0.19	0.81	0.35	64	215
75	11.61	11.60	33.547	25.536	245.7	0.198	4.41	71.6	11.7	1.15	12.8	0.14	0.16	0.22	75	214
85	11.15	11.14	33.555	25.626	237.3	0.222	3.98	64.0	14.2	1.32	15.7	0.04	0.08	0.15	85	213
95	10.31	10.30	33.675	25.867	214.4	0.245	3.27	51.7	19.3	1.61	20.2	0.02	0.04	0.12	95	212
100 ISL	10.05 D	10.04	33.704 D	25.934	208.2	0.256	3.13	49.2	20.7	1.68	21.3	0.01	0.03	0.11	101	
109	9.85	9.84	33.750	26.004	201.7	0.274	3.02	47.2	22.3	1.75	22.3	0.01	0.02	0.10	110	211
124	9.53	9.52	33.848	26.133	189.6	0.303	2.78	43.2	25.2	1.86	23.9	0.01	0.01	0.08	125	210
125 ISL	9.52 D	9.51	33.855 D	26.140	189.0	0.305	2.75	42.7	25.4	1.87	24.0	0.01	0.01	0.08	126	
144	9.53	9.51	34.015	26.264	177.7	0.340	2.29	35.6	29.0	2.03	25.4	0.01	0.01	0.10	145	209
150 ISL	9.52 D	9.50	34.021 D	26.271	177.2	0.351	2.31	35.9	29.9	2.03	25.9	0.01	0.01	0.09	151	
170	8.63	8.61	34.019	26.411	164.0	0.385	2.46	37.5	32.8	2.05	27.3	0.01	0.01	0.06	171	208
198	8.41	8.39	34.080	26.493	156.6	0.430	2.15	32.6	36.6	2.17	28.6	0.01	0.01	0.06	199	207
200 ISL	8.40 D	8.38	34.081 D	26.495	156.5	0.433	2.10	31.9	36.9	2.19	28.7	0.01			201	
228	8.39	8.37	34.195	26.587	148.4	0.476	1.43	21.7	41.7	2.41	30.3	0.01			229	206
250 ISL	8.10 D	8.07	34.182 D	26.621	145.4	0.508	1.47	22.2	44.3	2.44	31.3	0.01			252	
269	7.66	7.63	34.138	26.651	142.7	0.535	1.51	22.5	46.3	2.46	32.0	0.01			271	205
300 ISL	7.41 D	7.38	34.177 D	26.718	136.7	0.579	1.28	19.0	49.6	2.55	33.0	0.00			302	
319	7.42	7.39	34.191	26.727	136.1	0.605	1.08	16.0	51.7	2.62	33.6	0.00			321	204
378	7.08	7.04	34.275	26.842	126.0	0.682	0.59	8.7	60.2	2.84	35.5	0.00			380	203
400 ISL	6.86 D	6.82	34.274 D	26.871	123.4	0.709	0.52	7.6	62.8	2.89	36.1	0.00			403	
435	6.64	6.60	34.280	26.906	120.5	0.752	0.46	6.7	66.5	2.94	36.9	0.00			438	202
500 ISL	6.32 D	6.27	34.306 D	26.969	115.1	0.829	0.34	4.9	72.3	3.01	38.0	0.00			503	
508	6.26	6.21	34.308	26.979	114.3	0.838	0.32	4.6	73.0	3.02	38.1	0.00			512	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 15.2 N	121 25.6 W	25/01/07	1945	UTC	3784 m	330 08 kn	330 01 07	0	1021.1 mb	14.0 C	12.9 C	17m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.76	12.76	33.433	25.227	273.2	0.000	6.08	101.1	5.1	0.55	2.9	0.28	0.84	0.09	0	
2 A	12.76	12.76	33.433	25.227	273.2	0.005	6.08	101.1	5.1	0.55	2.9	0.28	0.84	0.09	2	222
10 A	12.66	12.66	33.434	25.247	271.5	0.027	6.08	100.9	5.0	0.55	2.9	0.28	0.90	0.13	10	220
10	12.67	12.67	33.433	25.245	271.7	0.027									10	221
20 ISL	12.63 D	12.63	33.429 D	25.250	271.5	0.054	6.07	100.6	5.0	0.54	2.9	0.29	0.88	0.23	20	
23 A	12.63	12.63	33.430	25.250	271.5	0.063	6.07	100.6	5.0	0.54	2.9	0.29	0.88	0.26	23	219
30 ISL	12.63 D	12.63	33.429 D	25.250	271.8	0.082	6.06	100.5	4.9	0.55	2.9	0.30	0.84	0.31	30	
32 A	12.63	12.63	33.431	25.251	271.7	0.087	6.05	100.3	4.9	0.55	2.9	0.30	0.83	0.32	32	218
40 A	12.65	12.64	33.450	25.263	270.8	0.109	5.98	99.2	4.9	0.58	3.2	0.33	0.81	0.37	40	217
48	12.66	12.65	33.466	25.273	270.0	0.130	5.98	99.2	4.8	0.58	3.2	0.30	0.96	0.28	48	216
50 ISL	12.67 D	12.66	33.469 D	25.274	270.1	0.136	5.96	98.9	4.9	0.59	3.3	0.30	0.89	0.25	50	
57	12.68	12.67	33.511	25.304	267.3	0.155	5.86	97.3	5.2	0.63	4.0	0.29	0.56	0.18	57	215
66 A	12.58	12.57	33.503	25.318	266.3	0.179	5.71	94.6	5.4	0.67	4.6	0.28	0.37	0.21	66	214
75	12.05	12.04	33.481	25.402	258.4	0.202	5.41	88.6	6.8	0.79	6.7	0.23	0.25	0.18	75	213
85	10.45	10.44	33.663	25.833	217.4	0.226	3.38	53.6	19.3	1.58	19.8	0.02	0.05	0.13	85	212
100	9.83	9.82	33.791	26.039	198.2	0.257	3.28	51.3	24.0	1.80	23.1	0.02	0.03	0.08	101	211
120	9.61	9.60	33.853	26.124	190.5	0.296	2.81	43.8	25.6	1.86	24.1	0.01	0.02	0.08	121	210
125 ISL	9.47 D	9.46	33.892 D	26.177	185.4	0.305	2.74	42.5	26.3	1.89	24.5	0.01	0.02	0.08	126	
139	9.35	9.33	33.941	26.236	180.2	0.331	2.62	40.6	28.4	1.96	25.5	0.01	0.01	0.08	140	209
150 ISL	9.17 D	9.15	33.957 D	26.277	176.4	0.351	2.56	39.5	29.6	2.00	26.1	0.01	0.01	0.08	151	
169	8.95	8.93	34.014	26.357	169.2	0.383	2.45	37.6	31.8	2.06	27.1	0.01	0.01	0.07	170	208
199	8.63	8.61	34.087	26.465	159.4	0.433	2.07	31.6	36.7	2.21	29.1	0.01	0.01	0.06	200	207
200 ISL	8.59 D	8.57	34.095 D	26.477	158.3	0.434	2.06	31.4	36.9	2.22	29.2	0.01			201	
229	8.41	8.39	34.147	26.546	152.2	0.479	1.70	25.8	41.0	2.36	30.6	0.01			230	206
250 ISL	8.15 D	8.12	34.155 D	26.592	148.2	0.511	1.52	22.9	43.8	2.45	31.5	0.01			251	
268	8.01	7.98	34.177	26.630	144.8	0.537	1.39	20.9	46.1	2.52	32.3	0.01			270	205
300 ISL	7.76 D	7.73	34.208 D	26.692	139.4	0.583	1.12	16.8	50.7	2.64	33.7	0.01			302	
318	7.55	7.52	34.220	26.732	135.8	0.607	0.98	14.6	53.3	2.70	34.4	0.01			320	204
379	7.08	7.04	34.253	26.824	127.7	0.688	0.67	9.9	60.7	2.87	36.2	0.01			381	203
400 ISL	6.87 D	6.83	34.250 D	26.851	125.3	0.714	0.60	8.8	63.7	2.92	36.9	0.01			403	
440	6.47	6.43	34.250	26.905	120.5	0.764	0.51	7.4	69.6	2.99	38.3	0.01			443	202
500 ISL	5.86 D	5.82	34.255 D	26.987	112.9	0.834	0.39	5.6	77.2	3.09	39.7	0.00			503	
515	5.91	5.87	34.279	27.000	111.9	0.850	0.36	5.2	79.1	3.11	40.1	0.00			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.8 N	122 7.6 W	26/01/07	0151	UTC	4178 m	330 08 kn	330 01 07	1	1019.0 mb	11.9 C	10.0 C		1/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.90	12.90	33.475	25.232	272.7	0.000	6.02	100.4	4.6	0.56	3.1	0.27	0.55	0.05	0	
2	12.90	12.90	33.475	25.232	272.8	0.005	6.02	100.4	4.6	0.56	3.1	0.27	0.55	0.05	2	221
10	12.85	12.85	33.476	25.243	271.9	0.027	6.03	100.5	4.5	0.56	3.1	0.27	0.61	0.06	10	219
10	12.88	12.88	33.479	25.239	272.3	0.027									10	220
20	12.73	12.73	33.468	25.260	270.5	0.054	6.03	100.2	4.5	0.56	3.0	0.27	1.06	0.23	20	218
30	12.89	12.89	33.526	25.274	269.5	0.081	5.91	98.6	4.6	0.59	3.7	0.28	0.87	0.19	30	217
40	12.89	12.88	33.531	25.278	269.4	0.108	5.91	98.6	4.7	0.60	3.8	0.28	0.63	0.17	40	216
50	12.90	12.89	33.536	25.281	269.4	0.135	5.89	98.3	4.7	0.61	3.9	0.29	0.53	0.12	50	215
60	12.89	12.88	33.541	25.287	269.1	0.162	5.83	97.3	4.7	0.62	4.0	0.32	0.48	0.13	60	214
70	12.86	12.85	33.560	25.307	267.4	0.189	5.77	96.2	4.9	0.65	4.5	0.33	0.32	0.02	70	213
75 ISL	12.80 D	12.79	33.558 D	25.318	266.5	0.202	5.42	90.3	6.5	0.77	6.6	0.26	0.24	0.05	75	
85	11.56	11.55	33.463	25.480	251.2	0.228	4.62	74.9	10.7	1.07	11.9	0.10	0.11	0.13	85	212
99	10.40	10.39	33.544	25.749	225.7	0.262	4.14	65.5	16.0	1.41	17.8	0.02	0.04	0.09	99	211
100 ISL	10.40 D	10.39	33.595 D	25.789	222.0	0.264	4.09	64.7	16.3	1.43	18.1	0.02	0.04	0.09	100	
119	9.88	9.87	33.729	25.982	203.9	0.304	3.19	49.9	21.8	1.71	22.2	0.02	0.03	0.09	120	210
125 ISL	9.60 D	9.59	33.776 D	26.066	196.1	0.316	3.14	48.9	23.0	1.75	22.9	0.02	0.02	0.09	126	
139	9.35	9.33	33.848	26.163	187.1	0.343	3.03	46.9	25.3	1.82	24.0	0.01	0.01	0.09	140	209
150 ISL	9.27 D	9.25	33.931 D	26.241	179.9	0.363	2.87	44.4	27.2	1.89	24.9	0.01	0.00	0.08	151	
169	9.07	9.05	33.989	26.319	172.9	0.397	2.60	40.0	30.2	2.00	26.3	0.01	0.00	0.06	170	208
200	8.80	8.78	34.048	26.408	164.9	0.449	2.39	36.6	33.6	2.09	27.5	0.01	0.00	0.05	201	207
228	8.41	8.39	34.090	26.501	156.4	0.494	2.15	32.6	38.1	2.21	29.1	0.01			229	206
250 ISL	7.92 D	7.89	34.062 D	26.553	151.7	0.528	2.01	30.2	41.1	2.28	30.0	0.01			251	
268	7.91	7.88	34.108	26.591	148.4	0.555	1.91	28.7	43.6	2.34	30.8	0.01			270	205
300 ISL	7.53 D	7.50	34.113 D	26.650	143.2	0.602	1.67	24.8	49.4	2.48	33.1	0.00			302	
319	7.12	7.09	34.104	26.701	138.4	0.629	1.52	22.4	52.9	2.56	34.5	0.00			321	204
378	6.65	6.62	34.143	26.796	130.0	0.708	1.08	15.7	61.2	2.75	36.7	0.00			380	203
400 ISL	6.50 D	6.46	34.163 D	26.832	126.8	0.736	0.98	14.2	64.9	2.81	37.6	0.00			403	
438	6.02	5.98	34.150	26.883	122.0	0.783	0.82	11.8	70.8	2.91	39.0	0.00			441	202
500 ISL	6.05 D	6.01	34.270 D	26.975	114.3	0.856	0.46	6.6	75.9	3.03	39.7	0.00			503	
514	6.04	5.99	34.276	26.981	113.9	0.872	0.38	5.5	77.0	3.06	39.9	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 34.7 N	122 48.7 W	26/01/07	0740 UTC	4261 m	360			1019.2 mb	13.4 C	11.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.77	13.77	33.251	24.884	305.8	0.000	6.04	102.5	2.3	0.32	0.0	0.01	0.56	0.11	0	
2	13.77	13.77	33.251	24.884	305.9	0.006	6.04	102.4	2.3	0.32	0.0	0.01	0.56	0.11	2	221
10 CSL	13.72	13.72	33.240	24.886	305.9	0.031									10	200
10	13.76	13.76	33.247	24.883	306.2	0.031									10	220
11	13.74	13.74	33.244	24.885	306.0	0.034	6.04	102.4	2.3	0.32	0.0	0.01	0.59	0.09	11	219
20	13.64	13.64	33.233	24.897	305.1	0.061	6.06	102.5	2.3	0.32	0.0	0.01	0.78	0.16	20	218
30	13.73	13.73	33.282	24.917	303.5	0.092	6.08	103.1	2.4	0.32	0.1	0.02	0.92	0.09	30	217
41	13.36	13.35	33.265	24.979	297.9	0.125	6.10	102.6	2.8	0.36	0.5	0.04	1.02	0.16	41	216
50	13.14	13.13	33.263	25.022	294.1	0.151	6.11	102.3	3.0	0.40	0.8	0.06	1.11	0.19	50	215
60	13.05	13.04	33.269	25.044	292.2	0.181	6.03	100.8	3.3	0.43	1.3	0.11	0.96	0.14	60	214
70	13.03	13.02	33.292	25.066	290.3	0.210	6.00	100.2	3.4	0.45	1.4	0.14	0.74	0.22	70	213
75 ISL	13.01 D	13.00	33.309 D	25.084	288.8	0.224	5.97	99.7	3.4	0.45	1.5	0.14	0.63	0.20	75	
85	12.99	12.98	33.319	25.096	287.9	0.253	5.92	98.8	3.5	0.45	1.6	0.14	0.40	0.16	85	212
100	12.57	12.56	33.475 D	25.299	269.0	0.295	5.41	89.6	4.1	0.51	3.7	0.04	0.08	0.06	100	211
120	10.41	10.40	33.416	25.648	235.8	0.345	4.51	71.3	12.9	1.21	14.4	0.01	0.03	0.03	121	210
125 ISL	10.28 D	10.27	33.474 D	25.716	229.4	0.357	4.23	66.7	15.3	1.36	16.7	0.01	0.02	0.03	126	
139	9.56	9.54	33.672	25.991	203.4	0.387	3.59	55.8	21.0	1.66	21.6	0.01	0.01	0.02	140	209
150 ISL	9.43 D	9.41	33.767 D	26.087	194.6	0.409	3.69	57.2	21.8	1.63	21.5	0.01	0.00	0.02	151	
169	9.09	9.07	33.868	26.221	182.1	0.445	3.85	59.3	23.1	1.59	21.4	0.00	0.00	0.01	170	208
199	8.66	8.64	33.972	26.370	168.4	0.497	3.21	49.0	29.7	1.85	25.0	0.00	0.00	0.01	200	207
200 ISL	8.57 D	8.55	33.996 D	26.403	165.3	0.499	3.19	48.6	29.9	1.86	25.1	0.00			201	
229	8.25	8.23	34.010	26.463	160.0	0.546	2.75	41.6	35.3	2.04	27.8	0.00			230	206
250 ISL	7.96 D	7.93	34.013 D	26.509	155.9	0.580	2.65	39.8	38.6	2.11	28.9	0.00			251	
268	7.71	7.68	34.024	26.554	151.8	0.607	2.57	38.4	41.3	2.16	29.7	0.00			270	205
300 ISL	7.26 D	7.23	34.045 D	26.635	144.4	0.655	2.03	30.0	47.2	2.38	32.2	0.00			302	
318	7.22	7.19	34.084	26.671	141.2	0.680	1.70	25.1	50.6	2.51	33.7	0.00			320	204
378	6.54	6.51	34.103	26.779	131.5	0.762	1.26	18.3	60.8	2.73	36.5	0.00			380	203
400 ISL	6.15 D	6.11	34.092 D	26.821	127.5	0.791	1.17	16.8	64.5	2.79	37.3	0.00			403	
438	5.91	5.87	34.114	26.869	123.2	0.838	1.02	14.6	70.7	2.88	38.6	0.00			441	202
500 ISL	5.62 D	5.58	34.191 D	26.966	114.6	0.912	0.61	8.7	79.3	3.04	40.3	0.00			503	
514	5.56	5.52	34.201	26.981	113.3	0.928	0.52	7.4	81.3	3.08	40.7	0.00			517	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 14.5 N	123 29.6 W	26/01/07	1343 UTC	4149 m	200 15 kn			1016.5 mb	14.2 C	13.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.11	14.11	33.211	24.783	315.5	0.000	5.93	101.3	2.0	0.31	0.0	0.01	0.43	0.08	0	
2	14.11	14.11	33.211	24.783	315.5	0.006	5.93	101.3	2.0	0.31	0.0	0.01	0.43	0.08	2	221
10	13.98	13.98	33.194	24.797	314.4	0.032	5.96	101.5	2.1	0.32	0.2	0.02	0.49	0.09	10	219
10	14.00	14.00	33.197	24.795	314.6	0.032									10	220
20	13.74	13.74	33.222	24.868	307.9	0.063	6.03	102.2	2.2	0.32	0.0	0.01	0.61	0.08	20	218
30	13.70	13.70	33.223	24.877	307.3	0.093	6.02	101.9	2.3	0.33	0.1	0.02	0.59	0.16	30	217
41	13.55	13.54	33.214	24.901	305.3	0.127	6.02	101.6	2.4	0.34	0.2	0.03	0.69	0.14	41	216
50	13.40	13.39	33.232	24.946	301.3	0.154	5.98	100.6	2.7	0.38	0.6	0.09	0.56	0.16	50	215
60	13.09	13.08	33.230	25.006	295.8	0.184	5.89	98.5	3.2	0.45	1.5	0.22	0.35	0.11	60	214
70	12.97	12.96	33.288	25.075	289.5	0.213	5.90	98.4	3.6	0.48	1.8	0.24	0.27	0.11	70	213
75 ISL	12.96 D	12.95	33.292 D	25.080	289.1	0.228	5.88	98.1	3.6	0.49	1.9	0.25	0.23	0.10	75	
84	12.89	12.88	33.297	25.098	287.7	0.254	5.83	97.1	3.7	0.51	2.2	0.27	0.16	0.09	84	212
100	12.44	12.43	33.364	25.238	274.7	0.299	5.48	90.4	4.3	0.58	4.1	0.07	0.08	0.07	100	211
119	11.37	11.36	33.524	25.563	244.1	0.348	4.95	79.9	8.1	0.84	9.2	0.02	0.03	0.04	120	210
125 ISL	10.43 D	10.42	33.572 D	25.767	224.7	0.362	4.73	74.9	10.5	1.01	11.8	0.02	0.02	0.03	126	
140	9.73	9.71	33.590	25.899	212.2	0.395	4.17	65.0	17.1	1.43	18.2	0.01	0.01	0.02	141	209
150 ISL	9.17 D	9.15	33.661 D	26.046	198.4	0.416	3.86	59.4	20.5	1.60	20.8	0.01	0.00	0.02	151	
170	8.88	8.86	33.830	26.224	181.8	0.454	3.42	52.4	25.7	1.79	23.7	0.01	0.00	0.02	171	208
200 ISL	8.47 D	8.45	33.963 D	26.392	166.2	0.506	3.40	51.6	29.4	1.81	24.8	0.01	0.00	0.02	201	
203	8.47	8.45	33.967	26.395	166.0	0.511	3.40	51.6	29.7	1.81	24.8	0.01	0.00	0.02	204	207
227	8.13	8.11	33.998	26.471	159.1	0.550	3.02	45.5	34.8	1.98	27.0	0.00			228	206
250 ISL	7.92 D	7.89	34.034 D	26.531	153.8	0.586	2.51	37.7	39.0	2.17	29.2	0.00			251	
269	7.82	7.79	34.059	26.566	150.8	0.615	2.14	32.0	42.3	2.30	30.8	0.00			271	205
300 ISL	7.52 D	7.49	34.084 D	26.629	145.2	0.661	2.14	31.8	47.7	2.38	32.5	0.00			302	
319	6.86	6.83	34.019	26.669	141.2	0.688	2.14	31.3	51.0	2.41	33.3	0.00			321	204
380	6.22	6.19	34.040	26.771	132.0	0.771	1.61	23.2	61.3	2.66	36.5	0.00			382	203
400 ISL	6.33 D	6.29	34.108 D	26.810	128.6	0.797	1.34	19.4	63.6	2.75	37.1	0.00			403	
438	6.18	6.14	34.150	26.863	124.1	0.845	0.89	12.8	68.5	2.91	38.2	0.00			441	202
500 ISL	5.25 D	5.21	34.132 D	26.963	114.4	0.919	0.74	10.4	82.0	3.03	40.8	0.00			503	
507	5.20	5.16	34.135	26.971	113.7	0.927	0.72	10.1	83.5	3.04	41.1	0.00			510	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 55.3 N	124 9.2 W	26/01/07	1926 UTC		220 02 kn	290 04 07	2	1017.1 mb	15.9 C	14.9 C	29m	8/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.80	14.80	33.282	24.692	324.1	0.000	5.87	101.7	1.6	0.29	0.1	0.00	0.25	0.13	0	
1 A	14.80	14.80	33.282	24.692	324.2	0.003	5.87	101.7	1.6	0.29	0.1	0.00	0.25	0.13	1	223
10	14.70	14.70	33.290	24.719	321.8	0.032	5.85	101.2	1.6	0.29	0.1	0.00	0.29	0.04	10	222
19 A	14.69	14.69	33.288	24.720	322.0	0.061	5.86	101.3	1.6	0.28	0.1	0.00	0.35	0.01	19	220
19	14.69	14.69	33.289	24.721	321.9	0.061									19	221
20 ISL	14.68 D	14.68	33.287 D	24.722	321.9	0.064	5.86	101.3	1.6	0.28	0.1	0.00	0.35	0.01	20	
29	14.67	14.67	33.288	24.725	321.8	0.093	5.86	101.3	1.5	0.28	0.1	0.00	0.34	0.06	29	219
30 ISL	14.68 D	14.68	33.287 D	24.722	322.1	0.097	5.86	101.3	1.5	0.28	0.1	0.00	0.35	0.07	30	
39 A	14.67	14.66	33.289	24.726	322.0	0.126	5.85	101.1	1.5	0.28	0.1	0.00	0.47	0.09	39	218
48	14.65	14.64	33.286	24.728	322.1	0.155	5.85	101.0	1.5	0.28	0.1	0.00	0.50	0.04	48	217
50 ISL	14.65 D	14.64	33.286 D	24.728	322.1	0.161	5.85	101.0	1.5	0.28	0.1	0.00	0.48	0.05	50	
56 A	14.65	14.64	33.289	24.731	322.0	0.180	5.85	101.0	1.5	0.28	0.1	0.00	0.39	0.07	56	216
63	14.65	14.64	33.285	24.728	322.5	0.203	5.85	101.0	1.6	0.29	0.1	0.00	0.35	0.08	63	215
68 A	14.64	14.63	33.276	24.723	323.1	0.219	5.83	100.7	1.6	0.30	0.1	0.02	0.37	0.04	68	214
75 ISL	14.63 D	14.62	33.282 D	24.730	322.7	0.242	5.83	100.6	1.6	0.30	0.1	0.01	0.44	0.03	75	
84	14.44	14.43	33.283	24.772	319.0	0.271	5.84	100.4	1.5	0.29	0.1	0.00	0.48	0.01	84	213
99	13.22	13.21	33.147 D	24.917	305.3	0.317	5.81	97.3	2.3	0.39	1.0	0.11	0.17	0.08	99	212
100 ISL	13.17 D	13.16	33.182 D	24.954	301.8	0.320	5.80	97.1	2.4	0.41	1.2	0.10	0.17	0.08	100	
112 A	11.60	11.59	33.011	25.122	285.9	0.356	5.68	91.9	3.6	0.61	3.8	0.02	0.15	0.02	112	211
125 ISL	11.38 D	11.36	33.065 D	25.204	278.3	0.392	5.54	89.2	4.5	0.69	5.2	0.01	0.09	0.04	126	
128	11.38	11.36	33.112	25.241	274.9	0.401	5.49	88.4	4.8	0.70	5.5	0.01	0.08	0.04	129	210
144	11.34	11.32	33.490	25.542	246.6	0.442	4.87	78.6	8.5	0.90	9.9	0.01	0.05	0.04	145	209
150 ISL	10.71 D	10.69	33.488 D	25.653	236.1	0.457	4.74	75.4	9.8	0.98	11.4	0.01	0.04	0.04	151	
169	10.13	10.11	33.662	25.889	214.0	0.500	4.49	70.6	14.0	1.22	15.6	0.01	0.01	0.02	170	208
199	9.07	9.05	33.875	26.230	181.9	0.559	4.14	63.7	22.0	1.49	20.4	0.00	0.00	0.02	200	207
200 ISL	8.98 D	8.96	33.909 D	26.271	178.0	0.561	4.13	63.4	22.2	1.50	20.5	0.00			201	
229	8.65	8.63	33.949	26.354	170.5	0.611	3.83	58.4	26.9	1.64	22.6	0.01			230	206
250 ISL	8.38 D	8.35	33.986 D	26.425	164.1	0.646	3.34	50.6	31.4	1.83	25.1	0.01			251	
268	8.20	8.17	34.017	26.476	159.4	0.676	2.92	44.1	35.4	2.00	27.2	0.00			269	205
300 ISL	7.37 D	7.34	33.993 D	26.578	149.8	0.725	2.68	39.7	41.4	2.13	29.5	0.00			302	
319	7.36	7.33	34.014	26.597	148.4	0.753	2.57	38.1	44.9	2.19	30.6	0.00			321	204
378	6.82	6.78	34.090	26.731	136.2	0.837	1.47	21.5	56.6	2.61	35.4	0.00			380	203
400 ISL	6.78 D	6.74	34.146 D	26.781	131.8	0.867	1.16	17.0	59.8	2.73	36.3	0.00			402	
438	6.61	6.57	34.188	26.837	126.9	0.916	0.77	11.2	64.8	2.90	37.4	0.00			441	202
500 ISL	6.11 D	6.07	34.219 D	26.927	118.8	0.992	0.59	8.5	73.9	3.02	39.1	0.00			503	
515	5.94	5.90	34.211	26.943	117.4	1.010	0.55	7.9	76.1	3.05	39.5	0.00			518	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SECOND FLUOROMETER READING MIS-RECORDED. CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 85.4 35.8

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 0.8 N	118 50.2 W	24/01/07	1041 UTC	23 m	080 05 kn			1020.0 mb	12.8 C	9.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.90	13.90	33.581	25.112	284.1	0.000	5.74	97.8	3.0	0.49	1.3	0.09	2.37	0.49	0	
2	13.90	13.90	33.581	25.112	284.2	0.006	5.74	97.8	3.0	0.49	1.3	0.09	2.37	0.49	2	206
6	13.90	13.90	33.581	25.112	284.3	0.017	5.75	98.0	2.9	0.49	1.3	0.10	2.22	0.52	6	205
10 ISL	13.90 D	13.90	33.579 D	25.111	284.5	0.028	5.76	98.2	3.0	0.49	1.2	0.10	2.33	0.45	10	
11	13.91	13.91	33.584	25.113	284.4	0.031	5.76	98.2	3.0	0.49	1.2	0.10	2.37	0.43	11	203
11	13.91	13.91	33.584	25.113	284.4	0.031									11	204
16	13.94	13.94	33.579	25.103	285.5	0.046	5.79	98.7	2.9	0.49	1.2	0.10	2.35	0.47	16	202
20	13.92	13.92	33.581	25.109	285.0	0.057	5.78	98.5	3.0	0.47	1.2	0.09	2.41	0.47	20	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 33.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 53.7 N	118 30.0 W	24/01/07	0601 UTC	61 m	300 01 kn			1021.0 mb	15.9 C	13.4 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.30	14.30	33.553	25.007	294.1	0.000	5.89	101.2	1.7	0.40	0.7	0.09	1.19	0.37	0	
2	14.30	14.30	33.553	25.007	294.2	0.006	5.89	101.2	1.7	0.40	0.7	0.09	1.19	0.37	2	209
6	14.28	14.28	33.552	25.011	293.9	0.018	5.89	101.1	1.7	0.39	0.7	0.09	1.10	0.33	6	208
10 ISL	14.24 D	14.24	33.547 D	25.015	293.6	0.029	5.88	100.9	1.6	0.40	0.7	0.10	1.13	0.41	10	
11	14.20	14.20	33.548	25.024	292.8	0.032	5.87	100.6	1.6	0.40	0.7	0.10	1.14	0.44	11	206
11	14.21	14.21	33.548	25.022	293.0	0.032									11	207
20 ISL	14.17 D	14.17	33.545 D	25.029	292.6	0.059	5.76	98.7	1.9	0.44	0.9	0.12	1.24	0.59	20	
21	14.16	14.16	33.543	25.029	292.6	0.062	5.75	98.5	1.9	0.44	0.9	0.12	1.25	0.60	21	205
30 ISL	14.11 D	14.11	33.537 D	25.035	292.3	0.088	5.69	97.4	2.2	0.46	1.1	0.14	1.14	0.61	30	
31	14.11	14.11	33.539	25.037	292.2	0.091	5.68	97.2	2.2	0.46	1.2	0.14	1.12	0.61	31	204
39	14.02	14.01	33.528	25.047	291.4	0.114	5.46	93.2	3.4	0.55	2.1	0.20	1.06	0.51	39	203
50	13.90	13.89	33.528	25.073	289.3	0.146	5.18	88.2	4.8	0.66	3.3	0.22	0.77	0.48	50	202
53	13.74	13.73	33.532	25.109	285.9	0.155	4.93	83.7	6.0	0.76	4.6	0.24	0.45	0.69	53	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 49.6 N	118 38.2 W	24/01/07	0311	UTC	679 m	240 05 kn			1021.2 mb	15.1 C	13.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.44	14.44	33.565	24.987	296.1	0.000	5.95	102.5	0.6	0.34	0.0	0.00	0.35	0.17	0	
2	14.44	14.44	33.565	24.987	296.1	0.006	5.95	102.5	0.6	0.34	0.0	0.00	0.35	0.17	2	221
10	14.17	14.17	33.571	25.048	290.5	0.029	6.00	102.8	0.6	0.37	0.0	0.01	0.42	0.25	10	219
10	14.17	14.17	33.575	25.052	290.2	0.029									10	220
20	13.97	13.97	33.575	25.094	286.4	0.058	5.99	102.2	0.7	0.40	0.1	0.01	0.49	0.38	20	218
30	13.94	13.94	33.574	25.099	286.2	0.087	5.96	101.6	0.9	0.41	0.1	0.02	0.44	0.36	30	217
40	13.74	13.73	33.573	25.140	282.6	0.115	5.78	98.2	1.9	0.50	0.9	0.04	0.31	0.48	40	216
50	13.46	13.45	33.575	25.199	277.2	0.143	5.48	92.5	3.9	0.62	2.7	0.10	0.30	0.67	50	215
60	12.74	12.73	33.572	25.340	264.0	0.170	4.85	80.7	9.0	0.94	8.1	0.28	0.26	0.62	60	214
70	12.13	12.12	33.544	25.436	255.1	0.196	3.88	63.7	12.2	1.26	13.3	0.12	0.28	0.44	70	213
75 ISL	11.85 D	11.84	33.606 D	25.537	245.6	0.209	3.63	59.3	13.9	1.37	15.1	0.08	0.26	0.44	75	
85	11.21	11.20	33.649	25.688	231.4	0.233	3.32	53.5	16.9	1.55	17.8	0.05	0.18	0.45	85	212
99	10.92	10.91	33.747	25.817	219.4	0.264	2.89	46.3	20.0	1.74	20.3	0.03	0.08	0.21	99	211
100 ISL	10.71 D	10.70	33.794 D	25.891	212.4	0.266	2.87	45.8	20.2	1.75	20.4	0.03	0.08	0.21	101	
120	10.53	10.52	33.842	25.960	206.3	0.308	2.62	41.6	23.0	1.86	22.2	0.02	0.06	0.19	121	210
125 ISL	10.46 D	10.45	33.886 D	26.006	202.0	0.318	2.61	41.4	23.4	1.88	22.5	0.02	0.05	0.18	126	
140	10.22	10.20	33.890	26.051	198.0	0.348	2.58	40.7	24.5	1.92	23.3	0.02	0.04	0.15	141	209
150 ISL	10.25 D	10.23	33.960 D	26.101	193.5	0.368	2.43	38.4	25.7	1.98	23.9	0.02	0.04	0.18	151	
170	10.16	10.14	34.034	26.174	187.0	0.406	2.10	33.1	28.2	2.10	25.0	0.02	0.05	0.23	171	208
199	9.78	9.76	34.116	26.303	175.3	0.459	1.92	30.1	31.1	2.19	26.5	0.01	0.02	0.14	200	207
200 ISL	9.79 D	9.77	34.118 D	26.303	175.3	0.460	1.91	29.9	31.3	2.19	26.6	0.01			201	
229	9.28	9.25	34.194	26.446	162.1	0.509	1.66	25.7	35.8	2.33	28.5	0.01			230	206
250 ISL	9.07 D	9.04	34.207 D	26.491	158.2	0.543	1.55	23.9	37.6	2.38	29.2	0.01			251	
269	8.97	8.94	34.215	26.513	156.5	0.573	1.48	22.8	38.9	2.42	29.6	0.01			271	205
300 ISL	8.65 D	8.62	34.234 D	26.579	150.7	0.620	1.35	20.6	41.6	2.50	30.6	0.01			302	
318	8.54	8.51	34.239	26.600	149.0	0.647	1.26	19.2	43.5	2.55	31.3	0.01			320	204
377	7.88	7.84	34.268	26.723	138.0	0.732	0.84	12.6	52.0	2.75	33.8	0.00			379	203
400 ISL	7.65 D	7.61	34.275 D	26.762	134.5	0.763	0.71	10.6	54.8	2.81	34.5	0.00			403	
437	7.40	7.36	34.296	26.815	129.9	0.812	0.54	8.0	59.5	2.91	35.4	0.01			440	202
500 ISL	6.66 D	6.61	34.316 D	26.933	119.0	0.891	0.37	5.4	69.7	3.06	37.4	0.01			503	
514	6.58	6.53	34.318	26.945	118.0	0.907	0.33	4.8	72.0	3.09	37.8	0.01			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 39.6 N	118 58.2 W	23/01/07	2228	UTC	784 m	260 06 kn	280 01 06	0	1022.1 mb	17.0 C	15.0 C	15m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.24	14.24	33.571	25.033	291.6	0.000	6.02	103.3	1.3	0.39	0.4	0.02	0.81	0.05	0	
2	14.24	14.24	33.571	25.033	291.6	0.006	6.02	103.3	1.3	0.39	0.4	0.02	0.81	0.05	2	224
10	13.92	13.92	33.569	25.099	285.6	0.029	5.92	100.9	1.4	0.39	0.4	0.02	0.99	0.16	10	222
10	13.92	13.92	33.569	25.099	285.6	0.029	5.92	100.9							10	223
20	13.87	13.87	33.571	25.111	284.8	0.057	5.87	100.0	1.3	0.41	0.6	0.03	1.03	0.39	20	221
30	13.84	13.84	33.568	25.115	284.7	0.086	5.80	98.7	1.5	0.43	0.9	0.03	0.82	0.34	30	220
40	13.71	13.70	33.564	25.139	282.7	0.114	5.66	96.1	2.3	0.49	1.7	0.05	0.67	0.33	40	219
50	12.86	12.85	33.550	25.299	267.6	0.142	4.84	80.7	7.2	0.85	7.3	0.13	0.46	0.50	50	218
59	11.74	11.73	33.573	25.531	245.7	0.165	3.85	62.7	13.2	1.31	14.5	0.11	0.22	0.30	59	217
70	11.47	11.46	33.581	25.588	240.6	0.192	3.70	59.9	14.3	1.38	15.7	0.10	0.15	0.26	70	216
75 ISL	11.16 D	11.15	33.618 D	25.673	232.6	0.203	3.60	57.9	15.2	1.44	16.5	0.09	0.13	0.22	75	
85	10.98	10.97	33.656	25.735	226.9	0.226	3.37	54.0	17.4	1.57	18.4	0.06	0.09	0.14	85	215
100	10.61	10.60	33.763	25.884	213.0	0.259	2.92	46.5	21.0	1.77	20.9	0.04	0.05	0.14	101	214
119	10.22	10.21	33.889	26.050	197.6	0.298	2.48	39.2	25.4	1.96	23.5	0.02	0.05	0.20	120	213
125 ISL	10.15 D	10.14	33.904 D	26.073	195.5	0.310	2.42	38.1	26.0	1.98	23.9	0.02	0.04	0.18	126	
139	10.06	10.04	33.934	26.113	192.1	0.337	2.34	36.8	26.9	2.02	24.4	0.03	0.03	0.12	140	212
150 ISL	9.98 D	9.96	33.960 D	26.146	189.1	0.358	2.26	35.5	27.8	2.06	24.9	0.04	0.03	0.12	151	
169	9.80	9.78	34.010	26.216	182.8	0.394	2.10	32.9	29.7	2.13	25.8	0.04	0.03	0.11	170	211
199	9.31	9.29	34.122	26.385	167.3	0.446	1.78	27.6	34.3	2.28	28.0	0.03	0.02	0.13	200	210
200 ISL	9.26 D	9.24	34.135 D	26.403	165.6	0.448	1.77	27.4	34.5	2.29	28.1	0.03			201	
229	8.87	8.85	34.200	26.516	155.3	0.494	1.41	21.6	40.0	2.46	30.1	0.02			230	209
250 ISL	8.71 D	8.68	34.210 D	26.550	152.5	0.527	1.30	19.9	42.0	2.52	30.8	0.01			251	
268	8.59	8.56	34.221	26.577	150.2	0.554	1.24	18.9	43.3	2.55	31.2	0.01			270	208
300 ISL	8.28 D	8.25	34.251 D	26.649	143.8	0.601	1.06	16.1	46.8	2.65	32.2	0.01			302	
318	8.12	8.09	34.261	26.681	141.0	0.627	0.95	14.3	48.9	2.70	32.7	0.01			320	207
378	7.66	7.62	34.282	26.766	133.7	0.709	0.66	9.9	55.3	2.85	34.5	0.00			380	206
400 ISL	7.50 D	7.46	34.282 D	26.789	131.8	0.738	0.61	9.1	57.1	2.89	34.9	0.00			403	
437	7.35	7.31	34.296	26.822	129.2	0.787	0.54	8.0	60.4	2.94	35.6	0.01			440	205
500 ISL	6.64 D	6.59	34.316 D	26.935	118.7	0.865	0.37	5.4	69.0	3.06	37.5	0.01			503	
515	6.60	6.55	34.318	26.942	118.3	0.882	0.33	4.8	71.3	3.09	37.9	0.01			519	204
600 ISL	5.87 D	5.82	34.354 D	27.065	106.9	0.978	0.21	3.0	84.5	3.22	38.8	0.00			604	
643	5.67	5.61	34.362	27.097	104.3	1.024	0.17	2.4	90.9	3.27	39.2	0.00			648	203
700 ISL	5.49 D	5.43	34.376 D	27.130	101.6	1.082	0.12	1.7	99.5	3.33	37.4	0.00			705	
763	5.33	5.27	34.387	27.158	99.5	1.146	0.09	1.3	103.9	3.40	35.5	0.01			769	202
768	5.33	5.26	34.387	27.158	99.5	1.151	0.09	1.3	103.7	3.39	35.8	0.01			774	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.3 N	119 19.5 W	23/01/07	1754 UTC	1628 m	040 05 kn	320 02 07	0	1023.9 mb	15.9 C	13.9 C	16m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.34	14.34	33.575	25.016	293.3	0.000	5.96	102.5	0.6	0.33	0.1	0.01	1.65	0.33	0	
1 A	14.34	14.34	33.575	25.016	293.3	0.003	5.96	102.5	0.6	0.33	0.1	0.01	1.65	0.33	1	221
10 A	14.23	14.23	33.575	25.039	291.3	0.029	5.95	102.1	0.6	0.33	0.1	0.01	1.93	0.26	10	219
10	14.23	14.23	33.575	25.039	291.3	0.029									10	220
20 ISL	14.22 D	14.22	33.573 D	25.040	291.6	0.058	5.88	100.9	0.7	0.36	0.3	0.02	1.72	0.50	20	
22 A	14.18	14.18	33.575	25.050	290.7	0.064	5.87	100.6	0.7	0.36	0.3	0.02	1.68	0.56	22	218
30 ISL	12.95 D	12.95	33.600 D	25.320	265.2	0.086	5.47	91.4	4.0	0.70	4.5	0.11	1.22	0.72	30	
31 A	12.86	12.86	33.604	25.341	263.2	0.089	5.42	90.4	4.4	0.74	5.0	0.12	1.17	0.74	31	217
38 A	12.63	12.62	33.610	25.390	258.6	0.107	5.34	88.6	5.1	0.80	6.0	0.14	1.28	0.83	38	216
50	11.79	11.78	33.644	25.577	241.1	0.137	4.32	70.5	12.4	1.21	12.4	0.18	0.51	0.51	50	215
62 A	10.61	10.60	33.775	25.892	211.3	0.164	3.03	48.2	21.0	1.72	20.4	0.11	0.25	0.42	62	214
74	10.44	10.43	33.826	25.962	205.0	0.189	2.76	43.8	23.0	1.83	21.8	0.06	0.15	0.36	74	213
75 ISL	10.45 D	10.44	33.824 D	25.959	205.3	0.192	2.74	43.5	23.1	1.84	21.9	0.06	0.16	0.36	75	
85	10.30	10.29	33.868	26.019	199.8	0.212	2.59	41.0	24.4	1.90	22.8	0.04	0.22	0.32	85	212
100	10.13	10.12	33.932	26.098	192.6	0.241	2.38	37.5	26.4	2.00	24.2	0.03	0.09	0.20	101	211
119	9.60	9.59	34.000	26.240	179.4	0.277	2.30	35.8	29.0	2.07	25.8	0.01	0.03	0.09	120	210
125 ISL	9.46 D	9.45	34.033 D	26.289	174.9	0.287	2.20	34.2	29.9	2.11	26.3	0.01	0.03	0.09	126	
139	9.44	9.42	34.097	26.343	170.1	0.311	1.95	30.3	32.1	2.21	27.3	0.01	0.02	0.10	140	209
150 ISL	9.18 D	9.16	34.150 D	26.427	162.3	0.330	1.81	28.0	33.7	2.26	28.0	0.01	0.02	0.12	151	
169	9.07	9.05	34.168	26.459	159.6	0.360	1.64	25.3	36.3	2.34	29.1	0.01	0.03	0.15	170	208
198	8.84	8.82	34.212	26.530	153.4	0.406	1.45	22.2	39.4	2.44	30.0	0.01	0.02	0.12	199	207
200 ISL	8.81 D	8.79	34.211 D	26.534	153.0	0.409	1.44	22.1	39.6	2.45	30.1	0.01			201	
229	8.66	8.64	34.233	26.575	149.6	0.453	1.27	19.4	41.9	2.52	30.8	0.01			230	206
250 ISL	8.38 D	8.35	34.246 D	26.629	144.8	0.483	1.16	17.6	44.0	2.57	31.5	0.01			252	
269	8.35	8.32	34.247	26.634	144.6	0.511	1.06	16.1	46.1	2.61	32.1	0.01			271	205
300 ISL	8.24 D	8.21	34.253 D	26.656	143.1	0.556	0.90	13.6	49.4	2.70	32.9	0.00			302	
318	7.99	7.96	34.272	26.709	138.3	0.581	0.82	12.3	51.3	2.75	33.4	0.00			320	204
378	7.54	7.50	34.292	26.791	131.3	0.662	0.58	8.6	57.4	2.87	35.0	0.00			380	203
400 ISL	7.50 D	7.46	34.294 D	26.798	130.9	0.691	0.52	7.7	59.2	2.91	35.5	0.00			403	
437	7.19	7.15	34.305	26.851	126.2	0.738	0.44	6.5	62.6	2.98	36.3	0.01			440	202
500 ISL	6.62 D	6.57	34.322 D	26.943	118.0	0.815	0.32	4.7	71.0	3.07	37.8	0.01			503	
514	6.52	6.47	34.324	26.958	116.7	0.831	0.29	4.2	72.9	3.09	38.1	0.01			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 19.5 N	119 39.9 W	23/01/07	1401 UTC	76 m	320 11 kn			1023.3 mb	13.2 C	11.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.96	12.96	33.604	25.320	264.3	0.000	5.77	96.4	3.6	0.61	3.4	0.10	1.45	0.56	0	
2	12.96	12.96	33.604	25.320	264.4	0.005	5.77	96.4	3.6	0.61	3.4	0.10	1.45	0.56	2	210
6	12.95	12.95	33.613	25.329	263.6	0.016	5.77	96.4	3.6	0.61	3.4	0.10	1.53	0.68	6	209
10 ISL	12.86 D	12.86	33.605 D	25.341	262.6	0.026	5.68	94.7	4.1	0.65	4.1	0.12	1.80	0.86	10	
11	12.86	12.86	33.607	25.342	262.5	0.029	5.65	94.2	4.3	0.67	4.3	0.12	1.86	0.90	11	207
11	12.88	12.88	33.605	25.337	263.0	0.029									11	208
20 ISL	12.43 D	12.43	33.632 D	25.446	252.9	0.052	5.14	85.0	7.2	0.87	7.0	0.13	1.06	0.89	20	
21	12.46	12.46	33.629	25.438	253.7	0.055	5.08	84.0	7.5	0.89	7.3	0.13	0.94	0.89	21	206
30	12.34	12.34	33.637	25.467	251.1	0.077	4.93	81.4	8.0	0.96	8.2	0.14	0.83	0.79	30	205
40	12.06	12.05	33.659	25.538	244.6	0.102	4.58	75.1	10.3	1.09	10.3	0.15	0.73	0.74	40	204
50 ISL	11.79 D	11.78	33.679 D	25.604	238.6	0.126	4.33	70.6	12.2	1.20	12.0	0.14	0.69	0.78	50	
51	11.81	11.80	33.680	25.601	238.9	0.129	4.30	70.2	12.4	1.21	12.2	0.14	0.69	0.78	51	203
60	11.43	11.42	33.726	25.708	228.9	0.150	3.83	62.0	15.7	1.42	15.1	0.13	0.57	0.90	60	202
70	10.80	10.79	33.782	25.865	214.2	0.172	3.23	51.6	20.1	1.64	19.0	0.11	0.32	0.61	70	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 9.4 N	120 0.3 W	23/01/07	0939 UTC	1201 m	320 14 kn			1023.2 mb	12.8 C	11.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.02	13.02	33.592	25.299	266.3	0.000	5.99	100.2	2.2	0.52	2.2	0.09	1.07	0.37	0	
2	13.02	13.02	33.592	25.299	266.4	0.005	5.99	100.2	2.2	0.52	2.2	0.09	1.07	0.37	2	221
10 ISL	13.02 D	13.02	33.590 D	25.298	266.7	0.027	5.99	100.2	2.2	0.51	2.2	0.09	1.10	0.44	10	
11	13.02	13.02	33.593	25.300	266.5	0.029	5.99	100.2	2.2	0.51	2.2	0.09	1.10	0.45	11	219
11	13.02	13.02	33.592	25.299	266.6	0.029									11	220
20	13.02	13.02	33.592	25.299	266.8	0.053	5.99	100.2	2.3	0.51	2.2	0.09	0.99	0.48	20	218
30	12.79	12.79	33.594	25.347	262.6	0.080	5.73	95.4	4.9	0.65	4.2	0.13	1.25	0.54	30	217
40	12.37	12.36	33.605	25.437	254.3	0.106	4.99	82.4	8.4	0.91	8.1	0.22	0.81	0.50	40	216
50	11.69	11.68	33.634	25.588	240.1	0.130	4.19	68.2	13.6	1.22	13.3	0.28	0.37	0.43	50	215
60	10.90	10.89	33.699	25.782	221.8	0.153	3.33	53.3	19.2	1.58	18.8	0.12	0.15	0.38	60	214
70	10.46	10.45	33.783	25.925	208.4	0.175	2.88	45.7	22.4	1.78	21.6	0.04	0.09	0.23	70	213
75 ISL	10.23 D	10.22	33.806 D	25.982	203.0	0.185	2.89	45.6	23.1	1.79	22.3	0.04	0.07	0.19	75	
85	9.93	9.92	33.808	26.035	198.2	0.205	2.92	45.8	23.8	1.82	22.9	0.03	0.03	0.16	85	212
100	9.77	9.76	33.872	26.112	191.2	0.235	2.77	43.3	25.4	1.89	23.7	0.02	0.02	0.13	101	211
120	9.63	9.62	34.017	26.249	178.6	0.271	2.31	36.0	29.4	2.06	25.5	0.02	0.01	0.11	121	210
125 ISL	9.59 D	9.58	34.065 D	26.293	174.5	0.280	2.24	34.9	30.1	2.09	25.9	0.02	0.01	0.10	126	
140	9.49	9.47	34.101	26.338	170.6	0.306	2.07	32.2	31.9	2.16	26.9	0.02	0.01	0.08	141	209
150 ISL	9.50 D	9.48	34.147 D	26.372	167.5	0.323	1.96	30.5	33.0	2.20	27.3	0.02	0.01	0.07	151	
169	9.28	9.26	34.169	26.426	162.8	0.355	1.78	27.6	35.2	2.28	28.1	0.02	0.01	0.07	170	208
199	8.84	8.82	34.209	26.528	153.6	0.402	1.52	23.3	39.9	2.42	29.9	0.01	0.00	0.06	200	207
200 ISL	8.79 D	8.77	34.215 D	26.540	152.4	0.403	1.51	23.1	40.0	2.42	29.9	0.01			201	
229	8.59	8.57	34.228	26.582	148.9	0.447	1.31	20.0	43.0	2.52	31.0	0.01			230	206
250 ISL	8.35 D	8.32	34.240 D	26.629	144.8	0.478	1.19	18.1	45.0	2.57	31.7	0.01			252	
269	8.24	8.21	34.246	26.650	143.1	0.505	1.09	16.5	47.1	2.62	32.3	0.01			271	205
300 ISL	7.81 D	7.78	34.256 D	26.722	136.5	0.549	0.86	12.9	51.8	2.74	33.6	0.01			302	
317	7.69	7.66	34.274	26.754	133.8	0.572	0.75	11.2	54.4	2.81	34.3	0.01			319	204
378	7.30	7.26	34.275	26.811	129.1	0.652	0.62	9.2	59.4	2.90	35.7	0.01			380	203
400 ISL	7.09 D	7.05	34.279 D	26.844	126.2	0.680	0.56	8.3	62.4	2.96	36.4	0.01			403	
437	6.78	6.74	34.296	26.900	121.2	0.726	0.46	6.7	67.5	3.05	37.6	0.01			440	202
500 ISL	6.48 D	6.43	34.309 D	26.951	117.1	0.801	0.37	5.4	71.8	3.13	38.6	0.01			503	
514	6.43	6.38	34.310	26.958	116.5	0.817	0.35	5.1	72.8	3.15	38.8	0.01			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 59.3 N	120 20.9 W	23/01/07	0520	UTC	718 m	300 11 kn			1024.0 mb	13.9 C	12.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.97	12.97	33.592	25.309	265.4	0.000	6.13	102.5	3.0	0.54	2.7	0.15	2.37	0.58	0	
1	12.97	12.97	33.592	25.309	265.4	0.003	6.13	102.5	3.0	0.54	2.7	0.15	2.37	0.58	1	221
10 ISL	12.98 D	12.98	33.592 D	25.307	265.8	0.027	6.14	102.7	2.8	0.53	2.6	0.15	2.64	0.82	10	
11	12.97	12.97	33.592	25.309	265.7	0.029	6.14	102.6	2.8	0.53	2.6	0.15	2.66	0.85	11	219
11	12.97	12.97	33.592	25.309	265.7	0.029									11	220
20	12.86	12.86	33.591	25.330	263.9	0.053	6.03	100.6	3.3	0.59	3.2	0.17	2.18	0.69	20	218
30	12.82	12.82	33.593	25.340	263.2	0.079	5.93	98.8	4.4	0.60	3.8	0.20	1.77	0.63	30	217
40	12.81	12.80	33.590	25.340	263.5	0.106	5.88	98.0	4.9	0.63	4.1	0.21	1.42	0.51	40	216
50	12.78	12.77	33.590	25.346	263.2	0.132	5.81	96.7	5.2	0.65	4.4	0.22	1.01	0.51	50	215
60	12.40	12.39	33.592	25.422	256.3	0.158	5.25	86.7	8.0	0.85	7.5	0.22	0.85	0.58	60	214
70	11.20	11.19	33.625	25.671	232.6	0.182	4.00	64.4	15.0	1.32	15.5	0.11	0.48	0.55	70	213
75 ISL	11.00 D	10.99	33.631 D	25.712	228.9	0.194	3.87	62.0	16.3	1.41	17.1	0.08	0.35	0.49	75	
85	10.64	10.63	33.642	25.784	222.2	0.217	3.60	57.3	17.7	1.49	18.5	0.05	0.17	0.35	85	212
100	10.01	10.00	33.732	25.963	205.4	0.249	3.14	49.3	21.9	1.71	22.0	0.02	0.05	0.19	101	211
119	9.81	9.80	33.793	26.044	198.1	0.287	2.93	45.8	24.0	1.82	23.2	0.01	0.04	0.12	120	210
125 ISL	9.59 D	9.58	33.871 D	26.141	188.9	0.299	2.86	44.5	24.8	1.85	23.7	0.01	0.03	0.12	126	
139	9.51	9.49	33.886	26.167	186.8	0.325	2.68	41.6	27.0	1.92	25.0	0.01	0.02	0.12	140	209
150 ISL	9.21 D	9.19	33.962 D	26.275	176.7	0.345	2.50	38.6	29.3	2.00	26.1	0.01	0.02	0.23	151	
169	9.02	9.00	34.066	26.387	166.4	0.377	2.19	33.7	33.3	2.14	27.9	0.01	0.03	0.37	170	208
198	8.70	8.68	34.131	26.488	157.2	0.424	1.85	28.3	38.1	2.29	29.7	0.01	0.01	0.06	199	207
200 ISL	8.70 D	8.68	34.133 D	26.490	157.1	0.428	1.83	28.0	38.3	2.30	29.8	0.01			201	
229	8.66	8.64	34.183	26.536	153.3	0.473	1.55	23.7	40.7	2.40	30.3	0.01			230	206
250 ISL	8.47 D	8.44	34.189 D	26.570	150.4	0.504	1.46	22.2	42.4	2.44	30.9	0.00			251	
269	8.31	8.28	34.190	26.596	148.3	0.533	1.41	21.4	44.1	2.48	31.5	0.00			271	205
300 ISL	7.86 D	7.83	34.188 D	26.661	142.3	0.578	1.27	19.0	47.5	2.56	32.7	0.00			302	
319	7.78	7.75	34.200	26.683	140.6	0.605	1.17	17.5	49.8	2.62	33.4	0.00			321	204
377	7.21	7.17	34.229	26.788	131.2	0.684	0.83	12.3	58.2	2.80	35.6	0.00			379	203
400 ISL	7.12 D	7.08	34.261 D	26.826	128.0	0.713	0.72	10.6	60.5	2.85	36.2	0.00			403	
437	6.90	6.86	34.278	26.870	124.2	0.760	0.56	8.2	64.2	2.93	37.0	0.00			440	202
500 ISL	6.41 D	6.36	34.300 D	26.953	116.8	0.836	0.39	5.7	72.8	3.05	38.8	0.00			503	
514	6.29	6.24	34.306	26.973	114.9	0.852	0.35	5.1	74.7	3.08	39.2	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.3 N	121 2.1 W	22/01/07	2236	UTC	3800 m	350 08 kn	340 04 07	0	1023.1 mb	15.5 C	13.9 C	21m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.18	13.18	33.464	25.168	278.8	0.000	5.94	99.7	4.2	0.55	2.3	0.15	0.38	0.10	0	
2	13.18	13.18	33.464	25.168	278.9	0.006	5.94	99.7	4.2	0.55	2.3	0.15	0.38	0.10	2	221
10 A	13.06	13.06	33.479	25.204	275.7	0.028	5.90	98.7	4.3	0.56	2.5	0.14	0.32	0.10	10	219
11	13.00	13.00	33.478	25.215	274.6	0.031			4.2	0.56	2.5	0.14			11	220
20	12.92	12.92	33.487	25.238	272.7	0.055	5.88	98.1	4.5	0.58	2.8	0.14	0.52	0.20	20	218
30 ISL	12.90 D	12.90	33.490 D	25.244	272.3	0.082	5.82	97.1	4.6	0.61	3.1	0.15	0.57	0.25	30	
31	12.89	12.89	33.492	25.248	272.0	0.085	5.81	96.9	4.6	0.61	3.1	0.15	0.58	0.25	31	217
41	12.70	12.69	33.504	25.295	267.8	0.112	5.50	91.4	5.9	0.72	4.9	0.17	0.48	0.30	41	216
49	11.97	11.96	33.472	25.410	257.0	0.133	4.78	78.2	9.4	0.99	9.8	0.19	0.17	0.17	49	215
50 ISL	11.76 D	11.75	33.477 D	25.453	252.9	0.136	4.72	76.9	9.7	1.01	10.3	0.18	0.16	0.17	50	
60	11.21	11.20	33.503	25.574	241.6	0.160	4.31	69.4	12.6	1.21	13.8	0.07	0.09	0.14	60	214
70	10.74	10.73	33.526	25.676	232.1	0.184	4.01	63.9	14.9	1.36	16.4	0.02	0.06	0.12	70	213
75 ISL	10.50 D	10.49	33.568 D	25.750	225.1	0.195	3.92	62.1	15.7	1.40	17.1	0.02	0.05	0.12	75	
85	10.35	10.34	33.607	25.807	219.9	0.218	3.79	59.9	17.1	1.47	18.2	0.02	0.04	0.11	85	212
100	9.93	9.92	33.686	25.940	207.5	0.250	3.56	55.8	19.8	1.59	20.3	0.01	0.02	0.08	101	211
120	9.40	9.39	33.836	26.145	188.4	0.289	3.00	46.5	25.7	1.85	24.3	0.01	0.01	0.12	121	210
125 ISL	9.27 D	9.26	33.889 D	26.208	182.6	0.299	2.84	43.9	27.2	1.91	25.2	0.01	0.01	0.11	126	
139	9.01	9.00	33.982	26.322	171.9	0.323	2.45	37.7	31.1	2.06	27.2	0.01	0.01	0.09	140	209
150 ISL	8.87 D	8.85	34.010 D	26.366	167.9	0.342	2.38	36.5	32.9	2.11	28.0	0.01	0.01	0.08	151	
169	8.64	8.62	34.042	26.427	162.4	0.374	2.27	34.6	35.0	2.15	28.8	0.01	0.01	0.07	170	208
198	8.31	8.29	34.075	26.504	155.6	0.420	2.08	31.5	38.8	2.25	30.2	0.01	0.00	0.06	199	207
200 ISL	8.29 D	8.27	34.076 D	26.508	155.2	0.423	2.07	31.3	39.1	2.26	30.3	0.01			201	
228	8.01	7.99	34.101	26.570	149.7	0.465	1.85	27.8	42.9	2.37	31.8	0.01			229	206
250 ISL	7.92 D	7.89	34.129 D	26.606	146.7	0.498	1.62	24.3	45.8	2.47	32.7	0.00			251	
268	7.74	7.71	34.146	26.646	143.2	0.524	1.44	21.5	48.1	2.54	33.4	0.00			270	205
300 ISL	7.42 D	7.39	34.160 D	26.703	138.1	0.569	1.21	18.0	52.1	2.65	34.7	0.00			302	
318	7.29	7.26	34.173	26.732	135.6	0.594	1.11	16.4	54.3	2.70	35.3	0.00			320	204
378	6.94	6.90	34.219	26.817	128.3	0.673	0.81	11.9	61.0	2.85	36.9	0.00			380	203
400 ISL	6.62 D	6.58	34.235 D	26.873	123.0	0.701	0.67	9.8	64.8	2.92	37.7	0.00			403	
437	6.41	6.37	34.268	26.927	118.3	0.745	0.46	6.7	71.2	3.03	39.1	0.00			440	202
500 ISL	6.06 D	6.02	34.316 D	27.010	111.0	0.817	0.30	4.3	77.7	3.13	40.2	0.00			503	
516	6.01	5.96	34.324	27.023	109.9	0.835	0.26	3.7	79.3	3.16	40.5	0.00			520	201

A) SECOND FLUOROMETER READING MIS-RECORDED. CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 19.6 N	121 42.9 W	22/01/07	1721	UTC	4001 m	360 07 kn	350 03 06	0	1028.5 mb	15.0 C	14.0 C	15m	0/8	

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	12.88	12.88		33.378		25.161	279.5	0.000	6.07	101.2	3.9	0.47	0.9	0.15	1.46	0.07	0	
1	A	12.88	12.88		33.378		25.161	279.5	0.003	6.07	101.2	3.9	0.47	0.9	0.15	1.46	0.07	1	221
10	ISL	12.87	12.87	D	33.376	D	25.161	279.7	0.028	6.09	101.5	3.7	0.46	0.9	0.15	1.27	0.11	10	
11	A	12.87	12.87		33.379		25.164	279.5	0.031	6.09	101.5	3.7	0.46	0.9	0.15	1.25	0.12	11	219
11		12.87	12.87		33.378		25.163	279.5	0.031									11	220
20	A	12.86	12.86		33.382		25.168	279.3	0.056	6.05	100.8	3.7	0.47	0.9	0.15	1.35	0.30	20	218
29	A	12.88	12.88		33.394		25.174	279.0	0.081	6.02	100.3	3.7	0.48	1.1	0.18	1.25	0.14	29	217
30	ISL	12.87	12.87	D	33.392	D	25.174	279.0	0.084	6.02	100.3	3.7	0.48	1.1	0.18	1.24	0.15	30	
36	A	12.86	12.86		33.394		25.178	278.8	0.101	6.01	100.1	3.8	0.48	1.1	0.18	1.19	0.22	36	216
48		12.84	12.83		33.395		25.183	278.6	0.134	6.01	100.1	3.7	0.49	1.2	0.19	1.13	0.28	48	215
50	ISL	12.84	12.83	D	33.395	D	25.183	278.7	0.140	6.00	99.9	3.7	0.49	1.3	0.19	1.12	0.27	50	
60	A	12.83	12.82		33.403		25.192	278.2	0.167	5.95	99.0	3.9	0.51	1.5	0.21	1.08	0.24	60	214
70		11.11	11.10		33.564		25.640	235.6	0.193	3.82	61.4	15.7	1.41	16.4	0.03	0.10	0.15	70	213
75	ISL	10.60	10.59	D	33.611	D	25.767	223.6	0.205	3.68	58.5	16.9	1.48	17.6	0.03	0.08	0.12	75	
85		10.33	10.32		33.640		25.836	217.2	0.227	3.39	53.6	19.4	1.61	20.0	0.02	0.04	0.09	85	212
100		9.83	9.82		33.742		26.000	201.8	0.258	3.06	47.9	22.9	1.77	22.6	0.01	0.02	0.07	101	211
120		9.45	9.44		33.879		26.171	186.0	0.297	2.74	42.5	27.1	1.93	25.0	0.01	0.01	0.04	121	210
125	ISL	9.40	9.39	D	33.895	D	26.191	184.1	0.306	2.68	41.5	27.7	1.96	25.4	0.01	0.01	0.04	126	
140		9.20	9.18		33.938		26.257	178.1	0.333	2.55	39.4	29.4	2.02	26.4	0.01	0.01	0.03	141	209
150	ISL	9.05	9.03	D	33.969	D	26.306	173.7	0.351	2.48	38.2	30.8	2.06	27.1	0.01	0.01	0.03	151	
169		8.79	8.77		34.024		26.390	166.0	0.383	2.36	36.1	33.5	2.12	28.3	0.01	0.00	0.04	170	208
199		8.57	8.55		34.072		26.462	159.7	0.432	2.11	32.1	36.8	2.22	29.6	0.01	0.00	0.04	200	207
200	ISL	8.54	8.52	D	34.073	D	26.468	159.2	0.434	2.10	32.0	36.9	2.23	29.7	0.01			201	
230		8.38	8.36		34.140		26.545	152.3	0.480	1.67	25.3	41.1	2.40	31.4	0.01			231	206
250	ISL	8.16	8.13	D	34.165	D	26.598	147.6	0.510	1.51	22.8	43.9	2.48	32.3	0.01			251	
269		7.95	7.92		34.169		26.633	144.5	0.538	1.38	20.7	46.6	2.54	33.1	0.01			271	205
300	ISL	7.65	7.62	D	34.194	D	26.697	138.8	0.582	1.09	16.3	51.1	2.67	34.5	0.01			302	
318		7.53	7.50		34.219		26.734	135.6	0.607	0.93	13.8	53.9	2.75	35.3	0.01			320	204
377		6.81	6.77		34.253		26.861	124.0	0.683	0.58	8.5	64.8	2.97	37.8	0.00			379	203
400	ISL	6.58	6.54	D	34.255	D	26.894	121.0	0.711	0.52	7.6	68.0	3.03	38.6	0.00			403	
438		6.28	6.24		34.267		26.943	116.7	0.757	0.47	6.8	72.8	3.10	39.8	0.00			441	202
500	ISL	5.81	5.77	D	34.292	D	27.023	109.5	0.827	0.34	4.9	80.8	3.15	41.3	0.00			503	
512		5.73	5.69		34.290		27.031	108.8	0.840	0.31	4.4	82.4	3.16	41.6	0.00			516	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 59.1 N	122 23.8 W	22/01/07	0856	UTC	4136 m	360 15 kn			1022.8 mb	12.9 C	11.1 C			

DEPTH m		TEMP DEG C	POT TEMP DEG C		SALINITY		SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	13.00	13.00		33.492		25.225	273.3	0.000	5.97	99.8	4.1	0.50	1.2	0.19	0.98	0.35	0	
2		13.00	13.00		33.492		25.225	273.4	0.005	5.97	99.8	4.1	0.50	1.2	0.19	0.98	0.35	2	220
10	ISL	13.00	13.00	D	33.490	D	25.224	273.7	0.027	5.98	100.0	4.1	0.50	1.1	0.19	0.98	0.33	10	
15		13.00	13.00		33.492		25.226	273.7	0.041	5.98	100.0	4.1	0.50	1.1	0.19	0.97	0.31	15	219
20	ISL	13.00	13.00	D	33.490	D	25.224	274.0	0.055	5.98	100.0	4.1	0.50	1.1	0.19	0.96	0.30	20	
29		13.01	13.01		33.491		25.223	274.3	0.079	5.98	100.0	4.0	0.50	1.1	0.19	0.94	0.29	29	218
30	ISL	13.01	13.01	D	33.490	D	25.223	274.4	0.082	5.98	100.0	4.0	0.50	1.1	0.19	0.94	0.29	30	
45		13.01	13.00		33.495		25.227	274.4	0.123	5.98	100.0	4.0	0.50	1.1	0.19	0.97	0.31	45	217
50	ISL	13.01	13.00	D	33.490	D	25.223	274.9	0.137	5.98	100.0	4.0	0.50	1.0	0.19	0.98	0.30	50	
55		13.01	13.00		33.491		25.224	274.9	0.151	5.98	100.0	4.0	0.50	1.0	0.19	0.99	0.30	55	216
65		13.01	13.00		33.492		25.225	275.1	0.178	5.98	100.0	4.0	0.50	1.1	0.20	0.92	0.33	65	215
75		12.99	12.98		33.506		25.240	274.0	0.206	5.87	98.1	4.5	0.56	1.8	0.29	0.50	0.27	75	214
84		12.96	12.95		33.511		25.250	273.2	0.230	5.77	96.4	4.7	0.59	2.3	0.31	0.38	0.21	84	213
94		12.18	12.17		33.531		25.417	257.5	0.257	4.74	77.9	10.1	0.99	9.4	0.18	0.16	0.16	94	212
100	ISL	10.87	10.86	D	33.577	D	25.693	231.2	0.272	4.46	71.3	13.5	1.22	13.7	0.11	0.09	0.14	100	
110		10.21	10.20		33.594		25.821	219.1	0.294	4.14	65.2	18.5	1.53	19.4	0.02	0.04	0.11	111	211
125		9.66	9.65		33.710		26.004	201.9	0.326	3.31	51.6	22.1	1.68	22.2	0.01	0.01	0.07	126	210
144		9.51	9.49		33.859		26.146	188.9	0.363	3.17	49.3	25.0	1.77	23.4	0.01	0.01	0.06	145	209
150	ISL	9.38	9.36	D	33.905	D	26.203	183.6	0.374	3.03	47.0	26.2	1.81	24.0	0.01	0.01	0.06	151	
169		9.20	9.18		33.987		26.296	175.0	0.408	2.57	39.7	29.9	1.95	26.1	0.01	0.00	0.05	170	208
199		8.96	8.94		34.043		26.379	167.7	0.459	2.32	35.6	32.9	2.06	27.8	0.01	0.00	0.04	200	207
200	ISL	8.94	8.92	D	34.063	D	26.398	166.0	0.461	2.31	35.5	33.0	2.06	27.8	0.01			201	
229		8.64	8.62		34.097		26.472	159.4	0.508	2.13	32.5	36.6	2.15	29.1	0.01			230	206
250	ISL	8.33	8.30	D	34.102	D	26.523	154.7	0.541	2.07	31.4	39.6	2.19	30.2	0.01			251	
269		7.97	7.94		34.097		26.573	150.2	0.570	2.02	30.4	42.5	2.25	31.3	0.01			271	205
300	ISL	8.06	8.03	D	34.223	D	26.659	142.6	0.616	1.37	20.6	47.4	2.47	33.5	0.00			302	
318		7.83	7.80		34.225		26.695	139.4	0.641	0.97	14.5	50.4	2.61	34.8	0.00			320	204
378		6.97	6.93		34.227		26.819	128.1	0.721	0.73	10.7	60.5	2.79	37.7	0.00			380	203
400	ISL	6.74	6.70	D	34.231	D	26.854	125.0	0.749	0.66	9.6	64.3	2.84	38.7	0.00			403	
438		6.28	6.24		34.229		26.913	119.5	0.796	0.54	7.8	70.4	2.92	40.3	0.00			441	202
500	ISL	5.90	5.86	D	34.256	D	26.983	113.3	0.868	0.38	5.4	78.4	3.02	41.9	0.00			503	
514		5.78	5.74		34.265		27.005	111.3	0.883	0.35	5.0	80.2	3.04	42.2	0.00			517	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 39.3 N	123 4.4 W	22/01/07	0103	UTC	4115 m	350	30 kn	340 10 08	0	1020.5 mb	14.1 C	12.6 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.47	13.47	33.218	24.919	302.5	0.000	5.99	101.0	2.7	0.37	0.5	0.05	0.60	0.32	0	
3	13.47	13.47	33.218	24.919	302.5	0.009	5.99	101.0	2.7	0.37	0.5	0.05	0.60	0.32	3	221
10 ISL	13.47 D	13.47	33.217 D	24.919	302.8	0.030	5.99	100.9	2.6	0.37	0.5	0.05	0.71	0.28	10	
11	13.48	13.48	33.218	24.918	302.9	0.033	5.99	101.0	2.6	0.37	0.5	0.05	0.73	0.27	11	219
11	13.48	13.48	33.217	24.917	303.0	0.033									11	220
20 ISL	13.48 D	13.48	33.216 D	24.916	303.3	0.061	5.99	101.0	2.7	0.37	0.3	0.05	0.83	0.05	20	
21	13.48	13.48	33.218	24.918	303.2	0.064	5.99	101.0	2.7	0.37	0.3	0.05	0.83	0.03	21	218
30	13.48	13.48	33.217	24.917	303.5	0.091	5.99	101.0	2.6	0.37	0.4	0.05	0.76	0.04	30	217
41	13.35	13.34	33.239	24.961	299.6	0.124	5.96	100.2	2.9	0.39	0.7	0.07	0.94	0.12	41	216
50	13.20	13.19	33.267	25.013	294.9	0.151	5.94	99.6	3.1	0.42	1.2	0.11	0.73	0.15	50	215
61	13.15	13.14	33.271	25.026	293.9	0.183	5.95	99.6	3.1	0.43	1.3	0.11	0.70	0.44	61	214
70	12.93	12.92	33.345	25.127	284.5	0.209	5.90	98.4	3.6	0.50	2.2	0.22	0.69	0.25	70	213
75 ISL	12.88 D	12.87	33.385 D	25.168	280.8	0.223	5.87	97.8	3.7	0.51	2.5	0.25	0.67	0.20	75	
85	12.79	12.78	33.392	25.192	278.8	0.251	5.82	96.8	4.3	0.56	3.1	0.31	0.55	0.14	85	212
99	11.38	11.37	33.288	25.377	261.3	0.289	5.31	85.6	7.3	0.81	7.9	0.03	0.08	0.06	99	211
100 ISL	11.38 D	11.37	33.281 D	25.371	261.8	0.292	5.27	85.0	7.6	0.83	8.3	0.03	0.08	0.06	100	
120	10.30	10.29	33.488	25.723	228.6	0.341	4.45	70.2	13.8	1.24	15.2	0.01	0.05	0.05	121	210
125 ISL	10.02 D	10.01	33.579 D	25.842	217.4	0.352	4.23	66.4	15.7	1.35	16.9	0.01	0.04	0.05	126	
140	9.64	9.62	33.693	25.994	203.2	0.384	3.71	57.7	20.7	1.61	21.0	0.01	0.02	0.04	141	209
150 ISL	9.37 D	9.35	33.760 D	26.091	194.1	0.403	3.78	58.5	21.0	1.59	20.8	0.01	0.02	0.03	151	
170	9.31	9.29	33.841	26.164	187.6	0.442	3.93	60.8	21.5	1.54	20.5	0.01	0.01	0.02	171	208
199	8.75	8.73	33.963	26.349	170.5	0.493	3.96	60.5	26.2	1.59	21.8	0.01	0.00	0.02	200	207
200 ISL	8.67 D	8.65	33.967 D	26.365	169.0	0.495	3.91	59.7	26.6	1.61	22.0	0.01			201	
229	8.44	8.42	34.067	26.479	158.6	0.543	2.27	34.5	37.1	2.18	28.8	0.01			230	206
250 ISL	8.06 D	8.03	34.102 D	26.564	150.8	0.575	2.00	30.1	41.0	2.33	30.7	0.00			251	
269	8.06	8.03	34.123	26.580	149.5	0.604	1.76	26.5	43.4	2.39	31.4	0.00			271	205
300 ISL	7.67 D	7.64	34.122 D	26.637	144.5	0.649	1.50	22.4	48.4	2.53	33.3	0.00			302	
319	7.37	7.34	34.132	26.688	139.8	0.676	1.37	20.3	51.5	2.60	34.3	0.00			321	204
377	6.83	6.79	34.165	26.789	130.7	0.755	0.97	14.2	60.1	2.80	36.6	0.00			379	203
400 ISL	6.69 D	6.65	34.191 D	26.829	127.3	0.784	0.82	12.0	63.5	2.86	37.4	0.00			403	
438	6.38	6.34	34.217	26.891	121.7	0.832	0.61	8.8	69.1	2.94	38.5	0.00			441	202
500 ISL	5.98 D	5.94	34.266 D	26.981	113.6	0.905	0.40	5.7	77.5	3.08	39.9	0.00			503	
513	5.92	5.88	34.275	26.996	112.4	0.919	0.36	5.2	79.3	3.11	40.2	0.00			516	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 19.5 N	123 44.9 W	21/01/07	1731	UTC	3996 m	350	35 kn	340 10 07	1	1023.0 mb	15.3 C	13.0 C	15m	3/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.17	14.17	33.300	24.839	310.1	0.000	5.89	100.8	2.3	0.34	0.0	0.02	0.37	0.16	0	
2 A	14.17	14.17	33.300	24.839	310.2	0.006	5.89	100.8	2.3	0.34	0.0	0.02	0.37	0.16	2	223
10 A	14.16	14.16	33.300	24.841	310.2	0.031	5.89	100.7	2.3	0.33	0.1	0.02	0.41	0.11	10	221
10	14.17	14.17	33.300	24.839	310.4	0.031									10	222
20 A	14.16	14.16	33.306	24.846	310.0	0.062	5.89	100.7	2.2	0.34	0.1	0.02	0.38	0.15	20	220
29 A	14.16	14.16	33.299	24.841	310.7	0.090	5.89	100.7	2.2	0.33	0.1	0.02	0.38	0.14	29	219
30 ISL	14.17 D	14.17	33.299 D	24.839	311.0	0.093	5.89	100.8	2.2	0.33	0.1	0.02	0.38	0.14	30	
36 A	14.17	14.16	33.300	24.840	311.1	0.112	5.89	100.8	2.1	0.33	0.1	0.02	0.40	0.14	36	218
48	14.17	14.16	33.300	24.840	311.4	0.149	5.90	100.9	2.1	0.34	0.0	0.02	0.36	0.14	48	217
50 ISL	14.16 D	14.15	33.296 D	24.839	311.5	0.155	5.90	100.9	2.1	0.34	0.0	0.02	0.36	0.14	50	
58 A	14.18	14.17	33.301	24.839	311.7	0.180	5.89	100.8	2.2	0.34	0.1	0.02	0.38	0.14	58	216
67	14.18	14.17	33.302	24.840	311.9	0.208	5.90	100.9	2.1	0.34	0.1	0.02	0.38	0.14	67	215
75	14.19	14.18	33.303	24.839	312.2	0.233	5.89	100.8	2.1	0.42	0.1	0.02	0.37	0.16	75	214
84	14.18	14.17	33.304	24.842	312.2	0.261	5.89	100.8	2.0	0.34	0.1	0.02	0.37	0.14	84	213
96	13.93	13.92	33.272	24.870	309.9	0.299	5.86	99.7	2.1	0.35	0.3	0.03	0.29	0.12	96	212
100 ISL	12.72 D	12.71	33.283 D	25.121	285.9	0.311	5.79	96.1	2.4	0.38	0.9	0.03	0.23	0.11	100	
110	12.72	12.71	33.431	25.236	275.2	0.339	5.49	91.2	3.9	0.52	3.4	0.03	0.08	0.08	110	211
125	11.38	11.36	33.419	25.479	252.2	0.378	4.77	77.0	9.2	0.97	10.4	0.01	0.05	0.06	126	210
141	10.07	10.05	33.602	25.852	216.9	0.416	4.21	66.1	16.1	1.39	17.4	0.01	0.02	0.03	142	209
150 ISL	9.77 D	9.75	33.701 D	25.979	204.8	0.435	3.90	60.9	19.1	1.55	19.9	0.01	0.01	0.03	151	
170	9.24	9.22	33.811	26.152	188.7	0.474	3.37	52.0	24.1	1.76	23.0	0.01	0.00	0.02	171	208
199	8.83	8.81	33.951	26.327	172.6	0.526	3.26	49.9	28.1	1.86	24.4	0.01	0.00	0.02	200	207
200 ISL	8.66 D	8.64	33.998 D	26.391	166.5	0.528	3.26	49.7	28.3	1.86	24.4	0.01			201	
229	8.31	8.29	34.004	26.449	161.3	0.576	3.06	46.3	33.8	1.94	26.3	0.01			230	206
250 ISL	8.22 D	8.19	34.084 D	26.526	154.5	0.609	2.39	36.1	38.7	2.17	29.1	0.00			251	
269	7.98	7.95	34.105	26.578	149.7	0.638	1.76	26.5	43.0	2.39	31.6	0.00			270	205
300 ISL	7.59 D	7.56	34.119 D	26.646	143.6	0.683	1.61	24.0	47.4	2.52	33.2	0.00			302	
321	7.42	7.39	34.120	26.672	141.4	0.713	1.51	22.4	49.9	2.57	33.7	0.00			323	204
375	6.95	6.91	34.180	26.785	131.2	0.787	0.94	13.8	58.5	2.82	36.2	0.00			377	203
400 ISL	6.70 D	6.66	34.208 D	26.841	126.1	0.819	0.77	11.2	62.5	2.90	37.1	0.00			402	
435	6.46	6.42	34.228	26.889	121.9	0.862	0.59	8.6	67.9	2.98	38.3	0.00			438	202
500 ISL	5.85 D	5.81	34.248 D	26.983	113.3	0.939	0.44	6.3	77.2	3.09	40.0	0.00			503	
515	5.80	5.76	34.254	26.994	112.4	0.956	0.40	5.7	79.4	3.11	40.4	0.00			518	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 86.8 32.5

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 55.6 N	118 27.5 W	24/01/07	0754 UTC	18 m	320 01 kn			1020.0 mb	15.1 C	13.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.35	14.35	33.571	25.010	293.8	0.000	5.90	101.5	1.7	0.40	0.5	0.05	1.42	0.33	0	
2	14.35	14.35	33.571	25.010	293.9	0.006	5.90	101.5	1.7	0.40	0.5	0.05	1.42	0.33	2	204
6	14.35	14.35	33.570	25.010	294.0	0.018	5.91	101.6	1.7	0.40	0.5	0.05	1.47	0.34	6	203
10 ISL	14.34 D	14.34	33.569 D	25.011	294.0	0.029	5.92	101.8	1.6	0.40	0.5	0.05	1.62	0.32	10	
11	14.34	14.34	33.570	25.012	294.0	0.032	5.92	101.8	1.6	0.40	0.5	0.05	1.65	0.32	11	202
16	14.21	14.21	33.569	25.039	291.6	0.047	5.94	101.9	1.9	0.41	0.6	0.08	1.54	0.34	16	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 27.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.7 N	117 45.1 W	18/01/07	1202 UTC	30 m	130 01 kn			1018.0 mb	11.5 C	8.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.36	14.36	33.566	25.004	294.4	0.000	5.74	98.7	2.5	0.41	0.6	0.09	1.73	0.65	0	
1	14.36	14.36	33.566	25.004	294.4	0.003	5.74	98.7	2.5	0.41	0.6	0.09	1.73	0.65	1	206
5	14.35	14.35	33.566	25.007	294.3	0.015	5.74	98.7	2.6	0.41	0.6	0.09	1.74	0.64	5	205
10	14.35	14.35	33.566	25.007	294.4	0.029	5.73	98.5	2.5	0.41	0.6	0.10	1.84	0.66	10	204
15	14.28	14.28	33.559	25.016	293.7	0.044	5.64	96.9	2.9	0.47	1.1	0.12	1.54	0.56	15	203
20	14.07	14.07	33.540	25.046	291.0	0.059	5.36	91.6	4.4	0.64	2.8	0.20	0.95	0.43	20	202
26	13.95	13.95	33.546	25.075	288.3	0.076	5.23	89.2	5.0	0.70	3.3	0.20	0.85	0.47	26	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 29.1 N	117 46.0 W	18/01/07	1021 UTC	61 m	100 03 kn			1018.2 mb	12.0 C	8.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.49	14.49	33.567	24.978	296.9	0.000	5.89	101.6	0.4	0.34	0.1	0.01	2.94	1.18	0	
2	14.49	14.49	33.567	24.978	297.0	0.006	5.89	101.6	0.4	0.34	0.1	0.01	2.94	1.18	2	209
6	14.50	14.50	33.566	24.975	297.3	0.018	5.88	101.4	0.4	0.34	0.1	0.01	2.94	1.20	6	208
10 ISL	14.50 D	14.50	33.564 D	24.974	297.6	0.030	5.87	101.3	0.4	0.34	0.1	0.02	2.92	1.19	10	
11	14.50	14.50	33.566	24.975	297.5	0.033	5.87	101.3	0.4	0.34	0.1	0.02	2.91	1.18	11	207
20	14.49	14.49	33.565	24.977	297.6	0.059	5.85	100.9	0.6	0.36	0.2	0.02	2.96	1.12	20	206
30	14.48	14.48	33.565	24.979	297.7	0.089	5.86	101.0	0.5	0.35	0.2	0.02	2.87	1.04	30	205
35	14.26	14.25	33.548	25.013	294.6	0.104	5.38	92.3	2.9	0.54	2.6	0.07	2.28	1.07	35	204
41	13.37	13.36	33.514	25.170	279.8	0.121	4.27	71.9	9.0	1.00	9.1	0.16	0.40	0.51	41	203
50	12.88	12.87	33.554	25.298	267.7	0.146	3.77	62.9	11.7	1.23	12.1	0.31	0.25	0.29	50	202
56	12.74	12.73	33.568	25.337	264.2	0.162	3.63	60.4	12.6	1.29	12.7	0.34	0.22	0.29	56	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 25.1 N	117 54.0 W	18/01/07	1751 UTC	624 m	020 18 kn	030 01 06	0	1019.2 mb	15.9 C	10.2 C	11m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.60	14.60	33.572	24.958	298.8	0.000	5.88	101.6	1.2	0.33	0.0	0.01	2.00	0.58	0	
2 A	14.60	14.60	33.572	24.958	298.8	0.006	5.88	101.6	1.2	0.33	0.0	0.01	2.00	0.58	2	223
7 A	14.59	14.59	33.569	24.958	299.0	0.021	5.88	101.6	1.2	0.34	0.0	0.01	2.02	0.76	7	222
10 ISL	14.58 D	14.58	33.567 D	24.959	299.0	0.030	5.88	101.6	1.1	0.34	0.0	0.01	2.11	0.68	10	
15 A	14.56	14.56	33.566	24.962	298.8	0.045	5.87	101.4	1.0	0.34	0.0	0.01	2.26	0.57	15	220
15	14.56	14.56	33.566	24.962	298.8	0.045									15	221
20 ISL	14.42 D	14.42	33.562 D	24.989	296.4	0.060	5.84	100.6	1.0	0.35	0.1	0.01	2.31	0.90	20	
22 A	14.42	14.42	33.564	24.991	296.3	0.066	5.83	100.4	1.0	0.36	0.1	0.01	2.33	1.04	22	219
26 A	14.41	14.41	33.565	24.994	296.1	0.077	5.80	99.9	1.1	0.36	0.1	0.01	2.22	1.13	26	218
30 ISL	14.40 D	14.40	33.563 D	24.995	296.2	0.089	5.80	99.8	1.1	0.37	0.1	0.01	2.20	1.27	30	
34	14.40	14.40	33.566	24.997	296.1	0.101	5.79	99.7	1.1	0.38	0.2	0.01	2.19	1.32	34	217
43 A	14.38	14.37	33.565	25.001	296.0	0.128	5.77	99.3	1.2	0.39	0.3	0.02	2.16	0.72	43	216
50 ISL	14.02 D	14.01	33.544 D	25.060	290.5	0.148	5.18	88.5	4.1	0.62	3.4	0.11	1.65	0.87	50	
53	13.77	13.76	33.539	25.108	286.0	0.157	4.80	81.6	6.0	0.78	5.5	0.14	1.35	0.95	53	215
60	12.68	12.67	33.549	25.334	264.6	0.176	3.74	62.1	11.8	1.25	12.6	0.11	0.58	0.62	60	214
71	12.42	12.41	33.571	25.402	258.4	0.205	3.57	59.0	13.0	1.34	14.0	0.05	0.43	0.41	71	213
75 ISL	12.21 D	12.20	33.623 D	25.482	250.8	0.215	3.46	56.9	13.8	1.40	14.9	0.04	0.36	0.37	75	
86	11.76	11.75	33.660	25.596	240.2	0.242	3.12	50.9	16.5	1.58	17.4	0.02	0.17	0.29	86	212
100	11.41	11.40	33.761	25.739	226.9	0.275	2.74	44.4	19.8	1.76	19.9	0.01	0.08	0.19	100	211
121	10.72	10.71	33.829	25.916	210.5	0.321	2.64	42.1	22.3	1.86	21.8	0.01	0.04	0.11	122	210
125 ISL	10.69 D	10.68	33.837 D	25.928	209.5	0.329	2.56	40.8	22.9	1.89	22.2	0.01	0.03	0.11	126	
141	10.66	10.64	33.920	25.998	203.2	0.362	2.24	35.7	25.0	2.01	23.4	0.01	0.02	0.10	142	209
150 ISL	10.62 D	10.60	33.964 D	26.040	199.4	0.380	2.15	34.3	25.9	2.05	23.9	0.01	0.02	0.09	151	
169	10.41	10.39	34.007	26.110	193.1	0.418	2.05	32.5	27.5	2.10	24.7	0.01	0.01	0.07	170	208
199	10.15	10.13	34.090	26.220	183.3	0.474	1.91	30.1	29.8	2.17	25.9	0.01	0.01	0.08	200	207
200 ISL	10.14 D	10.12	34.098 D	26.228	182.5	0.476	1.91	30.1	29.9	2.17	25.9	0.01			201	
228	9.66	9.63	34.154	26.353	171.1	0.525	1.84	28.7	32.7	2.23	27.2	0.00			229	206
250 ISL	9.48 D	9.45	34.195 D	26.415	165.6	0.563	1.68	26.1	35.1	2.31	28.2	0.00			251	
268	9.23	9.20	34.223	26.478	159.9	0.592	1.53	23.7	37.3	2.38	29.0	0.00			270	205
300 ISL	8.88 D	8.85	34.230 D	26.540	154.5	0.642	1.32	20.3	41.7	2.49	30.5	0.00			302	
321	8.48	8.45	34.248	26.616	147.4	0.674	1.20	18.3	44.6	2.56	31.5	0.00			323	204
380	7.93	7.89	34.263	26.711	139.1	0.758	0.90	13.5	51.3	2.73	33.6	0.00			382	203
400 ISL	7.65 D	7.61	34.267 D	26.755	135.1	0.786	0.79	11.8	54.2	2.79	34.4	0.00			403	
440	7.27	7.23	34.286	26.825	128.8	0.839	0.59	8.7	60.1	2.91	35.9	0.00			443	202
500 ISL	6.77 D	6.72	34.308 D	26.912	121.1	0.914	0.41	6.0	67.8	3.04	37.7	0.00			503	
515	6.66	6.61	34.308	26.927	119.8	0.932	0.36	5.3	69.7	3.07	38.1	0.00			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 15.0 N	118 14.9 W	18/01/07	2109	UTC	344 m	330 07 kn	340 01 06	1	1017.1 mb	16.5 C	11.5 C	12m	1/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.68	14.68	33.556	24.929	301.6	0.000	5.98	103.5	0.5	0.32	0.0	0.00	2.16	0.62	0	
1	14.68	14.68	33.556	24.929	301.6	0.003	5.98	103.5	0.5	0.32	0.0	0.00	2.16	0.62	1	219
10	14.65	14.65	33.555	24.935	301.3	0.030	5.98	103.5	0.5	0.31	0.0	0.00	1.68	0.49	10	216
10	14.65	14.65	33.555	24.935	301.3	0.030									10	218
11	14.65	14.65	33.555	24.935	301.3	0.033									11	217
20 ISL	14.63 D	14.63	33.557 D	24.941	301.0	0.060	5.97	103.2	0.4	0.31	0.0	0.00	2.07	0.47	20	
21	14.63	14.63	33.560	24.943	300.8	0.063	5.97	103.3	0.4	0.31	0.0	0.00	2.13	0.47	21	215
29	14.61	14.61	33.560	24.948	300.6	0.087	5.94	102.7	0.2	0.31	0.0	0.00	2.39	0.76	29	214
30 ISL	14.60 D	14.60	33.558 D	24.948	300.6	0.090	5.94	102.7	0.2	0.31	0.0	0.00	2.45	0.73	30	
40	14.58	14.57	33.560	24.954	300.3	0.120	5.89	101.8	0.4	0.33	0.0	0.01	3.01	0.33	40	213
49	13.82	13.81	33.490	25.060	290.5	0.147	5.06	86.0	5.2	0.67	4.8	0.11	0.86	0.37	49	212
50 ISL	13.67 D	13.66	33.487 D	25.088	287.8	0.150	4.99	84.6	5.6	0.70	5.3	0.11	0.74	0.36	50	
59	12.88	12.87	33.484	25.245	273.1	0.175	4.47	74.5	8.4	0.96	9.1	0.09	0.23	0.24	59	211
70	12.49	12.48	33.545	25.368	261.6	0.205	4.10	67.8	11.0	1.15	11.9	0.11	0.20	0.20	70	210
75 ISL	12.09 D	12.08	33.557 D	25.454	253.5	0.217	3.83	62.8	12.6	1.27	13.6	0.08	0.16	0.18	75	
86	11.48	11.47	33.642	25.634	236.6	0.244	3.29	53.3	15.9	1.52	17.3	0.02	0.07	0.14	86	209
99	10.89	10.88	33.704	25.789	222.1	0.274	3.11	49.8	18.5	1.65	19.7	0.02	0.05	0.11	99	208
100 ISL	10.87 D	10.86	33.710 D	25.797	221.4	0.276	3.09	49.4	18.7	1.66	19.9	0.02	0.05	0.11	100	
119	10.52	10.51	33.841	25.961	206.2	0.317	2.69	42.7	22.5	1.85	22.1	0.01	0.03	0.13	120	207
125 ISL	10.47 D	10.46	33.875 D	25.996	202.9	0.329	2.58	40.9	23.4	1.89	22.6	0.01	0.03	0.11	126	
139	10.37	10.35	33.945	26.068	196.4	0.357	2.39	37.9	25.2	1.96	23.5	0.01	0.02	0.07	140	206
150 ISL	10.19 D	10.17	33.997 D	26.140	189.8	0.378	2.33	36.8	26.6	1.99	24.2	0.01	0.02	0.06	151	
169	9.91	9.89	34.048	26.227	181.8	0.414	2.28	35.8	28.7	2.04	25.2	0.01	0.01	0.05	170	205
199	9.76	9.74	34.122	26.311	174.5	0.467	2.04	31.9	30.6	2.13	26.3	0.00	0.01	0.05	200	204
200 ISL	9.75 D	9.73	34.130 D	26.319	173.8	0.469	2.03	31.8	30.7	2.14	26.3	0.00			201	
228	9.66	9.63	34.216	26.401	166.5	0.517	1.76	27.5	33.6		27.2	0.01			229	203
250 ISL	9.18 D	9.15	34.233 D	26.493	158.1	0.552	1.52	23.5	37.6	2.39	28.8	0.01			251	
268	8.82	8.79	34.238	26.555	152.4	0.580	1.35	20.7	40.9	2.48	30.1	0.00			270	202
300 ISL	8.55 D	8.52	34.250 D	26.607	148.0	0.628	1.20	18.3	44.0	2.55	31.1	0.01			302	
320	8.37	8.34	34.251	26.635	145.5	0.658	1.11	16.8	46.0	2.60	31.8	0.01			322	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 37.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 11.3 N	118 23.0 W	19/01/07	0022	UTC	1172 m	320 15 kn	330 01 06	1	1016.2 mb	15.5 C	12.9 C		6/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.59	14.59	33.567	24.956	298.9	0.000	5.83	100.8	2.3	0.39	0.3	0.05	2.00	0.61	0	
2	14.59	14.59	33.567	24.956	299.0	0.006	5.83	100.8	2.3	0.39	0.3	0.05	2.00	0.61	2	220
10	14.60	14.60	33.567	24.954	299.4	0.030	5.82	100.6	2.2	0.39	0.3	0.05	1.77	0.66	10	219
20 ISL	14.56 D	14.56	33.565 D	24.962	299.0	0.060	5.81	100.3	2.2	0.41	0.4	0.05	2.01	0.67	20	
21	14.56	14.56	33.566	24.963	299.0	0.063	5.81	100.3	2.2	0.41	0.4	0.05	2.03	0.67	21	218
30 ISL	14.52 D	14.52	33.563 D	24.969	298.6	0.090	5.87	101.3	1.7	0.37	0.1	0.03	2.52	0.78	30	
31	14.52	14.52	33.565	24.971	298.5	0.093	5.88	101.5	1.6	0.37	0.1	0.03	2.59	0.79	31	217
41	14.49	14.48	33.561	24.974	298.4	0.123	5.89	101.6	1.0	0.35	0.0	0.02	3.29	0.62	41	216
50	14.48	14.47	33.563	24.978	298.3	0.149	5.84	100.7	1.3	0.37	0.1	0.03	2.90	0.68	50	215
61	14.07	14.06	33.543	25.049	291.9	0.182	5.20	88.9	5.8	0.65	3.9	0.16	0.71	0.33	61	214
69	13.35	13.34	33.514	25.174	280.1	0.205	4.65	78.3	7.8	0.87	7.5	0.17	0.34	0.41	69	213
75 ISL	12.49 D	12.48	33.520 D	25.349	263.6	0.221	4.25	70.3	10.0	1.07	10.7	0.12	0.20	0.33	75	
85	11.69	11.68	33.578	25.545	245.0	0.246	3.69	60.0	13.7	1.36	15.3	0.02	0.11	0.15	85	212
100	11.24	11.23	33.667	25.697	230.9	0.282	3.27	52.7	17.0	1.57	18.2	0.02	0.07	0.13	100	211
119	10.79	10.78	33.801	25.882	213.7	0.324	2.67	42.7	21.4	1.83	21.4	0.01	0.03	0.08	120	210
125 ISL	10.72 D	10.70	33.839 D	25.924	209.8	0.337	2.53	40.4	22.6	1.89	22.1	0.01	0.03	0.08	126	
140	10.47	10.45	33.928	26.038	199.3	0.368	2.30	36.5	25.0	2.00	23.6	0.01	0.02	0.07	141	209
150 ISL	10.29 D	10.27	33.984 D	26.113	192.4	0.387	2.28	36.1	26.0	2.03	24.2	0.01	0.02	0.07	151	
168	9.99	9.97	34.020	26.192	185.2	0.421	2.24	35.2	27.4	2.06	25.1	0.01	0.01	0.06	169	208
198	9.77	9.75	34.114	26.303	175.2	0.475	1.94	30.4	30.6	2.19	26.6	0.00	0.01	0.07	199	207
200 ISL	9.75 D	9.73	34.117 D	26.309	174.7	0.479	1.94	30.3	30.7	2.19	26.7	0.00			201	
230	9.35	9.32	34.134	26.388	167.7	0.530	1.89	29.3	32.7	2.23	27.8	0.00			231	206
250 ISL	9.21 D	9.18	34.188 D	26.453	161.9	0.563	1.75	27.1	34.9	2.30	28.6	0.00			251	
270	8.99	8.96	34.203	26.501	157.7	0.595	1.57	24.2	37.5	2.38	29.5	0.00			272	205
300 ISL	8.61 D	8.58	34.228 D	26.580	150.5	0.641	1.36	20.8	41.3	2.48	30.9	0.00			302	
318	8.38	8.35	34.226	26.614	147.5	0.668	1.24	18.8	43.5	2.53	31.7	0.00			320	204
378	7.96	7.92	34.267	26.710	139.2	0.754	0.85	12.8	50.2	2.73	33.5	0.00			380	203
400 ISL	7.74 D	7.70	34.276 D	26.750	135.7	0.785	0.72	10.8	53.0	2.80	34.2	0.00			403	
438	7.41	7.37	34.296	26.813	130.1	0.835	0.53	7.9	58.5	2.91	35.6	0.00			441	202
500 ISL	6.67 D	6.62	34.315 D	26.930	119.2	0.912	0.34	5.0	69.6	3.04	37.9	0.00			503	
512	6.54	6.49	34.320	26.952	117.2	0.926	0.30	4.4	71.8	3.07	38.3	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 55.2 N	118 56.0 W	19/01/07	0626 UTC	1699 m	330 19 kn			1018.0 mb	14.1 C	12.6 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.56	14.56	33.569	24.964	298.2	0.000	5.90	101.9	0.5	0.31	0.0	0.01	1.37	0.53	0	
1 A	14.56	14.56	33.569	24.964	298.2	0.003	5.90	101.9	0.5	0.31	0.0	0.01	1.37	0.53	1	220
10 ISL	14.56 D	14.56	33.567 D	24.963	298.6	0.030	5.89	101.7	0.5	0.31	0.0	0.01	1.73	0.67	10	
11	14.56	14.56	33.569	24.965	298.5	0.033	5.89	101.7	0.5	0.31	0.0	0.01	1.78	0.69	11	219
20	14.57	14.57	33.570	24.964	298.8	0.060	5.90	101.9	0.4	0.31	0.0	0.01	1.95	0.61	20	218
30	14.57	14.57	33.569	24.963	299.2	0.090	5.90	101.9	0.5	0.31	0.0	0.01	1.98	0.47	30	217
40	14.56	14.55	33.566	24.963	299.5	0.120	5.85	101.0	0.7	0.32	0.1	0.01	1.71	0.64	40	216
50	14.56	14.55	33.567	24.964	299.7	0.149	5.86	101.2	0.7	0.32	0.1	0.01	1.81	0.61	50	215
60	14.26	14.25	33.543	25.009	295.6	0.179	5.57	95.6	2.3	0.45	1.6	0.08	1.09	0.65	60	214
70	13.69	13.68	33.513	25.105	286.8	0.208	5.17	87.7	4.9	0.65	4.7	0.15	0.56	0.46	70	213
75 ISL	12.72 D	12.71	33.491 D	25.282	270.0	0.222	4.83	80.3	7.6	0.83	7.6	0.14	0.36	0.35	75	
85	11.83	11.82	33.592	25.530	246.5	0.248	4.09	66.7	13.5	1.22	13.7	0.12	0.11	0.18	85	212
100	10.86	10.85	33.691	25.784	222.6	0.283	3.27	52.3	19.1	1.60	19.2	0.03	0.06	0.15	100	211
119	10.35	10.34	33.844	25.992	203.1	0.324	2.64	41.8	23.6	1.87	22.7	0.01	0.03	0.12	120	210
125 ISL	10.18 D	10.17	33.896 D	26.062	196.6	0.336	2.58	40.7	24.5	1.90	23.2	0.01	0.02	0.11	126	
139	10.00	9.98	33.936	26.124	191.0	0.363	2.50	39.3	26.5	1.96	24.2	0.01	0.01	0.08	140	209
150 ISL	10.05 D	10.03	34.072 D	26.222	181.9	0.383	2.28	35.9	28.8	2.06	25.4	0.01	0.01	0.06	151	
170	9.54	9.52	34.132	26.354	169.7	0.419	1.88	29.3	33.0	2.23	27.4	0.01	0.02	0.05	171	208
199	9.17	9.15	34.188	26.459	160.3	0.466	1.67	25.8	36.5	2.31	28.7	0.00	0.01	0.07	200	207
200 ISL	9.15 D	9.13	34.211 D	26.480	158.3	0.468	1.66	25.6	36.6	2.31	28.8	0.00			201	
229	8.78	8.76	34.216	26.543	152.7	0.513	1.46	22.4	40.6	2.44	30.2	0.00			230	206
250 ISL	8.64 D	8.61	34.246 D	26.589	148.7	0.545	1.31	20.0	43.6	2.52	31.1	0.00			251	
268	8.37	8.34	34.241	26.627	145.4	0.571	1.18	17.9	46.1	2.58	31.8	0.00			270	205
300 ISL	8.11 D	8.08	34.250 D	26.673	141.4	0.617	1.00	15.1	49.8	2.67	33.0	0.00			302	
318	7.89	7.86	34.257	26.712	137.9	0.642	0.91	13.7	51.7	2.72	33.6	0.00			320	204
378	7.42	7.38	34.280	26.798	130.4	0.723	0.65	9.7	58.2	2.86	35.3	0.00			380	203
400 ISL	7.22 D	7.18	34.279 D	26.826	128.0	0.751	0.58	8.6	60.6	2.90	35.8	0.00			403	
438	7.03	6.99	34.289	26.861	125.2	0.799	0.49	7.2	64.6	2.97	36.7	0.00			441	202
500 ISL	6.60 D	6.55	34.307 D	26.933	118.8	0.875	0.37	5.4	71.1	3.06	38.2	0.00			503	
511	6.53	6.48	34.310	26.945	117.8	0.888	0.35	5.1	72.3	3.08	38.5	0.00			515	201

A) SECOND FLUOROMETER READING MIS-RECORDED. CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 53.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 39.1 N	119 28.7 W	19/01/07	1221 UTC	1307 m	320 15 kn			1016.2 mb	13.8 C	12.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.59	13.59	33.532	25.138	281.7	0.000	5.78	97.8	2.7	0.47	1.9	0.10	0.80	0.27	0	
2	13.59	13.59	33.532	25.138	281.7	0.006	5.78	97.8	2.7	0.47	1.9	0.10	0.80	0.27	2	220
10 ISL	13.58 D	13.58	33.531 D	25.139	281.8	0.028	5.79	98.0	2.7	0.47	1.9	0.10	0.78	0.26	10	
11	13.59	13.59	33.533	25.139	281.9	0.031	5.79	98.0	2.7	0.47	1.9	0.10	0.78	0.26	11	219
20 ISL	13.59 D	13.59	33.531 D	25.138	282.2	0.056	5.79	98.0	2.7	0.47	2.0	0.10	0.74	0.26	20	
21	13.59	13.59	33.540	25.145	281.6	0.059	5.79	98.0	2.7	0.47	2.0	0.10	0.74	0.26	21	218
30 ISL	13.59 D	13.59	33.531 D	25.138	282.5	0.085	5.79	98.0	2.7	0.47	2.0	0.10	0.77	0.26	30	
31	13.59	13.59	33.534	25.140	282.3	0.087	5.79	98.0	2.7	0.47	2.0	0.10	0.77	0.26	31	217
40	13.59	13.58	33.531	25.138	282.8	0.113	5.79	98.0	2.6	0.47	2.0	0.10	0.76	0.25	40	216
50 ISL	13.59 D	13.58	33.530 D	25.138	283.1	0.141	5.77	97.7	2.8	0.48	1.9	0.10	0.76	0.25	50	
51	13.59	13.58	33.532	25.139	282.9	0.144	5.77	97.7	2.8	0.48	1.9	0.10	0.76	0.25	51	215
61	13.52	13.51	33.532	25.154	281.8	0.172	5.69	96.2	3.3	0.51	2.4	0.11	0.66	0.25	61	214
71	12.82	12.81	33.529	25.291	268.9	0.200	5.02	83.6	7.4	0.82	7.3	0.20	0.26	0.20	71	213
75 ISL	11.79 D	11.78	33.541 D	25.498	249.3	0.210	4.69	76.4	9.6	0.97	9.8	0.17	0.18	0.18	75	
85	11.16	11.15	33.589	25.651	234.9	0.234	3.91	62.9	15.3	1.35	16.0	0.05	0.08	0.13	85	212
100	10.29	10.28	33.773	25.947	207.0	0.267	3.18	50.2	22.3	1.76	21.7	0.05	0.03	0.08	100	211
120	9.98	9.97	33.899	26.098	193.0	0.307	2.57	40.4	25.4	1.94	23.9	0.02	0.01	0.05	121	210
125 ISL	9.84 D	9.83	33.945 D	26.158	187.4	0.317	2.53	39.6	26.3	1.98	24.4	0.02	0.01	0.05	126	
140	9.66	9.64	34.027	26.252	178.8	0.344	2.48	38.7	29.1	2.08	25.8	0.04	0.00	0.06	141	209
150 ISL	9.52 D	9.50	34.061 D	26.302	174.2	0.362	2.33	36.3	30.4	2.12	26.3	0.04	0.00	0.06	151	
170	9.40	9.38	34.118	26.366	168.5	0.396	1.99	30.9	32.7	2.19	27.2	0.03	0.00	0.05	171	208
199	9.08	9.06	34.200	26.483	158.0	0.444	1.66	25.6	37.2	2.34	28.9	0.02	0.00	0.04	200	207
200 ISL	9.08 D	9.06	34.197 D	26.480	158.2	0.445	1.65	25.4	37.3	2.34	28.9	0.02			201	
230	8.94	8.92	34.239	26.536	153.5	0.492	1.38	21.2	39.8	2.46	29.8	0.01			231	206
250 ISL	8.59 D	8.56	34.224 D	26.579	149.6	0.522	1.27	19.4	42.2	2.52	30.6	0.01			251	
269	8.45	8.42	34.231	26.607	147.3	0.551	1.18	17.9	44.7	2.57	31.5	0.02			271	205
300 ISL	8.26 D	8.23	34.241 D	26.644	144.3	0.596	1.02	15.4	48.5	2.65	32.6	0.02			302	
320	7.94	7.91	34.255	26.703	138.9	0.624	0.92	13.8	51.0	2.71	33.3	0.01			322	204
378	7.31	7.27	34.281	26.815	128.8	0.702	0.61	9.0	59.4	2.88	35.7	0.00			380	203
400 ISL	7.20 D	7.16	34.282 D	26.831	127.5	0.730	0.54	8.0	61.8	2.93	36.2	0.00			403	
437	6.91	6.87	34.296	26.882	123.0	0.776	0.46	6.8	65.5	2.99	36.9	0.00			440	202
500 ISL	6.54 D	6.49	34.315 D	26.948	117.4	0.852	0.35	5.1	72.5	3.08	38.4	0.00			503	
514	6.40	6.35	34.319	26.969	115.4	0.868	0.32	4.6	74.1	3.10	38.7	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 25.0 N	119 57.8 W	19/01/07	1805 UTC	847 m	330 22 kn	310 05 07	0	1018.2 mb	14.9 C	12.3 C	14m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.90	13.90	33.537	25.078	287.3	0.000	5.87	100.0	1.3	0.39	0.7	0.06	1.31	0.58	0	
2 A	13.90	13.90	33.537	25.078	287.4	0.006	5.87	100.0	1.3	0.39	0.7	0.06	1.31	0.58	2	222
9 A	13.90	13.90	33.537	25.078	287.6	0.026	5.87	100.0	1.3	0.40	0.7	0.06	1.38	0.06	9	220
9	13.90	13.90	33.537	25.078	287.6	0.026									9	221
10 ISL	13.90 D	13.90	33.535 D	25.077	287.7	0.029	5.87	100.0	1.3	0.40	0.7	0.06	1.39	0.07	10	
19 A	13.89	13.89	33.537	25.081	287.6	0.055	5.87	100.0	1.2	0.39	0.6	0.06	1.46	0.13	19	219
20 ISL	13.90 D	13.90	33.535 D	25.077	288.0	0.058	5.87	100.0	1.2	0.39	0.6	0.06	1.46	0.13	20	
27 A	13.89	13.89	33.537	25.081	287.8	0.078	5.87	100.0	1.3	0.40	0.6	0.06	1.16	0.87	27	218
30 ISL	13.89 D	13.89	33.535 D	25.079	288.1	0.086	5.87	100.0	1.3	0.40	0.6	0.06	1.40	0.14	30	
33 A	13.89	13.89	33.537	25.081	288.0	0.095	5.87	100.0	1.3	0.40	0.6	0.06	1.37	0.14	33	217
45	13.88	13.87	33.536	25.083	288.2	0.130	5.85	99.6	1.3	0.40	0.7	0.06	1.33	0.75	45	216
50 ISL	13.88 D	13.87	33.533 D	25.081	288.5	0.144	5.85	99.6	1.3	0.40	0.7	0.06	1.11	0.88	50	
54 A	13.88	13.87	33.536	25.083	288.4	0.155	5.85	99.6	1.3	0.40	0.7	0.06	1.04	0.98	54	215
60	13.89	13.88	33.536	25.081	288.8	0.173	5.84	99.5	1.1	0.40	0.6	0.06	1.49	0.05	60	214
70	12.41	12.40	33.523	25.366	261.7	0.200	4.52	74.6	9.9	1.01	10.4	0.14	0.19	0.47	70	213
75 ISL	11.79 D	11.78	33.538 D	25.495	249.5	0.213	4.10	66.8	13.0	1.22	13.9	0.11	0.15	0.40	75	
85	10.67	10.66	33.600	25.746	225.8	0.237	3.57	56.8	17.3	1.51	18.7	0.02	0.07	0.13	85	212
100	10.10	10.09	33.692	25.916	209.9	0.270	3.22	50.6	20.9	1.69	21.4	0.01	0.04	0.09	100	211
120	9.60	9.59	33.813	26.094	193.3	0.310	2.80	43.6	25.1	1.89	24.3	0.01	0.02	0.09	121	210
125 ISL	9.51 D	9.50	33.838 D	26.129	190.1	0.319	2.79	43.3	25.9	1.91	24.7	0.01	0.02	0.09	126	
139	9.22	9.20	33.896	26.221	181.5	0.345	2.78	42.9	28.1	1.96	25.6	0.01	0.01	0.09	140	209
150 ISL	9.03 D	9.01	33.943 D	26.289	175.3	0.365	2.71	41.7	29.8	2.00	26.3	0.01	0.01	0.08	151	
170	8.70	8.68	34.000	26.385	166.4	0.399	2.53	38.6	32.9	2.07	27.5	0.01	0.01	0.05	171	208
200	8.39	8.37	34.058	26.479	158.0	0.448	2.31	35.0	36.9	2.18	28.8	0.00	0.00	0.04	201	207
228	8.02	8.00	34.093	26.562	150.5	0.491	1.98	29.8	42.1	2.33	30.8	0.00			229	206
250 ISL	7.91 D	7.88	34.120 D	26.600	147.3	0.524	1.83	27.5	44.3	2.39	31.4	0.00			251	
269	7.81	7.78	34.130	26.623	145.4	0.552	1.73	25.9	45.9	2.44	31.7	0.00			271	205
300 ISL	7.48 D	7.45	34.148 D	26.685	139.9	0.596	1.48	22.0	50.5	2.56	33.2	0.00			302	
318	7.30	7.27	34.149	26.711	137.5	0.621	1.34	19.8	53.3	2.63	34.2	0.00			320	204
376	6.85	6.81	34.174	26.794	130.3	0.699	1.01	14.8	59.8	2.79	36.2	0.00			378	203
400 ISL	6.77 D	6.73	34.229 D	26.848	125.5	0.729	0.81	11.8	64.1	2.89	37.1	0.00			403	
438	6.37	6.33	34.266	26.930	117.9	0.775	0.51	7.4	70.8	3.03	38.5	0.00			441	202
500 ISL	6.16 D	6.12	34.306 D	26.990	113.0	0.847	0.33	4.8	76.8	3.12	39.6	0.00			503	
514	6.02	5.97	34.313	27.013	110.8	0.863	0.29	4.2	78.2	3.14	39.9	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 5.4 N	120 37.4 W	20/01/07	0103 UTC	3808 m	330 21 kn	310 05 07	1	1016.4 mb	13.9 C	12.2 C		1/8	ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.19	13.19	33.455	25.159	279.6	0.000	5.83	97.8	3.8	0.55	2.8	0.20	0.52	0.22	0	
2	13.19	13.19	33.455	25.159	279.7	0.006	5.83	97.8	3.8	0.55	2.8	0.20	0.52	0.22	2	220
10 ISL	13.17 D	13.17	33.436 D	25.148	280.9	0.028	5.82	97.6	3.8	0.55	2.9	0.22	0.52	0.21	10	
11	13.18	13.18	33.443	25.152	280.6	0.031	5.82	97.6	3.8	0.55	2.9	0.22	0.52	0.21	11	219
20 ISL	13.17 D	13.17	33.426 D	25.141	281.9	0.056	5.82	97.6	3.9	0.55	2.9	0.22	0.51	0.20	20	
21	13.17	13.17	33.431	25.145	281.6	0.059	5.82	97.6	3.9	0.55	2.9	0.22	0.51	0.20	21	218
30 ISL	13.16 D	13.16	33.523 D	25.218	274.8	0.084	5.76	96.6	4.2	0.59	3.4	0.16	0.47	0.23	30	
31	13.17	13.17	33.529	25.221	274.6	0.087	5.75	96.5	4.2	0.59	3.4	0.15	0.47	0.23	31	217
39	13.18	13.17	33.542	25.229	274.0	0.109	5.75	96.5	4.1	0.59	3.3	0.13	0.48	0.24	39	216
50	13.09	13.08	33.570	25.269	270.5	0.139	5.79	97.0	4.1	0.62	3.5	0.13	0.46	0.20	50	215
61	13.08	13.07	33.579	25.279	269.9	0.168	5.79	97.0	4.2	0.63	3.6	0.13	0.42	0.24	61	214
71	12.68	12.67	33.564	25.346	263.7	0.195	5.46	90.7	5.9	0.75	5.5	0.15	0.24	0.18	71	213
75 ISL	11.44 D	11.43	33.429 D	25.475	251.4	0.205	5.06	81.8	8.3	0.91	8.4	0.11	0.17	0.15	75	
84	11.18	11.17	33.503	25.580	241.6	0.228	4.08	65.6	13.9	1.30	15.4	0.01	0.05	0.10	84	212
100	10.18	10.17	33.591	25.824	218.6	0.264	4.10 U		17.5	1.50	19.0	0.01	0.02	0.05	100	211
120	9.65	9.64	33.718	26.012	201.1	0.306	3.52	54.8	21.0	1.65	21.4	0.01	0.01	0.04	121	210
125 ISL	9.54 D	9.53	33.753 D	26.057	196.9	0.316	3.48	54.1	21.6	1.67	21.8	0.01	0.01	0.04	126	
140	9.35	9.33	33.801	26.126	190.6	0.345	3.36	52.0	23.6	1.74	23.0	0.01	0.01	0.03	141	209
150 ISL	9.08 D	9.06	33.859 D	26.215	182.3	0.364	3.29	50.6	25.4	1.78	23.8	0.01	0.01	0.03	151	
170	8.73	8.71	33.950	26.341	170.6	0.399	3.05	46.6	29.5	1.90	25.7	0.01	0.00	0.02	171	208
200 ISL	8.41 D	8.39	34.064 D	26.480	157.9	0.449	2.26	34.3	36.9	2.19	29.1	0.00	0.00	0.03	201	
201	8.45	8.43	34.060	26.471	158.8	0.450	2.23	33.9	37.1	2.20	29.2	0.00	0.00	0.03	202	207
229	8.09	8.07	34.098	26.556	151.2	0.494	1.89	28.5	41.9	2.35	31.2	0.00			230	206
250 ISL	7.81 D	7.79	34.140 D	26.630	144.3	0.525	1.54	23.1	46.2	2.50	32.6	0.00			251	
267	7.72	7.69	34.174	26.670	140.8	0.549	1.29	19.3	49.6	2.61	33.6	0.00			269	205
300 ISL	7.26 D	7.23	34.159 D	26.724	136.0	0.594	1.14	16.9	53.9	2.69	35.1	0.00			302	
319	7.12	7.09	34.159	26.744	134.3	0.620	1.11	16.4	55.8	2.72	35.7	0.00			321	204
377	7.04	7.00	34.258	26.834	126.7	0.696	0.67	9.9	61.8	2.91	36.6	0.00			379	203
400 ISL	6.89 D	6.85	34.277 D	26.870	123.6	0.725	0.55	8.1	65.1	2.97	37.3	0.00			403	
436	6.50	6.46	34.284	26.928	118.3	0.768	0.42	6.1	70.4	3.06	38.5	0.00			439	202
500 ISL	6.01 D	5.97	34.330 D	27.028	109.3	0.841	0.30	4.3	78.3	3.15	40.1	0.00			503	
534	5.83	5.78	34.343	27.061	106.4	0.878	0.24	3.4	82.5	3.20	40.9	0.00			538	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 45.0 N	121 19.0 W	20/01/07	0832	UTC	3672 m	320 25 kn			1018.5 mb	13.0 C	11.5 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.10	14.10	33.368	24.906	303.7	0.000	5.94	101.5	2.2	0.31	0.1	0.01	0.48	0.14	0	
3	14.10	14.10	33.368	24.906	303.8	0.009	5.94	101.5	2.2	0.31	0.1	0.01	0.48	0.14	3	220
10 ISL	14.10 D	14.10	33.367 D	24.906	304.0	0.030	5.94	101.5	2.2	0.31	0.1	0.01	0.47	0.14	10	
11	14.10	14.10	33.367	24.906	304.1	0.033	5.94	101.5	2.2	0.31	0.1	0.01	0.47	0.14	11	219
20	14.09	14.09	33.365	24.906	304.3	0.061	5.93	101.3	2.1	0.31	0.1	0.01	0.48	0.15	20	218
30 ISL	14.01 D	14.01	33.357 D	24.917	303.5	0.091	5.95	101.5	2.3	0.31	0.1	0.02	0.50	0.17	30	
31	14.01	14.01	33.360	24.919	303.3	0.094	5.95	101.5	2.3	0.31	0.1	0.02	0.50	0.17	31	217
40	13.91	13.90	33.350	24.933	302.3	0.121	5.96	101.4	2.3	0.32	0.2	0.02	0.54	0.17	40	216
50	13.52	13.51	33.312	24.983	297.7	0.151	5.95	100.4	2.6	0.38	0.8	0.09	0.55	0.20	50	215
61	13.16	13.15	33.293	25.041	292.5	0.184	5.91	99.0	3.0	0.44	1.4	0.17	0.46	0.24	61	214
71	13.13	13.12	33.342	25.085	288.6	0.213	5.86	98.1	3.4	0.49	2.1	0.28	0.35	0.20	71	213
75 ISL	12.99 D	12.98	33.353 D	25.122	285.2	0.224	5.84	97.5	3.5	0.50	2.3	0.30	0.31	0.19	75	
85	12.89	12.88	33.361	25.148	283.0	0.253	5.74	95.6	4.1	0.57	3.3	0.36	0.22	0.17	85	212
100	10.98	10.97	33.237	25.409	258.2	0.293	5.36	85.7	7.3	0.83	8.2	0.02	0.05	0.05	100	211
120	10.57	10.56	33.482	25.672	233.5	0.343	4.22	67.0	14.3	1.31	16.0	0.01	0.04	0.05	121	210
125 ISL	10.40 D	10.39	33.542 D	25.748	226.4	0.354	4.09	64.7	15.3	1.37	16.9	0.01	0.03	0.05	126	
140	10.02	10.00	33.652	25.899	212.3	0.387	3.85	60.4	17.9	1.48	18.9	0.01	0.01	0.03	141	209
150 ISL	9.44 D	9.42	33.773 D	26.090	194.3	0.407	3.65	56.6	20.6	1.59	20.6	0.01	0.01	0.03	151	
170	9.07	9.05	33.890	26.241	180.2	0.445	3.24	49.9	26.5	1.80	24.0	0.01	0.00	0.03	171	208
199	8.59	8.57	34.017	26.416	164.0	0.495	2.64	40.2	33.5	2.04	27.5	0.00	0.00	0.02	200	207
200 ISL	8.55 D	8.53	34.025 D	26.429	162.9	0.496	2.63	40.0	33.7	2.05	27.6	0.00			201	
229	8.29	8.27	34.072	26.505	156.0	0.543	2.27	34.4	38.3	2.20	29.2	0.00			230	206
250 ISL	8.06 D	8.03	34.099 D	26.561	151.0	0.575	2.00	30.1	42.3	2.32	30.7	0.00			251	
269	7.78	7.75	34.117	26.617	145.9	0.603	1.75	26.2	45.8	2.43	32.0	0.00			271	205
300 ISL	7.58 D	7.55	34.173 D	26.690	139.4	0.647	1.34	20.0	50.1	2.59	33.6	0.00			302	
318	7.51	7.48	34.188	26.712	137.6	0.672	1.13	16.8	52.4	2.67	34.3	0.00			320	204
377	7.02	6.98	34.223	26.809	129.1	0.751	0.76	11.2	60.2	2.86	36.3	0.00			379	203
400 ISL	6.63 D	6.59	34.239 D	26.875	122.9	0.780	0.63	9.2	64.0	2.93	37.3	0.00			403	
439	6.40	6.36	34.261	26.923	118.7	0.827	0.46	6.7	70.3	3.03	38.8	0.00			442	202
500 ISL	6.07 D	6.03	34.313 D	27.007	111.3	0.897	0.32	4.6	77.0	3.12	39.8	0.00			503	
515	6.04	5.99	34.317	27.014	110.8	0.914	0.29	4.2	78.7	3.14	40.0	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 24.9 N	121 59.4 W	20/01/07	1804	UTC	3901 m	340 23 kn	330 08 06	2	1022.0 mb	13.7 C	12.0 C	23m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.21	15.21	33.460	24.740	319.5	0.000	5.75	100.6	0.7	0.27	0.1	0.00	0.25	0.09	0	
1 A	15.21	15.21	33.460	24.740	319.6	0.003	5.75	100.6	0.7	0.27	0.1	0.00	0.25	0.09	1	221
10 ISL	15.21 D	15.21	33.457 D	24.738	320.0	0.032	5.75	100.6	0.7	0.27	0.1	0.00	0.25	0.09	10	
15 A	15.20	15.20	33.459	24.742	319.8	0.048	5.75	100.5	0.7	0.27	0.1	0.00	0.25	0.09	15	219
15	15.20	15.20	33.458	24.741	319.9	0.048									15	220
20 ISL	15.21 D	15.21	33.456 D	24.737	320.4	0.064	5.75	100.6	0.7	0.27	0.1	0.00	0.25	0.09	20	
30 ISL	15.21 D	15.21	33.456 D	24.738	320.7	0.096	5.76	100.7	0.7	0.28	0.1	0.00	0.25	0.09	30	
32 A	15.21	15.21	33.458	24.739	320.6	0.102	5.76	100.7	0.7	0.28	0.1	0.00	0.25	0.09	32	218
46 A	15.21	15.20	33.461	24.742	320.7	0.147	5.75	100.5	0.9	0.28	0.1	0.00	0.25	0.09	46	217
50 ISL	15.21 D	15.20	33.456 D	24.738	321.2	0.160	5.75	100.5	0.9	0.28	0.1	0.00	0.25	0.09	50	
56 A	15.21	15.20	33.457	24.739	321.3	0.179	5.75	100.5	0.8	0.28	0.1	0.00	0.25	0.09	56	216
67	15.21	15.20	33.457	24.740	321.6	0.215	5.75	100.5	0.9	0.28	0.0	0.01	0.26	0.09	67	215
75 ISL	15.21 D	15.20	33.456 D	24.739	321.9	0.241	5.75	100.5	1.0	0.28	0.1	0.00	0.26	0.10	75	
80	15.21	15.20	33.457	24.740	322.0	0.257	5.75	100.5	1.0	0.28	0.1	0.00	0.26	0.10	80	214
91 A	15.21	15.20	33.461	24.744	322.0	0.292	5.74	100.4	1.0	0.28	0.0	0.00	0.25	0.09	91	213
100	14.56	14.55	33.667	25.043	293.7	0.320	5.52	95.4	1.9	0.33	0.9	0.14	0.15	0.18	100	212
110	14.23	14.21	33.714	25.149	283.8	0.349	5.38	92.4	2.5	0.38	2.0	0.06	0.13	0.16	110	211
124	12.64	12.62	33.651	25.422	257.9	0.387	5.03	83.5	5.6	0.67	6.6	0.01	0.09	0.09	125	210
125 ISL	12.30 D	12.28	33.633 D	25.474	252.9	0.389	4.98	82.1	6.1	0.71	7.1	0.01	0.09	0.09	126	
143	10.54	10.52	33.593	25.764	225.3	0.432	4.03	63.9	14.8	1.36	16.8	0.00	0.02	0.03	144	209
150 ISL	9.94 D	9.92	33.667 D	25.924	210.1	0.447	3.80	59.5	17.2	1.50	19.0	0.00	0.01	0.03	151	
168	9.51	9.49	33.753	26.063	197.2	0.484	3.43	53.3	21.7	1.70	22.2	0.00	0.00	0.02	169	208
198	9.04	9.02	33.889	26.245	180.3	0.541	3.30	50.7	26.0	1.79	23.9	0.00	0.00	0.02	199	207
200 ISL	9.02 D	9.00	33.903 D	26.260	179.0	0.544	3.27	50.3	26.3	1.80	24.0	0.00			201	
227	8.76	8.74	33.976	26.358	170.1	0.591	2.92	44.6	30.2	1.94	26.0	0.00			228	206
250 ISL	8.17 D	8.14	34.000 D	26.467	159.9	0.629	2.87	43.3	34.4	2.00	27.3	0.00			251	
266	7.95	7.92	34.015	26.512	155.9	0.655	2.84	42.6	37.4	2.05	28.2	0.00			267	205
300 ISL	7.44 D	7.41	34.033 D	26.600	147.8	0.706	2.39	35.5	43.2	2.25	30.9	0.00			302	
316	7.41	7.38	34.049	26.617	146.5	0.730	2.11	31.3	46.1	2.36	32.2	0.00			318	204
376	6.66	6.63	34.129	26.783	131.1	0.813	1.10	16.0	59.9	2.78	36.8	0.00			378	203
400 ISL	6.24 D	6.20	34.137 D	26.845	125.3	0.844	0.92	13.3	64.8	2.87	38.0	0.00			402	
441	5.91	5.87	34.156	26.902	120.1	0.894	0.75	10.7	72.4	2.98	39.5	0.00			444	202
500 ISL	5.50 D	5.46	34.210 D	26.995	111.7	0.963	0.49	7.0	81.3	3.10	41.0	0.00			503	
512	5.45	5.41	34.217	27.007	110.7	0.976	0.44	6.2	83.1	3.13	41.3	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 5.3 N	122 39.1 W	21/01/07	0021	UTC	4042 m	340	28 kn	330 07 06	2	1020.5 mb	14.9 C	12.9 C		8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.92	14.92	33.404	24.760	317.6	0.000	5.81	101.0	2.2	0.30	0.1	0.01	0.29	0.09	0	
2	14.92	14.92	33.404	24.760	317.7	0.006	5.81	101.0	2.2	0.30	0.1	0.01	0.29	0.09	2	220
10	14.91	14.91	33.403	24.761	317.8	0.032	5.81	101.0	2.2	0.30	0.1	0.01	0.28	0.09	10	219
20	14.91	14.91	33.402	24.761	318.1	0.064	5.80	100.8	2.1	0.30	0.1	0.01	0.28	0.10	20	218
30 ISL	14.90 D	14.90	33.397 D	24.760	318.6	0.095	5.81	100.9	2.2	0.30	0.1	0.01	0.28	0.09	30	
31	14.89	14.89	33.398	24.763	318.3	0.099	5.81	100.9	2.2	0.30	0.1	0.01	0.28	0.09	31	217
41	14.86	14.85	33.393	24.766	318.3	0.130	5.82	101.0	2.2	0.30	0.1	0.01	0.28	0.10	41	216
50	14.86	14.85	33.391	24.764	318.7	0.159	5.80	100.7	2.1	0.30	0.1	0.01	0.29	0.09	50	215
59	14.86	14.85	33.393	24.766	318.8	0.188	5.79	100.5	2.1	0.30	0.1	0.01	0.29	0.09	59	214
70	14.85	14.84	33.394	24.769	318.8	0.223	5.81	100.8	2.0	0.31	0.1	0.01	0.28	0.09	70	213
75 ISL	14.80 D	14.79	33.389 D	24.776	318.3	0.239	5.78	100.2	2.1	0.32	0.3	0.02	0.27	0.09	75	
84	14.58	14.57	33.392	24.826	313.8	0.267	5.73	98.9	2.4	0.35	0.6	0.03	0.23	0.09	84	212
100	13.12	13.11	33.454	25.175	280.9	0.315	5.24	87.8	5.2	0.62	5.1	0.04	0.12	0.09	100	211
120	11.83	11.81	33.506	25.464	253.6	0.368	4.66	76.0	9.4	0.95	10.7	0.02	0.07	0.07	121	210
125 ISL	11.28 D	11.26	33.512 D	25.570	243.6	0.381	4.56	73.5	11.1	1.07	12.5	0.02	0.06	0.06	126	
140	10.47	10.45	33.576	25.763	225.3	0.416	4.26	67.5	16.2	1.41	17.6	0.01	0.02	0.04	141	209
150 ISL	9.96 D	9.94	33.660 D	25.916	211.0	0.438	3.93	61.6	18.9	1.55	19.8	0.01	0.01	0.03	151	
168	9.54	9.52	33.755	26.060	197.5	0.474	3.36	52.2	22.8	1.71	22.5	0.00	0.00	0.03	169	208
200	9.03	9.01	33.927	26.277	177.4	0.534	3.05	46.9	28.2	1.88	25.0	0.00	0.00	0.02	201	207
230	8.42	8.40	33.988	26.420	164.2	0.586	3.13	47.5	32.9	1.91	26.1	0.00			231	206
250 ISL	8.04 D	8.01	34.004 D	26.490	157.7	0.618	3.02	45.4	36.1	1.96	27.3	0.00			251	
269	7.84	7.81	34.011	26.525	154.7	0.648	2.82	42.2	39.1	2.04	28.6	0.00			270	205
300 ISL	7.51 D	7.48	34.034 D	26.591	148.7	0.695	2.33	34.6	44.2	2.24	31.0	0.00			302	
319	7.41	7.38	34.063	26.628	145.5	0.722	2.01	29.8	47.4	2.37	32.4	0.00			321	204
378	6.70	6.67	34.090	26.747	134.6	0.805	1.43	20.9	57.6	2.65	35.8	0.00			380	203
400 ISL	6.53 D	6.49	34.125 D	26.798	130.0	0.834	1.21	17.6	61.2	2.75	36.8	0.00			402	
437	6.25	6.21	34.157	26.860	124.4	0.881	0.89	12.9	67.5	2.89	38.3	0.00			440	202
500 ISL	5.60 D	5.56	34.188 D	26.966	114.6	0.957	0.62	8.8	79.5	3.04	40.6	0.00			503	
512	5.48	5.44	34.189	26.981	113.1	0.970	0.57	8.1	81.8	3.07	41.0	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 45.3 N	123 19.4 W	21/01/07	0740	UTC	4005 m	350	27 kn			1023.1 mb	13.9 C	12.1 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.35	14.35	33.326	24.821	311.8	0.000	5.84	100.3	2.3	0.33	0.2	0.03	0.26	0.10	0	
3	14.35	14.35	33.326	24.821	311.9	0.009	5.84	100.3	2.3	0.33	0.2	0.03	0.26	0.10	3	220
10 ISL	14.35 D	14.35	33.325 D	24.821	312.1	0.031	5.85	100.5	2.3	0.33	0.2	0.03	0.24	0.09	10	
11	14.35	14.35	33.328	24.823	311.9	0.034	5.85	100.5	2.3	0.33	0.2	0.03	0.24	0.09	11	219
20 ISL	14.36 D	14.36	33.325 D	24.819	312.6	0.062	5.85	100.5	2.3	0.34	0.2	0.03	0.25	0.09	20	
21	14.36	14.36	33.326	24.820	312.5	0.066	5.85	100.5	2.3	0.34	0.2	0.03	0.25	0.09	21	218
30 ISL	14.36 D	14.36	33.325 D	24.819	312.8	0.094	5.86	100.6	2.1	0.34	0.2	0.03	0.24	0.08	30	
31	14.36	14.36	33.326	24.820	312.8	0.097	5.86	100.6	2.1	0.34	0.2	0.03	0.24	0.08	31	217
41	14.36	14.35	33.326	24.820	313.1	0.128	5.85	100.5	2.2	0.34	0.2	0.03	0.25	0.12	41	216
50 ISL	14.36 D	14.35	33.324 D	24.819	313.5	0.156	5.86	100.6	2.2	0.34	0.2	0.03	0.24	0.09	50	
51	14.36	14.35	33.325	24.820	313.4	0.159	5.86	100.6	2.2	0.34	0.2	0.03	0.24	0.09	51	215
60	14.36	14.35	33.326	24.821	313.6	0.188	5.84	100.3	2.1	0.34	0.2	0.03	0.25	0.11	60	214
68	14.37	14.36	33.325	24.818	314.0	0.213	5.85	100.5	2.1	0.34	0.2	0.03	0.24	0.08	68	213
75 ISL	14.37 D	14.36	33.326 D	24.819	314.2	0.235	5.79	99.4	2.5	0.36	0.5	0.04	0.20	0.08	75	
85	13.68	13.67	33.328	24.964	300.6	0.265	5.62	95.2	3.0	0.44	1.7	0.06	0.14	0.07	85	212
100 ISL	12.05 D	12.04	33.394 D	25.335	265.4	0.308	5.26	86.1	5.9	0.71	6.3	0.02	0.07	0.07	100	
101	12.26	12.25	33.369	25.276	271.1	0.311	5.23	86.0	6.1	0.73	6.6	0.02	0.07	0.07	101	211
118	11.38	11.37	33.448	25.502	249.9	0.355	4.72	76.2	9.6	0.98	11.0	0.01	0.05	0.05	119	210
125 ISL	11.06 D	11.04	33.488 D	25.591	241.5	0.372	4.56	73.1	11.0	1.08	12.6	0.01	0.04	0.05	126	
140	10.47	10.45	33.551	25.744	227.2	0.407	4.21	66.7	14.4	1.30	16.0	0.01	0.03	0.04	141	209
150 ISL	10.25 D	10.23	33.635 D	25.847	217.6	0.429	3.88	61.2	17.2	1.46	18.5	0.01	0.02	0.04	151	
170	9.49	9.47	33.763	26.074	196.2	0.471	3.24	50.3	23.2	1.76	22.9	0.01	0.00	0.03	171	208
199	8.78	8.76	33.972	26.351	170.2	0.524	2.66	40.7	31.3	1.99	26.7	0.00	0.00	0.02	200	207
200 ISL	8.78 D	8.76	33.971 D	26.351	170.3	0.526	2.64	40.4	31.5	2.00	26.8	0.00			201	
229	8.43	8.41	34.046	26.464	160.0	0.574	2.28	34.6	36.1	2.17	29.1	0.00			230	206
250 ISL	8.15 D	8.12	34.054 D	26.513	155.7	0.607	2.11	31.8	39.6	2.26	30.3	0.00			251	
268	7.92	7.89	34.078	26.566	150.8	0.634	1.98	29.7	42.6	2.33	31.2	0.00			269	205
300 ISL	7.57 D	7.54	34.106 D	26.639	144.3	0.682	1.61	24.0	48.0	2.49	33.1	0.00			302	
319	7.34	7.31	34.128	26.689	139.7	0.709	1.40	20.7	51.2	2.58	34.2	0.00			321	204
378	6.71	6.68	34.148	26.792	130.4	0.788	1.03	15.0	60.5	2.78	36.7	0.00			380	203
400 ISL	6.27 D	6.23	34.112 D	26.821	127.5	0.817	0.93	13.4	63.6	2.84	37.4	0.00			402	
437	6.15	6.11	34.165	26.879	122.5	0.863	0.79	11.4	69.1	2.93	38.6	0.00			440	202
500 ISL	5.50 D	5.46	34.185 D	26.975	113.5	0.937	0.57	8.1	81.0	3.05	40.8	0.00			503	
513	5.34	5.30	34.185	26.995	111.7	0.952	0.53	7.5	83.5	3.08	41.2	0.00			516	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 25.1 N	123 59.6 W	16/01/07	1729 UTC	4216 m	360 17 kn	030 04 06	1	1026.7 mb	15.0 C	12.2 C	30m	1/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.82	15.82	33.537	24.664	326.8	0.000	5.69	100.8	1.7	0.26	0.0	0.00	0.16	0.05	0	
2 A	15.82	15.82	33.537	24.664	326.8	0.007	5.69	100.8	1.7	0.26	0.0	0.00	0.16	0.05	2	224
10	15.82	15.82	33.534	24.662	327.3	0.033	5.72	101.3	1.7	0.26	0.0	0.00	0.19	0.05	10	223
19 A	15.82	15.82	33.534	24.662	327.5	0.062	5.69	100.8	1.6	0.26	0.0	0.00	0.19	0.05	19	221
20 CSL	15.82	15.82	33.533	24.661	327.6	0.065									20	200
20	15.82	15.82	33.540	24.667	327.1	0.065									20	222
30	15.82	15.82	33.535	24.663	327.8	0.098	5.70	100.9	1.6	0.26	0.0	0.00	0.20	0.03	30	220
41 A	15.82	15.81	33.534	24.663	328.2	0.134	5.70	100.9	1.6	0.26	0.0	0.00	0.19	0.06	41	219
50	15.82	15.81	33.534	24.663	328.4	0.164	5.69	100.8	1.6	0.26	0.0	0.00	0.18	0.04	50	218
60 A	15.83	15.82	33.534	24.661	328.9	0.197	5.69	100.8	1.5	0.26	0.0	0.00	0.19	0.05	60	217
71 A	15.83	15.82	33.533	24.661	329.3	0.233	5.70	101.0	1.5	0.26	0.0	0.00	0.18	0.05	71	216
75 ISL	15.83 D	15.82	33.535 D	24.663	329.3	0.246	5.70	101.0	1.5	0.26	0.0	0.00	0.17	0.05	75	
84	15.83	15.82	33.538	24.665	329.3	0.276	5.69	100.8	1.5	0.26	0.0	0.00	0.16	0.06	84	215
94	15.79	15.78	33.539	24.675	328.7	0.309	5.68	100.5	1.5	0.26	0.0	0.01	0.18	0.05	94	214
100 ISL	14.55 D	14.54	33.609 D	25.000	297.7	0.327	5.69	98.3	1.9	0.27	0.1	0.10	0.20	0.13	100	
102	14.55	14.53	33.611	25.002	297.6	0.333	5.69	98.3	2.1	0.28	0.2	0.13	0.21	0.16	102	213
118 A	14.13	14.11	33.737	25.188	280.3	0.380	5.45	93.4	2.7	0.35	1.7	0.04	0.13	0.12	118	212
125 ISL	13.83 D	13.81	33.730 D	25.245	275.0	0.399	5.39	91.8	3.2	0.40	2.5	0.02	0.11	0.10	126	
129	13.36	13.34	33.694	25.313	268.6	0.410	5.35	90.2	3.6	0.43	3.1	0.02	0.10	0.09	130	211
141	12.67	12.65	33.639	25.408	259.7	0.442	5.14	85.4	5.3	0.60	5.8	0.02	0.08	0.07	142	210
150 ISL	11.73 D	11.71	33.611 D	25.565	244.8	0.464	4.96	80.8	7.2	0.77	8.4	0.02	0.06	0.05	151	
163	11.05	11.03	33.610	25.688	233.2	0.495	4.72	75.7	10.3	1.00	12.1	0.01	0.04	0.03	164	209
195	9.69	9.67	33.794	26.066	197.6	0.564	4.41	68.8	17.2	1.30	17.5	0.00	0.00	0.01	196	208
200 ISL	9.55 D	9.53	33.820 D	26.109	193.5	0.574	4.35	67.6	18.3	1.34	18.1	0.00			201	
229	8.90	8.88	33.925	26.296	176.1	0.628	3.94	60.4	24.8	1.57	21.7	0.00			230	207
250 ISL	8.59 D	8.56	33.979 D	26.387	167.7	0.664	3.48	53.0	30.5	1.78	24.7	0.00			251	
265	8.19	8.16	34.004	26.468	160.2	0.688	3.14	47.4	34.6	1.92	26.8	0.00			266	206
300 ISL	7.49 D	7.46	34.026 D	26.587	149.0	0.742	2.55	37.9	42.4	2.17	30.2	0.00			302	
318	7.37	7.34	34.031	26.609	147.3	0.769	2.30	34.1	45.9	2.28	31.6	0.00			320	205
376	6.78	6.75	34.077	26.726	136.6	0.851	1.69	24.7	56.0	2.59	35.2	0.00			378	203
400 ISL	6.67 D	6.63	34.119 D	26.775	132.3	0.884	1.38	20.1	60.2	2.70	36.4	0.00			402	
433	6.32	6.28	34.140	26.837	126.6	0.926	0.99	14.3	65.9	2.84	37.8	0.00			436	202
500 ISL	5.79 D	5.75	34.191 D	26.945	116.7	1.008	0.63	9.0	76.3	3.02	40.1	0.00			503	
509	5.76	5.72	34.186	26.945	116.9	1.018	0.58	8.3	77.7	3.04	40.4	0.00			512	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 91.7 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 14.5 N	117 28.1 W	13/01/07	0717 UTC	23 m	270 10 kn			1017.2 mb	9.6 C	6.6 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.26	14.26	33.575	25.032	291.7	0.000	6.07	104.2	0.1	0.27	0.0	0.01	2.93	0.86	0	
1	14.26	14.26	33.575	25.032	291.7	0.003	6.07	104.2	0.1	0.27	0.0	0.01	2.93	0.86	1	206
6	14.27	14.27	33.574	25.030	292.1	0.018	6.07	104.2	0.1	0.28	0.0	0.01	2.90	0.86	6	205
10 ISL	14.27 D	14.27	33.572 D	25.028	292.4	0.029	6.06	104.1	0.1	0.28	0.0	0.01	2.96	0.87	10	
11	14.27	14.27	33.574	25.030	292.2	0.032	6.06	104.1	0.1	0.28	0.0	0.01	2.98	0.87	11	203
11	14.27	14.27	33.574	25.030	292.2	0.032									11	204
16	14.26	14.26	33.586	25.041	291.3	0.047	6.07	104.2	0.1	0.28	0.0	0.01	2.99	0.85	16	202
19	14.27	14.27	33.574	25.030	292.5	0.055	6.07	104.2	0.0	0.29	0.0	0.01	3.13	0.88	19	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.5 N	117 18.5 W	13/01/07	0206 UTC	74 m	300 10 kn			1015.8 mb	11.2 C	7.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.48	14.48	33.540	24.959	298.7	0.000	5.93	102.2	1.5	0.39	0.6	0.06	4.98	0.83	0	
2	14.48	14.48	33.540	24.959	298.7	0.006	5.93	102.2	1.5	0.39	0.6	0.06	4.98	0.83	2	208
10	14.48	14.48	33.539	24.958	299.0	0.030	5.92	102.1	1.4	0.39	0.6	0.07	4.61	0.97	10	207
11	14.49	14.49	33.539	24.956	299.3	0.033									11	209
20	14.39	14.39	33.547	24.984	296.9	0.060	5.55	95.5	3.7	0.52	1.9	0.16	2.07	0.56	20	206
30	14.14	14.14	33.548	25.038	292.1	0.089	5.05	86.5	6.4	0.74	4.4	0.27	0.94	0.43	30	205
40	13.84	13.83	33.539	25.093	287.0	0.118	4.52	76.9	8.4	0.93	7.2	0.32	0.53	0.36	40	204
50	13.58	13.57	33.535	25.144	282.5	0.147	4.19	70.9	9.4	1.05	9.0	0.27	0.27	0.27	50	203
61	12.84	12.83	33.553	25.306	267.3	0.177	3.71	61.8	11.7	1.29	12.3	0.07	0.13	0.19	61	202
65	12.75	12.74	33.558	25.327	265.4	0.187	3.69	61.4	12.1	1.32	12.8	0.07	0.12	0.20	65	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 28.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.8 N	117 23.7 W	13/01/07	1026	UTC	645 m	320 05 kn			1017.6 mb	11.5 C	8.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.15	14.15	33.562	25.045	290.4	0.000	5.47	93.7	4.2	0.56	2.7	0.17	1.32	0.41	0	
2	14.15	14.15	33.562	25.045	290.5	0.006	5.47	93.7	4.2	0.56	2.7	0.17	1.32	0.41	2	220
10	14.13	14.13	33.564	25.051	290.2	0.029	5.44	93.1	4.4	0.57	2.9	0.17	1.31	0.40	10	219
20	14.07	14.07	33.558	25.060	289.7	0.058	5.33	91.1	5.1	0.63	3.6	0.21	1.39	0.45	20	218
30 ISL	13.58 D	13.58	33.536 D	25.144	281.9	0.087	4.28	72.4	9.2	0.99	8.6	0.26	0.49	0.27	30	
31	13.65	13.65	33.544	25.136	282.7	0.089	4.17	70.7	9.6	1.03	9.2	0.27	0.39	0.25	31	217
40	13.19	13.18	33.548	25.232	273.8	0.114	3.74	62.8	11.4	1.21	11.8	0.08	0.14	0.16	40	216
50	12.67	12.66	33.575	25.356	262.3	0.141	3.48	57.8	13.4	1.35	14.0	0.35	0.07	0.13	50	215
60	12.57	12.56	33.576	25.376	260.6	0.167	3.41	56.5	13.8	1.37	14.4	0.49	0.09	0.13	60	214
70	12.33	12.32	33.627	25.462	252.6	0.193	3.22	53.1	15.0	1.48	15.6	0.03	0.05	0.11	70	213
75 ISL	12.14 D	12.13	33.649 D	25.516	247.6	0.206	3.13	51.4	15.6	1.52	16.3	0.03	0.05	0.11	75	
85	11.90	11.89	33.678	25.584	241.4	0.230	2.95	48.2	17.1	1.61	17.7	0.03	0.04	0.10	85	212
100	11.38	11.37	33.748	25.735	227.3	0.265	2.70	43.7	19.8	1.76	20.0	0.02	0.02	0.06	100	211
120	10.99	10.98	33.802	25.848	217.0	0.310	2.57	41.2	21.6	1.84	21.3	0.02	0.02	0.06	121	210
125 ISL	10.90 D	10.88	33.830 D	25.885	213.5	0.320	2.53	40.5	22.4	1.87	21.8	0.02	0.02	0.05	126	
140	10.43	10.41	33.913	26.033	199.8	0.351	2.39	37.9	24.9	1.96	23.5	0.02	0.01	0.04	141	209
150 ISL	10.32 D	10.30	33.984 D	26.107	192.9	0.371	2.33	36.9	26.3	2.00	24.3	0.02	0.01	0.04	151	
169	9.89	9.87	34.033	26.219	182.6	0.407	2.20	34.5	28.8	2.07	25.5	0.01	0.00	0.05	170	208
200	9.63	9.61	34.178	26.376	168.3	0.461	1.77	27.6	33.3	2.25	27.4	0.01	0.01	0.04	201	207
229	9.44	9.41	34.192	26.419	164.8	0.509	1.72	26.7	34.9	2.28	27.9	0.01			230	206
250 ISL	9.26 D	9.23	34.215 D	26.466	160.6	0.544	1.60	24.8	37.3	2.34	28.8	0.01			251	
269	8.95	8.92	34.228	26.526	155.2	0.574	1.47	22.6	39.7	2.41	29.7	0.01			271	205
300 ISL	8.62 D	8.59	34.238 D	26.586	149.9	0.621	1.28	19.5	42.7	2.51	30.8	0.00			302	
318	8.54	8.51	34.255	26.612	147.8	0.648	1.18	18.0	44.4	2.56	31.4	0.00			320	204
378	7.91	7.87	34.262	26.714	138.8	0.734	0.88	13.2	51.3	2.72	33.5	0.00			380	203
400 ISL	7.67 D	7.63	34.270 D	26.755	135.1	0.764	0.77	11.5	54.4	2.78	34.3	0.00			403	
438	7.29	7.25	34.277	26.815	129.8	0.814	0.61	9.0	59.7	2.88	35.7	0.01			441	202
500 ISL	6.89 D	6.84	34.297 D	26.887	123.6	0.893	0.43	6.3	66.9	3.00	37.3	0.01			503	
515	6.74	6.69	34.305	26.913	121.1	0.911	0.39	5.7	68.7	3.03	37.7	0.01			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 50.7 N	117 32.3 W	13/01/07	1341	UTC	863 m	320 11 kn			1017.5 mb	11.9 C	9.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.60	14.60	33.557	24.946	299.9	0.000	5.69	98.4	2.0	0.42	0.7	0.06	2.75	0.73	0	
2	14.60	14.60	33.557	24.947	299.9	0.006	5.69	98.4	2.0	0.42	0.7	0.06	2.75	0.73	2	221
10 ISL	14.61 D	14.61	33.556 D	24.944	300.4	0.030	5.68	98.2	2.0	0.42	0.7	0.06	2.72	0.76	10	
11	14.61	14.61	33.556	24.944	300.4	0.033	5.68	98.2	2.0	0.42	0.7	0.06	2.72	0.76	11	220
20	14.60	14.60	33.556	24.946	300.5	0.060	5.68	98.2	2.0	0.41	0.7	0.06	3.09	0.54	20	219
30 ISL	14.60 D	14.60	33.553 D	24.944	301.0	0.090	5.69	98.3	1.9	0.41	0.7	0.06	2.94	0.62	30	
31	14.60	14.60	33.559	24.949	300.6	0.093	5.69	98.3	1.9	0.41	0.7	0.06	2.91	0.63	31	218
40	14.59	14.58	33.553	24.947	301.0	0.120	5.70	98.5	1.9	0.42	0.7	0.06	2.90	0.65	40	217
50	14.56	14.55	33.549	24.950	301.0	0.150	5.67	97.9	2.1	0.43	0.9	0.06	3.05	0.57	50	216
55	13.90	13.89	33.530	25.074	289.3	0.165	4.47	76.1	8.0	0.92	7.5	0.12	0.75	0.39	55	215
60	13.03	13.02	33.554	25.269	270.8	0.179	3.58	59.9	12.3	1.29	12.9	0.03	0.09	0.17	60	214
70	12.58	12.57	33.579	25.377	260.8	0.206	3.49	57.9	13.0	1.36	13.9	0.03	0.11	0.16	70	213
75 ISL	12.32 D	12.31	33.597 D	25.441	254.8	0.219	3.36	55.4	13.9	1.42	14.8	0.03	0.11	0.16	75	
85	12.15	12.14	33.654	25.518	247.7	0.244	3.07	50.5	15.9	1.56	16.7	0.02	0.09	0.15	85	212
100 ISL	11.66 D	11.65	33.711 D	25.655	235.0	0.280	2.89	47.0	18.1	1.68	18.6	0.01	0.05	0.11	100	
101	11.68	11.67	33.710	25.650	235.5	0.282	2.88	46.9	18.2	1.69	18.7	0.01	0.05	0.11	101	211
120	11.11	11.10	33.824	25.843	217.5	0.325	2.41	38.8	22.4	1.90	21.6	0.01	0.02	0.06	121	210
125 ISL	10.97 D	10.95	33.858 D	25.895	212.7	0.336	2.31	37.1	23.6	1.95	22.3	0.01	0.02	0.06	126	
138	10.61	10.59	33.945	26.026	200.4	0.363	2.11	33.6	26.4	2.06	23.9	0.01	0.01	0.05	139	209
150 ISL	10.29 D	10.27	33.983 D	26.112	192.5	0.386	2.13	33.7	27.7	2.07	24.7	0.01	0.01	0.04	151	
170	9.92	9.90	34.043	26.222	182.4	0.424	2.16	33.9	29.0	2.09	25.6	0.01	0.01	0.03	171	208
199	9.62	9.60	34.116	26.329	172.7	0.475	2.01	31.4	31.9	2.17	26.8	0.01	0.01	0.04	200	207
200 ISL	9.58 D	9.56	34.120 D	26.339	171.8	0.477	2.00	31.2	32.0	2.17	26.8	0.01			201	
228	9.35	9.32	34.165	26.412	165.3	0.524	1.84	28.5	34.4	2.26	28.0	0.01			229	206
250 ISL	9.00 D	8.97	34.173 D	26.475	159.7	0.560	1.70	26.2	36.8	2.33	29.0	0.01			251	
269	8.87	8.84	34.196	26.514	156.3	0.590	1.58	24.2	39.0	2.39	29.8	0.01			271	205
300 ISL	8.59 D	8.56	34.241 D	26.593	149.3	0.637	1.40	21.4	42.1	2.48	30.9	0.00			302	
319	8.42	8.39	34.233	26.614	147.6	0.666	1.28	19.4	44.1	2.54	31.5	0.00			321	204
380	7.76	7.72	34.254	26.729	137.3	0.753	0.85	12.7	53.0	2.75	34.2	0.00			382	203
400 ISL	7.58 D	7.54	34.258 D	26.759	134.7	0.780	0.76	11.3	55.4	2.80	34.9	0.00			403	
438	7.29	7.25	34.275	26.813	129.9	0.830	0.62	9.2	59.6	2.89	36.0	0.00			441	202
500 ISL	6.81 D	6.76	34.305 D	26.904	121.9	0.908	0.42	6.1	67.2	3.02	37.5	0.00			503	
511	6.72	6.67	34.306	26.917	120.7	0.921	0.39	5.7	68.6	3.04	37.8	0.00			514	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 40.4 N	117 52.5 W	13/01/07	1846 UTC	592 m	310 16 kn	120 06 08	1	1020.0 mb	10.5 C	8.2 C	12m	7/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.52	15.52	33.572	24.758	317.8	0.000	5.68	100.0	2.2	0.33	0.1	0.02	1.94	0.11	0	
2 A	15.52	15.52	33.572	24.758	317.9	0.006	5.68	100.0	2.2	0.33	0.1	0.02	1.94	0.11	2	223
9 A	15.51	15.51	33.587	24.772	316.8	0.029	5.68	100.0	2.2	0.33	0.1	0.02	1.91	0.29	9	222
10 ISL	15.51 D	15.51	33.568 D	24.757	318.2	0.032	5.68	100.0	2.2	0.33	0.1	0.02	1.86	0.29	10	
16 A	15.51	15.51	33.569	24.758	318.3	0.051	5.68	100.0	2.2	0.33	0.1	0.02	1.60	0.23	16	220
17	15.51	15.51	33.567	24.757	318.5	0.054									17	221
20 ISL	15.51 D	15.51	33.567 D	24.757	318.6	0.064	5.68	100.0	2.2	0.33	0.1	0.02	1.65	0.23	20	
25 A	15.50	15.50	33.570	24.762	318.3	0.079	5.67	99.8	2.2	0.33	0.1	0.02	1.72	0.24	25	219
30 A	15.50	15.50	33.570	24.762	318.4	0.095	5.67	99.8	2.1	0.33	0.1	0.02	2.11	0.01	30	218
39	15.47	15.46	33.566	24.766	318.3	0.124	5.67	99.7	2.3	0.33	0.1	0.03	1.98	0.08	39	217
47 A	15.43	15.42	33.563	24.772	317.9	0.150	5.66	99.5	2.5	0.34	0.1	0.03	1.63	0.30	47	216
50 ISL	15.41 D	15.40	33.559 D	24.774	317.9	0.159	5.65	99.3	2.5	0.34	0.1	0.03	1.58	0.30	50	
54	15.38	15.37	33.560	24.781	317.3	0.172	5.64	99.0	2.6	0.35	0.2	0.04	1.41	0.30	54	215
61	13.25	13.24	33.457	25.150	282.2	0.193	4.57	76.8	7.3	1.02	7.6	0.08	0.31	0.25	61	214
70	12.60	12.59	33.506	25.316	266.5	0.217	4.16	69.0	9.8	1.10	11.0	0.04	0.18	0.08	70	213
75 ISL	12.07 D	12.06	33.541 D	25.445	254.3	0.230	3.91	64.1	11.5	1.21	12.9	0.03	0.13	0.07	75	
86	11.66	11.65	33.638	25.597	240.1	0.258	3.39	55.1	15.4	1.48	16.6	0.02	0.05	0.06	86	212
100	11.24	11.23	33.764	25.773	223.7	0.290	2.91	46.9	19.5	1.71	19.6	0.01	0.03	0.06	100	211
119	10.83	10.82	33.877	25.934	208.7	0.331	2.53	40.5	22.9	1.91	22.0	0.01	0.02	0.04	120	210
125 ISL	10.73 D	10.71	33.885 D	25.958	206.6	0.344	2.53	40.4	23.3	1.92	22.4	0.01	0.02	0.04	126	
140	10.45	10.43	33.916	26.032	199.9	0.374	2.52	40.0	24.2	1.93	23.0	0.01	0.01	0.03	141	209
150 ISL	10.30 D	10.28	33.950 D	26.084	195.1	0.394	2.43	38.4	25.3	1.97	23.7	0.01	0.01	0.03	151	
169	10.15	10.13	34.052	26.190	185.4	0.430	2.19	34.6	27.9	2.08	25.0	0.01	0.00	0.04	170	208
198	9.98	9.96	34.165	26.308	174.9	0.482	1.76	27.7	31.7	2.30	26.7	0.01	0.01	0.04	199	207
200 ISL	10.01 D	9.99	34.178 D	26.313	174.5	0.486	1.76	27.7	31.8	2.30	26.8	0.01			201	
233	9.73	9.70	34.222	26.395	167.3	0.542	1.69	26.4	33.5	2.29	27.4	0.01			234	206
250 ISL	9.47 D	9.44	34.224 D	26.439	163.3	0.570	1.63	25.4	35.0	2.32	28.0	0.01			251	
271	9.24	9.21	34.239	26.489	159.0	0.604	1.54	23.8	37.3	2.38	28.8	0.01			273	205
300 ISL	8.86 D	8.83	34.249 D	26.558	152.8	0.649	1.33	20.4	40.8	2.48	29.9	0.01			302	
317	8.77	8.74	34.281	26.597	149.4	0.675	1.20	18.4	43.0	2.55	30.6	0.01			319	204
374	8.10	8.06	34.302	26.717	138.7	0.757	0.82	12.4	50.5	2.75	33.0	0.00			376	203
400 ISL	7.69 D	7.65	34.303 D	26.778	133.0	0.792	0.72	10.8	53.7	2.82	34.0	0.00			403	
434	7.43	7.39	34.297	26.811	130.2	0.837	0.62	9.2	58.0	2.89	35.3	0.01			437	202
500 ISL	6.64 D	6.59	34.291 D	26.916	120.6	0.920	0.44	6.4	68.1	3.02	38.0	0.01			503	
508	6.58	6.53	34.291	26.924	119.9	0.930	0.42	6.1	69.3	3.04	38.3	0.01			511	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 40.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 30.5 N	118 13.1 W	13/01/07	2314 UTC	1602 m	100 03 kn	120 05 07	1	1019.0 mb	12.5 C	9.5 C	14m	2/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.43	15.43	33.561	24.769	316.7	0.000	5.76	101.2	1.5	0.30	0.0	0.00	1.57	0.06	0	
3 A	15.43	15.43	33.561	24.769	316.8	0.010	5.76	101.2	1.5	0.30	0.0	0.00	1.57	0.06	3	221
10	15.43	15.43	33.562	24.770	316.9	0.032	5.76	101.2	1.4	0.30	0.0	0.00	1.62	0.06	10	219
11	15.43	15.43	33.561	24.770	317.0	0.035			1.5	0.30	0.0	0.00			11	220
20 ISL	15.43 D	15.43	33.557 D	24.767	317.6	0.063	5.75	101.1	1.4	0.30	0.0	0.00	1.59	0.08	20	
21	15.42	15.42	33.558	24.770	317.3	0.067	5.75	101.0	1.4	0.30	0.0	0.00	1.59	0.08	21	218
30 ISL	15.40 D	15.40	33.551 D	24.769	317.7	0.095	5.74	100.8	1.3	0.30	0.0	0.00	1.54	0.01	30	
31	15.39	15.39	33.552	24.772	317.4	0.098	5.74	100.8	1.3	0.30	0.0	0.00	1.54	0.01	31	217
40	15.34	15.33	33.543	24.777	317.3	0.127	5.72	100.3	1.3	0.31	0.0	0.00	1.34	0.13	40	216
50	15.32	15.31	33.541	24.780	317.3	0.159	5.72	100.3	1.3	0.31	0.0	0.00	1.18	0.10	50	215
60	13.18	13.17	33.396	25.117	285.3	0.189	4.99	83.7	6.3	0.75	6.6	0.05	0.24	0.16	60	214
70	12.29	12.28	33.435	25.321	266.0	0.216	4.60	75.7	9.0	0.99	10.3	0.02	0.14	0.17	70	213
75 ISL	12.05 D	12.04	33.457 D	25.384	260.2	0.229	4.42	72.4	10.2	1.09	11.9	0.02	0.12	0.14	75	
86	11.28	11.27	33.509	25.567	242.9	0.257	4.11	66.2	12.8	1.27	14.9	0.01	0.10	0.08	86	212
99	10.74	10.73	33.575	25.714	229.1	0.288	3.90	62.2	15.8	1.43	17.5	0.01	0.05	0.07	99	211
100 ISL	10.69 D	10.68	33.578 D	25.726	228.1	0.290	3.89	61.9	15.9	1.44	17.6	0.01	0.05	0.07	100	
120	10.15	10.14	33.646	25.872	214.5	0.334	3.60	56.7	18.4	1.56	19.6	0.01	0.03	0.04	121	210
125 ISL	10.06 D	10.05	33.757 D	25.974	204.9	0.345	3.45	54.2	19.6	1.62	20.5	0.01	0.02	0.04	126	
139	9.89	9.87	33.817	26.050	198.0	0.373	3.00	47.0	23.1	1.81	22.9	0.00	0.01	0.03	140	209
150 ISL	9.62 D	9.60	33.904 D	26.163	187.4	0.394	2.75	42.8	25.4	1.91	24.0	0.00	0.00	0.03	151	
168	9.74	9.72	34.059	26.264	178.2	0.427	2.40	37.5	28.7	2.04	25.3	0.01	0.00	0.03	169	208
199	9.57	9.55	34.189	26.395	166.5	0.481	1.83	28.5	33.4	2.24	27.4	0.00	0.00	0.02	200	207
200 ISL	9.55 D	9.53	34.190 D	26.399	166.1	0.482	1.82	28.4	33.5	2.25	27.5	0.00			201	
228	9.28	9.25	34.243	26.485	158.5	0.528	1.54	23.9	36.9	2.38	28.8	0.00			229	206
250 ISL	9.05 D	9.02	34.275 D	26.547	152.9	0.562	1.28	19.7	39.9	2.49	29.8	0.00			251	
268	8.92	8.89	34.295	26.584	149.8	0.589	1.10	16.9	42.3	2.57	30.5	0.00			270	205
300 ISL	8.20 D	8.17	34.269 D	26.675	141.3	0.636	1.01	15.3	46.4	2.64	31.9	0.00			302	
319	8.16	8.13	34.274	26.685	140.7	0.663	0.99	15.0	48.6	2.67	32.6	0.00			321	204
376	7.77	7.73	34.293	26.758	134.5	0.741	0.72	10.8	53.8	2.81	34.1	0.00			378	203
400 ISL	7.52 D	7.48	34.300 D	26.800	130.7	0.773	0.64	9.5	56.9	2.86	35.0	0.00			403	
436	7.11	7.07	34.289	26.849	126.3	0.819	0.55	8.1	61.9	2.94	36.4	0.00			439	202
500 ISL	6.61 D	6.56	34.314 D	26.938	118.5	0.897	0.38	5.5	69.5	3.05	38.1	0.00			503	
515	6.54	6.49	34.318	26.950	117.4	0.915	0.34	4.9	71.3	3.08	38.5	0.00			518	201

CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 21.1 N	118 33.0 W	14/01/07	0326	UTC	1296 m	350 06 kn			1020.8 mb	11.1 C	8.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.16	15.16	33.540	24.812	312.6	0.000	5.74	100.3	1.7	0.32	0.1	0.01	1.47	0.30	0	
2	15.16	15.16	33.540	24.813	312.7	0.006	5.74	100.3	1.7	0.32	0.1	0.01	1.47	0.30	2	220
10 ISL	15.16 D	15.16	33.536 D	24.810	313.2	0.031	5.75	100.5	1.7	0.31	0.1	0.01	1.46	0.29	10	
11	15.16	15.16	33.538	24.811	313.1	0.034	5.75	100.5	1.7	0.31	0.1	0.01	1.46	0.29	11	219
20 ISL	15.17 D	15.17	33.537 D	24.809	313.6	0.063	5.73	100.2	1.6	0.31	0.1	0.01	1.44	0.33	20	
21	15.17	15.17	33.540	24.811	313.4	0.066	5.73	100.2	1.6	0.31	0.1	0.01	1.44	0.33	21	218
30	15.17	15.17	33.539	24.810	313.7	0.094	5.75	100.5	1.6	0.32	0.1	0.01	1.39	0.29	30	217
41	15.13	15.12	33.534	24.816	313.6	0.128	5.72	99.9	1.7	0.32	0.1	0.01	1.34	0.29	41	216
50	13.71	13.70	33.468	25.065	290.0	0.156	4.80	81.4	6.5	0.77	6.0	0.09	0.29	0.19	50	215
60	12.43	12.42	33.449	25.305	267.3	0.184	4.49	74.1	9.1	1.01	10.3	0.03	0.13	0.17	60	214
70	11.95	11.94	33.496	25.433	255.4	0.210	4.15	67.8	11.1	1.17	12.9	0.02	0.09	0.13	70	213
75 ISL	11.83 D	11.82	33.513 D	25.468	252.1	0.222	4.04	65.9	12.1	1.24	14.1	0.02	0.07	0.12	75	
86	11.01	11.00	33.554	25.650	234.9	0.249	3.88	62.2	14.3	1.36	16.3	0.01	0.05	0.10	86	212
100	10.37	10.36	33.596	25.795	221.4	0.281	3.79	59.9	16.7	1.47	18.3	0.01	0.03	0.06	100	211
120	9.98	9.97	33.752	25.984	203.9	0.324	3.21	50.4	21.3	1.72	21.7	0.01	0.01	0.04	121	210
125 ISL	9.90 D	9.89	33.770 D	26.011	201.3	0.334	3.03	47.5	22.4	1.78	22.4	0.01	0.01	0.04	126	
139	10.06	10.04	33.910	26.094	193.9	0.361	2.56	40.3	25.4	1.93	23.9	0.01	0.00	0.03	140	209
150 ISL	9.98 D	9.96	33.998 D	26.176	186.3	0.382	2.34	36.8	27.2	2.02	24.6	0.01	0.00	0.03	151	
169	10.02	10.00	34.159	26.296	175.4	0.417	2.09	32.9	29.7	2.13	25.6	0.01	0.00	0.03	170	208
199	9.74	9.72	34.201	26.376	168.4	0.468	1.73	27.1	33.2	2.26	27.3	0.01	0.00	0.02	200	207
200 ISL	9.70 D	9.68	34.203 D	26.384	167.6	0.470	1.72	26.9	33.3	2.26	27.4	0.01			201	
228	9.24	9.21	34.220	26.473	159.5	0.516	1.60	24.8	36.7	2.35	28.8	0.00			229	206
250 ISL	9.10 D	9.07	34.246 D	26.516	155.8	0.550	1.44	22.2	39.4	2.43	29.7	0.00			251	
269	8.82	8.79	34.252	26.566	151.4	0.580	1.29	19.8	41.7	2.50	30.5	0.00			271	205
300 ISL	8.47 D	8.44	34.255 D	26.623	146.4	0.626	1.12	17.0	45.6	2.60	31.8	0.00			302	
319	8.21	8.18	34.259	26.666	142.5	0.653	1.03	15.6	47.9	2.65	32.6	0.00			321	204
377	7.73	7.69	34.271	26.747	135.5	0.734	0.79	11.8	54.0	2.78	34.3	0.00			379	203
400 ISL	7.46 D	7.42	34.281 D	26.794	131.3	0.764	0.69	10.3	56.9	2.84	35.1	0.00			403	
437	7.16	7.12	34.292	26.845	126.8	0.812	0.54	8.0	61.9	2.93	36.3	0.00			440	202
500 ISL	6.52 D	6.47	34.317 D	26.952	117.0	0.889	0.38	5.5	70.4	3.05	38.2	0.00			503	
515	6.47	6.42	34.318	26.959	116.5	0.907	0.34	4.9	72.4	3.08	38.7	0.00			519	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 50.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 10.7 N	118 53.7 W	14/01/07	0755	UTC	1470 m	350 07 kn			1022.5 mb	12.5 C	8.4 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.92	14.92	33.557	24.878	306.4	0.000	5.85	101.8	1.2	0.30	0.0	0.00	2.47	0.44	0	
2	14.92	14.92	33.557	24.878	306.5	0.006	5.85	101.8	1.2	0.30	0.0	0.00	2.47	0.44	2	220
10 ISL	14.92 D	14.92	33.553 D	24.875	307.0	0.031	5.86	101.9	1.2	0.31	0.0	0.00	2.51	0.46	10	
11	14.92	14.92	33.556	24.877	306.8	0.034	5.86	101.9	1.2	0.31	0.0	0.00	2.52	0.46	11	219
20 ISL	14.92 D	14.92	33.553 D	24.875	307.3	0.061	5.84	101.6	1.1	0.30	0.0	0.00	2.48	0.45	20	
21	14.92	14.92	33.556	24.878	307.1	0.064	5.84	101.6	1.1	0.30	0.0	0.00	2.48	0.45	21	218
30 ISL	14.93 D	14.93	33.552 D	24.873	307.8	0.092	5.85	101.8	1.1	0.30	0.0	0.00	2.61	0.46	30	
31	14.92	14.92	33.557	24.879	307.3	0.095	5.85	101.8	1.1	0.30	0.0	0.00	2.62	0.46	31	217
41	14.90	14.89	33.555	24.882	307.3	0.126	5.84	101.5	1.2	0.31	0.0	0.00	2.49	0.52	41	216
50 ISL	12.74 D	12.73	33.462 D	25.255	271.9	0.152	4.86	80.8	7.2	0.81	7.3	0.11	0.51	0.29	50	
51	13.03	13.02	33.467	25.201	277.0	0.155	4.74	79.3	8.0	0.87	8.2	0.12	0.29	0.26	51	215
60	11.80	11.79	33.488	25.454	253.1	0.179	4.28	69.7	11.3	1.13	12.8	0.04	0.11	0.17	60	214
70	11.45	11.44	33.522	25.545	244.6	0.203	4.09	66.2	12.8	1.25	14.4	0.03	0.09	0.13	70	213
75 ISL	11.31 D	11.30	33.560 D	25.601	239.4	0.216	3.83	61.8	14.3	1.36	15.8	0.03	0.07	0.11	75	
85	11.11	11.10	33.676	25.727	227.6	0.239	3.26	52.4	17.5	1.58	18.6	0.02	0.04	0.08	85	212
100	10.72	10.71	33.810	25.901	211.4	0.272	2.82	45.0	21.3	1.79	21.4	0.01	0.02	0.06	100	211
120	10.36	10.35	33.937	26.063	196.4	0.313	2.52	39.9	25.0	1.93	23.3	0.01	0.01	0.04	121	210
125 ISL	10.28 D	10.27	34.015 D	26.138	189.4	0.322	2.48	39.2	25.6	1.96	23.7	0.01	0.01	0.04	126	
140	10.13	10.11	34.044	26.187	185.1	0.350	2.36	37.2	27.4	2.03	24.6	0.01	0.00	0.04	141	209
150 ISL	9.94 D	9.92	34.131 D	26.287	175.8	0.368	2.22	34.9	28.8	2.09	25.3	0.01	0.00	0.04	151	
169	9.87	9.85	34.167	26.327	172.4	0.401	1.93	30.3	31.5	2.19	26.5	0.01	0.00	0.03	170	208
199	9.50	9.48	34.216	26.427	163.4	0.452	1.60	24.9	35.3	2.33	28.1	0.01	0.00	0.02	200	207
200 ISL	9.46 D	9.44	34.220 D	26.437	162.5	0.453	1.59	24.7	35.4	2.33	28.1	0.01			201	
229	9.16	9.13	34.250	26.510	156.1	0.500	1.39	21.5	38.8	2.43	29.4	0.01			230	206
250 ISL	8.99 D	8.96	34.251 D	26.538	153.8	0.532	1.30	20.0	40.5	2.48	30.0	0.00			251	
268	8.85	8.82	34.260	26.567	151.3	0.560	1.24	19.0	41.9	2.52	30.4	0.00			270	205
300 ISL	8.44 D	8.41	34.256 D	26.628	145.9	0.607	1.12	17.0	45.2	2.59	31.6	0.00			302	
318	8.31	8.28	34.260	26.651	143.9	0.633	1.05	15.9	47.3	2.63	32.3	0.00			320	204
378	7.67	7.63	34.277	26.760	134.2	0.717	0.75	11.2	54.8	2.80	34.6	0.00			380	203
400 ISL	7.37 D	7.33	34.280 D	26.806	130.1	0.746	0.67	9.9	57.4	2.85	35.3	0.00			403	
438	7.16	7.12	34.287	26.841	127.2	0.795	0.56	8.3	61.8	2.93	36.4	0.00			441	202
500 ISL	6.59 D	6.54	34.313 D	26.939	118.3	0.871	0.38	5.5	69.5	3.05	38.2	0.00			503	
512	6.56	6.51	34.314	26.944	118.0	0.885	0.35	5.1	71.0	3.07	38.5	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 55.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 1.3 N	119 13.8 W	14/01/07	1212	UTC	1568 m	340 09 kn			1022.9 mb	11.9 C	7.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.17	14.17	33.469	24.969	297.7	0.000	5.85	100.2	2.0	0.37	0.5	0.06	0.90	0.19	0	
2	14.17	14.17	33.469	24.969	297.7	0.006	5.85	100.2	2.0	0.37	0.5	0.06	0.90	0.19	2	221
10 ISL	14.17 D	14.17	33.468 D	24.969	298.0	0.030	5.84	100.0	2.0	0.37	0.5	0.06	0.87	0.20	10	
11	14.17	14.17	33.470	24.970	297.9	0.033	5.84	100.0	2.0	0.37	0.5	0.06	0.86	0.20	11	219
11	14.17	14.17	33.470	24.970	297.9	0.033									11	220
20 ISL	14.17 D	14.17	33.469 D	24.970	298.2	0.060	5.85	100.2	2.0	0.37	0.5	0.06	0.86	0.22	20	
21	14.17	14.17	33.470	24.971	298.1	0.063	5.85	100.2	2.0	0.37	0.5	0.06	0.86	0.22	21	218
30 ISL	14.17 D	14.17	33.469 D	24.970	298.5	0.089	5.86	100.3	2.0	0.37	0.5	0.06	0.80	0.24	30	
31	14.17	14.17	33.470	24.971	298.4	0.092	5.86	100.3	2.0	0.37	0.5	0.06	0.79	0.24	31	217
40	14.17	14.16	33.472	24.973	298.5	0.119	5.84	100.0	2.0	0.38	0.5	0.06	0.83	0.25	40	216
50 ISL	14.10 D	14.09	33.508 D	25.016	294.7	0.149	5.77	98.7	2.5	0.43	1.1	0.12	0.69	0.27	50	
51	14.10	14.09	33.504	25.013	295.1	0.152	5.76	98.5	2.6	0.44	1.2	0.13	0.67	0.27	51	215
61	14.00	13.99	33.511	25.039	292.8	0.181	5.69	97.1	3.0	0.49	1.8	0.19	0.45	0.23	61	214
70	13.97	13.96	33.508	25.043	292.7	0.208	5.65	96.4	3.2	0.50	2.0	0.20	0.29	0.20	70	213
75 ISL	13.89 D	13.88	33.507 D	25.059	291.3	0.222	5.39	91.8	4.6	0.61	4.0	0.16	0.22	0.18	75	
85	12.38	12.37	33.464	25.327	265.9	0.250	4.77	78.7	8.2	0.89	9.0	0.06	0.10	0.13	85	212
100	11.05	11.04	33.523	25.619	238.2	0.288	4.36	69.9	12.2	1.18	14.0	0.01	0.02	0.05	100	211
119	10.01	10.00	33.641	25.892	212.6	0.331	3.82	59.9	18.0	1.49	19.0	0.01	0.02	0.05	120	210
125 ISL	9.77 D	9.76	33.736 D	26.006	201.8	0.343	3.60	56.2	20.2	1.60	20.7	0.01	0.02	0.05	126	
138	9.39	9.37	33.817	26.132	190.0	0.369	3.18	49.3	24.8	1.82	23.8	0.01	0.01	0.04	139	209
150 ISL	9.04 D	9.02	33.888 D	26.244	179.5	0.391	3.05	46.9	27.6	1.86	25.1	0.01	0.01	0.03	151	
170	8.68	8.66	33.964	26.360	168.8	0.426	2.96	45.2	30.8	1.93	26.1	0.01	0.00	0.02	171	208
200	8.49	8.47	34.015	26.430	162.7	0.475	2.57	39.1	34.5	2.07	28.0	0.01	0.00	0.03	201	207
231	8.23	8.21	34.065	26.509	155.7	0.525	2.25	34.0	38.3	2.21	29.7	0.01			232	206
250 ISL	7.93 D	7.90	34.097 D	26.579	149.3	0.554	1.88	28.2	42.3	2.36	31.2	0.00			251	
267	7.93	7.90	34.150	26.621	145.6	0.579	1.53	23.0	46.0	2.49	32.4	0.00			269	205
300 ISL	7.47 D	7.44	34.146 D	26.685	139.9	0.626	1.13	16.8	50.7	2.66	33.7	0.00			302	
318	7.65	7.62	34.226	26.722	136.8	0.651	0.99	14.8	52.8	2.72	34.2	0.00			320	204
378	7.17	7.13	34.250	26.810	129.1	0.730	0.73	10.8	59.6	2.87	36.0	0.00			380	203
400 ISL	6.82 D	6.78	34.230 D	26.842	126.1	0.759	0.71	10.4	62.4	2.90	36.8	0.00			403	
438	6.51	6.47	34.220	26.876	123.2	0.806	0.68	9.9	67.2	2.95	38.0	0.00			441	202
500 ISL	6.31 D	6.26	34.313 D	26.976	114.5	0.880	0.37	5.4	73.7	3.09	39.3	0.00			503	
512	6.27	6.22	34.313	26.981	114.1	0.893	0.31	4.5	74.9	3.12	39.5	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 51.9 N	119 34.2 W	14/01/07	1804	UTC	2272 m	310 04 kn	340 03 08	1	1025.0 mb	14.0 C	11.0 C	17m	1/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.60	13.60	33.502	25.113	284.1	0.000	5.85	99.0	3.4	0.49	2.1	0.12	0.95	0.18	0	
2 A	13.60	13.60	33.502	25.113	284.1	0.006	5.85	99.0	3.4	0.49	2.1	0.12	0.95	0.18	2	222
10 ISL	13.59 D	13.59	33.491 D	25.106	284.9	0.028	5.85	99.0	3.4	0.50	2.1	0.12	1.06	0.13	10	
11 A	13.59	13.59	33.495	25.109	284.7	0.031	5.85	99.0	3.4	0.50	2.1	0.12	1.08	0.12	11	220
11	13.59	13.59	33.492	25.107	284.9	0.031									11	221
20 ISL	13.58 D	13.58	33.493 D	25.110	284.8	0.057	5.83	98.6	3.5	0.50	2.1	0.13	1.01	0.16	20	
24 A	13.58	13.58	33.494	25.111	284.9	0.068	5.82	98.5	3.5	0.50	2.1	0.13	0.97	0.19	24	219
30 ISL	13.58 D	13.58	33.493 D	25.111	285.1	0.085	5.82	98.5	3.5	0.50	2.1	0.13	1.00	0.20	30	
35 A	13.57	13.57	33.496	25.115	284.8	0.100	5.81	98.3	3.5	0.50	2.2	0.13	1.02	0.21	35	218
41 A	13.58	13.57	33.498	25.115	285.0	0.117	5.79	98.0	3.6	0.52	2.3	0.14	0.86	0.23	41	217
49	13.59	13.58	33.502	25.116	285.1	0.140	5.77	97.6	3.7	0.52	2.4	0.15	0.75	0.29	49	216
50 ISL	13.60 D	13.59	33.504 D	25.116	285.2	0.142	5.76	97.5	3.7	0.52	2.4	0.15	0.75	0.27	50	
58	13.60	13.59	33.516	25.125	284.5	0.165	5.67	96.0	4.3	0.57	3.0	0.18	0.72	0.15	58	215
66 A	13.53	13.52	33.537	25.156	281.8	0.188	5.45	92.1	5.6	0.65	4.3	0.22	0.24	0.23	66	214
71	13.43	13.42	33.538	25.177	279.9	0.202	5.41	91.3	5.9	0.68	4.7	0.23	0.25	0.19	71	213
75 ISL	13.22 D	13.21	33.544 D	25.224	275.5	0.213	5.02	84.3	7.9	0.84	7.3	0.19	0.23	0.19	75	
85	11.61	11.60	33.553	25.541	245.4	0.239	3.85	62.5	14.2	1.32	15.2	0.05	0.15	0.22	85	212
99	10.80	10.79	33.639	25.754	225.4	0.272	3.37	53.8	18.3	1.57	19.1	0.02	0.06	0.12	99	211
100 ISL	10.79 D	10.78	33.642 D	25.758	225.0	0.274	3.36	53.6	18.5	1.58	19.3	0.02	0.06	0.12	100	
120	9.97	9.96	33.702	25.946	207.4	0.318	3.20	50.2	21.9	1.74	22.3	0.01	0.03	0.09	121	210
125 ISL	9.76 D	9.75	33.743 D	26.013	201.1	0.328	3.05	47.6	23.4	1.80	23.2	0.01	0.03	0.10	126	
139	9.37	9.35	33.878	26.183	185.2	0.355	2.63	40.7	27.5	1.95	25.6	0.01	0.02	0.14	140	209
150 ISL	9.12 D	9.10	33.953 D	26.282	175.9	0.375	2.57	39.6	29.5	2.00	26.5	0.01	0.02	0.12	151	
170	8.83	8.81	33.999	26.364	168.5	0.409	2.47	37.8	32.4	2.07	27.6	0.01	0.01	0.05	171	208
199	8.43	8.41	34.067	26.480	157.9	0.456	2.08	31.6	37.9	2.24	29.9	0.01	0.01	0.04	200	207
200 ISL	8.40 D	8.38	34.074 D	26.490	157.0	0.458	2.06	31.3	38.1	2.25	30.0	0.01			201	
230	8.15	8.13	34.107	26.554	151.4	0.504	1.69	25.5	42.5	2.40	32.0	0.01			231	206
250 ISL	7.76 D	7.74	34.095 D	26.602	146.9	0.534	1.66	24.8	46.0	2.45	32.8	0.01			251	
268	7.50	7.47	34.100	26.644	143.2	0.560	1.64	24.4	49.0	2.49	33.4	0.01			270	205
300 ISL	7.26 D	7.23	34.129 D	26.701	138.2	0.605	1.47	21.7	53.1	2.59	34.5	0.00			302	
319	7.05	7.02	34.129	26.730	135.6	0.631	1.33	19.6	55.4	2.65	35.2	0.00			321	204
379	6.60	6.57	34.176	26.828	126.9	0.710	0.89	13.0	64.0	2.85	37.3	0.00			381	203
400 ISL	6.39 D	6.35	34.199 D	26.875	122.7	0.736	0.81	11.7	66.4	2.89	37.9	0.00			403	
439	6.24	6.20	34.210	26.903	120.4	0.784	0.68	9.8	70.8	2.96	38.8	0.00			442	202
500 ISL	5.81 D	5.77	34.262 D	26.999	111.7	0.854	0.40	5.7	79.2	3.10	40.5	0.00			503	
512	5.77	5.73	34.280	27.018	110.0	0.868	0.35	5.0	80.9	3.13	40.8	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 30.6 N	120 14.6 W	14/01/07	2332 UTC	3920 m	340 13 kn	340 03 08	1	1023.1 mb	13.5 C	10.0 C	14m	5/8	AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.85	13.85	33.335	24.932	301.2	0.000	5.97	101.5	2.6	0.37	0.5	0.06	0.74	0.13	0	
2	13.85	13.85	33.335	24.932	301.3	0.006	5.97	101.5	2.6	0.37	0.5	0.06	0.74	0.13	2	220
10 ISL	13.87 D	13.87	33.336 D	24.929	301.8	0.030	5.95	101.2	2.5	0.37	0.5	0.06	0.71	0.15	10	
11	13.87	13.87	33.338	24.931	301.7	0.033	5.95	101.2	2.5	0.37	0.5	0.06	0.71	0.15	11	219
20 ISL	13.84 D	13.84	33.337 D	24.936	301.4	0.060	5.94	100.9	2.6	0.37	0.6	0.06	0.73	0.09	20	
21	13.87	13.87	33.339	24.932	301.8	0.063	5.94	101.0	2.6	0.37	0.6	0.06	0.73	0.09	21	218
30	13.75	13.75	33.333	24.952	300.2	0.090	5.98	101.4	2.5	0.37	0.4	0.06	0.93	0.15	30	217
40	13.75	13.74	33.332	24.952	300.5	0.120	5.96	101.1	2.8	0.37	0.5	0.06	0.89	0.15	40	216
50	13.73	13.72	33.329	24.954	300.6	0.150	5.96	101.0	2.6	0.36	0.4	0.06	0.77	0.23	50	215
61	13.59	13.58	33.343	24.993	297.1	0.183	5.87	99.2	3.0	0.50	1.1	0.15	0.42	0.12	61	214
70	13.21	13.20	33.373	25.093	287.8	0.210	5.53	92.8	4.5	0.59	3.8	0.27	0.12	0.11	70	213
75 ISL	12.83 D	12.82	33.371 D	25.167	280.9	0.224	5.31	88.4	5.7	0.69	5.7	0.22	0.11	0.10	75	
86	11.80	11.79	33.370	25.363	262.3	0.254	4.80	78.2	9.0	0.96	10.2	0.04	0.09	0.08	86	212
100	10.75	10.74	33.497	25.652	235.1	0.289	4.13	65.8	14.2	1.31	16.0	0.01	0.03	0.11	100	211
119	9.99	9.98	33.625	25.883	213.4	0.331	3.80	59.6	18.1	1.52	19.4	0.01	0.02	0.03	120	210
125 ISL	9.86 D	9.85	33.648 D	25.922	209.7	0.344	3.66	57.2	19.7	1.60	20.6	0.01	0.02	0.03	126	
140	9.33	9.31	33.754	26.093	193.8	0.374	3.38	52.3	23.4	1.75	23.2	0.01	0.01	0.03	141	209
150 ISL	9.16 D	9.14	33.824 D	26.175	186.1	0.393	3.39	52.2	24.3	1.75	23.3	0.01	0.01	0.03	151	
171	9.05	9.03	33.911	26.261	178.4	0.431	3.42	52.6	26.0	1.74	23.4	0.01	0.00	0.02	172	208
199	8.78	8.76	34.014	26.384	167.1	0.480	2.52	38.6	32.6	2.07	27.5	0.01	0.00	0.02	200	207
200 ISL	8.66 D	8.64	34.008 D	26.398	165.8	0.481	2.51	38.3	32.8	2.08	27.6	0.01			201	
231	8.27	8.25	34.057	26.497	156.9	0.531	2.24	33.9	38.2	2.19	29.7	0.01			232	206
250 ISL	7.97 D	7.94	34.075 D	26.556	151.4	0.561	2.05	30.8	41.8	2.28	31.0	0.01			251	
266	7.76	7.73	34.078	26.589	148.5	0.585	1.90	28.4	44.8	2.36	32.0	0.01			268	205
300 ISL	7.22 D	7.19	34.088 D	26.674	140.7	0.634	1.65	24.4	50.5	2.50	33.8	0.00			302	
318	7.07	7.04	34.095	26.701	138.4	0.659	1.53	22.5	53.5	2.57	34.6	0.00			320	204
380	6.44	6.41	34.142	26.823	127.3	0.741	1.00	14.5	64.6	2.81	37.5	0.00			382	203
400 ISL	6.28 D	6.24	34.155 D	26.854	124.5	0.767	0.86	12.4	67.6	2.87	38.2	0.00			403	
439	6.09	6.05	34.198	26.913	119.3	0.814	0.64	9.2	72.9	2.97	39.2	0.00			442	202
500 ISL	5.75 D	5.71	34.249 D	26.996	111.9	0.885	0.39	5.6	80.3	3.11	40.6	0.00			503	
511	5.73	5.69	34.269	27.014	110.3	0.897	0.34	4.9	81.6	3.13	40.8	0.00			514	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 10.7 N	120 54.8 W	15/01/07	0550 UTC	3827 m	010 13 kn			1024.3 mb	13.1 C	9.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.67	15.67	33.441	24.624	330.6	0.000	5.75	101.5	1.6	0.32	0.1	0.00	0.17	0.05	0	
2	15.67	15.67	33.441	24.624	330.7	0.007	5.75	101.5	1.6	0.32	0.1	0.00	0.17	0.05	2	220
10 ISL	15.69 D	15.69	33.441 D	24.620	331.3	0.033	5.72	101.0	1.6	0.30	0.0	0.00	0.17	0.05	10	
15	15.70	15.70	33.442	24.618	331.6	0.050	5.70	100.7	1.6	0.28	0.0	0.00	0.17	0.05	15	219
20 ISL	15.68 D	15.68	33.439 D	24.620	331.5	0.066	5.70	100.6	1.6	0.28	0.0	0.00	0.17	0.05	20	
30	15.69	15.69	33.440	24.619	332.0	0.099	5.70	100.6	1.6	0.29	0.1	0.00	0.18	0.05	30	218
45	15.67	15.66	33.435	24.620	332.3	0.149	5.70	100.6	1.6	0.28	0.1	0.00	0.18	0.06	45	217
50 ISL	15.66 D	15.65	33.431 D	24.620	332.5	0.166	5.70	100.6	1.6	0.28	0.1	0.00	0.18	0.06	50	
60	15.65	15.64	33.432	24.623	332.5	0.199	5.71	100.7	1.6	0.28	0.1	0.00	0.19	0.06	60	216
75	15.65	15.64	33.429	24.621	333.2	0.249	5.70	100.5	1.6	0.29	0.0	0.00	0.20	0.06	75	215
85	15.61	15.60	33.423	24.626	333.0	0.282	5.70	100.4	1.6	0.28	0.0	0.00	0.23	0.08	85	214
95	15.47	15.46	33.417	24.653	330.8	0.316	5.70	100.2	1.7	0.30	0.1	0.02	0.22	0.09	95	213
100 ISL	14.68 D	14.67	33.473 D	24.868	310.4	0.332	5.67	98.1	2.1	0.32	0.4	0.12	0.22	0.12	100	
105	14.24	14.22	33.474	24.962	301.5	0.347	5.60	96.0	2.6	0.36	0.6	0.20	0.22	0.15	105	212
115	13.48	13.46	33.529	25.161	282.7	0.376	5.30	89.5	4.0	0.50	3.4	0.04	0.16	0.13	115	211
125	12.60	12.58	33.510	25.321	267.5	0.404	5.00	82.9	6.1	0.71	6.8	0.02	0.11	0.10	126	210
140	11.21	11.19	33.506	25.578	243.1	0.442	4.60	74.0	10.2	1.04	12.1	0.01	0.06	0.08	141	209
150 ISL	10.36 D	10.34	33.566 D	25.775	224.5	0.465	4.38	69.2	13.1	1.21	14.9	0.01	0.04	0.06	151	
164	9.87	9.85	33.642	25.917	211.1	0.496	4.13	64.6	16.8	1.39	17.9	0.01	0.02	0.04	165	208
195	9.24	9.22	33.810	26.152	189.2	0.558	3.79	58.5	22.4	1.59	21.3	0.00	0.00	0.02	196	207
200 ISL	9.17 D	9.15	33.829 D	26.178	186.8	0.567	3.76	58.0	23.3	1.61	21.7	0.00			201	
229	8.68	8.66	33.959	26.357	170.2	0.619	3.47	52.9	28.7	1.76	24.1	0.00			230	206
250 ISL	8.38 D	8.35	34.006 D	26.440	162.6	0.654	2.99	45.3	33.6	1.95	26.7	0.00			251	
269	8.10	8.07	34.039	26.509	156.3	0.684	2.53	38.1	38.0	2.12	29.0	0.00			270	205
300 ISL	7.73 D	7.70	34.071 D	26.588	149.1	0.732	2.11	31.5	43.8	2.30	31.4	0.00			302	
317	7.49	7.46	34.069	26.621	146.1	0.757	1.94	28.8	46.8	2.39	32.5	0.00			319	204
378	6.66	6.63	34.118	26.775	132.0	0.841	1.21	17.6	59.4	2.75	36.5	0.00			380	203
400 ISL	6.31 D	6.27	34.123 D	26.825	127.2	0.870	1.03	14.9	63.8	2.83	37.5	0.00			402	
436	6.08	6.04	34.157	26.881	122.2	0.915	0.81	11.6	70.3	2.94	38.7	0.00			439	202
500 ISL	5.83 D	5.79	34.224 D	26.966	114.8	0.991	0.52	7.4	77.8	3.06	40.2	0.00			503	
515	5.77	5.73	34.231	26.979	113.7	1.008	0.45	6.4	79.6	3.09	40.6	0.00			518	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 51.1 N	121 35.3 W	15/01/07	1212 UTC	4087 m	360 15 kn			1024.2 mb	13.8 C	10.2 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.72	15.72	33.435	24.608	332.1	0.000	5.68	100.3	1.8	0.29	0.0	0.00	0.22	0.07	0	
2	15.72	15.72	33.435	24.608	332.2	0.007	5.68	100.3	1.8	0.29	0.0	0.00	0.22	0.07	2	220
10 ISL	15.72 D	15.72	33.433 D	24.607	332.5	0.033	5.68	100.3	1.8	0.29	0.0	0.00	0.22	0.07	10	
16	15.72	15.72	33.437	24.610	332.4	0.053	5.68	100.3	1.8	0.29	0.0	0.00	0.22	0.07	16	219
20 ISL	15.72 D	15.72	33.433 D	24.607	332.8	0.066	5.68	100.3	1.8	0.29	0.0	0.00	0.22	0.07	20	
30	15.73	15.73	33.435	24.607	333.2	0.100	5.67	100.2	1.8	0.28	0.0	0.00	0.22	0.07	30	218
46	15.73	15.72	33.435	24.607	333.6	0.153	5.68	100.3	1.9	0.28	0.0	0.00	0.22	0.07	46	217
50 ISL	15.73 D	15.72	33.432 D	24.605	334.0	0.166	5.68	100.3	1.9	0.28	0.0	0.00	0.22	0.07	50	
61	15.73	15.72	33.435	24.608	334.1	0.203	5.68	100.3	1.9	0.28	0.0	0.00	0.22	0.07	61	216
75	15.73	15.72	33.435	24.608	334.4	0.250	5.68	100.3	1.7	0.28	0.0	0.00	0.22	0.08	75	215
85	15.73	15.72	33.435	24.609	334.7	0.283	5.66	100.0	1.7	0.28	0.0	0.00	0.22	0.07	85	214
95	15.73	15.72	33.435	24.609	335.0	0.317	5.68	100.3	1.7	0.28	0.0	0.00	0.22	0.07	95	213
100 ISL	13.86 D	13.85	33.365 D	24.956	301.8	0.333	5.48	93.2	2.8	0.40	1.5	0.02	0.20	0.12	100	
106	13.42	13.41	33.422	25.090	289.1	0.351	5.20	87.6	4.4	0.58	3.8	0.04	0.16	0.17	106	212
114	12.71	12.69	33.420	25.230	276.0	0.373	4.95	82.2	6.2	0.75	6.7	0.02	0.12	0.11	114	211
124	11.72	11.70	33.455	25.445	255.5	0.400	4.59	74.6	9.2	0.99	10.9	0.01	0.08	0.08	125	210
125 ISL	11.61 D	11.59	33.461 D	25.470	253.1	0.402	4.57	74.1	9.4	1.00	11.1	0.01	0.08	0.08	126	
140	10.88	10.86	33.501	25.633	237.8	0.439	4.43	70.8	11.7	1.15	13.6	0.01	0.05	0.06	141	209
150 ISL	10.22 D	10.20	33.571 D	25.802	221.8	0.462	4.33	68.2	13.5	1.24	15.2	0.01	0.04	0.05	151	
165	9.90	9.88	33.614	25.890	213.7	0.495	4.14	64.8	16.5	1.38	17.7	0.00	0.02	0.03	166	208
195	9.20	9.18	33.828	26.172	187.3	0.555	3.44	53.1	24.2	1.72	22.8	0.00	0.00	0.02	196	207
200 ISL	9.10 D	9.08	33.876 D	26.226	182.3	0.564	3.36	51.7	25.3	1.75	23.4	0.00			201	
230	8.71	8.69	33.989	26.376	168.5	0.617	2.94	44.9	31.0	1.92	26.0	0.00			231	206
250 ISL	8.40 D	8.37	34.031 D	26.457	161.1	0.650	2.66	40.3	34.8	2.04	27.7	0.00			251	
269	8.17	8.14	34.055	26.511	156.2	0.680	2.40	36.2	38.2	2.15	29.2	0.00			270	205
300 ISL	7.76 D	7.73	34.071 D	26.584	149.6	0.727	2.05	30.6	43.4	2.31	31.3	0.00			302	
316	7.59	7.56	34.083	26.618	146.5	0.751	1.89	28.1	46.1	2.39	32.3	0.00			318	204
377	6.88	6.84	34.135	26.759	133.7	0.836	1.29	18.9	57.4	2.68	35.5	0.00			379	203
400 ISL	6.63 D	6.59	34.134 D	26.792	130.7	0.867	1.14	16.6	60.9	2.76	36.5	0.00			402	
440	6.29	6.25	34.156	26.854	125.1	0.918	0.91	13.2	66.8	2.87	38.0	0.00			443	202
500 ISL	5.84 D	5.80	34.207 D	26.952	116.2	0.990	0.57	8.2	76.5	3.03	40.0	0.00			503	
511	5.76	5.72	34.216	26.969	114.6	1.003	0.51	7.3	78.3	3.06	40.4	0.00			514	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 30.8 N	122 15.3 W	15/01/07	1841 UTC	4192 m	040 21 kn	360 05 07	1	1027.2 mb	14.9 C	12.0 C	33m	5/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.06	16.06	33.500	24.581	334.6	0.000	5.66	100.7	1.7	0.27	0.0	0.00	0.20	0.02	0	
2 A	16.06	16.06	33.500	24.581	334.7	0.007	5.66	100.7	1.7	0.27	0.0	0.00	0.20	0.02	2	223
10 ISL	16.06 D	16.06	33.499 D	24.581	335.0	0.033	5.66	100.7	1.7	0.27	0.0	0.00	0.19	0.01	10	
12	16.06	16.06	33.500	24.582	335.0	0.040	5.66	100.7	1.7	0.27	0.0	0.00	0.18	0.01	12	222
20 ISL	16.06 D	16.06	33.498 D	24.580	335.4	0.067	5.66	100.7	1.7	0.27	0.0	0.00	0.16	0.04	20	
21 A	16.06	16.06	33.500	24.582	335.2	0.070	5.66	100.7	1.7	0.27	0.0	0.00	0.16	0.04	21	221
30 ISL	16.05 D	16.05	33.497 D	24.582	335.5	0.101	5.66	100.7	1.7	0.27	0.0	0.00	0.17	0.04	30	
34	16.06	16.05	33.500	24.583	335.6	0.114	5.66	100.7	1.7	0.27	0.0	0.00	0.17	0.04	34	220
46 A	16.06	16.05	33.502	24.584	335.8	0.154	5.67	100.9	1.7	0.27	0.0	0.00	0.17	0.04	46	218
46	16.06	16.05	33.502	24.584	335.8	0.154									46	219
50 ISL	16.06 D	16.05	33.498 D	24.582	336.2	0.168	5.67	100.9	1.7	0.27	0.0	0.00	0.18	0.02	50	
56	16.05	16.04	33.498	24.584	336.2	0.188	5.66	100.7	1.6	0.27	0.0	0.00	0.19	0.00	56	217
66 A	16.04	16.03	33.491	24.581	336.8	0.222	5.66	100.6	1.6	0.27	0.0	0.00	0.21	0.01	66	216
72	16.03	16.02	33.489	24.582	336.9	0.242	5.66	100.6	1.6	0.27	0.0	0.00	0.20	0.01	72	215
75 ISL	16.04 D	16.03	33.491 D	24.582	337.0	0.252	5.66	100.6	1.6	0.27	0.0	0.00	0.20	0.00	75	
78 A	16.05	16.04	33.496	24.583	337.0	0.262	5.65	100.5	1.6	0.27	0.0	0.00	0.21	0.00	78	214
91 B	16.04	16.03	33.494	24.584	337.3	0.306	5.66	100.6	1.6	0.27	0.0	0.00	0.19	0.03	91	213
100 ISL	14.91 D	14.90	33.471 D	24.817	315.2	0.335	5.68	98.7	2.0	0.31	0.2	0.12	0.32	0.09	100	
103	14.25	14.24	33.464	24.952	302.4	0.344	5.69	97.6	2.2	0.33	0.3	0.15	0.36	0.11	103	212
115	13.66	13.64	33.521	25.118	286.8	0.380	5.39	91.3	3.5	0.46	2.5	0.06	0.23	0.11	115	211
125 ISL	13.18 D	13.16	33.545 D	25.234	275.9	0.408	5.20	87.3	4.5	0.57	4.5	0.03	0.19	0.06	126	
128 A	12.99	12.97	33.535	25.264	273.1	0.416	5.15	86.1	4.9	0.61	5.1	0.02	0.18	0.05	129	210
148	11.44	11.42	33.514	25.543	246.7	0.468	4.73	76.5	9.2	0.95	10.8	0.01	0.08	0.06	149	209
150 ISL	11.25 D	11.23	33.515 D	25.578	243.4	0.473	4.69	75.5	9.7	0.98	11.3	0.01	0.07	0.06	151	
173	9.98	9.96	33.619	25.881	214.8	0.526	4.32	67.7	15.3	1.31	16.7	0.01	0.03	0.03	174	208
200 ISL	9.22 D	9.20	33.803 D	26.150	189.6	0.580	3.92	60.5	21.4	1.56	20.7	0.01	0.00	0.02	201	
202	9.22	9.20	33.805	26.151	189.4	0.584	3.89	60.0	21.8	1.57	20.9	0.01	0.00	0.02	203	207
225	8.86	8.84	33.919	26.298	175.9	0.626	3.54	54.2	26.5	1.73	23.4	0.01			226	206
250 ISL	8.36 D	8.33	33.999 D	26.438	162.8	0.668	3.20	48.5	32.0	1.88	25.8	0.00			251	
268	8.11	8.08	34.016	26.489	158.2	0.697	2.93	44.1	36.1	2.00	27.5	0.00			269	205
300 ISL	7.72 D	7.69	34.039 D	26.565	151.4	0.747	2.30	34.3	43.1	2.27	30.8	0.00			302	
316	7.50	7.47	34.069	26.620	146.3	0.771	1.99	29.6	46.4	2.40	32.3	0.00			318	204
375	7.02	6.98	34.128	26.734	136.1	0.854	1.26	18.5	55.4	2.70	35.5	0.00			377	203
400 ISL	6.68 D	6.64	34.145 D	26.794	130.5	0.887	1.05	15.3	60.1	2.80	36.7	0.00			402	
430	6.41	6.37	34.161	26.842	126.2	0.926	0.86	12.5	65.7	2.90	38.0	0.00			433	202
500 ISL	5.86 D	5.82	34.209 D	26.951	116.3	1.011	0.53	7.6	76.2	3.08	39.9	0.00			503	
513	5.83	5.79	34.231	26.972	114.5	1.026	0.47	6.7	78.1	3.11	40.3	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.
B) SECOND FLUOROMETER READING MIS-RECORDED. CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
D) CTD DATA USED ON STANDARD LEVELS AND MISSING FIELDS;PRIMARY T; PRIMARY CORRECTED S;

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 10.4 N	122 55.3 W	16/01/07	0230 UTC	3474 m	040 13 kn			1025.0 mb	13.6 C	10.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.87	15.87	33.518	24.638	329.2	0.000	5.69	100.9	1.7	0.26	0.0	0.00	0.19	0.06	0	
2	15.87	15.87	33.518	24.638	329.3	0.007	5.69	100.9	1.7	0.26	0.0	0.00	0.19	0.06	2	220
10 ISL	15.89 D	15.89	33.516 D	24.632	330.1	0.033	5.69	100.9	1.7	0.26	0.0	0.00	0.19	0.08	10	
16	15.88	15.88	33.518	24.636	329.9	0.053	5.69	100.9	1.7	0.26	0.0	0.00	0.18	0.09	16	219
20 ISL	15.89 D	15.89	33.518 D	24.634	330.2	0.066	5.69	100.9	1.7	0.26	0.0	0.00	0.18	0.08	20	
30 ISL	15.89 D	15.89	33.517 D	24.634	330.6	0.099	5.69	100.9	1.6	0.26	0.0	0.00	0.17	0.06	30	
31	15.90	15.90	33.519	24.633	330.7	0.102	5.69	100.9	1.6	0.26	0.0	0.00	0.17	0.06	31	218
45	15.90	15.89	33.519	24.634	331.1	0.149	5.69	100.9	1.7	0.26	0.0	0.00	0.17	0.06	45	217
50 ISL	15.90 D	15.89	33.517 D	24.632	331.4	0.165	5.69	100.9	1.6	0.26	0.0	0.00	0.17	0.06	50	
60	15.90	15.89	33.518	24.633	331.6	0.198	5.69	100.9	1.5	0.26	0.0	0.00	0.17	0.07	60	216
75	15.90	15.89	33.518	24.634	332.0	0.248	5.69	100.9	1.5	0.26	0.0	0.00	0.18	0.06	75	215
85	15.88	15.87	33.519	24.640	331.8	0.281	5.67	100.5	1.6	0.26	0.0	0.00	0.19	0.07	85	214
96	14.82	14.81	33.651	24.975	300.1	0.316	5.60	97.3	2.2	0.29	0.3	0.14	0.18	0.13	96	213
100 ISL	14.76 D	14.75	33.660 D	24.995	298.3	0.328	5.58	96.8	2.2	0.30	0.4	0.14	0.18	0.13	100	
104	14.70	14.68	33.687	25.029	295.2	0.340	5.56	96.3	2.2	0.30	0.5	0.14	0.17	0.13	104	212
115	14.33	14.31	33.728	25.139	284.9	0.372	5.48	94.3	2.6	0.33	1.3	0.06	0.14	0.14	115	211
125	13.65	13.63	33.714	25.270	272.6	0.400	5.30	89.9	3.6	0.44	3.3	0.02	0.10	0.09	126	210
139	12.71	12.69	33.638	25.399	260.5	0.437	5.06	84.1	5.7	0.64	6.4	0.02	0.07	0.08	140	209
150 ISL	11.45 D	11.43	33.561 D	25.578	243.5	0.465	4.80	77.7	8.4	0.88	9.9	0.02	0.05	0.07	151	
163	10.63	10.61	33.571	25.732	228.9	0.495	4.48	71.2	12.2	1.16	14.2	0.01	0.04	0.05	164	208
195	9.29	9.27	33.794	26.131	191.2	0.563	3.95	61.0	21.0	1.52	20.4	0.00	0.01	0.02	196	207
200 ISL	9.16 D	9.14	33.832 D	26.182	186.5	0.572	3.88	59.8	22.1	1.56	21.0	0.00			201	
228	8.70	8.68	33.944	26.342	171.6	0.622	3.47	53.0	27.7	1.75	23.9	0.00			229	206
250 ISL	8.45 D	8.42	33.992 D	26.419	164.7	0.659	3.08	46.8	31.8	1.91	26.0	0.00			251	
269	8.26	8.23	34.022	26.471	160.0	0.690	2.74	41.4	35.2	2.04	27.7	0.00			270	205
300 ISL	7.86 D	7.83	34.047 D	26.551	152.8	0.739	2.31	34.6	41.2	2.23	30.3	0.00			302	
318	7.58	7.55	34.064	26.605	147.8	0.766	2.09	31.1	44.6	2.33	31.7	0.00			320	204
377	6.89	6.85	34.101	26.731	136.3	0.849	1.43	21.0	55.1	2.62	35.1	0.00			379	203
400 ISL	6.55 D	6.51	34.120 D	26.791	130.7	0.880	1.24	18.0	59.3	2.71	36.3	0.00			402	
438	6.26	6.22	34.144	26.848	125.5	0.929	0.97	14.0	66.0	2.85	38.0	0.00			441	202
500 ISL	5.81 D	5.77	34.202 D	26.951	116.2	1.004	0.63	9.0	75.7	3.01	39.7	0.00			503	
531	5.61	5.56	34.231	26.999	111.9	1.039	0.46	6.5	80.5	3.09	40.6	0.00			534	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.3 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
29 50.5 N	123 35.3 W	16/01/07	0847 UTC	4018 m	030 12 kn			1026.1 mb	14.8 C	11.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.92	15.92	33.497	24.611	331.8	0.000	5.69	101.0	1.6	0.26	0.0	0.00	0.16	0.05	0	
2	15.92	15.92	33.497	24.611	331.9	0.007	5.69	101.0	1.6	0.26	0.0	0.00	0.16	0.05	2	220
10 ISL	15.92 D	15.92	33.492 D	24.607	332.5	0.033	5.68	100.8	1.6	0.26	0.0	0.00	0.15	0.05	10	
15	15.93	15.93	33.494	24.607	332.7	0.050	5.68	100.8	1.6	0.26	0.0	0.00	0.15	0.05	15	219
20 ISL	15.94 D	15.94	33.493 D	24.604	333.1	0.066	5.68	100.8	1.6	0.26	0.0	0.00	0.15	0.05	20	
30	15.93	15.93	33.493	24.606	333.2	0.100	5.68	100.8	1.6	0.26	0.0	0.00	0.15	0.05	30	218
45	15.94	15.93	33.495	24.606	333.7	0.150	5.68	100.8	1.6	0.26	0.0	0.00	0.15	0.05	45	217
50 ISL	15.95 D	15.94	33.497 D	24.606	333.9	0.167	5.68	100.8	1.5	0.26	0.0	0.00	0.16	0.05	50	
60	15.94	15.93	33.495	24.607	334.1	0.200	5.68	100.8	1.4	0.26	0.0	0.00	0.17	0.06	60	216
75	15.95	15.94	33.499	24.608	334.5	0.250	5.68	100.8	1.5	0.26	0.0	0.00	0.15	0.05	75	215
85	15.95	15.94	33.502	24.611	334.6	0.284	5.68	100.8	1.4	0.26	0.0	0.00	0.16	0.06	85	214
94	15.08	15.07	33.624	24.898	307.4	0.312	5.63	98.3	1.8	0.27	0.1	0.11	0.19	0.14	94	213
100 ISL	14.82 D	14.81	33.633 D	24.961	301.5	0.331	5.59	97.1	1.9	0.29	0.3	0.13	0.18	0.14	100	
105	14.62	14.60	33.661	25.026	295.5	0.346	5.54	95.8	2.1	0.31	0.6	0.14	0.17	0.14	105	212
114	14.28	14.26	33.678	25.111	287.6	0.372	5.42	93.1	2.8	0.37	1.7	0.05	0.13	0.13	114	211
124	13.43	13.41	33.614	25.237	275.7	0.400	5.14	86.7	4.4	0.56	4.6	0.02	0.09	0.09	125	210
125 ISL	13.03 D	13.01	33.608 D	25.313	268.4	0.403	5.12	85.7	4.6	0.58	4.9	0.02	0.09	0.09	126	
139	12.28	12.26	33.567	25.427	257.7	0.440	4.95	81.5	6.8	0.78	8.2	0.01	0.07	0.07	140	209
150 ISL	11.36 D	11.34	33.552 D	25.587	242.6	0.467	4.76	76.9	9.0	0.94	10.9	0.01	0.05	0.06	151	
164	10.61	10.59	33.594	25.753	226.9	0.500	4.53	72.0	12.0	1.13	13.9	0.01	0.03	0.05	165	208
194	9.59	9.57	33.756	26.053	198.8	0.564	4.28	66.6	17.4	1.37	18.1	0.00	0.01	0.02	195	207
200 ISL	9.34 D	9.32	33.814 D	26.139	190.6	0.575	4.20	65.0	18.7	1.42	18.9	0.00			201	
228	8.87	8.85	33.920	26.297	176.0	0.627	3.75	57.4	25.3	1.64	22.5	0.00			229	206
250 ISL	8.47 D	8.44	33.977 D	26.404	166.1	0.664	3.24	49.2	31.2	1.85	25.5	0.00			251	
269	8.15	8.12	34.019	26.485	158.6	0.695	2.80	42.2	36.1	2.03	27.9	0.00			270	205
300 ISL	7.73 D	7.70	34.043 D	26.566	151.2	0.743	2.38	35.6	41.5	2.21	30.3	0.00			302	
319	7.55	7.52	34.053	26.600	148.2	0.772	2.19	32.6	44.3	2.30	31.4	0.00			321	204
378	6.82	6.78	34.078	26.722	137.1	0.856	1.58	23.1	54.9	2.59	35.1	0.00			380	203
400 ISL	6.54 D	6.50	34.102 D	26.778	131.9	0.885	1.36	19.8	59.2	2.69	36.3	0.00			402	
437	6.18	6.14	34.121	26.840	126.2	0.933	1.04	15.0	66.3	2.84	38.1	0.00			440	202
500 ISL	5.71 D	5.67	34.178 D	26.945	116.7	1.010	0.68	9.7	77.1	3.01	40.0	0.00			503	
512	5.62	5.58	34.184	26.960	115.3	1.024	0.61	8.7	79.1	3.04	40.4	0.00			515	201

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

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 93.4 26.4

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 56.9 N	117 16.7 W	13/01/07	0420 UTC	16 m	300 09 kn			1016.1 mb	12.5 C	8.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.50	14.50	33.561	24.971	297.5	0.000	6.00	103.5	1.0	0.35	0.2	0.04	3.44	0.61	0	
1	14.50	14.50	33.561	24.971	297.6	0.003	6.00	103.5	1.0	0.35	0.2	0.04	3.44	0.61	1	204
6	14.51	14.51	33.561	24.969	297.9	0.018	5.99	103.3	1.0	0.37	0.2	0.04	3.58	0.66	6	203
10 ISL	14.51 D	14.51	33.559 D	24.968	298.2	0.030	6.07	104.7	1.0	0.36	0.2	0.04	3.63	0.59	10	
11	14.50	14.50	33.561	24.971	297.8	0.033	6.09	105.1	1.0	0.36	0.2	0.04	3.64	0.57	11	202
17	14.51	14.51	33.560	24.968	298.3	0.051	5.99	103.3	1.0	0.35	0.2	0.04	3.76	0.64	17	201

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

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 76.7 49.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.0 N	120 46.8 W	28/01/07	1947 UTC	21 m	1223 - 1756 PST	1216 PST	1756 PST	241.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.93	33.558	25.290	6.01	100.4	1.8	0.56	2.2	0.10	0.81	0.27	86. A	10.5	8.5	9.5	0.16
9	12.92	33.563	25.296	5.99	100.0	1.8	0.55	2.2	0.11	0.70	0.22					
14	12.90	33.559	25.297	6.02	100.5	1.8	0.55	2.2	0.10			36.	7.3	8.0	7.7	0.14
22	12.89	33.563	25.303	5.97	99.6	2.0	0.56	2.4	0.11	0.83	0.23					
29	12.83	33.581	25.329	5.74	95.7	3.8	0.68	3.9	0.14	0.86	0.32	12.	4.1	4.0	4.1	0.10
41	12.30	33.622	25.464	4.93	81.3	9.4	1.02	8.7	0.22	0.52	0.38	5.0	1.1	1.1	1.1	0.06
51	12.22	33.626	25.482	4.92	81.0	10.1	1.06	9.0	0.22	0.55	0.46	2.4	0.52	0.49	0.50	0.06

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 76.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 3.6 N	122 56.1 W	29/01/07	1932 UTC	16 m	1226 - 1810 PST	1225 PST	1809 PST	176.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.63	33.268	24.926	6.16	104.2	2.7	0.34	0.0	0.01	0.86	0.01	83. A	3.2	3.7	3.5	0.06
10	13.40	33.267	24.972	6.16	103.7	2.7	0.34	0.0	0.01	1.02	0.01	38.	6.0	6.0	6.0	0.09
22	13.37	33.267	24.978	6.16	103.6	2.7	0.34	0.0	0.01	0.95	0.08	12.	5.6	4.8	5.2	0.12
31	13.35	33.265	24.981	6.13	103.1	2.6	0.34	0.1	0.02	0.86	0.26	5.1	2.6	2.8	2.7	0.07
38	13.27	33.263	24.995	6.06	101.7	2.8	0.38	0.4	0.07	0.85	0.11	2.6	1.2	1.3	1.2	0.06
49	13.15	33.267	25.023	6.01	100.6	3.1	0.46	0.9	0.12	0.60	0.20					
61	13.00	33.256	25.044	6.08	101.5	3.1	0.40	0.6	0.08	0.75	0.05	0.29	0.10	0.12	0.11	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 80.0 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.1 N	122 32.1 W	27/01/07	1743 UTC	15 m	1224 - 1756 PST	1223 PST	1755 PST	252.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.76	33.393	25.196	6.12	101.7	4.3	0.49	2.1	0.22	0.94	0.30	81. A	11.2	10.7	10.9	0.12
10	12.76	33.395	25.198	6.11	101.6	4.4	0.49	2.1	0.23	0.94	0.28	36.	11.3	11.5	11.4	0.11
20	12.74	33.397	25.203	6.08	101.0	4.4	0.49	2.2	0.23	0.94	0.32	13.	6.1	5.9	6.0	0.09
28	12.73	33.394	25.203	6.06	100.7	4.5	0.50	2.2	0.25	0.88	0.30	5.7	2.3	2.2	2.3	0.07
36	12.70	33.398	25.212	5.96	98.9	4.7	0.54	2.6	0.37	0.60	0.28	2.5	0.80	0.77	0.79	0.05
47	12.65	33.403	25.226	5.93	98.3	5.0	0.55	2.9	0.45	0.44	0.21					
58	12.59	33.411	25.245	5.94	98.4	4.6	0.57	3.2	0.52	0.41	0.26	0.26	0.06	0.06	0.06	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 83.3 42.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 10.8 N	119 30.7 W	24/01/07	1750 UTC	24 m	1207 - 1750 PST	1210 PST	1749 PST	350.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.14	33.579	25.061	5.76	98.6	2.3	0.43	0.7	0.06	0.74	0.27	94. A	6.0	5.3	5.7	0.07
8	14.13	33.580	25.064	5.74	98.3	2.4	0.43	0.7	0.06	0.78	0.28					
10	14.13	33.579	25.063	5.75	98.5	2.3	0.42	0.7	0.06	0.76	0.27					
16	14.12	33.579	25.065	5.76	98.6	2.4	0.42	0.7	0.06	0.77	0.23	36.	9.0	9.6	9.3	0.10
24	14.10	33.582	25.072			2.2	0.43	0.7	0.06	0.85	0.34					
33	13.97	33.584	25.101	5.86	100.0	2.2	0.42	0.8	0.07	1.53	0.19	12.	7.5	7.6	7.5	0.17
41	13.76	33.584	25.144	5.68	96.5	2.9	0.50	1.6	0.10	0.83	0.41					
46	13.70	33.585	25.158	5.70	96.7	3.0	0.50	1.6	0.10	0.80	0.35	5.3	2.4	2.1	2.2	0.07
57	13.40	33.588	25.221	5.30	89.4	4.8	0.67	3.7	0.14	0.46	0.30	2.6	0.63	0.55	0.59	0.05
68	13.00	33.586	25.300	4.74	79.3	7.6	0.90	7.1	0.18	0.40	0.29					
80	12.66	33.591	25.371	4.30	71.4	9.9	1.08	9.8	0.21	0.32	0.26					
94	11.50	33.711	25.684	3.05	49.5	18.1	1.65	17.8	0.12	0.13	0.27	0.24	0.00	0.00	0.00	0.06

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 70.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.2 N	121 25.6 W	25/01/07	1945 UTC	17 m	1244 - 1800 PST	1218 PST	1800 PST	222.5 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	12.76	33.433	25.227	6.08	101.1	5.1	0.55	2.9	0.28	0.84	0.09	83. A	6.6	6.7	6.6	0.07
10	12.66	33.434	25.247	6.08	100.9	5.0	0.55	2.9	0.28	0.90	0.13	41.	8.2	8.4	8.3	0.13
23	12.63	33.430	25.250	6.07	100.6	5.0	0.54	2.9	0.29	0.88	0.26	13.	5.3	5.1	5.2	0.08
32	12.63	33.431	25.251	6.05	100.3	4.9	0.55	2.9	0.30	0.83	0.32	5.6	2.1	2.4	2.3	0.07
40	12.65	33.450	25.263	5.98	99.2	4.9	0.58	3.2	0.33	0.81	0.37	2.7	1.1	1.1	1.1	0.06
48	12.66	33.466	25.273	5.98	99.2	4.8	0.58	3.2	0.30	0.96	0.28					
57	12.68	33.511	25.304	5.86	97.3	5.2	0.63	4.0	0.29	0.56	0.18					
66	12.58	33.503	25.318	5.71	94.6	5.4	0.67	4.6	0.28	0.37	0.21	0.26	0.04	0.00	0.02	0.06

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 83.3 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 55.3 N	124 9.2 W	26/01/07	1926 UTC	29 m	1238 - 1812 PST	1229 PST	1809 PST	108.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.80	33.282	24.692	5.87	101.7	1.6	0.29	0.1	0.00	0.25	0.13	95. A	1.9	1.7	1.8	0.04
10	14.70	33.290	24.719	5.85	101.2	1.6	0.29	0.1	0.00	0.29	0.04					
19	14.69	33.288	24.720	5.86	101.3	1.6	0.28	0.1	0.00	0.35	0.01	37.	2.1	2.1	2.1	0.05
29	14.67	33.288	24.725	5.86	101.3	1.5	0.28	0.1	0.00	0.34	0.06					
39	14.67	33.289	24.726	5.85	101.1	1.5	0.28	0.1	0.00	0.47	0.09	13.	1.5	1.6	1.6	0.05
48	14.65	33.286	24.728	5.85	101.0	1.5	0.28	0.1	0.00	0.50	0.04					
56A	14.65	33.289	24.731	5.85	101.0	1.5	0.28	0.1	0.00	0.39	0.07	5.2	0.80	0.85	0.83	0.02
63	14.65	33.285	24.728	5.85	101.0	1.6	0.29	0.1	0.00	0.35	0.08					
68	14.64	33.276	24.723	5.83	100.7	1.6	0.30	0.1	0.02	0.37	0.04	2.7	0.31	0.31	0.31	0.02
84	14.44	33.283	24.772	5.84	100.4	1.5	0.29	0.1	0.00	0.48	0.01					
99	13.22	33.147	24.917	5.81	97.3	2.3	0.39	1.0	0.11	0.17	0.08					
112	11.60	33.011	25.122	5.68	91.9	3.6	0.61	3.8	0.02	0.15	0.02	0.27	0.01	0.01	0.01	0.02

A) SECOND FLUOROMETER READING MIS-RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 45.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.3 N	119 19.5 W	23/01/07	1754 UTC	16 m	1201 - 1746 PST	1209 PST	1744 PST	329.6 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	14.34	33.575	25.016	5.96	102.5	0.6	0.33	0.1	0.01	1.65	0.33	91. A	11.5	12.5	12.0	0.11
10	14.23	33.575	25.039	5.95	102.1	0.6	0.33	0.1	0.01	1.93	0.26	38.	13.3	13.8	13.5	0.13
22	14.18	33.575	25.050	5.87	100.6	0.7	0.36	0.3	0.02	1.68	0.56	12.	8.3	8.1	8.2	0.09
31	12.86	33.604	25.341	5.42	90.4	4.4	0.74	5.0	0.12	1.17	0.74	5.1	2.7	2.6	2.6	0.06
38	12.63	33.610	25.390	5.34	88.6	5.1	0.80	6.0	0.14	1.28	0.83	2.6	0.97	0.93	0.95	0.07
50	11.79	33.644	25.577	4.32	70.5	12.4	1.21	12.4	0.18	0.51	0.51					
62	10.61	33.775	25.892	3.03	48.2	21.0	1.72	20.4	0.11	0.25	0.42	0.26	0.02	0.01	0.02	0.02

RV DAVID STARR JORDAN CALCOFI CRUISE 0701 STATION 86.7 80.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 19.6 N	121 42.9 W	22/01/07	1721 UTC	15 m	1217 - 1754 PST	1218 PST	1754 PST	250.3 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	12.88	33.378	25.161	6.07	101.2	3.9	0.47	0.9	0.15	1.46	0.07	90. A	3.5	4.0	3.8	0.07
11	12.87	33.379	25.164	6.09	101.5	3.7	0.46	0.9	0.15	1.25	0.12	32.	11.3	11.4	11.3	0.09
20	12.86	33.382	25.168	6.05	100.8	3.7	0.47	0.9	0.15	1.35	0.30	13.	7.9	7.6	7.8	0.08
29	12.88	33.394	25.174	6.02	100.3	3.7	0.48	1.1	0.18	1.25	0.14	5.1	3.7	3.2	3.4	0.06
36	12.86	33.394	25.178	6.01	100.1	3.8	0.48	1.1	0.18	1.19	0.22	2.5	1.4	1.4	1.4	0.05
48	12.84	33.395	25.183	6.01	100.1	3.7	0.49	1.2	0.19	1.13	0.28					
60	12.83	33.403	25.192	5.95	99.0	3.9	0.51	1.5	0.21	1.08	0.24	0.22	0.10	0.08	0.09	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 86.7 110.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 19.5 N	123 44.9 W	21/01/07	1731 UTC	15 m	1220 - 1804 PST	1226 PST	1803 PST	74.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.17	33.300	24.839	5.89	100.8	2.3	0.34	0.0	0.02	0.37	0.16	81. A	0.54	0.45	0.49	0.04
10	14.16	33.300	24.841	5.89	100.7	2.3	0.33	0.1	0.02	0.41	0.11	36.	3.9	4.0	3.9	0.04
20	14.16	33.306	24.846	5.89	100.7	2.2	0.34	0.1	0.02	0.38	0.15	13.	2.1	2.5	2.3	0.03
29	14.16	33.299	24.841	5.89	100.7	2.2	0.33	0.1	0.02	0.38	0.14	5.1	1.1	1.3	1.2	0.03
36	14.17	33.300	24.840	5.89	100.8	2.1	0.33	0.1	0.02	0.40	0.14	2.5	0.29	0.31	0.30	0.03
48	14.17	33.300	24.840	5.90	100.9	2.1	0.34	0.0	0.02	0.36	0.14					
58	14.18	33.301	24.839	5.89	100.8	2.2	0.34	0.1	0.02	0.38	0.14	0.26	0.03	0.04	0.03	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 30.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.1 N	117 54.0 W	18/01/07	1751 UTC	11 m	1202 - 1740 PST	1202 PST	1740 PST	309.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	14.60	33.572	24.958	5.88	101.6	1.2	0.33	0.0	0.01	2.00	0.58	76. A	11.7	11.0	11.3	0.12
7	14.59	33.569	24.958	5.88	101.6	1.2	0.34	0.0	0.01	2.02	0.76	38.	17.5	16.7	17.1	0.14
15	14.56	33.566	24.962	5.87	101.4	1.0	0.34	0.0	0.01	2.26	0.57	12.	12.6	11.8	12.2	0.12
22	14.42	33.564	24.991	5.83	100.4	1.0	0.36	0.1	0.01	2.33	1.04	4.6	5.8	5.7	5.7	0.10
26	14.41	33.565	24.994	5.80	99.9	1.1	0.36	0.1	0.01	2.22	1.13	2.7	2.4	2.1	2.2	0.09
34	14.40	33.566	24.997	5.79	99.7	1.1	0.38	0.2	0.01	2.19	1.32					
43	14.38	33.565	25.001	5.77	99.3	1.2	0.39	0.3	0.02	2.16	0.72	0.25	0.14	0.09	0.12	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.0 N	119 57.8 W	19/01/07	1805 UTC	14 m	1210 - 1752 PST	1211 PST	1751 PST	202.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.90	33.537	25.078	5.87	100.0	1.3	0.39	0.7	0.06	1.31	0.58	80. A	3.1	4.3	3.7	0.07
9	13.90	33.537	25.078	5.87	100.0	1.3	0.40	0.7	0.06	1.38	0.06	37.	9.0	9.4	9.2	0.06
19	13.89	33.537	25.081	5.87	100.0	1.2	0.39	0.6	0.06	1.46	0.13	12.	7.0	7.8	7.4	0.06
27	13.89	33.537	25.081	5.87	100.0	1.3	0.40	0.6	0.06	1.16	0.87	5.2	3.1	3.1	3.1	0.07
33	13.89	33.537	25.081	5.87	100.0	1.3	0.40	0.6	0.06	1.37	0.14	2.7	0.86	0.84	0.85	0.04
45	13.88	33.536	25.083	5.85	99.6	1.3	0.40	0.7	0.06	1.33	0.75					
54	13.88	33.536	25.083	5.85	99.6	1.3	0.40	0.7	0.06	1.04	0.98	0.27	0.04	0.06	0.05	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 90.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 24.9 N	121 59.4 W	20/01/07	1804 UTC	23 m	1208 - 1759 PST	1219 PST	1801 PST	83.9 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
1	15.21	33.460	24.740	5.75	100.6	0.7	0.27	0.1	0.00	0.25	0.09	94. A	2.0	2.0	2.0	0.04
15	15.20	33.459	24.742	5.75	100.5	0.7	0.27	0.1	0.00	0.25	0.09	37.	2.4	2.4	2.4	0.03
32	15.21	33.458	24.739	5.76	100.7	0.7	0.28	0.1	0.00	0.25	0.09	12.	1.4	1.4	1.4	0.03
46	15.21	33.461	24.742	5.75	100.5	0.9	0.28	0.1	0.00	0.25	0.09	4.6	0.51	0.54	0.53	0.03
56	15.21	33.457	24.739	5.75	100.5	0.8	0.28	0.1	0.00	0.25	0.09	2.4	0.12	0.10	0.11	0.02
67	15.21	33.457	24.740	5.75	100.5	0.9	0.28	0.0	0.01	0.26	0.09					
80	15.21	33.457	24.740	5.75	100.5	1.0	0.28	0.1	0.00	0.26	0.10					
91	15.21	33.461	24.744	5.74	100.4	1.0	0.28	0.0	0.00	0.25	0.09	0.23	0.01	0.01	0.01	0.02

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 93.3 35.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 40.4 N	117 52.5 W	13/01/07	1846 UTC	12 m	1207 - 1738 PST	1200 PST	1738 PST	265.1 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.52	33.572	24.758	5.68	100.0	2.2	0.33	0.1	0.02	1.94	0.11	77. A	6.6	7.8	7.2	0.07
9	15.51	33.587	24.772	5.68	100.0	2.2	0.33	0.1	0.02	1.91	0.29	32.	14.7	14.0	14.4	0.09
16	15.51	33.569	24.758	5.68	100.0	2.2	0.33	0.1	0.02	1.60	0.23	13.	9.6	9.4	9.5	0.09
25	15.50	33.570	24.762	5.67	99.8	2.2	0.33	0.1	0.02	1.72	0.24	4.1	4.4	4.7	4.5	0.07
30	15.50	33.570	24.762	5.67	99.8	2.1	0.33	0.1	0.02	2.11	0.01	2.2	1.5	1.6	1.5	0.07
39	15.47	33.566	24.766	5.67	99.7	2.3	0.33	0.1	0.03	1.98	0.08					
47	15.43	33.563	24.772	5.66	99.5	2.5	0.34	0.1	0.03	1.63	0.30	0.24	0.07	0.10	0.08	0.05

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 93.3 60.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 51.9 N	119 34.2 W	14/01/07	1804 UTC	17 m	1159 - 1747 PST	1207 PST	1747 PST	275.8 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	13.60	33.502	25.113	5.85	99.0	3.4	0.49	2.1	0.12	0.95	0.18	83. A	4.5	4.5	4.5	0.07
11	13.59	33.495	25.109	5.85	99.0	3.4	0.50	2.1	0.12	1.08	0.12	37.	9.5	9.6	9.5	0.09
24	13.58	33.494	25.111	5.82	98.5	3.5	0.50	2.1	0.13	0.97	0.19	11.	7.0	7.4	7.2	0.07
35	13.57	33.496	25.115	5.81	98.3	3.5	0.50	2.2	0.13	1.02	0.21	4.2	3.9	4.2	4.1	0.06
41	13.58	33.498	25.115	5.79	98.0	3.6	0.52	2.3	0.14	0.86	0.23	2.5	1.3	1.4	1.3	0.05
49	13.59	33.502	25.116	5.77	97.6	3.7	0.52	2.4	0.15	0.75	0.29					
58	13.60	33.516	25.125	5.67	96.0	4.3	0.57	3.0	0.18	0.72	0.15					
66	13.53	33.537	25.156	5.45	92.1	5.6	0.65	4.3	0.22	0.24	0.23	0.26	0.05	0.06	0.05	0.03

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 93.3 100.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 30.8 N	122 15.3 W	15/01/07	1841 UTC	33 m	1222 - 1801 PST	1218 PST	1800 PST	58.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	16.06	33.500	24.581	5.66	100.7	1.7	0.27	0.0	0.00	0.20	0.02	91. A	0.32	0.45	0.38	0.03
12	16.06	33.500	24.582	5.66	100.7	1.7	0.27	0.0	0.00	0.18	0.01					
21	16.06	33.500	24.582	5.66	100.7	1.7	0.27	0.0	0.00	0.16	0.04	38.	1.2	1.2	1.2	0.03
34	16.06	33.500	24.583	5.66	100.7	1.7	0.27	0.0	0.00	0.17	0.04					
46	16.06	33.502	24.584	5.67	100.9	1.7	0.27	0.0	0.00	0.17	0.04	12.	0.75	0.78	0.77	0.03
56	16.05	33.498	24.584	5.66	100.7	1.6	0.27	0.0	0.00	0.19	0.00					
66	16.04	33.491	24.581	5.66	100.6	1.6	0.27	0.0	0.00	0.21	0.01	4.6	0.40	0.44	0.42	0.03
72	16.03	33.489	24.582	5.66	100.6	1.6	0.27	0.0	0.00	0.20	0.01					
78	16.05	33.496	24.583	5.65	100.5	1.6	0.27	0.0	0.00	0.21	0.00	2.7	0.10	0.10	0.10	0.02
91A	16.04	33.494	24.584	5.66	100.6	1.6	0.27	0.0	0.00	0.19	0.03					
103	14.25	33.464	24.952	5.69	97.6	2.2	0.33	0.3	0.15	0.36	0.11					
115	13.66	33.521	25.118	5.39	91.3	3.5	0.46	2.5	0.06	0.23	0.11					
128	12.99	33.535	25.264	5.15	86.1	4.9	0.61	5.1	0.02	0.18	0.05	0.26	0.02	0.02	0.02	0.01

A) SECOND FLUOROMETER READING MIS-RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN — CALCOFI CRUISE 0701 — STATION 90.0 120.0

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 25.1 N	123 59.6 W	16/01/07	1729 UTC	30 m	1225 - 1800 PST	1226 PST	1758 PST	54.7 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	LIGHT PCT	UPTAKE (mg C/m3) 1	2	MEAN	DARK
2	15.82	33.537	24.664	5.69	100.8	1.7	0.26	0.0	0.00	0.16	0.05	90. A	0.17	0.16	0.16	0.02
10	15.82	33.534	24.662	5.72	101.3	1.7	0.26	0.0	0.00	0.19	0.05					
19	15.82	33.534	24.662	5.69	100.8	1.6	0.26	0.0	0.00	0.19	0.05	38.	1.3	1.4	1.3	0.03
30	15.82	33.535	24.663	5.70	100.9	1.6	0.26	0.0	0.00	0.20	0.03					
41	15.82	33.534	24.663	5.70	100.9	1.6	0.26	0.0	0.00	0.19	0.06	12.	0.80	0.82	0.81	0.02
50	15.82	33.534	24.663	5.69	100.8	1.6	0.26	0.0	0.00	0.18	0.04					
60	15.83	33.534	24.661	5.69	100.8	1.5	0.26	0.0	0.00	0.19	0.05	4.6	0.37	0.42	0.40	0.02
71	15.83	33.533	24.661	5.70	101.0	1.5	0.26	0.0	0.00	0.18	0.05	2.6	0.15	0.16	0.16	0.02
84	15.83	33.538	24.665	5.69	100.8	1.5	0.26	0.0	0.00	0.16	0.06					
94	15.79	33.539	24.675	5.68	100.5	1.5	0.26	0.0	0.01	0.18	0.05					
102	14.55	33.611	25.002	5.69	98.3	2.1	0.28	0.2	0.13	0.21	0.16					
118	14.13	33.737	25.188	5.45	93.4	2.7	0.35	1.7	0.04	0.13	0.12	0.24	0.01	0.02	0.02	0.01

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505mm

Line	Sta.	Latitude N	Longitude W	Date Mo/Day	Time (PST) Start	Time (PST) End	Water Volume Strained (m^3)	Max. Tow Depth (m)	Volume per 1000 m^3 Strained Total (cm^3)	Volume per 1000 m^3 Strained Small (cm^3)
66.7	50.0	36 46.1	122 05.1	01/31	1250	1311	428	212	54	54
66.7	55.0	36 37.3	122 24.9	01/31	1753	1814	445	207	72	72
66.7	60.0	36 27.3	122 46.3	01/31	2206	2228	415	212	60	60
66.7	70.0	36 07.3	123 29.1	02/01	0530	0552	452	214	38	38
66.7	80.0	35 47.3	124 11.7	02/01	1248	1310	440	210	23	23
76.7	49.0	35 04.9	120 46.7	01/28	1229	1236	136	64	22	22
76.7	51.0	35 01.4	120 55.0	01/28	1656	1718	430	206	123	123
76.7	55.0	34 53.3	121 11.8	01/28	2049	2111	394	208	106	106
76.7	60.0	34 43.3	121 32.8	01/29	0043	0105	419	212	91	91
76.7	70.0	34 23.3	122 14.6	01/29	0631	0652	408	211	61	61
76.7	80.0	34 03.5	122 56.0	01/29	1231	1253	429	212	21	21
76.7	90.0	33 43.3	123 37.9	01/29	1820	1842	430	213	184	93
76.7	100.0	33 23.2	124 19.4	01/30	0001	0023	415	213	68	43
80.0	50.5	34 27.8	120 29.8	01/28	0703	0706	57	20	70	70
80.0	51.0	34 26.8	120 31.6	01/28	0605	0612	148	69	54	54
80.0	55.0	34 18.9	120 48.3	01/28	0235	0256	417	214	94	94
80.0	60.0	34 08.9	121 09.0	01/27	2231	2253	426	206	82	82
80.0	70.0	33 49.0	121 50.6	01/27	1616	1637	433	207	42	42
80.0	80.0	33 28.8	122 32.1	01/27	0841	0902	456	209	50	50
80.0	90.0	33 08.9	123 13.3	01/27	0251	0313	456	212	57	57
80.0	100.0	32 48.9	123 54.4	01/26	2023	2045	446	212	56	56
81.7	43.5	34 24.2	119 47.9	01/24	1355	1357	44	12	23	23
81.8	46.9	34 16.5	120 01.6	01/24	1726	1748	431	203	44	44
83.3	39.4	34 15.5	119 19.6	01/24	0643	0645	70	11	14	14
83.3	40.6	34 13.4	119 24.7	01/24	0831	0835	91	33	22	22
83.3	42.0	34 10.7	119 30.6	01/24	1101	1119	357	177	39	39
83.3	51.0	33 52.8	120 07.9	01/24	2238	2247	171	83	64	64
83.3	55.0	33 44.7	120 24.6	01/25	0226	0248	424	210	59	59
83.3	60.0	33 35.8	120 45.1	01/25	0643	0705	435	212	67	67
83.3	70.0	33 15.3	121 25.5	01/25	1303	1325	424	213	87	87
83.3	80.0	32 54.8	122 07.6	01/25	1854	1916	445	200	103	103
83.3	90.0	32 34.7	122 48.7	01/26	0040	0102	430	213	174	142
83.3	100.0	32 14.6	123 29.5	01/26	0640	0702	465	207	47	47
83.3	110.0	31 55.3	124 09.1	01/26	1237	1258	436	212	18	18
85.4	35.8	34 00.8	118 50.2	01/24	0251	0253	48	13	104	104
86.7	33.0	33 53.7	118 30.0	01/23	2249	2254	107	47	113	113
86.7	35.0	33 49.5	118 38.1	01/23	2033	2054	397	213	126	126
86.7	40.0	33 39.4	118 58.4	01/23	1606	1628	397	208	83	83
86.7	45.0	33 29.2	119 19.5	01/23	1120	1142	418	207	62	62
86.7	50.0	33 19.3	119 39.8	01/23	0657	0705	165	74	176	176
86.7	55.0	33 09.4	120 00.4	01/23	0300	0322	434	213	244	120
86.7	60.0	32 59.3	120 21.0	01/22	2242	2304	416	209	125	125
86.7	70.0	32 39.4	121 02.0	01/22	1604	1625	447	195	107	107
86.7	80.0	32 18.8	121 42.6	01/22	0819	0841	437	214	59	59
86.7	90.0	31 59.3	122 23.6	01/22	0200	0222	441	214	82	82
86.7	100.0	31 39.3	123 04.2	01/21	1817	1839	534	187	41	41
86.7	110.0	31 18.8	123 43.7	01/21	0829	0850	439	213	11	11
86.8	32.5	33 55.6	118 27.5	01/24	0005	0007	49	12	40	40
90.0	27.7	33 29.6	117 45.1	01/18	0415	0418	62	16	33	33
90.0	28.0	33 29.0	117 46.2	01/18	0315	0325	194	100	180	180
90.0	30.0	33 25.1	117 54.2	01/18	0843	0904	392	217	92	92
90.0	35.0	33 15.1	118 15.0	01/18	1432	1453	383	215	44	44
90.0	37.0	33 11.1	118 23.2	01/18	1800	1822	403	211	47	47
90.0	45.0	32 55.0	118 56.0	01/18	2349	0010	409	212	81	81
90.0	53.0	32 39.2	119 28.5	01/19	0553	0615	441	212	82	82
90.0	60.0	32 25.0	119 57.5	01/19	1137	1159	429	214	49	49
90.0	70.0	32 05.1	120 38.1	01/19	1846	1908	417	217	180	180
90.0	80.0	31 45.2	121 18.7	01/20	0153	0215	458	211	41	41
90.0	90.0	31 25.1	121 59.4	01/20	0850	0912	402	220	10	10
90.0	100.0	31 05.1	122 39.6	01/20	1800	1822	475	207	25	25
90.0	110.0	30 45.1	123 19.8	01/21	0100	0122	449	210	24	24
90.0	120.0	30 25.0	123 59.9	01/16	0815	0837	426	216	12	12
91.7	26.4	33 14.5	117 28.1	01/12	2336	2339	62	16	96	96
93.3	26.7	32 57.5	117 18.5	01/12	1934	1940	139	54	65	65
93.3	28.0	32 54.8	117 23.7	01/13	0344	0406	446	215	83	83
93.3	30.0	32 50.8	117 32.2	01/13	0659	0721	441	208	41	41
93.3	35.0	32 40.5	117 52.4	01/13	1203	1224	438	211	41	41
93.3	40.0	32 30.5	118 13.0	01/13	1627	1649	461	217	15	15
93.3	45.0	32 21.0	118 33.1	01/13	2047	2109	459	213	79	37
93.3	50.0	32 10.8	118 53.6	01/14	0104	0126	449	214	47	47
93.3	55.0	32 01.1	119 13.8	01/14	0536	0559	500	253	38	38
93.3	60.0	31 51.9	119 34.4	01/14	0904	0926	454	215	68	68
93.3	70.0	31 30.9	120 14.6	01/14	1647	1710	426	221	52	52
93.3	80.0	31 10.8	120 55.1	01/14	2300	2322	426	214	28	28
93.3	90.0	30 50.9	121 35.5	01/15	0523	0545	425	219	26	26
93.3	100.0	30 30.8	122 15.3	01/15	1326	1348	439	215	14	14
93.3	110.0	30 10.8	122 55.4	01/15	1943	2005	414	214	19	19
93.3	120.0	29 50.7	123 35.2	01/16	0212	0234	440	214	18	18
93.4	26.4	32 56.9	117 16.7	01/12	2044	2046	40	11	99	99