

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 9401
20 January – 7 February 1994

CalCOFI Cruise 9403
22 March – 8 April 1994

SIO Reference 94-21
1 December 1994

UNIVERSITY OF CALIFORNIA, SAN DIEGO
SCRIPPS INSTITUTION OF OCEANOGRAPHY
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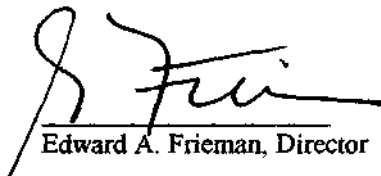
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Approved for distribution:



Edward A. Frieman, Director

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INTRODUCTION

The data in this report were collected during Cruises 9401* and 9403 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 Marine Life Research Group (MLRG) at Scripps Institution of Oceanography (SIO). MLRG contributes to this program by investigations of the physical, chemical and biological structure of the California Current. Data from CalCOFI Cruises 9401 and 9403 were collected and processed by personnel of the Marine Life Research Group and the Southwest Fisheries Science Center. Volunteers and other SIO staff members also assisted in the collection of data and chemical analyses at sea.

STANDARD PROCEDURES

Rosette Cast Data

At each station on cruises 9401 and 9403 a Sea-Bird Electronics, Inc., Conductivity-Temperature-Depth (CTD) instrument was deployed with a 24-place General Oceanics rosette. The rosette was equipped with 20 to 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. Pressures and temperatures assigned to the water sample data were derived from the CTD signals collected just prior to the bottle trip. Pressures have been converted to depth 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 8400A Autosol salinometer. 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 P122. Salinity values have been calculated from the algorithms for the Practical Salinity Scale, 1978 (UNESCO, 1981a) and were reported to three decimal places, provided that accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities were reported to two decimal places.

Dissolved oxygen was determined 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).

Silicate, phosphate, nitrate and nitrite nutrients were determined at sea using an automated analyzer. The procedures used are similar to those described in Atlas *et al.* (1971).

Samples for chlorophyll-a and phaeopigments were filtered onto 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 (Yentsch and Menzel, 1963; Holm-Hansen *et al.* 1965).

Evaluation of the 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). Estimates of precision of the standard techniques are given in SIO, 1991.

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

Primary Productivity Sampling

Primary productivity samples were taken each day shortly before local apparent noon (LAN), from the standard rosette cast. Primary production was estimated from 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 10 μ Ci of C as NaHCO₃ (200 μ l of 50 nCi/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 Bumison, 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 for all depths.

Macrozooplankton Net Tows

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

Avifauna Observations

Seabirds 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).

TABULATED DATA

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 cast. 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 and Forel water color scales are also reported for most daylight stations.

Observed and interpolated standard depth data from CTD/rosette casts have been interspersed and are presented together sequentially by depth. Interpolated or extrapolated standard level data are noted by the footnote "ISL" printed after the depth. Density-related parameters have been calculated from the International Equation of State of Seawater 1980 (UNESCO, 1981, b). 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 from six of the rosette bottles, 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

The bottle trip data are available over the internet via the Nemo Oceanographic Server. To access these data telnet to nemo.ucsd.edu and login with username "info".

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 (cmV1000m strained) and as the total volume minus the volume of larger organisms under the heading "Small." Tow times are given in local PST (+8) time.

FOOTNOTES

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

D: CTD salinity value listed in place of normal ship-board salinity analysis.

ISL: After a depth value indicates that this is an interpolated or extrapolated standard level.

U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.

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PERSONNEL

CalCOFI Cruise 9401

SHIP'S CAPTAIN

Herbert M. Kirsch, RV *David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Dotson, Ronald C. (in charge)	Fishery Biologist, NMFS	I, II
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Bradley, Albert M.	Senior Engineer, WHOI	I
Brody, Eric A.	Programmer/Analyst, SIO	I, II
Cass-Calay, Shannon	Graduate Student, SIO	II
Checkley, David M.	Associate Professor, SIO	II
Gripp, Sherry L.	Staff Research Associate, SIO	I, II
Gruber, Dennis W.	Marine Technician, SIO	I, II
Hays, Amy E.	Biological Technician, NMFS	I, II
Manion, Susan M.	Fishery Biologist, NMFS	I, II
Morgan, Stacey R.	Staff Research Associate, SIO	I, II
Mullin, Michael M.	Director of MLRG, Professor, SIO	I, II
Peterson, Ray G.	Asst. Research Oceanographer, SIO	I
Pouliquen, Eric	Post Graduate Research Oceanographer, I, II	
Pyle, Peter	Biologist, Pt. Reyes Bird Observatory	I, II
Renger, Edward H.	Staff Research Associate, SIO	I, II
Wilkinson, James R.	Programmer/Analyst, SIO	I, II

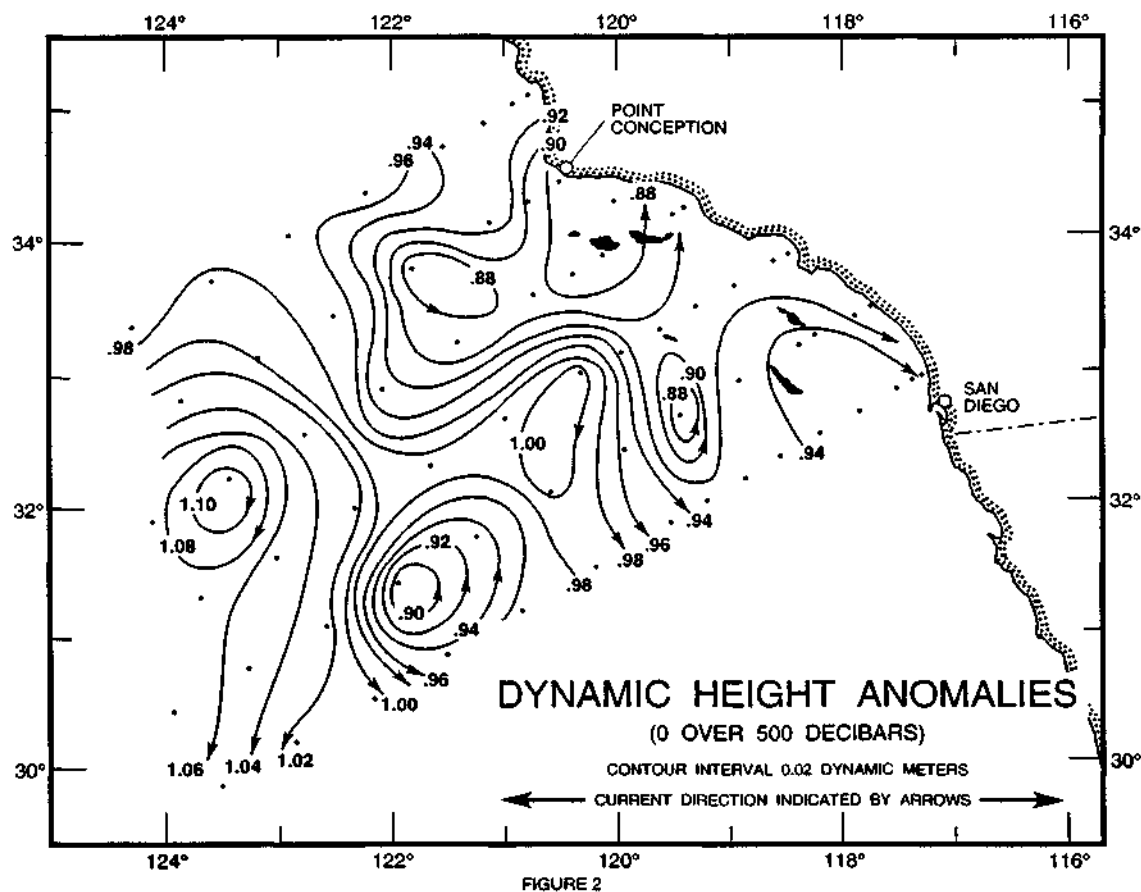
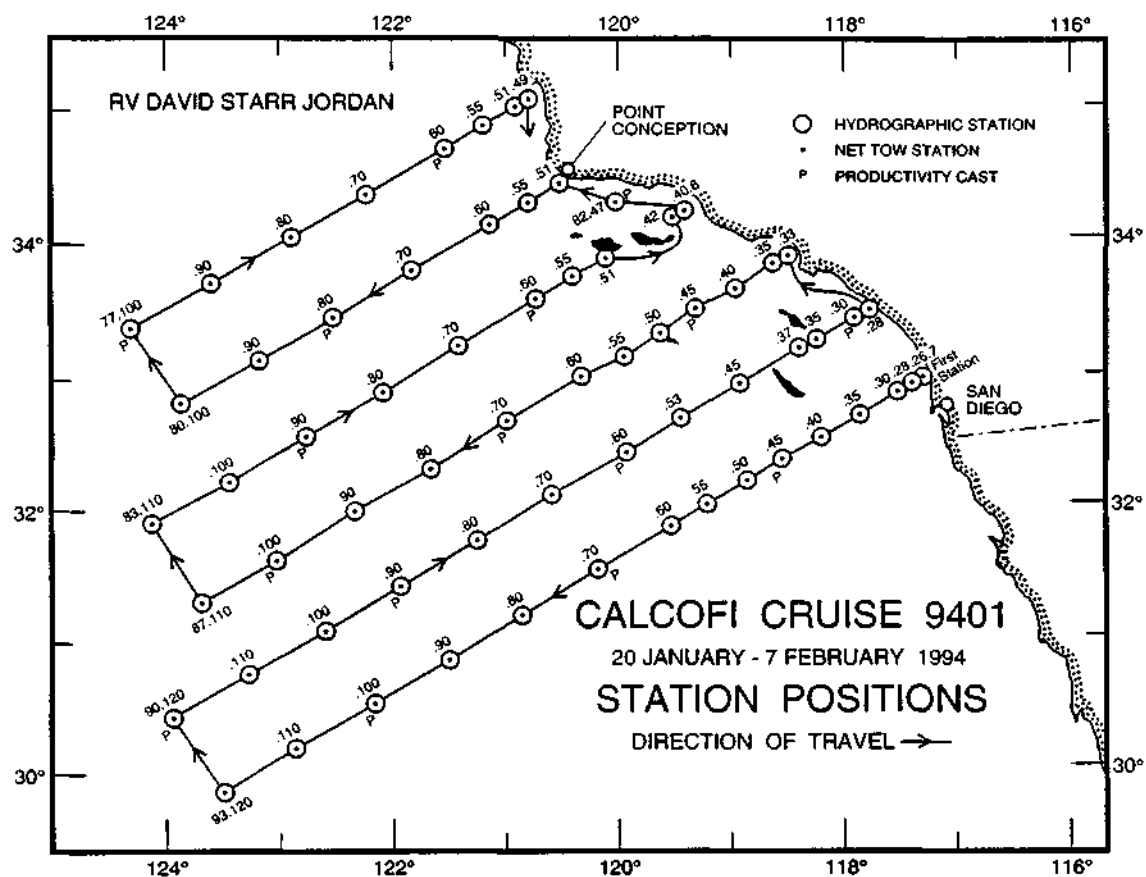
Leg I: San Diego to Dana Pt., CA 20 - 27 Jan., 1994

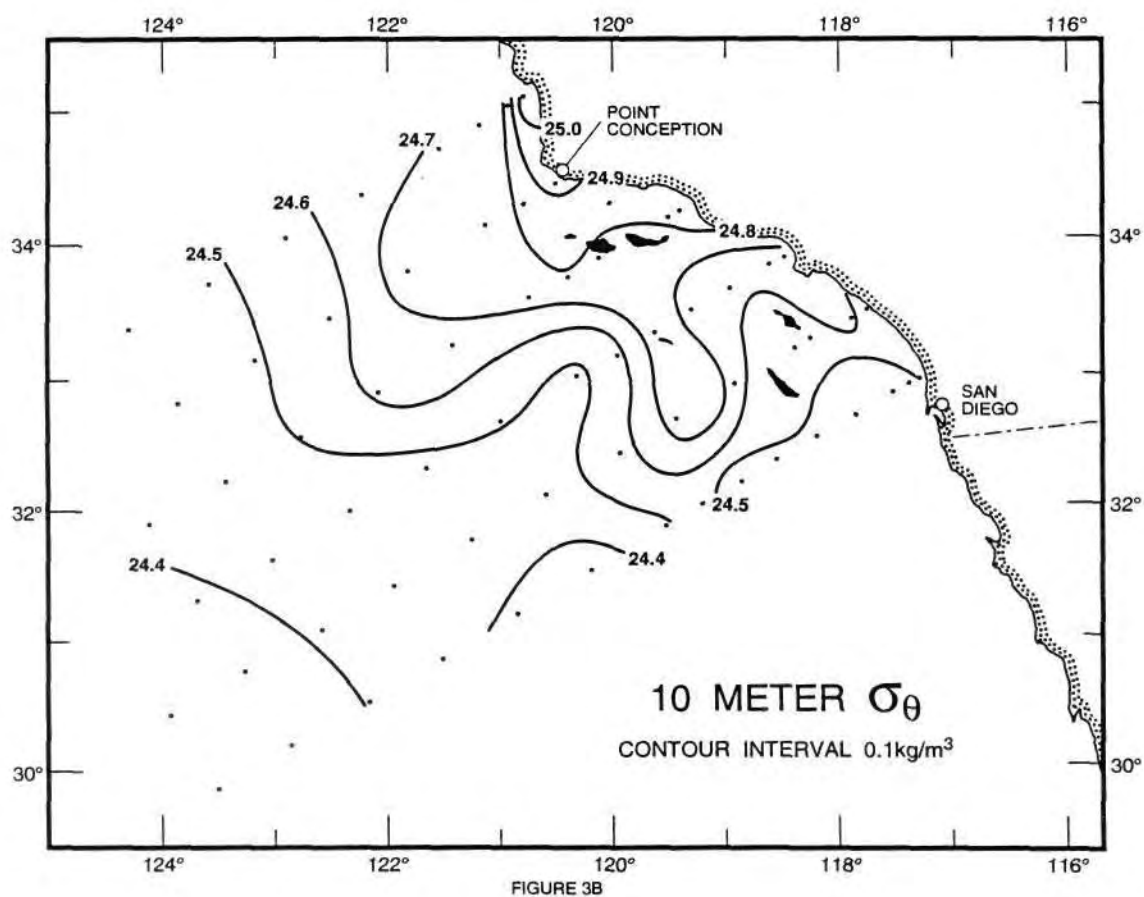
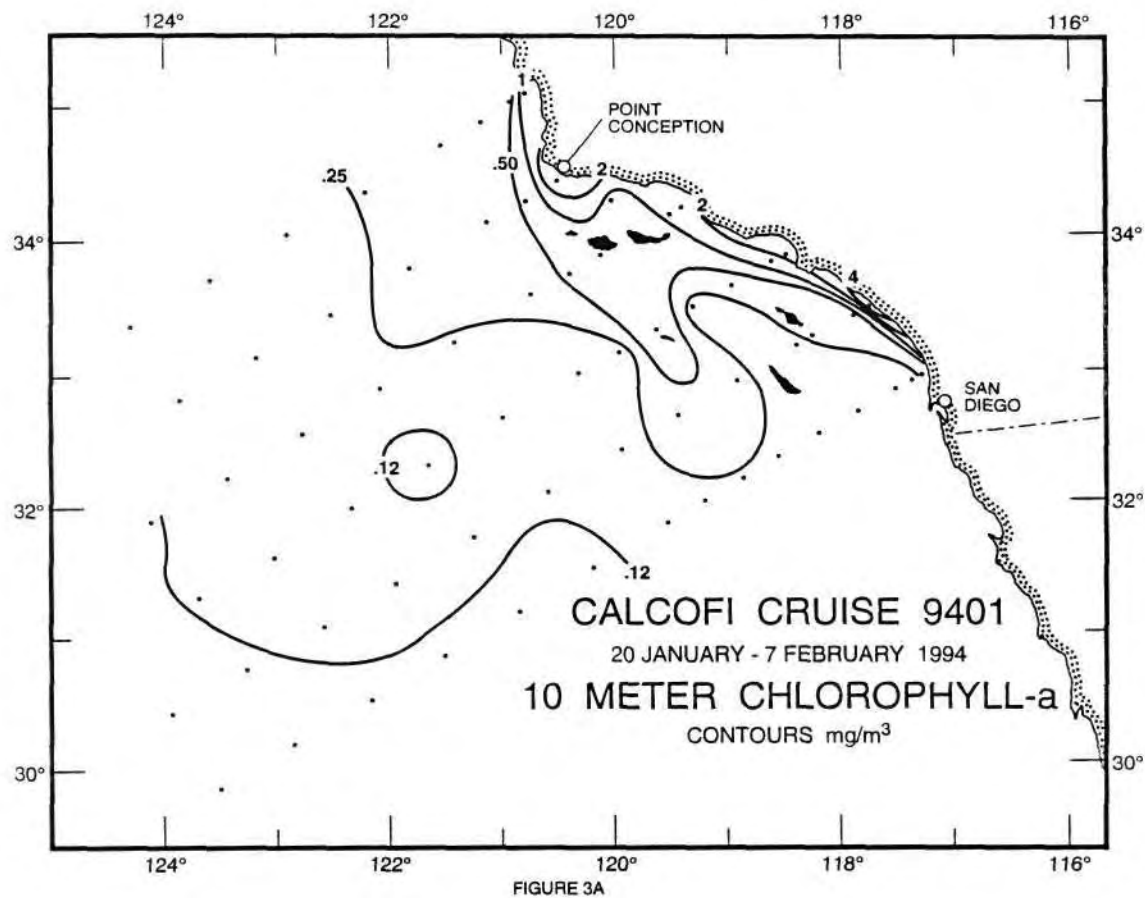
Leg II: Dana Pt. to San Diego, CA 27 Jan. - 7 Feb., 1994

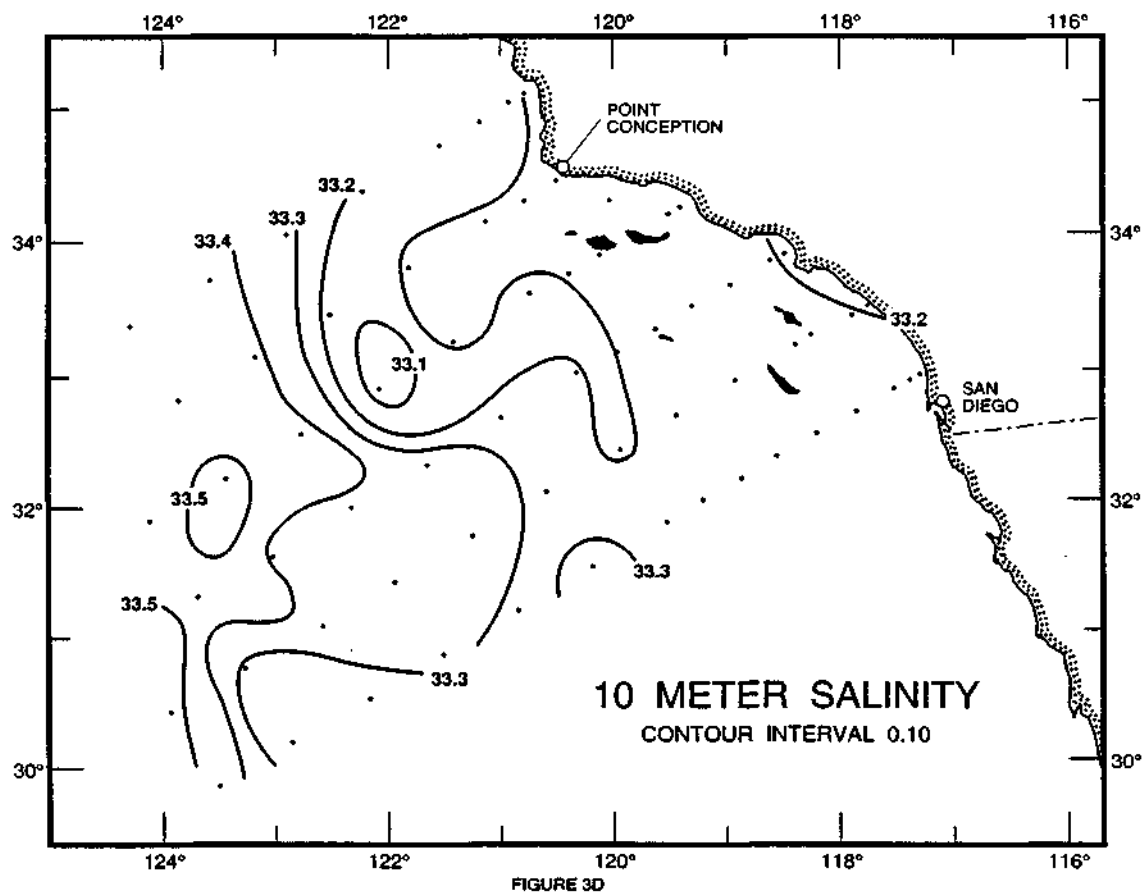
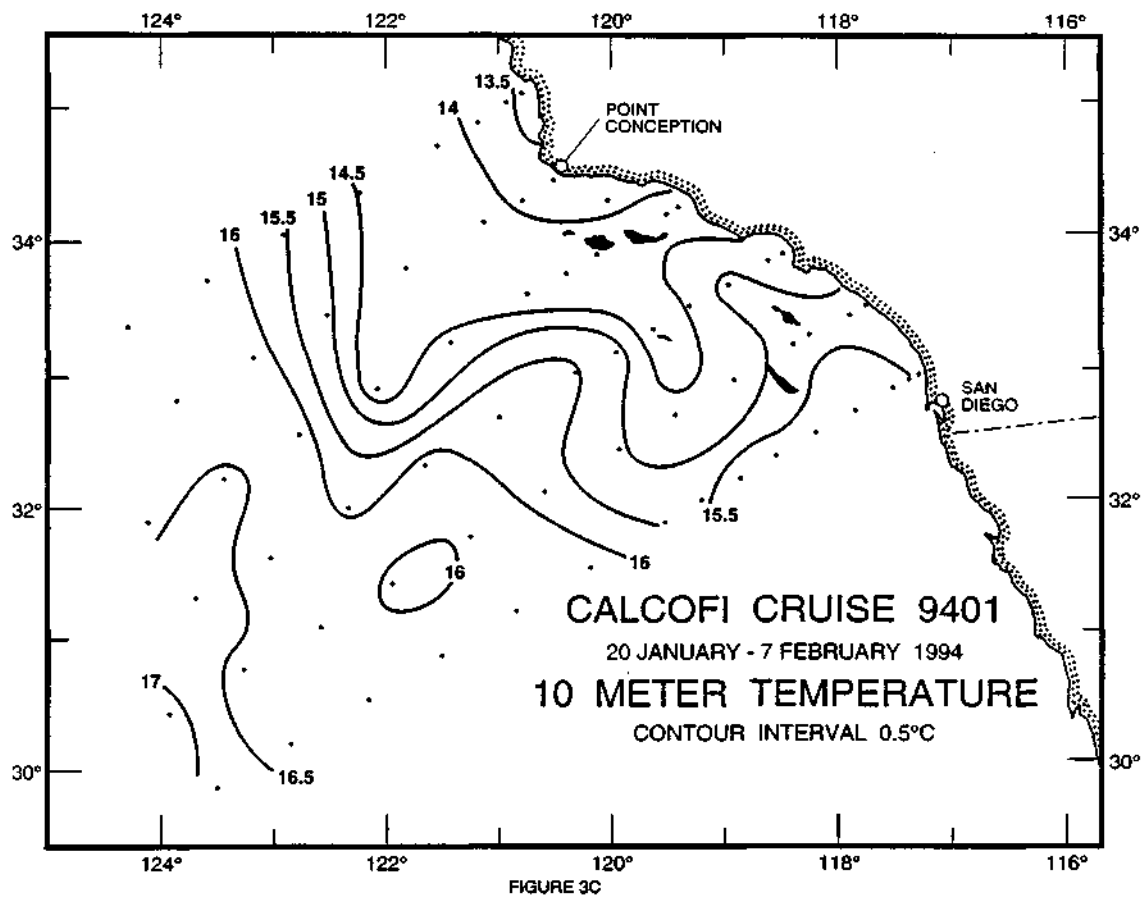
FIGURES

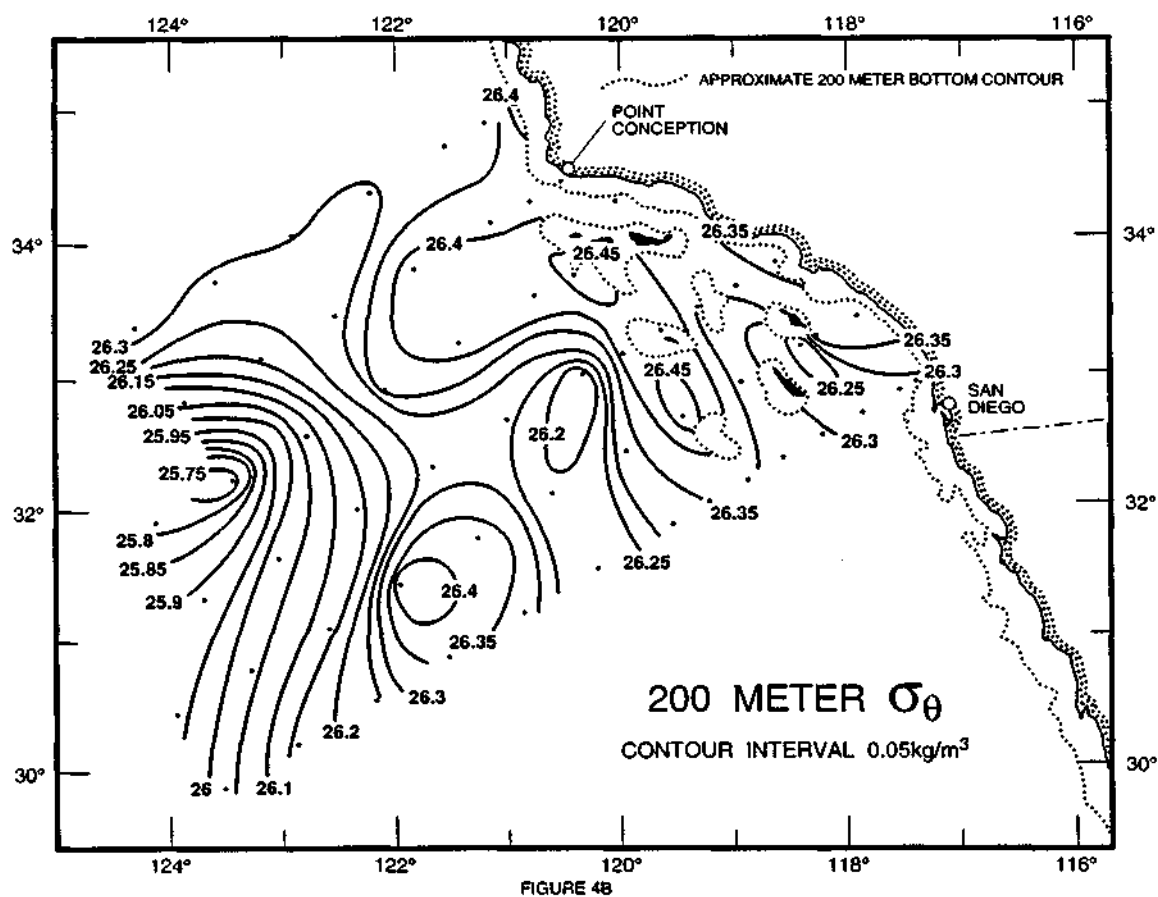
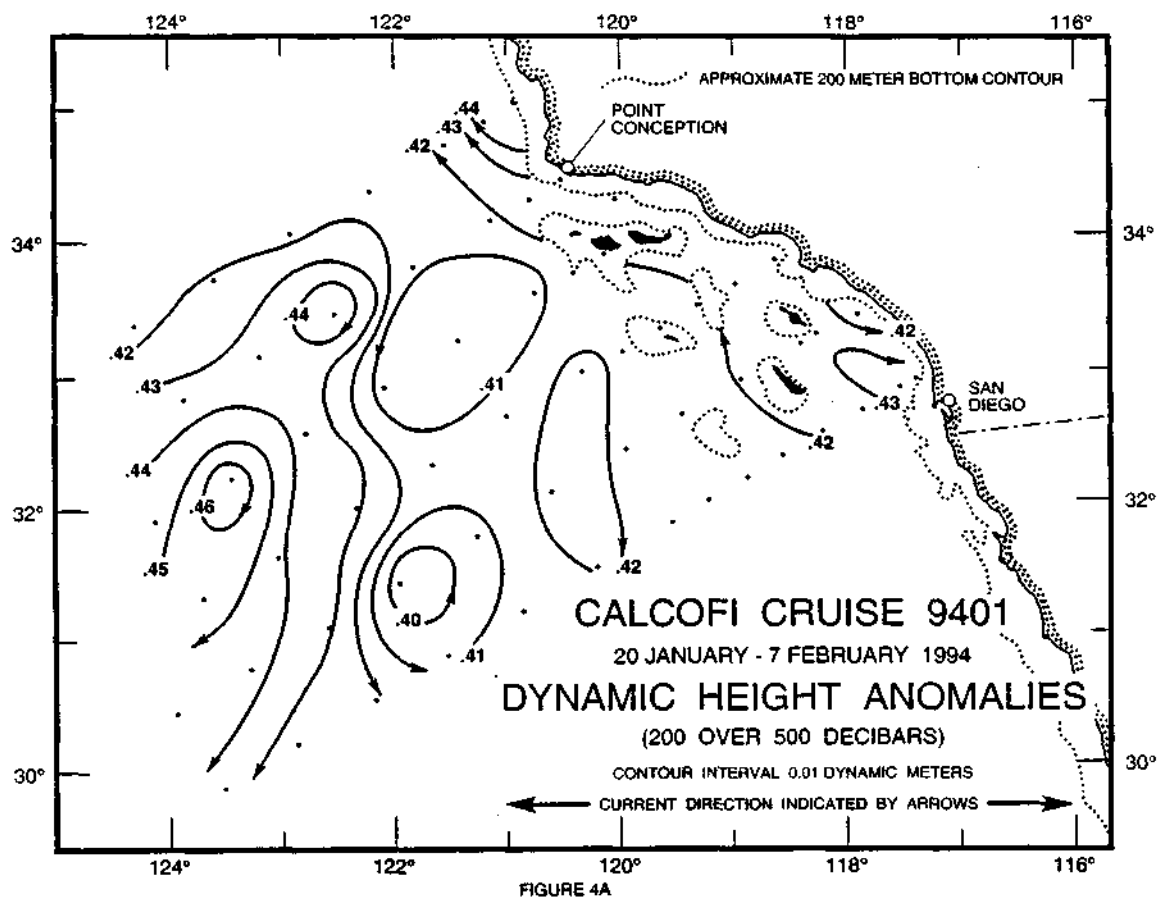
Cruise 9401

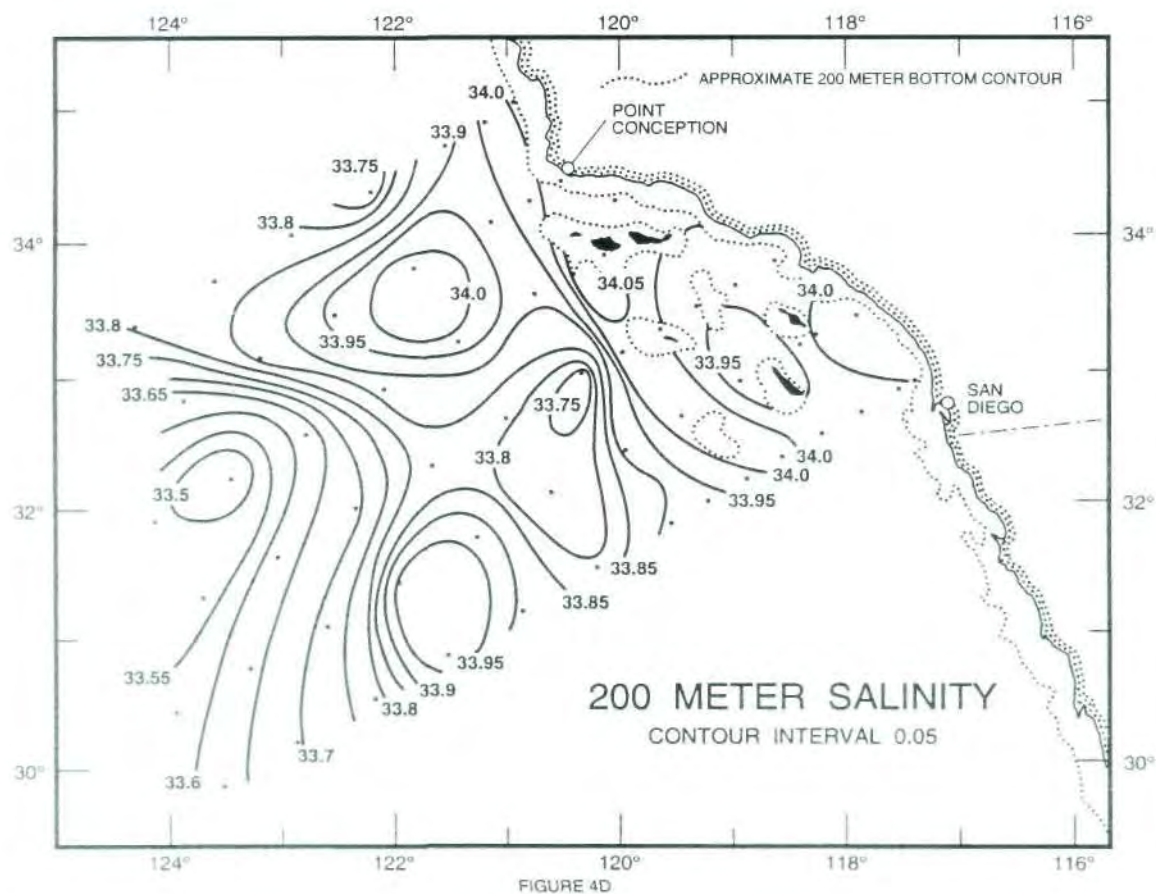
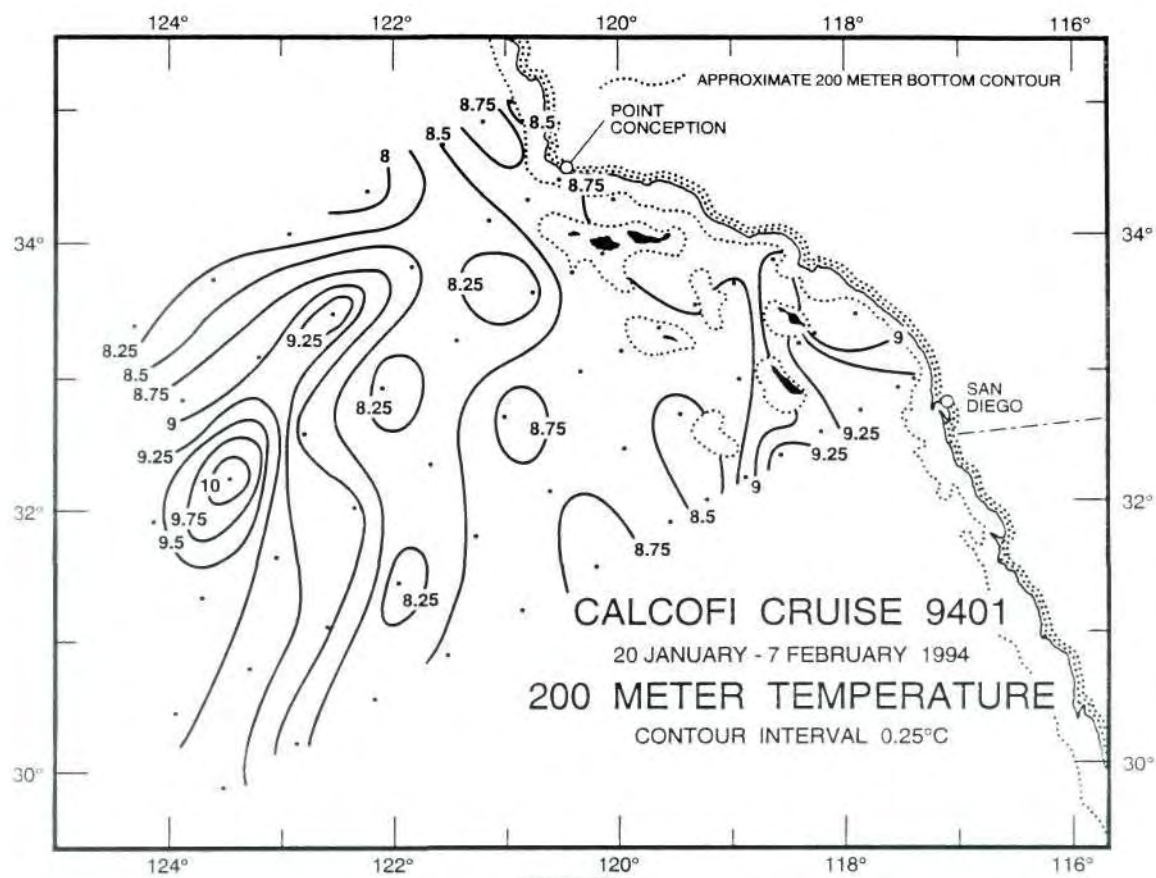
1. CalCOFI Cruise 9401, track and station positions.
2. Horizontal distribution of dynamic height anomaly (0 over 500in). In areas shallower than 500 m, the dynamic heights were extrapolated on the basis of the offshore deeper steric height as described in Reid and Mantyla (1976).
3. Horizontal distributions 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.











CALCOFI CRUISE 9401

25 - 28 JANUARY 1994

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

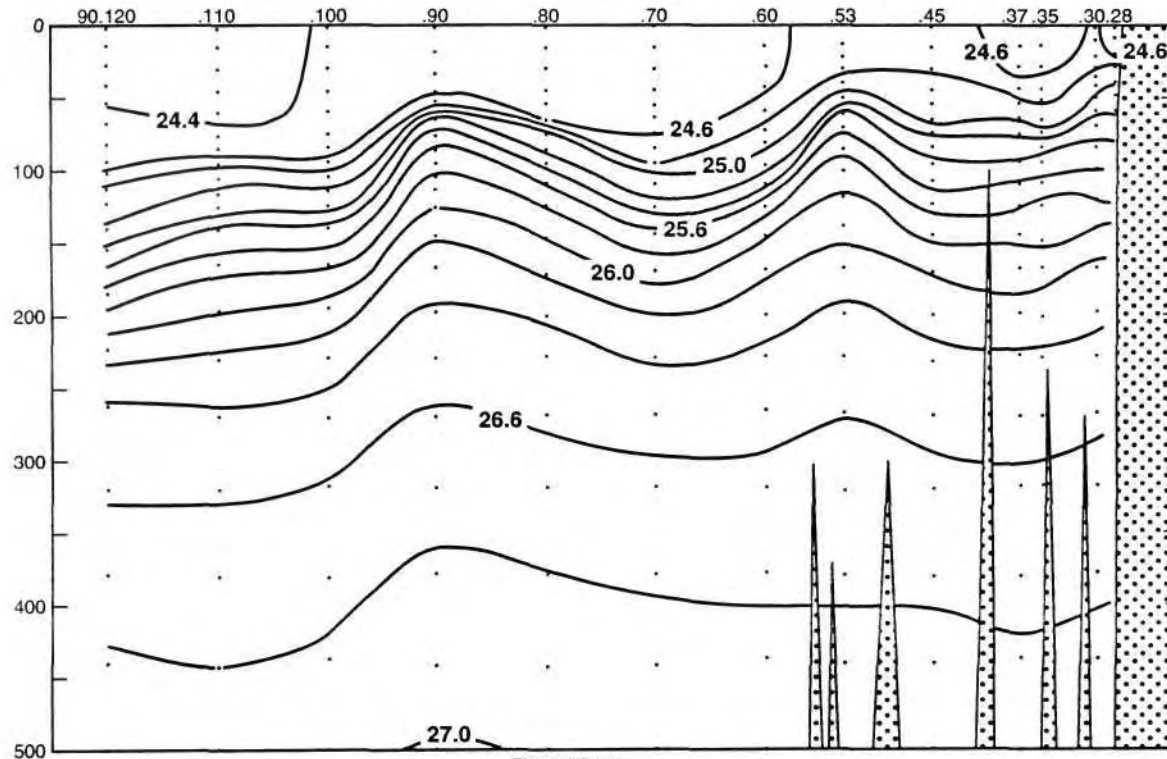


FIGURE 5A

DEPTH (m)

TEMPERATURE ($^{\circ}\text{C}$) ALONG CALCOFI LINE 90

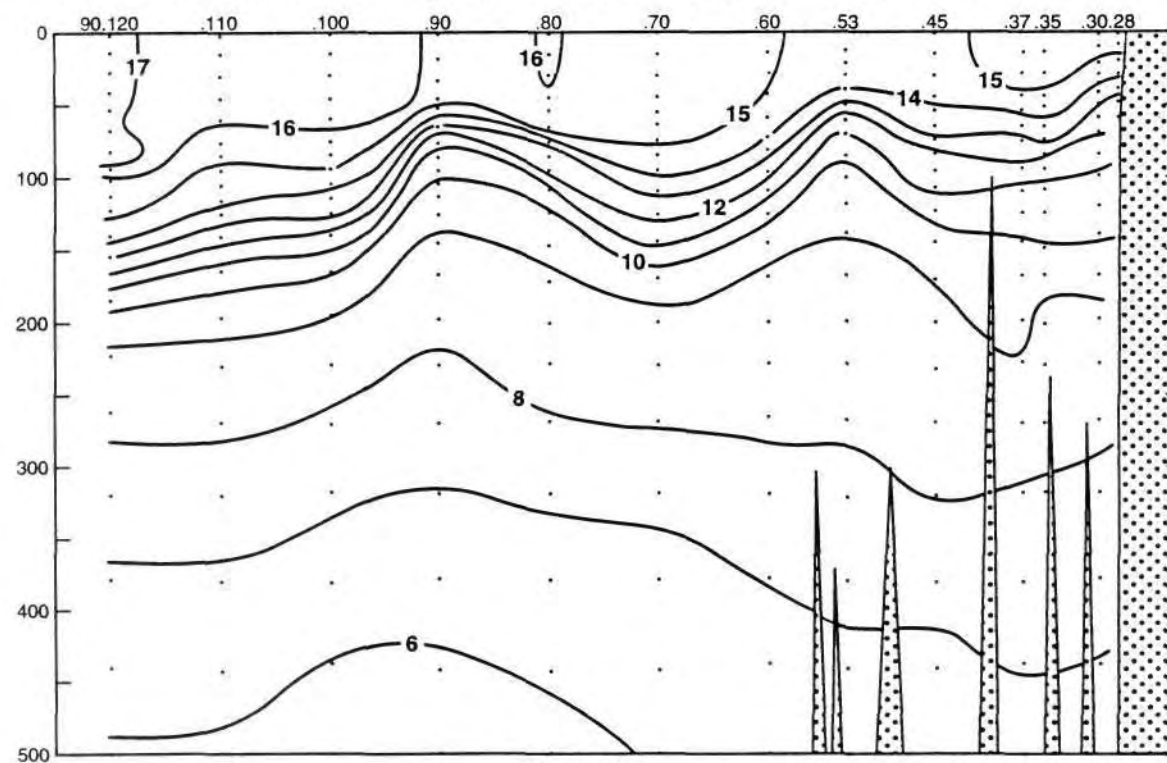


FIGURE 5B

CALCOFI CRUISE 9401

25 - 28 JANUARY 1994

SALINITY ALONG CALCOFI LINE 90

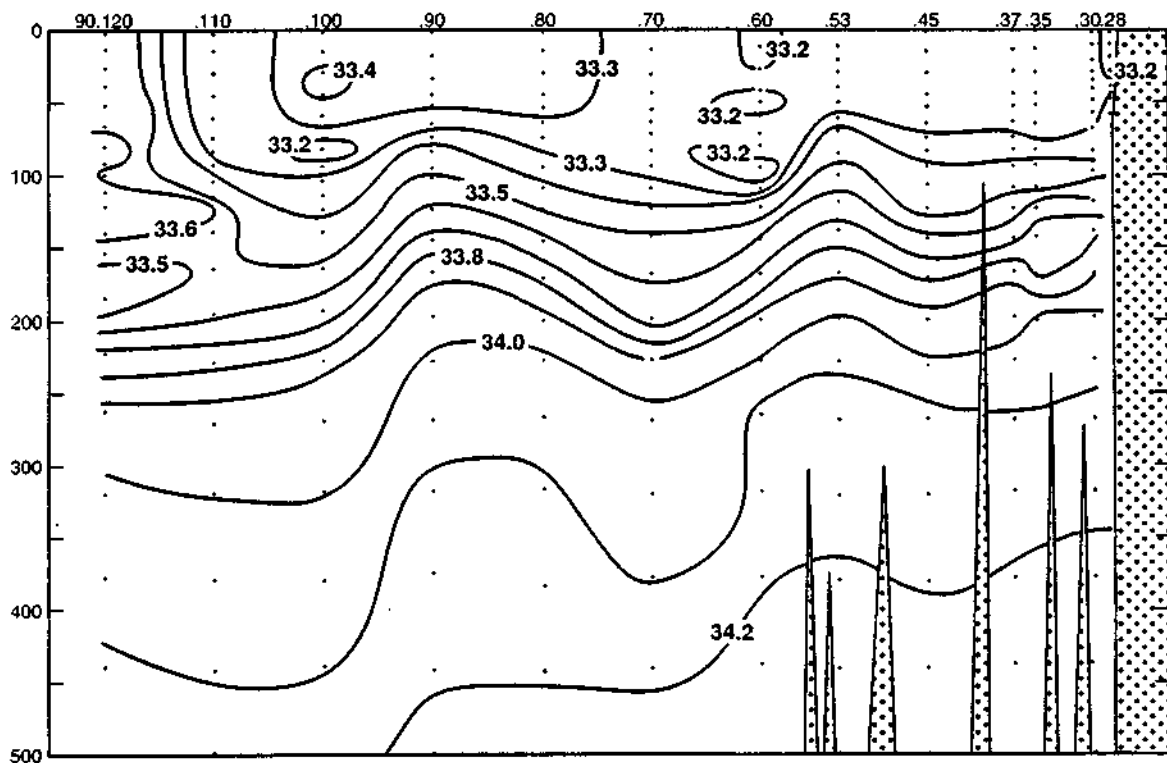


FIGURE 5C

DEPTH (m)

SILICATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

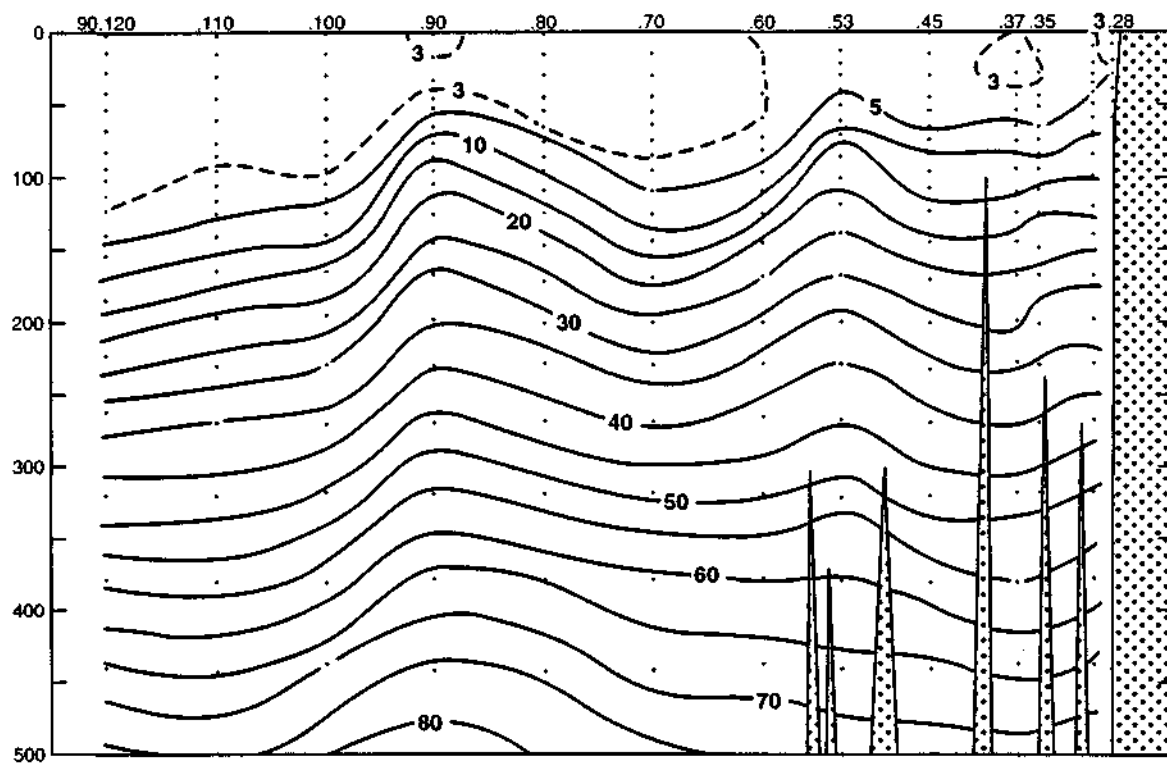


FIGURE 5D

CALCOFI CRUISE 9401

25 - 28 JANUARY 1994

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

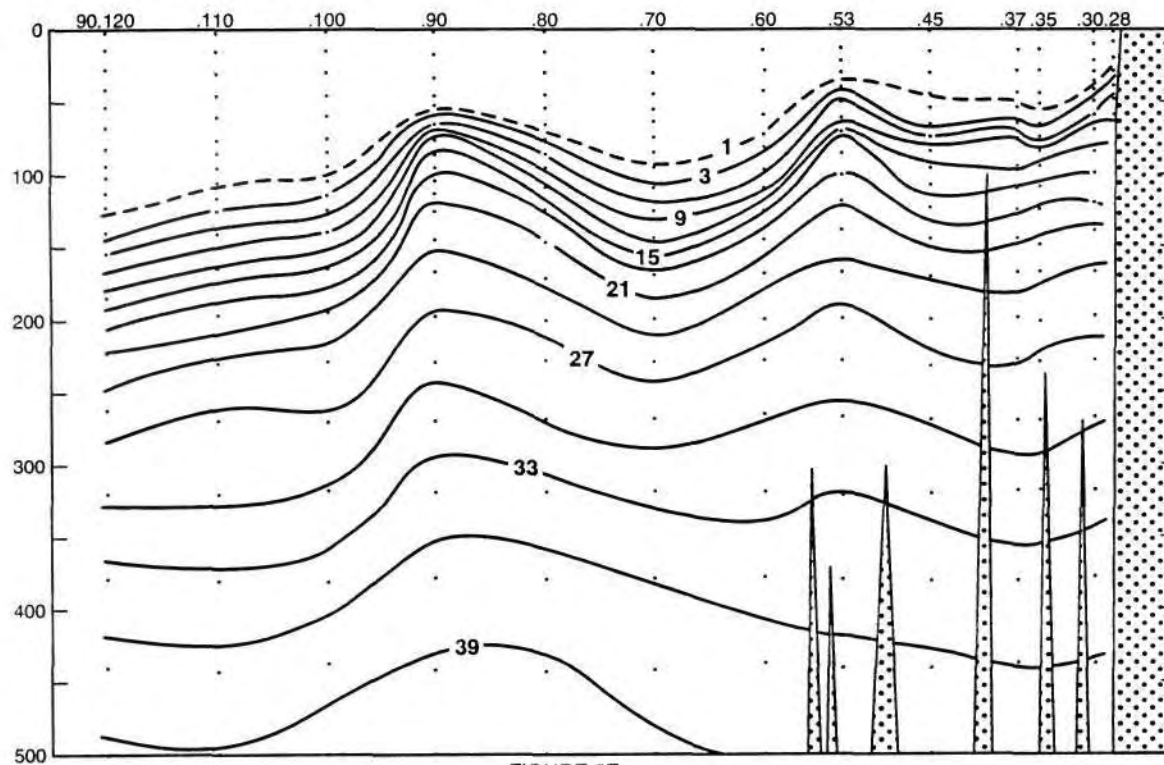


FIGURE 5E

PHOSPHATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

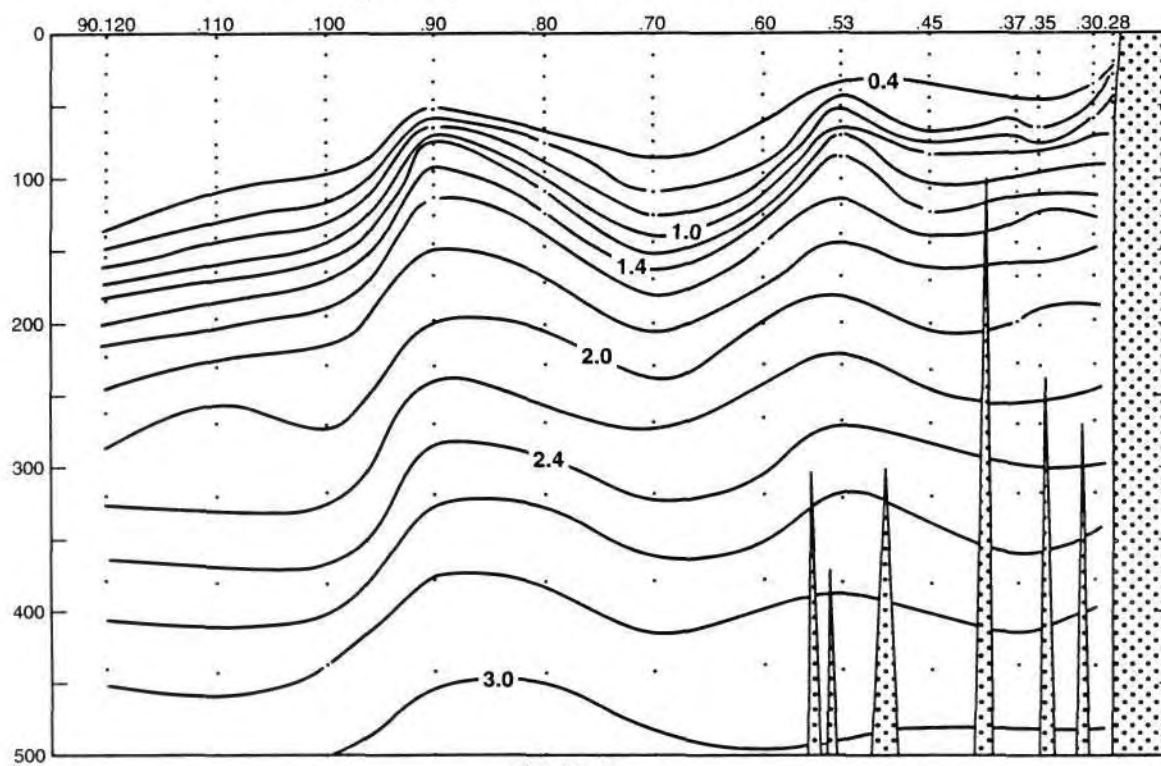


FIGURE 5F

CALCOFI CRUISE 9401

25 - 28 JANUARY 1994

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

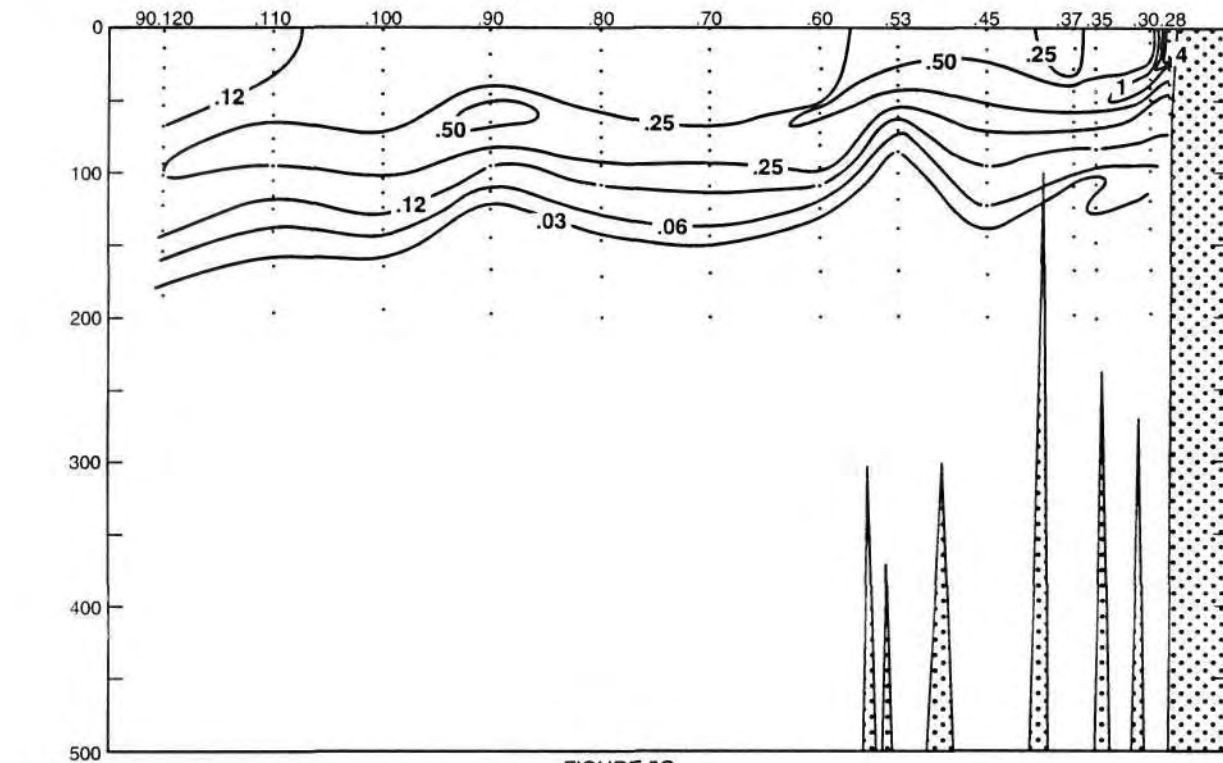


FIGURE 5G

DEPTH (m)

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

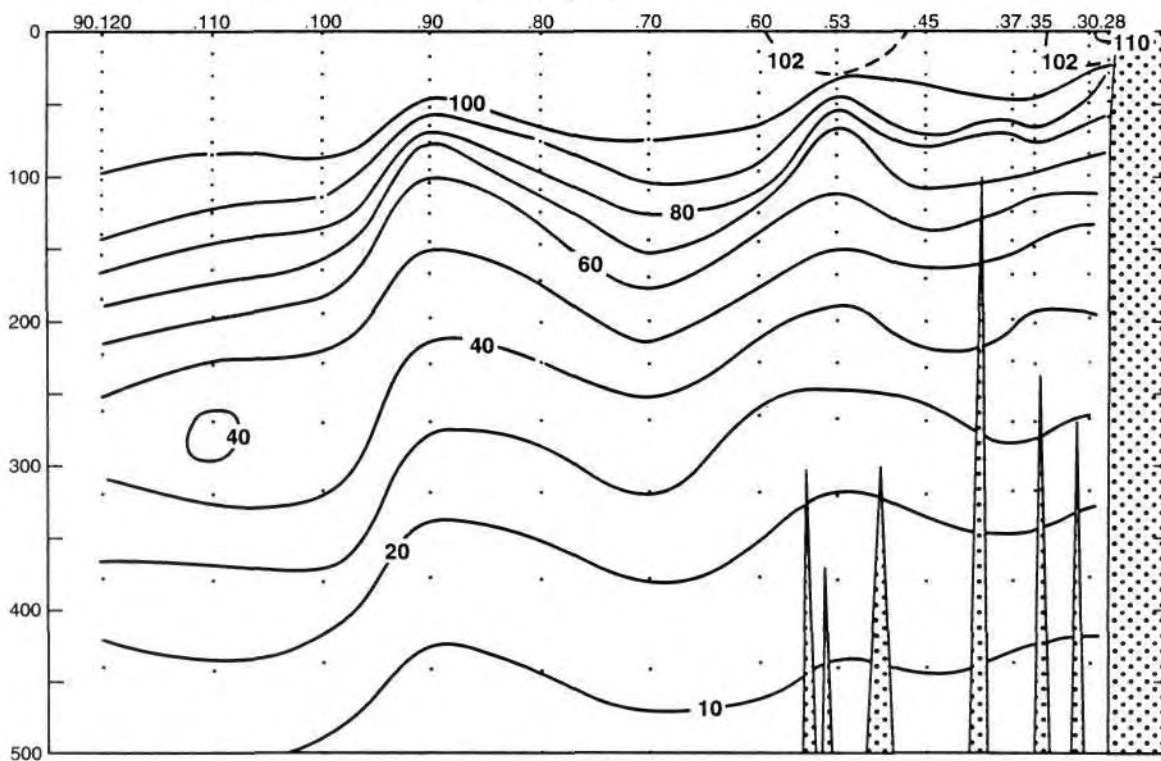


FIGURE 5H

CALCOFI CRUISE 9401

25 - 28 JANUARY 1994

OXYGEN (ml/l) ALONG CALCOFI LINE 90

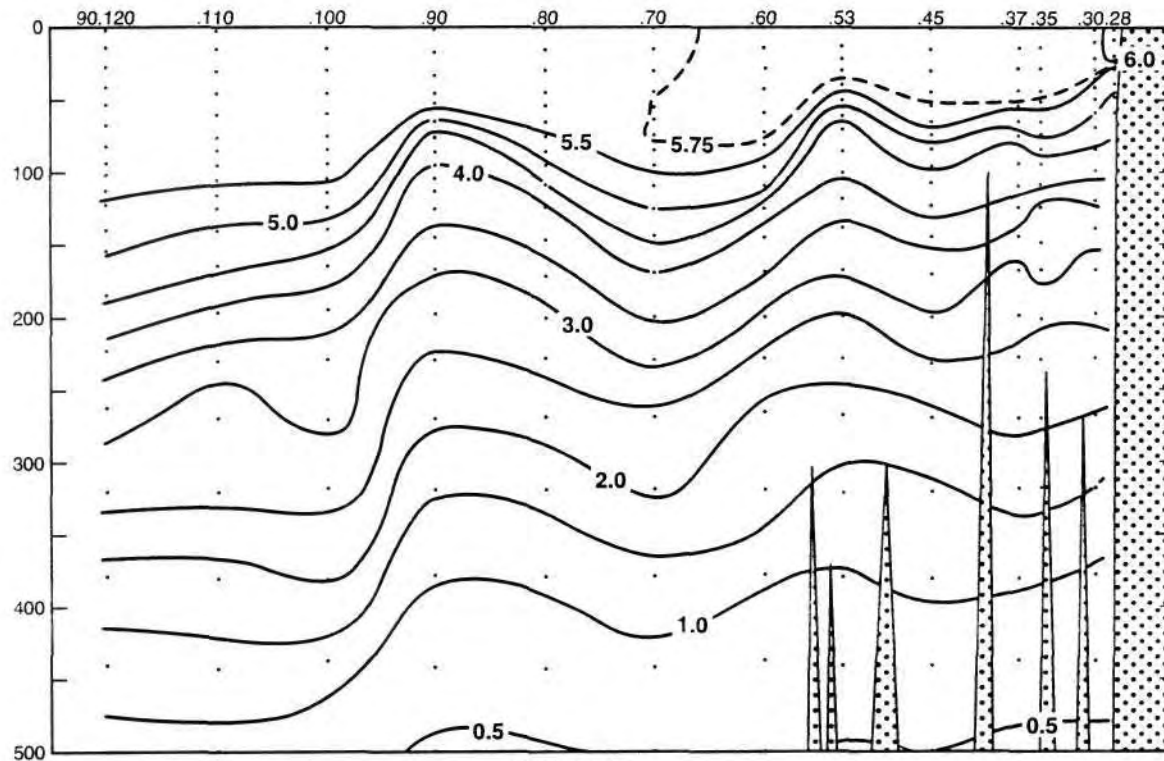


FIGURE 5I

NITRITE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

DEPTH (m)

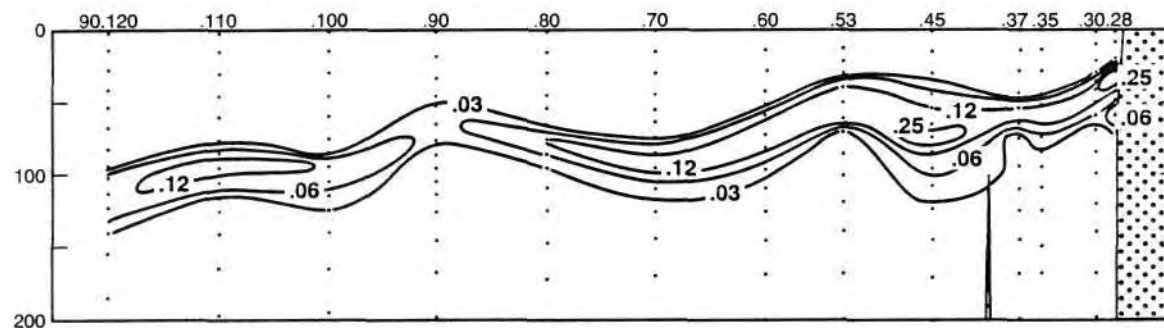


FIGURE 5J

PHAEOPIGMENTS ($\mu\text{g/l}$) ALONG CALCOFI LINE 90

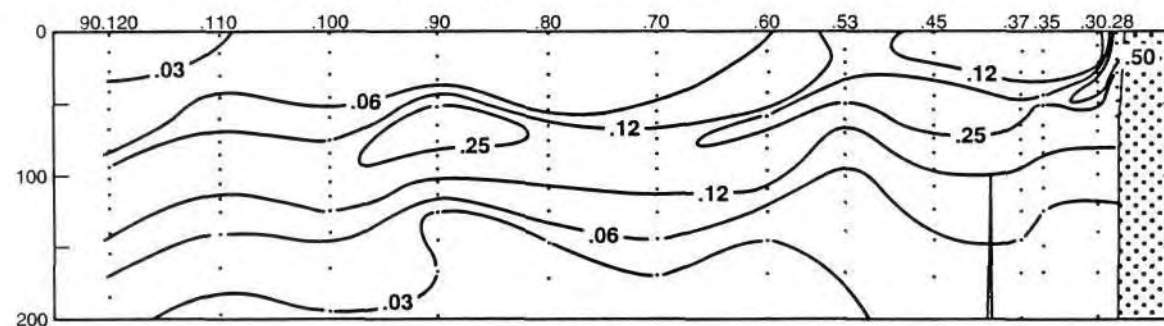


FIGURE 5K

RV DAVID STARR JORDAN				CALCOFI 9401												
				CRUISE												
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
35 5.3 N	120 46.5 W	06/02/94	0658 UTC	69 m	110	06 kn			1018.9 mb	13.4 C	12.3 C					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGIEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	ib
	0 ISL	13.19	13.19	33.203	24.964	298.2	0.000	5.89	98.7	5.4	0.54	2.2	0.10	1.80	0.49	0
2	2	13.19	13.19	33.203	24.964	298.3	a.006	5.89	98.7	5.4	0.54	2.2	0.10	1.80	0.49	2
2	10	13.03	13.03	33.211	25.002	294.8	0.030	5.76	96.2	5.7	0.58	2.9	0.12	1.52	0.41	10
2	20	12.88	12.88	33.235	25.051	290.5	0.059	5.53	92.1	6.6	0.66	4.2	0.16	1.11	0.38	20
2	30	12.77	12.77	33.259	25.091	286.9	0.088	5.39	89.5	7.4	0.72	5.4	0.18	0.84	0.33	30
2	40	12.64	12.63	33.283	25.135	283.0	0.116	5.21	86.3	8.2	0.80	6.5	0.20	0.48	0.28	40
2	50	12.53	12.52	33.285	25.158	281.0	0.145	5.12	84.6	9.1	0.84	7.1	0.20	0.42	0.29	50
2	63	12.43	12.42	33.296	25.186	278.7	0.181	5.03	83.0	9.9	0.90	7.6	0.22	0.46	0.41	63

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 77 51			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMI	YPE
35 1.6 N		120 5 5.2 W		06/02/94	0355 UTC	240 m	150	07 kn			1019.8 mb	13.9 c	12.4 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	13.56	13.56	33.098	24.808	313.0	0.000										
	1	13.56	13.56	33.098	24.808	313.0	0.003										
	10 ISL	13.56	13.56	33.100	24.810	313.1	0.031									10	
2	11	13.56	13.56	33.100	24.810	313.2	0.034	6.07	102.4	3.8	0.36	0.2	0.02	0.46	0.21	11	
2	20	13.54	13.54	33.111	24.823	312.2	0.063	6.36	102.2	3.7	0.37	0.1	0.02	0.58	0.31	20	
2	30	13.51	13.51	33.140	24.852	309.7	0.094	6.04	101.8	3.7	0.37	0.2	0.04	0.59	0.35	30	
2	40	13.59	13.58	33.222	24.899	305.5	0.124	5.72	96.6	4.0	0.51	2.0	0.18	0.37	0.22	40	
2	50	13.38	13.37	33.237	24.954	300.6	0.155	5.58	93.9	4.5	0.56	2.9	0.21	0.32	0.23	50	
2	60	12.33	12.32	33.259	25.177	279.5	0.184	5.06	83.3	7.4	0.84	7.2	0.10	0.18	0.17	60	
2	70	11.96	11.95	33.284	25.266	271.2	0.211	4.85	79.2	9.4	1.00	9.6	0.05	0.15	0.14	70	
	75 ISL	11.76	11.75	33.288	25.307	267.4	0.225	4.79	77.9	9.9	1.04	10.3	0.04	0.13	0.13	75	
2	85	11.34	11.33	33.303	25.396	259.2	0.251	4.66	75.1	11.0	1.12	11.5	0.03	0.10	a. 10	85	
2	100	10.64	10.63	33.384	25.583	241.6	0.289	4.33	68.8	14.5	1.33	15.0	0.02	0.06	0.08	100	
2	120	9.95	9.94	33.495	25.788	222.4	0.335	5.94	61.7	18.8	1.55	18.5	0.03	0.03	0.08	121	
	125 ISL	9.78	9.77	33.524	25.839	217.6	0.346	5.86	60.2	19.8	1.60	19.4	0.03	0.02	0.08	126	
2	140	9.33	9.31	33.626	25.992	203.3	0.378	3.55	54.9	23.4	1.75	21.9	0.03	0.01	0.07	141	
	150 ISL	9.09	9.07	33.734	26.115	191.7	0.297	3.19	49.1	27.1	1.89	23.8	0.06	0.01	0.07	151	
2	167	8.78	8.76	33.906	26.299	174.6	0.428	2.59	39.6	33.2	2.10	26.6	0.10	0.01	0.08	168	
2	199	8.45	8.43	34.000	26.424	163.2	0.483	2.28	34.6	38.2	2.24	28.7	0.09	0.01	0.11	200	
	200 ISL	8.44	8.42	34.002	26.427	162.9	0.484	2.27	34.5	38.4	2.24	28.8	0.09	0.01	0.11	201	
2	229	8.109	8.086	34.063	26.526	154.0	0.530	2.01	30.3	43.4	2.37	30.3	0.06	0.01	0.13	230	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 77 5				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
34 53.4 N		121 12.0 W		05/02/94	2322 UTC	562 m	190	12 kn	170 QZ 05	2	1020.1 mb	14.7 C	12.8 C	17ra 03		8/8	SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	13.93	13.93	33.111	24.743	319.3	0.000	6.02	102.4	4.0	0.35	0.0	0.00	0.34	0.12		0	
2	1	13.93	13.93	33.111	24.743	319.3	0.003	6.02	102.4	4.0	0.35	0.0	0.00	0.34	0.12		1	
	10 ISL	13.88	13.88	33.109	24.752	318.7	0.032	6.02	102.3	3.8	0.35	0.0	0.00	0.33	0.12		J10	
2	15	13.84	13.84	33.108	24.759	318.1	0.048	6.02	102.2	3.7	0.35	0.0	0.00	0.33	0.13		15	
	20 ISL	13.84	13.84	33.111	24.762	318.0	0.064	6.01	102.0	3.6	0.35	0.0	0.00	0.34	0.13		20	
2	30	13.84	13.84	33.119	24.768	317.7	0.096	5.99	101.7	3.5	0.35	0.0	0.00	0.38	0.15		30	
2	44	13.96	13.95	33.181	24.792	315.8	0.140	5.98	101.8	3.3	0.36	0.0	0.01	0.52	0.22		44	
2	50 ISL	13.74	13.73	33.213	24.862	309.3	0.159	5.73	97.1	4.2	0.48	1.6	0.12	0.41	0.25		50	
2	53	13.57	13.56	33.227	24.907	305.0	0.168	5.59	94.4	4.7	0.55	2.6	0.17	0.34	0.26		53	
2	65	12.56	12.55	33.245	25.122	284.9	0.203										65	
2	75	11.74	11.73	33.267	25.294	268.6	0.231	4.89	79.5	9.4	0.97	9.3	0.03	0.15	0.15		75	
2	84	11.07	11.06	33.310	25.449	254.0	0.254	4.63	74.2	11.9	1.16	12.1	0.02	0.10	0.11		84	
2	94	10.63	10.62	33.401	25.598	240.0	0.279	4.28	68.0	14.8	1.34	15.1	0.01	0.07	0.08		94	
2	100 ISL	10.31	10.30	33.487	25.720	228.5	0.293	3.99	63.0	17.2	1.46	17.1	0.01	0.05	0.06		100	
2	108	9.91	9.90	33.603	25.879	213.5	0.311	3.62	56.7	20.5	1.62	19.6	0.01	0.02	0.05		109	
2	124	9.49	9.48	33.741	26.056	196.9	0.344	3.17	49.2	25.0	1.81	22.6	0.01	0.01	0.05		125	
2	125 ISL	9.48	9.47	33.745	26.061	196.5	0.346	5.16	49.0	25.1	1.81	22.7	0.01	0.01	0.05		126	
2	144	9.33	9.31	33.792	26.122	191.0	0.382	3.05	47.2	26.5	1.87	23.5	0.01	0.01	0.04		145	
2	150 ISL	9.27	9.25	33.817	26.152	188.4	0.394	2.98	46.0	27.2	1.90	23.9	0.01	0.01	0.04		151	
2	169	9.10	9.08	33.897	26.242	180.1	0.429	2.77	42.7	29.5	1.99	25.2	0.01	0.01	0.04		170	
2	199	8.97	8.95	33.958	26.311	174.2	0.482	2.57	39.5	31.8	2.06	26.2	0.01	0.01	0.03		200	
2	200 ISL	8.96	8.94	33.961	26.315	173.8	0.484	2.56	39.3	31.9	2.06	26.2	0.01				201	
2	229	8.80	8.78	34.033	26.397	166.6	0.533	2.32	35.5	34.7	2.16	27.5	0.01				230	
2	250 ISL	8.71	8.68	34.067	26.438	163.1	0.568	2.18	33.3	36.5	2.23	28.2	0.01				251	
2	268	8.64	8.61	34.089	26.466	160.7	0.597	2.07	31.6	37.9	2.28	28.7	0.01				270	
2	300 ISL	8.46	8.43	34.118	26.517	156.4	0.648	1.90	28.9	40.5	2.35	29.6	0.01				302	
2	317	8.34	8.31	34.130	26.545	154.0	0.684	1.82	27.6	42.1	2.38	30.1	0.01				319	
2	376	7.80	7.76	34.167	26.655	144.3	0.762	1.48	22.2	49.4	2.57	32.4	0.00				378	
2	400 ISL	7.47	7.43	34.173	26.707	139.4	0.796	1.30	19.3	53.8	2.66	33.7	0.00				403	
2	435	6.98	6.94	34.180	26.781	132.5	0.844	1.05	15.4	60.5	2.79	35.6	0.00				438	
	500 ISL	6.39	6.34	34.190	26.869	124.7	0.927	0.81	11.7	69.6	2.94	37.7	0.00				503	
2	512	6.28	6.23	34.192	26.885	123.2		0.76	11.0	71.3	2.97	38.1	0.00				516	
																		0.942

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
34 43.3 HI	121 33.1 W	05/02/94	1831 UTC	947 m	150 09 kn	150 02 05	1	1022.0 mb	14.5 C	12.2 C	24m 03	6/8	CI			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
m		DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	14.43	14.43	33.195	24.703	323.0	0.000	5.88	101.1	3.4	0.36	0.0	0.00	0.32	0.12	0
2	2 A	14.43	14.43	33.195	24.703	323.1	0.006	5.88	101.1	3.4	0.36	0.0	0.00	0.32	0.12	2
	10 ISL	14.41	14.41	33.195	24.708	322.9	0.032	5.89	101.2	3.2	0.35	0.0	0.00	0.31	0.13	10
2	14 A	14.39	14.39	33.196	24.713	322.5	0.045	5.89	101.1	3.1	0.35	0.0	0.00	0.31	0.14	14
	20 ISL	14.39	14.39	33.199	24.715	322.4	0.065	5.88	101.0	3.0	0.35	0.0	0.00	0.32	0.14	20
2	28 A	14.39	14.39	33.202	24.718	322.4	0.090	5.87	100.8	3.0	0.35	0.0	0.00	0.33	0.13	28
	30 ISL	14.39	14.39	33.203	24.719	322.4	0.097	5.87	100.8	3.0	0.35	0.0	0.00	0.33	0.13	30
2	45 A	14.39	14.38	33.207	24.722	322.5	0.145	5.88	101.0	2.9	0.35	0.0	0.01	0.35	0.15	45
	50 ISL	14.33	14.32	33.209	24.737	321.3	0.161	5.87	100.7	2.9	0.36	0.0	0.03	0.34	0.16	50
2	54 A	14.23	14.22	33.214	24.762	319.0	0.174	5.87	100.5	2.9	0.37	0.0	0.05	0.34	0.16	54
	63 A	13.77	13.76	33.245	24.881	307.9	0.202	5.75	97.5	3.3	0.47	1.4	0.40	0.36	0.27	63
2	75 A	12.54	12.53	33.203	25.093	287.8	0.238	5.16	85.3	7.1	0.79	6.2	0.13	0.20	0.22	75
	86 A	11.77	11.76	33.298	25.313	267.1	0.269	4.78	77.8	9.6	1.00	9.5	0.06	0.14	0.16	86
2	95 A	11.13	11.12	33.314	25.442	254.9	0.292	4.66	74.8	11.0	1.10	11.2	0.04	0.10	0.13	95
	100 ISL	10.83	10.82	33.344	25.519	247.7	0.305	4.57	72.9	12.1	1.17	12.5	0.03	0.08	0.12	100
2	109 ISL	10.38	10.37	33.416	25.653	235.0	0.326	4.35	68.7	14.4	1.31	14.9	0.02	0.04	0.10	110
	124 A	9.87	9.86	33.552	25.846	217.0	0.360	3.83	59.9	19.2	1.56	18.7	0.02	0.02	0.06	125
2	125 ISL	9.84	9.83	33.557	25.855	216.1	0.362	3.82	59.7	19.4	1.57	18.8	0.02	0.02	0.06	126
	145 A	9.27	9.25	33.639	26.012	201.5	0.404	3.72	57.4	21.9	1.66	20.5	0.02	0.01	0.04	146
2	150 ISL	9.17	9.15	33.661	26.046	198.4	0.414	3.67	56.5	22.6	1.66	21.0	0.02	0.01	0.04	151
	170 A	8.87	8.85	33.750	26.163	187.5	0.453	3.65	52.8	25.6	1.78	22.7	0.02	0.01	0.05	171
2	199 A	8.51	8.49	33.873	26.316	173.5	0.505	3.16	48.0	29.8	1.91	24.8	0.03	0.01	0.03	200
	200 ISL	8.50	8.48	33.876	26.319	173.2	0.507	3.15	47.8	29.9	1.91	24.8	0.03	0.01	0.03	201
2	230 A	8.30	8.28	33.947	26.406	165.4	0.558	2.90	43.9	33.4	2.00	25.9	0.02	0.01	0.01	231
	250 ISL	8.17	8.14	33.989	26.459	160.8	0.590	2.73	41.2	35.8	2.07	27.0	0.02	0.01	0.01	251
2	268 A	8.02	7.99	34.019	26.505	156.6	0.619	2.57	38.6	38.2	2.14	28.1	0.02	0.01	0.01	270
	300 ISL	7.58	7.55	34.041	26.586	149.2	0.668	2.33	34.7	43.6	2.27	30.0	0.02	0.01	0.01	302
2	317 A	7.33	7.30	34.049	26.628	145.4	0.693	2.19	32.4	46.8	2.34	31.1	0.02	0.01	0.01	319
	377 A	6.84	6.80	34.127	26.758	133.7	0.777	1.37	20.1	58.2	2.67	34.8	0.02	0.01	0.01	379
2	400 ISL	6.71	6.67	34.157	26.799	130.1	0.807	1.12	16.3	62.1	2.77	35.7	0.02	0.01	0.01	403
	437 A	6.52	6.48	34.198	26.857	125.0	0.854	0.80	11.6	67.9	2.91	36.9	0.03	0.01	0.01	440
2	500 ISL	6.09	6.05	34.228	26.937	117.9	0.931	0.57	8.2	75.6	3.04	38.7	0.02	0.01	0.01	503
	512 A	6.01	5.96	34.234	26.952	116.6	0.945	0.53	7.6	77.1	3.06	39.0	0.02	0.01	0.01	516

A> PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN IFROM THESE LEVELS.

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
34 23.1 N	122 14.7 W	05/02/94	1220 UTC	4016 m	200 04 kn			1020.3 mb	13.4 C	10.9 C						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
m		DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	14.48	14.48	33.146	24.655	327.6	0.000	5.86	100.8	3.3	0.30	0.1	0.00	0.25	0.08	0
2	2 A	14.48	14.48	33.146	24.655	327.7	0.007	5.86	100.8	3.3	0.30	0.1	0.00	0.25	0.08	2
	10 ISL	14.50	14.50	33.147	24.652	328.2	0.033	5.86	100.8	3.3	0.30	0.1	0.00	0.26	0.08	10
2	15 A	14.51	14.51	33.149	24.651	328.4	0.049	5.86	100.8	3.2	0.30	0.1	0.00	0.26	0.08	15
	20 ISL	14.52	14.52	33.151	24.651	328.6	0.066	5.86	100.9	3.1	0.30	0.1	0.00	0.26	0.08	20
2	30 A	14.53	14.53	33.152	24.650	329.0	0.099	5.85	100.7	3.0	0.30	0.0	0.00	0.26	0.09	30
	45 A	14.51	14.50	33.149	24.652	329.2	0.148	5.86	100.8	3.0	0.30	0.0	0.00	0.26	0.09	45
2	50 ISL	14.50	14.49	33.146	24.652	329.3	0.164	5.87	101.0	3.0	0.30	0.0	0.00	0.25	0.10	50
	54 A	14.50	14.49	33.144	24.651	329.6	0.178	5.87	101.0	3.0	0.30	0.0	0.00	0.24	0.10	54
2	65 A	14.50	14.49	33.145	24.652	329.8	0.214	5.87	101.0	3.0	0.30	0.0	0.00	0.25	0.08	65
	74 A	14.56	14.55	33.164	24.654	329.9	0.243	5.85	100.8	2.9	0.29	0.0	0.00	0.27	0.11	74
2	75 ISL	14.55	14.54	33.164	24.656	329.7	0.247	5.85	100.7	2.9	0.29	0.0	0.00	0.27	0.11	75
	84 A	14.29	14.28	33.163	24.711	324.8	0.276	5.83	99.9	3.0	0.32	0.2	0.03	0.24	0.14	84
2	94 A	13.79	13.78	33.162	24.814	315.1	0.308	5.77	97.8	3.3	0.38	0.7	0.08	0.25	0.21	94
	100 ISL	13.43	13.42	33.176	24.898	307.3	0.327	5.70	95.9	3.5	0.42	1.1	0.07	0.23	0.21	100
2	109 ISL	12.82	12.81	33.196	25.034	294.4	0.354	5.55	92.2	4.3	0.52	2.4	0.03	0.18	0.20	109
	124 A	11.64	11.62	33.188	25.252	273.8	0.397	5.13	83.1	7.9	0.86	7.8	0.01	0.10	0.10	125
2	125 ISL	11.55	11.53	33.195	25.274	271.7	0.399	5.09	82.3	8.3	0.89	8.2	0.01	0.10	0.10	126
	144 A	9.94	9.92	33.376	25.697	231.5	0.447	4.44	69.4	15.3	1.37	15.9	0.00	0.03	0.04	145
2	150 ISL	9.61	9.59	33.414	25.781	223.6	0.461	4.35	67.5	16.9	1.45	17.2	0.00	0.02	0.03	151
	168 A	8.89	8.87	33.511	25.973	205.5	0.499	4.20	64.2	20.8	1.59	19.8	0.00	0.01	0.02	169
2	199 A	7.94	7.92	33.727	26.286	176.0	0.559	3.96	59.3	27.7	1.78	23.1	0.00	0.00	0.01	200
	200 ISL	7.93	7.91	33.733	26.292	175.5	0.560	3.95	59.2	27.9	1.78	23.2	0.00	0.00	0.01	201
2	228 A	7.65	7.63	33.857	26.431	162.7	0.608	3.60	53.6	33.2	1.91	25.4	0.00	0.00	0.00	229
	250 ISL	7.36	7.34	33.917	26.519	154.6	0.643	3.30	48.8	37.8	2.02	27.3	0.00	0.00	0.00	251
2	268 A	7.15	7.12	33.952	26.576	149.3	0.670	3.03	44.6	41.5	2.12	28.8	0.00	0.00	0.00	270
	300 ISL	7.05	7.02	34.012	26.638	144.0	0.717	2.45	36.0	47.4	2.33	31.2	0.00	0.00	0.00	302
2	318 A	7.00	6.97	34.036	26.664	141.8	0.743	2.13	31.3	50.7	2.44	32.5	0.00	0.00	0.00	320
	378 A	6.29	6.26	34.061	26.778	131.3	0.824	1.47	21.2	62.7	2.72	36.5	0.00	0.00	0.00	380
2	400 ISL	6.19	6.15	34.087	26.812	128.4	0.853	1.26	18.2	65.9	2.80	37.3	0.00	0.00	0.00	403
	437 A	6.08	6.04	34.132	26.862	124.1	0.900	0.95	13.7	70.7	2.92	38.2	0.00	0.00	0.00	440
2	500 ISL	5.65	5.61	34.165	26.942	116.9	0.976	0.68	9.7	79.5	3.05	40.2	0.00	0.00	0.00	503
	514 A	5.56	5.52	34.173	26.959	115.3	0.992	0.62	8.8	81.4	3.08	40.6	0.00	0.00	0.00	517

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 77 80			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
34 3.7 N	122 56.1 W	05/02/94	0603 UTC	4229 m	290	06 kn			1021.0 mb	13.2 c	11.0 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.50	15.50	33.313	24.563	336.4	0.000	5.75	101.1	3.3	0.32	0.0	0.00	0.18	0.05	0	
2	1	15.50	15.50	33.313	24.563	336.4	0.003	5.75	101.1	3.3	0.32	0.0	0.00	0.18	0.05	1	
	10 ISL	15.51	15.51	33.312	24.560	337.0	0.034	5.76	101.3	3.1	0.31	0.0	0.00	0.17	0.05	10	
2	16	15.51	15.51	33.312	24.560	337.1	0.054	5.76	101.2	3.0	0.31	0.0	0.00	0.17	0.05	16	
	20 ISL	15.50	15.50	33.312	24.563	337.0	0.067	5.76	101.2	3.0	0.31	0.0	0.00	0.17	0.05	20	
2	30	15.44	15.44	33.298	24.566	337.1	0.101	5.75	100.9	2.9	0.31	0.0	0.00	0.17	0.05	30	
2	45	15.15	15.14	33.276	24.613	333.0	0.151	5.80	101.2	2.9	0.31	0.0	0.00	0.19	0.06	45	
	50 ISL	15.05	15.04	33.251	24.615	332.9	0.168	5.82	101.3	2.9	0.31	0.0	0.00	0.21	0.07	50	
2	61	14.78	14.77	33.181	24.620	332.8	0.205	5.84	101.1	3.0	0.33	0.0	0.00	0.25	0.10	61	
	75 ISL	14.27	14.26	33.139	24.696	325.9	0.251	5.81	99.5	3.3	0.37	0.1	0.05	0.28	0.16	75	
2	76	14.22	14.21	33.133	24.702	325.3	0.254	5.81	99.4	3.3	0.37	0.1	0.05	0.28	0.16	76	
2	85	13.61	13.60	33.341	24.989	298.2	0.282	5.52	93.4	4.1	0.48	2.0	0.05	0.24	0.19	85	
2	95	13.03	13.02	33.339	25.104	287.5	0.311	5.21	87.0	5.9	0.69	4.8	0.03	0.18	0.16	95	
	100 ISL	12.65	12.64	33.351	25.187	279.6	0.325	5.36	83.9	6.8	0.78	6.3	0.02	0.16	0.14	100	
2	104	12.34	12.33	33.362	25.256	273.1	0.337	4.97	81.9	7.5	0.84	7.4	0.02	0.14	0.13	104	
2	115	11.54	11.53	33.375	25.416	258.0	0.366	4.91	79.5	8.5	0.91	8.8	0.01	0.09	0.10	115	
2	125	10.82	10.80	33.354	25.529	247.3	0.391	4.86	77.5	10.8	1.04	11.2	0.00	0.05	0.06	125	
2	139	9.69	9.67	33.405	25.761	225.3	0.424	4.39	68.3	16.2	1.40	16.7	0.00	0.02	0.03	139	
	150 ISL	9.14	9.12	33.469	25.900	212.1	0.448	4.18	64.3	19.4	1.56	19.3	0.00	0.01	0.03	150	
2	164	8.70	8.68	33.562	26.042	198.8	0.477	3.99	60.8	22.9	1.69	21.5	0.00	0.00	0.02	164	
2	193	8.31	8.29	33.768	26.263	178.2	0.532	5.44	52.0	29.4	1.90	25.0	0.00	0.00	0.02	193	
	200 ISL	8.24	8.22	33.809	26.306	174.3	0.541	5.33	50.3	30.6	1.93	25.6	0.00	0.00	0.02	200	
2	228	7.97	7.95	33.937	26.447	161.3	0.591	2.97	44.6	34.9	2.04	27.4	0.00	0.00	0.02	228	
	250 ISL	7.72	7.70	33.985	26.522	156.5	0.626	2.74	40.9	38.8	2.14	28.8	0.00	0.00	0.02	250	
2	267	7.54	7.51	34.005	26.565	150.8	0.652	2.57	38.2	41.8	2.22	29.9	0.00	0.00	0.02	267	
	300 ISL	7.27	7.24	34.044	26.632	144.6	0.700	2.20	32.5	47.5	2.38	31.8	0.00	0.00	0.02	300	
2	318	7.12	7.09	34.054	26.661	142.1	0.726	2.03	29.9	50.5	2.45	32.7	0.00	0.00	0.02	318	
2	377	6.32	6.29	34.023	26.744	134.5	0.808	1.92	27.7	59.0	2.57	35.0	0.00	0.00	0.02	377	
	400 ISL	6.08	6.05	34.035	26.785	130.8	0.838	1.69	24.3	63.6	2.67	36.3	0.00	0.00	0.02	400	
2	436	5.77	5.73	34.064	26.846	125.2	0.884	1.28	18.3	70.9	2.83	38.2	0.00	0.00	0.02	436	
	500 ISL	5.43	5.39	34.112	26.926	118.1	0.962	0.90	12.7	79.9	2.99	40.2	0.00	0.00	0.02	500	
2	511	5.37	5.33	34.120	26.940	116.9	0.975	0.83	11.7	81.4	3.02	40.5	0.00	0.00	0.02	511	

RV DAVID STARR JORDAN				CALCOFI CRUISE <401										STATION 77 90			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 43.6 N	123 37.0 W	04/02/94	2357 UTC	4336 m	340	10 kn	360 05 05	1	1019.8 mb	15.2 c	12.4 c	35m	02	5/8	CI		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.30	16.30	33.433	24.475	344.8	0.000	5.66	101.1	3.0	0.29	0.0	0.00	0.15	0.04	0	
2	1	16.30	16.30	33.433	24.475	344.8	0.003	5.66	101.1	3.0	0.29	0.0	0.00	0.15	0.04	1	
	10 ISL	16.31	16.31	33.437	24.476	345.0	0.034	5.66	101.2	3.0	0.29	0.0	0.00	0.15	0.05	10	
2	16	16.31	16.31	33.440	24.479	344.9	0.055	5.66	101.2	2.9	0.28	0.0	0.00	0.15	0.05	16	
	20 ISL	16.30	16.30	33.442	24.483	344.7	0.069	5.65	101.0	2.8	0.28	0.0	0.00	0.15	0.05	20	
2	29	16.29	16.29	33.445	24.488	344.5	0.100	5.63	100.6	2.7	0.27	0.0	0.00	0.15	0.05	29	
	30 ISL	16.29	16.29	33.445	24.488	344.5	0.103	5.63	100.6	2.7	0.27	0.0	0.00	0.15	0.05	30	
2	45	16.29	16.28	33.446	24.489	344.9	0.155	5.67	101.3	2.7	0.28	0.0	0.00	0.15	0.05	45	
	50 ISL	16.29	16.28	33.446	24.489	345.0	0.172	5.67	101.3	2.7	0.28	0.0	0.00	0.15	0.05	50	
2	59	16.29	16.28	33.447	24.490	345.2	0.203	5.66	101.1	2.6	0.27	0.0	0.00	0.16	0.05	59	
2	75	16.30	16.29	33.449	24.490	345.8	0.259	5.64	100.8	2.6	0.27	0.0	0.00	0.16	0.05	75	
2	84	16.24	16.23	33.448	24.503	344.8	0.290	5.66	101.0	2.5	0.27	0.0	0.00	0.16	0.05	84	
2	95	14.11	14.10	33.290	24.847	312.1	0.326	5.67	96.8	3.7	0.43	0.6	0.10	0.28	0.20	95	
	100 ISL	13.68	13.67	33.269	24.919	305.3	0.341	5.58	94.5	4.2	0.50	1.6	0.09	0.26	0.20	100	
2	105	13.38	13.37	33.263	24.975	300.0	0.356	5.45	91.7	4.9	0.59	2.9	0.08	0.23	0.20	105	
2	115	12.48	12.46	33.270	25.158	282.7	0.386	5.07	83.7	7.1	0.82	6.6	0.03	0.19	0.18	115	
2	124	12.12	12.10	33.462	25.376	262.2	0.410	4.98	81.7	7.8	0.81	7.5	0.01	0.09	0.09	124	
	125 ISL	12.00	11.98	33.460	25.397	260.2	0.413	4.94	80.8	8.3	0.85	8.1	0.01	0.09	0.09	125	
2	139	10.05	10.03	33.359	25.665	234.5	0.447	4.33	67.9	15.8	1.44	16.9	0.01	0.06	0.07	139	
	150 ISL	9.22	9.20	33.422	25.851	216.9	0.472	4.16	64.0	19.1	1.53	19.5	0.01	0.03	0.05	150	
2	163	8.71	8.69	33.546	26.028	200.1	0.499	4.05	61.7	21.8	1.64	20.6	0.01	0.01	0.03	163	
2	192	8.49	8.47	33.750	26.222	182.2	0.555	3.34	50.7	28.4	1.89	24.7	0.02	0.00	0.02	192	
	200 ISL	8.38	8.36	33.802	26.280	176.9	0.569	3.20	48.5	30.2	1.94	25.5	0.02	0.00	0.02	200	
2	228	7.96	7.94	33.948	26.457	160.4	0.616	2.86	42.9	35.7	2.06	27.5	0.02	0.00	0.02	228	
	250 ISL	7.76	7.74	33.991	26.521	154.7	0.651	2.72	40.6	38.6	2.13	28.6	0.02	0.00	0.02	250	
2	270	7.61	7.58	34.003	26.552	152.0	0.682	2.62	39.0	41.0	2.19	29.4	0.02	0.00	0.02	270	
	300 ISL	7.30	7.27	34.021	26.610	146.8	0.726	2.41	35.6	45.5	2.28	30.9	0.02	0.00	0.02	300	
2	319	7.10	7.07	34.029	26.645	143.7	0.754	2.25	33.1	48.6	2.35	31.9	0.02	0.00	0.02	319	
2	379	6.53	6.50	34.058	26.745	134.7	0.838	1.61	23.4	59.1	2.62	35.4	0.02	0.00	0.02	379	
	400 ISL	6.33	6.29	34.071	26.781	131.4	0.866	1.40	20.2	63.1	2.71	36.6	0.02	0.00	0.02	400	
2	438	6.00	5.96	34.100	26.846	125.4	0.914	1.07	15.4	70.1	2.87	38.4	0.02	0.00	0.02	438	
	500 ISL	5.64	5.60	34.158	26.937	117.3	0.990	0.69	9.8	79.5	3.04	40.3	0.02	0.00	0.02	500	
2	510	5.58	5.54	34.168	26.953	115.9	1.001	0.63	9.0	81.0	3.07	40.6	0.02	0.00	0.02	510	

RV DAVID STARR JORDANI										CALCOFI CRUISE 9401										STATION 77 100		
LATITUDE	LONGITUDE	DAY/MO/YR	CST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE							
33 24.0 N	124 19.5 W	04/02/94	1830 UTC	4468 m	340	15 kn	020 06 07	1	1018.7 mb	14.2 c	11.7 c	39m	01	5/8	CU							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS						
m	DEG C	DEG C			THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db						
	0 ISL	16.25	16.25	33.448	24.498	342.6	0.000	5.64	100.7	2.9	0.28	0.0	0.00	0.13	0.04	0						
2	1 A	16.25	16.25	33.448	24.498	342.6	0.003	5.64	100.7	2.9	0.28	0.0	0.00	0.13	0.04	1						
	10 ISL	16.25	16.25	33.447	24.498	342.9	0.034	5.63	100.5	2.8	0.27	0.0	0.00	0.13	0.04	10						
2	12	16.25	16.25	33.447	24.498	343.0	0.041	5.63	100.5	2.8	0.27	0.0	0.00	0.13	0.04	12						
	20 ISL	16.24	16.24	33.448	24.501	342.9	0.069	5.64	100.7	2.7	0.26	0.0	0.00	0.13	0.04	20						
2	23 A	16.24	16.24	33.449	24.502	342.9	0.079	5.64	100.7	2.7	0.26	0.0	0.00	0.13	0.04	23						
	30 ISL	16.20	16.20	33.445	24.508	342.6	0.103	5.64	100.6	2.7	0.26	0.0	0.00	0.13	0.04	30						
2	36	16.17	16.16	33.444	24.515	342.2	0.123	5.64	100.5	2.7	0.26	0.0	0.00	0.13	0.04	36						
	47 A	15.33	15.32	33.226	24.535	340.5	0.161	5.78	101.2	2.7	0.27	0.0	0.00	0.15	0.04	47						
2	50 ISL	15.31	15.30	33.224	24.538	340.3	0.171	5.78	101.1	2.7	0.27	0.0	0.00	0.16	0.04	50						
	60	15.19	15.18	33.209	24.553	339.2	0.205	5.78	100.9	2.7	0.27	0.0	0.00	0.18	0.06	60						
2	74 A	13.81	13.80	33.151	24.800	315.8	0.251	5.80	98.4	3.2	0.35	0.2	0.05	0.39	0.29	74						
	75 ISL	13.75	13.74	33.151	24.813	314.7	0.254	5.80	98.3	3.2	0.35	0.2	0.05	0.39	0.29	75						
2	82	13.56	13.55	33.157	24.897	306.9	0.276	5.76	96.8	3.4	0.37	0.5	0.06	0.37	0.29	82						
	92	12.73	12.72	33.185	25.043	293.1	0.306	5.67	94.1	3.8	0.42	1.3	0.02	0.19	0.28	92						
2	100 ISL	12.79	12.79	33.328	25.142	283.9	0.329	5.45	90.6	4.8	0.50	2.9	0.01	0.14	0.16	100						
	101 A	12.80	12.79	33.346	25.154	282.8	0.332	5.42	90.1	4.9	0.51	3.1	0.01	0.14	0.16	101						
2	116	12.35	12.33	33.528	25.383	261.4	0.373	4.97	82.0	7.4	0.76	7.2	0.01	0.09	0.07	116						
	125 ISL	11.64	11.62	33.512	25.504	249.9	0.396	4.78	77.6	9.4	0.94	9.8	0.01	0.06	0.05	125						
2	136 A	10.63	10.61	33.466	25.650	236.1	0.422	4.57	72.6	12.5	1.16	13.1	0.01	0.03	0.04	136						
	150 ISL	9.51	9.49	33.505	25.869	215.2	0.454	4.27	66.2	17.8	1.44	17.6	0.00	0.01	0.02	150						
2	163	8.69	8.67	33.576	26.054	197.6	0.481	4.02	61.2	22.7	1.66	21.1	0.00	0.00	0.01	163						
	193	8.09	8.07	33.749	26.281	176.4	0.537	3.67	55.2	28.8	1.83	24.2	0.01	0.00	0.01	193						
2	200 ISL	8.07	8.05	33.802	26.326	172.3	0.549	3.48	52.3	30.4	1.89	25.0	0.01			200						
	227	7.99	7.97	33.961	26.463	159.8	0.594	2.76	41.5	36.4	2.10	27.8	0.01			227						
2	250 ISL	7.83	7.81	34.011	26.526	154.2	0.630	2.47	37.0	40.0	2.20	29.3	0.01			250						
	268	7.67	7.64	34.022	26.558	151.4	0.658	2.34	34.9	42.5	2.26	30.2	0.01			268						
2	300 ISL	7.31	7.28	34.042	26.625	145.3	0.705	2.08	30.8	47.8	2.39	32.0	0.01			300						
	319	7.07	7.04	34.049	26.664	141.8	0.732	1.94	28.5	51.1	2.47	33.0	0.01			319						
2	379	6.35	6.32	34.074	26.781	131.1	0.814	1.40	20.3	62.7	2.72	36.5	0.00			379						
	400 ISL	6.16	6.12	34.087	26.816	128.0	0.841	1.22	17.6	66.6	2.80	37.5	0.00			400						
2	438	5.86	5.82	34.115	26.876	122.5	0.889	0.93	13.3	73.2	2.93	38.9	0.00			438						
	500 ISL	5.51	5.47	34.166	26.959	115.1	0.963	0.61	8.7	82.2	3.07	40.7	0.00			500						
2	512	5.44	5.40	34.176	26.976	113.6	0.976	0.55	7.8	83.9	3.10	41.0	0.00			512						

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN					CALCOFI CRUISE 9401										STATION		80	51
LATITUDE		LONGITUDE		DAY/MO/YR	CST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 27.2 N		120 31.3 W		02/02/94	2243	UTC	70 m	090	07 kn	180 01 05	2	1018.3 mb	14.3 c	10.3 c	10m	04	8/8	SC
CAST	DEPTH	TEMP	POT	TEMP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C		DEG C		THETA				mL/L	PCT	uM/L	uM/L	uN/L	uM/L	ug/L	ug/L	db
	0	ISL	13.84	13.84	33.274	24.887	305.5	0.000		6.12	104.0	3.7	0.39	0.2	0.02	2.83	0.66	0
2	1		13.84	13.84	33.274	24.887	305.5	0.003		6.12	104.0	3.7	0.39	0.2	0.02	2.83	0.66	1
	10	ISL	13.77	13.77	33.272	24.900	304.5	0.031		6.04	102.5	3.7	0.40	0.2	0.02	3.21	0.70	10
2	11		13.76	13.76	33.272	24.902	304.4	0.034		6.03	102.3	3.7	0.40	0.2	0.02	3.26	0.71	11
	20	ISL	13.75	13.75	33.272	24.905	304.4	0.061		5.98	101.4	3.7	0.39	0.2	0.02	3.27	0.76	20
2	21		13.75	13.75	33.272	24.905	304.4	0.064		5.98	101.4	3.7	0.39	0.2	0.02	3.27	0.77	21
	30		13.74	13.74	33.273	24.908	304.4	0.091		5.95	100.9	3.8	0.41	0.4	0.03	3.31	0.82	30
2	40		13.71	13.70	33.271	24.913	304.2	0.122		5.76	97.6	4.3	0.46	1.0	0.07	2.88	0.55	40
	50		13.32	13.31	33.287	25.004	295.7	0.152		5.27	88.6	6.7	0.66	4.0	0.15	1.08	0.41	50
2	60		12.78	12.77	33.319	25.136	283.4	0.181		4.96	82.4	8.9	0.84	6.9	0.13	0.71	0.38	60

RV DAVID STARR JORDAN										CALCOFI CRUISE 9401										STATION 80 55		
LATITUDE	LONGITUDE	DAY/MO/YR	CST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE							
34 18.3 N	120 48.2 W	03/02/94	0214 UTC	768 m	120	07 kn			1017.1 mb	13.8 c	10.5 c											
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS						
m	DEG C	DEG C			THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db						
	0 ISL	13.99	13.99	33.217	24.812	312.6	0.000	6.01	102.4	3.2	0.34	0.2	0.00	0.60	0.21	0						
2	2	13.99	13.99	33.217	24.812	312.7	0.006	6.01	102.4	3.2	0.34	0.2	0.00	0.60	0.21	2						
	10	13.99	13.99	33.220	24.815	312.7	0.031	6.03	102.7	3.1	0.35	0.2	0.00	0.59	0.23	10						
2	20 ISL	13.99	13.99	33.223	24.817	312.7	0.063	5.99	102.0	3.0	0.34	0.2	0.00	0.63	0.23	20						
	21	13.99	13.99	33.223	24.818	312.7	0.066	5.98	101.9	3.0	0.34	0.2	0.00	0.63	0.23	21						
2	30 ISL	13.89	13.89	33.228	24.842	310.6	0.094	5.88	100.0	3.4	0.38	0.8	0.07	0.64	0.25	30						
	31	13.87	13.87	33.229	24.847	310.2	0.097	5.87	99.7	3.5	0.39	0.9	0.08	0.64	0.25	31						
2	40	13.71	13.70	33.235	24.885	306.8	0.125	5.72	96.9	4.1	0.46	1.9	0.19	0.53	0.28	40						
	50	12.92	12.91	33.274	25.074	289.1	0.154	5.27	87.8	7.3	0.72	5.5	0.23	0.42	0.26	50						
2	60	12.49	12.48	33.328	25.199	277.3	0.183	4.95	81.8	9.4	0.89	8.0	0.21	0.31	0.26	60						
	69	11.68	11.67	33.361	25.378	260.5	0.207	4.54	73.7	11.3	1.09	11.4	0.04	0.15	0.14	69						
2	75 ISL	11.29	11.28	33.399	25.479	251.0	0.222	4.33	69.8	12.9	1.20	13.2	0.03	0.10	0.12	75						
	84	10.86	10.85	33.459	25.603	239.4	0.244	4.10	65.5	15.1	1.33	15.3	0.01	0.07	0.10	84						
2	100	10.41	10.40	33.524	25.732	227.4	0.282	3.88	61.4	17.3	1.46	17.3	0.01	0.04	0.08	100						
	119	9.94	9.93	33.641	25.904	211.4	0.323	3.46	54.2	21.9	1.67	20.1	0.04	0.03	0.08	119						
2	125 ISL	9.77	9.76	33.667	25.952	206.9	0.336	3.38	52.8	22.7	1.71	20.8	0.03	0.02	0.07	125						
	139	9.40	9.38	33.724	26.058	197.1	0.364	3.22	49.9	24.2	1.79	22.4	0.00	0.01	0.05	139						
2	150 ISL	9.24	9.22	33.783	26.130	190.4	0.385	3.06	47.2	26.0	1.86	23.5	0.00	0.01	0.05	150						
	170	9.04	9.02	33.884	26.241	180.2	0.423	2.81	43.2	29.5	1.98	25.3	0.00	0.01	0.04	170						
2	200	8.63	8.61	33.962	26.367	168.7	0.475	2.66	40.5	33.2	2.07	26.9	0.00</									

RV DAVID STARR JORDAN					CALCOFI CRUISE 9401					STATION 80 ' 60									
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLI	AMT	irr	PE				
34 8.8 M	121 9.0 W	03/02/94	0717 UTC	2168 m	190 06 kn			1017 .9 mb	14.0 c	11.4 c									
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS!			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	14.24	14.24	33.218	24.761	317.5	0.000	5.96	102.1	3.1	0.34	0.0	0.00	0.37	0.15	0			
2	2	14.24	14.24	33.218	24.761	317.6	0.006	5.96	102.1	3.1	0.34	0.0	0.00	0.37	0.15	2			
2	10	14.23	14.23	33.217	24.763	317.7	0.032	5.96	102.0	3.0	0.33	0.0	0.00	0.36	0.12	10			
2	20	14.23	14.23	33.221	24.766	317.6	0.064	5.94	101.7	2.9	0.33	0.0	0.00	0.41	0.17	20			
2	30	14.22	14.22	33.223	24.770	317.5	0.095	5.96	102.0	2.9	0.34	0.0	0.00	0.46	0.19	30			
2	39	14.21	14.20	33.229	24.777	317.1	0.124	5.94	101.6	2.9	0.35	0.0	0.01	0.55	0.26	39			
2	50	14.18	14.17	33.233	24.787	316.5	0.159	5.92	101.2	2.8	0.36	0.0	0.02	0.59	0.28	50			
2	60	14.15	14.14	33.238	24.797	315.8	0.190	5.90	100.8	2.8	0.37	0.1	0.03	0.58	0.32	60			
2	70	14.05	14.04	33.235	24.816	314.3	0.222	5.89	100.5	2.8	0.38	0.2	0.05	0.61	0.38	70			
2	75 ISL	13.88	13.87	33.230	24.847	311.4	0.237	5.83	99.1	3.3	0.41	0.6	0.12	0.51	0.36	75			
2	85	13.21	13.20	33.227	24.981	298.9	0.268	5.58	93.5	4.2	0.55	2.7	0.21	0.26	0.32	85			
2	99	11.39	11.38	33.285	25.373	261.7	0.307	4.89	78.9	9.3	0.96	9.8	0.02	0.09	0.14	99			
2	100 ISL	11.32	11.31	33.293	25.392	259.9	0.310	4.87	78.4	9.5	0.97	10.0	0.02	0.09	0.13	100			
2	120	10.39	10.38	33.461	25.687	232.1	0.359	4.62	73.0	13.2	1.19	13.5	0.01	0.03	0.04	121			
2	125 ISL	10.02	10.01	33.494	25.776	223.7	0.370	4.43	69.5	15.5	1.32	15.5	0.01	0.02	0.04	126			
2	140	9.01	8.99	33.587	26.013	201.2	0.402	3.88	59.5	22.2	1.67	21.1	0.01	0.01	0.03	141			
2	150 ISL	8.90	8.88	33.656	26.084	194.6	0.422	3.86	59.1	22.8	1.68	21.4	0.01	0.00	0.03	151			
2	168	8.70	8.68	33.712	26.160	187.8	0.456	3.81	58.1	23.9	1.69	21.8	0.01	0.00	0.02	169			
2	200	8.44	8.42	33.919	26.362	169.1	0.514	2.98	45.2	31.8	1.96	26.0	0.01	0.00	0.02	201			
2	228	8.46	8.44	33.979	26.407	165.4	0.560	2.66	40.4	34.5	2.08	27.1	0.01			229			
2	250 ISL	8.29	8.26	34.043	26.483	158.5	0.596	2.33	35.3	38.5	2.21	28.6	0.01			251			
2	269	8.09	8.06	34.094	26.553	152.1	0.625	2.06	31.0	42.3	2.32	30.0	0.01			271			
2	300 ISL	7.86	7.83	34.137	26.621	146.1	0.672	1.76	26.4	46.8	2.46	31.4	0.01			302			
2	317	7.70	7.67	34.145	26.651	143.5	0.694	1.64	24.5	49.1	2.52	32.0	0.01			319			
2	376	6.71	6.68	34.105	26.758	133.6	0.778	1.46	21.3	59.3	2.68	35.1	0.01			378			
2	400 ISL	6.46	6.42	34.114	26.798	129.9	0.819	1.28	18.6	63.4	2.77	36.2	0.01			403			
2	437	6.20	6.16	34.142	26.854	124.9	0.857	0.98	14.1	69.3	2.90	37.7	0.01			440			
2	500 ISL	5.93	5.89	34.203	26.937	117.7	0.933	0.64	9.2	76.7	3.05	39.3	0.00			503			
2	512	5.88	5.84	34.215	26.953	116.3	0.947	0.57	8.2	78.1	3.08	39.6	0.00			516			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 80				70	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 48.5 N		121 50.7 W		03/02/94	1320 UTC	3624 f	160	08 kn		5	1016 .3 mb	14.2 c	13.2 c			8/8			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	14.18	14.18	33.217	24.773	316.4	0.000	5.95	101.8	3.3	0.35	0.1	0.00	0.31	0.10		0		
2	1	14.18	14.18	33.217	24.773	316.4	0.003	5.95	101.8	3.3	0.35	0.1	0.00	0.31	0.10		1		
2	10	14.18	14.18	33.218	24.774	316.6	0.032	5.95	101.8	3.1	0.34	0.0	0.00	0.32	0.10		10		
2	20	14.14	14.14	33.216	24.781	316.2	0.063	5.95	101.7	2.9	0.34	0.0	0.00	0.31	0.11		20		
2	30	14.03	14.03	33.203	24.794	315.2	0.095	5.99	102.1	2.9	0.35	0.0	0.00	0.37	0.14		30		
2	40	13.07	13.06	33.198	24.985	297.3	0.125	5.54	92.6	4.7	0.57	2.9	0.08	0.64	0.51		40		
2	50	12.45	12.44	33.238	25.137	283.0	0.155	5.09	84.0	7.1	0.81	6.7	0.05	0.25	0.20		50		
2	60	11.18	11.17	33.202	25.345	263.3	0.182	4.93	79.1	9.8	1.03	10.2	0.03	0.15	0.20		60		
2	70	10.80	10.79	33.283	25.476	251.1	0.208	4.70	74.9	11.9	1.16	12.5	0.03	0.09	0.09		70		
2	75 ISL	10.51	10.50	33.306	25.544	244.7	0.220	4.61	73.0	13.1	1.24	13.8	0.03	0.07	0.08		75		
2	85	9.98	9.97	33.359	25.676	232.3	0.244	4.39	68.7	15.6	1.41	16.3	0.02	0.03	0.05		85		
2	100	9.71	9.70	33.523	25.849	216.1	0.277	5.88	60.4	19.3	1.58	19.1	0.02	0.02	0.05		100		
2	120	9.32	9.31	33.638	26.003	201.8	0.319	3.46	53.5	23.1	1.76	21.9	0.02	0.01	0.08		121		
2	125 ISL	9.18	9.17	33.660	26.043	198.1	0.329	3.45	53.1	23.9	1.78	22.3	0.02	0.01	0.07		126		
2	139	8.81	8.80	33.721	26.149	188.2	0.356	3.43	52.4	25.9	1.83	23.2	0.02	0.01	0.03		140		
2	150 ISL	8.76	8.74	33.786	26.208	182.9	0.377	3.32	50.7	27.3	1.87	23.9	0.02	0.01	0.03		151		
2	169	8.67	8.65	33.874	26.291	175.3	0.411	3.03	46.2	29.9	1.95	25.1	0.02	0.00	0.03		170		
2	199	8.65	8.63	34.030	26.417	164.0	0.462	2.37	36.2	35.6	2.15	27.5	0.02	0.00	0.04		200		
2	200 ISL	8.64	8.62	34.032	26.420	163.7	0.463	2.36	36.0	35.7	2.15	27.6	0.02				201		
2	229	8.22	8.20	34.071	26.515	155.0	0.509	2.19	33.1	39.8	2.27	29.2	0.02				230		
2	250 ISL	8.07	8.04	34.109	26.568	150.4	0.541	1.95	29.4	43.1	2.37	30.3	0.02				251		
2	269	7.95	7.92	34.136	26.607	147.0	0.570	1.74	26.1	46.0	2.46	31.2	0.02				271		
2	300 ISL	7.57	7.54	34.130	26.658	142.5	0.615	1.66	24.7	49.8	2.53	32.3	0.02				302		
2	318	7.34	7.31	34.121	26.684	140.2	0.640	1.64	24.3	52.0	2.56	32.9	0.02				320		
2	377	6.92	6.88	34.164	26.776	132.1	0.720	1.15	16.9	60.4	2.77	35.4	0.02				379		
2	400 ISL	6.59	6.55	34.141	26.802	129.6	0.750	1.11	16.2	64.5	2.82	36.6	0.02				403		
2	438	6.05	6.01	34.107	26.846	125.6	0.799	1.06	15.2	71.1	2.89	38.3	0.02				441		
2	500 ISL	5.73	5.69	34.174	26.939	117.3	0.874	0.70	10.0	78.7	3.04	39.6	0.02				503		
2	512	5.67	5.63	34.187	26.957	115.7	0.888	0.63	9.0	80.2	3.07	39.9	0.02				516		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 80		80	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 28.4 N	122 32.8 U	03/02/94	1904 UTC	4000 m	080	11 kn	290 04 14	6	1015.9 mb	13.6 c	12.4 c	31m	01	8/8	CU		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.01	15.01	33.176	24.565	336.2	0.000	5.79	100.7	3.3	0.32	0.1	0.00	0.15	0.04	0	
	2 A	15.01	15.01	33.176	24.565	336.3	0.007	5.79	100.7	3.3	0.32	0.1	0.00	0.15	0.04	2	
	10 ISL	15.01	15.01	33.182	24.570	336.1	0.034	5.79	100.7	3.2	0.32	0.1	0.00	0.14	0.04	10	
	18 A	15.00	15.00	33.190	24.578	335.5	0.060	5.80	100.8	3.0	0.31	0.0	0.00	0.14	0.04	18	
	20 ISL	14.99	14.99	33.188	24.579	335.5	0.067	5.80	100.8	3.0	0.31	0.0	0.00	0.14	0.04	20	
	28	14.93	14.93	33.178	24.584	335.2	0.094	5.80	100.7	3.0	0.31	0.0	0.00	0.15	0.05	28	
	30 ISL	14.92	14.92	33.177	24.586	335.1	0.101	5.80	100.7	3.0	0.31	0.0	0.00	0.16	0.05	30	
	38 A	14.90	14.89	33.175	24.589	335.1	0.128	5.82	101.0	3.0	0.31	0.0	0.00	0.18	0.06	38	
	49	14.87	14.86	33.173	24.594	334.9	0.164	5.82	100.9	3.0	0.31	0.0	0.00	0.17	0.05	49	
	50 ISL	14.86	14.85	33.173	24.596	334.7	0.168	5.82	100.9	3.0	0.31	0.0	0.00	0.17	0.05	50	
	58 A	14.80	14.79	33.173	24.609	333.7	0.194	5.82	100.8	2.9	0.31	0.0	0.00	0.17	0.05	58	
	69	14.08	14.07	33.132	24.730	322.4	0.231	5.86	99.9	3.1	0.38	0.2	0.09	0.44	0.26	69	
	75 ISL	13.83	13.82	33.154	24.799	316.0	0.250	5.77	97.9	3.4	0.43	0.8	0.15	0.36	0.24	75	
	79 A	13.62	13.61	33.177	24.859	310.3	0.262	5.67	95.8	3.8	0.48	1.6	0.17	0.28	0.20	79	
	96	11.31	11.30	33.286	25.388	260.1	0.311	4.79	77.1	10.1	1.04	10.7	0.02	0.11	0.12	96	
	100 ISL	10.97	10.96	33.316	25.472	252.2	0.321	4.66	74.5	11.5	1.13	12.3	0.02	0.09	0.10	100	
	111 A	10.33	10.32	33.408	25.656	234.9	0.348	4.33	68.3	15.1	1.36	15.8	0.02	0.04	0.05	112	
	125 ISL	9.93	9.92	33.552	25.836	218.0	0.379	3.70	57.9	19.5	1.64	19.3	0.02	0.02	0.04	126	
	126	9.91	9.90	33.562	25.847	216.9	0.382	3.65	57.1	19.8	1.66	19.5	0.02	0.02	0.04	127	
	144	9.67	9.65	33.705	25.999	202.8	0.419	3.14	48.9	23.6	1.80	22.2	0.02	0.01	0.03	145	
	150 ISL	9.60	9.58	33.746	26.042	198.8	0.431	3.02	47.0	24.7	1.85	22.9	0.02	0.01	0.03	151	
	167	9.42	9.40	33.844	26.149	189.0	0.464	2.74	42.5	27.4	1.96	24.5	0.02	0.00	0.02	168	
	199	9.27	9.25	33.964	26.268	178.4	0.523	2.39	37.0	30.7	2.09	26.1	0.02	0.00	0.02	200	
	200 ISL	9.27	9.25	33.967	26.270	178.2	0.525	2.38	36.8	30.8	2.09	26.1	0.02			201	
	227	9.14	9.12	34.041	26.349	171.2	0.572	2.15	33.2	33.3	2.17	27.4	0.01			228	
	250 ISL	9.00	8.97	34.091	26.411	165.7	0.611	1.97	30.3	35.6	2.25	28.3	0.01			251	
	267	8.89	8.86	34.121	26.452	162.1	0.639	1.85	28.4	37.3	2.31	28.9	0.02			269	
	300 ISL	8.68	8.65	34.167	26.521	156.1	0.691	1.62	24.7	40.7	2.42	30.0	0.02			302	
	317	8.55	8.52	34.183	26.554	153.2	0.718	1.51	23.0	42.6	2.47	30.6	0.02			319	
	376	7.92	7.88	34.202	26.665	143.4	0.805	1.23	18.5	50.4	2.63	32.8	0.01			378	
	400 ISL	7.69	7.65	34.207	26.703	140.1	0.839	1.14	17.0	53.0	2.68	33.6	0.01			403	
	436	7.36	7.32	34.211	26.753	135.6	0.889	1.02	15.1	57.0	2.76	34.7	0.01			439	
	500 ISL	6.69	6.64	34.215	26.849	126.9	0.973	0.77	11.2	66.6	2.92	37.0	0.01			503	
	510	6.59	6.54	34.216	26.863	125.6	0.985	0.73	10.6	68.1	2.94	37.4	0.01			513	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 80		90	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 8.6 N	123 13.4 W	04/02/94	0157 UTC	4233 n	120	12 kn	120 03 04	1	1009.5 mb	15.0 c	14.7 c			7/8	SC		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.12	16.12	33.407	24.496	342.7	0.000	5.68	101.1	2.9	0.30	0.0	0.00	0.16	0.04	0	
	2	16.12	16.12	33.407	24.496	342.8	0.007	5.68	101.1	2.9	0.30	0.0	0.00	0.16	0.04	2	
	10 ISL	16.12	16.12	33.406	24.496	343.1	0.034	5.69	101.3	2.9	0.29	0.0	0.00	0.16	0.04	10	
	16	16.12	16.12	33.406	24.496	343.3	0.055	5.70	101.5	2.9	0.29	0.0	0.00	0.16	0.04	16	
	20 ISL	16.11	16.11	33.406	24.498	343.2	0.069	5.68	101.1	2.9	0.29	0.0	0.00	0.16	0.04	20	
	30	16.10	16.10	33.406	24.501	343.3	0.103	5.66	100.7	2.9	0.29	0.0	0.00	0.16	0.05	30	
	46	15.03	15.02	33.235	24.607	333.6	0.157	5.82	101.3	2.9	0.32	0.0	0.00	0.22	0.06	46	
	50 ISL	14.65	14.64	33.178	24.645	330.0	0.170	5.88	101.5	3.0	0.33	0.0	0.00	0.27	0.09	50	
	55	14.26	14.25	33.123	24.685	326.3	0.187	5.94	101.7	3.1	0.35	0.0	0.00	0.33	0.12	55	
	66	14.23	14.22	33.141	24.706	324.7	0.223	5.92	101.3	3.1	0.36	0.0	0.00	0.37	0.17	66	
	75	14.06	14.05	33.148	24.747	321.0	0.252	5.89	100.4	3.2	0.38	0.0	0.03	0.30	0.16	75	
	84	13.36	13.35	33.187	24.920	304.7	0.280	5.75	96.6	3.5	0.40	0.7	0.10	0.27	0.22	84	
	97	12.83	12.82	33.185	25.024	295.1	0.319	5.55	92.3	4.6	0.53	2.7	0.03	0.20	0.18	97	
	100 ISL	12.67	12.66	33.191	25.059	291.7	0.328	5.52	91.5	4.7	0.54	3.0	0.02	0.17	0.17	100	
	109	12.10	12.09	33.224	25.194	279.0	0.353	5.36	87.8	5.8	0.64	4.7	0.01	0.10	0.13	109	
	124	10.90	10.89	33.329	25.495	250.5	0.393	4.59	73.3	12.3	1.18	13.1	0.01	0.07	0.09	125	
	125 ISL	10.85	10.83	33.332	25.506	249.5	0.395	4.57	72.9	12.5	1.19	13.3	0.01	0.07	0.09	126	
	144	10.22	10.20	33.377	25.651	236.0	0.442	4.41	69.4	14.8	1.33	15.6	0.00	0.04	0.06	145	
	150 ISL	10.02	10.00	33.419	25.718	229.8	0.456	4.27	66.9	16.2	1.40	16.8	0.00	0.03	0.05	151	
	170	9.45	9.43	33.593	25.948	208.1	0.499	3.70	57.3	21.6	1.67	21.0	0.00	0.01	0.03	171	
	200 ISL	8.99	8.97	33.855	26.227	182.1	0.558	2.86	43.9	29.0	1.97	25.3	0.00	0.00	0.03	201	
	201	8.98	8.96	33.863	26.235	181.4	0.560	2.84	43.6	29.2	1.98	25.4	0.00	0.00	0.03	202	
	229	8.65	8.63	33.982	26.380	168.1	0.609	2.50	38.1	34.0	2.11	27.4	0.00			230	
	250 ISL	8.40	8.37	34.024	26.451	161.6	0.643	2.44	37.0	36.4	2.16	28.2	0.00			251	
	269	8.17	8.14	34.047	26.504	156.8	0.673	2.40	36.2	38.6	2.21	28.9	0.00			270	
	300 ISL	7.83	7.80	34.096	26.594	148.7	0.721	2.02	30.3	44.7	2.37	30.9	0.00			302	
	319	7.64	7.61	34.121	26.641	144.4	0.749	1.75	26.1	48.5	2.48	32.2	0.00			321	
	377	7.20	7.16	34.155	26.731	136.6	0.830	1.34	19.8	55.9	2.67	34.4	0.00			379	
	400 ISL	7.04	7.00	34.165	26.761	134.0	0.861	1.20	17.7	58.8	2.74	35.2	0.00			402	
	436	6.72	6.68	34.168	26.807	129.9	0.909	1.02	14.9	64.0	2.83	36.5	0.00			439	
	500 ISL	5.65	5.61	34.120	26.906	120.3	0.989	0.92	13.1	76.7	2.97	39.6	0.00			503	
	510	5.48	5.44	34.114	26.922	118.7	1.001	0.90	12.8	78.7	2.99	40.1	0.00			513	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION		80 100		
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
32 50.0 N	123 54.4 W	04/02/94	0930 UTC	4375 m	320	26 kn			1013.9 mb	14.8 C	13.3 C							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	!RESS		
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	16.25	16.25	33.435	24.488	343.5	0.000	5.66	101.0	3.6	0.29	0.1	0.00	0.15	0.04	0		
2	2	16.25	16.25	33.435	24.488	343.6	0.007	5.66	101.0	3.6	0.29	0.1	0.00	0.15	0.04	2		
	10 ISL	16.25	16.25	33.434	24.488	343.9	0.034	5.65	100.9	3.3	0.28	0.1	0.00	0.14	0.04	10		
2	15	16.25	16.25	33.433	24.487	344.1	0.052	5.65	100.9	3.0	0.28	0.1	0.00	0.14	0.04	15		
	20 ISL	16.25	16.25	33.429	24.484	344.5	0.069	5.65	100.9	3.0	0.28	0.1	0.00	0.14	0.04	20		
2	30	16.24	16.24	33.423	24.482	345.1	0.103	5.66	101.0	3.0	0.28	0.1	0.00	0.15	0.05	30		
2	45	16.24	16.23	33.427	24.486	345.2	0.155	5.65	100.8	2.9	0.27	0.0	0.00	0.15	0.05	45		
	50 ISL	16.24	16.23	33.427	24.486	345.3	0.172	5.65	100.8	2.9	0.27	0.0	0.00	0.15	0.05	50		
2	61	16.24	16.23	33.427	24.486	345.6	0.210	5.66	101.0	2.8	0.27	0.0	0.00	0.14	0.04	61		
2	74	16.22	16.21	33.423	24.488	345.9	0.255	5.66	101.0	2.7	0.27	0.0	0.00	0.14	0.05	74		
	75 ISL	16.22	16.21	33.423	24.488	345.9	0.259	5.66	101.0	2.7	0.27	0.0	0.00	0.14	0.05	75		
2	84	16.20	16.19	33.419	24.490	346.0	0.290	5.65	100.7	2.7	0.27	0.0	0.00	0.15	0.04	84		
2	94	16.20	16.19	33.435	24.503	345.1	0.324	5.65	100.7	2.6	0.27	0.0	0.00	0.20	0.08	94		
	100 ISL	15.73	15.71	33.483	24.646	331.6	0.345	5.61	99.1	2.9	0.30	0.1	0.08	0.23	0.16	100		
2	105	15.25	15.23	33.524	24.784	318.6	0.361	5.57	97.5	3.2	0.34	0.3	0.13	0.25	0.22	105		
2	114	14.59	14.57	33.537	24.937	304.2	0.389	5.51	95.2	3.6	0.39	1.1	0.07	0.21	0.20	114		
	125 ISL	13.08	13.06	33.381	25.127	286.1	0.421	5.22	87.3	5.8	0.64	4.5	0.02	0.16	0.16	126		
2	126	12.94	12.92	33.367	25.144	284.5	0.424	5.19	86.6	6.0	0.67	4.9	0.02	0.16	0.16	127		
2	141	12.02	12.00	33.410	25.354	264.6	0.465	4.90	80.2	8.3	0.88	8.5	0.01	0.09	0.11	142		
	150 ISL	11.36	11.34	33.434	25.495	251.3	0.489	4.74	76.5	10.3	1.02	10.8	0.01	0.06	0.09	151		
2	165	10.31	10.29	33.482	25.718	230.2	0.525	4.49	70.8	14.0	1.26	14.6	0.00	0.03	0.06	166		
2	195	8.99	8.97	33.598	26.026	201.1	0.589	3.94	60.4	21.6	1.63	20.5	0.00	0.01	0.03	196		
	200 ISL	8.87	8.85	33.629	26.069	197.0	0.599	3.95	60.4	22.2	1.64	20.8	0.00	0.01	0.03	201		
2	230	8.41	8.39	33.817	26.287	176.7	0.656	4.00	60.6	25.9	1.67	21.9	0.00	0.00	0.02	231		
	250 ISL	8.18	8.15	33.913	26.397	166.5	0.690	3.57	53.8	30.8	1.83	24.3	0.00			251		
2	267	8.01	7.98	33.974	26.471	159.8	0.718	3.13	47.0	35.2	1.99	26.6	0.00			268		
	300 ISL	7.61	7.58	34.015	26.562	151.6	0.769	2.73	40.7	41.4	2.16	29.1	0.00			302		
2	317	7.39	7.36	34.019	26.596	148.4	0.794	2.57	38.1	44.4	2.24	30.2	0.00			319		
2	378	6.56	6.53	34.058	26.741	135.1	0.881	1.76	25.6	58.3	2.59	34.9	0.00			380		
	400 ISL	6.32	6.28	34.071	26.782	131.2	0.910	1.53	22.1	62.8	2.70	36.2	0.00			402		
2	440	5.97	5.93	34.097	26.848	125.3	0.962	1.16	16.6	70.1	2.86	38.2	0.00			443		
	500 ISL	5.73	5.69	34.156	26.925	118.6	1.035	0.74	10.6	77.8	3.02	39.8	0.00			503		
2	510	5.69	5.65	34.166	26.938	117.5	1.046	0.67	9.5	79.1	3.05	40.1	0.00			513		

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION		82 4 7		
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
34 17.9 N	120 2.4 W	02/02/94	1822 UTC	578 ra	130	13 kn	110 03 05	2	1020.2 mb	14.5 C	10.7 C	14m 04		8/8	AC			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	13.81	13.81	33.281	24.899	304.4	0.000	5.97	101.4	3.7	0.38	0.4	0.02	0.94	0.38	0		
2	2 A,C	13.81	13.81	33.281	24.899	304.5	0.006	5.97	101.4	3.7	0.38	0.4	0.02	0.94	0.38	2		
2	9 C	13.81	13.81	33.279	24.897	304.8	0.027	5.97	101.4	3.7	0.37	0.4	0.02	0.87	0.36	9		
	10 ISL	13.81	13.81	33.279	24.897	304.8	0.030	5.97	101.4	3.7	0.37	0.4	0.02	0.87	0.36	10		
2	18 C	13.80	13.80	33.277	24.898	305.0	0.055	5.95	101.0	3.6	0.41	0.4	0.02	0.85	0.36	18		
	20 ISL	13.80	13.80	33.278	24.899	304.9	0.061	5.95	101.0	3.5	0.40	0.4	0.02	0.85	0.37	20		
2	27 C	13.80	13.80	33.280	24.901	305.0	0.082	5.95	101.0	3.4	0.37	0.4	0.02	0.85	0.38	27		
	30 ISL	13.77	13.77	33.281	24.908	304.4	0.091	5.93	100.6	3.5	0.38	0.5	0.02	0.84	0.37	30		
2	37 C	13.71	13.70	33.283	24.922	303.2	0.113	5.88	99.6	3.6	0.40	0.7	0.03	0.80	0.36	37		
2	50 c	12.55	12.54	33.336	25.194	277.6	0.150	4.77	78.9	9.2	0.92	8.5	0.13	0.50	0.41	50		
2	60	11.60	11.59	33.391	25.416	256.7	0.177	4.48	72.7	11.4	1.12	11.3	0.06	0.32	0.28	60		
2	70	10.67	10.66	33.491	25.661	233.5	0.202						0.03	0.11	0.15	70		
	75 ISL	10.42	10.41	33.525	25.731	226.9	0.213	3.99	63.1	17.2	1.47	17.1	0.02	0.09	0.11	75		
2	85	10.13	10.12	33.579	25.823	218.4	0.235	3.70	58.2	19.1	1.57	18.7	0.01	0.04	0.08	85		
2	99	9.78	9.77	33.656	25.942	207.3	0.265	3.44	53.7	21.6	1.68	20.7	0.01	0.03	0.07	100		
	100 ISL	9.76	9.75	33.661	25.949	206.7	0.267	3.43	53.5	21.8	1.69	20.7	0.01	0.03	0.07	101		
2	119	9.51	9.50	33.740	26.052	197.2	0.306	3.22	50.0	24.3	1.80	22.4	0.01	0.02	0.07	120		
	125 ISL	9.46	9.45	33.758	26.074	195.2	0.317	3.17	49.2	24.9	1.82	22.7	0.01	0.02	0.07	126		
2	140	9.35	9.33	33.801	26.126	190.6	0.346	3.04	47.0	26.3	1.87	23.5	0.01	0.01	0.06	141		
	150 ISL	9.29	9.27	33.839	26.166	187.0	0.365	2.89	44.7	27.6	1.92	24.2	0.01	0.01	0.06	151		
2	169	9.18	9.16	33.912	26.241	180.3	0.400	2.59	40.0	30.4	2.03	25.7	0.01	0.01	0.06	170		
2	198	8.93	8.91	33.999	26.349	170.5	0.451	2.31	35.5	34.2	2.15	27.3	0.00	0.01	0.06	199		
	200 ISL	8.92	8.90	34.005	26.355	170.0	0.454	2.28	35.0	34.5	2.16	27.4	0.00			201		
2	228	8.72	8.70	34.076	26.443	162.2	0.501	1.84	28.1	39.7	2.33	29.1	0.00			229		
	250 ISL	8.54	8.51	34.112	26.499	157.2	0.536	1.52	23.1	44.0	2.46	30.4	0.00			251		
2	267	8.39	8.36	34.132	26.538	153.7	0.563	1.35	20.2	47.0	2.55	31.3	0.00			269		
	300 ISL	8.12	8.09	34.155	26.597	148.6	0.612	1.2										

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE:		
34 13.5 N	119 24.6 W	02/02/94	1149	UTC	30 m	080	10 kn			1020.5 mb	13.9 C	7.7 C						
CA:ST	DEPTH	TEMP	POT	TEMP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C			THETA				in l / l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db
	0 ISL	14.14	14.14	33.281	24.830	310.9	0.000	5.96		101.9	2.4	0.38	0.2	0.01	1.91	0.29		0
2	2	14.14	14.14	33.281	24.831	311.0	0.006	5.96		101.9	2.4	0.38	0.2	0.01	1.91	0.29		2
2	5	14.16	14.16	33.281	24.826	311.4	0.016	5.97		102.1	2.2	0.39	0.2	0.01	1.99	0.33		5
2	10	14.16	14.16	33.281	24.827	311.6	0.031	5.97		102.1	2.2	0.38	0.2	0.01	1.83	0.30		10
2	15	14.17	14.17	33.281	24.825	311.9	0.047	5.98		102.3	2.2	0.40	0.2	0.01	1.83	0.33		15
2	20	14.16	14.16	33.281	24.827	311.8	0.062	5.96		101.9	2.2	0.38	0.2	0.01	1.82	0.31		20
2	25	14.12	14.12	33.282	24.836	311.1	0.078	5.96		101.8	2.3	0.39	0.2	0.01	2.03	0.33		25

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 83 42

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD		AMT		TYPE	
34 10.7 N		119 30.5 W		02/02/94		0941 UTC		139 m		040 08 kn						1021.8 mb		14.1 C		10.9 C									
CA	ST	DEPTH	TEMP	POT	TEMP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS										
		m	DEG C	DEG C			THETA				ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db										
		0	ISL	14.16	14.16	33.282	24.827	311.2	0.000		5.81	99.4	3.4	0.42	1.0	0.03	1.13	0.29											
2		2		14.16	14.16	33.282	24.827	311.3	0.006		5.81	99.4	3.4	0.42	1.0	0.03	1.13	0.29											
2		10		14.16	14.16	33.282	24.827	311.5	0.031		5.81	99.4	3.4	0.41	1.0	0.03	1.15	0.24											
2		20		14.16	14.16	33.283	24.828	311.7	0.062		5.81	99.4	3.4	0.41	1.1	0.03	1.10	0.25											
2		30		14.16	14.16	33.284	24.830	311.9	0.093		5.81	99.4	3.4	0.43	1.1	0.03	1.13	0.29											
2		40		14.16	14.15				0.125		5.80	99.2	3.4	0.42	1.1	0.03	1.09	0.31											
2		50		14.03	14.02	33.281	24.855	310.0	0.156		5.72	97.5	3.7	0.46	1.8	0.04	0.94	0.30											
2		60		13.95	13.94	33.281	24.872	308.7	0.187		5.66	96.4	4.0	0.48	2.1	0.05	0.86	0.27											
2		70		13.85	13.84	33.281	24.893	307.0	0.218		5.60	95.1	4.3	0.51	2.5	0.06	0.75	0.23											
2		75	ISL	12.70	12.69	33.333	25.163	281.2	0.232		5.00	83.0	8.3	0.84	7.5	0.05	0.44	0.20											
2		80		11.40	11.39	33.415	25.472	251.8	0.246		4.34	70.1	12.9	1.20	13.1	0.04	0.12	0.16											
2		94		10.03	10.02	33.579	25.840	217.0	0.278		3.73	58.5	19.3	1.55	18.7	0.03	0.05	0.10											
2		100	ISL	9.75	9.74	33.648	25.940	207.5	0.291		3.52	54.9	21.5	1.66	20.5	0.02	0.03	0.07											
2		108		9.56	9.55	33.720	26.028	199.3	0.307		3.31	51.4	23.6	1.76	22.1	0.01	0.02	0.05											
2		124		9.49	9.48	33.754	26.066	196.0	0.339		3.19	49.5	24.7	1.81	22.6	0.01	0.02	0.06											

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 83 51

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 52.5 K		120 7.8 W		02/02/94	0227 UTC	101 m	090	18 kn			1022.3 mb	15.2 C	9.8 C				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	14.33	14.33	33.283	24.792	314.6	0.000	5.88	100.9	3.0	0.38	0.6	0.02	0.93	0.24	0	
2	2	14.33	14.33	33.283	24.792	314.6	0.006	5.88	100.9	3.0	0.38	0.6	0.02	0.93	0.24	2	
2	10	14.34	14.34	33.282	24.790	315.1	0.031	5.88	100.9	2.7	0.38	0.5	0.02	0.90	0.23	10	
2	19	14.35	14.35	33.283	24.789	315.4	0.060	5.88	100.9	2.7	0.37	0.5	0.02	0.99	0.21	19	
2	20 ISL	14.35	14.35	33.283	24.789	315.5	0.063	5.88	100.9	2.7	0.37	0.5	0.02	0.99	0.21	20	
2	29	14.36	14.36	33.282	24.786	316.0	0.091	5.87	100.8	2.7	0.38	0.5	0.02	0.97	0.22	29	
2	30 ISL	14.36	14.36	33.282	24.786	316.0	0.095	5.87	100.8	2.7	0.38	0.5	0.02	0.98	0.23	30	
2	39	14.34	14.33	33.284	24.792	315.7	0.123	5.88	100.9	2.7	0.38	0.6	0.02	1.03	0.30	39	
2	50	13.76	13.75	33.307	24.931	302.8	0.157	5.64	95.7	4.3	0.51	2.4	0.03	1.01	0.25	50	
2	60	12.13	12.12	33.388	25.315	266.3	0.185	4.79	78.6	10.3	0.97	9.6	0.09	0.40	0.20	60	
2	69	11.07	11.06	33.500	25.597	239.6	0.208	4.16	66.7	15.7	1.34	15.5	0.06	0.14	0.13	69	
2	75 ISL	10.46	10.45	33.554	25.746	225.5	0.222	3.90	61.8	18.3	1.49	17.8	0.05	0.10	0.10	75	
2	80	10.08	10.07	33.589	25.839	216.8	0.233	3.76	59.1	19.9	1.57	19.0	0.04	0.07	0.09	80	
2	90	9.82	9.81	33.633	25.917	209.5	0.255	3.63	56.7	21.6	1.65	20.1	0.04	0.05	0.08	90	

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 45.4 N	120 24.8 W	01/02/94	2149 UTC	1027 m	070	19 kn	110 05 05	2	1023.5 mb	15.2 c	10.9 c	14m 03		8/8	CS	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	14.29	14.29	33.281	24.799	313.9	0.000	5.91	101.3	4.3	0.38	0.4	0.01	0.74	0.22	0
2	2	14.29	14.29	33.281	24.799	313.9	0.006	5.91	101.3	4.3	0.38	0.4	0.01	0.74	0.22	2
2	10	14.29	14.29	33.280	24.799	314.2	0.031	5.91	101.3	4.1	0.38	0.3	0.01	0.74	0.21	10
2	20	14.29	14.29	33.279	24.798	314.6	0.063	5.90	101.2	4.1	0.38	0.3	0.01	0.78	0.23	20
2	30	14.25	14.25	33.280	24.808	314.0	0.094	5.89	100.9	4.1	0.38	0.5	0.02	0.76	0.22	30
2	40	12.36	12.35	33.308	25.208	276.0	0.124	5.10	84.0	8.4	0.81	6.3	0.17	0.63	0.35	40
2	50	12.01	12.00	33.343	25.302	267.3	0.151	4.78	78.2	10.7	0.99	9.7	0.14	0.34	0.28	50
2	60	11.68	11.67	33.367	25.382	259.8	0.177	4.62	75.0	12.2	1.08	11.3	0.12	0.27	0.22	60
2	70	10.68	10.67	33.454	25.630	236.4	0.202	4.16	66.2	16.3	1.37	15.5	0.05	0.14	0.14	70
2	75 ISL	10.46	10.45	33.479	25.688	231.0	0.214	4.06	64.3	17.2	1.43	16.4	0.04	0.10	0.11	75
2	84	10.20	10.19	33.529	25.772	223.2	0.234	3.90	61.4	18.7	1.50	17.7	0.03	0.06	0.08	84
2	100	9.40	9.39	33.730	26.062	195.9	0.268	3.28	50.8	25.0	1.79	22.4	0.01	0.01	0.06	101
2	119	9.31	9.30	33.770	26.108	191.9	0.305	3.18	49.2	26.1	1.83	23.1	0.02	0.01	0.06	120
2	125 ISL	9.27	9.26	33.795	26.134	189.5	0.316	3.11	48.0	26.8	1.86	23.5	0.02	0.01	0.06	126
2	140	9.14	9.12	33.866	26.211	182.5	0.344	2.90	44.7	28.9	1.94	24.5	0.01	0.01	0.06	141
2	150 ISL	9.05	9.03	33.911	26.260	178.0	0.362	2.79	42.9	30.3	1.99	25.2	0.01	0.01	0.05	151
2	169	8.89	8.87	33.987	26.345	170.3	0.395	2.58	39.6	33.0	2.07	26.6	0.01	0.01	0.04	170
2	198	8.65	8.63	34.068	26.447	161.1	0.443	2.23	34.0	37.2	2.20	28.2	0.00	0.00	0.04	199
2	200 ISL	8.63	8.61	34.072	26.453	160.6	0.446	2.21	33.7	37.5	2.21	28.3	0.00			201
2	228	8.43	8.41	34.116	26.519	154.8	0.490	1.98	30.1	40.9	2.30	29.4	0.00			229
2	250 ISL	8.31	8.28	34.134	26.551	152.1	0.524	1.86	28.2	42.6	2.35	30.0	0.00			251
2	268	8.22	8.19	34.146	26.575	150.2	0.551	1.77	26.8	43.9	2.40	30.5	0.00			270
2	300 ISL	8.02	7.99	34.179	26.631	145.3	0.599	1.49	22.4	47.9	2.52	31.9	0.00			302
2	316	7.92	7.89	34.195	26.658	142.9	0.622	1.35	20.3	50.0	2.58	32.6	0.00			318
2	377	7.55	7.51	34.224	26.736	136.4	0.707	1.05	15.6	56.3	2.72	34.3	0.00			379
2	400 ISL	7.25	7.21	34.232	26.785	131.9	0.738	0.91	13.5	60.4	2.80	35.4	0.00			403
2	436	6.76	6.72	34.245	26.862	124.7	0.784	0.70	10.2	67.2	2.92	37.1	0.00			439
2	500 ISL	6.23	6.19	34.269	26.952	116.7	0.861	0.50	7.2	76.1	3.06	39.1	0.00			503
2	511	6.14	6.09	34.274	26.967	115.3	0.874	0.47	6.8	77.6	3.08	39.4	0.00			511

RV DAVID STARR JORDAN										CALCOFI CRUISE 9401										STATION 83		60	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE								
33 35.9 N	120 46.0 W	01/02/94	1815 UTC	1407 m	110	18 kn	100 05 05	2	1025.0 mb	14.8 c	11.5 c	18m 03		8/8	cs								
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS							
m		DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db							
	0 ISL	14.29	14.29	33.187	24.727	320.8	0.000	15.94	101.8	3.3	0.36	0.1	0.00	0.29	0.10	0							
	1 A	14.29	14.29	33.187	24.727	320.8	0.003	5.94	101.8	3.3	0.36	0.1	0.00	0.29	0.10	1							
	10 ISL	14.29	14.29	33.188	24.728	321.0	0.032	5.93	101.6	3.2	0.35	0.1	0.00	0.29	0.10	10							
	11 A	14.29	14.29	33.188	24.728	321.0	0.035	5.93	101.6	3.2	0.35	0.1	0.00	0.29	0.10	11							
	20 ISL	14.25	14.25	33.197	24.743	319.8	0.064	5.95	101.9	3.1	0.35	0.1	0.00	0.45	0.18	20							
	22 A	14.23	14.23	33.201	24.751	319.1	0.071	5.96	102.0	3.0	0.35	0.1	0.00	0.49	0.22	22							
	30 ISL	14.12	14.12	33.244	24.807	314.0	0.096	5.04	103.2	2.3	0.34	0.1	0.00	1.59	0.50	30							
	2 34 A	14.01	14.01	33.260	24.842	310.7	0.108	6.08	103.6	2.2	0.34	0.1	0.00	2.05	0.64	34							
	2 41	13.63	13.62	33.244	24.908	304.7	0.130	5.80	98.1	3.2	0.44	1.0	0.11	1.83	0.71	41							
	2 46 A	13.19	13.18	33.228	24.984	297.5	0.145	5.57	93.3	4.2	0.53	2.4	0.11	0.97	0.57	46							
	50 ISL	12.92	12.91	33.218	25.030	293.2	0.157	5.45	90.8	4.8	0.60	3.4	0.09	0.60	0.48	50							
	2 55	12.59	12.58	33.215	25.092	287.4	0.171	5.32	88.0	5.6	0.68	4.8	0.06	0.38	0.39	55							
	2 64 A	11.87	11.86	33.249	25.256	272.0	0.196	5.01	81.6	8.0	0.87	7.9	0.03	0.29	0.20	64							
	2 75	11.29	11.28	33.305	25.406	258.0	0.226	4.73	76.2	10.4	1.06	11.0	0.02	0.22	0.24	75							
	2 84	10.69	10.68	33.407	25.592	240.4	0.248	4.32	68.7	13.9	1.29	14.6	0.02	0.11	0.11	84							
	2 99	9.85	9.84	33.486	25.797	221.1	0.283	4.07	63.6	17.6	1.48	18.0	0.02	0.04	0.07	99							
	100 ISL	9.82	9.81	33.494	25.808	220.0	0.285	4.04	63.1	17.9	1.49	18.2	0.02	0.04	0.07	100							
	120	9.47	9.46	33.643	25.983	203.8	0.327	3.44	53.3	22.8	1.73	21.7	0.02	0.03	0.06	121							
	125 ISL	9.34	9.33	33.666	26.022	200.2	0.337	3.38	52.3	23.6	1.77	22.3	0.02	0.02	0.05	126							
	2 138	8.99	8.98	33.710	26.112	191.8	0.363	3.30	50.6	25.4	1.83	23.5	0.02	0.01	0.04	139							
	150 ISL	8.71	8.69	33.738	26.178	185.7	0.385	3.30	50.3	26.9	1.87	24.2	0.02	0.00	0.03	151							
	2 168	8.37	8.35	33.781	26.264	177.7	0.418	3.31	50.1	29.2	1.91	25.1	0.02	0.00	0.03	169							
	2 197	8.06	8.04	33.902	26.406	164.7	0.468	3.09	46.5	33.4	2.00	26.6	0.02	0.00	0.02	198							
	200 ISL	8.03	8.01	33.908	26.415	163.9	0.473	3.15	47.3	33.4	1.98	26.4	0.02			201							
	2 229	7.71	7.69	33.944	26.490	157.1	0.519	3.74	55.8	33.6	1.82	24.8	0.01			230							
	250 ISL	7.51	7.49	33.963	26.534	153.2	0.552	3.48	51.7	37.0	1.92	26.3	0.01			251							
	2 268	7.32	7.29	33.976	26.572	149.9	0.579	3.07	45.4	41.1	2.08	28.4	0.01			270							
	300 ISL	6.87	6.84	34.002	26.654	142.3	0.626	2.49	36.5	49.3	2.34	31.5	0.01			302							
	2 319	6.61	6.58	34.018	26.702	137.9	0.652	2.17	31.6	54.2	2.49	33.2	0.01			321							
	2 375	6.10	6.07	34.061	26.802	128.8	0.727	1.43	20.6	65.5	2.73	37.0	0.01			377							
	400 ISL	6.01	5.98	34.082	26.831	126.4	0.759	1.21	17.4	68.0	2.80	37.7	0.01			403							
	2 439	5.95	5.91	34.118	26.867	123.5	0.808	0.96	13.8	72.1	2.91	38.7	0.01			442							
	500 ISL	5.83	5.79	34.186	26.936	117.6	0.881	0.65	9.3							503							
	2 513	5.81	5.77	34.201	26.951	116.4	0.897	0.59	8.4	72.0	2.91	38.7	0.01			517							

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN										CALCOFI CRUISE 9401										STATION 83		70	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE								
33 14.7 N	121 26.5 W	01/02/94	0907 UTC	3804 m	080	06 kn			1024.8 mb	14.6 c	12.8 c												
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS							
m		DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db							
	0 ISL	14.71	14.71	33.217	24.661	327.1	0.000	5.88	101.7	3.0	0.33	0.0	0.00	0.21	0.06	0							
	2	14.71	14.71	33.217	24.661	327.1	0.007	5.88	101.7	3.0	0.33	0.0	0.00	0.21	0.06	2							
	10 ISL	14.70	14.70	33.216	24.662	327.2	0.033	5.89	101.8	2.9	0.32	0.0	0.00	0.23	0.06	10							
	2 15	14.69	14.69	33.215	24.664	327.2	0.049	5.91	102.1	2.8	0.32	0.0	0.00	0.24	0.06	15							
	20 ISL	14.45	14.45	33.220	24.719	322.1	0.065	5.96	102.5	3.0	0.32	0.0	0.00	0.37	0.16	20							
	2 30	13.90	13.90	33.232	24.843	310.5	0.097	6.01	102.2	3.4	0.36	0.0	0.00	0.65	0.37	30							
	2 45	13.54	13.53	33.230	24.916	304.0	0.143	5.71	96.4	3.8	0.50	1.6	0.25	0.72	0.36	45							
	50 ISL	13.26	13.25	33.205	24.953	300.6	0.158	5.58	93.6	4.2	0.55	2.3	0.16	0.55	0.34	50							
	2 55	12.91	12.90	33.190	25.011	295.2	0.173	5.41	90.1	5.0	0.62	3.5	0.05	0.36	0.30	55							
	2 64	12.13	12.12	33.242	25.202	277.2	0.199	4.94	80.9	8.2	0.90	8.2	0.04	0.19	0.14	64							
	2 75	11.64	11.63	33.280	25.323	265.9	0.2219	4.73	76.7	9.9	1.04	10.4	0.03	0.12	0.13	75							
	2 84	10.80	10.79	33.338	25.519	247.3	0.252	4.55	72.5	12.9	1.22	13.3	0.02	0.07	0.08	84							
	2 95	10.50	10.49	33.381	25.605	239.3	0.279	4.37	69.2	14.3	1.32	14.9	0.01	0.05	0.07	95							
	100 ISL	10.27	10.26	33.423	25.677	232.5	0.290	4.20	66.2	15.9	1.41	16.3	0.01	0.04	0.06	100							
	2 109	9.84	9.83	33.506	25.815	219.6	0.311	3.89	60.8	18.9	1.57	18.8	0.01	0.02	0.05	110							
	2 124	9.36	9.35	33.595	25.963	205.7	0.343	3.62	56.0	22.1	1.71	21.2	0.01	0.01	0.04	125							
	125 ISL	9.34	9.33	33.603	25.973	204.8	0.345	3.60	55.6	22.3	1.72	21.4	0.01	0.01	0.04	126							
	2 144	9.00	8.98	33.762	26.151	188.2	0.382	3.16	48.5														

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 83 80			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
32 54.2 N		122 7.4 W		01/02/94	0218 UTC	4180 m	100 06 kn			1023.7 mb	14.1 c	12.0 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGHN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml / L	PCT	uN/L	uM/L	uM/L	uM/L	ug/L	ug/L	dl:	
	0 ISL	14.37	14.37	33.041	24.597	333.1	0.000	5.95	102.0	3.5	0.34	0.0	0.00	0.22	0.06	0	
2	2	14.37	14.37	33.041	24.597	333.2	0.007	5.95	102.0	3.5	0.34	0.0	0.00	0.22	0.06	2	
	10 ISL	14.20	14.20	33.032	24.626	330.7	0.033	5.97	102.0	3.5	0.34	0.0	0.00	0.24	0.06	10	
2	15	14.07	14.07	33.025	24.648	328.7	0.050	5.98	101.9	3.5	0.34	0.0	0.00	0.26	0.06	15	
	20 ISL	14.07	14.07	33.027	24.650	328.7	0.066	5.99	102.1	3.4	0.34	0.0	0.00	0.27	0.06	20	
2	30	14.08	14.08	33.030	24.650	328.9	0.099	5.99	102.1	3.3	0.33	0.0	0.00	0.28	0.08	30	
2	45	14.05	14.04	33.067	24.685	326.0	0.148	5.99	102.1	3.3	0.34	0.0	0.00	0.35	0.11	45	
	50 ISL	14.03	14.02	33.072	24.693	325.4	0.164	5.99	102.0	3.3	0.34	0.0	0.00	0.36	0.11	50	
2	55	14.00	13.99	33.073	24.701	324.8	0.181	6.00	102.1	3.3	0.35	0.0	0.00	0.37	0.12	55	
2	65	13.83	13.82	33.164	24.806	315.1	0.213	5.90	100.1	3.6	0.41	0.5	0.03	0.55	0.24	65	
	75 ISL	12.86	12.85	33.152	24.992	297.6	0.243	5.66	94.1	4.8	0.55	2.7	0.04	0.34	0.25	75	
2	76	12.74	12.73	33.153	25.016	295.2	0.246	5.62	93.2	5.0	0.58	3.1	0.04	0.31	0.25	76	
2	85	11.73	11.72	33.275	25.302	268.1	0.272	4.85	78.8	9.4	0.99	9.4	0.03	0.17	0.16	85	
2	95	11.35	11.34	33.339	25.422	256.9	0.298	4.63	74.7	11.4	1.12	11.6	0.02	0.10	0.11	95	
	100 ISL	11.14	11.13	33.371	25.485	251.0	0.311	4.47	71.8	12.7	1.20	12.9	0.02	0.08	0.09	100	
2	110	10.70	10.69	33.426	25.606	239.7	0.335	4.21	67.0	15.0	1.35	15.2	0.01	0.06	0.07	110	
2	125	9.98	9.97	33.461	25.756	225.5	0.370	4.28	67.0	16.3	1.40	16.5	0.01	0.03	0.04	125	
2	143	9.36	9.34	33.598	25.966	205.9	0.409	3.69	57.0	22.1	1.69	20.9	0.00	0.01	0.04	143	
	150 ISL	9.21	9.19	33.654	26.034	199.5	0.423	3.52	54.3	23.8	1.76	22.0	0.00	0.01	0.04	150	
2	168	8.90	8.88	33.778	26.180	185.9	0.458	3.20	49.0	27.4	1.88	24.1	0.00	0.00	0.03	168	
2	198	8.23	8.21	33.869	26.355	169.7	0.511	3.08	46.5	32.2	1.97	26.3	0.00	0.00	0.02	198	
	200 ISL	8.21	8.19	33.877	26.364	168.8	0.514	3.05	46.2	32.5	1.98	26.4	0.00			200	
2	228	7.95	7.93	33.975	26.480	158.2	0.560			37.0	2.08	27.9	0.00			228	
	250 ISL	7.61	7.59	34.015	26.561	150.8	0.594	2.61	38.9	41.5	2.18	29.3	0.00			250	
2	268	7.31	7.28	34.031	26.616	145.7	0.621	2.44	36.1	45.3	2.26	30.5	0.00			268	
	300 ISL	6.89	6.86	34.027	26.671	140.7	0.667	2.29	33.5	50.5	2.37	32.2	0.00			300	
2	318	6.71	6.68	34.025	26.694	138.7	0.692	2.18	31.8	53.3	2.43	33.1	0.00			318	
2	378	6.48	6.45	34.124	26.803	129.1	0.772	1.23	17.9	64.4	2.77	36.4	0.00			378	
	400 ISL	6.36	6.32	34.145	26.836	126.3	0.800	1.06	15.3	67.0	2.84	37.1	0.00			400	
2	435	6.18	6.14	34.172	26.881	122.4	0.844	0.87	12.5	70.6	2.93	38.0	0.00			438	
	500 ISL	5.93	5.89	34.243	26.969	114.7	0.921	0.53	7.6	79.0	3.08	39.5	0.00			503	
2	512	5.88	5.84	34.256	26.986	113.2	0.934	0.47	6.7	80.6	3.11	39.8	0.00			512	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401											STATION 83		90	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES		WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
32 34.4 N		122 48.6 W		31/01/94	1910 UTC	4260 m	060 07 kn	360 32 05	1		1024.5 mb	15.5 c	13.9 c	44m 01	1/8	AC		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db		
	0 ISL	16.14	16.14	33.410	24.494	343.0	0.000	5.66	100.8	2.9	0.28	0.0	0.00	0.14	0.04	0		
2	3 A	16.14	16.14	33.410	24.494	343.0	0.010	5.66	100.8	2.9	0.28	0.0	0.00	0.14	0.04	3		
	10 ISL	16.09	16.09	33.409	24.505	342.2	0.034	5.66	100.7	2.9	0.27	0.0	0.00	0.14	0.04	10		
2	13	16.07	16.07	33.409	24.510	341.9	0.045	5.66	100.7	2.9	0.27	0.0	0.00	0.14	0.04	13		
	20 ISL	16.07	16.07	33.409	24.510	342.1	0.068	5.67	100.8	2.8	0.27	0.0	0.00	0.15	0.05	20		
2	26 A	16.07	16.07	33.409	24.510	342.3	0.039	5.67	100.8	2.7	0.27	0.0	0.00	0.15	0.05	26		
	30 ISL	16.07	16.07	33.409	24.510	342.4	0.103	5.67	100.8	2.7	0.27	0.0	0.00	0.15	0.05	30		
2	40	16.07	16.06	33.409	24.510	342.7	0.137	5.66	100.7	2.7	0.27	0.0	0.00	0.14	0.05	40		
	50 ISL	16.06	16.05	33.408	24.512	342.8	0.171	5.66	100.6	2.7	0.27	0.0	0.00	0.15	0.04	50		
2	53 A	16.06	16.05	33.407	24.512	343.0	0.182	5.66	100.6	2.7	0.27	0.0	0.00	0.15	0.04	53		
2	68	16.05	16.04	33.404	24.512	343.4	0.233	5.67	100.8	2.6	0.26	0.0	0.00	0.16	0.05	68		
	75 ISL	16.02	16.01	33.401	24.517	343.2	0.257	5.67	100.7	2.6	0.26	0.0	0.00	0.16	0.05	75		
2	83 A	15.99	15.98	33.397	24.521	343.0	0.284	5.67	100.7	2.6	0.26	0.0	0.00	0.17	0.05	83		
2	93	15.40	15.39	33.281	24.563	339.2	0.319	5.73	100.3	2.7	0.27	0.0	0.01	0.23	0.09	93		
	100 ISL	15.01	14.99	33.238	24.616	334.4	0.342	5.74	99.8	2.8	0.30	0.0	0.03	0.22	0.11	100		
2	104	14.68	14.66	33.216	24.670	329.3	0.355	5.74	99.1	2.9	0.32	0.0	0.04	0.21	0.12	104		
2	115 A	12.93	12.91	33.140	24.970	300.7	0.390	5.71	95.7	3.7	0.38	0.6	0.05	0.19	0.18	115		
	125 ISL	12.03	12.01	33.206	25.194	279.4	0.419	5.35	87.1	5.9	0.64	3.9	0.02	0.12	0.10	125		
2	127	11.89	11.87	33.225	25.235	275.6	0.425	5.25	85.2	6.4	0.70	4.7	0.01	0.10	0.08	127		
2	142	10.77	10.75	33.303	25.498	250.6	0.464	4.87	77.5	10.1	1.00	9.5	0.00	0.05	0.05	142		
	150 ISL	10.38	10.36	33.325	25.583	242.6	0.484	4.71	74.5	12.2	1.15	11.9	0.00	0.03	0.04	150		
2	155 A	10.17	10.15	33.338	25.629	238.3	0.496	4.63	72.8	13.5	1.23	13.3	0.00	0.02	0.03	155		
2	189	8.88	8.86	33.545	26.001	203.2	0.571	4.00	61.2	21.2	1.60	20.3	0.00	0.00	0.01	189		
	200 ISL	8.68	8.66	33.626	26.096	194.4	0.593	3.80	57.9	23.6	1.69	21.9	0.00			200		
2	228	8.36	8.34	33.811	26.290	176.4	0.645	3.36	50.8	29.4	1.86	25.1	0.00			228		
	250 ISL	8.05	8.02	33.904	26.410	165.3	0.682	3.115	47.8	33.3	1.95	26.9	0.00			250		
2	269	7.77	7.74	33.955	26.491	157.8	0.713	3.11	46.3	36.5	2.00	28.0	0.00			269		
	300 ISL	7.26	7.23	33.978	26.582	149.4	0.761	3.09	45.6	41.3	2.06	29.2	0.00			300		
2	318	6.98	6.95	33.977	26.620	145.9	0.787	3.013	45.2	44.2	2.11	30.0	0.00			318		
2	379	6.37	6.34	34.004	26.723	136.6	0.873	2.14	31.0	56.8	2.47	35.7	0.00			379		
	400 ISL	6.16	6.12	34.018	26.761	133.1	0.902	1.86	26.8	61.2	2.58	37.4	0.00			400		
2	437	5.82	5.78	34.047	26.827	127.1	0.950	1.45	20.4	68.7	2.75	39.9	0.00			437		
	500 ISL	5.40	5.36	34.109	26.927	118.0	1.027	0.93	13.0	79.9	2.96	42.8	0.00			500		
2	514	5.31	5.27	34.123	26.949	116.0	1.043	0.81	11.4	82.4	3.01	43.4	0.00			514		

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
32 14.3 N	123 29.4 U	31/01/94	1301 UTC	4167 m	360 09 kn			1023 .0 tab	14.0 c	12.5 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	S103	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		um/L	um/L	um/L	um/L	ug/L	ug/L	db
	0 ISL	16.66	16.66	33.525	24.463	345.9	0.000	5.59	100.7	2.7	0.28	0.0	0.00	0.13	0.04	0
2	2	16.66	16.66	33.525	24.463	346.0	0.007	5.59	100.7	2.7	0.28	0.0	0.00	0.13	0.04	2
	10 ISL	16.65	16.65	33.523	24.464	346.1	0.035	5.60	100.8	2.7	0.28	0.0	0.00	0.13	0.04	10
2	15	16.65	16.65	33.522	24.463	346.4	0.052	5.61	101.0	2.6	0.28	0.0	0.00	0.13	0.04	15
	20 ISL	16.65	16.65	33.522	24.464	346.5	0.069	5.60	100.8	2.5	0.28	0.0	0.00	0.14	0.04	20
2	30	16.65	16.65	33.521	24.463	346.9	0.104	5.58	100.4	2.4	0.28	0.0	0.00	0.15	0.05	30
	45	16.66	16.65	33.522	24.462	347.5	0.156	5.59	100.6	2.4	0.28	0.0	0.00	0.14	0.04	45
2	50 ISL	16.66	16.65	33.523	24.463	347.5	0.173	5.59	100.6	2.4	0.28	0.0	0.00	0.14	0.04	50
	59	16.66	16.65	33.524	24.464	347.7	0.205	5.59	100.6	2.4	0.28	0.0	0.00	0.14	0.04	59
2	75	16.67	16.66	33.521	24.460	348.7	0.260	5.59	100.7	2.3	0.28	0.0	0.00	0.14	0.04	75
	90	16.67	16.66	33.523	24.462	348.9	0.313	5.59	100.6	2.3	0.28	0.1	0.00	0.15	0.04	90
2	100 ISL	16.67	16.65	33.523	24.463	349.2	0.348	5.61	101.0	2.3	0.28	0.1	0.00	0.13	0.04	100
	104	16.67	16.65	33.523	24.463	349.4	0.362	5.61	101.0	2.3	0.28	0.1	0.00	0.13	0.04	104
2	114	16.69	16.67	33.532	24.466	349.5	0.397	5.59	100.7	2.3	0.28	0.1	0.00	0.15	0.05	114
	125	16.27	16.25	33.525	24.557	341.0	0.434	5.55	99.1	2.5	0.31	0.1	0.07	0.16	0.09	126
2	134	15.43	15.41	33.589	24.795	318.4	0.464	5.57	97.9	2.9	0.33	0.2	0.13	0.19	0.16	135
	144	14.64	14.62	33.585	24.964	302.5	0.495	5.43	93.9	3.6	0.41	1.1	0.07	0.15	0.14	145
2	150 ISL	13.97	13.95	33.549	25.077	291.7	0.513	5.29	90.2	4.6	0.53	2.5	0.05	0.12	0.12	151
	163	12.49	12.47	33.472	25.314	269.2	0.549	4.96	82.0	7.4	0.81	6.2	0.01	0.07	0.09	164
2	194	10.51	10.49	33.471	25.676	234.9	0.628	4.59	72.7	12.7	1.19	12.5	0.00	0.02	0.04	195
	200 ISL	10.18	10.16	33.490	25.747	228.1	0.642	4.50	70.8	14.1	1.26	13.8	0.00			201
2	228	8.98	8.96	33.631	26.053	199.1	0.701	4.06	62.2	21.0	1.57	19.5	0.00			229
	250 ISL	8.57	8.54	33.786	26.239	181.8	0.743	3.65	55.5	26.4	1.75	23.0	0.00			251
2	267	8.41	8.38	33.896	26.350	171.5	0.773	3.35	50.8	30.2	1.85	25.1	0.00			268
	300 ISL	8.02	7.99	33.979	26.474	160.1	0.828	3.06	46.0	35.3	1.98	27.5	0.00			302
2	319	7.80	7.77	33.995	26.519	1156.1	0.858	2.93	43.8	38.1	2.04	28.6	0.00			321
	378	6.99	6.95	34.044	26.672	141.9	0.946	2.15	31.6	51.1	2.40	34.1	0.00			380
2	400 ISL	6.68	6.64	34.055	26.723	137.2	0.977	1.86	27.1	56.2	2.52	36.1	0.00			402
	436	6.24	6.20	34.073	26.795	130.5	1.025	1.44	20.8	64.0	2.70	38.9	0.00			439
2	500 ISL	5.82	5.78	34.127	26.891	121.9	1.106	0.93	13.3	74.4	2.92	41.7	0.00			503
	513	5.74	5.70	34.138	26.909	120.2	1.121	0.83	11.8	76.5	2.96	42.3	0.00			516

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD AMT	TYPE
31	55. N	124	10.0 W	31/01/94	0618 UTC	4209 m	3 40 12 kn			1024 .8 ntb	14.9 c	12.1 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	S103	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		uM/I	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	16.46	16.46	33.448	24.450	347.2	0.000	5.62	100.8	2.6	0.28	0.0	0.00	0.12	0.04	0
	2	16.46	16.46	33.448	24.450	347.2	0.007	5.62	100.8	2.6	0.28	0.0	0.00	0.12	0.04	2
	10 ISL	16.46	16.46	33.448	24.450	347.4	0.035	5.63	100.9	2.6	0.27	0.0	0.00	0.12	0.04	10
2	15	16.46	16.46	33.448	24.450	347.6	0.052	5.63	100.9	2.5	0.27	0.0	0.00	0.12	0.04	15
	20 ISL	16.46	16.46	33.447	24.450	347.8	0.069	5.63	100.9	2.4	0.27	0.0	0.00	0.12	0.04	20
2	30	16.47	16.47	33.446	24.447	348.4	0.104	5.64	101.1	2.3	0.27	0.1	0.00	0.12	0.04	30
	44	16.47	16.46	33.447	24.448	348.7	0.153	5.64	101.1	2.3	0.27	0.0	0.00	0.13	0.04	44
2	50 ISL	16.47	16.46	33.447	24.449	348.9	0.174	5.63	100.9	2.3	0.27	0.0	0.00	0.12	0.04	50
	59	16.47	16.46	33.448	24.450	349.1	0.205	5.63	100.9	2.3	0.27	0.0	0.00	0.12	0.04	59
2	74	16.46	16.45	33.446	24.451	349.5	0.258	5.65	101.3	2.3	0.27	0.1	0.00	0.15	0.04	74
	75 ISL	16.46	16.45	33.446	24.451	349.5	0.261	5.65	101.3	2.3	0.27	0.1	0.00	0.15	0.04	75
2	85	16.47	16.46	33.448	24.451	349.9	0.296	5.62	100.7	2.3	0.27	0.1	0.00	0.15	0.05	85
	94	16.48	16.46	33.452	24.452	350.0	0.328	5.64	101.1	2.2	0.27	0.1	0.00	0.15	0.05	94
2	100 ISL	16.31	16.29	33.457	24.495	346.1	0.349	5.64	100.8	2.2	0.27	0.1	0.01	0.16	0.06	100
	105	16.15	16.13	33.462	24.535	342.4	0.366	5.64	100.5	2.2	0.28	0.1	0.01	0.18	0.06	105
2	115	15.36	15.34	33.606	24.823	315.2	0.399	5.61	98.5	2.8	0.31	0.1	0.14	0.23	0.17	115
	125	14.97	14.95	33.601	24.905	307.6	0.430	5.50	95.8	3.3	0.37	0.7	0.09	0.19	0.16	126
2	140	14.06	14.04	33.576	25.079	291.3	0.475	5.27	90.1					0.11	0.10	141
	150 ISL	13.28	13.26	33.544	25.214	278.5	0.503	5.11	85.9	5.9	0.66	4.4	0.02	0.08	0.07	151
2	164	12.16	12.14	33.504	25.402	260.8	0.541	4.89	80.3	8.1	0.86	7.3	0.00	0.05	0.05	165
	194	10.24	10.22	33.474	25.724	230.2	0.615	4.54	71.5	13.8	1.24	13.6	0.00	0.01	0.03	195
2	200 ISL	9.93	9.91	33.501	25.797	223.2	0.628	4.45	69.6	15.3	1.31	15.0	0.00			201
	227	8.88	8.86	33.675	26.104	194.3	0.685	3.98	60.9	22.3	1.61	20.6	0.00			228
2	250 ISL	8.46	8.43	33.837	26.296	176.3	0.727	3.55	53.9	28.1	1.80	24.1	0.00			251
	267	8.27	8.24	33.939	26.405	166.2	0.756	3.25	49.1	32.1	1.91	26.1	0.00			268
2	500 ISL	7.83	7.80	34.013	26.528	154.9	0.809	2.86	42.8	38.5	2.09	29.1	0.00			302
	317	7.61	7.58	34.023	26.568	151.2	0.835	2.69	40.1	41.7	2.17	30.5	0.01			319
2	377	6.72	6.69	34.057	26.719	137.3	0.922	1.89	27.6	55.7	2.52	36.1	0.00			379
	400 ISL	6.46	6.42	34.077	26.769	132.6	0.953	1.59	23.1	61.0	2.65	37.9	0.00			402
2	439	6.094	6.055	34.114	26.846	125.6	1.003	1.14	16.4	69.2	2.84	40.5	0.00			442
	500 ISL	5.721	5.678	34.173	26.939	117.2	1.077	0.72	10.3	78.6	3.03	42.9	0.00			503
2	509	5.666	5.623	34.182	26.953	116.0	1.088	0.66	9.4	80.0	3.06	43.2	0.00			512

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVEL

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 53.0 N		118 29.2 W		28/01/94	0708 UTC	59 n	030	09 kn			1015.5 mb	13.0 c	9.0 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	14.53	14.53	33.183	24.673	325.9	0.000	6.01	103.5	4.1	0.47	0.4	0.19	3.14	0.30		0
2	2	14.53	14.53	33.183	24.673	326.0	0.007	6.01	103.5	4.1	0.47	0.4	0.19	3.14	0.30		2
2	10	14.54	14.54	33.182	24.670	326.5	0.033	5.96	102.7	3.9	0.46	0.4	0.19	2.91	0.33		10
2	20	14.32	14.32	33.153	24.695	324.4	0.065	5.51	94.5	5.3	0.67	1.4	0.39	1.13	0.22		20
2	30	13.24	13.24	33.208	24.959	299.5	0.096	5.03	84.4	7.2	0.89	4.1	0.43	0.22	0.19		30
2	40	12.82	12.81	33.226	25.056	290.5	0.126	4.72	78.5	9.2	1.06	6.3	0.33	0.16	0.16		40
	50 ISL	12.27	12.26	33.298	25.218	275.3	0.154	4.67	76.8	10.0	1.04	7.9	0.18	0.15	0.18		50
	53	12.10	12.09	33.320	25.267	270.7	0.162	4.66	76.4	10.2	1.03	8.4	0.13	0.15	0.19		53

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LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD		AMT		TYPE	
33 49.5 N		118 37.4 U		28/01/94		0952 UTC		649 m		060 06 kn						1016.2 mb		13.1 c		9.9 c									
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS													
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db													
	0 ISL	14.85	14.85	33.234	24.644	328.7	0.000	6.03	104.6	2.1	0.31	0.0	0.00	1.36	0.16	0													
2	2	14.85	14.85	33.234	24.644	328.7	0.007	6.03	104.6	2.1	0.31	0.0	0.00	1.36	0.16	2													
	10 ISL	14.85	14.85	33.232	24.643	329.1	0.033	6.04	104.7	2.1	0.32	0.0	0.00	1.41	0.27	10													
2	11	14.85	14.85	33.232	24.643	329.1	0.036	6.04	104.7	2.1	0.32	0.0	0.00	1.42	0.29	11													
2	20	14.81	14.81	33.231	24.651	328.6	0.066	6.03	104.5	2.1	0.31	0.0	0.00	1.52	0.29	20													
2	30	13.96	13.96	33.232	24.831	311.7	0.098	5.40	91.9	4.5	0.60	1.9	0.35	0.61	0.26	50													
2	40	13.42	13.41	33.242	24.949	300.7	0.128	5.26	88.6	5.6	0.69	3.3	0.24	0.48	0.29	40													
2	50	12.57	12.56	33.271	25.140	282.8	0.158	5.05	83.5	6.9	0.82	5.5	0.06	0.30	0.22	50													
2	60	11.70	11.69	33.349	25.365	261.5	0.185	4.65	75.6	10.2	1.05	9.4	0.05	0.15	0.15	60													
2	69	11.59	11.58	33.359	25.393	259.1	0.208	4.58	74.2	10.8	1.10	10.3	0.04	0.12	0.14	69													
	75 ISL	11.42	11.41	33.369	25.432	255.5	0.224	4.57	73.8	11.1	1.12	10.8	0.03	0.10	0.13	75													
2	84	11.10	11.09	33.388	25.505	248.7	0.246	4.53	72.7	11.8	1.17	11.8	0.02	0.08	0.10	a 4													
2	100	10.61	10.60	33.428	25.623	237.8	0.285	4.26	67.6	14.8	1.33	14.6	0.00	0.05	0.07	100													
2	119	10.24	10.23	33.568	25.796	221.7	0.329	3.79	59.7	17.9	1.53	17.7	0.00	0.02	0.06	120													
2	125 ISL	10.14	10.13	33.602	25.840	217.7	0.342	3.68	57.9	18.8	1.58	18.5	0.00	0.02	0.05	126													
2	138	9.91	9.89	33.675	25.936	208.8	0.370	3.45	54.0	21.0	1.67	20.2	0.00	0.02	0.04	139													
2	150 ISL	9.64	9.62	33.771	26.056	197.6	0.394	3.19	49.7	24.0	1.78	22.1	0.00	0.02	0.04	151													
2	168	9.28	9.26	33.904	26.218	182.4	0.428	2.84	43.9	28.2	1.92	24.6	0.00	0.01	0.04	169													
2	199	9.04	9.02	33.975	26.313	174.0	0.484	2.65	40.8	30.9	2.01	26.1	0.00	0.01	0.04	200													
2	200 ISL	9.03	9.01	33.977	26.316	173.7	0.485	2.64	40.6	31.0	2.01	26.2	0.00			201													
2	228	8.73	8.71	34.039	26.412	165.0	0.533	2.41	36.8	34.8	2.13	27.9	0.00			229													
2	250 ISL	8.54	8.51	34.087	26.479	159.0	0.568	2.15	32.7	38.3	2.23	29.3	0.00			251													
2	268	8.39	8.36	34.123	26.531	154.4	0.597	1.93	29.3	41.2	2.32	30.4	0.00			270													
2	300 ISL	8.14	8.11	34.174	26.609	147.5	0.645	1.56	23.5	46.1	2.49	32.2	0.00			302													
2	318	8.00	7.97	34.197	26.648	144.0	0.671	1.38	20.8	48.7	2.57	35.1	0.00			320													
2	377	7.60	7.56	34.236	26.738	136.3	0.754	0.99	14.8	55.5	2.73	35.2	0.00			379													
2	400 ISL	7.44	7.40	34.249	26.771	133.4	0.785	0.85	12.6	58.1	2.80	36.0	0.00			403													
2	437	7.15	7.11	34.268	26.827	128.4	0.833	0.65	9.7	62.8	2.90	37.2	0.00			440													
	500 ISL	6.53	6.48	34.292	26.931	119.0	0.911	0.45	6.5	73.2	3.04	39.4	0.00			503													
	512	6.41	6.36	34.297	26.951	117.2	0.925	0.41	5.9	75.2	3.07	39.8	0.00			516													

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LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 39.4 N		118 58.3 U		28/01/94	1437 UTC	756 m	080	06 kn	260 02 07	0	1016.9 mb	14.0 c	10.0 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.06	15.06	33.268	24.625	330.5	0.000	5.83	101.5	3.1	0.35	0.1	0.00	0.34	0.12		0
2	2	15.06	15.06	33.268	24.625	330.6	0.007	5.83	101.5	3.1	0.35	0.1	0.00	0.34	0.12		2
	10 ISL	15.07	15.07	33.268	24.623	331.0	0.033	5.83	101.6	3.1	0.34	0.1	0.00	0.35	0.13		10
2	15	15.07	15.07	33.268	24.623	331.1	0.050	5.83	101.6	3.0	0.34	0.1	0.00	0.35	0.13		15
	20 ISL	15.07	15.07	33.267	24.622	331.3	0.066	5.83	101.5	2.9	0.34	0.1	0.00	0.35	0.13		20
2	30	15.07	15.07	33.266	24.622	331.7	0.099	5.83	101.5	2.8	0.34	0.1	0.00	0.34	0.13		30
2	45	14.22	14.21	33.261	24.800	315.2	0.148	5.60	95.9	4.0	0.49	1.0	0.10	0.45	0.22		45
2	50 ISL	13.80	13.79	33.267	24.891	306.5	0.163	5.46	92.7	4.8	0.57	1.9	0.15	0.40	0.25		50
2	54	13.48	13.47	33.278	24.965	299.6	0.176	5.33	89.9	5.5	0.63	2.8	0.17	0.36	0.26		54
2	65	12.97	12.96	33.339	25.115	285.6	0.208	4.98	83.1	7.0	0.81	5.3	0.09	0.33	0.24		65
2	75	12.57	12.56	33.374	25.220	275.8	0.236	4.90	81.1	7.7	0.86	6.3	0.06	0.26	0.22		75
2	85	12.05	12.04	33.427	25.361	262.6	0.263	4.44	72.7	10.7	1.10	9.9	0.04	0.17	0.20		85
2	95	11.40	11.39	33.457	25.505	249.1	0.288	4.40	71.1	12.0	1.17	11.6	0.02	0.10	0.13		95
2	100 ISL	11.13	11.12	33.470	25.564	243.5	0.301	4.32	69.4	13.0	1.23	12.7	0.02	0.08	0.11		100
2	109	10.68	10.67	33.512	25.676	233.0	0.322	4.08	64.9	15.5	1.37	15.1	0.02	0.05	0.09		110
2	124	9.85	9.84	33.678	25.948	207.3	0.355	3.47	54.3	21.6	1.69	20.3	0.01	0.01	0.05		125
2	125 ISL	9.80	9.79	33.685	25.961	206.0	0.357	3.45	53.9	21.9	1.70	20.5	0.01	0.01	0.05		126
2	144	9.09	9.07	33.792	26.161	187.3	0.394	3.12	48.2	27.1	1.87	23.9	0.01	0.01	0.06		145
2	150 ISL	9.04	9.02	33.828	26.197	184.0	0.406	3.05	46.9	28.2	1.91	24.5	0.01	0.01	0.06		151
2	168	8.90	8.88	33.890	26.268	177.6	0.438	2.86	43.8	30.8	2.00	25.7	0.01	0.01	0.05		169
2	199	8.69	8.67	33.974	26.367	168.7	0.492	2.58	39.4	33.6	2.08	27.2	0.00	0.00	0.04		200
2	200 ISL	8.69	8.67	33.977	26.369	168.5	0.494	2.57	39.2	33.7	2.08	27.3	0.00				201
2	229	8.57	8.55	34.069	26.460	160.4	0.541	2.17	33.1	38.0	2.22	29.3	0.00				230
2	250 ISL	8.45	8.42	34.110	26.511	155.9	0.574	2.01	30.5	40.3	2.29	30.1	0.00				251
2	268	8.33	8.30	34.136	26.550	152.5	0.602	1.89	28.6	42.3	2.35	30.7	0.00				270
2	300 ISL	8.13	8.10	34.179	26.615	146.9	0.650	1.54	23.2	46.9	2.49	32.4	0.00				302
2	317	8.01	7.98	34.197	26.647	144.1	0.675	1.35	20.3	49.4	2.57	33.3	0.00				319
2	377	7.55	7.51	34.237	26.746	135.5	0.759	0.89	13.3	57.2	2.77	35.6	0.00				379
2	400 ISL	7.35	7.31	34.246	26.782	132.3	0.790	0.78	11.6	60.3	2.83	36.4	0.00				403
2	435	7.05	7.01	34.257	26.833	127.8	0.835	0.66	9.7	65.2	2.92	37.5	0.00				438
2	500 ISL	6.52	6.47	34.290	26.931	119.0	0.915	0.47	6.8	74.5	3.05	39.4	0.00				503
2	511	6.43	6.38	34.296	26.947	117.5	0.928	0.44	6.4	76.1	3.07	39.7	0.00				514

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 29.8 N	119 19.0 W	28/01/94	1918 UTC	1649 m	180	03 kn	260 04 06	0	1019.9 hPa	16.0 C	11.9 C	35m	03	0/8		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/I	PCT	uM/L	uM/L	uM/I	uM/I	ug/L	ug/L	db
	0 ISL	15.00	15.00	33.256	24.628	330.2	0.000	5.85	1 01.8	2.9	0.3 4	0.0	q.00	0.19	0.04	0
2	2 A	15.00	15.00	33.256	24.629	330.2	0.007	5.85	101.8	2.9	0.34	0.0	0.00	0.19	0.04	2
	10 ISL	14.81	14.81	33.252	24.667	326.8	0.033	5.85	101.4	2.9	0.34	0.0	0.00	0.20	0.05	10
2	12	14.75	14.75	33.251	24.679	325.7	0.039	5.85	101.2 2	.. 9	0.34	0.0	0.00	0.20	0.05	12
	20 ISL	14.73	14.73	33.251	24.683	325.5	0.065	5.85	101.2	2.9	0.34	0.0	0.00	0.19	0.04	20
2	22 A	14.73	14.73	33.251	24.683	325.6	0.072	5.85	101.2 2	.. 9	0.34	0.0	0.00	0.19	0.04	22
	30 I S L	14.66	14.66	33,248	24.696	324.6	0.098	5.87	101.4	2.8	0.34	0.0	0.00	0.21	0.05	30
2	33	14.61	14.61	33.247	24.706	323.7	0.108	5.88	101.5	2.8	0.34	0.0	0.00	0.23	0.06	33
	43 A	14.31	14.30	33.243	24.767	318.2	0.140	5.91	101.3	2.9	0.34	0.0	0.00	0.33	0.10	43
	50 I S L	14.09	14.08	33.249	24.818	313.6	0.162	5.85	9 9.9	3.3	0.38	0.3	a.07	0.63	0.24	50
2	54	13.95	13.94	33.254	24.851	310.5	0.174	5.79	9 8.6	3.7	0.41	0.6	0.12	0.76	0.31	54
	66 A	13.39	13.38	33.274	24.981	298.4	0.211	5.46	91.9	5.1	0.59	2.6	0.26	0.36	0.26	66
2	73	12.49	12.48	33.278	25.161	281.3	0.231	5.13	8 4.7	7.0	0.75	5.3	0.15	0.26	0.24	73
	75 ISL	12.35	12.34	33.282	25.191	278.5	0.237	5.06	8 3.3	7.4	0.79	5.9	0.13	0.24	0.23	75
2	83	11.99	11.98	33.311	25.282	270.0	0.259	4.83	78.9	9.1	0.93	8.0	0.07	0.21	0.19	83
	91 A	11.67	11.66	33.370	25.387	260.2	0.280	4.58	7 4.4	11.2	1.06	10.3	0.08	0.20	0.22	91
	100 ISL	10.87	10.86	33.427	25.576	242.3	0.303	4.30	6 8.7 14	.. 2	1.25	13.8	0.05	0.11	0.15	100
2	108	10.19	10.18	33.502	25.753	225.5	0.321	4.00	6 3.0 17	.. 1	1.43	16.8	0.01	0.03	a.07	109
	124 A	10.06	10.05	33.764	25.979	204.3	0.356	3.17	49.8	22.1	1.73	21.2	0.00	0.00	0.05	125
2	125 ISL	10.05	10.04	33.773	25.988	203.5	0.358	3.16	49.7	22.3	1.74	21.3	0.00	0.00	0.05	126
	144	9.76	9.74	33.864	26.108	192.5	0.395	2.92	4 5.6	25.1	1.85	23.1	0.00	0.00	0.06	145
	150 ISL	9.60	9.58	33.880	26.147	188.9	0.407	2.89	4 5.0	26.1	1.88	23.6	0.00	0.00	0.05	151
2	170	9.09	9.07	33.918	26.260	178.5	0.444	2.81	4 3.3	29.3	1.95	25.2	0.00	0.00	0.03	171
2	199	8.84	8.82	33.976	26.345	170.9	0.494	2.65	40.6	32.2	2.03	26.6	0.00	0.00	0.03	200
	200 I S L	8.83	8.81	33.980	26.350	170.4	0.496	2.63	40.3	32.4	2.04	26.7	0.00	0.00	0.03	201
	228	8.49	8.47	34.084	26.484	158.1	0.542	2.12	32.2	38.7	2.25	29.4	0.00	0.00	0.03	229
	250 ISL	8.34	8.31	34.131	26.545	152.8	0.576	1.83	2 7.7	42.0	2.36	30.8	0.00	0.00	0.03	251
2	267	8.25	8.22	34.155	26.577	149.9	0.602	1.65	2 5.0	44.1	2.43	31.6	0.00	0.00	0.03	269
	300 I S L	8.00	7.97	34.193	26.645	144.0	0.650	1.37	2 0.6	48.5	2.55	33.0	0.00	0.00	0.03	302
2	317	7.87	7.84	34.207	26.675	141.3	0.675	1.25	18.8	50.6	2.61	33.7	0.00	0.00	0.03	319
	377	7.49	7.45	34.247	26.762	133.9	0.757	0.87	12.9	57.6	2.80	35.8	0.00	0.00	0.03	379
	400 I S L	7.34	7.30	34.256	26.791	131.4	0.788	0.78	11.6	59.9	2.84	36.4	0.00	0.00	0.03	403
2	438	7.08	7.04	34.266	26.836	127.6	0.837	0.66	9.7	63.5	2.89	37.4	0.00	0.00	0.03	441
	500 I S L	6.69	6.64	34.281	26.901	122.0	0.914	0.52	7.6	70.2	2.99	38.9	0.00	0.00	0.03	503
2	512	6.62	6.57	34.284	26.913	121.0	0.929	0.49	7.1	71.5	3.01	39.2	0.00	0.00	0.03	515

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 19.7 H	119 3 8.6 U	29/01/94	0109 UTC	77 m	300	10 kn	320 03 05	1	1020.1 mb	13.8 C	10.4 C			2/8	AC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
2	0 ISL	14.37	14.37	33.254	24.761	317.5	0.000	5.92	101.7 4	.. 0	0.40	0.2	a.03	0.65	0.18	0
	1	14.37	14.37	33.254	24.761	317.5	0.003	5.92	101.7 4	.. 0	0.40	0.2	0.03	0.65	0.18	1
2	10 ISL	14.34	14.34	33.251	24.766	317.4	0.032	5.93	101.8	3.8	0.39	0.3	0.03	0.56	0.16	10
2	11	14.34	14.34	33.251	24.766	317.4	0.035	5.93	101.8	3.8	0.39	0.3	0.03	0.56	0.16	11
2	20	14.04	14.04	33.255	24.832	311.4	0.063	5.93	101.1	3.8	0.41	0.4	0.05	0.85	0.25	20
2	30 ISL	13.915	13.98	33.268	24.854	309.5	0.094	5.95	101.4	3.7	0.41	0.4	0.06	1.68	0.39	30
2	31	13.97	13.97	33.267	24.856	309.4	0.097	5.95	101.3	3.7	0.41	0.4	0.06	1.76	0.40	31
2	39	13.95	13.94	33.270	24.863	309.0	0.122	5.93	101.0	3.5	0.41	0.5	0.06	1.83	0.44	39
2	50	13.88	13.87	33.271	24.878	307.8	0.156	5.88	100.0	3.9	0.45	0.8	0.09	1.39	0.40	50
2	69	10.85	10.84	33.444	25.592	240.0	0.208	4.27	68.2	15.0	1.30	13.8	0.05	0.09	0.14	69

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WINDSPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 5.9 N	119 5 9.4 W	29/01/94	0523 UTC	1213 m	310 05 kn			1021.8 mb	13.8 C	10.8 C						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	15.10	15.10	33.214	24.574	335.3	0.000	5.79	100.9	2.7	0.32	a..0	0.00	0.17	0.05	0
2	2	15.10	15.10	33.214	24.574	335.4	0.007	5.79	100.9	2.7	0.32	0.0	0.00	0.17	0.05	2
	10 ISL	15.05	15.05	33.209	24.582	334.9	0.034	5.80	101.0	2.7	0.32	0.1	0.00	0.18	0.06	10
2	16	14.99	14.99	33.204	24.591	334.2	0.054	5.82	101.2	2.7	0.32	0.1	0.00	0.18	0.06	16
	20 ISL	14.96	14.96	33.202	24.596	333.8	0.067	5.83	101.3	2.7	0.33	0.1	0.00	0.18	0.06	20
	30 ISL	14.90	14.90	33.197	24.605	333.2	0.100	5.86	101.7	2.8	0.35	0.1	0.00	0.18	0.06	30
	31	14.89	14.89	33.197	24.608	333.0	0.104			2.8	0.35	0.1	0.00	0.18	0.06	31
	45	14.10	14.09	33.150	24.739	320.9	0.149	5.89	100.5	3.2	0.38	a..a	0.04	0.47	0.22	45
	50 ISL	13.95	13.94	33.160	24.778	317.3	0.165	5.88	100.0	3.3	0.39	0.1	0.07	0.50	0.26	50
	54	13.85	13.84	33.170	24.806	314.7	0.178	5.38	99.8	3.4	0.41	0.3	0.10	0.52	0.28	54
2	64	13.62	13.61	33.177	24.859	310.0	0.209	5.77	9 7.5	3.7	0.47	0.8	0.21	0.32	0.21	64
	74	13.19	13.18	33.251	25.003	296.5	0.240	5.43	91.0	5.2	0.63	3.0	0.34	0.18	0.17	74
	75 ISL	13.11	13.10	33.259	25.025	294.4	0.243	5.40	9 0.3	5.3	0.64	3.2	0.31	0.17	0.16	75
2	84	12.46	12.45	33.328	25.206	277.4	0.268	5.16	8 5.2	6.5	0.74	4.9	0.05	0.09	0.11	84
2	92	12.30	12.29	33.372	25.271	271.4	0.290	5.08	8 3.6	7.1	0.77	5.6	0.02	0.08	0.08	92
	100 ISL	11.62	11.61	33.380	25.405	258.7	0.311	4.87	79.0	9.5	0.96	8.7	0.01	0.06	0.06	100
2	107	10.89	10.88	33.388	25.543	245.6	0.329	4.63	73.9	12.3	1.17	12.1	0.01	0.04	0.04	107
	123	9.66	9.65	33.486	25.829	218.5	0.366	4.07	6 3.3	18.2	1.52	18.0	0.00	0.02	0.04	124
	125 ISL	9.58	9.57	33.499	25.852	216.3	0.371	4.05	62.9	18.6	1.54	18.3	0.00	0.02	0.04	126
	143	9.17	9.15	33.619	26.013	201.4	0.408	3.94	60.7	21.2	1.60	20.1	0.00	0.01	0.03	144
	150 ISL	9.03	9.01	33.663	26.069	196.1	0.422	3.82	5 8.6	22.6	1.65	21.1	0.00	0.01	0.03	151
2	169	8.74	8.72	33.789	26.214	182.7	0.458	3.36	51.3	26.9	1.83	24.4	0.00	0.00	0.02	170
2	199	8.68	8.66	34.026	26.409	164.7	0.510	2.29	35.0	35.6	2.18	28.5	0.00	0.00	0.04	200
	200 ISL	8.68	8.66	34.030	26.412	164.4	0.512	2.27	34.7	35.8	2.19	28.6	0.00			201
2	230	8.51	8.49	34.106	26.499	156.8	0.560	1.92	29.2	40.2	2.34	30.6	0.00			231
	250 ISL	8.41	8.38	34.133	26.536	153.6	0.591	1.79	2 7.2	42.3	2.40	31.3	0.00			251
2	272	8.24	8.21	34.148	26.573	150.4	0.624	1.69	2 5.6	44.5	2.46	32.4	0.00			274
	300 ISL	7.81	7.78	34.149	26.638	144.5	0.666	1.60	2 4.0	48.7	2.53	33.5	0.00			302
2	320	7.49	7.46	34.150	26.685	140.2	0.694	1.52	2 2.6	52.0	2.58	34.6	0.00			322
2	379	7.02	6.98	34.211	26.800	130.0	0.774	0.95	14.4	61.5	2.83	37.6	0.00			381
	400 ISL	6.90	6.86	34.226	26.828	127.5	0.801	0.85	12.5	64.0	2.89	38.3	0.00			403
2	439	6.71	6.67	34.247	26.871	123.9	0.850	0.72	10.5	67.9	2.97	39.2	0.00			442
	500 ISL	6.39	6.34	34.266	26.929	119.1	0.924	0.57	8.3	73.5	3.04	40.6	0.00			503
2	515	6.31	6.26	34.271	26.943	117.8	0.942	0.53	7.7	74.9	3.06	40.9	0.00			515

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 8?				60
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	'FOREL	CLD	AMT	TYPE		
32 59.7 N	120 20.5 U	29/01/94	1030 UTC	716 m	010	07 kn			1023.2 mb	13.0 c	11.2 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml / l	PCT	uM / l	uM / l	uM / l	uM / l	ug / l	ug / l	db		
	0 ISL	15.56	15.56	33.241	24.494	342.9	0.000	5.74	101.0	2.9	0.32	0.1	0.00	0.16	0.04	0		
2	2	15.56	15.56	33.241	24.494	343.0	0.007	5.74	101.0	2.9	0.32	0.1	0.00	0.16	0.04	2		
	10 ISL	15.56	15.56	33.239	24.493	343.4	0.034	5.74	101.0	2.8	0.31	0.1	0.00	0.16	0.04	10		
2	15	15.56	15.56	33.238	24.492	343.6	0.051	5.74	101.0	2.8	0.31	0.1	0.00	0.16	0.04	15		
	20 ISL	15.56	15.56	33.238	24.493	343.7	0.069	5.74	101.0	2.8	0.31	0.1	0.00	0.16	0.04	20		
	30 ISL	15.56	15.56	33.240	24.495	343.8	0.103	5.73	100.8	2.7	0.31	0.0	0.00	0.16	0.04	30		
2	31	15.56	15.56	33.240	24.495	343.9	0.106	5.73	100.8	2.7	0.31	0.0	0.00	0.16	0.04	31		
2	45	15.56	15.55	33.241	24.496	344.2	0.155	5.74	100.9	2.7	0.31	0.0	0.00	0.15	0.05	45		
	50 ISL	15.56	15.55	33.240	24.495	344.4	0.172	5.74	100.9	2.7	0.31	0.0	0.00	0.16	0.05	50		
2	60	15.55	15.54	33.237	24.495	344.7	0.206	5.74	100.9	2.7	0.31	0.0	0.00	0.19	0.05	60		
2	75	15.13	15.12	33.209	24.567	338.3	0.258	5.77	100.6	2.7	0.32	0.0	0.00	0.27	0.10	75		
2	85	14.89	14.88	33.196	24.609	334.6	0.291	5.84	101.3	2.8	0.32	0.0	0.00	0.31	0.11	85		
2	95	14.12	14.11	33.149	24.736	322.7	0.324	5.90	100.7	3.1	0.38	0.0	0.06	0.42	0.21	95		
	100 ISL	13.90	13.89	33.187	24.811	315.6	0.340	5.85	99.4	3.3	0.42	0.3	0.19	0.34	0.18	100		
2	104	13.76	13.75	33.221	24.866	310.5	0.353	5.79	98.1	3.5	0.45	0.6	0.29	0.25	0.15	104		
2	115	13.33	13.31	33.213	24.947	303.0	0.386	5.64	94.7	4.1	0.53	1.6	0.27	0.11	0.11	115		
2	124	12.87	12.85	33.198	25.027	295.5	0.413	5.44	90.5	5.0	0.63	3.0	0.09	0.11	0.13	125		
	125 ISL	12.81	12.79	33.206	25.045	293.8	0.416	5.40	89.7	5.2	0.65	3.3	0.08	0.11	0.13	126		
2	139	11.88	11.86	33.351	25.335	266.4	0.455	4.88	79.6	8.8	0.93	7.9	0.01	0.05	0.06	140		
	150 ISL	10.90	10.88	33.408	25.557	245.2	0.484	4.64	74.1	11.9	1.13	11.5	0.01	0.03	0.05	151		
2	165	9.66	9.64	33.479	25.824	219.8	0.518	4.41	68.6	16.0	1.37	15.9	0.00	0.01	0.03	166		
2	194	8.73	8.71	33.701	26.147	189.5	0.578	4.01	61.2	22.9	1.63	21.0	0.00	0.00	0.01	195		
	200 ISL	8.67	8.65	33.740	26.187	185.8	0.589	3.88	59.1	24.1	1.67	21.8	0.00			201		
2	229	8.51	8.49	33.888	26.328	172.9	0.641	3.33	50.6	29.4	1.85	24.8	0.00			230		
	250 ISL	8.09	8.06	33.941	26.433	163.2	0.676	3.20	48.2	33.4	1.94	26.5	0.00			251		
2	268	7.70	7.67	33.969	26.512	155.7	0.705	3.12	46.6	37.0	2.01	27.9	0.00			269		
	300 ISL	7.33	7.30	34.011	26.598	147.9	0.754	2.64	39.1	43.7	2.21	31.0	0.00			302		
2	318	7.17	7.14	34.030	26.636	144.6	0.780	2.31	34.1	47.7	2.33	32.7	0.00			320		
2	377	6.59	6.56	34.109	26.777	131.7	0.861	1.37	19.9	61.3	2.70	37.6	0.00			379		
	400 ISL	6.41	6.37	34.134	26.821	127.7	0.891	1.12	16.2	65.5	2.81	38.9	0.00			402		
2	438	6.16	6.12	34.171	26.882	122.2	0.939	0.81	11.7	71.3	2.96	40.5	0.00			441		
	500 ISL	5.91	5.87	34.219	26.952	116.2	1.013	0.58	8.3	77.7	3.07	41.9	0.00			503		
2	511	5.86	5.82	34.228	26.966	115.0	1.025	0.54	7.7	78.8	3.09	42.1	0.00			514		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 87				70	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES		WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE
32 40.0 N		121 1.8 U		29/01/94	1821 UTC	3724 m	030	09 kn	330 04 06		0	1027.2 mb	14.9 c	12.1 c	45m 02			0/8	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	b			
	0 ISL	15.64	15.64	33.262	24.493	343.1	0.000	5.73	101.0	3.1	0.32	0.1	0.00	0.15	0.04			0	
2	2 A	15.64	15.64	33.262	24.493	343.2	0.007	5.73	101.0	3.1	0.32	0.1	0.00	0.15	0.04			2	
	10 ISL	15.60	15.60	33.261	24.501	342.6	0.034	5.73	100.9	3.0	0.31	0.1	0.00	0.16	0.05			10	
2	14	15.58	15.58	33.261	24.506	342.3	0.048	5.73	100.8	2.9	0.31	0.1	0.00	0.16	0.05			14	
	20 ISL	15.58	15.58	33.262	24.507	342.4	0.069	5.73	100.8	2.9	0.31	0.1	0.00	0.16	0.05			20	
2	27 A	15.58	15.58	33.263	24.508	342.5	0.093	5.73	100.8	2.9	0.31	0.0	0.00	0.15	0.05			27	
	30 ISL	15.58	15.58	33.264	24.508	342.5	0.103	5.73	100.8	2.9	0.31	0.0	0.00	0.15	0.05			30	
2	42	15.58	15.57	33.268	24.512	342.6	0.144	5.72	100.7	2.7	0.31	0.0	0.00	0.15	0.05			42	
	50 ISL	15.59	15.58	33.272	24.513	342.7	0.171	5.73	100.8	2.6	0.31	0.0	0.00	0.16	0.05			50	
2	54 A	15.59	15.58	33.274	24.515	342.7	0.185	5.73	100.8	2.6	0.31	0.0	0.00	0.17	0.05			54	
2	64	15.47	15.46	33.260	24.531	341.4	0.219	5.74	100.8	2.6	0.32	0.0	0.00	0.20	0.06			64	
2	75	14.83	14.82	33.178	24.607	334.4	0.256	5.32	100.8	2.7	0.35	0.0	0.00	0.28	0.10			75	
2	84 A	14.35	14.34	33.123	24.667	328.9	0.286	5.91	101.3	2.8	0.36	0.0	0.00	0.30	0.14			84	
2	94	13.91	13.90	33.163	24.790	317.4	0.319	5.31	98.8	3.2	0.43	0.2	0.14	0.30	0.21			94	
	100 ISL	13.76	13.75	33.272	24.905	306.6	0.337	5.59	94.8	3.7	0.48	1.0	0.09	0.23	0.19			100	
2	105	13.60	13.59	33.363	25.008	296.9	0.352	5.38	91.0	4.2	0.54	2.0	0.03	0.17	0.15			105	
2	119 A	12.42	12.40	33.401	25.271	272.1	0.392	5.06	83.5	6.7	0.77	5.4	0.02	0.10	0.09			119	
	125 ISL	11.79	11.77	33.419	25.404	259.4	0.408	4.91	80.0	8.1	0.89	7.3	0.01	0.07	0.07			125	
2	128	11.48	11.46	33.429	25.469	253.3	0.416	4.83	78.1	9.0	0.95	8.4	0.01	0.06	0.07			129	
2	142	10.42	10.40	33.486	25.702	231.2	0.450	4.37	69.1	14.5	1.29	14.4	0.01	0.02	0.07			142	
	150 ISL	10.00	9.98	33.510	25.792	222.7	0.468	4.16	65.2	16.8	1.43	16.6	0.01	0.02	0.05			151	
2	159 A	9.63	9.61	33.542	25.878	214.5	0.488	3.95	61.4	19.0	1.55	18.6	0.01	0.01	0.03			160	
2	191	8.91	8.89	33.789	26.188	185.6	0.552	3.23	49.5	26.8	1.86	24.2	0.00	0.05	0.05	U		192	
	200 ISL	8.78	8.76	33.844	26.251	179.7	0.568	3.10	47.4	28.6	1.91	25.2	0.00					201	
2	227	8.46	8.44	33.972	26.401	165.9	0.615	2.78	42.2	33.6	2.04	27.4	0.01					228	
	250 ISL	8.20	8.17	34.039	26.493	157.5	0.652	2.46	37.1	38.2	2.18	29.4	0.01					251	
2	268	8.00	7.97	34.072	26.549	152.4	0.680	2.22	33.4	41.7	2.28	30.9	0.00					269	
	300 ISL	7.60	7.57	34.097	26.628	145.3	0.727	1.93	28.8	47.4	2.41	32.9	0.00					302	
2	317	7.38	7.35	34.103	26.664	142.0	0.752	1.79	26.5	50.4	2.48	33.9	0.00					319	
2	377	6.70	6.67	34.157	26.800	129.6	0.833	1.11	16.2	62.5	2.78	38.0	0.00					379	
	400 ISL	6.53	6.49	34.173	26.836	126.4	0.863	0.95	13.8	65.9	2.86	39.0	0.00					402	
2	437	6.30	6.26	34.197	26.885	122.1	0.909	0.75	10.8	70.7	2.96	40.3	0.00					440	
	500 ISL	5.94	5.90	34.253	26.976	114.1	0.983	0.48	6.9	79.0	3.08	42.1	0.00					503	
2	513	5.87	5.83	34.265	26.994	112.4	0.998	0.42	6.0	80.7	3.11	42.5	0.00					515	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD ANT	TYPE
32 19.4 N		121 42.4 W		30/01/94	0126 UTC	4031 m	350	OS	ten	260 0 2 0 5 0		1026.9 mb	15.2 C	12.2 C			0/8	
CAST	DEPTH	TEMP'	TEMP'	POT	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	S103	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C	DEG C		THETA				HT. / I	PCT	UM/L	UM/L	UM/L	UM/L	ug/L	ug/L	db
2	0 ISL	16.38	16.38	16.38	33.436	24.459	346.3	0.000		5.66	101.3	3.1	0.28	0.1	0.00	0.11	0.03	0
	2	16.38	16.38	16.38	33.436	24.459	346.3	0.007		5.66	101.3	3.1	0.28	0.1	0.00	0.11	0.03	2
2	10 ISL	16.23	16.23	16.23	33.399	24.465	346.0	0.035		5.67	101.2	3.0	0.28	0.0	0.00	0.11	0.03	10
	16	16.10	16.10	16.10	33.369	24.472	345.6	0.055		5.67	100.9	2.9	0.28	0.0	0.00	0.11	0.03	16
2	20 tSL	16.12	16.12	16.12	33.378	24.475	345.5	0.069		5.66	100.7	2.9	0.27	0.0	0.00	0.11	0.03	20
	30	16.17	16.17	16.17	33.399	24.480	345.3	0.104		5.65	100.7	2.8	0.26	0.0	0.00	0.12	0.04	30
2	45	16.18	16.17	16.17	33.413	24.489	344.9	0.155		5.66	100.9	2.8	0.26	0.0	0.00	0.12	0.04	45
	50 ISL	16.20	16.19	16.19	33.418	24.488	345.1	0.173		5.65	100.7	2.8	0.26	0.0	0.00	0.13	0.04	50
2	59	16.23	16.22	16.22	33.428	24.489	345.3	0.204		5.64	100.6	2.7	0.26	0.0	0.00	0.15	0.04	59
2	75	15.60	15.59	15.59	33.434	24.636	331.7	0.258		5.63	99.2	2.7	0.26	0.0	0.01	0.17	0.06	75
2	86	14.95	14.94	14.94	33.559	24.875	309.2	0.293		5.55	96.6	3.4	0.33	0.6	0.13	0.25	0.16	86
2	94	14.150	14.79	14.79	33.600	24.940	303.3	0.318		5.44	94.4	3.7	0.39	1.2	0.08	0.22	0.16	94
2	100 ISL	14.32	14.31	14.31	33.580	25.027	295.2	0.336		5.35	91.9	4.2	0.45	2.1	0.05	0.20	0.15	100
2	104	13.99	13.98	13.98	33.567	25.086	289.6	0.347		5.30	90.5	4.5	0.49	2.8	0.03	0.18	0.14	104
2	115	13.75	13.73	13.73	33.621	25.177	281.2	0.379		5.17	87.8	5.1	0.55	4.0	0.01	0.12	0.11	115
2	125	12.47	12.45	12.45	33.506	25.343	265.4	0.406		5.00	82.6	7.2	0.76	6.9	0.01	0.08	0.07	126
2	139	10.77	10.75	10.75	33.452	25.614	239.5	0.441		4.67	74.4	11.7	1.11	12.3	0.01	0.03	0.05	140
2	150 ISL	9.35	9.83	9.83	33.470	25.786	223.2	0.467		4.25	66.4	16.5	1.41	16.9	0.01	0.01	0.04	151
	164	9.08	9.06	9.06	33.538	25.964	206.4	0.497		3.79	58.2	22.1	1.71	21.5	0.00	0.00	0.03	165
2	194	8.49	8.47	8.47	33.769	26.237	180.9	0.555		3.89	59.0	25.6	1.70	2.2	0.00	0.00	0.01	95
	200 ISL	8.44	8.42	8.42	33.810	26.277	177.2	0.566		3.76	57.0	26.9	1.74	22.8	0.00	0.00	0.01	201
2	227	8.30	8.28	8.28	33.956	26.413	164.7	0.612		3.04	46.0	33.0	1.97	2.6	0.00	0.00	0.01	228
	250 ISL	8.21	8.18	8.18	34.018	26.475	159.2	0.649		2.73	41.2	36.5	2.08	2.75	0.00	0.00	0.01	251
2	269	8.07	8.04	8.04	34.042	26.515	155.7	0.679		2.55	38.4	39.3	2.16	28.6	0.00	0.00	0.01	270
	300 ISL	7.45	7.42	7.42	34.054	26.615	146.4	0.726		2.24	33.2	46.3	2.33	31.0	0.00	0.00	0.01	302
2	318	7.06	7.03	7.03	34.057	26.672	141.1	0.752		2.05	30.2	50.7	2.43	32.4	0.00	0.00	0.01	320
	376	6.44	6.41	6.41	34.111	26.798	129.5	0.830		1.29	18.7	63.2	2.73	36.3	0.00	0.00	0.01	378
2	400 ISL	6.30	6.26	6.26	34.129	26.831	126.7	0.861		1.10	15.9	66.6	2.81	37.2	0.00	0.00	0.01	402
	437	6.13	6.09	6.09	34.157	26.875	122.9	0.907		0.89	12.8	70.9	2.91	38.2	0.00	0.00	0.01	440
2	500 ISL	5.84	5.80	5.80	34.217	26.959	115.5	0.982		0.57	3.2	78.9	3.08	39.8	0.00	0.00	0.01	503
	513	5.78	5.74	5.74	34.230	26.977	113.9	0.997		0.50	7.1	80.6	3.11	40.1	0.00	0.00	0.01	516

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER		DRY	WET	SECCHI / FOREL		CLD	AMT	TYPE
31 59.5 N		122 22.8 W		30/01/94	0810 UTC	4062 H	010	11	kn			1027.6 mb	14.3 C	12.1 C					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S103	P04	N03	IMD 2	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			mL / L	PCT	UM/L	UM/L	UM/L	UM/L	ug/L	ug/L	db			
2	0 ISL	15.98	15.98	33.336	24.473	344.9	0.000	5.68	100.8	2.9	0.29	0.0	0.00	0.14	0.04	0			
	1	15.98	15.98	33.336	24.473	344.9	0.003	5.68	100.8	2.9	0.29	0.0	0.00	0.14	0.04	1			
2	10 ISL	15.99	15.99	33.339	24.474	344.2	0.035	5.68	100.8	2.7	0.29	0.0	0.00	0.14	0.04	10			
	15	16.00	16.00	33.341	24.473	345.4	0.052	5.68	100.8	2.6	0.29	0.0	0.00	0.14	0.05	15			
2	20 ISL	16.00	16.00	33.341	24.473	345.6	0.069	5.68	100.8	2.5	0.28	0.0	0.00	0.14	0.05	20			
	30	16.01	16.01	33.341	24.471	346.1	0.104	5.67	100.7	2.4	0.27	0.0	0.00	0.14	0.04	30			
2	45	16.01	16.00	33.344	24.474	346.3	0.156	5.68	100.9	2.4	0.28	0.0	0.00	0.14	0.04	45			
	50 ISL	16.00	15.99	33.343	24.476	346.3	0.173	5.68	100.8	2.4	0.28	0.0	0.00	0.14	0.04	50			
2	60	15.97	15.96	33.342	24.482	346.0	0.207	5.68	100.3	2.4	0.28	0.0	0.00	0.14	0.04	60			
2	74	16.01 U		33.332			0.256	5.68	100.2	2.4	0.27	0.0	0.00	0.16	0.05	74			
	75 ISL	15.69	15.68	33.321	24.529	341.9	0.259	5.69	100.4	2.4	0.27	0.0	0.00	0.17	0.05	75			
2	85	15.45	15.44	33.294	24.562	339.1	0.293	5.73	100.6	2.5	0.29	0.0	0.00	0.22	0.07	85			
2	95	15.27	15.26	33.401	24.684	327.7	0.326	5.65	98.9	2.7	0.35	0.1	0.08	0.25	0.16	95			
	100 ISL	15.06	15.04	33.493	24.801	315.7	0.343	5.51	96.1	3.1	0.38	0.6	0.07	0.23	0.17	100			
2	104	14.85	14.83	33.556	24.895	307.9	0.355	5.39	93.6	3.4	0.40	1.1	0.06	0.21	0.17	104			
2	115	14.08	14.06	33.540	25.047	293.7	0.388	5.23	89.4	4.4	0.52	3.0	0.02	0.14	0.15	115			
	125 ISL	13.54	13.52	33.574	25.184	280.8	0.417	5.13	86.7	5.4	0.59	4.4	0.02	0.11	0.11	126			
I	126	13.48	13.46	33.577	25.198	279.4	0.420	5.12	86.5	5.5	0.60	4.6	0.02	0.11	0.11	127			
2	139	12.19	12.17	33.553	25.433	257.1	0.455	4.91	80.7	7.7	0.81	8.0	0.01	0.06	0.06	140			
	150 ISL	11.19	11.17	33.522	25.594	241.8	0.482	4.74	76.2	10.3	1.00	11.0	0.00	0.03	0.05	151			
?	164	10.13	10.11	33.506	25.767	225.4	0.515	4.52	71.0	14.0	1.23	14.6	0.00	0.01	0.04	165			
2	195	8.86	8.84	33.660	26.094	194.5	0.580	4.06	62.1	21.5	1.57	20.3	0.00	0.00	0.02	196			
	200 ISL	8.76	8.74	33.689	26.133	190.9	0.589	4.01	61.2	22.4	1.60	2.08	0.00	0.00	0.01	201			
2	223	8.37	8.35	33.836	26.308	174.7	0.641	3.74	56.6	27.3	1.73	22.9	0.00	0.00	0.01	229			
	250 ISL	8.05	8.02	33.907	26.412	165.1	0.678	3.50	52.6	31.5	1.84	24.8	0.00	0.00	0.01	251			
2	268	7.80	7.77	33.945	26.479	139.0	0.707	3.31	49.5	34.9	1.92	2.63	0.00	0.00	0.01	269			
	300 ISL	7.36	7.33	33.975	26.566	151.0	0.757	3.10	45.9	40.3	2.04	28.1	0.00	0.00	0.01	302			
2	319	7.11	7.08	33.981	26.605	147.4	0.785	2.96	43.6	43.6	2.11	29.1	0.00	0.00	0.01	321			
	378	6.41	6.38	34.016	26.727	136.2	0.869	2.04	29.5	56.8	2.47	34.2	0.00	0.00	0.01	380			
2	400 ISL	6.21	6.17	34.032	26.766	132.7	0.898	1.63	23.5	61.2	2.57	35.6	0.00	0.00	0.01	402			
	438	5.92	5.88	34.063	26.827	127.2	0.948	1.03	14.7	68.1	2.73	37.5	0.00	0.00	0.01	441			
2	500 ISL	5.51	5.47	34.114	26.918	119.0	1.024	0.87	12.3	78.1	2.95	39.7	0.00	0.00	0.01	503			
	512	5.43	5.39	34.124	26.936	117.3	1.038	0.84	11.9	80.0	2.99	40.1	0.00	0.00	0.01	515			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 87 100				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES			WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
31 38.3 N		123 5.0 W		30/01/94	1814 UTC	4096 m	020 08 kn	010 02 05	1			1026.9 mb	15.1 c	12.2 c	46m 01	1 / 8	AC	
CAST	DEPTH	TEMP	POT	TEHP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	NQ3	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C			THETA				ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	16.18	16.18		33.370	24.454	346.8	0.000		5.65	100.7	3.0	0.30	0.0	0.00	0.16	0.04	0
2	2 A	16.18	16.18		33.370	24.454	346.8	0.007		5.65	100.7	3.0	0.30	0.0	0.00	0.16	0.04	2
	10 ISL	16.16	16.16		33.368	24.457	346.8	0.035		5.65	100.6	2.9	0.30	0.0	0.00	0.16	0.05	10
2	14	16.14	16.14		33.367	24.461	346.5	0.049		5.65	100.6	2.9	0.30	0.0	0.00	0.16	0.05	14
	20 ISL	16.14	16.14		33.367	24.462	346.7	0.069		5.65	100.6	2.8	0.30	0.0	0.00	0.16	0.05	20
2	27 A	16.14	16.14		33.367	24.462	346.9	0.094		5.65	100.6	2.7	0.30	0.0	0.00	0.15	0.05	27
	30 ISL	16.14	16.14		33.366	24.461	347.0	0.104		5.65	100.6	2.7	0.30	0.0	0.00	0.15	0.05	30
2	43	16.12	16.11		33.362	24.463	347.3	0.149		5.65	100.5	2.7	0.30	0.0	0.00	0.15	0.05	43
	50 ISL	16.11	16.10		33.359	24.463	347.5	0.173		5.65	100.5	2.7	0.30	a.o	0.00	0.16	0.05	50
2	56 A	16.10	16.09		33.357	24.464	347.6	0.194		5.66	100.7	2.7	0.30	0.0	0.00	0.16	0.05	56
2	70	16.11	16.10		33.360	24.465	348.0	0.243		5.68	101.1	2.6	0.29	0.0	0.00	0.16	0.05	70
	75 ISL	16.12	16.11		33.361	24.464	348.3	0.260		5.67	100.9	2.6	0.29	0.0	0.00	0.16	0.05	75
2	85 A	16.14	16.13		33.364	24.462	348.8	0.295		5.65	100.6	2.6	0.29	0.0	0.00	0.16	0.05	85
2	93	16.13	16.12		33.366	24.466	348.6	0.323		5.65	100.6	2.5	0.29	0.0	0.00	0.16	0.07	93
	100 ISL	15.40	15.38		33.374	24.635	332.6	0.347		5.64	98.9	2.8	0.34	0.1	0.13	0.21	0.13	100
2	103	15.04	15.02		33.379	24.718	324.8	0.357		5.63	98.0	2.9	0.36	0.1	0.18	0.23	0.16	103
2	110	14.67	14.65		33.378	24.797	317.4	0.379		5.59	96.6	3.1	0.39	0.4	0.15	0.20	0.16	110
2	120 A	14.60	14.58		33.523	24.924	305.6	0.410		5.36	92.6	3.6	0.45	1.4	0.04	0.20	0.18	120
	125 ISL	14.47	14.45		33.560	24.980	300.4	0.426		5.28	91.0	3.9	0.48	2.0	0.03	0.17	0.16	126
2	135	13.93	13.91		33.577	25.107	288.5	0.455		5.15	87.8	4.9	0.58	3.6	0.02	0.10	0.11	136
2	150	12.28	12.26		33.503	25.378	262.7	0.496		4.93	81.2	7.4	0.83	7.5	0.01	0.05	0.06	151
2	164 A	11.15	11.13		33.471	25.562	245.2	0.532		4.70	75.5	10.7	1.07	11.4	0.00	0.03	0.04	165
2	193	9.30	9.28		33.561	25.947	208.6	0.598		4.17	64.4	18.7	1.49	18.4	0.00	0.01	0.03	194
	200 ISL	9.05	9.03		33.606	26.022	201.5	0.612		4.05	62.2	20.5	1.56	19.6	0.00			201
2	228	8.45	8.43		33.794	26.263	179.0	0.665		3.60	54.6	27.1	1.77	23.3	0.00			229
	250 ISL	8.19	8.16		33.902	26.387	167.5	0.703		3.23	48.7	31.7	1.92	25.5	0.00			251
2	267	8.04	8.01		33.961	26.456	161.2	0.731		2.98	44.8	34.9	2.01	26.9	0.00			268
	300 ISL	7.60	7.57		34.005	26.555	152.2	0.783		2.79	41.5	40.3	2.12	28.7	0.00			302
2	318	7.35	7.32		34.010	26.595	148.5	0.810		2.71	40.1	43.1	2.17	29.5	0.00			320
2	377	6.73	6.70		34.037	26.702	138.9	0.895		2.04	29.8	54.2	2.46	33.4	0.00			379
	400 ISL	6.49	6.45		34.053	26.746	134.8	0.926		1.74	25.3	59.0	2.58	35.0	0.00			402
2	435	6.16	6.12		34.079	26.810	129.0	0.973		1.33	19.2	66.1	2.75	37.2	0.00			438
	500 ISL	5.76	5.72		34.127	26.898	121.1	1.054		0.91	13.0	75.6	2.93	39.3	0.00			503
2	513	5.68	5.64		34.137	26.916	119.5	1.070		0.83	11.8	77.5	2.97	39.7	0.00			516

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 87 110			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE				
31 19.3 N	123 44.5 U	30/01/94	2321 UTC	3850 m	360 08 kn	340 02 05	1	1025.0 mb	17.0 c	13.1 c	28m 01	3/8	CS				
CAST	DEPTH	TEHP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.79	16.79	33.495	24.410	351.0	0.000	5.59	100.9	2.4	0.28	0.0	0.00	0.13	0.03	0	
2	1	16.79	16.79	33.495	24.410	351.0	0.004	5.59	100.9	2.4	0.28	0.0	0.00	0.13	0.03	1	
	10 ISL	16.70	16.70	33.494	24.430	349.4	0.035	5.50	100.9	2.3	0.28	0.0	0.00	0.13	0.04	10	
2	15	16.63	16.63	33.494	24.447	348.0	0.052	5.50	100.8	2.3	0.28	0.0	0.00	0.13	0.04	15	
	20 ISL	16.63	16.63	33.494	24.447	348.1	0.070	5.61	100.9	2.3	0.28	0.0	0.00	0.13	0.04	20	
2	30	16.62	16.62	33.494	24.449	348.2	0.105	5.61	100.9	2.3	0.29	0.0	0.00	0.14	0.05	30	
	44	16.62	16.61	33.494	24.450	348.6	0.153	5.59	100.5	2.2	0.28	0.0	0.00	0.15	0.05	44	
2	50 ISL	16.62	16.61	33.494	24.450	348.8	0.174	5.59	100.5	2.2	0.28	0.0	0.00	0.15	0.05	50	
	60	16.62	16.61	33.495	24.451	349.0	0.209	5.60	100.7	2.2	0.28	0.0	0.00	0.14	0.05	60	
2	75	16.62	16.61	33.493	24.450	349.6	0.262	5.60	100.7	2.2	0.28	0.0	0.00	0.15	0.05	75	
	85	16.62	16.61	33.494	24.452	349.8	0.297	5.60	100.7	2.2	0.30	0.0	0.00	0.15	0.06	85	
2	95	16.60	16.58	33.494	24.457	349.7	0.332	5.59	100.5	2.2	0.30	0.1	0.00	0.16	0.06	95	
	100 ISL	16.09	16.07	33.495	24.574	338.5	0.349	5.58	99.3	2.4	0.33	0.1	0.09	0.19	0.10	100	
2	105	15.56	15.54	33.507	24.702	326.4	0.365	5.56	97.9	2.6	0.36	0.1	0.17	0.21	0.15	105	
	115	15.32	15.30	33.569	24.803	317.0	0.398	5.45	95.6	2.9	0.40	0.4	0.15	0.19	0.16	115	
2	125	14.91	14.89	33.609	24.924	305.8	0.429	5.34	92.9	3.3	0.45	1.2	0.03	0.14	0.12	126	
	140	13.95	13.93	33.598	25.119	287.5	0.473	5.19	88.5	4.7	0.56	2.9	0.01	0.09	0.09	141	
2	150 ISL	12.84	12.82	33.539	25.297	270.5	0.501	5.03	83.8	6.5	0.73	5.4	0.00	0.06	0.07	151	
	164	11.26	11.24	33.473	25.544	247.0	0.537	4.79	77.1	9.6	1.00	9.4	0.00	0.03	0.04	165	
2	194	9.59	9.57	33.514	25.864	216.7	0.607	4.31	66.9	16.5	1.42	16.4	0.00	0.01	0.03	195	
	200 ISL	9.37	9.35	33.542	25.921	211.2	0.620	4.22	65.2	17.7	1.47	17.4	0.00			201	
2	229	8.66	8.64	33.707	26.163	188.6	0.678	3.81	58.0							230	
	250 ISL	8.39	8.36	33.822	26.295	176.4	0.716	3.61	54.7	27.3	1.80	23.8	0.00	0.00		251	
2	268	8.22	8.19	33.905	26.385	168.0	0.747	3.44	51.9	30.7	1.87	25.3	0.00			269	
	300 ISL	7.78	7.75	33.982	26.511	156.4	0.799	3.01	45.0	37.6	2.06	28.7	0.00			302	
2	319	7.52	7.49	34.005	26.567	151.3	0.828	2.75	40.9	41.6	2.17	30.5	0.00			321	
	377	6.81	6.78	34.033	26.688	140.3	0.913	2.12	31.0	52.4	2.47	35.0	0.00			379	
2	400 ISL	6.53	6.49	34.046	26.735	135.9	0.945	1.83	26.6	57.3	2.58	36.8	0.00			402	
	437	6.11	6.07	34.071	26.810	129.0	0.994	1.39	20.0	65.4	2.74	39.6	0.00			440	
2	500 ISL	5.63	5.59	34.128	26.915	119.4	1.072	0.88	12.5	77.6	2.96	42.8	0.00			503	
	513	5.53	5.49	34.140	26.936	117.4	1.087	0.78	11.1	80.1	3.00	43.5	0.00			516	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90 28			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	FOR ECLD	AMT	TYPE		
33 29.1 N	117 46.1 U	28/01/94	0013 UTC	68 m	080	08 kn	100 01 04	1	1015.0 mb	15.2 c	10.5 c	09m	05	3 / 8	CU		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	PO 4	NO3	NO2	CHL-A	PHAE0	PRES	
	m	DEG C	DEG C		THETA			ml / l	PCT	uM / l	uM / l	uM / l	uM / l	ug / l	ug / l	db	
	0 ISL	15.05	15.05	33.150	24.536	339.0	0.000	6.49	112.9	1.7	0.29	0.0	0.01	4.65	0.87	0	
2	2	15.05	15.05	33.150	24.536	339.0	0.007	6.49	112.9	1.7	0.29	0.0	0.01	4.65	0.87	2	
	10 ISL	15.06	15.06	33.172	24.551	337.8	0.034	6.28	109.3	1.8	0.29	0.0	0.01	4.27	0.73	10	
2	11	15.06	15.06	33.176	24.554	337.5	0.037	6.25	108.8	1.8	0.29	0.0	0.01	4.23	0.71	11	
2	20	14.97	14.97	33.180	24.577	335.7	0.068	6.07	105.5	1.9	0.32	0.0	0.02	4.63	0.79	20	
2	30	14.16	14.16	33.182	24.751	319.4	0.100	5.26	89.9	5.4	0.73	2.4	0.43	0.41	0.23	50	
2	41	13.25	13.24	33.248	24.988	297.0	0.134	5.17	86.7	6.0	0.74	4.9	0.24	0.29	0.20	41	
2	49	12.74	12.73	33.301	25.130	283.7	0.157	4.92	81.7	7.2	0.83	6.7	0.06	0.21	0.19	19	
	50 ISL	12.73	12.72	33.301	25.132	283.5	0.160	4.91	81.5	7.3	0.84	6.8	0.06	0.21	0.19	50	
2	61	12.64	12.63	33.304	25.152	281.9	0.191	4.80	79.5	8.0	0.91	7.3	0.10	0.19	0.20	41	

RV DAVID S RWR JORDAN				CALCOFI CRUISE 9401										STATION 90 30			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE				
33 25.3 N	117 54.0 W	27/01/94	1827 UTC	614 m	060 14 kn	300 02 08	1	1014.2 mb	13.4 C	11.8 C	19m 03	6/8	CU				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	PO4	NO3	NO2	CHL-A	PHAE0	PRES	
m	DEG C	DEG C		THETA				ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	a ISL	15.08	15.08	33.251	24.607	332.2	0.000	5.93	103.3	3.1	0.31	0.0	0.00	0.30	0.07	0	
2	2 A	15.08	15.08	33.251	24.607	332.2	0.007	5.93	103.3	3.1	0.31	0.0	0.00	0.30	0.07	2	
	10 ISL	15.06	15.06	33.251	24.612	332.0	0.033	5.93	103.3	3.1	0.29	0.0	0.00	0.28	0.07	10	
2	12 A	15.06	15.06	33.250	24.611	332.1	0.040	5.93	103.3	3.1	0.29	0.0	0.00	0.27	0.07	12	
	20 ISL	15.00	15.00	33.249	24.624	331.2	0.066	5.94	103.3	3.1	0.30	0.0	0.00	0.28	0.08	20	
2	23 A	14.98	14.98	33.249	24.628	330.9	0.076	5.94	103.3	3.1	0.30	0.0	0.00	0.29	0.09	23	
2	30	14.43	14.43	33.235	24.735	320.9	0.099	5.81	99.9	3.7	0.37	0.0	0.01	0.63	0.36	30	
2	36 A	14.12	14.11	33.241	24.805	314.4	0.118	5.75	98.2	4.2	0.41	0.2	0.08	1.35	0.62	36	
2	42	13.78	13.77	33.240	24.875	307.9	0.137	5.45	93.1	4.8	0.52	2.0	0.21	0.86	0.51	42	
2	50 A	13.22	13.21	33.250	24.996	296.6	0.161	5.30	88.9	5.6	0.63	4.0	0.12	0.43	0.34	50	
2	59	12.50	12.49	33.272	25.154	281.6	0.187	5.03	83.1	7.7	0.80	6.9	0.04	0.20	0.20	59	
2	69 A	12.01	12.00	33.300	25.269	270.9	0.215	4.72	77.3	9.6	0.97	9.6	0.02	0.16	0.17	69	
	75 ISL	11.76	11.75	33.325	25.335	264.7	0.231	4.60	74.8	10.6	1.04	10.8	0.01	0.13	0.15	75	
2	35	11.38	11.37	33.369	25.440	255.0	0.257	4.43	71.5	12.1	1.14	12.4	0.01	0.08	0.11	85	
2	99	10.36	10.85	33.423	25.575	242.4	0.292	4.24	67.7	14.5	1.27	14.6	0.01	0.05	0.07	99	
100	1 ISL	10.84	10.83	33.430	25.584	241.5	0.294	4.21	67.2	14.6	1.28	14.7	0.01	0.05	0.07	100	
2	119	10.60	10.59	33.596	25.756	225.6	0.338	3.63	57.7	17.7	1.50	17.6	0.01	0.02	0.06	120	
125	1 ISL	10.46	10.45	33.652	25.824	219.2	0.352	3.40	55.0	19.2	1.57	18.7	0.01	0.01	0.05	126	
2	140	10.04	10.02	33.779	25.995	203.3	0.383	3.13	49.2	23.1	1.74	21.4	0.00	0.00	0.04	141	
150	1 ISL	9.72	9.70	33.829	26.088	194.6	0.403	3.01	47.0	25.1	1.82	22.6	0.00	0.00	0.03	151	
2	169	9.19	9.17	33.899	26.229	181.4	0.439	2.86	44.1	28.5	1.94	24.4	0.01	0.00	0.03	170	
2	199	8.85	8.83	34.009	26.370	168.6	0.491	2.57	39.4	33.2	2.04	26.4	0.00	0.00	0.03	200	
200	1 ISL	8.84	8.82	34.012	26.373	168.2	0.493	2.56	39.2	33.3	2.04	26.4	0.00	0.00	0.03	201	
229	8.68	8.66	8.66	34.072	26.446	161.9	0.541	2.31	35.9	36.3	2.13	27.5	0.00	0.00	0.03	230	
250	1 ISL	8.42	8.39	34.103	26.510	156.0	0.574	2.16	32.8	39.7	2.22	28.6	0.00	0.00	0.03	251	
269	8.16	8.13	8.13	34.125	26.567	150.9	0.604	1.97	29.7	43.1	2.31	29.7	0.00	0.00	0.03	271	
300	1 ISL	7.85	7.82	34.153	26.635	144.8	0.649	1.67	25.0	47.9	2.44	31.4	0.00	0.00	0.03	302	
2	319	7.70	7.67	34.169	26.670	141.7	0.677	1.43	22.1	50.7	2.52	32.3	0.00	0.00	0.03	321	
2	378	7.41	7.37	34.240	26.768	133.3	0.758	0.90	13.4	58.2	2.75	34.4	0.00	0.00	0.03	380	
400	1 ISL	7.26	7.22	34.254	26.801	130.4	0.787	0.77	11.4	60.9	2.81	35.1	0.00	0.00	0.03	403	
2	437	6.97	6.93	34.271	26.854	125.7	0.834	0.61	9.0	65.7	2.90	36.2	0.00	0.00	0.03	440	
500	1 ISL	6.40	6.35	34.296	26.951	117.0	0.911	0.44	6.4	75.4	3.06	37.9	0.00	0.00	0.03	503	
2	513	6.28	6.23	34.302	26.971	115.1	0.926	0.41	5.9	77.4	3.09	38.3	0.00	0.00	0.03	517	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90 35			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLO AMT	TYPE		
33 15.9 N		118 15.3 W		27/01/94	1419 UTC	212m	290 11 kn	290 0 4 0 7 1		1014 1 mb	13.7 c	10.8 c		4/8	CU		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	PO4	NO3	NO2	CHL-A	PHAE0	PRES	
	m	DEG C	DEG C		THETA			lt/L	PCT	uM/L	uM/L	uN/ I	uM/ I	ug/L	ug/L	db	
	0 ISL	15.36	15.36	33.232	2 4.531	339.4	0.000	5.80	101.6	3.2	0.29	0.0	0.00	0.32	0.08	0	
2	2	15.36	15.36	33.232	2 4.531	339.5	0.007	5.80	101.6	3.2	0.29	0.0	0.00	0.32	0.08	2	
	10 ISL	15.37	15.37	33.232	24.530	339.9	0.034	5.81	101.8	3.2	0.29	0.0	0.00	0.32	0.07	10	
2	15	15.37	15.37	33.232	2 4.530	340.0	0.051	5.81	101.8	3.1	0.29	0.0	0.00	0.32	0.07	15	
	20 ISL	15.36	15.36	33.232	24.532	339.9	0.068	5.81	101.8	3.0	0.29	0.0	0.00	0.33	0.08	20	
2	30	15.33	15.33	33.233	24.540	339.5	0.102	5.81	101.7	2.9	0.29	0.0	0.00	0.36	0.09	30	
2	45	14.88	14.87	33.241	24.644	330.0	0.152	5.80	100.6	3.4	0.37	0.0	0.03	0.81	0.25	45	
	50 ISL	14.61	14.60	33.234	24.697	325.1	0.169	5.70	98.3	3.6	0.42	0.2	0.13	0.87	0.24	50	
2	53	14.43	14.42	33.231	24.733	321.8	0.178	5.63	96.8	3.7	0.45	0.4	0.19	0.91	0.24	53	
2	66	13.78	13.77	33.251	24.884	307.7	0.219	5.35	90.7	5.0	0.60	2.9	0.11	0.35	0.22	66	
2	75	13.23	13.22	33.291	25.026	294.3	0.246	5.10	85.5	6.4	0.74	5.1	0.04	0.24	0.20	75	
2	84	12.11	12.10	33.364	25.301	268.3	0.272	4.67	76.5	9.5	1.01	9.5	0.03	0.12	0.13	84	
2	95	11.47	11.46	33.424	25.466	252.7	0.300	4.38	70.8	12.1	1.19	12.6	0.02	0.07	0.09	95	
	100 ISL	11.20	11.19	33.444	25.531	246.6	0.313	4.26	68.5	13.3	1.26	13.8	0.02	0.04	0.07	100	
2	109	10.79	10.78	33.491	25.641	236.4	0.334	4.03	64.3	15.5	1.39	15.8	0.02	0.01	0.05	110	
2	125	10.43	10.42	33.662	25.837	218.0	0.371	3.44	54.5	19.6	1.62	19.1	0.01	0.04	0.06	126	
2	144	10.15	10.13	33.752	25.955	207.1	0.411	3.19	50.2	22.4	1.74	21.0	0.00	0.00	0.04	145	
	150 ISL	9.93	9.91	33.760	25.999	203.1	0.423	3.18	49.8	23.3	1.77	21.6	0.00	0.00	0.04	151	
2	170	9.20	9.18	33.795	26.146	189.3	0.463	3.13	48.3	26.5	1.86	23.6	0.01	0.00	0.04	171	
	200 ISL	8.82	8.80	34.005	26.371	168.4	0.516	2.53	39.0	33.6	2.08	26.7	0.01	0.00	0.04	201	
2	201	8.81	8.79	34.012	26.378	167.8	0.518	2.53	38.7	33.8	2.09	26.8	0.01	0.00	0.04	202	

RV DAVID STARR JORDAN					CALCOFI CRUISE 9401										STATION 90		37	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
33 11.6 N		118 23.6 W		27/01/94	1118 UTC	1177 m	290	19 kn			1015.3 mb	13.5 c	11.1 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.39	15.39	33.242	24.532	339.3	0.000	5.80	101.7	3.0	0.34	0.0	0.00	0.21	0.07	0		
2	2	15.39	15.39	33.242	24.533	339.4	0.007	5.80	101.7	3.0	0.34	0.0	0.00	0.21	0.07	2		
	10 ISL	15.40	15.40	33.242	24.531	339.8	0.034	5.81	101.9	2.8	0.33	0.0	0.00	0.21	0.07	10		
2	15	15.40	15.40	33.242	24.531	339.9	0.051	5.81	101.9	2.6	0.33	0.0	0.00	0.21	0.07	15		
	20 ISL	15.40	15.40	33.242	24.531	340.1	0.068	5.81	101.9	2.6	0.33	0.0	0.00	0.21	0.07	20		
2	30	15.40	15.40	33.242	24.531	340.3	0.102	5.80	101.7	2.7	0.33	0.0	0.00	0.22	0.06	30		
2	45	14.67	14.66	33.240	24.688	325.8	0.152	5.34	100.9	3.2	0.37	0.0	0.01	0.55	0.23	45		
	50 ISL	14.33	14.32	33.239	24.760	319.1	0.168	5.68	97.4	3.7	0.46	0.7	0.14	0.59	0.33	50		
2	54	14.05	14.04	33.240	24.819	313.5	0.181	5.54	94.5	4.1	0.53	1.5	0.22	0.62	0.39	54		
2	65	13.40	13.39	33.251	24.961	300.3	0.214	5.27	88.7	5.6	0.66	3.9	0.07	0.36	0.26	65		
2	75	12.71	12.70	33.339	25.166	281.0	0.244	4.63	76.8	8.9	0.94	8.6	0.01	0.18	0.18	75		
2	84	12.50	12.49	33.386	25.243	273.8	0.268	4.38	72.4	10.0	1.05	10.3	0.02	0.12	0.14	84		
2	95	11.74	11.73	33.403	25.400	259.0	0.298	4.43	72.1	11.3	1.13	11.5	0.02	0.09	0.13	95		
	100 ISL	11.42	11.41	33.429	25.479	251.6	0.311	4.53	70.0	12.3	1.21	12.7	0.02	0.07	0.11	100		
2	110	10.89	10.88	33.491	25.623	238.1	0.335	4.36	64.9	14.6	1.38	15.2	0.01	0.03	0.08	111		
2	125	10.44	10.43	33.567	25.761	225.2	0.370	3.77	59.7	17.5	1.52	17.5	0.00	0.02	0.07	126		
2	145	9.97	9.95	33.691	25.938	208.7	0.413	3.59	53.2	21.2	1.70	20.5	0.00	0.01	0.06	146		
	150 ISL	9.93	9.91	33.732	25.977	205.1	0.424	3.27	51.2	22.1	1.75	21.1	0.00	0.01	0.06	151		
2	168	9.83	9.81	33.871	26.103	193.6	0.459	2.58	45.1	25.2	1.89	23.0	0.00	0.00	0.04	169		
2	199	9.46	9.44	33.972	26.243	180.8	0.517	2.56	41.3	28.8	2.00	24.8	0.00	0.00	0.03	200		
	200 ISL	9.44	9.42	33.976	26.250	180.2	0.519	2.55	41.1	29.0	2.00	24.9	0.00			201		
2	228	8.93	8.91	34.070	26.405	165.8	0.568	2.41	37.0	34.1	2.13	26.8	0.00			229		
	250 ISL	8.60	8.57	34.095	26.477	159.3	0.603	2.29	34.9	37.2	2.20	28.0	0.00			251		
2	270	8.35	8.32	34.104	26.522	155.2	0.635	2.18	33.0	39.8	2.26	28.9	0.00			272		
	300 ISL	8.06	8.03	34.136	26.591	149.1	0.681	1.97	28.2	44.4	2.40	30.5	0.00			302		
2	318	7.93	7.90	34.156	26.626	146.0	0.707	1.97	25.1	47.1	2.48	31.4	0.00			320		
2	379	7.59	7.55	34.223	26.729	137.1	0.793	1.07	15.9	54.8	2.66	33.7	0.00			381		
	400 ISL	7.42	7.38	34.241	26.768	133.7	0.822	0.90	13.4	58.0	2.74	34.5	0.00			403		
2	437	7.08	7.04	34.267	26.836	127.5	0.870	0.86	9.7	63.8	2.88	35.9	0.00			440		
	500 ISL	6.52	6.47	34.294	26.934	118.7	0.948	0.84	6.4	72.6	3.05	37.9	0.00			503		
2	513	6.41	6.36	34.300	26.953	117.0	0.963	0.89	5.7	74.4	3.08	38.3	0.00			516		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90		45	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
32 55.6 N		118 55.5 W		27/01/94	0520 UTC	1689 m	310	21 kn			1018.3 mb	13.6 c	11.2 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	14.62	14.62	33.241	24.698	323.5	0.000	5.50	101.8	3.4	0.35	0.0	0.00	0.29	0.10	0	
2	2	14.62	14.62	33.241	24.699	323.5	0.006	5.50	101.8	3.4	0.35	0.0	0.00	0.29	0.10	2	
	10 ISL	14.63	14.63	33.242	24.697	323.9	0.032	5.91	102.0	3.3	0.35	0.0	0.00	0.31	0.11	10	
2	16	14.63	14.63	33.242	24.698	324.0	0.052	5.92	102.2	3.3	0.35	0.0	0.00	0.32	0.11	16	
	20 ISL	14.55	14.55	33.243	24.715	322.5	0.065	5.92	102.0	3.3	0.35	0.0	0.00	0.39	0.12	20	
2	30 ISL	14.31	14.31	33.249	24.771	317.4	0.097	5.93	101.7	3.4	0.38	0.1	0.02	0.62	0.21	50	
	31	14.28	14.28	33.250	24.778	316.8	0.100	5.93	101.6	3.4	0.38	0.1	0.02	0.65	0.22	31	
2	46	14.05	14.04	33.269	24.841	311.2	0.147	5.80	98.9	3.8	0.45	1.0	0.08	1.13	0.54	46	
	50 ISL	13.97	13.96	33.269	24.858	309.7	0.159	5.76	98.1	4.1	0.47	1.3	0.10	0.82	0.43	50	
2	54	13.89	13.88	33.268	24.874	308.3	0.172	5.72	97.3	4.3	0.49	1.5	0.12	0.49	0.31	54	
2	66	13.56	13.55	33.271	24.944	301.9	0.208	5.66	95.6	4.6	0.53	2.1	0.16	0.40	0.35	66	
2	75	12.83	12.82	33.314	25.123	285.1	0.235	5.18	86.2	7.7	0.78	6.1	0.27	0.20	0.19	75	
2	84	11.97	11.96	33.372	25.333	265.2	0.260	4.75	77.6	10.9	1.01	10.1	0.13	0.14	0.13	84	
2	96	11.43	11.42	33.411	25.463	253.0	0.291	4.51	72.9	13.3	1.16	12.5	0.07	0.12	0.12	96	
	100 ISL	11.30	11.29	33.413	25.489	250.7	0.301	4.47	72.0	13.5	1.19	12.9	0.06	0.11	0.12	100	
2	107	11.09	11.08	33.416	25.529	247.0	0.318	4.41	70.7	13.8	1.23	13.4	0.05	0.10	0.11	107	
2	123	10.43	10.42	33.464	25.682	232.6	0.357	4.19	66.3	16.3	1.40	16.2	0.02	0.06	0.09	124	
	125 ISL	10.34	10.33	33.475	25.706	230.4	0.361	4.15	65.5	16.7	1.42	16.6	0.02	0.06	0.09	126	
2	145	9.56	9.54	33.609	25.942	208.2	0.405	3.69	57.3	21.5	1.65	20.3	0.01	0.02	0.05	146	
	150 ISL	9.43	9.41	33.647	25.993	203.5	0.415	3.58	55.4	22.7	1.70	21.1	0.01	0.02	0.05	151	
2	171	9.00	8.98	33.797	26.179	186.0	0.456	3.21	49.3	27.2	1.87	23.8	0.00	0.01	0.04	172	
2	200	8.60	8.58	33.915	26.335	171.8	0.508	2.96	45.1	31.3	1.97	25.8	0.00	0.01	0.04	201	
2	232	8.45	8.43	34.034	26.451	161.3	0.561	2.48	37.7	36.2	2.14	27.8	0.00			233	
	250 ISL	8.42	8.39	34.089	26.499	157.1	0.590	2.19	33.2	38.9	2.25	28.9	0.00			251	
2	269	8.39	8.36	34.136	26.541	153.5	0.620	1.90	28.8	41.7	2.36	29.9	0.00			271	
	300 ISL	8.21	8.18	34.179	26.603	148.1	0.666	1.59	24.0	45.6	2.48	31.3	0.00			302	
2	320	8.03	8.00	34.192	26.640	144.8	0.696	1.45	21.8	48.2	2.55	32.1	0.00			322	
2	380	7.22	7.18	34.195	26.759	133.9	0.779	1.12	16.5	58.0	2.74	34.8	0.00			382	
	400 ISL	7.06	7.02	34.210	26.794	130.9	0.806	0.99	14.6	60.8	2.80	35.6	0.00			403	
2	440	6.81	6.77	34.246	26.857	125.4	0.857	0.74	10.8	66.1	2.92	36.9	0.00			443	
	500 ISL	6.43	6.38	34.276	26.931	118.8	0.930	0.54	7.8	73.1	3.04	38.4	0.00			503	
2	515	6.33	6.28	34.284	26.951	117.1	0.948	0.49	7.1	74.9	3.07	38.8	0.00			515	

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

KV DAVID STARR JORDAN						CALCOFI CRUISE 9401										STATION 90		53
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 39.5 N		119 27.8 W		26/01/94		2330 UTC		1250 m	320	15 kn	2 70 05 05	1	1019.3 mb	15.0 c	12.5 c	15m 02	4/8	CU
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PfESS		
m		DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db		
	0 ISL	14.59	14.59	33.259	24.719	321.5	0.000	5.96	102.8	3.5	0.38	0.0	0.00	0.46	0.17	0		
2	1	14.59	14.59	33.259	24.719	321.6	0.003	5.96	102.8	3.5	0.38	0.0	0.00	0.46	0.17	1		
	101 ISL	14.56	14.56	33.261	24.727	321.1	0.032	5.96	102.7	3.4	0.35	0.0	0.00	0.40	0.14	10		
2	12	14.55	14.55	33.262	24.730	320.8	0.039	5.96	102.7	3.4	0.34	0.0	0.00	0.39	0.14	12		
	20 ISL	14.52	14.52	33.260	24.735	320.6	0.064	5.97	102.8	3.3	0.34	0.0	0.00	0.42	0.17	20		
2	22	14.51	14.51	33.260	24.737	320.5	0.071	5.97	102.8	3.3	0.34	0.0	0.00	0.44	0.18	22		
	30	14.43	14.43	33.261	24.755	319.0	0.096	5.93	102.0	3.4	0.37	0.0	0.01	0.51	0.21	30		
2	40	13.92	13.91	33.259	24.860	309.2	0.128	5.66	96.3	4.4	0.49	1.9	0.17	0.57	0.32	40		
	50 ISL	12.70	12.69	33.258	25.104	286.2	0.157	5.16	85.6	7.3	0.77	6.3	0.16	0.32	0.23	50		
2	51	12.56	12.55	33.260	25.133	283.4	0.160	5.10	84.3	7.6	0.80	6.8	0.16	0.29	0.22	51		
	62	11.30	11.29	33.340	25.431	255.2	0.190	4.53	73.0	7.6	0.81	6.8	0.16	0.13	0.14	62		
2	71	10.91	10.90	33.412	25.557	243.4	0.212	4.25	67.9	14.3	1.30	14.6	0.01	0.07	0.10	71		
	75 ISL	10.69	10.68	33.435	25.614	238.1	0.222	4.19	66.6	15.1	1.34	15.4	0.01	0.05	0.09	75		
2	86	10.11	10.10	33.486	25.753	225.0	0.247	4.11	64.6	16.9	1.42	16.9	0.01	0.03	0.07	86		
	100 ISL	9.71	9.70	33.531	25.855	215.5	0.278	4.06	63.2	18.4	1.49	18.2	0.02	0.01	0.05	100		
2	101	9.69	9.68	33.534	25.861	215.0	0.280	4.05	63.1	18.5	1.50	18.3	0.02	0.01	0.05	101		
	119	9.28	9.27	33.652	26.020	200.2	0.318	3.73	57.6	22.0	1.65	20.5	0.01	0.01	0.04	120		
2	125 ISL	9.20	9.19	33.679	26.054	197.0	0.330	3.64	56.1	22.9	1.69	21.1	0.01	0.01	0.04	126		
	139	9.05	9.04	33.736	26.123	190.8	0.357	3.44	52.9	25.0	1.77	22.4	0.01	0.01	0.03	140		
2	150 ISL	8.94	8.92	33.791	26.184	185.2	0.377	3.29	50.4	26.8	1.83	23.3	0.01	0.01	0.03	151		
	168	8.74	8.72	33.881	26.286	175.8	0.410	3.02	46.1	30.0	1.93	24.9	0.01	0.00	0.03	169		
2	199	8.32	8.30	34.008	26.450	160.7	0.462	2.48	37.5	37.2	2.14	27.9	0.01	0.00	0.03	200		
	200 ISL	8.31	8.29	34.011	26.454	160.3	0.464	2.47	37.4	37.3	2.14	28.0	0.01			201		
2	229	8.22	8.20	34.082	26.524	154.2	0.509	2.20	33.2	40.6	2.24	29.1	0.01			230		
	250 ISL	8.18	8.15	34.126	26.565	150.7	0.541	1.97	29.8	42.6	2.32	29.9	0.01			251		
2	269	8.15	8.12	34.157	26.594	148.3	0.570	1.77	26.7	44.7	2.40	30.6	0.01			271		
	300 ISL	7.79	7.76	34.176	26.662	142.2	0.615	1.49	22.3	50.0	2.54	32.2	0.00			302		
2	321	7.51	7.48	34.181	26.707	138.2	0.644	1.33	19.8	53.7	2.62	33.2	0.00			323		
	379	7.14	7.10	34.210	26.782	131.7	0.723	0.98	14.5	60.2	2.77	35.2	0.00			381		
2	400 ISL	7.04	7.00	34.226	26.809	129.5	0.750	0.36	12.7	62.3	2.82	35.8	0.00			403		
	440	6.86	6.82	34.256	26.858	125.3	0.801	0.66	9.7	66.3	2.92	36.7	0.00			443		
2	500 ISL	6.48	6.43	34.282	26.930	119.1	0.874	0.49	7.1	73.1	3.02	38.1	0.00			503		
	512	6.41	6.36	34.287	26.943	117.9	0.888	0.46	6.7	74.5	3.04	38.4	0.00			516		

RV DAVID STARR JORDAN						CALCOFI CRUISE 9401										STATION 90		60
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 24.8 N		119 57.7 W		26/01/94		1808 UTC			320	13 kn	310 08 06	1	1022.6 mb	15.0 c	13.2 c	22m 02	3/8	SC
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.11	15.11	33.194	24.557	337.0	0.000	5.85	101.9	3.1	0.32	0.0	0.00	0.19	0.05		0	
2	2 A	15.11	15.11	33.194	24.557	337.0	0.007	5.85	101.9	3.1	0.32	0.0	0.00	0.19	0.05		2	
	10 ISL	15.09	15.09	33.197	24.564	336.6	0.034	5.83	101.5	3.0	0.32	0.0	0.00	0.19	0.06		10	
2	13 A	15.08	15.08	33.198	24.567	336.4	0.044	5.82	101.4	3.0	0.32	0.0	0.00	0.19	0.07		13	
	20 ISL	15.06	15.06	33.199	24.572	336.1	0.067	5.82	101.3	3.0	0.32	0.0	0.00	0.20	0.07		20	
2	28 A	15.04	15.04	33.200	24.578	335.8	0.094	5.81	101.1	3.0	0.32	0.0	0.00	0.22	0.07		28	
	30 ISL	15.04	15.04	33.200	24.578	335.9	0.101	5.81	101.1	3.0	0.32	0.0	0.00	0.22	0.07		30	
2	42 A	15.05	15.04	33.203	24.578	336.2	0.141	5.83	101.5	3.0	0.33	0.0	0.00	0.22	0.07		42	
	50 ISL	14.86	14.85	33.184	24.605	333.9	0.168	5.87	101.8	2.9	0.36	0.0	0.00	0.22	0.07		50	
2	51	14.82	14.81	33.182	24.612	333.2	0.171	5.87	101.7	2.9	0.36	0.0	0.00	0.22	0.07		51	
	60 A	14.33	14.32	33.202	24.732	322.1	0.201	5.86	100.5	3.1	0.38	0.2	0.10	0.60	0.34		60	
2	72	14.07	14.06	33.227	24.806	315.4	0.239	5.83	99.5	3.3	0.43	1.0	0.22	0.37	0.24		72	
	75 ISL	14.00	13.99	33.231	24.823	313.8	0.249	5.78	98.5	3.4	0.44	1.2	0.21	0.33	0.22		75	
2	81 A	13.79	13.78	33.229	24.865	309.9	0.267	5.67	96.2	3.7	0.48	1.7	0.18	0.27	0.19		81	
	96	12.42	12.41	33.149	25.075	290.1	0.312	5.40	89.0	5.6	0.67	4.5	0.04	0.29	0.24		95	
2	100 ISL	12.13	12.12	33.153	25.133	284.6	0.324	5.37	87.1	6.3	0.73	5.6	0.03	0.24	0.21		103	
	110	11.46	11.45	33.218	25.308	268.1	0.351	5.04	81.4	8.6	0.92	8.8	0.02	0.11	0.11		113	
2	124	10.47	10.46	33.458	25.671	233.7	0.387	4.34	68.7	14.0	1.28	14.8	0.01	0.04	0.05		125	
	125 ISL	10.41	10.40	33.469	25.690	232.0	0.389	4.31	68.1	14.4	1.30	15.1	0.01	0.04	0.05		125	
2	145	9.42	9.40	33.612	25.967	205.8	0.433	3.83	59.3	20.5	1.59	19.6	0.01	0.01	0.03		146	
	150 ISL	9.27	9.25	33.636	26.010	201.8	0.443	3.77	58.2	21.5	1.63	20.3	0.01	0.01	0.03		151	
2	169	8.90	8.88	33.724	26.138	189.9	0.480	3.54	54.2	24.8	1.74	22.4	0.00	0.00	0.02		170	
	200	8.63	8.61	33.937	26.347	170.6	0.536	2.75	41.9	32.6	2.02	26.1	0.00	0.00	0.02		201	
2	228	8.49	8.47	34.022	26.436	162.7	0.583	2.40	36.5	36.4	2.15	27.8	0.01				229	
	250 ISL	8.40	8.37	34.083	26.498	157.2	0.618	2.09	31.7	39.5	2.26	29.0	0.01				251	
2	265	8.30	8.27	34.113	26.537	153.7	0.641	1.92	29.1	41.7	2.32	29.8	0.00				266	
	300 ISL	7.78	7.75	34.111	26.613	146.9	0.694	1.87	28.0	46.4	2.39	31.2	0.00				302	
2	318	7.49	7.46	34.104	26.649	143.5	0.720	1.85	27.5	49.0	2.43	31.9	0.00				32c	
	377	7.07	7.03	34.195	26.780	131.8	0.801	1.04	15.3	59.7	2.75	35.2	0.00				375	
2	400 ISL	6.93	6.89	34.213	26.814	128.9	0.831	0.89	13.1	62.7	2.82	36.0	0.00				402	
	437	6.71	6.67	34.229	26.856	125.2	0.878	0.75	11.0	67.0	2.90	37.0	0.00				440	
2	500 ISL	6.25	6.21	34.238	26.925	119.3	0.955	0.58	8.4	74.2	3.01	38.7	0.00				503	
	513	6.16	6.11	34.240	26.938	118.1	0.970	0.55	7.9	75.7	3.03	39.0	0.00				516	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90 70			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
32 5.5 N	120 38.2 W	26/01/94	0914 UTC	3817 m	310 15 kn			1022.1 mb	14.9 c	12.2 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.74	15.74	33.263	24.471	345.1	0.000	5.71	100.8	2.7	0.32	0.0	0.00	0.13	0.03	0	
2	2	15.74	15.74	33.263	24.471	345.2	0.007	5.71	100.8	2.7	0.32	0.0	0.00	0.13	0.03	2	
	10 ISL	15.74	15.74	33.263	24.471	345.4	0.035	5.72	101.0	2.6	0.32	0.0	0.00	0.13	0.04	10	
2	15	15.74	15.74	33.263	24.472	345.6	0.052	5.72	101.0	2.5	0.32	0.0	0.00	0.13	0.04	15	
	20 ISL	15.74	15.74	33.263	24.472	345.7	0.069	5.72	101.0	2.5	0.32	0.0	0.00	0.13	0.04	20	
	30 ISL	15.74	15.74	33.263	24.472	346.0	0.104	5.72	101.0	2.6	0.31	0.0	0.00	0.13	0.03	30	
2	31	15.74	15.74	33.263	24.472	346.0	0.107	5.72	101.0	2.6	0.31	0.0	0.00	0.13	0.03	31	
2	45	15.68	15.67	33.258	24.482	345.5	0.156	5.74	101.2	2.5	0.31	0.0	0.00	0.16	0.05	45	
	50 ISL	15.62	15.61	33.233	24.476	346.2	0.173	5.75	101.2	2.6	0.31	0.0	0.00	0.19	0.07	50	
2	55	15.57	15.56	33.213	24.472	346.7	0.190	5.76	101.3	2.6	0.31	0.0	0.00	0.22	0.09	55	
2	64	15.54	15.53	33.236	24.497	344.7	0.221	5.75	101.1	2.5	0.31	0.0	0.00	0.21	0.09	64	
2	73	15.18	15.17	33.208	24.555	339.4	0.252	5.76	100.5	2.7	0.34	0.0	0.01	0.34	0.18	73	
	75 ISL	15.10	15.09	33.209	24.573	337.7	0.259	5.76	100.3	2.7	0.35	0.0	0.02	0.34	0.18	75	
2	84	14.70	14.69	33.228	24.674	328.3	0.289	5.73	99.0	2.9	0.38	0.3	0.09	0.34	0.19	84	
2	95	14.20	14.19	33.252	24.798	316.7	0.324	5.64	96.5	3.3	0.44	1.1	0.16	0.23	0.15	95	
	100 ISL	13.85	13.84	33.285	24.897	307.4	0.340	5.53	93.9	3.8	0.49	1.9	0.13	0.19	0.14	100	
2	110	13.14	13.12	33.357	25.096	288.6	0.370	5.28	88.4	5.0	0.61	3.9	0.04	0.14	0.13	110	
2	124	12.47	12.45	33.401	25.261	273.1	0.409	5.01	82.8	7.0	0.79	6.9	0.02	0.09	0.09	125	
	125 ISL	12.41	12.39	33.406	25.277	271.7	0.412	4.99	82.3	7.2	0.80	7.1	0.02	0.09	0.09	126	
2	144	11.09	11.07	33.508	25.601	241.0	0.460	4.66	74.8	11.2	1.06	11.7	0.02	0.04	0.06	145	
	150 ISL	10.65	10.63	33.521	25.689	232.6	0.475	4.50	71.5	13.1	1.18	13.6	0.02	0.03	0.05	151	
2	169	9.47	9.45	33.570	25.927	210.1	0.517	4.00	62.0	19.3	1.53	19.0	0.01	0.01	0.03	170	
2	199	8.74	8.72	33.764	26.195	185.1	0.576	3.55	54.2	25.9	1.76	22.9	0.01	0.00	0.02	200	
	200 ISL	8.73	8.71	33.770	26.201	184.5	0.578	3.53	53.9	26.1	1.77	23.0	0.01			201	
2	228	8.44	8.42	33.925	26.367	169.1	0.627	3.05	46.3	31.8	1.94	25.9	0.01			229	
	250 ISL	8.22	8.19	34.005	26.464	160.3	0.664	2.69	40.6	36.2	2.07	27.7	0.00			251	
2	269	8.01	7.98	34.049	26.530	154.3	0.693	2.42	36.4	39.9	2.18	29.1	0.00			270	
	300 ISL	7.58	7.55	34.073	26.612	146.8	0.740	2.17	32.3	45.5	2.31	31.0	0.00			302	
2	320	7.28	7.25	34.074	26.655	142.8	0.769	2.03	30.0	49.2	2.39	32.2	0.00			322	
2	377	6.54	6.51	34.098	26.775	131.8	0.847	1.43	20.8	61.0	2.67	35.9	0.00			379	
	400 ISL	6.50	6.46	34.132	26.807	129.1	0.877	1.21	17.6	63.6	2.75	36.7	0.00			402	
2	440	6.44	6.40	34.184	26.857	125.0	0.928	0.87	12.6	67.5	2.87	37.6	0.00			443	
	500 ISL	6.07	6.03	34.239	26.948	116.8	1.001	0.55	7.9	76.4	3.02	39.4	0.00			503	
2	512	6.00	5.96	34.250	26.966	115.2	1.015	0.49	7.0	78.2	3.05	39.8	0.00			515	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90				80									
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
31 45.8 N		121 17.9 W		26/01/94		0129 UTC		3616 m		290 12 kn		330 35 06		1		1021.0 mb		15.5 c		12.0 c		SECCHI/FOREL		7/8		SC	
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN HT		OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS					
	m	DEG C		DEG C				THETA					mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db					
	0 ISL	16.00		16.00	33.332	24.466		345.7		0.000	5.71		101.4		2.9	0.32	0.0	0.00	0.15	0.05	0						
2	2	16.00		16.00	33.332	24.466		345.7		0.007	5.71		101.4		2.9	0.32	0.0	0.00	0.15	0.05	2						
	10 ISL	16.01		16.01	33.331	24.463		346.2		0.035	5.71		101.4		2.8	0.31	0.0	0.00	0.16	0.05	10						
2	15	16.01		16.01	33.330	24.462		346.4		0.052	5.71		101.4		2.8	0.31	0.0	0.00	0.16	0.05	15						
	20 ISL	16.01		16.01	33.330	24.463		346.6		0.069	5.71		101.4		2.8	0.31	0.0	0.00	0.16	0.05	20						
2	30	16.01		16.01	33.333	24.465		346.6		0.104	5.71		101.4		2.8	0.32	0.0	0.00	0.16	0.05	30						
2	45	15.99		15.98	33.332	24.470		346.7		0.156	5.71		101.3		2.8	0.32	0.0	0.00	0.17	0.05	45						
	50 ISL	15.98		15.97	33.332	24.472		346.6		0.173	5.72		101.5		2.8	0.32	0.0	0.00	0.18	0.05	50						
2	54	15.98		15.97	33.332	24.472		346.8		0.187	5.72		101.5		2.8	0.32	0.0	0.00	0.18	0.05	54						
2	65	15.50		15.49	33.292	24.549		339.7		0.225	5.71		100.3		3.0	0.35	0.0	0.00	0.39	0.19	65						
2	75	13.21		13.20	33.257	25.004		296.4		0.257	5.41		90.7		5.6	0.64	2.9	0.12	0.42	0.23	75						
2	85	12.54		12.53	33.314	25.180		279.9		0.285	5.10		84.3		6.9	0.77	5.8	0.06	0.31	0.19	85						
2	95	12.15		12.14	33.340	25.275		271.1		0.313	4.91		80.5		8.2	0.91	8.0	0.03	0.22	0.16	95						
	100 ISL	11.68		11.67	33.363	25.380		261.0		0.326	4.76		77.3		9.6	1.01	9.8	0.02	0.17	0.14	100						
2	109	10.77		10.76	33.416	25.586		241.6		0.349	4.45		70.9		12.7	1.21	13.2	0.01	0.10	0.10	109						
2	124	9.98		9.97	33.496	25.784		222.9		0.384	3.98		62.3		17.4	1.48	17.7	0.01	0.07	0.10	125						
	125 ISL	9.94		9.93	33.501	25.794		221.9		0.386	3.96		62.0		17.6	1.49	17.9	0.01	0.07	0.10	126						
2	146	9.29		9.27	33.618	25.993		203.3		0.431	3.71		57.3		21.8	1.67	21.0	0.01	0.01	0.03	147						
	150 ISL	9.21		9.19	33.642	26.024		200.4		0.439	3.66		56.4		22.5	1.69	21.4	0.01	0.01	0.03	151						
2	171	8.89		8.87	33.770	26.176		186.4		0.479	3.35		51.3		26.1	1.81	23.5	0.00	0.01	0.02	172						
2	200	8.55		8.53	33.941	26.363		169.1		0.531	2.86		43.5		32.2	1.99	26.3	0.00	0.00	0.03	201						
2	227	8.21		8.19	34.017	26.474		158.9		0.575	2.65		40.0		37.0	2.09	28.1	0.00			228						
	250 ISL	8.07		8.04	34.054	26.525		154.5		0.611	2.44		36.7		39.7	2.18	29.1	0.00			251						
2	267	7.97		7.94	34.071	26.553		152.1		0.637	2.27		34.1		41.9	2.26	29.9	0.00			268						
2	300 ISL	7.50		7.47	34.096	26.641		144.0		0.686	1.87		27.8		49.3	2.45	32.5	0.00			302						
2	316	7.24		7.21	34.105	26.685		139.9		0.709	1.68		24.8		53.2	2.54	33.9	0.00			318						
2	383	6.45		6.42	34.133	26.814		128.1		0.799	1.10		16.0		65.4	2.80	37.6	0.00			385						
	400 ISL	6.32		6.28	34.148	26.843		125.5		0.820	0.98		14.2		68.1	2.86	38.3	0.00			402						
2	441	6.09		6.05	34.188	26.905		120.1		0.871	0.72		10.4		74.0	2.99	39.5	0.00			444						
	500 ISL	5.88		5.84	34.248	26.979		113.7		0.939	0.49		7.0		79.8	3.09	40.5	0.00			503						
2	515	5.83		5.79	34.263	26.997		112.1		0.956	0.43		6.2		81.3	3.12	40.8	0.00			518						

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90		90
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
31 24.8 N	121 59.5 W	25/01/94	1836 UTC	3914 m	290	16 kn	300 08 07	1	1020.8 mb	15.2 c	12.9 c	29m	02	4/8	;	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	15.95	15.95	33.338	24.482	344.1	0.000	5.71	101.3	3.1	0.33	0.1	0.00	0.17	0.04	0
2	2 A	15.95	15.95	33.338	24.482	344.2	0.007	5.71	101.3	3.1	0.33	0.1	0.00	0.17	0.04	2
	10 ISL	15.95	15.95	33.338	24.482	344.4	0.034	5.71	101.3	3.1	0.33	0.1	0.00	0.17	0.04	10
2	18 A	15.94	15.94	33.337	24.484	344.5	0.062	5.71	101.2	3.0	0.33	0.1	0.00	0.17	0.05	18
	20 ISL	15.94	15.94	33.337	24.484	344.6	0.069	5.71	101.2	3.0	0.33	0.1	0.00	0.17	0.05	20
	30 ISL	15.93	15.93	33.338	24.487	344.6	0.103	5.70	101.0	2.8	0.32	0.0	0.00	0.18	0.05	30
2	34 A	15.93	15.92	33.339	24.488	344.6	0.117	5.70	101.0	2.8	0.32	0.0	0.00	0.18	0.05	34
2	45	15.61	15.60	33.345	24.565	337.6	0.155	5.68	100.1	3.3	0.34	0.0	0.00	0.44	0.20	45
	50 ISL	15.05	15.04	33.316	24.665	328.1	0.171	5.64	98.2	3.7	0.40	0.4	0.03	0.51	0.25	50
2	52 A	14.76	14.75	33.303	24.718	323.2	0.178	5.61	97.1	3.9	0.43	0.8	0.04	0.53	0.27	52
2	65	12.28	12.27	33.294	25.214	276.1	0.217	4.97	81.7	8.3	0.89	7.6	0.05	0.56	0.42	65
2	75 A	11.33	11.32	33.379	25.456	253.2	0.243	4.39	70.8	12.4	1.21	12.9	0.04	0.33	0.36	75
2	85	10.60	10.59	33.426	25.623	237.5	0.268	4.16	66.0	14.8	1.34	15.6	0.01	0.16	0.19	85
2	96	10.19	10.18	33.473	25.730	227.5	0.293	3.98	62.6	16.5	1.45	17.3	0.01	0.11	0.15	96
	100 ISL	10.06	10.05	33.497	25.771	223.6	0.302	3.88	60.9	17.5	1.50	18.2	0.01	0.09	0.13	100
2	103 A	9.96	9.95	33.515	25.802	220.8	0.309	3.30	59.5	18.3	1.53	18.8	0.01	0.08	0.11	103
2	124	9.30	9.29	33.628	25.999	202.3	0.353	3.58	55.3	22.3	1.68	21.4	0.00	0.02	0.03	125
	125 ISL	9.27	9.26	33.633	26.007	201.5	0.355	3.58	55.3	22.5	1.68	21.5	0.00	0.02	0.03	126
2	145	8.76	8.74	33.743	26.174	186.0	0.394	3.44	52.5	25.8	1.76	23.2	0.00	0.00	0.02	146
	150 ISL	8.68	8.66	33.778	26.214	182.2	0.403	3.34	50.9	27.0	1.80	23.8	0.00	0.00	0.02	151
2	166	8.48	8.46	33.879	26.324	172.0	0.432	3.02	45.9	30.9	1.92	25.7	0.00	0.00	0.03	167
2	197	8.20	8.18	33.944	26.418	163.6	0.484	2.86	43.2	34.4	2.00	27.2	0.00	0.00	0.02	198
	200 ISL	8.17	8.15	33.953	26.430	162.6	0.489	2.82	42.5	34.9	2.01	27.4	0.00		2 01	
2	227	7.92	7.90	34.028	26.526	153.8	0.531	2.47	37.1	39.8	2.15	29.2	0.00		2 28	
	250 ISL	7.68	7.66	34.052	26.580	149.0	0.566	2.25	33.6	43.6	2.25	30.5	0.00		2 51	
2	268	7.49	7.46	34.062	26.615	145.9	0.593	2.09	31.1	46.6	2.33	31.5	0.00		2 70	
	300 ISL	7.16	7.13	34.093	26.686	139.5	0.638	1.72	25.4	52.6	2.49	33.3	0.00		3 02	
2	317	6.99	6.96	34.108	26.722	136.3	0.662	1.52	22.3	55.9	2.57	34.3	0.00		319	
2	374	6.42	6.39	34.142	26.825	126.9	0.737	1.03	14.9	66.5	2.80	37.4	0.00		3 76	
	400 ISL	6.20	6.16	34.160	26.868	123.0	0.769	0.86	12.4	70.7	2.88	38.4	0.00		4 03	
2	440	5.90	5.86	34.190	26.930	117.5	0.817	0.64	9.2	76.5	2.98	39.6	0.00		4 43	
	500 ISL	5.60	5.56	34.234	27.002	111.2	0.886	0.45	6.4	83.3	3.10	40.8	0.00		5 33	
2	514	5.53	5.49	34.244	27.019	109.7	0.902	0.40	5.7	84.9	3.13	41.1	0.00		5 17	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90		100	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
31 4.9 N	122 39.4 W	25/01/94	0929 UTC	4011 m	290	18 kn			1019.2 mb	15.0 c	12.2 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.48	16.48	33.396	24.405	351.4	0.000	5.64	101.1	2.5	0.29	0.0	0.00	0.14	0.04	0	
2	2	16.48	16.48	33.396	24.406	351.5	0.007	5.64	101.1	2.5	0.29	0.0	0.00	0.14	0.04	2	
	10 ISL	16.47	16.47	33.397	24.409	351.4	0.035	5.63	100.9	2.4	0.29	0.0	0.00	0.13	0.05	10	
2	15	16.47	16.47	33.397	24.409	351.5	0.053	5.63	100.9	2.3	0.29	0.0	0.00	0.13	0.05	15	
	20 ISL	16.47	16.47	33.398	24.410	351.6	0.070	5.63	100.9	2.3	0.29	0.0	0.00	0.13	0.05	20	
2	30	16.48	16.48	33.401	24.410	351.9	0.105	5.62	100.8	2.3	0.29	0.0	0.00	0.14	0.04	30	
2	45	16.49	16.48	33.402	24.409	352.5	0.158	5.63	101.0	2.3	0.29	0.0	0.00	0.13	0.04	45	
	50 ISL	16.47	16.46	33.399	24.412	352.4	0.176	5.64	101.1	2.3	0.29	0.0	0.00	0.14	0.05	50	
2	60	16.31	16.30	33.357	24.417	352.3	0.211	5.66	101.1	2.4	0.30	0.0	0.00	0.18	0.08	60	
2	75	15.61	15.60	33.217	24.467	347.8	0.264	5.74	101.0	2.5	0.33	0.1	0.00	0.27	0.12	75	
2	84	15.27	15.26	33.194	24.525	342.6	0.295	5.75	100.5	2.7	0.34	0.1	0.02	0.30	0.16	84	
2	94	14.93	14.92	33.217	24.617	334.1	0.329	5.72	99.3	2.9	0.38	0.3	0.11	0.30	0.19	94	
	100 ISL	14.56	14.55	33.286	24.749	321.6	0.348	5.63	97.0	3.2	0.42	0.9	0.10	0.25	0.18	100	
2	104	14.28	14.26	33.335	24.846	312.5	0.361	5.51	95.1	3.5	0.46	1.4	0.09	0.22	0.17	104	
2	114	13.58	13.56	33.393	25.036	294.6	0.391	5.32	89.9	4.7	0.58	3.2	0.04	0.17	0.15	114	
2	124	13.08	13.06	33.395	25.138	285.0	0.420	5.19	86.8	5.7	0.66	4.8	0.03	0.15	0.12	125	
	125 ISL	13.01	12.99	33.397	25.153	283.6	0.423	5.17	86.4	5.9	0.67	5.0	0.03	0.15	0.12	126	
2	139	11.88	11.86	33.437	25.402	260.0	0.461	4.86	79.3	8.6	0.91	9.0	0.02	0.07	0.07	140	
	150 ISL	10.99	10.97	33.462	25.583	242.8	0.489	4.64	74.3	11.6	1.11	12.2	0.01	0.04	0.05	151	
2	164	10.02	10.00	33.505	25.785	223.7	0.521	4.36	68.4	15.6	1.34	15.9	0.00	0.02	0.04	165	
2	193	9.04	9.02	33.657	26.064	197.5	0.583	3.80	58.3	22.4	1.65	21.1	0.00	0.00	0.03	194	
	200 ISL	8.92	8.90	33.709	26.124	191.9	0.596	3.66	56.1	24.0	1.71	22.0	0.00			201	
2	227	8.57	8.55	33.888	26.318	173.8	0.646	3.22	49.0	29.7	1.88	24.8	0.00			223	
	250 ISL	8.17	8.14	33.953	26.430	163.4	0.684	3.17	47.8	33.5	1.94	26.2	0.00			251	
2	269	7.83	7.80	33.975	26.498	157.2	0.715	3.13	46.8	36.5	1.97	27.1	0.00			273	
	300 ISL	7.35	7.32	33.994	26.582	149.5	0.762	2.92	43.2	42.1	2.09	29.1	0.00			307	
2	317	7.12	7.09	33.997	26.617	146.3	0.787	2.76	40.6	45.3	2.17	30.2	0.00			317	
2	379	6.42	6.39	34.021	26.730	136.0	0.875	2.01	29.1	57.3	2.48	34.5	0.00			381	
	400 ISL	6.24	6.20	34.047	26.774	132.0	0.903	1.68	24.2	62.1	2.61	36.0	0.00			407	
2	437	5.96	5.92	34.097	26.849	125.1	0.951	1.14	16.3	70.3	2.82	38.4	0.00			441	
	500 ISL	5.60	5.56	34.157	26.941	116.9	1.027	0.69	9.8	80.0	3.00	40.6	0.00			501	
2	512	5.53	5.49	34.169	26.959	115.3	1.041	0.60	8.5	81.9	3.04	41.0	0.00			511	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90 110									
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA	BAROMETER		DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE
30 45.8 N		123 19.6 W		25/01/94		0208 UTC		4017 m		320 21 kn		300 05 05		5	1017.4 mb		12.9 c	11.8 c			8/8		SC
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN HT	OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C		DEG C				THETA				mL / l		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	16.10	16.10	16.10	33.218	24.355		356.2		0.000		5.71	101.5	2.9	0.31	0.0	0.00	0.11	0.03		0		
2	2	16.10	16.10	16.10	33.218	24.355		356.2		0.007		5.71	101.5	2.9	0.31	0.0	0.00	0.11	0.03		2		
	10 ISL	16.10	16.10	16.10	33.212	24.351		356.9		0.036		5.70	101.3	2.9	0.31	0.0	0.00	0.11	0.03		10		
2	15	16.10	16.10	16.10	33.208	24.348		357.3		0.054		5.70	101.3	2.9	0.31	0.0	0.00	0.11	0.03		15		
	20 ISL	16.10	16.10	16.10	33.207	24.348		357.5		0.071		5.70	101.3	2.9	0.31	0.0	0.00	0.11	0.03		20		
2	30	16.10	16.10	16.10	33.205	24.347		358.0		0.107		5.69	101.1	2.9	0.30	0.0	0.00	0.12	0.04		30		
2	45	16.04	16.03	16.03	33.234	24.383		355.0		0.161		5.69	101.0	2.8	0.31	0.0	0.00	0.19	0.07		45		
	50 ISL	16.03	16.02	16.02	33.232	24.384		355.0		0.178		5.69	101.0	2.8	0.31	0.0	0.00	0.21	0.08		50		
2	61	16.02	16.01	16.01	33.226	24.382		355.6		0.217		5.69	101.0	2.8	0.30	0.0	0.00	0.24	0.10		61		
2	74	15.89	15.88	15.88	33.226	24.412		353.1		0.264		5.68	100.5	2.8	0.31	0.0	0.02	0.27	0.14		74		
	75 ISL	15.89	15.88	15.88	33.232	24.416		352.7		0.267		5.68	100.5	2.8	0.31	0.0	0.02	0.27	0.14		75		
2	84	15.65	15.64	15.64	33.289	24.514		343.7		0.298		5.67	99.9	2.7	0.33	0.2	0.07	0.26	0.17		84		
2	93	14.72	14.71	14.71	33.311	24.734		322.9		0.328		5.69	98.4	3.2	0.37	0.5	0.15	0.25	0.20		93		
	100 ISL	14.52	14.51	14.51	33.411	24.854		311.6		0.351		5.62	96.9	3.3	0.38	0.7	0.12	0.20	0.18		100		
2	104	14.48	14.46	14.46	33.468	24.907		306.7		0.363		5.56	95.8	3.4	0.38	0.9	0.08	0.17	0.16		104		
2	115	14.06	14.04	14.04	33.498	25.018		296.4		0.396		5.40	92.3	4.0	0.45	2.0	0.02	0.12	0.11		115		
2	125	13.62	13.60	13.60	33.602	25.189		280.3		0.425		5.22	88.4	4.9	0.53	3.5	0.02	0.08	0.07		126		
2	139	12.26	12.24	12.24	33.550	25.418		258.6		0.463		4.97	81.8	7.5	0.77	7.2	0.01	0.05	0.06		140		
	150 ISL	11.41	11.39	11.39	33.521	25.554		245.7		0.490		4.81	77.7	9.5	0.94	9.7	0.01	0.03	0.05		151		
2	164	10.54	10.52	10.52	33.506	25.697		232.2		0.524		4.60	72.9	12.3	1.14	12.7	0.01	0.02	0.04		165		
2	195	9.23	9.21	9.21	33.597	25.987		204.9		0.592		3.93	60.6	20.5	1.58	19.7	0.00	0.00	0.02		196		
	200 ISL	9.11	9.09	9.09	33.624	26.027		201.1		0.602		3.82	58.7	21.7	1.63	20.5	0.00				201		
2	228	8.70	8.68	8.68	33.785	26.218		183.4		0.656		3.26	49.7	27.8	1.86	24.3	0.00				229		
	250 ISL	8.50	8.47	8.47	33.894	26.334		172.7		0.695		2.82	42.8	32.3	2.02	26.5	0.00				251		
2	270	8.31	8.28	8.28	33.968	26.422		164.7		0.729		2.53	38.3	35.8	2.12	28.0	0.00				271		
	300 ISL	7.76	7.73	7.73	33.996	26.525		155.1		0.776		2.62	39.2	39.4	2.14	28.9	0.00				302		
2	318	7.43	7.40	7.40	33.998	26.574		150.6		0.804		2.71	40.2	41.5	2.15	29.3	0.00				320		
2	378	6.87	6.83	6.83	34.057	26.699		139.3		0.891		1.92	28.1	53.5	2.48	33.3	0.00				380		
	400 ISL	6.65	6.61	6.61	34.067	26.736		135.9		0.921		1.70	24.8	57.4	2.58	34.6	0.00				402		
2	440	6.28	6.24	6.24	34.085	26.799		130.2		0.974	1.36	19.6	64.3	2.74	36.7	0.00					443		
	500 ISL	5.84	5.80	5.80	34.138	26.897		121.3		1.050		0.88	12.6	74.5	2.93	39.1	0.00				503		
2	512	5.75	5.71	5.71	34.149	26.917		119.5		1.064		0.78	11.1	76.5	2.97	39.6	0.00				515		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 90 120				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
30 25.7 N		123 59.8 W		24/01/94	1836 UTC	4209 m	240	22 kn	260 06 05	1	1019.1 mb	18.2 c	15.3 c	43m 01	3/8		CS	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	17.11	17.11	33.576	24.396	352.3	0.000	5.55	100.9	2.7	0.27	0.1	0.00	0.09	0.02	0		
2	2 A	17.11	17.11	33.576	24.397	352.3	0.007	5.55	100.9	2.7	0.27	0.1	0.00	0.09	0.02	2		
	10 ISL	17.11	17.11	33.573	24.395	352.8	0.035	5.55	100.8	2.6	0.27	0.0	0.00	0.10	0.03	10		
2	13	17.11	17.11	33.572	24.394	352.9	0.046	5.55	100.8	2.5	0.27	0.0	0.00	0.10	0.03	13		
	20 ISL	17.11	17.11	33.574	24.396	353.0	0.071	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03	20		
2	26 A	17.11	17.11	33.577	24.398	353.0	0.092	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03	26		
	30 ISL	17.11	17.11	33.576	24.398	353.2	0.106	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03	30		
2	39	17.11	17.10	33.575	24.397	353.5	0.138	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03	39		
	50 ISL	17.12	17.11	33.577	24.397	353.9	0.177	5.55	100.9	2.2	0.26	0.0	0.00	0.10	0.03	50		
2	52 A	17.12	17.11	33.578	24.398	353.9	0.184	5.55	100.9	2.2	0.26	0.0	0.00	0.10	0.03	52		
2	66	17.07	17.06	33.577	24.409	353.3	0.233	5.56	100.9	2.2	0.26	0.0	0.00	0.12	0.04	66		
	75 ISL	17.20	17.19	33.626	24.417	352.9	0.265	5.54	100.9	2.2	0.25	0.0	0.00	0.12	0.04	75		
2	80 A	17.24	17.23	33.651	24.426	352.1	0.283	5.53	100.8	2.2	0.25	0.0	0.00	0.12	0.04	80		
2	92	16.96	16.94	33.632	24.478	347.5	0.325	5.55	100.6	2.3	0.25	0.0	0.00	0.21	0.12	92		
2	100	15.93	15.91	33.594	24.687	327.8	0.352	5.59	99.2	2.6	0.29	0.0	0.07	0.25	0.18	100		
2	111 A	15.48	15.46	33.640	24.823	315.1	0.387	5.56	97.8	2.8	0.30	0.4	0.11	0.22	0.17	111		
2	121	15.24	15.22	33.689	24.914	306.7	0.418	5.48	96.0	3.0	0.31	0.6	0.10	0.20	0.18	121		
	125 ISL	15.15	15.13	33.702	24.944	304.0	0.430	5.44	95.1	3.1	0.32	0.7	0.09	0.19	0.17	126		
2	139	14.50	14.48	33.674	25.062	293.0	0.472	5.27	90.9	3.9	0.44	2.2	0.03	0.13	0.13	140		
	150 ISL	13.35	13.33	33.550	25.205	279.5	0.503	5.07	85.4	5.8	0.66	5.1	0.01	0.08	0.09	151		
2	153 A	13.00	12.98	33.516	25.248	275.3	0.512	5.01	83.7	6.4	0.73	6.0	0.01	0.07	0.08	154		
2	183	10.20	10.18	33.450	25.712	231.0	0.588	4.53	71.3	13.6	1.24	14.3	0.00	0.02	0.04	184		
	200 ISL	9.39	9.37	33.555	25.928	210.6	0.625	4.23	65.4	18.0	1.45	17.8	0.00			201		
2	221	8.83	8.81	33.721	26.147	190.0	0.667	3.85	58.9	23.4	1.65	21.3	0.00			222		
	250 ISL	8.35	8.32	33.888	26.352	170.9	0.720	3.35	50.7	30.1	1.86	24.6	0.00			251		
2	261	8.23	8.20	33.937	26.409	165.7	0.738	3.18	48.0	32.4	1.92	25.6	0.00			262		
	300 ISL	7.77	7.74	34.012	26.536	154.1	0.801	2.80	41.9	39.3	2.10	28.3	0.00			302		
2	318	7.57	7.54	34.022	26.573	150.8	0.828	2.65	39.4	42.3	2.17	29.4	0.00			320		
2	376	6.88	6.84	34.060	26.700	139.2	0.912	1.92	28.1	54.2	2.48	33.6	0.00			378		
	400 ISL	6.66	6.62	34.081	26.746	135.0	0.945	1.63	23.8	58.7	2.60	35.1	0.00			402		
2	438	6.35	6.31	34.115	26.814	128.9	0.995	1.23	17.8	65.5	2.77	37.1	0.00			441		
	500 ISL	5.87	5.83	34.156	26.908	120.4	1.072	0.81	11.6	75.5	2.96	39.5	0.00			503		
2	514	5.76	5.72	34.166	26.929	118.4	1.089	0.72	10.3	77.7	3.00	40.1	0.00			517		

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAFI										CALCOFI CRUISE 9401										STATION 93 26.7				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE								
32 57.0 N		117 18.1 U		20/01/94	1951 UTC	61 m	310	06 kn	310 02 10	4	1022.3 mb	14.3 c	13.2 c	23m 02	1/8	ST								
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS								
	m	DEG C	DEG C		THETA			mL/I	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db								
	0 ISL	15.56	15.56	33.252	24.503	342.1	0.000	5.82	102.4	2.7	0.32	0.1	0.00	0.23	0.05	0								
2	2	15.56	15.56	33.252	24.503	342.2	0.007	5.82	102.4	2.7	0.32	0.1	0.00	0.23	0.05	2								
2	5	15.50	15.50	33.252	24.516	341.0	0.017	5.82	102.2	2.6	0.32	0.1	0.00	0.22	0.05	5								
	10 ISL	15.40	15.40	33.256	24.541	338.7	0.034	5.86	102.7	2.7	0.32	0.1	0.00	0.30	0.07	10								
2	11	15.38	15.38	33.257	24.547	338.3	0.037	5.87	102.9	2.7	0.32	0.1	0.00	0.31	0.08	11								
	20 ISL	15.05	15.05	33.254	24.617	331.9	0.068	5.89	102.5	3.1	0.36	0.1	0.05	0.88	0.34	20								
2	21	15.01	15.01	33.254	24.625	331.1	0.071	5.89	102.5	3.2	0.37	0.1	0.06	0.94	0.37	21								
	30 ISL	14.77	14.77	33.266	24.687	325.5	0.100	5.76	99.7	3.5	0.40	0.5	0.09	0.97	0.41	30								
2	31	14.73	14.73	33.267	24.696	324.6	0.104	5.74	99.3	3.5	0.41	0.5	0.09	0.97	0.41	31								
2	41	13.93	13.92	33.277	24.872	308.1	0.135	5.37	91.4	4.8	0.57	2.5	0.22	0.72	0.39	41								
	50 ISL	13.32	13.31	33.320	25.030	293.3	0.162	4.96	83.4	6.8	0.76	5.5	0.26	0.44	0.31	50								
2	53	13.12	13.11	33.335	25.081	288.5	0.171	4.82	80.7	7.5	0.82	6.5	0.28	0.34	0.28	53								

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 93 28

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 54.5 N		117 23.7 W		20/01/94	2302 UTC	610 m	310	09 kn	310 02 09	4	1020.8 mb	15.7 c	13.3 c	26m 02	3/8	ST
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRE SS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	cb
	0 ISL	15.91	15.91	33.254	24.426	349.4	0.000	5.80	102.7	2.3	0.31	0.0	0.00	0.17	0.04	0
2	2	15.91	15.91	33.254	24.426	349.5	0.007	5.80	102.7	2.3	0.31	0.0	0.00	0.17	0.04	2
	10 ISL	15.73	15.73	33.253	24.466	345.9	0.035	5.30	102.4	2.4	0.31	0.0	0.00	0.19	0.04	10
2	11	15.70	15.70	33.252	24.472	345.4	0.038	5.30	102.3	2.4	0.31	0.0	0.00	0.19	0.04	11
	20 ISL	15.49	15.49	33.243	24.512	341.9	0.069	5.30	101.9	2.5	0.32	0.0	0.00	0.22	0.07	20
2	21	15.46	15.46	33.242	24.518	341.3	0.073	5.80	101.8	2.5	0.32	0.0	0.00	0.23	0.08	21
	30	15.16	15.16	33.240	24.582	335.5	0.103	5.34	101.9	2.8	0.35	0.0	0.00	0.30	0.13	30
2	41	14.66	14.65	33.236	24.687	325.8	0.139	5.82	100.5	3.0	0.36	0.0	0.01	0.96	0.40	41
2	50	14.18	14.17	33.265	24.811	314.2	0.168	5.63	96.3	3.5	0.45	0.7	0.18	0.87	0.39	50
2	61	13.47	13.46	33.218	24.921	304.0	0.202	5.43	91.5	4.4	0.57	2.9	0.13	0.55	0.36	61
2	70	13.15	13.14	33.282	25.035	293.3	0.229	5.11	85.6	5.9	0.71	5.2	0.07	0.40	0.27	70
	75 ISL	12.70	12.69	33.312	25.147	282.8	0.244	4.92	81.6	7.4	0.82	7.1	0.05	0.30	0.22	75
2	85	11.75	11.74	33.379	25.380	260.8	0.271	4.53	73.7	10.6	1.06	11.0	0.02	0.12	0.14	85
2	99	11.16	11.15	33.490	25.574	242.5	0.306	4.04	64.9	13.7	1.29	14.4	0.01	0.05	0.09	99
	100 ISL	11.13	11.12	33.498	25.585	241.5	0.308	4.01	64.4	13.9	1.30	14.5	0.01	0.05	0.09	100
2	120	10.56	10.55	33.642	25.799	221.6	0.355	3.50	55.6	18.6	1.55	18.6	0.00	0.01	0.05	121
	125 ISL	10.46	10.45	33.675	25.842	217.5	0.366	3.39	53.7	19.6	1.60	19.3	0.00	0.01	0.05	126
2	140	10.19	10.17	33.763	25.957	206.9	0.397	3.11	49.0	22.2	1.72	21.1	0.00	0.01	0.05	141
	150 ISL	9.97	9.95	33.806	26.028	200.3	0.418	3.02	47.4	23.7	1.77	22.0	0.00	0.01	0.05	151
2	169	9.59	9.57	33.876	26.146	189.4	0.455	2.90	45.1	26.2	1.85	23.4	0.00	0.00	0.04	170
2	199	9.26	9.24	33.998	26.296	175.7	0.510	2.51	38.8	30.2	2.00	25.6	0.00	0.00	0.04	230
	200 ISL	9.25	9.23	34.000	26.299	175.4	0.511	2.50	38.6	30.3	2.00	25.6	0.00	0.00	0.04	201
2	229	9.05	9.03	34.053	26.373	168.9	0.561	2.37	36.5	33.1	2.08	26.8	0.00	0.00	0.04	250
	250 ISL	8.84	8.81	34.102	26.445	162.5	0.596	2.17	33.3	36.3	2.17	28.0	0.00	0.00	0.04	251
2	268	8.66	8.63	34.141	26.504	157.1	0.625	1.99	30.4	39.2	2.25	29.1	0.00	0.00	0.04	270
	300 ISL	8.42	8.39	34.171	26.565	151.8	0.674	1.76	26.7	42.8	2.36	30.3	0.00	0.00	0.04	302
2	319	8.27	8.24	34.179	26.594	149.3	0.703	1.63	24.7	44.8	2.42	30.9	0.00	0.00	0.04	321
2	379	7.58	7.54	34.213	26.723	137.7	0.789	1.15	17.1	53.7	2.65	33.9	0.00	0.00	0.04	381
	400 ISL	7.39	7.35	34.228	26.762	134.2	0.818	0.99	14.7	56.9	2.72	34.8	0.00	0.00	0.04	403
2	437	7.09	7.05	34.252	26.823	128.8	0.866	0.75	11.1	62.5	2.83	36.1	0.00	0.00	0.04	440
	500 ISL	6.56	6.51	34.279	26.917	120.4	0.945	0.50	7.3	70.5	2.97	38.1	0.00	0.00	0.04	503
2	511	6.47	6.42	34.284	26.932	118.9	0.958	0.46	6.7	71.9	3.00	38.4	0.00	0.00	0.04	514

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 93 30

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 50.7 N		117 31.8 U		21/01/94	0352 UTC	859 m	040	06 kn			1022.5 mb	14.9 c	14.0 c			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	15.77	15.77	33.258	24.460	346.2	0.000	5.84	103.2	2.3	0.33	0.0	0.00	0.20	0.04	0
2	2	15.77	15.77	33.258	24.461	346.2	0.007	5.84	103.2	2.3	0.33	0.0	0.00	0.20	0.04	2
	10 ISL	15.75	15.75	33.257	24.465	346.1	0.035	5.83	102.9	2.3	0.33	0.0	0.00	0.20	0.05	10
2	16	15.73	15.73	33.257	24.469	345.8	0.055	5.83	102.9	2.3	0.33	0.0	0.00	0.20	0.05	16
	20 ISL	15.69	15.69	33.255	24.477	345.2	0.069	5.83	102.8	2.3	0.33	0.0	0.00	0.20	0.05	20
	30 ISL	15.52	15.52	33.255	24.515	341.9	0.104	5.83	102.5	2.3	0.33	0.0	0.00	0.19	0.05	30
2	31	15.50	15.50	33.256	24.520	341.4	0.107	5.83	102.4	2.3	0.33	0.0	0.00	0.19	0.05	31
2	46	15.02	15.01	33.301	24.660	328.5	0.157	5.93	103.2	2.7	0.36	0.0	0.00	0.31	0.11	46
	50 ISL	14.76	14.75	33.316	24.728	322.2	0.170	5.73	99.2	3.4	0.43	0.4	0.14	0.51	0.22	50
2	54	14.48	14.47	33.326	24.795	315.8	0.183	5.51	94.9	4.1	0.51	1.0	0.28	0.68	0.33	54
2	65	13.89	13.88	33.29												

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 93 35				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME		BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 41.1 N		117 52.1 W		21/01/94	0853 UTC		622 m	010	07 kn			1022.9 mb	14.8 c	14.0 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.73	15.73	33.238	24.454	346.8	0.000	5.78	102.0	2.3	0.32	0.0	0.00	0.19	0.04	0		
2	2	15.73	15.73	33.238	24.454	346.8	0.007	5.78	102.0	2.3	0.32	0.0	0.00	0.19	0.04	2		
	10 ISL	15.73	15.73	33.238	24.454	347.0	0.035	5.80	102.4	2.2	0.31	0.0	0.00	0.19	0.05	10		
2	15	15.73	15.73	33.238	24.455	347.2	0.052	5.82	102.7	2.2	0.31	0.0	0.00	0.19	0.06	15		
	20 ISL	15.71	15.71	33.240	24.461	346.8	0.069	5.81	102.5	2.2	0.31	0.0	0.00	0.19	0.06	20		
2	30	15.67	15.67	33.245	24.474	345.8	0.104	5.79	102.1	2.1	0.32	0.0	0.00	0.18	0.05	30		
2	45	15.02	15.01	33.242	24.615	332.8	0.155	5.81	101.1	2.5	0.35	0.0	0.00	0.32	0.16	45		
	50 ISL	14.85	14.84	33.268	24.672	327.5	0.171	5.77	100.0	2.8	0.37	0.2	0.04	0.44	0.21	50		
2	55	14.65	14.64	33.290	24.732	322.0	0.188	5.71	98.6	3.2	0.41	0.3	0.10	0.52	0.26	55		
2	65	14.05	14.04	33.273	24.845	311.4	0.219	5.47	93.3	4.0	0.53	1.8	0.21	0.39	0.26	65		
2	75	13.31	13.30	33.307	25.022	294.7	0.250	5.05	84.9	6.0	0.73	5.0	0.05	0.31	0.24	75		
2	85	12.58	12.57	33.371	25.216	276.4	0.278	4.70	77.8	8.3	0.92	8.3	0.02	0.18	0.21	85		
2	95	11.69	11.68	33.419	25.422	257.0	0.305	4.40	71.5	11.0	1.13	11.8	0.01	0.10	0.13	95		
	100 ISL	11.46	11.45	33.458	25.495	250.1	0.318	4.21	68.1	12.3	1.22	13.2	0.01	0.07	0.11	100		
2	109	11.17	11.16	33.531	25.604	239.9	0.340	3.88	62.4	14.5	1.37	15.2	0.00	0.04	0.10	109		
2	125	10.54	10.53	33.618	25.783	223.1	0.377	3.59	57.0	17.8	1.54	18.1	0.00	0.01	0.05	126		
2	144	10.35	10.33	33.723	25.899	212.6	0.418	3.27	51.7	20.5	1.68	20.0	0.00	0.01	0.04	145		
	150 ISL	10.15	10.13	33.735	25.942	208.5	0.431	3.26	51.3	21.3	1.70	20.6	0.00	0.01	0.04	151		
2	168	9.52	9.50	33.774	26.078	195.8	0.467	3.22	50.0	24.0	1.76	22.3	0.00	0.00	0.04	169		
2	199	9.32	9.30	33.982	26.274	177.8	0.525	2.61	40.4	29.7	1.98	25.2	0.00	0.00	0.03	200		
	200 ISL	9.31	9.29	33.986	26.278	177.4	0.527	2.60	40.2	29.8	1.98	25.3	0.00			201		
2	228	8.97	8.95	34.081	26.407	165.6	0.575	2.39	36.7	33.7	2.09	26.9	0.00			229		
	250 ISL	8.74	8.71	34.136	26.487	158.4	0.610	2.09	32.0	37.5	2.22	28.4	0.00			251		
2	269	8.54	8.51	34.168	26.543	153.3	0.640	1.83	27.9	40.9	2.33	29.6	0.00			271		
	300 ISL	8.15	8.12	34.185	26.616	146.8	0.687	1.57	23.7	45.8	2.45	31.2	0.00			302		
2	319	7.93	7.90	34.187	26.651	143.7	0.714	1.45	21.8	48.5	2.51	32.1	0.00			321		
2	377	7.49	7.45	34.217	26.739	136.1	0.795	1.11	16.5	55.5	2.68	34.2	0.00			379		
	400 ISL	7.22	7.18	34.222	26.781	132.2	0.826	0.96	14.2	59.2	2.75	35.2	0.00			402		
2	436	6.80	6.76	34.232	26.847	126.2	0.873	0.75	11.0	65.1	2.36	36.7	0.00			439		
	500 ISL	6.44	6.39	34.280	26.933	118.7	0.951	0.48	7.0	72.5	3.00	38.3	0.00			503		
2	510	6.38	6.33	34.288	26.947	117.4	0.963	0.44	6.4	73.6	3.02	38.6	0.00			513		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 93 40				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME		BOTTOM	WIND SPEED		WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 31.0 N		118 12.7 W		21/01/94	1338 UTC		1645 m	320 08 kn				1023.3 mb	14.9 C	14.2 C				
CAST	DEPTH	TEMP		POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C		DEG C		THETA			ml / l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.73		15.73	33.258	24.469	345.3	0.000	5.79	102.2	2.4	0.33	0.0	0.00	0.18	0.05	0	
2	2	15.73		15.73	33.258	24.469	345.4	0.007	5.79	102.2	2.4	0.33	0.0	0.00	0.18	0.05	2	
	10 ISL	15.71		15.71	33.258	24.474	345.2	0.035	5.79	102.2	2.3	0.32	0.0	0.00	0.18	0.05	10	
2	15	15.67		15.67	33.259	24.484	344.4	0.052	5.79	102.1	2.3	0.32	0.0	0.00	0.18	0.05	15	
	20 ISL	15.61		15.61	33.261	24.499	343.1	0.069	5.80	102.1	2.3	0.32	0.0	0.00	0.19	0.06	20	
2	30	15.46		15.46	33.266	24.536	339.8	0.103	5.80	101.8	2.4	0.34	0.0	0.00	0.24	0.11	30	
2	45	15.15		15.14	33.279	24.615	332.8	0.154	5.76	100.5	2.7	0.36	0.0	0.00	0.42	0.23	45	
	50 ISL	14.95		14.94	33.278	24.658	328.9	0.170	5.72	99.4	2.9	0.39	0.2	0.04	0.53	0.28	50	
2	54	14.72		14.71	33.275	24.705	324.5	0.183	5.66	97.9	3.2	0.42	0.4	0.08	0.59	0.31	54	
2	65	13.63		13.62	33.260	24.921	304.1	0.218	5.35	90.5	4.5	0.60	3.1	0.12	0.41	0.26	65	
2	75	13.34		13.33	33.268	24.986	298.1	0.248	5.28	88.8	5.1	0.63	3.5	0.11	0.38	0.24	75	
2	85	12.63		12.62	33.359	25.197	278.2	0.277	4.78	79.2	8.0	0.89	7.7	0.04	0.25	0.21	85	
2	94	12.21		12.20	33.369	25.286	270.0	0.301	4.65	76.4	9.2	0.98	9.2	0.03	0.17	0.17	94	
	100 ISL	11.77		11.76	33.420	25.408	258.4	0.317	4.39	71.5	11.3	1.12	11.5	0.02	0.12	0.13	100	
2	110	11.01		11.00	33.515	25.620	238.3	0.342	3.96	63.5	15.1	1.36	15.4	0.01	0.05	0.08	110	
2	125	10.19		10.18	33.553	25.793	222.1	0.377	3.83	60.3	17.9	1.50	17.9	0.01	0.02	0.05	126	
2	144	9.73		9.71	33.625	25.927	209.7	0.418	3.66	57.1	20.7	1.60	19.8	0.01	0.01	0.05	145	
	150 ISL	9.65		9.63	33.673	25.977	205.0	0.430	3.53	55.0	21.8	1.65	20.6	0.01	0.01	0.05	151	
2	168	9.48		9.46	33.825	26.124	191.4	0.466	3.09	48.0	25.3	1.81	22.9	0.00	0.00	0.04	169	
2	199	9.04		9.02	33.986	26.322	173.2	0.522	2.67	41.1	31.3	1.99	25.7	0.00	0.01	0.04	200	
	200 ISL	9.02		9.00	33.987	26.325	172.8	0.524	2.67	41.1	31.4	1.99	25.7	0.00			201	
2	229	8.51		8.49	33.995	26.412	165.0	0.573	2.71	41.2	34.3	2.03	26.7	0.00			230	
	250 ISL	8.36		8.33	34.047	26.476	159.3	0.607	2.44	37.0	37.5	2.13	28.0	0.00			251	
2	268	8.28		8.25	34.098	26.528	154.6	0.635	2.14	32.4	40.5	2.23	29.2	0.00			270	
	300 ISL	8.01		7.98	34.145	26.606	147.7	0.684	1.77	26.6	45.6	2.38	31.0	0.00			302	
2	318	7.84		7.81	34.165	26.647	144.0	0.710	1.58	23.7	48.6	2.47	32.0	0.00			320	
2	377	7.27		7.23	34.241	26.789	131.2	0.791	0.87	12.9	60.0	2.77	35.2	0.00			379	
	400 ISL	7.13		7.09	34.255	26.819	128.6	0.821	0.74	10.9	62.7	2.83	35.9	0.00			402	
2	437	6.91		6.87	34.267	26.859	125.2	0.868	0.63	9.2	66.4	2.90	36.9	0.00			440	
	500 ISL	6.37		6.32	34.275	26.938	118.1	0.944	0.48	7.0	73.9	2.99	38.7	0.00			503	
2	512	6.27		6.22	34.277	26.953	116.8	0.959	0.45	6.5	75.3	3.01	39.0	0.00			515	

RV DAVID STARR JORDAN					CALCOFI CRUISE 9401										STATION 93 45				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES		WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD AMT	TYPE	
32 20.6 N		118 33.9 W		21/01/94	1827 UTC	1367 m	320	07 kn	310	01 05	1	1025.2 mb	15.7 c	15.0 c	35m	01	4/8	CS	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
2	0 ISL	15.73	15.73	33.240	24.456	346.6	0.000	5.78	102.0	2.6	0.32	0.0	0.00	0.17	0.05	1			
	2 A	15.73	15.73	33.240	24.456	346.7	0.007	5.78	102.0	2.6	0.32	0.0	0.00	0.17	0.05	2			
	10 ISL	15.70	15.70	33.237	24.460	346.5	0.035	5.78	101.9	2.5	0.32	0.0	0.00	0.17	0.05	10			
2	20 ISL	15.65	15.65	33.239	24.473	345.5	0.069	5.79	102.0	2.5	0.32	0.0	0.00	0.19	0.06	20			
	21 A	15.65	15.65	33.239	24.473	345.6	0.073	5.79	102.0	2.5	0.32	0.0	0.00	0.19	0.06	21			
	30 ISL	15.65	15.65	33.253	24.484	344.8	0.104	5.79	102.0	2.6	0.32	0.0	0.00	0.21	0.07	30			
2	33	15.65	15.64	33.262	24.491	344.2	0.114	5.79	102.0	2.7	0.32	0.0	0.00	0.22	0.07	33			
	43 A	15.41	15.40	33.263	24.546	339.4	0.148	5.81	101.9	2.8	0.33	0.0	0.00	0.36	0.14	43			
	50 ISL	14.85	14.84	33.261	24.666	328.0	0.172	5.67	98.3	3.3	0.41	0.6	0.06	0.49	0.22	50			
2	53	14.55	14.54	33.264	24.733	321.8	0.181	5.58	96.2	3.7	0.46	1.1	0.08	0.52	0.25	53			
	66 A	13.06	13.05	33.330	25.090	288.0	0.221	4.92	82.3	7.1	0.80	6.2	0.08	0.28	0.20	66			
	73	12.24	12.23	33.329	25.248	273.0	0.241	4.73	77.7	9.1	0.94	8.8	0.03	0.16	0.15	73			
2	75 ISL	12.10	12.09	33.339	25.283	269.8	0.246	4.67	76.5	9.6	0.98	9.4	0.03	0.14	0.14	75			
	83	11.74	11.73	33.383	25.384	260.3	0.267	4.47	72.7	11.0	1.10	11.4	0.02	0.09	0.13	83			
	92 A	11.44	11.43	33.396	25.450	254.2	0.290	4.44	71.8	11.5	1.14	12.2	0.02	0.08	0.10	92			
2	100 ISL	10.91	10.90	33.428	25.570	242.9	0.310	4.31	68.9	13.3	1.25	14.1	0.02	0.06	0.08	100			
	109	10.31	10.30	33.476	25.712	229.5	0.332	4.12	65.0	16.1	1.38	16.5	0.01	0.03	0.06	109			
	125 A	9.85	9.84	33.553	25.850	216.6	0.367	3.85	60.2	18.9	1.52	18.8	0.01	0.01	0.05	126			
2	144	9.49	9.47	33.682	26.010	201.7	0.407	3.46	53.7	22.5	1.69	21.3	0.00	0.01	0.05	145			
	150 ISL	9.41	9.39	33.701	26.038	199.1	0.419	3.41	52.8	23.3^	1.72	21.8	0.00	0.01	0.05	151			
	169	9.24	9.22	33.768	26.118	191.9	0.456	3.22	49.7	25.6	1.79	23.1	0.00	0.00	0.04	170			
2	200	9.29	9.27	34.040	26.324	173.1	0.513	2.39	37.0	31.8	2.05	26.2	0.00	0.00	0.03	201			
	229	8.89	8.87	34.098	26.433	163.1	0.562	2.22	34.1	35.7	2.15	27.7	0.00	0.00	0.00	230			
	250 ISL	8.52	8.49	34.122	26.510	156.1	0.595	2.07	31.5	39.7	2.24	29.2	0.00	0.00	0.00	251			
2	268	8.19	8.16	34.137	26.572	150.4	0.623	1.92	29.0	43.5	2.33	30.5	0.00	0.00	0.00	270			
	300 ISL	7.71	7.68	34.164	26.664	141.9	0.669	1.56	23.3	49.9	2.49	32.5	0.00	0.00	0.00	302			
	318	7.49	7.46	34.176	26.706	138.2	0.695	1.36	20.2	53.0	2.57	33.5	0.00	0.00	0.00	320			
2	377	7.19	7.15	34.199	26.767	133.2	0.775	1.07	15.8	58.4	2.70	35.0	0.00	0.00	0.00	379			
	400 ISL	7.08	7.04	34.216	26.796	130.8	0.805	0.94	13.8	60.8	2.76	35.6	0.00	0.00	0.00	403			
	438	6.89	6.85	34.245	26.845	126.5	0.854	0.74	10.9	65.1	2.86	36.7	0.00	0.00	0.00	441			
2	500 ISL	6.42	6.37	34.271	26.929	119.1	0.930	0.52	7.5	72.7	2.94	38.5	0.00	0.00	0.00	503			
	511	6.34	6.29	34.276	26.943	117.8	0.943	0.48	6.9	74.0	2.96	38.8	0.00	0.00	0.00	514			

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN					CALCOFI CRUISE 9401							STATION 93 50						
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TVPE		
32 10.9 N		118 53.2 W		21/01/94	2304 UTC	1451 m	350	10 kn	350 02 05	1	1022.9 mb	15.9 c	15.0 c	28m 02	2/8	CI		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRE SS		
	m	DEG C	DEG C		THETA			ral/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.97	15.97	33.288	24.439	348.2	0.000	5.74	101.8	2.9	0.33	0.0	0.00	0.16	0.04	0		
2	2	15.97	15.97	33.288	24.439	348.3	0.007	5.74	101.8	2.9	0.33	0.0	0.00	0.16	0.04	2		
	10 ISL	15.87	15.87	33.282	24.457	346.8	0.035	5.75	101.8	2.8	0.32	0.0	0.00	0.17	0.05	10		
2	15	15.80	15.80	33.278	24.470	345.7	0.052	5.75	101.6	2.7	0.32	0.0	0.00	0.17	0.05	15		
	20 ISL	15.80	15.80	33.280	24.471	345.7	0.069	5.75	101.6	2.7	0.32	0.0	0.00	0.18	0.05	20		
2	30	15.79	15.79	33.283	24.476	345.6	0.104	5.74	101.4	2.7	0.33	0.0	0.00	0.21	0.06	30		
2	45	15.57	15.56	33.316	24.551	338.9	0.155	5.73	100.8	2.9	0.35	0.0	0.00	0.27	0.18	45		
	50 ISL	14.93	14.92	33.301	24.680	326.8	0.172	5.62	97.6	3.5	0.43	0.4	0.07	0.43	0.31	50		
2	55	14.27	14.26	33.294	24.815	314.0	0.188	5.48	93.9	4.2	0.51	1.0	0.13	0.56	0.41	55		
2	65	13.72	13.71	33.330	24.957	300.7	0.219	5.25	89.0	5.1	0.61	3.0	0.07	0.43	0.34	65		
2	75	12.93	12.92	33.315	25.104	286.9	0.248	5.03	83.9	6.6	0.78	5.9	0.03	0.25	0.30	75		
2	85	12.10	12.09	33.342	25.285	269.8	0.276	4.85	79.5	8.5	0.91	8.5	0.02	0.14	0.16	85		
2	95	11.77	11.76	33.411	25.401	259.0	0.302	4.67	76.0	9.8	1.01	10.2	0.02	0.09	0.11	95		
	100 ISL	11.43	11.42	33.421	25.471	252.4	0.315	4.58	74.0	10.9	1.09	11.4	0.02	0.07	0.09	130		
2	110	10.69	10.68	33.438	25.617	238.6	0.340	4.38	69.7	13.5	1.25	14.1	0.02	0.05	0.06	110		
2	125	9.90	9.89	33.532	25.825	219.0	0.374	4.00	62.6	17.6	1.47	17.6	0.01	0.02	0.04	126		
2	145	9.66	9.64	33.682	25.983	204.4	0.416	3.47	54.0	21.5	1.66	20.6	0.01	0.01	0.03	146		
	150 ISL	9.49	9.47	33.701	26.025	200.4	0.426	3.43	53.2	22.5	1.70	21.3	0.01	0.01	0.03	151		
2	170	8.83	8.81	33.776	26.190	185.0	0.465	3.31	50.6	26.6	1.82	23.7	0.00	0.01	0.03	171		
2	199	8.84	8.82	33.989	26.355	169.9	0.516	2.70	41.4	32.0	2.00	26.1	0.00	0.00	0.02	200		
	200 ISL	8.83	8.81	33.994	26.361	169.4	0.518	2.68	41.0	32.2	2.01	26.2	0.00	0.00	0.00	201		
2	229	8.44	8.42	34.078	26.487	157.8	0.566	2.32	35.2	37.6	2.15	28.3	0.00	0.00	0.00	250		
	250 ISL	8.19	8.16	34.098	26.541	153.0	0.598	2.17	32.8	40.8	2.23	29.4	0.00	0.00	0.00	251		
2	268	8.00	7.97	34.106	26.576	149.9	0.625	2.05	30.8	43.4	2.30	30.3	0.00	0.00	0.00	270		
	300 ISL	7.80	7.77	34.147	26.638	144.5	0.673	1.71	25.6	47.9	2.45	31.9	0.00	0.00	0.00	302		
2	318	7.69	7.66	34.170	26.672	141.5	0.698	1.50	22.4	50.5	2.53	32.8	0.00	0.00	0.00	320		
2	378	7.09	7.05	34.211	26.790	130.9	0.780	0.97	14.3	60.3	2.76	35.6	0.00	0.00	0.00	380		
	400 ISL	6.96	6.92	34.225	26.819	128.4	0.809	0.86	12.6	62.7	2.81	36.3	0.00	0.00	0.00	402		
2	436	6.77	6.73	34.246	26.862	124.8	0.854	0.73	10.7	66.3	2.88	37.2	0.00	0.00	0.00	439		
	500 ISL	6.35	6.30	34.274	26.940	117.9	0.932	0.49	7.1	73.5	3.00	39.0	0.00	0.00	0.00	503		
2	512	6.27	6.22	34.279	26.954	116.7	0.946	0.45	6.5	74.9	3.02	39.3	0.00	0.00	0.00	515		

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 87 100

LATITUDE			LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME			LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
31 38 3 N			123 5.0 W		30/ 1/94		1814 UTC		46 m	01	1222 - 1813 PST			1225 PST	1813 PST		153.9 mg C/m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ml/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N 0 2 uM/L	CHL ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE		(mg C/m3)			
													1	2	MEAN	DARK		
2	16.18	33.370	24.454	5.65	100.7	3.0	0.30	0.0	0.00	0.16	0.04	94. A	0.59	0.68	0.63	0.02		
14	16.14	33.367	24.461	5.65	100.6	2.9	0.30	0.0	0.00	0.16	0.05							
27	16.14	33.367	24.462	5.65	100.6	2.7	0.30	0.0	0.00	0.15	0.05							
43	16.12	33.362	24.463	5.65	100.5	2.7	0.30	0.0	0.00	0.15	0.05	41 .	1.9	1.9	1.9	0.03		
56	16.10	33.357	24.464	5.66	100.7	2.7	0.30	0.0	0.00	0.16	0.05							
70I	16.11	33.360	24.465	5.68	101.1	2.6	0.29	0.0	0.00	0.16	0.05							
85	16.14	33.364	24.462	5.65	100.6	2.6	0.29	0.0	0.00	0.16	0.05	5.9	0.91	0.92	0.92	0.02		
93	16.13	33.366	24.466	5.65	100.6	2.5	0.29	0.0	0.00	0.16	0.07							
103	15.04	33.379	24.718	5.63	98.0	2.9	0.36	0.1	0.18	0.23	0.16							
110	14.67	33.378	24.797	5.59	96.6	3.1	0.39	0.4	0.15	0.20	0.16	1.8	0.46	0.43	0.44	0.01		
120	14.60	33.523	24.924	5.36	92.6	3.6	0.45	1.4	0.04	0.20	0.18							
135	13.93	33.577	25.107	5.15	87.8	4.9	0.58	3.6	0.02	0.10	0.11							
150	12.28	33.503	25.378	4.93	81.2	7.4	0.83	7.5	0.01	0.05	0.06	0.42	0.01	0.00	0.01	0.01		
164	11.15	33.471	25.562	4.70	75.5	10.7	1.07	11.4	0.00	0.03	0.04							

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 90 30

LATITUDE			LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 25 3 N			117 54.0 W		27/ 1/94		1827 UTC		19 n		03		204 - 1743 PST		1205 PST		1743 PST		224.5 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		(mg C/m3)					
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK				
2	15.08	33.251	24.607	5.93	103.3	3.1	0.31	0.0	0.00	0.30	0.07	85. A	4.2	3.8	4.0	0.08				
12	15.06	33.250	24.611	5.93	103.3	3.1	0.29	0.0	0.00	0.27	0.07	38.	5.0	5.1	5.0	0.08				
23	14.98	33.249	24.628	5.94	103.3	3.1	0.30	0.0	0.00	0.29	0.09	16.	3.3	3.5	3.4	0.07				
30	14.43	33.235	24.735	5.81	99.9	3.7	0.37	0.0	0.01	0.63	0.36									
36	14.12	33.241	24.805	5.75	98.2	4.2	0.41	0.2	0.08	1.35	0.62	5.5	6.4	6.8	6.6	0.09				
42	13.78	33.240	24.875	5.49	93.1	4.8	0.52	2.0	0.21	0.56	0.51									
50	13.22	33.250	24.996	5.30	88.9	5.6	0.63	4.0	0.12	0.43	0.34	1.8	0.85	0.81	0.83	0.01				
59	12.50	33.272	25.154	5.03	83.1	7.7	0.80	6.9	0.04	0.20	0.20									
69	12.01	33.300	25.269	4.73	77.3	9.6	0.97	9.6	0.02	0.16	0.17	0.38	0.04	0.04	0.04	0.01				

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 90 60

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	NCUBATION TIME		LAN	CIVIL			
32 24 8 N		119 57.7 W		26/ 1/94		1808 UTC		22 m	02	1213 - 1751 PST		1213 PST	1751 PST		12 4.6 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		mg C/m3)	
m	DEG C		THETA	ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	PCT	1	2	MEAN	DARK
2	15.11	33.194	24.557	5.85	101.9	3.1	0.32	0.0	0.00	0.19	0.05	87. A	1.0	1.1	1.0	0.04
13	15.08	33.198	24.567	5.82	101.4	3.0	0.32	0.0	0.00	0.19	0.07	40.	2.5	2.4	2.5	0.04
28	15.04	33.200	24.578	5.81	101.1	3.0	0.32	0.0	0.00	0.22	0.07	14.	2.1	2.0	2.0	0.04
42	15.05	33.203	24.578	5.83	101.5	3.0	0.33	0.0	0.00	0.22	0.07	5.3	1.2	1.1	1.2	0.04
51	14.82	33.182	24.612	5.87	101.7	2.9	0.36	0.0	0.00	0.22	0.07					
60	14.33	33.202	24.732	5.86	100.5	3.1	0.38	0.2	0.10	0.60	0.34	1.5	1.8	1.8	1.8	0.02
72	14.07	33.227	24.806	5.83	99.5	3.3	0.43	1.0	0.22	0.37	0.24					
81	13.79	33.229	24.865	5.67	96.2	3.7	0.48	1.7	0.18	0.27	0.19	0.35	0.13	0.11	0.12	0.02

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 90 90

LATITUDE				LONGITUDE			DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME			LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
31 24 8 N				121 5 9.5 W			25/ 1/94		1836 UTC		29 m	02	1220 - 1759 PST			1220 PST	1759 PST		162.6 mg C/m2	
DEPTH	TEHP	SALINITY		SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		mg C/m3)				
m	DEG C			THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK			
2	15.95	33.338		24.482	5.71	101.3	3.1	0.33	0.1	0.00	0.17	0.04	90. A	0.60	0.77	0.69	0.04			
18	15.94	33.337		24.484	5.71	101.2	3.0	0.33	0.1	0.00	0.17	0.05	39.	2.0	2.0	2.0	0.04			
34	15.93	33.339		24.488	5.70	101.0	2.8	0.32	0.0	0.03	0.18	0.05	17.	1.6	1.6	1.6	0.05			
45	15.61	33.345		24.565	5.68	100.1	3.3	0.34	0.0	0.00	0.44	0.20								
52	14.76	33.303		24.718	5.61	97.1	3.9	0.43	0.8	0.04	0.53	0.27	6.4	3.4	3.1	3.3	0.03			
65	12.28	33.294		25.214	4.97	81.7	8.3	0.89	7.6	0.05	0.56	0.42								
75	11.33	33.379		25.456	4.39	70.8	12.4	1.21	12.9	0.01	0.33	0.36	1.9	1.0	1.1	1.1	0.02			
85	10.60	33.426		25.623	4.16	66.0	14.8	1.34	15.6	0.01	0.16	0.19								
96	10.19	33.473		25.730	3.98	62.6	16.5	1.45	17.3	0.01	0.11	0.15								
103	9.96	33.515		25.802	3.80	59.5	18.3	1.53	18.8	0.01	0.08	0.11	0.43	0.07	0.06	0.06	0.00			

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8, 0.42 PERCENT RESPECTIVELY.

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
31 30.6 N	120 13.8 U	22/01/94	1804 UTC	3927 m	350	06 kn	310 02 09		1020.8 mb	15.2 c	14.5 c	46m 01	2/8	CS		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	ib
2	0 ISL	16.55	16.55	33.367	24.367	355.1	0.000	5.63	101.1	2.8	0.31	0.0	0.00	0.09	0.02	0
	1 A	16.55	16.55	33.367	24.367	355.1	0.004	5.63	101.1	2.8	0.31	0.0	0.00	0.09	0.02	1
	10 ISL	16.49	16.49	33.364	24.379	354.2	0.035	5.64	101.1	2.8	0.31	0.0	0.00	0.10	0.03	10
2	15	16.45	16.45	33.363	24.388	353.6	0.053	5.65	101.2	2.8	0.31	0.0	0.00	0.10	0.03	15
	20 ISL	16.45	16.45	33.364	24.388	353.7	0.071	5.64	101.0	2.8	0.31	0.0	0.00	0.10	0.03	20
2	28 A	16.46	16.46	33.366	24.388	354.0	0.099	5.63	100.9	2.8	0.30	0.0	0.00	0.10	0.03	28
	30 ISL	16.43	16.43	33.361	24.391	353.7	0.106	5.63	100.8	2.8	0.30	0.0	0.00	0.10	0.03	30
2	42	16.22	16.21	33.330	24.416	351.8	0.149	5.67	101.1	2.7	0.32	0.0	0.00	0.12	0.04	42
	50 ISL	16.18	16.17	33.321	24.418	351.8	0.177	5.68	101.2	2.7	0.32	0.0	0.00	0.15	0.05	50
2	56 A	16.16	16.15	33.319	24.422	351.7	0.198	5.69	101.3	2.7	0.32	0.0	0.00	0.17	0.06	56
2	71	16.06	16.05	33.330	24.453	349.1	0.250	5.68	100.9	2.6	0.32	0.0	0.00	0.21	0.08	71
	75 ISL	15.37	15.36	33.275	24.565	338.5	0.264	5.68	99.5	2.9	0.36	0.3	0.03	0.24	0.11	75
2	85 A	13.66	13.65	33.177	24.852	311.3	0.297	5.68	96.1	3.8	0.47	1.2	0.08	0.29	0.18	85
2	95	13.31	13.30	33.214	24.951	302.0	0.327	5.52	92.7	4.0	0.51	2.0	0.04	0.24	0.17	95
	100 ISL	13.23	13.22	33.372	25.089	289.0	0.342	5.29	88.8	5.0	0.59	3.7	0.03	0.16	0.14	100
2	101	13.21	13.20	33.402	25.117	286.4	0.345	5.24	87.9	5.2	0.61	4.1	0.03	0.15	0.14	101
2	111	12.48	12.47	33.357	25.225	276.2	0.373	5.03	83.1	7.1	0.78	6.7	0.02	0.13	0.14	111
2	119 A	11.97	11.95	33.363	25.327	266.7	0.395	4.87	79.6	8.5	0.91	8.7	0.01	0.12	0.13	120
	125 ISL	11.54	11.52	33.381	25.421	257.8	0.411	4.81	77.9	9.5	0.98	10.0	0.01	0.10	0.11	126
2	140	10.52	10.50	33.446	25.653	235.8	0.448	4.68	74.2	12.2	1.13	12.9	0.01	0.03	0.05	141
	150 ISL	9.96	9.94	33.483	25.777	224.1	0.471	4.56	71.4	14.6	1.26	15.0	0.01	0.02	0.04	151
2	163 A	9.39	9.37	33.540	25.916	211.0	0.499	4.33	67.0	17.9	1.43	17.7	0.01	0.01	0.03	154
2	194	8.91	8.89	33.758	26.163	188.0	0.561	3.38	51.8	25.5	1.79	23.2	0.00	0.00	0.03	195
	200 ISL	8.84	8.82	33.801	26.208	183.9	0.572	3.24	49.6	26.9	1.84	24.0	0.00			201
2	228	8.46	8.44	33.959	26.391	166.9	0.621	2.85	43.3	32.9	1.99	26.5	0.00			229
	250 ISL	7.94	7.91	33.978	26.484	158.2	0.657	2.97	44.6	36.1	2.01	27.3	0.00			251
2	269	7.51	7.48	33.971	26.541	152.9	0.686	3.10	46.1	38.7	2.02	27.8	0.00			270
	300 ISL	7.20	7.17	34.001	26.608	146.9	0.733	2.74	40.4	44.3	2.16	29.8	0.00			302
2	319	7.08	7.05	34.024	26.643	143.8	0.760	2.40	35.3	48.1	2.28	31.3	0.00			321
2	378	6.57	6.54	34.102	26.774	132.0	0.842	1.40	20.4	60.9	2.66	35.8	0.00			380
	400 ISL	6.45	6.41	34.132	26.814	128.4	0.870	1.14	16.5	64.5	2.76	36.9	0.00			402
2	437	6.25	6.21	34.171	26.871	123.4	0.917	0.83	12.0	70.1	2.88	38.3	0.00			440
	500 ISL	5.59	5.55	34.182	26.962	114.9	0.992	0.61	8.7	80.7	3.02	40.4	0.00			503
2	511	5.48	5.44	34.184	26.977	113.5	1.004	0.57	8.1	82.6	3.04	40.8	0.00			514

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
31 11.3 N	120 54.3 W	23/01/94	0055 UTC	3829 m	340	06 kn	320 02 06	1	1018.5 mb	16.6 c	15.3 c		6/8	CI		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGLN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
2	0 ISL	16.36	16.36	33.284	24.347	357.0	0.000	5.71	102.1	2.6	0.31	0.1	0.00	0.10	0.03	0
	1 A	16.36	16.36	33.284	24.347	357.0	0.007	5.71	102.1	2.6	0.31	0.1	0.00	0.10	0.03	2
	10 ISL	16.16	16.16	33.283	24.392	353.0	0.036	5.70	101.5	2.5	0.31	0.0	0.00	0.11	0.04	13
2	15	16.00	16.00	33.283	24.429	349.7	0.053	5.70	101.2	2.5	0.31	0.0	0.00	0.12	0.04	15
	20 ISL	15.99	15.99	33.282	24.430	349.7	0.071	5.71	101.3	2.5	0.31	0.0	0.00	0.12	0.04	23
2	30	15.98	15.98	33.281	24.432	349.8	0.106	5.72	101.5	2.5	0.31	0.0	0.00	0.12	0.03	33
2	44	15.96	15.95	33.280	24.436	349.8	0.155	5.72	101.4	2.5	0.31	0.0	0.00	0.18	0.06	44
	50 ISL	15.97	15.96	33.299	24.449	348.8	0.176	5.72	101.5	2.4	0.31	0.0	0.00	0.21	0.07	50
2	54	15.97	15.96	33.313	24.460	347.9	0.189	5.72	101.5	2.4	0.31	0.0	0.00	0.22	0.08	54
2	65	15.94	15.93	33.333	24.482	346.1	0.228	5.72	101.4	2.5	0.31	0.0	0.00	0.24	0.10	65
2	75	14.83	14.82	33.261	24.671	328.3	0.261	5.69	98.6	3.4	0.39	0.4	0.05	0.33	0.16	75
2	84	13.56	13.55	33.249	24.927	304.0	0.290	5.54	93.5	4.2	0.51	1.9	0.09	0.30	0.18	84
2	95	12.61	12.60	33.325	25.175	280.6	0.322	5.19	85.9	6.1	0.71	5.4	0.04	0.19	0.14	95
	100 ISL	12.26	12.25	33.346	25.258	272.7	0.336	5.05	83.0	7.1	0.80	6.9	0.04	0.16	0.13	100
2	109	11.61	11.60	33.377	25.404	259.0	0.360	4.80	77.8	9.3	0.96	9.8	0.03	0.12	0.11	109
2	123	10.27	10.26	33.444	25.694	231.4	0.394	4.37	68.9	14.2	1.27	14.9	0.01	0.04	0.05	121
	125 ISL	10.17	10.16	33.453	25.718	229.2	0.399	4.33	68.1	14.6	1.30	15.3	0.01	0.04	0.05	126
2	144	9.65	9.63	33.542	25.875	214.6	0.441	4.04	62.8	18.3	1.48	18.3	0.00	0.01	0.04	145
	150 ISL	9.46	9.44	33.585	25.940	208.5	0.453	3.91	60.6	19.9	1.54	19.4	0.00	0.01	0.04	151
2	169	8.95	8.93	33.727	26.132	190.4	0.491	3.50	53.7	24.8	1.73	22.6	0.00	0.00	0.03	170
2	199	8.65	8.63	33.892	26.309	174.2	0.546	3.04	46.3	30.2	1.90	25.3	0.00	0.00	0.04	200
	200 ISL	8.64	8.62	33.896	26.314	173.8	0.548	3.02	46.0	30.4	1.91	25.4	0.00			201
2	229	8.30	8.28	33.998	26.446	161.7	0.596	2.66	40.2	35.7	2.06	27.5	0.00			230
	250 ISL	8.11	8.08	34.026	26.497	157.1	0.630	2.60	39.2	37.8	2.10	28.1	0.00			251
2	269	7.92	7.89	34.033	26.530	154.2	0.660	2.58	38.7	39.6	2.12	28.6	0.00			270
	300 ISL	7.47	7.44	34.043	26.604	147.5	0.706	2.39	35.5	44.9	2.24	30.2	0.00			302
2	317	7.20	7.17	34.046	26.644	143.8	0.731	2.26	33.3	48.2	2.31	31.3	0.00			319
2	378	6.41	6.38	34.052	26.755	133.5	0.816	1.74	25.2	60.4	2.56	35.1	0.00			380
	400 ISL	6.20	6.16	34.064	26.792	130.2	0.845	1.52	21.9	64.6	2.66	36.4	0.00			402
2	436	5.94	5.90	34.098	26.852	124.8	0.891	1.15	16.5	70.9	2.81	38.2	0.00			439
	500 ISL	5.76	5.72	34.211	26.965	114.9	0.967	0.59	8.4	79.9	3.01	40.0	0.00			503
2	510	5.73	5.69	34.229	26.983	113.3	0.979	0.50	7.1	81.3	3.04	40.3	0.00			513

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 93				55
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
32 1 .0 N	119 13.7 W	22/01/94	0330 UTC	1591 m	330	07 kn			1022.5 mb	15.3 c	14.3 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
m	DEG C	DEG C			THETA			10 l / l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.51	15.51	33.242	24.506	341.8	0.000	5.77	101.4	2.8	0.33	0.0	0.00	0.16	0.05	0		
2	2	15.51	15.51	33.242	24.506	341.9	0.007	5.77	101.4	2.8	0.33	0.0	0.00	0.16	0.05	2		
	10 ISL	15.47	15.47	33.243	24.516	341.2	0.034	5.80	101.8	2.8	0.32	0.0	0.00	0.17	0.05	10		
2	11	15.46	15.46	33.243	24.518	341.0	0.038	5.81	102.0	2.8	0.32	0.0	0.00	0.17	0.05	11		
2	20	15.40	15.40	33.239	24.529	340.3	0.068	5.81	101.9	2.7	0.32	0.0	0.00	0.18	0.04	20		
2	30	14.65	14.65	33.213	24.671	326.9	0.102	5.91	102.0	2.9	0.34	0.0	0.00	0.31	0.13	30		
2	39	14.58	14.57	33.244	24.710	323.5	0.131	5.92	102.1	2.9	0.35	0.0	0.01	0.35	0.18	39		
2	50	14.48	14.47	33.247	24.734	321.5	0.166	5.94	102.2	3.0	0.36	0.0	0.02	0.34	0.20	50		
2	61	14.19	14.18	33.241	24.791	316.4	0.201	5.81	99.4	3.2	0.42	0.6	0.13	0.25	0.19	61		
2	70	13.22	13.21	33.224	24.976	298.9	0.229	5.49	92.0	4.6	0.57	3.0	0.11	0.19	0.18	70		
	75 ISL	12.96	12.95	33.245	25.044	292.6	0.244	5.37	89.5	5.2	0.63	4.0	0.09	0.17	0.17	75		
2	85	12.61	12.60	33.315	25.167	281.1	0.273	5.15	85.3	6.5	0.75	5.9	0.04	0.15	0.15	85		
2	100	11.80	11.79	33.441	25.419	257.4	0.313	4.72	76.9	9.5	0.97	9.9	0.01	0.08	0.09	100		
2	120	10.38	10.37	33.516	25.731	227.9	0.362	4.25	67.2	15.4	1.34	15.7	0.00	0.03	0.05	121		
2	125 ISL	10.14	10.13	33.538	25.790	222.4	0.373	4.14	65.1	16.6	1.40	16.7	0.00	0.02	0.04	126		
2	139	9.63	9.61	33.603	25.926	209.7	0.403	3.87	60.2	19.7	1.54	19.1	0.00	0.01	0.03	140		
	150 ISL	9.34	9.32	33.656	26.014	201.4	0.426	3.70	57.2	21.9	1.63	20.6	0.00	0.00	0.03	151		
2	170	8.95	8.93	33.753	26.153	188.5	0.465	3.43	52.6	25.7	1.76	22.8	0.00	0.00	0.03	171		
2	198	8.46	8.44	33.894	26.339	171.2	0.515	3.12	47.4	31.0	1.91	25.4	0.00	0.00	0.02	199		
	200 ISL	8.44	8.42	33.903	26.350	170.3	0.518	3.09	46.9	31.4	1.92	25.6	0.00			201		
2	229	8.17	8.15	34.004	26.470	159.3	0.566	2.64	39.8	37.1	2.09	28.0	0.00			230		
2	250 ISL	8.01	7.98	34.045	26.526	154.3	0.599	2.43	36.5	40.2	2.18	29.1	0.00			251		
2	269	7.86	7.83	34.066	26.565	150.9	0.628	2.27	34.0	42.8	2.25	30.0	0.00			271		
2	300 ISL	7.46	7.43	34.082	26.636	144.5	0.674	2.01	29.8	48.2	2.38	31.8	0.00			302		
2	318	7.25	7.22	34.092	26.673	141.1	0.700	1.84	27.2	51.5	2.46	32.9	0.00			320		
2	378	7.07	7.03	34.211	26.793	130.6	0.781	0.95	14.0	61.0	2.79	35.7	0.00			380		
	400 ISL	6.84	6.80	34.216	26.828	127.4	0.809	0.83	12.2	64.4	2.85	36.6	0.00			402		
2	436	6.45	6.41	34.214	26.879	122.8	0.854	0.74	10.7	69.5	2.91	37.9	0.00			439		
	500 ISL	6.18	6.14	34.265	26.955	116.3	0.931	0.50	7.2	76.1	3.03	39.1	0.00			503		
2	512	6.13	6.08	34.275	26.969	115.1	0.945	0.45	6.5	77.3	3.05	39.3	0.00			515		

RV DAVID STARR JORDANI				CALCOFI CRUISE 9401										STATION 93				60
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
31 50.6 N	119 33.5 W	22/01/94	0807 UTC	1883 m	310	07 kn			1022.2 mb	15.3 c	14.9 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
m	DEG C	DEG C			THETA			mL/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.50	15.50	33.226	24.496	342.8	0.000	5.78	101.5	2.7	0.32	0.0	0.00	0.14	0.05	0		
2	2	15.50	15.50	33.226	24.496	342.8	0.007	5.78	101.5	2.7	0.32	0.0	0.00	0.14	0.05	2		
	10 ISL	15.49	15.49	33.225	24.498	342.9	0.034	5.78	101.5	2.6	0.32	0.0	0.00	0.15	0.04	10		
2	15	15.49	15.49	33.226	24.499	343.0	0.051	5.78	101.5	2.5	0.32	0.0	0.00	0.15	0.04	15		
2	20 ISL	15.47	15.47	33.226	24.503	342.7	0.069	5.78	101.5	2.6	0.32	0.0	0.00	0.15	0.04	20		
2	30	15.42	15.42	33.217	24.508	342.6	0.103	5.78	101.4	2.7	0.32	0.0	0.00	0.16	0.05	30		
2	45	15.13	15.12	33.173	24.538	340.2	0.154	5.83	101.6	2.6	0.32	0.0	0.00	0.26	0.11	45		
2	50 ISL	14.95	14.94	33.167	24.572	337.0	0.171	5.81	100.9	2.7	0.35	0.2	0.01	0.34	0.15	50		
2	56	14.66	14.65	33.165	24.633	331.3	0.191	5.76	99.4	2.9	0.39	0.4	0.03	0.42	0.20	56		
2	65	13.99	13.98	33.174	24.781	317.5	0.220	5.61	95.5	3.8	0.48	1.7	0.06	0.35	0.22	65		
2	75	12.55	12.54	33.233	25.115	285.8	0.250	5.19	85.8	6.9	0.78	6.4	0.07	0.20	0.17	75		
2	84	12.47	12.46	33.243	25.138	283.8	0.276	5.13	84.7	7.3	0.81	6.9	0.07	0.20	0.16	84		
2	95	12.30	12.29	33.260	25.184	279.7	0.307	5.06	83.2	7.8	0.86	7.6	0.06	0.18	0.17	95		
2	100 ISL	12.02	12.01	33.275	25.249	273.6	0.321	4.98	81.4	8.3	0.90	8.3	0.05	0.16	0.16	100		
2	110	11.36	11.35	33.316	25.403	259.1	0.347	4.79	77.2	9.8	1.01	10.3	0.02	0.10	0.14	110		
2	125	10.63	10.62	33.391	25.591	241.4	0.385	4.54	72.1	13.1	1.22	13.8	0.00	0.05	0.08	126		
2	144	9.54	9.52	33.527	25.881	214.0	0.428	4.11	63.8	18.5	1.50	18.6	0.00	0.01	0.04	145		
	150 ISL	9.37	9.35	33.570	25.942	208.2	0.441	3.97	61.4	19.9	1.56	19.6	0.00	0.01	0.04	151		
2	168	9.05	9.03	33.696	26.092	194.3	0.477	3.56	54.7	23.8	1.72	22.1	0.00	0.01	0.03	169		
2	199	8.59	8.57	33.901	26.325	172.7	0.534	2.96	45.1	30.9	1.95	25.8	0.00	0.00	0.03	200		
	200 ISL	8.58	8.56	33.906	26.331	172.1	0.536	2.94	44.7	31.1	1.96	25.9	0.00			201		
2	229	8.35	8.33	34.016	26.453	161.1	0.584	2.52	38.2	36.3	2.10	28.0	0.00			230		
2	250 ISL	8.15	8.12	34.063	26.520	155.0	0.617	2.28	34.4	40.0	2.21	29.2	0.00			251		
2	268	7.95	7.92	34.087	26.568	150.6	0.645	2.10	31.5	43.1	2.29	30.2	0.00			269		
2	300 ISL	7.53	7.50	34.101	26.641	144.1	0.692	1.88	28.0	48.4	2.40	31.9	0.00			302		
2	317	7.32	7.29	34.107	26.675	140.9	0.716	1.75	25.9	51.3	2.46	32.8	0.00			319		
2	377	6.94	6.90	34.206	26.807	129.2	0.797	0.95	13.9	62.2	2.78	35.8	0.00			379		
	400 ISL	6.72	6.68	34.210	26.840	126.2	0.827	0.84	12.3	65.7	2.84	36.7	0.00			402		
2	437	6.39	6.35	34.211	26.884	122.3	0.873	0.74	10.7	70.5	2.91	38.0	0.00			440		
	500 ISL	6.17	6.13	34.274	26.963	115.5	0.947	0.48	6.9	76.5	3.02	39.2	0.00			503		
2	516	6.11	6.06	34.290	26.984	113.8	0.966	0.41	5.9	78.0	3.05	39.5	0.00			519		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 93 110			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE				
30 10.6 N	122 55.6 U	24/01/94	0331 UTC	3645 m	320 05 kn			1019.2 mb	15.2 c	12.6 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PLES0	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.19	16.19	33.242	24.353	356.4	0.000	5.69	101.3	2.6	0.30	0.0	0.00	0.10	0.03	0	
2	1	16.19	16.19	33.242	24.354	356.4	0.004	5.69	101.3	2.6	0.30	0.0	0.00	0.10	0.03	'	
	10 ISL	16.19	16.19	33.240	24.352	356.8	0.036	5.71	101.7	2.5	0.30	0.0	0.00	0.11	0.03	10	
2	14	16.19	16.19	33.239	24.352	357.0	0.050	5.72	101.9	2.5	0.30	0.0	0.00	0.11	0.03	14	
	20 ISL	16.23	16.23	33.266	24.364	356.0	0.071	5.70	101.6	2.5	0.30	0.0	0.00	0.11	0.03	20	
	30 ISL	16.30	16.30	33.312	24.383	354.5	0.107	5.66	101.1	2.5	0.29	0.0	0.00	0.10	0.03	30	
2	31	16.31	16.31	33.316	24.384	354.4	0.110	5.66	101.1	2.5	0.29	0.0	0.00	0.10	0.03	31	
2	45	16.28	16.27	33.316	24.391	354.2	0.160	5.70	101.7	2.4	0.29	0.0	0.00	0.17	0.07	45	
	50 ISL	16.25	16.24	33.320	24.402	353.4	0.178	5.70	101.7	2.3	0.29	0.0	0.00	0.18	0.07	50	
2	60	16.11	16.10	33.304	24.421	351.8	0.213	5.70	101.4	2.3	0.30	0.0	0.00	0.22	0.07	60	
	75 ISL	15.60	15.59	33.375	24.591	336.1	0.265	5.69	100.2	2.6	0.32	0.0	0.04	0.35	0.24	75	
2	76	15.54	15.53	33.382	24.610	338.3	0.268	5.69	100.1	2.6	0.32	0.0	0.05	0.35	0.25	76	
2	84	14.88	14.87	33.437	24.797	316.7	0.294	5.70	99.0	3.0	0.33	0.2	0.12	0.30	0.23	84	
2	93	14.65	14.64	33.478	24.878	309.2	0.322	5.59	96.6	3.2	0.36	0.6	0.08	0.25	0.20	93	
	100 ISL	14.59	14.58	33.568	24.960	301.5	0.343	5.53	95.5	3.3	0.35	0.8	0.06	0.21	0.18	100	
2	103	14.56	14.54	33.611	25.000	297.9	0.352	5.50	95.0	3.3	0.35	0.9	0.05	0.19	0.17	103	
2	114	13.73	13.71	33.588	25.156	283.2	0.384	5.29	89.8	4.6	0.50	3.0	0.01	0.10	0.09	114	
2	123	12.81	12.79	33.555	25.315	268.1	0.409	5.17	86.1	5.9	0.63	4.9	0.01	0.07	0.06	123	
	125 ISL	12.67	12.65	33.554	25.341	265.6	0.415	5.14	85.3	6.2	0.66	5.3	0.01	0.07	0.06	126	
2	139	11.85	11.83	33.552	25.497	251.0	0.451	4.94	80.6	8.5	0.84	8.5	0.00	0.04	0.05	140	
	150 ISL	10.93	10.91	33.521	25.640	237.4	0.478	4.79	76.6	11.2	1.03	11.5	0.00	0.03	0.04	151	
2	162	9.97	9.95	33.504	25.792	222.9	0.505	4.62	72.3	14.3	1.24	14.6	0.00	0.02	0.03	163	
2	192	8.79	8.77	33.639	26.089	194.9	0.568	4.16	63.5	21.1	1.54	19.9	0.00	0.00	0.02	193	
	200 ISL	8.63	8.61	33.696	26.158	188.5	0.583	3.95	60.1	23.4	1.63	21.4	0.00			201	
2	229	8.25	8.23	33.888	26.367	169.1	0.635	3.25	49.1	31.5	1.90	25.9	0.00			230	
	250 ISL	7.94	7.91	33.951	26.463	160.2	0.670	3.15	47.3	34.9	1.96	27.1	0.00			251	
2	269	7.69	7.66	33.982	26.524	154.6	0.700	3.11	46.4	37.6	1.99	27.8	0.00			270	
	300 ISL	7.40	7.37	34.023	26.598	148.0	0.746	2.71	40.2	43.4	2.15	30.1	0.00			302	
2	319	7.24	7.21	34.039	26.633	144.9	0.774	2.41	35.6	47.2	2.27	31.6	0.00			321	
2	378	6.64	6.61	34.074	26.743	135.0	0.857	1.66	24.2	58.7	2.58	35.5	0.00			380	
	400 ISL	6.44	6.40	34.090	26.782	131.4	0.886	1.42	20.6	62.7	2.67	36.7	0.00			402	
2	439	6.13	6.09	34.125	26.850	125.3	0.936	1.06	15.3	69.4	2.82	38.5	0.00			442	
	500 ISL	5.85	5.81	34.205	26.949	116.5	1.010	0.63	9.0	77.9	3.01	40.2	0.00			503	
2	513	5.79	5.75	34.222	26.970	114.6	1.025	0.54	7.7	79.7	3.05	40.6	0.00			516	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9401										STATION 93 120			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE				
29 51.0 N	123 35.0 W	24/01/94	1031 UTC	4074 m	250 07 kn			1019.1 mb	15.4 c	11.9 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uL/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.97	16.97	33.435	24.321	359.4	0.000	5.60	101.4	2.4	0.30	0.0	0.00	0.11	0.04	0	
2	2	16.97	16.97	33.435	24.322	359.5	0.007	5.60	101.4	2.4	0.30	0.0	0.00	0.11	0.04	2	
	10 ISL	16.96	16.96	33.435	24.324	359.5	0.036	5.60	101.4	2.3	0.29	0.0	0.00	0.11	0.03	10	
2	16	16.95	16.95	33.434	24.326	359.5	0.058	5.59	101.2	2.3	0.29	0.0	0.00	0.11	0.03	16	
	20 ISL	16.95	16.95	33.434	24.326	359.6	0.072	5.59	101.2	2.3	0.29	0.0	0.00	0.11	0.03	20	
2	30	16.95	16.95	33.432	24.325	360.1	0.108	5.58	101.0	2.3	0.29	0.0	0.00	0.11	0.04	30	
	45	16.66	16.65	33.380	24.353	357.8	0.162	5.61	100.9	2.2	0.30	0.0	0.00	0.16	0.05	45	
	50 ISL	16.58	16.57	33.355	24.353	358.0	0.180	5.62	100.9	2.2	0.30	0.0	0.00	0.18	0.06	50	
2	59	16.45	16.44	33.317	24.354	358.2	0.212	5.64	101.0	2.2	0.30	0.0	0.00	0.22	0.09	59	
2	75	16.33	16.32	33.288	24.360	358.2	0.269	5.65	100.9	2.2	0.30	0.0	0.00	0.23	0.10	75	
2	85	16.24	16.23	33.281	24.375	357.0	0.305	5.65	100.7	2.2	0.31	0.0	0.00	0.24	0.12	85	
2	95	15.89	15.88	33.454	24.588	337.1	0.340	5.62	99.6	2.4	0.32	0.0	0.04	0.24	0.21	95	
	100 ISL	15.62	15.60	33.509	24.691	327.4	0.356	5.59	98.6	2.5	0.33	0.1	0.10	0.23	0.21	100	
2	104	15.40	15.38	33.542	24.765	320.4	0.369	5.57	97.8	2.6	0.34	0.2	0.15	0.22	0.21	104	
2	115	15.03	15.01	33.593	24.885	309.2	0.404	5.48	95.5	3.0	0.36	0.7	0.11	0.19	0.20	115	
2	125	14.36	14.34	33.567	25.009	297.6	0.434	5.30	91.1	3.9	0.48	2.1	0.02	0.14	0.16	125	
2	139	13.22	13.20	33.560	25.238	276.0	0.474	5.07	85.2	5.9	0.67	5.5	0.02	0.08	0.10	140	
	150 ISL	11.99	11.97	33.498	25.429	257.8	0.504	4.87	79.7	8.5	0.89	9.0	0.02	0.05	0.07	151	
2	163	10.62	10.60	33.447	25.637	237.9	0.536	4.63	73.5	11.9	1.14	13.0	0.01	0.03	0.05	164	
2	194	9.31	9.29	33.583	25.963	207.1	0.605	4.22	65.2	18.7	1.45	18.4	0.00	0.01	0.03	195	
	200 ISL	9.13	9.11	33.623	26.023	201.5	0.617	4.12	63.4	20.2	1.50	19.4	0.00			201	
2	228	8.48	8.46	33.807	26.269	178.5	0.670	3.68	55.8	27.1	1.72	23.2	0.00			229	
	250 ISL	8.18	8.15	33.900	26.387	167.5	0.708	3.44	51.9	31.2	1.83	25.1	0.00			251	
2	268	7.99	7.96	33.951	26.456	161.3	0.738	3.25	48.8	34.4	1.91	26.4	0.00			269	
	300 ISL	7.61	7.58	34.003	26.552	152.5	0.788	2.83	42.1	40.7	2.08	28.9	0.00			302	
2	317	7.41	7.38	34.018	26.593	148.8	0.814	2.59	38.4	44.2	2.18	30.2	0.00			319	
2	377	6.77	6.74	34.071	26.723	136.9	0.899	1.75	25.6	56.7	2.53	34.6	0.00			379	
	400 ISL	6.52	6.48	34.094	26.775	132.2	0.930	1.44	20.9	61.9	2.65	36.1	0.00			402	
2	437	6.18	6.14	34.133	26.850	125.3	0.978	1.02	14.7	69.4	2.81	38.2	0.00			440	
	500 ISL	5.92	5.88	34.198	26.935	117.9	1.055	0.64	9.2	76.6	2.98	39.8	0.00			503	
	511	5.88	5.84	34.209	26.948	116.7	1.068	0.57	8.2	77.9	3.01	40.1	0.00			514	

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
30 51.2 N	121 34.1 W	23/01/94	1125 UTC	4083 m	240	07 kn			1017.4 mb	17.2 C	16.2 C					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	16.27	16.27	33.325	24.399	352.0	0.000	5.69	101.6	3.0	0.31	0.0	0.00	0.09	0.02	0
2	2	16.27	16.27	33.325	24.399	352.1	0.007	5.69	101.6	3.0	0.31	0.0	0.00	0.09	0.02	2
	10 ISL	16.18	16.18	33.315	24.412	351.1	0.035	5.69	101.4	2.9	0.31	0.0	0.00	0.09	0.02	10
2	15	16.10	16.10	33.306	24.424	350.2	0.053	5.69	101.2	2.8	0.31	0.0	0.00	0.10	0.02	15
	20 ISL	16.05	16.05	33.297	24.428	349.9	0.070	5.69	101.1	2.8	0.31	0.0	0.00	0.10	0.02	20
2	30	15.98	15.98	33.279	24.431	350.0	0.105	5.70	101.1	2.8	0.31	0.0	0.00	0.12	0.03	30
	46	15.88	15.87	33.260	24.439	349.6	0.161	5.72	101.2	2.8	0.31	0.0	0.00	0.17	0.06	46
	50 ISL	15.82	15.81	33.255	24.449	348.8	0.175	5.72	101.1	2.8	0.31	0.0	0.00	0.18	0.07	50
2	55	15.73	15.72	33.251	24.466	347.3	0.193	5.72	100.9	2.8	0.32	0.0	0.00	0.21	0.09	55
	65	15.46	15.45	33.268	24.539	340.7	0.227	5.71	100.2	3.0	0.33	0.0	0.01	0.30	0.17	65
2	74	14.06	14.05	33.239	24.817	314.3	0.256	5.62	95.9	3.6	0.43	0.7	0.10	0.31	0.22	74
	75 ISL	13.95	13.94	33.243	24.843	311.9	0.260	5.59	95.1	3.7	0.45	0.9	0.10	0.30	0.22	75
2	84	13.16	13.15	33.296	25.044	292.9	0.287	5.32	89.1	5.2	0.61	3.5	0.04	0.22	0.17	84
2	95	12.57	12.56	33.369	25.217	276.6	0.318	5.08	84.1	6.7	0.75	6.2	0.02	0.14	0.13	95
	100 ISL	12.22	12.21	33.392	25.302	268.6	0.332	4.95	81.3	7.9	0.85	7.9	0.02	0.12	0.12	100
2	109	11.51	11.50	33.426	25.461	253.6	0.355	4.69	75.9	10.6	1.04	11.2	0.01	0.09	0.10	109
	124	10.12	10.11	33.478	25.746	226.5	0.391	4.19	65.8	15.9	1.37	16.5	0.00	0.04	0.05	125
	125 ISL	10.06	10.05	33.483	25.760	225.2	0.393	4.17	65.4	16.2	1.39	16.8	0.00	0.04	0.05	126
2	145	9.24	9.22	33.603	25.989	203.7	0.436	3.85	59.4	21.3	1.61	20.6	0.00	0.01	0.03	146
	150 ISL	9.10	9.08	33.634	26.036	199.3	0.446	3.79	58.3	22.3	1.64	21.2	0.00	0.01	0.03	151
2	172	8.71	8.69	33.774	26.207	183.4	0.489	3.49	53.2	26.5	1.77	23.4	0.00	0.00	0.02	173
2	199	8.57	8.55	33.965	26.378	167.6	0.536	2.80	42.6	32.6	1.98	26.5	0.00	0.00	0.03	200
	200 ISL	8.56	8.54	33.968	26.382	167.2	0.538	2.79	42.5	32.7	1.98	26.6	0.00	0.00	0.03	201
2	229	8.17	8.15	34.007	26.472	159.1	0.585	2.68	40.4	36.6	2.06	28.1	0.00	0.00	0.03	230
	250 ISL	7.89	7.86	34.042	26.542	152.8	0.618	2.43	36.4	40.9	2.18	29.5	0.00	0.00	0.03	251
2	268	7.65	7.62	34.069	26.598	147.6	0.645	2.19	32.7	44.8	2.29	30.8	0.00	0.00	0.03	269
	300 ISL	7.30	7.27	34.090	26.665	141.6	0.691	1.89	28.0	50.1	2.42	32.6	0.00	0.00	0.03	302
2	317	7.11	7.08	34.092	26.693	139.1	0.715	1.77	26.1	52.8	2.47	33.4	0.00	0.00	0.03	319
2	377	6.17	6.14	34.062	26.794	129.7	0.795	1.52	21.9	64.1	2.65	36.5	0.00	0.00	0.03	379
	400 ISL	6.02	5.99	34.088	26.834	126.1	0.825	1.27	18.2	68.1	2.75	37.5	0.00	0.00	0.03	402
2	440	5.88	5.84	34.151	26.902	120.1	0.874	0.83	11.9	74.4	2.91	39.1	0.00	0.00	0.03	443
	500 ISL	5.66	5.62	34.225	26.988	112.6	0.944	0.50	7.1	81.9	3.04	40.5	0.00	0.00	0.03	503
2	512	5.61	5.57	34.240	27.006	111.0	0.957	0.44	6.3	83.4	3.07	40.8	0.00	0.00	0.03	515

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
30 31.4 N	122 13.7 W	23/01/94	1941 UTC	3922 m	310	08 kn	310 32 07 'I		1019.9 mb	17.6 C	16.6 C	38m 01	7/8	SC		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	16.23	16.23	33.278	24.372	354.6	0.000	5.69	101.4	2.8	0.32	0.0	0.00	0.10	0.03	0
2	2 A	16.23	16.23	33.278	24.372	354.6	0.007	5.69	101.4	2.8	0.32	0.0	0.00	0.10	0.03	2
	10 ISL	16.10	16.10	33.282	24.405	351.8	0.035	5.69	101.2	2.7	0.32	0.0	0.00	0.11	0.03	10
2	11	16.08	16.08	33.282	24.410	351.4	0.039	5.69	101.1	2.7	0.32	0.0	0.00	0.11	0.03	11
	20 ISL	15.99	15.99	33.274	24.424	350.3	0.070	5.70	101.1	2.7	0.32	0.0	0.00	0.10	0.03	20
2	21 A	15.98	15.98	33.273	24.426	350.1	0.074	5.70	101.1	2.7	0.32	0.0	0.00	0.10	0.03	21
	30 ISL	15.97	15.97	33.274	24.429	350.1	0.105	5.69	100.9	2.6	0.31	0.0	0.00	0.11	0.04	30
2	33	15.96	15.95	33.273	24.431	350.0	0.116	5.69	100.9	2.6	0.31	0.0	0.00	0.12	0.04	33
	46 A	15.94	15.93	33.269	24.432	350.3	0.161	5.69	100.8	2.6	0.31	0.0	0.00	0.16	0.05	46
	50 ISL	15.90	15.89	33.260	24.435	350.2	0.175	5.70	100.9	2.6	0.31	0.0	0.00	0.18	0.06	50
2	57	15.81	15.80	33.242	24.441	349.8	0.200	5.71	100.9	2.6	0.32	0.0	0.00	0.21	0.08	57
2	71 A	15.68	15.67	33.230	24.462	348.3	0.249	5.72	100.8	2.5	0.32	0.0	0.00	0.24	0.10	71
	75 ISL	15.61	15.60	33.231	24.478	346.8	0.263	5.72	100.7	2.6	0.33	0.0	0.00	0.26	0.11	75
2	85	15.42	15.41	33.232	24.521	343.0	0.297	5.71	100.1	2.8	0.34	0.0	0.01	0.28	0.14	85
2	97 A	14.37	14.36	33.362	24.848	312.1	0.337	5.55	95.3	3.7	0.44	1.1	0.09	0.23	0.19	97
	100 ISL	14.08	14.07	33.372	24.916	305.6	0.346	5.51	94.1	3.8	0.45	1.4	0.08	0.22	0.19	100
2	110	13.17	13.15	33.374	25.103	288.0	0.375	5.35	89.7	4.6	0.54	3.0	0.03	0.17	0.16	110
2	121	12.43	12.41	33.348	25.228	276.2	0.407	5.04	83.2	7.0	0.79	6.7	0.02	0.12	0.13	121
	125 ISL	12.19	12.17	33.370	25.291	270.3	0.417	4.96	81.4	7.7	0.84	7.6	0.02	0.11	0.12	126
2	133 A	11.70	11.68	33.427	25.427	257.4	0.439	4.84	78.7	9.0	0.92	9.2	0.01	0.08	0.09	134
	150 ISL	10.38	10.36	33.476	25.701	231.4	0.480	4.66	73.6	12.4	1.12	12.7	0.00	0.03	0.05	151
2	157	9.85	9.83	33.495	25.805	221.5	0.496	4.59	71.7	14.1	1.21	14.2	0.00	0.02	0.04	158
	192	8.45	8.43	33.697	26.187	185.5	0.567	3.94	59.7	24.7	1.67	21.8	0.00	0.00	0.02	193
	200 ISL	8.40	8.38	33.758	26.242	180.4	0.582	3.77	57.1	26.6	1.74	22.9	0.00	0.00	0.02	201
2	234	8.17	8.15	33.929	26.411	164.9	0.641	3.13	47.2	33.3	1.93	26.0	0.00	0.00	0.02	235
	250 ISL	8.00	7.97	33.966	26.466	160.0	0.667	2.98	44.8	35.9	1.99	27.0	0.00	0.00	0.02	251
2	278	7.65	7.62	33.998	26.542	153.0	0.710	2.77	41.3	40.4	2.10	28.7	0.00	0.00	0.02	279
	300 ISL	7.38	7.35	34.021	26.599	147.9	0.743	2.46	36.4	45.0	2.23	30.4	0.00	0.00	0.02	302
2	328	7.04	7.01	34.041	26.662	142.1	0.784	2.07	30.4	50.9	2.39	32.5	0.00	0.00	0.02	330
2	377	6.50	6.47	34.060	26.750	134.1	0.852	1.70	24.7	59.7	2.57	35.0	0.00	0.00	0.02	379
	400 ISL	6.32	6.28	34.088	26.796	130.0	0.882	1.41	20.4	64.5	2.68	36.3	0.00	0.00	0.02	402
2	437	6.05	6.01	34.138	26.870	123.2	0.929	0.94	13.5	72.2	2.86	38.3	0.00	0.00	0.02	440
	500 ISL	5.52	5.48	34.180	26.969	114.2	1.004	0.60	8.5	82.9	3.03	40.5	0.00	0.00	0.02	503
2	512	5.42	5.38	34.189	26.988	112.4	1.017	0.54	7.6	84.9	3.06	40.9	0.00	0.00	0.02	515

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 83 60

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE		
33 35 9 N		120 46.0 W		1/ 2/94		1815 UTC		18 m		03		12 7.-- 1758 PST		1217 PST		1758 PST		179.3 mg C/m2		
DEPTH	m	TEMP	DEG C	SALINITY	SIGMA	THETA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE (mg C/m3)				
																PCT	1	2	MEAN	DARK
1		14.29		33.187		24.727		5.94	101.8	3.3	0.36	0.1	0.00	0.29	0.10	92. A	4.5	4.6	4.5	0.06
11		14.29		33.188		24.728		5.93	101.6	3.2	0.35	0.1	0.00	0.29	0.10	39.	4.3	4.3	4.3	0.07
22		14.23		33.201		24.751		5.96	102.0	3.0	0.35	0.1	0.00	0.49	0.22	15.	3.5	3.7	3.6	0.06
34		14.01		33.260		24.842		6.08	103.6	2.2	0.34	0.1	0.00	2.05	0.64	5.5	4.7	4.7	4.7	0.09
41		13.63		33.244		24.908		5.80	98.1	3.2	0.44	1.0	0.11	1.83	0.71					
46		13.19		33.228		24.984		5.57	93.3	4.2	0.53	2.4	0.11	0.97	0.57	2.0	0.62	0.59	0.61	0.04
55		12.59		33.215		25.092		5.32	88.0	5.6	0.68	4.8	0.06	0.38	0.39					
64		11.87		33.249		25.256		5.01	81.6	8.0	0.87	7.9	0.03	0.29	0.20	0.43	0.03	0.02	0.02	0.02

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 83 90

LATITUDE				LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME			LAN	CIVIL TWILIGHT		INTEGRATED VALUE					
32	34	4	N	122	48.6	W	31/	1/94	1910	UTC	44	m	01	1223 - 1807	PST	122	4	PST	1807	PST	126.8	mg	C/m2
DEPTH		TEMP	SALINITY	SIGMA	DISS	O2	OXY	SIO3	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE (mg C/m3)								
m		DEG	C	THETA	mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK					
3		16.14	33.410	24.494	5.66	100.8	2.9	0.28	0.0	0.00	0.14	0.04	90. A	1.3	1.4	1.4	0.03						
13		16.07	33.409	24.510	5.66	100.7	2.9	0.27	0.0	0.00	0.14	0.04											
26		16.07	33.409	24.510	5.67	100.8	2.7	0.27	0.0	0.00	0.15	0.05	40.	1.7	1.7	1.7	0.03						
40		16.07	33.409	24.510	5.66	100.7	2.7	0.27	0.0	0.00	0.14	0.05											
53		16.06	33.407	24.512	5.66	100.6	2.7	0.27	0.0	0.00	0.15	0.04	16.	1.1	1.1	1.1	0.04						
68		16.05	33.404	24.512	5.67	100.8	2.6	0.26	0.0	0.00	0.16	0.05											
83		15.99	33.397	24.521	5.67	100.7	2.6	0.26	0.0	0.00	0.17	0.05	5.5	0.62	0.64	0.63	0.03						
93		15.40	33.281	24.563	5.72	100.3	2.7	0.27	0.0	0.01	0.23	0.09											
104		14.68	33.216	24.670	5.74	99.1	2.9	0.32	0.0	0.04	0.21	0.12											
115		12.93	33.140	24.970	5.75	95.7	3.7	0.38	0.6	0.05	0.19	0.18	1.8	0.37	0.35	0.36	0.01						
127		11.89	33.225	25.235	5.23	85.2	6.4	0.70	4.7	0.01	0.10	0.08											
142		10.77	33.303	25.498	4.87	77.5	10.1	1.00	9.5	0.00	0.05	0.05											
155		10.17	33.338	25.629	4.63	72.8	13.5	1.23	13.3	0.00	0.02	0.03	0.45	0.00	0.01	0.01	0.01						

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 87 45

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 29 8 N		119 19.0 W		28/ 1/94		1918 UTC		35 m		03		1208 - 1754 PST		1210 PST		1754 PST		251.7 mg C/m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE		mg C/m3)				
													1	2	MEAN	DARK			
2	15.00	33.256	24.629	5.85	101.8	2.9	0.34	0.0	0.00	0.19	0.04	92. A	2.3	2.4	2.3	0.04			
12	14.75	33.251	24.679	5.85	101.2	2.9	0.34	0.0	0.00	0.20	0.05								
22	14.73	33.251	24.683	5.85	101.2	2.9	0.34	0.0	0.00	0.19	0.04	38.	3.1	3.2	3.1	0.07			
33	14.61	33.247	24.706	5.88	101.5	2.8	0.34	0.0	0.00	0.23	0.06								
43	14.31	33.243	24.767	5.91	101.3	2.9	0.34	0.0	0.00	0.33	0.10	15.	4.2	4.2	4.2	0.05			
54	13.95	33.254	24.851	5.79	98.6	3.7	0.41	0.6	0.12	0.76	0.31								
66	13.39	33.274	24.981	5.46	91.9	5.1	0.59	2.6	0.26	0.36	0.26	5.5	2.3	2.1	2.2	0.03			
73	12.49	33.278	25.161	5.13	84.7	7.0	0.75	5.3	0.15	0.26	0.24								
83	11.99	33.311	25.282	4.83	78.9	9.1	0.93	8.0	0.07	0.21	0.19	1.8	0.53	0.52	0.53	0.02			
91	11.67	33.370	25.387	4.58	74.4	11.2	1.06	10.3	0.08	0.20	0.22								
108	10.19	33.502	25.753	4.00	63.0	17.1	1.43	16.8	0.01	0.03	0.07	0.43	0.01	0.00	0.00	0.01			
124	10.06	33.764	25.979	3.17	49.8	22.1	1.73	21.2	0.00	0.00	0.05								

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 87 70

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
32 40 0 N		121 1.8 W		29/ 1/94		1821 UTC		45 m	02	1215 - 1803 PST		1217 PST	1803 PST		181.3 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		mg	C/m3)
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	15.64	33.262	24.493	5.73	101.0	3.1	0.32	0.1	0.00	0.15	0.04	93. A	0.85	0.94	0.89	0.04
14	15.58	33.261	24.506	5.73	100.8	2.9	0.31	0.1	0.00	0.16	0.05					
27	15.58	33.263	24.508	5.73	100.8	2.9	0.31	0.0	0.00	0.15	0.05	40.	1.7	1.7	1.7	0.04
42	15.58	33.268	24.512	5.72	100.7	2.7	0.31	0.0	0.30	0.15	0.05					
54	15.59	33.274	24.515	5.73	100.8	2.6	0.31	0.0	0.00	0.17	0.05	16.	1.7	1.7	1.7	0.04
64	15.47	33.260	24.531	5.74	100.8	2.6	0.32	0.0	0.00	0.20	0.06					
75	14.83	33.178	24.607	5.82	100.8	2.7	0.35	0.0	0.00	0.28	0.10					
84	14.35	33.123	24.667	5.91	101.3	2.8	0.36	0.0	0.00	0.30	0.14	5.7	2.1	2.0	2.1	0.02
94	13.91	33.163	24.790	5.81	98.8	3.2	0.43	0.2	0.14	0.30	0.21					
105	13.60	33.363	25.008	5.38	91.0	4.2	0.54	2.0	0.03	0.17	0.15					
119	12.42	33.401	25.271	5.06	83.5	6.7	0.77	5.4	0.02	0.10	0.09	1.7	0.20	0.19	0.20	0.01
128	11.48	33.429	25.469	4.83	78.1	9.0	0.95	8.4	0.01	0.06	0.07					
142	10.42	33.486	25.702	4.37	69.1	14.5	1.29	14.4	0.01	0.02	0.07					
159	9.63	33.542	25.878	3.95	61.4	19.0	1.55	18.6	0.01	0.01	0.03	0.44	0.00	0.00	0.00	0.01

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8, 0.42 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 77 60

LATITUDE			LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME			LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
34 43 3 N			121 33.1 W		5/ 2/94		1831 UTC		24 m		03		1218 - 1803 PST			1220 PST		1803 PST		223.6 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE (mg C/m3)								
													PCT	1	2	MEAN	DARK				
2	14.43	33.195	24.703	5.88	101.1	3.4	0.36	0.0	0.00	0.32	0.12	88. A	4.6	4.4	4.5	0.04					
14	14.39	33.196	24.713	5.89	101.1	3.1	0.35	0.0	0.00	0.31	0.14	41.	5.5	5.4	5.5	0.05					
38	14.39	33.202	24.718	5.87	100.8	3.0	0.35	0.0	0.00	0.33	0.13	17.	3.9	4.0	4.0	0.03					
45	14.39	33.207	24.722	5.88	101.0	2.9	0.35	0.0	0.01	0.35	0.15	5.6	1.9	2.0	2.0	0.04					
54	14.23	33.214	24.762	5.87	100.5	2.9	0.37	0.0	0.05	0.34	0.16										
63	13.77	33.245	24.881	5.75	97.5	3.3	0.47	1.4	0.40	0.36	0.27	1.8	0.93	0.89	0.91	0.03					
75	12.54	33.203	25.093	5.16	85.3	7.1	0.79	6.2	0.13	0.20	0.22										
86	11.77	33.298	25.313	4.78	77.8	9.6	1.00	9.5	0.06	0.14	0.16	0.41	0.04	0.04	0.04	0.02					

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 77 100

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME			LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 24 0 N		124 19.5 W		4/ 2/94		1830 UTC		39 m		01		230 - 1815 PST			1231 PST		1815 PST		148.0 mg C/m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL ug/L	PHAE0 ug/L	LIGHT PCT	(mg C/m3)							
													1	2	MEAN	DARK				
1	16.25	33.448	24.498	5.64	100.7	2.9	0.28	0.0	0.00	0.13	0.04	96. A	0.83	0.67	0.75	0.04				
12	16.25	33.447	24.498	5.63	100.5	2.8	0.27	0.0	0.00	0.13	0.04									
23	16.24	33.449	24.502	5.64	100.7	2.7	0.26	0.0	0.00	0.13	0.04									
36	16.17	33.444	2 4.515	5.64	100.5	2.7	0.26	0.0	0.00	0.13	0.04	40.	1.5	1.5	1.5	0.04				
47	15.33	33.226	24.535	5.78	101.2	2.7	0.27	0.0	0.00	0.15	0.04	16.	1.3	1.3	1.3	0.05				
60	15.19	33.209	24.553	5.78	100.9	2.7	0.27	0.0	0.00	0.18	0.06									
74	13.81	33.151	24.800	5.80	98.4	3.2	0.35	0.2	0.05	0.39	0.29									
82	13.36	33.157	24.897	5.76	96.8	3.4	0.37	0.5	0.06	0.37	0.29	5.4	2.1	2.2	2.2	0.03				
92	12.73	33.185	25.043	5.67	94.1	3.8	0.42	1.3	0.02	0.19	0.28									
101	12.80	33.346	25.154	5.42	90.1	4.9	0.51	3.1	0.01	0.14	0.14									
116	12.35	33.528	25.383	4.97	82.0	7.4	0.76	7.2	0.01	0.09	0.07	1.9	0.38	0.38	0.38	0.01				
136	10.63	33.466	25.650	4.57	72.6	12.5	1.16	13.1	0.01	0.03	0.04									

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 80 80

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
33 28 4 N		122 32.8 W		3/ 2/94		1904 UTC		31 m		01		1223 - 1813 PST		1224 PST		1813 PST		73.1 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N0 2	CHL	PHAE0	LIGHT	UPTAKE		Cmg C/m3)				
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK			
2	15.01	33.176	24.565	5.79	100.7	3.3	0.32	0.1	0.00	0.15	0.04	91 . A	2.2	2.2	2.2	0.02			
18	15.00	33.190	24.578	5.80	100.8	3.0	0.31	0.0	0.00	0.14	0.04	41 .	1.6	1.5	1.5	0.03			
28	14.93	33.178	24.584	5.80	100.7	3.0	0.31	0.0	0.00	0.15	0.05								
38	14.90	33.175	24.589	5.82	101.0	3.0	0.31	0.0	0.00	0.18	0.06	15.	0.72	0.72	0.72	0.03			
49	14.87	33.173	24.594	5.82	100.9	3.0	0.31	0.0	0.00	0.17	0.05								
58	14.80	33.173	24.609	5.82	100.8	2.9	0.31	0.0	0.00	0.17	0.05	5.7	0.20	0.19	0.19	0.03			
69	14.08	33.132	24.730	5.86	99.9	3.1	0.38	0.2	0.09	0.44	0.26								
79	13.62	33.177	24.859	5.67	95.8	3.8	0.48	1.6	0.17	0.28	0.20	2.0	0.23	0.21	0.22	0.02			
96	11.31	33.286	25.388	4.79	77.1	10.1	1.04	10.7	0.02	0.11	0.12								
111	10.33	33.408	25.656	4.33	68.3	15.1	1.36	15.8	0.02	0.04	0.05	0.41	0.00	0.00	0.00	0.02			

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 82 47

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
34 17 9 N		120 2.4 W		2/ 2/94		1822 UTC		14 m		04		1214 - 1759 PST		1214 PST		1759 PST		307.1 mg C/m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE		mg C/m3)				
													1	2	MEAN	DARK			
2	13.81	33.281	24.899	5.97	101.4	3.7	0.38	0.4	0.02	0.94	0.38	80. A	16.6	16.7	16.7	0.08			
9	13.81	33.279	24.897	5.97	101.4	3.7	0.37	0.4	0.02	0.87	0.36	37.	14.8	15.1	14.9	0.08			
18	13.80	33.277	24.898	5.95	101.0	3.6	0.41	0.4	0.02	0.85	0.36	14.	6.7	7.1	6.9	0.06			
27	13.80	33.280	24.901	5.95	101.0	3.4	0.37	0.4	0.02	0.85	0.38	5.2	2.7	2.7	2.7	0.08			
37	13.71	33.283	24.922	5.88	99.6	3.6	0.40	0.7	0.03	0.80	0.36	1.7	0.72	0.66	0.69	0.06			
50	12.55	33.336	25.194	4.77	78.9	9.2	0.92	8.5	0.13	0.50	0.41	0.42	0.05	0.04	0.05	0.04			

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8, 0.42 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 90 120

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
30 25 7 N		123 59.8 W		24/ 1/94		1836 UTC		43 m		01		1227 - 1807 PST		1228 PST		1807 PST		77.2 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		(mg C/m3)				
													PCT	1	2	MEAN	DARK		
2	17.11	33.576	24.397	5.55	100.9	2.7	0.27	0.1	0.00	0.09	0.02	93. A	0.52	0.85	0.68	0.06			
13	17.11	33.572	24.394	5.55	100.8	2.5	0.27	0.0	0.00	0.10	0.03								
26	17.11	33.577	24.398	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03	40.	1.0	1.0	1.0	0.06			
39	17.11	33.575	24.397	5.55	100.8	2.4	0.26	0.0	0.00	0.10	0.03								
52	17.12	33.578	24.398	5.55	100.9	2.2	0.26	0.0	0.00	0.10	0.03	16.	0.62	0.60	0.61	0.05			
66	17.07	33.577	24.409	5.56	100.9	2.2	0.26	0.0	0.00	0.12	0.04								
80	17.24	33.651	24.426	5.53	100.8	2.2	0.25	0.0	0.00	0.12	0.04	5.7	0.33	0.38	0.36	0.03			
92	16.96	33.632	24.478	5.55	100.6	2.3	0.25	0.0	0.00	0.21	0.12								
100	15.93	33.594	24.687	5.59	99.2	2.6	0.29	0.0	0.07	0.25	0.18	1.9	0.42	0.40	0.41	0.01			
111	15.48	33.640	24.823	5.56	97.8	2.8	0.30	0.4	0.11	0.22	0.17								
121	15.24	33.689	24.914	5.48	96.0	3.0	0.31	0.6	0.10	0.20	0.18								
139	14.50	33.674	25.062	5.27	90.9	3.9	0.44	2.2	0.03	0.13	0.13								
153	13.00	33.516	25.248	5.01	83.7	6.4	0.73	6.0	0.01	0.07	0.08	0.42	0.03	0.03	0.03	0.00			

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 93 45

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
32 20 6 N		118 33.9 W		21/ 1/94		1827 UTC		35 m		01		1204 - 1746 PST		1205 PST		1745 PST		222.9 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	(rag C/m3)						
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK			
2	15.73	33.240	24.456	5.78	102.0	2.6	0.32	0.0	0.00	0.17	0.05	92. A	2.9	3.0	3.0	0.04			
21	15.65	33.239	24.473	5.79	102.0	2.5	0.32	0.0	0.00	0.19	0.06	40.	3.6	3.5	3.5	0.05			
33	15.65	33.262	24.491	5.79	102.0	2.7	0.32	0.0	0.00	0.22	0.07								
43	15.41	33.263	24.546	5.81	101.9	2.8	0.33	0.0	0.00	0.36	0.14	15.	3.7	3.8	3.7	0.05			
53	14.55	33.264	24.733	5.58	96.2	3.7	0.46	1.1	0.08	0.52	0.25								
66	13.06	33.330	25.090	4.92	82.3	7.1	0.80	6.2	0.08	0.28	0.20	5.5	1.2	1.1	1.2	0.04			
73	12.24	33.329	25.248	4.73	77.7	9.1	0.94	8.8	0.03	0.16	0.15								
83	11.74	33.383	25.384	4.47	72.7	11.0	1.10	11.4	0.02	0.09	0.13								
92	11.44	33.396	25.450	4.44	71.8	11.5	1.14	12.2	0.02	0.08	0.10	1.8	0.13	0.13	0.13	0.01			
109	10.31	33.476	25.712	4.12	65.0	16.1	1.38	16.5	0.01	0.03	0.06								
125	9.85	33.553	25.850	3.85	60.2	18.9	1.52	18.8	0.01	0.01	0.05	0.42	0.01	0.01	0.01	0.00			

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 93 70

LATITUDE			LONGITUDE			DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME			LAN		CIVIL TWILIGHT			INTEGRATED VALUE											
31 30 6 N			120 13.8 W			22/ 1/94		1804 UTC		46 m		01		1214 - 1758 PST			1213 PST		1757 PST			154.7 mg C/ra2											
DEPTH		TEMP		SALINITY		SIGMA		DISS O2		OXY		SI03		P04		N03		N02		CHL		PHAE0		LIGHT		UPTAKE		Cmg C/m3)					
m		DEG C				THETA		ml/L		PCT		uM/L		uM/L		uM/L		uM/L		ug/L		ug/L		PCT		1		2		MEAN		DARK	
1		16.55		33.367		24.367		5.63		101.1		2.8		0.31		0.0		0.00		0.09		0.02		97. A		1.1		1.0		1.1		0.04	
15		16.45		33.363		24.388		5.65		101.2		2.8		0.31		0.0		0.00		0.10		0.03											
28		16.46		33.366		24.388		5.63		100.9		2.8		0.30		0.0		0.00		0.10		0.03		39.		1.5		1.4		1.5		0.05	
42		16.22		33.330		24.416		5.67		101.1		2.7		0.32		0.0		0.00		0.12		0.04											
56		16.16		33.319		24.422		5.69		101.3		2.7		0.32		0.0		0.00		0.17		0.06		15.		1.4		1.5		1.4		0.05	
71		16.06		33.330		24.453		5.68		100.9		2.6		0.32		0.0		0.00		0.21		0.08											
85		13.66		33.177		24.852		5.68		96.1		3.8		0.47		1.2		0.08		0.29		0.18		5.9		1.5		1.5		1.5		0.01	
95		13.31		33.214		24.951		5.52		92.7		4.0		0.51		2.0		0.04		0.24		0.17											
101		13.21		33.402		25.117		5.24		87.9		5.2		0.61		4.1		0.03		0.15		0.14											
111		12.48		33.357		25.225		5.03		83.1		7.1		0.78		6.7		0.02		0.13		0.14											
119		11.97		33.363		25.327		4.87		79.6		8.5		0.91		8.7		0.01		0.12		0.13		1.9		0.25		0.26		0.26		0.00	
140		10.52		33.446		25.653		4.68		74.2		12.2		1.13		12.9		0.01		0.03		0.05											
163		9.39		33.540		25.916		4.33		67.0		17.9		1.43		17.7		0.01		0.01		0.03		0.43		0.01		0.01		0.01		0.00	

RV DAVID STARR JORDAN

CALCOFI CRUISE 9401

STATION 93 100

LATITUDE				LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME			LAN	CIVIL TWILIGHT			INTEGRATED VALUE	
30 31 4 N				122 13.7 W		23/ 1/94		1941 UTC		38 m	01	1236 - 1807 PST			1221 PST	1807 PST			120.8 mg C/m2	
DEPTH		TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE		mg C/m3)				
m		DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK			
2		16.23	33.278	24.372	5.69	101.4	2.8	0.32	0.0	0.00	0.10	0.03	92. A	1.3	1.3	1.3	0.04			
11		16.08	33.282	24.410	5.69	101.1	2.7	0.32	0.0	0.00	0.11	0.03								
21		15.98	33.273	24.426	5.70	101.1	2.7	0.32	0.0	0.00	0.10	0.03	43.	1.4	1.4	1.4	0.06			
33		15.96	33.273	24.431	5.69	100.9	2.6	0.31	0.0	0.00	0.12	0.04								
46		15.94	33.269	24.432	5.69	100.8	2.6	0.31	0.0	0.00	0.16	0.05	16.	1.2	1.2	1.2	0.05			
57		15.81	33.242	24.441	5.71	100.9	2.6	0.32	0.0	0.00	0.21	0.08								
71		15.68	33.230	24.462	5.72	100.8	2.5	0.32	0.0	0.00	0.24	0.10	5.7	1.1	1.2	1.1	0.03			
85		15.42	33.232	24.521	5.71	100.1	2.8	0.34	0.0	0.01	0.28	0.14								
97		14.37	33.362	24.848	5.55	95.3	3.7	0.44	1.1	0.09	0.23	0.19	2.0	0.53	0.52	0.52	0.02			
110		13.17	33.374	25.103	5.35	89.7	4.6	0.54	3.0	0.03	0.17	0.16								
121		12.43	33.348	25.228	5.04	83.2	7.0	0.79	6.7	0.02	0.12	0.13								
133		11.70	33.427	25.427	4.84	78.7	9.0	0.92	9.2	0.01	0.08	0.09	0.46	0.04	0.05	0.05	0.01			

A) INCUBATION LIGHT INTENSITIES WERE 97, 41, 15, 5.7, 1.8 0.42 PERCENT RESPECTIVELY.

CalCOFI Cruise 9401

MACROZOOPLANKTON BIOMASS

Net Mesh Size: 0.505 mm

Line	Sta.	Position	Date Mo/Day	Time(PST) Start	Time(PST) End	Water Volume Strained (m3)	Volume per		1000 m Strained Total (cm)	Small (cm)
							Max. Tow Depth (m)			
77	49	35 05.2N	120 46.6W	02/05	2355	0002	131		55	191
77	51	35 02.0N	120 54.4W	02/05	2108	2127	373		189	395
77	55	34 53.1N	121 11.3W	02/05	1713	1735	439		210	84
77	60	34 43.1N	121 33.2W	02/05	1211	1233	424		214	28
77	70	34 22.5N	122 14.4W	02/05	0536	0558	448		212	40
77	80	34 03.8N	122 56.0W	02/04	2320	2342	437		216	48
77	90	33 44.0N	123 37.2W	02/04	1717	1739	444		212	23
77	100	33 23.7N	124 19.8W	02/04	0801	0823	484		201	45
80	51	34 27.0N	120 30.6W	02/02	1552	1559	119		55	135
80	55	34 17.6N	120 47.7W	02/02	1935	1957	447		203	150
80	60	34 08.5N	121 09.0W	02/03	0037	0059	459		203	100
80	70	33 48.1N	121 50.4W	02/03	0624	0647	469		220	171
80	80	33 28.3N	122 33.3W	02/03	1231	1253	438		216	39
80	90	33 08.0N	123 12.1W	02/03	1933	1956	489		223	88
80	100	32 50.6N	123 54.8W	02/04	0248	0311	505		211	28
82	47	34 18.3N	120 03.0W	02/02	1127	1149	455		205	77
83	40.6	34 13.8N	119 24.5W	02/02	0434	0438	67		27	90
83	42	34 10.7N	119 30.4W	02/02	0227	0237	189		92	42
83	51	33 52.7N	120 06.7W	02/01	1937	1944	138		63	29
83	55	33 45.6N	120 23.8W	02/01	1538	1600	425		213	59
83	60	33 35.1N	120 45.0W	02/01	0832	0854	462		204	82
83	70	33 15.4N	121 26.5W	02/01	0232	0254	466		205	309
83	80	32 53.5N	122 06.4W	01/31	1932	1954	461		211	180
83	90	32 35.2N	122 49.1W	01/31	1322	1344	413		207	29
83	100	32 14.5N	123 29.8W	01/31	0612	0634	445		213	18
83	110	31 56.3N	124 10.5W	01/30	2343	0005	433		214	23
87	33	33 53.3N	118 29.6W	01/28	0001	0007	113		47	44
87	35	33 49.2N	118 37.3W	01/28	0342	0404	430		212	42
87	40	33 39.6N	118 57.7W	01/28	0749	0811	432		209	25
87	45	33 30.8N	119 19.7W	01/28	1316	1338	470		205	28
87	50	33 19.6N	119 38.5W	01/28	1759	1807	151		66	33
87	55	33 08.6N	120 00.2W	01/28	2307	2330	420		217	100
87	60	33 00.3N	120 19.8W	01/29	0404	0427	460		218	100
87	70	32 40.1N	121 02.0W	01/29	1125	1147	432		210	44
87	80	32 19.7N	121 42.9W	01/29	1844	1906	428		211	23
87	90	31 59.6N	122 22.6W	01/30	0113	0135	432		211	111
87	100	31 39.6N	123 04.2W	01/30	0653	0715	443		214	20
87	110	31 19.4N	123 45.2W	01/30	1651	1713	426		213	16
90	28	33 28.9N	117 46.2W	01/27	1726	1732	118		47	51
90	30	33 25.9N	117 53.6W	01/27	11.29	1151	426		215	42
90	35	33 15.9N	118 15.7W	01/27	0710	0728	351		170	31
90	37	33 11.5N	118 24.3W	01/27	0430	0452	435		213	37
90	45	33 55.3N	118 55.9W	01/26	2241	2303	464		213	45
90	53	32 40.0N	119 28.4W	01/26	1652	1715	474		216	21
90	60	32 24.8N	119 58.3W	01/26	1111	1133	439		215	23
90	70	32 05.0N	120 38.4W	01/26	0321	1344	461		222	43
90	80	31 45.8N	121 18.5W	01/25	1942	2005	464		221	91
90	90	31 24.8N	121 59.9W	01/25	1138	1201	453		238	27
90	100	31 03.7N	122 39.4W	01/25	0333	0356	463		219	28
90	110	30 45.4N	123 19.6W	01/24	2021	2044	487		231	31
90	120	30 25.6N	123 59.3W	01/24	1250	1313	489		221	10
93	28	32 54.1N	117 23.3W	01/20	1724	1746	417		210	36
93	30	32 51.3N	117 31.9W	01/20	2121	2143	421		209	31
93	35	32 41.8N	117 52.4W	01/21	0208	0230	414		216	31
93	40	32 31.5N	118 12.8W	01/21	0648	0710	416		212	34
93	45	32 20.7N	118 34.8W	01/21	1146	1208	401		216	15
93	50	32 11.0N	118 54.1W	01/21	1630	1652	418		211	38
93	55	32 01.0N	119 14.1W	01/21	2045	2107	427		208	73
93	60	31 50.6N	119 33.8W	01/22	0120	0142	401		218	62
93	70	31 31.2N	120 14.8W	01/22	0650	0712	411		211	53
93	80	31 10.9N	120 54.5W	01/22	2130	2152	428		207	100
93	90	30 51.7N	121 34.3W	01/23	0638	0700	444		202	52
93	100	30 31.0N	122 13.6W	01/23	1434	1456	402		214	20
93	110	30 10.3N	122 56.3W	01/23	2137	2159	480		210	33
93	120	29 51.2N	123 35.6W	01/24	0334	0357	443		228	27

PERSONNEL

CalCOFI Cruise 9403

SHIP'S CAPTAIN

Herbert M. Kirsch, *RV David Starr Jordan*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Dotson, Ronald C. (in charge)	Fishery Biologist, NMFS	I, II
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Forster, Richard A.	Bird Observer, Massachusetts Audubon Society	I, II
Gripp, Sherry L.	Staff Research Associate, SIO	I, II
Gruber, Dennis W.	Marine Technician, SIO	I, II
Hays, Amy E.	Biological Technician, NMFS	I, II
Kahru, Mati	Visiting Associate Researcher, SIO	I, II
Manion, Susan M.	Fishery Biologist, NMFS	I, II
Mitchell, Brian G.	Asst. Research Biologist, SIO	I, II
Mullin, Michael M.	Director of MLRG, Professor, SIO	I
Nisly, Barry J.	Development Engineer, SIO	I, II
Renger, Edward H.	Staff Research Associate, SIO	I, II
Wilkinson, James R.	Programmer/Analyst, SIO	I, II

Leg I: San Diego to Dana Pt., CA 22 - 29 Mar., 1994

Leg II: Dana Pt. to San Diego, CA 29 Mar. - 8 Apr., 1994

FIGURES

Cruise 9403

1. CalCOFI Cruise 9403, 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.

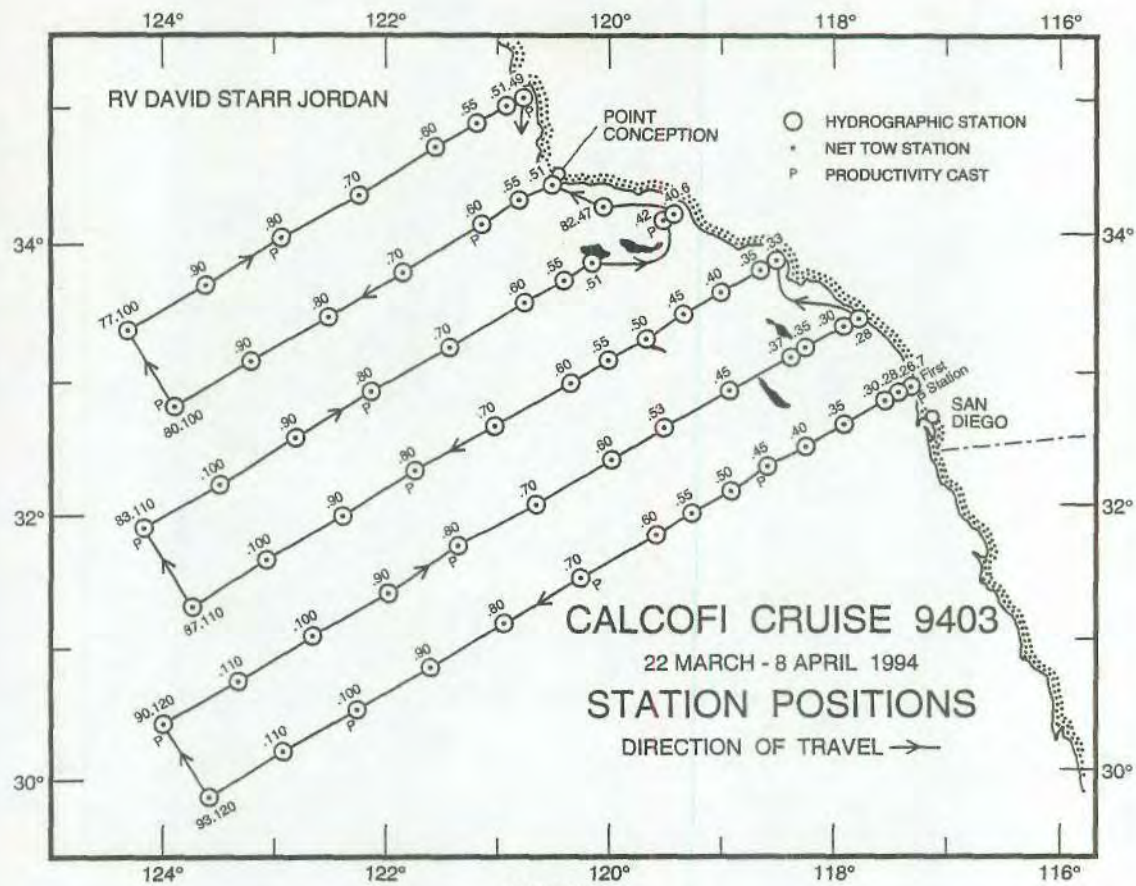


FIGURE 1

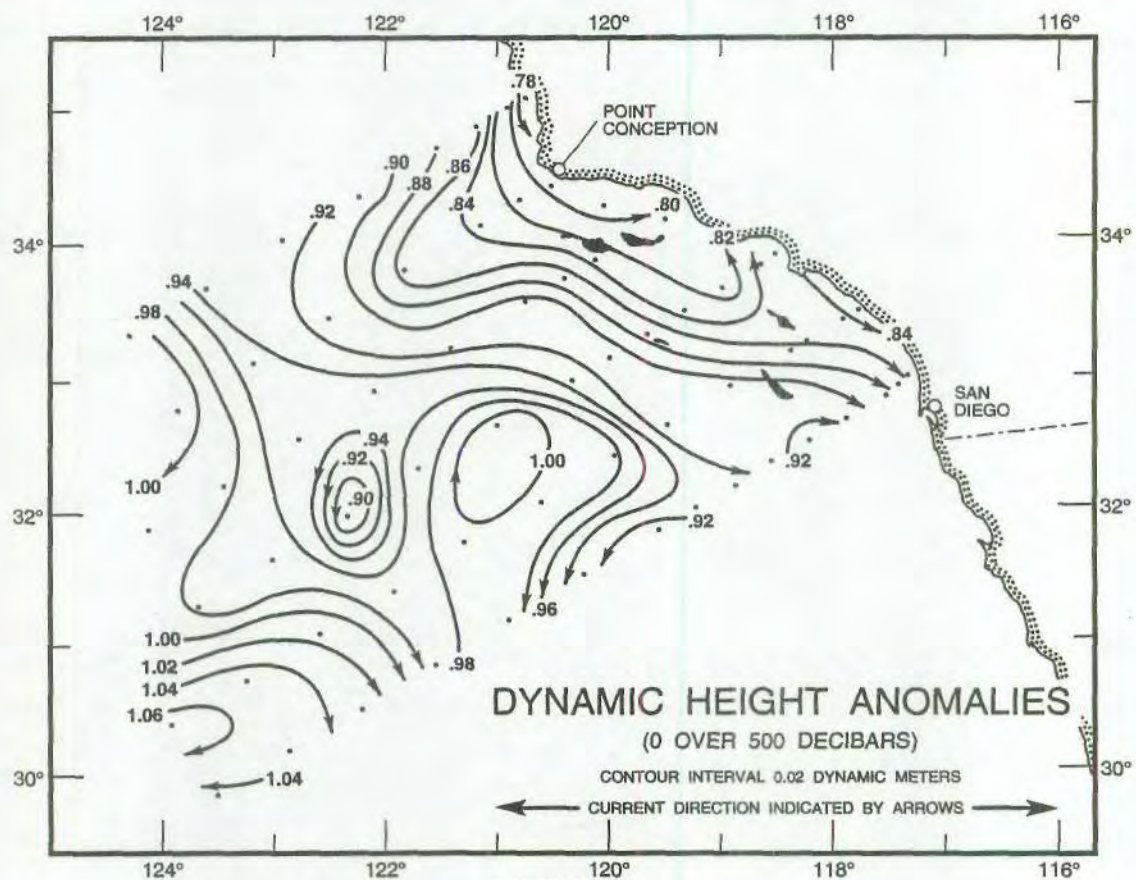
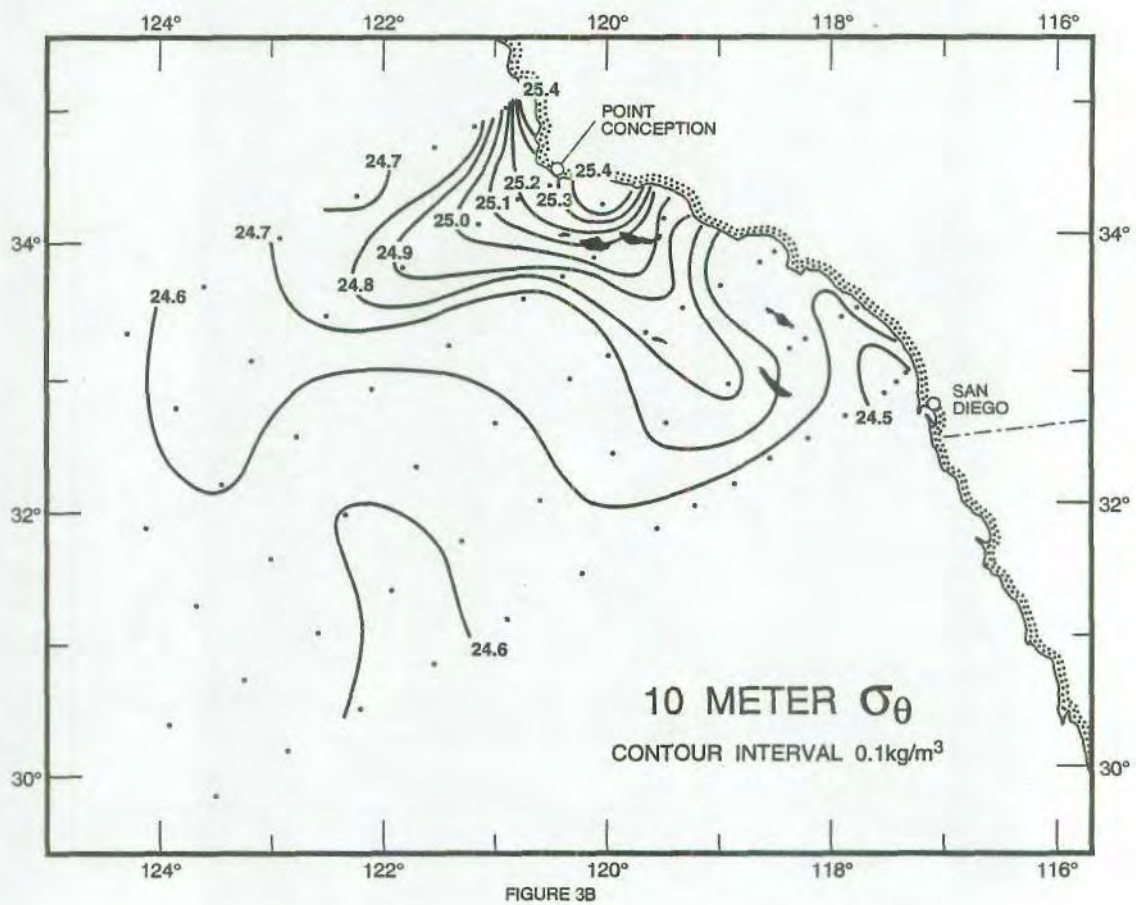
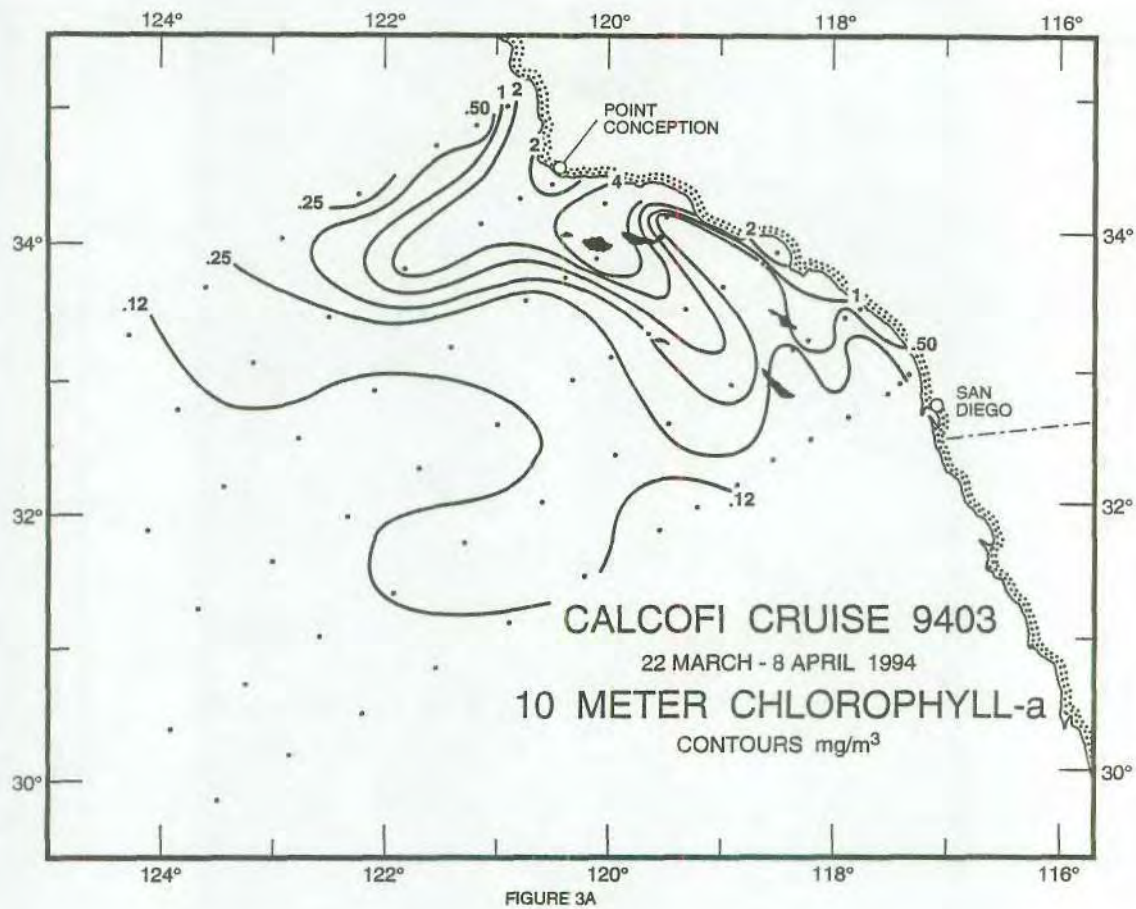
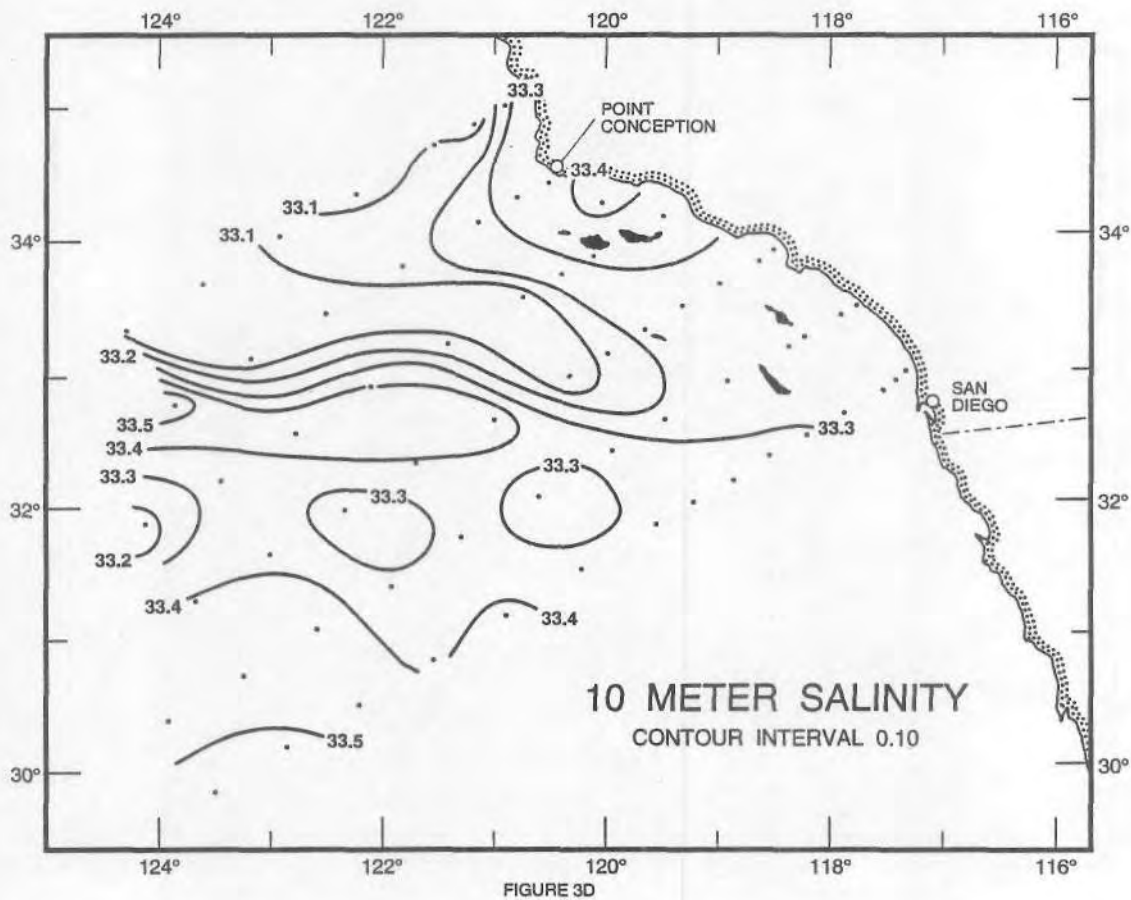
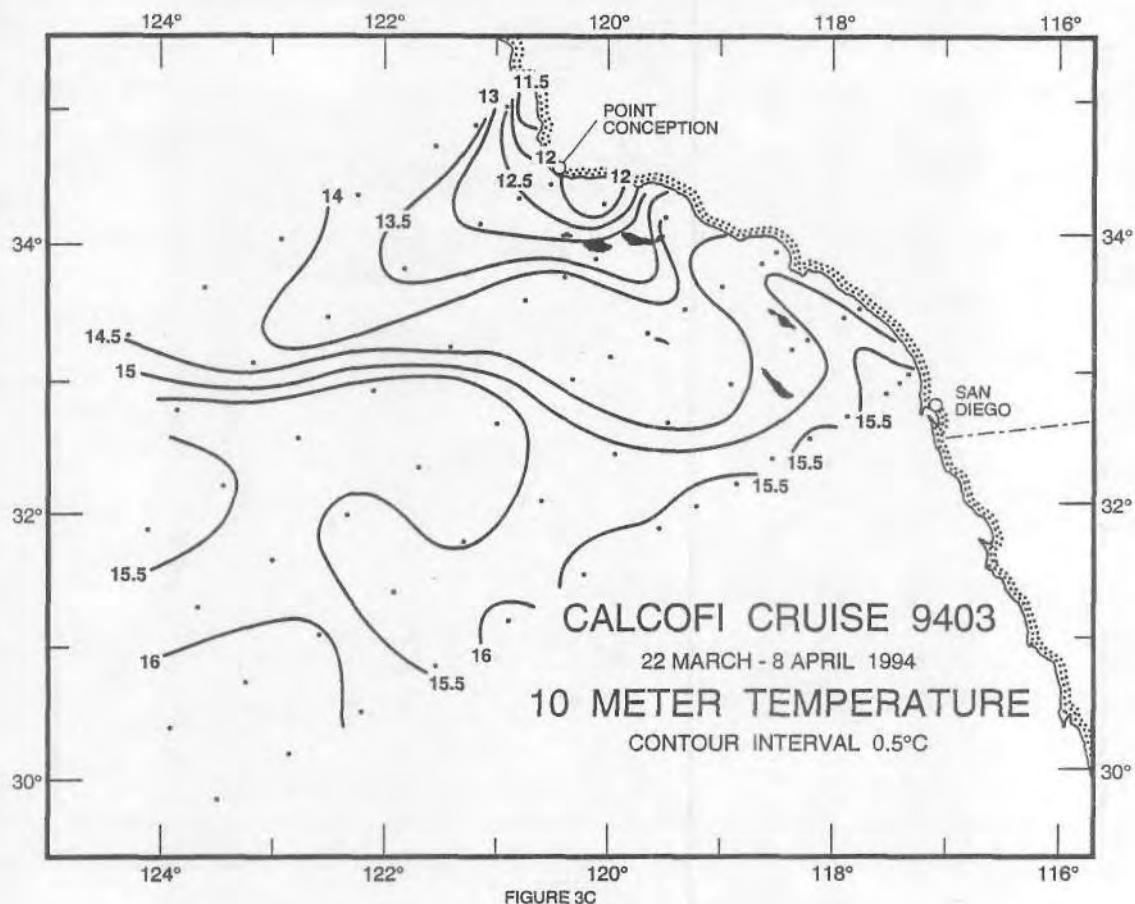


FIGURE 2





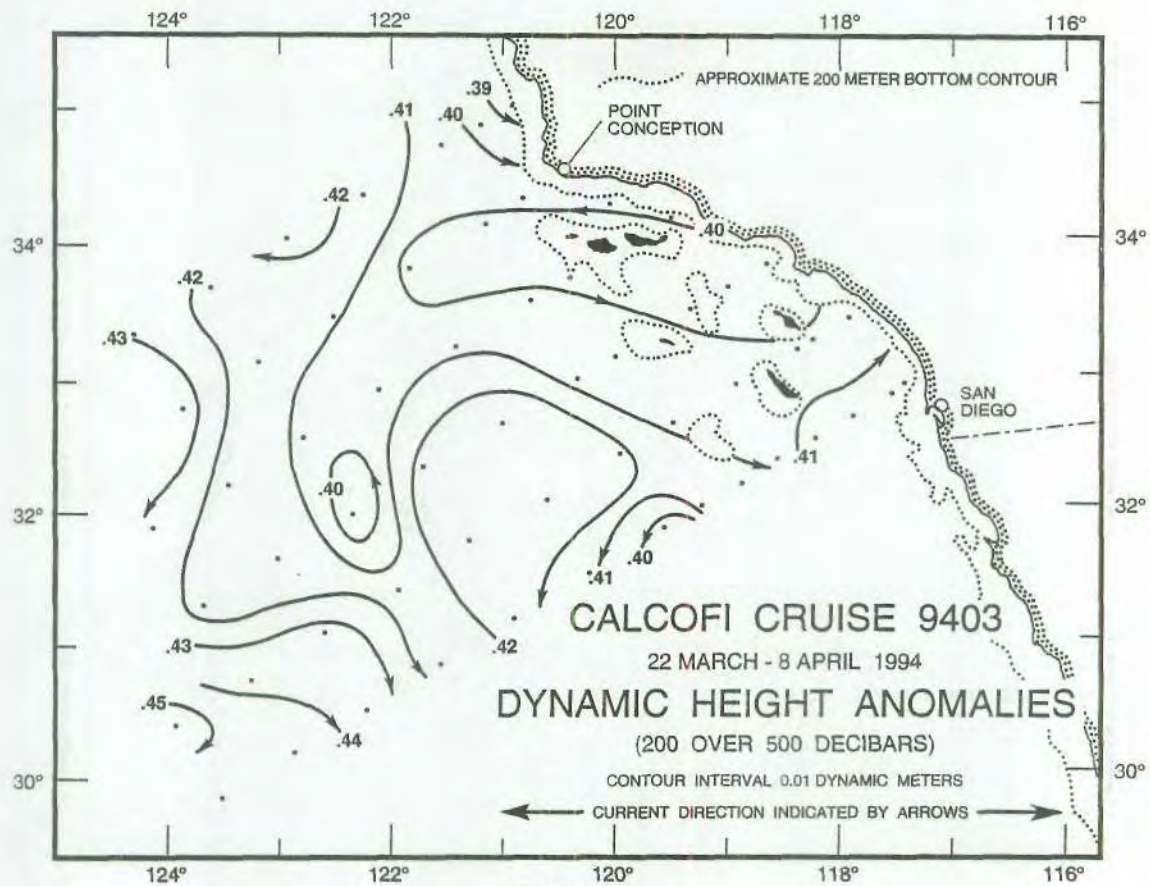


FIGURE 4A

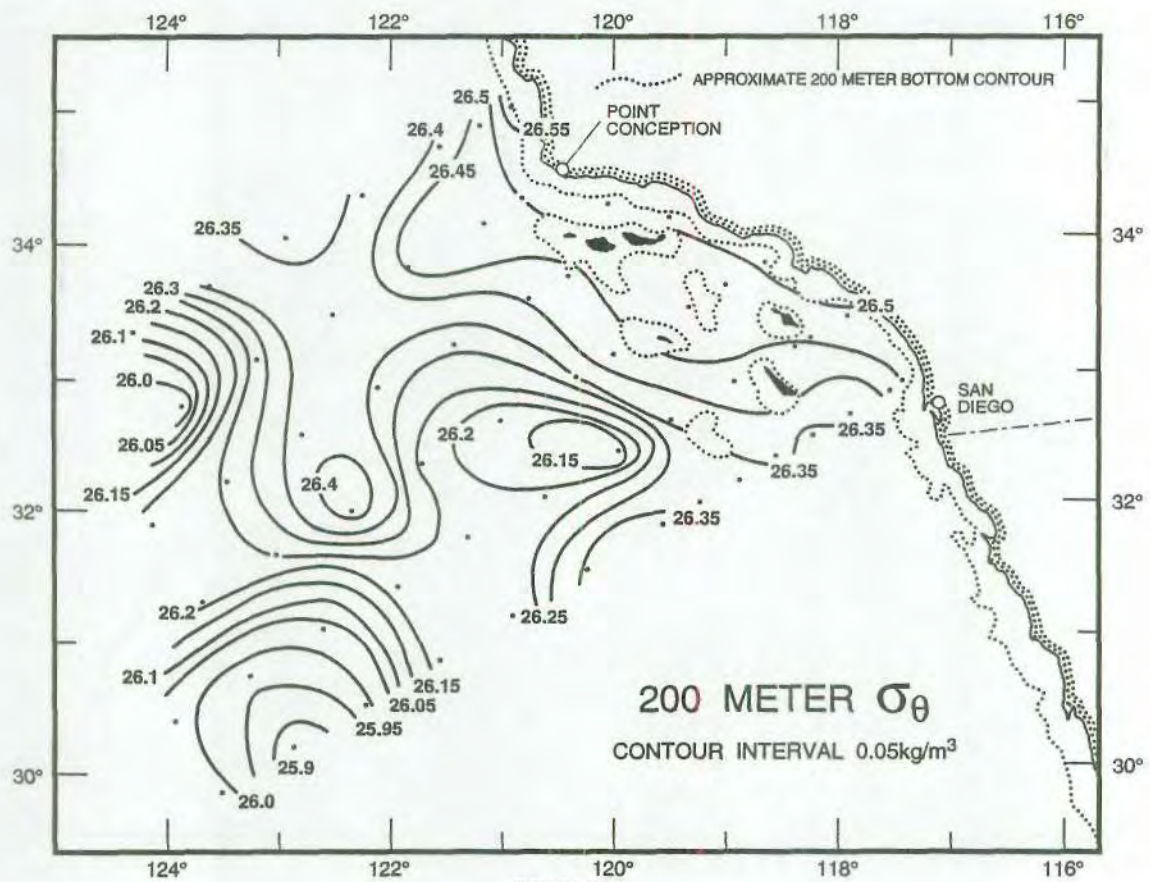
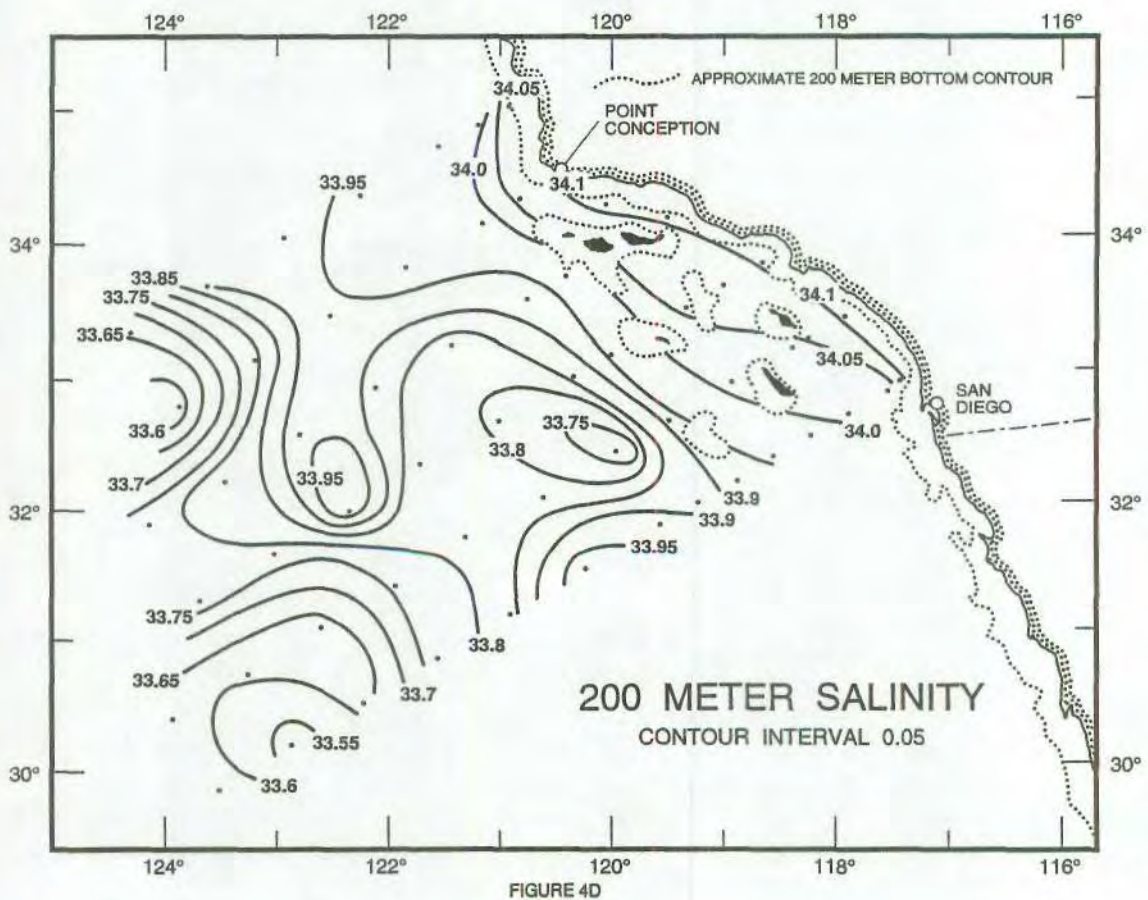
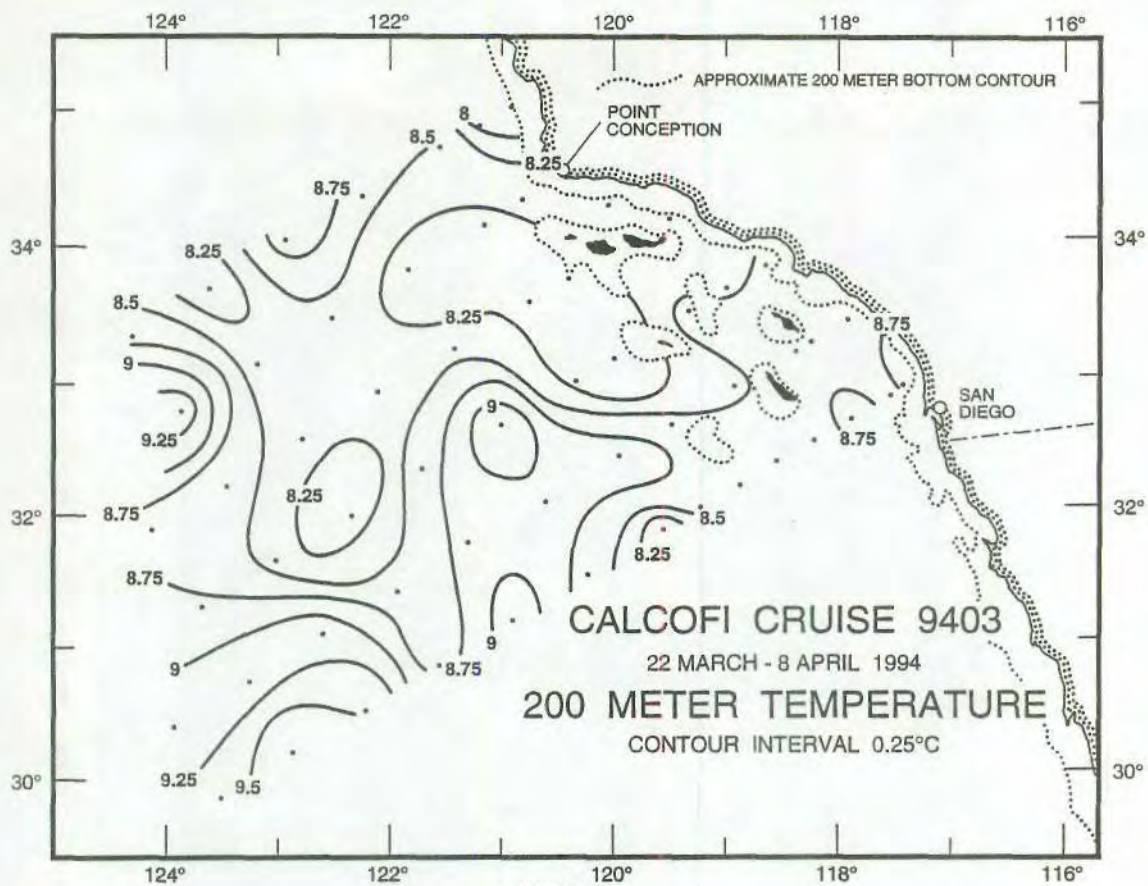


FIGURE 4B



CALCOFI CRUISE 9403

26 - 29 MARCH 1994

POTENTIAL DENSITY (σ_θ) ALONG CALCOFI LINE 90

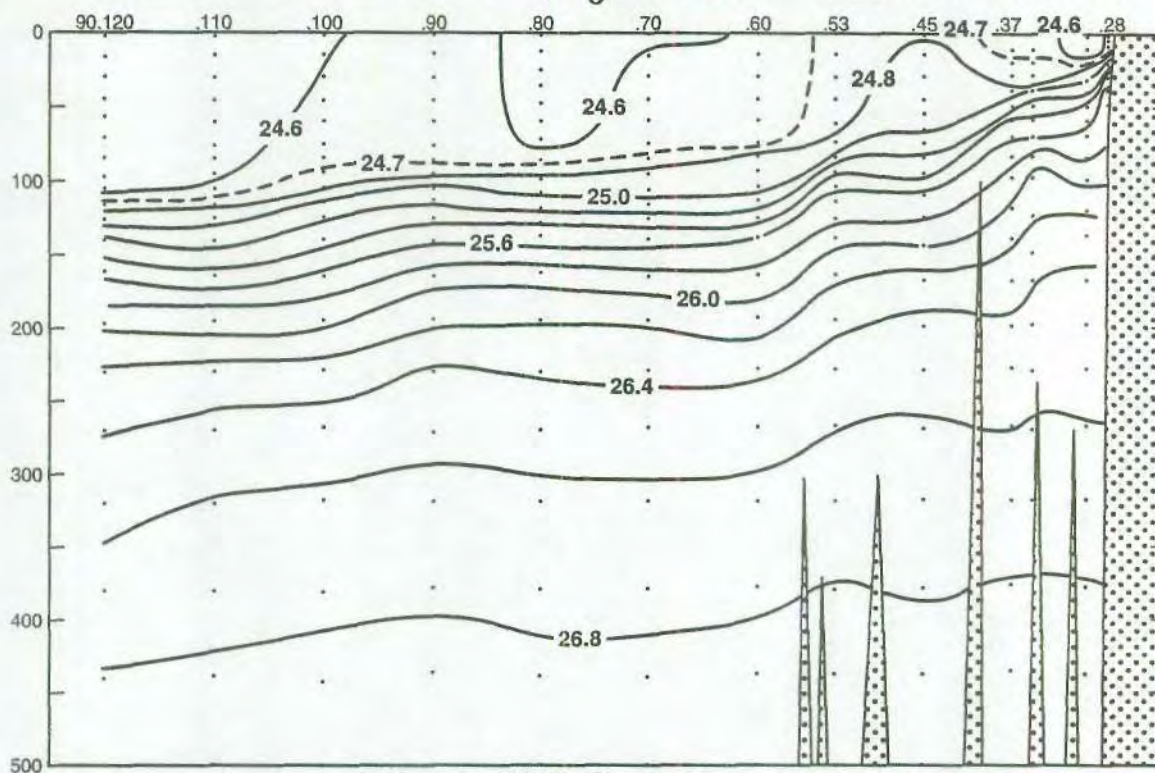


FIGURE 5A

DEPTH (m)

TEMPERATURE ($^{\circ}\text{C}$) ALONG CALCOFI LINE 90

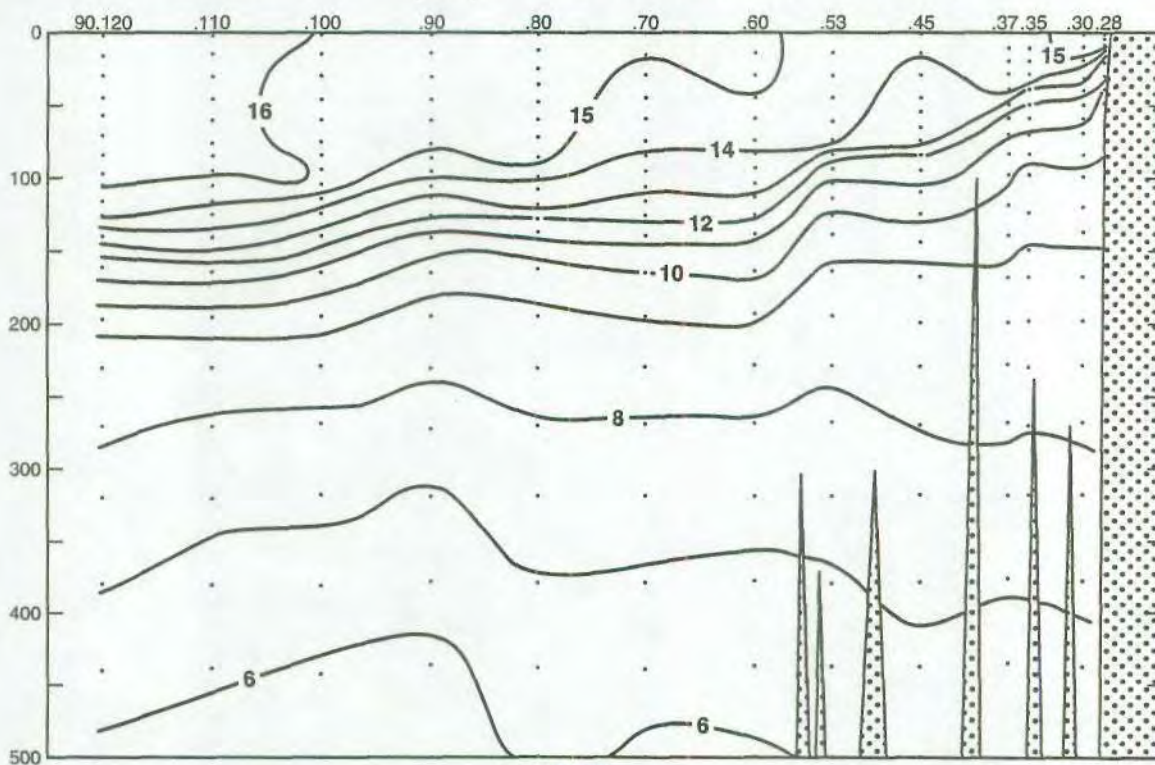


FIGURE 5B

CALCOFI CRUISE 9403

26 - 29 MARCH 1994

SALINITY ALONG CALCOFI LINE 90

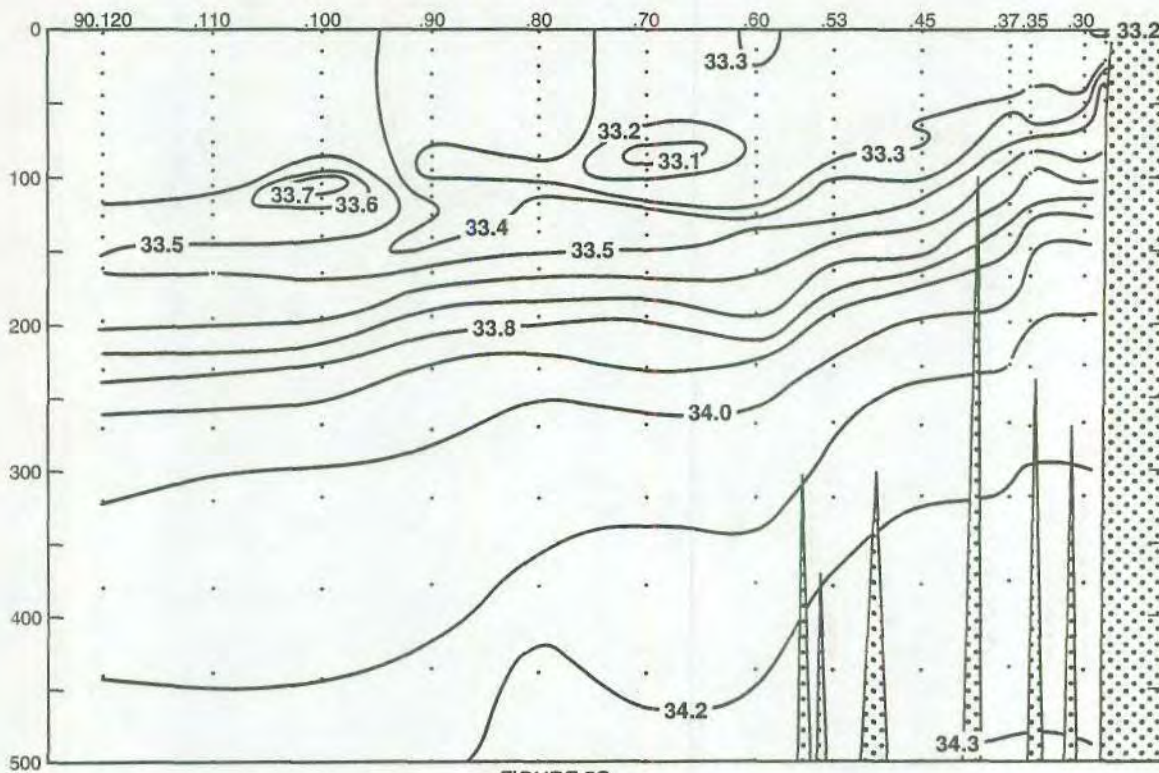


FIGURE 5C

DEPTH (m)

SILICATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

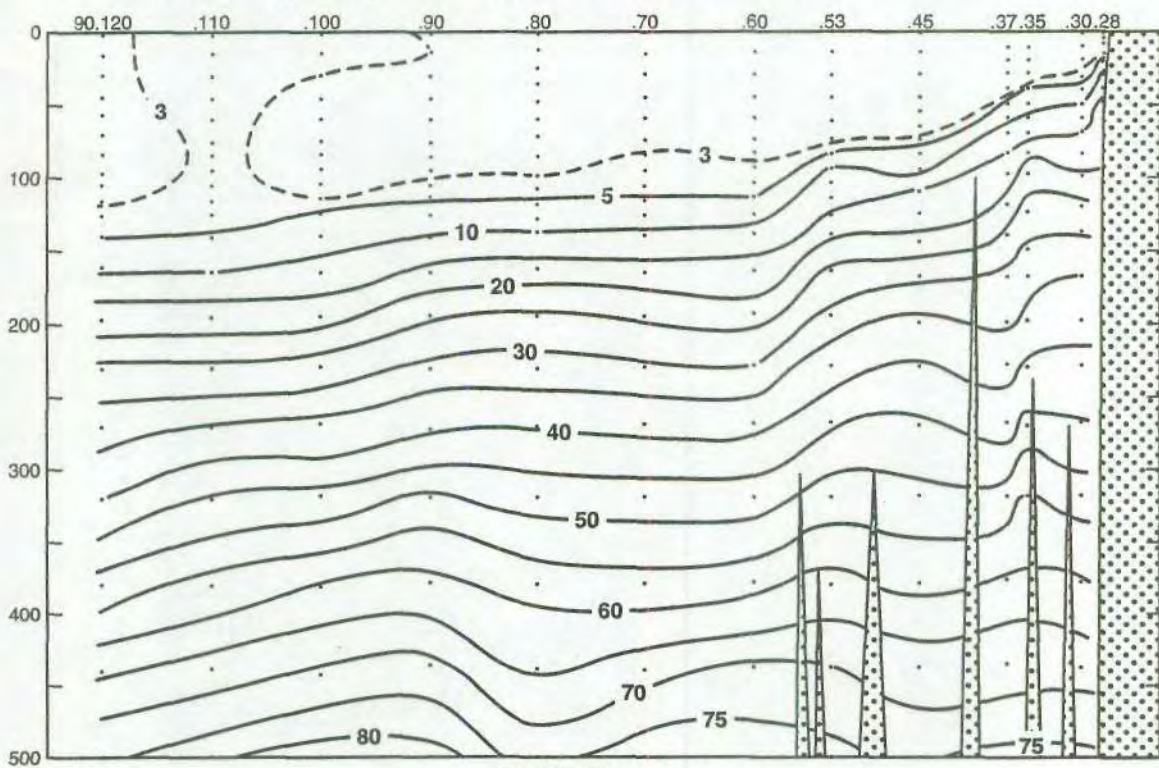


FIGURE 5D

CALCOFI CRUISE 9403

26 - 29 MARCH 1994

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

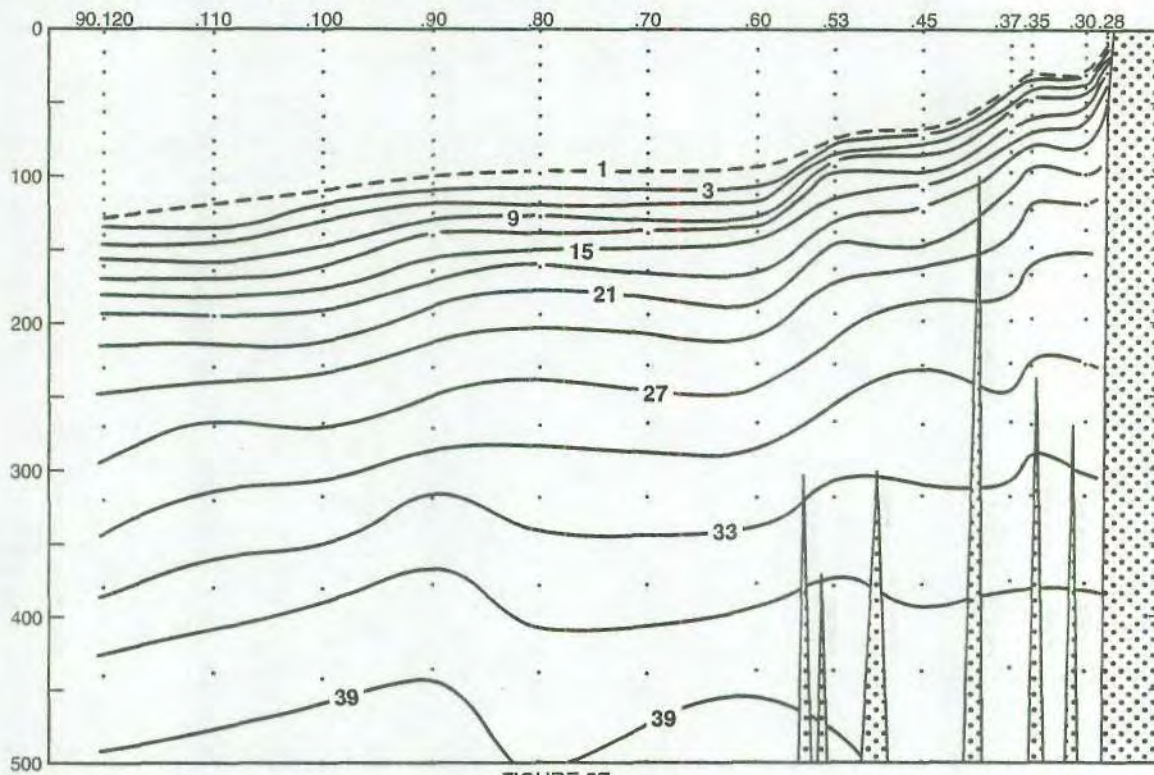


FIGURE 5E

DEPTH (m)

PHOSPHATE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

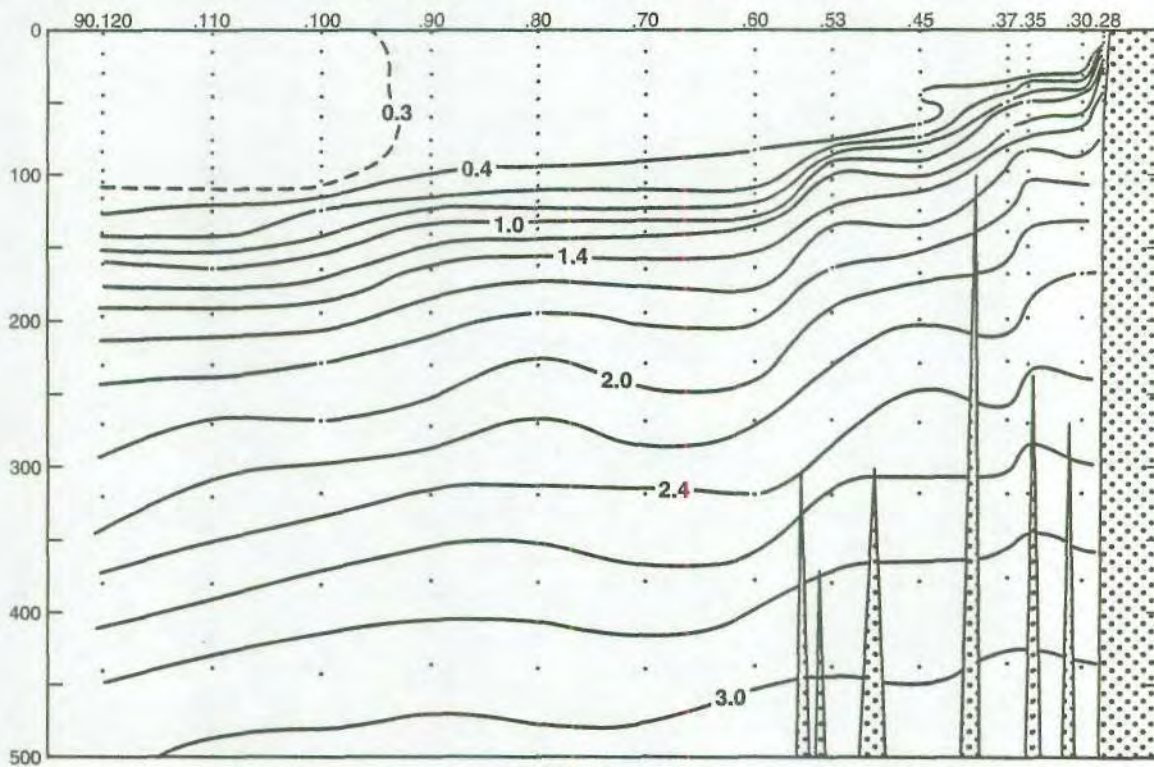


FIGURE 5F

CALCOFI CRUISE 9403

26 - 29 MARCH 1994

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

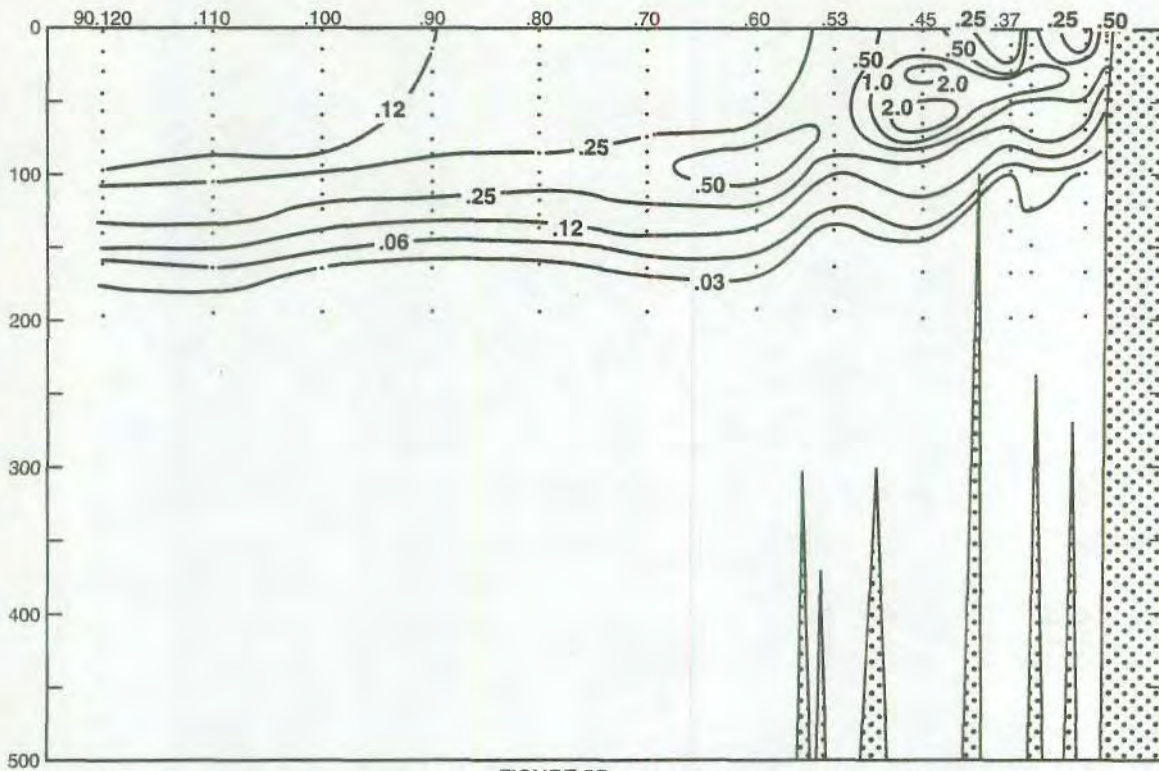


FIGURE 5G

DEPTH (m)

OXYGEN SATURATION (%) ALONG CALCOFI LINE 90

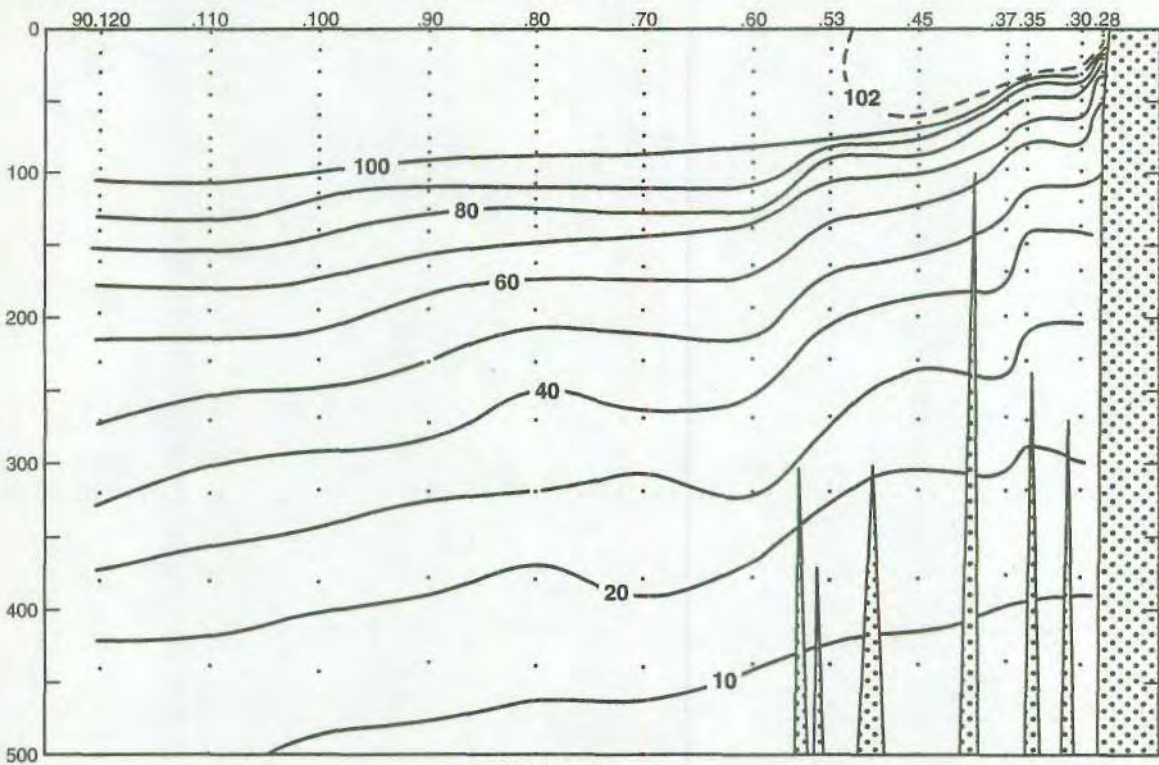


FIGURE 5H

CALCOFI CRUISE 9403

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OXYGEN (ml/l) ALONG CALCOFI LINE 90

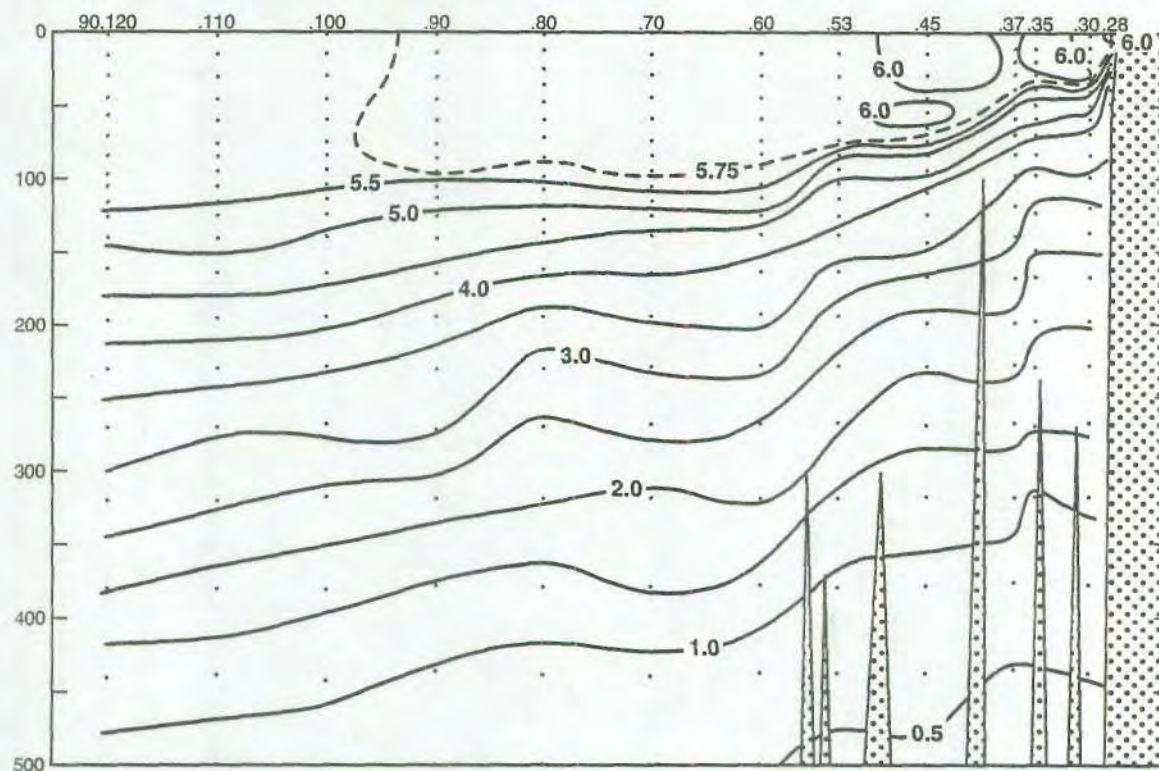


FIGURE 5I

NITRITE ($\mu\text{M/l}$) ALONG CALCOFI LINE 90

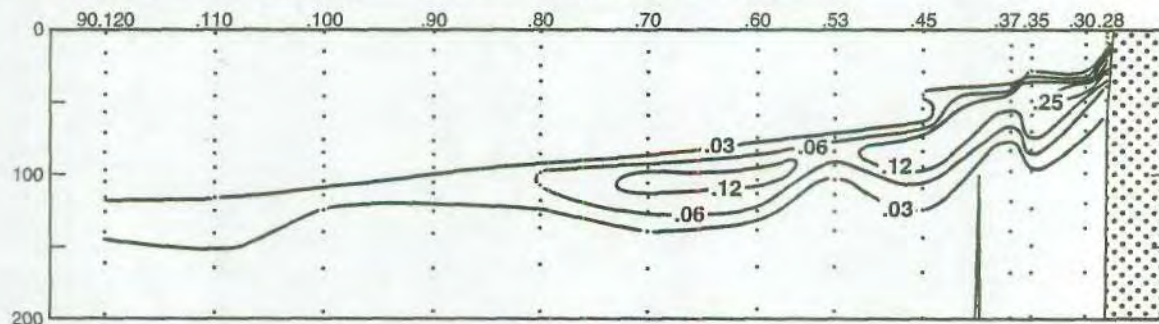


FIGURE 5J

PHAEOPIGMENTS ($\mu\text{g/l}$) ALONG CALCOFI LINE 90

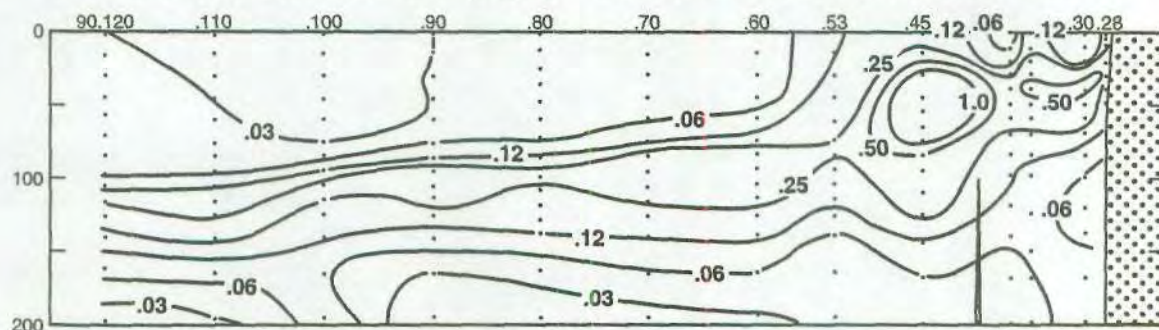


FIGURE 5K

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77 49			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
35 4.8 N	120 45.9 W	07/04/94	1829 UTC	67 m	290	09 kn	280 02 05	I	1019.8 mb	14.5 C	12.1 C	11m 05	4/8	AS			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SV,	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/t	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	11.83	11.83	33.312	25.311	265.2	0.000	5.60	91.2	9.7	0.89	7.8	0.17	1.71	0.56	0	
2	2 8	11.83	11.83	33.312	25.311	265.3	0.005	5.60	91.2	9.7	0.89	7.8	0.17	1.71	0.56	2	
2	8 8	11.41	11.41	33.397	25.454	251.8	0.021	5.28	85.3	12.9	1.08	10.5	0.17	2.26	0.62	8	
	10 ISL	11.39	11.39	33.396	25.457	251.5	0.026	5.27	85.1	13.0	1.09	10.5	0.17	2.23	0.63	10	
2	15 B	11.36	11.36	33.402	25.467	250.7	0.038	5.25	84.7	13.1	1.10	10.6	0.17	1.98	0.64	15	
	20 ISL	11.13	11.13	33.446	25.543	243.6	0.051	5.05	81.1	14.8	1.19	12.0	0.17	1.78	0.57	20	
2	21 B	11.08	11.08	33.455	25.559	242.1	0.053	5.00	80.2	15.2	1.21	12.3	0.17	1.73	0.55	21	
2	30 B	10.78	10.78	33.483	25.634	235.1	0.075	4.61	73.5	16.8	1.34	14.1	0.18	0.88	0.49	30	
2	40 B	9.87	9.87	33.586	25.871	212.8	0.097	3.65	57.1	21.7	1.67	19.3	0.19	0.34	0.30	40	
	50 ISL	9.64	9.63	33.611	25.929	207.5	0.118	3.48	54.2	22.7	1.73	20.4	0.18	0.23	0.29	50	
2	51	9.63	9.62	33.613	25.932	207.2	0.120	3.48	54.1	22.8	1.73	20.4	0.18	0.22	0.29	51	
2	60	9.39	9.38	33.679	26.023	198.8	0.138	3.15	48.8	26.0	1.88	22.2	0.22	0.17	1.11	60	

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND "HAEOPIGMENT
CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
B) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77		51													
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
35 1.3 N		120 5 4.8 W		07/04/94		1445 UTC		238 m		340		21 kn		320 05 05		1		1019.2 mb		12.5 c		11.8 c		10m 05		2/8		ST	
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN HT		OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS							
	m	DEG C		DEG C				THETA					nL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db							
	0 ISL	12.72		12.72		33.226		25.074		287.7	0.000	6.03	100.1	5.2	0.60	2.9	0.08	1.37	0.60	0									
2	2	12.72		12.72		33.226		25.074		287.7	0.006	6.03	100.1	5.2	0.60	2.9	0.08	1.37	0.60	2									
2	10	12.71		12.71		33.226		25.077		287.7	0.029	6.04	100.2	5.2	0.57	2.8	0.08	1.34	0.59	10									
	20 ISL	12.71		12.71		33.226		25.077		288.0	0.058	6.02	99.9	5.2	0.58	2.9	0.08	1.31	0.57	20									
2	21	12.71		12.71		33.226		25.077		288.0	0.060	6.02	99.9	5.2	0.58	2.9	0.08	1.31	0.57	21									
2	30	12.68		12.68		33.225		25.082		287.7	0.086	5.97	99.0	5.3	0.60	3.2	0.09	1.24	0.55	30									
2	40	12.42		12.41		33.204		25.116		284.7	0.115	5.73	94.5	5.9	0.68	4.2	0.09	1.01	0.51	40									
2	50	10.91		10.90		33.218		25.406		257.3	0.142	4.85	77.4	10.1	1.09	10.9	0.06	0.98	0.51	50									
2	59	10.62		10.61		33.293		25.515		247.1	0.165	4.53	71.9	12.8	1.27	13.9	0.05	0.20	0.18	59									
2	71	10.08		10.07		33.399		25.690		230.7	0.193	4.18	65.6	16.1	1.46	17.2	0.04	0.11	0.12	71									
	75 ISL	9.89		9.88		33.447		25.760		224.1	0.203	4.08	63.8	17.3	1.51	18.1	0.03	0.09	0.10	75									
2	85	9.47		9.46		33.556		25.914		209.6	0.224	3.85	59.7	20.2	1.63	20.0	0.02	0.05	0.08	85									
2	99	9.06		9.05		33.619		26.029		198.9	0.253	3.64	55.9	22.8	1.75	22.0	0.02	0.02	0.08	100									
	100 ISL	9.03		9.02		33.627		26.040		197.8	0.255	3.62	55.6	23.1	1.76	22.2	0.02	0.02	0.08	101									
2	120	8.55		8.54		33.789		26.242		179.0	0.292	3.18	48.3	28.3	1.94	25.1	0.02	0.01	0.04	121									
	125 ISL	8.49		8.48		33.811		26.269		176.5	0.301	3.14	47.7	29.0	1.95	25.4	0.02	0.01	0.04	126									
2	141	8.37		8.36		33.867		26.331		170.9	0.329	3.03	45.9	30.8	1.98	26.2	0.01	0.01	0.04	142									
	150 ISL	8.34		8.32		33.905		26.366		167.8	0.344	2.92	44.2	32.0	2.02	26.7	0.01	0.01	0.04	151									
2	171	8.27		8.25		33.992		26.445		160.7	0.379	2.57	38.9	35.8	2.15	28.0	0.01	0.02	0.05	172									
2	199	7.97		7.95		34.082		26.561		150.1	0.422	1.97	29.6	43.7	2.41	30.5	0.04	0.01	0.07	200									
	200 ISL	7.96		7.94		34.083		26.563		149.9	0.424	1.96	29.4	43.9	2.41	30.5	0.04			201									
2	224	7.70		7.68		34.096		26.611		145.6	0.459	1.80	26.9	47.8	2.47	31.5	0.05			225									

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77		55
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
34 53.4 N		121 11.4 W		07/04/94	1049 UTC	561 m	330	22 kn			1019.4 mb	12.9 C	11.0 C			
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	PRESS db
	0 ISL	13.72	13.72	33.093	24.772	316.5	0.000	6.05	102.4	3.5	0.36	0.2	0.00	0.37	0.15	0
2	2	13.72	13.72	33.093	24.772	316.5	0.006	6.05	102.4	3.5	0.36	0.2	0.00	0.37	0.15	2
	10 ISL	13.73	13.73	33.093	24.770	316.9	0.032	6.05	102.4	3.4	0.36	0.2	0.00	0.37	0.16	10
2	16	13.73	13.73	33.093	24.770	317.1	0.051	6.06	102.6	3.3	0.36	0.2	0.00	0.37	0.16	16
	20 ISL	13.70	13.70	33.093	24.777	316.6	0.063	6.06	102.5	3.2	0.36	0.2	0.00	0.41	0.18	20
2	30	13.62	13.62	33.092	24.792	315.4	0.095	6.07	102.5	3.0	0.36	0.2	0.01	0.49	0.23	30
2	45	13.13	13.12	33.101	24.898	305.7	0.142	5.97	99.8	2.7	0.41	0.4	0.04	0.46	0.23	45
	50 ISL	12.81	12.80	33.117	24.974	298.6	0.157	5.89	97.8	3.9	0.52	2.0	0.13	0.45	0.26	50
2	56	12.38	12.37	33.139	25.074	289.2	0.174	5.74	94.5	5.9	0.69	4.5	0.23	0.44	0.30	56
2	66	11.75	11.74	33.163	25.211	276.3	0.203	5.25	85.3	9.5	0.99	9.5	0.19	0.37	0.38	66
2	75	11.08	11.07	33.230	25.385	259.9	0.227	4.81	77.1	12.5	1.17	12.6	0.09	0.26	0.30	75
2	85	10.44	10.43	33.321	25.568	242.6	0.252	4.40	69.6	14.2	1.32	15.2	0.03	0.14	0.17	85
2	93	9.95	9.94	33.395	25.709	229.3	0.271	4.12	64.5	15.5	1.39	16.4	0.03	0.09	0.11	95
	100 ISL	9.56	9.55	33.454	25.820	218.9	0.286	3.93	61.0	17.6	1.50	18.2	0.03	0.05	0.08	100
2	109	9.17	9.16	33.531	25.943	207.3	0.306	3.73	57.4	20.6	1.64	20.5	0.02	0.01	0.05	110
2	123	8.90	8.89	33.665	26.091	193.5	0.334	3.41	52.2	24.1	1.77	22.7	0.01	0.01	0.04	124
	125 ISL	8.89	8.88	33.675	26.100	192.6	0.337	3.39	51.9	24.6	1.79	23.0	0.01	0.01	0.04	125
2	143	8.83	8.81	33.737	26.159	187.4	0.372	3.27	50.0	28.6	1.94	24.9	0.01	0.00	0.04	144
	150 ISL	8.75	8.73	33.776	26.202	183.5	0.385	3.19	48.7	29.7	1.98	25.4	0.01	0.00	0.04	151
2	169	8.47	8.45	33.883	26.329	171.7	0.418	2.95	44.8	31.9	2.04	26.3	0.01	0.00	0.03	170
2	198	7.98	7.96	33.977	26.477	158.0	0.466	2.71	40.7	34.5	2.09	27.2	0.01	0.00	0.03	199
	200 ISL	7.96	7.94	33.982	26.484	157.4	0.469	2.69	40.4	34.9	2.10	27.4	0.01			201
2	228	7.80	7.78	34.044	26.556	151.0	0.512	2.32	34.7	40.8	2.30	29.8	0.01			229
	250 ISL	7.70	7.68	34.096	26.612	146.0	0.545	1.93	28.8	43.9	2.36	30.8	0.01			251
2	266	7.61	7.58	34.125	26.648	142.9	0.568	1.67	24.9	45.9	2.39	31.4	0.01			268
	300 ISL	7.26	7.23	34.125	26.698	138.5	0.616	1.55	22.9	51.5	2.56	33.2	0.01			302
2	316	7.06	7.03	34.114	26.717	136.8	0.638	1.50	22.1	54.1	2.65	34.0	0.01			318
	376	6.22	6.19	34.100	26.818	127.5	0.717	1.20	17.3	60.4	2.80	36.1	0.01			378
	400 ISL	6.05	6.02	34.125	26.859	123.7	0.748	1.01	14.5	63.8	2.86	37.0	0.01			403
2	437	5.87	5.83	34.169	26.917	118.6	0.792	0.74	10.6	69.3	2.94	38.2	0.00			440
	500 ISL	5.55	5.51	34.197	26.979	113.3	0.865	0.58	8.2	78.3	3.08	39.9	0.00			504
2	511	5.49	5.45	34.202	26.990	112.3	0.878	0.55	7.8	79.9	3.11	40.2	0.00			511

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
34 43.9 N		121 32.8 W		07/04/94	0636 UTC	905 m	320	20 kn			1020.0 mb	14.0 C	13.0 C				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/I	uM/L	uM/L	uM/L	ug/I	ug/L	db	
	0	ISL 13.90	13.90	33.099	24.740	319.6	0.000	6.03	102.5	3.6	0.37	0.2	0.00	0.43	0.17	0	
2	2	13.90	13.90	33.099	24.740	319.6	0.006	6.03	102.5	3.6	0.37	0.2	0.00	0.43	0.17	2	
	10	ISL 13.89	13.89	33.100	24.743	319.5	0.032	6.04	102.6	3.5	0.36	0.2	0.00	0.43	0.14	10	
2	15	13.89	13.89	33.101	24.744	319.6	0.048	6.05	102.8	3.5	0.36	0.2	0.00	0.43	0.13	15	
	20	ISL 13.87	13.87	33.101	24.748	319.3	0.064	6.05	102.7	3.5	0.36	0.2	0.00	0.44	0.16	20	
2	29	13.81	13.81	33.111	24.768	317.6	0.093	6.05	102.6	3.4	0.37	0.2	0.01	0.47	0.23	29	
	30	ISL 13.79	13.79	33.109	24.771	317.4	0.096	6.05	102.6	3.4	0.37	0.2	0.01	0.51	0.24	30	
2	45	13.52	13.51	33.181	24.882	307.3	0.143	6.02	101.5	3.9	0.45	0.9	0.13	0.95	0.37	45	
	50	ISL 13.17	13.16	33.210	24.975	298.5	0.158	5.75	96.3	4.3	0.52	1.7	0.24	0.74	0.33	50	
2	55	12.73	12.72	33.242	25.086	288.0	0.172	5.41	89.8	4.9	0.61	2.9	0.30	0.50	0.31	55	
2	64	11.85	11.84	33.308	25.305	267.3	0.197	4.79	78.1	7.3	0.84	7.0	0.11	0.43	0.45	64	
	75	ISL 11.35	11.34	33.371	25.446	254.1	0.226	4.44	71.6	10.1	1.07	10.8	0.05	0.24	0.35	75	
2	76	11.32	11.31	33.375	25.455	253.3	0.229	4.42	71.2	10.4	1.09	11.1	0.05	0.22	0.33	76	
2	85	10.81	10.80	33.403	25.568	242.7	0.251	4.20	67.0	13.9	1.33	15.0	0.02	0.14	0.22	85	
2	94	10.50	10.49	33.427	25.641	235.9	0.272	4.11	65.1	16.5	1.50	17.7	0.02	0.10	0.18	94	
	100	ISL 10.13	10.12	33.473	25.740	226.6	0.286	3.98	62.5	18.4	1.60	19.3	0.02	0.07	0.15	100	
2	110	9.51	9.50	33.567	25.917	209.9	0.308	3.74	58.0	21.4	1.73	21.6	0.01	0.02	0.12	111	
2	124	9.13	9.12	33.671	26.059	196.5	0.337	3.46	53.2	24.8	1.84	23.6	0.01	0.02	0.11	125	
	125	ISL 9.13	9.12	33.681	26.067	195.8	0.339	3.43	52.8	24.9	1.84	23.7	0.01	0.02	0.11	126	
2	143	9.09	9.07	33.824	26.186	184.9	0.373	2.91	44.8	26.2	1.89	24.2	0.01	0.02	0.13	144	
	150	ISL 9.02	9.00	33.859	26.224	181.4	0.386	2.81	43.2	27.4	1.92	24.7	0.01	0.02	0.13	151	
2	168	8.80	8.78	33.918	26.306	174.0	0.418	2.70	41.3	31.1	2.02	26.3	0.01	0.01	0.13	169	
2	199	8.50	8.48	33.977	26.399	165.7	0.470	2.64	40.1	36.6	2.13	28.3	0.01	0.01	0.10	200	
	200	ISL 8.49	8.47	33.981	26.403	165.2	0.472	2.62	39.8	36.8	2.13	28.4	0.01			201	
2	229	8.23	8.21	34.074	26.516	155.0	0.518	2.10	31.7	41.8	2.28	30.0	0.01			230	
	250	ISL 7.95	7.92	34.089	26.570	150.1	0.550	2.01	30.2	46.0	2.43	31.5	0.01			251	
2	266	7.74	7.71	34.092	26.603	147.2	0.574	1.98	29.6	49.0	2.53	32.6	0.01			268	
	300	ISL 7.52	7.49	34.141	26.674	140.9	0.623	1.55	23.1	53.1	2.61	33.9	0.01			302	
2	317	7.44	7.41	34.165	26.704	138.3	0.647	1.32	19.6	55.0	2.63	34.4	0.01			319	
2	379	6.97	6.93	34.188	26.788	131.0	0.730	1.03	15.1	65.7	2.82	37.5	0.01			381	
	400	ISL 6.76	6.72	34.186	26.815	128.6	0.758	0.96	14.0	69.5	2.90	38.2	0.01			403	
2	438	6.40	6.36	34.188	26.865	124.1	0.806	0.83	12.0	75.8	3.02	39.3	0.01			441	
	500	ISL 6.00	5.96	34.245	26.962	115.4	0.880	0.53	7.6	81.8	3.09	40.6	0.01			503	
2	513	5.92	5.88	34.257	26.981	113.7	0.895	0.47	6.7	83.1	3.11	40.9	0.01			517	

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMI	TYPE
34 2 12 N	122 14.5 W	06/04/94	2331	UTC	4013 m	320	18 kn	320 05 05	2	1020.1 mb	15.0 C	13.3 C	18m	02	8/8	AS
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESli
	JD	DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/t	ug/L	db
2	0	ISL 13.94	13.94	33.051	24.694	323.9	0.000	6.03	102.5	3.7	0.37	0.3	0.00	0.24	0.07	
	3	13.94	13.94	33.051	24.694	323.9	0.010	6.03	102.5	3.7	0.37	0.3	0.00	0.24	0.07	11
2	10	ISL 13.93	13.93	33.050	24.696	324.0	0.032	6.04	102.7	3.7	0.37	0.2	0.00	0.24	0.07	10
	15	13.93	13.93	33.050	24.696	324.1	0.049	6.04	102.7	3.6	0.37	0.2	0.00	0.24	0.07	15
2	20	ISL 13.91	13.91	33.050	24.700	323.9	0.065	6.04	102.6	3.6	0.37	0.2	0.00	0.23	0.07	20
	30	13.87	13.87	33.051	24.710	323.3	0.097	6.03	102.4	3.5	0.37	0.2	0.00	0.23	0.08	30
2	45	ISL 13.83	13.82	33.056	24.722	322.5	0.146	6.04	102.4	3.5	0.37	0.2	0.00	0.27	0.10	45
	50	13.59	13.58	33.052	24.768	318.2	0.162	5.99	101.1	3.7	0.40	0.5	0.02	0.47	0.22	50
2	55	13.20	13.19	33.064	24.856	310.0	0.177	5.94	99.4	3.8	0.43	0.8	0.04	0.63	0.33	55
	65	11.91	11.90	33.194	25.206	276.8	0.207	5.19	34.6	7.5	0.83	7.1	0.06	0.39	0.33	65
2	75	11.27	11.26	33.358	25.451	253.7	0.233	4.47	72.0	12.3	1.17	12.7	0.02	0.20	0.21	75
	86	10.82	10.81	33.420	25.579	241.6	0.260	4.21	67.1	14.5	1.33	15.0	0.02	0.13	0.13	86
2	95	10.49	10.48	33.474	25.679	232.3	0.282	4.00	63.4	16.5	1.45	16.8	0.01	0.09	0.11	95
	100	ISL 10.36	10.35	33.493	25.717	228.9	0.293	3.93	62.1	17.2	1.49	17.4	0.01	0.07	0.10	100
2	109	10.15	10.14	33.526	25.778	223.1	0.314	3.82	60.1	18.3	1.54	18.4	0.01	0.05	0.08	110
	124	9.71	9.70	33.624	25.929	209.1	0.346	3.49	54.4	21.6	1.70	21.0	0.01	0.01	0.05	125
2	125	ISL 9.69	9.68	33.629	25.936	208.4	0.348	3.47	54.1	21.8	1.71	21.1	0.01	0.01	0.05	126
	145	9.38	9.36	33.716	26.055	197.5	0.389	3.23	50.0	24.3	1.82	22.9	0.01	0.01	0.04	146
2	150	ISL 9.31	9.29	33.737	26.083	194.9	0.399	3.17	49.0	25.5	1.85	23.3	0.01	0.01	0.04	151
	167	9.10	9.08	33.810	26.174	186.6	0.431	2.98	45.9	27.3	1.93	24.6	0.01	0.01	0.05	168
2	200	8.70	8.68	33.976	26.367	168.7	0.490	2.49	38.0	33.8	2.12	27.5	0.01	0.00	0.03	201
	229	8.47	8.45	34.042	26.455	160.9	0.537	2.25	34.2	37.4	2.22	28.8	0.01			230
2	250	ISL 8.29	8.26	34.074	26.507	156.2	0.571	2.09	31.6	40.3	2.29	29.8	0.01			251
	267	8.13	8.10	34.093	26.547	152.7	0.597	1.97	29.7	42.7	2.35	30.6	0.01			269
2	300	ISL 7.83	7.80	34.124	26.616	146.6	0.646	1.72	25.8	47.2	2.48	32.1	0.01			302
	318	7.66	7.63	34.137	26.651	143.5	0.672	1.58	23.6	49.8	2.55	32.9	0.01			320
2	376	7.00	6.96	34.170	26.770	132.7	0.753	1.18	17.3	59.2	2.76	35.5	0.00			378
	400	ISL 6.71	6.67	34.176	26.814	128.6	0.784	1.01	14.7	63.7	2.84	36.7	0.00			403
2	437	6.33	6.29	34.189	26.875	123.1	0.830	0.78	11.3	70.2	2.96	38.3	0.01			440
	500	ISL 6.03	5.99	34.242	26.956	116.1	0.906	0.53	7.6	77.4	3.08	39.7	0.01			503
2	511	5.98	5.94	34.251	26.969	114.9	0.919	0.49	7.0	78.7	3.10	39.9	0.01			51

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77		80
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TTYPE	
34 4.0 N	122 5 7.4 W	06/04/94	1821 UTC	4235 m	320	20 kn	320 05 06	1	1021 . 6 mb	14.4 c	11.5 c	17m 03	7/8		SC	
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAEO ug/L	PRESS db
	0 ISL	14.08	14.08	33.105	24.707	322.7	0.000	5.99	102.2	2.9	0.35	0.3	0.00	0.40	0.1 2	0
2	2 A	14.08	14.08	33.105	24.707	322.7	0.006	5.99	102.2	2.9	0.35	0.3	0.00	0.40	0.12	2
	10 ISL	14.07	14.07	33.105	24.709	322.7	0.032	6.00	102.3	2.7	0.35	0.2	0.00	0.40	0.13	10
2	12 A	14.07	14.07	33.105	24.709	322.8	0.039	6.00	102.3	2.7	0.35	0.2	0.00	0.40	0.1 3	12
	20 ISL	14.05	14.05	33.105	24.714	322.6	0.065	6.00	102.3	2.6	0.35	0.2	0.00	0.41	0.1 3	20
2	22 A	14.04	14.04	33.105	24.716	322.4	0.071	6.00	102.2	2.6	0.35	0.2	0.00	0.41	0.13	22
	30 ISL	14.03	14.03	33.104	24.718	322.5	0.097	6.00	102.2	2.5	0.34	0.2	0.00	0.41	0.14	30
2	32 A	14.03	14.03	33.104	24.718	322.6	0.103	6.00	102.2	2.5	0.34	0.2	0.00	0.41	0.14	32
2	44 A	14.03	14.02	33.106	24.719	322.7	0.142	5.99	102.0	2.5	0.35	0.2	0.00	0.42	0.14	44
	50 ISL	14.00	13.99	33.105	24.725	322.4	0.161	6.00	102.1	2.5	0.35	0.2	0.00	0.43	0.15	50
2	53	13.99	13.98	33.105	24.727	322.2	0.171	6.00	102.1	2.5	0.35	0.2	0.00	0.44	0.15	53
2	62 A	13.71	13.70	33.120	24.797	315.9	0.200	5.87	99.3	3.1	0.41	0.8	0.04	0.81	0.35	62
2	74	12.48	12.47	33.223	25.120	285.2	0.236	5.24	86.5	6.6	0.75	5.6	0.12	0.88	0.64	74
	75 ISL	12.38	12.37	33.232	25.146	282.7	0.239	5.17	85.2	7.0	0.79	6.2	0.11	0.83	0.62	75
2	85	11.53	11.52	33.323	25.376	261.0	0.266	4.57	74.0	11.2	1.11	11.5	0.04	0.32	0.32	85
2	94	10.95	10.94	33.387	25.531	246.4	0.289	4.30	68.8	13.4	1.27	13.9	0.03	0.20	0.20	94
	100 ISL	10.64	10.63	33.435	25.623	237.8	0.303	4.12	65.5	15.0	1.37	15.5	0.03	0.14	0.15	100
2	110	10.19	10.18	33.518	25.765	224.4	0.326	3.82	60.1	17.8	1.53	18.1	0.02	0.07	0.09	110
2	124	9.63	9.62	33.639	25.953	206.7	0.35 6	3.44	53.5	22.2	1.73	21.3	0.02	0.01	0.05	125
	125 ISL	9.60	9.59	33.646	25.964	205.8	0.358	3.42	53.2	22.5	1.74	21.5	0.02	0.01	0.05	126
2	145	9.17	9.15	33.771	26.132	190.1	0.398	3.08	47.5	26.4	1.89	23.9	0.01	0.00	0.04	146
	150 ISL	9.12	9.10	33.792	26.156	187.9	0.408	3.02	46.5	27.1	1.92	24.3	0.01	0.00	0.04	151
2	169	9.03	9.01	33.856	26.221	182.1	0.443	2.82	43.3	29.0	1.99	25.2	0.01	0.00	0.04	170
2	199	8.88	8.86	33.938	26.309	174.3	0.496	2.57	39.4	31.8	2.08	26.5	0.01			200
	200 ISL	8.87	8.85	33.940	26.312	174.0	0.498	2.56	39.2	31.9	2.08	26.6	0.01			201
2	228	8.66	8.64	34.006	26.397	166.4	0.546	2.36	36.0	35.0	2.18	28.0	0.01			229
	250 ISL	8.51	8.48	34.058	26.461	160.7	0.582	2.15	32.7	37.9	2.27	29.1	0.01			251
2	268	8.37	8.34	34.094	26.511	156.3	0.610	1.98	30.0	40.3	2.34	29.9	0.01			270
	300 ISL	8.07	8.04	34.126	26.582	150.0	0.659	1.78	26.8	44.1	2.43	31.1	0.01			302
2	317	7.88	7.85	34.134	26.616	146.9	0.684	1.70	25.5	46.3	2.48	31.8	0.01			319
2	378	7.06	7.02	34.131	26.731	136.4	0.771	1.40	20.6	56.4	2.67	34.8	0.01			380
	400 ISL	6.76	6.72	34.128	26.770	132.9	0.800	1.27	18.6	60.4	2.75	35.9	0.01			403
2	438	6.29	6.25	34.133	26.836	126.8	0.850	1.04	15.0	67.4	2.88	37.8	0.01			441
	500 ISL	5.85	5.81	34.196	26.942	117.2	0.925	0.64	9.2	77.6	3.06	40.0	0.01			503
2	512	5.76	5.72	34.208	26.962	115.3	0.939	0.56	8.0	79.6	3.09	40.4	0.01			516

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77		90											
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
33 43.4 N		123 37.9 W		06/04/94		0816 UTC		4155 m		340 16 kn						1022.9 mb		13.4 c		12.1 c							
CAST	DEPTH m	TEMP DEG C		POT TEMP DEG C	SALINITY		SIGMA THETA		SVA	DYN HT	OXYGEN ml/L		OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAEO ug/L	PRESS db							
	0 ISL	14.11	14.11	14.11	33.092	24.691	324.2	0.000	6.00	102.4	2.8	0.36	0.1	0.00	0.22	0.06	0.00	0.22	0.06	0							
2	2	14.11	14.11	14.11	33.092	24.691	324.3	0.006	6.00	102.4	2.8	0.36	0.1	0.00	0.22	0.06	0.22	0.06	0.22	0							
	10 ISL	14.12	14.12	14.12	33.092	24.689	324.7	0.032	5.99	102.2	2.8	0.35	0.1	0.00	0.21	0.07	0.21	0.07	0.21	10							
2	15	14.12	14.12	14.12	33.092	24.689	324.8	0.049	5.99	102.2	2.8	0.35	0.1	0.00	0.21	0.07	0.21	0.07	0.21	15							
	20 ISL	14.12	14.12	14.12	33.092	24.689	324.9	0.065	5.99	102.2	2.8	0.35	0.1	0.00	0.21	0.07	0.21	0.07	0.21	20							
2	30	14.12	14.12	14.12	33.092	24.690	325.2	0.097	5.99	102.2	2.7	0.36	0.1	0.00	0.21	0.07	0.21	0.07	0.21	30							
2	44	14.12	14.11	14.11	33.091	24.689	325.6	0.143	5.99	102.2	2.6	0.35	0.1	0.00	0.22	0.07	0.22	0.07	0.22	44							
	50 ISL	14.12	14.11	14.11	33.091	24.689	325.8	0.163	5.98	102.0	2.7	0.35	0.1	0.00	0.21	0.07	0.21	0.07	0.21	50							
2	54	14.12	14.11	14.11	33.091	24.690	325.9	0.176	5.98	102.0	2.7	0.35	0.1	0.00	0.21	0.07	0.21	0.07	0.21	54							
2	64	13.80	13.79	13.79	33.074	24.743	321.1	0.208	6.01	101.9	2.6	0.36	0.1	0.00	0.34	0.15	0.34	0.15	0.34	64							
2	75	12.98	12.97	12.97	33.085	24.916	304.7	0.242	5.98	99.7	3.6	0.36	0.5	0.13	0.79	0.49	0.79	0.49	0.79	75							
2	85	12.61	12.60	12.60	33.109	25.007	296.3	0.272	5.82	96.3	3.9	0.54	2.0	0.29	0.60	0.45	0.60	0.45	0.60	85							
2	95	11.67	11.66	11.66	33.155	25.220	276.1	0.301	5.23	84.8	7.0	0.83	7.0	0.04	0.26	0.27	0.26	0.27	0.27	95							
	100 ISL	11.25	11.24	11.24	33.188	25.323	266.4	0.315	4.97	79.9	8.8	0.99	9.6	0.03	0.19	0.22	0.19	0.22	0.19	100							
2	109	10.56	10.55	10.55	33.253	25.495	250.1	0.338	4.58	72.6	12.1	1.24	13.7	0.02	0.14	0.15	0.14	0.15	0.15	109							
2	124	9.62	9.61	9.61	33.358	25.736	227.4	0.374	4.29	66.6	16.6	1.47	17.6	0.01	0.05	0.07	0.05	0.07	0.07	124							
	125 ISL	9.57	9.56	9.56	33.369	25.752	225.8	0.376	4.27	66.2	16.9	1.48	17.8	0.01	0.05	0.07	0.05	0.07	0.07	125							
2	143	8.91	8.89	8.89	33.569	26.015	201.1	0.414	3.97	60.7	21.4	1.66	20.9	0.01	0.01	0.03	0.01	0.03	0.03	143							
	150 ISL	8.74	8.72	8.72	33.618	26.079	195.0	0.428	3.84	58.6	22.9	1.72	21.9	0.01	0.01	0.03	0.01	0.03	0.03	150							
2	169	8.44	8.42	8.42	33.723	26.208	183.1	0.464	3.49	52.9	26.8	1.86	24.2	0.00	0.00	0.02	0.00	0.02	0.02	169							
2	198	8.17	8.15	8.15	33.903	26.390	166.3	0.515	3.10	46.7	32.5	2.00	26.5	0.00	0.00	0.02	0.00	0.02	0.02	198							
	200 ISL	8.15	8.13	8.13	33.910	26.399	165.5	0.518	3.08	46.4	32.8	2.01	26.6	0.00						200							
2	229	7.86	7.84	7.84	33.977	26.495	156.8	0.565	2.86	42.8	36.8	2.09	27.9	0.00						229							
	250 ISL	7.59	7.57	7.57	34.000	26.552	151.6	0.597	2.67	39.7	40.9	2.18	29.3	0.00						250							
2	269	7.38	7.35	7.35	34.018	26.596	147.6	0.626	2.45	36.3	44.6	2.28	30.7	0.00						269							
	300 ISL	7.31	7.28	7.28	34.078	26.654	142.7	0.671	1.94	28.7	49.2	2.45	32.4	0.00						300							
2	317	7.29	7.26	7.26	34.108	26.680	140.4	0.695	1.67	24.7	51.5	2.54	33.3	0.00						317							
2	378	6.59	6.56	6.56	34.114	26.781	131.3	0.778	1.29	18.8	61.5	2.74	36.3	0.00						378							
	400 ISL	6.46	6.42	6.42	34.133	26.813	128.5	0.806	1.12	16.3	64.6	2.81	37.1	0.00						400							
2	437	6.28	6.24	6.24	34.168	26.865	124.0	0.85 3	0.85	12.3	69.6	2.93	38.2	0.00						437							
	500 ISL	5.74	5.70	5.70	34.188	26.949	116.3	0.929	0.61	8.7	79.0	3.07	40.2	0.00						500							
2	512	5.64	5.60	5.60	34.192	26.964	114.9	0.942	0.56	8.0	80.8	3.10	40.6	0.00						512							

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 77 100			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
33 23.1 N		124 19.7 W		06/04/94	0207 UTC	4543 m	330	22 kn	320 06 05	1	1023.2 mb	14.3 c	12.3 c		5/8	SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN	HIT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA				ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db
	0 ISL	14.40	14.40	33.029	24.582	334.6	0.000		5.95	102.1	3.4	0.36	0.3	0.00	0.08	0.03	0
2	2	14.40	14.40	33.029	24.582	334.7	0.007		5.95	102.1	3.4	0.36	0.3	0.00	0.08	0.03	2
	10 ISL	14.39	14.39	33.027	24.582	334.8	0.033		5.95	102.1	3.3	0.36	0.2	0.00	0.09	0.02	10
2	15	14.38	14.38	33.026	24.584	334.8	0.050		5.95	102.0	3.3	0.36	0.2	0.00	0.09	0.02	15
	20 ISL	14.38	14.38	33.026	24.584	335.0	0.067		5.95	102.0	3.3	0.36	0.2	0.00	0.09	0.02	20
2	30	14.37	14.37	33.024	24.585	335.2	0.100		5.94	101.9	3.2	0.37	0.2	0.00	0.09	0.02	30
2	45	14.30	14.29	33.023	24.599	334.2	0.151		5.95	101.9	3.0	0.36	0.2	0.00	0.09	0.02	45
	50 ISL	14.31	14.30	33.026	24.600	334.3	0.167		5.95	101.9	3.0	0.36	0.2	0.00	0.09	0.02	50
2	60	14.34	14.33	33.050	24.612	333.4	0.201		5.93	101.6	3.0	0.35	0.2	0.00	0.12	0.03	60
2	75	14.42	14.41	33.148	24.671	328.2	0.2E0		5.89	101.2	2.9	0.34	0.2	0.00	0.23	0.09	75
2	84	13.78	13.77	33.054	24.732	322.6	0.280		5.92	100.3	3.0	0.38	0.2	0.02	0.41	0.25	84
2	94	13.48	13.47	33.062	24.799	316.4	0.312		5.95	100.2	3.1	0.40	0.2	0.04	0.40	0.26	94
	100 ISL	13.52	13.51	33.092	24.815	315.2	0.331		5.89	99.3	3.2	0.42	0.5	0.06	0.39	0.29	100
2	104	13.55	13.54	33.132	24.840	312.9	0.343		5.81	98.0	3.2	0.43	0.7	0.07	0.39	0.30	104
2	114	12.64	12.62	33.177	25.055	292.5	0.373		5.47	90.6	4.9	0.63	3.9	0.06	0.31	0.28	115
2	125	12.28	12.26	33.283	25.206	278.3	0.405		5.21	85.7	6.2	0.75	6.1	0.03	0.23	0.26	126
2	139	11.28	11.26	33.309	25.412	258.8	0.442		4.89	78.7	9.3	1.00	10.1	0.02	0.11	0.12	140
	150 ISL	10.55	10.53	33.350	25.573	243.6	0.470		4.59	72.7	12.4	1.22	13.7	0.01	0.06	0.07	151
2	164	9.74	9.72	33.422	25.767	225.3	0.503		4.24	66.0	16.4	1.48	17.8	0.01	0.03	0.05	165
2	194	8.67	8.65	33.625	26.096	194.2	0.566		3.83	58.3	23.6	1.74	22.4	0.01	0.00	0.02	195
	200 ISL	8.57	8.55	33.669	26.146	189.6	0.577		3.73	56.7	24.9	1.78	23.1	0.01			201
2	228	8.25	8.23	33.848	26.336	172.0	0.628		3.27	49.4	30.5	1.94	25.8	0.01			229
	250 ISL	7.99	7.96	33.929	26.438	162.6	0.665		3.04	45.7	34.3	2.03	27.3	0.01			251
2	269	7.75	7.72	33.970	26.506	156.4	0.695		2.89	43.2	37.5	2.10	28.3	0.01			270
	300 ISL	7.31	7.28	33.997	26.590	148.7	0.742		2.72	40.2	42.9	2.20	30.0	0.01			302
2	318	7.06	7.03	34.002	26.629	145.1	0.769		2.61	38.4	46.2	2.27	31.0	0.01			320
2	378	6.46	6.43	34.040	26.740	135.1	0.853	1.77		25.7	58.3	2.60	35.3	0.01			380
	400 ISL	6.25	6.21	34.055	26.779	131.5	0.882	1.53		22.1	62.5	2.70	36.6	0.01			402
2	438	5.93	5.89	34.083	26.842	125.8	0.931	1.18		16.9	69.3	2.85	38.5	0.01			441
	500 ISL	5.61	5.57	34.132	26.920	118.9	1.007	0.79		11.2	77.6	3.02	40.2	0.01			503
2	516	5.53	5.49	34.145	26.940	117.1	1.026	0.69		9.8	79.8	3.06	40.7	0.01			519

RV DAVID STARR JORDAI				CALCOFI CRUISE 9403										STATION 80		51													
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
34 27.1 N		120 31.4 U		04/04/94		0736 UTC		73 ra		300		22 kn						1019.0 mb		12.5 c		11.0 c							
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN	HT	OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS							
	m	DEG C		DEG C				THETA					mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db							
2	0 ISL	12.34		12.34	33.369	25.259		270.2	0.000	5.44	89.6	8.6	0.83	6.4	0.21	1.15	0.47	0											
	2	12.34		12.34	33.369	25.259		270.2	0.005	5.44	39.6	3.6	0.83	6.4	0.21	1.15	0.47	2											
2	10 ISL	12.34		12.34	33.369	25.259		270.4	0.027	5.44	89.6	8.7	0.83	6.4	0.21	1.20	0.49	10											
	11	12.34		12.34	33.369	25.259		270.4	0.030	5.44	89.6	8.7	0.83	6.4	0.21	1.21	0.49	11											
2	20 ISL	12.32		12.32	33.371	25.264		270.1	0.054	5.41	89.1	8.7	0.84	6.6	0.21	1.38	0.50	20											
2	21	12.32		12.32	33.371	25.264		270.2	0.057	5.41	89.1	8.7	0.84	6.6	0.21	1.39	0.50	21											
2	30	12.23		12.23	33.381	25.290		268.0	0.081	5.28	86.8	9.3	0.89	7.2	0.23	1.13	0.51	30											
2	40	10.86		10.86	33.500	25.634		235.4	0.106	4.07	65.0	17.3	1.37	14.6	0.31	0.57	0.53	40											
2	50 ISL	10.12		10.11	33.639	25.870		213.1	0.129	3.36	52.9	23.3	1.68	19.7	0.27	0.22	0.53	50											
2	52	10.04		10.03	33.660	25.900		210.3	0.133	3.28	51.5	24.1	1.72	20.3	0.25	0.18	0.53	52											
2	60	9.92		9.91	33.681	25.937		207.0	0.149	3.21	50.3	25.0	1.75	20.9	0.22	0.17	0.45	60											

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403											STATION 80		55
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
34 19.6 N	120 47.6 W	04/04/94	1035 UTC	745 m	330	28 kn			1018.8 mb	12.7 c	11.4 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
	0 ISL	12.54	12.54	33.336	25.194	276.3	0.000	5.85	96.8	7.2	0.71	5.1	0.15	2.11	0.83	0	
2	1	12.54	12.54	33.336	25.194	276.3	0.003	5.85	96.8	7.2	0.71	5.1	0.15	2.11	0.83	1	
2	10	12.53	12.53	33.339	25.199	276.1	0.028	5.87	97.1	7.1	0.72	5.1	0.15	2.36	0.78	10	
	20 ISL	11.42	11.42	33.330	25.401	257.2	0.054	4.84	78.2	11.8	1.07	11.0	0.19	0.66	0.38	20	
2	21	11.30	11.30	33.332	25.424	254.9	0.017	4.73	76.2	12.3	1.11	11.6	0.19	0.48	0.34	21	
	30 ISL	11.10	11.10	33.398	25.511	246.8	0.079	4.48	71.9	13.9	1.23	13.1	0.23	0.37	0.31	30	
2	31	11.10	11.10	33.407	25.518	246.2	0.082	4.46	71.6	14.0	1.24	13.2	0.24	0.36	0.31	31	
2	40	10.79	10.79	33.483	25.633	235.5	0.104	3.98	63.5	16.8	1.41	16.2	0.07	0.27	0.35	40	
	50 ISL	10.62	10.61	33.536	25.704	228.9	0.127	3.69	58.6	18.4	1.51	17.8	0.03	0.14	0.26	50	
2	51	10.60	10.59	33.541	25.711	228.3	0.129	3.67	58.3	18.6	1.52	17.9	0.03	0.13	0.25	51	
2	61	10.02	10.01	33.608	25.863	214.0	0.151	3.50	54.9	21.6	1.66	20.2	0.02	0.05	0.20	61	
	68	9.59	9.58	33.647	25.965	204.4	0.166	3.47	53.9	23.4	1.73	21.7	0.03	0.04	0.23	68	
2	75 ISL	9.37	9.36	33.695	26.039	197.5	0.180	3.34	51.7	25.2	1.80	22.7	0.04	0.03	0.22	75	
	83	9.26	9.25	33.744	26.095	192.4	0.195	3.17	49.0	26.8	1.86	23.4	0.04	0.03	0.19	83	
2	99	9.15	9.14	33.779	26.140	188.4	0.226	3.04	46.8	28.0	1.90	24.1	0.04	0.02	0.19	100	
	100 ISL	9.14	9.13	33.783	26.145	187.9	0.228	3.03	46.7	28.1	1.90	24.2	0.04	0.02	0.19	101	
2	120	8.90	8.89	33.851	26.237	179.6	0.265	2.91	44.6	30.2	1.99	25.3	0.04	0.02	0.16	121	
	125 ISL	8.87	8.86	33.859	26.248	178.7	0.274	2.90	44.4	30.4	2.00	25.4	0.04	0.02	0.16	126	
2	140	8.79	8.78	33.883	26.279	175.9	0.300	2.82	43.1	31.3	2.03	25.9	0.04	0.01	0.15	141	
	150 ISL	8.71	8.69	33.923	26.323	171.9	0.318	2.67	40.8	33.0	2.08	26.6	0.04	0.01	0.15	151	
2	171	8.54	8.52	34.015	26.422	163.0	0.353	2.29	34.8	37.1	2.21	28.2	0.04	0.01	0.16	172	
2	198	8.39	8.37	34.080	26.496	156.4	0.396	1.97	29.9	40.8	2.34	29.7	0.04	0.01	0.12	199	
	200 ISL	8.37	8.35	34.083	26.501	155.9	0.399	1.96	29.7	41.0	2.35	29.8	0.04			201	
2	230	8.12	8.10	34.112	26.562	150.6	0.445	1.81	27.3	44.2	2.42	30.9	0.06			231	
	250 ISL	8.03	8.00	34.136	26.595	147.8	0.475	1.65	24.8	46.2	2.49	31.5	0.05			252	
2	270	7.95	7.92	34.157	26.623	145.4	0.504	1.50	22.5	48.1	2.55	32.1	0.03			272	
	300 ISL	7.76	7.73	34.172	26.663	142.1	0.547	1.36	20.3	50.9	2.62	32.9	0.02			302	
2	322	7.61	7.58	34.179	26.691	139.8	0.578	1.28	19.1	53.0	2.66	33.5	0.02			324	
	376	7.26	7.22	34.206	26.762	133.6	0.652	1.02	15.1	59.0	2.79	35.2	0.02			379	
2	400 ISL	7.02	6.98	34.205	26.795	130.7	0.684	0.95	14.0	62.0	2.84	36.0	0.02			403	
	440	6.59	6.55	34.206	26.854	125.4	0.735	0.83	12.1	67.6	2.92	37.4	0.02			443	
2	500 ISL	6.11	6.07	34.247	26.949	116.7	0.808	0.54	7.8	77.1	3.08	39.2	0.01			504	
2	511	6.02	5.98	34.255	26.967	115.1	0.820	0.49	7.0	78.8	3.11	39.5	0.01			511	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 30 60		
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE		
34 9.3 N	121 9.0 W	04/04/94	1810 UTC	2176 m	330	20 kn	330 08 07	2	1019.8 mb	13.0 c	11.8 c	11m 05	8/8	CS		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	12.98	12.98	33.244	25.037	291.2	0.000	6.03	100.6	5.7	0.55	2.4	0.11	2.02	0.81	0
2	2	12.98	12.98	33.244	25.037	291.3	0.006	6.03	100.6	5.7	0.55	2.4	0.11	2.02	0.81	2
2	8 B	12.96	12.96	33.245	25.042	291.0	0.023	6.03	100.6	5.7	0.55	2.5	0.11	1.91	0.95	8
	10 ISL	12.89	12.89	33.246	25.057	289.6	0.029	6.02	100.3	6.0	0.57	2.8	0.11	2.05	0.99	10
2	15 B	12.68	12.68	33.248	25.100	285.7	0.043	5.97	99.0	6.9	0.62	3.6	0.10	2.44	1.07	15
	20 ISL	12.53	12.53	33.251	25.131	282.8	0.058	5.92	97.8	7.5	0.66	4.2	0.11	2.47	1.08	20
2	21 B	12.51	12.51	33.251	25.135	282.5	0.061	5.91	97.6	7.6	0.67	4.3	0.11	2.47	1.08	21
2	30 B	12.48	12.48	33.253	25.142	282.0	0.086	5.84	96.4	7.7	0.70	4.6	0.11	2.40	1.49	30
2	40 B	12.40	12.39	33.271	25.172	279.4	0.114	5.73	94.5	7.9	0.74	5.3	0.15	2.38	1.51	40
2	50	12.25	12.24	33.304	25.227	274.5	0.142	5.24	86.1	8.9	0.87	7.2	0.26	1.19	0.79	50
2	60	11.56	11.55	33.337	25.381	260.0	0.168	4.67	75.6	11.1	1.08	10.8	0.17	0.35	0.44	60
2	70	10.80	10.79	33.406	25.572	242.0	0.194	4.23	67.4	14.3	1.33	14.9	0.03	0.12	0.28	70
	75 ISL	10.58	10.57	33.434	25.632	236.4	0.205	4.11	65.2	15.4	1.40	16.0	0.03	0.10	0.22	75
2	85	10.24	10.23	33.482	25.728	227.1	0.229	3.96	62.4	17.1	1.49	17.6	0.02	0.05	0.13	85
	100 ISL	9.5 5	9.54	33.544	25.892	212.4	0.262	3.80	59.0	20.0	1.64	20.0	0.01	0.02	0.06	101
2	102	9.46	9.45	33.555	25.915	209.3	0.266	3.78	58.6	20.4	1.66	20.3	0.01	0.02	0.06	103
2	119	8.99	8.98	33.713	26.114	191.2	0.300	3.32	50.9	25.4	1.86	23.6	0.00	0.00	0.04	120
	125 ISL	8.92	8.91	33.739	26.146	188.3	0.311	3.25	49.8	26.2	1.89	24.1	0.00	0.00	0.04	126
2	139	8.81	8.80	33.778	26.194	184.0	0.337	3.17	48.5	27.5	1.92	24.7	0.00	0.00	0.03	140
	150 ISL	8.5 9	8.57	33.820	26.261	177.8	0.357	3.09	47.0	29.4	1.97	25.5	0.00	0.00	0.03	151
2	170	8.20	8.18	33.896	26.380	166.7	0.392	2.95	44.5	32.9	2.05	27.0	0.00	0.00	0.03	171
2	198	8.09	8.07	33.974	26.458	159.8	0.437	2.73	41.1	36.1	2.12	28.1	0.00	0.00	0.00	199
	200 ISL	8.07	8.05	33.978	26.464	159.3	0.441	2.71	40.8	36.4	2.13	28.2	0.00	0.00	0.00	201
2	229	7.75	7.73	34.024	26.547	151.7	0.486	2.49	37.2	41.0	2.23	29.6	0.00	0.00	0.00	230
	250 ISL	7.60	7.58	34.045	26.586	148.4	0.517	2.34	34.9	43.5	2.30	30.4	0.00	0.00	0.00	252
2	269	7.45	7.42	34.056	26.616	145.8	0.545	2.20	32.7	46.0	2.37	31.2	0.00	0.00	0.00	271
	300 ISL	6.99	6.96	34.059	26.683	139.7	0.589	1.94	28.5	52.4	2.51	33.2	0.00	0.00	0.00	302
2	319	6.72	6.69	34.065	26.724	135.9	0.616	1.76	25.7	56.5	2.60	34.5	0.00	0.00	0.00	321
2	378	6.46	6.43	34.159	26.833	126.2	0.693	1.10	16.0	65.5	2.87	37.1	0.00	0.00	0.00	380
	400 ISL	6.30	6.26	34.169	26.862	123.7	0.720	0.95	13.7	68.6	2.93	37.9	0.00	0.00	0.00	403
2	436	6.01	5.97	34.177	26.906	119.8	0.764	0.77	11.1	73.5	3.00	39.0	0.00	0.00	0.00	439
	500 ISL	5.59	5.55	34.209	26.984	112.9	0.839	0.54	7.7	82.0	3.12	40.6	0.00	0.00	0.00	504
2	514	5.50	5.46	34.216	27.000	111.4	0.854	0.49	7.0	83.9	3.15	41.0	0.00	0.00	0.00	518

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

B) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.
B) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 80		70	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
33 49.5 N		120 50.2 W		04/04/94	2330 UTC	3629 m	330	23 kn	330 07 05	1	1019.5 mb	14.5 c	13.0 c	09m 04	6/8	cu	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0	ISL	13.36	13.36	33.180	24.912	303.1	0.000	6.20	104.2	2.6	0.38	0.3	0.06	2.57	1.10	0
2	2		13.36	13.36	33.180	24.912	303.2	0.006	6.20	104.2	2.6	0.38	0.3	0.06	2.57	1.10	2
	10	ISL	13.36	13.36	33.180	24.912	303.4	0.030	6.20	104.2	2.8	0.38	0.3	0.06	2.41	0.94	10
2	11		13.36	13.36	33.180	24.912	303.4	0.033	6.20	104.2	2.8	0.38	0.3	0.06	2.39	0.92	11
2	20		13.34	13.34	33.179	24.916	303.3	0.061	6.18	103.8	2.4	0.39	0.3	0.06	2.54	0.96	20
2	30	ISL	13.27	13.27	33.183	24.933	301.9	0.091	6.13	102.9	2.4	0.40	0.4	0.05	2.65	0.97	30
2	31		13.26	13.26	33.184	24.936	301.7	0.094	6.13	102.8	2.4	0.40	0.4	0.05	2.67	0.97	31
2	40		13.19	13.18	33.217	24.976	298.2	0.121	6.20	103.9	2.0	0.41	0.6	0.04	3.16	1.61	40
2	50		12.61	12.60	33.262	25.125	284.2	0.150	5.34	88.4	6.7	0.75	5.1	0.32	1.02	0.80	50
2	60		11.87	11.86	33.285	25.284	269.3	0.178	5.00	81.5	8.8	0.93	8.2	0.19	0.47	0.56	60
2	70		11.47	11.46	33.384	25.435	255.1	0.204	4.39	71.0	12.1	1.19	12.6	0.09	0.27	0.56	70
2	75	ISL	11.37	11.36	33.403	25.468	252.1	0.217	4.33	69.9	12.9	1.24	13.5	0.07	0.26	0.57	75
2	85		11.06	11.05	33.420	25.537	245.7	0.242	4.20	67.3	14.3	1.30	14.6	0.05	0.24	0.59	85
2	100		9.80	9.79	33.475	25.797	221.1	0.277	4.01	62.6	18.0	1.57	18.6	0.03	0.12	0.29	100
2	121		9.12	9.11	33.594	26.001	202.0	0.321	3.75	57.7	22.1	1.71	21.6	0.02	0.04	0.17	122
2	125	ISL	9.02	9.01	33.622	26.038	198.5	0.329	3.67	56.3	23.0	1.75	22.2	0.02	0.03	0.16	126
2	140		8.72	8.71	33.722	26.164	186.8	0.358	3.38	51.6	26.3	1.87	24.1	0.02	0.02	0.12	141
2	150	ISL	8.59	8.57	33.771	26.222	181.4	0.376	3.31	50.4	27.7	1.90	24.7	0.02	0.01	0.10	151
2	169		8.40	8.38	33.850	26.314	173.1	0.410	3.21	48.6	30.2	1.94	25.6	0.02	0.01	0.08	170
2	199		8.13	8.11	33.977	26.454	160.2	0.460	2.78	41.9	35.8	2.11	27.8	0.01	0.01	0.06	200
2	200	ISL	8.11	8.09	33.978	26.458	159.9	0.462	2.78	41.9	36.0	2.11	27.9	0.01	0.01	0.01	201
2	227		7.63	7.61	33.988	26.536	152.7	0.504	2.74	40.8	40.1	2.17	29.2	0.01	0.01	0.01	228
2	250	ISL	7.28	7.26	34.001	26.597	147.2	0.538	2.59	38.3	44.3	2.26	30.5	0.01	0.01	0.01	251
2	268		7.03	7.00	34.012	26.640	143.2	0.564	2.42	35.6	47.9	2.35	31.6	0.01	0.01	0.01	270
2	300	ISL	6.64	6.61	34.027	26.705	137.4	0.609	2.06	30.0	54.6	2.51	33.9	0.01	0.01	0.01	302
2	318		6.45	6.42	34.036	26.737	134.4	0.634	1.85	26.8	58.3	2.59	35.1	0.01	0.01	0.01	320
2	378		6.06	6.03	34.081	26.823	126.8	0.712	1.31	18.8	67.5	2.81	37.7	0.01	0.01	0.01	380
2	400	ISL	5.86	5.83	34.086	26.852	124.2	0.740	1.17	16.7	71.1	2.88	38.6	0.01	0.01	0.01	403
2	438		5.53	5.49	34.101	26.905	119.4	0.786	0.95	13.5	77.2	2.98	39.9	0.00	0.00	0.00	441
2	500	ISL	5.31	5.27	34.186	26.999	111.1	0.857	0.55	7.8	86.2	3.14	41.5	0.00	0.00	0.00	505
2	512		5.27	5.23	34.203	27.017	109.5	0.871	0.47	6.6	87.9	3.17	41.8	0.00	0.00	0.00	516

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 80		80											
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
33 29.3 N		122 31.5 W		05/04/94		0632 UTC		4346 m		310 25 kn						1020.5 mb		13.0 C		11.9 C							
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN	HT	OXYGEN		OXY	SI03	P04	M03	N02	CHL-A	PHAE0	PRESS					
	m	DEG C		DEG C				THETA					mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db					
	a ISL	13.94		13.94		33.063		24.704		323.0		0.000	6.01	102.2		3.5	0.35	0.1	0.00	0.24	0.08	0					
2	2	13.94		13.94		33.063		24.704		323.0		0.036	6.01	102.2		3.5	0.35	0.1	0.00	0.24	0.08	2					
	10 ISL	13.94		13.94		33.061		24.702		323.4		0.032	6.02	102.3		3.3	0.37	0.1	0.00	0.24	0.09	10					
2	15	13.94		13.94		33.060		24.702		323.6		0.048	6.03	102.5		3.2	0.38	0.1	0.00	0.24	0.09	15					
	20 ISL	13.94		13.94		33.060		24.702		323.7		0.065	6.02	102.3		3.2	0.38	0.1	0.00	0.24	0.09	20					
2	30	13.95		13.95		33.061		24.701		324.1		0.097	6.00	102.0		3.2	0.36	0.1	0.00	0.24	0.08	30					
2	45	13.95		13.94		33.061		24.701		324.5		0.146	6.00	102.0		3.3	0.35	0.2	0.00	0.24	0.08	45					
	50 ISL	13.75		13.74		33.076		24.754		319.6		0.162	5.96	100.9		3.3	0.37	0.2	0.01	0.45	0.20	50					
2	54	13.56		13.55		33.086		24.801		315.2		0.175	5.95	100.4		3.4	0.39	0.3	0.03	0.62	0.30	54					
2	64	13.12		13.11		33.071		24.877		308.2		0.206	6.09	101.8		3.6	0.43	0.5	0.09	0.68	0.42	64					
2	75	12.28		12.27		33.119		25.078		289.3		0.239	5.53	90.8		5.7	0.67	4.5	0.12	1.17	0.99	75					
2	84	11.78		11.77		33.127		25.178		279.9		0.264	5.38	87.4		6.7	0.77	6.2	0.06	0.29	0.31	84					
2	94	11.22		11.21		33.207		25.343		264.4		0.291	5.04	81.0		8.7	0.97	9.4	0.03	0.21	0.22	94					
	100 ISL	11.07		11.06		33.278		25.425		256.7		0.307	4.74	75.9		10.6	1.10	11.5	0.03	0.17	0.18	100					
2	110	10.78		10.77		33.400		25.571		242.9		0.332	4.25	67.7		14.3	1.32	15.0	0.02	0.11	0.12	110					
2	125	9.63		9.62		33.550		25.884		213.3		0.366	3.79	58.9		20.1	1.62	19.9	0.01	0.02	0.09	126					
2	145	9.36		9.34		33.696		26.042		198.6		0.407	3.32	51.4		24.4	1.80	22.6	0.01	0.01	0.07	146					
	150 ISL	9.27		9.25		33.722		26.077		195.4		0.417	3.25	50.2		25.3	1.84	23.1	0.01	0.01	0.07	151					
2	169	8.93		8.91		33.802		26.194		184.6		0.453	3.06	46.9		28.3	1.95	24.8	0.01	0.01	0.06	170					
2	198	8.50		8.48		33.906		26.343		170.9		0.505	2.84	43.1		32.3	2.04	26.6	0.01	0.01	0.05	199					
	200 ISL	8.47		8.45		33.914		26.354		169.9		0.508	2.82	42.8		32.6	2.05	26.7	0.01			201					
2	231	8.15		8.13		34.023		26.488		157.6		0.559	2.44	36.8		38.3	2.20	28.9	0.01			232					
	250 ISL	8.03		8.00		34.063		26.537		153.2		0.589	2.17	32.6		41.6	2.31	30.0	0.01			251					
2	264	7.95		7.92		34.083		26.565		150.8		0.610	1.98	29.7		43.9	2.38	30.7	0.01			266					
	300 ISL	7.63		7.60		34.114		26.637		144.5		0.663	1.69	25.2		49.3	2.52	32.3	0.00			302					
2	321	7.40		7.37		34.123		26.677		140.9		0.693	1.56	23.1		52.6	2.59	33.3	0.00			323					
2	378	6.62		6.59		34.149		26.805		129.1		0.770	1.10	16.0		63.7	2.82	36.6	0.00			380					
	400 ISL	6.48		6.44		34.167		26.838		126.2		0.798	0.96	13.9		66.6	2.88	37.3	0.00			403					
2	439	6.31		6.27		34.201		26.887		122.0		0.846	0.75	10.8		71.2	2.98	38.2	0.00			442					
	500 ISL	5.94		5.90		34.243		26.968		114.8		0.919	0.51	7.3		79.2	3.11	39.6	0.00			503					
2	516	5.84		5.80		34.254		26.989		112.9		0.937	0.45	6.4		81.3	3.14	40.0	0.00			520					

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 80		90						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA	BAROMETER		DRY	WET	SECCHI/FOREL		CLD AMT	TYPE
33 9.0 N		123 13.1 W		05/04/94		1304 UTC		4232 m		320 23 kn		320 07 06		1	1020.9 mb		14.2 C	12.8 C			3/8	CS
CAST	DEPTH	TEMP		POT TEMP	SALINITY		SIGMA		SVA	DYN HT	OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C		DEG C			THETA				mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	14.03	14.03	14.03	33.003	24.639	329.2	0.000	5.99	102.0	3.3	0.35	0.1	0.00	0.17	0.04	0.00	0.17	0.04	0		
2	1	14.03	14.03	14.03	33.003	24.639	329.2	0.003	5.99	102.0	3.3	0.35	0.1	0.00	0.17	0.04	0.1	0.00	0.17	0.04	1	
	10 ISL	14.02	14.02	14.02	33.002	24.640	329.3	0.033	5.98	101.8	3.1	0.35	0.1	0.00	0.17	0.04	0.1	0.00	0.17	0.04	10	
2	15	14.02	14.02	14.02	33.002	24.640	329.4	0.049	5.98	101.8	2.9	0.35	0.1	0.00	0.17	0.04	0.1	0.00	0.17	0.04	15	
	20 ISL	14.02	14.02	14.02	33.002	24.641	329.6	0.066	5.98	101.8	2.9	0.35	0.1	0.00	0.17	0.04	0.1	0.00	0.17	0.04	20	
2	30	14.03	14.03	14.03	33.002	24.639	330.0	0.099	5.98	101.8	3.1	0.34	0.1	0.00	0.17	0.04	0.1	0.00	0.17	0.04	30	
2	45	14.03	14.02	14.02	33.001	24.638	330.5	0.148	5.99	102.0	3.0	0.34	0.0	0.00	0.17	0.05	0.1	0.00	0.17	0.05	45	
	50 ISL	14.01	14.00	14.00	33.000	24.642	330.3	0.165	5.98	101.8	3.1	0.34	0.1	0.00	0.18	0.06	0.1	0.00	0.18	0.06	50	
2	54	13.98	13.97	13.97	32.999	24.647	329.8	0.178	5.98	101.7	3.1	0.34	0.1	0.00	0.19	0.06	0.1	0.00	0.19	0.06	54	
2	64	13.78	13.77	13.77	32.988	24.680	327.0	0.211	5.99	101.4	2.7	0.35	0.1	0.00	0.29	0.13	0.1	0.00	0.29	0.13	64	
2	73	13.86	13.85	13.85	33.078	24.734	322.2	0.240	5.91	100.3	2.4	0.36	0.1	0.01	0.40	0.27	0.1	0.01	0.40	0.27	73	
	75 ISL	13.74	13.73	13.73	33.069	24.751	320.5	0.247	5.91	100.0	2.5	0.37	0.1	0.03	0.41	0.29	0.1	0.03	0.41	0.29	75	
2	82	13.18	13.17	13.17	33.033	24.837	312.5	0.269	5.86	98.0	3.4	0.42	0.7	0.09	0.43	0.32	0.7	0.09	0.43	0.32	82	
2	93	12.38	12.37	12.37	33.129	25.067	290.8	0.302	5.52	90.9	5.2	0.63	3.8	0.16	0.29	0.30	3.8	0.16	0.29	0.30	93	
	100 ISL	11.90	11.89	11.89	33.181	25.198	278.4	0.322	5.24	85.4	6.7	0.79	6.5	0.12	0.22	0.27	6.5	0.12	0.22	0.27	100	
2	108	11.36	11.35	11.35	33.232	25.337	265.3	0.344	4.92	79.3	8.8	0.99	9.8	0.05	0.16	0.22	9.8	0.05	0.16	0.22	108	
2	124	10.31	10.30	10.30	33.312	25.584	241.9	0.384	4.39	69.2	13.9	1.34	15.4	0.02	0.09	0.12	15.4	0.02	0.09	0.12	125	
	125 ISL	10.25	10.24	10.24	33.322	25.602	240.2	0.387	4.36	68.6	14.3	1.36	15.7	0.02	0.09	0.11	15.7	0.02	0.09	0.11	126	
2	146	9.16	9.14	9.14	33.545	25.956	206.7	0.433	3.85	59.2	21.0	1.68	20.9	0.01	0.01	0.04	20.9	0.01	0.01	0.04	147	
	150 ISL	9.07	9.05	9.05	33.570	25.990	203.6	0.442	3.78	58.0	21.7	1.71	21.4	0.01	0.01	0.04	21.4	0.01	0.01	0.04	151	
2	169	8.84	8.82	8.82	33.656	26.094	194.0	0.479	3.54	54.1	24.4	1.81	23.2	0.01	0.00	0.03	23.2	0.01	0.00	0.03	170	
2	199	8.32	8.30	8.30	33.794	26.282	176.6	0.535	3.34	50.5	29.0	1.93	25.4	0.01	0.00	0.03	25.4	0.01	0.00	0.03	200	
	200 ISL	8.31	8.29	8.29	33.799	26.288	176.1	0.537	3.33	50.3	29.2	1.93	25.5	0.01			25.5	0.01			201	
2	226	8.06	8.04	8.04	33.919	26.420	163.9	0.581	3.03	45.6	33.8	2.03	27.1	0.01			27.1	0.01			227	
	250 ISL	7.81	7.79	7.79	33.993	26.515	155.2	0.619	2.67	39.9	38.8	2.17	29.0	0.01			29.0	0.01			251	
2	268	7.59	7.56	7.56	34.024	26.571	150.1	0.647	2.45	36.5	42.5	2.27	30.3	0.01			30.3	0.01			270	
	300 ISL	7.05	7.02	7.02	34.011	26.637	144.1	0.694	2.45	36.0	47.3	2.33	31.5	0.01			31.5	0.01			302	
2	317	6.77	6.74	6.74	33.999	26.666	141.4	0.718	2.45	35.8	49.9	2.36	32.1	0.01			32.1	0.01			319	
	379 ISL	6.24	6.21	6.21	34.091	26.808	128.4	0.802	1.23	17.8	65.3	2.81	37.6	0.01			37.6	0.01			381	
2	400	6.02	5.99	5.99	34.106	26.848	124.8	0.828	1.03	14.8	69.8	2.90	38.7	0.01			38.7	0.01			403	
2	438	5.65	5.61	5.61	34.124	26.909	119.2	0.875	0.82	11.7	76.7	3.01	40.1	0.01			40.1	0.01			441	
	500 ISL	5.32	5.28	5.28	34.149	26.968	114.0	0.947	0.63	8.9	83.6	3.10	41.3	0.01			41.3	0.01			503	
2	513	5.25	5.21	5.21	34.155	26.981	112.8	0.962	0.59	8.3	85.1	3.12	41.6	0.01			41.6	0.01			516	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION		80	100
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 48.9 N		123 54.4 W		05/04/94	1847 UTC	4354 m	330	22 kn	320 07 06	1	1024.1 mb	16.3 c	14.6 c	36m 01	2/8		CS
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	PRESS db	
	0 ISL	15.62	15.62	33.505	24.684	324.9	0.000	5.75	101.4	2.3	0.28	0.1	0.00	0.08	0.02	0	
2	2 A	15.62	15.62	33.505	24.684	324.9	0.006	5.75	101.4	2.3	0.28	0.1	0.00	0.08	0.02	2	
	10 ISL	15.60	15.60	33.507	24.690	324.5	0.032	5.75	101.4	2.2	0.26	0.1	0.00	0.08	0.02	10	
2	11	15.60	15.60	33.507	24.690	324.6	0.036	5.75	101.4	2.2	0.26	0.1	0.00	0.08	0.02	11	
	20 ISL	15.60	15.60	33.508	24.691	324.3	0.065	5.76	101.6	2.1	0.26	0.1	0.00	0.08	0.02	20	
2	23 A	15.60	15.60	33.508	24.692	324.9	0.075	5.76	101.5	2.1	0.26	0.1	0.00	0.08	0.02	23	
	30 ISL	15.60	15.60	33.511	24.694	324.8	0.097	5.76	101.5	2.2	0.27	0.1	0.00	0.09	0.03	30	
2	35	15.60	15.59	33.513	24.696	324.15	0.114	5.76	101.5	2.2	0.27	0.11	0.00	0.09	0.03	35	
2	45 A	15.60	15.59	33.514	24.697	325.0	0.146	5.75	101.4	1.7	0.27	0.1	0.00	0.08	0.02	45	
	50 ISL	15.60	15.59	33.514	24.697	325.2	0.162	5.75	101.4	1.8	0.27	0.1	0.00	0.08	0.02	50	
2	58	15.60	15.59	33.514	24.697	325.4	0.188	5.75	101.4	2.1	0.26	0.1	0.00	0.09	0.02	58	
2	68 A	15.60	15.59	33.516	24.699	325.5	0.221	5.75	101.4	2.2	0.26	0.1	0.00	0.09	0.03	68	
	75 ISL	15.75	15.74	33.589	24.722	323.6	0.244	5.72	101.2	2.1	0.25	0.1	0.00	0.13	0.05	75	
2	81	15.89	15.88	33.662	24.747	321.4	0.263	5.68	100.8	2.0	0.24	0.1	0.00	0.17	0.07	81	
2	96 A	15.92	15.90	33.744	24.804	316.5	0.311	5.63	100.0	2.3	0.24	0.1	0.00	0.26	0.15	96	
	100 ISL	15.68	15.66	33.752	24.864	310.9	0.323	5.59	98.8	2.4	0.25	0.2	0.01	0.37	0.28	100	
2	105	15.32	15.30	33.752	24.944	303.4	0.339	5.54	97.2	2.5	0.28	0.3	0.02	0.49	0.42	105	
2	115	14.75	14.73	33.712	25.038	294.7	0.369	5.43	94.2	2.9	0.35	1.3	0.06	0.43	0.39	115	
2	125	13.87	13.85	33.616	25.149	284.2	0.398	5.31	90.4	3.9	0.47	3.0	0.06	0.32	0.33	126	
2	131 A	13.56	13.54	33.610	25.208	278.7	0.415	5.21	88.2	4.5	0.54	3.8	0.04	0.25	0.29	132	
2	139	13.13	13.11	33.627	25.308	269.3	0.436	5.10	85.5	5.4	0.63	5.3	0.03	0.19	0.20	140	
	150 ISL	12.20	12.18	33.607	25.474	253.6	0.465	4.93	81.1	7.5	0.81	8.1	0.02			151	
2	164	10.98	10.96	33.573	25.672	234.7	0.499	4.72	75.6	10.6	1.04	11.7	0.01			165	
2	195	9.58	9.56	33.561	25.902	213.0	0.569	4.41	68.5	16.2	1.38	16.9	0.01			196	
	200 ISL	9.36	9.34	33.592	25.962	207.4	0.579	4.30	66.5	17.8	1.45	18.0	0.01			201	
2	229	8.33	8.31	33.805	26.290	176.4	0.635	3.63	54.9	27.1	1.80	23.8	0.01			230	
	250 ISL	8.07	8.04	33.891	26.396	166.6	0.671	3.30	49.6	31.4	1.93	25.9	0.01			251	
2	269	7.97	7.94	33.940	26.450	161.8	0.702	3.05	45.8	34.6	2.02	27.2	0.01			270	
	300 ISL	7.63	7.60	33.996	26.544	153.3	0.751	2.68	39.9	40.2	2.18	29.3	0.01			302	
2	319	7.41	7.38	34.019	26.594	148.7	0.780	2.46	36.5	43.7	2.28	30.6	0.01			321	
2	378	6.76	6.73	34.080	26.732	136.1	0.864	1.56	22.8	56.2	2.61	35.0	0.01			380	
	400 ISL	6.45	6.41	34.080	26.773	132.3	0.893	1.45	21.0	60.9	2.70	36.3	0.01			402	
2	437	5.95	5.91	34.076	26.834	126.6	0.941	1.34	19.2	68.2	2.82	38.1	0.01			440	
	500 ISL	5.52	5.48	34.113	26.916	119.2	1.019	0.90	12.8	77.7	2.98	40.1	0.01			503	
2	512	5.44	5.40	34.120	26.931	117.8	1.033	0.82	11.6	79.5	3.01	40.5	0.01			515	

A) PRIMARY PRODUCTIVITY' SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 82 47			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL.	CLD	AMT	TYPE
34 16.7 N		120 1.7 W		04/04/94	0250 UTC	577 m	290	30 kn	290 04 05	0	1017.0 mb	13.0 c	11.0 c		0/8		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	11.90	11.90	33.471	25.421	254.7	0.000	5.22	85.3	7.5	0.96	9.0	0.16	5.27	1.30	0	
2	2 A	11.90	11.90	33.471	25.421	254.8	0.005	5.22	85.3	7.5	0.96	9.0	0.16	5.27	1.30	2	
	10 ISL	11.75	11.75	33.477	25.454	251.8	0.025	5.06	82.4	7.9	1.01	9.6	0.17	5.05	1.70	10	
2	11	11.73	11.73	33.478	25.458	251.4	0.028	5.04	82.0	8.0	1.02	9.7	0.17	5.02	1.73	11	
2	20	10.44	10.44	33.553	25.748	224.1	0.049	3.66	57.9	16.8	1.54	17.8	0.17	2.39	0.86	20	
2	30	10.18	10.18	33.597	25.827	216.8	0.071	3.42	53.9	19.9	1.67	19.8	0.11	0.99	0.71	30	
2	40	9.89	9.89	33.661	25.926	207.6	0.093	3.28	51.3	22.4	1.76	21.2	0.07	0.46	0.63	40	
2	49	9.70	9.69	33.703	25.991	201.6	0.111	3.18	49.6	23.9	1.80	22.1	0.04	0.21	0.46	49	
	50 ISL	9.69	9.68	33.708	25.996	201.1	0.113	3.17	49.4	24.0	1.80	22.2	0.04	0.21	0.45	50	
2	60	9.58	9.57	33.750	26.047	196.5	0.133	3.08	47.9	25.0	1.85	22.8	0.03	0.16	0.40	60	
2	69	9.46	9.45	33.782	26.092	192.4	0.150	2.94	45.6	26.3	1.90	23.6	0.04	0.17	0.38	69	
	75 ISL	9.42	9.41	33.796	26.110	190.8	0.162	2.91	45.1	26.7	1.92	23.8	0.04	0.16	0.37	75	
2	84	9.36	9.35	33.818	26.137	188.4	0.179	2.87	44.4	27.4	1.94	24.1	0.03	0.14	0.34	84	
2	99	9.19	9.18	33.882	26.214	181.3	0.207	2.66	41.0	29.8	2.01	25.4	0.04	0.09	0.28	99	
	100 ISL	9.18	9.17	33.885	26.218	181.0	0.208	2.65	40.9	29.9	2.01	25.5	0.04	0.09	0.28	100	
2	119	9.03	9.02	33.931	26.279	175.6	0.242	2.50	38.4	31.9	2.09	26.3	0.02	0.07	0.29	119	
	125 ISL	8.98	8.97	33.950	26.302	173.6	0.253	2.44	37.5	32.7	2.12	26.7	0.02	0.06	0.26	125	
2	138	8.86	8.85	33.993	26.354	168.8	0.275	2.29	35.1	34.6	2.18	27.5	0.01	0.03	0.18	138	
	150 ISL	8.78	8.76	34.026	26.393	165.3	0.295	2.11	32.3	36.5	2.24	28.3	0.01	0.04	0.19	150	
2	168	8.66	8.64	34.067	26.444	160.8	0.324	1.83	27.9	39.5	2.34	29.4	0.01	0.05	0.20	168	
2	200	8.44	8.42	34.111	26.513	154.8	0.375	1.47	22.3	44.6	2.49	30.9	0.01	0.01	0.14	200	
2	228	8.17	8.15	34.135	26.573	149.6	0.418	1.33	20.1	48.5	2.57	31.9	0.01			228	
	250 ISL	8.00	7.97	34.150	26.610	146.3	0.450	1.21	18.2	51.1	2.63	32.5	0.01			250	
2	266	7.89	7.86	34.158	26.633	144.4	0.473	1.12	16.8	52.9	2.68	32.9	0.01			266	
	300 ISL	7.60	7.57	34.170	26.685	139.9	0.522	0.98	14.6	57.3	2.76	33.7	0.01			300	
2	317	7.44	7.41	34.174	26.711	137.6	0.545	0.92	13.7	59.8	2.80	34.1	0.01			317	
2	377	6.86	6.82	34.195	26.809	128.9	0.625	0.61	8.9	70.8	2.99	35.0	0.01			377	
	400 ISL	6.69	6.65	34.204	26.839	126.3	0.655	0.51	7.4	74.5	3.05	34.7	0.01			403	
2	437	6.49	6.45	34.217	26.876	123.1	0.701	0.36	5.2	80.9	3.14	34.3	0.01			446	
	500 ISL	6.42	6.37	34.221	26.889	122.8	0.778	0.07	1.0	96.1	3.35	26.8	0.00			504	
2	511	6.41	6.36	34.222	26.891	122.7	0.792	0.03	0.4	99.3	3.42	24.5	0.00			515	
2	531	6.41	6.36	34.224	26.893	122.8	0.816	0.01	0.1	105.7	3.61	19.1	0.01			535	
2	553	6.41	6.36	34.225	26.894	123.1	0.843	0.07	1.0	102.1	3.59	21.6	0.00			557	
2	558	6.41	6.36	34.225	26.894	123.1	0.850	0.08	1.2	99.9	3.55	22.8	0.01			562	
2	563	6.41	6.36	34.225	26.894	123.2	0.856	0.09	1.3	99.9	3.55	22.8	0.02			5 67	

HV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83				42	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE				
34 10.8 N	119 30.4 W	03/04/94	1924 UTC	143 m	260	12 kn	2 60 02 06	1	1020.9 mb	17.3 c	14.2 c	15m 04	1	8	CS				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	14.50	14.50	33.345	24.804	313.4	0.000	6.68	115.1	1.1	0.25	0.1	0.00	0.31	0.12	0			
2	2 A	14.50	14.50	33.345	24.804	313.5	0.006	6.68	115.1	1.1	0.25	0.1	0.00	0.31	0.12	2			
2	10 A	14.00	14.00	33.350	24.913	303.3	0.011	6.83	116.5	1.0	0.24	0.1	0.00	0.25	0.09	10			
2	19 A	13.02	13.02	33.365	25.124	283.5	0.057	6.74	112.6	1.0	0.31	0.1	0.01	0.42	0.35	19			
	20 ISL	12.93	12.93	33.366	25.142	281.8	0.000	6.57	109.6	1.1	0.36	0.5	0.04	0.53	0.41	20			
2	28 A	12.32	12.32	33.382	25.273	269.5	0.082	5.05	83.2	3.4	0.81	5.3	0.25	1.24	0.82	28			
	30 ISL	12.17	12.17	33.389	25.307	266.3	0.088	4.83	79.3	5.1	0.90	6.8	0.24	1.16	0.79	30			
2	39 A	11.55	11.55	33.436	25.460	252.0	0.111	4.22	68.4	12.9	1.23	12.9	0.11	0.51	0.56	39			
2	45	11.17	11.16	33.483	25.565	242.1	0.126	4.03	64.8	15.0	1.35	15.0	0.07	0.32	0.61	45			
	50 ISL	10.75	10.74	33.521	25.670	232.2	0.158	3.87	61.7	16.8	1.45	16.6	0.05	0.24	0.49	50			
2	55 A	10.35	10.34	33.564	25.773	222.5	0.149	3.70	58.5	18.6	1.55	18.0	0.04	0.20	0.35	55			
2	65	9.91	9.90	33.674	25.933	207.4	0.170	3.37	52.8	22.2	1.73	20.8	0.03	0.09	0.29	65			
2	75	9.51	9.50	33.773	26.077	193.9	0.191	3.04	47.2	25.6	1.86	23.0	0.04	0.05	0.23	75			
2	85	9.44	9.43	33.799	26.109	191.1	0.210	2.94	45.6	26.5	1.90	23.6	0.05	0.05	0.23	85			
2	99	9.33	9.32	33.836	26.156	186.9	0.236	2.79	43.2	27.7	1.96	24.3	0.08	0.05	0.33	100			
	100 ISL	9.32	9.31	33.841	26.161	186.4	0.238	2.78	43.0	27.9	1.97	24.4	0.08	0.05	0.33	101			
2	120	9.04	9.03	33.944	26.287	174.8	0.274	2.53	38.9	31.8	2.09	26.1	0.05	0.03	0.35	121			
	125 ISL	9.00	8.99	33.957	26.304	173.4	0.283	2.49	38.3	32.4	2.11	26.3	0.05	0.03	0.36	126			
2	137	8.89	8.88	33.989	26.346	169.5	0.304	2.39	36.7	34.0	2.15	26.9	0.05	0.04	0.37	138			

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

IV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83				51	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE				
33 53.1 N	120 9.3 U	03/04/94	1416 UTC	110 m	330	23 kn	310 03 05	1	1020.1 mb	13.1 c	12.0 c	04m 05		2/8	SC				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	db			
	0 ISL	13.49	13.49	33.359	25.024	292.5	0.000	6.27	105.8	2.2	0.40	0.5	0.02	7.23	1.53	0			
2	2	13.49	13.49	33.359	25.024	292.5	0.006	6.27	105.8	2.2	0.40	0.5	0.02	7.23	1.53	2			
	10 ISL	13.41	13.41	33.360	25.042	291.1	0.029	6.27	105.6	2.2	0.41	0.5	0.02	6.92	1.63	10			
2	12	13.39	13.39	33.360	25.046	290.8	0.035	6.27	105.6	2.2	0.41	0.5	0.02	6.84	1.68	12			
2	20	13.08	13.08	33.388	25.130	283.0	0.0158	5.82	97.4	4.8	0.61	3.3	0.08	5.36	1.92	20			
2	29	12.84	12.84	33.397	25.184	278.0	0.0153	5.65	94.1	5.8	0.68	4.3	0.10	4.18	1.96	29			
	30 ISL	12.83	12.83	33.397	25.186	277.9	0.0136	5.64	93.9	5.9	0.69	4.4	0.10	4.17	1.97	30			
2	41	12.72	12.71	33.404	25.213	275.6	0.116	5.49	91.2	6.7	0.75	5.2	0.11	3.82	2.06	41			
	50 ISL	11.90	11.89	33.443	25.400	257.9	0.140	4.82	78.7	10.9	1.03	9.4	0.17	2.00	1.31	50			
2	51	11.80	11.79	33.450	25.425	255.7	0.143	4.74	77.2	11.4	1.06	9.9	0.18	1.80	1.23	51			
2	61	11.12	11.11	33.540	25.619	237.3	0.168	4.26	68.4	15.8	1.30	13.7	0.14	1.52	1.46	61			
2	71	10.31	10.30	33.624	25.827	217.7	0.190	3.72	58.8	20.5	1.55	17.8	0.11	0.68	1.12	71			
	75 ISL	10.19	10.18	33.644	25.863	214.4	0.199	3.63	57.2	21.4	1.60	18.5	0.11	0.63	1.04	75			
2	86	10.02	10.01	33.680	25.920	209.2	0.222	3.48	54.6	22.8	1.67	19.7	0.10	0.48	0.87	86			
	100 ISL	9.61	9.60	33.734	26.031	198.9	0.2151	3.21	50.0	25.2	1.80	21.8	0.07	0.16	0.59	101			
2	101	9.58	9.57	33.738	26.039	198.1	0.2153	3.19	49.6	25.4	1.81	22.0	0.07	0.14	0.57	102			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83				55	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE	
33 44.9 N		120 23.8 U		03/04/94	1008 UTC	988 m	330	24 kn			1020.3 mb	13.8 c	11.4 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	M03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	um/L	um/L	um/L	um/L	ug/L	ug/L	db			
	0 ISL	14.03	14.03	33.223	24.809	313.0	0.000	5.99	102.1	2.4	0.38	0.2	0.01	0.85	0.30		0		
2	1	14.03	14.03	33.223	24.809	313.0	0.003	5.99	102.1	2.4	0.38	0.2	0.01	0.85	0.30		1		
	10 ISL	14.01	14.01	33.224	24.814	312.8	0.031	6.00	102.3	2.4	0.39	0.2	0.01	0.88	0.30		10		
2	16	13.99	13.99	33.226	24.820	312.4	0.050	6.00	102.2	2.4	0.40	0.2	0.01	0.91	0.30		16		
	20 ISL	13.96	13.96	33.226	24.826	311.9	0.0153	5.99	102.0	2.4	0.40	0.3	0.01	0.91	0.31		20		
2	30	13.90	13.90	33.227	24.839	310.9	0.094	5.94	101.0	2.5	0.40	0.4	0.04	0.92	0.34		30		
2	44	13.39	13.38	33.240	24.954	300.4	0.156	5.76	96.9	3.7	0.74	U 1.4	0.12	1.21	A 0.55	A	44		
	50 ISL	12.93	12.92	33.243	25.048	291.6	0.154	5.56	92.7	4.4	0.62	3.1	0.11	1.16	0.58		50		
2	55	12.48	12.47	33.253	25.143	282.6	0.189	5.31	87.7	5.6	0.74	5.2	0.10	1.11	0.61		55		
2	63	11.69	11.68	33.304	25.332	264.8	0.190	4.74	77.0	9.4	1.03	10.1	0.06	0.34	0.42		63		
2	73	11.34	11.33	33.337	25.422	256.4	0.217	4.55	73.4	11.0	1.14	11.9	0.04	0.26	0.48		73		
	75 ISL	11.26	11.25	33.341	25.439	254.8	0.222	4.53	72.9	11.2	1.15	12.1	0.04	0.25	0.50		75		
2	86	10.83	10.82	33.374	25.542	245.2	0.249	4.37	69.7	12.6	1.25	13.7	0.03	0.19	0.58		86		
2	94	10.55	10.54	33.430	25.635	236.5	0.268	4.16	66.0	14.9	1.39	15.8	0.03	0.12	0.29		94		
	100 ISL	10.21	10.20	33.474	25.727	227.8	0.232	4.02	63.3	16.7	1.49	17.5	0.03	0.07	0.19		100		
2	110	9.65	9.64	33.542	25.874	214.0	0.304	3.82	59.4	19.4	1.62	19.8	0.02	0.02	0.12		111		
	125 ISL	9.28	9.27	33.607	25.985	203.6	0.336	3.64	56.2	21.7	1.72	21.4	0.01	0.01	0.07		126		
2	126	9.27	9.26	33.611	25.990	203.2	0.338	3.63	56.0	21.8	1.72	21.5	0.01	0.01	0.07		127		
2	147	8.98	8.96	33.706	26.111	192.1	0.379	3.39	52.0	24.6	1.82	23.2	0.01	0.01	0.05		148		
	150 ISL	8.92	8.90	33.726	26.136	189.7	0.355	3.35	51.3	25.2	1.84	23.5	0.01	0.01	0.05		151		
2	170	8.51	8.49	33.858	26.303	174.1	0.421	3.10	47.1	29.6	1.96	25.6	0.01	0.00	0.05		171		
2	197	8.18	8.16	33.952	26.427	162.8	0.457	3.06	46.2	33.2	2.00	26.4	0.00	0.00	0.05		198		
	200 ISL	8.15	8.13	33.956	26.435	162.1	0.472	3.05	46.0	33.4	2.00	26.4	0.00	0.00	0.05		201		
2	226	7.85	7.83	33.982	26.500	156.2	0.513	3.01	45.1	36.1	2.03	27.2	0.00	0.00	0.05		227		
	250 ISL	7.58	7.56	34.023	26.572	149.8	0.550	2.58	38.4	41.7	2.19	29.4	0.00	0.00	0.05		251		
2	269	7.38	7.35	34.055	26.625	144.9	0.578	2.19	32.5	46.5	2.34	31.4	0.00	0.00	0.05		271		
	300 ISL	7.13	7.10	34.078	26.679	140.2	0.622	1.88	27.7	51.3	2.47	33.0	0.00	0.00	0.05		302		
2	321	6.97	6.94	34.092	26.712	137.3	0.651	1.70	25.0	54.4	2.55	33.9	0.00	0.00	0.05		323		
2	377	6.45	6.42	34.187	26.857	124.0	0.724	0.88	12.8	67.4	2.89	37.4	0.00	0.00	0.05		379		
	400 ISL	6.29	6.25	34.206	26.893	120.8	0.752	0.72	10.4	70.8	2.96	38.3	0.00	0.00	0.05		403		
2	438	6.07	6.03	34.230	26.940	116.7	0.798	0.57	8.2	75.1	3.04	39.2	0.00	0.00	0.05		441		
	500 ISL	5.86	5.82	34.284	27.010	110.8	0.868	0.43	6.2	81.1	3.11	40.0	0.00	0.00	0.05		503		
2	516	5.80	5.76	34.298	27.029	109.1	0.886	0.39	5.6	82.7	3.13	40.2	0.00	0.00	0.05		520		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83				60		
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
33 34.9 N		120 45.3 U		03/04/94		0555 UTC		1312 m	310	17 kn			1020.1 mb	14.0 c	13.0 c					
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C		DEG C				THETA				ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	14.14	14.14	14.14	33.029	24.636	329.4	0.000	6.00	102.4	3.1	0.35	0.2	0.00	0.14	0.03				0
2	2	14.14	14.14	14.14	33.029	24.636	329.5	0.007	6.00	102.4	3.1	0.35	0.2	0.00	0.14	0.03				2
	10 ISL	14.14	14.14	14.14	33.031	24.638	329.5	0.033	6.00	102.4	3.1	0.35	0.2	0.00	0.15	0.03				10
2	15	14.14	14.14	14.14	33.032	24.639	329.6	0.049	6.00	102.4	3.1	0.35	0.2	0.00	0.15	0.03				15
	20 ISL	14.12	14.12	14.12	33.031	24.642	329.4	0.066	6.00	102.4	3.0	0.35	0.2	0.00	0.15	0.03				20
2	30	14.07	14.07	14.07	33.037	24.657	328.2	0.099	6.00	102.3	2.9	0.35	0.2	0.00	0.16	0.04				30
2	45	14.08	14.07	14.07	33.081	24.690	325.6	0.148	6.01	102.5	2.8	0.35	0.1	0.00	0.29	0.08				45
	50 ISL	14.31	14.30	14.30	33.198	24.732	321.7	0.164	5.90	101.1	2.8	0.35	0.2	0.00	0.49	0.21				50
2	55	14.40	14.39	14.39	33.287	24.782	317.1	0.180	5.79	99.5	2.8	0.35	0.2	0.01	0.68	0.33				55
2	65	13.27	13.26	13.26	33.137	24.899	306.2	0.211	5.77	96.8	3.7	0.47	1.5	0.13	0.74	0.37				65
2	75	12.23	12.22	12.22	33.157	25.117	285.6	0.241	5.34	87.6	6.2	0.74	5.6	0.11	0.34	0.32				75
2	83	11.92	11.91	11.91	33.276	25.268	271.4	0.263	4.87	79.5	8.9	0.95	9.1	0.06	0.25	0.23				83
2	94	11.39	11.38	11.38	33.322	25.401	258.8	0.292	4.64	74.9	10.7	1.09	11.3	0.03	0.17	0.19				94
	100 ISL	11.00	10.99	10.99	33.365	25.505	249.0	0.307	4.43	70.9	12.6	1.21	13.3	0.02	0.12	0.15				100
2	108	10.46	10.45	10.45	33.432	25.652	235.2	0.327	4.13	65.4	15.4	1.39	16.2	0.02	0.06	0.09				109
2	125	9.50	9.49	9.49	33.577	25.926	209.2	0.365	3.71	57.5	20.7	1.67	20.7	0.01	0.01	0.05				126
2	143	8.84	8.82	8.82	33.629	26.072	195.6	0.401	3.78	57.8	23.2	1.72	22.1	0.00	0.01	0.03				144
	150 ISL	8.69	8.67	8.67	33.682	26.137	189.5	0.414	3.67	55.9	24.7	1.77	22.9	0.00	0.00	0.03				151
2	167	8.45	8.43	8.43	33.817	26.280	176.2	0.446	3.32	50.4	28.6	1.90	25.0	0.00	0.00	0.05				168
2	199	8.19	8.17	8.17	33.924	26.404	165.0	0.500	2.94	44.4	33.3	2.04	27.0	0.00	0.00	0.02				200
	200 ISL	8.19	8.17	8.17	33.928	26.407	164.7	0.502	2.92	44.1	33.5	2.05	27.1	0.00	0.00	0.00				201
2	228	8.06	8.04	8.04	34.032	26.508	155.6	0.547	2.45	36.9	38.4	2.20	29.1	0.00	0.00	0.00				229
	250 ISL	7.79	7.77	7.77	34.073	26.581	149.0	0.580	2.14	32.0	43.1	2.33	30.7	0.00	0.00	0.00				251
2	269	7.53	7.50	7.50	34.092	26.633	144.2	0.608	1.92	28.6	47.0	2.43	31.9	0.00	0.00	0.00				271
	300 ISL	7.28	7.25	7.25	34.112	26.685	139.7	0.652	1.67	24.7	51.4	2.55	33.3	0.00	0.00	0.00				302
2	318	7.14	7.11	7.11	34.115	26.707	137.8	0.677	1.56	23.0	53.7	2.60	34.0	0.00	0.00	0.00				320
2	378	6.39	6.36	6.36	34.100	26.796	129.7	0.757	1.28	18.5	63.0	2.77	36.8	0.00	0.00	0.00				380
	400 ISL	6.18	6.14	6.14	34.100	26.823	127.3	0.786	1.17	16.9	66.2	2.83	37.7	0.00	0.00	0.00				403
2	437	5.89	5.85	5.85	34.109	26.867	123.3	0.832	0.99	14.2	71.5	2.92	38.9	0.00	0.00	0.00				440
	500 ISL	5.58	5.54	5.54	34.173	26.956	115.4	0.907	0.65	9.2	80.3	3.07	40.3	0.00	0.00	0.00				503
2	520	5.48	5.44	5.44	34.193	26.984	112.9	0.930	0.54	7.7	83.1	3.12	40.7	0.00	0.00	0.00				524

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83				70
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
33 15.3 N	121 25.8 W	03/04/94	0010 UTC	3792 m	320	14 kn	310 05 04	1	1020.2 mb	15.6 c	14.2 c	20m 02	6/8		SC			
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI 03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	14.39	14.39	33.118	24.652	327.9	0.000	5.99	102.8	3.2	0.36	0.2	0.00	0.16	0.04	0		
2	2	14.39	14.39	33.118	24.652	327.9	0.007	5.99	102.8	3.2	0.36	0.2	0.00	0.16	0.04	2		
	10 ISL	14.37	14.37	33.115	24.654	328.0	0.033	6.00	102.9	3.1	0.35	0.2	0.00	0.16	0.04	10		
2	15	14.34	14.34	33.109	24.656	327.9	0.049	6.00	102.9	3.0	0.35	0.2	0.00	0.17	0.04	15		
	20 ISL	14.28	14.28	33.100	24.662	327.5	0.066	6.00	102.7	3.0	0.35	0.2	0.00	0.18	0.04	20		
2	30	14.16	14.16	33.086	24.677	326.4	0.098	6.01	102.6	3.0	0.36	0.1	0.00	0.19	0.05	30		
2	45	14.14	14.13	33.097	24.690	325.6	0.147	6.01	102.6	3.0	0.36	0.1	0.00	0.22	0.06	45		
	50 ISL	13.66	13.65	33.048	24.751	319.9	0.163	6.03	101.9	3.1	0.37	0.2	0.02	0.53	0.24	50		
2	54	13.26	13.25	33.024	24.813	314.0	0.176	6.05	101.4	3.2	0.40	0.2	0.03	0.76	0.37	54		
2	64	12.94	12.93	33.150	24.974	298.9	0.207	5.67	94.5	4.5	0.56	2.6	0.26	0.63	0.38	64		
2	74	12.36	12.35	33.234	25.152	282.2	0.236	5.14	84.6	7.4	0.81	6.5	0.27	0.50	0.40	74		
	75 ISL	12.28	12.27	33.241	25.173	280.3	0.239	5.09	83.7	7.7	0.84	6.9	0.25	0.48	0.39	75		
2	84	11.65	11.64	33.302	25.338	264.7	0.263	4.72	76.6	10.3	1.04	10.4	0.06	0.30	0.31	84		
2	94	11.27	11.26	33.355	25.449	254.3	0.289	4.47	72.0	12.2	1.17	12.4	0.04	0.22	0.26	94		
	100 ISL	11.01	11.00	33.391	25.524	247.3	0.304	4.30	68.8	13.6	1.26	13.9	0.03	0.17	0.23	100		
2	109	10.63	10.62	33.446	25.633	237.0	0.326	4.05	64.3	15.6	1.40	16.1	0.02	0.10	0.18	110		
2	125	10.07	10.06	33.534	25.798	221.6	0.363	3.77	59.2	18.6	1.56	18.8	0.02	0.05	0.13	126		
2	145	9.48	9.46	33.629	25.971	205.5	0.405	3.54	54.9	22.0	1.72	21.3	0.02	0.02	0.11	146		
	150 ISL	9.42	9.40	33.653	25.999	202.9	0.415	3.45	53.4	22.7	1.75	21.8	0.02	0.02	0.10	151		
2	168	9.22	9.20	33.732	26.094	194.2	0.451	3.19	49.2	25.2	1.85	23.5	0.01	0.01	0.07	169		
2	200	8.41	8.39	33.847	26.310	174.0	0.510	3.21	48.6	29.5	1.93	25.6	0.01	0.01	0.05	201		
2	229	7.98	7.96	33.938	26.446	161.4	0.559	2.90	43.5	34.9	2.08	27.9	0.00	0.00	0.00	230		
	250 ISL	7.73	7.71	33.974	26.511	155.5	0.592	2.88	43.0	37.5	2.11	28.5	0.00	0.00	0.00	251		
2	268	7.53	7.50	33.994	26.556	151.5	0.620	2.85	42.4	39.9	2.13	29.0	0.00	0.00	0.00	270		
	300 ISL	7.08	7.05	34.023	26.642	143.6	0.667	2.40	35.3	47.1	2.32	31.6	0.00	0.00	0.00	302		
2	320	6.79	6.76	34.036	26.692	139.0	0.695	2.05	30.0	52.3	2.47	33.5	0.00	0.00	0.00	322		
2	380	6.00	5.97	34.068	26.820	127.1	0.775	1.35	19.4	66.5	2.78	37.7	0.00	0.00	0.00	382		
	400 ISL	5.84	5.81	34.080	26.850	124.4	0.800	1.20	17.2	69.8	2.85	38.6	0.00	0.00	0.00	403		
2	438	5.60	5.56	34.103	26.898	120.2	0.846	0.96	13.6	75.1	2.95	39.8	0.00	0.00	0.00	441		
	500 ISL	5.25	5.21	34.150	26.977	113.1	0.919	0.64	9.0	84.0	3.08	41.4	0.00	0.00	0.00	503		
2	511	5.19	5.15	34.159	26.991	111.8	0.931	0.58	8.2	85.6	3.10	41.7	0.00	0.00	0.00	514		

RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 83					80				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE				
32 55.5 N	122 7.7 W	02/04/94	1823 UTC	4176 m	330	18 kn	330 07 04	1	1021.5 mb	16.0 C	14.5 C	35m 01		3/8	AS				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	M03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/t	ug/L	db			
	0 ISL	15.85	15.85	33.409	24.559	336.8	0.000	5.74	101.6	2.4	0.32	0.2	0.00	0.09	0.02	0			
2	2 A	15.85	15.85	33.409	24.559	336.9	0.007	5.74	101.6	2.4	0.32	0.2	0.00	0.09	0.02	2			
	10 ISL	15.84	15.84	33.409	24.561	336.9	0.034	5.74	101.6	2.3	0.32	0.2	0.00	0.09	0.02	10			
2	12	15.83	15.83	33.409	24.564	336.7	0.040	5.74	101.6	2.3	0.32	0.2	0.00	0.09	0.02	12			
	20 ISL	15.81	15.81	33.408	24.568	336.6	0.067	5.73	101.4	2.3	0.32	0.2	0.00	0.09	0.02	20			
2	22 A	15.81	15.81	33.408	24.568	336.6	0.074	5.73	101.4	2.3	0.32	0.2	0.00	0.09	0.02	22			
	30 ISL	15.81	15.81	33.408	24.568	336.9	0.101	5.73	101.4	2.3	0.32	0.2	0.00	0.09	0.02	30			
2	44 A	15.80	15.79	33.407	24.570	337.1	0.148	5.74	101.5	2.3	0.32	0.2	0.00	0.09	0.02	44			
	50 ISL	15.67	15.66	33.393	24.588	335.5	0.168	5.75	101.4	2.3	0.32	0.2	0.00	0.11	0.03	50			
2	66 A	15.34	15.33	33.357	24.634	331.6	0.222	5.77	101.1	2.3	0.33	0.2	0.00	0.16	0.04	66			
	74	14.73	14.72	33.284	24.711	324.5	0.248	5.85	101.2	2.5	0.34	0.2	0.00	0.31	0.15	74			
	75 ISL	14.64	14.63	33.276	24.724	323.3	0.251	5.85	101.0	2.5	0.35	0.2	0.00	0.33	0.16	75			
2	82	14.02	14.01	33.241	24.827	313.6	0.274	5.83	99.4	3.0	0.41	0.3	0.03	0.47	0.25	82			
2	91 A	13.19	13.18	33.253	25.005	296.8	0.301	5.54	92.8	4.1	0.56	2.4	0.14	0.46	0.32	91			
	100	12.08	12.07	33.328	25.279	270.8	0.327	4.96	81.2	7.3	0.87	7.5	0.11	0.33	0.28	100			
2	109	11.53	11.52	33.417	25.450	254.6	0.350	4.66	75.5	9.7	1.05	10.8	0.04	0.19	0.24	109			
	119	10.92	10.91	33.479	25.608	239.7	0.375	4.55	72.7	11.4	1.16	12.8	0.02	0.11	0.13	120			
	125 ISL	10.59	10.58	33.488	25.673	233.5	0.389	4.49	71.3	12.7	1.22	13.8	0.02	0.08	0.10	126			
2	126 A	10.53	10.52	33.489	25.685	232.5	0.391	4.48	71.0	12.9	1.23	14.0	0.02	0.08	0.10	127			
	140	9.67	9.65	33.530	25.862	215.7	0.423	3.98	61.9	17.9	1.54	18.8	0.01	0.06	0.09	141			
2	150 ISL	9.31	9.29	33.569	25.951	207.4	0.444	3.92	60.5	19.7	1.62	20.2	0.01	0.04	0.07	151			
	164	8.99	8.97	33.636	26.055	197.7	0.472	3.83	58.7	21.6	1.67	21.2	0.01	0.01	0.04	165			
2	195	8.40	8.38	33.844	26.309	174.0	0.530	3.46	52.4	28.3	1.86	24.5	0.01			196			
	200 ISL	8.31	8.29	33.866	26.340	171.1	0.539	3.47	52.5	29.0	1.86	24.6	0.01			201			
2	229	7.84	7.82	33.954	26.479	158.2	0.586	3.51	52.5	33.4	1.90	25.4	0.01			230			
	250 ISL	7.54	7.52	33.991	26.552	151.6	0.619	3.08	45.8	38.6	2.06	27.8	0.00			251			
2	268	7.31	7.28	34.012	26.601	147.1	0.646	2.63	38.9	43.4	2.23	30.1	0.00			270			
	300 ISL	6.98	6.95	34.042	26.671	140.8	0.692	2.12	31.1	50.3	2.43	32.7	0.00			302			
2	318	6.83	6.80	34.055	26.702	138.1	0.717	1.89	27.7	53.7	2.53	33.8	0.00			320			
	378	6.38	6.35	34.105	26.801	129.2	0.797	1.30	18.8	63.3	2.78	36.7	0.00			380			
	400 ISL	6.21	6.17	34.132	26.845	125.3	0.825	1.07	15.4	67.5	2.87	37.7	0.00			403			
2	438	5.95	5.91	34.178	26.914	119.0	0.871	0.72	10.3	74.4	3.01	39.3	0.00			441			
	500 ISL	5.69	5.65	34.223	26.983	113.1	0.943	0.49	7.0	80.9	3.12	40.5	0.00			503			
2	512	5.64	5.60	34.232	26.996	112.0	0.957	0.45	6.4	82.2	3.14	40.7	0.00			515			

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN					CALCOFI CRUISE 9403										STATION		83	90	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 34.6 N		122 48.6 U		02/04/94	0845 UTC	4268 m	340	18 kn			1021.5 mb	14.8 C	13.7 C						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	15.94	15.94	33.441	24.563	336.4	0.000	5.72	101.5	2.5	0.32	0.2	0.00	0.09	0.02		0		
2	2	15.94	15.94	33.441	24.563	336.4	0.007	5.72	101.5	2.5	0.32	0.2	0.00	0.09	0.02		2		
	10 ISL	15.95	15.95	33.441	24.561	336.9	0.034	5.72	101.5	2.5	0.31	0.2	0.00	0.09	0.02		10		
2	16	15.95	15.95	33.441	24.561	337.1	0.054	5.72	101.5	2.4	0.31	0.2	0.00	0.09	0.02		16		
	20 ISL	15.95	15.95	33.441	24.562	337.2	0.067	5.72	101.5	2.4	0.31	0.2	0.00	0.09	0.02		20		
2	30	15.95	15.95	33.441	24.562	337.5	0.101	5.71	101.3	2.3	0.31	0.2	0.00	0.09	0.02		30		
2	44	15.86	15.85	33.434	24.577	336.4	0.148	5.73	101.5	2.2	0.32	0.2	0.00	0.10	0.03		44		
	50 ISL	15.46	15.45	33.368	24.616	332.9	0.168	5.80	101.9	2.3	0.33	0.2	0.00	0.16	0.05		50		
2	53	15.25	15.24	33.334	24.636	331.1	0.178	5.83	101.9	2.3	0.33	0.2	0.00	0.19	0.06		53		
2	64	14.92	14.91	33.290	24.674	327.7	0.215	5.86	101.8	2.4	0.33	0.2	0.00	0.21	0.08		64		
	74	14.25	14.24	33.233	24.773	318.5	0.247	5.87	100.5	2.3	0.36	0.2	0.00	0.23	0.12		74		
2	75 ISL	14.21	14.20	33.231	24.780	317.9	0.250	5.86	100.3	2.3	0.36	0.2	0.00	0.25	0.13		75		
	85	13.86	13.85	33.248	24.865	310.0	0.281	5.77	98.0	2.7	0.42	0.4	0.06	0.47	0.25		85		
2	95	13.25	13.24	33.345	25.064	291.3	0.311	5.39	90.5	4.3	0.58	3.1	0.11	0.46	0.27		95		
	100 ISL	12.87	12.86	33.396	25.179	280.4	0.326	5.23	87.1	5.1	0.66	4.6	0.09	0.41	0.26		100		
2	109	12.08	12.07	33.466	25.386	260.8	0.350	4.92	80.6	7.2	0.85	7.9	0.03	0.29	0.24		109		
	124	10.54	10.53	33.463	25.663	234.5	0.387	4.17	66.1	14.3	1.39	16.0	0.02	0.16	0.21		124		
	125 ISL	10.47	10.46	33.466	25.677	233.2	0.396	4.14	65.5	14.6	1.41	16.3	0.02	0.15	0.20		125		
2	143	9.62	9.60	33.559	25.893	212.8	0.430	3.81	59.2	18.7	1.61	19.8	0.01	0.06	0.09		143		
	150 ISL	9.32	9.30	33.610	25.982	204.5	0.444	3.79	58.5	20.2	1.65	20.6	0.01	0.04	0.07		150		
2	169	8.70	8.68	33.755	26.193	184.6	0.481	3.74	57.0	24.2	1.73	22.4	0.01	0.01	0.04		169		
2	199	8.44	8.42	33.926	26.368	168.5	0.534	2.97	45.1	31.4	2.00	26.3	0.00	0.00	0.03		199		
	200 ISL	8.43	8.41	33.929	26.372	168.2	0.536	2.97	45.1	31.5	2.00	26.3	0.00				200		
2	228	8.16	8.14	33.989	26.460	160.2	0.582	2.95	44.5	34.4	2.03	27.0	0.00				228		
	250 ISL	7.93	7.90	34.022	26.520	154.8	0.617	2.69	40.4	38.0	2.14	28.5	0.00				250		
2	269	7.73	7.70	34.046	26.568	150.5	0.546	2.39	35.7	41.7	2.26	30.0	0.00				269		
	300 ISL	7.41	7.38	34.085	26.645	143.5	0.691	1.94	28.8	47.9	2.44	32.2	0.00				300		
2	319	7.22	7.19	34.106	26.688	139.6	0.718	1.68	24.8	51.7	2.55	33.4	0.00				319		
	377	6.59	6.56	34.143	26.804	129.2	0.796	1.10	16.0	62.8	2.82	36.7	0.00				377		
	400 ISL	6.39	6.35	34.153	26.838	126.1	0.525	0.96	13.9	66.3	2.89	37.6	0.00				400		
2	437	6.12	6.08	34.170	26.887	121.8	0.371	0.78	11.2	71.3	2.98	38.8	0.00				437		
	500 ISL	5.79	5.75	34.222	26.970	114.5	0.946	0.50	7.1	78.8	3.10	40.2	0.00				500		
2	512	5.73	5.69	34.232	26.985	113.1	0.959	0.45	6.4	80.2	3.12	40.5	0.00				512		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 83		100	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
32 14.4 N	123 29.7 W	02/04/94	0213 UTC	4136 m	330	24	kn	330 07 05	1	1020.9 mb	15.1 c	13.9 c			6/8	SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0	ISL	15.41	15.41	33.332	24.597	333.1	0.000	5.80	101.8	2.5	0.33	0.3	0.00	0.07	0.02	
2	2		15.41	15.41	33.332	24.597	333.2	0.007	5.80	101.8	2.5	0.33	0.3	0.00	0.07	0.02	
	10	ISL	15.39	15.39	33.332	24.602	333.0	0.033	5.81	101.9	2.5	0.32	0.3	0.00	0.07	0.01	
2	14		15.38	15.38	33.332	24.604	332.9	0.047	5.81	101.9	2.5	0.32	0.3	0.00	0.07	0.01	
	20	ISL	15.37	15.37	33.333	24.608	332.8	0.067	5.81	101.9	2.4	0.32	0.3	0.00	0.07	0.01	
2	30		15.35	15.35	33.334	24.613	332.3	0.100	5.81	101.8	2.3	0.32	0.3	0.00	0.07	0.02	
2	45		15.26	15.25	33.335	24.634	331.0	0.150	5.80	101.4	2.3	0.32	0.2	0.00	0.08	0.02	
	50	ISL	15.25	15.24	33.335	24.636	330.9	0.166	5.80	101.4	2.3	0.32	0.2	0.00	0.08	0.02	
2	60		15.24	15.23	33.333	24.637	331.1	0.199	5.80	101.4	2.3	0.32	0.2	0.00	0.08	0.02	
2	74		15.19	15.18	33.328	24.645	330.8	0.246	5.81	101.5	2.2	0.32	0.2	0.00	0.09	0.02	
	75	ISL	15.18	15.17	33.327	24.646	330.7	0.249	5.81	101.4	2.2	0.32	0.2	0.00	0.09	0.02	
2	84		15.11	15.10	33.324	24.660	329.7	0.279	5.80	101.1	2.2	0.32	0.2	0.00	0.13	0.05	
2	94		15.10	15.09	33.325	24.663	329.7	0.312	5.81	101.3	2.2	0.32	0.2	0.00	0.20	0.07	
	100	ISL	14.89	14.88	33.317	24.702	326.1	0.331	5.77	100.1	2.4	0.34	0.3	0.01	0.37	0.22	
2	105		14.53	14.51	33.308	24.772	319.5	0.347	5.74	98.9	2.6	0.36	0.3	0.01	0.49	0.34	
	113		13.47	13.45	33.300	24.986	299.2	0.372	5.50	92.7	3.7	0.53	2.3	0.08	0.41	0.34	
2	124		12.45	12.43	33.329	25.210	278.0	0.404	5.17	85.3	5.7	0.73	5.7	0.03	0.27	0.25	
	125	ISL	12.34	12.32	33.332	25.233	275.8	0.407	5.13	84.5	6.0	0.76	6.1	0.03	0.26	0.24	
2	138		11.01	10.99	33.378	25.514	249.1	0.441	4.68	74.9	10.2	1.11	12.0	0.01	0.12	0.11	
	150	ISL	10.15	10.13	33.432	25.706	230.9	0.470	4.41	69.3	13.6	1.33	15.5	0.01	0.06	0.08	
2	164		9.44	9.42	33.511	25.885	213.9	0.501	4.15	64.2	17.4	1.51	18.5	0.01	0.03	0.04	
2	194		8.65	8.63	33.762	26.207	183.8	0.560	3.42	52.1	26.3	1.85	24.0	0.00	0.00	0.02	
	200	ISL	8.57	8.55	33.809	26.256	179.2	0.571	3.29	50.0	27.9	1.90	24.8	0.00		0.01	
2	228		8.31	8.29	33.992	26.440	162.2	0.619	2.70	40.9	34.7	2.11	27.6	0.00		0.01	
	250	ISL	8.11	8.08	34.067	26.529	154.1	0.654	2.27	34.2	39.7	2.27	29.6	0.00		0.01	
2	267		7.95	7.92	34.100	26.579	149.6	0.680	1.98	29.7	43.2	2.38	30.9	0.00		0.01	
	300	ISL	7.65	7.62	34.135	26.650	143.2	0.728	1.64	24.5	48.5	2.53	32.6	0.00		0.01	
2	318		7.47	7.44	34.141	26.681	140.5	0.754	1.52	22.6	51.0	2.59	33.3	0.00		0.01	
2	377		6.79	6.76	34.141	26.776	132.0	0.834	1.23	18.0	59.8	2.75	35.8	0.00		0.01	
	400	ISL	6.68	6.64	34.161	26.806	129.4	0.864	1.07	15.6	62.4	2.82	36.5	0.00		0.01	
2	438		6.50	6.46	34.195	26.857	124.9	0.912	0.82	11.9	67.0	2.93	37.6	0.01		0.01	
	500	ISL	5.82	5.78	34.204	26.952	116.2	0.987	0.60	8.6	78.0	3.07	39.9	0.01		0.01	
2	511		5.70	5.66	34.206	26.968	114.6	1.000	0.56	8.0	80.0	3.09	40.3	0.01		0.01	

RV DAVID STARR JORDAN				CALCOFI: CRUISE 9403										STATION 83			110	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE			
31 54.8 N	124 10.5 W	01/04/94	1907 UTC	4180 m	340	16 kn	340 05 06	1	1024.0 mb	17.5 c	15.2 c	33m 02	1/8		ST			
CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	PRESS db		
	0 ISL	15.07	15.07	33.188	24.561	336.6	0.000	5.85	101.9	2.6	0.34	0.2	0.00	0.10	0.02	0		
2	2 A	15.07	15.07	33.188	24.561	336.6	0.007	5.85	101.9	2.6	0.34	0.2	0.00	0.10	0.02	2		
	10 ISL	15.04	15.04	33.192	24.571	335.9	0.034	5.85	101.8	2.5	0.35	0.2	0.00	0.10	0.03	10		
2	11	15.03	15.03	33.193	24.574	335.7	0.037	5.85	101.8	2.5	0.35	0.2	0.00	0.10	0.03	11		
	20 ISL	15.02	15.02	33.200	24.582	335.2	0.067	5.85	101.8	2.5	0.33	0.2	0.00	0.10	0.03	20		
2	22 A	15.02	15.02	33.201	24.582	335.2	0.074	5.85	101.8	2.5	0.33	0.2	0.00	0.10	0.03	22		
	30 ISL	14.99	14.99	33.194	24.584	335.3	0.101	5.85	101.7	2.5	0.33	0.2	0.00	0.11	0.03	30		
2	43 A	14.93	14.92	33.182	24.588	335.3	0.144	5.86	101.7	2.5	0.34	0.2	0.00	0.13	0.03	43		
	50 ISL	14.60	14.59	33.124	24.614	333.0	0.168	5.89	101.5	2.5	0.35	0.2	0.00	0.18	0.06	50		
2	62 A	14.08	14.07	33.033	24.653	329.5	0.207	5.95	101.4	2.6	0.36	0.1	0.00	0.25	0.11	62		
2	74	14.06	14.05	33.025	24.652	330.0	0.247	5.96	101.5	2.5	0.36	0.1	0.00	0.26	0.12	74		
	75 ISL	13.98	13.97	33.020	24.664	328.9	0.250	5.95	101.2	2.5	0.37	0.1	0.02	0.28	0.14	75		
2	86 A	13.29	13.28	33.050	24.828	313.5	0.286	5.87	98.4	2.9	0.44	0.6	0.17	0.47	0.35	86		
2	94	13.60	13.59	33.232	24.906	306.3	0.310	5.66	95.6	3.4	0.47	1.3	0.15	0.40	0.33	94		
	100 ISL	13.01	13.00	33.250	25.039	293.8	0.328	5.46	91.1	4.4	0.59	3.4	0.07	0.29	0.28	100		
2	102	12.74	12.73	33.246	25.089	289.0	0.334	5.39	89.5	4.8	0.64	4.2	0.04	0.25	0.26	102		
2	110	11.92	11.91	33.248	25.247	274.0	0.357	5.14	83.8	6.8	0.83	7.2	0.02	0.18	0.19	110		
2	119 A	11.26	11.25	33.247	25.367	262.6	0.381	4.86	78.2	9.4	1.04	10.4	0.01	0.11	0.13	120		
	125 ISL	11.27	11.25	33.314	25.418	258.0	0.397	4.82	77.6	9.4	1.03	10.5	0.01	0.11	0.12	126		
2	129	11.27	11.25	33.363	25.456	254.5	0.407	4.80	77.3	9.4	1.03	10.5	0.01	0.11	0.12	130		
2	139	10.47	10.45	33.401	25.627	238.3	0.431	4.57	72.3	12.4	1.23	13.8	0.01	0.06	0.06	140		
	150 ISL	9.88	9.86	33.451	25.766	225.1	0.457	4.34	67.8	15.1	1.40	16.5	0.01	0.04	0.05	151		
2	165	9.34	9.32	33.535	25.920	210.6	0.490	4.04	62.4	18.6	1.58	19.3	0.00	0.02	0.03	166		
2	194	8.70	8.68	33.760	26.198	184.7	0.547	3.35	51.1	26.5	1.88	24.1	0.00			195		
	200 ISL	8.62	8.60	33.793	26.236	181.1	0.558	3.31	50.4	27.3	1.90	24.5	0.00			201		
2	229	8.34	8.32	33.913	26.373	168.6	0.609	3.18	48.1	30.7	1.95	25.5	0.00			233		
	250 ISL	8.16	8.13	33.981	26.454	161.2	0.643	2.86	43.1	34.5	2.07	27.1	0.00			251		
2	269	8.00	7.97	34.025	26.512	155.9	0.673	2.55	38.3	38.2	2.19	28.7	0.00			270		
	300 ISL	7.64	7.61	34.053	26.587	149.2	0.721	2.30	34.3	42.9	2.31	30.3	0.00			302		
2	317	7.43	7.40	34.059	26.622	146.0	0.746	2.19	32.5	45.5	2.37	31.1	0.00			319		
2	378	6.80	6.76	34.103	26.744	135.0	0.831	1.50	21.9	57.0	2.66	34.9	0.00			383		
	400 ISL	6.51	6.47	34.098	26.779	131.8	0.861	1.37	19.9	61.1	2.74	36.0	0.00			402		
2	437	6.05	6.01	34.091	26.833	126.7	0.909	1.20	17.2	67.6	2.85	37.7	0.00			440		
	500 ISL	5.57	5.53	34.143	26.934	117.6	0.986	0.82	111.6	77.2	3.03	39.8	0.00			503		
2	511	5.49	5.45	34.152	26.951	116.0	0.998	0.75	10.6	78.9	3.06	40.2	0.00			514		

RV DAVID STARR JORDAN					CALCOFI CRUISE 9403												STATION 87		33	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE					
33 53.5 *	118 29.5 U	29/03/94	2138 UTC	55 m	220	09 kn	2 60 01 05	1	1021.0 mb	16.0 c	14.2 c	16m 03		6/8	CI					
CAST	DEPTH	TEMP	POT TEHP	SALINITY	SIGMA	SVA	DUN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS				
	ID	DES C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db				
	0	ISL	15.39	15.39	33.239	24.530	339.5	0.000	6.13	107.5	2.4	0.31	0.3	0.01	0.82	0.21	0			
2			15.39	15.39	33.239	24.530	339.6	0.007	6.13	107.5	2.4	0.31	0.3	0.01	0.82	0.21	2			
2	5		14.94	14.94	33.239	24.628	330.3	0.017	6.19	107.5	2.4	0.33	0.3	0.02	1.46	0.28	5			
2	10		14.80	14.80	33.230	24.652	328.2	0.033	6.20	107.4	2.5	0.33	0.4	0.02	2.44	0.44	10			
2	20		14.09	14.09	33.226	24.799	314.5	0.065	5.55	94.7	5.0	0.55	2.7	0.14	11.48	1.13	20			
2	30		13.02	13.02	33.221	25.012	294.4	0.096	4.83	80.6	8.9	1.05	6.6	0.28	2.06	0.38	30			
2	40		11.72	11.71	33.319	25.337	263.6	0.124	4.20	68.3	13.8	1.41	11.7	0.37	0.33	0.23	40			
	50	ISL	11.27	11.26	33.450	25.522	246.3	0.149	3.83	61.7	16.4	1.51	14.5	0.32	0.23	0.28	50			
2	51		11.22	11.21	33.463	25.541	244.5	0.112	3.79	61.0	16.7	1.52	14.8	0.31	0.22	0.28	51			

RV DAVID STARR JORDAI					CALCOFI CRUISE 9403										STATION 87					35	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE						
33 49.6 N	118 37.5 W	29/03/94	2349 UTC	640 m	260	10 kn	150 01 05 2		1020.5 mb	15.8 c	14.2 c	19m 02		8/8	CI						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS					
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db					
0	ISL	15.59	15.59	33.28	24.517	340.7	0.000	5.97	105.1	2.4	0.34	0.2	0.00	0.34	0.09	CI					
2	1	15.59	15.59	33.28	24.518	340.7	0.003	5.97	105.1	2.4	0.34	0.2	0.00	0.34	0.09	1					
2	10	14.91	14.91	33.26	24.651	328.3	0.034	6.04	104.9	3.1	0.34	0.2	0.00	0.36	0.10	10					
2	20	14.79	14.79	33.26	24.677	326.1	0.066	6.07	105.1	2.4	0.34	0.2	0.00	0.62	0.17	20					
2	30	14.53	14.53	33.26	24.733	321.1	0.099	6.15	105.9	2.5	0.34	0.2	0.01	1.20	0.33	30					
2	40	13.69	13.68	33.29	24.932	302.4	0.130	5.69	96.4	4.2	0.52	2.2	0.14	1.20	0.47	40					
2	50	12.47	12.46	33.33	25.205	276.6	0.159	5.06	83.6	7.5	0.83	6.9	0.34	0.69	0.42	50					
2	60	11.57	11.56	33.38	25.413	256.9	0.185	4.48	72.6	10.9	1.13	11.4	0.35	0.56	0.30	60					
2	70	10.60	10.59	33.52	25.696	230.2	0.210	3.95	62.7	15.9	1.43	16.6	0.07	0.21	0.23	70					
2	75	ISL	10.39	33.57	25.768	223.4	0.221	3.77	59.6	17.3	1.52	18.0	0.05	0.13	0.18	75					
2	83	10.23	10.22	33.62	25.838	217.0	0.239	3.57	56.3	18.9	1.61	19.3	0.02	0.07	0.10	83					
2	99	9.86	9.85	33.71	25.970	204.6	0.272	3.35	52.4	21.6	1.73	21.2	0.02	0.03	0.07	99					
2	100	ISL	9.84	9.83	33.71	25.976	0.274	3.34	52.2	21.7	1.73	21.3	0.02	0.03	0.07	100					
2	119	9.55	9.54	33.77	26.069	195.6	0.312	3.19	49.6	24.0	1.81	22.7	0.01	0.01	0.05	120					
2	125	ISL	9.45	9.44	33.80	26.105	0.314	3.12	48.4	24.9	1.84	23.2	0.01	0.01	0.05	126					
2	140	9.21	9.19	33.87	26.203	183.3	0.352	2.92	45.1	27.4	1.93	24.6	0.01	0.01	0.05	141					
2	150	ISL	9.05	9.03	33.94	26.279	0.370	2.75	42.3	29.6	2.00	25.6	0.01	0.01	0.05	151					
2	169	8.77	8.75	34.05	26.414	163.8	0.403	2.42	37.0	33.8	2.14	27.5	0.01	0.00	0.05	170					
2	199	8.52	8.50	34.13	26.516	154.6	0.450	1.99	30.3	39.2	2.31	29.5	0.01	0.00	0.04	200					
2	200	ISL	8.51	8.49	34.13	26.519	0.452	1.98	30.1	39.3	2.31	29.5	0.01			201					
2	228	8.33	8.31	34.17	26.576	149.3	0.494	1.74	26.4	42.4	2.41	30.5	0.01			229					
2	250	ISL	8.10	8.07	34.18	26.621	0.527	1.55	23.4	45.9	2.50	31.6	0.00			251					
2	269	7.89	7.86	34.19	26.658	142.1	0.554	1.39	20.9	49.0	2.58	32.5	0.00			271					
2	300	ISL	7.67	7.64	34.21	26.706	0.597	1.18	17.6	52.4	2.68	33.6	0.00			302					
2	318	7.56	7.53	34.22	26.730	135.9	0.622	1.08	16.1	54.2	2.73	34.1	0.00			320					
2	378	7.24	7.20	34.26	26.808	129.4	0.732	0.75	11.1	60.8	2.88	35.7	0.00			380					
2	400	ISL	7.04	7.00	34.27	26.845	0.750	0.64	9.4	64.1	2.94	36.4	0.00			403					
2	437	6.67	6.63	34.29	26.910	120.2	0.775	0.48	7.0	70.1	3.04	37.6	0.00			440					
2	500	ISL	6.11	6.07	34.32	27.010	0.848	0.34	4.9	80.4	3.16	38.8	0.00			503					
2	512	6.00	5.95	34.33	27.029	109.3	0.861	0.31	4.5	82.4	3.18	39.0	0.00			516					

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 87		40	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
33 39.8 N	118 58.5 U	30/03/94	0414 UTC	794 m	260	13 kn			1020.9 mb	15.0 c	13.8 c						
CAST	DEPTH	TEHP	POT TEHP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
0	ISL	15.32	15.32	33.270	24.569	335.8	0.000	6.01	105.2	2.7	0.33	0.1	0.00	0.43	0.16	0	
2	2	15.32	15.32	33.270	24.570	335.8	0.007	6.01	105.2	2.7	0.33	0.1	0.00	0.43	0.16	2	
2	10	ISL	14.90	33.266	24.658	327.6	0.033	6.05	105.0	2.6	0.32	0.1	0.00	0.47	0.20	10	
2	11	14.80	14.80	33.266	24.680	325.6	0.037	6.05	104.8	2.6	0.32	0.1	0.00	0.48	0.21	11	
2	20	13.31	13.31	33.291	25.009	294.5	0.064	5.55	93.3	4.6	0.59	3.4	0.14	1.10	0.81	20	
2	30	11.79	11.79	33.345	25.344	262.7	0.092	4.73	77.0	9.8	1.01	10.1	0.19	0.57	0.48	30	
2	40	11.16	11.16	33.432	25.527	245.5	0.118	4.29	68.9	13.1	1.24	13.6	0.11	0.38	0.35	40	
2	50	10.18	10.17	33.585	25.818	218.1	0.141	3.69	58.1	19.0	1.57	18.7	0.03	0.13	0.35	50	
2	59	10.03	10.02	33.619	25.870	213.3	0.160	3.57	56.0	20.1	1.63	19.6	0.03	0.09	0.2 5	59	
2	69	9.84	9.83	33.653	25.929	207.9	0.181	3.46	54.1	21.2	1.68	20.5	0.02	0.05	0.14	69	
2	75	ISL	9.67	33.679	25.977	203.4	0.194	3.40	53.0	22.3	1.72	21.2	0.02	0.03	0.12	75	
2	84	9.45	9.44	33.719	26.045	197.2	0.212	3.30	51.2	24.1	1.78	22.2	0.02	0.02	0.10	84	
2	99	9.34	9.33	33.766	26.100	192.3	0.241	3.15	48.7	25.7	1.85	23.1	0.02	0.02	0.10	100	
2	100	ISL	9.33	33.770	26.104	191.8	0.243	3.14	48.6	25.8	1.85	23.2	0.02	0.02	0.10	101	
2	119	9.20	9.19	33.845	26.184	184.6	0.279	2.91	44.9	28.0	1.95	24.4	0.02	0.01	0.09	120	
2	125	ISL	9.13	9.12	33.870	26.215	181.8	0.290	2.83	43.6	28.9	1.98	24.9	0.02	0.01	0.03	126
2	139	8.96	8.95	33.925	26.285	175.4	0.315	2.64	40.5	31.1	2.05	25.9	0.01	0.01	0.07	140	
2	150	ISL	8.85	8.83	33.961	26.331	171.2	0.334	2.51	38.5	32.9	2.11	26.6	0.01	0.01	0.07	151
2	169	8.68	8.66	34.013	26.399	165.1	0.3 66	2.33	35.6	35.7	2.20	27.7	0.02	0.01	0.08	170	
2	199	8.48	8.46	34.076	26.479	158.0	0.414	2.15	32.7	38.1	2.28	28.8	0.01	0.00	0.04	2 00	
2	200	ISL	8.47	8.45	34.078	26.482	157.7	0.416	2.14	32.5	38.2	2.29	28.9	0.01		201	
2	229	8.25	8.23	34.137	26.563	150.6	0.460	1.76	26.6	42.9	2.44	30.6	0.01			230	
2	250	ISL	8.12	8.09	34.158	26.599	147.5	0.492	1.59	24.0	45.4	2.51	31.4	0.01		252	
2	268	8.00	7.97	34.170	26.626	145.2	0.518	1.48	22.3	47.5	2.56	31.9	0.01			270	
2	300	ISL	7.75	7.72	34.201	26.688	139.8	0.564	1.23	18.4	51.8	2.68	33.2	0.01		302	
2	317	7.60	7.57	34.217	26.722	136.7	a.587	1.10	16.4	54.3	2.75	33.9	0.01			319	
2	379	7.03	6.99	34.266	26.842	126.0	0.669	0.66	9.7	64.5	2.98	36.3	0.01			381	
2	400	ISL	6.84	6.80	34.276	26.876	123.0	0.695	0.57	8.4	67.6	3.04	36.9	0.01		403	
2	438	6.54	6.50	34.290	26.927	118.4	0.741	0.47	6.8	72.6	3.11	37.8	0.01			441	
2	500	ISL	6.24	6.20	34.308	26.981	113.9	0.813	0.39	5.6	78.0	3.17	38.5	0.01		504	
2	513	6.18	6.13	34.312	26.992	113.9	0.827	0.37	5.3	79.1	3.18	38.7	0.01			51	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403						STATION 87 45									
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE				
33 29.8 N	119 19.3 W	30/03/94	0816 UTC	1640 m	280	24 kn			1021.8 mb	14.0 c	13.5 c								
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	14.13	14.13	33.284	24.835	310.5	0.000	6.25	106.8	0.5	0.26	0.2	0.01	1.60	0.53	0			
2	2	14.13	14.13	33.284	24.835	310.5	0.006	6.25	106.8	0.5	0.26	0.2	0.01	1.60	0.53	2			
	10 ISL	14.02	14.02	33.285	24.859	308.5	0.031	6.25	106.6	0.5	0.28	0.2	0.01	1.51	0.64	10			
2	11	14.00	14.00	33.285	24.863	308.1	0.034	6.25	106.5	0.5	0.28	0.2	0.01	1.50	0.65	11			
2	20	13.94	13.94	33.286	24.876	307.1	0.062	6.23	106.1	0.5	0.23	0.2	0.01	1.57	0.63	20			
2	30	13.28	13.28	33.306	25.026	293.1	0.092	5.93	99.6	1.7	0.45	1.1	0.05	1.60	1.43	30			
2	40	12.12	12.11	33.355	25.291	268.1	0.120	5.08	83.3	7.4	0.86	7.1	0.16	0.89	1.45	40			
2	50	11.41	11.40	33.385	25.446	253.6	0.146	4.61	74.5	10.7	1.09	11.1	0.17	0.77	1.36	50			
2	60	10.69	10.68	33.458	25.631	236.1	0.170	4.10	65.2	14.8	1.35	15.6	0.13	0.31	0.92	60			
2	70	10.48	10.47	33.466	25.674	232.2	0.194	4.05	64.1	15.7	1.40	16.4	0.10	0.24	0.76	70			
	75 ISL	10.26	10.25	33.489	25.730	227.0	0.205	3.97	62.6	16.8	1.46	17.4	0.08	0.20	0.69	75			
2	85	9.78	9.77	33.560	25.866	214.2	0.227	3.76	58.7	19.5	1.60	19.6	0.03	0.12	0.57	85			
2	100	9.36	9.35	33.691	26.038	198.2	0.258	3.44	53.2	23.2	1.74	22.0	0.02	0.07	0.38	101			
2	119	9.10	9.09	33.730	26.110	191.6	0.295	3.39	52.2	24.6	1.79	22.9	0.02	0.04	0.25	120			
	125 ISL	9.01	9.00	33.740	26.132	189.6	0.307	3.38	51.9	25.0	1.80	23.1	0.02	0.04	0.25	126			
2	140	8.83	8.82	33.771	26.185	184.8	0.335	3.36	51.4	26.3	1.82	23.7	0.02	0.03	0.25	141			
	150 ISL	8.77	8.75	33.800	26.217	182.0	0.353	3.29	50.3	27.2	1.85	24.1	0.02	0.03	0.22	151			
2	168	8.69	8.67	33.869	26.284	176.0	0.385	3.05	46.5	29.5	1.93	25.1	0.02	0.02	0.15	169			
	200 ISL	8.51	8.49	34.051	26.455	160.3	0.439	2.23	33.9	37.1	2.22	28.5	0.01	0.01	0.12	201			
2	201	8.50	8.48	34.056	26.461	159.8	0.441	2.20	33.5	37.4	2.23	28.6	0.01	0.01	0.12	202			
2	229	8.23	8.21	34.134	26.563	150.5	0.484	1.75	26.5	42.9	2.40	30.6	0.01			230			
	250 ISL	8.04	8.01	34.168	26.619	145.6	0.515	1.51	22.7	46.4	2.51	31.7	0.01			251			
2	269	7.87	7.84	34.188	26.660	142.0	0.543	1.33	20.0	49.2	2.59	32.6	0.01			271			
2	300 ISL	7.61	7.58	34.213	26.717	136.9	0.586	1.09	16.3	53.5	2.70	33.7	0.01			2102			
2	319	7.46	7.43	34.225	26.749	134.2	0.612	0.98	14.6	55.9	2.76	34.3	0.01			321			
2	377	7.11	7.07	34.262	26.827	127.4	0.687	0.74	10.9	62.4	2.89	35.9	0.01			379			
	400 ISL	6.96	6.92	34.270	26.855	125.1	0.716	0.66	9.7	65.1	2.94	36.4	0.01			403			
2	435	6.73	6.69	34.279	26.893	121.8	0.760	0.56	8.2	69.0	3.00	37.2	0.01			438			
	500 ISL	6.40	6.35	34.297	26.952	116.9	0.837	0.43	6.2	74.1	3.08	38.3	0.01			503			
2	512	6.34	6.29	34.300	26.962	116.0	0.851	0.41	5.9	75.0	3.09	38.5	0.01			516			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403						STATION 87 50									
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE				
33 19.3 N	119 39.7 W	30/03/94	1212 UTC	77 n	290	25 kn			1021.5 mb	13.5 c	12.9 c								
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	14.11	14.11	33.240	24.805	313.3	0.000	5.96	101.8	2.5	0.33	0.2	0.01	0.48	0.21	0			
2	2	14.11	14.11	33.240	24.805	313.4	0.006	5.96	101.8	2.5	0.33	0.2	0.01	0.48	0.21	2			
2	10	14.11	14.11	33.242	24.807	313.4	0.031	5.95	101.6	2.6	0.33	0.2	0.01	0.50	0.24	10			
2	20	14.10	14.10	33.240	24.808	313.6	0.063	5.96	101.8	2.6	0.34	0.2	0.01	0.48	0.21	20			
2	30	14.04	14.04	33.241	24.821	312.6	0.094	5.93	101.1	2.5	0.35	0.3	0.02	0.56	0.28	30			
2	40	13.89	13.88	33.242	24.853	309.9	0.125	5.88	100.0	2.7	0.39	0.6	0.04	0.56	0.30	40			
2	49	13.65	13.64	33.254	24.912	304.5	0.153	5.78	97.8	3.1	0.45	1.3	0.08	0.56	0.33	49			
	50 ISL	13.60	13.59	33.258	24.925	303.3	0.156	5.77	97.5	3.2	0.46	1.5	0.08	0.62	0.37	50			
2	64	12.95	12.94	33.312	25.098	287.2	0.197	5.63	93.9	4.6	0.61	3.6	0.11	1.46	0.93	64			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403								STATION 87 55						
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL.	CLD	AMT	TYPE	
33 ?.1 N		119 59.6 W		30/03/94	2252 UTC	1243 m	310	21 kn	300 08 04	1	1021.5 mb	16.0 C	14.3 C	24m	02	4/8	CI	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	14.48	14.48	33.188	24.687	324.5	0.000	5.91	101.7	2.9	0.34	0.2	0.00	0.24	0.09		0	
2	1	14.48	14.48	33.188	24.687	324.6	0.003	5.91	101.7	2.9	0.34	0.2	0.00	0.24	0.09		1	
	10 ISL	14.47	14.47	33.188	24.690	324.6	0.032	5.91	101.7	2.9	0.35	0.2	0.00	0.24	0.09		10	
2	16	14.45	14.45	33.186	24.693	324.5	0.052	5.91	101.6	2.8	0.35	0.2	0.00	0.24	0.09		16	
	20 ISL	14.43	14.43	33.182	24.694	324.5	0.065	5.91	101.6	2.7	0.35	0.2	0.00	0.24	0.09		20	
2	30	14.39	14.39	33.173	24.696	324.6	0.097	5.91	101.5	2.6	0.35	0.2	0.00	0.25	0.10		30	
2	45	14.06	14.05	33.135	24.736	321.2	0.146	5.97	101.8	2.6	0.35	0.2	0.00	0.32	0.10		45	
	50 ISL	13.87	13.86	33.118	24.762	318.8	0.162	5.97	101.4	2.8	0.36	0.2	0.01	0.57	0.24		50	
2	55	13.65	13.64	33.108	24.799	315.4	0.178	5.97	100.9	3.0	0.38	0.2	0.02	0.79	0.37		55	
2	65	13.19	13.18	33.131	24.910	305.1	0.209	5.78	96.8	3.6	0.47	1.3	0.13	0.65	0.42		65	
2	75	12.43	12.42	33.265	25.162	281.2	0.238	5.21	85.9	6.1	0.73	5.7	0.07	0.43	0.44		75	
2	85	11.89	11.88	33.273	25.271	271.1	0.266	4.95	80.7	8.0	0.91	8.5	0.04	0.31	0.29		85	
2	95	11.02	11.01	33.351	25.490	250.3	0.292	4.48	71.7	12.3	1.21	13.4	0.01	0.15	0.14		95	
	100 ISL	10.68	10.67	33.382	25.575	242.4	0.304	4.35	69.1	13.7	1.30	14.8	0.01	0.11	0.10		100	
2	109	10.21	10.20	33.440	25.701	230.5	0.325	4.20	66.1	15.5	1.40	16.6	0.01	0.07	0.07		110	
2	124	9.79	9.78	33.574	25.876	214.1	0.359	3.92	61.2	18.2	1.54	18.9	0.01	0.04	0.05		125	
	125 ISL	9.75	9.74	33.578	25.886	213.1	0.361	3.91	61.0	18.4	1.55	19.0	0.01	0.04	0.05		126	
2	144	9.09	9.07	33.636	26.039	198.9	0.400	3.76	57.8	22.0	1.68	21.4	0.00	0.01	0.04		145	
	150 ISL	8.97	8.95	33.667	26.082	194.9	0.412	3.70	56.7	23.0	1.71	21.9	0.00	0.01	0.03		151	
2	170	8.67	8.65	33.784	26.221	182.0	0.449	3.50	53.3	26.4	1.81	23.6	0.00	0.00	0.02		171	
2	199	8.08	8.06	33.953	26.443	161.3	0.499	3.15	47.4	33.5	1.97	26.4	0.00	0.00	0.02		200	
	200 ISL	8.07	8.05	33.956	26.447	160.9	0.501	3.13	47.1	33.7	1.98	26.5	0.00				201	
2	229	7.75	7.73	34.022	26.546	151.9	0.546	2.66	39.8	40.1	2.16	29.0	0.00				230	
	250 ISL	7.56	7.54	34.054	26.599	147.2	0.578	2.32	34.5	44.2	2.29	30.6	0.00				251	
2	270	7.39	7.36	34.076	26.641	143.5	0.607	2.03	30.1	47.8	2.40	31.9	0.00				272	
	300 ISL	7.16	7.13	34.103	26.694	138.7	0.649	1.70	25.1	52.4	2.54	33.5	0.00				302	
2	318	7.04	7.01	34.116	26.721	136.4	0.674	1.54	22.7	54.8	2.61	34.2	0.00				320	
	328 ISL	6.77	6.73	34.152	26.787	130.9	0.754	1.18	17.2	60.9	2.76	35.9	0.00				380	
	400 ISL	6.69	6.65	34.160	26.804	129.6	0.783	1.09	15.9	62.4	2.80	36.3	0.00				403	
2	439	6.51	6.47	34.181	26.845	126.1	0.832	0.92	13.4	65.9	2.88	37.2	0.00				442	
	500 ISL	6.00	5.96	34.263	26.976	114.1	0.906	0.49	7.0	77.8	3.09	39.6	0.00				503	
2	511	5.91	5.87	34.278	26.999	112.0	0.918	0.41	5.9	79.9	3.13	40.0	0.00				511	

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE
32 59.3 N		120 20.4 U		31/03/94	0318 UTC	721 m	310	25 kn			1021.7 mb	14.2 c	12.8 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/l		uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db		
2	0	ISL 14.15	14.15	33.070	24.666	326.6	0.0130	5.99	102.3	2.9	0.35	0.3	0.00	0.16	0.04	0		
	2	14.15	14.15	33.070	24.666	326.7	0.007	5.99	102.3	2.9	0.35	0.3	0.00	0.16	0.04	2		
	10	ISL 14.15	14.15	33.070	24.666	326.9	0.033	6.00	102.5	2.8	0.35	0.3	0.00	0.16	0.04	10		
2	15	14.15	14.15	33.070	24.666	327.0	0.049	6.00	102.5	2.7	0.35	0.3	0.00	0.16	0.04	15		
	20	ISL 14.15	14.15	33.070	24.666	327.1	0.055	6.00	102.4	2.7	0.35	0.3	0.00	0.16	0.04	20		
	30	ISL 14.15	14.15	33.071	24.667	327.3	0.098	6.00	102.4	2.6	0.34	0.3	0.00	0.16	0.04	30		
2	31	14.15	14.15	33.071	24.667	327.3	0.101	6.00	102.4	2.6	0.34	0.3	0.00	0.16	0.04	31		
	45	14.08	14.07	33.070	24.681	326.4	0.147	5.99	102.1	2.6	0.35	0.3	0.00	0.19	0.06	45		
	50	ISL 14.13	14.12	33.114	24.705	324.3	0.153	5.93	101.2	2.6	0.34	0.2	0.01	0.31	0.17	50		
2	54	14.17	14.16	33.156	24.729	322.1	0.176	5.89	100.7	2.6	0.34	0.2	0.01	0.42	0.26	54		
	63	13.70	13.69	33.106	24.788	316.7	0.205	5.92	100.2	2.9	0.38	0.3	0.06	0.60	0.36	63		
	74	13.09	13.08	33.095	24.902	306.1	0.239	5.80	96.9	3.6	0.48	1.6	0.15	0.57	0.43	74		
2	75	ISL 13.04	13.03	33.103	24.918	304.5	0.242	5.77	96.3	3.7	0.50	1.9	0.14	0.55	0.42	75		
	84	12.49	12.48	33.188	25.092	288.2	0.269	5.39	89.0	5.3	0.68	4.9	0.04	0.31	0.32!	84		
	94	11.55	11.54	33.255	25.320	266.6	0.297	4.90	79.3	8.5	0.97	9.7	0.03	0.15	0.28	94		
2	100	ISL 11.10	11.09	33.312	25.446	254.7	0.312	4.62	74.1	10.7	1.13	12.3	0.02	0.10	0.21	100		
	110	10.48	10.47	33.410	25.631	237.2	0.337	4.24	67.1	14.4	1.35	15.8	0.01	0.06	0.09	110		
	124	9.76	9.75	33.512	25.833	218.2	0.369	3.94	61.4	18.4	1.55	19.0	0.01	0.02	0.04	124		
2	125	ISL 9.73	9.72	33.520	25.844	217.1	0.371	3.91	60.9	18.6	1.56	19.2	0.01	0.02	0.04	126		
	144	9.31	9.29	33.645	26.010	201.6	0.411	3.51	54.2	22.6	1.75	22.1	0.01	0.01	0.04	145		
	150	ISL 9.15	9.13	33.659	26.047	198.2	0.423	3.51	54.0	23.4	1.78	22.6	0.01	0.01	0.04	151		
2	169	8.67	8.65	33.696	26.152	188.5	0.460	3.50	53.3	25.7	1.84	24.0	0.01	0.00	0.02	170		
	199	8.19	8.17	33.878	26.368	168.4	0.513	3.03	45.7	32.1	2.02	26.9	0.01	0.00	0.02	200		
	200	ISL 8.18	8.16	33.883	26.373	167.9	0.515	3.02	45.5	32.3	2.02	27.0	0.01	0.01	0.04	201		
2	227	7.93	7.91	33.982	26.488	157.4	0.559	2.83	42.5	36.6	2.09	28.1	0.01	0.01	0.04	228		
	250	ISL 7.60	7.58	33.996	26.547	152.0	0.594	2.88	42.9	39.3	2.11	28.7	0.01	0.01	0.04	251		
	266	7.37	7.34	33.993	26.578	149.3	0.618	2.90	43.0	41.1	2.13	29.1	0.01	0.01	0.04	268		
2	300	ISL 7.15	7.12	34.026	26.635	144.3	0.668	2.46	36.3	46.8	2.30	31.3	0.00	0.00	0.04	302		
	318	7.06	7.03	34.048	26.665	141.7	0.694	2.15	31.6	50.2	2.42	32.6	0.00	0.00	0.04	320		
	378	6.54	6.51	34.117	26.790	130.4	0.776	1.27	18.5	62.1	2.77	36.5	0.00	0.00	0.04	380		
2	400	ISL 6.32	6.28	34.143	26.839	125.9	0.804	1.03	14.9	66.6	2.87	37.7	0.00	0.00	0.04	403		
	437	5.97	5.93	34.182	26.915	118.9	0.849	0.73	10.5	73.8	3.01	39.3	0.00	0.00	0.04	440		
	500	ISL 5.51	5.47	34.214	26.997	111.5	0.922	0.50	7.1	83.2	3.12	41.0	0.00	0.00	0.04	503		
2	514	5.41	5.37	34.222	27.016	109.8	0.937	0.45	6.4	85.3	3.15	41.4	0.00	0.00	0.04	517		

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 39.8 N		121 1.4 U		31/03/94	0940 UTC	3787 M	330	28 Kn			1021.8 mb	14.3 c	12.8 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
2	0 ISL	15.98	15.98	33.452	24.563	336.4	0.000	5.70	101.2	2.5	0.30	0.2	0.00	0.09	0.02		0
	2	15.98	15.98	33.452	24.563	336.5	0.007	5.70	101.2	2.5	0.30	0.2	0.00	0.09	0.02		2
	10 ISL	15.98	15.98	33.451	24.562	336.8	0.034	5.70	101.2	2.4	0.29	0.2	0.00	0.09	0.02		10
2	15	15.98	15.98	33.450	24.562	337.0	0.051	5.70	101.2	2.3	0.29	0.2	0.00	0.09	0.02		15
	20 ISL	15.98	15.98	33.450	24.562	337.1	0.067	5.70	101.2	2.2	0.29	0.2	0.00	0.09	0.02		20
	30 ISL	15.98	15.98	33.451	24.563	337.4	0.101	5.70	101.2	2.2	0.29	0.2	0.00	0.10	0.02		30
2	31	15.98	15.98	33.451	24.563	337.4	0.104	5.70	101.2	2.2	0.29	0.2	0.00	0.10	0.02		31
	47	15.99	15.98	33.450	24.560	338.1	0.158	5.70	101.2	2.3	0.30	0.2	0.00	0.09	0.02		47
	50 ISL	15.94	15.93	33.445	24.568	337.5	0.169	5.71	101.3	2.3	0.30	0.2	0.00	0.10	0.02		50
2	61	15.60	15.59	33.404	24.613	333.5	0.206	5.74	101.1	2.3	0.30	0.1	0.00	0.15	0.04		61
	75 ISL	14.88	14.87	33.282	24.677	327.8	0.252	6.00	104.1	2.5	0.32	0.1	0.00	0.19	0.06		75
	76	14.83	14.82	33.272	24.680	327.5	0.2155	6.01	104.2	2.5	0.32	0.1	0.00	0.19	0.06		76
2	84	14.51	14.50	33.218	24.707	325.1	0.2181	5.88	101.2	2.5	0.34	0.1	0.00	0.26	0.12		84
	94	14.22	14.21	33.216	24.766	319.7	0.313	5.87	100.4	2.5	0.35	0.1	0.00	0.29	0.19		94
	100 ISL	14.05	14.04	33.250	24.828	314.0	0.332	5.78	98.6	2.7	0.36	0.4	0.04	0.40	0.26		100
2	103	13.95	13.94	33.279	24.871	309.9	0.342	5.70	97.0	2.9	0.37	0.5	0.06	0.45	0.29		103
	113	13.55	13.53	33.438	25.077	290.7	0.372	5.27	89.1	4.5	0.56	3.5	0.08	0.38	0.30		113
	125 ISL	13.14	13.12	33.462	25.178	281.3	0.406	5.14	86.1	5.3	0.64	5.0	0.06	0.30	0.28		125
2	127	13.03	13.01	33.453	25.193	279.9	0.412	5.13	85.8	5.5	0.66	5.3	0.06	0.29	A 0.27	A	127
	141	11.43	11.41	33.377	25.438	256.5	0.449	4.68	75.6	10.0	1.05	11.1	0.03	0.17	0.18		141
	150 ISL	10.71	10.69	33.422	25.602	241.0	0.472	4.47	71.1	12.6	1.22	13.3	0.02	0.10	0.12		150
2	164	9.94	9.92	33.545	25.829	219.4	0.504	4.19	65.6	16.2	1.41	17.1	0.01	0.03	0.05		164
	194	9.26	9.24	33.756	26.106	193.5	0.566	3.54	54.7	22.9	1.71	21.9	0.00	0.00	0.03		194
	200 ISL	9.15	9.13	33.797	26.156	188.9	0.577	3.43	52.8	24.2	1.76	22.6	0.00	0.00	0.03		200
2	228	8.69	8.67	33.950	26.349	171.0	0.628	3.02	46.1	30.1	1.93	25.4	0.00	0.00	0.04		228
	250 ISL	8.32	8.29	33.997	26.442	162.4	0.664	2.90	43.9	33.7	2.01	26.7	0.00	0.00	0.04		250
	267	8.05	8.02	34.013	26.496	157.5	0.692	2.83	42.6	36.4	2.06	27.6	0.00	0.00	0.04		267
2	300 ISL	7.61	7.58	34.047	26.587	149.2	0.742	2.49	37.1	42.6	2.23	29.9	0.00	0.00	0.04		300
	320	7.37	7.34	34.062	26.633	145.0	0.772	2.23	33.0	46.6	2.34	31.3	0.00	0.00	0.04		320
	376	6.76	6.73	34.103	26.750	134.4	0.850	1.48	21.6	57.9	2.64	35.2	0.00	0.00	0.04		376
2	400 ISL	6.53	6.49	34.120	26.794	130.4	0.882	1.24	18.0	62.3	2.75	36.5	0.00	0.00	0.04		400
	438	6.22	6.18	34.152	26.860	124.4	0.930	0.92	13.3	68.7	2.90	38.2	0.00	0.00	0.04		438
	500 ISL	5.84	5.80	34.224	26.965	115.0	1.004	0.53	7.6	78.2	3.07	40.0	0.00	0.00	0.04		500
2	510	5.78	5.74	34.236	26.982	113.4	1.016	0.47	6.7	79.7	3.10	40.3	0.00	0.00	0.04		510

A) FIRST FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 87 80			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE		
32 21.0 N	121 43.9 W	31/03/94	1808 UTC	4020 m	330	23 kn	320 10 05	1	102 2.2 mb	15.5 c	13.7 c	30m 01	1/8		CI		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/l	per	uM/l	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.68	15.68	33.377	24.572	335.5	0.000	5.75	101.5	2.5	0.31	0.2	0.00	0.09	0.03	0	
2	2 A	15.68	15.68	33.377	24.572	335.6	0.007	5.75	101.5	2.5	0.31	0.2	0.00	0.09	0.03	2	
	10 ISL	15.68	15.68	33.377	24.573	335.8	0.034	5.77	101.8	2.4	0.31	0.21	0.00	0.09	0.03	10	
2	11	15.68	15.68	33.377	24.573	335.8	0.037	5.77	101.8	2.4	0.31	0.2	0.00	0.09	0.03	11	
2	19 A	15.67	15.67	33.376	24.574	335.9	0.064	5.75	101.4	2.2	0.31	0.2	0.00	0.09	0.03	19	
	20 ISL	15.67	15.67	33.376	24.574	335.9	0.067	5.75	101.4	2.2	0.31	0.2	0.00	0.09	0.03	20	
	30 ISL	15.67	15.67	33.377	24.575	336.2	0.101	5.76	101.6	2.2	0.31	0.2	0.00	0.09	0.03	30	
2	39 A	15.67	15.66	33.377	24.576	336.4	0.131	5.76	101.6	2.2	0.31	0.2	0.00	0.09	0.03	39	
	50 ISL	15.61	15.60	33.374	24.587	335.6	0.168	5.76	101.5	2.1	0.31	0.2	0.00	0.10	0.03	50	
2	56 A	15.54	15.53	33.369	24.599	334.7	0.188	5.76	101.3	2.1	0.31	0.2	0.00	0.12	0.04	56	
2	67	15.26	15.25	33.347	24.644	330.7	0.225	5.77	100.9	2.2	0.31	0.2	0.00	0.17	0.06	67	
	7 i ISL	14.63	14.62	33.267	24.719	323.8	0.251	5.83	100.6	2.3	0.33	0.2	0.00	0.25	0.13	75	
2	77 A	14.47	14.46	33.257	24.745	321.3	0.257	5.85	100.6	2.3	0.34	0.2	0.00	0.28	0.16	77	
2	87	14.14	14.13	33.414	24.936	303.4	0.289	5.45	93.2	3.3	0.47	1.3	0.08	0.43	0.32	87	
2	98	13.66	13.65	33.416	25.037	294.0	0.321	5.32	90.1	4.1	0.55	2.9	0.09	0.38	0.29	98	
	100 ISL	13.56	13.55	33.433	25.070	290.9	0.327	5.25	88.7	4.4	0.59	3.5	0.08	0.37	0.28	100	
2	103 A	13.09	13.08	33.501	25.217	277.0	0.350	4.96	83.1	5.9	0.75	6.1	0.04	0.30	0.25	108	
2	119	12.22	12.20	33.509	25.393	260.4	0.380	4.69	77.1	8.1	0.94	9.1	0.03	0.20	0.20	120	
	125 ISL	11.70	11.68	33.516	25.496	250.7	0.395	4.60	74.8	9.2	1.02	10.5	0.02	0.16	0.16	126	
2	129	11.38	11.36	33.523	25.560	244.6	0.405	4.55	73.5	10.0	1.07	11.4	0.02	0.13	0.14	130	
2	140	10.79	10.77	33.552	25.689	232.5	0.431	4.36	69.5	12.1	1.21	13.4	0.01	0.07	0.09	141	
	150 ISL	10.17	10.15	33.571	25.811	220.9	0.454	4.24	66.7	14.7	1.35	16.1	0.01	0.05	0.07	151	
2	164	9.39	9.37	33.610	25.971	205.8	0.484	4.08	63.1	18.5	1.53	19.0	0.01	0.01	0.03	165	
2	194	8.72	8.70	33.777	26.208	183.7	0.542	3.62	55.2	25.2	1.77	23.0	0.01			195	
	200 ISL	8.63	8.61	33.807	26.245	180.2	0.553	3.56	54.2	26.3	1.80	23.5	0.01			201	
2	230	8.28	8.26	33.931	26.396	166.3	0.605	3.27	49.4	31.2	1.92	25.5	0.01			231	
	250 ISL	8.14	8.11	33.982	26.458	160.8	0.638	3.00	45.2	34.2	2.02	26.9	0.01			251	
2	268	8.01	7.98	34.011	26.500	157.1	0.666	2.75	41.3	37.0	2.11	28.2	0.01			269	
	300 ISL	7.56	7.53	34.037	26.586	149.2	0.715	2.43	36.2	43.1	2.26	30.4	0.01			302	
2	319	7.27	7.24	34.045	26.634	144.9	0.743	2.26	33.4	46.9	2.35	31.6	0.01			321	
2	379	6.67	6.64	34.085	26.747	154.6	0.827	1.62	23.6	58.0	2.63	35.1	0.01			381	
	400 ISL	6.47	6.43	34.090	26.778	131.8	0.855	1.45	21.0	61.3	2.70	36.1	0.01			402	
2	435	6.17	6.13	34.106	26.830	127.1	0.900	1.19	17.1	66.6	2.82	37.7	0.00			438	
	501 ISL	5.76	5.72	34.206	26.961	115.3	0.979	0.62	8.9	78.2	3.06	40.1	0.00			503	
2	512	5.68	5.64	34.224	26.985	113.3	0.993	0.52	7.4	80.4	3.11	40.5	0.00			515	

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 87 90															
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
32 0.1 N		122 23.2 W		01/04/94		0055 UTC		4075 m		320 24 kn		320 08 06		1		1022.2 mb		14.8 c		12.8 i:		22 m 01		7/8		sc			
CAST	DEP	HT	TEMP	POT	TEMP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS										
	m		DEG C	DEG C			THETA				ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db										
	0	ISL	15.16	15.16	33.264	24.600	332.9	0.000			5.86	102.3	2.6	0.33	0.2	0.00	0.11	0.02	0										
2	2		15.16	15.16	33.264	24.600	332.9	0.007			5.86	102.3	2.6	0.33	0.2	0.00	0.11	0.02	2										
	10	ISL	15.15	15.15	33.263	24.602	333.0	0.033			5.86	102.2	2.6	0.34	0.2	0.00	0.11	0.02	10										
2	16		15.15	15.15	33.263	24.602	333.2	0.053			5.86	102.2	2.6	0.34	0.2	0.00	0.11	0.02	16										
	20	ISL	15.14	15.14	33.262	24.603	333.1	0.067			5.86	102.2	2.6	0.34	0.2	0.00	0.11	0.02	20										
2	30		15.04	15.04	33.255	24.620	331.9	0.100			5.87	102.2	2.5	0.34	0.2	0.00	0.12	0.02	30										
2	44		14.68	14.67	33.231	24.679	326.6	0.146			5.91	102.1	2.5	0.34	0.2	0.00	0.24	0.07	44										
	50	ISL	14.02	14.01	33.216	24.807	314.6	0.165			5.90	100.6	2.8	0.38	0.3	0.01	0.52	0.23	50										
2	55		13.42	13.41	33.211	24.926	303.4	0.181			5.89	99.1	3.3	0.42	0.3	0.03	0.74	0.39	55										
2	65		12.68	12.67	33.226	25.084	288.5	0.210			5.28	87.5	5.7	0.71	5.1	0.08	0.76	0.63	65										
2	75		11.90	11.89	33.262	25.260	271.9	0.238			4.99	31.4	7.8	0.89	8.2	0.04	0.43	0.42	75										
2	84		11.32	11.31	33.293	25.391	259.5	0.262			4.77	76.8	9.8	1.05	10.8	0.02	0.27	0.38	84										
2	95		10.71	10.70	33.329	25.528	246.7	0.290			4.61	73.3	12.2	1.21	13.5	0.01	0.15	0.14	95										
	100	ISL	10.48	10.47	33.347	25.582	241.6	0.302			4.52	71.5	13.2	1.27	14.5	0.01	0.11	0.12	100										
2	109		10.09	10.08	33.392	25.684	231.1	0.324			4.33	67.9	15.2	1.39	16.3	0.01	0.06	0.07	110										
2	124		9.39	9.38	33.516	25.896	212.1	0.357			3.95	61.1	19.8	1.60	19.9	0.00	0.02	0.04	125										
	125	ISL	9.36	9.35	33.524	25.908	211.0	0.359			3.92	60.6	20.0	1.61	20.1	0.00	0.02	0.04	126										
2	145		8.99	8.97	33.662	26.075	195.4	0.400			3.48	53.4	24.4	1.80	23.1	0.00	0.00	0.03	146										
	150	ISL	8.88	8.86	33.695	26.118	191.4	0.409			3.41	52.2	25.5	1.84	23.7	0.00	0.00	0.03	151										
2	168		8.50	8.48	33.805	26.263	177.9	0.443			3.20	48.6	29.2	1.94	25.4	0.00	0.00	0.03	169										
2	199		8.19	8.17	33.961	26.433	162.3	0.495			2.82	42.6	34.9	2.08	27.5	0.00	0.00	0.02	200										
	200	ISL	8.18	8.16	33.963	26.436	162.0	0.497			2.82	42.5	35.1	2.08	27.5	0.00	0.00	0.02	201										
2	229		7.73	7.71	34.002	26.533	153.1	0.543			2.75	41.1	39.9	2.16	28.9	0.00	0.00	0.02	230										
	250	I S L	7.47	7.45	34.018	26.583	148.6	0.574			2.58	38.3	43.4	2.23	30.1	0.00			251										
2	268		7.25	7.22	34.027	26.621	145.1	0.601			2.39	35.3	46.7	2.31	31.3	0.00			270										
	300	I S L	6.79	6.76	34.047	26.701	137.9	0.646			1.97	28.8	54.2	2.49	33.7	0.00			302										
2	318		6.55	6.52	34.059	26.742	134.0	0.670			1.73	25.1	58.4	2.60	35.0	0.00			320										
2	378		6.14	6.11	34.101	26.829	126.4	0.749		1.19	17.1	67.8	2.83	37.7	0.00				380										
	400	ISL	6.00	5.97	34.115	26.853	123.8	0.776		1.04	14.9	71.1	2.90	38.5	0.00				403										
2	438		5.77	5.73	34.142	26.908	119.4	0.822		0.81	11.6	76.6	3.00	39.7	0.00				441										
	500	I S L	5.42	5.38	34.195	26.993	111.8	0.894		0.53	7.5	85.5	3.13	41.1	0.00				503										
2	513		5.35	5.31	34.206	27.010	110.3	0.908		0.47	6.6	87.4	3.16	41.4	0.00				516										

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE
31 39.6 N		123 3.9 W		01/04/94	0718 UTC	4157 m	340	20 kn			1023.0 mb	14.6 c	13.0 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.76	15.76	33.388	24.563	336.4	0.000	5.75	101.6	2.7	0.36	0.2	0.00	0.09	0.03		0	
2	3	15.76	15.76	33.388	24.563	336.5	0.010	5.75	101.6	2.7	0.36	0.2	0.00	0.09	0.03		3	
	10 ISL	15.76	15.76	33.388	24.563	336.7	0.034	5.75	101.6	2.6	0.34	0.2	0.00	0.09	0.02		10	
2	15	15.76	15.76	33.388	24.563	336.8	0.050	5.75	101.6	2.5	0.33	0.2	0.00	0.09	0.02		15	
	20 ISL	15.76	15.76	33.387	24.563	337.1	0.067	5.75	101.6	2.5	0.33	0.2	0.00	0.09	0.02		20	
2	30	15.75	15.75	33.386	24.564	337.2	0.101	5.74	101.4	2.4	0.33	0.2	0.00	0.09	0.02		30	
2	45	15.53	15.52	33.368	24.600	334.3	0.151	5.77	101.5	2.4	0.34	0.2	0.00	0.11	0.02		45	
	50 ISL	15.45	15.44	33.365	24.616	332.9	0.168	5.77	101.3	2.4	0.34	0.2	0.00	0.13	0.04		50	
2	55	15.38	15.37	33.364	24.630	331.7	0.185	5.77	101.2	2.4	0.34	0.2	0.00	0.16	0.05		55	
2	65	15.37	15.36	33.365	24.634	331.6	0.218	5.77	101.2	2.3	0.34	0.2	0.00	0.20	0.05		65	
2	75	14.89	14.88	33.290	24.681	327.4	0.251	5.82	101.0	2.3	0.35	0.2	0.00	0.30	0.13		75	
2	85	13.40	13.39	33.260	24.968	300.1	0.282	5.56	93.6	3.7	0.52	1.9	0.10	0.56	0.43		85	
2	94	12.72	12.71	33.285	25.122	285.6	0.309	5.18	86.0	5.8	0.74	5.6	0.04	0.39	0.37		94	
	100 ISL	12.44	12.43	33.305	25.192	279.1	0.325	5.07	83.6	6.5	0.80	6.7	0.04	0.32	0.35		100	
2	109	12.07	12.06	33.33	25.282	270.7	0.350	4.96	81.2	7.4	0.87	7.9	0.03	0.25	0.32		109	
2	122	11.26	11.24	33.342	25.441	255.7	0.384	4.69	75.5	10.2	1.10	11.4	0.02	0.19	0.20		123	
	125 ISL	11.09	11.07	33.347	25.476	252.5	0.392	4.64	74.4	10.8	1.14	12.1	0.02	0.17	0.18		126	
2	144	10.14	10.12	33.410	25.690	232.2	0.438	4.30	67.6	14.7	1.38	16.1	0.01	0.06	0.08		145	
	150 ISL	9.89	9.87	33.445	25.759	225.7	0.452	4.16	65.0	16.2	1.46	17.4	0.01	0.04	0.06		151	
2	169	9.19	9.17	33.570	25.972	205.8	0.493	3.75	57.7	21.2	1.70	21.2	0.00	0.01	0.03		173	
2	199	8.27	8.25	33.757	26.261	178.6	0.550	3.43	51.8	28.6	1.91	25.0	0.00	0.00	0.02		200	
	200 ISL	8.26	8.24	33.765	26.269	177.9	0.552	3.41	51.5	28.8	1.92	25.1	0.00	0.00	0.00		201	
2	227	8.13	8.11	33.946	26.430	163.0	0.598	2.85	42.9	34.4	2.08	27.5	0.00	0.00	0.00		228	
	250 ISL	7.79	7.77	33.993	26.518	154.9	0.635	2.63	39.3	38.4	2.14	28.3	0.00	0.00	0.00		251	
2	269	7.48	7.45	33.999	26.567	150.4	0.664			41.4	2.18	28.8	0.00	0.00	0.00		270	
	300 ISL	7.16	7.13	34.024	26.632	144.6	0.710	2.30	33.9	46.6	2.32	31.0	0.00	0.00	0.00		302	
2	318	7.00	6.97	34.036	26.664	141.8	0.735	2.23	32.8	49.7	2.42	32.4	0.00	0.00	0.00		320	
2	378	6.36	6.33	34.076	26.781	131.1	0.817	1.48	21.4	62.0	2.73	36.3	0.00	0.00	0.00		380	
	400 ISL	6.17	6.13	34.096	26.821	127.4	0.846	1.27	18.3	66.2	2.83	37.5	0.00	0.00	0.00		402	
2	438	5.88	5.84	34.135	26.889	121.3	0.893	0.98	14.0	73.0	2.97	39.2	0.00	0.00	0.00		441	
	500 ISL	5.56	5.52	34.199	26.979	113.3	0.966	0.66	9.4	81.6	3.11	40.7	0.00	0.00	0.00		503	
2	514	5.49	5.45	34.213	26.999	111.5	0.981	0.59	8.4	83.6	3.14	41.0	0.00	0.00	0.00		517	

RV DAVID STARR JORDAN

CALCOFI CRUISE 9403

STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
31 19.4 N	123 44.4 W	01/04/94	1308 UTC	3869 m	330	13 kn			1022.8 mb	14.8 c	13.2 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	15.74	15.74	33.410	24.584	334.4	0.000	5.75	101.6	2.4	0.30	0.1	0.00	0.08	0.02	0
2	2	15.74	15.74	33.410	24.584	334.4	0.007	5.75	101.6	2.4	0.30	0.1	0.00	0.08	0.02	2
	10 ISL	15.72	15.72	33.404	24.584	334.7	0.033	5.75	101.6	2.3	0.30	0.1	0.00	0.08	0.02	10
2	17	15.70	15.70	33.399	24.585	334.8	0.057	5.76	101.7	2.3	0.30	0.1	0.00	0.08	0.02	17
	20 ISL	15.65	15.65	33.389	24.589	334.6	0.067	5.76	101.6	2.3	0.30	0.1	0.00	0.08	0.02	20
2	29	15.45	15.45	33.346	24.600	333.7	0.097	5.78	101.5	2.4	0.31	0.1	0.00	0.09	0.03	29
	30 ISL	15.41	15.41	33.338	24.603	333.5	0.100	5.78	101.4	2.4	0.31	0.1	0.00	0.09	0.03	30
2	45	14.97	14.96	33.243	24.626	331.7	0.150	5.83	101.3	2.4	0.32	0.1	0.00	0.13	0.04	45
	50 ISL	14.96	14.95	33.244	24.629	331.6	0.167	5.83	101.3	2.4	0.32	0.1	0.00	0.15	0.04	50
2	55	14.95	14.94	33.244	24.632	331.5	0.183	5.82	101.1	2.4	0.32	0.1	0.00	0.17	0.05	55
2	65	14.90	14.89	33.240	24.640	331.0	0.217	5.82	101.0	2.4	0.32	0.1	0.00	0.22	0.08	65
2	75	14.80	14.79	33.235	24.658	329.6	0.250	5.83	101.0	2.4	0.33	0.1	0.00	0.28	0.14	75
2	84	14.37	14.36	33.254	24.764	319.7	0.279	5.79	99.4	2.5	0.35	0.1	0.02	0.48	0.31	84
2	94	13.56	13.55	33.291	24.960	301.2	0.310	5.58	94.2	3.4	0.46	1.5	0.10	0.41	0.34	94
	100 ISL	13.68	13.67	33.394	25.016	296.1	0.328	5.47	92.7	3.6	0.48	2.1	0.09	0.36	0.32	100
2	111	14.00	13.98	33.615	25.121	286.5	0.360	5.27	90.0	4.1	0.50	3.2	0.04	0.26	0.24	111
2	124	13.20	13.18	33.773	25.406	259.5	0.395	5.03	84.6	5.5	0.61	5.5	0.02	0.12	0.10	125
	125 ISL	13.09	13.07	33.765	25.422	258.0	0.398	5.01	84.0	5.7	0.63	5.8	0.02	0.11	0.10	126
2	145	10.76	10.74	33.541	25.685	232.9	0.447	4.71	75.1	10.9	1.07	12.1	0.01	0.03	0.04	146
	150 ISL	10.33	10.31	33.529	25.751	226.7	0.458	4.62	72.9	12.4	1.17	13.6	0.01	0.03	0.03	151
2	169	9.19	9.17	33.569	25.971	205.9	0.500	4.32	66.5	17.7	1.45	18.1	0.00	0.01	0.02	170
2	200	8.77	8.75	33.780	26.203	184.3	0.560	4.26	65.1	21.6	1.52	19.8	0.00	0.00	0.01	201
2	227	8.13	8.11	33.919	26.409	165.0	0.607	3.88	58.5	28.9	1.73	23.3	0.00	0.00	0.00	228
	250 ISL	7.80	7.78	33.967	26.496	157.0	0.644	3.43	51.3	34.0	1.91	26.0	0.00	0.00	0.00	251
2	267	7.61	7.58	33.979	26.533	153.7	0.671	3.10	46.2	37.5	2.03	27.7	0.00	0.00	0.00	268
	300 ISL	7.13	7.10	34.002	26.619	145.8	0.720	2.66	39.2	44.5	2.22	30.4	0.00	0.00	0.00	302
2	317	6.89	6.86	34.008	26.657	142.4	0.745	2.48	36.3	48.0	2.31	31.6	0.00	0.00	0.00	319
	376	6.24	6.21	34.029	26.759	133.0	0.826	1.85	26.7	59.7	2.59	35.3	0.00	0.00	0.00	378
	400 ISL	6.04	6.01	34.053	26.804	129.0	0.857	1.53	22.0	64.7	2.72	36.8	0.00	0.00	0.00	402
2	438	5.77	5.73	34.101	26.876	122.4	0.905	1.05	15.0	72.3	2.90	39.0	0.00	0.00	0.00	441
	500 ISL	5.49	5.45	34.190	26.981	113.1	0.978	0.58	8.2	82.2	3.09	40.9	0.00	0.00	0.00	503
2	517	5.41	5.37	34.215	27.010	110.4	0.997	0.45	6.4	84.9	3.14	41.4	0.00	0.00	0.00	520

RV DAVID STARR JORDA*					CALCOFI CRUISE 9403										STATION 90 28				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED		WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD AMT	TYPE		
33 28.9 N		117 45.9 W		29/03/94	1125 UTC	61 m	2 60 02 kn				1021.6 mb	15.5 c	12.9 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml / l	PCT	uM / L	uM / L	uM / L	uM / L	ug / L	ug / L	db			
	0 ISL	15.56	15.56	33.180	24.447	347.4	0.000	6.01	105.7	1.9	0.33	0.3	0.00	0.65	0.16	0			
2	2	15.56	15.56	33.180	24.447	347.5	0.007	6.01	105.7	1.9	0.33	0.3	0.00	0.65	0.16	2			
2	6	15.18	15.18	33.220	24.562	336.7	0.021	6.00	104.7	1.8	0.31	0.3	0.00	0.48	0.12	6			
2	10	14.61	14.61	33.220	24.685	325.1	0.034	5.95	102.7	2.5	0.38	0.5	0.02	0.80	0.23	10			
2	20	12.70	12.70	33.279	25.120	283.9	0.064	5.09	84.4	7.3	0.84	6.4	0.27	0.92	0.46	20			
2	30	11.22	11.22	33.406	25.496	248.3	0.091	4.39	70.6	12.3	1.21	12.9	0.18	0.40	0.28	30			
2	40	10.86	10.86	33.509	25.641	234.8	0.115	3.98	63.6	14.9	1.38	15.9	0.06	0.23	0.20	40			
2	50	10.38	10.37	33.567	25.770	222.7	0.138	3.72	58.8	17.2	1.52	18.0	0.04	0.15	0.15	50			

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90		30											
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WINDSPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
33 25.3 N		117 54.0 W		29/03/94		0851 UTC		61 3 m		3 40 03 kn						1021.7 mb		14.8 c		13.5 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S 10 31	P04	N03	N02	CHL-A	PHAE0	PRESS											
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db											
	0 ISL	15.24	15.24	33.224	24.552	337.5	0.000	5.92	103.4	1.4	0.33	0.1	0.00	0.23	0.06	0											
2	2	15.24	15.24	33.224	24.552	337.5	0.007	5.92	103.4	1.4	0.33	0.1	0.00	0.23	0.06	2											
	10 ISL	15.23	15.23	33.224	24.554	337.5	0.034	5.94	103.8	1.4	0.32	0.1	0.00	0.23	0.06	10											
2	11	15.23	15.23	33.224	24.554	337.6	0.037	5.94	103.8	1.4	0.32	0.1	0.00	0.23	0.06	11											
2	23	14.80	14.80	33.228	24.651	328.6	0.067	5.97	103.4	1.6	0.33	0.1	0.00	0.30	0.09	20											
2	33	13.32	13.32	33.254	24.978	297.7	0.098	6.02	101.2	3.5	0.40	0.2	0.03	0.76	0.30	30											
2	43	12.29	12.28	33.279	25.199	276.8	0.127	5.21	85.7	6.8	0.77	6.1	0.27	0.88	0.54	40											
2	53	11.38	11.37	33.370	25.440	254.2	0.154	4.58	73.9	11.1	1.11	11.7	0.08	0.47	0.29	50											
2	63	11.08	11.07	33.425	25.537	245.1	0.179	4.37	70.1	12.7	1.23	13.4	0.05	0.37	0.29	60											
2	70	10.86	10.35	33.532	25.659	233.7	0.203	3.89	62.1	15.2	1.42	16.2	0.03	0.22	0.19	70											
2	75 ISL	10.68	10.67	33.549	25.704	229.5	0.214	3.81	60.6	16.1	1.47	17.0	0.03	0.16	0.15	75											
2	85	10.28	10.27	33.569	25.789	221.6	0.237	3.75	59.2	17.8	1.54	18.3	0.02	0.08	0.09	85											
2	100	9.70	9.69	33.669	25.965	205.1	0.269	3.47	54.1	21.5	1.71	21.0	0.01	0.02	0.06	100											
2	120	9.39	9.38	33.860	26.165	186.5	0.308	2.92	45.3	26.5	1.91	24.0	0.01	0.01	0.05	121											
2	125 ISL	9.32	9.31	33.894	26.203	183.0	0.317	2.33	43.8	26.4	1.95	24.5	0.01	0.01	0.05	126											
2	138	9.14	9.13	33.964	26.287	175.2	0.340	2.64	40.7	29.7	2.03	25.6	0.01	0.00	0.04	139											
2	150 ISL	8.96	8.94	34.013	26.354	169.1	0.361	2.48	38.1	32.0	2.11	26.7	0.01	0.00	0.06	151											
2	168	8.72	8.70	34.065	26.433	161.9	0.391	2.28	34.8	35.2	2.20	28.0	0.01	0.01	0.10	169											
2	198	8.54	8.52	34.107	26.494	156.6	0.439	2.04	31.1	38.4	2.29	29.1	0.01	0.01	0.10	199											
2	200 ISL	8.53	8.51	34.109	26.498	156.3	0.442	2.03	30.9	38.6	2.30	29.2	0.01	0.01	0.10	201											
2	229	8.37	8.35	34.133	26.541	152.7	0.487	1.87	28.4	41.2	2.37	30.0	0.00	0.00	0.10	230											
2	250 ISL	8.25	8.22	34.153	26.575	149.8	0.518	1.73	26.2	43.2	2.43	30.7	0.00	0.00	0.10	251											
2	268	8.13	8.10	34.171	26.608	147.0	0.545	1.59	24.0	45.2	2.48	31.3	0.00	0.00	0.10	270											
2	300 ISL	7.83	7.80	34.198	26.674	141.1	0.591	1.31	19.6	49.8	2.61	32.8	0.00	0.00	0.10	302											
2	318	7.66	7.63	34.212	26.710	137.9	0.616	1.15	17.2	52.5	2.68	33.6	0.00	0.00	0.10	320											
2	373	7.22	7.18	34.254	26.806	129.5	0.697	0.75	11.1	60.5	2.88	35.7	0.00	0.00	0.10	380											
2	400 ISL	7.03	6.99	34.264	26.840	126.5	0.725	0.65	9.6	63.4	2.93	36.4	0.00	0.00	0.10	403											
2	4438	6.71	6.67	34.280	26.897	121.5	0.772	0.51	7.4	68.4	3.01	37.5	0.00	0.00	0.10	441											
2	500 ISL	6.24	6.20	34.305	26.979	114.2	0.845	0.36	5.2	76.3	3.13	38.9	0.00	0.00	0.10	503											
2	515	6.13	6.08	34.312	26.999	112.4	0.862	0.32	4.6	78.2	3.16	39.3	0.00	0.00	0.10	519											

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90		35	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED		WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
33 15.1 N		118 14.3 W		29/03/94	0455 UTC	331 m	12 00 5 kn				1021.9 h b	14.5 c	13.2 c				
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	OY NHT	OXYGEN ra I / I	OXY PCT	S103 uM / L	P04 uM / L	N03 uM / I	N02 uM/L	CHL--A ug / L	PHAE0 ug/L	PRESS db	
	0 ISL	14.85	14.85	33.258	24.662	326.9	0.000	6.10	105.8	1.3	0.31	0.2	0.00	0.52	0.19	0	
2	1	14.85		33.258	24.662	326.9	0.003	6.10	105.8	1.3	0.31	0.2	0.00	0.52	0.19	1	
2	10	14.83	14.83	33.255	24.665	327.0	0.033	6.12	106.1	1.1	0.31	0.2	0.00	0.53	0.19	10	
2	20	14.52	14.52	33.246	24.724	321.6	0.065	6.12	105.4	1.3	0.32	0.2	0.01	0.76	0.28	20	
2	30	14.27	14.27	33.261	24.789	315.8	0.097	5.99	102.6	1.7	0.37	0.6	0.03	1.35	0.47	30	
2	40	12.89	12.88	33.301	25.100	286.3	0.127	5.27	87.8	5.5	0.70	5.2	0.22	1.01	0.54	40	
2	50	11.77	11.76	33.317	25.327	264.9	0.155	4.80	78.1	9.0	0.99	9.8	0.19	0.43	0.37	50	
2	60	11.45	11.44	33.378	25.433	255.0	0.181	4.51	72.9	11.0	1.13	11.8	0.14	0.36	0.27	60	
2	69	10.99	10.98	33.461	25.581	241.1	0.203	4.14	66.3	13.9	1.32	14.8	0.18	0.32	0.25	69	
2	75 ISL	10.63	10.62	33.519	25.690	230.9	0.217	3.92	62.3	16.1	1.44	16.7	0.15	0.24	0.21	75	
2	84	10.11	10.10	33.604	25.845	216.2	0.237	3.64	57.2	19.3	1.60	19.3	0.07	0.12	0.14	84	
2	99	9.46	9.45	33.717	26.042	197.8	0.268	3.41	52.9	23.2	1.76	22.0	0.02	0.04	0.08	99	
2	100 ISL	9.45	9.44	33.726	26.051	197.0	0.270	3.39	52.6	23.4	1.77	22.1	0.02	0.04	0.08	100	
2	124	9.32	9.31	33.871	26.185	184.6	0.316	2.88	44.6	26.8	1.93	24.3	0.01	0.03	0.07	125	
2	125 ISL	9.31	9.30	33.877	26.192	184.1	0.318	2.86	44.2	27.0	1.94	24.4	0.01	0.03	0.07	126	
2	149	8.98	8.96	33.997	26.339	170.5	0.360	2.52	38.7	31.5	2.07	26.5	0.01	0.02	0.08	150	
2	150 ISL	8.97	8.95	34.000	26.343	170.2	0.362	2.51	38.6	31.6	2.07	26.6	0.01	0.02	0.08	151	
2	168	8.86	8.84	34.034	26.387	166.3	0.392	2.39	36.6	33.3	2.13	27.3	0.01	0.01	0.05	169	
2	198	8.64	8.62	34.094	26.469	159.1	0.441	2.11	32.2	37.0	2.24	28.5	0.01	0.01	0.05	199	
2	200 ISL	8.62	8.60	34.098	26.475	158.5	0.444	2.09	31.9	37.3	2.25	28.6	0.01	0.01	0.05	201	
2	230	8.33	8.31	34.144	26.556	151.3	0.491	1.82	27.6	41.9	2.39	30.2	0.01	0.01	0.05	231	
2	250 ISL	8.17	8.14	34.160	26.593	148.1	0.521	1.67	25.2	44.2	2.45	31.0	0.01	0.01	0.05	251	
2	270	8.01	7.98	34.173	26.627	145.1	0.550	1.52	22.9	46.7	2.52	31.8	0.01	0.01	0.05	272	
2	300 ISL	7.66	7.63	34.207	26.705	138.0	0.593	1.18	17.6	52.5	2.68	33.5	0.01	0.01	0.05	302	
2	318	7.45	7.42	34.228	26.752	133.8	0.617	0.97	14.4	55.9	2.77	34.5	0.01	0.01	0.05	320	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90 37													
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT TYPE	
33 11.3 N		118 21.6 W		29/03/94		0219 UTC		1161 ra		290		19 kn		280 01 03		1		1021.4 mb		14.2 c		13.0 c				4/8 SC	
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN	HT	OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS					
	m	DEG C		DEG C				THETA					mL/L		PCT	uM/t	uM/L	uM/L	uM/L	ug/L	ug/L	db					
	0	ISL	14.95	14.95	33.262	24.644	328.7	0.000	5.94	103.2	2.0	0.36	0.3	0.00	0.19	0.05	0										
2	1		14.95	14.95	33.262	24.644	328.7	0.003	5.94	103.2	2.0	0.36	0.3	0.00	0.19	0.05	1										
	10	ISL	14.90	14.90	33.260	24.653	328.1	0.033	5.97	103.6	2.0	0.36	0.3	0.00	0.19	0.06	10										
2	11		14.89	14.89	33.260	24.656	327.9	0.036	5.97	103.6	2.0	0.36	0.3	0.00	0.19	0.06	11										
2	20		14.62	14.62	33.255	24.710	323.0	0.065	5.98	103.2	1.9	0.35	0.2	0.00	0.22	0.07	20										
2	29		14.53	14.53	33.261	24.734	321.0	0.094	5.96	102.7	2.2	0.35	0.2	0.00	0.42	0.18	29										
	30	ISL	14.50	14.50	33.262	24.741	320.3	0.098	5.95	102.4	2.2	0.36	0.2	0.00	0.50	0.21	30										
2	39		14.22	14.21	33.274	24.810	314.0	0.126	5.89	100.8	2.5	0.41	0.6	0.03	1.10	0.45	39										
2	49		12.70	12.69	33.302	25.138	282.9	0.156	5.20	86.3	6.0	0.74	5.6	0.23	0.62	0.38	49										
	50	ISL	12.58	12.57	33.312	25.169	279.9	0.159	5.13	84.9	6.4	0.78	6.2	0.22	0.58	0.37	50										
2	59		11.67	11.66	33.404	25.413	256.9	0.183	4.61	74.9	9.7	1.05	10.7	0.09	0.33	0.31	59										
2	70		11.03	11.02	33.437	25.555	243.6	0.210	4.43	71.0	12.2	1.20	13.1	0.04	0.21	0.25	70										
	75	ISL	10.92	10.91	33.480	25.608	238.7	0.223	4.22	67.5	13.4	1.29	14.4	0.03	0.16	0.20	75										
2	84		10.77	10.76	33.565	25.701	230.0	0.244	3.83	61.1	15.5	1.45	16.8	0.02	0.09	0.13	84										
2	99		10.11	10.10	33.655	25.885	212.7	0.277	3.57	56.1	19.2	1.63	19.6	0.01	0.03	0.14	99										
	100	ISL	10.08	10.07	33.659	25.894	212.0	0.279	3.56	55.9	19.4	1.64	19.7	0.01	0.03	0.14	100										
2	119		9.59	9.58	33.733	26.033	199.0	0.318	3.36	52.3	22.4	1.75	21.8	0.01	0.01	0.06	119										
	125	ISL	9.47	9.46	33.762	26.076	195.1	0.330	3.29	51.0	23.4	1.79	22.4	0.01	0.01	0.06	125										
2	139		9.23	9.21	33.833	26.170	186.3	0.357	3.10	47.9	25.7	1.87	23.8	0.01	0.01	0.06	139										
	150	ISL	9.07	9.05	33.888	26.239	180.0	0.377	2.93	45.1	27.9	1.94	24.8	0.01	0.01	0.06	150										
2	168		8.86	8.84	33.965	26.333	171.4	0.408	2.68	41.1	31.2	2.04	26.2	0.00	0.01	0.05	168										
2	199		8.68	8.66	34.034	26.416	164.1	0.460	2.40	36.6	34.8	2.16	27.7	0.00	0.00	0.04	199										
	200	ISL	8.67	8.65	34.037	26.419	163.8	0.462	2.39	36.5	34.9	2.16	27.7	0.00	0.00		200										
2	228		8.51	8.49	34.102	26.495	157.1	0.507	2.15	32.7	37.7	2.26	28.8	0.00			228										
	250	ISL	8.31	8.28	34.132	26.550	152.2	0.541	1.89	28.6	41.1	2.37	30.1	0.00	0.00		250										
2	268		8.14	8.11	34.150	26.590	148.7	0.568	1.67	25.2	44.2	2.46	31.2	0.00	0.00		268										
	300	ISL	7.87	7.84	34.183	26.656	142.8	0.615	1.38	20.7	48.6	2.59	32.5	0.00	0.00		300										
2	318		7.72	7.69	34.200	26.692	139.7	0.640	1.23	18.4	51.1	2.65	33.2	0.00	0.00		318										
	376		7.12	7.08	34.245	26.813	128.8	0.718	0.77	11.4	60.9	2.87	35.8	0.00	0.00		376										
2	400	ISL	6.93	6.89	34.262	26.852	125.3	0.748	0.64	9.4	64.3	2.94	36.6	0.00	0.00		400										
	435		6.67	6.63	34.284	26.905	120.6	0.791	0.49	7.2	68.9	3.03	37.6	0.00	0.00		435										
	500	ISL	6.21	6.17	34.308	26.985	113.5	0.868	0.35	5.1	77.1	3.12	38.9	0.00	0.00		500										
	511		6.13	6.08	34.313	26.999	112.3	0.880	0.33	4.8	78.5	3.14	39.1	0.00	0.00		511										

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RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90 45															
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND		SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
32 55.5 N		118 55.4 W		28/03/94		2143 UTC		1699 m		320		06 fen		300 01 07		2		1023.1 mb		12.8 c		12.0 c				8/8		SC	
CAST	DEPTH	TEMP		POT	TEMP	SALINITY		SIGMA		SVA	DYN HT		OXYGEN		OXY	5103		P04	N03	N02	CHL-A	PHAE0	PRESS						
	m	DEG C		DEG C				THETA					mL/I		PCT	uM/L		uM/L	uM/t	uM/L	ug/L	ug/L	db						
	0 ISL	14.29	14.29	14.29	33.265	24.787	315.1	0.000	6.15	105.4	0.7	0.30	0.3	0.01	0.71	0.21	0												
2	2	14.29	14.29	14.29	33.265	24.787	315.1	0.006	6.15	105.4	0.7	0.30	0.3	0.01	0.71	0.21	2												
	10 ISL	14.16	14.16	14.16	33.264	24.813	312.8	0.031	6.16	105.3	0.6	0.30	0.3	0.01	0.78	0.24	10												
2	15	14.04	14.04	14.04	33.265	24.839	310.5	0.047	6.17	105.2	0.6	0.31	0.3	0.01	0.83	0.26	15												
	20 ISL	13.94	13.94	13.94	33.269	24.863	308.4	0.062	6.16	104.9	0.6	0.31	0.3	0.01	1.34	0.52	20												
2	30	13.77	13.77	13.77	33.279	24.906	304.5	0.093	6.13	104.0	0.7	0.33	0.2	0.01	2.28	1.08	30												
2	45	13.60	13.59	13.59	33.286	24.947	301.1	0.139	5.98	101.1	1.0	0.40	0.5	0.03	1.83	1.24	45												
	50 ISL	13.57	13.56	13.56	33.293	24.958	300.1	0.154	6.07	102.5	0.6	0.36	0.4	0.02	2.55	1.57	50												
2	55	13.54	13.53	13.53	33.299	24.969	299.2	0.169	6.15	103.8	0.4	0.33	0.3	0.01	3.20	1.85	55												
2	65	13.44	13.43	13.43	33.303	24.993	297.2	0.198	5.96	100.4	1.4	0.43	0.9	0.04	2.71	1.66	65												
2	75	13.06	13.05	13.05	33.293	25.061	290.9	0.228	5.52	92.3	3.8	0.62	3.4	0.13	1.53	1.68	75												
2	85	11.98	11.97	11.97	33.311	25.284	269.9	0.256	4.90	80.1	7.9	0.92	3.6	0.16	0.31	0.47	85												
2	95	11.62	11.61	11.61	33.342	25.375	261.4	0.282	4.68	75.9	9.8	1.05	10.7	0.15	0.20	0.40	95												
	100 ISL	11.30	11.29	11.29	33.389	25.470	252.4	0.295	4.45	71.7	11.7	1.17	12.6	0.11	0.18	0.36	100												
2	110	10.67	10.66	10.66	33.490	25.661	234.4	0.320	3.99	63.5	15.6	1.39	16.2	0.04	0.15	0.28	110												
2	125	10.20	10.19	10.19	33.554	25.792	222.2	0.354	3.77	59.4	17.9	1.52	18.4	0.03	0.09	0.26	125												
2	145	9.35	9.33	9.33	33.640	26.000	202.6	0.396	3.70	57.2	21.6	1.67	20.9	0.01	0.03	0.11	145												
	150 ISL	9.17	9.15	9.15	33.689	26.068	196.3	0.406	3.57	55.0	23.3	1.73	21.9	0.01	0.02	0.09	150												
2	168	8.68	8.66	8.66	33.872	26.288	175.6	0.440	2.99	45.6	29.9	1.97	25.4	0.01	0.01	0.06	168												
2	199	8.42	8.40	8.40	34.017	26.442	161.5	0.492	2.37	36.0	36.4	2.18	28.2	0.01	0.01	0.06	199												
	200 ISL	8.41	8.39	8.39	34.020	26.446	161.1	0.494	2.36	35.8	36.6	2.19	28.3	0.01	0.01		200												
2	229	8.25	8.23	8.23	34.082	26.519	154.7	0.539	2.01	30.4	40.7	2.32	29.8	0.01			229												
	250 ISL	8.13	8.10	8.10	34.125	26.571	150.1	0.571	1.79	27.0	43.5	2.41	30.7	0.01			250												
2	269	8.01	7.98	7.98	34.158	26.615	146.2	0.600	1.61	24.2	45.8	2.49	31.5	0.01			269												
	300 ISL	7.81	7.78	7.78	34.185	26.666	141.8	0.644	1.39	20.8	49.1	2.59	32.6	0.01			300												
2	318	7.69	7.66	7.66	34.194	26.691	139.7	0.670	1.27	19.0	51.0	2.64	33.2	0.01			318												
	378 ISL	7.24	7.20	7.20	34.235	26.788	131.2	0.751	0.86	12.7	59.0	2.83	35.3	0.00			378												
2	400	7.06	7.02	7.02	34.249	26.824	128.0	0.779	0.75	11.0	62.2	2.89	36.1	0.00			400												
	437 ISL	6.76	6.72	6.72	34.271	26.883	122.8	0.826	0.60	8.8	67.3	2.97	37.2	0.00			437												
	500 ISL	6.39	6.34	6.34	34.293	26.950	117.0	0.901	0.44	6.4	73.1	3.08	38.6	0.00			500												
2	511	6.32	6.27	6.27	34.297	26.962	116.0	0.914	0.41	5.9	74.1	3.10	38.8	0.00			511												

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										TATION 90 53			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL.	CLD	AMT	TYPE			
32 39.3 N	119 28.6 W	28/03/94	1102 UTC	1317 m	310 11 kn			1022.1 mb	13.5 c	12.9 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	14.38	14.38	33.242	24.750	318.6	0.000	5.92	101.7	2.2	0.36	0.1	0.00	0.28	0.11	0	
2	1	14.38	14.38	33.242	24.750	318.6	0.003	5.92	101.7	2.2	0.36	0.1	0.00	0.28	0.11	1	
	10 ISL	14.38	14.38	33.242	24.750	318.8	0.032	5.92	101.7	2.1	0.35	0.1	0.00	0.29	0.11	10	
2	15	14.38	14.38	33.242	24.751	319.0	0.048	5.92	101.7	2.1	0.35	0.1	0.00	0.29	0.11	15	
	20 ISL	14.38	14.38	33.242	24.751	319.1	0.064	5.92	101.7	2.1	0.35	0.1	0.00	0.30	0.11	20	
2	30	14.36	14.36	33.241	24.755	319.0	0.096	5.93	101.8	2.0	0.36	0.1	0.00	0.34	0.13	30	
2	45	14.32	14.31	33.240	24.762	318.7	0.143	5.91	101.4	1.9	0.35	0.1	0.00	0.45	0.18	45	
	50 ISL	14.31	14.30	33.240	24.765	318.6	0.159	5.91	101.3	1.9	0.35	0.1	0.00	0.45	0.19	50	
2	61	14.28	14.27	33.240	24.771	318.3	0.194	5.91	101.3	2.0	0.35	0.1	0.01	0.45	0.21	61	
2	74	14.07	14.06	33.238	24.814	314.6	0.236	5.86	100.0	2.1	0.38	0.2	0.04	0.45	0.24	74	
	75 ISL	13.94	13.93	33.239	24.842	312.0	0.239	5.811	98.9	2.4	0.41	0.6	0.05	0.43	0.25	75	
2	34	12.59	12.58	33.267	25.134	284.3	0.266	5.23	86.5	5.8	0.72	5.4	0.11	0.27	0.27	84	
2	94	11.52	11.51	33.347	25.397	259.3	0.293	4.72	76.4	10.1	1.04	10.7	0.05	0.17	0.19	94	
	100 ISL	11.04	11.03	33.394	25.521	247.6	0.308	4.53	72.6	11.8	1.17	12.9	0.03	0.12	0.15	100	
2	104	10.80	10.79	33.418	25.582	241.8	0.318	4.44	70.8	12.6	1.23	13.9	0.02	0.09	0.13	104	
2	114	10.54	10.53	33.429	25.636	236.8	0.342	4.37	69.3	13.4	1.30	14.9	0.02	0.09	0.15	115	
	125 ISL	10.02	10.01	33.454	25.744	226.7	0.367	4.20	65.8	15.6	1.43	16.9	0.01	0.05	0.10	126	
2	126	9.97	9.96	33.458	25.756	225.6	0.369	4.18	65.4	15.9	1.44	17.1	0.01	0.05	0.09	127	
2	138	9.40	9.38	33.562	25.931	209.1	0.395	3.85	59.6	19.5	1.61	20.0	0.01	0.02	0.06	139	
	150 ISL	9.10	9.08	33.656	26.053	197.7	0.420	3.63	55.8	22.2	1.71	21.7	0.01	0.02	0.05	151	
2	164	8.91	8.89	33.754	26.160	187.7	0.447	3.41	52.2	25.1	1.80	23.1	0.01	0.01	0.04	165	
2	194	8.57	8.55	33.927	26.349	170.3	0.501	2.78	42.3	32.5	2.03	26.4	0.01	0.00	0.04	195	
	200 ISL	8.52	8.50	33.949	26.374	168.0	0.511	2.70	41.0	33.5	2.06	26.8	0.01			201	
2	228	8.25	8.23	34.022	26.472	159.1	0.557	2.41	36.4	37.7	2.19	28.5	0.00			229	
	250 ISL	7.93	7.90	34.054	26.545	152.4	0.591	2.24	33.6	41.6	2.28	29.9	0.00			251	
2	267	7.69	7.66	34.075	26.597	147.7	0.616	2.10	31.3	44.6	2.35	31.0	0.00			269	
	300 ISL	7.48	7.45	34.135	26.675	140.8	0.664	1.62	24.1	50.2	2.53	32.8	0.00			302	
2	318	7.40	7.37	34.165	26.710	137.8	0.689	1.36	20.2	53.1	2.63	33.7	0.00			320	
2	379	6.92	6.88	34.204	26.808	129.1	0.770	0.94	13.8	61.7	2.83	36.1	0.00			381	
	400 ISL	6.74	6.70	34.216	26.842	126.1	0.797	0.82	12.0	64.8	2.89	36.9	0.00			403	
2	437	6.44	6.40	34.237	26.898	121.0	0.843	0.64	9.3	70.1	2.99	38.1	0.00			440	
	500 ISL	6.05	6.01	34.282	26.985	113.4	0.917	0.43	6.2	77.8	3.11	39.5	0.00			503	
	512	5.98	5.94	34.291	27.001	111.9	0.930	0.39	5.6	79.3	3.13	39.8	0.00			515	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90 60			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL.	CLD	AMT	TYPE			
32 25.4 N	119 57.6 W	28/03/94	0550 UTC	864 m	320 12 kn			1021.8 mb	13.8 c	12.2 c							
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.21	15.21	33.312	24.626	330.4	0.000	5.80	101.3	2.7	0.32	0.1	0.00	0.12	0.03	0	
2	1	15.21	15.21	33.312	24.626	330.4	0.003	5.80	101.3	2.7	0.32	0.1	0.00	0.12	0.03	1	
	10 ISL	15.20	15.20	33.311	24.628	330.5	0.033	5.81	101.5	2.7	0.33	0.1	0.00	0.12	0.03	10	
2	15	15.20	15.20	33.310	24.627	330.8	0.050	5.82	101.7	2.7	0.33	0.1	0.00	0.12	0.03	15	
	20 ISL	15.19	15.19	33.308	24.628	330.8	0.066	5.82	101.6	2.6	0.33	0.1	0.00	0.12	0.03	20	
2	30	15.15	15.15	33.299	24.630	330.9	0.099	5.82	101.6	2.5	0.32	0.1	0.00	0.12	0.03	30	
2	45	14.97	14.96	33.263	24.642	330.2	0.149	5.84	101.5	2.5	0.33	0.1	0.00	0.14	0.04	45	
	50 ISL	14.94	14.93	33.257	24.644	330.2	0.165	5.84	101.4	2.5	0.33	0.1	0.00	0.16	0.05	50	
2	59	14.88	14.87	33.250	24.652	329.7	0.195	5.85	101.5	2.6	0.33	0.1	0.00	0.20	0.07	59	
2	75	14.66	14.65	33.243	24.694	326.1	0.247	5.88	101.5	2.4	0.33	0.2	0.00	0.30	0.13	75	
2	84	13.94	13.93	33.211	24.820	314.3	0.276	5.86	99.7	2.7	0.40	0.3	0.05	0.76	0.44	84	
2	94	13.76	13.75	33.238	24.879	309.0	0.307	5.74	97.3	3.1	0.45	1.0	0.11	0.56	0.39	94	
	100 ISL	13.65	13.64	33.228	24.893	307.7	0.326	5.70	96.4	3.3	0.46	1.4	0.12	0.54	0.39	100	
2	104	13.58	13.57	33.241	24.918	305.5	0.358	5.65	95.4	3.4	0.49	1.6	0.13	0.52	0.39	104	
2	114	12.65	12.63	33.278	25.131	285.3	0.368	5.25	87.0	5.4	0.70	5.1	0.09	0.32	0.29	114	
2	125	12.10	12.08	33.324	25.272	272.0	0.398	4.97	81.4	7.2	0.86	7.9	0.04	0.22	0.22	126	
2	139	11.22	11.20	33.546	25.607	240.3	0.434	4.07	65.5	12.8	1.30	14.6	0.02	0.11	0.15	140	
	150 ISL	10.68	10.66	33.594	25.741	227.7	0.460	4.01	63.8	14.9	1.37	16.7	0.01	0.07	0.10	151	
2	164	10.11	10.09	33.597	25.842	218.3	0.491	3.94	61.9	16.7	1.47	17.9	0.01	0.04	0.06	165	
2	193	9.09	9.07	33.699	26.089	195.1	0.551	3.72	57.2	22.5	1.69	21.7	0.00	0.00	0.03	194	
	200 ISL	8.95	8.93	33.742	26.145	189.9	0.565	3.60	55.2	24.1	1.74	22.6	0.00			201	
2	228	8.53	8.51	33.912	26.344	171.4	0.615	3.05	46.8	30.5	1.94	25.8	0.00			229	
	250 ISL	8.20	8.17	33.993	26.457	160.9	0.652	2.74	41.4	35.5	2.08	27.8	0.00			251	
2	268	7.95	7.92	34.036	26.528	154.4	0.680	2.50	37.5	39.3	2.19	29.1	0.00			269	
	300 ISL	7.54	7.51	34.069	26.614	146.5	0.728	2.20	32.7	45.0	2.33	31.0	0.00			302	
2	318	7.33	7.30	34.077	26.650	143.3	0.754	2.05	30.3	48.1	2.40	32.0	0.00			320	
2	377	6.81	6.77	34.131	26.765	133.0	0.836	1.30	19.0	59.1	2.70	35.5	0.00			379	
	400 ISL	6.55	6.51	34.154	26.818	128.1	0.866	1.05	15.3	64.2	2.82	36.9	0.00			402	
2	436	6.17	6.13	34.189	26.895	121.0	0.911	0.73	10.5	71.5	2.98	38.7	0.00			439	
	500 ISL	5.92	5.88	34.229	26.959	115.6	0.986	0.53	7.6	76.9	3.08	39.8	0.00			503	
2	511	5.88	5.84	34.236	26.970	114.7	0.999	0.49	7.0	77.8	3.10	40.0	0.00			514	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90				70
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD ANT	TYPE				
32 4.9 N	120 37.8 W	27/03/94	2336 UTC	3812 m	280	07 kn	300 03 04	1	1021.0 mb	15.1 c	13.1 c	31m 01	7/8	SC				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.25	15.25	33.230	24.554	337.2	0.000	5.83	101.9	3.3	0.33	0.3	0.00	0.12	0.03	0		
2	1	15.25	15.25	33.230	24.554	337.3	0.003	5.83	101.9	3.3	0.33	0.3	0.00	0.12	0.03	1		
	10 ISL	15.11	15.11	33.232	24.586	334.5	0.034	5.83	101.6	3.3	0.33	0.3	0.00	0.12	0.03	10		
2	16	15.00	15.00	33.233	24.611	332.3	0.054	5.83	101.4	3.3	0.33	0.3	0.00	0.12	0.03	15		
	20 ISL	15.00	15.00	33.233	24.611	332.4	0.067	5.83	101.4	3.1	0.33	0.3	0.00	0.12	0.03	20		
2	30	14.99	14.99	33.233	24.614	332.4	a.100	5.83	101.4	2.8	0.34	0.3	0.00	0.13	0.04	30		
2	45	14.98	14.97	33.234	24.617	332.6	a.150	5.83	101.3	3.2	0.33	0.3	0.00	0.14	0.04	45		
	50 ISL	14.98	14.97	33.233	24.617	332.8	0.167	5.83	101.3	3.0	0.33	0.3	0.00	0.14	0.04	50		
2	59	14.97	14.96	33.231	24.618	333.0	0.197	5.83	101.3	2.6	0.33	0.3	0.00	0.16	0.05	59		
2	75	14.60	14.59	33.189	24.665	328.9	0.250	5.85	100.9	2.7	0.33	0.3	0.00	0.25	0.11	75		
2	85	13.79	13.78	33.075	24.746	321.3	0.282	5.92	100.3	3.1	0.35	0.3	0.00	0.38	0.26	85		
2	95	13.58	13.57	33.109	24.815	315.0	0.314	5.82	98.2	3.6	0.41	0.7	0.09	0.45	0.35	95		
	100 ISL	13.46	13.45	33.159	24.879	309.1	0.329	5.72	96.3	3.9	0.45	1.3	0.13	0.41	0.34	100		
2	106	13.26	13.25	33.224	24.969	300.6	0.348	5.56	93.3	4.4	0.52	2.4	0.15	0.34	0.31	106		
2	115	12.76	12.74	33.282	25.113	287.1	0.374	5.27	87.5	5.7	0.66	4.8	0.08	0.30	0.28	115		
2	125	12.42	12.40	33.420	25.286	270.8	0.402	4.91	81.0	7.8	0.84	7.7	0.07	0.20	0.19	126		
2	139	11.15	11.13	33.417	25.520	248.6	0.438	4.45	71.5	11.9	1.18	13.1	0.03	0.13	0.13	140		
	150 ISL	10.53	10.51	33.475	25.674	234.0	0.465	4.23	67.1	14.3	1.33	15.6	0.02	0.08	0.019	151		
2	164	9.98	9.96	33.579	25.849	217.5	0.497	4.03	63.2	17.1	1.46	17.8	0.01	0.04	0.06	161		
2	194	9.04	9.02	33.798	26.174	187.0	0.557	3.51	53.9	24.9	1.74	22.6	0.00	0.00	0.012	191		
	200 ISL	8.94	8.92	33.820	26.207	184.0	0.568	3.42	52.4	26.0	1.78	23.2	0.00			201		
2	229	8.58	8.56	33.894	26.322	173.5	0.620	3.05	46.4	30.7	1.94	25.6	0.00			230		
	250 ISL	8.23	8.20	33.962	26.428	163.7	0.656	2.84	42.9	35.1	2.04	27.3	0.00			25		
2	268	7.94	7.91	34.016	26.514	155.7	0.684	2.65	39.8	38.9	2.13	28.6	0.00			269		
	300 ISL	7.67	7.64	34.075	26.600	148.0	0.733	2.18	32.5	44.8	2.32	30.8	0.00			302		
2	318	7.55	7.52	34.095	26.633	145.1	0.759	1.92	28.6	47.8	2.42	31.9	0.00			320		
2	378	6.90	6.86	34.110	26.736	135.8	0.844	1.54	22.6	56.6	2.62	34.6	0.00			380		
	400 ISL	6.68	6.64	34.131	26.783	131.6	0.873	1.28	18.7	61.2	2.72	35.9	0.00			402		
2	438	6.33	6.29	34.174	26.863	124.2	0.922	0.84	12.2	69.2	2.90	38.0	0.00			441		
	500 ISL	5.92	5.88	34.231	26.961	115.5	0.996	0.52	7.5	78.1	3.07	39.8	0.00			503		
2	512	5.84	5.80	34.242	26.979	113.7	1.010	0.46	6.6	79.8	3.10	40.2	0.00			515		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION				90	80
LATITUDE		LONGITUDE		DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA		BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 46.6 N		121 19.9 W		27/03/94	1816	UTC	3951 m	340	11	<n	310	04 06 1	1022.1 mb	14.9 C	12.5 C	38m	01	7/8	SC
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	15.56	15.56	33.355	24.582	334.6	0.000	5.76	101.4	2.6	0.32	0.3	0.00	0.12	0.03	0			
2	2 A	15.56	15.56	33.355	24.582	334.6	0.007	5.76	101.4	2.6	0.32	0.3	0.00	0.12	0.03	2			
	10 ISL	15.53	15.53	33.347	24.583	334.8	0.033	5.75	101.1	2.6	0.31	0.3	0.00	0.14	0.04	10			
2	13	15.51	15.51	33.343	24.584	334.8	0.044	5.75	101.1	2.6	0.31	0.3	0.00	0.15	0.04	13			
	20 ISL	15.49	15.49	33.342	24.588	334.6	0.067	5.75	101.0	2.6	0.31	0.3	0.00	0.14	0.04	20			
2	25 A	15.49	15.49	33.353 U			0.084	5.75	101.0	2.6	0.31	0.3	0.00	0.14	0.04	25			
	30 ISL	15.49	15.49	33.342	24.588	334.9	0.100	5.75	101.0	2.6	0.31	0.3	0.00	0.13	0.03	30			
2	36	15.50	15.49	33.341	24.586	335.3	0.121	5.76	101.2	2.5	0.31	0.3	0.00	0.12	0.03	36			
2	48 A	15.49	15.48	33.341	24.588	335.5	0.161	5.76	101.2	2.4	0.31	0.3	0.00	0.12	0.04	48			
	50 ISL	15.49	15.48	33.341	24.588	335.5	0.167	5.76	101.2	2.3	0.31	0.3	0.00	0.12	0.04	50			
2	60	15.50	15.49	33.342	24.587	335.9	0.201	5.77	101.4	2.0	0.31	0.3	0.00	0.12	0.04	60			
2	72 A	15.50	15.49	33.344	24.589	336.1	0.241	5.76	101.2	2.0	0.31	0.3	0.00	0.14	0.05	72			
	75 ISL	15.45	15.44	33.338	24.596	335.6	0.251	5.76	101.1	2.1	0.31	0.3	0.00	0.16	0.06	75			
2	86	15.27	15.26	33.317	24.620	333.6	0.288	5.77	100.9	2.7	0.32	0.3	0.00	0.25	0.12	86			
2	99 A	14.07	14.06	33.275	24.843	312.5	0.330	5.60	95.6	3.0	0.46	1.4	0.08	0.40	0.33	99			
	100 ISL	14.02	14.01	33.279	24.857	311.3	0.333	5.58	95.1	3.1	0.47	1.5	0.08	0.39	0.32	100			
2	108	13.67	13.65	33.332	24.970	300.7	0.358	5.38	91.1	4.3	0.55	3.0	0.06	0.27	0.23	108			
2	118	13.06	13.04	33.418	25.159	282.8	0.387	5.08	85.0	5.8	0.70	5.6	0.04	0.20	0.20	119			
	125 ISL	12.31	12.29	33.429	25.314	268.1	0.406	4.85	79.9	7.8	0.86	8.2	0.02	0.16	0.16	126			
2	128	11.99	11.97	33.428	25.374	262.4	0.414	4.77	78.0	8.6	0.93	9.3	0.02	0.14	0.14	129			
	137 A	11.49	11.47	33.417	25.458	254.5	0.438	4.66	75.4	10.1	1.06	11.3	0.02	0.10	0.12	138			
2	150 ISL	10.47	10.45	33.472	25.682	233.2	0.469	4.36	69.0	14.3	1.30	15.3	0.02	0.06	0.08	151			
2	162	9.58	9.56	33.563	25.903	212.3	0.496	4.05	62.9	18.7	1.52	18.9	0.01	0.02	0.04	163			
2	194	8.88	8.86	33.772	26.179	186.5	0.560	3.43	52.5	25.7	1.80	23.3	0.00			195			
	200 ISL	8.81	8.79	33.809	26.219	182.8	0.571	3.32	50.8	26.9	1.84	23.9	0.00			201			
2	229	8.54	8.52	33.956	26.376	168.3	0.622	2.84	43.2	32.4	2.02	26.5	0.00			230			
	250 ISL	8.23	8.20	34.009	26.465	160.2	0.656	2.62	39.6	36.4	2.12	28.0	0.00			251			
2	269	7.95	7.92	34.036	26.528	154.4	0.686	2.46	36.9	39.9	2.21	29.2	0.00			270			
	300 ISL	7.63	7.60	34.066	26.599	148.1	0.733	2.19	32.6	44.7	2.34	30.9	0.00			302			
2	318	7.47	7.44	34.079	26.632	145.1	0.759	2.02	30.0	47.4	2.42	31.8	0.00			320			
2	378	6.97	6.93	34.140	26.750	134.5	0.843	1.33	19.5	57.6	2.70	35.1	0.00			380			
	400 ISL	6.90	6.86	34.171	26.785	131.6	0.873	1.11	16.3	60.5	2.78	35.8	0.00			402			
2	437	6.79	6.75	34.220	26.839	127.0	0.920	0.80	11.7	64.9	2.90	36.8	0.00			440			
	500 ISL	6.33	6.28	34.259	26.931	118.8	0.998	0.52	7.5	73.3	3.05	38.7	0.00			503			
2	512	6.24	6.19	34.267	26.949	117.1	1.012	0.47	6.8	74.9	3.08	39.1	0.00			515			

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90 90			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED			WAVES	WEA	BAROMETER	DRY	WET	SIECCHI/FOREL	CLD AMT	TYPE
31 25.3 N		121 58.2 W		27/03/94	112 2 U T C	3 86 5 m	3	40	16	kn			1021.3 mb	14.8 c	12.9 c		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	S 10 3	P04	NO3	NO 2	CHL-A	PHAE0	P R E S S	
	m	DEG C	DEG C		THETA			mL/L		uM/1.	uM/L	uM/ I	uM/L	ug/L.	ug/L	db	
	0 ISL	15.15	15.15	33.307	24.635	329.5	0.000	5.79	101.0	2.9	0.33	0.1	0.00	0.12	0.03	0	
2	2	15.15	15.15	33.307	24.635	329.6	0.007	5.79	101.0	2.9	0.33	0.1	0.00	0.12	0.03	2	
	10 ISL	15.15	15.15	33.307	24.635	329.8	0.033	5.80	101.2	3.0	0.32	0.1	0.00	0.12	0.03	10	
2	14	15.15	15.15	33.307	24.636	329.9	0.046	5.80	101.2	3.0	0.32	0.1	0.00	0.12	0.03	14	
	20 ISL	15.15	15.15	33.307	24.636	330.1	0.066	5.80	101.2	3.0	0.32	0.1	0.00	0.12	0.03	20	
2	10	15.15	15.15	33.308	24.637	330.3	0.099	5.79	101.0	2.9	0.32	0.1	0.00	0.121	0.04	30	
2	46	15.15	15.14	33.316	24.644	330.1	0.152	5.79	101.0	2.7	0.32	0.1	0.00	0.13	0.03	46	
	SCI ISL	15.15	15.14	33.316	24.644	330.2	0.165	5.79	101.0	2.7	0.32	0.1	0.00	0.13	0.03	50	
2	eo	15.15	15.14	33.317	24.645	330.4	0.198	5.78	100.9	2.8	0.31	0.1	0.00	0.14	0.04	60	
	73 ISL	15.08	15.07	33.308	24.654	330.0	0.248	5.80	101.1	2.6	0.32	0.1	0.00	0.19	0.06	75	
2	76	15.08	15.07	33.307	24.653	330.1	0.251	5.80	101.1	2.6	0.32	0.1	0.00	0.19	0.06	76	
2	86	14.84	14.83	33.283	24.687	327.2	0.284	5.81	100.7	2.7	0.33	0.2	0.00	0.24	0.12	86	
2	95	14.26	14.25	33.240	24.777	318.8	0.313	5.81	99.5	2.1	0.36	0.2	0.01	0.47	0.32	95	
	100 ISL	13.89	13.88	33.301	24.901	307.1	0.328	5.66	96.2	2.8	0.40	0.9	0.03	0.44	0.36	100	
2	105	13.51	13.50	33.369	25.031	294.7	0.344	5.49	92.7	21.8	0.46	1.9	0.05	0.40	0.40	105	
2	113	12.97	12.95	33.376	25.145	284.1	0.367	5.33	89.0	4.7	0.56	3.6	0.04	0.30	0.33	113	
2	125	12.03	12.01	33.412	25.354	264.3	0.400	4.96	81.2	6.9	0.85	8.0	0.02	0.18	0.17	126	
2	140	10.66	10.64	33.386	25.582	242.6	0.438	4.74	75.3	11.2	1.12	12.2	0.01	0.07	0.07	141	
	150 ISL	10.03	10.01	33.439	25.731	228.4	0.461	4.61	72.3	13.6	1.25	14.5	0.01	0.03	0.05	151	
2	164	9.40	9.38	33.548	25.921	210.6	0.492	4.42	68.4	16.9	1.41	17.3	0.01	0.01	0.03	165	
2	194	8.68	8.66	33.737	26.183	186.1	0.551	3.79	57.8	24.4	1.71	22.2	0.01	0.00	0.01	195	
	200 ISL	8.57	8.55	33.773	26.228	181.8	0.562	3.69	56.1	25.7	1.75	22.9	0.01			201	
2	230	8.11	8.09	33.918	26.411	164.8	0.614	3.32	50.3	31.9	1.91	25.6	0.00			231	
	250 ISL	7.80	7.78	33.964	26.493	157.2	0.647	3.18	47.6	35.8	1.98	26.9	0.00			251	
2	271	7.50	7.47	33.990	26.557	151.4	0.679	3.01	44.7	40.0	2.07	28.3	0.00			272	
	300 ISL	7.13	7.10	34.025	26.637	144.1	0.722	2.44	35.9	47.3	2.30	31.3	0.00			302	
2	318	6.93	6.90	34.041	26.677	140.5	0.747	2.07	30.4	51.8	2.45	33.1	0.00			320	
2	377	6.35	6.32	34.067	26.775	131.6	0.828	1.49	21.6	62.1	2.70	36.3	0.00			379	
	400 ISL	6.16	6.12	34.085	26.814	128.1	0.858	1.28	18.4	66.2	2.79	37.4	0.00			402	
2	434	5.90	5.86	34.115	26.871	123.0	0.900	0.99	14.2	72.1	2.91	38.9	0.00			437	
	500 ISL	5.44	5.40	34.178	26.977	113.3	0.978	0.60	8.5	83.0	3.09	40.9	0.00			503	
2	512	5.36	5.32	34.190	26.996	111.6	0.992	0.53		85.0	3.12	41.3	0.00			515	

RV DAVID STARR Jottdan				CALCOFI CRUISE 9403										STATION 90 100			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE			
31 5.5 N	122 39.3 W	27/03/94	0537 UTC	4015 m	33012 kn				1021.9 mb	15.1 C	12.3 C						
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN H T	OXYGEN ml/l	OXY PCT	S 10 3 uM / l	P04 uM / L	NO3 uM / t	NO2 uM/L	CHL-A ug/l	PHAE0 ug/l	PRESS db	
	0 ISL	16.06	16.06	33.476	24.563	336.4	0.000	5.70	101.4	3.3	0.28	0.0	0.00	0.08	0.01	0	
2	2	16.06	16.06	33.476	24.563	336.5	0.007	5.70	101.4	3.3	0.28	0.0	0.00	0.08	0.01	2	
	10 ISL	16.01	16.01	33.475	24.574	335.7	0.034	5.70	101.3	3.3	0.27	0.0	0.00	0.08	0.02	10	
2	15	15.96	15.96	33.475	24.585	334.7	0.050	5.71	101.4	3.3	0.27	0.0	0.00	0.08	0.02	15	
	20 ISL	15.89	15.89	33.476	24.602	333.3	0.067	5.72	101.4	3.2	0.27	0.0	0.00	0.08	0.02	20	
2	30	15.76	15.76	33.477	24.632	330.7	0.100	5.73	101.3	3.0	0.27	0.0	0.00	0.09	0.02	30	
2	46	15.73	15.72	33.474	24.637	330.8	0.153	5.73	101.3	2.9	0.27	0.0	0.00	0.11	0.03	46	
	50 ISL	15.73	15.72	33.473	24.637	330.9	0.166	5.73	101.3	2.9	0.27	0.0	0.00	0.11	0.03	50	
2	60	15.72	15.71	33.471	24.638	331.2	0.200	5.73	101.2	2.7	0.27	0.0	0.00	0.10	0.02	60	
2	75	15.70	15.69	33.463	24.636	331.8	0.249	5.74	101.4	2.0	0.28	0.1	0.00	0.11	0.03	75	
2	34	15.73	15.72	33.474	24.639	331.8	0.279	5.73	101.2	2.7	0.27	0.0	0.00	0.11	0.04	84	
2	94	15.85	15.84	33.596	24.706	325.8	0.312	5.68	100.7	2.8	0.26	0.0	0.00	0.18	0.10	94	
	100 ISL	15.89	15.87	33.663	24.749	321.9	0.331	5.64	100.1	2.9	0.25	0.0	0.01	0.28	0.20	100	
2	104	15.91	15.89	33.730	24.796	317.6	0.344	5.59	99.2	2.9	0.24	0.0	0.01	0.34	0.26	104	
2	114	14.66	14.64	33.679	25.031	295.2	0.375	5.39	93.2	3.0	0.39	1.6	0.05	0.31	0.25	114	
2	123	13.65	13.63	33.576	25.163	282.7	0.401	5.14	87.1	5.1	0.60	4.3	0.03	0.22	0.23	124	
	125 ISL	13.51	13.49	33.566	25.184	280.8	0.407	5.11	86.2	5.3	0.63	4.7	0.03	0.20	0.22	126	
2	139	12.73	12.71	33.533	25.314	268.6	0.445	4.94	82.1	6.8	0.79	7.1	0.02	0.12	0.13	140	
	150 ISL	11.88	11.86	33.504	25.454	255.4	0.474	4.81	78.5	9.0	0.94	9.6	0.01	0.07	0.09	151	
2	164	10.81	10.79	33.494	25.641	237.6	0.508	4.63	73.8	12.2	1.14	12.8	0.01	0.03	0.06	165	
2	194	9.32	9.30	33.598	25.973	206.2	0.575	4.19	64.7	18.8	1.50	18.6	0.01	0.02	0.07	195	
	200 ISL	9.13	9.11	33.634	26.032	200.7	0.587	4.08	62.8	20.4	1.56	19.6	0.01			201	
2	228	8.51	8.49	33.806	26.263	179.0	0.640	3.58	54.4	27.6	1.80	23.6	0.00			229	
2	250 ISL	8.14	8.11	33.910	26.401	166.2	0.678	3.32	50.0	32.3	1.92	25.6	0.00			251	
2	267	7.91	7.88	33.969	26.482	158.7	0.706	3.14	47.1	35.8	2.00	26.9	0.00			268	
	300 ISL	7.48	7.45	34.016	26.581	149.6	0.757	2.67	39.6	42.7	2.20	29.7	0.00			302	
2	317	7.27	7.24	34.024	26.617	146.4	0.782	2.42	35.8	46.4	2.31	31.1	0.00			319	
2	380	6.41	6.38	34.062	26.763	132.8	0.870	1.60	23.2	61.2	2.68	35.8	0.00			382	
	400 ISL	6.23	6.19	34.073	26.796	129.9	0.896	1.42	20.5	64.6	2.76	36.8	0.00			402	
2	441	5.94	5.90	34.099	26.853	124.8	0.948	1.11	15.9	71.0	2.89	38.4	0.00			444	
	500 ISL	5.52	5.48	34.162	26.955	115.5	1.019	0.68	9.6	81.6	3.08	40.6	0.00			503	
2	511	5.44	5.40	34.174	26.974	113.7	1.032	0.60	8.5	83.6	3.11	41.0	0.00			514	

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT
CILIATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV		DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION		90	110
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	ANT	TYPE	
30 44.8 N		123 19.2 W		26/03/94	2343 UTC	3998 m	320	12	kn	310 03 04	1	1020 .8 mb	17.0 C	13.9 C	43m 01	4/8		SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN	HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA				mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	16.49	16.49	33.476	24.464	345.8	0.000		5.68	101.9	3.8	0.29	0.3	0.00	0.08	0.02	0		
2	2	16.49	16.49	33.476	24.465	345.8	0.007		5.68	101.9	3.8	0.29	0.3	0.00	0.08	0.02	2		
	10 ISL	16.27	16.27	33.471	24.511	341.6	0.034		5.69	101.6	3.7	0.30	0.2	0.00	0.09	0.02	10		
2	15	16.10	16.10	33.467	24.547	338.4	0.051		5.69	101.3	3.6	0.30	0.2	0.00	0.09	0.02	15		
	20 ISL	16.09	16.09	33.467	24.550	338.3	0.068		5.69	101.3	3.6	0.30	0.2	0.00	0.09	0.02	20		
2	30	16.08	16.08	33.467	24.552	338.3	0.102		5.68	101.1	3.5	0.30	0.2	0.00	0.09	0.03	30		
2	45	16.07	16.06	33.468	24.556	338.5	0.153		5.69	101.2	3.4	0.29	0.2	0.00	0.09	0.03	45		
	50 ISL	16.07	16.06	33.468	24.556	338.6	0.170		5.69	101.2	3.4	0.29	0.2	0.00	0.09	0.03	50		
2	60	16.06	16.05	33.467	24.558	338.8	0.204		5.69	101.2	3.3	0.29	0.2	0.00	0.10	0.03	60		
2	75	16.06	16.05	33.466	24.558	339.3	0.255		5.69	101.2	3.3	0.29	0.2	0.00	0.10	0.03	75		
2	84	16.05	16.04	33.467	24.561	339.2	0.285		5.70	101.4	3.1	0.28	0.2	0.00	0.11	0.03	84		
2	95	16.02	16.01	33.467	24.568	338.9	0.322		5.69	101.1	3.1	0.29	0.2	0.00	0.14	0.05	95		
	100 ISL	15.89	15.87	33.465	24.596	336.4	0.339		5.69	100.8	3.1	0.28	0.2	0.00	0.19	0.07	100		
2	105	15.71	15.69	33.469	24.640	332.4	0.356		5.70	100.7	3.1	0.28	0.2	0.00	0.25	0.11	105		
2	115	15.34	15.32	33.517	24.759	321.3	0.389		5.60	98.2	3.3	0.32	0.3	0.03	0.33	0.23	115		
2	124	14.43	14.41	33.535	24.969	301.3	0.417		5.38	92.6	4.3	0.45	1.9	0.06	0.28	0.24	125		
	125 ISL	14.39	14.37	33.536	24.979	300.5	0.420		5.37	92.4	4.3	0.46	2.0	0.06	0.28	0.24	126		
2	140	13.88	13.86	33.532	25.082	290.9	0.464		5.26	89.5	5.1	0.54	3.3	0.05	0.23	0.26	141		
	150 ISL	12.95	12.93	33.511	25.254	274.7	0.492		5.08	84.8	6.9	0.71	6.0	0.03	0.16	0.19	151		
2	164	11.46	11.44	33.500	25.529	248.5	0.529		4.78	77.3	10.2	1.00	10.5	0.01	0.06	0.07	165		
2	194	9.41	9.39	33.564	25.932	210.1	0.598		4.28	66.2	18.2	1.46	18.0	0.00	0.01	0.03	195		
2	200 ISL	9.19	9.17	33.602	25.997	204.0	0.610		4.18	64.4	19.7	1.52	19.0	0.00			201		
2	229	8.52	8.50	33.795	26.253	180.0	0.666		3.72	56.5	26.6	1.75	23.0	0.00			230		
2	250 ISL	8.18	8.15	33.895	26.383	167.9	0.702		3.36	50.7	31.4	1.90	25.3	0.00			25-1		
2	269	7.93	7.90	33.960	26.472	159.7	0.733		3.06	45.9	35.5	2.02	27.1	0.00			270		
2	300 ISL	7.49	7.46	34.005	26.571	150.6	0.782		2.75	40.8	41.7	2.17	29.3	0.00			302		
2	319	7.24	7.21	34.014	26.613	146.7	0.810		2.58	38.1	45.3	2.26	30.5	0.00			32"		
2	378	6.63	6.60	34.047	26.723	136.8	0.893	1.87		27.2	56.4	2.56	34.4	0.00			380		
	400 ISL	6.41	6.37	34.059	26.761	133.3	0.923	1.64		23.8	60.6	2.67	35.7	0.00			402		
2	437	6.07	6.03	34.084	26.825	127.5	0.971	1.28		18.4	67.6	2.83	37.6	0.00			440		
	500 ISL	5.62	5.58	34.155	26.937	117.3	1.049	0.74		10.5	79.3	3.04	40.1	0.00			503		
2	511	5.54	5.50	34.168	26.957	115.4	1.061	0.64		9.1	81.3	3.08	40.5	0.00			514		

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 90 120		
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
30 21.2 N		124 0.0 W		26/03/94	1815 UTC	4202 m	010	12 kn	330 05 06	1	1020.1 mb	15.3 c	11.8 c	44m 01	6/8	CC
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	16.34	16.34	33.483	24.504	342.0	0.000	5.66	101.3	2.9	0.28	0.2	0.00	0.09	0.03	0
2	2 A	16.34	16.34	33.483	24.505	342.0	0.007	5.66	101.3	2.9	0.28	0.2	0.00	0.09	0.03	2
	10 ISL	16.29	16.29	33.483	24.516	341.2	0.034	5.66	101.2	2.9	0.29	0.2	0.00	0.09	0.03	10
2	16	16.25	16.25	33.483	24.526	340.5	0.055	5.66	101.1	2.9	0.29	0.2	0.00	0.10	0.03	16
	20 ISL	16.25	16.25	33.483	24.526	340.6	0.068	5.66	101.1	2.9	0.29	0.2	0.00	0.10	0.04	20
2	29 A	16.25	16.25	33.483	24.526	340.9	0.099	5.66	101.1	2.8	0.29	0.2	0.00	0.11	0.06	29
	30 ISL	16.25	16.25	33.483	24.526	340.9	0.102	5.66	101.1	2.8	0.29	0.2	0.00	0.11	0.06	30
2	44	16.25	16.24	33.482	24.526	341.4	0.150	5.66	101.1	2.7	0.31	0.2	0.00	0.10	0.04	44
	50 ISL	16.24	16.23	33.482	24.528	341.3	0.171	5.66	101.0	2.6	0.30	0.2	0.00	0.10	0.03	50
2	56 A	16.24	16.23	33.482	24.528	341.5	0.191	5.66	101.0	2.6	0.28	0.2	0.00	0.10	0.03	56
	70	16.24	16.23	33.482	24.529	341.9	0.239	5.66	101.0	2.6	0.28	0.2	0.00	0.10	0.03	70
2	75 ISL	16.24	16.23	33.481	24.528	342.1	0.256	5.66	101.0	2.6	0.28	0.2	0.00	0.10	0.03	75
	83 A	16.23	16.22	33.479	24.529	342.3	0.283	5.66	101.0	2.6	0.29	0.2	0.00	0.11	0.03	83
2	96	16.21	16.19	33.479	24.535	342.2	0.328	5.66	101.0	2.6	0.28	0.2	0.00	0.12	0.04	96
	100 ISL	16.13	16.11	33.478	24.552	340.6	0.341	5.66	100.8	2.5	0.28	0.2	0.00	0.15	0.06	100
2	104	16.01	15.99	33.477	24.579	338.2	0.355	5.65	100.4	2.5	0.29	0.2	0.00	0.18	0.09	104
	115 A	15.43	15.41	33.470	24.703	326.6	0.392	5.61	98.5	2.9	0.33	0.2	0.02	0.32	0.23	115
2	125	15.01	14.99	33.597	24.893	308.8	0.423	5.46	95.2	3.2	0.37	0.8	0.06	0.32	0.29	126
	139	13.10	13.08	33.515	25.227	277.0	0.464	5.19	86.9	5.0	0.59	4.1	0.04	0.21	0.23	140
2	150 ISL	12.04	12.02	33.493	25.415	259.1	0.494	4.96	81.2	7.4	0.81	7.5	0.02	0.12	0.15	151
	160 A	11.29	11.27	33.492	25.553	246.0	0.519	4.76	76.7	9.9	1.00	10.6	0.01	0.06	0.08	161
2	195	9.31	9.29	33.578	25.959	207.5	0.598	4.26	65.8	18.2	1.46	18.2	0.00	0.01	0.02	196
	200 ISL	9.15	9.13	33.604	26.005	203.2	0.609	4.18	64.3	19.4	1.51	19.0	0.00			201
2	229	8.54	8.52	33.762	26.224	182.7	0.665	3.75	57.0	25.5	1.73	22.7	0.00			230
	250 ISL	8.31	8.28	33.850	26.328	173.1	0.702	3.52	53.2	28.8	1.83	24.4	0.00			251
2	269	8.17	8.14	33.911	26.398	166.9	0.734	3.33	50.2	31.6	1.90	25.5	0.00			270
	300 ISL	7.83	7.80	33.974	26.498	157.7	0.785	3.04	45.5	36.8	2.03	27.5	0.00			302
2	318	7.63	7.60	33.998	26.546	153.4	0.813	2.86	42.6	40.0	2.11	28.6	0.00			320
	378	7.03	6.99	34.057	26.677	141.5	0.901	2.03	29.8	51.6	2.44	32.8	0.00			380
2	400 ISL	6.76	6.72	34.073	26.726	137.0	0.932	1.74	25.4	56.5	2.56	34.4	0.00			402
	438	6.31	6.27	34.099	26.806	129.5	0.982	1.29	18.6	64.6	2.76	36.8	0.00			441
2	500 ISL	5.86	5.82	34.150	26.904	120.7	1.060	0.84	12.0	74.7	2.97	39.1	0.00			503
	513	5.77	5.73	34.161	26.924	118.9	1.076	0.74	10.6	76.8	3.02	39.6	0.00			516

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN					CALCOFI CRUISE 9403										STATION 93					26.7	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES		WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD) AMT	TYPE				
32 57.3 M		117 18.1. W		22/03/94	1947 UTC	63 in	250	22 kn	270	05 06	1	1 01 5.1 mb	15.1 c	12.8 c	19m	03	SC				
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	3103 uM / I	P04 uM / I	N03 uM / I	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	PRESS db					
	0 ISL	15.91	15.91	33.195	24.381	3 5 3.8	0.000	5.96	10 5.5	1.7	0.31	0.3	0.00	0.37	0.06	0					
2	2 A	15.91	15.91	33.195	24.381	353.8	0.007	5.96	10 5.5	1.7	0.31	0.3	0.00	0.37	0.06	2					
2	6	15.93	15.93	33.196	24.377	354.3	0.021	5.94	10 5.2	1.6	0.31	0.3	0.00	0.36	0.06	6					
	10 ISL	15.54	15.54	33.203	24.470	345.6	0.035	6.02	10 5.8	1.8	0.32	0.3	0.00	0.35	0.09	10					
2	13 A	15.11	15.11	33.212	24.571	336.0	0.045	6.06	105.6	1.9	0.33	0.3	0.00	0.34	0.12	13					
	20 ISL	14.11	14.11	33.247	24.811	313.3	0.068	5.77	98.5	3.6	0.45	1.4	0.09	1.34	0.49	20					
2	25 A	13.39	13.39	33.272	24.978	297.6	0.083	5.48	92.2	5.1	0.57	2.9	0.17	1.37	0.71	25					
2	30	12.76	12.76	33.280	25.109	285.2	0.098	5.28	87.7	6.2	0.71	4.9	0.24	1.38	0.67	30					
2	36 A	12.06	12.06	33.366	25.310	266.2	0.115	4.45	72.9	10.3	1.08	10.5	0.40	0.97	0.51	36					
2	49 A	11.12	11.11	33.451	25.550	243.7	0.143	4.06	65.2	13.9	1.31	14.7	0.28	0.28	0.28	49					

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVEL.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 93		28	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SP	EED	WAVES	WEA	BAROMETER		DRY	WET	SECCHI/FOREL	CLD AM"	TYPE
32 54.7 N		117 23.5 W		22/03/94	2251 UTC	644 m	2 70 i3	kn 2	90 03 0	5 1	1014 .1 mb		15.9 c	13.0 c	24 m 03	4/8	CU
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	S 10 3 uM/L	PC) 4 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	PRESS db	
	0 ISL	16.00	16.00	33.227	24.385	3 5 3.3	0.000	5.90	10 4.7	1.3	0.3 1	0.2	0.00	0.19	0.04	0	
2	2	16.00	16.00	33.227	24.385	353.4	0.007	5.90	10 4.7	1.3	0.31	0.2	0.00	0.19	0.04	2	
	10 ISL	15.68	15.68	33.224	24.455	347.0	0.03 5	5.96	10 5.1	1.3	0.3 2	0.2	0.00	0.20	0.05	10	
2	16	15.22	15.22	33.221	24.554	337.7	0.05 6	6.02	10 5.1	1.3	0.32	0.2	0.00	0.21	0.05	16	
	20 ISL	14.85	14.85	33.217	24.631	330.5	0.069	6.04	104.7	1.5	0.3 3	0.2	0.00	0.24	0.07	20	
2	30 ISL	13.82	13.82	33.227	24.856	309.3	0.101	6.08	103.2	2.7	0.3 6	0.2	0.00	0.36	0.18	30	
2	31	13.71	13.71	33.230	24.881	307.0	0.104	6.08	103.0	2.9	0.36	0.2	0.00	0.38	0.20	31	
2	45	12.37	12.36	33.322	25.217	275.2	0.145	4.94	81.4	7.9	0.84	7.6	0.2 2	0.76	0.53	45	
	50 ISL	12.02	12.01	33.336	25.295	268.0	0.158	4.77	78.0	3.9	0.94	9.2	0.1 5	0.66	0.47	50	
2	56	11.63	11.62	33.364	25.389	259.1	0.174	4.57	74.1	10.4	1.06	11.1	0.1 0	0.47	0.35	56	
2	65	11.04	11.03	33.480	25.587	240.5	0.197	3.91	62.7	14.6	1.3 5	15.8	0.3 4	0.19	0.24 A	65	
2	75	10.56	10.55	33.526	25.707	229.2	0.220	3.87	61.4	16.1	1.4 4	17.0	0.06	0.13	0.17	75	
2	85	10.23	10.22	33.599	25.821	218.6	0.243	3.59	56.6	18.6	1.5 7	19.1	0.1 6	0.05	0.09	85	
2	95	9.92	9.91	33.689	25.944	207.1	0.264	3.36	52.6	21.0	1.68	20.9	0.02	0.02	0.17	95	
	100 ISL	9.85	9.84	33.718	25.978	203.9	0.274	3.28	51.3	21.7	1.71	21.4	0.02	0.02	0.14	100	
2	110	9.77	9.76	33.761	26.026	199.6	0.294	3.16	49.4	22.9	1.76	22.2	0.01	0.01	0.05	110	
2	125	9.55	9.54	33.327	26.114	191.5	0.324	2.99	46.5	24.9	1.8 4	23.4	0.01	0.01	0.05	126	
2	145	9.39	9.37	33.942	26.230	180.9	0.361	2.65	41.1	28.4	1.97	25.0	0.01	0.01	0.04	146	
	150 ISL	9.34	9.32	33.968	26.259	178.3	0.370	2.59	40.1	29.2	2.00	25.4	0.01	0.01	0.04	151	
2	169	9.13	9.11	34.049	26.356	169.4	0.403	2.39	36.9	32.0	2.08	26.7	0.01	0.00	0.04	170	
2	199	8.84	8.82	34.104	26.445	161.4	0.452	2.17	33.3	35.7	2.19	28.1	0.00	0.01	0.04	200	
2	200 ISL	8.83	8.81	34.107	26.449	161.0	0.454	2.16	33.1	35.9	2.20	28.2	0.00			201	
2	229	8.65	8.63	34.172	26.529	154.0	0.500	1.78	27.2	40.0	2.34	29.6	0.00			230	
2	250 ISL	8.52	8.49	34.181	26.556	151.7	0.532	1.73	26.3	41.6	2.38	30.1	0.00			251	
2	269	8.40	8.37	34.177	26.572	150.6	0.561	1.68	25.5	42.7	2.40	30.4	0.00			271	
2	300 ISL	8.15	8.12	34.182	26.614	147.0	0.607	1.57	23.7	45.3	2.46	31.3	0.00			302	
2	318	7.99	7.96	34.187	26.642	144.6	0.633	1.49	22.4	47.2	2.51	31.9	0.00			320	
2	379	7.41	7.37	34.213	26.747	135.3	0.718	1.07	15.9	55.9	2.71	34.3	0.00			381	
	400 ISL	7.21	7.17	34.225	26.785	131.9	0.746	0.92	13.6	59.1	2.77	35.2	0.00			403	
2	438	6.86	6.82	34.249	26.852	125.8	0.795	0.69	10.1	64.6	2.87	36.6	0.00			441	
	500 ISL	6.45	6.40	34.279	26.931	118.9	0.871	0.48	7.0	72.0	3.00	38.2	0.00			503	
2	513	6.36	6.31	34.285	26.948	117.4	0.887	0.44	6.4	73.5	3.03	38.5	0.00			517	

A) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 93		30	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 50.9 N		117 32.1 W		23/03/94	0234 UTC	846 m	290	13 kn			1014.3 mb	14.2 c	11.2 c				
CAST	DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN mL/L	OXY PCT	SI O 3 uM/L	P04 uM/L	N03 uM/L	N02 uM/I	CHL-A ug/L	PHAE0 ug/L	PRESS db	
	0 ISL	15.76	15.76	33.216	24.430	349.0	0.000	5.89	104.0	1.7	0.32	0.3	0.00	0.17	0.05	0	
2	1	15.76	15.76	33.216	24.430	349.0	0.003	5.89	104.0	1.7	0.32	0.3	0.00	0.17	0.05	1	
2	10	15.73	15.73	33.216	24.438	348.7	0.035	5.91	104.3	1.5	0.32	0.3	0.00	0.19	0.04	10	
2	20	14.58	14.58	33.238	24.705	323.4	0.068	6.03	104.0	1.4	0.34	0.3	0.00	0.13	0.05	20	
2	30	14.05	14.05	33.241	24.319	312.8	0.100	6.05	103.2	1.8	0.36	0.2	0.00	0.20	0.09	30	
2	40	13.17	13.16	33.235	24.994	296.4	0.131	5.68	95.1	3.5	0.53	2.3	0.15	0.57	0.31	40	
2	49	12.51	12.50	33.255	25.139	282.9	0.157	5.24	86.6	6.4	0.74	5.8	0.22	0.54	0.27	49	
	50 ISL	12.45	12.44	33.256	25.151	281.7	0.160	5.21	86.0	6.6	0.76	6.1	0.22	0.53	0.27	50	
2	60	11.87	11.86	33.282	25.281	269.5	0.187	4.94	80.5	8.5	0.93	8.8	0.13	0.39	0.26	60	
2	70	11.31	11.30	33.359	25.444	254.2	0.213	4.54	73.2	11.3	1.13	12.1	0.06	0.28	0.21	70	
	75 ISL	11.01	11.00	33.383	25.517	247.4	0.226	4.48	71.7	12.2	1.19	13.2	0.04	0.22	0.18	75	
2	84	10.51	10.50	33.435	25.645	235.3	0.248	4.37	69.2	14.0	1.30	14.9	0.03	0.11	0.13	84	
2	99	10.04	10.03	33.610	25.362	214.9	0.281	3.70	58.1	19.0	1.58	19.2	0.01	0.03	0.07	99	
	100 ISL	10.02	10.01	33.618	25.872	214.0	0.284	3.67	57.6	19.2	1.59	19.4	0.01	0.03	0.07	100	
2	119	9.77	9.76	33.731	26.002	202.0	0.323	3.27	51.1	22.5	1.76	21.7	0.01	0.01	0.06	119	
2	125 ISL	9.66	9.65	33.770	26.051	197.5	0.335	3.16	49.2	23.7	1.81	22.4	0.01	0.01	0.06	126	
2	139	9.40	9.38	33.850	26.156	187.7	0.362	2.95	45.7	26.3	1.91	23.9	0.01	0.00	0.05	140	
	150 ISL	9.25	9.23	33.882	26.206	183.2	0.382	2.87	44.3	27.5	1.96	24.6	0.01	0.00	0.06	151	
2	169	9.03	9.01	33.923	26.273	177.1	0.417	2.74	42.1	29.6	2.02	25.5	0.01	0.00	0.07	170	
2	198	8.63	8.61	34.029	26.419	163.7	0.466	2.34	35.7	35.3	2.18	27.9	0.01	0.01	0.05	199	
	200 ISL	8.64	8.62	34.039	26.426	163.2	0.469	2.30	35.1	35.6	2.19	28.0	0.01			201	
2	228	8.75	8.73	34.162	26.505	156.2	0.514	1.86	28.5	38.8	2.34	29.1	0.00			229	
	250 ISL	8.57	8.54	34.177	26.545	152.8	0.548	1.77	27.0	40.8	2.39	29.8	0.00			251	
2	268	8.35	8.32	34.168	26.572	150.5	0.575	1.74	26.4	42.5	2.42	30.3	0.01			270	
	300 ISL	8.00	7.97	34.178	26.633	145.1	0.623	1.54	23.2	46.8	2.52	31.6	0.00			302	
2	317	7.81	7.78	34.185	26.667	142.1	0.647	1.42	21.3	49.3	2.58	32.4	0.00			319	
2	377	7.22	7.18	34.221	26.780	132.0	0.729	0.97	14.3	58.3	2.81	35.0	0.00			379	
	400 ISL	7.04	7.00	34.232	26.814	129.0	0.759	0.84	12.4	61.1	2.87	35.8	0.00			403	
2	436	6.79	6.75	34.247	26.860	125.0	0.805	0.68	9.9	65.4	2.94	36.9	0.00			439	
	500 ISL	6.32	6.27	34.278	26.947	117.2	0.883	0.47	6.8	73.7	3.07	38.7	0.00			503	
2	511	6.24	6.19	34.284	26.962	115.9	0.895	0.43	6.2	75.1	3.09	39.0	0.00			511	

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD AMT	TYPE
32 41.4 N		117 52.5 W		23/03/94	0729 UTC	617 m	290 19 kn			1014.4 mb	13.3 c	11.0 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY PCT	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS
	m	DEG C	DEG C		THETA			ml/L		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db
	0 ISL	15.32	15.32	33.241	24.547	337.9	0.000	5.89	103.1	2.4	0.40	0.2	0.00	0.15	0.04	
2	1	15.32	15.32	33.241	24.547	337.9	0.003	5.89	103.1	2.4	0.40	0.2	0.00	0.15	0.04	1
	10 ISL	15.31	15.31	33.240	24.549	338.0	0.034	5.89	103.1	2.3	0.37	0.2	0.00	0.15	0.04	13
2	15	15.31	15.31	33.240	24.549	338.2	0.051	5.89	103.1	2.2	0.35	0.2	0.00	0.15	0.04	15
	20 ISL	15.28	15.28	33.242	24.557	337.5	0.068	5.91	103.4	2.2	0.35	0.2	0.00	0.15	0.04	20
2	30	15.22	15.22	33.247	24.575	336.2	0.101	5.94	103.8	2.1	0.35	0.2	0.00	0.15	0.05	30
2	45	13.59	13.58	33.272	24.938	301.9	0.149	5.67	95.8	3.7	0.50	1.7	0.11	0.49	0.30	45
	50 ISL	13.28	13.27	33.286	25.012	295.0	0.164	5.45	91.5	4.7	0.60	3.2	0.19	0.49	0.34	50
2	55	13.03	13.02	33.306	25.077	288.9	0.179	5.22	87.2	5.8	0.70	4.8	0.24	0.49	0.35	55
2	65	12.60	12.59	33.376	25.216	276.0	0.207	4.94	81.8	7.4	0.84	7.3	0.09	0.36	0.33	65
2	75	12.07	12.06	33.402	25.337	264.6	0.234	4.75	77.8	8.8	0.94	9.1	0.07	0.27	0.30	75
2	95	10.82	10.81	33.460	25.611	238.9	0.284	4.19	66.8	13.9	1.30	14.9	0.02	0.09	0.14	91
	100 ISL	10.64	10.63	33.489	25.665	233.8	0.296	4.07	64.7	15.1	1.37	15.9	0.01	0.07	0.12	100
2	111	10.35	10.34	33.550	25.763	224.7	0.321	3.86	61.0	17.3	1.49	17.7	0.01	0.04	0.09	112
2	124	10.11	10.10	33.594	25.838	217.8	0.350	3.71	58.3	18.9	1.56	18.9	0.01	0.03	0.09	125
	125 ISL	10.09	10.08	33.601	25.847	216.9	0.352	3.69	58.0	19.1	1.57	19.1	0.01	0.03	0.09	126
2	144	9.68	9.66	33.754	26.036	199.4	0.392	3.21	50.0	23.5	1.78	22.2	0.01	0.01	0.06	145
	150 ISL	9.60	9.58	33.783	26.071	196.1	0.404	3.13	48.7	24.4	1.82	22.7	0.01	0.01	0.06	151
2	169	9.38	9.36	33.860	26.168	187.3	0.440	2.93	45.4	27.0	1.91	24.1	0.01	0.00	0.05	170
	2 200	8.85	8.83	34.026	26.383	167.3	0.495	2.44	37.4	34.0	2.12	27.1	0.01	0.00	0.01	201
2	229	8.60	8.58	34.095	26.476	158.9	0.542	2.15	32.8	37.6	2.25	28.6	0.01	0.00	0.01	230
	250 ISL	8.49	8.46	34.132	26.522	154.9	0.575	1.97	30.0	40.0	2.32	29.4	0.00	0.00	0.00	251
2	266	8.41	8.38	34.152	26.551	152.5	0.600	1.84	27.9	41.9	2.37	30.0	0.00	0.00	0.00	268
	300 ISL	8.09	8.06	34.169	26.613	147.1	0.651	1.63	24.6	46.0	2.48	31.3	0.00	0.00	0.00	302
2	318	7.89	7.86	34.174	26.646	144.1	0.677	1.52	22.8	48.4	2.54	32.1	0.00	0.00	0.00	320
2	375	7.29	7.25	34.219	26.768	133.1	0.756	0.99	14.7	58.0	2.78	34.8	0.00	0.00	0.00	377
	400 ISL	7.03	6.99	34.237	26.819	128.5	0.789	0.81	11.9	62.3	2.87	35.7	0.00	0.00	0.00	401
2	441	6.66	6.62	34.264	26.891	122.0	0.840	0.59	8.6	68.6	2.99	37.0	0.00	0.00	0.00	444
	500 ISL	6.37	6.32	34.288	26.948	117.2	0.911	0.46	6.7	74.1	3.08	38.5	0.00	0.00	0.00	503
2	510	6.32	6.27	34.292	26.958	116.3	0.922	0.44	6.4	75.0	3.09	38.7	0.00	0.00	0.00	513

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
32 31.2 N		118 12.9 W		23/03/94		1148 UTC		1649 m		310 19 kn						1013.0 mb		13.0 c		11.0 c							
CAST	DEPTH	TEMP		POT TEMP	SALINITY		SIGMA		SVA	DYN HT	OXYGEN		OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS							
	M	DEG C		DEG C			THETA				mL/L		PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db							
2	0 ISL	15.70	15.70	15.70	33.329	24.531	339.5	0.000	5.78	102.0	2.0	0.34	0.2	0.00	0.12	0.03	0.00	0.12	0.03	0							
	1	15.70	15.70	15.70	33.329	24.531	339.5	0.003	5.78	102.0	2.0	0.34	0.2	0.00	0.12	0.03	0.00	0.12	0.03	1							
	10 ISL	15.69	15.69	15.69	33.328	24.533	339.6	0.034	5.78	102.0	2.2	0.33	0.2	0.00	0.12	0.03	0.00	0.12	0.03	10							
2	15	15.68	15.68	15.68	33.328	24.535	339.5	0.051	5.78	102.0	2.4	0.33	0.2	0.00	0.12	0.03	0.00	0.12	0.03	15							
	20 ISL	15.68	15.68	15.68	33.328	24.535	339.7	0.068	5.78	102.0	2.4	0.33	0.2	0.00	0.12	0.03	0.00	0.12	0.03	20							
	30 ISL	15.67	15.67	15.67	33.328	24.538	339.7	0.102	5.78	101.9	2.4	0.34	0.2	0.00	0.12	0.03	0.00	0.12	0.03	30							
2	31	15.67	15.67	15.67	33.328	24.538	339.8	0.105	5.78	101.9	2.4	0.34	0.2	0.00	0.12	0.03	0.00	0.12	0.03	31							
2	46	15.32	15.31	15.31	33.306	24.599	334.4	0.156	5.84	102.3	2.5	0.34	0.2	0.00	0.13	0.04	0.00	0.13	0.04	46							
	50 ISL	15.03	15.02	15.02	33.276	24.639	330.7	0.169	5.89	102.5	2.4	0.35	0.1	0.00	0.15	0.05	0.00	0.15	0.05	50							
	55	14.63	14.62	14.62	33.244	24.700	324.9	0.186	5.92	102.2	2.3	0.36	0.1	0.00	0.18	0.06	0.00	0.18	0.06	55							
2	65	14.05	14.04	14.04	33.264	24.838	312.0	0.217	5.76	98.3	3.0	0.43	0.4	0.03	0.60	0.39	0.60	0.39	0.60	65							
2	75	13.34	13.33	13.33	33.308	25.017	295.2	0.248	5.43	91.3	4.6	0.61	3.3	0.10	0.60	0.45	0.75	0.45	0.75	75							
2	86	12.51	12.50	12.50	33.370	25.229	275.2	0.279	4.92	81.3	7.4	0.88	7.4	0.10	0.41	0.35	0.86	0.35	0.86	86							
	95	11.84	11.83	11.83	33.445	25.414	257.7	0.303	4.65	75.8	9.3	1.04	10.3	0.03	0.20	0.18	0.95	0.18	0.95	95							
	100 ISL	11.37	11.36	11.36	33.448	25.503	249.3	0.316	4.52	73.0	10.9	1.14	11.9	0.02	0.14	0.14	1.00	0.14	1.00	100							
2	108	10.66	10.65	10.65	33.447	25.629	237.4	0.335	4.35	69.1	13.5	1.29	14.3	0.01	0.10	0.12	1.08	0.10	1.08	108							
2	125 ISL	9.87	9.86	9.86	33.558	25.851	216.5	0.374	4.05	63.3	17.5	1.50	17.8	0.01	0.03	0.05	1.26	0.03	1.26	126							
	126	9.84	9.83	9.83	33.566	25.862	215.5	0.376	4.03	63.0	17.7	1.51	18.0	0.01	0.03	0.05	1.27	0.03	1.27	127							
	145	9.51	9.49	9.49	33.664	25.993	203.4	0.416	3.69	57.3	21.1	1.68	20.3	0.01	0.01	0.04	1.46	0.01	1.46	145							
2	150 ISL	9.48	9.46	9.46	33.698	26.025	200.5	0.426	3.56	55.2	22.0	1.72	20.9	0.01	0.01	0.04	1.51	0.01	1.51	150							
	169	9.37	9.35	9.35	33.821	26.139	190.0	0.463	3.10	48.0	25.4	1.87	23.1	0.01	0.01	0.04	1.70	0.01	1.70	169							
	198	8.67	8.65	8.65	33.930	26.336	171.7	0.515	2.89	44.1	31.1	2.01	25.7	0.00	0.00	0.00	1.99	0.00	1.99	198							
2	200 ISL	8.63	8.61	8.61	33.936	26.346	170.6	0.519	2.88	43.9	31.5	2.02	25.8	0.00	0.00	0.00	2.01	0.00	2.01	200							
	228	8.23	8.21	8.21	34.015	26.470	159.3	0.565	2.63	39.7	36.2	2.13	27.7	0.00	0.00	0.00	2.29	0.00	2.29	228							
	250 ISL	8.19	8.16	8.16	34.085	26.531	153.9	0.599	2.26	34.1	39.7	2.28	29.1	0.00	0.00	0.00	2.51	0.00	2.51	250							
2	269	8.15	8.12	8.12	34.129	26.572	150.4	0.628	1.93	29.1	42.6	2.41	30.3	0.00	0.00	0.00	2.71	0.00	2.71	269							
	300 ISL	7.91	7.88	7.88	34.160	26.632	145.1	0.674	1.61	24.2	47.0	2.54	31.7	0.00	0.00	0.00	3.02	0.00	3.02	300							
	319	7.71	7.68	7.68	34.170	26.669	141.8	0.701	1.46	21.8	49.8	2.60	32.5	0.00	0.00	0.00	3.21	0.00	3.21	319							
2	378	7.01	6.97	6.97	34.231	26.817	128.3	0.781	0.92	13.5	60.8	2.86	35.6	0.00	0.00	0.00	3.80	0.00	3.80	378							
	400 ISL	6.86	6.82	6.82	34.238	26.843	126.1	0.809	0.80	11.7	63.5	2.94	36.3	0.00	0.00	0.00	4.03	0.00	4.03	400							
	440	6.63	6.59	6.59	34.247	26.881	122.9	0.859	0.63	9.2	68.0	3.06	37.4	0.00	0.00	0.00	4.43	0.00	4.43	440							
2	500 ISL	6.13	6.09	6.09	34.288	26.979	114.0	0.930	0.42	6.1	76.9	3.16	39.1	0.00	0.00	0.00	5.03	0.00	5.03	500							
	516	6.00	5.95	5.95	34.299	27.005	111.7	0.948	0.37	5.3	79.3	3.19	39.6	0.00	0.00	0.00	5.19	0.00	5.19	516							

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM		WIND SPEED		WAVES		WEA		BAROMETER		DRY		WET		SECCHI/FOREL		CLD AMT		TYPE	
32 21.5 N		118 33.5 U		23/03/94		1838 UTC		1292 m		300 18 kn		290 06 06				1014.9 mb		13.9 C		11.2 C		27m 02		2/8		cts	
CA. T	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN H T	OXYGEN	OXY	SIO3	P04	N03	N02	CHL-A	PHAE0	PRESS											
m		DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db											
0	ISL	15.44	15.44	33.312	24.575	335.2	0.000	5.80	101.8	2.5	0.34	0.0	0.00	0.14	0.04	0											
2	A	15.44	15.44	33.312	24.575	335.3	0.007	5.80	101.8	2.5	0.34	0.0	0.00	0.14	0.04	2											
10	ISL	15.43	15.43	33.311	24.577	335.3	0.034	5.80	101.8	2.5	0.34	0.0	0.00	0.14	0.04	10											
17	A	15.42	15.42	33.310	24.579	335.4	0.057	5.81	101.9	2.4	0.34	0.0	0.00	0.14	0.04	17											
20	ISL	15.38	15.38	33.308	24.586	334.8	0.067	5.82	102.0	2.4	0.34	0.0	0.00	0.14	0.04	20											
30	ISL	15.27	15.27	33.301	24.605	333.3	0.100	5.83	102.0	2.3	0.34	0.1	0.00	0.16	0.05	30											
34	A	15.22	15.21	33.298	24.614	332.6	0.114	5.84	102.0	2.3	0.34	0.1	0.00	0.16	0.05	34											
42		14.62	14.61	33.271	24.723	322.4	0.140	5.89	101.7	2.4	0.36	0.1	0.00	0.24	0.14	42											
50	ISL	14.06	14.05	33.267	24.838	311.6	0.165	5.78	98.6	3.3	0.43	0.7	0.03	0.46	0.31	50											
51	A	13.99	13.98	33.268	24.853	310.2	0.168	5.76	98.1	3.4	0.44	0.8	0.04	0.49	0.33	51											
61		13.40	13.39	33.294	24.994	297.0	0.199	5.41	91.1	4.9	0.60	3.3	0.15	0.56	0.49	61											
70	A	13.07	13.06	33.350	25.103	286.8	0.225	5.19	86.8	5.8	0.69	5.0	0.13	0.50	0.53	70											
75	ISL	12.53	12.52	33.365	25.221	275.7	0.239	5.00	82.7	7.1	0.81	6.9	0.10	0.43	0.45	75											
79		12.09	12.08	33.377	25.314	266.9	0.250	4.84	79.3	8.3	0.91	8.5	0.07	0.36	0.37	79											
89		11.62	11.61	33.414	25.431	256.0	0.276	4.56	74.0	10.6	1.08	11.5	0.03	0.22	0.26	89											
100	A	11.16	11.15	33.441	25.536	246.2	0.304	4.41	70.9	12.2	1.19	13.1	0.02	0.15	0.18	100											
109		10.67	10.66	33.478	25.651	235.3	0.325	4.24	67.4	14.2	1.31	15.1	0.01	0.10	0.11	110											
125		10.17	10.16	33.521	25.771	224.2	0.362	4.12	64.8	16.2	1.42	17.0	0.00	0.05	0.07	126											
145		9.38	9.36	33.702	26.044	198.5	0.404	3.54	54.8	22.4	1.71	21.5	0.00	0.00	0.03	146											
150	ISL	9.25	9.23	33.736	26.092	194.0	0.414	3.45	53.3	23.6	1.75	22.2	0.00	0.00	0.03	151											
169		8.91	8.89	33.841	26.228	181.4	0.450	3.21	49.2	27.2	1.86	24.1	0.00	0.00	0.02	170											
200		8.64	8.62	33.953	26.358	169.5	0.504	2.92	44.5	31.5	1.98	26.0	0.00	0.00	0.01	201											
229		8.18	8.16	34.035	26.493	157.1	0.552	2.56	38.6	37.4	2.14	28.2	0.00	0.00	0.00	230											
250	ISL	7.96	7.93	34.063	26.548	152.2	0.584	2.35	35.3	40.3	2.23	29.5	0.00	0.00	0.00	251											
268		7.82	7.79	34.079	26.581	149.3	0.611	2.18	32.6	43.4	2.31	30.4	0.00	0.00	0.00	270											
300	ISL	7.62	7.59	34.119	26.642	144.0	0.658	1.82	27.1	47.8	2.45	31.9	0.00	0.00	0.00	302											
319		7.49	7.46	34.141	26.678	140.8	0.685	1.60	23.8	50.7	2.53	32.8	0.00	0.00	0.00	321											
377		6.78	6.75	34.190	26.816	128.2	0.763	0.96	14.0	63.2	2.84	36.4	0.00	0.00	0.00	379											
400	ISL	6.62	6.58	34.215	26.857	124.5	0.792	0.79	11.5	66.5	2.91	37.2	0.00	0.00	0.00	403											
437		6.44	6.40	34.252	26.910	119.9	0.838	0.59	8.6	70.8	3.00	38.0	0.00	0.00	0.00	440											
500	ISL	6.13	6.09	34.295	26.985	113.4	0.911	0.41	5.9	77.5	3.10	39.3	0.00	0.00	0.00	503											
511		6.07	6.02	34.302	26.998	112.3	0.923	0.38	5.5	78.7	3.12	39.5	0.00	0.00	0.00	514											

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS;

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/F0REL	CLD AMT	TYPE		
32 11.0 N	118 53.1 W	23/03/94	2233 UTC	1459 m	290 18 kn		290 05 05		1014.8 mb	14.8 C	11.2 C	29m 02	5/8	CU		
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	P04	N03	N02	CHL-A	PHAE0	PRESS
m	DEG C	DEG C			THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db
0 ISL	15.56	15.56	33.314	24.550	337.6	0.000		5.80	102.1	2.4	0.33	0.1	0.00	0.14	0.03	0
2	15.56	15.56	33.314	24.550	337.6	0.007		5.80	102.1	2.4	0.33	0.1	0.00	0.14	0.03	2
10 ISL	15.56	15.56	33.314	24.551	337.9	0.034		5.81	102.2	2.3	0.33	0.1	0.00	0.14	0.04	10
15	15.55	15.55	33.314	24.553	337.8	0.051		5.81	102.2	2.2	0.33	0.1	0.00	0.14	0.04	15
20 ISL	15.54	15.54	33.314	24.555	337.7	0.068		5.81	102.2	2.2	0.33	0.1	0.00	0.14	0.04	20
30 ISL	15.52	15.52	33.313	24.559	337.6	0.101		5.81	102.1	2.2	0.32	0.1	0.00	0.15	0.03	30
31	15.52	15.52	33.313	24.559	337.7	0.105		5.81	102.1	2.2	0.32	0.1	0.00	0.15	0.03	31
45	15.35	15.34	33.307	24.593	334.9	0.152		5.82	102.0	2.2	0.33	0.1	0.00	0.17	0.05	45
50 ISL	15.04	15.03	33.284	24.643	330.3	0.168		5.87	102.2	2.3	0.33	0.1	0.00	0.19	0.06	50
56	14.64	14.63	33.257	24.708	324.2	0.188		5.93	102.4	2.4	0.34	0.1	0.00	0.24	0.10	56
66	14.25	14.24	33.248	24.784	317.2	0.220		5.93	101.6	2.5	0.36	0.0	0.00	0.42	0.24	66
75	13.54	13.53	33.300	24.971	299.6	0.248		5.55	93.7	4.2	0.53	2.3	0.11	0.82	0.66	75
85	12.47	12.46	33.363	25.231	275.0	0.277		4.97	82.1	7.0	0.82	7.1	0.09	0.43	0.45	85
95	11.69	11.68	33.411	25.416	257.6	0.303		4.62	75.1	9.7	1.04	10.8	0.03	0.24	0.24	95
100 ISL	11.37	11.36	33.444	25.500	249.6	0.316		4.43	71.5	11.5	1.17	12.5	0.03	0.18	0.18	100
109	10.86	10.85	33.502	25.637	236.7	0.338		4.13	66.0	14.6	1.37	15.2	0.02	0.12	0.13	109
124	10.02	10.01	33.557	25.825	219.0	0.372		3.91	61.3	17.3	1.48	17.3	0.01	0.04	0.08	125
125 ISL	9.99	9.98	33.559	25.831	218.4	0.374		3.90	61.1	17.4	1.49	17.9	0.01	0.04	0.08	126
144	9.60	9.58	33.608	25.935	208.9	0.415		3.82	59.4	19.6	1.58	19.7	0.01	0.02	0.04	145
150 ISL	9.47	9.45	33.645	25.985	204.2	0.427		3.76	58.3	20.6	1.61	20.3	0.01	0.01	0.04	151
169	9.08	9.06	33.774	26.149	189.0	0.465		3.52	54.1	24.2	1.73	22.3	0.01	0.00	0.03	170
199	8.74	8.72	33.904	26.304	174.7	0.519		3.04	46.4	29.4	1.93	25.2	0.01	0.00	0.03	200
200 ISL	8.72	8.70	33.908	26.311	174.1	0.521		3.03	46.3	29.6	1.94	25.3	0.01	0.00	0.00	201
229	8.27	8.25	34.010	26.460	160.3	0.569		2.65	40.1	35.9	2.11	27.8	0.00	0.00	0.00	230
250 ISL	8.10	8.07	34.051	26.518	155.1	0.602		2.42	36.5	39.2	2.20	29.0	0.00	0.00	0.00	251
268	7.98	7.95	34.075	26.555	151.9	0.630		2.22	33.4	41.9	2.28	29.9	0.00	0.00	0.00	270
300 ISL	7.57	7.54	34.117	26.648	143.4	0.677		1.78	26.5	48.7	2.48	32.2	0.00	0.00	0.00	302
317	7.36	7.33	34.136	26.693	139.3	0.701		1.55	23.0	52.3	2.58	33.3	0.00	0.00	0.00	319
377	7.03	6.99	34.187	26.779	131.9	0.783		1.07	15.7	59.8	2.78	35.5	0.00	0.00	0.00	379
400 ISL	6.85	6.81	34.207	26.820	128.2	0.813		0.89	13.0	63.3	2.86	36.4	0.00	0.00	0.00	402
438	6.56	6.52	34.240	26.885	122.4	0.860		0.64	9.3	68.9	2.98	37.7	0.00	0.00	0.00	441
500 ISL	6.29	6.24	34.284	26.956	116.4	0.934		0.46	6.7	75.3	3.08	38.9	0.00	0.00	0.00	503
512	6.24	6.19	34.293	26.969	115.2	0.948		0.43	6.2	76.5	3.10	39.1	0.00	0.00	0.00	515

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403						STATION 93				55			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMI	TYPE	
32 0.9 N	119 13.7 U	23/03/94	0344 UTC	1586 m	300	10 kn			1014.8 mb	13.3 C	10.4 C						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.63	15.63	33.337	24.552	337.4	0.000	5.77	101.7	3.1	0.34	0.2	0.00	0.09	0.02	0	
2	1	15.63	15.63	33.337	24.552	337.4	0.003	5.77	101.7	3.1	0.34	0.2	0.00	0.09	0.02	1	
	10 ISL	15.63	15.63	33.335	24.551	337.8	0.034	5.78	101.9	3.0	0.34	0.2	0.00	0.09	0.02	10	
2	14	15.63	15.63	33.334	24.551	338.0	0.047	5.79	102.0	3.0	0.34	0.2	0.00	0.09	0.02	14	
	20 ISL	15.63	15.63	33.334	24.551	338.2	0.068	5.78	101.9	3.0	0.34	0.2	0.00	0.09	0.02	20	
2	30	15.62	15.62	33.339	24.557	337.9	0.101	5.77	101.7	2.9	0.35	0.1	0.00	0.10	0.02	30	
	2	45	15.39	15.38	33.296	24.576	0.152	5.82	102.0	2.9	0.35	0.1	0.00	0.12	0.03	45	
	50 ISL	15.00	14.99	33.278	24.647	329.9	0.169	5.84	101.6	3.0	0.35	0.1	0.00	0.15	0.05	50	
2	55	14.58	14.57	33.261	24.724	322.7	0.185	5.86	101.0	3.1	0.35	0.1	0.00	0.22	0.09	55	
	2	65	14.13	14.12	33.236	24.800	0.217	5.85	99.9	3.4	0.40	0.3	0.01	0.55	0.33	65	
2	74	13.32	13.31	33.291	25.008	296.0	0.244	5.42	91.1	5.1	0.59	3.3	0.10	0.54	0.37	74	
	75 ISL	13.27	13.26	33.302	25.027	294.3	0.247	5.39	90.5	5.2	0.60	3.5	0.10	0.53	0.36	75	
z	85	12.92	12.91	33.413	25.182	279.7	0.276	5.10	85.1	6.3	0.72	5.7	0.05	0.37	0.27	85	
z	95	12.42	12.41	33.472	25.325	266.3	0.303	4.77	78.7	8.4	0.91	8.6	0.03	0.25	0.24	95	
	100 ISL	11.96	11.95	33.459	25.403	259.0	0.316	4.62	75.5	9.9	1.02	10.4	0.02	0.21	0.22	100	
2	109	11.11	11.10	33.436	25.541	245.9	0.339	4.39	70.5	12.6	1.22	13.5	0.02	0.15	0.18	109	
	2	123	10.40	10.39	33.506	25.720	0.372	4.12	65.1	16.1	1.41	16.6	0.02	0.06	0.08	124	
	125 ISL	10.31	10.30	33.518	25.745	226.7	0.377	4.08	64.4	16.5	1.43	17.0	0.02	0.05	0.08	126	
2	144	9.57	9.55	33.636	25.961	206.4	0.418	3.79	58.9	20.3	1.61	20.1	0.01	0.02	0.04	145	
	2	150 ISL	9.40	9.38	33.676	26.020	0.430	3.73	57.7	21.4	1.64	20.7	0.01	0.02	0.04	151	
2	168	9.03	9.01	33.784	26.164	187.4	0.465	3.60	55.3	24.3	1.72	22.1	0.01	0.01	0.03	169	
	2	199	8.69	8.67	33.893	26.303	0.521	3.30	50.3	28.3	1.85	24.2	0.01	0.00	0.02	200	
	2	200 ISL	8.67	8.65	33.895	26.308	0.523	3.30	50.3	28.4	1.85	24.3	0.01			201	
	2	229	8.22	8.20	33.952	26.422	0.572	3.13	47.3	33.0	1.94	26.2	0.01			230	
	2	250 ISL	8.07	8.04	34.022	26.499	0.606	2.65	39.9	37.7	2.12	28.2	0.00			251	
	2	268	7.97	7.94	34.079	26.559	0.634	2.20	33.1	41.9	2.29	30.0	0.00			269	
	2	300 ISL	7.63	7.60	34.114	26.637	0.681	1.83	27.3	47.6	2.45	32.0	0.00			302	
	2	317	7.44	7.41	34.124	26.672	0.705	1.69	25.1	50.4	2.52	32.9	0.00			319	
	2	376	7.05	7.01	34.202	26.788	0.786	1.00	14.7	60.0	2.79	35.7	0.00			378	
	2	400 ISL	6.83	6.79	34.221	26.834	0.817	0.82	12.0	64.0	2.88	36.7	0.00			402	
	2	436	6.51	6.47	34.243	26.894	0.861	0.62	9.0	69.6	2.99	38.0	0.00			439	
	2	500 ISL	6.15	6.11	34.280	26.970	0.937	0.44	6.3	76.4	3.09	39.4	0.00			503	
	2	511	6.09	6.04	34.287	26.984	0.949	0.41	5.9	77.6	3.11	39.6	0.00			514	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403						STATION 93				60			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL		CLD	AMT	TYPE	
31 51.1 N	119 34.2 W	23/03/94	0811 UTC	1839 m	210	06 kn			1013.9 mb	14.0 C	10.5 C						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	15.49	15.49	33.325	24.574	335.3	0.000	5.79	101.7	1.7	0.35	0.3	0.00	0.10	0.04	0	
2	2	15.49	15.49	33.325	24.574	335.4	0.007	5.79	101.7	1.7	0.35	0.3	0.00	0.10	0.04	2	
	10 ISL	15.50	15.50	33.321	24.569	336.1	0.034	5.80	101.9	2.0	0.35	0.3	0.00	0.10	0.03	10	
2	16	15.51	15.51	33.318	24.565	336.7	0.054	5.80	102.0	2.3	0.34	0.3	0.00	0.10	0.02	16	
	20 ISL	15.51	15.51	33.318	24.565	336.8	0.067	5.80	102.0	2.3	0.34	0.3	0.00	0.10	0.02	20	
	30 ISL	15.50	15.50	33.316	24.566	337.0	0.101	5.79	101.8	2.3	0.33	0.3	0.00	0.10	0.03	30	
2	32	15.50	15.50	33.316	24.566	337.1	0.108	5.79	101.8	2.3	0.33	0.3	0.00	0.10	0.03	32	
	2	46	15.44	15.43	33.314	24.578	0.155	5.79	101.6	2.4	0.33	0.2	0.00	0.11	0.03	46	
	2	50 ISL	15.05	15.04	33.293	24.648	0.168	5.81	101.2	2.5	0.34	0.2	0.00	0.20	0.11	50	
	2	56	14.38	14.37	33.265	24.770	0.188	5.83	100.1	2.7	0.38	0.2	0.00	0.35	0.23	56	
	2	66	13.66	13.65	33.263	24.917	0.219	5.66	95.8	3.7	0.49	1.6	0.10	0.51	0.33	66	
	2	75	12.93	12.92	33.312	25.102	0.245	5.25	37.5	5.4	0.69	5.0	0.15	0.51	0.31	75	
	2	84	12.43	12.42	33.359	25.236	0.271	5.00	22.5	6.8	0.83	7.4	0.06	0.44	0.31	84	
	2	97	11.16	11.15	33.434	25.530	0.304	4.46	71.7	10.9	1.15	12.4	0.02	0.19	0.19	97	
	2	100 ISL	10.96	10.95	33.448	25.577	0.312	4.39	70.2	11.9	1.21	13.4	0.02	0.15	0.17	100	
	2	109	10.52	10.51	33.484	25.682	0.333	4.22	66.9	14.4	1.34	15.7	0.01	0.08	0.11	109	
	2	125 ISL	10.35	10.34	33.524	25.743	0.370	4.00	63.2	15.9	1.44	17.1	0.01	0.07	0.09	126	
	2	126	10.34	10.33	33.527	25.747	0.372	3.99	63.0	16.0	1.45	17.2	0.01	0.07	0.09	127	
	2	144	9.58	9.56	33.679	25.993	0.411	3.54	35.0	21.3	1.69	21.1	0.00	0.01	0.04	145	
	2	150 ISL	9.34	9.32	33.717	26.062	0.423	3.51	34.3	22.8	1.73	21.9	0.00	0.01	0.04	151	
	2	170	8.68	8.66	33.817	26.245	0.461	3.42	52.1	26.9	1.82	23.8	0.00	0.00	0.03	171	
	2	199	8.26	8.24	33.900	26.375	0.511	3.29	49.7	30.4	1.89	25.3	0.00	0.00	0.03	200	
	2	200 ISL	8.24	8.22	33.904	26.381	0.513	3.28	49.5	30.6	1.90	25.4	0.00			201	
	2	227	7.83	7.81	34.010	26.525	0.556	2.84	42.5	37.5	2.07	27.9	0.00			228	
	2	250 ISL	7.56	7.54	34.031	26.581	0.591	2.62	39.0	41.6	2.17	29.4	0.00			251	
	2	267	7.38	7.35	34.033	26.608	0.616	2.46	36.5	44.6	2.25	30.4	0.00			269	
	2	300 ISL	6.95	6.92	34.074	26.700	0.663	1.86	27.3	53.1	2.50	33.4	0.00			302	
	2	316	6.77	6.74	34.098	26.744	0.685	1.56	22.8	57.1	2.62	34.7	0.00			318	
	2	377	6.62	6.59	34.184	26.832	0.764	0.93	13.5	64.5	2.84	36.7	0.00			379	
	2	400 ISL	6.55	6.51	34.217	26.868	0.793	0.75	10.9	67.4	2.92	37.3	0.00			403	
	2	438	6.39	6.35	34.262	26.925	0.839	0.52	7.5	72.1	3.02	38.3	0.00			441	
	2	500 ISL	5.98	5.94	34.278	26.990	0.910	0.41	5.9	79.0	3.11	39.7	0.00			503	
	2	514	5.89	5.85	34.282	27.005	0.926	0.39	5.6	80.5	3.13	40.0	0.00			517	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 93 70				
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPE	ED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI /	FOREL	CLD	AMT	TYPE
31 31.0 N		120 15.2 U		24/03/94	18 25 UTC	3934 m	180	14 kn	180 04 06	1	1010.8 mb	14.3 C	12.0 C	29ra	01	6/8		cu
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI O3	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/l	PCT	LM/l	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.57	15.57	33.327	24.558	336.8	0.000	5.78	101.7	2.4	0.33	0.2	0.00	0.13	0.03			0
2	2 A	15.57	15.57	33.327	24.558	336.9	0.007	5.78	101.7	2.4	0.33	0.2	0.00	0.13	0.03			2
	10 ISL	15.57	15.57	33.327	24.558	337.1	0.034	5.78	101.7	2.4	0.33	0.2	0.00	0.13	0.03			10
2	18 A	15.56	15.56	33.327	24.561	337.1	0.061	5.79	101.9	2.4	0.33	0.2	0.00	0.13	0.04			18
	20 ISL	15.56	15.56	33.327	24.561	337.2	0.067	5.79	101.9	2.4	0.33	0.2	0.00	0.13	0.04			20
	30 ISL	15.55	15.55	33.326	24.563	337.3	0.101	5.79	101.9	2.3	0.33	0.2	0.00	0.13	0.04			30
2	37 A	15.54	15.53	33.325	24.565	337.4	0.125	5.79	101.8	2.3	0.33	0.2	0.00	0.13	0.04			37
2	45	15.10	15.09	33.289	24.634	331.0	0.151	5.88	102.5	2.3	0.34	0.2	0.00	0.20	0.07			45
	50 ISL	14.81	14.80	33.271	24.682	326.5	0.168	5.89	102.0	2.5	0.35	0.2	0.00	0.29	0.13			50
2	55 A	14.48	14.47	33.261	24.745	320.6	0.184	5.90	101.5	2.3	0.36	0.2	0.00	0.40	0.22			55
2	66	13.53	13.52	33.289	24.964	300.0	0.218	5.56	93.8	4.3	0.54	2.2	0.12	0.71	0.58			66
	75 ISL	12.96	12.95	33.283	25.073	289.8	0.245	5.27	87.9	5.9	0.68	4.7	0.20	0.50	0.42			75
2	76 A	12.90	12.89	33.283	25.085	288.7	0.248	5.24	87.3	6.1	0.70	5.0	0.20	0.47	0.39			76
2	85	12.21	12.20	33.316	25.244	273.7	0.273	4.98	81.8	8.3	0.87	7.9	0.13	0.31	0.27			85
2	95	11.67	11.66	33.373	25.390	260.0	0.300	4.69	76.2	10.3	1.03	10.4	0.05	0.19	0.23			95
	100 ISL	11.28	11.27	33.400	25.482	251.3	0.312	4.56	73.4	11.8	1.12	12.0	0.04	0.14	0.18			100
2	104 A	10.96	10.95	33.422	25.557	244.3	0.322	4.46	71.3	13.0	1.20	13.3	0.03	0.10	0.14			104
2	124	9.71	9.70	33.563	25.881	213.6	0.368	3.98	62.0	18.6	1.51	18.4	0.01	0.03	0.06			124
	125 ISL	9.67	9.66	33.572	25.895	212.3	0.370	3.95	61.5	18.9	1.52	18.6	0.01	0.03	0.06			125
2	145	9.20	9.18	33.742	26.104	192.7	0.411	3.39	52.3	24.3	1.77	22.6	0.00	0.00	0.05			145
	150 ISL	9.12	9.10	33.773	26.141	189.3	0.420	3.31	51.0	25.2	1.80	23.1	0.00	0.00	0.05			150
2	169	8.92	8.90	33.865	26.245	179.8	0.455	3.10	47.5	28.1	1.89	24.5	0.01	0.00	0.03			169
2	199	8.69	8.67	33.953	26.351	170.3	0.508	2.75	42.0	32.0	2.03	26.4	0.01	0.00	0.04			199
	200 ISL	8.68	8.66	33.956	26.354	169.9	0.510	2.74	41.8	32.1	2.03	26.4	0.01	0.00	0.04			200
2	228	8.38	8.36	34.032	26.460	160.3	0.556	2.50	37.9	36.2	2.14	28.0	0.00	0.00	0.00			228
	250 ISL	8.08	8.05	34.061	26.529	154.1	0.590	2.33	35.1	39.8	2.22	29.3	0.00	0.00	0.00			250
2	269	7.82	7.79	34.077	26.580	149.5	0.519	2.17	32.5	43.0	2.30	30.4	0.00	0.00	0.00			269
	300 ISL	7.48	7.45	34.102	26.649	143.3	0.565	1.86	27.6	48.3	2.44	32.2	0.00	0.00	0.00			300
2	318	7.33	7.30	34.118	26.683	140.3	0.590	1.66	24.6	51.3	2.53	33.1	0.00	0.00	0.00			318
2	378	7.14	7.10	34.207	26.780	131.9	0.772	1.01	14.9	59.1	2.79	35.3	0.00	0.00	0.00			378
	400 ISL	6.92	6.88	34.215	26.817	123.6	0.300	0.87	12.8	62.5	2.86	36.2	0.00	0.00	0.00			400
2	437	6.52	6.48	34.222	26.876	125.2	0.347	0.71	10.3	68.1	2.95	37.7	0.00	0.00	0.00			437
	500 ISL	6.22	6.18	34.275	26.958	116.1	0.722	0.47	6.8	74.8	3.08	39.0	0.00	0.00	0.00			500
2	512	6.16	6.11	34.285	26.973	114.7	0.736	0.42	6.1	76.1	3.10	39.3	0.00	0.00	0.00			512

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 93		80	
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI /	FOREL	CLD	AMT	TYPE
31 10.9 N		120 5 5.5 W		25/03/94	0142 UTC	3847 m	2 20 09 kn	190 05 05	1	1008.9 mb	14.0 c	12.0 c	7/8			SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	S 10 3	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/l	ug/l	db	
	0 ISL	16.08	16.08	33.444	24.534	339.2	0.000	5.69	101.2	3.1	0.31	0.2	0.00	0.09	0.02	0	
2	2	16.08	16.08	33.444	24.534	339.2	0.107	5.69	101.2	3.1	0.31	0.2	0.00	0.09	0.02	2	
	10 ISL	16.08	16.08	33.444	24.534	339.5	0.034	5.68	101.1	3.0	0.31	0.2	0.00	0.10	0.03	10	
2	15	16.08	16.08	33.445	24.535	339.5	0.151	5.68	101.1	3.0	0.31	0.2	0.00	0.10	0.03	15	
	20 ISL	16.07	16.07	33.442	24.535	339.7	0.068	5.68	101.0	3.0	0.31	0.2	0.00	0.10	0.03	20	
2	30	16.04	16.04	33.437	24.538	339.7	0.102	5.68	101.0	2.9	0.31	0.2	0.00	0.10	0.02	30	
2	45	15.78	15.77	33.390	24.561	338.0	0.153	5.75	101.7	2.9	0.33	0.2	0.00	0.11	0.03	45	
	50 ISL	15.75	15.74	33.386	24.565	337.7	0.170	5.76	101.8	2.9	0.33	0.2	0.00	0.12	0.03	50	
2	60	15.68	15.67	33.382	24.578	336.3	0.203	5.77	101.8	2.8	0.33	0.2	0.00	0.14	0.03	60	
2	75	15.39	15.38	33.365	24.630	332.3	0.253	5.72	100.3	3.0	0.34	0.2	0.00	0.23	0.11	75	
2	84	14.83	14.82	33.371	24.756	320.5	0.283	5.65	98.0	3.3	0.38	0.3	0.02	0.40	0.29	84	
2	94	14.57	14.56	33.415	24.846	312.2	0.314	5.49	94.7	3.8	0.45	1.0	0.07	0.37	0.28	94	
	100 ISL	14.24	14.23	33.442	24.937	303.7	0.333	5.36	91.9	4.3	0.52	2.1	0.07	0.34	0.25	100	
2	106	13.78	13.76	33.464	25.049	293.1	0.351	5.20	88.3	5.1	0.61	3.6	0.07	0.30	0.21	106	
2	113	13.10	13.08	33.478	25.198	279.0	0.371	5.00	83.7	6.5	0.74	6.0	0.05	0.22	0.19	113	
2	124	12.70	12.68	33.524	25.312	268.3	0.401	4.84	80.4	7.6	0.84	7.8	0.04	0.18	0.19	124	
	125 ISL	12.60	12.58	33.519	25.328	266.9	0.404	4.83	80.1	7.8	0.85	8.0	0.04	0.17	0.19	126	
2	139	11.07	11.05	33.457	25.565	244.3	0.439	4.66	74.7	10.9	1.08	11.8	0.02	0.10	0.12	140	
	150 ISL	10.45	10.43	33.504	25.711	230.5	0.466	4.39	69.5	13.6	1.26	14.6	0.01	0.06	0.09	151	
2	163	10.03	10.01	33.597	25.855	217.0	0.495	4.06	63.7	16.9	1.44	17.5	0.01	0.03	0.06	164	
2	193	9.19	9.17	33.792	26.146	189.8	0.556	3.64	56.1	23.4	1.68	21.5	0.00	0.00	0.03	194	
	200 ISL	9.06	9.04	33.839	26.203	184.4	0.569	3.50	53.8	25.1	1.74	22.4	0.00			201	
2	228	8.67	8.65	33.991	26.384	167.7	0.618	2.95	45.0	31.6	1.97	25.7	0.00			229	
	250 ISL	8.39	8.36	34.040	26.466	160.2	0.654	2.75	41.7	35.2	2.07	27.1	0.00			251	
2	269	8.14	8.11	34.055	26.515	155.8	0.684	2.63	39.7	38.2	2.13	28.1	0.00			270	
	300 ISL	7.60	7.57	34.059	26.598	148.2	0.731	2.38	35.4	44.6	2.27	30.3	0.00			302	
2	318	7.28	7.25	34.056	26.641	144.1	0.758	2.23	33.0	48.4	2.36	31.6	0.00			320	
	378 ISL	6.57	6.54	34.078	26.755	133.7	0.841	1.65	24.0	59.6	2.63	35.2	0.00			380	
2	400	6.38	6.34	34.094	26.793	130.3	0.870	1.43	20.7	63.5	2.72	36.3	0.00			402	
	437 ISL	6.10	6.06	34.127	26.855	124.7	0.917	1.09	15.7	69.8	2.87	38.0	0.00			440	
2	500	5.72	5.68	34.197	26.958	115.4	0.993	0.67	9.6	79.3	3.05	40.0	0.00			503	
2	513	5.64	5.60	34.212	26.980	113.5	1.008	0.58	8.3	81.2	3.09	40.4	0.00			516	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403								STATION 93 90						
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE	
30 51.0 N		121 35.6 W		25/03/94	0824 UTC	4102 m	240	18 kn			1010.5 mb	14.9 c	12.5 c					
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS		
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db		
	0 ISL	15.41	15.41	33.389	24.641	328.9	0.000	5.76	101.1	3.2	0.33	0.2	0.00	0.10	0.03		0	
2	2	15.41	15.41	33.389	24.641	329.0	0.007	5.76	101.1	3.2	0.33	0.2	0.00	0.10	0.03		2	
	10 ISL	15.42	15.42	33.390	24.640	329.3	0.033	5.75	100.9	3.1	0.33	0.2	0.00	0.10	0.03		10	
2	16	15.43	15.43	33.392	24.640	329.6	0.053	5.75	101.0	3.0	0.32	0.2	0.00	0.10	0.03		16	
	20 ISL	15.44	15.44	33.395	24.640	329.7	0.066	5.75	101.0	3.0	0.32	0.2	0.00	0.10	0.03		20	
2	30	15.46	15.46	33.401	24.641	329.9	0.099	5.75	101.0	3.0	0.31	0.2	0.00	0.10	0.03		30	
2	45	15.48	15.47	33.401	24.637	330.8	0.148	5.75	101.1	3.0	0.31	0.1	0.00	0.09	0.03		45	
	50 ISL	15.47	15.46	33.402	24.640	330.6	0.165	5.75	101.0	3.0	0.31	0.1	0.00	0.09	0.03		50	
2	61	15.46	15.45	33.402	24.642	330.7	0.201	5.75	101.0	2.9	0.31	0.1	0.00	0.10	0.03		61	
2	74	15.46	15.45	33.422	24.658	329.6	0.244	5.77	101.4	2.9	0.30	0.1	0.00	0.12	0.04		74	
	75 ISL	15.45	15.44	33.430	24.667	328.9	0.248	5.76	101.2	2.9	0.30	0.1	0.00	0.13	0.05		75	
2	85	15.31	15.30	33.539	24.782	318.2	0.280	5.66	99.2	3.0	0.29	0.1	0.00	0.25	0.17		85	
2	94	14.76	14.75	33.512	24.880	309.0	0.308	5.56	96.4	3.5	0.37	0.8	0.03	0.37	0.32		94	
	100 ISL	13.81	13.80	33.413	25.004	297.3	0.326	5.49	93.3	4.0	0.45	1.8	0.03	0.37	0.32		100	
2	103	13.34	13.33	33.368	25.064	291.5	0.335	5.46	91.8	4.3	0.49	2.3	0.03	0.37	0.32		103	
2	115	12.97	12.95	33.392	25.157	282.9	0.370	5.30	88.5	4.8	0.59	3.9	0.02	0.32	0.29		115	
2	125	11.68	11.66	33.306	25.337	265.8	0.397	4.90	79.5	8.6	0.95	9.1	0.02	0.21	0.20		126	
2	140	11.03	11.01	33.405	25.532	247.5	0.436	4.69	75.1	11.4	1.11	12.0	0.01	0.09	0.10		141	
	150 ISL	10.50	10.48	33.457	25.665	234.8	0.460	4.59	72.7	13.1	1.20	13.7	0.01	0.05	0.06		151	
2	165	9.73	9.71	33.533	25.855	216.9	0.494	4.41	68.7	15.8	1.35	16.3	0.01	0.02	0.03		165	
2	194	8.72	8.70	33.709	26.155	188.7	0.552	3.80	57.9	23.5	1.70	21.9	0.00	0.00	0.02		195	
	200 ISL	8.62	8.60	33.753	26.205	184.1	0.564	3.65	55.5	25.1	1.76	22.8	0.00				201	
2	228	8.29	8.27	33.933	26.396	166.3	0.613	3.03	45.8	32.2	1.98	26.1	0.00				229	
	250 ISL	7.97	7.94	33.994	26.492	157.5	0.648	2.81	42.2	36.5	2.08	27.7	0.00				251	
II	269	7.69	7.66	34.020	26.554	151.8	0.678	2.66	39.7	40.0	2.16	28.8	0.00				270	
	300 ISL	7.33	7.30	34.059	26.636	144.4	0.723	2.20	32.6	46.9	2.35	31.3	0.00				302	
2	318	7.14	7.11	34.076	26.676	140.7	0.749	1.92	28.3	51.0	2.47	32.7	0.00				320	
2	378	6.57	6.54	34.130	26.796	129.9	0.830	1.19	17.3	62.6	2.78	36.2	0.00				380	
	400 ISL	6.43	6.39	34.150	26.831	126.8	0.859	1.01	14.6	65.8	2.85	37.1	0.00				402	
2	440	6.20	6.16	34.186	26.889	121.7	0.908	0.75	10.8	71.1	2.96	38.3	0.00				445	
	500 ISL	5.78	5.74	34.244	26.988	112.7	0.979	0.47	6.7	79.9	3.11	39.9	0.00				503	
	514	5.68	5.64	34.258	27.012	110.5	0.994	0.41	5.8	82.0	3.14	40.3	0.00				517	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403								STATION 93 100							
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
30 30.5 N		122 16.1 W		25/03/94		1858 UTC		4150 m	260	30 ten	260 0 05	1	1011.1 mb	15.6 c	12.7 c	35m 01	4/8	SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI 03	P04	N03	N02	CHL-A	PHAE0	PRESS			
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	db			
	0 ISL	15.76	15.76	33.454	24.614	331.6	0.000	5.71	101.0	2.9	0.30	0.2	0.00	0.10	0.03				0
2	2 A	15.76	15.76	33.454	24.614	331.6	0.007	5.71	101.0	2.9	0.30	0.2	0.00	0.10	0.03				2
	10 ISL	15.75	15.75	33.455	24.617	331.6	0.033	5.72	101.1	2.8	0.30	0.2	0.00	0.10	0.03				10
	20 ISL	15.75	15.75	33.456	24.618	331.8	0.066	5.72	101.1	2.6	0.29	0.2	0.00	0.10	0.03				20
2	22 A	15.75	15.75	33.456	24.618	331.8	0.073	5.72	101.1	2.6	0.29	0.2	0.00	0.10	0.03				22
	30 ISL	15.76	15.76	33.456	24.616	332.3	0.100	5.71	101.0	2.5	0.29	0.2	0.00	0.10	0.03				30
2	33	15.76	15.75	33.456	24.616	332.4	0.109	5.71	101.0	2.5	0.29	0.2	0.00	0.10	0.03				33
	44 A	15.75	15.74	33.456	24.619	332.5	0.146	5.71	100.9	2.4	0.29	0.2	0.00	0.09	0.03				44
	50 ISL	15.74	15.73	33.455	24.620	332.5	0.166	5.71	100.9	2.4	0.29	0.2	0.00	0.09	0.03				50
2	67 A	15.73	15.72	33.453	24.622	332.9	0.223	5.71	100.9	2.4	0.29	0.2	0.00	0.10	0.04				67
2	74	15.73	15.72	33.452	24.621	333.2	0.246	5.72	1101.1	2.4	0.29	0.2	0.00	0.11	0.04				74
	75 ISL	15.73	15.72	33.451	24.620	333.3	0.249	5.72	101.1	2.4	0.29	0.2	0.00	0.11	0.04				75
2	81 A	15.70	15.69	33.447	24.624	333.1	0.269	5.71	100.8	2.3	0.30	0.2	0.00	0.12	0.05				81
2	91	15.64	15.63	33.439	24.632	332.7	0.302	5.72	100.9	2.3	0.29	0.2	0.00	0.15	0.06				91
	100 ISL	15.17	15.15	33.487	24.773	319.5	0.332	5.64	98.5	2.8	0.32	0.2	0.02	0.33	0.28				100
2	102	15.06	15.04	33.501	24.807	316.2	0.338	5.62	98.0	2.9	0.33	0.2	0.02	0.37	0.33				102
2	116	14.80	14.78	33.554	24.905	307.3	0.382	5.52	95.8	3.0	0.36	0.7	0.04	0.34	0.33				116
	125 ISL	14.51	14.49	33.587	24.993	299.2	0.409	5.37	92.6	3.5	0.43	1.8	0.05	0.31	0.31				126
2	126 A	14.46	14.44	33.590	25.006	298.0	0.412	5.35	92.2	3.6	0.44	2.0	0.05	0.30	0.31				127
2	140	13.32	13.30	33.617	25.262	273.7	0.452	5.07	85.4	5.4	0.64	5.2	0.03	0.17	0.18				141
	150 ISL	12.42	12.40	33.590	25.418	258.9	0.479	4.93	81.4	7.2	0.79	7.7	0.02	0.11	0.11				151
2	164	11.24	11.22	33.550	25.607	240.9	0.514	4.77	76.8	10.1	1.00	11.0	0.01	0.05	0.05				165
2	194	9.67	9.65	33.594	25.913	212.0	0.582	4.40	68.5	16.4	1.37	16.9	0.01	0.01	0.03				195
	200 ISL	9.43	9.41	33.631	25.981	205.6	0.594	4.24	65.7	18.3	1.45	18.2	0.01						201
2	228	8.58	8.56	33.821	26.264	178.9	0.648	3.53	53.7	26.9	1.79	23.6	0.00						229
	250 ISL	8.17	8.14	33.907	26.394	166.8	0.686	3.39	51.1	30.9	1.88	25.3	0.00						251
2	268	7.94	7.91	33.954	26.465	160.3	0.716	3.32	49.8	33.7	1.93	26.1	0.00						269
	300 ISL	7.58	7.55	34.017	26.568	151.0	0.765	2.74	40.8	40.9	2.16	29.1	0.00						302
2	317	7.42	7.39	34.041	26.609	147.2	0.791	2.38	35.3	44.8	2.29	30.7	0.00						319
2	379	6.96	6.92	34.124	26.739	135.6	0.878	1.41	20.7	56.8	2.67	34.9	0.00						381
	400 ISL	6.72	6.68	34.132	26.778	132.0	0.906	1.24	18.1	60.4	2.75	35.9	0.00						402
2	437	6.27	6.23	34.139	26.843	126.0	0.954	1.02	14.7	66.7	2.86	37.5	0.00						440
	500 ISL	5.72	5.68	34.169	26.936	117.5	1.031	0.70	10.0	77.8	3.03	39.8	0.00						503
2	513	5.61	5.57	34.176	26.955	115.7	1.046	0.63	9.0	80.1	3.07	40.3	0.00						516

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 93 110			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
30 11.5 N		122 56.2 W		26/03/94	0215 UTC	3979 m	300	26 kn	300 08 06	1	1014 .1 mb	15.0 c	12.0 c		5/8	SC	
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/l	PCT	uM/l	uM/l	uM/l	uM/l	ug/l	ug/l	dli	
	0 ISL	16.32	16.32	33.523	2 4.5 40	3 3 8.6	0.000	5.67	101.4	2.7	0.2 9	0.2	0.00	0.10	0.03	0	
2	2	16.32	16.32	33.523	24.540	338.7	0.007	5.67	101.4	2.7	0.29	0.2	0.00	0.10	0.03	2	
	10 ISL	16.32	16.32	33.523	24.540	338.9	0.034	5.67	101.4	2.7	0.29	0.2	0.00	0.10	0.03	10	
2	20	16.33	16.33	33.522	24.537	339.5	0.068	5.67	101.4	2.7	0.30	0.2	0.00	0.09	0.02	20	
	30 ISL	16.33	16.33	33.523	24.538	339.7	0.102	5.66	101.2	2.7	0.30	0.2	0.00	0.09	0.02	30	
2	40	16.34	16.33	33.524	24.537	340.1	0.136	5.66	101.3	2.7	0.29	0.2	0.00	0.09	0.03	40	
	50 ISL	16.35	16.34	33.526	24.537	340.5	0.170	5.66	101.3	2.7	0.30	0.1	0.00	0.09	0.02	50	
2	58	16.36	16.35	33.530	24.538	340.7	0.197	5.66	101.3	2.6	0.30	0.1	0.00	0.09	0.02	58	
	75 ISL	16.43	16.42	33.566	24.550	340.1	0.255	5.64	101.1	2.2	0.30	0.1	0.00	0.11	0.04	75	
2	80	16.45	16.44	33.576	24.553	339.9	0.272	5.64	101.1	2.1	0.30	0.1	0.00	0.12	0.04	80	
2	99	16.99	16.97	33.834	24.627	333.7	0.336	5.52	100.2	2.6	0.27	0.1	0.00	0.23	0.16	99	
	100 ISL	16.98	16.96	33.340	24.634	333.0	0.339	5.51	100.0	2.6	0.27	0.1	0.00	0.23	0.17	100	
2	109	16.63	16.61	33.842	24.717	325.3	0.369	5.47	98.6	2.7	0.29	0.1	0.01	0.27	0.25	109	
2	120	15.48	15.46	33.693	24.864	311.5	0.404	5.48	96.5	3.1	0.34	0.3	0.03	0.28	0.26	120	
	125 ISL	15.23	15.21	33.702	24.926	300.7	0.419	5.43	95.1	3.2	0.36	0.7	0.05	0.27	0.26	126	
2	130	14.99	14.97	33.715	24.989	299.9	0.434	5.35	93.3	3.5	0.40	1.4	0.07	0.25	0.27	131	
2	139	14.14	14.12	33.644	25.115	287.9	0.461	5.18	88.7	4.6	0.53	3.4	0.05	0.20	0.21	140	
2	148	13.16	13.14	33.529	25.226	277.3	0.486	5.09	85.4	5.6	0.67	5.3	0.02	0.14	0.15	149	
	150 ISL	12.94	12.92	33.512	25.257	274.4	0.492	5.05	84.3	6.0	0.71	5.9	0.02	0.13	0.14	151	
2	159	12.03	12.01	33.467	25.397	261.0	0.516	4.86	79.6	7.9	0.91	8.7	0.01	0.10	0.10	160	
2	174	11.04	11.02	33.496	25.602	241.6	0.554	4.70	75.3	10.9	1.09	11.8	0.00	0.04	0.05	175	
2	193	10.02	10.00	33.510	25.789	223.9	0.598	4.48	70.2	14.6	1.30	15.4	0.00	0.02	0.04	194	
	200 ISL	9.69	9.67	33.544	25.871	216.1	0.613	4.36	67.9	16.4	1.39	16.9	0.00			201	
2	230	8.63	8.61	33.740	26.193	185.7	0.674	3.78	57.5	24.7	1.74	22.4	0.00			231	
	250 ISL	8.33	8.30	33.855	26.329	173.1	0.709	3.45	52.2	29.1	1.87	24.6	0.00			251	
2	268	8.17	8.14	33.938	26.419	164.8	0.740	3.18	48.0	32.8	1.96	26.1	0.00			269	
	300 ISL	7.74	7.71	34.002	26.533	154.4	0.791	2.82	42.1	39.1	2.12	28.5	0.00			302	
2	318	7.50	7.47	34.017	26.579	150.1	0.318	2.63	39.1	42.7	2.21	29.7	0.00			320	
2	377	6.72	6.69	34.071	26.730	136.2	0.903	1.72	25.1	57.4	2.59	34.7	0.00			379	
	400 ISL	6.48	6.44	34.085	26.773	132.3	0.934	1.47	21.3	61.6	2.70	36.0	0.00			402	
2	438	6.15	6.11	34.107	26.833	126.9	0.983	1.15	16.6	67.5	2.84	37.6	0.00			441	
	500 ISL	5.77	5.73	34.152	26.917	119.4	1.059	0.80	11.4	76.5	3.01	39.7	0.00			503	
2	512	5.70	5.66	34.161	26.932	118.0	1.073	0.73	10.4	78.3	3.04	40.1	0.00			515	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 9 3 120			
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE	
29 51.0 N		123 35.0 U		26/03/94	0859 UTC	4052 m	340	18 kn			10184 mb	15.0 c	12.1 c				
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DIM HT	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			ml/L	PCT	uM/t	uM/L	uM/L	uM/L	ug/L	ug/L	db	
	0 ISL	16.48	16.48	33.539	2 4.515	3 40.9	0.000	5.64	101.2	3.1	0.30	0.0	0.00	0.09	0.03	0	
2	3	16.48	16.48	33.539	2 4.515	3 41.0	0.010	5.64	101.2	3.1	0.30	0.0	0.00	0.09	0.03	3	
	10 ISL	16.49	16.49	33.539	2 4.513	3 41.4	0.034	5.63	101.0	3.1	0.30	0.0	0.00	0.09	0.02	10	
2	15	16.49	16.49	33.539	2 4.513	3 41.6	0.051	5.63	101.0	3.0	0.30	0.0	0.00	0.09	0.02	15	
	20 ISL	16.49	16.49	33.539	2 4.514	3 41.7	0.068	5.63	101.0	2.9	0.30	0.0	0.00	0.09	0.02	20	
2	29	16.49	16.49	33.538	2 4.513	3 42.1	0.099	5.64	101.2	2.8	0.29	0.0	0.01	0.09	0.03	29	
	30 ISL	16.49	16.49	33.538	2 4.513	3 42.1	0.102	5.64	101.2	2.8	0.29	0.0	0.01	0.09	0.03	30	
2	44	16.49	16.48	33.537	2 4.513	3 42.6	0.150	5.64	101.2	2.8	0.29	0.1	0.01	0.09	0.03	44	
	50 ISL	16.49	16.48	33.538	2 4.514	3 42.7	0.171	5.64	101.2	2.8	0.29	0.1	0.01	0.09	0.03	50	
2	59	16.49	16.48	33.539	2 4.515	3 42.9	0.202	5.64	101.2	2.8	0.29	0.1	0.00	0.10	0.03	59	
	73 ISL	16.49	16.48	33.538	2 4.515	3 43.4	0.250	5.64	101.2	2.7	0.28	0.1	0.00	0.10	0.03	73	
2	75	16.37	16.36	33.530	2 4.536	3 41.4	0.257	5.65	101.1	2.7	0.28	0.1	0.00	0.11	0.04	75	
2	85	15.67	15.66	33.467	24.646	331.1	0.290	5.68	100.2	2.8	0.30	0.0	0.00	0.20	0.10	85	
2	94	15.23	15.22	33.382	24.679	328.3	0.320	5.69	99.5	3.0	0.34	0.1	0.01	0.31	0.23	94	
	100 ISL	15.22	15.20	33.531	24.796	317.3	0.339	5.57	97.4	3.3	0.36	0.3	0.03	0.29	0.33	100	
2	103	15.22	15.20	33.615	24.860	311.2	0.349	5.49	96.1	3.5	0.37	0.5	0.04	0.27	0.37	103	
2	114	15.10	15.08	33.750	24.991	299.1	0.382	5.30	92.6	3.8	0.41	1.5	0.07	0.28	0.33	114	
2	123	14.61	14.59	33.776	25.117	287.3	0.409	5.11	88.4	4.9	0.53	3.4	0.05	0.21	0.23	123	
	125 ISL	14.48	14.46	33.769	25.140	285.2	0.414	5.09	87.8	5.0	0.55	3.7	0.05	0.20	0.22	126	
2	139	13.40	13.38	33.688	25.301	270.0	0.453	5.01	84.5	6.0	0.67	5.6	0.02	0.15	0.17	140	
	150 ISL	12.34	12.32	33.621	25.458	255.1	0.482	4.88	80.5	7.9	0.83	8.1	0.02	0.08	0.10	151	
2	163	11.14	11.12	33.570	25.641	237.7	0.514	4.70	75.5	10.7	1.04	11.3	0.01	0.01	0.03	164	
2	192	9.55	9.53	33.601	25.938	209.5	0.579	4.22	65.5	17.9	1.45	17.8	0.00	0.05	0.05	193	
2	228	8.85	8.83	33.645	26.008	203.0	0.596	4.13	63.4	19.4	1.51	18.8	0.00			201	
2	250	8.43	8.40	33.820	26.222	183.1	0.650	3.82	58.5	24.5	1.66	21.6	0.00			229	
2	268	8.12	8.09	33.918	26.364	169.9	0.688	3.45	52.3	29.9	1.83	24.3	0.00			255	
	300 ISL	7.75	7.72	34.024	26.549	152.9	0.769	2.77	41.4	40.2	2.13	28.6	0.00			269	
2	318	7.58	7.55	34.036	26.583	149.9	0.796	2.58	38.4	43.1	2.21	29.7	0.00			302	
2	375	7.04	7.00	34.110	26.717	137.7	0.878	1.72	25.3	53.3	2.55	33.3	0.00			377	
	400 ISL	6.83	6.79	34.129	26.761	133.8	0.912	1.44	21.1	58.1	2.67	34.8	0.00			402	
2	438	6.54	6.50	34.156	26.821	128.4	0.961	1.10	*6.0	65.0	2.83	36.7	0.00			441	
	500 ISL	6.19	6.15	34.226	26.923	119.4	1.038	0.65	9.4	73.7	3.04	38.8	0.00			503	
2	515	6.10	6.05	34.243	26.948	117.1	1.056	0.54	7.8	75.8	3.09	39.3	0.00			511	

RV DAVID STARR JORDAN				CALCOFI CRUISE 9403										STATION 9 3 120			
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND	SPE	ED WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMI	TYPE			
29 51.0 N	123 35.0 U	26/03/94	0859 UTC	4052 m	3 40 18 kn				10184 mb	15.0 c	12.1 c						
CAST	DEPTH	TEMP	POT TEMP	SALINITY	SIGMA	SVA	DIM HT	OXYGEN	OXY	SI O3	PO4	NO3	NO2	CHL-A	PHAE0	PRESS	
	m	DEG C	DEG C		THETA			m L / L	PCI	uM/t	u M / L	UM/ L	uM/ L	ug / l	ug / l	db	
	0 ISL	16.48	16.48	33.539	2 4.515	3 40.9	0.000	5.64	101.2	3.1	0.30	0.0	0.00	0.09	0.03	0	
2	3	16.48	16.48	33.539	2 4.515	3 41.0	0.010	5.64	101.2	3.1	0.30	0.0	0.00	0.09	0.03	3	
	10 ISL	16.49	16.49	33.539	2 4.513	3 41.4	0.034	5.63	101.0	3.1	0.30	0.0	0.00	0.09	0.02	10	
2	15	16.49	16.49	33.539	2 4.513	3 41.6	0.051	5.63	101.0	3.0	0.30	0.0	0.00	0.09	0.02	15	
	20 ISL	16.49	16.49	33.539	2 4.514	3 41.7	0.068	5.63	101.0	2.9	0.30	0.0	0.00	0.09	0.02	20	
2	29	16.49	16.49	33.538	2 4.513	3 42.1	0.099	5.64	101.2	2.8	0.29	0.0	0.01	0.09	0.03	29	
	30 ISL	16.49	16.49	33.538	2 4.513	3 42.1	0.102	5.64	101.2	2.8	0.29	0.0	0.01	0.09	0.03	30	
2	44	16.49	16.48	33.537	24.513	3 42.6	0.150	5.64	101.2	2.8	0.29	0.1	0.01	0.09	0.03	44	
	50 ISL	16.49	16.48	33.538	2 4.514	3 42.7	0.171	5.64	101.2	2.8	0.29	0.1	0.01	0.09	0.03	53	
2	59	16.49	16.48	33.539	2 4.515	3 42.9	0.202	5.64	101.2	2.8	0.29	0.1	0.00	0.10	0.03	59	
2	73	16.49	16.48	33.538	2 4.515	3 43.4	0.250	5.64	101.2	2.7	0.28	0.1	0.00	0.10	0.03	73	
	75 ISL	16.37	16.36	33.530	24.536	3 41.4	0.257	5.65	101.1	2.7	0.28	0.1	0.00	0.11	0.04	75	
2	85	15.67	15.66	33.467	24.646	331.1	0.290	5.68	100.2	2.8	0.30	0.0	0.00	0.20	0.10	85	
2	94	15.23	15.22	33.382	24.679	3 2 8.3	0.320	5.69	99.5	3.0	0.34	0.1	0.01	0.31	0.23	94	
	100 ISL	15.22	15.20	33.531	24.796	317.3	0.339	5.57	97.4	3.3	0.36	0.3	0.03	0.29	0.33	100	
2	103	15.22	15.20	33.615	24.860	311.2	0.349	5.49	96.1	3.5	0.37	0.5	0.04	0.27	0.37	105	
2	114	15.10	15.08	33.750	24.991	299.1	0.382	5.30	92.6	3.8	0.41	1.5	0.07	0.28	0.33	114	
2	123	14.61	14.59	33.776	25.117	2 8 7.3	0.409	5.11	88.4	4.9	0.53	3.4	0.05	0.21	0.23	123	
	125 ISL	14.48	14.46	33.769	25.140	285.2	0.414	5.09	87.8	5.0	0.55	3.7	0.05	0.20	0.22	126	
2	139	13.40	13.38	33.688	25.301	270.0	0.453	5.01	84.5	6.0	0.67	5.6	0.02	0.15	0.17	140	
	150 ISL	12.34	12.32	33.621	25.458	255.1	0.482	4.88	80.5	7.9	0.83	8.1	0.02	0.08	0.10	151	
2	163	11.14	11.12	33.570	25.641	237.7	0.514	4.70	75.5	10.7	1.04	11.3	0.01	0.01	0.03	164	
2	192	9.55	9.53	33.601	25.938	209.5	0.579	4.22	65.5	17.9	1.45	17.8	0.00	0.05	0.05	193	
	200" ISL	9.33	9.31	33.645	26.008	203.0	0.596	4.13	63.4	19.4	1.51	18.8	0.00			201	
2	228	8.85	8.83	33.820	26.222	183.1	0.650	3.82	58.5	24.5	1.66	21.6	0.00			229	
2	250 ISL	8.43	8.40	33.918	26.364	169.9	0.688	3.45	52.3	29.9	1.83	24.3	0.00			251	
2	268	8.12	8.09	33.977	26.457	161.2	0.718	3.14	47.3	34.4	1.96	26.3	0.00			269	
	300 ISL	7.75	7.72	34.024	26.549	152.9	0.769	2.77	41.4	40.2	2.13	28.6	0.00			302	
2	318	7.58	7.55	34.036	26.583	149.9	0.796	2.58	38.4	43.1	2.21	29.7	0.00			321	
2	375	7.04	7.00	34.110	26.717	137.7	0.878	1.72	25.3	53.3	2.55	33.3	0.00			377	
	400 ISL	6.83	6.79	34.129	26.761	133.8	0.912	1.44	21.1	58.1	2.67	34.8	0.00			402	
2	438	6.54	6.50	34.156	26.821	128.4	0.961	1.10	*6.0	65.0	2.83	36.7	0.00			441	
	500 ISL	6.19	6.15	34.226	26.923	119.4	1.038	0.65	9.4	73.7	3.04	38.8	0.00			503	
2	515	6.10	6.05	34.243	26.948	117.1	1.056	0.54	7.8	75.8	3.09	39.3	0.00			511	

PRIMARY PRODUCTIVITY CASTS														
RV DAVID STARR JORDAN						CALCOFI CRUISE 9403						STATION 77 49		
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE		
35 4.8 N		120 45.9 W		7/ 4/94	1829 UTC	11 m	05	1204 - 1851 PST		1205 PST	1851 PST	8 77.2 mg C/ra2		
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	(rag C/m3)
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2
2	11.83	33.312	25.311	5.60	91.2	9.7	0.89	7.8	0.17	1.71	0.56	76. A	23.3	20.7
8	11.41	33.397	25.454	5.28	85.3	12.9	1.08	10.5	0.17	2.26	0.62	33.	59.8	57.8
15	11.36	33.402	25.467	5.25	84.7	13.1	1.10	10.6	0.17	1.98	0.64	12.	38.1	35.5
21	11.08	33.455	25.559	5.00	80.2	15.2	1.21	12.3	0.17	1.73	0.55	5.3	15.1	15.3
30	10.78	33.483	25.634	4.61	73.5	16.8	1.34	14.1	0.18	0.88 B	0.49 B	1.5	3.4	3.3
40	9.87	33.586	25.871	3.65	57.1	21.7	1.67	19.3	0.19	0.34	0.30	0.38	0.08	0.09
													0.08	0.10

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

RV DAVID STARR JORDAN						CALCOFI CRUISE 9403						STATION 77 80					
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE		
34 4.0 N		122 57.4 W		6/ 4/94		1821 UTC		17 m	03	1214 - 1858 PST		1214 PST	1858 PST		212.1 mg C/m2		
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE				
m	DEG C		THETA	ml/l	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	mg MEAN	C/m3) DARK	
2	14.08	33.105	24.707	5.99	102.2	2.9	0.35	0.3	0.00	0.40	0.12	83. A	6.3	6.1	6.2	0.09	
12	14.07	33.105	24.709	6.00	102.3	2.7	0.35	0.2	0.00	0.40	0.13	34.	7.8	8.0	7.9	0.16	
22	14.04	33.105	24.716	6.00	102.2	2.6	0.35	0.2	0.00	0.41	0.13	14.	4.8	4.7	4.8	0.14	
32	14.03	33.104	24.718	6.00	102.2	2.5	0.34	0.2	0.00	0.41	0.14	5.6	2.7	2.6	2.7	0.12	
44	14.03	33.106	24.719	5.99	102.0	2.5	0.35	0.2	0.00	0.42	0.14	1.9	0.71	0.78	0.75	0.13	
53	13.99	33.105	24.727	6.00	102.1	2.5	0.35	0.2	0.00	0.44	0.15						
62	13.71	33.120	24.797	5.87	99.3	3.1	0.41	0.8	0.04	0.81	0.35	0.37	0.10	0.06	0.08	a.14	

RV DAVID STARR JORDAN						CALCOFI CRUISE 9403						STATION 80 60					
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE			
34 9.3 N		121 9.0 W		4/ 4/94		1810 UTC		11 m	05	1208 - 1858 PST		1208 PST	1858 PST	85 5.2 mg C/m2			
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	1	UPTAKE	mg C/m3)		
m	BEG C		THETA	ml/L	PCT	uM/L	uM/ I	uM/L	uM/L	ug/L	ug/L	PCT		2	MEAN DARK		
2	12.98	33.244	25.037	6.03	100.6	5.7	0.55	2.4	0.11	2.02	0.81	76. A	26.9	27.9	27.4		
8	12.96	33.245	25.042!	6.03	100.6	5.7	0.55	2.5	0.11	1.91	0.95	33.	44.1	43.8	44.0		
15	12.68	33.248	25.100	5.97	99.0	6.9	0.62	3.6	0.10	2.44	1.07	12.	37.4	37.0	37.2		
21	12.51	33.251	25.135	5.91	97.6	7.6	0.67	4.3	0.11	2.47	1.08	5.3	17.4.	17.5	17.5		
30	12.48	33.253	25.142	5.84	96.4	7.7	0.70	4.6	0.11	2.40	1.49	1.5	6.0	5.6	5.8		
40	12.40	33.271	25.172	5.73	94.5	7.9	0.74	5.3	0.15	2.38	1.51	0.38	0.76	0.87	0.81		

RV DAVID STARR JORDAN						CALCOFI CRUISE 9403						STATION 80 100					
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE				
32 48.9 M		123 5 4.4 W		5/ 4/94	1847 UTC	36 m	01	1219 - 1905 PST		1219 PST	1905 PST		77.2 mg C/m2				
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	mg C/m3)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2			
2	15.62	33.505	24.684	5.75	101.4	2.3	0.28	0.1	0.00	0.08	0.02	92. A	0.60	0.58			
11	15.60	33.507	24.690	5.75	101.4	2.2	0.26	0.1	0.00	0.08	0.02						
23	15.60	33.508	24.692	5.76	101.5	2.1	0.26	0.1	0.00	0.08	0.02	38.	1.3	1.2			
35	15.60	33.513	24.696	5.76	101.5	2.2	0.27	0.1	0.00	0.09	0.03						
45	15.60	33.514	24.697	5.75	101.4	1.7	0.27	0.1	0.00	0.08	0.02	15.	0.72	0.80			
58	15.60	33.514	24.697	5.75	101.4	2.1	0.26	0.1	0.00	0.09	0.02						
68	15.60	33.516	24.699	5.75	101.4	2.2	0.26	0.1	0.00	0.09	0.03	5.5	0.38	0.36			
81	15.89	33.662	24.747	5.68	100.8	2.0	0.24	0.1	0.00	0.17	0.07						
96	15.92	33.744	24.804	5.63	100.0	2.3	0.24	0.1	0.00	0.26	0.15	1.7	0.41	0.43			
105	15.32	33.752	24.944	5.54	97.2	2.5	0.28	0.3	0.02	0.49	0.42						
115	14.75	33.712	25.038	5.43	94.2	2.9	0.35	1.3	0.06	0.43	0.39						
125	13.87	33.616	25.149	5.31	90.4	3.9	0.47	3.0	0.06	0.32	0.33						
131	13.56	33.610	25.208	5.21	88.2	4.5	0.154	3.8	0.04	0.25	0.29	0.37	0.14	0.10			

RV DAVID STARR JORDAN						CALCOFI CRUISE 9403						STATION 83 42					
LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE				
34 10.8 N		119 30.4 W		3/ 4/94	1924 UTC	15 m	04	1205 - 1846 PST		1201 PST	1846 PST		278.1 mg C/m2				
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	mg C/m I)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2			
2	14.50	33.345	24.804	6.68	115.1	1.1	0.25	0.1	0.00	0.31	0.12	81. A	5.0	5.2			
10	14.00	33.350	24.913	6.83	116.5	1.0	0.24	0.1	0.00	0.25	0.09	36.	6.6	5.9			
19	13.02	33.365	25.124	6.74	112.6	1.0	0.31	0.1	0.01	0.42	0.35	14.	8.6	8.4			
28	12.32	33.382	25.273	5.05	83.2	3.4	0.81	5.3	0.25	1.24	0.82	5.7	9.9	10.0			
39	11.55	33.436	25.460	4.22	68.4	12.9	1.23	12.9	0.11	0.51	0.56	1.8	1.5	1.3			
45	11.17	33.483	25.565	4.03	64.8	15.0	1.35	15.0	0.07	0.32	0.61						
55	10.35	33.564	25.773	3.70	58.5	18.6	1.55	18.0	0.04	0.20	0.35	0.36	0.05	0.05			
													0.05	0.07			

A) INCUBATION LIGHT INTENSITIES WERE 96, 38, 14, 5.6, 1.8, 0.38 PERCENT RESPECT VELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9403

STATION 83 80

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI		FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
32 55 5 N		122 7.7 W		2/ 4/94		1823 UTC		35 m		01		211 - 18 49 PST		1212 PST		1850 PST		12 9.0 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	QXY	S I O 3	P04	N03	N02	CHL	PHAE0	L I G H T	UPTAKE	(m g C / 3m					
m	DEG C		THETA	m l / l	PCT	uM / L	uM / L	uM / l	uM / l	ug / l	ug / l	PCT	1	2	MEAN	DARK			
2	15.85	33.409	24.559	5.7 4	101.6	2.4	0.32	0.2	0.00	0.09	0.02	92. A	0.71	0.67	0.69	0.08			
12	15.83	33.409	24.564	5.7 4	101.6	2.3	0.32	0.2	0.00	0.09	0.02								
22	15.81	33.408	24.568	5.73	101.4	2.3	0.32	0.2	0.00	0.09	0.02	38.	1.4	1.4	1.4	0.09			
44	15.80	33.407	24.570	5.7 4	101.5	2.3	0.32	0.2	0.00	0.09	0.02	15.	1.1	1.0	1.0	0.07			
66	15.34	33.357	24.634	5.77	101.1	2.3	0.33	0.2	0.00	0.16	0.04	5.5	0.95	0.91	0.93	0.09			
74	14.73	33.284	24.711	5.8 5	101.2	2.5	0.34	0.2	0.00	0.31	0.15								
82	14.02	33.241	24.827	5.8 3	99.4	3.0	0.41	0.3	0.03	0.47	0.25								
91	13.19	33.253	25.005	5.54	92.8	4.1	0.56	2.4	0.14	0.46	0.32	1.8	1.6	1.7	1.6	0.08			
100	12.08	33.328	25.279	4.9 6	81.2	7.3	0.87	7.5	0.11	0.33	0.28								
109	11.53	33.417	25.450	4.6 6	75.5	9.7	1.05	10.8	0.04	0.19	0.24								
119	10.92	33.479	25.608	4.5 5	72.7	11.4	1.16	12.8	0.02	0.11	0.13								
126	10.53	33.489	25.685	4.48	71.0	12.9	1.23	14.0	0.02	0.08	0.10	0.40	-0.02	-0.03	-0.03	0.09			

RV DAVID STARR JORDAN

CALCOFI CRUISE 9403

STATION 83 110

LATITUDE			LONGITUDE			DAY/MO/YR		CAST TIME		SECCHI FOREL		INCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
31 54 8 N			12 4 10.5 W			1/ 4/94		1907 UTC		33 m 3 2		1220 - 1859 PST		12 21 PST		18 9 PST		190.6 mg C / m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ml / l	OXY PCT	SI O3 uM / l	P04 uM / L	N03 uM / l	N02 uM / l	CHL jg / l	PHAE0 ug / l	LIGHT PCT	UPTAKE (mg C/m3)						
													1	2	MEAN	DARK			
2	15.07	33.188	24.561	5.85	101.9	2.6	0.34	0.2	0.00	0.10	0.02	91. A	0.90	0.79	0.85	0.08			
11	15.03	33.193	24.574	5.8 5	101.8	5	0.35	0.2	0.00	0.10	0.03								
22	15.02	33.201	24.582	5.8 5	101.8	5	0.33	0.2	0.00	0.10	0.03	36.	1.8	1.8	1.8	0.09			
43	14.93	33.132	24.588	5.8 6	101.7	5	0.34	0.2	0.00	0.13	0.03	14.	1.7	1.6	1.7	0.09			
62	14.08	33.033 D	24.653	5.95	101.4	6	0.36	0.1	0.00	0.25	0.11	5.6	2.0	2.0	2.0	0.10			
74	14.06	33.025	24.652	5.9 6	101.5	5	0.36	0.1	0.00	0.26	0.12								
86	13.29	33.050	24.828	5.8 7	98.4	9	0.44	0.6	0.17	0.47	0.35	1.8	2.3	2.3	2.3	0.10			
94	13.60	33.232	24.906	5.66	95.6	34	0.47	1.3	0.15	0.40	0.33								
102	12.74	33.246	25.089	5.39	89.5	6	0.64	4.2	0.04	0.25	0.26								
110	11.92	33.248	25.247	5.14	83.8	68	0.83	7.2	0.02	0.18	0.19								
119	11.26	33.247	25.367	4.8 6	78.2	4	1.04	10.4	0.01	0.11	0.13	0.39	0.06	0.07	0.06	0.03			

RV DAVID STARR JORDAN

CALCOFI CRUISE 9403

STATION 87 30

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI FOR EL		NCUBATION TIME		LAN		CIVIL TWILIGHT		INTEGRATED VALUE	
32 21 0 N		121 43.9 W		31/3/94		1808 UTC		30 m 01		'210 - 18 55 P ST		1211 PST		1853 PST		9 1.2 mg/c/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SI O3	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	m c/ m3)			
m	DEG C		THETA	ml/l	PCT	uM/L	uM/L	uM/L	uM/L	g/L	ug/l	PCT	1	2	MEAN	DARK	
2	15.68	33.377	24.572	5.75	101.5	2.5	0.31	0.2	0.00	0.09	0.03	90. A	0.48	0.50	0.49	0.08	
11	15.68	33.377	24.575	5.77	101.8	2.4	0.31	0.2	0.00	0.09	0.03						
19	15.67	33.376	24.574	5.75	101.4	2.2	0.31	0.2	0.00	0.09	0.03	38.	1.4	1.4	1.4	0.08	
39	15.67	33.377	24.576	5.76	101.6	2.2	0.31	0.2	0.00	0.09	0.03	14.	1.0	1.0	1.0	0.11	
56	15.54	33.369	24.599	5.7 6	101.3	2.1	0.31	0.2	0.00	0.12	0.04	5.7	0.77	0.72	0.74	0.09	
67	15.26	33.347	24.644	5.77	100.9	2.2	0.31	0.2	0.00	0.17	0.06						
77	14.47	33.257	24.745	5.85	100.6	2.3	0.34	0.2	0.00	0.28	0.16	1.9	0.96	a. 91	0.93	0.07	
87	14.14	33.414	24.936	5.45	95.2	3.3	0.47	1.3	0.08	0.43	0.32						
98	13.66	33.416	25.037	5.32	90.1	4.1	0.55	2.9	0.09	0.38	0.29						
108	13.09	33.501	25.217	4.96	83.1	5.9	0.75	6.1	0.04	0.30	0.25	0.40	0.21	0.22	0.22	0.02	

RV DAVID STARR JORDAN

CALCOFI CRUISE 9403

STATION 90 80

LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FCREL	INCUBATION TIME		LAM	CIVIL TWILIGHT		INTEGRATED VALUE	
31 46 6 N		121 19.9 W		27/ 3/ 9 4		1816 UTC		38 m	01	1208 - 184 I PST		1210 PST	1841 PST		14 5.3 mg C/m2	
DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 m l / l	OXY PCT	SI O3 uM / L	PC4 uM/ L	NO3 uM/ l	NO2 uM/ I	CHL ug/ l	PHAE0 u g / I	LIGHT PCT	1	UPTAKE 2	mg C / m3 MEAN	3 J DARK
2	15.56	33.355	24.582	5.7 6	101.4	2.6	0.32	0.3	0.00	0.12	0.03	92. A	1.1	1.0	1.1	0.07
13	15.51	33.343	24.584	5.7 5	101.1	2.6	0.31	0.3	0.00	0.15	0.04					
25	15.49	33.353	24.597	5.75	101.1	2.6	0.31	0.3	0.00	0.14	0.04	36.	1.8	1.6	1.7	0.10
36	15.50	33.341	24.586	5.76	101.2	2.5	0.31	0.3	0.00	0.12	0.03					
48	15.49	33.341	24.588	5.7 6	101.2	2.4	0.31	0.3	0.00	0.12	0.04	14.	1.2	1.2	1.2	0.08
60	15.50	33.342	24.587	5.77	101.4	2.0	0.31	0.3	0.00	0.12	0.04					
72	15.50	33.344	24.589	5.76	101.2	2.0	0.31	0.3	0.00	0.14	0.05	5.5	0.78	0.80	0.79	0.06
86	15.27	33.317	24.620	5.7 7	100.9	2.7	0.32	0.3	0.00	0.25	0.12					
99	14.07	33.275	24.843	5.60	95.6	3.0	0.46	1.4	0.08	0.40	0.33	1.8	1.3	1.3	1.3	0.03
108	13.67	33.332	24.970	5.38	91.1	4.3	0.55	3.0	0.06	0.27	0.23					
118	13.06	33.418	25.159	5.08	85.0	5.8	0.70	5.6	0.04	0.20	0.20					
128	11.99	33.428	25.374	4.77	78.0	8.6	0.93	9.3	0.02	0.14	0.14					
137	11.49	33.417	25.458	4.66	75.4	10.1	1.06	11.3	0.02	0.10	0.12	0.39	0.05	0.03	0.04	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 38, 14, 5, 5.6, 18. 0.38 PERCENT RESPECTIVELY

PRIMARY PRODUCTIVITY CASTS																
RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 90 120						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
30 25.2 N		124 0.0 W		26/ 3/94		1815 UTC		44 m	01	1221 - 1850 PST		1222 PST	1851 PST		129.0 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS	O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	mg	C/m3)
m	DEG C		THETA	ml/L	PCT		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN
2	16.34	33.483	24.505	5.66	101.3	2.9	0.28	0.2	0.00	0.09	0.03	93. A	0.45	0.49	0.47	0.05
16	16.25	33.483	24.526	5.66	101.1	2.9	0.29	0.2	0.00	0.10	0.03					
29	16.25	33.483	24.526	5.66	101.1	2.8	0.29	0.2	0.00	0.11	0.06	36.	1.0	1.0	1.0	0.06
44	16.25	33.482	24.526	5.66	101.1	2.7	0.31	0.2	0.00	0.10	0.04					
56	16.24	33.482	24.528	5.66	101.0	2.6	0.28	0.2	0.00	0.10	0.03	14.	0.92	0.89	0.90	0.07
70	16.24	33.482	24.529	5.66	101.0	2.6	0.28	0.2	0.00	0.10	0.03					
83	16.23	33.479	24.529	5.66	101.0	2.6	0.29	0.2	0.00	0.11	0.03	5.5	0.67	0.64	0.66	0.05
96	16.21	33.479	24.535	5.66	101.0	2.6	0.28	0.2	0.00	0.12	0.04					
104	16.01	33.477	24.579	5.65	100.4	2.5	0.29	0.2	0.00	0.18	0.09					
115	15.43	33.470	24.703	5.61	98.5	2.9	0.33	0.2	0.02	0.32	0.23	1.8	1.3	1.3	1.3	0.02
125	15.01	33.597	24.893	5.46	95.2	3.2	0.37	0.8	0.06	0.32	0.29					
139	13.10	33.515	25.227	5.19	86.9	5.0	0.59	4.1	0.04	0.21	0.23					
160	11.29	33.492	25.553	4.76	76.7	9.9	1.00	10.6	0.01	0.06	0.08	0.38	0.04	0.04	0.04	0.02
RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 93 26.7						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
32 57 3 N		117 18.4 W		22/ 3/94		1947 UTC		19 m	03	214 - 1826 PST		1156 PST	1827 PST		5 51.1 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS	O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	(mg	C/m3)
m	DEG C		THETA	ml/L	PCT		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN
2	15.91	33.195	24.381	5.96	105.5	1.7	0.31	0.3	0.00	0.37	0.06	85. A	6.1	6.7	6.4	0.16
6	15.93	33.196	24.377	5.94	105.2	1.6	0.31	0.3	0.00	0.36	0.06					
13	15.11	33.212	24.571	6.06	105.6	1.9	0.33	0.3	0.00	0.34	0.12	35.	8.6	8.3	8.4	0.24
25	13.39	33.272	24.978	5.48	92.2	5.1	0.57	2.9	0.17	1.87	0.71	13.	27.2	27.5	27.4	0.19
30	12.76	33.280	25.109	5.28	87.7	6.2	0.71	4.9	0.24	1.38	0.67					
36	12.06	33.366	25.310	4.45	72.9	10.3	1.08	10.5	0.40	0.97	0.51	5.5	7.1	7.2	7.1	0.14
49	11.12	33.451	25.550	4.06	65.2	13.9	1.31	14.7	0.28	0.28	0.28	1.9	0.98	0.95	0.96	0.05
RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 93 45						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
32 21 5 N		118 33.5 W		23/ 3/94		1838 UTC		27 m	02	1200 - 1838 PST		1203 PST	1836 PST		199.9 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS	O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	mg	C/m3)
m	DEG C		THETA	ml/L	PCT		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN
2	15.44	33.3112	24.575	5.80	101.8	2.5	0.34	0.0	0.00	0.14	0.04	89. A	1.3	1.5	1.4	0.09
17	15.42	33.310	24.579	5.81	101.9	2.4	0.34	0.0	0.00	0.14	0.04	38.	2.4	2.4	2.4	0.10
34	15.22	33.298	24.614	5.84	102.0	2.3	0.34	0.1	0.00	0.16	0.05	14.	2.0	1.9	1.9	0.10
42	14.62	33.271	24.723	5.89	101.7	2.4	0.36	0.1	0.00	0.24	0.14					
51	13.99	33.268	24.853	5.76	98.1	3.4	0.44	0.8	0.04	0.49	0.33	5.5	4.0	3.9	3.9	0.08
61	13.40	33.294	24.994	5.41	91.1	4.9	0.60	3.3	0.15	0.56	0.49					
70	13.07	33.350	25.103	5.19	86.8	5.8	0.69	5.0	0.13	0.50	0.53	1.9	1.9	1.8	1.8	0.04
79	12.09	33.377	25.314	4.84	79.3	8.3	0.91	8.5	0.07	0.36	0.37					
89	11.62	33.414	25.431	4.56	74.0	10.6	1.08	11.5	0.03	0.22	0.26					
100	11.16	33.441	25.536	4.41	70.9	12.2	1.19	13.1	0.02	0.15	0.18	0.34	0.09	0.12	0.11	0.01
RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 93 70						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
31 31 0 N		120 15.2 W		24/ 3/94		1825 UTC		29 m	01	1205 - 1842 PST		1207 PST	1842 PST		126.6 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS	O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	(mg	C/m2)
m	DEG C		THETA	ml/L	PCT		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN
2	15.57	33.327	24.558	5.78	101.7	2.4	0.33	0.2	0.00	0.13	0.03	90. A	2.2	2.4	2.3	0.09
18	15.56	33.327	24.561	5.79	101.9	2.4	0.33	0.2	0.00	0.13	0.04	39.	1.9	2.0	2.0	0.10
37	15.54	33.325	24.565	5.79	101.8	2.3	0.33	0.2	0.00	0.13	0.04	14.	0.82	0.82	0.82	0.32
45	15.10	33.289	24.634	5.88	102.5	2.3	0.34	0.2	0.00	0.20	0.07					
55	14.48	33.261	24.745	5.90	101.5	2.8	0.36	0.2	0.00	0.40	0.22	5.4	1.7	1.5	1.6	0.10
66	13.53	33.289	24.964	5.56	93.8	4.3	0.54	2.2	0.12	0.71	0.58					
76	12.90	33.283	25.085	5.24	87.3	6.1	0.70	5.0	0.20	0.47	0.39	1.8	0.86	0.91	0.89	0.02
85	12.21	33.316	25.244	4.98	81.8	8.3	0.87	7.9	0.13	0.31	0.27					
95	11.67	33.373	25.390	4.69	76.2	10.3	1.03	10.4	0.05	0.19	0.23					
104	10.96	33.422	25.557	4.46	71.3	13.0	1.20	13.3	0.03	0.10	0.14	0.41	0.03	0.02	0.03	0.02
RV DAVID STARR JORDAN					CALCOFI CRUISE 9403					STATION 93 100						
LATITUDE		LONGITUDE		DAY/MO/YR		CAST TIME		SECCHI	FOREL	INCUBATION TIME		LAN	CIVIL TWILIGHT		INTEGRATED VALUE	
30 30.5 N		122 16.1 W		25/ 3/94		1858 UTC		35 m	01	1214 - 1849 PST		1215 PST	1850 PST		77.7 mg C/m2	
DEPTH	TEMP	SALINITY	SIGMA	DISS	O2	OXY	SI03	P04	N03	N02	CHL	PHAE0	LIGHT	UPTAKE	(mg	C/m3)
m	DEG C		THETA	ml/L	PCT		uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN
2	15.76	33.454	24.614	5.71	101.0	2.9	0.30	0.2	0.00	0.10	0.03	92. A	0.38	0.35	0.36	0.06
22	15.75	33.456	24.618	5.72	101.1	2.6	0.29	0.2	0.00	0.10	0.03	38.	1.2	1.1	1.1	0.06
33	15.76	33.456	24.616	5.71	101.0	2.5	0.29	0.2	0.00	0.10	0.03					
44	15.75	33.456	24.619	5.71	100.9	2.4	0.29	0.2	0.00	0.09	0.03	15.	0.88	0.90	0.89	0.06
67	15.73	33.453	24.622	5.71	100.9	2.4	0.29	0.2	0.00	0.10	0.04	5.3	0.58	0.57	0.57	0.07
74	15.73	33.452	24.621	5.72	101.1	2.4	0.29	0.2	0.00	0.11	0.04					
81	15.70	33.447	24.624	5.71	100.8	2.3	0.30	0.2	0.00	0.12	0.05					
91	15.64	33.439	24.632	5.72	100.9	2.3	0.29	0.2	0.00	0.15	0.06	1.8	0.42	0.41	0.41	0.05
102	15.06	33.501	24.807	5.62	98.0	2.9	0.33	0.2	0.02	0.37	0.33					
116	14.80	33.554	24.905	5.52	95.8	3.0	0.36	0.7	0.04	0.34	0.33					
126	14.46	33.590	25.006	5.35	92.2	3.6	0.44	2.0	0.05	0.30	0.31	0.40	0.26	0.28	0.27	0.02

A) INCUBATION LIGHT INTENSITIES WERE 96, 38, 14, 5.6, 1.8, 0.38 PERCENT RESPECTIVELY.

CalCOFI Cruise 9403

MACROZOOPLANKTON BIOMASS

Net Mesh Size: 0.505 mm

Line	Sta.	Position	Date Mo/Day	Time(PST) Start	End	Water Volume Strained (m ³)	Volume per			
							Max. Tow Depth (m)	1000 m ³ Strained Total (cm)	Small (cm)	
77	49	35 05.3N 120 46.7W	04/07	0940	0946	117	50	223	223	
77	51	35 01.7N 120 54.5W	04/07	0758	0817	360	187	33	33	
77	55	34 53.5N 121 12.9W	04/07	0422	0444	452	209	86	53	
77	60	34 44.0N 121 33.7W	04/06	2356	0018	433	212	83	83	
77	70	34 22.6N 122 15.5W	04/06	1733	1755	454	209	24	24	
77	80	34 03.5N 122 57.3W	04/06	0619	0641	466	208	39	39	
77	90	33 43.6N 123 38.6W	04/06	0114	0136	455	213	40	40	
77	100	33 23.3N 124 20.5W	04/05	1905	1927	467	210	17	17	
80	51	34 26.9N 120 32.3W	04/04	002:2	0031	199	74	317	267	
80	55	34 19.7N 120 48.2W	04/04	0346	0408	448	218	83	83	
80	60	34 09.2N 121 09.6W	04/04	0701	0723	455	213	55	55	
80	70	33 49.8N 121 50.7 W	04/04	1705	1727	429	214	1.68	168	
80	80	33 29.4N 122 31.9W	04/04	234:?	0004	452	214	44	44	
80	90	33 09.0N 123 13.5W	04/05	055:3	0615	459	210	33	33	
80	100	32 49.3N 123 55.0W	04/05	1210	1232	455	210	22	22	
82	47	34 16.7N 120 02.2W	04/03	1948	2010	439	213	121	121	
83	40.6	34 12.9N 119 25.3W	04/03	144:5	1448	46	22	43	43	
83	42	34 10.3N 119 30.6W	04/03	1235	1253	351	170	97	97	
83	51	33 52.8N 120 08.8W	04/03	0544-	0553	216	75	250	250	
83	55	33 44.9N 120 24.0W	04/03	0312	0334	41.1	220	61	61	
83	60	33 34.6N 120 45.7W	04/02	2310	2332	459	214	52	52	
83	70	33 15.4N 121 26.1W	04/02	1717	1739	439	212	50	50	
83	80	32 55.0N 122 08.3W	04/02	0730	0752	464	210	17	17	
83	90	32 34.6N 122 49.4W	04/02	0144	0206	450	216	20	20	
83	100	32 14.4N 123 30.6W	04/01	1916	1938	455	211	24	24	
83	110	31 55.0N 124 11.6W	04/01	1230	1252	473	208	21	21	
87	33	33 52.7N 118 29.7W	03/29	1430	1435	95	43	84	84	
87	35	33 49.3N 118 36.8W	03/29	1720	1742	424	213	59	59	
87	40	33 39.2N 118 58.7W	03/29	2125	2147	43 7	212	73	73	
87	45	33 29.3N 119 20.1W	03/30	0118	0140	459	211	131	131	
87	50	33 18.8N 119 40.1W	03/30	0452.	0459	135	53	37	37	
87	55	33 09.0N 120 00.5W	03/30	1615	1637	445	211	16	16	
87	60	32 59.0N 120 21.1W	03/30	2030	2052	438	216	32	32	
87	70	32 39.6N 121 01.9W	03/3 1	0252	0315	473	217	19	19	
87	80	32 19.6N 121 43.4W	03/31	0815	0837	450	219	16	16	
87	90	32 00.5N 122 23.4W	03/31	1808	1830	448	214	480	33	
87	100	31 39.7N 123 04.7W	04/01	0022	0044	460	212	50	50	
87	110	31 19.6N 123 44.8W	04/01	0556	0618	465	213	9	9	
90	28	33 28.3N 117 45.6W	03/29	0406	0412	11.9	55	1.26	126	
90	30	33 25.4N 117 54.8W	03/29	0154	0216	428	211	63	63	
90	35	33 14.8N 118 14.5W	03/28	2155	2217	398	212	103	103	
90	37	33 11.2N 118 21.8W	03/28	1920	1.942	407	212	47	47	
90	45	32 55.7N 118 56.2W	03/28	0824	0846	412	212	49	49	
90	53	32 39.8N 119 29.4W	03/28	0419	0441	422	212	47	47	
90	60	32 24.7N 119 58.3W	03/27	2318	2340	444	210	36	36	
90	70	32 04.4N 120 38.5W	03/27	1650	1712	459	207	24	24	
90	80	31 45.7N 1.21 19.2W	03/27	0854	0916	432	221	19	19	
90	90	31 25.6N 1.21 58.9W	03/27	0421	0443	458	213	20	20	
90	100	31 05.5N 122 39.9W	03/26	2240	2302	45 1	213	22,	22	
90	110	30 44.9N 123 19.7W	03/26	1651	1713	457	211	22	22	
90	120	30 25.5N 123 59.9W	03/26	0725	0747	438	214	11	11	
93	26.7	32 56.3N 117 18.4W	03/22	1316	1323	137	55	36	36"	
93	28	32 54.2N 117 23.0W	03/22	1646	1.708	448	212	33	33	
93	30	32 50.6N 117 33.2W	03/22	2001	2023	459	209	59	59	
93	35	32 41.2N 117 53.2W	03/23	0048	0112	472	229	34	34	
93	40	32 31.4N 118 13.5W	03/23	0453	0515	450	225	36	36	
93	45	32 20.7N 118 33.8W	03/23	0758	0820	441	218	18	18	
93	50	32 10.8N 118 52.3W	03/23	1635	1657	454	217	18	18	
93	55	32 01.0N 119 14.6W	03/23	2117	2140	452	224	11.7	40	
93	60	31 51.1N 119 34.9W	03/24	0133	0155	45 1	215	35	35	
93	70	31 30.2N 120 14.5W	03/24	0631	0653	457'	213	22	22	
93	80	31 10.1N 120 55.6W	03/24	1845	1907	476	212	15	15	
93	90	30 50.6N 121 36.1W	03/25	0127	0149	473	216	21	21	
93	100	30 30.7N 122 16.0W	03/25	0841	0903	482	217	6	6	
93	110	30 11.8N 122 57.2W	03/25	1925	1948	502	215	10	10	
93	120	29 51.4N 123 35.5W	03/26	0200	0222	470	212	13	13	

Avifauna Observations

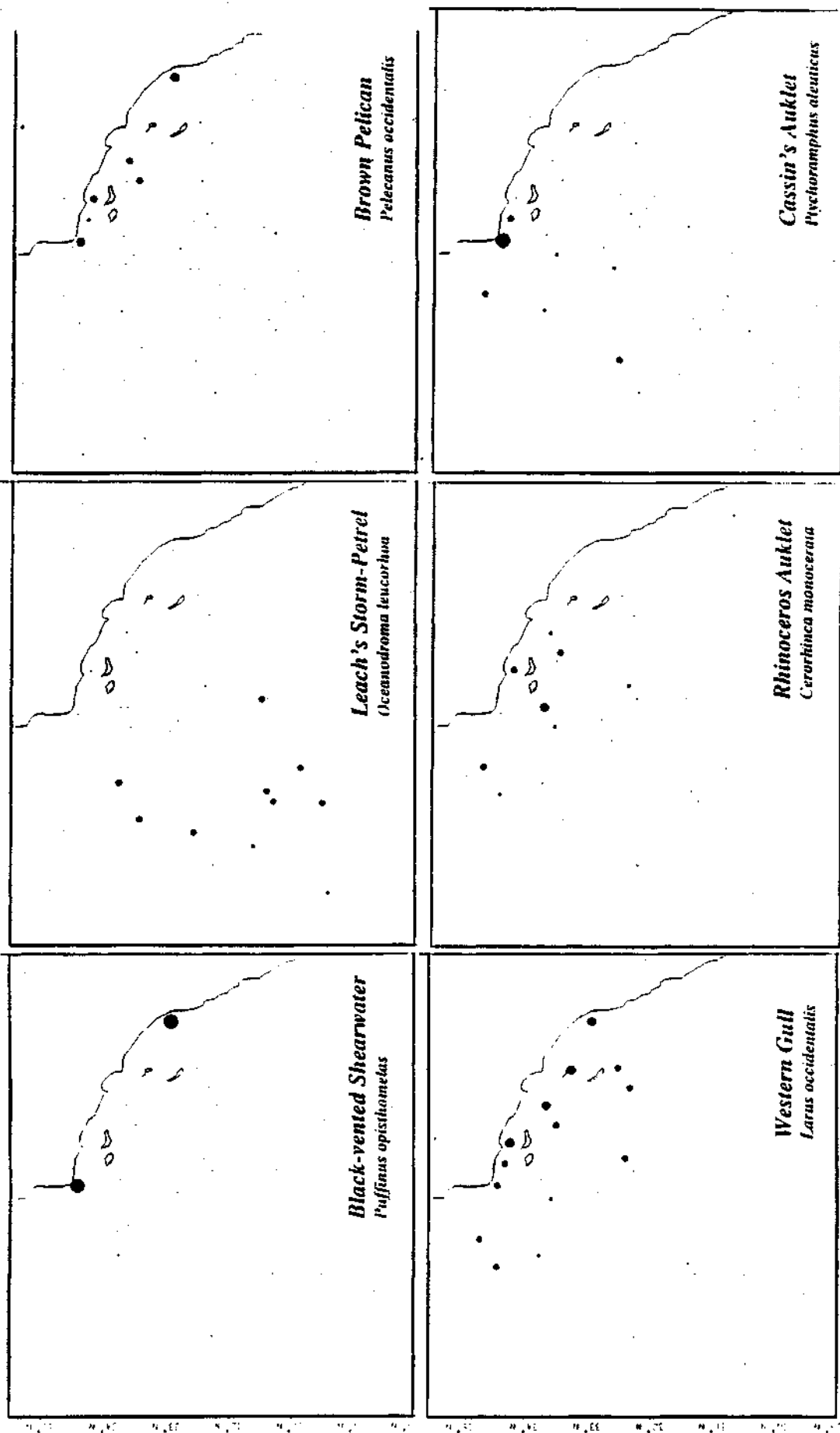
CalCOFI Cruise 9401

- 1a. Black-vented Shearwater distribution.
- 1b. Leach's Storm-Petrel distribution.
- 1c. Brown Pelican distribution.
- 1d. Western Gull distribution.
- 1e. Rhinoceros Auklet attribution.
- 1f. Cassin's Auklet distribution.

CalCOFI Cruise 9403

- 2a. Cook's Petrel distribution.
- 2b. Sooty Shearwater distribution.
- 2c. Leach's Storm-Petrel distribution.
- 2d. Phalarope Sp.? distribution.
- 2e. Western Gull distribution.
- 2f. Bonaparte's Gull distribution.

CalCOFI Cruise 9401



CalCOFI Cruise 9403

