UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 8609
18 September – 3 October 1986

CalCOFI Cruise 8611
11 – 26 November 1986

SIO Reference 87-7
14 April 1987

UNIVERSITY OF CALIFORNIA

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Approved for distribution:

Edward A. Frieman, Director

CONTENTS

INTRODUCTION

The data in this report were collected during Cruises 8609*, and 8611 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) aboard the RV *New Horizon* of the Scripps Institution of Oceanography (SIO). The CalCOFI program was organized in the late 1940s to study the causes of variations in population size of fishes of importance to the State of California. It is carried out by the National Marine Fisheries Service Southwest Fisheries Center, the California Department of Fish and Game, and the Marine Life Research Group (MLRG) of the Scripps Institution of Oceanography. MLRG contributes to this program by investigations of the physical, chemical, and biological structure of the California Current. Data from CalCOFI cruises 8609 and 8611 were collected and processed by personnel of the Marine Life Research Group, the Southwest Fisheries Center, National Marine Fisheries Service (NMFS), and the Physical and Chemical Oceanographic Data Facility (PACODF). Volunteers also assisted in the collection of data at sea.

STANDARD PROCEDURES

Hydrographic Cast Data

The hydrographic casts usually consisted of 20 bottles lowered to a maximum sampling depth of 525 meters, bottom depth permitting. The top 12 bottles were plastic Niskin bottles and the bottom eight were epoxy-lined Nansen bottles. Temperature, salinity, oxygen and nutrients were determined for all depths sampled. Chlorophyll-a and phaeopigments were usually determined from the top 14 depths. Productivity casts were merged with the hydrographic casts on some stations. Special near-bottom casts were done in the Santa Monica and Santa Barbara Basins.

Paired protected reversing thermometers were used to determine temperatures which are recorded to hundredths of a degree Celsius. Sampling bottles used below a depth of 100 meters were equipped with unprotected thermometers for determination of the depth of sampling.

Salinity samples were analyzed at sea using inductive-type salinometers. Salinometers were standardized with sub-standard seawater. Periodic checks on the concentration of the substandard were made by comparison with Wormley Standard Seawater batch P-96. The salinity values are reported to three 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).

Chlorophyll-a and phaeopigments were measured with a fluorometric technique (Yentsch and Menzel, 1963; Holm-Hansen *et al,* 1965) from subsamples filtered onto GF/C 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 fluorometer.

The observed data have been evaluated using the methodology described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other, and comparisons with adjacent observations.

Primary Productivity Casts

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). Six depths, corresponding to predetermined levels of light penetration, were sampled

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

with 5 1 Niskin bottles. Temperature, salinity, oxygen, nutrients, chlorophyll-a, and phaeopigments were determined for all depths sampled. Triplicate samples (two light and one dark control) were drawn from each depth into 250 ml polycarbonate incubation bottles which were innoculated with approximately 10 uci of C as NaHCO . These were incubated approximately from local apparent noon to civil twilight in seawater-cooled incubators with neutral-density screens which simulate the *in situ* light levels. At the end of the incubation, the samples were filtered onto HA milipore filters and placed in scintillation vials. One-half ml of 10% HC1 was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation fluor were added to each sample and the samples were returned to S.I.O. where the radioactivity was determined with a scintillation counter.

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).

TABULATED DATA

Hydrographic Cast Data

The reported hydrographic cast time is the Greenwich Mean Time (GMT) of the messenger release. 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.

Observed and interpolated standard depth data from hydrographic 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 (EOS80, UNESCO, 1981). Some of the differences between EOS80 and the older equations-of-state are discussed in the introduction to SIO Ref. 84-18. Computed values of potential temperature, sigma-theta, specific volume anomaly (SVA), dynamic height or geopotential anomaly, and pressure are included with both observed and interpolated standard depth levels.

Primary Productivity Casts

In addition to the normal hydrographic data, the tabulated data include: the light levels at which the samples were incubated, 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, the dark uptake, chlorophyll-a and phaeopigments. The uptake values shown are the total for the incubation period. The times of local apparent noon (LAN), civil twilight, and the vertically integrated value of the mean uptake from the surface to the deepest sample depth (assuming that the shallowest measured value extends to the surface and that negative values are zero) are also shown for each experiment. The uptake data have been presented to two significant digits (values < 1.00) or one decimal (values >1.00). The higher production values may not warrant all of the significant digits presented. Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to GMT, add eight hours to the PST time.

Secchi Disk Observations

Secchi disk observations were made on most daylight stations. The times are given in local PST (+8) time. Weather codes and cloud observations are also presented.

Macrozooplankton Data

Macrozooplankton biomass volumes are tabulated as total biomass volume (cm / 1000 m strained) and as the total volume minus the volume of larger organisms under the heading "Small."

FOOTNOTES

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

ISL: After depth values indicates interpolated or extrapolated standard level.

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

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FIGURES

Cruise 8609

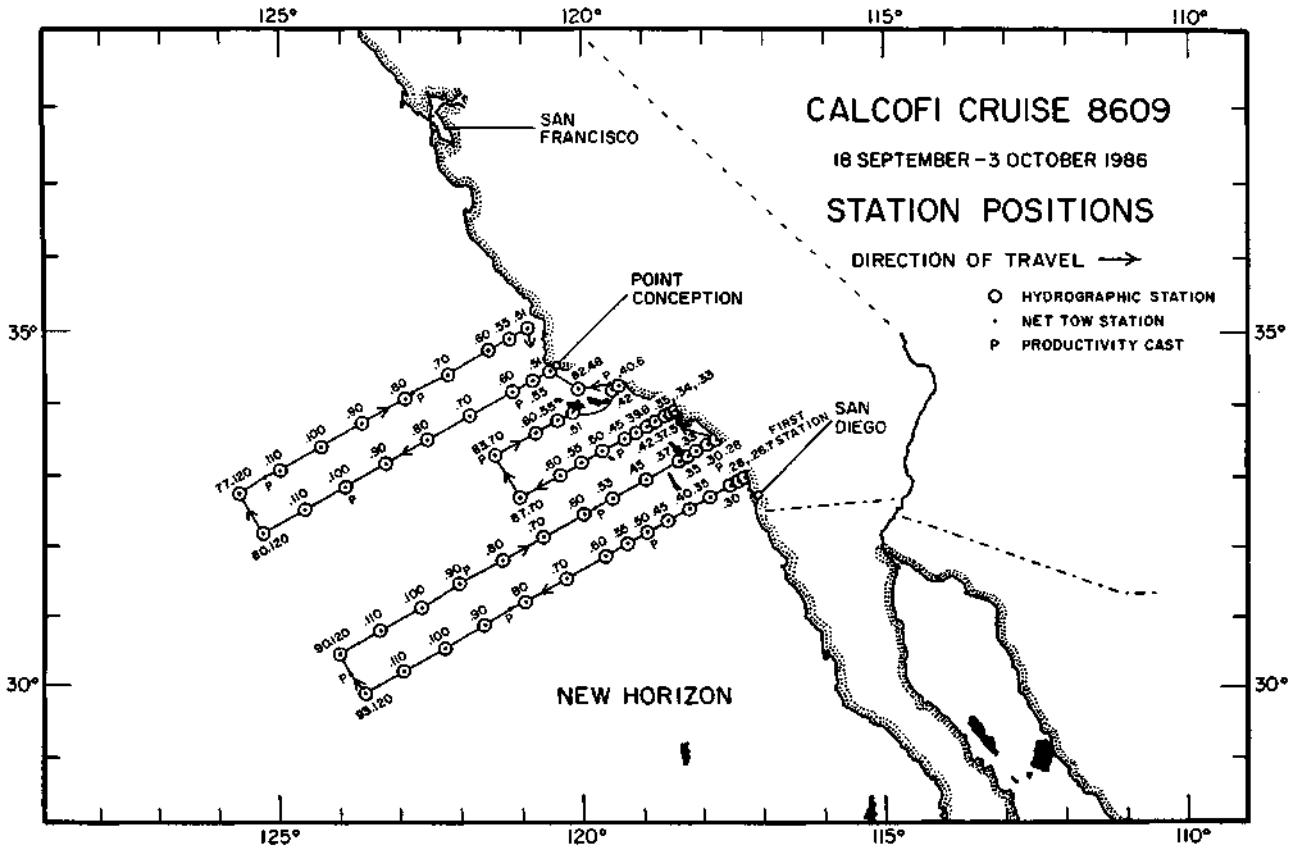
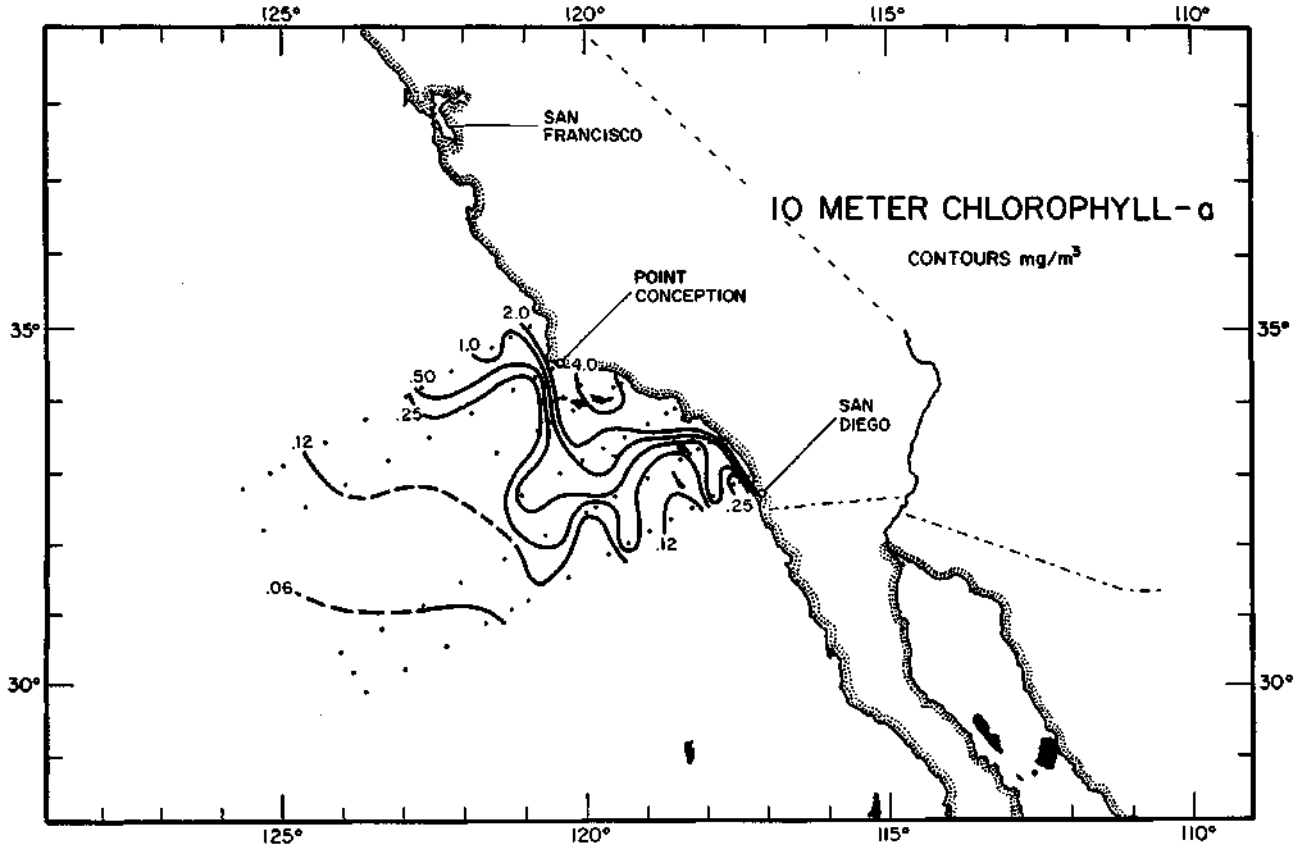


FIGURE 1



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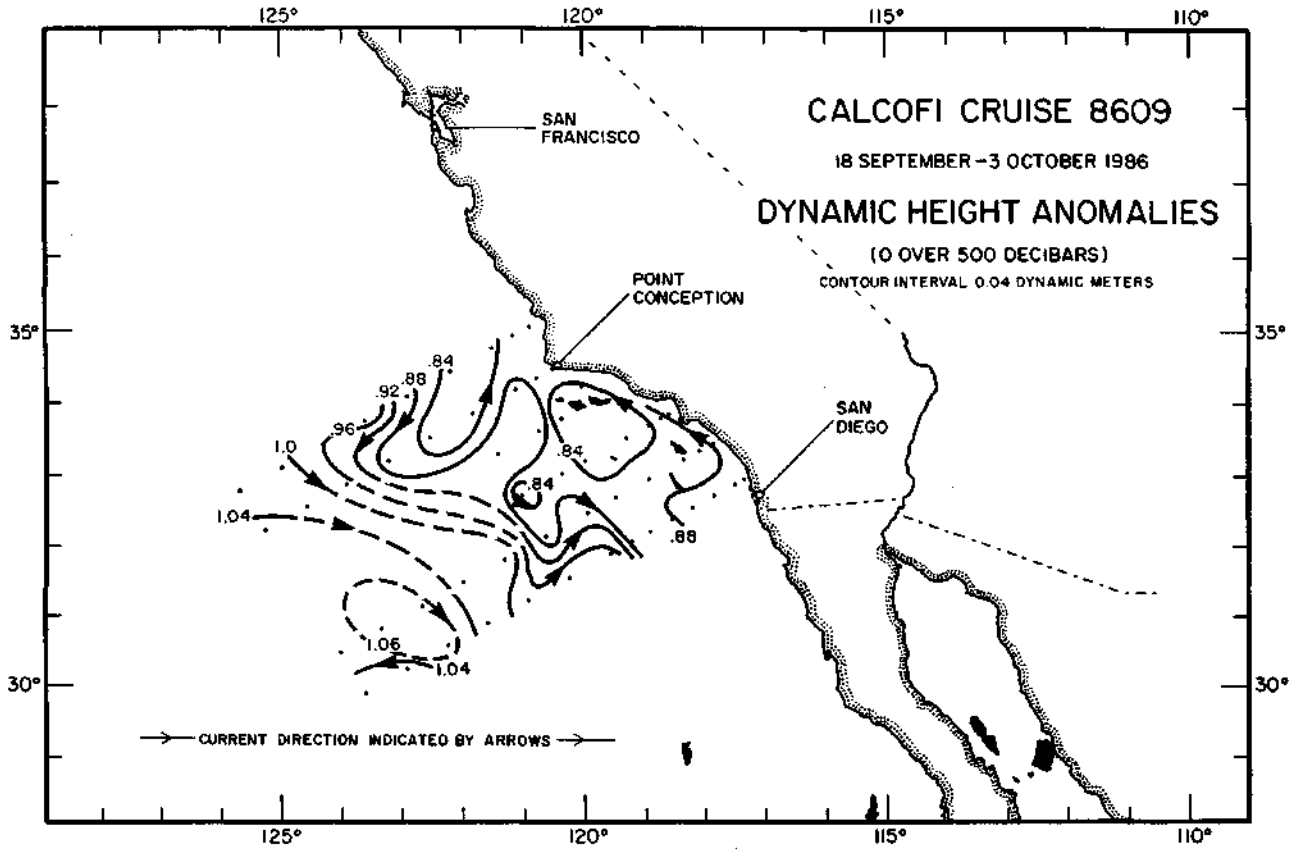

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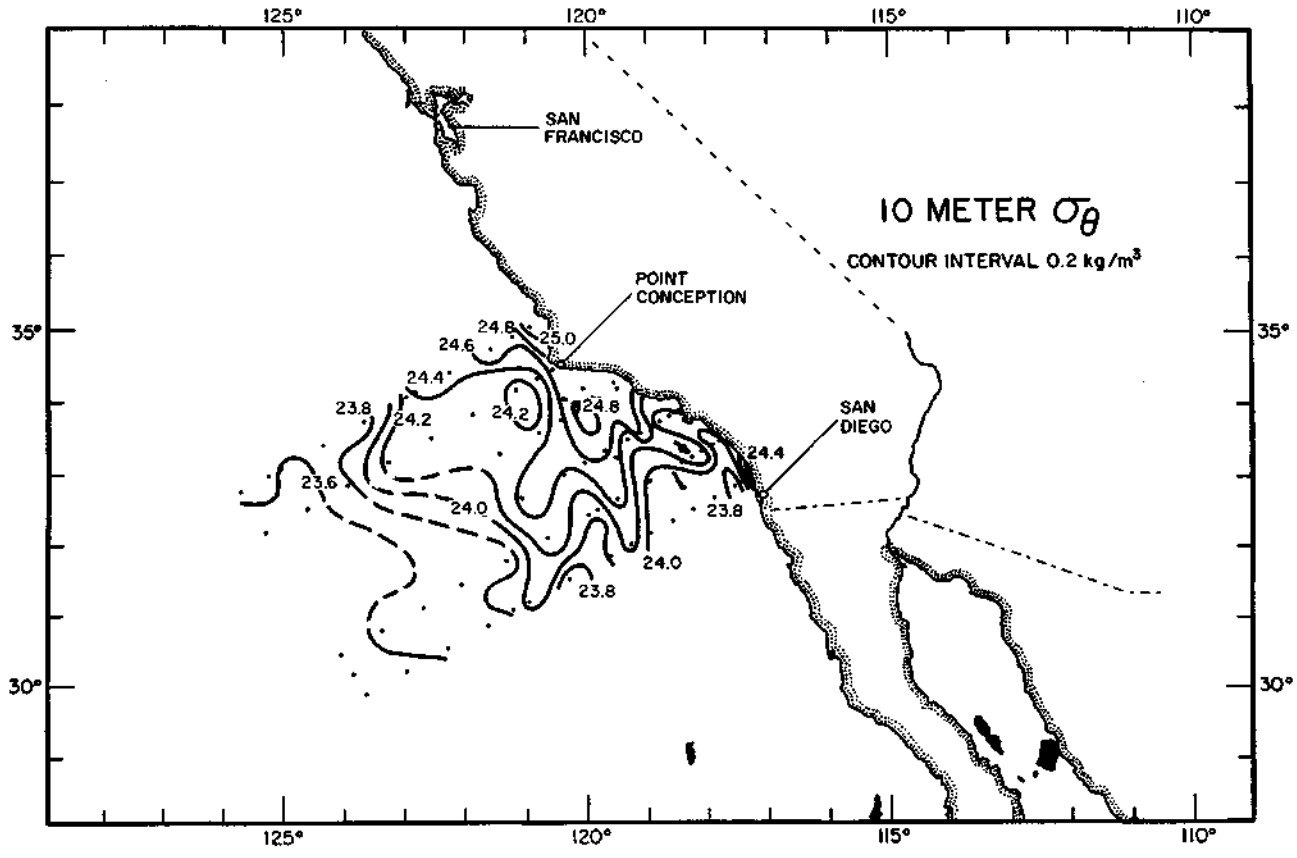

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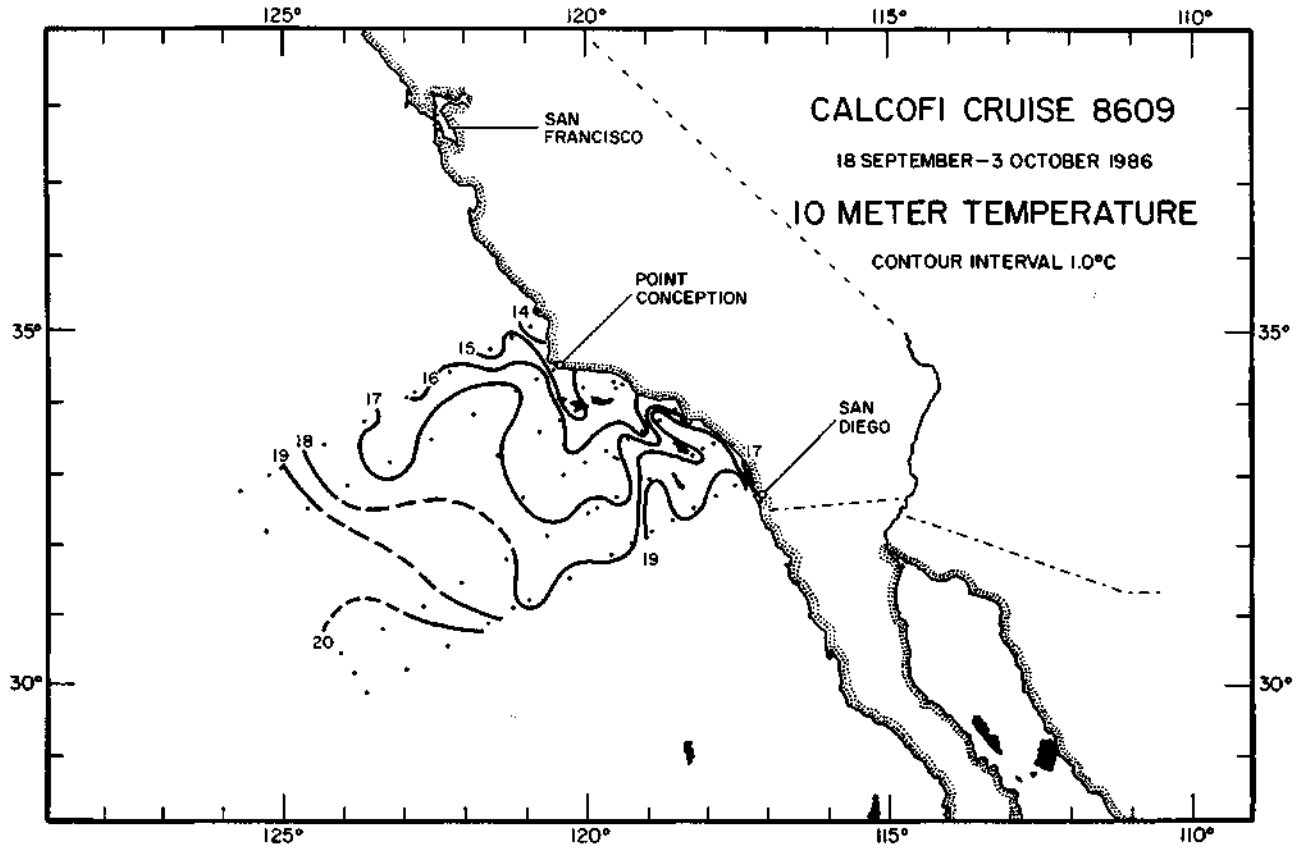

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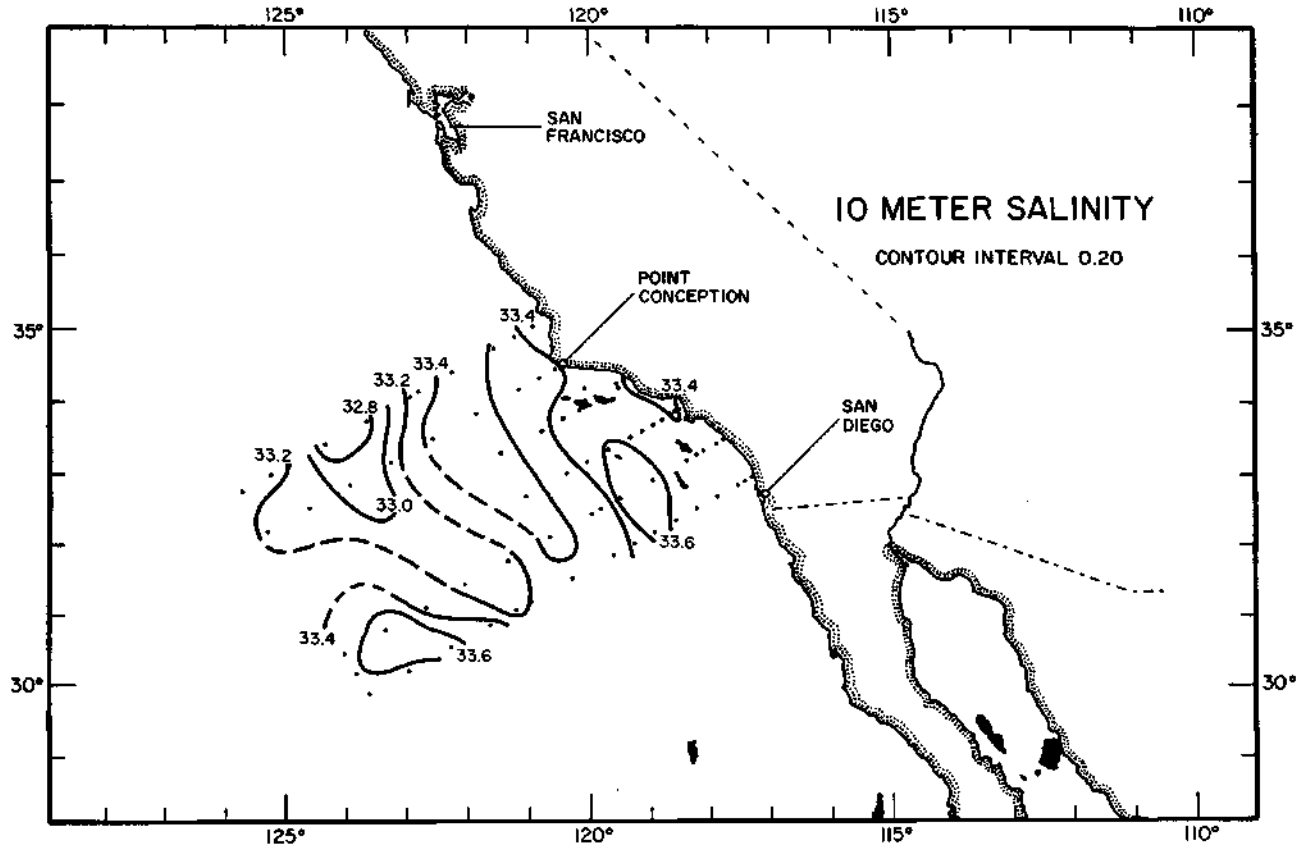

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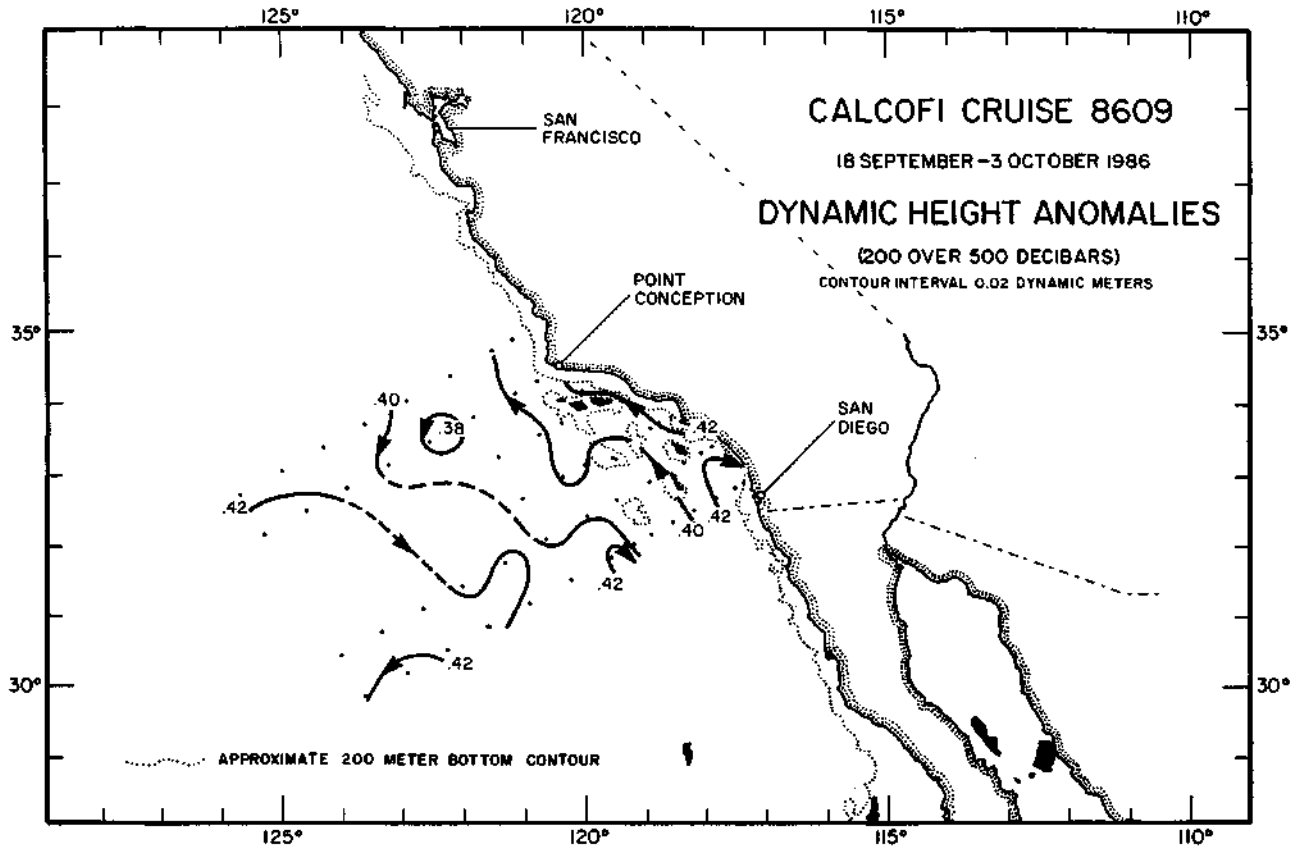

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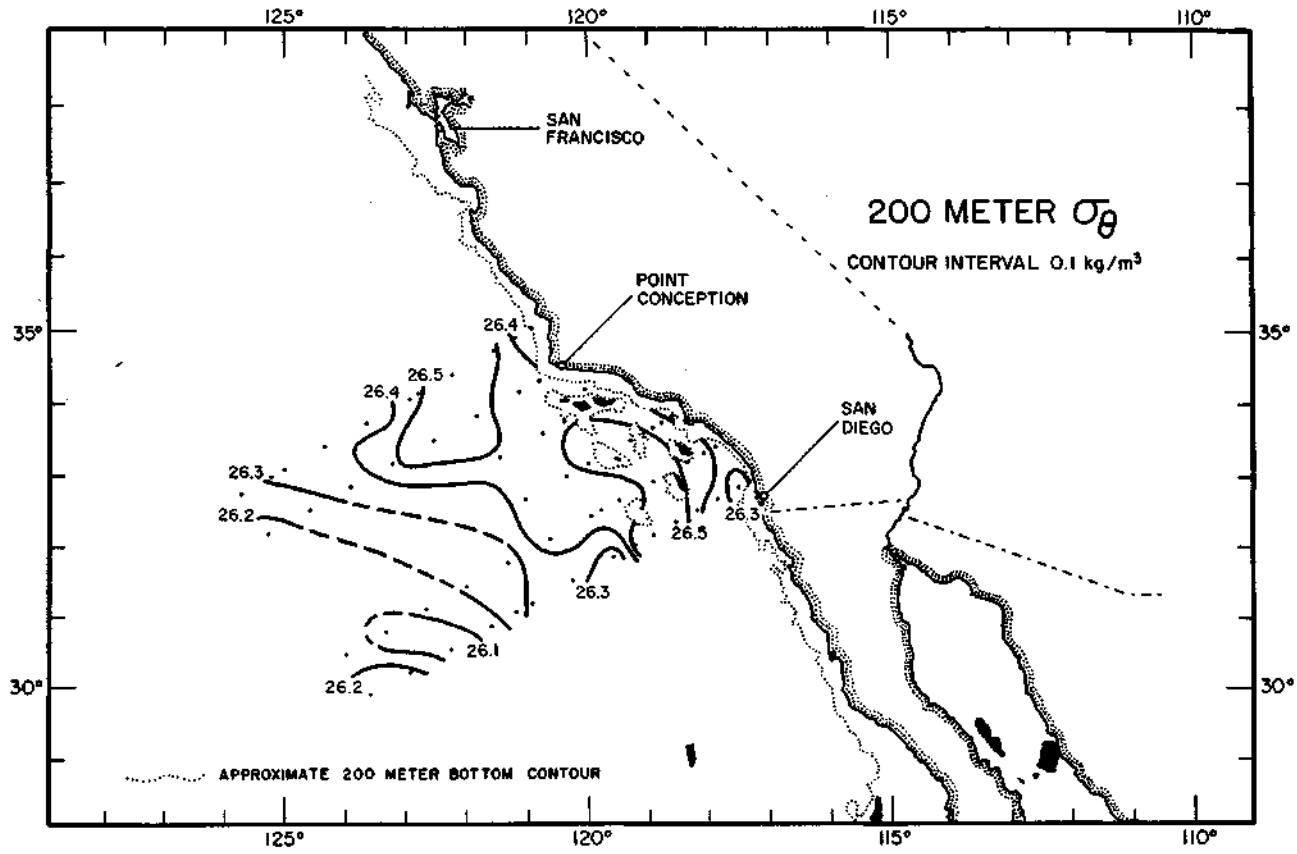

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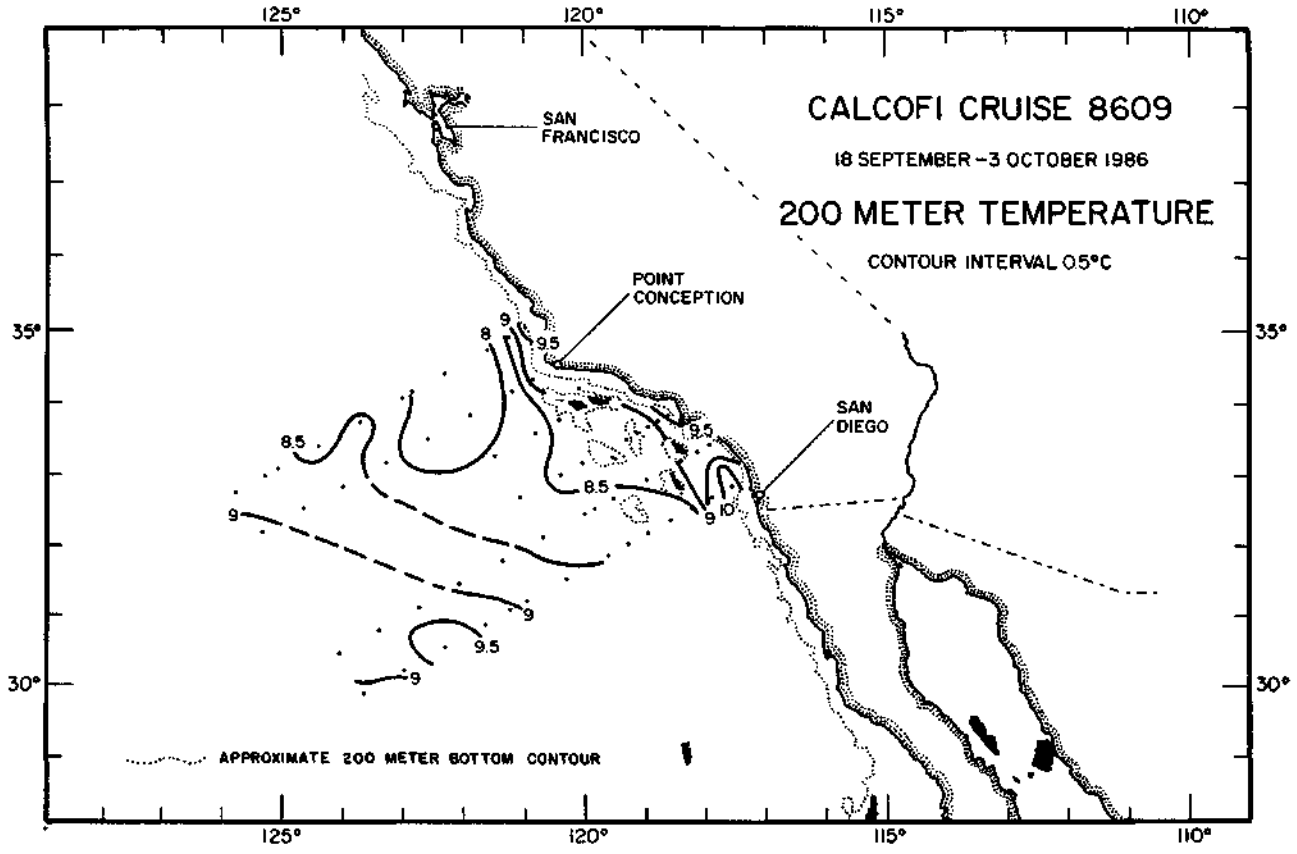

FIGURE 9

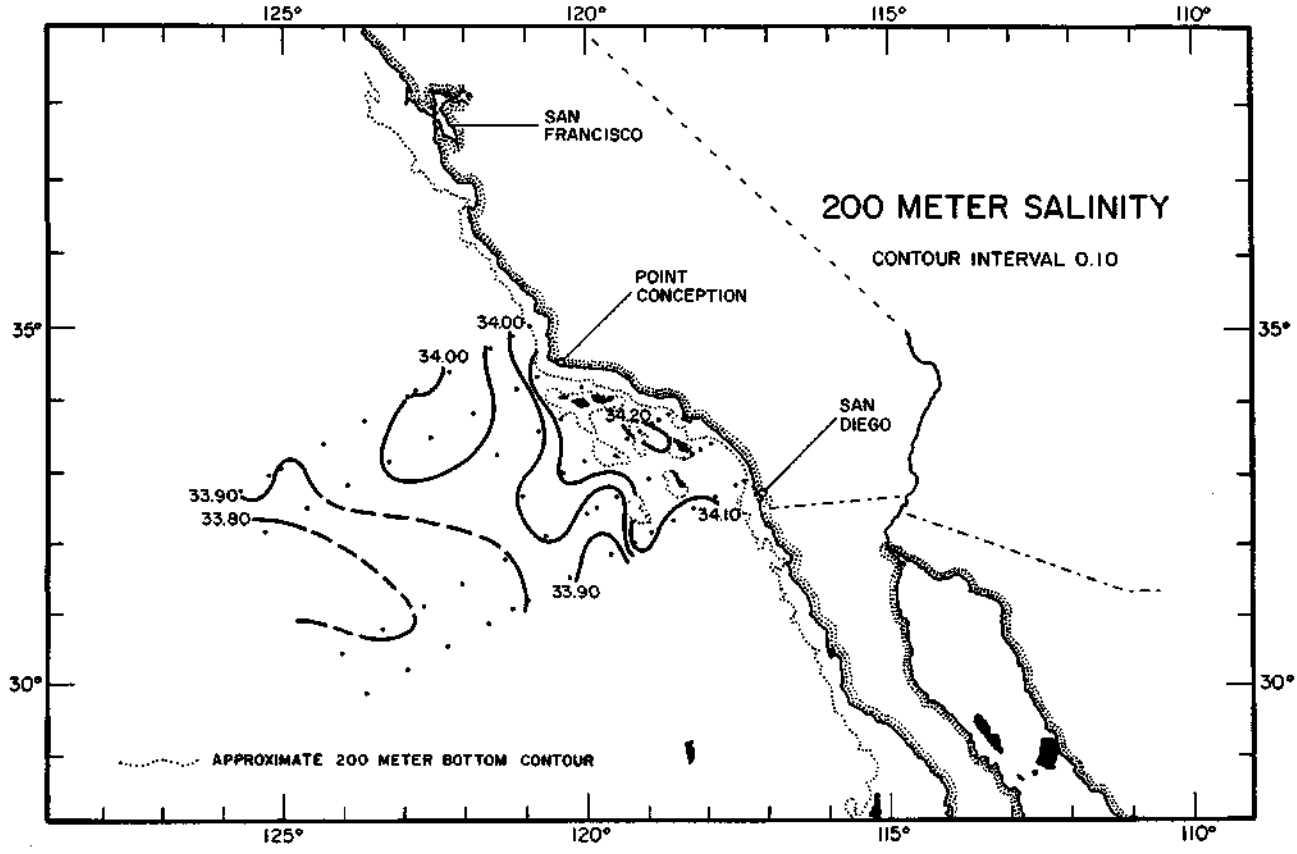

FIGURE 10

PERSONNEL

Cruise 8609

SHIP'S CAPTAIN

Desjardins, Thomas J., RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Venrick, Elizabeth L. (Chief Scientist)	Research Oceanographer, SIO
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS
Anderson, George C.	Staff Research Associate, SIO
Carr, Carmen Lichtenfels	Volunteer
Cohenour, Bernard C.	Oceangrapher, U. S. Navy, PMTC
Dotson, Ronald C.	Fishery Biologist, NMFS
Gruber, Dennis W.	Marine Technician, SIO
Masten, Douglas M.	Marine Technician, SIO
Ohman, Mark D.	Asst. Research Oceangrapher, SIO
Pillard, Eugene G.	Resident Technician, SIO
Rutherford, Susan E.	Student, UCSB
Wilkinson, James R.	Staff Research Associate, SIO

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 01.6 N	120 55.3 W	02/10/86	1634 GMT	233 M	100	06 KT	320 06 08	1	1008.0 MB	14.8 C	13.0 C	6/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	13.80	13.80	33.468	25.045	290.6	.000	5.97	101.5							0
1	1		13.80	13.80	33.468	25.045	290.5	.003	5.97	101.5	6.4	.64	4.5	.23	3.71	1.13	1
	10	ISL	13.72	13.72	33.464	25.060	289.4	.029	5.92	100.5							10
1	11		13.71	13.71	33.463	25.061	289.3	.032	5.92	100.4	6.5	.65	4.6	.24	3.66	1.05	11
1	20		13.08	13.08	33.518	25.230	273.4	.057	5.29	88.6	8.1	.88	7.7	.41	1.87	.91	20
	30	ISL	11.96	11.96	33.593	25.505	247.5	.083	4.21	68.9							30
1	32		11.77	11.76	33.608	25.553	243.0	.088	4.03	65.7	14.0	1.32	14.8	.18	.37	.47	32
1	42		11.34	11.33	33.674	25.683	230.8	.111	3.64	58.8	17.1	1.46	17.3	.07	.23	.37	42
	50	ISL	11.04	11.03	33.706	25.763	223.4	.130	3.44	55.2							50
1	53		10.95	10.94	33.716	25.787	221.2	.136	3.37	54.0	19.2	1.57	19.0	.05	.08	.22	53
1	63		10.67	10.66	33.775	25.882	212.4	.158	2.93	46.7	23.3	1.77	21.3	.02	.06	.38	63
1	73		10.50	10.49	33.815	25.944	206.7	.178	2.76	43.8	24.1	1.81	22.5	.02	.04	.27	73
	75	ISL	10.47	10.46	33.820	25.952	206.0	.183	2.73	43.3							76
1	88		10.38	10.37	33.840	25.983	203.3	.209	2.62	41.5	25.7	1.87	23.3	.02	.03	.26	88
	100	ISL	10.29	10.28	33.865	26.018	200.3	.234	2.61	41.2							101
1	108		10.23	10.22	33.883	26.044	198.0	.251	2.59	40.9	26.9	1.90	24.0	.02	.02	.24	109
	125	ISL	10.06	10.04	33.928	26.108	192.2	.283	2.34	36.8							126
1	129		10.01	10.00	33.939	26.124	190.8	.291	2.27	35.7	29.8	2.05	25.6	.09	.01	.25	130
	150	ISL	9.94	9.92	33.963	26.156	188.2	.331	2.15	33.7							151
1	151		9.93	9.92	33.964	26.158	188.0	.333	2.14	33.6	31.4	2.13	26.1	.16	.01	.28	152
1	181		9.65	9.63	34.043	26.267	178.2	.388	1.84	28.7	35.1	2.25	27.9	.20	.01	.30	182
	200	ISL	9.51	9.49	34.075	26.316	174.0	.421	1.74	27.0							202
1	213		9.43	9.41	34.089	26.339	172.0	.443	1.71	26.6	37.7	2.33	28.9	.19	.01	.28	214

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 52.8 N	121 12.5 W	02/10/86	1118 GMT	550 M	300	11 KT			1006.0 MB	15.1 C	13.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		15.22	15.22	33.392	24.685	324.8	.000	5.87	102.6	2.6	.44	1.2	.13	.85	.39	0
1	10		15.21	15.21	33.390	24.686	325.0	.032	5.87	102.6	2.6	.44	1.3	.13	.90	.39	10
	20	ISL	13.76	13.75	33.471	25.057	289.9	.063	5.38	91.3							20
1	21		13.60	13.60	33.480	25.095	286.3	.066	5.32	90.1	6.0	.80	6.2	.83	.98	.66	21
	30	ISL	12.83	12.82	33.525	25.286	268.4	.091	4.75	79.2							30
1	31		12.76	12.76	33.528	25.300	267.0	.093	4.70	78.2	9.2	1.02	9.8	.58	.44	.40	31
1	42		11.81	11.80	33.565	25.512	247.1	.121	4.20	68.5	12.9	1.27	14.2	.08	.21	.31	42
	50	ISL	11.43	11.42	33.623	25.628	236.3	.141	3.75	60.7							50
1	51		11.40	11.40	33.629	25.637	235.4	.143	3.71	60.0	15.8	1.42	16.7	.03	.12	.28	51
1	63		11.10	11.09	33.681	25.732	226.6	.171	3.36	54.0	18.2	1.55	18.7	.02	.06	.24	63
1	72		10.98	10.97	33.703	25.772	223.1	.191	3.23	51.8	19.4	1.61	19.5	.01	.05	.21	72
	75	ISL	10.92	10.92	33.713	25.789'	221.5	.198	3.19	51.1							76
1	87		10.73	10.72	33.749	25.852	215.8	.224	3.08	49.1	21.4	1.69	20.7	.01	.06	.25	87
	100	ISL	10.50	10.49	33.788	25.921	209.4	.252	2.96	47.0							101
1	101		10.48	10.46	33.791	25.929	208.8	.255	2.95	46.8	22.9	1.75	21.9	.01	.04	.19	102
1	122		9.97	9.95	33.807	26.029	199.7	.298	3.04	47.7	24.6	1.79	23.0	.02	.03	.14	123
	125	ISL	9.93	9.92	33.818	26.043	198.3	.303	2.98	46.8							126
1	147		9.68	9.66	33.920	26.165	187.2	.346	2.47	38.5	29.3	2.02	26.0	.01	.01	.13	148
	150	ISL	9.64	9.62	33.928	26.179	185.9	.351	2.47	38.5							151
1	178		9.14	9.12	33.988	26.306	174.2	.402	2.47	38.1	32.3	2.06	27.1	.02	.00	.17	179
	200	ISL	8.71	8.69	34.018	26.399	165.7	.439	2.49	38.0							202
1	207		8.60	8.57	34.028	26.424	163.5	.450	2.49	37.9	35.8	2.14	28.4	.01	.00	.10	208
1	239		8.45	8.43	34.084	26.490	157.7	.501	2.14	32.5	39.5	2.26	29.7	.01			240
	250	ISL	8.23	8.20	34.083	26.523	154.7	.519	2.12	32.1							252
1	277		7.65	7.63	34.074	26.602	147.4	.560	2.10	31.3	45.9	2.36	31.9	.01			279
	300	ISL	7.46	7.43	34.100	26.650	143.1	.593	1.85	27.4							302
1	332		7.31	7.28	34.141	26.704	138.4	.638	1.44	21.3	53.9	2.63	34.5	.00			334
1	390		6.86	6.83	34.156	26.778	132.0	.717	1.12	16.4	61.5	2.79	36.1	.00			393
	400	ISL	6.79	6.75	34.163	26.794	130.7	.730	1.05	15.4							403
1	454		6.40	6.36	34.202	26.876	123.3	.798	.70	10.1	70.4	2.98	38.6	.00			457
	500	ISL	6.10	6.06	34.223	26.932	118.4	.854	.54	7.8							504
1	520		5.98	5.93	34.229	26.952	116.6	.878	.51	7.3	76.2	3.07	40.2	.00			524

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 43.4 N	121 34.0 W	02/10/86	0709 GMT	936 M	310	25 KT	330 12 06		1007.2.MB	15.6 C	13.4 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	14.91	14.90	33.391	24.753	318.4	.000	5.92	102.9							0
1	1		14.91	14.90	33.391	24.753	318.3	.003	5.92	102.9	4.0	.50	2.1	.13	1.44	.57	1
	10	ISL	14.89	14.88	33.393	24.759	318.0	.032	5.92	102.8							10
1	11		14.88	14.88	33.393	24.760	318.0	.035	5.92	102.8	3.8	.49	2.1	.13	1.49	.57	11
1	20		14.55	14.54	33.403	24.840	310.6	.063	5.93	102.3	4.8	.55	3.1	.16	2.02	.76	20
1	30		14.06	14.05	33.392	24.935	301.8	.093	5.89	100.6	4.9	.61	3.9	.22	2.38	1.06	30
1	40		12.51	12.51	33.223	25.113	285.1	.123	5.66	93.5	5.4	.81	6.4	.34	1.00	1.48	40
1	49		11.70	11.69	33.341	25.359	261.8	.147	5.02	81.6	9.1	1.07	11.4	.12	.50	.61	49
	50	ISL	11.63	11.62	33.354	25.382	259.7	.150	4.97	80.6							50
1	59		11.26	11.25	33.478	25.546	244.3	.172	4.48	72.2	12.2	1.26	14.8	.03	.19A	.36A	59
1	68		10.84	10.83	33.716	25.807	219.6	.193	3.40	54.3	19.0	1.56	19.4	.06	.07	.21	68
	75	ISL	10.62	10.61	33.727	25.853	215.4	.209	3.36	53.4							76
1	83		10.47	10.46	33.754	25.901	210.9	.225	3.31	52.5	20.8	1.62	20.6	.05	.07	.21	83
1	97		10.23	10.21	33.832	26.004	201.5	.254	2.87	45.3	24.5	1.82	23.0	.04	.03	.17	97
	100	ISL	10.18	10.16	33.856	26.031	198.9	.261	2.77	43.6							101
1	115		9.87	9.85	33.938	26.148	188.2	.291	2.50	39.2	28.6	1.97	25.0	.02	.02	.15	116
	125	ISL	9.44	9.42	33.924	26.207	182.6	.309	2.66	41.3							126
1	140		8.77	8.75	33.889	26.288	175.1	.336	2.99	45.7	31.0	1.97	26.6	.01	.00	.06	141
	150	ISL	8.61	8.59	33.915	26.333	171.0	.353	2.92	44.4							151
1	169		8.43	8.42	33.977	26.408	164.2	.385	2.71	41.1	35.4	2.07	28.2	.01	.00	.06	170
1	199		7.90	7.88	33.991	26.500	155.8	.432	2.98	44.7	37.7	2.05	28.3	.01	.00	.04	200
	200	ISL	7.88	7.86	33.992	26.503	155.6	.434	2.97	44.5							202
1	227		7.61	7.59	34.012	26.558	150.7	.475	2.69	40.1	42.4	2.16	30.0	.01			228
	250	ISL	7.35	7.33	34.018	26.600	146.9	.510	2.57	38.0							252
1	265		7.19	7.17	34.023	26.626	144.6	.532	2.48	36.6	48.1	2.28	31.7	.00			267
	300	ISL	7.00	6.98	34.061	26.682	139.8	.581	1.99	29.2							302
1	320		6.91	6.88	34.085	26.715	137.0	.609	1.67	24.5	56.0	2.57	35.1	.00			322
1	379		6.38	6.34	34.128	26.820	127.5	.686	1.10	15.9	66.1	2.81	38.1	.01			381
	400	ISL	6.46	6.43	34.173	26.845	125.5	.713	.90	13.1							403
1	444		6.64	6.60	34.264	26.893	121.8	.768	.57	8.3	69.5	3.00	38.3	.00			447
	500	ISL	6.13	6.08	34.281	26.974	114.5	.834	.37	5.3							504
1	513		5.99	5.94	34.289	26.998	112.2	.849	.35	5.0	79.9	3.13	40.6	.00			517
1	523		5.95	5.90	34.310	27.020	110.2	.860									527

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 23.6 N	122 14.7 W	02/10/86	0029 GMT	4009 M	320	27 KT	340 14 08	1	1008.6 MB	16.8 C	13.9 C	3/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.41	16.41	33.435	24.450	347.2	.000	5.79	103.7							0
1	1		16.41	16.41	33.435	24.450	347.2	.003	5.79	103.7	1.9	.38	.2	.00	.54	.13	1
	10	ISL	16.41	16.40	33.433	24.451	347.3	.035	5.81	104.0							10
1	11		16.40	16.40	33.433	24.452	347.3	.038	5.81	104.0	1.8	.38	.2	.00	.56	.13	11
	20	ISL	16.41	16.41	33.433	24.450	347.8	.069	5.80	103.9							20
1	21		16.41	16.41	33.433	24.450	347.8	.073	5.80	103.9	1.7	.38	.2	.01	.55	.12	21
	30	ISL	16.41	16.40	33.432	24.451	348.1	.104	5.82	104.2							30
1	31		16.41	16.40	33.432	24.451	348.1	.107	5.82	104.2	1.7	.38	.2	.00	.54	.11	31
1	42		13.79	13.79	33.474	25.053	290.9	.142	5.82	98.9	5.0	.66	4.4	.35	.83	.48	42
	50	ISL	12.48	12.47	33.503	25.337	264.1	.165	4.86	80.3							50
1	52		12.24	12.24	33.505	25.384	259.6	.170	4.64	76.3	9.8	1.11	11.8	.21	.56	.43	52
1	62		10.95	10.95	33.497	25.615	237.7	.194	4.42	70.7	13.2	1.33	15.8	.04	.17	.22	62
1	72		10.56	10.55	33.575	25.746	225.4	.217	4.10	65.1	15.9	1.50	18.3	.02	.09	.16	72
	75	ISL	10.38	10.37	33.599	25.796	220.8	.225	3.99	63.2							76
1	88		9.77	9.76	33.681	25.963	205.2	.252	3.63	56.7	21.7	1.70	22.0	.03	.03	.09	88
	100	ISL	9.50	9.49	33.737	26.051	196.9	.277	3.38	52.4							101
1	102		9.46	9.45	33.747	26.065	195.6	.281	3.33	51.7	25.2	1.81	24.0	.01	.01	.07	103
1	122		9.10	9.09	33.840	26.196	183.5	.319	2.92	45.0	28.9	1.96	26.1	.01	.01	.06	123
	125	ISL	9.05	9.04	33.854	26.215	181.9	.324	2.88	44.3							126
1	148		8.68	8.66	33.957	26.355	168.9	.365	2.64	40.3	34.2	2.08	28.0	.01	.01	.06	149
	150	ISL	8.66	8.64	33.962	26.362	168.2	.368	2.63	40.1							151
1	179		8.33	8.31	34.016	26.455	159.8	.415	2.50	37.9	37.6	2.15	29.0	.01	.00	.05	180
	200	ISL	7.99	7.97	34.037	26.522	153.8	.448	2.43	36.6							202
1	210		7.83	7.81	34.042	26.550	151.2	.463	2.40	35.9	42.3	2.24	30.5	.01	.00	.04	211
1	241		7.41	7.39	34.042	26.611	145.8	.509	2.24	33.2	47.1	2.34	32.0	.01			242
	250	ISL	7.42	7.39	34.068	26.630	144.1	.523	2.04	30.3							252
1	281		7.45	7.42	34.156	26.695	138.5	.567	1.38	20.5	53.2	2.62	34.1	.01			283
	300	ISL	7.15	7.12	34.143	26.728	135.6	.592	1.36	20.0							302
1	337		6.45	6.42	34.099	26.787	130.0	.641	1.31	19.0	62.7	2.74	37.1	.00			339
1	400		6.06	6.03	34.173	26.896	120.3	.721	.72	10.4	73.2	2.96	39.6	.01			403
1	467		5.67	5.63	34.222	26.984	112.5	.798	.48	6.8	81.4	3.11	41.2	.00			470
	500	ISL	5.49	5.45	34.246	27.025	108.9	.835	.40	5.6							504
1	538		5.30	5.26	34.273	27.069	105.0	.876	.33	4.7	90.2	3.19	42.5	.00			542

A. SECOND FLOUROMETER READING NOT RECORDED. CHLOROPHYLL AND PHAEOPHYTIN CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 03.1 N	122 56.6 W	01/10/86	1514 GMT	4229 M	320	26 KT	340 08 08	1	1013.4 MB	16.0 C	14.0 C	4/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.36	16.36	33.212	24.291	362.4	.000	5.79	103.5							0
1	1		16.36	16.36	33.212	24.291	362.4	.004	5.79	103.5	2.7	.41	.2	.00	.23	.06	1
	10	ISL	16.35	16.35	33.210	24.292	362.5	.036	5.78	103.3							10
1	12		16.35	16.35	33.210	24.292	362.6	.043	5.78	103.3	2.5	.41	.2	.00	.22	.06	12
	20	ISL	16.35	16.35	33.208	24.292	362.9	.073	5.80	103.5							20
1	22		16.35	16.35	33.207	24.291	363.0	.079	5.80	103.6	2.6	.39	.2	.00	.22	.07	22
	30	ISL	14.80	14.79	32.936	24.426	350.3	.108	6.12	105.8							30
1	32		14.37	14.37	32.876	24.471	346.1	.115	6.20	106.2	2.6	.47	.8	.03	.38	.16	32
1	43		12.84	12.83	32.873	24.780	316.9	.151	6.42	106.5	2.8	.50	.7	.05	.59	.29	43
	50	ISL	12.19	12.19	32.823	24.864	309.0	.174	6.22	101.9							50
1	53		12.00	11.99	32.805	24.887	306.8	.182	6.12	99.7	3.8	.58	1.6	.16	.45	.39	53
1	62		11.44	11.43	32.828	25.008	295.5	.209	5.90	95.0	5.0	.71	4.1	.06	.33	.27	62
1	74		10.90	10.89	32.922	25.177	279.6	.243	5.62	89.5	7.4	.86	7.1	.03	.17	.16	74
	75	ISL	10.81	10.80	32.930	25.200	277.4	.247	5.60	89.0							76
1	89		9.98	9.96	33.063	25.446	254.2	.283	5.28	82.5	11.2	1.08	11.4	.01	.07	.10	89
	100	ISL	10.08	10.07	33.317	25.626	237.4	.311	4.79	75.1							101
1	105		10.13	10.11	33.412	25.693	231.1	.322	4.57	71.8	16.1	1.41	17.2	.01	.06	.07	105
1	124		9.62	9.61	33.668	25.978	204.4	.365	3.68	57.3	23.5	1.75	23.0	.01	.02	.06	125
	125	ISL	9.59	9.58	33.672	25.986	203.7	.366	3.68	57.3							126
1	150		8.61	8.59	33.806	26.247	179.1	.415	3.81	58.0	27.2	1.73	23.4	.00	.01	.03	151
1	181		8.32	8.30	33.979	26.428	162.4	.467	2.77	41.9	36.2	2.07	28.3	.00	.00	.03	182
	200	ISL	8.15	8.13	34.009	26.477	158.1	.498	2.66	40.1							202
1	211		8.05	8.03	34.013	26.495	156.6	.515	2.60	39.1	39.0	2.15	29.1	.00	.01	.03	212
1	241		7.72	7.70	34.037	26.562	150.6	.560	2.42	36.1	42.8	2.25	30.5	.00			242
	250	ISL	7.58	7.55	34.042	26.587	148.3	.575	2.34	34.8							252
1	281		7.10	7.07	34.060	26.669	140.8	.620	1.99	29.3	51.8	2.46	33.3	.01			283
	300	ISL	6.91	6.89	34.078	26.708	137.3	.646	1.72	25.2							302
1	336		6.63	6.60	34.109	26.771	131.7	.694	1.25	18.2	62.0	2.75	36.8	.00			338
1	396		6.11	6.08	34.122	26.850	124.7	.772	.96	13.8	69.6	2.88	38.8	.00			399
	400	ISL	6.08	6.05	34.124	26.855	124.2	.776	.94	13.5							403
1	464		5.60	5.56	34.171	26.952	115.4	.853	.62	8.8	79.7	3.07	40.8	.00			467
	500	ISL	5.40	5.36	34.206	27.003	110.8	.893	.48	6.9							504
1	537		5.24	5.20	34.246	27.054	106.3	.934	.38	5.4	89.2	3.20	42.2	.00			541

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 42.8 N	123 38.8 W	01/10/86	0857 GMT	4164 M	330	26 KT			1015.0 MB	16.4 C	14.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.31	17.31	32.767	23.729	415.9	.000	5.66	102.7							0
1	1		17.31	17.31	32.767	23.729	415.9	.004	5.66	102.7	1.4	.37	.1	.00	.12	.02	1
	10	ISL	17.30	17.30	32.766	23.732	416.0	.042	5.67	102.9							10
1	11		17.30	17.30	32.766	23.732	416.0	.046	5.67	102.9	1.3	.37	.1	.00	.14	.02	11
	20	ISL	17.30	17.30	32.766	23.731	416.4	.083	5.67	102.9							20
1	21		17.30	17.30	32.766	23.731	416.5	.087	5.67	102.9	1.2	.37	.1	.00	.13	.02	21
	30	ISL	17.32	17.31	32.765	23.728	417.1	.125	5.68	103.1							30
1	31		17.32	17.31	32.765	23.727	417.1	.129	5.68	103.1	1.0	.37	.1	.00	.13	.02	31
1	41		15.90	15.89	32.918	24.172	374.9	.168	6.08	107.4	2.5	.38	.1	.00	.21	.10	41
	50	ISL	15.30	15.29	32.967	24.343	358.9	.202	6.14	107.2							50
1	51		15.26	15.25	32.969	24.353	358.0	.205	6.14	107.2	2.5	.37	.1	.00	.24	.17	51
1	61		14.57	14.56	33.036	24.554	339.0	.239	6.12	105.4	2.5	.52	.2	.00	.27	.30	61
1	71		13.67	13.66	32.993	24.706	324.7	.272	6.05	102.2	3.0	.44	.4	.10	.32	.40	71
	75	ISL	13.37	13.36	32.994	24.768	319.0	.286	6.00	100.8							76
1	86		12.71	12.70	33.030	24.927	303.9	.319	5.84	96.7	4.0	.57	2.7	.06	.19	.29	86
	100	ISL	11.82	11.81	33.160	25.196	278.6	.361	5.50	89.4							101
1	101		11.79	11.78	33.167	25.208	277.4	.363	5.48	89.1	6.5	.78	6.5	.02	.10	.16	101
1	120		10.48	10.47	33.336	25.574	242.9	.414	4.97	78.6	11.9	1.14	12.7	.01	.02	.07	121
	125	ISL	10.30	10.29	33.394	25.650	235.7	.425	4.79	75.6							126
1	145		9.71	9.69	33.640	25.942	208.3	.470	3.99	62.2	20.2	1.56	20.2	.00	.01	.04	146
	150	ISL	9.58	9.56	33.673	25.989	203.9	.480	3.85	59.9							151
1	175		8.98	8.96	33.797	26.183	185.8	.529	3.27	50.2	28.4	1.86	25.2	.00	.00	.04	176
	200	ISL	8.58	8.55	33.918	26.341	171.2	.573	2.86	43.5							201
1	205		8.51	8.48	33.937	26.366	168.8	.582	2.80	42.6	34.1	2.04	27.7	.00	.00	.04	206
1	236		8.04	8.02	34.002	26.488	157.7	.632	2.72	40.9	38.7	2.10	28.7	.00			237
	250	ISL	7.80	7.78	34.010	26.529	153.9	.654	2.70	40.4							252
1	275		7.40	7.37	34.013	26.590	148.3	.693	2.66	39.4	44.6	2.21	30.3	.00			277
	300	ISL	7.10	7.08	34.030	26.645	143.4	.7 28	2.31	34.0							302
1	330		6.77	6.74	34.050	26.706	137.8	.771	1.82	26.6	55.6	2.54	34.7	.00			332
1	389		5.98	5.95	34.067	26.823	127.0	.848	1.39	19.9	67.1	2.78	37.9	.00			391
	400	ISL	5.87	5.84	34.075	26.842	125.2	.863	1.28	18.3							403
1	454		5.54	5.50	34.126	26.924	117.8	.928	.79	11.2	77.9	3.00	40.7	.00			457
	500	ISL	5.46	5.41	34.192	26.987	112.5	.981	.53	7.6							504
1	525		5.41	5.37	34.223	27.017	109.9	1.010	.45	6.4	85.4	3.15	41.7	.00			529

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 23.6 N	124 19.6 W	01/10/86	0304 GMT	4535 M	340	04 KT	340 04 06	2	1016.1 JIB	18.2 C	16.4 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.17	17.17	32.788	23.777	411.3	.000	5.72	103.6	.4	.38	.1	.00	.17	.02	0
	10	ISL	17.17	17.17	32.786	23.777	411.6	.041	5.74	103.9							10
1	15		17.17	17.16	32.785	23.777	411.8	.062	5.75	104.1	.4	.38	.1	.00	.16	.02	15
	20	ISL	16.76	16.76	32.858	23.929	397.5	.082	5.85	105.1							20
	30	ISL	15.54	15.54	32.955	24.279	364.3	.120	6.09	106.8							30
1	31		15.41	15.40	32.962	24.314	361.1	.123	6.11	106.9	1.8	.40	.1	.00	.27	.13	31
1	41		13.84	13.83	32.819	24.537	340.0	.158	6.30	106.7	2.5	.42	.1	.00	.37	.25	41
	50	ISL	13.67	13.66	32.924	24.653	329.2	.189	6.22	105.1							50
1	52		13.65	13.64	32.944	24.672	327.4	.195	6.20	104.7	2.5	.41	.1	.00	.36	.25	52
1	62		12.37	12.37	32.808	24.818	313.6	.227	6.23	102.3	3.3	.54	1.2	.17	.39	.39	62
1	72		12.28	12.27	32.922	24.926	303.7	.257	5.87	96.3	4.1	.66	3.6	.20	.35	.56	72
	75	ISL	12.13	12.12	32.931	24.959	300.5	.267	5.83	95.3							76
1	83		11.74	11.73	32.943	25.042	292.7	.290	5.76	93.4	6.2	.86	6.8	.13	.22	.39	83
1	98		11.20	11.19	33.078	25.245	273.7	.332	5.46	87.6	7.7	.95	9.0	.03	.11	.19	98
	100	ISL	11.05	11.04	33.080	25.274	271.0	.339	5.41	86.5							101
1	113		10.33	10.31	33.117	25.429	256.3	.372	5.14	80.9	11.4	1.12	12.1	.02	.06	.11	113
	125	ISL	10.16	10.15	33.327	25.621	238.4	.403	4.83	75.8							126
1	128		10.14	10.13	33.393	25.676	233.3	.411	4.73	74.3	14.5	1.28	15.2	.01	.02	.08	129
	150	ISL	9.45	9.43	33.658	25.999	202.9	.458	4.01	62.1							151
1	153		9.33	9.32	33.690	26.042	198.8	.464	3.89	60.1	22.9	1.65	21.7	.01	.01	.04	154
1	180		8.90	8.88	33.898	26.274	177.3	.515	2.98	45.7	30.1	1.94	25.8	.00	.00	.05	181
	200	ISL	8.42	8.40	33.940	26.381	167.3	.549	3.18	48.2							201
1	209		8.22	8.20	33.946	26.417	164.0	.564	3.32	50.1	33.4	1.92	26.2	.01	.00	.03	210
1	240		7.89	7.87	34.004	26.511	155.5	.613	2.93	43.9	38.7	2.06	28.2	.00			241
	250	ISL	7.80	7.77	34.021	26.538	153.0	.629	2.75	41.1							252
1	280		7.49	7.47	34.056	26.610	146.6	.675	2.24	33.3	46.7	2.34	31.6	.01			282
	300	ISL	7.19	7.17	34.053	26.651	142.9	.703	2.08	30.7							302
1	336		6.68	6.65	34.047	26.716	136.9	.753	1.84	26.8	57.1	2.55	34.8	.00			338
1	399		6.39	6.35	34.124	26.815	128.2	.836	1.08	15.6	65.8	2.83	37.8	.00			401
	400	ISL	6.38	6.34	34.125	26.817	128.0	.838	1.07	15.5							403
1	466		5.84	5.80	34.150	26.906	120.0	.920	.78	11.2	75.2	2.99	39.9	.00			469
	500	ISL	5.65	5.61	34.175	26.949	116.2	.960	.64	9.1							504
1	539		5.51	5.46	34.212	26.996	112.1	1.005	.48	6.8	84.3	3.14	41.4	.00			543

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 03.5 N	125 00.3 W	30/09/86	2133 GMT	4765 M	330	20 KT	340 06 08	1	1018.5 MB	20.1 C	18.1 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	19.24	19.24	33.193	23.580	430.2	.000	5.40	102.0							0
1	1		19.24	19.24	33.193	23.580	430.2	.004	5.40	102.0	2.3	.35	.1	.00	.07	.00	1
	10	ISL	19.22	19.22	33.194	23.586	429.9	.043	5.43	102.5							10
1	17		19.22	19.21	33.195	23.589	429.9	.073	5.44	102.7	2.3	.35	.1	.00	.08	.00	17
	20	ISL	19.22	19.21	33.196	23.590	429.9	.086	5.44	102.7							20
	30	ISL	19.22	19.21	33.199	23.593	430.0	.129	5.44	102.7							30
1	32		19.22	19.21	33.199	23.593	430.1	.137	5.44	102.7	2.3	.35	.1	.00	.08	.00	32
1	42		19.22	19.21	33.203	23.596	430.2	.180	5.43	102.5	2.2	.35	.1	.00	.08	.01	42
	50	ISL	19.17	19.16	33.215	23.618	428.4	.215	5.44	102.5							50
1	53		19.15	19.14	33.218	23.625	427.7	.227	5.44	102.5	2.3	.35	.1	.00	.09	.01	53
1	63		17.61	17.60	33.091	23.908	400.9	.268	5.77	105.5	2.3	.35	.1	.00	.16	.06	63
1	73		15.28	15.27	33.144	24.483	346.3	.306	6.17	107.8	2.3	.36	.1	.00	.15	.06	73
	75	ISL	14.97	14.95	33.151	24.558	339.1	.313	6.17	107.1							76
1	84		14.02	14.01	33.172	24.774	318.7	.342	6.16	105.0	2.6	.40	.1	.00	.18	.11	84
1	100		12.40	12.39	33.250	25.157	282.4	.390	5.49	90.5	5.2	.71	4.6	.10	.33	.24	100
1	115		11.49	11.48	33.334	25.393	260.2	.430	5.23	84.6	7.8	.92	8.8	.03	.19	.31	115
	125	ISL	11.01	10.99	33.446	25.568	243.7	.457	4.82	77.2							126
1	129		10.82	10.81	33.495	25.638	237.1	.467	4.63	73.9	11.8	1.15	13.2	.02	.09	.12	130
	150	ISL	10.06	10.05	33.626	25.872	215.2	.514	3.95	62.0							151
1	155		9.88	9.87	33.652	25.923	210.4	.525	3.82	59.8	19.6	1.55	19.8	.01	.02	.05	156
1	181		8.97	8.95	33.809	26.193	184.9	.576	3.64	55.9	25.8	1.75	23.3	.00	.00	.03	182
	200	ISL	8.55	8.52	33.889	26.322	172.9	.610	3.36	51.1							201
1	212		8.34	8.32	33.926	26.383	167.3	.630	3.21	48.6	32.3	1.94	26.6	.00	.00	.02	213
1	244		7.88	7.85	33.987	26.501	156.5	.682	3.34	50.1	36.3	1.94	26.9	.00			245
	250	ISL	7.79	7.76	33.992	26.517	155.0	.691	3.30	49.4							252
1	283		7.33	7.30	34.005	26.593	148.1	.7 42	2.94	43.5	43.3	2.14	29.6	.00			285
	300	ISL	7.11	7.08	34.011	26.629	144.8	.766	2.71	39.9							302
1	340		6.62	6.59	34.029	26.709	137.5	.823	2.12	30.9	55.2	2.45	34.3	.00			342
	400	ISL	6.04	6.00	34.068	26.816	127.8	.902	1.35	19.4							403
1	403		6.01	5.98	34.069	26.820	127.5	.906	1.32	18.9	67.1	2.79	38.2	.00			405
1	469		5.56	5.52	34.126	26.922	118.2	.987	.82	11.6	77.9	3.01	40.7	.00			472
	500	ISL	5.43	5.38	34.161	26.965	114.4	1.023	.64	9.1							504
1	539		5.34	5.29	34.211	27.016	110.1	1.068	.47	6.6	85.9	3.16	42.0	.00			543

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 43.8 N	125 41.8 W	30/09/86	1408 GMT	4429 M	350	20 KT			1020.9 MB	18.5 C	16.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.19	19.19	33.216	23.611	427.2	.000	5.43	102.5	2.1	.34	.1	.00	.07	.01	0
	10	ISL	19.19	19.19	33.216	23.612	427.4	.043	5.44	102.6							10
1	11		19.19	19.19	33.216	23.612	427.4	.047	5.44	102.6	2.1	.34	.1	.00	.07	.01	11
1	20		19.21	19.20	33.216	23.608	428.1	.085	5.42	102.3	2.2	.34	.1	.00	.08	.01	20
1	30		19.21	19.20	33.214	23.606	428.7	.128	5.44	102.7	1.9	.34	.1	.00	.07	.01	30
1	40		18.37	18.36	33.144	23.763	414.0	.170	5.57	103.4	1.7	.35	.1	.00	.09	.02	40
	50	ISL	16.71	16.70	33.050	24.089	383.2	.210	5.95	106.8							50
1	51		16.55	16.54	33.043	24.121	380.2	.214	5.98	107.1	2.0	.35	.0	.00	.06	.01	51
1	60		14.92	14.91	33.005	24.454	348.5	.246	6.22	107.8	2.1	.35	.0	.00	.12	.05	60
1	70		14.21	14.20	33.006	24.606	334.3	.280	6.23	106.4	2.1	.38	.0	.00	.14	.06	70
	75	ISL	13.99	13.98	33.024	24.667	328.6	.298	6.19	105.3							76
1	86		13.58	13.57	33.094	24.803	315.9	.332	6.11	103.1	2.5	.40	.0	.00	.24	.21	86
1	100		12.76	12.75	33.241	25.081	289.7	.374	5.72	95.0	3.9	.57	3.0	.09	.27	.30	100
1	120		11.53	11.52	33.385	25.425	257.3	.429	5.15	83.4	7.4	.87	8.4	.02	.14	.23	120
	125	ISL	11.23	11.22	33.427	25.513	249.0	.442	5.06	81.4							126
1	144		10.33	10.31	33.573	25.785	223.3	.488	4.70	74.2	12.9	1.18	14.3	.01	.05	.08	145
	150	ISL	10.16	10.15	33.610	25.842	218.0	.501	4.48	70.5							151
1	175		9.57	9.55	33.759	26.058	197.9	.553	3.48	54.1	23.3	1.70	22.5	.00	.00	.03	176
	200	ISL	8.89	8.87	33.907	26.283	176.7	.599	3.03	46.5							201
1	204		8.79	8.77	33.928	26.316	173.7	.607	2.99	45.7	31.1	1.96	26.4	.00	.00	.04	205
1	234		8.32	8.30	34.012	26.454	161.0	.656	2.68	40.6	36.8	2.12	28.6	.00			235
	250	ISL	8.07	8.04	34.031	26.507	156.1	.682	2.60	39.1							252
1	274		7.68	7.66	34.038	26.569	150.4	.718	2.54	37.9	43.2	2.24	30.5	.00			275
	300	ISL	7.20	7.17	34.026	26.628	145.0	.757	2.50	36.8							302
1	327		6.74	6.71	34.013	26.681	140.1	.796	2.45	35.8	52.3	2.37	33.1	.00			329
1	388		6.09	6.05	34.053	26.798	129.3	.877	1.47	21.1	64.9	2.75	38.0	.00			390
	400	ISL	5.97	5.94	34.067	26.823	127.1	.893	1.32	19.0							403
1	453		5.56	5.52	34.124	26.920	118.2	.958	.86	12.2	77.8	3.02	41.2	.00			456
	500	ISL	5.24	5.20	34.157	26.984	112.5	1.012	.64	9.0							504
1	525		5.10	5.06	34.167	27.008	110.2	1.040	.59	8.3	88.2	3.15	42.8	.00			528

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 26.9 N	120 31.8 W	28/09/86	0430 GMT	74 M	310	10 KT			1015.2 MB	15.5 C	14.3 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		15.61	15.61	33.419	24.621	330.9	.000	6.31	111.2	4.6	.35	.1	.00	3.28	.15	0
	10	ISL	14.83	14.83	33.380	24.761	320.2	.033	6.19	107.4							10
1	15		14.33	14.33	33.361	24.852	309.3	.048	6.13	105.3	4.2	.44	1.1	.06	3.98	.32	15
	20	ISL	13.74	13.73	33.425	25.026	292.9	.063	5.69	96.5							20
1	26		12.97	12.96	33.513	25.249	271.7	.080	5.04	84.2	10.1	.90	8.1	.18	3.28	.55	26
	30	ISL	12.31	12.30	33.552	25.407	256.8	.091	4.52	74.6							30
1	37		11.39	11.39	33.613	25.626	236.1	.108	3.79	61.3	16.1	1.38	16.0	.06	.22	.31	37
1	46		11.08	11.07	33.687	25.741	225.4	.128	3.47	55.8	19.0	1.53	18.3	.03	.10	.24	46
	50	ISL	11.02	11.01	33.707	25.767	223.0	.138	3.36	53.9							50
1	56		10.98	10.98	33.723	25.786	221.3	.151	3.25	52.1	20.6	1.62	19.5	.01	.08	.26	56
1	67		10.92	10.91	33.731	25.804	219.8	.175	3.22	51.6	20.9	1.63	19.7	.02	.07	.23	67

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 19.0 N	120 48.5 W	28/09/86	0744 GMT	742 M	310	13 KT			1016.3 MB	16.1 C	13.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.60	16.60	33.336	24.331	358.5	.000	5.78	103.8	2.6	.39	.2	.00	.25	.08	0
1	10		16.60	16.59	33.334	24.332	358.8	.036	5.80	104.2	2.5	.39	.2	.00	.26	.08	10
	20	ISL	15.99	15.99	33.311	24.453	347.5	.071	5.98	106.2							20
1	21		15.88	15.88	33.294	24.464	346.5	.07 4	6.00	106.2	2.5	.40	.2	.01	.43	.15	21
	30	ISL	13.98	13.98	33.295	24.876	307.5	.104	5.98	101.9							30
1	31		13.78	13.78	33.296	24.917	303.6	.107	5.98	101.5	4.4	.61	3.2	.25	.66	.39	31
1	42		12.26	12.25	33.182	25.130	283.4	.139	5.55	91.2	6.7	.83	6.5	.32	.52	.33	42
	50	ISL	11.38	11.38	33.148	25.267	271.3	.162	5.34	86.1							50
1	52		11.24	11.23	33.141	25.288	268.6	.166	5.29	85.0	9.1	1.00	9.7	.05	.29	.28	52
1	62		10.90	10.89	33.333	25.498	248.8	.192	4.79	76.5	12.5	1.21	13.6	.02	.16	.18	62
1	73		10.39	10.39	33.529	25.738	226.2	.218	4.30	68.0	16.2	1.39	17.1	.02	.07	.11	73
	75	ISL	10.31	10.30	33.539	25.760	224.2	.223	4.28	67.5							76
1	88		10.10	10.09	33.571	25.822	218.5	.251	4.13	64.9	18.0	1.49	18.5	.01	.05	.12	88
	100	ISL	10.34	10.33	33.734	25.908	210.7	.278	3.43	54.3							101
1	102		10.39	10.38	33.769	25.927	209.0	.283	3.28	51.9	22.1	1.66	20.9	.03	.08	.17	103
1	123		9.90	9.89	33.888	26.104	192.6	.325	2.81	44.1	27.1	1.87	23.9	.02	.05	.15	124
	125	ISL	9.87	9.86	33.899	26.116	191.4	.328	2.77	43.4							126
1	149		9.52	9.50	34.032	26.280	176.3	.373	2.29	35.6	32.3	2.11	26.6	.01	.03	.10	150
	150	ISL	9.51	9.49	34.035	26.283	176.0	.374	2.28	35.5							151
1	180		9.24	9.22	34.110	26.387	166.7	.425	1.98	30.6	36.3	2.24	28.4	.01	.01	.15	181
	200	ISL	9.17	9.15	34.137	26.418	164.1	.458	1.86	28.7							202
1	211		9.14	9.11	34.151	26.435	162.7	.476	1.78	27.5	38.2	2.32	29.2	.02	.01	.09	212
1	241		8.86	8.83	34.223	26.537	153.6	.523	1.39	21.3	42.6	2.50	30.8	.01			242
	250	ISL	8.78	8.75	34.233	26.557	151.9	.538	1.32	20.2							252
1	282		8.48	8.45	34.237	26.606	147.6	. .586	1.21	18.4	46.7	2.60	32.0	.01			284
	300	ISL	8.24	8.21	34.223	26.633	145.3	.612	1.23	18.6							302
1	337		7.65	7.62	34.178	26.684	140.7	.665	1.30	19.4	52.5	2.63	33.9	.01			339
1	399		6.70	6.66	34.122	26.773	132.5	.750	1.22	17.8	61.3	2.75	36.8	.01			402
	400	ISL	6.69	6.66	34.123	26.775	132.4	.751	1.21	17.7							403
1	466		6.44	6.39	34.237	26.900	121.3	.834	.59	8.6	71.6	3.00	38.7	.00			469
	500	ISL	6.21	6.17	34.264	26.950	116.9	.875	.50	7.3							504
1	541		5.87	5.82	34.266	26.995	112.7	.922	.40	5.7	76.5	3.13	40.8	.00			545

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 09.1 N	121 09.1 W	28/09/86	1115 GMT	2218 M	330	16 KT			1016.0 MB	15.8 C	13.7 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.21	17.21	33.291	24.154	375.4	.000	5.67	103.1	1.3	.40	.2	.00	.15	.04	0
1	10		17.20	17.20	33.288	24.154	375.7	.037	5.69	103.4	1.3	.40	.2	.00	.17	.05	10
	20	ISL	17.12	17.11	33.273	24.163	375.2	.075	5.72	103.7							20
1	21		17.11	17.10	33.271	24.164	375.1	.079	5.72	103.7	1.2	.40	.2	.00	.18	.05	21
	30	ISL	15.19	15.18	33.051	24.431	349.9	.111	6.18	107.7							30
1	31		14.98	14.97	33.033	24.463	346.9	.115	6.22	108.0	1.6	.41	.2	.00	.27	.09	31
1	41		13.60	13.59	33.048	24.763	318.5	.148	6.29	106.2	1.6	.48	.5	.07	.51	.25	41
	50	ISL	12.81	12.81	33.173	25.016	294.6	.176	5.73	95.3							50
1	51		12.77	12.76	33.183	25.033	292.9	.178	5.68	94.3	4.9	.78	5.5	.45	.54	.32	51
1	62		12.47	12.46	33.199	25.104	286.4	.210	5.56	91.7	5.7	.85	6.7	.43	.49	.34	62
1	72		11.71	11.70	33.286	25.314	266.6	.237	5.19	84.3	8.4	1.03	10.2	.15	.36	.28	72
	75	ISL	11.39	11.38	33.336	25.412	257.5	.246	5.00	80.8							76
1	87		10.44	10.43	33.527	25.729	227.4	.274	4.26	67.4	15.3	1.43	17.5	.02	.06	.11	87
	100	ISL	10.30	10.29	33.709	25.896	211.9	.304	3.38	53.4							101
1	103		10.27	10.26	33.727	25.914	210.2	.309	3.25	51.3	21.6	1.71	21.7	.02	.03	.10	103
1	123		9.49	9.48	33.753	26.065	196.1	.351	3.36	52.2	24.3	1.80	23.5	.02	.02	.08	124
	125	ISL	9.43	9.42	33.761	26.082	194.6	.354	3.36	52.0							126
1	148		8.68	8.66	33.880	26.294	174.6	.397	3.21	49.0	29.9	1.90	25.8	.02	.01	.04	149
	150	ISL	8.65	8.64	33.885	26.302	173.9	.400	3.19	48.7							151
1	179		8.40	8.38	33.932	26.379	167.1	.450	2.91	44.1	33.9	2.04	27.7	.02	.00	.06	180
	200	ISL	8.20	8.18	33.988	26.453	160.4	.484	2.68	40.5							202
1	211		8.07	8.05	34.011	26.490	157.0	.501	2.60	39.1	38.6	2.15	29.3	.01	.00	.05	212
1	242		7.54	7.52	34.011	26.567	150.0	.549	2.66	39.6	42.8	2.19	30.2	.01			243
	250	ISL	7.44	7.41	34.011	26.583	148.6	.561	2.65	39.3							252
1	282		7.07	7.04	34.015	26.637	143.7	.608	2.47	36.3	48.5	2.30	31.8	.01			284
	300	ISL	6.83	6.80	34.018	26.673	140.6	.634	2.26	33.1							302
1	339		6.40	6.37	34.042	26.748	133.7	.687	1.71	24.8	59.8	2.61	36.2	.00			341
1	400		6.33	6.30	34.158	26.850	124.9	.766	.90	13.0	67.7	2.89	38.5	.01			403
1	468		5.91	5.87	34.209	26.945	116.5	.848	.55	7.9	76.4	3.06	40.4	.00			471
	500	ISL	5.78	5.74	34.239	26.984	113.0	.885	.44	6.3							504
1	539		5.70	5.65	34.282	27.029	109.3	.929	.35	5.0	83.9	3.17	41.3	.00			543

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.0 N	121 51.2 W	29/09/86	0051 GMT	3629 M	330	17 KT	320 05 07	0	1015.0 MB	17.0 C	15.1 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.41	17.41	33.453	24.231	368.0	.000	5.66	103.4							0
1	1		17.41	17.41	33.453	24.231	368.0	.004	5.66	103.4	2.6	.37	.2	.00	.19	.04	1
	10	ISL	17.41	17.41	33.454	24.232	368.3	.037	5.68	103.7							10
1	11		17.41	17.41	33.454	24.232	368.3	.040	5.68	103.7	2.6	.36	.2	.00	.18	.05	11
	20	ISL	17.40	17.40	33.453	24.235	368.3	.07 4	5.70	104.2							20
1	22		17.40	17.39	33.453	24.235	368.4	.081	5.71	104.3	2.5	.36	.2	.00	.18	.05	22
	30	ISL	14.73	14.72	33.318	24.736	320.8	.109	6.20	107.3							30
1	32		14.05	14.05	33.304	24.868	308.3	.114	6.28	107.2	2.7	.53	1.8	.13	.79	.33	32
1	42		12.65	12.65	33.409	25.231	273.9	.143	5.54	91.9	6.8	.83	6.8	.40	.90	.67	42
	50	ISL	12.05	12.04	33.472	25.396	258.5	.165	4.89	80.1							50
1	53		11.93	11.92	33.489	25.431	255.1	.172	4.71	77.0	10.7	1.14	12.4	.09	.46	.41	53
1	63		11.73	11.72	33.551	25.517	247.1	.197	4.56	74.2	11.8	1.24	14.2	.11	.37	.44	63
1	74		11.11	11.10	33.593	25.662	233.6	.224	4.00	64.3	16.2	1.42	17.0	.03	.21	.23	74
	75	ISL	11.01	11.00	33.598	25.685	231.5	.227	3.96	63.5							76
1	89		10.07	10.06	33.650	25.888	212.3	.257	3.71	58.3	21.1	1.63	20.9	.02	.05	.11	89
	100	ISL	9.82	9.81	33.689	25.961	205.6	.281	3.56	55.6							101
1	104		9.76	9.75	33.707	25.985	203.4	.290	3.49	54.5	23.7	1.71	22.4	.01	.04	.16	105
1	124		9.00	8.99	33.846	26.217	181.6	.328	2.97	45.6	30.6	1.94	26.2	.01	.00	.06	125
	125	ISL	8.98	8.97	33.848	26.221	181.2	.329	2.97	45.6							126
1	150		8.51	8.50	33.922	26.353	169.1	.373	3.16	48.0	33.1	1.94	26.3	.01	.00	.06	151
1	181		8.07	8.05	34.002	26.482	157.2	.424	2.84	42.8	38.6	2.08	28.5	.01	.00	.05	182
	200	ISL	7.83	7.81	34.021	26.533	152.6	.453	2.62	39.2							201
1	212		7.68	7.66	34.027	26.560	150.3	.471	2.49	37.2	43.7	2.23	30.5	.01	.00	.05	213
1	244		7.29	7.26	34.050	26.634	143.6	.518	2.29	33.9	48.7	2.32	32.1	.00			245
	250	ISL	7.26	7.23	34.057	26.644	142.7	.527	2.19	32.4							252
1	283		7.08	7.05	34.087	26.693	138.5	.574	1.67	24.6	54.9	2.56	34.5	.00			285
	300	ISL	6.81	6.78	34.078	26.722	135.9	.597	1.59	23.3							302
1	341		6.10	6.07	34.052	26.794	129.1	.651	1.49	21.4	65.8	2.72	37.5	.00			343
	400	ISL	5.61	5.58	34.100	26.894	120.0	.724	.96	13.7							403
1	401		5.60	5.57	34.102	26.896	119.8	.726	.95	13.5	76.9	2.95	40.4	.00			404
1	470		5.38	5.35	34.177	26.983	112.4	.805	.57	8.1	85.4	3.09	41.8	.00			473
	500	ISL	5.30	5.25	34.211	27.021	109.1	.839	.45	6.4							504
1	541		5.18	5.14	34.259	27.072	104.6	.883	.34	4.8	92.4	3.18	42.6	.00			545

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 28.7 N	122 33.3 W	29/09/86	0656 GMT	4000 M	340	22 KT		0	1017.3 MB	16.8 C	1A.8 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.30	17.30	33.465	24.267	364.6	.000	5.66	103.2	1.9	.35	.2	.00	.18	.05	0
1	10		17.29	17.29	33.465	24.269	364.7	.036	5.67	103.3					.19	.06	10
1	20		17.27	17.27	33.465	24.274	364.6	.073	5.67	103.3	1.9	.36	.2	.00	.18	.06	20
	30	ISL	13.28	13.28	33.424	25.118	285.1	.105	5.49	92.2							30
1	31		12.91	12.91	33.420	25.188	277.7	.108	5.47	91.2	6.5	.80	6.9	.44	.78	.46	31
1	41		12.09	12.09	33.479	25.392	258.5	.135	4.75	77.9	10.0	1.09	11.8	.21	.69	.51	41
	50	ISL	11.59	11.58	33.500	25.502	248.2	.158	4.54	73.7							50
1	51		11.55	11.55	33.502	25.511	247.4	.160	4.53	73.4	11.9	1.21	13.9	.10	.43	.36	51
1	61		11.00	11.00	33.586	25.676	231.9	.184	4.04	64.8	15.7	1.41	17.4	.04	.25	.33	61
1	71		10.46	10.45	33.661	25.830	217.5	.206	3.66	58.0	19.1	1.61	20.5	.03	.12	.17	71
	75	ISL	10.24	10.23	33.689	25.889	211.9	.215	3.55	56.0							76
1	87		9.72	9.71	33.751	26.026	199.1	.239	3.32	51.8	23.8	1.73	22.8	.01	.03	.11	87
	100	ISL	9.23	9.22	33.803	26.146	187.9	.265	3.08	47.6							101
1	101		9.18	9.17	33.808	26.158	186.8	.268	3.06	47.2	28.4	1.91	25.8	.01	.02	.08	102
1	121		8.61	8.60	33.894	26.315	172.1	.303	2.87	43.7	33.0	2.02	27.6	.01	.02	.08	122
	125	ISL	8.55	8.53	33.909	26.337	170.0	.310	2.84	43.2							126
1	145		8.27	8.26	33.980	26.435	161.1	.343	2.69	40.7	36.5	2.09	28.7	.01	.01	.06	146
	150	ISL	8.23	8.21	33.988	26.448	160.0	.351	2.67	40.3							151
1	177		8.02	8.00	34.013	26.499	155.6	.393	2.55	38.3	39.8	2.16	29.7	.00	.01	.04	178
	200	ISL	7.77	7.75	34.034	26.552	150.9	.429	2.43	36.4							201
1	207		7.69	7.67	34.038	26.567	149.5	.439	2.39	35.7	43.9	2.25	31.0	.00	.00	.02	208
1	237		7.37	7.35	34.052	26.624	144.5	.483	2.11	31.3	48.6	2.37	32.6	.00			238
	250	ISL	7.21	7.19	34.063	26.655	141.7	.502	1.94	28.6							252
1	277		6.91	6.88	34.088	26.717	136.1	.540	1.58	23.2	56.9	2.61	35.4	.01			279
	300	ISL	6.75	6.72	34.109	26.755	132.7	.570	1.35	19.7							302
1	333		6.50	6.47	34.130	26.804	128.4	.613	1.09	15.8	65.0	2.81	37.7	.01			335
1	392		5.73	5.70	34.135	26.906	118.9	.687	.80	11.4	77.1	2.98	40.6	.01			395
	400	ISL	5.68	5.65	34.143	26.919	117.8	.696	.76	10.8							403
1	459		5.45	5.42	34.215	27.004	110.3	.763	.45	6.4	85.4	3.12	42.0	.00			462
	500	ISL	5.35	5.31	34.256	27.050	106.4	.807	.36	5.1							504
1	529		5.27	5.23	34.294	27.089	103.0	.838	.30	4.2	91.7	3.22	42.6	.00			533
1	539		5.34	5.29	34.328	27.108	101.4	.848	.26	3.7							543

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 08.6 N	123 14.3 W	29/09/86	1250 GMT	4190 M	330	20 KT			1018.5 MB	15.7 C	13.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.39	16.39	33.189	24.267	364.6	.000	5.85	104.6	1.4	.38	.2	.00	.18	.03	0
1	10		16.38	16.38	33.188	24.268	364.8	.036	5.86	104.7	1.5	.38	.2	.00	.18	.04	10
	20	ISL	16.24	16.24	33.174	24.290	363.0	.073	5.88	104.8							20
1	21		16.23	16.23	33.173	24.292	362.9	.076	5.88	104.8	1.4	.38	.2	.00	.17	.03	21
	30	ISL	13.91	13.91	32.781	24.492	344.0	.108	6.39	108.4							30
1	31		13.66	13.65	32.746	24.517	341.6	.111	6.44	108.6	1.6	.46	.2	.00	.1.8	.06	31
1	41		12.03	12.02	32.731	24.824	312.5	.144	6.33	103.2	2.8	.54	.5	.09	.44	.25	41
	50	ISL	11.46	11.46	32.821	24.998	296.2	.172	5.99	96.5							50
1	52		11.41	11.40	32.845	25.027	293.4	.177	5.91	95.1	5.9	.79	5.2	.26	.34	.35	52
1	62		10.95	10.94	32.996	25.227	274.6	.205	5.57	88.9	8.3	.97	9.3	.03	.25	.31	62
1	73		10.61	10.60	33.072	25.345	263.5	.235	5.43	86.0	10.0	1.08	11.2	.02	.14	.16	73
	75	ISL	10.47	10.46	33.104	25.394	259.0	.241	5.33	84.2							76
1	88		9.75	9.74	33.304	25.671	232.7	.272	4.70	73.2	15.6	1.32	16.0	.02	.05	.07	88
	100	ISL	9.42	9.41	33.460	25.847	216.3	.300	4.32	66.8							101
1	104		9.37	9.35	33.501	25.888	212.4	.307	4.23	65.4	20.9	1.55	20.0	.01	.02	.05	104
1	123		8.98	8.97	33.748	26.144	188.5	.347	3.76	57.7	26.6	1.79	23.7	.01	.02	.03	124
	125	ISL	8.95	8.94	33.761	26.158	187.2	.350	3.75	57.6							126
1	149		8.56	8.55	33.883	26.314	172.7	.394	3.66	55.7	29.2	1.75	24.3	.01	.01	.03	150
	150	ISL	8.55	8.54	33.885	26.318	172.4	.395	3.66	55.7							151
1	180		8.15	8.13	33.950	26.431	162.1	.445	3.67	55.3	32.7	1.80	25.2	.01	.01	.03	181
	200	ISL	8.06	8.04	34.018	26.497	156.2	.477	2.80	42.1							201
1	211		8.02	8.00	34.050	26.528	153.4	.494	2.31	34.7	42.6	2.24	30.6	.01	.01	.03	212
1	241		7.69	7.67	34.066	26.589	148.0	.539	2.11	31.5	47.0	2.34	32.1	.01			242
	250	ISL	7.57	7.54	34.064	26.605	146.5	.552	2.07	30.8							252
1	282		7.17	7.14	34.061	26.660	141.7	.599	1.90	28.0	53.3	2.45	34.0	.01			284
	300	ISL	7.05	7.02	34.085	26.696	138.5	.624	1.67	24.6							302
1	338		6.78	6.75	34.136	26.772	131.7	.675	1.18	17.3	63.4	2.74	37.0	.00			340
1	400		5.83	5.80	34.111	26.875	122.0	.754	.96	13.7	75.6	2.90	40.2	.00			403
1	469		5.73	5.69	34.208	26.966	114.3	.835	.51	7.3	82.5	3.06	41.4	.00			472
	500	ISL	5.64	5.59	34.244	27.006	110.8	.870	.40	5.7							504
1	542		5.46	5.41	34.285	27.060	106.1	.916	.34	4.8	89.2	3.16	42.4	.00			546

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 49.9 N	123 56.1 W	29/09/86	1855 GMT	4295 M	340	18 KT	350 08 08	1	1019.7 MB	18.7 C	15.5 C	6/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.A7	17.A7	32.89A	23.787	410.4	.000	5.70	103.9	.2	.36	.2	.00	.13	.02	0
1	10		17.46	17.46	32.895	23.792	410.3	.041	5.70	103.9	.1	.37	.2	.00	.14	.02	10
	20	ISL	17.44	17.43	32.893	23.797	410.1	.082	5.71	104.0							20
1	21		17.43	17.43	32.893	23.797	410.1	.086	5.71	104.0	.1	.37	.2	.00	.16	.02	21
	30	ISL	16.77	16.77	32.911	23.967	394.1	.122	5.97	107.3							30
1	31		16.66	16.66	32.913	23.993	391.7	.126	6.00	107.6	1.0	.37	.2	.00	.21	.04	31
1	42		1A.57	1A.57	32.901	24.448	348.6	.166	6.23	107.2	2.1	.39	.2	.00	.19	.09	42
	50	ISL	13.61	13.61	32.862	24.617	332.7	.194	6.25	105.5							50
1	52		13.46	13.45	32.854	24.641	330.4	.200	6.26	105.2	2.5	.43	.2	.02	.33	.20	52
1	63		12.95	12.95	32.890	24.770	318.3	.236	6.11	101.7	3.0	.51	1.0	.25	.38	.34	63
1	73		12.21	12.20	32.967	24.974	299.1	.266	5.77	94.5	4.2	.67	3.9	.08	.27	.38	73
	75	ISL	12.02	12.01	32.973	25.014	295.3	.273	5.72	93.4							76
1	89		11.17	11.16	33.048	25.228	275.1	.312	5.46	87.5	7.4	.89	8.3	.01	.14	.22	89
	100	ISL	11.16	11.15	33.261	25.395	259.5	.342	5.17	83.0							101
1	104		11.16	11.15	33.324	25.445	254.9	.352	5.07	81.4	9.0	1.09	11.7	.01	.02	.06	104
1	124		10.52	10.51	33.523	25.713	229.8	.402	A.37	69.3	15.0	1.37	16.9	.01	.02	.06	125
	125	ISL	10.50	10.A9	33.526	25.719	229.2	.A0A	A.36	69.1							126
1	150		9.65	9.63	33.645	25.956	207.1	.459	3.90	60.7	20.8	1.62	21.2	.01	.01	.04	151
1	180		9.09	9.07	33.884	26.234	181.1	.517	2.92	44.9	29.5	1.93	26.0	.00	.00	.05	181
	200	ISL	8.77	8.75	33.949	26.335	171.8	.552	2.77	42.3							201
1	211		8.60	8.58	33.967	26.375	168.1	.570	2.68	40.8	34.0	2.04	28.1	.00	.00	.0A	212
1	2A1		8.10	8.07	34.011	26.486	157.9	.619	2.78	41.9	37.4	2.07	28.6	.00			242
	250	ISL	8.00	7.97	34.025	26.513	155.6	.633	2.67	40.1							252
1	281		7.71	7.68	34.063	26.585	149.1	.681	2.17	32.4	44.9	2.31	31.7	.00			283
	300	ISL	7.49	7.46	34.071	26.623	145.7	.709	1.98	29.4							302
1	337		7.04	7.01	34.078	26.691	139.5	.761	1.68	24.7	54.0	2.53	34.8	.00			339
1	398		6.43	6.40	34.106	26.796	130.1	.843	1.25	18.1	63.5	2.73	37.6	.00			400
	400	ISL	6.41	6.38	34.108	26.800	129.7	.846	1.23	17.8							403
1	465		5.97	5.93	34.169	26.905	120.2	.927	.72	10.3	73.6	2.97	40.1	.00			468
	500	ISL	5.71	5.67	3A.192	26.956	115.7	.969	.57	8.1							50A
1	539		5.Al	5.37	3A.209	27.006	111.1	1.013	.A9	6.9	8A.7	3.09	Al.9	.00			543

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 29.6 N	124 35.4 W	30/09/86	0152 GMT	A362 M	360	25 KT	360 06 08	1	1018.8 MB	18.1 C	15.5 C	5/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	19.38	19.38	33.169	23.526	A35.3	.000	5.39	102.0							0
1	1		19.38	19.38	33.169	23.526	435.3	.004	5.39	102.0	2.1	.34	.2	.00	.06	.01	1,
1	10		19.39	19.39	33.170	23.525	435.8	.043	5.42	102.6	2.1	.34	.2	.00	.07	.01	10
	20	ISL	19.40	19.40	33.170	23.523	436.2	.087	5.41	102.5							20
1	22		19.40	19.40	33.170	23.523	436.3	.096	5.41	102.4	2.1	.34	.2	.00	.06	.01	22
	30	ISL	19.41	19.40	33.170	23.522	436.8	.131	5.43	102.8							30
1	32		19.41	19.41	33.170	23.521	436.9	.139	5.43	102.8	2.0	.34	.2	.00	.06	.01	32
1	42		17.92	17.91	33.127	23.860	40A.8	.181	5.73	105.5	1.9	.3A	.2	.00	.09	.02	42
	50	ISL	16.12	16.11	32.998	24.184	374.1	.213	6.10	108.3							50
1	53		15.53	15.52	32.966	24.290	363.9	.223	6.20	108.8	1.9	.36	.2	.00	.12	.04	53
1	62		14.65	14.64	33.032	24.534	341.0	.255	6.20	106.9	1.9	.36	.2	.00	.16	.08	62
1	74		13.95	13.94	33.076	24.715	324.1	.295	6.11	103.9	1.9	.37	.2	.00	.19	.18	74
	75	ISL	13.90	13.89	33.084	24.729	322.7	.299	6.10	103.6							76
1	90		13.41	13.40	33.176	2A.902	306.6	.3A5	5.90	99.3	2.5	.44	.7	.08	.27	.38	90
	100	ISL	12.77	12.76	33.201	25.048	292.8	.376	5.70	94.7							101
1	105		12.49	12.48	33.221	25.117	286.3	.389	5.61	92.6	4.1	.62	3.7	.05	.18	.33	105
1	125		12.07	12.05	33.520	25.430	257.0	.446	5.22	85.6	5.9	.73	6.4	.02	.07	.37	126
	150	ISL	10.96	10.94	33.665	25.748	227.2	.505	4.76	76.2							151
1	151		10.89	10.87	33.670	25.764	225.7	.508	4.73	75.7	10.8	1.03	12.1	.01	.04	.07	152
1	182		9.31	9.29	33.775	26.112	192.8	.573	4.13	63.9	20.7	1.48	19.6	.00	.01	.02	183
	200	ISL	8.81	8.79	33.861	26.260	178.9	.606	3.83	58.6							201
1	213		8.56	8.54	33.917	26.343	171.2	.628	3.67	55.8	28.5	1.74	23.9	.00	.00	.01	214
1	243		8.15	8.13	33.969	26.446	161.8	.678	3.60	54.3	32.3	1.82	25.2	.00			244
	250	ISL	8.03	8.01	33.976	26.469	159.7	.690	3.54	53.3							252
1	284		7.48	7.46	33.998	26.566	150.8	.743	3.15	46.8	40.4	2.04	28.5	.00			286
	300	ISL	7.28	7.25	34.005	26.600	147.7	.766	2.92	43.2							302
1	340		6.84	6.81	34.021	26.674	141.1	.824	2.31	33.8	51.4	2.38	33.1	.00			342
	400	ISL	6.29	6.25	34.055	26.774	132.0	.906	1.62	23.3							403
1	401		6.28	6.25	34.055	26.775	131.9	.907	1.61	23.3	62.0	2.66	36.7	.00			403
1	468		5.74	5.70	34.110	26.887	121.7	.993	.98	14.0	74.6	2.93	40.1	.00			A71
	500	ISL	5.58	5.53	3A.143	26.933	117.6	1.031	.76	10.8							504
1	538		5.47	5.42	34.187	26.981	113.4	1.075	.56	7.9	83.6	3.10	41.7	.00			542

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 09.7 N	125 16.5 W	30/09/86	0756 GMT	4458 M	360	22 KT		1	1021.2 MB	18.8 C	16.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.35	19.35	33.183	23.545	433.5	.000	5.40	102.2	2.2	.33	.1	.00	.07	.01	0
1	10		19.35	19.35	33.181	23.545	433.9	.043	5.41	102.4	2.2	.33	.1	.00	.07	.01	10
	20	ISL	19.33	19.33	33.181	23.548	433.9	.087	5.41	102.3							20
1	21		19.33	19.33				.091	5.41	102.3	2.2	.33	.1	.00	.07	.01	21
	30	ISL	19.36	19.35	33.180	23.543	434.8	.130	5»41	102.4							30
1	31		19.36	19.35	33.180	23.542	434.8	.134	5.41	102.4	2.1	.33	.1	.00	.07	.02	31
1	41		18.13	18.12	33.098	23.787	411.8	.176	5.69	105.1	2.1	.34	.1	.00	.10	.02	41
	50	ISL	17.60	17.59	33.209	24.000	391.8	.213	5.81	106.3							50
1	52		17.51	17.50	33.238	24.046	387.5	.220	5.83	106.5	2.1	.32	.1	.00	.12	.03	52
1	62		16.45	16.44	33.312	24.351	358.6	.257	6.04	108.2	1.9	.30	.1	.00	.11	.04	62
1	72		14.74	14.73	33.060	24.535	341.1	.292	6.16	106.4	1.9	.34	.1	.00	.16	.07	72
	75	ISL	14.69	14.68	33.111	24.586	336.4	.303	6.14	106.1							76
1	88		14.50	14.49	33.290	24.765	319.8	.345	5.99	103.1	1.8	.32	.1	.00	.20	.15	88
	100	ISL	13.72	13.71	33.296	24.931	303.7	.383	5.85	99.2							101
1	103		13.52	13.50	33.297	24.974	300.1	.391	5.82	98.2	2.8	.41	.8	.06	.29	.35	103
1	124		11.91	11.90	33.342	25.321	267.3	.450	5.36	87.5	6.0	.74	6.2	.03	.12	.27	124
	125	ISL	11.82	11.81	33.349	25.344	265.2	.454	5.33	86.8							126
1	148		10.66	10.64	33.484	25.659	235.5	.513	4.86	77.3	10.9	1.07	12.2	.01	.07	.12	149
	150	ISL	10.59	10.57	33.493	25.678	233.7	.517	4.82	76.5							151
1	179		9.57	9.55	33.655	25.977	205.6	.581	4.16	64.6	19.4	1.49	19.1	.01	.02	.04	180
	200	ISL	9.09	9.06	33.791	26.162	188.4	.622	3.98	61.2							201
1	211		8.88	8.86	33.855	26.244	180.7	.642	3.92	60.1	25.0	1.62	21.9	.00	.01	.02	212
1	241		8.40	8.38	33.942	26.387	167.5	.694	3.65	55.3	30.6	1.78	24.4	.00			242
	250	ISL	8.26	8.23	33.958	26.421	164.4	.709	3.60	54.4							252
1	282		7.77	7.74	33.991	26.520	155.3	.760	3.37	50.4	37.4	1.95	26.8	.00			283
	300	ISL	7.48	7.45	34.002	26.570	150.7	.7 88	3.09	45.8							302
1	339		6.92	6.89	34.017	26.660	142.4	.845	2.41	35.3	50.6	2.34	32.4	.00			341
1	400		6.30	6.26	34.051	26.770	132.4	.928	1.61	23.3	62.5	2.67	36.5	.00			402
1	465		5.75	5.71	34.106	26.882	122.1	1.012	.97	13.8	74.0	2.94	39.8	.00			468
	500	ISL	5.53	5.49	34.144	26.939	117.0	1.053	.74	10.5							504
1	537		5.31	5.27	34.174	26.989	112.5	1.096	.57	8.0	85.6	3.18	41.8	.00			541
1	547		5.25	5.21	34.177	26.999	111.6	1.108									551

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 82 48

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 11.4 N	120 03.7 W	27/09/86	2257 GMT	575 M	260	14 KT	260 02 08	2	1015.0 MB	17.8 C	15.4 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	A	15.93	15.93	33.497	24.609	332.0	.000	6.15	109.1	5.7	.33	.2	.00	4.14	.36	0
1	10		15.83	15.83	33.495	24.629	330.5	.033	6.14	108.8	5.7	.33	.2	.00	4.35	.35	10
	20	ISL	14.35	14.35	33.480	24.940	301.9	.065	5.52	94.9							20
1	26		13.32	13.32	33.471	25.146	281.6	.082	5.07	85.3	7.4	.81	6.6	.44	.59	.35	26
	30	ISL	12.91	12.90	33.482	25.238	272.9	.093	4.87	81.2							30
1	42		11.99	11.98	33.545	25.463	251.8	.124	4.33	70.9	11.9	1.15	12.7	.05	.12	.24	42
	50	ISL	11.41	11.41	33.617	25.626	236.5	.144	3.87	62.7							50
1	58		10.96	10.95	33.691	25.766	223.3	.162	3.47	55.6	17.8	1.53	18.5	.02	.06	.16	58
1	73		10.34	10.33	33.809	25.966	204.5	.194	2.97	47.0	22.6	1.76	22.1	.01	.03	.12	73
	75	ISL	10.27	10.26	33.826	25.991	202.2	.199	2.90	45.9							76
1	89		9.98	9.97	33.912	26.109	191.4	.225	2.57	40.4	27.0	1.94	24.6	.01	.01	.10	89
	100	ISL	9.82	9.81	33.975	26.185	184.4	.247	2.36	36.9							101
1	104		9.78	9.77	33.995	26.207	182.3	.255	2.29	35.8	29.9	2.08	26.1	.01	.01	.08	105
1	119		9.68	9.67	34.034	26.253	178.2	.282	2.14	33.4	30.9	2.13	26.9	.01	.01	.09	120
	125	ISL	9.66	9.64	34.049	26.270	176.8	.292	2.09	32.6							126
1	150		9.55	9.53	34.108	26.335	171.1	.336	1.86	29.0	33.6	2.26	28.0		.01	.11	151
1	181		9.39	9.37	34.163	26.404	165.2	.388	1.61	25.0	38.4	2.37	29.1	.01	.01	.09	182
	200	ISL	9.34	9.32	34.179	26.424	163.7	.419	1.47	22.9							202
1	212		9.31	9.28	34.184	26.434	163.0	.43 8	1.40	21.7	39.5	2.41	30.0	.01	.01	.10	213
	250	ISL	9.00	8.97	34.195	26.493	158.0	.499	1.21	18.6							252
1	252		8.97	8.94	34.196	26.498	157.6	.503	1.20	18.5	44.5	2.54	31.1	.01	.00	.11	254
	300	ISL	8.24	8.21	34.190	26.606	147.8	.576	.96	14.6							302
1	309		8.09	8.06	34.189	26.628	145.8	.589	.92	13.9	54.3	2.77	33.7	.00	.01	.15	311
1	381		7.27	7.23	34.210	26.765	133.5	.689	.57	8.4	67.1	2.98	35.4	.00			383
	400	ISL	7.02	6.98	34.214	26.802	130.1	.715	.47	6.9							403
1	421		6.78	6.74	34.218	26.838	126.8	.742	.37	5.4	77.7	3.15	35.1	.00			424
1	469		6.51	6.46	34.238	26.891	122.2	.802	.17	2.5	89.2	3.35	32.5	.00			472
1	499		6.48	6.44	34.241	26.897	122.1	.838	.23	3.3	89.9	3.35	32.7	.00			502
	500	ISL	6.48	6.44	34.242	26.897	122.1	.840	.23	3.4							504
1	525		6.45	6.40	34.241	26.901	122.0	.871	.26	3.8	88.1	3.30	33.6	.00			529
1	552		6.34	6.29	34.231	26.908	121.7	.903	.08	1.2	104.0	3.59	28.0	.00			556

A. SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 83 40.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 13.7 N	119 24.4 W	27/09/86	1709 GMT	30 M	090	03 KT	260 02 05	1	1017.6 MB	16.5 C	14.2 C	6/8	AS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.17	16.17	33.441	24.510	341.4	.000	6.24	111.2	6.1	.31	.1	.01	4.35	.15	0
1	10		14.52	14.51	33.431	24.868	307.7	.032	5.51	95.0	6.5	.59	3.0	.20	3.66	.38	10
	20	ISL	12.60	12.60	33.453	25.273	269.3	.061	4.68	77.6							20
1	21		12.43	12.43	33.457	25.310	265.9	.064	4.61	76.1	10.2	1.05	9.8	.30	.76	.43	21

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 11.0 N	119 30.6 W	27/09/86	1415 GMT	117 M	100	06 KT	270 02 06	1	1016.7 MB	14.8 C	13.5 C	4/8	AS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		15.62	15.62	33.484	24.669	326.3	.000	6.16	108.6	5.6	.34	.1	.00	5.27	.44	0
1	10		15.55	15.55	33.471	24.673	326.2	.032	6.12	107.8	5.5	.35	.1	.00	5.59	.59	10
	20	ISL	14.60	14.60	33.514	24.914	303.6	.064	5.29	91.5							20
1	21		14.48	14.48	33.519	24.943	300.8	.067	5.21	89.8	7.4	.65	4.4	.26	1.07	.20	21
	30	ISL	13.10	13.10	33.518	25.226	274.1	.093	4.78	80.1							30
1	31		12.98	12.98	33.518	25.250	271.8	.095	4.75	79.4	10.0	.93	8.8	.33	.49	.25	31
1	41		12.46	12.46	33.538	25.367	260.9	.122	4.53	74.9	11.3	1.06	10.7	.31	.30	.24	41
	50	ISL	11.65	11.64	33.515	25.503	248.1	.145	4.25	69.1							50
1	51		11.58	11.57	33.515	25.516	246.9	.147	4.22	68.5,	12.2	1.25	13.7	.11	.11	.20	51
1	61		10.99	10.98	33.638	25.719	227.8	.172	3.58	57.4	17.4	1.50	17.7	.02	.05	.13	61
	75	ISL	10.78	10.77	33.721	25.822	218.4	.204	3.21	51.2							76
1	77		10.75	10.74	33.720	25.825	218.2	.207	3.19	50.9	20.3	1.64	20.0	.01	.04	.12	77
1	93		10.64	10.63	33.752	25.870	214.2	.242	3.04	48.4	21.6	1.71	20.9	.00	.03	.11	93

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 52.4 N	120 09.1 W	27/09/86	0820 GMT	109 M	310	18 KT			1017.1 MB	15.7 C	13.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		15.15	15.15	33.491	24.776	316.1	.000	5.75	100.5	5.9	.52	1.7	.09	3.16	.39	0
1	10		14.97	14.97	33.492	24.818	312.4	.031	5.78	100.6	6.6	.48	1.7	.09	3.31	.47	10
	20	ISL	13.20	13.20	33.414	25.126	283.4	.061	5.54	93.0							20
1	21		13.01	13.01	33.410	25.160	280.2	.064	5.52	92.3	5.9	.67	4.2	.33	.62	.69	21
	30	ISL	11.90	11.90	33.486	25.433	254.3	.088	4.65	75.9							30
1	31		11.82	11.82	33.497	25.457	252.1	.090	4.56	74.4	10.3	1.08	11.7	.09	.30	.30	31
1	41		11.17	11.17	33.613	25.666	232.5	.114	4.07	65.5	14.1	1.29	15.2	.05	.14	.26	41
	50	ISL	11.21	11.20	33.611	25.658	233.2	.136	3.87	62.4							50
1	52		11.22	11.21	33.611	25.657	233.6	.140	3.83	61.7	15.7	1.40	16.1	.10	.14	.20	52
1	62		10.73	10.72	33.719	25.828	217.5	.162	3.24	51.7	20.3	1.63	19.8	.06	.04	.18	62
1	74		10.41	10.40	33.797	25.944	206.7	.188	2.89	45.8	23.4	1.77	22.1	.05	.04	.09	74
	75	ISL	10.37	10.37	33.808	25.959	205.3	.190	2.85	45.2							76
1	88		10.08	10.07	33.896	26.078	194.2	.215	2.57	40.5	27.0	1.93	24.2	.04	.01	.08	88
	100	ISL	9.92	9.91	33.940	26.141	188.5	.239	2.49	39.1							101
1	103		9.89	9.88	33.945	26.148	187.9	.246	2.47	38.7	29.9	1.99	25.0	.04	.01	.08	104

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.7 N	120 24.5 W	27/09/86	0437 GMT	972 M	310	18 KT	310 08 13	0	1018.0 MB	16.2 C	14.2 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.42	16.42	33.530	24.523	340.2	.000	5.99	107.4	5.0	.27	.2	.00	3.48	.32	0
1	10		16.08	16.07	33.525	24.598	333.4	.034	5.92	105.4	5.1	.35	.2	.01	2.84	.62	10
	20	ISL	15.28	15.28	33.521	24.772	317.1	.066	5.68	99.5							20
1	21		15.19	15.19	33.521	24.792	315.2	.069	5.65	98.8	6.1	.51	2.1	.13	1.26	.38	21
	30	ISL	14.21	14.20	33.536	25.014	294.2	.097	5.21	89.3							30
1	31		14.09	14.09	33.537	25.039	292.0	.099	5.17	88.4	8.6	.74	5.7	.25	.43	.36	31
1	41		12.50	12.50	33.423	25.270	270.2	.127	5.10	84.3	8.3	.90	8.1	.28	.29	.37	41
	50	ISL	11.22	11.22	33.415	25.504	248.7	.151	4.79	77.1							50
1	52		11.01	11.00	33.414	25.540	244.6	.155	4.72	75.6	12.0	1.18	13.7	.05	.18	.25	52
1	62		10.18	10.17	33.522	25.770	222.9	.179	4.32	68.0	16.6	1.41	17.6	.03	.08	.15	62
1	72		9.77	9.77	33.586	25.887	211.9	.200	4.07	63.5	19.8	1.54	19.9	.02	.04	.10	72
	75	ISL	9.79	9.78	33.635	25.924	208.6	.207	3.86	60.2							76
1	87		9.96	9.95	33.803	26.027	199.1	.231	3.11	48.8	25.2	1.79	22.9	.02	.07	.15	87
	100	ISL	9.87	9.86	33.869	26.093	193.0	.257	2.86	44.9							101
1	102		9.85	9.84	33.879	26.104	192.1	.262	2.85	44.6	27.5	1.86	24.1	.02	.05	.13	103
1	122		9.57	9.55	33.965	26.219	181.5	.299	2.58	40.2	30.3	1.98	25.7	.02	.02	.08	123
	125	ISL	9.53	9.52	33.973	26.230	180.4	.304	2.55	39.7							126
1	147		9.29	9.28	34.031	26.316	172.8	.343	2.33	36.1	33.4	2.10	27.2	.01	.01	.07	148
	150	ISL	9.26	9.24	34.039	26.327	171.8	.348	2.31	35.7							151
1	177		8.94	8.92	34.106	26.430	162.4	.393	2.05	31.5	37.6	2.24	28.9	.02	.00	.09	178
	200	ISL	8.74	8.72	34.151	26.497	156.5	.430	1.71	26.1							201
1	207		8.70	8.68	34.163	26.514	154.9	.440	1.60	24.5	42.4	2.43	30.7	.04	.01	.07	208
1	237		8.57	8.55	34.236	26.592	148.2	.486	1.23	18.8	46.2	2.55	31.7	.06			238
	250	ISL	8.47	8.45	34.245	26.615	146.2	.505	1.14	17.4							252
1	276		8.23	8.20	34.246	26.653	143.0	.543	1.05	15.9	50.2	2.66	32.9	.04			278
	300	ISL	7.96	7.93	34.239	26.688	139.9	.577	1.00	15.1							302
1	330		7.62	7.59	34.232	26.732	136.1	.618	.95	14.2	56.2	2.75	34.7	.01			332
1	390		7.15	7.11	34.251	26.813	129.0	.698	.72	10.6	63.3	2.88	36.4	.00			393
	400	ISL	7.10	7.06	34.255	26.824	128.1	.711	.69	10.1							403
1	457		6.72	6.68	34.266	26.884	122.9	.782	.54	7.9	69.1	2.99	37.8	.00			460
	500	ISL	6.25	6.21	34.254	26.937	118.1	.834	.48	7.0							504
1	529		5.84	5.80	34.237	26.976	114.4	.868	.47	6.7	80.8	3.09	40.7	.00			533

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 34.4 N	120 45.5 W	27/09/86	0018 GMT	1510 M	300	13 KT	310 08 13	1	1018.3 MB	18.1 C	15.1 C	2/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.10	17.10	33.223	24.129	377.8	.000	5.69	103.2	2.5	.40	.2	.00	.19	.03	0
1	10		16.71	16.71	33.224	24.221	369.4	.037	5.79	104.2	2.5	.41	.2	.00	.22	.05	10
1	16		16.52	16.52	33.198	24.245	367.2	.059	5.83	104.5							16
	20	ISL	16.48	16.48	33.196	24.251	366.8	.07 4	5.82	104.3							20
1	21		16.48	16.48	33.195	24.252	366.7	.078	5.82	104.2	2.5	.40	.2	.00	.22	.06	21
	30	ISL	16.38	16.37	33.196	24.277	364.6	.111	5.86	104.7							30
1	31		16.37	16.36	33.196	24.279	364.4	.114	5.86	104.7	2.4	.40	.2	.00	.21	.06	31
1	42		14.46	14.46	33.067	24.599	334.2	.152	6.18	106.2	2.6	.44	.2	.01	.39	.14	42
	50	ISL	13.61	13.60	33.148	24.839	311.5	.179	5.97	100.8							50
1	52		13.47	13.46	33.169	24.883	307.3	.184	5.90	99.4	3.1	.52	1.2	.12	.43	.31	52
1	62		12.88	12.87	33.169	25.001	296.3	.214	5.70	94.8	4.2	.65	3.5	.11	.45	.35	62
1	73		12.16	12.15	33.309	25.249	272.9	.245	5.21	85.5	6.8	.92	8.4	.04	.26	.24	73
	75	ISL	12.04	12.03	33.326	25.284	269.7	.252	5.17	84.6							76
1	88		11.52	11.51	33.404	25.441	255.0	.285	5.06	81.9	8.4	.97	9.5	.03	.16	.21	88
	100	ISL	11.02	11.01	33.510	25.615	238.7	.315	4.86	77.8							101
1	103		10.91	10.90	33.531	25.650	235.3	.321	4.80	76.8	11.0	1.06	11.7	.04	.09	.12	103
1	123		9.82	9.81	33.638	25.922	209.8	.368	4.09	63.9	18.9	1.48	18.6	.01	.02	.05	124
	125	ISL	9.75	9.74	33.649	25.942	207.9	.371	4.04	63.0							126
1	149		8.92	8.90	33.817	26.208	182.9	.418	3.31	50.7	28.6	1.88	25.0	.01	.00	.04	150
	150	ISL	8.90	8.89	33.821	26.214	182.4	.420	3.29	50.5							151
1	180		8.50	8.49	33.951	26.377	167.3	.472	2.83	43.0	34.3	2.06	27.6	.00	.00	.04	181
	200	ISL	8.23	8.21	33.991	26.451	160.6	.505	2.77	41.8							201
1	211		8.07	8.05	34.002	26.483	157.7	.522	2.73	41.1	38.4	2.13	28.9	.01	.00	.04	212
1	241		7.61	7.59	34.011	26.558	150.9	.568	2.80	41.7	42.2	2.15	29.6	.00			242
	250	ISL	7.50	7.48	34.021	26.581	148.8	.582	2.66	39.5							252
1	281		7.20	7.18	34.059	26.654	142.3	.628	2.06	30.4	51.0	2.44	33.1	.00			283
	300	ISL	7.01	6.99	34.069	26.688	139.3	.654	1.85	27.2							302
1	339		6.65	6.62	34.088	26.752	133.5	.707	1.50	21.9	59.8	2.69	36.2	.00			341
1	400		6.19	6.16	34.152	26.863	123.5	.786	.87	12.5	70.5	2.93	39.2	.01			403
1	468		5.90	5.86	34.225	26.958	115.2	.867	.53	7.6	78.6	3.09	40.5	.00			471
	500	ISL	5.74	5.69	34.243	26.993	112.2	.904	.49	6.9							504
1	540		5.50	5.46	34.251	27.028	109.2	.948	.43	6.1	86.6	3.17	41.9	.00			544

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.1 N	121 26.6 W	26/09/86	1644 GMT	3805 M	330	09 KT	340 08 11	1	1019.8 MB	18.1 C	15.2 C	2/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.01	17.01	33.431	24.310	360.5	.000	5.74	104.0	1.9	.37	.0	.00	.20	.06	0
1	10		16.99	16.99	33.430	24.314	360.5	.036	5.71	103.4	1.9	.37	.0	.00	.20	.06	10
	20	ISL	16.64	16.64	33.446	24.408	351.7	.072	5.79	104.1							20
1	21		16.60	16.59	33.448	24.419	350.8	.075	5.80	104.3	1.9	.36	.0	.00	.25	.10	21
	30	ISL	16.18	16.17	33.378	24.462	347.0	.107	5.91	105.3							30
1	31		16.14	16.13	33.372	24.467	346.6	.110	5.92	105.4	1.9	.37	.0	.00	.34	.13	31
1	42		12.93	12.93	32.937	24.810	314.0	.146	6.14	102.1	3.0	.53	.8	.18	.49	.26	42
	50	ISL	12.60	12.59	32.969	24.900	305.6	.171	6.02	99.5							50
1	52		12.52	12.52	32.969	24.915	304.2	.177	5.97	98.5	3.7	.61	2.4	.24	.56	.33	52
1	63		12.64	12.63	33.266	25.123	284.7	.209	5.50	91.1	4.5	.71	5.0	.05	.45	.30	63
1	73		11.87	11.86	33.375	25.354	262.9	.236	5.20	84.8	6.4	.83	7.2	.04	.23	.25	73
	75	ISL	11.81	11.80	33.401	25.385	260.1	.242	5.18	84.4							76
1	88		11.59	11.58	33.517	25.517	247.8	.274	5.10	82.7	7.3	.86	8.2	.03	.15	.18	88
	100	ISL	10.80	10.78	33.572	25.702	230.3	.304	4.82	76.9							101
1	105		10.47	10.46	33.587	25.771	223.8	.314	4.68	74.2	12.4	1.14	13.3	.01	.07	.11	105
1	123		9.59	9.57	33.677	25.990	203.2	.354	3.91	60.8	20.7	1.59	20.5	.01	.01	.04	124
	125	ISL	9.53	9.51	33.689	26.010	201.4	.358	3.86	60.0							126
1	149		8.77	8.76	33.853	26.258	178.1	.404	3.39	51.8	28.0	1.83	24.6	.01	.00	.02	150
	150	ISL	8.76	8.74	33.857	26.263	177.6	.405	3.38	51.7							151
1	180		8.29	8.27	33.955	26.413	163.9	.456	3.23	48.9	33.3	1.93	26.5	.01	.00	.02	181
	200	ISL	8.03	8.01	33.990	26.480	157.8	.488	3.11	46.7							201
1	212		7.88	7.86	34.003	26.512	154.9	.507	3.01	45.1	38.0	2.05	28.0	.01	.00	.03	213
1	243		7.48	7.46	34.024	26.586	148.2	.553	2.62	38.9	43.8	2.21	30.4	.01			244
	250	ISL	7.41	7.39	34.032	26.603	146.7	.564	2.49	36.9							252
1	282		7.13	7.10	34.067	26.670	140.7	.611	1.92	28.3	51.5	2.47	33.7	.01			284
	300	ISL	6.92	6.89	34.078	26.708	137.3	.635	1.69	24.7							302
1	340		6.48	6.45	34.102	26.786	130.2	.689	1.27	18.4	62.8	2.75	37.4	.00			342
1	400		6.12	6.08	34.161	26.880	121.9	.765	.82	11.8	71.6	2.96	39.4	.00			403
1	470		5.67	5.63	34.211	26.975	113.4	.847	.52	7.4	81.0	3.09	41.4	.00			473
	500	ISL	5.52	5.48	34.232	27.011	110.3	.881	.43	6.1							504
1	542		5.35	5.31	34.262	27.055	106.5	.926	.35	4.9	88.1	3.19	42.4	.00			546

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 53.3 N	118 29.4 W	25/09/86	0507 GMT	53 M	210	16 KT	200 03 05	6	1009.8 MB	16.9 C	16.3 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.93	16.93	33.318	24.242	367.0	.000	6.08	109.9							0
1	1		16.93	16.93	33.318	24.242	367.0	.004	6.08	109.9	4.0	.28	.6	.01	3.62	.46	1
	' 10	ISL	16.88	16.88	33.333	24.265	365.1	.037	6.11	110.3							10
1	11		16.87	16.87	33.337	24.269	364.7	.040	6.11	110.4	4.0	.28	.6	.01	3.67	.49	11
	20	ISL	16.71	16.71	33.365	24.329	359.4	.073	6.18	111.2							20
1	21		16.69	16.69	33.374	24.340	358.3	.076	6.18	111.2	4.1	.29	.6	.01	3.87	.44	21
	30	ISL	15.89	15.88	33.398	24.542	339.3	.108	6.06	107.5							30
1	32		15.61	15.60	33.397	24.604	333.4	.114	6.04	106.4	4.8	.42	.7	.06	3.86	.67	32
1	42		13.12	13.11	33.338	25.084	287.9	.145	5.28	88.4	7.4	.95	4.9	.32	.63	.46	42

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 34

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 51.1 N	118 33.5 W	25/09/86	0635 GMT	72 M	220	22 KT	210 04 05	5	1010.1 MB	17.8 C	16.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.70	17.70	33.403	24.123	378.6	.000	5.96	109.4							0
1	1		17.70	17.70	33.403	24.123	378.4	.004	5.96	109.4	3.4	.23	.1	.01			1
	10	ISL	17.70	17.70	33.426	24.142	376.9	.038	5.97	109.6							10
1	12		17.70	17.70	33.430	24.145	376.7	.045	5.97	109.6	3.2	.24	.1	.01			12
	20	ISL	17.64	17.63	33.418	24.151	376.4	.075	5.99	109.8							20
1	22		17.62	17.62	33.415	24.152	376.3	.083	5.99	109.8	3.3	.24	.1	.01			22
	30	ISL	15.29	15.28	33.379	24.662	327.8	.111	6.11	107.0							30
1	32		14.68	14.67	33.379	24.794	315.4	.117	6.14	106.2	4.2	.45	.7	.07			32
1	42		13.24	13.23	33.343	25.064	289.8	.147	5.34	89.6	7.7	1.02	4.7	.34			42
	50	ISL	12.34	12.34	33.376	25.264	270.9	.170	4.82	79.5							50
1	62		11.52	11.51	33.504	25.518	247.0	.201	4.30	69.7	12.4	1.26	13.0	.27			62

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.1 N	118 38.1 W	25/09/86	0752 GMT	659 M	260	13 KT	240 04 05		1010.1 MB	17.8 C	16.7 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.62	17.62	33.409	24.146	376.1	.000	5.99	109.8	3.5	.24	.0	.00	2.58	.29	0
1	10		17.63	17.62	33.408	24.146	376.5	.037	6.01	110.2	3.4	.23	.0	.00	2.58	.22	10
	20	ISL	15.76	15.76	33.371	24.549	338.3	.073	6.16	108.8							20
1	21		15.54	15.54	33.369	24.598	333.7	.076	6.17	108.6	3.1	.36	.0	.00	.60	.18	21
	30	ISL	13.53	13.52	33.386	25.039	291.9	.105	6.15	103.9							30
1	31		13.35	13.34	33.390	25.078	288.2	.107	6.15	103.5	4.8	.52	1.6	.07	.80	.33	31
1	41		12.20	12.19	33.439	25.342	263.4	.135	5.14	84.5	7.4	.86	7.3	.25	.75	.64	41
	50	ISL	11.86	11.86	33.474	25.431	255.0	.159	4.67	76.2							50
1	52		11.81	11.80	33.483	25.449	253.4	.163	4.60	75.0	9.6	1.08	10.8	.14	.45	.43	52
1	62		10.85	10.84	33.581	25.700	229.7	.187	4.01	64.1	15.1	1.39	16.1	.02	.12	.22	62
1	72		10.63	10.62	33.611	25.762	223.9	.210	3.87	61.5	16.7	1.47	17.3	.01	.08	.17	72
	75	ISL	10.60	10.60	33.643	25.791	221.4	.217	3.70	58.7							76
1	87		10.57	10.56	33.761	25.890	212.2	.242	3.03	48.2	21.5	1.74	20.9	.01	.05	.15	87
	100	ISL	10.41	10.40	33.838	25.978	204.1	.270	2.68	42.5							101
1	\ 102		10.37	10.36	33.848	25.991	202.9	.275	2.64	41.8	24.3	1.90	22.9	.00	.02	.11	103
1	+2 3		10.21	10.19	33.925	26.080	194.8	.317	2.36	37.3	26.9	2.01	24.5	.00	.01	.08	124
	125	ISL	10.20	10.18	33.930	26.086	194.3	.320	2.34	36.9							126
1	148		10.08	10.06	34.001	26.162	187.6	.364	2.10	33.1	29.1	2.12	25.5	.00	.01	.07	149
	150	ISL	10.07	10.05	34.008	26.169	187.0	.368	2.08	32.8							151
1	180		9.87	9.85	34.103	26.278	177.3	.422	1.85	29.0	32.3	2.25	27.0	.00	.00	.06	181
	200	ISL	9.72	9.69	34.138	26.330	172.7	.45 7	1.82	28.4							201
1	209		9.64	9.61	34.148	26.352	170.8	.472	1.80	28.1	34.1	2.31	27.9	.00	.00	.07	210
1	241		9.19	9.17	34.177	26.447	162.3	.525	1.79	27.7	36.8	2.36	28.8	.00			242
	250	ISL	9.08	9.06	34.182	26.469	160.3	.540	1.76	27.2							252
1	281		8.78	8.75	34.203	26.534	154.6	.590	1.59	24.4	40.6	2.47	30.0	.00			283
	300	ISL	8.69	8.66	34.233	26.571	151.4	.618	1.38	21.1							302
1	337		8.54	8.50	34.290	26.640	145.5	.673	.97	14.8	46.5	2.72	31.9	.00			339
1	398		7.97	7.93	34.305	26.740	136.8	.760	.72	10.8	52.6	2.86	33.9	.00			401
	400	ISL	7.95	7.91	34.305	26.742	136.6	.762	.71	10.7							403
1	466		7.15	7.11	34.306	26.858	126.0	.849	.47	6.9	62.8	3.03	36.6	.00			469
	500	ISL	6.82	6.77	34.309	26.906	121.7	.891	.40	5.9							504
1	540		6.49	6.45	34.312	26.952	117.6	.939	.37	5.4	73.7	3.16	38.6	.00			544

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.5 N	118 48.5 W	25/09/86	1029 GMT	897 M	290	15 KT		1	1010.3 MB	17.5 C	14.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.42	18.42	33.519	24.036	386.7	.000	5.61	104.5							0
1	1	A	18.42	18.42	33.519	24.036	386.7	.004	5.61	104.5	3.1	.22	.0	.00			1
	10	ISL	18.42	18.42	33.519	24.036	386.9	.039	5.61	104.5							10
	20	ISL	15.41	15.40	33.477	24.711	326.3	.075	5.46	95.8							20
1	27		12.81	12.81	33.444	25.226	274.0	.095	5.28	87.9	7.4	.87	6.4	.27			27
	30	ISL	12.67	12.67	33.451	25.258	271.0	.104	5.21	86.4							30
1	48		11.89	11.88	33.496	25.443	253.8	.150	4.67	76.3	10.4	1.08	10.9	.12			48
	50	ISL	11.77	11.77	33.509	25.475	250.8	.156	4.57	74.5							50
1	74		10.62	10.61	33.688	25.823	218.2	.212	3.50	55.7	19.0	1.57	19.1	.02			74
	75	ISL	10.57	10.56	33.699	25.840	216.6	.214	3.45	54.9							76
1	99		9.91	9.90	33.887	26.100	192.4	.265	2.76	43.3	26.8	1.92	24.0	.00			100
	100	ISL	9.91	9.90	33.891	26.104	192.1	.266	2.75	43.1							101
	125	ISL	9.87	9.86	34.063	26.245	179.2	.312	2.12	33.3							126
1	146		9.84	9.82	34.145	26.315	173.0	.349	1.75	27.4	33.8	2.27	27.5	.00			147
	150	ISL	9.79	9.78	34.151	26.327	171.9	.356	1.75	27.4							151
1	197		9.16	9.14	34.182	26.456	160.5	.434	1.78	27.5	38.0	2.38	28.9	.00			198
	200	ISL	9.13	9.11	34.188	26.464	159.7	.439	1.75	27.0							201
1	245		8.78	8.76	34.253	26.572	150.3	.508	1.27	19.5	43.7	2.58	31.0	.00			246
	250	ISL	8.73	8.70	34.251	26.579	149.7	.516	1.27	19.5							252
1	294		8.34	8.31	34.226	26.620	146.4	.581	1.28	19.4	46.7	2.61	31.9	.00			296
	300	ISL	8.32	8.29	34.230	26.626	146.0	.590	1.26	19.1							302
1	341		8.18	8.15	34.266	26.676	141.9	.649	1.03	15.6	50.0	2.74	32.9	.00			343
1	386		7.69	7.65	34.294	26.771	133.4	.710	.69	10.3	56.7	2.90	34.9	.00			388
	400	ISL	7.54	7.50	34.298	26.796	131.2	.729	.62	9.2							403
1	437		7.20	7.15	34.303	26.849	126.5	.777	.50	7.4	63.5	3.02	36.6	.00			440
1	484		6.87	6.83	34.306	26.896	122.4	.835	.46	6.7	68.1	3.08	37.6	.00			487
	500	ISL	6.72	6.67	34.310	26.921	120.2	.855	.42	6.2							504
1	535		6.38	6.33	34.318	26.971	115.6	.897	.34	4.9	75.8	3.17	39.1	.00			539
1	580		6.11	6.06	34.324	27.011	112.1	.947	.31	4.5	81.5	3.21	39.5	.00			584
	600	ISL	6.01	5.96	34.330	27.029	110.6	.970	.28	4.1							605
1	632		5.85	5.79	34.342	27.059	107.9	1.005	.24	3.4	86.6	3.26	39.8	.00			637
1	678		5.53	5.47	34.360	27.113	103.0	1.053	.21	3.0	93.6	3.32	39.9	.00			683
	700	ISL	5.44	5.38	34.366	27.128	101.7	1.076	.20	2.8							706
1	730		5.35	5.29	34.374	27.145	100.3	1.106	.18	2.5	98.3	3.34	39.6	.00			736
1	777		5.21	5.14	34.385	27.171	98.2	1.153	.13	1.8	103.5	3.39	38.3	.00			783
	800	ISL	5.15	5.09	34.388	27.180	97.5	1.175	.11	1.5							807
1	825		5.11	5.04	34.390	27.187	97.1	1.199	.08	1.1	111.0	3.46	34.8	.00			831

A. SANTA MONICA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 40.3 N	118 56.8 W	25/09/86	1218 GMT	896 M	280	16 KT			1010.2 MB	16.9 C	15.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.84	16.84	33.468	24.376	354.2	.000	5.85	105.7							0
2	1	A	16.84	16.84	33.468	24.376	354.2	.004	5.85	105.7	4.0	.29	.0	.01	2.87	.25	1
	10	ISL	16.85	16.85	33.469	24.376	354.5	.035	5.87	106.0							10
2	11		16.85	16.85	33.469	24.376	354.5	.03 9	5.87	106.1	4.0	.29	.0	.01	2.97	.28	11
	20	ISL	16.16	16.15	33.488	24.551	338.2	.070	5.70	101.7							20
2	22		16.01	16.01	33.535	24.621	331.6	.077	5.67	100.8	4.9	.42	1.3	.07	2.92	.41	22
	30	ISL	13.46	13.46	33.524	25.158	281.0	.101	5.07	85.7							30
2	32		12.88	12.88	33.522	25.273	269.6	.106	4.93	82.2	8.7	.92	8.8	.27	.45	.57	32
2	42		12.08	12.07	33.537	25.439	254.0	.133	4.57	74.9	11.5	1.10	11.6	.21	.35	.32	42
	50	ISL	11.67	11.67	33.547	25.523	246.2	.153	4.41	71.7							50
2	53		11.56	11.56	33.553	25.549	243.9	.160	4.36	70.7	13.2	1.21	13.4	.12	.23	.25	53
2	63		11.12	11.11	33.604	25.669	232.6	.183	4.10	65.9	15.3	1.34	15.7	.07	.16	.22	63
2	73		10.78	10.77	33.638	25.756	224.5	.206	3.90	62.2	17.3	1.45	17.2	.05	.12	.19	73
	75	ISL	10.66	10.65	33.657	25.791	221.3	.211	3.81	60.7							76
2	89		10.09	10.08	33.763	25.973	204.2	.240	3.35	52.7	22.6	1.70	21.1	.02	.05	.13	89
	100	ISL	9.99	9.98	33.787	26.008	201.1	.263	3.27	51.3							101
2	103		9.99	9.97	33.792	26.014	200.7	.270	3.25	51.0	23.6	1.75	21.9	.02	.05	.11	104
2	124		9.64	9.63	33.932	26.181	185.1	.311	2.69	41.9	29.0	1.97	24.8	.02	.02B	.08B	125
	125	ISL	9.63	9.62	33.936	26.186	184.7	.312	2.68	41.7							126
2	149		9.33	9.31	34.066	26.337	170.8	.355	2.27	35.2	33.6	2.15	27.2	.00	.00	.05	150
	150	ISL	9.33	9.31	34.069	26.340	170.6	.356	2.26	35.0							151
2	180		9.10	9.08	34.121	26.417	163.8	.406	2.05	31.6	36.6	2.27	28.5	.00	.00	.06	181
	200	ISL	8.75	8.72	34.118	26.472	158.9	.439	2.08	31.8							201
2	210		8.56	8.53	34.114	26.498	156.5	.454	2.09	31.8	39.7	2.30	29.4	.00	.00	.05	211
2	241		8.10	8.08	34.132	26.581	149.0	.501	1.86	28.0	44.7	2.43	31.2	.00			242
	250	ISL	8.13	8.10	34.163	26.602	147.3	.515	1.70	25.7							252
2	280		8.22	8.19	34.252	26.658	142.6	.559	1.17	17.7	49.0	2.67	32.4	.00			282
	300	ISL	8.17	8.14	34.281	26.688	140.0	.587	.98	14.7							302
2	337		7.95	7.91	34.305	26.741	135.5	.638	.76	11.4	54.4	2.84	34.0	.00			339
2	398		7.26	7.22	34.308	26.843	126.4	.718	.59	8.7	62.9	2.97	36.3	.00			401
	400	ISL	7.25	7.21	34.308	26.845	126.3	.720	.59	8.7							403
2	466		6.85	6.81	34.310	26.902	121.6	.802	.45	6.6	68.4	3.05	37.6	.00			469
	500	ISL	6.59	6.54	34.313	26.940	118.2	.843	.40	5.8							504
2	542		6.26	6.21	34.321	26.990	113.7	.892	.34	4.9	78.1	3.16	39.2	.00			546
	600	ISL	5.84	5.79	34.343	27.060	107.4	.956	.27	3.8							605
1	627		5.69	5.63	34.353	27.087	105.0	.985	.24	3.4	89.5	3.26	40.1	.00			632
1	676		5.56	5.50	34.360	27.109	103.4	1.035	.22	3.1	92.7	3.27	40.2	.00			681
	700	ISL	5.47	5.41	34.367	27.125	102.0	1.060	.20	2.9							706
1	725		5.38	5.32	34.374	27.142	100.6	1.085	.18	2.5	97.5	3.31	39.6	.00			730
1	774		5.23	5.17	34.380	27.165	98.8	1.134	.13	1.8	102.3	3.35	38.3	.00			780
	800	ISL	5.19	5.12	34.383	27.173	98.3	1.160	.12	1.7							807
1	824		5.15	5.09	34.387	27.179	97.9	1.183	.11	1.5	106.4	3.41	36.6	.00			830
1	872		5.10	5.02	34.394	27.192	97.2	1.230	.09	1.3	112.3	3.44	32.7	.00			879

A. SANTA MONICA BASIN STATION.

B. SECOND FLOUROMETER READING NOT RECORDED. CHLOROPHYLL AND PHAEOPHYTIN CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 35.0 N	119 07.1 W	25/09/86	1611 GMT	253 M	280	12 KT	280 03 0A	1	1011.2 MB	17.2 C	15.3 C	1/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.10	17.10	33.A89	2A.332	361.7	.000	5.81	105.5							0
1	1		17.10	17.10	33.A89	2A.332	358.5	.00A	5.81	105.5	3.6	.28	.2	.02			1
	10	ISL	15.96	15.95	33.527	2A.625	330.7	.035	5.57	98.9							10
	20	ISL	14.78	14.78	33.562	2A.912	303.8	.066	5.29	91.7							20
1	27		14.04	14.04	33.580	25.083	287.7	.087	5.09	87.0	8.2	.81	6.8	.26			27
	30	ISL	13.73	13.73	33.580	25.1A8	281.7	.096	5.00	8A.9							30
	50	ISL	11.92	11.91	33.583	25.506	247.9	.149	4.39	71.8							50
1	52		11.77	11.77	33.583	25.533	245.4	.153	4.34	70.7	13.7	1.21	13.8	.14			52
	75	ISL	9.90	9.89	33.706	25.961	205.0	.205	3.66	57.3							76
1	78		9.73	9.72	33.723	26.001	201.2	.211	3.59	56.0	22.7	1.68	21.5	.03			78
	100	ISL	9.35	9.34	33.826	26.145	188.0	.254	3.27	50.6							101
1	103		9.29	9.28	33.830	26.158	186.8	.261	3.21	49.6	27.1	1.86	24.1	.02			104
	125	ISL	9.16	9.14	34.020	26.328	171.1	.299	2.43	37.5							126
1	129		9.14	9.13	34.057	26.360	168.2	.306	2.28	35.2	34.9	2.20	27.9	.02			130
	150	ISL	8.96	8.94	34.119	26.438	161.2	.340	2.04	31.3							151
1	155		8.91	8.89	34.126	26.451	160.0	.349	2.01	30.9	38.1	2.32	29.1	.01			156
	200	ISL	8.64	8.62	34.216	26.564	150.1	.418	1.45	22.1							201
1	207		8.62	8.59	34.226	26.576	149.1	.428	1.35	20.6	44.8	2.59	31.5	.04			208

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 28.6 N	119 18.1 W	25/09/86	1925 GMT	1646 M	270	14 KT	280 04 05	1	1013.1 MB	18.5 C	16.3 C	3/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.58	17.58	33.559	24.272	364.1	.000	5.72	104.9	2.4	.24	.0	.00	1.06	.17	0
1	10		17.46	17.46	33.555	24.298	362.0	.036	5.75	105.2	2.2	.24	.0	.00	1.07	.24	10
1	20		17.11	17.11	33.595	24.412	351.4	.07 2	5.71	103.8	2.1	.27	.2	.01	1.16	.31	20
	30	ISL	16.08	16.08	33.611	24.663	327.7	.106	5.55	98.9							30
1	31		15.91	15.91	33.612	24.702	324.2	.109	5.54	98.3	4.2	.44	2.3	.07	1.36	.38	31
1	41		12.14	12.13	33.562	25.448	253.2	.138	4.51	74.1	11.8	1.13	12.2	.21	.41	.43	41
	50	ISL	11.19	11.18	33.587	25.644	234.8	.160	4.16	67.0							50
1	51		11.17	11.16	33.590	25.649	234.2	.162	4.14	66.6	14.6	1.32	15.5	.06	.24	.26	51
1	62		10.54	10.53	33.701	25.847	215.6	.186	3.51	55.7	19.9	1.58	19.4	.02	.08	.16	62
1	72		10.18	10.17	33.781	25.972	204.0	.207	3.20	50.4	22.9	1.74	21.6	.02	.04	.10	72
	75	ISL	10.14	10.13	33.789	25.985	202.8	.214	3.16	49.8							76
1	87		10.05	10.04	33.820	26.024	199.3	.237	3.03	47.6	24.5	1.79	22.6	.01	.03	.10	87
	100	ISL	9.68	9.67	33.948	26.187	184.2	.263	2.61	40.7							101
1	101		9.64	9.62	33.963	26.206	182.4	.266	2.56	39.9	29.8	2.00	25.5	.01	.02	.10	102
1	121		9.29	9.28	34.060	26.338	170.1	.301	2.26	35.0	33.8	2.17	27.4	.01	.01	.06	122
	125	ISL	9.28	9.27	34.071	26.349	169.2	.307	2.22	34.4							126
1	147		9.22	9.21	34.113	26.391	165.6	.344	1.96	30.3	36.2	2.26	28.3	.01	.01	.06	148
	150	ISL	9.22	9.21	34.126	26.401	164.7	.349	1.89	29.3							151
1	177		9.22	9.20	34.251	26.500	155.9	.392	1.40	21.7	40.0	2.48	29.9	.01	.00	.06	178
	200	ISL	8.65	8.63	34.198	26.548	151.6	.427	1.60	24.4							201
1	207		8.48	8.45	34.177	26.559	150.6	.43 8	1.67	25.4	43.5	2.45	30.9	.01	.01	.04	208
1	237		8.31	8.28	34.220	26.619	145.4	.482	1.37	20.8	46.6	2.58	31.9	.01			238
	250	ISL	8.26	8.24	34.241	26.643	143.4	.501	1.21	18.3							252
1	276		8.16	8.13	34.278	26.687	139.7	.538	.92	13.9	51.3	2.76	33.4	.01			278
	300	ISL	7.97	7.94	34.289	26.725	136.5	.571	.80	12.1							302
1	332		7.70	7.66	34.292	26.768	132.8	.614	.73	10.9	57.2	2.86	35.0	.00			334
1	392		7.43	7.39	34.308	26.819	128.7	.693	.58	8.6	61.0	2.94	35.9	.00			395
	400	ISL	7.36	7.32	34.307	26.828	127.9	.703	.56	8.4							403
1	460		6.76	6.72	34.296	26.903	121.3	.777	.46	6.7	68.9	3.05	38.1	.00			463
	500	ISL	6.47	6.42	34.304	26.949	117.2	.825	.39	5.7							504
1	535		6.27	6.23	34.320	26.987	113.9	.866	.34	4.9	77.3	3.16	39.6	.00			539

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.6 N	119 40.0 W	25/09/86	2300 GMT	79 M	280	14 KT	280 04 05	1	1013.2 MB	19.1 C	16.7 C	1/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.57	16.57	33.599	24.540	338.6	.000	5.75	103.4	3.6	.40	.9	.04	1.08	.29	0
	10	ISL	16.13	16.12	33.613	24.654	328.1	.033	5.58	99.5							10
1	16		15.86	15.86	33.622	24.721	321.8	.053	5.48	97.2	5.2	.54	2.8	.09	1.11	.44	16
	20	ISL	15.17	15.17	33.625	24.876	307.2	.065	5.26	92.1							20
1	26		14.00	14.00	33.636	25.135	282.7	.083	4.87	83.2	9.6	.85	7.7	.19	1.41	.54	26
	30	ISL	13.16	13.15	33.646	25.314	265.7	.094	4.52	75.9							30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 08.9 N	120 00.6 W	26/09/86	0219 GMT	1195 M	270	08 KT	290 05 06	1	1013.6 MB	17.A C	15.4 C	1/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.77	16.77	33.552	24.458	346.4	.000	6.07	109.6	5.1	.35	.1	.00	2.75	.48	0
1	10	16.53	16.53	33.561	24.522	340.7	.034	5.95	106.9	5.3	.39	.7	.03	1.41	.59	10
1	20	16.34	16.34	33.563	24.566	336.7	.068	5.84	104.5	5.3	.43	.9	.03	1.31	.73	20
	30 ISL	16.11	16.10	33.627	24.669	327.2	.101	5.65	100.6							30
1	31	16.09	16.08	33.633	24.678	326.4	.104	5.63	100.3	4.4	.51	2.3	.07	.64	.34	31
1	41	13.78	13.78	33.654	25.194	277.5	.134	4.62	78.6	12.0	1.00	9.8	.24	.46	.31	41
	50 ISL	12.14	12.14	33.714	25.566	242.3	.158	3.99	65.5							50
1	51	12.04	12.03	33.718	25.589	240.1	.160	3.95	64.8	17.3	1.34	15.4	.26	.32	.29	51
1	61	11.45	11.45	33.689	25.675	232.2	.184	3.81	61.7	17.7	1.41	16.8	.15	.24	.30	61
1	71	10.18	10.17	33.798	25.985	202.7	.205	3.17	50.0	24.1	1.75	21.9	.08	.15	.37	71
	75 ISL	10.10	10.09	33.802	26.002	201.2	.214	3.15	49.6							76
1	87	9.88	9.87	33.813	26.047	197.1	.237	3.10	48.6	25.5	1.81	22.9	.03	.09	.17	87
	100 ISL	9.67	9.66	33.900	26.151	187.5	.263	2.76	43.1							101
1	101	9.65	9.63	33.911	26.163	186.4	.266	2.72	42.4	29.8	1.95	24.7	.02	.04	.13	102
1	121	9.37	9.36	33.988	26.269	176.7	.302	2.46	38.1	32.2	2.06	26.2	.01	.02	.10	122
	125 ISL	9.32	9.30	34.001	26.288	175.0	.308	2.42	37.4							126
1	147	9.03	9.01	34.067	26.386	166.1	.346	2.16	33.2	36.8	2.22	28.1	.01	.02	.08	148
	150 ISL	9.00	8.99	34.074	26.396	165.2	.351	2.13	32.8							151
1	177	8.79	8.77	34.130	26.473	158.3	.394	1.85	28.3	40.7	2.34	29.6	.02	.02	.07	178
	200 ISL	8.62	8.60	34.164	26.527	153.6	.430	1.65	25.1							201
1	208	8.57	8.55	34.175	26.543	152.2	.442	1.58	24.1	43.4	2.45	30.7	.04	.01	.07	209
1	239	8.40	8.38	34.224	26.608	146.6	.488	1.28	19.4	47.7	2.58	31.9	.02			240
	250 ISL	8.32	8.30	34.238	26.631	144.6	.505	1.18	17.9							252
1	278	8.10	8.08	34.263	26.684	140.0	.545	.97	14.6	52.3	2.73	33.1	.02			280
	300 ISL	7.95	7.92	34.275	26.717	137.2	.575	.86	12.9							302
1	335	7.69	7.65	34.284	26.763	133.2	.622	.74	11.1	57.8	2.83	34.6	.02			337
1	395	7.16	7.12	34.290	26.843	126.3	.701	.61	9.0	65.3	2.94	36.3	.02			398
	400 ISL	7.13	7.09	34.290	26.847	125.9	.706	.60	8.9							403
1	463	6.70	6.65	34.289	26.906	121.0	.784	.52	7.6	70.4	3.02	37.8	.00			466
	500 ISL	6.47	6.42	34.297	26.943	117.8	.828	.46	6.7							504
1	534	6.28	6.23	34.309	26.978	114.8	.868	.41	5.9	76.8	3.11	39.3	.00			538

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 58.8 N	120 21.6 W	26/09/86	0547 GMT	757 M	300	10 KT		1	1016.4 MB	17.1 C	15.2 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.72	16.72	33.301	24.278	363.6	.000	5.79	104.2	2.4	.39	.0	.00	.35	.07	0
1	10	16.36	16.35	33.348	24.397	352.5	.036	5.92	105.8	2.4	.38	.0	.00	.64	.16	10
	20 ISL	16.01	16.00	33.413	24.527	340.4	.070	5.97	106.0							20
1	21	15.97	15.97	33.423	24.542	339.0	.07 4	5.97	106.0	4.1	.40	.1	.01	.87	.27	21
	30 ISL	14.04	14.03	33.159	24.758	318.6	.103	6.00	102.2							30
1	31	13.83	13.83	33.132	24.781	316.6	.106	6.00	101.8	3.6	.53	1.5	.15	.83	.29	31
1	41	12.45	12.44	33.004	24.956	300.0	.137	5.81	95.7	5.3	.73	4.1	.23	.59	.49	41
	50 ISL	11.90	11.90	33.096	25.131	283.6	.164	5.53	90.0							50
1	52	11.84	11.84	33.133	25.170	279.9	.169	5.45	88.7	7.2	.89	7.4	.15	.39	.31	52
1	62	11.51	11.51	33.425	25.458	252.7	.195	4.83	78.2	10.3	1.15	12.6		.18	.22	62
1	71	11.13	11.12	33.498	25.585	240.8	.217	4.52	72.6	12.9	1.32	15.2	.02	.11	.15	71
	75 ISL	10.79	10.79	33.534	25.672	232.6	.227	4.34	69.2							76
1	87	9.92	9.91	33.624	25.893	211.7	.253	3.89	60.9	20.3	1.63	20.4	.01	.02	.09	87
	100 ISL	9.56	9.55	33.686	26.002	201.6	.281	3.68	57.2							101
1	103	9.54	9.53	33.701	26.017	200.2	.286	3.63	56.4	23.6	1.73	22.1	.01	.02	.07	103
1	122	9.68	9.67	34.013	26.238	179.8	.324	2.31	36.1	30.9	2.07	26.0	.01	.01	.10	123
	125 ISL	9.68	9.66	34.030	26.251	178.5	.328	2.28	35.6							126
1	147	9.56	9.54	34.092	26.320	172.4	.367	2.02	31.5	33.7	2.22	27.3	.01	.02	.10	148
	150 ISL	9.53	9.52	34.095	26.327	171.9	.372	2.01	31.3							151
1	178	9.23	9.21	34.120	26.396	165.8	.420	1.91	29.5	36.3	2.27	28.5	.01	.00	.09	179
	200 ISL	8.95	8.93	34.170	26.480	158.3	.455	1.66	25.5							201
1	207	8.88	8.85	34.184	26.503	156.2	.466	1.58	24.3	40.9	2.43	30.0	.01	.00	.07	208
1	237	8.76	8.73	34.191	26.527	154.3	.512	1.53	23.4	42.1	2.45	30.4	.01			238
	250 ISL	8.58	8.55	34.197	26.560	151.4	.533	1.45	22.2							252
1	277	8.11	8.09	34.204	26.636	144.5	.573	1.30	19.6	49.3	2.60	32.5	.01			279
	300 ISL	7.70	7.67	34.179	26.678	140.7	.605	1.29	19.3							302
1	332	7.26	7.22	34.154	26.721	136.8	.650	1.28	18.9	56.1	2.69	34.8	.01			334
1	392	7.46	7.42	34.261	26.778	132.6	.731	.76	11.3	59.4	2.86	35.3	.00			395
	400 ISL	7.41	7.37	34.265	26.788	131.8	.741	.73	10.8							403
1	459	6.90	6.86	34.272	26.865	125.0	.817	.58	8.5	67.1	2.97	37.0	.00			462
	500 ISL	6.60	6.56	34.284	26.915	120.6	.867	.49	7.1							504
1	531	6.40	6.36	34.295	26.950	117.5	.905	.43	6.2	75.2	3.08	38.9	.00			535

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.6 N	121 02.0 W	26/09/86	105A GMT	3733 M	330	09 KT			1017.5 MB	16.5 C	14.7 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.01	17.01	33.603	24.441	348.0	.000	5.78	104.8	3.6	.35	.1	.00	.49	.15	0
1	10		16.99	16.98	33.598	24.443	348.1	.035	5.78	104.8	3.6	.34	.1	.00	.54	.22	10
	20	ISL	16.72	16.72	33.604	24.510	342.6	.069	5.87	105.8							20
1	21		16.70	16.69	33.605	24.516	341.5	.072	5.87	105.8	3.2	.35	.1	.00	.54	.27	21
	30	ISL	15.68	15.67	33.581	24.731	321.4	.103	5.66	100.0							30
1	31		15.55	15.55	33.578	24.757	318.9	.105	5.63	99.2	4.3	.50	1.9	.12	.88	.42	31
1	41		13.90	13.89	33.525	25.070	289.3	.136	5.20	88.6	6.9	.78	5.7	.62	.83	.43	41
	50	ISL	12.75	12.74	33.502	25.284	269.1	.161	4.79	79.7							50
1	52		12.54	12.54	33.496	25.319	265.8	.166	4.73	78.3	9.4	1.05	10.5	.35	.51	.32	52
1	62		11.29	11.28	33.410	25.488	249.8	.192	4.73	76.2	11.6	1.19	13.0	.04	.25	.20	62
1	72		10.92	10.91	33.588	25.692	230.6	.216	4.04	64.6	15.3	1.41	16.6	.02	.13	.16	72
	75	ISL	10.72	10.71	33.606	25.742	225.9	.223	4.01	63.9							76
1	88		9.95	9.94	33.640	25.900	211.1	.251	3.90	61.1	19.7	1.60	20.0	.02	.03	.07	88
	100	ISL	9.52	9.51	33.745	26.054	196.7	.276	3.46	53.7							101
1	103		9.46	9.45	33.768	26.082	194.1	.281	3.36	52.1	25.1	1.78	22.9	.01	.01	.08	103
1	123		9.09	9.07	33.881	26.231	180.3	.320	2.97	45.7	29.6	1.94	25.4	.01	.00	.05	124
	125	ISL	9.05	9.04	33.888	26.241	179.3	.323	2.94	45.3							126
1	149		8.66	8.64	33.978	26.375	167.0	.365	2.61	39.8	34.4	2.10	27.6	.00	.01	.07	150
	150	ISL	8.65	8.64	33.981	26.377	166.8	.366	2.60	39.6							151
1	180		8.53	8.51	34.063	26.461	159.4	.415	2.28	34.7	38.6	2.22	28.9	.00	.00	.05	181
	200	ISL	8.16	8.14	34.062	26.517	154.4	.446	2.27	34.2							201
1	212		7.95	7.93	34.059	26.546	151.7	.464	2.26	33.9	42.8	2.30	30.3	.00	.00	.04	213
1	242		7.85	7.82	34.113	26.604	146.8	.509	1.82	27.3	47.0	2.45	31.9	.00			243
	250	ISL	7.82	7.80	34.131	26.622	145.2	.521	1.69	25.2							252
1	283		7.67	7.64	34.191	26.691	139.0	.569	1.22	18.2	53.1	2.69	34.0	.00			285
	300	ISL	7.50	7.48	34.201	26.723	136.3	.592	1.11	16.4							302
1	340		7.10	7.07	34.212	26.789	130.4	.645	.93	13.7	60.0	2.82	35.9	.00			342
	400	ISL	6.83	6.80	34.270	26.872	123.4	.721	.57	8.4							403
1	402		6.82	6.79	34.272	26.875	123.1	.724	.56	8.2	67.9	2.99	37.5	.00			405
1	469		6.37	6.33	34.295	26.954	116.2	.804	.42	6.1	75.4	3.09	39.0	.00			472
	500	ISL	6.17	6.12	34.307	26.989	113.1	.839	.37	5.3							504
1	541		5.91	5.86	34.322	27.034	109.1	.885	.31	4.4	83.9	3.19	40.4	.00			545

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.0 N	117 46.4 W	24/09/86	2328 GMT	79 M	170	08 KT	230 03 05	2	1012.2 MB	16.2 C	15.3 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.56	18.56	33.470	23.963	393.6	.000	6.03	112.6	2.8	.23	.1	.00	2.22	.24	0
1	10		18.22	18.22	33.470	24.048	385.9	.03 9	6.10	113.2	3.0	.25	.1	.00	3.72	.40	10
	20	ISL	14.04	14.03	33.352	24.907	305.0	.074	6.05	103.3							20
1	21		13.63	13.62	33.341	24.983	297.0	.076	6.05	102.4	4.1	.51	.8	.06	.82	.33	21
	30	ISL	12.32	12.32	33.414	25.298	267.2	.102	5.38	88.6							30
1	31		12.27	12.27	33.423	25.314	265.8	.104	5.30	87.2	7.1	.82	6.6	.26	.95	.80	31
1	41		11.82	11.81	33.483	25.447	253.2	.130	4.61	75.2	10.4	1.10	11.1	.14	.53	.54	41
1	50		11.16	11.15	33.597	25.656	233.5	.152	3.90	62.7	15.3	1.38	15.8	.07	.17	.31	50

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 24.4 N	117 55.3 W	24/09/86	2041 GMT	613 M	240	14 KT	270 03 05	2	1013.2 MB	17.1 C	15.3 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.75	18.75	33.568	23.992	3 90.9	.000	5.72	107.3							0
1	1		18.75	18.75	33.568	23.992	390.9	.004	5.72	107.3	2.6	.23	.1	.00	.68	.10	1
	10	ISL	18.74	18.73	33.567	23.995	390.9	.03 9	5.73	107.4							10
1	11		18.74	18.73	33.567	23.995	390.9	.043	5.73	107.4	2.7	.22	.1	.00	.61	.09	11
	20	ISL	16.52	16.52	33.450	24.438	348.9	.076	6.15	110.3							20
1	22		15.94	15.94	33.429	24.554	337.9	.083	6.22	110.4	3.1	.35	.1	.00	.70	.28	22
	30	ISL	14.12	14.12	33.392	24.921	303.2	.109	5.99	102.5							30
1	32		13.76	13.76	33.389	24.993	296.4	.114	5.90	100.1	4.6	.57	2.7	.11	.78	.41	32
1	42		12.63	12.63	33.383	25.214	275.5	.143	5.44	90.2	5.8	.75	5.5	.22	.71	.63	42
	50	ISL	11.97	11.96	33.436	25.383	259.7	.165	4.97	81.3							50
1	53		11.80	11.79	33.454	25.427	255.4	.172	4.84	78.9	9.0	1.03	10.5	.11	.38	.34	53
1	63		11.51	11.50	33.465	25.491	249.6	.197	4.74	76.8	10.4	1.11	11.9	.07	.31	.42	63
1	73		10.79	10.78	33.560	25.694	230.5	.221	4.21	67.2	14.7	1.34	15.8	.04	.12	.17	73
	75	ISL	10.69	10.68	33.573	25.722	227.8	.226	4.14	65.9							76
1	89		10.36	10.35	33.648	25.836	217.2	.256	3.78	59.8	18.5	1.52	18.8	.02	.13	.62	89
	100	ISL	10.32	10.31	33.753	25.926	209.0	.281	3.27	51.8							101
1	103		10.31	10.30	33.780	25.949	206.8	.288	3.13	49.5	22.8	1.74	21.8	.02	.04	.18	104
1	124		10.12	10.11	33.832	26.022	200.4	.331	2.95	46.5	24.7	1.82	22.9	.02	.02	.09	125
	125	ISL	10.12	10.11	33.834	26.024	200.2	.332	2.94	46.3							126
1	149		10.00	9.99	33.920	26.112	192.4	.379	2.60	40.9	27.7	1.96	24.6	.01	.01	.10	150
	150	ISL	10.00	9.98	33.924	26.115	192.1	.381	2.58	40.6							151
1	181		9.73	9.70	34.075	26.280	177.0	.438	2.05	32.0	33.1	2.20	27.4	.00	.00	.06	182
	200	ISL	9.35	9.33	34.133	26.386	167.3	.471	1.94	30.1							201
1	212		9.10	9.08	34.157	26.446	161.7	.490	1.90	29.3	38.1	2.32	29.1	.00	.00	.04	213
1	242		8.63	8.60	34.188	26.545	152.7	.537	1.65	25.2	42.7	2.45	30.8	.00			243
	250	ISL	8.55	8.52	34.199	26.566	150.9	.550	1.56	23.8							252
1	282		8.31	8.28	34.238	26.633	145.0	.598	1.23	18.6	47.7	2.63	32.5	.00			284
	300	ISL	8.17	8.13	34.251	26.666	142.1	.623	1.08	16.4							302
1	339		7.85	7.82	34.272	26.729	136.6	.677	.83	12.5	54.5	2.80	34.5	.00			341
1	398		7.45	7.41	34.308	26.816	129.1	.756	.59	8.8	60.8	2.93	36.0	.00			401
	400	ISL	7.44	7.40	34.309	26.819	128.9	.758	.58	8.7							403
1	467		6.88	6.83	34.325	26.910	120.8	.842	.37	5.4	68.9	3.09	38.0	.00			470
	500	ISL	6.65	6.61	34.329	26.944	117.9	.881	.34	5.0							504
1	538		6.44	6.39	34.330	26.973	115.5	.926	.31	4.5	75.5	3.19	38.9	.07			542

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.1 N	118 06.8 W	24/09/86	1604 GMT	733 M	230	13 KT	260 03 05	2	1012.5 MB	17.2 C	14.3 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.65	17.65	33.532	24.233	367.8	.000	5.70	104.6	2.3	.30	.1	.00			0
	10	ISL	17.65	17.65	33.532	24.234	368.0	.037	5.70	104.6							10
	20	ISL	15.67	15.66	33.441	24.625	331.1	.072	5.97	105.4							20
1	26		14.11	14.11	33.407	24.935	301.8	.091	6.10	104.3	4.1	.49	1.5	.07			26
	30	ISL	13.51	13.50	33.412	25.063	289.6	.103	5.91	99.9							30
	50	ISL	11.57	11.56	33.501	25.507	247.7	.156	4.62	74.9							50
1	52		11.48	11.47	33.512	25.532	245.4	.161	4.47	72.4	11.5	1.17	12.9	.12			52
	75	ISL	10.33	10.32	33.635	25.833	217.3	.215	3.79	59.9							76
1	99		9.78	9.77	33.748	26.013	200.6	.264	3.46	54.1	22.3	1.68	21.6	.02			99
	100	ISL	9.75	9.74	33.754	26.023	199.6	.267	3.44	53.7							101
	125	ISL	9.29	9.27	33.859	26.182	185.0	.315	3.07	47.5							126
1	150		9.09	9.08	33.962	26.293	174.9	.360	2.70	41.6	31.7	2.03	26.7	.02			151
1	195		9.35	9.33	34.186	26.428	163.2	.436	1.74	27.0	36.8	2.34	29.0	.01			196
	200	ISL	9.30	9.28	34.195	26.443	161.9	.444	1.71	26.5							201
1	242		8.77	8.75	34.224	26.551	152.2	.509	1.56	23.9	42.0	2.49	30.7	.01			243
	250	ISL	8.71	8.68	34.235	26.570	150.6	.522	1.47	22.5							252
1	292		8.48	8.45	34.284	26.644	144.3	.584	1.04	15.8	47.5	2.71	32.5	.01			294
	300	ISL	8.45	8.41	34.288	26.653	143.6	.595	1.00	15.3							302
1	338		8.27	8.23	34.298	26.688	140.8	.649	.89	13.5	50.3	2.76	33.2	.00			340
1	385		7.94	7.90	34.305	26.743	136.3	.714	.72	10.8	54.9	2.84	34.4	.00			387
	400	ISL	7.80	7.76	34.309	26.767	134.1	.735	.68	10.2							403
1	434		7.44	7.40	34.315	26.823	129.0	.780	.59	8.8	61.3	2.97	36.2	.00			437
1	481		6.88	6.83	34.315	26.902	121.8	.838	.41	6.0	68.6	3.07	38.2	.00			484
	500	ISL	6.66	6.61	34.316	26.933	118.9	.861	.37	5.3							504
1	532		6.34	6.29	34.322	26.979	114.7	.899	.32	4.6	76.8	3.17	39.7	.00			536
1	579		6.11	6.06	34.336	27.021	111.1	.952	.30	4.3	80.5	3.20	40.2	.00			583
	600	ISL	5.98	5.93	34.341	27.041	109.3	.975	.27	3.9							605
1	631		5.78	5.73	34.350	27.073	106.5	1.009	.24	3.4	87.5	3.27	40.5	.00			636
1	679		5.50	5.44	34.373	27.127	101.7	1.058	.24	3.4	91.5	3.28	41.4	.00			684

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 14.8 N	118 15.1 W	24/09/86	1319 GMT	640 M	260	16 KT			1009.9 MB	16.5 C	13.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.82	17.82	33.543	24.201	370.9	.000	5.72	105.4	2.4	.28	.1	.00	.27	.07	0
1	10		17.82	17.82	33.543	24.202	371.1	.037	5.70	105.0	2.4	.29	.1	.00	.26	.08	10
	20	ISL	15.05	15.05	33.418	24.744	319.8	.072	6.24	108.8							20
1	21		14.78	14.77	33.411	24.797	314.8	.075	6.29	109.0	3.8	.39	.1	.00	.35	.19	21
	30	ISL	14.05	14.05	33.399	24.941	301.4	.103	6.10	104.1							30
1	31		14.01	14.01	33.398	24.948	300.6	.105	6.08	103.7	4.0	.51	1.6	.06	.52	.29	31
1	41		12.66	12.66	33.421	25.238	273.3	.134	5.50	91.3	6.6	.77	6.1	.20	.60	.35	41
	50	ISL	12.01	12.01	33.458	25.391	258.9	.158	4.99	81.7							50
1	51		11.97	11.97	33.461	25.401	258.0	.160	4.95	81.0	8.8	.99	9.7	.22	.62	.39	51
1	62		11.48	11.47	33.506	25.527	246.1	.188	4.56	73.8	11.1	1.16	12.8	.11	.44	.41	62
1	72		11.09	11.08	33.580	25.656	234.1	.212	4.09	65.7	14.3	1.33	15.5	.05	.27	.29	72
	75	ISL	10.98	10.97	33.595	25.688	231.1	.219	4.01	64.2							76
1	87		10.59	10.58	33.646	25.796	221.1	.246	3.79	60.2	17.3	1.48	18.0	.03	.12	.24	87
	100	ISL	10.12	10.10	33.751	25.960	205.7	.274	3.38	53.2							101
1	102		10.03	10.02	33.772	25.990	202.9	.279	3.30	51.9	22.4	1.71	21.6	.01	.04	.17	103
1	122		9.61	9.60	33.888	26.151	188.0	.318	2.92	45.5	26.9	1.90	24.2	.00	.01	.09	123
	125	ISL	9.62	9.61	33.916	26.171	186.1	.323	2.80	43.7							126
1	148		9.71	9.69	34.123	26.319	172.6	.365	1.90	29.7	33.5	2.22	27.5	.00	.00	.08	149
	150	ISL	9.68	9.66	34.121	26.323	172.1	.368	1.91	29.8							151
1	179		9.08	9.06	34.095	26.401	165.3	.417	2.16	33.3	35.5	2.22	28.3	.00	.00	.05	180
	200	ISL	9.11	9.09	34.191	26.470	159.1	.451	1.72	26.6							201
1	210		9.13	9.11	34.233	26.501	156.5	.466	1.49	23.0	39.5	2.44	29.9	.00	.00	.05	211
1	246		8.71	8.69	34.232	26.566	150.8	.521	1.46	22.3	43.3	2.51	30.8	.02			247
	250	ISL	8.70	8.67	34.239	26.574	150.2	.528	1.41	21.5							252
1	281		8.61	8.58	34.292	26.629	145.5	.574	1.03	15.7	47.1	2.66	31.9	.02			283
	300	ISL	8.44	8.41	34.299	26.662	142.7	.601	.97	14.8							302
1	319		8.18	8.14	34.290	26.695	139.7	.628	.91	13.8	51.0	2.74	33.0	.01			321

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RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 11.1 N	118 23.0 W	24/09/86	0950 GMT	1163 M	270	23 KT			1010.8 MB	17.0 C	13.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.28	18.28	33.558	24.102	380.3	.000	5.60	104.1							0
1	1		18.28	18.28	33.558	24.102	380.4	.004	5.60	104.1	2.1	.27	.0	.00	.19	.06	1
	10	ISL	18.29	18.29	33.557	24.097	381.1	.03 8	5.61	104.3							10
1	11		18.29	18.29	33.557	24.097	381.2	.042	5.61	104.3	2.1	.27	.0	.00	.19	.04	11
	20	ISL	18.04	18.03	33.538	24.146	376.9	.076	5.68	105.0							20
1	22		17.98	17.98	33.534	24.156	376.0	.083	5.69	105.1	2.2	.29	.0	.00	.21	.06	22
	30	ISL	14.75	14.75	33.419	24.809	313.8	.111	6.06	104.9							30
1	32		13.96	13.95	33.412	24.970	298.5	.117	6.10	104.0	3.9	.52	2.0	.07	.21	.05	32
1	42		12.64	12.63	33.436	25.254	271.7	.145	5.29	87.7	6.9	.83	7.0	.15	.85	.41	42
	50	ISL	11.85	11.84	33.463	25.425	255.5	.167	4.84	78.9							50
1	52		11.73	11.72	33.469	25.453	252.9	.171	4.77	77.6	9.7	1.06	10.9	.11	.59	.40	52
1	63		11.48	11.47	33.493	25.518	247.0	.199	4.61	74.6	10.7	1.13	12.3	.10	.45	.39	63
1	73		10.91	10.90	33.596	25.700	229.8	.222	3.99	63.8	15.0	1.39	16.3	.05	.24	.25	73
	75	ISL	10.83	10.83	33.616	25.730	227.1	.228	3.88	61.9							76
1	88		10.55	10.54	33.713	25.856	215.4	.256	3.38	53.7	19.7	1.63	19.7	.02	.08	.17	88
	100	ISL	10.21	10.20	33.807	25.987	203.2	.282	3.02	47.7							101
1	103		10.13	10.12	33.832	26.021	200.0	.289	2.94	46.3	24.3	1.82	22.7	.01	.03	.09	104
1	123		9.83	9.82	33.947	26.161	187.0	.327	2.54	39.8	28.3	1.99	25.1	.00	.01	.07	124
	125	ISL	9.83	9.81	33.958	26.170	186.2	.330	2.50	39.2							126
1	149		9.78	9.77	34.088	26.279	176.4	.374	2.01	31.5	32.3	2.19	27.0	..00	.01	.09	150
	150	ISL	9.77	9.76	34.090	26.283	176.1	.375	2.01	31.4							151
1	181		9.22	9.20	34.133	26.408	164.7	.428	1.97	30.5	35.9	2.28	28.5	.00	.00	.04	182
	200	ISL	9.01	8.99	34.193	26.488	157.5	.459	1.66	25.5							201
1	210		8.94	8.91	34.222	26.523	154.3	.474	1.48	22.8	40.9	2.48	30.2	.00	.00	.04	211
1	242		8.79	8.76	34.266	26.582	149.4	.522	1.24	19.0	43.8	2.58	31.0	.00			243
	250	ISL	8.72	8.70	34.274	26.598	147.9	.535	1.17	17.9							252
1	283		8.45	8.42	34.298	26.659	142.6	.583	.93	14.1	48.5	2.73	32.4	.00			285
	300	ISL	8.35	8.32	34.303	26.680	141.0	.607	.86	13.1							302
1	339		8.08	8.05	34.306	26.722	137.5	.661	.76	11.5	52.7	2.83	33.6	.00			341
1	400		7.44	7.40	34.305	26.815	129.2	.7 43	.59	8.8	60.1	2.94	35.7	.00			403
1	467		6.82	6.78	34.301	26.898	121.9	.827	.43	6.3	67.9	3.06	37.9	.00			470
	500	ISL	6.59	6.54	34.309	26.937	118.5	.866	.37	5.4							504
1	540		6.36	6.31	34.327	26.981	114.6	.913	.32	4.6	75.5	3.15	39.5	.00			544

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 54.7 N	118 56.8 W	24/09/86	0437 GMT	1686 M	280	20 KT			1012.3 MB	17.2 C	14.3 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	19.01	19.01	33.624	23.968	393.1	.000	5.43	102.4							0
1	2		19.01	19.01	33.624	23.968	393.2	.008	5.43	102.4	1.9	.27	.0	.00	.15	.03	2
	10	ISL	19.00	19.00	33.622	23.969	393.4	.039	5.43	102.3							10
1	12		19.00	19.00	33.622	23.969	393.4	.047	5.43	102.3	1.8	.28	.0	.00	.16	.03	12
	20	ISL	19.00	19.00	33.622	23.970	393.7	.079	5.43	102.3							20
1	22		19.00	19.00	33.622	23.970	393.7	.086	5.43	102.3	1.8	.27	.0	.00	.16	.03	22
	30	ISL	16.39	16.39	33.521	24.522	341.3	.116	6.06	108.6							30
1	32		15.69	15.69	33.506	24.670	327.2	.122	6.20	109.5	3.6	.40	.4	.02	.62	.26	32
1	42		13.68	13.67	33.477	25.079	288.5	.153	6.00	101.7	5.2	.61	3.4	.10	.67	.40	42
	50	ISL	12.41	12.40	33.502	25.349	262.9	.175	5.20	85.9							50
1	52		12.18	12.17	33.509	25.399	258.1	.180	5.01	82.3	9.0	.96	9.5	.24	.60	.48	52
1	62		11.27	11.26	33.538	25.590	240.1	.205	4.44	71.6	12.5	1.22	14.0	.12	.47	.41	62
1	73		10.85	10.85	33.578	25.696	230.3	.231	4.12	65.8	15.3	1.37	16.4	.05	.33	.32	73
	75	ISL	10.76	10.75	33.599	25.729	227.2	.236	4.01	64.0							76
1	87		10.32	10.31	33.710	25.892	211.9	.261	3.50	55.3	20.4	1.61	20.0	.02	.08	.15	87
	100	ISL	9.90	9.89	33.770	26.011	200.8	.289	3.26	51.0							101
1	102		9.86	9.85	33.775	26.021	199.8	.292	3.24	50.7	23.7	1.75	22.3	.01	.03	.09	102
1	122		9.50	9.48	33.875	26.160	187.1	.332	2.89	44.9	27.7	1.90	24.6	.00	.01	.05	123
	125	ISL	9.45	9.44	33.884	26.174	185.8	.337	2.87	44.5							126
1	146		9.12	9.11	33.947	26.277	176.4	.376	2.71	41.8	31.4	2.02	26.4	.00	.01	.06	147
	150	ISL	9.07	9.05	33.957	26.293	174.9	.382	2.69	41.4							151
1	176		8.76	8.74	34.036	26.404	164.8	.427	2.42	37.0	35.8	2.16	27.9	.00	.00	.05	177
	200	ISL	8.61	8.59	34.153	26.520	154.2	.465	1.79	27.3							201
1	205		8.58	8.56	34.174	26.541	152.4	.472	1.67	25.5	42.4	2.42	30.4	.00	.00	.04	206
1	235		8.40	8.37	34.181	26.575	149.6	.517	1.58	24.0	44.5	2.49	31.2	.00			236
	250	ISL	8.24	8.21	34.193	26.609	146.6	.540	1.45	22.0							252
1	274		7.98	7.95	34.216	26.666	141.5	.575	1.22	18.3	50.5	2.66	32.9	.00			276
	300	ISL	7.77	7.74	34.233	26.710	137.6	.611	1.04	15.6							302
~~X 1	329		7.57	7.53	34.251	26.754	133.9	.650	.87	13.0	56.5	2.83	34.8	.00			331
\ 1	389		7.24	7.21	34.308	26.845	126.0	.728	.53	7.8	62.8	2.97	36.3	.00			391
	400	ISL	7.18	7.14	34.315	26.860	124.8	.742	.49	7.2							403
1	456		6.82	6.78	34.328	26.920	119.7	.810	.37	5.4	69.4	3.08	37.8	.00			459
	500	ISL	6.47	6.42	34.327	26.966	115.6	.862	.35	5.0							504
1	528		6.21	6.16	34.320	26.995	113.0	.895	.33	4.8	77.6	3.16	39.8	.00			532

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.1 N	119 28.9 W	23/09/86	2220 GMT	1315 M	270	11 KT	280 03 07	1	1012.8 MB	18.8 C	14.9 C	2/8	CS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.97	16.97	33.644	24.481	3A5.0	.000	5.72	103.7							0
1	1		16.97	16.97	33.6AA	2A.A81	3AA.3	.003	5.72	103.7	A.A	.A8	1.8	.0A	.A5	.09	1
	10	ISL	16.63	16.63	33.6A2	2A.559	336.9	.03A	5.76	103.7							10
1	12		16.5A	16.53	33.6A1	2A.581	335.1	.0A1	5.76	103.5	A.9	.50	2.1	.05	.40	.09	12
	20	ISL	16.09	16.09	33.621	2A.668	327.1	.067	5.74	102.3							20
1	22		15.92	15.91	33.607	24.697	324.4	.074	5.74	101.9	5.0	.53	2.4	.09	.69	.29	22
	30	ISL	14.4A	14.43	33.470	24.915	303.8	.099	5.81	100.1							30
1	32		1A.06	1A.05	33.A35	2A.967	298.8	.105	5.82	99.A	3.6	.62	2.8	.28	.99	.51	32
1	A3		12.A9	12.A9	33.251	25.139	282.7	.136	5.60	92.5	5.2	.8A	6.2	.28	.81	.52	A3
	50	ISL	11.99	11.98	33.260	25.2A2	273.0	.156	5.37	87.8							50
1	53		11.8A	11.8A	33.280	25.285	269.0	.164	5.27	85.9	7.2	1.02	9.3	.11	.58	.A0	53
1	63		11.20	11.19	33.385	25.A8A	250.2	.190	A.86	78.1	10.5	1.25	13.3	.05	.26	.30	63
1	73		10.99	10.98	33.524	25.631	236.5	.21A	A.31	69.0	13.9	1.39	15.9	.0A	.17	.25	73
	75	ISL	10.95	10.9A	33.559	25.665	233.3	.219	A.16	66.5							76
1	89		10.63	10.62	33.737	25.860	215.0	.250	3.36	53.5	20.5	1.69	20.5	.0A	.11	.18	89
	100	ISL	10.05	10.0A	33.819	26.022	199.7	.273	3.07	A8.2							101
1	103		9.88	9.87	33.837	26.066	195.6	.280	3.01	A7.2	25.1	1.89	23.7	.03	.05	.14	10A
1	12A		9.59	9.57	33.937	26.193	18A.0	.320	2.63	A1.0	28.9	2.06	25.9	.03	.02	.11	125
	125	ISL	9.58	9.56	33.937	26.195	183.8	.321	2.63	A1.0							126
1	150		9.01	8.99	33.921	26.275	176.6	.367	2.83	A3.5	30.9	2.10	26.9	.02	.01	.07	151
1	180		8.35	8.33	33.959	26.A07	16A.A	.A17	3.17	48.0	33.3	2.04	27.1	.01	.00	.03	181
	200	ISL	8.11	8.09	33.992	26.469	158.8	.450	3.04	45.8							201
1	211		8.02	8.00	34.010	26.497	156.3	.467	2.90	43.6	37.8	2.16	28.7	.01	.00	.03	212
1	242		7.78	7.76	34.046	26.561	150.7	.514	2.50	37.4	42.6	2.34	30.8	.01			243
	250	ISL	7.78	7.75	34.081	26.589	148.2	.527	2.22	33.2							252
1	283		7.77	7.74	34.219	26.699	138.4	.574	1.12	16.8	52.7	2.81	34.8	.01			285
	300	ISL	7.66	7.63	34.240	26.731	135.6	.597	1.04	15.5							302
1	341		7.31	7.28	34.248	26.788	130.7	.652	.83	12.3	59.8	2.97	36.8	.01			343
	A00	ISL	6.79	6.75	3A.27A	26.881	122.4	.726	.58	8.A							A03
1	A01		6.78	6.7A	3A.275	26.88A	122.2	.728	.57	8.3	67.A	3.12	38.9	.01			A0A
1	469		6.41	6.37	34.303	26.954	116.2	.809	.40	5.8	74.3	3.22	40.3	.00			472
	500	ISL	6.29	6.2A	3A.313	26.979	11A.2	.8A5	.36	5.1							50A
1	5A0		6.16	6.12	3A.321	27.001	112.5	.890	.33	A.8	79.0	3.30	41.2	.00			544

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 25.2 N	119 57.5 W	23/09/86	1601 GMT	797 M	310	05 KT	330 02 05	1	1014.4 MB	17.0 C	14.2 C	5/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.73	17.73	33.263	24.010	389.2	.000	5.56	102.1	2.2	.39	.0	.00	.12	.03	0
1	10		17.75	17.74	33.261	24.004	390.0	.039	5.62	103.2	2.1	.39	.0	.00	.12	.02	10
1	20		17.71	17.71	33.261	24.013	389.5	.078	5.57	102.2	2.5	.39	.0	.00	.12	.02	20
1	30		16.31	16.30	33.239	24.325	360.0	.115	5.93	105.8	2.1	.39	.0	.00	.20	.06	30
1	41		15.10	15.10	33.278	24.624	331.8	.153	6.12	106.7	2.A	.39	.0	.00	.59	.27	Al
	50	ISL	1A.29	1A.28	33.321	2A.832	312.3	.182	5.79	99.A							50
1	51		1A.21	1A.21	33.322	2A.8A8	310.7	.185	5.76	98.6	2.7	.57	1.6	.28	.56	.3A	51
1	62		12.92	12.92	33.223	25.033	293.3	.218	5.65	94.1	4.3	.70	4.0	.36	.33	.34	62
1	72		11.86	11.85	33.214	25.230	274.7	.246	5.42	88.3	6.2	.82	6.6	.04	.26	.25	72
	75	ISL	11.77	11.76	33.235	25.265	271.4	.255	5.38	87.4							76
1	88		11.57	11.56	33.354	25.394	259.5	.289	5.16	83.6	7.4	.92	8.6	.02	.16	.20	88
	100	ISL	10.74	10.73	33.474	25.635	236.6	.319	4.68	74.6							101
1	103		10.55	10.54	33.500	25.689	231.6	.325	4.57	72.5	13.8	1.26	14.4	.01	.05	.07	103
1	123		9.57	9.56	33.705	26.015	200.9	.371	3.68	57.2	22.5	1.66	21.2	.00	.01	.03	124
	125	ISL	9.53	9.52	33.714	26.029	199.6	.374	3.65	56.6							126
1	149		9.13	9.11	33.812	26.171	186.5	.421	3.38	52.1	26.5	1.81	23.8	.00	.00	.03	150
	150	ISL	9.12	9.10	33.814	26.174	186.2	.422	3.38	52.0							151
1	181		8.68	8.67				.478	3.29	50.2	30.4	1.90	25.2	.01	.00	.02	182
	200	ISL	8.30	8.28	33.962	26.418	163.8	.510	3.22	48.8							201
1	212		8.05	8.03	33.994	26.480	158.0	.529	3.13	47.1	36.6	2.00	27.1	.01	.00	.02	213
1	242		7.60	7.57	34.035	26.578	149.0	.575	2.54	37.8	44.2	2.25	30.3	.00			243
	250	ISL	7.51	7.49	34.042	26.596	147.4	.587	2.42	36.0							252
1	283		7.24	7.21	34.064	26.653	142.4	.635	2.02	29.8	50.9	2.46	32.8	.00			285
	300	ISL	7.07	7.05	34.073	26.683	139.8	.659	1.84	27.1							302
1	340		6.69	6.66	34.096	26.753	133.4	.713	1.44	21.0	60.0	2.71	36.2	.00			342
	400	ISL	6.25	6.22	34.154	26.857	124.1	.791	.89	12.9							403
1	401		6.24	6.21	34.156	26.860	123.9	.792	.88	12.7	69.6	2.94	38.8	.00			404
1	469		6.08	6.03	34.240	26.948	116.4	.874	.49	7.1	76.1	3.11	39.9	.00			472
	500	ISL	5.97	5.93	34.272	26.986	113.1	.909	.39	5.6							504
1	542		5.81	5.77	34.308	27.035	108.9	.956	.34	4.9	82.6	3.20	41.0	.00			546

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 05.8 N	120 38.4 W	23/09/86	1016 GMT	3794 M	300	06 KT		1	1014.9 MB	17.9 C	13.7 C	1/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.08	17.08	33.528	24.368	355.0	.000	5.76	104.6	2.7	.38	.0	.00	.29	.09	0
1	10		17.07	17.07	33.529	24.369	355.2	.035	5.77	104.7	2.7	.38	.0	.00	.29	.08	10
	20	ISL	16.95	16.95	33.528	24.399	352.6	.071	5.80	104.9							20
1	21		16.93	16.93	33.528	24.403	352.4	.07 4	5.80	105.0	2.7	.38	.0	.00	.34	.12	21
	30	ISL	16.70	16.69	33.574	24.493	344.1	.106	5.89	106.2							30
1	33		16.53	16.53	33.583	24.538	339.8	.116	5.92	106.4	3.0	.38	.0	.01	.65	.24	33
1	43		15.21	15.20	33.532	24.797	315.5	.148	5.58	97.6	4.3	.57	2.5	.18	.84	.41	43
	50	ISL	13.34	13.33	33.505	25.168	280.2	.170	4.96	83.5							50
1	53		12.64	12.63	33.504	25.307	267.0	.177	4.73	78.5	9.9	1.10	10.9	.18	.24	.21	53
1	64		11.67	11.66	33.490	25.480	250.7	.206	4.53	73.6	11.8	1.20	13.1	.06	.14	.19	64
1	74		11.26	11.25	33.607	25.646	235.1	.230	3.97	64.0	15.4	1.41	16.0	.03	.12	.15	74
	75	ISL	11.23	11.22	33.616	25.660	233.8	.233	3.92	63.1							76
1	91		10.77	10.76	33.689	25.798	221.0	.268	3.53	56.3	18.6	1.60	19.0	.03	.05	.15	91
	100	ISL	10.25	10.24	33.712	25.907	210.8	.289	3.46	54.7							101
1	106		9.93	9.92	33.729	25.973	204.5	.300	3.43	53.8	22.5	1.75	21.8	.02	.02	.09	106
1	125		9.22	9.20	33.863	26.196	183.6	.339	2.95	45.5	28.8	1.98	25.5	.01	.01	.05	126
	150	ISL	8.86	8.84	33.918	26.296	174.5	.383	2.86	43.9							151
1	151		8.85	8.83	33.919	26.298	174.3	.385	2.86	43.8	31.8	2.07	26.7	.00	.00	.06	152
1	183		8.40	8.38	33.983	26.418	163.5	.438	2.85	43.2	35.1	2.11	27.6	.00	.00	.08	184
	200	ISL	8.22	8.20	34.001	26.459	159.8	.466	2.82	42.6							201
1	212		8.10	8.08	34.010	26.485	157.5	.485	2.78	41.9	37.9	2.16	28.5	.01	.00	.05	213
1	243		7.69	7.66	34.033	26.564	150.4	.532	2.52	37.6	43.3	2.30	30.5	.01			244
	250	ISL	7.60	7.58	34.040	26.581	148.8	.543	2.43	36.2							252
1	282		7.24	7.22	34.066	26.654	142.3	.590	2.01	29.7	50.7	2.53	33.1	.00			284
	300	ISL	7.03	7.00	34.075	26.691	139.0	.615	1.79	26.4							302
1	338		6.58	6.55	34.093	26.765	132.2	.666	1.37	19.9	61.4	2.80	36.8	.00			340
1	400		5.98	5.94	34.138	26.879	121.8	.746	.85	12.2	73.1	3.04	40.0	.00			403
1	466		5.62	5.58	34.192	26.966	114.1	.823	.54	7.7	81.5	3.17	41.5	.00			469
	500	ISL	5.46	5.42	34.221	27.009	110.4	.862	.43	6.1							504
1	540		5.30	5.25	34.256	27.056	106.2	.905	.35	4.9	89.9	3.30	42.6	.00			544

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 44.7 N	121 18.9 W	23/09/86	0341 GMT	3703 M	310	08 KT		1	1015.1 MB	18.2 C	14.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.81	18.80	33.125	23.639	424.5	.000	5.47	102.4							0
1	1		18.81	18.80	33.125	23.639	424.6	.004	5.47	102.4	2.6	.38	.0	.00	.07	.02	1
	10	ISL	18.80	18.79	33.122	23.640	424.8	.042	5.49	102.7							10
1	11		18.79	18.79	33.122	23.640	424.8	.047	5.49	102.8	2.6	.39	.0	.00	.07	.02	11
	20	ISL	18.69	18.68	33.107	23.655	423.7	.085	5.51	102.8							20
1	22		18.66	18.65	33.103	23.660	423.3	.093	5.51	102.8	2.5	.39	.0	.00	.07	.02	22
	30	ISL	18.54	18.53	33.093	23.682	421.5	.127	5.53	102.9							30
1	32		18.51	18.50	33.091	23.689	420.9	.135	5.53	102.9	2.5	.39	.0	.00	.07	.02	32
1	42		18.27	18.26	33.100	23.754	415.0	.177	5.57	103.2	2.3	.38	.0	.00	.08	.02	42
	50	ISL	16.84	16.83	33.155	24.140	378.4	.209	5.95	107.3							50
1	52		16.49	16.48	33.175	24.236	369.3	.216	6.04	108.1	2.4	.34	.0	.00	.09	.03	52
1	63		15.72	15.71	33.304	24.509	343.5	.255	6.04	106.6	2.3	.34	.0	.00	.11	.03	63
1	73		15.45	15.44	33.272	24.544	340.4	.289	5.93	104.1	2.1	.31	.0	.00	.12	.05	73
	75	ISL	15.36	15.35	33.308	24.593	335.9	.297	5.91	103.6							76
1	88		14.61	14.59	33.531	24.928	304.3	.337	5.80	100.2	2.4	.33	.0	.00	.18	.17	88
	100	ISL	13.51	13.50	33.527	25.152	283.1	.373	5.60	94.5							101
1	104		13.19	13.18	33.512	25.206	278.1	.384	5.53	92.8	3.7	.51	2.1	.11	.30	.30	104
1	124		12.13	12.12	33.545	25.438	256.3	.437	5.25	86.2	5.9	.72	5.9	.02	.18	.23	124
	125	ISL	12.02	12.00	33.543	25.457	254.5	.441	5.21	85.3							126
1	149		10.27	10.26	33.536	25.766	225.3	.499	4.41	69.5	15.6	1.38	16.3	.01	.04	.07	150
	150	ISL	10.25	10.23	33.539	25.773	224.6	.500	4.39	69.2							151
1	180		9.31	9.29	33.721	26.070	196.7	.564	3.59	55.5	24.8	1.78	22.8	.01	.00	.05	181
	200	ISL	8.88	8.85	33.825	26.222	182.6	.602	3.45	52.8							201
1	211		8.68	8.66	33.875	26.291	176.2	.621	3.42	52.2	29.2	1.87	24.6	.01	.00	.03	212
1	242		8.30	8.27	33.966	26.422	164.2	.674	3.18	48.1	34.0	1.99	26.4	.01			243
	250	ISL	8.17	8.14	33.980	26.452	161.4	.687	3.10	46.8							252
1	284		7.66	7.64	34.020	26.558	151.7	.740	2.72	40.6	42.2	2.21	29.3	.01			285
	300	ISL	7.49	7.46	34.040	26.598	148.0	.764	2.44	36.2							302
1	340		7.14	7.11	34.083	26.682	140.6	.822	1.75	25.8	53.5	2.58	33.8	.00			342
	400	ISL	6.55	6.52	34.127	26.796	130.2	.903	1.17	17.0							403
1	402		6.54	6.50	34.127	26.798	130.0	.905	1.16	16.9	64.1	2.85	37.3	.00			404
1	469		6.16	6.12	34.189	26.896	121.4	.990	.69	9.9	73.1	3.06	39.3	.00			472
	500	ISL	6.00	5.96	34.216	26.938	117.7	1.027	.51	7.3							504

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 26.3 N	122 01.9 W	22/09/86	1812 GMT	3918 M	340	10 KT	340 05 05	1	1017.9 MB	19.4 C	15.3 C	3/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.46	18.46	33.193	23.777	411.3	.000	5.50	102.3	2.2	.33	.1	.00	.07	.01	0
1	9		18.41	18.41	33.193	23.789	410.6	.037	5.49	102.1	2.2	.33	.1	.00	.07	.01	9
	10	ISL	18.41	18.41	33.193	23.789	410.6	.041	5.49	102.1							10
1	20		18.41	18.40	33.191	23.789	410.9	.082	5.51	102.4	2.1	.33	.1	.00	.07	.01	20
1	30		18.34	18.33	33.175	23.795	410.7	.123	5.52	102.4	2.1	.34	.1	.00	.08	.02	30
1	41		17.51	17.50	33.118	23.953	395.9	.167	5.70	104.1	1.8	.36	.1	.00	.13	.02	41
	50	ISL	17.04	17.03	33.135	24.076	3 84.4	.203	5.79	104.8							50
1	51		16.99	16.99	33.137	24.089	383.2	.206	5.80	104.9	1.6	.36	.1	.00	.15	.04	51
1	62		15.90	15.89	33.125	24.332	360.3	.247	6.02	106.5	1.7	.36	.1	.00	.17	.06	62
1	72		15.00	14.99	33.115	24.522	342.4	.282	6.08	105.6	1.8	.36	.1	.00	.18	.07	72
	75	ISL	14.82	14.81	33.126	24.570	338.0	.293	6.07	105.1							76
1	88		14.27	14.26	33.197	24.741	322.0	.335	5.96	102.1	1.7	.36	.1	.01	.27	.22	88
	100	ISL	13.65	13.64	33.289	24.940	303.3	.373	5.77	97.6							101
1	104		13.44	13.43	33.316	25.003	297.3	.384	5.70	96.0	2.6	.49	1.3	.11	.31	.29	104
1	124		11.89	11.87	33.433	25.396	260.1	.439	5.21	85.0	5.8	.78	6.8	.02	.13	.15	124
	125	ISL	11.80	11.78	33.441	25.420	257.9	.443	5.18	84.3							126
1	149		10.57	10.55	33.555	25.729	228.8	.503	4.61	73.2	12.2	1.17	13.9	.01	.04	.06	150
	150	ISL	10.54	10.53	33.557	25.736	228.2	.504	4.59	72.9							151
1	180		9.47	9.45	33.679	26.012	202.3	.569	3.85	59.7	20.8	1.61	20.8	.00	.01	.02	181
	200	ISL	8.90	8.88	33.839	26.229	182.0	.607	3.42	52.5							201
1	211		8.66	8.64	33.927	26.335	171.9	.626	3.18	48.5	30.5	1.92	25.6	.00	.00	.02	212
1	242		8.40	8.37	34.050	26.472	159.5	.677	2.36	35.8	37.9	2.20	28.9	.00			243
	250	ISL	8.29	8.27	34.068	26.502	156.8	.690	2.23	33.7							252
1	281		7.88	7.85	34.106	26.594	148.3	.737	1.88	28.2	45.4	2.43	31.7	.00			282
	300	ISL	7.66	7.64	34.120	26.637	144.5	.766	1.70	25.3							302
1	336		7.31	7.28	34.139	26.702	138.7	.817	1.41	20.9	54.0	2.65	34.4	.00			338
1	397		6.71	6.68	34.170	26.809	129.1	.898	.96	14.0	64.2	2.86	37.2	.00			399
	400	ISL	6.69	6.65	34.172	26.815	128.6	.902	.94	13.7							403
1	463		6.26	6.21	34.217	26.907	120.4	.981	.62	9.0	73.1	3.04	39.3	.00			466
	500	ISL	6.08	6.04	34.242	26.949	116.7	1.024	.50	7.2							504
1	535		5.97	5.92	34.264	26.981	114.1	1.064	.43	6.2	79.8	3.13	40.3	.00			538

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 05.4 N	122 39.2 W	22/09/86	1130 GMT '	4011 M	350	16 KT		1	1017.3 MB	17.9 C	14.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	19.43	19.43	33.348	23.651	423.3	.000	5.38	102.0							0
1	1		19.43	19.43	33.348	23.651	423.4	.004	5.38	102.0	2.3	.33	.0	.00	.06	.01	1
	10	ISL	19.43	19.43	33.349	23.652	423.6	.042	5.40	102.4							10
1	11		19.43	19.43	33.349	23.652	423.6	.046	5.40	102.4	2.3	.33	.0	.00	.06	.01	11
	20	ISL	19.45	19.44	33.349	23.649	424.3	.085	5.40	102.5							20
1	22		19.45	19.45	33.349	23.647	424.5	.093	5.40	102.5	2.3	.33	.1	.00	.05	.01	22
	30	ISL	19.46	19.46	33.356	23.650	424.6	.127	5.41	102.6							30
1	32		19.47	19.46	33.358	23.651	424.6	.135	5.41	102.7	2.3	.34	.1	.00	.06	.01	32
1	42		19.63	19.62	33.446	23.677	422.4	.177	5.41	103.0	2.1	.32	.1	.00	.06	.01	42
	50	ISL	18.73	18.72	33.378	23.852	406.0	.211	5.64	105.6							50
1	53		18.26	18.25	33.331	23.934	398.2	.223	5.74	106.5	2.1	.32	.1	.00	.08	.02	53
1	63		16.24	16.23	33.119	24.250	368.2	.261	6.03	107.4	2.3	.35	.1	.00	.09	.03	63
1	73		15.43	15.42	33.106	24.421	352.2	.297	6.03	105.7	2.3	.35	.1	.00	.11	.05	73
	75	ISL	15.31	15.30	33.109	24.450	349.5	.304	6.02	105.3							76
1	89		14.72	14.70	33.156	24.615	334.1	.351	5.94	102.6	2.2	.37	.1	.00	.16	.13	89
	100	ISL	14.13	14.12	33.208	24.778	318.8	.388	5.86	100.1							101
1	104		13.92	13.90	33.226	24.837	313.2	.400	5.82	99.0	2.6	.44	.3	.04	.32	.27	104
1	125		12.18	12.16	33.344	25.273	271.9	.461	5.39	88.5	5.0	.70	5.1	.03	.15	.24	125
1	150		11.36	11.34	33.598	25.624	239.1	.527	4.73	76.4	9.8	1.00	11.0	.01	.06	.10	151
1	181		9.85	9.83	33.691	25.959	207.5	.596	4.11	64.3	18.3	1.43	18.3	.01	.01	.03	182
	200	ISL	9.31	9.28	33.806	26.138	190.7	.633	3.57	55.2							201
1	212		9.04	9.02	33.878	26.237	181.5	.655	3.28	50.4	27.4	1.81	24.2	.01	.00	.02	213
1	243		8.40	8.38	33.973	26.411	165.2	.709	3.17	48.1	33.2	1.93	26.1	.00			244
	250	ISL	8.29	8.27	33.987	26.439	162.7	.721	3.10	46.9							252
1	285		7.86	7.83	34.031	26.538	153.7	.775	2.65	39.7	40.9	2.16	29.3	.00			286
	300	ISL	7.70	7.67	34.049	26.575	150.4	.799	2.43	36.3							302
1	341		7.26	7.23	34.082	26.664	142.3	.859	1.86	27.5	51.3	2.48	33.3	.00			343
	400	ISL	6.31	6.27	34.098	26.805	129.1	.939	1.24	17.9							403
1	402		6.28	6.24	34.098	26.809	128.7	.941	1.22	17.6	65.4	2.79	37.8	.00			404
1	469		5.81	5.77	34.163	26.920	118.7	1.025	.69	9.9	76.7	3.02	40.4	.00			472
	500	ISL	5.63	5.58	34.190	26.964	114.7	1.061	.54	7.7							504
1	542		5.40	5.36	34.223	27.018	110.0	1.107	.44	6.2	86.2	3.14	42.0	.00			545

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 46.1 N	123 20.0 W	22/09/86	0506 GMT	4004 M	350	15 KT			1012.2 MB	18.9 C	14.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	20.66	20.66	33.752	23.637	424.7	.000	5.24	101.9							0
1	1		20.66	20.66	33.752	23.637	424.7	.004	5.24	101.9	2.3	.29	.0	.00	.05	.01	1
	10	ISL	20.66	20.65	33.751	23.637	425.0	.042	5.27	102.5							10
1	11		20.66	20.65	33.750	23.637	425.1	.047	5.27	102.5	2.2	.29	.0	.00	.05	.01	11
	20	ISL	20.66	20.66	33.747	23.634	425.8	.085	5.27	102.5							20
1	21		20.66	20.66	33.747	23.633	425.8	.089	5.27	102.5	2.2	.30	.0	.00	.05	.01	21
	30	ISL	20.63	20.63	33.741	23.637	425.8	.128	5.28	102.6							30
1	31		20.63	20.62	33.741	23.638	425.8	.131	5.28	102.6	2.2	.28	.0	.00	.05	.01	31
1	41		19.29	19.28	33.652	23.920	399.2	.173	5.58	105.7	2.1	.28	.0	.00	.08	.02	41
	50	ISL	18.28	18.28	33.591	24.127	379.7	.208	5.77	107.2							50
1	51		18.19	18.18	33.584	24.145	378.0	.211	5.78	107.2	2.1	.29	.0	.00	.07	.02	51
1	61		16.74	16.73	33.429	24.373	356.5	.248	5.90	106.3	2.1	.29	.0	.00	.08	.02	61
1	72		16.26	16.25	33.388	24.453	349.2	.287	5.89	105.1	2.1	.32	.0	.00	.09	.04	72
	75	ISL	16.21	16.20	33.388	24.464	348.8	.298	5.88	104.9							76
1	87		15.86	15.84	33.388	24.544	341.0	.338	5.84	103.4	2.0	.29	.0	.00	.14	.07	87
	100	ISL	14.47	14.46	33.518	24.947	302.8	.381	5.80	99.9							101
1	102		14.28	14.27	33.534	24.999	297.8	.386	5.79	99.4	2.8	.37	.0	.00	.20	.19	102
1	122		12.94	12.92	33.450	25.208	278.2	.443	5.50	91.8	3.9	.58	2.7	.05	.27	.28	122
	125	ISL	12.79	12.77	33.444	25.233	275.9	.453	5.44	90.4							126
1	146		11.92	11.90	33.443	25.399	260.5	.510	4.98	81.3	7.7	.84	8.2	.01	.12	.16	147
	150	ISL	11.72	11.70	33.456	25.447	256.0	.520	4.88	79.4							151
1	176		10.28	10.26	33.594	25.810	221.6	.582	4.21	66.4	16.5	1.33	16.6	.00	.02	.04	177
	200	ISL	9.37	9.35	33.705	26.049	199.2	.632	3.88	60.0							201
1	207		9.16	9.14	33.736	26.107	193.7	.646	3.80	58.5	24.3	1.62	21.6	.00	.00	.02	208
1	237		8.46	8.43	33.874	26.325	173.3	.701	3.36	51.0	31.6	1.87	25.3	.00			238
	250	ISL	8.23	8.20	33.928	26.402	166.1	.723	3.25	49.1							252
1	278		7.83	7.80	34.018	26.532	154.1	.767	3.00	44.9	39.5	2.07	27.9	.00			279
	300	ISL	7.55	7.52	34.058	26.604	147.5	.801	2.51	37.4							302
1	333		7.19	7.16	34.089	26.680	140.6	.849	1.77	26.1	52.4	2.52	33.8	.00			335
1	394		6.62	6.58	34.126	26.787	131.0	.931	1.25	18.2	62.1	2.76	36.5	.00			3° 6
	400	ISL	6.58	6.54	34.131	26.797	130.1	.939	1.20	17.5							403
1	460		6.19	6.15	34.178	26.884	122.4	1.015	.78	11.2	71.2	2.97	38.9	.00			463
	500	ISL	5.85	5.81	34.208	26.951	116.4	1.063	.57	8.2							5C*
1	532		5.54	5.49	34.229	27.006	111.1	1.099	.45	6.4	84.4	3.16	41.5	.00			535

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.4 N	123 59.8 W	21/09/86	2301 GMT	4203 M	010	08 KT	360 03 05	1	1017.2 MB	21.2 C	14.6 C	3/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		20.27	20.27	33.466	23.522	435.6	.000	5.32	102.6	2.3	.31	.1	.00	.05	.01	0
1	10		20.17	20.17	33.467	23.550	433.4	.043	5.34	102.8	2.2	.31	.1	.00	.05	.01	10
	20	ISL	20.14	20.13	33.469	23.561	432.7	.087	5.35	102.9							20
1	21		20.13	20.13	33.469	23.562	432.6	.091	5.35	102.9	2.2	.30	.1	.00	.06	.01	21
	30	ISL	20.08	20.08	33.463	23.571	432.1	.130	5.37	103.1							30
1	31		20.08	20.07	33.462	23.572	432.1	.134	5.37	103.2	2.2	.30	.1	.00	.05	.01	31
1	41		19.56	19.55	33.466	23.709	419.3	.176	5.47	104.1	2.2	.30	.1	.00	.06	.01	41
	50	ISL	18.17	18.16	33.437	24.037	388.3	.213	5.77	106.9							50
1	51		18.02	18.02	33.433	24.070	385.2	.216	5.80	107.2	2.2	.30	.1	.00	.07	.02	51
1	62		16.61	16.60	33.312	24.313	362.3	.257	5.97	107.2	2.2	.31	.1	.00	.07	.02	62
1	72		16.11	16.10	33.295	24.415	352.8	.293	5.95	105.8	2.2	.33	.1	.00	.09	.03	72
	75	ISL	16.00	15.99	33.302	24.445	350.0	.304	5.93	105.3							76
1	87		15.60	15.59	33.357	24.577	337.8	.345	5.86	103.2	2.0	.33	.1	.00	.12	.08	87
	100	ISL	14.89	14.87	33.464	24.816	315.3	.388	5.81	100.9							101
1	102		14.77	14.76	33.475	24.849	312.1	.393	5.80	100.5	2.1	.34	.1	.00	.17	.22	102
1	123		12.55	12.53	33.449	25.284	271.0	.454	5.37	88.9	4.8	.63	4.1	.03	.20	.26	123
	125	ISL	12.42	12.40	33.452	25.312	268.4	.461	5.32	87.9							126
1	147		11.60	11.58	33.513	25.513	249.6	.519	4.91	79.7	8.6	.90	9.4	.02	.10	.15	148
	150	ISL	11.48	11.46	33.526	25.546	246.5	.525	4.85	78.6							151
1	178		10.14	10.12	33.701	25.918	211.4	.590	4.24	66.7	16.5	1.32	16.7	.01	.02	.03	179
	200	ISL	9.33	9.31	33.843	26.164	188.3	.633	3.83	59.2							201
1	208		9.08	9.05	33.889	26.240	181.1	.648	3.69	56.8	25.8	1.65	22.4	.00	.00	.02	209
1	239		8.39	8.36	33.970	26.411	165.2	.702	3.31	50.2	32.5	1.87	25.9	.00			240
	250	ISL	8.19	8.17	33.985	26.452	161.4	.720	3.25	49.0							252
1	278		7.77	7.74	34.005	26.530	154.2	.763	3.09	46.2	38.8	2.01	27.9	.00			279
	300	ISL	7.44	7.41	34.018	26.588	149.0	.797	2.78	41.3							302
1	334		6.97	6.94	34.036	26.668	141.6	.847	2.21	32.4	51.4	2.37	32.9	.00			336
1	394		6.19	6.16	34.086	26.811	128.4	.927	1.29	18.6	65.7	2.74	37.6	.00			396
	400	ISL	6.14	6.11	34.090	26.820	127.6	.935	1.24	17.8							403
1	461		5.80	5.76	34.127	26.893	121.1	1.012	.90	12.9	74.5	2.91	40.0	.00			464
	500	ISL	5.56	5.52	34.161	26.949	116.1	1.058	.70	9.9							504
1	534		5.36	5.32	34.197	27.002	111.3	1.096	.54	7.6	85.3	3.08	41.9	.00			537

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 57.1 N	117 18.2 W	18/09/86	2043 GMT	66 M	240	08 KT	230 02 05	1	1013.1 MB	21.8 C	18.9 C	4/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.15	19.15	33.506	23.844	405.0	.000	5.86	110.7	2.9	.27	.1	.00	.61	.07	0
1	10		16.55	16.55	33.420	24.408	351.5	.03 8	5.96	107.0	4.7	.49	.1	.03	2.17	.71	10
	20	ISL	13.91	13.91	33.323	24.910	303.9	.071	6.16	104.9							20
1	21		13.72	13.71	33.319	24.948	300.3	.073	6.18	104.7	4.6	.49	.4	.04	1.41	.50	21
	30	ISL	12.91	12.90	33.403	25.176	278.8	.100	4.89	81.6							30
1	31		12.87	12.87	33.413	25.190	277.5	.102	4.76	79.3	9.4	1.05	7.0	.84	.62	.48	31
1	42		12.24	12.23	33.441	25.335	263.9	.131	4.47	73.5	11.2	1.21	9.8	.54	.27	.36	42
	50	ISL	11.67	11.66	33.533	25.514	247.1	.152	4.03	65.5							50
1	52		11.53	11.52	33.562	25.562	242.6	.157	3.91	63.4	15.3	1.39	14.3	.21	.12	.31	52

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 5A.1 N	117 2A.0 W	19/09/86	0012 GMT	632 M	280	16 KT	270 03 06	1	1011.8 MB	20.4 C	17.8 C	5/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.98	19.98	33.558	23.669	421.7	.000	5.55	106.5	2.5	.24	.4	.00	.21	.04	0
1	10		19.76	19.76	33.555	23.725	416.7	.042	5.62	107.4	2.4	.25	.2	.00	.22	.04	10
1	20		15.75	15.75	33.386	24.564	336.9	.079	6.26	110.6	2.8	.37	.1	.00	.22	.10	20
	30	ISL	13.42	13.41	33.303	24.997	295.9	.111	6.13	103.3							30
1	31		13.28	13.27	33.301	25.023	293.4	.114	6.12	102.8	4.1	.54	1.6	.05	.59	.22	31
1	41		12.20	12.19	33.432	25.336	263.9	.142	5.21	85.6	7.3	.89	7.2	.31	.90	.84	41
	50	ISL	11.64	11.64	33.503	25.495	248.9	.165	4.48	72.8							50
1	51		11.61	11.60	33.507	25.504	248.0	.167	4.43	71.9	10.9	1.14	12.1	.04	.24	.36	51
1	61		11.31	11.30	33.571	25.609	238.3	.191	4.10	66.2	13.4	1.28	14.5	.03	.15	.34	61
1	71		10.88	10.87	33.640	25.740	226.1	.214	3.67	58.7	17.4	1.47	17.5	.02	.08	.20	71
	75	ISL	10.86	10.85	33.686	25.780	222.4	.224	3.41	54.6							76
1	86		10.81	10.80	33.767	25.852	215.7	.247	2.89	46.2	21.5	1.73	20.8	.00	.05	.19	86
	100	ISL	10.52	10.51	33.794	25.924	209.2	.278	2.87	45.6							101
1	101		10.51	10.50	33.794	25.926	209.0	.279	2.87	45.6	23.1	1.74	21.6	.00	.04	.15	101
1	120		10.26	10.25	33.858	26.018	200.7	.320	2.70	42.7	25.2	1.83	23.4	.00	.02	.11	121
	125	ISL	10.22	10.21	33.881	26.043	198.4	.329	2.62	41.3							126
1	146		10.09	10.08	33.986	26.148	189.0	.370	2.19	34.5	28.6	2.03	24.8	.00	.01	.09	147
	150	ISL	10.09	10.08	34.000	26.159	188.0	.377	2.12	33.4							151
1	177		10.09	10.07	34.088	26.228	182.0	.427	1.78	28.1	32.2	2.20	26.7	.01	.00	.08	178
	200	ISL	9.79	9.76	34.130	26.313	174.3	.468	1.86	29.1							201
1	207		9.66	9.64	34.135	26.338	172.1	.480	1.88	29.4	34.3	2.24	27.4	.01	.00	.10	208
1	237		9.02	9.00	34.094	26.409	165.6	.530	2.14	32.9	36.0	2.19	28.1	.00			238
	250	ISL	9.01	8.98	34.148	26.455	161.7	.552	1.93	29.7							252
1	277		8.97	8.94	34.254	26.543	153.8	.595	1.36	20.9	42.4	2.46	30.2	.01			279
	300	ISL	8.88	8.84	34.288	26.586	150.2	.630	1.17	17.9							302
1	333		8.65	8.61	34.301	26.633	146.3	.678	1.02	15.6	47.2	2.62	31.7	.01			335
1	394		7.94	7.90	34.306	26.744	136.2	.764	.75	11.3	54.2	2.79	34.0	.00			396
	400	ISL	7.86	7.81	34.308	26.758	135.0	.773	.71	10.7							403
1	461		7.10	7.05	34.322	26.877	124.1	.852	.41	6.0	65.9	2.96	36.7	.01			464
	500	ISL	6.65	6.60	34.332	26.947	117.7	.899	.35	5.0							504
1	533		6.28	6.23	34.340	27.001	112.6	.937	.29	4.2	77.1	3.10	39.2	.00			537

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 49.9 N	117 32.4 W	19/09/86	0259 GMT	864 M	290	16 KT	280 04 06	1	1012.2 MB	18.8 C	17.2 C	5/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.67	19.67	33.561	23.750	413.9	.000	5.59	106.7	2.7	.25	.2	.00	.25	.05	0
1	10		19.68	19.68	33.561	23.748	414.4	.041	5.62	107.2	2.5	.24	.4	.00	.25	.05	10
	20	ISL	18.60	18.60	33.500	23.978	392.9	.082	5.87	109.8							20
1	21		18.39	18.39	33.490	24.021	388.8	.085	5.90	109.8	3.0	.28	.2	.00	.26	.05	21
	30	ISL	14.42	14.42	33.373	24.843	310.6	.117	6.08	104.6							30
1	31		14.03	14.03	33.371	24.924	302.9	.120	6.10	104.1	4.4	.52	1.5	.11	.63	.16	31
1	41		12.61	12.61	33.362	25.202	276.6	.149	5.50	91.1	6.5	.78	5.9	.23	.64	.31	41
	50	ISL	11.84	11.84	33.429	25.400	258.0	.173	5.01	81.7							50
1	52		11.74	11.73	33.448	25.434	254.7	.178	4.90	79.7	9.8	1.04	10.7	.10	.50	.31	52
1	62		11.31	11.30	33.589	25.623	237.0	.202	3.93	63.4	15.3	1.36	15.5	.04	.25	.29	62
1	72		10.95	10.95	33.729	25.796	220.8	.225	3.09	49.5	20.8	1.71	19.9	.02	.13	.23	72
	75	ISL	10.87	10.87	33.761	25.835	217.1	.232	2.91	46.6							76
1	88		10.67	10.66	33.844	25.937	207.7	.259	2.47	39.4	25.6	1.88	23.3	.00	.04	.14	88
	100	ISL	10.54	10.53	33.891	25.996	202.4	.284	2.25	35.8							101
1	103		10.52	10.51	33.899	26.006	201.5	.290	2.22	35.3	27.9	1.97	24.3	.01	.02	.10	103
1	122		10.42	10.40	33.996	26.100	193.1	.329	1.72	27.3	31.5	2.18	26.3	.01	.01	.08	123
	125	ISL	10.41	10.39	34.004	26.108	192.3	.334	1.69	26.8							126
1	148		10.34	10.32	34.066	26.168	187.1	.378	1.54	24.4	33.5	2.26	26.9	.02	.00	.08	149
	150	ISL	10.34	10.32	34.071	26.172	186.8	.381	1.53	24.3							151
1	178		10.30	10.28	34.137	26.230	181.9	.433	1.41	22.3	35.5	2.34	27.8	.01	.00	.06	179
	200	ISL	10.24	10.21	34.178	26.274	178.2	.472	1.34	21.2							201
1	209		10.19	10.17	34.194	26.294	176.5	.488	1.32	20.9	36.7	2.38	28.4	.01	.00	.06	210
1	239		9.91	9.89	34.247	26.384	168.6	.540	1.34	21.1	37.8	2.42	28.7	.01			240
	250	ISL	9.76	9.73	34.251	26.412	166.0	.558	1.36	21.4							252
1	278		9.40	9.36	34.255	26.477	160.4	.605	1.39	21.6	40.9	2.47	29.6	.01			280
	300	ISL	9.26	9.23	34.274	26.514	157.2	.639	1.30	20.2							302
J	334		9.05	9.02	34.303	26.570	152.4	.692	1.11	17.1	45.3	2.59	30.8	.01			336
1	395		8.17	8.13	34.304	26.708	139.9	.780	.83	12.5	54.1	2.76	33.4	.00			397
	400	ISL	8.09	8.05	34.304	26.720	138.9	.788	.80	12.1							403
1	463		7.22	7.18	34.303	26.846	127.2	.872	.51	7.5	65.2	2.93	36.7	.00			466
	500	ISL	6.82	6.77	34.317	26.913	121.1	.918	.39	5.7							504
1	539		6.48	6.43	34.340	26.976	115.3	.964	.30	4.4	76.7	3.13	39.3	.00			543

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 40.A N	117 52.7 W	19/09/86	0703 GMT	601 M	270	15 KT		1	1014.1 MB	17.8 C	15.0 C	4/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.37	19.37	33.540	23.813	407.9	.000	5.74	108.9	2.8	.18	.2	.00	1.01	.06	0
1	10		19.27	19.27	33.530	23.830	406.6	.041	5.74	108.7	2.9	.22	.2	.00	.89	.10	10
1	20		17.54	17.54	33.408	24.166	375.0	.080	5.94	108.7	2.8	.29	.2	.00	.55	.10	20
	30	ISL	14.66	14.66	33.351	24.776	317.4	.114	6.00	103.8							30
1	31		14.41	14.41	33.346	24.824	312.4	.117	6.01	103.3	4.0	.46	.6	.06	.93	.31	31
1	41		13.00	12.99	33.371	25.134	283.2	.147	5.54	92.5	6.0	.69	4.3	.24	.72	.44	41
	50	ISL	11.86	11.85	33.438	25.405	257.5	.172	5.07	82.7							50
1	51		11.78	11.78	33.445	25.424	255.7	.174	5.03	81.9	10.5	1.03	10.2	.11	.36	.36	51
1	61		11.48	11.47	33.487	25.513	247.4	.199	4.52	73.2	12.1	1.12	12.2	.06	.22	.37	61
1	71		11.24	11.23	33.516	25.579	241.4	.223	4.37	70.4	13.3	1.21	13.4	.03	.16	.26	71
	75	ISL	11.16	11.15	33.526	25.601	239.4	.233	4.33	69.6							76
1	87		10.97	10.96	33.563	25.664	233.7	.261	4.16	66.6	15.4	1.30	15.1	.02	.12	.18	87
	100	ISL	10.69	10.68	33.647	25.780	223.0	.291	3.72	59.3							101
1	102		10.66	10.64	33.658	25.794	221.6	.295	3.67	58.4	19.2	1.52	18.2	.01	.05	.16	102
1	122		10.23	10.21	33.797	25.977	204.7	.339	3.13	49.4	23.9	1.75	21.5	.01	.02	.07	123
	125	ISL	10.19	10.18	33.808	25.991	203.3	.345	3.10	48.9							126
1	147		9.95	9.93	33.889	26.097	193.7	.389	2.92	45.8	27.0	1.86	23.2	.01	.01	.05	148
	150	ISL	9.92	9.90	33.902	26.112	192.4	.394	2.87	45.1							151
1	178		9.72	9.70	34.042	26.255	179.4	.446	2.33	36.4	32.0	2.09	26.1	.01	.00	.05	179
	200	ISL	9.66	9.64	34.137	26.339	171.8	.485	1.92	30.0							201
1	208		9.64	9.61	34.166	26.366	169.4	.498	1.79	27.9	35.6	2.30	28.0	.01	.00	.05	209
1	239		9.41	9.38	34.243	26.465	160.7	.549	1.43	22.2	39.4	2.45	29.5	.01			240
	250	ISL	9.28	9.25	34.242	26.484	158.7	.567	1.43	22.1							252
1	279		8.96	8.93	34.238	26.534	154.7	.613	1.42	21.8	42.6	2.52	30.2	.01			281
	300	ISL	8.83	8.80	34.253	26.566	152.0	.645	1.31	20.1							302
1	335		8.61	8.58	34.285	26.625	146.9	.697	1.06	16.2	47.1	2.66	31.7	.01			337
1	396		7.89	7.85	34.319	26.761	134.6	.782	.65	9.8	56.4	2.87	34.2	.01			3 98
	400	ISL	7.84	7.80	34.319	26.769	134.0	.788	.63	9.5							403
1	462		7.23	7.18	34.317	26.856	126.2	.869	.47	7.0	64.1	3.00	36.5	.01			465
	500	ISL	6.95	6.90	34.322	26.899	122.5	.916	.40	5.8							504
1	531		6.77	6.72	34.328	26.928	120.0	.954	.35	5.1	70.9	3.09	38.1	.00			535

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 30.9 N	118 13.3 W	19/09/86	1100 GMT	1616 M	280	21 KT		1	1013.8 MB	17.2 C	14.5 C	5/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.88	18.87	33.533	23.933	396.4	.000	5.42	101.9							0
1	2		18.88	18.87	33.533	23.933	396.5	.008	5.42	101.9	2.4	.33	.2	.00	.09	.02	2
	10	ISL	18.88	18.87	33.532	23.933	396.8	.040	5.43	102.1							10
1	12		18.88	18.87	33.532	23.933	396.9	.047	5.44	102.2	2.4	.32	.2	.00	.09	.02	12
	20	ISL	18.72	18.72	33.514	23.958	394.8	.079	5.48	102.7							20
1	22		18.69	18.68	33.510	23.963	394.3	.087	5.49	102.8	2.4	.32	.2	.00	.10	.02	22
	30	ISL	15.86	15.85	33.246	24.432	349.8	.117	5.91	104.6							30
1	33		14.82	14.82	33.176	24.606	333.3	.127	6.06	105.0	2.9	.38	.2	.00	.14	.06	33
1	43		14.28	14.28	33.173	24.719	322.8	.159	6.04	103.5	3.2	.41	.2	.00	.22	.11	43
	50	ISL	13.75	13.74	33.244	24.884	307.3	.182	5.89	99.9							50
1	53		13.52	13.51	33.276	24.956	300.4	.190	5.81	98.0	3.9	.50	1.5	.12	.47	.27	53
1	64		12.54	12.53	33.344	25.203	277.2	.222	5.45	90.1	5.6	.69	4.9	.08	.47	.37	64
1	74		12.35	12.34	33.431	25.306	267.6	.249	5.12	84.4	7.5	.85	7.4	.06	.45	.33	74
	75	ISL	12.28	12.27	33.443	25.329	265.4	.253	5.04	83.0							76
1	89		11.34	11.33	33.547	25.585	241.3	.287	4.26	68.8	13.2	1.27	14.6	.02	.21	.21	89
	100	ISL	10.53	10.52	33.582	25.756	225.1	.314	4.12	65.4							101
1	105		10.24	10.23	33.597	25.818	219.2	.324	4.09	64.5	17.7	1.46	17.7	.01	.08	.12	105
1	124		9.49	9.48	33.777	26.085	194.3	.365	3.30	51.2	25.7	1.77	23.2	.00	.01	.05	125
	125	ISL	9.48	9.46	33.781	26.089	193.8	.366	3.29	51.0							126
1	150		9.18	9.16	33.897	26.229	181.0	.413	2.99	46.1	29.8	1.91	25.0	.00	.00	.04	151
1	181		8.83	8.81	34.017	26.379	167.3	.467	2.59	39.7	35.1	2.08	27.4	.00	.00	.04	182
	200	ISL	8.49	8.47	34.061	26.467	159.3	.498	2.40	36.5							201
1	212		8.34	8.32	34.095	26.516	154.8	.517	2.22	33.6	40.9	2.26	29.5	.00	.00	.03	213
1	243		8.68	8.66	34.278	26.607	146.9	.563	1.16	17.7	46.4	2.61	31.4	.00			244
	250	ISL	8.65	8.62	34.280	26.614	145.5	.574	1.12	17.1							252
1	283		8.28	8.25	34.289	26.678	140.7	.621	.94	14.2	51.1	2.73	32.9	.00			285
	300	ISL	8.09	8.06	34.275	26.696	139.3	.645	.94	14.2							302
1	340		7.66	7.63	34.242	26.733	136.1	.700	.95	14.2	56.0	2.79	34.5	.00			342
	400	ISL	7.18	7.14	34.280	26.833	127.4	.779	.61	9.0							403
1	401		7.17	7.13	34.281	26.835	127.2	.781	.60	8.9	63.8	2.94	36.5	.00			404
1	467		6.64	6.59	34.293	26.917	119.9	.862	.45	6.6	70.8	3.06	38.4	.00			470
	500	ISL	6.42	6.37	34.305	26.956	116.6	.901	.39	5.6							504
1	534		6.23	6.19	34.321	26.992	113.4	.940	.33	4.8	77.9	3.14	39.9	.00			538

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.8 N	118 34.0 W	19/09/86	1513 GMT	1414 M	300	20 KT	310 06 06	1	1015.2 MB	17.3 C	14.6 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	19.07	19.07	33.557	23.901	399.5	.000	5.44	102.6							0
1	1		19.07	19.07	33.557	23.901	399.5	.004	5.44	102.6	2.7	.32	.2	.00	.12	.02	1
	10	ISL	19.07	19.07	33.560	23.904	399.6	.040	5.42	102.3							10
1	11		19.07	19.07	33.560	23.904	399.6	.044	5.42	102.2	2.7	.32	.2	.00	.11	.03	11
	20	ISL	19.07	19.06	33.558	23.905	399.9	.080	5.44	102.6							20
1	21		19.06	19.06	33.558	23.905	399.9	.084	5.44	102.6	2.7	.32	.2	.00	.11	.03	21
	30	ISL	17.28	17.27	33.443	24.255	366.7	.118	5.92	107.9							30
1	32		16.76	16.75	33.416	24.358	357.0	.125	6.02	108.5	3.0	.38	.2	.00	.19	.06	32
1	42		13.68	13.68	33.318	24.955	300.2	.158	5.96	100.9	4.1	.51	1.5	.07	.55	.28	42
	50	ISL	12.67	12.67	33.394	25.215	275.6	.181	5.41	89.7							50
1	52		12.56	12.56	33.413	25.251	272.2	.186	5.28	87.4	7.2	.80	6.7	.16	.57	.29	52
1	62		11.97	11.96	33.419	25.370	261.2	.213	5.08	83.0	8.4	.92	8.4	.06	.47	.35	62
	75	ISL	10.92	10.91	33.531	25.648	234.9	.246	4.39	70.2							76
1	77		10.80	10.79	33.548	25.682	231.6	.250	4.30	68.6	14.0	1.31	15.2	.03	.21	.20	77
1	92		10.38	10.37	33.604	25.800	220.8	.283	4.03	63.7	16.7	1.45	18.0	.02	.13	.16	92
	100	ISL	10.07	10.06	33.663	25.897	211.6	.302	3.72	58.5							101
1	112		9.60	9.59	33.765	26.056	196.8	.327	3.25	50.6	24.0	1.78	23.0	.00	.02	.05	113
	125	ISL	9.16	9.15	33.867	26.207	182.6	.351	2.99	46.1							126
1	132		8.94	8.93	33.920	26.284	175.4	.364	2.88	44.2	30.4	1.97	26.0	.00	.01	.04	133
	150	ISL	8.67	8.65	33.992	26.384	166.2	.394	2.63	40.2							151
1	157		8.60	8.59	34.010	26.408	164.0	.406	2.55	38.9	35.1	2.12	27.8	.00	.02	.03	158
1	189		8.34	8.32	34.075	26.499	155.9	.457	2.24	33.9	39.6	2.26	29.4	.00	.00	.03	190
	200	ISL	8.20	8.18	34.086	26.530	153.1	.474	2.16	32.7							201
1	225		7.87	7.84	34.105	26.594	147.3	.511	1.98	29.7	45.3	2.42	31.4	.00	.00	.02	226
	250	ISL	7.63	7.61	34.136	26.653	142.2	.548	1.70	25.4							252
1	260		7.56	7.54	34.149	26.673	140.3	.562	1.57	23.4	51.1	2.59	33.3	.00			262
	300	ISL	7.39	7.36	34.210	26.746	134.0	.617	1.02	15.1							302
1	301		7.39	7.36	34.212	26.748	133.8	.618	1.00	14.8	56.4	2.79	34.9	.00			303
1	357		7.15	7.11	34.270	26.828	127.0	.691	.63	9.3	62.3	2.93	35.9	.00			359
	400	ISL	6.85	6.82	34.292	26.886	122.0	.744	.49	7.2							403
1	423		6.68	6.64	34.299	26.915	119.5	.773	.45	6.6	69.8	3.06	38.1	.00			426
1	496		6.25	6.21	34.315	26.985	113.5	.857	.32	4.6	76.4	3.14	39.4	.00			499
	500	ISL	6.23	6.19	34.317	26.990	113.2	.862	.31	4.5							504
1	578		5.92	5.87	34.364	27.067	106.6	.948	.23	3.3	82.7	3.25	40.8	.00			582

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 10.1 N	118 55.1 W	19/09/86	2037 GMT	1478 M	310	18 KT	300 05 07	1	1015.5 MB	19.0 C	16.3 C	3/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.20	19.20	33.662	23.949	394.9	.000	5.45	103.1	2.4	.33	.2	.00	.15	.04	0
1	10		19.19	19.19	33.661	23.951	395.1	.03 9	5.38	101.8	2.4	.33	.2	.00	.15	.04	10
	20	ISL	19.14	19.13	33.662	23.966	394.0	.07 9	5.43	102.5							20
1	21		19.13	19.13	33.662	23.968	393.9	.083	5.43	102.6	2.4	.32	.2	.00	.16	.04	21
	30	ISL	18.46	18.45	33.623	24.108	380.8	.118	5.68	105.9							30
1	31		18.39	18.38	33.620	24.122	379.5	.121	5.70	106.2	2.7	.37	.2	.00	.32	.15	31
1	41		13.84	13.84	33.527	25.083	288.0	.154	5.69	96.8	7.1	.68	4.7	.10	.85	.72	41
	50	ISL	12.00	12.00	33.558	25.470	251.4	.179	4.65	76.2							50
1	51		11.92	11.91	33.560	25.488	249.7	.181	4.55	74.4	12.3	1.14	12.3	.11	.58	.46	51
1	62		11.13	11.13	33.604	25.667	232.9	.207	4.04	65.0	15.3	1.38	16.1	.03	.31	.31	62
1	72		10.86	10.85	33.647	25.750	225.2	.230	3.80	60.7	17.6	1.47	17.7	.03	.20	.27	72
	75	ISL	10.70	10.69	33.672	25.797	220.7	.238	3.68	58.7							76
1	87		10.12	10.11	33.763	25.968	204.6	.262	3.29	51.8	23.3	1.71	21.6	.01	.10	.13	87
	100	ISL	9.73	9.72	33.823	26.080	194.3	.289	3.08	48.0							101
1	103		9.68	9.67	33.831	26.095	192.9	.294	3.05	47.6	26.9	1.86	23.8	.01	.03	.09	103
1	122		9.40	9.39	33.915	26.207	182.6	.331	2.85	44.2	29.7	1.95	25.1	.00	.01	.08	123
	125	ISL	9.36	9.34	33.928	26.224	181.0	.336	2.81	43.5							126
1	148		8.97	8.95	34.034	26.370	167.6	.376	2.41	37.0	35.0	2.16	27.6	.00	.01	.08	149
	150	ISL	8.94	8.93	34.038	26.377	166.9	.379	2.39	36.7							151
1	180		8.58	8.56	34.086	26.471	158.4	.428	2.09	31.8	40.1	2.30	29.6	.00	.00	.05	181
	200	ISL	8.48	8.46	34.131	26.522	154.0	.459	1.86	28.3							201
1	211		8.42	8.39	34.151	26.548	151.7	.476	1.75	26.6	43.7	2.47	30.9	.00	.00	.05	212
1	241		7.96	7.93	34.161	26.625	144.8	.520	1.59	23.9	48.4	2.55	32.3	.00			242
	250	ISL	7.90	7.88	34.178	26.647	142.9	.534	1.46	22.0							252
1	282		7.82	7.79	34.245	26.712	137.2	.579	1.00	15.0	54.0	2.76	34.0	.01			284
	300	ISL	7.72	7.69	34.264	26.742	134.7	.603	.86	12.9							302
1	339		7.45	7.42	34.286	26.798	129.8	.654	.68	10.1	60.1	2.91	35.6	.01			341
1	400		6.91	6.87	34.293	26.880	122.6	.732	.52	7.6	67.8	3.02	37.6	.00			403
]	466		6.52	6.47	34.309	26.946	117.1	.811	.42	6.1	73.8	3.11	38.7	.00			469
	500	ISL	6.33	6.29	34.316	26.976	114.6	.850	.37	5.4							504
1	538		6.14	6.09	34.322	27.006	112.1	.894	.33	4.8	80.0	3.17	40.1	.00			542

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 00.A N	119 1A.7 W	20/09/86	0025 GMT	1589 M	300	13 KT	300 03 06	1	1014.2 MB	17.8 C	15.7 C	A/8	CS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.18	17.18	33.482	2A.308	360.7	.000	5.75	10A.6	2.9	.36	.2	.00	.30	.06	0
1	10		17.17	17.16	33.A83	24.313	360.6	.036	5.78	105.1	2.8	.36	.2	.00	.29	.06	10
1	20		16.93	16.93	33.447	24.341	358.2	.072	5.80	104.9	2.7	.36	.2	.00	.31	.06	20
1	30		16.51	16.50	33.396	24.401	352.8	.107	5.88	105.5	2.6	.37	.2	.00	.35	.09	30
1	40		13.69	13.68	33.099	24.784	316.5	.140	6.17	104.4	3.2	.48	.6	.06	.75	.31	40
1	50		12.52	12.52	33.120	25.031	293.1	.171	5.80	95.8	4.8	.69	4.1	.29	.67	.40	50
1	59		11.53	11.52	33.2A6	25.317	266.0	.196	5.30	85.7	8.1	.96	9.3	.02	.32	.28	59
1	69		11.19	11.18	33.369	25.A7A	251.3	.222	A.97	79.9	10.3	1.10	11.8	.02	.15	.18	69
	75	ISL	11.03	11.02	33.422	25.544	2A4.8	.237	A.84	77.5							76
1	8A		10.80	10.79	33.A88	25.637	236.1	.258	A.63	73.8	12.9	1.22	1A.1	.02	.07	.11	8A
1	99		10.11	10.10	33.637	25.871	21A.2	.292	3.93	61.8	18.9	1.52	18.9	.01	.02	.05	99
	100	ISL	10.07	10.06	33.651	25.889	212.5	.295	3.86	60.7							101
1	117		9.66	9.6A	33.789	26.066	195.9	.330	3.22	50.2	25.3	1.79	23.2	.00	.01	.0A	118
	125	ISL	9.41	9.39	33.815	26.127	190.2	.345	3.25	50.4							126
1	142		8.91	8.89	33.856	26.240	179.8	.377	3.33	51.0	28.6	1.83	24.4	.00	.00	.04	143
	150	ISL	8.82	8.81	33.886	26.276	176.4	.391	3.18	48.7							151
1	172		8.71	8.69	33.986	26.373	167.6	.429	2.59	39.6	35.1	2.08	27.6	.00	.00	.06	173
	200	ISL	8.42	8.40	34.128	26.529	153.4	.473	1.99	30.2							201
1	201		8.42	8.40	34.132	26.533	153.0	.475	1.97	29.9	39.1	2.29	29.2	.00	.00	.06	202
1	231		8.A3	8.40	34.158	26.552	151.7	.520	1.75	26.6	43.3	2.39	30.6	.00			232
	250	ISL	8.21	8.18	34.185	26.607	146.8	.549	1.50	22.7							252
1	269		7.93	7.90	34.213	26.670	140.9	.577	1.24	18.6	50.7	2.61	33.0	.00			271
	300	ISL	7.65	7.62	34.246	26.737	135.1	.619	.96	14.4							302
1	325		7.46	7.43	34.263	26.778	131.4	.652	.80	11.9	58.6	2.81	35.1	.00			327
1	386		6.97	6.93	34.283	26.864	124.0	.730	.56	8.2	65.2	2.93	36.8	.00			388
	400	ISL	6.86	6.82	34.287	26.881	122.5	.748	.52	7.6							A03
1	A52		6.53	6.A8	34.305	26.941	117.3	.810	.39	5.7	72.3	3.04	38.6	.00			A55
	500	ISL	6.31	6.26	34.331	26.990	113.1	.865	.30	4.A							504
1	522		6.23	6.18	34.345	27.012	111.4	.890	.27	3.9	78.2	3.12	39.6	.00			526

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 50.3 N	119 34.7 W	20/09/86	0410 GMT	1841 M	310	16 KT		0	1016.2 MB	17.9 C	15.6 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.58	17.58	33.208	24.003	389.9	.000	5.63	103.0							0
1	1		17.58	17.58	33.208	24.003	389.9	.004	5.63	103.0	2.7	.38	.0	.00	.08	.02	1
	10	ISL	17.55	17.55	33.204	24.006	389.8	.039	5.65	103.3							10
1	11		17.55	17.55	33.203	24.006	389.8	.043	5.65	103.3	2.7	.38	.0	.00	.08	.02	11
1	20		17.40	17.40	33.192	24.034	387.5	.07 8	5.67	103.4	2.7	.38	.1	.00	.09	.02	20
1	30		17.02	17.01	33.210	24.139	377.8	.116	5.78	104.6	2.6	.38	.1	.00	.11	.03	30
1	41		15.92	15.91	33.140	24.337	359.2	.156	6.05	107.1	2.9	.36	.1	.00	.10	.04	41
	50	ISL	15.28	15.27	33.143	24.482	345.9	.188	6.03	105.4							50
1	51		15.25	15.24	33.143	2A.A89	345.0	.191	6.03	105.3	2.9	.36	.1	.00	.11	.05	51
1	60		15.32	15.31	33.140U			.222	5.91	103.4	2.8	.32	.1	.00	.20	.13	60
1	72		13.67	13.66	33.395	25.017	295.1	.260	5.82	98.6	3.7	.45	.5	.03	.38	.34	72
	75	ISL	13.39	13.38	33.3A8	25.039	293.2	.269	5.77	97.2							76
1	86		12.68	12.67	33.256	25.107	286.8	.300	5.58	92.5	A.6	.62	3.5	.01	.33	.28	86
	100	ISL	11.85	11.8A	33.255	25.26A	272.5	.3A0	5.28	86.0							101
3	102		11.77	11.76	33.255	25.280	270.6	.3A5	5.2A	85.2	7.0	.81	7.1	.01	.16	.19	102
1	121		10.82	10.81	33.3A3	25.520	2A8.1	.396	A.62	73.6	12.8	1.16	13.0	.00	.06	.09	122
	125	ISL	10.65	10.6A	33.358	25.561	2AA. 2	.A05	4.50	71.4							126
1	146		9.72	9.70	33.463	25.802	221.5	.455	3.84	59.8	21.2	1.56	20.2	.00	.02	.02	147
	150	ISL	9.57	9.55	33.488	25.846	217.4	.463	3.77	58.5							151
1	177		8.72	8.70	33.681	26.132	190.5	.518	3.46	52.8	27.3	1.77	23.5	.00	.00	.03	178
	200	ISL	8.46	8.44	33.803	26.269	178.0	.560	3.36	51.0							201
1	207		8.42	8.40	33.833	26.298	175.3	.572	3.34	50.6	31.A	1.86	25.2	.00	.00	.04	208
1	237		8.18	8.15	33.928	26.409	165.2	.623	3.05	46.0	36.9	1.99	27.3	.00			238
	250	ISL	7.93	7.91	33.954	26.466	159.9	.645	2.83	42.5							252
1	278		7.40	7.38	33.992	26.573	150.0	.687	2.33	34.5	47.5	2.32	31.5	.00			279
	300	ISL	7.14	7.11	34.016	26.629	144.9	.720	1.96	28.8							302
1	332		6.93	6.90	34.044	26.680	140.5	.766	1.47	21.6	58.6	2.66	35.3	.00			334
1	392		7.04	7.00	34.110	26.718	137.9	.849	.74	10.9	64.0	2.91	36.8	.00			394
	400	ISL	6.97	6.93	34.132	26.7AA	135.5	.861	.68	10.0							403
1	459		6.38	6.34	34.281	26.941	117.2	.935	.A5	6.5	74.8	3.06	39.1	.00			A62
	500	ISL	6.10	6.06	3A.290	26.98A	113.5	.982	.35	5.1							504
1	531		5.96	5.91	34.307	27.016	110.7	1.017	.32	4.6	82.2	3.17	40.6	.00			534

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 30.8 N	120 15.1 W	20/09/86	0942 GMT	3931 M	320	15 KT			1017.8 MB	17.2 C	14.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.76	18.76	33.281	23.770	412.1	.000	5.45	102.0							0
1	1		18.76	18.76	33.281	23.770	412.1	.004	5.45	102.0	3.0	.36	.2	.00	.06	.01	1
	10	ISL	18.75	18.75	33.281	23.773	412.1	.041	5.47	102.4							10
1	11		18.75	18.75	33.281	23.773	412.1	.045	5.47	102.4	2.8	.35	.2	.00	.06	.01	11
	20	ISL	18.08	18.08	33.219	23.891	401.2	.082	5.59	103.3							20
1	22		17.91	17.91	33.206	23.922	398.2	.090	5.62	103.5	2.4	.40	.2	.00	.08	.02	22
	30	ISL	17.50	17.49	33.212	24.027	388.5	.121	5.68	103.7							30
1	32		17.39	17.38	33.215	24.055	385.9	.129	5.70	103.9	2.3	.38	.2	.00	.09	.02	32
1	43		16.32	16.32	33.192	24.286	364.1	.170	6.00	107.1	3.0	.34	.2	.00	.08	.03	43
	50	ISL	15.44	15.43	33.131	24.438	349.9	.195	6.09	106.8							50
1	53		15.14	15.13	33.116	24.492	344.7	.205	6.10	106.3	2.7	.37	.2	.00	.15	.07	53
1	64		14.84	14.83	33.237	24.650	330.0	.242	5.96	103.3	2.8	.37	.2	.00	.17	.13	64
1	74		14.14	14.13	33.251	24.810	315.0	.274	5.89	100.6	3.1	.41	.1	.03	.41	.31	74
	75	ISL	14.05	14.04	33.251	24.827	313.4	.278	5.87	100.2							76
1	90		13.19	13.18	33.252	25.005	296.8	.323	5.68	95.2	4.2	.58	2.6	.03	.41	.30	90
	100	ISL	12.72	12.71	33.282	25.121	285.9	.353	5.58	92.6							101
1	106		12.46	12.44	33.306	25.190	279.4	.369	5.50	90.8	5.0	.66	4.0	.02	.23	.29	106
1	125		11.09	11.07	33.436	25.545	245.9	.421	4.83	77.5	10.5	1.04	11.1	.01	.09	.12	126
	150	ISL	9.98	9.96	33.627	25.887	213.7	.477	4.08	63.9							151
1	151		9.93	9.92	33.637	25.902	212.2	.480	4.04	63.3	19.1	1.47	18.5	.00	.02	.04	152
1	182		9.12	9.10	33.841	26.196	184.8	.541	3.40	52.4	27.5	1.77	23.8	.00	.00	.03	183
	200	ISL	8.70	8.68	33.926	26.329	172.4	.573	3.24	49.4							201
1	213		8.43	8.41	33.970	26.404	165.4	.595	3.18	48.3	33.4	1.94	26.0	.00	.00	.02	214
1	243		7.94	7.92	34.001	26.501	156.5	.643	3.09	46.4	38.0	2.02	27.5	.00			244
	250	ISL	7.86	7.83	34.010	26.521	154.7	.654	2.98	44.6							252
1	284		7.51	7.48	34.049	26.603	147.4	.706	2.31	34.3	46.9	2.31	31.1	.00			286
	300	ISL	7.35	7.32	34.066	26.640	144.0	.729	2.06	30.6							302
1	339		6.93	6.90	34.103	26.727	136.1	.7 84	1.55	22.7	57.2	2.62	35.0	.00			341
	400	ISL	6.27	6.24	34.127	26.833	126.4	.864	1.03	14.9							403
1	401		6.27	6.23	34.127	26.834	126.4	.865	1.03	14.9	67.3	2.86	38.1	.00			403
1	467		5.88	5.84	34.192	26.935	117.4	.946	.60	8.6	77.5	3.04	40.1	.00			470
	500	ISL	5.66	5.62	34.217	26.981	113.2	.984	.47	6.7							504
1	540		5.38	5.33	34.240	27.034	108.4	1.028	.39	5.5	88.4	3.18	41.9	.00			544

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 11.0 N	120 55.2 W	20/09/86	1513 GMT	3876 M	330	13 KT	340 04 05	1	1019.3 MB	17.8 C	14.5 C	3/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.63	17.63	33.242	24.017	388.5	.000	5.63	103.1	2.7	.38	.2	.00	.12	.02	0
1	10		17.65	17.65	33.240	24.011	389.3	.039	5.63	103.2	2.6	.38	.2	.00	.11	.02	10
	20	ISL	17.58	17.58	33.242	24.030	387.9	.078	5.66	103.5							20
1	21		17.58	17.57	33.243	24.031	387.8	.081	5.66	103.6	2.5	.38	.2	.00	.11	.02	21
	30	ISL	17.10	17.10	33.236	24.139	377.8	.116	5.82	105.5							30
1	31		17.03	17.03	33.234	24.154	376.4	.119	5.84	105.7	2.4	.38	.2	.00	.15	.04	31
1	42		15.77	15.77	33.176	24.398	353.4	.159	6.04	106.6	2.7	.37	.2	.00	.18	.07	42
	50	ISL	15.21	15.20	33.152	24.504	343.5	.188	6.02	105.1							50
1	52		15.10	15.10	33.150	24.526	341.5	.194	6.02	104.8	2.8	.37	.2	.00	.15	.07	52
1	62		14.39	14.38	33.192	24.711	324.1	.227	5.92	101.7	2.8	.41	.2	.0C	.25	.20	62
1	73		13.97	13.96	33.285	24.871	309.1	.262	5.83	99.3	2.8	.43	.4	.07	.39	.31	73
	75	ISL	13.73	13.72	33.276	24.913	305.1	.269	5.78	98.0							76
1	88		12.42	12.41	33.228	25.136	284.1	.306	5.50	90.7	5.2	.76	5.8	.02	.20	.23	88
	100	ISL	12.08	12.07	33.308	25.263	272.3	.340	5.40	88.4							101
1	104		12.04	12.02	33.340	25.296	269.2	.350	5.36	87.7	6.0	.75	6.0	.02	.15	.22	104
1	123		11.04	11.03	33.480	25.587	241.8	.401	4.69	75.2	12.4	1.23	14.4	.00	.04	.06	124
	125	ISL	10.97	10.96	33.490	25.607	239.9	.405	4.63	74.1							126
1	149		9.96	9.94	33.637	25.898	212.6	.460	3.80	59.6	20.8	1.62	20.8	.00	.01	.06	150
	150	ISL	9.93	9.92	33.642	25.906	211.9	.461	3.79	59.3							151
1	180		9.02	9.01	33.836	26.206	183.7	.521	3.30	50.7	27.8	1.82	24.5	.00	.00	.03	181
	200	ISL	8.72	8.70	33.945	26.340	171.3	.556	2.92	44.6							201
1	211		8.59	8.57	33.990	26.395	166.3	.574	2.75	41.9	34.9	2.04	27.7	.00	.00	.03	212
1	241		8.20	8.18	34.027	26.484	158.3	.623	2.66	40.2	38.6	2.12	28.8	.00			242
	250	ISL	8.14	8.11	34.050	26.512	155.7	.637	2.47	37.3							252
1	281		7.89	7.87	34.119	26.602	147.6	.685	1.79	26.9	47.1	2.45	32.2	.00			283
	300	ISL	7.58	7.55	34.114	26.643	143.8	.712	1.74	25.9							302
1	338		6.88	6.85	34.084	26.718	136.9	.766	1.64	24.0	56.8	2.57	35.3	.00			340
1	400		6.15	6.12	34.117	26.840	125.7	.846	1.04	15.0	69.6	2.84	38.9	.00			402
1	468		5.73	5.69	34.181	26.944	116.4	.929	.60	8.6	80.0	3.04	40.9	.00			471
	500	ISL	5.56	5.52	34.206	26.984	112.8	.966	.48	6.8							504
1	541		5.37	5.32	34.233	27.030	108.8	1.012	.41	5.8	88.6	3.13	42.4	.00			545

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 50.8 N	121 35.A W	20/09/86	2254 GMT	4110 M	330	14 KT	340 03 06	1	1018.0 MB	20.2 C	16.7 C	3/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.91	19.91	33.507	23.647	423.7	.000	5.34	102.3	2.9	.33	.2	.00	.05	.00	0
1	10		19.89	19.89	33.513	23.658	423.1	.042	5.38	103.0	2.8	.33	.2	.00	.05	.01	10
	20	ISL	19.40	19.40	33.430	23.722	417.3	.084	5.38	102.0							20
1	21				33.570			.088	5.38	101.6	2.5	.31	.2	.00	.05	.01	21
	30	ISL	18.53	18.52	33.320	23.858	404.7	.125	5.57	103.9							30
1	31		18.43	18.43	33.289	23.858	404.7	.129	5.60	104.2	2.6	.34	.2	.00	.08	.01	31
1	41		17.24	17.24	33.113	24.011	390.4	.168	5.75	104.5	2.6	.38	.2	.00	.11	.03	41
	50	ISL	17.46	17.45	33.497	24.255	367.4	.203	5.87	107.4							50
1	52		17.51	17.50	33.577	24.304	362.9	.209	5.89	107.9	2.3	.29	.2	.00	.09	.03	52
1	62		16.58	16.57	33.470	24.441	350.0	.245	5.87	105.5	2.5	.32	.2	.00	.11	.04	62
1	72		16.36	16.34	33.579	24.577	337.4	.279	5.80	103.8	2.4	.31	.2	.01	.14	.07	72
	75	ISL	16.17	16.16	33.575	24.617	332.8	.290	5.79	103.3							76
1	88		15.10	15.09	33.560	24.843	312.4	.331	5.74	100.2	2.9	.35	.2	.01	.24	.24	88
	100	ISL	13.67	13.65	33.505	25.104	287.7	.368	5.59	94.7							101
1	103		13.38	13.37	33.498	25.157	282.7	.375	5.55	93.5	3.9	.48	1.4	.12	.23	.27	103
1	124		12.60	12.58	33.597	25.389	261.0	.432	5.18	85.9	6.2	.69	5.7	.03	.12	.22	124
	125	ISL	12.54	12.52	33.603	25.406	259.5	.436	5.15	85.4							126
1	149		11.47	11.45	33.694	25.677	234.1	.496	4.72	76.5	10.6	.97	10.9	.02	.06	.08	150
	150	ISL	11.44	11.42	33.696	25.684	233.4	.498	4.71	76.2							151
1	181		9.89	9.87	33.791	26.031	200.7	.565	4.14	64.8	19.3	1.39	18.1	.00	.01	.03	182
	200	ISL	9.29	9.27	33.853	26.177	187.0	.602	3.89	60.2							201
1	211		9.02	9.00	33.888	26.248	180.4	.622	3.76	57.8	26.2	1.64	22.0	.00	.00	.02	212
1	243		8.38	8.36	33.974	26.415	164.9	.677	3.36	50.9	33.2	1.86	25.5	.00			244
	250	ISL	8.28	8.25	33.987	26.441	162.5	.689	3.25	49.1							252
1	283		7.89	7.86	34.031	26.534	154.0	.740	2.70	40.5	41.0	2.12	29.0	.00			284
	300	ISL	7.70	7.67	34.056	26.580	149.9	.767	2.40	35.8							302
1	340		7.31	7.28	34.107	26.677	141.2	.825	1.75	25.9	52.4	2.49	33.4	.00			342
	400	ISL	6.68	6.65	34.157	26.803	129.7	.906	1.08	15.8							403
1	402		6.67	6.63	34.158	26.806	129.4	.908	1.07	15.6	64.3	2.78	37.0	.00			404
1	468		6.09	6.05	34.201	26.916	119.4	.991	.65	9.4	74.9	2.97	39.5	.00			471
	500	ISL	5.81	5.76	34.217	26.964	115.0	1.029	.53	7.6							504
1	539		5.46	5.42	34.231	27.017	110.1	1.072	.45	6.4	86.0	3.13	41.4	.01			542

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 31.4 N	122 15.5 W	21/09/86	0417 GMT	4157 M	340	12 KT	340 03 06	1	1018.1 MB	19.2 C	15.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		20.30	20.30	33.697	23.690	419.6	.000	5.29	102.2	2.1	.31	.1	.00	.05	.01	0
1	10		20.31	20.31	33.696	23.688	420.2	.042	5.30	102.4	2.1	.32	.1	.00	.05	.02	10
1	20		20.31	20.31	33.698	23.689	420.5	.084	5.30	102.4	2.1	.31	.1	.00	.05	.01	20
	30	ISL	20.31	20.30	33.701	23.693	420.5	.126	5.30	102.4							30
1	31		20.31	20.30	33.702	23.694	420.5	.130	5.30	102.4	2.0	.31	.1	.00	.05	.01	31
1	42		19.88	19.87	33.884	23.945	396.9	.175	5.56	106.7	1.8	.25	.1	.00	.05	.02	42
	50	ISL	19.63	19.63	33.883	24.009	391.2	.207	5.60	106.9							50
1	51		19.59	19.58	33.876	24.014	390.6	.210	5.60	106.9	1.8	.25	.1	.00	.05	.02	51
1	63		18.01	17.99	33.697	24.277	365.9	.255	5.78	106.9	1.9	.28	.1	.01	.05	.02	63
1	72		17.61	17.60	33.680	24.360	358.2	.288	5.80	106.5	1.9	.28	.1	.01	.07	.02	72
	75	ISL	17.59	17.57	33.717	24.394	355.1	.299	5.79	106.2							76
1	89		17.29	17.28	33.861	24.576	338.2	.347	5.70	104.1	1.9	.26	.1	.02	.10	.05	89
	100	ISL	16.17	16.15	33.791	24.784	318.6	.384	5.68	101.5							101
1	104		15.75	15.73	33.760	24.854	311.9	.395	5.67	100.4	2.1	.30	.1	.02	.16	.14	104
1	125		13.98	13.96	33.740	25.223	277.1	.457	5.37	91.7	3.7	.48	2.5	.05	.19	.27	125
1	149		12.83	12.81	33.734	25.450	256.0	.523	4.95	82.6	6.5	.73	6.9	.02	.11	.14	150
	150	ISL	12.79	12.77	33.735	25.458	255.3	.525	4.94	82.4							151
1	180		10.95	10.93	33.784	25.842	219.0	.596	4.57	73.2	12.2	1.07	13.0	.02	.02	.03	181
	200	ISL	10.00	9.98	33.813	26.029	201.3	.638	4.22	66.2							201
1	212		9.52	9.50	33.838	26.128	192.0	.662	4.01	62.3	21.3	1.48	19.7	.02	.00	.02	213
1	241		8.70	8.68	33.961	26.355	170.7	.714	3.74	57.1	28.4	1.71	23.2	.01			242
	250	ISL	8.52	8.49	33.981	26.400	166.5	.729	3.57	54.3							252
1	282		8.01	7.99	34.020	26.506	156.7	.780	2.91	43.7	38.1	2.07	28.0	.01			283
	300	ISL	7.78	7.75	34.040	26.558	152.1	.809	2.58	38.5							302
1	337		7.35	7.31	34.070	26.643	144.3	.864	2.01	29.8	49.2	2.42	32.7	.01			339
1	398		6.62	6.59	34.097	26.763	133.3	.948	1.47	21.4	60.3	2.67	36.1	.01			400
	400	ISL	6.60	6.56	34.099	26.768	132.9	.951	1.45	21.1							403
1	464		6.03	5.99	34.155	26.886	122.1	1.033	.85	12.2	72.6	2.93	39.4	.00			467
	500	ISL	5.82	5.77	34.192	26.943	117.0	1.076	.62	8.9							504
1	538		5.66	5.62	34.235	26.996	112.3	1.119	.47	6.7	82.1	3.09	41.2	.00			541

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 11.0 N	122 55.8 W	21/09/86	09A6 GMT	3601 M	340	15 KT		1	1018.3 MB	17.5 C	14.7 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	20.A8	20.A8	33.504	23.A95	A38.2	.000	5.28	102.2							0
1	1				33.50A			.00A	5.28	102.2	2.2	.32	.2	.00	.05	.01	1
	10	ISL	20.A8	20.A8	33.502	23.A95	A38.6	.0A4	5.28	102.2							10
1	16		20.48	20.48	33.502	23.496	438.8	.070	5.28	102.2	2.2	.34	.2	.00	.05	.01	16
	20	ISL	20.45	20.44	33.508	23.509	438.5	.088	5.29	102.4							20
	30	ISL	20.37	20.36	33.520	23.539	435.2	.131	5.32	102.7							30
1	31		20.36	20.36	33.524	23.544	434.8	.135	5.32	102.8	2.1	.32	.2	.00	.05	.01	31
1	42		19.72	19.72	33.448	23.653	424.7	.182	5.46	104.2	2.1	.31	.2	.00	.07	.02	42
	50	ISL	18.02	18.01	33.306	23.972	394.4	.216	5.82	107.5							50
1	52		17.63	17.62	33.281	24.049	387.2	.223	5.90	108.1	2.3	.32	.2	.00	.09	.02	52
1	62		16.46	16.45	33.267	24.313	362.2	.260	6.02	107.8	2.3	.32	.2	00	.10	-03	62
1	73		15.27	15.26	33.260	24.574	337.5	.298	6.06	106.0	2.4	.32	.2	.00	.13	.06	73
	75	ISL	15.08	15.07	33.274	24.628	332.4	.306	6.03	105.0							76
1	83		14.45	14.44	33.320	24.797	316.5	.331	5.90	101.5	2.4	.38	.2	.00	.14	.11	83
1	98		13.02	13.01	33.286	25.064	291.2	.376	5.71	95.4	3.5	.51	1.1	.09	.27	.23	98
	100	ISL	12.83	12.81	33.298	25.112	286.8	.383	5.63	93.6							101
1	114		11.86	11.84	33.385	25.365	262.9	.420	5.10	83.2	6.9	.83	7.7	.02	.19	.20	114
	125	ISL	11.14	11.13	33.448	25.545	246.0	.450	4.79	76.9							126
1	128		10.96	10.95	33.467	25.592	241.5	.458	4.70	75.2	10.9	1.10	12.2	.01	.11	.15	129
	150	ISL	10.27	10.25	33.620	25.832	219.0	.508	4.01	63.3							151
1	154		10.18	10.16	33.650	25.871	215.3	.517	3.88	61.1	18.1	1.48	18.5	.01	.05	.10	155
1	179		9.49	9.47	33.801	26.103	193.6	.568	3.32	51.5	24.6	1.74	22.8	.00	.02	.05	180
	200	ISL	9.05	9.03	33.897	26.251	179.9	.607	3.02	46.4							201
1	211		8.84	8.82	33.938	26.315	173.9	.626	2.90	44.4	31.3	1.95	26.2	.00	.00	.03	212
1	242		8.29	8.26	34.020	26.465	160.1	.678	2.66	40.2	36.7	2.10	28.3	.00			2A3
	250	ISL	8.16	8.13	3A.032	26.A9A	157.A	.691	2.59	39.1							252
1	281		7.67	7.65	3A.055	26.58A	1A9.2	.739	2.33	3A.8	AA.l	2.26	30.7	.00			283
	300	ISL	7.38	7.35	3A.060	26.630	1AA.9	.766	2.16	32.0							302
1	338		6.81	6.78	34.067	26.71A	137.2	.820	1.79	26.2	55.7	2.5A	3A.6	.00			3A0
1	399		6.17	6.1A	34.108	26.831	126.5	.900	1.17	16.9	67.1	2.81	38.1	.00			A01
	400	ISL	6.16	6.12	34.109	26.833	126.3	.901	1.16	16.7							403
1	465		5.76	5.72	34.163	26.927	118.0	.981	.71	10.1	76.8	3.01	39.9	.00			468
	500	ISL	5.61	5.57	34.203	26.976	113.6	1.021	.53	7.6							504
1	538		5.51	5.46	34.255	27.031	108.9	1.064	.39	5.5	85.5	3.15	41.7	.00			542

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
29 50.7 N	123 35.2 W	21/09/86	1509 GMT	4022 M	360	09 KT	350 02 05	1	1019.1 MB	19.1 C	15.3 C	4/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		20.44	20.44	33.526	23.523	435.6	.000	5.30	102.5	2.2	.32	.1	.00	.05	.01	0
	10	ISL	20.44	20.44	33.526	23.523	435.9	.044	5.29	102.4							10
1	16		20.44	20.44	33.526	23.523	436.1	.070	5.29	102.3	2.3	.32	.1	.00	.05	.01	16
	20	ISL	20.41	20.41	33.528	23.534	435.3	.087	5.31	102.6							20
	30	ISL	20.33	20.32	33.531	23.559	433.3	.131	5.35	103.2							30
1	31		20.32	20.31	33.532	23.562	433.1	.135	5.35	103.3	2.2	.31	.0	.00	.06	.01	31
1	41		19.06	19.05	33.402	23.789	411.7	.177	5.66	106.6	2.1	.32	.0	.00	.08	.02	41
	50	ISL	17.71	17.71	33.290	24.035	388.4	.213	5.92	108.6							50
1	51		17.59	17.58	33.280	24.058	386.3	.216	5.94	108.7	2.4	.32	.0	.00	.08	.02	51
1	62		16.25	16.24	33.179	24.293	36A.1	.258	6.05	107.8	2.A	.35	.0	.00	.10	.03	62
1	72		15.2A	15.23	33.181	2A.521	3A2.6	.293	6.03	105.3	2.5	.36	.0	.00	.12	.05	72
	75	ISL	1A.92	1A.91	33.198	24.604	334.7	.304	6.01	104.3							76
1	82		14.32	14.31	33.252	24.773	318.7	.326	5.95	102.0	2.6	.39	.0	.00	.16	.13	82
1	98		13.65	13.63	33.412	25.037	294.0	.374	5.70	96.5	3.0	.45	.5	.08	.29	.29	98
	100	ISL	13.46	13.45	33.412	25.074	290.5	.381	5.67	95.6							101
1	113		12.39	12.38	33.394	25.270	271.9	.417	5.40	89.1	4.7	.66	4.4	.04	.20	.26	113
	125	ISL	11.56	11.54	33.446	25.468	253.A	.449	4.84	78.5							126
1	129		11.35	11.34	33.467	25.521	248.3	.458	4.68	75.5	9.8	1.04	11.2	.01	.12	.19	129
	150	ISL	10.39	10.37	33.605	25.801	222.0	.509	4.31	68.1							151
1	153		10.27	10.26				.516	4.27	67.4	15.5	1.34	16.5	.00	.03	.05	154
1	179		9.43	9.41	33.795	26.108	193.1	.569	3.63	56.3	22.8	1.67	21.8	.00	.01	.02	180
	200	ISL	8.91	8.89	33.889	26.266	178.4	.608	3.45	53.0							201
1	211		8.68	8.66	33.927	26.332	172.3	.627	3.40	51.9	29.1	1.83	24.7	.00	.00	.02	212
1	242		8.18	8.16	34.000	26.465	160.0	.678	3.03	45.7	35.3	2.02	27.2	.01			243
	250	ISL	8.07	8.0A	3A.006	26.A87	157.9	.691	3.01	A5.2							252
1	28A		7.62	7.59	3A.013	26.559	151.5	.7A3	2.90	A3.2	A0.A	2.13	28.9	.01			285
	300	ISL	7.39	7.36	3A.022	26.599	1A7.9	.768	2.67	39.6							302
1	3A0		6.86	6.83	3A.0A6	26.691	139.A	.826	2.02	29.6	52.7	2.A7	33.9	.00			342
	A00	ISL	6.27	6.2A	3A.083	26.798	129.7	.906	1.35	19.A							403
1	402		6.26	6.22	34.085	26.801	129.5	.908	1.33	19.2	63.2	2.77	37.6	.00			40*
1	468		5.70	5.66	34.140	26.916	119.0	.991	.80	11.4	75.3	3.00	40.6	.00			471
	500	ISL	5.51	5.47	34.173	26.964	114.6	1.028	.62	8.8							504
1	540		5.36	5.31	34.218	27.019	109.8	1.073	.47	6.6	84.8	3.15	42.2	.00			543

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 78

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 08.7 N	122 49.4 W	01/10/86	1916 GMT	12 M	1202 - 1814 PST	1200 PST	1817 PST	209.1 MG C/M2

DEPTH M	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL UG/L	PHAEO UG/L	LIGHT %	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	15.80	33.365	24.536	5.97	105.6		0.37	0.2	0.00	0.52	0.14	96	1.1	0.87	0.97	0.14
6	15.80	33.365	24.536	5.96	105.4		0.37	0.2	0.00	0.55	0.15	40	8.1	8.1	8.1	0.16
8	15.79	33.364	24.537	5.95	105.2			0.2	0.00	0.54	0.15	30	6.7	7.4	7.0	0.16
14	15.82	33.365	24.531	5.96	105.5		0.38	0.2	0.00	0.54	0.16	18	8.2	9.3	8.7	0.18
28	13.43	32.888	24.672	6.28	105.5		0.50	0.7	0.06	0.58	0.28	3	3.5	3.7	3.6	0.12
42	11.75	32.802	24.931	6.16	99.9		0.62	2.3	0.21	0.60	0.36	0.5	1.0	1.3	1.2	0.07
73	9.93	33.059	25.449	5.33	83.2		1.18	12.6	0.01	0.10	0.09					
88	10.45	33.514	25.718	4.33	68.5		1.49	18.4	0.01	0.09	0.13					
103	9.74	33.602	25.906	3.92	61.1		1.68	21.5	0.04	0.03	0.08					
124	8.73	33.699	26.144	3.97	60.6		1.67	22.3	0.01	0.01	0.03					
144	8.57	33.833	26.274	3.82	58.1		1.73	23.6	0.01	0.00	0.04					
176	8.09	33.941	26.432	3.05	45.9		2.04	28.1	0.00	0.00	0.03					
207	7.74	33.995	26.526	2.67	39.9		2.18	30.1	0.00	0.00	0.03					

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 77 113

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 58.0 N	125 14.2 W	30/09/86	1918 GMT	23 M	1217 - 1832 PST	1210 PST	1830 PST	60.9 MG C/M2

DEPTH M	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL UG/L	PHAEO UG/L	LIGHT %	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	19.31	33.304	23.649	5.43	102.7	2.0	0.33	0.0	0.00	0.08	0.01	96	0.37	0.47	0.42	0.12
14	19.30	33.302	23.649	5.43	102.7	2.0	0.33	0.0	0.00	0.08	0.01	40	1.2	1.2	1.2	0.10
18	19.30	33.302	23.651	5.41	102.3	2.0	0.33	0.0	0.00	0.08	0.01	30	1.1	1.2	1.2	0.10
27	19.31	33.302	23.649	5.41	102.3	2.0	0.33	0.0	0.00	0.08	0.01	18	0.79	1.3	1.0	0.11
53	18.36	33.220	23.825	5.64	104.7	2.0	0.33	0.0	0.00	0.15	0.03	3	0.61	0.76	0.68	0.15
81	13.39	33.184	24.912	5.97	100.4	3.1	0.47	0.5	0.04	0.37	0.27	0.5	0.23	0.33	0.28	0.08
88		33.215		5.55		4.8	0.69	4.3	0.13	0.33	0.24					
102	11.80	33.345	25.344	5.17	84.2	6.9	0.86	7.7	0.06	0.21	0.21					
123	10.54	33.505	25.695	4.33	68.7	14.0	1.29	15.4	0.02	0.08	0.10					
143	9.95	33.636	25.898	3.81	59.7	19.4	1.54	19.8	0.01	0.02	0.06					
173	9.31	33.817	26.146	3.18	49.2	26.4	1.83	24.4	0.01	0.01	0.03					
206	8.76	33.941	26.330	2.89	44.2	31.8	2.00	26.9	0.00	0.01	0.02					

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 09.6 N	121 09.2 W	28/09/86	1919 GMT	20 M	1156 - 1822 PST	1156 PST	1820 PST	233.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL UG/L	PHAEO UG/L	LIGHT %	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.03	33.171	24.105	5.74	103.9	1.4	0.38	0.2	0.00	0.16	0.03	96	1.7	1.7	1.7	0.14
12	17.00	33.175	24.115	5.74	103.8	1.4	0.38	0.2	0.00	0.18	0.04	40	2.7	3.8	3.2	0.16
17	16.97	33.169	24.119	5.76	104.1	1.3	0.38	0.2	0.00	0.17	0.03	30	3.8	3.5	3.6	0.12
25	16.84	33.167	24.147	5.77	104.0	1.3	0.38	0.2	0.00	0.18	0.05	18	4.6	4.0	4.3	0.14
47	13.24	33.045	24.833	6.21	104.0	2.6	0.51	1.4	0.16	0.56	0.33	3	4.4	4.4	4.4	0.21
72	11.93	33.247	25.242	5.36	87.5	7.7	0.95	9.0	0.16	0.35	0.56	0.5	0.38	0.43	0.41	0.15

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 49.7 N	123 55.5 W	29/09/86	1940 GMT	19 M	1212 - 1832 PST	1206 PST	1830 PST	152.5 MG C/M2

DEPTH M	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL UG/L	PHAEO UG/L	LIGHT %	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	17.48	32.900	23.790	5.69	103.7	0.3	0.37	0.2	0.00	0.13	0.01	96	1.8	1.5	1.7	0.13
12	17.45	32.901	23.800	5.70	103.8	0.3	0.38	0.2	0.00	0.13	0.02	40	4.0	3.3	3.6	0.12
17	17.46	32.901	23.798	5.73	104.4	0.2	0.38	0.2	0.00	0.15	0.01	30	3.7	4.1	3.9	0.13
23	17.45	32.901	23.800	5.69	103.6	0.2	0.37	0.2	0.00	0.14	0.02	18	3.2	3.5	3.3	0.12
46	14.38	32.869	24.464	6.24	106.9	2.2	0.42	0.2	0.00	0.20	0.10	3	1.2	1.5	1.4	0.12
70	12.67	32.934	24.859	5.94	98.3	3.4	0.59	2.2	0.43	0.32	0.49	0.5	0.78	0.95	0.87	0.06

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 15.0 N	119 31.9 W	27/09/86	1905 GMT	4 M	1145 - 1820 PST	1149 PST	1819 PST	7 40.6 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	16.30	33.494	24.522	6.27	112.1	6.2	0.31	0.1	0.00	4.41	0.23	96	76.4	83.4	79.9	1.01
2	16.13	33.493	24.560	6.30	112.2	6.3	0.31	0.1	0.00	4.52	0.19	40	72.5	70.4	71.4	0.59
3	15.96	33.486	24.594	6.31	112.0	6.3	0.32	0.1	0.00	4.89	0.22	30	73.8	78.7	76.2	1.15
5	15.62	33.475	24.662	6.29	110.9	6.3	0.33	0.1	0.00	5.97	0.55	18	72.1	77.0	74.6	0.79
9	15.15	33.461	24.755	6.05	105.7	6.1	0.38	0.1	0.01	7.74	0.59	3	39.2	41.7	40.4	0.69
15	15.04	33.457	24.776	5.94	103.5	6.1	0.40	0.5	0.03	6.77	0.62	0.5	3.9	5.1	4.5	0.41

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 16.2 N	121 26.3 W	26/09/86	1904 GMT	26 M	1156 - 1826 PST	1157 PST	1819 PST	251.5 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	17.22	33.413	24.244	5.70	103.7	2.3	0.38	0.0	0.00	0.18	0.04	96	1.5	1.8	1.6	*0.00
17	17.00	33.429	24.311	5.72	103.6	2.2	0.37	0.0	0.00	0.19	0.05	40	3.8	3.8	3.8	0.17
20	16.90	33.441	24.344	5.73	103.6	2.1	0.37	0.0	0.00	0.21	0.06	30	3.0	4.3	3.7	0.19
30	16.31	33.459	24.495	5.90	105.5	1.8	0.34	0.0	0.01	0.39	0.11	18	4.8	6.0	5.4	0.14
60	13.02	33.287	25.064	5.61	93.7	4.0	0.62	8.4	0.08	0.48	0.34	3	2.0	2.1	2.1	0.14
93	11.00	33.569	25.665	4.84	77.6	10.2	1.03	11.3	0.03	0.10	0.14	0.5	0.20	0.14	0.17	0.06

* THE DARK VALUE APPEARS TO BE LOW. AS A RESULT UPTAKES MAY BE TOO HIGH.

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.2 N	119 18.2 W	25/09/86	1828 GMT	12 M	1147 - 1825 PST	1148 PST	1817 PST	542.9 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	17.67	33.550	24.243	5.69	104.5	2.7	0.24	0.2	0.00	1.08	0.18	96	8.6	7.6	8.1	0.30
7	17.58	33.549	24.265	5.71	104.7	2.6	0.24	0.2	0.00	1.08	0.24	40	19.8	19.6	19.7	0.32
9	17.58	33.549	24.265	5.72	104.9	2.7	0.23	0.2	0.01	1.07	0.22	30	23.0	23.0	23.0	0.34
14	17.48	33.552	24.290	5.72	104.7	2.6	0.23	0.2	0.01	1.13	0.21	18	21.1	20.0	20.5	0.47
27	16.81	33.609	24.495	5.66	102.3	2.6	0.32	0.8	0.04	1.10	0.34	3	11.7	10.5	11.1	0.22
42	12.11	33.571	25.461	4.46	73.2	12.5	1.16	12.7	0.18	0.43	0.44	0.5	0.75	0.72	0.73	0.07

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.0 N	117 54.5 W	24/09/86	1916 GMT	14 M	1150 - 1815 PST	1143 PST	1814 PST	244.8 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	18.71	33.567	24.000	5.63	105.5	2.4	0.24	0.1	0.00	0.61	0.10	96	11.4	13.3	12.3	0.27
8	18.72	33.568	23.999	5.65	105.9	2.3	0.24	0.1	0.00	0.62	0.10	40	10.2	10.8	10.5	0.24
11	18.71	33.566	24.001	5.62	105.3	2.3	0.22	0.1	0.00	0.63	0.09	30	8.7	9.2	9.0	0.26
17	16.26	33.436	24.488	6.13	109.4	3.0	0.35	0.1	0.00	0.46	0.25	18	5.7	5.8	5.8	0.15
32	13.34	33.379	25.070	5.72	96.2	4.7	0.65	3.7	0.15	0.78	0.44	3	2.2	2.0	2.1	0.07
50	12.21	33.426	25.328	5.11	84.0	7.1	0.91	8.0	0.21	0.48	0.40	0.5	0.21	0.19	0.20	0.05

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 58

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 30.3 N	119 48.7 W	23/09/86	1908 GMT	26 M	1158 - 1820 PST	1151 PST	1817 PST	177.1 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	17.56	33.261	24.048	5.64	103.2	2.1	0.39	0.0	0.00	0.12	0.02	96	0.39	0.49	0.44	0.07
15	17.38	33.258	24.089	5.67	103.4	2.0	0.38	0.0	0.00	0.14	0.03	40	2.4		2.4	0.10
19	16.84	33.270	24.226	5.84	105.4	2.0	0.38	0.0	0.00	0.22	0.05	30	2.7	3.5	3.1	0.14
28	15.90	,33.276	24.447	6.02	106.6	1.7	0.39	0.0	0.00	0.34	0.11	18	2.8	1.9	2.4	0.14
57	13.22	'33.177	24.940	5.82	97.5	3.2	0.57	1.8	0.31	0.59	0.39	3	2.9	2.6	2.7	0.06
89	11.50	33.326	25.385	5.19	83.9	7.6	0.95	8.9	0.02	0.19	0.23	0.5	0.16	0.20	0.18	0.03
99	11.01	33.391	25.523	4.90	78.5	10.6	1.16	12.3	0.02	0.13	0.16					
119	9.97	33.618	25.881	4.05	63.5	18.4	1.56	19.3	0.01	0.02	0.05					
139	9.22	33.797	26.145	3.51	54.2	25.2	1.81	23.3	0.00	0.00	0.03					
170	8.85	33.881	26.269	3.40	52.1	28.6	1.87	24.4	0.00	0.00	0.02					
200	8.33	33.968	26.417	3.30	50.0	33.5	2.00	26.3	0.00	0.00	0.02					

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 26.8 N	122 03.1 W	22/09/86	1919 GMT	34 M	1203 - 1825 PST	1201 PST	1825 PST	122.8 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	18.49	33.193	23.771	5.52	102.8	2.5	0.34	0.1	0.00	0.08	0.01	96	0.33	0.40	0.37	0.08
20	18.41	33.190	23.787	5.51	102.4	2.3	0.35	0.1	0.00	0.08	0.01	40	1.9	1.5	1.7	0.09
25	18.38	33.188	23.794	5.52	102.5	2.3	0.35	0.1	0.00	0.08	0.02	30	1.3	1.6	1.4	0.10
36	17.82	33.138	23.893	5.65	103.8	2.1	0.36	0.1	0.00	0.12	0.03	18	1.7	1.7	1.7	0.13
72	14.71	33.139	24.603	6.04	104.4	2.0	0.35	0.1	0.00	0.20	0.11	3	1.2	1.2	1.2	0.05
109		33.308		5.45		4.7	0.70	5.2	0.03	0.21	0.24	0.5	0.17	0.21	0.19	0.01

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 92 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 08.1 N	123 47.6 W	21/09/86	1925 GMT	34 M	1218 - 1838 PST	1208 PST	1837 PST	29.5 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	20.54	33.593	23.547	5.30	102.8	2.2	0.30	0.0	0.00	0.05	0.01	96	0.05	0.13	0.09	0.05
20	20.48	33.587	23.561	5.30	102.6	2.2	0.31	0.0	0.00	0.05	0.01	40	0.67	0.66	0.66	0.06
27	20.30	33.542	23.575	5.32	102.7	2.2	0.31	0.0	0.00	0.06	0.01	30	0.37	0.39	0.38	0.07
38	19.74	33.447	23.647	5.40	103.1	2.3	0.31	0.0	0.00	0.06	0.01	18	0.46	0.59	0.53	0.07
61		33.504		5.85		2.1	0.30	0.0	0.00	0.07	0.02	3	0.32	0.38	0.35	0.10
78		33.431		5.85		2.1	0.31	0.0	0.00	0.07	0.02	0.5	0.03	0.04	0.03	0.03
97				5.99		2.3	0.34	0.0	0.00	0.10	0.04					
120	14.77	33.421	24.810	5.82	100.8	2.3	0.35	0.0	0.00	0.14	0.12					
129	13.84	33.387	24.979	5.80	98.6	2.6	0.40	0.3	0.02	0.24	0.20					

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 10.6 N	118 54.4 W	19/09/86	1927 GMT	19 M	1208 - 1800 PST	1150 PST	1819 PST	262.1 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	19.15	33.666	23.965	5.45	103.0	2.5	0.33	0.1	0.00	0.15	0.05	96	1.4	1.4	1.4	0.08
10	19.14	33.664	23.967	5.43	102.6	2.5	0.34	0.1	0.00	0.16	0.05	40	4.0	4.0	4.0	0.10
14	19.09	33.664	23.980	5.43	102.5	2.5	0.33	0.1	0.00	0.16	0.04	30	3.5	3.7	3.6	0.11
20	19.07	33.664	23.984	5.46	103.1	2.4	0.32	0.1	0.00	0.16	0.04	18	3.1	3.3	3.2	0.10
43	13.23	33.541	25.220	5.40	90.7	8.4	0.84	6.8	0.13	0.93	0.68	3	7.0	7.1	7.1	0.12
65	10.88	33.640	25.740	3.83	61.3	17.3	1.48	17.6	0.03	0.20	0.26	0.5	0.24	0.29	0.27	0.17

RV NEW HORIZON CALCOFI CRUISE 8609 STATION 93 84

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 04.8 N	121 11.8 W	20/09/86	1926 GMT	27 M	1206 - 1836 PST	1158 PST	1831 PST	81.0 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	18.09	33.106	23.802	5.60	103.4	2.3	0.38	0.2	0.00	0.08	0.01	96	0.75	0.50	0.63	0.05
16	17.99			5.59		2.3	0.38	0.2	0.00	0.08	0.01	40	1.1	0.79	0.95	0.07
22	17.55	33.132	23.952	5.69	104.0	2.3	0.38	0.2	0.00	0.08	0.02	30	0.67	0.58	0.63	0.09
31	17.11	33.171	24.088	5.82	105.5	2.3	0.38	0.2	0.00	0.11	0.03	18	1.2	0.89	1.0	0.06
62	14.08	33.017	24.641	6.19	105.5	2.3	0.44	0.2	0.01	0.48	0.31	3	0.94	1.2	1.1	0.04
95	13.17			5.79		3.3	0.55	2.2	0.19	0.29	0.30	0.5	0.20	0.48	0.34	0.03
103	12.92	33.256	25.062	5.63	93.8	4.1	0.60	3.2	0.07	0.07	0.06					
123	11.74	33.380	25.384	5.10	82.9	8.5	1.06	11.1	0.02	0.02	0.02					
143	10.63	33.552	25.718	4.32	68.7	15.1	1.39	16.8	0.02	0.02	0.06					
174	9.66	33.682	25.982	3.73	58.1	22.0	1.65	21.4	0.02	0.01	0.04					
206	8.89	33.889	26.270	3.42	52.4	29.0	1.80	24.3	0.00							

Secchi Disk Observations

CalCOFI Cruise 8609

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Weather		Clouds Type/	Amt
77	51	2	10	0900	8	1		SC	6/8
77	70	1	10	1550	11	1		ST	3/8
77	78	1	10	1028	12	1		ST	7/8
77	80	1	10	0811	15	1		SC	4/8
77	110	30	9	1300	28	1		SC	7/8
77	113	30	9	1020	23	1		SC	7/8
77	120	30	9	0724	23		-	.	-
80	60	28	9	1056	20		0	-	-
80	70	28	9	1610	19		0	-	-
80	100	29	9	1015	19	1		cu	6/8
80	110	29	9	1620	23	1		cu	5/8
82	48	27	9	1357	6		2	SC	8/8
83	40.5	27	9	0915	3	1		AS	6/8
83	42	27	9	0700	3	1		AS	4/8
83	42	27	9	1039	4	1		AS	7/8
83	60	26	9	1542	24	1		CU	2/8
83	70	26	9	1033	26	1		CU	2/8
87	45	25	9	1009	12	1		CU	3/8
87	50	25	9	1511	12	1		ST	1/8
87	55	25	9	1937	6	1		ST	1/8
90	28	24	9	1511	5		2	ST	8/8
90	30	24	9	1033	14		2	ST	8/8
90	33	24	9	0806	15		2	SC	8/8
90	53	23	9	1305	11	1		CS	2/8
90	58	23	9	1030	26	1		CB	2/8
90	60	23	9	0835	29	1		SC	5/8
90	90	22	9	1045	31	1		CU	3/8
90	90	22	9	1331	34	1		CU	3/8
90	120	21	9	1430	38	1		CU	3/8
92	120	21	9	1050	34	1		AC	3/8
93.4	26.6	18	9	1115	4	1		.	.
93	26.7	18	9	1257	9	1		ST	4/8
93	28	18	9	1458	19	1		ST	5/8
93	30	18	9	1805	14	1		ST	5/8
93	45	19	9	0750	18	1		SC	7/8
93	50	19	9	1109	19	1		CU	3/8
93	55	19	9	1530	12	1		CS	4/8
93	80	20	9	0745	20	1		SC	3/8
93	84	20	9	1050	27	1		AC	7/8
93	90	20	9	1420	39	1		CU	3/8
93	120	21	9	0745	30	1		CU	4/8

CalCOFI Cruise 8609

MACROZOOPLANKTON BIOMASS
Nel Mesh Size: 0.505 mm

Line	Sta.	Position		Date Mo/Day	Time (GMT) Start	Time (GMT) End	Water Volume Strained (m)	Max. Tow Depth (m)	Volume per 1000 m Strained Total (cm)	Volume per 1000 m Strained Small (cm)
77	51	35 01.9N	120 55.1W	10/2	1710	1726	384	165	3968	133
77	55	34 52.7N	121 14.0W	10/2	1220	1243	456	206	156	156
77	60	34 44.0N	121 35.8W	10/2	0751	0813	470	211	98	98
77	70	34 24.1N	122 16.6W	10/2	0131	0153	502	194	82	82
77	80	34 03.0N	122 58.3W	10/1	1618	1643	597	211	40	40
77	90	33 43.0N	123 39.7W	10/1	0930	0952	435	213	57	57
77	100	33 23.8N	124 20.1W	10/1	0334	0356	412	209	56	56
77	110	33 03.9N	125 00.6W	9/30	2201	2223	433	210	51	51
77	120	32 44.4N	125 42.1W	9/30	1440	1502	442	209	32	32
80	51	34 26.7N	120 32.1W	9/28	0445	0454	142	61	119	119
80	55	34 19.6N	120 48.7W	9/28	0810	0832	395	213	101	101
80	60	34 09.3N	121 09.5W	9/28	1145	1208	417	215	161	161
80	70	33 49.4N	121 51.9W	9/29	0127	0149	411	207	U 0	110
80	80	33 32.8N	122 33.7W	9/29	0738	0800	418	212	165	165
80	90	33 08.9N	123 14.8W	9/29	1325	1347	422	212	83	83
80	100	32 50.2N	123 56.5W	9/29	2009	2031	432	211	37	37
80	110	32 30.3N	124 35.4W	9/30	0222	0244	449	202	31	31
80	120	32 10.1N	125 16.7W	9/30	0825	0847	442	212	32	32
82	48	34 11.1N	120 04.1W	9/27	2357	0019	411	203	207	165
83	40.5	34 13.9N	119 24.3W	9/27	1725	1728	70	21	43	43
83	42	34 11.6N	119 30.7W	9/27	1505	1515	188	90	267	267
83	51	33 52.6N	120 09.5W	9/27	0835	0847	235	106	106	106
83	55	33 44.9N	120 26.6W	9/27	0518	0541	437	206	144	144
83	60	33 34.4N	120 46.0W	9/27	0048	0109	411	220	46	46
83	70	32 16.0N	121 27.3W	9/26	1752	1814	440	212	105	105
87	33	33 52.7N	118 29.1W	9/25	0531	0539	121	53	306	306
87	35	33 49.1N	118 38.7W	9/25	0824	0846	425	214	96	96
87	39.6	33 39.4N	118 56.9W	9/25	1415	1437	391	213	82	82
87	45	33 28.2N	119 18.5W	9/25	1953	2015	405	211	59	59
87	50	33 19.5N	119 40.7W	9/25	2316	2324	158	67	127	127
87	55	33 08.7N	120 00.8W	9/26	0253	0315	436	205	195	183
87	60	32 58.5N	120 22.3W	9/26	0620	0641	409	201	142	142
87	70	32 39.9N	121 02.3W	9/26	1120	1143	430	212	146	128
90	28	33 28.9N	117 46.5W	9/24	2342	0000	341	172	117	117
90	30	33 24.0N	117 55.7W	9/24	2108	2130	404	210	54	54
90	35	33 14.5N	118 15.6W	9/24	1345	1407	391	215	100	100
90	37	33 10.9N	118 23.5W	9/24	1019	1041	423	203	137	137
90	45	32 54.5N	118 57.3W	9/24	0506	0528	424	210	92	92
90	53	32 38.9N	119 29.1W	9/23	2250	2312	379	212	95	95
90	60	32 25.4N	119 58.0W	9/23	1645	1707	395	213	89	89
90	70	32 06.4N	120 39.2W	9/23	1045	1107	438	210	263	263
90	80	31 44.7N	121 19.6W	9/23	0428	0450	409	213	61	61
90	90	31 27.2N	122 03.8W	9/22	1935	1957	458	203	63	39
90	100	31 05.8N	122 39.2W	9/22	1157	1219	413	223	58	58
90	110	30 46.6N	123 20.6W	9/22	0540	0601	406	210	32	32
90	120	30 25.9N	123 59.8W	9/21	2330	2352	430	210	23	23
93	26.7	32 55.8N	117 19.0W	9/18	2146	2153	126	56	87	87
93	28	32 53.8N	117 24.9W	9/19	0050	0112	400	210	18	18
93	30	32 49.6N	117 33.3W	9/19	0340	0402	399	207	103	103
93	35	32 40.3N	117 53.7W	9/19	0738	0800	464	194	112	112
93	40	32 31.1N	118 14.2W	9/19	1135	1157	444	211	52	52
93	45	32 21.0N	118 35.2W	9/19	1557	1620	448	215	56	56
93	50	32 10.0N	118 55.6W	9/19	2112	2135	424	216	42	42
93	55	32 00.5N	119 15.4W	9/20	0104	0126	414	205	145	131
93	60	31 50.1N	119 35.0W	9/20	0445	0507	405	211	74	62
93	70	31 31.1N	120 15.6W	9/20	1015	1037	438	213	55	55
93	80	31 11.6N	120 55.7W	9/20	1555	1617	434	205	37	37
93	90	30 51.6N	121 35.4W	9/20	2320	2342	417	209	34	34
93	100	30 31.8N	122 16.3W	9/21	0451	0513	418	209	33	33
93	110	30 11.9N	122 56.1W	9/21	1015	1037	431	218	188	109
93	120	29 51.2N	123 35.3W	9/21	1550	1612	428	207	107	30

FIGURES

Cruise 8611

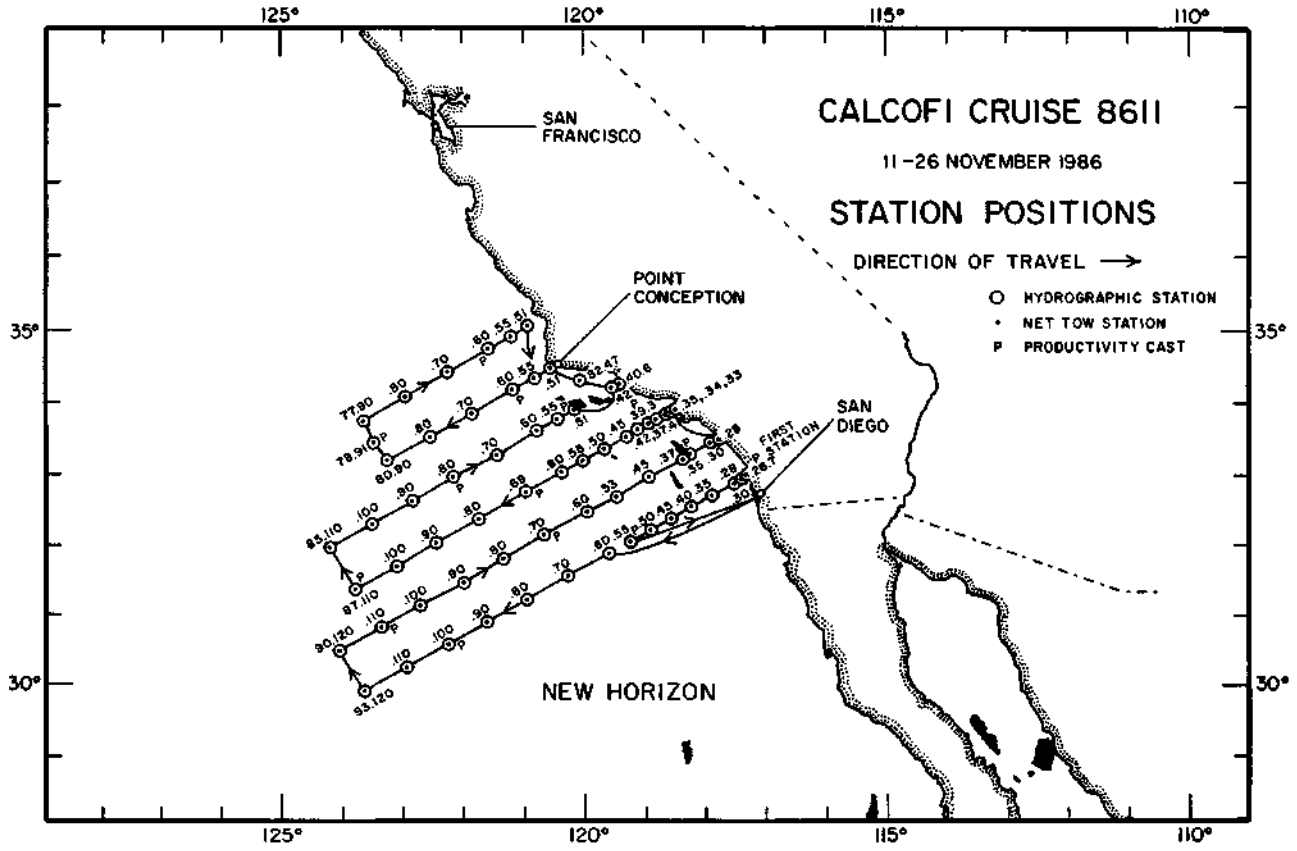

FIGURE 1

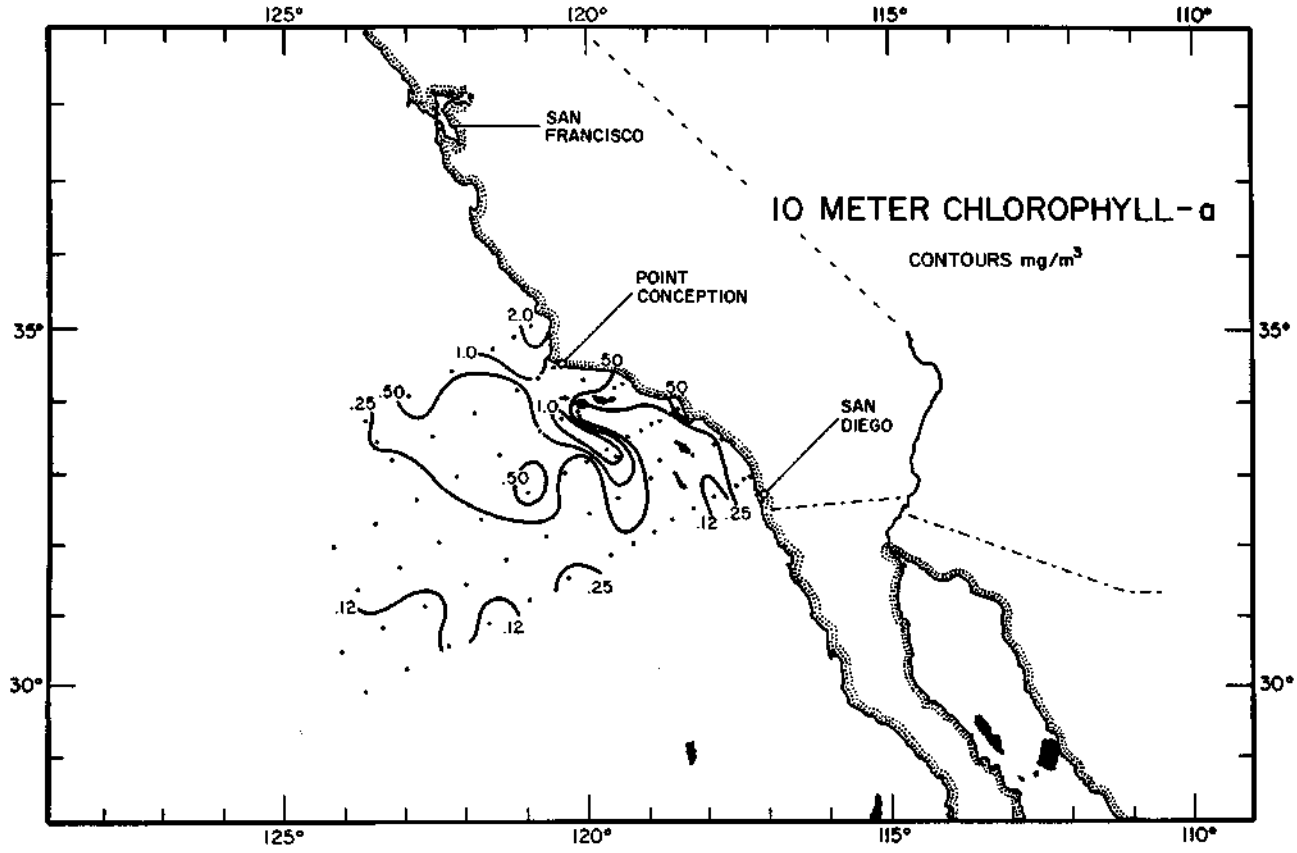

FIGURE 2

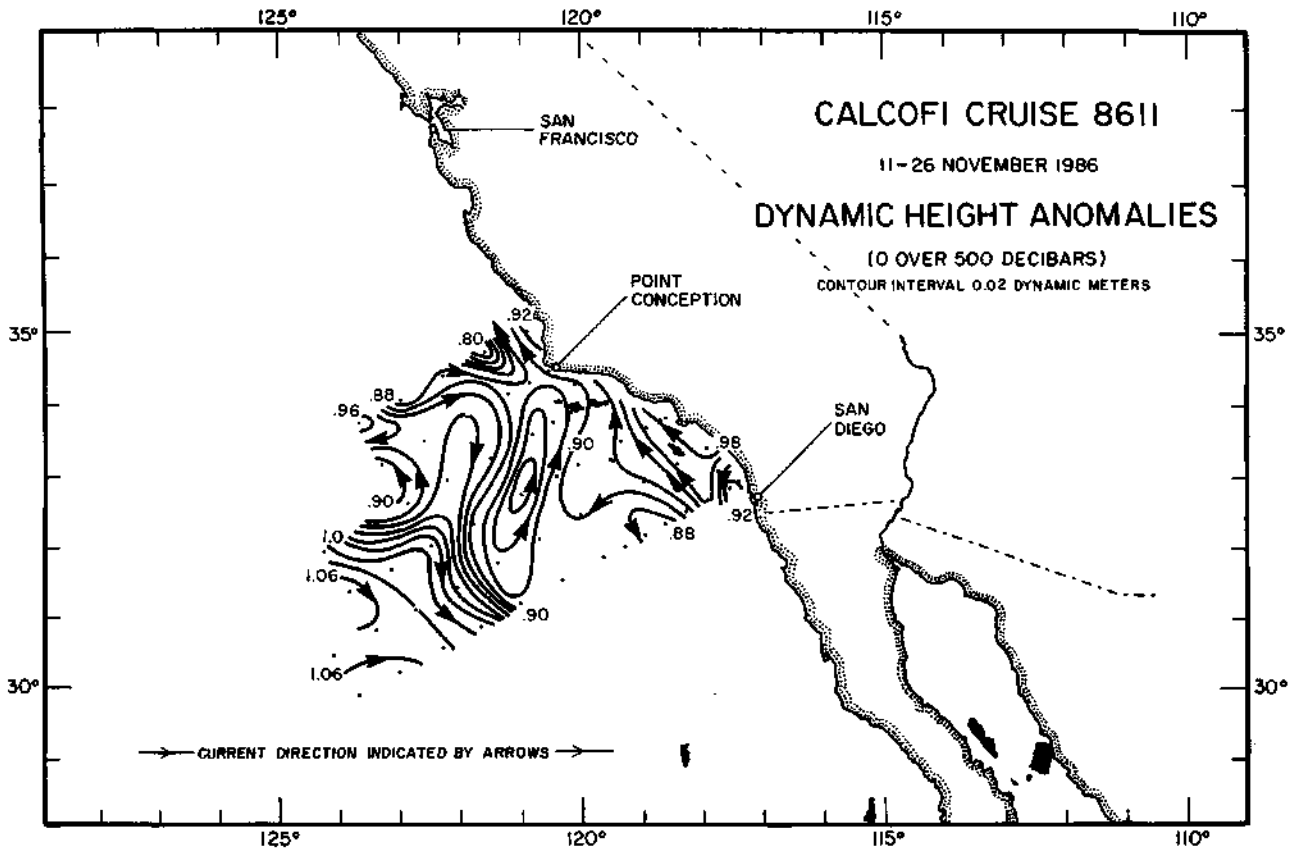

FIGURE 3

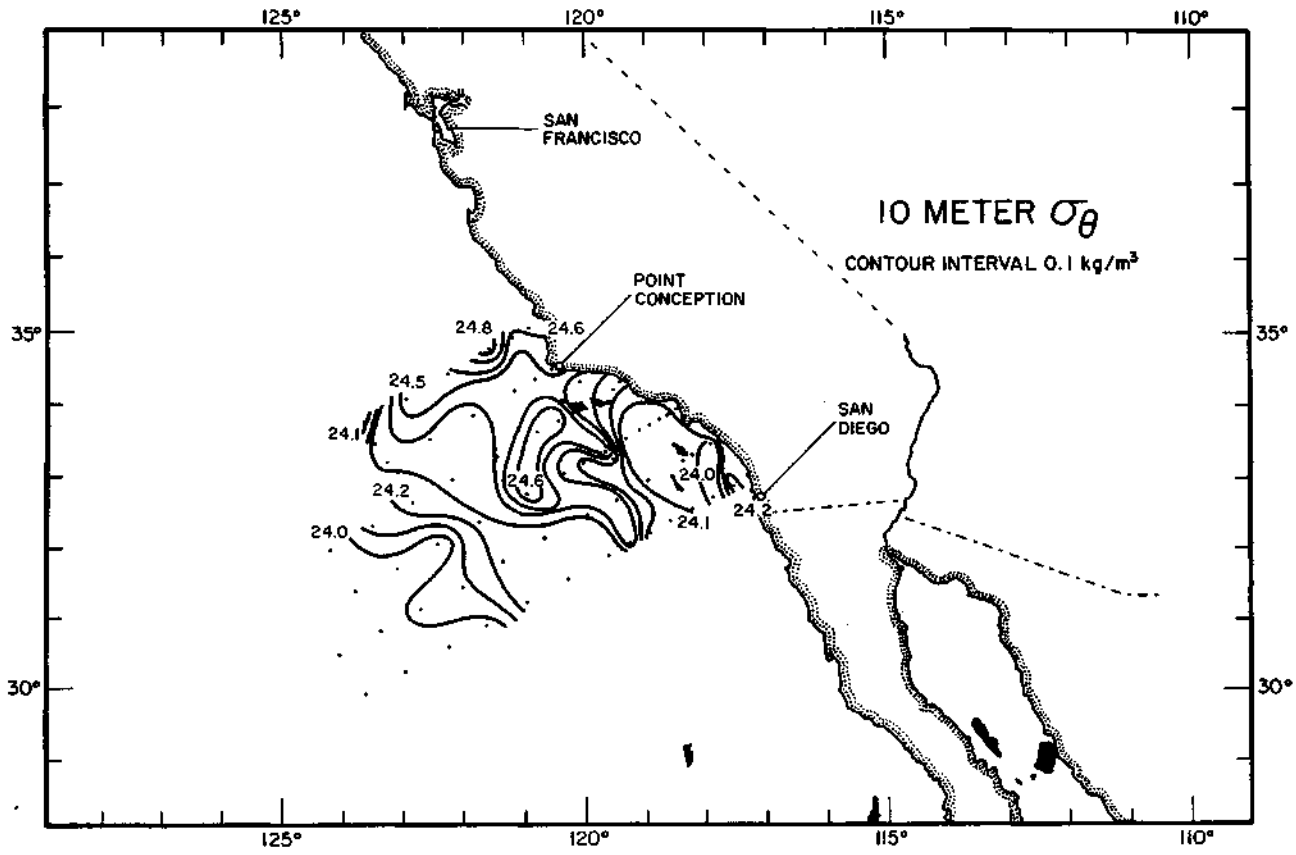

FIGURE 4

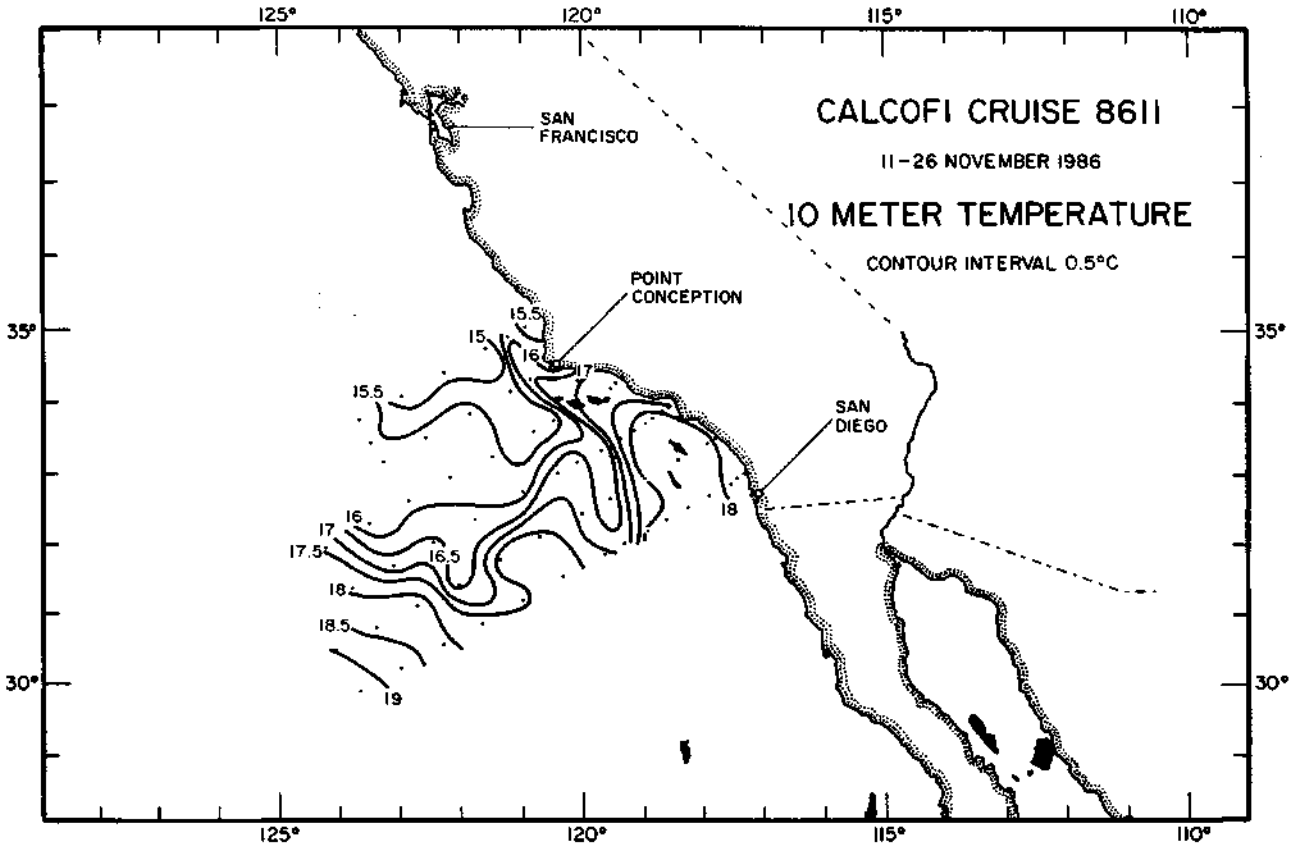

FIGURE 5

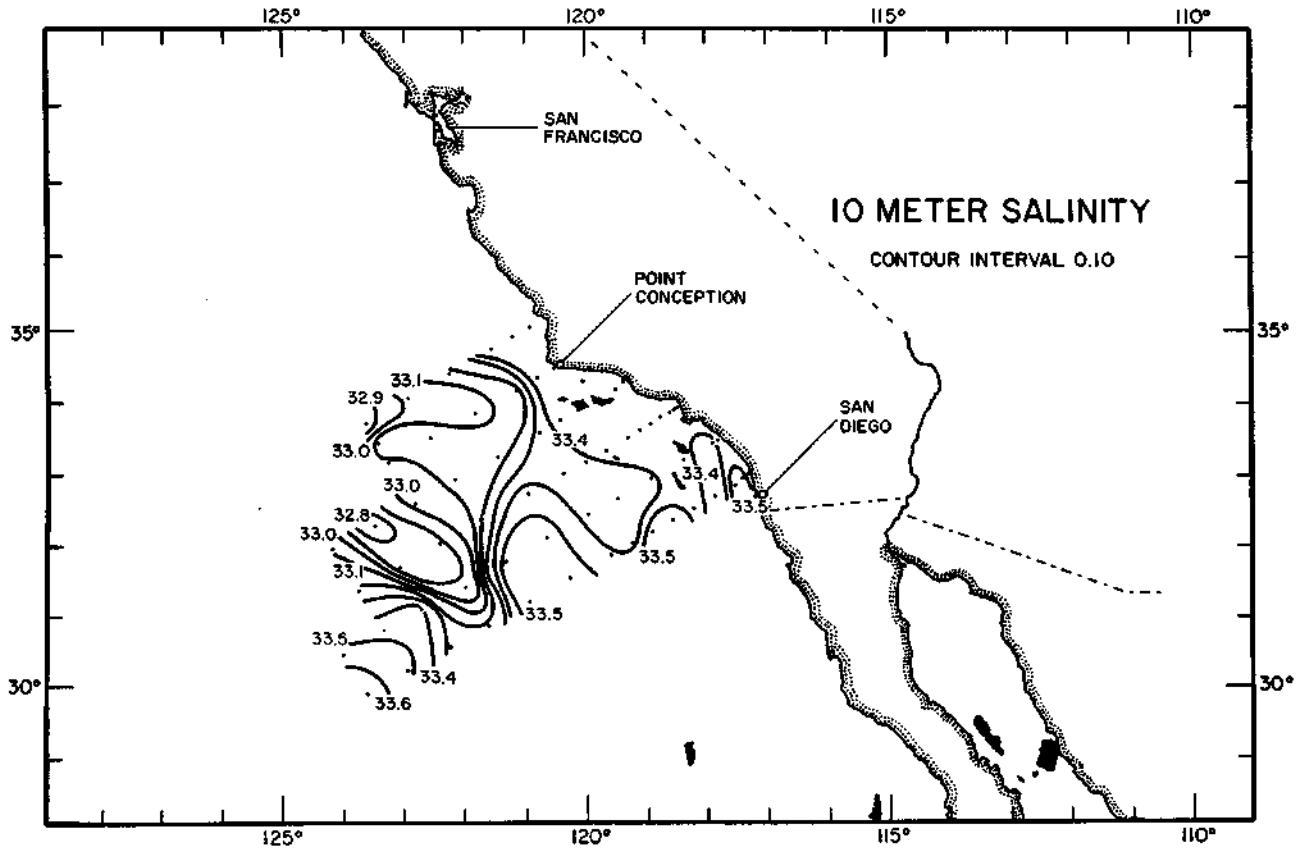

FIGURE 6

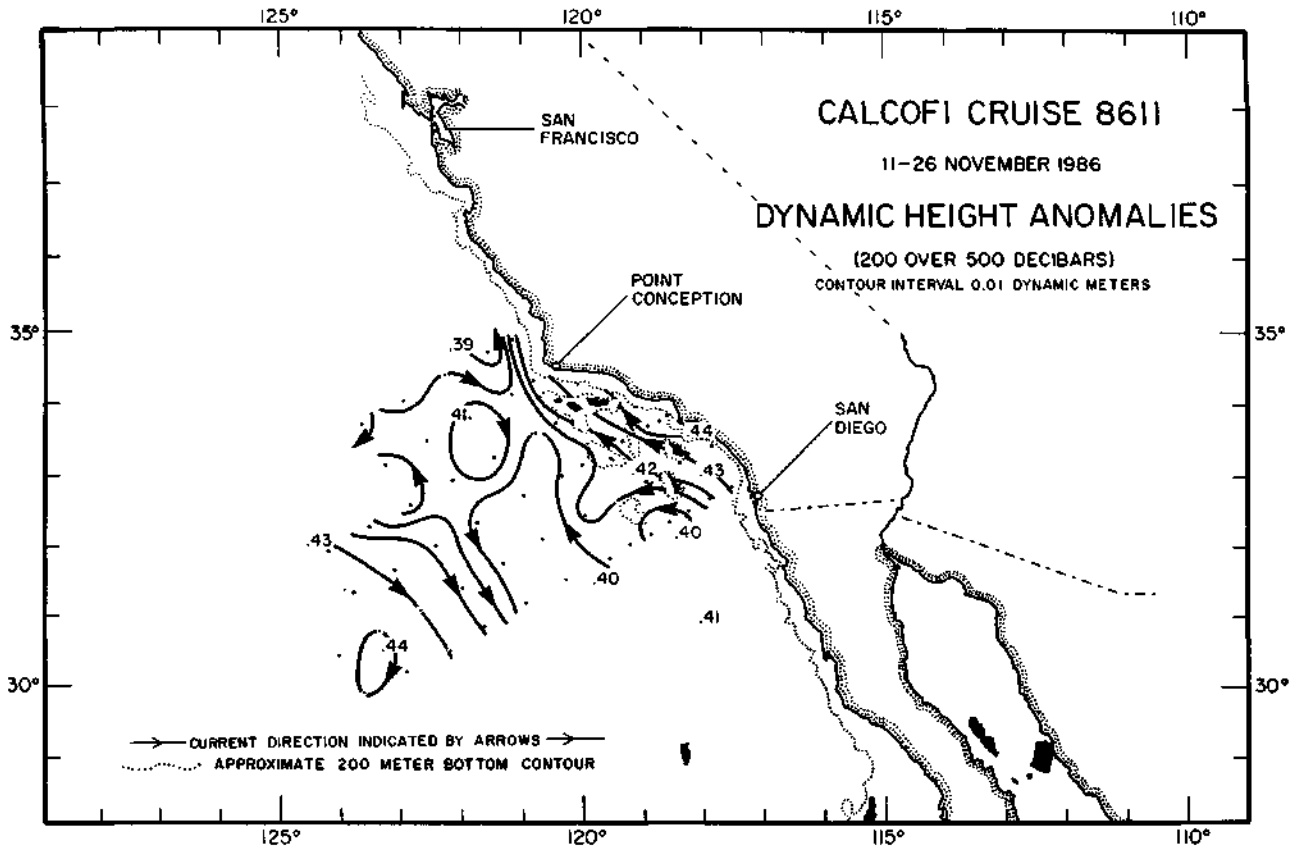

FIGURE 7

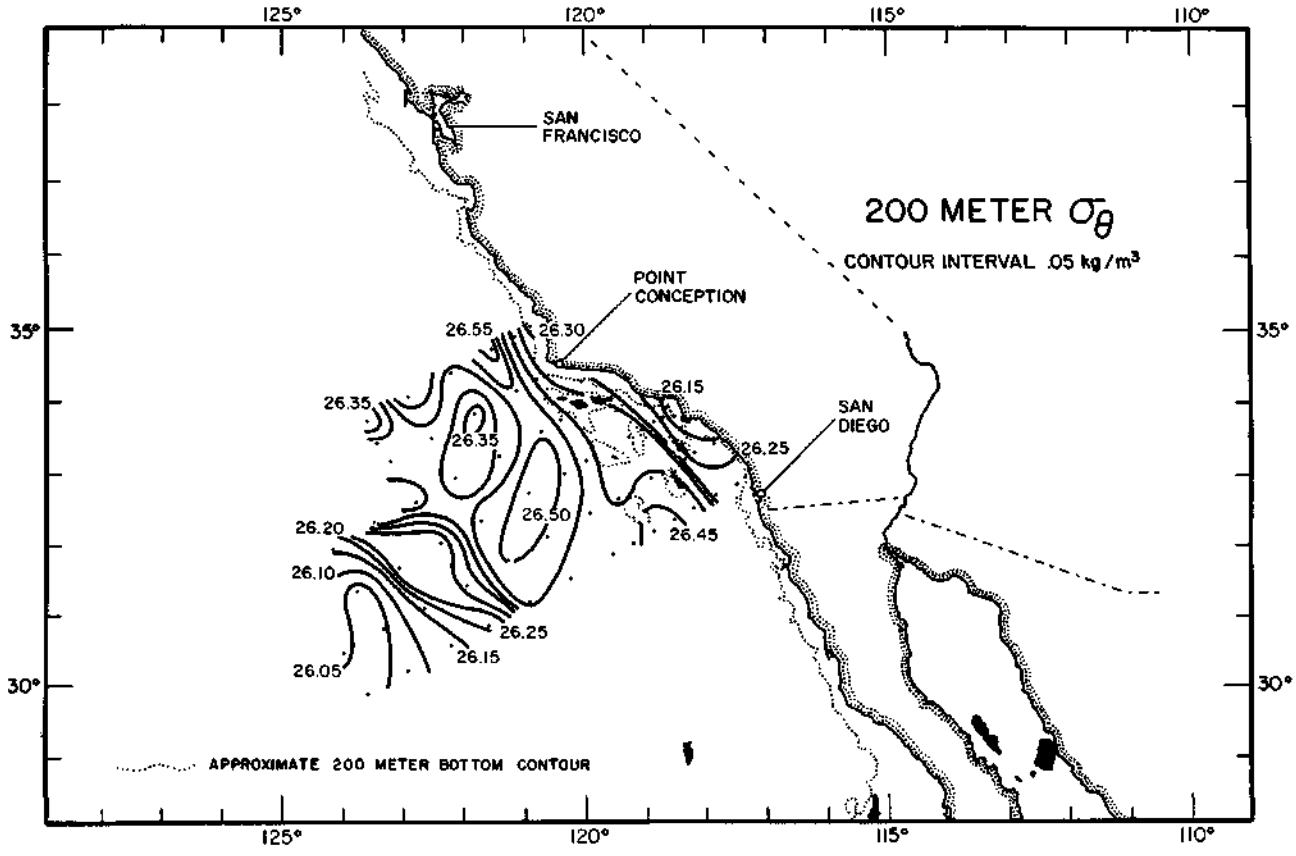

FIGURE 8

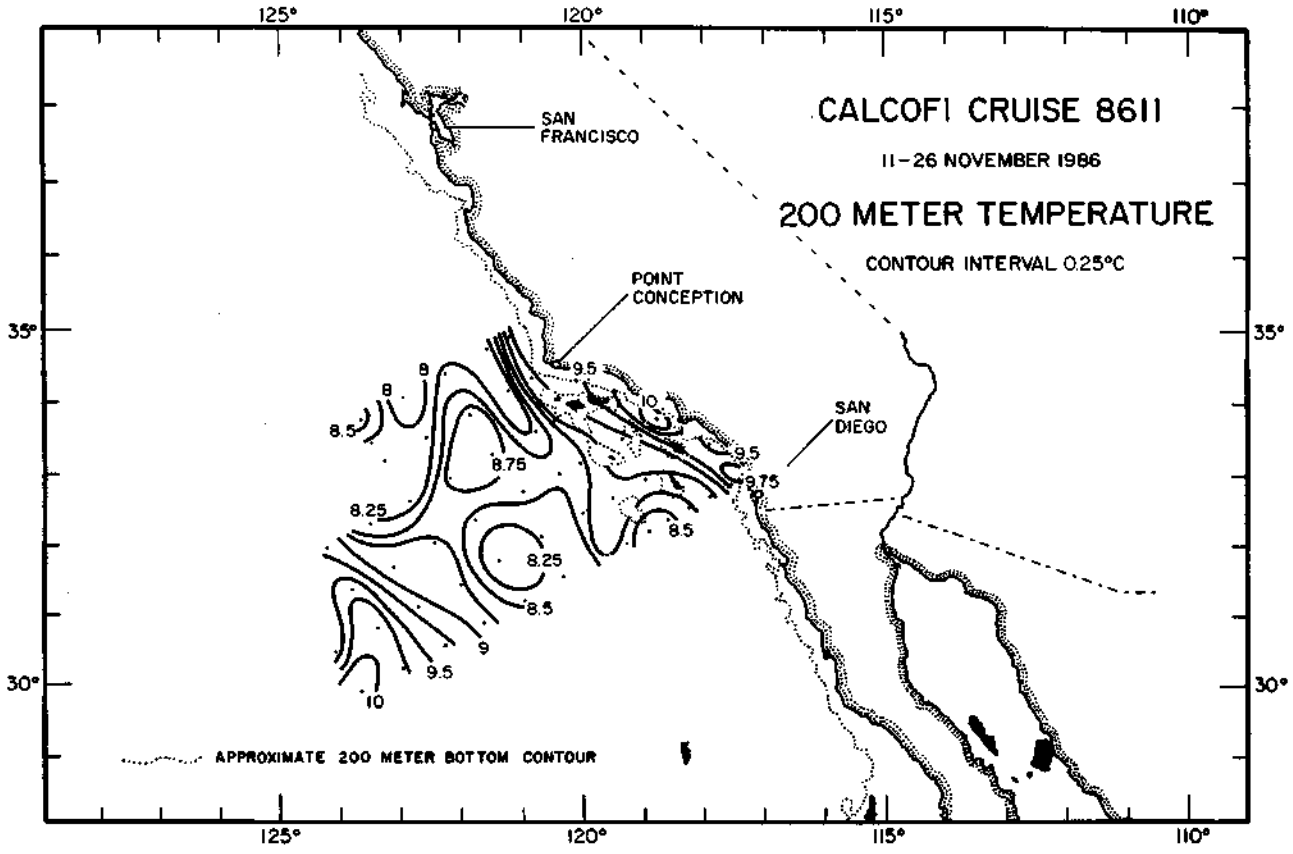

FIGURE 9

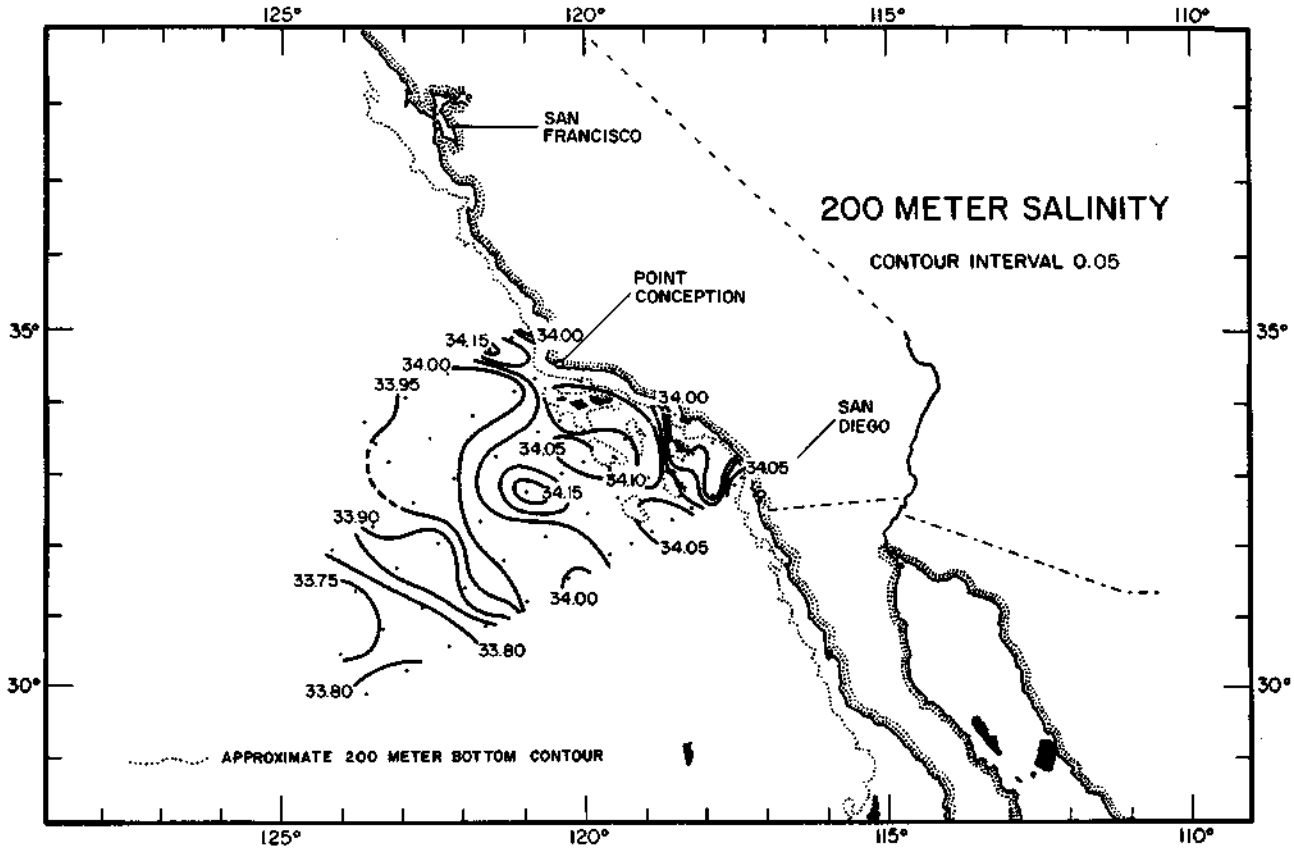

FIGURE 10

PERSONNEL

Cruise 8611

SHIP'S CAPTAIN

Munsch, Phillip L., RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Mantyla, Arnold W. (Chief Scientist)	Specialist in Oceanography, SIO
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS
Anderson, George C.	Staff Research Associate, SIO
Bos, David L.	Staff Research Associate, SIO
Bryan, Walter R.	Marine Technician, SIO
Carr, Carmen Lichtenfels	Volunteer
Flerx, William C.	Fishery Biologist, NMFS
Gruber, Dennis W.	Marine Technician, SIO
Lewin, William D.	Student, UCSB
Pillard, Eugene G.	Resident Technician, SIO
Salcedo-Vargas, Mario Alejandro	Graduate Student, U.N.A.M.
Theilacker, A. Gail H.	Fishery Biologist, NMFS
Venrick, Elizabeth L.	Research Oceanographer, SIO

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 01.1 N	120 55.5 W	26/11/86	0031 GMT	236 M	310	17 KT	310 06 09	0	1017.6 MB	15.0 C	13.6 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UK/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
	0	ISL	15.38	15.38	33.430	24.679	325.3	.000	5.95	104.4							0
1	1		15.38	15.38	33.430	24.679	325.4	.003	5.95	104.4	1.4	.41	.3	.06	3.07	.93	1
	1C	ISL	15.38	15.38	33.429	24.679	325.6	.033	5.94	104.2							10
1	11		15.38	15.38	33.429	24.679	325.6	.036	5.94	104.2	1.5	.43	.3	.07	2.93	.89	11
	20	ISL	15.29	15.29	33.423	24.695	324.5	.065	5.80	101.6							20
1	22		15.27	15.27	33.422	24.699	324.1	.07 1	5.77	101.0	1.9	.45	.7	.11	2.20	.69	22
	30	ISL	15.23	15.22	33.426	24.712	323.1	.097	5.72	100.1							30
1	32		15.22	15.21	33.428	24.715	322.9	.103	5.71	99.8	2.3	.48	1.0	.14	1.74	.67	32
1	43		13.71	13.70	33.412	25.022	293.9	.137	5.24	88.8	5.4	.77	5.1	.32	.52	.44	43
	50	ISL	12.67	12.66	33.443	25.254	271.9	.158	4.82	79.9							50
1	53		12.31	12.31	33.461	25.336	264.2	.165	4.66	76.8	9.4	1.07	10.3	.14	.32	.34	53
1	64		11.59	11.59	33.530	25.525	246.4	.193	4.28	69.5	12.1	1.26	13.2	.09	.23	.27	64
1	74		11.27	11.26	33.554	25.604	239.1	.217	4.09	65.9	13.9	1.36	14.7	.03	.13	.25	74
	75	ISL	11.22	11.21	33.554	25.613	238.3	.220	4.09	65.8							7b
1	89		10.79	10.78	33.550	25.686	231.6	.252	4.08	65.1	15.3	1.45	16.4	.03	.09	.16	89
	ICO	ISL	10.69	10.68	33.583	25.729	227.8	.278	3.95	62.9							101
1	109		10.65	10.64	33.625	25.769	224.2	.300	3.78	60.1	17.3	1.54	18.0	.02	.06	.14	U0
	125	ISL	10.38	10.36	33.717	25.889	213.1	.334	3.41	54.0							126
1	129		10.29	10.27	33.742	25.923	209.9	.343	3.31	52.3	21.1	1.72	20.8	.03	.04	.12	130
1	150		9.91	9.89	33.810	26.041	199.1	.386	3.07	48.1	24.5	1.85	22.6	.04	.02	.12	151
1	181		9.65	9.63	33.919	26.171	187.4	.445	2.55	39.8	29.8	2.08	24.8	.13	.02	.17	182
	200	ISL	9.42	9.40	33.975	26.252	179.9	.480	2.39	37.1							202
1	212		9.25	9.22	34.005	26.303	175.3	.501	2.36	36.5	32.7	2.18	26.8	.06	.01	.08	213

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 53.4 N	121 12.2 W	25/11/86	2126 GMT	558 K	330	12 KT	350 07 08	0	1019.6 MB	16.7 C	13.3 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UH/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
1	0		16.03	16.03	33.448	24.548	337.8	.000	5.86	104.2	1.4	.36	.2	.00	1.58	.57	0
1	10		15.99	15.99	33.446	24.556	337.4	.034	5.88	104.4	1.4	.36	.2	.00	1.69	.62	1C
	20	ISL	15.96	15.96	33.444	24.561	337.2	.067	5.85	103.9							20
1	21		15.96	15.96	33.444	24.561	337.2	.071	5.85	103.8	1.3	.36	.2	.01	1.76	.75	21
	30	ISL	15.94	15.93	33.442	24.565	337.1	.101	5.82	103.3							30
1	31		15.93	15.93	33.442	24.566	337.1	.104	5.82	103.3	1.2	.37	.2	.01	1.93	.75	31
1	41		15.45	15.44	33.421	24.659	328.5	.137	5.80	101.9	1.4	.39	.2	.02	1.48	.67	41
	50	ISL	12.31	12.31	33.021	24.995	296.5	.166	5.68	93.3							50
1	51		12.05	12.04	32.999	25.028	293.4	.168	5.67	92.6	5.1	.76	4.6	.09	.41	.36	51
1	62		11.99	11.98	33.384	25.339	264.1	.199	4.92	80.4	9.0	1.02	9.6	.09	.26	.35	62
1	72		10.96	10.95	33.510	25.625	237.1	.224	4.30	68.8	14.3	1.33	15.2	.03	.12	.19	72
	75	ISL	10.77	10.77	33.560	25.696	230.3	.231	4.21	67.1							76
1	88		10.36	10.35	33.705	25.882	212.9	.259	4.01	63.4	17.7	1.52	18.1	.01	.05	.12	88
	ICO	ISL	10.03	10.02	33.704	25.938	207.4	.285	3.67	57.7							101
1	103		9.96	9.95	33.704	25.949	206.8	.293	3.57	56.0	21.4	1.68	20.8	.00	.03	.10	104
1	124		9.90	9.89	33.834	26.060	196.7	.335	3.02	47.3	25.3	1.85	22.9	.01	.03	.13	125
	125	ISL	9.90	9.88	33.838	26.064	196.3	.336	3.01	47.1							126
1	150		9.64	9.63	33.950	26.195	184.4	.384	2.52	39.3	29.7	2.04	25.4	.01	.02	.08	151
1	181		9.35	9.33	34.023	26.300	175.0	.439	2.25	34.9	33.3	2.17	27.0	.01	.01	.08	182
	200	ISL	9.13	9.1C	34.083	26.384	167.3	.472	2.03	31.4							202
1	21C		9.01	8.98	34.111	26.425	163.6	.488	1.93	29.7	37.7	2.33	28.9	.01	.01	.05	211
1	240		8.71	8.68	34.137	26.493	157.7	.536	1.75	26.7	41.5	2.41	30.0	.00			241
	250	ISL	8.67	8.64	34.155	26.514	155.9	.552	1.65	25.1							252
2	281		8.47	8.44	34.193	26.574	150.6	.600	1.40	21.3	46.1	2.58	31.5	.00			283
	300	ISL	8.07	8.04	34.167	26.614	147.0	.628	1.49	22.4							302
2	337		7.22	7.19	34.107	26.690	139.8	.681	1.69	25.0	52.9	2.58	33.9	.00			339
2	398		6.57	6.53	34.137	26.802	129.6	.764	1.16	16.9	63.6	2.82	37.3	.00			40!
	400	ISL	6.57	6.53	3 4.140	26.805	129.4	.766	1.15	16.7							403
2	465		6.59	6.55	34.242	26.883	123.0	.848	.68	9.9	70.5	3.02	38.0	.00			468
	500	ISL	6.36	6.32	34.266	26.932	118.7	.890	.52	7.6							504
2	537		5.95	5.90	34.267	26.986	113.7	.933	.43	6.2	80.5	3.14	40.2	.01			541

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 43.3 N	121 33.5 W	25/11/86	1708 GMT	927 M	350	16 KT	340 08 08	1	1020.9 MB	15.2 C	13.9 C	1/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L.	PRESS D.EAR
1	0	14.51	14.51	33.471	24.899	304.4	.000	5.82	100.4	2.7	.52	1.8	.09	1.76	.72	0
1	10	14.52	14.52	33.470	24.897	304.9	.030	5.80	100.0	2.9	.52	1.8	.09	1.67	.79	10
1	20	14.51	14.51	33.471	24.899	305.0	.061	5.80	100.0	2.8	.64	1.8	.09	1.69	.73	20
1	29	14.44	14.44	33.479	24.920	303.3	.088	5.74	98.9	3.0	.56	2.2	.09	1.74	.72	29
	30 ISL	14.04	14.04	33.478	25.004	296.1	.091	5.68	97.0							30
1	40	10.51	10.50	33.474	25.675	231.5	.117	4.94	78.3	16.2	1.41	15.8	.05	.25	.35	40
1	50	10.47	10.46	33.582	25.767	223.0	.140	3.99	63.2	18.4	1.50	17.5	.04	.19	.29	50
1	60	10.42	10.41	33.682	25.853	215.0	.162	3.61	57.2	20.6	1.61	19.5	.02	.19	.34	60
1	70	10.11	10.10	33.739	25.951	205.9	.183	3.33	52.4	23.0	1.72	21.2	.01	.14	.24	70
	75 ISL	9.92	9.91	33.772	26.008	200.6	.193	3.21	50.3							76
1	85	9.61	9.60	33.830	26.105	191.5	.212	3.05	47.5	26.9	1.88	23.6	.01	.07	.13	85
1	99	9.26	9.25	33.914	26.229	180.1	.240	2.98	46.1	30.1	1.96	24.9	.00	.05	.11	ICO
	100 ISL	9.25	9.23	33.915	26.232	179.8	.241	2.98	46.0							1C1
1	117	8.87	8.86	33.959	26.326	171.0	.271	2.80	42.9	32.4	2.05	26.1	.00	.04	.11	118
	125 ISL	8.78	8.77	33.982	26.358	168.2	.284	2.73	41.8							126
1	143	8.64	8.62	34.035	26.422	162.4	.314	2.55	38.9	36.4	2.15	27.7	.00	.02	.08	144
	150 ISL	8.57	8.55	34.053	26.447	160.2	.325	2.44	37.2							151
1	171	8.37	8.36	34.102	26.515	154.0	.358	2.10	31.9	41.1	2.35	29.6	.00	.02	.06	172
1	200	8.17	8.15	34.151	26.584	147.9	.402	1.75	26.4	45.1	2.47	31.0	.00	.01	.05	201
1	229	8.05	8.03	34.178	26.624	144.6	.444	1.51	22.7	47.9	2.59	32.1	.00			230
	250 ISL	7.98	7.95	34.207	26.658	141.8	.474	1.26	18.9							252
1	267	7.90	7.88	34.228	26.686	139.5	.499	1.07	16.1	52.9	2.73	33.4	.00			269
	300 ISL	7.66	7.63	34.235	26.727	135.4	.544	.92	13.7							302
1	320	7.46	7.42	34.239	26.760	133.1	.571	.88	13.1	57.2	2.84	35.2	.00			322
1	377	6.60	6.57	34.186	26.836	126.1	.645	.84	12.2	66.8	2.94	37.6	.00			380
	400 ISL	6.33	6.30	34.188	26.873	123.1	.673	.77	11.1							403
1	441	5.93	5.89	34.191	26.927	117.8	.723	.62	8.9	76.2	3.06	40.2	.00			444
	500 ISL	5.54	5.50	34.214	26.993	111.9	.7 90	.47	6.6							504
1	512	5.49	5.45	34.221	27.005	111.0	.804	.44	6.2	84.2	3.16	41.8	.00			516

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 23.5 N	122 15.0 W	25/11/86	1112 GMT	4015 M	340	23 KT			1020.5 MB	14.1 C	12.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
	0 ISL	14.88	14.88	33.157	24.579	334.9	.000	5.87	101.8							0
1	2	14.88	14.88	33.157	24.579	334.9	.007	5.87	101.8	1.8	.46	.3	.03	.49	.19	2
	10 ISL	14.87	14.87	33.157	24.581	335.0	.033	5.88	101.9							1C
1	12	14.86	14.86	33.157	24.582	335.0	.040	5.88	101.9	2.0	.45	.3	.03	.51	.20	12
	20 ISL	14.88	14.87	33.155	24.578	335.5	.067	5.88	101.9							20
1	22	14.88	14.88	33.155	24.577	335.7	.073	5.88	102.0	1.8	.48	.3	.03	.50	.18	22
	30 ISL	14.88	14.87	33.153	24.577	336.0	.101	5.89	102.1							30
1	32	14.88	14.87	33.153	24.576	336.1	.107	5.89	102.1	1.9	.46	.3	.03	.49	.18	32
1	42	14.86	14.85	33.158	24.585	335.5	.140	5.88	101.9	1.9	.45	.3	.03	.51	.17	42
	50 ISL	14.75	14.74	33.157	24.608	333.6	.168	5.88	101.7							50
1	52	14.73	14.72	33.157	24.613	333.2	.174	5.88	101.6	2.1	.47	.4	.04	.47	.19	52
1	62	11.70	11.69	33.017	25.108	286.0	.204	5.55	90.0	5.8	.83	6.1	.03	.24	.22	62
1	72	11.43	11.42	33.072	25.199	277.5	.232	5.39	86.9	7.2	.93	7.9	.02	.21	.22	72
	75 ISL	11.17	11.16	33.095	25.264	271.4	.242	5.32	85.3							76
1	87	10.22	10.21	33.209	25.518	247.3	.272	5.01	78.8	12.5	1.38	13.1	.01	.05	.0S	87
	100 ISL	9.90	9.89	33.408	25.727	227.8	.303	4.55	71.2							1C1
1	103	9.87	9.86	33.440	25.758	224.9	.309	4.47	69.8	16.6	1.43	16.8	.01	.02	.06	103
1	122	9.03	9.01	33.476	25.923	209.4	.352	4.02	61.6	22.7	1.68	21.1	.01	.01	.04	123
	125 ISL	8.97	8.96	33.506	25.956	206.4	.358	3.95	60.5							126
1	148	8.68	8.66	33.798	26.230	180.7	.403	3.37	51.4	29.5	1.93	25.4	.00	.00	.03	149
	150 ISL	8.65	8.64	33.810	26.243	179.5	.406	3.36	51.1							151
1	180	8.35	8.34	33.930	26.384	166.7	.458	3.18	48.2	33.1	2.01	26.7	.01	.00	.03	181
	200 ISL	8.30	8.28	33.988	26.438	161.9	.491	2.83	42.9							202
1	211	8.26	8.23	34.008	26.460	159.9	.508	2.65	40.1	37.2	2.21	28.5	.01	.00	.03	212
1	241	7.84	7.81	34.019	26.531	153.5	.555	2.53	37.9	41.9	2.27	30.0	.00			242
	250 ISL	7.67	7.65	34.020	26.556	151.4	.569	2.50	37.3							252
1	281	7.15	7.12	34.023	26.633	144.2	.615	2.31	34.0	49.2	2.42	32.3	.00			283
	300 ISL	6.94	6.91	34.041	26.676	140.3	.642	2.02	29.7							302
1	339	6.59	6.56	34.084	26.757	133.0	.695	1.39	20.2	61.2	2.78	36.7	.00			3M
1	399	5.98	5.95	34.113	26.859	123.7	.773	.96	13.8	71.6	2.96	39.4	.00			402
	400 ISL	5.98	5.94	34.114	26.860	123.6	.773	.96	13.7							403
1	465	5.50	5.46	34.161	26.956	114.9	.85 1	.61	8.7	81.1	3.13	41.5	.00			468
	500 ISL	5.31	5.27	34.192	27.004	110.7	.891	.48	6.8							504
1	535	5.16	5.11	34.226	27.049	106.7	.929	.39	5.5	90.9	3.23	42.7	.00			539

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 03.3 N	122 56.7 W	25/11/86	0401 GMT	4209 M	350	25 KT	340 08 06	1	1023.6 MB	15.2 C	13.3 C	2/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	14.66	14.66	33.053	24.544	338.2	.000	5.98	103.2							0
1	1		14.66	14.66	33.053	24.544	338.2	.003	5.98	103.2	2.3	.45	.3	.04	.76	.21	1
	10	ISL	14.66	14.66	33.053	24.544	338.4	.034	5.97	103.0							10
1	12		14.67	14.66	33.053	24.544	338.5	.040	5.97	103.0	2.4	.45	.3	.04	.75	.23	12
	20	ISL	14.67	14.67	33.052	24.543	338.9	.068	5.97	103.0							20
1	21		14.67	14.67	33.052	24.543	338.9	.071	5.97	103.0	2.2	.45	.3	.04	.73	.24	21
	30	ISL	14.66	14.65	33.064	24.555	338.0	.102	5.97	103.0							30
1	31		14.65	14.65	33.065	24.557	337.9	.104	5.97	103.0	2.4	.45	.3	.04	.71	.24	31
1	42		13.40	13.39	33.009	24.773	317.5	.140	5.93	99.7	3.0	.54	1.2	.16	.47	.28	42
	50	ISL	12.89	12.88	33.033	24.892	306.3	.166	5.77	96.0							50
1	52		12.79	12.79	33.043	24.920	303.8	.171	5.73	95.1	4.4	.71	3.6	.21	.37	.26	52
1	62		11.92	11.91	33.121	25.147	282.3	.200	5.48	89.3	6.5	.82	6.2	.11	.22	.21	62
1	72		11.79	11.78	33.346	25.345	263.7	.228	4.72	76.8	10.5	1.15	11.7	.03	.17	.20	72
	75	ISL	11.61	11.60	33.393	25.417	257.0	.236	4.57	74.0							76
1	88		10.81	10.79	33.523	25.662	233.8	.267	4.12	65.7	15.3	1.46	16.6	.02	.09	.14	88
	100	ISL	10.40	10.39	33.645	25.828	218.2	.295	3.62	57.2							101
1	103		10.33	10.32	33.668	25.858	215.5	.301	3.52	55.6	20.3	1.66	20.3	.02	.03	.09	103
1	122		9.54	9.52	33.835	26.122	190.7	.341	2.97	46.2	27.5	1.93	24.7	.01	.00	.09	123
	125	ISL	9.45	9.44	33.846	26.145	188.6	.346	2.96	45.9							126
1	148		8.82	8.80	33.900	26.288	175.3	.388	2.88	44.1	32.0	2.05	26.6	.00	.00	.05	149
	150	ISL	8.77	8.76	33.904	26.299	174.3	.391	2.93	44.8							151
1	178		8.12	8.10	33.954	26.437	161.4	.438	3.58	53.9	33.1	1.89	25.3	.00	.00	.03	179
	200	ISL	7.79	7.77	33.990	26.515	154.3	.473	3.11	46.6							202
1	210		7.66	7.64	34.003	26.544	151.7	.488	2.82	42.1	41.0	2.17	29.1	.00	.00	.03	211
1	239		7.25	7.23	34.017	26.613	145.4	.531	2.53	37.4	47.0	2.31	31.0	.00			240
	250	ISL	7.17	7.14	34.028	26.634	143.6	.547	2.36	34.8							252
1	280		7.00	6.97	34.059	26.681	139.5	.590	1.91	28.1	53.6	2.53	33.7	.00			282
	300	ISL	6.83	6.80	34.069	26.713	136.8	.617	1.71	25.0							302
1	336		6.49	6.46	34.085	26.771	131.6	.666	1.39	20.2	62.6	2.77	36.7	.01			338
1	396		6.03	6.00	34.144	26.877	122.0	.742	.83	11.9	72.8	3.01	39.4	.00			399
	400	ISL	6.01	5.97	34.147	26.883	121.6	.747	.81	11.6							403
1	462		5.67	5.63	34.193	26.961	114.7	.820	.57	8.1	80.7	3.13	40.8	.00			465
	500	ISL	5.50	5.46	34.225	27.007	110.5	.863	.46	6.5							504
1	533		5.37	5.32	34.256	27.048	107.0	.899	.38	5.4	88.6	3.21	42.0	.00			537

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 43.2 N	123 38.0 W	24/11/86	2225 GMT	4198 M	350	21 KT	350 05 05	0	1024.2 MB	16.2 C	14.0 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		15.91	15.91	32.809	24.084	382.0	.000	5.80	102.5	.4	.44	.1	.00	.23	.08	0
	10	ISL	15.89	15.89	32.809	24.089	381.9	.038	5.81	102.5							1C
1	16		15.88	15.88	32.810	24.092	381.8	.061	5.81	102.6	.4	.43	.1	.00	.24	.07	16
	20	ISL	15.86	15.86	32.813	24.099	380.6	.076	5.81	102.6							20
	30	ISL	15.71	15.71	32.819	24.136	377.6	.114	5.83	102.7							30
1	32		15.67	15.67	32.820	24.146	377.1	.121	5.84	102.7	.4	.44	.1	.00	.28	.11	32
1	42		15.30	15.29	32.869	24.266	365.9	.158	5.89	102.8	.5	.45	.1	.01	.43	.13	42
	50	ISL	15.10	15.09	32.859	24.304	362.6	.188	5.91	102.8							50
1	53		15.03	15.02	32.859	24.318	361.2	.198	5.92	102.8	.8	.46	.2	.02	.47	.17	53
1	63		14.69	14.68	32.965	24.473	346.8	.233	5.95	102.6	1.3	.47	.3	.05	.50	.24	63
1	74		12.34	12.34				.269	6.05	99.3	2.6	.62	1.7	.09	.34	.32	74
	75	ISL	12.17	12.16	32.818	24.866	309.4	.273	6.04	98.8							76
1	84		11.40	11.38	32.722	24.934	303.0	.300	6.00	96.5	3.6	.72	3.2	.02	.17	.15	84
1	100		11.06	11.05	32.878	25.115	286.0	.347	5.65	90.3	6.6	.91	7.0	.02	.08	.12	100
1	115		10.92	10.90	33.235	25.419	257.5	.387	5.11	81.6	9.4	1.06	10.3	.01	.03	.07	115
	125	ISL	10.76	10.74	33.321	25.513	248.8	.414	4.97	79.2							126
1	130		10.65	10.63	33.346	25.553	245.1	.427	4.91	78.0	11.2	1.19	12.7	.01	.03	.05	131
	150	ISL	9.92	9.91	33.581	25.860	216.2	.473	4.20	65.8							151
1	156		9.66	9.65	33.659	25.964	206.4	.486	3.96	61.7	19.8	1.57	19.9	.00	.01	.03	157
1	181		8.92	8.90	33.831	26.219	182.5	.534	3.50	53.7	26.7	1.81	23.8	.00	.00	.02	182
	200	ISL	8.66	8.64	33.903	26.316	173.6	.568	3.31	50.5							201
1	213		8.53	8.51	33.934	26.360	169.6	.590	3.23	49.1	31.2	1.93	25.6	.00	.00	.02	214
1	243		8.01	7.99	33.989	26.482	158.3	.639	3.03	45.5	37.0	2.06	27.7	.00			244
	250	ISL	7.91	7.89	34.000	26.506	156.2	.650	2.92	43.8							252
1	283		7.51	7.48	34.043	26.598	147.8	.701	2.33	34.6	45.3	2.37	31.1	.00			285
	300	ISL	7.27	7.24	34.056	26.642	143.7	.725	2.09	30.9							302
1	340		6.72	6.69	34.079	26.735	135.2	.781	1.60	23.4	57.9	2.66	35.6	.00			342
	400	ISL	6.19	6.15	34.108	26.828	126.8	.860	1.09	15.8							403
1	401		6.19	6.15	34.108	26.829	126.8	.860	1.09	15.7	67.7	2.88	38.4	.00			403
1	467		5.77	5.73	34.177	26.936	117.1	.942	.62	8.9	77.5	3.08	40.5	.00			470
	500	ISL	5.61	5.56	34.202	26.976	113.6	.980	.49	7.0							504
1	539		5.45	5.40	34.224	27.013	110.4	1.024	.44	6.2	85.3	3.20	41.6	.00			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 78 91

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 24.3 N	123 27.6 W	24/11/86	1855 GMT	4282 M	350	26 KT	340 05 06	1	1027.0 MB	16.0 C	13.9 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.59	15.59	33.103	24.381	353.8	.000	5.81	102.2							0
1	1	A	15.59	15.59	33.103	24.381	353.8	.004	5.81	102.2	1.1	.42	.1	.00	.27	.10	1
	10	ISL	15.59	15.58	33.101	24.381	354.1	.035	5.81	102.2							10
1	13	A	15.58	15.58	33.100	24.381	354.1	.046	5.81	102.1	1.2	.42	.1	.00	.27	.11	13
1	16	A	15.59	15.59	33.100	24.379	354.4	.056	5.81	102.2	1.3	.42	.1	.00	.29	.14	16
	20	ISL	15.59	15.59	33.100	24.379	354.6	.071	5.81	102.2							20
1	24	A	15.60	15.59	33.101	24.379	354.6	.085	5.81	102.2	1.2	.42	.1	.00	.28	.12	24
	30	ISL	15.59	15.58	33.098	24.379	354.8	.106	5.80	102.0							30
1	33		15.59	15.58	33.097	24.379	355.0	.116	5.80	102.0	1.4	.42	.1	.00	.30	.13	33
1	43	A	15.60	15.60	33.097	24.375	355.6	.152	5.81	102.2	1.3	.43	.1	.00	.30	.12	43
	50	ISL	14.91	14.90	33.090	24.522	341.8	.177	5.85	101.5							50
1	56		14.15	14.15	33.077	24.672	327.6	.196	5.88	100.4	2.3	.54	.9	.20	.49	.32	56
1	68		12.73	12.72	32.986	24.889	307.1	.234	5.81	96.3	3.8	.67	3.0	.30	.34	.33	68
	75	ISL	12.26	12.25	33.040	25.021	294.7	.256	5.58	91.6							76
1	80	A	12.00	11.99	33.092	25.111	286.2	.270	5.41	88.3	6.6	.91	7.2	.04	.18	.20	80
1	92		10.98	10.96	33.190	25.373	261.4	.302	5.08	81.2	10.2	1.14	11.4	.02	.10	.14	92
	100	ISL	10.62	10.61	33.224	25.462	253.1	.324	5.00	79.3							101
1	107		10.43	10.41	33.262	25.525	247.2	.340	4.93	77.9	12.7	1.22	13.3	.01	.05	.09	107
1	123		9.79	9.78	33.557	25.863	215.3	.379	4.28	66.8	18.3	1.48	18.3	.01	.01	.04	124
	125	ISL	9.75	9.74	33.574	25.883	213.4	.383	4.22	65.8							126
1	144		9.32	9.31	33.725	26.072	195.9	.422	3.66	56.6	24.1	1.74	22.6	.00	.01	.03	145
	150	ISL	9.18	9.16	33.763	26.124	191.0	.433	3.64	56.1							151
1	177		8.57	8.55	33.899	26.326	172.1	.482	3.53	53.7	29.3	1.83	24.6	.00	.00	.02	178
	200	ISL	8.22	8.20	33.954	26.422	163.3	.521	3.45	52.2							201
1	208		8.14	8.12	33.960	26.440	161.8	.534	3.43	51.7	32.9	1.92	26.0	.00	.01	.02	209

A. PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE DEPTHS.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 27.2 N	120 31.9 W	23/11/86	1219 GMT	81 M	360	15 KT			1025.0 MB	16.1 C	12.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.35	16.35	33.478	24.498	343.0	.000	5.60	100.2							0
1	1		16.35	16.35	33.478	24.498	342.7	.003	5.60	100.2	3.1	.45	.5	.10	.97	.31	1
	10	ISL	15.93	15.92	33.434	24.562	336.8	.034	5.62	99.7							1C
1	11		15.87	15.87	33.430	24.571	335.9	.037	5.62	99.6	3.6	.48	.9	.16	.82	.35	11
	20	ISL	15.20	15.20	33.399	24.695	324.4	.067	5.57	97.3							20
1	22		15.07	15.06	33.394	24.721	322.0	.073	5.55	96.7	4.3	.55	1.9	.25	.68	.30	22
	30	ISL	14.72	14.72	33.383	24.788	315.9	.099	5.46	94.5							30
1	32		14.64	14.64	33.380	24.802	314.6	.105	5.44	94.0	5.0	.63	2.8	.33	.58	.32	32
1	42		14.00	14.00	33.342	24.908	304.8	.136	5.45	92.9	5.3	.67	3.4	.33	.47	.29	42
	50	ISL	13.83	13.82	33.345	24.946	301.4	.161	5.38	91.4							50
1	53		13.79	13.79	33.348	24.956	300.5	.169	5.35	90.8	5.9	.72	4.1	.39	.40	.29	53
1	62		13.51	13.50	33.348	25.013	295.2	.195	5.30	89.5	6.1	.78	4.8	.37	.37	.30	62
	75	ISL	12.95	12.94	33.362	25.136	283.8	.234	5.12	85.5							76
1	76		12.92	12.91	33.363	25.144	283.1	.236	5.11	85.2	7.3	.87	6.5	.35	.31	.40	76

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 18.9 N	120 48.9 W	23/11/86	1553 GMT	775 M	350	13 KT	330 08 07	1	1026.5 MB	16.8 C	14.1 C	1/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	HO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
1	0		16.49	16.49	33.465	24.456	346.6	.000	5.72	102.6	2.1	.41	.3	.01	.93	.23	0
1	10		16.49	16.49	33.459	24.452	347.3	.035	5.73	102.8	2.0	.38	.3	.02	1.00	.32	10
1	20		16.31	16.30	33.457	24.493	343.7	.069	5.70	101.9	2.1	.41	.4	.03	1.29	.31	20
1	30		13.35	13.35	33.336	25.035	292.3	.101	5.40	90.9	5.2	.74	4.6	.32	.56	.34	30
1	41		12.34	12.33	33.431	25.308	266.5	.131	4.88	80.4	8.6	.98	9.1	.16	.31	.27	41
	50	ISL	11.81	11.80	33.537	25.490	249.4	.155	4.31	70.3							50
1	51		11.77	11.77	33.546	25.504	248.1	.157	4.27	69.6	12.8	1.25	13.2	.17	.39	.31	51
1	61		11.19	11.18	33.595	25.650	234.5	.181	3.98	64.1	15.6	1.40	15.7	.07	.23	.24	61
1	71		11.09	11.08	33.609	25.678	232.0	.204	3.90	62.7	16.1	1.43	16.2	.06	.19	.20	71
	75	ISL	11.01	11.00	33.624	25.704	229.6	.214	3.82	61.3							76
1	86		10.75	10.74	33.674	25.789	221.7	.238	3.57	56.9	18.6	1.56	18.0	.02	.08	.15	86
1	100		10.33	10.32	33.770	25.938	207.9	.270	3.15	49.8	22.8	1.75	21.1	.01	.05	.11	101
1	120		10.01	10.00	33.842	26.049	197.7	.310	2.94	46.2	25.5	1.87	22.8	.00	.03	.11	121
	125	ISL	9.97	9.96	33.863	26.072	195.7	.319	2.84	44.6							126
1	145		9.83	9.81	33.949	26.163	187.4	.358	2.44	38.2	29.3	2.03	25.0	.00	.02	.06	146
	150	ISL	9.77	9.75	33.964	26.185	185.4	.367	2.41	37.7							151
1	175		9.44	9.42	34.025	26.287	176.1	.412	2.33	36.2	32.5	2.21	26.4	.00	.00	.05	176
	200	ISL	9.23	9.21	34.082	26.367	169.1	.455	2.13	33.0							202
1	205		9.19	9.17	34.093	26.381	167.8	.463	2.08	32.1	35.6	2.28	27.8	.00	.00	.05	206
I	235		8.96	8.93	34.182	26.489	158.0	.512	1.66	25.5	39.9	2.42	29.4	.00			236
	250	ISL	8.90	8.87	34.206	26.517	155.7	.536	1.54	23.7							252
1	274		8.80	8.77	34.228	26.551	153.0	.574	1.41	21.6	43.2	2.54	30.5	.00			276
	300	ISL	8.55	8.52	34.251	26.607	148.0	.612	1.21	18.4							302
1	329		8.23	8.20	34.268	26.669	142.3	.654	1.01	15.3	50.3	2.72	32.8	.00			331
1	390		7.68	7.64	34.260	26.746	135.8	.740	.87	13.0	56.1	2.82	34.6	.00			393
	400	ISL	7.62	7.58	34.264	26.758	134.8	.753	.84	12.5							403
1	457		7.10	7.06	34.267	26.833	128.1	.828	.66	9.7	63.3	2.96	36.6	.00			460
	500	ISL	6.36	6.31	34.225	26.900	121.6	.88 1	.62	9.0							504
1	529		5.69	5.64	34.181	26.950	116.5	.916	.60	8.5	78.8	3.09	40.8	.00			533

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 08.9 N	121 09.2 W	23/11/86	2005 GMT	2227 M	310	16 KT	310 09 10	1	1025.6 MB	17.0 C	15.0 C	1/8	CI

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.26	15.26	33.124	24.469	345.3	.000	5.89	102.9							0
1	2		15.26	15.26	33.124	24.469	345.4	.007	5.89	102.9	2.1	.45	.0	.00	.41	.14	2
	10	ISL	15.27	15.27	33.124	24.469	345.7	.035	5.87	102.6							1C
1	11		15.27	15.27	33.124	24.469	345.7	.038	5.87	102.6	2.0	.45	.0	.01	.42	.12	11
	20	ISL	15.22	15.22	33.123	24.478	344.9	.069	5.86	102.3							20
1	22		15.21	15.20	33.123	24.482	344.8	.076	5.86	102.3	2.2	.45	.0	.01	.43	.14	22
	30	ISL	15.07	15.07	33.158	24.538	339.7	.103	5.91	103.0							30
1	32		15.02	15.02	33.168	24.557	338.0	.110	5.93	103.1	2.0	.45	.1	.01	.88	.35	32
1	42		14.60	14.59	33.212	24.682	326.2	.143	5.98	103.1	1.5	.45	.2	.04	1.08	.47	42
	50	ISL	13.11	13.11	33.019	24.839	311.5	.169	5.88	98.3							50
1	53		12.57	12.57	32.957	24.896	306.0	.177	5.83	96.3	4.2	.68	2.9	.11	.48	.37	53
1	64		11.59	11.58	32.996	25.111	285.8	.210	5.55	89.8	6.8	.87	6.3	.03	.16	.25	64
1	73		11.03	11.02	33.081	25.278	270.0	.235	5.36	85.7	8.7	1.02	8.8	.02	.11	.14	73
	75	ISL	10.90	10.89	33.098	25.313	266.7	.241	5.32	84.8							76
1	90		10.36	10.35	33.238	25.518	247.5	.278	4.96	78.2	12.5	1.24	13.0	.02	.05	.07	90
	100	ISL	10.36	10.35	33.437	25.673	233.0	.303	4.47	70.6							101
1	104		10.36	10.35	33.500	25.722	228.4	.312	4.31	68.1	16.5	1.53	17.2	.01	.03	.08	1C4
1	124		9.64	9.63	33.611	25.929	209.0	.357	3.99	62.1	20.9	1.65	20.3	.01	.01	.05	125
	125	ISL	9.62	9.61	33.616	25.937	208.3	.358	3.97	61.7							126
1	150		8.90	8.89	33.838	26.226	181.2	.408	3.22	49.4	29.2	1.94	25.1	.01	.00	.03	151
1	180		8.35	8.33	33.954	26.403	164.8	.459	3.39	51.3	32.5	1.96	25.4	.01	.00	.02	181
	200	ISL	8.01	7.99	33.984	26.478	158.0	.491	3.27	49.1							202
1	212		7.87	7.85	33.997	26.509	155.2	.510	3.10	46.5	38.1	2.11	27.7	.01	.00	.02	213
1	242		7.81	7.79	34.055	26.563	150.6	.555	2.33	34.9	43.3	2.34	30.3	.01			243
	250	ISL	7.69	7.66	34.059	26.585	148.5	.568	2.25	33.6							252
1	282		7.11	7.09	34.061	26.668	140.9	.615	2.12	31.2	50.5	2.45	32.7	.01			284
	300	ISL	6.95	6.92	34.068	26.695	138.5	.639	1.94	28.5							302
1	339		6.70	6.67	34.082	26.740	134.6	.693	1.53	22.3	58.5	2.69	35.7	.00			341
	400	ISL	6.23	6.20	34.113	26.827	127.0	.773	1.10	15.8							403
1	401		6.22	6.19	34.113	26.828	126.9	.774	1.09	15.7	67.4	2.90	38.3	.00			404
1	468		5.82	5.78	34.162	26.918	118.9	.856	.73	10.4	76.2	3.06	40.4	.00			471
	500	ISL	5.65	5.61	34.188	26.960	115.2	.894	.59	8.4							504
1	539		5.47	5.42	34.222	27.009	110.9	.938	.45	6.4	85.1	3.19	41.8	.00			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 48.9 N	121 50.6 W	24/11/86	0223 GMT	3643 M	330	22 KT		0	1025.2 MB	15.0 C	13.7 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.61	15.61	33.093	24.370	354.8	.000	5.83	102.5							0
1	1		15.61	15.61	33.093	24.370	354.8	.004	5.83	102.5	1.2	.43	.2	.00	.32	.12	1
	10	ISL	15.61	15.61	33.091	24.369	355.2	.035	5.83	102.5							10
1	16		15.61	15.60	33.091	24.369	355.4	.057	5.83	102.5	1.2	.43	.2	.00	.32	.11	16
	20	ISL	15.61	15.61	33.091	24.369	355.5	.071	5.83	102.5							20
	30	ISL	15.61	15.61	33.091	24.368	355.9	.107	5.83	102.6							30
1	32		15.61	15.61	33.091	24.368	356.0	.113	5.83	102.5	1.2	.42	.2	.00	.33	.15	32
1	42		15.62	15.61	33.094	24.369	356.2	.149	5.82	102.4	1.1	.42	.2	.00	.36	.14	42
	50	ISL	15.34	15.33	33.112	24.445	349.1	.178	5.82	101.8							50
1	53		15.25	15.24	33.152	24.497	344.3	.187	5.82	101.7	1.7	.44	.2	.04	.40	.22	53
1	63		13.83	13.82	33.213	24.844	311.4	.220	5.70	96.8	3.6	.60	1.9	.25	.32	.29	63
1	73		13.25	13.24	33.215	24.963	300.3	.250	5.58	93.6	4.4	.69	3.4	.27	.28	.31	73
	75	ISL	13.05	13.04	33.229	25.014	295.4	.257	5.51	92.0							76
1	84		12.29	12.28	33.303	25.219	276.1	.282	5.21	85.7	6.9	.88	7.4	.05	.17	.25	84
1	99		11.60	11.59	33.431	25.447	254.6	.321	4.85	78.7	9.5	1.05	10.5	.02	.14	.19	99
	100	ISL	11.53	11.52	33.446	25.472	252.3	.325	4.78	77.5							101
1	114		10.83	10.81	33.586	25.708	230.1	.360	4.07	65.0	15.9	1.42	16.4	.00	.06	.13	115
	125	ISL	10.47	10.46	33.651	25.822	219.5	.384	3.73	59.1							126
1	129		10.34	10.33	33.674	25.861	215.7	.393	3.62	57.2	20.0	1.59	19.7	.00	.04	.10	130
	150	ISL	9.72	9.71	33.793	26.059	197.3	.436	3.23	50.4							151
1	155		9.58	9.56	33.820	26.103	193.2	.446	3.17	49.3	26.6	1.82	23.7	.00	.02	.05	156
1	181		9.06	9.04	33.899	26.251	179.5	.494	3.01	46.3	30.5	1.94	25.5	.01	.02	.05	182
	200	ISL	8.78	8.75	33.969	26.349	170.5	.527	2.76	42.2							201
1	212		8.63	8.61	34.011	26.405	165.4	.547	2.58	39.3	36.4	2.16	28.1	.01	.02	.04	213
1	243		8.32	8.29	34.090	26.515	155.3	.597	2.23	33.8	41.8	2.32	30.0	.00			244
	250	ISL	8.23	8.21	34.103	26.539	153.3	.608	2.13	32.1							252
1	283		7.84	7.81	34.143	26.629	145.1	.658	1.67	25.0	49.5	2.53	32.8	.01			285
	300	ISL	7.67	7.64	34.156	26.664	142.0	.682	1.50	22.4							302
1	340		7.27	7.23	34.166	26.729	136.1	.737	1.23	18.2	57.8	2.80	35.5	.00			342
	400	ISL	6.53	6.49	34.133	26.804	129.5	.817	1.13	16.5							403
1	401		6.51	6.48	34.132	26.805	129.3	.819	1.13	16.4	65.8	2.87	37.9	.00			404
1	468		6.04	6.00	34.180	26.905	120.4	.902	.69	9.9	75.4	3.04	40.2	.00			471
	500	ISL	5.86	5.82	34.206	26.948	116.6	.940	.55	7.9							504
1	539		5.69	5.64	34.240	26.997	112.3	.985	.45	6.4	84.4	3.19	41.7	.01			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.1 N	122 32.8 W	24/11/86	0926 GMT	4004 M	360	15 KT			1025.0 MB	15.1 C	13.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
	0	ISL	15.57	15.57	33.116	24.395	352.4	.000	5.82	102.3							0
1	2		15.57	15.57	33.116	24.395	352.4	.007	5.82	102.3	1.0	.43	.0	.00	.30	.12	2
	10	ISL	15.57	15.57	33.119	24.399	352.4	.035	5.83	102.5							10
1	17		15.57	15.56	33.122	24.402	352.3	.060	5.84	102.7	1.0	.42	.0	.00	.33	.12	17
	20	ISL	15.53	15.53	33.118	24.407	351.9	.070	5.84	102.7							20
	30	ISL	15.41	15.41	33.106	24.424	350.5	.106	5.86	102.6							30
1	33		15.38	15.37	33.103	24.429	350.2	.116	5.86	102.6	1.0	.42	.0	.00	.35	.13	33
1	43		15.34	15.34	33.101	24.436	349.8	.151	5.86	102.5	1.2	.42	.0	.01	.37	.15	43
	50	ISL	15.33	15.32	33.102	24.440	349.7	.176	5.87	102.6							50
1	53		15.32	15.32	33.102	24.441	349.6	.185	5.87	102.7	1.3	.42	.1	.01	.38	.15	53
1	63		12.56	12.55	32.843	24.810	314.5	.218	5.91	97.5	3.3	.63	2.0	.10	.27	.28	63
1	73		12.28	12.27	32.935	24.936	302.7	.249	5.78	94.8	4.2	.69	3.3	.04	.20	.21	73
	75	ISL	12.13	12.12	32.927	24.958	300.7	.256	5.76	94.2							76
1	84		11.49	11.48	32.892	25.048	292.2	.282	5.67	91.5	5.9	.80	5.2	.02	.13	.13	84
1	99		10.58	10.56	33.046	25.331	265.5	.323	5.28	83.6	9.8	1.05	9.9	.02	.06	.07	99
	100	ISL	10.55	10.53	33.085	25.367	262.1	.327	5.20	82.2							10!
1	113		10.30	10.29	33.455	25.698	230.9	.360	4.41	69.6	16.0	1.44	16.8	.01	.03	.07	114
	125	ISL	9.73	9.71	33.578	25.890	212.8	.386	4.09	63.7							126
1	129		9.50	9.49	33.604	25.948	207.4	.395	4.02	62.3	21.1	1.63	20.4	.01	.01	.04	130
	150	ISL	9.10	9.09	33.772	26.143	189.2	.436	3.98	61.2							151
1	154		9.06	9.04	33.800	26.172	186.4	.444	3.97	61.0	23.5	1.62	21.0	.01	.01	.02	155
1	181		8.45	8.43	33.935	26.373	167.6	.491	3.71	56.3	30.0	1.78	23.9	.01	.01	.01	182
	200	ISL	8.23	8.21	33.972	26.435	162.1	.523	3.65	55.2							201
1	212		8.13	8.11	33.981	26.457	160.2	.542	3.61	54.4	33.2	1.85	25.0	.00	.01	.02	213
1	242		7.76	7.73	33.999	26.527	153.8	.589	3.28	49.0	38.5	1.99	27.0	.00			243
	250	ISL	7.63	7.61	34.002	26.547	152.1	.601	3.17	47.2							252
1	283		7.15	7.12	34.009	26.622	145.2	.651	2.67	39.3	47.1	2.26	30.6	.00			285
	300	ISL	6.92	6.89	34.017	26.659	141.9	.675	2.41	35.3							302
1	338		6.48	6.45	34.038	26.735	135.0	.727	1.86	27.0	58.6	2.60	35.2	.00			340
1	400		6.07	6.03	34.081	26.823	127.2	.809	1.23	17.7	67.9	2.84	38.3	.00			403
1	467		5.73	5.69	34.165	26.932	117.5	.891	.63	9.0	78.5	3.08	40.8	.00			470
	500	ISL	5.56	5.52	34.195	26.976	113.5	.929	.54	7.6							504
1	540		5.35	5.30	34.220	27.022	109.5	.974	.42	5.9	86.7	3.19	42.1	.00			544

RV HEW HORIZON CALCOFI CRUISE 8611 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 09.0 N	123 14.1 W	24/11/86	1456 GMT	4211 M	360	19 KT	330 08 09	2	1026.1 MB	15.9 C	14.9 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UH/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.78	15.78	33.070	24.315	360.1	.000	5.79	102.2							0
1	1		15.78	15.78	33.070	24.315	360.1	.004	5.79	102.2	1.2	.42	.1	.00	.22	.10	1
	10	ISL	15.77	15.77	33.071	24.316	360.2	.036	5.80	102.3							10
1	17		15.77	15.77	33.072	24.317	360.3	.061	5.80	102.3	1.1	.42	.1	.00	.23	.09	17
	20	ISL	15.77	15.77	33.072	24.317	360.4	.072	5.80	102.3							20
	30	ISL	15.78	15.77	33.072	24.317	360.8	.108	5.80	102.3							30
1	32		15.78	15.77	33.072	24.317	360.8	.115	5.80	102.3	1.2	.42	.1	.00	.24	.08	32
1	43		15.78	15.77	33.073	24.318	361.1	.154	5.84	103.0	1.2	.43	.1	.00	.24	.12	43
	50	ISL	13.95	13.95	33.002	24.655	329.0	.179	5.87	99.8							50
1	53		13.18	13.17	32.987	24.800	315.2	.188	5.88	98.3	3.2	.61	2.0	.21	.51	.31	53
1	64		12.14	12.13	33.012	25.022	294.3	.222	5.65	92.5	5.3	.83	5.8	.04	.32	.26	64
1	74		11.67	11.66	33.163	25.226	275.1	.250	5.26	85.3	8.0	1.02	9.4	.03	.19	.18	74
	75	ISL	11.50	11.49	33.168	25.261	271.7	.253	5.21	84.2							7b
1	84		10.40	10.39	33.209	25.488	250.2	.276	4.91	77.5	12.6	1.24	13.3	.02	.07	.09	84
1	100		10.22	10.20	33.454	25.711	229.3	.314	4.35	68.5	16.6	1.49	17.7	.02	.04	.07	10C
1	114		9.93	9.92	33.577	25.855	215.9	.347	3.91	61.2	19.8	1.63	20.1	.01	.02	.05	115
	125	ISL	9.43	9.42	33.686	26.023	200.1	.369	3.63	56.2							126
1	130		9.18	9.17	33.740	26.105	192.3	.380	3.49	53.8	25.8	1.82	23.7	.01	.00	.04	131
	150	ISL	9.06	9.04	33.861	26.220	181.8	.416	3.00	46.2							151
1	155		9.02	9.01	33.871	26.234	180.6	.426	2.91	44.7	29.8	1.98	26.1	.00	.00	.04	156
1	181		8.47	8.45	33.934	26.369	168.1	.471	2.94	44.6	33.6	2.03	27.3	.00	.00	.04	182
	200	ISL	8.23	8.21	33.974	26.437	162.0	.502	2.84	42.9							201
1	212		8.10	8.08	33.994	26.472	158.8	.521	2.73	41.1	37.8	2.13	28.8	.00	.00	.04	213
1	242		7.69	7.67	34.034	26.563	150.4	.567	2.35	35.1	43.6	2.30	31.0	.00			243
	250	ISL	7.61	7.58	34.043	26.583	148.6	.580	2.24	33.4							252
1	282		7.31	7.28	34.072	26.649	142.8	.627	1.86	27.5	50.8	2.50	33.3	.00			284
	300	ISL	7.12	7.10	34.082	26.683	139.8	.652	1.68	24.7							302
1	339		6.70	6.67	34.099	26.754	133.4	.705	1.33	19.4	60.3	2.75	36.6	.00			341
1	399		6.01	5.97	34.124	26.864	123.3	.783	.90	12.9	71.3	2.94	39.5	.00			402
	400	ISL	6.00	5.97	34.124	26.865	123.2	.783	.90	12.9							403
1	468		5.52	5.48	34.187	26.974	113.3	.864	.59	8.4	81.6	3.10	41.4	.00			471
	500	ISL	5.39	5.34	34.219	27.016	109.6	.899	.47	6.7							504
1	542		5.29	5.25	34.262	27.062	105.7	.945	.35	4.9	89.3	3.20	42.5	.00			546

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 16.9 N	120 03.5 W	23/11/86	0701 GMT	573 M	330	17 KT		1	1022.6 MB	19.0 C	12.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0 A	16.98	16.98	33.449	24.329	358.7	.000	5.71	103.4	2.2	.36	.1	.00	.59	.18	0
	10 ISL	16.91	16.91	33.448	24.345	357.5	.036	5.72	103.4							10
1	16	16.87	16.87	33.448	24.354	356.8	.057	5.72	103.4	2.3	.39	.1	.01	.74	.22	16
	20 ISL	15.99	15.98	33.419	24.536	339.6	.07 1	5.62	99.9							20
	30 ISL	13.64	13.63	33.397	25.025	293.6	.103	5.30	89.8							30
1	31	13.42	13.42	33.394	25.066.	289.3	.105	5.27	88.8	6.6	.80	5.5	.20	.57	.38	31
1	47	12.15	12.14	33.455	25.363	261.4	.149	4.70	77.2	10.5	1.07	10.1	.13	.23	.25	47
	50 ISL	11.93	11.92	33.489	25.431	255.0	.157	4.52	73.8							50
1	63	11.20	11.20	33.618	25.665	233.1	.189	3.87	62.3	17.7	1.42	16.1	.05	.06	.12	63
	75 ISL	10.80	10.79	33.655	25.767	223.6	.217	3.67	58.6							76
1	78	10.74	10.73	33.659	25.780	222.4	.222	3.65	58.2	19.1	1.54	17.8	.02			78
1	94	10.52	10.51	33.720	25.866	214.6	.257	3.42	54.3	21.2	1.63	19.5	.01	.03	.08	94
	100 ISL	10.49	10.48	33.740	25.887	212.8	.271	3.33	52.8							101
1	108	10.44	10.43	33.761	25.911	210.6	.289	3.23	51.2	22.5	1.71	20.5	.01	.02	.09	109
1	124	10.15	10.13	33.788	25.984	204.0	.322	3.14	49.5	24.4	1.77	21.8	.01	.07	.09	125
	125 ISL	10.14	10.12	33.791	25.988	203.7	.323	3.13	49.2							126
1	149			33.926			.371	2.54	39.8	29.4	1.99	24.5	.01	.02	.07	150
	150 ISL	9.85	9.84	33.929	26.143	190.2	.372	2.53	39.6							151
2	182	9.61	9.59	34.026	26.260	178.9	.431	2.20	34.3	33.3	2.14	26.5	.01	.02	.09	183
	200 ISL	9.46	9.44	34.064	26.316	173.9	.463	2.05	31.8							202
2	213	9.35	9.33	34.087	26.351	170.8	.485	1.94	30.1	36.6	2.27	28.0	.00	.01	.06	214
	250 ISL	9.12	9.09	34.150	26.438	163.3	.547	1.60	24.7							252
2	254	9.09	9.06	34.156	26.448	162.4	.555	1.56	24.1	41.2	2.42	29.6	.00			256
	300 ISL	8.63	8.59	34.193	26.550	153.4	.627	1.12	17.0							302
2	306	8.55	8.52	34.195	26.563	152.2	.636	1.06	16.1	49.8	2.67	32.1	.00	.02	.11	308
2	388	7.52	7.48	34.208	26.728	137.3	.754	.67	10.0	64.5	2.96	34.8	.00			390
	400 ISL	7.37	7.33	34.212	26.752	135.1	.771	.61	9.0							403
2	469	6.71	6.67	34.229	26.857	125.7	.860	.23	3.4	82.7	3.25	34.3	.00	.01	.08	472
2	495	6.56	6.52	34.232	26.879	123.8	.893	.08	1.2	88.4	3.34	33.0	.00			498
	500 ISL	6.53	6.49	34.233	26.884	123.4	.899	.07	1.1							504
2	521	6.43	6.38	34.235	26.899	122.2	.926	.05	.7	99.2	3.45	28.8	.00	.01	.08	525
2	540	6.37	6.32	34.237	26.909	121.5	.949	.04	.6	104.1	3.55	27.1	.02			544
2	561	6.34	6.29	34.234	26.911	121.5	.974	.03	.4		3.75	21.1	.01	.01	.08	565

A. SANTA BARBARA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 13.6 N	119 24.6 W	23/11/86	0202 GMT	38 M	360	15 KT		1	1019.9 MB	20.3 C	14.0 C	1/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	17.49	17.49	33.426	24.192	371.8	.000	5.68	103.9	1.8	.33	.1	.01	.37	.13	0
1	10	17.43	17.43	33.421	24.202	371.1	.037	5.71	104.3	2.0	.33	.1	.01	.39	.13	1c
	20 ISL	17.10	17.09	33.412	24.275	364.6	.074	5.73	104.0							20
1	21	17.04	17.04	33.409	24.286	363.5	.077	5.73	103.9	2.2	.35	.2	.03	.45	.20	21
	30 ISL	15.99	15.98	33.344	24.479	345.3	.109	5.76	102.2							30
1	31	15.85	15.84	33.336	24.504	343.0	.112	5.76	1c1.9	3.3	.53	.9	.13	.54	.45	31

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 10.9 N	119 31.0 W	22/11/86	2329 GMT	164 M	300	17 KT	300 03 06	1	1017.4 MB	19.8 C	14.5 C	2/8	AC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	17.44	17.44	33.454	24.225	368.6	.000	5.69	104.0	1.8	.34	.2	.00	.33	.09	0
1	10	17.23	17.23	33.447	24.270	364.7	.037	5.67	103.2	2.0	.37	.3	.01	.44	.13	10
	20 ISL	17.08	17.08	33.446	24.304	361.8	.073	5.67	102.9							20
1	21	17.06	17.06	33.446	24.309	361.3	.076	5.67	102.8	2.1	.36	.3	.02	.62	.16	21
	30 ISL	16.59	16.58	33.452	24.425	350.4	.109	5.70	102.4							30
1	31	16.52	16.51	33.453	24.442	348.9	.112	5.70	102.3	2.5	.42	.8	.03	1.17	.35	31
1	41	15.20	15.20	33.361	24.667	327.8	.145	5.75	100.5	3.2	.49	1.3	.06	.88	.32	41
	50 ISL	14.15	14.14	33.344	24.879	307.8	.175	5.58	95.5							50
1	52	13.97	13.96	33.343	24.915	304.3	.180	5.55	94.6	4.7	.63	3.3	.11	.66	.29	52
1	62	13.27	13.26	33.316	25.038	292.9	.210	5.57	93.5	4.3	.62	3.2	.14	.41	.28	62
1	73	12.35	12.34	33.365	25.255	272.4	.241	5.24	86.3	6.0	.78	6.1	.05	.21	.24	73
	75 ISL	12.16	12.15	33.392	25.313	267.0	.247	5.07	83.2							76
1	88	11.34	11.33	33.544	25.583	241.4	.279	4.15	67.0	13.6	1.28	14.1	.02	.07	.12	88
	100 ISL	11.13	11.12	33.601	25.666	233.8	.308	3.97	63.8							101
1	104	11.10	11.09	33.609	25.677	232.8	.317	3.92	63.0	15.5	1.40	15.7	.02	.06	.11	104
1	123	10.40	10.38	33.688	25.863	215.5	.361	3.64	57.6	19.5	1.57	19.0	.01	.02	.07	124
	125 ISL	10.35	10.34	33.697	25.877	214.2	.365	3.61	57.1							126
1	142	10.03	10.01	33.804	26.017	201.2	.401	3.17	49.8	23.9	1.77	21.8	.01	.01	.07	143

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 52.6 N	120 08.4 W	22/11/86	1621 GMT	98 M	300	23 KT	290 05 06	0	1023.6 MB	17.0 C	12.5 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.03	17.03	33.450	24.319	359.5	.000	5.68	103.0							0
1	1		17.03	17.03	33.450	24.319	359.7	.004	5.68	103.0	1.6	.33	.0	.00	.24	.08	1
	10	ISL	17.03	17.03	33.448	24.317	360.2	.036	5.66	102.6							10
1	11		17.03	17.03	33.448	24.316	360.2	.039	5.66	102.6	1.5	.34	.0	.00	.24	.08	11
	20	ISL	17.00	17.00	33.447	24.324	359.8	.07 2	5.66	102.6							20
1	22		17.00	16.99	33.447	24.325	359.8	.079	5.66	102.5	1.5	.34	.1	.00	.25	.09	22
	30	ISL	15.12	15.12	33.383	24.701	324.2	.107	5.76	100.5							30
1	32		14.60	14.60	33.370	24.803	314.5	.113	5.77	99.6	2.9	.51	1.7	.12	.40	.28	32
1	43		12.50	12.50	33.297	25.172	279.5	.145	5.39	89.1	5.4	.76	5.6	.13	.43	.28	43
	50	ISL	11.93	11.92	33.360	25.331	264.6	.165	5.12	83.6							50
1	53		11.82	11.81	33.392	25.376	260.3	.172	5.01	81.6	7.7	.93	8.9	.05	.23	.26	53
1	62		11.59	11.58	33.464	25.475	251.1	.195	4.60	74.6	10.6	1.14	11.7	.07	.22	.26	62
	75	ISL	11.46	11.45	33.486	25.515	247.5	.228	4.51	72.9							76
1	79		11.43	11.42	33.493	25.527	246.6	.237	4.48	72.4	11.6	1.25	12.9	.05	.16	.22	79

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.7 N	120 25.0 W	22/11/86	1324 GMT	992 M	330	23 KT			1023.1 MB	16.0 C	13.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.48	15.48	33.451	24.674	325.9	.000	5.67	99.7							0
1	2		15.48	15.48	33.451	24.674	325.9	.006	5.67	99.7	2.3	.44	1.3	.09	1.06	.42	2
	10	ISL	15.47	15.47	33.450	24.676	325.9	.033	5.68	99.8							10
1	12		15.46	15.46	33.450	24.677	325.9	.039	5.68	99.8	2.3	.44	1.3	.09	1.07	.45	12
	20	ISL	15.48	15.48	33.449	24.672	326.6	.065	5.69	100.0							20
1	22		15.49	15.48	33.449	24.671	326.8	.071	5.69	100.1	2.3	.46	1.3	.09	1.04	.46	22
	30	ISL	13.51	13.51	33.225	24.918	303.4	.097	5.56	93.8							30
1	33		12.75	12.74	33.161	25.020	293.8	.105	5.49	91.1	5.4	.76	5.1	.19	.55	.41	33
1	43		11.87	11.87	33.194	25.212	275.7	.134	5.18	84.4	7.8	.95	8.3	.09	.38	.37	43
	50	ISL	11.87	11.87	33.210	25.224	274.7	.154	5.17	84.2							50
1	53		11.87	11.87	33.219	25.232	274.0	.161	5.16	84.1	7.7	.96	8.5	.07	.32	.32	53
1	63		11.30	11.29	33.384	25.466	251.9	.187	4.81	77.5	10.5	1.12	11.6	.04	.13	.21	63
	75	ISL	10.66	10.65	33.496	25.666	233.1	.217	4.40	70.0							76
1	78		10.54	10.53	33.519	25.706	229.5	.223	4.29	68.0	15.0	1.36	15.9	.02	.02	.08	78
1	93		9.97	9.96	33.759	25.990	202.6	.255	3.30	51.8	23.5	1.73	21.8	.01	.01	.05	93
	100	ISL	9.81	9.80	33.821	26.065	195.7	.270	3.19	49.9							101
1	113		9.64	9.63	33.884	26.144	188.5	.296	2.99	46.6	27.0	1.88	23.7	.01	.06	.13	114
	125	ISL	9.51	9.49	33.929	26.200	183.3	.318	2.85	44.2							126
1	133		9.44	9.43	33.956	26.232	180.5	.333	2.74	42.5	30.0	2.00	25.1	.00	.01	.05	134
	150	ISL	9.45	9.43	34.012	26.276	176.7	.363	2.46	38.3							151
1	159		9.45	9.43	34.040	26.298	174.8	.379	2.31	35.9	33.0	2.12	26.6	.00	.00	.05	160
1	189		9.10	9.08	34.122	26.418	163.9	.429	1.94	29.9	37.4	2.29	28.4	.01	.00	.04	190
	200	ISL	9.00	8.98	34.138	26.447	161.3	.447	1.86	28.7							201
1	225		8.82	8.79	34.165	26.498	156.9	.486	1.72	26.4	41.0	2.39	29.7	.00	.00	.04	226
	250	ISL	8.67	8.64	34.194	26.544	153.0	.526	1.53	23.3							252
1	259		8.61	8.58	34.204	26.561	151.5	.540	1.45	22.1	44.3	2.50	30.9	.01			261
1	300		8.19	8.16	34.237	26.651	143.5	.600	1.14	17.2	50.0	2.64	32.6	.00			302
1	355		7.87	7.84	34.255	26.713	138.4	.677	.94	14.1	54.1	2.75	33.7	.00			357
	400	ISL	7.55	7.51	34.268	26.771	133.5	.738	.77	11.4							403
1	421		7.38	7.34	34.273	26.800	131.0	.767	.69	10.2	61.0	2.89	35.7	.00			424
1	489		6.78	6.73	34.284	26.892	122.8	.852	.49	7.2	69.4	3.01	37.8	.00			492
	500	ISL	6.67	6.62	34.286	26.907	121.4	.866	.46	6.7							504
1	567		6.02	5.97	34.301	27.005	112.4	.944	.33	4.7	81.6	3.14	40.3	.00			571

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 34.9 N	120 45.5 W	22/11/86	0921 GMT	1497 M	330	25 KT			1023.5 MB	15.1 C	14.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.29	15.29	33.330	24.621	330.9	.000	5.83	102.1							0
1	1		15.29	15.29	33.330	24.621	330.9	.003	5.83	102.1	2.1	.38	.3	.06	.49	.18	1
	10	ISL	15.29	15.29	33.336	24.628	330.5	.033	5'.84	102.2							10
1	11		15.29	15.29	33.337	24.628	330.5	.036	5.84	102.2	1.7	.39	.3	.06	.50	.20	11
	20	ISL	15.28	15.28	33.331	24.625	331.1	.066	5.84	102.2							20
1	22		15.28	15.28	33.330	24.625	331.2	.07 2	5.84	102.2	1.7	.40	.3	.07	.50	.20	22
	30	ISL	15.20	15.19	33.355	24.663	327.8	.099	5.80	101.3							30
1	32		15.17	15.17	33.361	24.672	327.0	.105	5.78	100.9	1.6	.44	.6	.09	.57	.27	32
1	43		13.43	13.42	33.234	24.942	301.5	.140	5.56	93.6	3.3	.65	2.8	.25	.49	.61	43
	50	ISL	12.42	12.41	33.104	25.040	292.2	.161	5.51	90.8							50
1	53		12.10	12.09	33.082	25.083	288.2	.169	5.49	89.8	4.9	.78	5.1	.33	.41	.57	53
1	63		11.58	11.57	33.360	25.396	258.6	.196	4.81	78.0	9.3	1.06	10.7	.11	.32	.58	63
	75	ISL	11.18	11.17	33.564	25.626	237.0	.227	4.06	65.3							76
1	79		11.05	11.04	33.598	25.677	232.3	.235	3.92	62.9	15.5	1.42	16.9	.05	.22	.26	79
1	95		9.89	9.88	33.649	25.919	209.5	.270	4.30	67.3	16.4	1.38	17.3	.04	.07	.13	95
	100	ISL	9.68	9.67	33.691	25.985	203.2	.282	4.11	64.1							101
1	114		9.40	9.39	33.809	26.124	190.3	.310	3.41	52.8	24.1	1.74	22.6	.03	.03	.12	115
	125	ISL	9.30	9.29	33.869	26.186	184.6	.330	3.10	47.9							126
1	135		9.23	9.22	33.913	26.233	180.4	.349	2.89	44.6	28.4	1.93	25.1	.01	.02	.09	136
	150	ISL	8.98	8.96	33.949	26.301	174.1	.375	2.79	42.9							151
1	161		8.77	8.75	33.968	26.349	169.7	.394	2.76	42.2	31.8	2.02	26.7	.01	.01	.06	162
1	193		8.35	8.33	34.050	26.478	157.9	.446	2.38	36.1	37.6	2.20	28.9	.01	.00	.06	194
	200	ISL	8.25	8.23	34.055	26.497	156.3	.457	2.36	35.7							201
1	229		7.90	7.88	34.063	26.556	151.0	.501	2.27	34.1	41.9	2.29	30.4	.01	.00	.04	230
	250	ISL	7.73	7.70	34.091	26.604	146.8	.533	1.99	29.7							252
1	262		7.67	7.64	34.115	26.631	144.4	.551	1.78	26.6	47.4	2.46	32.3	.00			264
	300	ISL	7.75	7.72	34.227	26.708	137.9	.604	1.09	16.3							302
1	304		7.77	7.73	34.239	26.716	137.2	.610	1.02	15.3	53.0	2.71	34.0	.00			306
1	361		7.36	7.33	34.265	26.794	130.5	.685	.71	10.5	59.0	2.86	35.7	.00			363
	400	ISL	7.08	7.04	34.272	26.840	126.6	.736	.60	8.8							403
1	427		6.88	6.84	34.275	26.870	124.0	.770	.55	8.1	65.8	2.96	37.3	.00			430
1	498		6.38	6.33	34.293	26.952	116.8	.855	.41	5.9	73.6	3.06	39.0	.00			501
	500	ISL	6.36	6.32	34.294	26.954	116.6	.85 7	.41	5.9							504
1	581		6.01	5.96	34.302	27.006	112.4	.950	.34	4.9	80.0	3.12	40.1	.00			585

RV HEW HORIZON CALCOFI CRUISE 8611 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 14.0 N	121 26.8 W	22/11/86	0151 GMT	3704 M	340	32 KT	340 13 06	1	1021.3 MB	14.7 C	12.7 C	4/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.78	15.78	33.183	24.401	351.9	.000	5.79	102.2							0
1	3		15.78	15.78	33.183	24.401	351.9	.011	5.79	102.2	1.8	.38	.0	.00	.29	.14	3
	10	ISL	15.78	15.77	33.182	24.401	352.1	.035	5.78	102.1							10
1	13		15.77	15.77	33.182	24.402	352.2	.046	5.78	102.1	1.8	.39	.0	.00	.30	.13	13
	20	ISL	15.78	15.78	33.181	24.400	352.6	.070	5.78	102.1							20
1	24		15.78	15.78	33.181	24.399	352.8	.084	5.78	102.1	1.9	.41	.0	.00	.29	.12	24
	30	ISL	15.79	15.79	33.181	24.398	353.0	.106	5.79	102.2							30
1	34		15.79	15.79	33.182	24.398	353.1	.119	5.79	102.3	2.0	.39	.0	.00	.28	.13	34
1	45		15.77	15.77	33.181	24.402	353.1	.158	5.78	102.0	2.1	.39	.0	.00	.27	.13	45
	50	ISL	14.87	14.86	33.149	24.577	336.6	.176	5.82	100.9							50
1	55		13.90	13.89	33.120	24.758	319.4	.192	5.85	99.4	2.4	.45	.4	.07	.37	.22	55
1	65		12.71	12.70	33.055	24.946	301.6	.222	5.73	94.9	4.2	.64	3.2	.09	.22	.25	65
	75	ISL	12.24	12.23	33.074	25.051	291.8	.253	5.60	91.8							76
1	81		12.11	12.10	33.122	25.113	286.0	.269	5.48	89.7	6.2	.80	6.2	.03	.15	.18	81
1	96		11.41	11.40	33.415	25.470	252.3	.309	4.88	78.8	9.9	1.03	10.8	.02	.07	.14	96
	100	ISL	11.19	11.17	33.480	25.561	243.7	.320	4.64	74.7							101
1	116		10.41	10.40	33.670	25.846	217.0	.358	3.76	59.5	19.0	1.52	18.9	.01	.02	.07	117
	125	ISL	10.10	10.09	33.749	25.961	206.2	.376	3.39	53.3							126
1	137		9.75	9.74	33.842	26.092	193.9	.401	2.95	46.1	26.8	1.84	23.9	.00	.01	.05	138
	150	ISL	9.53	9.51	33.916	26.187	185.1	.425	2.66	41.4							151
1	162		9.37	9.35	33.969	26.255	178.9	.447	2.49	38.6	31.8	2.12	26.5	.00	.00	.05	163
1	193		8.93	8.91	34.048	26.388	166.8	.500	2.35	36.1	35.6	2.13	27.8	.00	.01	.05	194
	200	ISL	8.88	8.86	34.068	26.411	164.7	.512	2.27	34.8							201
1	230		8.68	8.66	34.135	26.495	157.3	.560	1.91	29.2	40.7	2.29	29.6	.00	.00	.03	231
	250	ISL	8.44	8.42	34.151	26.545	152.8	.591	1.78	27.1							252
1	264		8.27	8.24	34.156	26.575	150.1	.613	1.72	26.0	45.1	2.40	31.0	.00			266
	300	ISL	8.07	8.04	34.171	26.617	146.7	.666	1.54	23.3							302
1	305		8.04	8.01	34.172	26.623	146.2	.674	1.52	22.9	48.6	2.50	32.1	.00			307
1	362		6.86	6.83	34.120	26.749	134.3	.753	1.35	19.8	60.3	2.66	35.7	.00			364
	400	ISL	6.73	6.70	34.187	26.820	128.1	.803	.98	14.4							403
1	429		6.64	6.60	34.229	26.867	124.1	.840	.69	10.1	69.4	2.96	38.0	.00			432
	500	ISL	6.29	6.24	34.291	26.962	115.8	.925	.41	6.0							504
1	502		6.28	6.23	34.292	26.963	115.7	.927	.41	5.9	77.4	3.06	39.4	.00			505
1	585		5.75	5.70	34.307	27.042	108.7	1.020	.32	4.6	85.8	3.17	41.1	.00			589

RV NEW HORIZON CALCOFI CRUISE 861J STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.0 N	122 09.5 W	21/11/86	1925 GMT	4190 M	340	29 KT	340 08 09	1	1022.6 MB	16.3 C	14.1 C	2/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	15.68	15.68	33.132	24.383	353.5	.000	5.86	103.3							0
1	1	15.68	15.68	33.132	24.383	353.6	.004	5.86	103.3	1.5	.40	.1	.00	.28	.13	1
	10 ISL	15.69	15.69	33.131	24.382	354.0	.035	5'.84	102.9							10
1	11	15.69	15.69	33.131	24.381	354.0	.039	5.84	102.9	1.6	.41	.1	.00	.29	.13	11
	20 ISL	15.67	15.67	33.132	24.386	353.9	.071	5.84	102.9							20
1	21	15.67	15.67	33.132	24.386	353.9	.074	5.84	102.9	1.7	.39	.1	.00	.29	.12	21
	30 ISL	15.63	15.62	33.134	24.397	353.1	.106	5.86	103.1							30
1	32	15.62	15.62	33.134	24.399	352.9	.113	5.86	103.1	1.7	.42	.1	.00	.31	.17	32
1	43	15.22	15.22	33.202	24.540	339.9	.151	5.90	103.0	2.1	.41	.1	.04	.54	.36	43
	50 ISL	15.17	15.16	33.224	24.569	337.3	.175	5.83	101.7							50
1	53	15.16	15.15	33.232	24.577	336.6	.184	5.80	101.2	2.5	.51	.4	.10	.39	.27	53
1	63	15.06	15.05	33.285	24.639	331.0	.218	5.77	100.5	2.9	.47	.7	.12	.32	.29	63
	75 ISL	13.94	13.93	33.251	24.852	311.0	.257	5.58	94.9							76
1	79	13.52	13.51	33.238	24.927	303.9	.268	5.51	93.0	4.8	.73	4.2	.11	.25	.32	79
1	94	12.40	12.39	33.261	25.165	281.5	.312	5.34	88.0	6.1	.81	6.3	.04	.17	.24	94
	100 ISL	12.03	12.01	33.299	25.266	272.0	.330	5.18	84.8							101
1	115	11.28	11.27	33.417	25.495	250.4	.368	4.72	76.0	11.4	1.15	12.3	.02	.06	.13	115
	125 ISL	10.75	10.74	33.519	25.670	234.0	.393	4.33	69.0							126
1	135	10.29	10.28	33.622	25.829	218.9	.416	3.94	62.2	18.4	1.49	18.4	.01	.04	.07	136
	150 ISL	9.88	9.87	33.744	25.994	203.5	.447	3.41	53.5							151
1	161	9.64	9.63	33.822	26.095	194.1	.470	3.09	48.1	26.2	1.83	23.7	.01	.01	.05	162
1	192	8.91	8.89	33.961	26.322	172.9	.526	2.87	44.0	32.3	1.97	26.1	.01	.01	.04	193
	200 ISL	8.77	8.75	33.987	26.365	169.0	.540	2.76	42.2							201
1	228	8.36	8.34	34.054	26.481	158.4	.585	2.35	35.6	39.4	2.20	29.2	.01	.01	.04	229
	250 ISL	8.14	8.11	34.098	26.549	152.2	.620	2.09	31.5							252
1	264	8.01	7.99	34.116	26.582	149.3	.640	1.96	29.5	45.4	2.37	31.0	.01			265
	300 ISL	7.58	7.55	34.121	26.650	143.1	.694	1.72	25.7							302
1	304	7.52	7.49	34.122	26.658	142.4	.700	1.70	25.3	51.0	2.51	33.0	.00			306
1	362	6.68	6.64	34.107	26.764	132.8	.779	1.34	19.5	60.9	2.69	36.4	.00			364
	400 ISL	6.57	6.53	34.164	26.823	127.6	.829	.98	14.3							403
1	426	6.53	6.50	34.208	26.863	124.3	.862	.75	10.9	68.5	2.93	38.2	.00			429
1	499	5.83	5.79	34.236	26.976	113.9	.948	.47	6.7	80.4	3.11	40.7	.00			502
	500 ISL	5.82	5.78	34.238	26.978	113.7	.949	.47	6.7							504
1	579	5.36	5.31	34.293	27.078	104.7	1.036	.29	4.1	90.9	3.25	42.3	.00			583

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AKT	TYPE
32 35.0 N	122 49.0 W	21/11/86	1232 GMT	4262 M	3 40	24 KT			1021.0 MB	16.5 C	15.5 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
	0 ISL	15.90	15.90	33.021	24.249	366.4	.000	5.76	101.9							0
1	1	15.90	15.90	33.021	24.249	366.4	.004	5.76	101.9	1.0	.41	.2	.00	.20	.08	1
	10 ISL	15.89	15.89	33.020	24.252	366.4	.037	5.76	101.8							10
1	11	15;89	15.89	33.020	24.251	366.4	.040	5.76	101.8	1.0	.40	.2	.00	.21	.08	11
	20 ISL	15.90	15.89	33.020	24.250	366.8	.073	5.77	102.0							20
1	22	15.90	15.90	33.020	24.250	366.9	.080	5.77	102.0	1.2	.40	.2	.00	.20	.09	22
	30 ISL	16.00	16.00	33.210	24.373	355.5	.110	5.76	102.2							30
1	32	16.03	16.02	33.262	24.407	352.2	.116	5.76	102.3	1.4	.40	.2	.00	.41	.23	32
1	42	14.90	14.89	33.123	24.550	338.9	.151	5.91	102.5	1.7	.44	.2	.03	.44	.29	42
	50 ISL	14.44	14.44	33.186	24.695	325.3	.178	5.79	99.6							50
1	53	14.23	14.22	33.201	24.751	320.0	.187	5.74	98.2	3.0	.55	2.1	.19	.34	.26	53
1	63	12.35	12.34	33.009	24.979	298.3	.217	5.73	94.2	4.1	.70	4.0	.04	.21	.21	63
1	73	11.52	11.51	33.056	25.171	280.2	.246	5.49	88.7	6.4	.84	6.9	.02	.11	.15	73
	75 ISL	11.32	11.31	33.067	25.215	276.1	.253	5.43	87.3							76
1	89	10.44	10.43	33.180	25.459	253.1	.289	5.02	79.3	11.8	1.16	12.3	.02	.06	.09	89
	100 ISL	10.33	10.32	33.368	25.623	237.7	.317	4.61	72.8							101
1	104	10.30	10.29	33.420	25.670	233.3	.325	4.48	70.6	15.5	1.39	16.5	.02	.06	.09	104
1	123	9.76	9.74	33.624	25.921	209.8	.369	3.74	58.3	21.7	1.68	21.7	.01	.02	.07	124
	125 ISL	9.73	9.71	33.642	25.940	208.1	.372	3.67	57.1							126
1	149	9.30	9.28	33.866	26.186	185.1	.420	2.81	43.5	29.2	1.95	25.6	.01	.00	.05	150
	150 ISL	9.27	9.26	33.869	26.192	184.6	.421	2.82	43.6							151
1	180	8.37	8.35	33.906	26.363	168.7	.475	3.36	50.9	31.3	1.87	25.7	.01	.00	.03	181
	200 ISL	8.11	8.09	33.974	26.455	160.1	.507	2.99	45.0							201
1	210	8.03	8.01	34.008	26.494	156.7	.523	2.72	40.9	38.2	2.12	28.7	.01	.00	.03	211
1	241	7.73	7.71	34.047	26.568	150.0	.570	2.27	33.9	43.7	2.27	31.0	.01			242
	250 ISL	7.63	7.61	34.053	26.589	148.2	.584	2.20	32.7							252
1	281	7.27	7.24	34.068	26.651	142.6	.630	1.99	29.4	50.0	2.41	32.8	.01			283
	300 ISL	7.08	7.05	34.079	26.687	139.4	.656	1.80	26.6							302
1	337	6.71	6.68	34.099	26.752	133.5	.706	1.42	20.7	59.3	2.65	35.9	.00			339
1	399	6.16	6.12	34.137	26.855	124.2	.786	.93	13.4	70.3	2.85	38.8	.00			401
	400 ISL	6.15	6.11	34.138	26.857	124.0	.787	.92	13.3							403
1	467	5.70	5.66	34.174	26.943	116.5	.868	.65	9.3	78.6	3.00	40.5	.00			470
	500 ISL	5.47	5.43	34.195	26.987	112.4	.906	.53	7.5							504
1	539	5.20	5.15	34.224	27.042	107.4	.949	.39	5.5	89.5	3.11	42.3	.01			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 14.9 N	123 29.0 W	21/11/86	0720 GMT	4252 M	340	15 KT			1022.0 MB	16.1 C	15.2 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	15.77	15.77	32.793	24.104	380.2	.000	5.83	102.7							0
1	1	15.77	15.77	32.793	24.104	380.2	.004	5.83	102.7	1.2	.55	.0	.00	.22	.07	1
	10 ISL	15.77	15.77	32.791	24.102	380.6	.038	5.82	102.6							10
1	15	15.77	15.77	32.790	24.101	380.9	.057	5.82	102.5	1.2	.41	.0	.00	.22	.07	15
	20 ISL	15.40	15.40	32.795	24.187	372.8	.076	5.91	103.3							20
	30 ISL	14.62	14.62	32.843	24.393	353.5	.112	6.06	104.3							30
1	31	14.55	14.54	32.850	24.413	351.6	.115	6.07	104.3	1.9	.46	.0	.00	.47	.26	31
1	42	14.27	14.26	32.981	24.574	336.5	.153	6.01	102.8	2.3	.46	.2	.07	.39	.27	42
	50 ISL	13.78	13.77	33.013	24.699	324.8	.180	5.99	101.5							50
1	53	13.59	13.58	33.015	24.740	321.0	.189	5.98	100.9	3.1	.51	.7	.14	.28	.25	53
1	63	12.99	12.98	33.014	24.859	309.8	.220	5.86	97.6	3.6	.59	2.0	.09	.25	.27	63
1	73	12.19	12.18	33.004	25.006	296.0	.251	5.67	92.9	5.3	.75	4.9	.04	.17	.19	73
	75 ISL	12.13	12.12	33.065	25.064	290.6	.257	5.56	91.0							76
1	83	11.93	11.92	33.288	25.275	270.7	.279	5.17	84.4	8.6	1.02	9.7	.10	.20	.23	83
1	99	10.36	10.35	33.393	25.639	236.2	.319	4.68	73.9	13.3	1.24	13.9	.01	.03	.07	99
	100 ISL	10.28	10.27	33.405	25.661	234.1	.323	4.64	73.2							101
1	113	9.81	9.79	33.519	25.831	218.2	.353	4.30	67.1	18.3	1.50	18.4	.01	.01	.03	114
	125 ISL	9.49	9.48	33.612	25.955	206.6	.377	4.05	62.8							126
1	129	9.40	9.39	33.648	25.998	202.6	.387	3.94	61.0	22.7	1.66	21.3	.01	.00	.03	130
	150 ISL	9.25	9.23	33.845	26.178	185.9	.427	2.96	45.7							151
1	155	9.21	9.19	33.886	26.215	182.5	.436	2.76	42.6	30.7	2.01	26.1	.01	.00	.04	156
1	181	8.51	8.49	33.897	26.334	171.4	.482	3.26	49.5	31.9	1.95	25.8	.01			182
	200 ISL	8.27	8.25	33.931	26.397	165.7	.514	3.54	53.5							201
1	211	8.17	8.15	33.952	26.429	162.9	.532	3.62	54.6	32.6	1.85	25.0	.01	.00	.03	212
1	242	7.82	7.80	33.985	26.507	155.9	.581	3.30	49.4	37.3	2.00	27.0	.01			243
	250 ISL	7.74	7.72	33.991	26.523	154.4	.594	3.19	47.7							252
1	283	7.42	7.39	34.012	26.586	148.8	.644	2.70	40.0	44.0	2.23	30.0	.01			285
	300 ISL	7.23	7.20	34.023	26.622	145.6	.669	2.44	36.0							302
1	340	6.75	6.72	34.051	26.710	137.6	.725	1.82	26.6	56.2	2.59	34.7	.00			342
	400 ISL	6.11	6.08	34.106	26.836	125.9	.804	1.07	15.5							403
1	401	6.10	6.07	34.108	26.840	125.7	.806	1.06	15.2	69.3	2.90	38.6	.00			404
1	468	5.92	5.88	34.166	26.909	119.9	.887	.82	11.7	74.5	3.00	39.7	.00			471
	500 ISL	5.78	5.74	34.208	26.960	115.4	.925	.65	9.2							504
1	539	5.55	5.51	34.271	27.037	108.3	.969	.38	5.4	85.6	3.20	41.5	.00			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 54.5 N	124 10.4 W	21/11/86	0127 GMT	4162 M	320	18 KT	330 10 08	1	1020.8 MB	16.6 C	15.8 C	6/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	17.44	17.44	33.073	23.933	396.4	.000	5.60	102.1							0
1	1	17.44	17.44	33.073	23.933	396.5	.004	5.60	102.1	1.2	.37	.0	.00	.12	.04	1
	10 ISL	17.45	17.45	33.072	23.930	397.1	.040	5.61	102.2							10
1	16	17.46	17.46	33.072	23.928	397.5	.063	5.61	102.3	1.2	.38	.0	.00	.13	.03	16
	20 ISL	17.59	17.59	33.120	23.934	397.1	.079	5.59	102.3							20
	30 ISL	17.89	17.89	33.235	23.948	396.0	.119	5.55	102.1							30
1	32	17.95	17.95	33.256	23.951	395.8	.127	5.54	102.1	1.5	.35	.0	.00	.13	.04	32
1	42	17.97	17.97	33.261	23.950	396.2	.166	5.53	102.0	1.6	.34	.0	.00	.12	.04	42
	50 ISL	16.74	16.73	33.290	24.266	366.4	.197	5.89	106.0							50
1	52	16.42	16.42	33.298	24.345	358.8	.204	5.97	106.8	3.9	.32	.0	.00	.23	.10	52
1	63	15.61	15.60	33.316	24.543	340.2	.242	6.06	106.7	3.9	.32	.0	.00	.23	.14	63
1	73	14.99	14.98	33.343	24.700	325.5	.275	6.01	104.5					.23	.21	73
	75 ISL	14.87	14.86	33.346	24.728	322.9	.282	6.00	104.1							76
1	83	14.54	14.53	33.360	24.810	315.3	.307	5.95	102.6	3.9	.33	.0	.00	.22	.21	83
1	99	14.18	14.17	33.435	24.943	303.0	.356	5.79	99.1	4.1	.36	.3	.10	.18 A	.20 A	99
	100 ISL	14.14	14.13	33.446	24.961	301.4	.360	5.77	98.7							101
1	114	13.50	13.49	33.533	25.159	282.8	.400	5.53	93.4	5.9	.50	1.9	.09	.14	.17	114
	125 ISL	12.41	12.39	33.508	25.357	264.1	.431	5.29	87.2							126
1	128	12.05	12.04	33.499	25.417	258.4	.440	5.21	85.4	8.0	.77	6.4	.03	.09	.13	129
	150 ISL	10.71	10.69	33.585	25.728	229.0	.493	4.84	77.1							151
1	154	10.52	10.50	33.609	25.781	224.0	.503	4.77	75.7	13.4	1.12	12.6	.01	.03	.06	155
1	180	9.57	9.55	33.709	26.020	201.6	.558	4.30	66.8	20.1	1.42	18.1	.00	.01	.03	181
	200 ISL	9.19	9.16	33.809	26.160	188.6	.596	4.27	65.8							201
1	210	9.04	9.02	33.857	26.221	182.9	.615	4.25	65.3	23.8	1.50	19.9	.01	.01	.04	211
1	241	8.41	8.39	33.957	26.397	166.6	.669	3.99	60.5	29.9	1.68	22.7	.01			242
	250 ISL	8.25	8.22	33.971	26.433	163.2	.684	3.86	58.3							252
1	282	7.72	7.70	33.993	26.528	154.5	.734	3.34	49.9	38.9	2.01	26.7	.01			283
	300 ISL	7.45	7.42	34.001	26.573	150.4	.762	3.04	45.1							302
1	337	6.96	6.93	34.012	26.651	143.3	.817	2.47	36.2	50.8	2.34	31.8	.01			339
1	399	6.28	6.25	34.044	26.766	132.7	.902	1.68	24.3	63.2	2.64	36.1	.01			401
	400 ISL	6.27	6.23	34.045	26.769	132.5	.903	1.66	24.0							403
1	464	5.71	5.67	34.106	26.888	121.5	.985	.97	13.8	75.2	2.93	39.7	.01			467
	500 ISL	5.54	5.50	34.142	26.937	117.2	1.028	.73	10.3							504
1	535	5.47	5.43	34.176	26.972	114.3	1.068	.59	8.4	83.4	3.08	41.3	.01			538

A. SECOND FLUOROHETER READING NOT RECORDED. CHLOROPHYLL AND PHAEOPHYTIN CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 53.A N	118 29.5 W	18/11/86	1057 GMT	53 M	100	09 KT			1010.4 MB	17.9 C	16.9 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.59	17.59	33.147	23.953	394.6	.000	5.69	104.1	1.9	.30	.0	.02	.29	.09	0
1	10		17.58	17.58	33.384	24.138	377.2	.038	5.79	106.0	1.7	.29	.0	.01	.58	.16	10
	20	ISL	17.18	17.18	33.444	24.279	364.1	.076	5'.80	105.4							20
1	21		17.15	17.14	33.454	24.295	362.6	.079	5.80	105.4	1.7	.33	.0	.01	.86	.36	21
	30	ISL	15.62	15.61	33.378	24.588	334.9	.111	5.54	97.7							30
1	31		15.44	15.44	33.368	24.618	332.1	.114	5.51	96.8	3.7	.64	1.1	.22	.82	.45	31
1	42		13.92	13.92	33.260	24.861	309.2	.149	5.07	86.3	6.9	1.09	3.6	.65	.44	.39	42
	50	ISL	13.36	13.35	33.273	24.985	297.6	.174	4.97	83.6							50
1	53		13.28	13.27	33.292	25.016	294.7	.182	4.94	83.0	8.1	1.16	5.0	.78	.29	.40	53

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 34

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 51.3 N	118 33.8 W	18/11/86	1217 GMT	72 M	100	10 KT		2	1010.9 MB	18.0 C	17.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
1	0		17.61	17.61	33.182	23.975	392.5	.000	5.66	103.6	2.3	.36	.0	.01	.23	.10	0
1	10		17.69	17.68	33.467	24.176	373.6	.038	5.70	104.7	2.5	.32	.0	.00	.26	.09	10
	20	ISL	17.18	17.17	33.439	24.276	364.4	.075	5.79	105.2							20
1	21		17.08	17.08	33.426	24.289	363.2	.079	5.79	105.1	2.7	.34	.0	.01	.46	.16	21
	30	ISL	15.34	15.34	33.317	24.602	333.6	.110	5.67	99.3							30
1	31		15.17	15.16	33.309	24.635	330.5	.113	5.65	98.6	4.4	.66	1.3	.30	.63	.53	31
1	42		14.17	14.16	33.272	24.820	313.1	.148	5.35	91.5	6.0	.90	2.7	.66	.50	.44	42
	50	ISL	13.43	13.42	33.247	24.952	300.8	.173	4.94	83.2							50
1	52		13.29	13.28	33.245	24.979	298.3	.179	4.87	81.8	8.3	1.26	5.5	.97	.21	.35	52
1	67		12.83	12.82	33.330	25.135	283.7	.222	5.30	88.2	6.0	.82	5.9	.33	.20	.36	67

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.5 N	118 37.8 W	18/11/86	1348 GMT	648 M	190	09 KT		2	1012.2 MB	18.0 C	17.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.03	18.03	33.330	23.988	391.6	.000	5.56	102.7							0
1	1		18.03	18.03	33.330	23.988	391.2	.004	5.56	102.7	1.9	.33	.1	.00	.21	.05	1
	10	ISL	18.09	18.08	33.405	24.032	387.4	.039	5.57	103.0							10
1	11		18.09	18.08	33.412	24.037	386.9	.043	5.57	103.0	1.9	.36	.1	.00	.21	.05	11
	20	ISL	18.03	18.03	33.465	24.091	382.1	.077	5.60	103.6							20
1	22		18.02	18.02	33.476	24.103	381.0	.085	5.61	103.7	1.8	.33	.1	.00	.23	.07	22
	30	ISL	16.50	16.49	33.332	24.353	357.4	.115	5.91	105.9							30
1	33		15.88	15.87	33.280	24.455	347.8	.125	6.01	106.4	2.1	.36	.1	.00	.27	.11	33
1	43		14.67	14.66	33.246	24.693	325.3	.158	6.03	104.2	2.4	.40	.1	.00	.51	.26	43
	50	ISL	14.04	14.03	33.249	24.828	313.0	.181	5.84	99.5							50
1	54		13.74	13.74	33.250	24.890	306.7	.193	5.70	96.6	3.8	.61	1.6	.27	.48	.33	54
1	64		12.88	12.87	33.304	25.105	286.5	.222	5.40	89.9	5.0	.71	4.6	.17	.24	.27	64
1	75		12.48	12.47	33.415	25.269	271.2	.253	4.86	80.3	7.2	.91	7.8	.02	.16	.20	75
1	90		11.60	11.59	33.500	25.502	249.2	.292	4.37	70.9	11.4	1.17	12.3	.01	.08	.16	90
	100	ISL	11.34	11.32	33.532	25.574	242.6	.317	4.22	68.1							101
1	106		11.26	11.24	33.545	25.599	240.3	.331	4.15	66.9	13.4	1.29	14.2	.02	.06	.17	106
1	125		10.90	10.88	33.618	25.721	229.2	.377	3.68	58.9	17.1	1.51	17.2	.01	.03	.13	126
	150	ISL	10.66	10.64	33.714	25.838	218.5	.432	3.33	53.0							151
1	151		10.65	10.63	33.719	25.844	218.0	.435	3.31	52.7	20.0	1.63	19.2	.02	.02	.09	152
1	181		10.17	10.15	33.866	26.041	199.8	.497	2.66	41.9	26.1	1.94	23.2	.00	.01	.06	182
	200	ISL	9.98	9.96	33.942	26.134	191.4	.534	2.38	37.4							201
1	212		9.88	9.85	33.983	26.183	187.0	.557	2.25	35.3	30.0	2.12	25.4	.03	.00	.07	213
1	241		9.62	9.59	34.062	26.288	177.5	.609	2.07	32.3	33.0	2.19	26.7	.03			242
	250	ISL	9.51	9.48	34.090	26.328	173.9	.626	1.99	31.0							252
1	280		9.14	9.11	34.171	26.452	162.6	.677	1.72	26.6	38.1	2.37	28.9	.02			282
	300	ISL	8.93	8.90	34.205	26.512	157.2	.708	1.55	23.7							302
1	336		8.54	8.51	34.246	26.605	148.8	.763	1.23	18.7	46.1	2.60	31.3	.01			338
1	397		7.81	7.77	34.291	26.751	135.6	.849	.74	11.1	56.1	2.85	34.1	.01			399
	400	ISL	7.77	7.73	34.292	26.758	135.0	.854	.72	10.8							403
1	463		7.11	7.06	34.304	26.862	125.5	.936	.52	7.7	64.5	3.01	36.2	.00			466
	500	ISL	6.74	6.69	34.314	26.920	120.3	.982	.42	6.1							504
1	537		6.38	6.33	34.323	26.976	115.1	1.026	.33	4.8	76.7	3.15	38.5	.00			541

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.2 N	118 47.7 W	18/11/86	1650 GMT	898 M	190	09 KT	180 02 06	1	1013.6 MB	17.8 C	16.0 C	6/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	A	18.05	18.05	33.394	24.030	387.2	.000	5.56	102.8	1.6	.34	.1	.00	.20	.05	0
	10	ISL	18.04	18.03	33.437	24.068	383.9	.039	5.57	103.0							10
1	16		18.03	18.02	33.472	24.098	381.3	.061	3.58	103.1	1.7	.44	.1	.00	.23	.06	16
	20	ISL	17.93	17.93	33.476	24.123	379.0	.077	5.60	103.3							20
1	26		17.80	17.80	33.482	24.160	375.7	.099	5.63	103.6	1.7	.34	.1	.00	.25	.07	26
	30	ISL	17.08	17.08	33.423	24.287	363.7	.114	5.77	104.7							30
1	36		15.89	15.89	33.337	24.495	344.0	.135	5.96	105.6	2.0	.37	.1	.00	.38	.17	36
1	47		14.46	14.45	33.275	24.760	319.0	.171	5.88	101.2	2.5	.46	.7	.10	.63	.30	47
	50	ISL	14.05	14.04	33.283	24.853	310.2	.181	5.75	98.0							50
1	57		13.22	13.21	33.323	25.053	291.3	.202	5.38	90.2	4.4	.72	5.1	.05	.29	.27	57
1	68		12.12	12.11	33.418	25.340	264.1	.232	4.76	78.1	7.8	1.03	9.8	.03	.15	.21	68
	75	ISL	11.77	11.76	33.467	25.444	254.5	.251	4.50	73.3							76
1	83		11.55	11.54	33.508	25.516	247.7	.270	4.31	69.9	11.1	1.20	12.7	.02	.10	.15	83
1	99		10.98	10.97	33.582	25.677	232.7	.308	4.01	64.2	14.3	1.36	15.6	.01	.05	.12	99
	100	ISL	10.96	10.94	33.592	25.689	231.5	.312	3.96	63.3							101
1	112		10.77	10.76	33.679	25.790	222.3	.3 40	3.48	55.5	17.9	1.54	18.2	.01	.04	.11	113
	125	ISL	10.52	10.50	33.742	25.884	213.6	.367	3.25	51.6							126
1	134		10.34	10.33	33.785	25.948	207.6	.387	3.10	49.0	22.0	1.74	21.3	.00	.02	.06	135
	150	ISL	10.27	10.25	33.894	26.046	198.7	.419	2.52	39.8							151
1	160		10.22	10.20	33.952	26.100	193.8	.439	2.13	33.6	28.A	2.06	25.1	.00	.01	.05	161
1	190		10.17	10.15	34.081	26.210	184.1	.495	1.55	24.5	32.7	2.28	27.1	.00	.00	.04	191
	200	ISL	10.11	10.09	34.099	26.234	182.0	.513	1.59	25.0							201
1	226		9.89	9.87	34.129	26.295	176.7	.560	1.68	26.4	33.7	2.29	27.6	.00	.00	.04	227
	250	ISL	9.61	9.58	34.179	26.382	168.8	.601	1.62	25.3							252
1	257		9.52	9.49	34.192	26.406	166.6	.612	1.60	24.9	36.3	2.36	28.7	.00			258
1	297		8.98	8.95	34.224	26.519	156.5	.678	1.48	22.8	40.6	2.48	30.1	.01			299
	300	ISL	8.95	8.92	34.226	26.525	156.0	.682	1.47	22.6							302
1	354		8.53	8.50	34.258	26.617	148.0	.764	1.16	17.7	45.9	2.61	31.7	. .00			356
	400	ISL	8.09	8.04	34.286	26.707	140.1	.831	.86	12.9							403
1	419		7.88	7.84	34.295	26.744	136.6	.858	.74	11.1	54.7	2.82	34.1	.00			422
1	486		7.11	7.06	34.302	26.861	126.1	.945	.49	7.2	64.5	2.99	36.8	.00			489
	500	ISL	7.00	6.95	34.303	26.877	124.6	.963	.46	6.8							504
1	568		6.52	6.47	34.314	26.950	118.2	1.045	.36	5.2	73.5	3.13	38.2	.01			572
	600	ISL	6.24	6.19	34.325	26.996	114.0	1.082	.31	4.4							605
1	644		5.86	5.81	34.343	27.058	108.2	1.132	.24	3.4	85.9	3.21	39.6	.00			649
	700	ISL	5.52	5.46	34.364	27.116	102.9	1.190	.18	2.6							706
1	715		5.45	5.39	34.369	27.129	101.8	1.205	.17	2.4	95.6	3.28	39.4	.00			7 20
1	783		5.19	5.12	34.385	27.174	98.0	1.274	.10	1.4	104.4	3.36	36.9	.00			7 89
	800	ISL	5.16	5.09	34.384	27.177	97.8	1.291	.09	1.2							807
1	844		5.11	5.04	34.389	27.186	97.4	1.334	.06	.8	110.9	3.41	32.6	.00			851
1	897		5.10	5.02	34.393	27.191	97.5	1.385	.04	.6	117.0	3.48	28.6	.01			904

A. SANTA MONICA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 41.1 N	118 55.6 W	18/11/86	2024 GMT	896 M	070	04 KT	180 02 06	1	1014.2 MB	17.8 C	16.8 C	5/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.11	18.11	33.403	24.023	388.0	.000	5.56	102.9							0
1	1	A	18.11	18.11	33.403	24.023	387.9	.004	5.56	102.9	1.6	.33	.0	.00	.22	.05	1
	10	ISL	18.07	18.07	33.403	24.035	387.1	.039	5.57	103.0							10
1	16		18.04	18.03	33.404	24.043	386.5	.062	5.58	103.1	1.6	.32	.0	.00	.22	.07	16
	20	ISL	17.90	17.89	33.401	24.075	383.0	.077	5.63	103.7							20
1	27		17.40	17.39	33.396	24.191	372.7	.103	5.74	104.8	1.6	.34	.0	.00	.36	.13	27
	30	ISL	16.96	16.96	33.366	24.271	365.2	.115	5.81	105.1							30
1	37		15.81	15.81	33.289	24.476	345.9	.139	5.94	105.0	2.1	.40	.1	.00	.44	.17	37
1	48		13.93	13.93	33.184	24.800	315.1	.175	5.94	101.0	2.8	.49	.8	.06	.41	.29	48
	50	ISL	13.69	13.69	33.208	24.867	308.8	.182	5.84	98.9							50
1	58		13.07	13.07	33.316	25.076	289.1	.206	5.46	91.3	4.7	.69	4.2	.14	.29	.27	58
1	69		12.53	12.52	33.376	25.229	274.7	.236	5.23	86.5	5.9	.78	6.1	.09	.22	.27	69
	75	ISL	12.31	12.30	33.380	25.276	270.5	.253	5.15	84.7							76
1	84		12.00	11.99	33.391	25.342	264.4	.277	4.98	81.5	7.8	.94	8.8	.04	.15	.24	84
1	100		11.16	11.15	33.536	25.609	239.2	.317	4.21	67.7	13.3	1.27	14.3	.02	.07	.14	100
1	114		10.69	10.68	33.693	25.816	219.9	.351	3.41	54.3	19.2	1.60	19.0	.02	.03	.10	115
	125	ISL	10.46	10.44	33.761	25.909	211.2	.374	3.12	49.5							126
1	135		10.27	10.26	33.809	25.979	204.7	.395	2.97	46.9	23.7	1.79	22.1	.01	.01	.06	136
	150	ISL	9.99	9.97	33.870	26.075	195.8	.424	2.86	44.9							151
1	161		9.84	9.82	33.915	26.135	190.3	.446	2.76	43.2	27.3	1.91	24.0	.01	.00	.05	162
1	192		10.03	10.01	34.069	26.224	182.7	.504	1.82	28.6	32.6	2.21	26.8	.00	.00	.05	193
	200	ISL	9.97	9.94	34.099	26.259	179.6	.518	1.79	28.1							201
1	228		9.61	9.58	34.168	26.373	169.2	.566	1.68	26.2	35.9	2.31	28.3	.01	.00	.03	229
	250	ISL	9.37	9.34	34.183	26.424	164.7	.604	1.68	26.1							252
1	259		9.28	9.25	3 4.185	26.439	163.4	.618	1.68	26.0	37.8	2.35	29.0	.00			260
1	299		9.00	8.97	34.233	26.523	156.1	.683	1.46	22.5	41.1	2.45	30.1	.00			301
	300	ISL	8.99	8.96	34.234	26.525	156.0	.684	1.46	22.4							302
1	356		8.47	8.43	34.265	26.632	146.6	.768	1.19	18.1	47.3	2.62	31.9	.00			358
	400	ISL	8.09	8.05	34.292	26.711	139.7	.831	.90	13.5							403
1	422		7.87	7.83	34.302	26.751	136.1	.862	.75	11.3	55.2	2.84	34.2	.00			425
1	488		6.98	6.93	34.310	26.885	123.6	.947	.47	6.9	67.3	3.03	37.0	.00			491
	500	ISL	6.84	6.79	34.313	26.906	121.7	.962	.44	6.4							504
1	570		6.20	6.15	34.327	27.002	112.9	1.044	.33	4.8	79.8	3.17	39.1	.00			574
	600	ISL	6.02	5.97	34.334	27.030	110.5	1.078	.30	4.3							605
1	646		5.81	5.75	34.345	27.066	107.4	1.128	.26	3.7	87.2	3.23	39.8	.00			651
	700	ISL	5.58	5.52	34.362	27.108	103.8	1.185	.24	3.4							706
1	719		5.50	5.44	34.367	27.122	102.6	1.204	.23	3.3	94.8	3.31	39.9	.00			724
1	785		5.21	5.14	34.384	27.171	98.4	1.271	.14	2.0	104.1	3.35	37.8	.00			791
	800	ISL	5.18	5.11	34.384	27.174	98.1	1.286	.13	1.8							807
1	848		5.12	5.05	34.390	27.187	97.4	1.333	.11	1.5	109.6	3.40	33.7	.01			855
1	902		5.10	5.02	34.393	27.192	97.5	1.385	.07	1.0	117.5	3.48	28.3	.01			909

A. SANTA MONICA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 35.3 N	119 06.7 W	18/11/86	2303 GMT	258 M	130	05 KT	170 02 06	2	1013.8 MB	18.7 C	16.6 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	18.23	18.23	33.442	24.025	388.1	.000	5.55	103.0							0
1	1	18.23	18.23	33.442	24.025	387.7	.004	5.55	103.0	2.0	.35	.1	.00	.26	.07	1
	10 ISL	18.10	18.10	33.440	24.054	385.2	.039	5*.55	102.7							10
1	11	18.10	18.09	33.440	24.056	385.1	.042	5.55	102.7	2.2	.32	.1	.00	.24	.06	11
	20 ISL	18.06	18.05	33.439	24.065	384.6	.077	5.57	102.9							20
1	22	18.05	18.05	33.439	24.067	384.5	.085	5.57	103.0	1.9	.32	.1	.00	.29	.08	22
	30 ISL	17.55	17.55	33.411	24.166	376.8	.115	5.73	104.8							30
1	32	17.44	17.43	33.405	24.189	373.1	.122	5.77	105.4	2.0	.33	.1	.00	.44	.18	32
1	42	14.88	14.88	33.224	24.630	331.2	.157	5.96	103.4	3.0	.44	.7	.02	.46	.27	42
	50 ISL	14.43	14.43	33.241	24.740	321.0	.184	5.97	102.7							50
1	53	14.40	14.39	33.255	24.759	319.3	.193	5.98	102.7	3.3	.45	.7	.05	.56	.38	53
1	63	13.43	13.43	33.232	24.939	302.3	.224	5.75	96.8	4.9	.64	3.4	.16	.46	.34	63
1	73	12.89	12.88	33.312	25.111	286.2	.253	5.42	90.3	5.7	.71	4.8	.16	.30	.32	73
	75 ISL	12.78	12.77	33.324	25.141	283.3	.260	5.38	89.5							76
1	88	12.14	12.13	33.405	25.327	265.9	.294	5.08	83.3	7.4	.85	7.5	.06	.17	.25	88
	100 ISL	11.14	11.12	33.581	25.649	235.4	.325	4.17	67.0							101
1	109	10.51	10.50	33.706	25.856	215.8	.345	3.52	55.9	20.8	1.57	18.9	.02	.04	.11	109
	125 ISL	10.30	10.29	33.783	25.954	205.3	.379	3.09	48.8							126
1	129	10.25	10.23	33.804	25.979	204.5	.388	3.04	48.0	24.2	1.76	21.6	.02	.02	.12	130
1	149	10.03	10.02	33.895	26.087	194.7	.428	2.72	42.8	27.4	1.91	23.5	.02	.01	.06	150
	150 ISL	10.02	10.00	33.900	26.093	194.1	.429	2.70	42.5							151
1	181	9.40	9.37	34.080	26.338	171.4	.486	2.09	32.4	34.8	2.20	27.3	.01	.00	.04	182
	200 ISL	9.30	9.28	34.101	26.370	168.8	.518	2.00	31.0							201
1	212	9.24	9.22	34.114	26.389	167.1	.538	1.95	30.2	36.7	2.27	28.0	.02	.00	.03	213

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.7 N	119 19.1 W	19/11/86	0126 GMT	1556 M	090	09 KT	170 02 06	1	1016.0 MB	17.9 C	16.2 C	2/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.07	18.07	33.409	24.037	386.5	.000	5.56	102.8	1.8	.33	.0	.00	.19	.05	0
1	10	17.95	17.95	33.431	24.084	382.3	.038	5.58	103.0	1.7	.32	.0	.00	.23	.06	10
	20 ISL	17.84	17.84	33.495	24.160	375.5	.076	5.63	103.6							20
1	21	17.83	17.83	33.509	24.174	374.2	.080	5.63	103.7	1.8	.32	.0	.00	.31	.09	21
	30 ISL	16.16	16.15	33.361	24.454	347.7	.113	5.96	106.2							30
1	31	15.97	15.96	33.347	24.486	344.7	.116	5.99	106.3	2.2	.37	.1	.00	.47	.22	31
1	41	14.60	14.60	33.362	24.796	315.4	.148	5.78	99.8	3.6	.50	1.7	.15	.74	.51	41
	50 ISL	12.60	12.59	33.299	25.156	281.3	.176	5.39	89.3							50
1	51	12.45	12.44	33.296	25.183	278.7	.178	5.36	88.5	6.3	.80	6.2	.10	.41	.40	51
1	62	12.32	12.31	33.354	25.252	272.4	.208	5.28	86.9	6.6	.79	6.4	.07	.31	.33	62
1	72	11.86	11.85	33.423	25.393	259.2	.235	4.97	81.1	8.8	.95	9.5	.03	.21	.26	72
	75 ISL	11.77	11.76	33.430	25.415	257.2	.243	4.96	80.7							76
1	87	11.45	11.44	33.448	25.489	250.4	.273	4.87	78.7	9.7	1.01	10.5	.03	.15	.22	87
	100 ISL	10.73	10.72	33.540	25.689	231.5	.305	4.23	67.4							101
1	103	10.59	10.57	33.563	25.732	227.5	.311	4.09	65.0	16.6	1.40	16.8	.02	.07	.13	103
1	123	9.90	9.88	33.777	26.017	200.7	.355	3.44	53.9	23.2	1.66	21.1	.01	.02	.05	124
	125 ISL	9.87	9.86	33.789	26.031	199.5	.359	3.40	53.2							126
1	148	9.67	9.66	33.921	26.167	187.0	.404	2.91	45.4	27.4	1.87	23.7	.01	.01	.04	149
	150 ISL	9.65	9.64	33.928	26.176	186.2	.407	2.88	44.9							151
1	179	9.32	9.30	34.027	26.308	174.2	.459	2.49	38.6	32.6	2.05	26.1	.00	.01	.03	180
	200 ISL	9.21	9.19	34.094	26.379	167.9	.495	2.20	33.9							201
1	210	9.15	9.13	34.116	26.406	165.5	.511	2.09	32.3	35.8	2.22	27.7	.01	.00	.03	211
1	242	8.76	8.74	34.110	26.463	160.6	.563	2.07	31.7	37.8	2.28	28.7	.01			243
	250 ISL	8.74	8.71	34.129	26.482	158.8	.577	1.95	29.9							252
1	282	8.68	8.65	34.221	26.563	151.8	.627	1.42	21.7	44.0	2.56	30.6	.01			284
	300 ISL	8.58	8.54	34.246	26.600	148.6	.653	1.25	19.0							302
1	339	8.26	8.23	34.275	26.671	142.5	.710	.99	15.0	50.2	2.74	32.6	.01			341
	400 ISL	7.67	7.63	34.288	26.769	133.8	.7 94	.70	10.5							403
1	401	7.66	7.62	34.288	26.771	133.6	.796	.70	10.5	57.9	2.86	34.8	.00			404
1	469	7.00	6.95	34.297	26.872	124.6	.883	.53	7.8	66.2	2.98	36.9	.00			472
	500 ISL	6.71	6.66	34.305	26.918	120.4	.921	.46	6.7							504
1	541	6.33	6.28	34.319	26.979	114.8	.970	.36	5.2	77.7	3.13	38.8	.00			545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 18.9 N	119 39.6 W	19/11/86	0524 GMT	77 M	320	04 KT		1	1017.8 MB	17.2 C	16.1 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.61	16.61	33.472	24.434	348.7	.000	5.85	105.2	1.5	.30	.1	.00	.82	.29	0
1	10	16.27	16.27	33.463	24.505	342.2	.034	5.94	106.1	1.2	.32	.1	.01	1.83	.59	10
1	20	13.40	13.40	33.369	25.051	290.5	.066	5.16	86.9	7.1	.82	6.6	.27	1.14	.68	20
1	30	12.38	12.38	33.403	25.278	269.1	.094	4.75	78.3	10.5	1.06	10.4	.19	.51	.46	30
1	40	11.79	11.79	33.438	25.416	256.2	.120	4.55	74.1	12.3	1.15	12.2	.15	.22	.31	40
	50 ISL	11.66	11.65	33.455	25.456	252.7	.146	4.47	72.7							50
1	52	11.63	11.63	33.458	25.462	252.1	.150	4.46	72.4	13.2	1.22	12.9	.13	.19	.29	52
1	62	11.09	11.08	33.497	25.592	240.0	.175	4.26	68.4	15.0	1.31	14.6	.11	.21	.33	62

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 09.5 N	120 00.4 W	19/11/86	0909 GMT	1190 M	320	12 KT			1017.9 MB	17.0 C	15.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.77	16.77	33.344	24.299	361.6	.000	5.67	102.2	2.1	.37	.1	.00	.20	.05	0
1	10	16.78	16.78	33.340	24.294	362.4	.036	5.67	102.2	2.0	.40	.1	.00	.17	.06	10
	20 ISL	16.76	16.75	33.341	24.300	362.1	.072	5.67	102.2							20
1	21	16.75	16.75	33.342	24.302	362.0	.076	5.67	102.2	2.1	.35	.1	.00	.17	.06	21
	30 ISL	16.58	16.58	33.343	24.342	358.4	.108	5.70	102.4							30
1	32	16.53	16.52	33.343	24.355	357.2	.115	5.71	102.4	2.1	.36	.1	.00	.28	.11	32
1	42	16.04	16.04	33.344	24.466	346.9	.150	5.78	102.7	2.5	.37	.1	.01	.34	.15	42
	50 ISL	15.43	15.43	33.309	24.576	336.7	.178	5.76	101.0							50
1	53	15.18	15.17	33.293	24.619	332.6	.187	5.75	100.4	2.9	.44	.7	.10	.40	.20	53
1	63	14.14	14.13	33.245	24.805	315.1	.220	5.71	97.6	3.3	.55	1.9	.22	.41	.27	63
1	73	13.05	13.04	33.253	25.032	293.6	.250	5.51	92.1	4.5	.67	4.0	.13	.33	.31	73
	75 ISL	12.86	12.85	33.271	25.084	288.8	.257	5.43	90.4							76
1	89	11.84	11.83	33.394	25.374	261.4	.294	4.91	80.0	8.7	1.00	9.9	.03	.14	.21	89
	100 ISL	10.84	10.83	33.458	25.606	239.4	.323	4.54	72.5							101
1	105	10.48	10.47	33.487	25.691	231.3	.333	4.39	69.5	15.0	1.34	15.8	.01	.04	.09	105
1	124	9.86	9.84	33.722	25.980	204.2	.377	3.48	54.4	22.6	1.69	21.4	.01	.01	.06	125
	125 ISL	9.84	9.83	33.726	25.987	203.7	.378	3.47	54.2							126
1	150	9.22	9.20	33.850	26.186	185.1	.427	3.17	48.9	27.8	1.84	24.1	.00	.00	.05	151
1	181	8.80	8.78	33.996	26.367	168.3	.481	2.61	39.9	34.6	2.08	27.1	.00	.00	.04	182
	200 ISL	8.57	8.55	34.033	26.432	162.6	.513	2.48	37.8							201
1	211	8.43	8.41	34.042	26.461	159.9	.530	2.45	37.2	38.1	2.18	28.5	.00	.00	.03	212
1	242	7.85	7.82	34.058	26.561	150.8	.578	2.33	34.9	43.4	2.28	30.2	.01			243
	250 ISL	7.79	7.76	34.068	26.577	149.3	.591	2.24	33.5							252
1	281	7.68	7.66	34.113	26.628	145.0	.637	1.84	27.5	48.3	2.46	32.0	.00			283
	300 ISL	7.57	7.54	34.138	26.664	141.9	.663	1.60	23.9							302
1	337	7.30	7.27	34.182	26.737	135.4	.715	1.17	17.3	56.8	2.73	34.8	.00			339
1	398	6.77	6.74	34.242	26.858	124.6	.795	.65	9.5	67.0	2.95	37.5	.00			401
	400 ISL	6.77	6.73	34.243	26.860	124.4	.797	.64	9.4							403
1	466	6.47	6.43	34.297	26.942	117.4	.876	.43	6.2	73.5	3.07	38.7	.00			469
	500 ISL	6.27	6.22	34.315	26.983	113.8	.916	.36	5.2							504
1	540	5.98	5.93	34.328	27.030	109.6	.961	.32	4.6	81.6	3.16	40.3	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 59.5 N	120 21.6 W	19/11/86	1237 GMT	769 M	320	11 KT			1018.0 MB	17.0 C	15.0 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	16.71	16.71	33.369	24.332	358.2	.000	5.67	102.1							0
1	1	16.71	16.71	33.369	24.332	358.4	.004	5.67	102.1	1.9	.37	.0	.00	.19	.06	1
	10 ISL	16.74	16.73	33.366	24.324	359.6	.036	5.67	102.1							10
1	11	16.74	16.74	33.366	24.323	359.6	.039	5.67	102.2	2.0	.35	.0	.00	.20	.06	11
	20 ISL	16.70	16.69	33.369	24.335	358.7	.072	5.68	102.2							20
1	22	16.69	16.68	33.369	24.338	358.5	.079	5.68	102.2	2.1	.35	.0	.00	.21	.08	22
	30 ISL	16.54	16.53	33.358	24.364	356.3	.108	5.71	102.5							30
1	32	16.50	16.50	33.355	24.370	355.8	.114	5.72	102.6	2.1	.35	.0	.00	.26	.10	32
1	42	14.30	14.29	33.276	24.794	315.6	.148	5.94	101.9	3.0	.46	.5	.05	.51	.42	42
	50 ISL	13.16	13.15	33.294	25.042	292.1	.173	5.61	94.0							50
1	52	12.95	12.95	33.300	25.087	287.9	.178	5.51	91.9	4.9	.70	4.5	.13	.36	.36	52
1	63	11.75	11.74	33.299	25.317	266.2	.208	5.04	81.9	8.3	.97	9.2	.03	.19	.24	63
1	73	11.49	11.48	33.389	25.436	255.1	.234	4.85	78.5	9.7	1.05	10.7	.02	.12	.20	73
	75 ISL	11.44	11.43	33.400	25.453	253.5	.240	4.82	77.9							76
1	88	11.16	11.15	33.452	25.545	245.1	.271	4.62	74.2	11.5	1.16	12.6	.01	.08	.13	88
	100 ISL	10.70	10.69	33.537	25.693	231.2	.301	4.28	68.1							101
1	104	10.56	10.55	33.564	25.737	227.1	.309	4.17	66.2	15.9	1.40	16.6	.01	.04	.08	104
1	123	10.12	10.11	33.709	25.926	209.4	.352	3.59	56.5	20.6	1.60	19.9	.00	.02	.06	124
	125 ISL	10.09	10.08	33.718	25.938	208.3	.356	3.56	56.0							126
1	149	9.64	9.63	33.832	26.103	193.1	.404	3.17	49.4	25.6	1.79	23.0	.00	.00	.04	150
	150 ISL	9.63	9.61	33.836	26.109	192.5	.406	3.15	49.1							151
1	180	8.95	8.93	33.995	26.343	170.7	.460	2.54	39.0	33.9	2.10	26.9	.00	.00	.03	181
	200 ISL	8.54	8.52	34.054	26.453	160.5	.493	2.44	37.1							201
1	211	8.35	8.33	34.074	26.498	156.4	.511	2.41	36.5	38.6	2.20	28.9	.00	.00	.02	212
1	242	8.01	7.99	34.095	26.565	150.5	.558	2.05	30.8	43.9	2.35	30.7	.00			243
	250 ISL	7.92	7.89	34.101	26.584	148.7	.570	1.97	29.6							252
1	282	7.61	7.58	34.132	26.654	142.6	.617	1.70	25.3	49.7	2.50	32.6	.00			284
	300 ISL	7.60	7.57	34.162	26.679	140.5	.642	1.52	22.6							302
1	339	7.57	7.54	34.218	26.728	136.5	.696	1.12	16.7	54.9	2.70	34.1	.00			341
	400 ISL	7.16	7.12	34.267	26.825	128.1	.777	.65	9.6							403
1	401	7.15	7.11	34.267	26.826	127.9	.779	.64	9.4	62.9	2.92	36.2	.00			404
1	467	6.69	6.65	34.301	26.916	120.1	.860	.45	6.6	70.1	3.03	37.9	.00			470
	500 ISL	6.43	6.38	34.313	26.960	116.1	.899	.37	5.4							504
1	538	6.09	6.04	34.322	27.011	111.4	.943	.30	4.3	79.6	3.14	40.0	.00			542

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 43.0 N	120 56.9 W	19/11/86	1835 GMT	3809 M	320	17 KT	320 05 06	2	1020.9 MB	16.3 C	15.2 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	A	15.72	15.72	33.442	24.613	331.6	.000	6.10	107.8	.2	.29	.1	.00	.65	.24	0
1	10	A	15.67	15.67	33.447	24.628	330.5	.033	6.14	108.4	.2	.31	.1	.00	.69	.22	10
1	11	A	15.50	15.50	33.478	24.690	324.6	.036	6'.21	109.3	.2	.29	.1	.00	.71	.26	11
1	17	A	14.77	14.77	33.535	24.893	305.5	.055	5.96	103.4	1.3	.43	.6	.04	.93	.37	17
	20	ISL	14.61	14.61	33.529	24.923	302.1	.064	5.82	100.5							20
1	27		14.32	14.31	33.516	24.976	297.8	.085	5.48	94.1	4.4	.65	3.3	.16	1.04	.57	27
	30	ISL	14.04	14.03	33.508	25.028	293.0	.094	5.33	91.1							30
1	35	A	13.54	13.54	33.496	25.121	284.3	.108	5.11	86.4	7.1	.83	6.4	.29	1.19	1.14	35
	50	ISL	11.91	11.90	33.493	25.437	254.9	.149	4.53	73.9							50
1	54		11.56	11.56	33.492	25.501	248.4	.159	4.42	71.7	12.5	1.20	13.1	.07	.63	.44	54
1	65	A	11.04	11.03	33.517	25.616	237.7	.185	4.25	68.1	14.3	1.32	15.1	.04	.49	.45	65
1	75		10.56	10.55	33.625	25.784	221.9	.208	3.87	61.5	17.3	1.47	17.6	.03	.28	.32	75
1	85		10.17	10.16	33.655	25.876	213.4	.230	3.87	60.9	18.8	1.52	18.6	.03	.23	.29	85
1	97		9.91	9.90	33.744	25.988	202.9	.254	3.39	53.1	22.5	1.69	21.3	.03	.20	.19	97
	100	ISL	9.85	9.84	33.771	26.020	200.0	.261	3.27	51.2							1C1
1	112		9.57	9.55	33.855	26.133	189.5	.286	2.98	46.4	26.8	1.88	23.9	.01	.11	.17	113
	125	ISL	9.10	9.09	33.915	26.254	178.1	.309	2.90	44.7							126
1	127		9.02	9.01	33.924	26.275	176.2	.313	2.90	44.6	30.3	1.98	25.4	.01	.08	.13	128
	150	ISL	8.76	8.74	33.963	26.347	169.2	.352	2.82	43.1							151
1	153		8.72	8.71	33.969	26.357	168.8	.357	2.81	42.9	32.9	2.02	26.4	.01			154
1	179		8.83	8.81	34.119	26.459	159.7	.400	1.95	29.9	38.3	2.30	28.7	.01			180
	200	ISL	8.63	8.61	34.186	26.542	152.2	.433	1.56	23.8							201
1	209		8.55	8.53	34.207	26.572	149.5	.446	1.52	23.2	44.0	2.50	30.6	.01			210
1	240		7.53	7.51	34.070	26.615	145.4	.491	2.23	33.2	46.3	2.34	30.8	.01			241
	250	ISL	7.48	7.45	34.084	26.634	143.8	.506	2.14	31.8							252
1	280		7.31	7.29	34.126	26.691	138.8	.549	1.57	23.2	52.9	2.57	33.3	.01			282
	300	ISL	7.26	7.24	34.165	26.729	135.6	.576	1.26	18.7							302
1	338		7.18	7.15	34.231	26.793	130.1	.627	.80	11.8	60.9	2.88	35.7	.00			340
1	398		6.85	6.81	34.259	26.862	124.3	.703	.62	9.1	66.2	2.96	37.0	.00			401
	400	ISL	6.83	6.79	34.259	26.864	124.1	.705	.62	9.0							403
1	465		6.15	6.11	34.261	26.955	115.8	.783	.49	7.1	74.8	3.08	39.2	.00			468
	500	ISL	5.80	5.76	34.254	26.994	112.2	.823	.44	6.3							504
1	537		5.43	5.39	34.240	27.028	109.1	.865	.41	5.8	86.4	3.17	41.6	.00			541

A. PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE DEPTHS.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 19.3 N	121 43.6 W	20/11/86	0224 GMT	4038 M	340	22 KT			1019.7 MB	16.3 C	15.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.29	16.29	33.124	24.240	367.2	.000	5.73	102.2							0
1	1		16.29	16.29	33.124	24.240	367.2	.004	5.73	102.2	1.9	.39	.0	.00	.23	.08	1
	10	ISL	16.29	16.29	33.126	24.242	367.2	.037	5.74	102.3							10
1	11		16.29	16.29	33.126	24.243	367.2	.040	5.74	102.4	1.9	.39	.0	.00	.23	.08	11
	20	ISL	16.19	16.18	33.156	24.289	363.1	.073	5.79	103.0							20
1	22		16.15	16.14	33.167	24.307	361.5	.080	5.80	103.2	1.7	.38	.0	.00	.34	.13	22
	30	ISL	15.84	15.83	33.234	24.428	350.3	.109	5.86	103.7							30
1	32		15.74	15.73	33.250	24.463	347.0	.116	5.88	103.8	1.7	.36	.1	.00	.41	.24	32
1	43		14.89	14.89	33.312	24.696	325.0	.152	6.00	104.2	1.9	.40	.1	.03	1.03	.46	43
	50	ISL	14.71	14.70	33.326	24.747	319.3	.175	5.84	101.1							50
1	53		14.59	14.58	33.332	24.777	317.6	.184	5.77	99.6	3.1	.48	.9	.09	1.03	.70	53
1	63		13.12	13.11	33.110	24.908	305.2	.215	5.71	95.5	4.5	.63	2.7	.24	.95	.73	63
1	74		11.83	11.82	33.176	25.207	276.9	.247	5.44	88.5	6.7	.80	6.3	.09	.69	.56	74
	75	ISL	11.77	11.76	33.204	25.239	273.9	.25 1	5.35	87.0							76
1	89		11.47	11.46	33.500	25.525	247.0	.286	4.39	71.0	12.8	1.19	13.7	.03	.27	.45	89
	100	ISL	10.95	10.94	33.588	25.687	231.8	.313	4.02	64.4							101
1	104		10.77	10.76	33.602	25.730	227.8	.322	3.95	63.0	17.4	1.40	17.2	.02	.12	.22	104
1	124		9.90	9.89	33.747	25.993	203.1	.367	3.41	53.4	23.3	1.67	21.6	.01	.06	.12	125
	125	ISL	9.89	9.87	33.750	25.998	202.6	.368	3.40	53.2							126
1	149		9.34	9.33	33.868	26.180	185.7	.415	3.01	46.6	28.6	1.87	24.8	.00	.03	.07	150
	150	ISL	9.33	9.31	33.872	26.185	185.2	.416	3.00	46.4							151
1	179		8.79	8.77	33.989	26.363	168.7	.468	2.62	40.1	34.8	2.05	27.3	.01	.04	.11	180
	200	ISL	8.42	8.40	34.030	26.452	160.6	.502	2.56	38.9							201
1	208		8.30	8.28	34.041	26.479	158.1	.515	2.54	38.4	39.0	2.13	28.6	.01	.04	.07	209
1	238		7.95	7.93	34.095	26.574	149.5	.561	2.12	31.8	45.1	2.32	30.7	.01			239
	250	ISL	7.86	7.83	34.121	26.609	146.4	.579	1.89	28.3							252
1	278		7.66	7.64	34.177	26.681	140.0	.619	1.36	20.3	53.1	2.59	33.5	.01			280
	300	ISL	7.48	7.46	34.207	26.731	135.5	.649	1.10	16.3							302
1	333		7.19	7.16	34.238	26.796	129.7	.693	.82	12.1	61.8	2.82	36.0	.00			335
1	396		6.67	6.63	34.257	26.884	122.0	.772	.57	8.3	69.8	2.96	38.1	.00			398
	400	ISL	6.64	6.60	34.260	26.890	121.4	.777	.55	8.1							403
1	464		6.34	6.29	34.309	26.969	114.6	.853	.37	5.4	76.9	3.08	39.6	.00			467
	500	ISL	6.14	6.10	34.328	27.010	111.1	.893	.30	4.4							504
1	535		5.93	5.89	34.341	27.046	107.9	.932	.26	3.7	83.9	3.12	41.0	.00			539

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 59.6 N	122 24.3 W	20/11/86	0751 GMT	4104 M	320	18 KT	320 06 06		1021.1 MB	16.3 C	14.5 C	4/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	16.60	16.60	32.825	23.940	395.8	.000	5.70	102.1							0
1	1	16.60	16.60	32.825	23.940	395.8	.004	5.70	102.1	.3	.40	.0	.00	.15	.05	1
	10 ISL	16.60	16.60	32.824	23.940	396.1	.040	3.70	102.1							10
1	16	16.60	16.60	32.824	23.940	396.3	.063	5.70	102.1	.7	.39	.0	.00	.16	.06	16
	20 ISL	16.60	16.59	32.824	23.940	396.4	.079	5.71	102.2							20
	30 ISL	16.59	16.58	32.824	23.943	396.5	.119	5.72	102.4							30
1	32	16.59	16.58	32.824	23.943	396.5	.126	5.72	102.4	.6	.39	.0	.00	.16	.06	32
1	42	16.58	16.58	32.822	23.943	396.9	.166	5.71	102.2	.5	.40	.0	.00	.16	.06	42
	50 ISL	16.23	16.23	32.825	24.025	389.2	.198	5.77	102.5							50
1	53	16.05	16.04	32.835	24.075	384.5	.209	5.80	102.7	.6	.41	.0	.00	.31	.17	53
1	63	15.15	15.14	32.953	24.364	357.2	.246	5.95	103.6	1.3	.44	.0	.01	.41	.27	63
1	73	15.46	15.45	33.177	24.470	347.4	.281	5.81	101.9	1.9	.43	.0	.02	.23	.19	73
	75 ISL	15.24	15.23	33.141	24.490	345.6	.289	5.85	102.1							76
1	84	14.08	14.07	32.953	24.592	336.1	.318	5.99	102.0	2.3	.48	.3	.13	.27	.28	84
1	98	12.54	12.53	32.987	24.927	304.3	.363	5.78	95.4					.14	.23	98
	100 ISL	12.42	12.41	33.005	24.964	300.8	.370	5.75	94.6							1C1
1	115	11.81	11.80	33.137	25.180	280.4	.412	5.45	88.6	6.2	.83	6.2	.02	.07	.18	115
	125 ISL	11.00	10.98	33.236	25.405	259.2	.441	5.06	80.8							126
1	129	10.65	10.64	33.280	25.501	250.0	.452	4.88	77.5	12.3	1.18	12.8	.01	.04	.06	130
	150 ISL	9.92	9.90	33.492	25.792	222.7	.500	4.37	68.3							151
1	155	9.82	9.80	33.545	25.849	217.3	.512	4.29	67.0	17.9	1.46	18.3	.01	.01	.04	156
1	180	9.34	9.32	33.782	26.113	192.7	.563	4.26	65.9	20.5	1.45	19.0	.01	.01	.03	181
	200 ISL	8.78	8.76	33.889	26.286	176.4	.600	4.00	61.2							201
1	212	8.46	8.44	33.930	26.368	168.8	.620	3.82	58.0	29.5	1.72	23.7	.00	.01	.02	213
1	243	8.12	8.10	33.985	26.463	160.2	.671	3.53	53.2	34.4	1.85	25.6	.00			244
	250 ISL	8.00	7.97	33.993	26.488	158.0	.683	3.39	51.0							252
1	283	7.43	7.41	34.018	26.589	148.6	.732	2.71	40.2	44.8	2.18	30.3	.00			284
	300 ISL	7.22	7.19	34.028	26.626	145.2	.758	2.44	36.0							302
1	338	6.88	6.85	34.051	26.693	139.3	.812	1.93	28.3	55.2	2.49	34.4	.00			340
	400 ISL	6.50	6.46	34.125	26.803	129.5	.895	1.10	15.9							403
1	401	6.49	6.46	34.126	26.804	129.4	.896	1.09	15.8	65.5	2.80	38.0	.00			403
1	467	5.81	5.77	34.139	26.901	120.5	.979	.81	11.6	76.1	2.95	40.6	.00			470
	500 ISL	5.60	5.56	34.170	26.952	115.9	1.018	.64	9.1							504
1	539	5.45	5.41	34.228	27.016	110.2	1.063	.41	5.8	87.3	3.12	42.3	.00			543

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 39.1 N	123 04.1 W	20/11/86	1308 GMT	4102 M	330	18 KT			1020.9 MB	15.2 C	15.0 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	16.69	16.69	32.899	23.975	392.4	.000	5.66	101.6							0
1	1	16.69	16.69	32.899	23.975	392.5	.004	5.66	101.6	.7	.39	.0	.00	.19	.08	1
	10 ISL	16.70	16.70	32.894	23.970	393.3	.039	5.67	101.9							10
1	17	16.71	16.70	32.894	23.968	393.6	.067	5.68	102.0	.7	.38	.0	.00	.20	.08	17
	20 ISL	16.70	16.70	32.893	23.969	393.7	.079	5.68	102.0							20
	30 ISL	16.69	16.68	32.891	23.971	393.7	.118	5.68	101.9							30
1	32	16.69	16.68	32.891	23.972	393.8	.125	5.68	101.9	.7	.39	.0	.00	.21	.08	32
1	43	16.47	16.46	32.870	24.005	390.9	.168	5.72	102.2	.7	.39	.0	.00	.28	.11	43
	50 ISL	16.20	16.19	32.826	24.035	388.4	.196	5.76	102.4							50
1	53	16.10	16.09	32.814	24.048	387.2	.207	5.78	102.5	.6	.40	.0	.00	.30	.13	53
1	64	16.02	16.01	32.877	24.114	381.2	.249	5.81	102.9	.8	.39	.0	.00	.30	.15	64
1	74	16.78	16.76	33.419	24.358	358.4	.286	5.90	106.4	1.3	.31	.0	.00	.21	.09	74
	75 ISL	16.69	16.68	33.416	24.374	355.2	.291	5.92	106.5							76
1	85	15.46	15.45	33.391	24.634	332.2	.324	6.00	105.4	1.7	.30	.0	.00	.15	.16	85
1	100	12.81	12.80	32.991	24.877	309.1	.372	5.86	97.3	3.2	.57	2.0	.04	.13	.18	100
1	116	11.58	11.57	33.028	25.138	284.4	.419	5.51	89.1	6.3	.82	6.3	.02	.07	.12	116
	125 ISL	10.65	10.63	33.086	25.350	264.3	.445	5.24	83.1							126
1	131	10.08	10.07	33.148	25.495	250.5	.462	5.04	79.0	12.3	1.16	12.5	.01	.03	.04	132
	150 ISL	9.93	9.91	33.477	25.778	224.0	.506	4.45	69.6							151
1	157	9.87	9.85	33.576	25.866	215.8	.522	4.26	66.6	17.6	1.46	18.2	.01	.01	.04	158
1	183	9.20	9.18	33.814	26.161	188.1	.574	4.18	64.5	21.5	1.49	19.7	.01	.01	.03	184
	200 ISL	8.87	8.84	33.887	26.271	177.9	.605	4.11	62.9							201
1	214	8.62	8.60	33.919	26.335	172.0	.629	4.00	60.9	26.6	1.63	22.2	.01	.00	.02	215
1	245	8.09	8.07	33.972	26.457	160.8	.681	3.51	52.9	33.7	1.86	25.5	.00			246
	250 ISL	8.03	8.00	33.976	26.470	159.6	.689	3.47	52.2							252
1	285	7.61	7.58	33.996	26.547	152.6	.7 44	3.22	48.0	39.8	2.01	27.6	.00			287
	300 ISL	7.38	7.35	34.002	26.584	149.3	.766	3.00	44.5							302
1	342	6.80	6.76	34.027	26.685	140.0	.827	2.24	32.7	53.4	2.40	33.0	.00			344
	400 ISL	6.45	6.42	34.108	26.794	130.3	.905	1.23	17.9							403
1	404	6.44	6.40	34.113	26.800	129.7	.910	1.18	17.1	65.2	2.78	37.4	.00			406
1	470	5.97	5.93	34.153	26.892	121.6	.994	.85	12.2	73.3	2.93	39.3	.00			473
	500 ISL	5.79	5.74	34.177	26.934	117.8	1.029	.70	10.0							504
1	541	5.55	5.50	34.214	26.993	112.4	1.077	.48	6.8	84.4	3.10	41.5	.00			545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 19.6 N	123 45.3 W	20/11/86	1955 GMT	4034 M	330	10 KT	330 09 14	4	1021.9 MB	17.4 C	15.6 C	8/8

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	17.09	17.09	32.954	23.925	397.7	.000	5.64	102.1							0
1	1	17.09	17.09	32.954	23.925	397.3	.004	5.64	102.1	.7	.37	.0	.00	.14	.05	1
	10 ISL	17.58	17.58	33.157	23.963	393.9	.040	5.58	102.1							10
1	17	17.90	17.89	33.289	23.990	391.7	.067	5.55	102.2	1.4	.33	.0	.00	.14	.05	17
	20 ISL	17.99	17.98	33.326	23.996	391.1	.07 9	5.54	102.3							20
	30 ISL	18.28	18.28	33.461	24.027	388.6	.118	5.52	102.5							30
1	33	18.37	18.36	33.503	24.039	387.6	.129	5.51	102.5	1.7	.31	.0	.00	.16	.05	33
1	43	17.44	17.43	33.305	24.112	380.9	.167	5.67	103.5	1.3	.34	.0	.01	.22	.11	43
	50 ISL	16.51	16.50	33.083	24.159	376.5	.194	5.77	103.3							50
1	54	16.03	16.02	32.984	24.193	373.3	.209	5.82	103.2	1.0	.41	.0	.01	.33	.15	54
1	64	15.27	15.26	32.969	24.351	358.5	.245	5.92	103.3	1.3	.42	.0	.02	.30	.18	64
1	74	16.78	16.77	33.664	24.544	3 40.7	.280	5.93	107.1	1.7	.26	.0	.00	.17	.09	74
	75 ISL	16.82	16.80	33.693	24.559	339.3	.284	5.92	106.9							76
1	85	17.09	17.07	33.892	24.648	331.2	.317	5.79	105.3	1.7	.23	.0	.00	.15	.18	85
1	100	15.87	15.85	33.753	24.823	314.8	.365	5.72	101.5	2.0	.30	.1	.02	.16	.15	100
1	116	15.33	15.31	33.730	24.925	305.5	.414	5.69	99.9	2.3	.32	.1	.08	.15	.19	116
	125 ISL	14.82	14.80	33.707	25.019	296.8	.443	5.61	97.4							126
1	130	14.47	14.45	33.692	25.082	290.9	.459	5.54	95.6	2.8	.40	.7	.14	.14	.15	131
	150 ISL	12.93	12.91	33.631	25.350	265.5	.513	5.25	87.7							151
1	155	12.48	12.46	33.620	25.430	258.0	.527	5.15	85.2	6.0	.71	6.0	.01	.07	.10	156
1	181	10.54	10.52	33.646	25.807	222.2	.589	4.58	72.7	13.5	1.20	13.9	.01	.02	.05	182
	200 ISL	9.71	9.69	33.723	26.007	203.2	.629	4.18	65.2							201
1	211	9.37	9.34	33.776	26.105	194.1	.651	3.96	61.3	21.9	1.56	20.2	.01	.00	.02	212
1	241	8.60	8.58	33.911	26.332	172.9	.706	3.46	52.7	29.7	1.81	24.5	.00			242
	250 ISL	8.40	8.37	33.938	26.384	168.0	.721	3.36	50.9							252
1	281	7.82	7.80	33.998	26.517	155.6	.771	3.04	45.5	38.5	2.04	27.9	.00			282
	300 ISL	7.59	7.56	34.022	26.570	150.8	.801	2.74	40.8							302
1	336	7.26	7.23	34.050	26.639	144.6	.854	2.15	31.8	49.2	2.39	32.2	.00			338
1	397	6.63	6.59	34.094	26.760	133.6	.938	1.40	20.4	60.8	2.70	36.2	.00			3 99
	400 ISL	6.59	6.56	34.097	26.767	133.0	.943	1.37	19.9							403
1	464	6.01	5.97	34.147	26.882	122.4	1.025	.82	11.8	73.5	2.95	39.4	.00			467
	500 ISL	5.80	5.76	34.174	26.931	118.1	1.068	.63	9.0							504
1	539	5.66	5.61	34.201	26.970	114.8	1.113	.52	7.4	82.2	3.10	41.0	.00			542

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 29.2 N	117 46.3 W	18/11/86	0501 GMT	62 M	080	08 KT		6	1010.1 MB	18.5 C	18.0 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	17.90	17.90	33.387	24.063	384.1	.000	5.72	105.4	1.4	.29	.0	.00	.41	.08	0
1	10	17.72	17.72	33.482	24.179	373.3	.038	5.78	106.2	1.5	.30	.0	.00	.40	.11	10
	20 ISL	16.76	16.76	33.427	24.365	356.0	.074	5.80	104.6							20
1	21	16.64	16.63	33.417	24.386	354.0	.078	5.80	104.3	1.9	.38	.1	.01	.73	.31	21
	30 ISL	15.01	15.00	33.291	24.655	328.5	.109	5.94	103.3							30
1	31	14.85	14.84	33.282	24.682	326.0	.111	5.94	103.0	2.7	.44	.2	.05	.53	.29	31
1	41	13.84	13.83	33.313	24.919	303.6	.143	5.48	93.1	4.5	.70	2.2	.57	.40	.35	41
	50 ISL	13.45	13.44	33.305	24.993	296.9	.171	5.41	91.2							50
1	52	13.43	13.42	33.318	25.007	295.6	.176	5.40	91.0	5.1	.72	3.3	.68	.37	.36	52

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 25.4 N	117 53.8 W	18/11/86	0232 GMT	621 M	080	07 KT		5	1010.8 MB	18.5 C	17.2 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UH/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PKAEO UG/L	PRESS D.BAR
	0 ISL	18.23	18.23	33.394	23.988	391.3	.000	5.57	103.3							0
1	1	18.23	18.23	33.394	23.988	391.3	.004	5.57	103.3	1.9	.37	.1	.00	.14	.03	1
	10 ISL	18.19	18.19	33.392	23.995	390.9	.039	5.58	103.4							10
1	11	18.19	18.19	33.391	23.996	3 90.8	.043	5.58	103.4	2.2	.35	.0	.00	.15	.03	11
	20 ISL	18.10	18.09	33.402	24.027	388.2	.07 8	5.61	103.8							20
1	22	18.08	18.07	33.413	24.040	387.0	.086	5.62	103.9	1.9	.39	.0	.00	.21	.08	22
	30 ISL	17.52	17.51	33.363	24.137	378.0	.116	5.76	105.3							30
1	32	17.31	17.31	33.345	24.173	374.7	.124	5.80	105.7	1.9	.40	.0	.00	.28	.09	32
1	42	15.63	15.63	33.248	24.485	345.1	.159	6.02	106.0	2.2	.38	.0	.00	.26	.14	42
	50 ISL	14.74	14.73	33.186	24.632	331.3	.187	6.04	104.5							50
1	53	14.51	14.50	33.175	24.673	327.4	.196	6.05	104.1	2.4	.43	.0	.00	.42	.24	53
1	63	13.79	13.78	33.233	24.868	309.1	.228	5.89	99.9	3.0	.48	.7	.07	.38	.24	63
1	73	13.32	13.31	33.288	25.007	296.1	.258	5.71	96.0	3.6	.57	1.8	.12	.33	.35	73
	75 ISL	13.17	13.16	33.295	25.041	292.9	.265	5.65	94.7							76
1	89	12.35	12.34	33.350	25.244	273.9	.303	5.30	87.3	5.9	.81	6.0	.07	.23	.33	89
	100 ISL	11.92	11.91	33.445	25.400	259.3	.334	5.11	83.4							101
1	104	11.82	11.81				.343	5.02	81.8	7.9	.97	8.7	.04	.17	.31	104
1	124	11.30	11.28	33.658	25.680	233.1	.394	3.73	60.2	16.2	1.44	15.9	.02	.05	.10	125
	125 ISL	11.29	11.27	33.662	25.684	232.7	.395	3.71	59.8							126
1	150	10.91	10.89	33.794	25.856	216.9	.452	3.10	49.6	21.2	1.69	19.6	.02	.02	.06	151
1	181	10.23	10.21	33.864	26.030	200.9	.516	2.88	45.5	25.3	1.87	22.3	.01	.01	.07	182
	200 ISL	9.48	9.46	33.923	26.201	184.8	.553	2.84	44.2							201
1	212	9.05	9.02	33.968	26.306	174.9	.574	2.82	43.4	31.9	1.98	25.9	.01	.00	.04	213
1	243	8.76	8.73	34.097	26.453	161.4	.626	2.23	34.1	38.2	2.22	28.4	.01			244
	250 ISL	8.69	8.67	34.112	26.476	159.4	.638	2.16	33.0							252
1	283	8.45	8.43	34.159	26.550	153.0	.690	1.89	28.7	42.7	2.37	30.0	.01			285
	300 ISL	8.45	8.42	34.195	26.579	150.5	.715	1.65	25.1							302
1	340	8.44	8.40	34.266	26.637	145.8	.774	1.11	16.9	48.1	2.65	32.0	.00			342
	400 ISL	8.03	7.99	34.279	26.709	139.7	.860	.90	13.6							403
1	402	8.02	7.98	34.279	26.711	139.6	.862	.90	13.6	53.5	2.76	33.5	.00			404
1	469	7.30	7.25	34.303	26.835	128.4	.952	.57	8.4	62.8	2.97	35.8	.00			472
	500 ISL	6.91	6.87	34.316	26.898	122.5	.991	.45	6.5							504
1	540	6.37	6.32	34.335	26.986	114.2	1.039	.31	4.5	77.2	3.15	39.2	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.3 N	118 15.1 W	17/11/86	1800 GMT	387 M	080	04 KT	130 02 08	1	1013.6 MB	19.5 C	17.A C	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	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.17	18.17	33.401	24.009	389.2	.000	5.57	103.2	1.5	.32	.0	.00	.17	.04	0
1	10	18.16	18.16	33.394	24.005	389.9	.039	5.57	103.2	1.6	.33	.0	.00	.16	.04	10
	20 ISL	18.14	18.13	33.394	24.011	389.7	.078	5.57	103.1							20
1	21	18.13	18.13	33.394	24.012	389.7	.082	5.57	103.1	1.6	.32	.0	.00	.17	.04	21
	30 ISL	17.54	17.53	33.386	24.150	376.8	.116	5.74	105.0							30
1	32	17.35	17.35	33.380	24.189	373.1	.123	5.78	105.4	1.7	.32	.0	.00	.26	.08	32
1	43	15.92	15.91	33.281	24.447	348.8	.163	5.99	106.1	1.9	.35	.0	.00	.30	.13	43
	50 ISL	14.42	14.42	33.222	24.728	322.2	.187	5.97	102.6							50
1	53	13.88	13.87	33.213	24.834	312.0	.196	5.96	101.3	3.3	.50	1.1	.08	.56	.36	53
I	64	13.06	13.05	33.282	25.053	291.5	.229	5.54	92.6	4.3	.65	3.2	.45	.39	.32	64
1	74	12.39	12.38	33.344	25.231	274.7	.257	5.20	85.7	6.0	.80	6.2	.08	.25	.31	74
	75 ISL	12.34	12.33	33.355	25.250	272.9	.261	5.14	84.7							76
1	90	11.84	11.83	33.477	25.440	255.2	.299	4.54	74.0	10.1	1.06	10.6	.03	.16	.20	90
	100 ISL	11.49	11.48	33.533	25.547	245.2	.325	4.27	69.1							101
1	105	11.36	11.35	33.560	25.592	241.0	.336	4.14	66.9	13.4	1.26	13.9	.01	.09	.13	105
1	125	11.11	11.10	33.804	25.827	219.1	.384	3.05	49.1	20.7	1.68	19.4	.01	.02	.08	126
1	150	10.70	10.68	33.849	25.937	209.2	.437	2.91	46.4	22.9	1.77	21.1	.00	.02	.06	151
1	181	10.25	10.22	33.978	26.116	192.7	.499	2.63	41.6	27.0	1.94	23.7	.01	.01	.05	182
	200 ISL	9.69	9.67	33.994	26.222	182.9	.535	2.62	41.0							201
1	212	9.37	9.35	34.011	26.288	176.7	.556	2.62	40.6	31.3	2.04	25.8	.00	.00	.04	213
1	241	9.13	9.10	34.183	26.462	160.8	.605	1.76	27.2	38.7	2.36	29.0	.00			242
	250 ISL	9.00	8.98	34.205	26.500	157.3	.620	1.63	25.1							252
1	276	8.63	8.60	34.227	26.577	150.4	.660	1.44	22.0	44.4	2.52	30.9	.01			278
	300 ISL	8.37	8.34	34.226	26.615	147.0	.695	1.36	20.6							302
1	323	8.18	8.15	34.222	26.641	144.9	.729	1.30	19.6	48.7	2.60	32.3	.01			325
1	369	7.99	7.95	34.260	26.700	140.1	.794	1.02	15.3	52.3	2.74	33.3	.01			371

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 11.3 N	118 23.3 W	17/11/86	1547 GMT	1247 M	100	08 KT	130 02 08	1	1013.6 MB	19.5 C	17.3 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	S103 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	18.21	18.21	33.372	23.975	393.1	.000	5.55	102.9							0
1	1	18.21	18.21	33.372	23.975	392.5	.004	5.55	102.9	1.4	.35	.0	.00	.14	.03	1
	10 ISL	18.33	18.33	33.479	24.029	387.7	.039	5.54	103.0							10
1	11	18.33	18.33	33.487	24.033	387.2	.043	5.54	103.0	1.5	.37	.0	.00	.16	.04	11
	20 ISL	18.29	18.29	33.515	24.066	3 84.5	.078	5.55	103.2							20
1	22	18.28	18.28	33.520	24.072	384.0	.085	5.56	103.3	1.8	.31	.0	.00	.20	.05	22
	30 ISL	18.08	18.07	33.497	24.104	381.2	.116	5.60	1C3.6							30
1	32	18.03	18.03	33.492	24.112	380.5	.123	5.61	103.7	1.9	.34	.0	.00	.25	.09	32
1	43	15.86	15.85	33.282	24.461	347.4	.163	5.98	105.8	2.2	.36	.1	.00	.32	.16	43
	50 ISL	14.46	14.45	33.209	24.709	323.9	.187	5.98	102.8							50
1	53	14.02	14.01	33.198	24.793	316.0	.196	5.98	101.9	2.8	.46	.4	.06	.56	.32	53
1	64	13.60	13.59	33.264	24.930	303.2	.230	5.80	98.0	3.3	.53	1.2	.15	.45	.32	64
1	74	12.99	12.98	33.295	25.078	289.4	.259	5.48	91.5	4.7	.66	3.7	.17	.34	.32	74
	75 ISL	12.91	12.90	33.304	25.099	287.3	.263	5.43	90.5							'6
1	90	12.13	12.11	33.411	25.334	265.3	.304	4.92	80.7	7.9	.90	7.9	.04	.16	.24	90
	100 ISL	11.61	11.59	33.447	25.459	253.5	.330	4.79	77.7							1C1
1	105	11.38	11.37	33.462	25.512	248.6	.342	4.74	76.5	10.1	1.04	10.9	.02	.09	.14	1C5
1	125	10.37	10.36	33.606	25.803	221.2	.391	4.01	63.4	17.5	1.45	17.8	.01	.03	.08	126
1	150	9.81	9.80	33.742	26.004	202.5	.444	3.54	55.3	22.8	1.65	21.0	.01	.01	.04	151
1	181	9.43	9.41	33.907	26.197	184.8	.503	3.01	46.7	28.3	1.89	24.1	.01	.00	.03	182
	200 ISL	9.09	9.07	33.951	26.286	176.6	.537	2.93	45.1							201
1	212	8.86	8.84	33.969	26.337	171.9	.558	2.90	44.4	32.1	2.01	25.9	.00	.00	.03	213
1	242	8.29	8.27	34.031	26.473	159.3	.607	2.62	39.6	38.0	2.15	28.2	.00			243
	250 ISL	8.20	s.18	34.047	26.499	157.0	.621	2.50	37.8							25 2
1	282	7.98	7.95	34.105	26.579	149.9	.670	2.00	30.1	44.5	2.40	30.8	.00			284
	300 ISL	7.91	7.88	34.141	26.618	146.5	.696	1.74	26.0							302
1	339	7.76	7.73	34.208	26.692	140.0	.752	1.24	18.6	52.4	2.68	33.3	.00			341
1	400	7.38	7.34	34.240	26.773	133.2	.835	.88	13.1	58.6	2.84	35.2	.00			402
1	467	7.10	7.05	34.274	26.840	127.7	.923	.70	10.3	62.8	2.96	36.0	.00			470
	500 ISL	6.83	6.79	34.296	26.894	122.9	.964	.55	8.0							504
1	540	6.40	6.35	34.328	26.978	115.1	1.012	.31	4.5	76.3	3.14	38.9	.00			544

RV HEW HORIZON CALCOFI CRUISE 8611 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.6 N	118 55.9 W	17/11/86	1105 GMT	1698 M	100	10 KT			1014.0 MB	18.8 C	17.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.06	18.06	33.392	24.027	387.5	.000	5.59	103.3	1.5	.32	.1	.00	.22	.05	0
1	10	18.00	17.99	33.390	24.042	386.4	.039	5.62	103.8	1.5	.33	.1	.00	.19	.05	10
	20 ISL	17.95	17.94	33.397	24.060	3 85.1	.077	5'.65	104.2							20
1	21	17.94	17.94	33.398	24.061	385.0	.081	5.65	104.2	1.5	.32	.1	.00	.18	.06	21
	30 ISL	15.72	15.72	33.197	24.426	350.4	.114	6.06	106.9							30
1	31	15.47	15.47	33.180	24.467	346.5	.117	6.10	107.1	1.9	.37	.0	.00	.27	.14	31
1	41	13.99	13.99	33.157	24.767	318.1	.150	6.04	102.9	2.5	.43	.3	.02	.46	.36	41
	50 ISL	13.37	13.37	33.218	24.940	301.9	.179	5.84	98.2							50
1	51	13.34	13.34	33.225	24.952	300.7	.181	5.82	97.8	3.0	.49	1.2	.15	.39	.38	51
1	62	12.97	12.97	33.362	25.132	283.9	.213	5.54	92.5	4.1	.59	3.1	.11	.37	.32	62
1	72	12.29	12.28	33.342	25.249	272.9	.241	5.32	87.5	5.6	.76	6.0	.05	.26	.30	72
	75 ISL	12.04	12.03	33.365	25.315	266.7	.250	5.20	85.1							76
1	87	11.26	11.25	33.488	25.555	244.1	.279	4.70	75.7	10.2	1.05	11.3	.01	.10	.15	87
	100 ISL	10.89	10.87	33.608	25.715	229.2	.311	4.09	65.5							101
1	103	10.83	10.82	33.628	25.740	226.8	.317	3.99	63.7	15.7	1.35	16.1	.01	.04	.09	103
1	122	9.75	9.73	33.737	26.010	201.3	.359	3.56	55.6	22.3	1.66	21.1	.00	.01	.05	123
	125 ISL	9.69	9.67	33.749	26.031	199.5	.365	3.52	54.8							126
1	147	9.40	9.38	33.844	26.152	188.3	.408	3.19	49.4	26.6	1.81	23.5	.00	.00	.03	148
	150 ISL	9.35	9.33	33.856	26.169	186.7	.413	3.15	48.8							151
1	178	8.93	8.91	33.982	26.335	171.5	.463	2.69	41.3	32.7	2.03	26.5	.00	.00	.03	179
	200 ISL	8.97	8.95	34.103	26.424	163.5	.500	2.18	33.5							201
1	208	8.99	8.97	34.140	26.451	161.2	.513	2.01	30.9	37.8	2.27	28.5	.00	.00	.03	209
1	238	8.53	8.51	34.163	26.540	153.0	.560	1.78	27.1	42.2	2.39	30.1	.00			239
	250 ISL	8.42	8.40	34.175	26.566	150.7	.578	1.67	25.4							252
1	278	8.24	8.21	34.201	26.615	146.6	.620	1.43	21.6	46.8	2.54	31.6	.01			280
	300 ISL	8.12	8.09	34.218	26.646	143.9	.652	1.26	19.0							302
1	334	7.94	7.91	34.240	26.691	140.2	.700	1.03	15.5	52.8	2.71	33.4	.01			336
1	395	7.55	7.51	34.269	26.771	133.4	.783	.75	11.2	57.9	2.84	34.9	.00			397
	400 ISL	7.51	7.47	34.272	26.779	132.7	.7 90	.73	10.8							403
1	462	7.11	7.06	34.300	26.859	125.8	.870	.51	7.5	64.2	2.96	36.5	.00			465
	500 ISL	6.89	6.85	34.311	26.897	122.6	.918	.42	6.2							504
1	536	6.71	6.66	34.317	26.927	120.1	.962	.37	5.4	71.0	3.06	38.0	.00			540

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 38.6 N	119 28,4 W	17/11/86	0543 GMT	1312 M	120	09 KT		1	1014.5 MB	18.0 C	17.0 C	7/8	AC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.41	16.41	33.372	24.404	351.5	.000	5.76	103.1	2.7	.38	.0	.00	.32	.09	0
1	10	16.12	16.12	33.374	24.472	345.4	.035	5.79	103.1	2.6	.37	.0	.00	.32	.13	1C
	20 ISL	15.83	15.83	33.381	24.543	338.9	.069	5.80	102.6							20
1	21	15.81	15.80	33.383	24.549	338.4	.072	5.80	102.6	2.7	.38	.1	.01	.45	.21	21
	30 ISL	15.67	15.66	33.398	24.593	334.5	.103	5.81	102.5							30
1	31	15.66	15.65	33.401	24.597	334.2	.106	5.81	102.5	2.9	.40	.5	.04	.45	.21	31
1	42	15.56	15.55	33.444	24.652	329.2	.142	5.84	102.8	2.6	.44	.5	.05	.61	.26	42
	50 ISL	14.71	14.71	33.344	24.759	319.2	.168	5.72	99.0							50
1	52	14.48	14.48	33.322	24.792	316.1	.174	5.68	97.8	3.5	.53	1.9	.18	.70	.48	52
1	63	13.23	13.22	33.359	25.079	289.0	.207	5.23	87.8	6.2	.80	6.5	.22	.62	.55	63
1	73	11.71	11.70	33.408	25.409	257.7	.234	4.83	78.5	8.9	1.02	10.5	.03	.14	.24	73
	75 ISL	11.50	11.49	33.431	25.467	252.2	.240	4.72	76.3							76
1	89	10.72	10.71	33.572	25.716	228.7	.273	4.09	65.1	15.7	1.38	16.3	.02	.07	.16	89
	100 ISL	10.33	10.32	33.658	25.850	216.2	.298	3.76	59.4							101
1	103	10.27	10.26	33.674	25.873	214.0	.304	3.70	58.4	19.7	1.54	19.2	.01	.23	.61	103
1	123	9.85	9.83	33.755	26.009	201.5	.347	3.41	53.3	23.4	1.70	21.5	.01	.02	.08	124
	125 ISL	9.81	9.80	33.763	26.020	200.5	.350	3.39	52.9							126
1	150	9.36	9.34	33.870	26.179	185.8	.399	3.01	46.6	28.1	1.87	24.2	.01	.01	.06	151
1	181	9.16	9.14	33.976	26.294	175.5	.455	2.65	40.9	32.3	2.03	26.0	.00	.00	.08	182
	200 ISL	8.95	8.93	34.065	26.398	165.9	.487	2.28	35.1							201
1	212	8.79	8.77	34.112	26.460	160.3	.507	2.07	31.7	38.5	2.28	28.8	.00	.00	.03	213
1	242	8.40	8.37	34.130	26.535	153.5	.553	1.88	28.5	42.6	2.39	30.2	.00			243
	250 ISL	8.32	8.30	34.146	26.559	151.4	.566	1.76	26.7							252
1	282	8.07	8.04	34.208	26.646	143.6	.614	1.29	19.4	49.6	2.61	32.3	.00			284
	300 ISL	7.89	7.86	34.221	26.683	140.4	.639	1.15	17.3							302
1	339	7.49	7.46	34.229	26.748	134.6	.692	.96	14.3	56.9	2.79	34.6	.00			341
	400 ISL	7.05	7.01	34.239	26.818	128.6	.773	.75	11.1							403
1	401	7.04	7.00	34.240	26.820	128.4	.775	.75	11.0	62.9	3.01	36.5	.00			404
1	467	6.62	6.58	34.258	26.892	122.3	.857	.57	8.3	68.3	3.01	37.7	.00			470
	500 ISL	6.44	6.39	34.275	26.930	119.0	.897	.48	6.9							504
1	540	6.23	6.18	34.302	26.978	114.8	.944	.36	5.2	76.6	3.13	39.4	.00			544

RV HEW HORIZON CALCOFI CRUISE 8611 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 25.4 N	119 56.9 W	17/11/86	0110 GMT	894 M	120	07 KT	320 03 09	1	1013.2 MB	18.0 C	16.9 C	6/8	AC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.86	16.86	33.353	24.284	363.0	.000	5.68	102.6	2.1	.36	.1	.00	.18	.05	0
	10 ISL	16.78	16.78	33.357	24.306	361.2	.036	5.70	102.8							1C
1	16	16.74	16.73	33.360	24.319	360.1	.058	5.71	102.9	2.3	.35	.1	.00	.23	.08	16
	20 ISL	16.58	16.57	33.357	24.354	356.6	.072	5.75	103.3							20
	30 ISL	15.83	15.82	33.349	24.519	341.5	.107	5.83	103.1							30
1	31	15.74	15.73	33.348	24.539	339.7	.110	5.83	103.0	3.0	.41	.2	.02	.41	.20	31
1	42	14.10	14.10	33.314	24.865	308.9	.146	5.76	98.4	4.1	.54	2.0	.15	.46	.30	42
	50 ISL	13.36	13.35	33.314	25.018	294.6	.170	5.59	94.0							50
1	52	13.23	13.23	33.314	25.043	292.1	.176	5.54	93.0	5.1	.66	4.0	.19	.37	.30	52
1	62	12.69	12.68	33.357	25.183	279.0	.204	5.28	87.6	6.6	.78	6.1	.14	.28	.29	62
1	74	11.73	11.72	33.427	25.421	256.6	.236	4.81	78.2	10.0	1.02	10.3	.04	.17	.26	74
	75 ISL	11.66	11.65	33.436	25.441	254.7	.239	4.76	77.3							76
1	83	11.31	11.30	33.489	25.545	244.9	.258	4.50	72.6	12.4	1.16	12.9	.02	.11	.22	83
1	99	10.67	10.66	33.589	25.738	226.9	.296	4.04	64.3	16.4	1.40	16.7	.01	.07	.18	99
	100 ISL	10.63	10.61	33.597	25.751	225.6	.299	4.01	63.8							101
1	113	10.28	10.27	33.660	25.860	215.5	.329	3.76	59.4	19.5	1.54	19.1	.01	.03	.12	114
	125 ISL	10.02	10.00	33.719	25.952	207.0	.353	3.52	55.3							126
1	129	9.92	9.91	33.742	25.986	203.8	.362	3.43	53.7	22.9	1.68	21.4	.01	.01	.08	130
	150 ISL	9.40	9.39	33.855	26.159	187.7	.403	3.07	47.7							151
1	155	9.29	9.27	33.883	26.201	183.8	.412	2.99	46.2	28.7	1.90	24.6	.00	.00	.03	156
1	181	8.96	8.94	34.000	26.345	170.6	.458	2.53	38.9	33.7	2.10	27.0	.00	.00	.05	182
	200 ISL	8.71	8.69	34.077	26.445	161.4	.490	2.21	33.8							201
1	212	8.58	8.56	34.117	26.496	156.8	.508	2.03	30.9	40.0	2.32	29.4	.00	.00	.05	213
1	243	8.56	8.54	34.169	26.540	153.1	.556	1.71	26.1	42.5	2.42	30.1	.01			244
	250 ISL	8.50	8.48	34.172	26.552	152.2	.567	1.69	25.7							252
1	283	8.18	8.15	34.174	26.602	147.8	.617	1.61	24.3	46.0	2.49	31.3	.00			285
	300 ISL	8.07	8.04	34.186	26.629	145.6	.642	1.49	22.4							302
1	340	7.81	7.78	34.224	26.697	139.6	.699	1.12	16.8	52.5	2.69	33.5	.00			342
	400 ISL	7.24	7.20	34.289	26.832	127.5	.779	.59	8.7							403
1	402	7.22	7.18	34.292	26.837	127.1	.782	.57	8.4	62.9	2.95	36.3	.01			405
1	469	6.74	6.70	34.301	26.909	120.8	.864	.48	7.0	69.3	3.03	37.7	.00			472
	500 ISL	6.54	6.49	34.311	26.945	117.7	.901	.41	6.0							504
1	540	6.28	6.23	34.329	26.993	113.4	.948	.30	4.3	77.3	3.11	39.6	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 05.9 H	120 38.5 W	16/11/86	1932 GMT	3832 M	090	10 KT	280 03 14	2	1015.0 MB	19.5 C	17.0 C	8/8	AC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PKAEO UG/L	PRESS D.BAR
1	0	17.68	17.68	33.535	24.229	368.2	.000	5.57	102.3	2.0	.34	.0	.00	.19	.05	0
	10 ISL	17.62	17.62	33.537	24.246	367.1	.037	5.57	102.2							1C
1	16	17.61	17.60	33.538	24.250	366.8	.059	5.57	102.2	2.0	.32	.0	.00	.19	.05	16
	20 ISL	17.62	17.62	33.542	24.250	366.9	.073	5.57	102.1							20
	30 ISL	17.66	17.66	33.558	24.252	367.1	.110	5.56	102.1							30
1	32	17.68	17.67	33.562	24.252	367.1	.117	5.56	102.1	2.0	.34	.0	.00	.24	.08	32
1	43	17.71	17.70	33.598	24.272	365.6	.157	5.57	102.4	1.9	.32	.0	.00	.32	.14	43
	50 ISL	17.04	17.03	33.541	24.387	354.8	.183	5.71	103.6							50
1	53	16.56	16.56	33.499	24.467	347.3	.193	5.76	103.5	2.5	.38	.1	.01	.49	.23	53
1	63	13.43	13.42	33.293	24.988	297.6	.225	5.66	95.3	4.3	.63	3.3	.15	.46	.33	63
1	74	12.23	12.22	33.460	25.352	263.2	.256	4.85	79.8	9.2	1.00	10.1	.09	.27	.30	74
	75 ISL	12.13	12.12	33.469	25.379	260.6	.259	4.78	78.4							76
1	85	11.45	11.44	33.514	25.540	245.5	.283	4.38	70.9	12.2	1.20	13.6	.02	.16	.25	85
1	100	10.59	10.58	33.578	25.744	226.3	.319	4.17	66.2	15.4	1.36	16.4	.01	.06	.13	IC0
1	115	9.89	9.88	33.698	25.957	206.3	.353	3.72	58.2	20.9	1.60	20.2	.01	.02	.06	116
	125 ISL	9.60	9.58	33.769	26.061	196.5	.372	3.35	52.2							126
1	130	9.45	9.44	33.806	26.113	191.7	.383	3.16	49.0	26.4	1.82	23.8	.01	.00	.06	131
	150 ISL	8.97	8.95	33.902	26.266	177.4	.419	2.98	45.8							151
1	157	8.82	8.80	33.927	26.310	173.3	.432	2.92	44.7	31.6	1.95	26.2	.00	.00	.03	158
1	182	8.44	8.42	33.995	26.422	163.1	.473	2.79	42.4	35.5	2.10	27.5	.00	.00	.03	183
	200 ISL	8.26	8.24	34.025	26.472	158.6	.502	2.69	40.6							201
1	212	8.14	8.12	34.036	26.500	156.1	.521	2.62	39.5	38.9	2.18	28.7	.01	.00	.04	213
1	243	7.56	7.54	34.038	26.586	148.2	.568	2.48	36.9	44.7	2.26	30.4	.01			244
	250 ISL	7.46	7.43	34.048	26.609	146.1	.579	2.34	34.8							252
1	283	7.10	7.07	34.103	26.703	137.6	.626	1.64	24.2	55.1	2.57	34.1	.00			285
	300 ISL	6.95	6.92	34.118	26.735	134.8	.649	1.43	21.0							302
1	338	6.72	6.69	34.151	26.792	129.8	.699	1.09	15.9	62.8	2.80	36.6	.00			340
1	399	6.76	6.73	34.260	26.873	123.1	.777	.56	8.2	67.8	2.96	37.6	.00			402
	400 ISL	6.76	6.72	34.260	26.874	123.0	.777	.56	8.2							403
1	467	5.95	5.91	34.245	26.968	114.4	.857	.48	6.9	78.4	3.08	40.1	.00			470
	500 ISL	5.89	5.85	34.290	27.011	110.7	.894	.39	5.7							504
1	540	5.81	5.77	34.339	27.060	106.6	.938	.25	3.6	84.7	3.20	41.0	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 45.1 K	121 19.0 W	16/11/86	1313 GMT	3723 M	070	15 KT		5	1014.6 MB	17.9 C	16.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.52	17.52	33.549	24.278	363.5	.000	5.56	101.8							0
1	1		17.52	17.52	33.549	24.278	363.6	.004	5.56	101.8	2.1	.35	.1	.00	.20	.06	1
	10	ISL	17.53	17.53	33.548	24.275	364.2	.036	5.57	102.0							10
1	16		17.53	17.53	33.548	24.274	364.4	.058	5.57	102.0	2.1	.37	.1	.00	.21	.06	16
	20	ISL	17.53	17.53	33.549	24.276	364.4	.073	5.57	102.0							20
	30	ISL	17.52	17.52	33.551	24.280	364.4	.109	5.57	102.0							30
1	32		17.52	17.51	33.551	24.281	364.3	.116	5.57	102.0	2.0	.36	.1	.00	.25	.10	32
1	43		15.37	15.36	33.467	24.712	323.5	.154	5.67	99.5	3.8	.52	1.8	.10	.42	.23	43
	50	ISL	13.41	13.40	33.412	25.083	288.3	.176	5.29	89.2							50
1	53		12.71	12.70	33.405	25.216	275.6	.184	5.11	84.9	7.5	.88	7.8	.13	.38	.30	53
1	64		11.63	11.62	33.454	25.461	252.5	.213	4.68	76.0	10.4	1.10	11.7	.04	.30	.31	64
1	74		11.12	11.11	33.511	25.597	239.7	.237	4.37	70.2	13.3	1.28	14.6	.03	.16	.24	74
	75	ISL	11.04	11.03	33.519	25.618	237.7	.240	4.33	69.4							76
1	85		10.48	10.47	33.594	25.774	223.0	.262	4.00	63.4	17.0	1.47	17.8	.01	.07	.13	85
1	100		9.92	9.91	33.727	25.974	204.3	.294	3.42	53.6	22.6	1.72	21.7	.01	.02	.07	100
1	115		9.35	9.34	33.825	26.144	188.5	.325	3.07	47.5	27.3	1.89	24.6	.00	.00	.05	116
	125	ISL	9.14	9.13	33.866	26.211	182.2	.343	2.96	45.6							126
1	130		9.04	9.03	33.885	26.241	179.4	.353	2.92	44.9	29.9	1.96	25.8	.00	.00	.05	131
	150	ISL	8.71	8.69	33.934	26.332	171.1	.387	2.90	44.2							151
1	156		8.61	8.60	33.945	26.355	169.0	.398	2.89	44.0	32.8	2.02	26.8	.00	.00	.04	157
1	182		8.22	8.20	33.997	26.456	159.8	.440	2.77	41.8	36.7	2.12	28.1	.00	.00	.04	183
	200	ISL	8.07	8.05	34.024	26.500	155.8	.469	2.64	39.7							201
1	212		7.98	7.96	34.038	26.524	153.8	.487	2.54	38.2	40.6	2.21	29.4	.00	.00	.03	213
1	243		7.68	7.65	34.061	26.587	148.2	.533	2.29	34.2	45.0	2.33	30.8	.00			244
	250	ISL	7.61	7.59	34.066	26.602	147.0	.544	2.21	32.9							252
1	283		7.30	7.27	34.086	26.661	141.7	.592	1.82	26.9	51.3	2.53	33.1	.00			285
	300	ISL	7.11	7.08	34.091	26.692	139.0	.616	1.66	24.5							302
1	339		6.67	6.64	34.102	26.760	132.7	.669	1.33	19.4	61.0	2.75	36.4	.00			341
	400	ISL	6.14	6.10	34.142	26.861	123.7	.747	.88	12.7							403
1	401		6.13	6.09	34.142	26.863	123.5	.749	.87	12.5	71.3	2.95	39.1	.00			404
1	467		5.63	5.59	34.190	26.963	114.4	.827	.58	8.3	80.3	3.10	40.9	.00			470
	500	ISL	5.46	5.42	34.223	27.011	110.2	.864	.45	6.4							504
1	540		5.31	5.27	34.270	27.065	105.4	.907	.32	4.5	89.7	3.24	42.3	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 24.2 N	121 58.4 W	16/11/86	07 29 GMT	3951 M	120	06 KT			1016.6 MB	17.3 C	16.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	16.22	16.22	32.902	24.085	382.0	.000	5.76	102.4							0
1	1		16.22	16.22	32.902	24.085	382.0	.004	5.76	102.4	.4	.41	.0	.00	.13	.04	1
	10	ISL	16.18	16.18	32.902	24.095	381.3	.038	5.78	102.7							10
1	11		16.17	16.17	32.901	24.096	381.2	.042	5.78	102.7	1.1	.40	.0	.00	.13	.05	11
	20	ISL	16.02	16.02	33.021	24.223	369.4	.076	5.82	103.2							20
1	26		15.93	15.92	33.113	24.314	360.9	.097	5.84	103.4	1.2	.41	.0	.00	.21	.08	26
	30	ISL	15.93	15.93	33.145	24.338	358.8	.112	5.83	103.2							30
1	43		15.95	15.94	33.202	24.379	355.3	.158	5.79	102.6	1.4	.40	.0	.00	.28	.14	43
	50	ISL	15.82	15.82	33.209	24.412	353.0	.183	5.80	1C2.6							50
1	53		15.78	15.77	33.212	24.426	351.1	.193	5.81	102.6	1.7	.39	.0	.00	.33	.15	53
1	64		14.14	14.13	33.023	24.634	331.5	.231	6.07	103.6	2.2	.44	.0	.09	.37	.27	64
1	74		14.58	14.57	33.399	24.832	313.0	.263	5.87	101.3	2.0	.36	.0	.06	.24	.23	74
	75	ISL	14.55	14.54	33.412	24.847	311.5	.267	5.85	101.0							76
1	85		14.34	14.32	33.504	24.964	300.7	.296	5.73	98.5	2.3	.36	.2	.14	.18	.27	85
1	100		12.83	12.82	33.469	25.243	274.3	.339	5.43	90.4	4.3	.59	3.4	.04	.15	.21	100
1	115		11.57	11.55	33.351	25.392	260.3	.379	5.22	84.6	8.0	.85	7.5	.02	.12	.16	115
	125	ISL	11.04	11.02	33.467	25.579	242.7	.405	4.96	79.4							126
2	130		10.81	10.79	33.548	25.682	232.9	.418	4.78	76.3	12.4	1.11	12.2	.02	.05	.09	131
	150	ISL	9.75	9.73	33.689	25.974	205.4	.461	3.89	60.6							151
2	155		9.50	9.48	33.716	26.036	199.5	.472	3.65	56.6	24.8	1.70	21.6	.01	.01	.04	156
2	181		9.04	9.02	33.856	26.219	182.5	.521	3.18	48.9	31.0	1.89	24.7	.01	.00	.03	182
	200	ISL	8.85	8.83	33.923	26.302	174.9	.555	3.03	46.4							201
2	211		8.75	8.72	33.954	26.343	171.3	.574	2.96	45.2	34.8	1.98	26.0	.01			212
2	242		8.32	8.30	34.040	26.476	159.1	.625	2.54	38.5	41.3	2.17	28.4	.00			243
	250	ISL	8.19	8.16	34.041	26.497	156.8	.638	2.51	37.9							252
2	281		7.68	7.65	34.044	26.575	150.0	.686	2.43	36.3	48.0	2.27	30.3	.00			283
	300	ISL	7.42	7.39	34.047	26.614	146.5	.714	2.27	33.7							302
2	337		6.96	6.93	34.061	26.688	139.7	.767	1.84	27.0	58.4	2.53	34.0	.00			339
2	400		6.33	6.29	34.142	26.838	126.1	.850	.95	13.7	73.2	2.89	38.1	.00			402
2	467		6.03	5.99	34.213	26.933	117.8	.932	.62	8.9	81.2	3.05	39.5	.00			470
	500	ISL	5.91	5.87	34.255	26.981	113.6	.970	.47	6.7							504
2	541		5.80	5.75	34.314	27.042	108.3	1.016	.29	4.1	91.5	3.23	40.9	.00			545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 05.0 N	122 39.5 W	16/11/86	0134 GMT	4072 M	120	15 KT	140 04 05		1014.1 MB	18.5 C	17.8 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.28	18.28	33.439	24.010	389.1	.000	5.49	101.9							0
1	1		18.28	18.28	33.439	24.010	389.1	.004	5.49	101.9	2.3	.32	.1	.00	.09	.02	1
	10	ISL	18.28	18.28	33.441	24.011	389.4	.039	5.50	102.1							10
1	17		18.29	18.29	33.444	24.011	389.6	.066	5.50	102.2	2.4	.34	.1	.00	.09	.02	17
	20	ISL	18.30	18.29	33.451	24.015	389.3	.078	5.50	102.1							20
	30	ISL	18.32	18.31	33.472	24.027	388.6	.117	5.49	102.1							30
1	32		18.32	18.32	33.475	24.028	388.5	.124	5.49	102.0	2.5	.31	.1	.00	.08	.02	32
1	43		18.35	18.35	33.470	24.017	3 90.0	.167	5.49	102.1	2.6	.31	.1	.00	.09	.03	43
	50	ISL	18.36	18.35	33.498	24.037	388.3	.195	5.50	102.3							50
1	53		18.36	18.35	33.509	24.045	387.6	.206	5.50	102.3	2.8	.30	.1	.00	.11	.04	53
1	63		17.34	17.33	33.646	24.398	354.3	.242	5.90	107.7	2.7	.27	.1	.00	.14	.06	63
1	74		17.04	17.03	33.771	24.565	338.7	.280	5.80	105.4	2.5	.27	.0	.00	.13	.07	74
	75	ISL	16.95	16.94	33.770	24.585	336.9	.285	5.80	105.1							76
1	84		16.29	16.28	33.742	24.717	324.5	.313	5.79	103.6	2.6	.26	.0	.00	.15	.12	84
1	100		15.63	15.62	33.796	24.908	306.7	.364	5.64	99.7	2.9	.29	.0	.01	.17	.25	100
1	115		14.30	14.28	33.676	25.106	288.0	.408	5.52	94.9	3.7	.41	.4	.12	.17	.23	115
	125	ISL	13.66	13.64	33.656	25.223	277.1	.438	5.41	91.7							126
1	130		13.35	13.33	33.654	25.284	271.4	.453	5.34	90.0	5.5	.55	2.5	.02	.12	.18	131
	150	ISL	11.81	11.79	33.611	25.551	246.1	.503	5.07	82.6							151
1	156		11.29	11.27	33.607	25.642	237.4	.519	4.95	79.8	10.5	.94	9.2	.01	.05	.08	157
1	182		9.57	9.55	33.683	25.998	203.7	.576	4.21	65.4	22.4	1.51	18.4	.00	.01	.04	183
	200	ISL	9.04	9.01	33.798	26.175	187.1	.610	3.50	53.8							201
1	212		8.83	8.81	33.875	26.268	178.4	.632	3.08	47.1	34.2	2.02	25.9	.00	.00	.02	213
1	243		8.32	8.29	33.978	26.428	163.6	.685	2.85	43.1	40.2	2.12	27.9	.00			244
	250	ISL	8.19	8.16	33.987	26.454	161.2	.697	2.90	43.7							252
1	284		7.63	7.60	33.999	26.546	152.7	.7 49	3.09	46.0	46.0	2.11	28.3	.00			285
	300	ISL	7.44	7.41	34.009	26.582	149.5	.774	2.90	42.9							302
1	339		7.06	7.03	34.037	26.657	142.8	.831	2.19	32.2	56.9	2.46	33.1	.00			341
	400	ISL	6.50	6.46	34.107	26.787	131.0	.915	1.25	18.1							403
1	401		6.49	6.46	34.107	26.789	130.9	.915	1.24	18.0	70.4	2.88	37.7	.00			403
1	469		6.04	6.00	34.132	26.867	124.0	1.002	.90	12.9	79.4	3.00	40.0	.00			472
	500	ISL	5.84	5.80	34.155	26.911	120.1	1.040	.75	10.7							504
1	541		5.58	5.53	34.197	26.976	114.1	1.089	.54	7.7	91.2	3.19	42.1	.00			545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYFE
30 46.1 N	123 19.2 W	15/11/86	1934 GMT	4194 M	IIO	07 KT	280 04 13	6	1014.3 MB	20.0 C	19.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.28	18.28	33.399	23.978	392.5	.000	5.47	101.6							0
1	1		18.28	18.28	33.399	23.978	392.2	.004	5.47	101.6	1.7	.31	.1	.00	.10	.03	1
	10	ISL	18.28	18.28	33.425	23.999	3 90.4	.039	5.48	101.8							1C
1	17		18.28	18.27	33.436	24.009	389.8	.066	5.49	101.9	1.7	.32	.1	.00	.11	.03	17
	20	ISL	18.28	18.27	33.436	24.009	389.8	.078	5.49	102.0							20
	30	ISL	18.29	18.28	33.436	24.007	390.4	.117	5.50	102.1							30
1	32		18.29	18.28	33.436	24.006	390.6	.125	5.50	102.1	1.7	.33	.1	.00	.10	.03	32
1	43		18.32	18.31	33.442	24.004	391.2	.167	5.49	102.0	1.6	.34	.1	.00	.11	.03	43
	50	ISL	18.33	18.32	33.451	24.008	391.0	.195	5.50	102.2							50
1	53		18.33	18.32	33.454	24.010	391.0	.206	5.50	102.2	1.7	.35	.2	.00	.11	.03	53
1	64		17.01	17.00	33.443	24.320	361.7	.248	6.01	108.9	1.7	.29	.2	.00	.15	.06	64
1	74		16.20	16.19	33.527	24.573	337.8	.282	5.96	106.3	1.6	.28	.1	.00	.16	.08	74
	75	ISL	16.19	16.18	33.550	24.594	335.9	.287	5.94	106.0							76
1	84		16.14	16.12	33.671	24.699	326.2	.316	5.83	104.0	1.7	.28	.1	.01	.17	.13	84
1	100		15.40	15.38	33.649	24.848	312.4	.366	5.79	101.7	1.8	.29	.1	.01	.18	.17	100
1	115		14.16	14.15	33.564	25.048	293.5	.412	5.62	96.3	2.7	.40	.7	.16	.16	.16	115
	125	ISL	13.28	13.26	33.555	25.223	277.6	.441	5.46	91.9							126
1	130		12.84	12.82	33.551	25.306	269.2	.456	5.37	89.5	4.3	.59	3.7	.02	.13	.16	131
	150	ISL	11.75	11.73	33.621	25.569	244.4	.507	5.01	81.6							151
1	155		11.52	11.50	33.642	25.629	238.8	.519	4.91	79.6	8.8	.91	9.5	.01	.05	.07	156
1	181		10.50	10.48	33.665	25.828	220.1	.579	4.55	72.2	13.6	1.18	14.1	.00	.02	.05	182
	200	ISL	9.91	9.89	33.761	26.004	203.7	.619	4.11	64.3							201
1	211		9.61	9.58	33.825	26.104	194.2	.641	3.86	60.1	21.8	1.53	19.9	.01	.01	.02	212
1	242		8.89	8.86	33.936	26.307	175.4	.697	3.60	55.2	28.0	1.74	23.0	.00			243
	250	ISL	8.68	8.66	33.956	26.355	170.9	.712	3.49	53.3							252
1	282		7.96	7.93	34.013	26.509	156.5	.763	3.04	45.7	38.3	2.04	27.4	.01			283
	300	ISL	7.72	7.69	34.032	26.559	151.9	.792	2.80	41.7							302
1	337		7.35	7.32	34.054	26.629	145.6	.847	2.30	34.1	48.2	2.35	31.5	.00			339
1	400		6.63	6.59	34.110	26.773	132.4	.934	1.39	20.2	61.7	2.74	36.3	.00			402
1	465		6.04	6.00	34.147	26.879	122.8	1.018	.87	12.5	72.6	2.96	39.3	.00			468
	500	ISL	5.81	5.77	34.184	26.936	117.6	1.059	.65	9.3							504
1	541		5.63	5.58	34.241	27.005	111.5	1.106	.45	6.4	83.3	3.12	41.3	.00			544

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.0 N	124 00.1 W	15/11/86	1242 GMT	4233 M	130	08 KT		6	1011.7 MB	18.0 C	18.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.99	18.99	33.537	23.906	399.4	.000	5.40	101.7							0
1	1		18.99	18.99	33.537	23.906	399.0	.004	5.40	101.7	2.1	.31	.2	.00	.08	.03	1
	10	ISL	19.00	19.00	33.576	23.936	396.5	.040	5.41	101.9							10
1	17		19.00	19.00	33.595	23.949	395.5	.067	5.41	101.9	2.3	.32	.2	.00	.08	.03	17
	20	ISL	19.01	19.00	33.595	23.949	395.7	.079	5.41	101.9							20
	30	ISL	19.01	19.01	33.597	23.948	396.1	.119	5.41	102.0							30
1	33		19.02	19.01	33.597	23.948	396.2	.130	5.41	102.0	2.2	.32	.2	.00	.08	.02	33
1	43		19.02	19.01	33.597	23.948	396.6	.170	5.42	102.2	2.1	.33	.1	.00	.08	.03	43
	50	ISL	19.01	19.00	33.601	23.952	396.4	.198	5.42	102.1							50
1	53		19.01	19.00	33.602	23.954	396.4	.209	5.42	102.1	2.2	.31	.2	.00	.08	.02	53
1	64		17.04	17.03	33.527	24.378	356.2	.251	5.90	107.0	2.1	.30	.1	.00	.12	.05	64
1	74		16.92	16.91	33.663	24.511	343.8	.286	5.83	105.6	2.0	.27	.1	.00	.14	.08	74
	75	ISL	16.75	16.74	33.634	24.529	342.2	.290	5.83	105.2							76
1	85		15.23	15.22	33.372	24.671	328.7	.322	5.83	101.9	2.2	.36	.1	.00	.16	.16	85
1	100		14.02	14.00	33.328	24.895	307.6	.370	5.74	97.9	2.7	.42	.3	.13	.22	.24	100
1	116		13.58	13.56	33.497	25.116	287.0	.417	5.55	93.9	3.4	.49	1.3	.09	.17	.20	116
	125	ISL	12.82	12.80	33.517	25.284	271.2	.444	5.36	89.2							126
1	130		12.33	12.31	33.517	25.378	262.2	.458	5.23	86.2	5.8	.71	5.6	.02	.09	.18	131
	150	ISL	11.20	11.18	33.536	25.604	240.9	.507	4.77	76.8							151
1	156		10.92	10.90	33.545	25.661	235.6	.522	4.63	74.0	11.5	1.12	12.4	.01	.05	.09	157
1	182		10.03	10.01	33.646	25.893	213.8	.581	4.17	65.5	17.2	1.39	17.3	.01	.02	.04	183
	200	ISL	9.46	9.44	33.744	26.064	197.8	.617	3.86	59.9							201
1	214		9.08	9.06	33.826	26.190	186.0	.644	3.60	55.4	25.2	1.73	22.8	.00	.00	.02	215
1	243		8.62	8.59	33.974	26.379	168.4	.695	2.96	45.1	32.4	1.97	26.4	.00			244
	250	ISL	8.51	8.48	33.991	26.409	165.6	.707	2.89	44.0							252
1	284		8.02	7.99	34.029	26.513	156.1	.761	2.70	40.6	38.5	2.12	28.6	.00			285
	300	ISL	7.78	7.75	34.042	26.559	151.9	.786	2.51	37.6							302
1	340		7.23	7.20	34.067	26.656	143.0	.846	1.99	29.4	49.6	2.43	32.9	.00			342
	400	ISL	6.62	6.58	34.117	26.780	131.8	.928	1.29	18.8							403
1	402		6.60	6.56	34.118	26.783	131.5	.930	1.27	18.5	61.3	2.73	36.6	.00			404
1	470		5.96	5.92	34.209	26.938	117.2	1.016	.65	9.3	73.8	2.99	39.9	.00			473
	500	ISL	5.76	5.71	34.231	26.981	113.3	1.050	.49	7.1							504
1	545		5.55	5.50	34.244	27.017	110.3	1.101	.39	5.5	83.5	3.13	41.5	.00			548

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 57.7 N	117 18.4 W	11/11/86	1937 GMT	59 M	270	04 KT		1	1016.4 MB	22.1 C	15.0 C	4/8	CC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.63	17.63	33.467	24.188	372.1	.000	5.66	103.8							0
1	1	A	17.63	17.63	33.467	24.188	372.2	.004	5.66	103.8	2.5	.29	.1	.01	.24	.06	1
1	8		17.65	17.64	33.466	24.185	372.7	.030	5.67	104.0	2.6	.29	.1	.02	.25	.07	8
	10	ISL	17.61	17.61	33.467	24.194	371.9	.037	5.68	104.2							10
1	17	A	17.50	17.49	33.472	24.226	369.1	.063	5.72	104.7	2.7	.28	.1	.02	.62	.22	17
1	20	A	15.72	15.72	33.327	24.526	3 40.6	.074	5.98	105.6	3.1	.34	.1	.02	.51	.23	20
1	30	A	14.54	14.54	33.321	24.778	316.8	.106	5.70	98.3	4.1	.52	1.2	.18	.86	.47	30
1	42		12.91	12.91	33.301	25.096	286.8	.142	5.42	90.3	5.3	.69	3.4	.24	.40	.35	42
	50	ISL	12.88	12.88	33.307	25.106	286.0	.166	5.36	89.3							50
1	52		12.88	12.87	33.308	25.108	285.9	.171	5.35	89.1	5.7	.74	3.9	.28	.40	.35	52

A. PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE DEPTHS.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 54.9 N	117 24.1 W	11/11/86	2145 GMT	635 M	300	08 KT	310 02 07	1	1014.7 KB	19.7 C	17.3 C	6/8	CC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.14	18.14	33.519	24.105	380.0	.000	5.73	106.2	.4	.19	.1	.00	.35	.05	0
1	10		17.91	17.91	33.516	24.159	375.2	.038	5.76	106.3	.6	.19	.1	.00	.39	.07	10
	20	ISL	15.14	15.14	33.315	24.644	329.3	.073	6.04	105.4							20
1	21		14.88	14.88	33.301	24.690	324.9	.076	6.06	1C5.2	2.1	.38	.1	.00	.44	.25	21
	30	ISL	14.24	14.24	33.290	24.817	313.3	.105	5.94	101.8							30
1	31		14.22	14.22	33.289	24.821	312.7	.108	5.93	101.5	2.6	.47	.6	.07	.70	.37	31
1	42		13.16	13.16	33.300	25.046	291.6	.141	5.59	93.6	4.4	.61	3.2	.31	.51	.35	42
	50	ISL	12.57	12.56	33.340	25.193	277.7	.164	5.17	85.6							50
1	52		12.46	12.45	33.351	25.223	274.9	.169	5.08	83.9	6.7	.84	6.9	.27	.39	.40	52
1	63		11.89	11.88	33.434	25.397	258.6	.198	4.72	77.0	9.0	1.00	9.9	.03	.22	.29	63
1	73		11.66	11.65	33.474	25.470	251.8	.224	4.54	73.8	10.5	1.07	11.3	.02	.16	.31	73
	75	ISL	11.58	11.57	33.482	25.490	250.0	.229	4.48	72.7							76
1	89		11.17	11.15	33.545	25.615	238.3	.263	4.08	65.6	13.8	1.28	14.5	.01	.08	.27	89
	100	ISL	10.98	10.97	33.643	25.725	228.2	.289	3.65	58.5							1C1
1	104		10.94	10.93	33.672	25.755	225.4	.297	3.52	56.4	17.7	1.47	17.3	.01	.05	.12	104
1	124		10.75	10.74	33.755	25.854	216.5	.343	3.11	49.6	20.8	1.65	19.6	.01	.02	.11	125
	125	ISL	10.74	10.73	33.758	25.857	216.2	.345	3.10	49.5							126
1	149		10.44	10.42	33.862	25.991	203.9	.396	2.76	43.8	24.4	1.81	22.0	.00	.01	.07	150
	150	ISL	10.43	10.41	33.864	25.996	203.5	.397	2.76	43.7							151
1	180		9.89	9.86	33.972	26.173	187.3	.456	2.62	41.1	28.3	1.94	24.3	.01	.01	.05	181
	200	ISL	9.76	9.73	34.063	26.266	178.8	.492	2.26	35.3							201
1	211		9.70	9.68	34.107	26.309	175.0	.512	2.05	32.0	32.8	2.16	26.8	.02	.01	.04	212
1	241		9.37	9.35	34.144	26.392	167.5	.563	1.82	28.2	36.3	2.28	28.4	.01			242
	250	ISL	9.29	9.26	34.157	26.417	165.3	.578	1.79	27.7							252
1	281		8.98	8.95	34.196	26.497	158.3	.629	1.70	26.2	40.2	2.35	29.5	.01			283
	300	ISL	8.72	8.69	34.204	26.543	154.0	.658	1.60	24.5							302
1	337		8.20	8.17	34.214	26.632	146.1	.713	1.37	20.7	48.4	2.53	31.9	.00			339
1	398		7.61	7.57	34.261	26.757	134.8	.798	.92	13.7	56.7	2.77	34.6	.02			400
	400	ISL	7.58	7.54	34.261	26.761	134.5	.802	.91	13.5							403
1	465		6.91	6.87	34.268	26.860	125.5	.886	.59	8.7	66.8	2.94	37.2	.00			468
	500	ISL	6.60	6.56	34.293	26.922	119.9	.929	.44	6.4							504
1	537		6.31	6.26	34.334	26.993	113.4	.973	.30	4.3	77.9	3.11	39.3	.01			541

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 50.5 N	117 31.7 W	12/11/86	0008 GMT	857 M	300 08 KT	310 02 07	1	1013.8 MB	19.3 C	17.0 C	6/8 CC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.02	18.02	33.511	24.128	377.8	.000	5.77	106.7	1.6	.22	.2	.00	.39	.08	0
1	10	17.58	17.58	33.509	24.234	368.1	.037	5.80	106.3	1.7	.24	.2	.00	.44	.07	10
	20 ISL	14.06	14.06	33.337	24.891	305.8	.071	6.07	103.6							20
1	21	13.74	13.73	33.329	24.952	300.0	.074	6.08	103.1	4.4	.49	.5	.08	1.43	.54	21
	30 ISL	13.13	13.13	33.336	25.079	287.1	.100	5.61	93.9							30
1	31	13.07	13.07	33.337	25.092	286.9	.103	5.55	92.8	5.8	.69	3.8	.42	.92	.60	31
1	42	12.50	12.50	33.343	25.208	276.0	.134	5.19	85.8	7.4	.86	7.1	.20	.59	.57	42
	50 ISL	12.09	12.09	33.375	25.312	266.4	.156	4.96	81.2							50
1	52	12.01	12.01	33.385	25.335	264.3	.161	4.91	80.3	9.1	.99	9.4	.05	.32	.42	52
1	63	11.64	11.63	33.458	25.460	252.5	.189	4.62	75.0	10.9	1.08	11.2	.03	.19	.32	63
1	73	11.43	11.42	33.496	25.529	246.2	.214	4.48	72.4	12.0	1.14	12.3	.02	.13	.27	73
	75 ISL	11.35	11.34	33.509	25.553	244.0	.219	4.43	71.5							76
1	89	10.93	10.92	33.598	25.698	230.5	.252	4.04	64.7	15.8	1.33	15.6	.02	.07	.17	89
	100 ISL	10.75	10.74	33.673	25.789	222.1	.277	3.63	57.8							101
1	104	10.71	10.70	33.694	25.812	219.9	.285	3.50	55.8	19.7	1.55	18.4	.01	.03	.14	104
1	124	10.58	10.56	33.795	25.916	210.6	.330	2.97	47.2	23.2	1.75	20.9	.01	.02	.09	125
	125 ISL	10.57	10.55	33.798	25.919	210.2	.331	2.96	47.1							126
1	150	10.14	10.12	33.911	26.081	195.3	.383	2.66	41.9	27.2	1.94	23.5	.00	.01	.07	151
1	181	9.90	9.88	34.053	26.234	181.5	.441	2.25	35.3	31.9	2.10	25.9	.02	.00	.05	182
	200 ISL	9.71	9.69	34.097	26.299	175.6	.475	2.10	32.8							201
1	211	9.61	9.58	34.115	26.331	172.8	.493	2.03	31.7	34.4	2.19	27.4	.02	.00	.09	212
1	243	9.33	9.30	34.170	26.420	164.9	.547	1.83	28.4	37.5	2.29	28.6	.01			244
	250 ISL	9.15	9.12	34.163	26.444	162.8	.559	1.88	29.0							252
1	282	8.34	8.31	34.121	26.537	154.1	.610	2.07	31.4							284
	300 ISL	8.27	8.23	34.153	26.574	150.9	.637	1.91	28.8							302
1	339	8.09	8.06	34.208	26.644	144.9	.695	1.37	20.7	48.6	2.56	32.5	.01			341
1	400	7.57	7.53	34.261	26.762	134.4	.781	.86	12.8	57.2	2.78	35.1	.01			403
1	469	6.98	6.94	34.267	26.850	126.6	.870	.60	8.8	64.6	2.91	37.2	.01			472
	500 ISL	6.77	6.73	34.282	26.891	123.1	.909	.51	7.4							504
1	542	6.55	6.50	34.314	26.946	118.2	.960	.41	6.0	71.4	3.04	38.8	.00			546

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 40.7 N	117 52.8 W	12/11/86	0353 GMT	1334 M	320 10 KT		1	1015.0 MB	19.0 C	16.5 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
1	0	18.24	18.24	33.328	23.933	396.4	.000	5.54	102.7	1.3	.40	.2	.00	.11	.03	0
1	10	18.21	18.21	33.319	23.936	396.5	.040	5.57	103.2	1.4	.37	.2	.00	.09	.02	10
	20 ISL	18.15	18.14	33.318	23.951	395.5	.079	5.58	103.3							20
1	21	18.14	18.14	33.318	23.952	395.3	.083	5.58	103.3	1.3	.38	.1	.00	.10	.04	21
	30 ISL	18.08	18.07	33.317	23.967	394.2	.119	5.61	103.6							30
1	31	18.07	18.06	33.317	23.969	394.1	.122	5.61	103.7	1.2	.38	.1	.00	.11	.03	31
1	41	16.64	16.63	33.255	24.262	366.4	.160	5.92	106.4	1.4	.39	.1	.00	.15	.06	41
	50 ISL	15.03	15.02	33.197	24.578	336.4	.192	6.06	105.4							50
1	52	14.74	14.73	33.193	24.637	330.8	.198	6.06	104.8	2.2	.41	.1	.01	.49	.22	52
1	62	13.90	13.89	33.241	24.851	310.7	.230	5.89	100.2	2.6	.49	.7	.05	.59	.35	62
1	72	12.98	12.97	33.311	25.091	288.1	.260	5.45	91.0	4.8	.70	3.8	.18	.44	.37	72
	75 ISL	12.75	12.74	33.331	25.151	282.4	.269	5.37	89.3							76
1	88	12.03	12.02	33.402	25.344	264.2	.304	5.11	83.6	6.6	.89	7.0	.02	.17	.25	88
	100 ISL	11.45	11.43	33.475	25.510	248.7	.336	4.63	74.9							101
1	103	11.35	11.34	33.491	25.541	245.8	.342	4.52	72.9	11.0	1.18	12.1	.00	.09	.14	103
1	122	10.97	10.95	33.653	25.735	227.7	.389	3.82	61.2	16.2	1.49	16.5	.00	.04	.09	123
	125 ISL	10.90	10.89	33.667	25.758	225.7	.3 95	3.78	60.4							126
1	148	10.25	10.24	33.761	25.945	208.2	.445	3.57	56.4	20.4	1.63	19.7	.00	.02	.05	149
	150 ISL	10.20	10.19	33.766	25.957	207.1	.449	3.57	56.2							151
1	179	9.40	9.38	33.846	26.155	188.7	.507	3.47	53.8	25.2	1.74	22.5	.00	.00	.03	180
	200 ISL	8.93	8.91	33.916	26.283	176.7	.545	3.22	49.4							201
1	209	8.76	8.74	33.944	26.332	172.2	.560	3.10	47.4	31.4	1.94	25.6	.00	.00	.02	210
1	240	8.31	8.28	34.004	26.449	161.5	.612	2.85	43.1	36.5	2.08	27.7	.00			241
	250 ISL	8.18	8.16	34.028	26.488	158.0	.628	2.66	40.1							252
1	280	7.90	7.88	34.105	26.590	148.8	.675	2.01	30.2	45.0	2.40	31.3	.00			282
	300 ISL	7.90	7.87	34.163	26.637	144.7	.703	1.62	24.3							302
1	336	7.88	7.85	34.245	26.704	139.0	.755	1.05	15.8	53.1	2.73	33.8	.00			338
1	398	7.35	7.31	34.264	26.796	130.9	.838	.78	11.6	60.3	2.88	35.8	.01			400
	400 ISL	7.32	7.28	34.264	26.800	130.6	.841	.77	11.4							403
1	465	6.69	6.65	34.265	26.888	122.7	.923	.55	8.0	69.1	3.02	38.2	.00			468
	500 ISL	6.44	6.39	34.283	26.936	118.4	.965	.46	6.7							504
1	538	6.23	6.18	34.316	26.990	113.7	1.010	.38	5.5	76.4	3.12	39.6	.00			542

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 40

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 30.6 N	118 13.9 W	12/11/86	0846 GMT	1544 M	280	06 KT		1	1015.8 MB	18.1 C	15.1 C	2/8	CC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.10	18.10	33.476	24.082	382.3	.000	5.50	101.8	2.8	.37	.2	.00	.15	.04	0
	10	ISL	18.01	18.01	33.471	24.100	380.9	.038	5.54	102.4							10
1	16		17.96	17.96	33.469	24.111	380.1	.061	5.58	103.0	2.8	.31	.1	.01	.17	.04	16
	20	ISL	17.89	17.89	33.468	24.127	378.6	.076	5.61	103.3							20
	30	ISL	17.41	17.40	33.433	24.217	370.3	.114	5.72	104.4							30
1	31		17.34	17.34	33.428	24.229	369.3	.117	5.73	104.5	3.0	.31	.1	.01	.24	.10	31
1	42		15.94	15.93	33.303	24.458	347.7	.156	5.99	106.2	3.1	.35	.0	.00	.32	.11	42
	50	ISL	14.76	14.76	33.243	24.671	327.6	.184	6.08	105.2							50
1	52		14.52	14.51	33.237	24.718	323.1	.190	6.10	105.0	3.3	.38	.0	.00	.38	.26	52
1	63		13.55	13.54	33.304	24.972	299.1	.224	5.69	96.1	4.9	.57	2.5	.19	.45	.41	63
1	73		12.58	12.57	33.410	25.245	273.3	.252	5.23	86.6	7.9	.83	7.1	.19	.26	,34	73
	75	ISL	12.36	12.35	33.423	25.298	268.3	.258	5.11	84.2							76
1	84		11.63	11.62	33.457	25.462	252.9	.281	4.71	76.5	11.2	1.07	11.6	.03	.16	.24	84
1	99		11.07	11.06	33.509	25.604	239.6	.318	4.65	74.6	12.3	1.11	12.4	.02	.09	.15	99
	100	ISL	11.01	10.99	33.514	25.620	238.1	.321	4.62	74.0							101
1	114		10.35	10.34	33.589	25.793	221.9	.354	4.16	65.7	17.0	1.36	16.8	.02	.05	.08	115
	125	ISL	10.01	10.00	33.680	25.922	209.9	.377	3.69	57.9							126
1	129		9.89	9.88	33.720	25.973	205.0	.386	3.49	54.6	22.7	1.64	21.1	.01			130
	150	ISL	9.42	9.40	33.862	26.162	187.4	.427	2.98	46.2							151
1	155		9.32	9.31	33.892	26.202	183.7	.436	2.89	44.7	29.3	1.90	25.0	.01	.01	.04	156
1	182		8.91	8.89	34.017	26.366	168.5	.484	2.42	37.1	35.1	2.10	27.6	.01	.01	.02	183
	200	ISL	8.71	8.69	34.055	26.427	163.0	.513	2.39	36.4							201
1	213		8.55	8.52	34.065	26.461	160.1	.534	2.36	35.9	38.1	2.17	28.7	.01	.00	.03	214
1	243		7.88	7.86	34.050	26.549	151.9	.581	2.41	36.1	42.9	2.22	29.9	.01			244
	250	ISL	7.78	7.76	34.055	26.568	150.2	.592	2.33	34.9							252
1	283		7.47	7.45	34.096	26.645	143.3	.641	1.84	27.3	50.2	2.45	32.7	.01			285
	300	ISL	7.39	7.36	34.120	26.676	140.6	.664	1.62	24.0							302
1	340		7.19	7.16	34.168	26.741	135.0	.719	1.16	17.1	57.9	2.71	35.3	.00			342
1	400		6.58	6.54	34.188	26.841	126.0	.798	.82	11.9	67.0	2.91	37.9	.00			403
1	468		6.42	6.38	34.263	26.922	119.2	.881	.50	7.3	72.8	3.04	39.0	.00			471
	500	ISL	6.31	6.26	34.298	26.965	115.6	.919	.40	5.8							504
1	540		6.13	6.11													544

RV HEW HORIZON CALCOFI CRUISE 8611 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.4 N	118 33.8 W	12/11/86	1202 GMT	1386 M	280	06 KT			1015.0 MB	18.2 C	16.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.00	18.00	33.574	24.180	372.9	.000	5.56	102.8	2.0	.31	.1	.00	.21	.05	0
1	10		18.01	18.01	33.576	24.182	373.1	.037	5.59	103.4	2.0	.32	.1	.00	.21	.05	10
	20	ISL	17.66	17.65	33.563	24.257	366.2	.07 4	5.69	104.5							20
1	21		17.62	17.62	33.562	24.264	365.6	.078	5.71	104.8	2.1	.34	.1	.00	.36	.13	21
	30	ISL	15.97	15.97	33.464	24.575	336.2	.109	6.03	107.1							30
1	32		15.59	15.59	33.447	24.647	329.4	.116	6.08	107.1	3.4	.41	.2	.01	.80	.34	32
1	42		14.44	14.43	33.423	24.879	307.5	.147	5.85	100.7	4.5	.55	2.2	.08	.72	.48	42
	50	ISL	12.99	12.99	33.455	25.200	277.1	.171	5.11	85.3							50
1	53		12.55	12.54	33.475	25.303	267.3	.179	4.84	80.1	9.4	1.02	9.9	.10	.43	.45	53
1	63		12.00	11.99	33.531	25.450	253.5	.205	4.43	72.5	12.1	1.18	12.9	.04	.29	.37	63
1	74		11.29	11.28	33.608	25.641	235.5	.232	3.95	63.7	15.9	1.41	16.5	.02	.16	.23	74
	75	ISL	11.20	11.19	33.616	25.665	233.3	.235	3.90	62.8							76
1	89		10.37	10.36	33.700	25.876	213.5	.265	3.47	54.9	20.9	1.63	20.3	.01	.05	.10	89
	100	ISL	10.01	10.00	33.754	25.980	203.7	.289	3.27	51.3							101
1	105		9.90	9.89	33.773	26.013	200.7	.298	3.22	50.4	24.7	1.76	22.5	.01	.02	.06	105
1	125		9.31	9.30	33.864	26.181	185.1	.338	3.09	47.8	28.1	1.82	24.3	.01	.01	.04	126
	150	ISL	9.00	8.98	33.915	26.271	176.9	.383	3.04	46.8							151
1	151		8.99	8.97	33.917	26.274	176.6	.385	3.04	46.7	30.4	1.88	25.3	.01	.00	.03	152
1	183		8.62	8.60	34.009	26.405	164.8	.439	2.66	40.6	35.5	2.05	27.5	.01	.00	.02	184
	200	ISL	8.42	8.39	34.039	26.461	159.8	.467	2.48	37.7							201
1	212		8.27	8.25	34.057	26.497	156.5	.485	2.35	35.5	40.4	2.19	29.3	.01	.00	.03	213
1	243		7.86	7.84	34.106	26.596	147.5	.532	1.91	28.6	46.6	2.37	31.6	.01			244
	250	ISL	7.77	7.74	34.114	26.616	145.6	.543	1.81	27.1							252
1	283		7.37	7.35	34.143	26.696	138.4	.590	1.42	21.1	54.3	2.58	34.2	.01			285
	300	ISL	7.25	7.22	34.162	26.729	135.6	.613	1.24	18.4							302
1	339		7.04	7.01	34.203	26.790	130.3	.665	.91	13.4	61.7	2.78	36.2	.00			341
1	400		6.70	6.67	34.240	26.866	123.8	.743	.64	9.3	67.5	2.93	37.9	.00			403
1	468		6.35	6.31	34.303	26.962	115.3	.824	.37	5.4	75.2	3.08	39.4	.00			471
	500	ISL	6.18	6.14	34.330	27.006	111.5	.860	.35	5.1							504
1	541		5.94	5.93													545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 10.3 N	118 53.7 W	12/11/86	1630 GMT	1466 M	290	06 KT	310 02 08	0	1015.3 MB	17.5 C	16.7 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.08	18.08	33.588	24.172	373.6	.000	5.54	102.6	1.5	.30	.1	.00	.20	.05	0
1	10		18.07	18.07	33.588	24.176	373.7	.037	5.55	102.7	1.7	.30	.1	.00	.21	.05	10
	20	ISL	18.07	18.07	33.587	24.175	374.1	.075	5.58	103.4							20
1	21		18.07	18.07	33.587	24.175	374.1	.07 8	5.59	103.5	1.5	.30	.1	.00	.19	.05	21
	30	ISL	17.45	17.45	33.561	24.304	364.1	.112	5.67	103.8							30
1	32		17.33 A	17.32	33.555	24.331	359.6	.119	5.70	104.0	1.8	.32	.1	.00	.29	.09	32
1	42		14.38	14.37	33.367	24.849	310.4	.152	5.92	101.7	3.4	.50	1.5	.08	.68	.37	42
	50	ISL	13.67	13.66	33.369	24.998	296.4	.177	5.75	97.4							50
1	53		13.57	13.56	33.380	25.026	293.8	.185	5.64	95.3	4.6	.63	3.8	.17	.58	.42	53
1	64		12.53	12.52	33.409	25.255	272.2	.216	5.13	84.9	7.3	.87	8.0	.10	.40	.39	64
1	74		11.89	11.88	33.445	25.404	258.2	.242	4.81	78.5	9.4	1.03	10.8	.04	.27	.31	74
	75	ISL	11.81	11.80	33.456	25.427	256.0	.246	4.75	77.4							76
1	90		10.94	10.93	33.595	25.694	230.8	.281	4.05	64.8	15.2	1.37	16.6	.02	.11	.17	90
	100	ISL	10.27	10.26	33.674	25.872	214.1	.304	3.66	57.7							101
1	105		10.01	10.00	33.706	25.942	207.5	.314	3.51	55.1	21.1	1.62	20.9	.01	.04	.07	105
1	125		9.43	9.42	33.850	26.151	188.0	.355	3.02	46.8	26.9	1.85	24.3	.01	.01	.04	126
	150	ISL	8.93	8.91	33.963	26.320	172.3	.399	2.89	44.4							151
1	151		8.91	8.89	33.966	26.326	171.7	.402	2.89	44.3	31.6	1.96	26.1	.01	.00	.03	152
1	182		8.42	8.40	34.020	26.445	161.0	.453	2.68	40.7	36.1	2.07	27.8	.00	.00	.03	183
	200	ISL	8.26	8.24	34.042	26.486	157.2	.481	2.54	38.5							201
1	212		8.17	8.15	34.056	26.510	155.2	.500	2.44	36.8	39.5	2.18	29.2	.00	.00	.02	213
1	243		7.90	7.87	34.095	26.582	148.8	.547	2.08	31.2	44.3	2.32	30.9	.00			244
	250	ISL	7.85	7.82	34.109	26.601	147.1	.558	1.96	29.4							252
1	283		7.65	7.62	34.175	26.681	140.0	.605	1.44	21.5	51.4	2.56	33.3	.00			285
	300	ISL	7.56	7.53	34.197	26.712	137.4	.629	1.24	18.5							302
1	339		7.35	7.32	34.235	26.772	132.2	.681	.89	13.2	58.4	2.79	35.3	.00			341
1	400		6.92	6.88	34.277	26.866	124.0	.760	.58	8.5	65.8	2.95	37.1	.00			403
1	468		6.59	6.55	34.315	26.940	117.7	.841	.38	5.5	72.3	3.07	38.5	.00			471
	500	ISL	6.41	6.36	34.330	26.977	114.6	.879	.35	5.1							504
1	542		6.15	6.13													546

A. MEAN VALUE OF 17.25 AND 17.40 DEGREES CELSIUS.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 00.2 N	119 13.6 W	12/11/86	2025 GMT	1591 M	280	04 KT	310 03 07	0	1014.7 MB	21.5 C	18.7 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.76	16.76	33.379	24.327	358.9	.000	5.78	104.2	2.1	.35	.1	.02	.25	.05	0
	10	ISL	16.45	16.45	33.382	24.402	351.7	.036	5.82	104.3							10
1	16		16.22	16.22	33.383	24.455	347.2	.056	5.83	104.0	2.6	.34	.1	.00	.24	.12	16
	20	ISL	16.03	16.02	33.369	24.489	344.1	.070	5.82	103.4							20
	30	ISL	15.56	15.56	33.343	24.573	336.3	.104	5.79	101.9							30
1	31		15.52	15.52	33.342	24.581	335.6	.107	5.79	101.8	3.0	.40	.4	.05	.52	.23	31
1	42		15.23	15.22	33.367	24.665	327.9	.144	5.68	99.3	3.4	.45	1.3	.11	.52	.25	42
	50	ISL	14.09	14.08	33.328	24.879	307.7	.170	5.58	95.3							50
1	52		13.80	13.79	33.320	24.933	302.6	.175	5.55	94.2	4.5	.61	3.3	.22	.42	.27	52
1	62		12.50	12.49	33.309	25.182	279.0	.204	5.26	86.9	6.8	.82	6.6	.19	.26	.22	62
1	74		11.30	11.29	33.390	25.471	251.7	.236	4.76	76.7	10.6	1.11	11.9	.04	.14	.19	74
	75	ISL	11.23	11.22	33.407	25.496	249.4	.23 9	4.69	75.5							76
1	83		10.95	10.94	33.515	25.630	236.8	.258	4.28	68.5	14.3	1.31	15.5	.02	.09	.14	83
1	99		10.10	10.09	33.707	25.928	208.7	.293	3.58	56.3	20.9	1.60	20.2	.01	.03	.11	99
	100	ISL	10.06	10.05	33.713	25.939	207.7	.296	3.56	55.9							101
1	114		9.78	9.77	33.762	26.024	199.9	.325	3.39	53.0	23.6	1.70	21.9	.01	.02	.10	115
	125	ISL	9.53	9.51	33.844	26.131	189.9	.346	3.12	48.5							126
1	128		9.45	9.43	33.871	26.165	186.7	.352	3.03	47.0	27.4	1.85	24.0	.01	.01	.06	129
	150	ISL	9.13	9.12	33.941	26.271	177.0	.392	2.82	43.5							151
1	154		9.09	9.07	33.947	26.282	176.0	.399	2.80	43.1	31.2	1.98	25.9	.01	.01	.08	155
1	181		8.87	8.85	34.018	26.374	167.8	.445	2.46	37.7	34.7	2.11	27.5	.00	.00	.04	182
	200	ISL	8.71	8.69	34.073	26.442	161.7	.476	2.18	33.3							201
1	210		8.63	8.61	34.101	26.476	158.6	.492	2.03	31.0	39.2	2.27	29.4	.00	.00	.05	211
1	242		8.37	8.34	34.176	26.575	149.7	.541	1.62	24.6	44.8	2.45	31.1	.00			243
	250	ISL	8.31	8.28	34.190	26.595	147.9	.554	1.52	23.0							252
1	281		8.10	8.07	34.234	26.662	142.0	.599	1.18	17.8	49.9	2.62	32.7	.00			283
	300	ISL	7.95	7.92	34.257	26.702	138.5	.625	1.01	15.2							302
1	338		7.66	7.63	34.291	26.772	132.4	.677	.75	11.2	57.4	2.83	34.7	.00			340
1	399		7.34	7.30	34.302	26.827	128.0	.757	.58	8.6	61.9	2.92	36.0	.00			402
	400	ISL	7.34	7.30	34.302	26.828	128.0	.758	.58	8.6							403
1	468		6.84	6.80	34.310	26.903	121.4	.842	.42	6.2	69.0	3.02	37.7	.00			471
	500	ISL	6.62	6.58	34.317	26.939	118.4	.881									504
1	541		6.35	6.30	34.328	26.983	114.5	.929									545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 50.6 N	119 3A.6 W	13/11/86	2030 GMT	1830 H	270	08 KT	310 03 08	1	1014.7 MB	17.0 C	15.A C	A/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	17.21	17.21	33.A10	2A.2A5	366.7	.000	5.67	103.1	2.1	.32	.1	.00	.16	.0A	0
	10 ISL	17.09	17.09	33.A09	2A.273	36A.5	.037	5.68	103.0							10
1	16	17.01	17.00	33.A08	2A.293	362.7	.058	5.68	102.9	2.1	.33	.1	.00	.1A	.05	16
	20 ISL	16.93	16.93	33.A13	2A.31A	360.8	.073	5.68	102.8							20
	30 ISL	16.76	16.75	33.A26	2A.365	356.3	.109	5.73	103.A							30
1	31	16.7A	16.7A	33.A27	2A.369	355.9	.112	5.7A	103.5	2.5	.32	.1	.00	.23	.09	31
1	A2	1A.81	1A.80	33.301	2A.706	32A.0	.1A9	5.90	102.2	2.7	.AA	.6	.0A	.A9	.27	A2
	50 ISL	13.66	13.66	33.303	2A.9A7	301.2	.175	5.72	96.8							50
1	52	13.AA	13.AA	33.310	2A.997	296.5	.180	5.65	95.2	A.l	.61	3.2	.21	.A9	.29	52
1	62	12.Al	12.A0	33.373	25.250	272.6	.208	5.16	85.1	6.9	.8A	7.3	.09	.27	.32	62
1	73	11.76	11.75	33.A25	25.A12	257.3	.237	A.90	79.8	8.7	.96	9.5	.03	.16	.21	73
	75 ISL	11.61	11.60	33.AAA	25.A57	253.2	.2A3	A.80	77.8							76
1	83	11.08	11.07	33.515	25.606	239.1	.262	4.A3	71.1	13.1	1.19	13.8	.02	.10	.15	83
1	99	10.27	10.26	33.651	25.85A	215.7	.298	3.82	60.3	18.9	1.49	18.9	.01	.03	.08	99
	100 ISL	10.23	10.22	33.656	25.865	21A.7	.301	3.80	60.0							101
1	113	9.93	9.92	33.701	25.952	206.7	.330	3.65	57.2	21.5	1.60	20.6	.01	.02	.06	11A
	125 ISL	9.6A	9.63	33.795	26.073	195.A	.353	3.29	51.2							126
1	129	9.5A	9.53	33.83A	26.121	191.0	.361	3.1A	A8.8	26.2	1.79	23.A	.01	.00	.05	130
	150 ISL	9.17	9.15	33.931	26.257	178.A	.399	2.86	AA.1							151
1	15A	9.12	9.10	33.9AA	26.276	176.6	.A07	2.83	A3.6	30.9	1.97	25.9	.01	.01	.0A	155
1	181	8.97	8.95	3A.030	26.367	168.5	.A53	2.52	38.7	3A.0	2.10	27.3	.01	.00	.0A	182
	200 ISL	8.81	8.79	3A.076	26.A29	163.0	.A85	2.33	35.7							201
1	211	8.70	8.67	34.097	26.463	159.9	.502	2.23	3A.1	37.9	2.22	28.8	.01	.00	.06	212
1	2A4	8.32	8.29	34.137	26.553	151.8	.553	1.93	29.2	A2.7	2.37	30.5	.01			2A5
	250 ISL	8.27	8.25	3A.1A6	26.567	150.6	.563	1.86	28.2							252
1	283	8.05	8.02	3A.188	26.633	144.8	.612	1.A9	22.A	A7.8	2.52	32.3	.01			285
	300 ISL	7.87	7.8A	3A.198	26.668	1A1.7	.636	1.33	20.0							302
1	3A0	7.Al	7.37	3A.218	26.751	13A.2	.691	1.00	1A.8	56.9	2.7A	35.0	.00			342
	A00 ISL	7.02	6.98	3A.286	26.859	12A.7	.769	.57	8.A							A03
1	A01	7.01	6.97	3A.287	26.861	12A.5	.771	.56	8.2	65.2	2.97	37.0	.00			A04
1	468	6.5A	6.50	3A.323	26.953	116.A	.851	.37	5.4	73.1	3.11	38.8	.00			471
	500 ISL	6.33	6.29	34.333	26.989	113.3	.888	.32	4.7							504
1	539	6.10	6.05	34.339	27.024	110.2	.932	.30	4.3	80.4	3.11	40.1	.00			543

RV MEW HORIZON CALCOFI CRUISE 8611 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 30.9 N	120 15.3 W	14/11/86	0139 GMT	3885 M	290	08 KT	300 04 06	1	1014.4 MB	15.7 C	14.0 C	1/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	17.70	17.70	33.5A1	2A.228	368.5	.000	5.58	102.5							0
1	1	17.70	17.70	33.541	24.228	368.A	.004	5.58	102.5	2.0	.33	.1	.00	.17	.05	1
	10 ISL	17.66	17.65	33.5A6	2A.2A3	367.2	.037	5.59	102.6							1C
1	16	17.6A	17.6A	33.552	2A.253	366.5	.059	5.59	102.6	2.3	.35	.1	.00	.37	.0A	16
	20 ISL	17.6A	17.6A	33.559	2A.258	366.1	.073	5.59	102.5							20
	30 ISL	17.65	17.6 A	33.579	2A.271	365.2	.11C	5.58	102.A							30
1	37	17.65	17.65	33.592	24.281	36A.6	.135	5.57	102.3	2.0	.3A	.1	.00	.39	.13	37
	50 ISL	1A.A9	1A.A9	33.405	24.853	310.2	.179	5.41	93.2							50
1	58	12.55	12.54	33.352	25.206	276.7	.202	5.28	87.A	6.3	.80	6.6	.11	.31	.24	58
1	7A	11.60	11.59	33.381	25.408	257.8	.245	5.00	81.1	8.6	.98	9.7	.02	.17	.20	7A
	75 ISL	11.54	11.53	33.391	25.428	255.8	.248	4.94	80.1							76
1	84	11.17	11.16	33.A79	25.562	2A3.3	.270	A.52	72.7	12.0	1.18	13.3	.02	.11	.17	84
1	94	11.02	11.01	33.582	25.671	233.2	.293	4.03	64.6	15.3	1.34	16.3	.01	.11	.18	94
	100 ISL	10.70	10.69	33.628	25.763	224.5	.308	3.82	60.8							101
1	105	10.45	10.44	33.650	25.824	218.8	.318	3.73	59.1	18.6	1.52	18.8	.01	.05	.11	105
1	114	10.08	10.06	33.665	25.899	211.8	.340	3.77	59.3	20.0	1.54	19.6	.01	.03	.07	115
	125 ISL	9.71	9.69	33.718	26.002	202.1	.361	3.63	56.7							126
1	130	9.55	9.54	33.754	26.056	197.1	.372	3.50	54.4	24.A	1.69	22.1	.01	.01	.0A	131
1	1A5	9.39	9.37	33.872	26.176	186.0	.A01	2.93	A5.A	28.A	1.89	24.9	.00	.00	.04	1A6
	150 ISL	9.30	9.28	33.891	26.205	183.3	.409	2.90	44.8							151
1	166	8.95	8.94	33.928	26.289	175.5	.438	2.78	42.7	31.8	1.98	26.5	.00	.00	.05	167
1	187	8.53	8.51	33.966	26.385	166.7	.474	2.83	43.0	34.4	2.00	27.4	.00	.00	.04	188
	200 ISL	8.35	8.33	33.990	26.431	162.5	.495	2.80	42.4							201
1	213	8.20	8.18	34.013	26.472	158.9	.516	2.77	41.8	37.5	2.08	28.2	.01	.00	.02	214
1	244	7.80	7.78	34.059	26.568	150.1	.564	2.28	34.1	AA.A	2.27	30.7	.00			2A5
	250 ISL	7.71	7.68	3A.066	26.587	1A8.A	.573	2.19	32.7							252
1	28A	7.20	7.18	3A.089	26.677	1A0.1	.623	1.75	25.8	53.2	2.53	33.9	.00			286
	300 ISL	7.0A	7.01	3A.103	26.711	137.1	.6A4	1.56	23.0							302
1	341	6.67	6.64	34.134	26.786	130.3	.699	1.15	16.8	63.2	2.75	36.9	.01			343
	400 ISL	6.10	6.07	3A.1A9	26.871	122.7	.77A	.86	12.A							403
1	403	6.07	6.04	34.149	26.875	122.3	.778	.85	12.2	72.1	2.91	39.3	.00			406
1	470	5.67	5.63	34.202	26.968	114.1	.85 7	.55	7.8	81.3	3.10	41.2	.00			473
	500 ISL	5.56	5.52	34.238	27.010	U0.A	.890	.AA	6.2							504
1	5A2	5.A8	5.A3	3A.300	27.069	105.2	.936	.31	A.A	88.2	3.12	Al.9	.00			5A6

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 10.8 N	120 55.3 W	14/11/86	0706 GMT	3824 M	250 03 KT		1	1016.5 MB	15.0 C	13.5 C	2/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.43	17.43	33.541	24.293	362.1	.000	5.60	102.4	1.6	.34	.0	.00	.16	.05	0
	10	ISL	17.43	17.43	33.534	24.288	362.9	.036	5.60	102.4							10
1	16		17.44	17.43	33.533	24.287	363.3	.058	5.60	102.4	1.6	.34	.1	.00	.16	.05	16
	20	ISL	17.42	17.42	33.530	24.288	363.3	.073	5.60	102.4							20
	30	ISL	17.40	17.39	33.524	24.290	363.4	.109	5.60	102.3							30
1	36		17.38	17.38	33.521	24.291	363.5	.130	5.60	102.3	1.7	.35	.0	.00	.20	.07	36
	50	ISL	15.59	15.58	33.467	24.662	328.5	.179	5.71	100.6							50
1	57		14.44	A 14.43	33.446	24.896	306.3	.201	5.76	99.2	3.8	.53	2.0	.07	.54	.23	57
1	72		11.95	11.94	33.422	25.376	260.8	.243	4.99	81.5	8.5	1.00	9.7	.11	.25	.20	72
	75	ISL	11.70	11.69	33.455	25.448	254.0	.251	4.79	77.9							76
1	83		11..36	11.35	33.536	25.573	242.2	.270	4.39	70.9	13.0	1.21	13.9	.09	.15	.16	83
1	93		11.06	11.05	33.575	25.657	234.4	.294	4.21	67.6	14.4	1.30	15.5	.06	.13	.17	93
	100	ISL	10.65	10.64	33.627	25.771	223.8	.311	3.86	61.5							101
1	103		10.49	10.48	33.647	25.814	219.7	.317	3.74	59.3	18.2	1.51	18.7	.02	.09	.13	103
1	112		9.91	9.89	33.718	25.970	205.0	.338	3.47	54.3	21.9	1.65	21.3	.01	.05	.10	113
	125	ISL	9.53	9.52	33.791	26.089	193.9	.363	3.22	50.0							126
1	128		9.47	9.46	33.810	26.113	191.7	.369	3.16	49.0	25.8	1.81	23.7	.00	.02	.05	129
1	143		9.21	9.19	33.898	26.225	181.3	.397	2.88	44.5	29.2	1.92	25.3	.00	.01	.05	144
	150	ISL	9.07	9.06	33.919	26.263	177.7	.409	2.81	43.3							151
1	164		8.80	8.78	33.951	26.332	171.4	.43 4	2.73	41.8	32.6	2.01	27.0	.00	.00	.03	165
1	184		8.53	8.51	34.004	26.416	163.8	.467	2.68	40.8	35.4	2.06	27.7	.00	.00	.02	185
	200	ISL	8.36	8.34	34.047	26.475	158.4	.493	2.48	37.6							201
1	210		8.26	8.24	34.071	26.508	155.4	.508	2.32	35.1	39.9	2.21	29.5	.00	.00	.03	211
1	241		7.96	7.94	34.130	26.600	147.1	.555	1.82	27.4	45.6	2.41	31.6	.00			242
	250	ISL	7.80	7.78	34.125	26.620	145.3	.569	1.81	27.0							252
1	281		7.23	7.20	34.094	26.677	140.1	.613	1.76	26.0	52.4	2.50	33.7	.00			283
	300	ISL	6.96	6.93	34.095	26.717	136.5	.639	1.60	23.4							302
1	338		6.51	6.48	34.116	26.793	129.5	.690	1.20	17.4	63.3	2.74	37.2	.00			340
1	400		6.08	6.05	34.160	26.883	121.6	.768	.79	11.4	72.3	2.94	39.5	.01			403
1	469		5.64	5.60	34.220	26.986	112.3	.848	.46	6.5	82.1	3.09	41.2	.00			472
	500	ISL	5.46	5.42	34.245	27.028	108.6	.883	.38	5.3							504
1	543		5.23	5.19	34.275	27.079	104.0	.929	.33	4.7	90.9	3.16	42.6	.00			547

A. MEAN VALUE OF 14.40 AND 14.48 DEGREES CELSIUS.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 50.3 N	121 35.4 W	14/11/86	1231 GMT	4120 M	240 03 KT			1015.9 MB	16.1 C	12.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.65	17.65	33.209	23.986	391.4	.000	5.55	101.7							0
1	1		17.65	17.65	33.209	23.986	391.4	.004	5.55	101.7	1.2	.34	.0	.01	.09	.03	1
	10	ISL	17.66	17.65	33.209	23.985	391.7	.039	5.56	101.9							10
1	17		17.66	17.66	33.209	23.985	392.1	.066	5.57	102.1	1.2	.34	.0	.00	.08	.03	17
	20	ISL	17.66	17.66	33.208	23.983	392.4	.07 8	5.57	102.1							20
	30	ISL	17.67	17.67	33.205	23.979	393.1	.118	5.58	102.2							30
1	32		17.67	17.67	33.204	23.979	393.2	.125	5.58	102.3	1.2	.35	.0	.01	.10	.03	32
1	42		17.66	17.65	33.205	23.983	393.0	.164	5.59	102.4	1.1	.35	.0	.01	.11	.03	42
	50	ISL	17.31	17.30	33.127	24.006	391.2	.196	5.62	102.3							50
1	52		17.24	17.23	33.109	24.011	390.7	.203	5.63	102.2	.9	.36	.0	.01	.15	.04	52
1	63		15.13	15.12	33.057	24.450	349.0	.244	6.16	107.3	1.8	.37	.0	.01	.22	.14	63
1	73		14.16	14.15	33.054	24.654	329.8	.278	6.11	104.3	2.0	.41	.0	.03	.29	.21	73
	75	ISL	14.06	14.05	33.066	24.684	327.0	.285	6.10	103.9							76
1	83		13.87	13.86	33.125	24.769	319.1	.310	6.04	102.5	1.9	.40	.1	.02	.24	.24	83
1	99		13.54	13.53	33.297	24.969	300.5	.359	5.74	96.9	2.8	.49	1.4	.13	.23	.25	99
	100	ISL	13.50	13.48	33.315	24.992	298.3	.363	5.71	96.4							101
1	114		12.83	12.81	33.459	25.237	275.3	.402	5.43	90.4	4.2	.60	3.6	.05	.13	.19	114
	125	ISL	11.85	11.84	33.461	25.426	257.2	.433	5.16	84.2							126
1	128		11.54	11.52	33.462	25.484	251.9	.442	5.07	82.1	7.6	.90	8.6	.02	.07	.12	129
	150	ISL	10.28	10.27	33.568	25.789	223.1	.493	4.36	68.8							151
1	154		10.09	10.08	33.591	25.839	218.3	.502	4.21	66.2	16.4	1.37	17.0	.01	.02	.05	155
1	181		9.19	9.17	33.653	26.036	199.9	.558	3.46	53.3	25.7	1.72	22.9	.01	.00	.02	182
	200	ISL	8.89	8.87	33.821	26.216	183.1	.594	3.37	51.6							201
1	210		8.77	8.74	33.912	26.307	174.7	.612	3.32	50.7	29.3	1.81	24.7	.01	.00	.02	211
1	241		8.13	8.10	33.995	26.469	159.6	.664	3.13	47.2	35.7	1.95	27.0	.01			242
	250	ISL	8.00	7.97	34.010	26.500	156.7	.678	2.99	44.9							252
1	283		7.62	7.59	34.042	26.582	149.4	.728	2.44	36.4	44.4	2.23	30.5	.00			284
	300	ISL	7.39	7.36	34.048	26.619	146.1	.754	2.25	33.4							302
1	338		6.92	6.89	34.054	26.689	139.7	.808	1.90	27.9	53.8	2.46	34.1	.00			340
1	400		6.35	6.31	34.097	26.800	129.6	.891	1.22	17.7	64.3	2.74	37.6	.01			402
1	468		5.78	5.74	34.168	26.928	118.0	.976	.66	9.4	76.4	2.98	40.5	.00			471
	500	ISL	5.59	5.55	34.198	26.975	113.8	1.013	.51	7.2							504
1	542		5.42	5.37	34.233	27.024	109.4	1.059	.41	5.8	86.1	3.09	42.1	.00			545

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 31.3 N	122 12.8 W	14/11/86	2048 GMT	4129 M	090	10 KT	270 02 10	2	1017.0 MB	18.0 C	16.2 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.00	18.00	33.296	23.970	393.0	.000	5.53	102.1	1.4	.38	.1	.00			0
	10 ISL	18.04	18.04	33.296	23.960	394.2	.039	5.54	102.3							10
1	16	18.05	18.05	33.297	23.95 7	394.7	.063	5.54	102.3	1.4	.39	.1	.00	.09	.03	16
	20 ISL	18.06	18.05	33.297	23.957	394.9	.079	5.54	102.3							20
	30 ISL	18.06	18.06	33.298	23.956	395.3	.118	5.54	102.4							30
1	31	18.06	18.06	33.298	23.956	395.3	.122	5.54	102.4	1.4	.37	.1	.00	.10	.02	31
1	42	18.02	18.02	33.298	23.966	394.7	.165	5.54	102.3	1.4	.41	.1	.00	.11	.02	42
	50 ISL	17.97	17.96	33.283	23.967	395.0	.197	5.56	102.5							50
1	52	17.96	17.95	33.279	23.967	395.0	.205	5.56	102.5	1.2	.38	.1	.00	.15	.04	52
1	63	16.96	16.95	33.536	24.403	353.7	.246	5.96	107.9	1.4	.31	.1	.00	.20	.15	63
1	73	16.58	16.57	33.570	24.518	343.1	.280	5.91	106.3	1.6	.32	.1	.00	.19	.10	73
	75 ISL	16.50	16.49	33.588	24.551	340.0	.288	5.90	105.9							76
1	84	16.06	16.05	33.620	24.676	328.4	.317	5.86	104.3	1.6	.31	.1	.00	.18	.12	84
1	99	14.65	14.64	33.379	24.802	316.6	.365	5.88	101.6	1.9	.38	.2	.04	.22	.16	99
	100 ISL	14.65	14.63	33.399	24.818	315.2	.370	5.87	101.4							101
1	115	14.64	14.62	33.661	25.022	296.1	.414	5.64	97.6	2.2	.44	.2	.15	.19	.21	115
	125 ISL	13.67	13.65	33.648	25.216	277.9	.444	5.43	92.2							126
1	129	13.14	13.12	33.621	25.301	269.6	.456	5.33	89.4	4.2	.65	3.9	.02	.11	.16	130
	150 ISL	10.99	10.98	33.542	25.645	236.9	.508	4.72	75.6							151
1	155	10.52	10.51	33.535	25.722	229.6	.521	4.55	72.1	12.8	1.23	14.1	.01	.03	.07	156
1	181	9.69	9.67	33.689	25.984	205.0	.577	3.88	60.5	20.5	1.57	20.2	.01	.01	.03	182
	200 ISL	9.31	9.29	33.783	26.119	192.5	.614	3.57	55.2							201
1	211	9.14	9.11	33.834	26.188	186.2	.635	3.44	53.0	26.4	1.77	23.6	.00	.00	.02	212
1	242	8.62	8.60	33.978	26.382	168.1	.690	3.22	49.1	31.7	1.90	25.6	.00			243
	250 ISL	8.46	8.43	33.996	26.421	164.5	.703	3.14	47.7							252
1	283	7.83	7.80	34.029	26.541	153.3	.755	2.80	41.9	40.2	2.12	29.1	.00			284
	300 ISL	7.56	7.53	34.036	26.586	149.3	.781	2.61	38.9							302
1	338	7.09	7.06	34.051	26.663	142.2	.837	2.14	31.5	50.7	2.43	33.5	.00			340
1	400	6.61	6.58	34.145	26.803	129.6	.921	1.12	16.3	62.9	2.78	37.8	.00			402
1	466	5.99	5.95	34.173	26.906	120.2	1.004	.74	10.6	73.6	2.96	40.5	.00			469
	500 ISL	5.76	5.72	34.203	26.958	115.5	1.044	.58	8.3			.				504
1	541	5.57	5.53	34.251	27.019	110.0	1.089	.43	6.1	83.9	3.10	42 .*3	.00			544

RV MEW HORIZON CALCOFI CRUISE 8611 STATION 93 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 10.6 N	122 55.0 W	15/11/86	0142 GMT	3309 M	150	11 KT	180 03 08	2	1012.8 MB	18.9 C	16.6 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.EAR
	0 ISL	18.68	18.68	33.532	23.982	391.8	.000	5.46	102.2							0
1	1	18.68	18.68	33.532	23.982	391.8	.004	5.46	102.2	2.5	.32	.1	.00	.09	.02	1
	10 ISL	18.69	18.68	33.537	23.984	391.9	.039	5.46	102.2							10
1	17	18.69	18.69	33.541	23.985	392.0	.066	5.46	102.2	2.5	.31	.1	.00	.09	.02	17
	20 ISL	18.71	18.71	33.545	23.984	392.3	.078	5.46	102.2							20
	30 ISL	18.76	18.75	33.556	23.982	392.9	.118	5.45	102.2							30
1	32	18.76	18.76	33.558	23.981	392.9	.125	5.45	102.2	2.5	.30	.1	.00	.09	.03	32
1	43	18.75	18.74	33.562	23.989	392.6	.168	5.45	102.2	2.4	.30	.1	.00	.08	.03	43
	50 ISL	18.73	18.72	33.557	23.989	392.9	.196	5.45	102.1							50
1	53	18.73	18.72	33.553	23.988	393.1	.207	5.45	102.1	2.2	.32	.1	.00	.10	.03	53
1	64	18.66	18.65	33.541	23.995	392.8	.250	5.46	102.2	2.3	.31	.1	.00	.11	.03	64
1	74	17.30	17.29	33.538	24.325	361.6	.288	5.86	106.8	2.1	.29	.1	.00	.14	.07	74
	75 ISL	17.18	17.17	33.533	24.349	359.3	.292	5.86	106.5							7b
1	85	16.38	16.37	33.483	24.498	345.3	.327	5.84	104.5	2.1	.30	.1	.00	.16	.10	85
1	100	14.93	14.91	33.441	24.790	317.8	.376	5.73	99.6	2.6	.40	.2	.04	.23	.20	100
1	116	14.13	14.11	33.476	24.988	299.3	.425	5.58	95.4	3.4	.47	.7	.14	.20	.24	116
	125 ISL	13.20	13.18	33.435	25.145	284.4	.453	5.32	89.2							126
1	131	12.65	12.64	33.416	25.238	275.5	.468	5.15	85.4	5.8	.80	5.1	.02	.12	.14	131
	150 ISL	11.76	11.74	33.526	25.494	251.5	.520	4.78	77.8							151
1	156	11.58	11.56	33.579	25.569	244.5	.535	4.66	75.6	10.1	1.01	10.4	.01	.07	.11	157
1	182	10.43	10.40	33.727	25.889	214.3	.595	3.95	62.6	17.9	1.40	17.1	.00	.02	.06	183
	200 ISL	9.77	9.74	33.818	26.072	197.1	.631	3.61	56.4							201
1	213	9.38	9.35	33.875	26.181	186.9	.656	3.42	53.0	25.7	1.72	22.5	.00	.00	.03	214
1	243	8.88	8.86	33.965	26.331	173.1	.710	3.08	47.2	30.9	1.95	25.2	.01			244
	250 ISL	8.79	8.77	33.994	26.367	169.7	.722	2.93	44.9							252
1	284	8.37	8.34	34.103	26.519	155.8	.777	2.27	34.4	39.8	2.23	29.2	.01			285
	300 ISL	8.06	8.03	34.095	26.560	151.3	.802	2.16	32.4							302
1	340	7.30	7.27	34.077	26.655	143.2	.861	1.99	29.4	49.9	2.44	32.7	.01			342
	400 ISL	6.62	6.59	34.113	26.777	132.1	.944	1.33	19.4							403
1	402	6.61	6.57	34.114	26.779	131.9	.946	1.31	19.1	61.5	2.74	36.6	.00			404
1	468	5.84	5.80	34.139	26.897	120.9	1.030	.85	12.2	74.0	3.00	40.0	.01			471
	500 ISL	5.76	5.72	34.188	26.946	116.6	1.068	.66	9.4							504
1	541	5.65	5.61	34.239	27.000	111.9	1.115	.45	6.4	82.1	3.17	41.4	.00			544

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
29 50.3 N	123 35.2 W	15/11/86	0727 GMT	4007 M	140	13 KT		5	1013.2 MB	18.2 C	17.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		19.19	19.19	33.639	23.933	396.4	.000	5.38	101.8	2.1	.30	.0	.00	.08	.02	0
	10	ISL	19.19	19.19	33.641	23.935	396.6	.040	5.39	101.9							10
1	15		19.19	19.19	33.642	23.936	396.7	.059	5.39	102.0	2.1	.30	.0	.00	.08	.02	15
	20	ISL	19.22	19.21	33.654	23.940	396.5	.07 9	5.39	101.9							20
	30	ISL	19.26	19.26	33.680	23.948	396.1	.119	5.38	101.9							30
1	31		19.27	19.26	33.683	23.949	396.1	.123	5.38	101.9	2.2	.31	.0	.00	.09	.02	31
1	42		19.28	19.27	33.694	23.955	395.9	.166	5.40	102.3	2.1	.34	.0	.00	.10	.03	42
	50	ISL	19.53	19.52	33.862	24.019	390.1	.198	5.38	102.6							50
1	52		19.59	19.58	33.906	24.038	388.4	.205	5.38	102.7	1.9	.27	.0	.00	.09	.03	52
1	62		18.26	18.25	33.607	24.146	378.4	.243	5.67	105.3	2.1	.28	.0	.00	.11	.04	62
1	73		16.29	16.28	33.321	24.394	354.8	.283	5.97	106.6	2.0	.32	.0	.00	.13	.07	73
	75	ISL	16.15	16.14	33.323	24.427	351.7	.291	5.96	106.0							76
1	84		15.90	15.89	33.392	24.537	341.5	.322	5.90	104.6	2.0	.30	.0	.00	.15	.10	84
1	99		15.07	15.06	33.441	24.758	320.8	.371	5.81	101.3	2.2	.33	.1	.00	.20	.20	99
	100	ISL	15.03	15.01	33.445	24.772	319.5	.375	5.80	101.1							101
1	115		14.31	14.30	33.466	24.941	303.8	.421	5.70	97.9	2.7	.38	.3	.12	.19	.24	115
	125	ISL	13.19	13.17	33.453	25.162	283.5	.451	5.51	92.3							126
1	130		12.72	12.70	33.448	25.250	274.4	.464	5.41	89.9	4.5	.61	3.6	.02	.12	.19	130
	150	ISL	12.56	12.54	33.761	25.524	249.0	.518	5.07	84.1							151
1	155		12.52	12.50	33.820	25.577	244.0	.531	4.99	82.7	7.0	.73	7.1	.01	.05	.08	156
1	181		11.27	11.25	33.843	25.830	220.2	.591	4.69	75.7	11.5	.98	11.5	.01	.02	.04	182
	200	ISL	10.08	10.06	33.822	26.023	201.9	.630	4.36	68.6							201
1	211		9.44	9.42	33.821	26.128	191.9	.652	4.14	64.2	20.8	1.45	19.2	.00	.00	.02	212
1	241		8.75	8.72	33.942	26.334	172.7	.707	3.47	53.0	29.4	1.79	24.3	.00			242
	250	ISL	8.58	8.56	33.962	26.375	168.9	.722	3.46	52.6							252
1	282		8.09	8.06	34.001	26.480	159.2	.774	3.41	51.4	35.4	1.88	25.8	.00			283
	300	ISL	7.80	7.77	34.012	26.532	154.4	.803	3.20	47.9							302
1	338		7.22	7.19	34.028	26.627	145.7	.860	2.59	38.2	47.2	2.25	31.0	.00			340
1	398		6.50	6.47	34.081	26.767	132.9	.943	1.53	22.2	61.0	2.66	36.2	.00			400
	400	ISL	6.48	6.44	34.083	26.771	132.4	1946	1.50	21.8							403
1	464		5.87	5.83	34.133	26.890	121.6	1.028	.89	12.7	73.5	2.93	39.7	.00			467
	500	ISL	5.61	5.57	34.163	26.945	116.6	1.070	.67	9.6							504
1	538		5.41	5.37	34.195	26.994	112.2	1.113	.54	7.6	84.8	3.07	41.8	.00			541

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
3A 43.4 N	121 34.4 W	25/11/86	1755 GMT	12 M	1145 - 1721 PST	1153 PST	1721 PST	460.5 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	Z	1	2	MEAN	DARK
1	14.56	33.461	24.882	5.84	100.8	2.0	0.54	1.7	0.08	1.69	0.62	97	3.5	4.3	3.9	0.14
9	14.53	33.461	24.888	5.82	100.4	2.0	0.52	1.7	0.08	1.77	0.71	33	29.6	25.0	27.3	0.12
10	14.52	33.461	24.889	5.82	100.4	3.2	0.51	1.7	0.08	1.79	0.84	29	20.0	19.8	19.9	0.12
17	14.52	33.461	24.890	5.80	100.0		0.52	1.7	0.09	1.88	0.71	14	18.9	19.6	19.2	0.13
31	11.68	33.504	25.488	4.63	75.3	13.0	1.13	11.7	0.17	0.80	0.88	2.4	1.8	1.9	1.8	0.09
57	10.28	33.692	25.884	3.54	55.9	21.3	1.64	20.1	0.01	0.16	0.23	0.10	0.06	0.09	0.07	0.04

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 78 91

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 24.3 N	123 27.6 W	24/11/86	1855 GMT	17 M	1200 - 1737 PST	1159 PST	1733 PST	104.8 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	15.59	33.103	24.381	5.81	102.2	1.1	0.42	0.1	0.00	0.27	0.10	97	1.2	0.85	1.0	0.07
13	15.58	33.100	24.381	5.81	102.1	1.2	0.42	0.1	0.00	0.27	0.11	33	2.4	2.7	2.5	0.06
16	15.59	33.100	24.379	5.81	102.2	1.3	0.42	0.1	0.00	0.29	0.14	29	3.3	3.4	3.3	0.06
24	15.60	33.101	24.379	5.81	102.2	1.2	0.42	0.1	0.00	0.28	0.12	14	2.2	2.3	2.3	0.08
43	15.60	33.097	24.375	5.81	102.2	1.3	0.43	0.1	0.00	0.30	0.12	2.4	1.0	1.1	1.0	0.07
80	12.00	33.092	25.111	5.41	88.3	6.6	0.91	7.2	0.04	0.18	0.20	0.10	0.07	0.13	0.10	0.05

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 08.9 N	121 09.1 W	23/11/86	1931 GMT	16 M	1154 - 1729 PST	1150 PST	1726 PST	281.3 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	Z	1	2	MEAN	DARK
0	15.26	33.126	24.471	5.92	103.4	1.7	0.45	0.0	0.00	0.43	0.15	97	1.7	1.1	1.4	0.08
11	15.25	33.126	24.474	5.89	102.9	1.8	0.44	0.0	0.00	0.43	0.13	33	5.8	5.3	5.5	0.09
13	15.26	33.124	24.470	5.87	102.6	1.8	0.44	0.0	0.00	0.40	0.14	29	4.3	4.3	4.3	0.08
22	15.24	33.123	24.475	5.90	103.0	1.8	0.44	0.0	0.00	0.39	0.15	14	5.2	4.7	4.9	0.09
40	14.78	33.216	24.646	5.96	103.2	1.4	0.44	0.1	0.03	1.27	0.44	2.4	5.5	5.6	5.5	0.09
75	10.84	33.119	25.341	5.26	83.8	9.3	1.05	9.6	0.02	0.09	0.12	0.10	0.12	0.15	0.13	0.04

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 53.0 N	120 08.9 W	22/11/86	1836 GMT	19 M	1140 - 1716 PST	1146 PST	1716 PST	203.7 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	Z	1	2	MEAN	DARK
1	16.94	33.440	24.333	5.68	102.8	1.7	0.34	0.0	0.00	0.29	0.12	97	1.6	1.8	1.7	0.09
15	16.91	33.440	24.339	5.69	102.9	1.7	0.34	0.0	0.00	0.29	0.11	33	4.3	4.4	4.3	0.09
17	16.91	33.443	24.343	5.70	103.1	1.5	0.35	0.0	0.00	0.27	0.11	29	4.4	4.5	4.5	0.07
26	16.17	33.429	24.503	5.75	102.5	2.0	0.37	0.4	0.03	0.50	0.22	14	6.7	7.6	7.1	0.09
49	11.75	33.447	25.432	4.70	76.5	10.2	1.09	11.1	0.09	0.25	0.28	2.4	0.54	0.44	0.49	*0.28
90	10.93	33.603	25.702	4.02	64.3	15.7	1.39	15.9	0.06	0.11	0.19	0.10	0.06	0.10	0.08	0.06

* THE DARK VALUE APPEARS TO BE HIGH. AS A RESULT UPTAKES MAY BE TOO LOW.

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 54.8 N	122 08.8 W	21/11/86	1845 GMT	15 M	1146 - 1715 PST	1154 PST	1728 PST	186.6 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	Z	1	2	MEAN	DARK
0	15.63	33.128	24.393	5.88	103.5	1.6	0.41	0.1	0.00	0.30	0.14	97	0.13	0.13	0.13	0.08
12	15.60	33.127	24.397	5.86	103.1	1.7	0.41	0.1	0.00	0.31	0.15	33	2.6	2.8	2.7	0.08
14	15.59	33.126	24.400	5.86	103.1	1.6	0.42	0.1	0.00	0.35	0.16	29	3.8	3.9	3.9	0.07
22	15.61	33.125	24.394	5.86	103.1	1.6	0.39	0.1	0.00	0.31	0.15	14	3.9	3.8	3.8	0.08
42	15.21	33.201	24.542	5.91	103.2	2.2	0.41	0.1	0.03	0.57	0.34	2.4	3.0	3.2	3.1	0.05
79	13.69	33.235	24.891	5.58	94.5	4.5	0.62	3.3	0.18	0.28	0.29	0.10	0.30	0.34	0.32	0.06

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 39.4

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 40.6 N	118 56.2 W	18/11/86	1908 GMT	28 M	1145 - 1725 PST	1141 PST	1719 PST	195.9 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	18.10	33.394	24.020	5.56	102.9	1.9	0.33	0.0	0.00	0.23	0.05	97	3.5	3.2	3.4	0.05
21	17.69	33.436	24.150	5.67	104.1	1.9	0.34	0.0	0.00	0.38	0.14	33	3.8	3.4	3.6	0.06
24	17.48	33.427	24.195	5.69	104.0	1.9	0.34	0.0	0.00	0.43	0.15	29	5.7	4.2	4.9	0.05
37	15.51	33.288	24.543	5.95	104.6	2.3	0.41	0.1	0.01	0.43	0.16	14	2.1	2.2	2.1	0.05
70	12.64	33.327	25.171	5.34	88.5	5.4	0.75	5.4	0.11	0.23	0.25	2.4	0.66	0.61	0.63	0.04
130	10.36	33.800	25.957	3.00	47.5	22.9	1.75	21.3	0.01	0.02	0.07	0.10	0.00	0.02	0.01	0.02

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 69

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 43.0 N	120 56.9 W	19/11/86	1835 GMT	14 M	1155 - 1730 PST	1149 PST	1728 PST	304.8 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	15.72	33.442	24.613	6.10	107.8	0.2	0.29	0.1	0.00	0.65	0.24	97	11.5	6.2	8.9	0.15
10	15.67	33.447	24.628	6.14	108.4	0.2	0.31	0.1	0.00	0.69	0.22	33	7.4	12.8	10.1	0.13
11	15.50	33.478	24.690	6.21	109.3	0.2	0.29	0.1	0.00	0.71	0.26	29	10.9	8.6	9.7	0.10
17	14.77	33.535	24.893	5.96	103.4	1.3	0.43	0.6	0.04	0.93	0.37	14	6.6	6.4	6.5	0.07
35	13.54	33.496	25.121	5.11	86.4	7.1	0.83	6.4	0.29	1.19	1.14	2.4	3.7	3.9	3.8	0.05
65	11.04	33.517	25.616	4.25	68.1	14.3	1.32	15.1	0.04	0.49	0.45	0.10	0.08	0.13	0.11	0.06

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 19.5 N	123 44.8 W	20/11/86	1856 GMT	33 M	1155 - 1743 PST	1201 PST	1742 PST	111.1 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	X	1	2	MEAN	DARK
1	17.14	32.971	23.926	5.62	101.8	0.6	0.38	0.0	0.00	0.13	0.03	97	1.2	1.1	1.1	0.09
25	18.56	33.510	23.996	5.46	102.0	1.5	0.34	0.0	0.00	0.10	0.03	33	1.1	1.1	1.1	0.07
28	18.57	33.512	23.995	5.45	101.8	1.5	0.36	0.0	0.00	0.10	0.03	29	1.5	1.3	1.4	0.05
44	18.23	33.472	24.050	5.53	102.6	1.4	0.33	0.0	0.00	0.15	0.06	14	1.3	1.4	1.4	0.07
83	17.06	33.816	24.596	5.78	105.1	1.5	0.25	0.0	0.00	0.17	0.12	2.4	0.48	0.51	0.49	0.03
154	12.95	33.652	25.363	5.24	87.6	4.5	0.62	4.2	0.01	0.09	0.11	0.10	0.09	0.09	0.09	0.05

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.7 N	178 15.3 W	17/11/86	1849 GMT	26 M	1126 - 1720 PST	1138 PST	1715 PST	115.6 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	18.14	33.387	24.003	5.57	103.1	1.5	0.33	0.1	0.00	0.19	0.04	97	1.7	2.1	1.9	0.07
20	18.14	33.395	24.010	5.58	103.3	1.5	0.34	0.1	0.00	0.16	0.03	33	1.6	1.6	1.6	0.06
22	18.13	33.380	24.002	5.58	103.3	1.6	0.33	0.1	0.00	0.17	0.04	29	1.8	1.7	1.7	0.06
34	17.03	33.361	24.251	5.82	105.5	1.8	0.33	0.0	0.00	0.27	0.08	14	1.8	1.8	1.8	0.05
65		33.304		5.41		4.7	0.72	4.4	0.30	0.35	0.30	2.4	0.68	0.63	0.65	0.02
121	10.98	33.730	25.792	3.45	55.3	18.3	1.54	17.9	0.01	0.03	0.07	0.10	-.01	0.01	0.00	0.03

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 05.5 N	120 38.5 W	16/11/86	1848 GMT	21 M	1141 - 1745 PST	1148 PST	1725 PST	136.6 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	17.63	33.535	24.240	5.56	102.0	1.9	0.33	0.0	0.00	0.18	0.04	97	2.5	2.1	2.3	0.09
16	17.63	33.535	24.243	5.58	102.4	1.9	0.35	0.0	0.00	0.18	0.05	33	2.3	2.2	2.3	0.08
18	17.64	33.552	24.253	5.58	102.4	2.0	0.32	0.0	0.00	0.18	0.05	29	2.3	2.3	2.3	0.08
28	17.67	33.550	24.244	5.58	102.5	2.0	0.32	0.0	0.00	0.20	0.05	14	1.9	2.0	2.0	0.07
53	15.01	33.409	24.746	5.93	103.2	3.2	0.46	0.6	0.04	0.50	0.29	2.4	1.4	1.5	1.4	0.02
97	10.43	33.585	25.777	4.17	66.0	16.2	1.38	16.8	0.01	0.05	0.10	0.10	0.02	0.03	0.02	0.01

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 45.8 N	123 19.5 W	15/11/86	1856 GMT	33 M	1159 - 1737 PST	1158 PST	1737 PST	100.9 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	POA	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	18.27	33.410	23.989	5.49	101.9	1.7	0.40	0.2	0.00	0.11	0.03	97	1.3	2.1	1.7	0.03
24	18.26	33.431	24.008	5.51	102.3	1.7	0.34	0.2	0.00	0.11	0.03	33	1.4	1.3	1.3	0.02
27	18.28	33.433	24.006	5.50	102.1	1.7	0.35	0.1	0.00	0.10	0.03	29	1.3	1.2	1.3	0.02
42	18.35	33.470	24.017	5.50	102.3	1.7	0.32	0.1	0.00	0.11	0.03	14	0.81	0.95	0.88	0.04
81	16.14	33.569	24.620	5.93	105.7	1.5	0.29	0.1	0.00	0.16	0.10	2.4	0.45	0.51	0.48	0.03
152	11.88	33.628	25.551	5.02	82.0	7.2	0.82	7.9	0.01	0.06	0.09	0.10	0.02	0.03	0.03	0.01

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.7 N	117 18.4 W	11/11/86	1937 GMT	23 M	1159 - 1718 PST	1134 PST	1718 PST	180.3 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	17.63	33.467	24.188	5.66	103.8	2.5	0.29	0.1	0.01	0.24	0.06	97	3.1	2.8	3.0	0.07
17	17.50	33.472	24.226	5.72	104.7	2.7	0.28	0.1	0.02	0.62	0.22	33	10.8	8.5	9.6	0.10
20	15.72	33.327	24.526	5.98	105.6	3.1	0.34	0.1	0.02	0.51	0.23	29	3.6	3.9	3.7	0.06
30	14.54	33.321	24.778	5.70	98.3	4.1	0.52	1.2	0.18	0.86	0.47	14	10.0	5.2	7.6	0.05

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 00.5 N	119 13.9 W	12/11/86	1925 GMT	22 M	1158 - 1718 PST	1142 PST	1719 PST	199.0 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
0	16.78	33.378	24.323	5.78	104.2	2.3	0.41	0.1	0.00	0.30	0.05	97	3.0	2.7	2.8	0.08
17	16.22	33.381	24.455	5.83	104.0	2.4	0.38	0.1	0.00	0.25	0.08	33	4.5	4.7	4.6	0.15
19	16.19	33.383	24.463	5.85	104.3	2.3	0.40	0.1	0.00	0.23	0.08	29	3.5	4.0	3.8	0.14
29	16.04			5.83		2.5	0.43	0.1	0.01	0.37	0.13	14	3.9	4.3	4.1	0.09
56	12.91	33.297	25.094	5.42	90.3	5.4	0.75	5.1	0.28	0.30	0.24	2.4	0.92	0.85	0.88	0.03
103	9.96	33.739	25.976	3.44	54.0	21.9	1.68	21.1	0.01	0.02	0.07	0.10	0.03	-.01	0.01	0.04

RV NEW HORIZON CALCOFI CRUISE 8611 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 31.4 N	122 13.6 W	14/11/86	1935 GMT	32 M	1201 - 1742 PST	1154 PST	1742 PST	85.1 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C		THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	%	1	2	MEAN	DARK
1	18.01	33.296	23.966	5.53	102.1	1.6	0.36	0.1	0.00	0.08	0.02	97	1.5	1.3	1.4	0.06
24	17.99	33.293	23.968	5.53	102.0	1.6	0.41	0.1	0.00	0.09	0.02	33	1.5	1.3	1.4	0.06
26	18.00	33.293	23.968	5.53	102.0	1.6	0.39	0.1	0.00	0.10	0.02	29	1.3	1.5	1.4	0.05
41	17.95	33.285	23.973	5.54	102.1	1.5	0.44	0.1	0.00	0.11	0.03	14	0.57	0.76	0.67	0.07
79	16.29	33.615	24.620	5.87	105.0	1.7	0.32	0.1	0.00	0.18	0.12	2.4	0.40	0.34	0.37	0.03
146	12.20	33.598	25.466	5.09	83.7	6.6	0.82	7.1	0.02	0.08	0.11	0.10	0.05	0.02	0.03	0.02

Secchi Disk Observations

CalCOFI Cruise 8611

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Weather	Clouds Type	Clouds Amt
77	51	25	11	1611	10	0	-	0
77	55	25	11	1258	14	0	-	0
77	60	25	11	0935	12	-	.	-
77	90	24	11	1355	18	0	-	0
78	91	24	11	1015	17	1	sc	7/8
80	55	23	11	0825	15	1	ST	1/8
80	60	23	11	1115	16	-	-	-
83	42	22	11	1515	18	1	AC	2/8
83	51	22	11	0845	13	0	-	0
83	51	22	11	1017	19	-	-	-
83	80	21	11	1011	15	1	cu	2/8
83	110	20	11	1651	21	1	sc	6/8
87	39.4	18	11	1034	28	1	sc	5/8
87	42	18	11	1520	23	2	sc	8/8
87	69	19	11	0915	14	2	ST	8/8
87	110	20	11	1138	33	4	-	8/8
90	35	17	11	1040	26	-	-	-
90	37	17	11	0814	24	1	SC	7/8
90	60	16	11	1631	19	1	AC	6/8
90	70	16	11	1018	21	-	-	-
90	110	15	11	1039	33	6	SC	8/8
93	26.7	11	11	1115	23	1	cc	4/8
93	28	11	11	1311	17	1	cc	6/8
93	30	11	11	1535	15	1	cc	6/8
93	50	12	11	0900	27	0	-	0
93	55	12	11	1108	22	0	-	0
93	60	13	11	1200	32	1	cu	4/8
93	100	14	11	1031	32	2	sc	8/8

CalCOFI Cruise 8611

MACROZOOPLANKTON BIOMASS
Nel Mesh Size: 0.505 mm

Line	Sta.	Position		Date Mo/Day	Time (GMT) Start	Time (GMT) End	Water Volume Strained (m)	Max. Tow Depth (m)	Volume per 1000 m Strained Total (cm)	Volume per 1000 m Strained Small (cm)
77	51	35 01.5N	120 55.1W	11/26	0045	0107	422	210	1271	228
77	55	34 53.5N	121 12.7W	11/25	2205	2227	437	213	66	66
77	60	34 43.4N	121 34.7W	11/25	1808	1830	424	214	87	87
77	80	34 03.5N	122 57.1W	11/25	0440	0502	451	213	133	133
77	90	33 43.4N	123 38.0W	11/24	2300	2322	466	214	24	24
80	51	34 27.4N	120 32.1W	11/23	1235	1243	167	70	60	60
80	55	34 19.3N	120 49.5W	11/23	1628	1650	429	213	30	30
80	60	34 09.7N	121 09.7 W	11/23	2100	2123	448	224	40	40
80	70	33 49.3N	121 51.0W	11/24	0330	0352	437	211	62	62
80	80	33 29.5N	122 33.1W	11/24	0954	1016	419	213	72	60
80	90	33 09.3N	123 14.8W	11/24	1527	1549	425	211	61	45
82	47	34 17.1N	120 02.1W	11/23	0843	0906	460	217	33	33
83	40.6	34 13.7N	119 24.7W	11/23	0215	0219	73	28	27	27
83	42	34 11.4N	119 31.2W	11/23	0012	0028	292	151	14	14
83	51	33 53.0N	120 10.0W	11/22	1726	1741	328	134	18	18
83	90	32 35.2N	122 49.4W	11/21	1305	1327	460	211	609	70
83	100	32 15.4N	123 29.4W	11/21	0755	0817	413	211	107	95
83	110	31 54.5N	124 10.6W	11/21	0200	0222	434	207	30	30
87	33	33 53.6N	118 29.6W	11/18	1104	1109	88	41	90	90
87	35	33 49.4N	118 37.7W	11/18	1419	1441	394	210	58	58
87	40	33 41.1N	118 55.3W	11/18	2100	2123	411	212	56	39
87	45	33 29.7N	119 18.8W	11/19	0155	0217	408	208	52	52
87	50	33 18.7N	119 39.8W	11/19	0540	0548	155	61	58	58
87	55	33 09.6N	120 00.7W	11/19	0932	0954	400	212	125	125
87	60	32 59.7N	120 21.9W	11/19	1305	1327	417	214	43	43
87	69	32 43.1N	120 57.2W	11/19	1910	1932	408	216	83	83
87	80	32 19.5N	121 44.0W	11/20	0255	0317	446	208	101	101
87	90	31 59.6N	122 24.6W	11/20	0815	0838	433	210	58	58
87	100	31 39.4N	123 04.1W	11/20	1416	1438	413	212	24	24
87	110	31 20.0N	123 45.4W	11/20	2020	2043	455	212	13	13
90	28	33 29.4N	117 46.4W	11/18	0515	0521	109	49	138	138
90	30	33 25.5N	117 53.6W	11/18	0300	0322	404	209	52	52
90	35	33 15.9N	118 15.2W	11/17	1908	1930	403	201	22	22
90	37	33 11.6N	118 23.4W	11/17	1619	1641	409	201	42	42
90	45	32 55.9N	118 55.7W	11/17	1132	1154	401	211	82	82
90	53	32 38.7N	119 29.0W	11/17	0635	0657	367	206	166	125
90	60	32 25.7N	119 56.7W	11/17	0140	0202	394	208	97	97
90	70	32 06.1N	120 38.5W	11/16	1955	2017	398	211	55	55
90	80	31 45.2N	121 19.1W	11/16	1342	1404	388	213	85	85
90	90	31 23.9N	121 57.9W	11/16	0816	0838	422	211	130	130
90	100	31 05.0N	122 39.2W	11/16	0205	0227	417	210	24	24
90	110	30 45.9N	123 18.6W	11/15	2030	2052	405	213	15	15
90	120	30 25.6N	123 59.5W	11/15	1352	1414	400	214	30	3a
93	26.7	32 57.7N	117 18.9W	11/11	1953	2000	120	54	117	117
93	28	32 55.0N	117 24.6W	11/11	2214	2236	397	212	55	55
93	30	32 50.2N	117 31.7W	11/12	0040	0102	383	211	63	63
93	35	32 40.7N	117 53.6W	11/12	0440	0502	404	203	52	52
93	40	32 31.1N	118 14.4W	11/12	0915	0937	410	210	93	81
93	45	32 19.8N	118 35.2W	11/12	1308	1330	399	210	78	78
93	50	32 11.0N	118 52.8W	11/12	1519	1541	381	213	50	50
93	55	32 00.0N	119 13.7W	11/12	2050	2112	397	212	68	68
93	60	31 50.5N	119 34.8W	11/13	2055	2117	396	211	56	56
93	70	31 30.8N	120 15.7W	11/14	0210	0232	407	210	111	98
93	80	31 11.0N	120 55.3W	11/14	0745	0807	376	210	136	136
93	90	30 50.2N	121 35.6W	11/14	1259	1321	390	210	72	72
93	100	30 30.8N	122 15.2W	11/14	1755	1817	395	201	63	48
93	110	30 10.7N	122 54.7W	11/15	0213	0235	394	210	51	51
93	120	29 50.4N	123 34.9W	11/15	0759	0821	408	211	37	37