UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 8709
4 – 19 September 1987

CalCOFI Cruise 8711
13 – 28 November 1987

SIO Reference 88-8
25 March 1988

UNIVERSITY OF CALIFORNIA

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Approved for distribution:

Edward A. Frieman, Director

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INTRODUCTION

The data in this report were collected during Cruises 8709*, and 8711 of the California Cooperative Oceanic Fisheries Investigations (CalCOFI) program 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 8709 and 8711 were collected and processed by personnel of the Marine Life Research Group and the Southwest Fisheries Center, National Marine Fisheries Service. Volunteers and other SIO staff members 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. Two types of sampler bottles were used on the two cruises: 51 Niskin bottles, and experimental 31 plastic 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 at a few non-standard CalCOFI sampling locations. 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 about 75 meters were equipped with unprotected thermometers for determination of the depth of sampling, using the Saunders (1981) pressure-to-depth conversion technique.

Salinity samples were analyzed at sea using inductive-type salinometers standardized with substandard seawater. Periodic checks on the concentration of the substandard were made by comparison with Wormley Standard Seawater batch P-92 on 8709 and batch P-103 on 8711. 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 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 with 51 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

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

which were innoculated with approximately 10 uCi of C as $NaHCO_3$. These were incubated 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 millipore filters and placed in scintillation vials. One-half ml of 10% HCl was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10 ml of scintillation fluor were added to each sample and the samples were returned to SIO where the radioactivity was determined with a scintillation counter.

Macrozooplankton Net Tows

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

Avifauna Observations

Bird observations were made along the cruise track during periods of daylight by Richard Veit, U. C. Irvine. All data were summed over two-hour intervals except where stations were closer together than 20 nautical miles. Included at the end of this report are maps of the distribution of total avian biomass (kg/km) and individual maps of the most numerous bird species (individuals/km) for CalCOFI cruises 8705, 8709, and 8711. Other physical and biological data for cruise 8705 appeared in SIO Ref. 87-19.

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). 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. Also shown are 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, assuming that the shallowest measured value extends to the surface and that negative values (when dark uptake exceeds light uptake) are zero. The uptake data have been presented to two significant digits (values <1.00) or one decimal (values >1.00). The higher production values may not warrant all of the digits presented. Incubation time, LAN, and civil twilight are given in local Pacific Standard Time (PST); to convert to 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.

P: After depth values indicates the bottle posttripped.

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

With the exception of the macrozooplankton biomass data, the data presented in this data report are available from MLRG on 9-track computer tape. A standard format ("IEH" format) has been developed to incorporate all of the measurements made at each depth (hydrographic, chemical, primary productivity and pigments). Requests for information should be addressed to:

MLRG, Mail Code A-030
Scripps Institution of Oceanography
La Jolla, CA 92093-0230

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FIGURES

Cruise 8709

1. CalCOFI Cruise 8709 track and station positions.

2. Horizontal distribution of chlorophyll-a at 10 meters.

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

4. Horizontal distribution of sigma-theta at 10 meters.

5. Horizontal distribution of temperature at 10 meters.

6. Horizontal distribution of salinity at 10 meters.

7. Horizontal distribution of dynamic height anomaly (200 over 500 m).

8. Horizontal distribution of sigma-theta at 200 meters.

9. Horizontal distribution of temperature at 200 meters.

10. Horizontal distribution of salinity at 200 meters.

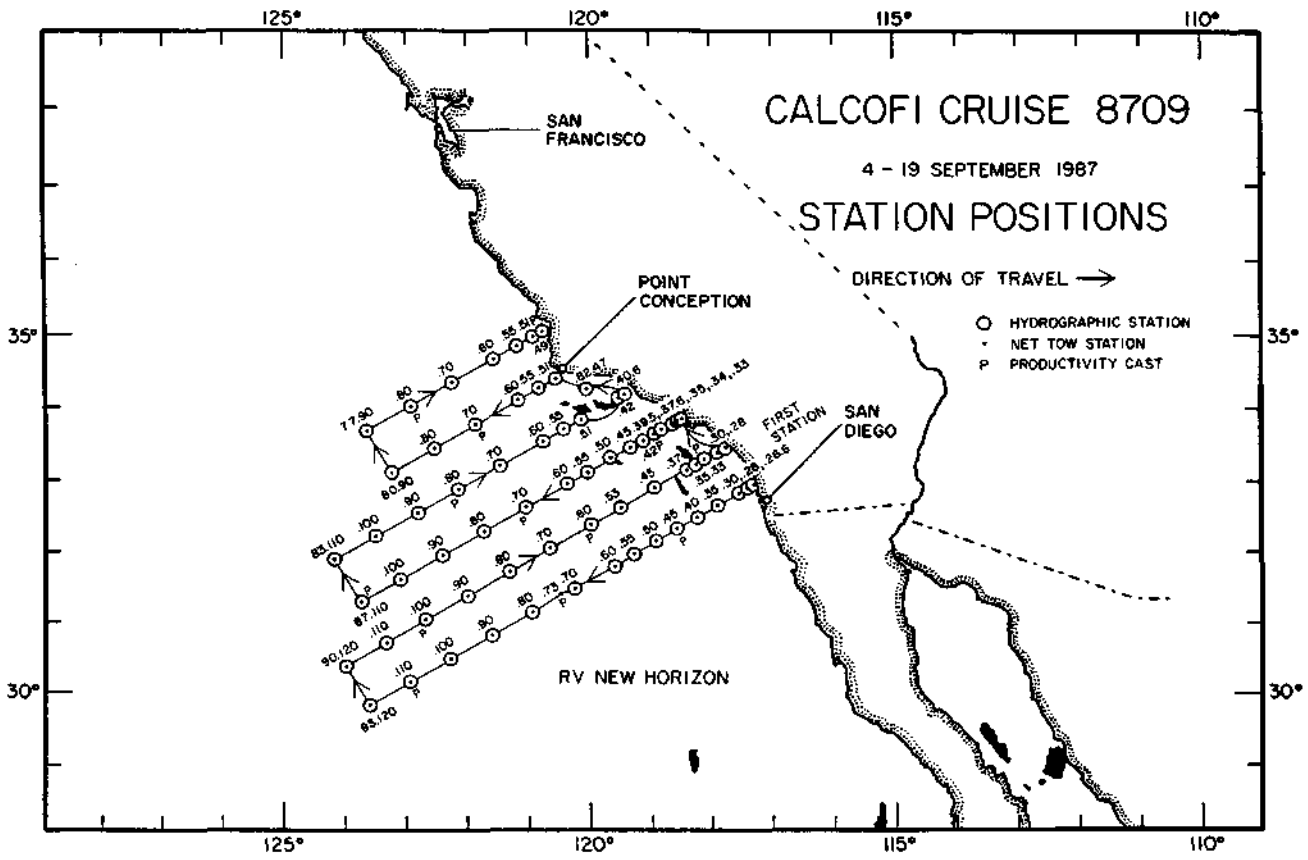
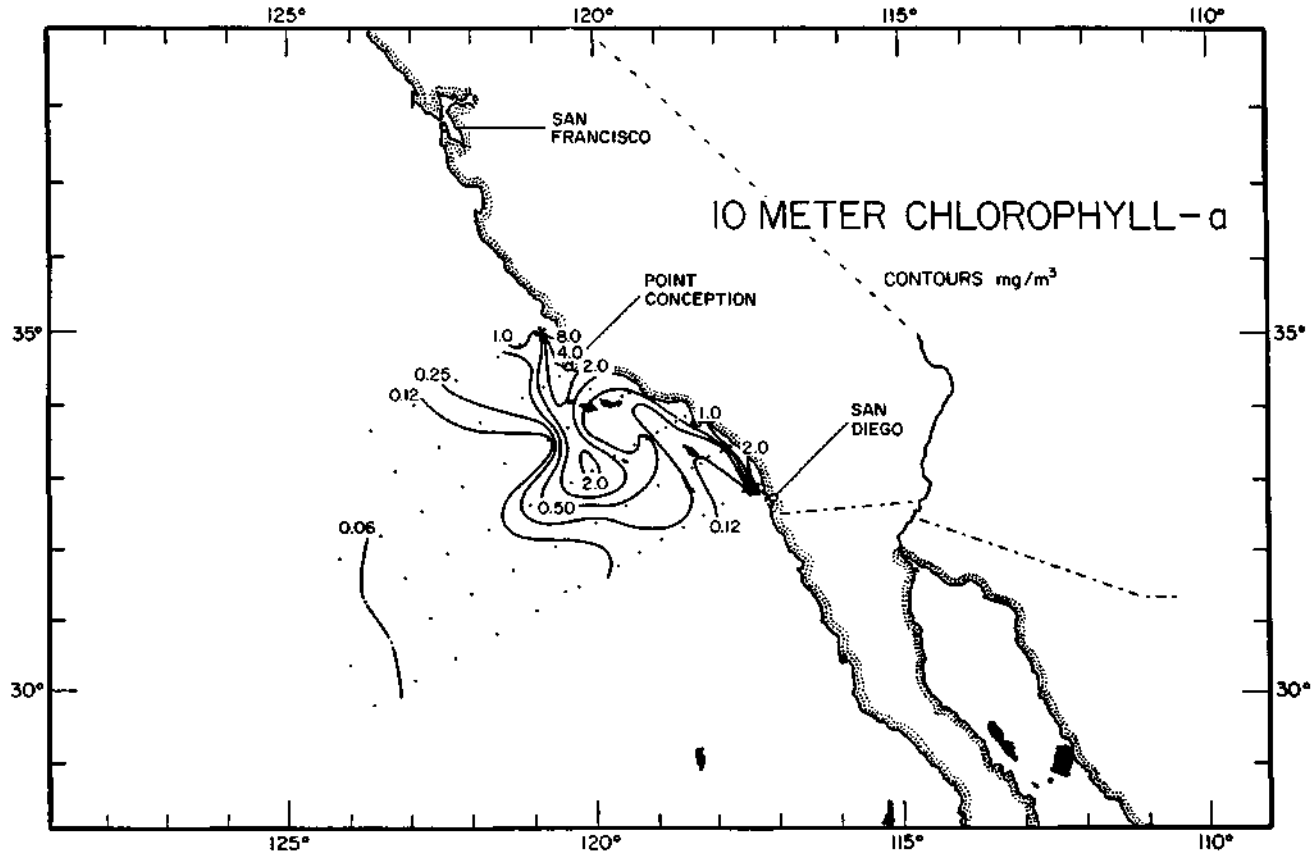


FIGURE 1



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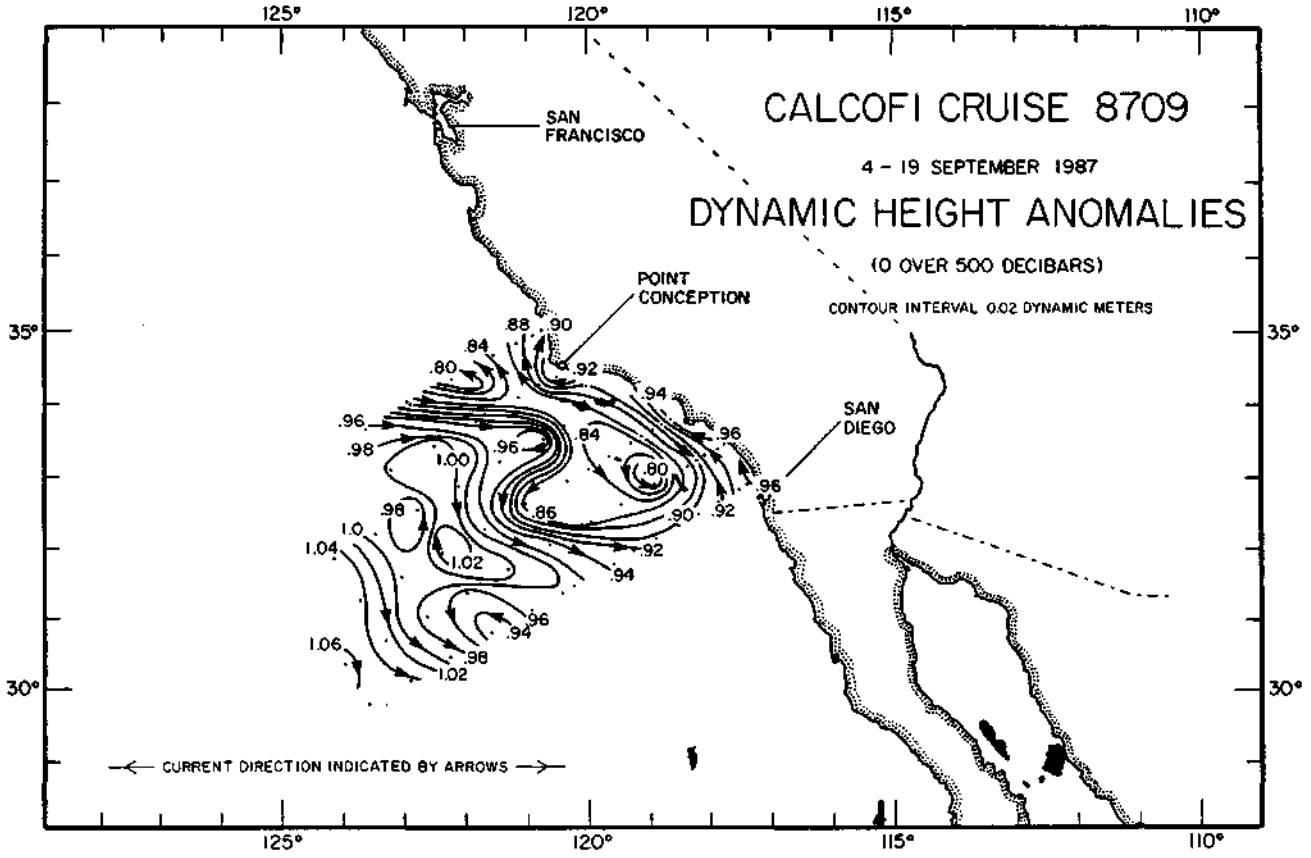

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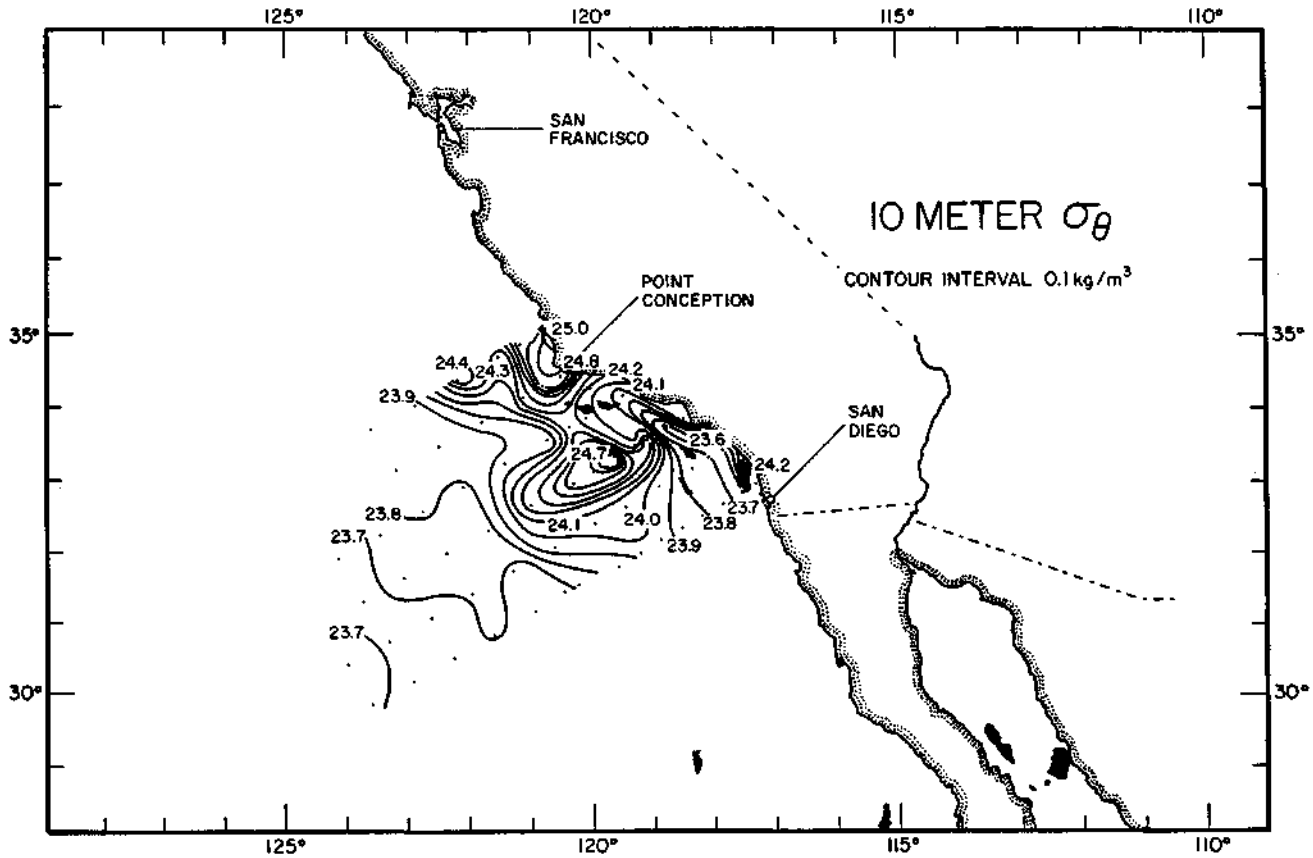

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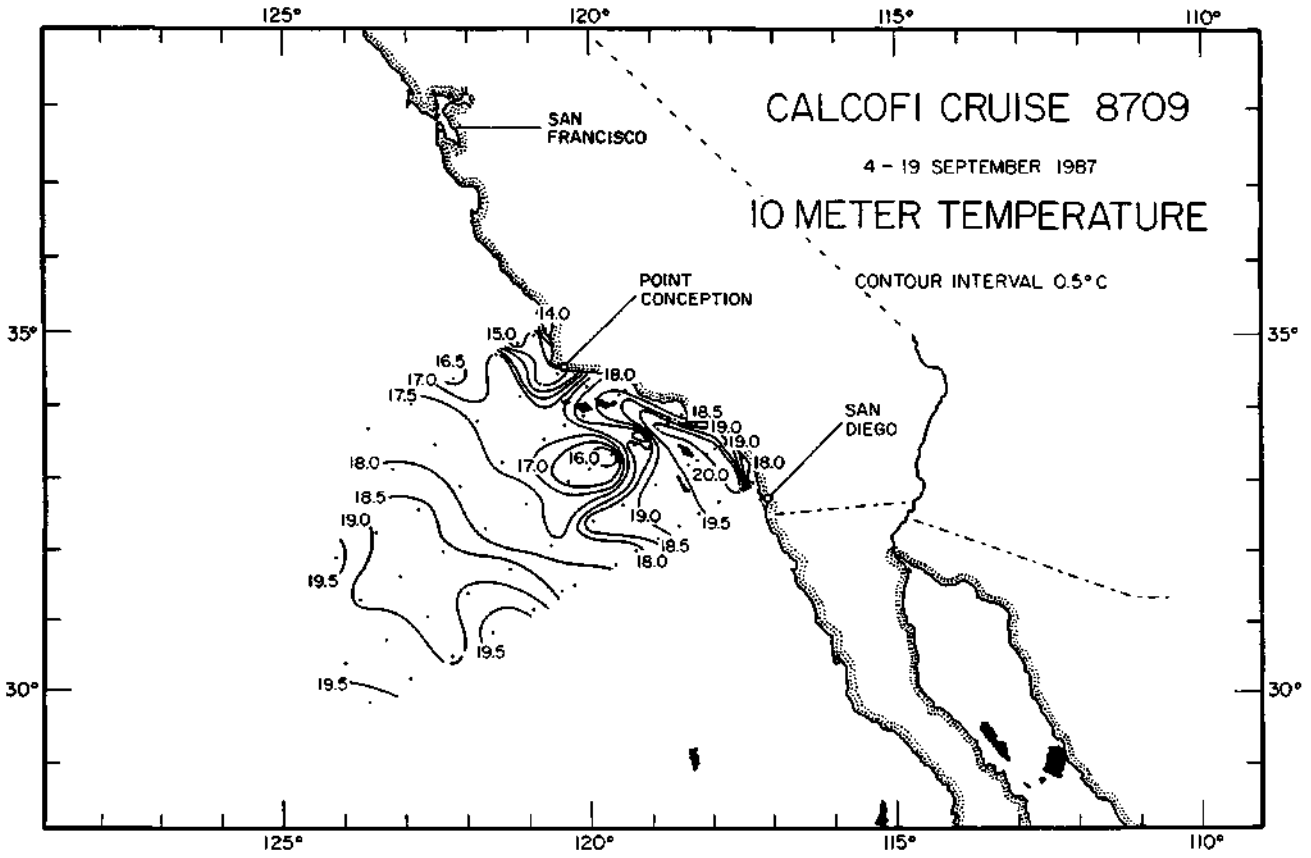


FIGURE 5

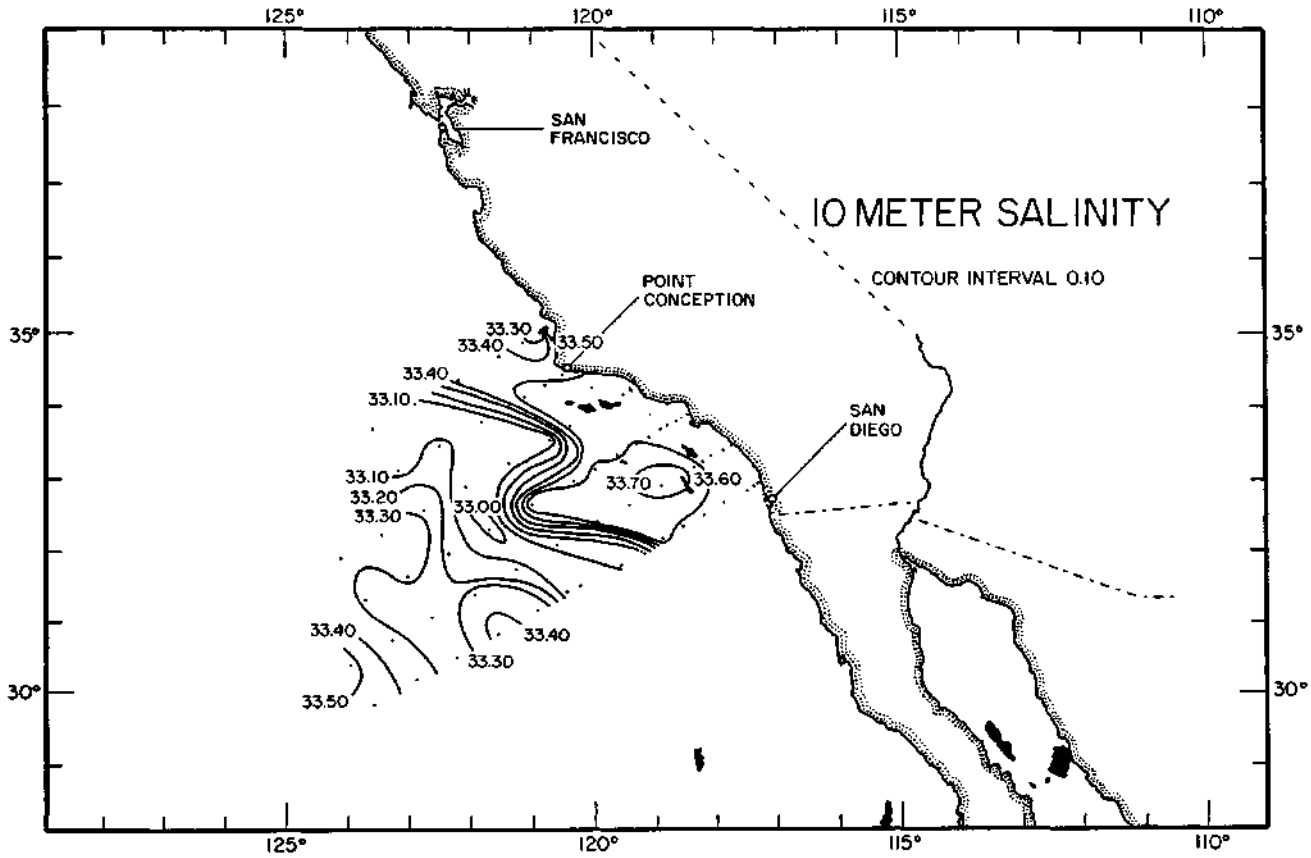
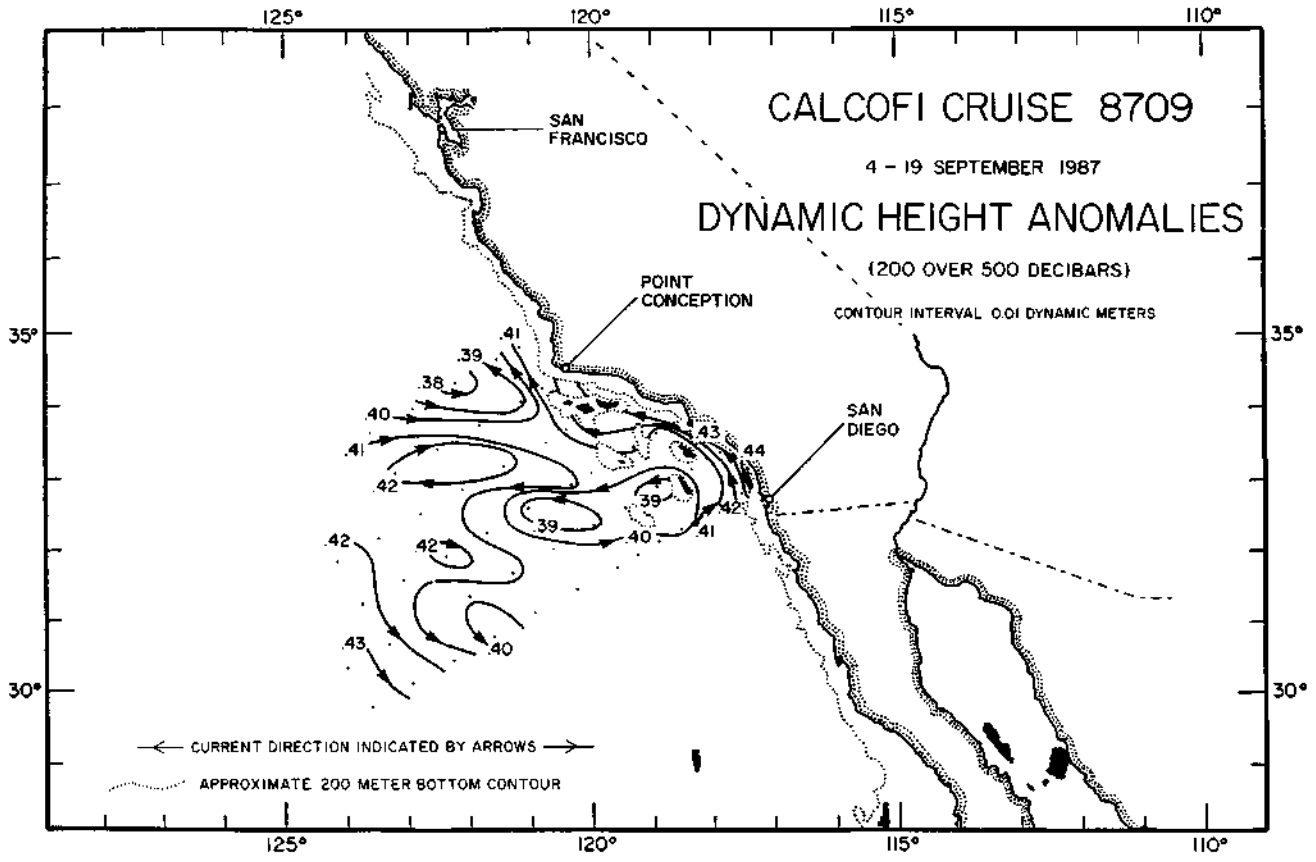


FIGURE 6



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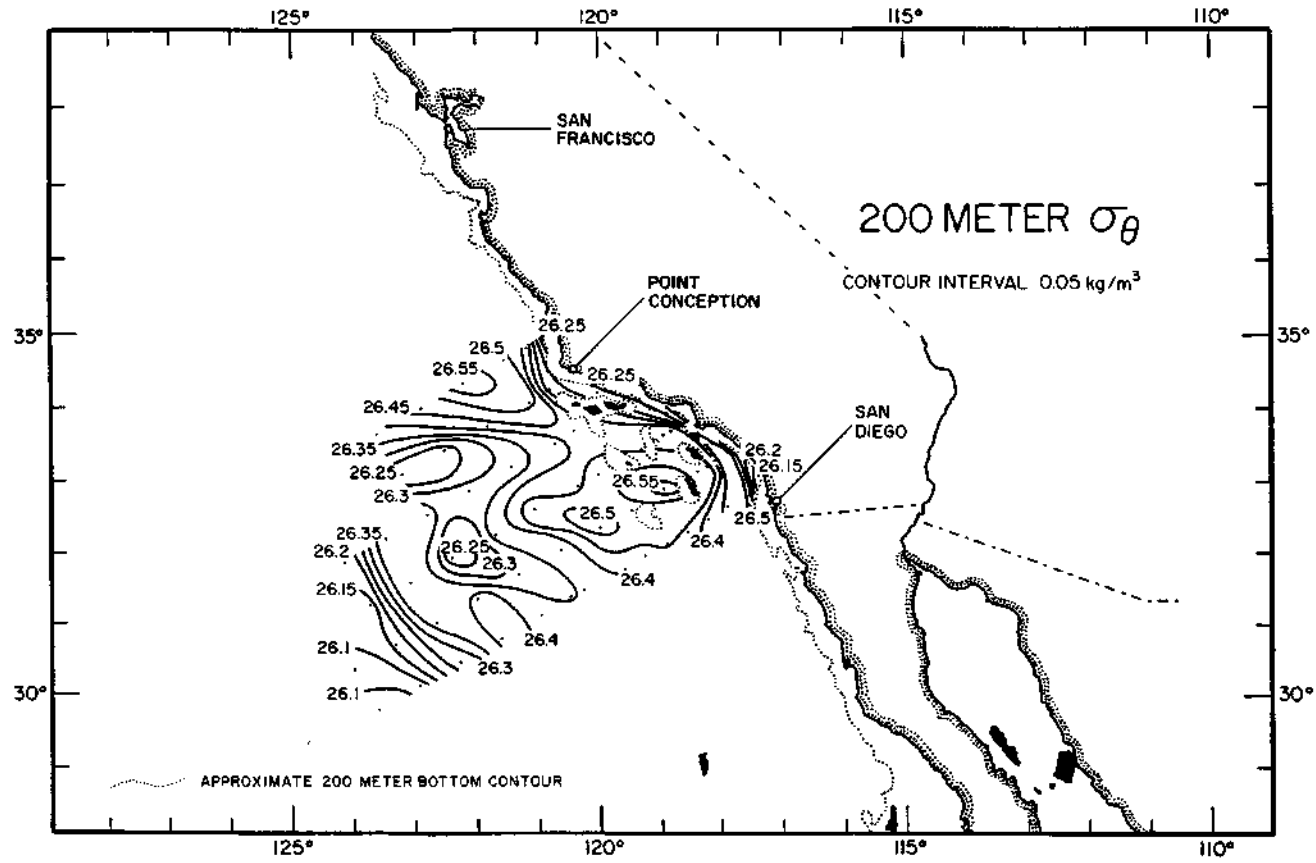

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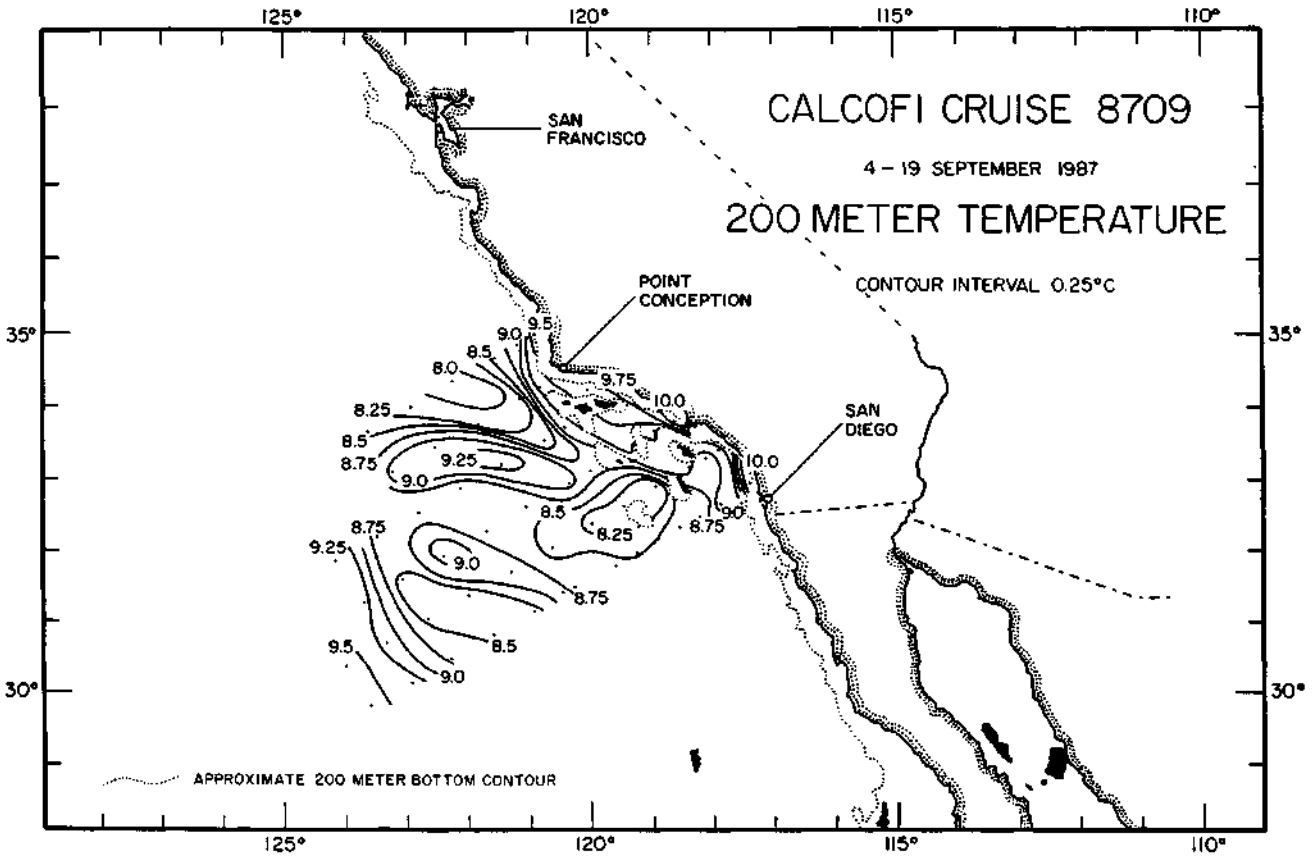


FIGURE 9

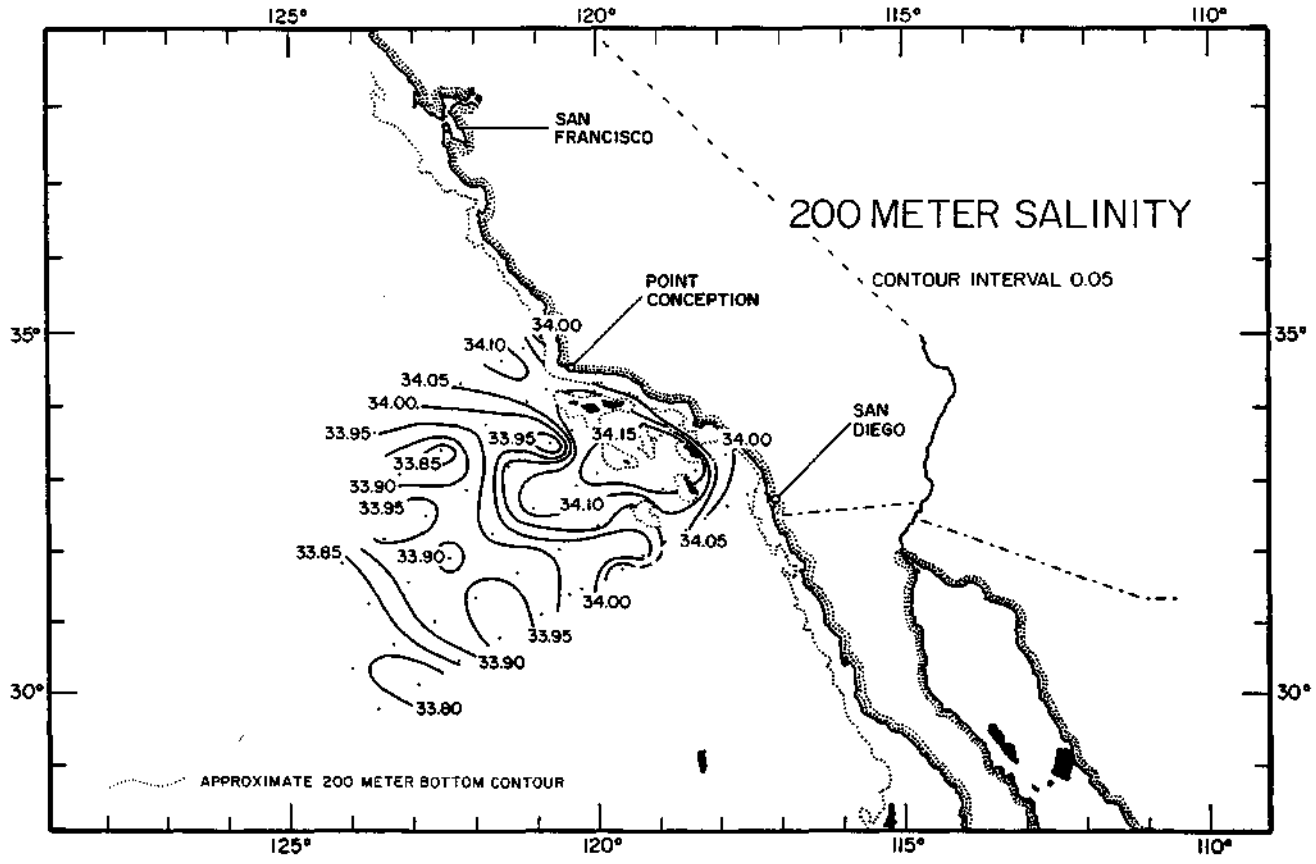


FIGURE 10

PERSONNEL

CalCOFI Cruise 8709

SHIP'S CAPTAIN

Phillip L. Munsch, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Venrick, Elizabeth L. (Chief Scientist)	Research Oceanographer, SIO	I,II
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Almeda Jauregui, Cesar O.	Oceanologist, CICESE	I.II
Anderson, George C.	Staff Research Associate, SIO	I, II
Chong Silva, Socorro	Biologist, CICESE	I
Flerx, William C.	Fishery Biologist, NMFS	I, II
Foreman, Terry J.	Associate Scientist, IATTC	I
Gripp, Sherry L.	Staff Research Associate, SIO	I, II
Gruber, Dennis W.	Marine Technician, SIO	I, II
Taveras, Susan M.	Fisheries Biological Technician, NMFS	II
Veit, Richard R.	Graduate Student, UCI	I, II
Wells, James A.	Marine Technician, SIO	I, II

Leg I: San Diego to Dana Point, CA, 4 - 10 September 1987

Leg II: Dana Point to San Diego, CA, 10 - 19 September 1987

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 5.3 N	120 46.6 W	18/09/87	1833 GMT	67 M	00	KT 270	03 05	2	1017.1 MB	15.0 C	14.7 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	14.44	14.44	33.520	24.952	299.3	0.000	6.87	118.3	5.7	0.41	0.3	0.04	12.03	2.88	0
1	1		14.44	14.44	33.520	24.952	299.4	0.003	6.87	118.3	5.7	0.41	0.3	0.04	12.03	2.88	1
	10	ISL	13.87	13.87	33.508	25.062	289.1	0.029	5.66	96.3	7.9	0.73	4.3	0.33	3.72	1.42	10
1	11		13.77	13.77	33.507	25.082	2 87.3	0.032	5.48	93.1	8.2	0.78	4.9	0.37	2.56	1.22	11
	20	ISL	13.10	13.10	33.520	25.228	273.7	0.058	4.93	82.6	10.3	0.98	7.9	0.50	1.54	1.07	20
1	22		12.97	12.97	33.523	25.256	271.0	0.063	4.87	81.4	10.7	1.01	8.4	0.51	1.31	1.04	22
	30	ISL	12.73	12.73	33.521	25.302	266.9	0.085	4.67	77.6	11.3	1.07	9.7	0.55	0.72	0.83	30
1	32		12.69	12.69	33.521	25.310	266.2	0.090	4.63	76.9	11.4	1.08	10.0	0.56	0.62	0.78	32
1	42		12.27	12.26	33.564	25.424	255.5	0.116	4.28	70.5	13.5	1.22	12.0	0.58	0.49	0.73	42
	50	ISL	12.09	12.08	33.579	25.470	251.3	0.136	4.14	67.9	14.1	1.27	13.0	0.41	0.37	0.58	50
1	53		12.05	12.04	33.581	25.479	250.5	0.144	4.10	67.2	14.3	1.28	13.3	0.35	0.33	0.55	53
1	63		11.98	11.97	33.584	25.495	249.2	0.169	3.97	65.0	16.4	1.39	13.6	0.46	0.32	0.89	63

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 1.3 N	120 55.3 W	18/09/87	1607 GMT	234 M	3 50	06 KT	2 80 04 09	2	1016.8 MB	14.2 C	14.0 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
1	0		15.54	15.54	33.317	24.557	336.9	0.000	6.02	105.8	2.8	0.39	0.1	0.00	0.63	0.35	0
1	10		15.26	15.26	33.299	24.605	332.7	0.033	6.07	106.1	2.7	0.39	0.1	0.00	0.61	0.32	10
	20	ISL	12.97	12.97	33.102	24.930	302.0	0.065	5.96	99.3	3.5	0.52	1.6	0.17	0.80	0.50	20
1	21		12.76	12.76	33.096	24.966	298.5	0.068	5.95	98.7	3.6	0.55	1.7	0.20	0.81	0.52	21
	30	ISL	13.08	13.08	33.454	25.181	278.4	0.094	5.04	84.4	8.8	0.95	7.3	0.57	0.60	0.50	30
1	31		13.12	13.12	33.488	25.199	276.7	0.097	4.93	82.6	9.4	0.99	7.9	0.61	0.56	0.50	31
1	41		12.52	12.51	33.504	25.330	264.5	0.124	4.55	75.3	10.8	1.13	10.3	0.69	0.25	0.31	41
	50	ISL	12.25	12.24	33.518	25.392	258.7	0.148	4.38	72.1	11.6	1.20	11.8	0.55	0.20	0.36	50
1	52		12.20	12.19	33.523	25.406	257.5	0.153	4.34	71.3	11.9	1.22	12.2	0.50	0.19	0.37	52
1	62		11.69	11.68	33.589	25.553	243.7	0.178	3.95	64.2	14.6	1.34	14.8	0.11	0.12	0.22	62
1	72		11.39	11.38	33.643	25.650	234.7	0.202	3.73	60.3	16.4	1.43	16.3	0.04	0.13	0.20	73
	75	ISL	11.34	11.33	33.651	25.666	233.2	0.209	3.69	59.6	16.7	1.45	16.5	0.04	0.12	0.19	76
1	82		11.23	11.22	33.668	25.699	230.2	0.225	3.60	58.0	17.2	1.48	17.0	0.03	0.08	0.18	83
1	97		10.90	10.89	33.750	25.823	218.8	0.259	3.28	52.5	19.7	1.61	19.2	0.02	0.06	0.15	98
	100	ISL	10.88	10.87	33.755	25.830	218.2	0.265	3.26	52.1	19.8	1.62	19.3	0.02	0.06	0.15	101
1	119		10.79	10.78	33.770	25.858	216.0	0.306	3.19	50.9	20.6	1.66	19.8	0.02	0.06	0.16	120
	125	ISL	10.67	10.66	33.787	25.892	212.8	0.319	3.14	50.0	21.5	1.69	20.3	0.02	0.05	0.15	126
1	138		10.41	10.39	33.828	25.970	205.7	0.346	3.02	47.8	23.5	1.76	21.4	0.02	0.04	0.11	139
	150	ISL	10.29	10.27	33.853	26.010	202.1	0.371	2.94	46.4	24.6	1.80	22.1	0.02	0.03	0.10	151
1	158		10.22	10.20	33.870	26.036	199.9	0.387	2.88	45.4	25.3	1.83	22.6	0.02	0.03	0.10	159
1	189		9.73	9.71	33.973	26.199	184.8	0.447	2.46	38.4	30.6	2.02	25.2	0.08	0.02	0.11	191
	200	ISL	9.56	9.54	33.991	26.241	181.0	0.467	2.36	36.7	32.2	2.07	25.8	0.11			202
1	218		9.27	9.25	34.022	26.313	174.5	0.499	2.20	34.0	34.8	2.16	26.8	0.15			220

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 53.3 N	121 11.9 W	18/09/87	1237 GMT	565 M	320	09 KT			1015.0 MB	15.1 C	14.6 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
	0	ISL	15.89	15.89	33.339	24.496	342.8	0.000	5.92	104.8	2.5	0.38	0.0	0.00	0.41	0.16	0
1	1		15.89	15.89	33.339	24.496	342.8	0.003	5.92	104.8	2.5	0.38	0.0	0.00	0.41	0.16	1
	10	ISL	14.99	14.99	33.328	24.686	324.9	0.033	6.04	105.1	3.6	0.42	0.2	0.02	1.04	0.38	10
1	11		14.86	14.86	33.327	24.714	322.4	0.037	6.06	105.1	3.8	0.43	0.2	0.02	1.12	0.41	11
	20	ISL	14.66	14.66	33.332	24.760	318.2	0.066	6.00	103.7	4.2	0.45	0.4	0.04	1.02	0.43	20
1	22		14.65	14.65	33.336	24.766	317.7	0.072	5.98	103.3	4.2	0.45	0.5	0.05	1.00	0.43	22
	30	ISL	14.41	14.41	33.384	24.854	309.5	0.097	6.02	103.5	4.5	0.50	0.9	0.08	1.15	0.52	30
1	32		14.31	14.31	33.392	24.881	307.0	0.103	6.03	103.5	4.6	0.52	1.1	0.09	1.17	0.54	32
1	42		13.35	13.34	33.318	25.022	2 93.8	0.133	5.61	94.4	5.5	0.68	3.4	0.26	0.73	0.53	42
	50	ISL	12.63	12.62	33.383	25.215	275.6	0.156	5.11	84.7	7.8	0.90	7.3	0.32	0.40	0.40	50
1	53		12.40	12.39	33.411	25.281	269.4	0.164	4.96	81.8	8.5	0.98	8.7	0.34	0.30	0.34	53
1	63		11.88	11.87	33.382	25.357	262.4	0.191	4.98	81.2	8.2	1.04	10.6	0.08	0.20	0.25	63
1	73		10.87	10.86	33.446	25.591	240.3	0.216	4.64	74.1	12.3	1.20	13.6	0.03	0.14	0.30	74
	75	ISL	10.79	10.78	33.473	25.626	237.0	0.221	4.51	71.9	13.2	1.26	14.5	0.03	0.12	0.27	76
1	88		10.47	10.46	33.639	25.811	219.6	0.250	3.72	58.9	18.7	1.61	19.8	0.01	0.03	0.07	89
	100	ISL	9.85	9.84	33.682	25.950	206.6	0.276	3.50	54.7	22.0	1.72	21.8	0.01	0.01	0.05	101
1	103		9.71	9.70	33.687	25.977	204.0	0.282	3.48	54.2	22.6	1.73	22.0	0.01	0.01	0.04	104
1	124		9.56	9.55	33.773	26.070	195.7	0.324	3.17	49.3	25.0	1.82	23.4	0.01	0.01	0.05	125
	125	ISL	9.54	9.53	33.777	26.076	195.1	0.326	3.16	49.1	25.2	1.82	23.5	0.01	0.01	0.05	126
1	149		9.14	9.12	33.879	26.221	181.7	0.371	2.94	45.3	29.1	1.94	25.5	0.01	0.01	0.05	150
	150	ISL	9.12	9.10	33.882	26.227	181.2	0.373	2.94	45.3	29.2	1.94	25.6	0.01	0.01	0.05	151
1	180		8.81	8.79	33.989	26.360	169.1	0.426	2.66	40.7	33.6	2.06	27.0	0.01	0.01	0.05	181
	200	ISL	8.86	8.84	3 4.086	26.428	163.0	0.459	2.09	32.0	37.3	2.25	28.6	0.02	0.00	0.06	202
1	211		8.88	8.86	34.130	26.459	160.3	0.477	1.81	27.7	39.2	2.34	29.4	0.02	0.00	0.06	213
1	241		8.48	8.45	34.132	26.524	154.6	0.524	1.85	28.1	42.1	2.37	30.1	0.03			243
	250	ISL	8.42	8.39	34.142	26.541	153.1	0.538	1.77	26.9	43.2	2.41	30.5	0.03			252
1	282		8.25	8.22	34.185	26.601	147.9	0.586	1.40	21.2	47.3	2.56	31.9	0.04			284
	300	ISL	8.09	8.06	3 4.196	26.634	145.1	0.612	1.31	19.7	49.3	2.61	32.5	0.03			303
1	338		7.71	7.68	34.210	26.701	139.1	0.666	1.17	17.5	53.5	2.69	33.5	0.02			341
1	400		7.22	7.18	34.237	26.793	131.1	0.750	0.83	12.3	62.1	2.86	35.6	0.02			403
1	466		6.54	6.50	34.256	26.901	121.3	0.833	0.54	7.8	73.2	3.04	37.7	0.01			470
	500	ISL	6.20	6.16	34.275	26.960	115.8	0.874	0.43	6.2	80.4	3.11	38.6	0.04			504
1	539		5.81	5.76	34.299	27.028	109.5	0.918	0.30	4.3	88.6	3.20	39.6	0.08			544

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 43.2 N	121 33.6 W	18/09/87	0833 GMT	932 M	310	11 KT			1015.1 MB	15.5 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	17.36	17.36	33.465	24.252	366.0	0.000	5.65	103.0	1.5	0.35	0.0	0.00	0.34	0.13	0
1	1		17.36	17.36	33.465	24.252	366.1	0.004	5.65	103.0	1.5	0.35	0.0	0.00	0.34	0.13	1
	10	ISL	17.37	17.37	33.464	24.249	366.6	0.037	5.68	103.5	1.5	0.35	0.0	0.00	0.34	0.13	10
1	11		17.37	17.37	33.464	24.249	366.7	0.040	5.68	103.5	1.5	0.35	0.0	0.00	0.34	0.13	11
	20	ISL	17.33	17.33	33.464	24.259	366.0	0.073	5.66	103.1	1.5	0.34	0.0	0.00	0.36	0.13	20
1	22		17.32	17.32	33.464	24.261	365.8	0.081	5.66	103.1	1.5	0.34	0.0	0.00	0.36	0.13	22
	30	ISL	15.68	15.68	33.417	24.604	333.4	0.109	6.05	106.7	1.9	0.42	0.4	0.04	0.72	0.40	30
1	32		15.18	15.18	33.409	24.708	323.6	0.115	6.12	106.9	2.0	0.46	0.5	0.05	0.80	0.47	32
1	42		13.18	13.17	33.403	25.122	2 84.3	0.146	5.50	92.2	4.4	0.81	5.4	0.91	0.54	0.56	42
	50	ISL	12.03	12.02	33.481	25.406	257.4	0.167	4.82	78.9	8.6	1.14	11.9	0.24	0.25	0.29	50
1	52		11.80	11.79	33.502	25.465	251.8	0.172	4.66	75.9	9.8	1.21	13.4	0.03	0.19	0.21	52
1	62		10.91	10.90	33.537	25.654	234.0	0.197			14.9	1.42	16.8	0.02	0.08	0.09	62
1	72		10.65	10.64	33.598	25.748	225.3	0.220	3.89	61.9	17.5	1.55	19.0	0.01	0.05	0.07	73
	75	ISL	10.47	10.46	33.603	2 5.783	222.0	0.226	3.84	60.8	18.2	1.57	19.4	0.01	0.04	0.06	76
1	87		9.77	9.76	33.630	25.923	208.9	0.252	3.67	57.2	21.1	1.66	20.9	0.01	0.02	0.04	88
	100	ISL	9.59	9.58	33.732	26.032	198.7	0.279	3.29	51.1	24.3	1.79	23.0	0.01	0.01	0.04	101
1	102		9.58	9.57	33.751	26.049	197.2	0.283	3.23	50.2	24.8	1.81	23.3	0.01	0.01	0.04	103
1	123		9.31	9.30	33.925	26.229	180.5	0.322	2.73	42.2	29.9	1.96	25.4	0.01	0.01	0.06	124
	125	ISL	9.31	9.30	33.938	26.239	179.6	0.326	2.68	41.4	30.3	1.98	25.6	0.01	0.01	0.06	126
1	148		9.31	9.29	34.045	26.323	172.1	0.366	2.19	33.9	34.1	2.16	27.3	0.02	0.01	0.07	149
	150	ISL	9.29	9.27	34.051	26.331	171.3	0.370	2.16	33.4	34.4	2.17	27.4	0.02	0.01	0.07	151
1	179		8.85	8.83	34.109	26.447	160.8	0.418	1.88	28.8	38.7	2.32	29.1	0.01	0.00	0.06	180
	200	ISL	8.64	8.62	34.140	26.505	155.7	0.451	1.72	26.2	41.6	2.40	30.1	0.01	0.00	0.05	202
1	209		8.56	8.54	34.150	26.525	153.9	0.465	1.66	25.3	42.7	2.43	30.5	0.01	0.00	0.05	211
1	239		8.33	8.31	34.162	26.570	150.1	0.511	1.55	23.5	44.8	2.49	31.2	0.01			241
	250	ISL	8.17	8.14	34.172	26.602	147.2	0.527	1.45	21.9	47.0	2.54	31.8	0.01			252
1	280		7.73	7.70	34.202	26.691	139.1	0.570	1.16	17.3	53.4	2.69	33.6	0.01			2 82
	300	ISL	7.60	7.57	34.211	26.717	136.9	0.597	1.08	16.1	55.3	2.73	34.1	0.01			302
1	335		7.43	7.40	34.218	26.747	134.5	0.645	1.00	14.8	57.9	2.78	34.7	0.02			338
1	394		6.80	6.76	34.231	26.845	125.7	0.722	0.72	10.5	67.2	2.94	36.9	0.01			3 97
	400	ISL	6.73	6.69	34.232	26.855	124.7	0.729	0.70	10.2	67.9	2.95	37.2	0.01			403
1	458		6.15	6.11	34.242	26.940	117.1	0.799	0.53	7.6	74.8	3.05	39.4	0.01			462
	500	ISL	5.84	5.80	34.263	26.996	112.0	0.847	0.41	5.9	80.7	3.13	40.4	0.00			504
1	526		5.65	5.61	34.277	27.031	108.9	0.876	0.34	4.8	84.4	3.18	41.0	0.00			531

RV NEW HORIZON CALCOFI CRUISE 8709 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 14.5 W	18/09/87	0205 GMT	4012 M									

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		16.81	16.81	33.466	24.383	353.6	0.000	5.82	105.0	2.8	0.37	0.1	0.00	0.30	0.12	0
1	10		16.49	16.49	33.428	24.428	349.5	0.035	5.83	104.5	2.9	0.37	0.1	0.00	0.39	0.13	10
	20	ISL	15.98	15.98	33.398	24.521	341.0	0.070	5.90	104.7	3.1	0.38	0.1	0.00	0.85	0.30	20
1	21		15.93	15.93	33.395	24.531	3 40.1	0.073	5.91	104.8	3.1	0.38	0.1	0.00	0.89	0.31	21
	30	ISL	13.44	13.44	33.462	25.115	284.6	0.101	5.50	92.8	5.9	0.81	5.5	0.76	0.62	0.23	30
1	31		13,15	13=15	33:475	25,183	278,2	0,104	5,43	91,0	6.3	0.87	6.3	0.83	0.57	0.22	31
1	42		11.86	11.85	33.504	25.455	252.5	0.133	4.50	73.4	11.5	1.29	14.4	0.12	0.32	0.21	42
	50	ISL	11.35	11.34	33.533	25.572	241.6	0.153	4.13	66.7	14.6	1.42	16.8	0.06	0.30	0.21	50
1	52		11.24	11.23	33.544	25.600	238.9	0.158	4.05	65.2	15.4	1.45	17.2	0.04	0.30	0.21	52
1	62		10.35	10.34	33.648	25.838	216.4	0.181	3.44	54.4	20.8	1.66	20.7	0.03	0.12	0.12	62
1	73		10.01	10.00	33.656	25.903	210.5	0.204	3.48	54.6	22.0	1.70	21.3	0.02	0.08	0.19	74
	75	ISL	9.96	9.95	33.669	25.921	208.8	0.208	3.43	53.7	22.7	1.72	21.6	0.02	0.07	0.18	76
1	87		9.65	9.64	33.760	26.044	197.3	0.233	3.06	47.6	26.8	1.84	23.7	0.02	0.02	0.08	88
	100	ISL	9.30	9.29	33.833	26.158	186.7	0.258	2.93	45.3	28.6	1.93	25.3	0.01	0.01	0.08	101
1	102		9.25	9.24	33.843	26.174	185.3	0.261	2.92	45.1	28.8	1.94	25.5	0.01	0.01	0.08	103
1	122		8.89	8.88	33.956	26.320	171.7	0.297	2.55	39.1	33.8	2.08	27.5	0.01	0.00	0.07	123
	125	ISL	8.85	8.84	33.966	26.334	170.4	0.302	2.53	38.7	34.3	2.09	27.6	0.01	0.00	0.07	126
1	147		8.56	8.54	34.018	26.421	162.6	0.339	2.47	37.6	37.1	2.15	28.4	0.00	0.01	0.05	148
	150	ISL	8.53	8.51	34.024	26.430	161.8	0.344	2.44	37.1	37.5	2.16	28.5	0.00	0.01	0.05	151
2	180		8.20	8.18	34.072	26.518	153.8	0.391	2.16	32.6	42.0	2.29	30.0	0.00	0.00	0.05	181
	200	ISL	7.87	7.85	34.086	26.578	148.4	0.421	2.02	30.3	45.5	2.37	31.2	0.00			202
2	211		7.68	7.66	34.090	26.609	145.6	0.437	1.96	29.2	47.5	2.41	31.8	0.00			213
2	241		7.29	7.27	34.094	26.668	140.3	0.480	1.80	26.6	52.5	2.49	33.3	0.00			243
	250	ISL	7.22	7.20	34.103	26.685	138.8	0.493	1.68	24.8	54.0	2.54	33.8	0.00			252
2	282		7.03	7.00	34.141	26.742	133.8	0.536	1.23	18.1	59.2	2.72	35.7	0.01			284
	300	ISL	6.91	6.88	34.157	26.771	131.3	0.560	1.07	15.7	61.6	2.79	36.4	0.01			302
2	339		6.65	6.62	34.187	26.830	126.1	0.610	0.83	12.1	66.7	2.90	37.6	0.01			342
2	400		6.19	6.15	34.224	26.920	118.2	0.685	0.54	7.8	75.7	3.06	39.3	0.00			403
2	466		5.71	5.67	34.232	26.987	112.3	0.761	0.46	6.6	83.7	3.12	40.8	0.00			470
	500	ISL	5.47	5.43	34.249	27.030	108.4	0.799	0.39	5.5	88.1	3.16	41.5	0.00			504
2	539		5.20	5.16	34.270	27.079	104.0	0.840	0.31	4.4	93.2	3.21	42.3	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 3.4 N	122 55.7 W	17/09/87	201A GMT	4238 M	330	05 KT	330 08 09	2	1015.1 MB	17.1 C	15.2 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		17.63	17.63	33.061	23.878	401.7	0.000	5.63	102.9	2.1	0.37	0.0	0.00	0.09	0.02	0
1	10		17.59	17.59	33.058	23.886	401.3	0.0A0	5.63	102.8	1.9	0.37	0.0	0.00	0.10	0.02	10
	20	ISL	17.59	17.59	33.056	23.885	401.7	0.080	5.61	102.5	1.9	0.37	0.0	0.00	0.06	0.02	20
1	21		17.59	17.59	33.056	23.885	401.7	0.084	5.61	102.5	1.9	0.37	0.0	0.00	0.06	0.02	21
	30	ISL	15.63	15.63	32.994	24.290	363.4	0.119	6.16	108.3	1.9	0.38	0.0	0.00	0.16	0.05	30
1	31		15.36	15.36	32.988	24.344	358.1	0.122	6.23	108.9	1.9	0.38	0.0	0.00	0.17	0.05	31
1	42		13.17	13.16	32.929	24.757	319.0	0.160	6.40	107.0	2.4	0.39	0.0	0.00	0.2A	0.10	42
	50	ISL	12.91	12.90	32.983	24.850	310.3	0.185	6.27	104.3	2.8	0.44	0.3	0.03	0.83	0.A3	50
1	52		12.85	12.8A	32.987	2A.865	309.0	0.191	6.21	103.2	2.9	0.46	0.A	0.0A	0.95	0.50	52
1	63		12.15	12.1A	33.109	25.09A	287.4	0.22A	5.71	93.5	A.6	0.66	3.9	0.15	0.A0	0.30	63
1	73		11.A6	11.45	33.202	25.295	268.4	0.252	5.27	85.1	7.5	0.91	8.2	0.04	0.27	0.27	74
	75	ISL	11.32	11.31	33.229	25.341	264.1	0.257	5.15	82.9	8.4	0.97	9.3	0.04	0.24	0.25	76
1	88		10.47	10.46	33.433	25.650	234.9	0.289	4.32	68.4	14.7	1.34	16.0	0.02	0.08	0.10	89
	100	ISL	9.85	9.84	33.649	25.92A	209.0	0.316	3.67	57.A	20.8	1.6A	20.8	0.02	0.02	0.05	101
1	103		9.72	9.71	33.695	25.982	203.6	0.322	3.55	55.3	22.1	1.70	21.7	0.02	0.01	0.0A	10A
1	12A		9.21	9.20	33.759	26.115	191.2	0.36A	3.39	52.3	25.6	1.79	23.4	0.02	0.00	0.03	125
	125	ISL	9.20	9.19	33.768	26.124	190.4	0.365	3.35	51.6	25.9	1.80	23.6	0.02	0.00	0.03	126
1	1A9		9.09	9.07	33.971	26.301	174.1	0.A09	2.53	38.9	32.7	2.09	27.0	0.01	0.00	0.06	150
	150	ISL	9.08	9.06	33.97A	26.305	173.8	0.A11	2.53	38.9	32.8	2.09	27.0	0.01	0.00	0.06	151
1	180		8.55	8.53	33.986	26.397	165.4	0.A62	2.68	40.7	34.7	2.08	27.8	0.01	0.00	0.03	181
	200	ISL	8.14	8.12	33.999	26.470	158.7	0.494	3.07	46.2	35.8	2.00	27.2	0.01	0.00	0.02	202
1	211		7.92	7.90	34.00A	26.507	155.4	0.512	3.29	A9.3	36.6	1.96	26.8	0.01	0.00	0.02	213
1	2A1		7.40	7.38	33.987	26.569	149.8	0.557	3.43	50.8	40.1	1.97	27.1	0.01			243
	250	ISL	7.30	7.28	33.994	26.588	148.0	0.571	3.25	48.0	42.1	2.03	27.9	0.01			252
1	281		7.03	7.00	34.029	26.653	142.2	0.616	2.A9	36.6	A9.7	2.30	31.5	0.01			2 83
	300	ISL	6.79	6.76	3A.035	26.691	138.7	0.642	2.32	33.9	53.7	2.41	33.1	0.01			302
1	337		6.35	6.32	34.049	26.760	132.4	0.693	2.07	29.9	61.0	2.59	35.6	0.01			340
1	398		6.01	5.98	34.135	26.872	122.5	0.770	0.96	13.8	72.7	2.90	38.8	0.00			401
	400	ISL	6.00	5.97	34.136	26.874	122.3	0.773	0.9A	13.5	73.0	2.91	38.9	0.00			403
1	463		5.58	5.54	34.164	26.949	115.7	0.848	0.67	9.5	80.5	3.02	40.6	0.00			467
	500	ISL	5.42	5.38	3 4.190	26.989	112.2	0.890	0.56	7.9	85.1	3.09	41.3	0.00			504
1	535		5.26	5.22	3A.21A	27.027	108.8	0.929	0.A6	6.5	89.A	3.15	42.0	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 43.3 N	123 37.8 W	17/09/87	1416 GMT	A228 M	330	11 KT	330 07 09	2	1014.2 MB	17.0 C	15.1 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	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.58	17.58	33.030	23.866	A02.8	0.000	5.60	102.2	2.2	0.37	0.0	0.00	0.08	0.02	0
1	1		17.58	17.58	33.030	23.866	A02.8	0.00A	5.60	102.2	2.2	0.37	0.0	0.00	0.08	0.02	1
	10	ISL	17.58	17.58	33.028	23.865	A03.2	0.0A0	5.62	102.6	2.1	0.37	0.0	0.00	0.08	0.02	10
1	11		17.58	17.58	33.028	23.865	403.3	0.04A	5.62	102.6	2.1	0.37	0.0	0.00	0.08	0.02	11
	20	ISL	17.59	17.59	33.028	23.863	403.8	0.081	5.61	102.A	2.1	0.36	0.0	0.00	0.08	0.02	20
1	21		17.59	17.59	33.028	23.863	A03.8	0.085	5.61	102.A	2.1	0.36	0.0	0.00	0.08	0.02	21
	30	ISL	17.60	17.59	33.028	23.861	A0A.3	0.121	5.63	102.8	2.1	0.37	0.0	0.00	0.08	0.02	30
1	32		17.60	17.59	33.028	23.861	A04.4	0.129	5.63	102.8	2.1	0.37	0.0	0.00	0.08	0.02	32
1	42		16.05	16.04	32.948	24.161	376.0	0.168	6.03	106.8	2.1	0.36	0.0	0.00	0.11	0.03	42
	50	ISL	14.79	14.78	32.961	24.448	3A8.8	0.197	6.21	107.3	2.2	0.38	0.0	0.00	0.15	0.05	50
1	52		14.50	14.49	32.970	24.516	342.3	0.204	6.24	107.2	2.2	0.39	0.0	0.00	0.16	0.06	52
1	63		13.35	13.34	32.993	24.771	318.3	0.2A0	6.21	10A.2	2.6	0.A0	0.0	0.00	0.21	0.10	63
1	73		12.71	12.70	33.007	2A.908	305.A	0.272	6.03	99.9	3.0	0.48	0.8	0.13	0.45	0.31	74
	75	ISL	12.60	12.59	33.017	2A.937	302.6	0.278	5.97	98.7	3.3	0.51	1.3	0.12	0.43	0.31	76
1	88		12.02	12.01	33.114	25.123	285.2	0.316	5.52	90.2	5.7	0.75	5.6	0.03	0.31	0.33	89
	100	ISL	11.62	11.61	33.240	25.296	269.0	0.349	5.13	83.1	8.4	0.98	9.6	0.02	0.18	0.19	101
1	103		11.51	11.50	33.271	25.340	26A.9	0.357	5.0A	81.5	9.1	1.03	10.5	0.02	0.15	0.15	10A
1	12A		10.35	10.3A	33.A18	25.660	23A.7	0.A10	A.A5	70.2	15.0	1.33	15.9	0.01	0.07	0.25	125
	125	ISL	10.31	10.30	33.A29	25.676	233.2	0.A12	A.A2	69.7	15.3	1.34	16.1	0.01	0.07	0.2A	126
1	150		9.A2	9.A0	33.703	26.038	199.2	0.A66	3.8A	59.4	22.2	1.59	20.7	0.01	0.01	0.03	151
1	182		8.80	8.78	33.901	26.292	175.5	0.526	3.18	A8.6	30.1	1.87	25.0	0.01	0.00	0.04	183
	200	ISL	8.45	8.43	33.950	26.385	166.9	0.557	3.49	52.9	31.5	1.81	24.6	0.01	0.00	0.03	202
1	213		8.22	8.20	33.970	26.A36	162.3	0.578	3.7A	56.4	32.3	1.75	24.1	0.01	0.00	0.02	215
1	24A		7.77	7.75	3A.007	26.531	153.5	0.627	3.39	50.6	38.3	1.91	26.4	0.01			246
	250	ISL	7.68	7.66	34.010	26.547	152.1	0.636	3.30	A9.2	39.6	1.95	26.9	0.01			252
1	285		7.20	7.17	3A.022	26.625	1A5.1	0.688	2.75	A0.5	47.2	2.17	30.1	0.01			287
	300	ISL	6.97	6.9A	34.025	26.659	141.9	0.710	2.50	36.6	50.6	2.28	31.5	0.01			302
1	340		6.48	6.45	3A.0A7	26.7A2	13A.3	0.765	1.85	26.8	59.3	2.55	3A.8	0.01			3 A3
1	398		6.31	6.27	34.1A1	26.839	125.9	0.841	0.97	14.0	69.0	2.87	38.0	0.01			401
	400	ISL	6.30	6.26	34.142	26.841	125.7	0.843	0.96	13.9	69.3	2.88	38.1	0.01			403
1	458		5.8A	5.80	3A.156	26.911	119.5	0.91A	0.76	10.9	77.0	2.97	39.5	0.01			A62
	500	ISL	5.A6	5.A2	3A.178	26.975	113.6	0.963	0.60	8.5	8A.7	3.05	A0.9	0.01			504
1	515		5.32	5.28	3 A.186	26.998	111.A	0.980	0.5A	7.6	87.4	3.08	Al.4	0.01			519

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
3A 27.2 N	120 31.6 W	16/09/87	0706 GMT	70 M	310	16 KT			1013.1 MB	15.8 C	15.0 C	

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA		'	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		15.40	15.40	33.501	2A.729	320.5	0.000	5.83	102.3	5.2	0.59	1.8	0.11	2.35	0.72	0
1	9		15.06	15.06	33.A88	2A.79A	31A.6	0.029	5.80	101.1	5.7	0.6A	2.A	0.16	2.57	0.78	9
	10	ISL	15.05	15.05	33.A88	2A.797	31A.A	0.032	5.79	100.9	5.7	0.6A	2.A	0.16	2.56	0.78	10
	20	ISL	1A.95	1A.95	33.A88	2A.819	312.7	0.063	5.71	99.3	5.9	0.68	2.7	0.19	2.51	0.75	20
1	21		1A.9A	1A.9A	33.A88	2A.821	312.5	0.066	5.70	99.1	5.9	0.68	2.7	0.19	2.51	0.7A	21
	30	ISL	1A.70	1A.70	33.A88	2A.873	307.8	0.09A	5.59	96.7	6.5	0.72	3.3	0.23	2.01	0.71	30
1	31		1A.67	1A.67	33.A88	2A.879	3 07.2	0.097	5.57	96.3	6.6	0.72	3.A	0.23	1.93	0.71	31
1	Al		13.A0	13.39	33.A96	25.1A9	281.7	0.127	5.06	85.3	9.2	1.01	7.1	0.A5	0.78	0.Al	Al
1	50		12.A9	12.A8	33.531	25.356	262.1	0.151	A.A9	7A.3	12.3	1.23	10.9	0.53	0.35	0.33	50
1	62		11.72	11.71	33.613	25.566	2A2.5	0.181	3.93	6A.0	15.7	1.A5	1A.6	0.A2	0.20	0.28	62

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
3A 18.9 N	120 A8.8 W	16/09/87	0956 GMT	771 M	320	19 KT			1013.2 MB	15.9 C	15.1 C	

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	POA	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		15.51	15.51	33.506	2A.709	322.A	0.000	5.75	101.2	5.3	0.53	1.7	0.12	1.90	0.A5	0
1	10		15.50	15.50	33.505	2A.711	322.6	0.032	5.77	101.5	5.3	0.53	1.7	0.12	1.92	0.AA	10
	20	ISL	15.A5	15.A5	33.50A	2A.721	321.9	0.06A	5.7A	100.8	5.3	0.53	1.8	0.13	1.92	0.AA	20
1	21		15.AA	15.AA	33.50A	2A.72A	321.7	0.068	5.7A	100.8	5.3	0.53	1.8	0.13	1.92	0.A4	21
	30	ISL	15.20	15.20	33.A99	2A.773	317.3	0.096	5.69	99.5	5.5	0.57	2.1	0.16	1.88	0.A5	30
1	31		15.15	15.15	33.A99	24.78A	316.3	0.100	5.68	99.2	5.5	0.58	2.2	0.17	1.88	0.A5	31
1	41		1A.30	1A.29	33.512	2A.977	298.2	0.130	5.39	92.5	6.7	0.70	3.9	0.2A	1.5A	0.A8	Al
	50	ISL	13.67	13.66	33.A96	25.095	2 87.1	0.157	5.18	87.8	8.1	0.8A	5.5	0.38	0.95	0.50	50
1	51		13.60	13.59	33.A9A	25.108	285.9	0.160	5.15	87.2	8.3	0.86	5.7	0.A0	0.88	0.50	51
1	61		12.85	12.8A	33.511	25.271	270.6	0.187	A.75	79.1	10.6	1.06	9.1	0.5A	0.A4	0.43	61
1	71		12.39	12.38	33.530	25.375	260.9	0.21A	A.A7	73.8	12.1	1.16	11.1	0.56	0.31	0.32	72
	75	ISL	12.27	12.26	33.546	25.411	257.6	0.22A	A.37	71.9	12.6	1.18	11.7	0.A9	0.28	0.32	76
1	86		11.98	11.97	33.595	25.50A	2A9.0	0.252	A.11	67.3	1A.0	1.23	13.3	0.2A	0.23	0.33	87
	100	ISL	11.A7	11.46	33.637	25.632	237.1	0.286	3.81	61.7	15.9	1.36	15.8	0.11	0.18	0.29	101
1	101		11.43	11.42	33.640	25.641	236.2	0.289	3.79	61.3	16.1	1.37	16.0	0.11	0.18	0.29	102
1	121		10.64	10.63	33.742	25.863	215.5	0.334	3.33	53.0	19.8	1.58	19.6	0.03	0.09	0.18	122
	125	ISL	10.53	10.52	33.769	25.903	211.8	0.342	3.24	51.4	20.7	1.62	20.3	0.03	0.08	0.16	126
1	146		10.05	10.03	33.905	26.092	194.2	0.385	2.79	43.9	25.7	1.84	23.3	0.01	0.04	0.09	147
	150	ISL	9.97	9.95	33.923	26.119	191.7	0.393	2.72	42.7	26.6	1.87	23.7	0.01	0.03	0.09	151
1	177		9.55	9.53	34.020	26.265	178.3	0.443	2.35	36.6	31.7	2.03	26.0	0.01	0.01	0.07	178
	200	ISL	9.40	9.38	3 4.087	26.343	171.4	0.483	2.13	33.0	34.1	2.13	27.1	0.01	0.01	0.06	202
1	207		9.32	9.30	3 4.097	26.364	169.5	0.495	2.10	32.5	34.7	2.15	27.4	0.01	0.01	0.06	209
1	237		8.35	8.33	34.044	26.474	159.1	0.544	2.A2	36.6	37.5	2.13	28.4	0.01			239
	250	ISL	8.12	8.09	34.042	26.508	156.1	0.564	2.42	36.4	39.1	2.15	28.9	0.01			252
1	277		7.78	7.75	34.055	26.568	150.7	0.606	2.42	36.2	43.0	2.23	30.1	0.01			279
	300	ISL	7.47	7.44	34.070	26.625	145.5	0.640	2.18	32.3	47.5	2.33	31.7	0.01			302
1	333		7.07	7.04	3 4.093	26.699	138.7	0.687	1.74	25.6	54.3	2.50	34.0	0.01			336
1	393		6.47	6.43	34.121	26.802	129.4	0.767	1.19	17.2	64.5	2.74	37.0	0.01			3 96
	400	ISL	6.48	6.44	34.136	26.813	128.5	0.776	1.11	16.1	65.3	2.77	37.2	0.01			403
1	459		6.58	6.54	34.267	26.904	121.0	0.850	0.54	7.9	71.0	2.97	38.1	0.01			463
	500	ISL	6.29	6.24	3 4.286	26.957	116.2	0.899	0.43	6.2	76.4	3.04	39.1	0.01			504
1	529		6.09	6.04	34.301	26.995	112.9	0.932	0.35	5.0	80.2	3.09	39.8	0.01			534

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 9.1 N	121 9.0 W	16/09/87	1342 GMT	2212 M	310	15 KT	310 08 07		1013.0 MB	16.1 C	15.4 C	

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		17.29	17.29	33.531	24.319	359.6	0.000	5.63	102.5	1.7	0.34	0.1	0.00	0.39	0.15	0
1	10		17.30	17.30	33.530	24.317	360.2	0.036	5.65	102.9	1.7	0.34	0.1	0.00	0.39	0.13	10
	20	ISL	17.30	17.30	33.531	24.318	360.4	0.072	5.66	103.1	1.6	0.34	0.1	0.00	0.38	0.15	20
1	21		17.30	17.30	33.531	24.318	360.5	0.076	5.66	103.1	1.6	0.34	0.1	0.00	0.38	0.15	21
	30	ISL	17.32	17.32	33.531	24.313	361.2	0.108	5.66	103.1	1.6	0.39	0.0	0.00	0.39	0.13	30
1	31		17.32	17.31	33.531	24.313	361.2	0.112	5.66	103.1	1.6	0.40	0.0	0.00	0.39	0.13	31
1	42		14.09	14.08	33.370	24.911	304.5	0.148	6.14	104.9	2.4	0.52	1.5	0.09	0.86	0.66	A2
	50	ISL	12.85	12.8A	33.419	25.200	277.1	0.172	5.34	88.9	5.4	0.89	6.9	1.16	0.59	0.55	50
1	52		12.64	12.63	33.438	25.255	271.9	0.177	5.09	84.4	6.4	0.99	8.5	1.35	0.50	0.50	52
1	62		11.66	11.65	33.484	25.477	250.9	0.203	4.55	73.9	11.1	1.24	14.0	0.03	0.46	0.44	62
1	73		11.01	11.00	33.537	25.636	236.0	0.230	4.12	66.0	15.3	1.46	17.7	0.03	0.17	0.16	74
	75	ISL	10.93	10.92	33.566	25.673	232.5	0.235	3.99	63.8	16.3	1.51	18.4	0.03	0.14	0.15	76
1	87		10.46	10.45	33.7A1	25.892	211.9	0.261	3.28	52.0	22.1	1.75	22.0	0.01	0.05	0.09	88
	100	ISL	9.76	9.75	33.810	26.065	195.6	0.288	3.01	A7.0	25.7	1.85	23.8	0.01	0.03	0.07	101
1	103		9.61	9.60	33.818	26.096	192.7	0.29A	2.99	A6.5	26.3	1.86	24.1	0.01	0.02	0.07	104
1	124		9.33	9.32	33.904	26.209	182.3	0.333	2.75	42.5	29.9	1.97	25.7	0.01	0.01	0.05	125
	125	ISL	9.30	9.29	33.906	26.216	181.7	0.335	2.76	42.7	30.0	1.97	25.7	0.01	0.01	0.05	126
1	149		8.68	8.66	33.939	26.340	170.3	0.377	2.95	45.0	32.0	1.96	26.3	0.01	0.00	0.04	150
	150	ISL	8.66	8.64	33.941	26.345	169.9	0.379	2.94	44.8	32.1	1.96	26.4	0.01	0.00	0.04	151
1	180		8.33	8.31	34.021	26.458	159.5	0.428	2.64	39.9	37.0	2.11	28.3	0.01	0.00	0.04	181
	200	ISL	8.09	8.07	34.052	26.519	154.1	0.A60	2.AA	36.7	A0.3	2.20	29.5	0.01	0.00	0.03	202
1	211		7.98	7.96	3A.065	26.5A6	151.7	0.A76	2.32	3A.8	A2.0	2.25	30.1	0.01	0.00	0.03	213
1	2A1		7.86	7.8A	3A.105	26.595	147.5	0.521	1.86	27.9	46.2	2.40	31.6	0.01			243
	250	ISL	7.73	7.71	34.108	26.617	145.5	0.534	1.79	26.7	47.9	2.AA	32.1	0.01			252
1	282		7.21	7.18	3A.115	26.697	138.3	0.580	1.61	23.7	5A.3	2.59	3A.1	0.01			28A
	300	ISL	7.02	6.99	34.135	26.739	134.4	0.604	1.40	20.6	57.9	2.68	35.1	0.01			302
1	339		6.71	6.68	3 4.184	26.820	127.2	0.655	0.93	13.6	65.0	2.86	37.0	0.01			342
1	400		6.36	6.32	34.227	26.900	120.2	0.731	0.58	8.A	72.9	3.02	38.9	0.00			403
1	464		5.57	5.53	34.191	26.971	113.6	0.806	0.54	7.7	82.9	3.10	41.1	0.01			468
	500	ISL	5.44	5.40	34.227	27.016	109.7	0.846	0.43	6.1	87.0	3.16	41.7	0.00			504
1	535		5.32	5.28	34.263	27.059	105.9	0.884	0.33	4.7	91.0	3.21	42.2	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.A N	121 50.1 W	16/09/87	2026 GMT	3642 M	330	12 KT	330 10 09	1	1013.8 MB	17.5 C	15.5 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
1	0	17.42	17.42	33.087	23.948	395.0	0.000	5.66	103.1	2.0	0.39	0.1	0.00	0.14	0.03	0
1	10	17.37	17.37	33.083	23.957	394.4	0.039	5.66	103.0	1.8	0.39	0.1	0.00	0.14	0.04	10
	20 ISL	17.35	17.35	33.083	23.962	394.3	0.079	5.68	103.3	1.8	0.39	0.1	0.00	0.14	0.04	20
1	21	17.35	17.35	33.083	23.963	394.3	0.083	5.68	103.3	1.8	0.39	0.1	0.00	0.14	0.04	21
	30 ISL	17.28	17.28	33.083	23.979	393.0	0.118	5.69	103.3	1.9	0.39	0.1	0.00	0.16	0.04	30
1	31	17.27	17.26	33.083	23.982	392.8	0.122	5.69	103.3	1.9	0.39	0.1	0.00	0.16	0.04	31
1	42	14.60	14.59	32.941	24.473	346.2	0.163	6.26	107.8	2.1	0.40	0.1	0.00	0.17	0.06	42
	50 ISL	13.24	13.23	32.918	24.735	321.3	0.190	6.29	105.3	2.7	0.43	0.1	0.01	0.51	0.31	50
1	52	12.99	12.98	32.920	24.786	316.5	0.196	6.30	104.9	2.8	0.44	0.1	0.01	0.59	0.37	52
1	62	12.34	12.33	32.970	24.950	301.1	0.227	6.00	98.6	3.1	0.54	1.3	0.24	0.57	0.44	62
1	73	11.80	11.79	33.028	25.097	2 87.3	0.259	5.68	92.3	4.3	0.69	4.3	0.05	0.37	0.32	74
	75 ISL	11.79	11.78	33.067	25.129	284.3	0.265	5.60	91.0	4.7	0.73	5.0	0.06	0.34	0.30	76
1	87	11.70	11.69	33.307	25.333	265.2	0.298	5.07	82.3	7.9	1.00	9.6	0.10	0.18	0.23	88
	100 ISL	10.75	10.74	33.376	25.558	244.0	0.331	4.55	72.4	12.9	1.26	14.3	0.03	0.12	0.15	101
1	103	10.50	10.49	33.384	25.607	239.3	0.338	4.45	70.4	14.0	1.31	15.2	0.01	0.11	0.13	104
1	124	9.87	9.86	33.546	25.841	217.4	0.386	4.18	65.3	16.9	1.43	17.3	0.01	0.05	0.06	125
	125 ISL	9.84	9.83	33.558	25.855	216.1	0.388	4.13	64.5	17.3	1.45	17.6	0.01	0.05	0.06	126
1	149	9.24	9.22	33.823	26.161	187.4	0.437	3.02	46.6	27.8	1.92	24.9	0.01	0.00	0.03	150
	150 ISL	9.22	9.20	33.829	26.169	186.7	0.439	3.03	46.7	27.8	1.92	24.9	0.01	0.00	0.03	151
1	180	8.55	8.53	33.942	26.363	168.7	0.492	3.61	54.9	29.1	1.80	23.9	0.01	0.00	0.02	181
	200 ISL	8.17	8.15	33.972	26.444	161.2	0.525	3.43	51.7	33.2	1.90	25.5	0.01	0.00	0.02	202
1	211	7.99	7.97	33.982	26.479	158.0	0.542	3.25	48.8	35.8	1.98	26.7	0.01	0.00	0.02	213
1	241	7.61	7.59	34.020	26.565	150.3	0.589	2.90	43.2	41.4	2.14	28.9	0.01			243
	250 ISL	7.51	7.49	34.028	26.585	148.4	0.602	2.76	41.0	43.3	2.20	29.6	0.01			252
1	282	7.17	7.14	34.050	26.651	142.5	0.649	2.26	33.3	50.0	2.39	32.1	0.01			2 84
	300 ISL	6.97	6.94	34.052	26.680	139.9	0.674	2.08	30.5	53.7	2.48	33.3	0.01			302
1	338	6.59	6.56	34.062	26.739	134.6	0.726	1.74	25.3	60.8	2.64	35.5	0.01			34X
1	399	6.31	6.27	34.144	26.841	125.7	0.806	1.02	14.7	69.9	2.91	38.1	0.01			402
	400 ISL	6.30	6.26	34.143	26.842	125.6	0.807	1.01	14.6	70.1	2.91	38.1	0.01			403
1	464	5.48	5.44	34.095	26.906	119.6	0.885	0.79	11.2	79.8	3.01	40.0	0.00			468
	500 ISL	5.37	5.33	34.167	26.977	113.3	0.927	0.58	8.2	85.5	3.12	41.1	0.00			504
1	534	5.26	5.22	34.235	27.044	107.3	0.965	0.39	5.5	90.9	3.22	42.2	0.00			539

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 28.9 N	122 32.2 W	17/09/87	0221 GMT	4002 M	310	13 KT	330 10 07	1	1012.1 MB	16.6 C	15.3 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	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	17.99	17.99	33.112	23.830	406.2	0.000	5.58	102.7	2.9	0.37	0.0	0.00	0.07	0.02	0
1	1	17.99	17.99	33.112	23.830	406.3	0.004	5.58	102.7	2.9	0.37	0.0	0.00	0.07	0.02	1
	10 ISL	17.98	17.98	33.110	23.831	406.4	0.041	5.58	102.7	2.9	0.37	0.0	0.00	0.07	0.02	10
1	12	17.98	17.98	33.109	23.831	406.6	0.049	5.58	102.7	2.9	0.37	0.0	0.00	0.07	0.02	12
	20 ISL	17.99	17.99	33.109	23.829	407.1	0.081	5.57	102.5	2.8	0.37	0.0	0.00	0.07	0.02	20
1	23	17.99	17.99	33.109	23.829	407.2	0.094	5.56	102.3	2.8	0.37	0.0	0.00	0.07	0.02	23
	30 ISL	18.00	17.99	33.108	23.826	407.7	0.122	5.55	102.2	2.8	0.37	0.0	0.00	0.07	0.02	30
1	33	18.00	17.99	33.108	23.826	407.8	0.134	5.55	102.2	2.8	0.37	0.0	0.00	0.07	0.02	33
1	43	16.76	16.75	33.108	24.121	379.9	0.174	5.89	105.9	2.7	0.36	0.0	0.00	0.12	0.04	43
	50 ISL	15.84	15.83	33.155	24.367	356.6	0.199	6.06	107.1	2.5	0.35	0.0	0.00	0.13	0.05	50
1	54	15.41	15.40	33.186	24.487	345.3	0.213	6.12	107.2	2.4	0.35	0.0	0.00	0.14	0.05	54
1	64	15.05	15.04	33.217	24.590	335.8	0.248	6.09	106.0	2.6	0.35	0.0	0.00	0.18	0.08	64
1	74	14.39	14.38	33.160	24.687	326.7	0.281	6.11	104.9	2.8	0.36	0.0	0.00	0.20	0.12	75
	75 ISL	14.35	14.34	33.169	24.702	325.3	0.284	6.10	104.6	2.8	0.36	0.0	0.00	0.21	0.13	76
1	89	13.76	13.75	33.308	24.932	303.7	0.328	5.83	98.9	3.3	0.43	0.4	0.06	0.31	0.27	90
	100 ISL	13.07	13.06	33.257	25.032	294.4	0.361-	5.66	94.6	4.3	0.55	2.3	0.06	0.27	0.27	101
1	104	12.79	12.78	33.228	25.065	291.4	0.373	5.59	92.9	4.8	0.61	3.2	0.06	0.26	0.27	105
1	125	11.27	11.25	33.233	25.354	264.0	0.431	5.13	82.5	8.7	0.94	9.0	0.01	0.12	0.14	126
1	150	10.00	9.98	33.486	25.773	224.5	0.492	4.24	66.4	16.8	1.41	17.1	0.01	0.03	0.04	151
1	181	9.45	9.43	33.744	26.066	197.2	0.557	3.51	54.4	23.9	1.70	22.3	0.00	0.00	0.03	182
	200 ISL	9.06	9.04	33.848	26.210	183.7	0.593	3.34	51.3	27.7	1.83	24.2	0.00	0.00	0.02	202
1	211	8.82	8.80	33.892	26.283	177.0	0.613	3.24	49.5	29.6	1.87	24.8	0.00	0.00	0.02	213
1	241	8.19	8.17	33.962	26.434	162.9	0.664	3.63	54.7	32.9	1.82	24.7	0.00			243
	250 ISL	8.05	8.02	33.973	26.464	160.2	0.679	3.56	53.5	34.2	1.84	25.1	0.00			252
1	281	7.65	7.62	34.000	26.544	152.9	0.727	3.32	49.4	39.4	1.97	27.1	0.00			283
	300 ISL	7.44	7.41	34.017	26.587	149.0	0.756	2.99	44.3	43.1	2.10	28.7	0.00			302
1	337	7.07	7.04	34.049	26.665	142.0	0.810	2.26	33.2	50.9	2.37	32.0	0.00			340
1	398	6.52	6.48	34.108	26.786	131.1	0.893	1.31	19.0	63.4	2.75	36.5	0.00			401
	400 ISL	6.51	6.47	34.110	26.788	130.9	0.896	1.29	18.7	63.7	2.76	36.6	0.00			403
1	464	6.07	6.03	34.171	26.894	121.4	0.977	0.74	10.6	73.8	2.98	39.3	0.00			468
	500 ISL	5.84	5.80	34.201	26.947	116.6	1.019	0.60	8.6	78.8	3.06	40.1	0.00			504
1	538	5.60	5.55	34.233	27.002	111.7	1.063	0.46	6.5	84.1	3.14	41.0	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.0 N	123 13.5 W	17/09/87	0759 GMT	A211 M	320	12 KT			1014.0 MB	16.5 C	15.A 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		18.01	18.01	33.085	23.804	408.7	0.000	5.54	102.0	2.5	0.38	0.0	0.00	0.06	0.02	0
1	10		18.01	18.01	33.083	23.803	409.1	0.041	5.54	102.0	2.4	0.37	0.0	0.00	0.07	0.02	10
	20	ISL	18.02	18.02	33.084	23.802	409.6	0.082	5.56	102.4	2.4	0.37	0.0	0.00	0.07	0.02	20
1	21		18.02	18.02	33.084	23.802	409.6	0.086	5.56	102.4	2.4	0.37	0.0	0.00	0.07	0.02	21
	30	ISL	18.04	18.03	33.080	23.795	410.7	0.123	5.57	102.6	2.4	0.37	0.0	0.00	0.07	0.02	30
1	31		18.04	18.03				0.127									31
1	41		17.97	17.96	33.074	23.807	409.8	0.168	5.59	102.8	2.4	0.37	0.0	0.00	0.08	0.02	41
	50	ISL	16.14	16.13	33.007	24.186	373.9	0.203	5.99	106.4	2.1	0.38	0.0	0.00	0.11	0.04	50
1	51		15.92	15.91	33.006	24.235	369.3	0.207	6.03	106.6	2.1	0.38	0.0	0.00	0.12	0.04	51
1	62		15.23	15.22	33.194	24.532	341.2	0.246	6.01	104.9	2.0	0.38	0.0	0.00	0.19	0.10	62
1	72		15.22	15.21	33.267	24.591	335.9	0.280	5.99	104.6	1.8	0.39	0.0	0.00	0.22	0.13	73
	75	ISL	14.97	14.96	33.259	24.640	331.3	0.290	5.98	103.9	1.9	0.40	0.1	0.03	0.25	0.15	76
1	86		13.85	13.84	33.224	24.849	311.6	0.325	5.90	100.2	2.8	0.47	0.7	0.14	0.32	0.20	87
	100	ISL	13.15	13.14	33.281	25.035	2 94.1	0.368	5.60	93.8	4.5	0.67	3.9	0.07	0.22	0.16	101
1	102		13.07	13.06	33.292	25.059	291.9	0.374	5.54	92.6	4.8	0.70	4.5	0.05	0.20	0.15	103
1	122		11.99	11.97	33.374	25.332	266.3	0.429	4.95	80.9	8.5	0.96	9.4	0.03	0.12	0.13	123
	125	ISL	11.79	11.77	33.395	25.385	261.2	0.437	4.84	78.8	9.4	1.01	10.4	0.03	0.11	0.12	126
1	148		10.39	10.37	33.577	25.778	224.1	0.493	4.03	63.7	16.6	1.42	17.3	0.01	0.05	0.08	149
	150	ISL	10.32	10.30	33.591	25.801	222.0	0.497	3.98	62.8	17.1	1.44	17.7	0.01	0.05	0.08	151
1	179		9.53	9.51	33.768	26.072	196.6	0.558	3.46	53.7	23.6	1.70	22.0	0.00	0.01	0.03	180
	200	ISL	9.02	9.00	33.869	26.233	181.6	0.598	3.23	49.6	27.8	1.82	24.1	0.00	0.01	0.03	202
1	210		8.80	8.78	33.910	26.300	175.3	0.616	3.14	48.0	29.8	1.87	24.9	0.00	0.01	0.03	212
1	240		8.26	8.24	34.010	26.461	160.3	0.666	2.86	43.2	36.4	2.05	27.4	0.00			242
	250	ISL	8.15	8.12	34.031	26.494	157.3	0.682	2.75	41.4	38.1	2.10	28.1	0.00			252
1	281		7.87	7.84	34.068	26.565	151.1	0.730	2.42	36.2	42.6	2.24	29.8	0.00			283
	300	ISL	7.61	7.58	34.069	26.604	147.6	0.758	2.33	34.7	45.5	2.29	30.6	0.00			302
1	338		7.12	7.09	34.067	26.672	141.4	0.813	2.11	31.0	51.6	2.41	32.3	0.00			341
1	400		6.70	6.66	34.149	26.794	130.5	0.897	1.18	17.2	62.8	2.77	36.2	0.00			403
1	466		6.03	5.99	34.188	26.912	119.6	0.980	0.67	9.6	74.9	2.99	39.2	0.00			470
	500	ISL	5.81	5.77	34.211	26.958	115.5	1.020	0.56	8.0	79.7	3.06	40.1	0.00			504
1	539		5.56	5.51	34.238	27.010	110.8	1.064	0.43	6.1	85.3	3.14	41.1	0.00			544

RV NEW HORIZON CALCOFI CRUISE 87 09 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 17.0 N	120 2.5 W	16/09/87	0305 GMT	5 83 M	260	12 KT	240 05 06	1	1012.2 MB	17.1 C	16.8 C	6/8	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	17.85	17.85	33.540	24.191	371.8	0.000	5.87	108.0	2.4	0.32	0.0	0.00	0.83	0.25	0
1	10		17.84	17.84	33.539	24.194	371.9	0.037	5.92	108.9	2.4	0.29	0.0	0.00	0.97	0.33	10
	20	ISL	16.25	16.25	33.536	24.566	336.7	0.073	5.75	102.6	4.3	0.45	1.4	0.10	1.34	0.61	20
1	25		15.23	15.23	33.542	24.799	314.6	0.089	5.60	98.0	5.6	0.56	2.6	0.16	1.43	0.72	25
	30	ISL	14.49	14.49	33.525	24.946	300.8	0.104	5.41	93.3	6.5	0.66	4.0	0.18	1.15	0.63	30
1	41		12.99	12.98	33.512	25.244	272.7	0.136	4.84	80.9	9.2	0.92	8.3	0.21	0.41	0.35	41
	50	ISL	11.70	11.69	33.592	25.553	243.3	0.159	4.18	68.0	13.7	1.23	13.6	0.10	0.19	0.29	50
1	55		11.13	11.12	33.644	25.698	229.7	0.171	3.85	61.9	16.1	1.39	16.2	0.04	0.13	0.27	55
1	71		10.97	10.96	33.688	2˜5v761	224.1	0.207	3.58	57.4	18.0	1.50	17.8	0.02	0.07	0.16	72
	75	ISL	10.93	10.92	33.706	25.7"82	222.1	0.216	3.50	56.0	18.5	1.52	18.2	0.02	0.06	0.14	76
1	85		10.84	10.83	33.748	25.831X	217.7	0.238	3.33	53.2	19.7	1.58	19.1	0.02	0.05	0.12	86
1	100		10.71	10.70	33.784	25.883 \	213.2	0.270	3.19	50.8	21.0	1.65	19.9	0.02	0.05	0.13	101
1	119		10.37	10.36	33.858	26.000	202.4	0.310	2.80	44.3	24.7	1.82	22.4	0.03	0.05	0.16	120
	125	ISL	10.33	10.32	33.868	26.014	201.1	0.322	2.76	43.6	25.2	1.84	22.6	0.03	0.05	0.16	126
1	140	'	10.25	10.23	33.891	26.047	198.4	0.352	2.69	42.5	26.0	1.89	23.0	0.03	0.03	0.16	141
	150	ISL	10.14	10.12	33.9/29	26.095	194.0	0.372	2.57	40.5	27.3	1.95	23.8	0.03	0.02	0.14	151
1	170		9.92	9.90	34./010	26.196	184.8	0.409	2.31	36.2	30.1	2.06	25.4	0.02	0.01	0.11	171
1	200		9.70	9.68	34^078	26.286	176.8	0.464	2.07	32.3	32.7	2.15	26.7	0.01	0.01	0.09	202
1	239		9.29	9.26	34.143	26.405	166.2	0.531	1.68	26.0	37.6	2.32	28.8	0.01	0.01	0.10	241
	250	ISL	9.13	9.10	34.153	26.439	163.2	0.549	1.60	24.7	39.3	2.37	29.4	0.01			252
1	290		8.52	8.49				0.612									292
	300	ISL	8.40	8.37	3 4.187	26.580	150.4	0.627	1.26	19.1	47.1	2.56	31.7	0.01			302
1	339		8.00	7.97	34.199	26.650	144.2	0.684	1.05	15.8	53.6	2.70	33.1	0.01			342
1	388		7.57	7.53	34.218	26.728	137.3	0.753	0.78	11.6	61.0	2.86	34.3	0.01			391
	400	ISL	7.46	7.42	34.222	26.747	135.7	0.770	0.69	10.2	63.2	2.90	34.5	0.01			403
1	428		7.20	7.16	34.233	26.793	131.6	0.807	0.48	7.1	69.9	3.02	35.0	0.01			432
1	466		6.76	6.72	34.249	26.866	124.8	0.856	0.19	2.8	84.0	3.26	32.7	0.01			470
1	496		6.56	6.51	34.267	26.907	121.2	0.893	0.19	2.8	90.9	3.35	31.6	0.01			500
	500	ISL	6.54	6.49	34.266	26.909	121.1	0.898	0.16	2.3	92.0	3.36	31.3	0.01			504
1	516		6.48	6.43	34.261	26.913	120.9	0.917	0.04	0.6	97.4	3.42	29.3	0.01			521
1	536		6.47	6.42	34.266	26.918	120.6	0.941	0.02	0.3	106.6	3.68	25.4	0.01			541
1	557		6.44	6.39	34.261	26.919	120.9	0.967	0.04	0.6	107.1	3.70	25.3	0.01			562
1	570		6.43	6.38	34.264	26.923	120.7	0.982	0.02	0.3	112.0	3.79	23.6	0.01			575

A) SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 13.4 N	119 24.5 W	15/09/87	2243 GMT	30 M	290	10 KT	2 90 02 02	1	1014.1 MB	19.1 C	18.0 C	4/8	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
1	0	19.33	19.33	33.573	23.848	404.5	0.000	5.59	105.7	2.1	0.29	0.2	0.00	0.30	0.06	0
1	10	18.47	18.47	33.540	24.040	3 86.6	0.040	5.76	107.2	2.2	0.31	0.1	0.00	0.30	0.05	10
1	20	18.06	18.06	33.536	24.138	377.6	0.082	5.81	107.3	2.2	0.31	0.1	0.00	0.66	0.26	20

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 10.8 N	119 30.8 W	15/09/87	2053 GMT	125 M	280	10 KT	280 02 05	1	1015.3 MB	20.6 C	18.5 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		19.47	19.47	33.570	23.810	408.1	0.000	5.57	105.6	2.1	0.29	0.0	0.00	0.25	0.05	0
1	10		18.94	18.94	33.561	23.938	396.3	0.040	5.63	105.7	2.1	0.30	0.0	0.00	0.28	0.09	10
	20	ISL	18.87	18.87	33.557	23.953	395.2	0.080	5.66	106.2	2.1	0.29	0.1	0.00	0.38	0.09	20
1	21		18.86	18.86	33.557	23.956	395.0	0.084	5.66	106.1	2.1	0.29	0.1	0.00	0.40	0.09	21
	30	ISL	18.09	18.08	33.526	24.124	379.3	0.119	5.75	106.3	2.2	0.32	0.1	0.00	0.66	0.28	30
1	31		17.94	17.93	33.518	24.154	376.4	0.122	5.77	106.3	2.2	0.32	0.1	0.00	0.69	0.30	31
1	42		14.84	14.83	33.359	24.744	320.4	0.161	6.09	105.6	3.1	0.40	0.1	0.00	0.83	0.34	42
	50	ISL	13.16	13.15	33.404	25.127	284.0	0.185	5.36	89.8	6.2	0.73	5.2	0.25	0.48	0.36	50
1	52		12.84	12.83	33.426	25.207	276.5	0.190	5.13	85.4	7.1	0.83	6.7	0.30	0.38	0.37	52
1	62		12.02	12.01	33.517	25.436	254.9	0.217	4.34	71.1	11.1	1.16	12.2	0.04	0.15	0.21	62
1	73		11.47	11.46	33.633	25.628	236.8	0.244	3.73	60.4	15.5	1.39	15.9	0.02	0.08	0.13	74
	75	ISL	11.42	11.41	33.639	25.642	235.5	0.249	3.72	60.2	15.8	1.40	16.0	0.02	0.08	0.13	76
1	87		11.19	11.18	33.655	25.696	230.6	0.277	3.69	59.4	16.5	1.44	16.6	0.02	0.08	0.11	88
	100	ISL	10.89	10.88	33.717	25.799	221.2	0.306	3.45	55.2	18.9	1.55	18.4	0.03	0.06	0.09	101
1	103		10.82	10.81	33.732	25.823	218.9	0.313	3.40	54.3	19.5	1.57	18.8	0.03	0.05	0.09	104

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 52.7 N	120 8.1 W	15/09/87	1435 GMT	97 M	310	10 KT	3 20 03 05	1	1016.7 MB	17.0 C	16.2 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		19.14	19.14	33.584	23.905	399.1	0.000	5.51	103.9	3.0	0.30	0.1	0.00	0.25	0.05	0
	10	ISL	18.29	18.29	33.560	24.100	3 80.8	0.039	5.61	104.1	2.9	0.33	0.2	0.01	0.46	0.10	10
1	11		18.20	18.20	33.558	24.120	379.0	0.043	5.62	104.1	2.9	0.33	0.2	0.01	0.48	0.11	11
	20	ISL	16.75	16.75	33.481	24.409	351.7	0.076	6.03	108.6	2.6	0.33	0.1	0.00	0.36	0.13	20
1	21		16.54	16.54	33.471	24.450	3 47.9	0.079	6.07	108.9	2.6	0.33	0.1	0.00	0.35	0.13	21
	30	ISL	13.97	13.97	33.391	24.952	300.2	0.108	6.02	102.6	3.8	0.46	1.1	0.05	1.59	0.31	30
1	31		13.70	13.70	33.387	25.004	295.2	0.111	6.02	102.0	4.0	0.48	1.2	0.06	1.71	0.33	31
1	41		12.71	12.70	33.378	25.195	277.3	0.140	5.22	86.7	6.8	0.82	6.8	0.19	0.96	0.42	41
	50	ISL	12.62	12.61	33.423	25.248	272.5	0.165	4.96	82.2	8.2	0.91	8.4	0.23	0.81	0.40	50
1	51		12.61	12.60	33.425	25.251	272.2	0.167	4.95	82.0	8.3	0.92	8.5	0.23	0.81	0.39	51
1	61		12.21	12.20	33.467	25.361	262.0	0.194	4.70	77.2	9.9	1.04	10.2	0.22	0.60	0.38	61
1	72		11.80	11.79	33.525	25.483	250.6	0.222	4.35	70.9	12.1	1.18	12.5	0.19	0.38	0.32	73
	75	ISL	11.66	11.65	33.553	25.531	246.1	0.230	4.21	68.4	13.2	1.24	13.4	0.17	0.34	0.30	76
1	87		11.11	11.10	33.667	25.720	228.3	0.258	3.67	59.0	17.4	1.46	17.1	0.11	0.16	0.21	88

RV NEW HORIZON CALCOFI CRUISE 8709 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 24.6 W	15/09/87	1120 GMT	954 M	330	14 KT			1016.3 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	17.40	17.40	33.533	24.295	361.9	0.000	5.75	104.9	3.7	0.34	0.2	0.00	1.30	0.22	0
1	1		17.40	17.40	33.533	24.295	362.0	0.004	5.75	104.9	3.7	0.34	0.2	0.00	1.30	0.22	1
	10	ISL	17.40	17.40	33.533	24.295	362.2	0.036	5.77	105.3	3.6	0.34	0.1	0.00	1.31	0.18	10
1	11		17.40	17.40	33.533	24.295	362.3	0.040	5.77	105.3	3.6	0.34	0.1	0.00	1.31	0.18	11
	20	ISL	16.56	16.56	33.503	24.470	345.9	0.072	5.93	106.5	3.9	0.37	0.3	0.01	2.31	0.51	20
1	22		16.31	16.31	33.498	24.523	340.8	0.079	- 5.94	106.1	4.0	0.38	0.3	0.01	2.49	0.58	22
	30	ISL	15.48	15.48	33.508	24.718	322.5	0.105	5.67	99.7	5.3	0.52	2.4	0.05	1.96	0.58	30
1	32		15.21	15.21	33.512	24.781	316.6	0.111	5.56	97.2	5.8	0.57	3.2	0.07	1.73	0.58	32
1	42		12.86	12.85	33.546	25.296	267.7	0.141	4.72	78.7	10.9	1.01	10.0	0.19	0.82	0.42	42
	50	ISL	11.87	11.86	33.609	25.535	245.1	0.161	4.23	69.1	14.4	1.25	13.8	0.20	0.47	0.32	50
1	53		11.63	11.62	33.631	25.597	239.3	0.168	4.08	66.3	15.6	1.32	14.9	0.20	0.40	0.29	53
1	63		10.89	10.88	33.686	25.773	222.7	0.192	3.66	58.5	18.6	1.51	18.1	0.09	0.24	0.22	63
1	73		10.06	10.05	33.902	26.086	193.1	0.212	2.78	43.7	26.3	1.87	23.3	0.02	0.03	0.07	74
	75	ISL	10.03	10.02	33.913	26.100	191.9	0.216	2.74	43.1	26.6	1.90	23.5	0.02	0.03	0.07	76
1	88		9.85	9.84	33.987	26.188	183.7	0.241	2.50	39.1	28.6	2.01	24.9	0.01	0.01	0.06	89
	100	ISL	9.90	9.89	34.043	26.224	180.6	0.263	2.31	36.2	29.7	2.07	25.4	0.01	0.01	0.06	101
1	103		9.92	9.91	34.054	26.229	180.2	0.268	2.28	35.8	29.9	2.08	25.5	0.01	0.01	0.06	104
1	124		9.65	9.64	34.054	26.274	176.3	0.305	2.25	35.1	31.8	2.12	26.4	0.02	0.01	0.08	125
	125	ISL	9.65	9.64	34.056	26.276	176.2	0.307	2.24	34.9	31.8	2.12	26.4	0.02	0.01	0.08	126
1	149		9.70	9.68	34.102	26.304	174.0	0.349	2.09	32.6	32.6	2.18	26.8	0.02	0.01	0.05	150
	150	ISL	9.69	9.67	34.103	26.307	173.8	0.351	2.09	32.6	32.7	2.18	26.8	0.02	0.01	0.05	151
1	180		9.27	9.25	34.123	26.391	166.3	0.402	1.98	30.6	36.1	2.27	27.9	0.02	0.01	0.07	181
	200	ISL	9.10	9.08	34.138	26.431	162.9	0.435	1.91	29.4	37.6	2.31	28.6	0.01	0.00	0.06	202
1	210		9.03	9.01	34.145	26.448	161.4	0.451	1.87	28.8	38.2	2.33	28.9	0.01	0.00	0.05	212
1	240		8.82	8.79	34.168	26.499	157.1	0.499	1.73	26.5	40.5	2.39	29.8	0.01			242
	250	ISL	8.74	8.71	34.178	26.520	155.3	0.514	1.66	25.4	41.6	2.42	30.1	0.01			252
1	281		8.49	8.46	34.209	26.583	149.8	0.562	1.45	22.0	45.2	2.53	31.2	0.01			283
	300	ISL	8.33	8.30	34.221	26.617	146.8	0.590	1.34	20.3	47.2	2.59	31.9	0.01			302
1	337		7.99	7.96	34.236	26.681	141.3	0.643	1.14	17.1	51.4	2.70	33.2	0.01			340
1	398		7.24	7.20	34.254	26.803	130.2	0.726	0.78	11.5	61.2	2.89	35.8	0.01			401
	400	ISL	7.22	7.18	34.255	26.807	129.8	0.729	0.77	11.4	61.4	2.90	35.9	0.01			403
1	464		6.68	6.64	34.272	26.895	122.0	0.809	0.54	7.9	69.6	3.07	37.9	0.00			468
	500	ISL	6.17	6.13	34.245	26.940	117.6	0.852	0.50	7.2	76.3	3.11	39.5	0.00			504
1	538		5.64	5.59	34.221	26.987	113.1	0.896	0.46	6.5	83.3	3.16	41.2	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 34.2 N	120 45.4 W	15/09/87	0728 GMT	1611 M	310	16 KT			1017.3 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	17.42	17.42	33.046	23.917	398.0	0.000	5.62	102.3	2.0	0.38	0.1	0.00	0.08	0.02	0
1	2		17.42	17.42	33.046	23.917	398.0	0.008	5.62	102.3	2.0	0.38	0.1	0.00	0.08	0.02	2
	10	ISL	17.41	17.41	33.044	23.918	398.2	0.040	5.63	102.5	2.0	0.38	0.1	0.00	0.08	0.02	10
1	12		17.41	17.41	33.044	23.918	398.3	0.048	5.63	102.5	2.0	0.38	0.1	0.00	0.08	0.02	12
	20	ISL	17.40	17.40	33.047	23.923	398.0	0.080	5.64	102.6	1.9	0.38	0.1	0.00	0.09	0.02	20
1	23		17.40	17.40	33.048	23.924	398.1	0.092	5.65	102.8	1.9	0.38	0.1	0.00	0.09	0.02	23
	30	ISL	17.33	17.33	33.055	23.946	3 96.2	0.119	5.66	102.9	1.8	0.38	0.1	0.00	0.10	0.03	30
1	33		17.29	17.28	33.059	23.959	395.1	0.131	5.67	103.0	1.8	0.38	0.1	0.00	0.10	0.03	33
1	43		17.17	17.16	33.074	23.999	391.6	0.171	5.70	103.3	1.8	0.38	0.1	0.00	0.13	0.03	43
	50	ISL	15.11	15.10	32.979	24.393	354.1	0.197	6.06	105.4	1.9	0.39	0.1	0.00	0.15	0.05	50
1	53		14.15	14.14	32.952	24.576	336.6	0.207	6.21	105.9	2.0	0.39	0.1	0.00	0.16	0.06	53
1	63		13.01	13.00	32.949	24.804	315.0	0.240	6.21	103.5	2.6	0.44	0.1	0.00	0.23	0.14	63
1	73		12.25	12.24	32.979	24.975	299.0	0.270	5.87	96.3	3.9	0.58	1.8	0.04	0.42	0.35	74
	75	ISL	12.24	12.23	32.993	24.988	2 97.8	0.276	5.85	95.9	4.0	0.59	2.0	0.04	0.41	0.35	76
1	87		12.18	12.17	33.061	25.052	292.0	0.312	5.71	93.5	4.8	0.66	3.5	0.05	0.36	0.32	88
	100	ISL	11.70	11.69	33.183	25.237	274.7	0.348	5.26	85.4	7.2	0.88	7.7	0.03	0.23	0.22	101
1	103		11.55	11.54	33.219	25.292	269.4	0.357	5.14	83.2	8.0	0.94	8.8	0.02	0.20	0.19	104
1	123		10.35	10.34	33.554	25.766	224.6	0.406	4.36	68.8	14.9	1.31	15.7	0.01	0.05	0.06	124
	125	ISL	10.26	10.25	33.571	25.795	221.9	0.411	4.31	67.9	15.5	1.34	16.2	0.01	0.05	0.06	126
1	148		9.48	9.46	33.695	26.022	200.6	0.459	3.90	60.5	21.0	1.59	20.3	0.00	0.01	0.02	149
	150	ISL	9.43	9.41	33.705	26.038	199.2	0.463	3.87	59.9	21.4	1.61	20.6	0.00	0.01	0.02	151
1	178		8.82	8.80	33.837	26.239	180.5	0.516	3.54	54.1	27.2	1.79	23.6	0.00	0.00	0.02	179
	200	ISL	8.35	8.33	33.929	26.384	167.0	0.554	3.28	49.6	32.7	1.93	26.0	0.00	0.00	0.02	202
1	208		8.19	8.17	33.956	26.429	162.8	0.568	3.20	48.2	34.6	1.98	26.7	0.00	0.00	0.02	210
1	238		7.71	7.69	33.997	26.532	153.3	0.615	3.07	45.8	39.4	2.07	28.0	0.00			240
	250	ISL	7.57	7.55	34.006	26.560	150.9	0.633	3.00	44.6	41.4	2.10	28.6	0.00			252
1	278		7.33	7.30	34.031	26.614	146.1	0.675	2.71	40.1	46.2	2.20	30.1	0.01			280
	300	ISL	7.27	7.24	34.080	26.661	142.0	0.707	2.17	32.0	50.5	2.39	32.0	0.01			302
1	333		7.18	7.15	34.146	26.726	136.3	0.753	1.36	20.0	56.9	2.67	34.7	0.00			336
1	392		6.50	6.46	34.136	26.810	128.7	0.831	1.10	16.0	65.5	2.83	37.1	0.00			395
	400	ISL	6.42	6.38	34.135	26.820	127.8	0.841	1.07	15.5	66.6	2.85	37.4	0.00			403
1	458		5.93	5.89	34.146	26.892	121.4	0.913	0.81	11.6	75.0	2.97	39.4	0.00			462
	500	ISL	5.66	5.62	34.189	26.959	115.2	0.963	0.61	8.7	81.9	3.08	40.6	0.00			504
1	527		5.48	5.44	34.217	27.003	111.2	0.994	0.48	6.8	86.4	3.15	41.4	0.00			532

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 14.9 N	121 26.5 W	15/09/87	0143 GMT	3794 M	330	16 KT	340 06 06	1	1015.7 MB	17.7 C	16.2 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	17.36	17.36	33.074	23.952	394.6	0.000	5.65	102.8	2.7	0.37	0.0	0.00	0.10	0.02	0
1	1		17.36	17.36	33.074	23.952	394.6	0.004	5.65	102.8	2.7	0.37	0.0	0.00	0.10	0.02	1
	10	ISL	17.36	17.36	33.074	23.953	3 94.8	0.039	5.64	102.6	2.7	0.37	0.1	0.00	0.10	0.02	10
1	11		17.36	17.36	33.074	23.953	3 94.9	0.043	5.64	102.6	2.7	0.37	0.1	0.00	0.10	0.02	11
	20	ISL	17.22	17.22	33.089	23.998	3 90.9	0.079	5.68	103.0	2.5	0.37	0.1	0.00	0.12	0.03	20
1	22		17.15	17.15	33.082	24.009	389.9	0.087	5.70	103.2	2.5	0.37	0.1	0.00	0.13	0.03	22
	30	ISL	16.62	16.62	33.126	24,167	375.1	0.117	5.82	104.4	2.3	0.37	0.1	0.00	0.28	0.07	30
1	32		16.48	16.47	33.139	24.209	371.1	0.125	5.85	104.6	2.3	0.37	0.1	0.00	0.32	0.08	32
1	42		16.15	16.14	33.186	24.321	360.8	0.161	5.87	104.4	2.5	0.37	0.1	0.01	0.50	0.13	42
	50	ISL	15.93	15.92	33.225	24.401	353.4	0.190	5.88	104.1	2.4	0.38	0.1	0.00	0.57	0.18	50
1	53		15.73	15.72	33.228	24.448	349.0	0.200	5.89	103.9	2.4	0.38	0.1	0.00	0.60	0.21	53
1	64		13.71	13.70	33.141	24.813	314.4	0.237	5.91	100.0	3.0	0.45	0.5	0.04	0.83	0.38	64
1	74		12.58	12.57	33.192	25.077	289.4	0.267	5.70	94.3	4.7	0.63	3.6	0.18	0.50	0.33	75
	75	ISL	12.49	12.48	33.201	25.101	287.1	0.270	5.66	93.4	5.0	0.66	4.1	0.17	0.48	0.32	76
1	87		11.57	11.56	33.330	25.375	261.2	0.303	5.05	81.8	9.1	1.02	10.4	0.04	0.30	0.20	88
	100	ISL	10.73	10.72	33.457	25.624	237.7	0.335	4.44	70.7	13.4	1.32	15.5	0.02	0.12	0.12	101
1	104		10.53	10.52	33.500	25.693	231.2	0.345	4.25	67.4	14.8	1.40	16.8	0.02	0.08	0.10	105
1	124		10.05	10.04	33.788	26.000	202.4	0.388	3.21	50.4	23.8	1.73	21.9	0.01	0.06	0.09	125
	125	ISL	10.05	10.04	33.799	26.009	201.6	0.390	3.17	49.8	24.1	1.74	22.0	0.01	0.06	0.09	126
1	150		9.96	9.94	33.956	26.147	189.1	0.439	2.57	40.3	28.2	1.94	24.3	0.01	0.02	0.07	151
1	181		9.66	9.64	34.009	26.239	180.9	0.496	2.43	37.9	30.9	2.03	25.7	0.01	0.02	0.06	182
	200	ISL	9.34	9.32	34.064	26.334	172.1	0.530	2.23	34.5	33.8	2.13	27.1	0.01	0.01	0.05	202
1	212		9.13	9.11	34.096	26.394	166.7	0.550	2.11	32.5	35.7	2.19	27.9	0.01	0.01	0.05	214
1	241		8.73	8.70	34.125	26.480	158.9	0.597	2.05	31.3	39.5	2.26	29.2	0.01			243
	250	ISL	8.64	8.61	34.133	26.500	157.1	0.611	1.99	30.3	40.5	2.29	29.6	0.01			252
1	283		8.35	8.32	34.165	26.570	150.9	0.662	1.67	25.3	44.6	2.43	30.9	0.01			285
	300	ISL	8.19	8.16	34.188	26.613	147.1	0.688	1.48	22.3	47.4	2.51	31.8	0.01			302
1	339		7.82	7.79	34.234	26.704	139.0	0.743	1.08	16.2	53.8	2.68	33.7	0.01			342
1	399		7.32	7.28	34.250	26.789	131.6	0.825	0.84	12.4	60.3	2.83	35.4	0.01			402
	400	ISL	7.31	7.27	34.250	26.790	131.5	0.826	0.84	12.4	60.4	2.83	35.4	0.01			403
1	465		6.64	6.60	34.249	26.882	123.2	0.909	0.63	9.2	69.4	2.96	37.7	0.00			469
	500	ISL	6.43	6.38	34.276	26.931	118.8	0.951	0.51	7.4	73.6	3.04	38.6	0.00			504
1	538		6.21	6.16	34.305	26.983	114.2	0.995	0.38	5.5	78.2	3.12	39.5	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 54.7 N	122 8.3 W	14/09/87	1951 GMT	4185 M	3 50	15 KT	350 05 04	2	1019.5 MB	19.3 C	17.0 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	17.98	17.98	33.041	23.778	411.2	0.000	5.56	102.3	2.2	0.38	0.0	0.00	0.08	0.02	0
1	1		17.98	17.98	33.041	23.778	411.2	0.004	5.56	102.3	2.2	0.38	0.0	0.00	0.08	0.02	1
	10	ISL	17.94	17.94	33.040	23.787	410.6	0.041	5.56	102.2	2.1	0.38	0.0	0.00	0.08	0.02	10
1	11		17.94	17.94	33.040	23.787	410.7	0.045	5.56	102.2	2.1	0.38	0.0	0.00	0.08	0.02	11
	20	ISL	17.93	17.93	33.040	23.790	410.7	0.082	5.57	102.4	2.1	0.38	0.0	0.00	0.08	0.02	20
1	21		17.93	17.93	33.040	23.790	410.8	0.086	5.57	102.4	2.1	0.38	0.0	0.00	0.08	0.02	21
	30	ISL	17.95	17.94	33.042	23.787	411.4	0.123	5.58	102.6	2.0	0.38	0.0	0.00	0.08	0.02	30
1	32		17.95	17.94	33.042	23.787	411.4	0.131	5.58	102.6	2.0	0.38	0.0	0.00	0.08	0.02	32
1	42		17.86	17.85	33.081	23.83 9	406.8	0.172	5.62	103.2	2.0	0.38	0.0	0.00	0.11	0.04	42
	50	ISL	16.30	16.29	33.019	24.159	376.5	0.204	6.00	106.9	2.0	0.39	0.0	0.00	0.14	0.05	50
1	52		15.85	15.84	33.006	24.250	367.8	0.211	6.10	107.7	2.0	0.39	0.0	0.00	0.15	0.05	52
1	62		14.45	14.44	33.008	24.556	338.8	0.247	6.22	106.8	2.1	0.39	0.0	0.00	0.18	0.09	62
1	72		13.62	13.61	33.036	24.750	320.5	0.279	6.14	103.7	2.3	0.41	0.0	0.00	0.23	0.16	73
	75	ISL	13.64	13.63	33.108	24.802	315.7	0.289	6.08	102.7	2.4	0.41	0.1	0.02	0.24	0.18	76
1	87		13.87	13.86	33.405	24.985	298.7	0.326	5.78	98.3	2.9	0.40	0.5	0.10	0.26	0.24	88
	100	ISL	13.17	13.16	33.449	25.161	282.2	0.364	5.46	91.5	4.5	0.58	3.6	0.07	0.22	0.24	101
1	102		13.01	13.00	33.443	25.188	279.6	0.369	5.41	90.4	4.8	0.62	4.2	0.06	0.21	0.24	103
1	122		11.24	11.22	33.392	25.483	251.7	0.422	4.86	78.2	10.1	1.08	11.4	0.02	0.07	0.10	123
	125	ISL	11.07	11.05	33.398	25.519	248.3	0.430	4.81	77.1	10.6	1.12	12.0	0.02	0.07	0.09	126
1	148		10.08	10.06	33.518	25.784	223.4	0.484	4.37	68.6	15.2	1.34	16.1	0.01	0.03	0.05	149
	150	ISL	10.01	9.99	33.538	25.812	220.8	0.489	4.29	67.2	16.0	1.37	16.7	0.01	0.03	0.05	151
1	178		9.13	9.11	33.815	26.173	186.9	0.546	3.36	51.7	26.4	1.80	23.5	0.00	0.00	0.03	179
	200	ISL	8.62	8.60	33.913	26.330	172.2	0.585	3.42	52.1	29.8	1.82	24.2	0.00	0.00	0.02	202
1	209		8.45	8.43	33.936	26.374	168.1	0.600	3.48	52.8	30.9	1.83	24.5	0.00	0.00	0.02	211
1	238		8.03	8.01	34.018	26.502	156.4	0.648	2.90	43.6	38.5	2.04	27.7	0.00			240
	250	ISL	7.91	7.88	34.034	26.532	153.6	0.666	2.73	40.9	40.6	2.11	28.6	0.00			252
1	279		7.65	7.62	34.053	26.585	149.0	0.710	2.40	35.8	44.8	2.25	30.3	0.00			281
	300	ISL	7.42	7.39	34.068	26.630	144.9	0.741	2.14	31.7	48.4	2.36	31.7	0.00			302
1	335		7.04	7.01	34.092	26.702	138.4	0.790	1.72	25.3	54.7	2.53	34.0	0.00			338
1	394		6.47	6.43	34.135	26.813	128.4	0.869	1.08	15.7	65.7	2.80	37.1	0.00			3 97
	400	ISL	6.41	6.37	34.139	26.824	127.3	0.877	1.03	14.9	66.8	2.82	37.4	0.00			403
1	460		5.86	5.82	34.183	26.929	117.8	0.950	0.67	9.6	77.3	3.01	39.8	0.00			464
	500	ISL	5.64	5.60	34.217	26.984	112.9	0.996	0.52	7.4	82.6	3.08	40.7	0.00			504
1	530		5.47	5.43	34.243	27.025	109.2	1.030	0.40	5.7	86.5	3.14	41.3	0.00			535

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 34.9 N	122 48.6 W	14/09/87	1344 GMT	3515 M	3 40	14 KT	3 50 05 07		1018.0 MB	18.9 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
	0	ISL	18.65	18.65	33.298	23.810	408.2	0.000	5.48	102.2	2.2	0.36	0.1	0.00	0.09	0.02	0
1	1		18.65	18.65	33.298	23.810	408.2	0.004	5.48	102.2	2.2	0.36	0.1	0.00	0.09	0.02	1
	10	ISL	18.65	18.65	33.297	23.809	408.6	0.041	5.48	102.2	2.2	0.36	0.1	0.00	0.09	0.02	10
1	16		18.65	18.65	33.296	23.809	408.8	0.065	5.48	102.2	2.1	0.36	0.1	0.00	0.09	0.02	16
	20	ISL	18.11	18.11	33.264	23.918	398.6	0.082	5.62	103.8	2.1	0.36	0.1	0.00	0.10	0.02	20
	30	ISL	16.53	16.53	33.190	24.237	368.4	0.120	5.99	107.3	2.0	0.36	0.1	0.00	0.15	0.05	30
1	31		16.35	16.35	33.184	24.273	365.0	0.124	6.03	107.6	2.0	0.36	0.1	0.00	0.16	0.05	31
1	42		15.22	15.21	33.156	24.505	3 43.2	0.162	6.13	107.0	2.1	0.36	0.1	0.00	0.24	0.11	42
	50	ISL	14.83	14.82	33.165	24.596	334.7	0.190	6.14	106.3	2.4	0.37	0.1	0.00	0.23	0.11	50
1	52		14.76	14.75	33.171	24.616	332.8	0.196	6.14	106.2	2.5	0.37	0.1	0.00	0.23	0.11	52
1	62		14.37	14.36	33.233	24.747	320.7	0.229	6.05	103.8	2.7	0.37	0.1	0.00	0.21	0.13	62
1	72		14.01	14.00	33.290	24.866	309.5	0.260	5.87	100.1	2.7	0.40	0.1	0.00	0.28	0.24	73
	75	ISL	13.86	13.85	33.314	24.916	304.9	0.270	5.80	98.6	3.0	0.43	0.5	0.06	0.27	0.26	76
1	81		13.50	13.49	33.357	25.023	294.8	0.288	5.65	95.3	4.0	0.52	1.9	0.17	0.26	0.27	82
1	97		12.17	12.16	33.358	25.285	270.1	0.333	5.11	83.8	7.2	0.85	7.9	0.05	0.19	0.25	98
	100	ISL	11.93	11.92	33.375	25.343	264.6	0.341	4.98	81.3	8.2	0.92	9.1	0.04	0.17	0.23	101
1	112		11.12	11.11	33.464	25.561	244.1	0.371	4.48	71.9	12.3	1.19	13.6	0.01	0.09	0.15	113
	125	ISL	10.64	10.63	33.544	25.708	230.3	0.402	4.17	66.3	15.4	1.36	16.4	0.01	0.05	0.08	126
1	128		10.55	10.53	33.563	25.739	227.4	0.409	4.11	65.2	16.0	1.39	16.9	0.01	0.05	0.07	129
	150	ISL	9.75	9.73	33.730	26.005	202.4	0.456	3.56	55.5	22.1	1.65	21.2	0.00	0.01	0.03	151
1	153		9.65	9.63	33.752	26.039	199.2	0.462	3.50	54.5	22.9	1.68	21.7	0.00	0.01	0.03	154
1	179		9.02	9.00	33.881	26.242	180.3	0.512	3.24	49.8	27.9	1.84	24.3	0.00	0.00	0.02	180
	200	ISL	8.66	8.64	33.955	26.356	169.7	0.548	3.05	46.5	31.6	1.94	25.8	0.00	0.00	0.02	202
1	211		8.50	8.48	33.984	26.404	165.4	0.567	2.96	45.0	33.5	1.99	26.5	0.00	0.00	0.02	213
1	241		8.05	8.03	34.034	26.511	155.5	0.615	2.71	40.7	39.2	2.13	28.4	0.00			243
	250	ISL	7.94	7.91	34.039	26.532	153.7	0.629	2.66	39.9	40.4	2.16	28.8	0.00			252
1	283		7.59	7.56	34.047	26.589	148.6	0.679	2.47	36.7	44.5	2.26	30.2	0.00			2 85
	300	ISL	7.42	7.39	34.058	26.622	145.7	0.704	2.27	33.6	47.3	2.34	31.2	0.00			302
1	341		7.04	7.01	34.090	26.701	138.7	0.762	1.73	25.4	54.8	2.54	33.8	0.00			344
	400	ISL	6.47	6.43	3 4.143	26.820	127.9	0.841	1.07	15.5	65.6	2.82	37.3	0.00			403
1	402		6.45	6.41	34.145	26.824	127.5	0.843	1.05	15.2	65.9	2.83	37.4	0.00			405
1	468		6.13	6.09	34.214	26.920	119.0	0.925	0.61	8.8	74.2	3.01	39.1	0.00			47 2
	500	ISL	6.04	6.00	34.248	26.959	115.7	0.962	0.50	7.2	77.3	3.07	39.6	0.00			504
1	539		5.93	5.88	34.289	27.006	111.8	1.007	0.36	5.2	81.0	3.14	40.1	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 14.8 N	123 29.7 W	14/09/87	0752 GMT	4114 M	350	07 KT			1017.8 MB	18.7 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
1	0		18.98	18.98	33.325	23.748	414.1	0.000	5.45	102.3	2.3	0.35	0.0	0.00	0.07	0.01	0
	10	ISL	18.98	18.98	33.330	23.752	414.1	0.041	5.46	102.5	2.3	0.39	0.0	0.00	0.07	0.01	10
1	16		18.98	18.98	33.333	23.754	414.0	0.066	5.46	102.5	2.3	0.41	0.0	0.00	0.07	0.01	16
	20	ISL	18.98	18.98	33.342	23.761	413.5	0.083	5.46	102.5	2.3	0.40	0.0	0.00	0.07	0.01	20
	30	ISL	18.99	18.98	33.364	23.776	412.5	0.124	5.46	102.5	2.4	0.36	0.0	0.00	0.08	0.02	30
1	32		18.99	18.98	33.368	23.779	412.3	0.132	5.46	102.5	2.4	0.35	0.0	0.00	0.08	0.02	32
1	42		17.91	17.90	33.292	23.989	392.5	0.173	5.77	106.1	2.5	0.36	0.0	0.00	0.11	0.03	42
	50	ISL	16.24	16.23	33.232	24.336	359.6	0.203	6.06	108.0	2.6	0.37	0.0	0.00	0.13	0.04	50
1	53		15.60	15.59	33.216	24.468	347.1	0.213	6.15	108.2	2.6	0.37	0.0	0.00	0.14	0.05	53
1	63		14.28	14.27	33.167	24.715	323.7	0.247	6.17	105.7	3.0	0.40	0.0	0.00	0.21	0.09	63
1	74		13.66	13.65	33.213	24.879	308.3	0.282	5.94	100.5	3.3	0.46	0.4	0.03	0.54	0.27	75
	75	ISL	13.63	13.62	33.219	24.890	307.4	0.285	5.93	100.2	3.4	0.47	0.5	0.05	0.54	0.27	76
1	83		13.41	13.40	33.263	24.969	300.0	0.309	5.81	97.8	4.1	0.55	1.9	0.19	0.43	0.29	84
1	99		12.53	12.52	33.275	25.152	282.9	0.356	5.38	88.9	6.0	0.74	5.6	0.08	0.30	0.25	100
	100	ISL	12.46	12.45	33.279	25.168	281.4	0.358	5.35	88.3	6.2	0.76	5.9	0.07	0.29	0.25	101
1	114		11.49	11.48	33.360	25.413	258.2	0.396	4.86	78.6	10.1	1.04	10.8	0.02	0.18	0.17	115
	125	ISL	10.84	10.82	33.459	25.607	239.9	0.424	4.50	71.8	13.3	1.23	14.2	0.01	0.11	0.11	126
1	130		10.58	10.56	33.505	25.688	232.2	0.435	4.36	69.2	14.7	1.30	15.5	0.01	0.08	0.09	131
	150	ISL	9.89	9.87	33.620	25.896	212.8	0.480	4.08	63.8	18.4	1.47	18.4	0.01	0.03	0.05	151
1	156		9.72	9.70	33.652	25.949	207.8	0.493	4.02	62.6	19.5	1.51	19.0	0.01	0.02	0.04	157
1	181		8.86	8.84	33.871	26.259	178.6	0.541	3.60	55.1	26.9	1.75	23.1	0.00	0.00	0.03	182
	200	ISL	8.55	8.53	33.951	26.370	168.3	0.574	3.29	50.0	30.9	1.88	25.1	0.00	0.00	0.03	202
1	212		8.43	8.41	33.977	26.409	164.8	0.594	3.13	47.5	32.9	1.94	26.0	0.00	0.00	0.03	214
1	241		8.09	8.07	34.012	26.488	157.7	0.641	2.94	44.2	37.0	2.05	27.5	0.00			243
	250	ISL	7.93	7.90	34.016	26.515	155.3	0.655	2.89	43.3	38.7	2.08	28.0	0.00			252
1	282		7.38	7.35	34.027	26.603	147.1	0.703	2.67	39.5	45.0	2.22	30.1	0.01			2 84
	300	ISL	7.17	7.14	34.035	26.639	143.9	0.729	2.44	35.9	48.4	2.31	31.3	0.01			302
1	338		6.82	6.79	34.056	26.704	138.1	0.783	1.91	27.9	55.5	2.52	33.9	0.00			341
1	398		6.35	6.31	34.101	26.802	129.4	0.863	1.22	17.6	65.8	2.79	37.2	0.00			401
	400	ISL	6.33	6.29	34.103	26.806	129.0	0.866	1.20	17.3	66.2	2.80	37.3	0.00			403
1	464		5.78	5.74	34.159	26.921	118.6	0.945	0.72	10.3	77.6	3.03	40.0	0.00			468
	500	ISL	5.60	5.56	34.192	26.969	114.3	0.987	0.57	8.1	82.3	3.09	40.8	0.00			504
1	536		5.43	5.39	34.226	27.017	110.0	1.027	0.43	6.1	87.1	3.16	41.5	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 54.8 N	124 10.2 W	14/09/87	0207 GMT	4170 M	350	09 KT	350 02 05	2	1015.8 MB	19.1 C	18.0 C	8/8	CB

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	19.69	19.69	33.333	23.572	430.8	0.000	5.41	102.9	2.8	0.33	0.0	0.00	0.05	0.01	0
1	1		19.69	19.69	33.333	23.572	430.9	0.004	5.41	102.9	2.8	0.33	0.0	0.00	0.05	0.01	1
	10	ISL	19.52	19.52	33.330	23.614	427.2	0.043	5.41	102.5	2.8	0.33	0.0	0.00	0.05	0.01	10
1	17		19.28	19.28	33.332	23.677	421.4	0.073	5.41	102.1	2.7	0.33	0.0	0.00	0.05	0.01	17
	20	ISL	19.20	19.20	33.343	23.706	418.8	0.085	5.44	102.5	2.7	0.33	0.0	0.00	0.05	0.01	20
	30	ISL	18.81	18.80	33.367	23.824	407.9	0.127	5.57	104.2	2.5	0.31	0.0	0.00	0.06	0.02	30
1	32		18.71	18.70	33.370	23.851	405.4	0.135	5.60	104.6	2.5	0.31	0.0	0.00	0.06	0.02	32
1	43		17.82	17.81	33.321	24.033	388.4	0.178	5.80	106.5	2.5	0.32	0.0	0.00	0.07	0.02	43
	50	ISL	16.99	16.98	33.254	24.180	374.6	0.205	5.92	107.0	2.5	0.32	0.0	0.00	0.08	0.02	50
1	63		15.69	15.68	33.206	24.440	350.0	0.252	6.06	106.8	2.4	0.32	0.0	0.00	0.09	0.02	63
1	73		15.44	15.43	33.316	24.581	336.9	0.286	6.05	106.1	2.4	0.31	0.0	0.00	0.10	0.03	74
	75	ISL	15.26	15.25	33.315	24.620	333.3	0.293	6.05	105.8	2.4	0.31	0.0	0.00	0.11	0.04	76
1	83		14.60	14.59	33.330	24.774	318.8	0.319	6.00	103.5	2.6	0.33	0.0	0.00	0.15	0.08	84
1	98		14.99	14.98	33.672	24.954	302.2	0.366	5.72	99.7	2.8	0.30	0.1	0.02	0.29	0.26	99
	100	ISL	14.94	14.92	33.682	24.973	300.4	0.372	5.69	99.0	2.9	0.31	0.2	0.03	0.29	0.26	101
1	114		14.43	14.41	33.699	25.095	289.0	0.413	5.55	95.6	3.4	0.37	1.2	0.13	0.26	0.26	115
	125	ISL	14.31	14.29	33.779	25.183	281.0	0.444	5.48	94.2	3.5	0.39	1.6	0.12	0.23	0.23	126
1	129		14.24	14.22	33.805	25.218	277.8	0.456	5.46	93.8	3.6	0.40	1.9	0.11	0.21	0.21	130
	150	ISL	12.63	12.61	33.731	25.487	252.4	0.511	5.22	86.7	5.8	0.62	5.7	0.03	0.11	0.13	151
1	155		12.14	12.12	33.706	25.562	245.3	0.524	5.15	84.6	6.7	0.70	7.0	0.01	0.09	0.11	156
1	181		10.17	10.15	33.742	25.945	209.0	0.583	4.68	73.7	14.6	1.17	14.6	0.01	0.02	0.03	182
	200	ISL	9.40	9.38	33.845	26.153	189.3	0.621	4.54	70.3	19.1	1.34	17.6	0.01	0.01	0.02	202
1	212		9.08	9.06	33.913	26.258	179.5	0.643	4.47	68.7	21.9	1.41	18.9	0.01	0.00	0.02	214
1	241		8.31	8.29	34.002	26.448	161.7	0.692	4.12	62.3	29.8	1.62	22.3	0.00			243
	250	ISL	8.14	8.11	34.010	26.479	158.8	0.707	4.02	60.6	31.6	1.67	23.2	0.00			252
1	282		7.65	7.62	34.009	26.551	152.3	0.756	3.62	53.9	37.6	1.87	26.1	0.00			284
	300	ISL	7.33	7.30	34.011	26.598	147.9	0.783	3.26	48.2	42.3	2.02	28.1	0.00			302
1	340		6.69	6.66	34.021	26.694	139.0	0.841	2.44	35.5	53.0	2.34	32.3	0.00			3 43
1	399		6.19	6.15	34.054	26.786	130.8	0.920	1.69	24.3	64.0	2.66	36.2	0.00			402
	400	ISL	6.18	6.14	34.055	26.788	130.6	0.922	1.68	24.2	64.2	2.66	36.3	0.00			403
1	465		5.76	5.72	34.111	26.885	121.9	1.004	1.03	14.7	75.1	2.92	39.2	0.00			469
	500	ISL	5.48	5.44	34.146	26.947	116.2	1.045	0.82	11.6	82.0	3.00	40.4	0.00			504
1	535		5.21	5.17	34.183	27.008	110.5	1.085	0.62	8.7	88.9	3.09	41.6	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 53.0 N	118 29.1 W	11/09/87	0950 GMT	47 M	050	04 KT			1010.8 MB	19.1 C	18.3 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	19.55	19.55	33.587	23.802	408.9	0.000	5.64	107.1	2.3	0.27	0.0	0.00	0.39	0.08	0
1	1		19.55	19.55	33.587	23.802	408.9	0.004	5.64	107.1	2.3	0.27	0.0	0.00	0.39	0.08	1
	10	ISL	18.46	18.46	33.530	24.035	3 87.1	0.040	5.82	108.3	2.3	0.30	0.0	0.00	0.74	0.14	10
1	11		18.27	18.27	33.520	24.074	383.4	0.044	5.85	108.5	2.3	0.31	0.0	0.00	0.79	0.15	11
	20	ISL	16.64	16.64	33.431	24.396	353.0	0.077	6.00	107.8	2.9	0.39	0.0	0.01	0.90	0.24	20
1	22		16.24	16.24	33.411	24.473	345.7	0.084	6.03	107.5	3.2	0.41	0.0	0.01	0.93	0.26	22
	30	ISL	14.64	14.64	33.328	24.762	318.3	0.110	5.65	97.6	5.1	0.74	1.6	0.21	0.64	0.28	30
1	32		14.30	14.30	33.316	24.825	312.4	0.117	5.53	94.8	5.6	0.82	2.0	0.26	0.55	0.29	32
1	43		13.79	13.78	33.379	24.980	297.9	0.150	5.24	89.0	7.1	0.92	3.1	0.35	0.35	0.25	43

RV NEW HORIZON CALCOFI CRUISE 8709 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 33.7 W	11/09/87	1201 GMT	69 M	050	04 KT			1010.8 MB	19.1 C	18.3 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		19.45	19.45	33.585	23.827	406.6	0.000	5.63	106.7	2.1	0.28	0.0	0.00	0.31	0.08	0
1	10		19.43	19.43	33.584	23.831	406.5	0.041	5.64	106.9	2.1	0.27	0.0	0.00	0.32	0.07	10
	20	ISL	16.86	16.86	33.441	24.352	3 57.1	0.079	6.01	108.5	2.5	0.36	0.0	0.00	0.84	0.38	20
1	21		16.56	16.56	33.428	24.412	351.4	0.082	6.04	108.4	2.6	0.37	0.0	0.00	0.90	0.41	21
	30	ISL	14.86	14.86	33.329	24.716	322.7	0.113	5.91	102.5	3.2	0.48	0.7	0.07	1.29	0.44	30
1	31		14.70	14.70	33.321	24.744	320.1	0.116	5.90	102.0	3.3	0.50	0.8	0.09	1.30	0.44	31
1	42		13.22	13.21	33.341	25.066	289.7	0.149	5.23	87.7	6.4	0.94	4.6	0.43	0.59	0.40	42
	50	ISL	13.14	13.13	33.397	25.125	284.2	0.172	4.82	80.7	9.0	1.21	5.6	0.57	0.29	0.36	50
1	52		13.12	13.11	33.401	25.132	283.6	0.178	4.74	79.4	9.6	1.26	5.8	0.59	0.24	0.35	52
1	66		12.50	12.49	33.467	25.305	267.5	0.217	4.46	73.7	11.1	1.24	9.0	0.73	0.16	0.29	67

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 49.4 N	118 37.7 W	11/09/87	1325 GMT	653 M	070	04 KT	270 01 08		1010.2 MB	19.6 C	19.0 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	19.62	19.62	33.594	23.790	410.1	0.000	5.72	108.8	2.4	0.30	0.1	0.00	0.42	0.06	0
1	1		19.62	19.62	33.594	23.790	410.1	0.004	5.72	108.8	2.4	0.30	0.1	0.00	0.42	0.06	1
	10	ISL	19.64	19.64	33.590	23.782	411.2	0.041	5.75	109.4	2.4	0.30	0.1	0.00	0.42	0.07	10
1	12		19.65	19.65	33.589	23.779	411.6	0.049	5.76	109.6	2.4	0.30	0.1	0.00	0.42	0.07	12
	20	ISL	18.02	18.02	33.495	24.116	379.6	0.081	6.01	110.9	3.0	0.34	0.1	0.00	0.66	0.19	20
1	22		17.56	17.56	33.472	24.210	370.7	0.088	6.07	111.1	3.1	0.35	0.1	0.00	0.72	0.22	22
	30	ISL	16.69	16.69	33.412	24.370	355.8	0.118	6.02	108.3	2.4	0.39	0.1	0.01	0.73	0.20	30
1	31		16.59	16.58	33.405	24.388	354.1	0.121	6.01	107.9	2.3	0.39	0.1	0.01	0.73	0.20	31
1	42		14.46	14.45	33.330	24.802	314.8	0.158	5.73	98.6	4.9	0.68	1.4	0.17	0.60	0.33	42
	50	ISL	14.02	14.01	33.338	24.901	305.6	0.183	5.66	96.5	5.0	0.67	2.1	0.21	0.67	0.34	50
1	53		13.95	13.94	33.347	24.922	303.7	0.192	5.63	95.9	5.0	0.67	2.5	0.23	0.68	0.35	53
1	63		13.30	13.29	33.395	25.092	2 87.7	0.221	5.27	88.6	6.9	0.84	4.6	0.36	0.39	0.28	63
1	73		12.90	12.89	33.435	25.203	277.4	0.250	5.09	84.9	7.8	0.88	6.4	0.32	0.31	0.26	74
	75	ISL	12.83	12.82	33.441	25.221	275.7	0.255	5.05	84.1	8.0	0.89	6.8	0.32	0.30	0.26	76
1	88		12.37	12.36	33.477	25.339	264.8	0.290	4.78	78.8	9.6	1.00	9.2	0.33	0.22	0.23	89
	100	ISL	11.92	11.91	33.530	25.465	253.0	0.321	4.43	72.4	11.8	1.14	11.6	0.20	0.17	0.20	101
1	103		11.81	11.80	33.546	25.498	249.9	0.329	4.33	70.6	12.4	1.18	12.3	0.16	0.16	0.19	104
1	124		11.05	11.03	33.683	25.744	227.0	0.379	3.61	57.9	17.7	1.50	17.4	0.03	0.06	0.10	125
	125	ISL	11.03	11.01	33.688	25.751	226.2	0.381	3.59	57.6	17.9	1.51	17.5	0.03	0.06	0.10	126
1	150		10.68	10.66	33.795	25.897	212.9	0.436	3.16	50.3	21.5	1.69	20.1	0.01	0.04	0.07	151
1	180		10.26	10.24	33.930	26.076	196.5	0.498	2.68	42.3	26.1	1.90	22.9	0.04	0.02	0.06	181
	200	ISL	10.06	10.04	34.020	26.181	187.0	0.536	2.35	37.0	29.5	2.05	24.7	0.06	0.01	0.05	202
1	211		9.95	9.93	34.063	26.233	182.2	0.556	2.19	34.4	31.2	2.12	25.5	0.06	0.01	0.05	213
1	241		9.59	9.56	34.126	26.343	172.3	0.609	2.02	31.5	34.2	2.22	26.9	0.04			243
	250	ISL	9.46	9.43	34.147	26.381	168.8	0.625	1.94	30.1	35.5	2.26	27.4	0.03			252
1	282		9.00	8.97	34.215	26.509	157.1	0.677	1.61	24.8	40.8	2.42	29.3	0.02			284
	300	ISL	8.75	8.72	34.237	26.565	152.0	0.705	1.44	22.0	43.8	2.51	30.3	0.02			302
1	339		8.21	8.17	34.265	26.671	142.4	0.762	1.10	16.6	50.5	2.68	32.2	0.01			342
1	400		7.35	7.31	34.280	26.808	129.8	0.845	0.72	10.7	61.7	2.90	35.1	0.01			403
1	466		6.69	6.65	34.292	26.909	120.7	0.928	0.48	7.0	71.2	3.06	37.4	0.01			470
	500	ISL	6.40	6.35	34.312	26.964	115.8	0.968	0.38	5.5	76.6	3.13	38.2	0.01			504
1	538		6.08	6.03	34.337	27.025	110.2	1.011	0.27	3.9	82.7	3.21	39.1	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 37.6

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.6 N	118 48.8 W	11/09/87	1657 GMT	905 M	3 50	02 KT	260 01 06	1	1010.9 MB	20.5 C	19.1 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	20.55	20.55	33.609	23.557	432.3	0.000	5.52	106.7	2.7	0.31	0.1	0.00	0.13	0.02	0
1	1	A	20.55	20.55	33.609	23.557	432.3	0.004	5.52	106.7	2.7	0.31	0.1	0.00	0.13	0.02	1
1	6		20.55	20.55	33.607	23.556	432.6	0.026	5.36	103.6	2.7	0.30	0.1	0.00	0.14	0.02	6
	10	ISL	20.40	20.40	33.598	23.589	429.6	0.043	5.42	104.5	2.7	0.30	0.1	0.00	0.14	0.02	10
1	17		19.82	19.82	33.569	23.719	417.4	0.073	5.52	105.3	2.7	0.31	0.2	0.00	0.14	0.02	17
	20	ISL	19.46	19.46	33.558	23.804	409.5	0.085	5.58	105.8	2.7	0.32	0.2	0.00	0.15	0.02	20
1	27		18.29	18.29	33.519	24.069	3 84.4	0.113	5.76	106.9	2.7	0.34	0.2	0.00	0.17	0.04	27
	30	ISL	17.47	17.46	33.490	24.246	367.6	0.124	5.88	107.4	3.0	0.35	0.2	0.00	0.21	0.06	30
1	37		15.62	15.61	33.443	24.637	330.4	0.149	6.12	107.8	3.7	0.37	0.2	0.00	0.33	0.12	37
1	47		14.50	14.49	33.414	24.859	309.6	0.181	6.16	106.1	4.3	0.41	0.1	0.00	0.52	0.26	47
	50	ISL	14.27	14.26	33.420	24.912	304.6	0.190	6.03	103.4	4.5	0.45	0.6	0.03	0.64	0.36	50
1	58		13.63	13.62	33.446	25.065	290.2	0.214	5.54	93.8	5.5	0.62	3.1	0.14	0.83	0.56	58
1	68		12.45	12.44	33.473	25.320	266.1	0.242	4.84	79.9	8.9	0.93	8.5	0.30	0.35	0.32	69
	75	ISL	11.97	11.96	33.535	25.459	253.0	0.260	4.41	72.1	11.4	1.11	11.5	0.19	0.21	0.22	76
1	82		11.62	11.61	33.599	25.574	242.1	0.277	4.08	66.3	13.6	1.25	13.9	0.04	0.16	0.16	83
1	98		10.75	10.74	33.649	25.770	223.8	0.314	3.96	63.1	16.5	1.37	16.5	0.02	0.08	0.16	99
	100	ISL	10.67	10.66	33.660	25.793	221.7	0.319	3.92	62.4	17.0	1.39	16.9	0.02	0.07	0.15	101
1	113		10.25	10.24	33.734	25.923	209.5	0.347	3.63	57.3	20.3	1.55	19.4	0.01	0.04	0.08	114
	125	ISL	9.85	9.84	33.781	26.028	199.7	0.371	3.31	51.8	23.9	1.71	21.9	0.01	0.03	0.07	126
1	133		9.61	9.60	33.812	26.092	193.7	0.387	3.12	48.5	26.1	1.81	23.4	0.01	0.02	0.06	134
	150	ISL	9.30	9.28	33.909	26.219	182.0	0.419	2.95	45.6	29.2	1.90	24.7	0.00	0.01	0.04	151
1	159		9.20	9.18	33.962	26.276	176.7	0.435	2.88	44.4	30.4	1.93	25.1	0.00	0.01	0.03	160
1	190		9.17	9.15	34.105	26.394	166.2	0.488	2.31	35.6	34.5	2.13	26.9	0.00	0.00	0.02	192
	200	ISL	9.15	9.13	34.144	26.427	163.2	0.505	2.09	32.2	36.1	2.20	27.5	0.00			202
1	220		9.11	9.09	34.209	26.485	158.2	0.537	1.73	26.7	39.0	2.33	28.7	0.01			222
	250	ISL	8.67	8.64	3 4.184	26.535	153.8	0.584	1.73	26.4	41.9	2.38	29.8	0.01			252
1	256		8.58	8.55	34.175	26.542	153.2	0.593	1.73	26.3	42.4	2.38	30.0	0.01			258
1	297		8.50	8.47	34.224	26.594	149.1	0.655	1.44	21.9	45.3	2.50	30.7	0.01			299
	300	ISL	8.49	8.46	34.227	26.598	148.8	0.659	1.42	21.6	45.5	2.51	30.8	0.01			302
1	352		8.20	8.16	34.270	26.676	142.1	0.735	1.03	15.6	50.6	2.68	32.3	0.01			355
	400	ISL	7.61	7.57	3 4.287	26.777	133.0	0.801	0.77	11.5	57.9	2.83	34.4	0.01			403
1	419		7.36	7.32	34.289	26.814	129.6	0.826	0.69	10.2	60.9	2.88	35.2	0.01			423
1	485		6.74	6.69	34.275	26.889	122.9	0.909	0.50	7.3	69.0	2.96	37.0	0.00			489
	500	ISL	6.60	6.55	34.285	26.916	120.5	0.928	0.45	6.5	71.5	2.99	37.5	0.00			504
1	566		6.07	6.02	34.337	27.026	110.4	1.004	0.27	3.9	82.5	3.13	39.2	0.01			571
	600	ISL	5.87	5.82	34.354	27.065	107.0	1.041	0.23	3.3	87.1	3.18	39.2	0.01			605
1	642		5.66	5.60	34.370	27.104	103.5	1.085	0.19	2.7	92.2	3.23	39.2	0.00			648
	700	ISL	5.43	5.37	34.385	27.144	100.2	1.144	0.14	2.0	98.3	3.28	38.7	0.00			706
1	779		5.23	5.16	3 4.397	27.178	97.6	1.222	0.09	1.3	105.9	3.32	36.6	0.00			786
	800	ISL	5.19	5.12	34.401	27.186	97.0	1.243	0.08	1.1	107.9	3.33	35.4	0.00			808
1	841		5.14	5.07	34.406	27.196	96.5	1.282									849
1	890		5.13	5.06	34.406	27.198	96.9	1.330	0.05	0.7	116.5	3.37	30.1	0.01			899

A) SANTA MONICA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 39.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 40.9 N	118 56.8 W	11/09/87	1952 GMT	896 M	130	05 KT	330 03 06	1	1010.5 MB	21.1 C	19.0 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	20.93	20.93	33.628	23.470	440.6	0.000	5.33	103.8	2.4	0.31	0.0	0.00	0.14	0.03	0
1	1	A	20.93	20.93	33.628	23.470	440.7	0.004	5.33	103.8	2.4	0.31	0.0	0.00	0.14	0.03	1
	10	ISL	20.52	20.52	33.613	23.569	431.5	0.044	5.40	104.4	2.4	0.30	0.0	0.00	0.20	0.04	10
1	11		20.48	20.48	33.611	23.578	430.8	0.048	5.41	104.5	2.4	0.30	0.0	0.00	0.21	0.04	11
	20	ISL	18.17	18.17	33.496	24.081	3 83.1	0.085	5.79	107.2	2.4	0.35	0.0	0.00	0.28	0.07	20
1	22		17.60	17.60	33.478	24.205	371.2	0.092	5.88	107.7	2.4	0.36	0.0	0.00	0.30	0.08	22
	30	ISL	16.28	16.28	33.477	24.514	342.0	0.121	6.13	109.4	2.6	0.38	0.1	0.00	0.92	0.27	30
1	32		15.96	15.95	33.473	24.584	335.4	0.127	6.15	109.1	2.6	0.38	0.1	0.00	1.07	0.33	32
1	43		13.34	13.33	33.336	25.038	292.4	0.162	5.75	96.7	4.7	0.62	3.4	0.20	1.01	0.54	43
	50	ISL	13.16	13.15	33.365	25.096	286.9	0.182	5.59	93.7	5.2	0.68	4.3	0.30	0.55	0.40	50
1	53		13.09	13.08	33.360	25.107	286.0	0.191	5.50	92.0	5.6	0.71	4.8	0.33	0.34	0.32	53
1	64		12.22	12.21	33.463	25.356	262.6	0.221	4.72	77.6	9.6	1.03	10.2	0.34	0.18	0.24	64
	75	ISL	11.51	11.50	33.547	25.554	243.9	0.249	4.23	68.5	13.1	1.23	13.9	0.14	0.06	0.11	76
1	78		11.33	11.32	33.568	25.603	239.3	0.256	4.13	66.6	14.0	1.28	14.7	0.08	0.04	0.08	79
1	94		10.26	10.25	33.684	25.882	212.9	0.292	3.60	56.8	19.6	1.56	19.7	0.02	0.04	0.08	95
	100	ISL	9.99	9.98	33.732	25.966	205.1	0.305	3.43	53.8	21.7	1.65	21.1	0.02	0.03	0.08	101
1	109		9.70	9.69	33.796	26.064	195.9	0.323	3.24	50.5	24.3	1.75	22.6	0.01	0.02	0.07	110
	125	ISL	9.54	9.53	33.850	26.133	189.7	0.354	3.14	48.8	26.0	1.79	23.1	0.00	0.01	0.05	126
1	130		9.53	9.52	33.862	26.144	188.7	0.363	3.13	48.6	26.2	1.80	23.3	0.00	0.01	0.04	131
	150	ISL	9.21	9.19	33.939	26.257	178.4	0.400	3.00	46.3	28.9	1.88	24.5	0.00	0.00	0.04	151
1	156		9.15	9.13	33.967	26.288	175.5	0.410	2.92	45.0	29.8	1.91	24.9	0.00	0.00	0.04	157
1	186		9.64	9.62	34.172	26.369	168.6	0.462	1.84	28.7	35.0	2.23	27.3	0.01	0.00	0.03	187
	200	ISL	9.43	9.41	34.190	26.418	164.2	0.485	1.82	28.3	36.9	2.28	28.0	0.01	0.00	0.03	202
1	216		9.09	9.07	34.189	26.473	159.2	0.511	1.79	27.6	38.6	2.31	28.6	0.00	0.00	0.03	218
	250	ISL	8.85	8.82	34.219	26.535	153.9	0.565	1.57	24.1	41.1	2.40	29.6	0.01			252
1	252		8.84	8.81	34.221	26.538	153.7	0.568	1.55	23.8	41.3	2.41	29.7	0.01			254
1	293		8.30	8.27	34.257	26.650	143.5	0.629	1.19	18.0	48.6	2.60	31.6	0.01			295
	300	ISL	8.24	8.21	34.260	26.662	142.6	0.639	1.15	17.4	49.4	2.62	31.8	0.01			302
1	347		7.81	7.78	34.271	26.735	136.2	0.704	0.93	13.9	54.5	2.73	33.4	0.00			350
	400	ISL	7.10	7.06	34.290	26.851	125.6	0.773	0.62	9.1	64.7	2.91	36.0	0.00			403
1	413		6.93	6.89	34.295	26.878	123.0	0.790	0.56	8.2	67.2	2.95	36.6	0.00			417
1	478		6.57	6.53	34.308	26.938	118.1	0.868	0.45	6.5	73.4	3.03	37.8	0.00			482
	500	ISL	6.45	6.40	34.315	26.959	116.2	0.894	0.41	5.9	75.7	3.06	38.1	0.00			504
1	559		6.12	6.07	34.336	27.019	111.1	0.961	0.31	4.5	82.6	3.13	38.7	0.00			564
	600	ISL	5.87	5.82	34.353	27.064	107.0	1.005	0.25	3.6	88.5	3.17	38.8	0.00			605
1	635		5.67	5.62	34.367	27.100	103.8	1.042	0.21	3.0	93.3	3.21	38.8	0.00			641
	700	ISL	5.42	5.36	34.387	27.147	99.9	1.109	0.16	2.3	99.8	3.27	38.6	0.00			706
1	705		5.41	5.35	34.388	27.149	99.7	1.114	0.16	2.3	100.2	3.27	38.6	0.00			711
1	772		5.27	5.20	34.397	27.173	98.1	1.180	0.11	1.6	106.6	3.32	36.6	0.00			779
	800	ISL	5.20	5.13	34.401	27.185	97.2	1.207	0.09	1.3	111.0	3.34	34.3	0.00			808
1	833		5.14	5.07	34.405	27.195	96.5	1.239	0.07	1.0	115.6	3.36	31.6	0.00			841
1	884		5.13	5.06	34.405	27.197	96.9	1.288	0.05	0.7	117.4	3.37	30.4	0.01			892

A) SANTA MONICA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 35.4 N	119 6.9 W	11/09/87	2327 GMT	257 M	290	10 KT	280 03 05	0	1008.3 MB	20.5 C	18.7 C	0/8	

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		18.29	18.29	33.590	24.122	378.4	0.000	5.73	106.3	2.9	0.30	0.2	0.01	0.49	0.11	0
1	10		17.29	17.29	33.553	24.336	358.3	0.037	5.80	105.6	3.1	0.34	0.6	0.04	0.63	0.15	10
	20	ISL	16.36	16.36	33.520	24.529	340.3	0.072	5.86	104.8	3.6	0.41	1.2	0.08	0.81	0.23	20
1	21		16.24	16.24	33.515	24.552	338.1	0.075	5.87	104.7	3.6	0.42	1.3	0.08	0.83	0.24	21
	30	ISL	14.19	14.19	33.448	24.950	300.4	0.104	5.60	95.9	5.5	0.65	4.2	0.31	1.19	0.48	30
1	32		13.74	13.74	33.440	25.037	292.2	0.110	5.52	93.7	6.0	0.71	5.0	0.36	1.24	0.53	32
1	42		12.73	12.72	33.453	25.249	272.2	0.138	5.10	84.7	8.2	0.87	7.9	0.39	0.83	0.44	42
	50	ISL	11.85	11.84	33.510	25.462	252.1	0.159	4.52	73.7	11.8	1.13	12.1	0.20	0.38	0.29	50
1	53		11.59	11.58	33.534	25.529	245.7	0.166	4.33	70.3	13.1	1.21	13.5	0.13	0.25	0.24	53
1	63		11.40	11.39	33.576	25.596	239.6	0.191	4.22	68.2	14.3	1.23	14.4	0.12	0.27	0.25	63
1	74		10.94	10.93	33.647	25.735	226.7	0.216	3.82	61.1	17.8	1.43	17.3	0.06	0.17	0.15	75
	75	ISL	10.91	10.90	33.648	25.741	226.1	0.219	3.81	60.9	17.9	1.44	17.4	0.06	0.16	0.15	76
1	88		10.61	10.60	33.682	25.820	218.8	0.248	3.65	58.0	19.2	1.51	18.6	0.02	0.10	0.15	89
	100	ISL	10.17	10.16	33.858	26.034	198.7	0.273	2.98	47.0	24.7	1.78	22.2	0.01	0.03	0.07	101
1	104		10.04	10.03	33.922	26.106	192.0	0.280	2.74	43.1	26.6	1.88	23.4	0.01	0.01	0.04	105
1	124		9.99	9.98	34.021	26.192	184.2	0.318	2.39	37.5	29.7	2.02	24.8	0.01	0.01	0.04	125
	125	ISL	9.98	9.97	34.024	26.196	183.8	0.320	2.38	37.4	29.8	2.02	24.9	0.01	0.01	0.04	126
1	145		9.75	9.73	34.059	26.262	178.0	0.356	2.25	35.2	31.7	2.08	25.8	0.01	0.01	0.04	146
	150	ISL	9.70	9.68	34.067	26.277	176.6	0.365	2.23	34.8	32.1	2.09	26.0	0.01	0.01	0.04	151
1	170		9.53	9.51	34.099	26.330	171.9	0.400	2.13	33.1	33.7	2.14	26.6	0.01	0.01	0.05	171
1	196		9.26	9.24	34.150	26.415	164.4	0.444	1.96	30.3	36.9	2.25	28.0	0.01	0.01	0.04	198
	200	ISL	9.25	9.23	34.155	26.420	164.0	0.450	1.94	30.0	37.0	2.26	28.1	0.01			202
1	226		9.11	9.09	34.183	26.465	160.2	0.492	1.77	27.3	38.7	2.33	28.6	0.01			228
	250	ISL	8.68	8.65	34.215	26.558	151.7	0.530	1.47	22.4	44.4	2.48	30.3	0.03			252
1	257		8.55	8.52	34.225	26.586	149.1	0.540	1.38	21.0	46.1	2.52	30.8	0.04			259

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.5 N	119 19.1 W	12/09/87	0206 GMT	1641 M	290	24 KT	3 00 06 06	1	1007.9 MB	17.5 C	16.6 C	1/8	CU

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		18.66	18.66	33.616	24.050	385.2	0.000	5.63	105.2	2.3	0.31	0.0	0.00	0.29	0.06	0
1	10		18.24	18.24	33.601	24.143	376.7	0.038	5.64	104.6	2.3	0.31	0.1	0.01	0.38	0.09	10
	20	ISL	14.22	14.22	33.495	24.979	297.3	0.072	5.55	95.1	5.8	0.66	4.5	0.20	0.79	0.20	20
1	21		13.78	13.78	33.496	25.072	288.5	0.075	5.54	94.1	6.3	0.71	5.1	0.22	0.82	0.21	21
	30	ISL	12.08	12.08	33.541	25.442	253.5	0.099	4.65	76.2	11.2	1.11	11.4	0.24	0.66	0.30	30
1	32		11.87	11.87	33.553	25.491	248.8	0.104	4.44	72.5	12.3	1.19	12.7	0.25	0.59	0.31	32
1	42		11.17	11.16	33.611	25.665	232.6	0.128	3.96	63.7	16.1	1.38	16.0	0.08	0.31	0.24	42
	50	ISL	10.77	10.76	33.707	25.811	218.8	0.146	3.55	56.6	19.9	1.55	18.7	0.07	0.19	0.23	50
1	53		10.64	10.63	33.744	25.863	213.9	0.153	3.41	54.3	21.2	1.61	19.6	0.06	0.16	0.23	53
1	63		10.13	10.12	33.824	26.013	199.8	0.173	3.09	48.6	24.2	1.76	21.9	0.02	0.09	0.67	63
1	74		10.01	10.00	33.871	26.070	194.6	0.195	2.95	46.3	25.4	1.81	22.8	0.02	0.04	0.07	75
	75	ISL	9.99	9.98	33.878	26.079	193.8	0.197	2.93	46.0	25.6	1.82	22.9	0.02	0.04	0.07	76
1	88		9.81	9.80	33.962	26.175	185.0	0.222	2.65	41.5	28.3	1.95	24.4	0.01	0.02	0.07	89
	100	ISL	9.75	9.74	34.001	26.216	181.4	0.244	2.48	38.8	29.7	2.01	25.1	0.01	0.01	0.05	101
I	104		9.74	9.73	34.011	26.226	180.5	0.251	2.44	38.1	30.1	2.02	25.3	0.01	0.01	0.04	105
1	125		9.71	9.70	34.082	26.286	175.2	0.288	2.22	34.7	32.0	2.13	26.2	0.00	0.01	0.04	126
	150	ISL	9.62	9.60	34.126	26.336	171.0	0.332	2.03	31.6	34.0	2.18	26.9	0.00	0.00	0.04	151
1	151		9.61	9.59	34.127	26.339	170.8	0.333	2.02	31.5	34.1	2.18	26.9	0.00	0.00	0.04	152
1	181		9.41	9.39	34.150	26.390	166.5	0.384	1.93	30.0	36.0	2.25	27.7	0.00	0.00	0.04	182
	200	ISL	9.29	9.27	34.166	26.422	163.8	0.415	1.86	28.8	37.1	2.28	28.0	0.01	0.00	0.04	202
1	212		9.20	9.18	34.178	26.446	161.7	0.435	1.81	28.0	37.9	2.30	28.3	0.01	0.00	0.04	214
1	242		8.94	8.91	34.217	26.519	155.3	0.482	1.60	24.6	41.0	2.39	29.5	0.01			244
	250	ISL	8.85	8.82	34.225	26.540	153.5	0.495	1.53	23.5	42.0	2.42	29.9	0.01			252
1	282		8.50	8.47	34.247	26.612	147.1	0.543	1.28	19.5	46.0	2.54	31.2	0.00			284
	300	ISL	8.35	8.32	34.251	26.638	144.9	0.569	1.20	18.2	47.8	2.58	31.8	0.00			302
1	338		8.02	7.99	34.254	26.690	140.4	0.623	1.06	15.9	51.9	2.67	32.9	0.00			341
1	398		7.24	7.20	34.273	26.818	128.8	0.704	0.72	10.6	61.9	2.87	35.5	0.00			401
	400	ISL	7.22	7.18	34.274	26.822	128.4	0.707	0.71	10.5	62.2	2.88	35.6	0.00			403
1	464		6.58	6.54	34.298	26.928	118.7	0.786	0.47	6.8	72.2	3.05	37.7	0.00			468
	500	ISL	6.31	6.26	34.321	26.982	113.9	0.828	0.37	5.3	77.9	3.11	38.4	0.00			504
1	536		6.03	5.98	34.344	27.037	109.0	0.868	0.27	3.9	83.7	3.16	39.1	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 20.5 N	119 39.4 W	12/09/87	0616 GMT	75 M	310	26 KT			1009.5 MB	16.5 C	15.8 C		

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		15.61	15.61	33.593	24.754	318.2	0.000	5.57	98.2	5.7	0.56	3.3	0.10	1.04	0.36	0
1	10		15.63	15.63	33.593	24.750	318.9	0.032	5.58	98.4	5.7	0.56	3.3	0.10	0.98	0.40	10
1	20		15.60	15.60	33.592	24.756	318.6	0.064	5.56	98.0	5.8	0.58	3.5	0.10	0.95	0.36	20
1	30		13.88	13.88	33.579	25.115	2 84.6	0.094	5.12	87.2	8.2	0.83	6.9	0.19	0.86	0.37	30
1	40		12.25	12.24	33.540	25.409	256.9	0.121	4.62	76.0	11.3	1.09	11.2	0.26	0.49	0.29	40
1	50		10.93	10.92	33.620	25.715	228.0	0.145	3.89	62.2	17.1	1.44	16.9	0.06	0.16	0.19	50
1	60		10.92	10.91	33.664	25.751	224.7	0.168	3.77	60.3	18.7	1.48	17.4	0.10	0.18	0.22	60

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.0 N	120 1.0 W	12/09/87	0937 GMT	1200 M	3 20	22 KT			1010.3 MB	16.8 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
	0	ISL	16.73	16.73	33.601	24.505	341.9	0.000	5.70	102.7	2.5	0.38	0.8	0.03	2.11	0.54	0
1	1		16.73	16.73	33.601	24.505	342.0	0.003	5.70	102.7	2.5	0.38	0.8	0.03	2.11	0.54	1
	10	ISL	16.72	16.72	33.601	24.507	342.0	0.034	5.70	102.7	2.6	0.38	0.8	0.03	2.07	0.53	10
1	11		16.72	16.72	33.601	24.508	342.0	0.038	5.70	102.7	2.6	0.38	0.8	0.03	2.07	0.53	11
	20	ISL	16.70	16.70	33.600	24.512	341.9	0.068	5.72	103.0	2.1	0.38	0.9	0.03	2.17	0.61	20
1	21		16.70	16.70	33.601	24.512	341.9	0.072	5.72	103.0	2.1	0.38	0.9	0.03	2.18	0.62	21
	30	ISL	16.61	16.61	33.596	24.530	340.5	0.103	5.69	102.3	2.4	0.40	1.1	0.04	2.02	0.60	30
1	31		16.60	16.59	33.596	24.532	340.3	0.106	5.69	102.3	2.4	0.40	1.1	0.04	2.00	0.60	31
1	41		13.75	13.74	33.518	25.095	286.9	0.137	5.10	86.6	7.8	0.83	6.2	0.28	0.46	0.46	41
	50	ISL	11.79	11.78	33.466	25.439	254.2	0.162	4.71	76.7	10.6	1.09	11.5	0.10	0.22	0.28	50
1	51		11.62	11.61	33.463	25.468	251.5	0.164	4.67	75.8	10.9	1.12	12.1	0.07	0.19	0.26	51
1	61		10.58	10.57	33.530	25.707	228.9	0.188	4.17	66.2	15.9	1.43	17.1	0.01	0.08	0.13	61
1	75		10.21	10.20	33.587	25.815	218.9	0.220	3.87	60.9	18.9	1.55	19.2	0.00	0.05	0.12	76
1	90		9.41	9.40	33.684	26.024	199.3	0.251	3.68	57.0	23.0	1.66	21.5	0.00	0.02	0.07	91
	100	ISL	9.41	9.40	33.780	26.099	192.3	0.270	3.39	52.5	25.4	1.75	22.7	0.00	0.02	0.06	101
1	111		9.41	9.40	33.853	26.156	187.2	0.291	3.03	46.9	27.7	1.85	23.9	0.00	0.02	0.05	112
	125	ISL	9.37	9.36	33.953	26.241	179.4	0.317	2.68	41.5	30.4	1.97	25.2	0.01	0.02	0.06	126
1	131		9.35	9.34	33.993	26.276	176.2	0.328	2.56	39.6	31.5	2.02	25.7	0.01	0.02	0.06	132
	150	ISL	9.08	9.06	34.062	26.374	167.3	0.360	2.32	35.7	35.1	2.14	27.2	0.00	0.01	0.05	151
1	157		8.98	8.96	34.079	26.403	164.6	0.372	2.25	34.6	36.2	2.17	27.6	0.00	0.01	0.05	158
1	188		8.97	8.95	34.146	26.458	160.0	0.422	1.81	27.8	38.7	2.29	28.6	0.00	0.01	0.06	189
	200	ISL	8.87	8.85	34.167	26.490	157.2	0.441	1.70	26.1	40.2	2.33	29.0	0.00	0.01	0.05	202
1	223		8.62	8.60	34.197	26.553	151.5	0.477	1.54	23.5	43.5	2.41	29.9	0.00	0.01	0.04	225
	250	ISL	8.30	8.27	34.214	26.615	146.0	0.517	1.35	20.4	47.1	2.52	31.4	0.00			252
1	259		8.20	8.17	34.217	26.633	144.4	0.530	1.29	19.5	48.3	2.55	31.9	0.00			261
	300	ISL	7.86	7.83	34.232	26.696	139.1	0.588	1.12	16.8	53.1	2.65	33.0	0.00			302
1	301		7.85	7.82	34.232	26.697	138.9	0.590	1.12	16.8	53.2	2.65	33.0	0.00			303
1	357		7.60	7.56	34.238	26.739	135.8	0.666	1.01	15.0	56.7	2.74	34.0	0.00			360
	400	ISL	7.16	7.12	34.250	26.811	129.3	0.723	0.83	12.2	63.4	2.84	35.6	0.00			403
1	424		6.90	6.86	34.258	26.854	125.5	0.754	0.72	10.6	67.4	2.90	36.6	0.00			428
1	494		6.40	6.36	34.265	26.926	119.2	0.840	0.51	7.4	74.3	3.01	38.3	0.00			498
	500	ISL	6.35	6.30	34.267	26.934	118.4	0.847	0.50	7.2	75.1	3.02	38.4	0.00			504
1	573		5.77	5.72	34.300	27.034	109.3	0.930	0.33	4.7	84.4	3.13	40.2	0.00			578

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 59.3 N	120 21.4 W	12/09/87	1335 GMT	762 M	310	16 KT	310 06 07	1	1010.9 MB	16.9 C	16.1 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	16.25	16.25	33.529	24.560	336.6	0.000	5.91	105.5	1.3	0.33	0.0	0.00	1.81	0.74	0
1	1		16.25	16.25	33.529	24.560	336.7	0.003	5.91	105.5	1.3	0.33	0.0	0.00	1.81	0.74	1
	10	ISL	16.25	16.25	33.529	24.561	336.9	0.034	5.94	106.0	1.3	0.33	0.0	0.00	1.83	0.75	10
1	11		16.25	16.25	33.529	24.561	336.9	0.037	5.94	106.0	1.3	0.33	0.0	0.00	1.83	0.75	11
	20	ISL	15.55	15.55	33.398	24.618	331.8	0.067	5.95	104.7	1.8	0.35	0.0	0.01	1.55	0.63	20
1	21		15.42	15.42	33.368	24.624	331.3	0.070	5.95	104.4	1.9	0.35	0.0	0.01	1.50	0.61	21
	30	ISL	13.34	13.34	33.128	24.876	307.3	0.099	5.93	99.6	3.3	0.47	1.0	0.06	0.93	0.42	30
1	32		12.88	12.88	33.100	24.946	300.7	0.105	5.93	98.6	3.7	0.51	1.2	0.07	0.79	0.38	32
1	42		12.11	12.10	33.318	25.264	270.7	0.134	5.29	86.7	6.7	0.83	7.3	0.04	0.32	0.28	42
	50	ISL	11.40	11.39	33.415	25.471	251.2	0.155	4.82	77.8	10.4	1.10	12.1	0.02	0.16	0.19	50
1	52		11.21	11.20	33.433	25.519	246.6	0.160	4.71	75.7	11.5	1.17	13.2	0.02	0.14	0.17	52
1	62		10.30	10.29	33.527	25.752	224.6	0.183	4.14	65.3	16.9	1.44	17.7	0.01	0.05	0.07	62
	75	ISL	10.01	10.00	33.675	25.917	209.1	0.211	3.62	56.8	21.1	1.63	20.5	0.01	0.04	0.11	76
1	77		9.96	9.95	33.683	25.932	207.8	0.216	3.57	55.9	21.5	1.65	20.7	0.01	0.04	0.12	78
1	92		9.92	9.91	33.718	25.966	204.9	0.247	3.44	53.9	22.6	1.67	21.2	0.01	0.04	0.09	93
	100	ISL	9.86	9.85	33.779	26.024	199.6	0.263	3.22	50.4	24.3	1.74	22.1	0.01	0.04	0.08	101
1	112		9.75	9.74	33.883	26.124	190.3	0.286	2.86	44.7	27.3	1.87	23.7	0.01	0.03	0.08	113
	125	ISL	9.64	9.63	33.959	26.202	183.2	0.310	2.60	40.5	29.7	1.96	24.9	0.01	0.02	0.07	126
1	133		9.57	9.56	33.994	26.241	179.6	0.325	2.47	38.4	31.0	2.01	25.5	0.01	0.01	0.07	134
	150	ISL	9.46	9.44	34.041	26.296	174.7	0.355	2.30	35.7	33.0	2.08	26.4	0.01	0.01	0.06	151
1	159		9.41	9.39	34.058	26.318	172.9	0.371	2.23	34.6	33.8	2.11	26.7	0.01	0.01	0.06	160
1	190		9.22	9.20	34.123	26.400	165.7	0.423	2.01	31.1	36.6	2.22	27.7	0.01	0.01	0.07	192
	200	ISL	9.13	9.11	34.144	26.431	162.9	0.440	1.92	29.6	37.9	2.26	28.2	0.01	0.01	0.06	202
1	225		8.90	8.88	34.187	26.501	156.6	0.480	1.70	26.1	40.9	2.34	29.4	0.01	0.01	0.05	227
	250	ISL	8.80	8.77	34.207	26.533	154.1	0.518	1.53	23.4	42.4	2.41	29.8	0.01			252
1	261		8.74	8.71	34.211	26.546	153.1	0.535	1.46	22.3	43.2	2.44	30.0	0.01			263
	300	ISL	8.06	8.03	34.229	26.664	142.2	0.593	1.19	17.9	51.0	2.60	32.4	0.00			302
1	302		8.02	7.99	34.230	26.671	141.6	0.596	1.18	17.7	51.4	2.61	32.5	0.00			304
1	358		7.52	7.48	34.242	26.754	134.4	0.673	0.95	14.1	58.1	2.74	34.3	0.00			361
	400	ISL	7.16	7.12	34.257	26.817	128.8	0.728	0.77	11.4	63.5	2.87	35.7	0.00			403
1	424		6.97	6.93	34.267	26.851	125.8	0.759	0.67	9.8	66.5	2.93	36.4	0.00			428
1	494		6.53	6.48	34.290	26.929	119.1	0.844	0.49	7.1	73.4	3.00	38.1	0.00			498
	500	ISL	6.50	6.45	34.292	26.935	118.6	0.852	0.48	7.0	73.9	3.01	38.2	0.00			504
1	574		6.18	6.13	34.314	26.994	113.7	0.938	0.35	5.0	79.5	3.08	39.2	0.00			579

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.7 N	121 2.7 W	12/09/87	1957 GMT	3779 M	300	11 KT	330 08 07	1	1011.5 MB	19.2 C	17.3 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
	0	ISL	17.97	17.97	33.627	24.229	368.2	0.000	5.60	103.3	1.3	0.29	0.0	0.00	0.42	0.13	0
1	1		17.97	17.97	33.627	24.229	368.2	0.004	5.60	103.3	1.3	0.29	0.0	0.00	0.42	0.13	1
	10	ISL	17.91	17.91	33.630	24.246	366.9	0.037	5.62	103.6	1.3	0.30	0.0	0.00	0.41	0.15	10
1	11		17.90	17.90	33.631	24.250	366.6	0.040	5.62	103.6	1.3	0.30	0.0	0.00	0.41	0.15	11
	20	ISL	17.85	17.85	33.632	24.263	365.7	0.073	5.62	103.5	1.3	0.30	0.0	0.00	0.43	0.17	20
1	22		17.84	17.84	33.632	24.265	365.5	0.081	5.62	103.5	1.3	0.30	0.0	0.00	0.44	0.17	22
	30	ISL	17.71	17.70	33.626	24.292	363.2	0.110	5.61	103.0	1.4	0.31	0.1	0.00	0.48	0.19	30
1	32		17.68	17.67	33.624	24.298	362.7	0.117	5.61	103.0	1.4	0.31	0.1	0.00	0.50	0.19	32
1	43		14.78	14.77	33.539	24.895	306.0	0.154	5.48	95.0	4.9	0.64	3.9	0.21	0.68	0.34	43
	50	ISL	13.61	13.60	33.567	25.162	280.7	0.174	5.07	85.9	7.7	0.88	7.6	0.34	0.62	0.41	50
1	53		13.25	13.24	33.584	25.248	272.6	0.183	4.88	82.0	8.8	0.98	9.1	0.39	0.59	0.42	53
1	63		12.52	12.51	33.605	25.408	257.6	0.209	4.48	74.2	11.1	1.17	12.1	0.44	0.38	0.30	63
1	73		11.16	11.15	33.652	25.699	230.0	0.234	3.91	62.9	15.8	1.45	17.1	0.30	0.21	0.17	74
	75	ISL	11.00	10.99	33.658	25.732	226.9	0.238	3.87	62.0	16.4	1.48	17.7	0.26	0.19	0.16	76
1	88		10.30	10.29	33.696	25.885	212.6	0.267	3.67	57.9	19.8	1.62	20.1	0.06	0.12	0.12	89
	100	ISL	9.72	9.71	33.780	26.048	197.2	0.291	3.25	50.7	23.8	1.78	22.7	0.03	0.05	0.09	101
1	103		9.60	9.59	33.802	26.085	193.8	0.297	3.14	48.8	24.7	1.81	23.3	0.02	0.03	0.09	104
1	124		9.19	9.18	33.891	26.222	181.1	0.337	2.92	45.0	28.5	1.90	25.2	0.01	0.02	0.08	125
	125	ISL	9.18	9.17	33.894	26.226	180.7	0.338	2.92	45.0	28.6	1.90	25.2	0.01	0.02	0.08	126
1	149		8.91	8.89	33.935	26.301	174.1	0.381	2.90	44.4	30.6	1.94	25.9	0.01	0.01	0.04	150
	150	ISL	8.89	8.87	33.936	26.305	173.7	0.383	2.90	44.4	30.7	1.94	25.9	0.01	0.01	0.04	151
1	180		8.42	8.40	33.999	26.427	162.5	0.433	2.89	43.8	34.1	2.00	26.9	0.01	0.01	0.04	181
	200	ISL	8.59	8.57	34.117	26.494	156.6	0.465	2.12	32.3	38.4	2.25	29.0	0.01	0.01	0.06	202
1	210		8.68	8.66	34.169	26.521	154.3	0.481	1.73	26.4	40.6	2.37	30.0	0.01	0.01	0.07	212
1	240		8.25	8.23	34.158	26.579	149.2	0.526	1.66	25.1	44.2	2.42	31.0	0.01			242
	250	ISL	8.08	8.05	34.155	26.602	147.1	0.541	1.65	24.8	45.6	2.45	31.5	0.01			252
1	280		7.64	7.61	34.159	26.670	141.0	0.584	1.54	23.0	50.1	2.55	32.9	0.01			282
	300	ISL	7.52	7.49	34.189	26.711	137.4	0.612	1.31	19.5	53.0	2.64	33.8	0.01			302
1	337		7.34	7.31	34.250	26.785	130.9	0.662	0.84	12.4	58.8	2.80	35.3	0.01			340
1	397		6.52	6.48	34.278	26.920	118.5	0.736	0.52	7.6	71.0	2.98	37.9	0.00			400
	400	ISL	6.50	6.46	34.280	26.924	118.1	0.740	0.51	7.4	71.4	2.99	38.0	0.00			403
1	464		6.18	6.14	34.314	26.993	112.2	0.814	0.35	5.0	77.9	3.09	39.3	0.00			468
	500	ISL	5.94	5.90	34.328	27.035	108.5	0.853	0.31	4.4	82.0	3.12	40.0	0.00			504
1	537		5.70	5.65	34.343	27.077	104.8	0.893	0.26	3.7	86.3	3.16	40.8	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 19.0 N	121 43.1 W	13/09/87	0137 GMT	4055 M	320	16 KT	330 04 05	1	1012.2 MB	17.5 C	16.2 C	7/8	NS

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	17.85	17.85	32.995	23.774	411.5	0.000	5.61	102.9	2.3	0.38	0.0	0.00	0.08	0.02	0
1	1		17.85	17.85	32.995	23.775	411.6	0.004	5.61	102.9	2.3	0.38	0.0	0.00	0.08	0.02	1
	10	ISL	17.83	17.83	32.996	23.780	411.3	0.041	5.62	103.1	2.2	0.39	0.0	0.00	0.07	0.02	10
1	12		17.82	17.82	32.997	23.784	411.1	0.049	5.62	103.0	2.2	0.39	0.0	0.00	0.07	0.02	12
	20	ISL	17.77	17.77	33.007	23.804	409.5	0.082	5.63	103.1	2.2	0.38	0.0	0.00	0.08	0.02	20
1	22		17.75	17.75	33.007	23.809	409.0	0.090	5.63	103.1	2.2	0.38	0.0	0.00	0.08	0.02	22
	30	ISL	17.58	17.57	33.067	23.896	401.0	0.123	5.69	103.9	2.1	0.37	0.0	0.00	0.10	0.03	30
1	32		17.54	17.53	33.097	23.928	398.0	0.131	5.72	104.4	2.1	0.37	0.0	0.00	0.10	0.03	32
1	42		16.49	16.48	33.098	24.176	374.6	0.169	5.96	106.6	2.0	0.37	0.0	0.00	0.11	0.04	42
	50	ISL	15.05	15.04	33.029	24.444	349.2	0.198	6.19	107.6	2.1	0.39	0.0	0.00	0.13	0.05	50
1	52		14.69	14.68	33.010	24.507	3 43.2	0.205	6.23	107.5	2.1	0.39	0.0	0.00	0.13	0.05	52
1	63		13.59	13.58	32.941	24.682	326.7	0.242	6.19	104.4	2.2	0.41	0.0	0.00	0.16	0.08	63
1	73		12.83	12.82	32.927	24.823	313.5	0.274	6.16	102.2	2.4	0.44	0.0	0.00	0.24	0.15	74
	75	ISL	12.82	12.81	32.954	24.846	311.4	0.280	6.12	101.6	2.5	0.46	0.2	0.03	0.26	0.17	76
1	88		12.75	12.74	33.110	24.981	298.9	0.320	5.79	96.0	3.8	0.60	2.5	0.20	0.35	0.24	89
	100	ISL	12.61	12.60	33.215	25.090	288.9	0.355	5.52	91.3	4.9	0.69	4.4	0.07	0.30	0.22	101
1	103		12.58	12.57	33.250	25.123	285.8	0.364	5.44	90.0	5.3	0.72	5.0	0.03	0.27	0.21	104
1	124		10.90	10.89	33.425	25.570	243.4	0.419	4.68	74.7	11.6	1.14	12.6	0.01	0.07	0.10	125
	125	ISL	10.83	10.81	33.436	25.591	241.4	0.422	4.64	74.0	12.0	1.16	13.0	0.01	0.07	0.10	126
1	150		9.47	9.45	33.699	26.027	200.2	0.477	3.67	56.9	22.7	1.67	21.5	0.01	0.01	0.03	151
1	182		8.82	8.80	33.923	26.306	174.2	0.537	3.12	47.7	30.6	1.91	25.2	0.01	0.00	0.03	183
	200	ISL	8.50	8.48	33.960	26.385	166.9	0.568	3.26	49.5	32.2	1.91	25.5	0.01	0.00	0.04	202
1	213		8.31	8.29	33.976	26.427	163.1	0.589	3.29	49.7	33.5	1.91	25.8	0.01	0.00	0.04	215
1	243		8.06	8.04	3 4.086	26.551	151.8	0.636	2.15	32.3	42.8	2.31	30.1	0.01			245
	250	ISL	7.96	7.93	34.089	26.568	150.3	0.647	2.16	32.4	44.0	2.32	30.5	0.01			252
1	283		7.46	7.43	34.077	26.631	144.6	0.696	2.19	32.5	48.2	2.39	31.4	0.01			285
	300	ISL	7.30	7.27	34.089	26.664	141.7	0.720	1.99	29.4	51.1	2.46	32.4	0.01			302
1	337		7.06	7.03	34.135	26.734	135.5	0.771	1.41	20.7	57.5	2.65	34.6	0.01			340
1	397		6.86	6.82	34\233	26.839	126.4	0.850	0.75	11.0	65.7	2.92	36.8	0.00			400
	400	ISL	6.84	6.80	34.236	26.844	125.9	0.854	0.73	10.7	66.1	2.93	36.9	0.00			403
2	469		6.35	6.31	34.278	26.943	117.2	0.938	0.48	6.9	74.9	3.08	38.8	0.00			473
	500	ISL	6.15	6.11	34.296	26.983	113.6	0.973	0.40	5.8	78.6	3.13	39.5	0.00			504
2	540		5.90	5.85	34.321	27.035	109.0	1.018	0.29	4.2	83.3	3.19	40.3	0.00			545

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 59.3 N	122 24.2 W	13/09/87	0749 GMT	4082 M	310	14 KT			1014.2 MB	18.3 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 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.53	18.53	33.181	23.750	413.9	0.000	5.52	102.7	2.5	0.37	0.0	0.00	0.08	0.02	0
1	10		18.54	18.54	33.177	23.745	414.7	0.041	5.51	102.5	2.2	0.36	0.0	0.00	0.08	0.02	10
1	20		18.55	18.55	33.179	23.745	415.1	0.083	5.51	102.5	2.1	0.36	0.0	0.00	0.08	0.02	20
1	30		18.56	18.55	33.179	23.742	415.7	0.124	5.53	102.9	2.1	0.35	0.0	0.00	0.09	0.02	30
1	41		18.35	18.34	33.199	23.810	409.6	0.170	5.59	103.6	2.0	0.35	0.0	0.00	0.10	0.02	41
	50	ISL	16.83	16.82	33.142	24.131	379.2	0.205	5.89	106.1	1.8	0.36	0.0	0.00	0.12	0.04	50
1	51		16.63	16.62	33.139	24.175	375.0	0.209	5.92	106.2	1.8	0.36	0.0	0.00	0.12	0.04	51
1	61		15.26	15.25	33.215	24.542	340.2	0.245	6.03	105.4	1.9	0.35	0.0	0.00	0.22	0.11	61
1	71		14.64	14.63	33.269	24.718	323.7	0.278	5.98	103.2	2.4	0.34	0.0	0.00	0.31	0.20	72
	75	ISL	14.55	14.54	33.294	24.756	320.1	0.291	5.96	102.7	2.5	0.34	0.0	0.00	0.32	0.23	76
1	85		14.38	14.37	33.354	24.839	312.5	0.323	5.90	101.4	2.6	0.35	0.1	0.01	0.35	0.28	86
	100	ISL	13.71	13.70	33.424	25.032	294.5	0.368	5.66	95.9	3.5	0.45	1.5	0.21	0.29	0.27	101
1	101		13.66	13.65	33.427	25.045	293.3	0.371	5.64	95.5	3.6	0.46	1.6	0.22	0.28	0.27	102
1	121		12.63	12.61	33.423	25.248	274.4	0.428	5.28	87.5	5.9	0.71	6.0	0.02	0.14	0.16	122
	125	ISL	12.32	12.30	33.431	25.313	268.1	0.439	5.12	84.3	7.2	0.81	7.6	0.02	0.12	0.14	126
1	146		10.75	10.73	33.526	25.676	233.9	0.491	4.20	66.9	15.1	1.34	16.1	0.01	0.04	0.07	147
	150	ISL	10.55	10.53	33.558	25.735	228.2	0.501	4.06	64.4	16.4	1.41	17.2	0.01	0.04	0.06	151
1	177		9.60	9.58	33.775	26.066	197.2	0.558	3.38	52.6	23.8	1.73	22.4	0.01	0.01	0.03	178
	200	ISL	9.04	9.02	33.881	26.239	181.0	0.602	3.22	49.5	28.4	1.85	24.5	0.00	0.00	0.03	202
1	208		8.89	8.87	33.907	26.283	176.9	0.616	3.20	49.0	29.8	1.88	25.0	0.00	0.00	0.03	210
1	237		8.41	8.39	33.997	26.428	163.5	0.665	2.95	44.7	35.0	2.01	26.9	0.00			239
	250	ISL	8.25	8.22	34.033	26.481	158.7	0.686	2.68	40.5	38.1	2.12	28.2	0.00			252
1	278		7.93	7.90	34.091	26.574	150.2	0.729	2.07	31.0	45.0	2.36	31.0	0.00			280
	300	ISL	7.64	7.61	34.106	26.629	145.3	0.762	1.84	27.4	49.1	2.47	32.4	0.00			302
1	334		7.22	7.19	34.112	26.693	139.4	0.810	1.61	23.8	54.5	2.59	34.0	0.00			337
1	395		6.65	6.61	34.147	26.799	129.9	0.892	1.09	15.9	63.8	2.81	36.8	0.00			3 98
	400	ISL	6.62	6.58	34.151	26.806	129.3	0.899	1.05	15.3	64.4	2.83	37.0	0.00			403
1	462		6.34	6.30	34.212	26.892	121.9	0.977	0.65	9.4	71.7	2.99	38.6	0.00			466
	500	ISL	6.09	6.05	34.246	26.951	116.5	1.022	0.49	7.0	77.2	3.08	39.6	0.00			504
1	533		5.88	5.83	34.275	27.001	112.1	1.060	0.35	5.0	81.9	3.15	40.5	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8709 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 4.6 W	13/09/87	1344 GMT	4118 M	320	11 KT	330 06 08	2	1014.9 MB	19.3 C	17.1 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	18.99	18.99	33.327	23.747	414.2	0.000	5.42	101.7	2.2	0.36	0.1	0.00	0.07	0.02	0
1	1		18.99	18.99	33.327	23.747	414.3	0.004	5.42	101.7	2.2	0.36	0.1	0.00	0.07	0.02	1
	10	ISL	18.99	18.99	33.324	23.745	414.7	0.041	5.43	101.9	2.1	0.36	0.0	0.00	0.07	0.01	10
1	17		18.99	18.99	33.321	23.743	415.2	0.070	5.43	101.9	2.1	0.36	0.0	0.00	0.08	0.01	17
	20	ISL	18.92	18.92	33.317	23.757	413.9	0.083	5.44	102.0	2.1	0.36	0.0	0.00	0.08	0.01	20
	30	ISL	18.67	18.66	33.304	23.811	409.2	0.124	5.51	102.8	2.1	0.35	0.0	0.00	0.10	0.02	30
1	32		18.62	18.61	33.301	23.821	408.3	0.132	5.54	103.3	2.1	0.35	0.0	0.00	0.10	0.02	32
1	43		17.34	17.33	33.249	24.093	382.6	0.176	5.81	105.7	2.1	0.36	0.0	0.00	0.13	0.04	43
	50	ISL	16.66	16.65	33.245	24.250	367.9	0.202	5.93	106.5	2.0	0.37	0.0	0.00	0.15	0.05	50
1	53		16.33	16.32	33.241	24.323	361.0	0.213	5.98	106.7	2.0	0.37	0.0	0.00	0.16	0.06	53
1	63		14.75	14.74	33.188	24.632	331.7	0.248	6.17	106.7	2.5	0.38	0.0	0.00	0.18	0.11	63
1	74		14.02	14.01	33.222	24.812	314.8	0.283	6.06	103.3	2.9	0.42	0.1	0.01	0.33	0.22	75
	75	ISL	13.96	13.95	33.225	24.827	313.4	0.286	6.04	102.8	3.0	0.43	0.2	0.02	0.33	0.23	76
1	83		13.46	13.45	33.242	24.942	302.6	0.311	5.83	98.2	3.7	0.52	1.2	0.12	0.31	0.27	84
1	99		12.17	12.16	33.292	25.233	275.0	0.357	5.21	85.5	7.1	0.85	7.6	0.04	0.22	0.20	100
	100	ISL	12.10	12.09	33.297	25.250	273.4	0.360	5.17	84.7	7.4	0.87	8.0	0.04	0.21	0.20	101
1	114		11.23	11.22	33.385	25.480	251.8	0.397	4.69	75.4	11.1	1.12	12.4	0.02	0.13	0.18	115
	125	ISL	10.72	10.71	33.493	25.655	235.3	0.423	4.31	68.6	14.1	1.31	15.4	0.01	0.07	0.12	126
1	130		10.53	10.51	33.543	25.727	228.6	0.435	4.16	65.9	15.4	1.38	16.6	0.01	0.05	0.09	131
	150	ISL	9.91	9.89	33.665	25.928	209.7	0.479	3.83	59.9	19.6	1.56	19.7	0.00	0.03	0.04	151
1	156		9.74	9.72	33.695	25.979	204.9	0.491	3.79	59.1	20.7	1.59	20.3	0.00	0.02	0.04	157
1	182		8.80	8.78	33.865	26.264	178.2	0.541	3.81	58.2	26.1	1.67	22.6	0.00	0.00	0.03	183
	200	ISL	8.49	8.47	33.938	26.369	168.4	0.572	3.51	53.3	30.0	1.79	24.5	0.00	0.00	0.03	202
1	213		8.36	8.34	33.971	26.415	164.3	0.594	3.29	49.8	32.5	1.87	25.6	0.00	0.00	0.03	215
1	243		8.03	8.01	34.004	26.491	157.5	0.642	3.30	49.6	35.6	1.92	26.4	0.00			245
	250	ISL	7.96	7.93	34.012	26.508	156.0	0.653	3.19	47.9	36.8	1.96	27.0	0.00			252
1	285		7.59	7.56	34.043	26.586	148.9	0.707	2.53	37.6	43.9	2.20	30.2	0.00			287
	300	ISL	7.36	7.33	34.043	26.619	146.0	0.729	2.42	35.8	46.6	2.26	31.1	0.00			302
1	340		6.75	6.72	34.036	26.698	138.7	0.786	2.23	32.5	53.6	2.40	33.1	0.00			3 43
1	400		6.13	6.09	34.060	26.798	129.6	0.866	1.56	22.4	65.3	2.69	36.9	0.00			403
1	467		5.60	5.56	34.129	26.919	118.6	0.949	0.86	12.2	78.2	2.96	40.0	0.00			471
	500	ISL	5.44	5.40	34.169	26.970	114.0	0.988	0.67	9.5	83.2	3.04	40.9	0.00			504
1	536		5.27	5.23	34.213	27.025	109.0	1.028	0.47	6.6	88.7	3.12	41.9	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 19.7 N	123 45.3 W	13/09/87	2000 GMT	3 935 M	350	09 KT	3 50 04 05	1	1016.5 MB	20.8 C	18.8 C	2/8	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
1	0		19.02	19.02	33.218	23.656	422.9	0.000	5.48	102.9	2.1	0.36	0.1	0.00	0.06	0.01	0
	10	ISL	18.93	18.93	33.218	23.679	421.0	0.042	5.49	102.9	2.0	0.36	0.1	0.00	0.06	0.01	10
1	16		18.87	18.87	33.218	23.694	419.8	0.067	5.50	103.0	2.0	0.36	0.1	0.00	0.06	0.01	16
	20	ISL	18.87	18.87	33.218	23.694	419.9	0.084	5.50	103.0	2.0	0.36	0.1	0.00	0.06	0.01	20
	30	ISL	18.86	18.85	33.220	23.699	419.8	0.126	5.50	102.9	2.0	0.36	0.1	0.00	0.07	0.01	30
1	31		18.86	18.85	33.220	23.699	419.9	0.130	5.50	102.9	2.0	0.36	0.1	0.00	0.07	0.01	31
1	42		17.74	17.73	33.215	23.971	3 94.2	0.175	5.89	108.0	2.1	0.34	0.1	0.00	0.09	0.02	42
	50	ISL	17.23	17.22	33.395	24.231	369.7	0.206	5.98	108.7	2.0	0.29	0.1	0.00	0.09	0.02	50
1	52		17.10	17.09	33.436	24.293	363.8	0.213	5.99	108.6	2.0	0.28	0.1	0.00	0.09	0.02	52
1	63		15.86	15.85	33.356	24.518	342.7	0.252	6.08	107.6	2.1	0.30	0.1	0.00	0.10	0.03	63
1	73		16.21	16.20	33.604	24.630	332.4	0.286	5.97	106.5	2.1	0.26	0.1	0.00	0.11	0.04	74
	75	ISL	15.99	15.98	33.575	24.657	329.8	0.292	5.98	106.2	2.1	0.27	0.1	0.00	0.11	0.04	76
1	83		14.96	14.95	33.431	24.775	318.8	0.318	6.00	104.3	2.1	0.30	0.1	0.00	0.14	0.06	84
1	98		14.87	14.86	33.622	24.942	303.3	0.365	5.80	100.8	2.4	0.30	0.1	0.00	0.25	0.24	99
	100	ISL	14.92	14.91	33.661	24.961	301.5	0.371	5.78	100.6	2.4	0.29	0.1	0.01	0.25	0.24	101
1	114		15.12	15.10	33.878	25.085	290.2	0.412	5.63	98.5	2.7	0.27	0.3	0.09	0.22	0.26	115
	125	ISL	14.62	14.60	33.856	25.177	281.7	0.444	5.55	96.1	3.1	0.33	1.3	0.14	0.18	0.24	126
1	129		14.34	14.32	33.826	25.213	278.3	0.455	5.52	95.0	3.3	0.37	1.8	0.15	0.17	0.23	130
	150	ISL	12.48	12.46	33.663	25.463	254.6	0.511	5.27	87.2	5.7	0.65	5.8	0.05	0.12	0.15	151
1	155		12.01	11.99	33.636	25.532	248.1	0.524	5.18	84.8	6.6	0.73	7.1	0.02	0.11	0.13	156
1	181		10.28	10.26	33.748	25.931	210.3	0.583	4.49	70.9	14.8	1.21	15.3	0.00	0.02	0.03	182
	200	ISL	9.37	9.35	33.833	26.149	189.7	0.621	4.20	65.0	20.4	1.45	19.2	0.00	0.01	0.02	202
1	212		8.93	8.91	33.884	26.259	179.3	0.643	4.05	62.1	23.8	1.57	21.1	0.00	0.00	0.02	214
1	242		8.27	8.25	33.995	26.448	161.7	0.694	3.54	53.5	31.8	1.80	24.9	0.00			244
	250	ISL	8.12	8.09	34.005	26.479	158.8	0.707	3.50	52.7	33.3	1.83	25.4	0.00			252
1	283		7.56	7.53	34.012	26.566	150.8	0.758	3.36	49.9	39.3	1.96	27.2	0.00			285
	300	ISL	7.30	7.27	34.018	26.608	147.0	0.784	3.08	45.5	43.3	2.08	28.8	0.00			302
1	340		6.76	6.73	34.034	26.695	139.0	0.841	2.31	33.7	53.2	2.38	32.9	0.00			343
1	400		6.13	6.09	34.069	26.805	128.9	0.921	1.54	22.1	66.1	2.71	36.9	0.00			403
1	466		5.58	5.54	34.135	26.926	117.8	1.003	0.89	12.6	79.0	2.98	40.2	0.00			470
	500	ISL	5.47	5.43	34.181	26.976	113.5	1.042	0.68	9.6	83.5	3.07	40.9	0.00			504
1	536		5.35	5.31	34.230	27.029	108.7	1.082	0.45	6.4	88.3	3.16	41.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.1 N	117 46.1 W	11/09/87	0348 GMT	61 M					1010.8 MB	20.7 C	19.5 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		21.21	21.21	33.593	23.368	450.4	0.000	5.70	111.5	2.6	0.24	0.0	0.00	0.84	0.11	0
1	10		19.28	19.28	33.537	23.834	406.3	0.043	6.20	117.1	3.1	0.26	0.0	0.01	1.85	0.17	10
	20	ISL	16.37	16.37	33.452	24.474	345.5	0.080	6.14	109.8	4.1	0.48	0.2	0.09	2.83	0.52	20
1	21		16.09	16.09	33.447	24.534	339.8	0.084	6.13	109.0	4.2	0.50	0.2	0.10	2.85	0.55	21
	30	ISL	14.77	14.77	33.443	24.823	312.5	0.113	5.58	96.7	5.5	0.58	1.2	0.19	0.98	0.50	30
1	31		14.68	14.68	33.443	24.842	310.7	0.116	5.51	95.3	5.6	0.59	1.3	0.20	0.74	0.49	31
1	42		13.93	13.92	33.447	25.003	295.6	0.150	5.18	88.2	6.8	0.75	3.2	0.38	0.28	0.31	42
	50	ISL	13.00	12.99	33.490	25.225	274.7	0.172	4.71	78.7	9.3	0.95	7.5	0.46	0.19	0.25	50
1	52		12.77	12.76	33.502	25.280	269.5	0.178	4.59	76.3	9.9	1.00	8.6	0.48	0.17	0.24	52

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 25.3 N	117 53.8 W	10/09/87	2111 GMT	612 M	290	03 KT	270 01 07	1	1012.7 MB	22.7 C	20.0 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
1	0		21.13	21.13	33.612	23.404	446.9	0.000	5.39	105.3	2.4	0.29	0.0	0.00	0.15	0.02	0
1	10		20.45	20.45	33.598	23.576	430.9	0.044	5.45	105.2	2.4	0.29	0.0	0.00	0.17	0.02	10
	20	ISL	18.51	18.51	33.507	24.005	3 90.2	0.085	5.79	107.8	2.4	0.32	0.0	0.00	0.31	0.05	20
1	21		18.26	18.26	33.495	24.058	385.3	0.089	5.83	108.1	2.4	0.32	0.0	0.00	0.32	0.06	21
	30	ISL	15.67	15.67	33.365	24.566	337.0	0.121	6.04	106.5	2.8	0.37	0.0	0.00	0.31	0.14	30
1	31		15.41	15.41	33.355	24.616	332.3	0.125	6.06	106.3	2.9	0.38	0.0	0.00	0.31	0.15	31
1	42		14.65	14.64	33.328	24.760	318.8	0.160	6.10	105.4	3.0	0.41	0.0	0.00	0.60	0.26	42
	50	ISL	13.83	13.82	33.344	24.945	301.4	0.185	5.82	98.9	4.2	0.52	1.7	0.05	0.67	0.38	50
1	52		13.64	13.63	33.352	24.990	2 97.2	0.191	5.73	97.0	4.6	0.55	2.2	0.07	0.67	0.40	52
1	62		13.17	13.16	33.384	25.110	286.0	0.220	5.42	90.8	5.8	0.68	4.5	0.14	0.65	0.40	62
1	73		12.61	12.60	33.416	25.245	273.4	0.251	5.10	84.5	7.4	0.84	7.2	0.12	0.45	0.35	74
	75	ISL	12.51	12.50	33.439	25.282	269.9	0.257	5.01	82.8	8.1	0.90	8.1	0.11	0.41	0.33	76
1	87		11.87	11.86	33.571	25.506	248.8	0.288	4.50	73.5	12.4	1.25	13.3	0.02	0.17	0.19	88
	100	ISL	11.15	11.14	33.570	25.638	236.5	0.319	4.13	66.4	14.7	1.34	15.7	0.02	0.08	0.12	101
1	103		11.00	10.99	33.567	25.662	234.2	0.326	4.06	65.0	15.1	1.35	16.0	0.02	0.07	0.11	104
1	124		10.50	10.49	33.751	25.894	212.6	0.373	3.59	56.9	19.0	1.53	18.6	0.02	0.04	0.08	125
	125	ISL	10.48	10.47	33.757	25.902	211.8	0.375	3.57	56.6	19.2	1.54	18.7	0.02	0.04	0.08	126
1	149		10.02	10.00	33.859	26.061	197.2	0.424	3.25	51.0	23.3	1.71	21.4	0.01	0.02	0.05	150
	150	ISL	10.00	9.98	33.861	26.066	196.7	0.426	3.24	50.9	23.4	1.71	21.5	0.01	0.02	0.05	151
1	180		9.39	9.37	33.915	26.209	183.6	0.483	3.08	47.7	27.4	1.84	23.6	0.01	0.01	0.04	181
	200	ISL	9.17	9.15	34.006	26.316	173.8	0.519	2.78	42.9	31.0	1.98	25.3	0.00	0.00	0.04	202
1	211		9.10	9.08	34.061	26.371	168.8	0.538	2.58	39.7	33.0	2.06	26.2	0.00	0.00	0.04	213
1	241		9.00	8.97	34.169	26.472	159.8	0.587	2.01	30.9	37.6	2.26	28.1	0.00			243
	250	ISL	8.85	8.82	34.173	26.499	157.3	0.602	1.90	29.1	39.2	2.31	28.8	0.00			252
1	282		8.29	8.26	34.165	26.579	150.0	0.651	1.63	24.7	44.5	2.45	30.9	0.00			284
	300	ISL	8.18	8.15	34.185	26.612	147.2	0.678	1.48	22.3	46.5	2.52	31.6	0.00			302
1	339		8.03	8.00	34.235	26.674	142.0	0.734	1.19	17.9	50.4	2.65	32.7	0.00			342
1	399		7.46	7.42	34.255	26.773	133.2	0.817	0.86	12.8	58.0	2.81	34.5	0.00			402
	400	ISL	7.45	7.41	34.255	26.775	133.1	0.818	0.86	12.8	58.1	2.81	34.5	0.00			403
1	464		7.01	6.97	34.287	26.862	125.4	0.901	0.60	8.8	65.6	2.95	36.3	0.00			468
	500	ISL	6.66	6.61	34.302	26.921	120.0	0.945	0.48	7.0	71.3	3.03	37.5	0.00			504
1	536		6.32	6.27	34.319	26.980	114.7	0.987	0.36	5.2	77.0	3.11	38.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.8 N	118 6.8 W	10/09/87	1746 GMT	752 M	040	05 KT	240 01 05	1	1013.5 MB	21.2 C	19.7 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		20.25	20.25	33.580	23.615	426.8	0.000	5.44	104.6	2.3	0.32	0.0	0.00	0.13	0.03	0
1	10		19.88	19.88	33.573	23.707	418.4	0.042	5.47	104.5	2.3	0.32	0.0	0.00	0.14	0.02	10
	20	ISL	19.21	19.21	33.550	23.862	403.9	0.083	5.54	104.5	2.3	0.32	0.0	0.00	0.17	0.04	20
1	21		19.15	19.15	33.548	23.876	402.6	0.087	5.55	104.6	2.3	0.32	0.0	0.00	0.17	0.04	21
	30	ISL	18.92	18.91	33.532	23.922	398.6	0.123	5.59	104.9	2.3	0.30	0.0	0.00	0.22	0.07	30
1	31		18.90	18.89	33.530	23.926	398.2	0.127	5.59	104.9	2.3	0.30	0.0	0.00	0.22	0.07	31
1	41		16.57	16.56	33.401	24.390	354.2	0.165	6.00	107.7	2.2	0.34	0.0	0.00	0.53	0.17	41
	50	ISL	15.50	15.49	33.351	24.594	335.0	0.196	6.07	106.6	2.2	0.36	0.0	0.00	0.62	0.25	50
1	52		15.31	15.30	33.344	24.630	331.6	0.203	6.09	106.6	2.2	0.37	0.0	0.00	0.64	0.27	52
1	62		13.96	13.95	33.346	24.920	304.2	0.235	5.83	99.3	3.8	0.52	1.8	0.09	0.89	0.39	62
1	72		13.28	13.27	33.355	25.065	290.5	0.264	5.48	92.0	5.0	0.67	4.2	0.24	0.61	0.46	73
	75	ISL	12.94	12.93	33.373	25.147	282.8	0.273	5.30	88.4	6.1	0.76	5.8	0.21	0.51	0.42	76
1	87		11.61	11.60	33.470	25.476	251.6	0.305	4.54	73.7	11.2	1.13	12.4	0.04	0.19	0.21	88
	100	ISL	10.97	10.96	33.532	25.640	236.2	0.337	4.11	65.8	14.8	1.34	16.1	0.03	0.13	0.16	101
1	108		10.75	10.74	33.566	25.706	230.1	0.355	3.93	62.6	16.7	1.43	17.6	0.02	0.10	0.13	109
	125	ISL	10.16	10.15	33.703	25.915	210.5	0.393	3.44	54.1	21.1	1.64	20.6	0.01	0.05	0.08	126
1	128		10.07	10.06	33.728	25.950	207.3	0.399	3.36	52.8	21.8	1.67	21.0	0.01	0.04	0.07	129
	150	ISL	9.52	9.50	33.861	26.146	189.0	0.443	3.05	47.4	26.5	1.84	23.6	0.01	0.01	0.04	151
1	159		9.35	9.33	33.903	26.206	183.4	0.459	2.96	45.8	28.2	1.89	24.4	0.01	0.01	0.03	160
1	190		8.98	8.96	34.006	26.346	170.6	0.514	2.56	39.3	33.1	2.05	26.7	0.01	0.00	0.03	192
	200	ISL	8.89	8.87	34.028	26.378	167.8	0.531	2.46	37.7	34.3	2.10	27.2	0.01	0.00	0.03	202
1	220		8.74	8.72	34.073	26.437	162.5	0.564	2.21	33.8	37.1	2.20	28.2	0.00	0.00	0.04	222
	250	ISL	8.54	8.51	34.200	26.568	150.6	0.611	1.53	23.3	43.9	2.45	30.2	0.01			252
1	261		8.46	8.43	34.242	26.613	146.5	0.628	1.29	19.6	46.4	2.54	31.0	0.01			263
	300	ISL	7.96	7.93	34.249	26.695	139.3	0.683	1.11	16.7	51.8	2.66	32.9	0.01			302
1	312		7.81	7.78	34.239	26.709	138.0	0.700	1.05	15.7	53.1	2.68	33.3	0.01			315
1	368		7.43	7.39	34.264	26.784	131.6	0.775	0.79	11.7	59.3	2.82	34.7	0.01			371
	400	ISL	7.16	7.12	34.278	26.833	127.3	0.817	0.66	9.7	63.4	2.90	35.7	0.01			403
1	430		6.90	6.86	34.287	26.876	123.4	0.854	0.55	8.1	67.3	2.97	36.7	0.01			434
1	495		6.47	6.42	34.287	26.935	118.5	0.933	0.40	5.8	74.5	3.05	38.1	0.00			499
	500	ISL	6.44	6.39	34.289	26.940	118.0	0.939	0.40	5.8	74.9	3.06	38.2	0.00			504
1	562		6.13	6.08	34.326	27.010	112.0	1.010	0.34	4.9	80.8	3.12	39.0	0.00			567
	600	ISL	5.91	5.86	34.346	27.054	108.1	1.052	0.27	3.9	86.1	3.16	39.3	0.01			605
1	622		5.74	5.69	34.358	27.085	105.2	1.076	0.23	3.3	89.6	3.18	39.5	0.01			628
1	673		5.15	5.09				1.127									679
	700	ISL	4.93	4.87	34.416	27.227	91.6	1.152	0.25	3.5	104.7	3.27	41.3	0.01			706
1	713		4.85	4.79	34.425	27.243	90.1	1.164	0.25	3.5	107.1	3.28	41.6	0.01			720
1	748		4.69	4.63	34.437	27.271	87.6	1.195	0.29	4.0	111.5	3.31	41.9	0.02			755

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.0 N	118 15.0 W	10/09/87	1343 GMT	466 M	280	14 KT	280 05 08	1	1014.2 MB	19.0 C	18.2 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
1	0		19.94	19.94	33.584	23.699	418.7	0.000	5.40	103.3	2.3	0.28	0.0	0.00	0.14	0.03	0
1	10		19.65	19.65	33.562	23.758	413.5	0.042	5.47	104.1	2.5	0.29	0.0	0.00	0.11	0.03	10
	20	ISL	18.40	18.40	33.515	24.039	3 87.1	0.082	5.69	105.8	2.4	0.30	0.0	0.00	0.20	0.06	20
1	21		18.22	18.22	33.507	24.077	3 83.5	0.085	5.72	106.0	2.4	0.30	0.0	0.00	0.21	0.07	21
	30	ISL	16.02	16.02	33.375	24.495	343.8	0.118	6.05	107.4	2.4	0.35	0.0	0.00	0.37	0.14	30
1	31		15.79	15.79	33.363	24.538	339.8	0.122	6.08	107.4	2.4	0.36	0.0	0.00	0.39	0.15	31
1	42		15.16	15.15	33.346	24.664	328.0	0.158	6.13	107.0	2.4	0.37	0.1	0.01	0.73	0.36	42
	50	ISL	14.67	14.66	33.401	24.812	314.1	0.184	6.02	104.1	3.1	0.43	1.0	0.05	1.07	0.53	50
1	52		14.50	14.49	33.414	24.859	309.7	0.190	5.99	103.2	3.5	0.46	1.2	0.06	1.13	0.56	52
1	62		12.85	12.84	33.416	25.198	277.6	0.220	5.29	88.1	7.0	0.81	6.6	0.36	0.85	0.52	62
1	73		11.83	11.82	33.461	25.428	255.9	0.249	4.61	75.1	10.7	1.13	12.1	0.11	0.28	0.27	74
	75	ISL	11.64	11.63	33.484	25.481	250.8	0.254	4.48	72.7	11.7	1.19	13.1	0.09	0.23	0.24	76
1	87		10.64	10.63	33.629	25.774	223.2	0.283	3.84	61.1	17.6	1.47	17.9	0.02	0.07	0.10	88
	100	ISL	10.13	10.12	33.697	25.915	210.0	0.311	3.56	56.0	20.8	1.60	20.2	0.01	0.04	0.08	101
1	102		10.08	10.07	33.705	25.929	208.6	0.315	3.53	55.5	21.2	1.62	20.4	0.01	0.03	0.08	103
1	122		9.40	9.39	33.875	26.175	185.6	0.354	2.88	44.6	28.6	1.91	24.6	0.02	0.02	0.05	123
	125	ISL	9.40	9.39	33.895	26.191	184.1	0.360	2.87	44.5	29.0	1.93	24.7	0.02	0.02	0.05	126
1	147		9.36	9.34	33.985	26.268	177.3	0.400	2.82	43.7	30.6	2.00	25.4	0.02	0.01	0.04	148
	150	ISL	9.32	9.30	33.997	26.284	175.8	0.405	2.77	42.9	31.1	2.02	25.6	0.02	0.01	0.04	151
1	179		8.96	8.94	34.098	26.421	163.3	0.454	,2.16	33.2	36.2	2.20	27.8	0.02	0.00	0.04	180
	200	ISL	8.90	8.88	34.155	26.476	158.5	0.488	1.86	28.5	38.5	2.30	28.7	0.02	0.00	0.04	202
1	208		8.89	8.87	34.172	26.491	157.3	0.500	1.77	27.1	39.3	2.33	28.9	0.02	0.00	0.04	210
1	240		8.68	8.65	34.196	26.543	152.9	0.550	1.59	24.3	42.5	2.43	30.0	0.01			242
	250	ISL	8.57	8.54	34.199	26.562	151.2	0.565	1.55	23.6	43.6	2.46	30.4	0.01			252
1	277		8.27	8.24	34.204	26.613	146.8	0.605	1.43	21.6	46.7	2.54	31.5	0.01			279
	300	ISL	8.06	8.03	34.210	26.649	143.6	0.639	1.30	19.6	49.6	2.60	32.3	0.01			302
2	323		7.88	7.85	34.220	26.684	140.6	0.672	1.16	17.4	52.3	2.66	33.0	0.00			326
2	365		7.63	7.59	34.250	26.744	135.5	0.730	0.93	13.9	55.8	2.75	33.7	0.00			368

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 11.0 N	118 23.3 W	10/09/87	1043 GMT	1176 M	280	14 KT			1014.8 MB	18.9 C	18.6 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
	0	ISL	19.96	19.96	33.628	23.727	416.1	0.000	5.39	103.1	2.4	0.28	0.0	0.00	0.15	0.03	0
1	1		19.96	19.96	33.628	23.727	416.1	0.004	5.39	103.1	2.4	0.28	0.0	0.00	0.15	0.03	1
	10	ISL	19.93	19.93	33.629	23.736	415.6	0.042	5.41	103.5	2.3	0.27	0.0	0.00	0.16	0.04	10
1	11		19.93	19.93	33.629	23.736	415.6	0.046	5.41	103.5	2.3	0.27	0.0	0.00	0.16	0.04	11
	20	ISL	17.19	17.19	33.522	24.337	358.6	0.081	5.99	108.9	2.9	0.31	0.0	0.00	0.22	0.08	20
1	22		16.49	16.49	33.503	24.486	344.4	0.088	6.12	109.7	3.0	0.32	0.0	0.00	0.23	0.10	22
	30	ISL	14.91	14.91	33.405	24.763	318.2	0.114	6.17	107.2	3.2	0.39	0.2	0.02	0.51	0.23	30
1	32		14.61	14.61	33.382	24.810	313.8	0.120	6.18	106.7	3.3	0.41	0.3	0.02	0.59	0.26	32
1	42		13.44	13.43	33.347	25.026	2 93.4	0.151	5.81	97.9	4.2	0.56	2.6	0.22	0.75	0.36	42
	50	ISL	12.54	12.53	33.382	25.231	274.0	0.173	5.23	86.5	7.1	0.83	7.0	0.19	0.67	0.35	50
1	53		12.21	12.20	33.405	25.312	266.4	0.182	4.99	82.0	8.5	0.94	8.9	0.18	0.64	0.35	53
1	63		11.20	11.19	33.496	25.570	242.0	0.207	4.39	70.6	13.4	1.23	14.0	0.04	0.25	0.22	63
	75	ISL	10.50	10.49	33.625	25.795	220.9	0.235	3.77	59.8	18.8	1.51	18.6	0.02	0.14	0.13	76
1	77		10.43	10.42	33.645	25.823	218.3	0.239	3.69	58.4	19.5	1.55	19.2	0.02	0.12	0.12	78
1	93		10.11	10.10	33.736	25.948	206.6	0.273	3.35	52.7	22.4	1.68	21.0	0.01	0.05	0.07	94
	100	ISL	9.90	9.89	33.770	26.010	200.9	0.287	3.28	51.4	23.9	1.72	21.8	0.01	0.03	0.07	101
1	113		9.55	9.54	33.844	26.126	190.1	0.313	3.14	48.8	26.7	1.81	23.2	0.01	0.01	0.06	114
	125	ISL	9.53	9.52	33.951	26.214	182.0	0.335	2.84	44.1	29.2	1.92	24.3	0.02	0.00	0.04	126
1	134		9.51	9.50	34.018	26.270	176.9	0.351	2.59	40.3	31.0	2.01	25.1	0.02	0.00	0.03	135
	150	ISL	9.52	9.50	34.107	26.338	170.8	0.379	2.18	33.9	34.6	2.15	26.5	0.01	0.00	0.03	151
1	159		9.52	9.50	3 4.143	26.366	168.3	0.394	1.99	31.0	36.4	2.21	27.2	0.01	0.00	0.04	160
1	190		9.22	9.20	34.167	26.434	162.4	0.446	1.87	28.9	38.4	2.28	28.1	0.02	0.00	0.03	192
	200	ISL	9.13	9.11	34.176	26.456	160.5	0.462	1.82	28.1	39.2	2.31	28.4	0.02	0.00	0.03	202
1	224		8.89	8.87	3 4.197	26.511	155.7	0.500	1.70	26.1	41.4	2.38	29.3	0.03	0.00	0.02	226
	250	ISL	8.55	8.52	34.209	26.573	150.1	0.540	1.54	23.4	44.6	2.46	30.3	0.01			252
1	260		8.41	8.38	34.213	26.598	147.9	0.554	1.47	22.3	46.0	2.49	30.7	0.00			262
1	300		7.93	7.90	34.239	26.691	139.6	0.612	1.12	16.8	52.5	2.67	32.8	0.00			302
1	355		7.42	7.39	34.246	26.771	132.6	0.687	0.87	12.9	60.1	2.81	34.8	0.00			358
	400	ISL	7.08	7.04	34.267	26.836	127.0	0.745	0.67	9.9	64.6	2.91	36.1	0.00			403
1	420		6.94	6.90	34.278	26.864	124.5	0.770	0.59	8.7	66.5	2.95	36.6	0.00			424
1	489		6.45	6.41	34.303	26.950	117.0	0.854	0.41	5.9	74.4	3.08	38.3	0.00			493
	500	ISL	6.39	6.34	34.307	26.961	116.0	0.866	0.39	5.6	75.5	3.09	38.5	0.00			504
1	568		6.01	5.96	34.336	27.033	109.7	0.943	0.28	4.0	82.4	3.17	39.7	0.00			573

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 56.3 N	118 56.4 W	10/09/87	0521 GMT	1690 M	2 90	19 KT			1015.7 MB	18.2 C	17.7 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	19.24	19.24	33.725	23.987	391.3	0.000	5.54	104.7							0
1	2				33.725			0.008	5.54	104.7	2.9	0.27	0.0	0.00	0.32	0.12	2
	10	ISL	19.24	19.24	33.725	23.987	391.6	0.039	5.53	104.5	2.7	0.27	0.0	0.00	0.33	0.13	10
1	11		19.24	19.24	33.725	23.988	391.6	0.043	5.53	104.5	2.7	0.27	0.0	0.00	0.33	0.13	11
	20	ISL	16.44	16.44	33.666	24.623	331.4	0.076	5.62	100.8	4.9	0.50	3.1	0.06	0.74	0.22	20
1	21		16.07	16.07	33.664	24.706	3 23.4	0.079	5.63	100.2	5.3	0.53	3.6	0.07	0.79	0.23	21
	30	ISL	13.89	13.89	33.665	25.180	278.5	0.106	5.18	88.3	8.8	0.84	8.1	0.18	0.83	0.24	30
1	31		13.68	13.68	33.665	25.223	274.4	0.109	5.10	86.5	9.2	0.88	8.7	0.19	0.83	0.24	31
1	41		11.73	11.72	33.649	25.592	239.5	0.134	4.22	68.7	14.3	1.26	14.4	0.34	0.85	0.36	41
	50	ISL	10.82	10.81	33.708	25.803	219.6	0.155	3.60	57.5	19.1	1.55	19.0	0.13	0.39	0.22	50
1	51		10.75	10.74	33.715	25.821	217.9	0.157	3.55	56.6	19.6	1.58	19.4	0.10	0.33	0.20	51
1	60		10.22	10.21	33.737	25.930	207.7	0.176	3.38	53.3	21.8	1.66	20.8	0.07	0.16	0.16	60
	75	ISL	9.71	9.70	33.806	26.070	194.6	0.207	3.10	48.3	25.8	1.81	23.2	0.02	0.06	0.08	76
1	76		9.69	9.68	33.811	26.077	194.0	0.209	3.08	48.0	26.1	1.82	23.4	0.02	0.06	0.08	77
1	91		9.28	9.27	33.892	26.208	181.8	0.237	2.83	43.7	30.1	1.97	25.2	0.01	0.02	0.05	92
	100	ISL	9.17	9.16	33.912	26.241	178.8	0.253	2.77	42.7	31.1	2.00	25.7	0.00	0.02	0.05	101
1	111		9.08	9.07	33.931	26.271	176.3	0.272	2.70	41.5	32.0	2.02	26.1	0.00	0.01	0.06	112
	125	ISL	8.88	8.87	33.983	26.343	169.6	0.297	2.52	38.6	34.7	2.10	27.2	0.00	0.01	0.05	126
1	131		8.79	8.78	34.008	26.377	166.5	0.307	2.43	37.2	35.9	2.14	27.7	0.00	0.01	0.04	132
	150	ISL	8.60	8.58	34.067	26.453	159.6	0.338	2.12	32.3	39.2	2.26	29.0	0.01	0.00	0.05	151
1	156		8.55	8.53	34.083	26.473	157.8	0.347	2.03	30.9	40.1	2.30	29.3	0.01	0.00	0.05	157
1	186		8.33	8.31	34.142	26.553	150.7	0.394	1.69	25.6	44.2	2.45	30.7	0.01	0.00	0.04	187
	200	ISL	8.22	8.20	34.162	26.586	147.8	0.414	1.56	23.6	46.1	2.51	31.3	0.01			202
	250	ISL	7.82	7.80	34.211	26.685	139.2	0.486	1.18	17.7	52.5	2.69	33.2	0.01			252
1	256		7.77	7.74	34.215	26.695	138.3	0.495	1.15	17.2	53.2	2.71	33.4	0.01			258
1	297		7.49	7.46	34.234	26.751	133.6	0.550	0.96	14.3	57.5	2.80	34.4	0.01			299
	300	ISL	7.47	7.44	34.236	26.755	133.2	0.554	0.94	14.0	57.8	2.81	34.5	0.01			302
1	352		7.14	7.11	34.273	26.832	126.6	0.622	0.67	9.9	63.5	2.93	35.9	0.00			355
	400	ISL	6.85	6.81	34.291	26.886	122.0	0.681	0.54	7.9	68.0	3.01	36.9	0.00			403
1	418		6.74	6.70	3 4.296	26.905	120.4	0.703	0.51	7.4	69.6	3.03	37.3	0.00			422
1	490		6.36	6.32	34.325	26.979	114.1	0.788	0.35	5.1	75.7	3.12	38.6	0.00			494
	500	ISL	6.30	6.25	34.327	26.988	113.3	0.799	0.34	4.9	76.8	3.13	38.8	0.00			504
1	571		5.90	5.85	34.347	27.055	107.5	0.877	0.27	3.9	84.4	3.20	39.9	0.00			576

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 38.8 N	119 28.4 W	10/09/87	0014 GMT	1299 M	320	20 KT	310 06 06	1	1015.2 MB	18.8 C	18.0 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	18.97	18.97	33.669	24.013	388.8	0.000	5.53	104.0	1.9	0.26	0.0	0.00	0.20	0.05	0
1	1		18.97	18.97	33.669	24.013	388.9	0.004	5.53	104.0	1.9	0.26	0.0	0.00	0.20	0.05	1
	10	ISL	18.92	18.92	33.666	24.023	388.1	0.039	5.51	103.5	1.9	0.25	0.0	0.00	0.48	0.05	10
1	11		18.92	18.92	33.667	24.024	388.1	0.043	5.51	103.5	1.9	0.25	0.0	0.00	0.51	0.05	11
	20	ISL	18.76	18.76	33.654	24.055	385.5	0.078	5.57	104.3	1.7	0.25	0.0	0.00	0.28	0.06	20
1	22		18.72	18.72	33.651	24.063	3 84.8	0.085	5.59	104.6	1.6	0.25	0.0	0.00	0.22	0.06	22
	30	ISL	18.06	18.05	33.615	24.199	372.1	0.116	5.72	105.7	1.5	0.27	0.0	0.00	0.29	0.10	30
1	33		17.71	17.70	33.601	24.274	365.1	0.127	5.77	105.9	1.4	0.29	0.0	0.00	0.31	0.11	33
1	43		16.18	16.17	33.584	24.620	332.4	0.161	5.78	103.1	3.0	0.41	1.3	0.06	0.82	0.41	43
	50	ISL	14.35	14.34	33.577	25.016	294.7	0.183	5.36	92.2	5.8	0.69	4.8	0.36	0.67	0.38	50
1	54		13.27	13.26	33.584	25.244	273.0	0.195	5.03	84.6	8.0	0.89	7.5	0.49	0.50	0.36	54
1	64		11.39	11.38	33.586	25.606	238.7	0.220	4.14	66.9	14.9	1.33	15.2	0.15	0.17	0.19	64
	75	ISL	10.61	10.60	33.673	25.813	219.2	0.246	3.63	57.7	19.7	1.57	19.3	0.06	0.11	0.12	76
1	79		10.50	10.49	33.710	25.861	214.7	0.254	3.51	55.7	21.0	1.63	20.2	0.03	0.09	0.11	80
1	93		9.85	9.84	33.809	26.049	197.0	0.283	2.99	46.8	26.1	1.84	23.4	0.02	0.05	0.07	94
	100	ISL	9.60	9.59	33.842	26.116	190.7	0.297	2.99	46.5	27.5	1.86	24.2	0.02	0.03	0.06	101
1	115		9.19	9.18	33.887	26.219	181.3	0.324	2.98	46.0	29.3	1.91	24.9	0.01	0.01	0.05	116
	125	ISL	9.02	9.01	33.903	26.258	177.7	0.342	2.99	45.9	30.0	1.92	25.2	0.00	0.00	0.04	126
1	136		8.88	8.87	33.918	26.292	174.6	0.362	3.00	45.9	30.8	1.94	25.6	0.00	0.00	0.04	137
	150	ISL	8.66	8.64	33.961	26.360	168.4	0.386	2.89	44.0	33.1	1.99	26.5	0.00	0.00	0.03	151
1	161		8.50	8.48	33.994	26.411	163.7	0.404	2.80	42.5	35.0	2.03	27.1	0.01	0.00	0.03	162
1	192		8.16	8.14	34.010	26.476	158.0	0.454	2.92	44.0	37.2	2.03	27.4	0.02	0.00	0.03	194
	200	ISL	8.11	8.09	34.019	26.490	156.8	0.467	2.86	43.1	38.0	2.05	27.7	0.02	0.00	0.03	202
1	226		7.97	7.95	34.056	26.541	152.5	0.507	2.51	37.7	41.1	2.18	29.0	0.01	0.00	0.02	228
	250	ISL	7.85	7.83	34.097	26.591	148.1	0.543	2.07	31.0	45.0	2.33	30.7	0.01			252
1	261		7.79	7.76	34.118	26.616	145.9	0.559	1.85	27.7	46.9	2.41	31.5	0.01			263
	300	ISL	7.61	7.58	34.215	26.719	136.7	0.614	1.14	17.0	53.9	2.69	33.8	0.01			302
1	301		7.60	7.57	34.217	26.722	136.4	0.615	1.12	16.7	54.1	2.70	33.8	0.01			303
1	357		7.20	7.17	34.255	26.809	128.9	0.690	0.75	11.1	61.6	2.87	35.8	0.01			360
	400	ISL	6.81	6.77	34.281	26.884	122.2	0.744	0.51	7.5	67.9	2.98	37.2	0.00			403
1	422		6.61	6.57	34.294	26.921	118.9	0.770	0.42	6.1	71.0	3.03	37.8	0.00			426
1	492		6.19	6.15	34.328	27.003	111.7	0.851	0.30	4.3	78.8	3.13	39.1	0.00			496
	500	ISL	6.17	6.13	34.330	27.007	111.4	0.860	0.30	4.3	79.2	3.13	39.2	0.00			504
1	577		6.01	5.96	34.344	27.040	109.2	0.945	0.25	3.6	82.6	3.18	39.7	0.00			582

RV NEW HORIZON CALCOFI CRUISE 87 09 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 58.6 W	09/09/87	1856 GMT	834 M	320	20 KT	330 06 06	1	1016.8 MB	20.2 C	18.8 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
	0	ISL	18.60	18.60	33.635	24.080	382.4	0.000	5.56	103.8	1.8	0.28	0.0	0.00	0.20	0.05	0
1	1		18.60	18.60	33.635	24.080	382.5	0.004	5.56	103.8	1.8	0.28	0.0	0.00	0.20	0.05	1
	10	ISL	18.57	18.57	33.632	24.085	382.2	0.038	5.55	103.6	1.8	0.28	0.0	0.00	0.23	0.06	10
1	11		18.56	18.56	33.632	24.088	3 82.1	0.042	5.55	103.5	1.8	0.28	0.0	0.00	0.23	0.06	11
	20	ISL	18.47	18.47	33.627	24.107	380.6	0.076	5.56	103.6	1.8	0.28	0.0	0.00	0.23	0.07	20
1	22		18.44	18.44	33.625	24.113	380.1	0.084	5.56	103.5	1.8	0.28	0.0	0.00	0.23	0.07	22
	30	ISL	18.17	18.16	33.613	24.171	374.8	0.114	5.61	103.9	1.7	0.29	0.0	0.00	0.28	0.10	30
1	32		18.10	18.09	33.610	24.186	373.5	0.122	5.63	104.1	1.7	0.29	0.0	0.00	0.29	0.11	32
1	42		16.21	16.20	33.574	24.605	333.7	0.157	5.81	103.6	2.7	0.40	0.9	0.03	0.59	0.31	42
	50	ISL	13.93	13.92	33.625	25.141	282.8	0.182	5.12	87.3	7.3	0.82	7.2	0.18	0.52	0.32	50
2	52		13.40	13.39	33.646	25.266	270.9	0.187	4.92	83.0	8.5	0.93	8.9	0.22	0.50	0.32	52
2	62		12.37	12.36	33.669	25.487	250.1	0.213	4.55	75.1	11.4	1.13	12.0	0.25	0.42	0.32	62
2	72		10.92	10.91	33.714	25.790	221.3	0.237	3.62	57.9	18.5	1.55	18.5	0.38	0.20	0.15	73
	75	ISL	10.63	10.62	33.719	25.845	216.1	0.243	3.59	57.1	19.6	1.57	19.4	0.33	0.16	0.14	76
2	87		9.89	9.88	33.740	25.989	202.7	0.269	3.47	54.3	22.5	1.67	21.3	0.05	0.08	0.08	88
	100	ISL	9.74	9.73	33.833	26.086	193.6	0.294	3.06	47.8	25.8	1.80	23.2	0.03	0.03	0.08	101
2	103		9.71	9.70	33.847	26.102	192.2	0.300	2.96	46.2	26.5	1.83	23.6	0.02	0.03	0.08	104
2	123		9.50	9.49	33.944	26.213	182.1	0.337	2.69	41.8	29.3	1.95	25.0	0.01	0.02	0.06	124
	125	ISL	9.46	9.45	33.951	26.225	180.9	0.341	2.67	41.4	29.7	1.96	25.2	0.01	0.02	0.06	126
2	149		8.95	8.93	34.007	26.351	169.3	0.383	2.43	37.3	34.3	2.10	27.3	0.01	0.01	0.06	150
	150	ISL	8.93	8.91	34.009	26.356	168.9	0.385	2.42	37.1	34.4	2.10	27.4	0.01	0.01	0.06	151
2	180		8.50	8.48	34.049	26.455	160.0	0.434	2.29	34.8	38.2	2.18	28.4	0.01	0.01	0.06	181
	200	ISL	8.18	8.16	34.057	26.510	155.0	0.466	2.31	34.8	40.5	2.20	29.0	0.01	0.01	0.05	202
2	211		8.03	8.01	34.062	26.536	152.6	0.483	2.32	34.9	41.8	2.22	29.4	0.01	0.01	0.04	213
2	241		7.83	7.81	34.104	26.599	147.2	0.528	1.92	28.7	46.4	2.38	31.1	0.01			243
	250	ISL	7.73	7.71	34.108	26.617	145.6	0.541	1.85	27.6	47.7	2.41	31.5	0.01			252
2	283		7.32	7.29	34.115	26.681	139.8	0.588	1.65	24.4	52.6	2.51	33.1	0.01			285
	300	ISL	7.13	7.10	34.127	26.717	136.5	0.611	1.48	21.8	55.7	2.59	34.1	0.01			302
2	339		6.73	6.70	34.160	26.798	129.3	0.663	1.08	15.8	63.1	2.78	36.3	0.01			342
2	400		6.18	6.14	34.197	26.900	120.0	0.739	0.73	10.5	72.9	2.95	38.7	0.00			403
2	467		5.96	5.92	34.244	26.966	114.6	0.818	0.55	7.9	76.1	3.00	38.8	0.00			471
	500	ISL	5.87	5.83	34.279	27.005	111.3	0.855	0.43	6.1	80.1	3.07	39.5	0.00			504
2	537		5.76	5.71	34.319	27.050	107.3	0.895	0.30	4.3	84.6	3.14	40.3	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 5.0 N	120 38.0 W	09/09/87	1246 GMT	3 83 5 M	330	14 KT			1016.0 MB	18.2 C	17.7 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	17.49	17.49	33.119	23.956	394.2	0.000	5.66	103.2	2.0	0.35	0.1	0.00	0.11	0.03	0
1	1		17.49	17.49	33.119	23.956	394.3	0.004	5.66	103.2	2.0	0.35	0.1	0.00	0.11	0.03	1
	10	ISL	17.51	17.51	33.120	23.952	3 94.9	0.039	5.68	103.6	2.1	0.35	0.0	0.00	0.10	0.02	10
1	11		17.51	17.51	33.120	23.952	395.0	0.043	5.68	103.6	2.1	0.35	0.0	0.00	0.10	0.02	11
	20	ISL	17.49	17.49	33.119	23.957	3 94.8	0.079	5.69	103.8	2.0	0.36	0.0	0.00	0.11	0.03	20
1	22		17.48	17.48	33.119	23.959	394.7	0.087	5.69	103.7	2.0	0.36	0.0	0.00	0.11	0.03	22
	30	ISL	16.71	16.71	33.064	24.098	381.7	0.118	5.87	105.4	2.2	0.37	0.0	0.00	0.16	0.05	30
1	32		16.45	16.44	33.046	24.145	377.3	0.125	5.93	106.0	2.2	0.37	0.0	0.00	0.17	0.05	32
1	43		14.86	14.85	32.920	24.401	3 53.1	0.166	6.31	109.2	2.1	0.37	0.0	0.00	0.20	0.08	43
	50	ISL	14.43	14.42	32.943	24.510	342.8	0.190	6.32	108.4	2.1	0.38	0.0	0.00	0.23	0.09	50
1	53		14.25	14.24	32.957	24.559	338.3	0.200	6.33	108.2	2.1	0.39	0.0	0.00	0.24	0.10	53
1	64		12.72	12.71	32.929	24.846	311.1	0.236	6.25	103.5	2.6	0.44	0.0	0.01	0.72	0.43	64
1	74		12.61	12.60	33.032	24.947	301.7	0.267	5.95	98.4	3.0	0.53	1.5	0.16	0.45	0.41	75
	75	ISL	12.61	12.60	33.047	24.959	300.6	0.270	5.91	97.7	3.1	0.54	1.7	0.16	0.43	0.40	76
1	89		12.61	12.60	33.319	25.170	280.9	0.310	5.31	87.9	6.0	0.77	6.1	0.04	0.21	0.18	90
	100	ISL	11.67	11.66	33.402	25.412	258.0	0.340	4.87	79.1	9.5	1.01	10.5	0.03	0.11	0.13	101
1	104		11.27	11.26	33.425	25.503	249.4	0.350	4.71	75.8	11.0	1.10	12.1	0.02	0.09	0.12	105
1	125		10.09	10.08	33.619	25.861	215.6	0.399	3.91	61.4	18.8	1.50	18.8	0.01	0.02	0.04	126
	150	ISL	9.49	9.47	33.787	26.093	194.0	0.450	3.35	52.0	24.8	1.74	22.8	0.00	0.00	0.02	151
1	151		9.48	9.46	33.792	26.098	193.5	0.452	3.34	51.8	25.0	1.75	22.9	0.00	0.00	0.02	152
1	181		8.85	8.83	33.882	26.270	177.7	0.508	3.45	52.8	27.9	1.78	23.9	0.00	0.00	0.02	182
	200	ISL	8.49	8.47	33.951	26.380	167.4	0.541	3.22	48.9	32.0	1.90	25.6	0.00	0.00	0.02	202
1	212		8.29	8.27	33.988	26.439	161.9	0.560	3.03	45.8	34.9	1.98	26.8	0.00	0.00	0.02	214
1	242		7.86	7.84	34.020	26.529	153.8	0.608	2.72	40.7	40.5	2.13	28.8	0.00			244
	250	ISL	7.76	7.74	34.033	26.553	151.6	0.620	2.58	38.5	42.3	2.19	29.5	0.00			252
1	282		7.41	7.38	34.083	26.643	143.4	0.667	2.00	29.6	49.6	2.42	32.1	0.00			284
	300	ISL	7.23	7,20	34.093	26.677	140.5	0.693	1.81	26.7	52.5	2.50	33.1	0.00			302
1	339		6.86	6.83	34.106	26.738	135.0	0.746	1.51	22.1	58.4	2.63	35.0	0.00			342
1	399		6.25	6.21	34.149	26.853	124.5	0.824	0.96	13.8	69.6	2.88	38.2	0.00			402
	400	ISL	6.24	6.20	34.149	26.854	124.4	0.825	0.95	13.7	69.8	2.88	38.2	0.00			403
1	467		5.73	5.69	34.199	26.958	115.0	0.906	0.58	8.3	80.4	3.07	40.2	0.00			471
	500	ISL	5.58	5.54	34.226	26.998	111.5	0.943	0.47	6.7	84.2	3.11	40.7	0.00			504
1	539		5.40	5.36	34.259	27.046	107.2	0.986	0.35	4.9	88.8	3.16	41.3	0.01			544

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 45.1 N	121 19.3 W	09/09/87	0652 GMT	3723 M	320	15 KT			1015.5 MB	18.8 C	18.5 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		18.85	18.85	33.150	23.647	423.7	0.000	5.50	102.9	2.2	0.37	0.0	0.00	0.07	0.02	0
1	10		18.84	18.84	33.151	23.650	423.8	0.042	5.51	103.0	2.2	0.36	0.0	0.00	0.07	0.02	10
	20	ISL	18.75	18.75	33.152	23.674	421.9	0.085	5.51	102.9	2.2	0.37	0.0	0.00	0.08	0.02	20
1	21		18.74	18.74	33.153	23.677	421.6	0.089	5.51	102.9	2.2	0.37	0.0	0.00	0.08	0.02	21
	30	ISL	18.71	18.70	33.162	23.692	420.5	0.127	5.52	103.0	2.2	0.37	0.0	0.00	0.09	0.03	30
1	31		18.71	18.70	33.163	23.693	420.5	0.131	5.52	103.0	2.2	0.37	0.0	0.00	0.09	0.03	31
1	42		17.94	17.93	33.289	23.979	393.4	0.176	5.73	105.5	2.1	0.35	0.0	0.00	0.10	0.03	42
	50	ISL	17.12	17.11	33.250	24.146	377.8	0.207	5.90	106.9	2.2	0.34	0.0	0.00	0.11	0.04	50
1	52		16.89	16.88	33.233	24.187	373.9	0.214	5.94	107.1	2.2	0.34	0.0	0.00	0.11	0.04	52
1	62		15.72	15.71	33.189	24.421	351.9	0.250	6.12	107.9	2.3	0.34	0.0	0.00	0.12	0.05	62
1	73		14.81	14.80	33.206	24.633	331.9	0.288	6.15	106.5	2.6	0.37	0.0	0.00	0.16	0.10	74
	75	ISL	14.65	14.64	33.218	24.677	327.8	0.295	6.13	105.8	2.7	0.38	0.1	0.01	0.19	0.12	76
1	87		13.76	13.75	33.301	24.927	304.2	0.333	5.91	100.2	3.6	0.49	0.6	0.08	0.37	0.22	88
	100	ISL	13.04	13.03	33.357	25.115	286.5	0.371	5.45	91.1	5.5	0.72	4.9	0.09	0.26	0.25	101
1	103		12.87	12.86	33.367	25.157	282.6	0.379	5.33	88.8	6.1	0.78	6.1	0.09	0.22	0.26	104
1	123		11.10	11.08	33.441	25.547	245.6	0.432	4.61	74.0	12.1	1.17	13.0	0.02	0.07	0.12	124
	125	ISL	10.99	10.97	33.455	25.577	242.8	0.437	4.54	72.7	12.7	1.21	13.6	0.02	0.07	0.12	126
1	148		10.11	10.09	33.626	25.864	215.9	0.490	3.78	59.4	19.6	1.57	19.7	0.00	0.05	0.18	149
	150	ISL	10.04	10.02	33.642	25.888	213.6	0.494	3.74	58.7	20.1	1.59	20.0	0.00	0.05	0.17	151
1	178		9.24	9.22	33.841	26.176	186.6	0.550	3.27	50.5	26.8	1.81	23.5	0.00	0.00	0.03	179
	200	ISL	8.79	8.77	33.930	26.317	173.5	0.590	2.94	44.9	31.2	1.96	25.6	0.01	0.00	0.03	202
1	208		8.65	8.63	33.955	26.358	169.7	0.604	2.83	43.1	32.8	2.01	26.3	0.01	0.00	0.03	210
1	237		8.22	8.20	34.050	26.499	156.7	0.651	2.46	37.1	38.9	2.19	28.7	0.00			239
	250	ISL	8.11	8.08	34.079	26.538	153.2	0.671	2.26	34.0	41.5	2.27	29.7	0.00			252
1	277		7.93	7.90	34.119	26.597	148.1	0.712	1.88	28.2	46.2	2.43	31.4	0.00			279
	300	ISL	7.72	7.69	34.131	26.637	144.5	0.745	1.75	26.1	49.0	2.50	32.2	0.00			302
1	332		7.38	7.35	34.133	26.687	140.0	0.791	1.64	24.3	52.6	2.57	33.1	0.00			335
1	391		6.68	6.64	34.148	26.796	130.2	0.871	1.19	17.3	62.3	2.78	35.7	0.00			394
	400	ISL	6.60	6.56	34.156	26.813	128.7	0.882	1.11	16.1	63.8	2.82	36.2	0.00			403
1	456		6.19	6.15	34.214	26.913	119.7	0.952	0.67	9.7	72.7	3.02	38.8	0.00			460
	500	ISL	5.90	5.86	34.246	26.975	114.1	1.003	0.51	7.3	79.1	3.11	39.9	0.00			504
1	526		5.73	5.68	34.266	27.012	110.7	1.032	0.41	5.8	82.9	3.17	40.5	0.00			531

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 25.0 N	121 59.6 W	09/09/87	0050 GMT	3884 M	330	13 KT	010 04 05	1	1013.8 MB	19.9 C	18.8 C	3/8	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
1	0		19.28	19.28	33.355	23.694	419.2	0.000	5.47	103.2	2.2	0.35	0.0	0.00	0.11	0.02	0
	10	ISL	19.23	19.23	33.356	23.708	418.2	0.042	5.48	103.3	2.2	0.34	0.0	0.00	0.11	0.02	10
1	11		19.22	19.22	33.356	23.711	418.0	0.046			2.2	0.34	0.0	0.00	0.11	0.02	11
	20	ISL	19.05	19.05	33.335	23.738	415.7	0.084	5.49	103.2	2.2	0.36	0.0	0.00	0.12	0.02	20
1	22		19.01	19.01	33.330	23.745	415.2	0.092	5.49	103.1	2.2	0.36	0.0	0.00	0.12	0.02	22
	30	ISL	17.61	17.60	33.243	24.023	388.8	0.124	5.92	108.3	2.0	0.35	0.0	0.00	0.17	0.04	30
1	32		17.20	17.19	33.222	24.105	3 81.1	0.132	6.02	109.2	2.0	0.35	0.0	0.00	0.18	0.05	32
1	43		15.73	15.72	33.136	24.377	355.4	0.172	6.09	107.4	1.9	0.36	0.0	0.00	0.20	0.10	43
	50	ISL	14.72	14.71	33.115	24.582	336.1	0.196	6.12	105.7	2.1	0.37	0.0	0.00	0.23	0.15	50
2	53		14.34	14.33	33.111	24.659	328.8	0.206	6.13	105.1	2.2	0.37	0.0	0.00	0.26	0.18	53
2	64		13.68	13.67	33.090	24.780	317.5	0.242	6.09	103.0	2.2	0.43	0.3	0.04	0.52	0.38	64
2	74		13.52	13.51	33.222	24.914	305.0	0.273	5.87	99.0	2.9	0.49	0.9	0.14	0.33	0.33	75
	75	ISL	13.45	13.44	33.226	24.932	303.3	0.276	5.84	98.4	3.1	0.51	1.2	0.14	0.31	0.32	76
2	89		12.24	12.23	33.268	25.201	277.9	0.317	5.31	87.2	6.4	0.79	6.5	0.04	0.12	0.16	90
	100	ISL	11.61	11.60	33.390	25.414	257.8	0.346	4.89	79.3	9.7	1.00	10.3	0.03	0.11	0.14	101
2	104		11.42	11.41	33.438	25.486	251.0	0.356	4.74	76.6	11.0	1.07	11.6	0.03	0.11	0.13	105
2	125		10.49	10.48	33.585	25.766	224.7	0.406	4.09	64.8	16.6	1.40	16.9	0.02	0.05	0.07	126
	150	ISL	9.51	9.49	33.779	26.083	194.9	0.459	3.70	57.4	22.6	1.61	20.9	0.01	0.01	0.03	151
2	151		9.48	9.46	33.786	26.093	194.0	0.461	3.69	57.2	22.8	1.62	21.0	0.01	0.01	0.03	152
2	181		8.83	8.81	33.915	26.299	174.9	0.516	3.46	52.9	28.6	1.78	23.6	0.01	0.00	0.03	182
	200	ISL	8.43	8.41	33.968	26.402	165.3	0.548	3.31	50.2	32.8	1.89	25.3	0.00	0.00	0.03	202
2	212		8.20	8.18	33.993	26.457	160.2	0.568	3.18	48.0	35.5	1.96	26.4	0.00	0.00	0.03	214
2	241		7.78	7.76	34.034	26.551	151.6	0.613	2.70	40.3	41.6	2.13	28.8	0.00			243
	250	ISL	7.68	7.66	34.045	26.574	149.5	0.627	2.56	38.2	43.3	2.19	29.5	0.00			252
2	282		7.35	7.32	34.073	26.644	143.3	0.674	2.11	31.2	49.3	2.38	31.9	0.00			284
	300	ISL	7.08	7.05	34.073	26.681	139.9	0.699	1.93	28.4	53.0	2.46	33.1	0.00			302
2	338		6.57	6.54	34.077	26.754	133.2	0.751	1.60	23.2	60.4	2.62	35.4	0.00			341
2	399		6.29	6.25	34.159	26.856	124.3	0.830	0.91	13.1	69.2	2.89	37.9	0.00			402
	400	ISL	6.29	6.25	34.160	26.856	124.2	0.831	0.90	13.0	69.3	2.89	37.9	0.00			403
2	466		6.09	6.05	34.240	26.946	116.5	0.910	0.54	7.8	75.5	3.03	39.1	0.00			470
	500	ISL	5.92	5.88	34.270	26.991	112.6	0.949	0.43	6.2	80.0	3.09	39.9	0.00			504
2	538		5.72	5.67	34.303	27.042	108.0	0.991	0.31	4.4	85.0	3.16	40.7	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 5.2 N	122 40.0 W	08/09/87	1748 GMT	3930 M	330	10 KT	320 04 05	1	1015.2 MB	20.9 C	19.4 C	4/8	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
1	0		18.97	18.97	33.238	23.684	420.2	0.000	5.46	102.4	2.3	0.36	0.0	0.00	0.08	0.02	0
1	10		18.92	18.92	33.238	23.697	419.3	0.042	5.46	102.3	2.3	0.36	0.0	0.00	0.07	0.02	10
	20	ISL	18.89	18.89	33.238	23.705	418.9	0.084	5.46	102.3	2.2	0.36	0.0	0.00	0.07	0.02	20
1	21		18.89	18.89	33.238	23.705	418.9	0.088	5.46	102.3	2.2	0.36	0.0	0.00	0.07	0.02	21
1	30		18.57	18.56	33.255	23.798	410.4	0.125	5.55	103.3	2.2	0.36	0.0	0.00	0.08	0.02	30
1	41		16.92	16.91	33.151	24.117	380.3	0.169	5.90	106.4	2.2	0.37	0.0	0.00	0.10	0.03	41
	50	ISL	15.26	15.25	33.135	24.480	345.8	0.202	6.19	108.1	2.3	0.36	0.0	0.01	0.15	0.07	50
1	51		15.10	15.09	33.136	24.516	342.4	0.205	6.21	108.1	2.3	0.36	0.0	0.01	0.15	0.07	51
1	61		14.37	14.36	33.142	24.677	327.3	0.238	6.18	106.0	2.4	0.40	0.0	0.00	0.16	0.10	61
1	71		13.69	13.68	33.160	24.832	312.8	0.270	6.15	104.1	2.9	0.45	0.1	0.02	0.35	0.17	72
	75	ISL	13.46	13.45	33.173	24.889	307.4	0.283	6.04	101.7	3.2	0.49	0.7	0.11	0.34	0.19	76
1	86		12.88	12.87	33.220	25.041	293.2	0.316	5.66	94.2	4.3	0.63	3.2	0.31	0.33	0.21	87
	100	ISL	12.23	12.22	33.303	25.231	275.4	0.356	5.27	86.6	6.6	0.82	6.9	0.05	0.18	0.17	101
1	101		12.18	12.17	33.309	25.245	274.0	0.358	5.24	86.0	6.8	0.83	7.2	0.03	0.17	0.17	102
1	122		10.83	10.82	33.466	25.614	239.2	0.412	4.47	71.3	13.3	1.24	14.2	0.02	0.07	0.10	123
	125	ISL	10.67	10.66	33.491	25.662	234.7	0.419	4.39	69.8	14.1	1.28	14.9	0.02	0.06	0.09	126
1	147		9.72	9.70	33.669	25.962	206.4	0.468	3.96	61.7	19.8	1.52	19.2	0.01	0.01	0.04	148
	150	ISL	9.63	9.61	33.692	25.995	203.3	0.474	3.90	60.7	20.6	1.55	19.7	0.01	0.01	0.04	151
1	178		8.91	8.89	33.863	26.245	179.9	0.528	3.55	54.4	26.9	1.75	23.2	0.01	0.00	0.03	179
	200	ISL	8.37	8.35	33.918	26.372	168.1	0.566	3.91	59.2	28.7	1.69	23.0	0.01	0.00	0.02	202
1	209		8.17	8.15	33.931	26.412	164.4	0.581	4.05	61.0	29.5	1.67	22.9	0.01	0.00	0.02	211
1	239		7.68	7.66	33.983	26.525	154.0	0.629	3.55	52.9	36.7	1.88	25.9	0.01			241
	250	ISL	7.58	7.56	34.007	26.559	150.9	0.646	3.20	47.6	39.9	2.01	27.4	0.01			252
1	280		7.35	7.32	34.065	26.637	143.9	0.690	2.23	33.0	48.2	2.35	31.5	0.00			282
	300	ISL	7.14	7.11	34.078	26.677	140.3	0.718	1.93	28.4	52.2	2.46	33.0	0.00			302
1	337		6.72	6.69	34.084	26.740	134.7	0.769	1.62	23.6	58.7	2.60	35.0	0.00			340
1	398		6.00	5.97	34.101	26.847	124.9	0.848	1.11	15.9	70.9	2.86	38.5	0.00			401
	400	ISL	5.98	5.95	34.102	26.850	124.5	0.851	1.09	15.6	71.3	2.87	38.6	0.00			403
1	464		5.56	5.52	34.163	26.950	115.5	0.928	0.66	9.4	82.1	3.07	40.7	0.00			468
	500	ISL	5.38	5.34	34.203	27.004	110.7	0.968	0.51	7.2	87.1	3.13	41.4	0.00			504
1	535		5.20	5.16	34.243	27.057	105.9	1.006	0.37	5.2	91.9	3.19	42.1	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 110 I

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 45.2 N	123 19.7 W	08/09/87	1056 GMT	3996 M	3 40	09 KT			1015.8 MB	18.8 C	17.4 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEC 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		19.25	19.25	33.336	23.687	419.8	0.000	5.40	101.9	2.4	0.35	0.1	0.00	0.06	0.02	0
	10	ISL	19.21	19.21	33.328	23.692	419.8	0.042	5.41	102.0	2.3	0.34	0.0	0.00	0.06	0.01	10
1	16		19.18	19.18	33.323	23.696	419.6	0.067	5.42	102.1	2.2	0.34	0.0	0.00	0.06	0.01	16
	20	ISL	19.10	19.10	33.328	23.720	417.4	0.084	5.46	102.7	2.2	0.33	0.0	0.00	0.06	0.01	20
	30	ISL	18.65	18.64	33.367	23.864	404.1	0.125	5.62	104.9	2.3	0.31	0.0	0.00	0.07	0.02	30
1	32		18.52	18.51	33.380	23.906	400.1	0.133	5.66	105.4	2.3	0.31	0.0	0.00	0.07	0.02	32
1	42		17.48	17.47	33.485	24.240	368.5	0.171	5.91	108.0	2.2	0.28	0.0	0.00	0.08	0.02	42
	50	ISL	16.66	16.65	33.509	24.452	348.6	0.200	5.99	107.7	2.3	0.27	0.0	0.00	0.10	0.03	50
1	53		16.42	16.41	33.514	24.512	343.0	0.211	6.00	107.4	2.3	0.27	0.0	0.00	0.10	0.03	53
1	63		16.30	16.29	33.568	24.581	336.7	0.244	5.96	106.5	2.3	0.27	0.0	0.00	0.10	0.03	63
1	74		15.80	15.79	33.592	24.713	324.4	0.281	5.91	104.6	2.3	0.27	0.0	0.00	0.12	0.05	75
	75	ISL	15.77	15.76	33.600	24.726	3 23.2	0.284	5.90	104.4	2.3	0.27	0.0	0.00	0.12	0.05	76
1	83		15.58	15.57	33.666	24.820	314.6	0.310	5.81	102.4	2.2	0.26	0.0	0.00	0.14	0.07	84
1	99		15.04	15.03	33.704	24.968	300.9	0.359	5.72	99.8	2.8	0.28	0.0	0.00	0.16	0.19	100
	100	ISL	15.01	14.99	33.708	24.978	299.9	0.362	5.71	99.5	2.8	0.28	0.0	0.01	0.17	0.19	101
1	114		14.49	14.47	33.741	25.115	287.2	0.403	5.53	95.4	3.0	0.36	0.7	0.19	0.25	0.22	115
	125	ISL	13.72	13.70	33.702	25.246	274.9	0.434	5.44	92.4	3.8	0.45	2.5	0.11	0.20	0.20	126
1	130		13.31	13.29	33.680	25.312	268.7	0.447	5.39	90.7	4.4	0.51	3.6	0.05	0.16	0.18	131
	150	ISL	11.51	11.49	33.648	25.634	238.1	0.498	4.99	80.9	8.9	0.86	9.4	0.02	0.08	0.10	151
1	155		11.08	11.06	33.652	25.715	230.4	0.510	4.88	78.3	10.3	0.96	10.9	0.01	0.06	0.08	156
1	181		9.65	9.63	33.748	26.036	200.1	0.566	4.47	69.6	17.4	1.32	17.0	0.01	0.02	0.03	182
	200	ISL	9.12	9.10	33.818	26.177	186.9	0.603	4.18	64.3	21.8	1.51	19.7	0.01	0.01	0.02	202
1	211		8.94	8.92	33.856	26.236	181.5	0.623	4.05	62.1	24.0	1.58	20.8	0.01	0.00	0.02	213
1	241		8.54	8.51	33.958	26.378	168.4	0.675	3.98	60.5	28.0	1.65	22.3	0.00			243
	250	ISL	8.37	8.34	33.973	26.416	164.9	0.690	3.90	59.0	29.9	1.69	23.0	0.00			252
2	283		7.69	7.66	34.004	26.541	153.3	0.743	3.46	51.6	38.1	1.91	26.3	0.00			285
	300	ISL	7.39	7.36	34.014	26.592	148.5	0.768	3.12	46.2	42.7	2.05	28.2	0.00			302
2	339		6.81	6.78	34.029	26.684	140.1	0.825	2.32	33.9	53.0	2.36	32.4	0.00			342
2	399		6.18	6.14	34.057	26.789	130.5	0.906	1.56	22.4	64.5	2.68	36.4	0.00			402
	400	ISL	6.17	6.13	34.058	26.791	130.2	0.907	1.55	22.3	64.7	2.69	36.5	0.00			403
2	464		5.82	5.78	34.145	26.905	120.1	0.987	0.81	11.6	76.6	2.97	39.5	0.00			468
	500	ISL	5.66	5.62	3 4.197	26.966	114.6	1.030	0.60	8.5	81.6	3.06	40.3	0.00			504
2	535		5.50	5.45	34.248	27.026	109.3	1.069	0.39	5.5	86.4	3.15	41.1	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.1 N	124 0.2 W	08/09/87	0516 GMT	4261 M	360	05 KT	320 02 06	1	1015.8 MB	18.7 C	17.2 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
1	0		19.50	19.50	33.520	23.764	412.5	0.000	5.41	102.6	2.5	0.32	0.1	0.00	0.05	0.01	0
	10	ISL	19.44	19.44	33.507	23.770	412.3	0.041	5.43	102.9	2.5	0.31	0.0	0.00	0.05	0.01	10
1	16		19.40	19.40	33.500	23.775	412.1	0.066	5.44	103.0	2.5	0.31	0.0	0.00	0.05	0.01	16
	20	ISL	19.39	19.39	33.497	23.776	412.2	0.082	5.44	103.0	2.5	0.31	0.0	0.00	0.05	0.01	20
	30	ISL	19.38	19.37	33.489	23.772	412.9	0.124	5.45	103.1	2.5	0.31	0.0	0.00	0.05	0.01	30
1	31		19.38	19.37	33.488	23.772	413.0	0.128	5.45	103.1	2.5	0.31	0.0	0.00	0.05	0.01	31
1	42		19.00	18.99	33.471	23.856	405.3	0.173	5.56	104.5	2.4	0.31	0.0	0.00	0.07	0.02	42
	50	ISL	18.18	18.17	33.491	24.076	384.6	0.204	5.74	106.2	2.5	0.29	0.0	0.00	0.08	0.02	50
1	52		17.96	17.95	33.500	24.136	378.8	0.212	5.78	106.5	2.5	0.29	0.0	0.00	0.08	0.02	52
1	63		17.24	17.23	33.564	24.359	358.0	0.253	5.88	107.0	2.4	0.28	0.0	0.00	0.09	0.02	63
1	73		16.58	16.57	33.550	24.503	344.5	0.288	5.91	106.2	2.3	0.28	0.0	0.00	0.11	0.03	74
	75	ISL	16.43	16.42	33.549	24.537	341.3	0.295	5.91	105.9	2.3	0.28	0.0	0.00	0.12	0.03	76
1	82		15.97	15.96	33.567	24.656	330.1	0.318	5.89	104.6	2.3	0.29	0.0	0.00	0.14	0.05	83
1	98		15.87	15.85	33.771	24.836	313.5	0.370	5.73	101.6	2.9	0.27	0.0	0.00	0.19	0.16	99
	100	ISL	15.80	15.78	33.776	24.856	311.7	0.376	5.71	101.1	2.9	0.27	0.1	0.01	0.20	0.18	101
1	113		15.10	15.08	33.771	25.007	297.6	0.415	5.52	96.4	3.3	0.35	0.7	0.10	0.26	0.26	114
	125	ISL	14.15	14.13	33.786	25.222	277.3	0.450	5.27	90.3	4.6	0.50	3.1	0.08	0.21	0.20	126
1	129		13.82	13.80	33.789	25.293	270.6	0.461	5.18	88.2	5.2	0.55	4.0	0.07	0.19	0.17	130
	150	ISL	12.48	12.46	33.711	25.500	251.1	0.516	4.93	81.6	8.0	0.78	7.7	0.03	0.12	0.13	151
1	155		12.18	12.16	33.690	25.542	247.2	0.528	4.87	80.1	8.8	0.84	8.6	0.02	0.10	0.12	156
1	180		10.56	10.54	33.712	25.854	217.6	0.586	4.39	69.7	15.0	1.21	14.8	0.00	0.04	0.07	181
	200	ISL	9.65	9.63	33.811	26.086	195.8	0.628	3.90	60.7	21.5	1.50	19.3	0.00	0.02	0.04	202
1	211		9.30	9.28	33.873	26.192	185.8	0.649	3.62	55.9	25.1	1.64	21.4	0.00	0.01	0.02	213
1	240		8.84	8.81	33.976	26.346	171.6	0.700	3.04	46.5	31.7	1.91	25.1	0.00			242
	250	ISL	8.71	8.68	34.003	26.387	167.8	0.717	2.88	43.9	33.6	1.98	26.0	0.00			252
1	281		8.34	8.31	34.072	26.499	157.7	0.768	2.43	36.8	39.1	2.18	28.3	0.00			283
	300	ISL	8.10	8.07	34.106	26.562	151.9	0.797	2.11	31.8	43.2	2.31	29.9	0.00			302
1	337		7.66	7.63	34.162	26.670	142.0	0.852	1.51	22.5	51.0	2.56	32.7	0.00			340
1	397		7.18	7.14	34.230	26.793	131.0	0.933	0.86	12.7	61.2	2.84	35.5	0.00			400
	400	ISL	7.15	7.11	34.231	26.798	130.6	0.937	0.84	12.4	61.7	2.85	35.6	0.00			403
1	464		6.49	6.45	34.252	26.904	120.9	1.018	0.56	8.1	71.5	3.00	38.1	0.00			468
	500	ISL	6.31	6.26	34.277	26.948	117.2	1.061	0.45	6.5	75.0	3.07	38.8	0.00			504
1	535		6.13	6.08	34.303	26.991	113.3	1.101	0.35	5.0	78.5	3.13	39.4	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 26.6

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 57.6 N	117 18.0 W	04/09/87	2157 GMT	52 M	270	06 KT		1	1011.7 MB	22.2 C	21.0 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	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	33.553	23.879	401.6	0.000	6.01	113.3	3.9	0.28	0.1	0.00	1.06	0.14	0
1	10		17.60	17.60	33.511	24.230	368.4	0.039	6.30	115.4	4.5	0.32	0.1	0.00	2.21	0.30	10
	20	ISL	14.81	14.81	33.446	24.816	312.9	0.073	6.00	104.0	5.4	0.50	1.2	0.13	1.21	0.35	20
1	21		14.55	14.55	33.443	24.870	307.8	0.076	5.95	102.6	5.5	0.52	1.4	0.15	1.07	0.35	21
	30	ISL	13.74	13.74	33.432	25.031	292.7	0.103	5.43	92.1	6.9	0.73	3.6	0.23	0.54	0.27	30
1	31		13.71	13.71	33.431	25.036	292.2	0.106	5.38	91.2	7.0	0.75	3.8	0.23	0.51	0.26	31
1	41		13.61	13.60	33.437	25.061	290.1	0.135	5.32	90.0	7.4	0.78	3.9	0.23	0.50	0.27	41

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 54.6 N	117 23.6 W	04/09/87	2318 GMT	648 M	280	04 KT	270 01 05	1	1009.2 MB	21.8 C	20.1 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
1	0		20.44	20.44	33.625	23.599	428.3	0.000	5.43	104.8	2.6	0.31	0.0	0.00	0.23	0.04	0
1	10		19.47	19.47	33.598	23.832	406.4	0.042	5.65	107.2	2.9	0.29	0.0	0.00	0.42	0.08	10
	20	ISL	17.29	17.29	33.498	24.295	362.6	0.080	5.96	108.5	2.8	0.34	0.0	0.00	0.47	0.17	20
1	21		17.04	17.04	33.488	24.346	357.7	0.084	5.99	108.5	2.8	0.35	0.0	0.00	0.47	0.18	21
	30	ISL	15.21	15.21	33.394	24.690	325.2	0.115	6.26	109.4	3.7	0.40	0.1	0.01	1.01	0.41	30
1	31		15.04	15.04	33.388	24.722	322.2	0.118	6.28	109.4	3.8	0.41	0.1	0.01	1.08	0.44	31
1	42		14.23	14.22	33.448	24.942	301.5	0.152			5.1	0.47	0.6	0.02	1.50	0.52	42
	50	ISL	13.49	13.48	33.443	25.091	2 87.5	0.176	5.57	94.0	6.4	0.68	3.5	0.16	0.72	0.35	50
1	52		13.29	13.28	33.444	25.132	2 83.7	0.181	5.42	91.1	6.9	0.74	4.5	0.21	0.50	0.30	52
1	62		12.34	12.33	33.532	25.386	259.6	0.209	4.55	75.0	10.7	1.06	10.0	0.49	0.29	0.29	62
1	73		12.12	12.11	33.573	25.460	252.8	0.237	4.01	65.8	12.3	1.24	12.7	0.09	0.18	0.24	74
	75	ISL	12.01	12.00	33.574	25.482	250.8	0.242	4.01	65.7	12.7	1.27	13.1	0.09	0.17	0.22	76
1	87		11.40	11.39	33.588	25.606	239.2	0.271	3.99	64.5					0.10	0.14	88
	100	ISL	11.33	11.32	33.691	25.699	230.7	0.302	3.46	55.9	17.7	1.51	17.2	0.03	0.06	0.14	101
1	103		11.32	11.31	33.709	25.715	229.2	0.309	3.33	53.8	18.3	1.53	17.5	0.02	0.05	0.14	104
1	123		11.13	11.11	33.772	25.799	221.7	0.354	3.13	50.3	21.1	1.60	18.9	0.02	0.04	0.10	124
	125	ISL	11.12	11.10	33.781	25.808	220.9	0.358	3.09	49.7	21.4	1.62	19.1	0.02	0.04	0.10	126
1	149		10.91	10.89	33.871	25.916	211.2	0.410	2.66	42.6	23.9	1.80	21.3	0.02	0.03	0.09	150
	150	ISL	10.88	10.86	33.870	25.921	210.8	0.412	2.67	42.7	23.9	1.80	21.3	0.02	0.03	0.09	151
1	179		10.13	10.11	33.850	26.036	200.3	0.472	3.01	47.4	24.8	1.76	22.3	0.02	0.02	0.07	180
	200	ISL	10.14	10.12	33.982	26.137	191.1	0.513	2.55	40.2	27.9	1.92	24.0	0.02	0.01	0.06	202
1	210		10.16	10.14	34.058	26.194	186.0	0.532	2.25	35.5	29.9	2.02	25.0	0.02	0.01	0.06	212
1	239		9.51	9.48	3 4.197	26.411	165.7	0.583	1.73	26.9	36.7	2.28	28.1	0.03			241
	250	ISL	9.29	9.26	34.210	26.458	161.5	0.601	1.70	26.3	38.4	2.32	28.7	0.03			252
1	280		8.81	8.78	34.210	26.534	154.6	0.648	1.62	24.8	41.9	2.39	29.8	0.01			282
	300	ISL	8.71	8.68	34.230	26.566	151.9	0.679	1.50	22.9	43.3	2.45	30.2	0.01			302
1	336		8.60	8.56	34.259	26.606	148.7	0.733	1.27	19.4	45.7	2.55	30.9	0.01			339
1	396		7.85	7.81	34.236	26.702	140.2	0.819	1.15	17.2	52.4	2.58	33.1	0.01			3 99
	400	ISL	7.82	7.78	34.238	26.708	139.7	0.825	1.13	16.9	52.7	2.59	33.2	0.01			403
1	463		7.43	7.38	34.285	26.802	131.6	0.910	0.73	10.8	59.3	2.77	34.9	0.01			467
	500	ISL	6.96	6.91	3 4.294	26.875	124.8	0.958	0.58	8.5	66.3	2.88	36.5	0.02			504
1	535		6.52	6.47	34.305	26.943	118.4	1.000	0.43	6.2	72.9	2.99	38.0	0.03			540

RV NEW HORIZON CALCOFI CRUISE 8709 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 31.8 W	05/09/87	0407 GMT	860 M	220	05 KT			1011.3 MB	20.3 C	19.0 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	33.584	23.604	427.8	0.000	5.40	103.9	2.9	0.32	0.0	0.00	0.12	0.03	0
1	9		20.11	20.11	33.573	23.646	424.1	0.038	5.45	104.5	2.8	0.31	0.0	0.00	0.10	0.02	9
	10	ISL	20.02	20.02	33.572	23.669	421.9	0.043	5.46	104.6	2.8	0.31	0.0	0.00	0.10	0.02	10
1	19		18.94	18.94	33.550	23.930	397.3	0.079	5.63	105.7	2.8	0.36	0.0	0.01	0.14	0.04	19
	20	ISL	18.83	18.83	33.542	23.952	395.3	0.083	5.65	105.9	2.8	0.36	0.0	0.01	0.14	0.04	20
1	29		17.59	17.59	33.455	24.190	372.9	0.118	5.83	106.7	2.9	0.35	0.0	0.00	0.18	0.06	29
	30	ISL	17.37	17.37	33.444	24.235	368.7	0.122	5.87	107.0	2.9	0.35	0.0	0.00	0.21	0.07	30
1	39		15.42	15.41	33.381	24.634	330.8	0.153	6.12	107.4	2.6	0.40	0.0	0.00	0.49	0.16	39
1	49		14.07	14.06	33.410	24.946	301.3	0.185	5.99	102.3	4.7	0.50	1.0	0.04	0.64	0.30	49
	50	ISL	14.00	13.99	33.412	24.962	299.8	0.188	5.96	101.6	4.8	0.52	1.3	0.05	0.64	0.30	50
1	60		13.42	13.41	33.417	25.085	288.3	0.217	5.57	93.9	5.8	0.70	4.4	0.20	0.62	0.26	60
1	70		12.63	12.62	33.405	25.232	274.5	0.245	5.13	85.0	7.7	0.85	7.1	0.23	0.32	0.25	71
	75	ISL	12.39	12.38	33.420	25.290	269.1	0.259	4.99	82.3	8.4	0.90	8.2	0.21	0.25	0.26	76
1	84		12.06	12.05	33.467	25.390	259.8	0.283	4.74	77.6	9.9	1.00	10.1	0.15	0.20	0.28	85
2	100		11.38	11.37	33.580	25.604	239.8	0.323	4.05	65.4	14.1	1.30	14.5	0.03	0.11	0.16	101
2	120		10.66	10.65	33.681	25.812	220.3	0.369	3.71	59.0	18.3	1.46	17.9	0.02	0.06	0.11	121
	125	ISL	10.54	10.53	33.709	25.854	216.4	0.380	3.62	57.5	19.3	1.50	18.6	0.02	0.05	0.10	126
2	144		10.19	10.17	33.815	25.998	203.1	0.419	3.28	51.7	22.8	1.66	21.0	0.02	0.03	0.07	145
	150	ISL	10.13	10.11	33.846	26.032	200.0	0.432	3.19	50.2	23.7	1.71	21.6	0.02	0.03	0.06	151
2	176		9.88	9.86	33.951	26.157	188.6	0.482	2.75	43.1	27.5	1.88	23.9	0.01	0.01	0.05	177
	200	ISL	9.38	9.36	33.999	26.277	177.6	0.526	2.13	33.0	31.2	1.98	25.7	0.01	0.00	0.04	202
2	206		9.25	9.23	34.009	26.306	174.9	0.537	2.02	31.2	32.1	2.00	26.1	0.01	0.00	0.04	208
2	235		8.88	8.85	34.086	26.426	164.0	0.586	2.32	35.6	36.3	2.14	27.8	0.01			237
	250	ISL	8.72	8.69	34.121	26.478	159.2	0.610	2.18	33.3	38.7	2.23	28.8	0.01			252
2	275		8.52	8.49	34.175	26.552	152.6	0.649	1.78	27.1	42.6	2.37	30.2	0.02			277
	300	ISL	8.47	8.44	34.228	26.602	148.4	0.687	1.45	22.0	45.5	2.41	31.0	0.02			302
2	332		8.40	8.37	34.278	26.652	144.2	0.733	1.09	16.5	48.9	2.45	31.8	0.01			335
2	391		7.68	7.64	34.279	26.760	134.5	0.816	0.82	12.2	56.8	2.80	34.2	0.00			3 94
	400	ISL	7.58	7.54	34.279	26.775	133.1	0.828	0.78	11.6	58.1	2.82	34.5	0.00			403
2	459		6.96	6.92	34.288	26.869	124.6	0.904	0.54	7.9	66.2	2.90	36.6	0.00			463
	500	ISL	6.54	6.49	34.303	26.938	118.3	0.953	0.44	6.4	71.4	2.98	38.0	0.00			504
2	514	P	6.40	6.35	34.309	26.961	116.2	0.970	0.40	5.8	73.2	3.01	38.5	0.00			518

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 40.6 N	117 52.7 W	05/09/87	0838 GMT	581 M	2 90	09 KT			1012.2 MB	18.9 C	17.8 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		20.44	20.44	33.598	23.578	430.3	0.000	5.53	106.7	3.1	0.32	0.1	0.00	0.13	0.04	0
1	10		19.73	19.73	33.582	23.752	414.0	0.042	5.58	106.3	3.1	0.36	0.1	0.00	0.11	0.03	10
	20	ISL	18.56	18.56	33.530	24.010	389.8	0.082	5.70	106.3	3.1	0.39	0.1	0.00	0.11	0.04	20
1	21		18.43	18.43	33.524	24.038	3 87.1	0.086	5.72	106.4	3.1	0.39	0.1	0.00	0.11	0.04	21
	30	ISL	17.52	17.51	33.482	24.228	369.3	0.120	5.85	107.0	3.2	0.45	0.3	0.00	0.16	0.07	30
1	31		17.41	17.40	33.477	24.250	367.2	0.124	5.87	107.1	3.2	0.45	0.3	0.00	0.17	0.07	31
1	42		15.75	15.74	33.416	24.588	335.3	0.163	6.05	106.9	3.7	0.40	0.1	0.00	0.28	0.16	42
	50	ISL	14.24	14.23	33.377	24.885	307.2	0.188	5.87	100.6	4.5	0.54	1.3	0.05	0.54	0.26	50
1	52		13.88	13.87	33.376	24.959	300.1	0.194	5.83	99.2	4.8	0.59	1.9	0.07	0.59	0.28	52
1	62		12.77	12.76	33.459	25.247	273.0	0.223	5.08	84.5	7.8	0.91	7.0	0.23	0.50	0.26	62
1	73		12.25	12.24	33.515	25.391	259.5	0.252	4.62	76.0	10.0	1.04	10.0	0.25	0.38	0.52	74
	75	ISL	12.06	12.05	33.530	25.438	255.0	0.258	4.53	74.2	10.8	1.08	10.9	0.22	0.34	0.48	76
1	87		10.93	10.92	33.635	25.727	227.6	0.286	4.05	64.8	16.0	1.35	16.0	0.02	0.09	0.15	88
	100	ISL	10.37	10.36	33.724	25.895	211.9	0.315	3.72	58.8	19.3	1.52	18.7	0.02	0.05	0.11	101
1	103		10.30	10.29	33.740	25.919	209.7	0.321	3.67	58.0	19.9	1.55	19.0	0.02	0.04	0.10	104
1	124		9.98	9.97	33.796	26.018	200.7	0.364	3.48	54.6	22.7	1.64	20.7	0.01	0.02	0.10	125
	125	ISL	9.96	9.95	33.800	26.024	200.1	0.366	3.46	54.2	22.9	1.65	20.8	0.01	0.02	0.10	126
1	150		9.56	9.54	33.912	26.179	185.9	0.415	3.02	47.0	27.7	1.88	23.7	0.01	0.01	0.06	151
1	181		9.26	9.24	33.977	26.279	176.9	0.471	2.77	42.8	30.9	2.00	25.3	0.01	0.00	0.05	182
	200	ISL	9.02	9.00	33.998	26.334	172.0	0.504	2.68	41.2	32.3	2.02	25.8	0.00	0.01	0.04	202
1	212		8.92	8.90	34.025	26.371	168.7	0.525	2.63	40.3	33.6	2.03	26.3	0.00	0.01	0.03	214
1	241		9.11	9.08	34.217	26.492	158.0	0.572	1.67	25.7	40.0	2.35	28.9	0.00			243
	250	ISL	8.98	8.95	34.243	26.533	154.2	0.586	1.48	22.8	42.2	2.43	29.7	0.00			252
1	282		8.34	8.31	34.279	26.661	142.3	0.633	1.06	16.1	49.6	2.66	32.1	0.01			28A
	300	ISL	8.12	8.09	3 4.284	26.698	139.0	0.659	0.95	14.3	52.2	2.71	32.8	0.01			302
1	337		7.78	7.75	34.279	26.745	135.0	0.709	0.84	12.6	56.3	2.76	33.7	0.00			340
1	397		7.26	7.22	34.293	26.831	127.5	0.788	0.62	9.2	63.3	2.87	35.6	0.00			400
	400	ISL	7.23	7.19	3 4.293	26.835	127.1	0.792	0.61	9.0	63.6	2.88	35.7	0.00			403
1	463		6.73	6.69	34.292	26.904	121.2	0.870	0.50	7.3	70.6	2.98	37.4	0.00			467
	500	ISL	6.50	6.45	34.304	26.944	117.7	0.914	0.43	6.2	74.3	3.03	38.2	0.00			504
1	535		6.28	6.23	34.315	26.982	114.5	0.955	0.36	5.2	77.8	3.07	38.9	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 40

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 30.7 N	118 12.7 W	05/09/87	1305 GMT	1601 M	260	06 KT	2 80 02 05	1	1013.1 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
1	0		19.51	19.51	33.589	23.814	407.8	0.000	5.45	103.4	2.8	0.33	0.1	0.00	0.20	0.05	0
1	10		19.48	19.48	33.586	23.820	407.6	0.041	5.46	103.6	2.8	0.33	0.0	0.00	0.20	0.05	10
	20	ISL	18.88	18.88	33.546	23.942	3 96.3	0.081	5.60	105.0	2.9	0.39	0.1	0.00	0.18	0.06	20
1	21		18.78	18.78	33.540	23.963	394.3	0.085	5.62	105.2	2.9	0.40	0.1	0.00	0.18	0.06	21
1	30		17.27	17.27	33.473	24.281	364.3	0.119	5.87	106.8	2.9	0.37	0.0	0.00	0.27	0.12	30
1	42		14.66	14.65	33.407	24.819	313.2	0.160	6.07	104.9	4.0	0.52	0.5	0.02	0.46	0.20	42
	50	ISL	13.43	13.42	33.369	25.045	291.8	0.184	5.68	95.7	5.2	0.64	3.1	0.12	0.40	0.17	50
1	52		13.20	13.19	33.364	25.088	2 87.8	0.190	5.56	93.2	5.6	0.68	3.9	0.14	0.37	0.17	52
1	63		12.51	12.50	33.414	25.262	271.4	0.220	5.12	84.7	7.8	0.92	7.9	0.14	0.32	0.27	63
1	72		11.89	11.88	33.503	25.449	253.8	0.244	4.55	74.3	11.2	1.10	11.6	0.13	0.25	0.26	73
	75	ISL	11.78	11.77	33.523	25.485	250.5	0.252	4.44	72.3	11.9	1.14	12.3	0.11	0.23	0.26	76
1	88		11.46	11.45	33.589	25.596	240.2	0.284	4.10	66.3	13.9	1.28	14.4	0.04	0.18	0.24	89
	100	ISL	11.14	11.13	33.649	25.701	230.5	0.312	3.78	60.8	16.1	1.38	16.5	0.02	0.12	0.20	101
1	102		11.08	11.07	33.659	25.719	228.8	0.316	3.73	59.9	16.5	1.40	16.8	0.02	0.11	0.19	103
1	124		10.10	10.09	33.778	25.984	204.0	0.364	3.38	53.2	21.8	1.64	20.7	0.01	0.05	0.11	125
	125	ISL	10.06	10.05	33.783	25.994	203.0	0.366	3.37	52.9	22.0	1.65	20.8	0.01	0.05	0.11	126
1	150		9.31	9.29	33.890	26.202	183.6	0.414	3.18	49.2	27.1	1.82	23.8	0.00	0.00	0.04	151
1	182		8.99	8.97	33.955	26.305	174.4	0.472	2.95	45.3	30.7	1.91	25.3	0.01	0.00	0.04	183
	200	ISL	8.71	8.69	34.000	26.384	167.1	0.502	2.81	42.9	33.6	2.00	26.5	0.01	0.01	0.03	202
1	212		8.52	8.50	34.030	26.437	162.2	0.522	2.70	41.0	35.7	2.07	27.3	0.01	0.01	0.03	214
1	242		8.26	8.24	3 4.086	26.521	154.7	0.570	2.37	35.8	40.3	2.20	28.9	0.01			244
	250	ISL	8.18	8.15	34.091	26.537	153.3	0.582	2.31	34.8	41.3	2.22	29.3	0.01			252
1	283		7.88	7.85	34.115	26.601	147.7	0.632	2.02	30.3	45.4	2.32	30.7	0.00			285
	300	ISL	7.81	7.78	34.156	26.644	144.0	0.656	1.70	25.4	48.3	2.44	31.7	0.00			302
1	339		7.69	7.66	34.252	26.737	135.7	0.711	0.99	14.8	55.0	2.71	33.9	0.00			342
1	399		7.28	7.24	34.283	26.821	128.6	0.790	0.67	9.9	62.1	2.84	35.5	0.00			402
	400	ISL	7.27	7.23	34.283	26.822	128.4	0.792	0.67	9.9	62.2	2.84	35.5	0.00			403
1	465		6.61	6.57	34.292	26.920	119.6	0.872	0.46	6.7	71.2	3.00	37.9	0.00			469
	500	ISL	6.45	6.40	34.304	26.951	117.0	0.914	0.40	5.8	74.3	3.04	38.4	0.00			504
1	535		6.29	6.24	34.317	26.982	114.4	0.954	0.34	4.9	77.3	3.08	38.9	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.7 N	118 33.4 W	05/09/87	1759 GMT	1373 M	2 90	10 KT	2 80 03	05 1	1014.1 MB	19.2 C	17.9 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	19.50	19.50	33.592	23.819	407.3	0.000	5.44	103.2	2.8	0.29	0.0	0.00	0.15	0.04	0
1	1		19.50	19.50	33.592	23.819	407.4	0.004	5.44	103.2	2.8	0.29	0.0	0.00	0.15	0.04	1
	10	ISL	19.45	19.45	33.592	23.832	406.4	0.041	5.45	103.3	2.8	0.29	0.0	0.00	0.16	0.04	10
1	11		19.44	19.44	33.592	23.83 5	406.2	0.045	5.45	103.3	2.8	0.29	0.0	0.00	0.16	0.04	11
	20	ISL	19.41	19.41	33.593	23.844	405.7	0.081	5.45	103.2	2.8	0.29	0.0	0.00	0.16	0.05	20
1	21		19.41	19.41	33.593	23.844	405.7	0.085	5.45	103.2	2.8	0.29	0.0	0.00	0.16	0.05	21
	30	ISL	17.52	17.51	33.479	24.226	369.5	0.120	5.83	106.6	3.1	0.32	0.0	0.00	0.23	0.12	30
1	32		17.01	17.00	33.456	24.329	359.7	0.128	5.92	107.2	3.2	0.33	0.0	0.00	0.26	0.14	32
1	42		15.25	15.24	33.413	24.696	325.0	0.162	6.03	105.5	3.5	0.39	0.0	0.00	0.50	0.19	42
	50	ISL	14.56	14.55	33.405	24.839	311.6	0.187	5.95	102.6	4.1	0.44	0.4	0.02	0.55	0.22	50
1	51		14.49	14.48	33.405	24.854	310.1	0.190	5.94	102.3	4.2	0.45	0.5	0.03	0.56	0.23	51
1	62		13.48	13.47	33.412	25.069	289.9	0.223	5.53	93.3	5.7	0.63	3.2	0.14	0.45	0.39	62
1	72		12.50	12.49	33.476	25.312	266.9	0.251	4.93	81.5	8.8	0.91	8.1	0.22	0.19	0.16	73
	75	ISL	12.26	12.25	33.492	25.371	261.4	0.259	4.77	78.5	9.7	0.98	9.4	0.20	0.18	0.16	76
1	86		11.58	11.57	33.543	25.538	245.7	0.287	4.31	69.9	12.5	1.16	13.1	0.07	0.13	0.18	87
	100	ISL	11.06	11.05	33.599	25.677	232.8	0.320	4.05	65.0	15.0	1.29	15.4	0.03	0.12	0.23	101
1	101		11.03	11.02	33.604	25.686	231.9	0.323	4.04	64.8	15.2	1.30	15.5	0.03	0.12	0.23	102
1	122		9.93	9.92	33.775	26.010	201.4	0.368	3.64	57.0	21.8	1.56	20.1	0.02	0.02	0.07	123
	125	ISL	9.84	9.83	33.787	26.034	199.1	0.374	3.60	56.3	22.4	1.58	20.5	0.02	0.02	0.07	126
1	147		9.40	9.38	33.858	26.163	187.3	0.417	3.36	52.0	25.9	1.72	22.6	0.01	0.01	0.04	148
	150	ISL	9.37	9.35	33.874	26.180	185.7	0.422	3.32	51.4	26.5	1.75	22.9	0.01	0.01	0.05	151
1	177		9.08	9.06	34.004	26.329	172.1	0.471			31.9	1.97	25.8	0.01	0.00	0.13	178
	200	ISL	8.63	8.61	34.054	26.439	161.9	0.509	2.61	39.8	36.2	2.08	27.4	0.01	0.01	0.05	202
1	206		8.51	8.49	34.062	26.464	159.6	0.519	2.52	38.3	37.3	2.10	27.8	0.01	0.01	0.03	208
1	237		8.17	8.15	34.104	26.549	152.0	0.567	2.18	32.9	42.1	2.24	29.7	0.01			239
	250	ISL	8.00	7.97	34.120	26.587	148.6	0.587	2.04	30.7	44.5	2.31	30.5	0.01			252
1	276		7.71	7.68	34.156	26.658	142.1	0.624	1.74	26.0	49.3	2.44	32.0	0.01			278
	300	ISL	7.64	7.61	34.203	26.705	138.0	0.658	1.40	20.9	52.5	2.57	33.1	0.01			302
1	332		7.58	7.55	34.257	26.757	133.7	0.701	0.98	14.6	56.4	2.73	34.3	0.00			335
1	392		6.98	6.94	34.279	26.859	124.6	0.779	0.63	9.3	66.3	2.91	36.7	0.01			3 95
	400	ISL	6.90	6.86	34.281	26.871	123.4	0.789	0.60	8.8	67.5	2.93	36.9	0.01			403
1	458		6.44	6.40	34.300	26.948	116.6	0.859	0.42	6.1	74.8	3.03	38.3	0.01			462
	500	ISL	6.30	6.25	34.316	26.979	114.1	0.907	0.35	5.1	77.3	3.08	38.8	0.01			504
1	529		6.20	6.15	34.327	27.001	112.4	0.940	0.31	4.5	79.1	3.11	39.2	0.01			534

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 10.6 N	118 54.0 W	06/09/87	0126 GMT	1477 M	310	15 KT	310 05	05 0	1012.5 MB	18.2 C	18.0 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
	0	ISL	18.94	18.94	33.622	23.984	391.5	0.000	5.54	104.1	2.8	0.28	0.0	0.00	0.19	0.06	0
1	1		18.94	18.94	33.622	23.984	391.5	0.004	5.54	104.1	2.8	0.28	0.0	0.00	0.19	0.06	1
	10	ISL	18.90	18.90	33.617	23.991	391.2	0.039	5.56	104.4	2.9	0.29	0.0	0.00	0.19	0.07	10
1	11		18.90	18.90	33.616	23.990	391.3	0.043	5.56	104.4	2.9	0.29	0.0	0.00	0.19	0.07	11
1	20		17.86	17.86	33.492	24.153	376.2	0.078	5.80	106.7	2.7	0.32	0.0	0.01	0.26	0.10	20
1	30		16.20	16.20	33.289	24.388	354.0	0.114	6.12	109.0	2.2	0.35	0.0	0.00	0.31	0.13	30
1	39		13.93	13.92	33.063	24.707	323.8	0.145	6.37	108.3	2.8	0.38	0.0	0.00	0.46	0.23	39
1	49		13.46	13.45	33.119	24.846	310.8	0.176	6.16	103.7	3.4	0.46	0.6	0.05	0.75	0.43	49
	50	ISL	13.41	13.40	33.129	24.864	309.1	0.179	6.12	102.9	3.5	0.48	0.8	0.07	0.75	0.44	50
1	59		12.92	12.91	33.217	25.030	293.5	0.207	5.75	95.8	4.3	0.63	3.1	0.26	0.62	0.49	59
1	68		12.31	12.30	33.253	25.176	279.8	0.232	5.48	90.1	5.7	0.74	5.2	0.37	0.42	0.41	69
	75	ISL	11.93	11.92	33.318	25.298	268.2	0.252	5.15	84.1	7.8	0.90	8.2	0.22	0.29	0.29	76
1	82		11.56	11.55	33.394	25.426	256.2	0.270	4.79	77.6	10.4	1.08	11.5	0.03	0.19	0.18	83
1	96		10.63	10.62	33.519	25.690	231.3	0.304	4.18	66.4	16.2	1.39	16.7	0.01	0.10	0.11	97
	100	ISL	10.47	10.46	33.553	25.744	226.3	0.313	4.05	64.1	17.4	1.44	17.6	0.01	0.08	0.10	101
1	115		10.04	10.03	33.666	25.906	211.1	0.346	3.68	57.8	20.9	1.58	20.1	0.01	0.03	0.07	116
	125	ISL	9.69	9.68	33.719	26.006	201.7	0.367	3.53	55.0	23.1	1.66	21.5	0.01	0.02	0.06	126
1	140		9.32	9.30	33.805	26.134	189.8	0.396	3.29	50.8	26.2	1.78	23.4	0.01	0.01	0.05	141
	150	ISL	9.43	9.41	33.910	26.198	184.0	0.415	2.90	45.0	28.5	1.90	24.6	0.01	0.00	0.05	151
1	169		9.61	9.59	34.082	26.304	174.5	0.449	2.26	35.2	32.5	2.09	26.3	0.00	0.00	0.04	170
1	198		8.53	8.51	34.061	26.460	159.8	0.497	2.53	38.5	36.8	2.10	27.4	0.01	0.01	0.03	200
	200	ISL	8.52	8.50	34.066	26.465	159.4	0.500	2.52	38.3	37.1	2.11	27.5	0.01			202
1	227		8.33	8.31	34.105	26.525	154.1	0.543	2.27	34.4	40.4	2.22	28.8	0.01			229
	250	ISL	8.11	8.08	34.128	26.576	149.5	0.578	2.06	31.0	43.8	2.32	30.0	0.00			252
1	267		7.97	7.94	34.150	26.615	146.2	0.603	1.86	27.9	46.3	2.40	30.9	0.00			269
	300	ISL	8.03	8.00	34.252	26.687	140.0	0.650	1.20	18.1	50.8	2.63	32.2	0.00			302
1	322		8.07	8.04	34.316	26.731	136.3	0.680	0.78	11.8	53.7	2.77	32.9	0.00			325
1	382		7.38	7.34	34.311	26.828	127.6	0.760	0.60	8.9	62.2	2.90	35.2	0.00			3 85
	400	ISL	7.20	7.16	34.310	26.853	125.4	0.782	0.55	8.1	64.0	2.93	35.8	0.00			403
1	449		6.78	6.74	34.315	26.915	120.0	0.842	0.44	6.4	68.8	3.01	37.2	0.00			453
	500	ISL	6.41	6.36	34.341	26.985	113.7	0.902	0.33	4.8	75.0	3.09	38.4	0.00			504
1	520		6.26	6.21	34.351	27.013	111.3	0.925	0.28	4.0	77.5	3.12	38.9	0.00			524

RV NEW HORIZON CALCOFI CRUISE 87 09 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 0.4 N	119 14.6 W	06/09/87	0450 GMT	1591 M	320	15 KT			1013.4 MB	18.1 C	17.3 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		17.89	17.89	33.105	23.849	404.4	0.000	5.62	103.2	2.3	0.36	0.1	0.00	0.11	0.03	0
1	10		17.84	17.84	33.195	23.930	3 97.0	0.040	5.65	103.8	2.2	0.35	0.0	0.00	0.13	0.04	10
1	20		17.24	17.24	33.161	24.048	3 86.1	0.079	5.79	105.1	2.1	0.36	0.0	0.00	0.16	0.05	20
1	30		15.49	15.49	33.028	24.347	357.9	0.116	6.15	107.8	2.1	0.38	0.0	0.00	0.23	0.09	30
1	40		14.05	14.04	32.935	24.583	335.6	0.151	6.35	108.1	2.2	0.40	0.0	0.00	0.31	0.15	40
1	50				32.969			0.184	6.20	103.4	3.0	0.45	0.4	0.04	0.68	0.46	50
1	59		12.48	12.47	32.987	24.937	302.3	0.211	5.99	98.7	3.3	0.51	1.2	0.20	0.54	0.51	59
1	69		12.14	12.13	33.099	25.089	288.1	0.241	5.67	92.8	4.4	0.66	3.8	0.36	0.33	0.36	70
	75	ISL	12.00	11.99	33.195	25.190	278.6	0.258	5.44	88.9	5.7	0.76	5.8	0.29	0.26	0.28	76
1	83		11.77	11.76	33.311	25.323	266.1	0.280	5.13	83.4	7.9	0.90	8.6	0.13	0.19	0.19	84
1	98		10.83	10.82	33.379	25.546	245.1	0.318	4.64	74.0	13.0	1.23	14.0	0.02	0.11	0.12	99
	100	ISL	10.76	10.75	33.391	25.568	243.1	0.323	4.59	73.1	13.4	1.25	14.4	0.02	0.10	0.11	101
1	117		10.34	10.33	33.514	25.737	227.3	0.363	4.20	66.3	16.7	1.42	17.3	0.02	0.05	0.08	118
	125	ISL	10.07	10.06	33.603	25.852	216.4	0.381	3.88	60.9	19.3	1.53	19.2	0.02	0.03	0.07	126
1	142		9.52	9.50	33.784	26.085	194.5	0.416	3.24	50.3	24.9	1.76	23.0	0.01	0.01	0.07	143
	150	ISL	9.32	9.30	33.832	26.155	188.0	0.431	3.18	49.2	26.6	1.81	23.9	0.01	0.01	0.06	151
1	171		8.90	8.88	33.911	26.284	176.1	0.469	3.02	46.3	30.1	1.90	25.4	0.01	0.00	0.04	172
	200	ISL	8.46	8.44	33.978	26.405	165.0	0.518	2.85	43.2	34.1	2.00	26.8	0.02	0.01	0.03	202
1	201		8.45	8.43	33.980	26.408	164.7	0.520	2.84	43.1	34.2	2.00	26.8	0.02	0.01	0.03	203
1	229		8.03	8.01	34.021	26.504	156.0	0.565	2.73	41.0	38.4	2.09	28.3	0.02			231
	250	ISL	7.81	7.79	34.057	26.565	150.5	0.597	2.41	36.0	42.6	2.22	29.8	0.03			252
1	267		7.66	7.63	34.086	26.610	146.5	0.622	2.09	31.1	46.2	2.33	31.1	0.03			269
	300	ISL	7.44	7.41	34.134	26.679	140.3	0.670	1.59	23.6	51.8	2.52	33.1	0.02			302
1	323		7.30	7.27	34.163	26.722	136.6	0.702	1.29	19.1	55.5	2.63	34.3	0.01			3 26
1	381		6.84	6.80	34.218	26.829	127.0	0.778	0.79	11.6	65.0	2.85	36.7	0.01			3 84
	400	ISL	6.69	6.65	34.229	26.859	124.4	0.802	0.70	10.2	67.4	2.90	37.3	0.01			403
1	447		6.39	6.35	34.257	26.921	119.0	0.859	0.53	7.7	72.5	2.99	38.5	0.00			451
	500	ISL	6.23	6.19	34.309	26.983	113.7	0.921	0.36	5.2	77.4	3.07	39.0	0.00			504
1	518		6.18	6.13	34.326	27.003	112.0	0.941	0.30	4.3	79.1	3.10	39.2	0.00			522

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 49.1 N	119 34.8 W	06/09/87	0852 GMT	194 8 M	330	14 KT			1014.4 MB	17.9 C	17.0 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	17.88	17.88	33.123	23.865	402.9	0.000	5.64	103.6	2.1	0.39	0.2	0.00	0.13	0.04	0
1	1		17.88	17.88	33.123	23.865	403.0	0.004	5.64	103.6	2.1	0.39	0.2	0.00	0.13	0.04	1
	10	ISL	17.84	17.84	33.122	23.875	402.3	0.040	5.64	103.5	2.1	0.40	0.2	0.00	0.14	0.04	10
1	11		17.84	17.84	33.122	23.875	402.4	0.044	5.64	103.5	2.1	0.40	0.2	0.00	0.14	0.04	11
	20	ISL	17.18	17.18	33.068	23.991	391.5	0.080	5.80	105.1	2.2	0.43	0.1	0.01	0.15	0.05	20
1	22		16.99	16.99	33.058	24.028	388.1	0.088	5.85	105.6	2.2	0.43	0.1	0.01	0.15	0.05	22
	30	ISL	16.38	16.38	33.072	24.180	373.C	0.118	5.98	106.7	2.2	0.41	0.1	0.00	0.17	0.06	30
1	32		16.21	16.20	33.077	24.223	369.8	0.126	6.01	106.9	2.2	0.40	0.1	0.00	0.18	0.07	32
1	42		15.08	15.07	33.069	24.468	3 46.7	0.162	6.15	107.0	2.3	0.44	0.2	0.00	0.24	0.13	42
	50	ISL	14.43	14.42	33.128	24.653	329.3	0.189	6.12	105.1	2.4	0.42	0.1	0.00	0.25	0.16	50
1	52		14.29	14.28	33.145	24.696	325.2	0.195	6.11	104.7	2.5	0.42	0.1	0.00	0.25	0.18	52
1	62		13.51	13.50	33.180	24.884	307.6	0.227	5.95	100.3	3.2	0.46	0.5	0.05	0.44	0.39	62
2	73		13.43	13.42	33.313	25.003	296.5	0.260	5.71	96.2	3.8	0.58	1.7	0.16	0.36	0.33	74
	75	ISL	13.38	13.37	33.322	25.020	294.9	0.266	5.69	95.7	3.9	0.59	1.9	0.16	0.35	0.33	76
2	88		12.85	12.84	33.347	25.145	283.3	0.303	5.49	91.4	5.0	0.65	4.0	0.14	0.27	0.32	89
	100	ISL	11.97	11.96	33.384	25.343	264.7	0.336	5.11	83.5	7.6	0.86	7.9	0.06	0.17	0.25	101
2	103		11.73	11.72	33.398	25.398	259.4	0.344	4.99	81.1	8.5	0.93	9.1	0.04	0.15	0.23	104
2	124		10.27	10.26	33.595	25.812	220.3	0.395	3.96	62.4	17.8	1.46	18.3	0.02	0.04	0.07	125
	125	ISL	10.22	10.21	33.605	25.828	218.8	0.397	3.93	61.9	18.2	1.48	18.6	0.02	0.04	0.07	126
2	149		9.24	9.22	33.822	26.160	187.5	0.446	3.28	50.6	26.6	1.77	23.6	0.01	0.01	0.03	150
	150	ISL	9.22	9.20	33.829	26.169	186.7	0.447	3.26	50.3	26.9	1.78	23.7	0.01	0.01	0.03	151
2	179		8.86	8.84	33.980	26.345	170.5	0.499	2.71	41.5	33.2	2.00	26.5	0.01	0.00	0.04	180
	200	ISL	8.72	8.70	34.054	26.425	163.3	0.534	2.43	37.1	36.2	2.11	27.8	0.01	0.00	0.03	202
2	210		8.66	8.64	34.081	26.456	160.5	0.550	2.32	35.4	37.5	2.16	28.3	0.01	0.00	0.03	212
2	239		8.33	8.31	34.133	26.547	152.3	0.596	1.97	29.8	42.5	2.33	30.1	0.02			241
	250	ISL	8.21	8.18	34.142	26.573	150.0	0.612	1.85	27.9	44.2	2.38	30.7	0.02			252
2	279		7.93	7.90	34.162	26.630	144.9	0.655	1.54	23.1	48.4	2.49	32.1	0.01			281
	300	ISL	7.80	7.77	34.197	26.677	140.8	0.685	1.30	19.4	51.5	2.59	33.0	0.01			302
2	335		7.61	7.58	34.252	26.748	134.5	0.733	0.95	14.2	56.5	2.75	34.3	0.01			338
2	395		7.07	7.03	34.262	26.833	127.1	0.812	0.68	10.0	64.2	2.88	36.4	0.00			3 98
	400	ISL	7.03	6.99	34.268	26.843	126.2	0.818	0.66	9.7	64.8	2.89	36.5	0.00			403
2	461		6.59	6.55	34.335	26.956	116.1	0.892	0.47	6.8	71.9	3.01	38.0	0.00			465
	500	ISL	6.29	6.24	34.334	26.995	112.7	0.937	0.37	5.3	77.2	3.10	39.0	0.00			50*
2	533		6.04	5.99	34.334	27.027	109.8	0.973	0.28	4.0	81.6	3.18	39.9	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8709 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	06/09/87	1558 GMT	2090 M	3 40	10 KT	360 05 07	1	1015.0 MB	19.8 C	18.0 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
1	0		18.30	18.30	33.071	23.723	416.5	0.000	5.54	102.5	2.3	0.37	0.1	0.00	0.09	0.02	0
1	10		18.29	18.29	33.067	23.723	416.8	0.042	5.57	103.1	2.3	0.37	0.1	0.00	0.09	0.02	10
	20	ISL	18.30	18.30	33.067	23.721	417.4	0.083	5.54	102.5	2.3	0.37	0.1	0.00	0.09	0.02	20
1	21		18.30	18.30	33.067	23.721	417.4	0.088	5.54	102.5	2.3	0.37	0.1	0.00	0.09	0.02	21
	30	ISL	17.50	17.49	33.100	23.940	3 96.8	0.124	5.78	105.4	2.2	0.36	0.1	0.00	0.11	0.03	30
1	31		17.39	17.38	33.105	23.970	3 93.9	0.128	5.81	105.7	2.2	0.36	0.1	0.00	0.11	0.03	31
1	41		16.60	16.59	33.159	24.197	372.6	0.166	5.94	106.5	2.1	0.36	0.1	0.00	0.16	0.05	41
	50	ISL	15.91	15.90	33.187	24.376	355.7	0.199	6.02	106.5	2.1	0.36	0.1	0.00	0.21	0.09	50
1	52		15.73	15.72	33.189	24.418	351.8	0.206	6.04	106.5	2.1	0.36	0.1	0.00	0.22	0.10	52
1	62		14.53	14.52	33.155	24.653	329.6	0.240	6.13	105.5	2.4	0.36	0.1	0.00	0.24	0.17	62
1	72		13.47	13.46	33.208	24.913	305.0	0.272	5.87	98.9	3.3	0.47	0.6	0.06	0.37	0.38	73
	75	ISL	13.28	13.27	33.218	24.959	300.7	0.281	5.79	97.2	3.7	0.51	1.3	0.09	0.36	0.37	76
1	86		12.91	12.90	33.266	25.070	290.4	0.314	5.53	92.1	4.9	0.64	3.8	0.16	0.28	0.33	87
	100	ISL	12.88	12.87	33.408	25.187	279.7	0.354	5.40	90.0	5.2	0.63	4.7	0.08	0.19	0.23	101
1	102		12.87	12.86	33.428	25.204	278.1	0.359	5.38	89.6	5.3	0.63	4.8	0.06	0.18	0.22	103
1	122		11.73	11.71	33.516	25.490	251.1	0.412	4.99	81.2	8.3	0.86	8.9	0.02	0.10	0.14	123
	125	ISL	11.51	11.49	33.524	25.537	246.7	0.420	4.87	78.9	9.5	0.94	10.1	0.02	0.09	0.13	126
1	148		9.95	9.93	33.619	25.885	213.8	0.473	3.88	60.7	19.6	1.53	19.5	0.01	0.02	0.05	149
	150	ISL	9.87	9.85	33.636	25.912	211.3	0.477	3.81	59.6	20.3	1.56	20.0	0.01	0.02	0.05	151
1	179		9.11	9.09	33.881	26.228	181.7	0.534	3.11	47.9	28.6	1.84	24.5	0.01	0.00	0.03	180
	200	ISL	8.66	8.64	33.964	26.364	169.1	0.571	2.98	45.4	32.4	1.93	26.0	0.01	0.00	0.03	202
1	209		8.50	8.48	33.986	26.406	165.2	0.586	2.95	44.8	33.8	1.96	26.5	0.01	0.00	0.03	211
1	238		8.13	8.11	34.049	26.511	155.5	0.632	2.49	37.5	39.9	2.16	28.9	0.01			240
	250	ISL	7.98	7.95	34.065	26.546	152.3	0.651	2.35	35.3	41.7	2.22	29.7	0.01			252
1	279		7.66	7.63	34.097	26.618	145.9	0.694	2.02	30.1	45.9	2.36	31.3	0.01			281
	300	ISL	7.52	7.49	34.132	26.666	141.6	0.724	1.70	25.3	49.9	2.48	32.5	0.01			302
1	335		7.34	7.31	34.188	26.736	135.5	0.773	1.19	17.6	56.6	2.67	34.4	0.00			338
1	395		6.89	6.85	34.242	26.842	126.1	0.851	0.73	10.7	65.2	2.87	36.7	0.00			398
	400	ISL	6.85	6.81	34.244	26.849	125.5	0.857	0.71	10.4	65.8	2.88	36.9	0.00			403
1	463		6.33	6.29	34.259	26.930	118.3	0.934	0.51	7.4	73.1	3.00	38.6	0.00			467
	500	ISL	6.14	6.10	34.281	26.972	114.6	0.977	0.42	6.0	77.2	3.05	39.3	0.00			504
1	534		5.96	5.91	34.302	27.012	111.2	1.015	0.33	4.7	80.9	3.10	40.0	0.00			53 9

RV NEW HORIZON CALCOFI CRUISE 87 09 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 10.7 N	120 55.6 W	06/09/87	2250 GMT	3849 M	360	14 KT	3 20 05 07	1	1014.9 MB	19.1 C	18.0 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
1	0		19.53	19.53	33.312	23.598	428.4	0.000	5.40	102.4	2.4	0.35	0.0	0.00	0.05	0.02	0
1	10		19.49	19.49	33.312	23.608	427.8	0.043	5.39	102.1	2.2	0.35	0.0	0.01	0.06	0.02	10
	20	ISL	19.29	19.29	33.329	23.673	422.0	0.085	5.42	102.3	2.3	0.34	0.0	0.01	0.07	0.02	20
1	21		19.26	19.26	33.331	23.682	421.1	0.090	5.43	102.4	2.3	0.34	0.0	0.01	0.07	0.02	21
	30	ISL	19.05	19.04	33.332	23.737	416.3	0.127	5.52	103.7	2.3	0.34	0.0	0.00	0.08	0.02	30
1	31		19.03	19.02	33.339	23.747	415.3	0.131	5.53	103.9	2.3	0.34	0.0	0.00	0.08	0.02	31
1	41		17.60	17.59	33.256	24.036	388.0	0.172	5.76	105.3	2.4	0.35	0.0	0.01	0.09	0.03	41
	50	ISL	16.05	16.04	33.272	24.410	352.5	0.205	6.10	108.3	2.4	0.36	0.0	0.00	0.13	0.06	50
2	51		15.88	15.87	33.274	24.450	348.8	0.208	6.13	108.5	2.4	0.36	0.0	0.00	0.14	0.06	51
2	61		14.45	14.44	33.198	24.703	324.8	0.242	6.09	104.7	2.8	0.39	0.0	0.00	0.18	0.11	61
	75	ISL	13.48	13.47	33.235	24.932	303.3	0.286	5.85	98.6	3.7	0.51	1.1	0.12	0.33	0.22	76
2	76		13.44	13.43	33.241	24.945	302.0	0.289	5.82	98.0	3.8	0.52	1.2	0.13	0.34	0.23	77
2	91		12.64	12.63	33.348	25.187	279.4	0.333	5.25	87.0	6.4	0.79	6.5	0.05	0.25	0.21	92
	100	ISL	12.12	12.11	33.387	25.317	267.2	0.357	5.07	83.1	7.7	0.87	8.3	0.03	0.19	0.18	101
2	111		11.48	11.47	33.436	25.474	252.4	0.386	4.86	78.6	9.8	0.98	10.4	0.02	0.12	0.14	112
	125	ISL	10.67	10.66	33.550	25.708	230.3	0.420	4.27	67.9	14.9	1.29	15.5	0.01	0.05	0.08	126
2	132		10.30	10.28	33.611	25.819	219.8	0.435	3.99	63.0	17.5	1.44	18.0	0.01	0.03	0.05	133
	150	ISL	9.56	9.54	33.727	26.034	199.6	0.473	3.89	60.4	21.4	1.56	20.4	0.01	0.02	0.06	151
2	157		9.33	9.31	33.764	26.101	193.4	0.487	3.85	59.5	22.6	1.58	20.8	0.01	0.01	0.06	158
2	188		8.70	8.68	33.897	26.305	174.4	0.544	3.53	53.8	28.6	1.74	23.7	0.01	0.00	0.02	189
	200	ISL	8.47	8.45	33.938	26.372	168.1	0.564	3.58	54.3	30.2	1.75	24.0	0.01	0.00	0.02	202
2	222		8.09	8.07	33.992	26.472	158.9	0.600	3.64	54.8	33.3	1.78	24.6	0.00	0.00	0.02	224
	250	ISL	7.69	7.67	34.013	26.548	152.1	0.644	3.22	48.0	38.8	1.96	27.0	0.00			252
2	258		7.59	7.56	34.016	26.564	150.5	0.656	3.05	45.4	40.6	2.02	27.9	0.00			260
2	299		7.23	7.20	34.064	26.654	142.6	0.716	2.07	30.5	49.8	2.36	32.2	0.00			301
	300	ISL	7.22	7.19	34.065	26.656	142.4	0.717	2.05	30.2	50.0	2.37	32.3	0.00			302
2	354		6.64	6.61	34.106	26.768	132.3	0.792	1.39	20.2	60.2	2.64	35.6	0.00			357
	400	ISL	6.53	6.49	34.187	26.847	125.4	0.851	0.86	12.5	66.4	2.84	37.2	0.00			403
2	421		6.49	6.45	34.220	26.878	122.7	0.877	0.68	9.9	68.8	2.91	37.7	0.00			424
2	492		5.85	5.81	34.226	26.965	114.8	0.961	0.59	8.4	76.1	2.98	39.1	0.00			496
	500	ISL	5.81	5.77	34.233	26.976	113.9	0.970	0.56	8.0	77.4	3.00	39.3	0.00			504
2	574		5.44	5.39	34.303	27.077	104.9	1.051	0.28	4.0	89.0	3.15	41.3	0.00			579

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 50.8 N	121 35.7 W	07/09/87	0503 GMT	4133 M	350	13 KT		1	1016.2 MB	18.3 C	17.5 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
	0	ISL	19.57	19.57	33.470	23.708	417.9	0.000	5.38	102.1	2.9	0.35	0.1	0.01	0.07	0.02	0
1	1		19.57	19.57	33.470	23.708	417.9	0.004	5.38	102.1	2.9	0.35	0.1	0.01	0.07	0.02	1
	10	ISL	19.57	19.57	33.465	23.704	418.6	0.042	5.39	102.3	2.9	0.34	0.0	0.00	0.08	0.02	10
1	11		19.57	19.57	33.464	23.704	418.7	0.046	5.39	102.3	2.9	0.34	0.0	0.00	0.08	0.02	11
	20	ISL	19.49	19.49	33.461	23.723	417.3	0.084	5.41	102.6	2.8	0.35	0.0	0.00	0.08	0.02	20
1	22		19.47	19.47	33.461	23.728	416.8	0.092	5.41	102.5	2.8	0.35	0.0	0.00	0.08	0.02	22
	30	ISL	19.45	19.44	33.459	23.732	416.7	0.125	5.43	102.9	2.8	0.35	0.0	0.00	0.09	0.02	30
1	32		19.44	19.43	33.458	23.734	416.7	0.134	5.43	102.8	2.8	0.35	0.0	0.00	0.10	0.02	32
1	43		18.08	18.07	33.392	24.024	389.2	0.178	5.79	106.9	2.7	0.35	0.0	0.00	0.14	0.05	43
	50	ISL	16.12	16.11	33.363	24.464	347.4	0.204	6.18	109.9	2.6	0.38	0.1	0.00	0.17	0.08	50
1	53		15.27	15.26	33.364	24.654	329.3	0.214	6.31	110.4	2.5	0.40	0.1	0.00	0.20	0.10	53
1	63		13.82	13.81	33.353	24.954	300.9	0.245	6.08	103.3	3.3	0.52	1.1	0.09	0.44	0.19	63
1	74		13.00	12.99	33.370	25.133	284.1	0.278	5.46	91.2	5.9	0.77	5.7	0.28	0.43	0.25	75
	75	ISL	12.89	12.88	33.374	25.157	281.8	0.280	5.40	90.0	6.3	0.80	6.2	0.27	0.41	0.24	76
1	88		11.59	11.58	33.440	25.456	253.5	0.315	4.72	76.5	11.4	1.11	12.1	0.03	0.18	0.14	89
	100	ISL	11.05	11.04	33.467	25.575	242.4	0.345	4.57	73.2	12.8	1.17	13.5	0.03	0.12	0.11	101
1	104		10.93	10.92	33.476	25.604	239.8	0.355	4.55	72.7	13.1	1.18	13.7	0.03	0.11	0.11	105
1	124		10.13	10.12	33.611	25.848	216.8	0.400	4.06	63.8	18.0	1.43	18.0	0.01	0.04	0.08	125
	125	ISL	10.09	10.08	33.620	25.862	215.5	0.402	4.04	63.5	18.3	1.44	18.2	0.01	0.04	0.08	126
1	150		9.16	9.14	33.820	26.172	186.4	0.453	3.63	55.9	25.3	1.67	22.4	0.01	0.00	0.03	151
1	180		8.73	8.71	33.935	26.330	171.9	0.506	3.56	54.3	29.0	1.73	23.6	0.00	0.00	0.03	181
	200	ISL	8.34	8.32	33.987	26.431	162.6	0.540	3.11	47.1	34.0	1.91	26.1	0.00	0.00	0.05	202
1	210		8.15	8.13	34.006	26.474	158.5	0.556	2.86	43.1	36.7	2.01	27.5	0.00	0.00	0.06	212
1	240		7.71	7.69	34.037	26.564	150.4	0.602	2.54	37.9	42.6	2.17	29.8	0.00			242
	250	ISL	7.58	7.56	34.042	26.586	148.4	0.617	2.44	36.3	44.4	2.22	30.5	0.00			252
1	280		7.19	7.16	34.049	26.647	142.8	0.661	2.16	31.8	49.8	2.35	32.3	0.00			282
	300	ISL	6.91	6.88	34.053	26.689	139.1	0.689	1.97	28.8	53.9	2.44	33.6	0.00			302
1	335		6.46	6.43	34.067	26.760	132.5	0.737	1.62	23.5	61.1	2.60	35.8	0.00			338
1	395		5.95	5.92	34.136	26.880	121.6	0.813	0.94	13.5	72.4	2.88	39.0	0.00			398
	400	ISL	5.93	5.90	34.140	26.886	121.1	0.819	0.91	13.0	73.0	2.89	39.2	0.00			403
1	462		5.68	5.64	34.186	26.954	115.3	0.892	0.60	8.5	79.8	3.01	40.5	0.00			466
	500	ISL	5.49	5.45	34.230	27.012	110.1	0.935	0.46	6.5	85.0	3.09	41.3	0.00			504
1	535		5.31	5.27	34.271	27.066	105.2	0.973	0.33	4.7	89.8	3.16	42.0	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 30.5 N	122 15.6 W	07/09/87	1047 GMT	4164 M	010	12 KT		1	1016.1 MB	18.2 C	17.3 C	7/8	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	18.93	18.93	33.227	23.685	420.0	0.000	5.44	102.0	2.4	0.37	0.2	0.00	0.07	0.01	0
1	1		18.93	18.93	33.227	23.685	420.1	0.004	5.44	102.0	2.4	0.37	0.2	0.00	0.07	0.01	1
	10	ISL	18.94	18.94	33.225	23.682	420.7	0.042	5.46	102.3	2.3	0.37	0.1	0.00	0.07	0.02	10
1	11		18.94	18.94	33.225	23.682	420.8	0.046	5.46	102.3	2.3	0.37	0.1	0.00	0.07	0.02	11
	20	ISL	18.83	18.83	33.217	23.704	419.0	0.084	5.48	102.5	2.5	0.39	0.1	0.01	0.06	0.02	20
1	22		18.80	18.80	33.215	23.710	418.5	0.092	5.48	102.4	2.5	0.39	0.1	0.01	0.06	0.02	22
	30	ISL	18.18	18.17	33.171	23.830	407.3	0.125	5.64	104.2	2.7	0.38	0.1	0.00	0.08	0.02	30
1	32		17.94	17.93	33.157	23.878	402.8	0.134	5.70	104.8	2.7	0.37	0.1	0.00	0.08	0.02	32
1	43		15.86	15.85	33.092	24.314	361.5	0.176	6.11	108.0	2.6	0.36	0.1	0.00	0.08	0.03	43
	50	ISL	15.15	15.14	33.099	24.476	3 46.1	0.200	6.15	107.1	2.7	0.37	0.1	0.00	0.10	0.03	50
1	53		14.95	14.94	33.112	24.530	341.1	0.211	6.17	107.1	2.7	0.37	0.1	0.00	0.11	0.03	53
1	63		14.42	14.41	33.202	24.713	324.0	0.244	6.08	104.4	2.7	0.39	0.1	0.00	0.13	0.06	63
1	74		14.14	14.13	33.214	24.781	317.8	0.279	6.03	103.0	2.9	0.37	0.1	0.00	0.15	0.08	75
	75	ISL	14.06	14.05	33.205	24.791	316.8	0.282	6.02	102.7	2.9	0.38	0.1	0.01	0.16	0.09	76
1	88		13.06	13.05	33.129	24.935	303.3	0.323	5.84	97.5	3.4	0.52	1.0	0.09	0.25	0.18	89
	100	ISL	13.09	13.08	33.305	25.065	291.2	0.358	5.62	94.0	4.3	0.57	2.6	0.12	0.23	0.18	101
1	104		13.10	13.09	33.370	25.114	286.8	0.370	5.54	92.7	4.7	0.58	3.3	0.13	0.22	0.18	105
1	124		12.32	12.30	33.594	25.440	256.1	0.424	5.16	85.0	6.9	0.73	6.7	0.03	0.12	0.13	125
	125	ISL	12.25	12.23	33.600	25.458	254.4	0.427	5.14	84.6	7.1	0.74	6.9	0.03	0.12	0.13	126
1	150		10.52	10.50	33.697	25.849	217.5	0.486	4.71	74.7	13.2	1.11	13.3	0.01	0.04	0.05	151
1	181		9.12	9.10	33.786	26.152	188.9	0.549	3.96	60.9	23.6	1.58	21.0	0.01	0.01	0.03	182
	200	ISL	8.75	8.73	33.868	26.274	177.5	0.584	3.77	57.5	27.1	1.69	22.8	0.01	0.00	0.03	202
1	212		8.61	8.59	33.919	26.336	171.8	0.605	3.65	55.5	29.1	1.74	23.6	0.01	0.00	0.03	214
1	242		8.20	8.18	34.003	26.465	160.0	0.654	2.95	44.5	36.3	2.00	27.1	0.01			244
	250	ISL	8.09	8.06	34.012	26.488	157.9	0.667	2.93	44.1	37.5	2.03	27.5	0.01			252
1	283		7.64	7.61	34.025	26.565	151.0	0.718	2.85	42.4	42.1	2.11	28.8	0.01			285
	300	ISL	7.36	7.33	34.033	26.611	146.7	0.743	2.61	38.6	46.2	2.22	30.3	0.01			302
1	340		6.71	6.68	34.052	26.716	137.0	0.800	1.94	28.3	56.6	2.49	34.2	0.00			343
1	400		6.01	5.98	34.085	26.833	126.2	0.879	1.27	18.2	68.9	2.76	37.9	0.00			403
1	467		5.72	5.68	34.173	26.939	116.8	0.960	0.70	10.0	78.1	2.98	39.9	0.00			471
	500	ISL	5.55	5.51	34.213	26.992	112.1	0.998	0.55	7.8	83.1	3.05	40.7	0.00			504
1	537		5.35	5.31	34.258	27.052	106.7	1.039	0.39	5.5	88.8	3.12	41.6	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 11.1 N	122 55.7 W	07/09/87	1644 GMT	3460 M	360	08 KT	010 02 03	2	1017.2 MB	19.2 C	17.8 C	8/8	SC

CAST	DEPTH M		TEMP DBG 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		19.29	19.29	33.359	23.695	419.1	0.000	5.39	101.8	2.5	0.33	0.1	0.00	0.06	0.02	0
1	10		19.29	19.29	33.357	23.694	419.6	0.042	5.41	102.1	2.3	0.33	0.1	0.00	0.07	0.02	10
	20	ISL	19.28	19.28	33.357	23.697	419.7	0.084	5.41	102.1	2.4	0.33	0.1	0.00	0.07	0.02	20
1	21		19.28	19.28	33.357	23.697	419.7	0.088	5.41	102.1	2.4	0.33	0.1	0.00	0.07	0.02	21
	30	ISL	19.33	19.32	33.452	23.757	414.3	0.126	5.46	103.2	2.5	0.31	0.1	0.00	0.06	0.01	30
1	31		19.34	19.33	33.467	23.766	413.5	0.130	5.47	103.4	2.5	0.31	0.1	0.00	0.06	0.01	31
1	42		18.80	18.79	33.496	23.925	398.7	0.174	5.61	105.0	2.4	0.29	0.1	0.00	0.07	0.02	42
	50	ISL	17.96	17.95	33.512	24.146	377.9	0.206	5.80	106.9	2.3	0.29	0.1	0.00	0.08	0.02	50
1	53		17.62	17.61	33.520	24.234	369.5	0.217	5.87	107.5	2.3	0.29	0.1	0.00	0.08	0.02	53
1	63		16.86	16.85	33.547	24.435	350.6	0.253	5.91	106.7	2.3	0.28	0.1	0.00	0.09	0.03	63
1	73		16.06	16.05	33.580	24.645	330.9	0.287	5.87	104.4	2.4	0.28	0.1	0.00	0.13	0.05	74
	75	ISL	15.98	15.97	33.595	24.675	328.1	0.293	5.87	104.2	2.4	0.28	0.1	0.00	0.14	0.06	76
1	88		15.50	15.49	33.665	24.837	313.1	0.335	5.82	102.4	2.5	0.27	0.1	0.00	0.19	0.16	89
	100	ISL	14.73	14.72	33.606	24.959	301.6	0.372	5.70	98.8	2.9	0.34	0.4	0.08	0.20	0.23	101
1	104		14.44	14.42	33.578	25.000	297.8	0.384	5.65	97.3	3.1	0.37	0.7	0.11	0.20	0.24	105
1	124		13.02	13.00	33.543	25.264	273.0	0.441	5.35	89.5	5.1	0.59	3.9	0.10	0.15	0.18	125
	125	ISL	12.96	12.94	33.545	25.278	271.7	0.444	5.34	89.2	5.2	0.60	4.1	0.10	0.15	0.18	126
	150	ISL	11.53	11.51	33.624	25.612	240.2	0.508	5.03	81.5	8.4	0.85	9.2	0.01	0.07	0.10	151
1	151		11.48	11.46	33.628	25.624	239.1	0.510	5.02	81.3	8.6	0.86	9.4	0.01	0.07	0.10	152
1	181		9.97	9.95	33.652	25.908	212.3	0.578	4.42	69.2	16.2	1.30	16.5	0.00	0.03	0.04	182
	200	ISL	9.38	9.36	33.759	26.089	195.3	0.617	4.10	63.4	20.8	1.48	19.6	0.00	0.02	0.03	202
1	213		9.07	9.05	33.842	26.204	184.6	0.641	3.95	60.7	23.7	1.56	21.1	0.00	0.01	0.02	215
1	242		8.42	8.39	33.964	26.401	166.2	0.692	3.92	59.4	28.7	1.63	22.7	0.00			244
	250	ISL	8.28	8.25	33.980	26.435	163.0	0.705	3.80	57.4	30.5	1.69	23.5	0.00			252
1	283		7.74	7.71	34.011 A	26.540	153.4	0.758	3.18	47.5	38.7	1.97	27.4	0.00			285
	300	ISL	7.45	7.42	34.020	26.588	148.9	0.783	2.91	43.1	42.8	2.09	29.1	0.00			302
1	338		6.84	6.81	34.029 A	26.680	140.4	0.838	2.36	34.5	51.8	2.32	32.4	0.00			341
1	398		6.06	6.03	34.042 A	26.792	130.0	0.919	1.66	23.8	64.9	2.62	36.5	0.00			401
	400	ISL	6.05	6.02	34.044	26.795	129.7	0.922	1.63	23.4	65.3	2.63	36.6	0.00			403
1	465		5.75	5.71	34.137 A	26.907	119.8	1.003	0.89	12.7	75.7	2.91	39.5	0.00			469
	500	ISL	5.61	5.57	34.187	26.964	114.8	1.044	0.66	9.4	80.8	2.99	40.4	0.00			504
1	535		5.47	5.43	34.238 A	27.021	109.6	1.083	0.43	6.1	85.8	3.07	41.3	0.00			540

A) THE SALINITY SAMPLES FROM 283 TO 535 METERS APPEAR TO HAVE BEEN ANALYZED IN REVERSE ORDER. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV NEW HORIZON CALCOFI CRUISE 8709 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 35.5 W	07/09/87	2337 GMT	4419 M	040	08 KT	020 04 07	1	1013.8 MB	20.4 C	18.5 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		19.82	19.82	33.475	23.647	423.7	0.000	5.38	102.6	2.7	0.32	0.0	0.00	0.05	0.01	0
1	10		19.56	19.56	33.467	23.708	418.2	0.042	5.40	102.5	2.3	0.32	0.1	0.00	0.05	0.01	10
	20	ISL	19.50	19.50	33.474	23.730	416.6	0.084	5.40	102.4	2.5	0.32	0.1	0.00	0.06	0.01	20
1	21		19.50	19.50	33.475	23.731	416.5	0.088	5.40	102.4	2.5	0.32	0.1	0.00	0.06	0.01	21
	30	ISL	19.33	19.32	33.500	23.794	410.8	0.125	5.45	103.0	2.5	0.32	0.1	0.00	0.07	0.01	30
1	31		19.31	19.30	33.503	23.801	410.1	0.129	5.46	103.2	2.5	0.32	0.1	0.00	0.07	0.01	31
1	41		17.73	17.72	33.459	24.160	376.2	0.169	5.80	106.4	2.3	0.30	0.1	0.00	0.09	0.02	41
	50	ISL	17.14	17.13	33.521	24.349	358.4	0.202	5.90	107.1	2.4	0.29	0.1	0.00	0.09	0.03	50
1	52		17.09	17.08	33.547	24.381	355.5	0.209	5.92	107.4	2.4	0.29	0.1	0.00	0.09	0.03	52
1	62		17.11	17.10	33.752	24.534	341.3	0.244	5.78	105.0	2.5	0.26	0.0	0.00	0.13	0.04	62
	75	ISL	16.48	16.47	33.745	24.676	328.1	0.287	5.80	104.1	2.5	0.26	0.0	0.00	0.16	0.07	76
1	78		16.32	16.31	33.731	24.702	325.7	0.297	5.81	103.9	2.5	0.26	0.0	0.00	0.16	0.08	79
1	92		16.17	16.16	33.854	24.832	313.8	0.342	5.68	101.4	2.8	0.27	0.0	0.00	0.20	0.20	93
	100	ISL	15.72	15.70	33.839	24.922	305.4	0.367	5.61	99.3	3.0	0.30	0.2	0.06	0.20	0.25	101
1	113		14.86	14.84	33.787	25.072	291.5	0.405	5.49	95.5	3.6	0.37	0.9	0.14	0.20	0.28	114
	125	ISL	14.34	14.32	33.804	25.196	279.8	0.440	5.35	92.1	4.3	0.45	2.2	0.11	0.16	0.25	126
1	134		13.94	13.92	33.819	25.292	270.9	0.464	5.23	89.3	5.0	0.52	3.6	0.06	0.13	0.21	135
	150	ISL	12.87	12.85	33.799	25.493	252.0	0.506	4.99	83.3	7.1	0.70	6.7	0.02	0.08	0.15	151
1	160		12.13	12.11	33.784	25.625	239.5	0.531	4.83	79.4	9.0	0.84	9.0	0.01	0.06	0.11	161
1	191		9.87	9.85	33.794	26.036	200.4	0.599	4.26	66.6	18.7	1.36	17.2	0.00	0.02	0.02	192
	200	ISL	9.53	9.51	33.827	26.118	192.7	0.617	4.07	63.2	21.3	1.47	18.9	0.00	0.01	0.02	202
1	225		8.95	8.93	33.926	26.289	176.7	0.663	3.66	56.1	27.4	1.69	22.3	0.00	0.00	0.02	227
	250	ISL	8.52	8.49	33.982	26.400	166.5	0.706	3.62	55.0	30.8	1.76	23.6	0.00			252
1	260		8.38	8.35	33.996	26.433	163.5	0.722	3.61	54.7	32.0	1.78	23.9	0.00			262
	300	ISL	7.74	7.71	34.017	26.544	153.3	0.786	3.24	48.4	39.5	1.98	26.9	0.00			302
1	301		7.72	7.69	34.017	26.547	153.0	0.787	3.23	48.2	39.7	1.99	27.0	0.00			303
1	356		6.93	6.90	34.052	26.686	140.2	0.868	2.17	31.8	53.2	2.41	32.5	0.00			359
	400	ISL	6.44	6.40	34.092	26.783	131.2	0.927	1.49	21.6	63.3	2.69	36.0	0.00			403
1	422		6.25	6.21	34.117	26.828	127.2	0.956	1.20	17.3	67.8	2.81	37.3	0.00			425
1	493		6.00	5.96	34.230	26.950	116.5	1.042	0.54	7.7	77.4	3.06	39.3	0.00			497
	500	ISL	5.93	5.89	34.230	26.958	115.6	1.051	0.53	7.6	78.6	3.07	39.5	0.00			504
1	577		5.19	5.14	34.234	27.052	106.9	1.136	0.42	5.9	91.4	3.17	41.7	0.00			582

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.4 N	120 46.7 W	18/ 9/87	1913 GMT	4 M	1147 - 1828 PST	1200 PST	1832 PST	1034.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	14.48	33.519	24.943	6.88	118.6	5.7	0.42	0.5	0.06	11.92	2.85	98.	158.9	163.4	161.1	1.3
2	14.42	33.519	24.955	6.65	114.5	6.2	0.44	0.8	0.08	10.06	3.16	40.	182.1	171.1	176.6	1.1
4	14.34	33.519	24.972	6.49	111.5	6.3	0.46	1.1	0.09	8.53	2.62	20.	136.9	129.9	133.4	0.93
8	13.67	33.518	25.111	5.44	92.2	8.8	0.79	5.2	0.31	4.23	1.68	5.0	25.3	24.4	24.9	0.51
13	13.07	33.523	25.236	5.02	84.0	10.4	0.96	7.6	0.44	2.38	1.39	0.60	2.0	1.9	1.9	0.65
16	13.05	33.525	25.241	4.95	82.8	10.8	0.99	8.0	0.47	1.90	1.39	0.30	0.46	0.35	0.41	0.44

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 3.5 N	122 56.1 W	17/ 9/87	1936 GMT	30 M	1211 - 1849 PST	1209 PST	183 9 PST	150.9 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.64	33.062	23.876	5.63	102.9	2.3	0.37	0.0	0.00	0.08	0.02	98.	1.8	2.0	1.9	0.13
19	17.60	33.061	23.886	5.64	103.0	2.2	0.37	0.0	0.00	0.10	0.03	40.	2.5	2.3	2.4	0.12
33	13.80	32.944	24.641	6.39	108.2	2.8	0.38	0.0	0.00	0.17	0.07	20.	2.0	1.8	1.9	0.15
60	12.08	33.125	25.120	5.67	92.7	5.1	0.71	4.3	0.16	0.37	0.30	5.0	1.4	1.7	1.5	0.15
101	9.82	33.635	25.918	3.79	59.2	19.9	1.60	20.1	0.01	0.02	0.05	0.60	0.26	-0.02	0.12	0.10
118	9.33	33.742	26.083	3.56	55.0	24.1	1.73	22.4	0.03	0.00	0.03	0.30	-0.02	-0.03	-0.02	0.10

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.2 N	121 50.5 W	16/ 9/87	1947 GMT	24 M	1208 - 1900 PST	1204 PST	1840 PST	171.0 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	17.42	33.089	23.950	5.62	102.3	2.0	0.39	0.1	0.00	0.14	0.04	98.	2.2	2.2	2.2	0.18
16	17.38	33.082	23.954	5.66	103.0	2.1	0.38	0.1	0.00	0.13	0.04	40.	3.0	3.0	3.0	0.19
27	17.35	33.076	23.957	5.68	103.3	2.1	0.38	0.1	0.00	0.14	0.05	20.	2.7	2.7	2.7	0.22
50	13.31	32.929	24.729	6.31	105.8	2.6	0.44	0.1	0.00	0.40	0.22	5.0	1.9	2.0	2.0	0.20
82	11.89	33.233	25.240	5.25	85.6	6.9	0.91	7.8	0.15	0.22	0.26	0.60	0.46	0.56	0.51	0.13
95	11.25	33.305	25.413	4.95	79.6	9.9	1.06	10.9	0.02	0.15	0.18	0.30	0.19	0.12	0.15	0.08

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 54.6 N	122 7.9 W	14/ 9/87	1915 GMT	26 M	1207 - 1845 PST	1206 PST	183 9 PST	99.0 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.92	33.040	23.792	5.57	102.4	2.5	0.38	0.0	0.00	0.08	0.02	98.	1.4	1.5	1.5	0.10
17	17.92	33.040	23.793	5.57	102.3	2.3	0.38	0.0	0.00	0.08	0.02	40.	2.0	1.8	1.9	0.08
28	17.93	33.041	23.791	5.58	102.5	2.3	0.38	0.0	0.00	0.09	0.04	20.	1.5	1.4	1.5	0.10
52	15.99	33.097	24.289	6.04	107.0	2.3	0.38	0.0	0.00	0.14	0.05	5.0	0.73	0.69	0.71	0.12
88	13.81	33.419	25.008	5.71	97.0	3.2	0.43	1.0	0.14	0.25	0.26	0.60	0.41	0.49	0.45	0.06
103	13.14	33.443	25.162	5.43	91.0	4.9	0.59	3.8	0.07	0.21	0.21	0.30	0.10	0.09	0.09	0.07

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 87 3 9.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 40.5 N	118 56.6 W	11/ 9/87	1855 GMT	25 M	1155 - 1900 PST	1153 PST	183 5 PST	541.0 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	20.87	33.628	23.486	5.35	104.1	2.5	0.28	0.0	0.00	0.16	0.02	98.	5.2	5.6	5.4	0.16
16	18.22	33.554	24.113	5.88	109.0	2.4	0.29	0.0	0.00	0.38	0.11	40.	9.5	8.6	9.1	0.17
27	16.50	33.522	24.498	6.18	110.8	2.5	0.31	0.0	0.00	0.54	0.19	20.	10.6	11.4	11.0	0.18
50	13.15	33.359	25.094	5.54	92.8	5.3	0.70	4.6	0.31	1.17	0.54	5.0	5.6	7.3	6.5	0.20
84	10.68	33.629	25.767	3.89	61.9	16.9	1.41	17.2	0.02	0.08	0.18	0.60	0.13	0.22	0.18	0.07
99	10.21	33.695	25.900	3.57	56.3	20.4	1.59	19.9	0.01	0.04	0.09	0.30	0.03	0.01	0.02	0.05

RV NEW HORIZON — CALCOFI CRUISE 8709 — STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 39.6 N	121 2.2 W	12/ 9/87	1923 GMT	18 M	1203 - 1848 PST	1201 PST	1844 PST	2 91.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.91	33.631	24.247	5.63	103.8	1.6	0.29	0.0	0.00	0.42	0.16	98.		8.2	8.2	0.21
11	17.87	33.631	24.257	5.64	103.9	1.4	0.29	0.0	0.00	0.44	0.18	40.	6.6	8.0	7.3	0.18
20	17.85	33.631	24.262	5.61	103.3	1.4	0.29	0.0	0.00	0.43	0.17	20.	7.1	6.6	6.9	0.23
36	16.20	33.550	24.589	5.68	101.3	2.9	0.45	1.3	0.09	0.67	0.27	5.0	3.2	4.4	3.8	0.27
61	12.32	33.609	25.450	4.43	73.0	11.9	1.18	12.6	0.44	0.36	0.31	0.60	0.43	0.58	0.51	0.22
72	10.87	33.663	25.760	3.78	60.4	17.1	1.51	18.2	0.18	0.19	0.15	0.30	0.05	0.09	0.07	0.09

RV NEW HORIZON — CALCOFI CRUISE 8709 — STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 19.6 N	123 45.0 W	13/ 9/87	1925 GMT	38 M	1202 - 1857 PST	1212 PST	1849 PST	87.1 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	19.01	33.221	23.661	5.50	103.2	2.3	0.37	0.1	0.00	0.05	0.01	98.	0.61	0.70	0.66	0.13
25	18.85	33.217	23.699	5.51	103.1	2.2	0.37	0.1	0.00	0.06	0.02	40.	0.93	1.1	1.0	0.12
42	17.25	33.127	24.021	5.90	107.1	2.4	0.35	0.1	0.00	0.08	0.02	20.	1.1	1.1	1.1	0.15
77	15.83	33.608	24.719	5.97	105.7	2.4	0.27	0.1	0.00	0.12	0.05	5.0	0.40	0.50	0.45	0.18
129	13.96	33.786	25.262	5.46	93.2	3.9	0.42	2.4	0.09	0.16	0.22	0.60	0.23	0.29	0.26	0.08
151	12.12	33.661	25.531	5.25	86.2	6.6	0.70	7.0	0.02	0.10	0.14	0.30	0.03	0.01	0.02	0.10

RV NEW HORIZON — CALCOFI CRUISE 8709 — STATION 90 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 20.3 N	118 7.3 W	10/ 9/87	1910 GMT	28 M	1140 - 1834 PST	1149 PST	1829 PST	345.6 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	20.83	33.580	23.460	5.42	105.3	2.2	0.29	0.0	0.00	0.13	0.03	98.	2.3	2.4	2.4	0.12
18	19.25	33.562	23.861	5.55	104.8	2.2	0.29	0.0	0.00	0.16	0.04	40.	4.1	3.8	4.0	0.14
31	18.89	33.547	23.941	5.61	105.2	2.2	0.29	0.0	0.00	0.24	0.10	20.	4.7	4.7	4.7	0.13
56	14.50	33.324	24.790	6.09	104.9	2.9	0.42	0.3	0.03	0.95	0.44	5.0	5.3	5.2	5.2	0.13
94	11.50	33.487	25.510	4.47	72.4	12.2	1.18	13.2	0.03	0.15	0.19	0.60	0.33	0.32	0.32	0.06
110	10.75	33.574	25.712	3.91	62.3	17.0	1.46	17.8	0.02	0.10	0.13	0.30	0.03	0.04	0.03	0.04

RV NEW HORIZON — CALCOFI CRUISE 87 09 — STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.2 N	119 57.6 W	9/ 9/87	1828 GMT	17 M	1157 - 1847 PST	1157 PST	183 8 PST	248.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	18.61	33.642	24.083	5.54	103.5	1.9	0.28	0.0	0.00	0.21	0.05	98.	1.7	2.2	1.9	0.14
10	18.59	33.632	24.080	5.54	103.4	1.9	0.29	0.0	0.00	0.22	0.06	40.	4.8	4.7	4.8	0.14
17	18.50	33.629	24.101	5.56	103.6	1.9	0.29	0.0	0.00	0.22 A	0.07 A	20.	5.3	6.0	5.6	0.17
34	17.82	33.602	24.248	5.69	104.7	1.7	0.29	0.0	0.00	0.30	0.13	5.0	4.3	4.6	4.5	0.20
58	13.17	33.653	25.318	4.85	81.4	9.3	0.97	9.8	0.21	0.45	0.33	0.60	2.3	2.0	.2.2	0.10
68	11.48	33.676	25.660	4.08	66.1	15.2	1.35	15.6	0.32	0.33	0.31	0.30	0.35	0.32	0.34	0.08

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

RV NEW HORIZON — CALCOFI CRUISE 8709 — STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.8 N	122 41.6 W	8/ 9/87	1926 GMT	30 M	1203 - 1850 PST	1208 PST	1848 PST	91.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	19.08	33.237	23.655	5.46	102.6	2.4	0.36	0.0	0.00	0.07	0.02	98.	0.65	0.92	0.78	0.09
19	18.91	33.233	23.696	5.46	102.3	2.4	0.36	0.0	0.00	0.07	0.02	40.	1.2	1.2	1.2	0.10
33	18.65	33.233	23.761	5.53	103.1	2.5	0.36	0.0	0.00	0.08	0.02	20.	1.5	1.5	1.5	0.18
60	14.70	33.133	24.600	6.25	107.9	2.5	0.38	0.0	0.00	0.16	0.09	5.0	0.66	0.82	0.74	0.15
101	11.81	33.331	25.331	5.02	81.7	8.5	0.95	9.2	0.03	0.15	0.16	0.60	0.30	0.30	0.30	0.07
116	10.89	33.429	25.575	4.54	72.5	13.0	1.22	13.8	0.01	0.09	0.11	0.30	0.03	0.04	0.04	0.07

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 20.7 N	118 33.4 W	5/ 9/87	1907 GMT	22 M	1152 - 1855 PST	1151 PST	1837 PST	201.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK	
0	19.60	33.595	23.795	5.44	103.4	2.9	0.29	0.0	0.00	0.15	0.04	98.	2.6	2.8	2.7	0.16	
13	19.44	33.591	23.834	5.45	103.3	2.9	0.29	0.0	0.00	0.16	0.04	40.	3.4	3.2	3.3	0.15	
24	19.38	33.582	23.843	5.50	104.1	2.9	0.30	0.0	0.00	0.21	0.07	20.	4.4	4.3	4.4	0.13	
45	15.56	33.425	24.637	6.05	106.5	3.5	0.37	0.0	0.00	0.43	0.27	5.0	2.5	2.6	2.5		A
75	11.78	33.520	25.483	4.43	72.2	12.1	1.10	12.0	0.11	0.18	0.21	0.60	0.50	0.50	0.50	0.03	
86	11.25	33.571	25.620	4.15	66.8	14.5	1.25	14.7	0.04	0.12	0.14	0.30	0.12	-0.02	0.05	0.17	

A) DARK SAMPLE LOST. CORRECTED UPTAKES AT 45 METERS CALCULATED FROM MEAN DARK VALUE (0.13) FOR THIS CAST.

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 73

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 26.9 N	120 28.3 W	6/ 9/87	1910 GMT	29 M	1158 - 1845 PST	1159 PST	1845 PST	109.5 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	18.41	33.033	23.667	5.55	102.9	2.5	0.38	0.0	0.00	0.09	0.02	98.	1.8	1.9	1.8	0.06
17	18.34	33.034	23.685	5.56	103.0	2.5	0.38	0.0	0.00	0.10	0.02	40.	1.8	1.6	1.7	0.11
31	17.07	33.093	24.037	5.89	106.5	2.5	0.38	0.0	0.00	0.12	0.03	20.	1.4	1.5	1.5	0.14
56	14.50	33.159	24.662	6.12	105.3	2.7	0.38	0.0	0.00	0.27	0.18	5.0	0.84	1.1	0.96	0.06
76	13.17	33.100	24.890	5.95	99.6	3.3	0.47	0.7	0.12	0.45	0.39					
95	13.01	33.376	25.136	5.55	92.7	4.5	0.55	3.1	0.17	0.20	0.22	0.60	0.31	0.33	0.32	0.06
111	11.76	33.378	25.377	5.12	83.3	7.9	0.86	8.4	0.02	0.10	0.13	0.30	-0.13	-0.11	-0.12	0.22
120	10.97	33.421	25.554	4.80	76.8	11.4	1.09	12.1	0.01	0.07	0.09					
140	10.22	33.597	25.822	4.01	63.2	18.0	1.46	17.9	0.01	0.03	0.06					
171	9.26	33.834	26.167	3.10	47.9	27.5	1.84	24.3	0.01	0.01	0.04					
200	8.82	33.975	26.347	2.76	42.2	32.9	1.99	26.6	0.00	0.00	0.04					

RV NEW HORIZON CALCOFI CRUISE 8709 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 12.6 N	122 56.5 W	7/ 9/87	1847 GMT	32 M	1209 - 1857 PST	1209 PST	1854 PST	103.9 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	19.45	33.403	23.688	5.39	102.1	2.2	0.32	0.1	0.00			98.	1.1	1.1	1.1	0.10
21	19.39	33.403	23.704	5.42	102.5	2.5	0.32	0.1	0.00	0.07	0.02	40.	1.9	1.2	1.5	0.10
36	19.30	33.568	23.853	5.50	104.0	2.6	0.29	0.1	0.00	0.07	0.02	20.	1.2	1.0	1.1	0.11
65	16.86	33.600	24.476	5.90	106.6	2.6	0.28	0.1	0.00	0.11	0.03	5.0	0.65	0.66	0.66	0.11
109	14.83	33.588	24.924	5.74	99.6	2.9	0.32	0.2	0.03	0.23	0.27	0.60	0.55	0.52	0.54	0.05
127	13.15	33.511	25.214	5.39	90.4	4.8	0.55	3.7	0.14	0.17	0.23	0.30	0.06	0.07	0.06	0.06

Secchi Disk Observations

CalCOFI Cruise 8709

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Forel Water Color	Weather	Clouds Type/Amt	
77	49	18	9	1042	4	11	2	ST	8/8
77	80	17	9	1120	30	2	2	sc	8/8
80	70	16	9	1133	24	2	1	sc	5/8
83	40.6	15	9	1434	17	4	1	CI	4/8
83	42	15	9	1237	18	3	1	ST	1/8
83	80	14	9	1056	26	2	2	sc	8/8
87	39.5	11	9	1038	25	2	1	sc	7/8
87	42	11	9	1458	18	4	0	-	0
87	70	12	9	1106	18	4	1	AC	7/8
87	110	13	9	1105	38	2	1	a	2/8
90	30	10	9	1235	31	3	1	sc	5/8
90	33	10	9	0910	24	3	1	sc	6/8
90	33	10	9	1025	28	3	1	-	-
90	53	9	9	1535	19	3	1	CI	1/8
90	60	9	9	1013	17	4	1	AC	6/8
90	100	8	9	1112	30	2	1	CI	4/8
93	26.5	4	9	1230	8	-	1	cu	1/8
93	26.6	4	9	1333	10	5	1	cu	1/8
93	28	4	9	1640	16	3	1	cu	1/8
93	45	5	9	1032	22	3	1	sc	6/8
93	50	5	9	1430	21	3	0	-	0
93	70	6	9	0830	27	2	1	sc	4/8
93	73	6	9	1047	29	2	1	ST	7/8
93	80	6	9	1418	33	1	1	sc	7/8
93	110	7	9	1013	32	1	2	sc	8/8
93	120	7	9	1500	35	1	1	sc	6/8

MACROZOOPLANKTON BIOMASS

Net 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	49	35 05.5N	12047.2W	9/18	1945	1952	125	56	305	305
77	51	35 01.3N	120 55.9W	9/18	1645	1707	434	210	249	249
77	55	34 53.9N	121 12.5W	9/18	1332	1354	420	211	121	121
77	60	34 43.0N	121 34.9W	9/18	0918	0941	483	215	178	178
77	70	34 24.0N	122 15.4W	9/18	0310	0333	441	224	304	304
77	80	34 03.8N	12255.3W	9/17	2125	2148	439	212	141	141
77	90	33 43.8N	123 38.0W	9/17	1505	1527	433	215	46	46
80	51	34 27.3N	120 32.2W	9/16	0740	0748	147	65	795	795
80	55	34 19.3N	12049.8W	9/16	1042	1105	469	237	104	104
80	60	34 09.8N	121 09.5W	9/16	1436	1459	465	224	49	49
80	70	33 49.6N	121 50.1W	9/16	2120	2143	456	224	53	53
80	80	33 29.4N	122 32.6W	9/17	0310	0333	462	230	43	43
80	90	33 09.2N	123 14.3W	9/17	0850	0913	481	224	46	46
82	47	34 17.1N	120 03.6W	9/16	0400	0422	426	204	185	185
83	40.6	34 13.1N	119 25.0W	9/15	2305	2308	48	21	104	104
83	42	34 10.6N	119 31.7W	9/15	2125	2137	232	113	34	34
83	51	33 53.0N	120 09.2W	9/15	1506	1515	189	82	64	64
83	55	33 44.9N	120 25.4W	9/15	1205	1228	437	225	53	53
83	60	33 34.1N	120 46.1W	9/15	0812	0834	460	213	50	50
83	70	33 15.4N	121 26.8W	9/15	0230	0253	427	222	101	101
83	80	32 55.0N	12208.9W	9/14	2035	2057	449	211	40	40
83	90	32 35.3N	12249.1W	9/14	1427	1449	431	212	128	128
83	100	32 15.4N	123 30.3W	9/14	0847	0909	423	213	80	80
83	110	31 55.1N	124 10.4W	9/14	0300	0322	427	218	23	23
87	33	33 53.6N	U8 30.9W	9/11	1045	1050	82	41	282	282
87	35	33 49.4N	118 38.9W	9/11	1423	1445	384	211	292	292
87	39.5	33 41.4N	118 55.8W	9/11	2100	2122	405	208	106	106
87	45	33 29.7N	11919.4W	9/12	0300	0323	430	213	IOS	105
87	50	33 19.2N	119 40.5W	9/12	0635	0642	159	54	138	138
87	55	33 08.9N	120 01.6W	9/12	1012	1034	450	213	98	98
87	60	32 59.6N	120 22.5W	9/12	1434	1456	406	216	165	165
87	70	32 39.7N	121 03.5W	9/12	2045	2108	448	219	105	105
87	80	3219.0N	121 43.5W	9/13	0300	0322	415	214	48	48
87	90	31 59.8N	122 25.1W	9/13	0845	0907	446	211	92	92
87	100	31 39.8N	123 05.2W	9/13	1436	1458	424	211	57	57
87	110	31 20.4N	123 45.7W	9/13	2055	2117	451	208	27	27
90	28	33 29.2N	117 46.7W	9/11	0415	0421	113	49	220	220
90	30	33 25.0N	117 53.9W	9/10	2200	2222	429	217	35	35
90	35	33 15.0N	U 8 16.0W	9/10	1450	1512	420	209	43	43
90	37	33 10.7N	118 24.2W	9/10	1135	1157	428	212	72	72
90	45	32 55.3N	118 57.3W	9/10	0610	0633	473	204	192	192
90	53	32 39. IN	119 29.0W	9/10	0105	0127	421	211	78	78
90	60	32 25.6N	119 58.6W	9/09	1955	2017	402	222	112	112
90	70	32 05.1N	120 38.3W	9/09	1335	1357	428	215	28	28
90	80	31 45.6N	121 20.1W	9/09	0735	0757	425	216	226	226
90	90	31 25.4N	122 00.2W	9/09	0145	0207	426	215	124	124
90	100	31 05.5N	12240.6W	9/08	1835	1857	425	212	33	33
90	110	3044.9N	123 20.7W	9/08	1237	1259	421	214	24	24
90	120	30 25.5N	124 00.7W	9/08	0600	0622	427	204	54	54
93	26.7	32 57.8N	117 19.2W	9/04	2333	2339	133	44	256	256
93	28	32 54.0N	117 24.3W	9/05	0220	0243	412	208	75	75
93	30	32 50.4N	117 32.6W	9/05	0520	0542	403	219	79	79
93	35	32 40.7N	117 53.2W	9/05	0954	1016	417	217	62	62
93	40	32 30.5N	118 14.0W	9/05	1435	1457	407	212	133	133
93	45	3220.9N	118 34.0W	9/05	1948	2010	395	222	58	58
93	50	32 10.3N	118 54.0W	9/06	0000	0022	409	217	54	54
93	55	3200.4N	11915.8W	9/06	0540	0602	444	208	52	52
93	60	31 49.1N	119 35.2W	9/06	1058	1120	416	221	161	161
93	70	31 31.7N	120 16.0W	9/06	1659	1721	425	215	132	132
93	80	31 11.3N	120 56.1W	9/07	0000	0022	433	212	48	48
93	90	30 51.5N	121 36.2W	9/07	0550	0612	418	208	117	117
93	100	30 30.9N	122 15.6W	9/07	1140	1202	424	215	35	35
93	110	3011.8N	12255.9W	9/07	1735	1757	426	207	19	19
93	120	29 51.3N	123 35.4W	9/08	0030	0052	433	211	23	23

FIGURES

Cruise 8711

1. CalCOFI Cruise 8711 track and station positions.

2. Horizontal distribution of chlorophyll-a at 10 meters.

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

4. Horizontal distribution of sigma-theta at 10 meters.

5. Horizontal distribution of temperature at 10 meters.

6. Horizontal distribution of salinity at 10 meters.

7. Horizontal distribution of dynamic height anomaly (200 over 500 m).

8. Horizontal distribution of sigma-theta at 200 meters.

9. Horizontal distribution of temperature at 200 meters.

10. Horizontal distribution of salinity at 200 meters.

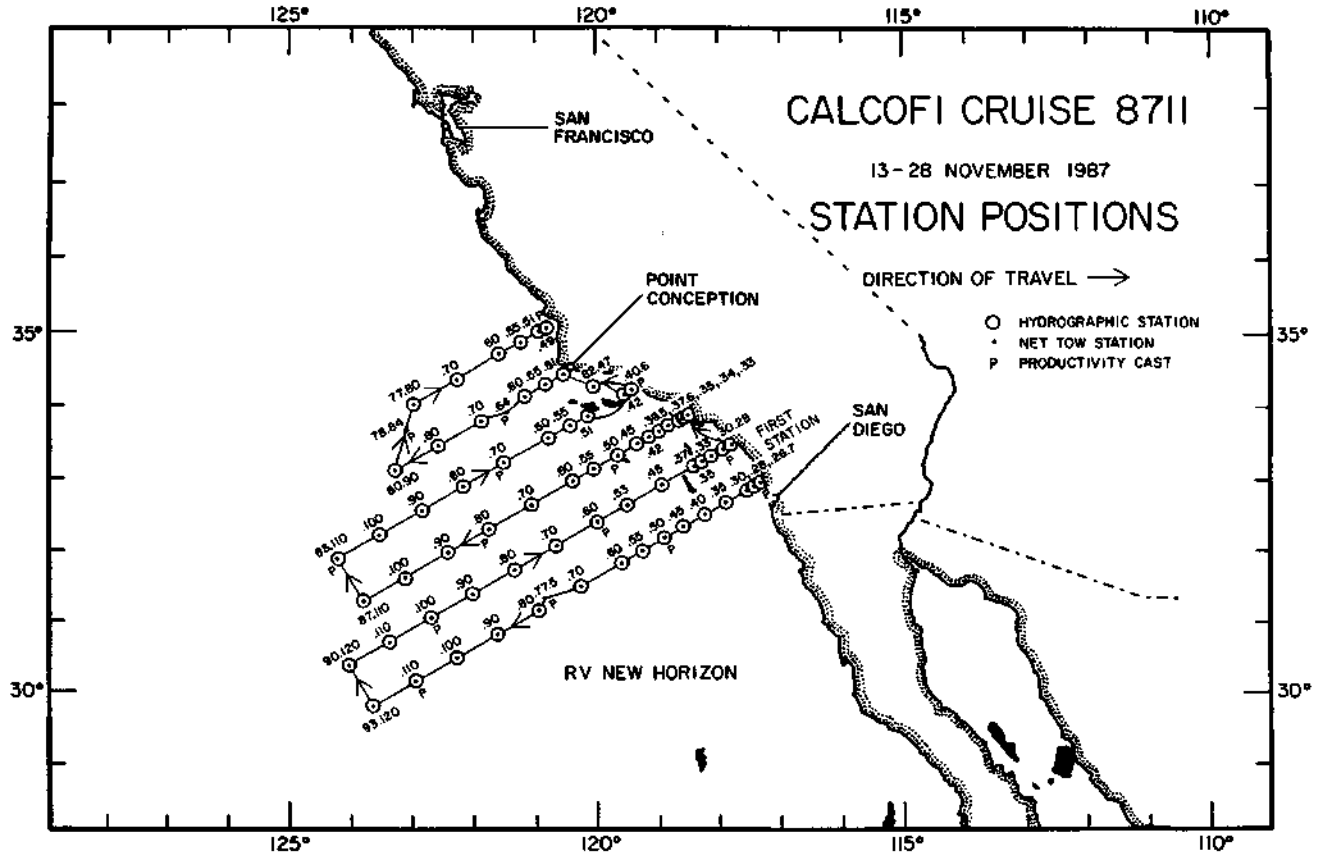


FIGURE 1

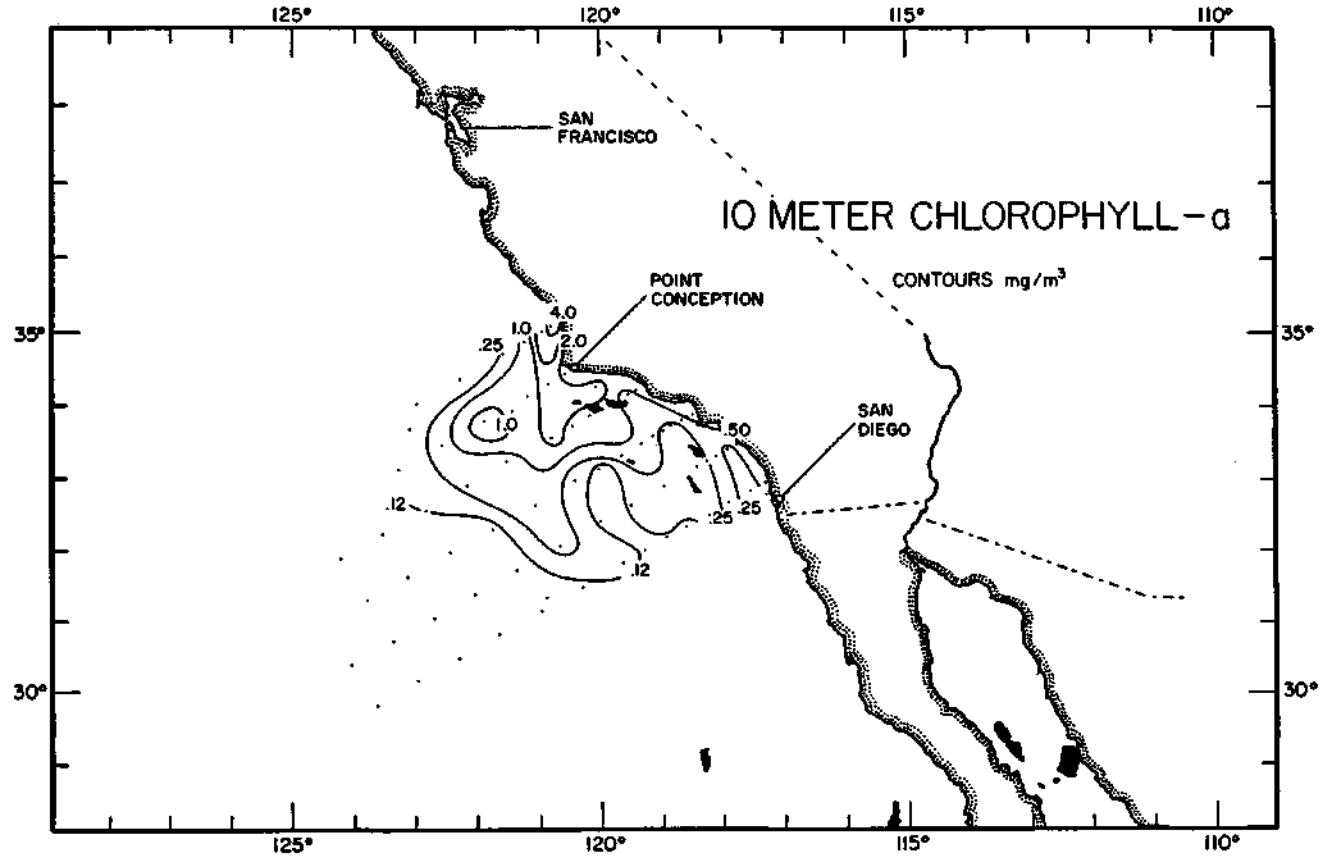


FIGURE 2

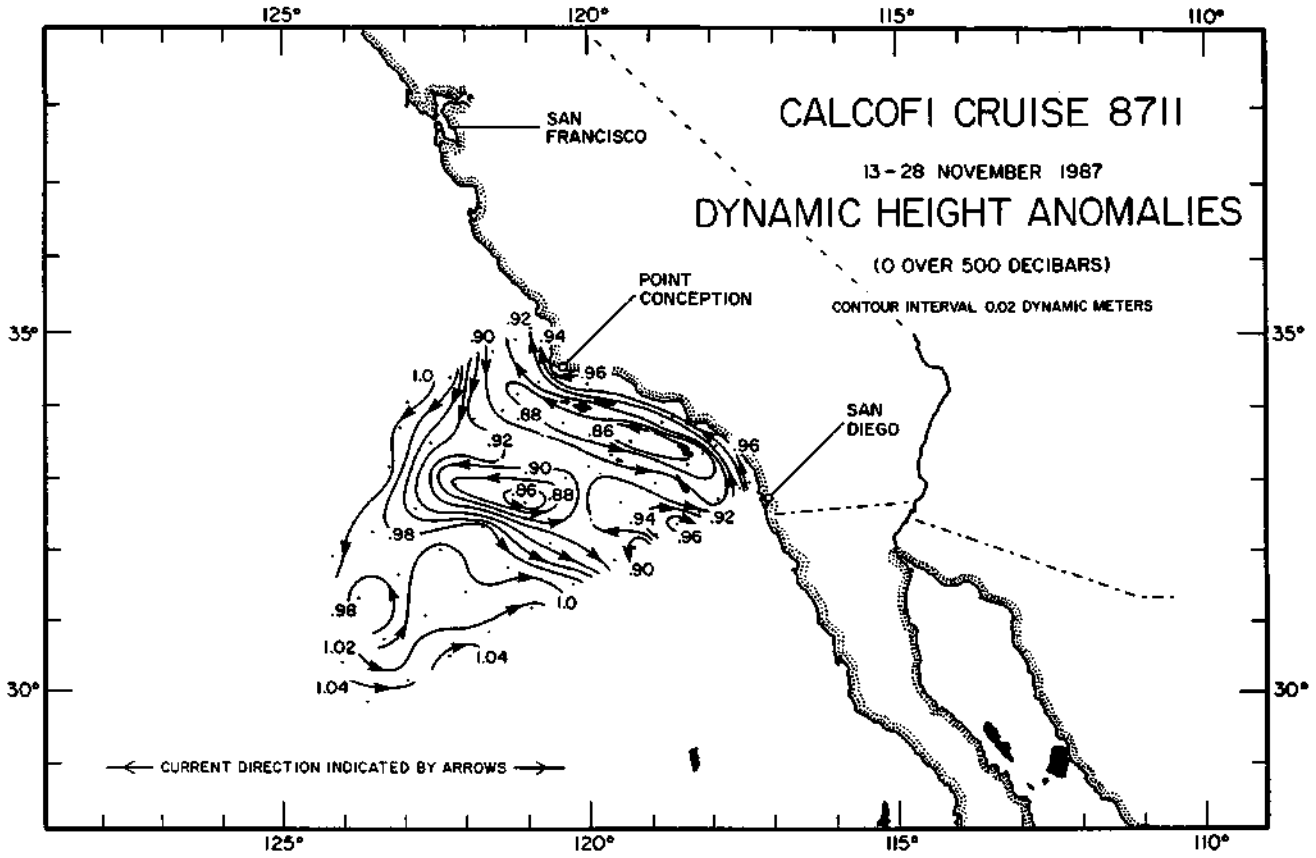


FIGURE 3

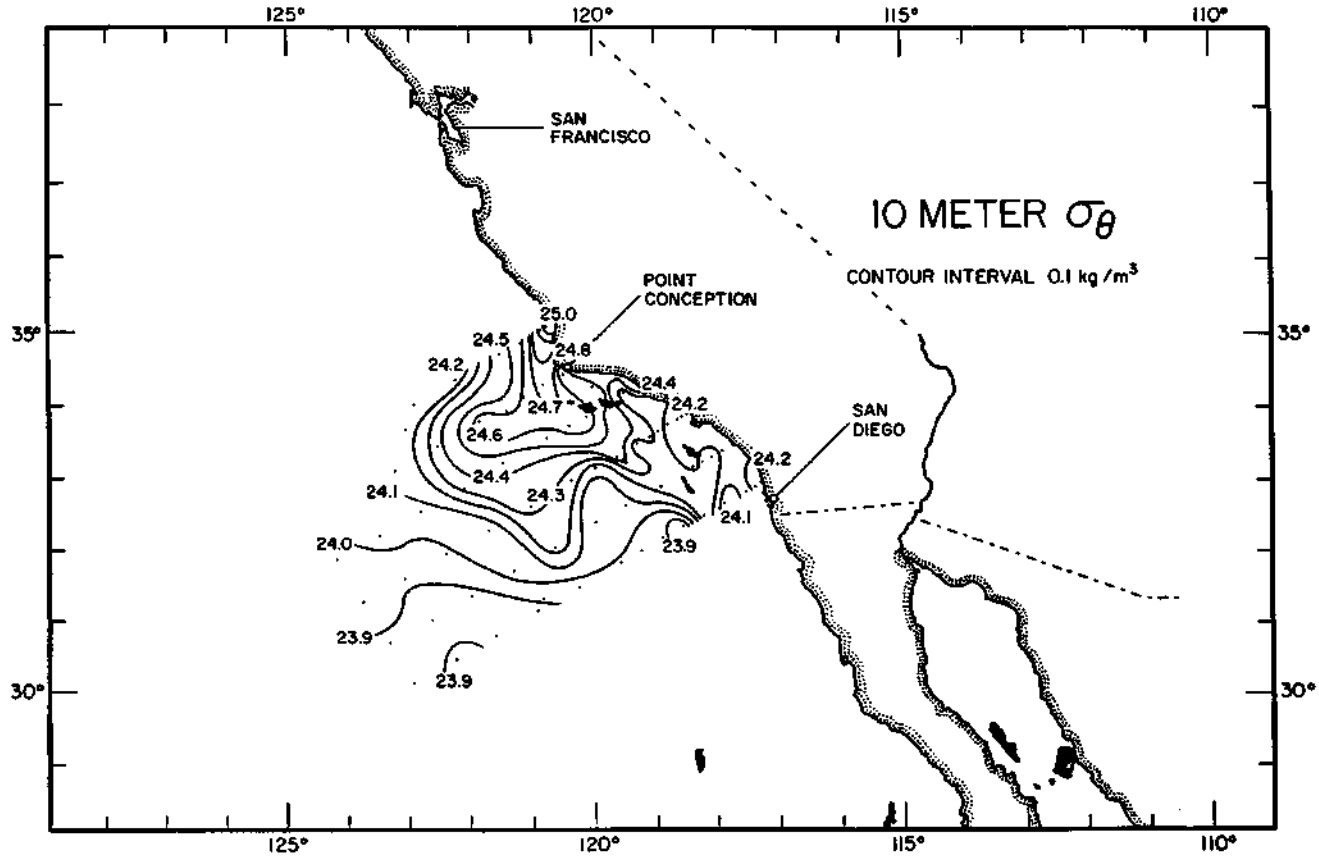


FIGURE 4

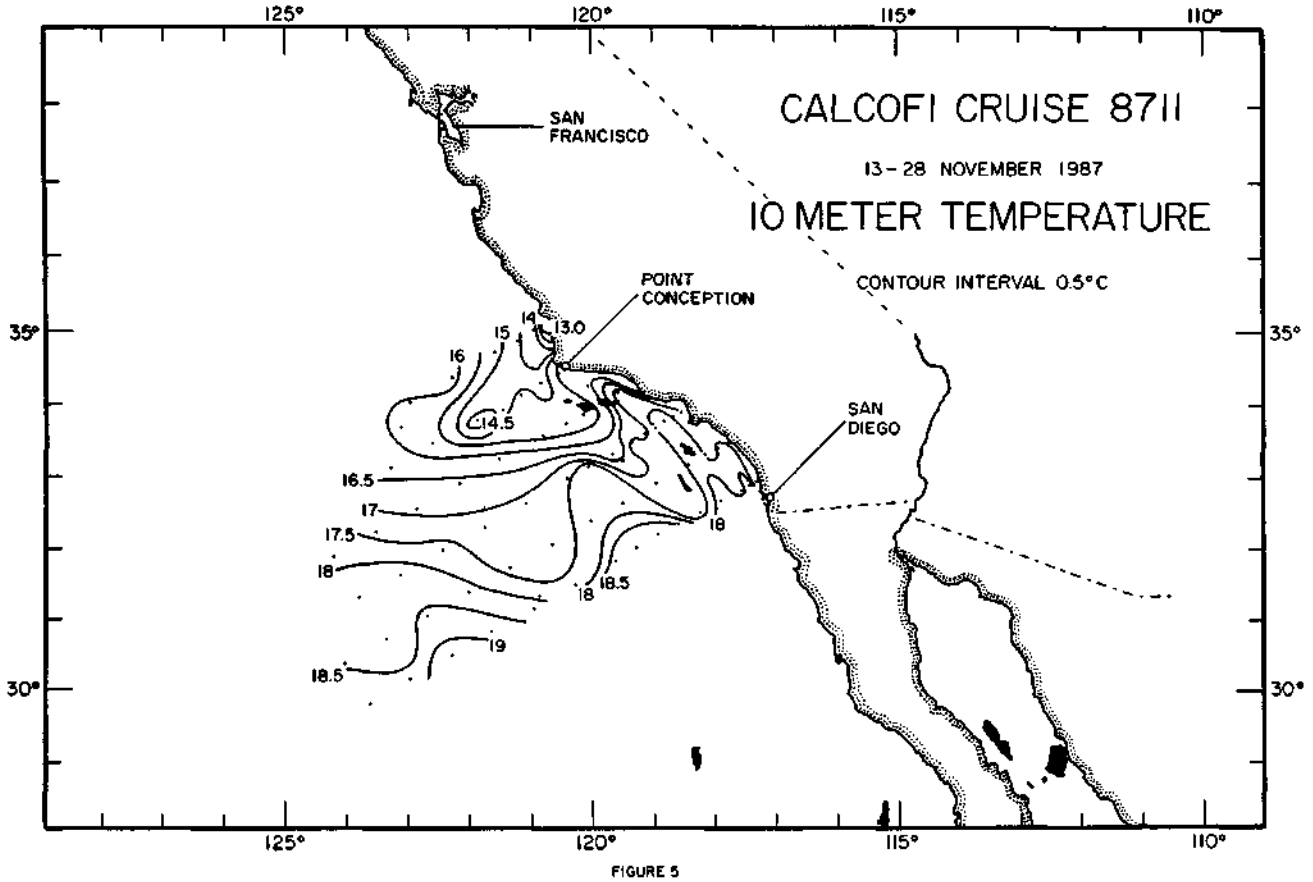


FIGURE 5

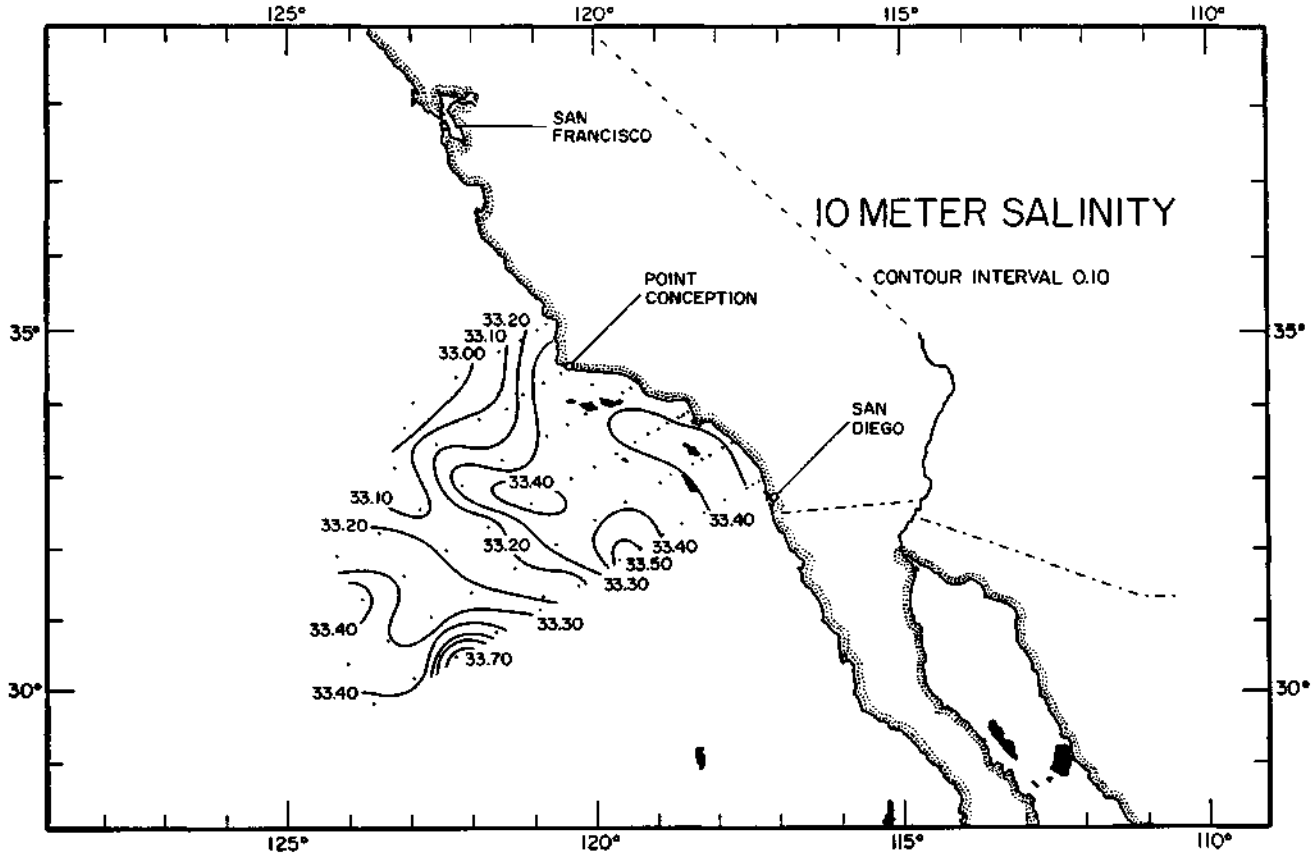


FIGURE 6

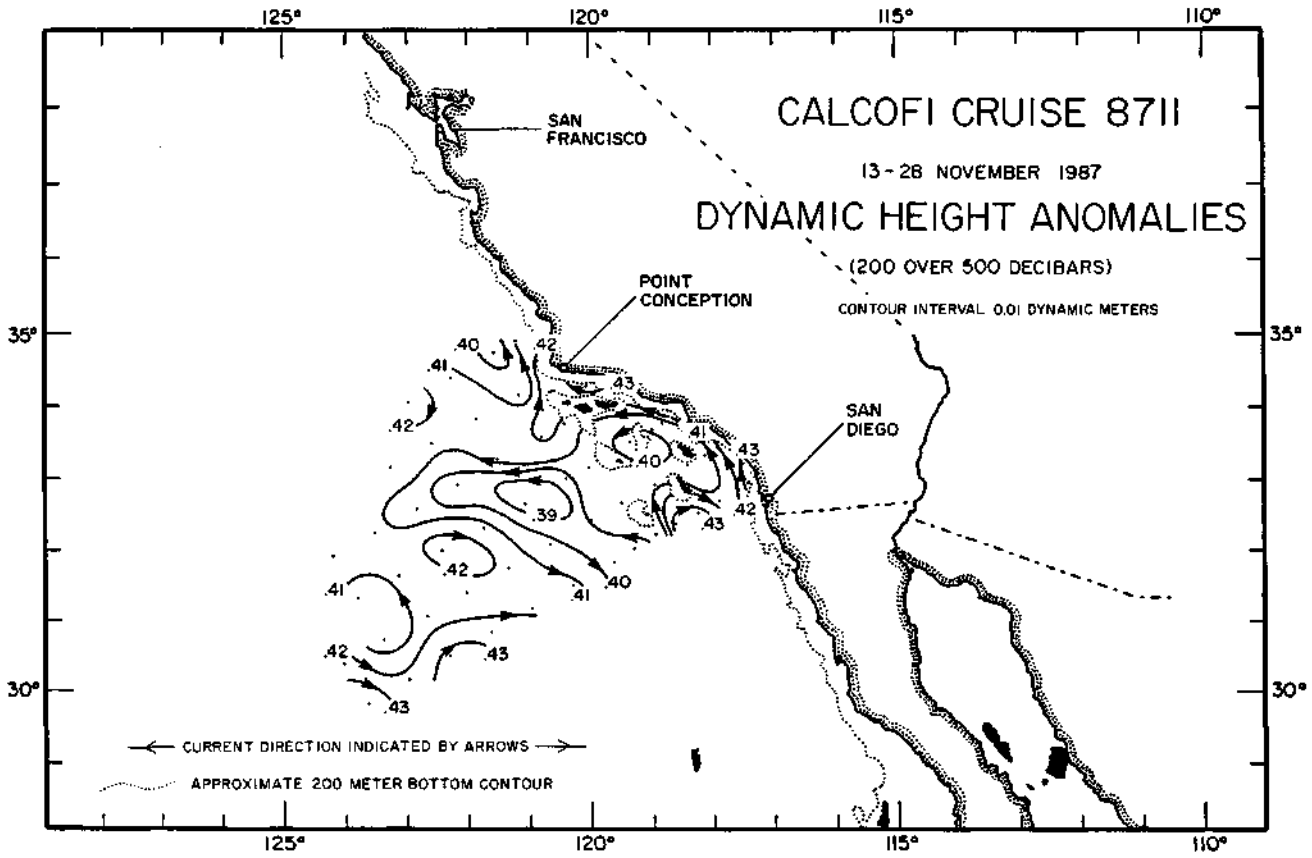


FIGURE 7

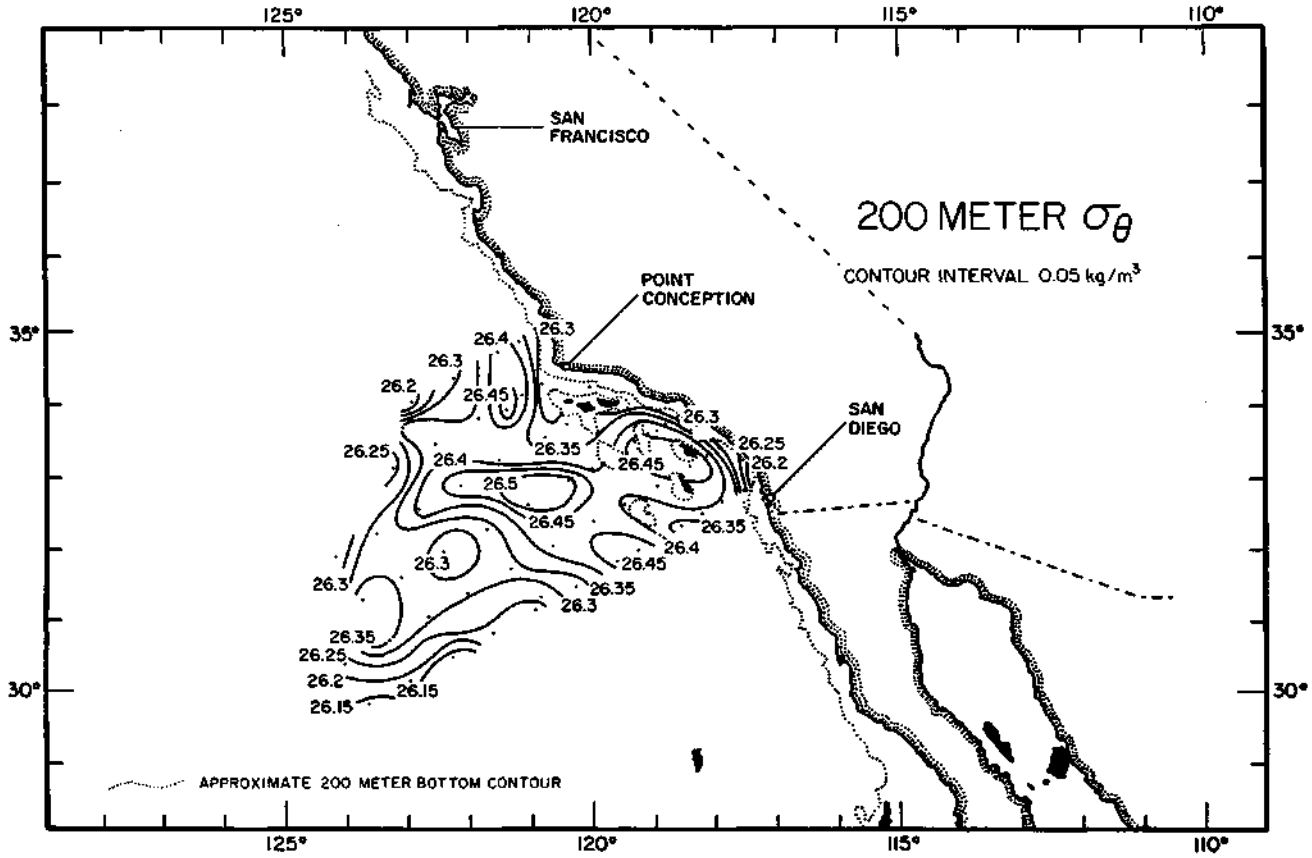


FIGURE 8

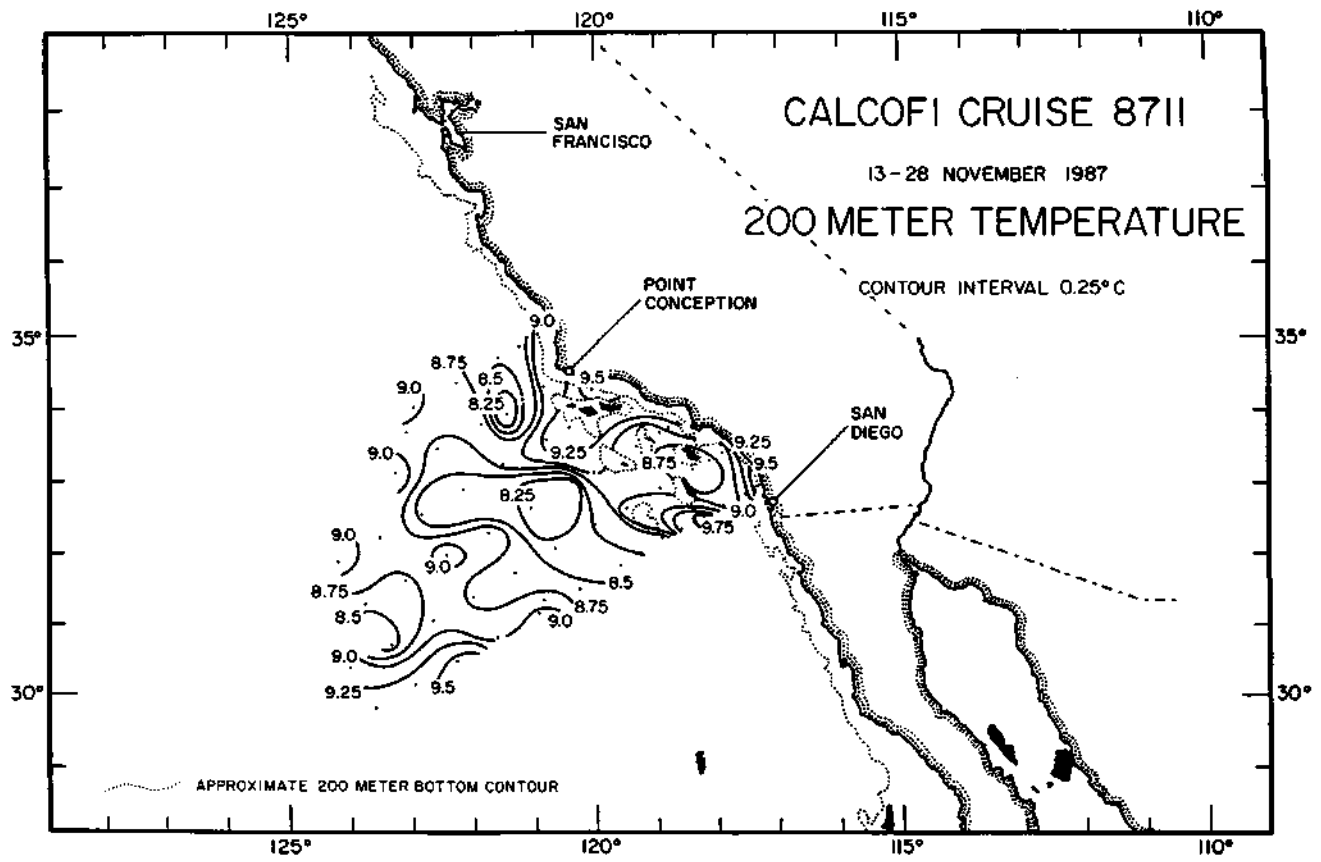


FIGURE 9

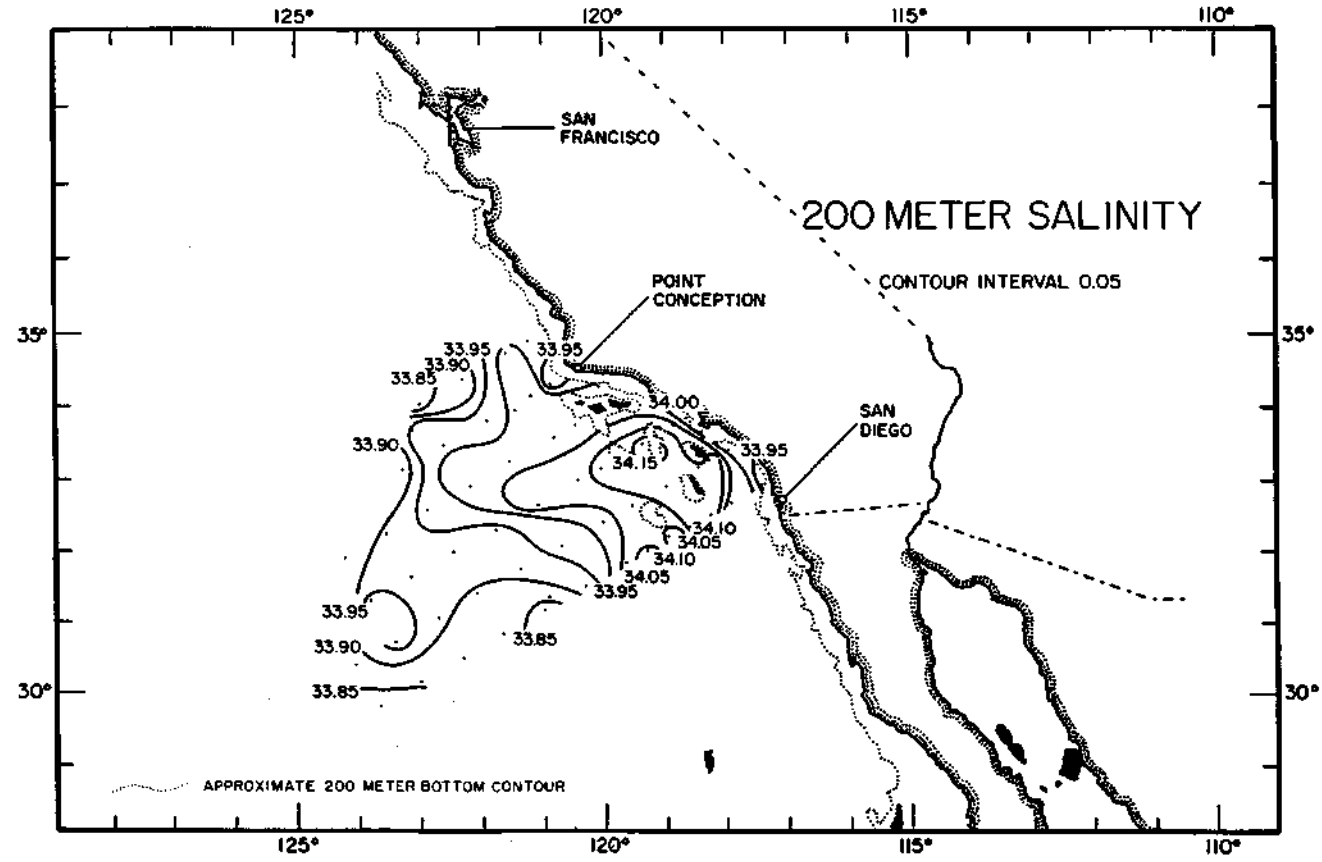


FIGURE 10

PERSONNEL

Cruise 8711

SHIP'S CAPTAIN

Phillip L. Munsch, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

Hemingway, George T. (in charge)	Assistant to the Director, MLRG, SIO
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS
Anderson, George C.	Staff Research Associate, SIO
Comer, Ronald L.	Resident Technician, SIO
Conrad, Carolyn L.	Student, UCSB
Flerx, William C.	Fishery Biologist, NMFS
Gil, Edgar L.	Student, CICESE
Gripp, Sherry L.	Staff Research Associate, SIO
Gruber, Dennis W.	Marine Technician, SIO
Taveras, Susan M.	Fisheries Biological Technician, NMFS
Vazquez, Carlos Israel	Student, CICESE
Veit, Richard R.	Graduate Student, UCI

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 77 A9

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 5.4 N	120 47.0 W	27/11/87	1943 GMT	69 M	00	KT	300 02 07	1	1020.1 MB	13.5 C	10.2 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
1	0	13.22	13.22	33.239	24.986	296.1	0.000	6.07	101.8	5.4	0.61	2.4	0.09	3.74	0.51	0
1	10	12.90	12.90	33.255	25.062	289.1	0.029	5.98	99.6	5.9	0.65	2.8	0.10	5.48	0.84	10
	20 ISL	12.66	12.66	33.330	25.167	279.4	0.058	5.19	86.0	8.9	0.90	6.9	0.14	3.13	0.60	20
1	21	12.64	12.64	33.339	25.178	278.4	0.060	5.10	84.5	9.2	0.93	7.4	0.14	2.80	0.56	21
	30 ISL	12.36	12.36	33.405	25.283	268.6	0.085	4.68	77.1	11.1	1.10	9.9	0.13	0.99	0.45	30
1	31	12.33	12.33	33.411	25.294	267.6	0.088	4.65	76.6	11.2	1.11	10.1	0.13	0.84	0.44	31
1	42	12.28	12.27	33.415	25.307	266.6	0.117	4.61	75.9	11.6	1.13	10.3	0.14	0.72	0.44	42
	50 ISL	12.28	12.27	33.414	25.306	266.9	0.138	4.62	76.0	11.8	1.15	10.3	0.15	0.73	0.49	50
1	52	12.28	12.27	33.413	25.305	267.1	0.144	4.62	76.0	11.8	1.16	10.3	0.15	0.73	0.50	52
1	63	12.28	12.27	33.413	25.306	267.3	0.173	4.57	75.2	11.8	1.17	10.3	0.16	0.70	0.48	63

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 1.5 N	120 55.0 W	27/11/87	1720 GMT	239 M	100	04 KT	300 03 07	1	1020.5 MB	14.2 C	12.0 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	14.18	14.18	33.328	24.858	308.3	0.000	5.99	102.5	2.7	0.47	0.7	0.08	2.32	0.43	0
1	2	14.18	14.18	33.328	24.858	308.3	0.006	5.99	102.5	2.7	0.47	0.7	0.08	2.32	0.43	2
	10 ISL	14.16	14.16	33.328	24.863	308.1	0.031	5.97	102.1	2.7	0.47	0.7	0.08	2.26	0.44	10
1	13	14.15	14.15	33.327	24.864	308.1	0.040	5.96	101.9	2.7	0.47	0.7	0.08	2.24	0.44	13
	20 ISL	14.11	14.11	33.326	24.872	307.5	0.062	5.97	102.0	2.6	0.47	0.7	0.08	2.30	0.54	20
1	23	14.10	14.10	33.325	24.873	307.5	0.071	5.98	102.1	2.6	0.47	0.7	0.08	2.32	0.57	23
	30 ISL	13.75	13.75	33.323	24.944	300.9	0.092	5.75	97.5	4.3	0.59	2.4	0.15	1.50	0.43	30
1	34	13.51	13.51	33.327	24.996	296.0	0.104	5.58	94.2	5.4	0.67	3.7	0.18	0.98	0.34	34
1	44	13.04	13.03	33.374	25.127	2 83.8	0.133	5.22	87.3	6.8	0.80	6.3	0.15	0.61	0.31	44
	50 ISL	12.71	12.70	33.369	25.188	278.2	0.150	5.09	84.5	7.6	0.86	7.4	0.13	0.46	0.33	50
1	54	12.49	12.48	33.370	25.232	274.1	0.161	4.99	82.4	8.2	0.91	8.1	0.11	0.38	0.33	54
1	64	12.00	11.99	33.464	25.398	258.5	0.188	4.53	74.1	10.8	1.07	10.9	0.06	0.21	0.23	64
1	74	11.50	11.49	33.545	25.554	243.9	0.213	4.20	68.0	13.7	1.24	13.7	0.03	0.10	0.18	75
	75 ISL	11.46	11.45	33.549	25.565	242.9	0.215	4.18	67.6	13.9	1.25	13.9	0.03	0.10	0.18	76
1	88	11.08	11.07	33.589	25.665	233.6	0.246	3.96	63.6	15.8	1.40	16.0	0.02	0.08	0.14	89
	100 ISL	10.71	10.70	33.666	25.791	221.9	0.273	3.65	58.1	18.5	1.54	18.2	0.01	0.05	0.12	101
1	107	10.52	.10.51	33.714	25.861	215.3	0.289	3.46	54.9	20.2	1.61	19-4	0.01	0.04	0.11	108
	125 ISL	10.23	10.22	33.801	25.979	204.4	0.327	3.13	49.4	23.6	1.77	21.5	0.02	0.02	0.11	126
1	127	10.20	10.19	33.809	25.991	203.4	0.331	3.10	48.9	23.9	1.79	21.7	0.02	0.02	0.11	128
1	147	9.86	9.84	33.864	26.092	194.2	0.370	2.93	45.9	26.8	1.89	23.2	0.04	0.02	0.12	148
	150 ISL	9.79	9.77	33.874	26.111	192.4	0.376	2.91	45.5	27.3	1.91	23.5	0.04	0.02	0.12	151
1	178	9.16	9.14	33.959	26.281	176.6	0.428	2.76	42.5	31.4	2.05	25.9	0.02	0.01	0.09	179
	200 ISL	9.01	8.99	33.969	26.313	174.0	0.466	2.77	42.6	32.4	2.08	26.2	0.02	0.01	0.10	202
1	211	8.94	8.92	33.974	26.328	172.8	0.485	2.77	42.5	32.9	2.09	26.4	0.02	0.01	0.11	213

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 53.3 N	121 12.2 W	27/11/87	1408 GMT	560 M	360	06 KT			1020.4 MB	12.8 C	11.9 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
	0 ISL	14.87	14.87	33.150	24.575	335.3	0.000	5.87	101.7	2.0	0.41	0.1	0.02	0.65	0.19	0
1	1	14.87	14.87	33.150	24.575	335.3	0.003	5.87	101.7	2.0	0.41	0.1	0.02	0.65	0.19	1
	10 ISL	14.86	14.86	33.149	24.576	335.4	0.034	5.88	101.9	2.0	0.43	0.1	0.02	0.67	0.18	10
1	11	14.86	14.86	33.149	24.576	335.4	0.037	5.88	101.9	2.0	0.43	0.1	0.02	0.67	0.18	11
	20 ISL	14.85	14.85	33.148	24.578	335.6	0.067	5.90	102.2	1.9	0.42	0.1	0.03	0.60	0.16	20
1	22	14.85	14.85	33.148	24.578	335.6	0.074	5.90	102.2	1.9	0.42	0.1	0.03	0.59	0.16	22
	30 ISL	14.83	14.83	33.145	24.580	335.6	0.101	5.91	102.3	1.8	0.42	0.1	0.03	0.63	0.20	30
1	32	14.82	14.82	33.144	24.582	335.5	0.107	5.91	102.3	1.8	0.42	0.1	0.03	0.65	0.22	32
1	43	14.16	14.15	33.078	24.671	327.3	0.144	5.92	101.1	2.5	0.48	0.8	0.09	0.72	0.33	43
	50 ISL	13.17	13.16	32.987	24.802	314.9	0.166	5.93	99.2	3.1	0.54	1.8	0.11	0.56	0.33	50
1	53	12.69	12.68	32.959	24.875	308.1	0.176	5.94	98.3	3.5	0.58	2.5	0.12	0.47	0.33	53
1	64	11.13	11.12	33.023	25.215	275.8	0.208	5.45	87.3	7.0	0.86	7.9	0.03	0.21	0.22	64
1	74	11.75	11.74	33.351	25.357	262.6	0.235	4.82	78.4	9.2	0.99	10.3	0.03	0.14	0.18	75
	75 ISL	11.73	11.72	33.364	25.371	261.3	0.237	4.77	77.5	9.5	1.01	10.6	0.03	0.14	0.18	76
1	89	11.46	11.45	33.528	25.549	244.7	0.273	4.18	67.6	13.8	1.24	14.1	0.02	0.09	0.15	90
	100 ISL	11.02	11.01	33.598	2 5.683	232.2	0.299	3.93	63.0	16.1	1.37	16.2	0.01	0.06	0.12	101
1	104	10.84	10.83	33.620	25.732	227.6	0.308	3.85	61.5	16.9	1.41	17.0	0.01	0.05	0.11	105
1	125	9.98	9.97	33.806	26.026	200.0	0.353	3.22	50.5	23.8	1.72	21.8	0.01	0.03	0.08	126
	150 ISL	9.58	9.56	33.898	26.165	187.2	0.401	2.91	45.3	27.5	1.89	24.2	0.01	0.02	0.07	151
1	151	9.57	9.55	33.900	26.168	187.0	0.403	2.90	45.1	27.6	1.89	24.2	0.01	0.02	0.07	152
1	182	9.05	9.03	33.956	26.296	175.2	0.459	2.84	43.7	30.7	1.97	25.9	0.01	0.01	0.07	183
	200 ISL	8.73	8.71	33.999	26.380	167.5	0.490	2.73	41.7	33.4	2.05	27.0	0.00	0.01	0.05	202
1	212	8.54	8.52	34.026	26.431	162.9	0.510	2.64	40.1	35.3	2.11	27.7	0.00	0.01	0.04	214
1	243	8.19	8.17	34.068	26.517	155.1	0.559	2.44	36.8	39.9	2.25	29-2	0.00			245
	250 ISL	8.10	8.07	34.072	26.534	153.6	0.570	2.39	36.0	40.9	2.28	29.5	0.00			252
1	284	7.68	7.65	34.083	26.605	147.3	0.621	2.17	32.4	45.8	2.40	31.1	0.01			286
	300 ISL	7.50	7.47	34.084	26.632	144.9	0.645	2.06	30.6	48-1	2.45	31.9	0.01			303
1	339	7.06	7.03	34.087	26.696	139.1	0.700	1.79	26.3	53.9	2.58	33.9	0.01			342
1	400	6.38	6.34	34.108	26.804	129.3	0.782	1.28	18.5	64.4	2.82	37.3	0.01			403
1	466	6.12	6.08	34.179	26.894	121.5	0.865	0.77	11.1	72.8	3.05	39.3	0.01			470
	500 ISL	5.93	5.89	34.226	26.955	116.0	0.905	0.54	7.7	80.1	3.18	39.6	0.04			504
1	536	5.72	5.67	34.276	27.021	110.0	0.946	0.30	4.3	87.8	3.31	39.9	0.08			541

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 A3.5 N	121 33.0 W	27/11/87	1007 GMT	911 M	100	05 KT			1020.5 MB	13.8 C	12.3 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		15.01	15.01	33.054	24.470	345.2	0.000	5.87	102.0	1.7	0.41	0.1	0.00	0.24	0.09	0
	10	ISL	15.01	15.01	33.052	24.469	345.6	0.035	5.89	102.3	1.7	0.41	0.1	0.01	0.26	0.09	10
1	16		15.01	15.01	33.051	24.469	345.8	0.055	5.90	102.5	1.7	0.41	0.1	0.01	0.27	0.09	16
	20	ISL	15.00	15.00	33.054	24.473	345.5	0.069	5.90	102.5	1.6	0.41	0.1	0.01	0.28	0.09	20
1	30		14.98	14.98	33.061	24.483	344.9	0.104	5.92	102.8	1.5	0.41	0.1	0.01	0.30	0.12	30
1	42		14.67	14.66	33.045	24.538	340.0	0.145	5.96	102.8	1.4	0.43	0.2	0.04	0.45	0.19	42
	50	ISL	13.27	13.26	32.977	24.774	317.6	0.171	6.03	101.0	2.2	0.50	1.2	0.13	0.56	0.28	50
1	52		12.91	12.90	32.965	24.836	311.7	0.177	6.04	100.4	2.4	0.52	1.5	0.15	0.57	0.30	52
2	63		12.26	12.25	32.995	24.985	2 97.8	0.211	5.83	95.6	3.1	0.59	3.0	0.06	0.38	0.23	63
2	73		11.57	11.56	33.055	25.160	281.3	0.240	5.61	90.7	4.4	0.71	5.2	0.02	0.22	0.17	74
	75	ISL	11.41	11.40	33.060	25.194	278.1	0.245	5.56	89.6	5.0	0.75	5.9	0.02	0.20	0.16	76
2	82		10.89	10.88	33.094	25.313	266.8	0.264	5.34	85.1	7.3	0.90	8.6	0.02	0.13	0.11	83
2	98		10.44	10.43	33.381	25.615	238.4	0.305	4.60	72.7	12.4	1.20	14.1	0.01	0.06	0.07	99
	100	ISL	10.36	10.35	33.414	25.655	234.7	0.310	4.49	70.9	13.3	1.25	14.9	0.01	0.05	0.07	101
2	113		9.84	9.83	33.597	25.885	212.9	0.339	3.87	60.4	18.8	1.54	19.8	0.01	0.03	0.05	114
	125	ISL	9.57	9.56	33.695	26.007	201.6	0.364	3.56	55.3	22.2	1.67	22.0	0.01	0.02	0.05	126
2	130		9.49	9.48	33.726	26.044	198.2	0.374	3.47	53.8	23.3	1.71	22.6	0.01	0.02	0.05	131
	150	ISL	9.11	9.09	33.857	26.208	182.9	0.412	3.12	48.0	27.7	1.88	25.0	0.01	0.00	0.04	151
2	156		9.01	8.99	33.888	26.249	179.2	0.423	3.04	46.7	28.7	1.92	25.5	0.01	0.00	0.04	157
2	181		8.82	8.80	33.947	26.325	172.4	0.466	2.82	43.1	31.4	2.02	26.7	0.01	0.00	0.06	182
	200	ISL	8.55	8.53	34.008	26.415	164.1	0.498	2.69	40.9	34.6	2.09	27.6	0.01	0.00	0.05	202
2	212		8.36	8.34	34.043	26.472	158.9	0.518	2.62	39.7	36.8	2.13	28.2	0.01	0.00	0.04	214
2	242		7.96	7.94	34.072	26.555	151.4	0.564	2.40	36.0	41.3	2.27	29.9	0.01			244
	250	ISL	7.88	7.85	34.083	26.575	149.5	0.576	2.29	34.3	42.8	2.32	30.4	0.01			252
2	284		7.51	7.48	34.119	26.657	142.2	0.626	1.77	26.3	49.7	2.53	32.9	0.01			286
	300	ISL	7.22	7.19	34.118	26.698	138.5	0.648	1.61	23.8	53.4	2.62	34.1	0.01			302
2	339		6.54	6.51	34.112	26.785	130.3	0.701	1.31	19.0	61.6	2.79	36.8	0.00			342
2	400		6.15	6.11	34.145	26.863	123.5	0.778	0.92	13.2	69.3	2.96	39.0	0.00			403
2	464		5.64	5.60	34.188	26.960	114.6	0.854	0.56	8.0	80.1	3.15	41.4	0.00			468
	500	ISL	5.48	5.44	34.215	27.001	111.0	0.895	0.46	6.5	83.9	3.21	42.0	0.00			504
2	535		5.32	5.28	34.242	27.042	107.5	0.933	0.36	5.1	87.6	3.26	42.5	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 23.2 N	122 14.8 W	27/11/87	0426 GMT	4014 M	330	09 KT			1020.9 MB	13.9 C	11.0 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		16.13	16.13	32.969	24.157	375.0	0.000	5.75	102.1	1.3	0.37	0.1	0.01	0.15	0.06	0
	10	ISL	16.14	16.14	32.967	24.154	375.7	0.038	5.76	102.3	1.3	0.37	0.1	0.00	0.15	0.05	10
1	17		16.14	16.14	32.965	24.153	376.0	0.064	5.76	102.3	1.3	0.37	0.1	0.00	0.15	0.05	17
	20	ISL	16.14	16.14	3 2.965	24.153	376.1	0.075	5.76	102.3	1.3	0.37	0.1	0.00	0.15	0.06	20
	30	ISL	16.15	16.15	32.965	24.151	376.6	0.113	5.76	102.3	1.3	0.35	0.1	0.00	0.15	0.07	30
1	32		16.15	16.14	32.965	24.151	376.7	0.120	5.76	102.3	1.3	0.35	0.1	0.00	0.15	0.07	32
1	42		16.16	16.15	32.967	24.150	377.0	0.158	5.77	102.5	1.2	0.36	0.0	0.01	0.15	0.05	42
	50	ISL	16.15	16.14	32.967	24.153	377.0	0.188	5.77	102.4	1.1	0.36	0.0	0.00	0.14	0.05	50
1	53		16.15	16.14	32.967	24.153	377.1	0.199	5.77	102.4	1.1	0.36	0.0	0.00	0.14	0.05	53
1	63		16.16	16.15	32.969	24.153	377.5	0.237	5.77	102.5	1.1	0.36	0.0	0.00	0.15	0.05	63
1	73		14.13	14.12	33.069	24.671	328.2	0.272	6.11	104.3	1.9	0.36	0.0	0.01	0.55	0.22	74
	75	ISL	13.95	13.94	33.082	24.718	323.7	0.279	6.10	103.7	1.9	0.36	0.0	0.02	0.50	0.22	76
1	82		13.48	13.47	33.090	24.821	314.1	0.301	5.99	100.9	2.1	0.39	0.1	0.04	0.25	0.20	83
1	98		11.62	11.61	32.889	25.023	294.9	0.350	5.88	95.1	4.0	0.61	3.8	0.02	0.16	0.14	99
	100	ISL	11.52	11.51	32.895	25.046	292.8	0.356	5.85	94.4	4.2	0.63	4.2	0.02	0.15	0.13	101
1	113		11.08	11.07	33.015	25.219	276.6	0.393	5.54	88.6	6.5	0.78	7.0	0.01	0.09	0.08	114
	125	ISL	10.49	10.48	33.192	25.460	253.8	0.425	5.04	79.7	10.6	1.06	11.8	0.01	0.05	0.05	126
1	128		10.35	10.34	33.241	25.522	247.9	0.432	4.90	77.2	11.7	1.13	13.0	0.01	0.04	0.05	129
	150	ISL	9.86	9.84	33.557	25.852	217.0	0.483	4.05	63.3	17.9	1.45	18.6	0.01	0.04	0.07	151
1	154		9.80	9.78	33.606	25.900	212.4	0.492	3.92	61.2	18.9	1.49	19.3	0.01	0.04	0.07	155
1	180		9.16	9.14	33.808	26.163	187.9	0.544	3.43	52.8	25.2	1.73	23.3	0.01	0.00	0.02	181
	200	ISL	8.77	8.75	33.899	26.296	175.5	0.580	3.55	54.2	27.6	1.75	23.8	0.01	0.00	0.03	202
1	211		8.57	8.55	33.933	26.354	170.2	0.599	3.61	54.9	29.0	1.76	24.0	0.01	0.00	0.03	213
1	240		8.07	8.05	34.005	26.486	158.0	0.647	3.02	45.4	36.4	2.01	27.4	0.01			242
	250	ISL	7.92	7.89	34.022	26.521	154.7	0.663	2.86	42.9	38.6	2.08	28.3	0.01			252
1	281		7.49	7.46	34.054 A	26.609	146.7	0.709	2.46	36.5	44.5	2.28	30.7	0.00			283
	300	ISL	7.26	7.23	34.056	26.643	143.6	0.737	2.26	33.4	47.8	2.36	31.9	0.00			302
1	338		6.84	6.81	34.056 A	26.701	138.4	0.790	1.93	28.2	54.0	2.50	33.9	0.00			341
1	399		6.14	6.10	34.107 A	26.834	126.2	0.871	1.54	22.1	63.7	2.76	37.1	0.00			402
	400	ISL	6.13	6.09	34.108	26.836	126.0	0.872	1.53	22.0	63.9	2.76	37.2	0.00			403
1	465		5.58	5.54				0.951	0.91	12.9	76.3	3.01	40.4	0.01			469
	500	ISL	5.50	5.46	3 4.186	26.976	113.5	0.991	0.67	9.5	80.6	3.10	41.2	0.01			504
1	537		5.42	5.38	34.216 A	27.010	110.7	1.033	0.42	5.9	85.2	3.19	42.0	0.00			542

A) THE SALINITY SAMPLES FROM 281 TO 537 METERS APPEAR TO HAVE BEEN ANALYZED IN REVERSE ORDER. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 3.2 N	122 56.A W	26/11/87	2246 GMT	2217 M	350	14 KT	350 07 07	1	1020.0 MB	16.0 C	13.3 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
	0	ISL	16.01	16.01	32.947	24.167	374.1	0.000	5.80	102.7	1.2	0.37	0.0	0.00	0.18	0.05	0
1	1		16.01	16.01	32.947	24.167	374.1	0.004	5.80	102.7	1.2	0.37	0.0	0.00	0.18	0.05	1
	10	ISL	16.00	16.00	32.946	24.169	374.2	0.037	5.82	103.0	1.1	0.36	0.0	0.00	0.17	0.05	10
1	17		15.98	15.98	32.946	24.174	374.0	0.064	5.83	103.2	1.0	0.36	0.0	0.00	0.17	0.05	17
	20	ISL	15.98	15.98	32.946	24.174	374.1	0.075	5.83	103.2	1.0	0.36	0.0	0.00	0.17	0.05	20
	30	ISL	15.97	15.97	32.947	24.177	374.0	0.112	5.81	102.8	0.9	0.36	0.0	0.00	0.18	0.06	30
1	32		15.97	15.97	32.948	24.178	374.1	0.120	5.81	102.8	0.9	0.36	0.0	0.00	0.18	0.06	32
1	42		15.97	15.96	32.948	24.179	374.3	0.157	5.81	102.8	0.9	0.36	0.0	0.00	0.19	0.06	42
	50	ISL	15.97	15.96	32.948	24.179	374.5	0.187	5.82	103.0	0.9	0.36	0.0	0.00	0.18	0.06	50
1	53		15.97	15.96	32.948	24.179	374.6	0.198	5.82	103.0	0.9	0.36	0.0	0.00	0.18	0.06	53
1	63		15.97	15.96	32.947	24.179	375.0	0.236	5.80	102.6	0.9	0.36	0.0	0.00	0.21	0.07	63
1	73		13.56	13.55	32.853	24.621	332.8	0.271	6.13	103.3	2.3	0.46	0.6	0.18	0.50	0.26	74
	75	ISL	13.25	13.24	32.851	24.682	327.1	0.278	6.12	102.4	2.5	0.47	0.9	0.16	0.47	0.25	76
1	83		12.39	12.38	32.878	24.870	309.2	0.303	5.99	98.5	3.1	0.52	2.2	0.06	0.27	0.22	84
1	98		12.10	12.09	33.026	25.040	293.4	0.348	5.72	93.5	4.1	0.61	3.5	0.03	0.16	0.13	99
	100	ISL	12.09	12.08	33.050	25.061	291.5	0.354	5.69	93.0	4.2	0.62	3.7	0.03	0.15	0.13	101
1	114		11.96	11.95	33.243	25.235	275.2	0.394	5.28	86.2	6.0	0.77	6.7	0.02	0.11	0.11	115
	125	ISL	11.67	11.65	33.440	25.442	255.7	0.423	4.56	74.1	10.6	1.10	12.2	0.01	0.09	0.10	126
1	129		11.53	11.51	33.506	25.520	248.5	0.433	4.29	69.5	12.5	1.22	14.2	0.01	0.08	0.10	130
	150	ISL	10.54	10.52	33.625	25.789	223.1	0.483	3.77	59.8	17.8	1.49	18.7	0.01	0.04	0.06	151
1	155		10.30	10.28	33.632	25.836	218.7	0.494	3.74	59.0	18.7	1.52	19.2	0.01	0.03	0.05	156
1	181		9.52	9.50	33.720	26.036	200.1	0.548	3.67	56.9	22.6	1.65	21.5	0.00	0.01	0.03	182
	200	ISL	9.03	9.01	33.826	26.198	184.9	0.585	3.51	53.9	26.3	1.75	23.3	0.01	0.00	0.02	202
1	211		8.78	8.76	33.888	26.286	176.7	0.605	3.39	51.8	28.6	1.81	24.3	0.01	0.00	0.02	213
1	241		8.23	8.21	33.987	26.448	161.6	0.655	3.10	46.8	34.9	1.99	26.8	0.01			243
	250	ISL	8.07	8.04	33.998	26.480	158.6	0.670	3.05	45.9	36.5	2.03	27.4	0.01			252
1	283		7.55	7.52	34.015	26.570	150.4	0.721	2.84	42.2	42.1	2.15	29.3	0.00			285
	300	ISL	7.36	7.33	34.026	26.606	147.2	0.746	2.59	38.3	45.3	2.25	30.5	0.00			302
1	339		6.97	6.94	34.052	26.680	140.5	0.802	1.96	28.7	53.0	2.49	33.5	0.00			3*2
1	399		6.33	6.29	34.092	26.798	129.8	0.883	1.26	18.2	64.9	2.79	37.5	0.01			402
	400	ISL	6.32	6.28	34.093	26.800	129.6	0.885	1.25	18.1	65.1	2.79	37.5	0.01			403
1	465		5.88	5.84	34.148	26.899	120.7	0.966	0.74	10.6	74.9	2.99	40.0	0.00			469
	500	ISL	5.58	5.54	34.154	26.941	116.9	1.008	0.66	9.4	80.1	3.07	41.0	0.00			50*
1	537		5.26	5.22	34.161	26.985	112.8	1.050	0.58	8.2	85.6	3.15	42.0	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 27.0 N	120 31.4 W	25/11/87	0302 GMT	70 M	330	17 KT			1020.1 MB	16.1 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		15.90	15.90	33.361	24.510	341.4	0.000	5.70	101.0	3.6	0.42	0.4	0.16	0.93	0.28	0
1	10		15.89	15.89	33.359	24.511	341.6	0.034	5.70	100.9	3.1	0.42	0.5	0.15	0.90	0.31	10
	20	ISL	15.88	15.88	33.359	24.514	341.7	0.068	5.70	100.9	3.4	0.43	0.4	0.15	0.88	0.29	20
1	21		15.88	15.88	33.359	24.514	341.7	0.072	5.70	100.9	3.4	0.43	0.4	0.15	0.88	0.29	21
	30	ISL	15.86	15.86	33.359	24.519	341.5	0.102	5.68	100.5	3.7	0.44	0.6	0.17	0.83	0.26	30
1	31		15.86	15.86	33.359	24.519	341.6	0.106	5.68	100.5	3.7	0.44	0.6	0.17	0.82	0.26	31
1	41		15.24	15.23	33.345	24.646	329.7	0.139	5.60	97.9	4.2	0.52	1.4	0.26	0.74	0.27	41
	50	ISL	14.97	14.96	33.342	24.703	324.6	0.169	5.52	96.0	4.5	0.57	2.0	0.28	0.64	0.29	50
1	51		14.93	14.92	33.342	24.711	3 23.8	0.172	5.50	95.5	4.5	0.58	2.1	0.28	0.62	0.29	51
1	67		12.89	12.88	33.381	25.163	281.0	0.221	4.85	80.8	8.3	0.95	7.8	0.13	0.22	0.39	68

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 19.1 N	120 48.9 W	25/11/87	0553 GMT	762 M	330	30 KT			1021.8 MB	15.1 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	14.88	14.88	33.351	24.728	320.7	0.000	5.81	100.8	3.6	0.43	0.9	0.12	1.16	0.42	0
1	1		14.88	14.88	33.351	24.728	320.7	0.003	5.81	100.8	3.6	0.43	0.9	0.12	1.16	0.42	1
	10	ISL	14.89	14.89	33.349	24.724	321.3	0.032	5.83	101.2	3.5	0.44	0.9	0.12	1.19	0.42	10
1	11		14.89	14.89	33.349	24.724	321.4	0.035	5.83	101.2	3.5	0.44	0.9	0.12	1.19	0.42	11
	20	ISL	14.87	14.87	33.345	24.726	321.5	0.064	5.80	100.6	3.6	0.45	1.0	0.13	1.14	0.44	20
1	21		14.87	14.87	33.345	24.726	321.5	0.067	5.80	100.6	3.6	0.45	1.0	0.13	1.13	0.44	21
	30	ISL	14.16	14.16	33.329	24.864	308.6	0.096	5.56	95.1	4.4	0.56	2.9	0.19	0.72	0.33	30
1	31		14.04	14.04	33.329	24.889	306.2	0.099	5.52	94.2	4.6	0.58	3.2	0.19	0.67	0.31	31
1	41		12.47	12.46	33.372	25.237	273.3	0.128	5.00	82.6	7.7	0.86	8.1	0.11	0.32	0.23	41
1	50		12.14	12.13	33.420	25.337	264.0	0.152	4.74	77.8	9.3	0.98	10.1	0.08	0.20	0.19	50
1	60		12.13	12.12	33.437	25.353	262.7	0.178	4.67	76.6	10.0	1.01	10.4	0.08	0.17	0.19	60
1	70		12.03	12.02	33.447	25.379	260.4	0.205	4.62	75.6	10.5	1.05	10.9	0.07	0.17	0.21	71
	75	ISL	11.97	11.96	33.454	25.396	258.9	0.218	4.58	74.9	10.7	1.07	11.2	0.06	0.16	0.20	76
1	84		11.77	11.76	33.480	25.454	253.7	0.241	4.46	72.6	11.6	1.12	12.1	0.05	0.14	0.18	85
1	99		11.05	11.04	33.595	25.675	232.9	0.277	4.00	64.2	15.8	1.34	15.9	0.03	0.08	0.14	100
	100	ISL	11.03	11.02	33.598	25.681	232.4	0.279	3.99	64.0	15.9	1.35	16.0	0.03	0.08	0.14	101
1	118		10.81	10.80	33.630	25.745	226.6	0.321	3.86	61.6	17.3	1.42	17.1	0.02	0.06	0.14	119
	125	ISL	10.70	10.69	33.670	25.796	221.9	0.336	3.69	58.8	18.5	1.48	18.0	0.02	0.05	0.12	126
1	143		10.37	10.35	33.781	25.940	208.6	0.375	3.24	51.3	22.2	1.66	20.7	0.01	0.03	0.07	144
	150	ISL	10.23	10.21	33.811	25.988	204.2	0.390	3.13	49.4	23.5	1.71	21.5	0.01	0.03	0.07	151
1	173		9.73	9.71	33.881	26.127	191.4	0.435	2.95	46.0	27.1	1.84	23.6	0.01	0.02	0.08	174
	200	ISL	9.05	9.03	33.918	26.267	178.4	0.485	3.00	46.1	29.9	1.91	25.2	0.00	0.01	0.05	202
1	202		9.00	8.98	33.922	26.278	177.4	0.489	3.00	46.1	30.2	1.92	25.3	0.00	0.01	0.05	204
1	231		8.69	8.67	34.070	26.443	162.2	0.538	2.36	36.0	37.3	2.18	28-2	0.01			233
	250	ISL	8.63	8.60	34.133	26.502	156.9	0.568	1.96	29.9	40.5	2.32	29-5	0.01			252
1	270		8.53	8.50	34.167	26.544	153.3	0.599	1.67	25.4	43.3	2.43	30.5	0.00			272
	300	ISL	7.93	7.90	34.130	26.605	147.6	0.644	1.81	27.1	47.0	2.45	31.6	0.01			302
1	324		7.41	7.38	34.091	26.650	143.5	0.679	1.97	29.2	49-8	2.46	32.4	0.01			327
1	381		7.05	7.01	34.152	26.749	134.8	0.759	1.23	18.1	58-1	2.73	35.4	0.00			38*
	400	ISL	6.94	6.90	34.175	26.782	131.9	0.784	0.98	14.4	62.6	2.85	35.7	0.00			403
1	441		6.67	6.63	34.219	26.854	125.5	0.837	0.56	8.2	71.8	3.06	36.4	0.01			445
	500	ISL	6.09	6.05	34.251	26.955	116.2	0.908	0.46	6.6	77.0	3.13	39.6	0.00			50*
1	504		6.05	6.01	34.254	26.962	115.5	0.913	0.45	6.5	77.3	3.14	39.8	0.00			508

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 9.1 N	121 9.1 W	25/11/87	1522 GMT	2212 M	330	30 KT	350 10 07	1	1022.0 MB	14.5 C	12.8 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	15.09	15.09	33.267	24.617	331.2	0.000	5.86	102.1	2.1	0.41	0.3	0.04	0.80	0.27	0
1	3		15.09	15.09	33.267	24.617	331.3	0.010	5.86	102.1	2.1	0.41	0.3	0.04	0.80	0.27	3
	10	ISL	15.09	15.09	33.266	24.617	331.5	0.033	5.86	102.1	2.0	0.40	0.2	0.04	0.85	0.29	10
1	14		15.09	15.09	33.266	24.617	331.7	0.046	5.86	102.1	1.9	0.40	0.2	0.04	0.88	0.30	14
	20	ISL	15.08	15.08	33.265	24.619	331.7	0.066	5.86	102.1	1.9	0.41	0.3	0.03	0.87	0.30	20
1	24		15.08	15.08	33.264	24.618	331.9	0.080			1.9	0.41	0.3	0.03	0.85	0.30	24
	30	ISL	15.09	15.09	33.264	24.616	332.3	0.099	5.86	102.1	1.9	0.41	0.3	0.04	0.83	0.32	30
1	35		15.10	15.09	33.264	24.614	332.6	0.116	5.86	102.1	1.9	0.41	0.3	0.04	0.81	0.33	35
1	45		12.45	12.44	33.032	24.977	298.1	0.148	5.78	95.2	3.8	0.62	3.4	0.09	0.40	0.27	45
	50	ISL	12.45	12.44	33.107	25.035	292.6	0.162	5.69	93.8	4.0	0.65	3.9	0.08	0.32	0.28	50
1	55		12.45	12.44	33.159	25.076	289.0	0.177	5.54	91.3	4.4	0.68	4.5	0.06	0.28	0.29	55
1	66		11.80	11.79	33.331	25.332	264.8	0.207	4.95	80.6	8.1	0.94	9.4	0.03	0.14	0.17	67
	75	ISL	11.14	11.13	33.422	25.524	246.7	0.230	4.56	73.2	11.7	1.15	13.2	0.02	0.09	0.14	76
1	80		10.80	10.79	33.472	25.623	237.3	0.243	4.34	69.2	13.8	1.26	15.2	0.02	0.08	0.14	81
1	95		10.21	10.20	33.699	25.903	211.0	0.276	3.52	55.5	20.3	1.61	20.1	0.01	0.03	0.07	96
	100	ISL	10.09	10.08	33.733	25.950	206.7	0.287	3.47	54.5	21.4	1.66	20.9	0.01	0.03	0.07	101
1	117		9.75	9.74	33.789	26.051	197.4	0.321	3.28	51.2	23.8	1.74	22.3	0.01	0.02	0.05	118
	125	ISL	9.57	9.56	33.815	26.101	192.8	0.337	3.22	50.1	25.1	1.78	23.1	0.01	0.01	0.04	126
1	137		9.31	9.29	33.854	26.174	186.0	0.359	3.13	48.4	27.1	1.85	24.2	0.01	0.00	0.04	138
	150	ISL	9.13	9.11	33.909	26.246	179.4	0.383	2.98	45.9	29.3	1.93	25.2	0.01	0.00	0.04	151
1	163		8.98	8.96	33.960	26.310	173.5	0.406	2.84	43.6	31.4	2.00	26.1	0.01	0.01	0.05	164
1	194		8.56	8.54	34.019	26.422	163.4	0.458	2.65	40.3	35.2	2.10	27.5	0.01	0.01	0.04	196
	200	ISL	8.53	8.51	34.034	26.438	161.9	0.468	2.56	38.9	36.1	2.14	27.9	0.01	0.01	0.04	202
1	229		8.39	8.37	34.093	26.507	155.9	0.514	2.15	32.6	40.2	2.31	29-5	0.01	0.00	0.04	231
	250	ISL	8.20	8.17	34.102	26.543	152.8	0.546	2.06	31.1	42.4	2.36	30.2	0.01			252
1	265		8.05	8.02	34.103	26.566	150.8	0.569	2.02	30.4	44.0	2.39	30.7	0.01			267
	300	ISL	7.70	7.67	34.131	26.640	144.2	0.621	1.72	25.7	49.2	2.53	32.4	0.01			302
1	304		7.65	7.62	34.133	26.649	143.5	0.627	1.68	25.0	49.8	2.55	32.6	0.01			307
1	359		6.76	6.73	34.097	26.745	134.6	0.703	1.54	22.5	58-6	2.71	35.1	0.01			362
	400	ISL	6.39	6.35	34.128	26.818	127.9	0.757	1.14	16.5	65.7	2.89	37.3	0.01			403
1	427		6.19	6.15	34.155	26.866	123.7	0.791	0.86	12.4	70.5	3.00	38.7	0.01			431
1	498		5.45	5.41	34.184	26.980	113.0	0.875	0.55	7.8	83.3	3.17	41.4	0.01			502
	500	ISL	5.44	5.40	34.186	26.983	112.7	0.877	0.54	7.6	83.5	3.17	41.4	0.01			504
1	579		5.08	5.03	34.272	27.094	102.8	0.962	0.30	4.2	93.4	3.30	42.9	0.00			584

RV NEW HORIZON CALCOFI CRUISE 8711 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 50.7 W	25/11/87	2340 GMT	3620 M	350	27 KT	350 12 08	1	1018.5 MB	14.9 C	11.8 C	3/8	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	14.28	14.28	33.123	24.679	325.3	0.000	6.01	102.9	3.0	0.42	0.5	0.07	1.33	0.39	0
1	1		14.28	14.28	33.123	24.679	325.3	0.003	6.01	102.9	3.0	0.42	0.5	0.07	1.33	0.39	1
	10	ISL	14.28	14.28	33.120	24.677	325.8	0.033	6.02	103.1	2.9	0.42	0.5	0.07	1.31	0.43	10
1	11		14.28	14.28	33.120	24.677	325.8	0.036	6.02	103.1	2.9	0.42	0.5	0.07	1.31	0.43	11
	20	ISL	14.28	14.28	33.120	24.677	326.1	0.065	6.01	102.9	2.8	0.42	0.5	0.07	1.29	0.40	20
1	21		14.28	14.28	33.120	24.677	326.1	0.068	6.01	102.9	2.8	0.42	0.5	0.07	1.29	0.39	21
1	30		14.29	14.29	33.116	24.673	326.8	0.098	6.01	102.9	2.5	0.41	0.5	0.07	1.23	0.32	30
1	40		14.24	14.23	33.119	24.686	325.8	0.130	6.02	103.0	2.7	0.42	0.5	0.07	1.42	0.36	40
1	50		13.72	13.71	33.042	24.734	321.5	0.163	5.98	101.2	2.9	0.49	1.1	0.07	0.97	0.51	50
1	60		13.01	13.00	32.975	24.825	313.1	0.195	5.96	99.3	3.3	0.53	1.8	0.07	0.56	0.29	60
1	70		12.39	12.38	33.064	25.014	295.2	0.225	5.74	94.5	3.9	0.58	3.1	0.06	0.30	0.24	71
	75	ISL	11.89	11.88	33.085	25.125	284.7	0.239	5.59	91.0	5.4	0.68	5.0	0.04	0.22	0.18	76
1	84		10.99	10.98	33.162	25.348	263.5	0.264	5.19	82.9	8.6	0.94	9.5	0.01	0.13	0.09	85
1	99		10.23	10.22	33.534	25.771	223.6	0.301	4.05	63.8	11.4	1.44	18.0	0.01	0.10	0.10	100
	100	ISL	10.20	10.19	33.535	25.777	223.1	0.303	4.04	63.6	11.8	1.44	18.1	0.01	0.09	0.10	101
1	119		9.90	9.89	33.610	25.886	213.1	0.344	3.92	61.3	19.3	1.51	19.2	0.01	0.00	0.01	120
	125	ISL	9.85	9.84	33.646	25.922	209.7	0.357	3.78	59.1	20.8	1.56	20.0	0.01	0.00	0.01	126
1	145		9.68	9.66	33.771	26.049	198.1	0.398	3.26	50.8	24.5	1.75	22.7	0.00	0.02	0.05	146
	150	ISL	9.61	9.59	33.800	26.083	195.0	0.408	3.16	49.2	25.5	1.79	23.3	0.00	0.02	0.05	151
1	176		9.19	9.17	33.920	26.245	180.0	0.456	2.80	43.2	29.9	1.96	25.6	0.00	0.02	0.06	177
	200	ISL	8.81	8.79	33.979	26.352	170.2	0.498	2.82	43.1	32.7	2.02	26.5	0.00	0.01	0.05	202
1	207		8.70	8.68	33.989	26.377	167.9	0.510	2.83	43.2	33.4	2.03	26.7	0.00	0.01	0.05	209
1	237		8.25	8.23	34.023	26.473	159.2	0.559	2.76	41.7	37.2	2.09	27.9	0.00			239
	250	ISL	8.14	8.11	34.044	26.506	156.2	0.580	2.59	39.0	39.3	2.16	28-7	0.00			252
1	279		7.94	7.91	34.086	26.569	150.7	0.624	2.16	32.4	44.2	2.33	30.7	0.00			281
	300	ISL	7.70	7.67	34.097	26.613	146.8	0.656	1.98	29.5	47.5	2.42	31.8	0.00			302
1	337		7.24	7.21	34.109	26.688	140.0	0.709	1.70	25.1	53.6	2.56	33.6	0.00			340
1	399		6.60	6.56	34.165	26.820	128.0	0.792	0.95	13.8	65.5	2.89	37.5	0.00			402
	400	ISL	6.59	6.55	34.165	26.821	127.9	0.793	0.94	13.7	65.7	2.89	37.6	0.00			403
1	464		5.87	5.83	34.182	26.927	118.0	0.872	0.69	9.9	76.4	3.06	40.3	0.00			468
	500	ISL	5.80	5.76	34.229	26.974	114.1	0.913	0.51	7.3	79.8	3.12	40.8	0.00			504
1	533		5.74	5.69	34.272	27.016	110.5	0.950	0.35	5.0	82.9	3.18	41.2	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 29.3 N	122 32.6 W	26/11/87	0710 GMT	3617 M	360	23 KT			1021.4 MB	15.1 C	12.2 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	15.80	15.80	33.176	24.391	352.8	0.000	5.80	102.4	2.0	0.37	0.1	0.01	0.48	0.16	0
1	2		15.80	15.80	33.176	24.391	352.8	0.007	5.80	102.4	2.0	0.37	0.1	0.01	0.48	0.16	2
	10	ISL	15.81	15.81	33.174	24.387	353.4	0.035	5.79	102.3	2.0	0.36	0.1	0.01	0.47	0.13	10
1	12		15.81	15.81	33.174	24.387	353.5	0.042	5.79	102.3	2.0	0.36	0.1	0.01	0.47	0.12	12
	20	ISL	15.81	15.81	33.173	24.387	3 53.8	0.071	5.79	102.3	1.9	0.36	0.0	0.01	0.46	0.14	20
1	22		15.81	15.81	33.173	24.387	353.8	0.078	5.79	102.3	1.9	0.36	0.0	0.01	0.46	0.15	22
	30	ISL	15.83	15.83	33.175	24.384	354.3	0.106	5.82	102.8	1.8	0.36	0.0	0.01	0.48	0.12	30
1	31		15.83	15.83	33.175	24.384	354.4	0.110	5.82	102.8	1.8	0.36	0.0	0.01	0.48	0.12	31
1	41		15.82	15.81	33.180	24.391	354.1	0.145	5.78	102.1	1.7	0.36	0.0	0.01	0.45	0.13	41
	50	ISL	15.83	15.82	33.175	24.385	354.9	0.177	5.78	102.1	1.8	0.36	0.0	0.01	0.49	0.14	50
1	51		15.83	15.82	33.175	24.385	354.9	0.180	5.78	102.1	1.8	0.36	0.0	0.01	0.49	0.14	51
1	60		15.77	15.76	33.175	24.399	353.9	0.212	5.79	102.2	1.8	0.37	0.1	0.02	0.48	0.18	60
1	70		15.24	15.23	33.211	24.544	340.3	0.247	5.77	100.8	2.1	0.42	0.4	0.09	0.54	0.21	71
	75	ISL	14.37	14.36	33.228	24.744	321.4	0.264	5.62	96.5	3.1	0.52	2.1	0.08	0.46	0.24	76
1	84		12.67	12.66	33.300	25.144	283.3	0.291	5.19	86.0	6.0	0.77	6.5	0.05	0.28	0.26	85
1	99		11.33	11.32	33.509	25.558	244.1	0.330	4.24	68.4	13.2	1.24	14.8	0.02	0.15	0.14	100
	100	ISL	11.26	11.25	33.515	25.575	242.5	0.333	4.23	68.1	13.5	1.26	15.1	0.02	0.14	0.13	101
1	118		10.37	10.36	33.578	25.781	223.1	0.375	4.01	63.4	16.7	1.42	17.7	0.02	0.07	0.07	119
	125	ISL	10.15	10.14	33.614	25.847	216.9	0.390	3.90	61.3	18.0	1.48	18.7	0.02	0.06	0.06	126
1	143		9.74	9.72	33.723	26.001	202.6	0.428	3.56	55.5	21.7	1.63	21.1	0.01	0.04	0.05	144
	150	ISL	9.61	9.59	33.780	26.067	196.5	0.442	3.37	52.4	23.7	1.71	22.2	0.01	0.03	0.05	151
1	173		9.24	9.22	33.943	26.255	179.0	0.485	2.81	43.4	29.9	1.95	25.4	0.01	0.01	0.04	174
	200	ISL	8.73	8.71	33.998	26.379	167.6	0.532	2.69	41.1	33.6	2.04	27.1	0.01	0.01	0.04	202
1	203		8.67	8.65	33.999	26.390	166.7	0.537	2.68	40.9	33.9	2.04	27.2	0.01	0.01	0.04	205
1	232		8.17	8.15	34.006	26.472	159.2	0.584	2.90	43.7	36.6	2.04	27.7	0.01			234
	250	ISL	7.91	7.88	34.016	26.518	155.0	0.612	2.79	41.8	39.0	2.09	28.5	0.01			252
1	272		7.65	7.62	34.035	26.571	150.2	0.646	2.65	39.5	42.6	2.19	29.8	0.01			274
	300	ISL	7.39	7.36	34.075	26.640	144.0	0.687	2.13	31.5	48.3	2.39	31.9	0.01			302
1	327		7.19	7.16	34.114	26.699	138.7	0.725	1.59	23.4	53.7	2.58	34.0	0.01			330
1	387		6.75	6.71	34.154	26.791	130.6	0.806	1.08	15.8	62.0	2.81	36.7	0.01			390
	400	ISL	6.64	6.60	34.159	26.810	129.0	0.823	1.00	14.6	63.8	2.85	37.2	0.01			403
1	450		6.22	6.18	34.181	26.883	122.4	0.886	0.75	10.8	70.9	2.98	38.9	0.01			454
	500	ISL	5.87	5.83	34.226	26.963	115.2	0.945	0.51	7.3	78.1	3.10	40.5	0.00			504
1	518		5.75	5.71	34.242	26.990	112.7	0.966	0.43	6.1	80.7	3.14	41.1	0.00			523

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 8.9 N	123 13.6 W	26/11/87	1405 GMT	4219 M	010	23 KT			1020.7 MB	15.6 C	13.3 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	16.31	16.31	33.048	24.177	373.1	0.000	5.74	102.3	1.8	0.38	0.1	0.00	0.16	0.05	0
1	2		16.31	16.31	33.048	24.177	373.2	0.007	5.74	102.3	1.8	0.38	0.1	0.00	0.16	0.05	2
	10	ISL	16.31	16.31	33.046	24.176	373.6	0.037	5.75	102.5	1.6	0.38	0.1	0.00	0.17	0.05	10
1	18		16.32	16.32	33.045	24.173	374.1	0.067	5.76	102.7	1.4	0.38	0.1	0.00	0.17	0.05	18
	20	ISL	16.32	16.32	33.045	24.173	374.2	0.075	5.76	102.7	1.4	0.38	0.1	0.00	0.17	0.05	20
	30	ISL	16.32	16.32	33.045	24.174	374.5	0.112	5.74	102.3	1.4	0.38	0.1	0.00	0.16	0.05	30
1	32		16.32	16.31	33.045	24.174	374.5	0.120	5.74	102.3	1.4	0.38	0.1	0.00	0.16	0.05	32
1	44		16.35	16.34	33.044	24.166	375.6	0.165	5.75	102.5	1.5	0.38	0.1	0.00	0.16	0.05	44
	50	ISL	16.34	16.33	33.044	24.169	375.5	0.187	5.74	102.3	1.5	0.38	0.1	0.00	0.16	0.05	50
1	54		16.33	16.32	33.043	24.171	375.5	0.202	5.74	102.3	1.5	0.38	0.1	0.00	0.16	0.05	54
1	65		16.29	16.28	33.042	24.179	375.0	0.243	5.77	102.8	1.4	0.38	0.1	0.00	0.18	0.05	65
1	75		13.96	13.95	33.094	24.726	323.0	0.278	6.07	103.2	2.2	0.40	0.1	0.00	0.33	0.18	76
1	85		13.68	13.67	33.138	24.817	314.5	0.310	5.96	100.8	2.5	0.44	0.2	0.07	0.34	0.19	86
1	100		13.01	13.00	33.227	25.021	295.5	0.356	5.59	93.3	4.0	0.61	3.3	0.07	0.24	0.18	101
1	116		12.36	12.34	33.339	25.234	275.5	0.402	5.10	84.0	6.9	0.85	8.0	0.02	0.15	0.13	117
	125	ISL	11.82	11.80	33.381	25.369	262.7	0.426	4.86	79.2	8.9	0.98	10.3	0.01	0.11	0.11	126
1	132		11.37	11.35	33.417	25.480	252.3	0.444	4.67	75.3	10.7	1.09	12.1	0.01	0.09	0.09	133
	150	ISL	10.41	10.39	33.570	25.769	225.0	0.487	4.04	63.9	16.6	1.41	17.6	0.00	0.04	0.05	151
1	158		10.06	10.04	33.645	25.887	213.9	0.504	3.76	59.0	19.3	1.55	19.9	0.00	0.02	0.04	159
1	183		9.43	9.41	33.824	26.132	191.0	0.555	3.12	48.3	25.6	1.83	24.1	0.00	0.01	0.03	184
	200	ISL	9.10	9.08	33.889	26.236	181.3	0.587	2.97	45.7	28.3	1.92	25.5	0.00	0.01	0.03	202
1	214		8.86	8.84	33.927	26.304	175.1	0.612	2.92	44.7	30.2	1.97	26.2	0.00	0.01	0.03	216
1	244		8.32	8.29	34.019	26.459	160.7	0.662	2.72	41.1	35.8	2.09	28.1	0.00			246
	250	ISL	8.24	8.21	34.030	26.480	158.8	0.672	2.66	40.2	36.9	2.12	28-5	0.00			252
1	285		7.81	7.78	34.064	26.571	150.5	0.726	2.32	34.7	43.1	2.31	30.5	0.00			287
	300	ISL	7.57	7.54	34.064	26.606	147.4	0.748	2.22	33.0	45.8	2.37	31.4	0.00			302
1	341		6.93	6.90	34.066	26.697	139.0	0.807	1.91	28.0	53.5	2.54	34.1	0.00			344
	400	ISL	6.37	6.33	34.136	26.827	127.1	0.885	1.02	14.8	65.6	2.91	38.3	0.00			403
1	401		6.36	6.32	34.137	26.829	126.9	0.886	1.01	14.6	65.8	2.92	38.4	0.00			404
1	466		5.88	5.84	34.177	26.922	118.5	0.966	0.64	9.1	75.0	3.09	40.4	0.00			470
	500	ISL	5.64	5.60	34.197	26.968	114.4	1.006	0.54	7.7	79.7	3.16	41.3	0.00			504
1	535		5.40	5.36	34.218	27.014	110.2	1.045	0.44	6.2	84.6	3.23	42.2	0.00			5*0

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 17.A N	120 2.3 W	2A/11/87	2301 GMT	572 M	270	1A KT	270 0A 06	0	1018.5 MB	16.9 C	15.0 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	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0 A	15.90	15.90	33.382	2A.527	339.8	0.000	5.87	10A.0	3.2	0.39	0.A	0.03	1.32	0.36	0
1	10	15.82	15.82	33.379	2A.5A2	338.6	0.03A	5.87	103.8	3.3	0.39	0.A	0.0A	1.57	0.A3	10
	20 ISL	15.39	15.39	33.367	24.629	330.7	0.067	5.67	99.A	3.9	0.A7	1.5	0.15	1.14	0.A0	20
1	25	15.13	15.13	33.363	2A.683	325.7	0.084	5.55	96.8	A.3	0.52	2.1	0.21	0.85	0.37	25
	30 ISL	1A.96	1A.96	33.367	2A.723	322.0	0.100	5.50	95.6	A.5	0.5A	2.4	0.21	0.74	0.35	30
1	40	14.57	14.56	33.375	24.813	313.7	0.132	5.43	93.7	4.9	0.58	3.2	0.20	0.60	0.30	40
	50 ISL	13.94	13.93	33.366	2A.939	302.0	0.163	5.28	89.9	6.0	0.69	A.6	0.26	0.A4	0.25	50
1	54	13.71	13.70	33.364	24.985	297.7	0.175	5.22	88.5	6.4	0.73	5.2	0.28	0.39	0.2A	5A
1	70	13.A7	13.A6	33.381	25.0A7	292.2	0.222	5.10	86.0	7.2	0.78	6.1	0.2A	0.38	0.24	71
	75 ISL	13.09	13.08	33.401	25.139	2 83.6	0.236	4.91	82.2	8.4	0.87	7.6	0.20	0.30	0.22	76
1	84	12.32	12.31	33.A54	25.330	265.5	0.261	4.52	74.4	11.1	1.07	10.8	0.11	0.15	0.18	85
1	98	11.53	11.52	33.561	25.562	243.7	0.296	4.01	65.0	1A.6	1.29	1A.6	0.03	0.07	0.13	99
	100 ISL	11.44	11.43	33.574	25.588	241.2	0.301	3.96	64.0	15.0	1.31	15.0	0.03	0.06	0.13	101
1	118	10.81	10.80	33.683	25.787	222.7	0.343	3.57	57.0	18.4	1.51	18.0	0.02	0.03	0.10	119
	125 ISL	10.66	10.65	33.727	25.847	217.1	0.358	3.40	54.1	19.9	1.59	19.1	0.02	0.02	0.09	126
1	139	10.44	10.42	33.806	25.948	207.8	0.388	3.07	48.6	22.8	1.72	21.1	0.01	0.01	0.07	140
	150 ISL	10.30	10.28	33.848	26.005	202.6	0.411	2.91	46.0	24.4	1.79	22.1	0.01	0.01	0.07	151
1	170	10.07	10.05	33.914	26.096	194.3	0.451	2.65	41.7	27.0	1.90	23.7	0.01	0.01	0.06	171
1	199	9.64	9.62	34.035	26.263	179.0	0.505	2.13	33.2	32.3	2.14	26.7	0.01	0.01	0.07	201
	200 ISL	9.63	9.61	34.038	26.267	178.7	0.506	2.11	32.9	32.5	2.15	26.8	0.01	0.01	0.07	202
1	239	9.09	9.06	3A.126	26.424	164.3	0.573	1.54	23.7	A0.0	2.A0	29.8	0.01	0.00	0.05	2A1
	250 ISL	8.9A	8.91	3A.139	26.A58	161.3	0.591	1.A3	22.0	Al.8	2.46	30.A	0.01	0.00	0.05	252
1	289	8.A2	8.39	3A.165	26.560	152.1	0.652	1.16	17.6	A7.6	2.63	32.2	0.01	0.00	0.05	291
	300 ISL	8.28	8.25	3A.172	26.586	1A9.7	0.669	1.11	16.8	A9.1	2.66	32.6	0.01			302
1	338	7.83	7.80	3A.19A	26.671	142.0	0.724	0.96	14.A	54.3	2.76	33.7	0.01			3A1
1	389	7.3A	7.30	3A.208	26.753	134.8	0.795	0.74	11.0	62.5	2.94	34.7	0.01			392
	400 ISL	7.24	7.20	34.212	26.770	133.3	0.810	0.65	9.6	64.8	2.99	3A.7	0.01			A03
1	A26	7.01	6.97	3A.222	26.810	129.7	0.8AA	0.A5	6.6	70.8	3.10	3A.6	0.00			430
1	A66	6.67	6.63	3A.235	26.867	12A.6	0.895	0.25	3.6	80.A	3.23	33.7	0.01			A70
1	A9A	6.56	6.51	3A.2A7	26.891	122.7	0.929	0.0A	0.6	93.3	3.A5	29.5	0.00			A98
	500 ISL	6.5A	6.A9	3A.248	26.895	122.4	0.937	0.05	0.7	94.6	3.46	28.9	0.00			50A
1	515	6.A9	6.AA	3A.250	26.903	121.8	0.955	0.07	1.0	96.5	3.A7	27.9	0.01			520
1	532	6.A7	6.A2	3A.2A9	26.905	121.8	0.976	0.07	1.0	97.A	3.52	27.A	0.01			537
1	553	6.A2	6.37	3A.250	26.913	121.3	1.001	0.09	1.3	97.0	3.53	28.8	0.01			558
1	567	6.A2	6.37	3A.250	26.913	121.5	1.018	0.09	1.3	97.2	3.53	28.9	0.0A			572

A) SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 13.5 N	119 24.7 W	24/11/87	1804 GMT	35 M	350	05 KT	3 50 01 06	0	1020.1 MB	19.0 C	16.5 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
1	0	16.07	16.07	33.330	24.AA8	3A7.3	0.000	5.83	103.6	2.A	0.Al	0.2	0.12	0.88	0.22	0
1	10	15.88	15.88	33.32A	2A.A87	3A3.9	0.035	5.77	102.1	2.5	0.A5	0.A	0.21	0.89	0.22	10
	20 ISL	15.52	15.52	33.310	24.557	337.6	0.069	5.65	99.3	3.4	0.56	1.0	0.39	0.89	0.31	20
1	21	15.46	15.46	33.308	24.568	336.5	0.072	5.63	98.8	3.5	0.57	1.1	0.41	0.89	0.32	21
	30 ISL	1A.60	1A.60	33.290	2A.7A1	320.3	0.102	5.A5	9A.0	A.A	0.68	2.5	0.69	0.69	0.30	30
1	32	1A.41	14.Al	33.287	2A.779	316.7	0.108	5.Al	93.0	A.6	0.70	2.8	0.75	0.6A	0.30	32

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 83 A2

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
3A 10.9 N	119 30.8 W	24/11/87	1619 GMT	129 M	290	07 KT	270 04 06	0	1021.9 MB	16.5 C	15.6 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	17.02	17.02	33.379	2A.267	36A.6	0.000	5.71	103.A	1.8	0.32	0.0	0.00	0.28	0.07	0
1	10	17.01	17.01	33.378	2A.269	364.7	0.036	5.72	103.5	1.8	0.32	0.0	0.01	0.38	0.07	10
	20 ISL	16.73	16.73	33.378	24.33A	358.8	0.073	5.73	103.1	2.0	0.33	0.1	0.01	0.5A	0.12	20
1	21	16.68	16.68	33.377	24.3A5	357.8	0.076	5.73	103.0	2.1	0.33	0.1	0.01	0.56	0.13	21
	30 ISL	15.83	15.83	33.357	24.524	341.0	0.108	5.64	99.7	3.0	0.42	1.2	0.06	0.70	0.21	30
1	31	15.73	15.73	33.354	24.544	339.1	0.111	5.63	99.4	3.1	0.43	1.3	0.07	0.71	0.22	31
1	42	14.97	1A.96	33.319	24.685	326.0	0.148	5.67	98.6	3.3	0.A8	1.6	0.09	0.65	0.28	42
	50 ISL	13.80	13.79	33.297	24.915	304.3	0.173	5.A9	93.2	A.5	0.61	3.5	0.09	0.A8	0.28	50
1	54	13.22	13.21	33.306	25.039	292.5	0.185	5.35	89.7	5.3	0.69	4.8	0.09	0.38	0.28	54
1	64	12.59	12.58	33.422	25.253	272.4	0.213	A.89	81.0	7.6	0.87	7.7	0.02	0.15	0.17	64
1	74	12.25	12.24	33.468	25.354	263.0	0.240	4.68	77.0	9.2	0.98	9.5	0.02	0.12	0.13	75
	75 ISL	12.22	12.21	33.473	25.364	262.1	0.242	4.66	76.6	9.3	0.99	9.7	0.02	0.12	0.13	76
1	90	11.74	11.73	33.550	25.514	248.1	0.281	4.34	70.6	11.8	1.14	12.3	0.02	0.08	0.10	91
	100 ISL	11.39	11.38	33.617	25.631	237.2	0.305	4.06	65.6	14.5	1.28	14.4	0.02	0.06	0.11	101
1	104	11.26	11.25	33.642	25.674	233.2	0.314	3.95	63.7	15.5	1.34	15.2	0.02	0.05	0.12	105
1	125	10.91	10.89	33.702	25.784	223.1	0.362	3.71	59.4	17.7	1.47	17.2	0.02	0.04	0.09	126

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 52.9 N	120 8.1 W	24/11/87	1115 GMT	90 M	050	03 KT			1019.5 MB	15.9 C	14.9 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
	0	ISL	15.99	15.99	33.364	24.492	343.1	0.000	5.79	102.7	2.5	0.34	0.0	0.01	0.42	0.14	0
1	1		15.99	15.99	33.364	24.492	343.1	0.003	5.79	102.7	2.5	0.34	0.0	0.01	0.42	0.14	1
	10	ISL	15.14	15.14	33.347	24.668	326.6	0.034	5.71	99.6	3.5	0.45	1.3	0.10	0.77	0.24	10
1	11		15.01	15.01	33.346	24.696	324.0	0.037	5.70	99.2	3.6	0.47	1.5	0.11	0.82	0.25	11
	20	ISL	14.60	14.60	33.350	24.787	315.6	0.066	5.63	97.2	4.4	0.53	2.2	0.15	0.88	0.31	20
1	22		14.55	14.55	33.352	24.800	314.5	0.072	5.62	96.9	4.5	0.54	2.3	0.15	0.89	0.32	22
	30	ISL	14.43	14.43	33.355	24.828	312.1	0.097	5.57	95.8	4.7	0.57	2.6	0.17	0.91	0.30	30
1	32		14.41	14.41	33.356	24.833	311.6	0.103	5.56	95.6	4.7	0.57	2.7	0.17	0.91	0.29	32
1	43		14.31	14.30	33.357	24.855	309.8	0.137	5.57	95.6	4.8	0.58	3.0	0.17	0.92	0.30	43
	50	ISL	13.94	13.93	33.377	24.948	301.2	0.159	5.39	91.8	5.9	0.66	4.3	0.14	0.70	0.28	50
1	53		13.70	13.69	33.388	25.005	295.7	0.168	5.29	89.6	6.6	0.71	5.1	0.13	0.59	0.27	53
1	64		12.36	12.35	33.431	25.304	267.5	0.199	4.84	79.8	9.2	0.93	8.8	0.09	0.25	0.20	64
	75	ISL	12.05	12.04	33.474	25.397	258.9	0.228	4.60	75.3	10.9	1.03	10.7	0.08	0.18	0.18	76
1	78		11.96	11.95	33.486	25.423	256.5	0.235	4.54	74.2	11.4	1.06	11.2	0.08	0.16	0.18	79

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 44.8 N	120 24.9 W	24/11/87	0755 GMT	964 M	330	21 KT			1019.3 MB	14.0 C	12.7 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	15.10	15.10	33.331	24.664	326.7	0.000	5.65	98.5	2.9	0.44	1.0	0.07	0.73	0.23	0
1	1		15.10	15.10	33.331	24.664	326.8	0.003	5.65	98.5	2.9	0.44	1.0	0.07	0.73	0.23	1
	10	ISL	15.08	15.08	33.331	24.669	326.6	0.033	5.73	99.8	2.8	0.45	1.0	0.07	0.71	0.25	10
1	11		15.08	15.08	33.331	24.669	326.6	0.036	5.74	100.0	2.8	0.45	1.0	0.07	0.71	0.25	11
	20	ISL	14.19	14.19	33.328	24.857	309.0	0.065	5.57	95.3	3.9	0.56	2.8	0.10	0.55	0.30	20
1	22		13.92	13.92	33.331	24.915	303.5	0.071	5.50	93.6	4.3	0.60	3.4	0.11	0.50	0.31	22
	30	ISL	12.78	12.78	33.366	25.172	279.2	0.094	5.16	85.8	6.6	0.79	6.6	0.08	0.29	0.24	30
1	32		12.52	12.52	33.378	25.232	273.6	0.099	5.07	83.8	7.2	0.84	7.4	0.07	0.24	0.22	32
1	42		11.95	11.94	33.425	25.377	260.0	0.126	4.81	78.6	9.2	0.97	9.9	0.04	0.15	0.13	42
	50	ISL	11.71	11.70	33.455	25.445	253.6	0.147	4.67	75.9	10.3	1.05	11.1	0.04	0.12	0.13	50
1	53		11.64	11.63	33.469	25.469	251.4	0.154	4.62	75.0	10.8	1.08	11.5	0.04	0.11	0.13	53
1	63		11.28	11.27	33.552	25.599	239.3	0.179	4.32	69.6	13.1	1.18	13.8	0.03	0.08	0.11	63
1	73		11.00	10.99	33.612	25.697	230.2	0.202	4.06	65.1	14.9	1.30	15.4	0.03	0.05	0.08	74
	75	ISL	10.94	10.93	33.624	25.717	228.3	0.207	4.01	64.2	15.4	1.33	15.7	0.03	0.05	0.08	76
1	88		10.58	10.57	33.707	25.845	216.4	0.236	3.68	58.5	18.6	1.49	18.1	0.03	0.03	0.07	89
	100	ISL	10.33	10.32	33.781	25.946	207.1	0.261	3.32	52.5	21.6	1.63	20V3	0.03	0.02	0.05	101
1	103		10.28	10.27	33.796	25.967	205.2	0.267	3.24	51.2	22.3	1.66	20.8	0.03	0.02	0.05	104
1	124		10.23	10.22	33.836	26.007	201.8	0.310	3.07	48.4	23.9	1.74	21.6	0.02	0.02	0.05	125
	125	ISL	10.23	10.22	33.837	26.008	201.7	0.312	3.06	48.3	23.9	1.74	21.6	0.02	0.02	0.05	126
1	150		10.06	10.04	33.879	26.070	196.4	0.362	2.91	45.7	25.3	1.82	22.7	0.02	0.02	0.05	151
1	181		9.61	9.59	33.939	26.192	185.3	0.421	2.71	42.2	29.1	1.94	24.7	0.02	0.01	0.05	182
	200	ISL	9.27	9.25	34.030	26.319	173.5	0.455	2.36	36.5	33.5	2.10	26.8	0.02	0.00	0.04	202
1	211		9.08	9.06	34.082	26.390	166.9	0.474	2.15	33.1	36.0	2.19	28-0	0.02	0.00	0.04	213
1	241		8.72	8.69	34.129	26.484	158.5	0.523	1.92	29.3	39.9	2.33	29.4	0.01			243
	250	ISL	8.55	8.52	34.140	26.519	155.2	0.537	1.83	27.8	41.8	2.38	30.1	0.01			252
1	282		7.94	7.91	34.169	26.635	144.6	0.585	1.51	22.7	48-6	2.54	32.4	0.01			2 84
	300	ISL	7.75	7.72	34.177	26.669	141.6	0.611	1.42	21.2	50.9	2.59	33.2	0.01			302
1	338		7.45	7.42	34.184	26.718	137.4	0.664	1.27	18.8	55.0	2.68	34.4	0.01			341
1	398		6.79	6.75	34.197	26.820	128.1	0.743	0.91	13.3	64.4	2.88	36.9	0.00			401
	400	ISL	6.78	6.74	34.199	26.823	127.9	0.746	0.90	13.1	64.7	2.89	37.0	0.00			403
1	463		6.38	6.34	34.253	26.919	119.4	0.824	0.54	7.8	73.2	3.05	39.0	0.01			467
	500	ISL	6.12	6.08	34.272	26.968	115.0	0.867	0.45	6.5	77.6	3.12	40.0	0.00			504
1	534		5.89	5.84	34.289	27.010	111.2	0.905	0.36	5.2	81.7	3.18	40.9	0.00			539

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 34.6 N	120 45.6 W	24/11/87	0331 GMT	1497 M	330	21 KT			1018.7 MB	14.9 C	13.9 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
	0	ISL	15.48	15.48	33.320	24.573	335.5	0.000	5.86	102.9	2.4	0.37	0.2	0.03	1.07	0.30	0
1	1		15.48	15.48	33.320	24.573	335.5	0.003	5.86	102.9	2.4	0.37	0.2	0.03	1.07	0.30	1
	10	ISL	15.48	15.48	33.318	24.571	335.9	0.034	5.85	102.7	2.2	0.36	0.2	0.03	1.09	0.29	10
1	12		15.48	15.48	33.318	24.572	335.9	0.040	5.85	102.7	2.1	0.36	0.2	0.03	1.10	0.29	12
	20	ISL	15.47	15.47	33.317	24.573	336.0	0.067	5.84	102.5	1.8	0.36	0.2	0.03	1.08	0.30	20
1	22		15.47	15.47	33.317	24.573	336.1	0.074	5.84	102.5	1.7	0.36	0.2	0.03	1.07	0.30	22
	30	ISL	15.48	15.48	33.317	24.571	336.5	0.101	5.84	102.6	1.8	0.36	0.2	0.03	1.09	0.28	30
1	32		15.48	15.48	33.317	24.571	336.6	0.108	5.84	102.6	1.8	0.36	0.2	0.03	1.10	0.27	32
1	42		15.39	15.38	33.317	24.592	334.9	0.141	5.85	102.5	2.4	0.39	0.4	0.04	0.95	0.30	42
	50	ISL	13.51	13.50	33.312	24.985	297.5	0.166	5.45	92.0	5.2	0.65	4.4	0.09	0.49	0.32	50
1	52		13.01	13.00	33.319	25.091	287.5	0.172	5.33	89.0	5.9	0.72	5.5	0.10	0.37	0.32	52
1	62		12.36	12.35	33.365	25.253	272.3	0.200	5.04	83.0	7.4	0.86	7.9	0.05	0.24	0.20	62
1	73		11.36	11.35	33.497	25.542	244.9	0.229	4.40	71.0	12.5	1.17	13.3	0.02	0.11	0.12	74
	75	ISL	11.22	11.21	33.519	25.585	240.9	0.234	4.30	69.2	13.3	1.22	14.1	0.02	0.10	0.11	76
1	87		10.59	10.58	33.627	25.781	222.5	0.261	3.85	61.1	17.5	1.44	17.6	0.01	0.05	0.08	88
	100	ISL	10.23	10.22	33.696	25.897	211.7	0.290	3.56	56.1	20.4	1.59	19.9	0.01	0.03	0.06	101
1	102		10.19	10.18	33.705	25.911	210.4	0.294	3.53	55.6	20.8	1.61	20.2	0.01	0.03	0.06	103
1	123		9.84	9.83	33.839	26.075	195.2	0.336	3.09	48.3	25.6	1.80	22.9	0.01	0.01	0.04	124
	125	ISL	9.82	9.81	33.849	26.086	194.2	0.340	3.06	47.8	25.9	1.81	23.1	0.01	0.01	0.04	126
1	148		9.68	9.66	33.934	26.176	186.1	0.384	2.74	42.7	28.5	1.93	24.5	0.01	0.01	0.04	149
	150	ISL	9.66	9.64	33.939	26.183	185.5	0.388	2.72	42.4	28.7	1.94	24.6	0.01	0.01	0.04	151
1	180		9.34	9.32	33.988	26.274	177.3	0.442	2.56	39.6	31.5	2.04	26.1	0.01	0.01	0.04	181
	200	ISL	9.29	9.27	34.011	26.301	175.3	0.477	2.45	37.9	32.6	2.07	26.6	0.01	0.00	0.03	202
1	209		9.27	9.25	34.023	26.314	174.2	0.493	2.40	37.1	33.2	2.09	26.8	0.01	0.00	0.03	211
1	239		8.93	8.90	34.090	26.421	164.5	0.544	2.15	33.0	37.0	2.22	28.4	0.00			241
	250	ISL	8.69	8.66	34.079	26.450	161.9	0.562	2.26	34.5	37.9	2.21	28-6	0.00			252
1	279		8.08	8.05	34.048	26.519	155.5	0.608	2.51	37.8	40.4	2.19	29.3	0.00			281
	300	ISL	7.99	7.96	34.095	26.569	151.1	0.640	2.15	32.3	43.6	2.33	30.5	0.00			302
1	336		7.90	7.87	34.188	26.656	143.5	0.693	1.33	19.9	50.6	2.62	33.1	0.00			339
1	396		6.77	6.73	34.192	26.819	128.2	0.775	0.87	12.7	64.4	2.89	37.4	0.00			399
	400	ISL	6.73	6.69	34.194	26.826	127.6	0.780	0.84	12.3	65.0	2.90	37.6	0.00			403
1	462		6.27	6.23	34.242	26.925	118.7	0.856	0.53	7.7	73.0	3.05	39.5	0.00			466
	500	ISL	6.08	6.04	34.273	26.974	114.4	0.900	0.42	6.0	77.5	3.10	40.3	0.00			504
1	533		5.92	5.87	34.301	27.016	110.7	0.938	0.33	4.7	81.5	3.15	41.0	0.00			538

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.8 N	121 29.5 W	23/11/87	2026 GMT	3730 M	330	24 KT	330 10 07	1	1019.3 MB	16.1 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	16.03	16.03	33.257	24.401	351.8	0.000	5.96	105.8	1.8	0.36	0.0	0.00	0.34	0.13	0
1	1		16.03	16.03	33.257	24.401	351.8	0.004	5.96	105.8	1.8	0.36	0.0	0.00	0.34	0.13	1
	10	ISL	16.02	16.02	33.258	24.405	351.8	0.035	5.93	105.2	1.5	0.35	0.0	0.00	0.35	0.11	10
1	11		16.02	16.02	33.259	24.405	351.8	0.039	5.92	105.0	1.5	0.35	0.0	0.00	0.35	0.11	11
	20	ISL	16.01	16.01	33.261	24.409	351.6	0.070	5.89	104.5	1.5	0.35	0.0	0.00	0.36	0.10	20
1	22		16.01	16.01	33.262	24.410	351.6	0.077	5.88	104.3	1.5	0.35	0.0	0.00	0.36	0.10	22
	30	ISL	16.02	16.02	33.263	24.409	352.0	0.106	5.87	104.1	1.4	0.35	0.1	0.00	0.35	0.11	30
1	32		16.02	16.01	33.263	24.409	352.1	0.113	5.87	104.1	1.4	0.35	0.1	0.00	0.35	0.11	32
1	42		15.99	15.98	33.274	24.425	350.9	0.148	5.89	104.4	1.5	0.35	0.1	0.00	0.39	0.12	42
	50	ISL	14.61	14.60	33.171	24.648	329.7	0.175	6.04	104.1	1.9	0.40	0.2	0.02	0.60	0.32	50
1	52		14.22	14.21	33.151	24.715	323.4	0.181	6.06	103.7	2.1	0.42	0.2	0.03	0.63	0.37	52
1	62		13.23	13.22	33.222	24.972	299.1	0.213	5.61	94.1	3.9	0.59	3.0	0.12	0.32	0.27	62
1	72		12.51	12.50	33.289	25.166	280.9	0.242	5.29	87.4	6.0	0.79	6.7	0.06	0.23	0.21	73
	75	ISL	12.31	12.30	33.305	25.216	276.1	0.250	5.20	85.6	6.6	0.84	7.6	0.05	0.20	0.19	76
1	87		11.59	11.58	33.365	25.398	259.0	0.282	4.85	78.6	9.4	1.04	11.0	0.03	0.12	0.13	88
	100	ISL	10.89	10.88	33.442	25.584	241.5	0.315	4.46	71.2	12.9	1.24	14.6	0.01	0.07	0.08	101
1	102		10.80	10.79	33.455	25.610	239.1	0.319	4.40	70.1	13.4	1.27	15.1	0.01	0.07	0.08	103
1	122		10.47	10.46	33.593	25.776	223.7	0.366	3.86	61.1	17.4	1.50	18.5	0.01	0.04	0.07	123
	125	ISL	10.35	10.34	33.619	25.817	219.8	0.372	3.79	59.9	18.3	1.54	19.1	0.01	0.04	0.07	126
1	148		9.45	9.43	33.809	26.116	191.7	0.420	3.34	51.8	25.2	1.78	23.1	0.01	0.01	0.03	149
	150	ISL	9.40	9.38	33.820	26.133	190.2	0.423	3.31	51.3	25.6	1.80	23.3	0.01	0.01	0.03	151
1	178		9.01	8.99	33.939	26.289	175.8	0.475	2.86	43.9	30.3	1.99	25.9	0.00	0.00	0.03	179
	200	ISL	8.89	8.87	34.014	26.367	168.8	0.513	2.55	39.1	33.6	2.10	27.2	0.00	0.00	0.03	202
1	209		8.85	8.83	34.040	26.394	166.4	0.528	2.43	37.2	35.0	2.15	27.7	0.00	0.00	0.03	211
1	239		8.58	8.55	34.118	26.497	157.1	0.576	1.98	30.1	40.3	2.34	29.7	0.01			241
	250	ISL	8.31	8.28	34.103	26.527	154.3	0.593	2.09	31.6	41.5	2.33	30.0	0.01			252
1	278		7.57	7.54	34.048	26.593	148.2	0.636	2.44	36.3	44.6	2.30	30.7	0.00			280
	300	ISL	7.29	7.26	34.059	26.641	143.8	0.668	2.21	32.6	48.5	2.40	32.1	0.00			302
1	334		7.01	6.98	34.095	26.709	137.8	0.716	1.65	24.2	55.3	2.61	34.5	0.00			337
1	395		6.30	6.26	34.113	26.818	127.8	0.797	1.16	16.7	66.5	2.85	37.8	0.00			398
	400	ISL	6.26	6.22	34.117	26.826	127.1	0.803	1.12	16.2	67.3	2.87	38.0	0.00			403
1	461		5.90	5.86	34.168	26.913	119.4	0.878	0.69	9.9	76.2	3.08	40.2	0.00			465
	500	ISL	5.62	5.58	34.191	26.966	114.6	0.924	0.55	7.8	81.6	3.15	41.2	0.00			504
1	529		5.41	5.37	34.208	27.005	111.1	0.957	0.45	6.4	85.7	3.21	42.0	0.00			534

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 54.6 N	122 7.9 W	23/11/87	1355 GMT	4179 M	330	24 KT			1018.9 MB	16.2 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	16.52	16.52	33.367	24.374	354.4	0.000	5.71	102.4	1.8	0.35	0.0	0.00	0.35	0.10	0
1	3		16.52	16.52	33.367	24.374	354.5	0.011	5.71	102.4	1.8	0.35	0.0	0.00	0.35	0.10	3
	10	ISL	16.52	16.52	33.367	24.374	354.7	0.035	5.71	102.4	1.8	0.35	0.0	0.00	0.34	0.10	10
1	19		16.52	16.52	33.367	24.375	354.9	0.067	5.70	102.2	1.9	0.35	0.0	0.00	0.34	0.11	19
	20	ISL	16.52	16.52	33.367	24.375	355.0	0.071	5.70	102.2	1.9	0.35	0.0	0.00	0.34	0.11	20
	30	ISL	16.51	16.51	33.365	24.376	355.2	0.106	5.70	102.2	2.1	0.35	0.0	0.00	0.35	0.11	30
1	34		16.51	16.50	33.364	24.375	355.4	0.121	5.70	102.2	2.2	0.35	0.0	0.00	0.36	0.11	34
1	45		15.05	15.04	33.333	24.678	326.8	0.158	5.68	98.9	3.4	0.44	1.2	0.08	0.64	0.27	45
	50	ISL	14.04	14.03	33.331	24.891	306.5	0.174	5.45	93.0	4.7	0.60	3.7	0.09	0.53	0.26	50
1	55		13.10	13.09	33.342	25.091	287.6	0.189	5.19	86.8	6.1	0.76	6.4	0.10	0.38	0.25	55
1	65		12.33	12.32	33.359	25.254	272.2	0.217	4.95	81.5	8.0	0.92	8.9	0.07	0.22	0.20	65
	75	ISL	11.86	11.85	33.457	25.419	256.7	0.243	4.51	73.6	10.4	1.11	12.3	0.03	0.17	0.18	76
1	76		11.81	11.80	33.468	25.437	255.1	0.246	4.46	72.7	10.7	1.13	12.7	0.03	0.17	0.18	77
1	85		11.14	11.13	33.534	25.611	238.6	0.268	4.10	65.9	14.8	1.33	15.9	0.02	0.10	0.14	86
	100	ISL	10.38	10.37	33.638	25.826	218.5	0.302	3.67	58.0	19.1	1.55	19.5	0.01	0.05	0.08	101
1	101		10.34	10.33	33.644	25.838	217.4	0.305	3.65	57.7	19.3	1.56	19.7	0.01	0.05	0.08	102
1	116		9.99	9.98	33.724	25.960	206.0	0.336	3.40	53.3	21.7	1.66	21.3	0.01	0.03	0.08	117
	125	ISL	9.68	9.67	33.774	26.051	197.5	0.354	3.28	51.1	24.6	1.73	22.5	0.01	0.02	0.06	126
1	131		9.47	9.46	33.807	26.111	191.9	0.366	3.22	49.9	26.5	1.78	23.2	0.01	0.01	0.05	132
	150	ISL	9.07	9.05	33.896	26.245	179.4	0.401	3.12	48.0	28-7	1.86	24.7	0.01	0.00	0.04	151
1	157		8.96	8.94	33.923	26.284	175.8	0.414	3.09	47.4	29.2	1.88	25.1	0.01	0.00	0.04	158
1	183		8.60	8.58	34.001	26.402	165.1	0.458	2.78	42.3	33.6	2.03	27.0	0.00	0.00	0.04	184
	200	ISL	8.34	8.32	34.036	26.469	158.9	0.486	2.62	39.7	36.8	2.12	28-2	0.00	0.00	0.03	202
1	214		8.14	8.12	34.061	26.519	154.4	0.508	2.46	37.1	39.7	2.20	29.2	0.00	0.00	0.03	216
1	243		7.79	7.77	34.114	26.613	145.9	0.551	1.91	28.6	46.3	2.42	31.5	0.00			245
	250	ISL	7.68	7.66	34.116	26.630	144.3	0.561	1.84	27.4	47.7	2.46	32.0	0.00			252
1	284		7.19	7.16	34.114	26.698	138.1	0.609	1.62	23.9	53.6	2.59	33.9	0.00			286
	300	ISL	7.07	7.04	34.127	26.725	135.7	0.631	1.46	21.5	56.1	2.66	34.6	0.00			302
1	340		6.86	6.83	34.165	26.784	130.6	0.685	1.06	15.5	61.8	2.81	36.1	0.00			343
1	400		6.35	6.31	34.196	26.877	122.3	0.760	0.71	10.3	70.2	2.99	38.4	0.00			403
1	466		5.85	5.81	34.224	26.963	114.6	0.839	0.49	7.0	78.8	3.12	40.2	0.00			470
	500	ISL	5.70	5.66	34.247	27.000	111.4	0.877	0.41	5.8	82.2	3.16	40.6	0.00			504
1	536		5.55	5.50	34.271	27.038	108.2	0.917	0.33	4.7	85.9	3.21	41.1	0.00			5*1

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 34.9 N	122 48.7 W	23/11/87	0712 GMT	3491 M	330	23 KT			1019.5 MB	15.6 C	14.0 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	16.86	16.86	33.081	24.075	382.8	0.000	5.68	102.3	1.5	0.36	0.1	0.00	0.11	0.04	0
1	1		16.86	16.86	33.081	24.075	382.9	0.004	5.68	102.3	1.5	0.36	0.1	0.00	0.11	0.04	1
	10	ISL	16.87	16.87	33.081	24.073	383.4	0.038	5.68	102.3	1.5	0.36	0.1	0.00	0.12	0.04	10
1	16		16.87	16.87	33.080	24.073	383.6	0.061	5.68	102.3	1.4	0.36	0.1	0.00	0.12	0.04	16
	20	ISL	16.86	16.86	33.078	24.074	3 83.6	0.077	5.69	102.5	1.4	0.35	0.1	0.00	0.12	0.04	20
	30	ISL	16.85	16.85	33.079	24.077	383.7	0.115	5.71	102.8	1.3	0.34	0.1	0.00	0.11	0.04	30
1	31		16.85	16.84	33.080	24.078	3 83.6	0.119	5.71	102.8	1.3	0.34	0.1	0.00	0.11	0.04	31
1	40		16.88	16.87	33.095	24.083	3 83.4	0.153	5.72	103.1	1.2	0.35	0.1	0.00	0.11	0.04	40
	50	ISL	16.61	16.60	33.115	24.161	376.3	0.191	5.79	103.8	1.3	0.35	0.1	0.00	0.18	0.08	50
1	52		16.56	16.55	33.119	24.176	374.9	0.199	5.81	104.1	1.3	0.35	0.1	0.00	0.20	0.09	52
1	62		14.40	14.39	33.056	24.604	334.3	0.234	6.10	104.7	2.0	0.40	0.1	0.05	0.41	0.29	62
1	72		13.30	13.29	33.164	24.914	304.9	0.266	5.73	96.2	3.4	0.54	2.1	0.20	0.26	0.25	73
	75	ISL	13.06	13.05	33.178	24.972	299.4	0.275	5.67	94.7	3.6	0.56	2.5	0.16	0.23	0.24	76
1	81		12.65	12.64	33.201	25.071	290.2	0.293	5.57	92.2	4.1	0.61	3.6	0.06	0.18	0.21	82
1	96		11.63	11.62	33.320	25.356	263.2	0.335	5.05	81.9	7.7	0.90	9.0	0.02	0.09	0.11	97
	100	ISL	11.33	11.32	33.359	25.441	255.2	0.345	4.88	78.6	9.1	0.99	10.5	0.02	0.07	0.09	101
1	111		10.62	10.61	33.466	25.651	235.4	0.372	4.43	70.3	13.3	1.23	14.5	0.01	0.04	0.05	112
	125	ISL	10.16	10.15	33.576	25.816	219.9	0.404	4.03	63.4	17.5	1.45	18.1	0.00	0.02	0.03	126
1	126		10.14	10.13	33.583	25.825	219.1	0.406	4.01	63.0	17.8	1.46	18.3	0.00	0.02	0.03	127
	150	ISL	9.43	9.41	33.785	26.101	193.2	0.455	3.42	53.0	24.7	1.72	22.7	0.00	0.00	0.05	151
1	152		9.38	9.36	33.800	26.120	191.4	0.459	3.38	52.3	25.2	1.74	23.0	0.00	0.00	0.05	153
1	177		8.84	8.82	33.905	26.289	175.7	0.505	3.21	49.1	29.0	1.87	25.0	0.00	0.00	0.02	178
	200	ISL	8.47	8.45	33.978	26.404	165.2	0.544	3.08	46.7	32.7	1.94	26.4	0.00	0.00	0.02	202
1	208		8.36	8.34	33.996	26.435	162.3	0.557	3.03	45.9	34.1	1.97	26.9	0.00	0.00	0.02	210
1	238		7.89	7.87	34.026	26.529	153.7	0.605	2.74	41.0	39.7	2.13	28-9	0.00			240
	250	ISL	7.79	7.77	34.043	26.557	151.2	0.623	2.54	38.0	41.8	2.21	29-7	0.00			252
1	279		7.58	7.55	34.077	26.614	146.2	0.666	2.06	30.6	46.9	2.39	31.7	0.00			281
	300	ISL	7.33	7.30	34.085	26.656	142.4	0.697	1.86	27.5	50.7	2.48	33.0	0.00			302
1	335		6.86	6.83	34.088	26.724	136.3	0.745	1.61	23.5	57.0	2.61	34.9	0.00			338
1	395		6.18	6.15	34.105	26.827	126.9	0.824	1.19	17.1	67.0	2.83	37.9	0.00			398
	400	ISL	6.13	6.09	34.108	26.836	126.0	0.831	1.15	16.5	67.9	2.85	38.2	0.00			403
1	461		5.65	5.61	34.166	26.942	116.3	0.905	0.67	9.5	78.3	3.06	40.9	0.00			465
	500	ISL	5.52	5.48	34.216	26.998	111.5	0.949	0.50	7.1	83.0	3.14	41.5	0.00			504
1	531		5.41	5.37	34.255	27.042	107.6	0.983	0.37	5.2	86.8	3.20	42.0	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 15.0 N	123 29.5 W	23/11/87	0118 GMT	4119 M	350	22 KT	350 12 07	1	1019.9 MB	15.9 C	14.1 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
	0	ISL	17.48	17.48	33.212	24.030	387.2	0.000	5.60	102.2	1.7	0.34	0.1	0.00	0.10	0.03	0
1	1		17.48	17.48	33.212	24.030	3 87.3	0.004	5.60	102.2	1.7	0.34	0.1	0.00	0.10	0.03	1
	10	ISL	17.47	17.47	33.211	24.031	3 87.4	0.039	5.61	102.3	1.7	0.34	0.1	0.00	0.10	0.03	10
1	17		17.47	17.47	33.211	24.032	387.6	c.066	5.61	102.3	1.7	0.34	0.1	0.00	0.10	0.03	17
	20	ISL	17.47	17.47	33.211	24.032	387.7	0.077	5.61	102.3	1.7	0.34	0.1	0.00	0.10	0.03	20
	30	ISL	17.47	17.46	33.211	24.032	388.0	0.116	5.60	102.1	1.5	0.35	0.1	0.00	0.10	0.03	30
1	32		17.47	17.46	33.211	24.032	388.1	0.124	5.60	102.1	1.5	0.35	0.1	0.00	0.10	0.03	32
1	43		17.49	17.48	33.210	24.027	388.9	0.167	5.60	102.2	1.6	0.34	0.1	0.00	0.10	0.03	43
	50	ISL	17.48	17.47	33.208	24.029	389.0	0.194	5.61	102.3	1.6	0.34	0.1	0.00	0.10	0.03	50
1	53		17.47	17.46	33.207	24.030	388.9	0.206	5.61	102.3	1.6	0.34	0.1	0.00	0.10	0.03	53
1	64		15.24	15.23	33.193	24.530	341.5	0.246	6.12	106.9	1.6	0.35	0.0	0.00	0.19	0.13	64
	75	ISL	13.87	13.86	33.161	24.796	316.3	0.282	5.99	101.7	2.2	0.41	0.3	0.05	0.28	0.25	76
1	78		13.62	13.61	33.157	24.844	311.8	0.291	5.95	100.5	2.5	0.43	0.4	0.07	0.29	0.27	79
1	94		13.00	12.99	33.280	25.064	291.2	0.340	5.49	91.6	4.1	0.63	4.1	0.07	0.20	0.21	95
	100	ISL	12.63	12.62	33.329	25.174	280.8	0.357	5.26	87.1	5.6	0.74	6.2	0.05	0.16	0.18	101
1	II0		11.96	11.95	33.403	25.359	263.3	0.384	4.89	79.9	8.4	0.93	9.8	0.01	0.11	0.13	111
1	125		11.02	11.00	33.467	25.581	242.4	0.422	4.53	72.6	12.3	1.14	13.3	0.00	0.06	0.08	126
1	146		10.25	10.23	33.589	25.811	220.8	0.471	3.96	62.4	17.7	1.45	18.2	0.00	0.02	0.05	147
	150	ISL	10.09	10.07	33.624	25.865	215.7	0.479	3.84	60.3	19.0	1.51	19.2	0.00	0.01	0.05	151
1	167		9.46	9.44	33.773	26.087	194.9	0.514	3.42	53.0	24.6	1.71	22.7	0.00	0.00	0.03	168
1	193		8.94	8.92	33.899	26.269	178.0	0.563	3.15	48.3	29.8	1.87	25.1	0.00	0.00	0.03	195
	200	ISL	8.81	8.79	33.925	26.310	174.2	0.575	3.10	47.4	31.0	1.90	25.6	0.00	0.00	0.03	202
1	228		8.34	8.32	34.000	26.441	162.1	0.622	2.92	44.2	35.6	2.00	27.2	0.00	0.00	0.02	230
	250	ISL	8.03	8.00	34.029	26.511	155.7	0.657	2.73	41.0	39.3	2.09	28-6	0.00			252
1	264		7.84	7.81	34.041	26.548	152.3	0.679	2.58	38.6	41.8	2.16	29.5	0.00			266
	300	ISL	7.36	7.33	34.075	26.644	143.6	0.732	2.01	29.7	49.6	2.41	32.4	0.00			302
1	304		7.31	7.28	34.079	26.654	142.6	0.738	1.94	28.7	50.5	2.44	32.7	0.00			306
1	359		6.70	6.67	34.115	26.767	132.4	0.813	1.31	19.1	61.0	2.72	36.2	0.00			362
	400	ISL	6.38	6.34	34.150	26.837	126.2	0.866	0.95	13.7	67.2	2.86	38.1	0.00			403
1	426		6.22	6.18	34.174	26.877	122.6	0.899	0.76	11.0	70.6	2.93	39.0	0.00			430
1	495		5.90	5.86	34.246	26.975	114.0	0.980	0.42	6.0	79.2	3.12	40.6	0.00			499
	500	ISL	5.88	5.84	34.250	26.981	113.5	0.986	0.41	5.9	79.6	3.13	40.7	0.00			50*
1	575		5.56	5.51	34.309	27.067	106.0	1.068	0.28	4.0	86.2	3.20	42.0	0.00			580

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 55.0 N	124 10.3 W	22/11/87	1851 GMT	446 5 M	350	23 KT	350 10 06	1	1022.8 MB	16.7 C	14.6 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	17.80	17.80	33.235	23.970	392.9	0.000	5.56	102.1	1.9	0.33	0.0	0.00	0.11	0.03	0
1	1	17.80	17.80	33.235	23.970	392.9	0.004	5.56	102.1	1.9	0.33	0.0	0.00	0.11	0.03	1
	10 ISL	17.78	17.78	33.234	23.975	392.8	0.039	5.57	102.2	1.9	0.33	0.0	0.00	0.11	0.03	10
1	17	17.75	17.75	33.233	23.981	392.4	0.067	5.57	102.1	1.8	0.33	0.0	0.00	0.11	0.03	17
	20 ISL	17.75	17.75	33.233	23.982	392.5	0.079	5.57	102.1	1.8	0.33	0.0	0.00	0.11	0.03	20
	30 ISL	17.74	17.73	33.233	23.984	392.5	0.118	5.57	102.1	1.7	0.33	0.0	0.00	0.11	0.03	30
1	32	17.74	17.73	33.233	23.984	392.6	0.126	5.57	102.1	1.7	0.33	0.0	0.00	0.11	0.03	32
1	42	17.77	17.76	33.232	23.977	3 93.7	0.165	5.57	102.2	1.8	0.34	0.0	0.00	0.11	0.03	42
	50 ISL	17.72	17.71	33.230	23.988	392.9	0.196	5.59	102.4	1.7	0.34	0.0	0.00	0.11	0.04	50
1	53	17.70	17.69	33.230	23.993	392.5	0.208	5.60	102.6	1.7	0.34	0.0	0.00	0.11	0.04	53
1	63	15.41	15.40	33.174	24.478	346.4	0.245	6.08	106.5	1.5	0.34	0.0	0.00	0.22	0.15	63
	75 ISL	14.50	14.49	33.215	24.706	324.9	0.285	5.93	102.0	1.8	0.37	0.2	0.04	0.29	0.25	76
1	78	14.43	14.42	33.228	24.731	322.6	0.295	5.89	101.2	1.9	0.38	0.2	0.05	0.30	0.26	79
1	93	13.57	13.56	33.260	24.934	303.6	0.342	5.71	96.4	2.9	0.49	1.5	0.16	0.25	0.23	94
	100 ISL	13.30	13.29	33.282	25.006	296.9	0.363	5.60	94.1	3.6	0.56	2.8	0.12	0.23	0.22	101
1	109	12.95	12.94	33.316	25.102	288.0	0.389	5.42	90.4	4.8	0.67	5.0	0.04	0.19	0.21	IIO
1	124	12.06	12.04	33.391	25.332	266.3	0.431	4.97	81.4	7.9	0.92	9.4	0.01	0.10	0.14	125
	125 ISL	12.00	11.98	33.396	25.347	264.9	0.434	4.94	80.8	8.1	0.94	9.7	0.01	0.10	0.14	126
1	145	10.83	10.81	33.513	25.651	236.1	0.484	4.31	68.8	13.8	1.26	15.3	0.01	0.04	0.07	146
	150 ISL	10.54	10.52	33.561	25.740	227.8	0.495	4.13	65.5	15.7	1.35	16.9	0.01	0.03	0.06	151
1	165	9.79	9.77	33.705	25.979	205.2	0.528	3.65	57.0	21.3	1.60	21.0	0.00	0.01	0.03	166
1	191	9.24	9.22	33.840	26.17.5	187.0	0.579	3.26	50.3	26.9	1.79	24.2	0.00	0.00	0.03	192
	200 ISL	9.07	9.05	33.877	26.231	181.7	0.595	3.18	48.9	28.4	1.83	24.9	0.00	0.00	0.03	202
1	226	8.60	8.58	33.965	26.374	168.5	0.641	2.96	45.0	33.0	1.95	26.8	0.00	0.00	0.02	228
	250 ISL	8.15	8.12	34.023	26.488	157.9	0.680	2.64	39.8	38.8	2.12	28.9	0.00			252
1	261	7.98	7.95	34.045	26.531	154.0	0.697	2.46	36.9	41.4	2.20	29.8	0.00			263
	300 ISL	7.77	7.74	34.121	26.622	146.0	0.756	1.71	25.6	48.1	2.47	32.4	0.00			302
1	303	7.76	7.73	34.126	26.627	145.5	0.760	1.65	24.7	48.6	2.49	32.6	0.00			305
1	357	7.30	7.27	34.177	26.734	136.0	0.836	1.14	16.9	57.1	2.72	35.1	0.00			360
	400 ISL	6.72	6.68	34.172	26.810	129.1	0.893	0.95	13.9	63.7	2.84	37.1	0.00			403
1	422	6.42	6.38	34.169	26.847	125.6	0.921	0.88	12.7	67.1	2.89	38.1	0.00			426
1	491	5.88	5.84	34.213	26.951	116.2	1.005	0.52	7.4	78.3	3.07	40.4	0.00			495
	500 ISL	5.84	5.80	34.222	26.963	115.1	1.015	0.50	7.1	79.3	3.08	40.6	0.00			50*
1	571	5.53	5.48	34.292	27.057	106.8	1.094	0.30	4.3	87.2	3.19	41.9	0.00			576

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 53.4 N	118 29.4 W	20/11/87	0236 GMT	55 M	360	08 KT			1020.1 MB	20.1 C	15.3 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	17.58	17.58	33.340	24.104	380.1	0.000	5.93	108.5	2.3	0.30	0.0	0.00	0.68	0.15	0
1	10	17.46	17.46	33.337	24.130	377.9	0.038	5.91	107.8	2.0	0.30	0.0	0.00	0.99	0.22	10
	20 ISL	17.05	17.05	33.315	24.211	370.6	0.075	5.95	107.7	2.0	0.32	0.0	0.01	0.93	0.23	20
1	21	16.97	16.97	33.310	24.226	369.2	0.079	5.95	107.5	2.0	0.32	0.0	0.01	0.92	0.23	21
	30 ISL	15.54	15.54	33.219	24.483	345.0	0.111	5.47	96.1	4.0	0.77	1.1	0.23	0.74	0.39	30
1	31	15.38	15.38	33.211	24.512	342.2	0.115	5.41	94.8	4.2	0.82	1.2	0.26	0.72	0.41	31
1	42	14.76	14.75	33.206	24.643	330.0	0.152	5.32	92.0	5.0	0.90	1.7	0.36	0.40	0.41	42
	50 ISL	14.25	14.24	33.218	24.760	319.0	0.178	5.30	90.7	5.1	0.88	2.5	0.72	0.27	0.38	50
1	52	14.12	14.11	33.222	24.791	316.2	0.184	5.29	90.3	5.1	0.88	2.7	0.81	0.24	0.37	52

RV NEW HORIZON CALCOFI CRUISE 8711 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 33.7 W	20/11/87	0404 GMT	69 M	360	08 KT			1020.3 MB	19.9 C	15.3 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	17.62	17.62	33.349	24.101	380.4	0.000	5.79	106.0	1.9	0.29	0.0	0.00	0.59	0.08	0
1	10	17.35	17.35	33.338	24.157	375.3	0.038	5.87	106.9	1.9	0.30	0.0	0.00	0.92	0.15	10
	20 ISL	15.88	15.88	33.248	24.429	349.8	0.074	5.69	100.7	2.9	0.54	0.5	0.14	1.38	0.51	20
1	21	15.74	15.74	33.240	24.454	347.4	0.078	5.67	100.0	3.0	0.56	0.5	0.15	1.42	0.54	21
	30 ISL	15.70	15.70	33.234	24.458	347.3	0.109	5.65	99.6	3.1	0.60	0.5	0.15	1.34	0.54	30
1	31	15.70	15.70	33.234	24.458	347.3	0.112	5.65	99.6	3.1	0.60	0.5	0.15	1.33	0.54	31
1	43	14.69	14.68	33.224	24.672	327.3	0.153	5.64	97.4	3.7	0.64	0.8	0.31	0.60	0.42	43
	50 ISL	14.38	14.37	33.218	24.733	321.6	0.175	5.55	95.3	4.1	0.73	1.4	0.47	0.50	0.39	50
1	52	14.27	14.26	33.220	24.758	319.4	0.182	5.50	94.2	4.2	0.76	1.6	0.50	0.49	0.38	52
1	67	12.23	12.22	33.420	25.321	266.0	0.226	4.61	75.8	9.4	1.03	10.1	0.06	0.10	0.23	68

RV NEW HORIZON CALCOFI CRUISE 8711 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 37.7 W	20/11/87	0509 GMT	611 M	010	06 KT			1020.8 MB	19.5 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		17.96	17.96	33.364	24.030	3 87.2	0.000	5.65	104.1	2.4	0.30	0.1	0.00	0.21	0.06	0
1	10		17.79	17.79	33.361	24.070	3 83.7	0.039	5.68	104.3	2.1	0.29	0.1	0.00	0.32	0.07	10
1	20		17.36	17.36	33.333	24.152	376.3	0.077	5.82	106.0	2.1	0.30	0.1	0.00	0.37	0.10	20
	30	ISL	15.51	15.51	33.293	24.546	338.9	0.112	6.01	105.6	2.5	0.37	0.0	0.00	0.26	0.16	30
1	31		15.30	15.30	33.291	24.591	334.7	0.116	6.02	105.3	2.6	0.38	0.0	0.00	0.25	0.17	31
1	42		13.64	13.63	33.293	24.944	301.3	0.151	5.58	94.4	4.3	0.59	2.9	0.23	0.56	0.36	42
	50	ISL	13.32	13.31	33.271	24.992	296.9	0.175	5.36	90.1	5.0	0.68	4.3	0.22	0.41	0.33	50
1	52		13.28	13.27	33.269	24.998	296.4	0.181	5.30	89.0	5.2	0.70	4.7	0.22	0.35	0.32	52
1	63		12.52	12.51	33.382	25.236	274.0	0.212	4.74	78.4	8.3	0.95	8.9	0.06	0.11	0.23	63
1	73		11.95	11.94	33.509	25.443	254.5	0.238	4.49	73.4	10.1	1.07	11.2	0.04	0.09	0.15	74
	75	ISL	11.89	11.88	33.522	25.464	252.5	0.243	4.46	72.8	10.5	1.08	11.5	0.03	0.09	0.14	76
1	87		11.66	11.65	33.569	25.544	245.2	0.273	4.31	70.0	12.6	1.15	12.8	0.01	0.08	0.12	88
	100	ISL	11.49	11.48	33.622	25.616	238.6	0.305	4.08	66.1	14.2	1.23	14.0	0.01	0.06	0.09	101
1	103		11.46	11.45	33.634	25.631	237.2	0.312	4.02	65.1	14.5	1.25	14.3	0.01	0.05	0.09	104
1	124		11.27	11.25	33.713	25.728	228.5	0.361	3.68	59.3	17.1	1.39	16.3	0.00	0.04	0.08	125
	125	ISL	11.25	11.23	33.713	25.731	228.2	0.363	3.68	59.3	17.2	1.39	16.4	0.00	0.04	0.08	126
1	150		10.47	10.45	33.727	25.881	214.4	0.418	3.59	56.9	20.1	1.53	19.2	0.00	0.02	0.05	151
1	181		9.49	9.47	33.886	26.170	187.3	0.481	3.10	48.1	27.1	1.80	23.6	0.00	0.01	0.05	182
	200	ISL	9.34	9.32	33.989	26.276	177.7	0.515	2.70	41.8	30.9	1.96	25.6	0.01	0.00	0.04	202
1	212		9.29	9.27	34.044	26.327	173.0	0.536	2.46	38.0	33.1	2.05	26.6	0.01	0.00	0.04	214
1	241		8.85	8.82	34.105	26.445	162.2	0.585	2.15	32.9	37.3	2.19	28.4	0.00			243
	250	ISL	8.79	8.76	34.118	26.465	160.5	0.599	2.07	31.7	38.2	2.22	28.7	0.00			252
1	283		8.61	8.58	34.157	26.524	155.4	0,652	1.80	27.4	41.7	2.35	29.9	0.00			285
	300	ISL	8.46	8.43	34.180	26.565	151.8	0.678	1.61	24.5	44.1	2.44	30.8	0.00			302
1	339		8.05	8.02	34.228	26.665	142.8	0.735	1.16	17.5	50.4	2.64	33.0	0.00			342
1	400		7.24	7.20	34.265	26.812	129.3	0.818	0.69	10.2	61.8	2.87	36.0	0.00			403
1	465		6.54	6.50	34.300	26.935	118.1	0.899	0.40	5.8	73.4	3.05	38.2	0.00			469
	500	ISL	6.30	6.25	34.316	26.979	114.1	0.939	0.33	4.8	78.2	3.09	38.7	0.00			504
1	537		6.04	5.99	34.334	27.027	109.9	0.981	0.25	3.6	83.2	3.14	39.3	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 37.6

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.5 N	118 48.6 W	20/11/87	0757 GMT	898 M	080	04 KT			1020.7 MB	18.6 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	A	17.60	17.60	33.395	24.141	376.6	0.000	5.65	103.4	2.1	0.29	0.1	0.00	0.14	0.04	0
1	10		17.59	17.59	33.404	24.151	376.0	0.038	5.66	103.6	1.9	0.29	0.1	0.00	0.18	0.06	10
1	20		17.57	17.57	33.428	24.174	374.1	0.075	5.68	103.9	1.9	0.28	0.1	0.00	0.20	0.07	20
1	30		14.77	14.77	33.258	24.680	326.1	0.110	6.02	104.2	2.8	0.38	0.1	0.00	0.39	0.28	30
1	40		13.94	13.93	33.266	24.861	309.1	0.142	5.74	97.7	3.7	0.51	1.5	0.27	0.78	0.42	40
	50	ISL	13.36	13.35	33.304	25.009	295.2	0.172	5.51	92.7	4.8	0.64	4.1	0.13	0.46	0.37	50
1	51		13.31	13.30	33.309	25.023	2 93.9	0.175	5.49	92.2	4.9	0.65	4.4	0.11	0.41	0.37	51
1	66		12.42	12.41	33.373	25.248	272.9	0.218	5.06	83.5	7.4	0.84	8.1	0.03	0.21	0.27	67
	75	ISL	11.93	11.92	33.428	25.384	260.1	0.242	4.77	77.9	9.4	0.99	10.6	0.02	0.15	0.21	76
1	80		11.67	11.66	33.463	25.459	253.0	0.254	4.60	74.7	10.6	1.07	12.0	0.02	0.12	0.18	81
1	96		10.98	10.97	33.580	25.676	232.7	0.293	4.12	66.0	14.8	1.30	15.9	0.02	0.05	0.11	97
	100	ISL	10.81	10.80	33.606	25.726	228.0	0.302	4.01	64.0	15.9	1.36	16.8	0.02	0.04	0.09	101
1	111		10.37	10.36	33.671	25.854	216.1	0.327	3.74	59.1	18.7	1.50	19.0	0.01	0.03	0.06	112
	125	ISL	9.97	9.96	33.741	25.977	204.6	0.356	3.50	54.9	21.9	1.63	21.1	0.01	0.02	0.05	126
1	131		9.85	9.84	33.771	26.020	200.6	0.368	3.40	53.2	23.1	1.67	21.9	0.01	0.01	0.05	132
	150	ISL	9.67	9.65	33.892	26.145	189.1	0.406	2.99	46.6	26.3	1.82	23.9	0.01	0.00	0.04	151
1	157		9.63	9.61	33.934	26.185	185.5	0.419	2.85	44.4	27.4	1.87	24.5	0.01	0.00	0.04	158
1	187		9.29	9.27	34.023	26.310	174.1	0.473	2.49	38.5	32.1	2.02	26.6	0.01	0.00	0.03	188
	200	ISL	9.13	9.11	34.057	26.363	169.3	0.495	2.35	36.2	34.1	2.09	27.4	0.01	0.00	0.03	202
1	217		8.92	8.90	34.100	26.430	163.2	0.523	2.15	33.0	36.9	2.19	28-5	0.00	0.00	0.03	219
	250	ISL	8.48	8.45	34.189	26.569	150.5	0.575	1.61	24.5	43.6	2.43	31.0	0.01			252
1	253		8.44	8.41	3 4.196	26.580	149.5	0.579	1.56	23.7	44.2	2.45	31.2	0.01			255
1	293		8.05	8.02	34.236	26.671	141.4	0.638	1.20	18.1	49.9	2.59	32.9	0.01			295
	300	ISL	7.99	7.96	34.239	26.682	140.4	0.647	1.15	17.3	50.7	2.61	33.1	0.01			302
1	349		7.62	7.59	34.252	26.747	134.9	0.715	0.90	13.4	56.3	2.76	34.7	0.00			352
	400	ISL	7.23	7.19	34.278	26.823	128.3	0.782	0.66	9.7	62.5	2.87	36.3	0.00			403
1	415		7.11	7.07	34.286	26.847	126.2	0.801	0.60	8.8	64.3	2.90	36.7	0.00			419
1	486		6.57	6.53	34.303	26.934	118.6	0.888	0.41	6.0	72.9	3.03	38.4	0.01			490
	500	ISL	6.46	6.41	34.310	26.954	116.7	0.904	0.38	5.5	74.9	3.05	38.7	0.01			504
1	568		5.97	5.92	34.344	27.044	108.6	0.981	0.25	3.6	84.2	3.16	39.6	0.00			573
	600	ISL	5.80	5.75	34.355	27.075	106.0	1.015	0.21	3.0	87.9	3.20	39.7	0.00			605
1	644		5.60	5.54	34.369	27.111	102.9	1.061	0.18	2.6	92.7	3.24	39.9	0.00			650
	700	ISL	5.38	5.32	34.386	27.151	99.4	1.118	0.14	2.0	98.4	3.26	39.6	0.00			706
1	715		5.33	5.27	34.390	27.160	98.7	1.133	0.13	1.8	99.9	3.27	39.5	0.00			722
1	782		5.21	5.14	34.397	27.180	97.4	1.199	0.13	1.8	105.8	3.33	36.6	0.00			789
	800	ISL	5.18	5.11	34.399	27.186	97.1	1.216	0.12	1.7	107.4	3.34	35.4	0.00			808
1	843		5.13	5.06	34.402	27.194	96.7	1.258	0.11	1.5	109.9	3.36	33.6	0.00			851
1	889		5.12	5.05	34.404	27.198	96.9	1.302	0.10	1.4	108.5	3.36	35.4	0.01			898

A) SANTA MONICA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 39.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 40.A N	118 56.6 W	20/11/87	1006 GMT	896 M	080	04 KT			1020.7 MB	19.6 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	A	17.28	17.28	33.412	24.230	368.1	0.000	5.71	103.9	2.2	0.29	0.1	0.00	0.24	0.08	0
1	10		17.10	17.10	33.416	24.277	364.0	0.037	5.76	104.4	2.1	0.29	0.1	0.00	0.23	0.09	10
	20	ISL	16.93	16.93	33.446	24.340	358.3	0.073	5.81	105.0	2.1	0.29	0.1	0.00	0.25	0.11	20
1	21		16.90	16.90	33.447	24.348	357.6	0.076	5.81	105.0	2.1	0.29	0.1	0.00	0.25	0.11	21
	30	ISL	16.19	16.19	33.391	24.469	346.3	0.108	5.85	104.2	2.2	0.32	0.1	0.00	0.38	0.22	30
1	31		16.06	16.06	33.382	24.492	344.2	0.111	5.85	103.9	2.2	0.32	0.1	0.00	0.40	0.23	31
1	42		13.44	13.43	33.305	24.994	296.5	0.147	5.46	92.0	5.0	0.63	4.2	0.19	0.53	0.29	42
	50	ISL	12.85	12.84	33.347	25.144	282.4	0.170	5.17	86.1	6.6	0.77	6.6	0.15	0.55	0.41	50
1	52		12.79	12.78	33.361	25.167	280.3	0.175	5.10	84.8	7.0	0.80	7.2	0.14	0.55	0.43	52
1	63		12.17	12.16	33.422	25.333	264.6	0.205	4.76	78.1	9.1	0.96	10.1	0.05	0.29	0.31	63
	75	ISL	11.28	11.27	33.487	25.549	244.3	0.236	4.42	71.2	13.0	1.17	13.5	0.03	0.13	0.17	76
1	77		11.14	11.13	33.501	25.585	240.9	0.241	4.36	70.0	13.7	1.20	14.0	0.03	0.11	0.15	78
1	93		10.74	10.73	33.660	25.781	222.7	0.278	3.83	61.0	17.6	1.41	17.4	0.03	0.07	0.10	94
	100	ISL	10.48	10.47	33.721	25.874	214.0	0.293	3.61	57.2	19.5	1.51	19.0	0.02	0.05	0.08	101
1	109		10.17	10.16	33.789	25.980	204.0	0.312	3.36	52.9	21.9	1.62	20.8	0.01	0.02	0.06	110
	125	ISL	9.96	9.95	33.860	26.071	195.6	0.344	3.11	48.8	24.6	1.73	22.3	0.01	0.01	0.04	126
1	129		9.93	9.92	33.875	26.088	194.1	0.352	3.06	48.0	25.2	1.75	22.6	0.01	0.01	0.04	130
	150	ISL	9.52	9.50	33.992	26.248	179.3	0.391	2.59	40.3	30.2	1.95	25.5	0.01	0.01	0.06	151
1	155		9.42	9.40	34.018	26.285	175.9	0.400	2.49	38.6	31.4	1.99	26.1	0.01	0.01	0.06	156
1	186		9.09	9.07	34.077	26.385	167.0	0.453	2.26	34.8	35.2	2.12	27.7	0.01	0.00	0.05	187
	200	ISL	8.90	8.88	34.097	26.430	162.9	0.476	2.17	33.3	37.1	2.18	28.5	0.01	0.00	0.05	202
1	216		8.69	8.67	34.120	26.481	158.2	0.502	2.05	31.3	39.3	2.24	29.3	0.01	0.00	0.04	218
	250	ISL	8.44	8.41	34.179	26.567	150.7	0.554	1.65	25.1	43.8	2.39	30.7	0.01			252
1	252		8.43	8.40	34.182	26.571	150.3	0.557	1.63	24.7	44.1	2.40	30.8	0.01			254
1	294		8.11	8.08	34.229	26.656	142.8	0.619	1.22	18.4	49.8	2.57	32.6	0.00			296
	300	ISL	8.06	8.03	34.232	26.667	142.0	0.627	1.18	17.8	50.5	2.59	32.8	0.00			302
1	349		7.61	7.58	34.246	26.744	135.2	0.695	0.90	13.4	56.0	2.73	34.5	0.01			352
	400	ISL	7.13	7.09	34.270	26.831	127.4	0.762	0.68	10.0	63.3	2.86	36.4	0.01			403
1	416		6.99	6.95	34.278	26.857	125.1	0.783	0.62	9.1	65.7	2.90	36.9	0.01			420
1	487		6.42	6.38	34.308	26.958	116.1	0.868	0.37	5.4	75.6	3.05	38.5	0.00			491
	500	ISL	6.33	6.28	34.314	26.974	114.7	0.883	0.35	5.1	77.3	3.07	38.7	0.00			504
1	569		5.91	5.86	34.347	27.054	107.6	0.960	0.26	3.7	85.7	3.15	39.6	0.01			574
	600	ISL	5.74	5.69	34.358	27.084	105.0	0.993	0.22	3.1	89.6	3.18	39.6	0.01			605
1	646		5.53	5.47	34.371	27.121	101.9	1.040	0.17	2.4	94.8	3.22	39.7	0.01			652
	700	ISL	5.37	5.31	34.383	27.150	99.6	1.095	0.14	2.0	98.5	3.26	39.1	0.00			706
1	717		5.33	5.27	34.386	27.157	99.0	1.112	0.13	1.8	99.6	3.27	38.8	0.00			724
1	783		5.22	5.15	34.392	27.175	97.9	1.177	0.12	1.7	105.2	3.31	36.9	0.00			790
	800	ISL	5.20	5.13	34.393	27.179	97.8	1.193	0.10	1.4	106.4	3.32	36.2	0.00			808
1	846		5.16	5.09	34.395	27.185	97.6	1.238	0.06	0.8	109.0	3.35	34.4	0.00			854
1	893		5.12	5.04	34.399	27.194	97.3	1.284	0.22	3.1	110.4	3.35	33.6	0.01			902

A) SANTA MONICA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 35.6 N	119 7.0 W	20/11/87	1314 GMT	264 M	020	02 KT			1020.3 MB	17.7 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		17.15	17.15	33.438	24.281	363.2	0.000	5.74	104.2	2.0	0.27	0.0	0.00	0.33	0.11	0
1	10		16.74	16.74	33.417	24.362	355.9	0.036	5.83	105.0	2.0	0.29	0.0	0.01	0.42	0.23	10
1	20		15.86	15.86	33.398	24.549	338.4	0.071	5.77	102.1	2.4	0.36	0.5	0.04	0.89	0.39	20
	30	ISL	13.62	13.62	33.422	25.047	291.1	0.102	5.16	87.3	6.4	0.76	6.5	0.22	0.64	0.39	30
1	31		13.39	13.39	33.428	25.099	286.3	0.105	5.09	85.7	6.8	0.80	7.2	0.23	0.60	0.39	31
1	42		12.39	12.38	33.432	25.299	267.4	0.135	4.81	79.3	8.7	0.94	9.6	0.11	0.44	0.33	42
	50	ISL	11.65	11.64	33.485	25.479	250.4	0.156	4.47	72.6	11.2	1.12	12.4	0.04	0.24	0.25	50
1	52		11.49	11.48	33.501	25.521	246.4	0.161	4.39	71.1	11.8	1.16	13.1	0.03	0.20	0.23	52
1	61		11.17	11.16	33.545	25.614	237.8	0.183	4.20	67.5	13.7	1.25	14.7	0.02	0.16	0.26	61
1	74		10.91	10.90	33.585	25.692	230.7	0.213	4.05	64.8	15.5	1.33	16.0	0.02	0.11	0.15	75
	75	ISL	10.88	10.87	33.590	25.701	229.9	0.216	4.03	64.4	15.7	1.34	16.2	0.02	0.11	0.14	76
1	87		10.43	10.42	33.668	25.841	216.8	0.243	3.69	58.4	19.1	1.50	18.6	0.01	0.05	0.10	88
	100	ISL	10.03	10.02	33.768	25.987	203.1	0.270	3.30	51.8	22.8	1.68	21.3	0.01	0.02	0.06	101
1	102		9.98	9.97	33.783	26.007	201.2	0.274	3.24	50.8	23.3	1.71	21.7	0.01	0.02	0.06	103
1	123		9.67	9.66	33.887	26.141	188.9	0.315	2.88	44.9	27.1	1.87	24.0	0.00	0.01	0.05	124
	125	ISL	9.66	9.65	33.896	26.149	188.1	0.319	2.85	44.4	27.3	1.88	24.1	0.00	0.01	0.05	126
1	144		9.55	9.53	33.968	26.224	181.4	0.354	2.63	40.9	29.5	1.96	25.1	0.00	0.01	0.04	145
	150	ISL	9.49	9.47	33.986	26.248	179.3	0.365	2.56	39.8	30.4	1.99	25.5	0.00	0.01	0.04	151
1	169		9.28	9.26	34.037	26.322	172.6	0.398	2.34	36.2	33.3	2.10	26.7	0.00	0.00	0.05	170
1	195		8.96	8.94	34.104	26.427	163.1	0.442	2.05	31.5	37.2	2.23	28.3	0.00	0.00	0.07	197
	200	ISL	8.89	8.87	34.117	26.448	161.2	0.450	1.98	30.4	38.3	2.26	28.7	0.00			202
1	225		8.54	8.52	34.169	26.543	152.5	0.489	1.62	24.7	43.6	2.42	30.5	0.01			227
	250	ISL	8.28	8.25	34.192	26.601	147.3	0.526	1.40	21.2	46.9	2.52	31.6	0.01			252
1	255		8.23	8.20	34.197	26.613	146.3	0.534	1.36	20.6	47.6	2.54	31.8	0.01			257

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.5 N	119 19.3 W	20/11/87	1523 GMT	1638 M	100	08 KT	280 02 08	1	1020.3 MB	18.8 C	15.8 C	6/8	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
1	0		17.30	17.30	33.439	24.246	366.5	0.000	5.72	104.1	1.6	0.28	0.0	0.00	0.36	0.11	0
1	10		17.22	17.22	33.434	24.262	365.4	0.037	5.77	104.9	1.5	0.26	0.0	0.00	0.33	0.11	10
	20	ISL	16.79	16.79	33.421	24.354	357.0	0.073	5.82	104.9	1.8	0.29	0.0	0.00	0.42	0.20	20
1	21		16.75	16.75	33.420	24.362	356.2	0.076	5.83	105.0	1.8	0.29	0.0	0.00	0.43	0.21	21
	30	ISL	13.94	13.94	33.320	24.903	304.8	0.106	5.61	95.5	4.0	0.56	3.0	0.16	0.91	0.59	30
1	31		13.62	13.62	33.315	24.965	299.0	0.109	5.57	94.2	4.3	0.59	3.4	0.18	0.95	0.63	31
1	42		12.63	12.62	33.357	25.194	277.4	0.141	5.09	84.3	6.6	0.83	7.5	0.11	0.54	0.44	42
	50	ISL	12.10	12.09	33.439	25.360	261.8	0.162	4.68	76.7	9.3	1.02	10.8	0.05	0.34	0.33	50
1	51		12.05	12.04	33.449	25.377	260.2	0.165	4.63	75.8	9.6	1.04	11.2	0.04	0.32	0.32	51
1	63		11.65	11.64	33.486	25.480	250.6	0.196	4.43	71.9	11.2	1.14	12.9	0.03	0.22	0.25	63
1	73		10.92	10.91	33.586	25.691	230.8	0.220	3.99	63.8	15.3	1.34	16.5	0.02	0.10	0.16	74
	75	ISL	10.82	10.81	33.603	25.722	227.9	0.224	3.92	62.6	16.0	1.37	17.0	0.02	0.09	0.15	76
1	88		10.34	10.33	33.707	25.886	212.4	0.253	3.52	55.6	19.8	1.57	20.0	0.01	0.04	0.09	89
	100	ISL	9.99	9.98	33.819	26.034	198.7	0.278	3.13	49.1	23.6	1.73	22.4	0.01	0.01	0.06	101
1	103		9.92	9.91	33.845	26.066	195.7	0.283	3.04	47.6	24.5	1.77	22.9	0.01	0.01	0.06	104
1	124		9.63	9.62	33.939	26.188	184.5	0.323	2.73	42.5	27.9	1.91	24.8	0.01	0.01	0.05	125
	125	ISL	9.62	9.61	33.943	26.193	184.0	0.325	2.71	42.2	28.1	1.92	24.9	0.01	0.01	0.05	126
1	150		9.29	9.27	34.043	26.325	171.9	0.370	2.31	35.7	32.7	2.08	27.2	0.00	0.01	0.05	151
1	181		8.97	8.95	34.103	26.424	163.1	0.422	2.06	31.6	36.7	2.21	28.7	0.00	0.00	0.04	182
	200	ISL	8.77	8.75	34.154	26.495	156.6	0.452	1.83	28.0	39.6	2.31	29.7	0.00	0.00	0.04	202
1	212		8.65	8.63	34.186	26.540	152.6	0.471	1.68	25.6	41.5	2.37	30.4	0.00	0.00	0.04	214
1	242		8.35	8.32	34.238	26.627	144.8	0.515			46.2	2.51	31.9	0.00			244
	250	ISL	8.26	8.23	34.243	26.644	143.3	0.527	1.27	19.2	47.6	2.55	32.3	0.00			252
1	283		7.89	7.86	34.249	26.705	137.9	0.573	0.99	14.8	52.9	2.71	33.7	0.00			285
	300	ISL	7.74	7.71	34.257	26.733	135.5	0.596	0.91	13.6	54.9	2.75	34.2	0.00			302
2	340		7.42	7.39	34.276	26.794	130.1	0.649	0.77	11.4	59.0	2.81	35.3	0.00			343
	400	ISL	6.94	6.90	34.280	26.865	124.1	0.726	0.56	8.2	66.1	2.94	37.1	0.00			403
2	401		6.93	6.89	34.280	26.866	123.9	0.727	0.56	8.2	66.2	2.94	37.1	0.00			404
2	467		6.62	6.58	34.294	26.920	119.6	0.807	0.43	6.3	71.6	3.03	38.1	0.00			471
	500	ISL	6.43	6.38	34.307	26.956	116.5	0.846	0.39	5.7	75.0	3.08	38.6	0.00			504
2	540		6.21	6.16	34.324	26.998	112.9	0.892	0.34	4.9	79.2	3.13	39.3	0.00			545

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.5 N	119 38.2 W	20/11/87	1946 GMT	74 M	300	13 KT	300 02 07	0	1019.9 MB	19-0 C	17.1 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
1	0		16.44	16.44	33.367	24.392	352.6	0.000	5.86	104.9	2.5	0.33	0.1	0.00	0.30	0.09	0
1	10		16.23	16.23	33.366	24.440	348.4	0.035	5.87	104.6	2.4	0.33	0.1	0.00	0.31	0.10	10
1	20		16.02	16.02	33.347	24.473	345.6	0.070	5.91	104.9	2.2	0.33	0.1	0.00	0.26	0.10	20
1	30		15.83	15.83	33.343	24.513	342.1	0.104	5.93	104.9	2.4	0.33	0.1	0.00	0.32	0.15	30
1	40		15.74	15.73	33.330	24.524	341.3	0.138	5.90	104.1	2.3	0.34	0.1	0.00	0.42	0.22	40
	50	ISL	14.04	14.03	33.279	24.851	310.4	0.171	5.60	95.5	4.0	0.55	2.8	0.10	0.59	0.35	50
1	51		13.84	13.83	33.277	24.891	306.6	0.174	5.56	94.4	4.2	0.58	3.2	0.11	0.60	0.36	51
1	66		12.17	12.16	33.345	25.274	270.4	0.217	5.02	82.4	8.0	0.88	8.5	0.08	0.18	0.21	67

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.4 N	120 0.3 W	21/11/87	0113 GMT	1195 M	330	22 KT	340 04 05	0	1017.9 MB	16.0 C	15.0 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
	0	ISL	17.76	17.76	33.397	24.104	380.1	0.000	5.59	102.6	2.6	0.30	0.1	0.00	0.12	0.04	0
1	1		17.76	17.76	33.397	24.104	380.2	0.004	5.59	102.6	2.6	0.30	0.1	0.00	0.12	0.04	1
	10	ISL	17.75	17.75	33.394	24.104	380.4	0.038	5.59	102.6	2.3	0.30	0.1	0.00	0.11	0.03	10
1	11		17.75	17.75	33.394	24.104	380.5	0.042	5.59	102.6	2.2	0.30	0.1	0.00	0.11	0.03	11
	20	ISL	17.76	17.76	33.399	24.106	380.6	0.076	5.57	102.2	2.0	0.30	0.1	0.00	0.12	0.03	20
1	22		17.76	17.76	33.400	24.107	380.6	0.084	5.57	102.2	2.0	0.30	0.1	0.00	0.12	0.03	22
	30	ISL	17.36	17.36	33.381	24.189	373.1	0.114	5.64	102.7	2.1	0.30	0.1	0.00	0.15	0.05	30
1	32		17.16	17.15	33.368	24.226	369.5	0.121	5.68	103.1	2.1	0.30	0.1	0.00	0.17	0.06	32
1	43		14.80	14.79	33.222	24.646	329.7	0.160	6.05	104.7	2.6	0.37	0.1	0.00	0.35	0.22	43
	50	ISL	13.97	13.96	33.228	24.826	312.7	0.182	5.88	100.1	3.4	0.47	1.3	0.07	0.72	0.45	50
1	53		13.69	13.68	33.241	24.894	306.3	0.191	5.75	97.3	3.8	0.52	2.0	0.10	0.83	0.53	53
1	64		12.51	12.50	33.282	25.160	281.2	0.224	5.33	88.1	5.8	0.72	5.9	0.04	0.33	0.38	64
1	74		11.90	11.89	33.413	25.378	260.7	0.251	4.76	77.7	9.2	1.00	10.6	0.03	0.17	0.20	75
	75	ISL	11.86	11.85	33.416	25.387	259.8	0.253	4.74	77.3	9.4	1.01	10.8	0.03	0.16	0.20	76
1	89		11.37	11.36	33.453	25.507	248.7	0.289	4.54	73.3	11.6	1.13	12.8	0.02	0.12	0.15	90
	100	ISL	10.90	10.89	33.607	25.711	229.5	0.315	3.97	63.5	15.5	1.35	16.5	0.01	0.05	0.08	101
1	104		10.74	10.73	33.667	25.786	222.4	0.324	3.76	59.9	17.0	1.43	17.9	0.01	0.03	0.06	105
1	125		10.14	10.13	33.771	25.971	205.2	0.369	3.43	54.0	21.1	1.60	20.8	0.00	0.03	0.06	126
1	150		9.75	9.73	33.845	26.095	193.9	0.419	3.27	51.0	24.1	1.71	22.5	0.00	0.02	0.04	151
1	181		9.43	9.41	34.051	26.309	174.1	0.476	2.49	38.6	31.3	2.02	26.1	0.00	0.01	0.04	182
	200	ISL	9.17	9.15	34.107	26.396	166.3	0.509	2.27	35.0	34.5	2.13	27.4	0.00	0.00	0.03	202
1	212		9.00	8.98	34.128	26.439	162.3	0.528	2.17	33.4	36.2	2.18	28.1	0.00	0.00	0.03	214
1	241		8.63	8.60	34.181	26.539	153.2	0.574	1.86	28.4	40.5	2.31	29.7	0.01			243
	250	ISL	8.54	8.51	34.194	26.563	151.1	0.588	1.75	26.6	41.9	2.35	30.2	0.01			252
1	282		8.24	8.21	34.228	26.636	144.6	0.635	1.41	21.3	46.7	2.50	31.7	0.01			284
	300	ISL	8.03	8.00	34.234	26.672	141.4	0.661	1.28	19.3	49.4	2.57	32.6	0.01			302
1	339		7.57	7.54	34.236	26.742	135.2	0.715	1.08	16.1	54.8	2.69	34.3	0.01			342
1	400		7.01	6.97	34.240	26.824	128.0	0.795	0.84	12.3	61.8	2.83	36.4	0.00			403
1	467		6.21	6.17	34.241	26.931	118.1	0.877	0.59	8.5	73.0	2.97	39.3	0.01			471
	500	ISL	6.06	6.02	34.265	26.970	114.7	0.916	0.49	7.0	76.3	3.03	39.9	0.01			50*
1	541		5.87	5.82	34.296	27.019	110.5	0.962	0.37	5.3	80.4	3.11	40.7	0.01			546

RV NEW HORIZON CALCOFI CRUISE 8711 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 22.0 W	21/11/87	0517 GMT	1498 M	320	24 KT			1020.0 MB	15.9 C	14.0 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	17.14	17.14	33.383	24.241	367.0	0.000	5.66	102.7	2.0	0.32	0.1	0.00	0.18	0.05	0
1	1		17.14	17.14	33.383	24.241	367.1	0.004	5.66	102.7	2.0	0.32	0.1	0.00	0.18	0.05	1
	10	ISL	17.15	17.15	33.383	24.239	367.5	0.037	5.66	102.7	1.9	0.31	0.1	0.00	0.17	0.05	10
1	12		17.15	17.15	33.384	24.240	367.5	0.044	5.66	102.7	1.9	0.31	0.1	0.00	0.17	0.05	12
	20	ISL	17.16	17.16	33.396	24.247	367.1	0.073	5.68	103.1	1.9	0.32	0.1	0.00	0.18	0.06	20
1	22		17.17	17.17	33.400	24.248	367.1	0.081	5.68	103.1	1.9	0.32	0.1	0.00	0.19	0.06	22
	30	ISL	17.22	17.22	33.456	24.280	364.4	0.110	5.66	102.9	1.8	0.31	0.1	0.00	0.22	0.08	30
1	33		17.23	17.22	33.477	24.293	363.2	0.121	5.65	102.7	1.8	0.31	0.1	0.00	0.24	0.09	33
1	43		17.17	17.16	33.494	24.321	360.9	0.157	5.63	102.3	1.9	0.30	0.1	0.00	0.38	0.15	43
	50	ISL	15.95	15.94	33.421	24.547	339.5	0.182	5.66	100.4	2.6	0.41	0.8	0.06	0.83	0.36	50
1	52		15.53	15.52	33.398	24.623	332.2	0.188	5.67	99.7	2.9	0.45	1.1	0.08	0.95	0.42	52
1	63		13.92	13.91	33.302	24.894	306.7	0.224	5.56	94.6	3.9	0.57	2.8	0.11	0.77	0.43	63
1	74		12.84	12.83	33.307	25.115	285.7	0.256	5.26	87.5	5.7	0.75	6.3	0.06	0.42	0.33	75
	75	ISL	12.74	12.73	33.314	25.140	283.4	0.259	5.22	86.7	6.0	0.77	6.7	0.06	0.39	0.32	76
1	89		11.42	11.41	33.461	25.504	249.0	0.296	4.50	72.7	11.1	1.14	13.1	0.02	0.11	0.15	90
	100	ISL	10.73	10.72	33.595	25.732	227.5	0.322	3.91	62.3	16.2	1.41	17.4	0.02	0.06	0.09	101
1	104		10.52	10.51	33.641	25.804	220.6	0.331	3.72	59.0	18.0	1.50	18.8	0.02	0.04	0.08	105
1	124		9.58	9.57	33.783	26.074	195.3	0.373	3.29	51.1	24.1	1.73	23.0	0.01	0.01	0.05	125
	125	ISL	9.54	9.53	33.790	26.086	194.1	0.375	3.27	50.8	24.4	1.74	23.2	0.01	0.01	0.05	126
	150	ISL	8.83	8.81	33.937	26.315	172.7	0.421	2.87	43.9	31.1	1.94	26.4	0.01	0.00	0.04	151
1	151		8.81	8.79	33.942	26.322	172.1	0.423	2.86	43.7	31.3	1.95	26.5	0.01	0.00	0.04	152
1	180		8.34	8.32	34.035	26.468	158.7	0.470	2.55	38.6	36.7	2.10	28-4	0.01	0.00	0.03	181
	200	ISL	8.17	8.15	34.059	26.513	154.7	0.502	2.54	38.3	38.8	2.15	28.7	0.01	0.00	0.03	202
1	210		8.07	8.05	34.060	26.529	153.3	0.517	2.53	38.1	39.8	2.16	28.8	0.01	0.00	0.03	212
1	239		7.46	7.44	34.040	26.602	146.6	0.561	2.52	37.4	44.8	2.21	30.7	0.01			241
	250	ISL	7.36	7.34	34.040	26.616	145.4	0.577	2.45	36.3	46.1	2.24	31.2	0.01			252
1	279		7.21	7.18	34.059	26.652	142.3	0.618	2.15	31.7	49.6	2.36	32.4	0.02			281
	300	ISL	7.09	7.06	34.097	26.699	138.2	0.648	1.76	25.9	53.6	2.50	33.9	0.02			302
1	334		6.90	6.87	34.165	26.779	131.1	0.694	1.13	16.6	60.4	2.74	36.2	0.01			337
1	393		6.53	6.49	34.228	26.879	122.3	0.768	0.70	10.2	68.8	2.96	38.4	0.00			396
	400	ISL	6.49	6.45	34.233	26.888	121.4	0.777	0.67	9.7	69.5	2.97	38.6	0.00			403
1	460		6.19	6.15	34.272	26.958	115.4	0.848	0.44	6.3	74.9	3.06	39.6	0.00			464
	500	ISL	5.97	5.93	34.307	27.014	110.4	0.893	0.34	4.9	80.3	3.12	40.5	0.00			504
1	530		5.80	5.75	34.334	27.057	106.6	0.926	0.26	3.7	84.3	3.17	41.1	0.00			535

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.4 N	121 2.0 W	21/11/87	1053 GMT	3777 M	320	21 KT			1020.3 MB	16.6 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	17.12	17.12	33.467	24.311	360.4	0.000	5.64	102.3	2.0	0.30	0.1	0.00	0.27	0.08	0
1	1		17.12	17.12	33.467	24.311	360.5	0.004	5.64	102.3	2.0	0.30	0.1	0.00	0.27	0.08	1
	10	ISL	17.11	17.11	33.467	24.313	360.5	0.036	5.64	102.3	1.9	0.29	0.1	0.00	0.28	0.08	10
1	17		17.11	17.11	33.466	24.313	360.8	0.061	5.65	102.5	1.8	0.29	0.1	0.00	0.28	0.08	17
	20	ISL	17.08	17.08	33.466	24.320	360.2	0.072	5.65	102.4	1.8	0.29	0.1	0.00	0.29	0.09	20
	30	ISL	17.00	17.00	33.466	24.339	358.7	0.108	5.66	102.5	1.8	0.30	0.1	0.00	0.36	0.14	30
1	31		16.99	16.98	33.466	24.342	358.5	0.112	5.66	102.4	1.8	0.30	0.1	0.00	0.37	0.14	31
1	42		14.95	14.94	33.479	24.812	313.9	0.149	5.26	91.5	4.9	0.61	4.3	0.16	0.55	0.35	42
	50	ISL	13.50	13.49	33.511	25.141	282.7	0.172	4.82	81.4	7.9	0.87	8.6	0.11	0.44	0.34	50
1	53		13.00	12.99	33.524	25.251	272.3	0.181	4.65	77.7	9.1	0.97	10.2	0.08	0.38	0.34	53
1	63		11.76	11.75	33.536	25.499	248.9	0.207	4.27	69.5	12.4	1.20	14.1	0.03	0.25	0.31	63
1	73		10.93	10.92	33.606	25.705	229.5	0.231	3.87	61.9	16.2	1.41	17.6	0.01	0.14	0.19	74
	75	ISL	10.80	10.79	33.622	25.740	226.2	0.235	3.80	60.6	17.0	1.45	18.2	0.01	0.12	0.17	76
1	83		10.33	10.32	33.683	25.869	214.0	0.253	3.55	56.1	20.1	1.58	20.3	0.01	0.05	0.10	84
1	98		9.61	9.60	33.753	26.045	197.5	0.284	3.36	52.3	23.6	1.71	22.5	0.01	0.01	0.05	99
	100	ISL	9.53	9.52	33.758	26.062	195.9	0.288	3.36	52.2	23.9	1.71	22.6	0.01	0.01	0.05	101
1	113		9.15	9.14	33.802	26.158	186.9	0.313	3.36	51.7	26.0	1.75	23.5	0.01	0.01	0.04	114
	125	ISL	9.19	9.18	33.919	26.244	179.1	0.335	2.96	45.6	29.1	1.88	25.0	0.00	0.00	0.04	126
1	129		9.21	9.20	33.955	26.269	176.8	0.342	2.82	43.5	30.1	1.93	25.5	0.00	0.00	0.04	130
	150	ISL	8.89	8.87	33.998	26.354	169.1	0.378	2.75	42.1	32.7	2.00	26.6	0.00	0.00	0.04	151
1	155		8.79	8.77	33.997	26.369	167.7	0.386	2.73	41.7	33.1	2.00	26.8	0.00	0.00	0.04	156
1	180		8.41	8.39	34.056	26.474	158.1	0.427	2.59	39.3	37.1	2.10	28.1	0.00	0.00	0.03	181
	200	ISL	8.07	8.05	34.076	26.541	152.0	0.458	2.45	36.9	40.8	2.18	29.3	0.00	0.00	0.03	202
1	211		7.89	7.87	34.081	26.572	149.2	0.475	2.36	35.4	42.9	2.23	30.0	0.00	0.00	0.03	213
1	241		7.51	7.49	34.092	26.635	143.5	0.519	2.05	30.4	48.2	2.36	31.7	0.01			243
	250	ISL	7.40	7.38	34.096	26.654	141.8	0.531	1.94	28.7	49.9	2.41	32.3	0.01			252
1	282		7.05	7.02	34.115	26.719	136.0	0.576	1.58	23.2	55.5	2.57	34.3	0.00			284
	300	ISL	6.92	6.89	34.128	26.747	133.6	0.600	1.41	20.7	58.1	2.64	35.1	0.00			302
1	339		6.69	6.66	34.156	26.800	129.0	0.651	1.10	16.0	63.3	2.78	36.5	0.00			342
1	400		6.21	6.17	34.188	26.889	121.1	0.728	0.73	10.5	71.7	2.97	38.9	0.00			403
1	467		5.89	5.85	34.239	26.970	114.1	0.806	0.45	6.4	78.9	3.07	40.4	0.00			471
	500	ISL	5.78	5.74	34.263	27.003	111.3	0.844	0.39	5.6	81.7	3.11	40.8	0.00			504
1	539		5.66	5.61	34.292	27.041	108.1	0.886	0.32	4.6	85.0	3.16	41.3	0.00			544

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 19.2 N	121 42.8 W	21/11/87	1650 GMT	4058 M	360	22 KT	3 40 09 06	1	1021.3 MB	17.5 C	14.9 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
	0	ISL	17.29	17.29	33.137	24.017	388.4	0.000	5.64	102.5	1.7	0.33	0.1	0.00	0.11	0.03	0
1	1		17.29	17.29	33.137	24.017	388.4	0.004	5.64	102.5	1.7	0.33	0.1	0.00	0.11	0.03	1
	10	ISL	17.28	17.28	33.138	24.021	388.4	0.039	5.64	102.5	1.7	0.34	0.1	0.00	0.11	0.03	10
1	16		17.27	17.27	33.138	24.023	388.3	0.062	5.64	102.4	1.6	0.34	0.1	0.00	0.11	0.03	16
	20	ISL	17.27	17.27	33.138	24.023	388.5	0.078	5.64	102.4	1.6	0.34	0.1	0.00	0.11	0.03	20
	30	ISL	17.26	17.26	33.138	24.026	388.6	0.117	5.64	102.4	1.5	0.33	0.1	0.00	0.11	0.03	30
1	32		17.26	17.25	33.138	24.026	388.6	0.124	5.64	102.4	1.5	0.33	0.1	0.00	0.11	0.03	32
1	42		17.28	17.27	33.137	24.021	389.4	0.163	5.65	102.6	1.5	0.33	0.1	0.00	0.11	0.03	42
	50	ISL	17.26	17.25	33.139	24.028	389.1	0.194	5.67	102.9	1.5	0.34	0.1	0.00	0.11	0.04	50
1	52		17.26	17.25	33.139	24.028	389.1	0.202	5.67	102.9	1.5	0.34	0.1	0.00	0.11	0.04	52
1	63		14.94	14.93	33.119	24.538	340.7	0.242	6.15	106.7	1.7	0.36	0.1	0.00	0.20	0.13	63
1	73		13.81	13.80	33.086	24.750	320.6	0.275	6.11	103.6	2.2	0.38	0.1	0.00	0.23	0.19	74
	75	ISL	13.64	13.63	33.090	24.788	317.0	0.282	6.07	102.6	2.2	0.39	0.2	0.03	0.25	0.20	76
1	82		13.15	13.14	33.125	24.914	305.2	0.303	5.89	98.5	2.4	0.46	0.9	0.13	0.29	0.22	83
1	98		12.32	12.31	33.289	25.203	278.0	0.350	5.26	86.5	5.9	0.78	6.9	0.02	0.17	0.20	99
	100	ISL	12.25	12.24	33.301	25.225	275.9	0.356	5.21	85.6	6.2	0.80	7.3	0.02	0.16	0.19	101
1	113		11.77	11.76	33.373	25.372	262.2	0.391	4.93	80.2	8.3	0.95	9.9	0.02	0.11	0.14	114
	125	ISL	10.98	10.96	33.464	25.586	241.9	0.421	4.51	72.2	12.0	1.17	13.8	0.01	0.06	0.08	126
1	128		10.77	10.75	33.490	25.644	236.5	0.428	4.40	70.1	13.1	1.23	14.8	0.01	0.05	0.07	129
	150	ISL	9.83	9.81	33.695	25.965	206.2	0.477	3.68	57.5	20.8	1.59	20.6	0.00	0.01	0.04	151
1	155		9.70	9.68	33.739	26.021	201.0	0.487	3.53	55.0	22.4	1.66	21.7	0.00	0.01	0.03	156
1	180		9.37	9.35	33.900	26.201	184.4	0.535	2.89	44.7	28.5	1.91	25.1	0.00	0.00	0.04	181
	200	ISL	8.84	8.82	33.948	26.323	172.9	0.571	3.03	46.4	31.3	1.92	26.1	0.00	0.00	0.03	202
1	211		8.53	8.51	33.961	26.382	167.5	0.590	3.10	47.1	32.5	1.92	26.4	0.00	0.00	0.02	213
1	241		8.04	8.02	34.010	26.494	157.1	0.638	3.11	46.7	36.9	1.99	27.5	0.00			243
	250	ISL	7.92	7.89	34.019	26.519	154.9	0.652	3.01	45.1	38.4	2.04	28.1	0.00			252
1	283		7.54	7.51	34.043	26.593	148.2	0.702	2.51	37.3	44.5	2.23	30.6	0.00			285
	300	ISL	7.33	7.30	34.051	26.630	144.9	0.727	2.31	34.2	47.8	2.32	31.7	0.00			302
1	339		6.85	6.82	34.066	26.708	137.8	0.782	1.90	27.8	55.4	2.51	34.2	0.00			342
1	400		6.23	6.19	34.097	26.814	128.1	0.864	1.30	18.7	66.0	2.77	37.7	0.00			403
1	467		6.04	6.00	3 4.180	26.905	120.4	0.947	0.71	10.2	73.7	2.98	39.4	0.00			471
	500	ISL	5.84	5.80	34.216	26.958	115.5	0.986	0.55	7.9	78.6	3.06	40.4	0.00			504
1	539		5.60	5.55	34.259	27.022	109.8	1.030	0.36	5.1	84.4	3.15	41.5	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8711 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 23.9 W	21/11/87	2330 GMT	4113 M	350	23 KT	340 09 06	1	1020.0 MB	16.5 C	13.7 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
	0	ISL	17.57	17.57	33.199	23.998	3 90.2	0.000	5.60	102.3	1.9	0.35	0.1	0.00	0.11	0.03	0
1	1		17.57	17.57	33.199	23.998	390.3	0.004	5.60	102.3	1.9	0.35	0.1	0.00	0.11	0.03	1
	10	ISL	17.58	17.58	33.197	23.995	390.9	0.039	5.60	102.3	1.9	0.35	0.1	0.01	0.11	0.04	10
1	17		17.58	17.58	33.195	23.993	391.3	0.066	5.61	102.5	1.8	0.35	0.1	0.01	0.11	0.04	17
	20	ISL	17.58	17.58	33.195	23.993	391.4	0.078	5.61	102.5	1.8	0.35	0.1	0.01	0.11	0.04	20
	30	ISL	17.58	17.57	33.196	23.995	391.6	0.117	5.62	102.7	1.6	0.35	0.1	0.00	0.12	0.04	30
1	32		17.58	17.57	33.196	23.995	391.7	0.125	5.62	102.7	1.6	0.35	0.1	0.00	0.12	0.04	32
1	42		17.59	17.58	33.196	23.993	392.2	0.164	5.60	102.3	1.6	0.35	0.1	0.00	0.12	0.03	42
	50	ISL	17.58	17.57	33.196	23.995	392.2	0.196	5.62	102.7	1.6	0.35	0.1	0.00	0.13	0.04	50
1	52		17.58	17.57	33.196	23.995	392.2	0.204	5.62	102.7	1.6	0.35	0.1	0.00	0.13	0.04	52
1	62		15.26	15.25	33.123	24.471	3 47.0	0.241	6.09	106.3	1.6	0.38	0.1	0.00	0.22	0.14	62
1	72		14.50	14.49	33.128	24.639	331.2	0.274	6.04	103.9	1.9	0.38	0.1	0.00	0.24	0.19	73
	75	ISL	14.19	14.18	33.129	24.705	325.0	0.284	6.03	103.1	2.0	0.40	0.1	0.02	0.28	0.22	76
1	81		13.61	13.60	33.135	24.829	313.3	0.303	5.99	101.2	2.3	0.44	0.4	0.06	0.36	0.27	82
1	98		12.94	12.93	33.189	25.005	296.9	0.355	5.66	94.3	3.7	0.60	3.1	0.06	0.28	0.24	99
	100	ISL	12.85	12.84	33.203	25.034	294.2	0.361	5.60	93.1	4.0	0.62	3.6	0.05	0.26	0.23	101
1	112		12.26	12.25	33.301	25.224	276.3	0.395	5.20	85.5	6.0	0.80	7.0	0.02	0.17	0.19	113
	125	ISL	11.57	11.55	33.398	25.428	257.0	0.430	4.77	77.3	9.3	1.04	11.1	0.01	0.11	0.14	126
1	127		11.46	11.44	33.413	25.460	254.0	0.435	4.70	76.0	9.9	1.08	11.7	0.01	0.10	0.13	128
	150	ISL	10.28	10.26	33.581	25.800	222.0	0.490	4.00	63.1	16.8	1.44	18.0	0.00	0.03	0.07	151
1	154		10.10	10.08	33.611	25.854	216.9	0.499	3.88	60.9	18.1	1.50	19.0	0.00	0.02	0.06	155
1	178		9.42	9.40	33.811	26.123	191.7	0.548	3.18	49.3	25.5	1.79	23.8	0.00	0.00	0.04	179
	200	ISL	9.01	8.99	33.925	26.279	177.3	0.588	2.90	44.5	30.1	1.94	25.9	0.00	0.00	0.03	202
1	209		8.89	8.87	33.959	26.324	173.0	0.604	2.82	43.2	31.6	1.99	26.5	0.00	0.00	0.03	211
1	239		8.62	8.59	34.062	26.447	161.9	0.654	2.33	35.5	37.1	2.17	28.7	0.01			241
	250	ISL	8.53	8.50	34.078	26.474	159.5	0.672	2.24	34.1	38.5	2.21	29.2	0.01			252
1	281		8.25	8.22	34.102	26.536	154.1	0.721	2.06	31.1	42.1	2.30	30.4	0.01			283
	300	ISL	8.05	8.02	34.123	26.582	149.9	0.750	1.85	27.8	45.2	2.40	31.5	0.01			302
1	337		7.63	7.60	34.160	26.673	141.7	0.803	1.42	21.2	51.5	2.59	33.7	0.00			340
1	398		6.96	6.92	34.176	26.781	132.0	0.887	1.03	15.1	60.5	2.78	36.2	0.01			401
	400	ISL	6.93	6.89	34.174	26.783	131.8	0.890	1.02	14.9	60.9	2.79	36.3	0.01			403
1	467		5.90	5.86	34.142	26.892	121.4	0.974	0.84	12.0	73.3	2.95	39.8	0.01			471
	500	ISL	5.82	5.78	3 4.186	26.937	117.5	1.014	0.65	9.3	76.9	3.03	40.5	0.01			504
1	539		5.72	5.67	34.238	26.991	112.9	1.059	0.43	6.1	81.1	3.13	41.3	0.00			544

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 39.4 N	123 5.0 W	22/11/87	0532 GMT	4169 M	330	21 KT			1021.1 MB	15.9 C	13.9 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
	0	ISL	18.20	18.20	33.279	23.906	398.9	0.000	5.53	102.3	1.7	0.32	0.1	0.00	0.10	0.03	0
1	1		18.20	18.20	33.279	23.906	399.0	0.004	5.53	102.3	1.7	0.32	c.l	0.00	0.10	0.03	1
	10	ISL	18.20	18.20	33.278	23.906	399.3	0.040	5.54	102.5	1.7	0.32	0.1	0.00	0.09	0.03	10
1	16		18.20	18.20	33.278	23.906	399.5	0.064	5.55	102.7	1.6	0.32	0.1	0.00	0.09	0.03	16
	20	ISL	18.20	18.20	33.278	23.906	399.7	0.080	5.55	102.6	1.6	0.32	0.1	0.00	0.09	0.03	20
1	30		18.21	18.20	33.279	23.905	400.1	0.120	5.54	102.5	1.5	0.32	0.1	0.00	0.09	0.02	30
1	42		18.24	18.23	33.280	23.899	401.1	0.168	5.56	102.9	1.6	0.33	0.1	0.00	0.09	0.03	42
	50	ISL	18.22	18.21	33.286	23.909	400.5	0.200	5.54	102.5	1.6	0.32	0.1	0.00	0.09	0.03	50
1	52		18.22	18.21	33.288	23.911	400.4	0.208	5.53	102.3	1.6	0.32	0.1	0.00	0.09	0.03	52
1	62		16.56	16.55	33.240	24.269	366.4	0.246	6.03	108.1	1.5	0.34	0.1	0.00	0.16	0.08	62
	75	ISL	14.04	14.03	33.209	24.798	316.1	0.291	5.91	100.7	2.3	0.41	0.4	0.06	0.30	0.27	76
1	77		13.70	13.69	33.211	24.869	309.4	0.297	5.89	99.7	2.5	0.43	0.4	0.07	0.32	0.30	78
1	91		12.61	12.60	33.246	25.113	286.3	0.339	5.49	90.9	4.4	0.61	4.0	0.06	0.22	0.24	92
	100	ISL	12.28	12.27	33.307	25.224	276.0	0.364	5.36	88.1	5.1	0.68	5.5	0.04	0.17	0.20	101
1	106		12.11	12.10	33.357	25.295	269.3	0.380	5.28	86.5	5.7	0.72	6.4	0.02	0.14	0.18	107
1	121		11.40	11.38	33.492	25.532	247.0	0.419	4.91	79.3	8.5	0.91	10.1	0.01	0.08	0.10	122
	125	ISL	11.19	11.17	33.516	25.589	241.7	0.429	4.79	77.0	9.7	0.98	11.3	0.01	0.07	0.09	126
1	140		10.44	10.42	33.595	25.783	223.5	0.464	4.35	68.8	14.4	1.26	15.8	0.00	0.04	0.06	141
	150	ISL	10.01	9.99	33.660	25.907	211.7	0.485	4.15	65.1	17.1	1.38	17.9	0.00	0.03	0.04	151
1	160		9.64	9.62	33.724	26.019	201.2	0.506	4.00	62.2	19.5	1.47	19.5	0.00	0.02	0.03	161
1	184		9.05	9.03	33.843	26.208	183.7	0.552	3.84	59.0	24.0	1.61	22.0	0.00	0.00	0.02	185
	200	ISL	8.72	8.70	33.921	26.321	173.1	0.581	3.47	52.9	28.4	1.76	24.4	0.00	0.00	0.02	202
1	216		8.43	8.41	33.984	26.415	164.4	0.608	3.08	46.7	32.8	1.91	26.7	0.00	0.00	0.02	218
1	247		8.02	8.00	34.028	26.511	155.6	0.657	2.75	41.3	38.1	2.07	28-7	0.00			249
	250	ISL	7.99	7.96	34.030	26.517	155.1	0.662	2.73	41.0	38.5	2.08	28.8	0.00			252
2	284		7.66	7.63	34.042	26.575	150.0	0.714	2.52	37.5	42.8	2.18	30.4	0.00			286
	300	ISL	7.45	7.42	34.049	26.611	146.8	0.738	2.35	34.8	46.0	2.26	31.5	0.00			302
2	338		6.94	6.91	34.070	26.699	138.7	0.792	1.87	27.4	54.3	2.48	34.4	0.00			341
	400	ISL	6.27	6.23	34.114	26.823	127.4	0.874	1.15	16.6	66.2	2.77	38.2	0.00			403
2	402		6.25	6.21	34.116	26.827	127.0	0.877	1.13	16.3	66.5	2.78	38.3	0.00			405
2	473		5.90	5.86	34.219	26.953	115.8	0.963	0.54	7.7	76.3	3.03	40.6	0.00			477
	500	ISL	5.74	5.70	34.231	26.983	113.2	0.994	0.48	6.8	79.6	3.07	41.2	0.00			504
2	560		5.37	5.32	34.260	27.051	107.0	1.060	0.34	4.8	86.8	3.16	42.5	0.00			565

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 19.7 N	123 44.8 W	22/11/87	1202 GMT	4013 M	340	23 KT			1021.2 MB	15.8 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	18.41	18.41	33.411	23.956	394.2	0.000	5.51	102.4	2.3	0.33	0.0	0.00	0.11	0.03	0
1	1		18.41	18.41	33.411	23.956	394.3	0.004	5.51	102.4	2.3	0.33	0.0	0.00	0.11	0.03	1
	10	ISL	18.42	18.42	33.410	23.953	394.9	0.039	5.50	102.2	2.0	0.32	0.0	0.00	0.12	0.03	10
1	16		18.43	18.43	33.410	23.951	395.3	0.063	5.50	102.2	1.8	0.32	0.0	0.00	0.12	0.03	16
	20	ISL	18.43	18.43	33.409	23.950	395.5	0.079	5.50	102.2	1.8	0.32	0.0	0.00	0.12	0.03	20
	30	ISL	18.42	18.41	33.409	23.953	395.6	0.119	5.50	102.2	1.9	0.32	0.0	0.00	0.11	0.03	30
1	32		18.42	18.41	33.409	23.953	395.6	0.126	5.50	102.2	1.9	0.32	0.0	0.00	0.11	0.03	32
1	42		18.44	18.43	33.413	23.952	3 96.1	0.166	5.52	102.6	1.8	0.32	0.0	0.00	0.11	0.04	42
	50	ISL	18.42	18.41	33.411	23.955	3 96.1	0.198	5.51	102.4	1.7	0.33	0.0	0.00	0.12	0.04	50
1	52		18.42	18.41	33.410	23.955	396.2	0.206	5.51	102.4	1.7	0.33	0.0	0.00	0.12	0.04	52
1	62		18.14	18.13	33.410	24.024	389.9	0.245	5.53	102.2	1.7	0.33	0.0	0.00	0.12	0.05	62
	75	ISL	14.51	14.50	33.344	24.803	315.7	0.291	5.92	102.0	2.5	0.47	1.1	0.05	0.30	0.26	76
1	77		13.89	13.88	33.348	24.936	303.0	0.297	5.95	101.2	2.8	0.51	1.3	0.06	0.33	0.29	78
1	92		12.29	12.28	33.372	25.272	271.2	0.340	5.10	83.9	6.8	0.86	8.2	0.04	0.24	0.27	93
	100	ISL	11.62	11.61	33.429	25.443	255.1	0.361	4.88	79.2	8.8	0.96	10.4	0.02	0.17	0.20	101
1	107		11.13	11.12	33.487	25.577	242.4	0.379	4.73	75.9	10.6	1.04	12.0	0.01	0.11	0.13	X08
1	123		10.33	10.32	33.583	25.792	222.1	0.416	4.28	67.6	14.8	1.30	16.0	0.01	0.05	0.07	124
	125	ISL	10.26	10.25	33.596	25.814	220.1	0.420	4.23	66.7	15.4	1.33	16.5	0.01	0.05	0.06	126
1	143		9.76	9.74	33.714	25.991	203.6	0.458	3.79	59.1	20.5	1.54	20.2	0.00	0.02	0.03	144
	150	ISL	9.55	9.53	33.759	26.061	197.0	0.472	3.65	56.7	22.3	1.60	21.3	0.00	0.01	0.03	151
1	164		9.17	9.15	33.841	26.187	185.3	0.499	3.42	52.7	25.6	1.70	23.2	0.00	0.00	0.03	165
1	190		8.65	8.63	33.949	26.353	169.8	0.545	3.18	48.4	30.8	1.87	25.6	0.00	0.00	0.02	191
	200	ISL	8.50	8.48	33.975	26.397	165.9	0.562	3.08	46.8	32.5	1.92	26.4	0.00	0.00	0.02	202
1	225		8.18	8.16	34.012	26.475	158.8	0.603	2.88	43.4	36.3	2.01	27.9	0.01	0.00	0.02	227
	250	ISL	7.82	7.80	34.023	26.537	153.2	0.642	2.89	43.2	39.3	2.06	28-6	0.00			252
1	261		7.66	7.63	34.024	26.561	151.0	0.658	2.89	43.1	40.8	2.08	29-0	0.00			263
	300	ISL	7.16	7.13	34.043	26.647	143.2	0.716	2.31	34.0	49.1	2.32	32.0	0.00			302
1	303		7.13	7.10	34.046	26.653	142.6	0.720	2.25	33.1	49.8	2.34	32.3	0.00			305
1	359		7.07	7.04	34.196	26.781	131.5	0.797	1.00	14.7	59.7	2.77	36.0	0.00			362
	400	ISL	6.68	6.64	34.231	26.862	124.1	0.849	0.65	9.5	66.9	2.94	38.0	0.01			403
1	427		6.37	6.33	34.240	26.910	119.7	0.882	0.56	8.1	71.4	3.01	39.0	0.01			431
1	499		5.86	5.82	34.296	27.019	109.9	0.965	0.32	4.6	81.7	3.14	40.9	0.00			503
	500	ISL	5.85	5.81	34.296	27.021	109.7	0.966	0.32	4.6	81.8	3.14	40.9	0.00			504
1	584		5.36	5.31	34.339	27.115	101.3	1.054	0.24	3.4	90.4	3.22	42.6	0.00			589

RV NEW HORIZON CALCOFI CRUISE 8711 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 46.1 W	19/11/87	2105 GMT	62 M	360	04 KT	270 01 06	0	1021.2 MB	19.9 C	16.3 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 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.52	17.52	33.357	24.131	377.5	0.000	5.71	104.3	2.2	0.31	0.1	0.01	0.33	0.04	0
1	10		17.47	17.47	33.358	24.144	376.6	0.038	5.71	104.2	1.9	0.30	0.1	0.01	0.27	0.07	10
	20	ISL	16.74	16.74	33.291	24.265	365.4	0.075	5.85	105.3	2.5	0.43	0.1	0.03	1.13	0.38	20
1	21		16.63	16.63	33.283	24.285	363.6	0.078	5.87	105.4	2.6	0.44	0.1	0.03	1.21	0.41	21
	30	ISL	15.23	15.23	33.252	24.576	336.0	0.110	5.99	104.6	2.9	0.47	0.3	0.05	0.93	0.32	30
1	31		15.07	15.07	33.251	24.610	332.8	0.113	6.00	104.5	2.9	0.47	0.3	0.05	0.87	0.30	31
1	42		13.85	13.84	33.281	24.892	306.3	0.148	5.50	93.4	4.5	0.65	2.4	0.39	0.42	0.39	42
	50	ISL	13.71	13.70	33.289	24.927	303.1	0.173	5.45	92.3	5.0	0.69	3.1	0.37	0.40	0.42	50
1	52		13.67	13.66	33.291	24.937	302.2	0.179	5.44	92.1	5.1	0.70	3.3	0.36	0.40	0.43	52

FV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 25.1 N	117 54.6 W	19/11/87	1804 GMT	611 M	2 90	06 KT	310 01 05	1	1023.0 MB	20.2 C	16.8 C	4/8	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	17.76	17.76	33.379	24.090	381.4	0.000	5.61	103.0	2.8	0.31	0.2	0.00	0.23	0.06	0
1	1		17.76	17.76	33.379	24.090	381.5	0.004	5.61	103.0	2.8	0.31	0.2	0.00	0.23	0.06	1
1	10		17.56	17.56	33.413	24.165	374.7	0.038	5.66	103.5	2.8	0.28	0.2	0.00	0.24	0.08	10
	20	ISL	17.14	17.14	33.369	24.231	368.7	0.075	5.76	104.5	2.8	0.30	0.2	0.00	0.28	0.10	20
1	22		16.98	16.98	33.353	24.257	366.3	0.082	5.79	104.7	2.8	0.31	0.2	0.00	0.29	0.10	22
	30	ISL	15.66	15.66	33.286	24.508	342.6	0.111	5.96	105.0	2.9	0.35	0.2	0.00	0.34	0.22	30
1	32		15.30	15.30	33.271	24.575	336.2	0.117	6.00	105.0	3.0	0.36	0.2	0.00	0.36	0.25	32
1	42		14.03	14.02	33.202	24.793	315.6	0.150	5.97	101.8	3.6	0.44	0.7	0.07	0.62	0.34	42
	50	ISL	13.40	13.39	33.274	24.978	298.2	0.175	5.56	93.6	5.2	0.60	3.8	0.12	0.45	0.29	50
1	52		13.27	13.26	33.297	25.022	294.1	0.181	5.44	91.3	5.7	0.65	4.7	0.12	0.39	0.27	52
1	63		12.52	12.51	33.353	25.213	276.1	0.212	5.09	84.1	7.5	0.82	7.7	0.04	0.22	0.21	63
1	73		12.02	12.01	33.396	25.342	264.1	0,239	4.86	79.5	9.4	0.95	10.1	0.03	0.16	0.17	74
	75	ISL	11.94	11.93	33.409	25.367	261.7	0.244	4.80	78.4	9.8	0.98	10.6	0.03	0.15	0.17	76
1	87		11.49	11.48	33.488	25.512	248.2	0.275	4.48	72.5	12.2	1.13	13.1	0.01	0.10	0.15	88
	100	ISL	10.99	10.98	33.534	25.638	236.4	0.306	4.28	68.5	14.3	1.25	15.0	0.01	0.06	0.10	101
1	101		10.95	10.94	33.537	25.648	235.5	0.309	4.27	68.3	14.5	1.26	15.1	0.01	0.06	0.10	102
1	123		10.43	10.42	33.671	25.844	217.3	0.358	3.71	58.7	19.3	1.49	19.0	0.01	0.03	0.06	124
	125	ISL	10.37	10.36	33.683	25.863	215.4	0.363	3.66	57.9	19.8	1.51	19.4	0.01	0.03	0.06	126
1	147		9.79	9.77	33.806	26.058	197.3	0.408	3.23	50.4	24.8	1.74	22.8	0.01	0.01	0.07	148
	150	ISL	9.73	9.71	33.818	26.077	195.6	0.414	3.19	49.8	25.3	1.76	23.1	0.01	0.01	0.07	151
1	179		9.27	9.25	33.918	26.231	181.4	0.469	2.93	45.3	29.6	1.89	25.2	0.01	0.00	0.04	180
	200	ISL	9.00	8.98	33.991	26.332	172.2	0.506	2.82	43.3	32.3	1.95	26.1	0.01	0.00	0.04	202
1	210		8.89	8.87	34.025	26.376	168.2	0.523	2.75	42.1	33.7	1.99	26.5	0.01	0.00	0.04	212
1	240		8.64	8.61	34.118	26.488	158.0	0.572	2.18	33.2	39.4	2.21	29.1	0.01			242
	250	ISL	8.58	8.55	34.141	26.516	155.6	0.588	2.01	30.6	41.0	2.28	29.8	0.01			252
1	281		8.39	8.36	34.192	26.585	149.5	0.635	1.58	24.0	45.3	2.45	31.4	0.00			283
	300	ISL	8.25	8.22	34.205	26.617	146.8	0.663	1.43	21.6	47.5	2.51	32.1	0.00			302
1	338		7.93	7.90	34.221	26.678	141.5	0.718	1.21	18.2	51.9	2.62	33.4	0.00			341
1	398		7.29	7.25	34.287	26.822	128.4	0.799	0.74	10.9	61.2	2.85	36.0	0.00			401
	400	ISL	7.27	7.23	34.289	26.827	128.0	0.801	0.73	10.8	61.4	2.85	36.1	0.00			403
1	465		6.80	6.76	34.323	26.919	119.9	0.882	0.49	7.2	68.9	2.98	37.6	0.00			469
	500	ISL	6.48	6.43	34.324	26.962	115.9	0.923			74.3	3.05	38.6	0.00			504
1	537		6.14	6.09	34.327	27.009	111.7	0.965			80.0	3.13	39.6	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.2 N	118 6.8 W	19/11/87	1506 GMT	740 M	330	09 KT	3 40 01 05	1	1022.8 MB	18.1 C	14.2 C	4/8	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
1	0		17.49	17.49	33.500	24.248	366.4	0.000	5.70	104.2	1.9	0.25	0.1	0.00	0.31	0.08	0
1	10		17.36	17.36	33.480	24.264	365.2	0.037	5.74	104.6	1.8	0.27	0.1	0.00	0.31	0.08	10
	20	ISL	17.17	17.17	33.458	24.292	362.8	0.073	5.75	104.4	1.8	0.28	0.2	0.00	0.29	0.08	20
1	21		17.15	17.15	33.456	24.296	362.6	0.077	5.75	104.4	1.8	0.28	0.2	0.00	0.29	0.08	21
	30	ISL	16.83	16.83	33.466	24.379	3 54.9	0.109	5.79	104.5	2.0	0.28	0.2	0.00	0.36	0.13	30
1	31		16.80	16.79	33.467	24.387	354.2	0.112	5.79	104.4	2.0	0.28	0.2	0.00	0.37	0.14	31
1	42		13.81	13.80	33.334	24.941	301.6	0.149	5.59	94.9	4.1	0.56	3.0	0.23	0.67	0.45	42
	50	ISL	12.88	12.87	33.424	25.198	277.3	0.172	5.03	83.8	7.3	0.83	7.9	0.17	0.45	0.40	50
1	52		12.74	12.73	33.453	25.248	272.6	0.177	4.88	81.1	8.2	0.90	9.2	0.14	0.38	0.39	52
1	69		11.58	11.57	33.550	25.543	244.8	0.221	4.24	68.8	13.1	1.22	14.6	0.07	0.20	0.28	70
	75	ISL	11.21	11.20	33.585	25.638	235.9	0.236	4.06	65.3	14.8	1.31	16.1	0.05	0.13	0.20	76
1	88		10.51	10.50	33.664	25.823	218.5	0.265	3.71	58.8	18.3	1.48	19.0	0.02	0.00	0.05	89
	100	ISL	10.03	10.02	33.737	25.963	205.4	0.291	3.39	53.2	21.7	1.63	21.4	0.01	0.01	0.06	101
1	108		9.79	9.78	33.783	26.039	198.3	0.307	3.21	50.1	23.7	1.72	22.7	0.01	0.02	0.07	109
	125	ISL	9.53	9.52	33.865	26.146	188.4	0.340	3.00	46.6	26.4	1.82	24.1	0.01	0.01	0.06	126
1	140		9.41	9.39	33.921	26.210	182.7	0.367	2.88	44.6	28.2	1.87	24.9	0.01	0.00	0.05	141
	150	ISL	9.26	9.24	33.947	26.255	178.6	0.385	2.78	42.9	29.6	1.92	25.7	0.01	0.00	0.05	151
1	171		8.95	8.93	33.993	26.341	170.8	0.422	2.57	39.4	32.6	2.03	27.2	0.01	0.00	0.04	172
	200	ISL	8.71	8.69	34.069	26.438	162.0	0.470	2.22	33.9	36.9	2.17	28-7	0.01	0.00	0.03	202
1	202		8.70	8.68	34.074	26.444	161.5	0.474	2.20	33.6	37.2	2.18	28.8	0.01	0.00	0.03	204
1	241		8.41	8.38	34.155	26.552	151.9	0.535	1.75	26.5	42.4	2.36	30.8	0.00	0.00	0.03	243
	250	ISL	8.36	8.33	34.170	26.572	150.1	0.548	1.66	25.2	43.5	2.40	31.1	0.00	0.00	0.03	252
1	292		8.14	8.11	34.221	26.646	143.8	0.610	1.28	19.3	48.4	2.55	32.5	0.00	0.00	0.02	294
	300	ISL	8.10	8.07	34.227	26.656	142.9	0.622	1.23	18.5	49.2	2.57	32.7	0.00			302
1	348		7.76	7.73	34.254	26.729	136.7	0.689	0.94	14.1	54.6	2.70	34.0	0.00			351
	400	ISL	7.16	7.12	34.282	26.836	127.0	0.757	0.62	9.1	62.9	2.87	36.1	0.00			403
1	411		7.03	6.99	34.287	26.858	125.0	0.771	0.56	8.2	64.7	2.91	36.6	0.00			414
1	477		6.45	6.41	34.310	26.955	116.3	0.851	0.37	5.4	73.8	3.04	38.5	0.00			481
	500	ISL	6.28	6.23	34.321	26.986	113.5	0.877	0.32	4.6	77.3	3.09	39.2	0.00			504
1	523	P	6.12	6.07	34.333	27.016	110.8	0.903	0.27	3.9	80.6	3.13	39.8	0.00			528
1	578	P	5.77	5.72	34.354	27.077	105.4	0.962	0.21	3.0	85.7	3.17	40.2	0.00			583
	600	ISL	5.67	5.62	34.362	27.096	103.8	0.985	0.20	2.8	87.5	3.19	40.2	0.00			605
1	626	P	5.55	5.50	34.371	27.118	101.9	1.012	0.19	2.7	90.0	3.21	40.2	0.00			632
1	663	P	5.27	5.21	34.387	27.164	97.5	1.049	0.19	2.7	94.8	3.23	40.7	0.00			669
1	693	P	5.06	5.00	34.410	27.207	93.5	1.078	0.22	3.1	99.5	3.24	42.1	0.00			699

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.1 N	118 15.5 W	19/11/87	1201 GMT	488 M	020	08 KT			1022.8 MB	18.5 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
1	0		17.58	17.58	33.504	24.229	368.2	0.000	5.69	104.2	1.3	0.25	0.0	0.00	0.32	0.05	0
1	10		17.56	17.56	33.497	24.229	368.5	0.037	5.70	104.3	1.2	0.24	0.0	0.00	0.25	0.05	10
	20	ISL	17.45	17.45	33.487	24.248	367.1	0.074	5.73	104.6	1.3	0.24	0.0	0.00	0.33	0.08	20
1	21		17.44	17.44	33.486	24.250	366.9	0.077	5.73	104.6	1.3	0.24	0.0	0.00	0.34	0.08	21
	30	ISL	14.91	14.91	33.464	24.809	313.8	0.108	5.62	97.7	4.0	0.51	2.5	0.10	1.15	0.50	30
1	31		14.59	14.59	33.463	24.877	307.4	0.111	5.60	96.7	4.3	0.54	2.9	0.11	1.22	0.54	31
1	42		12.77	12.76	33.319	25.138	282.8	0.143	5.27	87.6	5.8	0.74	6.2	0.14	0.49	0.46	42
	50	ISL	12.26	12.25	33.372	25.277	269.7	0.166	4.97	81.7	7.7	0.90	8.8	0.07	0.33	0.33	50
1	52		12.18	12.17	33.397	25.312	266.4	0.171	4.88	80.1	8.3	0.94	9.5	0.05	0.32	0.30	52
1	63		11.46	11.45	33.552	25.567	242.4	0.199	4.26	68.9	13.1	1.23	14.5	0.06	0.20	0.25	63
1	73		11.01	11.00	33.585	25.674	232.4	0.223	4.13	66.2	14.4	1.29	15.6	0.03	0.13	0.16	74
	75	ISL	10.90	10.89	33.599	25.704	229.5	0.227	4.05	64.8	15.1	1.33	16.2	0.03	0.12	0.15	76
1	88		10.26	10.25	33.700	25.895	211.7	0.256	3.49	55.1	20.1	1.59	20.3	0.01	0.05	0.10	89
	100	ISL	9.86	9.85	33.774	26.020	199.9	0.281	3.25	50.8	23.0	1.72	22.3	0.01	0.02	0.06	101
1	103		9.79	9.78	33.791	26.045	197.6	0.287	3.21	50.1	23.6	1.74	22.6	0.01	0.02	0.05	104
1	124		9.48	9.47	33.904	26.185	184.7	0.327	2.96	45.9	27.1	1.84	24.0	0.01	0.00	0.05	125
	125	ISL	9.46	9.45	33.908	26.191	184.1	0.329	2.94	45.6	27.3	1.85	24.1	0.01	0.00	0.05	126
1	150		9.05	9.03	33.993	26.324	171.9	0.373	2.56	39.4	31.9	2.03	26.7	0.00	0.00	0.03	151
1	181		8.87	8.85	34.081	26.422	163.2	0.425	2.26	34.6	35.6	2.16	27.9	0.01	0.00	0.03	182
	200	ISL	8.70	8.68	34.122	26.481	158.0	0.456	2.02	30.8	38.5	2.27	28.9	0.02	0.00	0.03	202
1	212		8.59	8.57	34.143	26.515	154.9	0.474	1.88	28.6	40.2	2.34	29.6	0.02	0.00	0.03	214
1	247		8.40	8.37	34.176	26.571	150.3	0.528	1.61	24.4	43.6	2.42	30.8	0.02			249
	250	ISL	8.39	8.36	34.178	26.574	150.0	0.532	1.60	24.3	43.8	2.42	30.8	0.02			252
1	298		8.24	8.21	34.210	26.622	146.2	0.603	1.37	20.7	47.3	2.51	31.6	0.02			300
	300	ISL	8.22	8.19	34.212	26.627	145.8	0.606	1.35	20.4	47.6	2.52	31.7	0.02			302
1	353		7.60	7.57	34.252	26.750	134.7	0.681	0.89	13.3	55.9	2.75	34.2	0.01			3 56
	400	ISL	7.17	7.13	34.270	26.826	128.0	0.742	0.67	9.9	61.9	2.87	35.9	0.00			403
1	419		6.99	6.95	34.278	26.857	125.2	0.766	0.58	8.5	64.3	2.92	36.6	0.00			423

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 11.0 N	118 23.5 W	19/11/87	0904 GMT	1174 M	110	03 KT			1023.0 MB	19.2 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	17.56	17.56	33.448	24.191	371.8	0.000	5.68	103.9	2.3	0.28	0.1	0.00	0.26	0.07	0
1	1		17.56	17.56	33.448	24.191	371.8	0.004	5.68	103.9	2.3	0.28	0.1	0.00	0.26	0.07	1
	10	ISL	17.55	17.55	33.445	24.192	372.1	0.037	5.67	103.7	2.3	0.28	0.1	0.00	0.24	0.07	10
1	11		17.55	17.55	33.445	24.192	372.1	0.041	5.67	103.7	2.3	0.28	0.1	0.00	0.24	0.07	11
	20	ISL	17.44	17.44	33.439	24.214	370.4	0.074	5.73	104.6	2.1	0.28	0.1	0.00	0.28	0.09	20
1	22		17.41	17.41	33.438	24.220	369.8	0.082	5.74	104.7	2.1	0.28	0.1	0.00	0.29	0.10	22
	30	ISL	15.88	15.88	33.313	24.479	345.3	0.110	5.99	106.0	2.4	0.32	0.1	0.00	0.35	0.13	30
1	32		15.44	15.44	33.290	24.559	337.7	0.117	6.03	105.8	2.5	0.33	0.1	0.00	0.36	0.14	32
1	43		14.04	14.03	33.373	24.924	303.3	0.152	5.60	95.6	4.7	0.57	2.8	0.24	0.74	0.41	43
	50	ISL	12.93	12.92	33.438	25.199	277.2	0.173	5.01	83.6	8.0	0.85	7.9	0.18	0.47	0.34	50
1	53		12.51	12.50	33.463	25.300	267.6	0.181	4.78	79.1	9.3	0.96	10.0	0.13	0.32	0.29	53
1	63		12.03	12.02	33.477	25.403	258.0	0.207	4.62	75.6	10.6	1.04	11.4	0.06	0.23	0.26	63
1	74		11.05	11.04	33.539	25.631	236.5	0.234	4.23	67.8	14.5	1.27	15.1	0.04	0.08	0.13	75
	75	ISL	10.98	10.97	33.549	25.651	234.6	0.237	4.18	66.9	15.0	1.29	15.5	0.04	0.08	0.12	76
1	87		10.32	10.31	33.673	25.864	214.6	0.264	3.68	58.1	20.1	1.53	19.6	0.02	0.04	0.09	88
	100	ISL	10.06	10.05	33.726	25.949	206.7	0.291	3.48	54.7	21.9	1.62	20.9	0.02	0.02	0.07	101
1	104		10.02	10.01	33.736	25.964	205.4	0.299	3.45	54.1	22.2	1.63	21.1	0.02	0.02	0.06	105
1	124		9.45	9.44	33.862	26.157	187.3	0.339	3.05	47.3	27.7	1.82	24.1	0.02	0.01	0.05	125
	125	ISL	9.43	9.42	33.868	26.165	186.6	0.340	3.04	47.1	27.9	1.83	24.2	0.02	0.01	0.05	126
1	150		9.14	9.12	33.986	26.305	173.8	0.386	2.82	43.5	31.1	1.93	25.6	0.02	0.00	0.03	151
1	181		8.85	8.83	34.062	26.411	164.3	0.438	2.36	36.1	36.1	2.14	27.9	0.02	0.00	0.03	182
	200	ISL	8.74	8.72	34.100	26.458	160.2	0.469	2.15	32.9	38.7	2.22	28.8	0.02	0.00	0.02	202
1	212		8.66	8.64	34.123	26.489	157.5	0.488	2.02	30.8	40.3	2.27	29.3	0.02	0.00	0.02	214
1	242		8.35	8.32	3 4.186	26.586	148.7	0.534	1.58	23.9	45.5	2.44	31.2	0.00			244
	250	ISL	8.29	8.26	34.195	26.602	147.3	0.546	1.51	22.8	46.4	2.47	31.5	0.00			252
1	283		8.09	8.06	34.219	26.651	143.1	0.593	1.31	19.7	49.5	2.57	32.5	0.00			285
	300	ISL	7.96	7.93	34.227	26.677	140.9	0.618	1.20	18.0	51.2	2.62	33.1	0.00			302
1	340		7.63	7.60	34.242	26.738	135.7	0.673	0.95	14.2	55.6	2.73	34.5	0.00			3 43
1	400		7.10	7.06	34.267	26.833	127.2	0.752	0.65	9.6	63.5	2.88	36.5	0.00			403
1	466		6.60	6.56	34.300	26.927	118.9	0.833	0.45	6.5	71.3	3.02	38.2	0.00			470
	500	ISL	6.37	6.32	34.312	26.968	115.4	0.873	0.40	5.8	74.9	3.07	39.0	0.00			504
1	537		6.11	6.06	34.327	27.013	111.3	0.915	0.34	4.9	78.8	3.12	39.8	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.0 N	118 56.0 W	19/11/87	0349 GMT	1685 M	320	06 KT			1021.2 MB	17.7 C	15.8 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	17.12	17.12	33.333	24.208	370.2	0.000	5.68	103.0	2.3	0.32	0.1	0.00	0.16	0.05	0
	10 ISL	17.13	17.13	33.331	24.204	370.9	0.037	5.68	103.0	2.0	0.32	0.1	0.00	0.17	0.05	10
1	13	17.13	17.13	33.330	24.204	371.1	0.048	5.68	103.0	1.9	0.32	0.1	0.00	0.17	0.05	13
	20 ISL	16.68	16.68	33.332	24.311	361.1	0.074	5.85	105.2	2.1	0.31	0.1	0.00	0.25	0.12	20
1	21	16.59	16.59	33.331	24.331	359.2	0.077	5.87	105.3	2.1	0.31	0.1	0.00	0.27	0.13	21
	30 ISL	15.39	15.39	33.266	24.552	338.4	0.109	5.95	104.3	2.5	0.37	0.2	0.02	0.57	0.32	30
1	31	15.24	15.24	33.259	24.579	335.8	0.112	5.96	104.1	2.6	0.38	0.2	0.02	0.60	0.34	31
1	42	14.00	13.99	33.267	24.850	310.3	0.148	5.66	96.4	3.5	0.50	2.0	0.13	0.47	0.30	42
	50 ISL	13.64	13.63	33.269	24.926	303.2	0.172	5.60	94.7	4.0	0.56	3.1	0.11	0.35	0.27	50
1	52	13.58	13.57	33.269	24.938	302.1	0.178	5.59	94.4	4.1	0.58	3.4	0.10	0.32	0.27	52
1	62	13.06	13.05	33.292	25.060	290.7	0.208	5.37	89.8	4.9	0.67	5.0	0.05	0.25	0.27	62
1	73	12.31	12.30	33.335	25.240	273.8	0.239	5.08	83.6	7.1	0.83	8.0	0.03	0.16	0.20	74
	75 ISL	12.11	12.10	33.367	25.302	267.9	0.244	4.94	81.0	8.1	0.89	9.1	0.03	0.14	0.18	76
1	87	11.10	11.09	33.563	25.641	235.9	0.275	4.14	66.5	14.1	1.25	15.2	0.01	0.05	0.10	88
	100 ISL	11.02	11.01	33.578	25.667	233.7	0.305	4.07	65.2	14.9	1.28	15.7	0.01	0.05	0.08	101
1	103	11.00	10.99	33.581	25.673	233.2	0.312	4.06	65.0	15.1	1.29	15.8	0.01	0.05	0.08	104
1	123	10.31	10.30	33.705	25.891	212.8	0.357	3.71	58.6	20.0	1.53	19.3	0.01	0.02	0.05	124
	125 ISL	10.23	10.22	33.719	25.915	210.5	0.361	3.67	57.9	20.6	1.55	19.7	0.01	0.02	0.05	126
1	149	9.36	9.34	33.878	26.185	185.2	0.408	3.14	48.6	27.3	1.80	23.9	0.00	0.00	0.03	150
	150 ISL	9.34	9.32	33.883	26.192	184.6	0.410	3.12	48.3	27.5	1.81	24.0	0.00	0.00	0.03	151
1	180	8.93	8.91	34.019	26.364	168.7	0.463	2.64	40.5	33.7	2.04	26.8	0.00	0.00	0.02	181
	200 ISL	8.80	8.78	34.072	26.427	163.2	0.496	2.27	34.7	36.7	2.17	28.3	0.00	0.00	0.03	202
1	211	8.74	8.72	34.094	26.453	160.8	0.514	2.08	31.8	38.2	2.23	29.0	0.00	0.00	0.03	213
1	241	8.41	8.38	34.152	26.550	152.1	0.561	1.69	25.6	43.4	2.40	31.1	0.01			243
	250 ISL	8.33	8.30	34.166	26.573	150.0	0.575	1.59	24.1	44.8	2.44	31.5	0.01			252
1	282	8.08	8.05	34.203	26.640	144.1	0.622	1.28	19.3	49.2	2.55	32.5	0.01			284
	300 ISL	7.95	7.92	34.216	26.670	141.6	0.648	1.16	17.4	51.2	2.60	33.2	0.01			302
1	338	7.66	7.63	34.236	26.729	136.5	0.700	0.95	14.2	55.2	2.71	34.5	0.01			341
1	399	7.16	7.12	34.262	26.821	128.4	0.781	0.67	9.9	62.7	2.87	36.4	0.00			402
	400 ISL	7.15	7.11	34.262	26.822	128.3	0.783	0.67	9.9	62.8	2.87	36.4	0.00			403
1	466	6.74	6.70	34.282	26.895	122.1	0.865	0.51	7.4	70.1	2.98	38.0	0.00			470
	500 ISL	6.53	6.48	34.295	26.933	118.8	0.906	0.42	6.1	73.7	3.03	38.6	0.00			504
1	537	6.30	6.25	34.310	26.975	115.1	0.949	0.33	4.8	77.7	3.09	39.2	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.2 N	119 29.0 W	18/11/87	2142 GMT	1314 M	350	08 KT	300 03 09	0	1020.6 MB	18.4 C	16.0 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	18.49	18.49	33.413	23.937	3 96.0	0.000	5.51	102.5	2.6	0.31	0.1	0.00	0.10	0.02	0
1	10	17.84	17.84	33.396	24.084	382.3	0.039	5.61	103.1	2.6	0.31	0.1	0.00	0.14	0.04	10
	20 ISL	17.21	17.21	33.366	24.212	370.5	0.077	5.70	103.5	2.5	0.31	0.0	0.00	0.24	0.08	20
1	21	17.15	17.15	33.363	24.225	369.3	0.080	5.71	103.6	2.5	0.31	0.0	0.00	0.25	0.08	21
	30 ISL	16.74	16.74	33.348	24.309	361.5	0.113	5.78	104.0	2.7	0.32	0.0	0.00	0.33	0.13	30
1	31	16.70	16.69	33.346	24.317	360.8	0.117	5.79	104.1		0.32	0.0	0.00	0.34	0.14	31
1	41	16.09	16.08	33.319	24.437	349.7	0.152	5.78	102.7	3.0	0.35	0.2	0.02	0.85	0.32	41
	50 ISL	14.93	14.92	33.280	24.664	328.3	0.183	5.69	98.8	3.7	0.47	1.6	0.13	0.57	0.25	50
1	52	14.64	14.63	33.275	24.722	322.8	0.189	5.65	97.5	3.9	0.51	2.0	0.16	0.47	0.23	52
1	62	13.35	13.34	33.297	25.006	295.9	0.220	5.34	89.8	5.9	0.68	4.8	0.20	0.31	0.24	62
1	72	12.98	12.97	33.334	25.109	286.3	0.249	5.17	86.3	6.9	0.76	6.3	0.17	0.22	0.21	73
	75 ISL	12.83	12.82	33.350	25.151	282.4	0.258	5.11	85.0	7.3	0.79	6.8	0.15	0.20	0.21	76
1	87	12.10	12.09	33.433	25.356	263.1	0.291	4.80	78.7	9.7	0.98	9.7	0.05	0.14	0.19	88
	100 ISL	11.13	11.12	33.543	25.620	238.1	0.323	4.25	68.3	14.4	1.27	14.6	0.02	0.06	0.11	101
1	102	10.99	10.98	33.560	25.658	234.5	0.328	4.16	66.6	15.1	1.31	15.3	0.02	0.05	0.10	103
1	123	10.31	10.30	33.689	25.878	214.0	0.375	3.66	57.8	19.9	1.53	19.0	0.01	0.03	0.06	124
	125 ISL	10.24	10.23	33.704	25.902	211.7	0.379	3.61	56.9	20.5	1.55	19.4	0.01	0.03	0.06	126
1	148	9.59	9.57	33.868	26.139	189.6	0.425	3.05	47.4	26.9	1.79	23.4	0.00	0.01	0.05	149
	150 ISL	9.56	9.54	33.878	26.152	188.4	0.429	3.02	46.9	27.2	1.80	23.6	0.00	0.01	0.05	151
1	179	9.25	9.23	33.988	26.289	175.9	0.482	2.62	40.5	31.4	1.97	26.0	0.00	0.00	0.04	180
	200 ISL	9.01	8.99	34.078	26.398	165.9	0.518	2.26	34.7	35.6	2.12	27.6	0.01	0.00	0.04	202
1	210	8.90	8.88	34.114	26.444	161.7	0.534	2.10	32.2	37.6	2.18	28.2	0.01	0.00	0.04	212
1	240	8.56	8.53	34.148	26.524	154.6	0.582	1.87	28.5	41.3	2.30	29.6	0.01			242
	250 ISL	8.35	8.32	34.148	26.556	151.6	0.597	1.82	27.6	43.1	2.35	30.2	0.01			252
1	282	7.71	7.68	34.144	26.648	143.1	0.644	1.66	24.8	48.8	2.51	32.2	0.01			284
	300 ISL	7.55	7.52	34.154	26.679	140.4	0.670	1.52	22.6	51.2	2.58	33.0	0.01			302
1	338	7.37	7.34	34.183	26.728	136.3	0.722	1.21	17.9	55.7	2.71	34.3	0.01			341
1	400	7.02	6.98	34.232	26.816	128.7	0.804	0.77	11.3	63.0	2.86	36.4	0.00			403
1	467	6.33	6.29	34.259	26.930	118.3	0.887	0.48	6.9	73.4	3.02	38.9	0.02			471
	500 ISL	6.14	6.10	34.280	26.972	114.7	0.926	0.40	5.8	76.8	3.07	39.6	0.02			504
1	540	5.92	5.87	34.306	27.020	110.4	0.971	0.31	4.4	81.0	3.13	40.5	0.02			545

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 25.2 N	119 57.6 W	18/11/87	1631 GMT	845 M	260	01 KT	310 01 09	1	1021.4 MB	17.8 C	15.8 C	4/8	SC

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		17.88	17.88	33.366	24.051	385.2	0.000	5.61	103.2	2.1	0.31	0.1	0.00	0.09	0.03	0
	10	ISL	17.86	17.86	33.366	24.056	385.0	0.039	5.58	102.6	2.1	0.30	0.1	0.00	0.09	0.03	10
1	16		17.85	17.85	33.366	24.059	384.9	0.062	5.56	102.2	2.1	0.30	0.1	0.00	0.09	0.03	16
	20	ISL	17.84	17.84	33.366	24.062	384.8	0.077	5.57	102.4	2.0	0.30	0.1	0.00	0.09	0.03	20
	30	ISL	17.82	17.81	33.366	24.067	384.7	0.115	5.58	102.5	1.9	0.30	0.1	0.00	0.10	0.03	30
1	31		17.82	17.81	33.366	24.067	384.7	0.119	5.58	102.5	1.9	0.30	0.1	0.00	0.10	0.03	31
1	41		15.56	15.55	33.155	24.429	350.4	0.156	6.07	106.7	2.0	0.33	0.0	0.00	0.20	0.09	41
	50	ISL	14.08	14.07	33.119	24.719	322.9	0.186	6.06	103.3	2.6	0.38	0.2	0.01	0.59	0.36	50
1	52		13.84	13.83	33.126	24.774	317.7	0.193	6.06	102.8	2.8	0.40	0.2	0.01	0.66	0.41	52
1	62		13.24	13.23	33.203	24.956	300.7	0.224	5.67	95.1	4.0	0.54	2.6	0.07	0.43	0.34	62
1	72		12.42	12.41	33.306	25.196	278.0	0.253	5.19	85.6	6.6	0.77	6.9	0.03	0.25	0.28	73
	75	ISL	12.26	12.25	33.311	25.230	274.7	0.261	5.14	84.5	6.9	0.80	7.6	0.03	0.23	0.26	76
1	82		11.95	11.94	33.323	25.299	268.4	0.280	5.05	82.5	7.8	0.87	9.0	0.02	0.19	0.22	83
1	97		11.25	11.24	33.539	25.595	240.4	0.318	4.32	69.6	12.7	1.19	14.6	0.02	0.11	0.15	98
	100	ISL	11.13	11.12	33.567	25.639	236.4	0.325	4.18	67.2	13.7	1.24	15.5	0.02	0.10	0.14	101
1	113		10.63	10.62	33.667	25.806	220.8	0.355	3.68	58.5	17.9	1.45	19.0	0.01	0.06	0.11	114
	125	ISL	10.06	10.05	33.768	25.982	204.1	0.380	3.38	53.1	21.6	1.61	21.6	0.01	0.03	0.06	126
1	128		9.93	9.92	33.792	26.023	200.2	0.387	3.32	52.0	22.4	1.65	22.2	0.01	0.02	0.05	129
	150	ISL	9.41	9.39	33.895	26.190	184.8	0.429	3.05	47.3	26.5	1.80	24.8	0.01	0.00	0.04	151
1	154		9.35	9.33	33.907	26.209	183.0	0.436	3.03	46.9	27.0	1.81	25.1	0.01	0.00	0.04	155
1	180		8.84	8.82	33.965	26.336	171.3	0.482	2.97	45.4	30.8	1.87	26.3	0.00	0.00	0.03	181
	200	ISL	8.57	8.55	34.005	26.410	164.6	0.516	2.89	44.0	33.3	1.95	27.3	0.00	0.00	0.02	202
1	211		8.44	8.42	34.024	26.445	161.5	0.534	2.82	42.8	34.7	2.00	27.9	0.00	0.00	0.02	213
1	241		8.06	8.04	34.062	26.53 2	153.6	0.581	2.51	37.8	39.7	2.14	29.5	0.00			243
	250	ISL	7.95	7.92	34.068	26.553	151.7	0.595	2.41	36.2	41.2	2.18	30.1	0.00			252
1	282		7.60	7.57	34.094	26.625	145.2	0.642	2.02	30.1	46.8	2.35	32.3	0.00			284
	300	ISL	7.49	7.46	34.132	26.671	141.2	0.668	1.70	25.2	50.2	2.47	33.4	0.00			302
1	339		7.30	7.27	34.214	26.763	133.1	0.722	1.06	15.7	57.1	2.71	35.5	0.00			342
1	400		6.90	6.86	34.248	26.845	125.9	0.801	0.71	10.4	64.1	2.87	37.2	0.01			403
1	467		6.49	6.45	34.286	26.931	118.4	0.882	0.46	6.7	71.5	2.99	38.6	0.00			471
	500	ISL	6.16	6.12	34.290	26.977	114.2	0.921	0.40	5.8	76.5	3.04	39.7	0.00			504
1	539		5.78	5.73	34.297	27.031	109.2	0.964	0.32	4.6	82.4	3.10	40.9	0.00			544

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 5.1 N	120 38.2 W	18/11/87	1043 GMT	3814 M	220	06 KT			1019.1 MB	17.0 C	15.5 C		

CAST	DEPTH		TETTp	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
	0	ISL	17.03	17.03	33.324	24.222	368.9	0.000	5.67	102.6	1.9	0.32	0.1	0.00	0.16	0.05	0
1	1		17.03	17.03	33.324	24.222	368.9	0.004	5.67	102.6	1.9	0.32	0.1	0.00	0.16	0.05	1
	10	ISL	17.04	17.04	33.320	24.217	369.7	0.037	5.68	102.8	1.6	0.32	0.1	0.00	0.27	0.05	10
1	11		17.04	17.04	33.319	24.216	369.8	0.041	5.68	102.8	1.6	0.32	0.1	0.00	0.28	0.05	11
	20	ISL	17.03	17.03	33.324	24.223	369.5	0.074	5.69	103.0	1.6	0.32	0.1	0.00	0.23	0.06	20
1	27		17.02	17.02	33.331	24.231	368.9	0.100	5.70	103.1	1.6	0.32	0.1	0.00	0.17	0.06	27
	30	ISL	17.03	17.03	33.334	24.231	369.0	0.111	5.70	103.2	1.6	0.32	0.1	0.00	0.17	0.06	30
1	43		17.08	17.07	33.348	24.230	369.5	0.159	5.68	102.9	1.5	0.32	0.1	0.00	0.19	0.06	43
	50	ISL	16.78	16.77	33.349	24.302	362.9	0.184	5.76	103.8	1.4	0.33	0.1	0.00	0.20	0.08	50
1	53		16.46	16.45	33.294	24.333	359.9	0.195	5.80	103.8	1.4	0.33	0.1	0.00	0.21	0.10	53
1	64		13.52	13.51	33.122	24.837	312.1	0.232	5.99	101.0	2.1	0.42	0.4	0.07	0.39	0.29	64
1	74		13.09	13.08	33.166	24.957	300.8	0.263	5.77	96.4	3.0	0.53	2.0	0.09	0.36	0.30	75
	75	ISL	13.03	13.02	33.176	24.977	299.0	0.266	5.73	95.6	3.2	0.55	2.3	0.08	0.33	0.34	76
1	84		12.47	12.46	33.273	25.161	281.6	0.292	5.34	88.1	5.0	0.72	5.8	0.02	0.05	0.64	85
1	99		11.55	11.54	33.395	25.429	256.4	0.332	4.81	77.9	9.1	1.01	11.1	0.01	0.11	0.16	100
	100	ISL	11.50	11.49	33.403	25.444	254.9	0.335	4.78	77.3	9.4	1.03	11.4	0.01	0.11	0.16	101
1	115		10.80	10.79	33.522	25.663	234.4	0.372	4.26	67.9	13.9	1.28	15.6	0.01	0.05	0.09	116
	125	ISL	10.35	10.34	33.612	25.812	220.4	0.394	3.90	61.6	17.5	1.45	18.4	0.00	0.03	0.06	126
1	130		10.14	10.12	33.657	25.882	213.7	0.405	3.72	58.5	19.3	1.53	19.7	0.00	0.02	0.05	131
	150	ISL	9.45	9.43	33.822	26.126	190.8	0.446	3.16	49.0	26.0	1.79	23.7	0.00	0.00	0.03	151
1	156		9.28	9.26	33.862	26.185	185.3	0.457	3.05	47.1	27.7	1.84	24.5	0.00	0.00	0.03	157
1	181		8.74	8.72	33.932	26.326	172.3	0.502	3.08	47.0	31.2	1.89	25.8	0.00	0.00	0.02	182
	200	ISL	8.30	8.28	33.985	26.435	162.1	0.533	3.04	46.0	34.6	1.95	26.8	0.00	0.00	0.02	202
1	212		8.04	8.02	34.013	26.496	156.4	0.553	3.02	45.4	36.9	1.99	27.4	0.00	0.00	0.02	214
1	242		7.65	7.63	34.035	26.571	149.7	0.598	2.76	41.1	42.1	2.11	29.3	0.00			244
	250	ISL	7.56	7.54	34.044	26.591	147.9	0.610	2.61	38.8	43.9	2.17	30.0	0.00			252
1	283		7.24	7.21	34.082	26.666	141.1	0.658	1.95	28.8	51.2	2.43	32.9	0.01			285
	300	ISL	7.09	7.06	34.096	26.698	138.3	0.682	1.72	25.3	54.3	2.52	33.9	0.01			302
1	339		6.81	6.78	34.127	26.761	132.7	0.735	1.33	19.4	60.1	2.67	35.7	0.00			342
1	400		6.60	6.56	34.184	26.835	126.6	0.814	0.87	12.7	66.2	2.86	37.4	0.01			403
1	467		5.99	5.95	34.192	26.921	118.8	0.896	0.64	9.2	75.6	2.98	39.5	0.00			471
	500	ISL	5.65	5.61	34.204	26.972	114.0	0.934	0.53	7.5	81.6	3.05	40.8	0.00			504
1	540		5.23	5.19	34.220	27.035	108.1	0.979	0.39	5.5	88.9	3.14	42.3	0.00			545

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 44.8 N	121 19.0 W	18/11/87	0513 GMT	3602 M	280	09 KT			1018.0 MB	17.8 C	15.6 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		17.37	17.37	33.182	24.033	3 86.9	0.000	5.63	102.5	2.2	0.33	0.2	0.00	0.09	0.03	0
	10	ISL	17.36	17.36	33.182	24.035	3 87.0	0.039	5.63	102.4	2.1	0.33	0.2	0.00	0.09	0.03	10
1	16		17.36	17.36	33.182	24.036	387.2	0.062	5.63	102.4	2.0	0.33	0.2	0.00	0.09	0.03	16
	20	ISL	17.36	17.36	33.182	24.036	387.3	0.077	5.63	102.4	2.0	0.33	0.2	0.00	0.09	0.03	20
	30	ISL	17.35	17.35	33.180	24.037	3 87.5	0.116	5.64	102.6	1.8	0.32	0.2	0.00	0.09	0.03	30
1	31		17.35	17.34	33.180	24.037	3 87.5	0.120	5.64	102.6	1.8	0.32	0.2	0.00	0.09	0.03	31
1	41		17.38	17.37	33.190	24.038	3 87.8	0.159	5.63	102.5	1.5	0.33	0.2	0.00	0.12	0.04	41
	50	ISL	17.36	17.35	33.203	24.053	3 86.6	0.194	5.63	102.4	1.5	0.32	0.2	0.00	0.13	0.04	50
1	52		17.35	17.34	33.206	24.058	386.3	0.201	5.63	102.4	1.5	0.32	0.2	0.00	0.13	0.04	52
1	62		14.91	14.90	33.130	24.553	339.2	0.238	6.14	106.5	1.8	0.34	0.2	0.00	0.19	0.12	62
1	73		13.77	13.76	33.137	24.798	316.1	0.274	6.06	102.7	2.2	0.41	0.2	0.01	0.28	0.21	74
	75	ISL	13.68	13.67	33.151	24.827	313.3	0.280	6.02	101.8	2.3	0.42	0.3	0.05	0.28	0.21	76
1	82		13.46	13.45	33.205	24.914	305.2	0.302	5.85	98.5	2.9	0.46	1.1	0.16	0.29	0.21	83
1	97		12.79	12.78	33.275	25.101	287.7	0.346	5.44	90.4	4.6	0.65	4.9	0.03	0.21	0.21	98
	100	ISL	12.67	12.66	33.289	25.135	284.5	0.355	5.38	89.2	4.9	0.68	5.5	0.03	0.19	0.20	101
1	113		12.01	12.00	33.360	25.317	267.5	0.391	5.04	82.4	7.4	0.85	8.8	0.02	0.13	0.15	114
	125	ISL	11.01	10.99	33.462	25.579	242.6	0.421	4.48	71.7	12.4	1.17	14.1	0.01	0.06	0.09	126
1	128		10.76	10.74	33.491	25.646	236.3	0.428	4.33	69.0	13.8	1.25	15.4	0.01	0.05	0.08	129
	150	ISL	9.84	9.82	33.696	25.964	206.4	0.477	3.56	55.6	21.2	1.60	21.2	0.00	0.01	0.04	151
1	154		9.75	9.73	33.728	26.004	202.6	0.485	3.47	54.1	22.2	1.64	21.8	0.00	0.01	0.04	155
1	180		9.19	9.17	33.843	26.185	185.7	0.536	3.35	51.6	26.2	1.75	23.7	0.00	0.00	0.02	181
	200	ISL	8.75	8.73	33.939	26.330	172.2	0.571	3.10	47.3	30.9	1.87	25.6	0.00	0.00	0.02	202
1	211		8.55	8.53	33.985	26.397	166.1	0.590	2.94	44.7	33.4	1.93	26.6	0.00	0.00	0.02	213
1	241		8.36	8.34	34.047	26.475	159.1	0.639	2.64	40.0	37.6	2.07	28.1	0.00			243
	250	ISL	8.26	8.23	34.056	26.498	157.1	0.653	2.57	38.8	38.9	2.10	28.6	0.00			252
1	282		7.85	7.82	34.076	26.574	150.2	0.702	2.29	34.3	43.7	2.23	30.4	0.00			284
	300	ISL	7.65	7.62	34.093	26.617	146.4	0.729	2.05	30.5	46.9	2.33	31.6	0.00			302
1	338		7.27	7.24	34.130	26.701	138.8	0.783	1.54	22.7	53.8	2.54	34.1	0.00			341
1	399		6.73	6.69	34.174	26.810	129.0	0.865	0.97	14.2	63.4	2.78	37.1	0.00			402
	400	ISL	6.73	6.69	34.175	26.811	129.0	0.866	0.96	14.0	63.5	2.78	37.1	0.00			403
1	466		6.55	6.51	34.252	26.896	121.8	0.949	0.56	8.1	69.8	2.94	38.3	0.00			470
	500	ISL	6.29	6.24	34.264	26.940	117.9	0.990	0.47	6.8	74.3	3.00	39.3	0.00			504
1	535		6.02	5.97	34.277	26.985	113.8	1.030	0.38	5.5	79.0	3.07	40.4	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 25.1 N	121 59.5 W	17/11/87	2327 GMT	3882 M	290	11 KT	300 03 06	2	1015.9 MB	18.6 C	15.9 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		18.27	18.27	33.222	23.846	404.8	0.000	5.54	102.6	2.8	0.33	0.0	0.00	0.08	0.02	0
1	10		18.26	18.26	33.221	23.848	404.9	0.040	5.55	102.7	2.4	0.32	0.0	0.00	0.08	0.02	10
	20	ISL	18.23	18.23	33.221	23.856	404.5	0.081	5.54	102.5	2.1	0.33	0.0	0.00	0.08	0.03	20
1	26		18.21	18.21	33.221	23.861	404.2	0.105	5.53	102.3	2.0	0.33	0.0	0.00	0.08	0.03	26
	30	ISL	18.21	18.20	33.221	23.861	404.3	0.121	5.53	102.3	2.0	0.33	0.0	0.00	0.08	0.03	30
1	42		18.22	18.21	33.221	23.859	404.9	0.170	5.54	102.5	2.0	0.32	0.0	0.00	0.09	0.03	42
	50	ISL	18.20	18.19	33.221	23.864	404.7	0.202	5.54	102.4	2.0	0.32	0.0	0.00	0.10	0.02	50
1	52		18.19	18.18	33.221	23.867	404.6	0.210	5.54	102.4	2.0	0.32	0.0	0.00	0.10	0.02	52
1	63		15.34	15.33	33.191	24.506	343.7	0.252	6.11	106.9	2.1	0.35	0.0	0.00	0.17	0.11	63
1	73		14.75	14.74	33.195	24.637	331.5	0.285	6.09	105.3	2.3	0.36	0.0	0.00	0.21	0.16	74
	75	ISL	14.55	14.54	33.203	24.686	326.8	0.292	6.05	104.2	2.4	0.37	0.0	0.01	0.23	0.19	76
1	82		13.85	13.84	33.234	24.856	310.8	0.314	5.90	100.2	2.8	0.43	0.2	0.05	0.29	0.28	83
1	98		13.07	13.06	33.267	25.040	293.6	0.363	5.56	92.9	4.2	0.60	3.3	0.10	0.22	0.24	99
	100	ISL	12.98	12.97	33.284	25.071	290.7	0.368	5.53	92.3	4.3	0.60	3.5	0.09	0.21	0.23	101
1	114		12.21	12.20	33.413	25.320	267.2	0.407	5.24	86.1	5.9	0.69	6.2	0.02	0.13	0.17	115
	125	ISL	11.34	11.32	33.477	25.532	247.2	0.436	4.78	77.1	10.1	0.97	11.0	0.01	0.08	0.12	126
1	129		11.03	11.01	33.499	25.604	240.3	0.446	4.60	73.7	11.8	1.08	12.9	0.01	0.07	0.10	130
	150	ISL	10.04	10.02	33.650	25.894	213.0	0.493	3.98	62.5	18.2	1.40	18.5	0.00	0.03	0.05	151
1	155		9.88	9.86	33.684	25.948	208.0	0.504	3.88	60.7	19.5	1.45	19.4	0.00	0.02	0.04	156
1	181		9.10	9.08	33.818	26.180	186.2	0.555	3.63	55.8	25.2	1.62	22.5	0.00	0.00	0.02	182
	200	ISL	8.69	8.67	33.897	26.306	174.5	0.589	3.71	56.6	27.9	1.64	23.3	0.00	0.00	0.02	202
1	212		8.47	8.45	33.937	26.372	168.4	0.610	3.77	57.2	29.4	1.65	23.6	0.00	0.00	0.02	214
1	242		8.00	7.98	33.988	26.483	158.2	0.659	3.53	53.0	34.5	1.76	25.6	0.00			244
	250	ISL	7.89	7.86	33.999	26.508	155.9	0.671	3.38	50.6	36.5	1.83	26.5	0.00			252
1	284		7.44	7.41	34.034	26.600	147.5	0.723	2.66	39.4	45.4	2.15	30.6	0.00			286
	300	ISL	7.21	7.18	34.037	26.635	144.3	0.746	2.43	35.8	48.8	2.24	31.9	0.00			302
1	340		6.70	6.67	34.050	26.715	137.0	0.802	1.91	27.8	56.4	2.42	34.4	0.00			343
	400	ISL	6.41	6.37	34.139	26.824	127.3	0.882	1.02	14.8	66.2	2.73	37.5	0.00			403
1	402		6.40	6.36	34.142	26.828	127.0	0.884	0.99	14.3	66.5	2.74	37.6	0.00			405
1	468		5.75	5.71	34.180	26.941	116.7	0.965	0.59	8.4	78.6	2.92	40.5	0.00			472
	500	ISL	5.59	5.55	34.206	26.981	113.1	1.002	0.49	7.0	82.5	2.97	41.0	0.00			504
1	538		5.41	5.37	34.238	27.028	108.9	1.044	0.37	5.2	87.2	3.04	41.6	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 5.2 N	122 39.A W	17/11/87	1723 GMT	3950 M	300	10 KT	010 03 07	2	1019.3 MB	18.0 C	15.8 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	18.59	18.59	33.295	23.822	A07.0	0.000	5.50	102.5	2.1	0.31	0.0	0.00	0.08	0.02	0
1	1	18.59	18.59	33.295	23.822	A07.0	0.00A	5.50	102.5	2.1	0.31	0.0	0.00	0.08	0.02	1
	10 ISL	18.58	18.58	33.296	23.826	A07.0	0.0A1	5.51	102.6	2.1	0.31	0.0	0.00	0.08	0.02	10
1	17	18.57	18.57	33.297	23.829	A06.9	0.069	5.51	102.6	2.0	0.31	0.0	0.00	0.08	0.02	17
	20 ISL	18.57	18.57	33.298	23.830	A06.9	0.081	5.51	102.6	2.0	0.31	0.0	0.00	0.08	0.02	20
	30 ISL	18.57	18.56	33.302	23.83A	A06.9	0.122	5.A9	102.2	1.9	0.30	0.0	0.00	0.08	0.02	30
1	33	18.57	18.56	33.303	23.835	A06.9	0.13A	5.A9	102.2	1.9	0.30	0.0	0.00	0.08	0.02	33
1	A3	18.59	18.58	33.296	23.825	A08.3	0.175	5.50	102.5	1.9	0.30	0.0	0.00	0.08	0.02	A3
	50 ISL	18.59	18.58	33.303	23.831	A07.9	0.20A	5.50	102.5	1.8	0.29	0.0	0.00	0.08	0.02	50
1	5A	18.59	18.58	33.307	23.83A	A07.8	0.220	5.50	102.5	1.8	0.29	0.0	0.00	0.08	0.02	5A
1	6A	16.27	16.26	33.212	2A.31A	362.1	0.258	6.08	108.A	1.8	0.31	0.0	0.00	0.12	0.05	6A
1	75	1A.76	1A.75	33.15A	2A.60A	33A.7	0.297	6.12	105.8	1.9	0.33	0.0	0.00	0.16	0.10	76
1	8A	13.98	13.97	33.218	2A.817	31A.6	0.326	5.95	101.3	2.6	0.A0	0.0	0.01	0.26	0.20	85
1	100	13.51	13.50	33.A36	25.083	289.7	0.37A	5.58	9A.2	3.6	0.A8	2.A	0.09	0.21	0.21	101
1	116	12.63	12.61	33.5A3	25.3A0	265.A	0.A19	5.20	86.2	6.3	0.68	6.3	0.02	0.11	0.1A	117
	125 ISL	11.7A	11.72	33.A77	25.A58	25A.2	0.AA2	A.85	78.9	9.2	0.9A	10.0	0.01	0.08	0.11	126
1	131	11.15	11.13	33.A38	25.536	2A6.9	0.A57	A.63	7A.3	11.2	1.10	12.A	0.01	0.07	0.10	132
	150 ISL	10.27	10.25	33.658	25.862	216.2	0.501	A.62	72.9	1A.2	1.15	1A.8	0.00	0.03	0.0A	151
1	157	10.08	10.06	33.765	25.978	205.3	0.516	A.62	72.6	15.1	1.17	15.1	0.00	0.02	0.02	158
1	183	9.13	9.11	33.869	26.215	183.0	0.566	A.23	65.1	22.3	1.A5	19.7	0.00	0.00	0.03	18A
	200 ISL	8.83	8.81	33.918	26.301	175.0	0.597	A.20	6A.2	2A.5	1.50	20.7	0.00	0.00	0.02	202
1	213	8.67	8.65	33.9A6	26.3A8	170.8	0.619	A.19	63.9	26.1	1.52	21.2	0.00	0.00	0.01	215
1	2A3	8.11	8.09	33.992	26.A70	159.5	0.669	3.77	56.7	33.2	1.73	2A.6	0.00			2A5
	250 ISL	7.98	7.95	33.995	26.A91	157.5	0.680	3.68	55.2	3A.8	1.78	25.3	0.00			252
1	28A	7.36	7.33	33.999	26.58A	1A9.0	0.732	3.20	A7.3	A2.3	2.01	28.A	0.00			286
	300 ISL	7.11	7.08	3A.00A	26.623	1A5.A	0.756	2.93	A3.1	A6.2	2.12	29.9	0.00			302
1	3A0	6.60	6.57	3A.023	26.707	137.7	0.812	2.25	32.7	55.6	2.38	33.5	0.00			3A3
1	A00	6.06	6.03	3A.080	26.823	127.2	0.892	1.33	19.1	67.5	2.7A	38.0	0.00			A03
1	A67	5.63	5.59	3A.1A2	26.925	118.0	0.97A	0.80	11.A	78.3	2.98	A0.5	0.00			A71
	500 ISL	5.A9	5.A5	3A.176	26.969	11A.1	1.012	0.65	9.2	82.3	3.0A	Al.2	0.00			50A
1	5A0	5.33	5.29	3A.217	27.021	109.5	1.057	0.A7	6.6	87.1	3.12	A2.0	0.00			5A5

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 AA.7 N	123 20.2 W	17/11/87	1131 GMT	3986 M	350	07 KT			1019.8 MB	17.2 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	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	18.32	18.32	33.300	23.893	A00.2	0.000	5.51	102.2	1.9	0.32	0.0	0.00	0.08	0.02	0
1	1	18.32	18.32	33.300	23.893	A00.3	0.00A	5.51	102.2	1.9	0.32	0.0	0.00	0.08	0.02	1
	10 ISL	18.32	18.32	33.300	23.893	A00.5	0.0A0	5.52	102.3	1.9	0.32	0.0	0.00	0.08	0.02	10
1	17	18.32	18.32	33.299	23.893	A00.8	0.068	5.53	102.5	1.9	0.32	0.0	0.00	0.08	0.02	17
	20 ISL	18.32	18.32	33.299	23.893	A01.0	0.080	5.53	102.5	1.9	0.32	0.0	0.00	0.08	0.02	20
	30 ISL	18.31	18.30	33.299	23.896	A01.0	0.120	5.52	102.3	1.7	0.32	0.0	0.00	0.08	0.02	30
1	33	18.31	18.30	33.299	23.896	A01.1	0.132	5.52	102.3	1.7	0.32	0.0	0.00	0.08	0.02	33
1	A3	18.37	18.36	33.313	23.892	A01.8	0.172	5.52	102.A	1.7	0.32	0.0	0.00	0.09	0.03	A3
	50 ISL	18.3A	18.33	33.31A	23.901	A01.2	0.200	5.53	102.6	1.6	0.32	0.0	0.00	0.09	0.03	50
1	5A	18.33	18.32	33.31A	23.90A	A01.1	0.217	5.53	102.5	1.6	0.32	0.0	0.00	0.09	0.03	5A
1	6A	15.79	15.78	33.208	2A.420	352.0	0.25A	6.12	108.0	1.7	0.33	0.0	0.00	0.18	0.10	6A
1	7A	1A.50	14.A9	33.240	2A.725	323.0	0.288	6.11	105.2	2.1	0.37	0.0	0.00	0.21	0.18	75
	75 ISL	1A.38	14.37	33.244	24.754	320.4	0.291	6.08	10A.A	2.2	0.38	0.2	0.01	0.22	0.19	76
1	8A	13.A7	13.A6	33.285	2A.973	299.6	0.319	5.71	96.2	3.1	0.53	2.1	0.12	0.28	0.22	85
1	99	12.58	12.57	33.338	25.191	279.2	0.362	5.28	87.A	5.6	0.7A	6.2	0.03	0.19	0.22	100
	100 ISL	12.52	12.51	33.3A1	25.205	277.9	0.365	5.25	86.8	5.8	0.76	6.5	0.03	0.18	0.22	101
1	115	11.54	11.53	33.A07	25.A40	255.7	0.405	4.81	77.9	9.2	1.00	10.6	0.02	0.11	0.15	116
	125 ISL	10.89	10.87	33.487	25.620	238.7	0.430	A.55	72.7	12.0	1.15	13.3	0.01	0.07	0.12	126
1	130	10.58	10.56	33.533	25.710	230.2	0.442	4.43	70.3	13.5	1.22	14.6	0.01	0.05	0.10	131
	150 ISL	9.68	9.66	33.710	26.001	202.7	0.485	3.86	60.1	20.3	1.52	19.9	0.00	0.01	0.04	151
1	156	9.48	9.46	33.758	26.072	196.1	0.497	3.71	57.5	22.2	1.60	21.2	0.00	0.01	0.03	157
1	181	8.84	8.82	33.891	26.278	176.8	0.544	3.47	53.1	27.5	1.76	24.0	0.00	0.00	0.02	182
	200 ISL	8.50	8.48	33.955	26.381	167.3	0.576	3.33	50.6	31.0	1.8A	25.3	0.00	0.00	0.02	202
1	212	8.32	8.30	33.981	26.A29	162.9	0.596	3.27	A9.5	32.9	1.88	25.9	0.00	0.00	0.02	21A
1	242	7.89	7.87	34.010	26.516	155.0	0.644	3.21	48.1	37.1	1.94	27.2	0.00			244
	250 ISL	7.76	7.74	34.014	26.538	153.0	0.656	3.13	46.7	38.7	1.98	27.7	0.00			252
1	282	7.26	7.23	34.022	26.616	145.9	0.704	2.7A	A0.A	A5.6	2.16	30.1	0.00			284
	300 ISL	6.98	6.95	34.022	26.655	142.3	0.730	2.57	37.7	49.3	2.25	31.4	0.00			302
1	338	6.46	6.43	34.027	26.729	135.5	0.783	2.17	31.4	57.0	2.43	34.1	0.00			341
1	399	5.92	5.89	34.085	26.844	125.0	0.862	1.26	18.0	69.6	2.79	38.5	0.00			402
	400 ISL	5.91	5.88	3A.086	26.8A6	12A.8	0.863	1.25	17.9	69.8	2.79	38.6	0.00			403
1	467	5.48	5.44	34.168	26.964	114.2	0.943	0.66	9.3	81.2	3.03	41.2	0.00			471
	500 ISL	5.32	5.28	34.213	27.019	109.2	0.980	0.51	7.2	85.9	3.09	41.9	0.00			504
1	539	5.13	5.09	34.267	27.084	103.3	1.022	0.33	4.6	91.4	3.16	42.7	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.3 N	12A 0.0 W	17/11/87	0555 GMT	4235 M	060	10 KT			1021.0 MB	17.7 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	18.AA	18.AA	33.318	23.877	A01.7	0.000	5.51	102.A	2.1	0.31	0.1	0.00	0.06	0.02	0
	10 ISL	18.AA	18.AA	33.319	23.87 8	A02.0	0.0A0	5.50	102.2	2.0	0.30	0.1	0.00	0.06	0.02	10
1	16	18.AA	18.AA	33.320	23.879	A02.1	0.06A	5.50	102.2	2.0	0.30	0.1	0.00	0.06	0.02	16
	20 ISL	18.A5	18.A5	33.326	23.882	A02.0	0.080	5.50	102.2	2.0	0.30	0.1	0.00	0.06	0.02	20
	30 ISL	18.A7	18.A6	33.3A2	23.889	A01.6	0.121	5.51	102.5	2.0	0.29	0.1	0.00	0.06	0.02	30
1	31	18.A7	18.A6	33.3AA	23.891	A01.5	0.125	5.51	102.5	2.0	0.29	0.1	0.00	0.06	0.02	31
1	A2	18.50	18.A9	33.350	23.889	A02.1	0.169	5.50	102.3	1.9	0.29	0.1	0.00	0.07	0.02	A2
	50 ISL	18.A9	18.A8	33.352	23.893	A02.0	0.201	5.A9	102.1	1.9	0.29	0.1	0.00	0.08	0.02	50
1	52	18.A9	18.A8	3 3.353	23.89A	A02.0	0.209	5.A9	102.1	1.9	0.29	0.1	0.00	0.08	0.02	52
1	63	17.36	17.35	33.37A	2A.185	37A.5	0.252	5.93	108.0	1.8	0.27	0.1	0.00	0.11	0.0A	63
1	73	15.73	15.72	33.A16	2A.59A	335.8	0.287	6.05	106.8	1.8	0.26	0.1	0.00	0.1A	0.09	7A
	75 ISL	15.A6	15.A5	33.391	2A.63A	331.9	0.29A	6.0A	106.1	1.8	0.27	0.1	0.00	0.15	0.10	76
1	8A	1A.51	1A.50	33.290	2A.762	319.9	0.323	5.99	103.1	2.0	0.31	0.1	0.00	0.18	0.17	85
1	98	1A.07	1A.06	33.A51	2A.979	299.6	0.367	5.78	98.7	2.6	0.36	0.8	0.09	0.23	0.25	99
	100 ISL	1A.00	13.99	33.A56	2A.998	297.8	0.373	5.75	98.1	2.7	0.37	1.0	0.09	0.23	0.25	101
1	11A	13.20	13.18	33.A28	25.139	28A.6	0.A13	5.52	92.6	3.9	0.51	3.3	0.06	0.18	0.20	115
	125 ISL	11.97	11.95	33.360	25.32A	267.0	0.AAA	5.25	85.8	6.2	0.73	6.9	0.03	0.11	0.1A	126
1	130	11.A2	11.A0	33.3A7	25.A16	258.3	0.A57	5.12	82.7	7.A	0.8A	8.7	0.02	0.08	0.11	131
	150 ISL	10.68	10.66	33.58A	25.733	228.5	0.505	A.7A	75.A	11.5	1.06	13.0	0.01	0.03	0.05	151
1	155	10.60	10.58	33.660	25.806	221.6	0.517	A.66	7A.0	12.6	1.10	13.8	0.01	0.02	0.0A	156
1	180	9.A9	9.A7	33.829	26.126	191.5	0.568	A.3A	67.3	19.3	1.36	18.5	0.00	0.00	0.02	181
	200 ISL	9.08	9.06	33.897	26.2A5	180.A	0.606	A.23	65.1	22.A	1.A5	20.2	0.00	0.00	0.02	202
1	211	8.9A	8.92	33.919	26.285	176.8	0.625	A.19	6A.2	23.8	1.A8	20.8	0.00	0.00	0.02	213
1	2A2	8.36	8.33	33.981	26.A2A	16A.0	0.678	3.99	60.A	29.5	1.63	23.2	0.00			2AA
	250 ISL	8.2A	8.21	33.988	26.AA7	161.9	0.691	3.96	59.8	30.5	1.65	23.6	0.00			252
1	281	7.78	7.75	33.999	26.52A	15A.9	0.7A0	3.75	56.0	35.1	1.77	25.A	0.00			283
	300 ISL	7.A6	7.A3	3A.00A	26.57A	150.3	0.769	3.35	A9.7	AO.l	1.93	27.6	0.00			302
1	338	6.85	6.82	3A.016	26.668	141.5	0.825	2.AA	35.7	51.0	2.29	32.3	0.00			3A1
1	397	6.20	6.16	3A.051	26.782	131.1	0.905	1.61	23.2	63.0	2.63	36.5	0.00			400
	A00 ISL	6.17	6.13	3A.05A	26.788	130.6	0.909	1.57	22.6	63.6	2.65	36.7	0.00			403
I	465	5.62	5.58	34.114	26.904	119.9	0.990	0.88	12.5	76.3	2.93	40.2	0.00			A69
	500 ISL	5.Al	5.37	3A.1AA	26.954	115.5	1.032	0.71	10.0	81.3	3.01	41.1	0.00			504
1	537	5.19	5.15	34.177	27.006	110.7	1.073	0.52	7.3	86.6	3.10	42.0	0.00			542

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 57.4 N	117 18.2 W	13/11/87	2017 GMT	59 M	220	05 KT	260 02 07	1	1016.2 MB	17.8 C	14.9 C	6/8	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
1	0	18.23	18.23	33.340	23.946	395.2	0.000	5.63	10A.2	l.A	0.31	0.1	0.01	0.32	0.06	0
1	10	17.32	17.32	33.299	2A.135	377.5	0.039	5.86	106.6	1.5	0.35	0.1	0.01	0.AA	0.1A	10
	20 ISL	15.63	15.63	33.262	2A.A95	343.5	0.075	6.00	105.6	1.7	0.38	0.1	0.01	0.39	0.22	20
1	21	15.A6	15.A6	33.259	2A.531	3A0.1	0.078	6.00	105.3	1.7	0.39	0.1	0.01	0.39	0.23	21
	30 ISL	1A.53	1A.53	33.22A	24.705	323.7	0.108	5.88	101.3	2.8	0.53	0.8	0.12	0.87	0.38	30
1	31	14.46	14.46	33.222	24.719	322.5	0.111	5.87	100.9	3.0	0.55	0.9	0.1A	0.91	0.A0	31
1	A2	14.18	14.17	33.277	24.820	313.1	0.146	5.39	92.2	4.8	0.73	2.6	0.41	0.36	0.40	42
	50 ISL	13.76	13.75	33.304	24.928	303.0	0.171	5.25	89.0	5.7	0.79	3.6	0.50	0.28	0.46	50
1	52	13.65	13.64	33.311	24.956	300.A	0.177	5.21	88.2	5.9	0.81	3.9	0.52	0.26	0.A7	52

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.2 N	117 23.7 W	13/11/87	2302 GMT	631 M	220	09 KT	270 03 06	2	101A.3 MB	17.6 C	15.0 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	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	18.35	18.35	33.3A9	23.923	397.A	0.000	5.63	10A.5	1.9	0.31	0.1	0.00	0.23	0.05	0
1	10	18.3A	18.3A	33.373	23.944	395.7	0.040	5.59	103.7	1.7	0.30	0.1	0.00	0.20	0.05	10
	20 ISL	16.36	16.36	33.265	24.333	359.0	0.077	6.01	107.3	1.8	0.35	0.1	0.01	0.22	0.07	20
1	21	16.12	16.12	33.255	24.380	35A.5	0.081	6.05	107.5	1.8	0.36	0.1	0.01	0.22	0.07	21
	30 ISL	1A.61	1A.61	33.219	2A.685	325.7	0.112	6.09	105.0	2.9	0.38	0.1	0.00	0.53	0.17	30
1	31	1A.A8	14.48	33.219	24.712	3 23.1	0.115	6.10	104.9	3.0	0.39	0.1	0.00	0.57	0.19	31
1	42	13.87	13.86	33.308	24.908	304.6	0.149	5.57	94.7	4.A	0.57	2.3	0.24	0.72	0.A7	A2
	50 ISL	13.61	13.60	33.326	2A.976	298.A	0.173	5.39	91.1	5.0	0.6A	3.A	0.22	0.A6	0.38	50
1	52	13.56	13.55	33.329	2A.988	297.3	0.179	5.35	90.A	5.2	0.65	3.6	0.22	0.38	0.3A	52
1	63	13.2A	13.23	33.397	25.106	286.A	0.212	5.07	85.1	6.7	0.76	5.5	0.08	0.27	0.28	63
1	73	12.91	12.90	33.A29	2 5.196	278.1	0.2A0	A.92	82.0	7.6	0.8A	6.8	0.05	0.19	0.21	7A
	75 ISL	12.85	12.8A	33.A30	25.209	276.9	0.2A5	A.91	81.8	7.7	0.85	7.0	0.05	0.18	0.20	76
1	88	12.A6	12.A5	33.A59	25.307	267.8	0.281	A.76	78.6	9.0	0.93	8.8	0.03	0.15	0.18	89
	100 ISL	12.15	12.1A	33.577	25.A58	253.7	0.312	A.22	69.3	12.3	1.13	11.7	0.02	0.09	0.13	101
1	103	12.07	12.06	33.608	25.A98	250.1	0.320	A.08	66.9	13.2	1.18	12.5	0.02	0.07	0.12	10A
1	12A	11.52	11.50	33.692	25.666	234.5	0.370	3.74	60.6	16.2	1.36	15.4	0.02	0.06	0.08	125
	125 ISL	11.50	11.48	33.699	25.675	233.6	0.373	3.71	60.1	16.5	1.37	15.6	0.02	0.06	0.08	126
1	150	10.97	10.95	33.845	25.885	214.2	0.429	3.11	49.9	23.9	1.65	19.6	0.01	0.02	0.06	151
1	181	10.21	10.19	33.877	26.043	199.7	0.493	3.11	49.0	23.9	1.75	21.6	0.02	0.01	0.05	182
	200 ISL	9.67	9.65	33.910	26.160	188.7	0.530	3.05	47.5	26.1	1.81	23.2	0.01	0.02	0.05	202
1	212	9.38	9.36	33.944	26.23A	181.9	0.552	3.01	A6.6	28.2	1.86	2A.3	0.00	0.02	0.05	21A
1	2A2	9.07	9.0A	3A.095	26.A03	166.A	0.60A	2.36	36.3	3A.9	2.13	27.4	0.02			2A4
	250 ISL	8.97	8.9A	3A.101	26.A23	16A.5	0.617	2.2A	3A.A	36.3	2.18	28.0	0.02			252
1	283	8.5A	8.51	3A.095	26.A86	159.0	0.671	1.83	27.8	Al.6	2.3A	30.2	0.01			285
	300 ISL	8.36	8.33	3A.136	26.5A6	153.6	0.697	1.59	2A.1	AA.6	2.A5	31.2	0.01			302
1	339	7.98	7.95	3A.236	26.682	141.2	0.755	1.11	16.7	51.4	2.67	33.2	0.01			342
1	400	7.40	7.36	34.260	26.786	132.0	0.838	0.75	11.1	59.9	2.84	35.A	0.00			403
1	A66	6.78	6.7A	3 A.287	26.893	122.3	0.922	0.A9	7.2	69.1	3.00	37.8	0.01			470
	500 ISL	6.50	6.A5	3A.302	26.9A2	117.9	0.963	0.A0	5.8	73.6	3.07	38.6	0.01			504
1	5A2	6.15	6.10	3A.323	27.005	112.2	1.011	0.29	A.2	79.2	3.15	39.6	0.01			547

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 50.8 N	117 31.9 W	14/11/87	0153 GMT	853 M	200	03 KT			1014.5 MB	18.0 C	16.0 C		

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		17.99	17.99	33.420	24.066	3 83.8	0.000	5.62	103.6	1.8	0.30	0.1	0.00	0.25	0.06	0
1	10		17.98	17.98	33.416	24.065	384.1	0.038	5.64	104.0	1.6	0.30	0.1	0.00	0.21	0.06	10
	20	ISL	17.54	17.54	33.403	24.162	375.3	0.076	5.72	104.6	1.6	0.30	0.1	0.00	0.26	0.09	20
1	21		17.50	17.50	33.402	24.171	374.4	0.080	5.74	104.9	1.6	0.30	0.1	0.00	0.26	0.09	21
1	30		15.39	15.39	33.274	24.558	337.8	0.112	5.98	104.8	2.0	0.37	0.1	0.00	0.44	0.21	30
1	42		14.15	14.14	33.286	24.833	311.8	0.151	5.77	98.6	3.4	0.51	1.2	0.19	1.05	0.48	42
	50	ISL	13.36	13.35	33.279	24.990	2 97.1	0.175	5.53	93.0	4.4	0.63	3.4	0.14	0.77	0.41	50
1	52		13.18	13.17	33.279	25.026	2 93.7	0.181	5.47	91.6	4.7	0.66	4.0	0.12	0.66	0.38	52
1	62		12.55	12.54	33.326	25.186	278.7	0.210	5.19	85.8	6.2	0.80	6.9	0.03	0.25	0.25	62
1	73		12.32	12.31	33.381	25.273	270.6	0.240	5.01	82.5	7.4	0.88	8.3	0.03	0.18	0.20	74
	75	ISL	12.25	12.24	33.398	25.300	268.1	0.246	4.96	81.5	7.7	0.90	8.6	0.03	0.18	0.20	76
1	87		11.80	11.79	33.503	25.467	252.5	0.277	4.64	75.6	9.9	1.03	10.8	0.02	0.16	0.17	88
	100	ISL	11.31	11.30	33.568	25.607	239.4	0.309	4.34	70.0	12.5	1.17	13.5	0.01	0.08	0.10	101
1	103		11.21	11.20	33.583	25.637	236.7	0.316	4.26	68.6	13.2	1.21	14.2	0.01	0.06	0.09	104
1	124		10.83	10.82	33.803	25.877	214.3	0.363	3.38	54.0	19.8	1.57	18.9	0.01	0.07	0.06	125
	125	ISL	10.82	10.80	33.809	2 5.883	213.7	0.365	3.35	53.5	20.0	1.58	19.0	0.01	0.07	0.06	126
1	150		10.50	10.48	33.915	26.022	201.0	0.417	2.87	45.6	24.1	1.78	21.7	0.00	0.06	0.05	151
1	181		9.55	9.53	34.006	26.254	179.4	0.476	2.67	41.5	29.7	1.95	24.9	0.01	0.00	0.03	182
	200	ISL	9.21	9.19	34.031	26.330	172.5	0.510	2.64	40.8	31.7	2.00	25.9	0.01	0.00	0.03	202
1	212		9.06	9.04	34.042	26.362	169.6	0.530	2.62	40.3	32.9	2.03	26.5	0.01	0.00	0.03	214
1	242		8.73	8.70	34.081	26.445	162.2	0.580	2.21	33.8	37.0	2.20	28.6	0.01			244
	250	ISL	8.64	8.61	3 4.094	26.469	160.0	0.593	2.13	32.5	38.1	2.24	29.0	0.01			252
1	284		8.27	8.24	34.152	26.572	150.7	0.646	1.83	27.7	43.2	2.39	30.6	0.01			286
	300	ISL	8.13	8.10	34.176	26.612	147.2	0.670	1.62	24.4	45.9	2.48	31.5	0.01			302
1	339		7.83	7.80	34.222	26.693	140.0	0.726	1.13	16.9	52.2	2.68	33.6	0.01			342
1	400		7.33	7.29	34.257	26.793	131.2	0.808	0.75	11.1	59.7	2.86	35.7	0.01			403
1	467		6.83	6.79	34.286	26.885	123.1	0.893	0.53	7.8	67.4	3.01	37.5	0.00			47 1
	500	ISL	6.58	6.53	34.298	26.929	119.2	0.933	0.43	6.3	71.6	3.06	38.3	0.00			504
1	537		6.29	6.24	34.312	26.978	114.8	0.977	0.32	4.6	76.3	3.12	39.3	0.01			542

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 40.5 N	117 52.5 W	14/11/87	0607 GMT	57 9 M	300	20 KT			1015.0 MB	18.5 C	16.5 C		

CAST	DEPTH		TEMP	POT TEMP	SALINITY	SIGMA	SVA	DYN HT	OXYGEN	OXY	SIO3	PO4	NO3	NO2	CHL-A	PHAEO	PRESS
	M		DEG C	DEG C		THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0		18.06	18.06	33.510	24.117	378.8	0.000	5.62	103.8	1.6	0.27	0.1	0.00	0.29	0.06	0
1	10		18.06	18.06	33.497	24.108	380.1	0.038	5.63	104.0	1.6	0.27	0.1	0.00	0.30	0.08	10
	20	ISL	17.04	17.04	33.383	24.266	365.4	0.075	5.77	104.5	1.8	0.31	0.1	0.00	0.27	0.08	20
1	21		16.91	16.91	33.372	24.288	363.3	0.079	5.79	104.6	1.8	0.32	0.1	0.00	0.27	0.08	21
	30	ISL	16.05	16.05	33.340	24.461	347.0	0.111	5.89	104.6	2.3	0.35	0.1	0.01	0.38	0.18	30
1	31		15.93	15.93	33.336	24.486	344.7	0.114	5.89	104.4	2.4	0.36	0.1	0.01	0.40	0.20	31
1	41		13.85	13.84	33.231	24.853	309.9	0.147	5.81	98.7	3.4	0.50	1.5	0.15	0.72	0.36	41
	50	ISL	13.14	13.13	33.272	25.029	2 93.4	0.174	5.48	91.7	4.9	0.66	4.3	0.17	0.52	0.28	50
1	52		13.06	13.05	33.286	25.055	290.9	0.180	5.40	90.3	5.2	0.70	4.9	0.17	0.45	0.25	52
1	62		12.48	12.47	33.299	25.179	279.4	0.209	5.22	86.2	6.5	0.81	6.8	0.09	0.30	0.19	62
1	72		11.81	11.80	33.393	25.379	260.5	0.236	4.78	77.9	9.9	1.01	10.6	0.02	0.20	0.17	73
	75	ISL	11.60	11.59	33.429	25.446	254.2	0.243	4.63	75.1	11.1	1.08	11.8	0.02	0.17	0.16	76
1	87		10.92	10.91	33.560	25.671	233.0	0.272	4.10	65.6	15.1	1.32	15.9	0.03	0.10	0.13	88
	100	ISL	10.71	10.70	33.600	25.739	226.8	0.302	3.91	62.3	16.7	1.42	17.4	0.02	0.08	0.12	101
1	102		10.68	10.67	33.605	25.748	225.9	0.307	3.89	61.9	17.0	1.43	17.6	0.02	0.08	0.12	103
1	123		9.56	9.55	33.851	26.131	189.9	0.351	3.14	48.8	26.0	1.79	23.3	0.01	0.01	0.04	124
	125	ISL	9.54	9.53	33.857	26.139	189.1	0.354	3.11	48.3	26.4	1.81	23.4	0.01	0.01	0.04	126
1	149		9.28	9.26	33.922	26.232	180.7	0.399	2.93	45.3	29.1	1.90	24.8	0.00	0.01	0.03	150
	150	ISL	9.27	9.25	33.925	26.236	180.4	0.401	2.92	45.1	29.2	1.90	24.8	0.00	0.01	0.03	151
1	180		8.96	8.94	33.996	26.342	170.9	0.453			32.3	1.99	26.2	0.00	0.00	0.03	181
	200	ISL	8.78	8.76	34.035	26.401	165.6	0.487	2.47	37.8	35.1	2.10	27.6	0.00	0.00	0.04	202
1	211		8.69	8.67	34.056	26.431	162.9	0.505	2.36	36.0	36.7	2.16	28.3	0.00	0.00	0.04	213
1	241		8.49	8.46	34.132	26.522	154.8	0.553	2.01	30.5	40.4	2.32	29.6	0.00			2 43
	250	ISL	8.40	8.37	34.139	26.542	153.0	0.566	1.95	29.6	41.5	2.35	30.0	0.00			252
1	282		8.06	8.03	34.154	26.605	147.4	0.614	1.75	26.3	45.4	2.44	31.3	0.00			284
	300	ISL	7.96	7.93	34.183	26.643	144.1	0.641	1.52	22.8	48.0	2.53	32.1	0.00			302
1	339		7.75	7.72	34.245	26.723	137.2	0.696	1.02	15.2	53.8	2.74	33.9	0.00			342
1	400		7.13	7.09	34.264	26.826	127.9	0.776	0.65	9.6	62.5	2.93	36.3	0.00			403
1	467		6.74	6.70	34.288	26.899	121.7	0.860	0.46	6.7	68.9	3.03	37.8	0.00			47 1
	500	ISL	6.52	6.47	34.299	26.937	118.4	0.900	0.39	5.7	72.8	3.09	38.5	0.00			504
1	538		6.27	6.22	34.313	26.982	114.4	0.944	0.32	4.6	77.3	3.15	39.3	0.00			543

j RV NEW HORIZON CALCOFI CRUISE 8711 STATION 93 40

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 30.8 N	118 12.8 W	14/11/87	1022 GMT	1602 M	2 90	24 KT			1014.7 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	17.18	17.18	33.367	24.220	369.1	0.000	5.70	103.5	1.7	0.32	0.0	0.00	0.22	0.07	0
1	1	17.18	17.18	33.367	24.220	369.1	0.004	5.70	103.5	1.7	0.32	0.0	0.00	0.22	0.07	1
	10 ISL	17.17	17.17	33.380	24.232	368.2	0.037	5.70	103.5	1.7	0.32	0.0	0.00	0.21	0.05	10
1	11	17.17	17.17	33.382	24.234	368.1	0.041	5.70	103.5	1.7	0.32	0.0	0.00	0.21	0.05	11
	20 ISL	17.12	17.12	33.368	24.235	368.3	0.074	5.72	103.7	1.6	0.32	0.0	0.00	0.21	0.07	20
1	22	17.11	17.11	33.365	24.235	368.3	0.081	5.72	103.7	1.6	0.32	0.0	0.00	0.21	0.07	22
	30 ISL	15.61	15.61	33.277	24.512	342.2	0.109	5.86	103.1	2.4	0.40	0.5	0.03	0.58	0.24	30
1	32	15.17	15.17	33.259	24.595	334.3	0.116	5.88	102.6	2.7	0.43	0.7	0.04	0.66	0.28	32
1	43	13.75	13.74	33.259	24.895	306.0	0.151	5.63	95.4	3.9	0.57	2.5	0.29	0.38	0.23	43
	50 ISL	12.82	12.81	33.286	25.102	2 86.3	0.172	5.35	89.0	5.9	0.73	5.4	0.16	0.31	0.23	50
1	53	12.51	12.50	33.305	25.177	279.2	0.181	5.23	86.4	6.7	0.80	6.6	0.08	0.29	0.23	53
1	64	12.41	12.40	33.412	25.280	269.8	0.211	5.00	82.5	7.9	0.87	8.2	0.06	0.23	0.20	64
1	74	12.27	12.26	33.490	25.367	261.7	0.237	5.00	82.3	7.7	0.82	8.0	0.03	0.18	0.18	75
	75 ISL	12.20	12.19	33.498	25.387	259.9	0.240	4.95	81.3	8.1	0.85	8.4	0.03	0.17	0.18	76
1	89	11.07	11.06	33.628	25.697	230.6	0.274	4.00	64.2	15.3	1.32	15.6	0.01	0.08	0.12	90
	100 ISL	10.64	10.63	33.735	25.857	215.6	0.299	3.46	55.0	20.0	1.56	19.0	0.01	0.04	0.07	101
1	104	10.55	10.54	33.770	25.900	211.6	0.307	3.30	52.4	21.4	1.63	19.9	0.01	0.03	0.06	105
1	125	10.34	10.33	33.890	26.030	199.6	0.351	2.84	44.9	24.5	1.81	22.3	0.01	0.01	0.04	126
1	150	10.24	10.22	34.053	26.175	186.5	0.399			29.9	2.06	25.0	0.01	0.00	0.03	151
1	181	9.96	9.94	34.090	26.252	179.8	0.456	2.11	33.1	31.8	2.12	26.1	0.01	0.00	0.02	182
	200 ISL	9.81	9.79	34.128	26.307	174.9	0.489	1.98	31.0	33.5	2.18	26.7	0.01	0.00	0.02	202
1	212	9.71	9.69	34.156	26.346	171.5	0.510	1.89	29.5	34.8	2.22	27.2	0.01	0.00	0.02	214
1	241	9.47	9.44	34.232	26.445	162.5	0.559	1.56	24.2	38.0	2.37	28.6	0.01			243
	250 ISL	9.36	9.33	34.244	26.473	160.1	0.573	1.49	23.1	39.1	2.41	29.0	0.01			252
1	281	8.95	8.92	34.263	26.554	152.9	0.622	1.31	20.1	43.0	2.50	30.2	0.01			283
	300 ISL	8.72	8.69	34.257	26.586	150.1	0.650	1.29	19.7	44.7	2.53	30.8	0.01			302
1	337	8.29	8.25	34.238	26.637	145.6	0.705	1.25	18.9	47.9	2.59	31.9	0.01			3 40
1	397	7.71	7.67	34.259	26.740	136.5	0.790	0.90	13.4	54.9	2.76	34.0	0.01			400
	400 ISL	7.67	7.63	34.260	26.747	135.9	0.794	0.88	13.1	55.4	2.77	34.2	0.01			403
1	463	6.89	6.85	34.271	26.865	125.0	0.876	0.58	8.5	65.9	2.96	37.1	0.00			467
	500 ISL	6.72	6.67	3 4.287	26.902	122.0	0.922	0.51	7.4	68.6	3.00	37.7	0.00			504
1	535	6.56	6.51	34.302	26.935	119.2	0.964	0.44	6.4	71.1	3.04	38.3	0.00			540

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.7 N	118 33.5 W	14/11/87	1519 GMT	143 8 M	300	27 KT	310 07 07	1	1015.9 MB	16.3 C	13.6 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	18.67	18.67	33.398	23.881	401.4	0.000	5.47	102.1	1.5	0.32	0.0	0.00	0.09	0.02	0
1	10	18.67	18.67	33.388	23.874	402.4	0.040	5.47	102.1	1.4	0.31	0.0	0.00	0.09	0.02	10
	20 ISL	18.67	18.67	33.389	23.875	402.7	0.080	5.46	101.9	1.4	0.31	0.0	0.00	0.09	0.02	20
1	21	18.67	18.67	33.389	23.875	402.7	0.084	5.46	101.9	1.4	0.31	0.0	0.00	0.09	0.02	21
	30 ISL	18.64	18.63	33.392	23.885	402.1	0.121	5.48	102.2	1.4	0.31	0.0	0.00	0.09	0.03	30
1	31	18.64	18.63	33.392	23.885	402.1	0.125	5.48	102.2	1.4	0.31	0.0	0.00	0.09	0.03	31
1	41	16.46	16.45	33.204	24.264	366.2	0.163	6.04	108.0	1.4	0.32	0.0	0.00	0.13	0.05	41
	50 ISL	15.20	15.19	33.193	24.538	340.2	0.195	6.14	107.1	1.4	0.32	0.0	0.00	0.15	0.07	50
1	52	14.96	14.95	33.202	24.597	334.7	0.202	6.16	107.0	1.4	0.32	0.0	0.00	0.15	0.07	52
1	62	13.60	13.59	33.255	24.923	303.8	0.234	5.79	97.8	3.0	0.48	1.4	0.10	0.33	0.26	62
1	72	13.23	13.22	33.398	25.109	286.4	0.263	5.48	92.0	3.9	0.57	3.5	0.10	0.30	0.25	73
	75 ISL	13.02	13.01	33.416	25.164	281.1	0.272	5.38	89.9	4.6	0.63	4.6	0.09	0.27	0.24	76
1	87	12.11	12.10	33.460	25.375	261.3	0.304	4.96	81.3	8.2	0.89	9.2	0.02	0.16	0.17	88
	100 ISL	11.49	11.48	33.524	25.540	245.8	0.337	4.49	72.7	11.7	1.10	12.5	0.01	0.10	0.13	101
1	102	11.41	11.40	33.535	25.563	243.7	0.342	4.41	71.3	12.2	1.13	13.0	0.01	0.09	0.12	103
1	123	10.75	10.74	33.717	25.824	219.3	0.391	3.51	56.0	18.7	1.51	18.6	0.01	0.05	0.08	124
	125 ISL	10.69	10.68	33.736	25.849	216.9	0.395	3.44	54.8	19.3	1.54	19.1	0.01	0.05	0.08	126
1	148	10.13	10.11	33.932	26.099	193.6	0.442	2.72	42.8	26.0	1.84	23.3	0.00	0.00	0.04	149
	150 ISL	10.11	10.09	33.946	26.114	192.2	0.446	2.67	42.0	26.5	1.86	23.6	0.00	0.00	0.04	151
1	179	9.86	9.84	34.095	26.273	177.7	0.500	2.11	33.1	31.7	2.10	26.2	0.00	0.00	0.03	180
	200 ISL	9.56	9.54	34.137	26.355	170.2	0.536	1.99	31.0	34.1	2.18	27.2	0.00	0.00	0.03	202
1	210	9.42	9.40	34.146	26.386	167.5	0.553	1.97	30.6	35.0	2.20	27.5	0.00	0.00	0.03	212
1	239	9.24	9.21	34.169	26.433	163.5	0.601	1.88	29.1	37.0	2.25	28.3	0.00			241
	250 ISL	9.18	9.15	34.185	26.456	161.6	0.619	1.79	27.6	38.0	2.29	28.6	0.00			252
1	280	8.98	8.95	34.225	26.520	156.1	0.667	1.54	23.7	41.1	2.40	29.6	0.00			282
	300 ISL	8.73	8.70	34.224	26.558	152.7	0.698	1.47	22.5	43.5	2.45	30.4	0.00			302
1	336	8.25	8.22	34.216	26.626	146.6	0.751	1.36	20.6	48.1	2.54	31.8	0.01			339
1	397	7.67	7.63	34.254	26.742	136.2	0.838	0.92	13.7	56.0	2.74	34.1	0.00			400
	400 ISL	7.64	7.60	34.255	26.748	135.8	0.842	0.90	13.4	56.5	2.75	34.2	0.00			403
1	465	6.91	6.87	34.279	26.869	124.7	0.926	0.55	8.1	66.8	2.95	37.0	0.00			46 9
	500 ISL	6.65	6.60	34.291	26.914	120.7	0.969	0.48	7.0	70.5	3.01	38.0	0.00			504
1	538	6.37	6.32	34.304	26.962	116.5	1.014	0.40	5.8	74.5	3.08	39.0	0.00			543

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 12.5 N	118 54.1 W	14/11/87	2022 GMT	1280 M	300	25 KT	310 09 08	1	1015.1 MB	17.3 C	14.1 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	18.51	18.51	33.403	23.925	3 97.2	0.000	5.49	102.2	1.8	0.31	0.1	0.00	0.12	0.03	0
1	1		18.51	18.51	33.403	23.925	397.3	0.004	5.49	102.2	1.8	0.31	0.1	0.00	0.12	0.03	1
	10	ISL	18.51	18.51	33.395	23.919	398.1	0.040	5.49	102.2	1.7	0.31	0.1	0.00	0.12	0.04	10
1	11		18.51	18.51	33.394	23.918	398.2	0.044	5.49	102.2	1.7	0.31	0.1	0.00	0.12	0.04	11
	20	ISL	18.51	18.51	33.390	23.916	398.8	0.080	5.49	102.2	1.7	0.31	0.1	0.01	0.12	0.03	20
1	22		18.51	18.51	33.389	23.915	398.9	0.088	5.49	102.2	1.7	0.31	0.1	0.01	0.12	0.03	22
	30	ISL	18.53	18.52	33.386	23.908	399.9	0.120	5.48	102.0	1.8	0.31	0.1	0.01	0.12	0.04	30
1	32		18.53	18.52	33.385	23.907	400.0	0.128	5.48	102.0	1.8	0.31	0.1	0.01	0.12	0.04	32
1	43		18.32	18.31	33.393	23.966	394.8	0.171	5.55	102.9	2.0	0.31	0.1	0.01	0.19	0.07	43
	50	ISL	17.08	17.07	33.321	24.210	371.7	0.198	5.78	104.7	2.1	0.33	0.2	0.01	0.20	0.09	50
1	53		16.43	16.42	33.295	24.341	359.2	0.209	5.88	105.2	2.1	0.35	0.2	0.01	0.21	0.11	53
1	64		14.36	14.35	33.327	24.822	313.6	0.246	5.88	101.0	3.6	0.47	0.9	0.06	0.34	0.23	64
1	74		13.44	13.43	33.366	25.042	292.8	0.276	5.54	93.4	5.4	0.64	3.9	0.16	0.37	0.27	75
	75	ISL	13.33	13.32	33.370	25.067	2 90.4	0.279	5.49	92.3	5.6	0.66	4.4	0.15	0.36	0.27	76
1	88		11.99	11.98	33.447	25.387	260.1	0.315	4.72	77.2	9.5	1.01	10.8	0.03	0.19	0.22	89
	100	ISL	11.14	11.13	33.558	25.630	237.2	0.345	4.10	65.9	14.3	1.30	15.6	0.02	0.05	0.09	101
1	104		10.92	10.91	33.595	25.698	230.8	0.354	3.94	63.0	15.9	1.38	16.9	0.02	0.02	0.05	105
1	125		10.03	10.02	33.695	25.931	209.0	0.400	3.71	58.2	20.4	1.55	20.1	0.01	0.02	0.05	126
1	150		9.50	9.48	33.897	26.177	186.0	0.450	3.06	47.5	27.0	1.83	24.0	0.01	0.00	0.03	151
1	181		9.02	9.00	34.001	26.336	171.4	0.505	2.75	42.3	31.6	1.99	26.2	0.01	0.00	0.02	182
	200	ISL	8.61	8.59	34.006	26.404	165.2	0.537	2.96	45.1	33.0	1.97	26.3	0.01	0.00	0.02	202
1	212		8.39	8.37	34.008	26.440	161.9	0.557	3.05	46.2	34.1	1.96	26.5	0.01	0.00	0.02	214
1	242		8.27	8.25	34.096	26.527	154.1	0.604	2.27	34.3	40.2	2.25	29.4	0.01			244
	250	ISL	8.20	8.17	34.110	26.549	152.2	0.616	2.13	32.1	41.7	2.30	30.0	0.01			252
1	284		7.84	7.81	34.149	26.633	144.7	0.667	1.67	25.0	47.8	2.47	32.0	0.01			286
	300	ISL	7.68	7.65	34.163	26.668	141.6	0.690	1.49	22.2	50.5	2.55	32.9	0.01			302
1	339		7.33	7.30	34.197	26.745	134.7	0.744	1.11	16.4	56.3	2.73	34.8	0.00			342
1	400		6.98	6.94	34.262	26.845	126.0	0.823	0.68	10.0	63.4	2.93	36.8	0.00			403
1	467		6.55	6.51	34.292	26.927	118.8	0.905	0.42	6.1	70.7	3.06	38.4	0.01			471
	500	ISL	6.31	6.26	34.313	26.976	114.5	0.944	0.35	5.1	74.8	3.11	39.2	0.01			504
1	540		6.02	5.97	34.339	27.034	109.3	0.988	0.26	3.7	79.8	3.17	40.2	0.00			545

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 0.7 N	119 14.5 W	15/11/87	0116 GMT	1596 M	310	28 KT	310 09 08	1	1015.1 MB	18.0 C	14.6 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	18.65	18.65	33.484	23.952	394.6	0.000	5.51	102.9	1.9	0.29	0.1	0.00	0.11	0.03	0
1	1		18.65	18.65	33.484	23.952	394.7	0.004	5.51	102.9	1.9	0.29	0.1	0.00	0.11	0.03	1
	10	ISL	18.66	18.66	33.484	23.950	395.2	0.039	5.49	102.5	1.8	0.29	0.0	0.00	0.11	0.03	10
1	15		18.66	18.66	33.484	23.950	395.4	0.059	5.47	102.2	1.8	0.29	0.0	0.00	0.11	0.03	15
	20	ISL	18.66	18.66	33.484	23.950	395.5	0.079	5.47	102.2	1.8	0.29	0.0	0.00	0.11	0.03	20
	30	ISL	18.66	18.65	33.485	23.951	395.7	0.119	5.48	102.3	1.8	0.29	0.0	0.00	0.11	0.04	30
1	32		18.66	18.65	33.485	23.951	395.8	0.127	5.48	102.3	1.8	0.29	0.0	0.00	0.11	0.04	32
1	42		18.69	18.68	33.482	23.942	3 97.1	0.166	5.47	102.2	1.6	0.29	0.0	0.00	0.11	0.03	42
	50	ISL	16.56	16.55	33.466	24.442	349.5	0.196	5.85	105.0	2.7	0.35	0.2	0.01	0.30	0.16	50
1	52		15.89	15.88	33.469	24.598	334.7	0.203	5.92	104.9	3.1	0.38	0.2	0.01	0.35	0.20	52
1	62		13.29	13.28	33.477	25.157	281.5	0.234	5.40	90.8	6.6	0.73	5.4	0.11	0.40	0.29	62
1	72		11.84	11.83	33.540	25.487	250.2	0.260	4.47	72.9	11.3	1.11	12.1	0.04	0.34	0.29	73
	75	ISL	11.52	11.51	33.563	25.564	242.9	0.268	4.28	69.3	12.8	1.20	13.8	0.03	0.29	0.27	76
1	81		11.02	11.01	33.610	25.692	230.9	0.282			15.6	1.36	16.5	0.02	0.19	0.21	82
1	96		10.46	10.45	33.707	25.866	214.6	0.315	3.52	55.8	19.5	1.55	19.8	0.01	0.08	0.12	97
	100	ISL	10.37	10.36	33.716	25.889	212.5	0.324	3.48	55.0	20.0	1.57	20.2	0.01	0.07	0.11	101
1	111		10.13	10.12	33.742	25.950	206.9	0.347	3.39	53.3	21.3	1.63	21.0	0.01	0.05	0.08	112
	125	ISL	9.73	9.72	33.834	26.089	193.9	0.375	3.13	48.8	25.2	1.76	22.9	0.01	0.02	0.05	126
1	126		9.70	9.69	33.841	26.100	192.9	0.377	3.11	48.5	25.5	1.77	23.1	0.01	0.02	0.05	127
	150	ISL	9.07	9.05	33.975	26.307	173.5	0.421	2.73	42.0	31.5	1.97	26.2	0.01	0.00	0.04	151
1	151		9.05	9.03	33.979	26.313	173.0	0.423	2.72	41.8	31.7	1.98	26.3	0.01	0.00	0.04	152
1	176		8.74	8.72	34.053	26.421	163.2	0.465	2.44	37.3	35.7	2.11	27.9	0.00	0.01	0.03	177
	200	ISL	8.57	8.55	34.104	26.487	157.3	0.503	2.16	32.9	39.1	2.23	29.0	0.01	0.03	0.03	202
1	207		8.51	8.49	34.114	26.504	155.8	0.514	2.08	31.6	40.1	2.26	29.3	0.01	0.03	0.03	209
1	235		8.08	8.06	34.127	26.580	149.0	0.557	1.89	28.5	44.6	2.38	30.9	0.01			237
	250	ISL	7.85	7.83	34.133	26.619	145.4	0.579	1.76	26.4	47.3	2.44	31.8	0.01			252
1	275		7.49	7.46	34.140	26.677	140.2	0.614	1.55	23.0	51.8	2.54	33.2	0.00			277
	300	ISL	7.13	7.10	34.137	26.725	135.8	0.649	1.38	20.3	56.3	2.63	34.7	0.00			302
1	330		6.82	6.79	34.146	26.775	131.3	0.689	1.17	17.1	60.8	2.74	36.1	0.00			333
1	390		6.98	6.94	34.271	26.852	125.1	0.766	0.59	8.7	65.0	2.94	36.9	0.00			3 93
	400	ISL	6.94	6.90	34.278	26.864	124.2	0.778	0.54	7.9	66.0	2.96	37.1	0.00			403
1	457		6.54	6.50	34.297	26.933	118.2	0.847	0.39	5.7	72.2	3.06	38.4	0.01			461
	500	ISL	6.24	6.20	34.315	26.987	113.4	0.897	0.32	4.6	77.0	3.12	39.4	0.00			504
1	528		6.05	6.00	34.328	27.021	110.3	0.929	0.28	4.0	80.1	3.16	40.0	0.00			533

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 50.8 N	119 35.0 W	15/11/87	0601 GMT	183 9 M	320	25 KT			1017.0 MB	17.5 C	14.9 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
	0 ISL	18.75	18.75	33.583	24.002	389.8	0.000	5.45	102.0	1.8	0.28	0.0	0.00	0.12	0.04	0
1	1	18.75	18.75	33.583	24.002	389.9	0.004	5.45	102.0	1.8	0.28	0.0	0.00	0.12	0.04	1
	10 ISL	18.75	18.75	33.578	23.999	390.5	0.039	5.45	102.0	1.8	0.28	0.0	0.00	0.16	0.09	10
1	17	18.75	18.75	33.574	23.996	391.0	0.066	5.45	102.0	1.8	0.28	0.0	0.00	0.18	0.12	17
	20 ISL	18.75	18.75	33.575	23.997	391.0	0.078	5.45	102.0	1.7	0.28	0.0	0.00	0.17	0.10	20
	30 ISL	18.74	18.73	33.576	24.001	391.0	0.117	5.45	102.0	1.6	0.28	0.0	0.00	0.12	0.05	30
1	31	18.74	18.73	33.576	24.001	391.1	0.121	5.45	102.0	1.6	0.28	0.0	0.00	0.12	0.04	31
1	41	18.78	18.77	33.576	23.991	392.3	0.160	5.46	102.2	1.8	0.28	0.0	0.00	0.13	0.05	41
	50 ISL	18.25	18.24	33.562	24.113	381.1	0.195	5.63	104.4	2.3	0.31	0.0	0.00	0.23	0.13	50
1	51	18.19	18.18	33.560	24.126	379.8	0.199	5.64	104.5	2.4	0.31	0.0	0.00	0.24	0.14	51
1	61	13.48	13.47	33.491	25.130	284.1	0.232	5.49	92.7	6.3	0.69	4.8	0.11	0.40	0.26	61
1	71	11.96	11.95	33.494	25.429	255.7	0.259	4.65	76.0	10.0	1.05	11.2	0.04	0.37	0.29	72
	75 ISL	11.52	11.51	33.518	25.530	246.2	0.269	4.41	71.4	11.8	1.16	13.3	0.02	0.27	0.24	76
1	80	11.09	11.08	33.556	25.637	236.1	0.281	4.17	66.9	14.0	1.27	15.5	0.01	0.14	0.16	81
1	95	10.63	10.62	33.666	25.804	220.4	0.315	3.71	59.0	17.5	1.47	18.4	0.01	0.11	0.15	96
	100 ISL	10.47	10.46	33.690	25.851	216.1	0.326	3.62	57.4	18.6	1.52	19.2	0.01	0.09	0.14	101
1	II0	10.18	10.17	33.730	25.932	208.5	0.348	3.49	55.0	20.5	1.60	20.5	0.01	0.05	0.10	111
1	125	9.91	9.90				0.378	3.27	51.2	22.8	1.73	22.2	0.00	0.03	0.05	126
1	150	9.49	9.47	33.890	26.173	186.4	0.427	2.99	46.4	26.8	1.84	24.2	0.00	0.01	0.04	151
1	175	8.86	8.84	34.029	26.383	166.8	0.471	2.56	39.2	33.5	2.06	27.4	0.00	0.00	0.03	176
	200 ISL	8.39	8.37	34.063	26.483	157.7	0.511	2.50	37.9	37.5	2.14	28.6	0.00	0.00	0.02	202
1	205	8.31	8.29	34.063	26.495	156.6	0.519	2.49	37.7	38.2	2.15	28.7	0.00	0.00	0.02	207
1	236	7.85	7.83	34.082	26.579	149.0	0.566	2.27	34.0	43.3	2.27	30.4	0.01			238
	250 ISL	7.65	7.63	34.085	26.610	146.1	0.587	2.15	32.0	45.7	2.33	31.3	0.01			252
1	277	7.32	7.29	34.096	26.666	141.1	0.626	1.86	27.5	50.4	2.45	32.9	0.01			279
	300 ISL	7.19	7.16	34.132	26.713	137.0	0.658	1.53	22.6	54.3	2.58	34.2	0.01			302
1	333	7.08	7.05	34.191	26.775	131.6	0.702	1.06	15.6	59.2	2.76	35.7	0.01			336
1	394	6.85	6.81	34.265	26.865	123.8	0.780	0.60	8.8	65.4	2.94	37.5				3 97
	400 ISL	6.82	6.78	34.270	26.874	123.2	0.788	0.57	8.3	65.9	2.95	37.6	0.01			403
1	461	6.50	6.46	34.306	26.945	117.0	0.861	0.37	5.4	71.8	3.06	38.8	0.01			465
	500 ISL	6.21	6.17	34.321	26.995	112.6	0.906	0.31	4.5	76.6	3.11	39.8	0.00			504
1	534	5.95	5.90	34.335	27.040	108.6	0.943	0.26	3.7	80.8	3.16	40.7	0.00			53 9

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 30.5 N	120 14.9 W	15/11/87	1324 GMT	3926 M	300	25 KT			1019.2 MB	16.2 C	14.0 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	17.61	17.61	33.138	23.942	395.6	0.000	5.60	102.4	1.6	0.35	0.0	0.01	0.09	0.03	0
1	1	17.61	17.61	33.138	23.942	395.6	0.004	5.60	102.4	1.6	0.35	0.0	0.01	0.09	0.03	1
	10 ISL	17.61	17.61	33.138	23.942	395.9	0.040	5.61	102.5	1.5	0.35	0.0	0.00	0.08	0.03	10
1	17	17.60	17.60	33.138	23.945	395.8	0.067	5.61	102.5	1.5	0.35	0.0	0.00	0.08	0.03	17
	20 ISL	17.60	17.60	33.138	23.945	396.0	0.079	5.61	102.5	1.5	0.35	0.0	0.00	0.08	0.03	20
	30 ISL	17.59	17.58	33.138	23.948	3 96.0	0.119	5.59	102.1	1.5	0.35	0.0	0.00	0.09	0.02	30
1	32	17.59	17.58	33.138	23.948	3 96.1	0.127	5.59	102.1	1.5	0.35	0.0	0.00	0.09	0.02	32
1	43	17.62	17.61	33.138	23.941	3 97.1	0.170	5.59	102.2	1.5	0.34	0.0	0.00	0.09	0.02	43
	50 ISL	17.43	17.42	33.141	23.989	392.8	0.198	5.63	102.5	1.4	0.34	0.0	0.00	0.09	0.03	50
1	52	17.38	17.37	33.142	24.002	391.6	0.206	5.64	102.6	1.4	0.34	0.0	0.00	0.09	0.03	52
1	63	15.69	15.68	33.148	24.396	354.3	0.247	6.06	106.7	1.4	0.35	0.0	0.00	0.16	0.09	63
1	73	14.51	14.50	33.107	24.621	333.0	0.281	6.12	105.3	1.6	0.37	0.0	0.00	0.19	0.14	74
	75 ISL	14.26	14.25	33.100	24.668	328.5	0.288	6.11	104.6	1.7	0.38	0.1	0.01	0.20	0.15	76
1	83	13.36	13.35	33.096	24.849	311.4	0.313	5.98	100.5	2.3	0.44	0.3	0.07	0.25	0.17	84
1	99	12.57	12.56	33.251	25.125	285.4	0.361	5.42	89.6	4.7	0.70	5.2	0.04	0.19	0.20	100
	100 ISL	12.53	12.52	33.259	25.139	284.1	0.364	5.39	89.1	4.8	0.71	5.4	0.04	0.19	0.20	101
1	114	11.97	11.96	33.351	25.317	267.4	0.403	5.02	82.0	7.3	0.89	8.8	0.02	0.12	0.16	115
	125 ISL	11.28	11.26	33.414	25.493	250.8	0.431	4.65	74.9	10.5	1.09	12.4	0.01	0.07	0.10	126
1	130	10.95	10.93	33.446	25.578	242.9	0.443	4.48	71.6	12.2	1.19	14.1	0.01	0.05	0.07	131
	150 ISL	9.90	9.88	33.624	25.897	212.6	0.489	3.88	60.7	18.9	1.50	19.4	0.00	0.01	0.04	151
1	156	9.65	9.63	33.680	25.983	204.6	0.502	3.73	58.0	20.8	1.58	20.7	0.00	0.01	0.03	157
1	181	9.00	8.98	33.848	26.219	182.5	0.550	3.32	51.0	26.9	1.79	24.1	0.00	0.00	0.02	182
	200 ISL	8.63	8.61	33.929	26.341	171.2	0.583	3.22	49.0	30.3	1.86	25.5	0.00	0.00	0.02	202
1	212	8.43	8.41	33.963	26.398	165.9	0.604	3.19	48.4	32.2	1.89	26.1	0.00	0.00	0.02	214
1	242	8.04	8.02	34.007	26.492	157.4	0.652	2.96	44.5	36.7	2.01	27.8	0.00			244
	250 ISL	7.94	7.91	34.020	26.517	155.1	0.665	2.81	42.1	38.5	2.07	28.5	0.00			252
1	283	7.58	7.55	34.076	26.614	146.3	0.714	2.13	31.7	46.1	2.34	31.5	0.00			285
	300 ISL	7.44	7.41	34.099	26.652	142.9	0.739	1.87	27.7	49.0	2.44	32.6	0.00			302
1	340	7.15	7.12	34.140	26.725	136.4	0.795	1.39	20.5	55.0	2.62	34.6	0.00			343
	400 ISL	6.63	6.59	34.176	26.825	127.5	0.874	0.92	13.4	63.9	2.83	37.1	0.00			403
1	401	6.62	6.58	34.176	26.826	127.4	0.875	0.91	13.2	64.0	2.83	37.1	0.00			404
1	467	6.12	6.08	34.217	26.924	118.7	0.957	0.58	8.3	73.4	3.00	39.5	0.00			471
	500 ISL	5.93	5.89	34.238	26.965	115.1	0.995	0.48	6.9	77.1	3.05	40.2	0.00			504
1	538	5.72	5.67	34.262	27.010	111.1	1.038	0.36	5.1	81.4	3.11	40.9	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8711 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 55.3 W	15/11/87	2138 GMT	3 87 5 M	340	22 KT	340 08 07	0	1019.2 MB	17.6 C	1A.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
1	0		18.30	18.30	33.260	23.867	A02.7	0.000	5.52	102.3	2.0	0.33	0.2	0.00	0.08	0.02	0
	10	ISL	18.31	18.31	33.261	23.866	A03.1	0.0A0	5.53	102.5	1.9	0.33	0.2	0.00	0.08	0.02	10
1	16		18.32	18.32	33.261	23.86A	A03.6	0.06A	5.5A	102.7	1.8	0.33	0.2	0.00	0.08	0.02	16
	20	ISL	18.31	18.31	33.261	23.866	A03.5	0.081	5.5A	102.7	1.8	0.33	0.2	0.00	0.08	0.02	20
	30	ISL	18.30	18.29	33.262	23.870	A03.5	0.121	5.53	102.5	1.7	0.32	0.2	0.00	0.08	0.02	30
1	32		18.30	18.29	33.262	23.870	A03.5	0.129	5.53	102.5	1.7	0.32	0.2	0.00	0.08	0.02	32
1	A3		18.3A	18.33	33.265	23.863	A0A.6	0.173	5.53	102.5	1.7	0.32	0.2	0.00	0.08	0.02	A3
	50	ISL	16.91	16.90	33.213	2A.167	375.8	0.201	5.96	107.5	1.7	0.31	0.2	0.00	0.11	0.0A	50
1	53		16.22	16.21	33.195	2A.312	362.0	0.212	6.15	109.5	1.7	0.31	0.2	0.00	0.13	0.05	53
1	6A		15.00	1A.99	33.175	2A.568	337.8	0.250	6.1A	106.7	1.9	0.32	0.2	0.00	0.15	0.07	6A
1	7A		15.17	15.16	33.379	2A.688	326.7	0.28A	6.01	10A.9	1.9	0.32	0.2	0.00	0.16	0.13	75
	75	ISL	15.1A	15.13	33.393	2A.706	325.0	0.287	5.99	10A.5	1.9	0.32	0.2	0.00	0.17	0.1A	76
1	8A		1A.77	1A.76	33.A96	2A.866	310.1	0.315	5.78	100.2	2.2	0.32	0.2	0.01	0.2A	0.2A	85
1	100		1A.68	1A.67	33.616	2A.978	299.9	0.36A	5.68	98.3	2.A	0.32	0.A	0.09	0.21	0.21	101
1	115		13.98	13.96	33.655	25.156	283.3	0.A08	5.A7	93.A	3.2	0.A2	2.1	0.13	0.16	0.20	116
	125	ISL	13.25	13.23	33.6A7	25.299	269.8	0.436	5.32	89.A	A.3	0.53	A.2	0.07	0.12	0.15	126
1	131		12.78	12.76	33.639	25.386	261.6	0.A52	5.22	86.9	5.1	0.61	5.7	0.02	0.10	0.12	132
	150	ISL	11.A7	11.A5	33.6A3	25.637	237.8	0.A99	A.90	79.3	8.6	0.87	10.2	0.01	0.06	0.07	151
1	157		11.02	11.00	33.65A	25.728	229.3	0.515	A.78	76.6	10.2	0.98	11.9	0.01	0.05	0.06	158
1	182		9.65	9.63	33.756	26.0A2	199.5	0.569	A.29	66.8	17.9	1.37	18.2	0.00	0.01	0.02	183
	200	ISL	9.03	9.01	33.8A0	26.209	183.9	0.603	3.90	59.9	23.8	1.59	21.7	0.00	0.00	0.02	202
1	212		8.7A	8.72	33.893	26.296	175.7	0.625	3.65	55.7	27.5	1.71	23.5	0.00	0.00	0.02	21A
1	2A1		8.25	8.23	33.987	26.AA5	161.9	0.67A	3.25	A9.1	33.7	1.90	26.1	0.00			2A3
	250	ISL	8.11	8.08	3A.002	26.A78	158.9	0.688	3.1A	A7.3	35.6	1.96	26.8	0.00			252
1	280		7.67	7.6A	3A.029	26.564	151.1	0.735	2.79	Al.6	Al.8	2.13	29.2	0.00			282
	300	ISL	7.36	7.33	3A.036	26.61A	1A6.5	0.765	2.5A	37.6	A6.0	2.23	30.7	0.00			302
2	338		6.82	6.79	34.048	26.698	138.7	0.819	2.03	29.7	53.7	2.43	33.5	0.00			341
2	398		6.25	6.21	34.106	26.819	127.7	0.899	1.20	17.3	65.2	2.77	37.7	0.00			401
	400	ISL	6.24	6.20	34.109	26.823	127.4	0.901	1.18	17.0	65.5	2.78	37.8	0.00			403
2	466		6.10	6.06	34.206	26.918	119.2	0.983	0.62	8.9	73.4	2.99	39.2	0.00			470
	500	ISL	5.89	5.85	34.235	26.968	114.8	1.022	0.50	7.2	78.3	3.05	39.9	0.00			504
2	537		5.66	5.61	34.268	27.022	109.8	1.064	0.36	5.1	83.6	3.12	40.6	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 50.8 N	121 35.9 W	16/11/87	0459 GMT	4119 M	340	20 KT			1020.1 MB	17.6 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	18.81	18.81	33.422	23.865	403.0	0.000	5.48	*02.6	2.2	0.28	0.1	0.00	0.07	0.02	0
1	1		18.81	18.81	33.422	23.865	403.0	0.004	5.48	102.6	2.2	0.28	0.1	0.00	0.07	0.02	1
	10	ISL	18.82	18.82	33.421	23.862	403.6	0.040	5.48	102.6	2.0	0.28	0.1	0.00	0.06	0.02	10
1	17		18.83	18.83	33.420	23.859	404.1	0.069	5.48	102.6	1.9	0.28	0.1	0.00	0.06	0.02	17
	20	ISL	18.83	18.83	33.420	23.859	404.2	0.081	5.49	102.8	1.9	0.28	0.1	0.00	0.06	0.02	20
	30	ISL	18.81	18.80	33.420	23.864	404.1	0.121	5.51	103.1	1.9	0.28	0.1	0.00	0.06	0.02	30
1	32		18.81	18.80	33.420	23.864	404.2	0.129	5.51	103.1	1.9	0.28	0.1	0.00	0.06	0.02	32
1	43		18.82	18.81	33.419	23.862	40A.8	0.17A	5.A9	102.8	1.8	0.28	0.1	0.00	0.07	0.02	A3
	50	ISL	18.73	18.72	33.A13	23.880	A03.3	0.202	5.50	102.8	1.7	0.28	0.0	0.00	0.07	0.02	50
1	53		18.69	18.68	33.All	23.888	A02.6	0.21A	5.51	102.9	1.7	0.28	0.0	0.00	0.07	0.02	53
1	63		16.22	16.21	33.26A	2A.366	357.2	0.252	6.13	109.2	1.7	0.29	0.0	0.00	0.11	0.0A	63
1	7A		15.53	15.52	33.A19	2A.6A0	331.3	0.290	6.00	105.5	1.8	0.28	0.0	0.00	0.15	0.08	75
	75	ISL	15.A9	15.A8	33.A23	24.652	330.2	0.293	5.99	105.3	1.8	0.28	0.0	0.00	0.15	0.09	76
1	83		15.19	15.18	33.445	24.735	322.5	0.319	5.95	103.9	2.0	0.29	0.0	0.00	0.19	0.15	84
1	99		14.53	14.52	33.566	24.971	300.4	0.369	5.70	98.3	2.3	0.32	0.2	0.06	0.24	0.25	100
	100	ISL	14.48	14.47	33.569	24.984	299.2	0.372	5.68	97.9	2.4	0.33	0.4	0.06	0.24	0.25	101
1	114		13.62	13.60				0.413									115
	125	ISL	12.68	12.66	33.618	25.389	261.1	0.442	5.20	86.4	5.4	0.63	5.8	0.02	0.11	0.14	126
1	130		12.24	12.22	33.622	25.477	252.7	0.A55	5.11	8A.1	6.3	0.71	7.2	0.01	0.08	0.10	131
	150	ISL	11.00	10.98	33.67A	25.747	227.3	0.503	4.84	77.6	10.3	0.98	11.6	0.00	0.04	0.06	151
1	155		10.75	10.73	33.690	25.803	221.9	0.515	4.78	76.2	11.4	1.04	12.6	0.00	0.03	0.05	156
1	181		9.62	9.60	33.802	26.083	195.6	0.569	4.45	69.2	17.9	1.31	17.4	0.00	0.01	0.02	182
	200	ISL	8.98	8.96	33.875	26.244	180.5	0.605	4.10	62.9	23.4	1.52	20.7	0.00	0.00	0.02	202
1	212		8.67	8.65	33.912	26.322	173.3	0.626	3.91	59.6	26.6	1.63	22.4	0.00	0.00	0.02	214
1	2A3		8.23	8.21	33.961	26.A27	163.6	0.678	3.86	58.2	30.9	1.71	23.8	0.00			245
	250	ISL	8.12	8.09	33.968	26.449	161.6	0.689	3.81	57.3	32.1	1.74	24.3	0.00			252
1	284		7.59	7.56	33.991	26.545	152.8	0.743	3.44	51.2	39.0	1.91	27.0	0.00			286
	300	ISL	7.33	7.30	33.997	26.587	149.0	0.767	3.17	46.9	42.7	2.03	28.6	0.00			302
1	340		6.74	6.71	34.013	26.681	140.3	0.825	2.40	35.0	52.4	2.34	32.5	0.00			343
1	400		6.19	6.15	34.069	26.797	129.7	0.906	1.38	19.9	65.5	2.73	37.2	0.00			403
1	468		5.69	5.65	34.124	26.904	120.1	0.991	0.86	12.2	76.2	2.95	39.9	0.00			472
	500	ISL	5.56	5.52	34.168	26.955	115.5	1.028	0.66	9.4	80.5	3.03	40.7	0.00			504
1	538		5.41	5.37	34.221	27.015	110.2	1.071	0.43	6.1	85.5	3.13	41.6	0.00			543

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE	I
30 31.4 N	122 15.3 W	16/11/87	1115 GMT	4159 M	360	15 KT			1019.9 MB	17.6 C	15.0 C			I

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	19.34	19.34	33.708	23.948	394.9	0.000	5.41	102.4	2.0	0.25	0.0	0.00	0.07	0.02	0
1	1	19.34	19.34	33.708	23.948	395.0	0.004	5.41	102.4	2.0	0.25	0.0	0.00	0.07	0.02	1
	10 ISL	19.34	19.34	33.708	23.949	395.3	0.040	5.41	102.4	2.0	0.25	0.1	0.00	0.06	0.02	10
1	17	19.34	19.34	33.708	23.949	395.5	0.067	5.41	102.4	2.0	0.25	0.1	0.00	0.06	0.02	17
	20 ISL	19.34	19.34	33.708	23.949	395.6	0.079	5.41	102.4	2.0	0.25	0.1	0.00	0.06	0.02	20
	30 ISL	19.35	19.34	33.708	23.947	3 96.2	0.119	5.42	102.6	1.9	0.24	0.1	0.00	0.06	0.02	30
1	32	19.35	19.34	33.707	23.947	396.3	0.127	5.42	102.6	1.9	0.24	0.1	0.00	0.06	0.02	32
1	42	19.38	19.37	33.709	23.941	3 97.2	0.166	5.41	102.5	1.9	0.24	0.1	0.00	0.07	0.02	42
	50 ISL	19.27	19.26	33.697	23.960	395.7	0.198	5.43	102.7	1.7	0.24	0.1	0.00	0.07	0.02	50
1	53	19.23	19.22	33.692	23.967	395.2	0.210	5.44	102.8	1.7	0.24	0.1	0.00	0.07	0.02	53
1	63	17.11	17.10	33.526	24.361	357.8	0.247	5.92	107.4	1.9	0.25	0.1	0.00	0.11	0.05	63
1	73	16.47	16.46	33.616	24.579	337.2	0.282	5.90	105.8	1.9	0.24	0.1	0.00	0.11	0.06	74
	75 ISL	16.36	16.35	33.624	24.611	334.3	0.289	5.89	105.4	1.9	0.24	0.1	0.00	0.11	0.06	76
1	82	15.99	15.98	33.642	24.709	325.1	0.312	5.84	103.8	2.0	0.25	0.1	0.00	0.13	0.09	83
1	98	15.13	15.12	33.701	24.946	302.9	0.362	5.60	97.9	2.4	0.31	0.3	0.08	0.22	0.22	99
	100 ISL	14.98	14.96	33.697	24.976	300.1	0.368	5.57	97.0	2.6	0.33	0.5	0.09	0.22	0.22	101
1	113	14.07	14.05	33.681	25.157	283.1	0.406	5.38	92.0	3.7	0.44	2.4	0.13	0.16	0.18	114
	125 ISL	13.69	13.67	33.728	25.272	272.4	0.440	5.27	89.5	4.3	0.49	3.7	0.05	0.14	0.16	126
1	128	13.60	13.58	33.738	25.299	270.0	0.448	5.24	88.8	4.5	0.50	4.1	0.02	0.13	0.15	129
	150 ISL	11.85	11.83	33.626	25.554	245.8	0.504	5.00	81.6	7.3	0.78	8.7	0.01	0.07	0.09	151
1	154	11.50	11.48	33.609	25.606	240.9	0.514	4.94	80.0	8.1	0.85	9.7	0.01	0.06	0.08	155
1	179	10.21	10.19	33.777	25.965	206.9	0.570	4.42	69.7	15.2	1.22	15.8	0.00	0.02	0.03	180
	200 ISL	9.55	9.53	33.856	26.137	190.9	0.612	4.19	65.1	19.7	1.40	18.8	0.00	0.01	0.02	202
1	210	9.31	9.29	33.882	26.197	185.3	0.631	4.11	63.5	21.6	1.46	19.9	0.00	0.00	0.02	212
1	240	8.62	8.59	33.961	26.368	169.4	0.684	3.79	57.7	28.0	1.66	23.1	0.00			242
	250 ISL	8.44	8.41	33.979	26.410	165.5	0.701	3.65	55.3	30.1	1.73	24.1	0.00			252
1	281	7.97	7.94	34.018	26.511	156.2	0.751	3.15	47.3	36.6	1.95	27.0	0.00			283
	300 ISL	7.69	7.66	34.034	26.565	151.3	0.780	2.84	42.3	41.0	2.09	28.8	0.00			302
1	337	7.19	7.16	34.057	26.654	143.1	0.834	2.26	33.3	49.5	2.35	32.1	0.00			340
1	397	6.50	6.46	34.097	26.780	131.7	0.917	1.46	21.2	61.8	2.68	36.5	0.00			400
	400 ISL	6.47	6.43	34.099	26.785	131.1	0.921	1.43	20.7	62.3	2.69	36.7	0.00			403
1	464	5.96	5.92	34.148	26.890	121.7	1.001	0.84	12.0	72.6	2.92	39.3	0.00			468
	500 ISL	5.69	5.65	34.183	26.951	116.1	1.044	0.64	9.1	78.6	3.01	40.4	0.00			504
1	534	5.44	5.40	34.216	27.008	110.8	1.083	0.46	6.5	84.2	3.10	41.5	0.00			539

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 93 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 11.0 N	122 55.6 W	16/11/87	1743 GMT	3386 M	350	12 KT	350 06 07	1	1021.3 MB	18.8 C	15.8 C	4/8	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
1	0	18.53	18.53	33.312	23.850	404.3	0.000	5.54	103.1	1.5	0.31	0.1	0.00	0.06	0.02	0
	10 ISL	18.52	18.52	33.309	23.851	404.6	0.040	5.53	102.9	1.5	0.30	0.1	0.00	0.07	0.02	10
1	16	18.52	18.52	33.307	23.850	404.9	0.065	5.52	102.7	1.5	0.30	0.1	0.00	0.07	0.02	16
	20 ISL	18.52	18.52	33.308	23.850	405.0	0.081	5.51	102.5	1.5	0.30	0.1	0.00	0.07	0.02	20
	30 ISL	18.52	18.51	33.309	23.852	405.2	0.121	5.50	102.3	1.4	0.30	0.1	0.00	0.07	0.02	30
1	31	18.52	18.51	33.309	23.852	405.3	0.125	5.50	102.3	1.4	0.30	0.1	0.00	0.07	0.02	31
1	42	18.53	18.52	33.308	23.849	405.9	0.170	5.50	102.4	1.4	0.31	0.1	0.00	0.08	0.02	42
	50 ISL	18.49	18.48	33.315	23.865	404.7	0.203	5.52	102.7	1.4	0.30	0.1	0.00	0.09	0.02	50
1	52	18.48	18.47	33.317	23.869	404.4	0.211	5.52	102.6	1.4	0.30	0.1	0.00	0.09	0.02	52
1	63	15.77	15.76	33.319	24.510	343.5	0.252	6.09	107.5	1.6	0.29	0.1	0.00	0.12	0.06	63
1	73	15.65	15.64	33.586	24.742	321.6	0.285	5.87	103.6	1.6	0.26	0.1	0.00	0.15	0.12	74
	75 ISL	15.50	15.49	33.580	24.771	318.9	0.291	5.87	103.3	1.6	0.26	0.1	0.00	0.17	0.14	76
1	82	14.88	14.87	33.507	24.850	311.5	0.313	5.89	102.3	1.7	0.28	0.1	0.01	0.23	0.21	83
1	98	13.90	13.89	33.464	25.024	295.2	0.362	5.72	97.4	2.5	0.39	1.3	0.09	0.22	0.22	99
	100 ISL	13.83	13.82	33.470	25.043	293.5	0.368	5.69	96.7	2.6	0.40	1.5	0.09	0.22	0.22	101
1	113	13.47	13.45	33.532	25.165	282.2	0.405	5.51	93.0	3.3	0.47	3.0	0.05	0.18	0.20	114
	125 ISL	13.05	13.03	33.590	25.295	270.1	0.438	5.36	89.7	4.1	0.55	4.5	0.03	0.12	0.15	126
1	129	12.88	12.86	33.606	25.341	265.8	0.449	5.31	88.6	4.5	0.58	5.1	0.02	0.10	0.13	130
	150 ISL	11.45	11.43	33.606	25.613	240.2	0.502	4.89	79.1	8.7	0.89	10.2	0.01	0.05	0.07	151
1	154	11.15	11.13	33.607	25.668	234.9	0.512	4.81	77.3	9.7	0.96	11.3	0.01	0.05	0.06	155
1	180	9.80	9.78	33.738	26.004	203.2	0.569	4.50	70.3	15.9	1.30	16.7	0.00	0.01	0.03	181
	200 ISL	9.32	9.30	33.859	26.177	187.0	0.608	4.50	69.6	18.8	1.34	18.2	0.00	0.00	0.02	202
1	210	9.15	9.13	33.910	26.245	180.7	0.626	4.50	69.3	20.3	1.35	18.7	0.00	0.00	0.02	212
1	240	8.38	8.36	33.972	26.413	164.9	0.678	4.12	62.4	27.8	1.59	22.6	0.00			242
	250 ISL	8.16	8.13	33.981	26.454	161.2	0.694	3.95	59.5	30.2	1.67	23.9	0.00			252
1	280	7.58	7.55	33.995	26.550	152.3	0.741	3.40	50.5	37.5	1.91	27.5	0.00			282
	300 ISL	7.30	7.27	34.007	26.599	147.8	0.771	2.99	44.2	42.6	2.08	29.6	0.00			302
1	337	6.86	6.83	34.030	26.678	140.6	0.825	2.25	32.9	51.6	2.36	33.1	0.00			340
1	396	6.17	6.14	34.070	26.801	129.4	0.904	1.42	20.4	63.9	2.70	37.2	0.00			399
	400 ISL	6.13	6.09	34.073	26.808	128.7	0.910	1.38	19.8	64.6	2.72	37.4	0.00			403
1	462	5.67	5.63	34.121	26.904	120.0	0.987	0.90	12.8	75.0	2.93	39.9	0.00			466
	500 ISL	5.43	5.39	34.156	26.961	114.8	1.031	0.72	10.2	80.6	3.01	41.0	0.00			504
1	534	5.22	5.18	34.188	27.011	110.2	1.069	0.56	7.9	85.7	3.09	41.9	0.00			53 9

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
29 51.0 N	123 35.2 W	17/11/87	0019 GMT	4032 M	360	12 KT	3 50 03 06	1	1019.0 MB	19.0 C	16.1 C	4/8	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
1	0	18.89	18.89	33.388	23.818	407.4	0.000	5.48	102.7	2.6	0.29	0.1	0.00	0.07	0.01	0
	10 ISL	18.89	18.89	33.428	23.849	404.8	0.041	5.46	102.4	2.5	0.28	0.1	0.00	0.08	0.02	10
1	16	18.89	18.89	33.452	23.868	403.2	0.065	5.45	102.2	2.5	0.28	0.1	0.00	0.08	0.02	16
	20 ISL	18.90	18.90	33.462	23.873	402.9	0.081	5.46	102.4	2.5	0.28	0.1	0.00	0.08	0.02	20
	30 ISL	18.92	18.91	33.481	23.883	402.3	0.121	5.48	102.8	2.3	0.27	0.1	0.00	0.09	0.02	30
1	32	18.93	18.92	33.484	23.883	402.4	0.129	5.48	102.8	2.3	0.27	0.1	0.00	0.09	0.02	32
1	42	18.94	18.93	33.493	23.888	402.3	0.170	5.47	102.7	2.1	0.27	0.1	0.00	0.08	0.02	42
	50 ISL	18.91	18.90	33.504	23.904	401.0	0.202	5.48	102.8	2.1	0.27	0.1	0.00	0.08	0.02	50
1	53	18.90	18.89	33.508	23.910	400.5	0.214	5.48	102.8	2.1	0.27	0.1	0.00	0.08	0.02	53
1	63	16.49	16.48	33.452	24.448	349.4	0.251	6.03	108.1	1.9	0.24	0.1	0.00	0.12	0.05	63
1	74	15.92	15.91	33.518	24.629	332.4	0.289	5.87	104.1	2.1	0.24	0.1	0.00	0.15	0.08	75
	75 ISL	15.89	15.88	33.528	24.644	331.1	0.292	5.86	103.8	2.1	0.24	0.1	0.00	0.15	0.09	76
1	83	15.70	15.69	33.601	24.743	321.9	0.318	5.81	102.6	2.3	0.25	0.1	0.00	0.17	0.15	84
1	99	15.07	15.06	33.624	24.900	307.4	0.368	5.73	100.0	2.5	0.27	0.1	0.02	0.23	0.26	100
	100 ISL	15.05	15.03	33.633	24.911	306.3	0.371	5.72	99.8	2.5	0.27	0.1	0.03	0.23	0.26	101
1	114	14.71	14.69	33.764	25.0 86	2 90.0	0.413	5.52	95.7	2.8	0.32	1.0	0.14	0.16	0.17	115
	125 ISL	14.32	14.30	33.788	25.188	280.6	0.445	5.41	93.0	3.3	0.38	2.2	0.07	0.11	0.13	126
1	130	14.08	14.06	33.782	25.234	276.3	0.459	5.36	91.7	3.7	0.41	2.9	0.02	0.09	0.11	131
	150 ISL	12.55	12.53	33.687	25.469	254.2	0.512	5.16	85.5	5.8	0.63	6.4	0.01	0.05	0.07	151
1	155	12.10	12.08	33.664	25.537	247.7	0.524	5.10	83.7	6.7	0.70	7.5	0.01	0.05	0.06	156
1	181	10.01	9.99	33.705	25.943	209.0	0.584	4.53	71.1	15.1	1.21	15.9	0.00	0.01	0.03	182
	200 ISL	9.42	9.40	33.822	26.132	191.3	0.622	4.51	69.9	18.4	1.31	18.0	0.00	0.00	0.02	202
1	212	9.23	9.21	33.896	26.221	183.1	0.644	4.49	69.3	20.2	1.33	18.6	0.00	0.00	0.01	214
1	241	8.52	8.49	33.969	26.390	167.3	0.695	4.20	63.8	26.6	1.54	21.7	0.02			243
	250 ISL	8.35	8.32	33.977	26.422	164.3	0.710	4.07	61.6	28.6	1.60	22.6	0.02			252
1	283	7.83	7.80	33.991	26.511	156.2	0.763	3.51	52.5	36.0	1.85	26.1	0.00			285
	300 ISL	7.56	7.53	34.005	26.561	151.6	0.789	3.13	46.5	40.5	2.00	28.1	0.00			302
1	338	7.02	6.99	34.036	26.661	142.3	0.845	2.30	33.8	50.3	2.32	32.1	0.00			341
1	399	6.36	6.32	34.063	26.771	132.4	0.928	1.59	23.0	61.8	2.63	36.3				402
	400 ISL	6.35	6.31	34.064	26.773	132.1	0.930	1.58	22.8	62.0	2.63	36.4	0.00			403
1	467	5.76	5.72	34.114	26.887	121.7	1.015	0.94	13.4	73.7	2.90	39.5	0.00			47 1
	500 ISL	5.57	5.53	34.148	26.938	117.2	1.054	0.75	10.6	78.8	2.98	40.4	0.00			504
1	540	5.34	5.30	34.191	27.000	111.6	1.100	0.52	7.3	85.0	3.07	41.5	0.00			545

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.3 N	120 46.8 W	27/11/87	1917 GMT	9 M	1149 - 1720 PST	1149 PST	1720 PST	1233.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	13.11	33.238	25.007	6.01	100.5	5.7	0.60	2.5	0.09	4.04	0.51	99.	68.5	67.7	68.1	0.22
6	12.91	33.247	25.053	5.98	99.6	5.8	0.64	2.7	0.09	5.48	0.79	37.	95.4	95.7	95.6	0.27
10	12.88	33.263	25.072	5.85	97.4	6.2	0.68	3.4	0.10	5.43	0.84	17.	72.8	77.3	75.1	0.26
19	12.45	33.387	25.252	4.78	78.9	10.2	1.02	9.3	0.12	1.10	0.44	4.5	4.6	5.6	5.1	0.12
32	12.28	33.412	25.304	4.61	75.9	11.4	1.10	10.1	0.14	0.92	0.49	0.54	0.82	0.80	0.81	0.09
36	12.30	33.411	25.300	4.61	75.9	11.7	1.13	10.3	0.15	0.75	0.49	0.25	0.13	0.21	0.17	0.08

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 78 84

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 41.8 N	123 3.7 W	26/11/87	1918 GMT	28 M	1157 - 1729 PST	1158 PST	1729 PST	158.1 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	15.89	32.938	24.187	5.81	102.6	1.6	0.37	0.1	0.00	0.19	0.06	99.	0.17	0.17	0.17	0.06
19	15.87	32.938	24.193	5.80	102.4	1.3	0.38	0.1	0.00	0.20	0.06	37.	3.1	3.0	3.1	0.07
34	15.85	32.936	24.196	5.81	102.5	1.1	0.38	0.1	0.00	0.18	0.06	17.	2.7	2.5	2.6	0.07
59	15.85	32.937	24.198	5.82	102.7	1.1	0.38	0.1	0.00	0.21	0.06	4.5	1.3	1.3	1.3	0.07
96	13.01	33.312	25.086	5.64	94.2	3.9	0.59	2.9	0.09	0.23	0.19	0.54	0.44	0.47	0.46	0.05
110	11.96	33.433	25.383	5.00	81.7	8.1	0.92	8.9	0.03	0.13	0.14	0.25	0.16	0.18	0.17	0.05
126	11.15	33.652	25.702	4.53	72.8	11.9	1.17	13.4	0.02	0.07	0.09					
147	10.31	33.839	25.996	3.70	58.5	18.9	1.56	19.4	0.01	0.03	0.06					
178	9.25	33.978	26.281	3.10	47.9	27.3	1.89	24.4	0.01	0.00	0.04					
210	8.60	33.978	26.384	2.86	43.5	33.6	2.06	27.0	0.01	0.00	0.03					

RV NEW HORIZON CALCOFI CRUISE 87 11 STATION 80 64

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 57.2 N	121 24.4 W	25/11/87	1923 GMT	16 M	1154 - 1726 PST	1152 PST	1726 PST	515.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	14.93	33.116	24.536	5.94	103.1	2.1	0.42	0.0	0.03	0.87	0.23	99.	10.6	10.9	10.8	0.09
12	14.96	33.115	24.529	5.94	103.1	2.0	0.42	0.0	0.03	0.84	0.23	37.	16.3	17.8	17.0	0.09
20	14.96	33.114	24.528	5.95	103.3	1.9	0.42	0.0	0.03	0.78	0.24	17.	12.5	13.0	12.8	0.09
37	14.49	33.126	24.638	5.98	102.8	2.0	0.44	0.2	0.06	1.26	0.36	4.5	6.1	5.8	5.9	0.07
58	12.41	32.992	24.954	5.84	96.1	3.8	0.57	3.1	0.15	0.41	0.30	0.54	0.87	0.69	0.78	0.11
66	11.83	33.047	25.106	5.60	91.1	4.9	0.72	5.1	0.07	0.26	0.29	0.25	0.25	0.12	0.18	0.06
75	11.36	33.331	25.413	4.75	76.6	9.9	1.09	12.0	0.03	0.13	0.18					
88	10.62	33.428	25.621	4.36	69.2	13.9	1.32	15.8	0.02	0.08	0.11					
108	9.99	33.540	25.816	3.94	61.7	18.5	1.53	19.4	0.01	0.03	0.08					
128	9.42	33.750	26.074	3.44	53.3	23.8	1.73	22.6	0.01	0.02	0.06					
148	9.00	33.843	26.215	3.32	51.0	27.3	1.81	24.1	0.01	0.01	0.04					
179	8.49	33.995	26.414	2.71	41.2	34.8	2.07	27.6	0.01	0.01	0.05					
210	7.95	34.014	26.510	2.85	42.7	38.1	2.10	28.2	0.01	0.00	0.03					

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 40.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 13.3 N	119 25.2 W	24/11/87	1907 GMT	26 M	1144 - 1718 PST	1144 PST	1718 PST	358.2 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	16.70	33.356	24.324	5.75	103.4	2.8	0.35	0.3	0.11	0.40	0.09	99.	8.0	9.2	8.6	0.10
18	15.74	33.311	24.509	5.76	101.7	2.6	0.36	0.3	0.12	0.55	0.19	37.	12.6	12.7	12.6	0.10
32	15.03	33.283	24.644	5.53	96.2	4.2	0.56	1.7	0.69	0.61	0.24	17.	11.1	12.0	11.6	0.10

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.2 N	121 29.0 W	23/11/87	1955 GMT	18 M	1212 - 1724 PST	1152 PST	1724 PST	239.0 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	16.01	33.268	24.414	5.80	102.9	2.1	0.36	0.0	0.00	0.33	0.10	99.	0.73	0.76	0.75	0.09
13	16.01	33.265	24.412	5.78	102.5	1.5	0.36	0.0	0.00	0.34	0.12	37.	6.3	7.2	6.8	0.09
23	16.02	33.266	24.411			1.5	0.36	0.0	0.00	0.34	0.10	17.	5.9	6.3	6.1	0.10
38	16.00	33.271	24.420	6.00	106.4	1.5	0.36	0.0	0.00	0.35	0.11	4.5	3.1	3.0	3.0	0.09
64	13.33	33.180	24.920	6.01	100.9	3.3	0.51	1.6	0.13	0.43	0.29	0.54	1.1	1.1	1.1	0.08
74	13.00	33.239	25.031	5.64	94.1	4.5	0.64	3.9	0.10	0.31	0.25	0.25	0.30	0.26	0.28	0.05

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 55.2 N	124 10.5 W	22/11/87	1929 GMT	28 M	1203 - 1738 PST	1203 PST	1737 PST	134.5 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.74	33.229	23.980	5.59	102.5	2.3	0.33	0.0	0.00	0.11	0.03	99.	0.30	0.25	0.28	0.09
20	17.74	33.229	23.981	5.58	102.3	2.1	0.33	0.0	0.00	0.10	0.03	37.	2.0	1.9	1.9	0.09
34	17.75	33.229	23.979	5.59	102.5	1.9	0.33	0.0	0.00	0.09	0.03	17.	1.7	1.8	1.8	0.09
60	15.50	33.172	24.456	6.06	106.4	1.9	0.34	0.0	0.00	0.21	0.13	4.5	1.4	1.4	1.4	0.07
99	13.42	33.275	24.976	5.65	95.1	3.7	0.52	2.2	0.14	0.23	0.23	0.54	0.63	0.58	0.60	0.07
114	13.02	33.325	25.095	5.45	91.0	4.7	0.63	4.4	0.03	0.17	0.19	0.25	0.24	0.21	0.23	0.04

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.6 N	119 38.1 W	20/11/87	1926 GMT	23 M	1144 - 1723 PST	1145 PST	1723 PST	374.5 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	16.40	33.367	24.401	5.85	104.6	2.6	0.33	0.1	0.00	0.34	0.09	99.	8.5	9.1	8.8	0.14
16	16.17	33.364	24.452	5.86	104.3	2.4	0.33	0.1	0.01	0.34	0.12	37.	8.5	8.4	8.5	0.14
26	16.01	33.356	24.483	5.89	104.5	2.3	0.33	0.1	0.00	0.32	0.16	17.	5.1	5.3	5.2	0.16
48	15.59	33.330	24.558	5.83	102.6	2.4	0.36	0.2	0.02	0.65	0.29	4.5	4.9	4.1	4.5	0.08
73	12.24	33.341	25.258	5.03	82.7	7.9	0.88	8.4	0.08	0.18	0.21	0.54	0.31	0.43	0.37	0.08

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 19.3 N	121 43.3 W	21/11/87	1822 GMT	26 M	1153 - 1734 PST	1152 PST	1734 PST	95.6 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	17.27	33.140	24.024	5.64	102.4	2.2	0.33	0.0	0.00	0.11	0.03	99.	0.22	0.35	0.28	0.09
18	17.27	33.138	24.023	5.63	102.2	1.8	0.33	0.0	0.00	0.11	0.03	37.	1.7	1.6	1.7	0.08
32	17.28	33.138	24.022	5.65	102.6	1.7	0.33	0.0	0.00	0.11	0.03	17.	1.6	1.6	1.6	0.07
54	17.23	33.139	24.035	5.67	102.9	1.7	0.34	0.0	0.00	0.12	0.03	4.5	0.88	0.93	0.90	0.08
90	12.36	33.261	25.173	5.34	87.9	5.4	0.73	6.1	0.02	0.19	0.22	0.54	0.43	0.44	0.44	0.04
104	11.85	33.362	25.348	5.01	81.6	8.2	0.92	9.6	0.02	0.11	0.15	0.25	0.12	0.07	0.10	0.05

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.2 N	117 55.2 W	19/11/87	1843 GMT	30 M	1138 - 1715 PST	1138 PST	1715 PST	338.2 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	17.78	33.379	24.085	5.60	102.8	2.3	0.30	0.0	0.00	0.21	0.05	99.	6.1	6.2	6.2	0.12
22	17.05	33.359	24.245	5.77	104.5	2.3	0.30	0.0	0.00	0.26	0.09	37.	5.1	4.8	4.9	0.16
36	14.91	33.245	24.640	6.03	104.6	2.7	0.38	0.0	0.00	0.54	0.33	17.	7.0	7.0	7.0	0.09
65	12.33	33.366	25.260	5.03	82.8	7.8	0.85	8.3	0.03	0.19	0.21	4.5	0.80	0.82	0.81	0.05
106	10.87	33.578	25.694	4.09	65.3	15.1	1.31	16.2	0.02	0.06	0.10	0.54	0.07	0.08	0.07	0.03
122	10.52	33.644	25.807	3.83	60.7	17.9	1.45	18.3	0.01	0.03	0.08	0.25	0.06	0.02	0.04	0.03

RV NEW HORIZON CALCOFI CRUISE 8711 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.6 N	119 58.6 W	18/11/87	1810 GMT	46 M	1141 - 1722 PST	1146 PST	1722 PST	163.0 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	18.02	33.380	24.028	5.53	102.0	2.5	0.32	0.2	0.00	0.11	0.04	99.	0.80	0.59	0.70	0.06
31	18.04	33.398	24.038	5.54	102.2	2.4	0.30	0.2	0.00	0.13	0.04	37.	3.1	2.8	2.9	0.06
54	13.73	33.113	24.787	6.06	102.6	2.8	0.41	0.2	0.02	0.56	0.37	17.	2.2	1.6	1.9	0.06
96	11.34	33.509	25.556	4.39	70.8	12.2	1.16	13.7	0.02	0.12	0.16	4.5	0.22	0.23	0.23	0.03
161	9.28	33.911	26.224	3.02	46.7	28.3	1.84	24.6	0.01	0.00	0.03	0.54	-0.01	0.00	-0.01	0.02
186	8.78	33.977	26.355	2.95	45.1	32.2	1.93	26.0	0.00	0.00	0.02	0.25	0.05	-0.01	0.02	0.04

RV NEW HORIZON — CALCOFI CRUISE 8711 — STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 5.4 N	122 40.8 W	17/11/87	1859 GMT	34 M	1155 - 1733 PST	1156 PST	1735 PST	126.6 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	18.58	33.284	23.816	5.48	102.1	2.3	0.31	0.0	0.00	0.07	0.02	99.	0.97	1.1	1.0	0.07
23	18.56	33.279	23.819	5.49	102.2	2.2	0.31	0.0	0.00	0.08	0.02	37.	1.5	1.5	1.5	0.07
40	18.55	33.279	23.822	5.50	102.4	2.2	0.31	0.0	0.00	0.07	0.03	17.	1.6	1.4	1.5	0.07
72	14.26	33.183	24.732	6.02	103.1	2.6	0.37	0.0	0.00	0.18	0.16	4.5	1.1	1.0	1.1	0.04
119	11.84	33.473	25.437	4.97	81.0	8.4	0.85	8.8	0.01	0.09	0.13	0.54	0.15	0.14	0.14	0.03
137	10.58	33.560	25.731	4.72	74.9	12.2	1.08	12.8	0.01	0.05	0.06	0.25	0.07	0.01	0.04	0.03

RV NEW HORIZON — CALCOFI CRUISE 8711 — STATION 93 26.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 56.6 N	117 16.6 W	13/11/87	1921 GMT	5 M	1146 - 1714 PST	1135 PST	1716 PST	568.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
0	17.84	33.284	23.998	5.98	109.9	1.7	0.37	0.1	0.01	1.95	0.39	99.	43.4	33.2	38.3	0.30
3	17.77	33.277	24.010	6.01	110.3	1.7	0.38	0.1	0.02	5.47	0.40	37.	127.4	122.6	125.0	0.78
6	17.66	33.275	24.035	5.94	108.8	1.8	0.39	0.1	0.03	1.25	0.48	17.	37.8	32.5	35.2	0.34
10	16.77	33.270	24.242	5.70	102.6	2.5	0.46	0.1	0.06	0.80	0.56	4.5	6.7	6.4	6.6	0.20

RV NEW HORIZON — CALCOFI CRUISE 8711 — STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 12.4 N	118 53.5 W	14/11/87	1946 GMT	27 M	1204 - 1726 PST	1142 PST	1725 PST	154.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY	SIGMA THETA	DISS O2 ML/L	OXY PCT	SI03 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL UG/L	PHAEO UG/L	LIGHT PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	18.49	33.383	23.914	5.47	101.8	2.0	0.31	0.1	0.00	0.13	0.03	99.	0.80	0.69	0.75	0.06
20	18.51	33.381	23.909	5.48	102.0	2.0	0.31	0.1	0.00	0.12	0.03	37.	2.8	2.7	2.7	0.06
33	18.51	33.384	23.912	5.50	102.4	1.9	0.31	0.1	0.00	0.13	0.04	17.	2.6	2.5	2.5	0.07
58	14.80	33.253	24.671	6.07	105.1	2.1	0.39	0.2	0.01	0.27	0.18	4.5	1.7	1.8	1.7	0.06
95	11.26	33.570	25.618	4.19	67.5	13.4	1.25	14.8	0.02	0.13	0.20	0.54	0.19	0.18	0.19	0.16
109	10.64	33.635	25.779	3.77	59.9	17.4	1.45	18.2	0.01	0.06	0.10					

RV NEW HORIZON — CALCOFI CRUISE 87 11 — STATION 93 77.5

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 22.4 N	120 49.8 W	15/11/87	1919 GMT	22 M	1150 - 1731 PST	1150 PST	1732 PST	64.8 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	17.80	33.181	23.929	5.60	102.8	1.7	0.34	0.0	0.00	0.08	0.02	99.	0.48	0.44	0.46	0.07
15	17.93	33.202	23.914	5.57	102.5	1.6	0.33	0.0	0.00	0.08	0.02	37.	1.2	1.3	1.3	0.07
27	17.89	33.198	23.921	5.57	102.4	1.7	0.33	0.0	0.00	0.08	0.02	17.	1.3	1.3	1.3	0.07
46	17.70	33.165	23.943	5.65	103.5	1.7	0.34	0.0	0.00	0.09	0.02	4.5	0.64	0.55	0.59	0.10
77	14.76	33.448	24.831	5.90	102.2	1.9	0.30	0.1	0.00	0.18	0.18	0.54	0.39	0.38	0.38	0.05
89	14.47	33.576	24.991	5.70	98.2	2.4	0.33	0.4	0.09	0.23	0.26	0.25	0.25	0.12	0.19	0.03
108	13.73	33.638	25.194	5.46	92.7	3.1	0.44	2.5	0.09	0.17	0.20					
129	12.08	33.559	25.458	5.16	84.6	5.9	0.71	7.1	0.01	0.09	0.11					
150	10.58	33.643	25.796	4.70	74.6	11.7	1.07	13.2	0.01	0.04	0.05					
181	9.33	33.781	26.114	4.00	61.8	21.2	1.51	20.3	0.00	0.01	0.02					
210	8.61	33.929	26.344	3.43	52.2	29.6	1.81	24.9	0.00	0.00	0.02					

RV NEW HORIZON — CALCOFI CRUISE 87 11 — STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 12.6 N	122 56.1 W	16/11/87	1936 GMT	33 M	1159 - 1746 PST	1157 PST	1743 PST	131.6 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 PCT	UPTAKE (MG C/M3) 1	2	MEAN	DARK
1	18.54	33.314	23.849	5.51	102.6	1.8	0.30	0.1	0.00	0.07	0.02	99.	0.84	0.85	0.85	0.12
25	18.50	33.306	23.854	5.50	102.3	1.7	0.30	0.1	0.00	0.08	0.02	37.	1.5	1.5	1.5	0.09
41	18.50	33.306	23.855	5.51	102.5	1.7	0.30	0.1	0.00	0.08	0.02	17.	1.6	1.4	1.5	0.10
71	15.86	33.666	24.756	5.84	103.5	1.8	0.25	0.1	0.00	0.15	0.10	4.5	1.0	1.2	1.1	0.06
117	13.39	33.592	25.228	5.43	91.5	3.9	0.50	3.8	0.03	0.14	0.18	0.54	0.39	0.46	0.42	0.02
135	12.59	33.665	25.443	5.21	86.4	5.3	0.62	6.0	0.02	0.08	0.11	0.25	0.10	0.08	0.09	0.02

Secchi Disk Observations

CalCOFI Cruise 8711

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Forel Water Color	Weather	Clouds Type	Clouds Amt
77	49	27	11	1108	9	5	1	CI	1/8
77	51	27	11	0905	17	4	1	CI	1/8
77	80	26	11	1415	27	2	1	sc	2/8
78	84	26	11	1100	28	2	1	sc	1/8
80	64	25	11	1100	16	3	0	-	0
80	70	25	11	1516	14	3	1	CI	3/8
82	47	24	11	1415	9	4	0	-	0
83	40.7	24	11	1055	26	3	0	-	0
83	42	24	11	0830	23	3	0	-	0
83	70	23	11	1138	18	2	1	sc	4/8
83	110	22	11	1115	28	2	1	sc	4/8
87	50	20	11	1115	23	3	0	-	0
87	80	21	11	1007	26	2	1	sc	3/8
87	90	21	11	1505	26	2	1	sc	2/8
90	28	19	11	1250	20	3	0	-	0
90	30	19	11	1025	30	3	1	cs	4/8
90	33	19	11	0746	20	3	1	CI	4/8
90	53	18	11	1314	33	2	0	-	0
90	60	18	11	0952	46	1	1	sc	4/8
90	90	17	11	1600	32	2	2	sc	8/8
90	100	17	11	1044	34	2	2	sc	8/8
93	26.5	13	11	1100	5	5	2	ST	8/8
93	26.7	13	11	1150	23	3	1	CS	6/8
93	26.8	13	11	1315	26	2	-	-	-
93	28	13	11	1420	23	2	2	ST	8/8
93	50	14	11	1135	27	2	1	CU	1/8
93	77.5	15	11	1100	22	2	1	CI	1/8
93	80	15	11	1304	31	2	0	-	0
93	II0	16	11	0915	35	2	1	cs	4/8

CalCOFI Cruise 8711

MACROZOOPLANKTON BIOMASS
Net 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	49	35 05.5N	12046.6W	11/27	2029	2036	123	58	8	8
77	51	35 01.9N	120 54.5W	11/27	1755	1816	377	192	520	24
77	55	34 53.9N	121 12.6W	11/27	1455	1517	421	210	24	24
77	60	3444.6N	121 33.6W	11/27	1110	1132	436	208	92	92
77	70	34 23.2N	12215.3W	11/27	0510	0532	442	212	25	25
77	80	34 03.8N	122 56.6W	11/26	2327	2349	454	209	26	26
80	51	34 27.1N	120 31.8W	11/25	0330	0338	164	73	6	6
80	55	34 19.2N	120 49.4W	11/25	0623	0645	514	189	58	58
80	60	34 09.3N	121 09.3W	11/25	1550	1612	440	216	23	23
80	70	33 49.0N	121 51.0W	11/26	0008	0030	435	210	25	25
80	80	33 29.9N	122 33.2W	11/26	0751	0813	461	207	17	17
80	90	33 09.4N	123 14.4W	11/26	1450	1512	438	210	27	27
82	47	34 17.6N	120 03.3W	11/24	2350	0012	442	204	43	43
83	40.6	34 13.5N	119 24.9W	11/24	1830	1834	70	27	14	14
83	42	34 11.6N	119 31.5W	11/24	1650	1701	188	98	5	5
83	51	33 53.0N	120 07.6W	11/24	1150	1157	127	55	8	8
83	55	33 45.1N	120 25.5W	11/24	0830	0852	468	206	9	9
83	60	33 34.5N	12046.0W	11/24	0359	0421	464	205	13	13
83	70	33 15.8N	121 30.2W	11/23	2105	2127	466	213	2	2
83	80	32 54.5N	122 08.6W	11/23	1425	1447	442	217	5	5
83	90	32 35.0N	12248.8W	11/23	0739	0801	437	205	7	7
83	100	3215.2N	123 29.7W	11/23	0154	0217	479	215	2	2
83	110	31 55.2N	124 10.8W	11/22	1945	2007	458	214	11	11
87	33	33 53.4N	118 29.8W	11/20	0321	0328	111	56	1086	1086
87	35	33 49.7N	118 38.4W	11/20	0554	0616	394	214	25	25
87	39.5	33 40.7N	118 56.6W	11/20	1110	1132	408	210	22	22
87	45	33 29.7N	11919.0W	11/20	1630	1652	382	211	21	21
87	50	33 19.9N	119 38.6W	11/20	2015	2022	119	56	8	8
87	55	33 09.5N	120 00.6W	11/21	0200	0222	410	214	85	85
87	60	32 59.9N	120 23.1W	11/21	0552	0614	468	199	26	26
87	70	32 39.8N	121 02.5W	11/21	1145	1208	472	225	21	21
87	80	32 19.3N	121 42.8W	11/21	1730	1752	414	211	5	5
87	90	31 59.8N	122 24.2W	11/22	0005	0028	487	212	6	6
87	110	31 19.4N	123 46.1W	11/22	1245	1307	471	210	284	19
90	28	33 29.4N	U7 46.7W	11/19	2132	2139	116	57	9	9
90	30	33 25.6N	117 56.0W	11/19	1915	1937	408	209	5	5
90	35	33 15.4N	U 8 16.0W	11/19	1250	1312	394	209	38	38
90	37	33 11.0N	118 24.3W	11/19	0957	1019	406	203	17	17
90	45	32 54.4N	118 56.1W	11/19	0436	0458	422	204	19	19
90	53	3239.8N	119 29.6W	11/18	2225	2247	440	193	9	9
90	60	3225.2N	119 58.1W	11/18	1715	1737	397	210	131	101
90	70	32 04.5N	120 38.3W	11/18	1135	1157	413	204	34	34
90	80	31 44.7N	121 19.4W	11/18	0557	0619	423	207	28	28
90	90	31 25.1N	122 00.1W	11/18	0021	0043	409	213	20	20
90	100	31 05.5N	12239.9W	11/17	1810	1832	425	206	5	5
90	110	3045.0N	123 21.1W	11/17	1230	1252	428	210	42	12
90	120	30 25.9N	123 59.9W	11/17	0643	0705	429	206	14	14
93	26.7	3257.5N	11718.9W	11/13	2055	2102	132	56	8	8
93	28	32 55.2N	U7 24.3W	11/13	2355	0017	435	212	55	55
93	30	32 51.0N	117 32.8W	11/14	0250	0312	431	213	21	21
93	35	3240.3N	117 52.8W	11/14	0655	0717	447	220	219	27
93	40	3230.9N	118 13.4W	11/14	1135	1157	443	217	5	5
93	45	3220.8N	118 34.0W	11/14	1625	1647	448	218	11	11
93	50	3212.7N	118 54.7W	11/14	2101	2123	478	200	29	29
93	55	3200.8N	11915.0W	11/15	0154	0217	443	208	27	27
93	60	31 50.9N	119 35.4W	11/15	0640	0702	465	199	43	43
93	70	31 30.7N	120 15.4W	11/15	1410	1432	465	207	13	13
93	80	31 11.8N	120 55.9W	11/15	2254	2316	529	193	26	26
93	90	30 51.2N	121 36.2W	11/16	0556	0618	433	217	5	5
93	100	30 31.5N	122 16.0W	11/16	1215	1237	440	211	5	5
93	110	3011.4N	12255.8W	11/16	1830	1852	426	208	2	2
93	120	29 51.4N	123 35.3W	11/17	0105	0127	433	211	7	7

FIGURES

Avifauna Observations

CalCOFI Cruise 8705

1a. Total avian biomass.

1b. Leach's Storm-Petrel distribution.

1c. Cook's Petrel distribution.

1d. Western Gull distribution.

1e. California Gull distribution.

1f. Sooty Shearwater distribution.

1g. Red-necked Phalarope distribution.

1h. Red Phalarope distribution.

1i. Brown Pelican distribution.

CalCOFI Cruise 8709

2a. Total avian biomass.

2b. Red-necked Phalarope distribution.

2c. Red Phalarope distribution.

2d. Western Gull distribution.

2e. Leach's Storm-Petrel distribution.

2i. Sooty Shearwater distribution.

CalCOFI Cruise 8711

3a. Total avian biomass.

3b. Cassin's Auklet distribution.

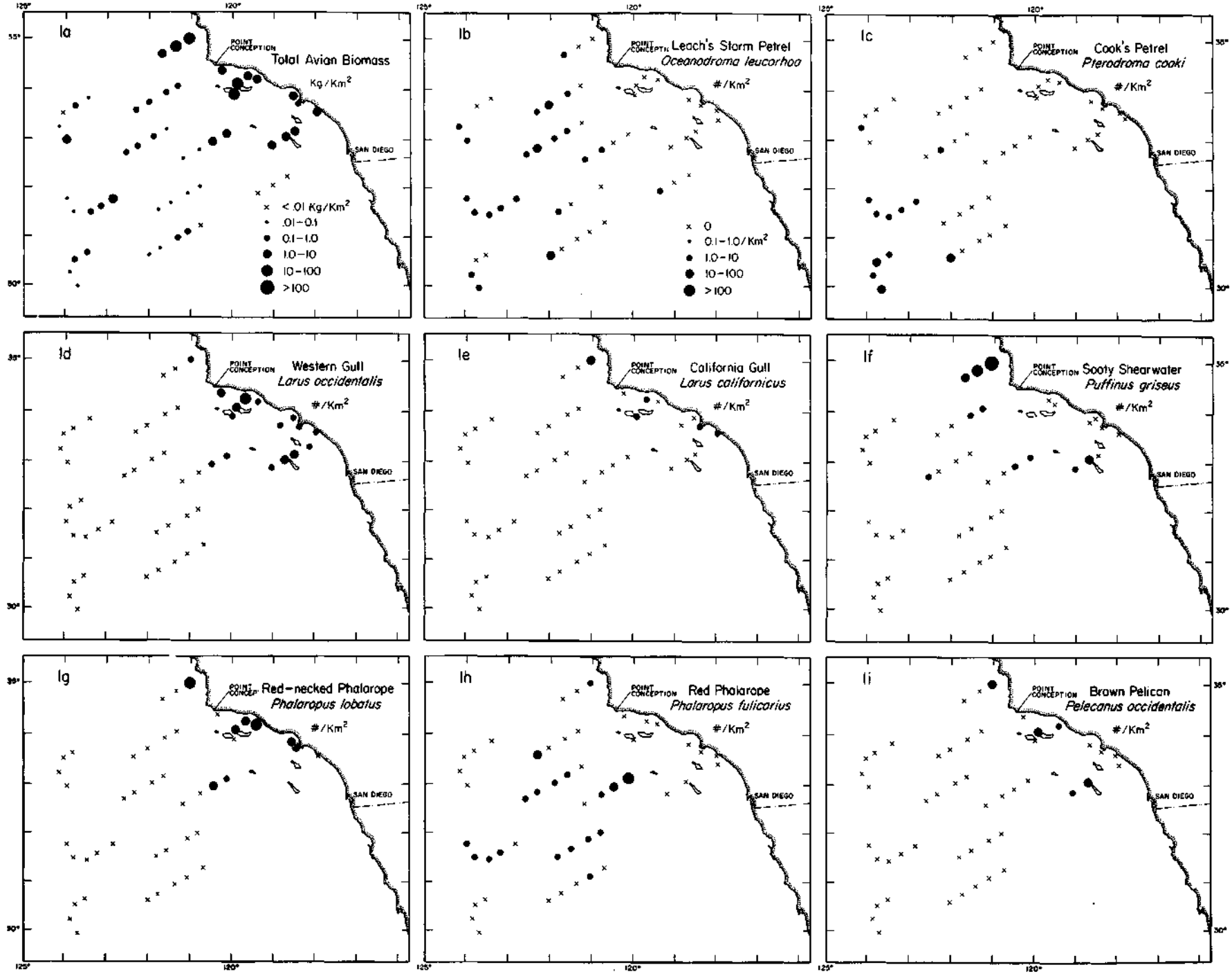
3c. Red Phalarope distribution.

3d. Western Gull distribution.

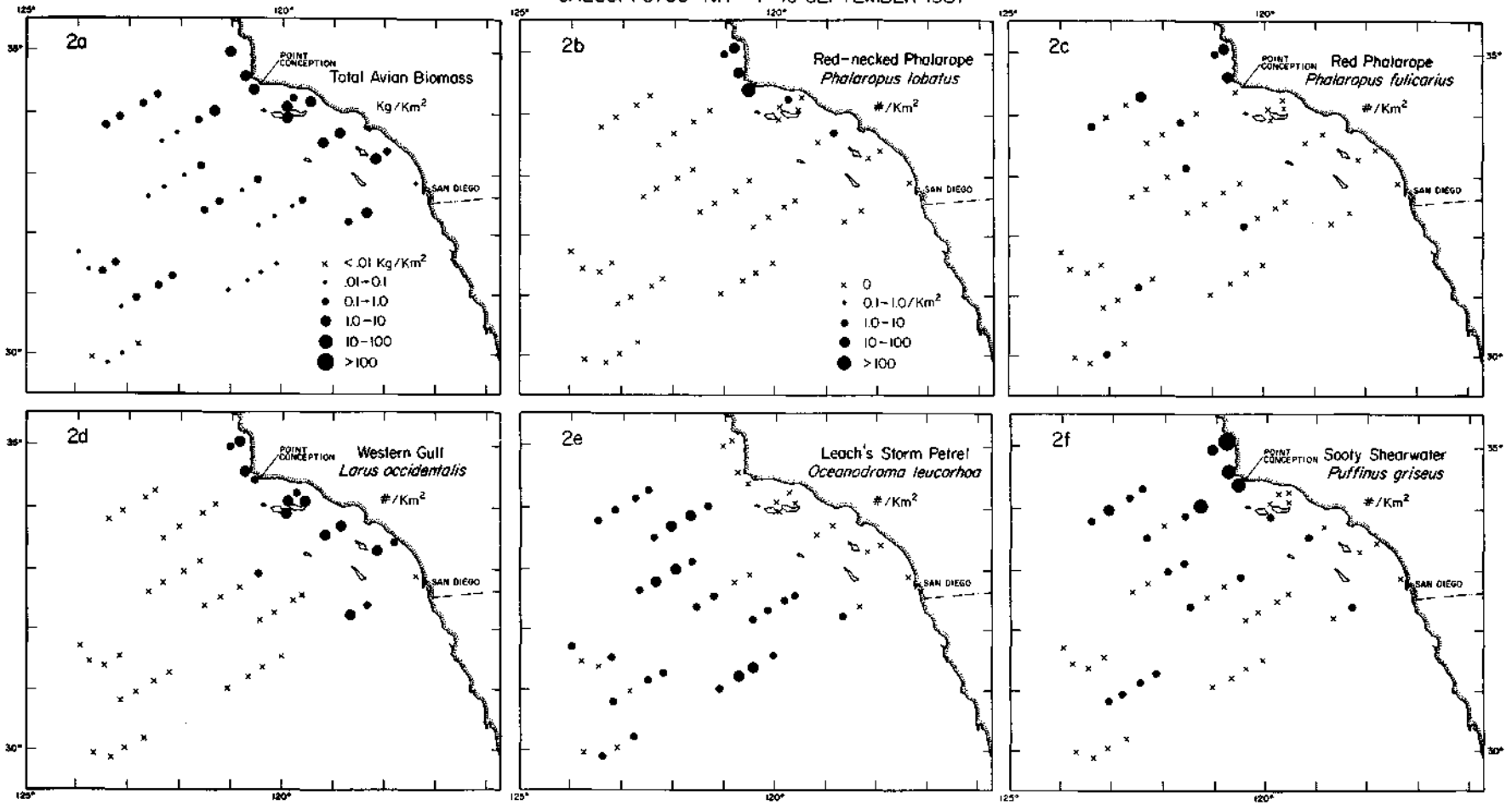
3e. California Gull distribution.

3i. Black-vented Shearwater distribution.

CALCOFI 8705 30 APR – 14 MAY 1987



CALCOFI 8709-NH 4-19 SEPTEMBER 1987



CALCOFI 8711-NH 13-28 NOVEMBER 1987