UNIVERSITY OF CALIFORNIA, SAN DIEGO SCRIPPS INSTITUTION OF OCEANOGRAPHY

data report

PHYSICAL, CHEMICAL AND BIOLOGICAL DATA

CalCOFI Cruise 8808
9 – 24 August 1988

CalCOFI Cruise 8810
11 – 26 October 1988

SIO Reference 89-2
15 May 1989

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093

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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 8808*, and 8810 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 8808 and 8810 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 and chemical analyses at sea.

STANDARD PROCEDURES

Hydrographic Cast Data

The hydrographic casts usually consisted of 20 3-1 plastic (PVC) bottles lowered to a maximum sampling depth of 525 meters, bottom depth permitting. 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 200 meter 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. Most 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-106. Salinity values have been calculated from the algorithms for the Practical Salinity Scale, 1978 (PSS78, UNESCO, 1981a) and were reported to three decimal places, provided accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities were reported to two decimal places.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). Percent oxygen saturation was calculated from the equations of Weiss (1970).

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

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

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

depths, corresponding .to predetermined levels of light penetration, were sampled with 5-1 Niskin bottles. Temperature, salinity, oxygen, nutrients, chlorophyll-a, and phaeopigments were determined for all depths sampled. Triplicate samples (two light and one dark control) were drawn from each depth into 250-ml polycarbonate incubation bottles which were innoculated with approximately 10 uCi of C as NaHCO . These were incubated 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% HC1 was added to each sample. The sample was then allowed to sit, without a cap, at room temperature for 12 hours (after Lean and Burnison, 1979). Following this, 10-ml of scintillation fluor were added to each sample and the samples were returned to 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).

TABULATED DATA

Hydrographic Cast Data

The reported hydrographic cast time is the Coordinated Universal Time (UTC) 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,b). 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 UTC, 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, cloud observations, and Forel water color 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.

LITERATURE CITED

Anderson, G. C, compiler, 1971. "Oxygen Analysis," Marine Technician's Handbook, SIO Ref. No. 71-8, Sea Grant Pub. No. 9.

Atlas, E. L., J. C. Callaway, R. D. Tomlinson, L. I. Gordon, L. Barstow, and P. K. Park, 1971. *A Practical Manual for Use of the Technicon AutoAnalyzer* in Sea Water Nutrient Analysis;* Revised. Oregon State University Technical Report 215, Reference No. 71-22.

Carpenter, J. H„ 1965. The Chesapeake Bay Institute technique for the Winkler dissolved oxygen method. *Limnol. Oceanogr., 10:* 141-143.

Carter, D. J. T., 1980. Echo-sounding correction tables. Third Edition. Hydrographic Department, Ministry of Defence, Taunton, U. K., NP 139:150 pp.

Holm-Hansen, O., C. J. Lorenzen, R. W. Holmes, and J. D. H. Strickland, 1965. Fluorometric determination of chlorophyll. /. *Cons. perm. int. Explor. Mer, 30:* 3-15.

Klein, Hans T., 1973. A new technique for processing physical Oceanographic data. SIO Ref. No. 73-14.

Kramer, D., M. J. Kalin, E. G. Stevens, J. R. Thrailkill, and J. R. Zweifel, 1972. Collecting and processing data on fish eggs and larvae in the California Current region. *NOAA Technical Report NMFS CIRC-370:* 38 pp.

Lean, D. R. S., and B. K. Burnison, 1979. An evaluation of errors in the C method of primary production measurement. *Limnol. Oceanogr., 24:* 799-998.

Reid, J. L., and A. W. Mantyla, 1976. The effect of the geostrophic flow upon coastal sea elevations in the northern North Pacific Ocean. /. *Geophys. Res., 81:* 3100-3110.

Saunders, P. M., 1981. Practical conversion of pressure to depth. *J. Phys. Oceanogr., 11:* 573-574.

UNESCO, 1981,a. Background papers and supporting data on the Practical Salinity Scale, 1978. *UNESCO Tech. Pap. in Mar. Sci., No. 37.*

UNESCO, 198l,b. Background papers and supporting data on the International Equation of State 1980. *UNESCO Tech. Pap. in Mar. Sci., No. 38.*

Venrick, E. L., and T. L. Hayward, 1984. Determining chlorophyll on the 1984 CalCOFI surveys. *CalCOFI Rep., Vol. XXV:* 74-79.

Weiss, R. F., 1970. The solubility of nitrogen, oxygen and argon in water and seawater. *Deep-Sea Res., 17:* 721-735.

Yentsch, C. S., and D. W. Menzel, 1963. A method for the determination of phytoplankton, chlorophyll and phaeophytin by fluorescence. *Deep-Sea Res., 10:* 221-231.

FIGURES
Cruise 8808

1. CalCOFI Cruise 8808 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.

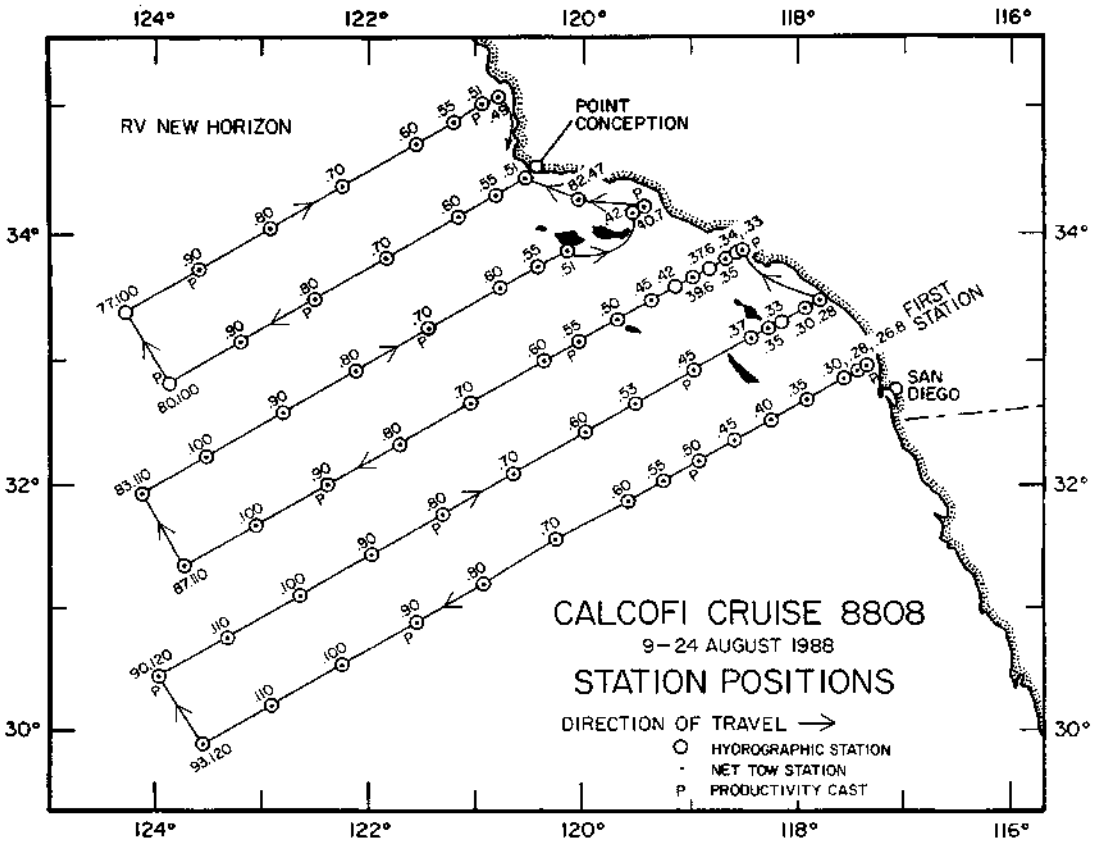
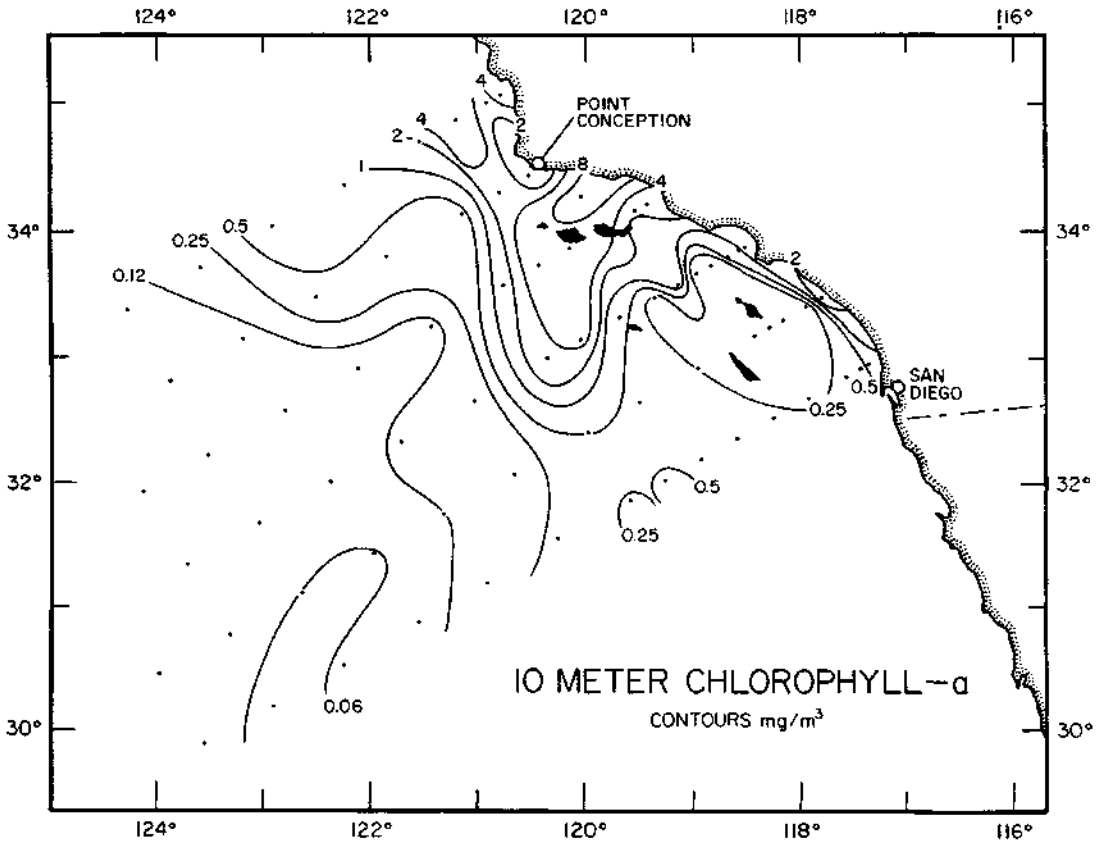


FIGURE 1



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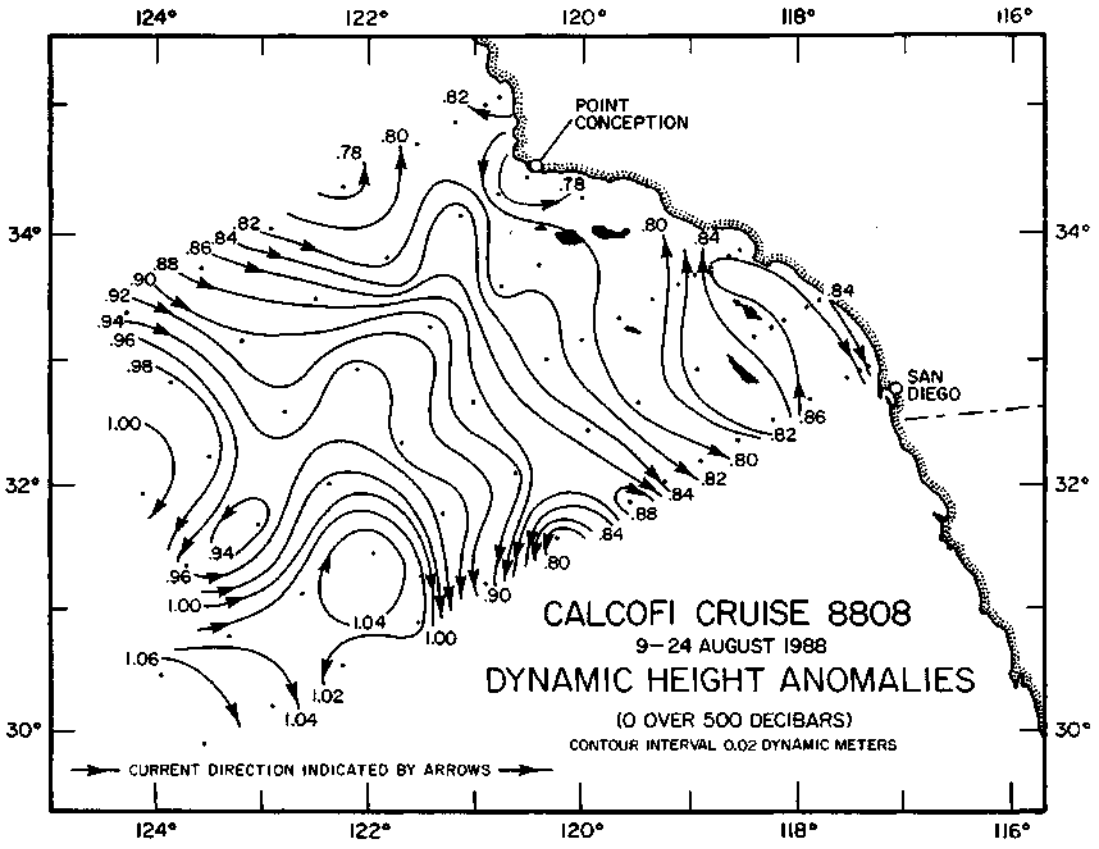

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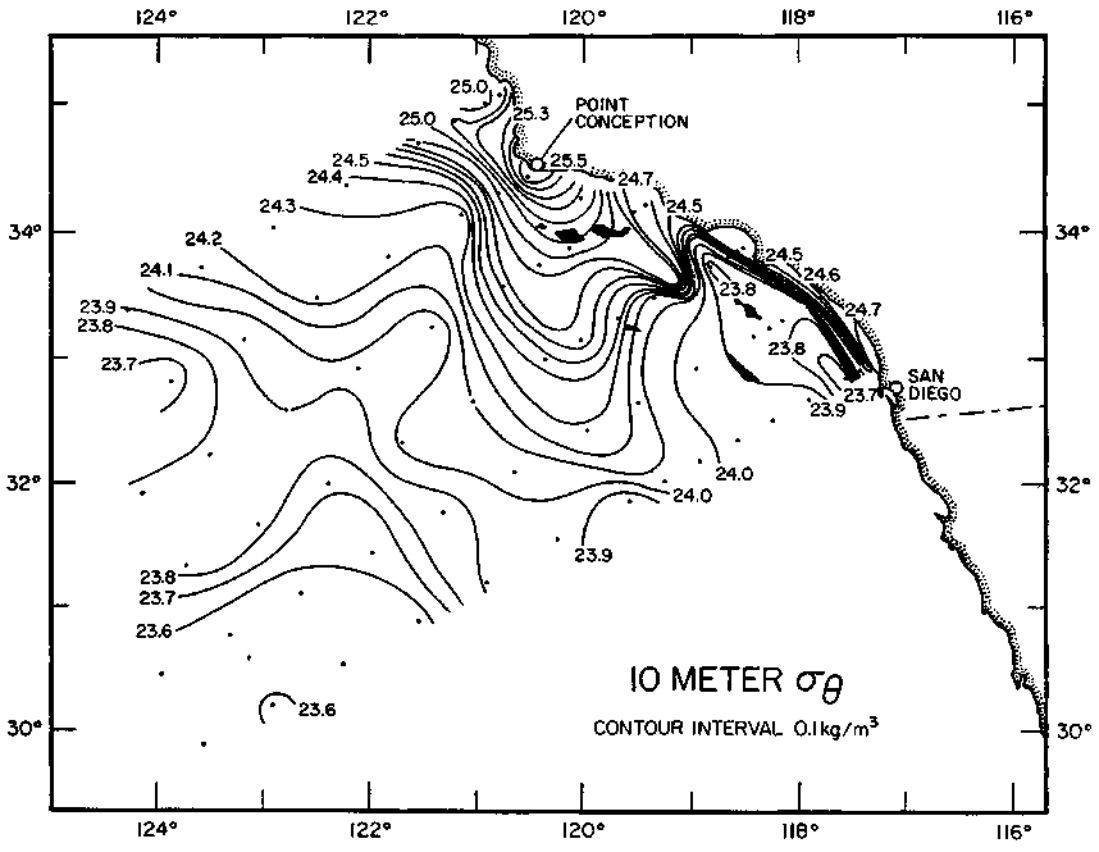

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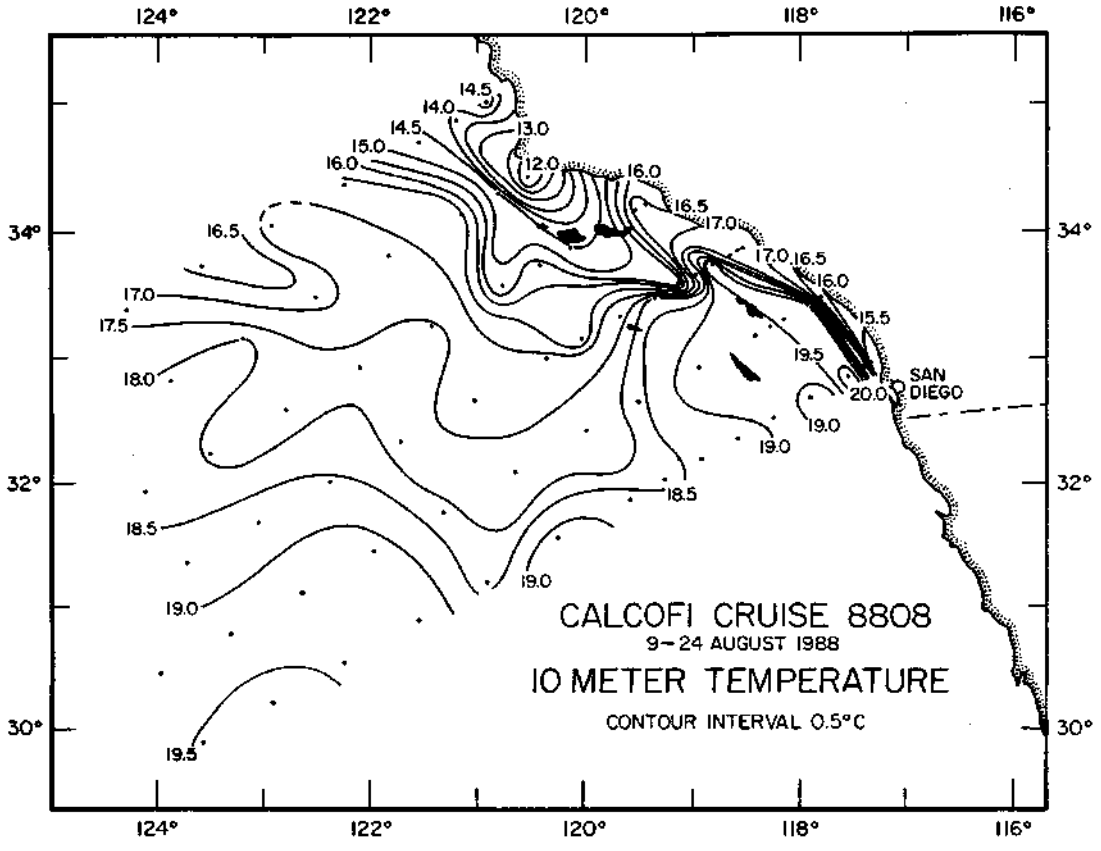

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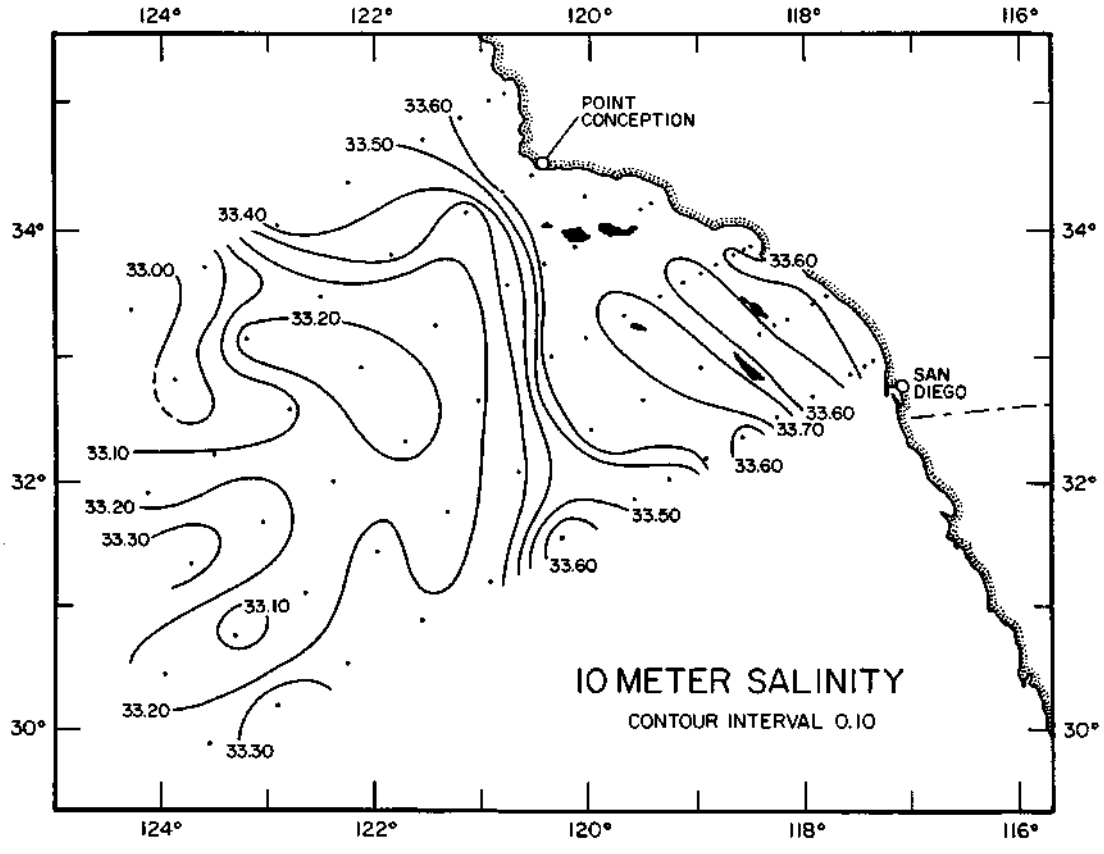
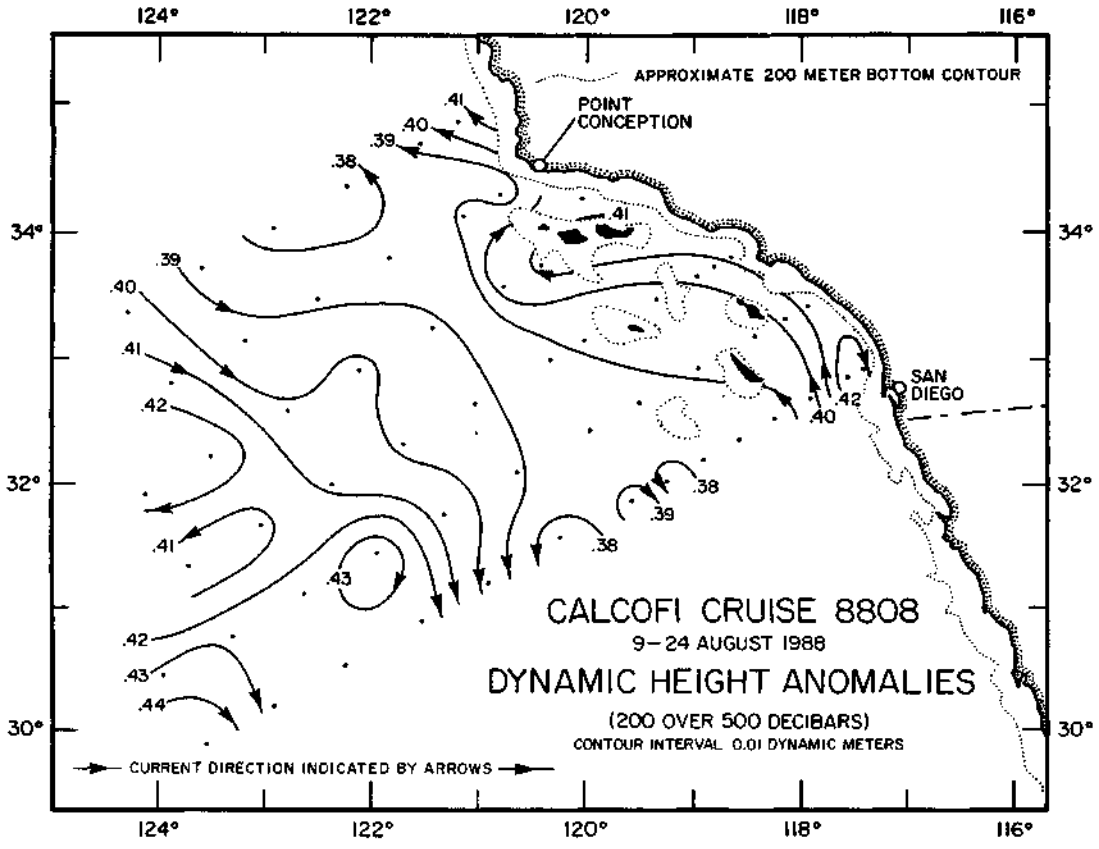


FIGURE 6



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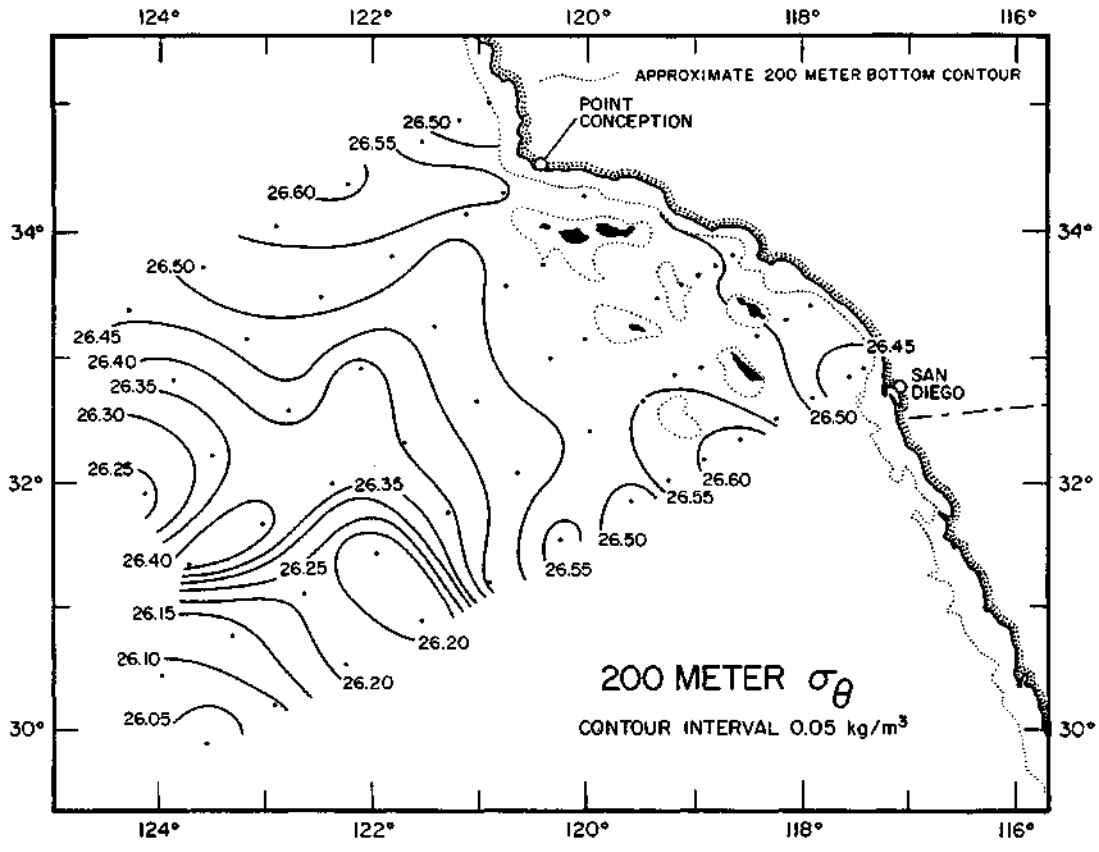

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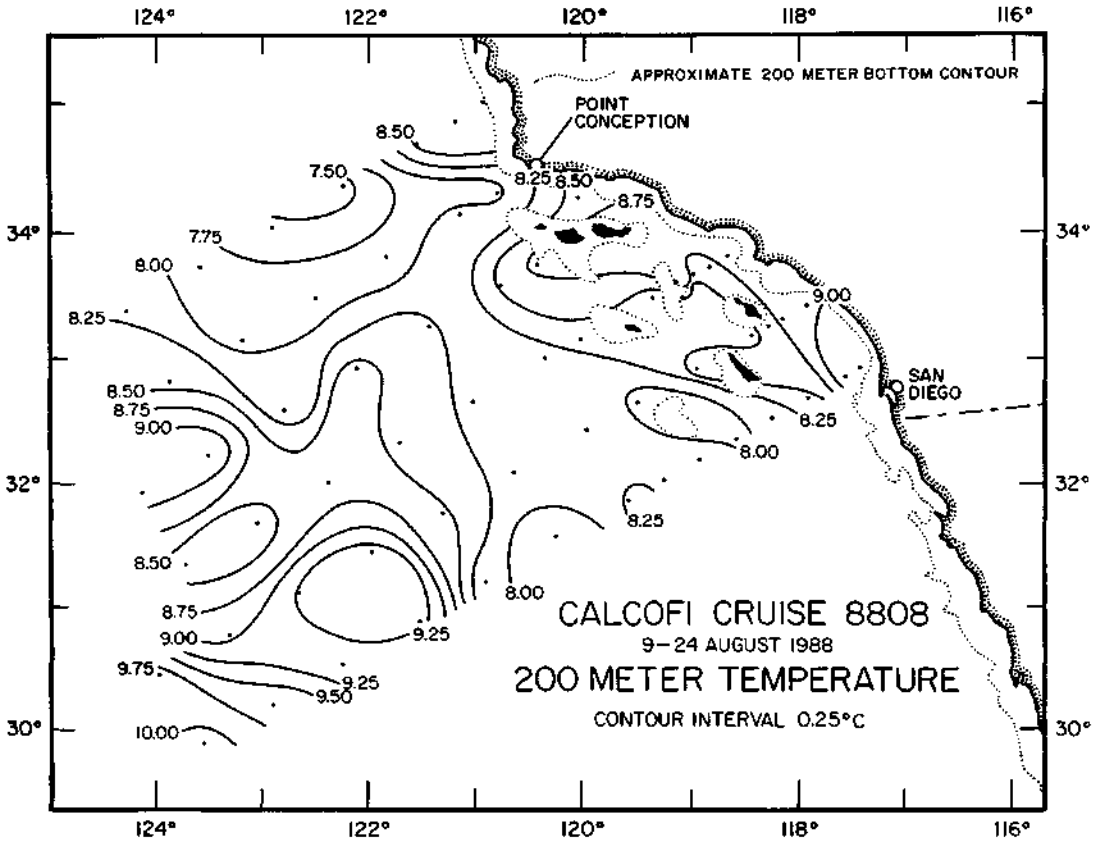

FIGURE 9

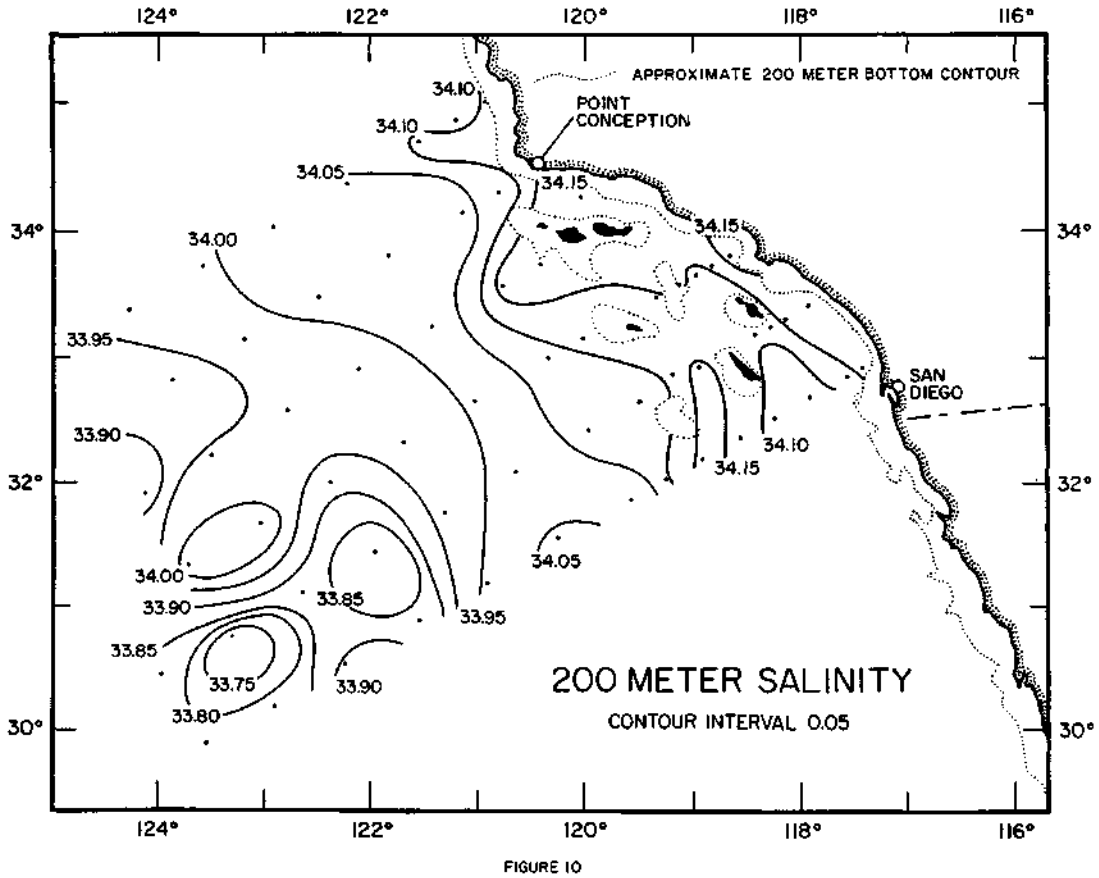

FIGURE 10

PERSONNEL

CalCOFI Cruise 8808

SHIP'S CAPTAIN

Phillip L. Munsch, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Mullin, Michael M. (Chief Scientist)	Professor, Director of MLRG, SIO	I, II
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Anderson, George C.	Staff Research Associate, SIO	I, II
Brooks, Elaine R.	Staff Research Associate, SIO	I
Field, Timothy J.	Marine Technician, SIO	I
Gruber, Dennis W.	Marine Technician, SIO	I, II
Lauth, Robert	Associate Scientist, IATTC	I
Lowell, William R.	Staff Research Associate, SIO	I, II
Miller, Susan M.	Biological Technician, NMFS	I, II
Mogk, Seth A.	Resident Technician, SIO	I, II
Nordhausen, Walter	Graduate Student, SIO	I, II
Platenberg, Renata	Volunteer, SIO	I, II
Rodriguez, Angel M.	Graduate Student, SIO	I, II
Smith, Paul E.	Fishery Biologist, NMFS	I, II
Veit, Richard R.	Graduate Student, UCI	I, II

Leg I: San Diego to Dana Point, CA, 9-15 August 1988

Leg II: Dana Point to San Diego, CA, 15-24 August 1988

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 5.3 N	120 46.9 W	23/08/88	2157 UTC	73 M	290	21 KT	280 03 05	1	1013.8 MB	18.6 C	16.5 C	1/8	AC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.647	24.958	298.8	0.000	6.84	118.9	1.5	0.24	1.9	0.07	3.78	0.69	0
1	1		14.87	14.87	33.647	24.958	298.8	0.003	6.84	118.9	1.5	0.24	1.9	0.07	3.78	0.69	1
	10	ISL	13.71	13.71	33.641	25.198	276.2	0.029	6.29	106.8	2.5	0.38	4.9	0.15	5.90	0.68	10
1	11		13.53	13.53	33.642	25.235	272.7	0.032	6.19	104.7	2.6	0.40	5.4	0.16	6.12	0.68	11
	20	ISL	12.69	12.69	33.650	25.409	256.4	0.055	5.10	84.8	8.7	0.95	10.1	0.32	3.75	0.93	20
1	22		12.55	12.55	33.654	25.440	253.5	0.061	4.86	80.6	10.2	1.08	11.1	0.35	3.05	0.99	22
	30	ISL	12.23	12.23	33.684	25.525	245.6	0.080	4.37	72.0	13.3	1.30	13.5	0.41	2.14	1.04	30
1	32		12.17	12.17	33.692	25.542	244.0	0.085	4.28	70.4	13.9	1.33	14.0	0.42	2.02	1.05	32
1	43		11.55	11.54	33.732	25.690	230.2	0.111	3.75	60.9	18.1	1.54	16.8	0.48	1.50	0.76	43
	50	ISL	11.27	11.26	33.746	25.752	224.4	0.127	3.55	57.3	19.5	1.61	18.2	0.48	0.76	0.40	50
1	53		11.17	11.16	33.752	25.775	222.3	0.134	3.48	56.0	20.0	1.64	18.7	0.48	0.46	0.26	53
1	69		10.86	10.85	33.795	25.864	214.2	0.169	3.12	49.9	25.4	1.82	20.9	0.46	0.34	0.42	70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 1.7 N	120 55.5 W	23/08/88	1938 UTC	242 M	300	12 KT	300 03 07	0	1014.4 MB	19.0 C	17.0 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.05	16.05	33.642	24.693	324.0	0.000	6.13	109.1	3.5	0.45	2.6	0.09	1.13	0.23	0
1	1		16.05	16.05	33.642	24.693	324.0	0.003	6.13	109.1	3.5	0.45	2.6	0.09	1.13	0.23	1
	10	ISL	14.70	14.70	33.632	24.983	296.7	0.031	6.29	109.0	2.1	0.38	3.3	0.11	2.26	0.45	10
1	11		14.49	14.49	33.633	25.029	292.3	0.034	6.30	108.7	2.0	0.38	3.4	0.11	2.38	0.49	11
	20	ISL	13.42	13.42	33.679	25.286	268.1	0.059	5.95	100.5	3.2	0.60	6.5	0.24	7.34	0.85	20
1	21		13.30	13.30	33.683	25.314	265.5	0.062	5.87	98.9	3.3	0.64	7.0	0.26	7.71	0.87	21
	30	ISL	11.90	11.90	33.615	25.534	244.8	0.085	4.52	73.9	11.9	1.19	13.9	0.37	2.15	0.52	30
1	32		11.63	11.63	33.602	25.574	241.0	0.090	4.23	68.7	13.9	1.31	15.4	0.39	0.62	0.42	32
1	42		11.21	11.20	33.655	25.692	230.0	0.113	3.89	62.7	16.9	1.43	17.4	0.41	0.22	0.41	42
	50	ISL	10.73	10.72	33.687	25.802	219.6	0.131	3.65	58.2	19.0	1.58	19.6	0.14	0.14	0.26	50
1	52		10.63	10.62	33.699	25.829	217.1	0.136	3.58	57.0	19.5	1.62	20.1	0.07	0.12	0.23	52
1	62		10.58	10.57	33.814	25.928	208.0	0.157	2.96	47.1	22.3	1.79	21.9	0.09	0.21	0.28	62
	75	ISL	10.13	10.12	33.843	26.028	198.7	0.183	2.84	44.7	24.4	1.88	23.1	0.06	0.17	0.24	76
1	76		10.09	10.08	33.843	26.035	198.0	0.185	2.83	44.5	24.5	1.89	23.2	0.06	0.16	0.24	77
1	97		9.75	9.74	33.956	26.181	184.6	0.226	2.35	36.7	29.5	2.11	25.7	0.03	0.13	0.24	98
	100	ISL	9.72	9.71	33.964	26.192	183.6	0.231	2.34	36.6	29.9	2.13	25.9	0.03	0.13	0.24	101
1	122		9.52	9.51	33.993	26.248	178.7	0.271	2.26	35.2	31.5	2.20	26.6	0.02	0.12	0.26	123
	125	ISL	9.50	9.49	33.997	26.255	178.1	0.276	2.26	35.1	31.7	2.20	26.7	0.02	0.11	0.26	126
1	148		9.32	9.30	34.023	26.305	173.8	0.317	2.23	34.5	33.1	2.21	27.1	0.02	0.04	0.20	149
	150	ISL	9.30	9.28	34.025	26.310	173.4	0.320	2.23	34.5	33.2	2.21	27.1	0.02	0.04	0.19	151
1	174		9.08	9.06	34.056	26.370	168.2	0.361	2.17	33.4	35.0	2.27	27.8	0.03	0.03	0.14	175
	200	ISL	8.75	8.73	34.102	26.458	160.2	0.404	1.90	29.1	39.5	2.39	29.1	0.06	0.02	0.15	202
1	205		8.68	8.66	34.111	26.476	158.5	0.412	1.84	28.1	40.5	2.42	29.4	0.06	0.02	0.16	207
1	234		8.37	8.35	34.148	26.553	151.6	0.457	1.59	24.1	44.9	2.55	30.9	0.05	0.03	0.14	236

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 53.4 N	121 12.0 W	23/08/88	1539 UTC	563 M	310	11 KT	290 03 09	1	1013.9 MB	17.9 C	16.5 C	1/8	AC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	14.73	14.73	33.638	24.981	296.6	0.000	6.54	113.4	1.4	0.29	2.7	0.13	4.03	0.46	0
1	1		14.73	14.73	33.638	24.981	296.6	0.003	6.54	113.4	1.4	0.29	2.7	0.13	4.03	0.46	1
	10	ISL	13.72	13.72	33.616	25.177	278.2	0.029	6.33	107.5	1.1	0.36	4.1	0.15	6.04	0.45	10
1	11		13.57	13.57	33.615	25.206	275.5	0.032	6.29	106.5	1.1	0.38	4.4	0.15	6.35	0.45	11
	20	ISL	13.09	13.09	33.627	25.313	265.6	0.056	5.86	98.2	2.1	0.60	6.5	0.20	7.77	0.82	20
1	22		13.01	13.01	33.633	25.333	263.7	0.061	5.74	96.1	2.3	0.66	7.1	0.22	8.09	0.92	22
	30	ISL	12.52	12.52	33.678	25.464	251.4	0.082	5.25	87.0	6.0	0.92	9.6	0.34	4.86	1.19	30
1	32		12.40	12.40	33.688	25.495	248.5	0.087	5.13	84.8	7.3	1.00	10.5	0.37	3.92	1.22	32
1	42		11.99	11.98	33.688	25.574	241.3	0.111	4.74	77.7	15.1	1.50	17.7	0.32	2.69	0.91	42
	50	ISL	11.43	11.42	33.695	25.683	231.0	0.130	4.25	68.8	15.5	1.51	17.8	0.31	1.44	0.50	50
1	53		11.21	11.20	33.703	25.729	226.6	0.137	4.04	65.1	15.6	1.52	17.8	0.31	1.01	0.37	53
1	63		10.60	10.59	33.759	25.882	212.4	0.159	3.36	53.4	20.2	1.70	20.6	0.07	0.29	0.33	63
1	73		10.13	10.12	33.817	26.008	200.5	0.180	3.04	47.9	23.5	1.82	22.7	0.02	0.10	0.21	74
	75	ISL	10.08	10.07	33.825	26.023	199.2	0.184	3.00	47.2	23.9	1.84	23.0	0.02	0.10	0.21	76
1	88		9.86	9.85	33.862	26.089	193.1	0.209	2.84	44.5	25.8	1.91	24.1	0.02	0.07	0.21	89
	100	ISL	9.68	9.67	33.883	26.135	189.0	0.232	2.77	43.2	27.1	1.96	24.8	0.01	0.16	0.28	101
1	103		9.64	9.63	33.889	26.147	187.9	0.238	2.76	43.0	27.4	1.97	24.9	0.01	0.18	0.29	104
1	124		9.32	9.31	33.973	26.265	177.1	0.276	2.69	41.7	30.6	2.07	26.4	0.01	0.03	0.13	125
	125	ISL	9.31	9.30	33.974	26.268	176.9	0.278	2.68	41.5	30.7	2.07	26.4	0.01	0.03	0.13	126
1	149		9.01	8.99	33.988	26.327	171.6	0.320	2.45	37.7	33.0	2.13	27.3	0.01	0.03	0.20	150
	150	ISL	9.00	8.98	33.989	26.329	171.4	0.321	2.44	37.5	33.1	2.13	27.3	0.01	0.03	0.20	151
1	179		8.78	8.76	34.019	26.388	166.4	0.370	2.32	35.5	35.7	2.20	28.3	0.01	0.02	0.12	180
	200	ISL	8.53	8.51	34.053	26.454	160.5	0.405	2.17	33.0	38.4	2.26	29.2	0.01	0.01	0.09	202
1	211		8.39	8.37	34.070	26.488	157.3	0.422	2.10	31.9	39.8	2.29	29.7	0.01	0.01	0.07	213
1	241		8.11	8.09	34.086	26.543	152.5	0.469	2.01	30.3	42.5	2.37	30.5	0.01			243
	250	ISL	8.06	8.03	34.102	26.564	150.8	0.482	1.90	28.6	43.7	2.42	30.9	0.01			252
1	282		7.92	7.89	34.165	26.634	144.6	0.530	1.45	21.8	48.5	2.59	32.4	0.01			284
	300	ISL	7.80	7.77	34.182	26.665	141.9	0.555	1.30	19.5	51.0	2.66	33.1	0.01			303
1	338		7.51	7.48	34.203	26.724	136.8	0.608	1.08	16.1	55.9	2.79	34.4	0.02			341
1	400		7.02	6.98	34.23	26.815	128.9	0.691	0.77	11.3	63.4	2.95	36.2	0.02			403
1	466		6.36	6.32	34.232	26.905	120.7	0.773	0.62	9.0	72.2	3.03	38.3	0.02			470
	500	ISL	6.15	6.11	34.260	26.955	116.3	0.813	0.50	7.2	78.2	3.12	38.7	0.07			504
1	538		5.91	5.86	34.293	27.011	111.2	0.857	0.37	5.3	84.9	3.22	39.2	0.12			543

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 43.4 N	121 33.1 W	23/08/88	1153 UTC	934 M	300	07 KT			1013.0 MB	16.5 C	16.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.07	16.07	33.584	24.644	328.7	0.000	6.48	115.4	1.7	0.34	0.5	0.03	0.90	0.24	0
1	1		16.07	16.07	33.584	24.644	328.7	0.003	6.48	115.4	1.7	0.34	0.5	0.03	0.90	0.24	1
	10	ISL	14.69	14.69	33.579	24.944	300.3	0.032	6.69	115.9	1.3	0.37	0.7	0.05	2.00	0.67	10
1	11		14.46	14.46	33.577	24.992	295.9	0.035	6.70	115.5	1.2	0.37	0.7	0.05	2.13	0.72	11
	20	ISL	12.96	12.96	33.456	25.206	275.7	0.060	5.85	97.7	3.4	0.80	6.0	0.26	1.63	0.62	20
1	22		12.68	12.68	33.434	25.244	272.1	0.066	5.62	93.3	4.1	0.90	7.3	0.31	1.44	0.58	22
	30	ISL	12.16	12.16	33.479	25.379	259.5	0.087	5.09	83.6	7.5	1.08	10.4	0.32	1.32	0.65	30
1	32		12.08	12.08	33.493	25.405	257.1	0.092	5.00	82.0	8.3	1.11	11.0	0.32	1.28	0.66	32
1	42		11.50	11.49	33.452	25.481	250.0	0.118	4.81	77.9	9.7	1.26	13.4	0.30	0.56	0.29	42
	50	ISL	11.30	11.29	33.466	25.529	245.6	0.137	4.69	75.6	10.9	1.34	14.5	0.22	0.56	0.49	50
1	52		11.25	11.24	33.473	25.543	244.3	0.142	4.66	75.0	11.2	1.36	14.8	0.20	0.56	0.55	52
1	62		10.79	10.78	33.501	25.647	234.6	0.166	4.43	70.6	13.8	1.50	17.0	0.14	0.43	0.28	62
1	72		10.39	10.38	33.600	25.794	220.8	0.189	4.00	63.3	17.6	1.66	19.7	0.08	0.39	0.34	73
	75	ISL	10.35	10.34	33.627	25.822	218.2	0.196	3.87	61.2	18.3	1.69	20.2	0.08	0.38	0.32	76
1	87		10.27	10.26	33.729	25.916	209.6	0.221	3.38	53.4	20.9	1.78	21.6	0.09	0.35	0.23	88
	100	ISL	10.01	10.00	33.836	26.044	197.7	0.248	2.98	46.8	24.3	1.90	23.3	0.06	0.33	0.39	101
1	102		9.96	9.95	33.851	26.064	195.8	0.252	2.93	46.0	24.9	1.92	23.6	0.05	0.33	0.42	103
1	123		9.35	9.34	33.949	26.242	179.3	0.291	2.62	40.6	30.4	2.08	26.0	0.03	0.31	0.64	124
	125	ISL	9.31	9.30	33.955	26.253	178.3	0.295	2.61	40.4	30.7	2.09	26.1	0.03	0.29	0.62	126
1	149		8.97	8.95	34.014	26.354	169.1	0.336	2.45	37.6	33.6	2.18	27.3	0.02	0.09	0.23	150
	150	ISL	8.96	8.94	34.017	26.358	168.7	0.338	2.43	37.3	33.8	2.19	27.4	0.02	0.09	0.23	151
1	180		8.68	8.66	34.111	26.476	158.1	0.387	1.93	29.5	39.3	2.37	29.5	0.02	0.05	0.14	181
	200	ISL	8.57	8.55	34.137	26.513	154.9	0.418	1.85	28.2	40.9	2.41	30.1	0.02	0.04	0.11	202
1	211		8.46	8.44	34.138	26.531	153.3	0.435	1.81	27.5	41.7	2.42	30.3	0.02	0.04	0.10	213
1	241		7.73	7.71	34.096	26.607	146.3	0.480	1.95	29.1	46.1	2.46	31.7	0.01			243
	250	ISL	7.57	7.55	34.092	26.627	144.5	0.493	1.92	28.6	48.0	2.48	32.1	0.01			252
1	283		7.15	7.12	34.095	26.689	138.9	0.540	1.68	24.8	54.9	2.59	33.7	0.02			285
	300	ISL	7.04	7.01	34.104	26.712	137.0	0.564	1.55	22.8	57.0	2.65	34.3	0.02			**302**
1	339		6.89	6.86	34.140	26.761	132.9	0.616	1.22	17.9	60.9	2.78	35.6	0.02			**342**
	400	ISL	6.68	6.64	34.228	26.859	124.3	0.695	0.69	10.1	68.2	3.00	37.3	0.01			**403**
1	401		6.68	6.64	34.229	26.860	124.3	0.696	0.68	9.9	68.3	3.00	37.3	0.01			**404**
1	467		6.18	6.14	34.261	26.951	116.2	0.775	0.48	6.9	77.3	3.13	39.0	0.02			**471**
	500	ISL	5.99	5.95	34.283	26.993	112.5	0.813	0.40	5.7	81.0	3.18	39.6	0.02			504
1	539		5.77	5.72	34.310	27.042	108.1	0.856	0.31	4.4	85.3	3.23	40.4	0.03			**544**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 23.1 N	122 14.5 W	23/08/88	0611 UTC	4017 M	270	04 KT			1013.4 MB	17.8 C	17.1 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	17.41	17.41	33.468	24.243	366.9	0.000	6.03	110.1	2.3	0.34	0.1	0.01	0.53	0.13	0
1	1		17.41	17.41	33.468	24.243	366.9	0.004	6.03	110.1	2.3	0.34	0.1	0.01	0.53	0.13	1
	10	ISL	16.89	16.89	33.458	24.358	356.2	0.036	6.03	109.0	2.1	0.34	0.1	0.01	0.71	0.30	10
1	11		16.78	16.78	33.458	24.384	353.8	0.040	6.03	108.8	2.1	0.34	0.1	0.01	0.75	0.33	11
	20	ISL	15.31	15.31	33.513	24.759	318.3	0.070	5.97	104.6	2.5	0.54	2.6	0.12	1.31	0.59	20
1	21		15.09	15.09	33.520	24.813	313.2	0.073	5.96	104.0	2.5	0.58	3.1	0.13	1.35	0.61	21
	30	ISL	12.51	12.51	33.562	25.376	259.7	0.099	5.25	86.9	7.0	1.07	10.2	0.68	0.85	0.48	30
1	32		11.97	11.97	33.578	25.492	248.8	0.104	5.06	82.8	8.3	1.18	12.0	0.77	0.68	0.42	32
1	42		10.99	10.98	33.644	25.723	227.0	0.128	4.32	69.3	14.1	1.48	18.3	0.37	0.27	0.19	42
	50	ISL	10.22	10.21	33.710	25.909	209.4	0.145	3.71	58.5	19.9	1.68	22.0	0.08	0.21	0.16	50
1	52		10.07	10.06	33.726	25.947	205.9	0.149	3.59	56.4	21.1	1.72	22.7	0.03	0.19	0.15	52
1	62		9.85	9.84	33.767	26.016	199.5	0.170	3.41	53.4	22.9	1.80	23.6	0.02	0.13	0.09	62
1	72		9.57	9.56	33.814	26.099	191.8	0.189	3.18	49.5	25.8	1.91	25.0	0.02	0.06	0.07	73
	75	ISL	9.47	9.46	33.829	26.127	189.1	0.195	3.09	48.0	26.6	1.92	25.4	0.02	0.05	0.06	76
1	86		9.10	9.09	33.881	26.228	179.8	0.215	2.83	43.6	29.2	1.95	26.6	0.01	0.02	0.05	87
	100	ISL	8.75	8.74	33.919	26.313	171.9	0.240	2.80	42.8	31.4	2.01	26.9	0.01	0.01	0.04	101
1	102		8.71	8.70	33.923	26.322	171.1	0.243	2.80	42.8	31.7	2.02	26.9	0.01	0.01	0.04	103
1	122		8.32	8.31	33.956	26.408	163.2	0.277	3.25	49.2	33.8	1.99	27.0	0.01	0.01	0.04	123
	125	ISL	8.30	8.29	33.963	26.417	162.5	0.282	3.20	48.4	34.2	2.00	27.2	0.01	0.01	0.04	126
1	148		8.15	8.14	34,011	26.477	157.1	0.318	2.66	40.1	37.3	2.10	28.6	0.01	0.01	0.03	149
	150	ISL	8.12	8.10	34.011	26.482	156.7	0.322	2.66	40.1	37.5	2.10	28.6	0.01	0.01	0.03	151
1	179		7.69	7.67	34.010	26.544	151.1	0.366	2.69	40.1	40.5	2.16	29.3	0.01	0.00	0.02	180
	200	ISL	7.49	7.47	34.046	26.602	146.0	0.397	2.22	33.0	45.2	2.33	31.4	0.01	0.01	0.02	202
1	210		7.40	7.38	34.064	26.629	143.6	0.412	1.98	29.4	47.6	2.41	32.5	0.01	0.01	0.02	212
1	241		7.00	6.98	34.071	26.690	138.0	0.455	1.72	25.3	53.1	2.50	34.2	0.01			243
	250	ISL	6.93	6.91	34.077	26.705	136.8	0.468	1.64	24.1	54.5	2.55	34.6	0.01			**252**
1	282		6.73	6.70	34.103	26.753	132.6	0.511	1.34	19.6	59.2	2.73	35.7	0.02			**284**
	300	ISL	6.62	6.59	34.118	26.779	130.3	0.535	1.19	17.3	61.9	2.80	36.4	0.02			**302**
1	339		6.36	6.33	34.143	26.833	125.6	0.585	0.93	13.5	67.8	2.91	38.0	0.01			3**42**
1	400		5.78	5.75	34.157	26.918	117.9	0.659	0.71	10.1	77.4	3.05	39.9	0.00			**403**
1	466		5.42	5.38	34.203	26.999	110.8	0.734	0.49	6.9	86.1	3.13	41.3	0.00			**47**0
	500	ISL	5.34	5.30	34.243	27.040	107.2	0.771	0.39	5.5	88.8	3.16	41.6	0.00			**504**
1	537		5.26	5.22	34.287	27.085	103.4	0.810	0.29	4.1	91.8	3.20	42.0	0.00			**542**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 3.3 N	122 56.2 W	23/08/88	0056 UTC	4231 M	220	05 KT	270 04 09	1	1012.4 MB	20.7 C	17.6 C	1/8	AS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.47	17.47	33.442	24.208	370.2	0.000	5.93	108.4	2.5	0.34	0.1	0.00	0.68	0.18	0
1	1		17.47	17.47	33.442	24.208	370.2	0.004	5.93	108.4	2.5	0.34	0.1	0.00	0.68	0.18	1
	10	ISL	17.27	17.27	33.440	24.255	366.1	0.037	5.94	108.2	2.3	0.34	0.1	0.00	0.69	0.19	10
1	11		17.23	17.23	33.440	24.264	365.2	0.040	5.94	108.1	2.3	0.34	0.1	0.00	0.69	0.19	11
	20	ISL	16.91	16.91	33.440	24.340	358.3	0.073	5.99	108.3	2.1	0.34	0.1	0.01	1.04	0.39	20
1	21		16.88	16.88	33.440	24.347	357.6	0.077	5.99	108.3	2.1	0.34	0.1	0.01	1.08	0.41	21
	30	ISL	16.85	16.85	33.438	24.353	3 57.4	0.109	5.89	106.4	2.0	0.35	0.1	0.01	1.30	0.47	30
1	32		16.84	16.83	33.438	24.355	357,2	0.116	5.85	105.6	2.0	0.35	0.1	0.01	1.35	0.48	32
1	42		13.61	13.60	33.667	25.239	273.2	0.147	5.63	95.4	3.2	0.81	5.9	0.34	0.58	0.23	42
	50	ISL	12.19	12.18	33.662	25.516	247.0	0.168	4.82	79.3	7.8	1.25	12.1	0.63	0.38	0.21	50
1	52		11.96	11.95	33.647	25.548	244.0	0.173	4.61	75.5	9.1	1.35	13.6	0.65	0.36	0.20	52
1	62		11.11	11.10	33.660	25.714	228.3	0.197	4.19	67.4	13.9	1.54	18.6	0.05	0.14	0.10	62
1	72		9.97	9.96	33.599	25.865	214.1	0.219	3.98	62.4	18.7	1.64	20.6	0.03	0.05	0.07	73
	75	ISL	9.90	9.89	33.638	25.907	210.1	0.225	3.84	60.1	20.0	1.69	21.4	0.03	0.04	0.06	76
1	86		9.65	9.64	33.764	26.047	197.0	0.248	3.27	50.9	24.3	1.89	24.1	0.02	0.02	0.05	87
	100	ISL	9.27	9.26	33.863	26.187	184.0	0.274	2.80	43.3	28.6	2.01	26.2	0.01	0.01	0.05	101
1	102		9.22	9.21	33.873	26.203	182.5	0.278	2.76	42.6	29.1	2.02	26.4	0.01	0.01	0.05	103
1	122		8.73	8.72	33.953	26.343	169.5	0.313	2.64	40.3	32.9	2.08	27.5	0.01	0.00	0.04	123
	125	ISL	8.67	8.66	33.962	26.359	168.0	0.318	2.63	40.1	33.4	2.09	27.7	0.01	0.00	0.04	126
1	148		8.27	8.25	34.010	26.458	158.9	0.356	2.54	38.4	37.3	2.16	28.8	0.01	0.00	0.04	149
	150	ISL	8.24	8.22	34.012	26.465	158.4	0.359	2.53	38.2	37.6	2.17	28.9	0.01	0.00	0.04	151
1	179		7.86	7.84	34.030	26.535	152.0	0.404	2.42	36.3	41.3	2.24	30.0	0.01	0.00	0.03	180
	200	ISL	7.53	7.51	34.029	26.583	147.8	0.436	2.37	35.2	44.5	2.30	30.9	0.02	0.00	0.02	202
1	209		7.40	7.38	34.030	26.602	146.1	0.449	2.32	34.4	45.9	2.34	31.4	0.02	0.00 A	0.02 A	211
1	239		7.24	7.22	34.070	26.656	141.4	0.492	1.84	27.2	50.7	2.52	33.3	0.02			241
	250	ISL	7.13	7.11	34.075	26.676	139.6	0.507	1.73	25.5	52.7	2.57	33.9	0.02			252
1	280		6.78	6.75	34.082	26.729	134.8	0.548	1.49	21.8	58.0	2.67	35.5	0.02			282
	300	ISL	6.59	6.56	34.091	26.762	131.9	0.575	1.33	19.4	61.2	2.75	36.4	0.02			**302**
1	337		6.29	6.26	34.112	26.818	126.9	0.623	1.06	15.3	66.7	2.88	37.9	0.02			3**40**
1	398		5.92	5.89	34.160	26.903	119.4	0.698	0.68	9.7	75.1	3.04	39.8	0.01			401
	400	ISL	5.91	5.88	34.161	26.906	119.2	0.701	0.67	9.6	75.4	3.04	39.8	0.01			403
1	463		5.52	5.48	34.19	26.977	113.0	0.774	0.50	7.1	82.8	3.15	41.1	0.01			**467**
	500	ISL	5.38	5.34	34.225	27.021	109.1	0.815	0.40	5.7	86.8	3.20	41.6	0.01			**504**
1	534		5.25	5.21	34.257	27.063	105.5	0.851	0.31	4.4	90.5	3.25	42.0	0.01			**539**

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

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 43.7 N	123 37.4 W	23/08/88	1858 UTC	4292 M	140	03 KT	350 04 06	2	1012.9 MB	18.8 C	18.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		16.22	16.22	32.991	24.154	375.4	0.000	5.85	104.1	2.1	0.35	0.0	0.00	0.15	0.03	0
	10	ISL	16.14	16.14	32.996	24.176	373.5	0.037	5.90	104.8	1.7	0.35	0.0	0.00	0.16	0.04	10
1	11		16.13	16.13	32.997	24.179	373.3	0.041	5.90	104.8	1.7	0.35	0.0	0.00	0.16	0.04	11
	20	ISL	16.00	16.00	33.012	24.220	369.7	0.075	5.93	105.1	1.7	0.35	0.0	0.00	0.19	0.06	20
1	22		15.97	15.97	33.020	24.233	368.5	0.082	5.93	105.0	1.7	0.35	0.0	0.00	0.20	0.06	22
	30	ISL	15.88	15.88	33.084	24.303	362.1	0.111	5.96	105.4	1.6	0.37	0.0	0.01	0.33	0.12	30
1	31		15.87	15.87	33.105	24.322	360.4	0.115	5.96	105.4	1.6	0.37	0.0	0.01	0.35	0.14	31
1	42		13.11	13.10	33.022	24.841	311.0	0.152	6.32	105.6	2.3	0.43	0.2	0.03	0.74	0.50	42
	50	ISL	11.93	11.92	32.984	25.038	292.3	0.176	6.05	98.6	3.6	0.61	2.8	0.26	0.47	0.41	50
1	52		11.74	11.73	32.981	25.071	289.2	0.182	5.95	96.5	3.9	0.66	3.5	0.31	0.38	0.37	52
1	63		11.36	11.35	33.076	25.215	275.8	0.213	5.68	91.5	4.8	0.72	5.2	0.03	0.19	0.24	63
1	73		11.01	11.00	33.134	25.323	265.7	0.240	5.43	86.8	6.9	0.87	7.7	0.02	0.14	0.14	74
	75	ISL	10.90	10.89	33.161	25.363	261.9	0.245	5.35	85.3	7.7	0.93	8.7	0.02	0.12	0.12	76
1	87		10.19	10.18	33.348	25.632	236.5	0.275	4.78	75.2	13.3	1.31	15.2	0.02	0.04	0.06	88
	100	ISL	9.65	9.64	33.503	25.844	216.6	0.304	4.23	65.8	17.8	1.50	18.6	0.01	0.02	0.04	101
1	102		9.58	9.57	33.524	25.871	214.0	0.309	4.15	64.4	18.4	1.52	19.0	0.01	0.02	0.04	103
1	123		8.88	8.87	33.753	26.163	186.6	0.351	3.34	51.1	26.8	1.89	24.7	0.00	0.01	0.03	**124**
	125	ISL	8.84	8.83	33.765	26.179	185.2	0.355	3.33	50.9	27.2	1.89	24.8	0.00	0.01	0.03	126
1	148		8.49	8.47	33.859	26.307	173.4	0.396	3.20	48.6	29.8	1.93	25.6	0.01	0.00	0.02	149
	150	ISL	8.46	8.44	33.866	26.317	172.4	0.399	3.20	48.6	30.1	1.93	25.7	0.01	0.00	0.02	151
1	179		8.06	8.04	33.949	26.443	160.9	0.448	3.16	47.5	34.4	1.99	26.8	0.01	0.00	0.01	180
	200	ISL	7.82	7.80	33.994	26.513	154.5	0.481	2.86	42.8	38.6	2.12	28.4	0.01	0.00	0.01	202
1	209		7.73	7.71	34.009	26.538	152.3	0.495	2.71	40.5	40.5	2.18	29.1	0.01	0.00	0.01	211 ,
1	239		7.43	7.41	34.032	26.600	146.8	0.539	2.31	34.3	45.7	2.32	31.3	0.01			**241**
	250	ISL	7.27	7.25	34.034	26.624	144.6	0.555	2.22	32.8	47.6	2.37	31.9	0.01			**252**
1	279		6.85	6.82	34.039	26.686	139.0	0.597	1.99	29.1	52.8	2.49	33.5	0.01			**281**
	300	ISL	**6.67**	**6.64**	34.059	26.726	135.4	0.625	1.70	24.8	56.7	2.62	34.8	0.01			**302**
2	335		**6.45**	**6.42**	34.097	26.785	130.1	0.672	1.22	17.7	62.7	2.81	36.8	0.01			**338**
2	395		**6.06**	**6.03**	34.129	26.861	123.5	0.748	0.89	12.8	70.5	2.94	38.7	0.01			**398**
	400	ISL	6.03	6.00	34.134	26.869	122.8	0.754	0.86	12.4	71.2	2.95	38.8	0.01			**403**
2	462		5.69	**5.65**	34.192	26.958	114.9	0.828	0.50	7.1	79.6	3.12	40.4	0.00			**466**
	500	ISL	5.45	**5.41**	**34.216**	27.006	110.6	0.871	0.42	6.0	84.9	3.17	41.2	0.00			**504**
2	535		5.22	**5.18**	34.238	27.051	106.5	0.909	0.34	4.8	89.7	3.22	41.9	0.00			**540**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 23.2 N	124 19.2 W	22/08/88	1328 UTC	3733 M	240	05 KT			1010.0 MB	17.4 C	15.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.45	17.45	33.014	23.885	401.0	0.000	5.63	102.6	2.8	0.36	0.1	0.00	0.09	0.02	0
1	1		17.45	17.45	33.014	23.885	401.0	0.004	5.63	102.6	2.8	0.36	0.1	0.00	0.09	0.02	1
	10	ISL	17.45	17.45	33.014	23.886	401.3	0.040	5.63	102.6	2.6	0.36	0.1	0.00	0.09	0.02	10
1	11		17.45	17.45	33.014	23.886	401.3	0.044	5.63	102.6	2.6	0.36	0.1	0.00	0.09	0.02	11
	20	ISL	17.44	17.44	33.033	23.903	400.0	0.080	5.64	102.8	2.5	0.36	0.1	0.00	0.14	0.03	20
1	21		17.44	17.44	33.035	23.904	399.9	0.084	5.64	102.8	2.5	0.36	0.1	0.00	0.15	0.03	21
	30	ISL	17.45	17.45	33.037	23.904	400.2	0.120	5.63	102.6	2.3	0.36	0.1	0.00	0.12	0.03	30
1	31		17.45	17.44	33.037	23.904	400.2	0.124	5.63	102.6	2.3	0.36	0.1	0.00	0.12	0.03	31
1	41		16.53	16.52	33.235	24.272	365.5	0.162	5.93	106.3	2.2	0.35	0.1	0.00	0.14	0.05	41
	50	ISL	14.71	14.70	33.246	24.685	3 26.3	0.194	6.26	108.2	2.4	0.39	0.1	0.00	0.20	0.10	50
1	51		14.50	14.49	33.244	24.728	322.2	0.197	6.29	108.3	2.5	0.40	0.1	0.00	0.21	0.11	51
1	61		13.11	13.10	33.274	25.036	292.9	0.228	6.14	102.7	3.4	0.55	2.0	0.09	0.27	0.22	61
1	71		12.39	12.38	33.326	25.218	275.9	0.256	5.84	96.3	4.6	0.70	4.6	0.14	0.27	0.22	72
	75	ISL	12.11	12.10	33.333	25.276	270.4	0.267	5.63	92.3	5.5	0.80	6.4	0.12	0.26	0.21	76
1	85		11.50	11.49	33.349	25.402	258.5	0.293	5.11	82.7	8.2	1.06	10.8	0.06	0.22	0.18	86
1	100		11.00	10.99	33.427	25.553	244.5	0.331	4.77	76.4	11.6	1.25	14.2	0.03	0.14	0.11	101
1	120		10.11	10.10	33.554	25.807	220.6	0.378	4.05	63.6	17.8	1.56	19.0	0.01	0.04	0.05	121
	125	ISL	9.90	9.89	33.587	25.868	214.9	0.389	3.91	61.2	19.1	1.61	19.9	0.01	0.03	0.05	126
1	146		9.16	9.14	33.729	26.100	193.1	0.431	3.45	53.1	24.2	1.78	23.0	0.01	0.01	0.03	147
	150	ISL	9.07	9.05	33.759	26.138	189.6	0.439	3.37	51.8	25.2	1.81	23.5	0.01	0.01	0.03	151
1	177		8.58	8.56	33.932	26.351	169.8	0.488	2.98	45.4	31.2	1.97	26.3	0.00	0.00	0.04	178
	200	ISL	8.22	8.20	33.990	26.451	160.5	0.526	2.83	42.7	34.9	2.06	27.7	0.00	0.01	0.03	202
1	208		8.11	8.09	33.999	26.475	158.4	0.538	2.80	42.2	36.0	2.09	28.0	0.00	0.01	0.03	210
1	238		7.75	7.73	34.024	26.548	151.9	0.585	2.67	39.9	40.3	2.19	29.1	0.00			240
	250	ISL	7.59	7.57	34.029	26.575	149.4	0.603	2.57	38.3	42.4	2.24	29.8	0.00			252
1	279		7.19	7.16	34.034	26.635	143.9	0.645	2.31	34.1	47.7	2.37	31.5	0.00			281
	300	ISL	6.91	6.88	34.032	26.673	140.6	0.675	2.17	31.8	51.4	2.44	32.7	0.00			302
1	337		6.44	6.41	34.027	26.732	135.2	0.726	1.93	28.0	57.9	2.56	34.6	0.00			3 40
1	398		5.79	5.76	34.034	26.820	127.2	0.806	1.48	21.1	68.1	2.79	37.7	0.00			401
	400	ISL	5.77	5.74	34.036	26.824	126.8	0.809	1.46	20.8	68.5	2.80	37.8	0.00			403
1	465		5.36	5.32	34.111	26.933	116.9	0.888	0.81	11.4	80.4	3.05	40.6	0.00			469
	500	ISL	5.26	5.22	34.158	26.983	112.6	0.928	0.62	8.7	84.6	3.12	41.1	0.00			504
1	536		5.15	5.11	34.206	27.034	108.1	0.968	0.43	6.0	89.0	3.20	41.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 27.1 N	120 31.7 W	21/08/88	0212 UTC	76 M	300	02 KT	260 03 05	0	1006.3 MB	16.6 C	14.5 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	15.81	15.81	33.690	24.784	315.4	0.000	6.79	120.4	1.9	0.24	0.1	0.03	3.70	0.63	0
1	1		15.81	15.81	33.690	24.784	315.4	0.003	6.79	120.4	1.9	0.24	0.1	0.03	3.70	0.63	1
	10	ISL	11.90	11.90	33.689	25.590	238.8	0.028	3.89	63.6	15.0	1.35	15.1	0.34	1.70	0.78	10
1	11		11.36	11.36	33.704	25.702	228.2	0.030	3.49	56.4	16.8	1.50	17.2	0.38	1.41	0.79	11
	20	ISL	10.91	10.91	33.736	25.808	218.4	0.051	3.20	51.2	19.1	1.65	19.5	0.13	0.59	0.52	20
1	22		10.81	10.81	33.744	25.832	216.1	0.055	3.13	50.0	19.6	1.68	20.0	0.06	0.51	0.44	22
	30	ISL	10.49	10.49	33.791	25.925	207.5	0.072	2.93	46.5	21.9	1.79	21.5	0.05	0.28	0.32	30
1	32		10.43	10.43	33.801	25.943	205.8	0.076	2.90	46.0	22.3	1.81	21.7	0.05	0.26	0.30	32
1	43		10.39	10.38	33.807	25.955	204.9	0.099	2.87	45.5	22.3	1.82	21.9	0.05	0.25	0.31	43
	50	ISL	10.37	10.36	33.810	25.961	204.5	0.113	2.86	45.3	22.4	1.83	21.9	0.05	0.26	0.32	50
1	53		10.36	10.35	33.812	25.964	204.3	0.119	2.86	45.3	22.4	1.84	21.9	0.05	0.26	0.32	53
1	69		10.14	10.13	33.86	26.040	197.4	0.151	2.69	42.4	24.2	1.92	23.0	0.05	0.22	0.34	70

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 19.2 N	120 48.3 W	21/08/88	0449 UTC	770 M	150	06 KT			1007.0 MB	17.0 C	15.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		15.00	15.00	33.630	24.917	302.7	0.000	6.53	113.8	2.9	0.36	0.4	0.07	2.56	0.25	0
1	10		14.68	14.68	33.635	24.990	296.0	0.030	6.61	114.5	2.8	0.38	0.5	0.08	3.46	0.44	10
	20	ISL	13.60	13.60	33.679	25.250	271.5	0.058	6.17	104.6	5.8	0.59	2.7	0.17	5.27	1.58	20
1	21		13.48	13.48	33.682	25.277	269.0	0.061	6.12	103.5	6.1	0.62	3.0	0.18	5.41	1.69	21
	30	ISL	12.94	12.94	33.607	25.327	264.4	0.085	5.97	99.7	5.2	0.77	5.2	0.20	4.99	1.73	30
1	31		12.89	12.89	33.599	25.331	264.1	0.088	5.95	99.3	5.1	0.79	5.6	0.20	4.89	1.73	31
1	40		12.12	12.11	33.657	25.525	245.9	0.111	4.82	79.2	11.6	1.21	11.8	0.34	4.56	1.58	40
	50	ISL	11.56	11.55	33.721	25.680	231.4	0.134	3.73	60.6	16.4	1.50	16.4	0.48	2.21	1.24	50
1	52		11.45	11.44	33.735	25.711	228.5	0.139	3.55	57.5	17.2	1.55	17.2	0.49	1.71	1.16	52
1	62		10.55	10.54	33.821	25.939	206.9	0.161	2.97	47.2	22.3	1.81	21.4	0.40	0.86	0.80	62
1	72		9.96	9.95	33.835	26.051	196.4	0.181	2.99	46.9	24.9	1.83	23.1	0.05	0.39	0.40	73
	75	ISL	9.83	9.82	33.842	26.078	193.9	0.187	2.97	46.5	25.5	1.84	23.5	0.04	0.36	0.39	76
1	87		9.46	9.45	33.883	26.171	185.2	0.210	2.83	43.9	28.0	1.92	24.8	0.02	0.25	0.35	88
	100	ISL	9.18	9.17	33.958	26.276	175.6	0.233	2.62	40.4	31.1	2.02	26.1	0.03	0.17	0.21	101
1	101		9.16	9.15	33.964	26.284	174.8	0.235	2.61	40.3	31.3	2.03	26.2	0.03	0.17	0.20	102
1	123		8.85	8.84	34.031	26.385	165.5	0.272	2.54	38.9	33.9	2.10	27.3	0.03	0.11	0.20	124
	125	ISL	8.82	8.81	34.034	26.392	164.9	0.276	2.52	38.6	34.2	2.11	27.4	0.03	0.11	0.20	126
1	149		8.48	8.46	34.064	26.469	158.0	0.314	2.24	34.1	38.4	2.23	28.9	0.02	0.44 U	1.64 U	150
	150	ISL	8.47	8.45	34.066	26.472	157.7	0.316	2.23	33.9	38.5	2.24	28.9	0.02	0.09	0.17	151
1	180		8.26	8.24	34.100	26.531	152.7	0.362	2.02	30.6	41.8	2.35	30.0	0.02	0.07	0.13	181
	200	ISL	7.99	7.97	34.082	26.557	150.4	0.393	2.14	32.2	43.2	2.33	30.3	0.02	0.09	0.12	202
1	211		7.82	7.80	34.069	26.573	149.1	0.409	2.21	33.1	44.1	2.32	30.5	0.02	0.10	0.11	213
1	240		7.44	7.42	34.074	26.631	143.8	0.452	2.00	29.7	48.7	2.46	32.0	0.02			242
	250	ISL	7.29	7.27	34.073	26.652	142.0	0.466	1.93	28.5	50.4	2.49	32.6	0.02			**252**
1	281		6.90	6.87	34.079	26.711	136.7	0.509	1.70	24.9	55.7	2.59	34.2	0.01			283
	300	ISL	6.78	6.75	34.100	26.744	133.8	0.535	1.48	21.6	58.6	2.67	35.1	0.01			302
1	338		6.68	6.65	34.157	26.802	128.7	0.585	1.04	15.2	63.7	2.84	36.6	0.02			3 41
1	398		6.67	6.63	34.254	26.881	122.2	0.660	0.59	8.6	69.4	3.00	37.4	0.01			**401**
	400	ISL	6.67	6.63	34.256	26.883	122.1	0.662	0.58	8.5	69.6	3.00	37.4	0.01			**403**
1	463		6.46	6.42	34.287	26.936	117.9	0.738	0.45	6.5	74.1	3.10	38.3	0.01			**467**
	500	ISL	6.24	6.20	34.289	26.966	115.3	0.781	0.40	5.8	77.1	3.13	39.1	0.01			**504**
1	534		6.03	5.98	34.291	26.995	112.9	0.820	0.35	5.0	79.8	3.16	39.8	0.01			**539**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 9.2 N	121 8.9 W	21/08/88	0844 UTC	2257 M	210	03 KT			1008.0 MB	17.0 C	14.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.58	16.58	33.241	24.263	364.9	0.000	5.94	106.6	2.3	0.35	0.0	0.00	0.33	0.12	0
1	1		16.58	16.58	33.241	24.263	364.9	0.004	5.94	106.6	2.3	0.35	0.0	0.00	0.33	0.12	1
	10	ISL	16.54	16.54	33.237	24.270	364.6	0.036	5.86	105.1	2.1	0.35	0.0	0.00	0.34	0.12	10
1	11		16.54	16.54	33.237	24.270	364.6	0.040	5.85	104.9	2.1	0.35	0.0	0.00	0.34	0.12	11
	20	ISL	16.04	16.04	33.243	24.389	353.6	0.072	6.05	107.4	2.0	0.36	0.0	0.00	0.67	0.25	20
1	22		15.85	15.85	33.238	24.428	349.9	0.079	6.11	108.1	2.0	0.36	0.0	0.00	0.75	0.28	22
	30	ISL	14.67	14.67	33.154	24.622	331.7	0.107	6.34	109.5	2.2	0.41	0.3	0.02	0.87	0.28	30
1	32		14.32	14.32	33.129	24.677	326.5	0.113	6.39	109.5	2.3	0.43	0.4	0.03	0.88	0.28	32
1	42		12.52	12.51	33.022	24.956	300.0	0.145	6.40	105.6	3.2	0.53	1.8	0.12	0.79	0.23	42
	50	ISL	12.12	12.11	33.086	25.082	288.2	0.168	6.01	98.4	4.3	0.69	4.3	0.25	0.58	0.27	50
1	51		12.10	12.09	33.099	25.096	286.9	0.171	5.95	97.4	4.5	0.71	4.7	0.27	0.55	0.27	51
1	62		11.57	11.56	33.253	25.314	266.4	0.201	5.43	87.9	6.4	0.94	8.6	0.31	0.31	0.22	62
1	73		11.57	11.56	33.401	25.430	255.7	0.230	5.05	81.8	8.0	1.10	11.7	0.23	0.22	0.16	74
	75	ISL	11.39	11.38	33.421	25.478	251.1	0.235	4.91	79.3	9.1	1.15	12.6	0.20	0.19	0.15	76
1	87		10.17	10.16	33.524	25.773	223.2	0.264	4.09	64.4	16.4	1.44	17.8	0.02	0.06	0.07	88
	100	ISL	9.70	9.69	33.597	25.909	210.5	0.292	3.87	60.3	19.4	1.56	19.9	0.02	0.03	0.05	101
1	102		9.66	9.65	33.609	25.925	209.0	0.296	3.85	59.9	19.7	1.58	20.1	0.02	0.03	0.05	103
1	123		9.10	9.09	33.852	26.206	182.6	0.337	2.89	44.5	28.7	1.96	25.9	0.01	0.02	0.04	124
	125	ISL	9.07	9.06	33.863	26.219	181.4	0.341	2.87	44.2	29.1	1.97	26.0	0.01	0.02	0.04	126
1	149		8.81	8.79	33.927	26.311	173.1	0.383	2.69	41.2	31.8	2.04	27.2	0.01	0.01	0.05	150
	150	ISL	8.80	8.78	33.929	26.314	172.8	0.385	2.69	41.2	31.9	2.04	27.2	0.01	0.01	0.05	151
1	180		8.34	8.32	33.997	26.438	161.5	0.435	2.66	40.3	35.8	2.10	28.2	0.01	0.03	0.04	181
	200	ISL	8.10	8.08	34.035	26.505	155.5	0.467	2.45	36.9	39.1	2.20	29.4	0.01	0.02	0.03	202
1	211		7.98	7.96	34.049	26.533	152.9	0.484	2.33	35.0	40.9	2.25	30.0	0.01	0.02	0.03	213
1	241		7.62	7.60	34.052	26.589	148.0	0.529	2.24	33.4	44.4	2.32	31.1	0.01			243
	250	ISL	7.52	7.50	34.060	26.609	146.2	0.542	2.15	32.0	46.0	2.37	31.6	0.01			252
1	282		7.19	7.16	34.097	26.685	139.3	0.588	1.75	25.8	52.3	2.55	33.5	0.01			284
	300	ISL	7.06	7.03	34.118	26.720	136.2	0.613	1.51	22.2	55.4	2.64	34.5	0.01			302
1	339		6.80	6.77	34.158	26.787	130.3	0.665	1.04	15.2	61.5	2.82	36.4	0.01			342
1	399		6.33	6.29	34.201	26.884	121.7	0.740	0.69	10.0	70.5	3.01	38.2	0.01			402
	400	ISL	6.32	6.28	34.201	26.885	121.6	0.742	0.69	10.0	70.6	3.01	38.2	0.01			403
1	465		5.85	5.81	34.209	26.952	115.7	0.819	0.54	7.7	78.0	3.11	40.1	0.01			469
	500	ISL	5.71	5.67	34.236	26.991	112.4	0.859	0.45	6.4	81.4	3.15	40.6	0.01			504
1	536		5.57	5.52	34.265	27.031	108.9	0.898	0.35	5.0	84.9	3.19	41.1	0.01			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.2 N	121 50.6 W	21/08/88	1416 UTC	3622 M	360	05 KT	290 03 07	2	1007.9 MB	17.5 C	14.6 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.02	17.02	33.346	24.241	367.0	0.000	5.76	104.3	2.1	0.35	0.2	0.00	0.35	0.11	0
1	1		17.02	17.02	33.346	24.241	367.0	0.004	5.76	104.3	2.1	0.35	0.2	0.00	0.35	0.11	1
1	10		17.04	17.04	33.345	24.236	367.8	0.037	5.77	104.6	1.9	0.33	0.1	0.00	0.36	0.09	10
	20	ISL	16.92	16.92	33.456	24.350	357.3	0.073	5.85	105.8	1.8	0.31	0.2	0.02	0.58	0.17	20
1	22		16.88	16.88	33.481	24.379	354.7	0.080	5.86	105.9	1.8	0.31	0.2	0.02	0.63	0.19	22
	30	ISL	16.71	16.71	33.522	24.450	348.1	0.108	5.84	105.3	1.7	0.33	0.6	0.04	0.68	0.25	30
1	32		16.67	16.66	33.532	24.467	346.6	0.115	5.83	105.0	1.7	0.34	0.7	0.04	0.68	0.26	32
1	42		12.75	12.74	33.659	25.405	257.4	0.145	5.25	87.4	5.5	1.03	8.8	0.50	0.70	0.21	42
	50	ISL	11.42	11.41	33.612	25.620	237.0	0.165	4.66	75.4	10.8	1.38	14.5	0.60	0.38	0.17	50
1	52		11.24	11.23	33.592	25.638	235.3	0.170	4.51	72.7	12.2	1.44	15.7	0.63	0.29	0.16	52
1	62		10.43	10.42	33.649	25.825	217.7	0.193	3.99	63.2	17.7	1.65	20.5	0.13	0.17	0.09	62
1	73		10.04	10.03	33.774	25.990	202.3	0.216	3.29	51.7	22.6	1.85	23.8	0.03	0.06	0.08	74
	75	ISL	9.97	9.96	33.785	26.010	200.4	0.220	3.22	50.5	23.2	1.88	24.1	0.03	0.05	0.09	76
1	87		9.60	9.59	33.824	26.102	191.8	0.243	2.94	45.8	26.3	1.98	25.4	0.02	0.02	0.11	88
	100	ISL	9.22	9.21	33.857	26.190	183.7	0.268	2.74	42.3	29.2	2.04	26.6	0.01	0.02	0.07	101
1	102		9.16	9.15	33.861	26.203	182.5	0.271	2.72	41.9	29.6	2.04	26.7	0.01	0.02	0.06	103
1	123		8.59	8.58	33.892	26.317	171.9	0.308	2.93	44.6	31.6	2.01	26.7	0.02	0.01	0.03	124
	125	ISL	8.59	8.58	33.901	26.324	171.3	0.312	2.90	44.2	31.9	2.02	26.8	0.02	0.01	0.03	126
1	148		8.60	8.58	33.988	26.391	165.4	0.351	2.45	37.3	35.8	2.16	28.4	0.01	0.01	0.03	149
	150	ISL	8.57	8.55	33.991	26.398	164.8	0.354	2.46	37.5	36.0	2.16	28.5	0.01	0.01	0.03	151
1	179		8.02	8.00	34.016	26.501	155.4	0.400	2.53	38.0	38.9	2.19	29.3	0.01	0.00	0.02	180
	200	ISL	7.82	7.80	34.031	26.543	151.7	0.433	2.42	36.2	41.4	2.25	30.1	0.01	0.00	0.02	202
1	210		7.75	7.73	34.037	26.557	150.5	0.448	2.34	35.0	42.8	2.29	30.6	0.01	0.00	0.02	212
1	240		7.49	7.47	34.058	26.612	145.7	0.492	2.04	30.3	47.5	2.42	32.2	0.01			242
	250	ISL	7.37	7.35	34.062	26.632	143.9	0.507	1.95	28.9	49.2	2.47	32.8	0.01			252
1	281		7.00	6.97	34.076	26.695	138.2	0.550	1.66	24.4	54.7	2.61	34.5	0.01			283
	300	ISL	6.82	6.79	34.090	26.730	135.0	0.576	1.46	21.4	58.0	2.70	35.5	0.01			302
1	337		6.51	6.48	34.120	26.796	129.2	0.625	1.09	15.8	64.2	2.86	37.3	0.02			340
1	398		6.00	5.97	34.156	26.890	120.7	0.701	0.72	10.3	74.0	3.02	39.6	0.01			401
	400	ISL	5.99	5.96	34.158	26.893	120.5	0.704	0.71	10.2	74.3	3.02	39.7	0.01			403
1	464		5.65	5.61	34.224	26.988	112.1	0.778	0.43	6.1	83.1	3.15	41.0	0.01			468
	500	ISL	5.52	5.48	34.255	27.028	108.6	0.818	0.36	5.1	86.6	3.20	41.4	0.01			504
1	538		5.39	5.35	34.289	27.071	104.9	0.859	0.29	4.1	90.2	3.25	41.8	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.2 N	122 31.4 W	21/08/88	2025 UTC	3997 M	110	07 KT	230 02 05	2	1009.1 MB	20.0 C	17.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.105	23.945	395.3	0.000	5.75	105.0	2.0	0.35	0.1	0.00	0.16	0.04	0
1	10		16.52	16.52	33.159	24.215	369.9	0.038	5.92	106.1	1.9	0.36	0.1	0.01	0.43	0.13	10
	20	ISL	16.43	16.43	33.217	24.280	364.0	0.075	5.91	105.7	1.7	0.34	0.1	0.01	0.33	0.12	20
1	21		16.42	16.42	33.216	24.282	363.9	0.079	5.91	105.7	1.7	0.34	0.1	0.01	0.32	0.12	21
	30	ISL	16.37	16.37	33.274	24.338	358.8	0.111	5.98	106.9	1.5	0.33	0.1	0.01	0.64	0.15	30
1	31		16.36	16.36	33.281	24.346	358.1	0.115	5.99	107.1	1.5	0.33	0.1	0.01	0.67	0.16	31
1	41		13.76	13.75	32.995	24.689	325.5	0.149	6.40	108.3	2.3	0.38	0.1	0.01	0.53	0.30	41
	50	ISL	12.51	12.50	32.924	24.882	307.3	0.177	6.51	107.3	2.6	0.43	0.2	0.02	0.67	0.45	50
1	51		12.41	12.40	32.922	24.900	305.6	0.180	6.52	107.3	2.6	0.44	0.2	0.02	0.69	0.46	51
1	62		11.41	11.40	32.914	25.080	288.6	0.213	6.10	98.2	2.8	0.45	0.2	0.02	0.54	0.46	62
1	71		11.25	11.24	33.175	25.312	266.7	0.238	5.38	86.5	8.1	1.04	10.5	0.05	0.26	0.27	72
	75	ISL	11.23	11.22	33.282	25.399	258.6	0.249	5.23	84.1	9.3	1.16	12.6	0.05	0.19	0.22	76
1	86		11.18	11.17	33.519	25.592	240.5	0.276	5.00	80.4	11.4	1.31	15.4	0.03	0.10	0.13	87
	100	ISL	10.48	10.47	33.562	25.750	225.7	0.309	4.53	71.8	15.7	1.49	18.3	0.02	0.05	0.07	101
1	102		10.36	10.35	33.560	25.769	223.9	0.313	4.45	70.3	16.4	1.51	18.7	0.02	0.05	0.06	103
1	122		9.48	9.47	33.725	26.045	197.9	0.355	3.48	54.0	23.8	1.77	23.4	0.02	0.01	0.04	123
	125	ISL	9.39	9.38	33.744	26.075	195.1	0.361	3.41	52.8	24.5	1.79	23.7	0.02	0.01	0.04	126
1	148		8.87	8.85	33.867	26.254	178.5	0.404	3.14	48.1	28.5	1.89	25.2	0.01	0.01	0.02	149
	150	ISL	8.83	8.81	33.877	26.268	177.2	0.408	3.12	47.8	28.9	1.90	25.3	0.01	0.01	0.02	151
1	178		8.25	8.23	33.990	26.446	160.6	0.455	2.93	44.3	34.3	2.02	27.3	0.01	0.00	0.02	179
	200	ISL	7.88	7.86	34.025	26.529	153.0	0.490	2.77	41.5	37.9	2.11	28.5	0.01			202
1	209		7.76	7.74				0.503									211
1	239		7.50	7.48	34.039	26.595	147.2	0.548	2.43	36.1	44.3	2.27	30.7	0.01			241
	250	ISL	7.36	7.34	34.042	26.618	145.2	0.564	2.31	34.2	46.6	2.33	31.5	0.01			252
1	280		6.97	6.94	34.055	26.682	139.4	0.607	1.95	28.6	52.8	2.49	33.6	0.01			282
	300	ISL	6.83	6.80	34.077	26.719	136.1	0.634	1.70	24.9	56.1	2.59	34.7	0.01			302
1	337		6.60	6.57	34.120	26.784	130.4	0.684	1.27	18.5	61.8	2.75	36.5	0.01			340
1	399		6.00	5.97	34.154	26.889	120.9	0.762	0.80	11.5	72.2	3.00	39.1	0.01			402
	400	ISL	5.99	5.96	34.154	26.890	120.8	0.763	0.80	11.5	72.3	3.00	39.1	0.01			403
1	464		5.69	5.65	34.187	26.954	115.3	0.838	0.57	8.1	78.9	3.09	40.3	0.01			468
	500	ISL	5.51	5.47	34.216	26.999	111.4	0.879	0.47	6.7	83.0	3.15	41.0	0.01			504
1	536		5.32	5.28	34.245	27.045	107.2	0.919	0.36	5.1	87.1	3.20	41.6	0.01			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.2 N	123 13.0 W	22/08/88	0216 UTC	4228 M	320	08 KT	160 05 10	2	1007.8 MB	18.5 C	16.9 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.123	23.846	404.7	0.000	5.58	102.8	2.8	0.34	0.1	0.00	0.09	0.02	0
1	10		18.00	18.00	33.209	23.902	399.7	0.040	5.60	103.3	2.5	0.34	0.1	0.00	0.10	0.03	10
	20	ISL	17.97	17.97	33.217	23.916	398.7	0.080	5.59	103.1	2.4	0.34	0.1	0.00	0.11	0.03	20
1	21		17.97	17.97	33.218	23.917	398.7	0.084	5.59	103.1	2.4	0.34	0.1	0.00	0.11	0.03	21
	30	ISL	17.30	17.30	33.156	24.031	388.1	0.120	5.67	103.1	1.9	0.34	0.1	0.00	0.14	0.03	30
1	31		17.14	17.13	33.143	24.059	385.5	0.123	5.68	103.0	1.9	0.34	0.1	0.00	0.14	0.03	31
1	41		13.87	13.86	32.937	24.622	331.9	0.159	6.36	107.9	2.5	0.37	0.1	0.00	0.22	0.07	41
	50	ISL	13.42	13.41	33.103	24.842	311.2	0.188	6.28	105.6	2.4	0.41	0.2	0.01	0.25	0.12	50
1	51		13.37	13.36	33.110	24.857	309.7	0.191	6.27	105.4	2.4	0.42	0.2	0.01	0.25	0.13	51
1	61		12.49	12.48	33.171	25.078	288.9	0.221	5.89	97.2	3.2	0.62	3.2	0.20	0.30	0.22	61
1	71		12.14	12.13	33.219	25.182	279.2	0.250	5.72	93.7	3.7	0.73	5.3	0.17	0.30	0.21	72
	75	ISL	12.13	12.12	33.280	25.231	274.6	0.261	5.64	92.4	4.4	0.80	6.7	0.14	0.27	0.18	76
1	86		12.00	11.99	33.440	25.380	260.8	0.290	5.31	86.9	7.2	1.03	10.8	0.05	0.16	0.09	87
	100	ISL	10.93	10.92	33.458	25.590	241.0	0.325	4.52	72.3	11.8	1.29	14.9	0.03	0.12	0.11	101
1	101		10.84	10.83	33.458	25.606	239.5	0.328	4.46	71.2	12.2	1.31	15.2	0.03	0.12	0.11	102
1	122		9.50	9.49	33.646	25.980	204.1	0.374	3.61	56.0	21.7	1.70	21.8	0.01	0.01	0.04	123
	125	ISL	9.40	9.39	33.671	26.016	200.7	0.380	3.52	54.5	22.6	1.74	22.4	0.01	0.01	0.04	126
1	147		8.96	8.94	33.829	26.210	182.6	0.423	3.07	47.1	27.9	1.93	25.4	0.01	0.00	0.03	148
	150	ISL	8.90	8.88	33.845	26.232	180.6	0.428	3.07	47.0	28.4	1.93	25.6	0.01	0.01	0.03	151
1	178		8.38	8.36	33.956	26.400	165.1	0.476	3.06	46.4	32.9	1.96	26.5	0.00	0.05	0.04	179
	200	ISL	7.96	7.94	33.991	26.491	156.7	0.512	3.09	46.4	36.3	2.00	27.2	0.01	0.02	0.03	202
1	209		7.81	7.79	34.000	26.520	154.0	0.526	3.10	46.4	37.9	2.02	27.6	0.01	0.01	0.02	211
1	239		7.50	7.48	34.039	26.595	147.3	0.571	2.34	34.8	45.0	2.31	30.8	0.01			241
	250	ISL	7.35	7.33	34.041	26.618	145.2	0.587	2.30	34.1	46.9	2.36	31.5	0.01			252
1	281		6.91	6.88	34.036	26.676	140.0	0.631	2.18	32.0	51.7	2.45	32.9	0.01			283
	300	ISL	6.63	6.60	34.029	26.708	137.1	0.658	2.09	30.4	54.9	2.50	33.7	0.01			302
1	337		6.20	6.17	34.035	26.769	131.5	0.707	1.81	26.1	61.3	2.62	35.4	0.01			340
1	398		6.04	6.01	34.151	26.881	121.6	0.784	0.90	12.9	72.1	2.97	38.9	0.01			401
	400	ISL	6.04	6.01	34.154	26.884	121.4	0.787	0.88	12.6	72.3	2.98	39.0	0.01			403
1	464		5.86	5.82	34.236	26.972	113.8	0.862	0.45	6.4	78.9	3.15	40.2	0.01			468
	500	ISL	5.67	5.63	34.263	27.017	109.9	0.902	0.37	5.3	82.9	3.18	40.8	0.01			504
1	532		5.51	5.47	34.287	27.055	106.4	0.937	0.29	4.1	86.5	3.21	41.4	0.01			537

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 48.8 N	123 53.8 W	22/08/88	0753 UTC	4404 M	240	09 KT			1009.5 MB	19.0 C	15.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0 ISL	18.11	18.11	32.954	23.680	420.6	0.000	5.57	102.8	2.8	0.34	0.0	0.00	0.07	0.02	0
1	1	18.11	18.11	32.954	23.680	420.6	0.004	5.57	102.8	2.8	0.34	0.0	0.00	0.07	0.02	1
1	10	18.03	18.03	32.952	23.698	419.2	0.042	5.58	102.8	2.4	0.34	0.0	0.00	0.07	0.02	10
	20 ISL	17.99	17.99	32.953	23.709	418.5	0.084	5.58	102.7	2.0	0.34	0.0	0.00	0.08	0.02	20
1	22	17.98	17.98	32.953	23.712	418.3	0.092	5.58	102.7	1.9	0.34	0.0	0.00	0.08	0.02	22
	30 ISL	17.50	17.50	32.964	23.836	406.7	0.125	5.79	105.6	1.8	0.34	0.0	0.00	0.13	0.04	30
1	32	17.33	17.32	32.968	23.880	402.6	0.133	5.85	106.4	1.8	0.34	0.0	0.00	0.14	0.04	32
1	42	16.22	16.21	33.007	24.168	375.4	0.172	5.98	106.4	1.5	0.34	0.0	0.00	0.14	0.05	42
	50 ISL	15.23	15.22	33.023	24.401	353.3	0.201	6.17	107.6	1.6	0.34	0.0	0.00	0.15	0.07	50
1	52	14.99	14.98	33.027	24.456	348.1	0.208	6.21	107.8	1.6	0.34	0.0	0.00	0.15	0.07	52
1	62	14.05	14.04	33.046	24.669	328.0	0.242	6.27	106.8	1.6	0.34	0.1	0.00	0.21	0.38	62
1	73	13.10	13.09	33.036	24.855	310.5	0.277	6.22	103.9	1.7	0.37	0.1	0.00	0.18	0.13	74
	75 ISL	12.96	12.95	33.030	24.878	308.4	0.284	6.20	103.2	1.7	0.39	0.2	0.05	0.19	0.14	76
1	87	12.34	12.33	33.026	24.995	297.5	0.320	6.04	99.3	2.1	0.51	1.3	0.29	0.26	0.l'9	88
	100 ISL	12.25	12.24	33.149	25.108	287.1	0.358	5.75	94.4	2.7	0.54	2.5	0.14	0.18	0.19	101
1	102	12.24	12.23	33.171	25.126	285.3	0.364	5.70	93.6	2.8	0.54	2.8	0.10	0.16	0.19	103
1	123	11.23	11.21	33.286	25.403	259.3	0.421	5.30	85.2	6.0	0.79	7.6	0.02	0.07	0.12	124
	125 ISL	11.12	11.10	33.298	25.432	256.6	0.426	5.25	84.2	6.5	0.82	8.1	0.02	0.06	0.11	126
1	149	9.84	9.82	33.478	25.794	222.4	0.483	4.71	73.5	12.9	1.20	14.4	0.01	0.02	0.04	150
	150 ISL	9.80	9.78	33.488	25.808	221.1	0.486	4.69	73.2	13.2	1.21	14.6	0.01	0.02	0.04	151
1	180	8.86	8.84	33.797	26.202	184.1	0.546	4.17	63.8	22.1	1.54	20.4	0.01	0.01	0.01	181
	200 ISL	8.40	8.38	33.942	26.386	166.8	0.581	4.01	60.8	26.0	1.66	22.3	0.01	0.00	0.01	202
1	211	8.21	8.19	33.993	26.455	160.4	0.599	3.95	59.6	27.9	1.71	23.0	0.01	0.00	0.01	213
1	241	7.87	7.85	33.994	26.507	155.9	0.647	3.65	54.7	34.3	1.84	25.2	0.01			243
	250 ISL	7.75	7.73	33.997	26.527	154.1	0.661	3.52	52.6	36.2	1.89	26.0	0.01			**252**
1	282	7.32	7.29	34.008	26.597	147.7	0.709	3.01	44.5	42.9	2.10	28.7	0.01			**284**
	300 ISL	7.11	7.08	34.010	26.628	144.9	0.735	2.77	40.8	46.4	2.21	30.1	0.01			**302**
1	339	6.70	6.67	34.022	26.693	139.1	0.791	2.24	32.7	53.6	2.44	32.8	0.01			3 **42**
1	399	6.20	6.16	34.089	26.812	128.3	0.871	1.30	18.7	64.9	2.79	36.8	0.01			**402**
	400 ISL	6.19	6.15	34.089	26.813	128.2	0.872	1.29	18.6	65.1	2.79	36.9	0.01			**403**
1	467	5.48	5.44	34.095	26.906	119.6	0.955	0.98	13.9	77.5	2.96	39.7	0.01			**471**
	500 ISL	5.33	5.29	34.129	26.951	115.6	0.994	0.77	10.9	82.3	3.05	40.6	0.01			**504**
1	536	5.17	5.13	34.166	27.000	111.3	1.035	0.55	7.7	87.5	3.15	41.6	0.01			**541**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 17.1 N	120 2.4 W	20/08/88	2221 UTC	575 M	260	03 KT	260 01 07	1	1007.0 MB	18.5 C	15.7 C	1/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0 A	16.62	16.62	33.679	24.590	333.8	0.000	6.67	120.1	7.0	0.37	0.0	0.01	0.49	0.17	0
1	10	13.81	13.81	33.662	25.194	276.6	0.031	7.59	129.2	10.5	0.48	0.0	0.02	9.41	0.31	10
	20 ISL	12.17	12.17	33.688	25.539	244.0	0.057	5.20	85.5	14.3	1.11	10.1	0.50	4.93	0.54	20
1	25	11.67	11.67	33.703	25.645	234.1	0.069	3.76	61.2	16.1	1.44	15.8	0.69	1.14	0.61	25
	30 ISL	11.35	11.35	33.724	25.720	227.0	0.080	3.58	57.9	17.6	1.56	18.1	0.52	0.87	0.52	30
1	40	10.96	10.96	33.763	25.821	217.7	0.102	3.23	51.8	20.1	1.66	20.3	0.06	0.32	0.28	40
	50 ISL	10.58	10.57	33.799	25.916	208.8	0.124	3.01	47.9	22.3	1.76	21.9	0.03	0.15	0.23	50
1	55	10.41	10.40	33.820	25.962	204.5	0.134	2.91	46.1	23.4	1.81	22.5	0.01	0.13	0.22	55
1	71	9.83	9.82	33.927	26.144	187.5	0.165	2.55	39.9	28.2	1.95	25.1	0.01	0.05	0.10	72
	75 ISL	9.73	9.72	33.952	26.181	184.1	0.173	2.46	38.4	29.2	2.00	25.6	0.01	0.04	0.10	76
1	85	9.55	9.54	34.004	26.251	177.6	0.191	2.28	35.5	31.4	2.10	26.6	0.01	0.03	0.09	86
1	100	9.36	9.35	34.049	26.318	171.6	0.217	2.12	32.9	33.9	2.15	27.5	0.01	0.04	0.10	101
1	119	9.22	9.21	34.087	26.370	167.0	0.249	1.97	30.5	36.1	2.28	28.2	0.01	0.03	0.11	120
	125 ISL	9.15	9.14	34.101	26.393	164.9	0.259	1.90	29.3	36.9	2.31	28.5	0.01	0.03	0.11	126
1	140	8.99	8.97	34.132	26.443	160.5	0.284	1.73	26.6	39.0	2.36	29.4	0.01	0.02	0.09	141
	150 ISL	8.92	8.90	34.142	26.462	158.9	0.299	1.65	25.3	40.0	2.38	29.9	0.01	0.02	0.09	151
1	170	8.79	8.77	34.152	26.490	156.5	0.331	1.52	23.3	41.7	2.43	30.7	0.01	0.02	0.08	171
1	200	8.53	8.51	34.161	26.538	152.5	0.377	1.35	20.6	45.0	2.55	31.7	0.01	0.02	0.09	202
1	239	8.17	8.15	34.174	26.604	146.8	0.436	1.12	16.9	50.5	2.67	33.0	0.00	0.02	0.09	241
	250 ISL	8.08	8.05	34.176	26.619	145.6	0.452	1.07	16.1	52.0	2.71	33.3	0.00	0.02	0.09	252
1	290	7.78	7.75	34.181	26.667	141.5	0.509	0.91	13.6	56.8	2.85	34.0	0.01	0.01	0.10	292
	300 ISL	7.73	7.70	34.182	26.676	140.9	0.523	0.89	13.3	57.4	2.86	34.2	0.01			302
1	339	7.52	7.49	34.189	26.712	138.0	0.578	0.81	12.1	60.3	2.88	34.9	0.01			**342**
1	388	7.06	7.02	34.213	26.796	130.5	0.644	0.54	7.9	69.2	3.07	35.1	0.00			**391**
	400 ISL	6.96	6.92	34.217	26.813	129.0	0.659	0.48	7.1	71.5	3.11	35.0	0.00			**403**
1	428	6.75	6.71	34.226	26.849	125.9	0.695	0.35	5.1	77.4	3.21	34.8	0.01			**432**
1	466	6.49	6.45	34.242	26.896	121.7	0.742	0.17	2.5	87.3	3.37	32.9	0.01			**470**
1	496	6.37	6.33	34.248	26.917	120.1	0.778	0.08	1.2	93.0	3.56	31.9	0.00			**500.**
	500 ISL	6.36	6.31	34.249	26.919	119.9	0.783	0.08	1.2	93.2	3.56	31.9	0.00			**504**
1	517	6.34	6.29	34.251	26.923	119.7	0.803	0.08	1.2	93.9	3.55	32.0	0.00			**522**
1	536	6.29	6.24	34.251	26.930	119.3	0.826	0.05	0.7	96.4	3.77	31.8	0.07			**541**
1	557	6.29	6.24	34.254	26.933	119.3	0.851	0.05	0.7	100.2	3.97	30.5	0.22			**562**
1	572	6.29	6.24	34.255	26.934	119.5	0.869	0.04	0.6	99.8	3.98	30.3	0.17			**577**

A) SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 40.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 13.4 N	119 25.1 W	20/08/88	1726 UTC	36 M	280	03 KT	270 01 05	2	1007.5 MB	16.1 C	15.4 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.76	16.76	33.684	24.562	336.5	0.000	7.09	128.0	0.6	0.16	0.1	0.01	2.33	0.51	0
1	10	16.50	16.50	33.686	24.624	330.9	0.033	6.90	124.0	0.5	0.16	0.1	0.01	3.42	0.52	10
	20 ISL	13.01	13.01	33.612	25.317	265.2	0.063	4.68	78.3	9.3	0.97	6.6	0.40	1.36	0.55	20
1	21	12.65	12.65	33.613	25.388	258.4	0.066	4.45	73.9	10.3	1.06	7.4	0.44	1.12	0.56	21
	30 ISL	11.94	11.94	33.630	25.538	244.4	0.088	3.94	64.5	14.4	1.41	12.7	0.46	0.82	0.69	30
1	31	11.86	11.86	33.632	25.554	242.8	0.091	3.88	63.4	14.9	1.45	13.3	0.46	0.79	0.70	31

RV NEW HORIZON CALCOFI CRUISE 8808 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 30.6 W	20/08/88	1527 UTC	138 M	360	04 KT	270 01 04	2	1007.4 MB	16.0 C	15.1 C	8/8 SC

CAST	DEPTH M		TEMP DEG C		POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		16.74		16.74	33.696	24.575	335.2	0.000	6.92	124.9	1.3	0.16	0.1	0.01	1.67	0.65	0
1	10		16.36		16.36	33.696	24.664	327.1	0.033	6.97	124.9	1.0	0.14	0.1	0.01	2.01	0.75	10
	20	ISL	14.12		14.12	33.640	25.113	284.6	0.064	5.35	91.6	6.0	0.62	3.0	0.12	2.95	1.15	20
1	21		13.89		13.89	33.637	25.158	280.3	0.067	5.18	88.3	6.6	0.68	3.4	0.13	2.99	1.18	21
	30	ISL	13.43		13.43	33.642	25.256	271.2	0.091	4.80	81.0	8.4	0.90	6.4	0.22	1.34	0.88	30
1	31		13.41		13.41	33.643	25.261	270.8	0.094	4.78	80.7	8.6	0.92	6.8	0.23	1.13	0.83	31
1	42		12.43		12.42	33.666	25.473	250.9	0.123	4.23	69.9	12.2	1.20	12.6	0.33	1.11	0.66	42
	50	ISL	11.21		11.20	33.725	25.747	225.0	0.142	3.57	57.5	17.3	1.53	17.9	0.21	0.68	0.55	50
1	52		10.93		10.92	33.740	25.808	219.1	0.146	3.42	54.8	18.5	1.60	19.1	0.17	0.56	0.52	52
1	62		10.50		10.49	33.747	25.890	211.6	0.168	3.24	51.4	19.8	1.68	20.8	0.05	0.28	0.34	62
1	73		10.22	*	10.21	33.768	25.954	205.6	0.191	3.24	51.1	21.0	1.71	21.7	0.04	0.15	0.26	74
	75	ISL	10.16		10.15	33.778	25.973	203.9	0.195	3.21	50.6	21.4	1.73	21.9	0.04	0.14	0.24	76
1	87		9.85		9.84	33.854	26.084	193.5	0.219	2.98	46.7	24.2	1.84	23.5	0.02	0.09	0.17	88
	100	ISL	9.68		9.67	33.933	26.175	185.3	0.243	2.67	41.7	27.3	1.97	24.9	0.03	0.11	0.19	101
1	103		9.65		9.64	33.949	26.192	183.6	0.249	2.61	40.7	28.0	2.00	25.2	0.03	0.11	0.20	104
	125	ISL	9.44		9.43	34.013	26.277	176.0	0.288	2.45	38.0	30.8	2.09	26.2	0.03	0.12	0.15	126
1	129		9.40		9.39	34.025	26.293	174.6	0.295	2.42	37.6	31.3	2.11	26.4	0.03	0.12	0.14	130

RV NEW HORIZON CALCOFI CRUISE 8808 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 8.3 W	20/08/88	1011 UTC	103 M	330	05 KT			1007.2 MB	15.1 C	13.5 C	

CAST	DEPTH M		TEMP DEG C		POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		14.93		14.93	33.689	24.977	2 96.9	0.000	5.74		100.0	4.9	0.52	3.2	0.11	3.82	1.01	0
1	10		14.81		14.81	33.675	24.993	295.8	0.030	5.64		98.0	4.9	0.55	3.5	0.13	4.37	1.23	10
	20	ISL	13.67		13.67	33.640	25.206	275.8	0.058	5.12		86.9	7.5	0.81	7.1	0.24	3.11	1.11	20
1	26		12.82		12.82	33.628	25.367	260.5	0.074	4.74		79.0	9.7	1.00	9.9	0.30	2.07	0.95	26
	30	ISL	12.39		12.39	33.627	25.450	252.7	0.085	4.54		75.0	10.9	1.10	11.5	0.30	1.61	0.84	30
1	36		11.83		11.83	33.634	25.561	242.2	0.099	4.26		69.5	12.8	1.23	13.7	0.29	1.04	0.66	36
1	47		11.14		11.13	33.673	25.719	227.5	0.125	3.81		61.3	16.0	1.45	17.1	0.24	0.40	0.33	47
	50	ISL	10.93		10.92	33.710	25.785	221.3	0.132	3.61		57.8	18.0	1.54	18.3	0.22	0.33	0.36	50
1	56		10.50		10.49	33.797	25.929	207.7	0.145	3.21	A	51.0	22.5	1.72	20.7	0.17	0.24	0.43	56
1	66		9.76		9.75	33.918	26.149	187.0	0.165	2.69	A	42.1	28.1	1.95	24.5	0.10	0.09	0.25	67
	75	ISL	9.58		9.57	33.959	26.211	181.2	0.181	2.53		39.4	30.3	2.03	25.5	0.10	0.07	0.26	76
1	76		9.57		9.56	33.962	26.215	180.9	0.183	2.52	A	39.2	30.5	2.03	25.5	0.10	0.07	0.26	77
1	86		9.34		9.33	34.018	26.296	173.3	0.201	2.31	A	35.8	33.0	2.11	26.7	0.07	0.08	0.21	87
1	97		9.22		9.21	34.051	26.342	169.2	0.220	2.16	A	33.4	35.0	2.21	27.4	0.06	0.04	0.18	98

A) THE OXYGEN SAMPLES FROM 56 TO 97 METERS APPEAR TO HAVE BEEN ANALYZED
IN REVERSE ORDER. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 44.6 N	120 25.0 W	20/08/88	0557 UTC	1018 M	300	11 KT			1007.5 MB	16.4 C	14.8 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	15.56	15.56	33.652	24.810	312.8	0.000	6.96	122.7	0.9	0.23	0.1	0.01	6.63	1.90	0
1	1		15.56	15.56	33.652	24.810	312.8	0.003	6.96	122.7	0.9	0.23	0.1	0.01	6.63	1.90	1
	10	ISL	15.54	15.54	33.650	24.814	312.8	0.031	6.94	122.3	0.7	0.25	0.1	0.01	6.72	1.92	10
1	11		15.54	15.54	33.650	24.814	312.8	0.034	6.94	122.3	0.7	0.25	0.1	0.01	6.73	1.92	11
	20	ISL	15.20	15.20	33.654	24.892	305.7	0.062	6.47	113.3	1.1	0.29	0.2	0.03	7.18	2.09	20
1	21		15.14	15.14	33.655	24.906	304.4	0.065	6.40	111.9	1.1	0.29	0.2	0.03	7.20	2.11	21
	30	ISL	14.52	14.52	33.673	25.054	290.5	0.092	5.77	99.6	3.2	0.52	2.6	0.10	6.32	1.43	30
1	31		14.42	14.42	33.675	25.077	288.4	0.095	5.69	98.1	3.6	0.56	3.1	0.11	6.12	1.34	31
1	41		12.85	12.84	33.668	25.392	258.5	0.122	4.70	78.4	9.4	1.02	10.4	0.22	2.62	0.83	41
	50	ISL	11.19	11.18	33.718	25.745	225.1	0.144	3.71	59.8	15.5	1.45	17.2	0.25	0.66	0.54	50
1	51		11.03	11.02	33.726	25.780	221.8	0.146	3.61	58.0	16.2	1.49	17.9	0.25	0.52	0.52	51
1	61		10.28	10.27	33.808	25.975	203.4	0.168	3.13	49.5	22.3	1.76	22.0	0.05	0.20	0.31	61
1	71		9.92	9.91	33.871	26.086	193.1	0.187	2.93	46.0	24.9	1.86	23.4	0.03	0.25	0,20	72
	75	ISL	9.82	9.81	33.893	26.120	189.9	0.195	2.85	44.6	25.9	1.89	23.9	0.03	0.30	0.24	76
1	85		9.64	9.63	33.937	26.184	184.0	0.214	2.68	41.8	27.9	1.95	24.8	0.03	0.37	0.34	86
1	100		9.51	9.50	33.963	26.226	180.3	0.241	2.57	40.0	29.8	2.02	25.5	0.02	0.09	0.17	101
1	120		9.04	9.03	34.046	26.367	167.2	0.276	2.45	37.7	34.2	2.15	27.2	0.02	0.04	0.09	121
	125	ISL	9.03	9.02	34.063	26.382	165.9	0.284	2.39	36.8	34.7	2.17	27.4	0.02	0.04	0.10	126
1	144		9.01	8.99	34.095	26.411	163.6	0.315	2.13	32.8	36.1	2.24	27.9	0.02	0.06	0.17	145
	150	ISL	8.98	8.96	34.110	26.427	162.2	0.325	2.05	31.5	36.8	2.26	28.2	0.02	0.05	0.15	151
1	174		8.85	8.83	34.160	26.487	156.9	0.364	1.79	27.5	39.6	2.35	29.3	0.02	0.02	0.07	175
	200	ISL	8.82	8.80	34.177	26.506	155.7	0.404	1.71	26.2	40.5	2.40	29.6	0.02	0.02	0.07	202
1	205		8.81	8.79	34.178	26.508	155.5	0.412	1.70	26.1	40.6	2.41	29.7	0.02	0.02	0.07	207
1	234		8.54	8.52	34.200	26.568	150.3	0.456	1.48	22.5	43.6	2.50	30.7	0.01			236
	250	ISL	8.42	8.39	34.204	26.590	148.5	0.480	1.42	21.6	44.8	2.53	31.2	0.01			252
1	274		8.26	8.23	34.206	26.616	146.4	0.516	1.36	20.6	46.5	2.58	31.8	0.01			276
	300	ISL	8.09	8.06	34.210	26.645	144.0	0.553	1.27	19.1	48.6	2.63	32.4	0.01			302
1	329		7.89	7.86	34.216	26.680	141.1	0.595	1.15	17.3	51.2	2.70	33.2	0.01			332
1	389		7.42	7.38	34.239	26.766	133.7	0.677	0.84	12.5	58.4	2.89	35.1	0.01			392
	400	ISL	7.34	7.30	34.242	26.780	132.5	0.692	0.81	12.0	59.6	2.91	35.4	0.01			403
1	455		6.96	6.92	34.255	26.844	127.0	0.763	0.67	9.8	65.1	2.97	36.7	0.01			459
	500	ISL	6.68	6.63	34.273	26.896	122.4	0.819	0.54	7.9	69.7	3.06	37.5	0.00			504
1	525		6.52	6.47	34.284	26.926	119.8	0.850	0.47	6.8	72.3	3.11	38.0	0.00			530

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 34.7 N	120 45.5 W	20/08/88	0205 UTC	1551 M	310	16 KT	3 20 05 07	1	1007.2 MB	18.0 C	15.1 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		15.41	15.41	33.323	24.590	333.8	0.000	6.14	107.7	2.2	0.37	0.4	0.04	1.14	0.24	0
1	10		15.04	15.04	33.356	24.697	323.9	0.033	6.14	106.9	2.0	0.39	0.7	0.06	1.28	0.33	10
	20	ISL	15.04	15.04	33.580	24.870	307.7	0.064	5.92	103.3	2.8	0.45	1.5	0.08	1.87	1.66	20
1	21		15.04	15.04	33.605	24.889	305.9	0.068	5.89	102.7	2.9	0.46	1.6	0.08	1.93	1.78	21
	30	ISL	13.87	13.87	33.499	25.056	290.3	0.094	5.77	98.2	3.7	0.63	4.0	0.19	2.12	1.49	30
1	31		13.69	13.69	33.480	25.078	288.2	0.097	5.74	97.3	3.8	0.66	4.4	0.20	2.14	1.46	31
1	41		11.70	11.69	33.396	25.401	257.6	0.125	5.05	82.1	8.3	1.07	11.4	0.16	0.45	0.46	41
	50	ISL	11.78	11.77	33.523	25.485	249.9	0.147	4.68	76.3	10.6	1.20	13.1	0.23	0.43	0.36	50
1	51		11.79	11.78	33.535	25.492	249.2	0.150	4.63	75.5	10.9	1.21	13.2	0.24	0.43	0.35	51
1	62		11.12	11.11	33.732	25.768	223.2	0.176	3.61	58.1	17.5	1.49	18.0	0.26	0.28	0.32	62
1	72		10.41	10.40	33.813	25.957	205.4	0.197	3.07	48.6	22.2	1.72	21.9	0.09	0.22	0.29	73
	75	ISL	10.26	10.25	33.832	25.998	201.6	0.203	2.98	47.1	23.2	1.77	22.6	0.08	0.20	0.26	76
1	86		9.84	9.83	33.895	26.118	190.3	0.225	2.77	43.4	26.5	1.89	24.3	0.03	0.14	0.17	87
	100	ISL	9.41	9.40	33.977	26.253	177.7	0.251	2.52	39.1	30.7	2.03	26.2	0.02	0.10	0.16	101
1	101		9.39	9.38	33.982	26.260	177.0	0.252	2.51	38.9	31.0	2.04	26.3	0.02	0.10	0.16	102
1	122		9.24	9.23	34.023	26.317	172.1	0.289	2.37	36.6	32.6	2.10	27.0	0.02	0.05	0.14	123
	125	ISL	9.21	9.20	34.035	26.332	170.8	0.294	2.33	36.0	33.1	2.12	27.2	0.02	0.05	0.14	126
1	147		8.97	8.95	34.118	26.435	161.3	0.331	2.00	30.8	36.8	2.27	28.8	0.01	0.03	0.11	148
	150	ISL	8.95	8.93	34.124	26.443	160.7	0.336	1.97	30.3	37.1	2.29	28.9	0.01	0.03	0.11	151
1	178		8.81	8.79	34.156	26.490	156.7	0.380	1.78	27.3	39.7	2.39	29.6	0.01	0.03	0.09	179
	200	ISL	8.65	8.63	34.168	26.525	153.7	0.414	1.67	25.5	41.6	2.43	30.3	0.01	0.03	0.09	202
1	209		8.59	8.57	34.172	26.538	152.7	0.428	1.63	24.9	42.4	2.44	30.6	0.01	0.03	0.09	211
1	239		8.49	8.46	34.204	26.579	149.4	0.473	1.43	21.8	44.6	2.52	31.2	0.01			241
	250	ISL	8.40	8.37	34.218	26.604	147.2	0.490	1.38	21.0	45.6	2.55	31.5	0.01			252
1	280		8.09	8.06	34.247	26.674	140.9	0.533	1.24	18.7	48.5	2.61	32.6	0.01			282
	300	ISL	7.91	7.88	34.244	26.698	138.9	0.561	1.14	17.1	50.7	2.65	33.3	0.01			302
1	337		7.58	7.55	34.231	26.736	135.7	0.612	0.94	14.0	55.1	2.74	34.6	0.01			3 40
1	397		7.02	6.98	34.259	26.838	126.7	0.690	0.66	9.7	62.8	2.89	36.6	0.01			400
	400	ISL	7.00	6.96	34.260	26.841	126.3	0.694	0.65	9.6	63.1	2.90	36.7	0.01			403
1	464		6.53	6.49	34.269	26.912	120.2	0.773	0.52	7.6	69.1	3.00	38.3	0.01			468
	500	ISL	6.32	6.27	34.288	26.955	116.5	0.816	0.44	6.4	73.4	3.05	38.9	0.01			504
1	537		6.11	6.06	34.309	26.999	112.6	0.858	0.35	5.0	77.9	3.10	39.5	0.01			542

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.0 N	121 26.4 W	19/08/88	1959 UTC	3799 M	310	15 KT	320 05 07	2	1010.7 MB	18.4 C	15.8 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 7 8	SIGMA THETA	SVA	DYN HT	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	33.181	23.984	391.5	0.000	5.62	102.8	2.4	0.35	0.0	0.00	0.11	0.03	0
1	1		17.57	17.57	33.181	23.984	391.6	0.004	5.62	102.8	2.4	0.35	0.0	0.00	0.11	0.03	1
	10	ISL	17.56	17.56	33.179	23.986	391.7	0.039	5.66	103.5	2.2	0.35	0.0	0.00	0.11	0.03	10
1	11		17.56	17.56	33.179	23.986	391.8	0.043	5.67	103.7	2.2	0.35	0.0	0.00	0.11	0.03	11
	20	ISL	17.57	17.57	33.186	23.989	391.8	0.078	5.65	103.3	2.1	0.34	0.0	0.01	0.10	0.02	20
1	22		17.57	17.57	33.188	23.991	391.7	0.086	5.65	103.3	2.1	0.34	0.0	0.01	0.10	0.02	22
	30	ISL	17.39	17.39	33.187	24.033	387.9	0.117	5.68	103.5	2.0	0.34	0.0	0.01	0.11	0.03	30
1	32		17.35	17.34	33.187	24.043	3 87.0	0.125	5.69	103.6	2.0	0.34	0.0	0.01	0.11	0.03	32
1	42		15.03	15.02	33.132	24.528	341.0	0.162	6.25	108.7	1.9	0.36	0.0	0.00	0.20	0.09	42
	50	ISL	13.69	13.68	33.076	24.766	318.4	0.188	6.24	105.5	2.3	0.40	0.2	0.03	0.31	0.14	50
1	53		13.33	13.32	33.069	24.834	312.0	0.197	6.23	104.6	2.5	0.41	0.3	0.04	0.35	0.16	53
1	63		12.81	12.80	33.201	25.039	292.7	0.228	5.82	96.7	3.1	0.62	3.6	0.34	0.41	0.27	63
1	74		12.06	12.05	33.27	25.237	274.1	0.259	5.43	88.9	5.4	0.85	7.7	0.03	0.20	0.19	75
	75	ISL	12.02	12.01	33.281	25.253	272.6	0.261	5.39	88.1	5.6	0.87	8.1	0.03	0.19	0.18	76
1	88		11.61	11.60	33.426	25.442	254.9	0.296	4.84	78.5	9.3	1.12	12.4	0.03	0.07	0.12	89
	100	ISL	10.98	10.97	33.534	25.640	236.2	0.325	4.36	69.8	13.7	1.34	16.2	0.02	0.03	0.07	101
1	104		10.77	10.76	33.564	25.701	230.5	0.335	4.22	67.3	15.1	1.41	17.3	0.02	0.03	0.06	105
1	124		10.18	10.17	33.656	25.875	214.3	0.379	3.73	58.7	19.6	1.59	20.4	0.02	0.01	0.04	125
	125	ISL	10.15	10.14	33.662	25.885	213.4	0.381	3.70	58.2	19.9	1.60	20.6	0.02	0.01	0.04	126
1	150		9.35	9.33	33.821	26.142	189.3	0.432	3.09	47.8	26.4	1.84	24.5	0.01	0.00	0.03	151
1	181		8.60	8.58	33.975	26.381	167.0	0.487	2.80	42.7	33.6	2.02	27.2	0.01	0.00	0.03	182
	200	ISL	8.31	8.29	34.026	26.466	159.2	0.518	2.57	38.9	37.6	2.12	28.7	0.01	0.00	0.04	202
1	212		8.16	8.14	34.046	26.504	155.7	0.537	2.42	36.5	40.0	2.19	29.5	0.01	0.00	0.04	214
1	242		7.84	7.82	34.083	26.581	148.9	0.582	2.03	30.4	45.4	2.37	31.3	0.01			244
	250	ISL	7.73	7.71	34.088	26.601	147.1	0.594	1.95	29.1	47.0	2.41	31.8	0.01			252
1	283		7.31	7.28	34.107	26.676	140.2	0.642	1.67	24.7	53.2	2.55	33.9	0.00			285
	300	ISL	7.18	7.15	34.123	26.7 07	137.5	0.665	1.49	22.0	55.8	2.63	34.8	0.00			302
1	340		6.91	6.88	34.160	26.774	131.6	0.719	1.08	15.8	61.6	2.79	36.5	0.00			343
	400	ISL	6.37	6.33	34.195	26.874	122.7	0.795	0.71	10.3	71.0	2.98	38.9	0.00			403
1	401		6.36	6.32	34.195	26.875	122.6	0.797	0.71	10.3	71.1	2.98	38.9	0.00			404
1	468		5.98	5.94	34.237	26.958	115.4	0.876	0.49	7.0	78.6	3.11	40.4	0.00			47 2
	500	ISL	5.81	5.77	34.254	26.993	112.3	0.913	0.42	6.0	81.8	3.15	40.9	0.00			504
1	539		5.60	5.55	34.275	27.035	108.5	0.956	0.34	4.8	85.6	3.19	41.6	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 54.8 N	122 7.8 W	19/08/88	1308 UTC	4175 M	330	21 KT			1012.0 MB	10.9 C	15.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.83	17.83	33.230	23.959	393.9	0.000	5.62	103.3	3.3	0.35	0.1	0.00	0.09	0.02	0
1	2		17.83	17.83	33.230	23.959	394.0	0.008	5.62	103.3	3.3	0.35	0.1	0.00	0.09	0.02	2
	10	ISL	17.82	17.82	33.230	23.962	394.0	0.039	5.59	102.8	3.3	0.34	0.1	0.00	0.09	0.02	10
1	12		17.82	17.82	33.230	23.962	394.1	0.047	5.58	102.6	3.3	0.34	0.1	0.00	0.09	0.02	12
	20	ISL	17.83	17.83	33.229	23.959	394.6	0.079	5.62	103.3	3.5	0.34	0.1	0.00	0.10	0.02	20
1	23		17.84	17.84	33.229	23.957	394.9	0.091	5.64	103.7	3.5	0.34	0.1	0.00	0.10	0.02	23
	30	ISL	17.85	17.84	33.229	23.955	395.4	0.118	5.60	103.0	3.3	0.34	0.1	0.00	0.09	0.02	30
1	34		17.85	17.84	33.229	23.955	395.5	0.134	5.58	102.6	3.2	0.34	0.1	0.00	0.09	0.02	34
1	43		17.77	17.76	33.228	23.974	394.0	0.170	5.59	102.7	3.0	0.34	0.1	0.00	0.10	0.02	43
	50	ISL	16.08	16.07	33.158	24.316	361.5	0.196	5.98	106.2	3.2	0.37	0.1	0.00	0.15	0.05	50
1	54		15.00	14.99	33.138	24.539	340.3	0.210	6.19	107.6	3.3	0.39	0.1	0.00	0.19	0.07	54
1	64		13.95	13.94	33.190	24.801	315.5	0.243	6.12	104.1	3.6	0.45	0.9	0.10	0.30	0.15	64
1	74		12.61	12.60	33.194	25.073	289.8	0.273	5.81	96.1	5.1	0.65	3.9	0.28	0.34	0.27	75
	75	ISL	12.54	12.53	33.203	25.093	287.8	0.276	5.77	95.3	5.3	0.67	4.3	0.27	0.33	0.27	76
1	89		12.02	12.01	33.350	25.307	267.8	0.315	5.25	85.9	8.0	0.96	9.6	0.07	0.15	0.15	90
	100	ISL	11.58	11.57	33.425	25.447	254.7	0.344	4.90	79.4	11.0	1.13	12.5	0.02	0.07	0.09	101
1	104		11.41	11.40	33.449	25.497	250.0	0.354	4.77	77.1	12.2	1.19	13.5	0.02	0.05	0.07	105
1	125		10.32	10.31	33.614	25.818	219.7	0.403	3.92	61.9	20.0	1.53	19.4	0.01	0.02	0.05	126
1	150		9.61	9.59	33.728	26.027	200.3	0.456	3.36	52.3	25.1	1.75	22.8	0.01	0.01	0.03	151
1	181		8.92	8.90	33.922	26.290	175.7	0.514	2.81	43.1	33.3	1.97	26.4	0.01	0.00	0.03	182
	200	ISL	8.56	8.54	33.977	26.389	166.6	0.546	2.63	40.0	36.8	2.07	28.0	0.01	0.00	0.03	202
1	212		8.35	8.33	33.997	26.437	162.2	0.566	2.55	38.6	38.7	2.12	28.8	0.01	0.00	0.03	214
1	242		7.92	7.90	34.039	26.535	153.3	0.613	2.38	35.7	43.9	2.23	30.1	0.00			244
	250	ISL	7.80	7.78	34.043	26.556	151.4	0.626	2.35	35.2	45.3	2.25	30.5	0.00			252
1	283		7.31	7.28	34.051	26.632	144.4	0.674	2.21	32.7	50.9	2.36	32.0	0.01			285
	300	ISL	7.08	7.05	34.057	26.669	141.0	0.699	2.04	30.0	54.1	2.44	33.1	0.01			302
1	340		6.59	6.56				0.754									343
	400	ISL	6.08	6.05	34.121	26.853	124.4	0.831	0.97	13.9	72.7	2.92	38.8	0.00			403
1	401		6.07	6.03	34.122	26.855	124.2	0.832	0.96	13.8	72.9	2.92	38.9	0.00			404
1	467		5.68	5.64	34.188	26.956	115.2	0.911	0.55	7.8	82.9	3.10	40.9	0.00			471
	500	ISL	5.54	5.50	34.217	26.996	111.6	0.949	0.45	6.4	87.1	3.16	41.5	0.00			504
1	539		5.37	5.33	34.252	27.044	107.4	0.991	0.34	4.8	92.0	3.22	42.1	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 34.8 N	122 49.1 W	19/08/88	0432 UTC	4289 M	340	24 KT			1011.9 MB	17.5 C	16.0 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.62	17.62	33.085	23.899	399.7	0.000	5.70	104.3	3.9	0.35	0.0	0.00	0.10	0.02	0
1	1		17.62	17.62	33.085	23.899	399.7	0.004	5.70	104.3	3.9	0.35	0.0	0.00	0.10	0.02	1
	10	ISL	17.61	17.61	33.083	23.900	399.9	0.040	5.69	104.1	3.8	0.35	0.0	0.00	0.10	0.02	10
1	11		17.61	17.61	33.083	23.900	399.9	0.044	5.69	104.1	3.8	0.35	0.0	0.00	0.10	0.02	11
	20	ISL	17.47	17.47	33.113	23.957	394.8	0.080	5.79	105.6	3.5	0.35	0.0	0.00	0.18	0.03	20
1	22		17.44	17.44	33.120	23.970	393.7	0.088	5.81	106.0	3.5	0.35	0.0	0.00	0.20	0.04	22
	30	ISL	15.73	15.73	33.002	24.274	364.9	0.118	6.22	109.6	3.6	0.36	0.0	0.00	0.26	0.08	30
1	32		15.26	15.26	32.98	24.360	356.7	0.125	6.33	110.5	3.6	0.36	0.0	0.00	0.28	0.10	32
1	42		14.24	14.23	33.067	24.646	329.7	0.160	6.56	112.2	3.7	0.38	0.0	0.01	0.50	0.27	42
	50	ISL	13.51	13.50	33.099	24.821	313.2	0.185	6.41	108.0	3.8	0.45	0.6	0.06	0.93	0.47	50
1	52		13.34	13.33	33.104	24.859	309.6	0.191	6.34	106.5	3.8	0.47	0.9	0.07	1.01	0.51	52
1	63		12.38	12.37	33.118	25.058	290.9	0.224	5.85	96.3	4.7	0.60	2.9	0.60	0.52	0.53	63
1	73		12.09	12.08	33.117	25.112	285.9	0.253	5.76	94.2	5.1	0.66	4.2	0.16	0.40	0.33	74
	75	ISL	12.00	11.99	33.125	25.135	283.7	0.259	5.71	93.2	5.4	0.67	4.6	0.14	0.36	0.30	76
1	87		11.43	11.42	33.203	25.302	268.2	0.292	5.40	87.1	7.5	0.83	7.6	0.03	0.14	0.14	88
	100	ISL	11.12	11.11	33.315	25.445	254.8	0.326	5.18	83.1	10.3	1.19	11.9	0.02	0.06	0.07	101
1	103		11.04	11.03	33.345	25.483	251.3	0.334	5.10	81.7	11.2	1.28	13.0	0.02	0.06	0.06	104
1	123		9.82	9.81	33.596	25.889	212.9	0.380	3.76	58.7	20.9	1.59	20.5	0.02	0.02	0.04	124
	125	ISL	9.74	9.73	33.615	25.917	210.2	0.384	3.68	57.4	21.5	1.61	21.0	0.02	0.02	0.04	126
1	149		9.08	9.06	33.781	26.154	188.0	0.432	3.24	49.8	27.0	1.81	24.2	0.02	0.00	0.03	150
	150	ISL	9.05	9.03	33.786	26.162	187.3	0.434	3.25	50.0	27.2	1.81	24.2	0.02	0.00	0.03	151
1	180		8.39	8.37	33.897	26.352	169.6	0.488	3.40	51.5	31.1	1.85	25.2	0.01	0.00	0.02	181
	200	ISL	8.15	8.13	33.969	26.445	161.1	0.521	3.52	53.1	33.0	1.83	25.3	0.01	0.00	0.02	202
1	211		8.04	8.02	33.997	26.484	157.6	0.538	3.55	53.4	34.3	1.82	25.3	0.01	0.00	0.02	213
1	240		7.58	7.56	33.997	26.551	151.5	0.583	3.26	48.5	40.1	1.98	27.5	0.01			242
	250	ISL	7.53	7.51	34.016	26.573	149.5	0.598	2.94	43.7	42.7	2.09	28.8	0.01			252
1	282		7.43	7.40	34.092	26.648	143.0	0.645	1.77	26.3	51.0	2.47	33.0	0.01			284
	300	ISL	7.24	7.21	34.117	26.694	138.8	0.670	1.61	23.8	54.4	2.59	34.3	0.01			302
1	338		6.82	6.79				0.721									341
1	399		6.57	6.53	34.197	26.849	125.2	0.800	0.75	10.9	68.2	2.91	37.9	0.01			402
	400	ISL	6.56	6.52	34.198	26.852	125.0	0.801	0.74	10.8	68.3	2.91	37.9	0.01			403
1	466		6.15	6.11	34.238	26.937	117.5	0.881	0.50	7.2	76.6	3.06	39.7	0.00			470
	500	ISL	5.91	5.87	34.254	26.980	113.6	0.920	0.43	6.2	80.8	3.10	40.5	0.00			504
1	536		5.65	5.60	34.272	27.027	109.4	0.960	0.35	5.0	85.3	3.15	41.3	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 13.A N	123 31.5 W	18/08/88	2100 UTC	A109 M	3 40	21 KT	350 07 07	0	1013.0 MB	19.7 C	17.A C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	POA UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		17.98	17.98	33.103	23.826	A06.7	0.000	5.6A	103.9	2.2	0.3A	0.1	0.00	0.09	0.02	0
	10	ISL	17.98	17.98	33.102	23.825	A07.1	0.0A1	5.65	10A.1	2.2	0.3A	0.1	0.00	0.07	0.02	10
1	11		17.98	17.98	33.102	23.825	A07.1	0.0A5	5.65	10A.1	2.2	0.3A	0.1	0.00	0.07	0.02	11
	20	ISL	17.97	17.97	33.100	23.827	A07.3	0.081	5.63	103.7	2.0	0.33	0.1	0.00	0.08	0.02	20
1	22		17.96	17.96	33.099	23.828	A07.2	0.090	5.63	103.7	1.9	0.33	0.1	0.00	0.08	0.02	22
	30	ISL	17.90	17.89	33.098	23.8A2	406.1	0.122	5.65	103.9	1.9	0.32	0.1	0.00	0.08	0.02	30
1	32		17.89	17.88	33.098	23.845	405.9	0.130	5.65	103.9	1.9	0.32	0.1	0.00	0.08	0.02	32
1	43		16.08	16.07	33.130	24.294	363.4	0.173	6.16	109.4	1.7	0.33	0.1	0.00	0.14	0.05	43
	50	ISL	14.25	14.24	32.969	24.568	337.3	0.197	6.36	108.7	2.1	0.35	0.1	0.00	0.14	0.05	50
1	53		13.53	13.52	32.914	24.674	327.3	0.207	6.39	107.6	2.3	0.36	0.1	0.00	0.14	0.05	53
1	63		12.70	12.69	33.023	24.922	3 03.8	0.239	6.08	100.7	2.9	0.45	0.5	0.06	0.53	0.32	63
1	74		12.84	12.83	33.277	25.092	287.9	0.271	5.84	97.2	3.3	0.64	4.1	0.62	0.54	0.35	75
	75	ISL	12.83	12.82	33.290	25.104	286.8	0.274	5.82	96.8	3.4	0.66	4.5	0.59	0.52	0.33	76
1	88		12.75	12.74	33.402	25.207	277.4	0.311	5.62	93.4	5.3	0.88	8.8	0.02	0.18	0.11	89
	100	ISL	12.61	12.60	33.426	25.253	273.3	0.344	5.58	92.5	6.0	0.93	9.4	0.02	0.09	0.09	101
1	103		12.54	12.53	33.424	25.265	272.2	0.352	5.57	92.2	6.2	0.94	9.6	0.02	0.09	0.08	104
1	124		11.30	11.28	33.410	25.487	251.4	0.407	5.01	80.7	10.0	1.12	12.7	0.01	0.03	0.05	125
	125	ISL	11.24	11.22	33.418	25.504	249.8	0.409	4.96	79.8	10.4	1.14	13.0	0.01	0.03	0.05	126
1	150		9.88	9.86	33.683	25.947	207.9	0.467	3.58	56.0	20.9	1.63	21.2	0.01	0.01	0.03	151
1	180		9.30	9.28	33.921	26.229	181.7	0.525	2.70	41.8	30.0	1.95	26.0	0.00	0.00	0.03	181
	200	ISL	9.02	9.00	33.968	26.311	174.2	0.561	2.62	40.3	32.5	2.02	27.0	0.00	0.00	0.03	202
1	211		8.89	8.87	33.978	26.339	171.7	0.580	2.57	39.4	33.4	2.04	27.3	0.00	0.00	0.03	213
1	241		8.58	8.55	34.045	26.440	162.5	0.630	2.30	35.0	37.9	2.16	28.8	0.00			243
	250	ISL	8.49	8.46	34.060	26.466	160.2	0.644	2.23	33.9	39.1	2.19	29.2	0.00			252
1	282		8.15	8.12	34.094	26.545	153.2	0.694	2.02	30.5	43.1	2.31	30.8	0.00			284
	300	ISL	7.89	7.86	34.096	26.585	149.6	0.722	1.92	28.8	45.7	2.36	31.6	0.00			302
1	337		7.37	7.34	34.094	26.658	142.9	0.776	1.71	25.3	51.3	2.48	33.4	0.00			340
1	399		6.82	6.78	34.146	26.776	132.3	0.861	1.13	16.5	61.6	2.76	36.6	0.00			402
	400	ISL	6.81	6.77	34.147	26.778	132.1	0.862	1.13	16.5	61.8	2.76	36.7	0.00			403
1	467		6.16	6.12	34.199	26.905	120.5	0.947	0.89	12.8	73.3	3.01	39.6	0.00			47 1
	500	ISL	5.97	5.93	34.230	26.954	116.2	0.986	0.65	9.3	77.7	3.07	40.3	0.00			504
1	539		5.74	5.69	34.266	27.011	111.0	1.030	0.36	5.1	83.0	3.1A	Al.2	0.00			544

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 IIO

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 54.8 N	124 10.1 W	18/08/88	1404 UTC	4200 M	330	22 KT	330 08 07	1	1013.3 MB	18.0 C	16.5 C	1/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 7 8	SIGMA THETA	SVA	DYN HT	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	18.27	18.27	33.192	23.823	406.9	0.000	5.56	103.1	2.4	0.34	0.0	0.00	0.08	0.02	0
1	1		18.27	18.27	33.192	23.823	407.0	0.004	5.56	103.1	2.4	0.34	0.0	0.00	0.08	0.02	1
	10	ISL	18.28	18.28	33.191	23.820	407.6	0.041	5.57	103.3	2.4	0.33	0.0	0.00	0.08	0.02	10
1	11		18.28	18.28	33.191	23.820	407.6	0.045	5.57	103.3	2.4	0.33	0.0	0.00	0.08	0.02	11
	20	ISL	18.30	18.30	33.190	23.815	408.4	0.082	5.57	103.3	2.2	0.35	0.0	0.00	0.08	0.02	20
1	22		18.30	18.30	33.190	23.815	408.5	0.090	5.57	103.3	2.2	0.35	0.0	0.00	0.08	0.02	22
	30	ISL	17.89	17.88	33.179	23.907	399.9	0.122	5.72	105.3	2.2	0.33	0.0	0.00	0.13	0.04	30
1	32		17.72	17.71	33.176	23.946	3 96.3	0.130	5.77	105.8	2.2	0.33	0.0	0.00	0.14	0.04	32
1	43		16.31	16.30	33.167	24.270	365.7	0.172	6.00	107.1	2.0	0.35	0.0	0.00	0.14	0.05	43
	50	ISL	15.35	15.3A	33.133	24.459	3 47.8	0.197	6.15	107.6	2.0	0.36	0.0	0.00	0.22	0.10	50
1	53		15.03	15.02	33.124	24.522	341.9	0.207	6.21	108.0	2.0	0.36	0.0	0.00	0.26	0.12	53
1	63		14.96	14.95	33.169	24.572	337.4	0.241	6.27	108.9	2.0	0.37	0.0	0.00	0.32	0.18	63
1	74		14.29	14.28	33.197	24.737	322.0	0.277	6.10	104.5	2.1	0.46	0.8	0.06	0.47	0.32	75
	75	ISL	14.20	14.19	33.195	24.754	320.4	0.281	6.08	104.0	2.1	0.47	0.9	0.11	0.47	0.32	76
1	88		13.07	13.06	33.171	24.965	300.4	0.321	5.86	97.9	2.9	0.58	2.5	0.69	0.36	0.32	89
	100	ISL	12.48	12.A7	33.214	25.114	286.5	0.356	5.64	93.1	3.9	0.71	5.2	0.23	0.23	0.22	101
1	104		12.34	12.33	33.239	25.160	282.2	0.368	5.56	91.5	4.4	0.76	6.2	0.02	0.19	0.18	105
1	124		11.76	11.74	33.446	25.431	256.9	0.421	5.09	82.8	8.3	1.08	11.9	0.01	0.05	0.06	125
	125	ISL	11.71	11.69	33.451	25.4A4	255.6	0.424	5.06	82.3	8.6	1.09	12.1	0.01	0.05	0.06	126
1	150		10.42	10.40	33.551	25.752	226.5	0.484	4.30	68.0	15.7	1.37	17.1	0.01	0.01	0.04	151
1	181		9.53	9.51	33.792	26.091	194.9	0.550	3.19	49.6	25.4	1.80	23.7	0.01	0.00	0.04	182
	200	ISL	9.07	9.05	33.884	26.237	181.2	0.585	3.0A	A6.8	29.3	1.92	25.6	0.01	0.00	0.0A	202
1	212		8.80	8.78	33.923	26.310	17A.A	0.607	2.9A	A5.0	31.2	1.95	26.2	0.01	0.00	0.0A	21A
1	2A1		8.22	8.20	33.965	26.432	163.1	0.656	3.18	48.0	34.4	1.95	26.6	0.01			243
	250	ISL	8.12	8.09	33.986	26.46A	160.2	0.670	3.03	A5.7	36.2	2.00	27.3	0.01			252
1	282		7.87	7.84	34.057	26.557	151.9	0.720	2.28	34.2	43.3	2.25	30.4	0.00			284
	300	ISL	7.76	7.73	34.082	26.593	148.7	0.7A7	2.02	30.2	A6.1	2.35	31.A	0.00			302
1	339		7.A6	7.A3	3A.11A	26.661	142.7	0.804	1.60	23.8	52.0	2.52	33.4	0.01			3 42
1	400		6.49	6.45	34.126	26.804	129.A	0.887	1.11	16.1	65.A	2.79	37.5	0.01			A03
1	A67		6.10	6.06	3A.215	26.925	118.5	0.970	0.57	8.2	75.7	3.02	39.7	0.00			A7 1
	500	ISL	5.95	5.91	34.233	26.958	115.7	1.009	0.49	7.0	79.0	3.07	40.2	0.00			504
1	540		5.77	5.72	34.256	26.999	112.2	1.054	0.39	5.6	82.9	3.13	40.9	0.00			545

RV NEW HORIZON CALCOFI CRUISE 8808 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 29.2 W	15/08/88	2018 UTC	55 M	260	06 KT	050 01 04	0	1010.0 MB	20.0 C	17.5 C	0/8

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		17.78	17.78	33.636	24.282	363.1	0.000	6.77	124.7	3.2	0.26	0.1	0.00	1.06	0.28	0
1	10		17.23	17.23	33.637	24.415	350.8	0.036	6.86	125.0	3.3	0.25	0.0	0.00	1.32	0.22	10
	20	ISL	14.63	14.63	33.579	24.958	299.4	0.068	6.22	107.6	6.7	0.47	0.1	0.02	4.29	0.68	20
1	21		14.32	14.32	33.575	25.020	293.4	0.071	6.09	104.7	7.3	0.49	0.1	0.02	4.47	0.72	21
	30	ISL	12.20	12.20	33.518	25.402	257.3	0.096	3.85	63.3	15.6	1.67	11.4	0.64	0.82	0.42	30
1	31		12.02	12.02	33.516	25.434	254.3	0.099	3.61	59.1	16.5	1.79	12.7	0.71	0.34	0.37	31
1	43		11.59	11.58	33.630	25.603	238.4	0.128	3.45	56.0	16.7	1.68	15.1	0.79	0.13	0.23	43
	50	ISL	11.36	11.35	33.654	25.664	232.8	0.145	3.20	51.7	19.0	1.77	16.7	0.81	0.11	0.34	50
1	52		11.29	11.28	33.661	25.682	231.1	0.149	3.13	50.5	19.6	1.79	17.2	0.81	0.11	0.37	52

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 34

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 51.5 N	118 33.3 W	15/08/88	2144 UTC	75 M	280	13 KT	270 01 03	4	1010.0 MB	19.6 C	17.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.19	18.19	33.647	24.191	371.9	0.000	6.33	117.5	2.5	0.27	0.0	0.00	0.63	0.28	0
1	10		17.35	17.35	33.635	24.385	353.7	0.036	6.62	120.9	2.4	0.26	0.0	0.00	0.74	0.33	10
	20	ISL	15.36	15.36	33.577	24.798	314.6	0.070	7.11	124.8	3.0	0.35	0.0	0.01	6.36	0.65	20
1	21		15.13	15.13	33.572	24.844	310.2	0.073	7.16	125.1	3.1	0.36	0.0	0.01	6.77	0.68	21
	30	ISL	13.12	13.12	33.547	25.245	272.3	0.099	5.13	86.0	8.7	0.95	5.4	0.29	1.83	0.61	30
1	31		12.92	12.92	33.548	25.285	268.4	0.102	4.87	81.3	9.4	1.03	6.2	0.34	1.13	0.60	31
1	42		11.80	11.79	33.593	25.535	244.9	0.130	3.63	59.2	15.3	1.65	13.7	0.98	0.33	0.45	42
	50	ISL	11.43	11.42	33.636	25.637	235.4	0.149	3.31	53.6	17.7	1.96	16.4	0.94	0.15	0.30	50
1	52		11.36	11.35	33.648	25.659	233.3	0.154	3.26	52.7	18.2	2.00	16.9	0.93	0.14	0.27	52
1	62		10.85	10.84	33.728	25.813	218.8	0.176	2.89	46.2	21.3	1.87	20.8	0.61	0.06	0.24	62
1	72		10.60	10.59	33.771	25.891	211.7	0.198	2.51	39.9	24.7	1.93	22.1	0.43	0.06	0.51	73

RV NEW HORIZON CALCOFI CRUISE 8808 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 37.5 W	15/08/88	2307 UTC	597 M	280	11 KT	280 01 03	4	1009.4 MB	20.0 C	17.9 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.69	18.69	33.614	24.041	3 86.1	0.000	5.97	111.9	3.2	0.30	0.0	0.00	0.23	0.10	0
1	1		18.69	18.69	33.614	24.041	3 86.1	0.004	5.97	111.8	3.2	0.30	0.0	0.00	0.23	0.10	1
	10	ISL	17.20	17.20	33.596	24.391	353.1	0.037	6.44	117.2	3.2	0.28	0.0	0.00	0.87	0.26	10
1	11		16.94	16.94	33.593	24.450	3 47.5	0.041	6.50	117.7	3.2	0.28	0.0	0.00	0.96	0.28	11
	20	ISL	14.73	14.73	33.516	24.888	3 06.1	0.070	6.32	109.5	3.6	0.47	2.0	0.10	0.89	0.32	20
1	22		14.28	14.28	33.505	24.975	297.8	0.076	6.28	107.8	3.7	0.52	2.4	0.12	0.87	0.32	22
	30	ISL	13.45	13.45	33.525	25.162	280.2	0.099	5.96	100.6	5.5	0.57	2.0	0.06	1.05	0.39	30
1	32		13.31	13.31	33.532	25.195	277.1	0.105	5.88	99.0	6.3	0.58	1.9	0.04	1.07	0.40	32
1	42		12.26	12.25	33.558	25.422	255.8	0.131	4.03	66.4	13.3	1.49	11.2	0.59	0.52	0.34	42
	50	ISL	11.95	11.94	33.585	25.501	248.3	0.152	3.90	63.8	14.3	1.52	13.2	0.76	0.30	0.33	50
1	52		11.91	11.90	33.591	25.514	247.2	0.157	3.87	63.3	14.6	1.53	13.3	0.77	0.27	0.32	52
1	63		11.54	11.53	33.630	25.613	238.0	0.183	3.67	59.5	15.9	1.55	15.4	0.70	0.17	0.22	63
1	73		11.15	11.14	33.664	25.710	228.9	0.207	3.56	57.3	16.6	1.54	17.9	0.28	0.14	0.18	74
	75	ISL	11.04	11.03	33.681	25.743	225.8	0.211	3.49	56.0	17.2	1.56	18.5	0.22	0.13	0.17	76
1	87		10.39	10.38	33.793	25.945	206.9	0.237	3.01	47.7	21.7	1.75	21.9	0.01	0.06	0.12	88
	100	ISL	10.03	10.02	33.870	26.067	195.5	0.263	2.77	43.5	25.5	1.88	23.6	0.01	0.02	0.07	101
1	103		9.98	9.97	33.885	26.087	193.7	0.269	2.74	43.0	26.2	1.90	23.9	0.01	0.02	0.06	104
1	124		9.60	9.59	34.000	26.241	179.5	0.308	2.50	39.0	30.5	2.03	25.9	0.01	0.01	0.06	125
	125	ISL	9.59	9.58	34.003	26.245	179.1	0.310	2.50	38.9	30.6	2.03	25.9	0.01	0.01	0.06	126
1	149		9.31	9.29	34.042	26.321	172.3	0.352	2.44	37.8	32.7	2.10	26.6	0.01	0.01	0.07	150
	150	ISL	9.30	9.28	34.044	26.324	172.0	0.354	2.43	37.6	32.8	2.10	26.6	0.01	0.01	0.07	151
1	180		9.12	9.10	34.100	26.398	165.6	0.405	2.21	34.1	36.1	2.19	27.7	0.01	0.01	0.07	181
	200	ISL	8.94	8.92	34.137	26.456	160.5	0.437	2.03	31.2	38.3	2.27	28.6	0.01	0.02	0.12	202
1	211		8.84	8.82	34.156	26.486	157.7	0.455	1.93	29.6	39.5	2.32	29.1	0.01	0.03	0.14	213
1	242		8.72	8.69	34.191	26.533	153.9	0.503	1.66	25.4	42.4	2.42	29.9	0.01			244
	250	ISL	8.69	8.66	34.206	26.550	152.4	0.515	1.56	23.8	43.3	2.46	30.2	0.02			252
1	283		8.51	8.48	34.258	26.619	146.5	0.565	1.20	18.3	47.1	2.61	31.5	0.04			285
	300	ISL	8.39	8.36	34.261	26.640	144.7	0.589	1.11	16.9	48.7	2.65	31.9	0.04			302
1	338		8.06	8.03	34.252	26.683	141.2	0.644	0.99	14.9	52.5	2.73	32.9	0.04			341
1	399		7.36	7.32	34.264	26.795	131.1	0.727	0.73	10.8	61.1	2.88	35.3	0.01			402
	400	ISL	7.35	7.31	34.264	26.796	131.0	0.728	0.73	10.8	61.2	2.88	35.3	0.01			403
1	466		7.01	6.97	34.294	26.868	124.9	0.812	0.56	8.2	66.3	2.99	36.7	0.01			47 0
	500	ISL	6.74	6.69	34.300	26.909	121.3	0.854	0.48	7.0	70.6	3.05	37.4	0.02			504
1	538		6.43	6.38	34.307	26.956	117.1	0.900	0.39	5.7	75.5	3.12	38.2	0.04			543

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.1 N	118 48.4 W	16/08/88	0225 UTC	900 M	290	08 KT	280 01 03	0	1008.3 MB	21.0 C	18.3 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	20.47	20.47	33.692	23.642	424.2	0.000	5.62	108.9	2.7	0.28	0.1	0.00	0.17	0.08	0
1	1	A	20.47	20.47	33.692	23.642	424.2	0.004	5.62	108.9	2.7	0.28	0.1	0.00	0.17	0.08	1
	10	ISL	19.88	19.88	33.656	23.770	412.4	0.042	5.73	109.8	2.2	0.28	0.1	0.00	0.18	0.08	10
1	12		19.75	19.75	33.649	23.799	409.7	0.050	5.75	109.9	2.0	0.28	0.1	0.00	0.18	0.08	12
	20	ISL	17.67	17.67	33.576	24.264	365.6	0.081	6.30	115.7	1.7	0.27	0.1	0.00	0.26	0.13	20
1	23		16.72	16.72	33.555	24.473	3 45.7	0.092	6.53	117.7	1.6	0.26	0.1	0.00	0.29	0.15	23
	30	ISL	14.61	14.61	33.517	24.914	3 03.8	0.115	6.95	120.1	1.4	0.32	0.1	0.03	6.97	1.62	30
1	32		14.10	14.10	33.516	25.021	293.7	0.120	6.98	119.4	1.4	0.36	0.1	0.04	8.56	2.00	32
1	42		13.31	13.30	33.558	25.216	275.4	0.149	5.68	95.6	4.5	0.76	6.2	0.27	2.27	1.25	42
	50	ISL	12.79	12.78	33.542	25.307	266.9	0.171	5.25	87.4	6.4	0.91	8.6	0.27	1.21	0.74	50
1	53		12.60	12.59	33.537	25.340	263.8	0.179	5.13	85.1	7.2	0.95	9.3	0.27	0.81	0.59	53
1	63		11.95	11.94	33.602	25.515	247.4	0.204	4.42	72.3	10.7	1.18	12.8	0.32	0.50	0.40	63
	75	ISL	11.04	11.03	33.683	25.745	225.7	0.233	3.68	59.1	15.4	1.47	17.8	0.13	0.23	0.29	76
1	78		10.82	10.81	33.702	25.799	220.6	0.239	3.54	56.6	16.6	1.53	18.9	0.07	0.18	0.27	79
1	93		10.04	10.03	33.772	25.989	202.8	0.271	3.27	51.4	22.0	1.70	21.9	0.05	0.05	0.08	94
	100	ISL	9.86	9.85	33.822	26.058	196.3	0.285	3.09	48.4	23.6	1.78	23.0	0.03	0.04	0.07	101
1	109		9.71	9.70	33.888	26.135	189.2	0.302	2.89	45.1	25.3	1.87	24.0	0.01	0.02	0.06	II0
	125	ISL	9.49	9.48	33.986	26.248	178.8	0.332	2.82	43.8	28.4	1.96	24.8	0.02	0.01	0.05	126
1	129		9.45	9.44	34.007	26.27 1	176.7	0.339	2.81	43.6	29.2	1.98	25.0	0.02	0.01	0.05	130
	150	ISL	9.23	9.21	34.092	26.373	167.4	0.375	2.36	36.5	33.2	2.15	26.8	0.02	0.01	0.07	151
1	155		9.19	9.17	34.107	26.391	165.7	0.383	2.24	34.6	34.1	2.19	27.3	0.02	0.01	0.07	156
1	186		9.00	8.98	34.170	26.472	158.7	0.434	1.83	28.2	38.8	2.37	29.0	0.01	0.01	0.07	187
	200	ISL	8.85	8.83	34.183	26.506	155.7	0.456	1.74	26.7	40.6	2.41	29.5	0.01	0.01	0.07	202
1	216		8.68	8.66	34.196	26.543	152.4	0.480	1.64	25.1	42.6	2.45	30.1	0.01	0.01	0.07	218
	250	ISL	8.49	8.46	34.248	26.613	146.3	0.531	1.25	19.0	46.9	2.60	31.5	0.01			252
1	252		8.48	8.45	34.251	26.617	146.0	0.534	1.23	18.7	47.1	2.61	31.6	0.01			254
1	293		8.24	8.21	34.271	26.670	141.6	0.593	0.98	14.8	51.2	2.74	32.7	0.01			295
	300	ISL	8.18	8.15	34.271	26.679	140.9	0.603	0.96	14.5	51.9	2.75	32.9	0.01			302
1	350		7.71	7.68	34.269	26.748	135.0	0.672	0.82	12.3	56.7	2.82	34.4	0.01			353
	400	ISL	7.32	7.28	34.276	26.810	129.7	0.738	0.66	9.8	61.5	2.92	35.8	0.01			403
1	416		7.21	7.17	34.279	26.828	128.1	0.759	0.61	9.0	63.0	2.95	36.2	0.01			420
1	487		6.75	6.70	34.296	26.905	121.5	0.847	0.47	6.9	69.4	3.06	37.9	0.00			491
	500	ISL	6.67	6.62	34.300	26.919	120.3	0.863	0.44	6.4	70.6	3.08	38.2	0.00			504
1	569		6.24	6.19	34.323	26.994	113.7	0.944	0.31	4.5	78.0	3.18	39.7	0.00			574
	600	ISL	6.00	5.95	34.333	27.032	110.2	0.978	0.27	3.9	82.5	3.22	40.3	0.00			605
1	645		5.67	5.61	34.350	27.087	105.2	1.027	0.22	3.1	89.5	3.28	40.7	0.00			651
	700	ISL	5.41	5.35	34.374	27.138	100.7	1.083	0.17	2.4	97.8	3.32	39.8	0.00			7 06
1	716		5.35	5.29	34.380	27.150	99.7	1.099	0.16	2.3	100.0	3.33	39.4	0.00			7 23
1	783		5.19	5.12	34.392	27.179	97.5	1.166	0.12	1.7	106.1	3.40	37.0	0.00			790
	800	ISL	5.16	5.09	34.395	27.185	97.1	1.182	0.12	1.7	107.1	3.40	36.9	0.00			808
1	844		5.09	5.02	34.400	27.198	96.3	1.225	0.11	1.5	109.7	3.40	36.6	0.00			852
1	889		5.04	4.97	34.404	27.207	95.9	1.268	0.08	1.1	114.0	3.41	35.0	0.01			898

A) SANTA MONICA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 40.0 N	118 56.6 W	16/08/88	0445 UTC	899 M	270	08 KT			1008.2 MB	19.5 C	18.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	20.25	20.25	33.693	23.701	418.6	0.000	5.52	106.5	2.6	0.27	0.0	0.00	0.14	0.06	0
1	1	A	20.25	20.25	33.693	23.701	418.6	0.004	5.52	106.5	2.6	0.27	0.0	0.00	0.14	0.06	1
	10	ISL	17.99	17.99	33.582	24.190	372.2	0.040	6.06	112.0	1.9	0.29	0.0	0.00	0.19	0.08	10
1	11		17.62	17.62	33.568	24.269	364.7	0.043	6.15	112.9	1.8	0.29	0.0	0.00	0.19	0.08	11
	20	ISL	15.29	15.29	33.480	24.738	320.3	0.074	6.63	116.1	1.7	0.34	0.1	0.02	0.58	0.16	20
1	22		14.86	14.86	33.471	24.825	312.1	0.081	6.68	116.0	1.7	0.36	0.1	0.03	0.70	0.20	22
	30	ISL	13.95	13.95	33.514	25.051	290.8	0.105	6.40	109.1	3.0	0.49	1.7	0.09	1.20	0.51	30
1	32		13.79	13.79	33.527	25.094	286.7	0.110	6.26	106.4	3.5	0.53	2.4	0.11	1.28	0.59	32
1	42		12.79	12.78	33.550	25.313	266.1	0.138	5.31	88.4	7.5	0.87	7.9	0.27	0.90	0.80	42
	50	ISL	12.00	11.99	33.562	25.474	250.9	0.159	4.69	76.8	10.1	1.09	11.6	0.28	0.66	0.56	50
1	52		11.81	11.80	33.567	25.514	247.2	0.164	4.56	74.4	10.8	1.14	12.5	0.28	0.60	0.47	52
1	61		11.01	11.00	33.634	25.712	228.5	0.185	4.11	65.9	15.0	1.39	17.2	0.04	0.28	0.17	61
	75	ISL	10.50	10.49	33.727	25.874	213.3	0.216	3.50	55.5	19.5	1.62	20.6	0.02	0.17	0.12	76
1	76		10.48	10.47	33.733	25.883	212.6	0.218	3.46	54.9	19.8	1.63	20.7	0.02	0.16	0.12	77
1	91		9.86	9.85	33.844	26.075	194.5	0.249	3.09	48.4	24.4	1.79	23.3	0.01	0.04	0.07	92
	100	ISL	9.68	9.67	33.885	26.137	188.8	0.266	2.95	46.0	26.1	1.85	24.0	0.01	0.04	0.09	101
1	106		9.60	9.59	33.907	26.167	186.0	0.277	2.88	44.9	27.1	1.88	24.3	0.01	0.04	0.10	107
	125	ISL	9.32	9.31	33.979	26.270	176.7	0.312	2.71	42.0	30.4	1.97	25.7	0.01	0.02	0.08	126
1	127		9.29	9.28	33.986	26.280	175.7	0.315	2.70	41.8	30.7	1.98	25.8	0.01	0.02	0.08	128
	150	ISL	9.02	9.00	34.030	26.358	168.7	0.355	2.58	39.7	33.6	2.05	26.8	0.01	0.02	0.07	151
1	152		9.00	8.98	34.033	26.364	168.2	0.358	2.57	39.5	33.8	2.06	26.9	0.01	0.02	0.07	153
1	182		8.69	8.67	34.099	26.465	159.1	0.407	2.31	35.3	38.7	2.22	28.7	0.00	0.05	0.11	183
	200	ISL	8.51	8.49	34.113	26.504	155.7	0.436	2.18	33.2	40.8	2.27	29.3	0.01	0.03	0.08	202
1	213		8.40	8.38	34.121	26.527	153.7	0.456	2.08	31.6	42.2	2.31	29.7	0.01	0.02	0.06	215
1	247		8.21	8.18	34.182	26.604	147.0	0.507	1.69	25.5	47.4	2.54	31.5	0.00			249
	250	ISL	8.19	8.16	34.184	26.609	146.6	0.511	1.66	25.1	47.7	2.55	31.6	0.00			252
1	288		8.00	7.97	34.204	26.653	143.0	0.566	1.35	20.3	50.8	2.60	32.6	0.01			290
	300	ISL	7.94	7.91	34.220	26.675	141.1	0.583	1.21	18.2	52.4	2.65	33.0	0.01			3 02
1	343		7.69	7.66	34.277	26.757	134.0	0.643	0.77	11.5	58.8	2.84	34.7	0.01			346
	400	ISL	7.18	7.14	34.285	26.836	127.0	0.717	0.62	9.2	65.6	2.97	36.4	0.01			403
1	409		7.09	7.05	34.284	26.848	126.0	0.728	0.61	9.0	66.7	2.99	36.7	0.01			412
1	479		6.43	6.39	34.305	26.954	116.4	0.813	0.37	5.4	77.3	3.13	39.0	0.01			483
	500	ISL	6.29	6.24	34.310	26.976	114.4	0.837	0.36	5.2	79.7	3.16	39.5	0.01			504
1	561		5.96	5.91	34.327	27.032	109.6	0.906	0.32	4.6	86.0	3.22	40.3	0.00			566
	600	ISL	5.74	5.69	34.343	27.073	106.0	0.948	0.31	4.4	90.4	3.26	40.4	0.00			605
1	637		5.56	5.51	34.359	27.107	103.0	0.986	0.31	4.4	94.9	3.29	40.4	0.00			643
	700	ISL	5.32	5.26	34.384	27.156	98.8	1.050	0.17	2.4	103.8	3.35	39.5	0.00			706
1	708		5.30	5.24	34.386	27.161	98.5	1.058	0.15	2.1	104.9	3.36	39.3	0.00			714
1	774		5.16	5.10	34.395	27.185	96.8	1.122	0.24	3.4	111.6	3.39	36.8	0.00			781
	800	ISL	5.13	5.06	34.397	27.190	96.6	1.147	0.24	3.4	111.8	3.40	37.0	0.00			808
1	835		5.09	5.02	34.400	27.197	96.2	1.181	0.23	3.2	112.5	3.42	37.3	0.00			843
1	880		5.05	4.98	34.403	27.205	96.0	1.224	0.13	1.8	118.2	3.42	35.6	0.01			888

A) SANTA MONICA BASIN STATION.

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	16/08/88	0733 UTC	273 M	260	10 KT			1008.7 MB	17.A C	16.2 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.16	18.16	33.634	24.188	372.1	0.000	5.94	110.2	1.2	0.27	0.0	0.00	0.89	0.25	0
1	10	15.22	15.22	33.562	24.817	312.5	0.034	6.49	113.6	2.0	0.40	1.1	0.08	1.08	0.27	10
	20 ISL	13.41	13.41	33.531	25.174	278.7	0.064	5.61	94.6	5.0	0.76	6.6	0.24	1.69	0.52	20
1	21	13.28	13.28	33.530	25.200	276.4	0.067	5.49	92.3	5.4	0.80	7.2	0.26	1.72	0.54	21
	30 ISL	12.46	12.46	33.562	25.386	258.8	0.091	4.98	82.3	8.1	1.01	10.5	0.30	0.89	0.41	30
1	31	12.38	12.38	33.568	25.406	257.0	0.093	4.92	81.2	8.5	1.03	10.9	0.30	0.78	0.39	31
1	42	11.18	11.17	33.686	25.721	227.2	0.120	3.74	60.2	14.9	1.43	17.5	0.28	0.38	0.23	42
	50 ISL	10.81	10.80	33.721	25.815	218.4	0.138	3.47	55.4	16.4	1.54	19.3	0.18	0.29	0.20	50
1	52	10.75	10.74	33.726	25.829	217.1	0.142	3.45	55.0	16.7	1,56	19.5	0.15	0.28	0.20	52
1	62	10.36	10.35	33.766	25.929	207.8	0.163	3.28	51.9	20.3	1.66	21.1	0.07	0.15	0.14	62
1	73	10.26	10.25	33.786	25.962	205.0	0.186	3.20	50.5	21.1	1.69	21.5	0.05	0.12	0.11	74
	75 ISL	10.22	10.21	33.794	25.975	203.7	0.190	3.17	50.0	21.5	1.70	21.7	0.05	0.11	0.10	76
1	87	9.91	9.90	33.856	26.076	194.4	0.214	3.00	47.0	24.4	1.79	23.2	0.04	0.06	0.07	88
	100 ISL	9.59	9.58	33.922	26.181	184.6	0.239	2.83	44.1	27.5	1.90	24.5	0.03	0.03	0.06	101
1	103	9.52	9.51	33.937	26.204	182.5	0.244	2.79	43.4	28.2	1.92	24.8	0.03	0.02	0.06	104
1	123	9.20	9.19	34.025	26.325	171.4	0.279	2.63	40.6	32.3	2.06	26.5	0.02	0.01	0.06	124
	125 ISL	9.18	9.17	34.030	26.332	170.7	0.283	2.61	40.3	32.5	2.07	26.6	0.02	0.01	0.06	126
1	150	9.03	9.01	34.075	26.392	165.5	0.325	2.33	35.9	34.6	2.14	27.4	0.02	0.02	0.06	151
1	174	8.93	8.91	34.114	26.439	161.5	0.364	2.11	32.4	36.9	2.20	28.1	0.02	0.01	0.07	175
1	200	8.81	8.79	34.182	26.511	155.1	0.405	1.79	27.4	40.1	2.38	29.5	0.02	0.01	0.06	202
1	231	8.61	8.59	34.204	26.560	151.0	0.453	1.60	24.4	43.2	2.46	30.6	0.03			233
	250 ISL	8.43	8.40	34.213	26.595	148.0	0.481	1.47	22.3	45.3	2.52	31.2	0.03			252
1	262	8.32	8.29	34.219	26.617	146.1	0.499	1.39	21.1	46.7	2.55	31.6	0.03			264

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 29.4 N	119 19.5 W	16/08/88	0933 UTC	1641 M	290	11 KT			1008.5 MB	17.1 C	15.9 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.48	18.48	33.650	24.121	378.5	0.000	5.74	107.1	2.0	0.28	0.0	0.00	0.21	0.10	0
1	10	18.44	18.44	33.651	24.132	377.8	0.038	5.72	106.7	2.1	0.29	0.1	0.01	0.23	0.11	10
	20 ISL	16.38	16.38	33.695	24.659	327.9	0.073	5.23	93.7	5.8	0.61	4.9	0.10	0.33	0.18	20
1	21	16.09	16.09	33.702	24.730	321.1	0.076	5.15	91.8	6.4	0.66	5.6	0.11	0.34	0.19	21
	30 ISL	13.02	13.02	33.755	25.426	255.0	0.102	4.24	71.0	14.1	1.23	13.9	0.18	0.34	0.22	30
1	31	12.68	12.68	33.765	25.501	248.0	0.105	4.13	68.7	15.0	1.29	14.8	0.19	0.34	0.22	31
1	41	10.60	10.60	33.832	25.938	206.5	0.128	3.20	50.9	22.4	1.72	20.9	0.26	0.35	0.22	41
	50 ISL	10.27	10.26	33.860	26.017	199.1	0.146	2.95	46.6	25.3	1.86	22.8	0.24	0.42	0.25	50
1	51	10.23	10.22	33.863	26.027	198.3	0.148	2.94	46.4	25.5	1.87	22.9	0.24	0.42	0.25	51
1	62	9.86	9.85	33.894	26.113	190.2	0.169	2.70	42.3	28.3	1.95	24.7	0.18	0.28	0.24	62
1	72	9.60	9.59	33.920	26.177	184.4	0.188	2.55	39.7	30.3	2.01	25.9	0.07	0.15	0.17	73
	75 ISL	9.52	9.51	33.930	26.198	182.5	0.193	2.51	39.0	30.8	2.03	26.2	0.05	0.12	0.15	76
1	86	9.29	9.28	33.971	26.268	176.0	0.213	2.38	36.8	32.6	2.09	27.0	0.02	0.04	0.10	87
	100 ISL	9.13	9.12	34.017	26.330	170.4	0.237	2.34	36.1	34.2	2.14	27.5	0.01	0.02	0.09	101
1	102	9.11	9.10	34.022	26.337	169.8	0.241	2.34	36.1	34.4	2.14	27.5	0.01	0.02	0.09	103
1	122	8.98	8.97	34.041	26.373	166.7	0.274	2.25	34.6	36.0	2.19	28.0	0.01	0.01	0.11	123
	125 ISL	8.95	8.94	34.045	26.381	166.0	0.279	2.24	34.4	36.2	2.20	28.1	0.01	0.01	0.11	126
1	148	8.76	8.74	34.085	26.442	160.6	0.317	2.11	32.3	38.2	2.24	28.8	0.01	0.01	0.08	149
	150 ISL	8.75	8.73	34.088	26.446	160.3	0.320	2.09	32.0	38.4	2.25	28.9	0.01	0.01	0.08	151
1	179	8.58	8.56	34.126	26.503	155.4	0.366	1.86	28.3	41.4	2.35	30.0	0.00	0.01	0.11	180
	200 ISL	8.43	8.41	34.148	26.543	152.0	0.398	1.73	26.3	42.9	2.42	30.6	0.01	0.01	0.08	202
1	210	8.36	8.34	34.158	26.562	150.3	0.413	1.67	25.3	43.7		30.9	0.02	0.01	0.07	212
1	240	8.22	8.20	34.197	26.614	145.9	0.458	1.39	21.0	47.3	2.56	32.0	0.04			242
	250 ISL	8.15	8.12	34.206	26.632	144.4	0.472	1.30	19.6	48.4	2.60	32.4	0.04			252
1	281	7.90	7.87	34.228	26.687	139.6	0.516	1.06	15.9	52.0	2.72	33.6	0.03			283
	300 ISL	7.73	7.70	34.238	26.720	136.7	0.543	0.94	14.1	54.8	2.78	34.4	0.03			302
1	338	7.38	7.35	34.252	26.781	131.3	0.593	0.76	11.3	60.4	2.89	35.7	0.03			341
1	399	6.89	6.85	34.273	26.867	123.9	0.671	0.55	8.1	67.2	3.01	37.1	0.01			402
	400 ISL	6.88	6.84	34.274	26.869	123.7	0.673	0.55	8.1	67.3	3.01	37.1	0.01			403
1	464	6.37	6.33	34.300	26.958	115.8	0.749	0.37	5.4	76.0	3.12	38.9	0.00			468
	500 ISL	6.17	6.13	34.313	26.994	112.6	0.790	0.32	4.6	79.4	3.16	39.3	0.00			504
1	534	5.99	5.94	34.326	27.027	109.7	0.828	0.28	4.0	82.7	3.20	39.7	0.00			539

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 19.5 N	119 39.7 W	16/08/88	1320 UTC	78 M	310	20 KT	350 03 05	2	1009.1 MB	15.1 C	14.9 C	8/8 SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	17.44	17.44	33.728	24.435	348.6	0.000	5.48	100.3	4.0	0.43	2.0	0.04	0.51	0.23	0
1	10	17.47	17.47	33.726	24.426	349.7	0.035	5.47	100.2	3.8	0.43	2.2	0.04	0.55	0.22	10
	20 ISL	12.40	12.40	33.687	25.494	248.3	0.065	4.44	73.4	11.9	1.12	12.3	0.22	0.73	0.41	20
1	21	11.87	11.87	33.702	25.606	237.6	0.067	4.32	70.6	12.9	1.20	13.4	0.24	0.74	0.43	21
	30 ISL	11.20	11.20	33.742	25.761	223.1	0.088	3.63	58.5	17.6	1.50	18.0	0.21	0.50	0.34	30
2	31	11.13	11.13	33.747	25.778	221.6	0.090	3.58	57.6	18.0	1.52	18.3	0.21	0.47	0.32	31
2	42	10.83	10.82	33.768	25.848	215.1	0.114	3.41	54.5	19.3	1.63	19.5	0.19	0.40	0.27	42
	50 ISL	10.36	10.35	33.822	25.972	203.4	0.131	3.13	49.6	23.1	1.75	21.7	0.21	0.19	0.22	50
2	52	10.23	10.22	33.840	26.008	200.0	0.135	3.04	48.0	24.3	1.79	22.3	0.21	0.14	0.21	52
2	61	9.71	9.70	33.928	26.165	185.3	0.152	2.62	40.9	30.1	1.99	25.1	0.17	0.06	0.20	61
2	73	9.69	9.68	33.930	26.170	185.1	0.175	2.59	40.4	30.8	2.00	25.1	0.16	0.05	0.19	74

RV NEW HORIZON CALCOFI CRUISE 8808 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 0.8 W	16/08/88	1819 UTC	1191 M	330	20 KT	310 05 06	2	1011.3 MB	15.8 C	15.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.38	16.38	33.687	24.652	327.9	0.000	5.91	105.9	1.1	0.31	0.1	0.01	4.09	1.46	0
1	1		16.38	16.38	33.687	24.652	327.9	0.003	5.91	105.9	1.1	0.31	0.1	0.01	4.09	1.46	1
	10	ISL	16.37	16.37	33.684	24.652	328.2	0.033	5.92	106.1	0.8	0.30	0.1	0.01	4.09	1.41	10
1	11		16.37	16.37	33.684	24.652	328.2	0.036	5.92	106.1	0.8	0.30	0.1	0.01	4.09	1.40	11
	20	ISL	16.36	16.36	33.685	24.656	328.2	0.066	5.91	105.9	1.0	0.31	0.1	0.01	4.09	1.35	20
1	21		16.36	16.36	33.685	24.656	328.2	0.069	5.91	105.9	1.0	0.31	0.1	0.01	4.09	1.34	21
	30	ISL	12.72	12.72	33.637	25.394	258.1	0.095	4.74	78.8	8.7	1.02	10.8	0.30	0.71	0.39	30
1	31		12.30	12.30	33.643	25.479	249.9	0.098	4.60	75.8	9.7	1.11	12.1	0.33	0.33	0.28	31
1	41		11.49	11.48	33.703	25.678	231.3	0.122	4.03	65.3	13.6	1.35	16.0	0.33	0.25	0.22	41
	50	ISL	10.81	10.80	33.754	25.840	216.0	0.142	3.49	55.8	19.0	1.58	19.7	0.22	0.14	0.18	50
1	51		10.75	10.74	33.759	25.855	214.6	0.144	3.44	54.9	19.6	1.60	20.1	0.21	0.13	0.18	51
1	61		10.47	10.46	33.806	25.941	206.7	0.165	3.20	50.8	22.1	1.71	21.4	0.21	0.11	0.18	61
1	71		10.01	10.00	33.852	26.056	196.0	0.185	2.98	46.8	24.6	1.81	23.1	0.06	0.06	0.13	72
	75	ISL	9.89	9.88	33.869	26.089	192.9	0.193	2.93	45.9	25.3	1.83	23.6	0.05	0.05	0.12	76
1	85		9.68	9.67	33.907	26.154	186.9	0.212	2.84	44.3	26.7	1.88	24.5	0.03	0.04	0.10	86
	100	ISL	9.46	9.45	33.956	26.229	180.1	0.240	2.67	41.5	29.5	1.96	25.5	0.03	0.03	0.14	101
1	101		9.45	9.44	33.959	26.233	179.7	0.241	2.66	41.3	29.7	1.96	25.6	0.03	0.03	0.14	102
1	121		9.25	9.24	33.995	26.294	174.3	0.277	2.53	39.1	31.7	2.05	26.5	0.02	0.03	0.12	122
	125	ISL	9.18	9.17	34.004	26.312	172.6	0.284	2.52	38.9	32.2	2.06	26.7	0.02	0.03	0.12	126
1	146		8.85	8.83	34.049	26.400	164.6	0.319	2.48	38.0	35.1	2.10	27.5	0.02	0.01	0.10	147
	150	ISL	8.82	8.80	34.056	26.410	163.7	0.326	2.44	37.4	35.6	2.12	27.7	0.02	0.01	0.10	151
1	176		8.70	8.68	34.090	26.456	159.8	0.368	2.14	32.7	38.3	2.24	28.9	0.02	0.01	0.10	177
	200	ISL	8.49	8.47	34.116	26.509	155.2	0.406	2.03	30.9	40.5	2.30	29.8	0.01	0.03	0.13	202
1	206		8.44	8.42	34.124	26.523	154.0	0.415	1.99	30.2	41.2	2.32	30.0	0.01	0.04	0.14	208
1	236		8.22	8.20	34.183	26.603	146.9	0.460	1.52	23.0	46.3	2.51	31.7	0.01			238
	250	ISL	8.11	8.08	34.200	26.633	144.2	0.480	1.35	20.4	48.3	2.58	32.3	0.01			252
1	276		7.90	7.87	34.222	26.682	140.0	0.517	1.11	16.7	51.7	2.68	33.4	0.02			278
	300	ISL	7.71	7.68	34.234	26.719	136.7	0.551	0.96	14.4	54.8	2.76	34.3	0.02			302
1	333		7.46	7.43	34.245	26.764	132.9	0.595	0.83	12.3	58.7	2.84	35.4	0.02			336
1	392		7.08	7.04	34.261	26.831	127.3	0.672	0.68	10.0	63.9	2.94	36.6	0.00			395
	400	ISL	7.03	6.99	34.263	26.840	126.6	0.682	0.66	9.7	64.7	2.95	36.8	0.00			403
1	459		6.68	6.64	34.274	26.896	121.8	0.755	0.52	7.6	70.6	3.03	38.0	0.00			463
	500	ISL	6.42	6.37	34.283	26.938	118.2	0.804	0.44	6.4	74.3	3.09	38.9	0.00			504
1	530		6.23	6.18	34.291	26.969	115.4	0.839	0.39	5.6	77.0	3.13	39.6	0.00			535

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 59.9 N	120 21.1 W	16/08/88	2313 UTC	712 M	320	19 KT	320 05 06	2	1010.5 MB	17.8 C	16.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.16	17.16	33.699	24.479	344.4	0.000	5.93	107.9	1.7	0.25	0.0	0.00	3.23	0.88	0
1	1		17.16	17.16	33.699	24.479	344.4	'0.003	5.93	107.9	1.7	0.25	0.0	0.00	3.23	0.88	1
	10	ISL	17.15	17.15	33.697	24.480	344.6	0.034	5.90	107.4	1.6	0.25	0.0	0.00	3.15	1.03	10
1	11		17.15	17.15	33.697	24.480	344.6	0.038	5.90	107.4	1.6	0.25	0.0	0.00	3.14	1.05	11
	20	ISL	17.15	17.15	33.697	24.481	344.9	0.069	5.92	107.7	1.6	0.25	0.0	0.00	3.02	1.16	20
1	22		17.15	17.15	33.697	24.481	3 45.0	0.076	5.92	107.7	1.6	0.25	0.0	0.00	2.96	1.17	22
	30	ISL	16.43	16.43	33.640	24.605	333.3	0.103	5.82	104.4	2.4	0.35	1.0	0.04	2.55	1.06	30
1	32		16.25	16.24	33.627	24.637	330.4	0.110	5.80	103.7	2.6	0.38	1.2	0.06	2.35	1.03	32
1	42		12.43	12.42	33.480	25.328	264.6	0.139	5.10	84.2	8.0	0.98	9.8	0.28	0.30	0.28	42
	50	ISL	11.80	11.79	33.568	25.516	246.9	0.160	4.45	72.6	12.2	1.24	14.0	0.24	0.21	0.20	50
1	53		11.59	11.58	33.601	25.581	240.8	0.167	4.31	70.0	13.5	1.30	15.1	0.23	0.18	0.17	53
1	63		11.26	11.25	33.679	25.702	229.5	0.191	3.95	63.7	16.2	1.43	17.2	0.22	0.14	0.14	63
1	73		10.56	10.55	33.745	25.878	212.9	0.213	3.49	55.5	20.7	1.64	20.8	0.06	0.08	0.11	74
	75	ISL	10.45	10.44	33.760	25.909	210.1	0.217	3.41	54.1	21.5	1.67	21.3	0.05	0.07	0.12	76
1	88		9.90	9.89	33.852	26.074	194.5	0.243	3.02	47.3	25.5	1.82	23.7	0.01	0.05	0.15	89
	100	ISL	9.54	9.53	33.907	26.177	185.0	0.266	2.89	45.0	28.1	1.91	24.9	0.01	0.04	0.10	101
1	103		9.47	9.46	33.917	26.197	183.2	0.272	2.87	44.6	28.6	1.93	25.1	0.01	0.04	0.09	104
1	124		9.25	9.24	33.969	26.273	176.3	0.309	2.70	41.7	31.0	1.99	26.1	0.01	0.02	0.08	125
	125	ISL	9.24	9.23	33.971	26.277	176.0	0.311	2.69	41.6	31.1	1.99	26.1	0.01	0.02	0.08	126
1	150		8.88	8.86	34.026	26.377	166.9	0.354	2.51	38.5	34.5	2.10	27.4	0.01	0.01	0.07	151
1	181		8.38	8.36	34.050	26.474	158.1	0.404	2.42	36.7	38.6	2.19	28.9	0.00	0.01	0.07	182
	200	ISL	8.19	8.17	34.065	26.515	154.5	0.434	2.26	34.1	41.3	2.27	29.9	0.00	0.02	0.07	202
1	213		8.05	8.03	34.076	26.544	151.9	0.454	2.13	32.1	43.5	2.33	30.7	0.00	0.02	0.07	215
1	241		7.59	7.57	34.106	26.635	143.6	0.495	1.84	27.4	49.4	2.47	32.5	0.02			243
	250	ISL	7.54	7.52	34.116	26.650	142.3	0.508	1.75	26.0	50.5	2.51	32.9	0.02			252
1	283		7.43	7.40	34.153	26.696	138.5	0.554	1.42	21.1	53.7	2.63	34.0	0.01			285
	300	ISL	7.30	7.27	34.173	26.730	135.5	0.578	1.23	18.2	56.5	2.71	34.8	0.01			302
1	340		6.98	6.95	34.214	26.807	128.6	0.631	0.84	12.3	63.1	2.87	36.6	0.00			343
1	400		6.66	6.62	34.242	26.873	123.0	0.706	0.63	9.2	68.7	2.99	37.9	0.00			403
1	466		6.20	6.16	34.288	26.97 0	114.4	0.784	0.40	5.8	77.5	3.13	39.6	0.00			470
	500	ISL	6.05	6.01	34.303	27.001	111.8	0.823	0.37	5.3	80.6	3.17	40.0	0.00			504
1	537		5.88	5.83	34.319	27.036	108.9	0.864	0.34	4.9	83.9	3.21	40.5	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8808 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 2.3 W	17/08/88	0631 UTC	3773 M	330	20 KT			1011.0 MB	16.5 C	15.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.201	24.102	380.3	0.000	5.76	104.5	2.1	0.35	0.0	0.00	0.18	0.06	0
1	1		17.14	17.14	33.201	24.102	380.3	0.004	5.76	104.5	2.1	0.35	0.0	0.00	0.18	0.06	1
	10	ISL	17.14	17.14	33.198	24.100	380.8	0.038	5.76	104.5	1.9	0.35	0.0	0.00	0.18	0.05	10
1	U		17.14	17.14	33.198	24.100	380.8	0.042	5.76	104.5	1.9	0.35	0.0	0.00	0.18	0.05	11
	20	ISL	17.13	17.13	33.197	24.102	381.0	0.076	5.76	104.5	1.4	0.34	0.0	0.00	0.17	0.06	20
1	21		17.13	17.13	33.197	24.102	381.0	0.080	5.76	104.5	1.4	0.34	0.0	0.00	0.17	0.06	21
	30	ISL	15.09	15.09	33.243	24.600	333.8	0.112	6.31	109.9	1.5	0.39	0.3	0.03	0.75	0.27	30
1	31		14.84	14.84	33.251	24.660	328.0	0.115	6.36	110.3	1.5	0.40	0.3	0.03	0.81	0.29	31
1	41		13.88	13.87	33.232	24.848	310.4	0.147	6.05	102.8	2.2	0.52	1.8	0.21	0.68	0.35	41
	50	ISL	13.06	13.05	33.191	24.982	297.8	0.175	5.91	98.7	2.8	0.58	2.8	0.52	0.61	0.36	50
1	51		12.98	12.97	33.187	24.995	296.6	0.178	5.90	98.4	2.9	0.59	2.9	0.54	0.60	0.36	51
1	60		12.54	12.53	33.197	25.088	2 87.9	0.204	5.67	93.7	3.9	0.72	5.4	0.22	0.39	0.25	60
	75	ISL	11.68	11.67	33.253	25.294	268.6	0.246	5.30	86.0	6.7	0.97	9.9	0.02	0.18	0.14	76
1	76		11.62	11.61	33.260	25.311	267.0	0.248	5.27	85.4	7.0	0.99	10.2	0.02	0.17	0.13	77
1	91		10.91	10.90	33.463	25.597	240.1	0.286	4.57	73.0	12.7	1.28	15.5	0.02	0.06	0.06	92
	100	ISL	10.46	10.45	33.547	25.741	226.5	0.307	4.18	66.2	16.3	1.44	18.2	0.02	0.06	0.06	101
1	111		9.96	9.95	33.630	25.891	212.4	0.332	3.76	58.9	20.3	1.61	21.0	0.01	0.05	0.05	112
	123	ISL	9.49	9.48	33.734	26.051	197.5	0.360	3.28	50.9	24.4	1.79	23.8	0.01	0.02	0.04	126
1	131		9.31	9.30	33.771	26.109	192.0	0.372	3.16	48.9	25.7	1.83	24.5	0.01	0.01	0.03	132
	150	ISL	8.73	8.71	33.832	26.249	179.0	0.407	3.56	54.3	26.4	1.74	23.7	0.01	0.02	0.04	151
1	156		8.57	8.55	33.846	26.284	175.6	0.418	3.74	56.9	26.6	1.69	23.2	0.01	0.03	0.04	157
1	187		8.21	8.19	33.982	26.446	160.8	0.470	3.74	56.5	30.8	1.72	24.0	0.01	0.01	0.02	188
	200	ISL	8.08	8.06	34.008	26.486	157.2	0.491	3.40	51.2	34.1	1.86	25.6	0.01	0.01	0.02	202
1	221		7.84	7.82	34.025	26.535	152.8	0.523	2.83	42.4	39.4	2.09	28.4	0.01	0.01	0.03	223
	250	ISL	7.39	7.37	34.016	26.593	147.6	0.567	2.82	41.8	43.3	2.13	29.6	0.01			252
1	258		7.27	7.25	34.014	26.608	146.2	0.579	2.82	41.7	44.3	2.14	29.8	0.01			260
1	297		7.01	6.98	34.072	26.690	138.9	0.634	1.86	27.3	52.5	2.50	33.7	0.00			299
	300	ISL	6.98	6.95	34.074	26.696	138.4	0.638	1.81	26.6	53.0	2.52	33.9	0.00			302
1	352		6.48	6.45	34.104	26.787	130.2	0.708	1.26	18.3	61.6	2.74	36.9	0.00			355
	400	ISL	6.05	6.02	34.135	26.867	123.0	0.769	0.88	12.6	69.7	2.91	39.0	0.00			403
1	419		5.90	5.86	34.150	26.898	120.2	0.792	0.76	10.9	72.7	2.97	39.7	0.00			423
1	489		5.55	5.51	34.228	27.004	110.8	0.873	0.45	6.4	81.8	3.12	41.5	0.00			493
	500	ISL	5.50	5.46	34.234	27.014	109.9	0.885	0.43	6.1	83.0	3.13	41.6	0.00			504
1	571		5.20	5.15	34.276	27.084	103.9	0.961	0.30	4.2	90.4	3.19	42.4	0.00			576

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 19.4 N	121 43.1 W	17/08/88	1303 UTC	4058 M	320	21 KT			1011.2 MB	18.5 C	16.0 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		17.64	17.64	33.238	24.011	389.0	0.000	5.66	103.7	2.0	0.34	0.0	0.01	0.18	0.05	0
1	10		17.65	17.65	33.231	24.004	390.0	0.039	5.68	104.1	1.9	0.34	0.0	0.00	0.18	0.06	10
	20	ISL	17.65	17.65	33.226	24.000	390.7	0.078	5.67	103.9	1.5	0.34	0.0	0.01	0.19	0.05	20
1	21		17.65	17.65	33.226	24.000	390.7	0.082	5.67	103.9	1.5	0.34	0.0	0.01	0.19	0.05	21
	30	ISL	17.47	17.46	33.223	24.042	3 87.1	0.117	5.73	104.6	1.3	0.34	0.0	0.00	0.21	0.07	30
1	31		17.45	17.44	33.223	24.046	386.6	0.121	5.74	104.8	1.3	0.34	0.0	0.00	0.21	0.07	31
1	41		16.02	16.01	33.204	24.364	356.6	0.158	5.99	106.3	1.2	0.34	0.0	0.00	0.21	0.09	41
	50	ISL	14.71	14.70	33.174	24.629	331.5	0.189	6.21	107.3	1.4	0.36	0.0	0.00	0.28	0.14	50
1	51		14.58	14.57	33.170	24.654	329.2	0.192	6.23	107.4	1.4	0.36	0.0	0.00	0.29	0.15	51
1	61		13.59	13.58	33.107	24.811	314.4	0.224	6.33	106.9	1.7	0.39	0.0	0.00	0.29	0.17	61
1	72		12.98	12.97	33.230	25.028	294.0	0.258	6.01	100.2	2.6	0.54	2.3	0.18	0.42	0.29	73
	75	ISL	12.78	12.77	33.242	25.077	289.4	0.267	5.87	97.5	3.1	0.61	3.5	0.16	0.37	0.27	76
1	86		12.18	12.17	33.269	25.214	276.6	0.298	5.40	88.6	5.1	0.84	7.9	0.03	0.15	0.15	87
	100	ISL	12.01	12.00	33.350	25.309	267.9	0.336	5.16	84.4	6.4	0.95	9.7	0.04	0.12	0.13	101
1	101		12.00	11.99	33.356	25.315	267.3	0.339	5.15	84.2	6.5	0.96	9.8	0.04	0.12	0.13	102
1	122		10.53	10.52	33.467	25.667	234.0	0.391	4.45	70.5	14.2	1.35	16.5	0.02	0.03	0.05	123
	125	ISL	10.38	10.37	33.496	25.716	229.5	0.398	4.31	68.1	15.4	1.41	17.4	0.02	0.03	0.05	126
1	147		9.58	9.56	33.717	26.023	200.6	0.445	3.35	52.1	23.6	1.75	23.2	0.01	0.01	0.03	148
	150	ISL	9.49	9.47	33.739	26.055	197.6	0.451	3.27	50.7	24.5	1.78	23.7	0.01	0.01	0.03	151
1	179		8.83	8.81	33.902	26.288	175.8	0.506	2.80	42.9	31.3	1.97	26.7	0.01	0.01	0.04	180
	200	ISL	8.44	8.42	33.971	26.403	165.2	0.541	2.77	42.0	34.7	2.03	27.7	0.01	0.00	0.03	202
1	209		8.30	8.28	33.991	26.440	161.8	0.556	2.75	41.6	35.9	2.04	27.9	0.01	0.00	0.03	211
1	239		7.90	7.88	34.028	26.529	153.7	0.603	2.70	40.5	40.2	2.11	28.8	0.00			241
	250	ISL	7.74	7.72	34.037	26.559	151.0	0.620	2.57	38.4	42.4	2.17	29.6	0.00			252
1	281		7.26	7.23	34.056	26.643	143.3	0.666	2.11	31.2	49.5	2.37	32.2	0.00			283
	300	ISL	6.96	6.93	34.066	26.693	138.7	0.693	1.85	27.2	54.2	2.48	33.8	0.00			302
1	338		6.41	6.38	34.083	26.780	130.7	0.744	1.42	20.6	63.3	2.68	36.5	0.00			341
1	399		5.80	5.77	34.101	26.872	122.3	0.821	1.05	15.0	73.9	2.89	39.1	0.00			402
	400	ISL	5.79	5.76	34.102	26.874	122.1	0.822	1.04	14.9	74.1	2.89	39.1	0.00			403
1	467		5.51	5.47	34.181	26.971	113.6	0.901	0.57	8.1	83.3	3.06	41.1	0.00			471
	500	ISL	5.42	5.38	34.212	27.006	110.5	0.938	0.47	6.7	86.1	3.11	41.5	0.00			504
1	540		5.31	5.27	34.249	27.049	106.9	0.982	0.35	4.9	89.6	3.18	42.0	0.00			5*5

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 59.7 N	122 23.5 W	17/08/88	1901 UTC	4118 M	330	20 KT	320 07 05	1	1012.9 MB	19.0 C	17.0 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.53	18.53	33.125	23.7 07	417.9	0.000	5.52	102.8	2.1	0.32	0.0	0.00	0.09	0.02	0
1	2	18.53	18.53	33.125	23.707	418.0	0.008	5.52	102.8	2.1	0.32	0.0	0.00	0.09	0.02	2
	10 ISL	18.52	18.52	33.124	23.709	418.1	0.042	5.53	103.0	2.0	0.32	0.0	0.00	0.09	0.02	10
1	12	18.52	18.52	33.123	23.709	418.2	0.050	5.53	103.0	2.0	0.32	0.0	0.00	0.09	0.02	12
	20 ISL	18.52	18.52	33.119	23.706	418.8	0.084	5.53	103.0	1.8	0.32	0.0	0.00	0.10	0.03	20
1	23	18.52	18.52	33.117	23.705	419.0	0.096	5.53	103.0	1.7	0.32	0.0	0.00	0.10	0.03	23
	30 ISL	17.09	17.09	33.133	24.063	385.1	0.124	5.82	105.4	1.4	0.33	0.0	0.01	0.14	0.04	30
1	33	16.44	16.43	33.146	24.224	369.8	0.136	5.95	106.4	1.3	0.34	0.0	0.01	0.16	0.05	33
1	43	15.87	15.86	33.138	24.347	358.3	0.172	6.05	107.0	1.4	0.35	0.0	0.01	0.24	0.11	43
	50 ISL	15.33	15.32	33.147	24.474	3 46.4	0.197	6.12	107.1	1.4	0.36	0.0	0.00	0.31	0.18	50
1	54	15.03	15.02	33.151	24.543	339.9	0.210	6.15	106.9	1.4	0.36	0.0	0.00	0.35	0.22	54
1	64	14.49	14.48	33.135	24.646	330.3	0.244	6.15	105.8	1.7	0.39	0.3	0.02	0.42	0.27	64
1	74	13.59	13.58	33.073	24.785	317.3	0.276	6.17	104.1	2.1	0.43	0.5	0.04	0.40	0.33	75
	75 ISL	13.54	13.53	33.079	24.800	315.9	0.280	6.15	103.7	2.1	0.44	0.6	0.07	0.39	0.32	76
1	88	13.04	13.03	33.194	24.989	298.1	0.319	5.83	97.3	2.9	0.61	3.2	0.46	0.23	0.20	89
	100 ISL	12.40	12.39	33.253	25.160	282.2	0.354	5.55	91.5	4.2	0.77	6.1	0.17	0.13	0.14	101
1	104	12.15	12.14	33.265	25.217	276.8	0.365	5.45	89.3	4.8	0.82	7.2	0.03	0.10	0.12	105
1	124	10.72	10.71	33.300	25.504	249.6	0.418	4.88	77.6	10.8	1.15	12.9	0.01	0.03	0.04	125
	125 ISL	10.69	10.68	33.309	25.516	248.5	0.421	4.87	77.4	10.9	1.15	13.0	0.01	0.03	0.04	126
1	150	10.08	10.06	33.563	25.820	220.1	0.479	4.65	73.0	13.6	1.18	14.6	0.00	0.02	0.04	151
1	180	8.89	8.87	33.812	26.209	183.4	0.540	3.67	56.2	25.4	1.72	22.9	0.00	0.00	0.02	181
	200 ISL	8.52	8.50	33.923	26.353	170.0	0.575	3.42	52.0	30.1	1.85	24.9	0.00	0.00	0.02	202
1	212	8.38	8.36	33.970	26.411	164.6	0.595	3.30	50.0	32.4	1.90	25.6	0.00	0.00	0.02	214
1	241	8.06	8.04	34.034	26.510	155.6	0.641	2.68	40.3	39.5	2.14	28.8	0.00			243
	250 ISL	7.95	7.92	34.044	26.534	153.5	0.655	2.56	38.4	41.2	2.19	29.5	0.00			252
1	282	7.53	7.50	34.057	26.606	147.0	0.703	2.30	34.2	46.7	2.33	31.3	0.00			284
	300 ISL	7.26	7.23	34.053	26.641	143.8	0.730	2.21	32.7	49.8	2.39	32.3	0.00			302
1	339	6.65	6.62	34.038	26.713	137.2	0.784	2.04	29.7	57.0	2.53	34.4	0.00			3 42
1	399	5.82	5.79	34.044	26.824	126.8	0.864	1.49	21.3	70.6	2.80	38.3	0.00			402
	400 ISL	5.81	5.78	34.045	26.826	126.6	0.865	1.48	21.1	70.8	2.80	38.4	0.00			403
1	467	5.49	5.45	34.130	26.933	117.1	0.947	0.80	11.3	81.8	3.06	41.1	0.00			47 1
	500 ISL	5.37	5.33	34.174	26.982	112.8	0.985	0.63	8.9	85.9	3.12	41.7	0.00			504
1	536	5.23	5.19	34.222	27.037	107.9	1.024	0.45	6.3	90.4	3.19	42.3	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 39.5 N	123 4.4 W	18/08/88	0130 UTC	4103 M	330	21 KT	320 07 06	1	1011.9 MB	18.9 C	17.0 C	5/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.69	18.69	33.326	23.821	407.1	0.000	5.53	103.4	3.4	0.34	0.0	0.00	0.09	0.02	0
1	1	18.69	18.69	33.326	23.821	407.1	0.004	5.53	103.4	3.4	0.34	0.0	0.00	0.09	0.02	1
	10 ISL	18.68	18.68	33.321	23.820	407.5	0.041	5.53	103.4	3.2	0.34	0.0	0.00	0.08	0.02	10
1	11	18.68	18.68	33.320	23.820	407.6	0.045	5.53	103.4	3.2	0.34	0.0	0.00	0.08	0.02	11
	20 ISL	18.69	18.69	33.324	23.820	407.9	0.082	5.51	103.0	3.1	0.34	0.0	0.00	0.09	0.03	20
1	22	18.69	18.69	33.325	23.821	407.9	0.090	5.51	103.0	3.1	0.34	0.0	0.00	0.09	0.03	22
	30 ISL	16.94	16.94	33.204	24.152	376.5	0.121	5.94	107.3	3.1	0.34	0.0	0.00	0.14	0.05	30
1	32	16.44	16.43	33.178	24.248	367.4	0.128	6.06	108.4	3.1	0.34	0.0	0.00	0.15	0.05	32
1	42	15.12	15.11	33.167	24.535	3 40.3	0.164	6.21	108.2	2.9	0.36	0.0	0.00	0.18	0.07	42
	50 ISL	14.32	14.31	33.236	24.760	319.1	0.190	6.24	107.0	2.8	0.40	0.3	0.03	0.43	0.20	50
1	52	14.16	14.15	33.256	24.808	314.5	0.197	6.25	106.9	2.8	0.42	0.5	0.04	0.49	0.23	52
1	63	13.53	13.52	33.296	24.969	299.4	0.230	6.01	101.4	3.1	0.54	2.1	0.24	0.50	0.33	63
	75 ISL	12.74	12.73	33.331	25.154	282.1	0.265	5.53	91.8	4.6	0.76	6.1	0.10	0.48	0.38	76
1	77	12.60	12.59	33.340	25.188	278.9	0.271	5.43	89.9	5.1	0.80	6.9	0.06	0.48	0.39	78
1	92	11.40	11.39	33.480	25.522	247.3	0.310	4.50	72.7	11.9	1.21	14.2	0.03	0.20	0.25	93
	100 ISL	10.90	10.89	33.537	25.657	234.6	0.330	4.12	65.9	15.1	1.36	16.8	0.02	0.13	0.18	101
1	113	10.24	10.23	33.614	25.832	218.2	0.359	3.69	58.2	19.5	1.54	19.7	0.01	0.07	0.09	114
	125 ISL	9.75	9.74	33.675	25.962	206.0	0.384	3.53	55.1	22.4	1.65	21.5	0.01	0.03	0.07	126
1	133	9.49	9.48	33.715	26.036	199.0	0.401	3.46	53.7	24.1	1.71	22.5	0.01	0.02	0.06	134
	150 ISL	9.20	9.18	33.825	26.169	186.7	0.433	3.08	47.5	28.5	1.87	24.9	0.00	0.00	0.05	151
1	159	9.10	9.08	33.880	26.228	181.2	0.450	2.89	44.5	30.7	1.95	26.0	0.00	0.00	0.05	160
1	190	8.49	8.47	33.990	26.410	164.4	0.504	2.77	42.1	36.0	2.04	27.5	0.00	0.00	0.03	191
	200 ISL	8.38	8.36	34.014	26.446	161.1	0.520	2.66	40.3	37.6	2.09	28.2	0.00	0.00	0.03	202
1	225	8.13	8.11	34.047	26.510	155.4	0.559	2.47	37.2	41.2	2.19	29.5	0.00	0.00	0.03	227
	250 ISL	7.73	7.71	34.033	26.558	151.1	0.598	2.71	40.5	43.2	2.16	29.5	0.00			252
1	261	7.55	7.52	34.024	26.577	149.4	0.614	2.81	41.8	44.1	2.15	29.5	0.00			263
	300 ISL	7.18	7.15	34.040	26.642	143.7	0.671	2.32	34.2	51.3	2.36	31.9	0.01			302
1	302	7.16	7.13	34.042	26.646	143.3	0.674	2.28	33.6	51.7	2.37	32.1	0.01			304
1	359	6.67	6.64	34.099	26.758	133.2	0.753	1.39	20.3	63.8	2.70	36.4	0.00			362
	400 ISL	6.37	6.33	34.127	26.820	127.7	0.807	1.04	15.1	69.7	2.84	38.2	0.00			403
1	425	6.19	6.15	34.143	26.856	124.5	0.838	0.90	13.0	72.8	2.91	39.0	0.00			429
1	497	5.69	5.65	34.212	26.974	113.9	0.924	0.51	7.3	83.0	3.11	41.1	0.00			501
	500 ISL	5.68	5.64	34.215	26.977	113.6	0.927	0.50	7.1	83.4	3.12	41.1	0.00			504
1	578	5.33	5.28	34.291	27.080	104.5	1.012	0.30	4.2	92.6	3.25	42.4	0.00			583

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 19.5 N	123 44.5 W	18/08/88	0733 UTC	3829 M	330	18 KT			1013.2 MB	18.0 C	16.7 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.82	18.82	33.393	23.840	405.3	0.000	5.48	102.8	2.3	0.35	0.0	0.00	0.08	0.02	0
1	2	18.82	18.82	33.393	23.840	405.4	0.008	5.48	102.8	2.3	0.35	0.0	0.00	0.08	0.02	2
	10 ISL	18.81	18.81	33.392	23.842	405.5	0.041	5.47	102.6	2.2	0.35	0.0	0.00	0.08	0.02	10
1	12	18.81	18.81	33.392	23.842	405.5	0.049	5.47	102.6	2.2	0.35	0.0	0.00	0.08	0.02	12
	20 ISL	18.79	18.79	33.390	23.846	405.5	0.081	5.48	102.7	2.0	0.34	0.0	0.00	0.08	0.02	20
1	22	18.79	18.79	33.390	23.846	405.5	0.089	5.48	102.7	2.0	0.34	0.0	0.00	0.08	0.02	22
	30 ISL	18.82	18.81	33.392	23.840	406.3	0.122	5.48	102.8	2.0	0.34	0.0	0.00	0.08	0.02	30
1	32	18.82	18.81	33.392	23.840	406.4	0.130	5.48	102.8	2.0	0.34	0.0	0.00	0.08	0.02	32
1	42	18.75	18.74	33.392	23.858	405.0	0.170	5.49	102.8	1.8	0.34	0.0	0.00	0.08	0.02	42
	50 ISL	16.80	16.79	33.216	24.195	373.1	0.202	5.96	107.4	1.8	0.35	0.0	0.00	0.13	0.05	50
1	52	16.24	16.23	33.182	24.298	363.3	0.209	6.09	108.5	1.8	0.35	0.0	0.00	0.15	0.06	52
1	61	14.88	14.87	33.236	24.641	330.8	0.240	6.33	109.8	1.8	0.36	0.0	0.00	0.22	0.12	61
	75 ISL	13.49	13.48	33.328	25.002	296.6	0.284	6.19	104.4	2.8	0.48	1.5	0.07	0.43	0.33	76
1	77	13.32	13.31	33.339	25.045	292.6	0.290	6.17	103.7	2.9	0.50	1.7	0.08	0.45	0.36	78
1	91	11.90	11.89	33.396	25.365	262.3	0.329	5.06	82.6	7.3	1.00	10.3	0.12	0.26	0.29	92
	100 ISL	11.27	11.26	33.453	25.525	247.2	0.352	4.55	73.3	10.7	1.20	13.9	0.08	0.17	0.19	101
1	111	10.69	10.68	33.786 U			0.378	4.09	65.1	14.9	1.38	17.0	0.02	0.10	0.09	112
	125 ISL	10.10	10.09	33.619	25.860	215.8	0.409	3.64	57.2	19.1		20.1	0.01	0.05	0.10	126
1	132	9.84	9.83	33.663	25.938	208.4	0.424	3.50	54.7	20.9		21.3	0.01	0.03	0.10	133
	150 ISL	9.15	9.13	33.751	26.119	191.4	0.460	3.46	53.3	24.7		23.2	0.00	0.00	0.06	151
1	157	8.93	8.91	33.785	26.181	185.6	0.473	3.45	52.9	26.1		23.8	0.00	0.00	0.04	158
1	187	8.59	8.57	33.974	26.382	167.0	0.526	2.79	42.5	33.5		27.1	0.00	0.01	0.05	188
	200 ISL	8.37	8.35	34.005	26.440	161.6	0.548	2.75	41.7	35.7		27.9	0.00	0.01	0.04	202
1	222	8.02	8.00	34.026	26.510	155.3	0.583	2.69	40.5	38.9		28.8	0.00	0.00	0.02	224
	250 ISL	7.77	7.75	34.045	26.562	150.8	0.625	2.47	36.9	42.8		30.1	0.00			252
1	257	7.71	7.68	34.047	26.572	149.9	0.636	2.41	36.0	43.8		30.4	0.00			259
1	298	7.22	7.19	34.051	26.645	143.4	0.696	2.17	32.0	49.6	2.38	32.3	0.00			300
	300 ISL	7.18	7.15	34.051	26.651	142.8	0.699	2.15	31.7	50.1	2.39	32.5	0.00			302
1	353	6.33	6.30	34.066	26.777	131.1	0.772	1.55	22.4	62.6	2.73	36.5	0.00			356
	400 ISL	6.20	6.16	34.144	26.855	124.3	0.832	0.96	13.8	70.2	2.92	38.7	0.00			403
1	420	6.15	6.11	34.170	26.883	121.9	0.856	0.74	10.7	72.9	2.98	39.3	0.00			423
1	492	5.78	5.74	34.235	26.981	113.3	0.941	0.44	6.3	82.0	3.13	40.9	0.00			496
	500 ISL	5.73	5.69	34.240	26.991	112.4	0.950	0.43	6.1	83.0	3.14	41.0	0.00			504
1	575	5.27	5.22	34.286	27.083	104.0	1.031	0.29	4.1	92.0	3.23	42.4	0.00			580

RV NEW HORIZON CALCOFI CRUISE 8808 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	15/08/88	1230 UTC	60 M	360	03 KT			1010.1 MB	18.0 C	17.0 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.17	18.17	33.532	24.107	379.8	0.000	6.65	123.3	3.5	0.32	0.0	0.01	1.34	0.36	0
1	10	16.10	16.10	33.588	24.640	329.3	0.035	6.81	121.3	4.6	0.33	0.0	0.01	3.64	0.86	10
	20 ISL	12.81	12.81	33.534	25.296	267.1	0.065	5.07	84.4	9.0	0.99	8.4	0.34	1.64	0.51	20
1	21	12.51	12.51	33.533	25.354	261.7	0.068	4.87	80.6	9.5	1.07	9.4	0.39	1.35	0.46	21
	30 ISL	11.69	11.69	33.569	25.537	244.4	0.091	3.96	64.4	14.0	1.53	14.4	0.82	0.43	0.45	30
1	31	11.67	11.67	33.574	25.544	243.7	0.093	3.89	63.3	14.4	1.56	14.8	0.86	0.38	0.45	31
1	42	11.29	11.28	33.648	25.672	231.9	0.119	3.49	56.3	16.4	1.57	17.1	0.73	0.26	0.34	42
	50 ISL	10.91	10.90	33.702	25.782	221.5	0.137	3.40	54.4	17.2	1.58	19.1	0.18	0.19	0.20	50
1	51	10.86	10.85	33.709	25.797	220.2	0.140	3.39	54.2	17.3	1.58	19.3	0.11	0.18	0.18	51

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 25.4 N	117 54.3 W	15/08/88	0954 UTC	609 M	010	03 KT			1010.5 MB	18.8 C	17.9 C	

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.70	19.70	33.668	23.825	406.7	0.000	5.71	109.1	2.3	0.28	0.0	0.00	0.13	0.06	0
1	10	19.69	19.69	33.666	23.827	406.9	0.041	5.72	109.2	2.2	0.28	0.0	0.00	0.13	0.07	10
	20 ISL	16.99	16.99	33.540	24.398	352.8	0.079	7.05	127.8	2.0	0.30	0.0	0.00	0.19	0.11	20
1	21	16.67	16.67	33.532	24.467	346.2	0.082	7.16	129.0	2.0	0.30	0.0	0.00	0.20	0.12	21
	30 ISL	14.82	14.82	33.562	24.904	304.8	0.111	6.51	113.0	2.8	0.38	0.5	0.02	1.25	0.16	30
1	31	14.65	14.65	33.567	24.945	301.0	0.114	6.39	110.6	3.0	0.40	0.5	0.03	1.34	0.16	31
1	41	13.34	13.33	33.559	25.210	275.9	0.143	5.66	95.3	5.5	0.69	5.2	0.13	0.49	0.21	41
	50 ISL	12.42	12.41	33.552	25.386	259.3	0.167	4.88	80.6	8.4	1.00	10.0	0.28	0.44	0.24	50
1	52	12.24	12.23	33.555	25.423	255.8	0.173	4.70	77.3	9.1	1.07	11.1	0.30	0.43	0.25	52
1	62	11.51	11.50	33.631	25.619	237.4	0.197	3.91	63.4	12.7	1.33	15.8	0.15	0.39	0.34	62
1	72	11.12	11.11	33.672	25.722	227.8	0.220	3.62	58.2	15.4	1.48	18.0	0.19	0.21	0.17	73
	75 ISL	11.03	11.02	33.687	25.750	225.2	0.227	3.54	56.8	16.0	1.51	18.5	0.16	0.17	0.16	76
1	87	10.62	10.61	33.742	25.865	214.5	0.254	3.30	52.5	18.7	1.62	20.5	0.02	0.08	0.11	88
	100 ISL	9.87	9.86	33.776	26.020	199.9	0.281	3.22	50.4	23.3	1.74	22.9	0.01	0.02	0.07	101
1	102	9.76	9.75	33.783	26.044	197.7	0.285	3.22	50.3	24.0	1.75	23.2	0.01	0.02	0.07	103
1	123	9.51	9.50	33.921	26.194	183.9	0.325	3.12	48.5	26.4	1.81	23.7	0.01	0.01	0.08	124
	125 ISL	9.51	9.50	33.931	26.202	183.2	0.328	3.08	47.9	26.7	1.83	23.9	0.01	0.01	0.08	126
1	148	9.48	9.46	34.017	26.274	176.8	0.370	2.60	40.4	30.5	2.01	25.9	0.01	0.01	0.05	149
	150 ISL	9.46	9.44	34.022	26.281	176.1	0.373	2.59	40.2	30.7	2.02	26.0	0.01	0.01	0.05	151
1	179	9.10	9.08	34.088	26.391	166.2	0.423	2.41	37.2	34.2	2.12	27.4	0.01	0.01	0.05	180
	200 ISL	8.95	8.93	34.154	26.467	159.4	0.457	1.99	30.6	38.2	2.28	29.0	0.01	0.01	0.05	202
1	210	8.89	8.87	34.183	26.500	156.5	0.473	1.78	27.3	40.2	2.36	29.7	0.01	0.01	0.05	212
1	239	8.62	8.59	34.224	26.574	149.9	0.517	1.44	22.0	44.3	2.50	31.1	0.01			241
	250 ISL	8.58	8.55	34.246	26.598	147.8	0.534	1.29	19.7	45.7	2.55	31.5	0.01			252
1	280	8.50	8.47	34.297	26.651	143.4	0.577	0.95	14.5	49.0	2.68	32.6	0.01			282
	300 ISL	8.36	8.33	34.299	26.674	141.5	0.606	0.90	13.7	50.8	2.73	33.2	0.01			302
1	337	8.05	8.02	34.286	26.711	138.4	0.658	0.81	12.2	53.8	2.78	34.1	0.00			340
1	397	7.67	7.63	34.298	26.777	133.0	0.739	0.64	9.6	58.0	2.88	35.3	0.00			400
	400 ISL	7.65	7.61	34.298	26.780	132.7	0.743	0.63	9.4	58.3	2.89	35.4	0.00			403
1	464	7.10	7.06	34.298	26.858	125.9	0.826	0.51	7.5	65.5	2.99	37.3	0.00			468
	500 ISL	6.84	6.79	34.303	26.898	122.4	0.870	0.46	6.7	69.3	3.04	38.3	0.00			504
1	537	6.57	6.52	34.310	26.940	118.7	0.915	0.40	5.8	73.2	3.10	39.3	0.00			542

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 18.3 N	118 7.A W	15/08/88	07 20 UTC	794 M	170	07 KT			1010.6 MB	19.9 C	17.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	20.24	20.24	33.698	23.707	418.0	0.000	5.56	107.3	2.1	0.28	0.0	0.00	0.17	0.08	0
1	1		20.24	20.24	33.698	23.707	418.0	0.004	5.56	107.3	2.1	0.28	0.0	0.00	0.17	0.08	1
	10	ISL	19.70	19.70	33.685	23.839	405.8	0.041	5.75	109.8	1.8	0.29	0.0	0.00	0.19	0.10	10
1	16		18.79	18.79	33.639	24.036	387.2	0.065	5.92	111.1	1.6	0.29	0.0	0.00	0.21	0.12	16
	20	ISL	17.61	17.61	33.553	24.260	365.9	0.080	5.96	109.3	1.8	0.33	0.4	0.03	0.24	0.13	20
	30	ISL	14.74	14.74	33.415	24.808	313.9	0.114	6.07	105.1	2.7	0.48	1.9	0.13	0.30	0.16	30
1	32		14.18	14.18	33.400	24.915	303.8	0.120	6.09	104.3	2.9	0.51	2.3	0.16	0.31	0.17	32
1	47		13.31	13.30	33.463	25.142	282.5	0.164	5.70	95.9	4.3	0.73	5.7	0.41	0.27	0.19	47
	50	ISL	13.15	13.14	33.472	25.181	278.9	0.173	5.59	93.7	4.7	0.78	6.6	0.40	0.30	0.22	50
1	63		12.46	12.45	33.521	25.355	262.6	0.208	5.00	82.6	7.2	1.02	10.6	0.27	0.41	0.32	63
1	73		11.89	11.88	33.583	25.512	247.9	0.233	4.40	71.9	10.5	1.18	13.6	0.18	0.32	0.24	74
	75	ISL	11.77	11.76	33.594	25.543	245.0	0.238	4.28	69.7	11.1	1.21	14.2	0.15	0.30	0.28	76
1	83		11.27	11.26	33.646	25.675	232.6	0.257	3.84	61.9	13.5	1.36	16.5	0.03	0.23	0.38	84
1	93		10.60	10.59	33.741	25.868	214.3	0.280	3.52	56.0	17.7	1.59	19.9	0.02	0.07	0.07	94
	100	ISL	10.31	10.30	33.778	25.947	206.9	0.295	3.39	53.6	19.4	1.62	20.9	0.02	0.06	0.07	101
1	108		10.08	10.07	33.809	26.011	201.0	0.311	3.30	51.9	20.8	1.66	21.4	0.02	0.04	0.08	109
1	124		9.77	9.76	33.886	26.123	190.6	0.342	3.21	50.2	23.6	1.74	22.5	0.01	0.02	0.05	125
	125	ISL	9.75	9.74	33.890	26.130	190.0	0.344	3.20	50.0	23.8	1.75	22.6	0.01	0.02	0.05	126
1	144		9.44	9.42	33.969	26.243	179.6	0.379	3.04	47.2	26.8	1.87	24.3	0.01	0.01	0.06	145
	150	ISL	9.36	9.34	33.995	26.276	176.6	0.390	2.94	45.6	28.0	1.92	24.9	0.01	0.01	0.06	151
1	170		9.12	9.10	34.076	26.379	167.2	0.424	2.55	39.3	32.0	2.08	26.8	0.01	0.01	0.07	171
	200	ISL	8.82	8.80	34.159	26.492	157.0	0.473	1.96	30.0	37.5	2.30	29.2	0.02	0.01	0.07	202
1	201		8.81	8.79	34.161	26.495	156.7	0.474	1.94	29.7	37.7	2.31	29.3	0.02	0.01	0.07	203
1	231		8.30	8.28	34.157	26.571	149.9	0.520	1.76	26.7	41.7	2.41	31.0	0.02	0.00	0.06	233
	250	ISL	8.19	8.16	34.183	26.608	146.7	0.549	1.54	23.3	44.0	2.50	31.8	0.02			252
1	262		8.13	8.10	34.199	26.630	144.8	0.566	1.41	21.3	45.4	2.56	32.3	0.02			264
	300	ISL	7.58	7.55	34.177	26.693	139.1	0.620	1.33	19.8	50.6	2.64	34.1	0.03			302
1	303		7.54	7.51	34.175	26.698	138.7	0.624	1.33	19.8	51.0	2.64	34.2	0.03			305
1	359		7.45	7.41	34.257	26.776	132.3	0.700	0.79	11.7	55.8	2.84	35.7	0.01			362
	400	ISL	7.22	7.18	34.293	26.837	127.0	0.753	0.57	8.4	60.3	2.95	36.8	0.01			403
1	420		7.08	7.04	34.304	26.865	124.5	0.778	0.50	7.4	62.6	3.00	37.3	0.01			424
1	486		6.56	6.52	34.309	26.940	117.9	0.858	0.39	5.7	69.4	3.10	38.9	0.01			490
	500	ISL	6.46	6.41	34.313	26.957	116.5	0.875	0.37	5.4	70.9	3.12	39.3	0.01			504
1	558		6.11	6.06	34.330	27.016	111.3	0.941	0.30	4.3	77.0	3.17	40.5	0.01			563
	600	ISL	5.93	5.88	34.339	27.046	108.8	0.987	0.27	3.9	80.4	3.21	41.0	0.01			605
1	640		5.76	5.70	34.348	27.075	106.4	1.030	0.25	3.6	84.1	3.24	41.2	0.01			646
1	695		5.44	5.38	34.371	27.132	101.3	1.087	0.20	2.8	91.7	3.30	41.2	0.03			701
	700	ISL	5.41	5.35	34.373	27.137	100.8	1.092	0.19	2.7	92.5	3.31	41.0	0.03			706
1	736		5.22	5.16	34.389	27.173	97.6	1.128	0.15	2.1	97.0	3.36	40.3	0.02			743
1	772		5.03	4.97	34.395	27.200	95.1	1.163	0.22	3.1	97.8	3.31	41.4	0.05			779

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 15.2 N	118 15.2 W	15/08/88	0344 UTC	375 M	280	23 KT	280 04 05	0	1009.0 MB	19.0 C	16.9 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.49	19.49	33.648	23.864	403.0	0.000	5.67	107.9	2.0	0.30	0.0	0.00	0.17	0.06	0
1	10		19.29	19.29	33.635	23.906	399.4	0.040	5.80	109.9	1.8	0.29	0.0	0.00	0.17	0.06	10
	20	ISL	15.54	15.54	33.427	24.642	329.4	0.077	6.47	113.9	2.0	0.35	0.1	0.03	0.41	0.16	20
1	21		15.14	15.14	33.415	24.721	321.9	0.080	6.52	113.8	2.0	0.36	0.1	0.03	0.44	0.17	21
	30	ISL	13.90	13.90	33.394	24.969	298.6	0.108	6.11	104.0	2.8	0.56	3.1	0.18	0.59	0.32	30
1	31		13.84	13.84	33.394	24.981	297.5	0.111	6.04	102.7	2.9	0.58	3.5	0.20	0.60	0.33	31
1	42		13.08	13.07	33.427	25.160	280.7	0.143	5.54	92.7	4.5	0.78	6.4	0.29	0.66	0.33	42
	50	ISL	12.68	12.67	33.489	25.287	268.8	0.164	5.23	86.8	5.9	0.94	8.8	0.41	0.57	0.32	50
1	52		12.59	12.58	33.505	25.317	266.0	0.170	5.17	85.7	6.3	0.98	9.4	0.42	0.53	0.32	52
1	62		12.18	12.17	33.554	25.434	255.0	0.196	5.00	82.2	7.7	1.10	12.1	0.05	0.30	0.21	62
1	73		11.80	11.79	33.594	25.537	245.5	0.223	4.36	71.1	11.4	1.25	14.3	0.10	0.29	0.22	74
	75	ISL	11.68	11.67	33.601	25.565	242.9	0.228	4.27	69.5	12.1	1.29	14.9	0.09	0.27	0.21	76
1	87		10.87	10.86	33.651	25.750	225.4	0.256	3.82	61.1	16.4	1.51	18.6	0.02	0.13	0.13	88
	100	ISL	10.03	10.02	33.745	25.969	204.8	0.284	3.39	53.2	22.0	1.72	22.0	0.01	0.03	0.07	101
1	102		9.93	9.92	33.760	25.998	202.1	0.288	3.34	52.4	22.7	1.74	22.4	0.01	0.02	0.06	103
1	123		9.79	9.78	33.868	26.106	192.3	0.330	3.33	52.1	24.1	1.75	22.5	0.01	0.02	0.04	124
	125	ISL	9.74	9.73	33.874	26.119	191.1	0.334	3.32	51.9	24.4	1.76	22.6	0.01	0.02	0.04	126
1	149		9.15	9.13	33.932	26.261	177.9	0.378	3.20	49.3	28.5	1.90	24.8	0.01	0.01	0.04	150
	150	ISL	9.14	9.12	33.936	26.266	177.5	0.380	3.18	49.0	28.7	1.91	24.9	0.01	0.01	0.04	151
1	180		8.80	8.78	34.058	26.415	163.8	0.431	2.50	38.3	35.4	2.17	27.8	0.01	0.01	0.05	181
	200	ISL	8.58	8.56	34.118	26.497	156.4	0.463	2.17	33.1	39.9	2.33	29.5	0.01	0.01	0.06	202
1	210		8.45	8.43	34.138	26.533	153.2	0.478	2.04	31.0	42.0	2.40	30.3	0.01	0.01	0.06	212
1	240		7.92	7.90	34.145	26.618	145.4	0.523	1.74	26.1	47.5	2.52	32.2	0.03			242
	250	ISL	7.83	7.81	34.160	26.643	143.1	0.538	1.61	24.1	49.3	2.58	32.8	0.03			252
1	276		7.70	7.67	34.202	26.695	138.6	0.574	1.30	19.4	53.4	2.72	34.1	0.02			278
	300	ISL	7.57	7.54	34.217	26.726	136.0	0.607	1.14	17.0	56.0	2.79	34.7	0.02			302
1	322		7.47	7.44	34.223	26.746	134.5	0.637	1.04	15.5	57.7	2.83	35.1	0.02			325
1	368		7.28	7.24	34.243	26.789	131.0	0.698	0.81	12.0	60.6	2.92	36.0	0.01			371

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 10.6 N	118 23.8 W	15/08/88	0049 UTC	1171 M	290	19 KT	290 04 05	0	1010.5 MB	20.0 C	17.2 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.31	19.31	33.565	23.847	404.6	0.000	5.72	108.4	2.7	0.31	0.1	0.00	0.18	0.04	0
1	1		19.31	19.31	33.565	23.847	404.7	0.004	5.72	108.4	2.7	0.31	0.1	0.00	0.18	0.04	1
	10	ISL	19.19	19.19	33.553	23.869	402.9	0.040	5.68	107.4	2.5	0.30	0.1	0.00	0.19	0.05	10
1	11		19.18	19.18	33.551	23.87 0	402.8	0.044	5.68	107.4	2.5	0.30	0.1	0.00	0.19	0.05	11
	20	ISL	15.86	15.86	33.335	24.500	3 43.0	0.078	6.31	111.7	2.6	0.35	0.0	0.00	0.28	0.09	20
1	22		15.09	15.09	33.309	24.650	328.7	0.085	6.44	112.2	2.6	0.37	0.0	0.00	0.31	0.10	22
	30	ISL	14.33	14.33	33.360	24.853	309.7	0.110	6.27	107.6	2.9	0.45	1.3	0.08	0.54	0.21	30
1	32		14.26	14.26	33.376	24.880	307.1	0.116	6.18	106.0	3.0	0.48	1.8	0.10	0.59	0.24	32
1	43		13.02	13.01	33.327	25.095	286.9	0.149	5.76	96.2	4.0	0.71	4.9	0.23	0.56	0.25	43
	50	ISL	12.57	12.56	33.373	25.219	275.3	0.169	5.39	89.2	5.5	0.88	7.6	0.24	0.60	0.28	50
1	53		12.44	12.43	33.402	25.266	270.8	0.177	5.23	86.4	6.2	0.94	8.8	0.25	0.61	0.29	53
1	63		12.23	12.22	33.489	25.374	260.8	0.204	4.90	80.6	8.4	1.06	11.4	0.09	0.42	0.23	63
1	74		11.37	11.36	33.592	25.615	238.1	0.231	4.47	72.2	12.3	1.31	15.7	0.02	0.16	0.13	75
	75	ISL	11.30	11.29	33.599	25.633	236.4	0.233	4.43	71.5	12.7	1.33	16.0	0.02	0.15	0.12	76
1	88		10.57	10.56	33.662	25.812	219.6	0.263	4.00	63.5	17.3	1.49	18.8	0.01	0.06	0.06	89
	100	ISL	10.12	10.11	33.699	25.918	209.6	0.289	3.74	58.8	19.9	1.59	20.3	0.01	0.05	0.05	101
1	104		10.00	9.99	33.712	25.949	206.8	0.297	3.66	57.4	20.7	1.62	20.8	0.01	0.04	0.05	105
1	125		9.50	9.49	33.857	26.145	188.5	0.339	3.08	47.8	26.6	1.85	24.4	0.01	0.01	0.04	126
	150	ISL	9.14	9.12	33.991	26.309	173.4	0.384	2.74	42.3	30.7	2.01	26.3	0.01	0.00	0.04	151
1	151		9.13	9.11	33.996	26.314	172.9	0.386	2.73	42.1	30.8	2.01	26.3	0.01	0.00	0.04	152
1	181		8.66	8.64	34.107	26.476	158.1	0.435	2.27	34.7	37.8	2.21	28.9	0.01	0.00	0.04	182
	200	ISL	8.40	8.38	34.141	26.542	152.0	0.465	1.95	29.6	42.0	2.35	30.5	0.01	0.00	0.05	202
1	212		8.25	8.23	34.152	26.574	149.2	0.483	1.78	26.9	44.3	2.43	31.4	0.01	0.00	0.05	214
1	242		7.88	7.86	34.156	26.632	144.0	0.527	1.70	25.5	48.0	2.52	32.5	0.03			244
	250	ISL	7.86	7.83	34.171	26.647	142.7	0.538	1.59	23.8	49.0	2.56	32.8	0.03			252
1	283		7.83	7.80	34.238	26.705	137.9	0.584	1.10	16.5	53.2	2.73	34.0	0.01			285
	300	ISL	7.67	7.64	34.239	26.729	135.8	0.608	1.06	15.8	55.2	2.77	34.7	0.01			302
1	339		7.23	7.20	34.224	26.780	131.3	0.660	0.96	14.2	59.6	2.84	36.1	0.01			3 42
1	400		6.82	6.78	34.265	26.870	123.5	0.738	0.59	8.6	67.2	3.00	38.0	0.01			403
1	466		6.62	6.58	34.326	26.945	117.2	0.817	0.37	5.4	72.9	3.11	39.2	0.00			47 0
	500	ISL	6.37	6.32	34.336	26.986	113.6	0.856	0.34	4.9	76.7	3.15	40.1	0.00			504
1	540		6.07	6.02	34.349	27.036	109.2	0.901	0.30	4.3	81.1	3.19	41.2	0.00			545

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.2 N	118 56.1 W	14/08/88	1845 UTC	1690 M	300	18 KT	310 05 06	1	1013.2 MB	19.4 C	17.1 C	2/8	CU

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 7 8	SIGMA THETA	SVA	DYN HT	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	19.40	19.40	33.727	23.948	3 95.0	0.000	5.58	106.0	2.0	0.29	0.1	0.00	0.25	0.16	0
1	1		19.40	19.40	33.727	23.948	3 95.1	0.004	5.58	106.0	2.0	0.29	0.1	0.00	0.25	0.16	1
	10	ISL	19.38	19.38	33.727	23.953	394.9	0.039	5.58	106.0	1.8	0.28	0.0	0.00	0.25	0.15	10
1	11		19.38	19.38	33.727	23.953	394.9	0.043	5.58	106.0	1.8	0.28	0.0	0.00	0.25	0.15	11
	20	ISL	15.58	15.58	33.619	24.781	316.2	0.075	5.78	101.9	4.4	0.57	3.8	0.13	0.64	0.31	20
1	22		14.63	14.63	33.615	24.985	296.8	0.082	5.79	100.2	5.1	0.66	5.0	0.17	0.72	0.35	22
	30	ISL	12.88	12.88	33.584	25.321	265.0	0.104	5.25	87.6	7.1	0.97	9.7	0.35	0.65	0.37	30
1	32		12.63	12.63	33.576	25.364	261.0	0.109	5.10	84.6	7.5	1.04	10.7	0.38	0.61	0.38	32
1	43		12.25	12.24	33.581	25.441	253.9	0.138	4.87	80.2	8.6	1.12	12.2	0.30	0.69	0.35	43
	50	ISL	11.67	11.66	33.558	25.533	245.3	0.155	4.72	76.7	10.1	1.16	13.4	0.18	0.54	0.25	50
1	53		11.40	11.39	33.559	25.583	240.6	0.162	4.60	74.4	11.1	1.20	14.2	0.13	0.46	0.21	53
1	62		10.84	10.83	33.674	25.773	222.7	0.183	3.76	60.1	15.8	1.48	18.5	0.05	0.26	0.19	62
1	73		10.52	10.51	33.765	25.900	210.8	0.207	3.23	51.3	19.6	1.66	21.3	0.03	0.16	0.15	74
	75	ISL	10.46	10.45	33.773	25.917	209.3	0.211	3.18	50.4	20.2	1.68	21.6	0.03	0.14	0.14	76
1	88		10.08	10.07	33.818	26.017	200.0	0.238	3.02	47.5	23.3	1.77	23.1	0.02	0.06	0.08	89
	100	ISL	9.74	9.73	33.888	26.129	189.5	0.261	2.88	45.0	25.9	1.86	24.3	0.02	0.02	0.06	101
1	103		9.67	9.66	33.906	26.155	187.2	0.267	2.84	44.3	26.5	1.88	24.6	0.02	0.02	0.06	104
1	123		9.42	9.41	33.977	26.252	178.3	0.303	2.59	40.2	30.0	2.00	26.1	0.02	0.01	0.09	124
	125	ISL	9.39	9.38	33.983	26.262	177.4	0.307	2.57	39.9	30.3	2.01	26.2	0.02	0.01	0.09	126
1	149		9.05	9.03	34.047	26.367	167.9	0.348	2.39	36.8	33.9	2.11	27.7	0.03	0.01	0.07	150
	150	ISL	9.04	9.02	34.049	26.370	167.6	0.350	2.39	36.8	34.1	2.11	27.8	0.03	0.01	0.07	151
1	179		8.67	8.65	34.105	26.472	158.4	0.397	2.18	33.3	38.5	2.25	29.2	0.03	0.00	0.06	180
	200	ISL	8.57	8.55	34.151	26.524	153.8	0.430	1.83	27.9	41.8	2.37	30.4	0.02	0.00	0.06	202
1	210		8.52	8.50	34.169	26.546	151.9	0.445	1.67	25.4	43.3	2.42	31.0	0.02	0.00	0.06	212
1	240		8.15	8.13	34.188	26.618	145.5	0.490	1.51	22.8	47.1	2.55	32.3	0.01			242
	250	ISL	8.07	8.04	34.194	26.635	144.1	0.505	1.45	21.9	48.1	2.58	32.6	0.01			252
1	281		7.88	7.85	34.215	26.679	140.3	0.549	1.24	18.6	51.0	2.65	33.4	0.02			283
	300	ISL	7.78	7.75	34.237	26.712	137.5	0.575	1.06	15.9	53.3	2.72	34.1	0.02			302
1	338		7.53	7.50	34.275	26.778	131.7	0.626	0.73	10.9	58.4	2.86	35.6	0.02			341
1	399		6.84	6.80	34.269	26.870	123.5	0.704	0.56	8.2	67.4	3.02	37.9	0.02			402
	400	ISL	6.84	6.80	34.270	26.871	123.4	0.705	0.56	8.2	67.5	3.02	37.9	0.02			403
1	465		6.58	6.54	34.322	26.947	117.0	0.783	0.36	5.2	73.3	3.12	39.0	0.00			469
	500	ISL	6.29	6.24	34.326	26.989	113.3	0.824	0.32	4.6	77.9	3.16	39.9	0.00			504
1	535		5.99	5.94	34.331	27.031	109.4	0.863	0.27	3.9	82.5	3.20	40.8	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8808 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 29.3 W	14/08/88	1216 UTC	1363 M	310	22 KT			1012.4 MB	17.0 C	15.2 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.49	18.49	33.640	24.111	379.5	0.000	5.65	105.5	2.5	0.32	0.1	0.01	0.34	0.16	0
1	1		18.49	18.49	33.640	24.111	379.5	0.004	5.65	105.5	2.5	0.32	0.1	0.01	0.34	0.16	1
	10	ISL	18.50	18.50	33.640	24.109	380.0	0.038	5.65	105.5	2.3	0.31	0.1	0.01	0.33	0.16	10
1	11		18.50	18.50	33.640	24.109	380.0	0.042	5.65	105.5	2.3	0.31	0.1	0.01	0.33	0.16	11
	20	ISL	17.52	17.52	33.688	24.385	354.0	0.075	5.72	104.8	3.1	0.41	1.5	0.07	0.44	0.23	20
1	22		17.17	17.17	33.699	24.478	345.3	0.082	5.74	104.5	3.5	0.45	2.1	0.09	0.47	0.25	22
	30	ISL	15.12	15.12	33.720	24.961	299.4	0.108	5.51	96.3	5.8	0.69	5.5	0.24	0.64	0.25	30
1	32		14.54	14.54	33.727	25.091	287.0	0.113	5.38	93.0	6.8	0.78	6.7	0.28	0.66	0.25	32
1	42		11.93	11.92	33.757	25.638	235.1	0.140	4.02	65.8	15.6	1.41	15.9	0.46	0.35	0.21	42
	50	ISL	11.08	11.07	33.789	25.820	218.0	0.158	3.56	57.2	19.8	1.60	19.7	0.36	0.19	0.17	50
1	52		10.96	10.95	33.795	25.846	215.6	0.162	3.49	56.0	20.6	1.63	20.3	0.31	0.16	0.16	52
1	63		10.20	10.19	33.836	26.011	200.1	0.185	3.09	48.8	24.6	1.80	23.4	0.09	0.08	0.08	63
	75	ISL	9.78	9.77	33.874	26.111	190.7	0.208	2.85	44.6	27.5	1.93	25.0	0.04	0.03	0.07	76
1	77		9.74	9.73	33.880	26.123	189.7	0.212	2.82	44.1	27.9	1.95	25.2	0.03	0.03	0.07	78
1	92		9.37	9.36	33.917	26.213	181.4	0.240	2.69	41.7	30.8	2.02	26.5	0.03	0.02	0.08	93
	100	ISL	9.24	9.23	33.930	26.244	178.6	0.254	2.65	41.0	31.9	2.04	26.9	0.03	0.02	0.08	101
1	113		9.06	9.05	33.950	26.289	174.5	0.277	2.61	40.2	33.4	2.07	27.4	0.04	0.01	0.07	114
	125	ISL	8.85	8.84	33.977	26.343	169.6	0.298	2.59	39.7	34.7	2.10	27.8	0.05	0.01	0.07	126
1	133		8.71	8.70	33.996	26.380	166.2	0.311	2.56	39.1	35.7	2.12	28.1	0.05	0.01	0.07	134
	150	ISL	8.53	8.51	34.033	26.437	161.1	0.339	2.37	36.1	38.5	2.21	29.2	0.06	0.02	0.35	151
1	159		8.45	8.43	34.047	26.460	159.0	0.354	2.28	34.6	39.9	2.25	29.7	0.06	0.02	0.48	160
1	190		8.06	8.04	34.044	26.517	154.0	0.402	2.50	37.6	41.2	2.21	29.7	0.03	0.00	0.04	191
	200	ISL	7.89	7.87	34.054	26.550	151.0	0.417	2.39	35.8	43.3	2.27	30.5	0.02	0.00	0.04	202
1	225		7.53	7.51	34.091	26.632	143.6	0.454	1.97	29.3	49.3	2.45	32.7	0.01	0.00	0.05	227
	250	ISL	7.47	7.45	34.139	26.678	139.6	0.490	1.59	23.6	53.1	2.59	34.0	0.01			252
1	261		7.44	7.41	34.154	26.695	138.2	0.505	1.44	21.4	54.4	2.65	34.5	0.01			263
	300	ISL	7.27	7.24	34.201	26.756	133.0	0.558	1.06	15.7	59.2	2.81	35.9	0.01			302
1	302		7.26	7.23	34.203	26.759	132.7	0.560	1.04	15.4	59.4	2.82	36.0	0.01			304
1	357		6.88	6.85	34.251	26.850	124.7	0.631	0.66	9.7	66.9	2.98	37.8	0.01			360
	400	ISL	6.56	6.52	34.271	26.909	119.5	0.684	0.50	7.3	72.2	3.07	39.1	0.00			403
1	424		6.38	6.34	34.279	26.939	116.9	0.712	0.45	6.5	75.0	3.11	39.7	0.00			428
1	496		5.96	5.92				0.794									500
	500	ISL	5.95	5.91	34.311	27.020	109.9	0.798	0.36	5.2	82.0	3.18	40.7	0.00			504
1	570		5.71	5.66	34.342	27.075	105.4	0.874	0.28	4.0	88.4	3.24	41.6	0.00			575

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 25.1 N	119 57.7 W	14/08/88	0658 UTC	885 M	320	23 KT			1013.2 MB	17.1 C	15.5 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.74	17.74	33.648	24.301	361.3	0.000	5.80	106.7	1.5	0.31	0.0	0.00	0.46	0.59	0
1	2		17.74	17.74	33.648	24.301	361.4	0.007	5.80	106.7	1.5	0.31	0.0	0.00	0.46	0.59	2
	10	ISL	17.76	17.76	33.649	24.297	362.0	0.036	5.81	107.0	1.3	0.30	0.0	0.00	0.50	0.52	10
1	12		17.76	17.76	33.648	24.297	362.2	0.043	5.81	107.0	1.3	0.30	0.0	0.00	0.51	0.50	12
	20	ISL	17.74	17.74	33.636	24.293	362.8	0.072	5.80	106.7	1.2	0.30	0.0	0.01	0.49	0.48	20
1	22		17.73	17.73	33.633	24.293	362.9	0.080	5.80	106.7	1.2	0.30	0.0	0.01	0.49	0.48	22
	30	ISL	14.53	14.53	33.302	24.766	318.0	0.107	6.13	105.6	1.5	0.53	1.9	0.11	0.57	0.40	30
1	32		13.69	13.69	33.239	24.892	306.0	0.113	6.20	105.0	1.6	0.59	2.5	0.15	0.58	0.38	32
1	42		12.92	12.91	33.241	25.048	291.3	0.143	5.90	98.3	2.6	0.70	4.4	0.34	0.44	0.26	42
	50	ISL	12.52	12.51	33.280	25.156	281.2	0.166	5.66	93.5	3.6	0.83	6.3	0.46	0.46	0.52	50
1	52		12.42	12.41	33.292	25.185	278.5	0.171	5.60	92.4	3.9	0.86	6.9	0.47	0.46	0.57	52
1	62		11.76	11.75	33.334	25.342	263.7	0.199	5.20	84.6	7.1	1.02	10.5	0.25	0.21	0.18	62
	75	ISL	11.08	11.07	33.455	25.560	243.2	0.232	4.68	75.1	10.9	1.28	14.9	0.05	0.13	0.12	76
1	76		11.03	11.02	33.465	25.577	241.7	0.234	4.64	74.4	11.2	1.30	15.2	0.04	0.13	0.11	77
1	90		10.21	10.20	33.565	25.798	220.8	0.266	4.13	65.1	16.4	1.50	18.9	0.02	0.04	0.06	91
	100	ISL	9.80	9.79	33.668	25.948	206.8	0.288	3.76	58.7	19.8	1.62	21.0	0.02	0.03	0.05	101
1	II0		9.52	9.51	33.766	26.071	195.3	0.308	3.44	53.4	22.8	1.71	22.6	0.02	0.01	0.04	111
	125	ISL	9.35	9.34	33.846	26.161	187.0	0.337	3.15	48.8	25.7	1.81	24.1	0.02	0.00	0.03	126
1	129		9.32	9.31	33.860	26.177	185.5	0.344	3.10	48.0	26.3	1.83	24.4	0.02	0.00	0.03	130
	150	ISL	9.00	8.98	33.924	26.279	176.3	0.382	2.97	45.6	29.3	1.93	25.9	0.01	0.00	0.03	151
1	154		8.93	8.91	33.934	26.297	174.5	0.389	2.95	45.3	29.9	1.95	26.2	0.01	0.00	0.03	155
1	183		8.37	8.35	34.034	26.463	159.2	0.437	2.55	38.7	36.8	2.12	28.7	0.00	0.00	0.04	184
	200	ISL	8.16	8.14	34.061	26.516	154.4	0.464	2.38	35.9	39.8	2.21	29.7	0.00	0.01	0.04	202
1	217		8.02	8.00	34.076	26.549	151.5	0.490	2.23	33.5	42.2	2.28	30.4	0.00	0.01	0.03	219
	250	ISL	7.87	7.84	34.103	26.592	147.9	0.539	1.99	29.8	45.1	2.40	31.7	0.00			252
1	251		7.87	7.84	34.104	26.593	147.9	0.541	1.98	29.7	45.2	2.40	31.7	0.00			253
1	290		7.46	7.43	34.188 A	26.719	136.4	0.596	1.26	18.7	54.3	2.69	34.7	0.01			292
	300	ISL	7.36	7.33	34.201	26.744	134.2	0.610	1.14	16.9	56.2	2.74	35.3	0.01			302
1	346		6.96	6.93	34.237 A	26.828	126.7	0.670	0.78	11.5	63.4	2.90	37.2	0.00			349
	400	ISL	6.64	6.60	34.260	26.890	121.4	0.737	0.56	8.2	68.8	3.03	38.4	0.00			403
1	410		6.59	6.55	34.263 A	26.899	120.7	0.749	0.54	7.9	69.7	3.05	38.6	0.00			413
1	482		6.16	6.12	34.296 A	26.982	113.5	0.833	0.41	5.9	77.6	3.12	40.0	0.00			486
	500	ISL	6.09	6.05	34.304	26.997	112.2	0.854	0.38	5.5	79.1	3.14	40.2	0.00			504
1	565		5.85	5.80	34.334 A	27.052	107.7	0.925	0.28	4.0	84.6	3.21	41.0	0.00			570

A) THE SALINITY SAMPLES FROM 290 TO 565 METERS APPEAR TO HAVE BEEN ANALYZED IN REVERSE ORDER. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 70

LATITUDE	LONGITUDE	DAT/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 5.1 N	120 38.6 W	14/08/88	0047 UTC	4058 M	330	17 KT	350 04 05	1	1014.1 MB	18.2 C	15.2 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.71	17.71	33.280	24.026	387.5	0.000	5.77	105.9	2.3	0.36	0.1	0.00	0.20	0.05	0
1	1	17.71	17.71	33.280	24.027	387.5	0.004	5.77	105.9	2.3	0.36	0.1	0.00	0.20	0.05	1
	10 ISL	17.72	17.72	33.280	24.025	388.0	0.039	5.76	105.7	2.2	0.34	0.1	0.00	0.19	0.05	10
1	11	17.72	17.72	33.280	24.025	388.1	0.043	5.76	105.7	2.2	0.34	0.1	0.00	0.19	0.05	11
	20 ISL	17.57	17.57	33.305	24.080	383.1	0.077	5.84	106.9	2.1	0.35	0.1	0.00	0.20	0.06	20
1	22	17.54	17.54	33.311	24.092	382.0	0.085	5.86	107.2	2.1	0.35	0.1	0.00	0.20	0.06	22
	30 ISL	16.35	16.35	33.350	24.401	352.8	0.114	6.20	110.8	2.0	0.35	0.1	0.00	0.34	0.16	30
1	32	15.98	15.97	33.350	24.485	344.8	0.121	6.28	111.4	2.0	0.35	0.1	0.00	0.37	0.18	32
1	42	14.25	14.24	33.165	24.719	322.7	0.155	6.29	107.7	2.3	0.38	0.1	0.00	0.27	0.14	42
	50 ISL	13.55	13.54	33.101	24.814	313.8	0.180	6.26	105.6	2.5	0.40	0.1	0.00	0.29	0.17	50
1	52	13.42	13.41	33.092	24.833	312.0	0.186	6.25	105.1	2.5	0.41	0.1	0.00	0.30	0.18	52
1	62	12.52	12.51	33.081	25.002	296.1	0.217	6.08	100.4	2.7	0.49	0.8	0.03	0.36	0.21	62
1	73	12.18	12.17	33.191	25.153	282.1	0.249	5.63	92.3	4.2	0.70	5.0	0.20	0.30	0.20	74
	75 ISL	12.09	12.08	33.208	25.183	279.2	0.254	5.56	91.0	4.5	0.73	5.6	0.19	0.29	0.20	76
1	87	11.51	11.50	33.318	25.376	261.1	0.287	5.12	82.8	7.1	0.93	9.5	0.13	0.20	0.16	88
	100 ISL	10.90	10.89	33.461	25.597	240.2	0.319	4.53	72.4	12.0	1.24	14.8	0.04	0.13	0.12	101
1	102	10.81	10.80	33.484	25.631	237.1	0.324	4.43	70.7	12.8	1.29	15.6	0.03	0.12	0.11	103
1	123	10.13	10.12	33.704	25.921	209.9	0.371	3.53	55.6	20.8	1.62	21.3	0.02	0.03	0.05	124
	125 ISL	10.06	10.05	33.718	25.944	207.8	0.375	3.48	54.7	21.4	1.64	21.7	0.02	0.03	0.05	126
1	148	9.31	9.29	33.848	26.169	186.6	0.421	3.04	47.0	27.4	1.85	24.9	0.01	0.01	0.05	149
	150 ISL	9.27	9.25	33.858	26.184	185.3	0.424	3.00	46.4	27.9	1.87	25.1	0.01	0.01	0.05	151
1	179	8.73	8.71	33.981	26.366	168.4	0.476	2.61	39.9	34.3	2.06	27.8	0.01	0.00	0.05	180
	200 ISL	8.22	8.20	34.028	26.481	157.7	0.510	2.52	38.1	38.8	2.14	29.1	0.01	0.00	0.04	202
1	210	8.01	7.99	34.044	26.525	153.7	0.525	2.48	37.3	40.8	2.18	29.7	0.01	0.00	0.03	212
1	239	7.77	7.75	34.089	26.596	147.3	0.569	2.11	31.6	45.9	2.36	31.5	0.01			241
	250 ISL	7.73	7.71	34.107	26.616	145.6	0.585	1.96	29.3	47.3	2.42	32.1	0.01			252
1	281	7.58	7.55	34.143	26.666	141.3	0.630	1.56	23.2	51.4	2.56	33.6	0.01			283
	300 ISL	7.27	7.24	34.140	26.708	137.5	0.656	1.41	20.9	55.5	2.64	34.9	0.01			302
1	337	6.61	6.58	34.126	26.787	130.1	0.706	1.19	17.3	63.8	2.78	37.2	0.01			340
1	397	6.13	6.10	34.146	26.866	123.1	0.782	0.88	12.7	72.1	2.94	39.2	0.01			400
	400 ISL	6.10	6.06	34.148	26.871	122.7	0.785	0.86	12.4	72.6	2.95	39.3	0.01			403
1	465	5.66	5.62	34.216	26.980	112.8	0.862	0.50	7.1	83.0	3.12	41.3	0.00			469
	500 ISL	5.60	5.56	34.261	27.024	109.1	0.901	0.40	5.7	85.9	3.18	41.7	0.00			504
1	535	5.54	5.49	34.305	27.066	105.5	0.938	0.29	4.1	88.7	3.24	42.1	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 45.0 N	121 18.9 W	13/08/88	1811 UTC	3647 M	350	15 KT	350 04 05	2	1014.4 MB	19.1 C	15.2 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.09	18.09	33.177	23.855	403.8	0.000	5.61	103.6	1.5	0.34	0.1	0.00	0.12	0.03	0
1	10	18.06	18.06	33.175	23.862	403.6	0.040	5.61	103.6	1.5	0.33	0.0	0.00	0.12	0.03	10
	20 ISL	18.06	18.06	33.175	23.862	403.9	0.081	5.62	103.8	1.5	0.33	0.0	0.00	0.14	0.03	20
1	21	18.06	18.06	33.175	23.862	403.9	0.085	5.62	103.8	1.5	0.33	0.0	0.00	0.14	0.03	21
	30 ISL	17.11	17.11	33.233	24.135	378.2	0.120	5.87	106.4	1.4	0.34	0.0	0.00	0.16	0.05	30
1	31	16.97	16.96	33.237	24.171	374.8	0.124	5.90	106.7	1.4	0.34	0.0	0.00	0.16	0.05	31
1	41	15.76	15.75	33.110	24.350	357.9	0.160	6.08	107.3	1.7	0.34	0.0	0.00	0.23	0.08	41
	50 ISL	14.63	14.62	33.052	24.552	338.9	0.192	6.23	107.4	1.9	0.35	0.0	0.00	0.29	0.11	50
1	52	14.38	14.37	33.044	24.599	334.5	0.198	6.26	107.4	1.9	0.35	0.0	0.00	0.31	0.12	52
1	62	13.29	13.28	32.999	24.788	316.6	0.231	6.32	106.0	2.1	0.38	0.0	0.00	0.45	0.28	62
1	72	12.71	12.70	32.985	24.891	307.0	0.262	6.24	103.3	2.2	0.40	0.0	0.00	0.41	0.35	73
	75 ISL	12.68	12.67	33.021	24.925	303.8	0.271	6.16	102.0	2.3	0.42	0.3	0.05	0.39	0.34	76
1	87	12.60	12.59	33.195	25.076	289.8	0.307	5.78	95.6	2.8	0.55	2.7	0.20	0.29	0.27	88
	100 ISL	11.96	11.95	33.272	25.258	272.7	0.344	5.38	87.8	4.9	0.79	6.9	0.05	0.16	0.17	101
1	102	11.84	11.83	33.280	25.286	270.0	0.349	5.32	86.6	5.3	0.83	7.6	0.02	0.14	0.15	103
1	123	10.71	10.70	33.407	25.589	241.5	0.403	4.80	76.4	10.3	1.06	12.0	0.01	0.05	0.07	124
	125 ISL	10.61	10.60	33.429	25.624	238.2	0.407	4.72	74.9	11.1	1.10	12.7	0.01	0.05	0.06	126
1	149	9.53	9.51	33.702	26.020	200.9	0.460	3.84	59.6	21.0	1.56	20.4	0.00	0.01	0.02	150
	150 ISL	9.50	9.48	33.710	26.031	199.9	0.462	3.82	59.3	21.3	1.57	20.6	0.00	0.01	0.02	151
1	180	8.82	8.80	33.885	26.277	176.9	0.519	3.38	51.7	28.2	1.80	24.4	0.01	0.00	0.02	181
	200 ISL	8.52	8.50	33.973	26.392	166.3	0.553	2.96	45.0	33.4	1.98	26.8	0.01	0.00	0.02	202
1	211	8.39	8.37	34.010	26.441	161.8	0.571	2.73	41.4	36.1	2.07	27.9	0.01	0.00	0.02	213
1	241	8.06	8.04	34.058	26.529	153.9	0.618	2.34	35.2	41.6	2.23	29.8	0.00			243
	250 ISL	7.91	7.88	34.052	26.547	152.3	0.632	2.43	36.5	42.3	2.22	29.8	0.00			252
1	283	7.31	7.28	34.013	26.602	147.2	0.682	2.82	41.7	45.1	2.17	29.8	0.00			285
	300 ISL	7.03	7.00	34.012	26.641	143.7	0.706	2.67	39.2	48.8	2.25	31.0	0.00			302
1	339	6.47	6.44	34.029	26.729	135.5	0.761	2.05	29.7	58.8	2.51	34.4	0.00			342
1	400	5.86	5.83	34.081	26.848	124.6	0.840	1.21	17.3	71.8	2.83	38.6	0.00			403
1	467	5.48	5.44	34.133	26.936	116.8	0.921	0.76	10.8	81.3	3.03	40.6	0.00			471
	500 ISL	5.29	5.25	34.170	26.989	112.1	0.959	0.60	8.5	86.7	3.11	41.4	0.00			504
1	537	5.08	5.04	34.213	27.047	106.7	0.999	0.43	6.0	92.8	3.20	42.2	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 25.5 N	121 59.3 W	13/08/88	1216 UTC	3851 M	320	15 KT			1014.7 MB	17.9 C	14.9 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.19	19.19	33.297	23.673	421.2	0.000	5.45	102.9	2.4	0.36	0.1	0.00	0.06	0.01	0
1	1		19.19	19.19	33.297	23.673	421.3	0.004	5.45	102.9	2.4	0.36	0.1	0.00	0.06	0.01	1
	10	ISL	19.20	19.20	33.296	23.670	421.9	0.042	5.45	102.9	2.3	0.36	0.0	0.00	0.06	0.01	10
1	11		19.20	19.20	33.296	23.670	421.9	0.046	5.45	102.9	2.3	0.36	0.0	0.00	0.06	0.01	11
	20	ISL	19.18	19.18	33.295	23.675	421.8	0.084	5.47	103.2	2.4	0.35	0.0	0.00	0.06	0.02	20
1	22		19.18	19.18	33.295	23.675	421.8	0.093	5.47	103.2	2.4	0.35	0.0	0.00	0.06	0.02	22
	30	ISL	18.59	18.58	33.275	23.808	409.4	0.126	5.61	104.7	2.4	0.34	0.0	0.00	0.07	0.02	30
1	32		18.43	18.42	33.275	23.848	405.6	0.134	5.64	104.9	2.4	0.34	0.0	0.00	0.07	0.02	32
1	43		18.16	18.15	33.373	23.990	392.5	0.178	5.65	104.6	2.2	0.33	0.0	0.00	0.08	0.02	43
	50	ISL	17.91	17.90	33.403	24.074	384.7	0.205	5.70	105.1	2.1	0.32	0.0	0.00	0.08	0.03	50
1	53		17.81	17.80	33.439	24.126	379.8	0.217	5.74	105.6	2.1	0.32	0.0	0.00	0.08	0.03	53
1	63		15.72	15.71	33.291	24.499	344.4	0.253	6.06	106.9	2.0	0.32	0.0	0.00	0.09	0.03	63
1	74		15.19	15.18	33.253	24.587	336.3	0.290	6.09	106.3	2.1	0.33	0.0	0.00	0.11	0.05	75
	75	-ISL	15.14	15.13	33.252	24.597	335.4	0.294	6.09	106.2	2.1	0.33	0.0	0.00	0.11	0.05	76
1	88		14.53	14.52	33.273	24.745	321.6	0.336	6.02	103.7	2.1	0.35	0.0	0.00	0.14	0.10	89
	100	ISL	14.33	14.32	33.357	24.853	311.7	0.374	5.93	101.8	2.2	0.36	0.0	0.01	0.25	0.18	101
1	104		14.29	14.27	33.392	24.888	308.5	0.387	5.89	101.0	2.2	0.36	0.0	0.01	0.28	0.20	105
1	124		13.77	13.75	33.549	25.118	287.1	0.446	5.52	93.8	3.2	0.47	2.4	0.14	0.23	0.21	125
	125	ISL	13.69	13.67	33.548	25.133	285.6	0.449	5.50	93.3	3.4	0.49	2.7	0.14	0.22	0.21	126
1	150		11.40	11.38	33.521	25.556	245.5	0.516	4.87	78.7	9.1	0.93	10.2	0.01	0.07	0.09	151
1	180		9.73	9.71	33.705	25.990	204.5	0.583	4.26	66.4	17.8	1.37	17.8	0.00	0.01	0.02	181
	200	ISL	9.28	9.26	33.821	26.154	189.2	0.623	4.20	64.9	20.5	1.46	19.5	0.00	0.00	0.02	202
1	211		9.13	9.11	33.875	26.221	183.0	0.643	4.17	64.2	21.7	1.49	19.9	0.00	0.00	0.02	213
1	240		8.53	8.50	33.975	26.393	167.0	0.694	3.98	60.5	27.8	1.64	22.4	0.00			242
	250	ISL	8.36	8.33	33.989	26.430	163.6	0.710	3.87	58.6	29.7	1.69	23.3	0.00			252
1	281		7.93	7.90	34.007	26.509	156.4	0.760	3.44	51.6	35.7	1.88	26.0	0.00			283
	300	ISL	7.71	7.68	34.020	26.551	152.6	0.789	3.09	46.1	39.7	2.02	27.8	0.00			302
1	337		7.34	7.31	34.050	26.628	145.7	0.844	2.35	34.8	47.7	2.31	31.3	0.00			340
1	398		6.76	6.72	34.127	26.769	132.9	0.929	1.30	19.0	61.2	2.73	35.9	0.00			401
	400	ISL	6.74	6.70	34.129	26.773	132.5	0.932	1.28	18.7	61.6	2.74	36.0	0.00			403
1	465		6.18	6.14	34.167	26.877	123.1	1.015	0.80	11.5	71.9	2.93	38.7	0.00			469
	500	ISL	5.92	5.88	34.192	26.930	118.4	1.057	0.65	9.3	77.3	3.03	39.8	0.00			504
1	538		5.63	5.58	34.221	26.989	112.9	1.101	0.49	7.0	83.2	3.13	41.0	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 5.8 N	122 40.3 W	13/08/88	0632 UTC	3988 M	320	16 KT			1016.1 MB	18.7 C	15.4 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.29	19.29	33.138	23.526	435.2	0.000	5.51	104.1	2.4	0.39	0.1	0.00	0.06	0.02	0
1	1		19.29	19.29	33.138	23.526	435.3	0.004	5.51	104.1	2.4	0.39	0.1	0.00	0.06	0.02	1
	10	ISL	19.27	19.27	33.132	23.527	435.5	0.044	5.44	102.7	2.4	0.35	0.0	0.00	0.06	0.01	10
1	11		19.27	19.27	33.131	23.527	435.6	0.048	5.43	102.6	2.4	0.34	0.0	0.00	0.06	0.01	11
	20	ISL	19.28	19.28	33.135	23.527	435.9	0.087	5.50	103.9	2.3	0.33	0.0	0.00	0.06	0.02	20
1	21		19.28	19.28	33.135	23.527	435.9	0.091	5.51	104.1	2.3	0.33	0.0	0.00	0.06	0.02	21
1	30		17.97	17.96	33.139	23.857	404.7	0.129	5.76	106.1	2.1	0.34	0.0	0.00	0.07	0.01	30
1	41		17.17	17.16	33.132	24.043	387.3	0.173	5.83	105.8	1.5	0.33	0.0	0.00	0.09	0.02	41
	50	ISL	16.16	16.15	33.170	24.307	362.4	0.207	6.01	106.9	1.5	0.33	0.0	0.00	0.10	0.03	50
1	51		16.04	16.03	33.173	24.336	359.6	0.210	6.03	107.0	1.5	0.33	0.0	0.00	0.10	0.03	51
1	62		15.07	15.06	33.124	24.514	342.9	0.249	6.17	107.4	1.4	0.33	0.0	0.00	0.11	0.04	62
1	72		14.43	14.42	33.089	24.624	332.7	0.283	6.20	106.5	1.5	0.35	0.0	0.00	0.14	0.06	73
	75	ISL	14.57	14.56	33.182	24.666	328.8	0.293	6.16	106.1	1.5	0.34	0.0	0.00	0.14	0.07	76
1	86		15.40	15.39	33.622	24.826	314.0	0.328	5.92	104.0	1.6	0.29	0.0	0.00	0.16	0.11	87
	100	ISL	15.79	15.77	33.950	24.992	298.8	0.371	5.64	100.1	2.0	0.26	0.1	0.03	0.22	0.23	101
1	101		15.82	15.80	33.973	25.003	297.7	0.374	5.62	99.8	2.0	0.26	0.1	0.03	0.22	0.24	102
1	121		13.43	13.41	33.627	25.247	274.6	0.431	5.43	91.6	4.0	0.52	3.7	0.08	0.16	0.18	122
	125	ISL	13.13	13.11	33.624	25.305	269.2	0.442	5.36	89.9	4.6	0.57	4.6	0.07	0.14	0.16	126
1	145		11.97	11.95	33.707	25.595	241.9	0.493	4.94	80.9	8.2	0.82	9.1	0.01	0.07	0.08	146
	150	ISL	11.66	11.64	33.716	25.660	235.8	0.505	4.83	78.6	9.4	0.89	10.3	0.01	0.06	0.07	151
1	177		10.14	10.12	33.779	25.979	205.6	0.565	4.35	68.5	16.1	1.26	16.4	0.01	0.02	0.02	178
	200	ISL	9.26	9.24	33.881	26.204	184.4	0.609	4.20	64.9	21.8	1.47	19.8	0.01	0.00	0.01	202
1	207		9.06	9.04	33.911	26.260	179.2	0.622	4.17	64.2	23.4	1.52	20.6	0.01	0.00	0.01	209
1	237		8.49	8.47	33.973	26.398	166.4	0.674	3.88	59.0	29.0	1.68	23.0	0.00			239
	250	ISL	8.25	8.22	33.987	26.445	162.1	0.695	3.69	55.8	31.8	1.77	24.3	0.00			252
1	278		7.76	7.73	34.006	26.533	154.0	0.740	3.25	48.6	38.3	1.97	27.2	0.00			280
	300	ISL	7.42	7.39	34.014	26.588	148.9	0.773	2.95	43.7	43.4	2.12	29.2	0.00			302
1	334		6.96	6.93	34.027	26.662	142.1	0.822	2.48	36.4	51.1	2.34	32.0	0.00			337
1	395		6.29	6.25	34.078	26.792	130.2	0.905	1.52	22.0	64.3	2.72	36.7	0.00			398
	400	ISL	6.25	6.21	34.082	26.800	129.5	0.912	1.46	21.1	65.2	2.74	37.0	0.00			403
1	462		5.84	5.80	34.139	26.897	120.8	0.990	0.86	12.3	75.1	2.99	39.4	0.00			466
	500	ISL	5.61	5.57	34.179	26.958	115.4	1.034	0.65	9.2	80.9	3.08	40.4	0.00			504
1	534		5.41	5.37	34.216	27.011	110.5	1.073	0.47	6.7	86.1	3.16	41.3	0.00			539

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 45.4 N	123 19.6 W	13/08/88	0114 UTC	3996 M	360	12 KT	350 04 07	2	1015.4 MB	19.0 C	17.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.093	23.492	438.5	0.000	5.46	103.1	3.1 A	0.41 A	0.0 A	0.00 A	0.07	0.02	0
1	10		19.26	19.26	33.096	23.502	437.9	0.044	5.46	103.1	2.8	0.40	0.0	0.00	0.07	0.02	10
1	20		19.17	19.17	33.095	23.525	436.1	0.088	5.50	103.7	2.5	0.40	0.0	0.00	0.07	0.02	20
	30	ISL	18.36	18.35	33.131	23.755	414.4	0.130	5.65	104.9	2.2	0.39	0.0	0.00	0.07	0.02	30
1	31		18.25	18.24	33.135	23.785	411.6	0.134	5.67	105.0	2.2	0.39	0.0	0.00	0.07 B	0.02 B	31
1	41		16.86	16.85	33.160	24.138	378.3	0.174	5.87	105.9	3.0	0.40	0.0	0.00	0.09	0.02	41
	50	ISL	15.68	15.67	33.152	24.401	353.4	0.207	6.07	106.9	2.3	0.38	0.0	0.00	0.10	0.03	50
1	51		15.56	15.55	33.150	24.426	351.0	0.210	6.09	107.0	2.2	0.38	0.0	0.00	0.10 B	0.03 B	51
1	61		14.57	14.56	33.125	24.622	332.6	0.244	6.14	105.8	2.0	0.38	0.0	0.00	0.12	0.05	61
1	72		14.21	14.20	33.218	24.769	318.8	0.280	6.06	103.7	1.9	0.39	0.0	0.00	0.17	0.12	73
	75	ISL	14.26	14.25	33.271	24.800	316.0	0.290	6.02	103.1	2.0	0.38	0.0	0.00	0.17	0.13	76
1	87		14.50	14.49	33.475	24.907	3 06.2	0.327	5.83	100.5	2.3	0.36	0.0	0.01	0.19	0.17	88
	100	ISL	14.11	14.10	33.551	25.048	293.1	0.366	5.64	96.5	2.7	0.42	0.7	0.14	0.16	0.19	101
1	101		14.06	14.05	33.553	25.060	291.9	0.369	5.63	96.2	2.7	0.43	0.8	0.15	0.16	0.19	102
1	122		13.08	13.06	33.588	25.287	270.8	0.428	5.32	89.1	4.8	0.63	4.5	0.05	0.11	0.18	123
	125	ISL	12.76	12.74	33.571	25.337	266.0	0.436	5.23	87.0	5.7	0.71	5.7	0.04	0.10	0.16	126
1	149		10.26	10.24	33.455	25.705	231.0	0.496	4.38	69.0	14.4	1.41	15.5	0.01	0.02	0.04	150
	150	ISL	10.21	10.19	33.451	25.710	230.5	0.498	4.33	68.1	14.8	1.43	15.8	0.01	0.02	0.04	151
1	179		9.49	9.47	33.455	25.833	219.1	0.563	3.35	51.9	24.6	1.90	22.6	0.01	0.00	0.03	180
	200	ISL	8.96	8.94	33.738	26.140	190.3	0.606	3.54	54.3	26.8	1.87	22.9	0.01	0.00	0.02	202
1	211		8.70	8.68	33.893	26.302	175.1	0.626	3.72	56.8	27.6	1.85	23.0	0.01	0.00	0.02	213
1	241		8.14	8.12	33.968	26.446	161.7	0.677	3.53	53.2	33.4	1.96	25.0	0.00			243
	250	ISL	8.01	7.98	33.982	26.477	158.9	0.691	3.44	51.7	35.1	2.00	25.6	0.00			252
1	281		7.61	7.58	34.013	26.560	151.4	0.739	3.10	46.2	40.9	2.17	27.6	0.00			283
	300	ISL	7.37	7.34	34.020	26.600	147.8	0.768	2.87	42.5	44.5	2.27	28.9	0.00			302
1	338		6.91	6.88	34.028	26.670	141.4	0.823	2.38	34.9	51.8	2.48	31.7	0.00			341
1	400		6.27	6.23	34.074	26.791	130.4	0.907	1.45	20.9	64.8	2.83	36.2	0.00			403
1	465		5.75	5.71	34.110	26.886	121.8	0.989	0.97	13.8	71.5	2.92	37.7	0.00			469
	500	ISL	5.59	5.55	34.160	26.945	116.5	1.031	0.75	10.7	78.5	3.07	39.3	0.00			504
1	535		5.42	5.38	34.209	27.005	111.2	1.070	0.53	7.5	85.5	3.21	40.9	0.00			540

A) NUTRIENT SAMPLES WERE NOT COLLECTED ON THIS STATION. THE ANALYST OBTAINED THESE SAMPLES FROM THE GLASS SALINITY BOTTLES 14 HOURS AFTER THE STATION; THE NUTRIENT DATA SHOULD BE USED WITH CAUTION.
B) SECOND FLUOROMETER READING NOT RECORDED. CHLOROPHYLL AND PHAEOPHYTIN CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.8 N	123 59.5 W	12/08/88	1907 UTC	4199 M	350	12 KT	330 03 05	2	1016.6 MB	19.4 C	16.6 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.31	19.31	33.128	23.513	436.5	0.000	5.46	103.2	1.9	0.32	0.0	0.00	0.06	0.01	0
	10	ISL	19.31	19.31	33.126	23.512	436.9	0.044	5.47	103.4	2.0	0.32	0.0	0.00	0.06	0.02	10
1	11		19.31	19.31	33.126	23.513	436.9	0.048	5.47	103.4	2.0	0.32	0.0	0.00	0.06	0.02	11
	20	ISL	18.87	18.87	33.115	23.616	427.4	0.087	5.55	104.0	2.0	0.32	0.0	0.00	0.06	0.02	20
	30	ISL	18.25	18.24	33.109	23.765	413.4	0.129	5.66	104.8	2.1	0.32	0.0	0.00	0.06	0.02	30
1	31		18.18	18.17	33.109	23.783	411.8	0.133	5.67	104.9	2.1	0.32	0.0	0.00	0.06	0.02	31
1	42		17.71	17.70	33.119	23.905	400.5	0.178	5.73	105.0	2.0	0.32	0.0	0.00	0.07	0.02	42
	50	ISL	16.12	16.11	33.127	24.283	364.6	0.208	6.02	107.0	2.0	0.32	0.0	0.00	0.08	0.02	50
1	51		15.92	15.91	33.131	24.331	360.1	0.212	6.06	107.3	2.0	0.32	0.0	0.00	0.08	0.02	51
1	63		15.36	15.35	33.200	24.509	3 43.4	0.254	6.10	106.8	1.8	0.31	0.0	0.00	0.09	0.03	63
1	73		14.92	14.91	33.179	24.589	336.1	0.288	6.09	105.7	1.4	0.31	0.0	0.00	0.10	0.03	74
	75	ISL	14.81	14.80	33.163	24.600	335.1	0.295	6.10	105.6	1.4	0.31	0.0	0.00	0.11	0.04	76
1	82		14.43	14.42	33.111	24.641	331.3	0.318	6.12	105.1	1.5	0.33	0.0	0.00	0.13	0.08	83
1	98		14.08	14.07	33.153	24.747	321.6	0.370	6.04	103.0	1.8	0.34	0.0	0.00	0.15	0.09	99
	100	ISL	14.06	14.05	33.163	24.759	320.6	0.377	6.03	102.8	1.8	0.34	0.0	0.00	0.16	0.10	101
1	113		13.81	13.79	33.231	24.864	310.9	0.418	5.94	100.8	2.0	0.36	0.0	0.02	0.22	0.18	114
	125	ISL	13.00	12.98	33.267	25.054	292.9	0.454	5.72	95.5	2.7	0.48	2.0	0.07	0.20	0.18	126
1	129		12.71	12.69	33.283	25.124	286.4	0.466	5.64	93.6	3.1	0.53	2.9	0.08	0.18	0.18	130
	150	ISL	11.97	11.95	33.463	25.405	260.0	0.523	5.23	85.5	5.6	0.70	6.5	0.03	0.09	0.11	151
1	154		11.87	11.85	33.504	25.456	255.2	0.533	5.15	84.0	6.3	0.73	7.3	0.01	0.07	0.09	155
1	180		10.79	10.77	33.765	25.855	217.6	0.595	4.54	72.5	12.5	1.09	13.7	0.01	0.02	0.03	181
	200	ISL	9.83	9.81	33.846	26.084	196.1	0.636	4.14	64.8	18.6	1.37	18.3	0.00	0.01	0.02	202
1	211		9.35	9.33	33.870	26.181	186.9	0.657	3.98	61.6	21.8	1.50	20.4	0.00	0.00	0.02	213
1	241		8.71	8.68	33.949	26.345	171.6	0.711	3.84	58.6	27.3	1.64	22.8	0.00			243
	250	ISL	8.56	8.53	33.965	26.381	168.3	0.726	3.78	57.5	28.9	1.68	23.5	0.00			252
1	281		8.09	8.06	34.001	26.480	159.2	0.777	3.50	52.7	34.7	1.83	25.8	0.00			283
	300	ISL	7.76	7.73	34.011	26.537	154.0	0.807	3.22	48.1	38.9	1.96	27.6	0.00			302
1	338		7.14	7.11	34.024	26.635	144.9	0.864	2.58	38.0	48.0	2.23	31.2	0.00			341
1	399		6.40	6.36	34.071	26.772	132.3	0.948	1.56	22.6	62.8	2.64	36.5	0.00			402
	400	ISL	6.39	6.35	34.072	26.774	132.1	0.950	1.55	22.4	63.0	2.64	36.6	0.00			403
1	465		5.98	5.94	34.130	26.873	123.3	1.033	0.94	13.5	72.4	2.88	39.6	0.00			469
	500	ISL	5.73	5.69	34.156	26.925	118.6	1.075	0.77	11.0	78.1	2.97	40.6	0.00			504
1	536		5.47	5.43	34.183	26.978	113.7	1.117	0.59	8.4	83.9	3.06	41.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 26.8

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 56.9 N	117 18.5 W	09/08/88	1959 UTC	62 M	310	07 KT	360 01 04	2	1012.4 MB	20.4 C	19.4 C	8/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.47	18.47	33.618	24.099	380.6	0.000	6.40	119.4	3.9		0.3	0.00	0.75	0.18	0
1	10	15.46	15.46	33.584	24.781	316.0	0.035	6.52	114.7	4.0		0.3	0.00	0.80	0.26	10
	20 ISL	13.22	13.22	33.547	25.225	273.9	0.064	5.54	93.1	7.0		6.2	0.31	1.07	0.53	20
1	21	13.05	13.05	33.545	25.257	270.9	0.067	5.41	90.6	7.4		6.9	0.35	1.09	0.56	21
	30 ISL	12.11	12.11	33.578	25.465	251.3	0.091	4.35	71.4	12.6		12.0	0.67	0.86	0.60	30
1	31	12.04	12.04	33.583	25.483	249.7	0.093	4.24	69.5	13.2		12.5	0.70	0.82	0.60	31
1	42	11.32	11.31	33.654	25.671	231.9	0.120	3.67	59.3	15.9		16.5	0.59	0.42	0.32	42
	50 ISL	11.01	11.00	33.698	25.761	223.5	0.138	3.36	53.9	17.9		18.7	0.47	0.24	0.25	50
1	52	10.93	10.92	33.709	25.784	221.4	0.142	3.28	52.5	18.4		19.2	0.44	0.20	0.23	52

RV NEW HORIZON CALCOFI CRUISE 8808 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 23.8 W	09/08/88	2222 UTC	629 M	270	10 KT	250 02 06	1	1011.4 MB	21.5 C	18.0 C	4/8	CU

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	20.47	20.47	33.675	23.629	425.4	0.000	5.74	111.2	2.6		0.3	0.00	0.50	0.13	0
1	10	17.75	17.75	33.589	24.254	366.2	0.040	6.27	115.4	2.7		0.3	0.00	0.30	0.12	10
	20 ISL	14.64	14.64	33.508	24.901	304.8	0.073	6.30	108.9	3.2		2.1	0.11	0.98	0.24	20
1	21	14.37	14.37	33.506	24.956	299.5	0.076	6.30	108.3	3.3		2.4	0.13	1.04	0.25	21
	30 ISL	13.21	13.21	33.557	25.235	273.2	0.102	5.56	93.4	5.7		7.3	0.38	0.73	0.35	30
1	31	13.13	13.13	33.562	25.255	271.4	0.105	5.46	91.6	6.1		7.9	0.41	0.68	0.37	31
1	41	12.00	11.99	33.559	25.471	251.0	0.131	4.55	74.5	10.6		12.3	0.42	0.56	0.69	41
	50 ISL	11.49	11.48	33.612	25.608	238.2	0.153	4.07	65.9	13.4		15.4	0.21	0.37	0.36	50
1	52	11.42	11.41	33.625	25.631	236.1	0.158	4.00	64.7	13.8		15.9	0.17	0.33	0.27	52
1	62	11.16	11.15	33.659	25.704	229.3	0.181	3.82	61.5	15.1		17.1	0.23	0.23	0.21	62
1	72	10.73	10.72	33.683	25.800	220.4	0.203	3.72	59.3	17.3		18.7	0.05	0.15	0.15	73
	75 ISL	10.62	10.61	33.695	25.829	217.7	0.210	3.67	58.4	17.9		19.2	0.05	0.13	0.14	76
1	87	10.24	10.23	33.758	25.943	207.0	0.235	3.47	54.8	20.4		21.0	0.03	0.06	0.13	88
	100 ISL	9.84	9.83	33.833	26.070	195.2	0.261	3.35	52.4	23.2		22.4	0.03	0.02	0.07	101
1	102	9.79	9.78	33.845	26.088	193.6	0.265	3.33	52.1	23.7		22.6	0.03	0.02	0.06	103
1	122	9.59	9.58	33.969	26.218	181.6	0.303	2.89	45.0	28.4		24.9	0.02	0.01	0.04	123
	125 ISL	9.55	9.54	33.979	26.233	180.3	0.308	2.86	44.5	28.8		25.1	0.02	0.01	0.04	126
1	148	9.31	9.29	34.031	26.313	173.1	0.349	2.69	41.7	31.5		26.3	0.01	0.02	0.05	149
	150 ISL	9.30	9.28	34.038	26.320	172.4	0.352	2.66	41.2	31.8		26.4	0.01	0.02	0.05	151
1	178	9.22	9.20	34.126	26.402	165.2	0.400	2.18	33.7	36.0		28.3	0.01	0.01	0.06	179
	200 ISL	9.14	9.12	34.162	26.443	161.7	0.436	1.97	30.4	38.0		29.1	0.01	0.01	0.06	202
1	209	9.09	9.07	34.171	26.458	160.4	0.450	1.91	29.5	38.7		29.3	0.01	0.01	0.06	211
1	239	8.84	8.81	34.195	26.518	155.4	0.497	1.79	27.5	41.2		30.0	0.01			241
	250 ISL	8.75	8.72	34.206	26.540	153.4	0.514	1.70	26.0	42.5		30.5	0.01			252
1	280	8.51	8.48	34.237	26.602	148.0	0.560	1.43	21.8	46.1		31.9	0.01			282
	300 ISL	8.36	8.33	34.251	26.636	145.0	0.589	1.29	19.6	48.2		32.5	0.02			302
1	335	8.09	8.06	34.269	26.692	140.3	0.639	1.08	16.3	51.8		33.4	0.04			338
1	394	7.56	7.52	34.281	26.779	132.6	0.719	0.82	12.2	58.2		35.5	0.01			397
	400 ISL	7.52	7.48	34.284	26.788	131.9	0.727	0.79	11.8	58.8		35.7	0.01			403
1	461	7.10	7.06	34.314	26.871	124.7	0.806	0.57	8.4	65.6		37.4	0.00			465
	500 ISL	6.76	6.71	34.318	26.921	120.2	0.853	0.49	7.2	70.5		38.3	0.03			504
1	532	6.49	6.44	34.322	26.960	116.7	0.891	0.43	6.2	74.6		39.1	0.05			537

RV NEW HORIZON CALCOFI CRUISE 8808 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 32.3 W	10/08/88	0135 UTC	860 M	270	07 KT	260 02 07	1	1010.2 MB	20.2 C	17.8 C	4/8	AC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	21.10	21.10	33.722	23.496	438.2	0.000	5.49	107.6	2.3	0.24	0.2	0.00	0.31	0.10	0
1	10	20.27	20.27	33.683	23.688	420.2	0.043	5.67	109.5	2.3	0.26	0.3	0.00	0.30	0.14	10
	20 ISL	16.43	16.43	33.520	24.513	341.8	0.081	6.36	114.0	2.4	0.31	0.2	0.00	0.30	0.09	20
1	21	16.02	16.02	33.512	24.600	333.5	0.084	6.42	114.1	2.4	0.32	0.2	0.00	0.30	0.09	21
	30 ISL	14.22	14.22	33.511	24.992	296.4	0.113	6.15	105.4	3.2	0.48	2.3	0.09	0.69	0.19	30
1	31	14.08	14.08	33.513	25.023	293.5	0.116	6.12	104.6	3.4	0.50	2.7	0.10	0.73	0.20	31
1	42	12.70	12.69	33.547	25.328	264.7	0.146	5.18	86.1	6.8	0.86	8.2	0.27	0.72	0.35	42
	50 ISL	11.80	11.79	33.608	25.547	244.0	0.167	4.28	69.8	11.1	1.18	13.6	0.39	0.60	0.30	50
1	52	11.59	11.58	33.626	25.600	239.0	0.172	4.07	66.1	12.2	1.26	14.9	0.40	0.55	0.27	52
1	62	10.69	10.68	33.706	25.825	217.8	0.194	3.54	56.4	17.0	1.51	19.5	0.04	0.19	0.17	62
1	73	10.59	10.58	33.767	25.890	211.8	0.218	3.15	50.1	19.4	1.64	21.1	0.01	0.11	0.14	74
	75 ISL	10.57	10.56	33.773	25.898	211.1	0.222	3.12	49.6	19.7	1.65	21.2	0.01	0.10	0.14	76
1	88	10.38	10.37	33.800	25.952	206.2	0.249	3.02	47.8	21.2	1.69	22.0	0.02	0.07	0.11	89
	100 ISL	10.16	10.15	33.839	26.021	199.9	0.274	2.91	45.9	22.9	1.76	23.1	0.01	0.05	0.08	101
1	103	10.11	10.10	33.850	26.038	198.4	0.280	2.89	45.5	23.3	1.78	23.4	0.01	0.04	0.08	104
1	124	9.82	9.81	33.943	26.160	187.2	0.320	2.79	43.7	26.4	1.85	24.4	0.01	0.01	0.10	125
	125 ISL	9.81	9.80	33.948	26.165	186.7	0.322	2.78	43.5	26.6	1.85	24.5	0.01	0.01	0.10	126
1	149	9.60	9.58	34.044	26.275	176.7	0.366	2.51	39.1	30.3	1.97	25.9	0.01	0.01	0.05	150
	150 ISL	9.59	9.57	34.046	26.279	176.4	0.367	2.50	39.0	30.4	1.97	26.0	0.01	0.01	0.05	151
1	180	9.31	9.29	34.092	26.361	169.2	0.419	2.27	35.2	33.4	2.08	27.4	0.01	0.01	0.07	181
	200 ISL	9.19	9.17	34.139	26.417	164.2	0.453	2.13	32.9	35.3	2.15	28.1	0.01	0.01	0.06	202
1	211	9.16	9.14	34.164	26.442	162.1	0.471	2.05	31.7	36.2	2.19	28.4	0.01	0.01	0.06	213
1	241	9.19	9.16	34.210	26.474	159.7	0.519	1.74	26.9	38.1	2.30	29.3	0.00			243
	250 ISL	9.15	9.12	34.225	26.492	158.2	0.533	1.66	25.6	38.8	2.33	29.6	0.00			252
1	282	8.87	8.84	34.261	26.565	151.7	0.583	1.44	22.1	42.1	2.43	30.7	0.00			284
	300 ISL	8.55	8.52	34.247	26.604	148.2	0.610	1.41	21.5	44.5	2.48	31.5	0.00			302
1	338	7.93	7.90	34.219	26.676	141.7	0.665	1.34	20.1	49.8	2.59	33.1	0.00			341
1	398	7.84	7.80	34.302	26.755	135.2	0.748	0.73	10.9	56.0	2.80	34.7	0.00			401
	400 ISL	7.82	7.78	34.303	26.759	134.9	0.751	0.72	10.8	56.2	2.81	34.8	0.00			403
1	466	7.12	7.08	34.304	26.860	125.8	0.837	0.53	7.8	64.9	2.95	37.2	0.00			470
	500 ISL	6.77	6.72	34.322	26.923	120.1	0.878	0.43	6.3	69.9	3.02	38.5	0.00			504
1	536	6.40	6.35	34.342	26.988	114.0	0.920	0.33	4.8	75.1	3.09	39.8	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 40.7 N	117 53.1 W	10/08/88	0532 UTC	543 M	260	07 KT			1010.7 MB	19.5 C	17.6 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.70	19.70	33.623	23.791	410.0	0.000	5.52	105.4	1.9	0.27	0.1	0.00	0.19	0.06	0
1	1		19.70	19.70	33.623	23.791	410.0	0.004	5.52	105.4	1.9	0.27	0.1	0.00	0.19	0.06	1
	10	ISL	18.86	18.86	33.514	23.923	3 97.8	0.040	5.77	108.4	1.9	0.29	0.2	0.00	0.21	0.06	10
1	11		18.77	18.77	33.502	23.936	3 96.5	0.044	5.82	109.1	1.9	0.30	0.2	0.00	0.21	0.06	11
1	20		15.42	15.42	33.464	24.697	324.2	0.077	6.43	112.9	2.4	0.36	0.4	0.03	0.70	0.24	20
	30	ISL	14.34	14.34	33.397	24.879	307.1	0.108	6.12	105.1	2.6	0.49	2.3	0.13	0.65	0.21	30
1	31		14.31	14.31	33.413	24.898	305.4	0.111	6.06	104.0	2.6	0.51	2.5	0.14	0.65	0.21	31
1	41		13.46	13.45	33.386	25.052	290.9	0.141	5.78	97.5	3.5	0.65	4.3	0.26	0.65	0.26	41
	50	ISL	13.20	13.19	33.422	25.133	283.5	0.167	5.60	94.0	4.3	0.74	5.9	0.30	0.66	0.30	50
1	52		13.17	13.16	33.432	25.146	282.2	0.173	5.56	93.2	4.5	0.76	6.3	0.31	0.66	0.30	52
1	62		12.84	12.83	33.455	25.230	274.5	0.201	5.30	88.3	5.7	0.89	8.3	0.21	0.48	0.25	62
1	72		12.56	12.55	33.489	25.311	267.1	0.228	5.05	83.6	7.2	0.99	10.3	0.17	0.29	0.21	73
	75	ISL	12.36	12.35	33.508	25.365	262.0	0.236	4.95	81.6	7.9	1.05	11.2	0.14	0.24	0.19	76
1	86		11.47	11.46	33.581	25.588	240.9	0.263	4.58	74.2	11.1	1.26	14.8	0.03	0.10	0.10	87
	100	ISL	10.43	10.42	33.627	25.809	220.1	0.296	4.18	66.2	16.1	1.40	17.8	0.02	0.05	0.07	101
1	101		10.36	10.35	33.631	25.824	218.6	0.298	4.15	65.6	16.5	1.41	18.0	0.02	0.05	0.07	102
1	120		9.40	9.39	33.818	26.131	189.7	0.337	3.35	51.9	24.9	1.72	23.3	0.01	0.01	0.04	121
	125	ISL	9.27	9.26	33.847	26.175	185.7	0.346	3.27	50.5	26.1	1.76	24.0	0.01	0.01	0.04	126
1	147		8.96	8.94	33.925	26.286	175.5	0.386	3.07	47.1	29.6	1.86	25.6	0.01	0.01	0.04	148
	150	ISL	8.92	8.90	33.934	26.299	174.3	0.391	3.02	46.3	30.1	1.88	25.9	0.01	0.01	0.04	151
1	177		8.62	8.60	33.998	26.396	165.5	0.437	2.58	39.3	35.0	2.05	28.2	0.01	0.01	0.08	178
	200	ISL	8.38	8.36	34.056	26.479	158.0	0.474	2.33	35.3	39.5	2.19	29.7	0.00	0.01	0.07	202
1	207		8.32	8.30	34.071	26.500	156.2	0.485	2.27	34.4	40.7	2.22	30.0	0.00	0.01	0.07	209
1	237		8.10	8.08	34.100	26.556	151.3	0.531	2.07	31.2	43.3	2.30	31.0	0.01			23 9
	250	ISL	7.99	7.96	34.113	26.583	148.9	0.551	1.94	29.2	45.0	2.36	31.6	0.01			252
1	277		7.80	7.77	34.147	26.638	144.1	0.590	1.63	24.4	48.9	2.49	33.0	0.01			279
	300	ISL	7.75	7.72	34.194	26.682	140.3	0.623	1.29	19.3	51.9	2.61	33.9	0.01			302
1	333		7.66	7.63	34.258	26.746	134.8	0.668	0.85	12.7	56.2	2.78	35.0	0.01			336
1	393		7.06	7.02	34.290	26.857	124.9	0.746	0.54	8.0	64.7	2.96	37.4	0.00			3 96
	400	ISL	7.00	6.96	34.293	26.867	123.9	0.755	0.52	7.6	65.7	2.98	37.6	0.00			403
1	460		6.54	6.50	34.311	26.944	117.1	0.827	0.39	5.7	73.3	3.08	39.3	0.00			464
	500	ISL	6.38	6.33	34.318	26.971	115.1	0.874	0.37	5.4	75.7	3.13	39.8	0.01			504
1	530		6.26	6.21	34.324	26.992	113.4	0.908	0.35	5.1	77.5	3.16	40.1	0.01			535

RV NEW HORIZON CALCOFI CRUISE 8808 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 13.2 W	10/08/88	0925 UTC	1626 M	300	08 KT			1010.7 MB	18.2 C	16.1 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.39	19.39	33.744	23.963	3 93.5	0.000	5.62	106.8	2.4	0.26	0.1	0.00	0.32	0.17	0
1	10		19.39	19.39	33.744	23.964	3 93.9	0.039	5.62	106.8	2.5	0.25	0.1	0.00	0.32	0.18	10
	20	ISL	16.84	16.84	33.675	24.537	339.5	0.076	6.19	112.0	2.8	0.33	1.1	0.04	0.65	0.26	20
1	21		16.54	16.54	33.671	24.604	333.2	0.079	6.24	112.2	2.9	0.34	1.3	0.05	0.69	0.27	21
	30	ISL	14.78	14.78	33.637	24.971	298.5	0.108	5.95	103.3	3.8	0.52	4.2	0.18	0.89	0.40	30
1	31		14.63	14.63	33.635	25.001	295.6	0.111	5.89	101.9	3.9	0.54	4.6	0.19	0.91	0.41	31
1	42		13.77	13.76	33.646	25.190	277.8	0.142	5.37	91.3	6.1	0.78	7.5	0.25	1.03	0.54	42
	50	ISL	11.99	11.98	33.540	25.459	252.4	0.164	4.81	78.7	10.2	1.12	12.8	0.28	0.60	0.36	50
1	52		11.55	11.54	33.522	25.527	245.9	0.169	4.67	75.7	11.3	1.21	14.2	0.29	0.47	0.30	52
1	62		10.84	10.83	33.591	25.709	228.8	0.192	4.20	67.1	15.6	1.42	18.2	0.06	0.17	0.17	62
1	73		10.71	10.70	33.620	25.754	224.7	0.217	4.11	65.5	16.9	1.49	18.9	0.04	0.13	0.15	74
	75	ISL	10.66	10.65	33.637	25.776	222.7	0.222	4.03	64.1	17.5	1.51	19.3	0.04	0.12	0.14	76
1	88		10.25	10.24	33.752	25.937	207.6	0.250	3.45	54.5	22.1	1.67	22.1	0.03	0.05	0.10	89
	100	ISL	9.75	9.74	33.796	26.056	196.5	0.274	3.20	50.0	25.2	1.74	23.7	0.03	0.03	0.08	101
1	103		9.62	9.61	33.804	26.084	193.9	0.280	3.16	49.2	25.9	1.76	24.0	0.03	0.03	0.08	104
1	124		9.05	9.04	33.919	26.266	176.9	0.319	2.82	43.4	31.0	1.92	26.5	0.02	0.01	0.08	125
	125	ISL	9.03	9.02	33.923	26.273	176.3	0.320	2.81	43.2	31.2	1.93	26.6	0.02	0.01	0.08	126
	150	ISL	8.64	8.62	33.998	26.393	165.3	0.363	2.57	39.2	35.7	2.06	28.1	0.02	0.00	0.08	151
1	151		8.63	8.61	34.000	26.396	165.0	0.365	2.56	39.0	35.9	2.06	28.1	0.02	0.00	0.08	152
1	181		8.30	8.28	34.059	26.493	156.3	0.413	2.23	33.8	40.5	2.23	30.0	0.02	0.00	0.10	182
	200	ISL	8.14	8.12	34.091	26.542	151.9	0.442	1.99	30.0	43.5	2.32	31.0	0.02	0.00	0.08	202
1	212		8.06	8.04	34.109	26.569	149.6	0.460	1.83	27.6	45.2	2.37	31.6	0.02	0.00	0.06	214
1	241		7.96	7.94	34.147	26.614	145.8	0.503	1.49	22.4	48.1	2.52	33.0	0.02			243
	250	ISL	7.81	7.79	34.147	26.636	143.8	0.516	1.46	21.9	49.7	2.55	33.4	0.02			252
1	282		7.22	7.19	34.144	26.718	136.2	0.561	1.40	20.7	55.7	2.63	34.9	0.04			284
	300	ISL	7.12	7.09	34.163	26.747	133.7	0.585	1.25	18.4	58.0	2.69	35.5	0.04			302
1	339		7.00	6.97	34.210	26.801	129.2	0.637	0.89	13.1	62.4	2.82	36.8	0.03			3 42
1	399		6.46	6.42	34.239	26.897	120.6	0.712	0.59	8.6	71.0	2.95	38.9	0.02			402
	400	ISL	6.45	6.41	34.239	26.898	120.5	0.713	0.59	8.6	71.1	2.95	38.9	0.02			403
1	465		6.08	6.04	34.274	26.974	113.9	0.789	0.42	6.0	78.1	3.07	40.4	0.01			469
	500	ISL	5.92	5.88	34.304	27.018	110.0	0.828	0.35	5.0	81.4	3.13	41.0	0.01			504
1	536		5.76	5.71	34.336	27.064	106.0	0.867	0.27	3.9	84.7	3.20	41.6	0.01			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.8 N	118 33.2 W	10/08/88	1313 UTC	1307 M	330	09 KT			1010.5 MB	18.0 C	16.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.83	18.83	33.593	23.990	391.0	0.000	5.66	106.3	1.6	0.28	0.0	0.00	0.31	0.13	0
1	1		18.83	18.83	33.593	23.990	391.0	0.004	5.66	106.3	1.6	0.28	0.0	0.00	0.31	0.13	1
	10	ISL	18.82	18.82	33.590	23.991	391.3	0.039	5.68	106.7	1.5	0.28	0.0	0.00	0.32	0.13	10
1	11		18.82	18.82	33.589	23.990	391.4	0.043	5.68	106.7	1.5	0.28	0.0	0.00	0.32	0.13	11
	20	ISL	17.39	17.39	33.648	24.386	353.9	0.077	6.11	111.7	2.2	0.35	0.6	0.02	0.52	0.30	20
1	22		16.94	16.94	33.665	24.506	3 42.6	0.084	6.19	112.2	2.5	0.36	0.7	0.03	0.57	0.33	22
	30	ISL	14.98	14.98	33.702	24.977	297.8	0.109	5.93	103.4	4.1	0.59	4.2	0.17	0.70	0.29	30
1	32		14.48	14.48	33.712	25.093	286.9	0.115	5.80	100.1	4.7	0.67	5.4	0.22	0.72	0.28	32
1	43		12.38	12.37	33.740	25.540	244.5	0.144	4.73	78.2	9.7	1.15	12.9	0.66	0.69	0.44	43
	50	ISL	11.17	11.16	33.775	25.793	220.6	0.160	3.77	60.7	16.7	1.51	19.0	0.25	0.50	0.32	50
1	53		10.73	10.72	33.792	25.884	211.9	0.167	3.40	54.3	19.8	1.65	21.3	0.05	0.39	0.25	53
1	63		9.83	9.82	33.835	26.073	194.2	0.187	2.99	46.8	25.2	1.84	24.3	0.02	0.06	0.09	63
1	74		9.45	9.44	33.880	26.171	185.0	0.208	2.83	43.9	28.2	1.92	25.7	0.01	0.04	0.10	75
	75	ISL	9.41	9.40	33.884	26.180	184.1	0.210	2.82	43.7	28.4	1.92	25.8	0.01	0.04	0.10	76
1	88		8.98	8.97	33.930	26.285	174.4	0.233	2.78	42.7	30.6	1.98	26.7	0.01	0.01	0.09	89
	100	ISL	8.74	8.73	33.962	26.348	168.6	0.254	2.72	41.6	32.4	2.04	27.4	0.02	0.01	0.07	101
1	104		8.68	8.67	33.971	26.365	167.1	0.261	2.69	41.1	33.1	2.06	27.6	0.02	0.01	0.07	105
1	125		8.40	8.39	34.029	26.453	159.0	0.295	2.39	36.3	37.9	2.19	29.2	0.02	0.00	0.09	126
	150	ISL	8.23	8.21	34.075	26.516	153.5	0.334	2.15	32.5	41.0	2.31	30.5	0.00	0.00	0.07	151
1	151		8.22	8.20	34.076	26.518	153.3	0.335	2.14	32.3	41.1	2.31	30.5	0.00	0.00	0.07	152
1	182		8.03	8.01	34.116	26.578	148.1	0.382	1.84	27.7	45.0	2.44	31.8	0.02	0.00	0.05	183
	200	ISL	7.93	7.91	34.135	26.608	145.6	0.409	1.75	26.3	46.7	2.47	32.3	0.02	0.00	0.04	202
1	213		7.86	7.84	34.145	26.626	144.1	0.427	1.71	25.6	47.8	2.49	32.6	0.02	0.00	0.03	215
1	242		7.70	7.68	34.149	26.653	141.9	0.469	1.63	24.4	50.6	2.54	33.3	0.01			244
	250	ISL	7.64	7.62	34.159	26.670	140.5	0.480	1.53	22.8	51.7	2.57	33.7	0.01			252
1	283		7.39	7.36	34.204	26.741	134.2	0.525	1.09	16.2	56.7	2.73	35.2	0.01			285
	300	ISL	7.26	7.23	34.210	26.765	132.2	0.548	1.00	14.8	58.7	2.77	35.8	0.01			3 02
1	339		7.01	6.98	34.222	26.809	128.4	0.599	0.87	12.8	62.7	2.85	36.8	0.01			342
1	399		6.76	6.72	34.301	26.906	120.0	0.673	0.45	6.6	68.9	3.01	38.4	0.01			402
	400	ISL	6.75	6.71	34.301	26.907	119.9	0.675	0.45	6.6	69.0	3.01	38.4	0.01			403
1	465		6.08	6.04	34.297	26.992	112.2	0.750	0.41	5.9	78.8	3.17	40.5	0.01			469
	500	ISL	5.86	5.82	34.315	27.035	108.5	0.789	0.35	5.0	82.9	3.18	41.2	0.01			504
1	536		5.63	5.58	34.335	27.079	104.5	0.827	0.28	4.0	87.2	3.19	41.9	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 10.9 N	118 53.8 W	10/08/88	1710 UTC	147 2 M	290	10 KT	290 02 04	2	1012.5 MB	18.2 C	16.2 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 7 8	SIGMA THETA	SVA	DYN HT	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	33.656	24.003	389.8	0.000	5.61	105.7	2.6	0.29	0.0	0.01	0.34	0.20	0
1	1		18.97	18.97	33.656	24.003	389.8	0.004	5.61	105.7	2.6	0.29	0.0	0.01	0.34	0.20	1
1	10		18.95	18.95	33.654	24.007	389.7	0.039	5.62	105.8	2.5	0.28	0.0	0.00	0.39	0.23	10
	20	ISL	17.14	17.14	33.657	24.452	3 47.6	0.076	6.07	110.4	2.9	0.36	0.8	0.05	0.77	0.69	20
1	21		16.89	16.89	33.657	24.511	342.0	0.079	6.10	110.4	3.0	0.38	0.9	0.06	0.80	0.72	21
1	30		14.65	14.65	33.603	24.972	298.3	0.108	5.75	99.5	4.3	0.62	4.9	0.22	0.72	0.39	30
1	41		12.69	12.68	33.657	25.415	256.4	0.139	4.72	78.5	9.9	1.11	11.4	0.42	0.76	0.40	41
	50	ISL	12.06	12.05	33.677	25.552	243.5	0.161	4.36	71.5	12.6	1.28	14.0	0.45	0.48	0.29	50
1	51		12.01	12.00	33.678	25.562	242.6	0.164	4.33	71.0	12.9	1.29	14.3	0.45	0.44	0.27	51
1	62		10.90	10.89	33.711	25.791	221.0	0.189	3.73	59.7	18.0	1.53	19.1	0.20	0.19	0.17	62
1	71		10.37	10.36	33.755	25.919	209.0	0.208	3.34	52.9	20.6	1.63	20.8	0.04	0.16	0.16	72
	75	ISL	10.23	10.22	33.778	25.961	205.1	0.217	3.25	51.3	21.5	1.67	21.4	0.04	0.14	0.15	76
1	87		9.95	9.94	33.842	26.058	196.1	0.241	3.10	48.6	23.7	1.75	22.7	0.02	0.07	0.10	88
	100	ISL	9.61	9.60	33.888	26.151	187.5	0.266	3.03	47.2	26.3	1.81	23.7	0.02	0.03	0.08	101
1	101		9.58	9.57	33.891	26.158	186.8	0.268	3.02	47.0	26.5	1.82	23.8	0.02	0.03	0.08	102
1	121		9.05	9.04	33.959	26.297	173.9	0.304	2.74	42.2	31.3	1.98	26.3	0.01	0.01	0.11	122
	125	ISL	8.94	8.93	33.970	26.323	171.5	0.311	2.70	41.5	32.3	2.01	26.7	0.01	0.01	0.11	126
1	147		8.42	8.40	34.020	26.444	160.3	0.347	2.49	37.8	37.4	2.13	28.5	0.01	0.00	0.08	148
	150	ISL	8.36	8.34	34.023	26.455	159.3	0.352	2.48	37.6	38.0	2.14	28.7	0.01	0.00	0.08	151
1	176		8.00	7.98	34.062	26.540	151.6	0.392	2.26	34.0	42.9	2.26	30.1	0.01	0.00	0.08	177
	200	ISL	8.13	8.11	34.163	26.600	146.4	0.428	1.65	24.9	46.3	2.46	31.4	0.03	0.00	0.06	202
1	208		8.17	8.15	34.192	26.617	145.0	0.440	1.47	22.2	47.2	2.52	31.8	0.04	0.00	0.05	210
1	237		7.78	7.76	34.164	26.653	141.9	0.481	1.52	22.8	50.3	2.54	33.3	0.05			239
	250	ISL	7.77	7.75	34.188	26.674	140.2	0.500	1.38	20.7	51.6	2.59	33.7	0.04			252
1	277		7.76	7.73	34.241	26.717	136.5	0.537	1.02	15.3	54.5	2.72	34.4	0.02			27 9
	300	ISL	7.50	7.47	34.244	26.757	133.0	0.568	0.90	13.4	58.0	2.79	35.5	0.02			302
1	334		7.04	7.01	34.237	26.817	127.6	0.612	0.79	11.6	63.5	2.87	37.1	0.02			337
1	395		6.63	6.59	34.282	26.908	119.6	0.688	0.48	7.0	71.4	3.01	38.8	0.01			398
	400	ISL	6.61	6.57	34.284	26.913	119.3	0.694	0.47	6.9	71.8	3.02	38.9	0.01			403
1	460		6.41	6.37	34.299	26.952	116.3	0.764	0.39	5.7	75.4	3.09	39.5	0.01			464
	500	ISL	6.30	6.25	34.308	26.974	114.7	0.810	0.35	5.1	77.8	3.11	39.8	0.01			504
1	531		6.21	6.16	34.314	26.990	113.5	0.846	0.32	4.6	79.6	3.13	40.0	0.01			536

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 1.0 N	119 13.7 W	10/08/88	2301 UTC	1572 M	300	10 KT	290 03 05	1	1011.1 MB	20.0 C	17.0 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.26	18.26	33.479	24.045	385.8	0.000	5.74	106.6	2.3	0.31	0.0	0.00	0.33	0.11	0
	10	ISL	18.07	18.07	33.482	24.094	381.4	0.038	5.78	106.9	2.2	0.31	0.0	0.00	0.57	0.14	10
1	11		18.05	18.05	33.482	24.099	381.0	0.042	5.78	106.9	2.2	0.31	0.0	0.00	0.59	0.14	11
	20	ISL	16.33	16.33	33.387	24.434	349.3	0.075	6.31	112.8	2.2	0.33	0.0	0.00	0.56	0.17	20
1	22		15.90	15.90	33.369	24.517	341.4	0.082	6.42	113.8	2.2	0.34	0.0	0.00	0.55	0.18	22
	30	ISL	14.96	14.96	33.357	24.716	322.7	0.109	6.35	110.4	2.3	0.38	0.5	0.03	0.87	0.26	30
1	32		14.74	14.74	33.354	24.761	318.5	0.115	6.33	109.6	2.3	0.40	0.8	0.05	0.93	0.28	32
1	42		13.18	13.17	33.294	25.037	292.3	0.145	5.86	98.2	2.9	0.62	3.6	0.23	0.52	0.21	42
	50	ISL	12.54	12.53	33.349	25.206	276.5	0.168	5.41	89.5	4.5	0.83	7.5	0.35	0.40	0.22	50
1	52		12.43	12.42	33.369	25.243	273.0	0.174	5.30	87.5	5.0	0.89	8.5	0.36	0.38	0.22	52
1	62		11.75	11.74	33.445	25.430	255.4	0.200	4.84	78.8	8.3	1.14	12.9	0.05	0.20	0.18	62
1	72		11.35	11.34	33.543	25.580	241.3	0.225	4.47	72.2	11.6	1.32	15.9	0.02	0.13	0.12	73
	75	ISL	11.17	11.16	33.567	25.631	236.5	0.232	4.32	69.5	12.9	1.37	16.8	0.02	0.11	0.10	76
1	87		10.43	10.42	33.653	25.829	217.9	0.259	3.75	59.4	18.2	1.55	19.9	0.01	0.04	0.06	88
	100	ISL	9.86	9.85	33.726	25.983	203.4	0.287	3.47	54.3	22.0	1.68	22.1	0.01	0.02	0.06	101
1	102		9.78	9.77	33.737	26.005	201.4	0.291	3.44	53.7	22.5	1.70	22.4	0.01	0.02	0.06	103
1	123		9.01	9.00	33.894	26.253	178.1	0.331	2.98	45.8	29.4	1.92	26.0	0.01	0.01	0.05	124
	125	ISL	8.96	8.95	33.901	26.266	176.9	0.334	2.99	45.9	29.6	1.92	26.0	0.01	0.01	0.05	126
1	149		8.55	8.53	33.952	26.370	167.4	0.376	3.21	48.8	31.3	1.89	25.8	0.01	0.00	0.05	150
	150	ISL	8.53	8.51	33.954	26.375	166.9	0.377	3.20	48.7	31.5	1.89	25.9	0.01	0.00	0.05	151
1	180		8.16	8.14	34.030	26.491	156.4	0.426	2.68	40.4	38.0	2.10	28.6	0.02	0.00	0.04	181
	200	ISL	8.07	8.05	34.096	26.557	150.5	0.456	2.08	31.3	42.9	2.32	30.7	0.01	0.01	0.05	202
1	210		8.03	8.01	34.125	26.586	147.9	0.471	1.80	27.1	45.2	2.43	31.7	0.01	0.01	0.05	212
1	241		7.72	7.70	34.152	26.653	142.0	0.516	1.52	22.7	50.2	2.55	33.3	0.03			243
	250	ISL	7.71	7.69	34.178	26.675	140.1	0.529	1.36	20.3	51.4	2.60	33.7	0.03			252
1	281		7.70	7.67	34.263	26.743	134.1	0.571	0.84	12.6	55.4	2.79	34.9	0.02			283
	300	ISL	7.50	7.47	34.267	26.776	131.3	0.597	0.79	11.8	58.2	2.85	35.7	0.02			302
1	338		7.01	6.98	34.250	26.831	126.3	0.646	0.68	10.0	63.9	2.93	37.2	0.01			341
1	398		6.56	6.52	34.285	26.920	118.5	0.719	0.45	6.6	72.2	3.05	38.8	0.01			401
	400	ISL	6.55	6.51	34.286	26.922	118.3	0.721	0.45	6.5	72.4	3.05	38.8	0.01			403
1	464		6.25	6.21	34.306	26.978	113.7	0.796	0.34	4.9	76.9	3.12	39.9	0.00			468
	500	ISL	6.13	6.09	34.315	27.001	112.0	0.836	0.32	4.6	79.3	3.15	40.2	0.00			504
1	536		6.01	5.96	34.325	27.024	110.1	0.876	0.29	4.2	81.6	3.18	40.5	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 51.3 N	119 34.3 W	11/08/88	0301 UTC	1919 M	3 00	10 KT	290 03 06	2	1009.8 MB	19.0 C	16.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.94	18.94	33.408	23.821	407.1	0.000	5.55	104.3	2.1	0.32	0.0	0.00	0.16	0.04	0
1	10		18.78	18.78	33.402	23.857	404.0	0.041	5.54	103.8	2.0	0.32	0.0	0.00	0.24	0.06	10
	20	ISL	17.40	17.40	33.522	24.287	363.3	0.079	6.24	114.0	1.6	0.28	0.0	0.01	0.37	0.12	20
1	21		17.22	17.22	33.530	24.336	358.7	0.083	6.31	114.9	1.6	0.28	0.0	0.01	0.39	0.13	21
	30	ISL	15.43	15.43	33.386	24.636	330.4	0.114	6.40	112.4	1.9	0.34	0.1	0.02	0.79	0.32	30
1	31		15.25	15.25	33.367	24.661	328.0	0.117	6.41	112.1	1.9	0.35	0.1	0.02	0.84	0.34	31
1	41		14.68	14.67	33.324	24.751	319.7	0.149	6.28	108.6	1.7	0.40	0.9	0.05	1.00	0.36	41
	50	ISL	13.26	13.25	33.229	24.971	298.8	0.177	5.94	99.7	2.2	0.55	2.4	0.21	0.67	0.29	50
1	52		12.95	12.94	33.216	25.023	294.0	0.183	5.85	97.5	2.4	0.59	2.9	0.24	0.58	0.27	52
1	62		12.47	12.46	33.270	25.158	281.3	0.212	5.51	91.0	3.4	0.74	5.9	0.20	0.38	0.22	62
1	72		12.31	12.30	33.305	25.216	276.0	0.240	5.37	88.4	4.3	0.80	7.0	0.15	0.28	0.17	73
	75	ISL	12.20	12.19	33.339	25.264	271.6	0.248	5.26	86.4	5.1	0.86	8.1	0.13	0.24	0.15	76
1	87		11.64	11.63	33.497	25.492	250.1	0.279	4.69	76.2	9.3	1.15	13.6	0.04	0.11	0.10	88
	100	ISL	10.91	10.90	33.623	25.722	228.5	0.310	4.05	64.8	14.8	1.41	18.0	0.01	0.04	0.07	101
1	102		10.80	10.79	33.639	25.754	225.4	0.315	3.96	63.2	15.6	1.45	18.6	0.01	0.03	0.07	103
1	123		9.80	9.79	33.769	26.027	199.8	0.359	3.31	51.7	22.7	1.71	22.9	0.01	0.01	0.05	124
	125	ISL	9.74	9.73	33.779	26.045	198.1	0.363	3.27	51.0	23.2	1.73	23.2	0.01	0.01	0.05	126
1	149		9.21	9.19	33.877	26.208	183.0	0.409	2.96	45.7	28.1	1.87	25.5	0.00	0.01	0.05	150
	150	ISL	9.19	9.17	33.880	26.214	182.4	0.411	2.96	45.7	28.2	1.87	25.5	0.00	0.01	0.05	151
1	180		8.66	8.64	33.965	26.364	168.6	0.464	2.99	45.6	31.8	1.92	26.5	0.01	0.01	0.07	181
	200	ISL	8.26	8.24	34.002	26.455	160.2	0.496	2.95	44.6	35.1	1.98	27.5	0.01	0.00	0.05	202
1	211		8.06	8.04	34.017	26.496	156.4	0.514	2.93	44.1	37.1	2.02	28.1	0.01	0.00	0.04	213
1	241		7.67	7.65	34.040	26.572	149.6	0.560	2.56	38.2	43.1	2.18	30.3	0.00			243
	250	ISL	7.53	7.51	34.043	26.594	147.6	0.573	2.46	36.6	44.9	2.22	31.0	0.00			252
1	282		7.06	7.03	34.054	26.669	140.7	0.619	2.12	31.2	51.4	2.36	33.2	0.00			284
	300	ISL	6.86	6.83	34.063	26.704	137.6	0.644	1.92	28.1	54.8	2.45	34.4	0.00			302
1	339		6.50	6.47	34.091	26.774	131.3	0.697	1.47	21.3	61.9	2.65	36.8	0.01			342
1	400		6.08	6.05	34.171	26.892	120.7	0.774	0.78	11.2	73.0	2.93	39.8	0.00			403
1	466		5.92	5.88	34.248	26.974	113.7	0.851	0.46	6.6	78.9	3.06	40.9	0.00			470
	500	ISL	5.79	5.75	34.278	27.014	110.3	0.889	0.38	5.4	82.0	3.10	41.4	0.00			504
1	537		5.64	5.59	34.310	27.058	106.4	0.929	0.29	4.1	85.4	3.15	41.9	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 32.8 N	120 15.0 W	11/08/88	0909 UTC	3936 M	340	12 KT			1010.9 MB	19.0 C	15.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.38	19.38	33.684	23.920	397.7	0.000	5.58	106.0	2.2	0.28	0.1	0.00	0.30	0.09	0
1	10	19.35	19.35	33.690	23.933	396.8	0.040	5.61	106.5	2.2	0.27	0.1	0.00	0.35	0.11	10
	20 ISL	16.81	16.81	33.730	24.586	334.9	0.076	6.51	117.7	2.7	0.32	0.2	0.01	1.10	0.49	20
1	21	16.47	16.47	33.732	24.666	327.2	0.080	6.57	118.0	2.8	0.32	0.2	0.01	1.16	0.52	21
	30 ISL	13.52	13.52	33.575	25.186	277.9	0.107	5.53	93.5	5.4	0.78	6.7	0.31	0.86	0.43	30
1	31	13.23	13.23	33.561	25.234	273.4	0.110	5.38	90.4	5.8	0.84	7.5	0.35	0.80	0.42	31
1	42	11.99	11.98	33.618	25.519	246.4	0.138	4.74	77.6	9.7	1.14	12.6	0.58	0.45	0.33	42
	50 ISL	11.38	11.37	33.662	25.667	232.6	0.157	4.25	68.7	13.3	1.35	16.7	0.28	0.30	0.23	50
1	52	11.26	11.25	33.672	25.696	229.8	0.162	4.14	66.8	14.2	1.40	17.6	0.19	0.27	0.20	52
1	63	10.75	10.74	33.723	25.827	217.6	0.187	3.75	59.8	17.4	1.57	20.0	0.03	0.12	0.13	63
1	73	10.47	10.46	33.803	25.939	207.2	0.208	3.30	52.4	21.1	1.71	22.3	0.02	0.09	0.09	74
	75 ISL	10.36	10.35	33.808	25.962	205.0	0.212	3.25	51.4	21.7	1.73	22.6	0.02	0.08	0.09	76
1	87	9.68	9.67	33.830	26.094	192.6	0.236	3.05	47.6	25.2	1.82	24.2	0.02	0.02	0.07	88
	100 ISL	9.24	9.23	33.898	26.219	180.9	0.260	2.92	45.1	28.6	1.92	25.6	0.01	0.01	0.06	101
1	103	9.16	9.15	33.915	26.245	178.5	0.265	2.90	44.7	29.3	1.94	25.9	0.01	0.01	0.06	104
1	124	8.71	8.70	33.976	26.364	167.5	0.302	2.89	44.1	32.4	1.98	26.8	0.01	0.00	0.05	125
	125 ISL	8.69	8.68	33.978	26.369	167.1	0.303	2.88	44.0	32.6	1.98	26.9	0.01	0.00	0.05	126
1	149	8.37	8.35	34.025	26.455	159.3	0.343	2.75	41.7	36.3	2.07	28.1	0.01	0.00	0.05	150
	150 ISL	8.36	8.34	34.026	26.457	159.1	0.344	2.75	41.7	36.4	2.07	28.1	0.01	0.00	0.05	151
1	180	7.97	7.95	34.042	26.529	152.7	0.391	2.70	40.6	40.0	2.14	29.1	0.02	0.00	0.04	181
	200 ISL	7.77	7.75	34.056	26.569	149.2	0.421	2.49	37.2	43.1	2.23	30.4	0.02	0.00	0.04	202
1	211	7.68	7.66	34.069	26.593	147.1	0.437	2.31	34.5	45.0	2.30	31.2	0.02	0.00	0.04	213
1	241	7.58	7.56	34.134	26.659	141.3	0.481	1.62	24.1	51.4	2.54	33.4	0.03			243
	250 ISL	7.41	7.39	34.127	26.677	139.6	0.493	1.61	23.9	53.1	2.57	34.0	0.03			252
1	283	6.78	6.75	34.103	26.746	133.3	0.538	1.56	22.8	58.5	2.63	35.8	0.02			285
	300 ISL	6.82	6.79	34.154	26.781	130.3	0.561	1.29	18.9	61.1	2.72	36.5	0.02			302
1	338	6.90	6.87	34.260	26.854	124.1	0.609	0.66	9.7	66.3	2.94	37.7	0.01			341
1	399	6.44	6.40	34.279	26.931	117.3	0.683	0.48	7.0	73.7	3.06	39.3	0.00			402
	400 ISL	6.44	6.40	34.280	26.932	117.3	0.684	0.48	7.0	73.8	3.06	39.3	0.00			403
1	466	6.15	6.11	34.318	27.000	111.5	0.759	0.36	5.2	80.7	3.15	40.4	0.00			470
	500 ISL	5.92	5.88	34.339	27.046	107.4	0.797	0.31	4.4	85.1	3.19	41.1	0.00			504
1	537	5.66	5.61	34.362	27.097	102.8	0.836	0.26	3.7	89.8	3.23	41.9	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 10.8 N	120 54.9 W	11/08/88	1504 UTC	3835 M	310	04 KT	310 02 07	1	1015.0 MB	19.1 C	15.9 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.32	18.32	33.297	23.891	400.4	0.000	5.65	104.9	1.8	0.33	0.0	0.00	0.16	0.04	0
1	1	18.32	18.32	33.297	23.891	400.5	0.004	5.65	104.9	1.8	0.33	0.0	0.00	0.16	0.04	1
	10 ISL	18.28	18.28	33.298	23.902	399.7	0.040	5.69	105.6	1.8	0.33	0.0	0.00	0.18	0.05	10
1	11	18.27	18.27	33.298	23.904	399.5	0.044	5.69	105.6	1.8	0.33	0.0	0.00	0.18	0.05	11
	20 ISL	17.93	17.93	33.296	23.986	392.0	0.080	5.79	106.7	1.7	0.33	0.0	0.00	0.22	0.07	20
1	22	17.79	17.79	33.302	24.025	388.4	0.087	5.84	107.3	1.7	0.33	0.0	0.00	0.23	0.07	22
	30 ISL	16.77	16.77	33.411	24.351	357.6	0.117	6.23	112.3	1.7	0.33	0.0	0.00	0.47	0.18	30
1	32	16.46	16.45	33.437	24.443	348.9	0.124	6.32	113.3	1.7	0.33	0.0	0.00	0.54	0.21	32
1	42	14.93	14.92	33.399	24.755	319.3	0.158	6.29	109.3	2.0	0.40	0.9	0.05	0.74	0.36	42
	50 ISL	13.76	13.75	33.318	24.939	302.0	0.183	6.06	102.8	2.3	0.54	2.5	0.16	0.61	0.41	50
1	52	13.53	13.52	33.299	24.971	298.9	0.189	5.99	101.1	2.4	0.57	2.9	0.19	0.56	0.41	52
1	63	13.16	13.15	33.287	25.036	293.0	0.221	5.82	97.5	3.0	0.64	4.0	0.26	0.41	0.37	63
1	73	12.48	12.47	33.316	25.192	278.3	0.250	5.50	90.8	4.7	0.82	7.0	0.32	0.27	0.34	74
	75 ISL	12.42	12.41	33.344	25.226	275.2	0.255	5.42	89.4	5.1	0.87	7.7	0.31	0.25	0.32	76
1	87	12.05	12.04	33.507	25.423	256.8	0.287	4.93	80.8	7.7	1.13	12.1	0.28	0.18	0.20	88
	100 ISL	11.18	11.17	33.514	25.589	241.1	0.320	4.53	72.9	11.7	1.30	15.5	0.08	0.10	0.11	101
1	103	10.94	10.93	33.511	25.630	237.3	0.327	4.45	71.2	12.8	1.33	16.2	0.03	0.08	0.10	104
1	123	9.44	9.43	33.664	26.004	201.8	0.371	3.91	60.6	20.2	1.56	20.6	0.01	0.01	0.04	124
	125 ISL	9.42	9.41	33.688	26.026	199.8	0.375	3.83	59.3	20.9	1.59	21.0	0.01	0.01	0.04	126
1	149	9.20	9.18	33.872	26.206	183.2	0.421	3.11	48.0	27.0	1.83	24.7	0.01	0.01	0.05	150
	150 ISL	9.18	9.16	33.878	26.214	182.4	0.422	3.13	48.3	27.1	1.83	24.7	0.01	0.01	0.05	151
1	180	8.47	8.45	33.983	26.408	164.4	0.474	3.86	58.6	28.4	1.67	23.2	0.01	0.00	0.02	181
	200 ISL	8.12	8.10	34.001	26.475	158.3	0.507	3.74	56.4	31.9	1.76	24.6	0.01	0.00	0.02	202
1	211	7.96	7.94	34.001	26.499	156.1	0.524	3.58	53.8	34.2	1.84	25.7	0.01	0.00	0.02	213
1	240	7.59	7.57	34.005	26.556	151.1	0.569	3.31	49.3	38.9	1.95	27.7	0.01			242
	250 ISL	7.44	7.42	34.006	26.578	149.0	0.584	3.17	47.0	41.1	2.01	28.5	0.01			252
1	282	6.96	6.93	34.011	26.649	142.6	0.630	2.65	38.9	48.6	2.23	31.3	0.00			284
	300 ISL	6.74	6.71	34.019	26.685	139.3	0.656	2.37	34.6	52.5	2.34	32.9	0.00			302
1	338	6.36	6.33	34.046	26.757	132.8	0.707	1.79	25.9	60.2	2.57	35.9	0.00			341
1	399	6.00	5.97	34.123	26.864	123.2	0.785	0.99	14.2	70.8	2.87	39.3	0.00			402.
	400 ISL	5.99	5.96	34.123	26.865	123.1	0.787	0.98	14.1	71.0	2.87	39.3	0.00			403
1	467	5.51	5.47	34.167	26.960	114.6	0.866	0.64	9.1	81.6	3.04	41.6	0.00			471
	500 ISL	5.39	5.35	34.201	27.001	111.0	0.903	0.52	7.4	85.5	3.10	42.2	0.00			504
1	537	5.25	5.21	34.240	27.049	106.8	0.944	0.38	5.4	89.8	3.16	42.8	0.00			542

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 51.9 N	121 33.2 W	11/08/88	2047 UTC	4083 M	350	08 KT	330 03 09	1	1012.8 MB	21.5 C	17.7 C	5/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.66	19.66	33.227	23.499	437.8	0.000	5.45	103.7	1.1	0.32	0.0	0.00	0.07	0.02	0
1	10	19.30	19.30	33.224	23.590	429.5	0.043	5.42	102.5	1.2	0.32	0.0	0.00	0.08	0.02	10
	20 ISL	18.74	18.74	33.223	23.731	416.4	0.086	5.59	104.6	1.5	0.32	0.0	0.00	0.07	0.02	20
1	21	18.68	18.68	33.225	23.747	414.9	0.090	5.61	104.8	1.5	0.32	0.0	0.00	0.07	0.02	21
	30 ISL	18.25	18.24	33.291	23.905	400.2	0.126	5.67	105.1	1.4	0.30	0.0	0.00	0.07	0.02	30
1	31	18.21	18.20	33.301	23.922	398.5	0.130	5.67	105.1	1.4	0.30	0.0	0.00	0.07	0.02	31
1	41	17.91	17.90	33.422	24.089	3 83.0	0.170	5.72	105.4	1.4	0.29	0.0	0.00	0.08	0.02	41
	50 ISL	16.51	16.50	33.405	24.407	352.9	0.203	5.98	107.3	1.4	0.29	0.0	0.00	0.09	0.03	50
1	51	16.34	16.33	33.401	24.443	349.4	0.206	6.01	107.4	1.4	0.29	0.0	0.00	0.09	0.03	51
1	62	15.27	15.26	33.390	24.675	327.6	0.243	6.00	105.0	1.5	0.29	0.0	0.00	0.11	0.05	62
1	72	14.19	14.18	33.213	24.770	318.7	0.276	6.02	103.0	1.4	0.33	0.0	0.00	0.15	0.11	73
	75 ISL	14.20	14.19	33.254	24.799	316.0	0.285	5.98	102.3	1.5	0.34	0.1	0.01	0.18	0.13	76
1	86	14.23	14.22	33.417	24.919	304.9	0.319	5.77	98.9	2.0	0.37	0.3	0.06	0.26	0.20	87
	100 ISL	14.51	14.50	33.728	25.101	288.2	0.361	5.48	94.6	2.5	0.40	1.8	0.19	0.22	0.20	101
1	101	14.52	14.51	33.748	25.114	286.9	0.364	5.46	94.3	2.5	0.40	1.9	0.20	0.22	0.20	102
1	123	13.54	13.52	33.739	25.312	268.6	0.425	5.20	88.0	4.2	0.55	4.7	0.04	0.14	0.2-0	124
	125 ISL	13.40	13.38	33.732	25.334	266.4	0.430	5.18	87.4	4.4	0.57	5.0	0.04	0.13	0.19	126
1	149	11.59	11.57	33.675	25.641	237.5	0.491	4.84	78.6	8.3	0.86	10.1	0.02	0.07	0.10	150
	150 ISL	11.52	11.50	33.676	25.654	236.2	0.493	4.81	78.0	8.6	0.88	10.4	0.02	0.07	0.10	151
1	178	9.86	9.84	33.767	26.016	202.0	0.554	4.14	64.8	17.5	1.35	18.1	0.01	0.01	0.03	179
	200 ISL	9.31	9.29	33.854	26.175	187.2	0.597	3.91	60.5	21.6	1.50	20.8	0.01	0.00	0.02	202
1	210	9.16	9.14	33.890	26.228	182.4	0.616	3.86	59.5	23.0	1.54	21.5	0.01	0.00	0.02	212
1	239	8.59	8.56	33.966	26.377	168.5	0.667	3.69	56.2	27.8	1.68	23.6	0.00			241
	250 ISL	8.38	8.35	33.983	26.422	164.3	0.685	3.54	53.7	30.3	1.75	24.7	0.00			252
1	281	7.82	7.79	34.018	26.533	154.0	0.734	3.03	45.3	37.9	1.95	28.1	0.01			**283**
	300 ISL	7.53	7.50	34.029	26.584	149.4	0.763	2.72	40.4	42.3	2.09	29.9	0.01			**302**
1	338	7.10	7.07	34.061	26.670	141.6	0.818	2.08	30.6	50.5	2.37	33.1	0.00			**341**
1	399	6.98	6.94	34.204	26.800	130.2	0.901	0.92	13.5	61.9	2.77	36.8	0.00			**402**
	400 ISL	6.97	6.93	34.204	26.801	130.1	0.903	0.92	13.5	62.1	2.77	36.9	0.00			**403**
1	466	6.10	6.06	34.174	26.893	121.6	0.986	0.76	10.9	72.1	2.91	39.6	0.01			**470**
	500 ISL	6.06	6.02	34.237	26.948	116.8	1.026	0.56	8.1	75.7	3.01	40.1	0.01			**504**
1	537	6.02	5.97	34.305	27.007	111.7	1.068	0.35	5.0	79.6	3.11	40.6	0.01			**542**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 31.3 N	122 15.8 W	12/08/88	0219 UTC	4164 M	320	10 KT	320 05 09	1	1012.7 MB	19.5 C	16.0 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.51	19.51	33.243	23.550	433.0	0.000	5.44	103.3	2.7	0.36	0.0	0.00	0.07	0.01	0
1	1	19.51	19.51	33.243	23.550	433.0	0.004	5.44	103.3	2.7	0.36	0.0	0.00	0.07	0.01	1
	10 ISL	19.38	19.38	33.238	23.580	430.5	0.043	5.46	103.4	2.7	0.35	0.0	0.00	0.07	0.01	10
1	17	19.28	19.28	33.235	23.604	428.5	0.073	5.47	103.4	2.7	0.34	0.0	0.00	0.07	0.02	17
	20 ISL	19.06	19.06	33.220	23.648	424.3	0.086	5.50	103.5	2.7	0.34	0.0	0.00	0.07	0.03	20
	30 ISL	18.04	18.03	33.188	23.877	402.8	0.127	5.68	104.8	2.6	0.34	0.0	0.00	0.06	0.04	30
1	32	17.78	17.77	33.186	23.939	3 97.0	0.135	5.73	105.2	2.6	0.34	0.0	0.00	0.06	0.04	32
1	42	16.31	16.30	33.255	24.338	359.2	0.173	6.04	107.8	2.4	0.32	0.0	0.00	0.09	0.03	42
	50 ISL	15.32	15.31	33.148	24.477	3 46.1	0.201	6.14	107.4	2.2	0.33	0.0	0.00	0.10	0.03	50
1	53	15.00	14.99	33.100	24.510	3 43.0	0.212	6.16	107.0	2.2	0.33	0.0	0.00	0.10	0.03	53
1	63	14.21	14.20	33.075	24.659	329.0	0.245	6.22	106.3	2.2	0.35	0.0	0.00	0.15	0.06	63
1	73	13.86	13.85	33.129	24.773	318.4	0.278	6.15	104.4	2.2	0.37	0.0	0.00	0.22	0.15	74
	75 ISL	13.72	13.71	33.127	24.800	315.9	0.284	6.14	103.9	2.2	0.38	0.0	0.00	0.24	0.18	76
1	83	13.17	13.16	33.112	24.900	3 06.5	0.309	6.08	101.7	2.2	0.41	0.0	0.00	0.32	0.27	84
1	98	12.65	12.64	33.144	25.027	294.7	0.354	5.87	97.2	2.3	0.51	1.5	0.13	0.34	0.32	99
	100 ISL	12.55	12.54	33.154	25.054	292.2	0.360	5.83	96.3	2.5	0.54	2.1	0.12	0.33	0.32	101
1	114	11.84	11.83	33.232	25.249	273.9	0.400	5.48	89.2	4.4	0.79	6.8	0.03	0.20	0.30	115
	125 ISL	11.42	11.40	33.284	25.367	262.8	0.429	5.20	83.9	6.3	0.92	9.1	0.02	0.14	0.19	126
1	129	11.28	11.26	33.305	25.409	258.9	0.440	5.09	81.9	7.2	0.96	9.9	0.01	0.12	0.14	130
	150 ISL	10.39	10.37	33.512	25.727	228.9	0.491	4.32	68.3	13.9	1.30	16.0	0.01	0.04	0.08	151
1	155	10.19	10.17	33.568	25.805	221.6	0.502	4.12	64.9	15.7	1.39	17.5	0.01	0.03	0.07	156
1	181	9.58	9.56	33.801	26.089	195.0	0.556	3.24	50.4	24.0	1.76	23.2	0.00	0.00	0.03	182
	200 ISL	9.13	9.11	33.905	26.244	180.6	0.592	2.94	45.3	28.6	1.90	25.5	0.00	0.00	0.04	202
1	211	8.89	8.87	33.946	26.314	174.1	0.611	2.85	43.7	30.9	1.96	26.4	0.00	0.00	0.04	213
1	241	8.33	8.31	34.018	26.457	160.8	0.662	2.66	40.3	36.5	2.09	28.2	0.00			**243**
	250 ISL	8.23	8.20	34.041	26.490	157.8	0.676	2.50	37.8	38.4	2.15	28.9	0.00			**252**
1	282	7.99	7.96	34.115	26.585	149.3	0.725	1.88	28.3	44.9	2.38	31.4	0.00			**284**
	300 ISL	7.87	7.84	34.140	26.622	146.0	0.752	1.66	24.9	47.6	2.47	32.3	0.00			**302**
1	339	7.62	7.59	34.176	26.687	140.4	0.807	1.32	19.7	52.9	2.62	33.9	0.00			**342**
1	399	7.09	7.05	34.215	26.793	130.9	0.889	0.87	12.8	61.6	2.85	36.2	0.00			**402**
	400 ISL	7.08	7.04	34.216	26.796	130.7	0.890	0.86	12.7	61.8	2.85	36.2	0.00			**403**
1	466	6.48	6.44	34.262	26.913	120.1	0.973	0.52	7.6	73.5	3.03	38.9	0.01			**47**0
	500 ISL	6.15	6.11	34.265	26.959	115.9	1.013	0.45	6.5	79.0	3.08	39.9	0.01			**504**
1	536	5.81	5.76	34.270	27.005	111.6	1.054	0.38	5.4	84.9	3.14	41.0	0.00			**541**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 11.0 N	122 55.6 W	12/08/88	0749 UTC	3445 M	330	12 KT			1014.1 MB	19.1 C	16.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.66	19.66	33.368	23.607	427.5	0.000	5.41	103.1	2.2	0.33	0.1	0.00	0.05	0.01	0
1	1		19.66	19.66	33.368	23.607	427.6	0.004	5.41	103.1	2.2	0.33	0.1	0.00	0.05	0.01	1
	10	ISL	19.66	19.66	33.364	23.604	428.2	0.043	5.41	103.1	2.1	0.32	0.1	0.00	0.05	0.01	10
1	H		19.66	19.66	33.364	23.604	428.2	0.047	5.41	103.1	2.1	0.32	0.1	0.00	0.05	0.01	11
	20	ISL	19.55	19.55	33.378	23.644	424.7	0.085	5.43	103.2	2.0	0.33	0.1	0.00	0.07	0.01	20
1	22		19.53	19.53	33.381	23.651	424.1	0.094	5.44	103.4	2.0	0.33	0.1	0.00	0.07	0.01	22
	30	ISL	18.90	18.89	33.439	23.856	404.8	0.127	5.56	104.5	1.9	0.31	0.1	0.00	0.06	0.01	30
1	32		18.73	18.72	33.452	23.909	399.9	0.135	5.59	104.7	1.9	0.30	0.1	0.00	0.06	0.01	32
1	43		18.21	18.20	33.407	24.004	391.2	0.179	5.66	104.9	1.7	0.31	0.1	0.00	0.06	0.01	43
	50	ISL	17.32	17.31	33.389	24.205	372.1	0.205	5.84	106.4	1.6	0.30	0.0	0.00	0.07	0.02	50
1	53		16.93	16.92	33.389	24.297	363.4	0.216	5.91	106.9	1.6	0.30	0.0	0.00	0.07	0.02	53
1	63		16.28	16.27	33.434	24.483	3 46.1	0.252	5.98	106.8	1.6	0.29	0.0	0.00	0.09	0.03	63
1	73		15.64	15.63	33.430	24.624	332.8	0.286	5.96	105.1	1.6	0.30	0.0	0.00	0.11	0.04	74
	75	ISL	15.55	15.54	33.435	24.648	330.6	0.292	5.95	104.7	1.6	0.30	0.0	0.00	0.12	0.04	76
1	88		15.08	15.07	33.482	24.788	317.6	0.335	5.87	102.4	1.6	0.32	0.0	0.00	0.18	0.11	89
	100	ISL	14.58	14.57	33.527	24.931	304.3	0.372	5.69	98.3	2.0	0.37	0.4	0.07	0.32	0.25	101
1	103		14.47	14.45	33.542	24.966	301.1	0.381	5.64	97.2	2.2	0.39	0.6	0.09	0.35	0.28	104
1	124		14.05	14.03	33.732	25.201	279.2	0.442	5.36	91.7	3.3	0.47	3.1	0.11	0.21	0.22	125
	125	ISL	13.98	13.96	33.730	25.214	278.0	0.445	5.34	91.2	3.4	0.48	3.3	0.11	0.20	0.21	126
1	150		11.98	11.96	33.647	25.546	246.6	0.510	4.80	78.6	7.9	0.86	9.7	0.01	0.07	0.08	151
1	180		10.29	10.27	33.715	25.903	212.9	0.579	4.25	67.1	15.1	1.27	16.5	0.00	0.02	0.04	181
	200	ISL	9.59	9.57	33.813	26.097	194.6	0.620	4.06	63.2	19.4	1.43	19.2	0.00	0.01	0.03	202
1	211		9.29	9.27	33.869	26.190	186.0	0.641	3.99	61.7	21.7	1.49	20.4	0.00	0.00	0.02	213
1	241		8.50	8.47	33.974	26.397	166.6	0.694	3.76	57.1	28.8	1.68	23.5	0.00			243
	250	ISL	8.31	8.28	33.990	26.438	162.7	0.709	3.58	54.2	31.3	1.76	24.7	0.00			**252**
1	282		7.76	7.73	34.023	26.546	152.8	0.759	2.88	43.0	39.9	2.04	28.7	0.00			**284**
	300	ISL	7.55	7.52	34.038	26.588	149.0	0.786	2.59	38.5	43.5	2.15	30.2	0.00			**302**
1	339		7.18	7.15	34.065	26.662	142.4	0.843	2.05	30.2	50.7	2.37	33.0	0.00			**342**
1	400		6.44	6.40	34.111	26.798	129.8	0.926	1.21	17.5	64.6	2.73	37.6	0.00			**403**
1	468		5.82	5.78	34.169	26.924	118.4	1.010	0.69	9.9	77.2	2.97	40.7	0.00			**472**
	500	ISL	5.67	5.63	34.195	26.963	114.9	1.048	0.57	8.1	80.9	3.02	41.3	0.00			**504**
1	540		5.49	5.44	34.227	27.010	110.7	1.093	0.43	6.1	85.5	3.09	42.0	0.00			**545**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
29 52.0 N	123 35.0 W	12/08/88	1327 UTC	4027 M	350	10 KT		2	1014.0 MB	18.8 C	16.2 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.74	19.74	33.252	23.498	438.0	0.000	5.44	103.7	2.3	0.32	0.1	0.00	0.06	0.01	0
	10	ISL	19.52	19.52	33.254	23.556	432.7	0.044	5.39	102.4	2.2	0.32	0.1	0.00	0.07	0.01	10
1	16		19.39	19.39	33.255	23.591	429.7	0.069	5.36	101.5	2.2	0.32	0.1	0.00	0.07	0.01	16
	20	ISL	19.23	19.23	33.289	23.658	423.4	0.086	5.42	102.4	2.2	0.31	0.1	0.00	0.07	0.01	20
	30	ISL	18.78	18.77	33.351	23.819	408.4	0.128	5.58	104.5	2.1	0.30	0.1	0.00	0.06	0.02	30
1	31		18.73	18.72	33.356	23.83 5	406.8	0.132	5.60	104.8	2.1	0.30	0.1	0.00	0.06	0.02	31
1	41		18.26	18.25	33.291	23.903	400.8	0.173	5.65	104.8	1.9	0.31	0.1	0.00	0.06	0.01	41
	50	ISL	17.18	17.17	33.340	24.201	372.6	0.207	5.87	106.6	1.9	0.29	0.0	0.00	0.07	0.02	50
1	52		16.91	16.90	33.357	24.278	365.3	0.215	5.92	107.0	1.9	0.29	0.0	0.00	0.07	0.02	52
1	62		15.83	15.82	33.381	24.544	340.1	0.250	6.02	106.5	1.8	0.29	0.0	0.00	0.08	0.02	62
1	72		15.52	15.51	33.404	24.631	332.2	0.284	6.00	105.5	1.7	0.29	0.0	0.00	0.09	0.03	73
	75	ISL	15.52	15.51	33.436	24.656	329.9	0.294	5.98	105.2	1.6	0.29	0.0	0.00	0.10	0.03	76
1	82		15.52	15.51	33.509	24.712	324.7	0.316	5.94	104.5	1.5	0.29	0.0	0.00	0.12	0.04	83
1	97		15.27	15.26	33.603	24.840	313.0	0.364	5.82	102.0	1.7	0.29	0.0	0.00	0.19	0.14	98
	100	ISL	15.22	15.20	33.627	24.870	310.3	0.374	5.78	101.2	1.7	0.30	0.1	0.02	0.21	0.16	101
1	113		14.92	14.90	33.724	25.010	297.2	0.413	5.58	97.1	2.1	0.35	1.0	0.12	0.24	0.21	114
	125	ISL	14.37	14.35	33.790	25.179	281.4	0.448	5.38	92.7	2.8	0.43	2.6	0.10	0.19	0.17	126
1	128		14.20	14.18	33.799	25.222	277.4	0.456	5.33	91.5	3.0	0.45	3.1	0.09	0.17	0.15	129
	150	ISL	12.59	12.57	33.698	25.469	254.1	0.515	4.99	82.8	5.9	0.70	7.3	0.02	0.09	0.11	151
1	154		12.29	12.27	33.677	25.511	250.2	0.525	4.93	81.3	6.6	0.75	8.1	0.01	0.08	0.11	155
1	180		11.03	11.01	33.752	25.803	222.7	0.586	4.57	73.4	11.3	1.03	12.9	0.01	0.03	0.04	181
	200	ISL	10.00	9.98	33.820	26.035	200.8	0.629	4.25	66.7	16.9	1.29	17.4	0.00	0.01	0.03	202
1	210		9.54	9.52	33.857	26.140	190.8	0.648	4.11	63.9	19.8	1.41	19.4	0.00	0.00	0.02	212
1	240		8.72	8.69	33.959	26.351	171.0	0.702	3.85	58.8	26.8	1.63	22.7	0.00			242
	250	ISL	8.54	8.51	33.975	26.392	167.3	0.719	3.79	57.6	28.4	1.67	23.4	0.00			**252**
1	282		8.09	8.06	34.000	26.480	159.3	0.772	3.53	53.2	33.4	1.79	25.4	0.00			**284**
	300	ISL	7.83	7.80	34.011	26.527	155.0	0.800	3.25	48.6	37.3	1.91	27.1	0.00			**302**
1	339		7.28	7.25	34.029	26.620	146.5	0.859	2.56	37.8	46.4	2.19	30.9	0.00			**3*2**
1	400		6.53	6.49	34.062	26.748	134.7	0.944	1.73	25.1	59.3	2.55	35.7	0.00			**403**
1	467		5.99	5.95	34.124	26.867	123.9	1.031	0.98	14.1	71.3	2.84	39.4	0.00			**471**
	500	ISL	5.75	5.71	34.155	26.922	118.9	1.071	0.78	11.1	76.8	2,94	40.5	0.00			**504**
1	541		5.46	5.41	34.194	26.988	112.8	1.119	0.54	7.7	83.6	3.06	41.8	0.00			**546**

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 1.6 N	120 55.3 W	23/ 8/88	1916 UTC	10 M	1207 - 1906 PST	1207 PST	1906 PST	925.6 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.07	33.644	24.690	6.13	109.2	4.0	0.39	2.5	0.09	1.09	0.21	99.	15.1	13.3	14.2	0.64
7	15.67	33.642	24.778	6.20	109.6	3.9	0.39	2.5	0.09	1.00	0.22	37.	33.6	31.6	32.6	0.76
12	14.30	33.646	25.079	6.08	104.5	2.8	0.38	4.0	0.13	3.11	0.63	19.	57.5	47.7	52.6	0.50
22	13.33	33.654	25.286	6.25	105.3	2.0	0.47	5.6	0.13	10.68	1.31	4.5	20.2	33.8	27.0	0.45
32	12.17	33.639	25.501	4.38	72.0	12.1	1.24	13.2	0.47	0.70	0.55	1.0	2.7	2.1	2.4	0.29
43	11.41	33.662	25.661	3.87	62.6	16.2	1.46	17.1	0.47	0.24	0.85	0.20	0.03	-0.12	-0.04	0.64

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 43.6 N	123 36.5 W	22/ 8/88	1955 UTC	22 M	1216 - 1915 PST	1217 PST	1916 PST	276.5 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.30	32.992	24.136	5.88	104.8	2.6	0.36	0.0	0.00	0.19	0.06	99.	1.3	1.6	1.5	0.19
16	16.09	32.998	24.189	5.91	104.9	2.2	0.36	0.0	0.00	0.19	0.07	37.	4.8	5.0	4.9	0.19
26	15.88	33.076	24.297	5.97	105.6	2.0	0.37	0.0	0.00	0.40	0.15	19.	8.4	8.0	8.2	0.26
47	12.27	32.983	24.974	6.21	101.9	3.4	0.52	1.2	0.23	0.46	0.34	4.5	2.9	2.5	2.7	0.11
70	11.31	33.137	25.271	5.56	89.5	5.8	0.76	6.1	0.02	0.16	0.17	1.0	0.69	0.69	0.69	0.10
92	10.42	33.354	25.598	4.77	75.4	13.8	1.30	15.3	0.01	0.04	0.05	0.20	0.05	0.04	0.04	0.07

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 29.3 N	122 31.8 W	21/ 8/88	1955 UTC	19 M	1218 - 1918 PST	1213 PST	1919 PST	264.6 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.63	33.138	24.173	5.89	105.7	2.5	0.36	0.1	0.00	0.31	0.10	99.	2.9	3.3	3.1	0.16
13	16.47	33.173	24.237	5.91	105.8	2.3	0.34	0.1	0.00	0.35	0.10	37.	7.6	7.3	7.5	0.17
22	16.41	33.229	24.294	5.91	105.7	2.1	0.33	0.1	0.00	0.35	0.11	19.	5.6	5.2	5.4	0.15
40	13.37	32.984	24.760	6.38	107.1	2.8	0.40	0.1	0.01	0.59	0.35	4.5	3.1	2.6	2.8	0.16
59	11.54	32.915	25.057	6.08	98.2	4.6	0.62	2.8	0.16	0.56	0.54	1.0	2.0	2.0	2.0	0.13
78	11.14	33.337	25.458	5.03	80.7	10.9	1.20	13.5	0.02	0.15	0.18	0.20	0.21	0.10	0.15	0.07

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 40.9

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 13.0 N	119 26.0 W	20/ 8/88	1830 UTC	7 M	1158 - 1909 PST	1201 PST	1910 PST	1224.6 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.95	33.696	24.526	7.01	127.1	0.1	0.12	0.1	0.01	1.83	0.47	99.	41.8	39.1	40.4	0.71
5	16.78	33.692	24.563	7.03	127.0	0.0	0.13	0.1	0.01	2.20	0.59	37.	68.9	72.0	70.5	0.70
8	16.61	33.686	24.598	7.05	126.9	1.3	0.14	0.0	0.01	2.69	0.61	19.	68.8	73.8	71.3	0.72
14	14.47	33.650	25.046	5.63	97.1	4.7	0.46	0.9	0.05	6.87	1.30	4.5	64.7	54.8	59.7	0.55
22	13.93	33.642	25.154	5.12	87.3	6.6	0.63	2.4	0.10	4.16	0.91	1.0	13.3	13.6	13.5	0.41
29	12.56	33.606	25.401	4.50	74.6	10.9	1.10	10.1	0.36	1.00	0.53	0.20	0.64	0.31	0.47	0.13

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 15.0 N	121 26.4 W	19/ 8/88	1927 UTC	26 M	1208 - 1909 PST	1210 PST	1910 PST	153.6 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	17.64	33.191	23.975	5.68	104.0	1.7	0.33	0.0	0.00	0.10	0.03	99.	2.1	2.1	2.1	0.19
19	17.59	33.191	23.988	5.63	103.0	1.7	0.34	0.0	0.00	0.10	0.02	37.	2.7	2.7	2.7	0.15
30	17.58	33.195	23.994	5.63	103.0	1.6	0.33	0.0	0.00	0.10	0.03	19.	1.9	1.8	1.8	0.14
56	13.54	33.176	24.874	6.12	103.3	1.9	0.49	1.3	0.18	0.44	0.23	4.5	1.8	1.9	1.9	0.11
81	11.85	33.392	25.371	5.01	81.7	7.4	1.02	10.8	0.03	0.11	0.13	1.0	0.41	0.42	0.42	0.09
109	10.79	33.591	25.718	4.08	65.1	16.6	1.47	18.3	0.02	0.02	0.06	0.20	0.07	0.00	0.04	0.06

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 13.6 N	123 31.1 W	18/ 8/88	2024 UTC	21 M	1240 - 1920 PST	1218 PST	1920 PST	116.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	17.96	33.102	23.830	5.61	103.3	2.7	0.34	0.1	0.00	0.08	0.02	99.	0.65	0.63	0.64	0.19
18	17.94	33.100	23.834	5.61	103.3	2.6	0.34	0.1	0.00	0.08	0.02	37.	1.7	1.8	1.8	0.17
26	17.87	33.097	23.849	5.63	103.5	2.4	0.34	0.1	0.00	0.08	0.02	19.	1.7	1.7	1.7	0.17
46	14.47	32.972	24.524	6.25	107.3	2.7	0.35	0.1	0.00	0.14	0.05	4.5	1.2	1.2	1.2	0.03
68	12.42	33.075	25.017	5.95	98.0	3.6	0.51	1.7	0.16	0.53	0.36	1.0	1.6	1.7	1.7	0.14
89	12.90	33.401	25.177	5.60	93.3	5.6	0.88	8.6	0.02	0.20	0.11	0.20	0.23	0.27	0.25	0.08

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 53.5 N	118 29.4 W	15/ 8/88	1956 UTC	11 M	1212 - 1909 PST	1158 PST	1909 PST	926.2 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	33.640	24.227	6.69	123.8	3.8	0.26	0.1	0.00	1.04	0.26	99.	31.3	29.6	30.4	0.46
7	17.22	33.635	24.416	6.80	123.9	3.7	0.26	0.1	0.00	1.22	0.33	37.	39.5	37.8	38.7	0.57
12	17.11	33.638	24.444	6.82	124.0	3.6	0.25	0.1	0.00	1.43	0.29	19.	40.0	44.5	42.3	0.52
23	13.58	33.552	25.156	5.37	90.9	8.6	0.71	2.1	0.13	2.75	0.57	4.5	20.4	20.2	20.3	0.71
34	12.02	33.523	25.440	3.60	59.0	16.7	1.78	12.7	0.72	0.40	0.41	1.0	2.1	2.0	2.1	0.74
47	11.69	33.620	25.577	3.42	55.7	17.1	1.68	15.4	0.81	0.13	0.21	0.20	0.12	0.07	0.10	0.26

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 10.0 N	120 2.3 W	16/ 8/88	1945 UTC	8 M	1206 - 1925 PST	1204 PST	1914 PST	1820.5 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.50	33.686	24.623	5.94	106.7	1.7	0.31	0.0	0.01	3.63	1.46	99.	;03.9	108.7	106.3	0.39
6	16.50	33.686	24.624	5.96	107.1	1.5	0.30	0.0	0.01	3.58	1.56	37.	118.7	128.8	123.7	0.45
10	16.49	33.685	24.625	5.95	106.9	1.3	0.29	0.0	0.01	3.73	1.49	19.	98.9	91.0	94.9	0.74
18	16.49	33.685	24.626	5.94	106.7	1.3	0.29	0.0	0.01	3.51	1.86	4.5	30.4	29.8	30.1	0.47
26	16.46	33.685	24.633	5.91	106.1	1.2	0.30	0.1	0.01	3.51	1.68	1.0	9.6	10.3	10.0	0.36
34	15.00	33.652	24.935	5.90	102.9	4.2	0.61	4.2	0.13	1.32	0.77	0.20	0.42	0.40	0.41	0.15

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 60.0 N	122 23.7 W	17/ 8/88	193 8 UTC	22 M	1214 - 1918 PST	1214 PST	1919 PST	157.9 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.52	33.122	23.708	5.53	103.0	2.6	0.33	0.0	0.00	0.09	0.02	99.	1.8	1.6	1.7	0.15
15	18.53	33.120	23.704	5.55	103.4	2.5	0.33	0.0	0.00	0.09	0.02	37.	3.0	3.1	3.1	0.13
26	17.78	33.105	23.877	5.58	102.4	2.9	0.32	0.0	0.00	0.11	0.02	19.	2.3	2.3	2.3	0.12
46	15.39	33.141	24.456	6.10	106.8	2.4	0.35	0.0	0.00	0.28	0.14	4.5	1.6	1.4	1.5	0.09
68	13.48	33.002	24.752	6.25	105.2	3.1	0.36	0.0	0.00	0.30	0.19	1.0	1.6	1.6	1.6	0.09
91	13.03	33.216	25.008	5.75	96.0	4.2	0.65	4.1	0.30	0.21	0.23	0.20	0.21	0.21	0.21	0.08

RV NEW HORIZON CALCOFI CRUISE 8808 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 55.1 N	118 56.3 W	14/ 8/88	1927 UTC	15 M	1200 - 1907 PST	1201 PST	1907 PST	321.4 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	19.38	33.728	23.954	5.58	106.0	2.3	0.29	0.1	0.00	0.25	0.15	99.	6.6	6.4	6.5	0.21
10	19.29	33.724	23.974	5.59	106.0	2.2	0.29	0.1	0.00	0.24	0.15	37.	13.7	13.4	13.6	0.23
17	16.05	33.614	24.672	6.11	108.8	3.3	0.41	1.9	0.07	0.49	0.30	19.	10.2	10.4	10.3	0.24
31	12.55	33.575	25.379	5.10	84.5	7.8	1.04	10.9	0.39	0.63	0.38	4.5	2.0	2.0	2.0	0.16
47	11.54	33.570	25.566	4.62	74.9	11.1	1.21	14.1	0.15	0.48	0.25	1.0	2.0	2.1	2.1	0.10
63	10.91	33.727	25.802	3.43	54.9	18.0	1.58	20.1	0.04	0.22	0.17	0.20	0.21	0.18	0.20	0.06

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON — CALCOFI CRUISE 8808 — STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 44.8 N	121 19.7 W	13/ 8/88	1943 UTC	21 M	1206 - 1913 PST	1210 PST	1913 PST	183.2 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C	PSS 78	THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	PCT	1	2	MEAN	DARK
0	18.12	33.169	23.842	5.66	104.6	2.3	0.36	0.1	0.00	0.14	0.03	99.	2.6	2.6	2.6	0.14
14	18.07	33.167	23.853	5.63	104.0	2.0	0.36	0.1	0.00	0.14	0.04	37.	4.2	4.4	4.3	0.14
24	18.01	33.168	23.869	5.65	104.2	1.6	0.36	0.1	0.00	0.15	0.04	19.	3.6	3.5	3.6	0.15
43	14.87	33.060	24.507	6.22	107.8	1.6	0.36	0.1	0.00	0.27	0.10	4.5	1.1	0.97	1.0	0.12
65	12.92	33.002	24.863	6.29	104.6	2.4	0.41	0.1	0.01	0.42	0.26	1.0	1.7	1.8	1.8	0.09
86	12.50	33.240	25.130	5.59	92.3	4.4	0.70	5.4	0.06	0.22	0.22	0.20	0.20	0.18	0.19	0.04

RV NEW HORIZON — CALCOFI CRUISE 8808 — STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 25.8 N	123 59.8 W	12/ 8/88	1948 UTC	32 M	1219 - 1925 PST	1221 PST	1925 PST	90.8 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C	PSS 78	THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	PCT	1	2	MEAN	DARK
0	19.33	33.124	23.505	5.45	103.0	2.4	0.32	0.0	0.00	0.06	0.02	99.	1.5	1.4	1.4	0.16
22	19.31	33.123	23.511	5.46	103.2	2.4	0.33	0.0	0.00	0.07	0.01	37.	1.6	1.7	1.7	0.12
36	18.05	33.121	23.824	5.68	104.8	2.4	0.32	0.1	0.00	0.07	0.01	19.	1.1	0.97	1.1	0.12
68	15.13	33.173	24.538	6.11	106.5	2.3	0.31	0.0	0.00	0.10	0.03	4.5	0.16	0.15	0.15	0.06
98	14.05	33.178	24.773	6.03	102.8	2.3	0.34	0.0	0.00	0.16	0.10	1.0	0.41	0.43	0.42	0.04
133	12.02	33.290	25.261	5.40	88.3	5.2	0.68	5.9	0.02	0.12	0.14	0.20	0.07	0.08	0.07	0.03

RV NEW HORIZON — CALCOFI CRUISE 8808 — STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.3 N	117 18.5 W	9/ 8/88	1930 UTC	12 M	1200 - 1908 PST	1154 PST	1909 PST	530.4 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C	PSS 78	THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	PCT	1	2	MEAN	DARK
0	18.07	33.617	24.197	6.38	118.1	3.8		0.4	0.01	0.80	0.18	99.	19.6	19.2	19.4	0.26
8	15.97	33.592	24.673	6.55	116.4	4.0		0.4	0.01	0.78	0.26	37.	24.7	23.3	24.0	0.29
13	14.41	33.564	24.993	6.51	112.1	4.2		0.7	0.04	1.75	0.40	19.	24.9	26.4	25.7	0.27
25	12.77	33.552	25.318	4.99	83.0	9.8		8.8	0.48	1.32	0.58	4.5	3.8	3.5	3.7	0.06
37	11.48	33.627	25.621	3.89	63.0	14.8		15.7	0.60	0.55	0.39	1.0	2.8	2.6	2.7	0.05
50	11.10	33.710	25.755	3.23	51.9	19.6		19.7	0.39	0.17	0.31	0.20	0.07	-0.01	0.03	0.05

RV NEW HORIZON — CALCOFI CRUISE 8808 — STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 11.0 N	118 55.4 W	10/ 8/88	1925 UTC	14 M	1204 - 1912 PST	1201 PST	1912 PST	317.0 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C	PSS 78	THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	PCT	1	2	MEAN	DARK
0	19.21	33.736	24.003	5.57	105.5	2.1	0.27	0.2	0.00	0.30	0.24	99.	9.1	9.0	9.1	0.13
10	19.18	33.743	24.016	5.56	105.2	1.9	0.27	0.1	0.00	0.30	0.25	37.	11.8	11.2	11.5	0.14
17	19.04	33.724	24.038	5.63	106.2	1.4	0.27	0.1	0.00	0.41	0.26	19.	10.2	9.5	9.9	0.11
31	13.83	33.548	25.102	5.59	95.1	4.3	0.71	6.4	0.27	0.89	0.27	4.5	2.6	2.6	2.6	0.06
48	11.80	33.440	25.417	4.97	81.0	8.5	1.07	11.6	0.30	0.47	0.26	1.0	1.7	1.8	1.8	0.14
63	10.72	33.706	25.819	3.62	57.7	19.4	1.59	20.6	0.08	0.13	0.11	0.20	0.08	0.10	0.09	0.03

RV NEW HORIZON — CALCOFI CRUISE 8808 — STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 52.1 N	121 33.3 W	11/ 8/88	2008 UTC	34 M	1226 - 1919 PST	1211 PST	1920 PST	128.4 MG C/M2

DEPTH	TEMP	SALINITY	SIGMA	DISS O2	OXY	SIO3	PO4	NO3	NO2	CHL	PHAEO	LIGHT	UPTAKE (MG C/M3)			
M	DEG C	PSS 78	THETA	ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	PCT	1	2	MEAN	DARK
0	19.61	33.237	23.520	5.46	103.8	1.8	0.32	0.0	0.00	0.07	0.02	99.	1.9	1.8	1.9	0.17
23	18.49	33.244	23.809	5.63	104.8	1.9	0.31	0.0	0.00	0.07	0.02	37.	1.7	1.8	1.8	0.13
38	18.10	33.383	24.012	5.66	104.7	1.9	0.31	0.0	0.00	0.08	0.02	19.	1.4	1.4	1.4	0.13
72	14.19	33.210	24.767	6.03	103.1	2.2	0.34	0.0	0.00	0.16	0.10	4.5	0.42	0.31	0.37	0.11
105	14.56	33.769	25.122	5.44	94.0	3.1	0.41	2.0	0.21	0.21	0.27	1.0	0.66	0.69	0.68	0.05
143	12.13	33.680	25.543	4.90	80.5	7.9	0.80	9.0	0.02	0.09	0.13	0.20	0.08	0.08	0.08	0.02

Secchi Disk Observations

CalCOFI Cruise 8808

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Forel Water Color	Weather	Clouds Type/Amt	
77	49	23	08	1345	7	6	1	AC	1/8
77	51	23	08	1100	10	5	0	–	0
77	55	23	08	0815	10	5	1	AC	1/8
77	80	22	08	1630	12	4	1	AS	1/8
77	90	22	08	1145	22	2	2	SC	8/8
80	70	21	8	0705	16	2	2	ST	8/8
80	80	21	8	1345	19	2	2	ST	8/8
82	47	20	8	1330	14	4	1	CU	1/8
83	40.9	20	8	1004	7	6	2	SC	8/8
83	42	20	8	0740	8	4	2	SC	8/8
83	70	19	8	1115	26	2	2	ST	8/8
83	100	18	8	1215	21	2	0	–	0
83	110	18	8	0631	17	1	1	ST	1/8
87	33	15	8	1143	11	4	0	–	0
87	34	15	8	1315	15	4	4	–	–
87	35	15	8	1420	16	3	4	–	–
87	55	16	8	1136	8	5	2	ST	8/8
87	60	16	8	1443	9	4	2	SC	8/8
87	90	17	8	1100	22	1	1	SC	7/8
87	100	17	8	1702	23	1	1	CU	5/8
90	37	14	8	1618	15	3	0	–	0
90	45	14	8	1116	15	3	1	CU	2/8
90	70	13	8	1617	16	2	1	SC	7/8
90	80	13	8	1130	21	2	1	SC	8/8
90	110	12	8	1647	29	2	2	SC	8/8
90	120	12	8	1126	32	2	2	ST	8/8
93	26.5	9	8	1026	7	4	2	ST	8/8
93	26.7	9	8	1115	12	5	2	ST	8/8
93	28	9	8	1457	16	2	1	CU	4/8
93	30	9	8	1642	15	4	1	AC	4/8
93	50	10	8	1111	15	3	2	ST	8/8
93	55	10	8	1525	14	3	2	SC	7/8
93	80	11	8	0735	18	2	1	SC	7/8
93	90	11	8	1151	34	2	1	ST	5/8
93	100	11	8	1747	28	2	1	SC	7/8
93	120	12	8	0620	27	1	2	ST	8/8

MACROZOOPLANKTON BIOMASS

Net Mesh Size: 0.505 mm

Line	Stt.	Position		Date Mo/Day	Time(UTC) Sun	Time(UTC) 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 05.4N	120 47.4W	8/23	2225	2233	154	72	136	136
77	51	35 01.8N	120 56.1W	8/23	2016	2038	405	211	375	207
77	55	34 53.8N	121 12.6W	8/23	1639	1701	398	215	183	183
77	60	34 43.5N	121 34.1W	8/23	1240	1302	401	213	381	381
77	70	34 22.4N	12214.1W	8/23	0705	0727	429	214	121	121
77	80	34 02.8N	12255.5W	8/23	0145	0207	422	214	213	213
77	90	33 43.4N	123 36.6W	8/22	2030	2052	437	210	76	57
77	100	33 22.4N	124 19.0W	8/22	1421	1443	431	211	250	250
80	51	34 27.2N	120 32.6W	8/21	0242	0250	144	68	173	173
80	55	3419.2N	120 47.2W	8/21	0540	0602	404	213	208	208
80	60	34 09.0N	121 08.4W	8/21	0930	0952	417	210	235	235
80	70	33 48.6N	121 50.0W	8/21	1512	1534	409	209	11148	10787
80	80	33 28.9N	122 30.3W	8/21	2113	2135	432	209	808	808
80	90	33 08.5N	123 12.4W	8/22	0310	0332	421	210	62	62
80	100	3248.4N	123 54.2W	8/22	0841	0903	423	211	40	40
82	47	34 17.0N	120 03.4W	8/20	2314	2336	411	216	161	136
83	40.6	34 13.9N	119 25.5W	8/20	1752	1756	64	27	219	219
83	42	34 10.4N	11931.1W	8/20	1604	1616	221	112	118	118
83	51	33 52.7N	120 09.0W	8/20	1040	1050	172	87	128	128
83	55	33 44.1N	120 26.6W	8/20	0723	0745	438	207	290	290
83	60	33 34.7N	120 46.2W	8/20	0255	0317	425	222	97	97
83	70	33 15.4N	121 26.6W	8/19	2043	2105	441	212	234	234
83	80	32 55.2N	122 08.4W	8/19	1406	1428	440	216	45	45
83	90	32 35.2N	122 51.9W	8/19	0650	0713	493	216	195	57
83	100	3213.5N	123 32.0W	8/18	2130	2152	455	215	4	4
83	110	31 55.0N	124 10.5W	8/18	1458	1520	424	226	5	5
87	33	33 53.1N	118 29.6W	8/15	2045	2051	99	50	203	203
87	35	33 49.4N	118 37.7W	8/15	2352	0014	393	213	199	199
87	39.5	33 39.5N	118 57.6W	8/16	0540	0602	413	202	152	152
87	45	33 29.6N	11919.4W	8/16	1024	1047	286	226	203	203
87	50	33 19.4N	119 40.9W	8/16	1424	1432	144	69	97	97
87	55	33 09.7N	120 01.5W	8/16	1904	1926	433	211	60	60
87	60	32 59.8N	120 21.8W	8/17	0025	0047	426	212	49	49
87	70	32 39.5N	121 03.2W	8/17	0730	0752	450	215	44	44
87	80	32 19.5N	121 43.8W	8/17	1357	1419	430	215	23	23
87	90	32 00.4N	122 24.2W	8/17	2010	2032	455	220	7	7
87	100	31 40.0N	123 05.0W	8/18	0223	0245	452	214	24	24
87	110	31 19.6N	123 45.2W	8/18	0823	0845	442	218	16	16
90	28	33 28.9N	117 46.5W	8/15	1301	1306	73	35	205	205
90	30	33 25.6N	117 54.9W	8/15	1046	1108	370	208	265	146
90	35	33 15.2N	118 15.5W	8/15	0430	0452	398	209	126	126
90	37	33 11.0N	118 24.2W	8/15	0140	0202	411	216	22	22
90	45	32 55. IN	118 56.9W	8/14	2000	2022	424	213	33	33
90	53	32 39.4N	119 30.6W	8/14	1318	1340	445	215	63	63
90	60	32 24.9N	119 58.4W	8/14	0752	0814	431	212	65	65
90	70	32 05.1N	120 39.7W	8/14	0139	0201	414	217	128	39
90	80	31 45.0N	121 19.1W	8/13	1854	1916	396	218	20	20
90	90	31 25.7N	122 00.4W	8/13	1320	1342	440	209	5	5
90	100	31 06.3N	122 41.0W	8A3	0725	0747	438	207	14	14
90	110	3046.0N	123 19.7W	8/13	0157	0219	430	210	12	12
90	120	30 26.1N	124 00.3W	8/12	2015	2038	439	223	7	7
93	26.7	32 56.8N	117 19.0W	8/09	2027	2033	113	50	35	35
93	28	3253.4N	117 23.9W	8/09	2305	2327	418	212	57	57
93	30	32 50. IN	117 33.1W	8/10	0218	0240	393	211	33	33
93	35	3240.5N	117 54.4W	8/10	0608	0630	405	206	76	76
93	40	32 31.0N	118 14.0W	8/10	1016	1038	405	214	136	136
93	45	32 20.9N	118 33.7W	8/10	1408	1430	395	208	61	61
93	50	32 10.9N	118 55.2W	8/10	1940	2002	405	217	47	47
93	55	32 01 .0N	119 13.8W	8/10	2330	2352	406	209	274	274
93	60	31 51.0N	119 35.9W	8/11	0400	0422	428	206	54	54
93	70	31 33.6N	12016.1W	8/11	1007	1029	422	211	88	88
93	80	31 10.2N	120 55.5W	8/11	1556	1619	425	212	35	35
93	90	30 52. IN	121 33.2W	8/11	2110	2132	420	215	2	2
93	100	30 31.2N	12216.4W	8/12	0300	0323	439	210	23	23
93	110	3011.3N	122 56.3W	8/12	0843	0905	443	212	23	23
93	120	29 52. IN	123 35.8W	8/12	1429	1451	433	210	30	30

FIGURES
Cruise 8810

1. CalCOFI Cruise 8810 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.

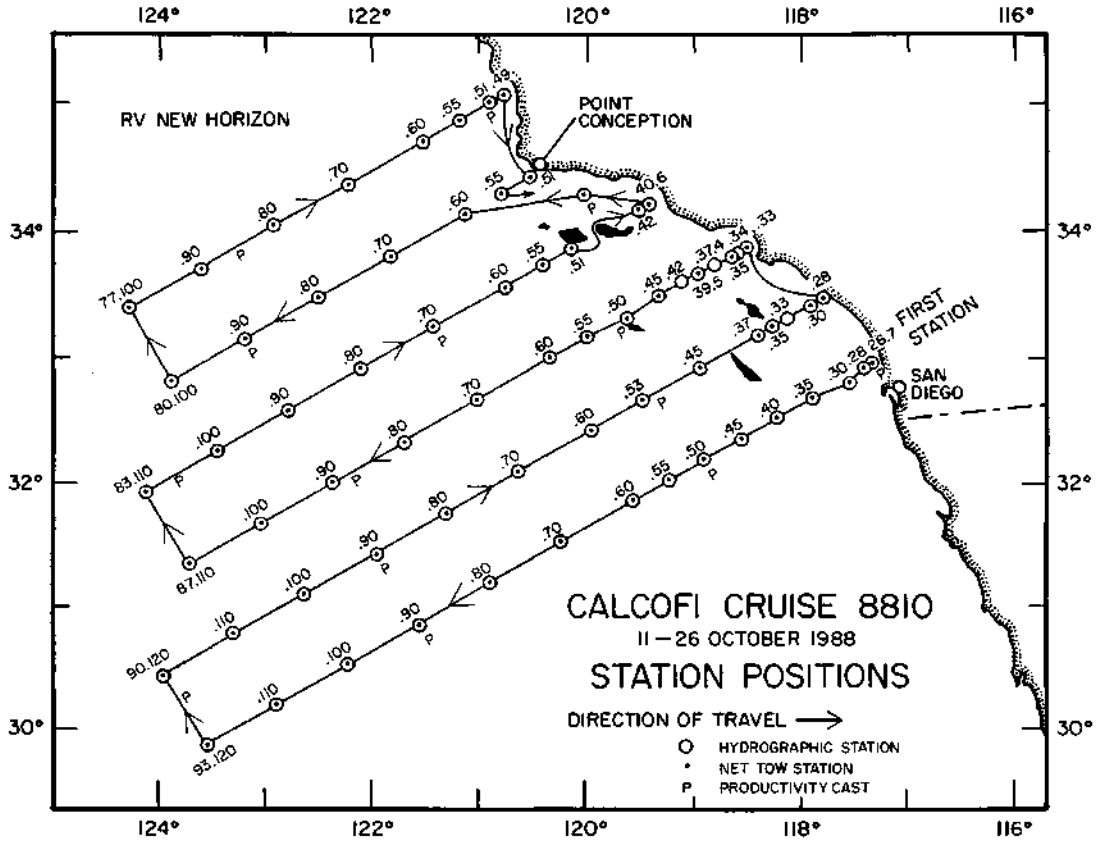

FIGURE 1

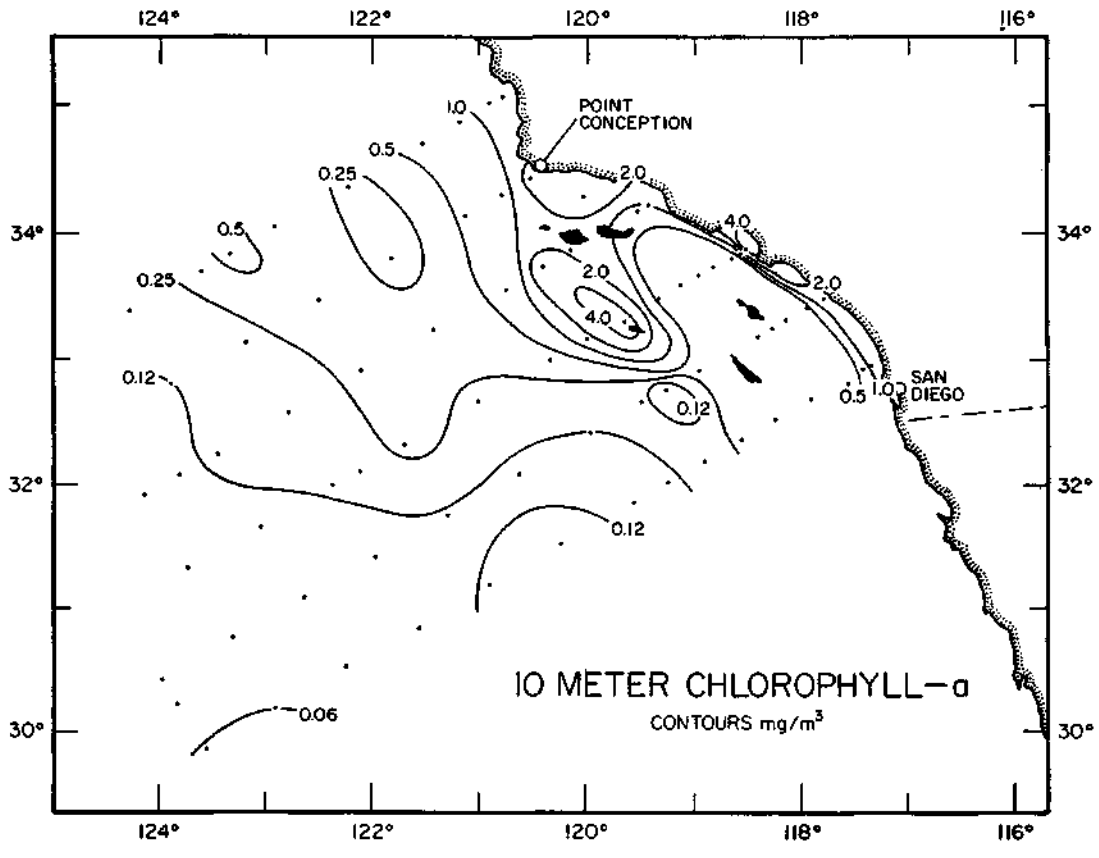

FIGURE 2

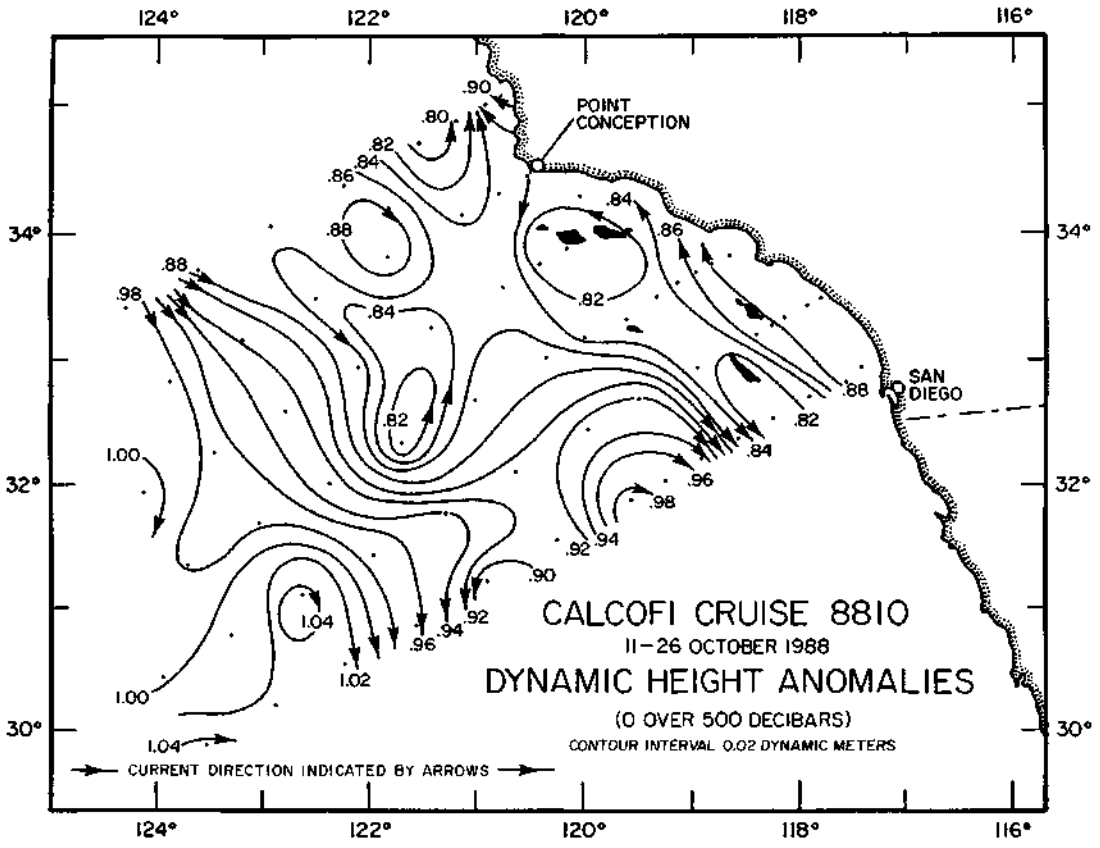

FIGURE 3

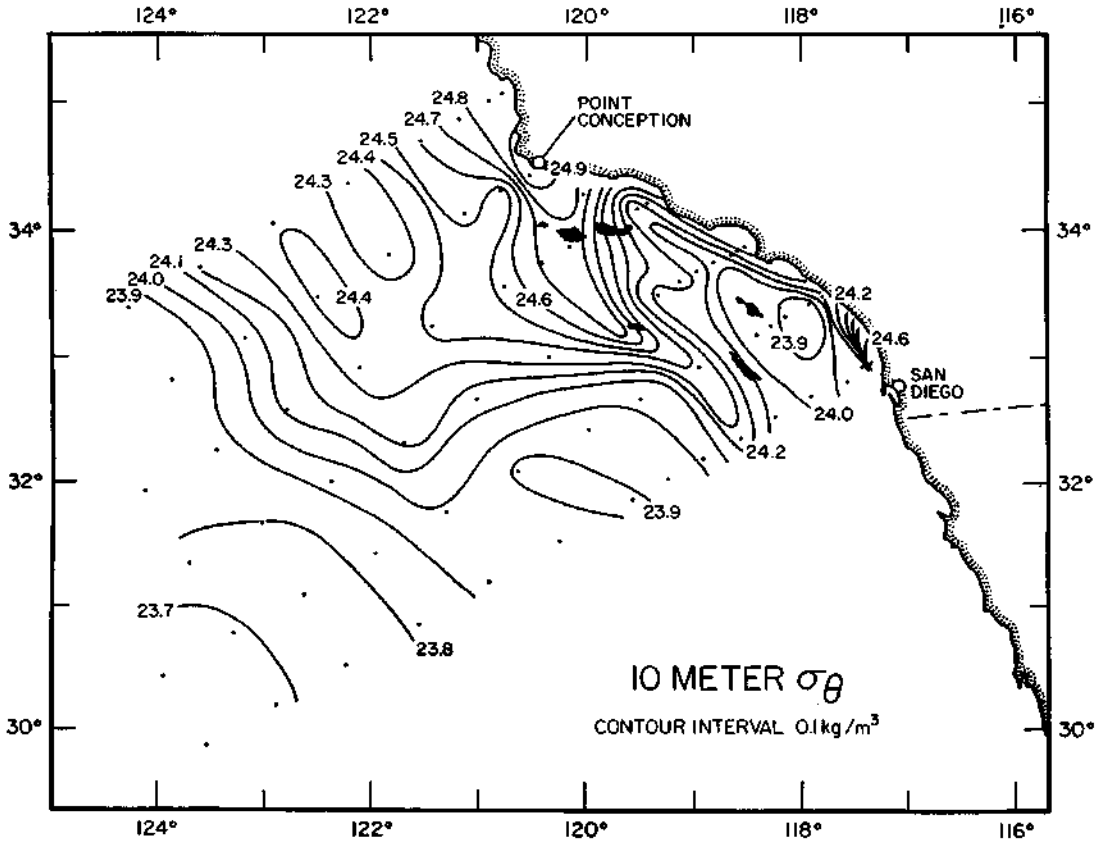

FIGURE 4

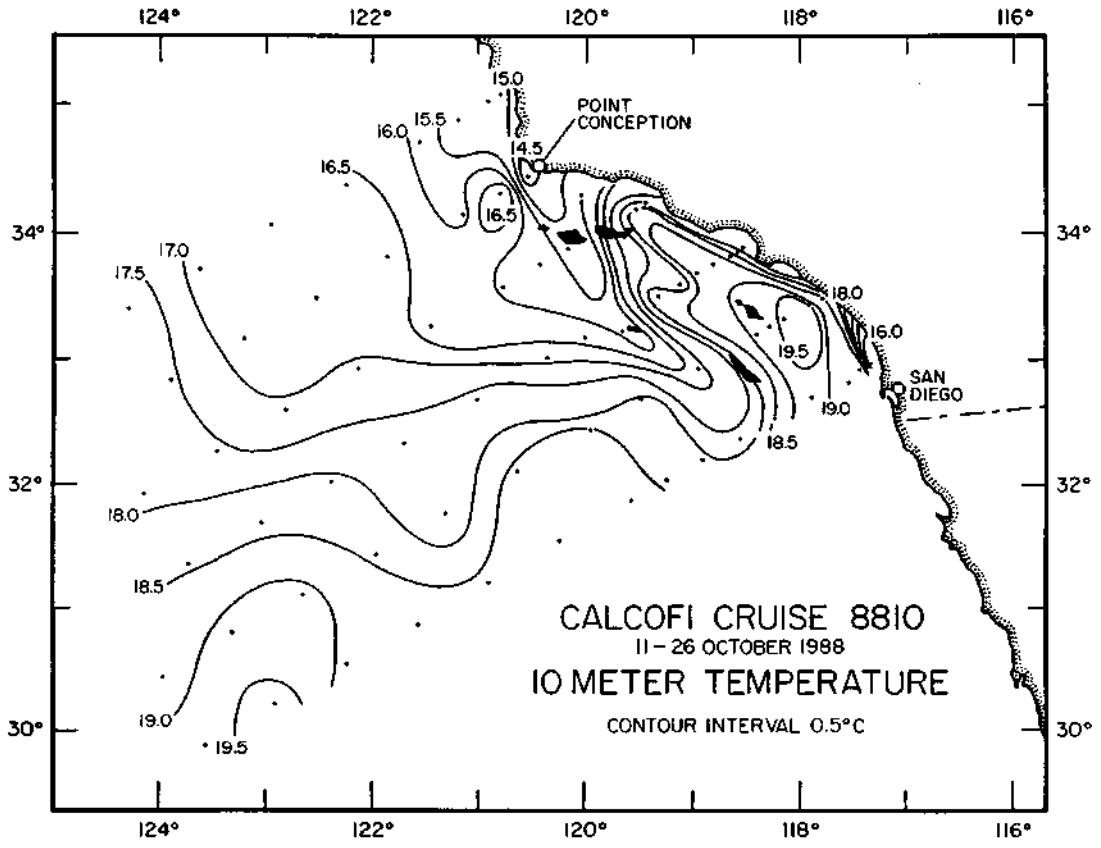

FIGURE 5

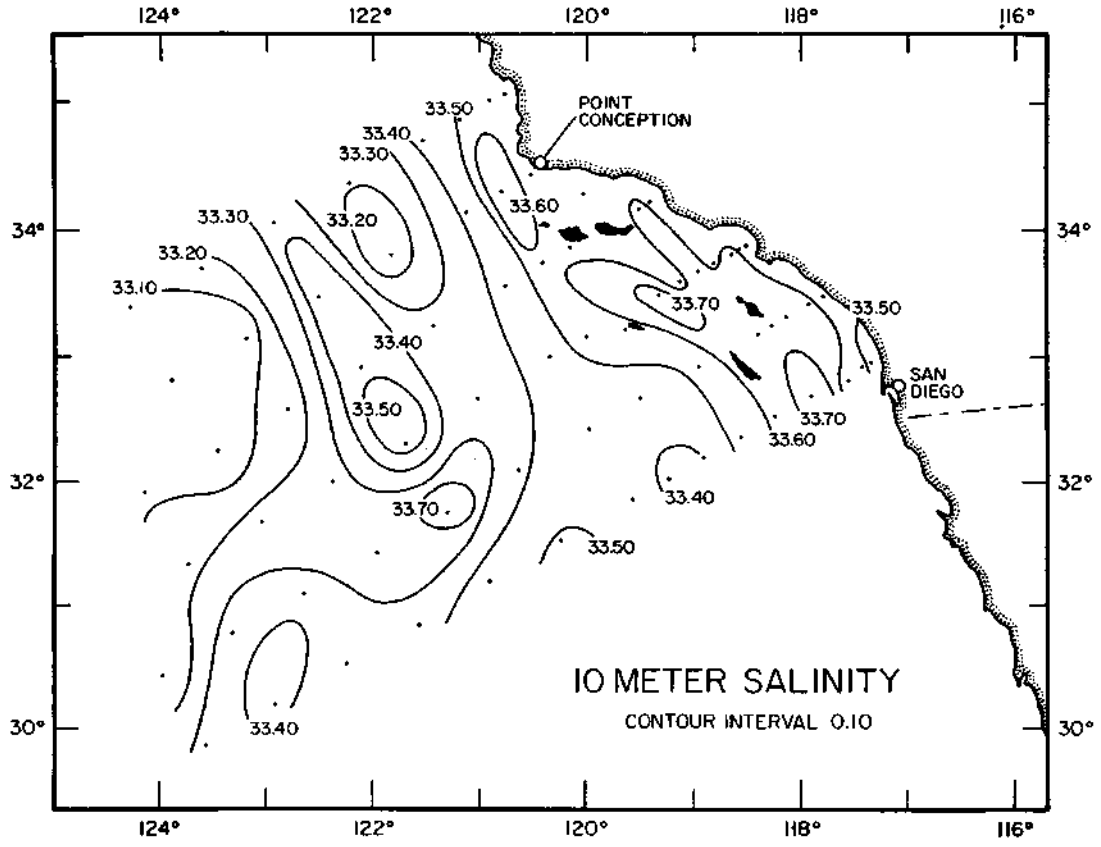

FIGURE 6

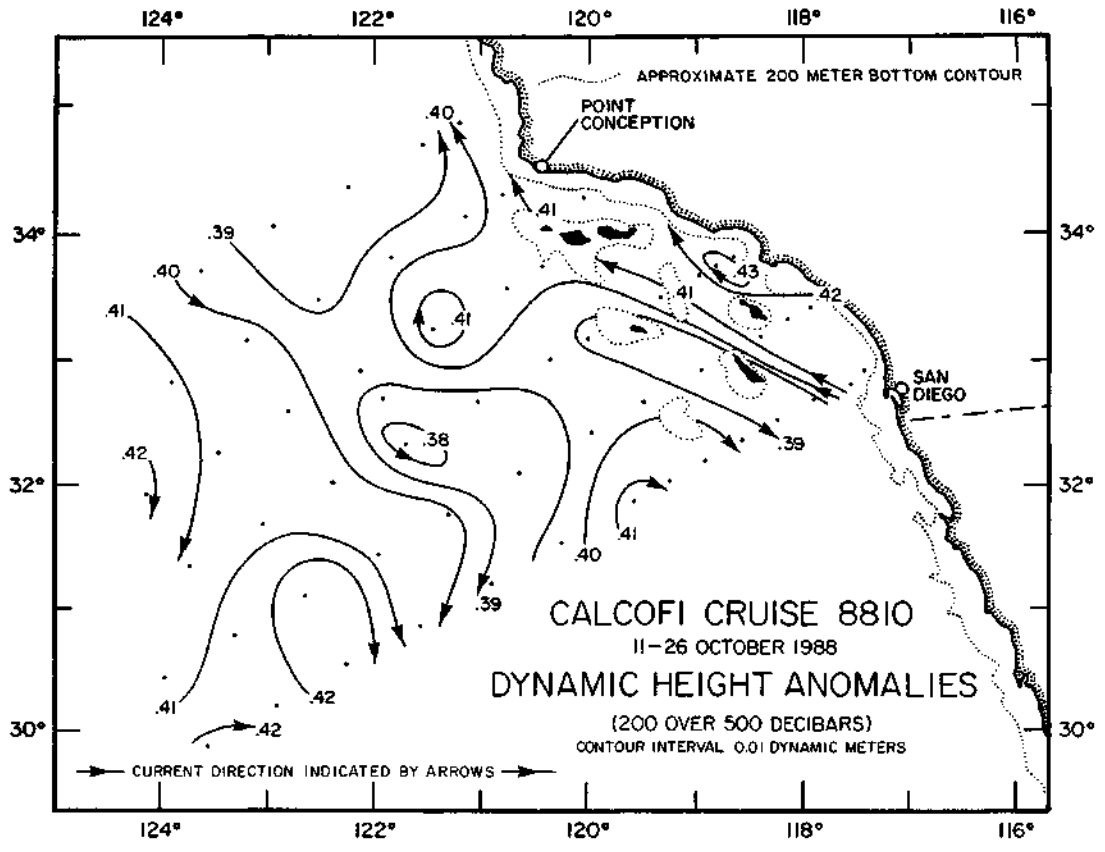

FIGURE 7

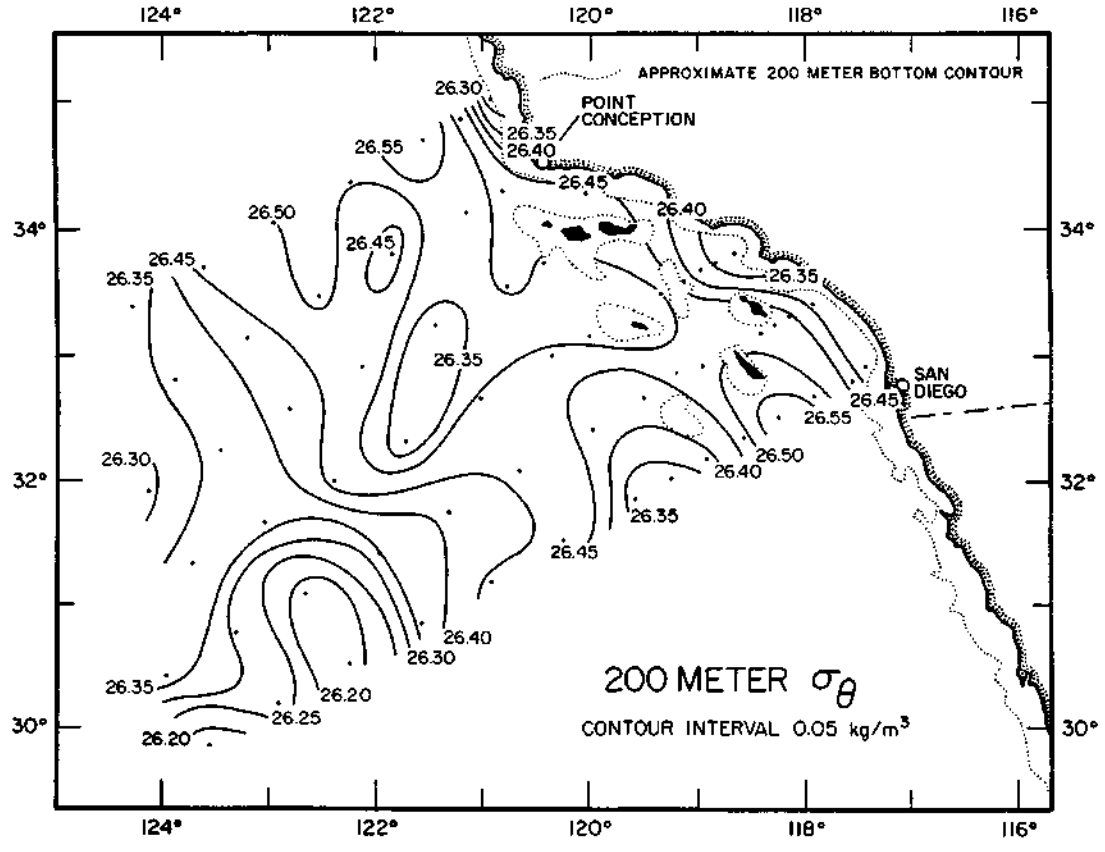

FIGURE 8

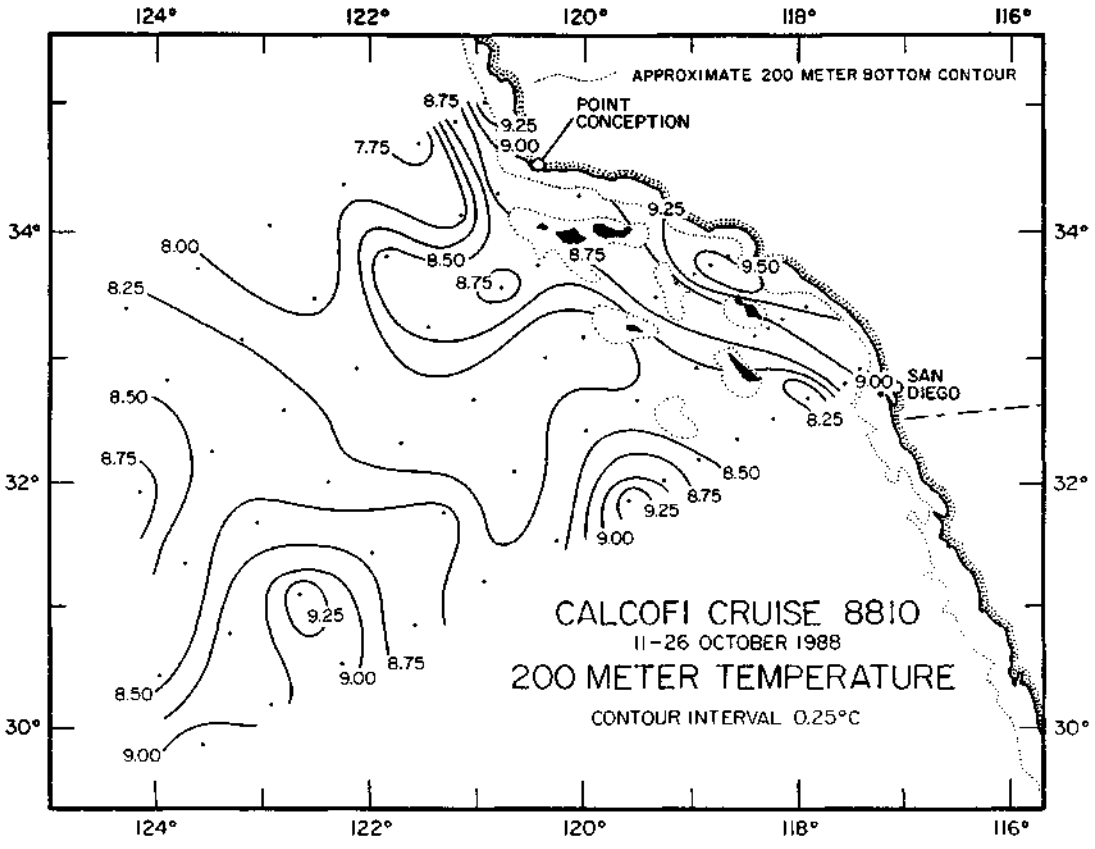

FIGURE 9

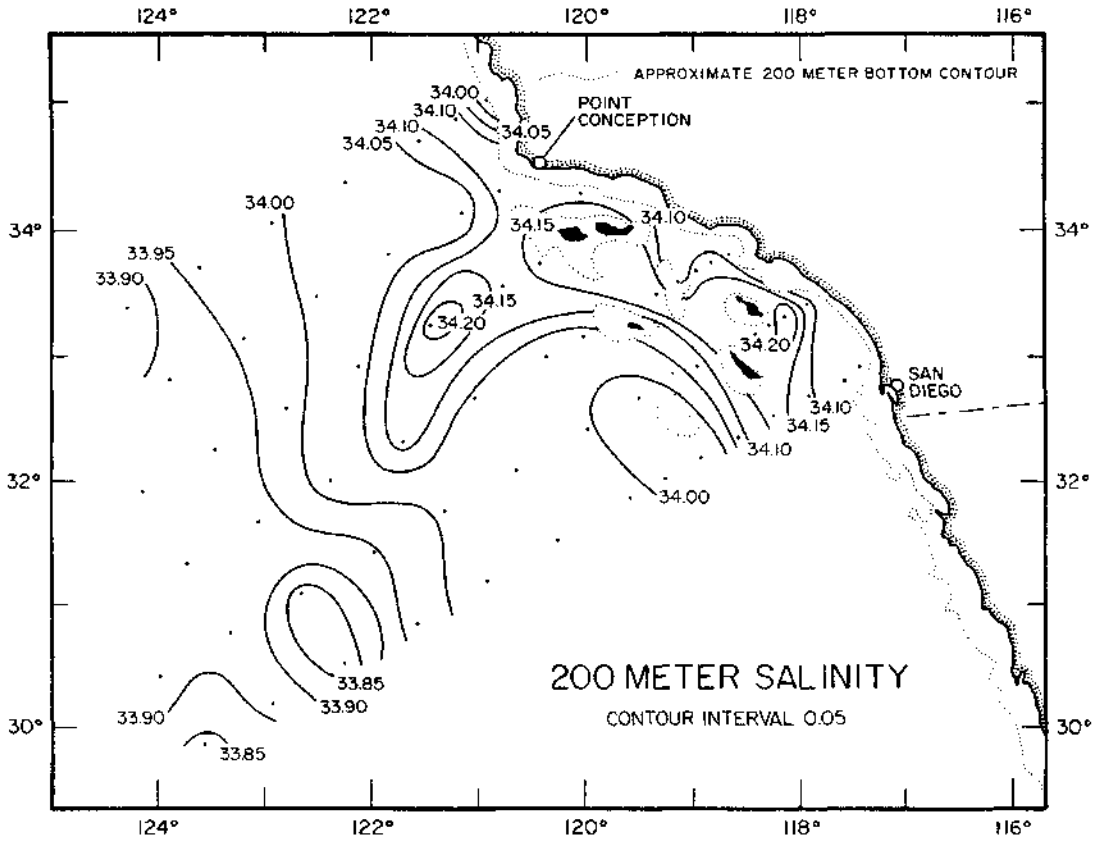

FIGURE 10

PERSONNEL

CalCOFI Cruise 8810

SHIP'S CAPTAIN

Phillip L. Munsch, RV *New Horizon*

PERSONNEL PARTICIPATING IN THE COLLECTION OF DATA

		Participation (Leg)
Hemingway, George T.	Assistant to the Director MLRG, SIO	I
Mullin, Michael M. (Chief Scientists)	Professor, Director of MLRG, SIO	II
Abramenkoff, Dimitry N.	Fishery Biologist, NMFS	I, II
Anderson, George C.	Staff Research Associate, SIO	I, II
Berger, Thomas E.	Student, UCSB	I
Brooks, Elaine R.	Staff Research Associate, SIO	I
Gripp, Sherry L.	Staff Research Associate, SIO	I, II
Gruber, Dennis W.	Marine Technician, SIO	I, II
Hester, Arthur W.	Staff Research Associate, SIO	I, II
Leventhal, Bruce J.	Student, UCI	I
Lowell, William R.	Staff Research Associate, SIO	I, II
Miller, Susan M.	Biological Technician, NMFS	I, II
Pineda, Jesus	Graduate Student, SIO	II
Rodriguez, Angel M.	Graduate Student, SIO	I
Roehri, Marc Cuellar	Student, FCMUABC	II
Veit, Richard R.	Graduate Student, UCI	II

Leg I: San Diego to Dana Point, CA, 11-17 October 1988

Leg II: Dana Point to San Diego, CA, 17-26 October 1988

RV NEW HORIZON CALCOFI CRUISE 8810 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 46.7 W	25/10/88	1957 UTC	68 M	120	04 KT	330 02 08	2	1013.9 MB	13.6 C	12.5 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		15.50	15.50	33.584	24.771	316.5	0.000	6.17	108.6	3.7	0.34	0.3	0.04	4.96	0.85	0
1	10		15.06	15.06	33.572	24.859	308.5	0.031	5.81	101.4	4.6	0.47	1.8	0.12	1.46	0.50	10
	20	ISL	14.23	14.23	33.551	25.021	293.4	0.061	5.42	93.0	6.7	0.69	5.0	0.27	1.03	0.53	20
1	21		14.14	14.14	33.550	25.039	291.7	0.064	5.38	92.1	7.0	0.71	5.3	0.29	0.99	0.53	21
	30	ISL	13.61	13.61	33.557	25.154	281.0	0.090	5.07	85.9	9.7	0.93	7.8	0.39	0.94	0.51	30
1	31		13.55	13.55	33.558	25.167	279.8	0.093	5.03	85.1	10.0	0.95	8.1	0.40	0.94	0.51	31
1	42		12.78	12.77	33.575	25.334	264.1	0.123	4.47	74.4	14.8	1.22	11.2	0.47	0.59	0.58	42
	50	ISL	12.58	12.57	33.579	25.376	260.3	0.144	4.36	72.3	15.0	1.26	12.1	0.48	0.44	0.60	50
1	52		12.51	12.50	33.582	25.392	258.8	0.149	4.32	71.5	15.1	1.27	12.5	0.48	0.41	0.60	52
1	63		11.28	11.27	33.672	25.693	230.4	0.176	3.51	56.6	20.2	1.59	18.2	0.23	0.25	0.68	63

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
35 1.7 N	120 55.2 W	25/10/88	1714 UTC	236 M	020	03 KT	320 03 08	2	1015.4 MB	14.0 C	13.1 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		15.36	15.36	33.595	24.811	312.8	0.000	6.03	105.9	4.9	0.39	0.9	0.09	4.91	0.56	0
1	10		15.22	15.22	33.587	24.836	310.7	0.031	5.67	99.3	5.2	0.48	1.7	0.12	1.25	0.51	10
	20	ISL	14.59	14.59	33.579	24.966	298.6	0.062	5.20	89.9	7.5	0.75	4.8	0.29	0.43	0.45	20
1	21		14.49	14.49	33.578	24.987	296.7	0.065	5.15	88.8	7.8	0.78	5.2	0.31	0.35	0.44	21
2	30		13.31	13.31	33.563	25.219	274.7	0.090	4.70	79.1	10.2	1.02	9.3	0.44	0.21	0.27	30
2	41		12.28	12.27	33.574	25.430	254.9	0.119	4.21	69.4	13.0	1.25	13.5	0.28	0.21	0.27	41
	50	ISL	11.83	11.82	33.580	25.520	246.5	0.142	4.00	65.3	14.0	1.34	15.0	0.15	0.17	0.24	50
2	51		11.80	11.79	33.580	25.526	246.0	0.144	3.99	65.1	14.1	1.34	15.1	0.14	0.17	0.24	51
2	61		11.83	11.82	33.581	25.521	246.7	0.169	4.15	67.7	14.2	1.34	15.1	0.13	0.16	0.22	61
2	71		11.77	11.76	33.586	25.536	245.5	0.194	3.96	64.5	14.5	1.36	15.4	0.12	0.15	0.25	72
	75	ISL	11.57	11.56	33.604	25.587	240.7	0.203	3.83	62.2	15.5	1.42	16.3	0.10	0.14	0.25	76
2	85		11.02	11.01	33.659	25.730	227.3	0.227	3.50	56.1	18.3	1.58	18.8	0.06	0.11	0.23	86
	100	ISL	10.72	10.71	33.704	25.819	219.2	0.260	3.30	52.6	20.2	1.63	20.1	0.03	0.10	0.28	101
2	106		10.68	10.67	33.715	25.834	217.9	0.273	3.27	52.1	20.6	1.65	20.2	0.03	0.10	0.30	107
	125	ISL	10.50	10.49	33.739	25.885	213.5	0.314	3.23	51.3	21.7	1.72	21.0	0.04	0.08	0.24	126
2	127		10.48	10.46	33.743	25.891	212.9	0.319	3.22	51.1	21.8	1.72	21.1	0.04	0.08	0.23	128
2	148		9.94	9.92	33.871	26.084	194.9	0.362	2.82	44.2	21.7	1.69	21.1	0.03	0.04	0.11	149
	150	ISL	9.92	9.90	33.878	26.093	194.2	0.365	2.80	43.9	22.1	1.71	21.3	0.03	0.04	0.11	151
2	179		9.67	9.65	33.937	26.181	186.3	0.421	2.59	40.4	28.9	1.97	25.2	0.03	0.03	0.14	180
	200	ISL	9.40	9.38	33.979	26.258	179.3	0.459	2.49	38.6	31.3	2.03	26.2	0.03	0.04	0.19	202
2	210		9.27	9.25	34.000	26.296	175.9	0.477	2.44	37.7	32.4	2.06	26.7	0.03	0.04	0.22	212

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 53.4 N	121 12.1 W	25/10/88	1359 UTC	560 M	300	03 KT	270 03 09	2	1013.8 MB	13.5 C	12.2 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	15.29	15.29	33.515	24.765	317.2	0.000	5.92	103.7	3.8	0.41	0.6	0.05	0.85	0.20	0
1	1		15.29	15.29	33.515	24.765	317.2	0.003	5.92	103.7	3.8	0.41	0.6	0.05	0.85	0.20	1
	10	ISL	15.14	15.14	33.501	24.787	315.3	0.032	5.91	103.2	3.8	0.45	1.0	0.08	0.81	0.17	10
1	11		15.12	15.12	33.499	24.790	315.1	0.035	5.91	103.2	3.8	0.45	1.0	0.08	0.80	0.17	11
	20	ISL	14.59	14.59	33.553	24.946	300.5	0.062	5.57	96.2	7.0	0.65	4.0	0.26	0.58	0.28	20
1	22		14.36	14.36	33.568	25.007	294.8	0.068	5.42	93.2	8.1	0.73	5.2	0.29	0.52	0.31	22
	30	ISL	12.45	12.45	33.618	25.431	254.5	0.090	4.25	70.3	13.8	1.23	13.6	0.24	0.37	0.32	30
1	32		11.98 A	11.98	33.635	25.534	244.8	0.095	3.96	64.8	15.1	1.35	15.6	0.23	0.34	0.32	32
1	42		11.28	11.27	33.681	25.699	229.3	0.119	3.57	57.6	17.7	1.50	18.1	0.11	0.33	0.50	42
	50	ISL	11.03	11.02	33.716	25.772	222.5	0.137	3.36	53.9	19.1	1.59	19.6	0.10	0.21	0.31	50
1	52		11.00	10.99	33.723	25.783	221.6	0.142	3.32	53.3	19.3	1.61	19.9	0.10	0.18	0.25	52
1	62		10.90	10.89	33.730	25.806	219.5	0.164	3.28	52.5	19.7	1.65	20.2	0.08	0.17	0.27	62
1	73		10.31	10.30	33.809	25.971	204.1	0.187	2.92	46.2	23.1	1.81	22.8	0.04	0.09	0.23	74
	75	ISL	10.17	10.16	33.836	26.016	199.8	0.191	2.83	44.6	24.3	1.85	23.4	0.04	0.08	0.22	76
1	87		9.47	9.46	33.990	26.253	177.4	0.214	2.34	36.4	31.2	2.09	26.6	0.02	0.04	0.15	88
	100	ISL	9.37	9.36	34.013	26.288	174.4	0.237	2.25	34.9	32.7	2.12	27.1	0.01	0.03	0.12	101
1	102		9.36	9.35	34.017	26.293	174.0	0.240	2.24	34.7	32.9	2.13	27.2	0.01	0.03	0.12	103
1	123		9.23	9.22	34.049	26.339	170.0	0.276	2.16	33.4	34.3	2.18	27.7	0.01	0.02	0.16	124
	125	ISL	9.21	9.20	34.052	26.345	169.5	0.280	2.15	33.2	34.4	2.18	27.8	0.01	0.02	0.16	126
1	148		9.01	8.99	34.078	26.397	164.9	0.318	2.06	31.7	36.2	2.24	28.5	0.01	0.02	0.14	149
	150	ISL	9.00	8.98	34.081	26.401	164.6	0.321	2.05	31.5	36.4	2.25	28.6	0.01	0.02	0.14	151
1	179		8.80	8.78	34.118	26.462	159.4	0.368	1.83	28.0	39.0	2.32	29.6	0.01	0.03	0.16	180
	200	ISL	8.66	8.64	34.134	26.497	156.4	0.401	1.76	26.9	40.6	2.36	30.2	0.01	0.02	0.11	202
1	211		8.59	8.57	34.142	26.514	155.0	0.419	1.72	26.2	41.5	2.39	30.5	0.01	0.01	0.09	213
1	241		8.38	8.35	34.178	26.575	149.7	0.464	1.53	23.2	44.5	2.49	31.5	0.00			243
	250	ISL	8.31	8.28	34.181	26.588	148.6	0.478	1.50	22.7	45.4	2.51	31.8	0.00			252
1	281		8.04	8.01	34.180	26.628	145.2	0.523	1.41	21.2	48.6	2.57	32.7	0.01			283
	300	ISL	7.82	7.79	34.178	26.659	142.5	0.551	1.36	20.4	50.9	2.61	33.4	0.01			303
1	338		7.32	7.29	34.171	26.726	136.5	0.604	1.22	18.1	56.2	2.71	34.9	0.01			341
1	399		6.47	6.43	34.167	26.839	126.1	0.684	0.85	12.3	67.5	2.91	38.2	0.01			402
	400	ISL	6.46	6.42	34.167	26.840	125.9	0.685	0.84	12.2	67.7	2.91	38.2	0.01			403
1	465		6.05	6.01	34.216	26.932	117.8	0.764	0.53	7.6	76.8	3.07	39.9	0.02			469
	500	ISL	5.91	5.87	34.248	26.975	114.1	0.805	0.43	6.2	81.3	3.13	40.2	0.04			504
1	538		5.75	5.70	34.283	27.023	109.9	0.847	0.32	4.6	86.1	3.19	40.5	0.07			543

A) MEAN VALUE OF 11.94 AND 12.03 DEGREES CELSIUS.

RV NEW HORIZON CALCOFI CRUISE 8810 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 33.1 W	25/10/88	0939 UTC	970 M	020	04 KT		1	1014.3 MB	14.1 C	12.7 C	7/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	15.88	15.88	33.479	24.606	332.3	0.000	5.83	103.3	2.9	0.38	0.5	0.02	0.62	0.19	0
1	1		15.88	15.88	33.479	24.606	332.3	0.003	5.83	103.3	2.9	0.38	0.5	0.02	0.62	0.19	1
	10	ISL	15.86	15.86	33.475	24.608	332.4	0.033	5.83	103.3	2.8	0.38	0.4	0.01	0.66	0.26	10
1	11		15.86	15.86	33.475	24.608	332.5	0.037	5.83	103.3	2.8	0.38	0.4	0.01	0.66	0.27	11
	20	ISL	15.35	15.35	33.489	24.732	320.9	0.066	5.86	102.8	3.3	0.43	1.5	0.07	0.66	0.36	20
1	21		15.29	15.29	33.507	24.759	318.3	0.069	5.86	102.7	3.4	0.44	1.6	0.08	0.66	0.37	21
	30	ISL	12.35	12.35	33.323	25.222	274.4	0.096	5.33	87.8	6.4	0.83	7.7	0.16	0.47	0.33	30
1	32		11.71	11.71	33.304	25.327	264.4	0.101	5.17	84.0	7.3	0.94	9.3	0.17	0.42	0.32	32
1	42		11.32	11.31	33.504	25.554	243.0	0.127	4.36	70.3	12.6	1.34	15.7	0.05	0.22	0.21	42
	50	ISL	10.89	10.88	33.578	25.689	230.4	0.146	3.98	63.6	16.0	1.51	18.6	0.02	0.12	0.17	50
1	52		10.79	10.78	33.588	25.715	228.0	0.150	3.92	62.5	16.7	1.53	19.0	0.02	0.10	0.17	52
1	62		10.45	10.44	33.623	25.802	219.9	0.173	3.73	59.1	18.5	1.57	20.1	0.01	0.07	0.15	62
1	73		9.80	9.79	33.734	25.999	201.4	0.196	3.30	51.6	23.4	1.79	23.6	0.02	0.03	0.10	74
	75	ISL	9.73	9.72	33.750	26.023	199.1	0.200	3.23	50.4	24.0	1.82	24.0	0.02	0.03	0.10	76
1	87		9.40	9.39	33.828	26.138	188.4	0.223	2.92	45.3	27.1	1.95	25.7	0.01	0.01	0.12	88
	100	ISL	9.10	9.09	33.886	26.232	179.7	0.247	2.73	42.0	29.8	2.03	27.0	0.01	0.01	0.09	101
1	102		9.06	9.05	33.893	26.244	178.6	0.250	2.71	41.7	30.2	2.04	27.2	0.01	0.01	0.08	103
1	123		8.74	8.73	33.960	26.347	169.1	0.287	2.49	38.1	33.9	2.12	28.6	0.01	0.00	0.06	124
	125	ISL	8.72	8.71	33.965	26.354	168.5	0.290	2.48	37.9	34.1	2.13	28.7	0.01	0.00	0.06	126
1	149		8.47	8.45	34.009	26.427	161.9	0.330	2.38	36.2	36.8	2.18	29.5	0.01	0.00	0.05	150
	150	ISL	8.46	8.44	34.011	26.431	161.7	0.332	2.37	36.0	37.0	2.18	29.5	0.01	0.00	0.05	151
1	178		8.05	8.03	34.057	26.529	152.7	0.376	2.16	32.5	41.8	2.27	30.8	0.01	0.00	0.03	179
	200	ISL	7.73	7.71	34.076	26.591	147.1	0.409	1.97	29.4	45.6	2.38	32.2	0.01	0.00	0.03	202
1	210		7.59	7.57	34.082	26.616	144.9	0.423	1.87	27.9	47.3	2.43	32.8	0.01	0.00	0.03	212
1	240		7.26	7.24	34.107	26.683	138.9	0.466	1.56	23.1	52.9	2.58	34.5	0.01			242
	250	ISL	7.14	7.12	34.106	26.699	137.5	0.480	1.51	22.3	54.4	2.61	35.0	0.01			252
1	281		6.78	6.75	34.098	26.742	133.7	0.522	1.40	20.5	58.6	2.67	36.2	0.01			283
	300	ISL	6.64	6.61	34.103	26.765	131.7	0.547	1.28	18.7	61.2	2.72	36.8	0.01			302
1	338		6.41	6.38	34.119	26.808	128.0	0.596	1.04	15.1	66.2	2.82	38.0	0.01			341
1	398		6.00	5.97	34.149	26.885	121.3	0.671	0.75	10.8	73.4	2.97	40.0	0.01			401
	400	ISL	5.99	5.96	34.150	26.887	121.1	0.673	0.74	10.6	73.6	2.97	40.0	0.01			403
1	463		5.72	5.68	34.186	26.949	115.8	0.748	0.53	7.6	79.9	3.07	41.2	0.01			467
	500	ISL	5.55	5.51	34.213	26.992	112.1	0.790	0.44	6.3	83.7	3.13	41.8	0.00			504
1	534		5.40	5.36	34.239	27.031	108.7	0.828	0.35	5.0	87.2	3.18	42.3	0.00			539

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 23.4 N	122 14.7 W	25/10/88	0332 UTC	4019 M	310	06 KT			1012.5 MB	16.0 C	13.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.58	16.58	33.206	24.237	367.5	0.000	5.72	102.6	2.5	0.29	0.0	0.00	0.23	0.07	0
1	1		16.58	16.58	33.206	24.237	367.5	0.004	5.72	102.6	2.5	0.29	0.0	0.00	0.23	0.07	1
	10	ISL	16.55	16.55	33.205	24.243	367.2	0.037	5.72	102.6	2.3	0.33	0.0	0.00	0.21	0.07	10
1	11		16.55	16.55	33.205	24.243	367.2	0.040	5.72	102.6	2.3	0.33	0.0	0.00	0.21	0.07	11
	20	ISL	16.52	16.52	33.205	24.250	366.8	0.073	5.74	102.9	2.3	0.30	0.0	0.00	0.25	0.10	20
1	22		16.51	16.51	33.205	24.253	366.7	0.081	5.74	102.8	2.3	0.29	0.0	0.00	0.26	0.11	22
	30	ISL	15.65	15.65	33.182	24.430	350.0	0.109	5.95	104.8	2.4	0.33	0.0	0.00	0.39	0.15	30
1	32		15.34	15.34	33.168	24.488	344.5	0.116	6.01	105.2	2.4	0.34	0.0	0.00	0.42	0.16	32
1	42		13.27	13.26	33.003	24.794	315.5	0.149	6.25	104.7	3.0	0.36	0.0	0.01	0.48	0.17	42
	50	ISL	12.68	12.67	33.061	24.956	300.3	0.174	6.08	100.7	3.3	0.39	0.5	0.03	0.47	0.24	50
1	53		12.57	12.56	33.094	25.002	295.9	0.183	5.98	98.8	3.5	0.41	0.7	0.04	0.47	0.26	53
1	63		11.84	11.83	33.109	25.153	281.8	0.212	5.76	93.7	4.9	0.50	3.6	0.03	0.34	0.26	63
1	73		11.79	11.78	33.262	25.281	269.8	0.239	5.62	91.4	5.2	0.46	3.8	0.05	0.19	0.21	74
	75	ISL	11.71	11.70	33.283	25.312	266.9	0.245	5.57	90.5	5.5	0.48	4.4	0.06	0.17	0.19	76
1	88		10.92	10.91	33.397	25.544	245.1	0.278	5.06	80.9	9.4	0.78	10.1	0.08	0.09	0.10	89
	100	ISL	10.10	10.09	33.506	25.771	223.6	0.306	4.35	68.3	16.7	1.24	17.0	0.03	0.04	0.06	101
1	103		9.90	9.89	33.534	25.827	218.4	0.313	4.17	65.2	18.6	1.36	18.6	0.01	0.03	0.06	104
1	123		9.10	9.09	33.723	26.105	192.2	0.354	3.56	54.8	25.7	1.75	23.2	0.01	0.01	0.03	124
	125	ISL	9.06	9.05	33.739	26.124	190.4	0.358	3.51	54.0	26.2	1.77	23.5	0.01	0.01	0.03	126
1	150		8.71	8.69	33.894	26.300	174.1	0.403	3.00	45.8	31.7	1.97	26.5	0.00	0.00	0.03	151
1	180		8.24	8.22	33.989	26.447	160.6	0.453	2.87	43.4	36.7	2.05	28.0	0.01	0.00	0.02	181
	200	ISL	7.97	7.95	34.012	26.506	155.3	0.485	2.84	42.7	39.1	2.09	28.6	0.00	0.01	0.03	202
1	211		7.83	7.81	34.018	26.531	153.0	0.502	2.82	42.2	40.5	2.12	29.0	0.00	0.01	0.03	213
1	241		7.40	7.38	34.034	26.605	146.3	0.547	2.49	36.9	46.4	2.28	31.2	0.00			243
	250	ISL	7.30	7.28	34.040	26.624	144.6	0.560	2.37	35.1	48.2	2.32	31.8	0.00			252
1	282		7.01	6.98	34.069	26.688	138.9	0.605	1.89	27.8	54.5	2.47	33.9	0.00			284
	300	ISL	6.92	6.89	34.097	26.722	135.9	0.630	1.60	23.5	57.6	2.57	35.0	0.00			302
1	338		6.74	6.71	34.153	26.791	129.8	0.681	1.07	15.6	63.8	2.77	37.0	0.00			341
1	398		6.26	6.22	34.190	26.884	121.6	0.756	0.73	10.5	73.7	2.96	39.1	0.00			401
	400	ISL	6.24	6.20	34.191	26.888	121.3	0.758	0.72	10.4	74.0	2.97	39.2	0.00			403
1	463		5.85	5.81	34.238	26.974	113.6	0.832	0.47	6.7	82.0	3.10	40.6	0.00			467
	500	ISL	5.75	5.71	34.280	27.021	109.6	0.874	0.45	6.4	85.6	3.16	41.0	0.00			504
1	535		5.66	5.61	34.319	27.063	106.0	0.911	0.43	6.1	89.0	3.22	41.3	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 3.8 N	122 56.5 W	24/10/88	2208 UTC	4226 M	300	03 KT	290 05 06	2	1013.0 MB	16.8 C	14.2 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.59	16.59	33.388	24.374	354.4	0.000	5.78	103.9	2.3	0.33	0.1	0.00	0.39	0.10	0
1	1		16.59	16.59	33.388	24.374	354.4	0.004	5.78	103.9	2.3	0.33	0.1	0.00	0.39	0.10	1
	10	ISL	16.51	16.51	33.384	24.390	353.2	0.035	5.78	103.7	2.2	0.32	0.1	0.00	0.38	0.11	10
1	11		16.50	16.50	33.384	24.392	3 53.0	0.039	5.78	103.7	2.2	0.32	0.1	0.00	0.38	0.11	11
	20	ISL	16.48	16.48	33.387	24.399	352.6	0.071	5.78	103.6	2.1	0.32	0.1	0.00	0.43	0.14	20
1	22		16.48	16.48	33.388	24.400	352.6	0.078	5.78	103.6	2.1	0.32	0.1	0.00	0.44	0.15	22
	30	ISL	14.81	14.81	33.292	24.698	324.4	0.105	6.07	105.2	2.3	0.43	0.8	0.05	0.71	0.33	30
1	32		14.29	14.29	33.262	24.785	316.1	0.111	6.12	104.9	2.3	0.46	1.1	0.07	0.76	0.37	32
1	42		12.15	12.14	33.075	25.068	289.4	0.141	5.78	94.7	3.9	0.63	3.6	0.23	0.52	0.34	42
	50	ISL	11.81	11.80	33.111	25.159	280.8	0.164	5.63	91.6	4.6	0.71	5.1	0.13	0.41	0.30	50
1	53		11.68	11.67	33.107	25.180	278.9	0.173	5.59	90.6	4.9	0.73	5.6	0.08	0.38	0.28	53
1	63		11.21	11.20	33.137	25.289	268.7	0.200	5.39	86.5	6.3	0.82	7.5	0.03	0.24	0.19	63
1	73		11.03	11.02	33.164	25.343	263.8	0.227	5.32	85.1	7.7	0.88	8.8	0.01	0.18	0.15	74
	75	ISL	10.97	10.96	33.175	25.362	262.0	0.232	5.28	84.4	8.1	0.91	9.3	0.01	0.17	0.14	76
1	87		10.55	10.54	33.275	25.514	247.8	0.263	4.91	77.8	11.3	1.15	13.0	0.02	0.10	0.10	88
	100	ISL	9.96	9.95	33.445	25.747	225.9	0.293	4.36	68.2	16.2	1.42	17.5	0.02	0.05	0.07	101
1	103		9.84	9.83	33.486	25.799	221.0	0.300	4.23	66.1	17.3	1.48	18.5	0.02	0.04	0.07	104
1	124		9.57	9.56	33.667	25.985	203.7	0.345	3.57	55.5	22.2	1.70	22.4	0.01	0.02	0.07	125
	125	ISL	9.53	9.52	33.676	25.999	202.4	0.347	3.56	55.3	22.5	1.71	22.5	0.01	0.02	0.07	126
1	149		8.59	8.57	33.854	26.287	175.2	0.392	3.38	51.4	28.8	1.86	25.1	0.01	0.00	0.04	150
	150	ISL	8.57	8.55	33.859	26.294	174.6	0.394	3.38	51.4	28.9	1.86	25.1	0.01	0.00	0.04	151
1	180		8.21	8.19	33.949	26.420	163.1	0.444	3.35	50.6	32.2	1.88	25.9	0.01	0.00	0.03	181
	200	ISL	7.93	7.91	33.997	26.500	155.8	0.476	2.91	43.7	37.1	2.04	28.3	0.01	0.00	0.03	202
1	211		7.77	7.75	34.019	26.541	152.1	0.493	2.61	39.0	40.2	2.15	29.9	0.01	0.00	0.03	213
1	241		7.40	7.38	34.069	26.633	143.7	0.538	1.95	28.9	47.9	2.41	33.1	0.01			243
	250	ISL	7.34	7.32	34.079	26.650	142.2	0.550	1.84	27.2	49.3	2.46	33.6	0.01			252
1	283		7.12	7.09	34.099	26.696	138.2	0.597	1.59	23.4	53.3	2.57	34.7	0.01			285
	300	ISL	6.92	6.89	34.095	26.721	136.0	0.620	1.53	22.4	55.7	2.61	35.4	0.01			302
1	339		6.45	6.42	34.088	26.778	130.9	0.672	1.39	20.2	61.6	2.70	36.9	0.01			3 42
1	400		6.03	6.00	34.143	26.876	122.1	0.749	0.84	12.1	71.2	2.95	39.5	0.01			403
1	465		5.53	5.49	34.194	26.979	112.8	0.826	0.51	7.2	82.5	3.11	41.5	0.00			469
	500	ISL	5.33	5.29	34.219	27.023	108.9	0.864	0.42	5.9	87.4	3.16	42.3	0.00			504
1	534		5.13	5.09	34.243	27.065	105.1	0.901	0.33	4.6	92.1	3.21	43.0	0.00			53 9

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 43.2 N	123 37.9 W	24/10/88	1539 UTC	4299 M	310	15 KT	320 05 08	2	1014.9 MB	16.3 C	14.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.56	16.56	33.164	24.209	370.1	0.000	5.72	102.6	2.2	0.36	0.1	0.00	0.34	0.09	0
1	1		16.56	16.56	33.164	24.209	370.1	0.004	5.72	102.6	2.2	0.36	0.1	0.00	0.34	0.09	1
	10	ISL	16.56	16.56	33.166	24.211	370.3	0.037	5.72	102.6	2.1	0.37	0.1	0.00	0.33	0.09	10
1	17		16.56	16.56	33.167	24.212	370.4	0.063	5.72	102.6	2.1	0.37	0.1	0.00	0.33	0.09	17
	20	ISL	16.45	16.45	33.223	24.280	364.0	0.074	5.76	103.1	2.2	0.38	0.2	0.01	0.34	0.11	20
	30	ISL	15.80	15.80	33.383	24.551	338.5	0.109	5.87	103.8	2.7	0.43	0.7	0.04	0.43	0.23	30
1	32		15.62	15.62	33.410	24.612	332.7	0.116	5.88	103.6	2.9	0.45	0.8	0.05	0.45	0.26	32
1	42		14.40	14.39	33.348	24.829	312.3	0.148	5.75	98.8	4.0	0.59	2.8	0.20	0.60	0.41	42
	50	ISL	12.61	12.60	33.127	25.020	294.1	0.172	5.79	95.8	4.2	0.61	3.1	0.28	0.48	0.36	50
1	52		12.22	12.21	33.088	25.065	289.9	0.178	5.80	95.1	4.3	0.61	3.2	0.29	0.43	0.33	52
1	63		12.14	12.13	33.288	25.235	274.0	0.209	5.29	86.7	6.4	0.92	8.7	0.35	0.21	0.19	63
1	73		10.92	10.91	33.190	25.382	260.0	0.236	5.22	83.3	8.5	0.95	9.6	0.02	0.14	0.14	74
	75	ISL	10.91	10.90	33.220	25.408	257.7	0.241	5.13	81.9	9.1	1.00	10.4	0.02	0.13	0.14	76
1	82		10.87	10.86	33.330	25.500	249.0	0.259	4.82	76.9	11.0	1.16	13.3	0.02	0.10	0.12	83
1	98		9.85	9.84	33.476	25.789	221.8	0.296	4.84	75.6	13.6	1.16	14.1	0.01	0.03	0.05	99
	100	ISL	9.78	9.77	33.506	25.824	218.5	0.301	4.68	73.0	14.8	1.23	15.2	0.01	0.03	0.05	101
1	113		9.42	9.41	33.685	26.024	199.8	0.328	3.61	55.9	22.8	1.68	22.3	0.01	0.01	0.07	114
	125	ISL	9.01	9.00	33.758	26.146	188.2	0.351	3.48	53.4	26.2	1.79	24.3	0.02	0.01	0.05	126
1	129		8.89	8.88	33.773	26.177	185.4	0.359	3.44	52.7	26.9	1.80	24.5	0.02	0.01	0.04	130
	150	ISL	8.67	8.65	33.883	26.298	174.3	0.397	2.97	45.3	30.9	1.95	26.8	0.01	0.00	0.06	151
1	155		8.65	8.63	33.906	26.319	172.4	0.405	2.86	43.6	31.7	1.98	27.2	0.01	0.00	0.07	156
1	181		8.34	8.32	33.986	26.430	162.3	0.449	2.68	40.6	35.2	2.08	28.2	0.01	0.00	0.04	182
	200	ISL	8.08	8.06	33.998	26.478	157.9	0.479	2.87	43.2	36.1	2.03	28.0	0.01	0.00	0.03	202
1	212		7.91	7.89	33.997	26.503	155.7	0.498	3.00	45.0	36.7	2.00	27.9	0.01	0.00	0.03	214
1	242		7.43	7.41	34.006	26.579	148.8	0.544	2.88	42.7	41.7	2.10	29.4	0.01			244
	250	ISL	7.33	7.31	34.008	26.595	147.4	0.555	2.81	41.6	43.1	2.14	29.9	0.01			252
1	283		6.94	6.91	34.014	26.654	142.1	0.603	2.44	35.8	49.4	2.31	32.2	0.00			285
	300	ISL	6.69	6.66	34.014	26.688	139.0	0.627	2.26	33.0	52.8	2.39	33.4	0.00			302
1	340		6.19	6.16	34.030	26.766	131.8	0.681	1.83	26.4	60.9	2.59	36.1	0.00			343
1	400		5.93	5.90	34.134	26.882	121.5	0.757	1.07	15.3	72.6	2.92	39.7	0.00			403
1	465		5.45	5.41	34.178	26.975	113.0	0.834	0.59	8.4	82.4	3.03	41.5	0.01			469
	500	ISL	5.28	5.24	34.205	27.017	109.3	0.872	0.51	7.2	86.9	3.09	42.1	0.01			504
1	536		5.11	5.07	34.234	27.060	105.5	0.911	0.42	5.9	91.6	3.16	42.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 23.5 N	124 19.3 W	24/10/88	1012 UTC	4542 M	300	15 KT			1015.9 MB	16.1 C	14.3 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.74	17.74	33.056	23.848	404.5	0.000	5.56	102.0	2.3	0.32	0.1	0.00	0.13	0.03	0
1	1	17.74	17.74	33.056	23.848	404.6	0.004	5.56	102.0	2.3	0.32	0.1	0.00	0.13	0.03	1
	10 ISL	17.74	17.74	33.055	23.847	404.9	0.040	5.57	102.1	2.2	0.33	0.1	0.00	0.13	0.04	10
1	17	17.74	17.74	33.054	23.847	405.2	0.069	5.57	102.1	2.1	0.33	0.1	0.00	0.13	0.04	17
	20 ISL	17.74	17.74	33.053	23.846	405.4	0.081	5.57	102.1	2.1	0.33	0.1	0.00	0.13	0.04	20
	30 ISL	17.75	17.74	33.050	23.842	406.1	0.122	5.56	102.0	2.0	0.32	0.1	0.00	0.12	0.04	30
1	32	17.75	17.74	33.050	23.842	406.2	0.130	5.56	102.0	2.0	0.32	0.1	0.00	0.12	0.04	32
1	43	17.59	17.58	33.040	23.873	403.6	0.174	5.60	102.4	2.1	0.33	0.1	0.00	0.16	0.05	43
	50 ISL	17.06	17.05	33.015	23.980	3 93.6	0.202	5.71	103.3	2.0	0.32	0.1	0.00	0.25	0.09	50
1	53	16.77	16.76	33.011	24.045	387.5	0.214	5.77	103.8	1.9	0.32	0.1	0.00	0.28	0.11	53
1	64	15.59	15.58	33.104	24.384	355.4	0.255	6.09	107.1	2.1	0.34	0.1	0.00	0.28	0.14	64
1	74	14.06	14.05	33.127	24.730	322.6	0.289	6.18	105.3	2.4	0.34	0.1	0.01	0.30	0.16	75
	75 ISL	13.90	13.89	33.122	24.760	319.8	0.292	6.17	104.8	2.4	0.35	0.2	0.02	0.30	0.16	76
1	83	12.81	12.80	33.085	24.950	301.7	0.317	6.03	100.1	2.9	0.47	1.0	0.13	0.25	0.18	84
1	98	11.95	11.94	33.119	25.141	283.8	0.361	5.73	93.5	4.2	0.65	4.1	0.02	0.16	0.16	99
	100 ISL	11.84	11.83	33.118	25.160	282.0	0.366	5.68	92.4	4.5	0.69	4.7	0.02	0.15	0.15	101
1	HI P	11.32	11.31	33.134	25.268	271.9	0.397	5.42	87.2	6.3	0.87	7.8	0.01	0.10	0.12	112
1	124 P	10.95	10.93	33.259	25.432	256.5	0.431	5.17	82.6	8.1	0.91	9.3	0.01	0.06	0.08	125
	125 ISL	10.90	10.88	33.268	25.448	255.0	0.434	5.14	82.0	8.4	0.92	9.6	0.01	0.06	0.08	126
1	142 P	9.93	9.91	33.408	25.724	229.0	0.475	4.62	72.2	13.5	1.20	14.4	0.03	0.03	0.05	143
	150 ISL	9.57	9.55	33.467	25.829	219.0	0.493	4.46	69.2	15.5	1.31	16.2	0.02	0.02	0.04	151
1	164 P	9.05	9.03	33.571	25.995	203.4	0.522	4.22	64.8	18.9	1.49	18.9	0.00	0.01	0.03	165
1	190 P	8.49	8.47	33.797	26.259	178.7	0.572	3.74	56.8	26.2	1.74	23.2	0.00	0.00	0.02	192
	200 ISL	8.32	8.30	33.855	26.330	172.0	0.589	3.71	56.1	27.9	1.74	23.8	0.00			202
1	215 P	8.09	8.07	33.920	26.416	164.1	0.615	3.70	55.7	30.1	1.74	24.4	0.01			217
1	249 P	7.56	7.54	33.988	26.547	152.0	0.668	3.23	48.0	37.6	1.98	27.5	0.00			251
	250 ISL	7.55	7.53	33.989	26.549	151.9	0.670	3.22	47.9	37.8	1.99	27.6	0.00			252
1	295 P	7.09	7.06	34.023	26.641	143.6	0.736	2.53	37.2	47.0	2.27	31.5	0.00			297
	300 ISL	7.04	7.01	34.023	26.648	143.0	0.744	2.44	35.9	48.0	2.31	31.9	0.01			302
1	344 P	6.57	6.54	34.022	26.711	137.4	0.805	1.72	25.0	57.4	2.60	35.0	0.05			347
1	399 P	5.92	5.89	34.091	26.849	124.6	0.877	1.21	17.3	69.2	2.85	38.7	0.00			402
	400 ISL	5.91	5.88	34.092	26.851	124.4	0.879	1.20	17.2	69.4	2.85	38.7	0.00			403
1	459 P	5.57	5'.53	34.156	26.944	116.1	0.949	0.68	9.7	79.6	3.05	41.2	0.01			463

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 26.8 N	120 31.6 W	26/10/88	0129 UTC	72 M	300	16 KT	320 02 02	1	1013.2 MB	14.7 C	13.0 C	2/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	14.94	14.94	33.542	24.862	307.9	0.000	5.92	103.0	5.8	0.42	1.4	0.07	3.91	0.75	0
1	10	14.31	14.31	33.515	24.976	297.4	0.030	5.53	95.0	7.2	0.63	4.3	0.13	2.07	0.49	10
	20 ISL	13.44	13.44	33.475	25.125	283.5	0.059	5.13	86.5	8.4	0.76	6.6	0.07	0.78	0.33	20
1	21	13.35	13.35	33.472	25.141	282.0	0.062	5.09	85.7	8.5	0.77	6.8	0.06	0.69	0.32	21
	30 ISL	12.68	12.68	33.471	25.273	269.6	0.087	4.73	78.5	10.4	0.98	9.6	0.08	0.47	0.30	30
1	31	12.61	12.61	33.473	25.288	268.2	0.090	4.69	77.8	10.7	1.00	9.9	0.08	0.45	0.30	31
1	42	11.93	11.92	33.543	25.472	250.9	0.118	4.15	67.8	14.8	1.16	12.9	0.03	0.26	0.32	42
	50 ISL	11.77	11.76	33.559	25.515	247.0	0.138	4.06	66.2	15.7	1.36	14.4	0.15	0.24	0.34	50
1	52	11.75	11.74	33.562	25.521	246.5	0.143	4.05	66.0	15.8	1.41	14.7	0.18	0.23	0.34	52
1	61	11.47	11.46	33.592	25.596	239.5	0.165	3.91	63.3	17.5	1.49	16.0	0.17	0.20	0.31	61

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 19.2 N	120 48.4 W	26/10/88	0411 UTC	740 M	330	10 KT			1012.9 MB	14.8 C	12.8 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.84	16.84	33.628	24.500	342.4	0.000	5.90	106.7	2.3	0.38	0.1	0.00	0.95	0.33	0
1	10	16.84	16.84	33.625	24.498	342.9	0.034	5.91	106.9	2.1	0.36	0.1	0.00	0.87	0.29	10
	20 ISL	15.70	15.70	33.588	24.731	321.0	0.067	5.75	101.6	3.0	0.38	0.9	0.02	1.59	0.66	20
1	21	15.56	15.56	33.584	24.759	318.4	0.071	5.73	101.0	3.2	0.38	1.1	0.02	1.65	0.70	21
	30 ISL	14.63	14.63	33.559	24.943	301.1	0.099	5.42	93.7	5.4	0.59	3.8	0.07	1.11	0.92	30
1	31	14.52	14.52	33.556	24.964	299.1	0.102	5.38	92.8	5.7	0.62	4.2	0.07	1.03	0.93	31
1	41	12.95	12.94	33.538	25.272	270.0	0.130	4.80	80.2	9.1	0.90	8.8	0.07	0.90	0.72	41
	50 ISL	12.20	12.19	33.559	25.434	254.8	0.154	4.46	73.3	11.6	1.13	12.3	0.21	0.66	0.70	50
1	52	12.10	12.09	33.565	25.458	252.6	0.159	4.41	72.4	12.0	1.17	12.9	0.24	0.60	0.69	52
1	62	11.75	11.74	33.588	25.541	244.8	0.184	4.21	68.6	13.5	1.28	14.6	0.21	0.38	0.34	62
1	72	11.03	11.02	33.630	25.705	229.4	0.207	3.84	61.6	16.0	1.45	17.6	0.07	0.31	0.35	73
	75 ISL	10.81	10.80	33.657	25.766	223.7	0.214	3.72	59.4	17.3	1.51	18.6	0.06	0.28	0.33	76
1	86	10.10	10.09	33.763	25.971	204.3	0.238	3.31	52.1	22.3	1.70	21.8	0.03	0.18	0.23	87
	100 ISL	9.68	9.67	33.841	26.103	192.1	0.265	3.06	47.7	26.1	1.83	23.7	0.02	0.09	0.20	101
1	102	9.65	9.64	33.849	26.114	191.0	0.269	3.04	47.4	26.5	1.84	23.9	0.02	0.08	0.20	103
1	122	9.35	9.34	33.913	26.213	182.0	0.306	2.83	43.8	29.5	1.92	25.3	0.00	0.14	0.29	123
	125 ISL	9.31	9.30	33.924	26.229	180.5	0.312	2.80	43.3	30.0	1.94	25.5	0.00	0.14	0.28	126
1	148	9.05	9.03	33.999	26.329	171.4	0.352	2.55	39.3	33.5	2.07	27.0	0.01	0.11	0.20	149
	150 ISL	9.04	9.02	34.004	26.335	170.9	0.356	2.53	38.9	33.7	2.08	27.1	0.01	0.12	0.21	151
1	179	8.87	8.85	34.071	26.415	163.9	0.404	2.28	35.0	36.3	2.18	28.1	0.01	0.20	0.39	180
	200 ISL	8.75	8.73	34.109	26.464	159.6	0.438	2.06	31.5	38.7	2.26	29.1	0.01	0.08	0.21	202
1	210	8.69	8.67	34.125	26.485	157.7	0.454	1.95	29.8	39.9	2.30	29.6	0.01	0.03	0.13	212
1	239	8.45	8.43	34.164	26.554	151.7	0.499	1.70	25.8	43.3	2.42	30.8	0.01			241
	250 ISL	8.40	8.37	34.182	26.575	149.9	0.516	1.58	24.0	44.5	2.46	31.2	0.01			252
1	280	8.21	8.18	34.204	26.622	145.9	0.560	1.37	20.7	47.4	2.54	32.0	0.03			282
	300 ISL	7.86	7.83	34.159	26.639	144.4	0.589	1.62	24.3	48.5	2.50	32.1	0.05			302
1	337	7.12	7.09	34.068	26.673	141.3	0.642	2.07	30.5	51.7	2.45	32.8	0.08			340
1	397	6.27	6.23	34.100	26.812	128.4	0.723	1.27	18.3	66.2	2.79	37.6	0.01			400
	400 ISL	6.27	6.23	34.108	26.818	127.8	0.727	1.23	17.8	66.7	2.01	37.7	0.01			403
1	462	6.33	6.29	34.261	26.932	118.1	0.803	0.49	7.1	74.5	3.07	39.2	0.01			466
	500 ISL	6.10	6.06	34.280	26.977	114.1	0.847	0.41	5.9	78.6	3.12	39.9	0.01			504
1	534	5.90	5.85	34.297	27.016	110.7	0.885	0.34	4.9	82.3	3.17	40.6	0.01			539

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
34 9.2 N	121 9.3 W	23/10/88	0221 UTC	2237 M	330	20 KT			1011.3 MB	14.3 C	14.0 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.02	16.02	33.408	24.520	3 40.5	0.000	5.86	104.1	2.8	0.33	0.0	0.01	0.54	0.16	0
1	1		16.02	16.02	33.408	24.520	3 40.5	0.003	5.86	104.1	2.8	0.33	0.0	0.01	0.54	0.16	1
	10	ISL	15.99	15.99	33.407	24.526	3 40.2	0.034	5.87	104.2	2.8	0.33	0.1	0.01	0.54	0.15	10
1	11		15.99	15.99	33.407	24.526	340.2	0.037	5.87	104.2	2.8	0.33	0.1	0.01	0.54	0.15	11
	20	ISL	15.86	15.86	33.440	24.581	335.3	0.068	5.91	104.7	3.0	0.33	0.1	0.00	0.63	0.18	20
1	22		15.83	15.83	33.448	24.594	334.1	0.075	5.91	104.6	3.0	0.33	0.1	0.00	0.66	0.19	22
	30	ISL	14.86	14.86	33.442	24.803	314.4	0.100	5.86	101.7	3.8	0.47	2.2	0.12	0.75	0.32	30
1	32		14.55	14.55	33.432	24.862	308.9	0.107	5.83	100.6	4.0	0.51	2.8	0.15	0.76	0.35	32
1	42		12.91	12.90	33.290	25.088	287.5	0.137	5.56	92.6	4.8	0.61	4.6	0.09	0.59	0.34	42
	50	ISL	11.52	11.51	33.383	25.424	255.6	0.158	4.91	79.5	9.7	1.12	11.8	0.04	0.29	0.24	50
1	53		11.07	11.06	33.430	25.542	244.4	0.166	4.67	74.9	11.7	1.31	14.5	0.03	0.18	0.19	53
1	63		10.32	10.31	33.430	25.673	232.1	0.190	4.48	70.7	15.0	1.35	16.1	0.02	0.08	0.10	63
1	73		10.33	10.32	33.558	25.772	223.0	0.212	4.10	64.8	17.9	1.58	19.5	0.02	0.10	0.10	74
	75	ISL	10.28	10.27	33.579	25.797	220.6	0.217	4.01	63.3	18.6	1.62	20.1	0.02	0.10	0.10	76
1	88		9.84	9.83	33.693	25.960	205.3	0.244	3.48	54.4	22.8	1.79	23.0	0.01	0.05	0.10	89
	100	ISL	9.53	9.52	33.761	26.065	195.6	0.269	3.22	50.0	25.4	1.87	24.4	0.01	0.03	0.08	101
1	103		9.47	9.46	33.774	26.085	193.8	0.274	3.18	49.3	25.9	1.88	24.6	0.01	0.03	0.07	104
1	124		9.15	9.14	33.849	26.195	183.6	0.314	2.89	44.5	2.9.1	1.98	26.2	0.01	0.01	0.06	125
	125	ISL	9.13	9.12	33.853	26.202	183.0	0.316	2.88	44.4	29.3	1.98	26.2	0.01	0.01	0.06	126
1	150		8.69	8.67	33.937	26.337	170.6	0.360	2.78	42.4	32.9	1.99	27.1	0.01	0.01	0.04	151
1	181		8.25	8.23	33.995	26.450	160.3	0.411	2.81	42.5	36.1	2.01	27.9	0.02	0.01	0.03	182
	200	ISL	8.00	7.98	34.014	26.503	155.6	0.441	2.74	41.2	38.9	2.08	28.6	0.01	0.01	0.02	202
1	212		7.85	7.83	34.023	26.532	152.9	0.460	2.66	39.8	40.9	2.13	29.2	0.01	0.01	0.02	214
1	241		7.53	7.51	34.049	26.599	147.0	0.503	2.33	34.7	46.1	2.28	31.2	0.01			243
	250	ISL	7.41	7.39	34.055	26.621	145.0	0.516	2.22	32.9	48.1	2.34	31.8	0.01			252
1	283		7.00	6.97	34.076	26.695	138.3	0.563	1.84	27.0	55.2	2.54	33.9	0.01			285
	300	ISL	6.88	6.85	34.092	26.724	135.7	0.586	1.64	24.0	57.8	2.61	34.8	0.03			302
1	339		6.71	6.68	34.129	26.776	131.2	0.639	1.24	18.1	62.4	2.73	36.4	0.06			342
1	399		6.46	6.42	34.163	26.837	126.2	0.716	0.86	12.5	68.2	2.90	38.1	0.01			402
	400	ISL	6.45	6.41	34.163	26.838	126.1	0.717	0.86	12.5	68.3	2.90	38.1	0.01			403
1	464		6.00	5.96	34.195	26.922	118.7	0.795	0.61	8.8	76.5	3.01	40.0	0.01			468
	500	ISL	5.85	5.81	34.220	26.961	115.4	0.837	0.50	7.2	79.9	3.09	40.6	0.04			504
1	534		5.70	5.65	34.245	26.999	112.0	0.876	0.39	5.6	83.1	3.17	41.1	0.07			539

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 49.3 N	121 50.8 W	23/10/88	0755 UTC	3627 M	330	19 KT			1013.0 MB	15.2 C	14.5 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.65	16.65	33.188	24.206	370.4	0.000	5.71	102.6	2.2	0.35	0.1	0.00	0.19	0.06	0
1	1		16.65	16.65	33.188	24.207	370.4	0.004	5.71	102.6	2.2	0.35	0.1	0.00	0.19	0.06	1
	10	ISL	16.64	16.64	33.187	24.208	370.5	0.037	5.71	102.6	1.9	0.36	0.1	0.00	0.19	0.05	10
1	11		16.64	16.64	33.187	24.208	370.5	0.041	5.71	102.6	1.9	0.36	0.1	0.00	0.19	0.05	11
	20	ISL	16.66	16.66	33.186	24.203	371.3	0.074	5.72	102.8	1.9	0.33	0.1	0.00	0.18	0.05	20
1	21		16.66	16.66	33.186	24.203	371.3	0.078	5.72	102.8	1.9	0.33	0.1	0.00	0.18	0.05	21
	30	ISL	16.34	16.34	33.230	24.311	361.3	0.111	5.81	103.8	1.8	0.40	0.1	0.00	0.29	0.09	30
1	31		16.31	16.31	33.247	24.331	359.5	0.114	5.82	103.9	1.8	0.41	0.1	0.00	0.30	0.10	31
1	42		14.57	14.56	33.262	24.727	322.0	0.152	6.02	103.8	2.4	0.41	0.4	0.03	0.40	0.21	42
	50	ISL	13.35	13.34	33.149	24.892	3 06.4	0.177	6.04	101.5	2.8	0.43	0.7	0.12	0.44	0.21	50
1	52		13.07	13.06	33.118	24.923	3 03.4	0.183	6.04	100.9	2.9	0.44	0.8	0.14	0.44	0.21	52
1	63		12.02	12.01	33.061	25.082	288.5	0.216	5.79	94.5	3.9	0.60	3.3	0.08	0.37	0.18	63
1	73		11.44	11.43	33.118	25.233	274.3	0.244	5.54	89.4	5.5	0.72	6.2	0.02	0.26	0.19	74
	75	ISL	11.35	11.34	33.139	25.266	271.2	0.249	5.47	88.1	6.0	0.77	7.0	0.02	0.24	0.18	76
1	88		10.76	10.75	33.300	25.497	249.5	0.283	4.94	78.6	10.2	1.15	12.3	0.02	0.11	0.13	89
	100	ISL	10.09	10.08	33.439	25.720	228.4	0.312	4.47	70.2	15.9	1.41	17.0	0.01	0.04	0.07	101
1	103		9.95	9.94	33.476	25.773	223.5	0.319	4.34	67.9	17.4	1.46	18.1	0.01	0.03	0.06	104
	125	ISL	10.00	9.99	33.826	26.038	198.8	0.365	2.99	47.0	24.2	1.79	23.5	0.01	0.02	0.10	126
1	126		10.00	9.99	33.838	26.047	197.9	0.367	2.93	46.0	24.4	1.80	23.7	0.01	0.02	0.10	127
1	150		9.33	9.31	33.953	26.248	179.2	0.412	2.62	40.6	30.2	2.02	26.3	0.01	0.02	0.08	151
1	180		8.94	8.92	34.030	26.371	168.0	0.464	2.36	36.2	34.3	2.10	27.9	0.00	0.01	0.06	181
	200	ISL	8.57	8.55	34.043	26.440	161.8	0.497	2.41	36.7	36.5	2.11	28.7	0.00	0.01	0.05	202
1	210		8.40	8.38	34.049	26.470	159.0	0.513	2.42	36.7	37.7	2.12	29.1	0.00	0.01	0.05	212
1	240		8.15	8.13	34.112	26.558	151.2	0.560	2.00	30.2	43.0	2.29	30.8	0.01			242
	250	ISL	8.06	8.03	34.124	26.581	149.1	0.575	1.89	28.5	44.5	2.33	31.3	0.01			252
1	281		7.71	7.68	34.139	26.645	143.5	0.620	1.64	24.5	49.1	2.45	32.8	0.01			283
	300	ISL	7.39	7.36	34.126	26.680	140.2	0.647	1.58	23.4	52.3	2.51	33.8	0.01			302
1	336		6.77	6.74	34.100	26.745	134.2	0.697	1.47	21.5	58.5	2.62	35.8	0.01			339
1	395		6.21	6.18	34.135	26.847	125.0	0.773	0.95	13.7	67.6	2.84	38.7	0.01			3 98
	400	ISL	6.17	6.13	34.139	26.855	124.2	0.779	0.92	13.3	68.4	2.86	38.9	0.01			403
1	462		5.74	5.70	34.191	26.951	115.7	0.854	0.57	8.1	78.5	3.07	40.7	0.01			466
	500	ISL	5.59	5.55	34.226	26.997	111.6	0.897	0.45	6.4	83.2	3.15	41.4	0.00			504
1	532		5.46	5.42	34.256	27.037	108.1	0.932	0.34	4.8	87.1	3.21	42.0	0.00			537

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.1 N	122 32.2 W	23/10/88	1311 UTC	4002 M	330	19 KT	320 07 08	2	1014.9 MB	15.2 C	14.1 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.62	16.62	33.486	24.442	347.9	0.000	5.72	102.9	2.8	0.38	0.0	0.00	0.41	0.19	0
1	1		16.62	16.62	33.486	24.442	347.9	0.003	5.72	102.9	2.8	0.38	0.0	0.00	0.41	0.19	1
	10	ISL	16.61	16.61	33.486	24.445	347.9	0.035	5.72	102.9	2.8	0.38	0.0	0.00	0.40	0.21	10
1	17		16.60	16.60	33.486	24.448	347.9	0.059	5.72	102.8	2.7	0.38	0.0	0.00	0.40	0.23	17
	20	ISL	16.60	16.60	33.486	24.448	348.0	0.070	5.72	102.8	2.7	0.38	0.0	0.00	0.40	0.22	20
	30	ISL	16.61	16.61	33.485	24.445	348.6	0.104	5.72	102.9	2.5	0.39	0.0	0.00	0.42	0.20	30
1	32		16.61	16.60	33.485	24.445	348.7	0.111	5.72	102.9	2.5	0.39	0.0	0.00	0.42	0.19	32
1	43		15.38	15.37	33.553	24.776	317.4	0.148	5.34	93.8	4.1	0.61	2.9	0.40	0.59	0.48	43
	50	ISL	13.36	13.35	33.491	25.154	281.5	0.169	4.85	81.7	7.7	0.95	8.8	0.17	0.36	0.36	50
1	53		12.51	12.50	33.478	25.312	266.5	0.177	4.63	76.6	9.4	1.10	11.5	0.04	0.24	0.29	53
1	63		11.49	11.48	33.559	25.567	242.4	0.203	4.15	67.2	13.9	1.35	15.8	0.03	0.15	0.19	63
1	73		10.67	10.66	33.644	25.780	222.2	0.226	3.67	58.4	19.0	1.57	20.0	0.01	0.05	0.10	74
	75	ISL	10.54	10.53	33.653	25.810	219.5	0.230	3.63	57.6	19.5	1.59	20.4	0.01	0.05	,0.09	76
1	83		10.06	10.05	33.674	25.908	210.2	0.247	3.54	55.6	21.1	1.64	21.3	0.02	0.03	0.08	84
1	98		9.30	9.29	33.700	26.054	196.5	0.278	3.37	52.1	23.8	1.73	23.3	0.02	0.01	0.04	99
	100	ISL	9.25	9.24	33.711	26.071	195.0	0.282	3.36	51.9	24.2	1.74	23.5	0.02	0.01	0.04	101
1	114		9.02	9.01	33.794	26.173	185.5	0.309	3.29	50.5	26.5	1.79	24.3	0.01	0.01	0.04	115
	125	ISL	8.82	8.81	33.846	26.245	178.8	0.329	2.91	44.5	27.9	1.79	24.5	0.01	0.01	0.04	126
1	129		8.75	8.74	33.863	26.270	176.6	0.336	2.77	42.3	28.4	1.79	24.6	0.01	0.01	0.04	130
	150	ISL	8.52	8.50	33.951	26.374	167.0	0.372	2.81	42.7	32.8	1.94	26.9	0.01	0.00	0.04	151
1	155		8.47	8.45	33.968	26.395	165.1	0.380	2.82	42.8	33.9	1.98	27.5	0.01	0.00	0.04	156
1	181		8.17	8.15	34.011	26.475	157.9	0.422	2.78	41.9	36.9	2.04	28.2	0.01	0.00	0.03	182
	200	ISL	7.97	7.95	34.032	26.521	153.8	0.452	2.63	39.5	39.6	2.12	29.2	0.01	0.00	0.03	202
1	212		7.83	7.81	34.043	26.551	151.2	0.470	2.49	37.3	41.7	2.18	30.0	0.01	0.00	0.03	214
1	241		7.43	7.41	34.071	26.630	143.9	0.513	2.02	30.0	48.5	2.38	32.5	0.01			243
	250	ISL	7.34	7.32	34.076	26.647	142.4	0.526	1.93	28.6	50.0	2.42	33.0	0.01			252
1	283		7.06	7.03	34.091	26.698	138.0	0.572	1.67	24.6	54.7	2.54	34.4	0.01			285
	300	ISL	6.91	6.88	34.104	26.729	135.2	0.595	1.53	22.4	57.3	2.60	35.1	0.01			302
1	339		6.59	6.56	34.131	26.794	129.5	0.647	1.24	18.0	63.0	2.73	36.5	0.02			342
1	399		6.12	6.08	34.137	26.860	123.7	0.723	0.97	14.0	71.2	2.88	38.8	0.01			402
	400	ISL	6.11	6.07	34.137	26.861	123.6	0.724	0.97	14.0	71.4	2.88	38.8	0.01			403
1	465		5.40	5.36	34.137	26.949	115.5	0.802	0.73	10.3	82.3	3.00	41.2	0.01			469
	500	ISL	5.25	5.21	34.173	26.995	111.3	0.841	0.58	8.2	87.2	3.07	41.9	0.01			504
1	536		5.10	5.06	34.211	27.043	107.1	0.881	0.42	5.9	92.2	3.15	42.7	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.1 N	123 13.3 W	23/10/88	1840 UTC	4226 M	340	14 KT	330 05 07	1	1016.2 MB	16.9 C	14.9 C	7/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.021	24.030	387.2	0.000	5.71	102.9	1.3	0.37	0.1	0.00	0.22	0.05	0
1	1		16.86	16.86	33.021	24.030	387.2	0.004	5.71	102.9	1.3	0.37	0.1	0.00	0.22	0.05	1
	10	ISL	16.85	16.85	33.021	24.032	387.3	0.039	5.71	102.9	1.3	0.36	0.1	0.00	0.21	0.06	10
1	17		16.84	16.84	33.021	24.035	387.3	0.066	5.71	102.9	1.3	0.35	0.1	0.00	0.21	0.06	17
	20	ISL	16.67	16.67	33.019	24.073	383.7	0.077	5.77	103.6	1.3	0.36	0.1	0.00	0.26	0.06	20
	30	ISL	15.62	15.62	33.017	24.310	361.4	0.115	6.03	106.0	1.2	0.38	0.1	0.00	0.41	0.11	30
1	32		15.32	15.32	33.018	24.376	355.1	0.122	6.09	106.4	1.2	0.38	0.1	0.00	0.44	0.12	32
1	43		13.07	13.06	33.063	24.880	307.3	0.158	6.35	106.0	2.6	0.37	0.1	0.00	0.46	0.25	43
	50	ISL	13.05	13.04	33.222	25.008	295.4	0.179	6.23	104.1	2.7	0.35	0.2	0.01	0.47	0.24	50
1	53		13.04	13.03	33.258	25.038	292.6	0.188	6.16	102.9	2.7	0.34	0.2	0.01	0.47	0.24	53
1	63		12.79	12.78	33.336	25.148	282.4	0.217	6.04	100.4	2.6	0.33	0.2	0.04	0.35	0.27	63
1	74		12.50	12.49	33.345	25.211	276.6	0.248	5.93	98.0	2.9	0.35	0.6	0.16	0.35	0.26	75
	75	ISL	12.49	12.48	33.348	25.215	276.2	0.250	5.92	97.8	2.9	0.35	0.6	0.16	0.34	0.26	76
1	83		12.39	12.38	33.375	25.256	272.6	0.272	5.85	96.5	3.2	0.34	1.3	0.17	0.28	0.24	84
1	98		11.66	11.65	33.389	25.404	258.7	0.312	5.59	90.8	4.8	0.51	4.5	0.02	0.14	0.13	99
	100	ISL	11.49	11.48	33.392	25.438	255.5	0.317	5.51	89.1	5.6	0.58	5.5	0.02	0.13	0.12	101
1	114		10.32	10.31				0.352	4.86	76.7	12.0	1.08	13.1	0.01	0.06	0.07	115
	125	ISL	9.75	9.74	33.493	25.820	219.4	0.376	4.39	68.4	16.6	1.34	17.2	0.01	0.03	0.04	126
1	129		9.60	9.59	33.521	25.866	215.1	0.385	4.23	65.7	18.1	1.42	18.5	0.01	0.02	0.03	130
	150	ISL	9.28	9.26	33.728	26.080	195.1	0.428	3.36	51.9	25.1	1.79	24.2	0.04	0.01	0.04	151
1	155		9.23	9.21	33.775	26.125	190.9	0.438	3.21	49.5	26.4	1.85	25.1	0.04	0.01	0.04	156
1	181		8.40	8.38	33.878	26.336	171.2	0.485	3.33	50.5	30.8	1.83	25.9	0.01	0.00	0.03	182
	200	ISL	8.25	8.23	33.967	26.428	162.7	0.517	2.99	45.2	34.2	1.97	27.4	0.00	0.00	0.02	202
1	212		8.21	8.19	34.012	26.470	159.0	0.536	2.75	41.5	36.3	2.07	28.3	0.00	0.00	0.02	214
1	241		7.77	7.75	34.024	26.545	152.2	0.581	2.70	40.4	40.8	2.13	29.4	0.00			243
	250	ISL	7.66	7.64	34.028	26.564	150.5	0.595	2.64	39.4	42.3	2.16	29.9	0.00			252
1	282		7.29	7.26	34.042	26.628	144.8	0.642	2.34	34.6	48.1	2.31	31.8	0.00			284
	300	ISL	7.10	7.07	34.052	26.662	141.7	0.668	2.12	31.2	51.3	2.41	33.0	0.00			302
1	339		6.69	6.66	34.070	26.732	135.4	0.722	1.66	24.2	58.5	2.61	35.5	0.00			342
1	399		5.89	5.86	34.083	26.846	124.8	0.800	1.21	17.3	70.2	2.85	38.9	0.00			402
	400	ISL	5.88	5.85	34.083	26.848	124.7	0.801	1.20	17.2	70.4	2.85	38.9	0.00			403
1	465		5.25	5.21	34.116	26.950	115.2	0.879	0.82	11.6	83.5	3.02	41.4	0.00			469
	500	ISL	5.35	5.31	34.199	27.004	110.6	0.919	0.56	7.9	85.7	3.11	41.8	0.00			504
1	535		5.45	5.41	34.281	27.058	106.2	0.956	0.29	4.1	87.9	3.20	42.1	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 49.2 N	123 54.7 W	24/10/88	0429 UTC	4409 M	3 40	12 KT			1015.4 MB	16.5 C	14.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.51	17.51	33.020	23.875	401.9	0.000	5.63	102.8	1.8	0.35	0.1	0.00	0.14	0.03	0
1	1		17.51	17.51	33.020	23.87 5	402.0	0.004	5.63	102.8	1.8	0.35	0.1	0.00	0.14	0.03	1
	10	ISL	17.51	17.51	33.019	23.875	402.3	0.040	5.64	102.9	1.8	0.35	0.0	0.00	0.12	0.03	10
1	11		17.51	17.51	33.019	23.875	402.3	0.044	5.64	102.9	1.8	0.35	0.0	0.00	0.12	0.03	11
	20	ISL	17.50	17.50	33.019	23.878	402.4	0.080	5.64	102.9	1.7	0.32	0.1	0.00	0.12	0.03	20
1	22		17.50	17.50	33.018	23.877	402.5	0.088	5.64	102.9	1.7	0.31	0.1	0.00	0.12	0.03	22
	30	ISL	17.48	17.48	33.022	23.885	402.0	0.121	5.64	102.9	1.6	0.35	0.0	0.00	0.13	0.03	30
1	32		17.47	17.46	33.023	23.888	401.7	0.129	5.64	102.9	1.6	0.36	0.0	0.00	0.13	0.03	32
1	42		16.65	16.64	33.014	24.074	384.3	0.168	5.85	105.0	1.6	0.37	0.1	0.00	0.23	0.07	42
	50	ISL	15.59	15.58	33.040	24.335	359.7	0.198	6.10	107.2	1.6	0.35	0.1	0.00	0.28	0.09	50
1	52		15.30	15.29	33.057	24.412	352.4	0.205	6.15	107.5	1.6	0.34	0.1	0.00	0.29	0.10	52
1	62		14.06	14.05	33.240	24.817	313.9	0.238	6.19	105.6	2.2	0.30	0.1	0.00	0.33	0.14	62
1	73		13.47	13.46	33.260	24.954	301.2	0.272	6.01	101.3	2.1	0.30	0.1	0.01	0.33	0.25	74
	75	ISL	13.35	13.34	33.251	24.971	299.6	0.278	5.98	100.5	2.2	0.31	0.2	0.02	0.33	0.25	76
1	87		12.70	12.69	33.190	25.053	292.0	0.314	5.83	96.7	2.6	0.41	1.2	0.06	0.34	0.24	88
	100	ISL	12.33	12.32	33.198	25.130	284.9	0.351	5.72	94.1	2.9	0.46	2.0	0.04	0.26	0.22	101
1	102		12.28	12.27	33.203	25.144	283.7	0.357	5.70	93.7	3.0	0.47	2.2	0.03	0.24	0.21	103
1	123		11.37	11.35	33.248	25.348	264.6	0.414	5.45	87.9	5.9	0.73	6.3	0.01	0.10	0.11	124
	125	ISL	11.26	11.24	33.259	25.377	261.9	0.420	5.39	86.7	6.4	0.77	7.0	0.01	0.09	0.10	126
1	148		9.98	9.96	33.440	25.740	227.5	0.476	4.54	71.1	14.0	1.27	15.4	0.01	0.03	0.04	149
	150	ISL	9.87	9.85	33.463	25.777	224.1	0.480	4.48	70.0	14.8	1.30	16.0	0.01	0.03	0.04	151
1	179		8.67	8.65	33.793	26.228	181.5	0.539	3.71	56.5	26.0	1.67	23.3	0.01	0.00	0.02	180
	200	ISL	8.47	8.45	33.930	26.366	168.7	0.576	3.15	47.8	31.4	1.90	26.2	0.00	0.00	0.02	202
1	210		8.43	8.41	33.969	26.403	165.4	0.593	2.95	44.8	33.5	1.99	27.1	0.00	0.00	0.02	212
1	240		7.90	7.88	34.008	26.513	155.3	0.641	2.91	43.6	38.7	2.07	28.5	0.00			242
	250	ISL	7.77	7.75	34.015	26.538	153.0	0.656	2.83	42.3	40.3	2.11	29.1	0.00			252
1	280		7.45	7.42	34.031	26.597	147.8	0.701	2.50	37.1	45.4	2.26	30.9	0.00			282
	300	ISL	7.21	7.18	34.042	26.639	143.9	0.730	2.26	33.4	49.3	2.36	32.3	0.00			302
1	338		6.78	6.75	34.064	26.716	137.0	0.784	1.80	26.3	57.0	2.55	34.9	0.00			3 41
1	396		6.27	6.23	34.102	26.813	128.2	0.861	1.16	16.8	67.6	2.83	38.0	0.00			399
	400	ISL	6.22	6.18	34.102	26.820	127.6	0.866	1.14	16.4	68.3	2.84	38.2	0.00			403
1	462		5.47	5.43	34.104	26.915	118.7	0.942	0.93	13.2	80.1	3.00	40.7	0.00			466
	500	ISL	5.19	5.15	34.144	26.979	112.8	0.986	0.70	9.9	87.5	3.08	41.8	0.02			504
1	530		4.96	4.92	34.176	27.031	107.9	1.019	0.52	7.3	93.3	3.15	42.7	0.04			535

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 17.5 N	120 2.2 W	22/10/88	1910 UTC	573 M	310	06 KT	310 02 04	4	1012.5 MB	15.5 C	15.5 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	15.82	15.82	33.593	24.707	322.7	0.000	6.25	110.7	4.9	0.41	0.2	0.02	2.76	0.69	0
1	2	A	15.82	15.82	33.593	24.707	322.7	0.006	6.25	110.7	4.9	0.41	0.2	0.02	2.76	0.69	2
	10	ISL	15.55	15.55	33.590	24.765	317.4	0.032	6.19	109.1	5.0	0.39	0.5	0.04	3.97	0.84	10
1	12		15.42	15.42	33.588	24.793	314.9	0.038	6.18	108.6	5.0	0.38	0.6	0.04	4.26	0.88	12
	20	ISL	14.53	14.53	33.576	24.977	297.6	0.063	5.83	100.6	7.6	0.65	3.7	0.21	2.86	0.73	20
1	27		13.63	13.63	33.572	25.161	280.1	0.083	5.40	91.5	10.2	0.93	7.1	0.35	1.19	0.54	27
	30	ISL	13.31	13.31	33.570	25.225	274.2	0.091	5.20	87.5	10.5	0.99	8.3	0.34	1.10	0.53	30
1	42		12.20	12.19	33.579	25.449	253.1	0.123	4.41	72.5	11.8	1.20	13.0	0.31	0.72	0.50	42
	50	ISL	11.61	11.60	33.610	25.584	240.5	0.143	4.02	65.3	14.0	1.36	15.7	0.19	0.56	0.49	50
1	58		11.10	11.09	33.657	25.714	228.3	0.162	3.70	59.5	16.9	1.52	18.1	0.07	0.42	0.47	58
1	72		10.29	10.28	33.775	25.948	206.2	0.192	3.23	51.0	22.6	1.71	21.6	0.02	0.11	0.28	73
	75	ISL	10.14	10.13	33.805	25.997	201.6	0.198	3.13	49.3	23.8	1.75	22.3	0.02	0.10	0.25	76
1	87		9.69	9.68	33.916	26.159	186.4	0.221	2.80	43.7	27.9	1.89	24.4	0.02	0.05	0.14	88
	100	ISL	9.49	9.48	33.979	26.242	178.8	0.245	2.65	41.2	30.3	1.97	25.5	0.01	0.03	0.10	101
1	101		9.48	9.47	33.982	26.246	178.5	0.247	2.64	41.0	30.4	1.97	25.5	0.01	0.03	0.10	102
1	121		9.41	9.40	34.034	26.298	173.9	0.282	2.43	37.7	32.1	2.05	26.4	0.01	0.02	0.10	122
	125	ISL	9.37	9.36	34.041	26.310	172.8	0.289	2.41	37.4	32.4	2.06	26.5	0.01	0.02	0.10	126
1	140		9.23	9.21	34.063	26.350	169.3	0.315	2.35	36.3	33.8	2.11	27.0	0.01	0.01	0.08	141
	150	ISL	9.16	9.14	34.080	26.375	167.1	0.332	2.22	34.3	35.2	2.16	27.6	0.01	0.01	0.08	151
1	171		9.05	9.03	34.114	26.420	163.3	0.366	1.90	29.3	38.2	2.28	28.9	0.01	0.02	0.10	172
	200	ISL	8.92	8.90	34.148	26.467	159.3	0.413	1.67	25.7	40.9	2.38	29.9	0.00	0.02	0.09	202
1	201		8.92	8.90	34.149	26.468	159.3	0.415	1.66	25.5	41.0	2.38	29.9	0.00	0.02	0.09	203
1	241		8.58	8.55	34.176	26.543	152.8	0.477	1.31	20.0	46.6	2.55	31.7	0.01	0.01	0.10	243
	250	ISL	8.50	8.47	34.179	26.558	151.6	0.491	1.25	19.0	48.0	2.58	32.0	0.01	0.01	0.11	252
1	291		8.12	8.09	34.187	26.622	146.0	0.552	1.02	15.4	54.6	2.73	33.2	0.01	0.03	0.14	293
	300	ISL	8.03	8.00	34.189	26.637	144.7	0.565	0.97	14.6	56.0	2.77	33.5	0.01			302
1	340		7.63	7.60	34.200	26.705	138.7	0.622	0.75	11.2	62.1	2.91	34.7	0.01			343
1	390		7.17	7.13	34.216	26.783	131.8	0.689	0.57	8.4	69.9	3.02	35.3	0.00			3 93
	400	ISL	7.08	7.04	34.220	26.799	130.4	0.702	0.52	7.7	71.5	3.04	35.3	0.00			403
1	428		6.85	6.81	34.232	26.840	126.8	0.738	0.35	5.1	77.2	3.12	35.4	0.01			432
1	467		6.53	6.49	34.251	26.898	121.6	0.787	0.08	1.2	89.3	3.34	33.5	0.01			471
1	496		6.41	6.36	34.257	26.919	119.9	0.822	0.03	0.4	94.7	3.43	32.1	0.01			500
	500	ISL	6.40	6.35	34.258	26.921	119.8	0.827	0.03	0.4	95.8	3.47	31.7	0.01			504
1	517		6.37	6.32	34.262	26.928	119.3	0.847	0.02	0.3	99.8	3.64	30.2	0.01			522
1	535		6.32	6.27	34.262	26.935	118.9	0.868	0.02	0.3	101.3	3.72	30.2	0.02			540
1	555		6.30	6.25	34.264	26.939	118.7	0.892	0.01	0.1	109.7	4.07	26.1	0.01			560
1	569		6.30	6.25	34.265	26.940	118.8	0.909	0.01	0.1	114.2	4.23	23.9	0.05			574

A) SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 8810 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 24.9 W	22/10/88	1451 UTC	35 M	090	04 KT	270 02 04	4	1013.0 MB	16.7 C	16.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
	0	ISL	18.03	18.03	33.617	24.207	370.3	0.000	5.98	110.6	1.8	0.20	0.0	0.00	1.41	0.26	0
1	1		18.03	18.03	33.617	24.207	370.3	0.004	5.98	110.6	1.8	0.20	0.0	0.00	1.41	0.26	1
	10	ISL	17.07	17.07	33.556	24.391	353.1	0.036	6.03	109.5	2.3	0.26	0.0	0.00	1.00	0.67	10
1	11		16.91	16.91	33.548	24.422	350.1	0.040	6.04	109.3	2.3	0.28	0.0	0.00	0.97	0.72	11
	20	ISL	15.72	15.72	33.523	24.676	326.2	0.070	5.45	96.3	5.2	0.49	1.6	0.11	1.92	0.70	20
1	22		15.38	15.38	33.516	24.746	319.6	0.077	5.29	92.9	6.0	0.56	2.3	0.14	2.07	0.70	22
	30	ISL	13.33	13.33	33.458	25.134	282.8	0.101	4.83	81.3	8.6	0.93	7.8	0.28	0.82	0.45	30
1	32		12.82	12.82	33.452	25.231	273.7	0.106	4.72	78.6	9.3	1.02	9.2	0.32	0.51	0.39	32

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
34 10.7 N	119 30.8 W	22/10/88	1230 UTC	152 M	260	07 KT			1011.5 MB	16.8 C	15.9 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.38	18.38	33.614	24.118	378.7	0.000	5.76	107.3	2.0	0.25	0.0	0.00	0.47	0.21	0
1	10		18.30	18.30	33.606	24.132	377.8	0.038	5.81	108.0	2.0	0.25	0.0	0.00	0.57	0.27	10
	20	ISL	15.46	15.46	33.424	24.658	328.0	0.073	6.06	106.5	3.1	0.37	0.6	0.03	0.90	0.53	20
1	21		15.13	15.13	33.410	24.719	322.1	0.076	6.07	105.9	3.3	0.39	0.7	0.03	0.93	0.55	21
	30	ISL	13.47	13.47	33.363	25.032	292.5	0.104	5.65	95.3	4.8	0.64	3.7	0.31	0.78	0.39	30
1	31		13.34	13.34	33.362	25.058	290.1	0.107	5.59	94.0	5.0	0.67	4.1	0.34	0.75	0.37	31
1	42		12.61	12.60	33.396	25.229	274.1	0.138	5.02	83.2	7.0	0.91	8.0	0.44	0.48	0.33	42
	50	ISL	12.07	12.06	33.458	25.380	259.9	0.159	4.54	74.4	9.6	1.13	11.9	0.13	0.37	0.27	50
1	52		11.94	11.93	33.476	25.419	256.2	0.164	4.42	72.2	10.3	1.18	12.9	0.05	0.35	0.26	52
1	62		11.43	11.42	33.553	25.573	241.7	0.189	3.98	64.4	13.6	1.35	15.8	0.02	0.20	0.20	62
1	73		10.89	10.88	33.650	25.746	225.5	0.215	3.65	58.4	17.5	1.46	18.4	0.02	0.11	0.14	74
	75	ISL	10.80	10.79	33.669	25.777	222.6	0.220	3.58	57.2	18.2	1.49	18.9	0.02	0.10	0.14	76
1	87		10.35	10.34	33.782	25.943	207.0	0.245	3.13	49.5	22.5	1.66	21.3	0.03	0.05	0.12	88
	100	ISL	10.16	10.15	33.884	26.056	196.6	0.272	2.73	43.0	26.3	1.84	23.2	0.01	0.02	0.08	101
1	103		10.14	10.13	33.903	26.074	194.9	0.277	2.66	41.9	27.0	1.87	23.6	0.01	0.02	0.07	104
1	123		9.82	9.81	33.971	26.182	185.1	0.315	2.52	39.5	30.2	1.98	25.0	0.03	0.02	0.09	124
	125	ISL	9.80	9.79	33.975	26.188	184.5	0.319	2.51	39.3	30.4	1.98	25.1	0.03	0.02	0.09	126
1	144		9.64	9.62	34.010	26.242	179.8	0.354	2.46	38.4	31.9	2.01	25.6	0.02	0.01	0.10	145

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 52.5 N	120 8.7 W	22/10/88	0645 UTC	100 M	300	20 KT			1013.4 MB	16.1 C	15.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.15	17.15	33.617	24.419	350.1	0.000	5.77	105.0	3.3	0.34	0.7	0.02	0.99	0.45	0
1	1		17.15	17.15	33.617	24.419	350.2	0.004	5.77	105.0	3.3	0.34	0.7	0.02	0.99	0.45	1
	10	ISL	15.34	15.34	33.539	24.773	316.7	0.034	5.87	103.0	4.3	0.49	2.2	0.05	1.76	0.82	10
1	11		15.05	15.05	33.529	24.828	311.4	0.037	5.88	102.5	4.5	0.52	2.5	0.06	1.85	0.86	11
	20	ISL	13.33	13.33	33.454	25.131	282.9	0.063	5.35	90.0	6.7	0.78	6.2	0.14	1.33	0.59	20
1	22		13.03	13.03	33.443	25.182	278.0	0.069	5.22	87.3	7.2	0.83	7.0	0.16	1.14	0.50	22
	30	ISL	12.54	12.54	33.444	25.279	269.0	0.091	5.04	83.4	8.1	0.91	8.5	0.18	0.63	0.38	30
1	32		12.47	12.47	33.452	25.299	267.2	0.096	4.99	82.5	8.4	0.93	8.9	0.18	0.53	0.35	32
1	42		11.85	11.84	33.558	25.499	248.4	0.122	4.36	71.2	12.7	1.15	13.1	0.04	0.48	0.74	42
	50	ISL	10.72	10.71	33.685	25.803	219.6	0.141	3.66	58.3	19.0	1.45	18.1	0.02	0.19	0.30	50
1	52		10.45	10.44	33.716	25.874	212.8	0.145	3.51	55.6	20.5	1.52	19.3	0.02	0.12	0.17	52
1	62		10.18	10.17	33.767	25.960	204.8	0.166	3.26	51.4	23.0	1.67	21.6	0.05	0.09	0.13	62
1	72		10.14	10.13	33.775	25.974	203.8	0.186	3.26	51.3	23.4	1.68	21.7	0.04	0.08	0.15	73
	75	ISL	10.03	10.02	33.801	26.013	200.1	0.192	3.19	50.1	24.4	1.71	22.2	0.04	0.07	0.14	76
1	86		9.62	9.61	33.897	26.156	186.7	0.214	2.91	45.3	28.2	1.83	24.0	0.02	0.04	0.09	87

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 A5.3 N	120 24.8 W	22/10/88	0312 UTC	989 M	300	16 KT			1013.9 MB	15.8 C	14.8 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.26	16.26	33.602	24.614	331.5	0.000	6.27	112.1	1.0	0.21	0.1	0.00	1.41	0.40	0
1	10	15.72	15.72	33.593	24.730	320.8	0.033	6.34	112.1	1.0	0.27	0.1	0.02	2.58	0.70	10
	20 ISL	14.65	14.65	33.596	24.966	298.6	0.064	5.58	96.6	3.9	0.53	3.6	0.09	5.57	1.89	20
1	21	14.52	14.52	33.595	24.993	296.0	0.067	5.48	94.6	4.3	0.57	4.1	0.10	5.71	1.97	21
	30 ISL	13.13	13.13	33.543	25.240	272.8	0.092	4.74	79.5	9.2	0.93	9.9	0.17	1.55	0.94	30
1	31	12.97	12.97	33.540	25.269	270.0	0.095	4.66	77.9	9.8	0.97	10.6	0.17	1.01	0.79	31
1	42	11.61	11.60	33.618	25.590	239.7	0.123	3.96	64.3	14.9	1.26	16.2	0.03	0.36	0.44	42
	50 ISL	11.06	11.05	33.661	25.724	227.1	0.142	3.71	59.6	17.1	1.31	17.6	0.02	0.26	0.26	50
1	52	10.97	10.96	33.671	25.748	224.9	0.146	3.67	58.8	17.6	1.32	17.8	0.02	0.23	0.23	52
1	63	10.69	10.68	33.732	25.845	215.9	0.170	3.42	54.5	20.2	1.57	20.2	0.01	0.21	0.27	63
1	72	10.19	10.18	33.791	25.978	203.4	0.189	3.20	50.5	22.6	1.63	21.5	0.01	0.17	0.23	73
	75 ISL	10.04	10.03	33.803	26.012	200.2	0.195	3.15	49.5	23.4	1.65	22.0	0.01	0.14	0.22	76
1	87	9.57	9.56	33.838	26.118	190.3	0.219	3.03	47.1	26.3	1.75	23.7	0.01	0.05	0.17	88
	100 ISL	9.38	9.37	33.882	26.184	184.3	0.243	2.92	45.2	28.4	1.81	24.7	0.01	0.05	0.17	101
1	103	9.35	9.34	33.892	26.197	183.1	0.249	2.90	44.9	28.9	1.83	24.9	0.01	0.05	0.17	104
1	123	8.98	8.97	33.958	26.308	172.9	0.284	2.67	41.0	32.8	2.03	26.7	0.01	0.02	0.09	124
	125 ISL	8.96	8.95	33.968	26.319	171.9	0.288	2.64	40.5	33.2	2.04	26.9	0.01	0.02	0.09	126
1	149	8.86	8.84	34.086	26.427	162.1	0.328	2.22	34.0	36.9	2.19	28.4	0.01	0.02	0.07	150
	150 ISL	8.85	8.83	34.089	26.431	161.7	0.329	2.21	33.9	37.0	2.20	28.5	0.01	0.02	0.07	151
1	180	8.64	8.62	34.137	26.502	155.5	0.377	1.88	28.7	40.4	2.34	29.9	0.01	0.02	0.10	181
	200 ISL	8.52	8.50	34.158	26.537	152.5	0.408	1.76	26.8	42.3	2.38	30.5	0.01	0.01	0.07	202
1	210	8.47	8.45	34.165	26.551	151.4	0.423	1.71	26.0	43.2	2.40	30.7	0.01	0.01	0.05	212
1	240	8.33	8.31	34.180	26.584	148.8	0.468	1.52	23.0	45.6	2.47	31.5	0.01			242
	250 ISL	8.26	8.23	34.180	26.595	147.9	0.483	1.50	22.7	46.3	2.49	31.7	0.01			252
1	280	8.00	7.97	34.180	26.634	144.6	0.527	1.44	21.7	48.9	2.54	32.5	0.01			282
	300 ISL	7.82	7.79	34.190	26.669	141.6	0.555	1.31	19.6	51.3	2.60	33.3	0.01			302
1	336	7.50	7.47	34.213	26.734	135.9	0.605	1.05	15.6	56.2	2.73	34.8	0.00			339
1	395	6.98	6.94	34.241	26.829	127.4	0.683	0.74	10.9	64.7	2.91	36.9	0.00			3 98
	400 ISL	6.94	6.90	34.243	26.836	126.8	0.689	0.72	10.6	65.4	2.92	37.1	0.00			403
1	461	6.53	6.49	34.267	26.911	120.3	0.765	0.50	7.3	72.2	3.04	38.6	0.00			465
	500 ISL	6.38	6.33	34.274	26.936	118.3	0.811	0.46	6.7	75.0	3.07	39.1	0.01			504
1	531	6.26	6.21	34.280	26.957	116.7	0.848	0.42	6.1	77.3	3.10	39.5	0.01			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 34.3 N	120 45.5 W	21/10/88	2306 UTC	1587 M	310	04 KT	310 04 06	1	1015.6 MB	16.0 C	14.1 C	7/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.38	16.38	33.397	24.429	349.1	0.000	5.83	104.3	3.2	0.24	0.1	0.00	0.43	0.07	0
	10 ISL	15.88	15.88	33.428	24.567	336.3	0.034	5.89	104.4	4.0	0.33	0.5	0.04	0.62	0.20	10
1	16	15.58	15.58	33.448	24.650	328.6	0.054	5.93	104.5	4.5	0.39	0.8	0.06	0.74	0.27	16
	20 ISL	15.20	15.20	33.454	24.738	320.3	0.067	5.88	102.8	4.9	0.42	1.5	0.10	0.77	0.36	20
	30 ISL	14.06	14.06	33.428	24.962	299.3	0.098	5.70	97.4	6.0	0.53	3.6	0.23	0.85	0.50	30
1	31	13.93	13.93	33.422	24.984	297.2	0.101	5.68	96.8	6.1	0.54	3.8	0.24	0.86	0.51	31
1	41	12.60	12.59	33.294	25.151	281.4	0.130	5.49	90.9	6.7	0.73	5.7	0.33	0.47	0.40	41
	50 ISL	12.70	12.69	33.480	25.276	269.8	0.155	5.00	83.0	9.6	0.88	9.0	0.43	0.35	0.31	50
1	52	12.74	12.73	33.531	25.308	266.8	0.160	4.86	80.8	10.5	0.92	10.0	0.45	0.34	0.31	52
1	62	11.71	11.70	33.616	25.571	242.0	0.186	4.00	65.1	14.9	1.35	16.3	0.05	0.30	0.48	62
1	72	10.54	10.53	33.685	25.835	217.0	0.209	3.54	56.2	18.7	1.59	20.2	0.02	0.20	0.30	73
	75 ISL	10.39	10.38	33.716	25.885	212.3	0.215	3.45	54.6	20.1	1.61	20.8	0.02	0.27	0.39	76
1	82	10.19	10.18	33.78	25.969	204.4	0.230	3.28	51.7	23.0	1.63	21.7	0.01	0.41	0.61	83
1	97	9.73	9.72	33.806	26.067	195.4	0.260	3.11	48.5	26.0	1.80	23.8	0.01	0.05	0.23	98
	100 ISL	9.65	9.64	33.818	26.090	193.3	0.265	3.07	47.8	26.6	1.82	24.1	0.01	0.05	0.22	101
1	113	9.38	9.37	33.889	26.189	184.0	0.290	2.86	44.3	29.4	1.89	25.2	0.01	0.04	0.17	114
	125 ISL	9.33	9.32	33.968	26.260	177.6	0.312	2.62	40.6	32.0	1.99	25.9	0.01	0.02	0.16	126
1	128	9.32	9.31	33.987	26.276	176.1	0.317	2.56	39.6	32.6	2.02	26.1	0.01	0.02	0.16	129
	150 ISL	9.06	9.04	34.052	26.369	167.7	0.355	2.33	35.9	36.1	2.11	27.5	0.01	0.02	0.12	151
1	153	9.02	9.00	34.056	26.379	166.8	0.360	2.31	35.5	36.5	2.12	27.7	0.01	0.02	0.11	154
1	179	8.87	8.85	34.087	26.427	162.7	0.403	2.15	33.0	38.8	2.18	28.5	0.01	0.01	0.10	180
	200 ISL	8.75	8.73	34.122	26.474	158.7	0.436	1.97	30.1	40.9	2.29	29.4	0.01	0.02	0.09	202
1	210	8.69	8.67	34.138	26.496	156.7	0.452	1.88	28.7	42.0	2.35	29.9	0.01	0.02	0.09	212
1	239	8.43	8.41	34.169	26.560	151.1	0.497	1.62	24.6	46.0	2.47	31.1	0.00			241
	250 ISL	8.33	8.30	34.175	26.581	149.3	0.513	1.55	23.5	47.4	2.51	31.5	0.00			252
1	280	8.04	8.01	34.183	26.631	145.0	0.558	1.42	21.4	51.3	2.59	32.7	0.01			282
	300 ISL	7.81	7.78	34.184	26.666	141.9	0.586	1.34	20.1	54.1	2.64	33.5	0.02			302
1	336	7.34	7.31	34.175	26.726	136.4	0.636	1.21	17.9	59.6	2.73	35.0	0.02			339
1	397	6.35	6.31	34.131	26.826	127.1	0.717	1.04	15.1	71.2	2.89	38.1	0.00			400
	400 ISL	6.32	6.28	34.132	26.831	126.7	0.720	1.02	14.8	71.7	2.90	38.2	0.00			403
1	463	5.87	5.83	34.170	26.918	118.9	0.798	0.66	9.4	81.3	3.03	40.3	0.00			467
	500 ISL	5.67	5.63	34.198	26.965	114.7	0.841	0.52	7.4	85.9	3.10	41.1	0.01			504
1	536	5.48	5.43	34.227	27.012	110.6	0.882	0.38	5.4	90.4	3.17	41.9	0.01			541

RV NEW HORIZON CALCOFI CRUISE 8810 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 26.6 W	21/10/88	1625 UTC	3799 M	210	05 KT	3 20 05 10	2	1016.0 MB	15.8 C	13.6 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	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	16.47	16.47	33.329	24.356	356.1	0.000	5.73	102.7	2.4	0.33	0.0	0.00	0.27	0.11	0
1	1		16.47	16.47	33.329	24.356	356.1	0.004	5.73	102.7	2.4	0.33	0.0	0.00	0.27	0.11	1
	10	ISL	16.22	16.22	33.343	24.425	349.9	0.035	5.77	102.9	2.5	0.33	0.0	0.00	0.34	0.13	10
1	20		15.85	15.85	33.360	24.522	340.9	0.070	5.84	103.4	2.6	0.34	0.0	0.00	0.41	0.16	20
	30	ISL	14.98	14.98	33.371	24.722	322.1	0.103	5.82	101.3	3.4	0.44	0.6	0.07	0.67	0.30	30
1	32		14.72	14.72	33.375	24.781	316.5	0.109	5.81	100.5	3.5	0.46	0.7	0.09	0.70	0.32	32
1	43		12.49	12.48	33.458	25.300	267.3	0.142	4.71	77.9	9.6	1.03	9.4	0.14	0.44	0.30	43
	50	ISL	11.79	11.78	33.562	25.513	247.2	0.160	4.21	68.6	12.8	1.28	13.3	0.08	0.32	0.26	50
1	53		11.56	11.55	33.602	25.587	240.2	0.167	4.05	65.7	14.0	1.37	14.6	0.05	0.27	0.24	53
1	63		10.56	10.55	33.647	25.801	220.0	0.190	3.72	59.1	18.1	1.56	18.2	0.02	0.13	0.15	63
1	74		10.08	10.07	33.811	26.012	200.2	0.213	3.13	49.2	23.5	1.78	21.5	0.01	0.03	0.11	75
	75	ISL	10.04	10.03	33.818	26.024	199.0	0.215	3.16	49.7	23.8	1.79	21.7	0.01	0.03	0.11	76
1	83		9.79	9.78	33.860	26.099	192.1	0.231	3.42	53.5	25.7	1.85	23.0	0.01	0.07	0.14	84
1	98		9.40	9.39	33.977	26.255	177.5	0.258	2.49	38.6	30.8	2.03	25.4	0.01	0.02	0.10	99
	100	ISL	9.35	9.34	33.986	26.270	176.1	0.262	2.47	38.3	31.3	2.04	25.6	0.01	0.02	0.09	101
1	114		9.08	9.07	34.039	26.355	168.3	0.286	2.36	36.4	34.1	2.12	26.5	0.01	0.01	0.07	115
	125	ISL	9.01	9.00	34.085	26.402	164.0	0.304	2.10	32.3	36.3	2.23	27.8	0.01	0.01	0.08	126
1	129		8.99	8.98	34.101	26.418	162.6	0.311	2.00	30.8	37.1	2.27	28.3	0.01	0.01	0.08	130
	150	ISL	8.82	8.80	34.157	26.489	156.2	0.344	1.72	26.4	40.7	2.39	29.6	0.01	0.01	0.08	151
1	155		8.78	8.76	34.166	26.503	155.0	0.352	1.68	25.7	41.3	2.41	29.8	0.01	0.01	0.08	156
1	181		8.68	8.66	34.193	26.540	152.0	0.392	1.51	23.1	42.7	2.47	30.6	0.01	0.00	0.05	182
	200	ISL	8.61	8.59	34.203	26.559	150.6	0.421	1.45	22.1	43.8	2.52	31.1	0.01	0.00	0.04	202
1	211		8.57	8.55	34.208	26.569	149.8	0.437	1.42	21.6	44.5	2.54	31.3	0.01	0.00	0.04	213
1	241		8.39	8.36	34.225	26.611	146.4	0.482	1.28	19.4	47.5	2.59	31.9	0.01			243
	250	ISL	8.35	8.32	34.228	26.619	145.7	0.495	1.24	18.8	48.1	2.61	32.1	0.01			252
1	282		8.20	8.17	34.235	26.648	143.5	0.541	1.13	17.1	49.9	2.66	33.0	0.01			284
	300	ISL	8.12	8.09	34.239	26.663	142.3	0.567	1.08	16.3	51.1	2.69	33.4	0.01			302
1	339		7.90	7.87	34.243	26.699	139.5	0.622	0.98	14.7	53.9	2.76	34.3	0.00			342
1	399		7.41	7.37	34.237	26.766	133.8	0.704	0.84	12.5	59.2	2.86	36.1	0.00			402
	400	ISL	7.40	7.36	34.237	26.768	133.7	0.705	0.84	12.5	59.3	2.86	36.1	0.00			403
1	465		6.77	6.73	34.255	26.869	124.5	0.789	0.62	9.1	68.8	3.02	38.6	0.00			469
	500	ISL	6.52	6.47	34.266	26.912	120.8	0.832	0.53	7.7	73.1	3.08	39.6	0.00			504
1	535		6.27	6.22	34.278	26.954	117.0	0.873	0.44	6.4	77.4	3.13	40.6	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8810 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 7.6 W	21/10/88	1052 UTC	4180 M	050	04 KT			1014.0 MB	16.4 C	14.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.04	17.04	33.492	24.349	356.8	0.000	5.65	102.5	2.4	0.32	0.1	0.00	0.31	0.13	0
1	1		17.04	17.04	33.492	24.349	356.8	0.004	5.65	102.5	2.4	0.32	0.1	0.00	0.31	0.13	1
	10	ISL	17.05	17.05	33.493	24.348	357.2	0.036	5.65	102.5	2.2	0.34	0.1	0.00	0.33	0.14	10
1	11		17.05	17.05	33.493	24.348	357.3	0.039	5.65	102.5	2.2	0.34	0.1	0.00	0.33	0.14	11
	20	ISL	17.05	17.05	33.492	24.347	357.6	0.071	5.67	102.9	2.2	0.34	0.0	0.00	0.31	0.14	20
1	22		17.05	17.05	33.491	24.346	357.7	0.079	5.67	102.9	2.2	0.34	0.0	0.00	0.30	0.14	22
	30	ISL	17.07	17.07	33.491	24.342	358.4	0.107	5.66	102.7	2.1	0.34	0.0	0.00	0.31	0.14	30
1	32		17.07	17.06	33.491	24.342	358.5	0.114	5.66	102.7	2.1	0.34	0.0	0.00	0.31	0.14	32
1	42		16.13	16.12	33.534	24.593	334.9	0.149	5.62	100.1	2.8	0.43	0.6	0.10	0.57	0.46	42
	50	ISL	14.38	14.37	33.448	24.911	304.8	0.175	5.32	91.5	4.7	0.67	4.1	0.23	0.47	0.39	50
1	52		13.89	13.88	33.415	24.987	297.5	0.181	5.25	89.3	5.2	0.73	5.0	0.25	0.43	0.35	52
1	62		11.78	11.77	33.183	25.221	275.2	0.209	5.42	88.1	5.8	0.82	6.3	0.06	0.29	0.28	62
1	72		11.18	11.17	33.245	25.379	260.4	0.236	5.10	81.9	9.0	1.01	10.2	0.02	0.30	0.20	73
	75	ISL	11.06	11.05	33.304	25.446	254.0	0.244	4.90	78.5	10.4	1.10	11.7	0.02	0.26	0.19	76
1	87		10.64	10.63	33.552	25.714	228.8	0.273	4.08	64.9	16.0	1.43	17.2	0.01	0.09	0.14	88
	100	ISL	10.04	10.03	33.664	25.904	210.9	0.301	3.66	57.5	20.2	1.61	20.4	0.02	0.03	0.07	101
1	102		9.95	9.94	33.675	25.928	208.7	0.306	3.62	56.7	20.8	1.63	20.8	0.02	0.03	0.06	103
1	122		9.55	9.54	33.812	26.102	192.6	0.346	3.11	48.4	26.2	1.82	23.9	0.05	0.01	0.06	123
	125	ISL	9.49	9.48	33.827	26.123	190.6	0.351	3.06	47.5	26.8	1.84	24.3	0.05	0.01	0.06	126
1	148		9.05	9.03	33.925	26.271	176.9	0.394	2.80	43.1	30.7	2.00	26.4	0.01	0.01	0.06	149
	150	ISL	9.02	9.00	33.933	26.282	175.9	0.397	2.78	42.7	31.0	2.01	26.5	0.01	0.01	0.06	151
1	179		8.65	8.63	34.025	26.413	164.0	0.447	2.58	39.4	35.5	2.10	27.8	0.01	0.01	0.06	180
	200	ISL	8.24	8.22	34.040	26.487	157.1	0.480	2.62	39.6	38.1	2.12	28.5	0.01	0.00	0.05	202
1	208		8.09	8.07	34.043	26.512	154.9	0.493	2.64	39.8	39.2	2.14	28.9	0.01	0.00	0.04	210
1	239		7.73	7.71	34.084	26.598	147.2	0.540	2.12	31.7	45.7	2.39	31.6	0.01			241
	250	ISL	7.69	7.67	34.107	26.622	145.1	0.556	1.93	28.8	47.4	2.46	32.2	0.01			252
1	280		7.60	7.57	34.159	26.676	140.4	0.598	1.49	22.2	51.4	2.60	33.5	0.01			282
	300	ISL	7.33	7.30	34.149	26.707	137.7	0.626	1.40	20.7	54.6	2.66	34.5	0.01			302
1	336		6.82	6.79	34.128	26.761	132.7	0.675	1.31	19.2	60.2	2.75	36.3	0.00			339
1	397		6.68	6.64	34.236	26.865	123.7	0.753	0.66	9.6	68.2	3.00	38.4	0.00			400
	400	ISL	6.65	6.61	34.238	26.871	123.2	0.757	0.65	9.5	68.7	3.01	38.5	0.00			403
1	462		5.90	5.86	34.241	26.971	113.9	0.830	0.50	7.2	80.6	3.13	40.9	0.00			466
	500	ISL	5.48	5.44	34.239	27.021	109.3	0.873	0.43	6.1	87.3	3.19	42.2	0.00			504
1	531		5.13	5.09	34.239	27.062	105.3	0.906	0.38	5.3	92.8	3.23	43.2	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 34.6 N	122 48.9 W	21/10/88	0445 UTC	4280 M	330	10 KT			1012.3 MB	17.0 C	15.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.02	17.02	33.180	24.114	379.2	0.000	5.69	103.0	3.0	0.25	0.2	0.00	0.18	0.04	0
1	1		17.02	17.02	33.180	24.114	379.2	0.004	5.69	103.0	3.0	0.25	0.2	0.00	0.18	0.04	1
	10	ISL	17.02	17.02	33.180	24.114	379.4	0.038	5.68	102.8	2.9	0.28	0.2	0.00	0.17	0.04	10
1	17		17.02	17.02	33.180	24.115	379.7	0.064	5.68	102.8	2.8	0.31	0.2	0.00	0.17	0.04	17
	20	ISL	17.02	17.02	33.182	24.116	379.6	0.076	5.68	102.8	2.7	0.30	0.2	0.00	0.17	0.04	20
	30	ISL	17.04	17.04	33.190	24.118	379.8	0.114	5.68	102.8	2.4	0.28	0.2	0.00	0.18	0.03	30
1	32		17.04	17.03	33.191	24.119	379.7	0.121	5.68	102.8	2.3	0.28	0.2	0.00	0.18	0.03	32
1	42		15.69	15.68	33.152	24.398	353.4	0.158	6.02	106.1	2.4	0.34	0.2	0.00	0.33	0.13	42
	50	ISL	14.61	14.60	33.154	24.635	331.0	0.185	6.21	107.1	2.3	0.33	0.2	0.00	0.49	0.26	50
1	52		14.34	14.33	33.157	24.694	325.4	0.192	6.22	106.7	2.3	0.33	0.2	0.00	0.52	0.29	52
1	62		13.03	13.02	33.161	24.965	299.8	0.223	5.93	99.0	3.2	0.48	2.0	0.09	0.44	0.32	62
1	73		12.43	12.42	33.197	25.110	286.2	0.256	5.58	92.0	4.5	0.69	4.7	0.06	0.28	0.26	74
	75	ISL	12.34	12.33	33.208	25.135	283.8	0.261	5.54	91.2	4.8	0.71	5.3	0.05	0.26	0.25	76
1	81		12.11	12.10	33.245	25.208	277.0	0.278	5.43	88.9	5.6	0.78	6.9	0.02	0.22	0.21	82
1	97		11.53	11.52	33.336	25.387	260.3	0.321	5.02	81.3	8.3	0.97	10.6	0.02	0.13	0.14	98
	100	ISL	11.35	11.34	33.375	25.450	254.3	0.329	4.86	78.4	9.6	1.05	11.9	0.02	0.11	0.17	101
1	112		10.61	10.60	33.535	25.706	230.1	0.358	4.23	67.2	15.2	1.37	17.3	0.01	0.04	0.05	113
	125	ISL	10.02	10.01	33.632	25.883	213.5	0.387	3.82	59.9	19.4	1.55	20.3	0.01	0.02	0.04	126
1	128		9.91	9.90	33.650	25.916	210.4	0.393	3.75	58.7	20.2	1.58	20.8	0.01	0.02	0.04	129
	150	ISL	9.22	9.20	33.821	26.163	187.3	0.437	3.13	48.3	26.9	1.85	24.8	0.01	0.00	0.03	151
1	153		9.15	9.13	33.842	26.190	184.7	0.442	3.07	47.3	27.7	1.88	25.2	0.01	0.00	0.03	154
1	179		8.68	8.66	33.943	26.344	170.5	0.489	2.98	45.5	31.7	1.96	26.5	0.01	0.00	0.03	180
	200	ISL	8.37	8.35	33.991	26.429	162.7	0.524	2.91	44.1	34.7	2.01	27.4	0.01	0.00	0.02	202
1	209		8.26	8.24	34.004	26.456	160.3	0.538	2.87	43.4	36.0	2.03	27.8	0.01	0.00	0.02	211
1	239		7.92	7.90	34.028	26.526	154.0	0.585	2.70	40.5	39.9	2.13	29.3	0.01			241
	250	ISL	7.81	7.79	34.045	26.556	151.4	0.602	2.50	37.4	42.3	2.21	30.3	0.01			252
1	280		7.47	7.44	34.085	26.636	144.1	0.646	1.96	29.1	49.2	2.44	32.9	0.01			282
	300	ISL	7.14	7.11	34.074	26.674	140.6	0.675	1.94	28.6	52.7	2.50	33.8	0.01			302
1	336		6.59	6.56	34.053	26.732	135.3	0.724	1.90	27.6	58.3	2.57	35.1	0.00			339
1	396		6.33	6.29	34.135	26.832	126.5	0.803	1.04	15.0	68.0	2.88	38.5	0.00			399
	400	ISL	6.31	6.27	34.141	26.839	125.9	0.808	1.00	14.5	68.6	2.90	38.7	0.00			403
1	462		6.00	5.96	34.224	26.945	116.5	0.883	0.50	7.2	77.3	3.12	40.7	0.00			466
	500	ISL	5.79	5.75	34.254	26.995	112.1	0.927	0.40	5.7	81.8	3.15	41.4	0.01			504
1	532		5.62	5.57	34.279	27.036	108.4	0.962	0.31	4.4	85.6	3.17	41.9	0.01			537

RV NEW HORIZON CALCOFI CRUISE 8810 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 29.0 W	20/10/88	2228 UTC	4132 M	3 40	16 KT	3 40 06 07	2	1012.4 MB	17.9 C	16.0 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.59	17.59	33.015	23.852	404.1	0.000	5.60	102.4	2.3	0.35	0.0	0.00	0.11	0.03	0
1	1		17.59	17.59	33.015	23.852	404.1	0.004	5.60	102.4	2.3	0.35	0.0	0.00	0.11	0.03	1
	10	ISL	17.58	17.58	33.014	23.855	404.3	0.040	5.61	102.5	2.4	0.34	0.0	0.00	0.12	0.03	10
1	17		17.58	17.58	33.013	23.854	404.5	0.069	5.62	102.7	2.4	0.34	0.0	0.00	0.12	0.03	17
	20	ISL	17.54	17.54	33.010	23.861	403.9	0.081	5.63	102.8	2.4	0.34	0.0	0.00	0.12	0.03	20
	30	ISL	17.41	17.41	33.001	23.886	401.9	0.121	5.65	102.9	2.3	0.34	0.0	0.00	0.12	0.03	30
1	32		17.38	17.37	32.999	23.891	401.5	0.129	5.65	102.8	2.3	0.34	0.0	0.00	0.12	0.03	32
1	42		16.66	16.65	32.985	24.050	3 86.6	0.169	5.79	103.9	2.2	0.35	0.0	0.00	0.20	0.05	42
	50	ISL	15.67	15.66	33.074	24.343	358.9	0.198	5.99	105.5	2.1	0.34	0.0	0.00	0.27	0.10	50
1	52		15.42	15.41	33.103	24.421	351.5	0.206	6.04	105.8	2.1	0.34	0.0	0.00	0.29	0.12	52
1	62		14.53	14.52	33.200	24.688	3 26.3	0.239	6.18	106.4	2.3	0.31	0.0	0.00	0.37	0.19	62
1	73		13.42	13.41	33.204	24.921	304.3	0.274	6.07	102.2	2.7	0.36	0.1	0.04	0.45	0.28	74
	75	ISL	13.33	13.32	33.228	24.957	300.9	0.280	6.07	102.0	2.7	0.36	0.2	0.05	0.42	0.27	76
1	82		13.04	13.03	33.299	25.070	290.3	0.301	6.03	100.8	2.8	0.36	0.4	0.07	0.28	0.22	83
1	97		11.85	11.84	33.174	25.202	277.9	0.343	5.63	91.7	4.5	0.64	4.2	0.02	0.17	0.16	98
	100	ISL	11.69	11.68	33.181	25.237	274.6	0.352	5.55	90.1	5.1	0.69	5.1	0.02	0.15	0.15	101
1	113		11.14	11.13	33.257	25.396	259.7	0.386	5.21	83.6	7.8	0.90	9.0	0.01	0.08	0.09	114
	125	ISL	10.62	10.61	33.324	25.541	246.2	0.417	4.93	78.2	10.1	1.07	11.8	0.01	0.05	0.06	126
1	128		10.49	10.47	33.344	25.579	242.6	0.424	4.86	76.9	10.7	1.11	12.5	0.01	0.05	0.06	129
	150	ISL	9.53	9.51	33.587	25.930	209.5	0.474	4.13	64.1	18.7	1.50	19.0	0.00	0.01	0.03	151
1	154		9.38	9.36	33.634	25.991	203.7	0.482	4.02	62.2	20.2	1.56	20.0	0.00	0.01	0.03	155
1	180		8.74	8.72	33.811	26.231	181.2	0.532	3.94	60.1	24.9	1.66	22.2	0.00	0.00	0.02	181
	200	ISL	8.43	8.41	33.913	26.359	169.4	0.567	3.93	59.6	27.9	1.70	23.1	0.00	0.00	0.01	202
1	211		8.28	8.26	33.952	26.412	164.5	0.586	3.92	59.3	29.5	1.72	23.5	0.00	0.00	0.01	213
1	241		7.81	7.79	33.989	26.511	155.4	0.634	3.65	54.6	35.0	1.87	25.7	0.00			243
	250	ISL	7.62	7.60	33.988	26.538	152.9	0.647	3.54	52.7	37.3	1.93	26.6	0.00			252
1	282		7.01	6.98	33.990	26.626	144.8	0.695	3.03	44.5	46.2	2.16	30.0	0.00			284
	300	ISL	6.85	6.82	34.021	26.672	140.6	0.721	2.53	37.0	50.8	2.35	32.1	0.00			302
1	339		6.69	6.66	34.103	26.759	132.9	0.774	1.47	21.4	59.4	2.73	36.1	0.00			3 42
1	399		6.44	6.40	34.188	26.859	124.1	0.851	0.78	11.3	68.0	3.00	38.7	0.00			402
	400	ISL	6.43	6.39	34.188	26.861	124.0	0.852	0.77	11.2	68.2	3.00	38.7	0.00			403
1	464		5.76	5.72	34.199	26.955	115.3	0.929	0.54	7.7	79.5	3.16	41.0	0.00			468
	500	ISL	5.56	5.52	34.227	27.002	111.2	0.970	0.43	6.1	84.3	3.22	41.6	0.00			504
1	531		5.39	5.35	34.252	27.042	107.6	1.004	0.33	4.7	88.5	3.28	42.2	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 54.7 N	124 10.1 W	20/10/88	1515 UTC	4389 M	3 40	22 KT	350 06 06	1	1015.2 MB	17.9 C	15.8 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.91	17.91	33.096	23.837	405.6	0.000	5.58	102.7	2.2	0.28	0.1	0.00	0.11	0.02	0
1	1		17.91	17.91	33.096	23.837	405.6	0.004	5.58	102.7	2.2	0.28	0.1	0.00	0.11	0.02	1
	10	ISL	17.92	17.92	33.094	23.83 4	406.2	0.041	5.57	102.5	2.2	0.31	0.1	0.00	0.11	0.02	10
1	17		17.92	17.92	33.091	23.83 2	406.7	0.069	5.57	102.5	2.2	0.33	0.1	0.00	0.11	0.03	17
	20	ISL	17.92	17.92	33.088	23.830	407.0	0.081	5.57	102.5	2.1	0.31	0.1	0.00	0.11	0.03	20
	30	ISL	17.91	17.90	33.077	23.824	407.8	0.122	5.61	103.2	1.9	0.28	0.1	0.00	0.13	0.04	30
1	32		17.91	17.90	33.075	23.823	408.1	0.130	5.62	103.4	1.9	0.27	0.1	0.00	0.13	0.04	32
1	42		17.06	17.05	33.078	24.028	388.7	0.170	5.72	103.5	1.8	0.33	0.1	0.00	0.17	0.06	42
	50	ISL	16.78	16.77	33.343	24.297	363.4	0.200	5.94	107.1	2.0	0.27	0.1	0.00	0.15	0.05	50
1	52		16.74	16.73	33.419	24.365	357.0	0.207	5.99	107.9	2.1	0.25	0.1 '	0.00	0.14	0.05	52
1	62		16.52	16.51	33.614	24.566	338.1	0.242	5.95	106.9	1.9	0.23	0.1	0.00	0.15	0.07	62
1	72		16.04	16.03	33.660	24.711	324.6	0.275	5.83	103.8	2.1	0.27	0.1	0.00	0.19	0.12	73
	75	ISL	15.78	15.77	33.635	24.751	320.9	0.285	5.84	103.4	2.1	0.27	0.1	0.00	0.21	0.14	76
1	82		15.18	15.17	33.566	24.831	313.4	0.307	5.85	102.3	2.2	0.25	0.1	0.00	0.26	0.19	83
1	97		14.77	14.76	33.559	24.915	305.8	0.353	5.82	100.9	2.3	0.29	0.2	0.03	0.26	0.20	98
	100	ISL	14.48	14.47	33.519	24.946	302.9	0.363	5.81	100.1	2.5	0.31	0.3	0.03	0.25	0.20	101
1	112		13.03	13.01	33.350	25.113	287.1	0.398	5.68	94.9	3.1	0.47	2.2	0.04	0.20	0.20	113
	125	ISL	11.46	11.44	33.277	25.354	264.0	0.434	5.18	83.7	7.3	0.89	8.8	0.02	0.09	0.10	126
1	128		11.14	11.12	33.278	25.413	258.5	0.442	5.06	81.2	8.4	0.99	10.4	0.01	0.07	0.08	129
	150	ISL	10.36	10.34	33.515	25.735	228.2	0.495	4.79	75.7	11.8	1.07	12.9	0.00	0.03	0.04	151
1	153		10.32	10.30	33.558	25.775	224.4	0.502	4.78	75.5	12.2	1.08	13.0	0.00	0.02	0.04	154
1	179		9.23	9.21	33.777	26.127	191.3	0.556	4.43	68.4	19.2	1.38	18.4	0.00	0.01	0.02	180
	200	ISL	8.88	8.86	33.914	26.290	176.1	0.595	4.34	66.5	23.0	1.47	20.2	0.01	0.00	0.01	202
1	210		8.78	8.76	33.959	26.341	171.4	0.612	4.30	65.8	24.7	1.50	20.7	0.01	0.00	0.01	212
1	240		8.30	8.28	33.996	26.444	162.0	0.662	3.85	58.3	31.0	1.71	23.7	0.00			242
	250	ISL	8.13	8.10	34.002	26.475	159.2	0.678	3.69	55.6	33.2	1.78	24.7	0.00			252
1	281		7.59	7.56	34.011	26.561	151.3	0.726	3.22	47.9	40.0	2.00	27.8	0.01			283
	300	ISL	7.25	7.22	34.008	26.607	147.0	0.754	3.00	44.3	44.5	2.12	29.4	0.01			302
1	338		6.65	6.62	34.008	26.689	139.4	0.809	2.59	37.7	53.2	2.35	32.3	0.00			3 41
1	399		6.17	6.13	34.054	26.788	130.5	0.891	1.71	24.6	65.0	2.75	36.7	0.00			402
	400	ISL	6.16	6.12	34.055	26.790	130.3	0.893	1.70	24.5	65.2	2.75	36.8	0.00			403
1	465		5.56	5.52	34.101	26.901	120.1	0.974	1.01	14.3	78.5	2.95	40.1	0.00			469
	500	ISL	5.41	5.37	34.150	26.958	115.0	1.015	0.75	10.6	83.6	3.07	41.1	0.00			504
1	536		5.25	5.21	34.201	27.018	109.6	1.056	0.49	6.9	88.9	3.19	42.1	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8810 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 29.5 W	18/10/88	0020 UTC	56 M	200	08 KT	290 01 04	0	1011.2 MB	19.6 C	18.3 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.18	18.18	33.565	24.130	377.6	0.000	6.22	115.4	3.5	0.28	0.2	0.00	1.43	0.08	0
1	10		17.04	17.04	33.532	24.380	354.2	0.037	6.58	119.4	3.5	0.29	0.2	0.00	4.26	0.16	10
	20	ISL	16.06	16.06	33.496	24.579	335.5	0.071	5.86	104.3	4.9	0.41	0.7	0.09	3.65	0.50	20
1	21		15.93	15.93	33.491	24.604	333.1	0.074	5.76	102.2	5.1	0.42	0.8	0.10	3.59	0.53	21
	30	ISL	13.82	13.82	33.409	24.997	295.9	0.103	4.91	83.4	7.1	0.85	5.7	0.76	1.48	0.46	30
1	32		13.37	13.37	33.398	25.080	288.1	0.109	4.75	80.0	7.6	0.95	6.9	0.90	1.02	0.44	32
1	42		12.75	12.74	33.398	25.203	276.6	0.137	4.55	75.6	9.4	1.15	10.1	0.83	0.43	0.32	42
	50	ISL	12.04	12.03	33.459	25.387	259.2	0.158	3.94	64.5	13.2	1.47	15.0	0.56	0.19	0.29	50
1	52		11.86	11.85	33.475	25.433	254.9	0.163	3.79	61.8	14.2	1.55	16.2	0.49	0.13	0.28	52

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 34

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 51.2 N	118 33.8 W	18/10/88	0206 UTC	73 M	190	04 KT			1011.2 MB	19.1 C	17.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.72	18.72	33.634	24.049	385.4	0.000	5.79	108.6	3.0	0.27	0.3	0.00	0.31	0.08	0
1	10		17.82	17.82	33.598	24.244	367.1	0.038	5.95	109.6	3.1	0.30	0.2	0.00	0.56	0.21	10
	20	ISL	16.20	16.20	33.493	24.545	338.8	0.073	5.88	104.9	4.2	0.41	0.7	0.07	2.90	0.52	20
1	21		15.98	15.98	33.480	24.585	335.0	0.076	5.87	104.3	4.4	0.43	0.7	0.08	3.07	0.54	21
	30	ISL	13.30	13.30	33.367	25.070	289.0	0.104	5.17	86.9	6.7	0.83	5.4	0.50	1.07	0.37	30
1	31		13.02	13.02	33.363	25.122	284.0	0.107	5.08	84.9	7.0	0.88	6.0	0.54	0.78	0.34	31
1	42		12.16	12.15	33.460	25.365	261.2	0.137	4.49	73.7	9.9	1.20	12.5	0.11	0.30	0.30	42
	50	ISL	11.69	11.68	33.534	25.510	247.5	0.158	4.18	68.0	12.5	1.36	15.1	0.07	0.19	0.23	50
1	52		11.61	11.60	33.549	25.537	245.0	0.162	4.12	66.9	13.0	1.38	15.5	0.06	0.18	0.22	52
1	63		11.51	11.50	33.559	25.563	242.7	0.189	4.04	65.5	13.4	1.38	15.8	0.06	0.18	0.22	63
1	70		11.17	11.16	33.613	25.667	233.0	0.206	3.57	57.4	16.8	1.60	18.4	0.05	0.10	0.18	71

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 49.3 N	118 37.8 W	18/10/88	0320 UTC	663 M	180	03 KT			1011.1 MB	19.0 C	17.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.00	19.00	33.642	23.985	391.5	0.000	5.73	108.0	2.1	0.25	0.1	0.00	0.39	0.14	0
1	10		18.18	18.18	33.610	24.165	374.6	0.038	5.89	109.3	2.1	0.25	0.1	0.00	0.34	0.11	10
	20	ISL	17.29	17.29	33.559	24.342	358.2	0.075	5.95	108.5	2.5	0.29	0.1	0.00	0.73	0.33	20
1	21		17.16	17.16	33.551	24.366	355.8	0.079	5.96	108.4	2.5	0.29	0.1	0.00	0.78	0.36	21
	30	ISL	15.19	15.19	33.457	24.743	320.2	0.109	5.64	98.6	3.8	0.50	1.7	0.20	1.00	0.48	30
1	31		14.95	14.95	33.449	24.789	315.8	0.112	5.60	97.4	4.0	0.53	2.0	0.22	1.00	0.49	31
1	42		12.71	12.70	33.427	25.233	273.7	0.145	5.22	86.7	7.0	0.88	7.9	0.21	0.51	0.34	42
	50	ISL	11.98	11.97	33.499	25.429	255.2	0.166	4.58	74.9	10.0	1.14	12.3	0.14	0.28	0.22	50
1	52		11.87	11.86	33.519	25.465	251.8	0.171	4.42	72.2	10.7	1.19	13.3	0.12	0.24	0.20	52
1	62		11.45	11.44	33.563	25.577	241.4	0.195	4.15	67.2	13.1	1.32	15.5	0.06	0.18	0.21	62
1	73		10.95	10.94	33.616	25.709	229.1	0.221	3.86	61.8	15.9	1.46	17.8	0.03	0.12	0.14	74
	75	ISL	10.92	10.91	33.623	25.719	228.1	0.226	3.81	61.0	16.2	1.48	18.0	0.03	0.11	0.14	76
1	87		10.80	10.79	33.667	25.775	223.1	0.253	3.53	56.4	18.1	1.57	19.2	0.02	0.07	0.16	88
	100	ISL	10.51	10.50	33.748	25.890	212.5	0.281	3.20	50.8	20.9	1.71	20.9	0.01	0.04	0.13	101
1	103		10.43	10.42	33.767	25.918	209.8	0.288	3.14	49.8	21.5	1.74	21.3	0.01	0.03	0.12	104
1	124		9.93	9.92	33.838	26.059	196.8	0.330	3.08	48.3	24.3	1.79	22.9	0.01	0.03	0.10	125
	125	ISL	9.93	9.92	33.843	26.063	196.4	0.332	3.07	48.1	24.4	1.80	23.0	0.01	0.03	0.10	126
1	150		9.88	9.86	33.930	26.140	189.7	0.380	2.75	43.1	26.9	1.93	24.3	0.01	0.01	0.07	151
1	181		9.56	9.54	34.024	26.267	178.2	0.438	2.50	38.9	30.6	2.02	25.8	0.01	0.01	0.06	182
	200	ISL	9.46	9.44	34.086	26.332	172.4	0.471	2.27	35.3	33.1	2.12	26.8	0.01	0.01	0.06	202
1	212		9.40	9.38	34.121	26.370	169.1	0.491	2.13	33.1	34.6	2.19	27.4	0.01	0.01	0.06	214
1	242		9.11	9.08	34.170	26.455	161.5	0.541	1.89	29.2	37.5	2.29	28.6	0.01			244
	250	ISL	9.06	9.03	34.180	26.471	160.1	0.554	1.84	28.4	38.3	2.32	28.9	0.01			252
1	283		8.82	8.79	34.213	26.535	154.5	0.606	1.62	24.8	42.1	2.43	30.0	0.01			285
	300	ISL	8.60	8.57	34.226	26.580	150.5	0.632	1.44	22.0	45.1	2.51	30.9	0.03			302
1	339		8.06	8.03	34.252	26.683	141.2	0.688	1.03	15.5	52.4	2.69	33.1	0.08			342
1	398		7.45	7.41	34.275	26.790	131.5	0.769	0.69	10.3	61.4	2.83	35.6	0.00			401
	400	ISL	7.43	7.39	34.276	26.794	131.2	0.772	0.68	10.1	61.7	2.84	35.7	0.00			403
1	462		6.88	6.84	34.297	26.888	122.9	0.850	0.46	6.7	70.5	3.02	37.6	0.01			466
	500	ISL	6.58	6.53	34.309	26.938	118.4	0.896	0.38	5.5	75.7	3.09	38.4	0.03			504
1	530		6.34	6.29	34.319	26.977	114.8	0.931	0.31	4.5	79.8	3.14	39.0	0.04			535

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 37.4

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 44.8 N	118 48.1 W	18/10/88	0702 UTC	896 M	07 0	08 KT			1013.5 MB	19.1 C	18.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.606	23.972	392.7	0.000	5.76	108.4	2.1	0.21	0.1	0.00	0.27	0.06	0
1	1	A	18.94	18.94	33.606	23.972	392.7	0.004	5.76	108.4	2.1	0.21	0.1	0.00	0.27	0.06	1
	10	ISL	18.72	18.72	33.595	24.020	388.5	0.039	5.85	109.6	2.0	0.24	0.1	0.00	0.29	0.07	10
1	11		18.69	18.69	33.594	24.026	3 87.9	0.043	5.86	109.8	2.0	0.24	0.1	0.00	0.29	0.07	11
	20	ISL	16.66	16.66	33.479	24.428	349.9	0.076	6.21	111.8	2.4	0.27	0.1	0.00	0.61	0.20	20
1	22		16.07	16.07	33.448	24.540	339.3	0.083	6.26	111.4	2.6	0.28	0.1	0.00	0.72	0.24	22
	30	ISL	13.63	13.63	33.295	24.947	300.6	0.109	6.01	101.7	3.6	0.53	1.5	0.08	1.38	0.42	30
1	32		13.09	13.09	33.277	25.042	291.6	0.115	5.87	98.2	4.0	0.61	2.3	0.10	1.47	0.45	32
1	42		12.03	12.02	33.449	25.380	259.6	0.142	4.75	77.8	8.8	1.07	10.9	0.08	0.39	0.24	42
	50	ISL	11.49	11.48	33.554	25.563	242.5	0.162	4.16	67.4	12.4	1.30	14.9	0.05	0.29	0.21	50
1	57		11.15	11.14	33.628	25.682	231.3	0.179	3.79	61.0	15.3	1.43	17.1	0.03	0.20	0.18	57
	75	ISL	10.54	10.53	33.779	25.908	210.1	0.219	3.10	49.3	21.1	1.66	20.9	0.02	0.07	0.11	76
1	77		10.50	10.49	33.792	25.925	208.6	0.223	3.05	48.4	21.6	1.68	21.1	0.02	0.06	0.10	78
	100	ISL	10.37	10.36	33.896	26.029	199.2	0.270	2.69	42.6	24.8	1.84	23.1	0.01	0.02	0.08	101
1	102		10.36	10.35	33.899	26.033	198.8	0.274	2.68	42.4	24.9	1.85	23.2	0.01	0.02	0.08	103
	125	ISL	10.09	10.08	33.947	26.117	191.3	0.318	2.60	40.9	26.6	1.92	24.2	0.01	0.01	0.07	126
1	133		9.99	9.97	33.961	26.145	188.8	0.334	2.59	40.7	27.1	1.94	24.4	0.01	0.01	0.07	134
	150	ISL	9.87	9.85	34.010	26.204	183.6	0.365	2.43	38.1	29.0	2.01	25.2	0.01	0.01	0.06	151
1	164		9.80	9.78	34.052	26.249	179.6	0.391	2.29	35.9	30.6	2.06	25.9	0.01	0.01	0.06	165
1	200		9.71	9.69	34.134	26.329	172.8	0.454	2.03	31.7	33.3	2.17	27.0	0.01	0.01	0.05	202
1	240		9.17	9.14	34.133	26.417	165.1	0.522	2.06	31.8	35.8	2.27	28.1	0.01	0.01	0.04	242
	250	ISL	9.11	9.08	34.153	26.442	162.8	0.538	1.96	30.2	36.9	2.31	28.5	0.01	0.01	0.04	252
1	287		8.92	8.89	34.231	26.534	154.8	0.597	1.51	23.2	41.9	2.46	30.1	0.00	0.00	0.05	289
	300	ISL	8.78	8.75	34.239	26.562	152.3	0.617	1.42	21.8	43.6	2.50	30.7	0.00	0.00	0.05	302
1	348		8.18	8.14	34.247	26.661	143.5	0.688	1.14	17.2	50.1	2.66	32.7	0.00	0.00	0.03	351
	400	ISL	7.58	7.54	34.275	26.772	133.4	0.760	0.76	11.3	58.5	2.83	35.0	0.01			403
1	415		7.41	7.37	34.283	26.803	130.6	0.780	0.66	9.8	61.1	2.88	35.6	0.01			419
1	487		6.61	6.56	34.312	26.936	118.4	0.869	0.37	5.4	73.0	3.08	38.3	0.00			491
	500	ISL	6.48	6.43	34.317	26.957	116.5	0.885	0.34	4.9	75.3	3.10	38.6	0.00			504
1	570		5.93	5.88	34.343	27.049	108.2	0.963	0.26	3.7	86.2	3.19	39.7	0.00			575
	600	ISL	5.80	5.75	34.353	27.073	106.1	0.995	0.24	3.4	88.8	3.21	39.8	0.00			605.
1	646		5.66	5.60	34.366	27.101	103.9	1.044	0.21	3.0	92.2	3.24	40.0	0.00			652
	700	ISL	5.45	5.39	34.380	27.138	100.8	1.099	0.19	2.7	97.7	3.28	39.8	0.00			706
1	716		5.39	5.33	34.384	27.148	99.9	1.115	0.18	2.5	99.5	3.29	39.7	0.00			723
1	782		5.20	5.13	34.399	27.183	97.1	1.180	0.11	1.6	107.6	3.32	37.9	0.00			789
	800	ISL	5.17	5.10	34.402	27.189	96.7	1.197	0.11	1.5	108.8	3.33	37.6	0.00			808
1	841		5.11	5.04	34.407	27.201	96.0	1.237	0.10	1.4	112.9	3.35	35.9	0.00			849
1	884		5.07	5.00	34.410	27.208	95.8	1.278	0.03	0.4	122.4	3.40	31.2	0.00			892

A) SANTA MONICA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 41.0 N	118 56.8 W	18/10/88	0920 UTC	895 M	120	08 KT			1014.7 MB	19.1 C	17.8 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.11	19.11	33.711	24.010	389.1	0.000	5.57	105.2	2.2	0.26	0.1	0.00	0.27	0.06	0
1	1	A	19.11	19.11	33.711	24.010	389.2	0.004	5.57	105.2	2.2	0.26	0.1	0.00	0.27	0.06	1
	10	ISL	18.67	18.67	33.698	24.111	379.8	0.038	5.67	106.2	2.3	0.29	0.1	0.00	0.30	0.09	10
1	11		18.62	18.62	33.697	24.123	378.7	0.042	5.69	106.5	2.3	0.29	0.1	0.00	0.30	0.09	11
	20	ISL	15.59	15.59	33.559	24.733	320.8	0.074	5.99	105.6	3.8	0.43	1.1	0.03	0.79	0.47	20
1	21		15.22	15.22	33.547	24.805	313.9	0.077	6.01	105.2	4.0	0.45	1.3	0.03	0.85	0.52	21
	30	ISL	13.69	13.69	33.460	25.063	289.7	0.104	5.64	95.6	5.6	0.72	4.5	0.22	0.92	0.66	30
1	31		13.57	13.57	33.453	25.082	287.9	0.107	5.57	94.2	5.8	0.75	5.0	0.24	0.93	0.67	31
1	42		11.95	11.94	33.487	25.425	255.4	0.137	4.53	74.1	9.9	1.17	12.4	0.10	0.46	0.35	42
	50	ISL	11.54	11.53	33.555	25.554	243.3	0.157	4.16	67.4	12.1	1.35	14.7	0.03	0.26	0.23	50
1	52		11.49	11.48	33.573	25.577	241.1	0.162	4.10	66.4	12.6	1.39	15.1	0.02	0.23	0.21	52
1	67		10.74	10.73	33.685	25.800	220.3	0.196	3.58	57.1	17.5	1.63	18.8	0.01	0.09	0.13	68
	75	ISL	10.50	10.49	33.765	25.904	210.5	0.213	3.23	51.3	20.3	1.72	20.6	0.01	0.06	0.10	76
1	82		10.35	10.34	33.832	25.982	203.2	0.228	2.96	46.8	22.6	1.79	21.9	0.01	0.04	0.09	83
1	97		10.04	10.03	33.921	26.105	191.9	0.258	2.73	42.9	25.9	1.91	23.7	0.00	0.02	0.07	98
	100	ISL	10.02	10.01	33.938	26.122	190.3	0.263	2.66	41.8	26.4	1.94	24.0	0.00	0.02	0.07	101
1	112		9.96	9.95	33.997	26.178	185.2	0.286	2.39	37.5	28.2	2.04	24.9	0.00	0.01	0.06	113
	125	ISL	9.86	9.85	34.041	26.229	180.6	0.310	2.28	35.7	29.5	2.10	25.6	0.00	0.01	0.05	126
1	133		9.80	9.78	34.059	26.254	178.5	0.324	2.26	35.4	30.1	2.12	25.9	0.00	0.01	0.05	134
	150	ISL	9.74	9.72	34.076	26.277	176.6	0.354	2.22	34.7	30.7	2.14	26.2	0.00	0.01	0.05	151
1	158		9.71	9.69	34.080	26.286	176.0	0.368	2.21	34.5	30.8	2.14	26.3	0.00	0.01	0.05	159
1	189		9.46	9.44	34.107	26.348	170.6	0.422	2.20	34.2	32.0	2.20	27.0	0.00	0.00	0.05	191
	200	ISL	9.40	9.38	34.132	26.378	168.0	0.441	2.07	32.1	33.2	2.25	27.5	0.00	0.00	0.05	202
1	219		9.31	9.29	34.173	26.425	163.9	0.472	1.84	28.5	35.4	2.33	28.4	0.00	0.01	0.04	221
	250	ISL	9.14	9.11	34.191	26.467	160.5	0.522	1.73	26.7	37.2	2.40	29.1	0.00			252
1	255		9.09	9.06	34.191	26.47 5	159.8	0.530	1.73	26.7	37.5	2.41	29.2	0.00			257
1	296		8.25	8.22	34.181	26.598	148.5	0.594	1.60	24.2							298
	300	ISL	8.20	8.17	34.185	26.609	147.5	0.600	1.56	23.6	43.2	2.58	31.3	0.00			302
1	352		7.78	7.74	34.246	26.719	137.7	0.674	1.00	15.0	51.7	2.81	34.0	0.01			355
	400	ISL	7.30	7.26	34.283	26.818	128.8	0.738	0.64	9.5	59.8	3.00	36.0	0.01			403
1	419		7.11	7.07	34.293	26.853	125.7	0.762	0.54	8.0	62.8	3.06	36.7	0.01			423
1	490		6.59	6.54	34.314	26.940	118.0	0.848	0.37	5.4	70.5	3.17	38.5	0.01			494
	500	ISL	6.51	6.46	34.316	26.953	116.9	0.860	0.35	5.1	71.9	3.19	38.7	0.01			504
1	573		5.97	5.92	34.338	27.040	109.1	0.943	0.25	3.6	83.4	3.29	39.9	0.01			578
	600	ISL	5.80	5.75	34.350	27.071	106.3	0.972	0.22	3.1	87.7	3.33	40.0	0.01			605
1	649		5.53	5.47	34.371	27.121	101.9	1.023	0.19	2.7	95.2	3.39	40.2	0.01			655
	700	ISL	5.33	5.27	34.387	27.158	98.7	1.074	0.16	2.3	102.0	3.42	39.8	0.01			7 06
1	719		5.28	5.22	34.392	27.168	97.9	1.093	0.15	2.1	104.2	3.43	39.4	0.01			7 26
1	784		5.16	5.09	34.403	27.191	96.3	1.156	0.09	1.3	110.6	3.46	37.0	0.01			791
	800	ISL	5.13	5.06	34.405	27.196	96.0	1.171	0.08	1.1	111.6	3.46	36.7	0.01			808
1	845		5.08	5.01	34.408	27.205	95.6	1.214	0.06	0.8	114.7	3.45	35.5	0.01			853
1	890		5.06	4.99	34.410	27.209	95.7	1.257	0.04	0.6	119.9	3.49	32.2	0.01			899

A) SANTA MONICA BASIN STATION.

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
33 35.7 N	119 6.5 W	18/10/88	1228 UTC	256 M	130	08 KT			1014.6 MB	19.3 C	17.8 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.12	19.12	33.666	23.973	392.6	0.000	5.57	105.2	2.3	0.29	0.1	0.00	0.26	0.06	0
1	1		19.12	19.12	33.666	23.973	392.7	0.004	5.57	105.2	2.3	0.29	0.1	0.00	0.26	0.06	1
	10	ISL	17.79	17.79	33.585	24.241	367.4	0.038	5.89	108.5	2.7	0.34	0.1	0.01	0.45	0.18	10
1	11		17.54	17.54	33.572	24.292	362.6	0.042	5.93	108.7	2.7	0.34	0.1	0.01	0.48	0.20	11
	20	ISL	15.07	15.07	33.478	24.785	315.8	0.072	5.82	101.5	4.1	0.55	2.0	0.09	0.85	0.50	20
1	22		14.54	14.54	33.469	24.892	305.7	0.079	5.79	99.9	4.6	0.61	2.7	0.11	0.91	0.56	22
	30	ISL	13.40	13.40	33.495	25.149	281.5	0.102	5.65	95.2	7.0	0.83	6.5	0.18	0.82	0.53	30
1	32		13.23	13.23	33.503	25.189	277.7	0.108			7.6	0.87	7.4	0.19	0.78	0.52	32
1	42		12.96	12.95	33.501	25.241	272.9	0.135	5.07	84.7	8.3	0.94	8.5	0.21	0.75	0.48	42
	50	ISL	11.60	11.59	33.570	25.555	243.2	0.156	4.21	68.4	12.9	1.31	14.6	0.09	0.36	0.27	50
1	52		11.26	11.25	33.594	25.636	235.6	0.161	4.01	64.6	14.2	1.41	16.2	0.06	0.26	0.22	52
1	63		10.94	10.93	33.656	25.741	225.7	0.186	3.76	60.2	17.3	1.52	18.3	0.06	0.17	0.18	63
	75	ISL	10.59	10.58	33.706	25.842	216.4	0.212	3.52	56.0	19.5	1.63	20.1	0.03	0.11	0.14	76
1	77		10.54	10.53	33.713	25.856	215.1	0.217	3.48	55.3	19.8	1.65	20.3	0.03	0.10	0.14	78
1	92		10.32	10.31	33.773	25.942	207.3	0.248	3.28	51.9	21.7	1.74	21.4	0.03	0.06	0.12	93
	100	ISL	10.11	10.10	33.766	25.972	204.5	0.265	3.12	49.1	23.5	1.81	22.5	0.02	0.04	0.10	101
1	113		9.73	9.72	33.773	26.041	198.1	0.291	2.87	44.8	26.6	1.92	24.4	0.01	0.01	0.06	114
	125	ISL	9.46	9.45	33.882	26.171	186.0	0.314	2.78	43.2	28.7	1.98	25.4	0.01	0.01	0.07	126
1	133		9.31	9.30	33.961	26.258	178.0	0.329	2.74	42.4	29.9	2.01	25.8	0.01	0.01	0.07	134
	150	ISL	9.16	9.14	34.011	26.321	172.3	0.358	2.62	40.4	31.8	2.07	26.5	0.02	0.01	0.07	151
1	159		9.12	9.10	34.014	26.330	171.6	0.374	2.57	39.6	32.5	2.09	26.7	0.02	0.01	0.07	160
1	184		8.98	8.96	34.023	26.360	169.2	0.417	2.59	39.8	32.9	2.10	27.0	0.01	0.01	0.05	185
	200	ISL	8.90	8.88	34.066	26.406	165.1	0.443	2.40	36.8	35.0	2.17	27.7	0.01	0.00	0.05	202
1	214		8.82	8.80	34.109	26.453	161.0	0.466	2.20	33.7	37.2	2.25	28.5	0.01	0.00	0.05	216
1	244		8.62	8.59	34.153	26.519	155.2	0.514	1.90	29.0	40.5	2.39	29.9	0.02			246

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 29.7 N	119 19.0 W	18/10/88	1424 UTC	1646 M	120	09 KT	330 03 11	2	1015.4 MB	19.2 C	17.6 C	8/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.09	19.09	33.753	24.047	385.6	0.000	5.47	103.3	2.2	0.23	0.0	0.00	0.32	0.07	0
1	10	18.45	18.45	33.714	24.178	373.4	0.038	5.60	104.5	2.3	0.25	0.0	0.00	0.29	0.08	10
	20 ISL	14.59	14.59	33.521	24.922	302.8	0.072	5.92	102.3	5.4	0.55	2.9	0.04	0.90	0.63	20
1	21	14.19	14.19	33.512	24.999	295.5	0.075	5.93	101.6	5.8	0.59	3.3	0.05	0.96	0.68	21
	30 ISL	13.05	13.05	33.528	25.244	272.3	0.100	5.37	89.9	8.0	0.84	7.5	0.14	0.86	0.68	30
1	31	12.98	12.98	33.532	25.261	270.8	0.103	5.28	88.2	8.3	0.87	8.1	0.15	0.85	0.68	31
1	41	11.60	11.59	33.580	25.562	242.3	0.129	4.26	69.2	12.5	1.26	15.1	0.07	0.45	0.29	41
	50 ISL	11.23	11.22	33.614	25.656	233.5	0.150	3.96	63.8	14.4	1.38	17.1	0.03	0.32	0.27	50
1	52	11.20	11.19	33.621	25.667	232.5	0.155	3.94	63.4	14.7	1.39	17.3	0.03	0.30	0.27	52
1	62	10.77	10.76	33.677	25.788	221.3	0.177	3.70	59.0	17.3	1.53	19.0	0.03	0.18	0.19	62
1	73	10.33	10.32	33.719	25.897	211.1	0.201	3.43	54.2	20.0	1.63	20.8	0.02	0.10	0.14	74
	75 ISL	10.26	10.25	33.729	25.917	209.2	0.205	3.39	53.5	20.5	1.65	21.1	0.02	0.09	0.13	76
1	87	9.90	9.89	33.800	26.034	198.4	0.230	3.17	49.7	23.2	1.75	22.8	0.01	0.04	0.11	88
	100 ISL	9.65	9.64	33.879	26.137	188.8	0.255	2.95	46.0	26.0	1.86	24.1	0.01	0.02	0.08	101
1	103	9.61	9.60	33.896	26.157	186.9	0.261	2.90	45.2	26.6	1.88	24.3	0.01	0.02	0.07	104
1	123	9.31	9.30	33.970	26.264	177.1	0.297	2.70	41.8	29.8	1.95	25.5	0.01	0.01	0.08	124
	125 ISL	9.31	9.30	33.979	26.272	176.5	0.301	2.68	41.5	30.1	1.96	25.6	0.01	0.01	0.08	126
1	149	9.30	9.28	34.071	26.345	170.0	0.342	2.35	36.4	33.0	2.08	26.7	0.01	0.01	0.07	150
	150 ISL	9.29	9.27	34.075	26.350	169.5	0.344	2.33	36.1	33.2	2.09	26.8	0.01	0.01	0.07	151
1	180	9.05	9.03	34.175	26.468	159.0	0.393	1.85	28.5	37.8	2.28	28.8	0.01	0.01	0.05	181
	200 ISL	8.90	8.88	34.185	26.500	156.3	0.425	1.77	27.2	39.5	2.34	29.4	0.01	0.00	0.04	202
1	211	8.80	8.78	34.181	26.512	155.3	0.442	1.75	26.8	40.3	2.36	29.6	0.01	0.00	0.04	213
1	241	8.41	8.38	34.183	26.575	149.8	0.488	1.61	24.5	43.8	2.49	30.9	0.00			243
	250 ISL	8.36	8.33	34.194	26.591	148.4	0.501	1.53	23.2	44.7	2.52	31.2	0.00			252
1	282	8.25	8.22	34.237	26.642	144.1	0.548	1.23	18.6	48.0	2.62	32.2	0.00			284
	300 ISL	8.10	8.07	34.243	26.669	141.7	0.574	1.13	17.0	50.1	2.67	32.8	0.00			302
1	338	7.72	7.69	34.247	26.729	136.5	0.626	0.96	14.4	54.7	2.78	34.2	0.00			341
1	399	7.22	7.18	34.279	26.826	128.0	0.707	0.63	9.3	62.7	3.05	36.2	0.01			402
	400 ISL	7.21	7.17	34.279	26.827	127.9	0.708	0.63	9.3	62.8	3.05	36.2	0.01			403
1	464	6.74	6.70	34.298	26.907	120.9	0.788	0.44	6.4	69.1	3.09	38.0	0,00			468
	500 ISL	6.50	6.45	34.313	26.951	117.0	0.831	0.36	5.2	73.8	3.22	38.8	0.00			504
1	534	6.27	6.22	34.328	26.994	113.3	0.870	0.29	4.2	78.2	3.34	39.5	0.00			539

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.1 N	119 38.4 W	18/10/88	1757 UTC	76 M	150	10 KT	160 02 04	2	1016.3 MB	19.5 C	17.8 C	8/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0	16.72	16.72	33.562	24.477	344.5	0.000	5.87	105.8	2.5	0.29	0.3	0.02	1.71	0.17	0
1	10	15.60	15.60	33.591	24.755	318.4	0.033	6.12	108.0	2.8	0.40	1.1	0.06	4.71	0.28	10
	20 ISL	15.34	15.34	33.585	24.808	313.6	0.065	5.83	102.3	3.9	0.47	2.6	0.10	3.98	0.75	20
1	21	15.33	15.33	33.590	24.814	313.1	0.068	5.79	101.6	4.0	0.48	2.8	0.10	3.91	0.80	21
	30 ISL	15.05	15.05	33.588	24.874	307.6	0.096	5.53	96.5	5.5	0.62	4.3	0.14	2.63	0.84	30
1	31	15.02	15.02	33.588	24.881	307.0	0.099	5.51	96.1	5.6	0.63	4.5	0.15	2.49	0.84	31
1	42	14.82	14.81	33.585	24.922	303.4	0.132	5.39	93.6	6.2	0.66	5.3	0.20	1.68	0.61	42
	50 ISL	13.62	13.61	33.537	25.137	283.1	0.156	5.10	86.4	7.1	0.82	7.5	0.33	0.95	0.54	50
1	52	13.22	13.21	33.524	25.208	276.4	0.162	5.00	84.0	7.6	0.88	8.4	0.35	0.78	0.52	52
1	62	10.93	10.92	33.475	25.602	238.9	0.187	4.38	70.0	13.7	1.27	15.0	0.07	0.23	0.25	62
1	72	10.21	10.20	33.662	25.874	213.3	0.210	3.65	57.5	19.9	1.57	20.2	0.04	0.08	0.14	73

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 9.7 N	120 0.4 W	18/10/88	2313 UTC	1196 M	190	05 KT	130 01 04	2	1015.5 MB	19.5 C	18.0 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.97	16.97	33.576	24.429	349.1	0.000	5.98	108.4	3.1	0.38	0.1	0.01	1.05	0.30	0
1	10	16.40	16.40	33.574	24.561	336.9	0.034	5.99	107.3	3.1	0.39	0.1	0.01	1.30	0.49	10
	20 ISL	16.02	16.02	33.556	24.634	330.2	0.068	5.89	104.7	3.6	0.42	0.5	0.05	1.38	0.71	20
1	21	15.99	15.99	33.553	24.639	329.8	0.071	5.88	104.5	3.6	0.42	0.5	0.05	1.39	0.72	21
	30 ISL	15.77	15.77	33.536	24.675	326.6	0.100	5.84	103.3	3.6	0.45	0.8	0.07	1.20	0.65	30
1	31	15.72	15.72	33.531	24.683	325.9	0.104	5.83	103.0	3.6	0.46	0.9	0.08	1.17	0.63	31
1	42	14.17	14.16	33.378	24.900	305.5	0.138	5.65	96.7	4.2	0.59	2.6	0.24	0.62	0.47	42
	50 ISL	12.67	12.66	33.295	25.139	282.8	0.162	5.33	88.4	6.2	0.80	6.5	0.21	0.36	0.33	50
1	52	12.33	12.32	33.288	25.199	277.2	0.168	5.23	86.1	6.9	0.86	7.7	0.20	0.31	0.30	52
1	63	11.45	11.44	33.419	25.465	252.0	0.197	4.58	74.1	11.8	1.19	13.2	0.04	0.17	0.23	63
1	73	10.54	10.53	33.454	25.655	234.1	0.221	4.36	69.1	15.1	1.37	16.4	0.03	0.14	0.17	74
	75 ISL	10.41	10.40	33.487	25.703	229.6	0.226	4.23	66.9	16.2	1.42	17.3	0.03	0.13	0.16	76
1	87	9.92	9.91	33.699	25.952	206.1	0.252	3.46	54.2	22.3	1.72	22.0	0.01	0.06	0.13	88
	100 ISL	9.77	9.76	33.782	26.042	197.9	0.278	3.18	49.7	24.7	1.80	23.4	0.01	0.03	0.12	101
1	102	9.76	9.75	33.788	26.048	197.3	0.282	3.16	49.4	24.9	1.80	23.4	0.01	0.03	0.12	103
1	123	9.18	9.17	33.874	26.210	182.2	0.322	3.01	46.4	28.5	1.89	25.1	0.01	0.01	0.08	124
	125 ISL	9.13	9.12	33.881	26.224	181.0	0.326	3.01	46.4	28.8	1.90	25.2	0.01	0.01	0.08	126
1	148	8.67	8.65	33.953	26.353	169.1	0.366	2.96	45.2	32.3	1.95	26.4	0.01	0.01	0.06	149
	150 ISL	8.64	8.62	33.958	26.361	168.3	0.369	2.95	45.0	32.6	1.96	26.5	0.01	0.01	0.06	151
1	179	8.26	8.24	34.017	26.466	158.8	0.417	2.77	41.9	36.9	2.06	27.9	0.01	0.02	0.07	180
	200 ISL	8.04	8.02	34.042	26.519	154.1	0.449	2.58	38.8	40.1	2.15	29.1	0.01	0.01	0.05	202
1	209	7.95	7.93	34.051	26.539	152.3	0.463	2.47	37.1	41.6	2.20	29.6	0.01	0.00	0.04	211
1	240	7.67	7.65	34.100	26.619	145.1	0.509	1.97	29.4	47.7	2.42	31.7	0.00			242
	250 ISL	7.54	7.52	34.105	26.642	143.1	0.524	1.86	27.7	49.7	2.47	32.4	0.00			252
2	282	7.14	7.11	34.116	26.707	137.2	0.569	1.57	23.1	55.6	2.59	34.2	0.00			284
	300 ISL	7.04	7.01	34.134	26.735	134.8	0.593	1.39	20.4	57.9	2.66	34.9	0.00			302
2	338	6.89	6.86	34.174	26.788	130.3	0.643	1.04	15.2	62.0	2.80	36.2	0.00			341
2	397	6.52	6.48	34.213	26.869	123.3	0.718	0.71	10.3	69.6	2.96	37.9	0.00			400
	400 ISL	6.51	6.47	34.216	26.872	123.0	0.722	0.69	10.0	69.9	2.97	38.0	0.00			403
2	463	6.24	6.20	34.277	26.956	115.7	0.797	0.43	6.2	76.9	3.10	39.3	0.00			467
	500 ISL	5.96	5.92	34.287	27.000	111.8	0.839	0.36	5.2	81.8	3.14	40.2	0.00			504
2	532	5.71	5.66	34.297	27.039	108.2	0.874	0.30	4.3	86.1	3.18	40.9	0.00			537

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 59.7 N	120 20.9 W	19/10/88	0330 UTC	712 M	260	04 KT			1015.4 MB	18.8 C	17.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	16.91	16.91	33.417	24.322	359.4	0.000	5.81	105.1	2.9	0.35	0.1	0.00	0.34	0.12	0
1	1		16.91	16.91	33.417	24.322	359.4	0.004	5.81	105.1	2.9	0.35	0.1	0.00	0.34	0.12	1
	10	ISL	16.79	16.79	33.412	24.346	357.4	0.036	5.84	105.4	2.9	0.35	0.1	0.00	0.41	0.14	10
1	11		16.78	16.78	33.411	24.348	357.2	0.039	5.84	105.3	2.9	0.35	0.1	0.00	0.42	0.14	11
	20	ISL	16.06	16.06	33.410	24.513	341.8	0.071	5.95	105.8.	3.0	0.36	0.1	0.00	0.49	0.23	20
1	22		15.88	15.88	33.413	24.556	337.8	0.078	5.97	105.8	3.1	0.36	0.1	0.00	0.51	0.27	22
	30	ISL	15.58	15.58	33.451	24.652	328.8	0.104	5.92	104.3	3.6	0.39	0.4	0.03	1.08	0.52	30
1	32		15.48	15.48	33.449	24.673	326.9	0.111	5.91	103.9	3.7	0.40	0.5	0.04	1.20	0.57	32
1	42		14.06	14.05	33.242	24.818	313.3	0.143	6.03	102.9	3.5	0.46	0.7	0.06	0.86	0.43	42
	50	ISL	12.55	12.54	33.093	25.005	295.6	0.167	5.94	98.1	4.1	0.60	2.6	0.18	0.65	0.39	50
1	52		12.23	12.22	33.076	25.053	291.0	0.173	5.89	96.6	4.3	0.64	3.2	0.21	0.61	0.39	52
1	63		12.11	12.10	33.244	25.207	276.7	0.204	5.41	88.6	5.8	0.84	7.2	0.10	0.39	0.36	63
1	73		10.75	10.74	33.233	25.446	254.0	0.231	5.10	81.1	10.4	1.08	11.6	0.03	0.16	0.19	74
	75	ISL	10.74	10.73	33.282	25.486	250.3	0.236	4.97	79.1	11.1	1.12	12.4	0.03	0.15	0.18	76
1	87		10.69	10.68	33.541	25.697	230.5	0.265	4.16	66.2	15.1	1.37	16.6	0.02	0.09	0.13	88
	100	ISL	10.10	10.09	33.677	25.904	211.0	0.293	3.63	57.1	20.2	1.61	20.7	0.01	0.04	0.11	101
1	103		9.94	9.93	33.697	25.947	206.9	0.300	3.54	55.5	21.4	1.66	21.5	0.01	0.03	0.11	104
1	123		9.30	9.29	33.837	26.162	186.8	0.339	3.15	48.7	27.0	1.88	24.4	0.01	0.01	0.06	124
	125	ISL	9.27	9.26	33.845	26.173	185.8	0.343	3.12	48.2	27.3	1.89	24.6	0.01	0.01	0.06	126
1	149		8.98	8.96	33.914	26.274	176.7	0.386	2.94	45.2	30.3	1.96	25.9	0.01	0.01	0.05	150
	150	ISL	8.97	8.95	33.917	26.278	176.3	0.388	2.94	45.1	30.4	1.96	25.9	0.01	0.01	0.05	151
1	180		8.51	8.49	33.986	26.404	164.8	0.439	2.93	44.5	34.2	2.02	26.9	0.01	0.01	0.06	181
	200	ISL	8.19	8.17	34.023	26.482	157.7	0.471	2.79	42.1	37.5	2.10	28.1	0.01	0.01	0.05	202
1	211		8.02	8.00	34.041	26.521	154.1	0.489	2.65	39.9	39.7	2.16	28.9	0.01	0.01	0.04	213
1	240		7.62	7.60	34.090	26.618	145.2	0.532	2.05	30.6	47.1	2.41	31.8	0.00			242
	250	ISL	7.51	7.49	34.097	26.640	143.3	0.546	1.94	28.8	48.8	2.45	32.4	0.00			252
1	281		7.27	7.24	34.112	26.686	139.3	0.590	1.70	25.1	53.1	2.55	33.7	0.00			283
	300	ISL	7.21	7.18	34.137	26.714	136.9	0.616	1.48	21.9	55.3	2.63	34.4	0.00			302
1	338		7.12	7.09	34.192	26.770	132.1	0.668	1.04	15.3	59.8	2.80	35.8	0.00			341
1	397		6.66	6.62	34.260	26.887	121.7	0.742	0.56	8.2	69.9	3.03	38.1	0.00			400
	400	ISL	6.64	6.60	34.262	26.891	121.3	0.746	0.55	8.0	70.2	3.04	38.2	0.00			403
1	463		6.32	6.28	34.281	26.949	116.5	0.821	0.44	6.4	75.3	3.10	39.3	0.00			467
	500	ISL	6.11	6.07	34.295	26.987	113.2	0.863	0.39	5.6	79.1	3.15	39.6	0.00			504
1	531		5.94	5.89	34.308	27.020	110.4	0.898	0.34	4.9	82.2	3.19	39.9	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 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 2.3 W	19/10/88	0923 UTC	4226 M		00 KT			1016.5 MB	18.0 C	16.2 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.59	17.59	33.386	24.137	377.0	0.000	5.63	103.1	1.9	0.33	0.0	0.00	0.17	0.04	0
1	2		17.59	17.59	33.386	24.137	377.1	0.008	5.63	103.1	1.9	0.33	0.0	0.00	0.17	0.04	2
	10	ISL	17.55	17.55	33.385	24.146	376.5	0.038	5.66	103.6	1.9	0.35	0.0	0.00	0.18	0.04	10
1	11		17.54	17.54	33.385	24.148	376.3	0.041	5.66	103.6	1.9	0.35	0.0	0.00	0.18	0.04	11
	20	ISL	17.32	17.32	33.408	24.219	369.9	0.075	5.68	103.5	1.9	0.33	0.0	0.00	0.21	0.07	20
1	22		17.27	17.27	33.437	24.253	366.7	0.082	5.68	103.4	1.9	0.33	0.0	0.00	0.22	0.08	22
	30	ISL	15.33	15.33	33.228	24.536	339.9	0.111	6.00	105.0	2.1	0.36	0.0	0.00	0.29	0.14	30
1	32		14.76	14.76	33.172	24.616	332.2	0.117	6.09	105.4	2.1	0.37	0.0	0.00	0.32	0.16	32
1	42		12.64	12.63	33.024	24.934	302.1	0.149	6.25	103.4	3.0	0.45	0.4	0.03	0.60	0.27	42
	50	ISL	12.19	12.18	33.079	25.063	290.0	0.173	5.96	97.7	3.7	0.58	2.9	0.07	0.59	0.32	50
1	52		12.15	12.14	33.102	25.089	287.6	0.179	5.85	95.8	4.0	0.62	3.7	0.08	0.59	0.32	52
1	62		11.51	11.50	33.181	25.269	270.6	0.206	5.37	86.8	6.3	0.86	7.7	0.03	0.36	0.27	62
1	73		10.99	10.98	33.275	25.436	254.9	0.235	5.01	80.1	9.5	1.06	11.4	0.02	0.18	0.19	74
	75	ISL	10.93	10.92	33.307	25.472	251.6	0.240	4.91	78.4	10.2	1.10	12.1	0.02	0.16	0.18	76
1	87		10.58	10.57	33.496	25.681	232.0	0.269	4.36	69.2	14.0	1.35	16.2	0.01	0.07	0.10	88
	100	ISL	10.08	10.07	33.571	25.825	218.5	0.299	4.03	63.3	17.1	1.47	18.6	0.01	0.03	0.06	101
1	103		9.97	9.96	33.582	25.852	215.9	0.305	3.97	62.2	17.8	1.49	19.1	0.01	0.03	0.06	104
1	123		9.57	9.56	33.757	26.056	197.0	0.347	3.32	51.6	23.5	1.76	23.2	0.01	0.01	0.05	124
	125	ISL	9.52	9.51	33.772	26.076	195.1	0.350	3.28	50.9	24.0	1.78	23.5	0.01	0.01	0.05	126
1	149		8.90	8.88	33.916	26.288	175.3	0.395	3.00	46.0	29.3	1.95	25.7	0.00	0.00	0.05	150
	150	ISL	8.88	8.86	33.920	26.294	174.7	0.397	2.99	45.8	29.5	1.95	25.8	0.00	0.00	0.05	151
1	180		8.44	8.42	34.002	26.427	162.6	0.447	2.85	43.3	34.1	2.01	27.2	0.00	0.00	0.04	181
	200	ISL	8.18	8.16	34.037	26.494	156.5	0.479	2.62	39.5	37.8	2.11	28.5	0.00	0.00	0.04	202
1	211		8.04	8.02	34.050	26.525	153.7	0.496	2.48	37.3	39.9	2.18	29.3	0.00	0.00	0.04	213
1	241		7.64	7.62	34.074	26.603	146.7	0.541	2.18	32.5	45.2	2.34	31.3	0.00			243
	250	ISL	7.55	7.53	34.087	26.626	144.6	0.554	2.03	30.2	46.9	2.40	31.9	0.00			252
1	282		7.27	7.24	34.133	26.702	137.7	0.600	1.51	22.3	53.1	2.61	34.1	0.00			284
	300	ISL	7.09	7.06	34.144	26.736	134.7	0.624	1.33	19.6	56.2	2.69	35.1	0.00			302
1	339		6.76	6.73	34.164	26.797	129.3	0.676	1.05	15.3	62.3	2.84	36.8	0.00			342
1	398		6.53	6.49	34.232	26.882	122.0	0.750	0.62	9.0	69.3	3.06	38.3	0.00			401
	400	ISL	6.52	6.48	34.233	26.884	121.8	0.752	0.61	8.9	69.6	3.06	38.4	0.00			403
1	463		6.02	5.98	34.257	26.968	114.3	0.827	0.43	6.2	78.2	3.14	40.1	0.00			467
	500	ISL	5.75	5.71	34.280	27.021	109.6	0.868	0.35	5.0	83.5	3.19	40.9	0.00			504
1	530		5.54	5.50	34.300	27.062	105.9	0.900	0.28	4.0	87.8	3.23	41.6	0.00			535

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 19.A N	121 A2.9 W	19/10/88	1442 UTC	4061 M	020	08 KT	320 03 06	2	1016.7 MB	17.0 C	15.0 C	8/8	ST

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.66	17.66	33.567	24.258	365.4	0.000	5.64	103.6	2.3	0.31	0.1	0.00	0.28	0.13	0
1	10	17.66	17.66	33.563	24.256	366.0	0.037	5.65	103.8	2.3	0.32	0.1	0.00	0.29	0.11	10
1	20	17.24	17.24	33.528	24.330	359.3	0.073	5.70	103.8	2.2	0.31	0.1	0.00	0.31	0.12	20
1	30	17.17	17.17	33.545	24.360	356.7	0.109	5.70	103.7	2.2	0.33	0.1	0.00	0.43	0.23	30
1	41	13.18	13.17	33.621	25.291	268.3	0.143	4.57	76.7	9.4	1.06	10.9	0.24	0.77	0.49	41
	50 ISL	11.43	11.42	33.686	25.676	231.7	0.166	3.74	60.5	16.1	1.47	17.9	0.06	0.29	0.30	50
1	51	11.30	11.29	33.691	25.704	229.0	0.168	3.67	59.2	16.8	1.50	18.5	0.03	0.23	0.27	51
1	61	10.44	10.43	33.749	25.902	210.4	0.190	3.34	52.9	20.9	1.65	21.1	0.02	0.12	0.19	61
1	71	10.08	10.07	33.827	26.024	198.9	0.210	2.99	47.0	24.4	1.80	23.4	0.01	0.06	0.12	72
	75 ISL	9.89	9.88	33.852	26.076	194.1	0.218	2.90	45.4	25.7	1.84	24.1	0.01	0.04	0.11	76
1	85	9.44	9.43	33.903	26.190	183.4	0.237	2.75	42.7	28.4	1.92	25.5	0.01	0.02	0.10	86
	100 ISL	9.20	9.19	33.953	26.269	176.2	0.264	2.57	39.7	31.1	2.01	26.6	0.02	0.01	0.10	101
1	101	9.19	9.18	33.956	26.272	175.9	0.266	2.56	39.5	31.2	2.01	26.6	0.02	0.01	0.10	102
1	122	8.94	8.93	34.000	26.347	169.2	0.302	2.53	38.8	32.8	2.06	27.2	0.02	0.01	0.09	123
	125 ISL	8.90	8.89	34.009	26.360	168.0	0.307	2.50	38.4	33.4	2.08	27.4	0.02	0.01	0.09	126
1	147	8.58	8.56	34.068	26.457	159.1	0.343	2.25	34.3	37.6	2.21	28.9	0.01	0.01	0.08	148
	150 ISL	8.54	8.52	34.069	26.464	158.5	0.348	2.26	34.4	37.8	2.21	28.9	0.01	0.01	0.08	151
1	179	8.20	8.18	34.071	26.517	153.9	0.393	2.35	35.5	39.3	2.20	29.3	0.01	0.00	0.07	180
	200 ISL	8.01	7.99	34.108	26.575	148.7	0.425	2.04	30.7	43.1	2.32	30.6	0.01	0.00	0.05	202
1	210	7.90	7.88	34.123	26.603	146.2	0.440	1.88	28.2	45.3	2.39	31.4	0.01	0.00	0.04	212
1	240	7.33	7.31	34.108	26.674	139.8	0.482	1.74	25.8	51.5	2.51	33.4	0.01			242
	250 ISL	7.23	7.21	34.112	26.691	138.2	0.496	1.65	24.4	53.0	2.55	33.9	0.01			252
1	282	7.06	7.03	34.141	26.738	134.3	0.540	1.33	19.6	57.1	2.68	35.2	0.01			284
	300 ISL	6.98	6.95	34.165	26.768	131.6	0.564	1.14	16.8	59.5	2.75	35.9	0.01			302
1	339	6.80	6.77	34.212	26.830	126.3	0.614	0.80	11.7	64.9	2.89	37.4	0.01			342
1	399	6.26	6.22	34.227	26.913	118.8	0.688	0.58	8.4	73.4	3.02	39.2	0.00			402
	400 ISL	6.25	6.21	34.227	26.915	118.7	0.689	0.58	8.4	73.5	3.02	39.2	0.00			403
1	464	5.78	5.74	34.265	27.005	110.7	0.762	0.38	5.4	82.5	3.15	40.9	0.00			468
	500 ISL	5.66	5.62	34.306	27.052	106.6	0.801	0.31	4.4	86.3	3.19	41.3	0.00			504
1	532	5.55	5.50	34.343	27.095	102.8	0.835	0.25	3.6	89.6	3.23	41.6	0.00			537

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 59.5 N	122 23.5 W	19/10/88	2121 UTC	4123 M	330	17 KT	320 04 05	2	1015.0 MB	17.7 C	16.0 C	8/8	SC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.10	18.10	33.250	23.909	398.7	0.000	5.54	102.4	1.7	0.30	0.1	0.00	0.13	0.02	0
1	1	18.10	18.10	33.250	23.909	398.8	0.004	5.54	102.4	1.7	0.30	0.1	0.00	0.13	0.02	1
	10 ISL	18.07	18.07	33.250	23.917	398.3	0.040	5.54	102.4	1.5	0.32	0.1	0.00	0.13	0.03	10
1	11	18.07	18.07	33.250	23.917	398.4	0.044	5.54	102.3	1.5	0.32	0.1	0.00	0.13	0.03	11
	20 ISL	18.03	18.03	33.238	23.918	398.6	0.080	5.58	103.0	1.3	0.29	0.1	0.00	0.14	0.03	20
1	21	18.03	18.03	33.237	23.917	398.7	0.084	5.58	103.0	1.3	0.29	0.1	0.00	0.14	0.03	21
	30 ISL	17.83	17.82	33.222	23.954	395.4	0.119	5.60	103.0	1.3	0.31	0.1	0.00	0.16	0.04	30
1	32	17.78	17.77	33.218	23.964	394.6	0.127	5.61	103.0	1.3	0.32	0.1	0.00	0.17	0.04	32
1	42	15.49	15.48	33.213	24.490	344.7	0.164	6.26	109.9	1.5	0.34	0.1	0.00	0.27	0.11	42
	50 ISL	14.70	14.69	33.225	24.671	327.6	0.191	6.32	109.2	1.6	0.35	0.1	0.00	0.33	0.19	50
1	52	14.58	14.57	33.229	24.699	324.9	0.198	6.33	109.1	1.7	0.36	0.1	0.00	0.35	0.21	52
1	62	13.74	13.73	33.271	24.907	305.3	0.229	6.17	104.6	2.2	0.46	0.8	0.03	0.49	0.38	62
1	73	12.92	12.91	33.297	25.092	287.9	0.262	5.76	96.0	3.4	0.65	4.3	0.14	0.42	0.37	74
	75 ISL	12.75	12.74	33.306	25.132	284.1	0.268	5.65	93.8	3.9	0.70	5.2	0.13	0.39	0.37	76
1	87	11.77	11.76	33.381	25.377	261.0	0.300	4.96	80.7	7.7	1.03	10.9	0.04	0.21	0.33	88
	100 ISL	11.10	11.09	33.471	25.570	242.9	0.333	4.47	71.7	11.6	1.25	15.0	0.01	0.14	0.20	101
1	102	11.01	11.00	33.486	25.597	240.3	0.338	4.40	70.5	12.2	1.28	15.5	0.01	0.13	0.18	103
1	123	9.80	9.79	33.664	25.945	207.5	0.385	3.55	55.4	20.8	1.65	21.5	0.01	0.04	0.05	124
	125 ISL	9.73	9.72	33.681	25.970	205.2	0.389	3.49	54.4	21.4	1.68	21.9	0.01	0.03	0.05	126
1	149	9.20	9.18	33.854	26.192	184.5	0.436	2.99	46.1	27.3	1.90	25.1	0.00	0.00	0.04	150
	150 ISL	9.18	9.16	33.859	26.199	183.8	0.438	2.98	46.0	27.5	1.90	25.2	0.00	0.00	0.04	151
1	180	8.60	8.58	33.974	26.380	167.0	0.490	2.84	43.3	32.7	1.99	27.1	0.00	0.00	0.03	181
	200 ISL	8.34	8.32	34.016	26.454	160.4	0.523	2.67	40.4	35.9	2.08	28.2	0.00	0.00	0.02	202
1	211	8.22	8.20	34.031	26.484	157.7	0.540	2.58	39.0	37.6	2.13	28.8	0.00	0.00	0.02	213
1	241	7.96	7.94	34.052	26.539	152.9	0.587	2.40	36.0	41.5	2.24	29.9	0.00			243
	250 ISL	7.86	7.84	34.057	26.558	151.2	0.601	2.33	34.9	42.9	2.28	30.4	0.00			252
1	282	7.48	7.45	34.077	26.629	144.8	0.648	2.03	30.2	48.4	2.42	32.3	0.00			284
	300 ISL	7.29	7.26	34.095	26.670	141.1	0.674	1.79	26.5	51.8	2.51	33.5	0.00			302
1	338	6.96	6.93	34.137	26.749	134.0	0.726	1.28	18.8	58.7	2.70	35.8	0.00			341
1	399	6.61	6.57	34.181	26.831	126.9	0.806	0.86	12.5	66.5	2.89	37.8	0.00			402
	400 ISL	6.60	6.56	34.181	26.833	126.8	0.807	0.85	12.4	66.7	2.89	37.8	0.00			403
1	465	5.97	5.93	34.205	26.933	117.6	0.886	0.56	8.0	76.9	3.08	40.2	0.00			469
	500 ISL	5.74	5.70	34.230	26.982	113.2	0.927	0.46	6.6	81.9	3.14	41.0	0.00			504
1	534	5.52	5.47	34.255	27.029	109.0	0.965	0.36	5.1	86.8	3.19	41.7	0.00			539

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 39.5 N	123 4.0 W	20/10/88	0308 UTC	4102 M	3 40	20 KT			1013.6 MB	18.2 C	17.1 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.43	18.43	33.218	23.803	408.8	0.000	5.51	102.5	2.3	0.32	0.1	0.01	0.10	0.02	0
1	10		18.44	18.44	33.217	23.800	409.4	0.041	5.51	102.5	2.1	0.34	0.1	0.01	0.10	0.02	10
	20	ISL	18.45	18.45	33.217	23.798	410.0	0.082	5.50	102.3	2.1	0.33	0.1	0.00	0.11	0.02	20
1	21		18.45	18.45	33.217	23.798	410.0	0.086	5.50	102.3	2.1	0.33	0.1	0.00	0.11	0.02	21
	30	ISL	18.28	18.27	33.227	23.848	405.6	0.123	5.55	102.9	2.0	0.34	0.1	0.00	0.15	0.03	30
1	31		18.26	18.25	33.235	23.859	404.5	0.127	5.56	103.1	2.0	0.34	0.1	0.00	0.15	0.03	31
1	42		17.13	17.12	33.197	24.103	381.6	0.170	5.84	105.9	2.0	0.32	0.1	0.00	0.21	0.06	42
	50	ISL	15.96	15.95	33.195	24.371	356.2	0.199	6.09	107.9	2.0	0.34	0.1	0.01	0.25	0.10	50
1	52		15.67	15.66	33.197	24.438	349.9	0.207	6.15	108.4	2.0	0.35	0.1	0.01	0.26	0.11	52
1	62		14.55	14.54	33.195	24.680	327.1	0.240	6.24	107.5	2.4	0.40	0.1	0.00	0.39	0.22	62
1	73		13.84	13.83	33.227	24.853	310.8	0.275	6.14	104.3	2.5	0.46	0.7	0.04	0.45	0.32	74
	75	ISL	13.63	13.62	33.223	24.893	307.0	0.282	6.07	102.6	2.7	0.49	1.2	0.05	0.43	0.32	76
1	87		12.40	12.39	33.205	25.122	285.4	0.317	5.64	92.9	4.1	0.65	4.4	0.09	0.29	0.26	88
	100	ISL	11.85	11.84	33.231	25.246	273.8	0.354	5.50	89.6	4.9	0.65	4.9	0.04	0.20	0.18	101
1	103		11.77	11.76	33.245	25.272	271.4	0.362	5.46	88.8	5.2	0.65	5.1	0.02	0.18	0.16	104
1	123		10.99	10.98	33.456	25.578	242.6	0.413	4.48	71.7	12.4	1.18	14.1	0.02	0.09	0.0J3	124
	125	ISL	10.91	10.89	33.471	25.604	240.2	0.418	4.40	70.3	13.0	1.22	14.8	0.02	0.08	0.08	126
1	149		10.01	9.99	33.623	25.878	214.5	0.473	3.69	57.9	19.6	1.61	20.5	0.00	0.04	0.05	150
	150	ISL	9.97	9.95	33.630	25.891	213.3	0.475	3.67	57.5	19.9	1.62	20.7	0.00	0.04	0.05	151
1	180		8.91	8.89	33.832	26.221	182.2	0.534	3.33	51.0	27.2	1.80	24.3	0.00	0.00	0.03	181
	200	ISL	8.59	8.57	33.942	26.357	169.6	0.569	3.08	46.9	31.8	1.92	26.2	0.00	0.00	0.03	202
1	211		8.48	8.46	33.987	26.410	164.8	0.588	2.95	44.8	34.1	1.99	27.0	0.00	0.00	0.03	213
1	240		8.07	8.05	34.034	26.509	155.8	0.634	2.67	40.2	39.3	2.13	28.8	0.00			242
	250	ISL	7.93	7.90	34.042	26.536	153.3	0.650	2.58	38.7	41.3	2.18	29.5	0.00			252
1	281		7.52	7.49	34.060	26.610	146.6	0.696	2.27	33.8	47.3	2.33	31.5	0.00			283
	300	ISL	7.30	7.27	34.073	26.651	142.9	0.724	2.03	30.0	50.7	2.44	32.8	0.00			302
1	337		6.92	6.89	34.101	26.726	136.1	0.775	1.56	22.9	57.0	2.66	35.1	0.00			340
1	397		6.44	6.40	34.155	26.833	126.5	0.854	0.94	13.6	67.7	2.91	38.2	0.00			400
	400	ISL	6.41	6.37	34.156	26.838	126.1	0.858	0.92	13.3	68.2	2.92	38.3	0.00			403
1	463		5.88	5.84	34.180	26.925	118.3	0.935	0.66	9.4	77.1	3.05	40.2	0.00			467
	500	ISL	5.71	5.67	34.220	26.978	113.6	0.978	0.49	7.0	81.8	3.13	40.9	0.00			504
1	533		5.56	5.51	34.257	27.026	109.3	1.014	0.34	4.8	85.9	3.21	41.6	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 19.6 N	123 44.7 W	20/10/88	0851 UTC	3879 M	3 40	20 KT			1016.0 MB	17.6 C	16.0 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.44	18.44	33.195	23.783	410.7	0.000	5.50	102.3	1.8	0.34	0.1	0.00	0.09	0.04	0
1	1		18.44	18.44	33.195	23.783	410.8	0.004	5.50	102.3	1.8	0.34	0.1	0.00	0.09	0.04	1
	10	ISL	18.45	18.45	33.194	23.780	411.3	0.041	5.50	102.3	1.8	0.33	0.1	0.00	0.09	0.03	10
1	17		18.45	18.45	33.193	23.780	411.6	0.070	5.50	102.3	1.8	0.32	0.1	0.00	0.09	0.02	17
	20	ISL	18.44	18.44	33.197	23.785	411.2	0.082	5.50	102.3	1.8	0.32	0.1	0.00	0.09	0.02	20
	30	ISL	18.41	18.40	33.211	23.804	409.8	0.123	5.51	102.4	1.8	0.32	0.1	0.00	0.11	0.03	30
1	32		18.40	18.39	33.214	23.809	409.4	0.131	5.51	102.4	1.8	0.32	0.1	0.00	0.11	0.03	32
1	42		17.12	17.11	33.102	24.032	388.4	0.171	5.77	104.6	1.7	0.34	0.1	0.00	0.19	0.07	42
	50	ISL	16.12	16.11	33.157	24.306	362.5	0.201	6.07	107.9	1.5	0.34	0.1	0.00	0.22	0.10	50
1	52		15.83	15.82	33.172	24.383	355.2	0.209	6.14	108.5	1.5	0.34	0.1	0.00	0.23	0.11	52
1	61		13.93	13.92	33.121	24.752	320.1	0.239	6.23	105.9	2.3	0.36	0.1	0.00	0.35	0.23	61
1	72		13.43	13.42	33.082	24.824	313.5	0.274	6.13	103.1	2.5	0.37	0.1	0.00	0.33	0.22	73
	75	ISL	13.26	13.25	33.080	24.857	310.4	0.283	6.12	102.6	2.5	0.38	0.1	0.00	0.35	0.25	76
1	82		12.86	12.85	33.092	24.945	302.1	0.305	6.07	100.9	2.8	0.40	0.2	0.02	0.39	0.33	83
1	97		12.33	12.32	33.205	25.136	284.3	0.349	5.60	92.1	4.6	0.71	5.5	0.06	0.26	0.26	98
	100	ISL	12.15	12.14	33.216	25.178	280.3	0.357	5.53	90.6	4.9	0.74	6.0	0.05	0.23	0.23	101
1	112		11.39	11.38	33.264	25.357	263.5	0.390	5.25	84.7	6.8	0.85	8.2	0.01	0.13	0.12	113
	125	ISL	10.64	10.63	33.366	25.570	243.4	0.423	4.81	76.4	11.0	1.10	12.6	0.01	0.07	0.06	126
1	127		10.54	10.52	33.385	25.602	240.3	0.427	4.73	75.0	11.7	1.14	13.4	0.01	0.06	0.06	128
	150	ISL	9.75	9.73	33.645	25.939	208.7	0.479	3.76	58.7	20.1	1.62	20.8	0.00	0.01	0.03	151
1	153		9.67	9.65	33.678	25.978	205.0	0.485	3.65	56.8	21.1	1.67	21.6	0.00	0.01	0.03	154
1	178		8.82	8.80	33.841	26.242	180.2	0.533	3.45	52.8	27.1	1.80	24.2	0.01	0.00	0.03	179
	200	ISL	8.49	8.47	33.929	26.362	169.1	0.572	3.21	48.8	31.0	1.91	25.9	0.01	0.00	0.02	202
1	209		8.41	8.39	33.955	26.395	166.1	0.587	3.10	47.0	32.5	1.96	26.5	0.01	0.00	0.02	211
1	238		8.00	7.98	34.027	26.514	155.2	0.634	2.77	41.6	38.5	2.13	28.6	0.01			240
	250	ISL	7.85	7.83	34.044	26.549	152.0	0.652	2.60	38.9	41.0	2.20	29.6	0.01			252
1	279		7.53	7.50	34.069	26.615	146.1	0.695	2.17	32.3	46.7	2.37	31.8	0.01			281
	300	ISL	7.32	7.29	34.087	26.659	142.1	0.725	1.90	28.1	50.4	2.48	33.2	0.01			302
1	336		6.97	6.94	34.108	26.725	136.3	0.776	1.52	22.3	56.5	2.64	35.2	0.01			339
1	395		6.29	6.25	34.111	26.818	127.8	0.854	1.16	16.8	66.4	2.85	37.9	0.01			398
	400	ISL	6.26	6.22	34.117	26.826	127.0	0.860	1.11	16.0	67.3	2.87	38.1	0.01			403
1	461		5.90	5.86	34.194	26.934	117.4	0.934	0.60	8.6	77.4	3.03	40.3	0.01			465
	500	ISL	5.58	5.54	34.203	26.980	113.2	0.979	0.54	7.7	82.8	3.08	41.2	0.00			504
1	532		5.32	5.28	34.211	27.018	109.7	1.015	0.49	6.9	87.3	3.13	42.0	0.00			537

RV NEW HORIZON CALCOFI CRUISE 8810 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 45.9 W	17/10/88	1523 UTC	55 M	110	06 KT	180 01 06	1	1014.1 MB	18.6 C	17.1 C	7/8 ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.54	19.54	33.646	23.850	404.4	0.000	5.72	108.9	2.2	0.23	0.1	0.00	0.52	0.07	0
1	6		19.49	19.49	33.641	23.859	403.7	0.024	5.78	109.9	2.1	0.22	0.1	0.00	0.56	0.09	6
	10	ISL	18.76	18.76	33.588	24.004	390.0	0.040	6.05	113.5	2.3	0.23	0.1	0.00	1.01	0.09	10
1	17		16.84	16.84	33.468	24.378	354.6	0.066	6.42	116.0	2.9	0.24	0.1	0.00	1.76	0.08	17
	20	ISL	15.83	15.83	33.404	24.560	337.3	0.077	6.32	111.9	3.0	0.29	0.5	0.02	1.67	0.21	20
1	28		13.45	13.45	33.313	24.998	295.8	0.102	5.78	97.4	3.8	0.51	1.4	0.08	1.20	0.53	28
	30	ISL	13.16	13.16	33.321	25.062	289.7	0.108	5.63	94.3	4.3	0.58	2.6	0.15	1.17	0.51	30
1	37		12.58	12.58	33.369	25.213	275.4	0.128	5.14	85.1	6.3	0.83	6.8	0.37	1.07	0.39	37
1	48		12.26	12.25	33.419	25.314	266.1	0.157	4.65	76.5	9.4	1.05	9.5	0.35	0.42	0.35	48
	50	ISL	12.12	12.11	33.436	25.354	262.4	0.163	4.56	74.8	10.1	1.11	10.5	0.31	0.36	0.34	50
1	54		11.83	11.82	33.471	25.435	254.7	0.173	4.37	71.3	11.6	1.24	12.4	0.22	0.25	0.32	54

RV NEW HORIZON CALCOFI CRUISE 8810 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 54.1 W	17/10/88	1302 UTC	607 M	1A0	10 KT			1013.5 MB	18.7 C	17.7 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.90	19.90	33.673	23.777	411.3	0.000	5.64	108.1	2.0	0.21	0.1	0.00	0.42	0.06	0
1	10		19.72	19.72	33.666	23.819	407.7	0.041	5.75	109.9	2.0	0.21	0.1	0.00	0.44	0.07	10
	20	ISL	17.27	17.27	33.506	24.306	361.6	0.079	6.18	112.6	2.9	0.24	0.1	0.00	0.97	0.15	20
1	21		16.95	16.95	33.488	24.368	355.7	0.083	6.22	112.6	3.0	0.24	0.1	0.00	1.03	0.17	21
	30	ISL	14.35	14.35	33.343	24.835	311.3	0.113	6.13	105.3	3.7	0.40	0.3	0.03	1.25	0.49	30
1	31		14.09	14.09	33.333	24.882	3 06.9	0.116	6.12	104.5	3.8	0.43	0.3	0.03	1.27	0.52	31
1	41		12.75	12.74	33.338	25.156	281.0	0.145	5.36	89.0	5.9	0.81	6.3	0.27	0.60	0.41	41
	50	ISL	12.18	12.17	33.424	25.333	264.4	0.170	4.85	79.6	8.5	1.09	10.3	0.11	0.32	0.34	50
1	51		12.14	12.13	33.435	25.349	262.8	0.173	4.80	78.8	8.8	1.11	10.7	0.08	0.30	0.33	51
1	62		11.81	11.80	33.500	25.462	252.4	0.201	4.44	72.4	10.7	1.25	13.2	0.05	0.19	0.22	62
1	72		11.42	11.41	33.584	25.599	239.5	0.226	3.98	64.4	13.5	1.44	16.3	0.04	0.14	0.16	73
	75	ISL	11.32	11.31	33.604	25.633	236.4	0.233	3.88	62.6	14.2	1.48	16.9	0.04	0.13	0.15	76
1	86		11.01	11.00	33.663	25.735	226.9	0.258	3.62	58.1	16.5	1.57	18.5	0.03	0.09	0.13	87
	100	ISL	10.65	10.64	33.730	25.851	216.1	0.289	3.38	53.8	19.6	1.66	20.1	0.01	0.06	0.11	101
1	102		10.61	10.60	33.739	25.865	214.8	0.294	3.35	53.3	20.0	1.67	20.3	0.01	0.06	0.11	103
1	123		10.30	10.29	33.850	26.006	201.9	0.337	2.94	46.5	23.9	1.83	22.5	0.01	0.02	0.07	124
	125	ISL	10.27	10.26	33.860	26.019	200.7	0.341	2.92	46.1	24.2	1.84	22.7	0.01	0.02	0.07	126
1	148		9.92	9.90	33.963	26.159	187.8	0.386	2.74	43.0	27.0	1.93	24.4	0.01	0.01	0.06	149
	150	ISL	9.90	9.88	33.973	26.170	186.8	0.390	2.71	42.5	27.3	1.94	24.5	0.01	0.01	0.06	151
1	179		9.61	9.59	34.086	26.307	174.4	0.442	2.37	37.0	31.8	2.13	26.4	0.01	0.01	0.05	180
	200	ISL	9.27	9.25	34.110	26.382	167.6	0.478	2.25	34.8	34.5	2.22	27.5	0.00	0.00	0.04	202
1	210		9.10	9.08	34.116	26.414	164.7	0.495	2.21	34.1	35.7	2.25	28.0	0.00	0.00	0.04	212
1	241		8.70	8.67	34.158	26.510	156.0	0.544	2.02	30.9	39.4	2.36	29.3	0.01			243
	250	ISL	8.60	8.57	34.174	26.538	153.5	0.558	1.88	28.7	41.1	2.41	29.9	0.01			252
1	282		8.31	8.28	34.226	26.624	145.8	0.606	1.36	20.6	47.1	2.60	31.9	0.01			284
	300	ISL	8.20	8.17	34.244	26.655	143.1	0.632	1.21	18.3	48.9	2.68	32.6	0.01			302
1	339		7.97	7.94	34.269	26.710	138.6	0.687	0.99	14.9	52.2	2.81	33.7	0.01			3 42
1	399		7.48	7.44	34.292	26.799	130.7	0.768	0.66	9.8	60.1	2.97	35.6	0.00			402
	400	ISL	7.47	7.43	34.292	26.801	130.6	0.769	0.66	9.8	60.2	2.97	35.6	0.00			403
1	464		6.90	6.86	34.314	26.898	121.9	0.850	0.42	6.2	68.5	3.14	37.8	0.01			468
	500	ISL	6.65	6.60	34.323	26.939	118.3	0.893	0.35	5.1	72.5	3.18	38.7	0.01			504
1	535		6.40	6.35	34.333	26.980	114.7	0.934	0.29	4.2	76.4	3.21	39.5	0.01			540

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 33

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 19.4 N	118 7.0 W	17/10/88	1041 UTC	733 M	160	04 KT			1013.0 MB	18.6 C	17.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.85	19.85	33.668	23.786	410.4	0.000	5.62	107.6	2.1	0.24	0.1	0.00	0.33	0.06	0
1	2		19.85	19.85	33.668	23.787	410.5	0.008	5.62	107.6	2.1	0.24	0.1	0.00	0.33	0.06	2
	10	ISL	19.63	19.63	33.661	23.83 9	405.8	0.041	5.71	108.9	2.1	0.22	0.1	0.00	0.31	0.08	10
1	12		19.58	19.58	33.659	23.850	404.8	0.049	5.73	109.2	2.1	0.22	0.1	0.00	0.31	0.08	12
	20	ISL	18.01	18.01	33.539	24.153	376.2	0.080	6.05	111.8	2.3	0.23	0.1	0.00	0.49	0.13	20
1	23		17.18	17.18	33.482	24.309	361.4	0.091	6.16	112.0	2.5	0.24	0.1	0.00	0.61	0.16	23
	30	ISL	14.81	14.81	33.338	24.734	321.0	0.115	6.17	107.0	3.0	0.36	0.2	0.01	1.14	0.33	30
1	33		13.87	13.87	33.305	24.906	304.6	0.125	6.17	104.9	3.4	0.44	0.2	0.02	1.28	0.40	33
1	43		12.66	12.65	33.366	25.195	277.3	0.154	5.14	85.2	6.0	0.86	6.8	0.62	0.49	0.38	43
	50	ISL	12.38	12.37	33.411	25.285	269.0	0.173	4.91	81.0	7.0	0.99	9.1	0.43	0.38	0.31	50
1	53		12.31	12.30	33.430	25.313	266.4	0.181	4.85	79.9	7.5	1.03	9.9	0.29	0.33	0.28	53
1	68		11.42	11.41	33.544	25.568	242.4	0.219	4.17	67.4	12.3	1.32	14.8	0.03	0.14	0.19	69
	75	ISL	11.09	11.08	33.595	25.667	233.1	0.236	3.93	63.1	14.3	1.42	16.7	0.03	0.09	0.15	76
1	88		10.60	10.59	33.685	25.824	218.4	0.265	3.58	56.9	17.5	1.58	19.4	0.02	0.05	0.10	89
	100	ISL	10.30	10.29	33.758	25.933	208.3	0.291	3.31	52.3	20.1	1.69	21.0	0.01	0.03	0.09	101
1	109		10.14	10.13	33.808	26.000	202.1	0.309	3.14	49.5	21.9	1.76	21.9	0.01	0.02	0.08	I10
	125	ISL	9.90	9.89	33.893	26.107	192.2	0.341	2.94	46.1	24.8	1.86	23.3	0.01	0.02	0.07	126
	150	ISL	9.62	9.60	34.018	26.252	179.0	0.387	2.59	40.4	29.2	2.04	25.4	0.01	0.01	0.06	151
1	160		9.54	9.52	34.065	26.302	174.4	0.405	2.43	37.8	30.9	2.11	26.1	0.01	0.01	0.06	161
1	170		9.46	9.44	34.114	26.354	169.7	0.422	2.18	33.9	32.7	2.21	27.0	0.01	0.01	0.05	171
	200	ISL	9.05	9.03	34.215	26.499	156.4	0.471	1.64	25.3	38.5	2.46	29.3	0.01	0.00	0.05	202
1	201		9.04	9.02	34.217	26.502	156.1	0.472	1.63	25.1	38.7	2.47	29.4	0.01	0.00	0.05	203
1	242		8.76	8.73	34.248	26.571	150.3	0.535	1.36	20.8	42.4	2.56	30.7	0.01	0.00	0.04	244
	250	ISL	8.68	8.65	34.245	26.582	149.4	0.547	1.36	20.8	43.0	2.57	30.9	0.01	0.00	0.04	252
1	294		8.25	8.22	34.230	26.636	144.8	0.612	1.33	20.1	46.1	2.64	31.9	0.01	0.00	0.04	296
	300	ISL	8.22	8.19	34.235	26.645	144.1	0.620	1.29	19.5	46.6	2.66	32.1	0.01			302
1	350		7.99	7.95	34.279	26.715	138.3	0.691	0.89	13.4	51.2	2.86	33.5	0.01			353
	400	ISL	7.44	7.40	34.262	26.782	132.4	0.759	0.78	11.6	56.7	2.96	35.4	0.00			403
1	412		7.30	7.26	34.258	26.798	130.9	0.775	0.76	11.3	58.1	2.98	35.8	0.00			415
1	478		6.83	6.79	34.308	26.903	121.6	0.858	0.42	6.2	66.8	3.19	37.7	0.00			482
	500	ISL	6.62	6.57	34.316	26.938	118.4	0.884	0.36	5.2	70.1	3.22	38.3	0.00			504
1	544		6.23	6.18	34.329	27.000	112.8	0.935	0.28	4.0	76.7	3.27	39.4	0.01			549
	600	ISL	5.90	5.85	34.348	27.057	107.8	0.997	0.22	3.2	84.7	3.33	40.2	0.01			605
1	605		5.88	5.83	34.349	27.060	107.5	1.002	0.22	3.2	85.4	3.34	40.2	0.01			610
1	655		5.61	5.55	34.368	27.109	103.2	1.055	0.18	2.6	92.4	3.39	40.5	0.01			661
1	694		5.35	5.29	34.387	27.155	98.9	1.094	0.13	1.8	100.3	3.43	39.6	0.00			7 00

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
33 1A.9 N	118 15.0 W	17/10/88	0800 UTC	535 M	150	07 KT			1012.6 MB	19.2 C	18.5 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	PSS 78	THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
	0 ISL	19.60	19.60	33.673	23.855	A03.9	0.000	5.56	106.0	1.9	0.22	0.1	0.00	0.3A	0.08	0
1	1	19.60	19.60	33.673	23.855	A03.9	0.00A	5.56	106.0	1.9	0.22	0.1	0.00	0.3A	0.08	1
	10 ISL	19.29	19.29	33.662	23.927	397.A	0.0A0	5.69	107.8	1.9	0.23	0.1	0.00	0.39	0.10	10
1	11	19.25	19.25	33.661	23.936	396.5	0.0AA	5.70	108.0	1.9	0.23	0.1	0.00	0.39	0.11	11
	20 ISL	17.77	17.77	33.5A2	2A.21A	370.A	0.079	6.27	115.A	2.3	0.2A	0.1	0.00	0.60	0.19	20
1	21	17.55	17.55	33.52A	2A.253	366.7	0.082	6.33	116.0	2.A	0.2A	0.1	0.00	0.62	0.20	21
	30 ISL	15.05	15.05	33.355	2A.695	32A.7	0.113	6.33	110.3	2.9	0.35	0.1	0.00	0.68	0.3A	30
1	31	1A.78	1A.78	33.3A2	2A.7A3	320.1	0.117	6.33	109.7	3.0	0.37	0.1	0.00	0.68	0.36	31
1	Al	13.33	13.32	33.32A	25.031	293.0	0.1A7	5.82	97.9	A.l	0.59	2.6	0.20	0.85	0.A8	41
	50 ISL	12.65	12.64	33.389	25.216	275.6	0.173	5.05	83.7	6.3	0.91	7.A	0.A3	0.57	0.A2	50
1	52	12.55	12.5A	33.A08	25.250	272.A	0.178	A.89	80.9	6.9	0.98	8.5	0.A5	0.A8	0.A0	52
1	62	12.00	11.99	33.A98	25.A25	255.9	0.205	A.57	7A.8	9.0	1.12	12.0	0.0A	0.21	0.28	62
1	72	11.21	11.20	33.575	25.630	236.5	0.229	A.03	64.9	13.7	1.37	16.0	0.03	0.11	0.18	73
	75 ISL	11.06	11.05	33.594	25.672	232.6	0.236	3.93	63.1	14.6	1.42	16.8	0.03	0.09	0.16	76
1	86	10.69	10.68	33.661	25.790	221.6	0.261	3.65	58.1	17.2	1.56	18.9	0.02	0.05	0.09	87
	100 ISL	10.29	10.28	33.775	25.948	206.8	0.291	3.25	51.4	21.0	1.72	21.3	0.03	0.03	0.08	101
1	102	10.24	10.23	33.792	25.970	204.8	0.295	3.19	50.4	21.5	1.74	21.6	0.03	0.03	0.08	103
1	122	9.97	9.96	33.942	26.134	189.7	0.335	2.71	42.6	25.9	1.92	23.9	0.02	0.01	0.06	123
	125 ISL	9.93	9.92	33.954	26.150	188.2	0.341	2.68	42.1	26.2	1.93	24.1	0.02	0.01	0.06	126
1	148	9.62	9.60	34.021	26.254	178.7	0.383	2.56	39.9	28.3	2.02	25.3	0.01	0.01	0.04	149
	150 ISL	9.58	9.56	34.030	26.268	177.4	0.386	2.53	39.4	28.8	2.04	25.5	0.01	0.01	0.04	151
1	179	9.08	9.06	34.145	26.439	161.6	0.436	2.08	32.1	35.4	2.24	28.1	0.01	0.00	0.04	180
	200 ISL	8.88	8.86	34.151	26.A76	158.5	0.A69	2.07	31.8	37.3	2.27	28.6	0.01	0.00	0.0A	202
1	210	8.80	8.78	3A.1A5	26.A84	157.9	0.485	2.06	31.6	37.9	2.28	28.7	0.01	0.00	0.04	212
1	246	8.48	8.45	34.170	26.55A	151.9	0.5A1	1.82	27.7	A2.0	2.A2	30.1	0.01			248
	250 ISL	8.47	8.44	34.174	26.558	151.5	0.547	1.79	27.2	42.3	2.43	30.2	0.01			252
1	297	8.27	8.24	34.221	26.627	145.8	0.617	1.34	20.3	47.0	2.59	31.9	0.01			299
	300 ISL	8.23	8.20	34.225	26.636	145.0	0.621	1.30	19.7	47.6	2.61	32.1	0.01			302
1	352	7.52	7.49	34.279	26.783	131.5	0.693	0.71	10.6	59.0	2.88	35.3	0.01			355
	400 ISL	7.24	7.20	34.291	26.833	127.4	0.755	0.58	8.6	63.4	2.97	36.3	0.01			403
1	417	7.14	7.10	34.296	26.850	125.9	0.777	0.53	7.8	65.0	3.00	36.7	0.01			421

RV NEW HORIZON CALCOFI CRUISE 8810 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 23.2 W	17/10/88	0510 UTC	1173 M	130	05 KT			1012.9 MB	20.2 C	19.6 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	PSS 78	THETA			ML/L	PCT	UM/L	UM/L	UM/L	UM/L	UG/L	UG/L	D.BAR
1	0	19.28	19.28	33.648	23.918	397.8	0.000	5.75	109.0	2.6	0.22	0.1	0.00	0.28	0.06	0
1	10	19.09	19.09	33.648	23.967	393.6	0.040	5.77	108.9	2.4	0.25	0.1	0.00	0.29	0.08	10
	20 ISL	16.84	16.84	33.504	24.406	352.0	0.077	6.35	114.7	2.8	0.27	0.1	0.00	0.58	0.14	20
1	21	16.54	16.54	33.487	24.462	3A6.7	0.080	6.40	114.9	2.9	0.27	0.1	0.00	0.63	0.15	21
	30 ISL	13.79	13.79	33.328	24.940	301.3	0.110	6.03	102.4	4.2	0.50	1.4	0.08	1.47	0.58	30
1	31	13.52	13.52	33.318	24.988	296.8	0.112	5.96	100.6	4.4	0.53	1.7	0.09	1.54	0.62	31
1	42	12.82	12.81	33.401	25.192	277.7	0.144	5.19	86.4	6.6	0.83	7.0	0.27	0.66	0.48	42
	50 ISL	12.31	12.30	33.435	25.317	265.9	0.166	4.86	80.0	8.5	1.02	10.2	0.14	0.38	0.39	50
1	52	12.18	12.17	33.444	25.349	262.9	0.171	4.78	78.5	9.1	1.06	10.9	0.10	0.34	0.36	52
1	62	11.40	11.39	33.528	25.559	243.1	0.196	4.23	68.4	12.5	1.23	14.6	0.03	0.17	0.20	62
1	73	11.21	11.20	33.595	25.646	235.1	0.223	3.97	63.9	14.3	1.39	16.3	0.03	0.16	0.17	74
	75 ISL	11.15	11.14	33.608	25.667	233.1	0.227	3.92	63.0	14.8	1.41	16.7	0.03	0.15	0.16	76
1	86	10.79	10.78	33.677	25.785	222.1	0.252	3.64	58.1	17.6	1.51	18.8	0.02	0.06	0.11	87
	100 ISL	10.39	10.38	33.739	25.903	211.1	0.283	3.38	53.5	20.7	1.64	20.7	0.01	0.05	0.07	101
1	103	10.31	10.30	33.752	25.927	208.9	0.289	3.33	52.6	21.3	1.67	21.1	0.01	0.05	0.07	104
1	123	9.81	9.80	33.889	26.119	191.1	0.329	2.97	46.5	26.2	1.83	23.5	0.01	0.01	0.06	124
	125 ISL	9.80	9.79	33.906	26.134	189.7	0.333	2.92	45.7	26.6	1.85	23.7	0.01	0.01	0.06	126
1	148	9.75	9.73	34.074	26.274	176.9	0.375	2.37	37.1	30.8	2.03	25.5	0.05	0.01	0.05	149
	150 ISL	9.71	9.69	34.079	26.285	175.9	0.379	2.36	36.9	31.2	2.04	25.6	0.05	0.01	0.05	151
1	180	9.04	9.02	3A.119	26.A25	163.0	0.429	2.25	34.6	35.9	2.16	27.6	0.02	0.01	0.05	181
	200 ISL	8.92	8.90	34.158	26.475	158.6	0.462	2.01	30.9	38.3	2.27	28.6	0.01	0.00	0.04	202
1	211	8.90	8.88	34.177	26.A94	157.1	0.A79	1.88	28.9	39.3	2.32	29.0	0.01	0.00	0.0A	213
1	2A1	8.68	8.65	3A.193	26.5A1	153.1	0.525	1.75	26.7	Al.A	2.39	30.0	0.02			243
	250 ISL	8.62	8.59	34.198	26.554	152.0	0.539	1.69	25.8	42.2	2.41	30.3	0.02			252
1	282	8.41	8.38	34.217	26.602	148.0	0.587	1.44	21.9	45.7	2.52	31.3	0.01			284
	300 ISL	8.23	8.20	34.231	26.641	144.6	0.613	1.26	19.1	48.4	2.61	32.1	0.01			302
1	339	7.83	7.80	34.262	26.725	137.0	0.668	0.91	13.6	54.2	2.79	33.9	0.00			342
1	399	7.48	7.44	34.289	26.797	131.0	0.749	0.65	9.7	59.4	2.94	35.4	0.00			402
	400 ISL	7.47	7.43	34.289	26.799	130.8	0.750	0.65	9.7	59.5	2.94	35.4	0.00			403
1	A65	6.76	6.72	3A.302	26.908	120.9	0.832	0.A4	6.4	69.6	3.13	38.0	0.00			469
	500 ISL	6.43	6.38	34.322	26.968	115.4	0.873	0.34	4.9	75.4	3.18	39.1	0.00			504
1	533	6.11	6.06	34.343	27.026	110.0	0.910	0.25	3.6	80.9	3.22	40.1	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 55.1 N	118 56.2 W	16/10/88	23*7 UTC	1685 M	260	08 KT	290 02 06	1	1011.4 MB	20.5 C	19.2 C	1/8	CI

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.75	18.75	33.643	24.048	385.4	0.000	5.96	111.8	1.8	0.26	0.2	0.00	0.79	0.13	0
1	10		16.62	16.62	33.505	24.457	3 46.8	0.037	5.98	107.6	2.4	0.35	0.2	0.00	0.48	0.17	10
1	20		15.92	15.92	33.583	24.677	3 26.1	0.070	5.85	103.8	3.5	0.40	0.9	0.06	0.66	0.34	20
	30	ISL	14.19	14.19	33.489	24.982	297.4	0.101	5.37	92.0	5.9	0.73	5.4	0.27	1.01	0.48	30
1	31		13.97	13.97	33.476	25.017	294.0	0.104	5.31	90.6	6.2	0.77	6.0	0.29	1.02	0.49	31
1	41		11.64	11.63	33.388	25.406	257.2	0.132	4.77	77.4	10.1	1.12	12.0	0.12	0.37	0.42	41
	50	ISL	11.36	11.35	33.585	25.610	237.9	0.154	4.14	66.9	13.7	1.36	16.1	0.08	0.27	0.29	50
1	51		11.33	11.32	33.597	25.625	236.5	0.157	4.08	65.9	14.1	1.38	16.4	0.08	0.26	0.28	51
1	61		11.07	11.06	33.651	25.714	228.3	0.180	3.75	60.2	16.1	1.50	18.3	0.04	0.18	0.34	61
1	71		10.69	10.68	33.680	25.805	219.9	0.202	3.62	57.7	18.1	1.58	19.7	0.03	0.14	0.26	72
	75	ISL	10.55	10.54	33.696	25.842	216.4	0.211	3.55	56.4	19.0	1.61	20.3	0.03	0.12	0.23	76
1	86		10.17	10.16	33.750	25.949	206.4	0.234	3.35	52.8	21.5	1.71	21.8	0.02	0.06	0.15	87
	100	ISL	9.71	9.70	33.836	26.094	192.9	0.262	3.10	48.4	25.2	1.83	23.7	0.01	0.02	0.09	101
1	101		9.68	9.67	33.842	26.104	192.0	0.264	3.08	48.0	25.4	1.84	23.8	0.01	0.02	0.09	102
1	122		9.44	9.43	33.907	26.194	183.8	0.304	2.91	45.2	27.7	1.92	25.0	0.01	0.01	0.06	123
	125	ISL	9.40	9.39	33.916	26.208	182.6	0.309	2.88	44.7	28.1	1.93	25.2	0.01	0.01	0.06	126
1	147		9.07	9.05	33.978	26.310	173.3	0.348	2.67	41.1	31.6	2.04	26.6	0.01	0.01	0.06	148
	150	ISL	9.03	9.01	33.986	26.322	172.1	0.353	2.65	40.8	32.0	2.05	26.8	0.01	0.01	0.06	151
1	178		8.72	8.70	34.052	26.423	163.0	0.400	2.45	37.4	35.8	2.15	28.2	0.01	0.01	0.07	179
	200	ISL	8.46	8.44	34.090	26.493	156.7	0.435	2.23	33.9	38.8	2.24	29.4	0.01	0.01	0.05	202
1	209		8.35	8.33	34.103	26.520	154.3	0.449	2.13	32.3	40.2	2.29	29.9	0.01	0.01	0.04	211
1	239		8.00	7.98	34.144	26.605	146.6	0.495	1.72	25.9	45.8	2.49	31.9	0.01			241
	250	ISL	7.92	7.89	34.161	26.631	144.3	0.511	1.57	23.6	47.6	2.55	32.5	0.01			252
1	281		7.71	7.68	34.207	26.698	138.4	0.554	1.17	17.5	52.6	2.71	33.9	0.00			283
	300	ISL	7.52	7.49	34.226	26.740	134.6	0.580	0.99	14.7	55.8	2.79	34.8	0.00			302
1	337		7.16	7.13	34.255	26.814	128.0	0.629	0.72	10.6	61.6	2.93	36.4	0.00			3 40
1	397		6.78	6.74	34.295	26.899	120.7	0.704	0.46	6.7	69.0	3.08	37.9	0.00			400
	400	ISL	6.76	6.72	34.296	26.902	120.4	0.707	0.45	6.6	69.4	3.09	38.0	0.00			403
1	464		6.30	6.26	34.329	26.990	112.7	0.782	0.29	4.2	77.2	3.20	39.5	0.00			468
	500	ISL	6.09	6.05	34.341	27.026	109.5	0.822	0.26	3.7	81.0	3.24	40.1	0.00			504
1	531		5.91	5.86	34.351	27.057	106.8	0.855	0.23	3.3	84.2	3.27	40.7	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 39.5 N	119 28.8 W	16/10/88	1602 UTC	1314 M	080	06 KT	310 05 09	0	1014.5 MB	19.2 C	18.5 C	0/8	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.19	18.19	33.416	24.014	388.7	0.000	5.53	102.5	2.1	0.31	0.1	0.00	0.13	0.03	0
1	1		18.19	18.19	33.416	24.014	388.7	0.004	5.53	102.5	2.1	0.31	0.1	0.00	0.13	0.03	1
	10	ISL	18.18	18.18	33.415	24.016	388.9	0.039	5.55	102.9	2.0	0.31	0.1	0.00	0.13	0.03	10
1	11		18.18	18.18	33.415	24.016	388.9	0.043	5.55	102.9	2.0	0.31	0.1	0.00	0.13	0.03	11
	20	ISL	18.10	18.10	33.408	24.031	3 87.8	0.078	5.57	103.1	2.0	0.30	0.1	0.00	0.14	0.03	20
1	22		18.08	18.08	33.400	24.029	388.0	0.085	5.58	103.2	2.0	0.30	0.1	0.00	0.14	0.03	22
	30	ISL	17.79	17.78	33.369	24.077	383.7	0.116	5.63	103.5	2.0	0.32	0.1	0.00	0.14	0.04	30
1	32		17.72	17.71	33.361	24.087	382.8	0.124	5.64	103.6	2.0	0.32	0.1	0.00	0.14	0.04	32
1	42		16.09	16.08	33.241	24.377	355.4	0.161	5.92	105.2	2.1	0.33	0.1	0.00	0.19	0.08	42
	50	ISL	14.12	14.11	33.158	24.741	320.8	0.188	6.07	103.6	2.5	0.38	0.2	0.01	0.38	0.25	50
1	52		13.69	13.68	33.148	24.822	313.2	0.194	6.09	103.0	2.6	0.40	0.2	0.02	0.43	0.29	52
1	62		13.35	13.34	33.163	24.903	305.7	0.225	5.99	100.7	2.9	0.44	0.7	0.07	0.42	0.34	62
1	72		12.78	12.77	33.208	25.051	291.8	0.255	5.77	95.8	3.5	0.53	2.6	0.12	0.33	0.32	73
	75	ISL	12.63	12.62	33.212	25.083	288.8	0.264	5.71	94.5	3.7	0.57	3.4	0.11	0.31	0.32	76
1	87		12.16	12.15	33.254	25.206	277.4	0.298	5.44	89.2	5.0	0.75	6.6	0.06	0.25	0.28	88
	100	ISL	11.86	11.85	33.435	25.403	258.9	0.333	5.09	83.0	7.1	0.85	8.7	0.02	0.16	0.16	101
1	102		11.80	11.79	33.465	25.437	255.7	0.338	5.03	82.0	7.6	0.87	9.1	0.02	0.15	0.14	103
1	123		10.21	10.20	33.596	25.823	219.2	0.388	4.23	66.6	16.1	1.35	17.2	0.00	0.03	0.04	124
	125	ISL	10.10	10.09	33.613	25.855	216.2	0.392	4.16	65.4	17.0	1.39	17.8	0.00	0.03	0.04	126
1	148		9.18	9.16	33.802	26.154	188.0	0.439	3.45	53.2	25.5	1.73	23.2	0.01	0.01	0.03	149
	150	ISL	9.14	9.12	33.813	26.169	186.6	0.442	3.42	52.7	25.9	1.75	23.4	0.01	0.01	0.03	151
1	179		8.72	8.70	33.924	26.323	172.5	0.494	3.14	47.9	30.8	1.88	25.5	0.01	0.00	0.03	180
	200	ISL	8.29	8.27	33.981	26.433	162.2	0.529	3.07	46.4	34.5	1.95	26.7	0.00	0.00	0.02	202
1	210		8.10	8.08	34.005	26.481	157.9	0.546	3.04	45.8	36.4	1.99	27.4	0.00	0.00	0.02	212
1	240		7.85	7.83	34.072	26.571	149.8	0.592	2.25	33.7	43.9	2.28	30.6	0.00			242
	250	ISL	7.72	7.70	34.081	26.597	147.4	0.607	2.11	31.5	46.0	2.34	31.4	0.00			252
1	281		7.34	7.31	34.105	26.670	140.7	0.651	1.80	26.7	51.7	2.49	33.2	0.00			283
	300	ISL	7.28	7.25	34.146	26.711	137.2	0.678	1.47	21.7	54.9	2.61	34.2	0.00			302
1	337		7.22	7.19	34.221	26.779	131.3	0.727	0.90	13.3	60.4	2.82	35.9	0.01			3 40
1	397		6.71	6.67	34.221	26.850	125.2	0.804	0.76	11.1	67.1	2.93	37.6	0.00			400
	400	ISL	6.69	6.65	34.222	26.853	124.9	0.808	0.75	10.9	67.5	2.94	37.7	0.00			403
1	463		6.30	6.26	34.259	26.934	117.9	0.884	0.49	7.1	74.8	3.07	39.3	0.00			467
	500	ISL	6.16	6.12	34.285	26.973	114.6	0.927	0.41	5.9	78.2	3.13	39.8	0.00			504
1	533		6.03	5.98	34.308	27.008	111.6	0.965	0.33	4.7	81.2	3.18	40.2	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 25.3 N	119 57.8 W	16/10/88	1140 UTC	814 M	300	11 KT			1013.5 MB	17.8 C	16.7 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.53	18.53	33.424	23.936	3 96.1	0.000	5.49	102.4	2.7	0.28	0.2	0.00	0.11	0.03	0
1	2		18.53	18.53	33.424	23.936	3 96.2	0.008	5.49	102.4	2.7	0.28	0.2	0.00	0.11	0.03	2
	10	ISL	18.51	18.51	33.424	23.941	3 96.0	0.040	5.49	102.4	2.6	0.30	0.2	0.00	0.12	0.02	10
1	13		18.50	18.50	33.424	23.944	395.8	0.051	5.49	102.4	2.6	0.31	0.2	0.00	0.12	0.02	13
	20	ISL	18.51	18.51	33.424	23.942	3 96.3	0.079	5.49	102.4	2.4	0.31	0.1	0.00	0.12	0.03	20
1	23		18.51	18.51	33.424	23.942	3 96.4	0.091	5.49	102.4	2.3	0.31	0.1	0.00	0.12	0.03	23
	30	ISL	18.50	18.49	33.423	23.944	3 96.4	0.119	5.50	102.5	2.1	0.31	0.1	0.00	0.12	0.03	30
1	33		18.49	18.48	33.422	23.946	3 96.4	0.131	5.50	102.5	2.1	0.31	0.1	0.00	0.12	0.03	33
1	43		15.71	15.70	33.272	24.486	3 45.0	0.168	6.10	107.6	2.1	0.34	0.1	0.00	0.20	0.09	43
	50	ISL	14.67	14.66	33.204	24.661	328.5	0.191	6.20	107.1	2.3	0.36	0.1	0.00	0.26	0.17	50
1	53		14.34	14.33	33.180	24.712	323.7	0.201	6.24	107.0	2.4	0.38	0.1	0.00	0.29	0.21	53
1	63		13.10	13.09	33.153	24.945	301.7	0.232	5.96	99.6	3.0	0.50	1.6	0.17	0.42	0.40	63
1	74		12.64	12.63	33.199	25.071	289.9	0.265	5.72	94.7	3.7	0.60	3.6	0.19	0.35	0.31	75
	75	ISL	12.60	12.59	33.206	25.084	288.7	0.268	5.69	94.1	3.8	0.61	3.9	0.18	0.34	0.30	76
1	88		12.11	12.10	33.326	25.271	271.2	0.304	5.22	85.5	6.2	0.82	8.0	0.02	0.19	0.19	89
	100	ISL	11.54	11.53	33.493	25.507	249.0	0.335	4.66	75.5	10.1	1.03	12.0	0.01	0.10	0.11	101
1	103		11.39	11.38	33.534	25.566	243.4	0.343	4.52	73.0	11.1	1.08	12.9	0.01	0.08	0.09	104
1	124		10.53	10.52	33.661	25.819	219.7	0.391	3.98	63.2	16.5	1.32	17.5	0.01	0.04	0.05	125
	125	ISL	10.48	10.47	33.666	25.831	218.5	0.394	3.98	63.1	16.7	1.33	17.6	0.01	0.04	0.05	126
1	149		9.42	9.40	33.792	26.108	192.5	0.443	3.93	60.9	21.5	1.48	20.4	0.01	0.01	0.02	150
	150	ISL	9.39	9.37	33.798	26.117	191.6	0.445	3.92	60.7	21.7	1.49	20.5	0.01	0.01	0.02	151
1	180		8.67	8.65	33.941	26.344	170.5	0.499	3.44	52.5	29.2	1.74	24.5	0.00	0.00	0.03	181
	200	ISL	8.34	8.32	34.003	26.443	161.3	0.532	2.99	45.3	34.6	1.92	27.1	0.00	0.00	0.03	202
1	210		8.21	8.19	34.023	26.479	158.1	0.548	2.80	42.3	37.0	2.00	28.1	0.00	0.00	0.03	212
1	241		7.81	7.79	34.041	26.552	151.5	0.596	2.73	40.9	41.0	2.07	29.2	0.00			243
	250	ISL	7.67	7.65	34.042	26.573	149.6	0.610	2.68	40.0	42.5	2.10	29.7	0.00			252
1	282		7.20	7.17	34.047	26.644	143.2	0.657	2.40	35.4	48.5	2.22	31.7	0.00	V		284
	300	ISL	6.98	6.95	34.061	26.686	139.4	0.682	2.11	31.0	52.7	2.33	33.2	0.00			302
1	337		6.58	6.55	34.092	26.764	132.2	0.732	1.53	22.3	61.2	2.57	36.1	0.00			340
1	398		6.01	5.98	34.102	26.846	124.9	0.811	1.19	17.1	70.1	2.76	38.9	0.00			401
	400	ISL	6.00	5.97	34.105	26.850	124.6	0.813	1.17	16.8	70.3	2.77	39.0	0.00			403
1	464		5.91	5.87	34.211	26.946	116.4	0.890	0.56	8.0	77.7	2.96	40.5	0.00			468
	500	ISL	5.78	5.74	34.252	26.995	112.1	0.932	0.44	6.3	82.2	3.04	41.2	0.00			504
1	536		5.64	5.59	34.294	27.045	107.6	0.971	0.31	4.4	86.7	3.11	41.8	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
32 5.3 N	120 38.6 W	16/10/88	0541 UTC	3824 M	310	16 KT			1014.4 MB	17.2 C	16.8 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.58	18.58	33.392	23.899	399.7	0.000	5.51	102.9	2.3	0.32	0.1	0.00	0.11	0.03	0
1	2		18.58	18.58	33.392	23.899	399.7	0.008	5.51	102.9	2.3	0.32	0.1	0.00	0.11	0.03	2
	10	ISL	18.59	18.59	33.391	23.896	400.3	0.040	5.50	102.7	2.2	0.32	0.1	0.00	0.11	0.02	10
1	13		18.60	18.60	33.391	23.894	400.6	0.052	5.49	102.5	2.2	0.58 U	0.1	0.00	0.11	0.02	13
	20	ISL	18.59	18.59	33.391	23.897	400.6	0.080	5.49	102.5	2.1	0.32	0.1	0.00	0.11	0.03	20
1	23		18.59	18.59	33.391	23.897	400.7	0.092	5.49	102.5	2.1	0.32	0.1	0.00	0.11	0.03	23
	30	ISL	18.06	18.05	33.384	24.022	388.9	0.120	5.69	105.2	2.1	0.33	0.1	0.00	0.17	0.06	30
1	33		17.61	17.60	33.368	24.119	379.8	0.131	5.81	106.5	2.1	0.34	0.1	0.00	0.21	0.08	33
1	43		14.58	14.57	33.239	24.707	3 23.9	0.166	6.29	108.5	2.9	0.45	0.1	0.00	0.31	0.16	43
	50	ISL	13.56	13.55	33.237	24.917	304.0	0.188	6.06	102.3	3.5	0.59	2.0	0.09	0.49	0.28	50
1	53		13.31	13.30	33.243	24.972	298.8	0.197	5.90	99.1	3.8	0.65	3.0	0.13	0.55	0.33	53
1	63		12.81	12.80	33.256	25.082	288.6	0.227	5.60	93.1	4.6	0.73	4.8	0.19	0.50	0.37	63
1	73		12.34	12.33	33.338	25.236	274.2	0.255	5.30	87.3	6.1	0.89	8.4	0.12	0.35	0.38	74
	75	ISL	12.24	12.23	33.356	25.269	271.0	0.260	5.22	85.8	6.5	0.95	9.1	0.10	0.32	0.37	76
1	87		11.60	11.59	33.447	25.460	253.1	0.292	4.73	76.7	9.5	1.27	13.1	0.03	0.18	0.25	88
	100	ISL	10.91	10.90	33.497	25.624	237.8	0.324	4.44	71.0	13.0	1.41	15.5	0.01	0.09	0.12	101
1	103		10.76	10.75	33.507	25.658	234.5	0.331	4.39	70.0	13.8	1.42	15.9	0.01	0.08	0.10	104
1	123		9.98	9.97	33.631	25.889	212.9	0.376	3.86	60.5	19.5	1.52	20.0	0.00	0.02	0.04	124
	125	ISL	9.90	9.89	33.645	25.913	210.6	0.380	3.83	59.9	20.0	1.54	20.3	0.00	0.02	0.04	126
1	148		9.06	9.04	33.804	26.175	186.0	0.425	3.61	55.5	25.3	1.70	22.7	0.01	0.00	0.02	149
	150	ISL	9.02	9.00	33.818	26.192	184.4	0.429	3.62	55.6	25.6	1.70	22.8	0.01	0.00	0.02	151
1	179		8.60	8.58	33.972	26.379	167.2	0.480	3.68	56.1	29.4	1.66	23.7	0.00	0.01	0.02	180
	200	ISL	8.14	8.12	34.007	26.476	158.1	0.514	3.40	51.3	34.5	1.80	26.0	0.00	0.00	0.02	202
1	209		7.95	7.93	34.011	26.508	155.2	0.528	3.27	49.1	36.7	1.88	27.0	0.00	0.00	0.02	211
1	238		7.54	7.52	34.014	26.570	149.6	0.573	3.12	46.4	41.0	2.03	28.5	0.00			240
	250	ISL	7.38	7.36	34.019	26.597	147.2	0.590	2.93	43.4	43.8	2.10	29.6	0.00			252
1	278		7.05	7.02	34.040	26.659	141.6	0.631	2.38	35.0	50.8	2.28	32.4	0.00			280
	300	ISL	6.82	6.79	34.067	26.712	136.8	0.661	1.95	28.5	55.9	2.44	34.4	0.00			302
1	334		6.53	6.50	34.113	26.788	130.0	0.707	1.36	19.8	62.9	2.67	36.9	0.00			337
1	394		6.18	6.15	34.174	26.882	121.7	0.782	0.81	11.7	72.0	2.88	39.3	0.00			397
	400	ISL	6.15	6.11	34.182	26.892	120.8	0.790	0.77	11.1	72.8	2.89	39.5	0.00			403
1	459		5.87	5.83	34.247	26.979	113.1	0.859	0.47	6.7	80.5	3.01	40.8	0.00			463
	500	ISL	5.54	5.50	34.255	27.026	108.8	0.904	0.39	5.5	86.5	3.09	41.9	0.00			504
1	527		5.33	5.29	34.261	27.056	106.1	0.933	0.34	4.8	90.5	3.15	42.6	0.00			532

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 45.0 N	121 18.9 W	15/10/88	2351 UTC	3738 M	320	20 KT	3 20 06 08	1	1014.4 MB	18.0 C	17.0 C	5/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	17.62	17.62	33.187	23.977	392.2	0.000	5.62	102.9	2.6	0.31	0.1	0.00	0.11	0.03	0
1	1		17.62	17.62	33.187	23.977	392.3	0.004	5.62	102.9	2.6	0.31	0.1	0.00	0.11	0.03	1
	10	ISL	17.61	17.61	33.188	23.980	392.2	0.039	5.63	103.1	2.6	0.31	0.1	0.00	0.11	0.02	10
1	11		17.61	17.61	33.188	23.980	392.3	0.043	5.63	103.1	2.6	0.31	0.1	0.00	0.11	0.02	11
	20	ISL	17.59	17.59	33.188	23.986	392.1	0.078	5.63	103.0	2.4	0.30	0.1	0.00	0.11	0.02	20
1	22		17.59	17.59	33.188	23.986	392.1	0.086	5.63	103.0	2.3	0.30	0.1	0.00	0.11	0.02	22
	30	ISL	17.41	17.41	33.191	24.031	388.1	0.117	5.65	103.0	2.2	0.31	0.1	0.00	0.13	0.03	30
1	32		17.36	17.35	33.192	24.044	386.9	0.125	5.66	103.1	2.2	0.31	0.1	0.00	0.14	0.03	32
1	42		17.24	17.23	33.199	24.078	384.0	0.164	5.66	102.9	2.1	0.32	0.1	0.00	0.17	0.05	42
	50	ISL	16.71	16.70	33.191	24.197	372.9	0.194	5.80	104.3	2.2	0.33	0.1	0.00	0.25	0.09	50
1	52		16.47	16.46	33.181	24.245	368.4	0.201	5.86	104.9	2.2	0.33	0.1	0.00	0.27	0.10	52
1	62		14.20	14.19	33.055	24.645	330.3	0.236	6.26	107.0	2.7	0.36	0.1	0.00	0.30	0.15	62
1	73		12.94	12.93	33.015	24.870	309.1	0.272	6.29	104.7	3.0	0.42	0.1	0.01	0.59	0.27	74
	75	ISL	12.75	12.74	33.027	24.916	304.7	0.278	6.21	103.0	3.2	0.46	0.7	0.02	0.56	0.27	76
1	87		11.80	11.79	33.171	25.209	277.0	0.313	5.54	90.1	5.3	0.76	6.1	0.04	0.27	0.25	88
	100	ISL	11.19	11.18	33.404	25.501	249.4	0.347	4.73	76.0	10.8	1.11	12.9	0.02	0.13	0.16	101
1	102		11.11	11.10	33.439	25.543	245.5	0.352	4.61	74.0	11.7	1.16	13.9	0.02	0.12	0.14	103
1	123		10.18	10.17	33.610	25.839	217.7	0.400	3.89	61.2	19.3	1.54	20.3	0.00	0.02	0.05	124
	125	ISL	10.11	10.10	33.624	25.862	215.5	0.405	3.83	60.2	19.9	1.57	20.7	0.00	0.02	0.05	126
1	148		9.41	9.39	33.769	26.091	194.1	0.452	3.27	50.7	25.3	1.78	23.9	0.01	0.00	0.04	149
	150	ISL	9.36	9.34	33.780	26.108	192.5	0.456	3.24	50.1	25.8	1.79	24.1	0.01	0.00	0.04	151
1	179		8.80	8.78	33.928	26.313	173.4	0.509	2.83	43.3	31.9	1.96	26.9	0.01	0.00	0.03	180
	200	ISL	8.59	8.57	34.019	26.418	163.9	0.544	2.51	38.2	36.1	2.08	28.4	0.00	0.01	0.04	202
1	210		8.49	8.47	34.048	26.456	160.4	0.560	2.42	36.8	37.8	2.12	28.9	0.00	0.01	0.04	212
1	240		7.85	7.83	34.039	26.545	152.2	0.607	2.69	40.3	41.0	2.12	29.2	0.00			242
	250	ISL	7.85	7.83	34.071	26.570	150.0	0.622	2.44	36.6	42.9	2.20	30.0	0.00			252
1	281		7.83	7.80	34.156	26.640	143.9	0.668	1.55	23.2	49.3	2.46	32.8	0.00			283
	300	ISL	7.47	7.44	34.131	26.673	141.0	0.695	1.63	24.2	52.4	2.47	33.7	0.00			302
1	337		6.65	6.62	34.060	26.730	135.6	0.746	1.80	26.2	58.3	2.50	35.1	0.00			340
1	398		5.97	5.94	34.093	26.844	125.1	0.826	1.18	16.9	70.3	2.77	38.7	0.01			401
	400	ISL	5.95	5.92	34.094	26.848	124.7	0.828	1.16	16.6	70.7	2.78	38.8	0.01			403
1	465		5.42	5.38	34.147	26.955	115.0	0.906	0.70	9.9	83.1	2.99	41.3	0.01			469
	500	ISL	5.33	5.29	34.186	26.996	111.3	0.946	0.54	7.6	86.7	3.04	41.9	0.01			504
1	536		5.24	5.20	34.227	27.040	107.6	0.985	0.38	5.4	90.4	3.10	42.5	0.00			541

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 25.3 N	121 59.3 W	15/10/88	1716 UTC	0 M	340	16 KT	330 05 07	2	1018.2 MB	18.0 C	16.6 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.249	23.832	406.1	0.000	5.53	102.8	1.6	0.31	0.1	0.00	0.09	0.02	0
1	1		18.41	18.41	33.249	23.832	406.1	0.004	5.53	102.8	1.6	0.31	0.1	0.00	0.09	0.02	1
	10	ISL	18.39	18.39	33.250	23.838	405.8	0.041	5.51	102.4	1.6	0.31	0.1	0.00	0.09	0.02	10
1	11		18.39	18.39	33.250	23.838	405.9	0.045	5.51	102.4	1.6	0.31	0.1	0.00	0.09	0.02	11
	20	ISL	18.40	18.40	33.250	23.836	406.4	0.081	5.53	102.8	1.5	0.31	0.1	0.00	0.09	0.02	20
1	22		18.40	18.40	33.250	23.836	406.5	0.089	5.53	102.8	1.5	0.31	0.1	0.00	0.09	0.02	22
	30	ISL	18.40	18.39	33.249	23.836	406.8	0.122	5.52	102.6	1.7	0.31	0.1	0.00	0.10	0.02	30
1	32		18.40	18.39	33.249	23.836	406.8	0.130	5.52	102.6	1.7	0.31	0.1	0.00	0.10	0.02	32
1	42		16.41	16.40	33.170	24.249	367.6	0.169	6.04	108.0	1.7	0.32	0.1	0.00	0.17	0.05	42
	50	ISL	14.68	14.67	33.097	24.576	336.6	0.197	6.23	107.5	2.0	0.32	0.1	0.00	0.18	0.07	50
1	52		14.31	14.30	33.086	24.646	330.0	0.204	6.25	107.1	2.1	0.32	0.1	0.00	0.18	0.08	52
1	62		13.57	13.56	33.123	24.827	312.9	0.236	6.16	104.0	2.3	0.35	0.1	0.00	0.22	0.15	62
1	73		12.80	12.79	33.112	24.972	299.3	0.269	6.02	100.0	2.5	0.41	0.3	0.04	0.33	0.21	74
	75	ISL	12.72	12.71	33.117	24.992	297.5	0.275	6.00	99.5	2.5	0.42	0.4	0.05	0.32	0.21	76
1	87		12.31	12.30	33.156	25.101	287.3	0.310	5.83	95.8	3.0	0.47	1.7	0.11	0.28	0.23	88
	100	ISL	11.70	11.69	33.182	25.236	274.7	0.347	5.59	90.7	4.7	0.65	5.2	0.03	0.19	0.16	101
1	102		11.60	11.59	33.188	25.259	272.6	0.352	5.55	89.9	5.0	0.68	5.8	0.02	0.18	0.15	103
1	123		10.87	10.86	33.354	25.520	248.1	0.407	5.04	80.4	9.1	0.92	10.4	0.01	0.09	0.09	124
	125	ISL	10.79	10.78	33.378	25.553	245.0	0.412	4.96	79.0	9.8	0.96	11.1	0.01	0.08	0.09	126
1	149		9.83	9.81	33.669	25.944	208.2	0.466	4.03	63.0	18.7	1.41	19.0	0.00	0.02	0.04	150
	150	ISL	9.80	9.78	33.678	25.956	207.0	0.468	4.00	62.5	19.0	1.42	19.2	0.00	0.02	0.04	151
1	180		9.13	9.11	33.879	26.223	182.1	0.527	3.49	53.8	25.9	1.66	23.2	0.00	0.00	0.03	181
	200	ISL	8.71	8.69	33.948	26.343	171.0	0.562	3.60	55.0	28.5	1.69	24.1	0.00	0.00	0.03	202
1	211		8.49	8.47	33.973	26.397	166.0	0.581	3.63	55.2	30.0	1.70	24.2	0.00	0.00	0.03	213
1	241		8.00	7.98	34.032	26.517	154.9	0.629	2.85	42.8	38.5	2.00 U	24.6	0.00			243
	250	ISL	7.83	7.81	34.036	26.546	152.3	0.643	2.76	41.3	40.5	1.93	25.8	0.00			252
1	283		7.25	7.22	34.039	26.631	144.5	0.692	2.56	37.8	46.9	2.17	30.9	0.00			285
	300	ISL	7.02	6.99	34.045	26.668	141.1	0.716	2.35	34.5	50.5	2.27	32.5	0.00			302
1	341		6.59	6.56	34.065	26.742	134.4	0.772	1.80	26.2	59.0	2.50	35.2	0.00			344
	400	ISL	6.15	6.11	34.111	26.836	126.1	0.849	1.18	17.0	69.2	2.75	38.3	0.00			403
1	401		6.14	6.10	34.112	26.838	125.8	0.851	1.17	16.8	69.4	2.75	38.3	0.00			404
1	466		5.74	5.70	34.162	26.928	117.9	0.930	0.78	11.1	78.2	2.93	40.4	0.00			470
	500	ISL	5.57	5.53	34.190	26.971	114.0	0.969	0.63	9.0	82.7	3.00	41.1	0.00			504
1	535		5.39	5.35	34.220	27.017	110.0	1.008	0.47	6.7	87.4	3.07	41.9	0.00			540

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 5.3 N	122 39.9 W	15/10/88	1115 UTC	3940 M	3	40 17 KT			1018.6 MB	18.0 C	15.8 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.12	19.12	33.379	23.753	413.6	0.000	5.42	102.2	2.4	0.30	0.1	0.00	0.08	0.01	0
1	1		19.12	19.12	33.379	23.753	413.6	0.004	5.42	102.2	2.4	0.30	0.1	0.00	0.08	0.01	1
	10	ISL	19.12	19.12	33.379	23.754	413.9	0.041	5.42	102.2	2.4	0.30	0.1	0.01	0.08	0.02	10
1	17		19.12	19.12	33.379	23.754	414.1	0.070	5.43	102.4	2.4	0.30	0.1	0.01	0.08	0.02	17
	20	ISL	19.12	19.12	33.379	23.754	414.2	0.083	5.43	102.4	2.4	0.30	0.1	0.01	0.08	0.02	20
	30	ISL	19.12	19.11	33.377	23.753	414.7	0.124	5.44	102.6	2.2	0.30	0.1	0.01	0.07	0.02	30
1	32		19.12	19.11	33.377	23.753	414.7	0.133	5.44	102.6	2.2	0.30	0.1	0.01	0.07	0.02	32
1	42		19.13	19.12	33.377	23.751	415.3	0.174	5.43	102.4	2.3	0.30	0.1	0.00	0.07	0.02	42
	50	ISL	17.24	17.23	33.251	24.119	380.4	0.206	5.93	107.8	2.3	0.30	0.1	0.00	0.09	0.03	50
1	52		16.71	16.70	33.224	24.222	370.6	0.213	6.06	109.0	2.3	0.30	0.1	0.00	0.10	0.03	52
1	63		15.41	15.40	33.194	24.493	344.9	0.253	6.13	107.4	2.2	0.30	0.1	0.00	0.14	0.04	63
1	73		14.91	14.90	33.202	24.609	334.2	0.287	6.09	105.7	2.2	0.30	0.1	0.00	0.15	0.07	74
	75	ISL	14.82	14.81	33.213	24.636	331.6	0.293	6.07	105.1	2.2	0.30	0.1	0.00	0.16	0.08	76
1	82		14.61	14.60	33.280	24.733	322.6	0.316	5.99	103.4	2.1	0.32	0.1	0.01	0.18	0.12	83
1	98		14.92	14.91	33.627	24.935	304.0	0.366	5.66	98.5	2.4	0.33	0.3	0.08	0.25	0.-22	99
	100	ISL	14.87	14.86	33.638	24.954	302.2	0.372	5.63	97.9	2.4	0.34	0.4	0.10	0.25	0.22	101
1	113		14.27	14.25	33.644	25.087	289.8	0.411	5.47	93.9	2.9	0.41	1.7	0.17	0.22	0.18	114
	125	ISL	13.50	13.48	33.646	25.248	274.7	0.445	5.27	89.1	4.1	0.53	4.2	0.06	0.17	0.15	126
1	129		13.22	13.20	33.646	25.304	269.4	0.456	5.20	87.4	4.7	0.58	5.2	0.02	0.15	0.14	130
	150	ISL	11.83	11.81	33.641	25.570	244.4	0.510	4.83	78.8	8.6	0.84	9.8	0.01	0.08	0.10	151
1	154		11.57	11.55	33.644	25.620	239.6	0.519	4.75	77.1	9.6	0.90	10.7	0.01	0.07	0.09	155
1	180		10.02	10.00	33.756	25.981	205.4	0.577	4.20	65.9	17.4	1.30	17.6	0.01	0.02	0.04	181
	200	ISL	9.38	9.36	33.844	26.156	189.0	0.617	4.01	62.1	21.4	1.46	20.2	0.00	0.01	0.03	202
1	211		9.14	9.12	33.888	26.229	182.2	0.637	3.94	60.7	23.3	1.51	21.1	0.00	0.00	0.03	213
1	241		8.44	8.41	33.988	26.417	164.7	0.689	3.73	56.6	29.9	1.66	23.8	0.00			243
	250	ISL	8.32	8.29	34.003	26.447	161.9	0.704	3.58	54.2	31.7	1.73	24.7	0.00			252
1	282		8.01	7.98	34.038	26.521	155.3	0.754	2.90	43.6	38.1	1.99	28.0	0.00			284
	300	ISL	7.84	7.81	34.070	26.572	150.8	0.782	2.45	36.7	42.2	2.15	29.9	0.00			302
1	339		7.50	7.47	34.141	26.677	141.2	0.839	1.55	23.0	51.2	2.48	33.7	0.00			342
1	399		6.98	6.94	34.225	26.816	128.7	0.920	0.81	11.9	63.2	2.79	36.9	0.00			402
	400	ISL	6.97	6.93	34.225	26.818	128.5	0.921	0.80	11.8	63.3	2.79	36.9	0.00			403
1	465		6.48	6.44	34.246	26.901	121.2	1.002	0.55	8.0	71.2	2.92	38.8	0.00			469
	500	ISL	6.21	6.17	34.264	26.950	116.8	1.044	0.46	6.6	75.7	3.00	39.7	0.00			504
1	533		5.96	5.91	34.281	26.995	112.7	1.082	0.37	5.3	80.0	3.07	40.5	0.00			538

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 45.6 N	123 20.1 W	15/10/88	0530 UTC	3991 M	350	18 KT			1018.6 MB	19.0 C	16.6 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.38	19.38	33.387	23.693	419.3	0.000	5.39	102.2	2.6	0.30	0.1	0.00	0.06	0.02	0
1	1		19.38	19.38	33.387	23.693	419.3	0.004	5.39	102.2	2.6	0.30	0.1	0.00	0.06	0.02	1
	10	ISL	19.39	19.39	33.387	23.691	419.8	0.042	5.40	102.4	2.6	0.30	0.1	0.00	0.06	0.02	10
1	16		19.39	19.39	33.387	23.692	420.0	0.067	5.41	102.6	2.6	0.30	0.1	0.00	0.06	0.02	16
	20	ISL	19.39	19.39	33.387	23.692	420.2	0.084	5.41	102.6	2.5	0.30	0.1	0.00	0.06	0.02	20
	30	ISL	19.39	19.38	33.387	23.692	420.5	0.126	5.40	102.4	2.2	0.30	0.1	0.00	0.06	0.02	30
1	31		19.39	19.38	33.387	23.692	420.5	0.130	5.40	102.4	2.2	0.30	0.1	0.00	0.06	0.02	31
1	41		17.87	17.86	33.176	23.910	400.0	0.171	5.70	104.8	2.1	0.30	0.1	0.00	0.10	0.03	41
	50	ISL	16.17	16.16	33.198	24.326	360.6	0.205	6.06	107.8	2.2	0.31	0.1	0.00	0.13	0.05	50
1	51		15.99	15.98	33.205	24.372	356.2	0.209	6.09	108.0	2.2	0.31	0.1	0.00	0.13	0.05	51
1	61		14.94	14.93	33.164	24.572	337.3	0.244	6.13	106.4	2.1	0.33	0.1	0.00	0.14	0.07	61
1	71		14.35	14.34	33.156	24.692	326.1	0.277	6.11	104.8	2.4	0.34	0.0	0.00	0.17	0.09	72
	75	ISL	14.05	14.04	33.177	24.771	318.7	0.290	6.05	103.1	2.5	0.35	0.0	0.00	0.21	0.14	76
1	80		13.68	13.67	33.208	24.871	309.3	0.305	5.95	100.7	2.7	0.37	0.1	0.00	0.27	0.21	81
1	96		13.01	13.00	33.234	25.026	294.8	0.354	5.73	95.6	3.4	0.50	2.0	0.16	0.26	0.20	97
	100	ISL	12.87	12.86	33.269	25.081	289.7	0.365	5.63	93.7	3.7	0.54	2.9	0.13	0.24	0.20	101
1	111		12.43	12.42	33.371	25.246	274.3	0.397	5.33	88.0	5.2	0.67	5.9	0.02	0.16	0.19	112
	125	ISL	11.55	11.53	33.441	25.465	253.5	0.433	4.95	80.2	8.5	0.88	9.7	0.01	0.10	0.12	126
1	126		11.48	11.46	33.445	25.481	252.0	0.436	4.92	79.6	8.8	0.90	10.0	0.01	0.10	0.11	127
	150	ISL	10.13	10.11	33.618	25.854	216.8	0.492	4.14	65.1	16.9	1.32	17.5	0.00	0.02	0.04	151
1	152		10.04	10.02	33.633	25.881	214.3	0.497	4.08	64.0	17.6	1.35	18.1	0.00	0.02	0.04	153
1	179		9.42	9.40	33.797	26.112	192.7	0.552	3.63	56.3	23.4	1.58	21.9	0.00	0.00	0.04	180
	200	ISL	8.93	8.91	33.914	26.283	176.8	0.590	3.66	56.1	26.5	1.64	23.1	0.00	0.00	0.03	202
1	208		8.75	8.73	33.949	26.338	171.6	0.604	3.68	56.2	27.7	1.65	23.4	0.00	0.00	0.02	210
1	239		8.25	8.23	34.001	26.456	160.8	0.656	3.33	50.3	33.8	1.82	26.1	0.00			241
	250	ISL	8.08	8.05	34.012	26.490	157.7	0.673	3.18	47.9	36.1	1.89	27.1	0.00			252
1	280		7.65	7.62	34.036	26.572	150.2	0.719	2.74	40.9	42.5	2.07	29.6	0.00			282
	300	ISL	7.40	7.37	34.053	26.621	145.8	0.749	2.44	36.2	46.6	2.19	31.2	0.00			302
1	337		7.00	6.97	34.079	26.698	138.8	0.802	1.92	28.2	53.8	2.41	33.8	0.00			340
1	398		6.45	6.41	34.108	26.795	130.2	0.884	1.30	18.9	64.1	2.68	37.3	0.00			401
	400	ISL	6.43	6.39	34.109	26.798	129.9	0.886	1.28	18.6	64.5	2.69	37.4	0.00			403
1	465		5.80	5.76	34.155	26.915	119.1	0.967	0.75	10.7	76.9	2.91	40.3	0.00			469
	500	ISL	5.61	5.57	34.188	26.965	114.7	1.008	0.61	8.7	81.9	3.00	41.2	0.00			504
1	535		5.41	5.37	34.221	27.015	110.1	1.048	0.46	6.5	86.8	3.09	42.0	0.00			540

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 25.2 N	124 0.3 W	14/10/88	2341 UTC	4246 M	340	16 KT	330 04 06	1	1017.3 MB	19.2 C	16.1 C	5/8	AS

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.62	18.62	33.132	23.690	419.6	0.000	5.53	103.2	2.0	0.30	0.1	0.00	0.08	0.01	0
	10	ISL	18.61	18.61	33.130	23.692	419.8	0.042	5.52	103.0	1.9	0.30	0.1	0.00	0.08	0.01	10
1	17		18.61	18.61	33.128	23.690	420.2	0.071	5.52	103.0	1.8	0.30	0.1	0.00	0.08	0.01	17
	20	ISL	18.44	18.44	33.122	23.728	416.7	0.084	5.55	103.2	1.8	0.30	0.1	0.00	0.08	0.01	20
	30	ISL	17.90	17.89	33.125	23.863	404.1	0.125	5.63	103.6	1.7	0.30	0.1	0.00	0.09	0.02	30
1	32		17.80	17.79	33.129	23.891	401.6	0.133	5.64	103.6	1.7	0.30	0.1	0.00	0.09	0.02	32
1	42		17.85	17.84	33.200	23.933	3 97.9	0.173	5.62	103.3	1.7	0.30	0.1	0.00	0.13	0.03	42
	50	ISL	15.88	15.87	33.094	24.312	361.9	0.203	6.11	108.0	2.0	0.30	0.0	0.00	0.17	0.06	50
1	51		15.61	15.60	33.082	24.363	357.1	0.207	6.17	108.5	2.0	0.30	0.0	0.00	0.17	0.06	51
1	61		14.71	14.70	33.087	24.562	338.2	0.242	6.26	108.1	2.1	0.30	0.0	0.00	0.19	0.08	61
1	73		13.94	13.93	33.094	24.730	322.6	0.281	6.21	105.6	2.2	0.31	0.0	0.01	0.21	0.11	74
	75	ISL	13.77	13.76	33.086	24.759	319.9	0.288	6.20	105.0	2.2	0.32	0.0	0.01	0.21	0.12	76
1	81		13.26	13.25	33.069	24.848	311.4	0.307	6.14	102.9	2.3	0.35	0.0	0.01	0.22	0.16	82
1	96		12.61	12.60	33.178	25.061	291.4	0.352	5.83	96.5	3.0	0.45	1.5	0.12	0.27	0.21	97
	100	ISL	12.38	12.37	33.194	25.118	286.1	0.364	5.74	94.5	3.5	0.50	2.5	0.10	0.25	0.20	101
1	112		11.77	11.76	33.236	25.265	272.3	0.397	5.50	89.4	5.1	0.65	5.5	0.03	0.15	0.16	113
	125	ISL	11.54	11.52	33.306	25.362	263.3	0.432	5.30	85.8	6.3	0.73	7.1	0.02	0.11	0.13	126
1	128		11.49	11.47	33.325	25.386	261.1	0.440	5.25	84.9	6.7	0.75	7.5	0.02	0.10	0.12	129
	150	ISL	10.06	10.04	33.495	25.770	224.8	0.493	4.50	70.6	14.8	1.21	15.7	0.01	0.03	0.05	151
1	153		9.84	9.82	33.523	25.829	219.2	0.500	4.39	68.6	16.1	1.28	16.9	0.01	0.02	0.04	154
1	179		8.79	8.77	33.788	26.205	183.7	0.552	3.99	61.0	23.8	1.54	21.7	0.01	0.00	0.03	180
	200	ISL	8.44	8.42	33.945	26.383	167.1	0.589	3.38	51.3	30.8	1.78	25.3	0.01	0.00	0.02	202
1	209		8.36	8.34	33.991	26.431	162.7	0.604	3.13	47.4	33.5	1.87	26.6	0.01	0.00	0.02	211
1	239		7.97	7.95	34.025	26.516	155.0	0.651	2.93	44.0	38.4	1.97	28.2	0.01			241
	250	ISL	7.79	7.77	34.028	26.545	152.4	0.668	2.86	42.8	40.4	2.01	28.9	0.01			252
1	279		7.33	7.30	34.036	26.618	145.7	0.712	2.58	38.2	45.9	2.15	30.8	0.00			281
	300	ISL	7.16	7.13	34.061	26.661	141.8	0.742	2.20	32.4	50.0	2.29	32.5	0.00			302
1	335		6.94	6.91	34.107	26.728	135.9	0.790	1.53	22.4	57.0	2.53	35.2	0.00			338
1	397		6.33	6.29	34.153	26.846	125.2	0.871	0.93	13.5	69.0	2.80	38.6	0.00			400
	400	ISL	6.31	6.27	34.156	26.851	124.8	0.875	0.91	13.2	69.5	2.81	38.7	0.00			403
1	462		5.92	5.88	34.219	26.951	115.9	0.950	0.53	7.6	78.0	2.96	40.5	0.00			466
	500	ISL	5.72	5.68	34.241	26.993	112.1	0.993	0.43	6.1	82.7	3.02	41.2	0.00			504
1	533		5.54	5.49	34.260	27.031	108.8	1.029	0.35	5.0	86.8	3.08	41.8	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 26.8

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 57.4 N	117 18.8 W	11/10/88	1929 UTC	65 M	360	05 KT	360 02 05	2	1014.1 MB	19.5 C	18.0 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		19.87	19.87	33.595	23.726	416.2	0.000	6.32	121.0	4.0	0.17	0.1	0.00	2.42	0.00	0
1	10		15.62	15.62	33.437	24.632	330.1	0.037	6.65	117.2	4.4	0.26	0.1	0.00	1.54	0.27	10
	20	ISL	13.23	13.23	33.372	25.087	287.0	0.068	5.58	93.7	5.9	0.58	3.1	0.12	1.91	0.44	20
1	21		13.08	13.08	33.368	25.114	284.5	0.071	5.45	91.2	6.1	0.62	3.6	0.14	1.93	0.45	21
	30	ISL	12.28	12.28	33.395	25.291	267.8	0.096	4.81	79.2	9.0	0.92	8.6	0.30	0.66	0.36	30
1	31		12.23	12.23	33.400	25.304	266.6	0.099	4.76	78.2	9.3	0.95	9.2	0.31	0.51	0.34	31
1	42		11.51	11.50	33.464	25.489	249.3	0.127	4.53	73.4	11.5	1.13	13.4	0.03	0.24	0.21	42
	50	ISL	11.48	11.47	33.478	25.505	247.9	0.147	4.44	71.9	12.2	1.15	13.7	0.05	0.22	0.19	50
1	52		11.47	11.46	33.482	25.510	247.5	0.152	4.42	71.5	12.4	1.16	13.8	0.06	0.22	0.19	52

RV NEW HORIZON CALCOFI CRUISE 8810 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 23.7 W	11/10/88	2148 UTC	622 M	230	10 KT	260 04 05	1	1013.7 MB	20.7 C	18.3 C	7/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.603	23.745	414.4	0.000	6.11	116.9	4.6	0.17	0.0	0.00	0.41	0.05	0
1	10		18.64	18.64	33.571	24.021	388.4	0.040	6.55	122.6	4.2	0.17	0.1	0.00	0.73	0.07	10
	20	ISL	14.78	14.78	33.295	24.707	323.3	0.076	6.58	114.0	3.6	0.17	0.1	0.00	1.26	0.15	20
1	21		14.39	14.39	33.279	24.777	316.6	0.079	6.58	113.1	3.5	0.17	0.1	0.00	1.30	0.16	21
	30	ISL	13.19	13.19	33.365	25.090	287.0	0.106	5.40	90.6	5.3	0.57	2.9	0.25	1.30	0.30	30
1	31		13.13	13.13	33.377	25.111	285.0	0.109	5.27	88.3	5.6	0.62	3.3	0.28	1.30	0.31	31
1	41		12.16	12.15	33.346	25.276	269.5	0.137	5.08	83.4	7.4	0.86	8.7	0.17	0.34	0.25	41
	50	ISL	11.55	11.54	33.415	25.444	253.8	0.160	4.68	75.8	10.3	1.08	12.7	0.05	0.21	0.18	50
1	51		11.50	11.49	33.424	25.460	252.3	0.163	4.64	75.1	10.6	1.10	13.0	0.04	0.19	0.17	51
1	61		11.32	11.31	33.464	25.524	246.4	0.188	4.50	72.6	11.7	1.17	14.1	0.03	0.19	0.15	61
1	72		11.24	11.23	33.611	25.653	234.4	0.214	3.90	62.8	14.4	1.31	16.4	0.02	0.14 A	0.14 A	73
	75	ISL	11.12	11.11	33.632	25.691	230.8	0.221	3.80	61.1	15.2	1.35	17.1	0.02	0.13	0.13	76
1	86		10.67	10.66	33.688	25.814	219.3	0.246	3.52	56.1	18.3	1.49	19.4	0.01	0.08	0.10	87
	100	ISL	10.48	10.47	33.771	25.913	210.3	0.276	3.14	49.8	21.4	1.64	21.2	0.01	0.04	0.07	101
1	101		10.48	10.47	33.777	25.917	209.8	0.278	3.11	49.3	21.6	1.65	21.3	0.01	0.04	0.07	102
1	122		10.42	10.41	33.864	25.996	202.8	0.321	2.71	43.0	24.6	1.76	22.6	0.01	0.03	0.08	123
	125	ISL	10.40	10.39	33.877	26.010	201.6	0.327	2.67	42.3	25.0	1.78	22.8	0.01	0.03	0.08	126
1	148		10.13	10.11	33.964	26.124	191.2	0.373	2.46	38.8	27.7	1.90	24.5	0.01	0.02	0.07	149
	150	ISL	10.08	10.06	33.969	26.137	190.0	0.376	2.47	38.9	27.9	1.90	24.6	0.01	0.02	0.07	151
1	179		9.34	9.32	34.032	26.309	174.1	0.429	2.60	40.3	31.0	1.95	26.0	0.00	0.01	0.04	180
	200	ISL	9.02	9.00	34.062	26.384	167.3	0.465	2.52	38.8	33.2	1.99	27.0	0.01	0.01	0.04	202
1	209		8.94	8.92	34.079	26.410	164.9	0.480	2.48	38.1	34.3	2.03	27.4	0.01	0.01	0.04	211
1	239		8.99	8.96	34.204	26.501	157.0	0.528	1.71	26.3	39.0	2.29	29.4	0.01			241
	250	ISL	8.90	8.87	34.218	26.526	154.8	0.545	1.60	24.6	40.5	2.34	29.9	0.01			252
1	280		8.57	8.54	34.231	26.588	149.3	0.591	1.44	22.0	44.1	2.42	31.1	0.00			282
	300	ISL	8.49	8.46	34.260	26.624	146.3	0.621	1.23	18.7	46.2	2.51	31.7	0.00			302
1	337		8.32	8.28	34.302	26.683	141.3	0.674	0.87	13.2	50.1	2.66	32.8	0.00			340
1	397		7.48	7.44	34.270	26.782	132.3	0.756	0.74	11.0	58.4	2.79	35.2	0.00			400
	400	ISL	7.45	7.41	34.270	26.786	132.0	0.760	0.73	10.8	58.9	2.80	35.3	0.00			403
1	463		6.85	6.81	34.289	26.885	123.1	0.840	0.48	7.0	68.6	2.94	37.8	0.00			467
	500	ISL	6.55	6.50	34.308	26.941	118.1	0.885	0.37	5.4	73.6	3.02	38.7	0.01			504
1	531		6.30	6.25	34.325	26.987	113.9	0.921	0.28	4.1	77.7	3.09	39.4	0.01			536

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

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 47.5 N	117 32.4 W	12/10/88	0113 UTC	859 M	260	05 KT	300 04 07	2	1013.2 MB	19.2 C	17.5 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	20.17	20.17	33.671	23.705	418.2	0.000	5.63	108.5	1.5	0.21	0.0	0.00	0.32	0.04	0
1	1		20.17	20.17	33.671	23.705	418.2	0.004	5.63	108.5	1.5	0.21	0.0	0.00	0.32	0.04	1
	10	ISL	18.74	18.74	33.596	24.015	388.9	0.041	5.91	110.8	2.7	0.22	0.0	0.00	0.31	0.07	10
1	11		18.46	18.46	33.580	24.073	383.5	0.044	5.96	111.1	2.9	0.22	0.0	0.00	0.31	0.07	11
	20	ISL	15.52	15.52	33.375	24.607	332.8	0.077	6.39	112.4	2.6	0.33	0.0	0.00	0.90	0.22	20
1	21		15.20	15.20	33.358	24.664	3 27.4	0.080	6.43	112.4	2.6	0.34	0.0	0.00	0.97	0.24	21
	30	ISL	14.04	14.04	33.328	24.889	306.2	0.108	6.25	106.6	3.5	0.36	0.0	0.00	1.08	0.41	30
1	32		13.90	13.90	33.331	24.920	303.3	0.115	6.21	105.7	3.8	0.36	0.0	0.00	1.11	0.43	32
1	42		12.87	12.86	33.365	25.154	281.2	0.144	5.42	90.3	6.0	0.66	5.1	0.33	0.69	0.37	42
	50	ISL	12.30	12.29	33.401	25.292	268.2	0.166	5.04	83.0	8.0	0.83	8.4	0.38	0.46	0.31	50
1	52		12.19	12.18	33.412	25.322	265.5	0.171	4.96	81.5	8.5	0.87	9.2	0.39	0.41	0.30	52
1	62		11.78	11.77	33.483	25.454	253.1	0.197	4.48	73.0	11.3	1.09	12.6	0.13	0.24	0.26	62
1	72		11.33	11.32	33.560	25.597	239.7	0.222	4.17	67.3	15.1	1.24	16.0	0.02	0.13	0.16	73
	75	ISL	11.19	11.18	33.576	25.635	236.2	0.229	4.08	65.7	15.9	1.28	16.7	0.02	0.11	0.14	76
1	86		10.72	10.71	33.621	25.754	225.1	0.254	3.82	60.9	18.2	1.43	18.4	0.01	0.07	0.10	87
	100	ISL	10.33	10.32	33.670	25.860	215.2	0.285	3.62	57.2	20.5	1.67	20.3	0.01	0.04	0.08	101
1	102		10.29	10.28	33.678	25.873	214.0	0.289	3.60	56.8	20.8	1.70	20.5	0.01	0.04	0.08	103
1	122		9.88	9.87	33.797	26.036	199.0	0.331	3.26	51.1	24.5	1.68	22.6	0.00	0.02	0.05	123
	125	ISL	9.82	9.81	33.812	26.057	196.9	0.336	3.25	50.8	24.9	1.68	22.8	0.00	0.02	0.05	126
1	148		9.35	9.33	33.908	26.210	182.8	0.380	3.20	49.6	27.4	1.75	23.8	0.00	0.01	0.04	149
	150	ISL	9.30	9.28	33.914	26.223	181.6	0.384	3.19	49.3	27.7	1.76	23.9	0.00	0.01	0.04	151
1	179		8.80	8.78	33.997	26.368	168.3	0.435	2.96	45.3	32.3	1.87	26.0	0.00	0.01	0.04	180
	200	ISL	8.97	8.95	34.089	26.413	164.5	0.469	2.45	37.7	34.8	2.04	27.3	0.01	0.01	0.05	202
1	210		9.06	9.04	34.128	26.430	163.2	0.486	2.21	34.0	35.9	2.13	27.9	0.01	0.01	0.05	212
1	240		8.69	8.66	34.153	26.508	156.2	0.534	2.00	30.6	39.8	2.33	29.4	0.00			242
	250	ISL	8.62	8.59	34.160	26.524	154.8	0.549	1.93	29.4	40.7	2.33	29.7	0.00			252
1	282		8.44	8.41	34.181	26.569	151.1	0.598	1.68	25.5	43.7	2.34	30.8	0.00			284
	300	ISL	8.24	8.21	34.194	26.610	147.4	0.625	1.49	22.5	46.5	2.41	31.8	0.00			302
1	339		7.81	7.78	34.225	26.698	139.5	0.681	1.09	16.3	53.0	2.61	33.8	0.00			3 42
1	399		7.50	7.46	34.280	26.787	131.9	0.762	0.67	10.0	60.0	2.81	35.5	0.00			402
	400	ISL	7.49	7.45	34.280	26.789	131.8	0.764	0.67	10.0	60.1	2.82	35.5	0.00			403
1	465		6.91	6.87	34.289	26.877	123.9	0.847	0.47	6.9	67.9	3.20	37.6	0.00			469
	500	ISL	6.60	6.55	34.310	26.936	118.6	0.889	0.37	5.4	72.7	3.14	38.7	0.00			504
1	533		6.31	6.26	34.330	26.990	113.7	0.928	0.28	4.1	77.3	3.09	39.8	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 41.1 N	117 52.8 W	12/10/88	0508 UTC	581 M	010	04 KT			1013.9 MB	18.4 C	17.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.47	19.47	33.734	23.935	3 96.2	0.000	5.50	104.6	1.8	0.23	0.0	0.01	0.37	-0.04	0
1	1		19.47	19.47	33.734	23.935	3 96.3	0.004	5.50	104.6	1.8	0.23	0.0	0.01	0.37	-0.04	1
	10	ISL	19.28	19.28	33.729	23.980	392.3	0.039	5.55	105.2	1.7	0.21	0.0	0.01	0.31	0.03	10
1	11		19.26	19.26	33.729	23.985	391.8	0.043	5.55	105.2	1.7	0.21	0.0	0.01	0.30	0.05	11
	20	ISL	18.05	18.05	33.655	24.232	368.6	0.078	5.83	107.9	1.7	0.26	0.0	0.01	1.14	0.29	20
1	21		17.82	17.82	33.640	24.276	364.4	0.081	5.86	108.0	1.7	0.26	0.0	0.01	1.23	0.32	21
	30	ISL	14.30	14.30	33.433	24.915	303.7	0.111	5.73	98.4	3.8	0.51	2.7	0.16	1.12	0.52	30
1	31		13.90	13.90	33.418	24.987	296.9	0.114	5.72	97.4	4.1	0.54	3.2	0.17	1.11	0.53	31
1	41		12.20	12.19	33.356	25.276	269.5	0.143	5.04	82.8	7.7	0.89	9.3	0.07	0.63	0.29	41
	50	ISL	11.59	11.58	33.429	25.447	253.4	0.166	4.65	75.4	11.0	1.09	12.8	0.05	0.33	0.23	50
1	51		11.55	11.54	33.442	25.465	251.8	0.169	4.61	74.7	11.3	1.11	13.1	0.05	0.30	0.23	51
1	62		11.14	11.13	33.614	25.673	232.2	0.195	3.92	63.0	14.5	1.36	17.4	0.03	0.16	0.18	62
1	72		10.80	10.79	33.681	25.786	221.7	0.218	3.61	57.6	17.5	1.50	19.5	0.03	0.13	0.15	73
	75	ISL	10.68	10.67	33.696	25.819	218.6	0.225	3.54	56.4	18.4	1.53	20.0	0.03	0.12	0.14	76
1	86		10.24	10.23	33.750	25.937	207.6	0.248	3.32	52.4					0.06	0.11	87
	100	ISL	9.76	9.75	33.839	26.088	193.5	0.276	3.06	47.8	24.8	1.73	23.6	0.02	0.02	0.06	101
1	101		9.73	9.72	33.845	26.098	192.6	0.278	3.04	47.5	25.0	1.74	23.7	0.02	0.02	0.06	102
1	121		9.25	9.24	33.904	26.222	181.0	0.315	2.77	42.8	29.1	1.89	26.1	0.01	0.03	0.05	122
	125	ISL	9.16	9.15	33.923	26.252	178.3	0.323	2.71	41.8	30.1	1.92	26.5	0.01	0.03	0.05	126
1	146		8.74	8.72	34.022	26.396	165.0	0.359	2.43	37.1	35.0	2.05	28.2	0.01	0.01	0.05	147
	150	ISL	8.69	8.67	34.031	26.411	163.6	0.365	2.39	36.5	35.7	2.07	28.5	0.01	0.01	0.05	151
1	177		8.41	8.39	34.072	26.486	156.9	0.408	2.16	32.8	39.4	2.20	29.9	0.02	0.01	0.04	178
	200	ISL	8.21	8.19	34.106	26.544	151.8	0.444	1.96	29.6	42.7	2.28	30.8	0.02	0.01	0.04	202
1	207		8.15	8.13	34.115	26.560	150.4	0.455	1.89	28.5	43.8	2.30	31.1	0.02	0.01	0.04	209
1	236		7.80	7.78	34.145	26.635	143.6	0.497	1.59	23.8	48.7	2.46	32.7	0.01			238
	250	ISL	7.70	7.68	34.161	26.663	141.2	0.517	1.46	21.8	50.5	2.52	33.2	0.01			252
1	277		7.57	7.54	34.193	26.707	137.4	0.555	1.23	18.3	53.5	2.61	34.1	0.01			279
	300	ISL	7.47	7.44	34.224	26.746	134.1	0.586	1.02	15.2	56.3	2.70	34.8	0.01			302
1	333		7.31	7.28	34.261	26.798	129.6	0.629	0.76	11.3	60.2	2.82	35.8	0.01			336
1	394		6.90	6.86	34.279	26.870	123.5	0.707	0.53	7.8	66.5	2.95	37.4	0.01			397
	400	ISL	6.86	6.82	34.280	26.876	122.9	0.714	0.52	7.6	67.1	2.96	37.6	0.01			403
1	459		6.48	6.44	34.295	26.939	117.5	0.785	0.42	6.1	73.4	3.03	38.9	0.01			463
	500	ISL	6.25	6.21	34.311	26.982	113.8	0.832	0.34	4.9	77.6	3.09	39.6	0.01			504
1	529		6.09	6.04	34.322	27.012	111.3	0.865	0.29	4.2	80.5	3.13	40.1	0.01			534

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	12/10/88	0902 UTC	890 M	310	10 KT			1013.8 MB	16.9 C	15.5 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.73	19.73	33.829	23.940	395.7	0.000	5.43	103.9	1.5	0.23	0.0	0.00	0.23	0.05	0
1	1		19.73	19.73	33.829	23.940	395.8	0.004	5.43	103.9	1.5	0.23	0.0	0.00	0.23	0.05	1
	10	ISL	18.57	18.57	33.617	24.074	383.3	0.039	6.19	115.7	2.5	0.24	0.0	0.00	0.29	0.10	10
1	11		18.35	18.35	33.565	24.089	382.0	0.043	6.30	117.2	2.6	0.24	0.0	0.00	0.30	0.10	11
	20	ISL	16.08	16.08	33.489	24.569	336.4	0.075	6.40	113.9	2.8	0.30	0.0	0.00	0.48	0.25	20
1	22		15.53	15.53	33.492	24.695	324.5	0.082	6.42	113.0	2.8	0.31	0.0	0.00	0.54	0.30	22
	30	ISL	13.69	13.69	33.514	25.104	285.7	0.106	5.52	93.6	5.3	0.66	5.5	0.19	1.00	0.52	30
1	32		13.30	13.30	33.529	25.195	277.1	0.112	5.24	88.2	6.2	0.77	7.2	0.23	1.08	0.56	32
1	43		12.01	12.00	33.657	25.546	243.9	0.140	4.23	69.3	12.4	1.23	15.4	0.16	0.50	0.34	43
	50	ISL	11.21	11.20	33.687	25.717	227.8	0.157	3.80	61.2	16.2	1.43	18.6	0.07	0.28	0.25	50
1	53		10.91	10.90	33.696	25.778	222.0	0.164	3.66	58.6	17.7	1.49	19.6	0.03	0.22	0.22	53
1	64		10.27	10.26	33.747	25.929	207.8	0.187	3.30	52.1	21.2	1.62	22.1	0.02	0.10	0.14	64
1	74		9.76	9.75	33.816	26.069	194.7	0.207	3.06	47.8	25.2	1.75	24.0	0.01	0.04	0.08	75
	75	ISL	9.72	9.71	33.821	26.080	193.7	0.209	3.05	47.6	25.5	1.77	24.1	0.01	0.04	0.08	76
1	89		9.36	9.35	33.884	26.188	183.6	0.236	2.92	45.2	29.0	1.93	25.2	0.01	0.02	0.10	90
	100	ISL	9.15	9.14	33.918	26.249	178.1	0.256	2.88	44.4	30.7	1.92	25.6	0.01	0.01	0.07	101
1	104		9.09	9.08	33.931	26.269	176.3	0.263	2.86	44.0	31.2	1.92	25.8	0.01	0.01	0.05	105
1	125		8.77	8.76	34.039	26.404	163.8	0.299	2.50	38.3	35.7	2.16	27.8	0.01	0.01	0.04	126
	150	ISL	8.69	8.67	34.134	26.492	156.0	0.339	2.07	31.6	39.4	2.20	29.1	0.01	0.01	0.05	151
1	151		8.69	8.67	34.136	26.493	155.8	0.340	2.06	31.5	39.5	2.20	29.1	0.01	0.01	0.05	152
1	181		8.62	8.60	34.162	26.525	153.4	0.386	1.81	27.6	41.9	2.31	30.0	0.02	0.01	0.04	182
	200	ISL	8.30	8.28	34.157	26.570	149.3	0.415	1.70	25.8	44.8	2.37	31.1	0.01	0.01	0.03	202
1	212		8.10	8.08	34.157	26.600	146.6	0.433	1.63	24.6	46.8	2.41	31.8	0.01	0.01	0.03	214
1	242		8.02	8.00	34.204	26.650	142.5	0.476	1.32	19.9	50.1	2.53	32.7	0.01			244
	250	ISL	7.96	7.93	34.211	26.664	141.2	0.488	1.25	18.8	51.1	2.56	33.0	0.01			252
1	283		7.69	7.66	34.228	26.717	136.6	0.534	1.02	15.2	55.3	2.65	34.3	0.00			285
	300	ISL	7.58	7.55	34.238	26.741	134.6	0.557	0.92	13.7	57.3	2.71	34.8	0.00			302
1	340		7.34	7.31	34.259	26.792	130.2	0.610	0.73	10.8	61.8	2.83	35.9	0.00			343
1	399		6.93	6.89	34.280	26.867	123.9	0.684	0.53	7.8	67.9	2.93	37.4	0.01			402
	400	ISL	6.92	6.88	34.281	26.869	123.7	0.686	0.53	7.8	68.0	2.93	37.4	0.01			403
1	465		6.30	6.26	34.325	26.986	113.0	0.763	0.30	4.3	77.8	3.09	39.6	0.00			469
	500	ISL	6.08	6.04	34.335	27.023	109.8	0.802	0.27	3.9	81.6	3.14	40.3	0.00			504
1	535		5.85	5.80	34.345	27.060	106.5	0.839	0.23	3.3	85.4	3.19	40.9	0.00			540

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 20.9 N	118 33.1 W	12/10/88	1253 UTC	1326 M	310	14 KT			1014.7 MB	16.0 C	15.0 C		

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.695	24.126	378.0	0.000	5.52	103.3	1.1	0.24	0.0	0.00	0.29	0.07	0
1	1		18.60	18.60	33.695	24.126	378.1	0.004	5.52	103.3	1.1	0.24	0.0	0.00	0.29	0.07	1
	10	ISL	17.62	17.62	33.553	24.258	365.8	0.037	5.67	104.0	1.3	0.27	0.0	0.00	0.29	0.11	10
1	11		17.44	17.44	33.528	24.282	363.5	0.041	5.70	104.2	1.3	0.28	0.0	0.00	0.29	0.12	11
	20	ISL	15.60	15.60	33.315	24.543	338.9	0.073	6.04	106.4	1.5	0.33	0.0	0.00	0.40	0.22	20
1	22		15.14	15.14	33.271	24.610	332.5	0.079	6.11	106.6	1.6	0.34	0.0	0.00	0.43	0.25	22
	30	ISL	13.45	13.45	33.142	24.865	308.4	0.105	6.09	102.5	2.3	0.43	1.0	0.07	0.60	0.37	30
1	32		13.10	13.10	33.127	24.924	302.9	0.111	6.08	101.6	2.5	0.46	1.5	0.09	0.63	0.39	32
1	43		12.46	12.45	33.236	25.134	283.2	0.143	5.54	91.4	3.7	0.69	5.9	0.13	0.48	0.37	43
	50	ISL	12.11	12.10	33.281	25.235	273.6	0.163	5.28	86.5	5.0	0.81	8.1	0.08	0.39	0.32	50
1	53		11.96	11.95	33.302	25.280	269.5	0.171	5.17	84.4	5.7	0.86	9.0	0.05	0.35	0.29	53
1	62		11.41	11.40	33.408	25.464	252.1	0.194	4.71	76.1	9.2	1.06	12.7	0.02	0.18	0.16	62
1	73		10.74	10.73	33.549	25.694	230.4	0.221	4.12	65.7	14.2	1.33	17.3	0.02	0.10	0.14	74
	75	ISL	10.66	10.65	33.569	25.723	227.7	0.225	4.03	64.1	14.9	1.36	17.9	0.02	0.09	0.13	76
1	88		10.28	10.27	33.673	25.870	213.9	0.254	3.59	56.7	18.9	1.53	20.6	0.01	0.03	0.08	89
	100	ISL	9.87	9.86	33.744	25.995	202.3	0.279	3.33	52.1	22.2	1.66	22.6	0.01	0.02	0.06	101
1	103		9.77	9.76	33.760	26.025	199.5	0.285	3.28	51.2	22.9	1.69	23.0	0.01	0.02	0.06	104
1	124		9.26	9.25	33.868	26.193	183.9	0.325	3.00	46.4	27.4	1.81	25.1	0.01	0.01	0.07	125
	125	ISL	9.24	9.23	33.872	26.199	183.3	0.327	2.99	46.2	27.6	1.81	25.2	0.01	0.01	0.07	126
1	150		8.90	8.88	33.953	26.317	172.6	0.372	2.84	43.6	31.4	1.89	26.3	0.01	0.01	0.06	151
1	180		8.62	8.60	34.023	26.416	163.7	0.422	2.65	40.4	34.3	1.99	27.6	0.01	0.01	0.05	181
	200	ISL	8.33	8.31	34.070	26.497	156.2	0.454	2.34	35.5	38.7	2.11	29.2	0.01	0.01	0.05	202
1	211		8.18	8.16	34.096	26.540	152.3	0.471	2.13	32.2	41.4	2.19	30.2	0.01	0.01	0.05	213
1	241		8.00	7.98	34.166	26.623	145.0	0.516	1.56	23.5	46.8	2.42	32.2	0.01			243
	250	ISL	7.93	7.90	34.179	26.643	143.2	0.529	1.45	21.8	48.2	2.46	32.7	0.01			252
1	282		7.71	7.68	34.209	26.699	138.3	0.574	1.15	17.2	52.5	2.58	34.0	0.01			284
	300	ISL	7.64	7.61	34.225	26.723	136.4	0.598	1.02	15.2	54.3	2.65	34.5	0.01			302
1	339		7.45	7.42	34.252	26.771	132.3	0.651	0.79	11.7	58.1	2.79	35.5	0.01			342
1	398		6.82	6.78	34.268	26.87 2	123.3	0.726	0.54	7.9	67.0	2.90	37.7	0.01			401
	400	ISL	6.81	6.77	34.268	26.873	123.2	0.729	0.53	7.8	67.2	2.90	37.7	0.01			403
1	464		6.50	6.46	34.292	26.934	118.1	0.806	0.40	5.8	72.1	3.00	39.0	0.01			468
	500	ISL	6.27	6.23	34.305	26.975	114.5	0.848	0.34	4.9	76.3	3.05	39.7	0.01			504
1	535		6.04	5.99	34.319	27.016	110.9	0.887	0.28	4.0	80.4	3.09	40.4	0.01			540

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
32 11.0 N	118 53.6 W	12/10/88	1647 UTC	1486 M	290	13 KT	300 04 07	2	1016.4 MB	17.0 C	15.4 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	OXYGEN ML/L	OXY PCT	SIO3 UM/L	PO4 UM/L	NO3 UM/L	NO2 UM/L	CHL-A UG/L	PHAEO UG/L	PRESS D.BAR
1	0		18.14	18.14	33.400	24.014	388.7	0.000	5.51	102.0	1.6	0.28	0.0	0.00	0.14	0.03	0
1	10		18.14	18.14	33.400	24.014	389.0	0.039	5.51	102.0	1.6	0.28	0.0	0.00	0.15	0.03	10
	20	ISL	18.15	18.15	33.400	24.012	389.6	0.078	5.50	101.9	1.6	0.28	0.0	0.00	0.14	0.03	20
1	21		18.15	18.15	33.400	24.012	389.6	0.082	5.50	101.9	1.6	0.28	0.0	0.00	0.14	0.03	21
	30	ISL	18.13	18.12	33.397	24.015	389.6	0.117	5.53	102.4	1.6	0.28	0.0	0.00	0.15	0.04	30
1	31		18.13	18.12	33.397	24.015	389.7	0.121	5.53	102.4	1.6	0.28	0.0	0.00	0.15	0.04	31
1	41		15.17	15.16	33.139	24.503	3 43.4	0.157	6.18	107.8	1.7	0.30	0.0	0.00	0.24	0.11	41
	50	ISL	14.28	14.27	33.123	24.681	326.6	0.187	6.18	105.8	2.1	0.31	0.0	0.00	0.23	0.15	50
1	51		14.24	14.23	33.126	24.692	325.6	0.191	6.18	105.7	2.1	0.31	0.0	0.00	0.23	0.15	51
1	62		13.51	13.50	33.150	24.860	309.8	0.226	6.05	102.0	2.3	0.35	0.2	0.01	0.39	0.26	62
1	72		12.58	12.57	33.161	25.053	291.6	0.256	5.77	95.4	3.6	0.53	3.2	0.13	0.32	0.28	73
	75	ISL	12.47	12.46	33.163	25.076	289.5	0.264	5.74	94.7	3.7	0.55	3.6	0.12	0.31	0.28	76
1	85.		12.29	12.28	33.180	25.124	285.2	0.293	5.65	92.9	3.8	0.60	4.5	0.10	0.28	0.25	86
	100	ISL	11.94	11.93	33.273	25.262	272.3	0.335	5.31	86.7	5.3	0.79	8.0	0.04	0.20	0.19	101
2	102		11.87	11.86	33.291	25.289	269.8	0.340	5.25	85.6	5.7	0.82	8.6	0.03	0.19	0.18	103
2	122		10.64	10.63	33.534	25.701	230.9	0.390	4.45	70.7	13.0	1.16	15.3	0.01	0.06	CD6	123
	125	ISL	10.55	10.54	33.545	25.725	228.7	0.397	4.39	69.7	13.5	1.19	15.8	0.01	0.06	0.06	126
2	146		10.09	10.07	33.594	25.842	217.8	0.444	4.08	64.1	17.0	1.36	18.2	0.00	0.03	0.04	147
	150	ISL	9.94	9.92	33.629	25.895	212.9	0.453	3.96	62.0	18.4	1.42	19.1	0.00	0.03	0.04	151
2	177		8.96	8.94	33.880	26.251	179.4	0.506	3.22	49.4	28.2	1.76	24.9	0.00	0.01	0.03	178
	200	ISL	8.52	8.50	33.968	26.389	166.6	0.546	3.20	48.7	32.0	1.80	26.1	0.00	0.01	0.02	202
2	207		8.43	8.41	33.981	26.412	164.4	0.557	3.20	48.6	32.9	1.81	26.2	0.00	0.01	0.02	209
2	238		8.12	8.10	34.033	26.500	156.6	0.607	2.59	39.0	39.1	2.06	29.0	0.00			240
	250	ISL	7.99	7.96	34.044	26.528	154.0	0.626	2.47	37.1	40.9	2.12	29.7	0.00			252
2	279		7.64	7.61	34.061	26.593	148.2	0.669	2.28	34.0	45.2	2.23	31.2	0.00			281
	300	ISL	7.35	7.32	34.069	26.641	143.9	0.700	2.10	31.1	49.2	2.32	32.5	0.00			302
2	334		6.93	6.90	34.084	26.711	137.5	0.748	1.77	26.0	55.7	2.48	34.5	0.00			337
2	395		6.57	6.53	34.149	26.811	128.7	0.829	1.06	15.4	65.4	2.76	37.4	0.00			398
	400	ISL	6.52	6.48	34.153	26.821	127.8	0.836	1.02	14.8	66.4	2.78	37.7	0.00			403
2	461		5.90	5.86	34.199	26.938	117.1	0.910	0.62	8.9	78.0	2.99	40.4	0.00			465
	500	ISL	5.80	5.76	34.248	26.989	112.6	0.955	0.47	6.7	82.0	3.07	41.0	0.00			504
2	533		5.71	5.66	34.290	27.034	108.8	0.992	0.34	4.9	85.4	3.13	41.5	0.00			538

RV NEW HORIZON CALCOFI CRUISE 8810 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 13.8 W	12/10/88	2150 UTC	1584 M	300	12 KT	310 04 08	2	1015.7 MB	17.3 C	15.7 C	8/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.38	18.38	33.398	23.953	394.5	0.000	5.50	102.3	3.8	0.28	0.1	0.00	0.10	0.02	0
1	1		18.38	18.38	33.398	23.953	394.5	0.004	5.50	102.3	3.8	0.28	0.1	0.00	0.10	0.02	1
	10	ISL	18.40	18.40	33.396	23.947	395.4	0.039	5.50	102.3	3.8	0.28	0.1	0.00	0.10	0.02	10
1	11		18.40	18.40	33.396	23.947	3 95.5	0.043	5.50	102.3	3.8	0.28	0.1	0.00	0.10	0.02	11
	20	ISL	18.39	18.39	33.395	23.949	395.6	0.079	5.50	102.3	3.7	0.29	0.1	0.00	0.11	0.03	20
1	22		18.39	18.39	33.394	23.949	3 95.7	0.087	5.50	102.3	3.7	0.29	0.1	0.00	0.11	0.03	22
	30	ISL	18.33	18.37	33.394	23.951	395.7	0.119	5.51	102.5	3.8	0.28	0.1	0.00	0.11	0.03	30
1	32		18.38	18.37	33.394	23.951	395.8	0.127	5.51	102.5	3.8	0.28	0.1	0.00	0.11	0.03	32
1	42		16.01	16.00	33.170	24.340	358.9	0.164	6.12	108.5	3.3	0.29	0.1	0.00	0.18	0.05	42
	50	ISL	15.22	15.21	33.136	24.490	344.9	0.192	6.18	107.9	3.2	0.29	0.1	0.00	0.19	0.07	50
1	52		15.12	15.11	33.139	24.514	3 42.6	0.199	6.19	107.8	3.2	0.29	0.1	0.00	0.20	0.08	52
1	63		14.61	14.60	33.186	24.660	329.0	0.236	6.09	105.0	3.0	0.33	0.1	0.00	0.36	0.28	63
1	73		13.50	13.49	33.215	24.913	305.1	0.268	5.90	99.5	3.6	0.42	1.2	0.07	0.44	0.35	74
	75	ISL	13.39	13.38	33.226	24.944	302.2	0.274	5.86	98.6	3.7	0.44	1.5	0.07	0.43	0.35	76
1	87		12.99	12.98	33.304	25.084	289.1	0.309	5.57	93.0	4.7	0.56	4.0	0.10	0.34	0.29	88
	100	ISL	12.42	12.41	33.398	25.268	271.8	0.346	5.21	86.0	6.7	0.74	7.5	0.05	0.20	0.22	101
1	103		12.27	12.26	33.421	25.315	267.5	0.354	5.11	84.1	7.3	0.79	8.4	0.04	0.17	0.20	104
1	123		11.09	11.07	33.580	25.657	235.2	0.404	4.15	66.6	14.3	1.19	15.4	0.01	0.07	0.08	124
	125	ISL	11.03	11.01	33.597	25.681	233.0	0.409	4.07	65.3	14.9	1.22	15.9	0.01	0.06	0.08	126
1	149		10.47	10.45	33.772	25.916	211.0	0.462	3.33	52.8	20.9	1.52	20.4	0.01	0.03	0.05	150
	150	ISL	10.44	10.42	33.778	25.926	210.1	0.464	3.32	52.6	21.1	1.53	20.5	0.01	0.03	0.05	151
1	180		9.54	9.52	33.905	26.177	186.6	0.524	3.16	49.1	26.5	1.69	23.3	0.01	0.01	0.04	181
	200	ISL	8.91	8.89	33.962	26.323	173.0	0.560	3.19	48.9	29.8	1.75	24.7	0.01	0.00	0.03	202
1	210		8.60	8.58	33.982	26.387	167.0	0.577	3.23	49.2	31.5	1.78	25.3	0.01	0.00	0.03	212
1	240		7.82	7.80	33.995	26.515	155.1	0.625	3.31	49.5	36.9	1.87	26.9	0.00			242
	250	ISL	7.67	7.65	34.008	26.547	152.1	0.640	3.11	46.4	39.3	1.95	28.0	0.00			252
1	281		7.34	7.31	34.050	26.627	144.9	0.687	2.34	34.6	47.0	2.23	31.5	0.00			283
	300	ISL	7.16	7.13	34.064	26.664	141.6	0.714	2.08	30.7	50.8	2.35	32.8	0.00			302
1	337		6.83	6.80	34.084	26.725	136.2	0.765	1.70	24.9	57.5	2.53	34.8	0.00			3 40
1	397		6.21	6.17	34.121	26.836	126.0	0.844	1.08	15.6	68.9	2.79	38.3	0.00			400
	400	ISL	6.19	6.15	34.124	26.841	125.6	0.848	1.06	15.3	69.3	2.80	38.4	0.00			403
1	463		5.89	5.85	34.184	26.927	118.1	0.924	0.66	9.5	77.4	2.98	40.1	0.00			467
	500	ISL	5.68	5.64	34.218	26.980	113.4	0.967	0.51	7.3	82.8	3.05	41.0	0.00			504
1	531		5.51	5.47	34.247	27.024	109.4	1.002	0.39	5.5	87.3	3.11	41.7	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 51.0 N	119 34.1 W	13/10/88	0200 UTC	1953 M	310	10 KT	320 04 08	2	1015.4 MB	16.9 C	15.0 C	8/8 SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.426	23.903	399.3	0.000	5.49	102.7	2.7	0.32	0.1	0.01	0.11	0.02	0
1	9		18.69	18.69	33.426	23.898	400.1	0.036	5.48	102.6	2.7	0.34	0.1	0.01	0.10	0.02	9
	10	ISL	18.69	18.69	33.426	23.898	400.1	0.040	5.48	102.6	2.7	0.34	0.1	0.01	0.10	0.02	10
	20	ISL	18.70	18.70	33.427	23.897	400.6	0.080	5.49	102.8	2.5	0.32	0.1	0.01	0.10	0.02	20
1	21		18.70	18.70	33.427	23.897	400.6	0.084	5.49	102.8	2.5	0.32	0.1	0.01	0.10	0.02	21
	30	ISL	18.70	18.69	33.427	23.897	400.9	0.120	5.48	102.6	2.4	0.32	0.1	0.00	0.11	0.03	30
1	31		18.70	18.69	33.427	23.897	401.0	0.124	5.48	102.6	2.4	0.32	0.1	0.00	0.11	0.03	31
1	40		17.72	17.71	33.293	24.036	388.0	0.160	5.86	107.6	2.5	0.32	0.1	0.00	0.16	0.04	40
	50	ISL	16.07	16.06	33.194	24.346	358.7	0.197	6.10	108.3	2.4	0.32	0.1	0.00	0.15	0.04	50
1	51		15.91	15.90	33.188	24.377	355.7	0.201	6.11	108.2	2.4	0.32	0.1	0.00	0.15	0.04	51
1	62		15.06	15.05	33.151	24.536	340.8	0.239	6.15	107.0	2.5	0.33	0.1	0.00	0.18	0.08	62
1	72		13.85	13.84	33.144	24.787	317.1	0.272	6.13	104.1	2.8	0.38	0.1	0.01	0.30	0.18	73
	75	ISL	13.64	13.63	33.160	24.842	311.9	0.281	6.08	102.8	2.9	0.40	0.4	0.04	0.34	0.22	76
1	86		13.09	13.08	33.248	25.021	295.1	0.315	5.76	96.3	3.8	0.53	2.6	0.13	0.43	0.34	87
	100	ISL	12.35	12.34	33.395	25.279	270.8	0.354	5.18	85.3	6.8	0.81	8.1	0.05	0.25	0.23	101
1	102		12.24	12.23	33.413	25.314	267.5	0.360	5.10	83.8	7.3	0.85	8.9	0.03	0.22	0.20	103
1	123		11.13	11.11	33.411	25.518	248.4	0.414	4.64	74.5	11.6	1.07	12.9	0.02	0.12	0.12	124
	125	ISL	11.07	11.05	33.434	25.547	245.7	0.419	4.54	72.8	12.3	1.11	13.5	0.02	0.11	0.12	126
1	149		10.53	10.51	33.757	25.894	213.1	0.474	3.36	53.4	20.8	1.56	20.3	0.01	0.03	0.08	150
	150	ISL	10.50	10.48	33.765	25.906	212.1	0.476	3.34	53.0	21.0	1.57	20.5	0.01	0.03	0.08	151
1	180		9.73	9.71	33.931	26.166	187.8	0.536	2.95	46.1	26.9	1.81	24.0	0.01	0.01	0.05	181
	200	ISL	9.31	9.29	34.034	26.316	173.8	0.572	2.66	41.2	31.8	1.95	26.0	0.01	0.00	0.04	202
1	211		9.09	9.07	34.072	26.381	167.8	0.591	2.56	39.5	34.2	2.01	26.8	0.01	0.00	0.03	213
1	241		8.40	8.37	34.042	26.465	160.1	0.640	2.80	42.5	37.0	2.01	27.6	0.01			243
	250	ISL	8.22	8.19	34.036	26.488	158.0	0.654	2.75	41.5	38.3	2.03	28.0	0.01			252
1	283		7.69	7.66	34.042	26.571	150.4	0.705	2.58	38.5	44.0	2.16	30.1	0.01			285
	300	ISL	7.54	7.51	34.079	26.622	145.8	0.730	2.21	32.9	48.0	2.30	31.6	0.01			302
1	340		7.28	7.25	34.171	26.732	136.0	0.787	1.29	19.1	57.1	2.63	34.8	0.01			343
1	400		6.78	6.74	34.194	26.819	128.2	0.866	0.91	13.3	64.9	2.82	37.0	0.00			403
1	464		6.28	6.24	34.242	26.923	118.9	0.945	0.52	7.5	75.0	3.02	39.4	0.00			468
	500	ISL	5.97	5.93	34.261	26.978	113.9	0.987	0.43	6.2	80.1	3.07	40.4	0.00			504
1	531		5.71	5.66	34.279	27.025	109.6	1.021	0.35	5.0	84.5	3.12	41.2	0.00			536

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT TYPE
31 31.1 N	120 15.4 W	13/10/88	0739 UTC	3931 M	300	08 KT			1017.0 MB	17.0 C	14.6 C	

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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		18.58	18.58	33.519	23.996	390.4	0.000	5.55	103.7	1.9	0.26	0.0	0.00	0.14	0.03	0
1	10		18.58	18.58	33.518	23.996	390.8	0.039	5.53	103.3	2.2	0.29	0.0	0.00	0.15	0.04	10
	20	ISL	18.58	18.58	33.518	23.996	391.1	0.078	5.54	103.5	2.1	0.28	0.0	0.00	0.14	0.03	20
1	21		18.58	18.58	33.518	23.996	391.1	0.082	5.54	103.5	2.1	0.28	0.0	0.00	0.14	0.03	21
	30	ISL	18.61	18.60	33.518	23.989	392.1	0.117	5.52	103.2	1.8	0.28	0.0	0.00	0.15	0.04	30
1	31		18.61	18.60	33.518	23.989	392.2	0.121	5.52	103.2	1.8	0.28	0.0	0.00	0.15	0.04	31
1	41		15.44	15.43	33.184	24.478	345.7	0.158	6.16	108.0	1.9	0.33	0.0	0.00	0.20	0.08	41
	50	ISL	13.54	13.53	33.085	24.804	314.8	0.188	6.27	105.7	2.5	0.36	0.0	0.00	0.27	0.15	50
1	51		13.39	13.38	33.083	24.833	312.1	0.191	6.28	105.6	2.6	0.37	0.0	0.00	0.28	0.16	51
1	62		12.78	12.77	33.151	25.006	295.8	0.224	5.95	98.8	3.1	0.49	1.5	0.16	0.41	0.28	62
1	72		12.40	12.39	33.197	25.116	285.6	0.253	5.77	95.1	3.8	0.58	3.4	0.09	0.38	0.28	73
	75	ISL	12.25	12.24	33.227	25.167	280.7	0.262	5.65	92.8	4.5	0.64	4.6	0.07	0.35	0.26	76
1	86		11.67	11.66	33.350	25.372	261.5	0.292	5.12	83.1	7.8	0.92	9.6	0.03	0.21	0.18	87
	100	ISL	11.09	11.08	33.451	25.556	244.2	0.327	4.58	73.5	11.9	1.20	14.2	0.02	0.13	0.13	101
1	102		11.01	11.00	33.465	25.581	241.9	0.332	4.51	72.2	12.5	1.24	14.8	0.02	0.12	0.13	103
1	123		9.98	9.97	33.669	25.919	210.1	0.380	3.67	57.6	20.8	1.56	20.9	0.02	0.02	0.05	124
	125	ISL	9.91	9.90	33.684	25.942	207.9	0.384	3.62	56.7	21.4	1.58	21.3	0.02	0.02	0.05	126
1	148		9.29	9.27	33.825	26.155	188.0	0.429	3.26	50.4	26.5	1.75	24.0	0.02	0.00	0.03	149
	150	ISL	9.24	9.22	33.835	26.171	186.5	0.433	3.25	50.2	26.8	1.76	24.1	0.02	0.00	0.03	151
1	179		8.64	8.62	33.955	26.359	169.0	0.485	3.18	48.5	31.4	1.85	25.8	0.02	0.00	0.03	180
	200	ISL	8.35	8.33	34.022	26.457	160.1	0.519	2.87	43.5	36.0	1.99	27.5	0.02	0.00	0.02	202
1	210		8.23	8.21	34.044	26.492	156.9	0.535	2.71	41.0	38.3	2.06	28.3	0.02	0.00	0.02	212
1	240		7.82	7.80	34.064	26.569	149.9	0.581	2.51	37.6	43.8	2.18	30.1	0.02			242
	250	ISL	7.65	7.63	34.056	26.587	148.3	0.596	2.51	37.4	45.3	2.20	30.5	0.02			252
1	281		7.13	7.10	34.033	26.643	143.2	0.641	2.49	36.7	50.1	2.26	31.7	0.02			283
	300	ISL	6.87	6.84	34.046	26.689	139.0	0.668	2.19	32.1	54.5	2.38	33.3	0.02			302
1	337		6.47	6.44	34.089	26.776	131.0	0.718	1.50	21.8	63.4	2.63	36.6	0.01			340
1	397		6.03	6.00	34.150	26.882	121.6	0.794	0.87	12.5	73.6	2.85	39.5	0.01			400
	400	ISL	6.01	5.98	34.152	26.886	121.2	0.797	0.85	12.2	74.0	2.86	39.6	0.01			403
1	462		5.63	5.59	34.196	26.968	113.9	0.870	0.58	8.3	81.6	3.02	41.1	0.01			466
	500	ISL	5.46	5.42	34.237	27.021	109.2	0.912	0.44	6.2	86.5	3.09	41.8	0.01			504
1	530		5.33	5.29	34.270	27.063	105.5	0.945	0.33	4.7	90.3	3.14	42.4	0.01			535

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
31 10.8 N	120 55.3 W	13/10/88	1251 UTC	3880 M	290	04 KT	320 04 08	2	1017.5 MB	17.2 C	14.4 C	8/8	ST

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	18.61	18.61	33.460	23.944	3 95.4	0.000	5.46	102.0	2.7	0.30	0.0	0.00	0.15	0.03	0
1	1		18.61	18.61	33.460	23.944	395.5	0.004	5.46	102.0	2.7	0.30	0.0	0.00	0.15	0.03	1
	10	ISL	18.63	18.63	33.461	23.940	396.1	0.040	5.46	102.1	2.5	0.29	0.0	0.00	0.15	0.04	10
1	11		18.63	18.63	33.462	23.941	3 96.1	0.044	5.46	102.1	2.5	0.29	0.0	0.00	0.15	0.04	11
	20	ISL	18.67	18.67	33.486	23.949	395.6	0.079	5.46	102.2	2.3	0.30	0.0	0.00	0.14	0.04	20
1	22		18.69	18.69	33.495	23.951	3 95.5	0.087	5.46	102.2	2.3	0.30	0.0	0.00	0.14	0.04	22
	30	ISL	18.79	18.78	33.557	23.97 4	393.6	0.119	5.45	102.3	2.2	0.29	0.0	0.00	0.16	0.04	30
1	32		18.81	18.80	33.572	23.980	3 93.1	0.127	5.45	102.3	2.2	0.29	0.0	0.00	0.16	0.04	32
1	43		15.35	15.34	33.327	24.608	333.4	0.166	6.32	110.7	2.6	0.37	0.0	0.00	0.33	0.15	43
	50	ISL	14.37	14.36	33.347	24.835	311.9	0.189	6.20	106.5	2.9	0.45	1.1	0.04	0.46	0.27	50
1	53		14.10	14.09	33.370	24.909	304.9	0.198	6.15	105.1	3.2	0.50	2.0	0.07	0.51	0.32	53
1	63		12.95	12.94	33.425	25.185	278.8	0.227	5.50	91.8	5.1	0.79	7.1	0.29	0.51	0.44	63
1	74		12.04	12.03	33.397	25.339	264.4	0.257	5.05	82.7	7.4	0.99	10.6	0.08	0.37	0.35	75
	75	ISL	11.98	11.97	33.402	25.354	262.9	0.260	5.01	81.9	7.7	1.01	10.9	0.08	0.36	0.34	76
1	88		11.29	11.28	33.498	25.556	244.0	0.293	4.52	72.9	11.6	1.22	14.7	0.03	0.19	0.20	89
	100	ISL	10.67	10.66	33.558	25.714	229.2	0.321	4.14	65.9	15.4	1.39	17.6	0.01	0.10	0.10	101
1	104		10.48	10.47	33.579	25.763	224.5	0.330	4.02	63.7	16.7	1.44	18.5	0.01	0.08	0.08	105
1	124		9.77	9.76	33.758	26.023	200.1	0.373	3.29	51.4	23.6	1.71	23.1	0.01	0.02	0.04	125
	125	ISL	9.74	9.73	33.764	26.033	199.2	0.375	3.28	51.2	23.8	1.72	23.2	0.01	0.02	0.04	126
1	150		9.07	9.05	33.879	26.232	180.7	0.422	3.13	48.2	28.4	1.81	25.1	0.01	0.01	0.03	151
1	180		8.52	8.50	34.005	26.417	163.5	0.474	2.85	43.3	34.4	1.98	27.3	0.01	0.01	0.04	181
	200	ISL	8.30	8.28	34.045	26.482	157.6	0.506	2.59	39.2	38.0	2.09	28.8	0.00	0.01	0.03	202
1	211		8.20	8.18	34.057	26.507	155.5	0.523	2.45	37.0	39.9	2.14	29.5	0.00	0.01	0.03	213
1	242		7.79	7.77	34.076	26.583	148.6	0.570	2.26	33.8	44.7	2.24	31.0	0.00			244
	250	ISL	7.64	7.62	34.076	26.605	146.7	0.582	2.21	33.0	46.3	2.28	31.5	0.00			252
1	282		7.06	7.03	34.076	26.687	139.1	0.628	1.99	29.3	53.1	2.43	33.4	0.00			284
	300	ISL	6.81	6.78	34.080	26.724	135.7	0.653	1.80	26.3	56.8	2.52	34.6	0.00			302
1	338		6.41	6.38	34.103	26.795	129.2	0.703	1.36	19.7	64.2	2.69	37.0	0.00			341
1	398		6.11	6.08	34.189	26.902	119.7	0.778	0.71	10.2	74.4	2.94	39.7	0.00			401
	400	ISL	6.10	6.06	34.192	26.906	119.4	0.780	0.70	10.1	74.7	2.95	39.8	0.00			403
1	465		5.81	5.77	34.266	27.001	111.0	0.855	0.38	5.4	82.7	3.10	41.0	0.00			469
	500	ISL	5.69	5.65	34.297	27.041	107.6	0.893	0.32	4.6	86.1	3.14	41.5	0.00			504
1	538		5.56	5.51	34.330	27.083	104.0	0.933	0.25	3.6	89.7	3.19	42.0	0.00			543

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 50.3 N	121 35.3 W	13/10/88	1944 UTC	4165 M	190	09 KT	190 01 05	1	1018.6 MB	18.9 C	17.2 C	7/8	SC

CAST	DEPTH M		TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	33.354	23.760	413.0	0.000	5.44	102.4	2.0	0.31	0.0	0.00	0.06	0.01	0
1	10		18.80	18.80	33.349	23.812	408.4	0.041	5.45	102.2	1.9	0.31	0.0	0.00	0.08	0.02	10
	20	ISL	18.82	18.82	33.348	23.806	409.2	0.082	5.46	102.4	1.8	0.30	0.0	0.00	0.08	0.02	20
1	21		18.82	18.82	33.348	23.806	409.3	0.086	5.46	102.4	1.8	0.30	0.0	0.00	0.08	0.02	21
	30	ISL	18.83	18.82	33.348	23.804	409.8	0.123	5.46	102.4	1.8	0.30	0.0	0.00	0.09	0.02	30
1	31		18.83	18.82	33.348	23.804	409.8	0.127	5.46	102.4	1.8	0.30	0.0	0.00	0.09	0.02	31
1	41		15.79	15.78	33.201	24.414	351.9	0.165	6.13	108.3	1.9	0.29	0.0	0.00	0.13	0.03	41
	50	ISL	14.77	14.76	33.131	24.583	335.9	0.196	6.17	106.7	2.2	0.33	0.0	0.00	0.17	0.06	50
1	51		14.72	14.71	33.128	24.592	335.1	0.199	6.17	106.6	2.2	0.33	0.0	0.00	0.17	0.06	51
1	61		14.33	14.32	33.237	24.759	319.5	0.232	6.03	103.4	2.2	0.33	0.0	0.00	0.18	0.08	61
1	71		13.82	13.81	33.325	24.933	3 03.2	0.263	5.89	100.0	2.1	0.33	0.1	0.01	0.30	0.18	72
	75	ISL	13.65	13.64	33.331	24.972	299.5	0.275	5.86	99.2	2.2	0.35	0.3	0.04	0.30	0.21	76
1	86		13.08	13.07	33.301	25.064	291.0	0.308	5.77	96.5	2.4	0.41	1.0	0.10	0.30	0.25	87
	100	ISL	11.83	11.82	33.226	25.246	273.8	0.347	5.47	89.0	4.9	0.70	6.1	0.03	0.23	0.19	101
1	101		11.74	11.73	33.224	25.261	272.4	0.350	5.44	88.4	5.1	0.72	6.5	0.02	0.22	0.18	102
1	121		11.07	11.06	33.509	25.605	240.0	0.401	4.71	75.6	10.5	1.00	12.1	0.01	0.09	0.08	122
	125	ISL	10.86	10.84	33.540	25.667	234.3	0.411	4.53	72.4	12.1	1.09	13.6	0.01	0.07	0.07	126
1	147		9.78	9.76	33.670	25.953	207.2	0.459	3.61	56.4	21.0	1.59	21.4	0.00	0.02	0.03	148
	150	ISL	9.70	9.68	33.691	25.983	204.5	0.466	3.54	55.2	21.8	1.62	21.9	0.00	0.02	0.03	151
1	178		9.13	9.11	33.871	26.217	182.7	0.520	3.09	47.6	27.7	1.79	24.9	0.00	0.01	0.03	179
	200	ISL	8.64	8.62	33.971	26.372	168.2	0.558	2.88	43.9	32.6	1.91	26.8	0.00	0.00	0.05	202
1	208		8.49	8.47	33.999	26.417	164.0	0.572	2.81	42.7	34.3	1.96	27.4	0.00	-0.01	0.06	210
1	238		8.20	8.18	34.054	26.505	156.2	0.620	2.36	35.6	40.0	2.15	29.6	0.00			240
	250	ISL	8.03	8.00	34.075	26.547	152.3	0.638	2.16	32.5	43.0	2.23	30.6	0.00			252
1	278		7.62	7.59	34.118	26.641	143.7	0.680	1.73	25.8	49.8	2.40	32.9	0.00			280
	300	ISL	7.39	7.36	34.139	26.690	139.2	0.711	1.48	21.9	53.6	2.51	34.1	0.00			302
1	334		7.14	7.11	34.169	26.749	134.0	0.757	1.16	17.1	58.3	2.66	35.6	0.00			337
1	393		6.88	6.84	34.249	26.849	125.4	0.834	0.62	9.1	66.0	2.86	37.6	0.00			396
	400	ISL	6.83	6.79	34.254	26.860	124.5	0.842	0.58	8.5	66.9	2.88	37.8	0.00			403
1	459		6.39	6.35	34.283	26.942	117.2	0.914	0.40	5.8	74.6	3.00	39.3	0.00			463'
	500	ISL	6.15	6.11	34.303	26.989	113.1	0.961	0.33	4.8	79.2	3.05	40.0	0.00			504
1	527		5.99	5.94	34.316	27.020	110.4	0.991	0.28	4.0	82.2	3.09	40.5	0.00			531

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 30.9 N	122 15.5 W	14/10/88	0111 UTC	4151 M	230	07 KT	240 03 06	1	1017.2 MB	20.2 C	16.8 C	6/8	CC

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.00	19.00	33.330	23.746	414.2	0.000	5.45	102.5	2.9	0.31	0.1	0.00	0.08	0.02	0
1	10	18.88	18.88	33.316	23.766	412.7	0.041	5.45	102.3	2.8	0.31	0.1	0.00	0.08	0.01	10
	20 ISL	18.86	18.86	33.309	23.766	413.0	0.083	5.48	102.8	2.7	0.31	0.1	0.00	0.08	0.02	20
1	21	18.86	18.86	33.308	23.766	413.1	0.087	5.48	102.8	2.7	0.31	0.1	0.00	0.08	0.02	21
	30 ISL	18.83	18.82	33.307	23.773	412.8	0.124	5.45	102.2	2.6	0.31	0.1	0.00	0.09	0.02	30
1	31	18.83	18.82	33.307	23.773	412.8	0.128	5.45	102.2	2.6	0.31	0.1	0.00	0.09	0.02	31
1	41	18.82	18.81	33.304	23.774	413.1	0.169	5.46	102.3	2.6	0.32	0.1	0.00	0.11	0.02	41
	50 ISL	16.58	16.57	33.218	24.247	368.0	0.205	6.03	108.2	2.5	0.30	0.1	0.01	0.14	0.03	50
1	51	16.32	16.31	33.213	24.303	362.8	0.208	6.09	108.7	2.5	0.30	0.1	0.01	0.14	0.03	51
1	62	15.91	15.90	33.277	24.446	349.5	0.247	6.10	108.0	2.6	0.32	0.1	0.00	0.17	0.05	62
1	72	15.03	15.02	33.285	24.647	330.6	0.281	6.08	105.8	2.7	0.34	0.1	0.00	0.21	0.10	73
	75 ISL	14.73	14.72	33.288	24.714	324.3	0.291	6.04	104.5	2.8	0.34	0.1	0.01	0.23	0.13	76
1	86	13.74	13.73	33.310	24.938	303.1	0.326	5.85	99.2	3.1	0.38	0.3	0.04	0.28	0.21	87
	100ISL	13.22	13.21	33.359	25.081	289.8	0.367	5.56	93.3	4.0	0.53	2.9	0.09	0.25	0.20	101
1	102	13.16	13.15	33.366	25.099	288.1	0.373	5.52	92.5	4.2	0.56	3.4	0.10	0.25	0.20	103
1	123	11.84	11.82	33.418	25.394	260.3	0.431	5.13	83.6	7.4	0.79	7.9	0.02	0.14	0.13	124
	125 ISL	11.73	11.71	33.428	25.422	257.7	0.436	5.10	82.9	7.8	0.81	8.3	0.02	0.13	0.12	126
1	148	10.70	10.68	33.557	25.709	230.8	0.492	4.62	73.5	12.8	1.08	13.3	0.01	0.06	0.07	149
	150 ISL	10.63	10.61	33.566	25.728	229.0	0.496	4.55	72.3	13.4	1.12	13.9	0.01	0.06	0.07	151
1	180	9.69	9.67	33.706	25.997	203.8	0.561	3.55	55.3	22.9	1.62	21.8	0.00	0.01	0.03	181
	200 ISL	9.14	9.12	33.841	26.192	185.5	0.600	3.21	49.5	28.1	1.79	24.5	0.00	0.00	0.02	202
1	211	8.89	8.87	33.910	26.286	176.7	0.620	3.09	47.4	30.5	1.85	25.5	0.00	0.00	0.02	213
1	241	8.47	8.44	34.000	26.422	164.2	0.671	2.80	42.5	35.6	1.99	27.6	0.00			243
	250 ISL	8.33	8.30	34.015	26.455	161.2	0.686	2.74	41.5	37.2	2.03	28.1	0.00			252
1	282	7.86	7.83	34.049	26.552	152.3	0.736	2.52	37.8	43.0	2.17	29.9	0.00			284
	300 ISL	7.64	7.61	34.064	26.596	148.3	0.763	2.31	34.4	46.3	2.25	31.1	0.00			302
1	340	7.24	7.21	34.096	26.678	141.0	0.821	1.79	26.4	53.4	2.44	33.6	0.00			343
1	400	6.82	6.78	34.156	26.784	131.6	0.903	1.12	16.4	62.9	2.72	36.6	0.00			403
1	467	6.16	6.12	34.214	26.917	119.4	0.987	0.64	9.2	75.0	2.97	39.7	0.00			471
	500 ISL	5.80	5.76	34.220	26.967	114.7	1.026	0.54	7.7	81.1	3.04	40.8	0.00			504
1	537	5.39	5.35	34.230	27.024	109.2	1.067	0.43	6.1	88.0	3.11	42.0	0.00			542

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	WIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
30 10.8 N	122 55.5 W	14/10/88	0633 UTC	3424 M	240	10 KT			1018.0 MB	19.8 C	17.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.56	19.56	33.442	23.689	419.7	0.000	5.37	102.2	2.4	0.28	0.1	0.00	0.06	0.01	0
1	10	19.57	19.57	33.440	23.685	420.4	0.042	5.39	102.6	2.4	0.30	0.1	0.00	0.06	0.01	10
	20 ISL	19.55	19.55	33.438	23.690	420.4	0.084	5.39	102.5	2.3	0.30	0.0	0.00	0.07	0.01	20
1	21	19.55	19.55	33.438	23.690	420.4	0.088	5.39	102.5	2.3	0.30	0.0	0.00	0.07	0.01	21
	30 ISL	19.55	19.54	33.439	23.691	420.6	0.126	5.38	102.3	2.3	0.31	0.0	0.00	0.07	0.01	30
1	31	19.55	19.54	33.439	23.691	420.7	0.130	5.38	102.3	2.3	0.31	0.0	0.00	0.07	0.01	31
1	42	19.47	19.46	33.424	23.700	420.2	0.177	5.41	102.7	2.3	0.31	0.0	0.00	0.09	0.02	42
	50 ISL	18.88	18.87	33.388	23.823	408.7	0.210	5.57	104.6	2.3	0.31	0.0	0.00	0.11	0.02	50
1	52	18.62	18.61	33.372	23.876	403.7	0.218	5.63	105.2	2.3	0.31	0.0	0.00	0.11	0.02	52
1	62	16.23	16.22	33.254	24.356	358.1	0.256	6.05	107.8	2.3	0.32	0.0	0.00	0.14	0.04	62
1	73	14.87	14.86	33.167	24.590	335.9	0.294	6.14	106.4	2.5	0.33	0.0	0.00	0.18	0.08	74
	75 ISL	14.65	14.64	33.159	24.631	332.1	0.301	6.13	105.8	2.5	0.33	0.0	0.00	0.20	0.10	76
1	87	13.58	13.57	33.167	24.860	310.5	0.339	6.09	102.8	2.5	0.38	0.0	0.00	0.28	0.19	88
	100 ISL	13.08	13.07	33.291	25.057	292.1	0.378	5.63	94.1	3.5	0.57	3.4	0.08	0.24	0.19	101
1	103	13.00	12.99	33.323	25.097	288.3	0.387	5.51	92.0	3.9	0.62	4.4	0.10	0.23	0.19	104
1	123	11.92	11.90	33.422	25.382	261.5	0.442	5.02	82.0	7.1	0.83	8.7	0.00	0.12	0.11	124
	125 ISL	11.78	11.76	33.435	25.418	258.1	0.447	4.94	80.4	7.8	0.87	9.4	0.00	0.11	0.10	126
1	149	10.24	10.22	33.613	25.832	218.9	0.505	3.98	62.7	17.1	1.38	18.1	0.00	0.02	0.04	150
	150 ISL	10.20	10.18	33.622	25.845	217.7	0.507	3.95	62.2	17.4	1.39	18.4	0.00	0.02	0.04	151
1	180	9.25	9.23	33.848	26.180	186.3	0.567	3.34	51.6	25.8	1.70	23.6	0.00	0.00	0.05	181
	200 ISL	8.91	8.89	33.929	26.297	175.4	0.604	3.25	49.8	29.0	1.79	24.9	0.00	0.00	0.04	202
1	211	8.77	8.75	33.955	26.340	171.6	0.623	3.20	48.9	30.2	1.81	25.2	0.00	0.00	0.03	213
1	241	8.28	8.26	33.992	26.444	162.0	0.673	3.43	51.9	32.8	1.78	25.5	0.00			243
	250 ISL	8.12	8.09	34.000	26.475	159.2	0.687	3.34	50.3	34.6	1.83	26.2	0.00			252
1	281	7.57	7.54	34.025	26.575	149.9	0.735	2.82	42.0	42.1	2.06	29.3	0.00			283
	300 ISL	7.29	7.26	34.038	26.625	145.3	0.763	2.50	37.0	46.8	2.19	31.1	0.00			302
1	337	6.85	6.82	34.063	26.705	138.0	0.816	1.91	28.0	55.3	2.43	34.2	0.00			340
1	396	6.43	6.39	34.112	26.801	129.6	0.894	1.25	18.1	64.6	2.69	37.2	0.00			399
	400 ISL	6.40	6.36	34.116	26.808	128.9	0.900	1.21	17.5	65.3	2.71	37.4	0.00			403
1	461	5.95	5.91	34.177	26.914	119.4	0.975	0.68	9.8	75.6	2.93	39.9	0.00			465
	500 ISL	5.71	5.67	34.208	26.968	114.5	1.021	0.53	7.6	81.2	3.03	40.9	0.00			504
1	530	5.52	5.48	34.232	27.011	110.7	1.055	0.41	5.8	85.5	3.10	41.7	0.00			534

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	BOTTOM	KIND	SPEED	WAVES	WEATHER	BAROMETER	DRY	WET	CLOUD AMT	TYPE
29 50.8 N	123 34.8 W	14/10/88	1213 UTC	4011 M	230	13 KT			1017.0 MB	20.0 C	18.9 C		

CAST	DEPTH M	TEMP DEG C	POT TEMP DEG C	SALINITY PSS 78	SIGMA THETA	SVA	DYN HT	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	19.47	19.47	33.316	23.616	426.7	0.000	5.38	102.1	2.5	0.29	0.1	0.00	0.06	0.02	0
1	2	19.47	19.47	33.316	23.616	426.7	0.009	5.38	102.1	2.5	0.29	0.1	0.00	0.06	0.02	2
	10 ISL	19.47	19.47	33.320	23.620	426.7	0.043	5.39	102.3	2.5	0.29	0.1	0.00	0.06	0.01	10
1	18	19.47	19.47	33.334	23.631	425.9	0.077	5.40	102.5	2.5	0.29	0.1	0.00	0.06	0.01	18
	20 ISL	19.45	19.45	33.331	23.634	425.7	0.085	5.40	102.5	2.5	0.29	0.1	0.00	0.06	0.01	20
	30 ISL	19.29	19.28	33.312	23.660	423.5	0.128	5.42	102.5	2.4	0.28	0.1	0.00	0.07	0.02	30
1	33	19.23	19.22	33.306	23.671	422.6	0.140	5.43	102.6	2.4	0.28	0.1	0.00	0.07	0.02	33
1	44	18.95	18.94	33.308	23.744	416.0	0.187	5.51	103.5	2.2	0.29	0.1	0.00	0.09	0.02	44
	50 ISL	17.57	17.56	33.322	24.094	382.7	0.211	5.84	106.9	2.2	0.28	0.1	0.00	0.09	0.03	50
1	54	16.62	16.61	33.348	24.338	359.6	0.225	6.05	108.7	2.2	0.27	0.1	0.00	0.09	0.03	54
1	64	16.01	16.00	33.405	24.522	3 42.3	0.260	6.02	106.9	2.2	0.27	0.1	0.00	0.11	0.03	64
1	75	15.11	15.10	33.341	24.672	328.2	0.297	6.01	104.8	2.1	0.29	0.1	0.00	0.13	0.05	76
1	84	14.56	14.55	33.301	24.760	320.1	0.327	5.97	102.9	2.3	0.31	0.1	0.00	0.14	0.07	85
1	99	14.30	14.29	33.290	24.807	316.0	0.374	5.78	99.1	2.6	0.33	0.2	0.04	0.24	0.15	100
	100 ISL	14.26	14.25	33.299	24.822	314.6	0.377	5.77	98.9	2.6	0.33	0.3	0.05	0.24	0.15	101
1	115	13.48	13.46	33.430	25.084	289.9	0.423	5.62	94.8	3.4	0.44	1.8	0.13	0.22	0.15	116
	125 ISL	12.88	12.86	33.433	25.207	278.4	0.451	5.48	91.3	4.3	0.53	3.7	0.06	0.18	0.13	126
1	130	12.55	12.53	33.425	25.265	272.9	0.465	5.39	89.2	4.9	0.59	4.8	0.02	0.16	0.12	131
	150 ISL	11.02	11.00	33.455	25.573	243.8	0.517	4.95	79.3	9.7	0.91	10.5	0.00	0.07	0.07	151
1	156	10.59	10.57	33.479	25.667	234.8	0.531	4.79	76.0	11.6	1.02	12.4	0.00	0.05	0.06	157
1	182	9.60	9.58	33.684	25.995	204.0	0.588	3.87	60.2	21.2	1.50	20.3	0.00	0.01	0.03	183
	200 ISL	9.07	9.05	33.820	26.187	185.9	0.623	3.72	57.2	25.6	1.64	22.8	0.00	0.00	0.02	202
1	212	8.79	8.77	33.895	26.290	176.3	0.645	3.62	55.4	27.6	1.67	23.6	0.00	0.00	0.02	214
1	242	8.37	8.34	33.974	26.417	164.7	0.696	3.81	57.7	30.3	1.66	23.7	0.00			244
	250 ISL	8.21	8.18	33.980	26.446	162.0	0.709	3.75	56.6	31.8	1.70	24.3	0.00			252
1	283	7.55	7.52	33.986	26.547	152.6	0.761	3.32	49.4	39.5	1.93	27.8	0.00			285
	300 ISL	7.27	7.24	33.993	26.592	148.4	0.787	3.06	45.2	43.6	2.05	29.4	0.00			302
1	339	6.75	6.72	34.016	26.682	140.2	0.843	2.41	35.2	52.9	2.31	32.9	0.00			342
1	400	6.24	6.20	34.086	26.805	129.1	0.925	1.37	19.8	66.4	2.68	37.5	0.00			403
1	464	5.66	5.62	34.150	26.928	117.7	1.004	0.75	10.7	79.3	2.94	40.6	0.00			468
	500 ISL	5.45	5.41	34.178	26.976	113.4	1.046	0.62	8.8	84.0	3.00	41.4	0.00			504
1	534	5.26	5.22	34.205	27.020	109.5	1.083	0.50	7.1	88.5	3.06	42.2	0.00			539

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 2.6 N	120 55.8 W	25/10/88	1843 UTC	12 M	1147 - 1746 PST	1147 PST	1741 PST	652.0 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	15.32	33.595	24.820	6.06	106.3	4.9	0.38	0.8	0.08	5.36	0.69	99.	63.3	70.3	66.8	0.55
9	15.31	33.594	24.821	5.99	105.1	4.8	0.38	0.9	0.10	3.36	0.51	35.	29.3	31.8	30.5	0.33
16	15.26	33.591	24.830	5.82	102.0	4.8	0.41	1.1	0.10	1.31	0.92	16.	8.7	8.6	8.6	0.20
28	14.11	33.575	25.065	5.02	85.9	8.4	0.85	6.3	0.38	0.33	0.37	3.7	0.43	0.43	0.43	0.06
41	13.86	33.569	25.112	4.91	83.6	8.9	0.91	7.2	0.41	0.28	0.42	0.79	0.20	0.16	0.18	0.10
50	13.47	33.565	25.189	4.71	79.5	10.0	1.00	8.9	0.42	0.21	0.33	0.22	0.04	0.05	0.04	0.05

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 77 86

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 51.5 N	123 20.3 W	24/10/88	1903 UTC	15 M	1157 - 1749 PST	1157 PST	1749 PST	186.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.75	33.504	24.426	5.68	102.4	2.4	0.35	0.1	0.00	0.55	0.16	99.	7.5	7.4	7.5	0.07
10	16.76	33.504	24.424	5.70	102.8	2.6	0.34	0.1	0.00	0.56	0.15	35.	6.7	7.0	6.8	0.07
19	16.76	33.505	24.425	5.69	102.6	2.2	0.33	0.1	0.00	0.57	0.19	16.	4.4	4.7	4.6	0.06
33	16.76	33.510	24.429	5.68	102.5	2.3	0.34	0.1	0.00	0.60	0.17	3.7	1.2	1.0	1.1	0.05
49	13.81	33.363	24.964	5.65	96.0	4.4	0.65	4.5	0.30	0.61	0.41	0.79	0.99	0.94	0.97	0.05
63	11.84	33.406	25.383	4.90	79.9	8.6	1.11	12.4	0.22	0.42	0.32	0.22	0.11	0.10	0.10	0.05
73	11.03	33.552	25.645	4.16	66.7	13.8	1.43	18.0	0.04	0.26	0.20					
88	10.05	33.612	25.862	3.76	59.0	19.0	1.61	21.1	0.03	0.08	0.09					
103	9.62	33.708	26.009	3.31	51.5	23.8	1.84	24.1	0.01	0.08	0.09					
124	9.02	33.795	26.174	3.11	47.8	28.0	1.91	25.9	0.01	0.01	0.06					
145	8.54	33.905	26.335	3.02	45.9	31.7	1.95	26.8	0.01	0.00	0.05					
175	8.12	33.984	26.461	2.97	44.8	35.8	2.02	27.8	0.01	0.00	0.03					
203	7.81	33.985	26.508	3.13	46.8	37.3	1.99	27.8	0.01	0.00	0.02					

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.0 N	123 13.6 W	23/10/88	1923 UTC	23 M	1204 - 1806 PST	1157 PST	1759 PST	139.6 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.88	33.019	24.023	5.70	102.8	1.8	0.32	0.1	0.00	0.21	0.04	99.	2.9	2.8	2.9	0.14
18	16.86	33.018	24.028	5.70	102.7	1.6	0.32	0.1	0.00	0.23	0.04	35.	2.9	2.8	2.8	0.14
29	16.85	33.021	24.033	5.69	102.5	1.3	0.30	0.1	0.00	0.23	0.05	16.	2.2	2.2	2.2	0.10
52	13.01	33.180	24.983	6.19	103.3	2.7	0.30	0.2	0.01	0.49	0.22	3.7	0.67	0.96	0.81	0.05
76	12.67	33.346	25.179	5.95	98.7	2.9	0.28	0.2	0.08	0.38	0.29	0.79	0.71	0.66	0.68	0.04
97	12.20	33.395	25.308	5.74	94.3	3.6	0.39	2.2	0.07	0.19	0.19	0.22	0.13	0.09	0.11	0.02

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 17.3 N	120 2.0 W	22/10/88	1838 UTC	11 M	1149 - 1755 PST	1144 PST	1748 PST	721.1 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	15.85	33.589	24.697	6.20	109.9	5.4	0.30	0.3	0.02	2.04	0.51	99.	37.2	38.3	37.7	0.31
7	15.43	33.590	24.792	6.11	107.4	5.3	0.37	0.7	0.05	3.58	0.65	35.	45.2	46.6	45.9	0.30
14	14.59	33.581	24.968	5.94	102.7	7.4	0.50	2.1	0.11	3.64	0.62	16.	26.9	23.3	25.1	0.19
25	13.64	33.572	25.159	5.36	90.8	10.4	0.85	7.1	0.34	1.22	0.57	3.7	2.6	2.5	2.6	0.08
36	13.09	33.583	25.279	4.88	81.8	11.4	1.03	10.0	0.54	1.01	0.57	0.79	1.2	1.1	1.2	0.10
46	12.26	33.591	25.447	4.31	71.0	12.8	1.22	13.7	0.31	1.03	0.72	0.22	0.15	0.14	0.15	0.07

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 13.1 N	121 26.8 W	21/10/88	1826 UTC	21 M	1150 - 1745 PST	1151 PST	1745 PST	274.1 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.39	33.376	24.411	5.74	102.7	2.5	0.35	0.2	0.00	0.34	0.11	99.	7.3	7.1	7.2	0.07
16	15.98	33.370	24.500	5.81	103.1	2.5	0.37	0.2	0.01	0.46	0.15	35.	7.5	7.7	7.6	0.05
27	15.51	33.362	24.599	5.86	103.0	2.8	0.37	0.3	0.02	0.63	0.22	16.	7.0	5.9	6.4	0.04
48	11.50	33.352	25.404	4.85	78.5	9.8	1.09	10.1	0.13	0.26	0.28	3.7	0.44	0.47	0.46	0.04
70	10.08	33.782	25.989	3.19	50.2	22.6	1.75	21.0	0.01	0.06	0.14	0.79	0.08	0.10	0.09	0.02
87	9.69	33.938	26.177	2.60	40.6	28.9	2.00	24.2	0.01	0.02	0.11	0.22	0.01	0.01	0.01	0.03

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 83 106

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 2.9 N	123 54.2 W	20/10/88	1902 UTC	26 M	1156 - 1804 PST	1200 PST	1801 PST	100.3 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	17.88	33.084	23.835	5.57	102.4	2.2	0.33	0.1	0.00	0.11	0.02	99.	2.1	2.1	2.1	0.07
20	17.88	33.087	23.838	5.57	102.4	2.2	0.33	0.1	0.00	0.12	0.03	35.	1.8	2.0	1.9	0.08
33	17.85	33.077	23.839	5.57	102.4	2.1	0.33	0.1	0.00	0.12	0.03	16.	1.1	1.0	1.1	0.07
59	14.68	33.073	24.558	6.16	106.3	2.1	0.34	0.1	0.00	0.29	0.15	3.7	0.58	0.58	0.58	0.06
84	12.76	33.062	24.942	6.04	100.2	2.7	0.44	0.4	0.09	0.37	0.26	0.79	0.51	0.40	0.46	0.04
107	11.83	33.133	25.174	5.60	91.1	4.8	0.69	5.0	0.01	0.15	0.14	0.22	0.07	0.04	0.05	0.02
125	11.00	33.262	25.425	5.12	81.9	9.1	0.99	10.2	0.01	0.06	0.07					
144	9.89	33.505	25.806	4.30	67.2	16.2	1.38	17.2	0.01	0.02	0.03					
175	8.88	33.747	26.159	3.83	58.6	24.3	1.66	22.1	0.01	0.00	0.02					
206	8.54	33.922	26.349	3.69	56.1	28.6	1.77	23.7	0.00	0.00	0.02					

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 19.1 N	119 38.6 W	18/10/88	1902 UTC	11 M	1144 - 1749 PST	1144 PST	1747 PST	930.5 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	16.97	33.566	24.422	5.84	105.8	2.7	0.36	0.1	0.01	0.86	0.22	99.	32.4	32.6	32.5	0.21
8	15.97	33.581	24.664	6.02	107.0	3.4	0.45	1.5	0.08	2.80	0.44	35.	57.6	58.1	57.8	0.31
15	15.46	33.595	24.789	5.91	104.0	4.3	0.53	2.7	0.10	2.96	0.47	16.	31.1	32.2	31.7	0.15
26	15.16	33.590	24.852	5.69	99.5	5.0	0.61	3.9	0.14	2.23	0.80	3.7	6.4	7.4	6.9	0.12
37	14.51	33.557	24.967	5.38	92.8	6.2	0.73	5.6	0.29	1.39	0.61	0.79	1.8	1.7	1.7	0.15
47	12.91	33.352	25.136	5.25	87.5	6.8	0.84	7.2	0.19	0.76	0.43	0.22	0.14	0.09	0.12	0.07

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 87 87

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 5.8 N	122 9.9 W	19/10/88	1900 UTC	24 M	1154 - 1805 PST	1153 PST	1800 PST	151.7 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	17.37	33.155	24.012	5.63	102.6	2.0	0.30	0.1	0.00	0.16	0.04	99.	3.6	3.6	3.6	0.07
18	17.37	33.155	24.013	5.63	102.6	2.0	0.33	0.1	0.00	0.17	0.04	35.	3.1	3.4	3.2	0.06
30	17.05	33.156	24.090	5.71	103.4	2.0	0.32	0.1	0.00	0.22	0.06	16.	2.1	2.1	2.1	0.07
55	12.98	33.121	24.944	6.04	100.7	2.9	0.49	1.3	0.09	0.42	0.28	3.7	0.71	0.74	0.73	0.06
79	11.95	33.242	25.236	5.42	88.5	5.7	0.83	7.6	0.03	0.29	0.29	0.79	0.62	0.62	0.62	0.04
99	11.25	33,369	25.463	4.85	78.0	10.4	1.15	13.0	0.01	0.12	0.13	0.22	0.08	0.06	0.07	0.03
124	10.29	33.588	25.803	3.98	62.8	17.8	1.54	19.3	0.01	0.02	0.06					
144	9.45	33.786	26.098	3.19	49.5	25.5	1.81	24.2	0.00	0.01	0.03					
175	8.69	33.931	26.333	3.15	48.1	30.6	1.87	25.7	0.00	0.00	0.04					
206	8.33	33.987	26.432	3.15	47.7	33.6	1.93	26.4	0.00	0.01	0.03					

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 45.2 N	119 16.2 W	16/10/88	1904 UTC	40 M	1150 - 1750 PST	1144 PST	1746 PST	161.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.68	33.413	23.890	5.53	103.5	2.3	0.32	0.1	0.00	0.09	0.02	99.	0.64	0.60	0.62	0.13
28	18.19	33.406	24.007	5.54	102.7	2.2	0.32	0.1	0.00	0.12	0.03	35.	2.2	2.1	2.1	0.14
49	13.96	33.181	24.792	6.30	107.2	2.8	0.39	0.2	0.01	0.45	0.22	16.	3.5	3.3	3.4	0.09
84	11.64	33.433	25.442	4.78	77.6	9.4	1.13	12.7	0.03	0.18	0.21	3.7	0.17	0.16	0.16	0.04
123	9.49	33.728	26.046	3.54	54.9	23.6	1.67	22.3	0.00	0.01	0.04	0.79	0.01	0.02	0.01	0.02
157	9.10	33.873	26.223	3.26	50.2	28.5	1.83	24.7	0.00	0.00	0.03	0.22	0.01	0.01	0.01	0.02
168	8.83	33.911	26.295	3.16	48.4	30.2	1.88	25.4	0.00	0.00	0.03					
202	8.44	33.979	26.409	3.10	47.1	33.3	1.94	26.4	0.00	0.00	0.03					

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 26.0 N	122 0.5 W	15/10/88	1919 UTC	22 M	1203 - 1800 PST	1154 PST	1756 PST	75.5 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.38	33.241	23.833	5.51	102.4	2.2	0.32	0.1	0.00	0.10	0.03	99.	1.5	1.5	1.5	0.10
17	18.38	33.242	23.835	5.52	102.6	2.2	0.32	0.1	0.00	0.09	0.02	35.	1.7	1.7	1.7	0.08
28	18.37	33.241	23.837	5.51	102.4	2.1	0.31	0.1	0.00	0.09	0.02	16.	1.1	0.99	1.1	0.09
50	15.31	33.113	24.452	6.19	108.2	2.3	0.33	0.1	0.00	0.17	0.06	3.7	0.47	0.40	0.43	0.08
73	13.35	33.104	24.857	6.14	103.1	2.7	0.36	0.1	0.00	0.21	0.15	0.79	0.48	0.48	0.48	0.03
92	12.58	33.136	25.034	5.91	97.7	3.4	0.45	1.2	0.12	0.09	0.02	0.22	0.14	0.10	0.12	0.02

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 91 120

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 15.3 N	123 53.2 W	14/10/88	1936 UTC	32 M	1206 - 1809 PST	1200 PST	1809 PST	87.3 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.66	33.117	23.669	5.50	102.7	2.8	0.30	0.1	0.00	0.07	0.02	99.	0.63	0.49	0.56	0.06
23	18.55	33.115	23.696	5.50	102.5	2.6	0.31	0.1	0.00	0.09	0.01	35.	1.7	1.7	1.7	0.07
39	18.21	33.147	23.805	5.58	103.3	2.5	0.30	0.1	0.00	0.09	0.02	16.	1.2	1.1	1.2	0.12
71	14.57	33.162	24.650	6.16	106.1	2.8	0.30	0.0	0.00	0.17	0.09	3.7	0.21	0.21	0.21	0.06
102	12.98	33.378	25.144	5.60	93.5	4.2	0.47	2.5	0.11	0.21	0.18	0.79	0.41	0.38	0.40	0.02
129	11.30	33.300	25.401	5.12	82.4	8.8	0.85	9.2	0.02	0.09	0.11	0.22	0.06	0.04	0.05	0.03
143	10.67	33.469	25.645	4.83	76.8	11.5	0.98	11.8	0.01	0.05	0.10					
173	9.23	33.674	26.047	4.27	65.8	20.2	1.39	19.0	0.01	0.01	0.05					
205	8.56	33.889	26.320	3.86	58.7	27.5	1.61	22.8	0.00	0.00	0.03					

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.5 N	117 18.6 W	11/10/88	1911 UTC	12 M	1136 - 1749 PST	1136 PST	1748 PST	1000.8 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	19.81	33.593	23.740	6.29	120.3	5.2	0.16	0.1	0.00	2.03	0.02	99.	92.2	84.6	88.4	0.37
9	17.64	33.519	24.227	6.77	124.2	4.8	0.20	0.1	0.00	1.77	0.17	35.	25.6	25.9	25.7	0.42
14	14.70	33.351	24.767	6.45	111.6	5.9	0.55	0.2	0.05	2.69	0.62	16.	41.6	40.0	40.8	0.47
27	12.58	33.376	25.219	4.98	82.5	8.5	0.83	7.0	0.32	1.11	0.37	3.7	4.2	3.9	4.0	0.18
39	11.55	33.453	25.473	4.56	73.9	11.6	1.11	13.0	0.04	0.26	0.23	0.79	0.54	0.42	0.48	0.03
50	11.53	33.509	25.520	4.25	68.9	14.0	1.21	14.6	0.08	0.18	0.21	0.22	0.06	0.06	0.06	0.03

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 11.7 N	118 55.1 W	12/10/88	1857 UTC	26 M	1148 - 1756 PST	1142 PST	1753 PST	159.1 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.16	33.400	24.009	5.51	102.1	2.8	0.28	0.0	0.00	0.14	0.03	99.	3.1	3.0	3.0	0.27
20	18.12	33.409	24.026	5.52	102.2	2.1	0.29	0.0	0.00	0.16	0.04	35.	3.0	3.1	3.1	0.05
33	16.94	33.301	24.227	5.87	106.1	2.0	0.29	0.0	0.00	0.21	0.08	16.	2.1	2.1	2.1	0.04
59	13.62	33.114	24.810	6.13	103.6	2.5	0.33	0.0	0.00	0.25	0.19	3.7	0.80	0.81	0.80	0.03
85	12.65	33.235	25.097	5.66	93.8	3.7	0.53	3.5	0.07	0.31	0.29	0.79	0.63	0.66	0.64	0.01
108	11.64	33.413	25.427	4.94	80.2	8.7	0.93	10.7	0.02	0.12	0.14	0.22	0.05	0.05	0.05	0.02

RV NEW HORIZON CALCOFI CRUISE 8810 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	MESSENGER	SECCHI DEPTH	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 50.6 N	121 35.4 W	13/10/88	1915 UTC	33 M	1203 - 1810 PST	1152 PST	1804 PST	103.4 MG C/M2

DEPTH M	TEMP DEG C	SALINITY PSS 78	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	18.92	33.354	23.785	5.44	102.2	2.7	0.30	0.1	0.00	0.07	0.01	99.	1.2	1.1	1.2	0.05
23	18.80	33.352	23.815	5.46	102.3	2.7	0.31	0.1	0.00	0.08	0.01	35.	1.5	1.6	1.5	0.08
41	15.89	33.171	24.368	6.14	108.6	2.7	0.29	0.1	0.01	0.12	0.02	16.	1.1	1.0	1.1	0.07
74	13.82	33.312	24.923	5.89	100.0	3.0	0.35	0.1	0.01	0.30	0.17	3.7	0.39	0.55	0.47	0.03
107	11.47	33.251	25.332	5.31	85.8	7.0	0.82	8.0	0.02	0.19	0.15	0.79	0.50	0.49	0.50	0.01
135	10.30	33.612	25.820	4.24	66.9	16.8	1.31	16.9	0.01	0.04	0.05	0.22	0.01	-0.01	0.00	0.03

Secchi Disk Observations

CalCOFI Cruise 8810

Line	Sta.	Day	Mo	Local Time (+8: PST)	Secchi Depth (m)	Forel Water Color	Weather	Clouds Type	Clouds Amt
77	49	25	10	1147	10	6	2	ST	8/8
77	51	25	10	1030	12	5	2	ST	8/8
77	80	24	10	1337	16	3	2	SC	8/8
77	86	24	10	1040	15	3	2	SC	8/8
77	90	24	10	0802	18	2	2	SC	8/8
80	90	23	10	1107	23	2	1	ST	7/8
82	47	22	10	1025	11	6	4	ST	8/8
83	40.6	22	10	0658	15	5	4	ST	8/8
83	60	21	10	1435	19	2	1	SC	7/8
83	70	21	10	0845	25	3	2	ST	8/8
83	70	21	10	1014	21	3	2	ST	8/8
83	100	20	10	1355	25	2	2	SC	8/8
83	106	20	10	1042	26	2	2	SC	8/8
83	110	20	10	0738	25	2	1	SC	7/8
87	33	17	10	1605	12	4	0	—	0
87	50	18	10	1048	11	4	2	ST	8/8
87	55	18	10	1450	11	4	2	SC	8/8
87	87	19	10	1040	24	2	2	SC	8/8
87	90	19	10	1251	24	2	2	SC	8/8
90	28	17	10	0730	17	3	1	ST	7/8
90	45	16	10	1615	11	4	1	CI	1/8
90	50	16	10	1040	40	1	0	—	0
90	53	16	10	0825	30	2	0	—	0
90	80	15	10	1525	26	2	1	SC	5/8
90	90	15	10	1104	22	1	2	ST	8/8
90	120	14	10	1450	32	1	1	AS	5/8
91	120	14	10	1115	32	1	1	AS	5/8
93	26.7	11	10	1057	12	4	2	ST	8/8
93	28	11	10	1317	16	3	1	ST	7/8
93	30	11	10	1618	17	2	2	SC	8/8
93	50	12	10	0925	26	3	2	ST	8/8
93	50	12	10	1040	26	3	2	ST	8/8
93	55	12	10	1310	23	2	2	SC	8/8
93	90	13	10	1100	33	1	1	SC	7/8
93	100	13	10	1645	32	1	1	CC	6/8

CalCOFI Cruise 8810

MACROZOOPLANKTON BIOMASS
Net Mesh Size: 0.505 mm

Line	Stt.	Position		Date Mo/Day	Time(UTC) Start	Time(UTC) 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 05.4N	120 47.2W	10/25	2045	2052	124	54	32	32
77	51	35 02.1N	120 55.7W	10/25	1754	1816	439	208	157	157
77	55	34 53.8N	121 12.5W	10/25	1445	1507	417	214	101	101
77	60	34 43.1N	121 33.3W	10/25	0845	0907	440	205	80	80
77	70	34 23.6N	12215.0W	10/25	0425	0447	425	211	33	33
77	80	34 04.0N	122 57.2W	10/24	2252	2314	453	214	29	29
77	90	33 43.4N	123 37.9W	10/24	1630	1652	431	210	28	28
77	100	33 23.7N	124 19.5W	10/24	1051	1113	439	218	18	18
80	51	34 26.7N	120 32.1W	10/26	0155	0202	145	64	55	55
80	55	34 19.4N	120 49.3W	10/26	0500	0522	433	209	162	162
80	60	34 09.6N	121 09.6W	10/23	0255	0317	427	212	405	405
80	70	33 49.3N	121 51.8W	10/23	0844	0906	451	216	38	38
80	80	33 29.5N	122 32.8 W	10/23	1358	1420	431	216	37	37
80	90	33 09.2N	123 13.9W	10/23	1950	2012	447	225	31	31
80	100	3249.5N	123 55.2W	10/24	0520	0542	445	212	25	25
82	47	34 17.7N	120 01.5W	10/22	2006	2028	411	212	78	66
83	40.6	34 13.3N	119 25.5W	10/22	1520	1524	77	35	26	26
83	42	34 10.9N	119 31.8W	10/22	1330	1346	255	149	35	35
83	51	33 52.5N	120 08.8W	10/22	0700	0710	182	82	5	5
83	55	33 45.5N	120 26.0W	10/22	0400	0422	410	210	110	110
83	60	33 33.9N	120 46.0W	10/21	2355	0017	413	212	143	143
83	70	33 14.4N	121 27.0W	10/21	1710	1732	426	210	42	42
83	80	32 55.0N	122 07.8W	10/21	1133	1155	424	212	61	61
83	90	32 34.5N	12249.1W	10/21	0520	0542	444	211	36	36
83	100	32 15.4N	123 29.4W	10/20	2322	2345	449	226	11	11
83	110	31 55.3N	124 10.7W	10/20	1627	1649	429	213	5	5
87	33	33 53.1N	118 29.7W	10/18	0040	0046	105	48	38	38
87	35	33 49.8N	118 38.0W	10/18	0408	0430	416	213	60	48
87	39.5	33 41.4N	118 56.6W	10/18	1018	1040	413	214	303	303
87	45	33 29.9N	119 18.4W	10/18	1506	1528	402	211	27	27
87	50	33 19.0N	119 39.3W	10/18	1828	1835	129	55	109	109
87	55	33 09.6N	120 01.2W	10/19	0030	0052	427	209	260	260
87	60	32 59.9N	120 19.9W	10/19	0420	0442	435	209	80	80
87	70	3240.1N	121 03.1W	10/19	1003	1025	442	209	120	41
87	80	32 19.6N	121 43.3W	10/19	1528	1550	426	212	33	33
87	90	31 59.4N	122 24.2W	10/19	2200	2222	437	211	16	16
87	100	31 39.7N	123 04.1W	10/20	0340	0402	484	214	19	19
87	110	31 20.3N	123 45.5W	10/20	0954	1016	459	212	15	15
90	28	33 28.7N	117 45.7W	10/17	1556	1602	118	50	34	34
90	30	33 24.7N	117 53.9W	10/17	1347	1409	405	217	42	42
90	35	33 14.4N	118 15.1W	10/17	0840	0902	413	207	34	34
90	37	33 10.6N	118 23.3W	10/17	0540	0602	426	214	26	26
90	45	32 54.6N	118 56.2W	10/17	0035	0057	408	213	64	64
90	53	32 39.7N	119 28.8W	10/16	1632	1654	441	206	5	5
90	60	32 25.5N	119 58.2W	10/16	1224	1246	433	214	35	35
90	70	32 05.5N	120 39.2W	10/16	0615	0637	457	212	72	72
90	80	31 45.0N	121 19.1W	10/16	0020	0042	439	216	9	9
90	90	31 25.6N	121 59.8W	10/15	1808	1830	440	211	2	2
90	100	31 05.7N	122 40.2W	10/15	1140	1202	439	217	7	7
90	110	30 46.5N	123 20.5W	10/15	0625	0647	461	218	11	11
90	120	30 25.8N	124 01.0W	10/15	0030	0052	458	214	2	2
93	26.8	32 57.3N	117 18.9W	10/11	1947	1954	145	55	110	110
93	28	32 54.5N	117 23.7W	10/11	2223	2245	435	209	28	28
93	30	32 50.7N	117 32.5W	10/12	0140	0202	414	216	63	63
93	35	32 41 .0N	117 53.4W	10/12	0540	0602	442	224	165	95
93	40	32 30.7N	118 13.3W	10/12	0948	1010	444	204	101	101
93	45	3220.9N	118 33.7W	10/12	1316	1338	403	215	52	52
93	50	32 11.0N	118 54.1W	10/12	1746	1808	423	211	12	12
93	55	32 00.7N	119 14.3W	10/12	2228	2250	415	217	7	7
93	60	3151.1N	119 34.7W	10/13	0225	0247	415	216	31	31
93	70	31 31.2N	120 16.7W	10/13	0824	0846	442	210	183	183
93	80	31 10.6N	120 55.3W	10/13	1319	1341	408	210	32	32
93	90	30 50.4N	121 35.4W	10/13	2015	2037	410	218	34	34
93	100	30 30.4N	122 15.9W	10/14	0140	0202	437	214	9	9
93	110	30 10.2N	122 56.2W	10/14	0725	0747	433	211	12	12
93	120	29 50.6N	123 34.9W	10/14	1241	1303	433	213	7	7