RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 5.3 N	120 46.8 W	25/11/02	0631	UTC	71 m	360			1017.2 mb	13.8 C	12.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	12.89	12.89	33.40	25.176	278.0	0.000	5.48	91.4	9.0	0.92	8.1	0.18	1.54	0.52	0	
1	12.89	12.89	33.40	25.176	278.1	0.003	5.48	91.4	9.0	0.92	8.1	0.18	1.54	0.52	1	208
5	12.90	12.90	33.40	25.174	278.4	0.014	5.48	91.4	8.9	0.92	8.1	0.17	1.54	0.56	5	207
10 ISL	12.89	12.89	33.38	25.162	279.6	0.028	5.47	91.2	8.9	0.93	8.2	0.17	1.51	0.56	10	
11	12.89	12.89	33.38	25.161	279.8	0.031	5.47	91.2	8.9	0.93	8.2	0.17	1.51	0.56	11	206
20 ISL	12.52	12.52	33.38	25.232	273.2	0.056	5.25	86.8	8.9	0.97	9.0	0.19	1.06	0.46	20	
21	12.47	12.47	33.38	25.243	272.2	0.058	5.21	86.1	8.9	0.98	9.1	0.19	0.99	0.45	21	205
30	12.12	12.12	33.38	25.310	266.1	0.082	4.80	78.7	10.2	1.13	11.3	0.20	0.46	0.32	30	204
41	11.89	11.88	33.40	25.369	260.7	0.111	4.66	76.1	11.0	1.20	12.6	0.09	0.38	0.30	41	203
50 ISL	11.61	11.60	33.50	25.497	248.7	0.134	4.30	69.8	14.5	1.36	14.5	0.15	0.27	0.32	50	
51	11.57	11.56	33.51 D	25.514	247.2	0.137	4.25	68.9	15.0	1.38	14.8	0.16	0.25	0.32	51	202
61	11.09	11.08	33.60	25.671	232.4	0.161	3.70	59.4	19.3	1.60	18.1	0.11	0.02	0.04	61	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
35 1.6 N	120 55.3 W	25/11/02	0348	UTC	244 m	310 21 kn			1018.1 mb	13.5 C	13.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	13.78	13.78	33.32	24.935	301.0	0.000	5.91	100.3	4.8	0.68	4.0	0.12	0.89	0.33	0	
1	13.78	13.78	33.32	24.935	301.0	0.003	5.91	100.3	4.8	0.68	4.0	0.12	0.89	0.33	1	215
10	13.79	13.79	33.33	24.941	300.7	0.030	5.87	99.7	4.8	0.67	4.0	0.12	0.88	0.36	10	214
20	13.78	13.78	33.33	24.943	300.7	0.060	5.88	99.8	4.8	0.67	4.0	0.12	0.89	0.32	20	213
29	13.69	13.69	33.32	24.954	299.9	0.087	5.86	99.3	4.9	0.70	4.3	0.11	0.88	0.31	29	212
30 ISL	13.47	13.47	33.31	24.990	296.6	0.090	5.79	97.6	5.3	0.74	5.0	0.11	0.82	0.30	30	
39	11.43	11.43	33.23	25.321	265.1	0.115	5.15	83.1	9.4	1.16	11.4	0.08	0.30	0.24	39	211
49	11.18	11.17	33.22	25.359	261.8	0.142	5.07	81.4	10.2	1.22	12.5	0.06	0.21	0.18	49	210
50 ISL	11.17	11.16	33.22	25.363	261.4	0.144	5.06	81.2	10.2	1.22	12.5	0.06	0.21	0.18	50	
59	11.08	11.07	33.25	25.400	258.0	0.168	5.00	80.1	10.6	1.25	12.9	0.06	0.20	0.18	59	209
69	10.78	10.77	33.55 D	25.687	231.0	0.192	4.12	65.7	15.8	1.48	16.7	0.08	0.15	0.18	69	208
75 ISL	10.55	10.54	33.64	25.801	220.3	0.206	3.70	58.7	18.5	1.61	18.7	0.07	0.11	0.17	75	
84	10.23	10.22	33.72	25.916	209.6	0.225	3.26	51.4	21.6	1.77	21.0	0.04	0.06	0.14	84	207
98	10.02	10.01	33.78	25.998	202.0	0.254	3.05	47.9	23.8	1.87	22.3	0.04	0.04	0.13	99	206
100 ISL	9.97	9.96	33.79	26.013	200.7	0.258	3.04	47.7	24.1	1.88	22.5	0.04	0.04	0.13	101	
119	9.59	9.58	33.87	26.141	188.9	0.295	2.86	44.5	26.5	1.96	24.4	0.01	0.02	0.10	120	205
125 ISL	9.55	9.54	33.90	26.172	186.0	0.306	2.72	42.3	27.5	2.01	24.9	0.02	0.02	0.10	126	
139	9.49	9.47	33.97	26.235	180.3	0.332	2.36	36.7	29.8	2.12	26.1	0.05	0.02	0.09	140	204
150 ISL	9.41	9.39	34.02	26.284	175.9	0.351	2.13	33.1	31.8	2.21	27.0	0.04	0.02	0.09	151	
168	9.28	9.26	34.07	26.348	170.1	0.383	1.85	28.6	34.5	2.32	28.2	0.02	0.01	0.09	169	203
199	9.18	9.16	34.10	26.388	166.9	0.435	1.72	26.6	36.3	2.36	29.0	0.04	0.03	0.10	200	202
200 ISL	9.17	9.15	34.10	26.391	166.7	0.436	1.72	26.6	36.4	2.36	29.0	0.04			201	
232	8.79	8.77	34.13	26.474	159.3	0.489	1.56	23.9	40.5	2.48	30.1	0.03			233	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 53.4 N	121 12.4 W	24/11/02	2340	UTC	565 m	320 26 kn	320 05 05	1	1018.6 mb	14.5 C	13.9 C	09m	2/8 AC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.23	15.23	33.395	24.685	324.7	0.000	5.99	104.8	1.6	0.40	0.4	0.02	0.97	0.27	0	
1	15.23	15.23	33.395	24.685	324.7	0.003	5.99	104.8	1.6	0.40	0.4	0.02	0.97	0.27	1	220
10 ISL	15.20	15.20	33.398	24.695	324.1	0.032	6.02	105.2	1.9	0.42	0.7	0.03	0.96	0.27	10	
11	15.20	15.20	33.398	24.695	324.2	0.036	6.02	105.2	1.9	0.42	0.7	0.03	0.96	0.27	11	219
20	13.81	13.81	33.461	25.038	291.7	0.063	5.69	96.7	7.4	0.74	5.6	0.19	1.12	0.46	20	218
29	12.70	12.70	33.553	25.332	263.9	0.088	4.90	81.4	12.1	1.08	11.1	0.33	0.42	0.29	29	217
30 ISL	12.62	12.62	33.556	25.350	262.2	0.091	4.86	80.6	12.3	1.10	11.4	0.32	0.40	0.28	30	
40	12.09	12.08	33.563	25.458	252.3	0.117	4.57	75.0	13.5	1.23	13.5	0.26	0.25	0.23	40	216
50	11.67	11.66	33.581	25.550	243.6	0.142	4.28	69.6	14.9	1.36	15.6	0.14	0.20	0.21	50	215
61	10.19	10.18	33.567	25.802	219.8	0.167	3.95	62.2	18.0	1.62	19.8	0.02	0.07	0.10	61	214
72	9.96	9.95	33.652	25.908	210.0	0.191	3.66	57.4	20.0	1.71	21.3	0.02	0.05	0.09	72	213
75 ISL	9.95	9.94	33.668	25.922	208.7	0.197	3.59	56.3	20.4	1.73	21.6	0.02	0.05	0.10	75	
85	9.92	9.91	33.714	25.963	205.0	0.218	3.40	53.3	21.8	1.80	22.6	0.01	0.05	0.11	85	212
100 ISL	9.51	9.50	33.786	26.088	193.5	0.248	3.23	50.2	24.7	1.92	24.6	0.01	0.02	0.08	101	
102	9.45	9.44	33.795	26.104	191.9	0.251	3.62 U	56.2U	25.1	1.94	24.9	0.01	0.02	0.07	103	211
122	9.24	9.23	33.848	26.180	185.1	0.289	2.98	46.0	27.0	2.00	26.2	0.01	0.01	0.06	123	210
125 ISL	9.25	9.24	33.869	26.195	183.7	0.295	2.92	45.1	27.4	2.02	26.3	0.01	0.01	0.06	126	
142	9.33	9.31	33.996	26.282	175.9	0.325	2.57	39.8	29.8	2.14	27.2	0.01	0.01	0.05	143	209
150 ISL	9.25	9.23	34.041	26.330	171.5	0.339	2.41	37.3	31.5	2.21	28.0	0.01	0.01	0.05	151	
170	8.97	8.95	34.120	26.437	161.6	0.372	2.05	31.5	35.8	2.37	30.1	0.01	0.01	0.05	171	208
200 ISL	8.81	8.79	34.159	26.493	156.9	0.420	1.78	27.3	38.9	2.50	31.6	0.01	0.01	0.05	201	
205	8.76	8.74	34.154	26.497	156.6	0.428	1.74	26.6	39.2	2.51	31.8	0.01	0.01	0.05	206	207
225	8.26	8.24	34.086	26.521	154.5	0.459	2.09	31.6	40.3	2.45	32.4	0.01			226	206
250 ISL	7.88	7.85	34.068	26.563	150.7	0.497	2.00	30.0	43.2	2.51	33.6	0.00			252	
262	7.75	7.72	34.073	26.587	148.6	0.515	1.95	29.2	44.9	2.56	34.2	0.00			264	205
300 ISL	7.42	7.39	34.087	26.645	143.5	0.571	1.74	25.8	49.2	2.66	35.7	0.01			302	
323	7.27	7.24	34.107	26.682	140.3	0.603	1.58	23.4	52.1	2.74	36.5	0.01			325	204
378	6.89	6.85	34.179	26.792	130.6	0.678	1.06	15.5	61.5	3.02	38.8	0.00			381	203
400 ISL	6.78	6.74	34.194	26.819	128.3	0.706	0.92	13.5	64.3	3.09	39.5	0.00			403	
435	6.59	6.55	34.207	26.855	125.2	0.751	0.76	11.1	68.7	3.17	40.6	0.01			438	202
500 ISL	5.98	5.94	34.215	26.941	117.4	0.830	0.57	8.2	79.7	3.32	42.5	0.03			504	
510	5.89	5.85	34.217 D	26.953	116.2	0.841	0.54	7.7	81.4	3.34	42.8	0.03			514	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 43.2 N	121 33.5 W	24/11/02	1855 UTC	974 m	320 20 kn	320 08 06	1	1021.7 mb	15.5 C	14.2 C	10m	4/8	CU

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.19	15.19	33.351	24.660	327.1	0.000	5.91	103.3	0.3	0.38	0.2	0.01	0.96	0.24	0	
1 A	15.19	15.19	33.351	24.660	327.1	0.003	5.91	103.2	0.3	0.38	0.2	0.01	0.96	0.24	1	221
1	15.19	15.19	33.351	24.660	327.1	0.003									1	222
5 A	15.19	15.19	33.350	24.660	327.3	0.016	5.92	103.4	0.2	0.38	0.2	0.01	0.93	0.22	5	220
10 ISL	15.18	15.18	33.351	24.663	327.2	0.033	5.92	103.4	0.2	0.38	0.2	0.01	0.89	0.22	10	
13 A	15.18	15.18	33.352	24.664	327.2	0.043	5.91	103.2	0.2	0.38	0.2	0.01	0.88	0.22	13	219
20 ISL	15.18	15.18	33.356	24.667	327.1	0.065	5.91	103.2	0.1	0.38	0.2	0.01	0.98	0.22	20	
22 A	15.18	15.18	33.357	24.668	327.1	0.072	5.91	103.2	0.1	0.38	0.2	0.01	1.00	0.22	22	218
26 A	15.18	15.18	33.351	24.663	327.6	0.085	5.92	103.4	0.2	0.38	0.2	0.01	0.95	0.23	26	217
30 ISL	14.80	14.80	33.315	24.718	322.5	0.098	5.84	101.2	1.0	0.47	1.3	0.10	0.91	0.26	30	
38 A	13.59	13.58	33.237	24.911	304.3	0.123	5.59	94.4	3.6	0.75	4.8	0.27	0.75	0.30	38	216
50	11.76	11.75	33.212	25.247	272.5	0.158	5.19	84.4	8.2	1.10	11.1	0.03	0.19	0.20	50	215
59	11.26	11.25	33.321	25.423	255.9	0.182	4.80	77.2	11.0	1.28	14.3	0.02	0.12	0.15	59	214
69	10.62	10.61	33.362	25.569	242.2	0.206	4.64	73.7	13.4	1.40	16.3	0.01	0.08	0.11	69	213
75 ISL	10.33	10.32	33.404	25.652	234.4	0.221	4.48	70.7	14.9	1.47	17.5	0.01	0.06	0.10	75	
85	9.98	9.97	33.490	25.778	222.6	0.244	4.17	65.3	17.5	1.59	19.5	0.01	0.04	0.09	85	212
99	9.74	9.73	33.617	25.918	209.6	0.274	3.72	58.0	20.7	1.72	21.7	0.01	0.03	0.07	99	211
100 ISL	9.71	9.70	33.624	25.928	208.6	0.276	3.70	57.7	20.9	1.73	21.8	0.01	0.03	0.07	101	
120	9.26	9.25	33.750	26.100	192.6	0.316	3.32	51.3	24.8	1.86	24.1	0.00	0.01	0.04	121	210
125 ISL	9.22	9.21	33.778	26.129	190.0	0.326	3.21	49.5	25.5	1.89	24.6	0.00	0.01	0.04	126	
139	9.15	9.13	33.850	26.197	183.9	0.352	2.91	44.9	27.6	1.97	25.8	0.00	0.01	0.05	140	209
150 ISL	9.01	8.99	33.908	26.264	177.6	0.372	2.69	41.3	29.7	2.05	27.0	0.00	0.01	0.05	151	
170	8.74	8.72	33.994	26.374	167.5	0.406	2.37	36.2	33.5	2.17	28.9	0.00	0.01	0.04	171	208
200	8.46	8.44	34.045	26.458	160.0	0.455	2.15	32.7	37.1	2.26	30.2	0.01	0.02	0.05	201	207
229	8.01	7.99	34.072	26.547	151.9	0.501	1.99	29.9	41.6	2.37	31.6	0.00			230	206
250 ISL	7.57	7.55	34.074	26.613	145.8	0.532	1.87	27.8	46.4	2.46	32.9	0.00			252	
270	7.19	7.16	34.078	26.670	140.5	0.560	1.73	25.5	50.9	2.55	34.2	0.00			272	205
300 ISL	6.99	6.96	34.116	26.728	135.4	0.602	1.42	20.9	55.2	2.68	35.4	0.00			302	
318	6.93	6.90	34.142	26.757	133.0	0.626	1.22	17.9	57.4	2.75	36.0	0.00			320	204
377	6.55	6.52	34.201	26.855	124.3	0.702	0.77	11.2	66.3	2.95	38.0	0.00			379	203
400 ISL	6.34	6.30	34.200	26.882	121.9	0.730	0.72	10.4	69.4	2.99	38.7	0.00			403	
435	6.04	6.00	34.197	26.918	118.7	0.772	0.67	9.6	73.9	3.04	39.6	0.00			438	202
500 ISL	5.81	5.77	34.265	27.001	111.5	0.847	0.42	6.0	81.1	3.15	40.7	0.00			504	
515	5.76	5.72	34.281	27.020	109.9	0.864	0.36	5.1	82.8	3.18	41.0	0.00			519	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 23.3 N	122 15.2 W	24/11/02	1249 UTC	4027 m	350 24 kn			1022.3 mb	15.6 C	13.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	15.21	15.21	33.354	24.658	327.3	0.000	5.94	103.8	0.3	0.38	0.2	0.00	0.92	0.24	0	220
10 ISL	15.21	15.21	33.355	24.659	327.5	0.033	5.93	103.6	0.2	0.37	0.2	0.00	0.91	0.22	10	
11	15.21	15.21	33.355	24.659	327.5	0.036	5.93	103.6	0.2	0.37	0.2	0.00	0.91	0.22	11	219
20	15.20	15.20	33.353	24.660	327.7	0.066	5.93	103.6	0.1	0.37	0.2	0.00	0.94	0.27	20	218
30	15.20	15.20	33.350	24.658	328.2	0.098	5.95	104.0	0.1	0.37	0.1	0.00	0.99	0.32	30	217
40	12.76	12.75	33.457	25.247	272.4	0.128	4.74	78.8	9.0	1.11	11.1	0.11	1.03	0.55	40	216
50	10.53	10.52	33.490	25.684	230.8	0.153	4.18	66.3	16.2	1.52	18.2	0.01	0.12	0.15	50	215
60	9.76	9.75	33.482	25.808	219.2	0.176	4.23	65.9	18.0	1.60	19.5	0.01	0.05	0.08	60	214
69	9.48	9.47	33.605	25.950	205.8	0.195	3.82	59.2	21.1	1.71	21.6	0.00	0.03	0.07	69	213
75 ISL	9.41	9.40	33.672	26.014	199.9	0.207	3.58	55.4	22.5	1.77	22.6	0.00	0.03	0.07	75	
85	9.35	9.34	33.765	26.097	192.2	0.227	3.24	50.1	24.6	1.85	23.9	0.00	0.02	0.08	85	212
100 ISL	9.08	9.07	33.873	26.225	180.4	0.255	2.86	44.0	28.4	1.99	26.1	0.00	0.02	0.04	101	
101	9.07	9.06	33.879	26.231	179.8	0.257	2.84	43.7	28.6	2.00	26.2	0.00	0.02	0.04	102	211
121	9.29	9.28	33.999	26.290	174.6	0.292	2.28	35.3	30.9	2.14	27.3	0.00	0.02	0.06	122	210
125 ISL	9.17	9.16	33.999	26.310	172.9	0.299	2.42	37.4	31.0	2.11	27.1	0.00	0.02	0.06	126	
141	8.62	8.61	33.986	26.386	165.8	0.326	3.00	45.7	31.5	1.98	26.4	0.00	0.01	0.05	142	209
150 ISL	8.62	8.60	34.025	26.417	163.0	0.341	2.82	43.0	33.1	2.05	27.2	0.00	0.01	0.05	151	
172	8.61	8.59	34.094	26.473	158.1	0.376	2.01	30.7	37.6	2.31	29.9	0.00	0.01	0.04	173	208
200 ISL	8.61	8.59	34.154	26.521	154.2	0.420	1.57	23.9	40.5	2.46	31.1	0.00	0.01	0.04	201	
201	8.61	8.59	34.156	26.522	154.1	0.422	1.56	23.8	40.6	2.46	31.1	0.00	0.01	0.04	202	207
225	8.25	8.23	34.135	26.561	150.7	0.458	1.67	25.3	42.7	2.47	31.7	0.00			226	206
250 ISL	8.01	7.98	34.152	26.610	146.3	0.495	1.49	22.4	46.1	2.56	32.7	0.00			252	
265	7.88	7.85	34.168	26.642	143.5	0.517	1.34	20.1	48.4	2.63	33.3	0.00			267	205
300 ISL	7.47	7.44	34.180	26.711	137.3	0.566	1.18	17.5	53.2	2.73	34.6	0.00			302	
320	7.22	7.19	34.181	26.748	134.1	0.593	1.12	16.5	56.1	2.78	35.3	0.00			322	204
378	6.48	6.45	34.169	26.839	125.8	0.669	0.88	12.8	66.0	2.93	38.0	0.00			381	203
400 ISL	6.27	6.23	34.174	26.870	122.9	0.696	0.79	11.4	69.4	2.98	38.8	0.00			403	
443	5.94	5.90	34.192	26.927	117.9	0.748	0.61	8.7	75.7	3.08	40.0	0.00			446	202
500 ISL	5.61	5.57	34.229	26.997	111.7	0.813	0.44	6.3	83.0	3.17	41.4	0.00			504	
518	5.51	5.47	34.241	27.019	109.7	0.833	0.38	5.4	85.3	3.20	41.8	0.00			522	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
34 3.0 N	122 57.0 W	24/11/02	0626	UTC	4240 m	330	18 kn			1021.4 mb	14.9 C	14.4 C				

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.22	14.22	32.960	24.566	336.1	0.000	6.22	106.3	0.1	0.30	0.2	0.03	1.10	0.20	0	
1	14.22	14.22	32.960	24.566	336.1	0.003	6.22	106.3	0.1	0.30	0.2	0.03	1.10	0.20	1	220
9	14.22	14.22	32.964	24.569	336.0	0.030	6.20	106.0	0.0	0.30	0.1	0.03	1.10	0.22	9	219
10 ISL	14.22	14.22	32.965	24.570	336.0	0.034	6.20	106.0	0.0	0.30	0.1	0.03	1.10	0.22	10	
19	14.19	14.19	32.981	24.589	334.5	0.064	6.20	105.9	0.0	0.29	0.1	0.02	1.10	0.20	19	218
20 ISL	14.18	14.18	32.987	24.596	333.8	0.067	6.20	105.9	0.0	0.29	0.1	0.02	1.12	0.21	20	
30	14.09	14.09	33.042	24.657	328.3	0.100	6.17	105.2	0.0	0.29	0.2	0.04	1.43	0.34	30	217
40	11.95	11.94	32.854	24.934	302.1	0.132	5.94	96.7	2.1	0.71	3.8	0.21	1.95	0.43	40	216
49	10.18	10.17	32.754	25.170	279.6	0.158	5.73	89.7	7.5	1.04	9.4	0.03	0.15	0.10	49	215
50 ISL	10.09	10.08	32.765	25.193	277.4	0.161	5.69	88.9	7.9	1.06	9.8	0.03	0.14	0.10	50	
59	9.65	9.64	32.910	25.379	259.9	0.185	5.34	82.7	10.8	1.21	12.7	0.02	0.07	0.06	59	214
70	9.44	9.43	33.018	25.498	248.8	0.213	5.13	79.2	12.7	1.30	14.4	0.02	0.05	0.05	70	213
75 ISL	9.52	9.51	33.112	25.559	243.1	0.225	4.98	77.0	13.1	1.33	15.0	0.02	0.05	0.05	75	
86	9.61	9.60	33.316	25.704	229.6	0.251	4.67	72.5	14.6	1.40	16.5	0.02	0.04	0.04	86	212
99	8.95	8.94	33.429	25.898	211.3	0.280	4.49	68.7	19.0	1.56	19.3	0.01	0.02	0.02	99	211
100 ISL	8.95	8.94	33.448	25.913	209.9	0.282	4.44	68.0	19.3	1.57	19.5	0.01	0.02	0.02	100	
121	8.97	8.96	33.779	26.169	186.0	0.323	3.38	51.9					0.01	0.02	122	210
125 ISL	8.96	8.95	33.807	26.193	183.9	0.331	3.27	50.2	25.7	1.85	24.0	0.00	0.01	0.02	126	
141	8.91	8.89	33.887	26.264	177.5	0.360	2.94	45.1	29.2	1.99	26.3	0.00	0.01	0.01	142	209
150 ISL	8.79	8.77	33.932	26.318	172.5	0.376	2.78	42.5	31.4	2.06	27.3	0.00	0.01	0.02	151	
173	8.43	8.41	34.018	26.441	161.1	0.414	2.47	37.5	36.2	2.18	29.2	0.00	0.01	0.03	174	208
200	8.16	8.14	34.045	26.503	155.6	0.457	2.35	35.5	39.3	2.25	30.1	0.00	0.01	0.02	201	207
233	7.95	7.93	34.107	26.584	148.5	0.507	1.85	27.8	43.9	2.44	31.9	0.00			234	206
250 ISL	7.82	7.80	34.134	26.624	144.9	0.532	1.63	24.4	46.6	2.53	32.7	0.00			251	
270	7.66	7.63	34.158	26.667	141.2	0.560	1.41	21.0	49.6	2.62	33.6	0.00			272	205
300 ISL	7.41	7.38	34.167	26.710	137.4	0.602	1.25	18.6	53.2	2.71	34.6	0.00			302	
318	7.26	7.23	34.169	26.733	135.5	0.627	1.18	17.5	55.3	2.76	35.2	0.00			320	204
378	6.85	6.81	34.216	26.827	127.2	0.706	0.77	11.3	63.8	2.93	37.2	0.00			380	203
400 ISL	6.67	6.63	34.226	26.859	124.4	0.733	0.69	10.1	66.6	2.98	37.8	0.00			403	
436	6.39	6.35	34.239	26.906	120.2	0.777	0.56	8.1	71.2	3.06	38.8	0.00			439	202
500 ISL	5.99	5.95	34.274	26.986	113.2	0.852									503	
513	5.91	5.87	34.281 D	27.002	111.8	0.867									517	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD	AMT	TYPE
33 43.2 N	123 38.0 W	23/11/02	2353	UTC	4270 m	330	17 kn	330 04 06	1	1020.7 mb	15.5 C	14.5 C	12m	7/8		SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.71	15.71	33.220	24.445	347.7	0.000	5.92	104.4	0.0	0.32	0.1	0.00	0.40	0.07	0	
1	15.71	15.71	33.220	24.445	347.7	0.003	5.92	104.4	0.0	0.32	0.1	0.00	0.40	0.07	1	220
10	15.72	15.72	33.219	24.442	348.2	0.035	5.92	104.4	0.0	0.32	0.1	0.00	0.40	0.07	10	219
20 ISL	15.74	15.74	33.225	24.443	348.5	0.070	5.89	104.0	0.0	0.32	0.0	0.00	0.37	0.07	20	
21	15.74	15.74	33.226	24.443	348.4	0.073	5.89	104.0	0.0	0.32	0.0	0.00	0.37	0.07	21	218
29	15.74	15.74	33.223	24.441	348.9	0.101	5.93	104.7	0.0	0.32	0.0	0.00	0.37	0.07	29	217
30 ISL	15.72	15.72	33.223	24.446	348.5	0.104	5.93	104.6	0.0	0.32	0.0	0.00	0.38	0.07	30	
38	15.59	15.58	33.224	24.476	345.9	0.132	5.95	104.7	0.0	0.33	0.0	0.00	0.54	0.12	38	216
49	13.65	13.64	33.091	24.786	316.5	0.169	5.94	100.4	1.3	0.69	2.6	0.19	1.02	0.35	49	215
50 ISL	13.44	13.43	33.102	24.837	311.6	0.172	5.88	99.0	1.9	0.74	3.4	0.19	0.99	0.34	50	
59	11.78	11.77	33.239	25.265	271.1	0.198	5.33	86.7	8.1	1.11	10.8	0.22	0.54	0.29	59	214
67	11.01	11.00	33.278	25.435	255.0	0.219	5.08	81.3	11.0	1.28	14.1	0.04	0.24	0.15	67	213
75 ISL	10.49	10.48	33.334	25.570	242.2	0.239	4.86	76.9	13.4	1.40	16.3	0.03	0.17	0.13	75	
84	10.04	10.03	33.413	25.708	229.2	0.260	4.60	72.1	16.0	1.51	18.1	0.02	0.10	0.10	84	212
98	9.34	9.33	33.566	25.943	207.1	0.291	4.10	63.4	20.5	1.66	20.9	0.01	0.03	0.07	98	211
100 ISL	9.32	9.31	33.590	25.965	205.0	0.295	4.02	62.1	21.0	1.68	21.3	0.01	0.03	0.07	100	
118	9.18	9.17	33.751	26.114	191.3	0.331	3.35	51.6	25.0	1.86	24.1	0.01	0.01	0.04	119	210
125 ISL	9.09	9.08	33.806	26.171	185.9	0.344	3.16	48.6	26.8	1.92	25.1	0.01	0.01	0.04	126	
138	8.90	8.89	33.892	26.269	176.9	0.367	2.87	44.0	30.1	2.02	26.7	0.01	0.01	0.04	139	209
150 ISL	8.76	8.74	33.949	26.336	170.7	0.388	2.69	41.1	32.2	2.08	27.6	0.01	0.01	0.05	151	
168	8.57	8.55	34.003	26.408	164.2	0.418	2.49	37.9	34.8	2.14	28.7	0.01	0.01	0.06	169	208
197	8.26	8.24	34.033	26.479	157.9	0.465	2.25	34.0	38.5	2.26	30.5	0.01	0.01	0.03	198	207
200 ISL	8.22	8.20	34.036	26.487	157.1	0.470	2.23	33.7	38.9	2.27	30.7	0.01			201	
227	7.87	7.85	34.054	26.554	151.2	0.511	2.05	30.7	42.8	2.36	32.0	0.00			228	206
250 ISL	7.56	7.54	34.056	26.600	147.0	0.546	1.96	29.2	46.1	2.43	32.9	0.00			251	
268	7.31	7.28	34.054	26.634	144.0	0.572	1.90	28.1	48.7	2.49	33.6	0.00			270	205
300 ISL	6.89	6.86	34.051	26.690	138.9	0.617	1.77	25.9	53.4	2.59	34.8	0.01			302	
317	6.69	6.66	34.052	26.718	136.4	0.641	1.69	24.6	55.9	2.64	35.5	0.01			319	204
377	6.15	6.12	34.080	26.811	128.1	0.720	1.25	18.0	65.5	2.83	38.0	0.00			379	203
400 ISL	6.05	6.02	34.107	26.845	125.1	0.749	1.05	15.1	68.9	2.91	38.7	0.00			403	
439	5.91	5.87	34.153	26.900	120.4	0.797	0.76	10.9	74.4	3.02	39.8	0.00			442	202
500 ISL	5.51	5.47	34.186	26.975	113.6	0.868	0.58	8.2	83.0	3.12	41.2	0.00			503	
516	5.41	5.37	34.195	26.994	111.9	0.886	0.53	7.5	85.2	3.14	41.6	0.00			520	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 77 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 23.0 N	124 19.0 W	23/11/02	1807 UTC	4583 m	330 16 kn	330 05 06	2	1023.0 mb	16.0 C	14.5 C	30m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.60	17.60	33.112	23.924	397.3	0.000	5.60	102.4	1.3	0.39	0.1	0.00	0.15	0.04	0	
2	17.60	17.60	33.113	23.925	397.3	0.008									2	222
2 A	17.60	17.60	33.112	23.924	397.3	0.008	5.60	102.4	1.3	0.39	0.1	0.00	0.15	0.04	2	221
10 ISL	17.61	17.61	33.112	23.922	397.8	0.040	5.61	102.6	1.3	0.39	0.1	0.00	0.14	0.03	10	
16 A	17.61	17.61	33.112	23.923	398.0	0.064	5.61	102.6	1.3	0.39	0.1	0.00	0.14	0.03	16	220
20 ISL	17.61	17.61	33.113	23.923	398.0	0.080	5.61	102.6	1.3	0.39	0.1	0.00	0.14	0.03	20	
29	17.61	17.61	33.116	23.926	398.1	0.115	5.61	102.6	1.3	0.39	0.1	0.00	0.14	0.03	29	219
30 ISL	17.61	17.60	33.116	23.926	398.1	0.119	5.61	102.6	1.3	0.39	0.1	0.00	0.14	0.03	30	
39 A	17.61	17.60	33.115	23.926	398.5	0.155	5.60	102.5	1.3	0.39	0.1	0.00	0.14	0.03	39	218
50	17.57	17.56	33.108	23.930	398.4	0.199	5.62	102.7	1.3	0.39	0.1	0.00	0.15	0.04	50	217
62 A	14.78	14.77	32.896	24.400	353.7	0.244	6.30	108.8	0.9	0.42	0.1	0.00	0.31	0.13	62	216
72	13.23	13.22	32.826	24.666	328.5	0.278	6.29	105.2	2.2	0.48	0.1	0.01	0.41	0.29	72	215
75 ISL	12.89	12.88	32.814	24.724	323.0	0.288	6.22	103.3	2.5	0.52	0.6	0.12	0.40	0.29	75	
81 A	12.32	12.31	32.800	24.823	313.6	0.307	6.06	99.4	3.1	0.62	1.9	0.32	0.34	0.29	81	214
92	11.53	11.52	32.807	24.976	299.3	0.341	5.86	94.5	4.3	0.78	5.3	0.04	0.17	0.21	92	213
100 ISL	11.30	11.29	32.860	25.059	291.5	0.364	5.74	92.2	5.1	0.86	6.7	0.03	0.12	0.16	100	
103	11.25	11.24	32.892	25.092	288.3	0.373	5.69	91.3	5.5	0.88	7.2	0.02	0.11	0.14	103	212
116 A	11.05	11.04	33.123	25.308	268.1	0.409	5.32	85.1	7.6	1.01	9.9	0.01	0.07	0.08	116	211
125 ISL	10.77	10.76	33.215	25.429	256.7	0.433	5.14	81.8	9.2	1.11	11.6	0.01	0.05	0.05	126	
129	10.64	10.62	33.247	25.477	252.3	0.443	5.07	80.4	9.9	1.15	12.4	0.01	0.04	0.04	130	210
143	10.33	10.31	33.359	25.618	239.1	0.478	4.80	75.7	12.5	1.31	15.1	0.01	0.01	0.03	144	209
150 ISL	10.05	10.03	33.397	25.695	231.9	0.494	4.78	74.9	13.2	1.31	15.4	0.01	0.01	0.03	151	
168	9.34	9.32	33.505	25.897	212.9	0.534	4.75	73.4	15.1	1.30	15.8	0.01	0.02	0.02	169	208
198	9.03	9.01	33.821	26.194	185.2	0.594	4.06	62.4	22.1	1.57	20.6	0.00	0.00	0.01	199	207
200 ISL	9.00	8.98	33.837	26.211	183.6	0.597	4.05	62.2	22.5	1.58	20.8	0.00			201	
227	8.62	8.60	33.997	26.396	166.5	0.645	3.91	59.6	27.7	1.66	22.8	0.00			228	206
250 ISL	8.24	8.21	34.026	26.477	159.0	0.682	3.49	52.7	33.0	1.85	25.5	0.00			251	
269	7.92	7.89	34.017	26.518	155.4	0.712	3.09	46.4	37.5	2.02	27.9	0.00			270	205
300 ISL	7.44	7.41	34.022	26.591	148.6	0.759	2.64	39.2	43.7	2.23	30.6	0.00			302	
318	7.19	7.16	34.024	26.628	145.3	0.786	2.42	35.7	46.8	2.33	31.9	0.00			320	204
376	6.69	6.66	34.046	26.714	137.7	0.868	1.83	26.7	54.6	2.58	34.8	0.00			378	203
400 ISL	6.42	6.38	34.060	26.761	133.4	0.900	1.57	22.7	59.5	2.70	36.3	0.00			402	
438	6.01	5.97	34.089	26.837	126.4	0.950	1.19	17.1	67.7	2.88	38.5	0.00			441	202
500 ISL	5.61	5.57	34.147	26.932	117.7	1.025	0.76	10.8	78.4	3.04	40.6	0.00			503	
521	5.47	5.43	34.167	26.965	114.7	1.050	0.62	8.8	82.0	3.10	41.3	0.00			524	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 27.0 N	120 31.3 W	22/11/02	0233 UTC	73 m	300 07 kn			1016.1 mb	16.5 C	15.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.26	15.26	33.309	24.613	331.7	0.000	6.54	114.4	4.2	0.34	0.1	0.00	1.32	0.46	0	
1	15.26	15.26	33.309	24.613	331.7	0.003	6.54	114.4	4.2	0.34	0.1	0.00	1.32	0.46	1	208
6	15.06	15.06	33.310	24.657	327.6	0.020	6.36	110.8	4.4	0.39	0.6	0.03	1.57	0.64	6	207
10 ISL	14.97	14.97	33.313	24.679	325.6	0.033	6.14	106.8	4.6	0.48	1.2	0.08	1.62	0.56	10	
11	14.95	14.95	33.314	24.684	325.2	0.036	6.09	105.9	4.7	0.50	1.4	0.09	1.63	0.53	11	206
20 ISL	14.71	14.71	33.318	24.739	320.2	0.065	5.93	102.6	5.0	0.55	2.2	0.14	1.84	0.53	20	
21	14.68	14.68	33.318	24.746	319.6	0.068	5.91	102.2	5.0	0.56	2.3	0.14	1.85	0.53	21	205
30 ISL	14.23	14.23	33.333	24.853	309.7	0.097	5.98	102.4	4.9	0.58	2.7	0.14	1.50	0.72	30	
32	14.09	14.09	33.336	24.884	306.7	0.103	6.00	102.5	4.9	0.58	2.8	0.14	1.38	0.74	32	204
41	13.15	13.14	33.335	25.075	288.7	0.130	5.26	88.1	7.7	0.91	7.4	0.24	0.79	0.44	41	203
50 ISL	12.19	12.18	33.359	25.281	269.3	0.155	4.81	79.0	10.3	1.13	11.3	0.16	0.44	0.39	50	
51	12.09	12.08	33.363	25.303	267.3	0.157	4.77	78.2	10.6	1.15	11.7	0.15	0.41	0.38	51	202
61	11.34	11.33	33.406	25.475	251.0	0.183	4.53	73.1	12.8	1.31	14.3	0.08	0.28	0.28	61	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 19.4 N	120 47.9 W	22/11/02	0536 UTC	750 m	300 14 kn			1016.7 mb	14.1 C	14.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.68	15.68	33.385	24.578	334.9	0.000	5.91	104.3	0.5	0.39	0.2	0.00	0.40	0.13	0	
1	15.68	15.68	33.385	24.578	334.9	0.003	5.91	104.3	0.5	0.39	0.2	0.00	0.40	0.13	1	220
10	15.66	15.66	33.386	24.584	334.7	0.033	5.96	105.1	0.5	0.39	0.2	0.00	0.50	0.14	10	219
20	15.09	15.09	33.374	24.700	323.9	0.066	5.96	103.9	1.2	0.45	0.9	0.06	1.84	0.44	20	218
29	14.15	14.15	33.342	24.876	307.4	0.095	6.01	102.8	2.9	0.58	2.7	0.11	2.15	0.62	29	217
30 ISL	13.93	13.93	33.315	24.901	305.0	0.098	5.97	101.6	3.3	0.62	3.3	0.11	2.00	0.60	30	
39	11.95	11.95	33.103	25.127	283.7	0.124	5.54	90.4	6.5	0.99	8.8	0.08	0.48	0.30	39	216
50	11.12	11.11	33.134	25.303	267.1	0.155	5.31	85.1	8.8	1.15	11.7	0.02	0.16	0.16	50	215
59	10.85	10.84	33.336	25.508	247.8	0.178	4.77	76.1	12.2	1.33	14.8	0.02	0.09	0.12	59	214
69	10.50	10.49	33.471	25.675	232.2	0.202	4.32	68.4	15.0	1.43	16.8	0.01	0.07	0.11	69	213
75 ISL	10.31	10.30	33.542	25.763	223.9	0.216	4.04	63.8	16.8	1.51	18.1	0.01	0.06	0.11	75	
85	10.08	10.07	33.635	25.875	213.5	0.237	3.66	57.5	19.4	1.64	20.1	0.00	0.04	0.10	85	212
98	9.96	9.95	33.696	25.943	207.3	0.265	3.48	54.6	21.0	1.72	21.3	0.00	0.04	0.09	98	211
100 ISL	9.94	9.93	33.710	25.957	205.9	0.269	3.43	53.8	21.4	1.74	21.6	0.00	0.04	0.09	101	
117	9.77	9.76	33.821	26.073	195.3	0.303	2.98	46.6	24.6	1.89	23.6	0.01	0.02	0.07	118	210
125 ISL	9.71	9.70	33.848	26.104	192.5	0.318	2.88	44.9	25.5	1.93	24.1	0.01	0.02	0.08	126	
139	9.61	9.59	33.889	26.152	188.2	0.345	2.75	42.8	26.9	1.99	24.8	0.01	0.02	0.10	140	209
150 ISL	9.56	9.54	33.948	26.207	183.2	0.366	2.52	39.2	28.6	2.07	25.7	0.01	0.02	0.09	151	
169	9.44	9.42	34.041	26.300	174.8	0.400	2.16	33.5	31.5	2.19	27.3	0.00	0.01	0.06	170	208
198	9.08	9.06	34.069	26.380	167.6	0.449	2.13	32.8	34.1	2.25	28.5	0.00	0.00	0.07	199	207
200 ISL	9.07	9.05	34.071	26.383	167.4	0.453	2.12	32.7	34.2	2.25	28.6	0.00			201	
228	9.02	9.00	34.107	26.420	164.5	0.499	1.94	29.9	35.8	2.31	29.2	0.00			229	206
250 ISL	8.92	8.89	34.139	26.461	161.0	0.535	1.80	27.6	37.5	2.38	29.8	0.00			251	
269	8.79	8.76	34.164	26.501	157.4	0.565	1.68	25.7	39.3	2.44	30.4	0.00			271	205
300 ISL	8.49	8.46	34.181	26.562	152.2	0.613	1.53	23.3	42.5	2.52	31.3	0.01			302	
319	8.29	8.26	34.187	26.597	149.1	0.642	1.44	21.8	44.6	2.57	31.9	0.01			321	204
380	7.73	7.69	34.216	26.704	139.7	0.730	1.12	16.7	52.3	2.74	34.2	0.00			382	203
400 ISL	7.61	7.57	34.225	26.728	137.6	0.757	1.02	15.2	54.1	2.79	34.6	0.00			403	
439	7.36	7.32	34.239	26.775	133.6	0.810	0.85	12.6	57.8	2.87	35.5	0.00			442	202
500 ISL	6.69	6.64	34.237	26.866	125.3	0.889	0.69	10.1	67.0	3.00	37.8	0.00			503	
518	6.49	6.44	34.238	26.894	122.7	0.912	0.64	9.3	69.7	3.04	38.5	0.00			522	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
34 9.3 N	121 9.1 W	22/11/02	0950 UTC	2191 m	310 14 kn			1018.7 mb	14.1 C	13.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	14.50	14.50	33.375	24.827	311.2	0.000	6.24	107.5	3.4	0.45	1.4	0.04	1.61	0.59	0	
1	14.50	14.50	33.375	24.827	311.2	0.003	6.24	107.5	3.4	0.45	1.4	0.04	1.61	0.59	1	220
9	14.48	14.48	33.377	24.833	310.9	0.028	6.23	107.3	3.8	0.47	1.7	0.04	1.45	0.57	9	219
10 ISL	14.47	14.47	33.377	24.836	310.7	0.031	6.23	107.3	3.8	0.47	1.7	0.04	1.45	0.57	10	
20	14.35	14.35	33.380	24.864	308.3	0.062	6.23	107.0	4.5	0.50	2.1	0.04	1.41	0.59	20	218
29	13.68	13.68	33.357	24.985	297.0	0.089	5.83	98.8	5.9	0.69	4.5	0.16	1.37	0.60	29	217
30 ISL	13.57	13.57	33.348	25.000	295.6	0.092	5.76	97.3	6.0	0.72	5.0	0.15	1.27	0.57	30	
39	12.52	12.51	33.276	25.153	281.2	0.118	5.20	85.9	7.3	1.00	9.6	0.05	0.35	0.31	39	216
50	11.51	11.50	33.296	25.358	261.9	0.148	4.91	79.4	10.3	1.22	13.2	0.02	0.20	0.18	50	215
59	10.50	10.49	33.363	25.590	239.9	0.171	4.61	73.0	13.9	1.42	16.6	0.02	0.09	0.10	59	214
70	9.60	9.59	33.440	25.802	220.0	0.196	4.40	68.3	17.5	1.56	18.9	0.01	0.04	0.05	70	213
75 ISL	9.53	9.52	33.556	25.904	210.4	0.207	4.04	62.7	19.8	1.66	20.6	0.01	0.03	0.05	75	
84	9.39	9.38	33.732	26.065	195.3	0.225	3.36	52.0	23.8	1.82	23.4	0.01	0.02	0.05	84	212
100	9.24	9.23	33.853	26.184	184.3	0.255	3.05	47.1	26.7	1.89	24.6	0.01	0.01	0.05	101	211
120	9.15	9.14	34.003	26.316	172.1	0.291	2.37	36.6	31.7	2.13	27.1	0.00	0.01	0.05	121	210
125 ISL	9.13	9.12	34.020	26.333	170.7	0.300	2.30	35.5	32.3	2.16	27.4	0.00	0.01	0.05	126	
139	9.07	9.05	34.050	26.366	167.8	0.323	2.18	33.6	33.7	2.21	28.0	0.00	0.01	0.05	140	209
150 ISL	8.94	8.92	34.072	26.404	164.4	0.342	2.13	32.7	35.1	2.24	28.5	0.00	0.01	0.05	151	
169	8.72	8.70	34.109	26.468	158.6	0.372	2.01	30.7	37.5	2.29	29.4	0.00	0.01	0.04	170	208
200	8.68	8.66	34.184	26.533	153.0	0.421	1.52	23.2	40.7	2.48	30.8	0.00	0.00	0.05	201	207
228	8.57	8.55	34.190	26.555	151.4	0.463	1.45	22.1	42.1	2.51	31.2	0.00			229	206
250 ISL	8.29	8.26	34.199	26.605	147.0	0.496	1.33	20.1	45.2	2.58	32.2	0.00			252	
268	8.04	8.01	34.210	26.652	142.8	0.522	1.22	18.4	48.1	2.65	33.1	0.00			270	205
300 ISL	7.81	7.78	34.240	26.710	137.7	0.567	1.01	15.1	52.1	2.74	34.1	0.01			302	
318	7.69	7.66	34.255	26.739	135.2	0.591	0.90	13.4	54.4	2.79	34.6	0.01			320	204
378	6.95	6.91	34.251	26.841	126.0	0.670	0.70	10.3	63.5	2.94	36.9	0.00			381	203
400 ISL	6.77	6.73	34.261	26.873	123.1	0.697	0.62	9.1	66.5	2.99	37.5	0.00			403	
439	6.53	6.49	34.281	26.921	119.0	0.744	0.48	7.0	71.3	3.08	38.5	0.00			442	202
500 ISL	6.24	6.20	34.301	26.976	114.5	0.816	0.38	5.5	76.3	3.15	39.6	0.00			504	
517	6.16	6.11	34.307	26.991	113.2	0.835	0.35	5.0	77.7	3.17	39.9	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 50.0 N	121 51.4 W	22/11/02	1812	UTC	3663 m	310	15 kn	300 04 06	1	1020.1 mb	16.0 C	14.0 C	20m	5/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	16.20	16.20	33.250	24.357	356.0	0.000	5.82	103.7	0.0	0.37	0.1	0.00	0.29	0.09	0	
1	A	16.20	16.20	33.250	24.357	356.0	0.004	5.82	103.7	0.0	0.37	0.1	0.00	0.29	0.09	1	221
1		16.20	16.20	33.251	24.358	355.9	0.004									1	222
10	ISL	16.19	16.19	33.249	24.359	356.1	0.036	5.82	103.7	0.0	0.36	0.0	0.00	0.27	0.08	10	
12	A	16.19	16.19	33.249	24.359	356.2	0.043	5.82	103.7	0.0	0.36	0.0	0.00	0.27	0.08	12	220
18		16.18	16.18	33.250	24.363	356.1	0.064	5.83	103.8	0.0	0.36	0.0	0.00	0.29	0.09	18	219
20	ISL	16.08	16.08	33.249	24.385	354.0	0.071	5.84	103.8	0.0	0.36	0.0	0.00	0.32	0.10	20	
25	A	15.83	15.83	33.246	24.439	349.0	0.089	5.87	103.8	0.0	0.36	0.0	0.00	0.39	0.13	25	218
30	ISL	14.66	14.66	33.259	24.705	323.8	0.106	5.86	101.2	0.5	0.52	1.0	0.17	1.44	0.40	30	
33		13.90	13.90	33.273	24.875	307.6	0.115	5.85	99.5	1.2	0.64	2.0	0.28	1.95	0.54	33	217
42	A	12.93	12.92	33.265	25.064	289.7	0.142	5.34	89.0	6.3	0.92	7.2	0.38	0.43	0.26	42	216
50	ISL	11.86	11.85	33.208	25.225	274.6	0.165	5.23	85.2	8.4	1.11	10.7	0.20	0.32	0.26	50	
54	A	11.36	11.35	33.197	25.309	266.7	0.175	5.19	83.6	9.3	1.20	12.2	0.09	0.27	0.26	54	215
66		10.59	10.58	33.376	25.585	240.6	0.206	4.67	74.1	14.0	1.45	16.8	0.04	0.12	0.14	66	214
75	ISL	10.14	10.13	33.455	25.724	227.6	0.227	4.42	69.5	16.6	1.56	18.7	0.02	0.07	0.09	75	
77	A	10.05	10.04	33.468	25.749	225.2	0.231	4.37	68.6	17.1	1.58	19.0	0.02	0.06	0.08	77	213
88		9.61	9.60	33.522	25.865	214.4	0.256	4.15	64.5	18.8	1.63	19.9	0.02	0.02	0.06	88	212
100		9.33	9.32	33.681	26.035	198.4	0.280	3.58	55.3	23.4	1.82	23.1	0.01	0.01	0.06	100	211
119		9.15	9.14	33.895	26.231	180.1	0.316	2.68	41.3	29.2	2.04	26.5	0.00	0.01	0.10	120	210
125	ISL	9.07	9.06	33.928	26.270	176.6	0.327	2.58	39.7	30.3	2.07	27.1	0.00	0.01	0.09	126	
137		8.90	8.89	33.967	26.328	171.3	0.348	2.49	38.2	32.2	2.12	27.9	0.00	0.01	0.05	138	209
150	ISL	8.69	8.67	34.002	26.388	165.8	0.370	2.38	36.3	34.3	2.17	28.8	0.00	0.01	0.05	151	
169		8.40	8.38	34.035	26.459	159.3	0.401	2.26	34.3	37.1	2.24	29.9	0.00	0.01	0.04	170	208
199		8.09	8.07	34.060	26.526	153.5	0.448	2.17	32.7	40.6	2.32	30.8	0.00	0.00	0.04	200	207
200	ISL	8.08	8.06	34.061	26.528	153.2	0.449	2.16	32.5	40.7	2.32	30.8	0.00			201	
227		7.74	7.72	34.088	26.599	146.8	0.490	1.94	29.0	44.8	2.43	31.9	0.00			228	206
250	ISL	7.48	7.46	34.094	26.642	143.1	0.523	1.81	26.9	48.2	2.50	32.8	0.00			251	
269		7.30	7.27	34.101	26.673	140.3	0.550	1.68	24.9	51.0	2.57	33.5	0.00			271	205
300	ISL	7.13	7.10	34.150	26.735	134.8	0.593	1.29	19.0	55.9	2.73	34.8	0.01			302	
318		7.04	7.01	34.178	26.770	131.8	0.617	1.07	15.7	58.7	2.82	35.6	0.01			320	204
378		6.41	6.38	34.182	26.858	123.9	0.693	0.81	11.7	67.5	2.96	38.2	0.00			380	203
400	ISL	6.33	6.29	34.204	26.886	121.5	0.720	0.69	10.0	69.9	3.01	38.8	0.00			403	
436		6.24	6.20	34.244	26.930	117.8	0.763	0.52	7.5	73.6	3.09	39.5	0.00			439	202
500	ISL	5.84	5.80	34.278	27.008	110.9	0.836	0.37	5.3	81.5	3.17	40.8	0.00			503	
519		5.72	5.68	34.289	27.031	108.8	0.857	0.33	4.7	83.9	3.20	41.2	0.00			523	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.0 N	122 32.5 W	22/11/02	2314	UTC	3985 m	300	15 kn	050 05 12	1	1017.7 mb	16.1 C	14.0 C	14m	6/8	SC

DEPTH m		TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	ISL	15.96	15.96	33.310	24.458	346.4	0.000	5.86	103.9	0.0	0.34	0.1	0.00	0.31	0.09	0	
1		15.96	15.96	33.310	24.458	346.4	0.003	5.86	103.9	0.0	0.34	0.1	0.00	0.31	0.09	1	220
10		15.94	15.94	33.312	24.464	346.1	0.035	5.88	104.2	0.0	0.34	0.1	0.00	0.32	0.08	10	219
20		15.51	15.51	33.357	24.595	333.9	0.069	6.00	105.5	0.0	0.33	0.1	0.00	0.46	0.12	20	218
30		15.38	15.38	33.372	24.636	330.4	0.102	5.97	104.7	0.0	0.34	0.1	0.00	0.92	0.26	30	217
40		14.96	14.95	33.324	24.691	325.4	0.135	5.90	102.6	0.1	0.41	0.2	0.03	2.43	0.59	40	216
50		11.11	11.10	33.214	25.367	261.0	0.164	5.19	83.2	9.8	1.19	12.6	0.04	0.25	0.20	50	215
61		10.44	10.43	33.346	25.587	240.3	0.192	4.64	73.4	14.1	1.41	16.2	0.02	0.06	0.10	61	214
70		10.53	10.52	33.520	25.708	229.1	0.213	4.09	64.9	16.1	1.53	18.2	0.02	0.06	0.10	70	213
75	ISL	10.28	10.27	33.533	25.761	224.1	0.224	4.05	63.9	17.1	1.57	18.9	0.02	0.04	0.09	75	
86		9.68	9.67	33.540	25.867	214.1	0.248	4.00	62.3	19.5	1.65	20.3	0.01	0.01	0.08	86	212
100		9.76	9.75	33.747	26.016	200.3	0.277	3.22	50.3	23.3	1.84	23.1	0.01	0.01	0.08	100	211
120		9.08	9.07	33.819	26.183	184.7	0.316	3.11	47.9	27.7	1.98	25.8	0.01	0.01	0.06	121	210
125	ISL	8.96	8.95	33.848	26.225	180.8	0.325	3.08	47.3	28.6	1.99	26.2	0.01	0.01	0.05	126	
140		8.70	8.69	33.933	26.332	170.9	0.351	2.97	45.3	31.0	2.02	26.9	0.01	0.00	0.04	141	209
150	ISL	8.61	8.59	33.966	26.372	167.2	0.368	2.89	44.0	32.1	2.04	27.4	0.01	0.00	0.03	151	
171		8.42	8.40	34.006	26.433	161.8	0.403	2.70	41.0	34.8	2.11	28.6	0.01	0.00	0.03	172	208
195		7.92	7.90	34.034	26.530	152.9	0.440	2.40	36.0	40.3	2.26	30.6	0.01	0.01	0.03	196	207
200	ISL	7.82	7.80	34.035	26.546	151.4	0.448	2.37	35.5	41.4	2.28	31.0	0.01			201	
228		7.34	7.32	34.035	26.615	145.2	0.489	2.22	32.9	47.1	2.40	32.9	0.01			229	206
250	ISL	7.09	7.07	34.048	26.660	141.1	0.521	1.96	28.9	50.6	2.50	34.0	0.01			251	
266		6.94	6.92	34.060	26.690	138.4	0.543	1.76	25.8	52.9	2.58	34.8	0.01			268	205
300	ISL	6.64	6.61	34.084	26.750	133.1	0.589	1.45	21.1	58.4	2.72	36.6	0.00			302	
317		6.50	6.47	34.095	26.777	130.7	0.612	1.32	19.2	61.0	2.78	37.4	0.00			319	204
380		6.09	6.06	34.117	26.848	124.6	0.692	1.03	14.8	69.2	2.94	39.2	0.00			382	203
400	ISL	6.00	5.97	34.137	26.875	122.2	0.717	0.89	12.8	71.9	2.99	39.7	0.00			403	
437		5.84	5.80	34.179	26.929	117.5	0.761	0.64	9.2	77.0	3.09	40.7	0.00			440	202
500	ISL	5.50	5.46	34.241	27.020	109.4	0.833	0.42	6.0	85.7	3.21	42.0	0.00			503	
512		5.44	5.40	34.253	27.037	107.9	0.846	0.38	5.4	87.3	3.23	42.3	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 8.7 N	123 13.2 W	23/11/02	0513 UTC	4245 m	300 19 kn			1019.7 mb	15.9 C	14.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.61	16.61	32.969	24.048	385.5	0.000	5.78	103.6	0.3	0.37	0.1	0.00	0.13	0.03	0	
1	16.61	16.61	32.969	24.048	385.5	0.004	5.78	103.6	0.3	0.37	0.1	0.00	0.13	0.03	1	220
10 ISL	16.62	16.62	32.971	24.047	385.9	0.039	5.77	103.5	0.2	0.37	0.0	0.00	0.12	0.03	10	
15	16.62	16.62	32.972	24.048	385.9	0.058	5.77	103.5	0.2	0.37	0.0	0.00	0.12	0.03	15	219
20 ISL	16.60	16.60	32.970	24.051	385.8	0.077	5.80	104.0	0.2	0.37	0.0	0.00	0.13	0.03	20	
30	16.55	16.55	32.965	24.059	385.3	0.116	5.86	104.9	0.3	0.36	0.0	0.00	0.14	0.04	30	218
45	15.68	15.67	32.956	24.250	367.6	0.172	5.93	104.4	0.2	0.34	0.0	0.00	0.23	0.09	45	217
50 ISL	14.39	14.38	32.896	24.483	345.5	0.190	6.08	104.2	0.9	0.46	0.1	0.02	0.32	0.16	50	
55	13.19	13.18	32.855	24.696	325.2	0.207	6.22	104.0	1.6	0.57	0.3	0.05	0.41	0.22	55	216
64	12.89	12.88	32.835	24.740	321.2	0.236	6.25	103.8	2.5	0.59	0.8	0.11	0.43	0.25	64	215
73	12.05	12.04	32.769	24.850	310.9	0.264	6.02	98.2	3.3	0.70	2.8	0.31	0.38	0.25	73	214
75 ISL	11.87	11.86	32.768	24.882	307.8	0.270	5.99	97.3	3.6	0.73	3.4	0.26	0.35	0.25	75	
83	11.26	11.25	32.795	25.015	295.3	0.295	5.88	94.3	5.1	0.82	5.9	0.03	0.21	0.24	83	213
94	10.93	10.92	32.869	25.131	284.4	0.326	5.65	90.0	6.3	0.92	7.8	0.02	0.11	0.13	94	212
100 ISL	10.66	10.65	32.888	25.193	278.6	0.343	5.61	88.9	7.2	0.99	9.0	0.01	0.08	0.10	100	
108	10.31	10.30	32.944	25.297	268.8	0.365	5.52	86.8	8.6	1.08	10.8	0.01	0.06	0.07	108	211
122	9.97	9.96	33.245	25.589	241.3	0.401	5.02	78.5	11.8	1.24	14.1	0.01	0.02	0.03	123	210
125 ISL	9.86	9.85	33.295	25.647	235.9	0.408	4.96	77.4	12.4	1.26	14.6	0.01	0.02	0.03	126	
144	9.20	9.18	33.557	25.959	206.4	0.450	4.51	69.5	17.2	1.41	17.6	0.00	0.01	0.02	145	209
150 ISL	9.13	9.11	33.635	26.032	199.7	0.462	4.17	64.2	19.6	1.53	19.5	0.00	0.01	0.02	151	
169	9.04	9.02	33.838	26.205	183.6	0.499	3.16	48.6	27.0	1.90	25.1	0.00	0.00	0.02	170	208
198	8.66	8.64	33.979	26.375	167.9	0.550	2.97	45.3	31.5	1.98	26.8	0.00	0.00	0.02	199	207
200 ISL	8.63	8.61	33.983	26.383	167.2	0.553	2.97	45.3	31.8	1.98	26.9	0.00			201	
227	8.20	8.18	34.013	26.473	159.0	0.597	2.91	43.9	36.1	2.07	28.3	0.00			228	206
250 ISL	7.86	7.84	34.036	26.541	152.8	0.633	2.50	37.5	40.8	2.23	30.5	0.00			251	
268	7.62	7.59	34.050	26.587	148.6	0.660	2.13	31.7	44.5	2.37	32.2	0.00			269	205
300 ISL	7.23	7.20	34.065	26.655	142.5	0.707	1.81	26.7	49.9	2.52	34.0	0.00			302	
322	6.99	6.96	34.072	26.693	139.0	0.738	1.65	24.2	53.3	2.60	34.9	0.00			324	204
380	6.42	6.39	34.101	26.793	130.1	0.816	1.17	17.0	63.0	2.82	37.8	0.00			382	203
400 ISL	6.21	6.17	34.107	26.825	127.1	0.841	1.07	15.4	66.5	2.88	38.5	0.00			402	
438	5.84	5.80	34.122	26.884	121.8	0.889	0.92	13.2	72.9	2.98	39.7	0.00			441	202
500 ISL	5.50	5.46	34.166	26.960	115.0	0.962	0.64	9.1	81.9	3.09	41.1	0.00			503	
512	5.44	5.40	34.175	26.975	113.7	0.976	0.59	8.4	83.7	3.11	41.4	0.00			515	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 80 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 49.2 N	123 54.7 W	23/11/02	1056 UTC	4347 m	320 16 kn			1021.1 mb	15.9 C	14.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.51	17.51	33.059	23.905	399.1	0.000	5.61	102.4	0.8	0.39	0.0	0.00	0.13	0.03	0	
1	17.51	17.51	33.059	23.905	399.1	0.004	5.61	102.4	0.8	0.39	0.0	0.00	0.13	0.03	1	220
10 ISL	17.51	17.51	33.059	23.906	399.4	0.040	5.60	102.2	0.7	0.39	0.0	0.00	0.14	0.03	10	
16	17.52	17.52	33.059	23.903	399.8	0.064	5.60	102.2	0.7	0.38	0.0	0.00	0.14	0.03	16	219
20 ISL	17.52	17.52	33.060	23.904	399.8	0.080	5.60	102.2	0.7	0.38	0.0	0.00	0.14	0.03	20	
30	17.53	17.52	33.064	23.906	400.1	0.120	5.60	102.3	0.7	0.37	0.0	0.00	0.13	0.03	30	218
46	17.56	17.55	33.084	23.914	399.8	0.184	5.61	102.5	0.8	0.38	0.0	0.00	0.16	0.04	46	217
50 ISL	17.08	17.07	33.042	23.996	392.1	0.200	5.77	104.4	0.8	0.38	0.0	0.00	0.22	0.07	50	
60	15.67	15.66	32.940	24.240	369.0	0.238	6.16	108.4	0.8	0.39	0.0	0.00	0.36	0.14	60	216
75	14.24	14.23	32.917	24.531	341.6	0.291	6.18	105.6	1.7	0.41	0.0	0.00	0.29	0.18	75	215
85	12.95	12.94	32.855	24.744	321.4	0.324	6.03	100.3	2.4	0.51	0.4	0.08	0.29	0.25	85	214
95	11.70	11.69	32.739	24.892	307.3	0.356	5.94	96.1	3.6	0.70	3.6	0.12	0.19	0.19	95	213
100 ISL	11.65	11.64	32.791	24.941	302.7	0.371	5.85	94.6	4.0	0.74	4.4	0.08	0.16	0.16	100	
105	11.61	11.60	32.840	24.987	298.5	0.386	5.76	93.1	4.5	0.77	5.1	0.03	0.13	0.14	105	212
115	11.18	11.17	32.904	25.115	286.5	0.415	5.63	90.2	5.8	0.90	7.4	0.01	0.08	0.09	115	211
125	10.85	10.84	32.975	25.228	275.8	0.443	5.47	87.0	7.2	0.97	9.0	0.01	0.06	0.08	126	210
140	10.16	10.14	33.118	25.459	254.1	0.483	5.19	81.4	10.3	1.18	12.6	0.01	0.02	0.03	141	209
150 ISL	9.74	9.72	33.264	25.643	236.7	0.508	4.88	75.9	13.2	1.32	15.1	0.01	0.02	0.02	151	
166	9.23	9.21	33.505	25.914	211.1	0.543	4.34	66.9	17.9	1.52	18.7	0.00	0.02	0.01	167	208
195	8.99	8.97	33.789	26.175	186.9	0.601	3.65	56.0	24.3	1.73	22.4	0.00	0.00	0.01	196	207
200 ISL	8.94	8.92	33.827	26.213	183.4	0.610	3.52	54.0	25.5	1.78	23.2	0.00			201	
229	8.58	8.56	33.982	26.391	167.0	0.661	2.90	44.2	32.2	2.01	27.0	0.00			230	206
250 ISL	8.27	8.24	34.016	26.465	160.2	0.696	2.84	42.9	35.4	2.07	28.1	0.00			251	
267	8.01	7.98	34.020	26.507	156.4	0.722	2.79	41.9	37.8	2.11	28.7	0.00			268	205
300 ISL	7.46	7.43	34.030	26.595	148.3	0.773	2.44	36.2	44.1	2.28	31.0	0.00			302	
320	7.16	7.13	34.032	26.639	144.3	0.802	2.20	32.4	48.0	2.39	32.4	0.00			322	204
378	6.62	6.59	34.052	26.728	136.3	0.883	1.73	25.2	56.1	2.61	35.1	0.00			380	203
400 ISL	6.45	6.41	34.070	26.765	133.0	0.913	1.51	21.9	59.7	2.71	36.2	0.00			402	
438	6.18	6.14	34.107	26.829	127.2	0.962	1.13	16.3	66.1	2.86	37.9	0.00			441	202
500 ISL	5.78	5.74	34.157	26.919	119.2	1.039	0.75	10.7	76.5	3.01	40.0	0.00			503	
522	5.64	5.60	34.175	26.951	116.3	1.065	0.62	8.8	80.2	3.07	40.7	0.00			525	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 16.5 N	120 2.0 W	21/11/02	2148 UTC	583 m	290 04 kn	260 01 06	1	1016.1 mb	19.5 C	17.5 C	08m	3/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 A	15.85	15.85	33.329	24.497	342.7	0.000	6.45	114.2	4.3	0.32	0.1	0.00	0.95	0.30	0	224
9	15.32	15.32	33.330	24.616	331.6	0.030	6.48	113.5	4.4	0.32	0.1	0.00	1.19	0.51	9	223
10 ISL	15.24	15.24	33.331	24.634	329.9	0.034	6.43	112.4	4.4	0.34	0.2	0.01	1.20	0.56	10	
20	14.48	14.48	33.344	24.808	313.6	0.066	5.86	100.9	5.1	0.55	2.3	0.21	1.35	0.92	20	222
29	13.98	13.98	33.344	24.913	303.9	0.094	5.56	94.8	5.8	0.70	4.6	0.43	1.02	0.54	29	221
30 ISL	13.90	13.90	33.339	24.926	302.7	0.097	5.54	94.3	5.9	0.72	4.9	0.42	0.98	0.52	30	
40	13.11	13.10	33.304	25.059	290.2	0.126	5.31	88.9	6.9	0.87	7.7	0.31	0.59	0.37	40	220
50	12.59	12.58	33.360	25.205	276.6	0.155	4.96	82.1	8.7	1.02	10.0	0.11	0.30	0.25	50	219
60	11.96	11.95	33.388	25.347	263.3	0.182	4.69	76.6	10.2	1.16	12.2	0.04	0.18	0.19	60	218
70	11.49	11.48	33.457	25.488	250.1	0.207	4.34	70.2	12.9	1.32	14.7	0.03	0.12	0.16	70	217
75 ISL	11.09	11.08	33.536	25.622	237.4	0.219	3.97	63.7	15.5	1.47	16.9		0.08	0.14	75	
84	10.42	10.41	33.686	25.856	215.2	0.240	3.30	52.3	20.2	1.73	20.7		0.03	0.11	84	216
98	10.06	10.05	33.802	26.009	201.0	0.269	2.87	45.1	23.8	1.90	23.2		0.02	0.10	98	215
100 ISL	10.02	10.01	33.820	26.030	199.1	0.273	2.82	44.3	24.3	1.92	23.5		0.02	0.10	101	
118	9.75	9.74	33.966	26.189	184.3	0.307	2.39	37.4	28.5	2.10	26.0		0.01	0.07	119	214
125 ISL	9.68	9.67	34.007	26.233	180.3	0.320	2.25	35.1	29.8	2.15	26.7		0.01	0.07	126	
138	9.58	9.56	34.062	26.293	174.9	0.343	2.03	31.6	31.8	2.23	27.6		0.01	0.07	139	213
150 ISL	9.49	9.47	34.086	26.326	171.9	0.364	1.90	29.5	33.1	2.28	28.2		0.01	0.07	151	
169	9.34	9.32	34.103	26.364	168.6	0.396	1.77	27.4	34.7	2.34	28.9		0.01	0.06	170	212
198	9.09	9.07	34.128	26.425	163.4	0.445	1.69	26.1	37.3	2.39	29.7		0.00	0.07	199	211
200 ISL	9.08	9.06	34.131	26.429	163.1	0.448	1.66	25.6	37.6	2.40	29.8				201	
228	8.88	8.86	34.172	26.493	157.5	0.493	1.21	18.6	42.6	2.56	31.4				229	210
250 ISL	8.68	8.65	34.185	26.535	153.9	0.527	1.02	15.6	46.0	2.65	32.4				251	
268	8.49	8.46	34.190	26.568	150.9	0.554	0.91	13.8	48.9	2.72	33.0				270	209
300 ISL	8.12	8.09	34.202	26.634	145.1	0.602	0.73	11.0	55.9	2.86	33.6				302	
316	7.95	7.92	34.208	26.664	142.4	0.625	0.67	10.1	59.1	2.92	33.8				318	208
378	7.57	7.53	34.220	26.730	137.0	0.711	0.59	8.8	63.7	3.02	34.5				380	207
400 ISL	7.36	7.32	34.224	26.763	134.1	0.741	0.55	8.2	66.9	3.06	34.5				403	
435	7.02	6.98	34.230	26.815	129.4	0.787	0.44	6.5	74.4	3.17	34.4				438	206
477	6.68	6.64	34.238	26.868	124.7	0.841	0.22	3.2	88.7	3.40	32.0				480	205
500 ISL	6.58	6.53	34.240	26.883	123.5	0.869	0.14	2.0	97.6	3.58	29.1				503	
512	6.54	6.49	34.241	26.889	123.1	0.884	0.11	1.6	102.6	3.69	27.2				516	204
541	6.49	6.44	34.242	26.897	122.7	0.920	0.09	1.3	116.0	4.00	21.9				545	203
566	6.47	6.42	34.243	26.901	122.7	0.950	0.13	1.9	112.1	3.86	24.2				570	202
569	6.47	6.42	34.243	26.901	122.8	0.954	0.13	1.9	111.4	3.81	24.6				573	201

A) SANTA BARBARA BASIN STATION.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 13.4 N	119 24.8 W	21/11/02	1457 UTC	35 m	070 05 kn	080 01 07	1	1017.5 mb	17.6 C	15.1 C	13m	5/8	CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.01	16.01	33.369	24.492	343.2	0.000	6.00	106.6	3.0	0.33	0.4	0.02	1.13	0.34	0	
1	16.01	16.01	33.369	24.492	343.2	0.003	6.00	106.6	3.0	0.33	0.4	0.02	1.13	0.34	1	205
5	16.02	16.02	33.371	24.491	343.4	0.017	5.99	106.4	2.9	0.32	0.3	0.02	1.11	0.30	5	204
10	15.69	15.69	33.348	24.548	338.1	0.034	6.02	106.2	3.1	0.33	0.7	0.05	1.58	0.42	10	203
20	15.63	15.63	33.339	24.555	337.8	0.068	6.01	105.9	3.3	0.35	0.9	0.06	1.51	0.47	20	202
30	15.20	15.20	33.320	24.635	330.4	0.101	5.87	102.5	4.5	0.49	1.6	0.17	1.13	0.54	30	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
34 11.2 N	119 31.7 W	21/11/02	1835 UTC	121 m	320 02 kn	030 01 07	1	1018.2 mb	21.6 C	17.0 C	12m	4/8	CC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.16	16.16	33.335	24.432	348.9	0.000	6.05	107.8	3.1	0.32	0.1	0.00	0.93	0.31	0	
1 A	16.16	16.16	33.335	24.432	348.9	0.003	6.05	107.8	3.1	0.32	0.1	0.00	0.93	0.31	1	212
1	16.18	16.18	33.334	24.427	349.4	0.003									1	213
8 A	16.06	16.06	33.332	24.452	347.2	0.028	6.06	107.7	3.1	0.32	0.1	0.00	1.15	0.36	8	211
10 ISL	16.04	16.04	33.332	24.457	346.8	0.035	6.07	107.8	3.1	0.32	0.1	0.00	1.30	0.41	10	
16 A	15.84	15.84	33.325	24.497	343.2	0.056	6.09	107.8	3.4	0.33	0.1	0.01	1.67	0.54	16	210
20 ISL	15.45	15.45	33.316	24.577	335.7	0.069	6.00	105.3	3.8	0.39	0.7	0.09	1.55	0.52	20	
25 A	14.71	14.71	33.293	24.720	322.2	0.086	5.86	101.3	4.5	0.50	1.9	0.19	1.40	0.48	25	209
30 ISL	13.66	13.66	33.246	24.903	304.8	0.101	5.80	98.1	5.0	0.63	3.4	0.25	1.13	0.50	30	
32 A	13.22	13.22	33.229	24.979	297.6	0.107	5.76	96.6	5.3	0.69	4.1	0.26	1.02	0.51	32	208
41	11.72	11.71	33.197	25.243	272.7	0.133	5.30	86.1	7.4	0.99	9.2	0.10	0.62	0.47	41	207
46 A	11.48	11.47	33.328 D	25.389	258.9	0.146	4.71	76.2	10.0	1.18	12.3	0.08	0.31	0.30	46	206
50 ISL	11.39	11.38	33.370	25.438	254.3	0.156	4.52	73.0	10.9	1.24	13.2	0.06	0.25	0.28	50	
53	11.36	11.35	33.382	25.453	253.0	0.164	4.47	72.1	11.2	1.25	13.4	0.05	0.20	0.26	53	205
60	11.31	11.30	33.414	25.487	249.9	0.182	4.34	70.0	11.9	1.30	14.2	0.03	0.16	0.22	60	204
70	11.28	11.27	33.451	25.521	246.9	0.207	4.17	67.2	12.6	1.34	14.8	0.04	0.13	0.19	70	203
75 ISL	11.15	11.14	33.480	25.567	242.6	0.219	4.05	65.1	13.4	1.39	15.5	0.03	0.11	0.17	75	
85	10.86	10.85	33.550	25.674	232.7	0.243	3.78	60.4	15.5	1.50	17.2	0.02	0.07	0.13	85	202
100 ISL	10.67	10.66	33.665	25.797	221.3	0.277	3.30	52.5	18.7	1.67	19.5	0.03	0.04	0.11	100	
102	10.64	10.63	33.680	25.814	219.7	0.281	3.24	51.6	19.1	1.69	19.8	0.03	0.04	0.11	103	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 52.9 N	120 8.3 W	21/11/02	0848 UTC	106 m	060 09 kn			1016.6 mb	18.0 C	15.7 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.15	16.15	33.401	24.485	343.8	0.000	5.95	106.0	2.9	0.31	0.1	0.00			0	
1	16.15	16.15	33.401	24.485	343.9	0.003	5.95	106.0	2.9	0.31	0.1	0.00			1	210
10	15.44	15.44	33.365	24.617	331.6	0.034	6.01	105.5	3.6	0.38	0.8	0.02			10	209
20	14.82	14.82	33.344	24.736	320.5	0.066	5.87	101.8							20	208
30	14.54	14.54	33.349	24.800	314.7	0.098	5.76	99.3	4.6	0.57	2.8	0.06			30	207
40	14.34	14.33	33.358	24.849	310.3	0.129	5.66	97.2	5.3	0.62	3.6	0.06			40	206
50	12.59	12.58	33.418	25.250	272.3	0.159	4.90	81.2	9.6	1.03	9.8	0.10			50	205
60	11.29	11.28	33.488	25.548	244.1	0.184	4.17	67.2	13.9	1.37	15.3	0.10			60	204
70	10.88	10.87	33.542	25.664	233.3	0.208	3.87	61.9	15.8	1.50	17.3	0.07			70	203
75 ISL	10.88	10.87	33.553	25.672	232.6	0.220	3.81	60.9	16.1	1.51	17.5	0.07			75	
80	10.87	10.86	33.564	25.683	231.7	0.232	3.79	60.6	16.3	1.52	17.6	0.07			80	202
92	10.85	10.84	33.584	25.702	230.1	0.259	3.74	59.7	16.8	1.54	17.8	0.08			92	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 44.8 N	120 24.9 W	21/11/02	0505 UTC	1042 m	360 08 kn			1016.2 mb	18.7 C	15.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.19	16.19	33.386	24.464	345.8	0.000	5.88	104.8	0.3	0.39	0.1	0.00	0.30	0.09	0	
1	16.19	16.19	33.386	24.464	345.8	0.003	5.88	104.8	0.3	0.39	0.1	0.00	0.30	0.09	1	220
9	15.87	15.87	33.376	24.529	339.9	0.031	5.89	104.3	0.2	0.39	0.1	0.00	0.31	0.09	9	219
10 ISL	15.87	15.87	33.378	24.531	339.8	0.034	5.89	104.3	0.2	0.39	0.1	0.00	0.31	0.09	10	
19	15.88	15.88	33.392	24.540	339.2	0.065	5.91	104.7	0.2	0.38	0.1	0.01	0.36	0.11	19	218
20 ISL	15.88	15.88	33.393	24.540	339.2	0.068	5.91	104.7	0.2	0.38	0.1	0.01	0.37	0.11	20	
29	15.84	15.84	33.403	24.557	337.8	0.099	5.91	104.6	0.2	0.38	0.1	0.00	0.41	0.13	29	217
30 ISL	15.79	15.79	33.396	24.563	337.3	0.102	5.91	104.5	0.2	0.38	0.2	0.00	0.46	0.15	30	
39	14.80	14.79	33.241	24.661	328.2	0.132	5.95	103.1	0.6	0.47	0.7	0.05	0.92	0.33	39	216
49	12.16	12.15	32.903	24.932	302.4	0.164	6.06	99.2	2.7	0.74	3.8	0.20	0.91	0.44	49	215
50 ISL	12.02	12.01	32.893	24.951	300.7	0.167	6.04	98.5	3.0	0.76	4.2	0.20	0.87	0.44	50	
59	11.34	11.33	32.921	25.098	286.8	0.193	5.68	91.3	5.9	0.95	7.8	0.20	0.49	0.34	59	214
69	11.25	11.24	33.158	25.299	268.0	0.221	5.18	83.3	8.9	1.14	11.7	0.03	0.17	0.18	69	213
75 ISL	11.22	11.21	33.195	25.333	264.9	0.237	5.11	82.1	9.4	1.18	12.3	0.03	0.16	0.18	75	
84	11.17	11.16	33.245	25.381	260.5	0.260	5.04	80.9	10.2	1.22	13.0	0.02	0.15	0.18	84	212
98	10.46	10.45	33.456	25.671	233.2	0.295	4.40	69.6	15.0	1.47	17.4	0.02	0.05	0.09	98	211
100 ISL	10.36	10.35	33.482	25.708	229.7	0.300	4.30	67.9	15.7	1.50	18.0	0.02	0.05	0.09	100	
119	9.58	9.57	33.689	26.001	202.1	0.341	3.50	54.4	22.1	1.77	22.5	0.01	0.02	0.06	120	210
125 ISL	9.42	9.41	33.741	26.068	195.9	0.353	3.31	51.3	23.8	1.83	23.6	0.01	0.01	0.06	126	
139	9.15	9.13	33.839	26.188	184.7	0.379	2.98	45.9	27.2	1.95	25.6	0.01	0.00	0.05	140	209
150 ISL	8.97	8.95	33.887	26.254	178.5	0.399	2.83	43.5	29.0	2.01	26.5	0.01	0.00	0.05	151	
166	8.77	8.75	33.934	26.323	172.3	0.427	2.71	41.4	31.0	2.06	27.4	0.01	0.01	0.04	167	208
197	8.53	8.51	34.009	26.419	163.7	0.479	2.55	38.8	34.6	2.16	28.5	0.01	0.00	0.02	198	207
200 ISL	8.49	8.47	34.012	26.428	162.9	0.484	2.54	38.6	35.0	2.17	28.6	0.01			201	
227	8.16	8.14	34.031	26.493	157.1	0.527	2.40	36.2	38.4	2.24	30.0	0.01			228	206
250 ISL	7.96	7.93	34.053	26.540	153.0	0.563	2.22	33.3	41.1	2.33	31.0	0.01			251	
268	7.81	7.78	34.070	26.576	149.8	0.590	2.06	30.8	43.3	2.40	31.7	0.01			270	205
300 ISL	7.48	7.45	34.099	26.646	143.5	0.637	1.75	26.0	48.5	2.54	33.3	0.01			302	
318	7.30	7.27	34.116	26.685	140.0	0.663	1.57	23.2	51.6	2.62	34.1	0.01			320	204
376	6.95	6.91	34.186	26.789	130.8	0.741	1.03	15.1	59.7	2.84	36.1	0.01			378	203
400 ISL	6.80	6.76	34.213	26.831	127.1	0.772	0.85	12.4	63.2	2.92	37.0	0.01			403	
437	6.59	6.55	34.249	26.888	122.1	0.818	0.62	9.0	68.2	3.04	38.2	0.01			440	202
500 ISL	6.36	6.31	34.289	26.951	116.9	0.894	0.43	6.2	73.4	3.17	39.3	0.01			503	
521	6.29	6.24	34.302	26.970	115.3	0.918	0.37	5.4	75.2	3.22	39.6	0.01			525	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 34.8 N	120 45.7 W	21/11/02	0109	UTC	1510 m	100	08 kn	090 02 07	1	1015.2 mb	18.0 C	16.1 C		2/8	AS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.37	16.37	33.283	24.344	357.3	0.000	5.85	104.6	0.2	0.40	0.1	0.00	0.23	0.04	0	
1	16.37	16.37	33.283	24.344	357.3	0.004	5.85	104.6	0.2	0.40	0.1	0.00	0.23	0.04	1	220
10	16.06	16.06	33.287	24.418	350.5	0.035	5.87	104.3	0.2	0.40	0.1	0.00	0.23	0.06	10	219
20	16.00	16.00	33.284	24.430	349.7	0.070	5.87	104.2	0.3	0.40	0.1	0.00	0.26	0.06	20	218
30	15.94	15.94	33.275	24.437	349.4	0.105	6.22	110.2	0.3	0.40	0.0	0.00	0.34	0.09	30	217
39	14.16	14.15	33.099	24.687	325.7	0.136	6.32	107.9	0.1	0.44	0.2	0.02	1.49	0.43	39	216
49	11.45	11.44	32.874	25.041	292.0	0.167	5.87	94.6	4.6	0.85	6.1	0.30	2.10	0.62	49	215
50 ISL	11.44	11.43	32.892	25.057	290.5	0.170	5.83	93.9	4.9	0.87	6.5	0.29	1.94	0.58	50	
60	11.30	11.29	32.997	25.164	280.6	0.198	5.52	88.7	7.2	1.03	9.4	0.06	0.22	0.13	60	214
69	11.24	11.23	33.120	25.271	270.6	0.223	5.30	85.1	8.6	1.11	11.1	0.03	0.34	0.28	69	213
75 ISL	10.89	10.88	33.175	25.376	260.7	0.239	5.16	82.3	10.1	1.20	12.8	0.03	0.25	0.21	75	
84	10.32	10.31	33.257	25.539	245.3	0.262	4.93	77.7	12.5	1.34	15.3	0.02	0.06	0.06	84	212
99	10.16	10.15	33.450	25.717	228.7	0.297	4.39	69.0	15.7	1.49	17.9	0.02	0.05	0.07	99	211
100 ISL	10.13	10.12	33.461	25.731	227.4	0.299	4.35	68.4	16.0	1.50	18.1	0.02	0.05	0.07	100	
118	9.59	9.58	33.645	25.965	205.5	0.338	3.67	57.0	21.5	1.72	21.8	0.01	0.02	0.05	119	210
125 ISL	9.48	9.47	33.711	26.034	199.0	0.353	3.42	53.1	23.3	1.80	23.0	0.01	0.02	0.05	126	
139	9.31	9.29	33.821	26.148	188.5	0.380	3.01	46.5	26.5	1.92	25.0	0.01	0.01	0.04	140	209
150 ISL	9.14	9.12	33.873	26.216	182.2	0.400	2.86	44.1	28.3	1.98	26.0	0.01	0.01	0.04	151	
166	8.89	8.87	33.925	26.297	174.8	0.429	2.75	42.2	30.6	2.04	27.1	0.01	0.00	0.03	167	208
195	8.43	8.41	34.014	26.438	161.8	0.477	2.50	37.9	35.7	2.17	29.3	0.01	0.00	0.02	196	207
200 ISL	8.34	8.32	34.019	26.456	160.2	0.486	2.48	37.6	36.5	2.18	29.6	0.01			201	
226	7.95	7.93	34.037	26.529	153.6	0.526	2.36	35.4	40.5	2.26	30.7	0.00			227	206
250 ISL	7.92	7.89	34.086	26.572	149.9	0.563	2.05	30.8	43.2	2.38	31.6	0.00			251	
266	7.90	7.87	34.113	26.596	147.9	0.587	1.80	27.0	44.9	2.47	32.1	0.00			268	205
300 ISL	7.87	7.84	34.197	26.667	141.8	0.636	1.24	18.6	49.4	2.67	33.4	0.01			302	
316	7.86	7.83	34.236	26.699	139.0	0.658	1.01	15.2	51.6	2.75	34.0	0.01			318	204
376	7.25	7.21	34.236	26.787	131.3	0.739	0.86	12.7	59.2	2.87	35.9	0.00			378	203
400 ISL	7.06	7.02	34.246	26.822	128.2	0.771	0.83	12.2	62.1	2.93	36.6	0.00			403	
436	6.79	6.75	34.264	26.873	123.7	0.816	0.78	11.4	66.4	3.01	37.7	0.00			439	202
500 ISL	6.29	6.24	34.292	26.962	115.8	0.892	0.63	9.1	75.2	3.12	39.5	0.00			503	
520	6.14	6.09	34.301	26.989	113.4	0.915	0.58	8.4	77.9	3.16	40.1	0.00			524	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 15.2 N	121 27.1 W	20/11/02	1827	UTC	3807 m	020	05 kn	330 04 11	1	1018.5 mb	20.1 C	17.1 C	27m	2/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.31	16.31	33.217	24.307	360.8	0.000	5.84	104.2	0.1	0.37	0.2	0.00	0.20	0.04	0	
1 A	16.31	16.31	33.217	24.307	360.8	0.004	5.84	104.2	0.1	0.37	0.2	0.00	0.20	0.04	1	221
1	16.32	16.32	33.216	24.304	361.1	0.004									1	222
7	16.16	16.16	33.217	24.341	357.7	0.025	5.86	104.3	0.0	0.37	0.1	0.00	0.20	0.05	7	220
10 ISL	16.13	16.13	33.221	24.351	356.9	0.036	5.87	104.4	0.0	0.37	0.1	0.00	0.21	0.05	10	
14 A	16.10	16.10	33.227	24.363	355.9	0.050	5.87	104.3	0.1	0.37	0.1	0.00	0.23	0.05	14	219
20 ISL	16.04	16.04	33.235	24.383	354.2	0.071	5.88	104.4	0.1	0.36	0.1	0.00	0.26	0.06	20	
25	15.97	15.97	33.243	24.405	352.2	0.089	5.89	104.4	0.1	0.36	0.1	0.00	0.29	0.09	25	218
30 ISL	15.87	15.87	33.263	24.443	348.8	0.107	5.95	105.3	0.0	0.36	0.1	0.00	0.41	0.13	30	
35 A	15.68	15.67	33.262	24.485	344.9	0.124	6.01	106.0	0.0	0.36	0.1	0.00	0.59	0.18	35	217
45	14.77	14.76	33.122	24.576	336.5	0.158	6.11	105.7	0.1	0.41	0.1	0.00	1.21	0.35	45	216
50 ISL	13.48	13.47	32.994	24.745	320.4	0.174	6.08	102.3	1.0	0.55	1.5	0.10	1.30	0.47	50	
55 A	12.23	12.22	32.912	24.926	303.2	0.190	6.05	99.1	2.5	0.71	3.5	0.19	1.38	0.52	55	215
63	11.62	11.61	32.971	25.086	288.1	0.214	5.74	92.9	5.7	0.91	7.1	0.13	0.46	0.27	63	214
72 A	11.20	11.19	33.065	25.235	274.0	0.239	5.50	88.2	7.5	1.04	9.7	0.04	0.21	0.17	72	213
75 ISL	11.02	11.01	33.100	25.295	268.5	0.247	5.41	86.5	8.3	1.09	10.6	0.04	0.16	0.15	75	
88	10.29	10.28	33.259	25.546	244.8	0.280	4.98	78.4	12.2	1.30	14.5	0.02	0.06	0.09	88	212
100 ISL	9.87	9.86	33.399	25.726	227.8	0.309	4.56	71.2	15.9	1.49	17.7	0.01	0.02	0.06	100	
105 A	9.73	9.72	33.454	25.792	221.6	0.320	4.39	68.4	17.5	1.56	18.9	0.01	0.02	0.05	105	211
118	9.31	9.30	33.582	25.961	205.8	0.348	4.02	62.1	21.4	1.72	21.7	0.01	0.01	0.04	119	210
125 ISL	9.14	9.13	33.639	26.033	199.1	0.362	3.87	59.6	23.2	1.78	22.8	0.01	0.01	0.04	126	
140	8.89	8.88	33.741	26.152	188.0	0.391	3.61	55.3	26.4	1.87	24.5	0.01	0.00	0.03	141	209
150 ISL	8.82	8.80	33.798	26.208	182.9	0.410	3.50	53.5	27.5	1.89	24.9	0.01	0.00	0.03	151	
169	8.74	8.72	33.894	26.296	174.9	0.444	3.22	49.2	29.5	1.93	25.7	0.00	0.01	0.03	170	208
198	8.53	8.51	34.039	26.443	161.5	0.492	2.31	35.1	36.4	2.23	29.6	0.00	0.00	0.03	199	207
200 ISL	8.49	8.47	34.043	26.452	160.6	0.496	2.30	35.0	36.8	2.24	29.8	0.00			201	
229	7.86	7.84	34.060	26.560	150.6	0.541	2.17	32.5	42.6	2.35	31.5	0.00			230	206
250 ISL	7.52	7.50	34.070	26.617	145.4	0.572	1.94	28.8	47.1	2.47	33.0	0.00			251	
267	7.30	7.27	34.077	26.654	142.1	0.596	1.74	25.7	50.4	2.57	34.1	0.00			269	205
300 ISL	7.01	6.98	34.096	26.709	137.2	0.642	1.51	22.2	54.8	2.68	35.3	0.00			302	
318	6.88	6.85	34.105	26.734	135.0	0.667	1.42	20.8	56.9	2.72	35.8	0.00			320	204
378	6.32	6.29	34.119	26.820	127.4	0.746	1.08	15.6	65.7	2.89	38.2	0.00			380	203
400 ISL	6.14	6.10	34.127	26.850	124.7	0.773	0.98	14.1	69.1	2.94	38.9	0.00			403	
438	5.86	5.82	34.147	26.901	120.1	0.820	0.83	11.9	74.9	3.02	39.9	0.00			441	202
500 ISL	5.56	5.52	34.203	26.983	113.0	0.892	0.57	8.1	83.1	3.14	41.3	0.00			503	
518	5.47	5.43	34.219	27.006	110.9	0.912	0.49	6.9	85.5	3.18	41.7	0.00			522	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 54.8 N	122 7.9 W	20/11/02	1145 UTC	4182 m	340 10 kn			1019.0 mb	16.7 C	15.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	16.90	16.90	33.006	24.009	389.2	0.000	5.70	102.8	0.1	0.38	0.0	0.00	0.13	0.03	0	220
10 ISL	16.91	16.91	33.007	24.007	389.7	0.039	5.70	102.8	0.2	0.37	0.0	0.00	0.13	0.03	10	
16	16.91	16.91	33.008	24.008	389.8	0.062	5.70	102.8	0.2	0.37	0.0	0.00	0.13	0.03	16	219
20 ISL	16.85	16.85	33.020	24.032	387.7	0.078	5.72	103.1	0.2	0.37	0.0	0.00	0.14	0.04	20	
30 ISL	16.69	16.69	33.049	24.092	382.3	0.116	5.77	103.7	0.1	0.38	0.0	0.00	0.18	0.05	30	
31	16.67	16.67	33.052	24.099	381.6	0.120	5.78	103.8	0.1	0.38	0.0	0.00	0.18	0.05	31	218
46	13.77	13.76	33.078	24.751	319.7	0.173	6.43	108.9	1.6	0.55	0.6	0.04	0.76	0.32	46	217
50 ISL	13.32	13.31	33.068	24.835	311.8	0.185	6.35	106.6	2.4	0.60	1.6	0.08	0.68	0.32	50	
55	12.84	12.83	33.051	24.917	304.1	0.201	6.17	102.5	3.5	0.68	3.3	0.13	0.52	0.31	55	216
65	11.74	11.73	33.039	25.117	285.2	0.230	5.75	93.3	5.7	0.90	7.2	0.10	0.27	0.23	65	215
75	10.80	10.79	33.056	25.299	268.0	0.258	5.42	86.2	8.2	1.08	10.7	0.02	0.10	0.09	75	214
85	10.37	10.36	33.134	25.435	255.3	0.284	5.22	82.3	10.2	1.20	12.4	0.38	0.06	0.06	85	213
95	10.04	10.03	33.295	25.616	238.2	0.309	4.91	76.9	13.4	1.38	15.9	0.00	0.03	0.04	95	212
100 ISL	9.88	9.87	33.372	25.703	230.0	0.320	4.71	73.6	15.1	1.46	17.4	0.00	0.02	0.03	100	
109	9.64	9.63	33.503	25.845	216.7	0.341	4.28	66.5	18.2	1.60	19.7	0.00	0.02	0.03	109	211
124	9.48	9.47	33.700	26.026	199.8	0.372	3.44	53.4	23.1	1.82	23.3	0.00	0.01	0.03	125	210
125 ISL	9.45	9.44	33.707	26.036	198.8	0.374	3.43	53.2	23.3	1.83	23.4	0.00	0.01	0.03	126	
145	8.90	8.88	33.816	26.209	182.7	0.412	3.33	51.0	27.0	1.89	24.9	0.00			146	209
150 ISL	8.82	8.80	33.853	26.251	178.8	0.421	3.21	49.1	28.4	1.93	25.6	0.00	0.00	0.02	151	
170	8.58	8.56	33.985	26.392	165.7	0.455	2.68	40.8	33.9	2.10	28.2	0.00	0.00	0.02	171	208
200	8.29	8.27	34.024	26.467	159.1	0.504	2.46	37.2	37.5	2.19	29.6	0.00	0.00	0.02	201	207
229	7.84	7.82	34.045	26.551	151.5	0.549	2.22	33.3	42.8	2.32	31.5	0.00			230	206
250 ISL	7.58	7.56	34.054	26.596	147.4	0.581	2.05	30.5	46.1	2.40	32.4	0.00			251	
269	7.37	7.34	34.059	26.630	144.4	0.608	1.91	28.3	48.7	2.47	33.0	0.00			271	205
300 ISL	7.06	7.03	34.065	26.678	140.2	0.652	1.74	25.6	52.4	2.56	34.4	0.00			302	
316	6.91	6.88	34.068	26.701	138.2	0.675	1.65	24.2	54.4	2.61	35.1	0.00			318	204
377	6.24	6.21	34.100	26.815	127.7	0.756	1.13	16.3	66.0	2.86	38.2	0.00			379	203
400 ISL	6.04	6.01	34.110	26.849	124.7	0.785	1.01	14.5	69.7	2.92	39.0	0.00			403	
438	5.78	5.74	34.132	26.899	120.3	0.831	0.85	12.1	75.2	3.01	40.0	0.00			441	202
500 ISL	5.52	5.48	34.202	26.987	112.5	0.904	0.53	7.5	83.7	3.14	41.4	0.00			503	
518	5.45	5.41	34.223	27.012	110.3	0.924	0.44	6.2	86.2	3.18	41.8	0.00			522	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 34.4 N	122 49.1 W	20/11/02	0554 UTC	4259 m	330 10 kn			1020.6 mb	17.1 C	15.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.71	16.71	32.965	24.021	388.0	0.000	5.80	104.2	0.0	0.36	0.1	0.00	0.11	0.03	0	
1	16.71	16.71	32.965	24.021	388.0	0.004	5.80	104.2	0.0	0.36	0.1	0.00	0.11	0.03	1	220
10 ISL	16.71	16.71	32.964	24.021	388.4	0.039	5.78	103.8	0.0	0.35	0.0	0.00	0.11	0.03	10	
14	16.71	16.71	32.964	24.021	388.5	0.054	5.77	103.6	0.0	0.35	0.0	0.00	0.11	0.03	14	219
20 ISL	16.69	16.69	32.967	24.028	388.0	0.078	5.77	103.6	0.0	0.35	0.0	0.00	0.11	0.03	20	
30	16.62	16.62	32.963	24.042	387.0	0.116	5.78	103.6	0.0	0.36	0.0	0.00	0.12	0.03	30	218
42	16.47	16.46	32.992	24.099	382.0	0.163	5.80	103.7	0.0	0.36	0.0	0.00	0.16	0.05	42	217
50 ISL	15.26	15.25	32.896	24.296	363.3	0.192	6.18	107.8	0.3	0.40	0.0	0.00	0.25	0.10	50	
54	14.54	14.53	32.843	24.410	352.5	0.207	6.37	109.5	0.4	0.42	0.0	0.00	0.29	0.12	54	216
63	13.40	13.39	32.770	24.589	335.6	0.238	6.42	107.7	1.5	0.46	0.0	0.00	0.32	0.15	63	215
74	12.34	12.33	32.741	24.773	318.2	0.274	6.17	101.2	2.5	0.58	0.9	0.16	0.34	0.26	74	214
75 ISL	12.28	12.27	32.744	24.787	316.9	0.277	6.14	100.6	2.6	0.59	1.1	0.16	0.33	0.26	75	
84	11.89	11.88	32.778	24.887	307.6	0.305	5.92	96.2	3.6	0.69	3.4	0.09	0.20	0.24	84	213
94	11.44	11.43	32.780	24.971	299.7	0.335	5.81	93.5	4.5	0.79	5.3	0.03	0.14	0.18	94	212
100 ISL	11.29	11.28	32.789	25.005	296.6	0.353	5.77	92.6	4.9	0.82	5.9	0.03	0.12	0.15	100	
109	11.12	11.11	32.828	25.066	291.0	0.380	5.69	91.0	5.6	0.87	6.9	0.02	0.10	0.11	109	211
124	10.80	10.79	32.997	25.254	273.4	0.422	5.46	86.8	7.7	1.03	9.9	0.01	0.07	0.07	125	210
125 ISL	10.78	10.77	33.017	25.273	271.6	0.425	5.43	86.3	8.0	1.05	10.2	0.01	0.07	0.07	126	
145	10.29	10.27	33.382	25.643	236.8	0.475	4.74	74.7	13.5	1.40	16.3	0.01	0.04	0.07	146	209
150 ISL	10.03	10.01	33.416	25.713	230.1	0.487	4.64	72.7	14.6	1.44	17.1	0.01	0.03	0.06	151	
168	9.12	9.10	33.502	25.929	209.7	0.527	4.38	67.3	18.4	1.51	19.0	0.01	0.01	0.02	169	208
198	8.76	8.74	33.797	26.217	182.9	0.586	3.96	60.5	24.6	1.69	22.4	0.00	0.01	0.01	199	207
200 ISL	8.75	8.73	33.813	26.232	181.6	0.589	3.90	59.5	25.1	1.71	22.7	0.00			201	
229	8.58	8.56	33.982	26.391	167.0	0.640	3.07	46.7	31.8	1.96	26.7	0.00			230	206
250 ISL	8.24	8.21	34.020	26.473	159.5	0.674	2.81	42.5	36.1	2.08	28.5	0.00			251	
269	7.87	7.84	34.026	26.532	154.0	0.704	2.67	40.0	39.9	2.18	29.8	0.00			270	205
300 ISL	7.32	7.29	34.037	26.620	145.9	0.750	2.26	33.4	46.5	2.38	32.2	0.00			302	
318	7.03	7.00	34.043	26.665	141.7	0.776			50.3	2.49	33.6	0.00			320	204
377	6.47	6.44	34.095	26.782	131.1	0.857	1.33	19.3	61.3	2.80	37.3	0.00			379	203
400 ISL	6.25	6.21	34.105	26.818	127.8	0.886	1.17	16.9	65.4	2.88	38.3	0.00			402	
437	5.94	5.90	34.120	26.870	123.2	0.933	0.97	13.9	71.7	2.97	39.6	0.00			440	202
500 ISL	5.60	5.56	34.173	26.954	115.7	1.008	0.66	9.4	80.6	3.10	41.2	0.00			503	
516	5.51	5.47	34.187	26.976	113.7	1.026	0.58	8.2	82.8	3.13	41.6	0.00			519	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 14.9 N	123 29.7 W	19/11/02	2355 UTC	4152 m	350 11 kn	350 02 05	1	1022.0 mb	19.0 C	16.5 C	28m	3/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	17.62	17.62	33.077	23.893	400.3	0.000	5.63	103.0	0.6	0.38	0.1	0.00	0.11	0.03	0	220
10 ISL	17.57	17.57	33.080	23.907	399.2	0.040	5.64	103.1	0.7	0.38	0.1	0.00	0.11	0.03	10	
15	17.54	17.54	33.081	23.916	398.6	0.060	5.64	103.0	0.7	0.38	0.1	0.00	0.11	0.03	15	219
20 ISL	17.54	17.54	33.081	23.916	398.8	0.080	5.68	103.8	0.7	0.38	0.1	0.00	0.11	0.03	20	
28	17.53	17.53	33.082	23.919	398.7	0.112	5.75	105.0	0.7	0.38	0.1	0.00	0.12	0.02	28	218
30 ISL	17.53	17.52	33.082	23.919	398.8	0.120	5.76	105.2	0.7	0.38	0.1	0.00	0.12	0.02	30	
43	17.52	17.51	33.081	23.921	399.0	0.172	5.86	107.0	0.7	0.38	0.1	0.00	0.13	0.03	43	217
50 ISL	16.60	16.59	33.013	24.086	383.5	0.199	6.04	108.3	0.7	0.39	0.0	0.00	0.20	0.06	50	
59	15.10	15.09	32.918	24.348	358.6	0.232	6.26	108.9	0.6	0.40	0.0	0.00	0.29	0.13	59	216
74	13.05	13.04	32.798	24.680	327.2	0.284	6.36	106.0	2.0	0.48	0.1	0.02	0.30	0.29	74	215
75 ISL	12.97	12.96	32.794	24.693	326.0	0.287	6.34	105.4	2.1	0.49	0.2	0.03	0.30	0.29	75	
84	12.41	12.40	32.769	24.782	317.6	0.316	6.11	100.4	2.5	0.56	1.0	0.12	0.25	0.30	84	214
94	11.98	11.97	32.756	24.853	311.0	0.347	5.94	96.7	3.1	0.65	2.5	0.14	0.20	0.26	94	213
100 ISL	11.75	11.74	32.785	24.918	304.9	0.366	5.86	95.0	3.7	0.71	3.8	0.09	0.18	0.20	100	
104	11.63	11.62	32.812	24.962	300.9	0.378	5.82	94.1	4.2	0.75	4.6	0.05	0.16	0.16	104	212
113	11.47	11.46	32.868	25.034	294.1	0.405	5.74	92.5	5.0	0.82	6.0	0.02	0.11	0.15	113	211
124	11.42	11.40	32.910	25.076	290.4	0.437	5.64	90.8	5.2	0.84	6.4	0.02	0.11	0.12	125	210
125 ISL	11.39	11.37	32.924	25.093	288.9	0.440	5.62	90.4	5.4	0.85	6.6	0.02	0.11	0.12	126	
138	10.89	10.87	33.124	25.338	265.8	0.476	5.30	84.5	7.9	1.01	9.9	0.01	0.06	0.06	139	209
150 ISL	10.60	10.58	33.219	25.463	254.1	0.507	5.14	81.5	9.3	1.12	11.9	0.01	0.04	0.05	151	
164	10.28	10.26	33.315	25.593	242.0	0.542	4.88	76.9	11.7	1.27	14.3	0.01	0.02	0.03	165	208
193	9.23	9.21	33.725	26.087	195.4	0.605	3.46	53.4	24.2	1.83	23.5	0.00	0.00	0.02	194	207
200 ISL	9.11	9.09	33.785	26.153	189.2	0.619	3.29	50.6	25.9	1.89	24.6	0.00			201	
228	8.80	8.78	33.936	26.321	173.7	0.670	2.89	44.2	30.6	2.02	26.9	0.00			229	206
250 ISL	8.50	8.47	33.998	26.416	165.0	0.707	2.68	40.7	34.3	2.11	28.4	0.00			251	
268	8.24	8.21	34.023	26.475	159.6	0.736	2.55	38.5	37.2	2.17	29.4	0.00			269	205
300 ISL	7.72	7.69	34.041	26.566	151.2	0.786	2.36	35.2	42.4	2.29	31.1	0.00			302	
319	7.42	7.39	34.043	26.611	147.1	0.814	2.24	33.2	45.5	2.37	32.1	0.00			321	204
379	6.76	6.72	34.074	26.727	136.6	0.899	1.56	22.8	55.8	2.67	35.7	0.00			381	203
400 ISL	6.62	6.58	34.091	26.759	133.7	0.928	1.37	19.9	58.9	2.75	36.6	0.00			402	
441	6.38	6.34	34.126	26.819	128.5	0.981	1.07	15.5	64.7	2.88	38.1	0.00			444	202
500 ISL	5.98	5.94	34.170	26.905	120.8	1.055	0.73	10.5	73.6	3.04	39.9	0.00			503	
509	5.92	5.88	34.177	26.918	119.6	1.066	0.68	9.7	74.9	3.06	40.2	0.00			512	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 55.2 N	124 10.9 W	19/11/02	1755 UTC	4250 m	010 13 kn	360 04 07	0	1014.9 mb	19.1 C	16.9 C	29m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.61	17.61	33.075	23.894	400.2	0.000	5.63	103.0	0.8	0.40	0.1	0.00	0.13	0.03	0	
1	17.61	17.61	33.077	23.895	400.1	0.004									1	222
1 A	17.61	17.61	33.075	23.894	400.2	0.004	5.63	103.0	0.8	0.40	0.1	0.00	0.13	0.03	1	221
10 ISL	17.59	17.59	33.075	23.899	400.0	0.040	5.62	102.8	0.7	0.40	0.1	0.00	0.14	0.03	10	
16 A	17.58	17.58	33.075	23.901	400.0	0.064	5.61	102.6	0.6	0.40	0.1	0.00	0.14	0.03	16	220
20 ISL	17.58	17.58	33.075	23.902	400.1	0.080	5.60	102.4	0.6	0.40	0.1	0.00	0.14	0.03	20	
27	17.58	17.58	33.075	23.902	400.3	0.108	5.59	102.2	0.6	0.39	0.1	0.00	0.13	0.03	27	219
30 ISL	17.58	17.57	33.076	23.903	400.3	0.120	5.59	102.2	0.6	0.39	0.1	0.00	0.14	0.03	30	
38 A	17.58	17.57	33.078	23.905	400.4	0.152	5.60	102.4	0.7	0.39	0.1	0.00	0.15	0.03	38	218
49	17.57	17.56	33.075	23.905	400.8	0.196	5.61	102.5	0.6	0.39	0.1	0.00	0.14	0.04	49	217
50 ISL	17.54	17.53	33.075	23.912	400.1	0.200	5.62	102.7	0.5	0.39	0.1	0.00	0.16	0.04	50	
60 A	16.48	16.47	33.016	24.116	380.9	0.239	5.85	104.6	0.0	0.40	0.1	0.00	0.36	0.10	60	216
69	14.04	14.03	32.879	24.543	340.2	0.272	6.27	106.7	1.4	0.46	0.1	0.00	0.41	0.22	69	215
75 ISL	13.22	13.21	32.849	24.686	326.7	0.292	6.19	103.5	2.1	0.53	0.8	0.07	0.39	0.23	75	
77 A	13.04	13.03	32.844	24.718	323.7	0.298	6.16	102.6	2.3	0.56	1.1	0.10	0.38	0.23	77	214
90	12.28	12.27	32.842	24.863	310.0	0.339	5.97	97.9	3.3	0.68	3.1	0.21	0.28	0.28	90	213
100 ISL	11.75	11.74	32.926	25.028	294.5	0.370	5.71	92.6	4.7	0.82	6.0	0.05	0.15	0.20	100	
102	11.67	11.66	32.945	25.057	291.7	0.375	5.66	91.7	5.0	0.85	6.5	0.02	0.13	0.18	102	212
112 A	11.61	11.60	33.001	25.112	286.8	0.404	5.59	90.4	5.4	0.89	7.4	0.01	0.11	0.13	112	211
125 ISL	11.52	11.50	33.200	25.284	270.8	0.441	5.44	88.0	6.7	1.03	10.0	0.01	0.06	0.06	126	
128	11.48	11.46	33.251	25.331	266.4	0.449	5.40	87.3	7.1	1.07	10.7	0.01	0.05	0.05	129	210
145	11.00	10.98	33.408	25.540	246.8	0.492	5.08	81.3	10.6	1.27	14.0	0.01	0.01	0.02	146	209
150 ISL	10.79	10.77	33.456	25.614	239.8	0.504	4.87	77.6	12.4	1.35	15.3	0.01	0.01	0.02	151	
169	10.04	10.02	33.631	25.880	214.8	0.548	3.95	62.0	19.3	1.66	20.3	0.00	0.01	0.01	170	208
199	9.56	9.54	33.826	26.113	193.2	0.609	2.93	45.6	26.1	1.95	24.8	0.00	0.00	0.02	200	207
200 ISL	9.55	9.53	33.832	26.119	192.6	0.611	2.90	45.1	26.3	1.96	24.9	0.00			201	
229	9.30	9.27	33.973	26.270	178.8	0.665	2.30	35.6	31.2	2.15	27.6	0.00			230	206
250 ISL	9.03	9.00	34.044	26.369	169.7	0.701	2.05	31.5	34.5	2.25	29.0	0.00			251	
269	8.75	8.72	34.088	26.448	162.4	0.733	1.91	29.2	37.4	2.33	30.1	0.00			270	205
300 ISL	8.31	8.28	34.115	26.537	154.3	0.782	1.76	26.7	41.7	2.43	31.5	0.00			302	
319	8.03	8.00	34.116	26.580	150.5	0.811	1.70	25.6	44.4	2.48	32.3	0.00			321	204
377	7.12	7.08	34.113	26.709	138.6	0.895	1.43	21.1	54.2	2.68	35.2	0.00			379	203
400 ISL	6.86	6.82	34.124	26.753	134.5	0.926	1.26	18.5	58.3	2.77	36.3	0.00			402	
436	6.51	6.47	34.147	26.818	128.6	0.973	0.98	14.2	64.7	2.90	37.9	0.00			439	202
500 ISL	6.02	5.98	34.190	26.916	119.8	1.053	0.66	9.5	74.6	3.05	39.9	0.00			503	
513	5.92	5.88	34.199	26.936	118.0	1.068	0.60	8.6	76.6	3.08	40.3	0.00			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 33

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 52.5 N	118 29.5 W	17/11/02	0353 UTC	63 m	170 02 kn			1019.0 mb	17.8 C	15.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.95	16.95	33.402	24.301	361.4	0.000	5.87	106.2	2.7	0.32	0.1	0.00	0.31	0.09	0	
1	16.95	16.95	33.402	24.301	361.4	0.004	5.87	106.2	2.7	0.32	0.1	0.00	0.31	0.09	1	207
5	16.92	16.92	33.401	24.307	360.9	0.018	5.88	106.3	2.6	0.32	0.1	0.00	0.30	0.09	5	206
10	16.77	16.77	33.414	24.352	356.8	0.036	5.88	106.0	2.6	0.33	0.1	0.00	0.29	0.09	10	205
20 ISL	15.50	15.50	33.343	24.587	334.8	0.071	6.19	108.8	3.5	0.37	0.2	0.02	0.78	0.28	20	
21	15.34	15.34	33.334	24.615	332.1	0.074	6.21	108.8	3.6	0.37	0.2	0.02	0.85	0.31	21	204
29	14.25	14.25	33.294	24.818	312.9	0.100	5.93	101.6	4.9	0.55	2.0	0.23	1.23	0.47	29	203
30 ISL	14.10	14.10	33.287	24.844	310.4	0.103	5.87	100.3	5.2	0.59	2.4	0.27	1.18	0.46	30	
42	12.48	12.47	33.260	25.148	281.8	0.138	5.05	83.4	9.1	1.03	8.9	0.59	0.28	0.36	42	202
50 ISL	11.80	11.79	33.346	25.344	263.3	0.160	4.42	72.0	11.8	1.25	13.4	0.45	0.16	0.28	50	
51	11.72	11.71	33.357	25.367	261.1	0.163	4.34	70.6	12.1	1.28	14.0	0.43	0.14	0.27	51	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 49.5 N	118 37.6 W	17/11/02	0606 UTC	632 m	270 08 kn			1019.0 mb	17.9 C	15.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.38	16.38	33.316	24.367	355.1	0.000	6.07	108.6	3.1	0.32	0.1	0.01	0.88	0.50	0	
2	16.38	16.38	33.316	24.367	355.1	0.007	6.07	108.6	3.1	0.32	0.1	0.01	0.88	0.50	2	220
10	15.93	15.93	33.303	24.460	346.5	0.035	5.95	105.5	3.8	0.40	0.6	0.06	1.26	0.60	10	219
19	15.33	15.33	33.277	24.573	336.0	0.066	5.69	99.6	4.6	0.53	1.4	0.15	1.57	0.63	19	218
20 ISL	15.24	15.24	33.276	24.592	334.2	0.069	5.68	99.3	4.7	0.54	1.5	0.17	1.50	0.61	20	
30	14.26	14.26	33.276	24.802	314.5	0.102	5.62	96.3	5.9	0.68	3.1	0.34	0.66	0.42	30	217
40	13.29	13.28	33.260	24.989	296.9	0.132	5.53	92.9	6.8	0.82	5.4	0.42	0.43	0.41	40	216
50	12.16	12.15	33.274	25.220	275.1	0.161	4.89	80.2	9.1	1.09	11.4	0.66	0.21	0.27	50	215
58	11.47	11.46	33.393	25.441	254.2	0.182	4.40	71.2	11.5	1.28	13.7	0.06	0.16	0.26	58	214
69	11.29	11.28	33.509	25.564	242.7	0.209	4.01	64.6	13.6	1.40	15.4	0.03	0.10	0.16	69	213
75 ISL	11.16	11.15	33.566	25.632	236.4	0.224	3.82	61.4	14.8	1.47	16.4	0.03	0.08	0.13	75	
84	11.00	10.99	33.632	25.713	229.0	0.245	3.59	57.6	16.4	1.55	17.7	0.02	0.05	0.10	84	212
99	10.95	10.94	33.665	25.748	226.0	0.279	3.37	54.0	17.6	1.61	18.5	0.04	0.04	0.09	99	211
100 ISL	10.93	10.92	33.670	25.755	225.3	0.281	3.34	53.5	17.8	1.62	18.7	0.04	0.04	0.09	100	
119	10.52	10.51	33.770	25.905	211.4	0.323	2.88	45.7	21.5	1.84	21.7	0.03	0.02	0.07	120	210
125 ISL	10.47	10.46	33.786	25.927	209.5	0.335	2.83	44.9	22.0	1.87	22.0	0.03	0.02	0.07	126	
139	10.40	10.38	33.815	25.962	206.5	0.364	2.76	43.7	22.8	1.90	22.5	0.02	0.01	0.06	140	209
150 ISL	10.38	10.36	33.843	25.987	204.3	0.387	2.62	41.5	23.6	1.95	23.1	0.02	0.01	0.06	151	
170	10.29	10.27	33.916	26.060	197.8	0.427	2.33	36.8	25.7	2.05	24.5	0.01	0.01	0.07	171	208
199	9.83	9.81	34.098	26.281	177.4	0.481	2.01	31.5	30.7	2.21	26.9	0.01	0.00	0.05	200	207
200 ISL	9.82	9.80	34.102	26.285	177.0	0.483	2.00	31.3	30.8	2.22	27.0	0.01			201	
227	9.62	9.59	34.175	26.376	168.9	0.530	1.74	27.1	33.7	2.34	28.3	0.01			228	206
250 ISL	9.40	9.37	34.211	26.441	163.2	0.568	1.58	24.5	36.1	2.42	29.2	0.01			251	
267	9.22	9.19	34.229	26.484	159.3	0.596	1.47	22.7	37.9	2.47	29.8	0.01			269	205
300 ISL	8.83	8.80	34.257	26.569	151.7	0.647	1.23	18.9	42.2	2.56	31.2	0.01			302	
316	8.63	8.60	34.265	26.606	148.4	0.671	1.12	17.1	44.4	2.61	31.9	0.01			318	204
377	7.89	7.85	34.261	26.716	138.6	0.758	0.91	13.7	52.4	2.81	34.1	0.01			379	203
400 ISL	7.60	7.56	34.266	26.762	134.4	0.790	0.79	11.8	56.4	2.89	35.2	0.01			403	
436	7.17	7.13	34.278	26.833	128.0	0.837	0.62	9.2	62.6	3.01	36.7	0.00			439	202
500 ISL	6.71	6.66	34.297	26.911	121.1	0.917	0.47	6.9	70.5	3.12	38.0	0.01			503	
519	6.57	6.52	34.303	26.934	119.0	0.940	0.43	6.3	72.8	3.15	38.4	0.01			523	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 40

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 39.3 N	118 58.6 W	17/11/02	1000 UTC	709 m	290 08 kn			1018.4 mb	17.0 C	14.3 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	16.47	16.47	33.427	24.432	348.9	0.000	5.96	106.9	3.1	0.33	0.1	0.00	0.26	0.10	0	220
10	16.43	16.43	33.422	24.437	348.7	0.035	5.94	106.4	3.2	0.33	0.1	0.00	0.26	0.11	10	219
19	15.74	15.74	33.344	24.534	339.7	0.066	6.03	106.5	3.1	0.37	0.1	0.00	0.54	0.25	19	218
20 ISL	15.63	15.63	33.344	24.559	337.4	0.069	6.02	106.1	3.2	0.38	0.1	0.01	0.63	0.29	20	
30	14.18	14.18	33.350	24.876	307.4	0.101	5.92	101.3	5.0	0.54	2.3	0.13	1.23	0.56	30	217
40	12.05	12.04	33.282	25.247	272.3	0.130	5.16	84.4	8.0	1.00	9.7	0.05	0.42	0.39	40	216
49	11.68	11.67	33.354	25.372	260.6	0.154	4.85	78.8	10.1	1.14	12.0	0.03	0.26	0.34	49	215
50 ISL	11.63	11.62	33.359	25.385	259.3	0.157	4.82	78.2	10.3	1.16	12.2	0.03	0.25	0.33	50	
59	11.16	11.15	33.406	25.507	247.9	0.180	4.52	72.6	12.0	1.30	14.5	0.02	0.16	0.26	59	214
69	10.61	10.60	33.499	25.677	231.9	0.204	4.14	65.8	15.1	1.46	17.1	0.02	0.08	0.16	69	213
75 ISL	10.38	10.37	33.545	25.753	224.8	0.218	3.96	62.6	16.5	1.52	18.2	0.02	0.05	0.13	75	
85	10.12	10.11	33.617	25.854	215.4	0.240	3.70	58.2	18.4	1.61	19.6	0.02	0.03	0.11	85	212
100	9.92	9.91	33.731	25.977	204.1	0.271	3.29	51.5	21.4	1.76	21.7	0.01	0.01	0.08	100	211
120	9.66	9.65	33.915	26.164	186.7	0.310	2.70	42.1	26.9	1.99	24.9	0.01	0.01	0.07	121	210
125 ISL	9.74	9.73	33.962	26.188	184.6	0.319	2.50	39.1	27.9	2.05	25.5	0.01	0.01	0.07	126	
139	9.98	9.96	34.074	26.235	180.4	0.345	1.99	31.3	29.9	2.20	26.7	0.01	0.01	0.07	140	209
150 ISL	9.89	9.87	34.101	26.272	177.2	0.365	1.93	30.3	30.9	2.25	27.2	0.01	0.01	0.06	151	
169	9.74	9.72	34.142	26.329	172.1	0.398	1.83	28.6	32.2	2.28	27.8	0.02	0.01	0.05	170	208
199	9.43	9.41	34.192	26.420	164.1	0.448	1.64	25.5	35.5	2.39	29.1	0.02	0.01	0.05	200	207
200 ISL	9.42	9.40	34.194	26.423	163.8	0.450	1.63	25.3	35.6	2.39	29.1	0.02			201	
229	9.14	9.11	34.231	26.498	157.2	0.496	1.40	21.6	39.0	2.51	30.3	0.02			230	206
250 ISL	8.88	8.85	34.232	26.540	153.4	0.529	1.35	20.7	40.9	2.55	31.0	0.01			251	
268	8.66	8.63	34.230	26.573	150.6	0.556	1.32	20.2	42.6	2.58	31.5	0.01			270	205
300 ISL	8.34	8.31	34.257	26.644	144.3	0.604	1.10	16.7	46.9	2.70	32.8	0.01			302	
319	8.17	8.14	34.275	26.684	140.8	0.631	0.96	14.5	49.5	2.77	33.5	0.01			321	204
379	7.64	7.60	34.284	26.770	133.3	0.713	0.79	11.8	55.9	2.89	35.1	0.01			381	203
400 ISL	7.45	7.41	34.288	26.801	130.6	0.741	0.71	10.6	58.6	2.93	35.7	0.01			403	
438	7.11	7.07	34.297	26.856	125.7	0.789	0.58	8.6	63.4	3.01	36.9	0.01			441	202
500 ISL	6.69	6.64	34.313	26.926	119.6	0.865	0.44	6.4	70.1	3.11	38.4	0.01			503	
517	6.57	6.52	34.318	26.946	117.9	0.886	0.40	5.8	72.0	3.14	38.8	0.01			521	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.3 N	119 19.0 W	17/11/02	1401 UTC	1637 m	280 10 kn			1017.5 mb	14.9 C	14.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.69	15.69	33.325	24.530	339.5	0.000	5.94	104.8	2.2	0.40	0.1	0.00	0.47	0.13	0	
1	15.69	15.69	33.325	24.530	339.6	0.003	5.94	104.8	2.2	0.40	0.1	0.00	0.47	0.13	1	220
10	15.67	15.67	33.324	24.534	339.5	0.034	5.94	104.8	2.1	0.40	0.1	0.00	0.49	0.14	10	219
19	15.49	15.49	33.318	24.570	336.3	0.064	5.92	104.0	2.0	0.40	0.2	0.01	0.62	0.21	19	218
20 ISL	15.40	15.40	33.311	24.584	335.0	0.068	5.91	103.7	2.1	0.41	0.3	0.02	0.63	0.22	20	
30	14.13	14.13	33.238	24.800	314.6	0.100	5.81	99.3	2.8	0.58	2.4	0.14	0.72	0.26	30	217
41	12.48	12.47	33.224	25.120	284.4	0.133	5.33	88.0	6.7	0.92	7.8	0.16	0.28	0.19	41	216
50	12.01	12.00	33.319	25.284	269.0	0.158	4.93	80.6	9.0	1.10	11.1	0.07	0.21	0.18	50	215
60	11.15	11.14	33.406	25.509	247.7	0.184	4.51	72.4	12.0	1.28	14.2	0.05	0.13	0.17	60	214
71	10.73	10.72	33.550	25.696	230.2	0.210	3.91	62.3	15.8	1.51	17.7		0.09	0.17	71	213
75 ISL	10.68	10.67	33.560	25.713	228.7	0.219	3.84	61.1	15.9	1.53	18.0		0.08	0.16	75	
84	10.60	10.59	33.570	25.735	226.8	0.240	3.74	59.4	16.1	1.55	18.3		0.07	0.13	84	212
100	10.17	10.16	33.712	25.920	209.5	0.275	3.28	51.7	20.4	1.74	21.2		0.03	0.09	100	211
120	9.82	9.81	33.796	26.045	198.0	0.316	3.13	49.0	23.0	1.83	22.8		0.01	0.07	121	210
125 ISL	9.78	9.77	33.841	26.087	194.2	0.325	2.99	46.7	24.1	1.88	23.4		0.01	0.07	126	
141	9.68	9.66	33.978	26.211	182.7	0.355	2.51	39.2	27.8	2.05	25.5		0.01	0.06	142	209
150 ISL	9.54	9.52	34.007	26.256	178.5	0.372	2.40	37.3	29.4	2.10	26.3		0.01	0.06	151	
169	9.19	9.17	34.031	26.332	171.6	0.405	2.31	35.7	32.1	2.17	27.5		0.01	0.05	170	208
200	8.74	8.72	34.088	26.449	161.0	0.457	2.18	33.3	35.8	2.26	29.0		0.00	0.04	201	207
229	8.43	8.41	34.152	26.547	152.2	0.502	1.80	27.3	40.7	2.43	30.7				230	206
250 ISL	8.35	8.32	34.188	26.588	148.7	0.534	1.56	23.7	43.1	2.53	31.5				251	
269	8.30	8.27	34.213	26.615	146.4	0.562	1.37	20.8	44.9	2.61	32.1				271	205
300 ISL	8.13	8.10	34.245	26.666	142.0	0.606	1.11	16.8	48.3	2.71	33.1				302	
318	8.01	7.98	34.257	26.694	139.7	0.632	1.00	15.1	50.2	2.76	33.6				320	204
379	7.55	7.51	34.255	26.760	134.2	0.715	0.85	12.7	55.7	2.86	35.2				381	203
400 ISL	7.39	7.35	34.263	26.789	131.6	0.743	0.76	11.3	58.2	2.91	35.9				403	
440	7.09	7.05	34.283	26.848	126.5	0.795	0.59	8.7	63.3	3.01	37.2				443	202
500 ISL	6.61	6.56	34.304	26.930	119.2	0.868	0.43	6.3	71.1	3.11	38.8				503	
514	6.50	6.45	34.309	26.948	117.5	0.885	0.39	5.7	72.9	3.13	39.2				518	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 19.2 N	119 41.1 W	17/11/02	1843 UTC	69 m	290 12 kn	290 04 09	1	1018.3 mb	16.5 C	15.0 C	11m	7/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	15.64	15.64	33.352	24.562	336.5	0.000	6.03	106.3	3.4	0.40	0.2	0.01	0.91	0.24	0	
0	15.64	15.64	33.352	24.562	336.5	0.000									0	210
1 A	15.64	15.64	33.352	24.562	336.5	0.003	6.03	106.3	3.4	0.40	0.2	0.01	0.91	0.24	1	209
7 A	15.65	15.65	33.352	24.560	336.9	0.024	6.02	106.1	3.2	0.39	0.2	0.01	0.87	0.23	7	208
10 ISL	15.64	15.64	33.352	24.562	336.8	0.034	6.03	106.3	3.2	0.39	0.2	0.01	0.86	0.25	10	
15 A	15.62	15.62	33.352	24.567	336.5	0.051	6.04	106.4	3.2	0.39	0.2	0.01	0.85	0.28	15	207
20 ISL	15.61	15.61	33.353	24.570	336.3	0.067	6.03	106.2	3.1	0.39	0.2	0.01	0.91	0.26	20	
23 A	15.60	15.60	33.353	24.572	336.2	0.077	6.02	106.0	3.1	0.39	0.2	0.01	0.94	0.25	23	206
30 ISL	15.36	15.36	33.349	24.622	331.6	0.101	5.86	102.7	3.4	0.46	1.0	0.06	0.90	0.32	30	
31 A	15.31	15.31	33.348	24.633	330.7	0.104	5.83	102.1	3.5	0.47	1.2	0.07	0.90	0.33	31	205
36	14.92	14.91	33.342	24.713	323.2	0.120	5.75	99.9	3.9	0.53	2.0	0.12	0.69	0.30	36	204
44 A	14.38	14.37	33.307	24.802	314.9	0.146	5.63	96.7	4.6	0.64	3.4	0.17	0.45	0.23	44	203
50 ISL	13.35	13.34	33.230	24.954	300.5	0.164	5.56	93.5	5.3	0.76	5.2	0.20	0.38	0.27	50	
51	13.16	13.15	33.221	24.985	297.6	0.167	5.54	92.8	5.5	0.79	5.6	0.20	0.37	0.28	51	202
61	11.66	11.65	33.316	25.347	263.3	0.195	4.86	78.9	10.4	1.16	12.0	0.12	0.15	0.18	61	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 9.2 N	120 0.7 W	17/11/02	2145 UTC	1206 m	310 17 kn	300 06 05	1	1018.0 mb	16.0 C	14.5 C	16m	4/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.28	16.28	33.350	24.416	350.4	0.000	5.90	105.3	1.7	0.37	0.1	0.00	0.40	0.12	0	
1	16.28	16.28	33.350	24.416	350.4	0.004	5.90	105.3	1.7	0.37	0.1	0.00	0.40	0.12	1	220
10	16.28	16.28	33.349	24.416	350.8	0.035	5.94	106.0	1.7	0.37	0.1	0.00	0.40	0.12	10	219
20	16.10	16.10	33.347	24.455	347.3	0.070	5.91	105.1	1.8	0.37	0.2	0.00	0.50	0.13	20	217
30	15.66	15.66	33.341	24.550	338.6	0.104	5.90	104.0	2.5	0.41	0.3	0.02	0.80	0.29	30	218
40	14.06	14.05	33.208	24.792	315.7	0.137	5.78	98.6	3.5	0.62	2.8	0.18	0.37	0.21	40	216
50	12.58	12.57	33.148	25.042	292.0	0.167	5.59	92.4	5.5	0.87	6.8	0.23	0.34	0.32	50	215
59	12.19	12.18	33.193	25.152	281.8	0.193	5.34	87.6	6.8	0.97	8.7	0.13	0.24	0.26	59	214
69	11.88	11.87	33.217	25.229	274.7	0.221	5.27	85.9	7.8	1.05	10.0	0.09	0.19	0.24	69	213
75 ISL	11.60	11.59	33.245	25.303	267.8	0.237	5.16	83.6	8.7	1.12	11.2	0.07	0.15	0.21	75	
84	11.15	11.14	33.303	25.430	255.9	0.261	4.95	79.5	10.4	1.23	13.2	0.06	0.10	0.15	84	212
99	10.46	10.45	33.427	25.648	235.4	0.298	4.56	72.2	13.4	1.37	15.9	0.06	0.06	0.09	99	211
100 ISL	10.41	10.40	33.437	25.664	233.8	0.300	4.53	71.6	13.7	1.38	16.1		0.06	0.09	100	
119	9.64	9.63	33.619	25.936	208.3	0.342	3.99	62.1	18.5	1.56	19.4		0.02	0.06	120	210
125 ISL	9.53	9.52	33.661	25.987	203.5	0.354	3.84	59.6	19.8	1.62	20.3		0.02	0.06	126	
138	9.41	9.39	33.747	26.074	195.5	0.380	3.53	54.7	22.5	1.74	22.2		0.01	0.05	139	209
150 ISL	9.38	9.36	33.854	26.163	187.3	0.403	3.19	49.4	25.2	1.86	23.8		0.00	0.04	151	
168	9.31	9.29	33.998	26.287	175.9	0.436	2.72	42.1	29.2	2.03	25.9		0.00	0.03	169	208
199	8.73	8.71	34.084	26.447	161.2	0.488	2.35	35.9	35.6	2.21	28.7		0.00	0.02	200	207
200 ISL	8.72	8.70	34.085	26.449	161.0	0.490	2.34	35.8	35.7	2.21	28.7				201	
229	8.44	8.42	34.102	26.506	156.0	0.536	2.21	33.6	38.5	2.29	29.7				230	206
250 ISL	8.21	8.18	34.122	26.557	151.5	0.568	2.00	30.2	41.7	2.39	30.9				251	
268	8.03	8.00	34.143	26.601	147.6	0.595	1.79	26.9	44.6	2.48	31.9				270	205
300 ISL	7.85	7.82	34.185	26.661	142.4	0.641	1.44	21.6	48.7	2.63	33.3				302	
316	7.75	7.72	34.201	26.688	140.0	0.664	1.29	19.3	50.7	2.69	33.9				318	204
378	6.96	6.92	34.171	26.776	132.1	0.748	1.15	16.9	58.8	2.82	36.4				380	203
400 ISL	6.84	6.80	34.187	26.805	129.6	0.777	1.00	14.6	61.5	2.88	37.1				403	
437	6.70	6.66	34.225	26.855	125.4	0.824	0.74	10.8	66.0	2.99	38.2				440	202
500 ISL	6.36	6.31	34.280	26.943	117.6	0.901	0.49	7.1	73.8	3.14	39.8				503	
515	6.28	6.23	34.294	26.965	115.7	0.918	0.43	6.2	75.6	3.17	40.2				519	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 59.4 N	120 20.9 W	18/11/02	0157 UTC	730 m	310 20 kn			1015.8 mb	15.9 C	15.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.55	16.55	33.397	24.390	352.9	0.000	5.80	104.1	1.2	0.38	0.1	0.00	0.34	0.09	0	
1	16.55	16.55	33.397	24.390	352.9	0.004	5.80	104.1	1.2	0.38	0.1	0.00	0.34	0.09	1	220
9	16.54	16.54	33.396	24.392	353.0	0.032	5.81	104.3	1.3	0.37	0.0	0.00	0.34	0.08	9	219
10 ISL	16.54	16.54	33.395	24.391	353.1	0.035	5.81	104.3	1.3	0.37	0.0	0.00	0.34	0.08	10	
19	16.52	16.52	33.390	24.392	353.3	0.067	5.81	104.2	1.2	0.37	0.0	0.00	0.36	0.08	19	218
20 ISL	16.52	16.52	33.390	24.392	353.3	0.071	5.81	104.2	1.2	0.37	0.0	0.00	0.37	0.09	20	
29	16.30	16.30	33.370	24.428	350.2	0.102	5.87	104.8	1.2	0.37	0.0	0.00	0.44	0.14	29	217
30 ISL	16.26	16.26	33.363	24.432	349.9	0.106	5.88	104.9	1.2	0.37	0.0	0.00	0.50	0.16	30	
38	15.61	15.60	33.277	24.512	342.4	0.133	5.97	105.1	1.4	0.41	0.1	0.00	1.00	0.36	38	216
48	13.72	13.71	33.130	24.802	315.0	0.166	5.99	101.4	2.7	0.63	2.6	0.12	1.03	0.50	48	215
50 ISL	13.36	13.35	33.119	24.866	308.9	0.173	5.89	99.0	3.4	0.70	3.7	0.12	0.90	0.48	50	
59	12.02	12.01	33.138	25.141	282.8	0.199	5.39	88.1	6.8	0.99	9.0	0.06	0.30	0.31	59	214
68	11.45	11.44	33.238	25.325	265.5	0.224	5.24	84.6	9.2	1.16	12.1	0.02	0.17	0.17	68	213
75 ISL	11.21	11.20	33.285	25.405	258.0	0.242	5.05	81.2	10.3	1.24	13.4	0.02	0.12	0.15	75	
83	10.99	10.98	33.333	25.482	250.9	0.263	4.80	76.8	11.5	1.30	14.4	0.01	0.10	0.12	83	212
99	10.31	10.30	33.489	25.722	228.3	0.301	4.31	68.0	15.3	1.46	17.3	0.01	0.05	0.07	99	211
100 ISL	10.28	10.27	33.498	25.734	227.1	0.303	4.28	67.5	15.5	1.47	17.5	0.01	0.05	0.07	100	
119	9.70	9.69	33.660	25.958	206.2	0.344	3.79	59.1	20.1	1.63	20.4	0.00	0.02	0.04	120	210
125 ISL	9.52	9.51	33.719	26.034	199.1	0.356	3.62	56.2	21.9	1.69	21.5	0.00	0.02	0.04	126	
139	9.19	9.17	33.848	26.188	184.6	0.383	3.25	50.1	25.8	1.84	24.0	0.01	0.01	0.03	140	209
150 ISL	9.16	9.14	33.925	26.254	178.6	0.403	3.00	46.3	27.9	1.93	25.2	0.01	0.01	0.03	151	
168	9.10	9.08	34.004	26.326	172.2	0.435	2.66	41.0	30.9	2.05	26.5	0.00	0.01	0.02	169	208
198	8.69	8.67	34.102	26.467	159.2	0.485	2.28	34.8	36.4	2.24	28.6	0.00	0.00	0.02	199	207
200 ISL	8.66	8.64	34.103	26.473	158.7	0.488	2.27	34.7	36.7	2.25	28.7	0.00			201	
230	8.21	8.19	34.101	26.540	152.7	0.535	2.12	32.0	40.4	2.33	30.2	0.00			231	206
250 ISL	8.00	7.97	34.130	26.595	147.8	0.565	1.83	27.5	44.1	2.46	31.5	0.00			251	
270	7.85	7.82	34.165	26.644	143.4	0.594	1.52	22.8	47.8	2.59	32.7	0.00			272	205
300 ISL	7.72	7.69	34.198	26.690	139.5	0.636	1.28	19.1	50.8	2.69	33.6	0.00			302	
322	7.62	7.59	34.215	26.718	137.2	0.667	1.15	17.2	52.7	2.74	34.2	0.00			324	204
382	7.05	7.01	34.245	26.822	127.9	0.746	0.76	11.2	62.0	2.95	36.7	0.00			384	203
400 ISL	6.99	6.95	34.252	26.836	126.8	0.769	0.70	10.3	63.1	2.97	37.0	0.00			403	
439	6.89	6.85	34.267	26.862	124.9	0.818	0.61	8.9	65.2	3.01	37.4	0.00			442	202
500 ISL	6.46	6.41	34.295	26.942	117.8	0.892	0.44	6.4	72.8	3.13	39.1	0.00			503	
514	6.36	6.31	34.302	26.961	116.2	0.909	0.40	5.8	74.5	3.16	39.5	0.00			518	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 39.7 N	121 2.1 W	18/11/02	0755 UTC	3775 m	300 13 kn			1020.1 mb	15.8 C	15.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.42	16.42	33.318	24.359	355.8	0.000	5.77	103.3	0.3	0.40	0.0	0.00	0.21	0.06	0	
1	16.42	16.42	33.318	24.359	355.8	0.004	5.77	103.3	0.3	0.40	0.0	0.00	0.21	0.06	1	220
10 ISL	16.43	16.43	33.319	24.358	356.2	0.036	5.77	103.3	0.3	0.40	0.0	0.00	0.21	0.05	10	
15	16.43	16.43	33.319	24.358	356.4	0.053	5.77	103.3	0.3	0.40	0.0	0.00	0.21	0.05	15	219
20 ISL	16.43	16.43	33.319	24.359	356.5	0.071	5.77	103.3	0.3	0.40	0.0	0.00	0.21	0.05	20	
30	16.43	16.43	33.318	24.358	356.9	0.107	5.76	103.1	0.3	0.40	0.0	0.00	0.22	0.05	30	218
45	14.33	14.32	33.109	24.659	328.5	0.158	6.22	106.6	0.0	0.43	0.2	0.01	1.33	0.40	45	217
50 ISL	13.11	13.10	33.009	24.831	312.2	0.174	6.10	101.9	1.7	0.60	2.4	0.18	1.38	0.54	50	
55	12.00	11.99	32.945	24.995	296.6	0.190	5.92	96.6	3.7	0.79	5.0	0.30	1.44	0.60	55	216
64	11.35	11.34	32.979	25.141	282.8	0.216	5.62	90.4	6.3	0.98	8.6	0.07	0.27	0.25	64	215
73	11.09	11.08	33.061	25.252	272.5	0.241	5.44	87.1	7.9	1.08	10.6	0.02	0.14	0.13	73	214
75 ISL	11.02	11.01	33.102	25.296	268.3	0.246	5.34	85.4	8.6	1.12	11.3	0.02	0.13	0.13	75	
85	10.67	10.66	33.326	25.532	246.0	0.272	4.78	75.9	12.6	1.33	15.0	0.01	0.10	0.12	85	213
94	10.48	10.47	33.460	25.670	233.2	0.293	4.40	69.7	15.1	1.45	17.0	0.01	0.09	0.10	94	212
100 ISL	10.07	10.06	33.464	25.743	226.3	0.307	4.37	68.6	16.2	1.49	17.8	0.01	0.07	0.08	100	
110	9.35	9.34	33.471	25.867	214.5	0.329	4.33	66.9	18.3	1.56	19.3	0.01	0.03	0.06	111	211
125	8.99	8.98	33.728	26.126	190.2	0.359	3.60	55.2	24.6	1.79	23.3	0.00	0.01	0.03	126	210
144	8.87	8.85	33.889	26.271	176.8	0.394	3.01	46.1	29.3	1.97	26.1	0.00	0.00	0.03	145	209
150 ISL	8.81	8.79	33.920	26.305	173.7	0.405	2.91	44.5	30.4	2.00	26.6	0.00	0.00	0.03	151	
170	8.58	8.56	33.986	26.393	165.7	0.439	2.71	41.3	33.3	2.08	27.9	0.00	0.00	0.03	171	208
200	8.34	8.32	34.027	26.462	159.6	0.488	2.45	37.1	36.7	2.19	29.5	0.00	0.00	0.03	201	207
229	7.81	7.79	34.034	26.547	151.8	0.533	2.36	35.3	41.6	2.28	31.0	0.00			230	206
250 ISL	7.74	7.72	34.091	26.602	147.0	0.564	2.00	29.9	45.1	2.42	31.9	0.00			251	
271	7.67	7.64	34.140	26.651	142.7	0.595	1.61	24.0	48.3	2.56	32.8	0.00			273	205
300 ISL	7.45	7.42	34.162	26.700	138.4	0.635	1.39	20.6	52.1	2.66	34.0	0.00			302	
320	7.30	7.27	34.172	26.729	135.9	0.663	1.28	18.9	54.4	2.71	34.7	0.00			322	204
380	7.18	7.14	34.264	26.819	128.3	0.742	0.67	9.9	61.1	2.94	36.4	0.00			382	203
400 ISL	7.04	7.00	34.276	26.848	125.7	0.767	0.58	8.5	63.5	3.03	37.1	0.00			403	
435	6.74	6.70	34.285	26.897	121.5	0.811	0.50	7.3	68.1	3.16	38.3	0.00			438	202
500 ISL	6.09	6.05	34.296	26.991	112.8	0.887	0.37	5.3	77.9	3.18	40.1	0.00			503	
509	6.00	5.96	34.298	27.004	111.6	0.897	0.35	5.0	79.3	3.18	40.3	0.00			512	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 19.4 N	121 44.4 W	18/11/02	1727	UTC	4038 m	360	17 kn	350 05 07	1	1022.2 mb	18.1 C	16.2 C	23m	2/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.18	17.18	33.067	23.990	391.0	0.000	5.66	102.7	0.2	0.39	0.1	0.00	0.13	0.04	0	
1 A	17.18	17.18	33.067	23.990	391.0	0.004	5.66	102.7	0.2	0.39	0.1	0.00	0.13	0.04	1	221
2	17.18	17.18	33.067	23.990	391.1	0.008									2	222
10 ISL	17.17	17.17	33.067	23.992	391.1	0.039	5.66	102.7	0.1	0.38	0.1	0.00	0.14	0.04	10	
13 A	17.17	17.17	33.067	23.993	391.2	0.051	5.66	102.7	0.1	0.38	0.1	0.00	0.14	0.04	13	220
20 ISL	17.17	17.17	33.067	23.993	391.4	0.078	5.70	103.4	0.3	0.37	0.1	0.00	0.14	0.04	20	
23	17.17	17.17	33.067	23.993	391.5	0.090	5.71	103.6	0.3	0.37	0.1	0.00	0.14	0.04	23	219
30 ISL	17.09	17.09	33.108	24.044	386.9	0.117	5.68	102.9	0.0	0.37	0.1	0.00	0.17	0.05	30	
31 A	17.07	17.06	33.115	24.054	386.0	0.121	5.67	102.7	0.0	0.37	0.1	0.00	0.17	0.05	31	218
40	16.91	16.90	33.161	24.127	379.3	0.156	5.71	103.1	0.0	0.37	0.0	0.00	0.21	0.07	40	217
48 A	15.88	15.87	33.044	24.273	365.5	0.185	6.08	107.5	0.0	0.40	0.1	0.00	0.34	0.13	48	216
50 ISL	15.28	15.27	32.972	24.350	358.2	0.193	6.18	107.9	0.0	0.41	0.1	0.00	0.36	0.13	50	
55	13.79	13.78	32.833	24.558	338.3	0.210	6.37	107.8	0.1	0.46	0.1	0.00	0.45	0.14	55	215
63 A	12.89	12.88	32.905	24.794	316.0	0.236	6.30	104.7	0.8	0.57	1.1	0.07	0.92	0.37	63	214
75 ISL	11.67	11.66	32.839	24.974	299.0	0.273	6.04	97.8	3.5	0.77	4.5	0.16	0.92	0.39	75	
77	11.51	11.50	32.827	24.994	297.1	0.279	5.99	96.6	4.0	0.80	5.2	0.17	0.92	0.39	77	213
91 A	11.16	11.15	32.977	25.174	280.3	0.319	5.63	90.2	6.5	0.98	8.7	0.02	0.13	0.11	91	212
100 ISL	10.64	10.63	33.050	25.323	266.3	0.344	5.42	85.9	8.4	1.08	10.7	0.01	0.08	0.09	100	
106	10.31	10.30	33.106	25.423	256.8	0.360	5.27	83.0	9.7	1.14	12.0	0.01	0.05	0.07	106	211
121	10.16	10.15	33.328	25.622	238.2	0.397	4.80	75.4	12.7	1.34	15.2	0.01	0.04	0.05	122	210
125 ISL	10.05	10.04	33.375	25.678	233.0	0.406	4.67	73.2	13.8	1.39	16.1	0.01	0.04	0.05	126	
140	9.57	9.55	33.531	25.879	214.1	0.440	4.21	65.4	18.1	1.58	19.3	0.00	0.02	0.03	141	209
150 ISL	9.31	9.29	33.634	26.002	202.5	0.461	3.89	60.1	21.0	1.68	21.2	0.00	0.01	0.02	151	
169	8.93	8.91	33.805	26.197	184.4	0.497	3.34	51.2	26.3	1.86	24.4	0.00	0.00	0.02	170	208
199	8.59	8.57	33.978	26.385	166.9	0.550	2.69	41.0	33.6	2.11	28.1	0.00	0.00	0.02	200	207
200 ISL	8.58	8.56	33.981	26.389	166.6	0.552	2.68	40.8	33.7	2.11	28.1	0.00			201	
228	8.38	8.36	34.021	26.452	161.1	0.598	2.55	38.7	35.8	2.16	28.8	0.00			229	206
250 ISL	8.10	8.07	34.039	26.508	156.0	0.632	2.39	36.0	38.9	2.24	30.0	0.00			251	
269	7.82	7.79	34.048	26.557	151.6	0.662	2.24	33.5	42.2	2.32	31.2	0.00			270	205
300 ISL	7.33	7.30	34.057	26.634	144.5	0.708	1.98	29.3	47.8	2.46	33.1	0.00			302	
321	7.02	6.99	34.065	26.684	139.9	0.737	1.79	26.3	51.8	2.56	34.3	0.00			323	204
379	6.55	6.52	34.128	26.797	129.8	0.816	1.14	16.6	62.4	2.84	37.2	0.00			381	203
400 ISL	6.38	6.34	34.140	26.829	126.9	0.843	1.00	14.5	65.6	2.91	38.0	0.00			402	
437	6.09	6.05	34.156	26.879	122.4	0.889	0.81	11.7	71.0	3.00	39.2	0.00			440	202
500 ISL	5.56	5.52	34.200	26.980	113.2	0.963	0.55	7.8	81.9	3.14	41.1	0.00			503	
517	5.42	5.38	34.212	27.007	110.7	0.982	0.48	6.8	84.9	3.18	41.6	0.00			520	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 59.5 N	122 23.9 W	18/11/02	2313	UTC	4128 m	350	12 kn	360 08 07	1	1021.9 mb	16.9 C	16.1 C	22m	4/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.51	17.51	33.034	23.886	400.9	0.000	5.64	102.9	0.4	0.40	0.1	0.00	0.11	0.03	0	
1	17.51	17.51	33.034	23.886	400.9	0.004	5.64	102.9	0.4	0.40	0.1	0.00	0.11	0.03	1	220
10 ISL	17.50	17.50	33.034	23.889	401.0	0.040	5.66	103.3	0.5	0.39	0.1	0.00	0.11	0.03	10	
14	17.49	17.49	33.034	23.891	400.9	0.056	5.67	103.5	0.5	0.39	0.1	0.00	0.11	0.03	14	219
20 ISL	17.47	17.47	33.034	23.896	400.6	0.080	5.69	103.8	0.4	0.39	0.1	0.00	0.11	0.03	20	
29	17.45	17.45	33.034	23.902	400.4	0.116	5.70	103.9	0.2	0.39	0.1	0.00	0.12	0.03	29	218
30 ISL	17.45	17.45	33.034	23.902	400.4	0.120	5.70	103.9	0.2	0.39	0.1	0.00	0.12	0.03	30	
45	17.43	17.42	33.033	23.906	400.5	0.180	5.63	102.6	0.3	0.38	0.0	0.00	0.15	0.03	45	217
50 ISL	16.70	16.69	32.991	24.046	387.3	0.200	5.83	104.7	0.5	0.39	0.1	0.00	0.22	0.06	50	
55	15.78	15.77	32.940	24.216	371.2	0.219	6.06	106.8	0.7	0.40	0.1	0.00	0.28	0.09	55	216
65	13.85	13.84	32.829	24.543	340.1	0.255	6.33	107.2	1.4	0.43	0.0	0.00	0.24	0.14	65	215
75 ISL	12.92	12.91	32.789	24.699	325.4	0.288	6.20	103.0	1.9	0.47	0.1	0.00	0.33	0.30	75	
76	12.86	12.85	32.786	24.708	324.5	0.291	6.18	102.5	2.0	0.48	0.1	0.00	0.34	0.31	76	214
85	12.26	12.25	32.743	24.790	316.8	0.320	6.02	98.6	2.6	0.57	0.9	0.14	0.29	0.26	85	213
94	11.81	11.80	32.737	24.870	309.4	0.348	5.90	95.7	3.4	0.67	3.0	0.08	0.21	0.21	94	212
100 ISL	11.57	11.56	32.737	24.914	305.3	0.367	5.86	94.6	3.8	0.72	4.0	0.05	0.17	0.19	100	
110	11.27	11.26	32.797	25.015	295.9	0.397	5.77	92.6	4.9	0.81	5.8	0.01	0.12	0.15	110	211
125	10.99	10.97	33.120	25.317	267.5	0.439	5.36	85.6	8.2	1.09	10.9	0.01	0.06	0.08	126	210
145	9.54	9.52	33.384	25.769	224.6	0.488	4.93	76.4	15.7	1.45	17.3	0.01	0.02	0.03	146	209
150 ISL	9.37	9.35	33.442	25.842	217.7	0.499	4.74	73.2	17.0	1.50	18.3	0.01	0.02	0.03	151	
170	9.03	9.01	33.651	26.060	197.3	0.541	3.90	59.9	21.8	1.67	21.4	0.01	0.01	0.02	171	208
200	8.72	8.70	33.924	26.323	172.9	0.596	2.89	44.1	31.0	2.03	27.0	0.00	0.00	0.02	201	207
227	8.51	8.49	34.001	26.416	164.5	0.642	2.67	40.6	34.2	2.10	28.3	0.00			228	206
250 ISL	8.23	8.20	34.025	26.478	159.0	0.679	2.63	39.7	36.9	2.14	29.1	0.00			251	
270	7.95	7.92	34.031	26.524	154.8	0.710	2.60	39.0	39.4	2.19	29.8	0.00			271	205
300 ISL	7.54	7.51	34.035	26.587	149.1	0.756	2.40	35.7	43.8	2.30	31.4	0.00			302	
319	7.29	7.26	34.040	26.627	145.5	0.784	2.21	32.7	47.0	2.39	32.5	0.00			321	204
379	6.71	6.68	34.110	26.762	133.2	0.867	1.30	19.0	58.6	2.77	36.6	0.00			381	203
400 ISL	6.56	6.52	34.130	26.798	130.0	0.895	1.12	16.3	62.0	2.85	37.5	0.00			402	
438	6.31	6.27	34.159	26.854	125.1	0.944	0.89	12.9	67.9	2.96	38.7	0.00			441	202
500 ISL	5.76	5.72	34.194	26.951	116.2	1.018	0.62	8.9	78.2	3.11	40.6	0.00			503	
513	5.64	5.60	34.202	26.972	114.2	1.033	0.56	8.0	80.4	3.14	41.0	0.00			516	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 39.6 N	123 4.5 W	19/11/02	0457 UTC	4120 m	020 13 kn			1023.8 mb	17.1 C	15.9 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.47	17.47	33.103	23.948	395.0	0.000	5.64	102.9	0.5	0.39	0.2	0.00	0.12	0.03	0	
1	17.47	17.47	33.103	23.949	395.0	0.004	5.64	102.9	0.5	0.39	0.2	0.00	0.12	0.03	1	220
10 ISL	17.47	17.47	33.103	23.949	395.3	0.040	5.63	102.7	0.5	0.39	0.1	0.00	0.12	0.03	10	
14	17.47	17.47	33.103	23.949	395.4	0.055	5.63	102.7	0.5	0.39	0.1	0.00	0.12	0.03	14	219
20 ISL	17.47	17.47	33.102	23.949	395.6	0.079	5.63	102.7	0.5	0.39	0.1	0.00	0.13	0.03	20	
29	17.47	17.47	33.102	23.949	395.9	0.115	5.63	102.7	0.4	0.38	0.1	0.00	0.14	0.02	29	218
30 ISL	17.47	17.47	33.102	23.949	395.9	0.119	5.63	102.7	0.4	0.38	0.1	0.00	0.14	0.02	30	
45	17.48	17.47	33.105	23.949	396.4	0.178	5.63	102.7	0.4	0.38	0.1	0.00	0.13	0.03	45	217
50 ISL	17.43	17.42	33.101	23.958	395.7	0.198	5.67	103.4	0.3	0.38	0.1	0.00	0.15	0.04	50	
54	17.39	17.38	33.098	23.966	395.1	0.214	5.70	103.8	0.3	0.38	0.1	0.00	0.17	0.04	54	216
64	13.86	13.85	32.854	24.560	338.4	0.250	6.37	108.0	0.2	0.46	0.1	0.00	0.42	0.22	64	215
75	12.64	12.63	32.786	24.751	320.4	0.287	6.29	103.9	1.4	0.55	0.3	0.06	0.49	0.28	75	214
84	11.84	11.83	32.730	24.859	310.2	0.315	6.04	98.0	2.9	0.71	3.0	0.22	0.43	0.29	84	213
94	11.36	11.35	32.701	24.924	304.2	0.346	5.98	96.1	3.9	0.80	4.9	0.04	0.24	0.18	94	212
100 ISL	11.36	11.35	32.728	24.945	302.3	0.364	5.94	95.4	4.1	0.82	5.4	0.03	0.18	0.14	100	
109	11.35	11.34	32.809	25.010	296.3	0.391	5.82	93.5	4.8	0.87	6.4	0.01	0.12	0.11	109	211
125 ISL	10.50	10.49	33.056	25.352	264.0	0.436	5.34	84.4	8.7	1.10	11.1	0.00	0.05	0.07	126	
127	10.37	10.36	33.091	25.402	259.3	0.441	5.27	83.0	9.3	1.13	11.8	0.00	0.05	0.07	128	210
144	9.66	9.64	33.333	25.710	230.2	0.482	4.78	74.3	14.3	1.39	16.4	0.00	0.02	0.02	145	209
150 ISL	9.50	9.48	33.425	25.808	221.0	0.496	4.51	69.9	16.7	1.51	18.3	0.00	0.02	0.02	151	
171	9.10	9.08	33.711	26.096	194.0	0.540	3.58	55.1	24.5	1.86	24.1	0.00	0.01	0.02	172	208
200 ISL	8.75	8.73	33.929	26.322	173.0	0.593	3.04	46.5	30.0	1.98	26.4	0.00	0.00	0.02	201	
203	8.73	8.71	33.942	26.336	171.8	0.598	3.01	46.0	30.4	1.98	26.5	0.00	0.00	0.02	204	207
233	8.52	8.50	34.008	26.420	164.2	0.648	2.60	39.5	34.4	2.14	28.6	0.00			234	206
250 ISL	8.29	8.26	34.031	26.474	159.4	0.676	2.42	36.6	37.3	2.22	29.7	0.00			251	
268	8.01	7.98	34.047	26.528	154.4	0.704	2.26	34.0	40.4	2.30	30.8	0.00			269	205
300 ISL	7.56	7.53	34.057	26.602	147.7	0.752	2.09	31.1	45.3	2.42	32.5	0.00			302	
319	7.32	7.29	34.061	26.639	144.4	0.780	1.98	29.3	48.2	2.49	33.4	0.00			321	204
379	6.70	6.67	34.111	26.764	133.0	0.863	1.26	18.4	59.0	2.80	36.6	0.00			381	203
400 ISL	6.53	6.49	34.132	26.803	129.5	0.891									402	
438	6.24	6.20	34.167 D	26.869	123.6	0.939									441	202
500 ISL	5.72	5.68	34.193	26.955	115.7	1.013									503	
508	5.65	5.61	34.197 D	26.967	114.6	1.022									511	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 87 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 19.7 N	123 44.8 W	19/11/02	1033 UTC	3994 m	010 12 kn			1014.3 mb	16.6 C	15.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.27	17.27	33.101	23.995	390.6	0.000	5.64	102.5	0.3	0.39	0.1	0.00	0.13	0.03	0	
1	17.27	17.27	33.101	23.995	390.6	0.004	5.64	102.5	0.3	0.39	0.1	0.00	0.13	0.03	1	220
10 ISL	17.28	17.28	33.101	23.993	391.1	0.039	5.64	102.5	0.4	0.39	0.1	0.00	0.12	0.03	10	
16	17.28	17.28	33.101	23.993	391.3	0.063	5.64	102.5	0.4	0.39	0.1	0.00	0.12	0.03	16	219
20 ISL	17.28	17.28	33.102	23.994	391.3	0.078	5.64	102.5	0.4	0.39	0.1	0.00	0.12	0.03	20	
30 ISL	17.28	17.28	33.103	23.995	391.5	0.117	5.63	102.3	0.3	0.38	0.1	0.00	0.13	0.03	30	
31	17.28	17.27	33.103	23.995	391.6	0.121	5.63	102.3	0.3	0.38	0.1	0.00	0.13	0.03	31	218
46	16.79	16.78	33.081	24.094	382.6	0.179	5.77	103.9	0.0	0.39	0.1	0.00	0.25	0.10	46	217
50 ISL	16.51	16.50	33.085	24.161	376.3	0.195	5.86	104.9	0.0	0.40	0.1	0.00	0.31	0.14	50	
55	16.03	16.02	33.083	24.269	366.1	0.213	5.98	106.0	0.0	0.41	0.1	0.00	0.38	0.20	55	216
65	14.52	14.51	33.017	24.549	339.6	0.248	6.16	105.9	0.4	0.48	0.1	0.01	0.50	0.30	65	215
75 ISL	13.14	13.13	32.885	24.730	322.5	0.281	6.14	102.5	2.0	0.59	1.0	0.13	0.43	0.24	75	
76	13.02	13.01	32.871	24.743	321.3	0.285	6.14	102.3	2.2	0.60	1.1	0.15	0.42	0.23	76	214
85	12.13	12.12	32.794	24.854	310.7	0.313	6.02	98.4	3.3	0.71	2.9	0.32	0.27	0.17	85	213
95	11.24	11.23	32.839	25.053	291.9	0.343	5.75	92.2	5.3	0.89	6.9	0.02	0.11	0.14	95	212
100 ISL	10.93	10.92	32.885	25.144	283.3	0.358	5.62	89.5	6.5	0.98	8.6	0.01	0.09	0.12	100	
110	10.47	10.46	32.993	25.308	267.9	0.385	5.37	84.8	8.9	1.13	11.4	0.00	0.06	0.07	110	211
125 ISL	10.01	10.00	33.142	25.502	249.6	0.424	5.12	80.1	11.5	1.27	14.0	0.00	0.03	0.05	126	
127	9.96	9.95	33.163	25.527	247.3	0.429	5.08	79.4	11.9	1.29	14.3	0.00	0.03	0.05	128	210
145	9.52	9.50	33.409	25.792	222.4	0.471	4.52	70.0	16.5	1.50	18.0	0.00	0.01	0.03	146	209
150 ISL	9.44	9.42	33.469	25.852	216.8	0.482	4.35	67.3	17.9	1.57	19.1	0.00	0.01	0.03	151	
170	9.21	9.19	33.674	26.050	198.4	0.524	3.71	57.2	23.1	1.79	22.7	0.00	0.01	0.02	171	208
200 ISL	8.90	8.88	33.891	26.269	178.1	0.580	3.20	49.1	28.0	1.90	25.1	0.00	0.00	0.02	201	
202	8.88	8.86	33.901	26.280	177.1	0.584	3.18	48.7	28.3	1.90	25.2	0.00	0.00	0.02	203	207
227	8.54	8.52	33.997	26.409	165.3	0.627	2.89	44.0	33.0	2.02	27.2	0.00			228	206
250 ISL	8.19	8.16	34.023	26.482	158.5	0.664	2.80	42.3	36.4	2.09	28.4	0.00			251	
270	7.89	7.86	34.024	26.528	154.4	0.695	2.74	41.1	39.2	2.15	29.3	0.00			271	205
300 ISL	7.46	7.43	34.030	26.595	148.3	0.740	2.49	37.0	44.1	2.28	31.1	0.00			302	
319	7.21	7.18	34.035	26.634	144.8	0.768	2.27	33.5	47.4	2.38	32.4	0.00			321	204
377	6.67	6.64	34.092	26.753	134.0	0.849	1.36	19.8	58.8	2.74	36.6	0.00			379	203
400 ISL	6.46	6.42	34.104	26.790	130.6	0.880									402	
437	6.15	6.11	34.126 D	26.848	125.4	0.927									440	202
500 ISL	5.82	5.78	34.204	26.952	116.2	1.003									503	
512	5.76	5.72	34.219 D	26.971	114.4	1.017									515	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 29.1 N	117 46.3 W	16/11/02	2143	UTC	72 m	320	03 kn	270 01 07	1	1020.1 mb	23.2 C	19.5 C	19m	3/8	CS

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.61	17.61	33.379	24.126	378.0	0.000	5.93	108.7	2.4	0.31	0.1		0.55	0.17	0	
1	17.61	17.61	33.379	24.126	378.0	0.004	5.93	108.7	2.4	0.31	0.1		0.55	0.17	1	208
6	17.30	17.30	33.427	24.238	367.6	0.022	5.81	105.9	1.7	0.33	0.1		0.40	0.10	6	207
10 ISL	16.89	16.89	33.424	24.332	358.7	0.037	5.88	106.3	2.2	0.34	0.1		0.64	0.21	10	
15	16.02	16.02	33.380	24.499	343.0	0.054	5.99	106.4	2.8	0.36	0.1		1.03	0.41	15	206
20 ISL	14.37	14.37	33.297	24.795	314.8	0.071	5.91	101.5	4.3	0.53	1.9		1.06	0.53	20	
24	13.10	13.10	33.257	25.024	293.1	0.083	5.76	96.3	5.6	0.69	3.8		1.09	0.59	24	205
30 ISL	12.40	12.40	33.277	25.176	278.8	0.100	5.38	88.7	6.6	0.85	6.4		0.77	0.54	30	
34	12.25	12.25	33.304	25.226	274.1	0.111	5.11	84.0	7.1	0.94	8.0		0.54	0.48	34	204
45	12.04	12.03	33.377	25.323	265.2	0.141	4.67	76.4	8.9	1.09	10.4		0.42	0.35	45	203
50 ISL	11.90	11.89	33.398	25.365	261.3	0.154	4.49	73.3	10.0	1.16	11.5		0.33	0.32	50	
55	11.77	11.76	33.418	25.405	257.6	0.167	4.34	70.7	11.1	1.23	12.4		0.25	0.29	55	202
65	11.64	11.63	33.471	25.471	251.6	0.193	4.11	66.7	12.3	1.30	13.7		0.18	0.23	65	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 25.8 N	117 54.8 W	16/11/02	1737	UTC	605 m	310	04 kn	300 01 05	1	1021.8 mb	20.1 C	17.1 C	26m	2/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.84	16.84	33.418	24.339	357.7	0.000	5.80	104.7	2.2	0.36	0.1	0.00	0.28	0.07	0	
1 A	16.84	16.84	33.418	24.339	357.8	0.004	5.80	104.7	2.2	0.36	0.1	0.00	0.28	0.07	1	221
1	16.83	16.83	33.419	24.342	357.5	0.004									1	222
8	16.76	16.76	33.441	24.375	354.5	0.028	5.81	104.8	2.2	0.36	0.1	0.00	0.27	0.07	8	220
10 ISL	16.74	16.74	33.431	24.372	354.9	0.036	5.81	104.7	2.2	0.36	0.1	0.00	0.25	0.07	10	
13 A	16.67	16.67	33.407	24.370	355.2	0.046	5.83	104.9	2.1	0.36	0.1	0.00	0.23	0.08	13	219
20 ISL	16.31	16.31	33.372	24.427	350.0	0.071	5.94	106.1	2.2	0.37	0.1	0.00	0.27	0.09	20	
23	15.99	15.99	33.309	24.451	347.8	0.081	5.99	106.3	2.2	0.38	0.1	0.00	0.29	0.09	23	218
30 ISL	14.41	14.41	33.165	24.685	325.6	0.105	6.05	103.9	3.0	0.48	0.6	0.04	0.57	0.17	30	
34 A	13.50	13.50	33.104	24.826	312.3	0.118	6.08	102.5	3.6	0.56	1.3	0.07	0.71	0.22	34	217
43	12.73	12.72	33.095	24.972	298.6	0.145	5.81	96.3	4.8	0.72	4.1	0.16	0.55	0.23	43	216
50 ISL	12.32	12.31	33.102	25.057	290.7	0.166	5.64	92.7	5.6	0.81	5.8	0.14	0.54	0.30	50	
54 A	12.09	12.08	33.122	25.116	285.1	0.177	5.52	90.3	6.2	0.87	6.9	0.11	0.54	0.33	54	215
62	11.45	11.44	33.229	25.318	266.0	0.199	5.13	82.8	8.6	1.05	10.1	0.07	0.27	0.28	62	214
70 A	11.17	11.16	33.293	25.418	256.6	0.220	4.91	78.8	10.0	1.16	12.1	0.07	0.18	0.32	70	213
75 ISL	10.94	10.93	33.343	25.498	249.1	0.233	4.74	75.8	11.3	1.24	13.4	0.05	0.14	0.26	75	
86	10.47	10.46	33.448	25.662	233.7	0.259	4.39	69.5	14.2	1.38	15.9	0.00	0.07	0.11	86	212
100 ISL	10.13	10.12	33.518	25.775	223.2	0.291	4.16	65.4	16.4	1.47	17.7	0.00	0.05	0.10	100	
101 A	10.11	10.10	33.523	25.783	222.6	0.294	4.14	65.1	16.5	1.48	17.8	0.00	0.05	0.10	101	211
120	9.75	9.74	33.701	25.982	203.9	0.334	3.56	55.6	21.0	1.68	20.9		0.01	0.05	121	210
125 ISL	9.77	9.76	33.745	26.013	201.1	0.344	3.41	53.3	21.9	1.73	21.6		0.01	0.05	126	
141	9.82	9.80	33.863	26.097	193.5	0.376	2.91	45.5	24.8	1.90	23.6		0.00	0.05	142	209
150 ISL	9.89	9.87	33.949	26.153	188.4	0.393	2.56	40.1	26.7	2.01	24.8		0.00	0.05	151	
167	9.95	9.93	34.089	26.253	179.4	0.424	2.00	31.4	30.1	2.20	26.6		0.00	0.05	168	208
200 ISL	9.39	9.37	34.121	26.371	168.7	0.482	2.05	31.8	33.3	2.25	28.0		0.00	0.04	201	
202	9.35	9.33	34.120	26.377	168.2	0.485	2.05	31.8	33.4	2.25	28.0		0.00	0.04	203	207
230	9.30	9.27	34.218	26.462	160.7	0.531	1.69	26.2	36.4	2.38	28.9				231	206
250 ISL	9.09	9.06	34.227	26.503	157.1	0.563	1.60	24.7	38.4	2.44	29.7				251	
269	8.86	8.83	34.223	26.537	154.2	0.593	1.54	23.6	40.3	2.49	30.5				271	205
300 ISL	8.65	8.62	34.262	26.601	148.6	0.639	1.21	18.5	43.9	2.62	31.7				302	
319	8.54	8.51	34.285	26.636	145.6	0.667	1.01	15.4	46.0	2.70	32.4				321	204
382	8.08	8.04	34.272	26.696	140.7	0.758	0.89	13.4	50.8	2.79	33.9				384	203
400 ISL	7.91	7.87	34.272	26.722	138.5	0.783	0.85	12.8	52.7	2.82	34.5				403	
436	7.54	7.50	34.277	26.780	133.3	0.832	0.76	11.3	57.4	2.89	35.7				439	202
500 ISL	6.81	6.76	34.293	26.894	122.8	0.914	0.49	7.2	68.3	3.08	38.1				503	
507	6.73	6.68	34.295	26.907	121.6	0.922	0.46	6.7	69.5	3.10	38.4				510	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
33 15.2 N	118 15.2 W	16/11/02	1300	UTC	308 m	340	09 kn			1020.4 mb	18.1 C	13.8 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.41	16.41	33.386	24.414	350.6	0.000	5.88	105.3	2.3	0.36	0.1	0.00	0.25	0.08	0	
1	16.41	16.41	33.386	24.414	350.6	0.004	5.88	105.3	2.3	0.36	0.1	0.00	0.25	0.08	1	217
10	16.37	16.37	33.381	24.420	350.4	0.035	5.90	105.5	2.4	0.36	0.1	0.00	0.27	0.07	10	216
20	16.03	16.03	33.388	24.503	342.8	0.070	6.01	106.8	3.1	0.36	0.1	0.00	0.36	0.13	20	215
30	14.00	14.00	33.141	24.752	319.2	0.103	6.33	107.8	3.1	0.45	0.2	0.01	0.94	0.29	30	214
40	12.53	12.52	33.095	25.011	294.8	0.134	5.78	95.4	5.0	0.74	4.8	0.21	0.84	0.48	40	213
50	11.54	11.53	33.200	25.278	269.5	0.162	5.20	84.1	7.9	1.01	9.7	0.07	0.38	0.31	50	212
59	11.23	11.22	33.375	25.471	251.4	0.185	4.66	75.0	11.2	1.23	13.5	0.06	0.19	0.27	59	211
70	10.86	10.85	33.488	25.625	237.0	0.212	4.15	66.3	14.0	1.41	16.3		0.13	0.19	70	210
75 ISL	10.66	10.65	33.533	25.695	230.4	0.224	3.96	63.0	15.4	1.48	17.4		0.10	0.16	75	
85	10.27	10.26	33.609	25.822	218.5	0.246	3.69	58.2	17.9	1.59	19.2		0.04	0.12	85	209
100	9.82	9.81	33.682	25.955	206.1	0.278	3.60	56.3	20.3	1.66	20.7		0.01	0.07	100	208
120	9.85	9.84	33.830	26.066	196.0	0.318	2.92	45.7	24.2	1.88	23.6		0.01	0.07	121	207
125 ISL	9.85	9.84	33.876	26.102	192.7	0.328	2.74	42.9	25.3	1.94	24.3		0.01	0.07	126	
140	9.84	9.82	34.014	26.212	182.6	0.356	2.28	35.7	28.5	2.10	26.1		0.00	0.06	141	206
150 ISL	9.78	9.76	34.070	26.266	177.7	0.374	2.10	32.9	30.1	2.17	26.9		0.00	0.06	151	
170	9.60	9.58	34.142	26.352	169.9	0.409	1.88	29.3	32.7	2.27	28.1		0.00	0.05	171	205
200 ISL	9.25	9.23	34.207	26.461	160.1	0.458	1.58	24.5	36.9	2.42	29.7		0.00	0.05	201	
201	9.24	9.22	34.209	26.464	159.8	0.460	1.57	24.3	37.0	2.42	29.7		0.00	0.05	202	204
230	9.08	9.05	34.243	26.517	155.4	0.506	1.35	20.8	39.6	2.51	30.6				231	203
250 ISL	8.96	8.93	34.256	26.547	152.9	0.536	1.26	19.4	41.1	2.53	31.1				251	
263	8.89	8.86	34.261	26.562	151.7	0.556	1.22	18.7	41.9	2.54	31.3				265	202
300 ISL	8.76	8.73	34.264	26.585	150.2	0.612	1.14	17.5	43.2	2.61	31.6				302	
301	8.76	8.73	34.264	26.585	150.2	0.614	1.14	17.5	43.2	2.61	31.6				303	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
33 11.2 N	118 23.4 W	16/11/02	1005 UTC	1180 m	190 05 kn			1020.5 mb	17.6 C	15.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	16.96	16.96	33.355	24.262	365.0	0.000	5.78	104.6	1.4	0.38	0.2	0.00	0.17	0.04	0	220
10 ISL	16.93	16.93	33.358	24.272	364.4	0.036	5.76	104.2	1.5	0.36	0.1	0.00	0.21	0.05	10	
11	16.93	16.93	33.358	24.272	364.5	0.040	5.76	104.2	1.5	0.36	0.1	0.00	0.21	0.05	11	219
20	16.48	16.48	33.357	24.376	354.8	0.072	5.93	106.3	1.8	0.36	0.1	0.00	0.35	0.12	20	218
30	13.89	13.89	33.200	24.821	312.7	0.106	5.90	100.3	4.0	0.60	2.5	0.14	1.06	0.49	30	217
40	13.03	13.02	33.132	24.942	301.4	0.137	5.80	96.8	4.5	0.69	3.9	0.15	0.73	0.46	40	216
50 ISL	12.29	12.28	33.110	25.068	289.5	0.166	5.61	92.2	5.5	0.82	6.2	0.09	0.52	0.18	50	
51	12.22	12.21	33.112	25.083	288.1	0.169	5.58	91.5	5.7	0.84	6.5	0.08	0.50	0.16	51	215
59	11.57	11.56	33.166	25.247	272.7	0.191	5.26	85.1	7.6	1.00	9.3	0.04	0.30	0.33	59	214
69	11.17	11.16	33.274	25.403	258.0	0.218	4.95	79.5	9.8	1.13	11.7		0.18	0.21	69	213
75 ISL	10.94	10.93	33.359	25.510	247.9	0.233	4.66	74.5	11.7	1.25	13.7		0.13	0.16	75	
84	10.63	10.62	33.475	25.656	234.3	0.255	4.25	67.5	14.6	1.42	16.5		0.08	0.12	84	212
100	10.19	10.18	33.561	25.799	221.0	0.291	3.95	62.2	17.2	1.54	18.7		0.04	0.10	100	211
120	9.74	9.73	33.781	26.046	197.9	0.333	3.26	50.9	23.2	1.80	22.6		0.01	0.06	121	210
125 ISL	9.65	9.64	33.812	26.085	194.2	0.343	3.16	49.2	24.2	1.84	23.2		0.01	0.05	126	
139	9.47	9.45	33.879	26.168	186.7	0.370	2.94	45.6	26.6	1.93	24.6		0.01	0.04	140	209
150 ISL	9.43	9.41	33.949	26.229	181.1	0.390	2.72	42.2	28.5	2.01	25.6		0.01	0.04	151	
169	9.36	9.34	34.049	26.319	173.0	0.423	2.34	36.3	31.4	2.14	27.1		0.01	0.04	170	208
200	9.40	9.38	34.182	26.417	164.3	0.476	1.83	28.4	35.0	2.33	28.5		0.00	0.03	201	207
229	9.21	9.18	34.227	26.484	158.6	0.523	1.57	24.3	38.0	2.41	29.6				230	206
250 ISL	8.95	8.92	34.238	26.534	154.1	0.555	1.43	22.0	40.5	2.50	30.5				251	
269	8.70	8.67	34.242	26.577	150.3	0.584	1.32	20.2	42.8	2.58	31.3				271	205
300 ISL	8.46	8.43	34.261	26.629	145.8	0.630	1.13	17.2	45.8	2.67	32.2				302	
320	8.32	8.29	34.272	26.659	143.2	0.659	1.02	15.5	47.8	2.72	32.8				322	204
379	7.63	7.59	34.273	26.763	134.0	0.741	0.77	11.5	56.0	2.89	35.2				381	203
400 ISL	7.46	7.42	34.278	26.791	131.5	0.769	0.70	10.4	58.4	2.94	35.9				403	
439	7.17	7.13	34.288	26.840	127.2	0.819	0.58	8.6	62.7	3.01	37.0				442	202
500 ISL	6.67	6.62	34.306	26.923	119.9	0.895	0.42	6.1	70.7	3.11	38.8				503	
517	6.53	6.48	34.311	26.946	117.8	0.915	0.38	5.5	72.9	3.14	39.3				521	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 55.2 N	118 56.4 W	16/11/02	0454 UTC	1691 m	360 04 kn			1019.8 mb	18.1 C	16.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.71	16.71	33.427	24.376	354.2	0.000	5.77	103.9	2.0	0.38	0.1	0.00	0.22	0.05	0	
1	16.71	16.71	33.427	24.376	354.2	0.004	5.77	103.9	2.0	0.38	0.1	0.00	0.22	0.05	1	220
10	16.61	16.61	33.424	24.397	352.5	0.035	5.82	104.6	1.9	0.37	0.1	0.00	0.21	0.07	10	219
20	16.55	16.55	33.420	24.408	351.8	0.071	5.78	103.8	1.9	0.36	0.1	0.00	0.26	0.09	20	218
30	15.23	15.23	33.310	24.621	331.8	0.105	5.95	104.0	3.0	0.45	0.9	0.03	0.62	0.20	30	217
40	13.55	13.54	33.227	24.911	304.3	0.137	5.71	96.4	4.7	0.67	4.0	0.11	0.63	0.36	40	216
50	12.22	12.21	33.173	25.131	283.6	0.166	5.48	89.9	6.3	0.86	6.9	0.07	0.53	0.41	50	215
58	11.72	11.71	33.207	25.251	272.3	0.188	5.27	85.6	7.6	0.98	9.2	0.03	0.33	0.29	58	214
69	11.27	11.26	33.326	25.426	255.9	0.217	4.81	77.4	9.9	1.16	12.1	0.02	0.17	0.19	69	213
75 ISL	11.17	11.16	33.371	25.479	251.0	0.232	4.68	75.2	10.6	1.21	12.9	0.01	0.14	0.16	75	
82	11.02	11.01	33.418	25.542	245.1	0.250	4.55	72.9	11.4	1.25	13.8	0.01	0.12	0.14	82	212
98	10.06	10.05	33.554	25.815	219.4	0.287	4.07	63.9	15.9	1.45	17.4	0.01	0.03	0.06	98	211
100 ISL	10.00	9.99	33.568	25.836	217.4	0.291	4.03	63.2	16.4	1.47	17.8	0.01	0.03	0.06	100	
117	9.65	9.64	33.675	25.978	204.2	0.327	3.78	58.8	19.9	1.62	20.2	0.01	0.01	0.04	118	210
125 ISL	9.52	9.51	33.725	26.039	198.6	0.343	3.68	57.1	21.2	1.66	21.1	0.01	0.00	0.03	126	
138	9.33	9.31	33.801	26.129	190.3	0.369	3.55	54.9	23.2	1.71	22.2	0.01	0.00	0.03	139	209
150 ISL	9.17	9.15	33.867	26.207	183.1	0.391	3.46	53.4	25.2	1.75	23.1	0.01	0.00	0.03	151	
168	8.97	8.95	33.949	26.303	174.3	0.423	3.33	51.1	27.9	1.82	24.3	0.01	0.00	0.03	169	208
198	8.79	8.77	34.015	26.384	167.2	0.474	3.07	47.0	31.1	1.94	25.8	0.01	0.00	0.02	199	207
200 ISL	8.76	8.74	34.018	26.391	166.5	0.478	3.04	46.5	31.5	1.95	26.0	0.01			201	
227	8.40	8.38	34.078	26.494	157.2	0.521	2.55	38.7	36.9	2.16	28.4	0.01			228	206
250 ISL	8.59	8.56	34.199	26.560	151.5	0.557	1.73	26.4	40.8	2.43	30.1	0.01			251	
267	8.77	8.74	34.285	26.599	148.1	0.582	1.16	17.8	43.4	2.62	31.1	0.01			269	205
300 ISL	8.45	8.42	34.310	26.669	142.0	0.630	0.98	14.9	47.7	2.76	32.6	0.01			302	
317	8.18	8.15	34.296	26.699	139.3	0.654	0.89	13.5	49.8	2.78	33.2	0.01			319	204
376	7.41	7.37	34.256	26.781	132.0	0.734	0.85	12.6	57.3	2.86	35.2	0.01			378	203
400 ISL	6.94	6.90	34.207	26.808	129.5	0.766	0.95	13.9	61.2	2.88	36.4	0.01			403	
437	6.29	6.25	34.148	26.848	125.6	0.813	1.06	15.3	67.0	2.92	38.1	0.01			440	202
500 ISL	6.12	6.08	34.215	26.923	119.3	0.890	0.70	10.1	73.8	3.06	39.5	0.01			503	
520	6.06	6.01	34.237	26.948	117.1	0.914	0.58	8.3	75.9	3.10	40.0	0.01			524	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 39.4 N	119 28.5 W	15/11/02	2338 UTC	1305 m	360	300 01 10	0	1019.2 mb	19.0 C	16.9 C	18m	0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.63	16.63	33.363	24.345	357.1	0.000	5.79	104.1	1.8	0.37	0.1	0.00	0.21	0.06	0	
1	16.63	16.63	33.363	24.345	357.1	0.004	5.79	104.1	1.8	0.37	0.1	0.00	0.21	0.06	1	220
10	16.12	16.12	33.342	24.447	347.8	0.035	5.90	105.0	1.9	0.38	0.1	0.00	0.42	0.14	10	219
19	15.88	15.88	33.342	24.501	342.9	0.066	5.96	105.6	2.4	0.38	0.1	0.00	0.69	0.29	19	218
20 ISL	15.80	15.80	33.332	24.511	341.9	0.070	5.96	105.4	2.4	0.39	0.2	0.00	0.69	0.31	20	
29	14.74	14.74	33.228	24.664	327.6	0.100	5.97	103.3	2.5	0.51	1.1	0.07	0.69	0.41	29	217
30 ISL	14.55	14.55	33.219	24.697	324.5	0.103	5.94	102.3	2.8	0.54	1.6	0.09	0.66	0.41	30	
39	12.88	12.87	33.180	25.008	295.0	0.131	5.62	93.5	5.6	0.81	6.0	0.22	0.36	0.37	39	216
49	12.03	12.02	33.193	25.182	278.7	0.160	5.33	87.1	7.3	0.94	8.1	0.10	0.23	0.29	49	215
50 ISL	11.96	11.95	33.200	25.201	276.9	0.163	5.30	86.5	7.5	0.95	8.3	0.09	0.22	0.28	50	
59	11.44	11.43	33.276	25.356	262.3	0.187	5.00	80.8	9.1	1.08	10.8	0.06	0.15	0.20	59	214
68	11.02	11.01	33.351	25.490	249.8	0.210	4.74	75.9	11.6	1.26	13.8	0.06	0.10	0.14	68	213
75 ISL	10.74	10.73	33.410	25.585	240.8	0.227	4.54	72.3	13.4	1.38	15.8		0.07	0.10	75	
84	10.41	10.40	33.484	25.701	230.0	0.248	4.28	67.7	15.6	1.50	18.0		0.04	0.07	84	212
100 ISL	9.89	9.88	33.603	25.882	213.1	0.284	3.89	60.9	19.3	1.65	20.7		0.01	0.06	100	
108	9.65	9.64	33.664	25.969	204.9	0.300	3.67	57.1	21.3	1.72	21.9		0.01	0.05	109	211
119	9.34	9.33	33.764	26.098	192.8	0.322	3.27	50.6	24.7	1.86	24.2		0.01	0.04	120	210
125 ISL	9.24	9.23	33.802	26.144	188.5	0.334	3.13	48.3	25.9	1.91	25.0		0.01	0.04	126	
139	9.09	9.07	33.872	26.223	181.3	0.360	2.90	44.6	28.2	1.98	26.1		0.01	0.03	140	209
150 ISL	8.97	8.95	33.926	26.285	175.7	0.379	2.76	42.4	30.0	2.02	26.8		0.01	0.03	151	
169	8.76	8.74	34.005	26.380	166.9	0.412	2.55	39.0	33.0	2.10	27.9		0.01	0.04	170	208
199	8.44	8.42	34.074	26.484	157.6	0.460	2.14	32.5	37.9	2.28	30.1		0.01	0.03	200	207
200 ISL	8.42	8.40	34.076	26.488	157.1	0.462	2.13	32.3	38.1	2.29	30.2				201	
228	8.00	7.98	34.121	26.587	148.1	0.505	1.83	27.5	43.7	2.43	31.8				229	206
250 ISL	7.85	7.83	34.138	26.623	145.0	0.537	1.67	25.0	45.9	2.51	32.6				251	
269	7.76	7.73	34.147	26.643	143.4	0.564	1.55	23.2	47.5	2.56	33.1				271	205
300 ISL	7.49	7.46	34.167	26.698	138.6	0.608	1.32	19.6	51.8	2.67	34.3				302	
318	7.32	7.29	34.178	26.731	135.6	0.633	1.20	17.8	54.4	2.73	35.0				320	204
379	6.84	6.80	34.198	26.814	128.5	0.713	0.89	13.0	62.1	2.89	37.1				381	203
400 ISL	6.70	6.66	34.211	26.843	125.9	0.740	0.78	11.4	64.8	2.94	37.8				403	
436	6.49	6.45	34.238	26.893	121.6	0.785	0.60	8.7	69.4	3.03	38.9				439	202
500 ISL	6.18	6.14	34.287	26.972	114.7	0.860	0.42	6.1	76.2	3.14	40.1				503	
514	6.11	6.06	34.298	26.990	113.1	0.876	0.38	5.5	77.7	3.16	40.4				518	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 25.4 N	119 57.9 W	15/11/02	1810 UTC	875 m	060 06 kn	340 04 08	1	1019.2 mb	18.0 C	16.4 C	24m	2/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.74	16.74	33.353	24.312	360.3	0.000	5.74	103.4	0.7	0.39	0.1	0.00	0.19	0.05	0	
2 A	16.74	16.74	33.353	24.312	360.4	0.007	5.74	103.4	0.7	0.39	0.1	0.00	0.19	0.05	2	221
2	16.74	16.74	33.353	24.312	360.4	0.007									2	222
10 ISL	16.70	16.70	33.355	24.323	359.5	0.036	5.78	104.1	0.7	0.39	0.1	0.00	0.20	0.05	10	
12 A	16.69	16.69	33.355	24.326	359.4	0.043	5.79	104.2	0.7	0.39	0.1	0.00	0.20	0.05	12	220
20 ISL	16.68	16.68	33.356	24.329	359.3	0.072	5.80	104.4	0.7	0.38	0.1	0.00	0.20	0.06	20	
21	16.68	16.68	33.357	24.330	359.3	0.076	5.80	104.4	0.7	0.38	0.1	0.00	0.20	0.06	21	219
30 ISL	16.53	16.53	33.341	24.353	357.4	0.108	5.79	103.9	0.7	0.38	0.1	0.00	0.25	0.06	30	
31 A	16.51	16.51	33.339	24.356	357.1	0.111	5.79	103.8	0.7	0.38	0.1	0.00	0.25	0.06	31	218
42	13.30	13.29	32.945	24.744	320.3	0.149	6.30	105.6	0.4	0.51	0.3	0.04	1.02	0.35	42	217
50 A	12.20	12.19	32.812	24.854	309.9	0.174	6.15	100.7	2.3	0.68	2.7	0.24	0.94	0.42	50	216
57	11.72	11.71	32.774	24.914	304.3	0.195	6.07	98.3	3.3	0.74	3.8	0.29	0.85	0.45	57	215
64 A	11.30	11.29	32.768	24.986	297.6	0.216	5.89	94.5	4.6	0.85	5.6	0.26	0.75	0.38	64	214
75 ISL	11.03	11.02	32.968	25.190	278.4	0.248	5.54	88.5	6.8	0.98	8.6	0.10	0.31	0.21	75	
79	10.96	10.95	33.065	25.278	270.1	0.259	5.40	86.2	7.7	1.03	9.8	0.04	0.15	0.16	79	213
93 A	10.36	10.35	33.301	25.567	242.9	0.295	4.89	77.2	11.9	1.26	14.2	0.03	0.06	0.12	93	212
100 ISL	10.09	10.08	33.421	25.706	229.8	0.311	4.54	71.3	14.9	1.41	16.8		0.03	0.08	100	
106	9.89	9.88	33.507	25.807	220.3	0.325	4.27	66.8	17.2	1.53	18.7		0.02	0.04	106	211
119	9.64	9.63	33.579	25.905	211.2	0.353	4.03	62.7	19.3	1.62	20.2		0.01	0.03	120	210
125 ISL	9.57	9.56	33.619	25.948	207.3	0.366	3.85	59.8	20.6	1.68	21.2		0.01	0.03	126	
139	9.42	9.40	33.718	26.050	197.8	0.394	3.43	53.1	23.8	1.82	23.4		0.01	0.04	140	209
150 ISL	9.25	9.23	33.798	26.140	189.5	0.415	3.19	49.3	26.0	1.89	24.6		0.01	0.04	151	
168	8.95	8.93	33.911	26.276	176.8	0.448	2.92	44.8	29.1	1.97	26.2		0.00	0.03	169	208
199	8.58	8.56	34.002	26.406	165.0	0.501	2.71	41.3	33.6	2.09	28.1		0.00	0.02	200	207
200 ISL	8.57	8.55	34.004	26.409	164.7	0.503	2.70	41.1	33.8	2.09	28.2				201	
228	8.15	8.13	34.058 D	26.515	155.0	0.548									229	206
250 ISL	7.88	7.85	34.070	26.565	150.5	0.581	2.28	34.2	41.6	2.31	30.8				251	
267	7.70	7.67	34.073	26.594	148.0	0.607	2.13	31.8	44.3	2.38	31.7				269	205
300 ISL	7.35	7.32	34.093	26.660	142.1	0.654	1.89	28.0	49.4	2.53	33.4				302	
317	7.19	7.16	34.106	26.693	139.2	0.678	1.76	26.0	52.1	2.60	34.2				319	204
377	6.75	6.72	34.166	26.801	129.6	0.759	1.07	15.6	61.6	2.85	36.9				379	203
400 ISL	6.59	6.55	34.190	26.841	126.0	0.788	0.87	12.7	65.3	2.94	37.9				403	
437	6.36	6.32	34.227	26.901	120.7	0.834	0.63	9.1	70.8	3.06	39.2				440	202
500 ISL	6.15	6.11	34.270	26.963	115.5	0.908	0.46	6.6	76.3	3.11	40.2				503	
521	6.08	6.03	34.284	26.983	113.9	0.933	0.40	5.8	78.1	3.13	40.5				525	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 5.2 N	120 38.7 W	15/11/02	1201 UTC	3828 m	320 05 kn			1018.1 mb	16.8 C	15.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.52	16.52	33.295	24.319	359.7	0.000	5.76	103.3	0.3	0.39	0.0	0.00	0.18	0.04	0	
1	16.52	16.52	33.295	24.319	359.7	0.004	5.76	103.3	0.3	0.39	0.0	0.00	0.18	0.04	1	220
9	16.52	16.52	33.291	24.316	360.2	0.032	5.76	103.3	0.2	0.38	0.1	0.00	0.17	0.04	9	219
10 ISL	16.52	16.52	33.291	24.316	360.3	0.036	5.76	103.3	0.2	0.38	0.1	0.00	0.17	0.04	10	
20	16.52	16.52	33.290	24.316	360.6	0.072	5.75	103.1	0.2	0.38	0.1	0.00	0.18	0.04	20	218
30	16.51	16.51	33.292	24.320	360.5	0.108	5.75	103.1	0.3	0.38	0.0	0.00	0.17	0.05	30	217
40	15.97	15.96	33.287	24.439	349.4	0.144	5.92	105.0	0.1	0.39	0.1	0.00	0.32	0.12	40	216
50	12.65	12.64	32.954	24.878	307.6	0.176	6.32	104.5	0.6	0.53	1.1	0.08	1.35	0.24	50	215
60	11.25	11.24	32.864	25.070	289.5	0.206	5.80	93.0	5.4	0.87	6.6	0.12	1.09	0.46	60	214
70	10.87	10.86	32.941	25.197	277.6	0.235	5.57	88.7	7.1	1.01	9.2	0.05	0.21	0.20	70	213
75 ISL	10.58	10.57	32.957	25.260	271.7	0.248	5.51	87.2	8.1	1.08	10.4	0.03	0.17	0.14	75	
85	10.07	10.06	33.037	25.410	257.6	0.275	5.29	82.8	10.6	1.22	13.0	0.02	0.08	0.08	85	212
100	9.99	9.98	33.443	25.740	226.5	0.311	4.38	68.6	16.3	1.52	18.3	0.01	0.03	0.05	100	211
122	9.44	9.43	33.701	26.033	199.1	0.358	3.50	54.2	23.2	1.78	22.8	0.01	0.02	0.06	123	210
125 ISL	9.39	9.38	33.722	26.057	196.8	0.364	3.43	53.1	23.8	1.80	23.2	0.01	0.02	0.06	126	
139	9.19	9.17	33.799	26.150	188.2	0.391	3.18	49.0	26.1	1.89	24.6	0.01	0.01	0.05	140	209
150 ISL	9.04	9.02	33.867	26.228	181.1	0.411	2.92	44.9	28.5	1.98	26.1	0.01	0.01	0.04	151	
170	8.76	8.74	33.972	26.354	169.4	0.446	2.51	38.4	32.9	2.12	28.5	0.01	0.00	0.03	171	208
198	8.35	8.33	34.038	26.469	158.9	0.492	2.33	35.3	37.5	2.24	30.0	0.01	0.00	0.03	199	207
200 ISL	8.31	8.29	34.040	26.477	158.2	0.495	2.31	35.0	37.9	2.25	30.2	0.01			201	
226	7.74	7.72	34.056	26.574	149.2	0.535	2.05	30.6	43.8	2.40	32.3	0.01			227	206
250 ISL	7.44	7.42	34.073	26.631	144.1	0.571	1.81	26.9	48.0	2.52	33.8	0.01			251	
267	7.29	7.26	34.083	26.660	141.5	0.595	1.66	24.6	50.5	2.59	34.6	0.01			269	205
300 ISL	7.00	6.97	34.096	26.711	137.1	0.641	1.43	21.0	54.9	2.69	35.8	0.01			302	
320	6.83	6.80	34.103	26.740	134.5	0.668	1.31	19.2	57.6	2.75	36.5	0.01			322	204
381	6.17	6.14	34.137	26.854	124.1	0.747	0.90	13.0	69.3	2.96	39.2	0.01			383	203
400 ISL	6.05	6.02	34.153	26.882	121.6	0.770	0.79	11.4	72.2	3.02	39.8	0.01			403	
438	5.89	5.85	34.193	26.934	117.1	0.816	0.61	8.7	77.1	3.11	40.6	0.01			441	202
500 ISL	5.86	5.82	34.280	27.007	111.0	0.886	0.40	5.7	81.5	3.19	41.1	0.01			503	
519	5.85	5.80	34.307	27.030	109.1	0.907	0.34	4.9	82.9	3.22	41.2	0.01			523	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 44.9 N	121 19.5 W	15/11/02	0553 UTC	3727 m	330 10 kn			1019.1 mb	16.9 C	15.5 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.36	16.36	33.151	24.245	366.7	0.000	5.81	103.8	0.3	0.39	0.2	0.00	0.17	0.05	0	
1	16.36	16.36	33.151	24.245	366.7	0.004	5.81	103.8	0.3	0.39	0.2	0.00	0.17	0.05	1	220
10 ISL	16.36	16.36	33.148	24.243	367.2	0.037	5.80	103.6	0.3	0.38	0.2	0.00	0.18	0.04	10	
15	16.36	16.36	33.147	24.242	367.4	0.055	5.79	103.4	0.3	0.38	0.2	0.00	0.18	0.04	15	219
20 ISL	16.05	16.05	33.122	24.294	362.7	0.073	5.92	105.1	0.2	0.39	0.2	0.00	0.23	0.07	20	
30	15.16	15.16	33.054	24.439	349.1	0.109	6.19	107.9	0.1	0.43	0.1	0.00	0.38	0.15	30	218
45	13.67	13.66	32.939	24.664	328.0	0.160	6.28	106.1	0.4	0.48	0.1	0.01	0.76	0.31	45	217
50 ISL	13.14	13.13	32.895	24.737	321.1	0.176	6.21	103.7	0.8	0.52	0.6	0.07	0.75	0.32	50	
55	12.65	12.64	32.859	24.805	314.7	0.192	6.12	101.2	1.5	0.58	1.3	0.14	0.75	0.33	55	216
65	11.96	11.95	32.836	24.918	304.1	0.223	5.99	97.6	3.7	0.74	3.8	0.26	0.44	0.27	65	215
74	11.70	11.69	32.896	25.013	295.3	0.250	5.79	93.8	4.7	0.78	5.3	0.12	0.22	0.22	74	214
75 ISL	11.63	11.62	32.895	25.025	294.1	0.253	5.77	93.3	4.9	0.79	5.5	0.11	0.21	0.22	75	
86	10.88	10.87	32.912	25.173	280.2	0.284	5.54	88.2	6.9	0.94	8.2	0.02	0.13	0.19	86	213
95	10.63	10.62	33.026	25.306	267.8	0.309	5.35	84.8	8.3	1.02	10.0	0.02	0.09	0.12	95	212
100 ISL	10.21	10.20	33.089	25.427	256.3	0.322	5.19	81.5	10.1	1.12	11.8	0.02	0.07	0.09	100	
110	9.40	9.39	33.241	25.680	232.3	0.346	4.86	75.0	14.4	1.35	15.9	0.01	0.03	0.04	110	211
125	9.40	9.39	33.553	25.924	209.5	0.380	4.55	70.4	20.3	1.66	21.0	0.01	0.01	0.02	126	210
146	9.16	9.14	33.733	26.104	192.8	0.422	3.53	54.4	24.1	1.78	23.2	0.01	0.00	0.02	147	209
150 ISL	9.11	9.09	33.763	26.135	189.9	0.429	3.43	52.8	24.9	1.81	23.7	0.01	0.00	0.02	151	
171	8.87	8.85	33.894	26.276	176.9	0.468	3.11	47.6	29.0	1.93	25.8	0.01	0.00	0.02	172	208
200	8.58	8.56	33.995	26.400	165.5	0.518	2.86	43.6	33.1	2.02	27.4	0.00	0.00	0.02	201	207
228	8.11	8.09	34.063	26.525	154.0	0.562	2.44	36.8	39.3	2.22	29.7	0.00			229	206
250 ISL	7.78	7.76	34.085	26.591	148.0	0.596	2.17	32.5	43.7	2.35	31.3	0.00			251	
272	7.51	7.48	34.100	26.642	143.4	0.628	1.90	28.3	47.8	2.48	32.7	0.00			274	205
300 ISL	7.35	7.32	34.139	26.696	138.7	0.667	1.44	21.3	52.6	2.65	34.5	0.01			302	
321	7.25	7.22	34.165	26.731	135.7	0.696	1.14	16.9	56.0	2.77	35.6	0.01			323	204
379	6.68	6.65	34.182	26.823	127.5	0.772	0.91	13.3	64.3	2.92	37.6	0.00			381	203
400 ISL	6.54	6.50	34.194	26.851	125.0	0.799	0.83	12.1	66.8	2.97	38.2	0.00			402	
436	6.33	6.29	34.218	26.898	120.9	0.843	0.69	10.0	70.8	3.04	39.1	0.00			439	202
500 ISL	5.96	5.92	34.252	26.972	114.4	0.918	0.48	6.9	78.6	3.14	40.6	0.01			503	
518	5.86	5.82	34.262	26.993	112.6	0.939	0.42	6.0	80.8	3.17	41.0	0.01			521	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 25.4 N	121 59.7 W	14/11/02	2343 UTC	3830 m	330 19 kn	310 08 07	0	1017.5 mb	18.0 C	15.9 C		0/8	

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.98	16.98	33.100	24.062	384.1	0.000			0.5	0.40	0.1	0.00	0.13	0.03	0	
2	16.98	16.98	33.100	24.062	384.2	0.008	5.89 U	106.5 U	0.5	0.40	0.1	0.00	0.13	0.03	2	220
10 ISL	16.99	16.99	33.103	24.063	384.4	0.038			0.5	0.39	0.1	0.00	0.14	0.04	10	
14	16.99	16.99	33.104	24.063	384.4	0.054	5.69	102.9	0.5	0.38	0.1	0.00	0.14	0.04	14	219
20 ISL	16.98	16.98	33.104	24.066	384.4	0.077	5.69	102.8	0.5	0.38	0.1	0.00	0.12	0.04	20	
29	16.96	16.96	33.105	24.072	384.2	0.111	5.69	102.8	0.5	0.38	0.0	0.00	0.10	0.03	29	218
30 ISL	16.84	16.84	33.093	24.091	382.4	0.115	5.73	103.3	0.5	0.38	0.0	0.00	0.11	0.03	30	
45	14.56	14.55	32.898	24.448	348.6	0.170	6.33	108.9	0.7	0.43	0.0	0.00	0.30	0.12	45	217
50 ISL	13.93	13.92	32.857	24.548	339.2	0.187	6.31	107.1	1.1	0.44	0.0	0.00	0.31	0.16	50	
54	13.47	13.46	32.831	24.622	332.3	0.201	6.30	105.9	1.5	0.46	0.0	0.00	0.32	0.19	54	216
65	12.49	12.48	32.781	24.776	317.8	0.236	6.12	100.8	3.1	0.55	0.6	0.09	0.41	0.33	65	215
74	11.96	11.95	32.794	24.886	307.4	0.265	5.98	97.4	4.0	0.68	2.9	0.11	0.33	0.27	74	214
75 ISL	11.92	11.91	32.794	24.893	306.7	0.268	5.97	97.1	4.1	0.69	3.1	0.12	0.32	0.27	75	
84	11.58	11.57	32.818	24.975	299.2	0.295	5.86	94.6	4.9	0.77	4.8	0.15	0.24	0.24	84	213
94	11.06	11.05	32.937	25.161	281.6	0.324	5.59	89.3	7.0	0.95	8.2	0.06	0.14	0.18	94	212
100 ISL	10.78	10.77	33.004	25.263	272.0	0.341	5.44	86.5	8.2	1.03	9.8	0.05	0.11	0.14	100	
110	10.34	10.33	33.124	25.432	256.0	0.367	5.18	81.6	10.6	1.17	12.5	0.04	0.08	0.09	110	211
125	9.65	9.64	33.356	25.729	228.0	0.403	4.64	72.1	15.8	1.45	17.3		0.02	0.03	126	210
145	9.39	9.37	33.525	25.904	211.8	0.447	4.23	65.4	19.5	1.60	19.9		0.01	0.03	146	209
150 ISL	9.33	9.31	33.583	25.959	206.6	0.458	4.06	62.7	20.7	1.64	20.7		0.01	0.03	151	
169	9.10	9.08	33.796	26.163	187.6	0.495	3.44	52.9	25.4	1.80	23.7		0.00	0.02	170	208
199	8.76	8.74	33.960	26.345	170.8	0.549	2.94	44.9	31.3	1.98	26.6		0.00	0.02	200	207
200 ISL	8.75	8.73	33.963	26.349	170.5	0.551	2.92	44.6	31.5	1.99	26.7				201	
228	8.36	8.34	34.022	26.456	160.7	0.597	2.55	38.6	36.1	2.16	29.2				229	206
250 ISL	8.12	8.09	34.044	26.509	155.9	0.632	2.35	35.4	39.1	2.25	30.5				251	
269	7.91	7.88	34.054	26.548	152.5	0.661	2.21	33.2	41.7	2.32	31.4				270	205
300 ISL	7.47	7.44	34.067	26.622	145.7	0.707	1.96	29.1	46.9	2.47	33.1				302	
321	7.20	7.17	34.079	26.670	141.4	0.738	1.78	26.3	50.5	2.57	34.2				323	204
382	6.86	6.82	34.158	26.780	131.8	0.821	1.12	16.4	59.6	2.81	36.6				384	203
400 ISL	6.73	6.69	34.170	26.807	129.4	0.844	1.00	14.6	62.1	2.87	37.2				402	
438	6.45	6.41	34.191	26.861	124.6	0.893	0.80	11.6	67.3	2.98	38.5				441	202
500 ISL	6.05	6.01	34.240	26.952	116.5	0.967	0.53	7.6	76.1	3.20	40.3				503	
513	5.97	5.93	34.250	26.970	114.9	0.982	0.47	6.7	78.0	3.25	40.7				516	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 5.3 N	122 40.3 W	14/11/02	1727 UTC	3988 m	330 22 kn	330 09 08	1	1022.3 mb	17.9 C	15.9 C	21m	3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.37	17.37	33.121	23.986	391.4	0.000	5.69	103.6	0.5	0.38	0.1	0.00	0.14	0.03	0	
1 A	17.37	17.37	33.121	23.986	391.4	0.004	5.69	103.6	0.5	0.38	0.1	0.00	0.14	0.03	1	222
1	17.36	17.36	33.121	23.989	391.2	0.004									1	223
10 ISL	17.36	17.36	33.121	23.989	391.4	0.039	5.70	103.8	0.5	0.37	0.0	0.00	0.14	0.03	10	
11 A	17.36	17.36	33.121	23.989	391.5	0.043	5.70	103.8	0.5	0.37	0.0	0.00	0.14	0.03	11	221
20	17.36	17.36	33.121	23.989	391.7	0.078	5.67	103.2	0.4	0.37	0.0	0.00	0.14	0.03	20	220
28 A	17.07	17.07	33.095	24.038	387.3	0.109	5.85	105.9	0.3	0.38	0.0	0.00	0.17	0.04	28	219
30 ISL	16.65	16.65	33.072	24.119	379.7	0.117	5.95	106.8	0.2	0.39	0.0	0.00	0.19	0.05	30	
37	14.89	14.88	32.975	24.437	349.5	0.143	6.26	108.4	0.0	0.44	0.0	0.00	0.28	0.12	37	218
44 A	13.45	13.44	32.847	24.638	330.5	0.166	6.36	106.9	0.0	0.52	0.0	0.00	0.37	0.18	44	217
50	12.61	12.60	32.772	24.745	320.3	0.186	6.28	103.7	0.5	0.58	0.2	0.08	0.67	0.29	50	216
56 A	12.09	12.08	32.733	24.814	313.9	0.205	6.19	101.0	1.6	0.64	1.4	0.22	0.80	0.33	56	215
71	11.43	11.42	32.768	24.963	300.0	0.251	5.87	94.5	4.4	0.74	4.3	0.08	0.28	0.27	71	214
75 ISL	11.27	11.26	32.784	25.004	296.1	0.263	5.81	93.2	5.0	0.78	5.2	0.06	0.23	0.25	75	
82 A	11.02	11.01	32.827	25.082	288.8	0.283	5.72	91.3	6.1	0.87	6.7	0.04	0.19	0.20	82	213
92	10.72	10.71	32.940	25.223	275.6	0.312	5.96 U	94.6 U	7.8	0.99	9.0	0.03	0.12	0.14	92	212
100	10.70	10.69	32.957	25.240	274.2	0.334	5.47	86.8	7.8	1.00	9.3	0.01	0.12	0.13	100	211
120	10.13	10.12	33.314	25.616	238.7	0.385	4.85	76.1	12.7	1.31	14.9	0.00	0.04	0.04	121	210
125 ISL	9.97	9.96	33.363	25.682	232.6	0.397	4.74	74.2	13.7	1.35	15.7	0.00	0.03	0.03	126	
139	9.56	9.54	33.473	25.835	218.2	0.428	4.44	68.9	16.6	1.45	17.6	0.00	0.02	0.02	140	209
150 ISL	9.33	9.31	33.591	25.965	206.0	0.452	4.12	63.6	19.7	1.57	19.7	0.00	0.01	0.01	151	
169	9.03	9.01	33.785	26.165	187.4	0.489	3.53	54.2	25.2	1.79	23.4	0.00	0.01	0.01	170	208
198	8.74	8.72	33.962	26.350	170.4	0.541	2.74	41.9	32.2	2.06	27.5	0.00	0.01	0.01	199	207
200 ISL	8.72	8.70	33.967	26.357	169.7	0.544	2.72	41.5	32.5	2.07	27.6	0.00			201	
227	8.44	8.42	34.002	26.428	163.4	0.589	2.57	39.0	35.6	2.16	28.9	0.00			228	206
250 ISL	8.19	8.16	34.028	26.486	158.2	0.626	2.42	36.5	38.6	2.23	30.1	0.00			251	
266	8.00	7.97	34.042	26.526	154.6	0.651	2.31	34.7	40.8	2.29	30.9	0.00			267	205
300 ISL	7.57	7.54	34.063	26.605	147.4	0.703	2.00	29.8	46.2	2.45	32.8	0.00			302	
318	7.33	7.30	34.070	26.645	143.8	0.729	1.84	27.2	49.3	2.53	33.8	0.00			320	204
377	6.55	6.52	34.074	26.755	133.7	0.811	1.47	21.4	59.6	2.74	36.7	0.00			379	203
400 ISL	6.33	6.29	34.102	26.806	129.1	0.841	1.22	17.6	64.5	2.85	37.9	0.00			402	
438	6.07	6.03	34.160	26.885	121.9	0.889	0.82	11.8	72.0	3.01	39.7	0.00			441	202
500 ISL	5.88	5.84	34.240	26.973	114.3	0.962	0.49	7.0	79.0	3.16	40.8	0.00			503	
514	5.84	5.80	34.258	26.992	112.6	0.978	0.42	6.0	80.6	3.19	41.0	0.00			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 44.8 N	123 20.5 W	14/11/02	0714 UTC	4003 m	350 20 kn			1023.1 mb	17.0 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.56	17.56	33.108	23.931	396.6	0.000	5.61	102.5	0.6	0.40	0.1	0.00	0.10	0.02	0	
1	17.56	17.56	33.108	23.931	396.7	0.004	5.61	102.5	0.6	0.40	0.1	0.00	0.10	0.02	1	220
10 ISL	17.57	17.57	33.108	23.929	397.2	0.040	5.60	102.4	0.5	0.39	0.0	0.00	0.10	0.02	10	
16	17.57	17.57	33.108	23.929	397.4	0.064	5.60	102.4	0.5	0.38	0.0	0.00	0.10	0.02	16	219
20 ISL	17.54	17.54	33.108	23.936	396.8	0.079	5.61	102.5	0.5	0.38	0.0	0.00	0.11	0.02	20	
30 ISL	17.47	17.47	33.107	23.953	395.6	0.119	5.62	102.5	0.5	0.39	0.0	0.00	0.12	0.03	30	
32	17.45	17.44	33.107	23.958	395.2	0.127	5.62	102.5	0.5	0.39	0.0	0.00	0.12	0.03	32	218
45	16.11	16.10	33.008	24.193	373.0	0.177	6.05	107.4	0.2	0.39	0.0	0.00	0.25	0.08	45	217
50 ISL	15.43	15.42	32.981	24.324	360.6	0.195	6.17	108.1	0.1	0.41	0.0	0.00	0.31	0.13	50	
56	14.43	14.42	32.926	24.497	344.2	0.216	6.26	107.4	0.0	0.46	0.0	0.00	0.43	0.20	56	216
65	12.46	12.45	32.749	24.756	319.6	0.246	6.23	102.5	1.3	0.60	0.5	0.09	0.84	0.34	65	215
75 ISL	11.77	11.76	32.706	24.853	310.6	0.278	6.05	98.0	2.8	0.71	2.5	0.40	0.43	0.30	75	
76	11.75	11.74	32.706	24.856	310.2	0.281	6.03	97.7	3.0	0.72	2.7	0.42	0.37	0.30	76	214
85	11.28	11.27	32.694	24.933	303.1	0.308	5.94	95.2	4.2	0.84	4.9	0.13	0.23	0.21	85	213
96	10.97	10.96	32.825	25.090	288.4	0.341	5.72	91.2	5.9	0.91	7.5	0.03	0.11	0.14	96	212
100 ISL	10.82	10.81	32.853	25.138	283.8	0.352	5.65	89.8	6.5	0.95	8.4	0.02	0.09	0.12	100	
109	10.46	10.45	32.926	25.258	272.6	0.377	5.47	86.3	8.1	1.06	10.3	0.01	0.07	0.08	109	211
122	10.04	10.03	33.140	25.496	250.2	0.411	5.08	79.5	11.3	1.22	13.5	0.01	0.05	0.06	123	210
125 ISL	9.96	9.95	33.193	25.551	245.0	0.419	4.98	77.8	12.0	1.26	14.2	0.01	0.04	0.05	126	
143	9.53	9.51	33.493	25.856	216.3	0.460	4.36	67.6	16.8	1.48	18.2	0.01	0.01	0.02	144	209
150 ISL	9.39	9.37	33.589	25.954	207.1	0.475	4.10	63.4	19.1	1.57	19.8	0.01	0.01	0.02	151	
169	9.06	9.04	33.796	26.169	187.0	0.513	3.46	53.2	25.0	1.78	23.5	0.01	0.00	0.02	170	208
200 ISL	8.74	8.72	33.958	26.347	170.7	0.568	2.87	43.9	31.2	2.01	27.0	0.01	0.00	0.01	201	
202	8.72	8.70	33.963	26.354	170.0	0.572	2.85	43.5	31.5	2.02	27.2	0.01	0.00	0.01	203	207
227	8.32	8.30	34.023	26.462	160.0	0.613	2.57	38.9	36.3	2.15	29.2	0.01			228	206
250 ISL	8.06	8.03	34.045	26.519	155.0	0.649	2.34	35.2	39.6	2.26	30.6	0.01			251	
268	7.89	7.86	34.053	26.551	152.2	0.677	2.17	32.5	42.1	2.34	31.5	0.01			269	205
300 ISL	7.53	7.50	34.077	26.622	145.8	0.724	1.83	27.2	47.5	2.49	33.4	0.01			302	
317	7.32	7.29	34.086	26.659	142.5	0.749	1.66	24.6	50.6	2.57	34.4	0.01			319	204
377	6.46	6.43	34.079	26.770	132.2	0.831	1.36	19.7	62.3	2.77	37.2	0.01			379	203
400 ISL	6.31	6.27	34.105	26.811	128.6	0.861	1.15	16.6	65.6	2.86	38.1	0.01			402	
439	6.15	6.11	34.159	26.874	123.0	0.910	0.80	11.5	70.6	3.00	39.5	0.01			442	202
500 ISL	5.84	5.80	34.208	26.952	116.1	0.983	0.57	8.2	78.1	3.11	40.8	0.01			503	
519	5.74	5.70	34.224	26.978	113.9	1.005	0.50	7.1	80.5	3.15	41.2	0.01			522	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 25.0 N	124 0.0 W	14/11/02	0057 UTC	4258 m	340 19 kn	340 04 09	1	1022.5 mb	16.8 C	15.1 C		3/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.17	18.17	33.146	23.812	408.0	0.000	5.55	102.7	1.4	0.39	0.1	0.00	0.10	0.01	0	
2	18.17	18.17	33.146	23.812	408.0	0.008	5.55	102.7	1.4	0.39	0.1	0.00	0.10	0.01	2	220
10 ISL	18.17	18.17	33.147	23.813	408.2	0.041	5.54	102.5	1.4	0.39	0.1	0.00	0.09	0.02	10	
14	18.17	18.17	33.148	23.814	408.3	0.057	5.54	102.5	1.4	0.39	0.1	0.00	0.09	0.02	14	219
20 ISL	18.13	18.13	33.143	23.820	407.9	0.082	5.54	102.4	1.4	0.39	0.1	0.00	0.09	0.02	20	
29	18.04	18.04	33.133	23.835	406.8	0.118	5.55	102.4	1.3	0.39	0.1	0.00	0.10	0.02	29	218
30 ISL	18.03	18.02	33.132	23.837	406.6	0.122	5.55	102.4	1.3	0.39	0.1	0.00	0.10	0.02	30	
44	17.87	17.86	33.125	23.871	403.9	0.179	5.59	102.8	1.4	0.44	0.1	0.00	0.11	0.02	44	217
50 ISL	17.28	17.27	33.060	23.963	395.3	0.203	5.80	105.4	1.0	0.41	0.1	0.00	0.17	0.04	50	
55	16.51	16.50	32.994	24.092	383.1	0.223	6.01	107.5	0.8	0.39	0.1	0.00	0.22	0.07	55	216
64	14.30	14.29	32.908	24.511	343.2	0.255	6.35	108.6	1.7	0.44	0.1	0.00	0.28	0.16	64	215
74	13.27	13.26	32.856	24.682	327.1	0.289	6.28	105.1	2.2	0.49	0.1	0.01	0.51	0.30	74	214
75 ISL	13.17	13.16	32.850	24.697	325.6	0.292	6.26	104.6	2.3	0.50	0.2	0.03	0.50	0.30	75	
86	12.36	12.35	32.844	24.850	311.2	0.327	6.03	99.0	3.3	0.63	2.1	0.25	0.42	0.28	86	213
95	12.23	12.22	32.947	24.954	301.5	0.355	5.81	95.2	4.1	0.71	3.7	0.17	0.28	0.25	95	212
100 ISL	12.17	12.16	32.992	25.001	297.2	0.370	5.73	93.8	4.4	0.74	4.5	0.12	0.23	0.25	100	
109	12.03	12.02	33.063	25.083	289.6	0.396	5.61	91.6	5.0	0.79	5.8	0.05	0.17	0.24	109	211
123	11.63	11.61	33.173	25.242	274.7	0.435	5.35	86.7	6.6	0.91	8.1	0.02	0.12	0.13	123	210
125 ISL	11.51	11.49	33.191	25.278	271.3	0.441	5.29	85.5	7.1	0.94	8.7	0.02	0.11	0.12	125	
144	10.26	10.24	33.390	25.654	235.7	0.489	4.64	73.1	12.7	1.27	14.7	0.01	0.03	0.04	145	209
150 ISL	9.98	9.96	33.466	25.761	225.6	0.503	4.39	68.7	14.9	1.38	16.5	0.01	0.03	0.04	151	
169	9.36	9.34	33.694	26.041	199.2	0.543	3.68	56.9	21.6	1.68	21.5	0.00	0.01	0.02	170	208
198	9.03	9.01	33.911	26.264	178.6	0.598	3.16	48.6	28.2	1.93	25.4	0.00	0.01	0.01	199	207
200 ISL	9.00	8.98	33.920	26.276	177.5	0.602	3.13	48.1	28.6	1.94	25.6	0.00			201	
227	8.63	8.61	34.002	26.399	166.2	0.648	2.76	42.1	32.9	2.07	27.4	0.00			228	206
250 ISL	8.31	8.28	34.037	26.475	159.2	0.685	2.59	39.2	36.6	2.15	28.8	0.00			251	
268	8.07	8.04	34.054	26.525	154.8	0.714	2.47	37.2	39.5	2.22	29.8	0.00			269	205
300 ISL	7.73	7.70	34.096	26.608	147.3	0.762	2.00	29.9	45.3	2.42	31.9	0.00			302	
317	7.55	7.52	34.112	26.647	143.8	0.787	1.75	26.0	48.3	2.53	33.0	0.00			319	204
376	6.80	6.77	34.102	26.744	135.0	0.869	1.51	22.1	57.4	2.69	35.6	0.00			378	203
400 ISL	6.58	6.54	34.116	26.784	131.3	0.901	1.33	19.4	61.4	2.78	36.7	0.00			402	
436	6.32	6.28	34.150	26.845	125.9	0.947	1.02	14.8	67.2	2.92	38.2	0.00			439	202
500 ISL	6.10	6.06	34.247	26.951	116.6	1.025	0.55	7.9	75.6	3.11	39.9	0.00			503	
519	6.03	5.98	34.276	26.983	113.8	1.047	0.41	5.9	78.1	3.17	40.4	0.00			522	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 57.6 N	117 18.5 W	10/11/02	1945 UTC	69 m	300 03 kn	280 03 06	1	1020.3 mb	18.0 C	16.2 C	17m	3/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.48	17.48	33.474	24.230	368.1	0.000	5.81	106.3	2.4	0.32	0.0	0.00	0.41	0.17	0	
1 A	17.48	17.48	33.474	24.230	368.1	0.004	5.81	106.3	2.4	0.32	0.0	0.00	0.41	0.17	1	208
1	17.49	17.49	33.474	24.228	368.3	0.004									1	209
5	17.24	17.24	33.474	24.288	362.8	0.018	5.83	106.1	2.4	0.30	0.0	0.00	0.39	0.17	5	207
9 A	17.12	17.12	33.470	24.313	360.5	0.033	5.83	105.9	2.4	0.30	0.0	0.00	0.47	0.17	9	206
10 ISL	16.98	16.98	33.462	24.340	357.9	0.036	5.83	105.6	2.5	0.32	0.1	0.00	0.51	0.20	10	
20 ISL	15.12	15.12	33.370	24.691	324.8	0.070	5.78	100.8	4.4	0.55	1.9	0.07	0.89	0.50	20	
21 A	14.89	14.89	33.361	24.734	320.7	0.074	5.78	100.4	4.6	0.58	2.1	0.08	0.93	0.54	21	205
30 ISL	13.54	13.54	33.300	24.969	298.5	0.102	5.61	94.7	5.8	0.74	4.0	0.14	0.94	0.58	30	
35 A	12.90	12.90	33.292	25.091	287.0	0.116	5.46	91.0	6.5	0.83	5.3	0.17	0.94	0.60	35	204
46	11.72	11.71	33.400 D	25.400	257.8	0.146									46	203
50 ISL	11.68	11.67	33.412	25.417	256.3	0.156	4.58	74.4	10.3	1.20	11.3	0.11	0.45	0.47	50	
56	11.61	11.60	33.431	25.445	253.8	0.172	4.25	69.0	11.8	1.32	13.4	0.09	0.25	0.39	56	202
65 A	11.52	11.51	33.480	25.500	248.8	0.194	4.08	66.1	12.9	1.36	14.4	0.16	0.18	0.31	65	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 54.9 N	117 23.8 W	10/11/02	2323 UTC	646 m	270 04 kn	300 02 06	1	1019.0 mb	18.8 C	15.7 C		3/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.51	17.51	33.473	24.222	368.8	0.000	5.82	106.5	2.3	0.30	0.0	0.00	0.29	0.12	0	
1	17.51	17.51	33.473	24.222	368.9	0.004	5.82	106.5	2.3	0.30	0.0	0.00	0.29	0.12	1	220
9	17.22	17.22	33.472	24.291	362.6	0.033	5.85	106.5	2.3	0.28	0.0	0.00	0.32	0.14	9	219
10 ISL	17.13	17.13	33.466	24.308	361.0	0.037	5.88	106.8	2.3	0.28	0.0	0.00	0.36	0.18	10	
18	16.16	16.16	33.398	24.481	344.8	0.065	6.11	108.9	2.9	0.34	0.0	0.01	0.82	0.52	18	218
20 ISL	15.92	15.92	33.380	24.521	341.0	0.072	6.13	108.7	3.0	0.35	0.1	0.01	1.01	0.61	20	
29	14.51	14.51	33.295	24.764	318.1	0.101	6.20	106.8	4.0	0.47	0.7	0.05	1.47	0.80	29	217
30 ISL	14.24	14.24	33.282	24.811	313.6	0.104	6.13	105.0	4.2	0.51	1.4	0.06	1.38	0.77	30	
38	12.30	12.30	33.235	25.163	280.2	0.128	5.47	90.0	6.3	0.87	7.1	0.14	0.51	0.47	38	216
48	11.74	11.73	33.330	25.342	263.4	0.155	4.93	80.2	8.5	1.07	10.4	0.04	0.26	0.32	48	215
50 ISL	11.72	11.71	33.344	25.357	262.0	0.161	4.89	79.5	8.7	1.10	10.6	0.04	0.26	0.32	50	
59	11.62	11.61	33.377	25.401	258.0	0.184	4.73	76.7	9.6	1.19	11.4	0.04	0.24	0.31	59	214
68	11.67	11.66	33.479	25.472	251.6	0.207	4.32	70.2	11.4	1.24	13.0	0.04	0.15	0.19	68	213
75 ISL	11.58	11.57	33.539	25.535	245.7	0.224	4.05	65.7	12.8	1.32	14.2	0.05	0.10	0.15	75	
85	11.35	11.34	33.618	25.639	236.1	0.248	3.67	59.3	15.1	1.46	16.1	0.07	0.05	0.12	85	212
99	10.97	10.96	33.753	25.813	219.9	0.280	3.09	49.5	19.0	1.70	19.2	0.06	0.03	0.07	99	211
100 ISL	10.96	10.95	33.761	25.820	219.1	0.283	3.06	49.1	19.2	1.71	19.3	0.06	0.03	0.07	100	
119	10.80	10.79	33.875	25.938	208.4	0.323	2.69	43.0	22.4	1.90	21.4	0.02	0.01	0.06	120	210
125 ISL	10.66	10.65	33.899	25.982	204.4	0.336	2.54	40.5	23.6	1.96	22.3	0.02	0.01	0.06	126	
137	10.39	10.37	33.937	26.058	197.3	0.360	2.26	35.8	25.9	2.06	24.1	0.02	0.01	0.05	138	209
150 ISL	10.34	10.32	33.979	26.100	193.6	0.385	2.10	33.3	27.1	2.11	25.0	0.02	0.01	0.05	151	
168	10.27	10.25	34.013	26.139	190.3	0.420	2.00	31.6	28.1	2.14	25.6	0.02	0.01	0.05	169	208
198	9.98	9.96	34.085	26.245	180.8	0.475	1.96	30.8	30.2	2.20	26.6	0.01	0.00	0.05	199	207
200 ISL	9.98	9.96	34.092	26.251	180.3	0.479	1.94	30.5	30.3	2.21	26.7	0.01			201	
229	9.92	9.89	34.191	26.339	172.6	0.530	1.68	26.4	32.7	2.31	27.7	0.01			230	206
250 ISL	9.49	9.46	34.190	26.410	166.2	0.566	1.52	23.6	34.7	2.39	28.5	0.01			251	
268	9.10	9.07	34.182 D	26.467	160.9	0.595									270	205
300 ISL	8.96	8.93	34.249	26.542	154.4	0.646	1.20	18.5	40.4	2.57	30.4	0.00			302	
317	8.92	8.89	34.286	26.578	151.3	0.672	1.12	17.2	42.6	2.63	31.1	0.00			319	204
378	7.92	7.88	34.265	26.714	138.8	0.760	0.89	13.4	52.1	3.07 U	34.0	0.00			380	203
400 ISL	7.72	7.68	34.267	26.745	136.1	0.790	0.83	12.4	54.5	2.86	34.6	0.00			403	
437	7.46	7.42	34.275	26.790	132.3	0.840	0.72	10.7	58.3	2.94	35.5	0.00			440	202
500 ISL	6.86	6.81	34.291	26.886	123.6	0.921	0.50	7.3	67.3	3.07	37.5	0.01			503	
519	6.68	6.63	34.297	26.915	121.0	0.944	0.44	6.4	70.0	3.11	38.1	0.01			523	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
32 50.8 N	117 32.3 W	11/11/02	0237 UTC	863 m	270 03 kn			1019.0 mb	17.5 C	14.9 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.25	17.25	33.443	24.261	365.1	0.000	5.83	106.1	2.5	0.31	0.0	0.00	0.26	0.09	0	
1	17.25	17.25	33.443	24.261	365.1	0.004	5.83	106.1	2.5	0.31	0.0	0.00	0.26	0.09	1	220
10	17.03	17.03	33.433	24.306	361.2	0.036	5.89	106.8	2.5	0.30	0.0	0.00	0.30	0.12	10	219
18	16.10	16.10	33.349	24.457	347.1	0.065	6.09	108.3	3.2	0.35	0.0	0.00	0.48	0.19	18	218
20 ISL	15.60	15.60	33.319	24.546	338.6	0.072	6.10	107.4	3.3	0.38	0.0	0.01	0.63	0.23	20	
28	13.63	13.63	33.238	24.903	304.8	0.097	6.14	103.8	4.0	0.54	0.9	0.08	1.16	0.41	28	217
30 ISL	13.40	13.40	33.231	24.944	300.9	0.103	6.13	103.2	4.3	0.57	1.4	0.11	1.14	0.45	30	
38	12.81	12.80	33.226	25.058	290.3	0.127	5.93	98.6	5.8	0.72	4.3	0.17	1.07	0.55	38	216
48	11.87	11.86	33.266	25.269	270.4	0.155	5.19	84.6	8.1	1.03	10.1	0.04	0.52	0.43	48	215
50 ISL	11.73	11.72	33.290	25.313	266.2	0.160	5.04	81.9	8.7	1.08	11.0	0.04	0.44	0.40	50	
58	11.26	11.25	33.397	25.483	250.2	0.181	4.54	73.1	11.4	1.26	14.0	0.02	0.19	0.27	58	214
68	10.80	10.79	33.484	25.632	236.2	0.205	4.30	68.6	14.0	1.39	15.9	0.02	0.09	0.17	68	213
75 ISL	10.78	10.77	33.576	25.708	229.2	0.222	3.97	63.3	15.4	1.47	16.9	0.02	0.05	0.12	75	
83	10.75	10.74	33.658	25.777	222.8	0.240	3.60	57.4	16.8	1.55	17.9	0.01	0.03	0.08	83	212
98	10.43	10.42	33.715	25.878	213.5	0.272	3.31	52.4	19.5	1.68	19.9	0.01	0.02	0.07	98	211
100 ISL	10.42	10.41	33.727	25.889	212.5	0.277	3.25	51.5	19.9	1.70	20.2	0.01	0.02	0.07	100	
118	10.34	10.33	33.850	25.999	202.5	0.314	2.63	41.6	24.0	1.93	22.9	0.01	0.01	0.05	119	210
125 ISL	10.30	10.29	33.909	26.052	197.6	0.328	2.42	38.3	25.5	2.01	23.8	0.01	0.01	0.05	126	
139	10.22	10.20	34.019	26.152	188.4	0.355	2.07	32.7	28.2	2.14	25.4	0.01	0.00	0.05	140	209
150 ISL	10.16	10.14	34.080	26.210	183.2	0.376	1.93	30.5	29.5	2.21	26.2	0.01	0.00	0.05	151	
169	10.03	10.01	34.143	26.281	176.8	0.410	1.81	28.5	31.0	2.28	27.1	0.01	0.00	0.05	170	208
199	9.75	9.73	34.145	26.331	172.7	0.462	1.77	27.7	32.7	2.30	27.7	0.02	0.00	0.05	200	207
200 ISL	9.74	9.72	34.145	26.332	172.5	0.464	1.77	27.7	32.7	2.30	27.7	0.02			201	
227	9.61	9.58	34.162	26.368	169.7	0.510	1.75	27.3	33.6	2.33	28.2	0.01			228	206
250 ISL	9.44	9.41	34.196	26.422	164.9	0.549	1.63	25.3	35.2	2.39	28.8	0.01			251	
269	9.29	9.26	34.228 D	26.472	160.5	0.579									271	205
300 ISL	9.06	9.03	34.264	26.538	154.8	0.628	1.30	20.0	40.1	2.54	30.3	0.01			302	
319	8.89	8.86	34.278	26.576	151.5	0.657	1.16	17.8	42.5	2.61	31.0	0.01			321	204
380	8.02	7.98	34.265	26.700	140.3	0.746	0.92	13.9	50.7	2.78	33.6	0.01			382	203
400 ISL	7.78	7.74	34.268	26.738	136.9	0.774	0.83	12.4	53.6	2.84	34.4	0.01			403	
439	7.37	7.33	34.278	26.805	130.8	0.826	0.67	9.9	59.2	2.94	35.8	0.01			442	202
500 ISL	6.85	6.80	34.291	26.887	123.5	0.904	0.50	7.3	67.5	3.07	37.6	0.01			503	
516	6.71	6.66	34.295	26.910	121.5	0.923	0.45	6.6	69.7	3.11	38.1	0.01			520	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 40.7 N	117 52.2 W	11/11/02	0647 UTC	627 m	260 12 kn			1019.2 mb	16.9 C	15.8 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.17	17.17	33.443	24.280	363.3	0.000	5.72	104.0	2.2	0.35	0.0	0.00	0.22	0.07	0	
1	17.17	17.17	33.443	24.280	363.3	0.004	5.72	104.0	2.2	0.35	0.0	0.00	0.22	0.07	1	221
10 ISL	17.17	17.17	33.443	24.281	363.6	0.036	5.76	104.7	2.2	0.36	0.0	0.00	0.22	0.06	10	
11	17.17	17.17	33.443	24.281	363.6	0.040	5.77	104.9	2.2	0.36	0.0	0.00	0.22	0.06	11	220
20 ISL	17.05	17.05	33.447	24.313	360.9	0.073	5.83	105.7	2.2	0.35	0.0	0.00	0.25	0.10	20	
21	17.04	17.04	33.448	24.316	360.7	0.076	5.84	105.9	2.2	0.35	0.0	0.00	0.25	0.11	21	219
30 ISL	15.97	15.97	33.394	24.521	341.3	0.108	6.21	110.2	3.0	0.37	0.0	0.00	0.40	0.22	30	
31	15.79	15.79	33.384	24.554	338.2	0.111	6.24	110.3	3.1	0.37	0.0	0.00	0.44	0.24	31	218
41	13.43	13.42	33.257	24.959	299.8	0.143	5.97	100.5	5.2	0.65	3.5	0.23	1.21	0.67	41	217
50 ISL	12.49	12.48	33.233	25.126	284.1	0.169	5.46	90.2	6.6	0.89	7.4	0.16	0.70	0.38	50	
51	12.43	12.42	33.232	25.136	283.1	0.172	5.41	89.2	6.7	0.91	7.8	0.15	0.62	0.34	51	216
61	11.75	11.74	33.236	25.268	270.8	0.200	5.19	84.4	7.8	1.02	9.7	0.05	0.40	0.36	61	215
71	11.26	11.25	33.387	25.475	251.3	0.226	4.58	73.7	11.3	1.23	13.7	0.02	0.19	0.27	71	214
75 ISL	11.06	11.05	33.437	25.550	244.2	0.236	4.35	69.7	12.7	1.31	15.0	0.02	0.14	0.22	75	
86	10.61	10.60	33.561	25.726	227.7	0.262	3.79	60.2	16.3	1.52	18.1	0.01	0.05	0.11	86	213
100 ISL	10.37	10.36	33.702	25.878	213.5	0.293	3.23	51.1	20.2	1.72	20.8	0.01	0.01	0.09	100	
101	10.36	10.35	33.712	25.887	212.7	0.295	3.19	50.5	20.5	1.73	21.0	0.01	0.01	0.09	101	212
121	10.26	10.25	33.899	26.051	197.6	0.336	2.47	39.0	25.4	1.98	23.9	0.01	0.01	0.07	122	211
125 ISL	10.24	10.23	33.922	26.072	195.7	0.344	2.39	37.8	26.0	2.01	24.3	0.01	0.01	0.07	126	
140	10.18	10.16	33.992	26.137	189.8	0.373	2.15	33.9	27.9	2.10	25.4	0.01	0.00	0.06	141	210
150 ISL	10.12	10.10	34.037	26.183	185.7	0.391	2.02	31.8	29.1	2.16	26.1	0.01	0.00	0.06	151	
171	10.01	9.99	34.130	26.275	177.4	0.430	1.76	27.7	31.5	2.28	27.3	0.01	0.00	0.05	172	209
200	9.91	9.89	34.260	26.394	166.8	0.479	1.36	21.4	35.3	2.44	28.6	0.01	0.00	0.05	201	208
229	9.45	9.42	34.266	26.475	159.5	0.527	1.30	20.2	37.8	2.49	29.7	0.01			230	207
250 ISL	9.22	9.19	34.266	26.513	156.2	0.560	1.26	19.5	39.4	2.52	30.2	0.01			251	
273	9.01	8.98	34.267	26.548	153.3	0.596	1.21	18.6	41.2	2.55	30.6	0.01			275	206
300 ISL	8.74	8.71	34.279	26.600	148.7	0.636	1.10	16.8	44.0	2.63	31.4	0.01			302	
323	8.54	8.51	34.289	26.639	145.4	0.670	1.01	15.4	46.3	2.69	32.1	0.01			325	204
380	8.21	8.17	34.280	26.683	142.0	0.752	0.92	13.9	49.9	2.74	33.2	0.01			382	203
400 ISL	7.98	7.94	34.281	26.718	138.9	0.780	0.85	12.8	52.7	2.79	33.9	0.01			403	
441	7.46	7.42	34.288	26.800	131.4	0.836	0.69	10.3	59.0	2.91	35.5	0.01			444	202
500 ISL	6.94	6.89	34.295	26.878	124.4	0.911	0.50	7.3	66.2	3.02	37.4	0.01			503	
504	6.90	6.85	34.295	26.884	123.9	0.916	0.49	7.2	66.7	3.03	37.5	0.01			507	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 40

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 30.6 N	118 13.3 W	11/11/02	1059 UTC	1608 m	290 18 kn			1019.0 mb	16.6 C	15.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0	17.05	17.05	33.415	24.287	362.7	0.000	5.69	103.2	1.4	0.39	0.1	0.00	0.25	0.08	0	222
10 ISL	17.06	17.06	33.415	24.285	363.2	0.036	5.71	103.6	1.4	0.38	0.1	0.00	0.26	0.07	10	
11	17.06	17.06	33.415	24.285	363.2	0.040	5.71	103.6	1.4	0.38	0.1	0.00	0.26	0.07	11	221
20 ISL	17.05	17.05	33.414	24.287	363.3	0.073	5.70	103.3	1.4	0.37	0.1	0.00	0.24	0.09	20	
21	17.05	17.05	33.414	24.287	363.4	0.076	5.70	103.3	1.4	0.37	0.1	0.00	0.24	0.09	21	220
30 ISL	16.35	16.35	33.349	24.400	352.9	0.108	5.87	104.9	1.5	0.38	0.1	0.00	0.48	0.20	30	
31	16.27	16.27	33.342	24.413	351.6	0.112	5.89	105.1	1.5	0.38	0.1	0.00	0.52	0.22	31	219
40	13.18	13.17	33.093	24.882	307.1	0.142	5.89	98.6	3.8	0.66	2.7	0.09	0.79	0.52	40	218
50 ISL	12.84	12.83	33.174	25.012	295.0	0.172	5.59	92.9	5.0	0.76	4.6	0.06	0.45	0.40	50	
51	12.81	12.80	33.169	25.014	294.8	0.175	5.55	92.2	5.1	0.76	4.8	0.05	0.40	0.38	51	217
61	12.50	12.49	33.265	25.149	282.2	0.204	5.21	86.1	6.4	0.88	7.0	0.03	0.24	0.29	61	216
69	12.11	12.10	33.373	25.307	267.3	0.226	4.84	79.3	8.1	1.02	9.5	0.02	0.15	0.19	69	215
75 ISL	11.75	11.74	33.437	25.424	256.3	0.241	4.62	75.2	9.5	1.15	11.3	0.01	0.10	0.16	75	
85	11.21	11.20	33.527	25.593	240.4	0.266	4.28	68.9	12.2	1.35	14.0	0.01	0.05	0.13	85	214
100	10.79	10.78	33.650	25.764	224.4	0.301	3.62	57.8	16.7	1.55	17.8	0.01	0.03	0.07	100	213
119	10.63	10.62	33.854	25.952	207.1	0.342	2.90	46.2	21.3	1.80	21.4	0.01	0.01	0.04	120	212
125 ISL	10.52	10.51	33.905	26.011	201.6	0.354	2.74	43.5	22.9	1.87	22.3	0.01	0.01	0.04	126	
139	10.22	10.20	33.997	26.134	190.1	0.382	2.46	38.9	26.1	2.02	24.1	0.01	0.00	0.03	140	211
150 ISL	10.04	10.02	34.028	26.189	185.0	0.402	2.43	38.2	27.4	2.05	24.8	0.01	0.00	0.03	151	
173	9.73	9.71	34.063	26.269	177.9	0.444	2.37	37.0	29.3	2.11	25.8	0.01	0.00	0.03	174	210
199	9.45	9.43	34.143	26.378	168.0	0.489	2.10	32.6	32.9	2.35	27.4	0.01	0.00	0.03	200	209
200 ISL	9.44	9.42	34.145	26.382	167.7	0.491	2.09	32.5	33.0	2.35	27.5	0.01			201	
229	9.15	9.12	34.212	26.481	158.7	0.538	1.73	26.7	37.2	2.39	28.9	0.01			230	208
250 ISL	9.17	9.14	34.288	26.538	153.8	0.571	1.26	19.5	40.7	2.58	29.8	0.01			251	
267	9.19	9.16	34.327	26.566	151.6	0.597	1.08	16.7	41.6	2.73	30.1	0.01			269	206
268	9.18	9.15	34.326	26.567	151.5	0.598	1.09	16.9	41.5	2.64	30.1	0.01			270	207
300 ISL	9.00	8.97	34.353	26.617	147.3	0.646	0.92	14.2	44.3	2.74	30.8	0.01			302	
317	8.88	8.85	34.370	26.650	144.5	0.671	0.74	11.4	45.8	2.79	31.4	0.01			319	204
379	7.61	7.57	34.229	26.731	137.0	0.758	1.10	16.4	53.4	2.80	34.0	0.01			381	203
400 ISL	7.48	7.44	34.241	26.759	134.5	0.787	0.99	14.7	55.4		34.6	0.01			403	
435	7.37	7.33	34.281	26.807	130.6	0.833	0.73	10.8	58.7	3.12 U	35.6	0.01			438	202
500 ISL	6.85	6.80	34.297	26.892	123.0	0.915	0.51	7.5	67.2		37.7	0.01			503	
523	6.66	6.61	34.303	26.923	120.3	0.943	0.43	6.3	70.2	3.67 U	38.4	0.01			527	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 20.8 N	118 33.9 W	11/11/02	1735 UTC	1405 m	300 14 kn	300 05 06	0	1019.1 mb	17.6 C	15.2 C	19m	0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.20	17.20	33.446	24.276	363.8	0.000	5.70	103.7	1.9	0.37	0.1	0.00	0.31	0.10	0	
1	17.20	17.20	33.446	24.276	363.8	0.004									1	222
1 A	17.20	17.20	33.446	24.276	363.8	0.004	5.70	103.7	1.9	0.37	0.1	0.00	0.31	0.10	1	221
10 A	17.18	17.18	33.446	24.281	363.6	0.036	5.71	103.8	1.8	0.35	0.1	0.00	0.31	0.09	10	220
18	17.13	17.13	33.442	24.290	363.0	0.065	5.74	104.3	1.7	0.35	0.1	0.00	0.33	0.10	18	219
20 ISL	17.11	17.11	33.439	24.292	362.8	0.073	5.74	104.2	1.7	0.35	0.1	0.00	0.35	0.10	20	
25 A	16.93	16.93	33.420	24.320	360.4	0.091	5.73	103.7	1.7	0.35	0.0	0.00	0.45	0.14	25	218
30 ISL	16.45	16.45	33.372	24.395	353.4	0.109	5.84	104.6	1.8	0.38	0.1	0.00	0.63	0.24	30	
31	16.34	16.34	33.360	24.411	351.9	0.112	5.87	104.9	1.8	0.39	0.1	0.00	0.67	0.26	31	217
39 A	15.57	15.56	33.251	24.501	343.5	0.140	5.98	105.2	2.2	0.42	0.1	0.01	0.76	0.31	39	216
50 ISL	13.04	13.03	33.121	24.932	302.6	0.175	5.68	94.8	4.5	0.70	4.0	0.08	0.50	0.38	50	
52 A	12.64	12.63	33.123	25.011	295.0	0.181	5.59	92.5	5.0	0.76	4.8	0.09	0.44	0.39	52	215
62	12.77	12.76	33.322	25.141	283.0	0.210	5.14	85.4	6.5	0.87	6.6	0.04	0.29	0.30	62	214
74 A	12.08	12.07	33.478	25.394	259.1	0.243	4.44	72.8	9.9	1.14	11.6	0.02	0.10	0.20	74	213
75 ISL	12.05	12.04	33.483	25.404	258.2	0.245	4.42	72.4	10.0	1.15	11.8	0.02	0.10	0.19	75	
85	11.82	11.81	33.513	25.471	252.1	0.271	4.26	69.5	11.1	1.23	12.9	0.02	0.09	0.14	85	212
99	11.15	11.14	33.579	25.645	235.8	0.305	3.96	63.7	13.9	1.39	15.7	0.01	0.04	0.09	99	211
100 ISL	11.09	11.08	33.590	25.664	234.0	0.308	3.92	63.0	14.2	1.41	16.0	0.01	0.04	0.09	100	
119	10.11	10.10	33.803	26.001	202.2	0.349	3.28	51.6	20.8	1.70	21.0	0.02	0.01	0.05	120	210
125 ISL	9.92	9.91	33.843	26.065	196.3	0.361	3.19	50.0	22.3	1.75	22.0	0.02	0.01	0.04	126	
138	9.64	9.62	33.910	26.164	187.1	0.386	3.04	47.4	25.0	1.84	23.5	0.01	0.00	0.03	139	209
150 ISL	9.60	9.58	33.981	26.226	181.4	0.408	2.81	43.8	27.0	1.93	24.7	0.01	0.00	0.03	151	
170	9.53	9.51	34.061	26.301	174.8	0.444	2.44	38.0	29.8	2.07	26.2	0.02	0.00	0.03	171	208
199	9.14	9.12	34.122	26.412	164.7	0.493	2.25	34.7	33.7	2.19	27.7	0.02	0.00	0.02	200	207
200 ISL	9.12	9.10	34.123	26.416	164.3	0.494	2.25	34.7	33.8	2.19	27.7	0.02			201	
231	8.66	8.64	34.135	26.498	156.9	0.544	2.17	33.1	37.7	2.27	28.9	0.01			232	206
250 ISL	8.62	8.59	34.170	26.532	154.1	0.574	1.96	29.9	39.5	2.36	29.6	0.01			251	
271	8.60	8.57	34.205	26.563	151.5	0.606	1.70	25.9	41.5	2.46	30.4	0.01			273	205
300 ISL	8.17	8.14	34.195	26.621	146.3	0.649	1.57	23.7	45.4	2.54	31.8	0.01			302	
320	7.86	7.83	34.187	26.661	142.7	0.678	1.48	22.2	48.3	2.60	32.7	0.01			322	204
375	7.67	7.63	34.274	26.758	134.4	0.754	0.83	12.4	55.0	2.85	34.6	0.01			377	203
400 ISL	7.47	7.43	34.292	26.801	130.6	0.787	0.67	10.0	58.4	2.94	35.6	0.01			403	
435	7.14	7.10	34.304	26.857	125.6	0.832	0.53	7.8	63.2	3.04	36.9	0.01			438	202
500 ISL	6.48	6.43	34.302	26.945	117.6	0.911	0.41	6.0	72.2	3.13	39.1	0.01			503	
513	6.35	6.30	34.302	26.962	116.0	0.926	0.38	5.5	74.0	3.15	39.6	0.01			516	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 10.7 N	118 54.0 W	11/11/02	2149 UTC	1481 m	300 14 kn	300 06 05	0	1018.1 mb	17.1 C	16.1 C		0/8

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.03	17.03	33.461	24.327	358.8	0.000	5.71	103.5	1.0	0.37	0.1	0.00	0.24	0.06	0	
1	17.03	17.03	33.461	24.327	358.9	0.004	5.71	103.5	1.0	0.37	0.1	0.00	0.24	0.06	1	220
10	17.01	17.01	33.462	24.333	358.6	0.036	5.71	103.5	0.9	0.37	0.1	0.00	0.26	0.05	10	219
20	16.86	16.86	33.456	24.364	356.0	0.072	5.75	103.9	0.9	0.36	0.1	0.00	0.28	0.06	20	218
30	16.81	16.81	33.451	24.372	355.6	0.107	5.71	103.1	1.0	0.39	0.1	0.00	0.31	0.09	30	217
40	16.46	16.45	33.415	24.426	350.7	0.143	5.78	103.6	1.3	0.38	0.1	0.00	0.49	0.15	40	216
50 ISL	13.63	13.62	33.160	24.844	311.1	0.176	5.80	98.0	3.6	0.64	3.1	0.10	0.74	0.51	50	
52	13.04	13.03	33.122	24.932	302.6	0.182	5.80	96.8	4.1	0.70	3.8	0.12	0.75	0.57	52	215
61	12.18	12.17	33.114	25.093	287.5	0.208	5.51	90.3	5.4	0.84	6.3	0.08	0.37	0.37	61	214
71	11.49	11.48	33.202	25.289	268.9	0.236	5.17	83.5	8.8	1.13	11.7	0.03	0.14	0.14	71	213
75 ISL	11.32	11.31	33.235	25.346	263.6	0.247	5.09	82.0	9.5	1.19	12.6	0.03	0.13	0.12	75	
82	11.09	11.08	33.293	25.433	255.5	0.265	4.95	79.3	10.5	1.25	13.6	0.02	0.10	0.09	82	212
97	10.64	10.63	33.434	25.622	237.8	0.302	4.50	71.5	13.9	1.42	16.8	0.02	0.05	0.06	97	211
100 ISL	10.48	10.47	33.470	25.678	232.5	0.309	4.39	69.5	14.9	1.46	17.5	0.02	0.04	0.06	100	
122	9.45	9.44	33.722	26.048	197.7	0.356	3.71	57.5	21.6	1.67	21.4	0.02	0.01	0.04	123	210
125 ISL	9.40	9.39	33.743	26.072	195.4	0.362	3.67	56.8	22.0	1.68	21.6	0.02	0.01	0.04	126	
139	9.28	9.26	33.824	26.155	187.8	0.389	3.52	54.4	23.8	1.72	22.4	0.02	0.01	0.02	140	209
150 ISL	9.11	9.09	33.893	26.237	180.2	0.409	3.39	52.2	26.0	1.78	23.4	0.02	0.01	0.02	151	
171	8.78	8.76	33.998	26.371	167.8	0.446	3.10	47.4	30.4	1.92	25.6	0.02	0.00	0.02	172	208
198	8.46	8.44	34.038	26.453	160.5	0.490	2.65	40.3	35.1	2.11	28.1	0.01	0.00	0.03	199	207
200 ISL	8.44	8.42	34.040	26.457	160.1	0.493	2.63	39.9	35.4	2.12	28.2	0.01			201	
231	8.20	8.18	34.074	26.521	154.6	0.542	2.29	34.6	39.4	2.25	29.9	0.01			232	206
250 ISL	8.07	8.04	34.108	26.567	150.5	0.571	1.95	29.4	42.4	2.38	31.2	0.01			251	
269	7.94	7.91	34.145	26.615	146.1	0.599	1.60	24.0	45.7	2.52	32.5	0.01			271	205
300 ISL	7.70	7.67	34.201	26.695	139.1	0.643	1.21	18.1	51.2	2.70	33.9	0.01			302	
318	7.55	7.52	34.224	26.735	135.5	0.668	1.06	15.8	54.1	2.78	34.6	0.01			320	204
368	7.07	7.04	34.217	26.797	130.1	0.735	0.91	13.4	59.7	2.86	36.1	0.01			370	203
400 ISL	6.80	6.76	34.226	26.842	126.1	0.776	0.77	11.3	64.0	2.96	37.2	0.01			403	
440	6.51	6.47	34.250	26.900	121.0	0.825	0.59	8.6	69.4	3.08	38.6	0.01			443	202
500 ISL	6.19	6.15	34.310	26.989	113.1	0.895									503	
514	6.12	6.07	34.324 D	27.009	111.3	0.911									517	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
32 0.8 N	119 14.0 W	12/11/02	0203 UTC	1587 m	350 12 kn			1019.1 mb	17.7 C	16.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.07	17.07	33.477	24.330	358.6	0.000	5.70	103.4	1.3	0.36	0.1	0.00	0.21	0.05	0	
2	17.07	17.07	33.477	24.330	358.6	0.007	5.70	103.4	1.3	0.36	0.1	0.00	0.21	0.05	2	220
10 ISL	17.08	17.08	33.467	24.320	359.8	0.036	5.72	103.8	1.3	0.37	0.1	0.00	0.19	0.04	10	
11	17.08	17.08	33.466	24.320	359.9	0.040	5.72	103.8	1.3	0.37	0.1	0.00	0.19	0.04	11	219
20 ISL	17.08	17.08	33.466	24.320	360.2	0.072	5.75	104.3	1.3	0.36	0.1	0.00	0.20	0.06	20	
21	17.08	17.08	33.466	24.320	360.2	0.076	5.75	104.3	1.3	0.36	0.1	0.00	0.20	0.06	21	218
30 ISL	17.02	17.02	33.462	24.331	359.5	0.108	5.72	103.7	1.2	0.36	0.1	0.00	0.23	0.07	30	
32	17.01	17.00	33.461	24.333	359.4	0.115	5.71	103.5	1.2	0.36	0.1	0.00	0.24	0.07	32	217
40	13.93	13.92	33.180	24.797	315.2	0.142	6.09	103.6	3.6	0.50	0.5	0.05	1.02	0.56	40	216
50	12.57	12.56	33.257	25.129	283.8	0.172	5.31	87.8	6.3	0.87	6.7	0.05	0.32	0.31	50	215
61	12.05	12.04	33.347	25.298	268.0	0.202	4.90	80.2	8.5	1.04	9.8	0.03	0.18	0.23	61	214
71	11.29	11.28	33.492	25.551	244.0	0.228	4.28	69.0	12.4	1.29	14.2	0.03	0.10	0.12	71	213
75 ISL	11.28	11.27	33.531	25.583	241.1	0.238	4.16	67.1	13.0	1.33	14.8	0.03	0.09	0.11	75	
87	11.25	11.24	33.587	25.633	236.7	0.266	3.94	63.5	14.1	1.39	15.6	0.03	0.06	0.10	87	212
100 ISL	10.69	10.68	33.688	25.811	219.9	0.296	3.61	57.5	17.3	1.55	18.2	0.02	0.02	0.06	100	
101	10.64	10.63	33.696	25.826	218.5	0.298	3.58	57.0	17.6	1.56	18.4	0.02	0.02	0.06	101	211
121	10.07	10.06	33.854	26.048	197.8	0.340	3.07	48.3	22.9	1.80	22.1	0.02	0.00	0.04	122	210
125 ISL	9.96	9.95	33.871	26.080	194.8	0.348	3.06	48.0	23.6	1.82	22.5	0.02	0.00	0.04	126	
139	9.64	9.62	33.920	26.172	186.3	0.374	3.03	47.2	25.7	1.87	23.5	0.02	0.00	0.03	140	209
150 ISL	9.64	9.62	33.981	26.220	182.0	0.395	2.82	44.0	27.2	1.95	24.5	0.02	0.00	0.03	151	
170	9.63	9.61	34.076	26.296	175.3	0.430	2.35	36.7	30.3	2.12	26.4	0.02	0.00	0.03	171	208
200 ISL	9.03	9.01	34.154	26.455	160.6	0.481	1.95	30.0	36.5	2.31	28.9	0.02	0.00	0.03	201	
201	9.01	8.99	34.156	26.459	160.2	0.482	1.94	29.9	36.7	2.32	29.0	0.02	0.00	0.03	202	207
229	8.77	8.75	34.225	26.552	151.9	0.526	1.57	24.0	41.3	2.49	30.3	0.02			230	206
250 ISL	8.83	8.80	34.283	26.588	148.9	0.558	1.25	19.2	43.2	2.63	30.8	0.02			251	
269	8.90	8.87	34.330	26.614	146.9	0.586	0.98	15.1	44.6	2.74	31.1	0.02			271	205
300 ISL	8.66	8.63	34.371	26.684	140.7	0.630	0.67	10.2	48.6	2.87	32.3	0.02			302	
319	8.46	8.43	34.383	26.725	137.1	0.657	0.55	8.4	51.1	2.93	33.0	0.02			321	204
376	8.02	7.98	34.367	26.780	132.7	0.734	0.49	7.4	55.6	2.99	34.5	0.02			378	203
400 ISL	7.76	7.72	34.357	26.810	130.0	0.765	0.47	7.0	58.3	3.01	35.3	0.02			403	
437	7.35	7.31	34.342	26.858	125.8	0.812	0.43	6.4	62.4	3.05	36.5	0.02			440	202
500 ISL	6.77	6.72	34.326	26.926	119.8	0.890									503	
511	6.67	6.62	34.324 D	26.938	118.7	0.903									514	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
31 50.9 N	119 34.2 W	12/11/02	0619 UTC	1928 m	330 11 kn			1019.1 mb	17.7 C	16.1 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.32	17.32	33.450	24.250	366.2	0.000	5.67	103.4	2.0	0.38	0.0	0.00	0.25	0.05	0	
1	17.32	17.32	33.450	24.250	366.2	0.004	5.67	103.4	2.0	0.38	0.0	0.00	0.25	0.05	1	220
10 ISL	17.32	17.32	33.450	24.250	366.5	0.037	5.66	103.2	1.9	0.37	0.0	0.00	0.24	0.06	10	
13	17.32	17.32	33.450	24.251	366.6	0.048	5.65	103.0	1.9	0.37	0.0	0.00	0.24	0.06	13	219
20 ISL	17.32	17.32	33.451	24.252	366.7	0.073	5.65	103.0	1.9	0.36	0.0	0.00	0.24	0.06	20	
29	17.33	17.33	33.452	24.250	367.2	0.106	5.64	102.8	1.8	0.35	0.0	0.00	0.25	0.06	29	218
30 ISL	17.11	17.11	33.425	24.282	364.2	0.110	5.68	103.1	1.8	0.36	0.0	0.00	0.31	0.09	30	
43	13.97	13.96	33.099	24.726	322.0	0.155	6.10	103.8	2.4	0.51	0.5	0.05	1.14	0.53	43	217
50 ISL	13.03	13.02	33.014	24.851	310.3	0.177	5.99	99.9	2.8	0.63	2.0	0.19	1.22	0.61	50	
54	12.63	12.62	32.992	24.912	304.5	0.189	5.92	97.9	3.1	0.71	3.2	0.24	1.26	0.65	54	216
63	11.83	11.82	33.041	25.102	286.6	0.216	5.47	88.9	5.9	0.92	7.3	0.06	0.30	0.26	63	215
73	12.12	12.11	33.165	25.144	282.9	0.244	5.33	87.3	6.4	0.94	7.7	0.04	0.23	0.26	73	214
75 ISL	12.10	12.09	33.181	25.160	281.4	0.250	5.26	86.1	6.5	0.96	7.9	0.04	0.22	0.25	75	
84	12.00	11.99	33.297	25.269	271.3	0.275	4.95	80.9	7.7	1.08	9.6	0.02	0.18	0.19	84	213
94	11.02	11.01	33.301	25.452	254.0	0.301	4.90	78.4	10.4	1.25	13.3	0.01	0.08	0.10	94	212
100 ISL	10.50	10.49	33.328	25.564	243.4	0.316	4.83	76.4	12.3	1.35	15.1	0.01	0.04	0.07	100	
109	9.92	9.91	33.401	25.719	228.7	0.337	4.63	72.4	15.2	1.49	17.4	0.01	0.01	0.04	109	211
125	9.65	9.64	33.619	25.935	208.5	0.372	3.82	59.4	20.2	1.69	21.2	0.01	0.01	0.04	126	210
145	9.22	9.20	33.778	26.129	190.4	0.412	3.29	50.8	25.1	1.87	24.4	0.00	0.00	0.04	146	209
150 ISL	9.15	9.13	33.807	26.163	187.2	0.421	3.20	49.3	26.0	1.90	24.9	0.00	0.00	0.04	151	
170	8.98	8.96	33.908	26.269	177.5	0.458	2.92	44.8	29.0	1.98	26.3	0.01	0.00	0.03	171	208
200	9.03	9.01	34.067	26.387	167.1	0.510	2.49	38.3	32.4	2.15	27.2	0.00	0.00	0.03	201	207
229	8.86	8.84	34.156	26.484	158.4	0.557	1.96	30.1	37.1	2.36	29.1	0.00			230	206
250 ISL	8.89	8.86	34.238	26.543	153.2	0.589	1.48	22.7	40.9	2.49	30.0	0.01			251	
269	8.92	8.89	34.305	26.592	149.0	0.618	1.11	17.1	44.1	2.88 U	30.8	0.01			271	205
300 ISL	8.42	8.39	34.296	26.663	142.6	0.663	1.01	15.4	48.0	2.73	32.4	0.00			302	
320	8.06	8.03	34.278	26.703	138.9	0.691	0.95	14.3	50.1	2.80	33.3	0.00			322	204
380	7.94	7.90	34.370	26.794	131.3	0.773	0.47	7.1	55.9	2.98	34.5	0.00			382	203
400 ISL	7.73	7.69	34.367	26.823	128.8	0.799	0.44	6.6	58.3	3.01	35.2	0.00			402	
443	7.19	7.15	34.344	26.882	123.4	0.853	0.39	5.8	63.8	3.07	36.9	0.00			446	202
500 ISL	6.64	6.59	34.346	26.959	116.5	0.921	0.31	4.5	71.3	3.15	38.7	0.00			503	
514	6.50	6.45	34.347	26.978	114.7	0.937	0.29	4.2	73.2	3.17	39.2	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 31.5 N	120 14.8 W	12/11/02	1220 UTC	3929 m	360 11 kn			1019.3 mb	17.2 C	16.0 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.27	17.27	33.697	24.451	347.0	0.000	5.67	103.4	0.5	0.37	0.1	0.00	0.24	0.09	0	
1	17.27	17.27	33.697	24.451	347.0	0.003	5.67	103.4	0.5	0.37	0.1	0.00	0.24	0.09	1	220
10	17.27	17.27	33.702	24.456	347.0	0.035	5.64	102.9	0.5	0.34	0.1	0.00	0.25	0.08	10	219
20	17.27	17.27	33.699	24.454	347.5	0.069	5.64	102.9	0.4	0.34	0.1	0.00	0.25	0.08	20	218
30	17.27	17.27	33.697	24.453	347.9	0.104	5.63	102.7	0.4	0.33	0.1	0.00	0.25	0.09	30	217
40	17.27	17.26	33.695	24.451	348.4	0.139	5.68	103.6	0.3	0.33	0.1	0.00	0.24	0.09	40	216
50	16.16	16.15	33.637	24.666	328.2	0.173	5.79	103.3	1.1	0.41	0.5	0.01	0.83	0.40	50	215
61	12.46	12.45	33.583	25.403	258.0	0.205	5.22	86.3	9.4	1.03	9.0	0.22	0.82	0.58	61	214
69	11.53	11.52	33.594	25.587	240.7	0.225	4.52	73.3	13.5	1.30	14.2	0.14	0.41	0.32	69	213
75 ISL	11.04	11.03	33.615	25.692	230.7	0.239	4.15	66.6	15.7	1.44	16.8	0.09	0.27	0.27	75	
85	10.44	10.43	33.657	25.830	217.7	0.262	3.72	58.9	18.7	1.62	19.7	0.02	0.17	0.18	85	212
100	9.68	9.67	33.718	26.007	201.2	0.293	3.40	53.0	22.6	1.80	22.7	0.01	0.07	0.10	100	211
121	9.28	9.27	33.819	26.151	187.8	0.334	3.34	51.6	26.0	1.92	24.7	0.01	0.02	0.06	122	210
125 ISL	9.20	9.19	33.837	26.178	185.3	0.341	3.25	50.1	26.8	1.94	25.1	0.01	0.02	0.05	126	
141	8.90	8.88	33.909	26.282	175.7	0.370	2.83	43.4	29.9	2.02	26.8	0.00	0.01	0.03	142	209
150 ISL	8.80	8.78	33.956	26.335	170.8	0.386	2.62	40.1	31.7	2.09	27.7	0.00	0.01	0.03	151	
171	8.63	8.61	34.049	26.435	161.8	0.421	2.23	34.0	35.7	2.25	29.5	0.00	0.00	0.04	172	208
198	8.37	8.35	34.091	26.508	155.2	0.464	2.00	30.3	39.3	2.36	30.6	0.00	0.00	0.02	199	207
200 ISL	8.34	8.32	34.092	26.513	154.8	0.467	1.99	30.2	39.6	2.37	30.7	0.00			201	
226	7.89	7.87	34.094	26.582	148.5	0.506	1.91	28.7	43.7	2.44	32.0	0.01			227	206
250 ISL	7.43	7.41	34.088	26.644	142.8	0.541	1.74	25.8	48.5	2.55	33.7	0.01			251	
268	7.12	7.09	34.086	26.686	139.0	0.566	1.60	23.6	52.1	2.63	34.9	0.00			270	205
300 ISL	6.81	6.78	34.103	26.742	134.0	0.610	1.38	20.2	56.8	2.75	36.2	0.00			302	
319	6.68	6.65	34.116	26.770	131.5	0.635	1.25	18.2	59.5	2.81	36.8	0.00			321	204
379	6.15	6.12	34.154	26.870	122.6	0.711	0.83	12.0	70.7	3.02	39.3	0.00			381	203
400 ISL	6.04	6.01	34.171	26.897	120.2	0.737	0.72	10.3	73.5	3.06	39.8	0.00			403	
438	5.89	5.85	34.202	26.941	116.4	0.782	0.57	8.2	77.7	3.12	40.6	0.00			441	202
500 ISL	5.60	5.56	34.250	27.015	110.0	0.852	0.39	5.5	84.1	3.21	41.7	0.00			503	
511	5.55	5.51	34.258	27.027	108.9	0.864	0.36	5.1	85.2	3.23	41.9	0.00			514	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
31 11.2 N	120 55.0 W	12/11/02	1832 UTC	3822 m	350 06 kn	340 04 07	1	1021.4 mb	18.6 C	17.6 C	26m	1/8	CI

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	16.63	16.63	33.291	24.290	362.4	0.000	5.79	104.1	0.2	0.40	0.1	0.00	0.15	0.03	0	
1	16.60	16.60	33.289	24.296	361.9	0.004									1	222
2	16.63	16.63	33.291	24.290	362.4	0.007	5.79	104.1	0.2	0.40	0.1	0.00	0.15	0.03	2	221
8	16.45	16.45	33.290	24.331	358.7	0.029	5.79	103.7	0.0	0.38	0.1	0.00	0.16	0.04	8	220
10 ISL	16.43	16.43	33.287	24.333	358.6	0.036	5.79	103.6	0.2	0.38	0.1	0.00	0.16	0.04	10	
13	16.42	16.42	33.287	24.336	358.4	0.047	5.80	103.8	0.5	0.38	0.0	0.00	0.16	0.04	13	219
20 ISL	16.37	16.37	33.288	24.349	357.5	0.072	5.81	103.9	0.3	0.37	0.0	0.00	0.19	0.05	20	
24	16.34	16.34	33.289	24.356	356.9	0.086	5.81	103.8	0.2	0.37	0.1	0.00	0.20	0.05	24	218
30 ISL	15.87	15.87	33.259	24.440	349.1	0.107	5.97	105.7	0.2	0.39	0.1	0.00	0.40	0.12	30	
34	15.30	15.29	33.209	24.528	340.8	0.121	6.09	106.5	0.2	0.40	0.1	0.00	0.62	0.21	34	217
44	12.65	12.64	32.944	24.870	308.2	0.154	6.17	102.0	1.4	0.64	2.5	0.19	1.62	0.60	44	216
50 ISL	12.07	12.06	32.913	24.957	300.1	0.172	6.02	98.3	2.8	0.77	4.4	0.37	1.23	0.51	50	
54	11.89	11.88	32.923	24.999	296.2	0.184	5.89	95.8	3.8	0.85	5.8	0.42	0.81	0.38	54	215
63	11.36	11.35	32.997 D	25.153	281.6	0.210	5.63	90.6	5.6	1.01	9.0	0.04	0.20	0.14	63	214
69	10.57	10.56	33.087	25.363	261.7	0.226	5.32	84.2	9.1	1.17	12.0	0.02	0.11	0.10	69	213
75 ISL	10.41	10.40	33.165	25.452	253.4	0.242	5.19	81.9	10.4	1.24	13.3	0.02	0.09	0.08	75	
85	10.14	10.13	33.205	25.529	246.3	0.266	5.05	79.2	11.5	1.30	14.4	0.02	0.06	0.07	85	212
98	9.63	9.62	33.378	25.749	225.5	0.297	4.64	72.1	15.3	1.48	17.6	0.02	0.03	0.04	98	211
100 ISL	9.58	9.57	33.397	25.772	223.4	0.302	4.59	71.2	15.7	1.50	17.9	0.02	0.03	0.04	100	
120	9.23	9.22	33.562	25.958	206.1	0.345	4.10	63.2	19.8	1.64	20.5	0.01	0.01	0.02	121	210
125 ISL	9.19	9.18	33.613	26.004	201.8	0.355	3.91	60.2	21.1	1.70	21.4	0.01	0.01	0.02	126	
140	9.12	9.10	33.757	26.129	190.3	0.384	3.37	51.9	24.9	1.86	24.0	0.01	0.00	0.03	141	209
150 ISL	9.06	9.04	33.818	26.186	185.0	0.403	3.19	49.1	26.3	1.91	24.9	0.01	0.00	0.03	151	
168	8.91	8.89	33.898	26.273	177.1	0.436	2.99	45.8	28.6	1.97	25.9	0.01	0.00	0.03	169	208
198	8.47	8.45	34.013	26.431	162.5	0.487	2.62	39.8	34.6	2.13	28.4	0.01	0.00	0.02	199	207
200 ISL	8.44	8.42	34.016	26.438	161.9	0.490	2.60	39.5	35.0	2.14	28.6	0.01			201	
229	8.02	8.00	34.054	26.532	153.4	0.535	2.26	34.0	40.3	2.32	30.8	0.01			230	206
250 ISL	7.91	7.88	34.100	26.584	148.7	0.567	1.93	29.0	43.3	2.44	31.7	0.01			251	
268	7.80	7.77	34.131	26.625	145.1	0.594	1.67	25.0	46.0	2.53	32.5	0.01			270	205
300 ISL	7.15	7.12	34.113	26.703	137.8	0.639	1.46	21.5	53.4	2.67	34.9	0.01			302	
316	6.83	6.80	34.106	26.742	134.3	0.661	1.37	20.1	57.1	2.74	36.0	0.01			318	204
378	6.80	6.76	34.267	26.874	122.8	0.740	0.61	8.9	65.2	3.01	37.5	0.01			380	203
400 ISL	6.67	6.63	34.286	26.906	119.9	0.767	0.49	7.2	68.1	3.07	38.1	0.01			403	
434	6.41	6.37	34.298	26.950	116.0	0.807	0.40	5.8	72.5	3.14	39.1	0.01			437	202
500 ISL	6.00	5.96	34.321	27.022	109.8	0.882	0.34	4.9	80.5	3.21	40.5	0.01			503	
520	5.87	5.82	34.329	27.045	107.8	0.903	0.32	4.6	82.9	3.23	40.9	0.01			524	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 50.8 N	121 35.1 W	13/11/02	0112	UTC	4089 m	350 16 kn	350 04 07		1021.6 mb	17.7 C	16.0 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.25	17.25	33.130	24.021	388.0	0.000	5.65	102.7	0.0	0.37	0.0	0.00	0.10	0.02	0	
2	17.25	17.25	33.130	24.022	388.1	0.008	5.65	102.7	0.0	0.37	0.0	0.00	0.10	0.02	2	220
10 ISL	17.23	17.23	33.131	24.027	387.8	0.039	5.68	103.2	0.0	0.37	0.0	0.00	0.10	0.02	10	
15	17.22	17.22	33.132	24.031	387.6	0.058	5.70	103.5	0.0	0.37	0.0	0.00	0.10	0.02	15	219
20 ISL	17.15	17.15	33.136	24.051	385.9	0.078	5.71	103.6	0.0	0.37	0.0	0.00	0.11	0.02	20	
29	17.02	17.02	33.142	24.086	382.8	0.112	5.72	103.5	0.0	0.37	0.0	0.00	0.12	0.03	29	218
30 ISL	16.96	16.96	33.140	24.099	381.6	0.116	5.75	103.9	0.0	0.37	0.0	0.00	0.13	0.04	30	
45	15.36	15.35	33.037	24.383	354.9	0.171	6.25	109.3	0.0	0.39	0.0	0.00	0.28	0.11	45	217
50 ISL	14.48	14.47	32.983	24.531	340.9	0.189	6.27	107.7	0.0	0.42	0.0	0.01	0.51	0.21	50	
56	13.30	13.29	32.895	24.705	324.3	0.209	6.30	105.6	0.0	0.49	0.1	0.02	0.75	0.32	56	216
63	11.91	11.90	32.736	24.850	310.6	0.231	6.22	101.1	2.1	0.64	2.1	0.22	0.75	0.35	63	215
74	11.28	11.27	32.693	24.932	303.0	0.264	5.97	95.7	3.6	0.78	4.5	0.23	0.67	0.35	74	214
75 ISL	11.20	11.19	32.691	24.944	301.8	0.268	5.95	95.2	3.8	0.80	4.8	0.21	0.62	0.33	75	
84	10.69	10.68	32.744	25.076	289.4	0.294	5.79	91.7	5.8	0.93	7.7	0.03	0.14	0.16	84	213
93	10.91	10.90	32.971	25.214	276.5	0.320	5.50	87.6	6.8	0.96	8.8	0.02	0.10	0.13	93	212
100 ISL	10.74	10.73	33.080	25.329	265.7	0.339	5.32	84.5	8.1	1.04	10.4	0.01	0.08	0.10	100	
107	10.46	10.45	33.162	25.441	255.1	0.357	5.15	81.4	9.5	1.13	12.1	0.01	0.06	0.07	107	211
123	10.03	10.02	33.351	25.662	234.4	0.396	4.71	73.8	12.7	1.28	15.0	0.01	0.03	0.05	124	210
125 ISL	9.98	9.97	33.375	25.689	231.9	0.401	4.65	72.8	13.2	1.30	15.4	0.01	0.03	0.05	126	
143	9.55	9.53	33.580	25.921	210.2	0.440	4.11	63.8	17.7	1.50	18.9	0.01	0.01	0.03	144	209
150 ISL	9.42	9.40	33.649	25.996	203.2	0.455	3.96	61.3	19.2	1.55	19.9	0.01	0.01	0.02	151	
169	9.11	9.09	33.808	26.171	186.9	0.492	3.67	56.5	23.1	1.67	22.1	0.01	0.01	0.01	170	208
197	8.76	8.74	33.966	26.350	170.4	0.542	3.38	51.7	28.6	1.82	24.6	0.01	0.00	0.01	198	207
200 ISL	8.73	8.71	33.974	26.361	169.4	0.547	3.38	51.6	28.9	1.83	24.7	0.01			201	
229	8.39	8.37	34.012	26.443	162.0	0.595	3.26	49.4	32.4	1.91	26.1	0.00			230	206
250 ISL	8.06	8.03	34.039	26.514	155.4	0.628	2.80	42.1	37.5	2.11	28.5	0.00			251	
268	7.77	7.74	34.057	26.571	150.2	0.656	2.38	35.6	42.1	2.29	30.6	0.00			269	205
300 ISL	7.32	7.29	34.056	26.635	144.4	0.703	2.16	32.0	46.8	2.40	32.2	0.00			302	
318	7.11	7.08	34.055	26.664	141.9	0.729	2.09	30.8	49.0	2.44	32.8	0.00			320	204
375	6.70	6.67	34.119	26.770	132.4	0.807	1.33	19.4	58.5	2.75	36.1	0.00			377	203
400 ISL	6.44	6.40	34.126	26.810	128.7	0.840	1.17	17.0	63.1	2.84	37.3	0.00			402	
437	6.07	6.03	34.140	26.869	123.4	0.886	0.99	14.2	69.7	2.95	38.8	0.00			440	202
500 ISL	5.84	5.80	34.233	26.972	114.3	0.961	0.54	7.7	78.4	3.15	40.5	0.00			503	
518	5.77	5.73	34.260	27.002	111.6	0.981	0.41	5.9	80.9	3.21	41.0	0.00			521	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT TYPE
30 31.0 N	122 15.5 W	13/11/02	0707	UTC	4170 m	350 15 kn			1022.5 mb	17.8 C	16.2 C		

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	17.65	17.65	33.128	23.925	397.2	0.000	5.60	102.6	0.6	0.39	0.1	0.00	0.11	0.03	0	
1	17.65	17.65	33.128	23.925	397.3	0.004	5.60	102.6	0.6	0.39	0.1	0.00	0.11	0.03	1	220
10 ISL	17.66	17.66	33.128	23.923	397.8	0.040	5.60	102.6	0.6	0.39	0.1	0.00	0.11	0.02	10	
14	17.66	17.66	33.128	23.923	397.9	0.056	5.60	102.6	0.6	0.39	0.1	0.00	0.11	0.02	14	219
20 ISL	17.63	17.63	33.128	23.930	397.4	0.080	5.60	102.5	0.6	0.39	0.1	0.00	0.11	0.02	20	
28	17.58	17.58	33.129	23.943	396.4	0.111	5.61	102.6	0.6	0.39	0.1	0.00	0.12	0.03	28	218
30 ISL	17.53	17.52	33.129	23.955	395.3	0.119	5.62	102.7	0.6	0.39	0.1	0.00	0.12	0.03	30	
44	17.17	17.16	33.132	24.044	387.3	0.174	5.72	103.8	0.4	0.39	0.1	0.00	0.16	0.05	44	217
50 ISL	15.92	15.91	33.076	24.289	364.1	0.197	6.02	106.5	1.3	0.41	0.1	0.00	0.19	0.11	50	
54	14.95	14.94	33.022	24.461	347.7	0.211	6.21	107.7	1.7	0.43	0.1	0.00	0.22	0.15	54	216
63	13.10	13.09	32.803	24.674	327.5	0.241	6.34	105.7	0.9	0.50	0.1	0.00	0.39	0.23	63	215
74	12.53	12.52	32.810	24.791	316.6	0.277	6.14	101.2	2.4	0.60	1.2	0.15	0.87	0.40	74	214
75 ISL	12.53	12.52	32.827	24.804	315.4	0.280	6.11	100.7	2.5	0.61	1.3	0.17	0.82	0.40	75	
84	12.56	12.55	32.982	24.918	304.7	0.308	5.87	96.9	3.6	0.66	2.8	0.24	0.26	0.31	84	213
94	12.19	12.18	33.055	25.046	292.8	0.338	5.64	92.4	4.6	0.76	5.1	0.07	0.17	0.24	94	212
100 ISL	11.94	11.93	33.099	25.127	285.2	0.355	5.52	90.0	5.3	0.82	6.3	0.05	0.14	0.21	100	
109	11.56	11.55	33.166	25.250	273.6	0.380	5.34	86.4	6.6	0.91	8.2	0.01	0.11	0.18	109	211
124	10.91	10.90	33.288	25.462	253.7	0.420	4.98	79.5	9.5	1.10	11.7	0.01	0.06	0.09	125	210
125 ISL	10.87	10.85	33.294	25.473	252.6	0.422	4.96	79.1	9.7	1.11	11.9	0.01	0.06	0.09	126	
145	10.15	10.13	33.410	25.688	232.4	0.471	4.61	72.4	13.4	1.32	15.5	0.01	0.02	0.04	146	209
150 ISL	9.99	9.97	33.447	25.744	227.2	0.482	4.50	70.5	14.4	1.37	16.4	0.01	0.02	0.03	151	
170	9.45	9.43	33.620	25.969	206.1	0.525	3.97	61.5	19.3	1.57	19.9	0.00	0.01	0.02	171	208
199	8.95	8.93	33.927	26.290	176.2	0.581	3.00	46.0	29.1	1.94	26.0	0.00	0.00	0.02	200	207
200 ISL	8.94	8.92	33.932	26.295	175.7	0.583	2.99	45.9	29.3	1.95	26.1	0.00			201	
229	8.61	8.59	34.003	26.403	165.9	0.632	2.84	43.3	32.9	2.08	27.3	0.00			230	206
250 ISL	8.33	8.30	34.034	26.470	159.8	0.666	2.66	40.3	36.1	2.16	28.6	0.00			251	
269	8.05	8.02	34.051	26.525	154.7	0.696	2.47	37.2	39.3	2.23	29.8	0.00			270	205
300 ISL	7.54	7.51	34.062	26.609	147.1	0.743	2.20	32.7	45.4	2.38	31.8	0.01			302	
318	7.25	7.22	34.065	26.652	143.1	0.769	2.04	30.1	49.0	2.47	32.9	0.01			320	204
377	6.62	6.59	34.096	26.763	133.0	0.851	1.46	21.3	59.4	2.71	36.1	0.00			379	203
400 ISL	6.46	6.42	34.116	26.800	129.7	0.881	1.25	18.1	63.1	2.80	37.1	0.00			402	
438	6.24	6.20	34.153	26.858	124.6	0.929	0.94	13.6	68.8	2.93	38.6	0.00			441	202
500 ISL	5.89	5.85	34.209	26.947	116.7	1.004	0.61	8.7	77.4	3.09	40.3	0.00			503	
514	5.81	5.77	34.222	26.967	114.9	1.020	0.53	7.6	79.3	3.12	40.7	0.00			517	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
30 10.7 N	122 56.0 W	13/11/02	1255 UTC	3862 m	340 17 kn			1022.0 mb	16.9 C	15.3 C			

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	18.75	18.75	33.253	23.750	413.9	0.000	5.52	103.3	1.3	0.40	0.1	0.00	0.11	0.03	0	
1	18.75	18.75	33.253	23.750	413.9	0.004	5.52	103.3	1.3	0.40	0.1	0.00	0.11	0.03	1	220
10 ISL	18.75	18.75	33.254	23.752	414.1	0.041	5.50	102.9	1.3	0.39	0.1	0.00	0.10	0.03	10	
15	18.75	18.75	33.254	23.752	414.3	0.062	5.48	102.6	1.3	0.38	0.1	0.00	0.10	0.03	15	219
20 ISL	18.75	18.75	33.254	23.752	414.4	0.083	5.48	102.6	1.3	0.38	0.1	0.00	0.10	0.03	20	
30	18.75	18.74	33.254	23.752	414.7	0.124	5.47	102.4	1.2	0.38	0.1	0.00	0.11	0.03	30	218
45	18.74	18.73	33.252	23.754	415.1	0.187	5.49	102.7	1.3	0.38	0.1	0.00	0.11	0.03	45	217
50 ISL	17.32	17.31	33.157	24.028	389.1	0.207	5.87	106.8	1.3	0.38	0.1	0.01	0.18	0.07	50	
55	15.86	15.85	33.089	24.312	362.0	0.225	6.22	109.9	1.2	0.39	0.1	0.01	0.25	0.12	55	216
65	14.95	14.94	33.088	24.512	343.2	0.261	6.19	107.4	1.9	0.42	0.1	0.00	0.22	0.16	65	215
75	13.89	13.88	33.033	24.693	326.1	0.294	6.14	104.2	2.4	0.49	0.3	0.04	0.33	0.26	75	214
85	13.05	13.04	32.999	24.836	312.6	0.326	5.98	99.7	3.1	0.60	1.7	0.26	0.32	0.28	85	213
95	12.48	12.47	33.077	25.008	296.5	0.357	5.69	93.8	4.4	0.74	4.5	0.15	0.22	0.27	95	212
100 ISL	12.29	12.28	33.129	25.084	289.3	0.371	5.58	91.7	4.8	0.78	5.4	0.12	0.19	0.26	100	
110	11.89	11.88	33.225	25.234	275.2	0.399	5.38	87.7	5.9	0.86	7.1	0.07	0.14	0.23	110	211
125	10.86	10.84	33.288	25.470	252.9	0.439	5.02	80.1	9.2	1.08	11.3	0.01	0.06	0.09	125	210
145	10.10	10.08	33.387	25.679	233.3	0.488	4.73	74.2	12.5	1.26	14.5	0.01	0.04	0.05	146	209
150 ISL	9.94	9.92	33.437	25.745	227.1	0.499	4.57	71.5	13.9	1.33	15.7	0.01	0.03	0.04	151	
170	9.40	9.38	33.661	26.009	202.3	0.542	3.83	59.3	20.3	1.63	20.6	0.01	0.01	0.02	171	208
200	8.90	8.88	33.929	26.299	175.3	0.599	2.97	45.5	29.2	1.97	26.2	0.01	0.00	0.01	201	207
230	8.40	8.38	34.016	26.445	161.8	0.649	2.79	42.3	34.4	2.08	28.0	0.01			231	206
250 ISL	8.06	8.03	34.042	26.517	155.2	0.681	2.58	38.8	38.4	2.20	29.5	0.01			251	
268	7.76	7.73	34.052	26.569	150.4	0.708	2.38	35.6	42.0	2.31	30.9	0.01			269	205
300 ISL	7.26	7.23	34.052	26.640	143.9	0.756	2.15	31.8	47.6	2.44	32.8	0.01			302	
318	7.01	6.98	34.050	26.673	140.9	0.781	2.02	29.7	50.6	2.51	33.7	0.01			320	204
378	6.37	6.34	34.083	26.785	130.7	0.863	1.38	20.0	61.8	2.79	37.1	0.01			380	203
400 ISL	6.19	6.15	34.097	26.820	127.6	0.891	1.23	17.7	65.5	2.86	38.0	0.01			402	
440	5.90	5.86	34.126	26.880	122.2	0.941	1.00	14.3	71.9	2.97	39.3	0.01			443	202
500 ISL	5.54	5.50	34.177	26.964	114.6	1.012	0.68	9.7	81.0	3.12	41.1	0.01			503	
520	5.42	5.38	34.195	26.993	112.0	1.035	0.57	8.1	84.0	3.17	41.7	0.01			523	201

RV NEW HORIZON CALCOFI CRUISE 0211 STATION 93 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI	CLD AMT	TYPE
29 50.9 N	123 35.5 W	13/11/02	1832 UTC	4076 m	340 14 kn	340 04 07	2	1024.8 mb	18.1 C	17.3 C	27m	8/8	SC

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	OXYGEN ml/l	OXY PCT	SIO3 uM/l	PO4 uM/l	NO3 uM/l	NO2 uM/l	CHL-A ug/l	PHAEO ug/l	PRES db	SAMP
0 ISL	19.04	19.04	33.336	23.741	414.8	0.000	5.45	102.6	1.7	0.38	0.1	0.00	0.11	0.03	0	
1	19.04	19.04	33.334	23.739	414.9	0.004									1	223
1 A	19.04	19.04	33.336	23.741	414.8	0.004	5.45	102.6	1.7	0.38	0.1	0.00	0.11	0.03	1	222
10 ISL	19.03	19.03	33.336	23.744	414.8	0.041	5.46	102.8	1.7	0.38	0.0	0.00	0.11	0.03	10	
15 A	19.03	19.03	33.336	23.744	415.0	0.062	5.46	102.8	1.7	0.38	0.0	0.00	0.11	0.03	15	221
20 ISL	19.03	19.03	33.339	23.747	414.9	0.083	5.46	102.8	1.7	0.38	0.0	0.00	0.12	0.03	20	
25	19.03	19.03	33.341 D	23.748	415.0	0.104	5.45	102.6	1.7	0.38	0.0	0.00	0.12	0.03	25	220
30 ISL	19.03	19.02	33.342	23.749	415.1	0.124	5.44	102.4	1.7	0.38	0.0	0.00	0.12	0.03	30	
35 A	19.04	19.03	33.342	23.747	415.4	0.145	5.44	102.4	1.7	0.37	0.0	0.00	0.12	0.03	35	219
46	19.05	19.04	33.346	23.748	415.7	0.191	5.44	102.4	1.7	0.37	0.0	0.00	0.12	0.03	46	218
50 ISL	19.04	19.03	33.348	23.752	415.5	0.208	5.45	102.6	1.7	0.37	0.0	0.00	0.13	0.03	50	
56 A	19.02	19.01	33.350	23.759	415.1	0.232	5.46	102.8	1.7	0.36	0.1	0.00	0.14	0.04	56	217
65	16.60	16.59	33.238	24.259	367.5	0.268	6.10	109.5	1.8	0.35	0.0	0.00	0.28	0.16	65	216
74 A	15.20	15.19	33.251	24.583	336.7	0.299	6.22	108.6	2.4	0.38	0.0	0.00	0.23	0.23	74	215
75 ISL	15.01	15.00	33.252	24.626	332.7	0.303	6.22	108.2	2.5	0.39	0.0	0.00	0.24	0.24	75	
83	13.62	13.61	33.275	24.935	303.2	0.328	6.07	102.6	3.3	0.48	0.2	0.01	0.30	0.31	83	214
94	12.68	12.67	33.334	25.168	281.2	0.360	5.54	91.9	4.9	0.74	3.4	0.27	0.24	0.29	94	213
100 ISL	12.13	12.12	33.351	25.287	270.0	0.377	5.25	86.1	6.3	0.88	6.7	0.17	0.20	0.26	100	
105 A	11.70	11.69	33.363	25.377	261.5	0.390	5.03	81.7	7.5	0.99	9.4	0.05	0.17	0.23	105	212
115	11.05	11.04	33.391	25.517	248.3	0.416	4.75	76.1	9.9	1.17	12.6	0.02	0.10	0.21	115	211
125 ISL	10.39	10.38	33.445	25.674	233.4	0.440	4.46	70.5	13.3	1.33	15.5	0.01	0.05	0.11	125	
126	10.33	10.32	33.451	25.689	232.0	0.442	4.43	69.9	13.6	1.35	15.8	0.01	0.05	0.10	126	210
145	9.78	9.76	33.574	25.878	214.3	0.484	3.97	61.9	17.7	1.55	19.2	0.01	0.03	0.05	146	209
150 ISL	9.67	9.65	33.614	25.928	209.7	0.495	3.83	59.6	19.0	1.61	20.1	0.01	0.03	0.04	151	
170	9.26	9.24	33.777	26.122	191.6	0.535	3.31	51.1	24.2	1.82	23.5	0.01	0.01	0.02	171	208
199	8.70	8.68	33.978	26.369	168.6	0.587	2.94	44.9	31.2	2.01	26.9	0.01	0.00	0.01	200	207
200 ISL	8.69	8.67	33.981	26.372	168.2	0.589	2.93	44.7	31.4	2.01	27.0	0.01			201	
229	8.28	8.26	34.024	26.469	159.4	0.637	2.66	40.2	36.1	2.14	28.8	0.01			230	206
250 ISL	7.95	7.92	34.040	26.531	153.8	0.669	2.47	37.1	39.8	2.25	30.2	0.01			251	
269	7.66	7.63	34.047	26.579	149.4	0.698	2.30	34.3	43.2	2.34	31.4	0.01			270	205
300 ISL	7.25	7.22	34.050	26.640	143.9	0.744	2.10	31.0	47.9	2.45	33.0	0.01			302	
321	7.00	6.97	34.052	26.676	140.6	0.774	1.95	28.6	51.2	2.53	34.1	0.01			323	204
377	6.38	6.35	34.089	26.789	130.4	0.849	1.30	18.8	62.4	2.81	37.5	0.01			379	203
400 ISL	6.15	6.11	34.107	26.833	126.4	0.879	1.11	16.0	67.1	2.90	38.6	0.01			402	
437	5.82	5.78	34.137	26.898	120.4	0.925	0.87	12.4	74.2	3.02	40.0	0.01			440	202
500 ISL	5.44	5.40	34.187	26.984	112.6	0.998	0.61	8.6	83.5	3.14	41.6	0.01			503	
514	5.36	5.32	34.198	27.003	111.0	1.014	0.55	7.8	85.6	3.17	42.0	0.01			517	201

A) PRIMARY PRODUCTIVITY SAMPLES WERE TAKEN FROM THESE LEVELS.