RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 83 40.6

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT TYPE
34 13.6 N	119 24.8 W	15/12/98	1315 UTC	35 m	100 05 kn			1019.5 mb	12.9 C	10.6 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	13.40	13.40	33.555	25.194	276.3	0.000	5.72	96.5					1.44	0.41	0	
1	13.40	13.40	33.555	25.194	276.3	0.003	5.72	96.5					1.44	0.41	1	205
5	13.41	13.41	33.557	25.194	276.5	0.014	5.70	96.1					1.36	0.40	5	204
10	13.41	13.41	33.558	25.195	276.5	0.028	5.70	96.1					1.37	0.40	10	203
20 ISL	12.23	12.23	33.650	25.498	247.9	0.054	4.05	66.7					0.42	0.30	20	
21	12.10	12.10	33.661	25.531	244.8	0.056	3.87	63.5					0.32	0.29	21	202
30 ISL	12.06	12.06	33.673	25.548	243.4	0.078	3.94	64.6					0.29	0.35	30	
31	12.06	12.06	33.674	25.549	243.3	0.081	3.95	64.8					0.29	0.36	31	201

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 83 42

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT TYPE
34 10.7 N	119 30.4 W	15/12/98	1056 UTC	130 m	340 17 kn			1019.0 mb	13.3 C	11.3 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	13.03	13.03	33.585	25.292	267.0	0.000	5.60	93.7					2.77	0.65	0	
2	13.03	13.03	33.585	25.292	267.1	0.005	5.60	93.7					2.77	0.65	2	211
10	12.95	12.95	33.591	25.312	265.3	0.027	5.41	90.4					2.60	0.65	10	210
20	12.47	12.47	33.621	25.429	254.4	0.053	4.20	69.5					0.55	0.32	20	209
28	12.15	12.15	33.645	25.510	247.0	0.073	3.81	62.6					0.38	0.26	28	208
30 ISL	12.09	12.09	33.649	25.524	245.7	0.078	3.75	61.6					0.34	0.24	30	
39	11.79	11.79	33.669	25.596	239.0	0.099	3.55	57.9					0.20	0.19	39	207
49	11.32	11.31	33.723	25.725	227.0	0.123	3.28	53.0					0.10	0.17	49	206
50 ISL	11.29	11.28	33.732	25.738	225.8	0.125	3.25	52.5					0.09	0.17	50	
59	10.95	10.94	33.812	25.861	214.3	0.145	2.95	47.3					0.05	0.12	59	205
67	10.50	10.49	33.853	25.972	203.8	0.162	2.77	44.0					0.03	0.10	67	204
75 ISL	10.13	10.12	33.911	26.081	193.6	0.177	2.55	40.2					0.03	0.08	75	
84	9.84	9.83	33.970	26.177	184.7	0.194	2.35	36.8					0.02	0.07	84	203
99	9.74	9.73	33.997	26.215	181.4	0.222	2.26	35.3					0.01	0.06	100	202
100 ISL	9.73	9.72	33.998	26.217	181.2	0.224	2.25	35.2					0.01	0.06	101	
125 ISL	9.43	9.42	34.023	26.286	175.1	0.268	2.11	32.8					0.01	0.07	126	
126	9.42	9.41	34.024	26.289	174.9	0.270	2.10	32.6					0.01	0.07	127	201

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 83 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT TYPE
33 52.7 N	120 8.0 W	15/12/98	0342 UTC	100 m	350 18 kn			1021.5 mb	12.9 C	9.0 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	12.21	12.21	33.638	25.492	248.0	0.000	4.62	76.0					0.87	0.27	0	
2	12.21	12.21	33.638	25.492	248.0	0.005	4.62	76.0					0.87	0.27	2	210
10 ISL	12.19	12.19	33.639	25.497	247.7	0.025	4.55	74.8					0.84	0.27	10	
11	12.18	12.18	33.638	25.498	247.7	0.027	4.53	74.5					0.84	0.27	11	209
20	12.09	12.09	33.649	25.524	245.4	0.049	4.35	71.4					0.69	0.27	20	208
30	11.99	11.99	33.656	25.548	243.4	0.074	4.23	69.3					0.56	0.26	30	207
39	11.29	11.29	33.722	25.729	226.3	0.095	3.43	55.4					0.12	0.15	39	206
49	10.65	10.64	33.822	25.922	208.3	0.117	2.99	47.6					0.07	0.12	49	205
50 ISL	10.62	10.61	33.827	25.931	207.4	0.119	2.98	47.4					0.07	0.12	50	
60	10.44	10.43	33.847	25.978	203.1	0.139	2.90	46.0					0.05	0.10	60	204
71	10.37	10.36	33.858	25.999	201.4	0.162	2.83	44.8					0.05	0.10	71	203
75 ISL	10.32	10.31	33.866	26.014	200.1	0.170	2.80	44.3					0.05	0.10	75	
84	10.17	10.16	33.888	26.057	196.2	0.187	2.73	43.1					0.04	0.11	84	202
95	9.94	9.93	33.922	26.123	190.1	0.209	2.60	40.8					0.02	0.09	96	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 83 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 34.6 N	122 48.6 W	14/12/98	0324	UTC	4270 m	350	20 kn			1024.3 mb	15.5 C	13.4 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	16.09	16.09	33.334	24.447	347.4	0.000									0	
1	16.09	16.09	33.334 D	24.447	347.5	0.003									1	1
10	16.09	16.09	33.342 D	24.453	347.1	0.035									10	1
20	16.10	16.10	33.343 D	24.452	347.6	0.069									20	1
30	16.10	16.10	33.344 D	24.453	347.8	0.104									30	1
40	16.19	16.18	33.391 D	24.469	346.6	0.139									40	1
50	16.24	16.23	33.410 D	24.473	346.6	0.174									50	1
60	16.26	16.25	33.442 D	24.493	345.0	0.208									60	1
75	16.03	16.02	33.462 D	24.562	338.9	0.259									75	1
100	13.45	13.44	33.321 D	25.006	297.0	0.339									100	1
125	13.13	13.11	33.543 D	25.242	275.1	0.410									126	1
150	11.82	11.80	33.629 D	25.562	245.1	0.476									151	1
175	10.94	10.92	33.793 D	25.851	218.0	0.533									176	1
193	9.58	9.56	33.884	26.155	189.1	0.570	4.19	65.2							194	207
200 ISL	9.29	9.27	33.904	26.217	183.2	0.583	4.07	62.9							201	
229	8.64	8.62	33.947	26.354	170.5	0.634	3.55	54.1							230	206
250 ISL	8.33	8.30	33.983	26.430	163.6	0.669	3.38	51.2							251	
266	8.13	8.10	34.003	26.476	159.4	0.695	3.30	49.7							267	205
300 ISL	7.59	7.56	34.008	26.559	151.8	0.748	3.06	45.6							302	
315	7.35	7.32	34.005	26.591	148.9	0.771	2.93	43.4							317	204
375	6.51	6.48	34.016	26.714	137.5	0.857	2.21	32.1							377	203
400 ISL	6.17	6.13	34.020	26.761	133.1	0.890	1.92	27.6							402	
436	5.75	5.71	34.037	26.828	126.9	0.937	1.53	21.8							439	202
500 ISL	5.51	5.47	34.126	26.928	118.1	1.016	0.91	12.9							503	
521	5.43	5.39	34.155	26.960	115.1	1.040	0.71	10.1							524	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 14.7 N	123 29.5 W	13/12/98	2003	UTC	4158 m	280	10 kn	310 04 05	1	1023.6 mb	16.8 C	13.8 C		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	16.51	16.51	33.539	24.508	341.6	0.000	5.68	102.0					0.16	0.04	0	
2	16.51	16.51	33.539	24.508	341.7	0.007	5.68	102.0					0.16	0.04	2	220
10 ISL	16.50	16.50	33.540	24.512	341.6	0.034	5.69	102.1					0.16	0.04	10	
14	16.50	16.50	33.541	24.513	341.6	0.048	5.69	102.1					0.16	0.04	14	219
20 ISL	16.50	16.50	33.542	24.514	341.7	0.068	5.68	102.0					0.16	0.04	20	
29	16.50	16.50	33.542	24.514	342.0	0.099	5.67	101.8					0.17	0.05	29	218
30 ISL	16.50	16.50	33.542	24.514	342.0	0.103	5.67	101.8					0.17	0.05	30	
45	16.51	16.50	33.548	24.517	342.3	0.154	5.67	101.8					0.17	0.05	45	217
50 ISL	16.55	16.54	33.563	24.519	342.2	0.171	5.67	101.9					0.18	0.05	50	
60	16.65	16.64	33.596	24.522	342.3	0.205	5.67	102.1					0.20	0.05	60	216
75 ISL	16.70	16.69	33.616	24.526	342.4	0.257	5.63	101.5					0.20	0.06	75	
76	16.70	16.69	33.617	24.527	342.3	0.260	5.63	101.5					0.20	0.06	76	215
85	16.72	16.71	33.619	24.524	342.9	0.291	5.63	101.5					0.21	0.06	85	214
92	16.75	16.74	33.662	24.551	340.6	0.315	5.65	102.0					0.21	0.08	92	213
100 ISL	16.14	16.12	33.786	24.787	318.3	0.341	5.72	102.1					0.22	0.16	100	
103	15.79	15.77	33.820	24.892	308.4	0.350	5.73	101.6					0.22	0.18	103	212
114	14.37	14.35	33.676	25.091	289.5	0.383	5.58	96.0					0.15	0.15	114	211
124	13.73	13.71	33.609	25.172	281.9	0.412	5.44	92.4					0.11	0.12	125	210
125 ISL	13.69	13.67	33.606	25.178	281.4	0.415	5.43	92.1					0.11	0.12	126	
137	13.18	13.16	33.597	25.275	272.4	0.448	5.21	87.5					0.08	0.12	138	209
150 ISL	12.04	12.02	33.608	25.505	250.6	0.482	4.74	77.7					0.05	0.09	151	
164	10.76	10.74	33.657	25.776	224.7	0.515	4.22	67.3					0.03	0.05	165	208
195	9.61	9.59	33.817	26.097	194.6	0.580	3.77	58.7					0.01	0.02	196	207
200 ISL	9.48	9.46	33.844	26.140	190.6	0.590	3.71	57.6							201	
228	8.89	8.87	33.967	26.331	172.8	0.641	3.36	51.5							229	206
250 ISL	8.55	8.52	34.009	26.417	164.9	0.678	3.01	45.8							251	
267	8.34	8.31	34.025	26.462	160.9	0.706	2.74	41.5							268	205
300 ISL	7.97	7.94	34.058	26.543	153.6	0.757	2.37	35.6							302	
318	7.79	7.76	34.075	26.583	150.0	0.785	2.19	32.8							320	204
382	7.25	7.21	34.155	26.724	137.4	0.877	1.35	20.0							384	203
400 ISL	7.05	7.01	34.158	26.754	134.6	0.901	1.26	18.5							402	
431	6.72	6.68	34.158	26.799	130.5	0.942	1.16	16.9							434	202
500 ISL	6.33	6.28	34.201	26.885	123.1	1.030	0.77	11.1							503	
524	6.20	6.15	34.216	26.914	120.5	1.059	0.64	9.2							527	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
33 29.1 N	117 46.1 W	11/12/98	0024	UTC	64 m	340	10 kn	300 01 05	1	1027.1 mb	15.8 C	15.1 C		1/8		ST

DEPTH m	TEMP DEG C	POT TEMP DEG C	SALINITY	SIGMA THETA	SVA	DYN HT	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	14.45	14.45	33.496	24.931	301.3	0.000	5.90	101.6					2.20	0.40	0	
2	14.45	14.45	33.496	24.931	301.4	0.006	5.90	101.6					2.20	0.40	2	208
4	14.46	14.46	33.494	24.928	301.8	0.012	5.90	101.7					2.04	0.43	4	207
10	13.48	13.48	33.522	25.153	280.5	0.030	5.11	86.3					1.65	0.39	10	206
20	12.89	12.89	33.550	25.293	267.5	0.057	4.98	83.1					1.23	0.40	20	205
30	12.45	12.45	33.588	25.408	256.7	0.083	4.04	66.8					0.34	0.23	30	204
39	11.80	11.80	33.664	25.590	239.6	0.105	3.65	59.6					0.12	0.14	39	203
50	11.35	11.34	33.729	25.724	227.1	0.131	3.26	52.7					0.05	0.11	50	202
58	11.09	11.08	33.782	25.813	218.9	0.149	3.04	48.9					0.03	0.10	58	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 25.1 N	117 54.3 W	11/12/98	0256	UTC	615 m	360	06 kn		0	1028.0 mb	14.5 C	12.0 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	14.49	14.49	33.482	24.912	303.1	0.000	5.94	102.4					2.97	0.50	0	
2	14.49	14.49	33.482	24.912	303.2	0.006	5.94	102.4					2.97	0.50	2	220
10	14.49	14.49	33.482	24.912	303.4	0.030	5.91	101.9					3.08	0.51	10	219
20 ISL	14.48	14.48	33.482	24.915	303.5	0.061	5.91	101.9					2.95	0.50	20	
21	14.48	14.48	33.482	24.915	303.5	0.064	5.91	101.9					2.94	0.50	21	218
30	13.98	13.98	33.502	25.035	292.3	0.091	5.65	96.4					2.24	0.53	30	217
39	13.37	13.36	33.524	25.177	279.0	0.116	4.77	80.4					0.67	0.40	39	216
50	12.39	12.38	33.591	25.422	255.9	0.146	4.19	69.2					0.23	0.28	50	215
60	11.78	11.77	33.633	25.571	242.0	0.171	3.96	64.6					0.13	0.20	60	214
70	11.38	11.37	33.666	25.670	232.7	0.194	3.77	61.0					0.08	0.13	70	213
75 ISL	11.10	11.09	33.693	25.742	226.0	0.206	3.68	59.2					0.06	0.10	75	
84	10.65	10.64	33.751	25.867	214.3	0.226	3.48	55.4					0.04	0.07	84	212
99	10.46	10.45	33.851	25.979	204.0	0.257	2.96	47.0					0.01	0.05	100	211
100 ISL	10.44	10.43	33.857	25.987	203.2	0.259	2.93	46.5					0.01	0.05	101	
120	10.10	10.09	33.971	26.134	189.6	0.298	2.50	39.4					0.01	0.04	121	210
125 ISL	10.00	9.99	34.003	26.176	185.7	0.308	2.38	37.4					0.01	0.04	126	
139	9.71	9.69	34.085	26.289	175.2	0.333	2.08	32.5					0.00	0.03	140	209
150 ISL	9.53	9.51	34.121	26.347	169.9	0.352	1.94	30.2					0.00	0.03	151	
169	9.27	9.25	34.158	26.419	163.5	0.384	1.80	27.9					0.01	0.03	170	208
199	9.01	8.99	34.197	26.491	157.1	0.432	1.61	24.8					0.01	0.03	200	207
200 ISL	9.00	8.98	34.198	26.494	156.9	0.433	1.60	24.6							201	
228	8.76	8.74	34.210	26.542	152.8	0.477	1.48	22.7							229	206
250 ISL	8.49	8.46	34.208	26.582	149.3	0.510	1.45	22.1							251	
268	8.23	8.20	34.203	26.618	146.1	0.536	1.43	21.6							270	205
300 ISL	7.68	7.65	34.191	26.690	139.5	0.582	1.31	19.6							302	
318	7.39	7.36	34.188	26.729	135.9	0.607	1.21	18.0							320	204
377	6.89	6.85	34.231	26.833	126.7	0.684	0.81	11.9							379	203
400 ISL	6.69	6.65	34.250	26.875	122.9	0.713	0.66	9.6							403	
436	6.38	6.34	34.280	26.940	117.0	0.756	0.46	6.7							439	202
500 ISL	5.93	5.89	34.321	27.031	108.9	0.828	0.31	4.4							503	
531	5.71	5.66	34.342	27.075	104.9	0.862	0.24	3.4							535	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 15.0 N	118 15.1 W	11/12/98	0738	UTC	350 m	020	07 kn		0	1028.6 mb	14.8 C	11.7 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	14.87	14.87	33.481	24.830	311.0	0.000	5.94	103.2					2.14	0.56	0	
2	14.87	14.87	33.481	24.830	311.0	0.006	5.94	103.2					2.14	0.56	2	218
10 ISL	14.88	14.88	33.479	24.827	311.6	0.031	5.92	102.9					2.09	0.55	10	
14	14.88	14.88	33.478	24.826	311.8	0.044	5.91	102.7					2.06	0.54	14	217
20 ISL	14.88	14.88	33.478	24.826	311.9	0.062	5.91	102.7					2.05	0.53	20	
30	14.87	14.87	33.478	24.829	312.0	0.093	5.91	102.7					2.04	0.50	30	216
45	14.18	14.17	33.473	24.972	298.8	0.139	5.35	91.6					1.52	0.44	45	215
50 ISL	13.26	13.25	33.475	25.162	280.8	0.154	4.84	81.3					0.88	0.39	50	
55	12.38	12.37	33.497	25.352	262.8	0.167	4.37	72.1					0.29	0.34	55	214
64	12.00	11.99	33.579	25.488	250.0	0.190	4.12	67.5					0.17	0.23	64	213
75	10.96	10.95	33.692	25.766	223.7	0.217	3.71	59.5					0.06	0.11	75	212
85	10.62	10.61	33.732	25.858	215.2	0.238	3.53	56.2					0.04	0.08	85	211
94	10.40	10.39	33.771	25.926	208.8	0.258	3.30	52.3					0.02	0.07	94	210
100 ISL	10.27	10.26	33.815	25.983	203.5	0.270	3.10	49.0					0.02	0.06	100	
110	10.09	10.08	33.884	26.068	195.7	0.290	2.81	44.2					0.01	0.04	111	209
124	9.94	9.93	33.920	26.121	190.9	0.317	2.71	42.5					0.01	0.04	125	208
125 ISL	9.93	9.92	33.926	26.128	190.3	0.319	2.69	42.2					0.01	0.04	126	
144	9.68	9.66	34.055	26.271	177.1	0.354	2.19	34.2					0.00	0.04	145	207
150 ISL	9.61	9.59	34.077	26.300	174.5	0.364	2.11	32.9					0.00	0.04	151	
169	9.42	9.40	34.119	26.364	168.7	0.397	1.94	30.1					0.00	0.03	170	206
199	9.10	9.08	34.171	26.457	160.4	0.446	1.71	26.4					0.00	0.03	200	205
200 ISL	9.08	9.06	34.172	26.461	160.1	0.448	1.70	26.2							201	
228	8.66	8.64	34.196	26.546	152.3	0.492	1.54	23.5							229	204
250 ISL	8.53	8.50	34.197	26.567	150.7	0.525	1.52	23.1							251	
268	8.40	8.37	34.192	26.584	149.4	0.552	1.50	22.8							270	203
300 ISL	7.68	7.65	34.193	26.692	139.3	0.598	1.27	19.0							302	
305	7.56	7.53	34.194	26.710	137.7	0.605	1.22	18.2							307	202
344	6.94	6.91	34.223	26.820	127.5	0.657	0.81	11.9							346	201

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 90 37

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
33 11.1 N	118 23.0 W	11/12/98	1035 UTC	1175 m	090 10 kn			1028.1 mb	15.2 C	11.9 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	14.92	14.92	33.477	24.816	312.3	0.000	5.90	102.6					1.73	0.50	0	
2	14.92	14.92	33.477	24.816	312.3	0.006	5.90	102.6					1.73	0.50	2	220
10	14.93	14.93	33.477	24.814	312.8	0.031	5.91	102.8					1.60	0.52	10	219
19	14.90	14.90	33.478	24.822	312.3	0.059	5.88	102.2					1.60	0.51	19	218
20 ISL	14.85	14.85	33.480	24.834	311.2	0.062	5.86	101.8					1.66	0.52	20	
30	14.30	14.30	33.498	24.965	298.9	0.093	5.59	96.0					2.13	0.63	30	217
40	14.10	14.09	33.503	25.011	294.8	0.123	5.45	93.2					1.65	0.53	40	216
49	13.51	13.50	33.504	25.134	283.4	0.149	5.02	84.8					0.73	0.41	49	215
50 ISL	13.37	13.36	33.504	25.162	280.7	0.152	4.95	83.4					0.66	0.39	50	
60	12.03	12.02	33.540	25.452	253.3	0.178	4.33	70.9					0.17	0.24	60	214
70	11.47	11.46	33.627	25.623	237.2	0.203	4.01	64.9					0.10	0.15	70	213
75 ISL	11.18	11.17	33.659	25.701	229.9	0.214	3.87	62.3					0.07	0.12	75	
85	10.66	10.65	33.715	25.837	217.1	0.237	3.61	57.5					0.04	0.09	85	212
100	10.23	10.22	33.805	25.982	203.6	0.268	3.18	50.2					0.02 A	0.05 A	100	211
120	9.78	9.77	33.896	26.130	190.0	0.308	2.84	44.4					0.01	0.04	121	210
125 ISL	9.69	9.68	33.917	26.161	187.1	0.317	2.77	43.2					0.01	0.04	126	
141	9.43	9.41	33.977	26.251	178.8	0.346	2.58	40.0					0.00	0.04	142	209
150 ISL	9.29	9.27	34.009	26.299	174.4	0.362	2.48	38.4					0.00	0.04	151	
171	9.02	9.00	34.070	26.390	166.1	0.398	2.26	34.8					0.00	0.03	172	208
200 ISL	8.82	8.80	34.115	26.457	160.3	0.445	1.99	30.5					0.00	0.04	201	
201	8.81	8.79	34.116	26.460	160.1	0.447	1.98	30.3					0.00	0.04	202	207
229	8.65	8.63	34.176	26.532	153.7	0.491	1.67	25.5							230	206
250 ISL	8.31	8.28	34.177	26.585	148.9	0.523	1.59	24.1							251	
269	7.97	7.94	34.169	26.630	144.8	0.551	1.55	23.3							271	205
300 ISL	7.59	7.56	34.177	26.692	139.3	0.595	1.33	19.8							302	
318	7.41	7.38	34.185	26.724	136.4	0.619	1.19	17.7							320	204
380	7.01	6.97	34.219	26.807	129.3	0.702	0.85	12.5							382	203
400 ISL	6.83	6.79	34.234	26.844	126.0	0.727	0.73	10.7							403	
436	6.52	6.48	34.262	26.908	120.2	0.772	0.54	7.9							439	202
500 ISL	6.14	6.10	34.299	26.987	113.3	0.846	0.36	5.2							503	
520	6.02	5.97	34.311	27.012	111.1	0.869	0.31	4.5							524	201

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

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 90 45

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
32 55.3 N	118 56.3 W	11/12/98	1639 UTC	1694 m	040 03 kn	290 02 07	1	1028.1 mb	14.8 C	13.2 C		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	14.23	14.23	33.462	24.951	299.4	0.000	6.09	104.4					2.60	1.03	0	
2	14.23	14.23	33.462	24.951	299.4	0.006	6.09	104.4					2.60	1.03	2	220
8	14.19	14.19	33.462	24.960	298.8	0.024	6.07	104.0					2.61	1.10	8	219
10 ISL	14.17	14.17	33.462	24.964	298.5	0.030	6.06	103.8					2.66	1.09	10	
18	14.12	14.12	33.460	24.973	297.8	0.054	6.00	102.6					2.83	1.05	18	218
20 ISL	14.11	14.11	33.460	24.976	297.7	0.060	5.99	102.4					2.81	1.03	20	
29	14.09	14.09	33.458	24.978	297.7	0.087	5.96	101.9					2.70	0.95	29	217
30 ISL	14.09	14.09	33.458	24.979	297.7	0.089	5.95	101.7					2.67	0.95	30	
39	14.05	14.04	33.456	24.985	297.3	0.116	5.90	100.8					2.37	0.93	39	216
49	12.68	12.67	33.459	25.264	271.0	0.145	4.79	79.5					0.29	0.37	49	215
50 ISL	12.55	12.54	33.468	25.296	267.9	0.147	4.69	77.6					0.27	0.35	50	
60	11.55	11.54	33.595	25.584	240.7	0.173	3.87	62.8					0.10	0.23	60	214
69	11.24	11.23	33.700	25.722	227.8	0.194	3.40	54.8					0.07	0.16	69	213
75 ISL	11.02	11.01	33.726	25.782	222.2	0.207	3.34	53.6					0.06	0.13	75	
85	10.65	10.64	33.745	25.862	214.7	0.229	3.25	51.7					0.04	0.10	85	212
100	10.18	10.17	33.815	25.999	202.1	0.260	3.16	49.8					0.03	0.06	101	211
119	9.62	9.61	33.888	26.150	188.0	0.298	2.90	45.2					0.02	0.04	120	210
125 ISL	9.60	9.59	33.922	26.180	185.3	0.309	2.76	43.0					0.02	0.04	126	
138	9.56	9.54	33.981	26.233	180.5	0.333	2.48	38.6					0.01	0.04	139	209
150 ISL	9.41	9.39	34.013	26.282	176.0	0.354	2.37	36.8					0.00	0.04	151	
168	9.10	9.08	34.038	26.352	169.7	0.385	2.31	35.6					0.00	0.04	169	208
197	8.56	8.54	34.053	26.449	160.9	0.433	2.17	33.0					0.01	0.05	198	207
200 ISL	8.51	8.49	34.056	26.459	159.9	0.438	2.16	32.9							201	
228	8.10	8.08	34.092	26.550	151.7	0.481	1.99	30.0							229	206
250 ISL	7.96	7.93	34.130	26.600	147.2	0.514	1.76	26.4							251	
267	7.86	7.83	34.157	26.637	144.1	0.539	1.56	23.4							269	205
300 ISL	7.44	7.41	34.182	26.717	136.8	0.585	1.24	18.4							302	
317	7.22	7.19	34.191	26.755	133.3	0.608	1.09	16.1							319	204
376	6.79	6.76	34.233	26.848	125.1	0.685	0.73	10.7							378	203
400 ISL	6.61	6.57	34.245	26.882	122.2	0.714	0.65	9.5							403	
438	6.35	6.31	34.261	26.929	118.0	0.760	0.56	8.1							441	202
500 ISL	6.03	5.99	34.290	26.994	112.5	0.831	0.40	5.8							503	
539	5.83	5.78	34.309	27.034	109.0	0.875	0.30	4.3							543	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT TYPE
32 39.1 N	119 28.9 W	11/12/98	2229 UTC	1315 m	330 13 kn	260 04 07	0	1026.0 mb	14.8 C	12.5 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	14.21	14.21	33.372	24.886	305.6	0.000	6.05	103.6					1.08	0.25	0	
1	14.21	14.21	33.372	24.886	305.6	0.003	6.05	103.6					1.08	0.25	1	220
10	14.19	14.19	33.369	24.888	305.7	0.031	6.05	103.6					1.12	0.26	10	219
20	13.83	13.83	33.395	24.983	296.9	0.061	5.93	100.8					1.23	0.45	20	218
30	13.55	13.55	33.409	25.052	290.7	0.090	5.91	99.9					1.01	0.46	30	217
40	13.08	13.07	33.414	25.150	281.6	0.119	5.43	90.9					0.29	0.25	40	216
50	12.81	12.80	33.397	25.191	278.0	0.147	5.26	87.5					0.20	0.33	50	215
60	11.99	11.98	33.409	25.357	262.3	0.174	4.76	77.8					0.10	0.15	60	214
68	11.55	11.54	33.460	25.479	250.9	0.194	4.56	73.9					0.09	0.14	68	213
75 ISL	11.17	11.16	33.511	25.588	240.7	0.211	4.29	69.0					0.07	0.14	75	
84	10.70	10.69	33.585	25.729	227.4	0.232	3.91	62.3					0.04	0.14	84	212
98	10.02	10.01	33.716	25.948	206.7	0.263	3.38	53.1					0.02	0.11	98	211
100 ISL	9.94	9.93	33.733	25.975	204.2	0.267	3.34	52.4					0.02	0.11	100	
119	9.33	9.32	33.860	26.175	185.5	0.304	3.11	48.1					0.01	0.07	120	210
125 ISL	9.19	9.18	33.885	26.217	181.6	0.315	3.08	47.5					0.01	0.07	126	
140	8.89	8.88	33.932	26.302	173.8	0.342	3.04	46.6					0.00	0.06	141	209
150 ISL	8.63	8.61	33.962	26.366	167.8	0.359	2.98	45.4					0.00	0.05	151	
169	8.20	8.18	34.006	26.466	158.6	0.390	2.86	43.2					0.00	0.04	170	208
200 ISL	8.02	8.00	34.026	26.509	155.0	0.438	2.67	40.2					0.00	0.03	201	
201	8.02	8.00	34.026	26.509	155.0	0.440	2.66	40.0					0.00	0.03	202	207
227	7.66	7.64	34.048	26.579	148.6	0.479	2.37	35.4							228	206
250 ISL	7.39	7.37	34.067	26.633	143.8	0.513	2.12	31.4							251	
268	7.21	7.18	34.082	26.670	140.5	0.539	1.93	28.5							270	205
300 ISL	6.96	6.93	34.111	26.728	135.4	0.583	1.55	22.8							302	
320	6.82	6.79	34.130	26.762	132.4	0.610	1.33	19.5							322	204
377	6.45	6.42	34.180	26.851	124.5	0.683	0.89	12.9							379	203
400 ISL	6.36	6.32	34.193	26.874	122.7	0.711	0.79	11.4							403	
435	6.22	6.18	34.214	26.909	119.8	0.754	0.67	9.7							438	202
500 ISL	5.84	5.80	34.282	27.011	110.6	0.828	0.39	5.6							503	
520	5.72	5.68	34.303	27.042	107.8	0.850	0.30	4.3							524	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	BOTTOM	WIND SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT TYPE
32 25.1 N	119 57.4 W	12/12/98	0404 UTC	909 m	330 11 kn			1026.3 mb	13.5 C	11.9 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	14.78	14.78	33.323	24.728	320.7	0.000	5.88	101.9					0.58	0.18	0	
1	14.78	14.78	33.323	24.728	320.7	0.003	5.88	101.9					0.58	0.18	1	220
9	14.78	14.78	33.323	24.728	321.0	0.029	5.91	102.4					0.59	0.17	9	219
10 ISL	14.78	14.78	33.323	24.728	321.0	0.032	5.91	102.4					0.59	0.17	10	
20	14.77	14.77	33.322	24.729	321.1	0.064	5.88	101.8					0.59	0.18	20	218
30	14.09	14.09	33.317	24.870	308.0	0.096	5.69	97.2					0.45	0.17	30	217
40	13.59	13.58	33.294	24.955	300.2	0.126	5.72	96.7					0.43	0.21	40	216
50	12.89	12.88	33.329	25.122	284.5	0.155	5.38	89.6					0.24	0.18	50	215
60	12.41	12.40	33.349	25.231	274.3	0.183	5.14	84.8					0.21	0.19	60	214
70	11.72	11.71	33.413	25.411	257.4	0.210	4.68	76.1					0.11	0.20	70	213
75 ISL	11.34	11.33	33.475	25.529	246.3	0.222	4.32	69.7					0.08	0.20	75	
83	10.79	10.78	33.578	25.708	229.4	0.241	3.78	60.3					0.04	0.21	83	212
99	10.20	10.19	33.670	25.882	213.1	0.277	3.49	55.0					0.02	0.17	99	211
100 ISL	10.16	10.15	33.675	25.893	212.1	0.279	3.48	54.8					0.02	0.17	100	
120	9.57	9.56	33.776	26.070	195.5	0.320	3.32	51.6					0.01	0.14	121	210
125 ISL	9.50	9.49	33.798	26.099	192.9	0.329	3.24	50.3					0.01	0.13	126	
137	9.36	9.34	33.846	26.160	187.4	0.352	3.07	47.5					0.01	0.09	138	209
150 ISL	9.18	9.16	33.883	26.218	182.1	0.376	3.11	48.0					0.01	0.06	151	
169	8.90	8.88	33.927	26.297	174.9	0.410	3.21	49.2					0.00	0.04	170	208
199	8.48	8.46	34.004	26.423	163.4	0.461	2.82	42.8					0.00	0.03	200	207
200 ISL	8.46	8.44	34.005	26.427	163.0	0.463	2.81	42.7							201	
229	7.98	7.96	34.031	26.519	154.5	0.509	2.64	39.7							230	206
250 ISL	7.68	7.66	34.038	26.569	150.0	0.541	2.57	38.3							251	
271	7.43	7.40	34.047	26.612	146.2	0.572	2.44	36.2							273	205
300 ISL	7.25	7.22	34.093	26.674	140.7	0.613	1.92	28.4							302	
315	7.17	7.14	34.116	26.703	138.1	0.634	1.63	24.0							317	204
376	6.55	6.52	34.129	26.798	129.7	0.716	1.22	17.7							378	203
400 ISL	6.45	6.41	34.154	26.831	126.8	0.747	1.04	15.1							403	
437	6.32	6.28	34.201	26.886	122.1	0.793	0.78	11.3							440	202
500 ISL	5.87	5.83	34.267	26.995	112.1	0.866	0.45	6.4							503	
520	5.73	5.69	34.289	27.030	109.0	0.889	0.35	5.0							524	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
32 5.1 N	120 38.3 W	12/12/98	1051	UTC	3787 m	320	14 kn			1024.9 mb	14.1 C	12.2 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	15.42	15.42	33.392	24.641	328.9	0.000	5.75	100.9					0.32	0.10	0	
2	15.42	15.42	33.392	24.641	329.0	0.007	5.75	100.9					0.32	0.10	2	220
10 ISL	15.42	15.42	33.393	24.642	329.1	0.033	5.75	100.9					0.32	0.11	10	
15	15.42	15.42	33.393	24.643	329.3	0.049	5.75	100.9					0.32	0.11	15	219
20 ISL	15.42	15.42	33.393	24.643	329.4	0.066	5.77	101.3					0.31	0.11	20	
29	15.42	15.42	33.393	24.643	329.7	0.095	5.79	101.6					0.31	0.10	29	218
30 ISL	15.42	15.42	33.393	24.643	329.7	0.099	5.79	101.6					0.31	0.10	30	
45	15.41	15.40	33.390	24.644	330.1	0.148	5.76	101.1					0.35	0.11	45	217
50 ISL	15.32	15.31	33.385	24.660	328.7	0.165	5.75	100.7					0.37	0.15	50	
55	15.21	15.20	33.376	24.677	327.2	0.181	5.73	100.1					0.38	0.19	55	216
64	14.98	14.97	33.350	24.707	324.6	0.210	5.71	99.3					0.32	0.16	64	215
73	14.34	14.33	33.320	24.821	313.9	0.239	5.55	95.3					0.21	0.15	73	214
75 ISL	14.19	14.18	33.325	24.856	310.6	0.245	5.50	94.1					0.21	0.17	75	
86	13.39	13.38	33.409	25.086	289.0	0.278	5.21	87.7					0.22	0.25	86	213
94	12.90	12.89	33.512	25.263	272.3	0.301	4.96	82.7					0.16	0.19	94	212
100 ISL	12.45	12.44	33.519	25.356	263.5	0.317	4.79	79.2					0.11	0.17	100	
107	11.94	11.93	33.510	25.446	255.0	0.335	4.60	75.2					0.07	0.15	107	211
124	11.16	11.14	33.620	25.676	233.5	0.377	4.23	68.0					0.05	0.08	125	210
125 ISL	11.11	11.09	33.626	25.689	232.2	0.379	4.21	67.6					0.05	0.08	126	
145	10.23	10.21	33.732	25.926	209.9	0.423	3.85	60.7					0.02	0.05	146	209
150 ISL	10.05	10.03	33.760	25.979	205.0	0.434	3.71	58.3					0.02	0.04	151	
169	9.50	9.48	33.861	26.149	189.1	0.471	3.19	49.6					0.01	0.02	170	208
198	9.09	9.07	33.980	26.309	174.4	0.524	2.81	43.3					0.00	0.02	199	207
200 ISL	9.07	9.05	33.989	26.319	173.4	0.527	2.77	42.6							201	
229	8.79	8.77	34.106	26.455	161.0	0.576	2.13	32.6							230	206
250 ISL	8.63	8.60	34.164	26.526	154.7	0.609	1.79	27.3							251	
268	8.48	8.45	34.198	26.576	150.2	0.636	1.57	23.9							269	205
300 ISL	8.07	8.04	34.220	26.656	143.0	0.683	1.29	19.4							302	
318	7.84	7.81	34.225	26.694	139.6	0.709	1.17	17.5							320	204
379	7.36	7.32	34.269	26.798	130.4	0.791	0.73	10.8							381	203
400 ISL	7.19	7.15	34.277	26.828	127.7	0.818	0.64	9.5							402	
440	6.88	6.84	34.289	26.881	123.1	0.868	0.52	7.6							443	202
500 ISL	6.45	6.40	34.323	26.966	115.6	0.940	0.35	5.1							503	
526	6.27	6.22	34.338	27.001	112.5	0.970	0.27	3.9							530	201

RV ROBERT GORDON SPROUL CALCOFI CRUISE 9812 STATION 90 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD	AMT	TYPE
31 45.1 N	121 19.1 W	12/12/98	1803	UTC	3593 m	340	11 kn	340 05 06	1	1025.4 mb	15.8 C	13.8 C		1/8		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	15.59	15.59	33.394	24.605	332.4	0.000	5.78	101.8					0.20	0.05	0	
2	15.59	15.59	33.394	24.605	332.4	0.007	5.78	101.8					0.20	0.05	2	220
10 ISL	15.58	15.58	33.394	24.608	332.4	0.033	5.77	101.6					0.21	0.06	10	
14	15.57	15.57	33.394	24.610	332.3	0.047	5.77	101.6					0.21	0.06	14	219
20 ISL	15.57	15.57	33.394	24.610	332.5	0.066	5.77	101.6					0.20	0.07	20	
30	15.57	15.57	33.394	24.611	332.8	0.100	5.77	101.6					0.20	0.08	30	218
44	15.57	15.56	33.394	24.611	333.2	0.146	5.76	101.4					0.24	0.08	44	217
50 ISL	15.57	15.56	33.394	24.611	333.3	0.166	5.79	101.9					0.21	0.09	50	
53	15.57	15.56	33.394	24.611	333.4	0.176	5.80	102.1					0.19	0.09	53	216
64	15.57	15.56	33.393	24.611	333.8	0.213	5.75	101.2					0.14	0.07	64	215
74	15.56	15.55	33.393	24.614	333.9	0.246	5.75	101.2					0.43	0.31	74	214
75 ISL	15.55	15.54	33.392	24.615	333.8	0.250	5.75	101.2					0.42	0.30	75	
84	15.32	15.31	33.378	24.655	330.2	0.280	5.70	99.8					0.26	0.17	84	213
94	14.71	14.70	33.378	24.788	317.8	0.312	5.63	97.4					0.24	0.18	94	212
100 ISL	14.20	14.19	33.401	24.914	305.9	0.331	5.48	93.8					0.16	0.14	100	
109	13.35	13.33	33.452	25.128	285.6	0.357	5.19	87.4					0.05	0.07	109	211
124	11.99	11.97	33.543	25.463	253.9	0.398	4.65	76.1					0.06	0.09	125	210
125 ISL	11.91	11.89	33.549	25.483	252.0	0.400	4.61	75.3					0.06	0.09	126	
145	10.65	10.63	33.672	25.807	221.4	0.448	3.94	62.7					0.02	0.06	146	209
150 ISL	10.44	10.42	33.696	25.862	216.2	0.459	3.86	61.2					0.01	0.06	151	
169	9.83	9.81	33.785	26.035	200.0	0.498	3.63	56.8					0.00	0.04	170	208
198	9.00	8.98	33.951	26.300	175.1	0.553	2.98	45.8					0.00	0.02	199	207
200 ISL	8.95	8.93	33.956	26.312	174.0	0.556	2.98	45.7							201	
229	8.28	8.26	34.000	26.450	161.2	0.605	2.92	44.2							230	206
250 ISL	7.93	7.90	34.022	26.520	154.8	0.638	2.75	41.3							251	
269	7.67	7.64	34.038	26.571	150.2	0.667	2.54	37.9							270	205
300 ISL	7.32	7.29	34.069	26.645	143.5	0.712	2.11	31.2							302	
316	7.17	7.14	34.085	26.679	140.4	0.735	1.87	27.6							318	204
378	6.66	6.63	34.156	26.805	129.1	0.819	1.09	15.9							380	203
400 ISL	6.48	6.44	34.174	26.843	125.7	0.847	0.91	13.2							402	
439	6.20	6.16	34.206	26.905	120.2	0.895	0.67	9.7							442	202
500 ISL	5.97	5.93	34.278	26.992	112.6	0.966	0.45	6.5							503	
521	5.89	5.84	34.303	27.022	110.0	0.989	0.37	5.3							524	201

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 25.1 N	121 59.4 W	13/12/98	0106	UTC	3858 m	340	12 kn	340 07 06	1	1023.0 mb	15.5 C	13.9 C		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	15.74	15.74	33.373	24.556	337.1	0.000	5.77	101.9					0.31	0.09	0	
2	15.74	15.74	33.373	24.556	337.1	0.007	5.77	101.9					0.31	0.09	2	220
10 ISL	15.75	15.75	33.372	24.553	337.6	0.034	5.76	101.8					0.31	0.10	10	
15	15.75	15.75	33.372	24.553	337.8	0.051	5.76	101.8					0.31	0.10	15	219
20 ISL	15.73	15.73	33.372	24.558	337.5	0.068	5.76	101.7					0.31	0.10	20	
30	15.69	15.69	33.373	24.568	336.9	0.101	5.76	101.6					0.32	0.10	30	218
44	15.68	15.67	33.373	24.571	337.0	0.148	5.85 U	103.2 U					0.33	0.10	44	217
50 ISL	15.68	15.67	33.373	24.571	337.2	0.169	5.75	101.4					0.33	0.11	50	
59	15.68	15.67	33.373	24.571	337.5	0.199	5.74	101.3					0.32	0.13	59	216
74	15.38	15.37	33.348	24.619	333.4	0.249	5.73	100.5					0.32	0.10	74	215
75 ISL	15.26	15.25	33.346	24.644	331.0	0.253	5.73	100.2					0.32	0.10	75	
84	14.16	14.15	33.342	24.876	309.0	0.281	5.69	97.3					0.31	0.10	84	214
95	13.56	13.55	33.375	25.025	295.0	0.315	5.53	93.4					0.26	0.13	95	213
100 ISL	13.26	13.25	33.385	25.094	288.6	0.329	5.43	91.2					0.23	0.15	100	
104	12.97	12.96	33.401	25.164	282.0	0.341	5.31	88.6					0.20	0.16	104	212
114	11.92	11.91	33.526	25.463	253.6	0.367	4.75	77.6					0.14	0.17	114	211
123	11.29	11.27	33.622	25.654	235.6	0.389	4.57	73.7					0.09	0.12	124	210
125 ISL	11.15	11.13	33.639	25.692	231.9	0.394	4.52	72.7					0.08	0.11	126	
139	10.31	10.29	33.740	25.919	210.6	0.425	4.15	65.6					0.04	0.07	140	209
150 ISL	9.90	9.88	33.790	26.027	200.4	0.448	3.87	60.6					0.02	0.05	151	
165	9.52	9.50	33.844	26.133	190.6	0.477	3.47	53.9					0.01	0.04	166	208
192	9.01	8.99	33.977	26.319	173.3	0.526	2.70	41.5					0.00	0.03	193	207
200 ISL	8.83	8.81	33.997	26.363	169.2	0.540	2.69	41.2							201	
230	8.17	8.15	34.033	26.493	157.2	0.589	2.63	39.7							231	206
250 ISL	7.76	7.74	34.032	26.553	151.6	0.620	2.56	38.3							251	
267	7.47	7.44	34.032	26.594	147.8	0.645	2.45	36.4							268	205
300 ISL	7.22	7.19	34.090	26.676	140.5	0.693	1.90	28.1							302	
317	7.14	7.11	34.122	26.712	137.3	0.716	1.60	23.6							319	204
376	6.58	6.55	34.137	26.800	129.4	0.795	1.15	16.7							378	203
400 ISL	6.45	6.41	34.156	26.833	126.6	0.826	0.99	14.4							402	
438	6.27	6.23	34.189	26.883	122.3	0.873	0.77	11.1							441	202
500 ISL	5.83	5.79	34.234	26.974	114.1	0.946	0.51	7.3							503	
519	5.69	5.65	34.248	27.003	111.5	0.968	0.43	6.1							522	201

RV ROBERT GORDON SPROUL — CALCOFI CRUISE 9812 — STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST	TIME	BOTTOM	WIND	SPEED	WAVES	WEA	BAROMETER	DRY	WET	SECCHI/FOREL	CLD AMT	TYPE
31 5.1 N	122 39.7 W	13/12/98	0810	UTC	4010 m	320	13 kn			1023.3 mb	15.2 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	15.33	15.33	33.307	24.596	333.3	0.000	5.80	101.6					0.26	0.08	0	
2	15.33	15.33	33.307	24.596	333.3	0.007	5.80	101.6					0.26	0.08	2	220
10 ISL	15.34	15.34	33.309	24.595	333.6	0.033	5.80	101.6					0.27	0.09	10	
14	15.35	15.35	33.310	24.594	333.9	0.047	5.80	101.6					0.27	0.09	14	219
20 ISL	15.35	15.35	33.308	24.593	334.2	0.067	5.80	101.6					0.27	0.09	20	
30	15.35	15.35	33.305	24.591	334.7	0.100	5.79	101.4					0.28	0.08	30	218
46	15.34	15.33	33.303	24.592	335.0	0.154	5.79	101.4					0.29	0.10	46	217
50 ISL	15.24	15.23	33.302	24.613	333.1	0.167	5.78	101.0					0.33	0.12	50	
55	15.11	15.10	33.301	24.641	330.6	0.184	5.76	100.4					0.37	0.16	55	216
65	13.75	13.74	33.312	24.937	302.6	0.215	5.62	95.3					0.32	0.33	65	215
75	13.40	13.39	33.363	25.048	292.3	0.245	5.52	93.0					0.23	0.22	75	214
85	13.14	13.13	33.415	25.140	283.7	0.274	5.41	90.6					0.18	0.19	85	213
94	12.33	12.32	33.460	25.333	265.5	0.299	5.04	83.0					0.10	0.13	94	212
100 ISL	11.74	11.73	33.488	25.466	252.9	0.314	4.76	77.5					0.08	0.11	100	
110	10.90	10.89	33.540	25.659	234.6	0.339	4.36	69.7					0.06	0.08	110	211
123	10.39	10.38	33.615	25.807	220.8	0.368	4.11	65.0					0.02	0.04	124	210
125 ISL	10.32	10.31	33.627	25.828	218.8	0.373	4.07	64.3					0.02	0.04	126	
145	9.69	9.67	33.742	26.025	200.4	0.414	3.78	58.9					0.01	0.03	146	209
150 ISL	9.56	9.54	33.771	26.069	196.3	0.424	3.73	58.0					0.01	0.03	151	
170	9.10	9.08	33.874	26.224	181.9	0.462	3.57	55.0					0.00	0.02	171	208
199	8.67	8.65	33.957	26.357	169.7	0.513	3.39	51.7					0.00	0.02	200	207
200 ISL	8.65	8.63	33.959	26.361	169.3	0.515	3.38	51.5							201	
228	8.14	8.12	34.009	26.478	158.5	0.561	2.97	44.8							229	206
250 ISL	7.81	7.79	34.025	26.540	152.9	0.595	2.75	41.2							251	
269	7.54	7.51	34.031	26.584	148.9	0.624	2.58	38.4							270	205
300 ISL	7.09	7.06	34.041	26.655	142.4	0.669	2.23	32.8							302	
318	6.85	6.82	34.047	26.693	138.9	0.694	2.01	29.4							320	204
378	6.20	6.17	34.086	26.809	128.3	0.774	1.31	18.9							380	203
400 ISL	6.01	5.98	34.104	26.848	124.8	0.802	1.11	15.9							402	
439	5.71	5.67	34.137	26.911	119.0	0.850	0.82	11.7							442	202
500 ISL	5.37	5.33	34.188	26.993	111.7	0.920	0.55	7.8							503	
517	5.28	5.24	34.202	27.015	109.8	0.939	0.47	6.6							520	201