UNIVERSITY OF WASHINGTON
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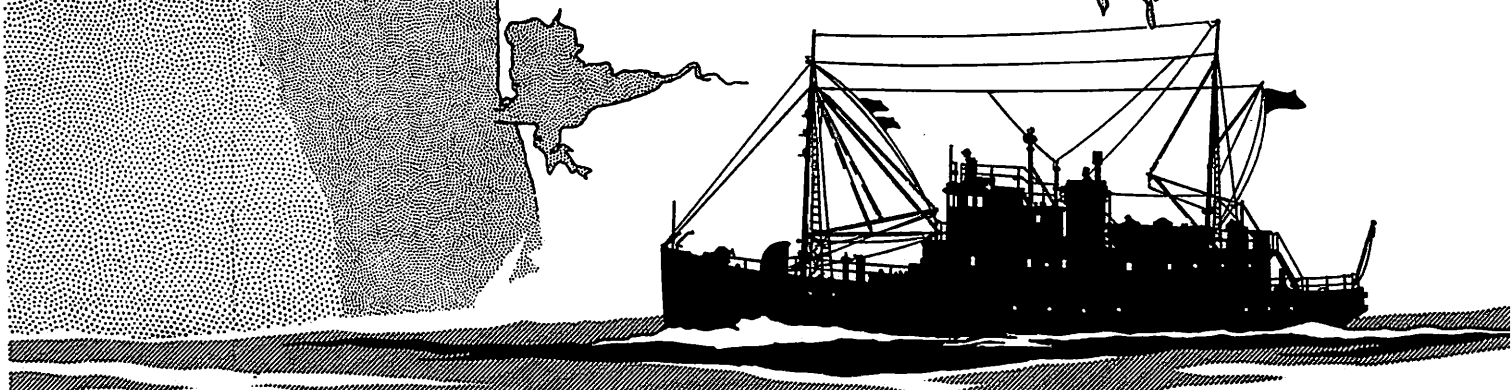
Technical Report No. 249

PHYSICAL, CHEMICAL, AND PRODUCTIVITY DATA FROM A SURVEY OF THE CARIBBEAN SEA AND THE NORTHEASTERN TROPICAL PACIFIC OCEAN

RV *Thomas G. Thompson* Cruise 001:
14 October - 7 December 1965

Office of Naval Research
Contract Nonr-477(37)
Project NR 083 012

Reference M70-40
May 1970



SEATTLE, WASHINGTON 98105

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Francis A. Richards
Principal Investigator

ABSTRACT

This report contains tabulated physical and chemical data collected in 1965 during Cruise 001 of RV *Thomas G. Thompson* and describes the methods of collection and analysis employed. These data are from the Caribbean Sea and the northeastern tropical Pacific Ocean.

Productivity and chlorophyll data collected in the northeastern tropical Pacific Ocean are included in the appendix.

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INTRODUCTION

In 1965, during the maiden voyage of the RV *Thomas G. Thompson*, oceanographic stations were occupied in the Puerto Rico Trench, the Caribbean Sea, and the northeastern tropical Pacific Ocean. The primary emphasis was on chemical oceanographic studies. However, gravity cores were taken at some stations (Fig. 1), and chlorophyll and ^{14}C productivity data were collected in the northeastern tropical Pacific Ocean (see APPENDIX). In addition to the station data, BT observations were made at frequent intervals during the passage from Boston to Seattle.

Disposition of the Data

The salinity, temperature, dissolved oxygen, reactive phosphorus, reactive silicate, and nitrate data are on file at the National Oceanographic Data Center and at the University of Washington. BT data were forwarded to the Scripps Institution of Oceanography for final processing, and copies of the corrected data are kept there and at the University of Washington. Those interested in examining the gravity cores and anyone desiring additional copies of the data in this report should contact the Department of Oceanography, University of Washington, Seattle, Washington, 98105. The cruise number and the title and reference number of this report should be included in such requests.

Methods

Hydrographic casts were made, using 6-liter plastic modified Emsworth sampling bottles equipped with reversing thermometers. Sampling depths were determined from wire angle and unprotected reversing thermometer readings. Salinities were measured onboard with a University of Washington salinometer Paquette, 1958) and with an Industrial Instruments Model RS-7A inductive salinometer. Oxygen determinations were by a modified Winkler method. The reagent concentrations in this unpublished method were adjusted to reduce iodine volatilization, but they are not exactly the same as those suggested by Carpenter (1965), and volumetric transfers of the final iodine solutions were not eliminated. Oxygen solubilities were calculated in accordance with the equations of Truesdale and Gameson (1957).

Reactive phosphorus was determined by an adaptation of the method of Murphy and Riley (1962), reactive silicate by Mullin and Riley's (1955) procedure, nitrate by a method similar to that of Wood, Armstrong, and Richards (1967), and nitrite using Bendschneider and Robinson's (1952) procedure. The method of Richards and Kletsch (1964) was employed for ammonia determinations. Hydrogen sulfide (H_2S, HS^-, $S^=$) was determined by the procedure of Cline (1969), and total sulfide (which includes H_2S, HS^-, $S^=$, $S_2O_3^=$, and $SO_3^=$) was determined by a modification of the scheme developed by Custer and Natelson (1949). A Corning Model 12 pH meter standardized with pH 7.00 and 9.00 buffer solutions was used to determine th pH of samples after they had been brought to 25°C in a constant temperature bath. Two methods were used for alkalinity determination. A modification of Gast and Thompson's (1958) procedure was employed for stations 1 - 18, and after this, Anderson and Robinson's (1946) method was used. Total carbon dioxide was calculated from the alkalinity and pH, using the tables and equations of Buch (*in* Barnes, 1959). In addition, total carbon dioxide was directly determined at some stations by a modification of the gas chromatographic technique of Swinnerton,

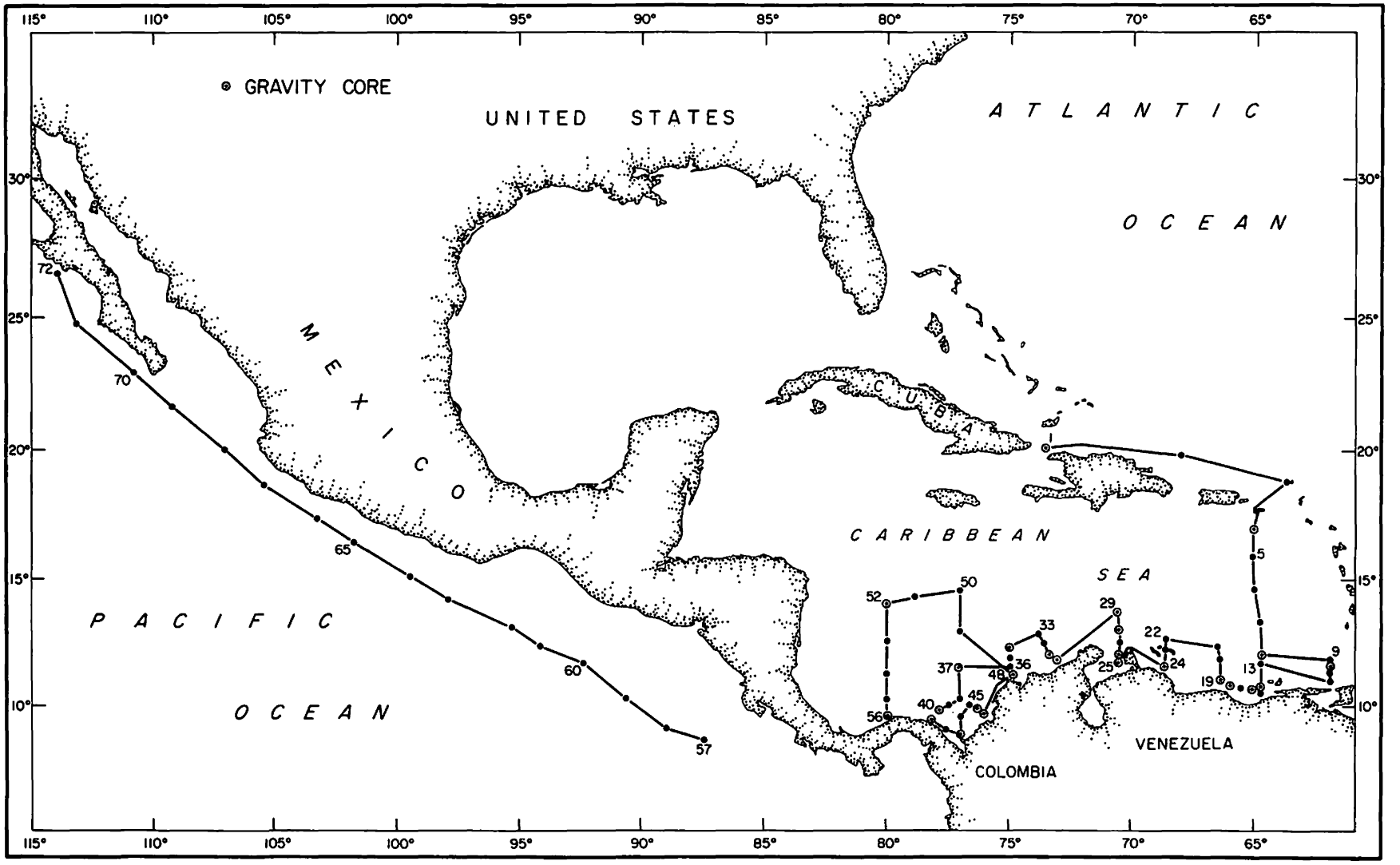

Figure 1. Station locations, *T. G. Thompson* cruise 1 (OPERCAT).

Linnenbom, and Cheek (1962a, b). Methane was also determined by a modification of their procedure. All of the above analyses were performed at sea.

Total phosphorus (organic plus reactive phosphorus) samples were stored in acid-washed soft glass bottles at room temperature and analyzed ashore. The sample bottles were scrubbed with a rubber policeman while the samples were being decanted to remove any phosphorus containing films that might have been present. The analyses were performed by using a modification of Ketchum, Corwin, and Keen's (1955) oxidation procedure and Murphy and Riley's (1962) color development reagents. However, Murphy and Riley's reagents were adjusted to account for the acid added during the oxidation step.

EXPLANATION OF DATA TABLES

The information in the data tables was transcribed directly from IBM cards. The codes used to describe weather, sea conditions, etc., can be found in NODC Publication M-2 (National Oceanographic Data Center, 1964), and the abbreviations and column headings are described below.

Abbreviations and Headings Used in Data Tables

DATE	Expressed as Greenwich day/month/year.
HOUR	Greenwich mean time to the nearest tenth of an hour of the messenger drop on the first cast
LAT LONG	Latitude and longitude in degrees and minutes; or in degrees, minutes, and tenths of minutes
MESSENGER TIMES	In Greenwich mean time to the nearest tenth of an hour (The times refer to the messenger times for only those casts appearing in the CST column and are listed in order of increasing cast number.)
WIRE ANGLE(S)	In degrees (Wire angles are tabulated only for those casts whose numbers appear in the "Cast" column at the left of the page, i.e., casts from which data were obtained. The first number is the wire angle for Cast 1, or the lowest numbered cast appearing, the second for Cast 2, etc. Dashes (--) indicate that the wire angle was not recorded for that cast.)
BAROMETER	In millibars (To obtain barometric pressure, add 900 if this number is above 50 and 1000 if below 50.)
TEMP DRY and TEMP WET	In degrees Celsius
REL HUMID	Relative humidity expressed in percent
WEATHER	State of present weather (Coded in accordance with WMO Code 4501). A preceding X has no significance except to avoid confusion with previously used two-digit codes.)
VISIBILITY	Range of visibility (WMO code 4300)
CLOUD TYPE	Cloud type (WMO code 0500)

CLOUD AMT	Amount of cloud cover (WMO code 2700)
WIND VELOC	Wind velocity in knots
WIND DIREC	Wind direction (from NODC Publication M-2)
WAVE DIREC	Direction from which dominant waves approached (from NODC Publication M-2)
WAVE HEIGHT	Height of dominant waves (WMO code 1555)
WAVE PERIOD	Period of dominant waves (WMO code 3155)
SECCHI	Depth in meters to which a 12-inch (30.5 cm) Secchi disk could be seen on daylight stations
SOUNDING	Depth of water in meters at the station as determined by the ship's echo sounder
CST	Cast number
DEPTH	Depth in meters from which sample was obtained
TEMP	Temperature in degrees Celsius
SAL	Salinity in parts per thousand (o/oo)
SIGMA-T (σ_t)	An expression for the density of seawater at atmospheric pressure at the indicated temperature and salinity (To convert sigma-t values to density, divide by 1000 and add 1; thus, sigma-t 22.42 = density 1.02242)
OXYGEN (Dissolved oxygen)	
ML/L	In milliliters per liter
MGA/L	In milligram-atoms per liter (mg-atoms/liter)
AOU	Apparent oxygen utilization in milligram-atoms per liter (mg-atoms/liter)
SATN	Percent of oxygen saturation
PHOS	Reactive phosphorus in microgram-atoms per liter (µg-atoms/liter)
NITR	Nitrate-nitrogen in microgram-atoms per liter (µg-atoms/liter)
SIL	Reactive-silicate in microgram-atoms per liter (µg-atoms/liter)

SP VOL ANOMALY	The anomaly of specific volume ($10^5\delta$) at the indicated temperature, salinity, and pressure compared to a standard water of 0°C and 35 o/oo salinity at the same pressure (Tabular values multiplied by 10^{-5} will give the anomaly in units of cubic centimeters per gram.)
GEOPOT ANOMALY	Geopotential anomaly ($\Sigma\Delta D$) in dynamic meters of the layer of water between the surface and the indicated depth
POT ENERGY	Potential energy anomaly in units of 10^8 ergs/cm^2 of the layer of water between the surface and the indicated depth
VAR RATIO	Ratio of the variance of the interpolation polynomial to the variance of the measurement (The value of the variance ratio is an indication of the adequacy of the vertical spacing of the observed values upon which the interpolation is based. Values greater than 3 indicate that the vertical spacing may be inadequate in this region of the curve. In the case of missing values, where different combinations of observed values may be used to interpolate at the same depth, the variance ratio indicating the worst spacing has been printed. Values greater than 100 have been printed as 99.99. If the observed depth corresponds to a desired standard depth, no interpolation is made and the variance ratio is not computed.)
E(T)	Interpolation error, in degrees Celsius, of the temperature value at this depth. (The error of interpolation is the difference in magnitude between the two Lagrange interpolation polynomials times 0.33.) If the observed depth corresponds to a desired standard depth, the interpolation error will be zero
E(S)	Interpolation error, in parts per thousand, of the salinity value at this depth (See comments under E(T) above.)
E(O)	Interpolation error, in milliliters per liter, of the oxygen value at this depth (See comments under E(T) above.)
*	Indicates a questionable value
#	Indicates a hand-interpolated value

TOTAL PO4	Total phosphorus (reactive phosphorus plus organic phosphorus) in microgram-atoms per liter (µg-atoms/liter)
NO2	Nitrite-nitrogen in microgram-atoms per liter (µg-atoms/liter)
pH	pH corrected for <u>in situ</u> temperature
CO2 CALC	Total carbon dioxide calculated from the pH and alkalinity values and expressed in millimoles per liter (mmole/liter)
CO2 GAS	Total carbon dioxide as determined directly by gas chromatography in millimoles per liter (mmole/liter)
NH3-N	Ammonia-nitrogen in microgram-atoms per liter (µg-atoms/liter)
S--	Hydrogen sulfide (H_2S, HS^-, S^{--}) in microgram-atoms per liter (µg-atoms/liter)
TOTAL H2S	Total sulfide (H_2S, HS^-, S^{--}, $S_2O_3^{=}$, $SO_3^{=}$) in microgram-atoms per liter (µg-atoms/liter)
CH4	Methane in milliliters per liter (ml/liter)

REFERENCES

Anderson, D. H. and R. J. Robinson
1946. Rapid electrometric determination of the alkalinity of sea water. Ind. Eng. Chem., Anal. Edition, 18:767-773.

Barnes, H.
1959. Apparatus and methods of oceanography, Part I: Chemical. George Allen and Unwin, Ltd., London. 341 pp.

Bendschneider, K. and R. J. Robinson
1952. A new spectrophotometric determination of nitrite in sea water. J. Mar. Res., 24:446-449.

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

Cline, Joel D.
1969. Spectrophotometric determination of hydrogen sulfide in natural waters. Limnol. Oceanog., 14:454-458.

Custer, J. J. and S. Natelson
1949. Spectrophotometric determination of microquantities of iodine. Anal. Chem., 21:1005-1009.

Gast, J. A. and T. G. Thompson
1958. Determination of the alkalinity and borate concentration of sea water. Anal. Chem, 30:1549-1551.

Ketchum, B. H., N. Corwin, and D. J. Keen
1955. The significance of organic phosphorus determinations in ocean waters. Deep-Sea Res., 2:172-181.

Mullin, J. B. and J. P. Riley
1955. The colorimetric determination of silicate with special reference to sea and natural waters. Anal. Chim. Acta, 12:162-176.

Murphy, J. and J. P. Riley
1962. A modified single solution method for the determination of phosphate in natural waters. Anal. Chim. Acta, 27L:31-36.

National Oceanographic Data Center
1964. Processing physical and chemical data from oceanographic stations. Part I. Coding and keypunching. Manual Series. Publication M-2. (Revised August 1964). Washington D. C. 117 pp.

Paquette, Robert G.
1958. A modification of the Wenner-Smith Soule salinity bridge for the determination of salinity in sea water. Univ. Wash., Dept. Oceanog. Tech. Rept. No. 61, Ref M58-14. 57 pp.

Richards, F. A. and R. A. Kletsch
1964. The spectrophotometric determination of ammonia and labile amino compounds in fresh and seawater by oxidation to nitrate, pp. 65-81. *In* Y. Miyake and J. Kayama [eds.], Ken Suguwara. Festival Volume, Recent researches in the fields of hydrosphere, atmosphere, and nuclear geochemistry. Maruzen Co., Tokyo 404 p.

Swinnerton, J. W., V. J. Linnenbom, and C. H. Cheek
1962a. Determination of dissolved gases in aqueous solutions by gas chromatography. Anal. Chem., 34:483-485.

1962b. Revised sampling procedure for determination of dissolved gases in solution by gas chromotography. Anal. Chem., 34:1509.

Truesdale, G. A. and A. L. H. Gameson
1957. The solubility of oxygen in saline water. J. Conseil, Conseil Perm. Intern. Exploration Mer, 22:163-166.

Wood, E. D., F. A. J. Armstrong, and F. A. Richards
1967. Determination of nitrate in sea water by cadmium-copper reduction to nitrite. J. Marine Biol. Assoc. U. K., 47-23-31.

PHYSICAL AND CHEMICAL DATA

T G THOMPSON CRUISE 001 STATION 001 OBSERVED VALUES

DATE	14/10/65	BAROMETER	13.0	WEATHER	X1	WIND VELOC	21	WAVE PERIOD	X
HOUR	06.1	TEMP DRY	28.3	VISIBILITY	6	WIND DIREC	07	SECCHI	30
LAT	20-12.2N	TEMP WET	25.5	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	73-34.2W	REL HUMID	80	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	1537

MESSENGER TIMES: 06.1; 07.8; 08.4; 08.8; 11.2
WIRE ANGLES: 00; 04; --; --; --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
2	0	28.41	36.478	23.39	4.22	0.377	0.010	97	0.00	0.0	2
2	19	28.33	36.476	23.42	4.67	0.417	-0.030	108	0.00	0.0	2
2	21	28.31	36.507	23.45	4.45	0.397	-0.010	103	0.02	0.0	1
2	31	28.29	36.594	23.52	4.58	0.409	-0.021	106	0.10	0.0	2
3	53	26.23	36.593	23.54	4.54	0.405	-0.018	105	0.00	0.0	5
3	78	26.86	36.618	24.00	4.52	0.404	-0.008	102	0.04	0.0	2
4	103	24.72	36.686	24.72	4.75	0.424	-0.015	104	0.00	0.0	2
4	154	22.98	36.835	25.35	4.65	0.416	0.005	99	0.10	1.5	1
4	206	20.30	36.744	26.03	4.54	0.405	0.035	92	0.01	0.0	1
4	257	18.71	36.579	26.32	4.46	0.398	0.056	88	0.13	3.2	1
4	309	18.03	36.496	26.43	4.52	0.404	0.056	88	0.21	4.4	2
4	412	16.66	36.274	26.59	3.94	0.352	0.120	75	0.41	7.6	3
1	495	14.69	35.952	26.79	3.87	0.345	0.146	70	0.71	13.1	6
5	505	13.66									
5	510	13.65									
1	592	12.34	35.610	27.01	3.56	0.318	0.199	62	1.12	18.7	9
1	691	10.29	35.332	27.18	3.18	0.284	0.258	52	1.47	22.1	15
1	788		35.070		3.63	0.325			1.70	26.2	20
1	982	5.78			4.79	0.428					
1	1229	4.61	35.020	27.76	5.77	0.515	0.106	83	1.25	19.5	19
1	1481	4.21	35.004	27.79	5.90	0.527	0.101	84	1.29	19.8	16
1	1500	4.20	35.005	27.79	5.91	0.528	0.100	84	1.27	20.1	
5	1522	3.95									
5	1532	3.93									

T G THOMPSON CRUISE 001 STATION 001 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.41	0.00	36.478	0.000	23.39	450.0	0.000	0.00	4.22	0.00	
10	23.33	0.00	36.476	0.000	23.42	448.0	0.046	0.02	4.67	0.00	
20	23.31	0.00	36.502	0.000	23.44	446.0	0.091	0.09	4.48	0.02	0.88
30	25.29	0.00	36.585	0.002	23.51	439.9	0.135	0.21	4.56	0.01	0.82
50	23.27	0.02	36.600	0.006	23.53	439.0	0.224	0.57	4.56	0.01	0.83
75	27.08	0.01	36.613	0.000	23.93	402.1	0.330	1.24	4.52	0.00	0.84
100	24.97	0.03	36.677	0.001	24.64	335.6	0.423	2.07	4.72	0.01	0.80
150	23.07	0.05	36.827	0.003	25.32	272.5	0.576	4.00	4.67	0.01	0.89
200	20.61	0.03	36.763	0.003	25.96	213.0	0.698	6.16	4.55	0.00	0.85
250	18.87	0.00	36.601	0.003	26.30	182.7	0.798	8.44	4.47	0.00	0.82
300	18.11	0.02	36.508	0.003	26.42	172.8	0.888	10.97	4.51	0.01	0.73
400	16.85	0.02	36.307	0.002	26.57	161.0	1.056	17.00	4.02	0.03	0.88
500	14.57	0.00	35.933	0.000	26.80	140.4	1.208	23.98	3.86	0.00	0.94
600	12.16	0.00	35.586	0.001	27.03	119.5	1.340	31.35	3.51	0.01	0.90
700	10.11	0.01	35.304	0.002	27.19	104.4	1.453	38.87	3.20	0.01	1.01
800	8.27	0.04	35.057	0.006	27.30	93.4	1.553	46.56	3.70	0.01	1.07
1000	5.64	0.02	35.020#		27.63	59.9	1.708	60.58	4.89	0.00	0.92
1200	4.66	0.03	35.015#		27.75	49.4	1.818	73.01	5.69	0.00	0.85
1500	4.20	0.00	35.005	0.000	27.79	46.9	1.965	93.33	5.91	0.00	

DATA FROM CAST 5 NOT USED FOR INTERPOLATION.

T G THOMPSON CRUISE 001 STATION 002 OBSERVED VALUES

DATE	16/10/65	BAROMETER	13.6	WEATHER X1	WIND VELOC 12	WAVE PERIOD	2
HOUR	00.6	TEMP DRY	30.0	VISIBILITY 6	WIND DIREC 09	SECCHI	30
LAT	19-42.0N	TEMP WET	25.0	CLOUD TYPE 7	WAVE DIREC 10	WATER COLOR	
LONG	67-57.0W	REL HUMID	66	CLOUD AMT 1	WAVE HEIGHT 2	SOUNDING	7772

MESSENGER TIMES: 00.6, 03.9, 06.4, 22.3
WIRE ANGLES: 00, 00, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	OXYGEN ML/L	OXYGEN MGA/L	OXYGEN ADU	OXYGEN SATN	PHOS	NITR	SIL
2	0	28.49	35.771	22.84	4.52	0.404	-0.015	104	0.01	0.0	2
2	10	28.47	35.761	22.83	4.53	0.404	-0.016	104	0.01	0.0	1
2	21	28.46	35.800	22.86	4.53	0.404	-0.016	104	0.01	0.0	1
2	31	28.50	35.834	22.88	4.41	0.394	-0.006	102	0.00	0.0	2
2	51	27.31	36.571	23.82	4.85	0.433	-0.040	110	0.00	0.0	1
2	77	24.67	36.751	24.79	4.90	0.438	-0.028	107	0.00	0.0	1
2	103	23.83	36.868	25.12	4.61	0.412	0.003	99	0.00	0.0	1
2	154	21.33	36.853	25.83	4.20	0.376	0.057	87	0.04	1.2	1
4	200	19.22	36.644	26.24	4.33	0.387	0.063	86	0.11	2.6	1
4	248	18.12	36.505	26.41	4.39	0.392	0.067	85	0.23	4.4	2
4	300	17.37	36.404	26.52	4.54	0.405	0.060	87	0.28	5.3	3
4	400	15.03	36.000	26.75	3.86	0.344	0.144	71	0.75	11.8	6
4	500	12.87	35.662	26.95	3.42	0.306	0.206	60	1.10	17.2	10
4	601	11.05	35.391	27.09	3.18	0.284	0.249	53	1.42	21.4	14
1	707	9.27	35.147	27.21	3.23	0.288	0.267	52	1.70	24.4	18
1	806	7.75	35.045	27.37	3.30	0.294	0.281	51	1.85	26.1	23
1	1005	5.89	34.966	27.56	4.19	0.374	0.228	62	1.69	24.9	25
1	1256	4.56	34.996	27.74	5.61	0.501	0.121	81	1.30	18.3	17
1	1506	4.01	34.978	27.79	5.97	0.533	0.095	85	1.20	17.2	17
1	1759	3.67	34.970	27.82	6.08	0.543	0.094	85	1.26	17.5	21
1	2008	3.51	34.967	27.83	6.10	0.545	0.094	85	1.23	18.7	20
1	2259	3.29	34.958	27.85	6.11	0.546	0.097	85	1.23	18.0	23
1	2509	3.10	34.943	27.85	6.11	0.546	0.100	84	1.25	16.5	25
1	3012	2.74	34.921	27.87	6.19	0.553	0.100	85	1.24	17.9	30
1	3517	2.47	34.889	27.87	6.23	0.556	0.101	85	1.25	17.0	36
1	4019	2.33	34.892	27.88	6.20	0.554	0.105	84	1.28	18.5	37
1	4517	2.30	34.880	27.87	6.08	0.543	0.117	82	1.30	19.3	42
1	5019	2.26	34.875	27.87	6.02	0.538	0.123	81	1.37	19.7	50

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 002 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
6	6271		34.823		5.66	0.505			1.67	22.7	75
6	6737	2.11	34.822	27.84	5.68	0.508	0.156	77	1.67	23.1	75
6	7204	2.13	34.812	27.83	5.66	0.505	0.157	76	1.67	23.5	75
6	7675	2.23	34.817	27.83	5.66	0.505	0.156	76	1.67	23.1	75
6	8152		34.816		5.65	0.505			1.67	23.2	76
6	8156	2.35									

T G THOMPSON CRUISE 001 STATION 002 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.49	0.00	35.771	0.000	22.83	503.3	0.000	0.00	4.52	0.00	
10	28.47	0.00	35.761	0.000	22.83	503.8	0.051	0.03	4.53	0.00	
20	28.46	0.00	35.795	0.001	22.86	501.4	0.102	0.10	4.53	0.00	0.88
30	28.50	0.01	35.826	0.003	22.87	501.1	0.152	0.23	4.42	0.01	0.83
50	27.40	0.01	36.530	0.011	23.76	416.8	0.245	0.61	4.82	0.01	0.92
75	24.86	0.04	36.754	0.010	24.73	325.7	0.338	1.19	4.91	0.00	0.89
100	23.89	0.04	36.858	0.000	25.10	291.3	0.416	1.88	4.65	0.01	0.81
150	21.54	0.02	36.864	0.001	25.78	228.4	0.547	3.52	4.22	0.00	0.90
200	19.22	0.00	36.644	0.000	26.24	186.4	0.652	5.38	4.33	0.00	
250	18.09	0.00	36.501	0.001	26.42	171.0	0.742	7.45	4.40	0.00	0.95
300	17.37	0.00	36.404	0.000	26.52	162.7	0.826	9.82	4.54	0.00	
400	15.03	0.00	36.000	0.000	26.75	142.5	0.980	15.31	3.86	0.00	
500	12.87	0.00	35.662	0.000	26.95	125.2	1.115	21.51	3.42	0.00	
600	11.07	0.00	35.393	0.000	27.09	112.8	1.235	28.28	3.18	0.00	0.98
700	9.38	0.00	35.160	0.001	27.20	102.3	1.344	35.52	3.22	0.00	0.91
800	7.83	0.00	35.049	0.001	27.36	87.1	1.440	42.87	3.29	0.00	0.89
1000	5.92	0.00	34.966	0.000	27.56	67.8	1.596	57.19	4.16	0.00	0.96
1200	4.77	0.01	34.985	0.006	27.71	53.0	1.719	70.89	5.32	0.04	0.75
1500	4.02	0.00	34.979	0.000	27.79	46.4	1.870	91.78	5.97	0.00	0.96
2000	3.51	0.00	34.967	0.000	27.83	44.7	2.101	133.46	6.10	0.00	0.95
2500	3.11	0.00	34.944	0.000	27.85	44.3	2.328	186.10	6.11	0.00	0.93
3000	2.75	0.00	34.922	0.000	27.87	43.7	2.553	249.92	6.19	0.00	0.96
4000	2.33	0.00	34.892	0.000	27.88	44.3	3.004	413.63	6.20	0.00	0.95
5000	2.26	0.00	34.875	0.000	27.87	46.5	3.482	638.25	6.02	0.00	0.92
6000	2.14	0.03	34.834	0.004	27.85	52.7	4.006	939.56	5.73	0.03	1.65
7000	2.15	0.00	34.820	0.000	27.84	57.3	4.578	329.15	5.67	0.00	0.65
8000	2.30	0.00	34.816	0.000	27.82	64.2	5.213	829.70	5.66	0.00	3.65

T G THOMPSON CRUISE 001 STATION 003 OBSERVED VALUES

DATE	10/10/65	BAROMETER	14.6	WEATHER		WIND VELOC	11	WAVE PERIOD	2
HOUR	00.8	TEMP DRY	25.0	VISIBILITY	6	WIND DIREC	08	SECCHI	
LAT	18-45.6N	TEMP WET	25.1	CLOUD TYPE	X	WAVE DIREC	08	WATER COLOR	
LONG	63-38.0W	REL HUMID	79	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	5669

MESSENGER TIMES: 00.8, 02.7, 03.3, 03.6
WIRE ANGLES: 00, --, --, --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.54	34.654	21.98	4.57	0.408	-0.017	104	0.03	0.0	3
2	10	28.51	34.654	21.99	4.56	0.407	-0.016	104	0.00	0.0	3
2	21	28.54	34.672	21.99	4.51	0.403	-0.013	103	0.01	0.0	3
2	31	28.66	35.247	22.38	4.69	0.418	-0.030	108	0.01	0.0	2
2	51	27.61	35.977	23.26	4.52	0.404	-0.011	103	0.01	0.0	1
2	77	26.32	36.460	24.15	4.39	0.392	0.008	98	0.06	0.0	2
2	103	24.86	36.831	24.79	4.53	0.404	0.004	99	0.07	0.9	2
2	154	22.35	36.973	25.64	4.21	0.376	0.049	88	0.08	1.4	1
3	199	19.96	36.792	26.16	4.31	0.385	0.058	87	0.09	1.9	2
3	248	18.42	36.569	26.39	4.48	0.400	0.056	88	0.18	3.7	3
3	299	17.41	36.415	26.52	4.57	0.408	0.057	88	0.28	5.6	2
4	403	15.44	36.067	26.71	3.97	0.354	0.130	73	0.61	11.1	5
1	507	12.58	35.616	26.97	3.42	0.305	0.209	59	1.54	23.2	15
1	607	10.13	35.291	27.17	3.13	0.280	0.264	51	1.13	18.3	10
1	707	8.04	35.021	27.30	3.28	0.293	0.279	51	1.84	27.6	22
1	806	6.92	34.905	27.38	3.28	0.293	0.294	50	1.96	27.0	25
1	1005	5.64	34.969	27.59	4.30	0.384	0.222	63	1.67	23.8	24
1	1255	4.54	35.004	27.75	5.50	0.491	0.131	79	1.35	16.2	18
1	1503	4.05	34.995	27.80	5.95	0.531	0.099	84	1.24	18.4	16
1	1753	3.79	34.982	27.82	6.07	0.542	0.092	85	1.24	17.9	18
1	2001	3.54	34.973	27.83	6.14	0.549	0.090	86	1.26	18.1	20
1	2253	3.38	34.970	27.85	6.14	0.549	0.093	86	1.26	18.1	22
1	2505	3.18	34.959	27.86	6.13	0.547	0.097	85	1.27	18.6	23
1	3008	2.79									

T G THOMPSON CRUISE 001 STATION 003 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.54	0.00	34.654	0.000	21.98	585.1	0.000	0.00	4.57	0.00	
10	28.51	0.00	34.654	0.000	21.99	584.6	0.059	0.03	4.56	0.00	
20	28.53	0.00	34.657	0.009	21.98	585.6	0.118	0.12	4.51	0.00	0.88
30	28.66	0.01	35.181	0.010	22.34	552.2	0.176	0.27	4.67	0.01	0.83
50	27.68	0.01	35.951	0.002	23.23	467.2	0.278	0.68	4.54	0.01	0.82
75	26.42	0.00	36.434	0.005	24.00	394.8	0.387	1.37	4.39	0.00	0.89
100	25.03	0.00	36.796	0.002	24.71	328.6	0.478	2.17	4.51	0.01	0.81
150	22.54	0.01	36.983	0.005	25.59	246.8	0.623	3.98	4.24	0.02	0.90
200	19.92	0.00	36.787	0.000	26.16	193.7	0.734	5.94	4.31	0.00	0.87
250	18.37	0.00	36.562	0.001	26.39	173.4	0.827	8.07	4.49	0.00	0.95
300	17.39	0.00	36.412	0.000	26.52	162.6	0.911	10.46	4.57	0.00	1.00
400	15.50	0.00	36.078	0.000	26.71	147.1	1.068	16.04	3.99	0.01	0.96
500	12.78	0.01	35.646	0.002	26.96	124.6	1.205	22.33	3.45	0.00	0.91
600	10.29	0.00	35.311	0.001	27.16	104.9	1.321	28.83	3.14	0.00	0.90
700	8.16	0.01	35.037	0.001	27.30	91.5	1.420	35.43	3.26	0.01	0.90
800	6.97	0.01	34.908	0.000	27.37	84.3	1.509	42.26	3.28	0.00	0.89
1000	5.66	0.00	34.965	0.002	27.59	64.2	1.659	55.97	4.27	0.01	0.96
1200	4.73	0.00	35.000	0.000	27.73	51.3	1.776	69.09	5.27	0.02	0.76
1500	4.05	0.00	34.995	0.000	27.80	45.7	1.924	89.49	5.95	0.00	0.98
2000	3.54	0.00	34.973	0.000	27.83	44.6	2.153	130.85	6.14	0.00	0.99
2500	3.18	0.00	34.959	0.000	27.86	44.3	2.380	183.45	6.13	0.00	11.94
3000	2.80	0.00					0.000	0.00			22.26

T G THOMPSON CRUISE 001 STATION 004 OBSERVED VALUES

DATE	26/10/65	BAROMETER	14.2	WEATHER	X1	WIND VELOC	16	WAVE PERIOD	2
HOUR	02.4	TEMP DRY	28.2	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	16-58.0N	TEMP WET	25.7	CLOUD TYPE	X	WAVE DIREC	05	WATER COLOR	
LONG	65-01.0W	REL HUMID	82	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	

MESSENGER TIMES: 02.4, 06.1
WIRE ANGLES: 05, 13

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
2	0	28.61	34.454	21.81	4.66	0.416	-0.025	106	0.00	0.0	3
2	10	28.57	34.453	21.82	4.53	0.405	-0.014	104	0.01	0.0	3
2	20		34.458		4.49	0.401			0.00	0.0	3
2	30		34.576		4.51	0.403			0.00	0.0	3
2	50		34.606		4.51	0.403			0.00	0.0	4
2	75	27.59	35.905	23.26	4.58	0.409	-0.015	104	0.03	0.0	2
2	100	26.21	36.429	24.07	4.44	0.397	0.004	99	0.05	0.2	2
2	152	23.25	36.939	25.35	4.30	0.384	0.035	92	0.10	1.9	1
2	202	19.63	36.573	26.08	3.32	0.297	0.150	66	0.52	8.7	4
2	252	17.64	36.435	26.48	4.27	0.382	0.082	82	0.34	6.4	3
2	302	15.89	36.137	26.67	3.87	0.346	0.134	72	0.66	11.4	5
2	402	12.34	35.512	26.94	3.16	0.282	0.236	54	1.36	19.8	11
2	503	9.82	35.123	27.10	2.92	0.261	0.288	48	1.74	25.2	16
2	604	8.12	34.901	27.20	2.95	0.263	0.308	46	1.95	28.4	21
1	1210	4.53	34.945	27.70	4.61	0.412	0.211	66	1.69	23.6	28
1	1310	4.35	34.961	27.74	4.76	0.425	0.200	68	1.64	23.0	29
1	1409	4.20	34.965	27.76	4.86	0.434	0.194	69	1.61	22.6	29
1	1502	4.16	34.969	27.77	4.93	0.440	0.189	70	1.59	22.8	29
1	1758	4.06	34.970	27.78	4.99	0.446	0.185	71	1.56	22.0	30
1	2010		34.969		5.03	0.449				22.0	30
1	2261	4.09	34.968	27.77	5.06	0.452	0.178	72		21.6	31

T G THOMPSON CRUISE 001 STATION 004 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.61	0.00	34.454	0.000	21.81	601.7	0.000	0.00	4.66	0.00	
10	28.57	0.00	34.453	0.000	21.82	600.9	0.061	0.03	4.53	0.00	
20	28.56	0.04	34.458	0.000	21.83	600.6	0.122	0.12	4.49	0.00	1.71
30	28.49	0.07	34.576	0.000	21.94	590.4	0.182	0.28	4.51	0.00	2.35
50	28.19	0.07	34.606	0.000	22.06	579.6	0.299	0.76	4.51	0.00	2.31
75	27.50	0.00	35.905	0.000	23.26	465.9	0.431	1.59	4.58	0.00	
100	25.21	0.00	36.429	0.000	24.07	389.9	0.539	2.54	4.44	0.00	
150	23.37	0.00	36.935	0.001	25.31	273.3	0.706	4.61	4.31	0.01	0.94
200	12.77	0.02	36.594	0.007	26.06	203.7	0.826	6.73	3.35	0.02	0.94
250	17.70	0.01	36.440	0.002	26.47	166.2	0.919	8.86	4.23	0.02	0.94
300	15.96	0.00	36.151	0.001	26.66	148.8	0.999	11.10	3.90	0.01	0.92
400	12.41	0.00	35.524	0.001	26.93	123.5	1.136	15.97	3.17	0.00	0.97
500	9.88	0.00	35.132	0.000	27.09	108.7	1.254	21.36	2.92	0.00	0.96
600	9.17	0.00	34.907	0.000	27.19	99.3	1.359	27.27	2.95	0.00	0.95
700	7.30#		34.820#		27.26	94.1	1.456	33.79	3.00#		
800	6.60#		34.800#		27.34	86.8	1.548	40.83	3.12#		
1000	5.40#		34.920#		27.59	63.9	1.700	54.72	3.90#		
1200	4.59	0.00	34.945	0.001	27.70	53.5	1.819	68.08	4.58	0.00	0.98
1500	4.16	0.00	34.969	0.000	27.77	49.1	1.975	89.68	4.92	0.00	0.84
2000	4.01	0.01	34.969	0.000	27.78	51.6	2.231	136.01	5.03	0.00	63.76

T G THOMPSON CRUISE 001 STATION 005 OBSERVED VALUES

DATE	26/10/65	BAROMETER	11.2	WEATHER	X1	WIND VELOC	21	WAVE PERIOD	2
HOUR	18.2	TEMP DRY	30.6	VISIBILITY	6	WIND DIREC	05	SECCHI	28
LAT	15-52.6N	TEMP WET	26.3	CLOUD TYPE	6	WAVE DIREC	09	WATER COLOR	
LONG	64-57.0W	REL HUMID	70	CLOUD AMT	8	WAVE HEIGHT	3	SOUNDING	3951

MESSENGER TIMES: 18.2
WIRE ANGLES: 01

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.92	34.603	21.81	4.54	0.406	-0.017	104	0.04	0.0	2
1	10	28.90	34.595	21.82	4.59	0.410	-0.021	105	0.01	0.0	2
1	21	28.88	34.605	21.83	4.53	0.404	-0.015	104	0.01	0.0	3
1	31	28.87	34.618	21.84	4.55	0.406	-0.017	104	0.03	0.0	2
1	51	28.64	34.995	22.20	4.71	0.420	-0.031	108	0.02	0.0	2
1	77	26.92	35.877	23.42	4.35	0.389	0.009	98	0.06	0.2	2
1	102	25.63	36.295	24.15	4.10	0.366	0.038	90	0.13	1.5	2
1	154	21.90	36.703	25.56	3.79	0.338	0.090	79	0.32	4.4	3
1	204	18.51	36.473	26.29	3.42	0.306	0.150	67	0.55	9.1	5
1	257	16.69	36.211	26.53	3.56	0.318	0.155	67	0.71	11.2	5
1	307	14.75	35.879	26.72	3.23	0.289	0.203	59	1.02	15.5	8
1	410	11.88	35.435	26.97	2.98	0.266	0.257	51	1.42	21.5	11
1	513	9.60	35.069	27.09	2.92	0.261	0.290	47	1.76	27.3	16
1	616	8.09	34.878	27.18	2.91	0.260	0.311	46	1.97	28.8	21

T G THOMPSON CRUISE 001 STATION 005 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.92	0.00	34.603	0.000	21.81	600.9	0.000	0.00	4.54	0.00	
10	29.90	0.00	34.595	0.000	21.81	601.2	0.061	0.03	4.59	0.00	
20	29.88	0.00	34.594	0.000	21.83	600.4	0.122	0.12	4.54	0.00	0.88
30	28.87	0.00	34.614	0.002	21.84	599.8	0.182	0.28	4.55	0.00	0.83
50	28.67	0.01	34.957	0.002	22.17	568.7	0.300	0.76	4.70	0.00	0.92
75	27.07	0.02	35.809	0.011	23.32	459.6	0.429	1.57	4.39	0.01	0.90
100	25.73	0.01	36.272	0.003	24.10	386.9	0.536	2.52	4.12	0.00	0.86
150	22.21	0.02	36.699	0.001	25.47	258.1	0.698	4.52	3.81	0.00	0.90
200	18.75	0.02	36.503	0.007	26.25	184.9	0.810	6.48	3.44	0.01	0.89
250	16.89	0.04	36.249	0.002	26.52	161.0	0.897	8.48	3.54	0.02	0.84
300	15.02	0.01	35.926	0.003	26.70	144.5	0.974	10.65	3.29	0.01	0.77
400	12.11	0.01	35.469	0.004	26.95	121.9	1.109	15.43	2.99	0.01	0.87
500	9.85	0.00	35.108	0.002	27.08	109.9	1.226	20.81	2.92	0.00	0.84
600	8.27	0.00	34.892	0.001	27.17	101.8	1.333	26.83	2.91	0.00	5.70

T G THOMPSON CRUISE 001 STATION 006 OBSERVED VALUES

DATE	27/10/65	BAROMETER	10.6	WEATHER	X2	WIND VELOC	24	WAVE PERIOD	X
HOUR	01.5	TEMP DRY	27.6	VISIBILITY	6	WIND DIREC	10	SECCHI	
LAT	14-37.0N	TEMP WET	25.3	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	64-58.0W	REL HUMID	83	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	3932

MESSENGER TIMES: 01.5, 04.2
WIRE ANGLES: 03, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	OXYGEN ML/L	OXYGEN MGA/L	OXYGEN ADU	OXYGEN SATN	PHOS	NITR	SIL
2	6	28.73	34.528	21.62	4.54	0.406	-0.016	104	0.09	0.0	4
2	16	28.75	34.523	21.61	4.59	0.410	-0.020	105	0.02	0.0	4
2	21	28.75	34.533	21.62	4.55	0.406	-0.016	104	0.03	0.0	4
2	31	28.77	34.559	21.63	4.56	0.407	-0.017	104	0.02	0.0	4
2	51	28.32	35.393	22.61	4.69	0.419	-0.028	107	0.02	0.0	1
2	77	26.90	36.050	23.56	4.49	0.401	-0.004	101	0.06	0.0	2
2	103	25.71	36.607	24.36	4.32	0.386	0.017	96	0.06	0.3	2
2	153	21.19	36.650	25.72	3.54	0.317	0.118	73	0.41	6.2	2
2	205	17.81	36.376	26.39	3.66	0.327	0.135	71	0.53	9.2	4
2	255	15.95	36.089	26.61	3.41	0.305	0.174	64	0.83	12.4	6
2	307	13.89	35.731	26.79	3.15	0.282	0.219	56	1.12	17.7	9
2	409	10.81	35.219	27.00	2.95	0.263	0.273	49	1.58	23.6	14
2	511	8.93	34.871	27.13	2.90	0.259	0.301	46	1.87	27.1	19
2	613	7.75	34.727	27.19	2.97	0.265	0.311	46	2.03	29.2	22
1	705	6.92	34.725	27.24	3.00	0.268	0.321	46	2.14	31.3	25
1	805	6.04	34.689	27.32	3.15	0.282	0.320	47	2.23	31.7	28
1	1006	5.15	34.888	27.59	3.99	0.356	0.257	58	1.87	26.7	28
1	1252	4.36	34.956	27.73	4.64	0.414	0.211	66	1.71	22.9	31
1	1500	4.17	34.972	27.77	4.65	0.415	0.213	66	1.57	22.9	32
1	1750	4.08	34.976	27.78	4.91	0.439	0.191	70	1.57	22.6	32
1	2000	4.06	34.978	27.78	4.96	0.443	0.187	70	1.55	21.9	33
1	2248	4.08	34.976	27.78	5.03	0.449	0.181	71	1.55	22.0	32
1	2496	4.09	34.980	27.78	5.05	0.451	0.179	72	1.53	22.5	31
1	2870	4.12	34.980	27.78	5.09	0.455	0.175	72	1.50	22.1	32
1	3193	4.15	34.980	27.78	5.10	0.455	0.173	72	1.50	21.7	32
1	3607	4.17	34.982	27.78	5.09	0.455	0.174	72	1.50	21.7	31

T G THOMPSON CRUISE 001 STATION 006 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	PUT ENERGY	UXY ML/L	E(O)	VAR RATIO
0	28.73	0.00	34.523	0.000	21.82	600.2	0.000	0.00	4.54	0.00	
10	28.75	0.00	34.523	0.000	21.81	601.6	0.061	0.03	4.59	0.00	
20	28.75	0.00	34.531	0.000	21.82	601.4	0.122	0.12	4.55	0.00	0.88
30	28.77	0.00	34.550	0.004	21.82	601.2	0.182	0.28	4.56	0.00	0.83
50	28.36	0.00	35.342	0.011	22.56	532.0	0.296	0.74	4.68	0.00	0.92
75	27.02	0.01	36.010	0.005	23.49	443.6	0.419	1.52	4.51	0.01	0.89
100	25.86	0.02	36.555	0.005	24.27	370.5	0.522	2.43	4.34	0.00	0.81
150	21.49	0.04	36.671	0.010	25.65	240.8	0.676	4.32	3.58	0.01	0.91
200	18.07	0.00	36.410	0.004	26.35	175.4	0.781	6.16	3.64	0.02	0.87
250	16.11	0.02	36.119	0.000	26.60	152.7	0.863	8.06	3.44	0.01	0.86
300	14.16	0.01	35.779	0.002	26.77	137.2	0.936	10.12	3.18	0.00	0.78
400	11.03	0.00	35.254	0.000	26.99	117.6	1.065	14.69	2.96	0.00	0.88
500	9.09	0.01	34.989	0.003	27.12	105.9	1.178	19.88	2.90	0.00	0.86
600	7.87	0.01	34.842	0.001	27.19	99.5	1.282	25.73	2.96	0.00	0.85
700	6.94	0.00	34.729	0.000	27.23	95.5	1.380	32.30	3.00	0.00	0.92
800	6.08	0.00	34.689	0.000	27.32	87.7	1.473	39.43	3.14	0.00	0.91
1000	5.17	0.00	34.880	0.002	27.58	63.7	1.626	53.36	3.96	0.00	0.95
1200	4.49	0.01	34.952	0.004	27.72	51.7	1.743	66.47	4.55	0.01	0.76
1500	4.17	0.00	34.972	0.000	27.77	48.9	1.896	87.70	4.65	0.00	
2000	4.06	0.00	34.978	0.000	27.78	51.6	2.151	133.99	4.96	0.00	
2500	4.09	0.00	34.980	0.000	27.78	56.3	2.426	198.19	5.05	0.00	0.99
3000	4.13	0.00	34.980	0.000	27.78	61.3	2.727	283.98	5.10	0.00	0.62

T G THOMPSON CRUISE 001 STATION 007 OBSERVED VALUES

DATE	27/10/65	BAROMETER	10.5	WEATHER	X1	WIND VELOC	11	WAVE PERIOD	1
HOUR	13.5	TEMP DRY	29.6	VISIBILITY	7	WIND DIREC	12	SECCHI	
LAT	13-20.2N	TEMP WET	25.8	CLOUD TYPE	3	WAVE DIREC	12	WATER COLOR	
LONG	64-48.0W	REL HUMID	74	CLOUD AMT	6	WAVE HEIGHT	1	SOUNDING	

MESSENGER TIMES: 13.5
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.82	34.311	21.63	4.62	0.413	-0.023	106	0.03	0.0	5
1	10	28.81	34.300	21.62	4.54	0.406	-0.016	104	0.02	0.0	5
1	21	28.75	34.367	21.69	4.56	0.408	-0.017	104	0.03	0.0	4
1	31	28.14	35.552	22.79	4.67	0.417	-0.026	107	0.06	0.0	3
1	50	26.43	36.024	23.69	4.31	0.385	0.015	96	0.12	0.1	3
1	75	24.50	36.384	24.56	3.92	0.350	0.061	85	0.25	3.8	3
1	100	22.53	36.603	25.36	3.72	0.332	0.092	78	0.30	4.7	3
1	150	19.34	36.568	26.15	3.34	0.298	0.151	66	0.52	8.6	4
1	202	16.45	36.163	26.55	3.43	0.306	0.168	65	0.82	12.2	6
1	252	13.90	35.705	26.77	3.19	0.285	0.216	57	1.09	17.3	9
1	303	12.53	35.496	26.89	3.06	0.274	0.242	53	1.33	20.4	11
1	405	9.80	35.084	27.07	2.91	0.260	0.289	47	1.76	26.3	16
1	507	8.12	34.884	27.17	2.93	0.262	0.308	46	1.97	29.2	21
1	609	6.98	34.751	27.25	3.03	0.270	0.317	46	2.12	30.6	25

T G THOMPSON CRUISE 001 STATION 007 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.82	0.00	34.311	0.000	21.63	618.7	0.000	0.00	4.62	0.00	
10	28.81	0.00	34.300	0.000	21.62	619.5	0.063	0.03	4.54	0.00	
20	28.77	0.01	34.332	0.017	21.66	616.3	0.125	0.13	4.55	0.00	0.88
30	28.22	0.00	35.424	0.026	22.66	520.9	0.182	0.27	4.66	0.00	0.83
50	26.43	0.00	36.024	0.000	23.69	423.5	0.278	0.65	4.31	0.00	
75	24.50	0.00	36.384	0.000	24.56	341.8	0.374	1.26	3.92	0.00	
100	22.53	0.00	36.683	0.000	25.36	266.1	0.450	1.93	3.72	0.00	
150	19.34	0.00	36.568	0.000	26.15	193.0	0.566	3.37	3.34	0.00	
200	16.55	0.00	36.182	0.001	26.54	156.6	0.654	4.93	3.43	0.01	0.95
250	13.99	0.01	35.722	0.002	26.76	136.4	0.728	6.63	3.20	0.00	0.94
300	12.59	0.01	35.505	0.002	26.88	125.9	0.794	8.49	3.07	0.00	0.89
400	9.92	0.01	35.102	0.002	27.06	109.4	0.913	12.72	2.91	0.00	0.93
500	8.28	0.01	34.893	0.002	27.17	100.1	1.019	17.58	2.92	0.00	0.91
600	7.09	0.01	34.764	0.001	27.24	93.5	1.116	23.09	3.02	0.00	8.01

T G THOMPSON CRUISE 001 STATION 008 OBSERVED VALUES

DATE	27/10/65	BAROMETER	27.1	WEATHER	X1	WIND VELOC	12	WAVE PERIOD	1
HOUR	21.5	TEMP DRY	29.7	VISIBILITY	5	WIND DIREC	08	SECCHI	
LAT	12-01.5N	TEMP WET	26.3	CLOUD TYPE	3	WAVE DIREC	15	WATER COLOR	
LONG	64-38.4W	REL HUMID	76	CLOUD AMT	5	WAVE HEIGHT	1	SOUNDING	2167

MESSENGER TIMES: 21.5, 23.1
WIRE ANGLES: 08, 08

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.66	34.367	21.72	4.54	0.406	-0.015	104	0.03	0.0	5
2	10	28.60	34.692	21.99	4.57	0.408	-0.018	105	0.01	0.0	4
2	21	27.94	35.643	22.92	4.58	0.409	-0.017	104	0.03	0.0	2
2	31	26.93	35.968	23.49	4.44	0.397	0.000	100	0.05	0.1	2
2	51	25.75	36.291	24.11	4.14	0.369	0.034	91	0.13	1.1	2
2	76	24.56	36.645	24.74	4.33	0.386	0.024	94	0.09	0.4	2
2	102	22.47	36.744	25.43	3.49	0.311	0.113	73	0.31	4.8	3
2	153	19.49	36.572	26.11	3.19	0.285	0.163	64	0.53	8.8	6
2	204	18.02	36.388	26.35	3.15	0.282	0.178	61	1.09	10.8	6
2	254	16.18	36.101	26.57	3.23	0.288	0.189	60	0.81	14.0	6
2	306	14.02	35.749	26.78	3.13	0.280	0.219	56	1.11	17.6	9
2	408	10.58	35.194	27.02	2.89	0.258	0.281	48	1.59	24.6	15
1	504	8.69	34.930	27.13	2.87	0.256	0.308	45	1.89	29.9	19
1	603	7.03	34.751	27.24	2.94	0.263	0.324	45	2.11	33.0	24
1	703	6.10	34.723	27.34	3.11	0.278	0.322	46	2.17	34.1	28
1	804	5.55	34.788	27.46	3.48	0.311	0.297	51	2.06	32.4	29
1	1005	4.79	34.922	27.66	4.22	0.377	0.242	61	1.76	27.5	30
1	1257	4.30	34.964	27.75	4.65	0.415	0.212	66	1.63	25.1	32
1	1513	4.07	34.965	27.77	4.87	0.435	0.196	69	1.58	24.5	32
1	1766	4.02	34.976	27.79	4.99	0.445	0.185	71	1.54	24.5	32
1	1909	4.04	34.964	27.78	4.97	0.444	0.187	70	1.46	21.9	33
1	1974	4.04									
1	1980	4.04									
1	2019	4.05	34.979	27.79	4.99	0.445	0.185	71	1.48	21.8	32

T G THOMPSON CRUISE 001 STATION 008 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPUT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.66	0.00	34.367	0.000	21.72	609.5	0.000	0.00	4.54	0.00	
10	28.60	0.00	34.692	0.000	21.99	584.7	0.061	0.03	4.57	0.00	
20	28.02	0.00	35.557	0.017	22.83	504.8	0.116	0.11	4.58	0.00	0.88
30	27.03	0.01	35.950	0.006	23.44	446.4	0.163	0.23	4.46	0.00	0.83
50	25.79	0.01	36.280	0.003	24.08	386.0	0.247	0.57	4.15	0.00	0.92
75	24.61	0.01	36.634	0.001	24.71	327.1	0.337	1.14	4.33	0.01	0.94
100	22.64	0.01	36.743	0.002	25.38	264.7	0.412	1.80	3.57	0.02	0.86
150	19.62	0.00	36.539	0.004	26.09	198.6	0.528	3.26	3.18	0.01	0.91
200	18.12	0.02	36.405	0.001	26.34	176.8	0.623	4.94	3.15	0.00	0.89
250	16.34	0.00	36.127	0.001	26.55	157.4	0.707	6.88	3.22	0.00	0.89
300	14.27	0.01	35.790	0.002	26.76	138.6	0.782	8.97	3.15	0.00	0.81
400	10.80	0.01	35.229	0.001	27.01	115.4	0.910	13.52	2.91	0.00	0.90
500	8.75	0.01	34.939	0.001	27.13	104.3	1.021	18.62	2.87	0.00	0.94
600	7.07	0.00	34.755	0.000	27.24	93.9	1.121	24.26	2.94	0.00	0.96
700	6.12	0.00	34.722	0.000	27.34	84.4	1.211	30.26	3.10	0.00	0.96
800	5.57	0.00	34.785	0.001	27.46	73.6	1.291	36.40	3.46	0.00	0.93
1000	4.80	0.00	34.919	0.000	27.66	56.1	1.422	48.37	4.20	0.00	0.96
1200	4.38	0.01	34.962	0.003	27.74	49.4	1.529	60.40	4.59	0.01	0.75
1500	4.08	0.00	34.965	0.000	27.77	48.2	1.678	81.03	4.86	0.00	0.93
2000	4.04	0.00	34.972	0.000	27.78	51.8	1.932	127.11	4.98	0.00	99.99

T G THOMPSON CRUISE 001 STATION 009 OBSERVED VALUES

DATE	28/10/65	BAROMETER	28.8	WEATHER	X1	WIND VELOC	20	WAVE PERIOD	2
HOUR	16.5	TEMP DRY	29.4	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	11-48.0N	TEMP WET	26.1	CLOUD TYPE	8	WAVE DIREC	07	WATER COLOR	
LONG	61-51.2W	REL HUMID	77	CLOUD AMT	5	WAVE HEIGHT	2	SOUNDING	0300

MESSENGER TIMES: 16.5
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	NITR	SIL
1	0	28.37	34.506	21.92	4.51	0.403	-0.011	103	0.0	4
1	5	28.29								
1	10	28.36	35.027	22.32	4.51	0.403	-0.012	103	0.0	3
1	21	28.44	35.193	22.42	4.54	0.406	-0.016	104	0.0	2
1	31	28.33	35.236	22.49	4.52	0.404	-0.013	103	0.0	2
1	51	26.66	36.222	23.77					0.0	1

T G THOMPSON CRUISE 001 STATION 009 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.37	0.00	34.506	0.000	21.92	590.4	0.000	0.00	4.51	0.00	
10	28.36	0.00	35.027	0.000	22.32	553.0	0.058	0.03	4.51	0.00	
20	28.44	0.00	35.189	0.004	22.41	544.3	0.113	0.11	4.54	0.00	0.89
30	28.36	0.00	35.227	0.006	22.47	539.4	0.168	0.25	4.53	0.00	8.21
50	26.81	0.01	36.117	0.009	23.64	428.4	0.265	0.64			15.06

T G THOMPSON CRUISE 001 STATION 010 OBSERVED VALUES

DATE	28/10/65	BAROMETER	30.8	WEATHER	X1	WIND VELOC	17	WAVE PERIOD	2
HOUR	18.7	TEMP DRY	31.2	VISIBILITY	7	WIND DIREC	07	SECCHI	
LAT	11-35.0N	TEMP WET	27.0	CLOUD TYPE	3	WAVE DIREC	07	WATER COLOR	
LONG	61-49.0W	REL HUMID	72	CLOUD AMT	7	WAVE HEIGHT	2	SOUNDING	0971

MESSENGER TIMES: 18.7
WIRE ANGLES:

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.62	34.593	21.91	4.56	0.407	-0.016	104	0.00	0.0	5
1	12	28.59	34.613	21.93	4.58	0.409	-0.018	105	0.00	0.0	4
1	21	28.53	35.199	22.39	4.56	0.407	-0.017	104	0.01	0.0	2
1	31	27.34	36.210	23.54	4.92	0.439	-0.045	112	0.02	0.0	2
1	51	26.03	36.452	24.14	4.71	0.421	-0.019	105	0.02	0.0	1
1	77	24.40	37.035	25.08	4.20	0.375	0.036	91	0.07	0.9	2
1	101	22.48	36.997	25.62	4.07	0.363	0.061	86	0.19	2.7	2
1	153	19.14	36.625	26.24	3.41	0.304	0.146	68	0.49	8.1	3
1	204	17.04	36.303	26.52	3.64	0.325	0.144	69	0.61	10.2	5
1	256	15.29	35.987	26.69	3.29	0.294	0.192	60	0.93	14.3	7
1	307	13.52	35.684	26.83	3.26	0.291	0.213	58	1.10	17.0	8
1	409	10.12	35.106	27.03	2.92	0.261	0.284	48	1.69	24.8	15
1	511	8.09	34.827	27.14	2.92	0.261	0.311	46	2.02	29.1	20
1	538	7.39	34.762	27.20	2.92	0.261	0.320	45	2.10	29.8	23

T G THOMPSON CRUISE 001 STATION 010 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.62	0.00	34.593	0.000	21.91	592.0	0.000	0.00	4.56	0.00	
10	28.59	0.00	34.613	0.000	21.93	590.1	0.060	0.03	4.58	0.00	
20	28.56	0.02	35.122	0.001	22.32	553.1	0.118	0.12	4.55	0.01	0.88
30	27.48	0.02	36.112	0.016	23.42	448.3	0.168	0.25	4.88	0.01	0.83
50	26.08	0.01	36.445		24.12	382.7	0.252	0.58	4.74	0.01	0.92
75	24.53	0.01	36.988	0.017	25.01	299.3	0.338	1.12	4.24	0.01	2.61
100	22.56	0.00	37.005	0.003	25.60	243.7	0.406	1.73	4.07	0.00	0.92
150	19.30	0.00	36.651	0.004	26.22	186.1	0.514	3.08	3.44	0.01	0.92
200	17.18	0.01	36.327	0.000	26.51	160.3	0.602	4.63	3.62	0.02	0.89
250	15.48	0.01	36.023	0.000	26.67	146.0	0.679	6.41	3.34	0.02	0.85
300	13.76	0.00	35.725	0.000	26.81	132.9	0.749	8.39	3.26	0.01	0.78
400	10.39	0.02	35.150	0.004	27.02	113.9	0.874	12.32	2.95	0.01	0.88
500	8.30	0.04	34.949	0.004	27.13	103.7	0.984	17.87	2.91	0.01	1.14

T G THOMPSON CRUISE 001 STATION 011 OBSERVED VALUES

DATE	26/10/55	BAROMETER	07.1	WEATHER	41	WIND VELOC	15	WAVE PERIOD	3		
HOUR	21.8	TEMP DRY	29.2	VISIBILITY		WIND DIREC	08	SECCHI			
LAT	11-16.0N	TEMP WET	26.0	CLOUD TYPE	6	WAVE DIREC	08	WATER COLOR			
LONG	61-52.0W	REL HUMID	77	CLOUD AMT	2	WAVE HEIGHT	2	SOUNDING	0145		

MESSENGER TIMES: 21.8
WIRE ANGLES: 08

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	0	28.84	32.326	20.13	4.58	0.409	-0.014	104	0.07	0.0	11
1	10	28.73	35.142	22.28	4.51	0.403	-0.015	104	0.04	0.0	3
1	21	27.63	36.131	23.39	5.00	0.447	-0.054	114	0.02	0.0	1
1	31	26.81	36.248	23.74	4.89	0.436	-0.039	110	0.02	0.0	2
1	51	25.61	36.646	24.42	4.62	0.412	-0.008	102	0.04	0.0	1
1	76	23.10	36.739	25.24	3.60	0.321	0.099	77	0.32	4.3	4
1	102	21.51	36.762	25.71	3.45	0.309	0.123	72	0.36	5.4	3
1	143	18.98	36.507	26.19	3.26	0.291	0.161	64	0.61	9.6	4

T G THOMPSON CRUISE 001 STATION 011 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.84	0.00	32.326	0.000	20.13	762.0	0.000	0.00	4.58	0.00	
10	28.73	0.00	35.142	0.000	22.28	556.5	0.067	0.03	4.51	0.00	
20	27.75	0.02	36.105	0.013	23.33	456.8	0.118	0.11	4.96	0.02	0.88
30	26.88	0.00	36.252	0.012	23.72	420.1	0.162	0.22	4.91	0.01	0.83
50	25.67	0.01	36.627	0.004	24.38	357.5	0.240	0.53	4.64	0.00	0.92
75	23.20	0.01	36.740	0.002	25.21	279.4	0.321	1.04	3.64	0.01	0.94
100	21.61	0.01	36.764	0.001	25.68	235.5	0.386	1.61	3.44	0.01	0.87

T G THOMPSON CRUISE 001 STATION 012 OBSERVED VALUES

DATE	29/10/55	BAROMETER	08.4	WEATHER	X1	WIND VELOC	12	WAVE PERIOD	X
HOUR	00.3	TEMP DRY	27.4	VISIBILITY	6	WIND DIREC	08	SECCHI	
LAT	10-58.0N	TEMP WET	25.6	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	61-50.0W	REL HUMID	87	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	0110

MESSENGER TIMES: 00.3
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	27.40	29.053	18.15	4.61	0.412	0.001	100	0.13	0.1	20
2	10	27.95	31.852	20.07	4.46	0.398	0.003	99	0.15	0.2	13
2	21	26.65	35.569	23.28	4.13	0.369	0.031	92	0.20	0.7	4
2	31	24.10	36.400	24.69	3.68	0.329	0.086	79	0.28	2.6	3
2	51	22.44	36.674	25.38	3.50	0.313	0.112	74	0.36	5.2	4
2	77	21.69	36.698	25.61	3.07	0.274	0.156	64	0.54	7.1	7
2	103	21.31	36.648	25.68	2.56	0.229	0.205	53	0.81	9.2	15
2	113	21.11	36.651	25.74	2.51	0.224	0.210	52	0.78	9.3	15

T G THOMPSON CRUISE 001 STATION 012 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.40	0.00	29.053	0.000	18.15	953.0	0.000	0.00	4.61	0.00	
10	27.95	0.00	31.852	0.000	20.07	768.5	0.087	0.04	4.46	0.00	
20	26.84	0.01	35.278	0.050	23.00	488.4	0.150	0.13	4.17	0.00	0.88
30	24.36	0.04	36.382	0.029	24.60	336.0	0.192	0.23	3.72	0.01	0.83
50	22.46	0.03	36.660#		25.37	263.7	0.252	0.47	3.50	0.01	0.92
75	21.71	0.01	36.709	0.007	25.62	241.1	0.316	0.88	3.11	0.00	2.61
100	21.35	0.01	36.654	0.003	25.67	236.5	0.376	1.42	2.61	0.01	1.01

T G THOMPSON CRUISE 001 STATION 013 OBSERVED VALUES

DATE	02/11/65	BAROMETER	29.9	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	X
HOUR	10.1	TEMP DRY	27.0	VISIBILITY	6	WIND DIREC	09	SECCHI	
LAT	11-37.5N	TEMP WET	25.2	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	64-38.5W	REL HUMID	86	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	1573

MESSENGER TIMES: 10.1, 11.6
WIRE ANGLES: 10, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
3	0	27.20	36.508	23.81	4.53	0.404	-0.010	103	0.02	0.3	2
3	10	26.92	36.519	23.91	4.54	0.406	-0.010	102	0.02	0.4	1
3	21	26.52	36.540	24.05	4.56	0.407	-0.009	102	0.02	0.0	2
3	31	25.29	36.576	24.46	4.54	0.406	0.000	100	0.02	0.4	2
3	51	23.85	36.726	25.01	4.28	0.382	0.033	92	0.07	0.2	1
3	77	22.96	36.750	25.29	3.65	0.326	0.095	77	0.28	4.3	2
3	102	22.37	36.732	25.45	3.43	0.306	0.119	72	0.36	5.4	4
3	152	20.53	36.681	25.92	3.35	0.299	0.140	68	0.42	7.3	3
3	202	17.11	36.261	26.47	3.32	0.296	0.172	63	0.72	12.2	6
3	253	14.24	35.762	26.74	3.08	0.275	0.222	55	1.14	17.6	10
3	304	12.14	35.410	26.90	2.96	0.264	0.256	51	1.44	21.4	11
3	406	9.93	35.068	27.04	2.88	0.257	0.290	47	1.78	26.1	16
1	502	8.31	34.868	27.14	2.85	0.254	0.314	45	1.99	28.4	20
1	601	7.05	34.758	27.24	3.04	0.272	0.315	46	2.16	31.0	24
1	700	6.35	34.732	27.32	2.44	0.218	0.378	37	2.21	31.5	26
1	799	5.45	34.833	27.51	3.61	0.322	0.287	53	2.03	29.3	29
1	997	4.78	34.925	27.66	4.24	0.379	0.241	61	1.84	25.0	30
1	1246	4.33	34.961	27.74	4.66	0.416	0.210	66	1.67	23.5	30
1	1251	4.32									
1	1256	4.29	34.957	27.74	4.67	0.417	0.210	67	1.64	23.7	30

T G THOMPSON CRUISE 001 STATION 013 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.20	0.00	36.508	0.000	23.81	410.1	0.000	0.00	4.53	0.00	
10	26.92	0.00	36.519	0.000	23.91	401.1	0.041	0.02	4.54	0.00	
20	26.58	0.01	36.537	0.000	24.03	389.8	0.081	0.08	4.56	0.00	0.88
30	25.42	0.02	36.571	0.000	24.42	353.3	0.119	0.18	4.54	0.00	0.83
50	23.90	0.01	36.719	0.002	24.99	299.5	0.184	0.44	4.30	0.00	0.92
75	23.00	0.01	36.752	0.002	25.28	273.1	0.256	0.90	3.70	0.01	0.90
100	22.42	0.01	36.734	0.000	25.44	259.3	0.324	1.50	3.44	0.00	0.86
150	20.63	0.00	36.687	0.002	25.90	217.1	0.444	3.01	3.35	0.00	0.94
200	17.26	0.01	36.282	0.002	26.45	165.4	0.540	4.71	3.32	0.00	0.94
250	14.39	0.00	35.790	0.002	26.73	139.6	0.617	6.48	3.10	0.00	0.92
300	12.28	0.00	35.433	0.000	26.89	125.1	0.684	8.35	2.97	0.00	0.86
400	10.02	0.02	35.080	0.003	27.03	112.6	0.804	12.63	2.88	0.00	0.92
500	8.34	0.00	34.871	0.000	27.14	102.7	0.912	17.64	2.85	0.00	0.97
600	7.06	0.00	34.759	0.000	27.24	93.5	1.011	23.21	3.04	0.00	0.98
700	6.35	0.00	34.732	0.000	27.32	86.9	1.102	29.29	2.44	0.00	
800	5.44	0.00	34.834	0.000	27.51	68.4	1.181	35.30	3.62	0.00	1.00
1000	4.78	0.00	34.926	0.000	27.66	55.2	1.306	46.74	4.25	0.00	1.16
1200	4.47	0.06	34.968	0.004	27.73	50.3	1.413	58.80	4.61	0.00	34.02

T G THOMPSON CRUISE 001 STATION 014 OBSERVED VALUES

DATE	02/11/65	BAROMETER	11.9	WEATHER	X1	WIND VELOC	11	WAVE PERIOD	2		
HOUR	17.5	TEMP DRY	28.0	VISIBILITY	6	WIND DIREC	09	SECCHI			
LAT	10-44.8N	TEMP WET	25.2	CLOUD TYPE	8	WAVE DIREC	09	WATER COLOR			
LONG	64-40.8W	REL HUMID	80	CLOUD AMT	2	WAVE HEIGHT	1	SOUNDING	0384		

MESSENGER TIMES: 17.5
WIRE ANGLES: 04

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	27.80	36.310	23.47	4.55	0.406	-0.015	104	0.03	0.0	2
1	10	27.55	36.316	23.55	4.56	0.407	-0.015	104	0.02	0.0	2
1	26	25.37	36.480	24.37	4.41	0.394	0.012	97	0.02	0.0	2
1	51	24.03	36.676	24.92	3.78	0.337	0.077	81	0.22	2.7	2
1	77	23.05	36.732	25.25	3.60	0.321	0.099	76	0.31	4.5	3
1	82	22.98									
1	103	22.25	36.721	25.47	3.30	0.295	0.131	69	0.40	6.1	4
1	129	21.26	36.708	25.74	3.12	0.279	0.155	64	0.46	7.4	4
1	153	20.06	36.637	26.01	2.95	0.263	0.179	59	0.57	9.2	6
1	205	17.43	36.318	26.44	0.69	0.062	0.404	13	1.65	8.8	29
1	255	17.22	36.277	26.46	0.34	0.030	0.437	6	2.00	5.4	37
1	306	17.19	36.256	26.47	0.15	0.014	0.455	3	2.24	2.1	44
1	356	17.01	36.241	26.48	0.08	0.007	0.462	1	2.60	0.0	50
1	367	16.96	36.241	26.49	0.03	0.003	0.467	1	2.66	0.0	53

T G THOMPSON CRUISE 001 STATION 014 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.80	0.00	36.310	0.000	23.47	442.9	0.000	0.00	4.55	0.00	
10	27.55	0.00	36.316	0.000	23.55	435.1	0.045	0.02	4.56	0.00	
20	26.26	0.13	36.409	0.009	24.04	389.3	0.086	0.09	4.49	0.00	0.68
30	25.06	0.05	36.519	0.001	24.49	346.4	0.123	0.18	4.31	0.02	0.87
50	24.06	0.01	36.670	0.000	24.91	307.5	0.189	0.45	3.81	0.01	0.94
75	23.10	0.01	36.732	0.001	25.24	277.2	0.263	0.91	3.61	0.01	1.22
100	22.38	0.01	36.724	0.001	25.44	258.9	0.330	1.52	3.33	0.00	0.92
150	20.22	0.03	36.549	0.003	25.98	209.3	0.448	3.00	2.99	0.01	0.79
200	17.63	0.04	36.347	0.007	26.41	169.4	0.544	4.69	0.92	0.07	0.88
250	17.19	0.03	36.275	0.004	26.46	166.1	0.628	6.64	0.33	0.02	0.87
300	17.11	0.00	36.258	0.000	26.47	167.2	0.712	9.02	0.16	0.00	0.85

T G THOMPSON CRUISE 001 STATION 015 OBSERVED VALUES

DATE	02/11/65	BAROMETER	29.9	WEATHER	X1	WIND VELOC	20	WAVE PERIOD	2
HOUR	23.2	TEMP DRY	25.0	VISIBILITY	6	WIND DIREC	05	SECCHI	
LAT	10-31. N	TEMP WET	25.8	CLOUD TYPE	6	WAVE DIREC	05	WATER COLOR	
LONG	64-40. W	REL HUMID	84	CLOUD AMT	2	WAVE HEIGHT	1	SOUNDING	1349
MESSENGER TIMES:		23.2, 26.2, 29.4							
WIRE ANGLES:		00, --, 12							

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
2	0	27.96	36.221	23.35	4.18	0.374	0.016	96	0.02	0.0	1
2	10	27.93	36.223	23.36	4.20	0.375	0.015	96	0.02	0.0	1
2	25	25.59	36.455	24.23	4.50	0.402	0.002	99	0.02	0.0	2
2	50	24.39	36.634	24.78	4.13	0.369	0.043	90	0.12	0.7	2
2	75	23.75	36.705	25.03	3.83	0.342	0.074	82	0.24	2.9	2
2	101	22.60	36.717	25.37	3.34	0.298	0.126	70	0.37	5.7	3
2	125	21.06	36.674	25.77	2.99	0.267	0.168	61	0.56	8.1	6
2	152	18.60	36.474	26.27	2.26	0.202	0.253	44	0.94	11.8	10
2	202	17.50	36.328	26.43	1.05	0.093	0.371	20	1.58	9.5	27
2	253	17.25	36.283	26.45	0.39	0.035	0.432	8	1.96	5.5	38
2	302	17.08	36.252	26.47	0.16	0.014	0.454	3	2.25	2.1	45
2	353	17.00	36.240	26.48	0.06	0.005	0.464	1	2.59	0.0	52
3	405	16.93	36.220	26.48	0.00	0.000	0.470	0	2.71	0.0	56
3	505	16.87	36.205	26.49					2.79		62
1	606	16.86	36.212	26.49					2.82		62
1	707	16.86	36.202	26.49					2.86		64
1	758	16.87	36.200	26.48					2.86		64
1	808	16.86	36.199	26.48					2.90		66
1	858	16.87	36.202	26.48					2.90		67
1	908	16.87	36.203	26.49					2.90		66
1	958	16.89	36.202	26.48					2.86		68
1	1008	16.91	36.200	26.47					2.89		68
1	1107	16.91	36.199	26.47					2.96		69
1	1207	16.95	36.196	26.46					2.95		69
1	1307	16.96	36.198	26.46					2.95		71
1	1311	16.97									
1	1315	16.96									
1	1347	16.96	36.200	26.46					2.97		70

T G THOMPSON CRUISE 001 STATION 015 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.86	0.00	36.221	0.000	23.35	454.3	0.000	0.00	4.18	0.00	
10	27.93	0.00	36.223	0.000	23.36	453.6	0.046	0.02	4.20	0.00	
20	26.56	0.16	36.357	0.015	23.90	402.3	0.089	0.09	4.39	0.03	0.68
30	25.27	0.05	36.496	0.002	24.41	354.4	0.127	0.19	4.47	0.02	0.86
50	24.39	0.00	36.634	0.000	24.78	319.6	0.195	0.46	4.13	0.00	
75	23.75	0.00	36.705	0.000	25.03	297.3	0.273	0.96	3.83	0.00	
100	22.65	0.00	36.718	0.000	25.35	266.9	0.344	1.59	3.36	0.00	0.95
150	19.77	0.02	36.490	0.003	26.24	184.7	0.458	3.00	2.32	0.00	0.87
200	17.49	0.02	36.330	0.001	26.43	167.5	0.547	4.58	1.09	0.00	0.94
250	17.25	0.01	36.284	0.001	26.46	166.9	0.631	6.53	0.41	0.00	0.92
300	17.09	0.00	36.253	0.000	26.47	167.0	0.715	8.91	0.16	0.00	0.94
400	16.94	0.00	36.222	0.000	26.48	169.1	0.885	15.01	0.01	0.00	8.26
500	16.87	0.00	36.206	0.000	26.49	172.1	1.057	22.99			0.93
600	16.86	0.00	36.212	0.000	26.49	174.7	1.232	32.90			0.92
700	16.86	0.00	36.203	0.000	26.49	176.6	1.411	44.05			0.97
800	16.86	0.00	36.199	0.000	26.48	182.1	1.593	56.93			0.80
1000	16.91	0.00	36.200	0.000	26.47	189.6	1.969	93.84			0.75
1200	16.95	0.00	36.196	0.000	26.46	197.2	2.361	138.30			0.90

T G THOMPSON CRUISE 001 STATION 016 OBSERVED VALUES

DATE 03/11/65 BAROMETER 11.1 WEATHER X1 WIND VELOC 10 WAVE PERIOD 2
HOUR 18.4 TEMP DRY 28.1 VISIBILITY 6 WIND DIREC 04 SECCHI
LAT 10-41.0N TEMP WET 26.0 CLOUD TYPE 8 WAVE DIREC 04 WATER COLOR
LONG 65-08.5W REL HUMID 85 CLOUD AMT 1 WAVE HEIGHT 1 SOUNDING 0906
MESSENGER TIMES: 18.4, 20.2
WIRE ANGLES: 03, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.45	36.111	23.10	4.55	0.406	-0.019	105	0.00	0.0	2
2	10	28.27	36.108	23.16	4.57	0.408	-0.019	105	0.00	0.0	2
2	26	27.01	36.316	23.73	4.58	0.409	-0.013	103	0.12	0.0	2
2	51	24.87	36.558	24.58	4.34	0.388	0.021	95	0.04	0.0	2
2	77	23.81	36.675	24.99	3.95	0.353	0.062	85	0.15	1.5	2
2	103	22.06	36.700	25.51	3.34	0.298	0.129	70	0.39	6.0	4
2	129	19.76	36.561	26.03	2.61	0.233	0.212	52	0.72	10.0	8
2	153	18.06	36.400	26.35	1.94	0.174	0.286	38	1.04	12.0	13
2	204	17.42	36.305	26.43	0.85	0.076	0.389	16	1.58	8.3	28
2	254	17.22	36.265	26.45	0.35	0.031	0.436	7	1.58	9.0	27
2	305	17.13	36.240	26.45	0.16	0.014	0.454	3	1.98	5.3	37
2	356	17.04	36.226	26.46	0.07	0.006	0.463	1	2.96	0.0	48
2	407	16.97	36.195	26.46	0.00	0.000	0.470	0	2.62		53
2	509	16.89	36.210	26.49					2.78		58
1	608	16.87	36.190	26.47					2.78		61
1	709	16.88	36.190	26.47					2.86		64
1	760	16.89	36.187	26.47					2.84		64
1	810	16.90	36.186	26.47					2.85		66
1	863	16.88	36.189	26.47					2.86		66
1	882	16.89	36.189	26.47					2.93		67
1	892	16.90									
1	897	16.89									
1	902	16.89	36.187	26.47					2.87	0.0	66

T G THOMPSON CRUISE 091 STATION 015 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.45	0.00	35.111	0.000	23.10	477.6	0.000	0.00	4.55	0.00	
10	28.27	0.00	36.108	0.000	23.16	472.6	0.048	0.02	4.57	0.00	
20	27.56	0.04	36.225	0.012	23.48	442.3	0.094	0.10	4.59	0.00	0.68
30	25.64	0.03	36.362	0.001	23.88	404.6	0.137	0.20	4.56	0.00	0.87
50	24.95	0.01	36.551	0.000	24.55	341.7	0.212	0.51	4.35	0.00	0.94
75	23.88	0.02	36.670	0.001	24.96	303.6	0.294	1.02	3.99	0.00	0.89
100	22.29	0.00	35.704	0.001	25.45	256.1	0.354	1.65	3.42	0.00	0.85
150	18.24	0.01	36.419	0.002	26.32	176.9	0.474	3.00	2.02	0.00	0.79
200	17.39	0.04	36.305	0.003	26.44	166.8	0.561	4.56	0.92	0.00	0.89
250	17.23	0.00	35.267	0.000	26.45	167.5	0.645	6.50	0.37	0.00	0.89
300	17.14	0.00	36.242	0.000	26.45	168.9	0.730	8.90	0.17	0.00	0.87
400	16.98	0.00	36.199	0.001	26.46	171.7	0.902	15.09	0.01	0.00	6.22
500	16.39	0.00	36.207	0.002	26.48	172.5	1.075	23.13			0.88
600	16.87	0.00	36.192	0.001	26.48	176.3	1.251	33.11			0.89
700	16.88	0.00	36.190	0.000	26.47	180.0	1.431	45.15			0.90
800	16.90	0.00	36.186	0.000	26.47	184.0	1.615	59.36			0.76

T G THOMPSON CRUISE 001 STATION 017 OBSERVED VALUES

DATE	04/11/65	BAROMETER	29.8	WEATHER	X1	WIND VELOC	20	WAVE PERIOD	2
HOUR	00.7	TEMP DRY	28.0	VISIBILITY	6	WIND DIREC	05	SECCHI	
LAT	10-40.5N	TEMP WET	25.0	CLOUD TYPE	9	WAVE DIREC	03	WATER COLOR	
LONG	65-31.5W	REL HUMID	85	CLOUD AMT	3	WAVE HEIGHT	2	SOUNDING	1342

MESSENGER TIMES: 00.7, 03.5, 05.7, 06.8
WIRE ANGLES: --, 01, --, --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.21	36.100	23.17	4.55	0.406	-0.017	104	0.00	0.0	2
2	10	28.20	36.095	23.17	4.53	0.405	-0.016	104	0.00	0.0	2
2	26	28.04	36.091	23.22	4.58	0.409	-0.019	105	0.02	0.0	1
2	51	25.01	36.598	24.57	4.32	0.386	0.022	95	0.04	0.2	1
2	77	23.35	36.709	24.97	3.89	0.347	0.067	84	0.19	2.9	2
2	103	22.97	36.763	25.30	3.75	0.335	0.086	79	0.26	4.0	2
2	128	20.17	36.645	25.99	2.91	0.260	0.182	59	0.60	9.0	6
2	153	18.52	36.481	26.29	2.28	0.204	0.252	45	0.94	11.8	10
2	204	17.53	36.339	26.43	1.08	0.097	0.368	21	1.50	9.9	25
2	209	17.46	36.328	26.44	1.03	0.092	0.373	20			27
3	234	17.40	36.322	26.45	0.78	0.070	0.396	15	1.61	8.0	29
2	255	17.29	36.299	26.46	0.55	0.049	0.417	11	1.84	6.7	33
3	285	17.23	36.290	26.46	0.33	0.030	0.437	6	2.07	4.7	39
2	306	17.13	36.277	26.48	0.30	0.027	0.441	6	2.24	3.4	42
3	337	17.07	36.255	26.48	0.15	0.013	0.456	3	2.43	0.8	46
2	356	17.03	36.232	26.47	0.21	0.019	0.450	4	2.43	2.1	42
4	366	17.00									
3	383	16.96	36.244	26.49	0.13	0.012	0.458	3	2.57	0.0	52
2	408	16.93	36.231	26.49	0.07	0.006	0.464	1	2.58	0.0	52
3	446	16.93	36.225	26.48	0.05	0.004	0.466	1	2.66	0.0	55
3	466	16.90	36.221	26.49	0.02	0.002	0.468	0	2.70		57
3	491	16.89	36.216	26.49					2.74		59
1	514	16.89	36.216	26.49					2.68		59
1	614	16.87	36.211	26.49					2.82		62
4	670	16.84									
4	675	16.86									
1	713	16.85	36.208	26.49					2.82		65
1	768	16.85	36.203	26.49					2.86		65

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 017 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	819	16.88	36.202	26.48					2.86		65
1	870	16.87	36.205	26.49					2.86		66
1	920	16.89	36.199	26.48					2.87		66
1	971	16.91	36.201	26.47					2.95		67
1	1020	16.91	36.202	26.48					2.92		67
1	1120	16.92	36.202	26.47					2.88		67
1	1220	16.93	36.201	26.47					2.88		66
4	1274	16.94									
4	1279	16.95									
4	1284	16.98									
4	1288	16.96									
4	1293	16.97									
4	1299	16.96									
4	1304	16.97									
4	1309	16.97									
4	1313	16.97									
1	1320	16.97	36.202	26.46					2.76		62
1	1361	16.99	36.203	26.46					2.67		60

T G THOMPSON CRUISE 001 STATION 017 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.21	0.00	35.160	0.000	23.17	470.8	0.000	0.00	4.55	0.00	
10	28.20	0.00	35.095	0.000	23.17	471.3	0.048	0.02	4.53	0.00	
20	28.19	0.05	36.093*		23.17	471.6	0.095	0.10	4.57	0.01	0.68
30	27.60	0.12	36.158	0.027	23.42	449.0	0.142	0.22	4.56	0.01	1.26
50	25.13	0.03	36.574	0.008	24.51	345.3	0.222	0.53	4.34	0.00	0.94
75	23.99	0.02	36.709	0.004	24.96	303.9	0.304	1.05	3.92	0.01	0.89
100	23.13	0.03	36.767	0.002	25.25	276.5	0.377	1.71	3.78	0.02	0.85
150	19.67	0.01	36.590	0.002	26.27	181.4	0.492	3.13	2.35	0.00	0.80
200	17.54	0.03	36.344	0.002	26.43	167.5	0.580	4.70	1.16	0.01	0.89
250	17.30	0.01	35.300	0.001	26.46	166.7	0.664	6.64	0.58	0.01	0.87
300	17.15	0.00	36.230	0.001	26.48	166.4	0.748	9.02	0.32	0.00	0.85
400	16.94	0.00	36.230	0.001	26.49	168.7	0.917	15.11	0.10	0.00	5.71
500	16.89	0.00	36.218	0.001	26.49	171.6	1.089	23.06			0.85
600	16.87	0.00	36.211	0.000	26.49	175.0	1.264	32.97			0.82
700	16.85	0.00	36.209	0.000	26.49	178.0	1.443	44.90			0.93
800	16.87	0.00	36.202	0.000	26.48	182.1	1.625	58.96			0.66
1000	16.91	0.00	36.202	0.000	26.47	189.6	2.001	93.37			0.59
1200	16.93	0.00	36.201	0.000	26.47	196.4	2.392	138.22			0.77

DATA FROM CASTS 3 AND 4 AND 209 METERS CAST 2
NOT USED FOR INTERPOLATION.

T G THOMPSON CRUISE 001 STATION 018 OBSERVED VALUES

DATE	04/11/65	BAROMETER	05.4	WEATHER	X1	WIND VELOC	10	WAVE PERIOD	2		
HOUR	19.8	TEMP DRY	29.6	VISIBILITY	8	WIND DIREC	08	SECCHI			
LAT	10-49.5N	TEMP WET	25.5	CLOUD TYPE	8	WAVE DIREC	05	WATER COLOR			
LONG	65-55.3W	REL HUMID	72	CLOUD AMT	2	WAVE HEIGHT	2	SOUNDING	0269		

MESSENGER TIMES: 19.8
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.63	36.120	23.05	4.53	0.405	-0.019	105	0.00	0.1	2
1	10	28.26	36.098	23.15	4.65	0.416	-0.027	107	0.01	0.1	2
1	21	27.58	36.176	23.44	4.59	0.410	-0.017	104	0.12	0.1	2
1	51	25.35	36.535	24.41	4.30	0.384	0.022	95	0.03	0.2	2
1	77	24.39	36.666	24.81	3.90	0.348	0.063	85	0.14	2.5	3
1	103	23.84	36.728	25.02	3.83	0.342	0.073	82	0.18	3.2	2
1	129	19.74	36.591	26.06	2.66	0.237	0.208	53	0.67	10.4	7
1	154	18.41	36.471	26.31	2.27	0.203	0.253	44	0.90	11.5	10
1	206	17.63	36.360	26.42	1.30	0.116	0.347	25	1.34	10.9	21
1	211	17.62									
1	257	17.31	36.302	26.45	0.46	0.041	0.425	9	1.84	6.9	34
1	263	17.32									
1	273	17.28	36.292	26.45	0.41	0.037	0.430	8	1.92	6.7	36

T. G. THOMPSON CRUISE 001 STATION 013 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	DYN HEIGHT	OXY ML/L	E(O)	VAR RATIO
0	28.63	0.00	35.120	0.000	23.05	482.7	0.000	0.00	4.53	0.00	
10	28.26	0.00	35.093	0.000	23.16	473.0	0.049	0.02	4.55	0.00	
20	27.55	0.00	36.166	0.001	23.41	449.4	0.095	0.10	4.50	0.00	0.83
30	26.38	0.03	35.264	0.015	23.75	417.5	0.139	0.21	4.52	0.00	1.13
50	25.42	0.01	36.523	0.002	24.38	357.5	0.217	0.52	4.31	0.00	0.55
75	24.44	0.01	36.662	0.001	24.79	320.1	0.302	1.03	3.93	0.01	0.99
100	23.28	0.07	35.726	0.022	24.97	303.3	0.381	1.77	3.06	0.02	0.55
150	19.52	0.04	35.483	0.001	25.30	178.5	0.502	3.24	2.31	0.02	0.75
200	17.62	0.02	35.347	0.002	25.43	167.8	0.539	4.81	1.41	0.01	2.15
250	17.35	0.02	35.307	0.000	25.45	167.4	0.674	6.76	0.54	0.02	2.60

T G THOMPSON CRUISE 001 STATION 019 OBSERVED VALUES

DATE	05/11/65	BAROMETER	29.0	WEATHER	X1	WIND VELOC	17	WAVE PERIOD	X
HOUR	03.1	TEMP DRY	28.7	VISIBILITY	6	WIND DIREC	02	SECCHI	
LAT	11-05.0N	TEMP WET	26.0	CLOUD TYPE	X	WAVE DIREC	08	WATER COLOR	
LONG	66-18.5W	REL HUMID	81	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	0415

MESSENGER TIMES: 03.1
WIRE ANGLES: 05

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.25	36.055	23.13	4.50	0.402	-0.013	103	0.00	0.0	1
1	10	28.15	36.066	23.17	4.52	0.404	-0.015	104	0.01	0.0	2
1	21	28.14	36.072	23.17	4.51	0.403	-0.013	103	0.00	0.0	1
1	31	28.13	36.081	23.19	4.51	0.403	-0.013	103	0.01	0.0	1
1	51	25.76	36.413	24.19	4.43	0.395	0.008	98	0.02	0.0	2
1	77	23.42	36.778	25.18	3.90	0.349	0.062	83	0.19	3.6	2
1	103	21.28	36.747	25.77	3.63	0.324	0.109	75	0.30	6.0	3
1	153	20.17	36.699	26.03	3.57	0.319	0.123	72	0.32	6.9	3
1	205	18.71	36.577	26.32	3.99	0.357	0.097	79	0.26	6.2	2
1	256	16.74	36.225	26.53	3.50	0.313	0.159	66	0.66	13.1	5
1	308	13.70	35.682	26.79	3.01	0.269	0.234	54	1.16	21.2	9
1	410	10.48	35.181	27.03	2.86	0.255	0.285	47	1.62	37.4	15

T. G. THOMPSON CRUISE 0[illegible] STATION 019 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.25	0.00	36.055	0.000	23.13	475.3	0.000	0.00	4.50	0.00	
10	29.15	0.00	36.066	0.000	23.17	471.8	0.048	0.02	4.52	0.00	
20	29.14	0.00	36.072	0.000	23.18	471.5	0.096	0.10	4.51	0.00	0.85
30	29.15	0.01	36.078	0.002	23.18	471.8	0.143	0.22	4.51	0.00	0.83
50	25.91	0.03	36.372	0.004	24.13	381.5	0.229	0.56	4.44	0.00	0.92
75	23.53	0.01	36.758	0.004	25.12	288.7	0.314	1.09	3.94	0.01	0.89
100	21.49	0.01	35.751	0.007	25.72	232.6	0.379	1.67	3.65	0.00	0.81
150	2[illegible].13	0.04	36.7[illegible]3	0.001	26.03	204.6	0.469	3.07	3.56	0.00	0.91
200	19.87	0.00	36.596	0.002	26.29	181.3	0.587	4.80	3.96	0.02	0.87
250	17.01	0.01	36.277	0.001	26.51	161.8	0.673	6.79	3.58	0.02	0.85
300	14.17	0.04	35.765	0.009	26.75	138.4	0.749	8.91	3.08	0.01	0.76
400	1[illegible].30#		35.230#		27.01	115.2	0.877	13.45	2.79	0.01	13.26

T G THOMPSON CRUISE 001 STATION 020 OBSERVED VALUES

DATE	05/11/65	BAROMETER	06.9	WEATHER	X1	WIND VELOC	12	WAVE PERIOD	X
HOUR	08.5	TEMP DRY	27.8	VISIBILITY	6	WIND DIREC	10	SECCHI	
LAT	11-49.5N	TEMP WET	25.6	CLOUD TYPE	X	WAVE DIREC	05	WATER COLOR	
LONG	66-20.6W	REL HUMID	84	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	1262

MESSENGER TIMES: 08.5
WIRE ANGLES:

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.34	36.042	23.09	4.47	0.399	-0.011	103	0.00	0.0	2
1	10	28.33	36.035	23.08	4.49	0.401	-0.013	103	0.00	0.0	1
1	21	28.32	36.037	23.09	4.50	0.402	-0.013	103	0.00	0.0	2
1	31	28.32	36.037	23.09	4.49	0.401	-0.012	103	0.00	0.0	2
1	51	26.01	36.366	24.08	4.46	0.399	0.003	99	0.01	0.0	2
1	77	22.74	36.825	25.41	3.77	0.337	0.086	80	0.21	4.1	3
1	103	21.22	36.774	25.80	3.63	0.324	0.110	75	0.26	5.8	2
1	153	19.04	36.540	26.20					0.51	14.5	4
1	205	17.32			3.29	0.294			1.51		
1	255	15.77	36.045	26.62	3.21	0.287	0.194	60	0.86	15.2	7
1	307	13.76	35.699	26.79	3.16	0.283	0.219	56	1.14	19.6	9
1	409	10.06	35.123	27.06	2.84	0.254	0.292	46	1.68	28.6	16
1	511	7.95	34.864	27.19	2.90	0.259	0.314	45	2.01	32.2	21
1	613	6.95	34.751	27.26	2.95	0.263	0.324	45	2.12	34.4	24

T. G. THOMPSON CRUISE 001 STATION 020 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.34	0.00	35.042	0.000	23.09	479.1	0.000	0.00	4.47	0.00	
10	23.33	0.00	35.035	0.000	23.09	479.7	0.049	0.03	4.49	0.00	
20	23.32	0.00	35.037	0.000	23.09	479.7	0.097	0.10	4.50	0.00	0.83
30	23.34	0.01	35.035	0.002	23.08	480.8	0.145	0.22	4.49	0.00	0.83
50	23.15	0.02	35.344	0.003	24.02	392.5	0.233	0.58	4.47	0.00	0.92
75	22.97	0.02	36.798	0.006	25.33	268.7	0.317	1.09	3.33	0.02	0.89
100	21.34	0.03	36.794	0.008	25.78	226.2	0.379	1.64	3.53	0.01	0.91
150	18.15	0.00	36.557	0.002	26.19	189.1	0.484	2.96	3.44	0.00	1.45
200	17.47	0.01	36.328	0.009	26.44	167.1	0.574	4.56	3.30	0.00	0.95
250	15.93	0.01	35.972	0.002	26.61	152.2	0.654	6.41	3.22	0.00	0.97
300	14.04	0.01	35.746	0.002	26.77	137.1	0.727	8.47	3.17	0.00	0.79
400	10.35	0.02	35.165	0.002	27.04	112.1	0.853	12.92	2.87	0.01	0.88
500	9.11	0.01	34.931	0.003	27.18	98.5	0.959	17.80	2.88	0.01	0.66
600	7.03	0.01	34.771	0.002	27.25	92.2	1.055	23.23	2.93	0.01	6.53

T G THOMPSON CRUISE 001 STATION 021 OBSERVED VALUES

DATE	05/11/65	BAROMETER	09.5	WEATHER	X1	WIND VELOC	16	WAVE PERIOD	1
HOUR	12.5	TEMP DRY	29.6	VISIBILITY	7	WIND DIREC	11	SECCHI	
LAT	12-19.5N	TEMP WET	26.0	CLOUD TYPE	8	WAVE DIREC	06	WATER COLOR	
LONG	66-25.1W	REL HUMID	75	CLOUD AMT	5	WAVE HEIGHT	2	SOUNDING	4572

MESSENGER TIMES: 12.5, 14.8
WIRE ANGLES: --, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
2	0	28.61	34.692	21.98	4.49	0.401	-0.011	103	0.00	0.0	2
2	10	28.53	34.702	22.02	4.49	0.401	-0.010	103	0.00	0.0	2
2	21	28.53	34.642	21.97	4.53	0.405	-0.014	104	0.00	0.0	2
2	31	27.82	35.741	23.03	4.53	0.405	-0.012	103	0.00	0.0	1
2	51	26.26	36.203	23.88	4.34	0.387	0.013	97	0.03	0.0	1
2	77	22.95	36.762	25.30	3.87	0.345	0.076	82	0.22	4.4	2
2	103	21.40	36.765	25.74	3.66	0.327	0.105	76	0.32	5.9	2
2	154	19.91	36.652	26.06	3.41	0.304	0.140	69	0.44	8.6	3
2	206	17.60	36.351	26.42	3.30	0.295	0.169	64	0.67	12.1	5
2	257	15.95	36.102	26.62	3.34	0.298	0.181	62	0.80	16.2	5
2	309	13.19	35.618	26.85	3.07	0.274	0.234	54	1.24	21.0	10
2	412	10.03	35.133	27.07	2.87	0.256	0.290	47	1.74	27.6	15
2	515	8.02	34.868	27.19	2.85	0.255	0.318	44	2.05	32.9	20
2	618	6.97									
1	713	6.21	34.735	27.34	3.11	0.278	0.321	46	2.20	34.4	26
1	814	5.64	34.794	27.46	3.42	0.305	0.301	50	2.21	33.8	28
1	1012	4.82	34.921	27.65	4.18	0.373	0.245	60	1.87	28.6	28
1	1266	4.49	34.946	27.71	4.53	0.405	0.219	65	1.71	27.4	28
1	1516	4.15	34.979	27.77	4.82	0.431	0.198	68	1.61	25.7	29
1	1771	4.04	34.979	27.79	4.89	0.437	0.194	69	1.58	25.7	30
1	2023	4.05	34.983	27.79	4.95	0.442	0.189	70	1.52	24.7	30
1	2273	4.07	34.984	27.79	4.99	0.445	0.185	71	1.52	25.7	30
1	2525	4.02	34.985	27.79	5.00	0.447	0.184	71	1.52	24.3	29
1	3025	4.15	34.982	27.78	5.01	0.448	0.181	71	1.52	24.0	31

T G THOMPSON CRUISE 021 STATION 021 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	PUT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.61	0.00	34.292	0.000	21.95	584.6	0.000	0.00	4.49	0.00	
10	23.53	0.00	34.702	0.000	22.02	581.8	0.059	0.03	4.49	0.00	
20	21.54	0.01	34.648*		21.97	586.5	0.118	0.12	4.53	0.00	0.88
30	27.91	0.01	35.530*		22.86	499.9	0.173	0.26	4.53	0.00	0.83
50	25.35	0.01	36.135*		23.34	409.5	0.264	0.63	4.35	0.00	0.92
75	23.20	0.04	36.726	0.009	25.20	280.4	0.351	1.16	3.91	0.01	2.62
100	21.52	0.02	36.765*		25.71	233.0	0.416	1.74	3.68	0.00	0.81
150	20.00	0.03	36.568	0.000	26.05	202.5	0.526	3.13	3.42	0.00	1.64
200	17.87	0.02	36.339	0.004	26.39	172.1	0.620	4.80	3.31	0.00	0.85
250	16.19	0.03	36.141	0.005	26.69	153.0	0.702	6.69	3.34	0.01	0.82
300	13.33	0.04	35.791	0.009	26.82	132.7	0.774	8.71	3.12	0.01	0.73
400	10.29	0.03	35.183	0.007	27.05	110.9	0.897	13.07	2.88	0.00	0.85
500	9.25	0.00	34.896	0.002	27.17	99.4	1.003	17.95	2.84	0.00	0.82
600	7.11	0.02	34.750	0.007	27.24	94.1	1.101	23.47	2.91	0.00	0.92
700	6.30	0.00	34.731	0.002	27.32	86.2	1.192	29.54	3.03	0.00	0.96
800	5.71	0.00	34.783	0.002	27.44	75.7	1.274	35.82	3.37	0.00	0.78
1000	4.86	0.00	34.914	0.001	27.65	57.1	1.408	48.07	4.14	0.01	0.90
1200	4.54	0.03	34.947	0.005	27.71	52.7	1.519	60.62	4.48	0.02	0.73
1500	4.17	0.00	34.977	0.000	27.77	45.5	1.673	81.95	4.81	0.00	0.91
2000	4.05	0.00	34.983	0.000	27.79	51.1	1.926	127.81	4.95	0.00	0.88
2500	4.02	0.00	34.985	0.000	27.79	55.0	2.197	190.83	5.00	0.00	0.83
3000	4.13	0.00	34.982	0.000	27.79	61.0	2.493	275.49	5.01	0.00	17.51

T G THOMPSON CRUISE 001 STATION 022 OBSERVED VALUES

DATE	06/11/65	BAROMETER	28.2	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	X
HOUR	03.0	TEMP DRY	28.8	VISIBILITY	6	WIND DIREC	09	SECCHI	
LAT	12-37.5N	TEMP WET	24.9	CLOUD TYPE	9	WAVE DIREC	09	WATER COLOR	
LONG	68-33.5W	REL HUMID	73	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	3146

MESSENGER TIMES: 03.0, 05.4, 05.8
WIRE ANGLES: 04, 03, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.28	36.039	23.10	4.55	0.406	-0.017	104	0.01	0.2	1
2	10	28.28	36.036	23.10	4.54	0.405	-0.017	104	0.01	0.2	1
2	21	28.29	36.083	23.13	4.53	0.405	-0.016	104	0.00	0.1	1
2	31	28.27	36.054	23.12	4.57	0.409	-0.020	105	0.00	0.1	1
2	51	27.52	36.449	23.66	4.59	0.410	-0.017	104	0.03	0.3	2
2	77	24.23	36.691	24.87	4.06	0.363	0.050	88	0.13	1.8	1
2	103	20.58	36.749	25.96	3.74	0.334	0.104	76	0.30	3.8	2
2	154	18.03	36.424	26.37	3.43	0.306	0.154	67	0.57	8.6	4
2	207	15.66	36.054	26.65	3.39	0.303	0.180	63	0.84	13.4	5
2	259	13.32	35.834	26.84	3.14	0.281	0.226	55	1.22	18.3	9
3	312	11.40	35.327	26.98	3.05	0.273	0.256	52	1.51	22.2	12
3	415	9.05	34.985	27.12	3.09	0.276	0.283	49	1.88	27.8	17
3	519	7.82	34.843	27.20	2.92	0.261	0.315	45	2.06	35.1	20
3	529	7.59									
1	608	6.76	34.749	27.27	2.86	0.256	0.335	43	2.19	32.4	24
1	709	6.23	34.741	27.34	3.13	0.279	0.319	47	2.19	32.6	27
1	808	5.74	34.797	27.45	3.43	0.311	0.295	51	2.12	30.9	27
1	1008	4.85	34.919	27.65	4.20	0.376	0.243	61	1.81	25.5	28
1	1257	4.34	34.962	27.74	4.78	0.427	0.199	68	1.66	23.9	29
1	1506	4.14	34.976	27.77	4.93	0.440	0.188	70	1.59	23.7	29
1	1756	4.08	34.985	27.79	5.07	0.453	0.177	72	1.55	23.4	29
1	2003	3.99	34.976	27.79	5.06	0.452	0.179	72	1.54	22.6	30
1	2250	4.06	34.986	27.79	5.07	0.453	0.177	72	1.51	22.9	30
1	2495	4.08	34.975	27.78	5.06	0.452	0.178	72	1.54	22.6	30
1	2994	4.14	34.982	27.78	5.08	0.453	0.175	72	1.51	22.4	31
1	3044	4.19									
1	3093	4.14	34.980	27.78	5.08	0.454	0.175	72	1.51	22.6	30

T G THOMPSON CRUISE JC1 STATION 022 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.28	0.00	36.032	0.000	23.10	477.4	0.000	0.00	4.55	0.00	
10	23.28	0.00	36.035	0.000	23.10	476.9	0.049	0.03	4.54	0.00	
20	23.29	0.00	36.039	0.002	23.13	475.7	0.097	0.10	4.53	0.00	0.83
30	23.28	0.00	36.055	0.003	23.12	477.5	0.145	0.22	4.57	0.00	0.83
50	23.59	0.00	36.424	0.016	23.62	430.2	0.236	0.59	4.59	0.00	0.92
75	24.54	0.03	36.631	0.001	24.77	321.5	0.331	1.18	4.11	0.01	0.89
100	20.97	0.03	35.751	0.001	25.85	219.5	0.399	1.78	3.77	0.00	0.81
150	10.11	0.07	35.461	0.007	25.38	171.0	0.497	3.01	3.44	0.00	0.89
200	15.97	0.01	36.105	0.000	26.62	149.0	0.578	4.45	3.39	0.01	0.83
250	13.71	0.01	35.703	0.004	26.81	131.9	0.649	6.07	3.19	0.01	0.79
300	11.79	0.00	35.337	0.001	26.95	119.3	0.712	7.85	3.06	0.00	0.68
400	9.30	0.01	35.013	0.003	27.10	105.2	0.825	11.89	3.08	0.01	0.83
500	8.00	0.03	34.860	0.004	27.18	98.3	0.928	16.63	2.95	0.01	0.80
600	6.34	0.01	34.755	0.001	27.27	90.6	1.023	22.00	2.85	0.00	0.87
700	6.26	0.01	34.733	0.001	27.33	85.2	1.112	27.93	3.10	0.00	0.88
800	5.73	0.00	34.791	0.001	27.44	76.0	1.194	34.19	3.45	0.00	0.86
1000	4.83	0.00	34.915	0.001	27.64	57.4	1.329	46.50	4.17	0.00	0.93
1200	4.41	0.01	34.959	0.003	27.73	50.2	1.438	58.76	4.68	0.00	0.75
1500	4.16	0.00	34.975	0.000	27.77	48.6	1.538	79.62	4.93	0.00	0.96
2000	3.99	0.00	34.975	0.000	27.79	50.8	1.840	125.30	5.05	0.00	0.93
2500	4.03	0.00	34.975	0.000	27.78	56.6	2.113	189.19	5.06	0.00	0.99
3000	4.13	0.00	34.982	0.000	27.78	61.2	2.414	275.03	5.08	0.00	11.69

DATA AT 529 AND 3044 METERS NOT USED FOR INTERPOLATION.

T G THOMPSON CRUISE 001 STATION 023 OBSERVED VALUES

DATE	06/11/65	BAROMETER	06.1	WEATHER	X1	WIND VELOC	10	WAVE PERIOD	X
HOUR	03.7	TEMP DRY	28.3	VISIBILITY	6	WIND DIREC	09	SECCHI	
LAT	12-12.3N	TEMP WET	25.9	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	68-35.4W	REL HUMID	83	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	1463

MESSENGER TIMES: 08.7, 09.8
WIRE ANGLES: 04, 01

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.36	35.801	22.90	4.51	0.402	-0.014	103	0.02	0.2	1
2	10	28.35	35.803	22.90	4.51	0.403	-0.014	104	0.02	0.2	1
2	21	28.35	35.794	22.90	4.35	0.389	-0.000	100	0.01	0.3	1
2	31	28.34	35.803	22.91	4.48	0.400	-0.011	103	0.03	0.1	1
2	51	26.87	36.331	23.78	4.32	0.386	0.011	97	0.06	0.2	1
2	77	24.06	36.992	24.92	4.35	0.389	0.025	94	0.13	1.4	1
2	103	21.34	36.756	25.76	3.36	0.300	0.132	69	0.35	5.8	3
2	154	17.96	36.415	26.39	3.45	0.308	0.152	67	0.59	9.5	4
2	203	15.73	36.041	25.63	3.29	0.293	0.183	61	0.88	14.1	6
2	253	13.63	35.710	26.83	3.17	0.283	0.220	56	1.16	18.3	8
2	305	11.69	35.389	26.97	2.99	0.267	0.259	51	1.48	22.6	12
2	408	9.17	35.006	27.11	2.87	0.256	0.301	46	1.86	28.1	17
1	500	7.96	34.870	27.20	2.89	0.258	0.316	45	2.03	30.5	20
1	600	7.14	34.778	27.25	2.97	0.265	0.320	45	2.14	32.2	23
1	700	6.08	34.752	27.37	3.17	0.283	0.317	47	2.19	32.4	27
1	800	5.71	34.797	27.45	3.35	0.299	0.307	49	2.11	30.2	27
1	999	4.91	34.913	27.64	2.96	0.264	0.353	43	1.81	26.4	28
1	1251	4.34	34.909	27.70	4.00	0.357	0.269	57	1.62	24.1	28
1	1496	4.15	34.978	27.77	4.85	0.433	0.196	69	1.60	23.7	30

T G THOMPSON CRUISE 001 STATION 023 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.36	0.00	35.301	0.000	22.90	497.0	0.000	0.00	4.51	0.00	
10	23.35	0.00	35.303	0.000	22.90	497.0	0.051	0.03	4.51	0.00	
20	23.35	0.00	35.295	0.000	22.90	498.0	0.101	0.10	4.38	0.01	0.88
30	23.35	0.01	35.293	0.002	22.90	498.3	0.151	0.23	4.46	0.01	0.83
50	25.97	0.01	35.229	0.007	23.73	420.3	0.243	0.60	4.33	0.01	0.92
75	24.29	0.01	35.576	0.011	24.34	314.8	0.336	1.18	4.36	0.02	0.89
100	21.63	0.01	36.760	0.002	25.58	236.3	0.405	1.79	3.48	0.03	0.81
150	13.16	0.02	35.454	0.007	26.36	172.5	0.508	3.07	3.40	0.04	0.89
200	15.35	0.01	36.084	0.001	26.62	149.4	0.590	4.52	3.30	0.00	0.91
250	13.73	0.00	35.729	0.000	26.82	131.0	0.650	5.14	3.18	0.00	0.91
300	11.89	0.00	35.422	0.001	26.96	115.6	0.723	7.91	3.01	0.00	0.81
400	9.32	0.00	35.025	0.001	27.11	104.9	0.836	11.93	2.87	0.00	0.90
500	7.96	0.00	34.870	0.000	27.21	96.9	0.938	16.62	2.89	0.00	
600	7.14	0.00	34.778	0.000	27.25	93.2	1.034	22.04	2.97	0.00	
700	6.08	0.00	34.752	0.000	27.37	81.7	1.122	27.92	3.17	0.00	
800	5.71	0.00	34.797	0.000	27.45	74.5	1.201	34.00	3.35	0.00	
1000	4.91	0.00	34.913	0.000	27.64	57.8	1.335	46.24	2.96	0.00	1.00
1200	4.42	0.00	34.914	0.007	27.69	53.6	1.448	58.98	3.73	0.05	0.77

T G THOMPSON CRUISE 001 STATION 024 OBSERVED VALUES

DATE	06/11/65	BAROMETER	29.4	WEATHER	X1	WIND VELOC	11	WAVE PERIOD	1
HOUR	14.0	TEMP DRY	28.4	VISIBILITY	6	WIND DIREC	07	SECCHI	
LAT	11-32.0N	TEMP WET	26.5	CLOUD TYPE	6	WAVE DIREC	48	WATER COLOR	
LONG	68-35.1W	REL HUMID	86	CLOUD AMT	7	WAVE HEIGHT	1	SOUNDING	0585

MESSENGER TIMES: 14.0
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.38	35.963	23.02	4.51	0.403	-0.014	104	0.02	0.3	3
1	10	28.13	35.959	23.09	4.53	0.404	-0.015	104	0.00	0.3	2
1	21	28.06	35.953	23.11	4.52	0.404	-0.014	103	0.00	0.3	2
1	31	27.46	36.357	23.61	4.54	0.406	-0.013	103	0.04	0.3	2
1	51	25.67	36.411	24.22	4.26	0.380	0.023	94	0.04	0.3	2
1	77	24.20	36.669	24.86	3.97	0.354	0.059	86	0.18	2.7	2
1	103	22.21	36.807	25.55	3.74	0.334	0.093	78	0.26	4.4	2
1	154	19.48	36.613	26.15	3.49	0.312	0.135	70	0.46	7.6	3
1	206	16.92	36.277	26.53	3.57	0.319	0.151	68	0.65	10.9	5
1	257	14.87	35.924	26.73	3.32	0.296	0.194	60	0.97	15.4	7
1	309	12.80	35.592	26.91	3.11	0.278	0.234	54	1.27	19.9	10
1	412	10.06	35.148	27.08	2.86	0.255	0.290	47	1.76	27.0	15
1	515	8.27	34.913	27.18	2.85	0.255	0.314	45	2.01	30.7	20
1	566	7.62									

T G THOMPSON CRUISE 001 STATION 024 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	DXY ML/L	E(O)	VAR RATIO
0	28.38	0.00	35.963	0.000	23.01	486.0	0.000	0.00	4.51	0.00	
10	28.13	0.00	35.959	0.000	23.09	478.9	0.049	0.03	4.53	0.00	
20	23.07	0.01	35.944	0.007	23.10	478.6	0.097	0.10	4.52	0.00	0.88
30	27.54	0.00	36.313	0.010	23.55	435.7	0.143	0.22	4.54	0.00	0.83
50	25.76	0.01	35.419	0.009	24.28	375.1	0.225	0.55	4.28	0.00	0.92
75	24.31	0.02	36.643	0.004	24.32	317.2	0.312	1.10	3.99	0.00	0.89
100	22.44	0.02	36.798	0.001	25.48	255.4	0.384	1.73	3.76	0.00	0.81
150	19.65	0.02	36.642	0.006	26.12	195.8	0.498	3.16	3.50	0.00	0.89
200	17.22	0.00	36.320	0.002	26.50	161.3	0.588	4.75	3.56	0.01	0.85
250	15.14	0.01	35.972	0.001	26.71	142.2	0.665	6.51	3.35	0.01	0.82
300	13.14	0.01	35.545	0.001	26.88	126.3	0.732	8.41	3.14	0.00	0.73
400	10.31	0.01	35.137	0.001	27.06	109.8	0.851	12.65	2.88	0.00	0.85
500	8.48	0.01	34.933	0.001	27.17	100.0	0.957	17.52	2.84	0.00	17.86

T G THOMPSON CRUISE 001 STATION 025 OBSERVED VALUES

DATE	07/11/65	BAROMETER	29.0	WEATHER	X1	WIND VELOC	12	WAVE PERIOD X
HOUR	01.9	TEMP DRY	28.5	VISIBILITY	6	WIND DIREC	06	SECCHI
LAT	11-44.6N	TEMP WET	26.2	CLOUD TYPE	9	WAVE DIREC	06	WATER COLOR
LONG	70-29.7W	REL HUMID	83	CLOUD AMT	9	WAVE HEIGHT	1	SOUNDING 0044

MESSENGER TIMES: 01.9
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	28.04	35.349	23.42	4.49	0.401	-0.012	103	0.04	0.3	1
1	10	27.95	36.335	23.44	4.51	0.403	-0.013	103	0.04	0.3	2
1	21	27.73	36.420	23.57	4.44	0.396	-0.005	101	0.06	0.3	1
1	31	27.44	36.499	23.73	4.31	0.385	0.008	98	0.10	0.1	2
1	41	26.95	36.458	23.85	3.91	0.349	0.047	88	0.27	1.3	5

T G THOMPSON CRUISE 001 STATION 025 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.04	0.00	36.349	0.000	23.42	447.6	0.000	0.00	4.49	0.00	
10	27.95	0.00	36.335	0.000	23.44	446.2	0.046	0.02	4.51	0.00	
20	27.75	0.00	36.410	0.001	23.56	435.2	0.090	0.09	4.45	0.00	0.88
30	27.48	0.00	36.494	0.002	23.71	420.9	0.133	0.20	4.33	0.00	0.87

T G THOMPSON CRUISE 001 STATION 026 OBSERVED VALUES

DATE	07/11/55	BAROMETER	29.1	WEATHER	X1	WIND VELOC	14	WAVE PERIOD X
HOUR	04.2	TEMP DRY	28.2	VISIBILITY	6	WIND DIREC	06	SECCHI
LAT	11-59.3N	TEMP WET	26.5	CLOUD TYPE	9	WAVE DIREC	07	WATER COLOR
LONG	70-28.9W	REL HUMID	87	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING 0059

MESSENGER TIMES: 04.2
WIRE ANGLES: --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	27.71	36.322	23.50	4.50	0.402	-0.010	103	0.01	0.1	1
1	10	27.70	36.338	23.52	4.50	0.402	-0.010	103	0.04	0.1	2
1	21	27.60	36.341	23.55	4.50	0.402	-0.010	103	0.04	0.4	2
1	31	25.96	36.477	24.13	4.38	0.391	0.011	97	0.03	0.3	2
1	51	25.36			3.71	0.331			0.24	2.1	3
1	57	25.29	36.553	24.45	3.51	0.313	0.093	77	0.34	2.7	6

T G THOMPSON CRUISE 001 STATION 025 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	DXY ML/L	E(O)	VAR RATIO
0	27.71	0.00	35.322	0.000	23.50	439.2	0.000	0.00	4.50	0.00	
10	27.70	0.00	35.333	0.000	23.52	438.2	0.045	0.02	4.50	0.00	
20	27.65	0.02	36.338	0.002	23.54	437.2	0.089	0.09	4.50	0.00	0.88
30	25.14	0.04	36.462	0.003	24.11	382.4	0.130	0.20	4.40	0.00	0.83
50	25.34	0.02	36.530	0.029	24.41	354.7	0.204	0.50	3.75	0.00	1.04

T G THOMPSON CRUISE 001 STATION 027 OBSERVED VALUES

DATE	07/11/55	BAROMETER	27.2	WEATHER	X1	WIND VELOC	15	WAVE PERIOD X
HOUR	09.1	TEMP DRY	27.7	VISIBILITY	6	WIND DIREC	06	SECCHI
LAT	12-30.0N	TEMP WET	25.8	CLOUD TYPE	X	WAVE DIREC	04	WATER COLOR
LONG	70-25.0W	REL HUMID	86	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING 0073

MESSENGER TIMES: 09.1
WIRE ANGLES: 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	0	27.59	36.298	23.53	4.53	0.404	-0.012	103	0.01	0.0	2
1	10	27.57	36.299	23.53	4.53	0.404	-0.012	103	0.04	0.0	1
1	21	27.54	35.293	23.54	4.54	0.405	-0.012	103	0.04	0.0	2
1	31	27.41	36.331	23.61	4.50	0.402	-0.008	102	0.10	0.0	1
1	51	24.77	36.642	24.67	4.16	0.371	0.038	91	0.08	0.8	1
1	77	24.45	36.659	24.79	4.03	0.360	0.051	88	0.10	1.6	2

T G THOMPSON CRUISE 001 STATION 027 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.59	0.00	36.298	0.000	23.53	437.2	0.000	0.00	4.53	0.00	
10	27.57	0.00	36.299	0.000	23.53	436.9	0.045	0.02	4.53	0.00	
20	27.55	0.00	36.293	0.001	23.54	437.1	0.089	0.09	4.54	0.00	0.88
30	27.43	0.01	36.325	0.001	23.60	431.8	0.132	0.20	4.51	0.00	0.83
50	24.91	0.04	36.626	0.004	24.62	335.3	0.210	0.51	4.18	0.00	0.92
75	24.49#		36.565	0.011	24.77	321.3	0.292	1.04	4.00	0.01	32.56

T G THOMPSON CRUISE 001 STATION 028 OBSERVED VALUES

DATE	07/11/65	BAROMETER	29.(	WEATHER	X1	WIND VELOC		WAVE PERIOD	2
HOUR	12.1	TEMP DRY	29.1	VISIBILITY	7	WIND DIREC		SECCHI	
LAT	13-00.0N	TEMP WET	26.(	CLOUD TYPE	2	WAVE DIREC	07	WATER COLOR	
LONG	70-30.0W	REL HUMID	78	CLOUD AMT	5	WAVE HEIGHT	2	SOUNDING	1372

MESSENGER TIMES: 12.1, 12.9
WIRE ANGLES: 05, --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
2	)	28.00	36.127	23.26	4.51	0.403	-0.013	103	0:03	0.0	2
2	10	27.97	36.13(	23.28	4.55	0.406	-0.016	104	0.10	0.0	3
2	21	27.93	36.125	23.29	4.54	0.405	-0.014	104	0.01	0.0	2
2	31	27.93	36.132	23.29	4.50	0.402	-0.011	103	0.00	0.0	2
2	51	26.39	36.23(	23.86	4.46	0.399	0.001	102	0.02	0.0	2
2	77	24.33	36.537	24.80	3.92	0.350	0.062	95	0.20	2.7	2
2	103	22.31	36.336	25.54	3.71	0.331	0.094	78	0.25	4.5	2
2	155	19.03	36.575	26.23	3.60	0.322	0.129	71	0.46	7.4	3
2	207	16.78	36.231	26.53	3.47	0.310	0.161	66	0.67	11.6	5
2	259	14.45	35.867	26.78	3.26	0.291	0.203	59	0.98	15.7	7
2	306	12.41	35.527	26.94	3.07	0.274	0.243	53	1.33	19.6	11
2	413	9.41	35.11(	27.16	2.90	0.259	0.295	47	1.88	24.9	16
1	503	7.66	34.343	27.23	2.92	0.260	0.317	45	2.06	29.1	26
1	61(	6.29	34.718	27.31	3.12	0.279	0.319	47	2.23	31.8	32
1	712	5.81	34.763	27.41	3.31	0.296	0.309	49	2.16	30.7	33
1	814	5.5(	34.844	27.51	3.72	0.332	0.277	55	2.03	27.9	33
1	1018	4.59	34.949	27.7(	4.49	0.401	0.221	64	1.73	23.7	34

T G THOMPSON CRUISE 001 STATION 028 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.00	0.00	36.127	0.000	23.26	462.3	0.000	0.00	4.51	0.00	
10	27.97	0.00	36.130	0.000	23.28	461.6	0.047	0.02	4.55	0.00	
20	27.93	0.00	36.125	0.000	23.28	461.2	0.093	0.10	4.54	0.00	0.88
30	27.94	0.01	36.130	0.000	23.29	461.5	0.140	0.22	4.50	0.00	0.83
50	26.49	0.02	36.222	0.001	23.32	411.2	0.228	0.57	4.47	0.00	0.92
75	24.49	0.00	36.604	0.006	24.73	325.7	0.321	1.15	3.97	0.01	0.89
100	22.54	0.00	36.824	0.000	25.47	256.1	0.394	1.80	3.72	0.00	0.80
150	19.35	0.00	36.629	0.013	25.19	188.8	0.506	3.20	3.60	0.01	0.86
200	17.06	0.02	35.281	0.002	26.50	161.0	0.594	4.76	3.49	0.00	0.82
250	14.86	0.00	35.931	0.000	25.74	139.3	0.670	6.50	3.30	0.00	0.80
300	12.66	0.01	35.568	0.002	26.92	122.5	0.736	8.35	3.09	0.00	0.78
400	9.68	0.02	35.151	0.007	27.14	101.8	0.849	12.37	2.91	0.00	0.87
500	7.78	0.01	34.866	0.001	27.22	94.5	0.948	16.93	2.91	0.00	0.88
600	6.39	0.01	34.723	0.000	27.30	86.7	1.040	22.09	3.10	0.00	0.87
700	5.84	0.01	34.752	0.002	27.40	78.4	1.123	27.64	3.28	0.00	0.85
800	5.54	0.01	34.832	0.001	27.50	69.8	1.198	33.40	3.66	0.00	0.78
1000	4.72	0.01	34.939	0.002	27.68	53.4	1.323	44.77	4.45	0.01	13.84

T S THOMPSON CRUISE 001 STATION 029 OBSERVED VALUES

DATE	07/11/65	BAROMETER	29.7	WEATHER	X1	WIND VELOC	12	WAVE PERIOD	2
HOUR	13.1	TEMP DRY	26.1	VISIBILITY	6	WIND DIREC	07	SECCHI	
LAT	13-40.5N	TEMP WET	25.8	CLOUD TYPE	3	WAVE DIREC	07	WATER COLOR	
LONG	70-32.0W	REL HUMID	83	CLOUD AMT	4	WAVE HEIGHT	2	SOUNDING	4462

MESSENGER TIMES: 18.1, 18.9, 22.5, 23.7
WIRE ANGLES: 00, 00, 00, 05

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
4	0	28.43	35.812	22.88	4.52	0.404	-0.015	104	0.00	0.0	1
4	10	28.40	35.803	22.89	4.52	0.404	-0.015	104	0.01	0.0	1
4	21	28.38	35.817	22.90	4.55	0.406	-0.018	105	0.00	0.0	1
4	31	28.38	35.345	22.93	4.56	0.407	-0.018	105	0.00	0.0	1
4	51	27.37	36.301	23.60	4.63	0.413	-0.020	105	0.02	0.1	1
4	75	24.51	36.597	24.72	4.13	0.369	0.042	90	0.07	0.1	1
4	100	21.92	36.745	25.59	3.59	0.320	0.108	75	0.34	6.0	2
4	151	18.95	36.612	26.28	3.86	0.345	0.107	76	0.30	5.7	1
4	202	17.27	36.364	26.51	4.10	0.366	0.101	78	0.43	7.6	3
4	253	14.73	35.881	26.73	3.25	0.290	0.201	59	0.99	15.4	6
4	304	12.99	35.612	26.89	3.08	0.275	0.235	54	1.23	18.3	9
4	406	10.13	35.168	27.08	2.91	0.260	0.285	48	1.69	24.4	14
4	508	7.94	34.875	27.20	2.89	0.258	0.316	45	2.06	27.9	20
4	611	6.68	34.750	27.29	3.01	0.269	0.323	45	2.20	30.9	24
1	709	6.03	34.762	27.38	3.24	0.289	0.312	43	2.19	29.6	27
1	799	5.57	34.331	27.49	3.60	0.322	0.286	53	2.07	25.9	27
2	913	5.04	34.907	27.62	4.03	0.360	0.255	59	1.89	26.3	28
2	1017	4.73	34.934	27.68	4.27	0.381	0.239	61	1.80	24.6	28
2	1271	4.30	34.955	27.75	4.73	0.423	0.204	67	1.64	22.9	28
2	1523	4.12	34.973	27.77	4.91	0.438	0.191	70	1.60	22.9	30
2	1774	4.04	34.994	27.80	4.99	0.445	0.185	71	1.59	22.4	30
2	1975	4.02	34.978	27.79	5.06	0.452	0.179	72	1.54	22.2	30
2	2269	4.07	34.985	27.79	5.03	0.450	0.181	71	1.54	22.1	30
2	2514	4.07	34.982	27.79	5.08	0.454	0.175	72	1.54	22.3	30
2	3203	4.13	34.981	27.78	5.06	0.452	0.177	72	1.53	22.3	30
2	3512	4.18	34.973	27.77	5.09	0.454	0.174	72	1.51	21.6	30
2	3562	4.20	34.975	27.77	5.14	0.460	0.169	73	1.53	21.3	30
2	4019	4.24	34.981	27.77	5.15	0.460	0.167	73			

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 029 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	449	4.31	34.983	27.76	5.19	0.464	0.163	74	1.51	21.4	30
3	99	22.45									
3	101	22.36									
3	103	22.16									
3	105	22.00									
3	107	21.87									
3	109	21.83									
3	111	21.69									
3	113	21.37	36.742	25.73							
3	115	21.32	36.754	25.76							
3	117		36.776								

T G THOMPSON CRUISE 001 STATION 029 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	DXY ML/L	E(O)	VAR RATIO
0	28.43	0.00	35.312	0.000	22.88	498.4	0.000	0.00	4.52	0.00	
10	28.42	0.00	35.313	0.000	22.89	496.5	0.051	0.03	4.52	0.00	
20	28.38	0.00	35.315	0.000	22.90	497.6	0.101	0.10	4.55	0.00	0.89
30	28.39	0.01	35.439	0.002	22.92	496.5	0.151	0.23	4.56	0.00	0.83
50	27.45	0.00	35.274	0.005	23.55	436.8	0.245	0.61	4.63	0.00	0.92
75	27.51	0.00	35.597	0.000	24.72	326.8	0.341	1.21	4.13	0.00	
100	21.92	0.00	36.745	0.000	25.58	245.1	0.413	1.85	3.59	0.00	
150	19.99	0.01	36.513	0.002	26.28	180.7	0.520	3.18	3.65	0.01	0.97
200	17.33	0.01	36.377	0.001	26.51	160.3	0.606	4.71	4.10	0.01	0.94
250	14.83	0.02	35.910	0.004	26.72	141.3	0.682	6.46	3.31	0.02	0.92
300	13.11	0.01	35.629	0.002	26.86	126.9	0.750	8.36	3.08	0.01	0.86
400	10.23	0.00	35.170	0.000	27.07	109.0	0.859	12.59	2.91	0.00	0.91
500	8.93	0.00	34.992	0.000	27.20	97.2	0.973	17.38	2.83	0.00	0.89
600	8.73	0.01	34.756	0.000	27.28	89.7	1.067	22.69	2.99	0.00	0.87
700	8.23	0.00	34.702	0.000	27.38	80.2	1.153	28.41	3.24	0.00	
800	5.57	0.00	34.832	0.000	27.50	70.1	1.229	34.25	3.50	0.00	0.99
1000	4.77	0.00	34.931	0.001	27.67	54.3	1.356	45.80	4.23	0.00	0.73
1200	4.33	0.01	34.950	0.001	27.73	49.7	1.462	57.73	4.63	0.00	0.83
1500	4.13	0.00	34.972	0.000	27.77	48.4	1.611	78.45	4.90	0.00	0.88
2000	4.02	0.00	34.973	0.001	27.79	51.1	1.863	124.23	5.06	0.00	0.92
2500	4.07	0.00	34.982	0.000	27.79	55.9	2.136	187.85	5.08	0.00	0.90
3000	4.13	0.00	34.981	0.000	27.78	51.2	2.435	273.21	5.05	0.00	0.97
4000	4.24	0.00	34.980	0.000	27.77	71.5	3.115	522.72	5.16	0.01	0.99

DATA FROM CAST 3 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 030 OBSERVED VALUES

DATE	10/11/65	BAROMETER	08.6	WEATHER	X1	WIND VELOC	08	WAVE PERIOD	1
HOUR	21.0	TEMP DRY	29.9	VISIBILITY	6	WIND DIREC	10	SECCHI	
LAT	11-47.0N	TEMP WET	27.0	CLOUD TYPE	4	WAVE DIREC	10	WATER COLOR	
LONG	73-05.0W	REL HUMID	80	CLOUD AMT	5	WAVE HEIGHT	1	SOUNDING	0068

MESSENGER TIMES: 21.0
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	27.75	36.249	23.44	4.47	0.399	-0.008	102	0.02	0.0	2
1	10	27.60	36.242	23.48	4.50	0.402	-0.010	102	0.01	0.1	2
1	21	27.42	36.216	23.52	4.48	0.400	-0.007	102	0.01	0.1	1
1	31	27.23	36.227	23.59	4.50	0.402	-0.007	102	0.04	0.1	1
1	51	26.13	36.402	24.07	4.26	0.380	0.021	95	0.05	0.5	2
1	67	25.80	36.446	24.21	4.18	0.373	0.030	93	0.05	1.0	2

T G THOMPSON CRUISE 001 STATION 030 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.75	0.00	36.249	0.000	23.44	445.7	0.000	0.00	4.47	0.00	
10	27.60	0.00	36.242	0.000	23.48	442.0	0.045	0.02	4.50	0.00	
20	27.44	0.00	36.213	0.001	23.51	439.1	0.090	0.09	4.48	0.00	0.88
30	27.25	0.00	36.224	0.000	23.58	433.5	0.134	0.20	4.50	0.00	0.83
50	26.19	0.01	36.390	0.003	24.04	389.9	0.216	0.54	4.27	0.00	0.94

T G THOMPSON CRUISE 0[illegible]1 STATION 031 OBSERVED VALUES

DATE	11/11/65	BAROMETER	29.8	WEATHER	X1	WIND VELOC	25	WAVE PERIOD	2
HOUR	00.1	TEMP DRY	25.0	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	12-06.0N	TEMP WET	26.0	CLOUD TYPE	X	WAVE DIREC	06	WATER COLOR	
LONG	73-13.0W	REL HUMID	85	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	2377

MESSENGER TIMES: 00.1
WIRE ANGLES: 25

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	27.71	36.077	23.32	4.53	0.404	-0.012	103	0.01	0.1	2
1	9	27.69	36.079	23.34	4.54	0.406	-0.013	103	0.00	0.1	1
1	19	27.68	36.087	23.34	4.57	0.408	-0.016	104	0.02	0.1	1
1	28	27.62	36.082	23.35	4.57	0.408	-0.015	104	0.00	0.0	2
1	43	27.04	36.17[illegible]	23.61	4.46	0.398	-0.002	100	0.02	0.2	2
1	55	25.33	36.41[illegible]	24.33	4.08	0.365	0.041	90	0.14	1.8	2
1	83	23.72	36.72[illegible]	25.05	3.78	0.338	0.075	81	0.24	3.4	2
1	132	21.35	36.767	25.76	3.56	0.318	0.114	74	0.29	5.2	2
1	178	19.12	36.577	25.21	3.43	0.306	0.144	68	0.46	8.6	3
1	223	16.98	36.292	26.53	3.42	0.305	0.164	65	0.66	15.1	5
1	265	15.04	35.955	26.72	3.24	0.290	0.199	59	0.97	15.2	7
1	358	11.56	35.366	26.97	2.96	0.265	0.262	50	1.49	21.8	12
1	459	9.39	35.049	27.11	2.87	0.256	0.298	46	1.84	26.6	17
1	540	7.73	34.842	27.21	2.97	0.265	0.312	46	2.08	29.9	21
1	632	6.54	34.761	27.31	3.07	0.274	0.320	46	2.20	32.4	23
1	724	5.97	34.788	27.41	3.29	0.294	0.309	49	2.13	30.6	28
1	911	4.94	34.908	27.63	4.10	0.366	0.251	59	1.86	25.9	27
1	1161	4.43	34.954	27.73	4.63	0.414	0.211	66	1.65	23.5	24

T G THOMPSON CRUISE 001 STATION 030 OBSERVED VALUES

DATE	10/11/65	BAROMETER	08.6	WEATHER	X1	WIND VELOC	08	WAVE PERIOD	1
HOUR	21.0	TEMP DRY	29.9	VISIBILITY	6	WIND DIREC	10	SECCHI	
LAT	11-47.0N	TEMP WET	27.0	CLOUD TYPE	4	WAVE DIREC	10	WATER COLOR	
LONG	73-05.0W	REL HUMID	80	CLOUD AMT	5	WAVE HEIGHT	1	SOUNDING	0068

MESSENGER TIMES: 21.0
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	27.75	36.249	23.44	4.47	0.399	-0.008	102	0.02	0.0	2
1	10	27.60	36.242	23.48	4.50	0.402	-0.010	102	0.01	0.1	2
1	21	27.42	36.216	23.52	4.48	0.400	-0.007	102	0.01	0.1	1
1	31	27.23	36.227	23.59	4.50	0.402	-0.007	102	0.04	0.1	1
1	51	26.13	36.402	24.07	4.26	0.380	0.021	95	0.05	0.5	2
1	67	25.80	36.446	24.21	4.18	0.373	0.030	93	0.05	1.0	2

T G THOMPSON CRUISE 001 STATION 030 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.75	0.00	36.249	0.000	23.44	445.7	0.000	0.00	4.47	0.00	
10	27.60	0.00	36.242	0.000	23.48	442.0	0.045	0.02	4.50	0.00	
20	27.44	0.00	36.213	0.001	23.51	439.1	0.090	0.09	4.48	0.00	0.88
30	27.25	0.00	36.224	0.000	23.58	433.5	0.134	0.20	4.50	0.00	0.83
50	26.19	0.01	36.390	0.003	24.04	389.9	0.216	0.54	4.27	0.00	0.94

T G THOMPSON CRUISE 011 STATION 031 OBSERVED VALUES

DATE	11/11/65	BAROMETER	29.8	WEATHER	X1	WIND VELOC	25	WAVE PERIOD	2
HOUR	00.1	TEMP DRY	28.0	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	12-06.0N	TEMP WET	26.0	CLOUD TYPE	X	WAVE DIREC	06	WATER COLOR	
LONG	73-13.0W	REL HUMID	85	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	2377

MESSENGER TIMES: 00.1
WIRE ANGLES: 25

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	27.71	36.077	23.32	4.53	0.404	-0.012	103	0.01	0.1	2
1	9	27.69	36.090	23.34	4.54	0.406	-0.013	103	0.00	0.1	1
1	19	27.68	36.087	23.34	4.57	0.408	-0.016	104	0.02	0.1	1
1	28	27.62	36.092	23.35	4.57	0.408	-0.015	104	0.00	0.0	2
1	43	27.04	36.174	23.61	4.46	0.398	-0.002	100	0.02	0.2	2
1	55	25.33	36.419	24.33	4.08	0.365	0.041	90	0.14	1.8	2
1	83	23.72	36.728	25.05	3.78	0.338	0.078	81	0.24	3.4	2
1	132	21.35	36.767	25.76	3.56	0.318	0.114	74	0.29	5.2	2
1	178	19.12	36.577	26.21	3.43	0.306	0.144	68	0.46	8.6	3
1	223	16.98	36.292	26.53	3.42	0.305	0.164	65	0.66	15.1	5
1	269	15.04	35.955	26.72	3.24	0.290	0.199	59	0.97	15.2	7
1	358	11.56	35.366	26.97	2.96	0.265	0.262	50	1.49	21.8	12
1	459	9.39	35.049	27.11	2.87	0.256	0.298	46	1.84	26.6	17
1	540	7.73	34.842	27.21	2.97	0.265	0.312	46	2.08	29.9	21
1	632	6.54	34.761	27.31	3.07	0.274	0.320	46	2.20	32.4	23
1	724	5.97	34.788	27.41	3.29	0.294	0.309	49	2.13	30.6	28
1	911	4.94	34.908	27.63	4.10	0.366	0.251	59	1.86	25.9	27
1	1161	4.43	34.954	27.73	4.63	0.414	0.211	66	1.65	23.5	25

T G THOMPSON CRUISE 001 STATION 031 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.71	0.00	36.077	0.000	23.32	456.8	0.000	0.00	4.53	0.00	
10	27.69	0.00	36.090	0.000	23.34	455.7	0.046	0.02	4.54	0.00	0.88
20	27.68	0.00	36.085	0.001	23.34	456.1	0.092	0.09	4.57	0.00	0.85
30	27.57	0.00	36.088	0.001	23.37	453.1	0.138	0.21	4.56	0.00	0.91
50	26.54	0.04	36.243	0.006	23.82	411.1	0.225	0.57	4.35	0.01	0.76
75	24.60	0.00	36.560	0.026	24.66	332.1	0.319	1.15	3.94	0.00	0.74
100	23.02	0.02	36.740#		25.27	275.3	0.395	1.83	3.69	0.01	0.86
150	20.46	0.01	36.713	0.005	25.96	210.9	0.518	3.36	3.50	0.00	0.67
200	18.06	0.01	36.447	0.002	26.38	172.4	0.614	5.08	3.43	0.01	0.64
250	15.80	0.00	36.091	0.003	26.65	147.9	0.695	6.93	3.32	0.01	0.59
300	13.69	0.04	35.723	0.007	26.83	131.6	0.766	8.91	3.12	0.00	0.84
400	10.54	0.07	35.208	0.012	27.04	112.2	0.889	13.28	2.89	0.00	0.69
500	8.51	0.02	34.934	0.004	27.16	100.7	0.996	18.23	2.91	0.01	0.61
600	6.88	0.00	34.774	0.002	27.28	89.7	1.092	23.64	3.03	0.01	0.68
700	6.09	0.02	34.775	0.003	27.38	80.1	1.178	29.35	3.22	0.00	0.65
800	5.51	0.01	34.835	0.006	27.50	69.2	1.254	35.14	3.61	0.03	0.83
1000	4.62	0.01	34.912	0.018	27.67	54.2	1.379	46.55	4.43	0.03	20.58

T G THOMPSON CRUISE 011 STATION 032 OBSERVED VALUES

DATE	11/11/65	BAROMETER	10.9	WEATHER	X1	WIND VELOC	28	WAVE PERIOD	5
HOUR	05.7	TEMP DRY	28.2	VISIBILITY	6	WIND DIREC	07	SECCHI	
LAT	12-25.0N	TEMP WET	25.6	CLOUD TYPE	X	WAVE DIREC	07	WATER COLOR	
LONG	73-33.0W	REL HUMID	81	CLOUD AMT	9	WAVE HEIGHT	5	SOUNDING	2542

MESSENGER TIMES: 05.7
WIRE ANGLES: 13

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	27.71	36.175	23.39	4.51	0.403	-0.011	103	0.00	0.0	2
1	15	27.72	36.181	23.40	4.57	0.408	-0.016	104	0.02	0.0	2
1	20	27.69	36.178	23.40					0.01	0.3	2
1	30	27.68	36.193	23.42	4.59	0.410	-0.018	104	0.03	0.0	2
1	50	26.53	36.397	23.92	4.55	0.407	-0.003	102	0.02	0.1	1
1	72	24.98	36.595	24.57	4.12	0.368	0.040	90	0.08	1.3	1
1	98	23.05	36.814	25.31	3.36	0.300	0.120	71	0.22	3.3	2
1	147	19.88	36.594	26.10	3.33	0.297	0.147	67	0.32	5.9	2
1	198	17.26	36.347	26.50	3.31	0.295	0.171	63	0.56	9.2	3
1	248	15.34	36.020	26.70	3.46	0.309	0.176	64	0.84	13.5	6
1	297	13.42	35.581	26.85	3.10	0.277	0.229	55	1.18	18.2	8
1	398	10.17	35.157	27.06	2.86	0.256	0.289	47	1.72	24.9	15
1	500	7.68	34.938	27.21	2.87	0.256	0.321	44	2.10	30.0	22
1	601	7.02	34.763	27.25	2.99	0.267	0.320	45	2.18	31.0	23
1	703	6.22	34.755	27.35						31.1	27
1	804	5.56	34.843	27.51					2.04	28.4	28
1	1008	4.73	34.936	27.68					1.78	24.1	27
1	1264	4.37	34.965	27.74					1.63	22.6	28

T G THOMPSON CRUISE 001 STATION 032 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.71	0.00	36.175	0.000	23.39	449.8	0.000	0.00	4.51	0.00	
10	27.70	0.00	36.181	0.000	23.40	449.5	0.046	0.02	4.57	0.00	
20	27.69	0.00	36.178	0.000	23.40	449.8	0.091	0.09	4.59	0.00	0.80
30	27.68	0.00	36.193	0.000	23.42	448.8	0.136	0.21	4.59	0.00	
50	26.58	0.00	36.397	0.000	23.92	401.3	0.222	0.56	4.55	0.00	
75	24.75	0.00	36.626	0.003	24.66	331.7	0.314	1.14	4.03	0.01	0.87
100	22.91	0.00	36.818	0.003	25.36	266.7	0.390	1.80	3.34	0.01	0.98
150	19.71	0.00	36.677	0.002	26.14	194.4	0.506	3.25	3.33	0.00	0.92
200	17.18	0.00	36.334	0.000	26.51	159.8	0.595	4.83	3.32	0.00	0.94
250	15.26	0.00	36.006	0.000	26.71	142.4	0.671	6.58	3.45	0.00	0.95
300	13.31	0.00	35.562	0.000	26.86	128.4	0.740	8.50	3.09	0.00	0.99
400	10.11	0.00	35.149	0.000	27.07	109.2	0.859	12.76	2.86	0.00	0.97
500	7.68	0.00	34.838	0.000	27.21	95.1	0.963	17.50	2.87	0.00	
600	7.02	0.00	34.763	0.000	27.25	92.6	1.057	22.85	2.99	0.00	12.40
700	6.24	0.00	34.754	0.000	27.35	83.8	1.146	28.79			0.96
800	5.58	0.00	34.839	0.001	27.50	69.9	1.224	34.74			0.93
1000	4.75	0.00	34.934	0.000	27.67	54.3	1.350	46.21			0.93
1200	4.41	0.01	34.959	0.002	27.73	50.1	1.455	58.15			15.25

T G THOMPSON CRUISE 001 STATION 033 OBSERVED VALUES

DATE	11/11/65	BAROMETER	11.9	WEATHER	X1	WIND VELOC	25	WAVE PERIOD	3		
HOUR	12.1	TEMP DRY	27.4	VISIBILITY	7	WIND DIREC	08	SECCHI			
LAT	12-50.0N	TEMP WET	25.9	CLOUD TYPE	6	WAVE DIREC	08	WATER COLOR			
LONG	73-46.0W	REL HUMID	89	CLOUD AMT	6	WAVE HEIGHT	3	SOUNDING	3612		
MESSENGER TIMES:	12.1, 13.8										
WIRE ANGLES:	04, 00										

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
2	0	28.32	35.641	22.79	4.57	0.408	-0.018	105	0.01	0.0	2
2	14	28.28	35.637	22.80	4.54	0.406	-0.016	104	0.02	0.0	2
2	21	28.29	35.639	22.80	4.55	0.407	-0.017	104	0.02	0.1	2
2	31	28.30	35.641	22.80	4.55	0.406	-0.016	104	0.02	0.0	2
2	51	27.68	36.045	23.31	4.63	0.413	-0.021	105	0.02	0.0	1
2	75	24.92	36.520	24.61	4.11	0.367	0.041	90			
2	101	23.17	36.813	25.25	3.95	0.353	0.066	84	0.22	2.9	2
2	152	19.22	36.588	26.20	3.39	0.302	0.147	67	0.44	8.2	3
2	203	17.46	36.330	26.44	3.36	0.300	0.165	65	0.60	10.8	4
2	254	15.51	36.028	26.67	3.29	0.294	0.190	61	0.88	14.1	6
2	305	13.07	35.624	26.88	3.07	0.274	0.235	54	1.23	18.5	10
2	406	9.99	35.137	27.08	2.81	0.251	0.296	46	1.72	25.5	15
2	511	8.34			2.81	0.251			1.98	28.8	20
2	613	6.85			3.00	0.268			2.18	30.6	24
1	709	6.09	34.775	27.38	3.18	0.284	0.316	47	2.20	31.0	27
1	810	5.75	34.836	27.47	3.39	0.302	0.303	50	2.11	29.3	27
1	1013	4.83	34.928	27.66	4.18	0.373	0.245	60	1.82	24.9	28
1	1265	4.32	34.964	27.75					1.64	27.8	28
1	1513	4.10	34.976	27.78	4.83	0.431	0.198	68	1.60	22.8	28
1	1765	4.06	34.980	27.79	4.93	0.440	0.190	70	1.55	21.8	30
1	2010	4.04	34.984	27.79	4.98	0.445	0.185	71	1.56	21.8	31
1	2255	4.03	34.983	27.79	4.99	0.446	0.185	71	1.56	21.1	29
1	2500	4.08	34.978	27.78	4.99	0.446	0.184	71	1.54	22.1	29
1	3006	4.12	34.982	27.78					1.56	21.3	31
1	3512	4.19	34.985	27.78	5.00	0.447	0.181	71	1.56	21.0	31
1	3563	4.19									
1	3614	4.21	34.987	27.78	5.05	0.451	0.177	72	1.57	21.3	30

T G THOMPSON CRUISE 001 STATION 033 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.32	0.00	35.641	0.000	22.79	507.2	0.000	0.00	4.57	0.00	
10	28.28	0.00	35.637	0.000	22.80	506.7	0.052	0.03	4.54	0.00	
20	28.29	0.00	35.639	0.000	22.80	507.3	0.103	0.11	4.55	0.00	0.88
30	28.30	0.00	35.638	0.002	22.80	508.2	0.154	0.24	4.55	0.00	0.83
50	27.74	0.01	36.018	0.004	23.27	464.1	0.252	0.63	4.63	0.00	0.92
75	24.92	0.00	36.520	0.000	24.61	337.0	0.353	1.26	4.11	0.00	
100	23.23	0.01	36.812	0.001	25.26	276.0	0.430	1.95	3.95	0.00	0.93
150	19.36	0.02	36.605	0.005	26.17	190.9	0.547	3.40	3.41	0.01	0.94
200	17.54	0.02	36.346	0.000	26.43	167.3	0.638	5.01	3.35	0.01	0.92
250	15.67	0.00	36.054	0.001	26.65	147.9	0.717	6.83	3.30	0.00	0.89
300	13.35	0.02	35.670	0.003	26.86	128.6	0.787	8.79	3.10	0.00	0.81
400	10.16	0.01	35.163	0.002	27.07	109.1	0.907	13.05	2.82	0.00	0.90
500	8.48	0.02	34.930#		27.17	100.5	1.013	17.92	2.80	0.00	0.86
600	7.02	0.01	34.815#		27.29	88.7	1.108	23.30	2.97	0.00	0.84
700	6.14	0.00	34.780#		27.38	80.4	1.194	28.99	3.16	0.00	0.87
800	5.77	0.01	34.820	0.003	27.46	73.8	1.272	34.99	3.37	0.00	1.33
1000	4.89	0.01	34.923	0.000	27.65	56.9	1.404	47.06	4.13	0.01	0.90
1200	4.40	0.01	34.960	0.002	27.73	49.9	1.512	59.24	4.57	0.05	1.04
1500	4.11	0.00	34.976	0.000	27.78	47.8	1.661	79.88	4.83	0.01	0.98
2000	4.04	0.00	34.986	0.000	27.79	50.8	1.911	125.28	4.98	0.00	0.94
2500	4.08	0.00	34.979	0.000	27.78	56.3	2.184	189.03	4.99	0.00	
3000	4.12	0.00	34.982	0.000	27.78	61.0	2.483	274.52	4.94	0.04	4.94

T G THOMPSON CRUISE 001 STATION 034 OBSERVED VALUES

DATE	11/11/65	BAROMETER	29.1	WEATHER	X1	WIND VELOC	25	WAVE PERIOD	4
HOUR	21.5	TEMP DRY	31.4	VISIBILITY	7	WIND DIREC	06	SECCHI	
LAT	12-17.0N	TEMP WET	26.6	CLOUD TYPE	0	WAVE DIREC	07	WATER COLOR	
LONG	75-01.0W	REL HUMID	69	CLOUD AMT	1	WAVE HEIGHT	3	SOUNDING	3557

MESSENGER TIMES: 21.5, 24.9
WIRE ANGLES: 03, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
2	1	28.38	35.523	22.69	4.50	0.402	-0.013	103	0.00	0.0	2
2	10	28.37	35.519	22.69	4.53	0.405	-0.015	104	0.00	0.2	2
2	21	28.37	35.509	22.68	4.51	0.403	-0.014	103	0.00	0.1	1
2	31	28.39	35.564	22.71	4.53	0.405	-0.016	104	0.01	0.0	3
2	51	27.87	35.996	23.21	4.57	0.408	-0.017	104	0.03	0.2	1
2	76	25.82	36.271	24.07	4.19	0.375	0.029	93	0.06	0.7	1
2	102	24.11	36.750	24.95	3.98	0.355	0.058	86	0.11	1.9	2
2	153	19.25	36.532	26.22	3.74	0.334	0.115	74	0.38	6.3	2
2	205	17.75	36.404	26.43	4.08	0.365	0.097	79	0.39	7.0	2
2	256	15.76	36.042	26.62	3.39	0.303	0.178	63	0.93	13.4	6
2	308	13.44	35.648	26.82	3.07	0.274	0.232	54	1.23	17.7	9
2	411	10.73	35.244	27.03	2.84	0.254	0.283	47	1.62	24.8	15
2	514	8.64	34.927	27.14	2.84	0.253	0.311	45	1.95	27.5	20
2	617	7.59	34.845	27.23	2.90	0.259	0.319	45	2.09	30.0	22
1	702	6.52	34.771	27.33	3.09	0.276	0.318	46	2.18	30.6	24
1	801	5.86	34.803	27.44	3.39	0.303	0.300	50	2.14	29.1	26
1	1001	4.91	34.898	27.63	4.17	0.372	0.245	60	1.85		28
1	1251	4.43	34.938	27.71	4.68	0.418	0.207	67	1.66	24.5	27
1	1500	4.22	34.957	27.75	4.88	0.436	0.192	69	1.59	20.8	28
1	1749	4.07	34.962	27.77	4.96	0.443	0.188	70	1.56	23.3	30
1	1997	4.06	34.959	27.77	5.03	0.449	0.181	71	1.58	21.5	30
1	2248	4.06	34.963	27.77	5.05	0.451	0.180	72	1.52	22.0	29
1	2496	4.08	34.963	27.77	5.05	0.451	0.179	72	1.56	21.6	31
1	2996	4.12	34.962	27.76	5.07	0.453	0.176	72	1.54	21.4	30
1	3549	4.19	34.963	27.76	5.10	0.455	0.173	72	1.56	20.7	29

T G THOMPSON CRUISE 001 STATION 034 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.38	0.00	35.523	0.000	22.68	517.6	0.000	0.00	4.50	0.00	
10	28.37	0.00	35.519	0.000	22.68	518.0	0.053	0.03	4.53	0.00	
20	28.37	0.00	35.509	0.001	22.68	519.2	0.105	0.11	4.51	0.00	0.88
30	28.39	0.00	35.555	0.001	22.70	517.0	0.157	0.24	4.53	0.00	0.83
50	27.92	0.00	35.972	0.005	23.17	473.0	0.257	0.65	4.57	0.00	0.92
75	25.91	0.01	36.261	0.003	24.03	392.0	0.366	1.33	4.21	0.00	0.94
100	24.24	0.01	36.716	0.007	24.89	311.6	0.454	2.12	3.99	0.00	0.86
150	19.52	0.05	36.660	0.012	26.17	190.8	0.581	3.66	3.74	0.00	0.91
200	17.83	0.06	36.431	0.000	26.43	168.1	0.671	5.28	4.06	0.02	0.87
250	16.01	0.00	36.089	0.002	26.60	152.9	0.752	7.14	3.49	0.02	0.85
300	13.79	0.02	35.705	0.003	26.79	134.5	0.825	9.17	3.10	0.01	0.76
400	10.94	0.03	35.273	0.007	27.02	114.7	0.951	13.65	2.85	0.00	0.86
500	8.88	0.01	34.961	0.003	27.13	104.6	1.061	18.74	2.83	0.00	0.83
600	7.74	0.03	34.851	0.006	27.22	96.7	1.163	24.47	2.88	0.00	0.82
700	6.52	0.00	34.772	0.000	27.33	86.3	1.256	30.63	3.08	0.00	0.96
800	5.86	0.00	34.802	0.000	27.43	76.4	1.338	36.95	3.39	0.00	0.98
1000	4.91	0.00	34.898	0.000	27.63	59.1	1.475	49.46	4.17	0.00	0.99
1200	4.49	0.01	34.934	0.002	27.70	52.9	1.588	62.25	4.61	0.01	0.77
1500	4.20	0.00	34.957	0.000	27.75	50.4	1.746	84.06	4.88	0.00	
2000	4.06	0.00	34.959	0.000	27.77	53.0	2.008	131.66	5.03	0.00	0.98
2500	4.03	0.00	34.963	0.000	27.77	57.4	2.289	187.28	5.05	0.00	1.00
3000	4.12	0.00	34.962	0.000	27.76	62.4	2.595	284.61	5.07	0.00	13.32

T G THOMPSON CRUISE 001 STATION 035 OBSERVED VALUES

DATE	12/11/65	BAROMETER	29.6	WEATHER	X1	WIND VELOC	23	WAVE PERIOD	4		
HOUR	04.5	TEMP DRY	28.7	VISIBILITY	7	WIND DIREC	09	SECCHI			
LAT	11-52.0N	TEMP WET	26.6	CLOUD TYPE	8	WAVE DIREC	09	WATER COLOR			
LONG	74-58.0W	REL HUMID	51	CLOUD AMT	3	WAVE HEIGHT	3	SOUNDING	3201		

MESSENGER TIMES: 04.5
WIRE ANGLES: 15

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.38	35.002	22.29	4.50	0.402	-0.011	103	0.00	0.3	3
1	10	28.37	35.006	22.30	4.52	0.403	-0.013	103	0.00	0.2	2
1	20	28.37	35.008	22.30	4.52	0.404	-0.013	103	0.00	0.0	3
1	30	28.50									
1	49	28.17	35.917	23.05	4.58	0.409	-0.020	105	0.00	0.0	1
1	74	25.18	36.459	24.41	3.97	0.354	0.053	87	0.15	2.1	2
1	100	23.18	36.801	25.27	3.83	0.342	0.077	82	0.18	3.0	1
1	151	19.58	36.611	26.12	3.71	0.331	0.116	74	0.36	6.4	2
1	199	17.26	36.357	26.51	4.02	0.359	0.108	77	0.43	8.2	3
1	249	14.58	35.855	26.74	3.35	0.299	0.194	61	0.98	15.9	7
1	300	12.54	35.522	26.91	3.03	0.271	0.245	53	1.31	20.6	11
1	400	9.85	35.093	27.07	2.86	0.256	0.293	47	1.76	25.8	16
1	501	8.35	34.883	27.15	2.85	0.255	0.313	45	1.98	29.1	19
1	603	7.74	34.858	27.22	2.89	0.258	0.315	45	2.04	30.3	21
1	705	6.44	34.764	27.33	3.09	0.276	0.319	46	2.20	31.7	26
1	805	5.85	34.803	27.44	3.44	0.307	0.297	51	2.10	29.9	27
1	1005	4.89	34.908	27.64	4.19	0.374	0.243	61	1.82	26.1	27
1	1254	4.40	34.948	27.72	4.89	0.419	0.206	67	1.64	23.2	27

T G THOMPSON CRUISE 001 STATION 035 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.38	0.00	35.002	0.000	22.29	555.0	0.000	0.00	4.50	0.00	
10	28.37	0.00	35.006	0.000	22.30	554.9	0.056	0.03	4.52	0.00	
20	28.37	0.00	35.008	0.000	22.30	555.1	0.112	0.12	4.52	0.00	
30	28.50	0.00	35.420#		22.57	530.1	0.167	0.25	4.58	0.03	1.07
50	28.07	0.03	35.942	0.001	23.10	479.9	0.269	0.67	4.56	0.01	0.95
75	25.09	0.01	36.477	0.000	24.45	352.3	0.374	1.32	3.96	0.00	0.95
100	23.18	0.00	36.801	0.000	25.27	275.5	0.453	2.02	3.83	0.00	
150	19.64	0.00	36.621	0.003	26.11	196.8	0.572	3.49	3.71	0.00	0.97
200	17.20	0.00	36.347	0.001	26.52	159.5	0.661	5.09	4.01	0.00	0.97
250	14.53	0.00	35.847	0.000	26.74	138.5	0.736	6.31	3.34	0.00	0.97
300	12.54	0.00	35.522	0.000	26.91	123.6	0.803	8.67	3.03	0.00	
400	9.85	0.00	35.093	0.000	27.07	108.8	0.920	12.85	2.86	0.00	
500	3.36	0.00	34.884	0.000	27.15	102.0	1.026	17.75	2.85	0.00	0.99
600	7.76	0.01	34.858	0.001	27.22	96.5	1.127	23.41	2.89	0.00	0.96
700	6.50	0.01	34.768	0.002	27.32	86.4	1.219	29.56	3.08	0.00	0.93
800	5.87	0.01	34.799	0.001	27.43	76.8	1.301	35.89	3.42	0.00	0.89
1000	4.91	0.00	34.905	0.000	27.63	58.5	1.438	48.38	4.17	0.00	0.95
1200	4.42	0.01	34.940	0.005	27.72	51.6	1.550	60.95	4.66	0.01	15.73

T G THOMPSON CRUISE 001 STATION 036 OBSERVED VALUES

DATE	12/11/65	BAROMETER	07.4	WEATHER	X1	WIND VELOC	25	WAVE PERIOD	4
HOUR	08.1	TEMP DRY	27.2	VISIBILITY	6	WIND DIREC	07	SECCHI	
LAT	11-30.0N	TEMP WET	25.2	CLOUD TYPE	X	WAVE DIREC	07	WATER COLOR	
LONG	74-55.0W	REL HUMID	85	CLOUD AMT	9	WAVE HEIGHT	4	SOUNDING	1610

MESSENGER TIMES: 08.1
WIRE ANGLES: 05

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	28.18	34.295	21.83	4.53	0.409	-0.015	104	0.03	0.2	11
1	10	28.17	34.300	21.83	4.54	0.406	-0.012	103	0.03	0.2	11
1	21	28.23	34.310	21.80	4.56	0.408	-0.014	104	0.03	0.1	8
1	31	28.44	35.515	22.73	4.55	0.406	-0.018	105	0.00	0.0	2
1	51	27.29	36.220	23.56	4.45	0.398	-0.003	101	0.28	0.1	3
1	77	25.03	36.592	24.56	4.05	0.361	0.046	89	0.13	1.7	1
1	103	23.60	36.724	25.09	3.80	0.340	0.077	81	0.18	3.3	1
1	153	19.71	36.657	26.12	3.69	0.330	0.116	74	0.34	5.9	3
1	204	17.02	36.287	26.51	3.83	0.342	0.127	73	0.53	9.3	4
1	255	14.41	35.988	26.88	3.56	0.318	0.176	64	0.70	11.3	5
1	306	12.59	35.522	26.90	3.05	0.272	0.242	53	1.31	20.6	10
1	408	9.47	35.038	27.09	2.83	0.253	0.300	46	1.80	27.0	17
1	510	8.62	34.941	27.15	2.90	0.259	0.305	46	1.94	28.7	19
1	612	7.29	34.813	27.25	2.94	0.263	0.320	45	2.12	30.4	23
1	714	6.23	34.752	27.35	3.18	0.284	0.314	48	2.18	29.5	26
1	816	5.65	34.822	27.48	3.54	0.316	0.290	52	2.08	29.1	27
1	1020	4.75	34.947	27.68	4.29	0.384	0.236	62	1.78	26.0	27
1	1275	4.35	34.914	27.70	4.75	0.424	0.202	68	1.62	22.5	26

T G THOMPSON CRUISE 001 STATION 036 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.13	0.00	34.295	0.000	21.83	599.6	0.000	0.00	4.58	0.00	
10	23.17	0.00	34.300	0.000	21.83	599.3	0.061	0.03	4.54	0.00	
20	23.27	0.00	34.310#		21.81	602.0	0.121	0.12	4.56	0.00	0.88
30	23.43	0.01	35.550#		22.69	518.7	0.178	0.27	4.55	0.00	0.83
50	27.33	0.01	36.205#		23.52	439.4	0.274	0.66	4.46	0.00	0.92
75	25.20	0.02	36.568	0.002	24.48	349.0	0.374	1.28	4.08	0.01	2.61
100	23.75	0.02	36.718	0.002	25.03	297.6	0.455	2.00	3.82	0.00	0.81
150	19.95	0.03	36.671	0.001	26.07	200.8	0.581	3.55	3.69	0.00	0.91
200	17.21	0.01	36.320	0.005	26.49	161.5	0.672	5.17	3.82	0.01	0.89
250	14.65	0.01	36.019	0.004	26.85	126.3	0.745	6.84	3.60	0.00	0.87
300	12.73	0.01	35.577	0.005	26.99	124.2	0.809	8.63	3.11	0.01	0.80
400	9.66	0.02	35.053	0.003	27.07	108.2	0.926	12.81	2.82	0.01	0.89
500	8.66	0.04	34.943	0.006	27.15	102.5	1.032	17.71	2.89	0.00	0.87
600	7.45	0.01	34.827	0.002	27.24	94.2	1.132	23.31	2.93	0.00	0.85
700	6.35	0.00	34.755	0.001	27.33	85.2	1.222	29.35	3.14	0.00	0.83
800	5.72	0.01	34.807	0.003	27.46	74.1	1.303	35.53	3.48	0.00	0.75
1000	4.82	0.00	34.938	0.002	27.67	54.9	1.433	47.42	4.22	0.01	0.86
1200	4.37	0.01	34.935	0.007	27.72	51.3	1.541	59.56	4.71	0.01	14.10

T G THOMPSON CRUISE 001 STATION 037 OBSERVED VALUES

DATE	12/11/65	BAROMETER	06.5	WEATHER	X1	WIND VELOC	24	WAVE PERIOD	3
HOUR	19.2	TEMP DRY	29.3	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	11-31.0N	TEMP WET	26.0	CLOUD TYPE	6	WAVE DIREC	06	WATER COLOR	
LONG	77-07.0W	REL HUMID	77	CLOUD AMT	3	WAVE HEIGHT	4	SOUNDING	3292

MESSENGER TIMES: 19.2
WIRE ANGLES: 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	0	28.37	35.887	22.96	4.52	0.403	-0.015	104	0.00	0.1	1
1	10	28.33	35.884	22.97	4.52	0.403	-0.014	103	0.00	0.0	0
1	21	28.34	35.888	22.97	3.54	0.316	0.073	81	0.00	0.0	0
1	31	28.33									
1	51	26.51	36.324	23.95	3.38	0.302	0.096	76	0.00	0.0	0
1	77	24.65	36.651	24.71	2.81	0.251	0.159	61	0.03	0.4	11
1	102	22.52	36.743	25.41	2.45	0.219	0.205	52	0.18	3.8	1
1	153	19.49	36.641	26.17	3.57	0.319	0.129	71	0.40	7.2	2
1	202	17.73	36.368	26.40	3.61	0.323	0.140	70	0.54	9.5	3
1	254	15.75	36.063	26.64	3.40	0.304	0.177	63	0.82	13.8	4
1	304	13.75	35.724	26.82	2.28	0.203	0.299	41	1.12	17.3	7
1	406	10.71	35.246	27.04	2.44	0.218	0.320	40	1.60	24.0	12
1	509	8.82	35.001	27.17	2.83	0.253	0.309	45	1.90	27.6	17
1	611	7.30	34.827	27.26	2.91	0.260	0.323	45	2.12	30.3	21
1	713	6.47	34.795	27.35	3.12	0.279	0.316	47	2.15	31.1	24
1	815	5.90	34.815	27.44	3.40	0.304	0.299	50	2.12	30.1	24
1	1021	4.92	34.907	27.63	4.19	0.374	0.243	61	1.83	26.1	26
1	1278	4.39	34.951	27.73	4.74	0.423	0.202	68	1.66	23.3	26

T G THOMPSON CRUISE 001 STATION 037 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.37	0.00	35.887	0.000	22.96	491.2	0.000	0.00	4.52	0.00	
10	28.33	0.00	35.884	0.000	22.97	490.5	0.050	0.03	4.52	0.00	
20	28.34	0.00	35.885	0.002	22.97	491.2	0.099	0.10	3.64	0.02	0.89
30	28.34	0.01	35.980#		23.04	485.0	0.149	0.23	3.58#		1.03
50	26.63	0.02	36.373	0.004	23.89	404.3	0.238	0.59	3.36	0.02	0.95
75	24.80	0.01	36.639	0.001	24.66	332.1	0.331	1.17	2.86	0.01	0.90
100	22.69	0.01	36.740	0.001	25.36	266.3	0.406	1.84	2.46	0.01	0.86
150	19.63	0.01	36.655	0.002	26.14	193.9	0.522	3.28	3.48	0.03	0.92
200	17.79	0.01	36.381	0.001	26.40	170.8	0.614	4.92	3.62	0.01	0.94
250	15.91	0.00	36.088	0.000	26.62	150.6	0.695	6.78	3.44	0.01	0.90
300	13.91	0.01	35.751	0.001	26.80	134.0	0.767	8.79	2.37	0.02	0.86
400	10.85	0.00	35.267	0.000	27.03	113.5	0.892	13.23	2.38	0.03	0.91
500	8.95	0.01	35.016	0.002	27.16	101.8	1.000	18.23	2.80	0.01	0.88
600	7.44	0.01	34.841	0.001	27.25	93.0	1.099	23.77	2.91	0.01	0.86
700	6.55	0.01	34.794	0.002	27.34	85.1	1.189	29.76	3.09	0.00	0.84
800	5.98	0.00	34.810	0.001	27.43	77.4	1.271	36.08	3.35	0.00	0.75
1000	5.09	0.00	34.897	0.002	27.61	60.3	1.410	48.81	4.11	0.01	0.85
1200	4.44	0.01	34.934	0.008	27.71	52.3	1.524	61.64	4.70	0.02	13.96

T G THOMPSON CRUISE 001 STATION 038 OBSERVED VALUES

DATE	13/11/65	BAROMETER	30.2	WEATHER	X1	WIND VELOC	22	WAVE PERIOD	X
HOUR	04.6	TEMP DRY	28.5	VISIBILITY	5	WIND DIREC	05	SECCHI	
LAT	19-13.0N	TEMP WET	26.4	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	77-00.0W	REL HUMID	85	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	3018

MESSENGER TIMES: 04.6
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	28.38	35.890	22.96	4.52	0.404	-0.015	104	0.00	0.3	2
1	10	28.34	35.892	22.98	4.52	0.404	-0.015	104	0.00	0.3	2
1	21	28.34	35.898	22.98	4.52	0.404	-0.015	104	0.00	0.3	2
1	31	28.23	35.924	23.02	4.53	0.405	-0.016	104	0.00	0.1	2
1	51	27.26	36.257	23.60	4.53	0.405	-0.011	103	0.00	0.2	1
1	75	25.59	36.452	24.28	4.30	0.384	0.020	95	0.01	0.2	2
1	99	23.43	36.761	25.15	4.11	0.367	0.051	88	0.08	1.7	1
1	149	19.84	36.641	26.07	3.51	0.314	0.131	71	0.37	7.0	3
1	198	17.44	36.327	26.44	3.54	0.317	0.149	68	0.58	10.1	4
1	249	15.52	36.010	26.65	3.33	0.298	0.156	62	0.86	14.0	6
1	300	13.59	35.693	26.83	3.09	0.276	0.228	55	1.16	18.8	9
1	402	10.64	35.236	27.04	2.90	0.259	0.279	48	1.62	22.3	14
1	504	8.43	34.932	27.17	2.86	0.256	0.311	45	1.98	24.6	20
1	607	7.13	34.816	27.27	2.97	0.265	0.319	45	2.12	28.1	23
1	709	6.28	34.787	27.37	3.27	0.292	0.305	49	2.16	30.2	26
1	812	5.52	34.828	27.50	3.58	0.320	0.288	53	2.02	27.6	27
1	1015	4.64	34.917	27.67	4.46	0.398	0.223	64	1.74	23.8	28
1	1264	4.38	34.944	27.72	4.75	0.424	0.201	68	1.64	23.2	28

T G THOMPSON CRUISE 001 STATION 038 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.38	0.00	35.890	0.000	22.96	491.3	0.000	0.00	4.52	0.00	
10	28.34	0.00	35.892	0.000	22.97	490.3	0.050	0.03	4.52	0.00	
20	28.34	0.00	35.897	0.000	22.98	490.4	0.099	0.10	4.52	0.00	0.88
30	28.29	0.00	35.919	0.001	23.01	487.8	0.149	0.23	4.53	0.00	0.83
50	27.33	0.01	36.238	0.004	23.56	435.6	0.242	0.61	4.53	0.00	0.92
75	25.59	0.00	36.452	0.000	24.28	368.7	0.343	1.24	4.30	0.00	
100	23.40	0.00	36.765	0.003	25.18	284.1	0.425	1.97	4.10	0.00	0.99
150	19.78	0.00	36.636	0.001	26.08	199.3	0.547	3.48	3.51	0.00	0.97
200	17.40	0.00	36.321	0.000	26.45	166.0	0.639	5.11	3.54	0.00	0.97
250	15.48	0.00	36.003	0.000	26.66	147.3	0.718	6.93	3.32	0.00	0.97
300	13.59	0.00	35.693	0.000	26.83	131.8	0.788	8.90	3.09	0.00	
400	10.69	0.00	35.243	0.000	27.04	112.3	0.911	13.28	2.90	0.00	0.97
500	9.50	0.00	34.941	0.000	27.17	100.1	1.019	18.21	2.86	0.00	0.94
600	7.24	0.01	34.819	0.001	27.26	91.7	1.116	23.67	2.96	0.00	0.91
700	6.35	0.00	34.786	0.000	27.36	82.8	1.204	29.54	3.24	0.00	0.88
800	5.60	0.00	34.821	0.001	27.48	71.4	1.282	35.52	3.54	0.00	0.80
1000	4.68	0.00	34.911	0.001	27.66	55.0	1.419	47.20	4.40	0.01	0.89
1200	4.38	0.01	34.940	0.004	27.72	51.2	1.517	59.35	4.68	0.05	14.03

T G THOMPSON CRUISE 001 STATION 039 OBSERVED VALUES

DATE	13/11/65	BAROMETER	06.6	WEATHER	X1	WIND VELOC	21	WAVE PERIOD	X
HOUR	03.0	TEMP DRY	28.7	VISIBILITY	6	WIND DIREC	06	SECCHI	
LAT	10-01.0N	TEMP WET	26.9	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	77-25.0W	REL HUMID	87	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	2744

MESSENGER TIMES: 08.0
WIRE ANGLES: --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	[illegible]	27.89	35.375	22.73	4.53	0.405	-0.012	103	0.00	0.2	3
1	1[illegible]	27.93	35.483	22.78	4.57	0.408	-0.016	104	0.00	0.2	2
1	21	27.99	36.111	23.25	4.55	0.407	-0.016	104	0.01	0.2	2
1	31	27.5[illegible]									
1	51	26.51	36.352	23.91	4.42	0.395	0.004	99	0.01	0.1	2
1	75	25.00	36.606	24.58	4.20	0.375	0.032	92	0.06	0.4	2
1	102	24.25	36.690	24.86	4.10	0.366	0.046	89	0.09	1.8	2
1	152	20.63	36.713	25.92	3.56	0.318	0.120	73	0.38	5.8	3
1	203	17.79	36.384	26.40	3.59	0.321	0.141	69	0.54	9.1	3
1	253	15.81	36.058	26.63	3.42	0.305	0.175	64	0.81	12.7	6
1	305	14.00	35.767	26.80	3.19	0.285	0.214	57	1.09	17.0	8
1	407	9.90	35.137	27.09	2.86	0.256	0.292	47	1.73	25.7	17
1	510	8.51	34.952	27.18	2.81	0.251	0.315	44	1.94	28.7	20
1	612	7.25	34.823	27.27	2.94	0.262	0.321	45	2.10	30.1	23
1	714	6.30	34.788	27.37	2.91	0.260	0.337	44	2.18	30.0	26
1	817	5.66	34.818	27.47	3.50	0.313	0.293	52	2.06	27.6	27
1	1020	4.72	34.902	27.65	4.39	0.392	0.228	63	1.76	24.2	27
1	1275	4.30	34.946	27.73	4.78	0.427	0.200	68		22.4	28

T G THOMPSON CRUISE 001 STATION 039 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.89	0.00	35.375	0.000	22.73	512.9	0.000	0.00	4.53	0.00	
10	27.98	0.00	35.483	0.000	22.79	508.3	0.052	0.03	4.57	0.00	
20	28.00	0.01	36.100#		23.24	465.1	0.101	0.10	4.55	0.00	0.88
30	27.63	0.00	36.190#		23.43	447.6	0.147	0.22	4.52	0.00	1.03
50	26.57	0.00	36.350#		23.89	404.3	0.233	0.57	4.43	0.00	0.95
75	25.05	0.01	36.594	0.004	24.55	342.8	0.327	1.16	4.21	0.00	1.40
100	24.32	0.02	36.688	0.002	24.84	315.7	0.410	1.90	4.11	0.00	0.86
150	20.80	0.02	36.717	0.001	25.87	219.3	0.545	3.57	3.58	0.01	0.94
200	17.93	0.00	36.408	0.003	26.38	172.2	0.643	5.31	3.58	0.01	0.92
250	15.91	0.01	36.086	0.000	26.62	150.8	0.725	7.18	3.43	0.00	0.91
300	14.17	0.01	35.796	0.001	26.78	136.2	0.797	9.22	3.21	0.00	0.83
400	10.15	0.04	35.174	0.005	27.08	108.0	0.920	13.58	2.88	0.00	0.90
500	8.58	0.04	34.959	0.006	27.17	100.0	1.025	18.41	2.80	0.00	0.87
600	7.39	0.00	34.839	0.000	27.26	92.3	1.122	23.89	2.92	0.01	0.85
700	6.41	0.00	34.789	0.000	27.35	83.5	1.211	29.81	2.90	0.02	0.82
800	5.75	0.00	34.810	0.001	27.46	74.2	1.291	35.94	3.38	0.02	0.74
1000	4.79	0.00	34.894	0.001	27.64	57.7	1.425	48.13	4.32	0.00	0.85
1200	4.32	0.00	34.933	0.005	27.72	50.9	1.535	60.53	4.77	0.01	13.83

T G THOMPSON CRUISE 001 STATION 040 OBSERVED VALUES

DATE	13/11/65	BAROMETER	28.1	WEATHER	X1	WIND VELOC	16	WAVE PERIOD	1
HOUR	11.7	TEMP DRY	26.9	VISIBILITY	7	WIND DIREC	05	SECCHI	
LAT	9-50.0N	TEMP WET	26.4	CLOUD TYPE	2	WAVE DIREC	49	WATER COLOR	
LONG	77-48.5W	REL HUMID	82	CLOUD AMT	3	WAVE HEIGHT	2	SOUNDING	1144

MESSENGER TIMES: 11.7
WIRE ANGLES: 07

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	2	27.87	35.754	23.03	4.53	0.404	-0.012	103	0.00	0.1	2
1	10	27.86	35.754	23.03	4.53	0.405	-0.013	103	0.01	0.4	2
1	21	27.85	35.760	23.04	4.53	0.404	-0.012	103	0.00	0.3	2
1	31	27.85	35.993	23.21	4.45	0.397	-0.005	101	0.00	0.3	2
1	51	26.61	36.358	23.69	4.44	0.396	0.002	99	0.01	0.2	1
1	75	25.39	36.520	24.39					0.04	1.0	2
1	102	23.79	36.720	25.02					0.10	2.1	2
1	153	20.43	36.697	25.96					0.32	6.4	2
1	204	17.68	36.357	26.41					0.53	9.3	4
1	255	15.39	35.989	26.67					0.89	15.2	6
1	307	13.07	35.596	26.86					1.24	19.4	10
1	403	10.11	35.158	27.08					1.70	25.6	15
1	509	8.41	34.934	27.18					1.96	28.5	19
1	611	7.14	34.814	27.27					2.14	30.1	24
1	713	6.45	34.780	27.34					2.17	30.1	25
1	815	5.77	34.767	27.42					2.08	29.7	27
1	1013	4.65	34.918	27.57					1.76	25.4	27
1	1120	4.52	34.925	27.69					1.71	23.9	28

T G THOMPSON CRUISE 001 STATION 040 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.87	0.00	35.754	0.000	23.03	485.0	0.000	0.00	4.53	0.00	
10	27.86	0.00	35.754	0.000	23.03	485.1	0.049	0.03	4.53	0.00	
20	27.85	0.00	35.754	0.004	23.03	485.3	0.098	0.10	4.53	0.00	0.88
30	27.86	0.01	35.970	0.004	23.19	470.4	0.146	0.22	4.46	0.00	0.83
50	25.69	0.01	36.354	0.001	23.86	407.7	0.235	0.58	4.43	0.00	15.06
75	25.44	0.00	36.517	0.002	24.37	359.6	0.331	1.19			0.94
100	23.92	0.00	36.706	0.002	24.98	303.1	0.415	1.93			0.86
150	20.62	0.01	36.710	0.002	25.92	215.3	0.546	3.55			0.91
200	17.88	0.00	36.390	0.003	26.38	172.2	0.643	5.28			0.89
250	15.60	0.01	35.926	0.000	26.64	148.4	0.724	7.14			0.87
300	13.37	0.01	35.646	0.003	26.84	130.7	0.794	9.11			0.78
400	10.28	0.01	35.181	0.003	27.06	109.8	0.916	13.42			0.89
500	8.53	0.01	34.947	0.001	27.17	100.0	1.022	18.30			0.88
600	7.25	0.00	34.822	0.000	27.26	91.6	1.118	23.75			0.86
700	6.52	0.01	34.781	0.001	27.33	85.6	1.208	29.72			0.84
800	5.87	0.00	34.766	0.001	27.41	79.0	1.291	36.12			0.76
1000	4.72	0.01	34.903	0.006	27.65	56.1	1.428	48.55			0.96

T G THOMPSON CRUISE 001 STATION 041 OBSERVED VALUES

DATE	13/11/65	BAROMETER	29.9	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	3
HOUR	16.1	TEMP DRY	29.2	VISIBILITY	5	WIND DIREC	04	SECCHI	
LAT	9-25.4N	TEMP WET	26.4	CLOUD TYPE	2	WAVE DIREC	04	WATER COLOR	
LONG	78-10.8W	REL HUMID	80	CLOUD AMT	3	WAVE HEIGHT	3	SOUNDING	0256

MESSENGER TIMES: 16.1, 16.3
WIRE ANGLES: --, --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	0	28.50	34.613	21.96	4.49	0.401	-0.010	102	0.02	0.1	5
1	10	28.42	34.718	22.07	4.46	0.398	-0.007	102	0.06	0.1	5
1	21	28.14	35.682	22.88	4.49	0.401	-0.010	103	0.03	0.1	2
1	31	27.92	35.927	23.14	4.49	0.401	-0.010	102	0.02	0.2	2
1	51	26.98	36.270	23.70	4.40	0.393	0.003	99	0.04	0.4	2
1	77	25.71	36.468	24.25	4.29	0.383	0.020	95	0.06	1.0	1
1	103	24.61	36.520	24.70	4.06	0.363	0.048	88	0.10	1.5	1
1	154	20.23	36.665	25.99	3.55	0.317	0.124	72	0.42	6.5	2
2	231	14.95									

T G THOMPSON CRUISE 001 STATION 041 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.50	0.00	34.618	0.000	21.96	586.4	0.000	0.00	4.49	0.00	
10	28.42	0.00	34.718	0.000	22.07	577.1	0.059	0.03	4.46	0.00	
20	28.17	0.00	35.650#		22.85	502.7	0.113	0.11	4.49	0.00	0.88
30	27.95	0.00	35.907	0.001	23.12	477.7	0.163	0.24	4.49	0.00	1.23
50	27.04	0.01	36.257	0.000	23.57	425.2	0.254	0.51	4.41	0.00	0.92
75	25.31	0.00	36.459	0.003	24.21	374.6	0.355	1.24	4.30	0.00	0.89
100	24.75	0.02	36.606	0.001	24.55	334.2	0.444	2.04	4.09	0.00	0.81
150	20.61	0.04	36.671	0.001	25.89	217.9	0.593	3.75	3.58	0.00	14.40
200	16.25	0.21					0.000	0.00			19.97

T G THOMPSON CRUISE 001 STATION 042 OBSERVED VALUES

DATE	13/11/65	BAROMETER	25.2	WEATHER	X1	WIND VELOC	10	WAVE PERIOD	2		
HOUR	20.9	TEMP DRY	29.3	VISIBILITY	6	WIND DIREC	01	SECCHI			
LAT	9-09.0N	TEMP WET	26.5	CLOUD TYPE	2	WAVE DIREC	01	WATER COLOR			
LONG	77-35.6W	REL HUMID	80	CLOUD AMT	5	WAVE HEIGHT	2	SOUNDING	1399		

MESSENGER TIMES: 20.9, 21.3
WIRE ANGLES: 00, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	OXYGEN ML/L	OXYGEN MGA/L	OXYGEN AOU	OXYGEN SATN	PHOS	NITR	SIL
1	0	28.50	34.876	22.16	4.52	0.404	-0.013	103	0.01	0.1	4
1	10	28.39	34.901	22.21	4.50	0.402	-0.011	103	0.01	0.1	5
2	21	28.19	35.576	22.79	4.42	0.395	-0.004	101	0.01	0.1	4
2	31	28.16	35.916	23.05	4.44	0.396	-0.006	102	0.01	0.2	2
2	51	27.77	36.148	23.35	4.46	0.398	-0.006	102	0.02	0.2	2
2	77	26.77	36.276	23.77	4.27	0.381	0.016	96	0.06	0.6	2
2	103	24.46	36.647	24.77	4.00	0.357	0.054	87	0.11	1.9	1
2	150	20.48	36.708	25.95	3.56	0.318	0.121	72	0.34	6.2	2
2	201	17.42	36.319	26.44	3.56	0.318	0.147	68	0.60	10.2	4
2	251	15.24	35.962	26.68	3.34	0.298	0.185	61	0.92	14.6	6
2	302	13.32	35.651	26.85	3.12	0.278	0.228	55	1.20	19.1	9
2	404	10.24	35.181	27.07	2.82	0.252	0.291	46	1.72	25.9	14
2	506	8.32	34.928	27.19	2.79	0.249	0.319	44	2.00	29.4	19
2	608	7.07	34.819	27.29	2.97	0.265	0.321	45	2.14	30.6	23
2	710	6.33	34.785	27.36	3.14	0.281	0.315	47	2.18	31.1	26
2	812	5.63	34.818	27.48	3.55	0.317	0.290	52	2.07	29.2	27
2	1015	4.79	34.917	27.66	4.29	0.383	0.236	62	1.80	25.5	27
2	1268	4.43	34.936	27.71	4.68	0.418	0.207	67	1.68	23.5	28

T G THOMPSON CRUISE 001 STATION 042 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.50	0.00	34.876	0.000	22.16	567.9	0.000	0.00	4.52	0.00	
10	29.39	0.00	34.901	0.000	22.21	563.0	0.057	0.03	4.50	0.00	
20	29.21	0.00	35.507	0.014	22.73	514.1	0.112	0.11	4.43	0.00	0.55
30	29.16	0.00	35.891	0.002	23.03	485.6	0.162	0.24	4.44	0.00	0.83
50	27.80	0.00	36.145	0.004	23.34	456.9	0.257	0.53	4.46	0.00	0.92
75	26.88	0.01	36.265	0.005	23.73	420.9	0.368	1.33	4.29	0.00	0.89
100	24.76	0.02	36.604	0.018	24.65	334.5	0.453	2.17	4.03	0.00	0.91
150	21.48	0.00	36.708	0.000	25.95	211.8	0.609	3.86	3.56	0.00	
200	17.47	0.00	36.322	0.002	26.44	167.0	0.726	5.55	3.56	0.00	0.97
250	15.28	0.00	35.969	0.000	26.67	145.5	0.775	7.35	3.35	0.00	0.97
300	13.39	0.00	35.662	0.000	26.84	130.0	0.844	9.31	3.13	0.00	0.93
400	10.34	0.00	35.195	0.000	27.06	109.7	0.965	13.61	2.83	0.00	0.94
500	8.41	0.00	34.933	0.001	27.18	98.8	1.070	18.45	2.79	0.00	0.92
600	7.15	0.00	34.824	0.001	27.28	89.9	1.166	23.81	2.95	0.00	0.89
700	6.39	0.01	34.785	0.000	27.35	83.5	1.253	29.66	3.12	0.00	0.87
800	5.71	0.00	34.812	0.001	27.46	73.5	1.333	35.75	3.50	0.00	0.80
1000	4.33	0.00	34.910	0.001	27.65	57.1	1.485	47.32	4.24	0.00	1.88
1200	4.48	0.01	34.932	0.007	27.70	53.0	1.576	60.40	4.66	0.01	14.28

T G THOMPSON CRUISE 001 STATION 043 OBSERVED VALUES

DATE	14/11/65	BAROMETER	27.0	WEATHER	X1	WIND VELOC	05	WAVE PERIOD	X
HOUR	01.6	TEMP DRY	29.2	VISIBILITY		WIND DIREC	32	SECCHI	
LAT	8-51.8N	TEMP WET	26.5	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	77-01.2W	REL HUMID	81	CLOUD AMT	9	WAVE HEIGHT	X	SOUNDING	0064

MESSENGER TIMES: 01,6
WIRE ANGLES: 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.67	34.912	22.13	4.56	0.407	-0.018	105	0.02	0.2	5
1	10	28.51	34.890	22.17	4.53	0.404	-0.014	104	0.02	0.5	5
1	21	28.26	34.972	22.31	4.53	0.405	-0.013	103	0.02	0.8	5
1	31	28.25	35.055	22.38	4.52	0.404	-0.012	103	0.00	1.2	5
1	51	28.00	35.844	23.05	4.49	0.401	-0.010	103	0.03	0.1	3
1	62	27.32	36.198	23.54	4.30	0.384	0.010	98	0.04	1.3	2

T G THOMPSON CRUISE 001 STATION 043 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.67	0.00	34.912	0.000	22.13	570.7	0.000	0.00	4.56	0.00	
10	28.51	0.00	34.890	0.000	22.17	567.6	0.058	0.03	4.53	0.00	
20	28.28	0.00	34.962	0.001	22.30	555.6	0.114	0.12	4.53	0.00	0.88
30	28.25	0.00	35.042	0.003	22.37	549.3	0.170	0.26	4.52	0.00	0.83
50	28.03	0.01	35.797	0.008	23.00	489.1	0.275	0.68	4.50	0.00	0.96

T G THOMPSON CRUISE 001 STATION 044 OBSERVED VALUES

DATE	14/11/65	BAROMETER	07.5	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	X
HOUR	03.2	TEMP DRY	24.6	VISIBILITY	6	WIND DIREC	05	SECCHI	
LAT	9-32.0N	TEMP WET	27.5	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	77-00.0W	REL HUMID	92	CLOUD AMT	9	WAVE HEIGHT	2	SOUNDING	2669

MESSENGER TIMES: 06.2, 05.3
WIRE ANGLES: --, --

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SAT%	PHOS	NITR	SIL
1	0	28.49	35.362	22.91	4.51	0.403	-0.015	104	0.00	0.2	2
1	10	28.45	35.367	22.92	4.53	0.404	-0.016	104	0.00	0.2	2
1	21	28.45	35.370	22.92	4.53	0.404	-0.016	104	0.00	0.1	2
1	31	28.37	36.074	23.12	4.62	0.413	-0.024	106	0.00	0.1	2
1	51	29.37	36.319	23.77	4.49	0.400	-0.004	101	0.01	0.0	1
1	72	25.92	36.439	24.15	4.33	0.387	0.015	96	0.01	0.1	2
1	103	24.33	36.670	24.83	3.98	0.356	0.056	86	0.10	1.8	2
1	154	20.01	36.653	26.04	3.57	0.319	0.124	72	0.36	8.2	2
1	205	17.90	36.325	26.33	3.59	0.321	0.140	70	0.53	9.3	3
2	255	15.15	35.952	26.59	3.24	0.289	0.198	59	0.95	15.3	7
2	303	12.83	35.575	26.89	3.05	0.273	0.240	53	1.30	20.0	11
2	404	10.46	35.213	27.26	2.83	0.253	0.287	47	1.67	25.3	15
2	507	8.69	34.976	27.47	2.77	0.247	0.316	44	1.92	28.8	20
2	608	7.54	34.837	27.27	2.93	0.262	0.321	45	2.11	30.4	25
2	711	6.34	34.788	27.36	3.33	0.297	0.299	50	2.16	30.6	28
2	813	5.67	34.793	27.44	3.59	0.321	0.285	53	2.06	29.1	29
2	1019	4.75	34.956	27.69	4.05	0.362	0.257	58	1.80	25.3	29
2	1275	4.31			4.78	0.427			1.65	22.9	30

T G THOMPSON CRUISE 001 STATION 044 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.48	0.00	35.862	0.000	22.91	496.4	0.000	0.00	4.51	0.00	
10	28.45	0.00	35.867	0.000	22.92	495.6	0.050	0.03	4.53	0.00	
20	28.45	0.00	35.865	0.003	22.92	496.2	0.100	0.10	4.53	0.00	0.88
30	28.33	0.00	36.051	0.004	23.10	479.3	0.150	0.23	4.61	0.00	0.83
50	26.95	0.02	36.300	0.001	23.73	419.5	0.240	0.59	4.49	0.00	0.92
75	25.99	0.02	36.431	0.004	24.14	382.0	0.341	1.24	4.34	0.00	0.89
100	24.54	0.00	36.645	0.004	24.74	325.2	0.430	2.03	4.02	0.01	0.81
150	20.34	0.05	36.679	0.004	25.97	210.2	0.565	3.69	3.59	0.00	0.89
200	18.11	0.06	36.439	0.000	26.36	174.2	0.662	5.40	3.59	0.02	0.86
250	15.21	0.01	35.962	0.001	26.68	144.5	0.742	7.24	3.25	0.00	0.97
300	12.94	0.00	35.593	0.000	26.88	126.2	0.811	9.16	3.06	0.00	0.89
400	10.52	0.01	35.221	0.002	27.05	110.9	0.930	13.42	2.84	0.00	0.94
500	8.80	0.00	34.989	0.000	27.16	101.2	1.037	18.35	2.77	0.00	0.91
600	7.34	0.00	34.839	0.000	27.26	91.6	1.135	23.84	2.91	0.00	0.89
700	6.42	0.01	34.789	0.001	27.35	83.6	1.223	29.73	3.28	0.01	0.86
800	5.75	0.00	34.781	0.000	27.43	76.3	1.304	35.95	3.56	0.00	0.79
1000	4.81	0.00	34.927	0.001	27.66	55.6	1.437	48.10	4.01	0.00	13.44
1200	4.38	0.00					0.000	0.00	4.52	0.01	14.29

T G THOMPSON CRUISE 001 STATION 045 OBSERVED VALUES

DATE	14/11/65	BAROMETER	27.3	WEATHER	X1	WIND VELOC	17	WAVE PERIOD	3
HOUR	12.2	TEMP DRY	28.0	VISIBILITY	6	WIND DIREC	04	SECCHI	
LAT	10-03.0N	TEMP WET	26.1	CLOUD TYPE	8	WAVE DIREC	03	WATER COLOR	
LONG	76-40.3W	REL HUMID	86	CLOUD AMT	6	WAVE HEIGHT	3	SOUNDING	2542

MESSENGER TIMES: 12.2
WIRE ANGLES: 05

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.48	35.148	22.37	4.49	0.401	-0.011	103	0.02	0.1	5
1	10	28.43	35.217	22.42	4.52	0.403	-0.014	104	0.00	0.0	5
1	21	28.48	35.323	22.88	4.52	0.404	-0.016	104	0.00	0.1	2
1	31	28.18	36.082	23.17	4.56	0.407	-0.015	105	0.00	0.0	2
1	51	26.42	36.379	23.96	4.40	0.393	0.006	98	0.02	0.4	1
1	75	25.31	36.532	24.42	4.22	0.375	0.031	92	0.02	0.7	2
1	100	23.30	36.748	25.19	3.89	0.347	0.071	83	0.17	2.9	2
1	150	20.20	36.664	25.99	3.52	0.314	0.127	71	0.38	6.6	3
1	201	17.44	36.333	26.45	3.61	0.323	0.142	69	0.62	9.9	4
1	251	15.35	35.990	25.67	3.40	0.303	0.182	62	0.95	14.7	7
1	302	13.23	35.638	26.86	3.07	0.274	0.234	54	1.27	19.8	10
1	402	10.49	35.217	27.05	2.97	0.266	0.274	49	1.70	24.8	15
1	506	8.46	34.942	27.18	2.85	0.254	0.312	45	2.00	28.0	21
1	603	7.10	34.795	27.26	3.03	0.271	0.315	46	2.18	31.0	25
1	709	6.30	34.760	27.36	3.18	0.284	0.313	48	2.18	30.6	28
1	811	5.64	34.822	27.48	3.61	0.322	0.284	53	2.09	28.8	30
1	1010	4.72	34.925	27.67	4.40	0.393	0.227	63	1.80	24.9	29
1	1271	4.33	34.950	27.73					1.65	23.0	30

T G THOMPSON CRUISE 001 STATION 045 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.48	0.00	35.148	0.000	22.37	547.7	0.000	0.00	4.49	0.00	
10	28.48	0.00	35.217	0.000	22.42	543.2	0.055	0.03	4.52	0.00	
20	28.49	0.00	35.763	0.012	22.83	504.6	0.108	0.11	4.52	0.00	0.88
30	28.23	0.00	35.064	0.003	23.14	475.2	0.158	0.23	4.56	0.00	0.83
50	26.52	0.02	36.361	0.001	23.92	402.0	0.246	0.59	4.41	0.00	0.92
75	25.31	0.00	36.532	0.000	24.42	354.7	0.341	1.19	4.20	0.00	
100	23.30	0.00	36.748	0.000	25.19	282.6	0.421	1.90	3.89	0.00	
150	20.20	0.00	36.664	0.000	25.99	207.8	0.545	3.44	3.52	0.00	
200	17.49	0.00	36.341	0.001	26.44	166.6	0.639	5.11	3.61	0.00	0.97
250	15.39	0.00	35.997	0.000	26.67	145.8	0.718	6.92	3.41	0.00	0.97
300	13.31	0.00	35.651	0.001	26.85	129.2	0.788	8.87	3.08	0.00	0.93
400	10.57	0.01	35.229	0.001	27.05	111.3	0.909	13.19	2.97	0.00	0.94
500	8.56	0.00	34.954	0.000	27.17	100.0	1.016	18.09	2.85	0.00	0.92
600	7.18	0.00	34.802	0.000	27.26	92.1	1.113	23.56	3.01	0.00	0.89
700	6.36	0.01	34.778	0.001	27.35	83.6	1.201	29.47	3.16	0.00	0.88
800	5.70	0.00	34.816	0.001	27.47	73.2	1.281	35.56	3.56	0.00	0.82
1000	4.75	0.00	34.918	0.001	27.66	55.5	1.411	47.44	4.37	0.01	15.02
1200	4.34	0.00	34.946	0.006	27.73	50.2	1.518	59.50			14.32

T G THOMPSON CRUISE 001 STATION 046 OBSERVED VALUES

DATE	14/11/65	BAROMETER	06.5	WEATHER	X1	WIND VELOC	13	WAVE PERIOD	3		
HOUR	15.5	TEMP DRY	28.5	VISIBILITY	6	WIND DIREC	04	SECCHI			
LAT	9-53.1N	TEMP WET	25.0	CLOUD TYPE	7	WAVE DIREC	04	WATER COLOR			
LONG	76-17.5W	REL HUMID	82	CLOUD AMT	6	WAVE HEIGHT	3	SOUNDING	0713		

MESSENGER TIMES: 15.5
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	28.74	34.272	21.63	4.52	0.403	-0.013	103	0.00	0.1	9
1	10	28.64	34.283	21.67	4.51	0.403	-0.012	103	0.00	0.0	10
1	21	28.57	35.953	22.95	4.52	0.404	-0.017	104	0.00	0.1	1
1	31	28.48	35.947	22.97	4.53	0.404	-0.017	104	0.00	0.1	1
1	51	26.92	36.318	23.76	4.54	0.405	-0.009	102	0.01	0.1	1
1	77	25.57	36.512	24.33	4.23	0.377	0.027	93	0.01	0.2	2
1	103	24.08	36.578	24.91	3.92	0.350	0.063	85	0.12	2.2	1
1	154	20.98	36.747	25.85	3.59	0.321	0.115	74	0.28	5.0	2
1	206	18.54									
1	257	16.22			3.55	0.317			0.47	8.3	3
1	310	14.81			3.58	0.320			0.56	9.7	4
1	413	12.55	35.601	26.97	3.00	0.268	0.247	52	1.26	19.3	10
1	517	10.34	35.261	27.11	2.90	0.259	0.282	48	1.61	23.9	14
1	621	8.98	35.047	27.13	2.81	0.251	0.308	45	1.86	27.0	18
1	673	8.27	34.966	27.23	2.80	0.250	0.319	44	1.96	20.0	20

T G THOMPSON CRUISE 001 STATION 046 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.74	0.00	34.272	0.000	21.63	618.9	0.000	0.00	4.52	0.00	
10	28.64	0.00	34.283	0.000	21.67	615.4	0.063	0.03	4.51	0.00	
20	29.58	0.00	35.935#		22.93	495.1	0.119	0.12	4.52	0.00	0.86
30	28.50	0.01	35.948#		22.96	492.2	0.168	0.24	4.53	0.00	0.83
50	27.01	0.02	36.293	0.007	23.71	422.0	0.260	0.61	4.54	0.00	1.36
75	25.66	0.01	36.503	0.004	24.29	367.2	0.360	1.24	4.26	0.00	0.89
100	24.26	0.00	36.662	0.001	24.84	315.9	0.446	2.01	3.95	0.00	0.81
150	21.21	0.01	36.754	0.000	25.79	227.7	0.583	3.71	3.61	0.00	0.90
200	18.80	0.01	36.530#		26.26	184.3	0.687	5.55	3.51	0.03	0.94
250	16.51	0.02	36.250#		26.61	152.3	0.771	7.49	3.54	0.01	0.96
300	15.03	0.02	36.030#		26.78	137.3	0.844	9.54	3.58	0.01	0.72
400	12.82	0.01	35.650#		26.95	122.3	0.975	14.21	3.08	0.02	0.84
500	10.67	0.02	35.309	0.001	27.09	109.5	1.092	19.59	2.90	0.01	1.41
600	9.21	0.02	35.081	0.001	27.17	103.3	1.200	25.65	2.82	0.00	0.90

T G THOMPSON CRUISE 001 STATION 047 OBSERVED VALUES

DATE	14/11/65	BAROMETER	05.5	WEATHER	X1	WIND VELOC	08	WAVE PERIOD 2
HOUR	19.2	TEMP DRY	30.2	VISIBILITY	6	WIND DIREC	35	SECCHI
LAT	9-42.0N	TEMP WET	26.1	CLOUD TYPE	2	WAVE DIREC	05	WATER COLOR
LONG	76-01.0W	REL HUMID	72	CLOUD AMT	6	WAVE HEIGHT	1	SOUNDING 0049

MESSENGER TIMES: 19.2
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	29.98	34.931	21.70	4.51	0.403	-0.021	106	0.02	0.1	17
1	10	28.30	35.315	22.55	4.51	0.403	-0.012	103	0.00	0.0	4
1	21	28.25	35.362	22.61	4.48	0.400	-0.010	102	0.00	0.0	4
1	31	28.26	35.437	22.66	4.45	0.397	-0.007	102	0.00	0.0	3
1	49	26.92	36.274	23.72	4.20	0.375	0.021	95	0.07	0.7	2

T G THOMPSON CRUISE 001 STATION 047 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.98	0.00	34.931	0.000	21.70	611.6	0.000	0.00	4.51	0.00	
10	29.30	0.00	35.315	0.000	22.55	530.5	0.058	0.03	4.51	0.00	
20	28.21	0.03	35.365	0.005	22.62	524.6	0.111	0.11	4.48	0.00	0.88
30	28.27	0.01	35.423	0.004	22.64	522.6	0.164	0.24	4.45	0.00	0.83

T G THOMPSON CRUISE 001 STATION 048 OBSERVED VALUES

DATE	22/11/65	BAROMETER	29.9	WEATHER	X2	WIND VELOC	05	WAVE PERIOD X
HOUR	21.5	TEMP DRY	25.5	VISIBILITY	7	WIND DIREC	30	SECCHI
LAT	11-11.2N	TEMP WET	25.0	CLOUD TYPE	7	WAVE DIREC	49	WATER COLOR
LONG	74-50.7W	REL HUMID	96	CLOUD AMT	8	WAVE HEIGHT	0	SOUNDING 0238
MESSENGER TIMES:		21.5, 21.9						
WIRE ANGLES:		06, 00						

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	27.49	23.153*	13.72	3.95	0.353	-0.074	83	0.36	3.8	103
1	10	27.46	35.546	23.00	4.64	0.415	-0.020	105	0.01	0.2	3
1	21	27.60	35.844	23.18	4.54	0.415	-0.021	105	0.00	0.0	3
1	31	27.49	36.031	23.36	4.51	0.403	-0.009	102	0.03	0.0	1
1	51	26.39	36.381	23.97	4.31	0.385	0.014	96	0.02	0.5	0
1	77	25.39	36.528	24.40	4.17	0.373	0.033	92	0.04	1.0	1
1	102	23.97	36.742	24.99	4.07	0.364	0.050	88	0.08	1.4	1
1	153	19.57	36.613	26.10	3.53	0.315	0.131	71	0.40	7.3	3
1	180	18.55	36.498	26.30	3.57	0.319	0.137	70	0.46	8.9	3
2	238	16.59	36.203	26.55	3.66	0.327	0.145	69	0.71	11.4	4

T G THOMPSON CRUISE 001 STATION 048 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.49	0.00	35.546#		22.99	488.1	0.000	0.00	3.95	0.00	
10	27.46	0.00	35.546	0.000	23.00	487.8	0.050	0.03	4.64	0.00	
20	27.59	0.01	35.820#		23.17	472.4	0.098	0.10	4.66	0.01	0.88
30	27.51	0.00	36.014	0.001	23.34	456.5	0.145	0.22	4.53	0.00	0.84
50	26.46	0.01	36.366	0.001	23.94	399.7	0.231	0.57	4.32	0.00	0.92
75	25.47	0.01	36.522	0.005	24.37	360.1	0.327	1.18	4.18	0.00	0.90
100	24.10	0.00	36.727	0.003	24.94	306.7	0.411	1.92	4.08	0.00	0.86
150	19.91	0.04	36.633	0.006	26.05	202.7	0.539	3.50	3.56	0.01	0.96
200	17.93	0.04	36.400	0.001	26.38	172.6	0.634	5.18	3.64	0.01	5.94

SURFACE SALINITY ASSUMED FOR PURPOSES OF INTERPOLATION.

T G THOMPSON CRUISE 001 STATION 049 OBSERVED VALUES

DATE	23/11/55	BAROMETER	10.4	WEATHER	X5	WIND VELOC	15	WAVE PERIOD	3
HOUR	12.3	TEMP DRY	25.5	VISIBILITY	6	WIND DIREC	10	SECCHI	
LAT	12-55.0N	TEMP WET	25.2	CLOUD TYPE	7	WAVE DIREC	08	WATER COLOR	
LONG	77-00.0W	REL HUMID	94	CLOUD AMT	8	WAVE HEIGHT	2	SOUNDING	3795

MESSENGER TIMES: 12.3, 13.3
WIRE ANGLES: 00, 01

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	1	28.14	35.523	22.76	4.61	0.412	-0.021	105	0.03	0.1	0
1	11	28.12	35.522	22.77	4.67	0.418	-0.028	107	0.01	0.0	1
1	21	28.14	35.532	22.77	4.50	0.411	-0.020	105	0.01	0.1	0
1	31	28.15	35.535	22.77	4.61	0.412	-0.021	105	0.02	0.1	0
1	51	28.22	35.803	22.93	4.61	0.412	-0.023	106	0.00	0.1	1
1	77	27.75	35.959	23.22	4.55	0.404	-0.012	103	0.01	0.1	1
1	103	26.62	36.263	23.81	4.32	0.386	0.012	97	0.07	0.9	0
1	156	22.40	36.329	25.51	3.91	0.349	0.076	82	0.19	3.4	1
3	201		36.515		3.81	0.340			0.34	6.2	1
3	251	17.31	35.321	26.47	3.61	0.322	0.144	69	0.60	10.0	3
3	303	15.74	36.079	26.65	3.43	0.306	0.175	64	0.74	12.6	4
3	401	12.19	35.482	26.94	3.17	0.283	0.237	54	1.36	20.8	10
3	502	9.67	35.182	27.19	2.97	0.265	0.286	48	1.81	27.0	15
3	602	8.12	34.923	27.22	2.99	0.267	0.304	47	2.00	28.7	20
3	704	6.75	34.773	27.30	3.10	0.277	0.314	47	2.18	31.9	25
3	805	6.19	34.782	27.39	3.27	0.292	0.308	49	2.66	30.8	26
3	1002	5.21	34.873	27.57	3.96	0.354	0.259	58	1.97	26.9	28
3	1264	4.62	34.932	27.69	4.65	0.415	0.207	67	1.70	23.4	28

T G THOMPSON CRUISE 001 STATION 049 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.14	0.00	35.523	0.000	22.76	510.1	0.000	0.00	4.61	0.00	
10	28.12	0.00	35.522	0.000	22.77	509.9	0.052	0.03	4.67	0.00	
20	28.14	0.00	35.531	0.000	22.77	510.3	0.103	0.11	4.61	0.00	0.88
30	28.15	0.00	35.533	0.001	22.77	510.9	0.155	0.24	4.61	0.00	0.83
50	28.29	0.01	35.787	0.004	22.91	497.9	0.256	0.65	4.61	0.00	0.92
75	27.82	0.00	35.948	0.004	23.19	472.6	0.379	1.43	4.53	0.00	0.89
100	25.78	0.00	36.225	0.003	23.73	421.9	0.491	2.44	4.35	0.00	0.80
150	22.92	0.06	36.789	0.014	25.33	271.1	0.666	4.58	3.95	0.01	0.87
200	19.68	0.02	36.623	0.002	26.10	199.3	0.784	6.67	3.81	0.00	0.97
250	17.35	0.00	36.327	0.000	26.47	166.0	0.876	8.78	3.61	0.00	0.99
300	15.74	0.00	36.079	0.000	26.65	149.1	0.956	11.01	3.43	0.00	
400	12.22	0.00	35.488	0.001	26.94	122.6	1.093	15.87	3.17	0.00	0.98
500	9.71	0.00	35.088	0.000	27.09	109.0	1.210	21.25	2.97	0.00	0.97
600	8.15	0.00	34.925	0.001	27.21	97.5	1.314	27.12	2.99	0.00	0.97
700	6.79	0.00	34.777	0.001	27.29	89.8	1.409	33.42	3.09	0.00	0.94
800	6.12	0.00	34.779	0.001	27.38	81.6	1.496	40.09	3.26	0.00	0.91
1000	5.24	0.00	34.865	0.001	27.56	65.8	1.645	53.73	3.93	0.00	0.93
1200	4.73	0.01	34.911	0.007	27.66	57.9	1.770	67.84	4.56	0.02	15.15

T G THOMPSON CRUISE 001 STATION 050 OBSERVED VALUES

DATE	23/11/65	BAROMETER	29.9	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	2
HOUR	22.3	TEMP DRY	28.0	VISIBILITY	7	WIND DIREC	14	SECCHI	
LAT	14-31.0N	TEMP WET	25.0	CLOUD TYPE	6	WAVE DIREC	13	WATER COLOR	
LONG	77-01.0W	REL HUMID	78	CLOUD AMT	7	WAVE HEIGHT	1	SOUNDING	3932

MESSENGER TIMES: 22.3, 24.3
WIRE ANGLES: 06, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	28.30	35.470	22.67	4.55	0.406	-0.016	104	0.02	0.1	2
2	15	28.24	35.474	22.69	4.63	0.413	-0.023	106	0.00	0.2	1
2	21	28.23	35.473	22.70	4.61	0.412	-0.021	105	0.00	0.1	1
2	31	28.21	35.472	22.70	4.61	0.412	-0.021	105	0.00	0.1	1
2	51	28.18	35.480	22.72	4.61	0.412	-0.021	105	0.00	0.1	1
2	77	28.14	35.896	23.04	4.61	0.412	-0.022	106	0.00	0.1	1
2	103	27.21	35.989	23.42	4.30	0.384	0.011	97	0.06	0.3	1
2	154	23.88	36.712	24.99	4.01	0.358	0.057	86	0.20	3.1	2
2	206		36.722		3.61	0.323			0.35	6.1	2
2	309	16.83	36.228	26.51	3.61	0.322	0.149	68	0.67	11.2	5
2	411	13.51	35.679	26.83	3.25	0.290	0.215	57	1.18	19.2	9
2	514	10.82	35.255	27.03	2.90	0.259	0.277	48	1.60	24.2	14
2	617	9.08	35.016	27.14	2.86	0.255	0.303	46	1.90	27.3	18
1	702	7.99	34.893	27.21	2.99	0.267	0.306	47	2.04	29.6	21
1	803	6.93	34.781	27.28	3.07	0.274	0.314	47	2.16	31.2	25
1	1002	5.69	34.838	27.48	3.59	0.321	0.285	53	2.06	29.5	29
1	1252	4.69	34.926	27.67	4.53	0.404	0.216	65	1.72	24.0	27
1	1500	4.30	34.950	27.74	4.88	0.435	0.191	69	1.60	23.1	30
1	1751	4.14	34.962	27.76	5.04	0.450	0.179	71	1.60	22.6	31
1	1999	4.05	34.965	27.77	5.11	0.456	0.174	72	1.58	22.9	32
1	2250	4.07	34.964	27.77	5.16	0.460	0.170	73	1.54	22.6	32
1	2500	4.08	34.964	27.77	5.16	0.460	0.170	73	1.51	22.8	31
1	3001	4.13	34.961	27.76	5.15	0.460	0.169	73	1.53	22.5	31
	3502	4.17	34.959	27.76	5.19	0.462	0.166	74	1.52	22.4	31
1	3925	4.24	34.960	27.75	5.20	0.464	0.163	74	1.52	22.0	32

T G THOMPSON CRUISE 001 STATION 050 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.30	0.00	35.470	0.000	22.67	518.9	0.000	0.00	4.55	0.00	
10	28.24	0.00	35.474	0.000	22.69	517.1	0.053	0.03	4.63	0.00	
20	28.23	0.00	35.473	0.000	22.70	517.3	0.105	0.11	4.61	0.00	0.88
30	28.21	0.00	35.472	0.000	22.70	517.3	0.157	0.24	4.61	0.00	0.83
50	28.18	0.00	35.476	0.002	22.71	516.8	0.261	0.67	4.61	0.00	0.92
75	25.16	0.01	35.862	0.009	23.01	489.5	0.388	1.48	4.62	0.00	0.89
100	27.35	0.01	35.981	0.009	23.36	456.9	0.507	2.54	4.38	0.01	0.81
150	24.17	0.03	36.670#		24.87	314.8	0.701	4.95	4.03	0.01	0.89
200	21.42	0.08	36.720#		25.71	237.5	0.841	7.40	3.65	0.01	1.12
250	19.10	0.09	36.510#		26.17	194.9	0.950	9.89	3.57	0.06	1.03
300	17.14	0.02	36.270#		26.47	167.1	1.041	12.45	3.60	0.02	0.95
400	13.83	0.01	35.735	0.004	26.81	136.2	1.194	17.88	3.30	0.01	1.45
500	11.14	0.01	35.303	0.001	27.00	118.3	1.322	23.77	2.94	0.01	0.83
600	9.32	0.01	35.046	0.002	27.12	107.6	1.436	30.20	2.85	0.00	0.82
700	8.01	0.00	34.895	0.000	27.21	99.4	1.541	37.17	2.99	0.00	0.96
800	6.96	0.00	34.788	0.000	27.27	93.3	1.638	44.67	3.07	0.00	0.94
1000	5.73	0.00	34.829	0.001	27.48	74.7	1.808	60.22	3.58	0.00	0.98
1200	4.85	0.00	34.907	0.003	27.64	59.7	1.945	75.49	4.35	0.02	0.77
1500	4.30	0.00	34.959	0.000	27.74	52.3	2.115	99.02	4.88	0.00	
2000	4.05	0.00	34.965	0.000	27.77	52.4	2.381	147.04	5.11	0.00	0.99
2500	4.08	0.00	34.964	0.000	27.77	57.3	2.661	212.32	5.16	0.00	
3000	4.13	0.00	34.961	0.000	27.76	62.6	2.967	299.78	5.15	0.00	1.00

T G THOMPSON CRUISE 001 STATION 051 OBSERVED VALUES

DATE	24/11/65	BAROMETER	09.4	WEATHER	X1	WIND VELOC	12	WAVE PERIOD	X
HOUR	09.3	TEMP DRY	26.5	VISIBILITY	7	WIND DIREC	09	SECCHI	
LAT	14-17.0N	TEMP WET	24.3	CLOUD TYPE	X	WAVE DIREC	49	WATER COLOR	
LONG	78-50.0W	REL HUMID	83	CLOUD AMT	3	WAVE HEIGHT	1	SOUNDING	2240

MESSENGER TIMES: 09.3, 09.6
WIRE ANGLES: 03, 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.28	35.529	22.72	4.59	0.410	-0.020	105	0.05	0.1	1
1	10	28.23	35.527	22.74	4.61	0.412	-0.022	106	0.07	0.0	1
2	21	28.21	35.525	22.74	4.61	0.412	-0.021	105	0.04	0.1	2
2	31	28.23	35.525	22.74	4.66	0.416	-0.026	107	0.02	0.0	1
2	51	28.23	35.555	22.76	4.63	0.414	-0.024	106	0.02	0.0	1
2	75	27.97	35.760	23.00	4.65	0.415	-0.024	106	0.02	0.0	1
2	100	26.87	36.085	23.60	4.24	0.379	0.019	95	0.09	0.7	1
2	150	23.67	36.783	25.11	4.02	0.359	0.057	86	0.18	2.6	1
2	201	20.15	36.692	26.03	3.81	0.340	0.102	77	0.34	5.4	2
2	251	18.04	36.445	26.39	3.92	0.350	0.110	76	0.42	7.5	3
2	302	15.95	36.080	26.61	3.44	0.307	0.172	64	0.82	13.2	5
2	405	13.27	35.653	26.86	3.26	0.291	0.216	57	1.18	18.5	8
2	507	10.39	35.200	27.06	2.88	0.257	0.284	48	1.67	25.4	15
2	609	8.66	34.951	27.18	2.95	0.264	0.300	47	1.91	26.5	19
2	712	7.34	34.856	27.28	3.01	0.269	0.313	46	2.08	29.6	24
2	814	6.35	34.809	27.38	3.27	0.292	0.304	49	2.14	29.7	27
2	1021		34.768		3.82	0.341			2.01	26.6	29
2	1253	4.66	34.933	27.68	4.57	0.409	0.212	66	1.78	23.4	28

T G THOMPSON CRUISE 001 STATION 051 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.28	0.00	35.529	0.000	22.72	514.0	0.000	0.00	4.59	0.00	
10	28.23	0.00	35.527	0.000	22.74	513.0	0.052	0.03	4.61	0.00	
20	28.21	0.00	35.525	0.000	22.74	513.0	0.104	0.11	4.61	0.00	0.88
30	28.23	0.00	35.525	0.000	22.74	514.0	0.156	0.24	4.65	0.00	0.83
50	28.23	0.00	35.552	0.001	22.75	513.1	0.259	0.66	4.63	0.00	0.92
75	27.97	0.00	35.760	0.000	23.00	490.9	0.386	1.47	4.65	0.00	
100	26.87	0.00	36.085	0.000	23.60	434.6	0.502	2.51	4.24	0.00	
150	23.67	0.00	36.733	0.000	25.11	292.5	0.685	4.77	4.02	0.00	
200	20.21	0.01	36.698	0.002	26.02	207.5	0.811	6.98	3.81	0.00	0.97
250	18.08	0.00	36.451	0.000	26.38	174.2	0.908	9.19	3.92	0.00	0.97
300	16.03	0.00	36.094	0.001	26.60	154.4	0.990	11.51	3.46	0.01	0.93
400	13.38	0.02	35.669	0.003	26.85	132.1	1.135	16.65	3.26	0.01	0.93
500	10.57	0.01	35.228	0.003	27.05	113.7	1.259	22.35	2.90	0.01	0.91
600	8.78	0.01	34.994	0.002	27.17	102.6	1.368	28.49	2.93	0.01	0.88
700	7.47	0.00	34.866	0.000	27.27	93.3	1.467	35.09	3.00	0.00	0.85
800	6.47	0.00	34.813	0.001	27.36	84.0	1.557	41.98	3.23	0.00	0.78
1000	5.22	0.03	34.767	0.001	27.49	72.7	1.715	56.55	3.76	0.00	79.02
1200	4.72	0.03	34.846	0.003	27.61	62.5	1.852	71.96	4.33	0.00	48.58

T G THOMPSON CRUISE 001 STATION 052 OBSERVED VALUES

DATE	24/11/65	BAROMETER	10.5	WEATHER	X1	WIND VELOC	15	WAVE PERIOD	2
HOUR	18.6	TEMP DRY	25.4	VISIBILITY	7	WIND DIREC	06	SECCHI	
LAT	14-09.3N	TEMP WET	25.0	CLOUD TYPE	6	WAVE DIREC	06	WATER COLOR	
LONG	80-06.0W	REL HUMID	76	CLOUD AMT	4	WAVE HEIGHT	2	SOUNDING	1554

MESSENGER TIMES: 18.6
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	28.10	35.703	22.91	4.59	0.410	-0.020	105	0.00	0.0	1
1	10	28.05	35.703	22.93	4.61	0.412	-0.021	105	0.00	0.0	1
1	21	27.99	35.695	22.94	4.61	0.412	-0.020	105	0.00	0.0	1
1	31	28.10	35.845	23.02	4.65	0.416	-0.025	106	0.00	0.0	2
1	51	28.15	35.860	23.00	4.65	0.416	-0.026	107	0.00	0.1	1
1	73	26.08	36.485	24.15	4.67	0.418	-0.016	104	0.00	0.0	1
1	98	24.42	36.699	24.81	4.28	0.382	0.029	93	0.01	0.1	1
1	147	20.54	36.714	25.94	3.77	0.336	0.102	77	0.29	5.1	2
1	197	18.24	36.462	26.35	3.93	0.351	0.107	77	0.40	7.1	2
1	246	16.56	36.204	26.56	3.78	0.338	0.136	71	0.64	10.3	4
1	296	15.01	35.948	26.72	3.58	0.320	0.169	65	0.87	13.8	5
1	397	11.96	35.450	26.97	3.15	0.281	0.241	54	1.38	21.1	11
1	495	9.42	35.262	27.12	2.91	0.260	0.294	47	1.84	26.5	18
1	658	7.87	34.885	27.22	2.98	0.266	0.309	46	2.06	29.3	22
1	701	6.72	34.802	27.32	3.09	0.276	0.315	47	2.16	29.0	26

T G THOMPSON CRUISE 001 STATION 052 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.10	0.00	35.703	0.000	22.91	495.9	0.000	0.00	4.59	0.00	
10	28.05	0.00	35.703	0.000	22.93	494.7	0.050	0.03	4.61	0.00	
20	27.99	0.00	35.692	0.003	22.94	494.1	0.100	0.10	4.61	0.00	0.88
30	28.09	0.00	35.829	0.004	23.01	487.7	0.150	0.23	4.65	0.00	0.83
50	28.20	0.01	35.858	0.007	22.99	490.1	0.248	0.63	4.65	0.00	0.92
75	25.94	0.01	36.514	0.005	24.22	374.6	0.357	1.31	4.65	0.01	0.91
100	24.25	0.02	36.699	0.002	24.87	313.2	0.444	2.08	4.25	0.00	0.98
150	20.37	0.01	36.703	0.003	25.98	209.3	0.575	3.71	3.77	0.01	0.92
200	18.13	0.00	36.446	0.000	26.36	174.1	0.672	5.42	3.93	0.00	0.91
250	16.43	0.00	36.183	0.000	26.57	155.4	0.755	7.33	3.77	0.00	0.90
300	14.88	0.00	35.927	0.001	26.73	141.6	0.830	9.44	3.56	0.00	0.98
400	11.87	0.01	35.436	0.001	26.97	119.7	0.962	14.12	3.14	0.00	0.96
500	9.39	0.01	35.058	0.001	27.12	105.8	1.076	19.35	2.91	0.00	0.99
600	8.43#		34.950#		27.19	100.1	1.180	25.22	2.89	0.00	1.33
700	6.76	0.00	34.804	0.000	27.32	87.3	1.274	31.52	3.09	0.00	11.96

T G THOMPSON CRUISE 001 STATION 053 OBSERVED VALUES

DATE	25/11/65	BAROMETER	09.9	WEATHER	X1	WIND VELOC	17	WAVE PERIOD	X
HOUR	05.5	TEMP DRY	27.9	VISIBILITY	6	WIND DIREC	07	SECCHI	
LAT	12-32.1N	TEMP WET	25.2	CLOUD TYPE	3	WAVE DIREC	49	WATER COLOR	
LONG	80-05.0W	REL HUMID	80	CLOUD AMT	5	WAVE HEIGHT	1	SOUNDING	3017

MESSENGER TIMES: 05.5
WIRE ANGLES: 15

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.01	35.800	23.01	4.61	0.412	-0.021	105	0.00	0.1	2
1	10	28.01	35.802	23.02	4.62	0.413	-0.022	106	0.00	0.1	1
1	20	28.00	35.802	23.02	4.61	0.412	-0.021	105	0.00	0.0	2
1	30	28.01	35.803	23.02	4.63	0.414	-0.023	106	0.00	0.1	1
1	49	26.50	36.434	23.98	4.68	0.418	-0.019	105	0.02	0.1	1
1	73	24.02	36.749	24.97	4.41	0.394	0.020	95	0.01	0.5	0
1	97	21.50	36.787	25.74	3.66	0.327	0.105	76	0.22	4.7	2
1	144	18.97	36.572	26.25	3.67	0.328	0.123	73	0.42	7.6	2
1	193	16.61	36.228	26.57	3.63	0.324	0.148	69	0.65	10.6	4
1	242	14.69	35.915	26.76	3.36	0.300	0.192	61	0.97	14.9	7
1	290	13.88	35.769	26.82	3.27	0.292	0.208	58	1.16	16.4	8
1	387	11.17	35.327	27.02	3.02	0.270	0.262	51	1.54	22.9	13
1	484	9.35	35.096	27.16	2.98	0.266	0.288	48	1.80	27.3	17
1	581	7.64	34.871	27.25	2.99	0.267	0.311	46	2.09	29.5	22
1	679	6.96	34.823	27.31	3.07	0.274	0.313	47	2.15	30.2	25
1	776	6.31	34.806	27.38	3.97*	0.355	0.242	59	2.17	30.3	27
1	972	5.21	34.878	27.56	4.27	0.381	0.232	62	1.98	27.9	29
1	1217	4.59	34.937	27.69	4.61	0.412	0.210	66	1.76	24.7	28

T G THOMPSON CRUISE 001 STATION 053 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.01	0.00	35.800	0.000	23.01	486.1	0.000	0.00	4.61	0.00	
10	28.01	0.00	35.802	0.000	23.02	486.4	0.049	0.03	4.62	0.00	
20	28.00	0.00	35.802	0.000	23.02	486.5	0.098	0.10	4.61	0.00	
30	28.01	0.00	35.803	0.000	23.02	487.1	0.148	0.23	4.63	0.00	
50	26.40	0.00	36.455	0.002	24.02	391.8	0.236	0.58	4.68	0.00	0.95
75	23.79	0.01	36.751	0.002	25.05	295.3	0.323	1.12	4.35	0.01	0.89
100	21.29	0.03	36.781	0.003	25.79	225.6	0.388	1.70	3.63	0.02	0.97
150	18.66	0.00	36.532	0.003	26.30	178.9	0.490	2.98	3.67	0.00	0.85
200	16.29	0.01	36.177	0.003	26.60	151.0	0.573	4.45	3.59	0.01	0.82
250	14.53	0.03	35.887	0.005	26.78	135.5	0.645	6.11	3.34	0.00	0.80
300	13.61	0.04	35.723	0.006	26.84	130.1	0.712	8.00	3.24	0.00	0.95
400	10.90	0.02	35.290	0.004	27.04	112.6	0.835	12.36	3.01	0.00	0.83
500	9.03	0.02	35.053	0.004	27.17	100.3	0.942	17.30	2.98	0.00	0.80
600	7.47	0.03	34.853	0.004	27.26	92.4	1.040	22.78	3.00	0.00	0.78
700	6.82	0.00	34.817	0.000	27.32	87.2	1.130	28.84	3.15	0.03	1.03
800	6.15	0.00	34.812	0.003	27.41	79.7	1.215	35.33	3.53	0.09	1.08
1000	5.09	0.00	34.892	0.002	27.60	61.8	1.358	48.40	4.38	0.01	26.04
1200	4.60	0.00	34.930	0.003	27.69	54.7	1.476	61.69	4.57	0.02	33.53

T G THOMPSON CRUISE 001 STATION 054 OBSERVED VALUES

DATE	25/11/65	BAROMETER	09.7	WEATHER	X1	WIND VELOC	18	WAVE PERIOD	2
HOUR	13.2	TEMP DRY	27.4	VISIBILITY	6	WIND DIREC	12	SECCHI	
LAT	11-14.8N	TEMP WET	25.1	CLOUD TYPE	7	WAVE DIREC	12	WATER COLOR	
LONG	80-02.3W	REL HUMID	83	CLOUD AMT	7	WAVE HEIGHT	2	SOUNDING	3109

MESSENGER TIMES: 13.2, 15.5
WIRE ANGLES: 03, 10

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
2	0	27.94	35.687	22.95	4.53	0.404	-0.013	103	0.00	0.0	2
2	10	27.92	35.705	22.97	4.55	0.406	-0.014	104	0.02	0.0	1
2	21	27.90	35.716	22.99	4.52	0.403	-0.011	103	0.03	0.0	2
2	31	27.95	35.730	22.98	4.50	0.402	-0.010	103	0.03	0.1	1
2	50	26.58	36.465	23.97	4.68	0.418	-0.020	105	0.03	0.1	0
2	76	23.80	36.759	25.05	4.03	0.360	0.055	87	0.04	0.6	1
2	101	21.47	36.772	25.73	3.70	0.331	0.101	77	0.24	4.6	1
2	150	18.80	36.549	26.27	3.79	0.339	0.114	75	0.37	7.0	2
2	201	16.97	36.310	26.54	3.73	0.333	0.136	71	0.56	9.9	3
2	251	15.12	35.959	26.70	3.47	0.310	0.178	64	0.87	14.2	6
2	302	13.19	35.642	26.87	3.19	0.285	0.223	56	1.21	18.5	8
2	404	10.22	35.155	27.05	2.87	0.256	0.287	47	1.69	25.7	15
2	505	8.60	34.940	27.15	2.84	0.256	0.309	45	1.94	28.7	19
2	606	7.11	34.819	27.28	2.95	0.263	0.322	45	2.26	31.1	24
2	707	6.43	34.783	27.35	3.08	0.275	0.320	46	2.18	31.5	27
2	810	5.80	34.815	27.45	3.42	0.306	0.298	51	2.11	29.5	29
2	1012	4.86	34.914	27.64	4.27	0.382	0.236	62	1.80	25.4	29
2	1262	4.38	34.947	27.72	4.78	0.427	0.199	68	1.64	22.7	29
1	1520	4.11	34.963	27.77	4.91	0.438	0.191	70	1.60	22.1	30
1	1771	4.02	34.957	27.78	5.00	0.447	0.184	71	1.57	22.2	31
1	2019	4.01	34.969	27.78	5.03	0.449	0.182	71	1.57	21.7	31
1	2267	4.02	34.971	27.78	5.08	0.454	0.177	72	1.55	21.9	32
1	2517	4.04	34.971	27.78	5.04	0.450	0.180	71	1.55	22.1	32
1	3016	4.12	34.971	27.77	5.06	0.452	0.177	72	1.55	21.8	32
1	3026	4.11									
1	3035	4.13									
1	3045	4.12									
1	3055	4.12									

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 054 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	3064	4.13									
1	3094	4.13	34.971	27.77	5.09	0.455	0.174	72	1.57	21.6	32

T G THOMPSON CRUISE 001 STATION 054 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.94	0.00	35.687	0.000	22.95	492.0	0.000	0.00	4.53	0.00	
10	27.92	0.00	35.705	0.000	22.97	490.5	0.050	0.03	4.55	0.00	
20	27.90	0.00	35.715	0.000	22.99	489.6	0.099	0.10	4.52	0.00	0.88
30	27.96	0.01	35.723	0.004	22.97	491.2	0.149	0.23	4.50	0.00	0.83
50	26.58	0.00	36.465	0.000	23.98	396.4	0.238	0.59	4.68	0.00	
75	23.91	0.01	36.758	0.003	25.02	298.1	0.326	1.13	4.06	0.01	0.94
100	21.55	0.00	36.775	0.001	25.71	233.1	0.393	1.72	3.71	0.00	0.93
150	18.80	0.00	36.549	0.000	26.27	181.1	0.497	3.03	3.79	0.00	
200	17.00	0.00	36.315	0.000	26.54	157.1	0.582	4.55	3.73	0.00	0.97
250	15.16	0.00	35.966	0.001	26.70	143.1	0.658	6.29	3.48	0.00	0.97
300	13.26	0.00	35.654	0.000	26.86	128.1	0.726	8.21	3.20	0.00	0.93
400	10.31	0.00	35.170	0.000	27.05	111.1	0.847	12.51	2.88	0.00	0.94
500	8.66	0.01	34.946	0.001	27.15	102.2	0.955	17.46	2.86	0.00	0.93
600	7.19	0.01	34.824	0.000	27.27	90.5	1.052	22.94	2.94	0.00	0.92
700	6.46	0.01	34.783	0.000	27.34	84.7	1.140	28.84	3.07	0.00	0.90
800	5.86	0.00	34.810	0.001	27.44	75.7	1.221	35.07	3.38	0.00	0.83
1000	4.90	0.00	34.908	0.001	27.64	58.1	1.357	47.43	4.22	0.01	0.90
1200	4.45	0.02	34.944	0.003	27.71	51.8	1.468	59.98	4.70	0.01	0.73
1500	4.12	0.00	34.962	0.000	27.76	49.0	1.622	81.25	4.91	0.00	0.90
2000	4.01	0.00	34.969	0.000	27.78	51.5	1.877	127.53	5.03	0.00	0.90
2500	4.04	0.00	34.971	0.000	27.78	56.2	2.151	191.60	5.04	0.00	0.88
3000	4.12	0.00	34.971	0.000	27.77	61.7	2.453	277.58	5.06	0.00	1.13

DATA AT 3026, 3035, 3045, 3055, AND 3064 METERS
NOT USED FOR INTERPOLATION.

T G THOMPSON CRUISE 001 STATION 055 OBSERVED VALUES

DATE	25/11/65	BAROMETER	07.9	WEATHER	X2	WIND VELOC	10	WAVE PERIOD	2
HOUR	22.0	TEMP DRY	28.0	VISIBILITY	6	WIND DIREC	20	SECCHI	
LAT	10-16.0N	TEMP WET	24.9	CLOUD TYPE	4	WAVE DIREC	20	WATER COLOR	
LONG	79-57.0W	REL HUMID	78	CLOUD AMT	8	WAVE HEIGHT	1	SOUNDING	3017

MESSENGER TIMES: 22.0; 23.3
WIRE ANGLES: 04; 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
2	2	28.00	35.689	22.93	4.53	0.405	-0.014	103	0.00	0.0	2
2	10	28.01	35.678	22.92	4.55	0.407	-0.015	104	0.00	0.0	1
2	21	27.98	35.687	22.94	4.55	0.406	-0.015	104	0.00	0.0	1
2	31	27.92	35.927	23.14	4.67	0.417	-0.026	107	0.00	0.0	1
2	51	25.86	36.514	24.24	4.52	0.404	-0.001	100	0.00	0.1	1
2	77	23.89	36.750	25.02	4.24	0.379	0.036	91	0.00	0.1	1
2	102	22.15	36.795	25.56	3.85	0.344	0.083	81	0.12	2.8	1
2	152	18.60	36.512	26.30	3.74	0.334	0.121	73	0.32	7.2	2
2	203	16.90	36.277	26.54	3.64	0.325	0.145	69	0.50	9.4	3
2	253	14.91									
1	506	8.21	34.931	27.21	2.91	0.260	0.310	46	2.46	28.5	19
1	606	6.90	34.812	27.31	3.10	0.277	0.311	47	2.11	29.9	23
1	706	6.25	34.789	27.37	3.25	0.290	0.307	49	2.12	30.5	26
1	805	5.63	34.835	27.49	3.58	0.320	0.287	53	2.02	29.7	27
1	1003	4.76	34.926	27.67	4.35	0.388	0.231	63	1.78	25.2	27
1	1252	4.35	34.955	27.73	4.73	0.423	0.203	68	1.58	23.0	27
1	1498	4.11	34.971	27.77	4.99	0.446	0.184	71	1.57	22.1	29
1	1746	4.06	34.973	27.78	5.02	0.448	0.182	71	1.55	21.9	29
1	1994	4.04	34.973	27.78	5.09	0.455	0.176	72	1.54	21.8	30
1	2248	4.05	34.973	27.78	5.01	0.448	0.183	71	1.54	21.7	31
1	2502	4.11	34.973	27.77	5.08	0.454	0.176	72	1.52	21.7	31
1	2912	4.11	34.977	27.78	5.09	0.455	0.175	72	1.52	21.8	31

T G THOMPSON CRUISE 001 STATION 055 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.00	0.00	35.680	0.000	22.93	494.4	0.000	0.00	4.53	0.00	
10	28.01	0.00	35.678	0.000	22.92	495.3	0.050	0.03	4.55	0.00	
20	27.98	0.00	35.680	0.004	22.93	494.7	0.100	0.10	4.55	0.00	0.88
30	27.94	0.01	35.897	0.003	23.11	478.2	0.149	0.23	4.66	0.00	0.83
50	25.99	0.02	36.487	0.004	24.18	377.0	0.235	0.57	4.53	0.00	0.92
75	24.02	0.01	36.746	0.005	24.98	302.2	0.321	1.11	4.27	0.00	0.90
100	22.29	0.00	36.797	0.001	25.52	251.2	0.391	1.73	3.88	0.00	0.86
150	18.72	0.01	36.528	0.004	26.28	180.8	0.499	3.08	3.74	0.01	0.94
200	16.98	0.02	36.292	0.002	26.53	158.3	0.585	4.60	3.65	0.00	0.92
250	15.03	0.01	35.940#		26.71	142.3	0.661	6.34	3.47	0.05	1.63
300	13.28	0.03	35.660#		26.86	128.1	0.729	8.26	3.31	0.08	2.23
400	10.41	0.05	35.220#		27.07	109.2	0.849	12.51	3.07	0.08	2.10
500	8.31	0.00	34.943	0.000	27.20	96.9	0.953	17.30	2.92	0.01	1.01
600	6.94	0.01	34.816	0.000	27.30	87.6	1.046	22.54	3.09	0.00	0.93
700	6.28	0.01	34.788	0.000	27.37	81.7	1.131	28.24	3.24	0.00	0.93
800	5.66	0.00	34.832	0.001	27.48	71.4	1.209	34.19	3.56	0.00	0.91
1000	4.77	0.00	34.925	0.000	27.66	55.2	1.337	45.89	4.34	0.00	0.97
1200	4.40	0.02	34.953	0.002	27.73	50.4	1.444	57.95	4.68	0.01	0.77
1500	4.11	0.00	34.971	0.000	27.77	48.2	1.594	78.75	4.99	0.00	0.99
2000	4.04	0.00	34.973	0.000	27.78	51.7	1.847	124.79	5.09	0.00	0.97
2500	4.11	0.00	34.973	0.000	27.77	57.1	2.125	189.55	5.08	0.00	0.99

T G THOMPSON CRUISE 001 STATION 056 OBSERVED VALUES

DATE	26/11/65	BAROMETER	11.2	WEATHER	X8	WIND VELOC	12	WAVE PERIOD	2
HOUR	03.6	TEMP DRY	26.4	VISIBILITY	5	WIND DIREC	22	SECCHI	
LAT	9-32.6N	TEMP WET	24.4	CLOUD TYPE	8	WAVE DIREC	18	WATER COLOR	
LONG	79-56.8W	REL HUMID	85	CLOUD AMT	8	WAVE HEIGHT	2	SOUNDING	0183

MESSENGER TIMES: 03.6
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	27.22	33.548	21.58	4.61	0.411	-0.010	102	0.03	0.0	12
1	10	27.40	34.288	22.08	4.58	0.409	-0.010	103	0.05	0.0	7
1	21	27.61	35.193	22.69	4.54	0.405	-0.010	103	0.02	0.0	2
1	31	27.86	35.575	22.90	4.50	0.402	-0.009	102	0.04	0.0	2
1	51	27.92	35.859	23.09	4.46	0.398	-0.006	102	0.03	0.0	1
1	77	26.83	36.314	23.78	4.39	0.392	0.004	99	0.08	0.1	0
1	103	23.20	36.734	25.21	3.90	0.348	0.071	83	0.17	2.7	2
1	154	19.06	36.557	26.21	3.70	0.330	0.121	73	0.42	9.3	2
1	185	17.54	36.347	26.44	3.76	0.336	0.129	72	0.55	7.0	3

T G THOMPSON CRUISE 001 STATION 056 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.22	0.00	33.548	0.000	21.58	523.5	0.000	0.00	4.61	0.00	
10	27.40	0.00	34.288	0.000	22.08	576.2	0.061	0.03	4.58	0.00	
20	27.59	0.00	35.119	0.008	22.64	522.7	0.116	0.11	4.54	0.00	0.88
30	27.84	0.00	35.550	0.004	22.88	499.9	0.168	0.25	4.50	0.00	0.83
50	27.93	0.00	35.852	0.006	23.08	482.1	0.267	0.65	4.46	0.00	0.92
75	26.98	0.01	36.278	0.002	23.71	423.1	0.381	1.37	4.40	0.00	0.89
100	23.66	0.06	36.695	0.005	25.05	296.5	0.471	2.17	3.96	0.01	0.81
150	19.28	0.02	36.599	0.013	26.19	189.3	0.594	3.67	3.69	0.01	0.94

T G THOMPSON CRUISE 001 STATION 057 OBSERVED VALUES

DATE	29/11/65	BAROMETER	12.1	WEATHER	X6	WIND VELOC	01	WAVE PERIOD	2
HOUR	17.4	TEMP DRY	23.6	VISIBILITY	5	WIND DIREC	23	SECCHI	22
LAT	8-38.3N	TEMP WET	22.5	CLOUD TYPE	6	WAVE DIREC	26	WATER COLOR	
LONG	87-22.7W	REL HUMID	91	CLOUD AMT	8	WAVE HEIGHT	2	SOUNDING	3017

MESSENGER TIMES: 17.4
WIRE ANGLES: 17

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	26.86	32.988	21.27	4.62	0.413	-0.007	102	0.28	0.5	2
1	8	26.67	33.071	21.40	4.59	0.410	-0.003	101	0.35	0.7	2
1	19	21.00	34.563	24.18	3.28	0.293	0.149	66	1.12	12.4	8
1	25	19.61	34.693	24.65	2.48	0.221	0.231	49	1.48	17.7	11
1	40	17.59	34.804	25.24	1.41	0.126	0.343	27	1.84	23.5	17
1	74	16.04	34.844	25.64	1.01	0.090	0.392	19	2.02	25.4	19

T G THOMPSON CRUISE 001 STATION 057 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	26.86	0.00	32.988	0.000	21.27	652.9	0.000	0.00	4.62	0.00	
10	26.25#		33.240#		21.65	616.7	0.064	0.03	4.41	0.03	0.85
20	20.70	0.03	34.607	0.013	24.30	364.4	0.114	0.10	3.14	0.01	0.77
30	15.78	0.05	34.753	0.007	24.91	306.4	0.148	0.19	2.02	0.03	1.00
50	17.00	0.10	34.820#		25.39	260.8	0.205	0.42	1.19	0.06	66.72

T G THOMPSON CRUISE 001 STATION 058 OBSERVED VALUES

DATE	30/11/65	BAROMETER	11.5	WEATHER	X6	WIND VELOC	08	WAVE PERIOD	2
HOUR	04.5	TEMP DRY	25.6	VISIBILITY	4	WIND DIREC	14	SECCHI	
LAT	9-09.5N	TEMP WET	24.4	CLOUD TYPE	X	WAVE DIREC	16	WATER COLOR	
LONG	88-59.7W	REL HUMID	91	CLOUD AMT	8	WAVE HEIGHT	1	SOUNDING	3310

MESSENGER TIMES: 04.5, 05.2, 06.3, 07.3
WIRE ANGLES: 03, 03, 00, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AUU	SATN	PHOS	NITR	SIL
3	0	26.57	32.569	21.05	4.67	0.417	-0.009	102	0.30	0.7	2
3	5	26.58	32.583	21.06	4.69	0.419	-0.010	103	0.31	0.7	2
3	10	26.40	32.698	21.20	4.61	0.412	-0.002	101	0.34	1.2	4
3	15	24.99	33.350	22.12	4.26	0.380	0.036	91	0.56	4.3	4
3	21	21.68	34.571	24.00	3.06	0.273	0.163	63	1.14	11.8	9
3	31	18.28	34.673	24.97	2.18	0.195	0.268	42	1.62	19.4	16
3	41	15.98	34.730	25.56	1.72	0.154	0.330	32	1.79	22.5	20
3	62	14.89	34.838	25.89	1.07	0.096	0.398	19	2.06	25.5	20
3	82	13.97	34.824	26.08	1.31	0.117	0.386	23	1.99	26.2	23
3	103	13.64	34.887	26.19	0.42	0.038	0.468	7	2.25	29.4	25
3	154	13.15	34.880	26.29	0.74	0.066	0.445	13	2.17	29.6	24
3	206	12.70	34.843	26.35	0.69	0.062	0.454	12	2.28	30.6	28
2	301	11.48	34.776	26.53	0.35	0.031	0.499	6	2.52	33.1	34
2	401	10.10	34.698	26.72	0.17	0.015	0.531	3	2.84	30.6	43
2	501		34.625		0.15	0.013			3.14	35.0	60
2	600	7.31	34.590	27.07	0.24	0.021	0.562	4	3.21	39.9	67
2	700	6.36	34.563	27.18	0.19	0.017	0.580	3	3.36	41.9	78
2	799	5.68	34.551	27.26	0.34	0.030	0.577	5	3.40	43.1	89
2	898	5.10	34.543	27.32	0.39	0.035	0.581	6	3.42	45.5	100
2	997	4.67	34.552	27.38	0.58	0.052	0.571	8	3.42	43.9	107
2	1096	4.24	34.576	27.45	0.81	0.072	0.557	11	3.40	43.5	118
2	1194	3.89	34.578	27.48	1.18	0.105	0.529	17	3.38	43.0	125
2	1292	3.55	34.583	27.52	1.28	0.114	0.526	18	3.26	41.4	131
2	1492	2.99	34.605	27.59	1.71	0.153	0.497	24	3.12	41.2	146
4	3019	1.85	34.658	27.73	2.63	0.235	0.434	35	2.82	38.0	168

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 058 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	26.58	32.560	21.04	4.68	0.418	-0.010	102	0.30	0.7	3
1	8	26.53	32.596	21.08	2.32	0.207	0.201	51	0.29	0.7	3
1	20	22.26	34.424	23.73	4.65	0.415	0.017	96	1.01	1.2	8
1	26	19.06	34.645	24.76	3.65	0.326	0.131	71	1.59	4.3	13
1	42	15.55	34.755	25.68	1.42	0.127	0.361	26	1.88	11.8	21
1	77	13.83	34.805	26.09	1.42	0.127	0.378	25	1.98	26.7	23

T G THOMPSON CRUISE 001 STATION 058 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	26.57	0.00	32.569	0.000	21.05	674.3	0.000	0.00	4.67	0.00	
10	25.40	0.00	32.698	0.000	21.20	660.3	0.068	0.03	4.61	0.00	
20	22.25	0.06	34.500#		23.79	413.1	0.122	0.11	3.27	0.03	0.75
30	18.54	0.02	34.670#		24.91	306.7	0.158	0.20	2.23	0.01	0.87
50	15.19	0.20	34.785	0.004	25.78	223.8	0.211	0.41	1.36	0.02	0.85
75	14.25	0.02	34.831	0.007	26.02	201.6	0.265	0.75	1.24	0.07	0.66
100	13.66	0.01	34.877	0.002	26.18	187.2	0.314	1.19	0.56	0.04	0.76
150	13.13	0.00	34.885	0.002	26.29	178.5	0.406	2.37	0.66	0.05	0.89
200	12.75	0.00	34.848	0.001	26.34	174.3	0.495	3.96	0.71	0.00	0.81
250	12.17	0.02	34.812	0.000	26.43	167.2	0.581	5.95	0.54	0.02	0.77
300	11.49	0.00	34.777	0.000	26.53	158.5	0.663	8.26	0.35	0.00	0.98
400	10.11	0.00	34.699	0.000	26.72	142.2	0.815	13.68	0.17	0.00	0.99
500	8.64	0.05	34.626	0.000	26.90	125.4	0.950	19.89	0.15	0.00	0.99
600	7.31	0.00	34.590	0.000	27.07	109.5	1.069	26.56	0.24	0.00	
700	6.36	0.00	34.563	0.000	27.18	99.4	1.174	33.59	0.19	0.00	
800	5.67	0.00	34.551	0.000	27.26	92.3	1.271	41.05	0.34	0.00	0.99
1000	4.66	0.00	34.553	0.000	27.38	81.1	1.447	57.18	0.59	0.00	0.96
1200	3.87	0.00	34.578	0.000	27.49	71.2	1.601	74.55	1.19	0.00	0.92
1500	2.97	0.00	34.606	0.000	27.60	60.4	1.801	102.14	1.73	0.00	15.61
2000	2.21	0.07	34.631	0.009	27.68	51.9	2.086	153.09	2.20	0.18	99.99
2500	1.98	0.12	34.650	0.008	27.71	49.8	2.345	213.13	2.55	0.16	99.99
3000	1.86	0.01	34.658	0.000	27.73	49.4	2.599	285.10	2.63	0.01	99.99

DATA FROM CAST 1 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 059 OBSERVED VALUES

DATE	30/11/65	BAROMETER	11.9	WEATHER	X1	WIND VELOC	02	WAVE PERIOD	2		
HOUR	17.5	TEMP DRY	27.4	VISIBILITY	6	WIND DIREC	14	SECCHI	26		
LAT	10-22.2N	TEMP WET	25.0	CLOUD TYPE	6	WAVE DIREC	14	WATER COLOR			
LONG	90-36.8W	REL HUMID	82	CLOUD AMT	6	WAVE HEIGHT	2	SOUNDING	3585		
MESSENGER TIMES:		17.5, 18.1, 19.0									
WIRE ANGLES:		06, 05, 00									

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
3	0	27.40	33.194	21.26	4.71	0.421	-0.019	105	0.26	0.4	3
3	5	27.36	33.193	21.27	4.71	0.421	-0.019	105	0.28	0.3	3
3	10	27.32	33.216	21.30	4.68	0.418	-0.016	104	0.26	0.4	2
3	15	27.31	33.265	21.34	4.69	0.419	-0.017	104	0.28	0.5	2
3	21	24.77	34.214	22.84	4.23	0.378	0.038	91	0.55	0.5	5
3	31	20.20	34.589	24.42	2.28	0.204	0.244	48	1.46	17.9	14
3	41	18.62	34.702	24.91	1.46	0.130	0.330	28	1.78	22.7	15
3	62	16.20	34.778	25.55	0.89	0.079	0.402	17	2.07	25.6	21
3	82	14.51	34.809	25.95	0.61	0.054	0.443	11	2.24	29.5	24
3	103	13.77	34.842	26.13	0.47	0.015	0.490	3	2.43	31.3	26
3	154	13.14	34.856	26.27	0.36	0.032	0.479	6	2.35	31.2	27
3	206	12.54	34.826	26.37	0.35	0.031	0.487	6	2.42	32.7	29
2	303	11.10	34.737	26.57	0.66	0.059	0.476	11	2.43	31.6	34
2	405	9.70	34.677	26.77	0.20	0.018	0.534	3	2.86	38.2	45
2	507	8.07	34.594	26.96	0.22	0.020	0.553	3	3.20	39.8	64
2	608	6.93	34.567	27.11	0.12	0.011	0.578	2	3.31	37.2	75
2	710	6.13	34.544	27.20	0.14	0.013	0.588	2	3.43	40.7	84
2	810	5.51	34.538	27.27	0.14	0.013	0.597	2	3.46	43.5	92
2	910	4.97	34.539	27.34	0.30	0.027	0.591	4	3.48	43.6	100
2	1010	4.61	34.544	27.38	0.55	0.049	0.574	8	3.45	44.4	107
2	1109	4.23	34.552	27.43	0.70	0.063	0.567	10	3.42	43.3	114
2	1207	3.89	34.562	27.47	0.77	0.069	0.566	11	3.42	43.7	123
2	1305	3.58	34.569	27.51	0.93	0.083	0.557	13	3.33	43.2	129
2	1500	3.08	34.580	27.56	1.37	0.122	0.526	19	3.19	41.8	138

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 059 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	27.50	33.208	21.23	4.71	0.421	-0.020	105	0.26		3
1	9	27.29	33.211	21.30	4.72	0.422	-0.019	105	0.26		3
1	24	23.38	34.341	23.35	3.82	0.341	0.084	80	0.80		6
1	30	20.26	34.580	24.39	2.36	0.211	0.237	47	1.44		12
1	50	17.44	34.722	25.22	1.35	0.121	0.350	26	1.88		18
1	77	14.77	34.809	25.89	0.41	0.037	0.458	7	2.33		23

T G THOMPSON CRUISE 001 STATION 059 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.40	0.00	33.194	0.000	21.25	654.5	0.000	0.00	4.71	0.00	
10	27.32	0.00	33.216	0.000	21.30	650.9	0.066	0.03	4.68	0.00	
20	25.29	0.06	34.200#		22.67	519.8	0.125	0.12	4.34	0.00	0.75
30	20.60	0.05	34.585#		24.31	363.8	0.170	0.23	2.48	0.04	0.87
50	17.47	0.02	34.751	0.007	25.23	276.4	0.234	0.49	1.10	0.05	0.85
75	15.01	0.01	34.800	0.002	25.83	219.6	0.297	0.88	0.70	0.01	0.66
100	13.83	0.02	34.838	0.000	26.11	193.5	0.349	1.34	0.23	0.01	0.76
150	13.16	0.02	34.857	0.001	26.27	180.1	0.443	2.54	0.32	0.02	0.89
200	12.61	0.00	34.831	0.001	26.36	172.8	0.532	4.14	0.35	0.01	0.81
250	11.91	0.02	34.785	0.003	26.46	164.1	0.617	6.09	0.51	0.05	0.78
300	11.15	0.00	34.740	0.000	26.57	155.0	0.697	8.36	0.65	0.01	0.95
400	9.77	0.00	34.680	0.000	26.76	137.8	0.845	13.63	0.23	0.01	0.93
500	8.18	0.01	34.599	0.001	26.95	120.2	0.975	19.61	0.21	0.01	0.91
600	7.01	0.00	34.568	0.001	27.10	106.7	1.090	26.06	0.13	0.00	0.89
700	6.20	0.00	34.546	0.000	27.19	98.5	1.193	32.96	0.14	0.00	0.87
800	5.57	0.00	34.538	0.000	27.26	91.8	1.290	40.37	0.14	0.00	0.87
1000	4.64	0.00	34.543	0.000	27.38	81.6	1.465	56.52	0.53	0.00	0.87
1200	3.91	0.00	34.561	0.000	27.47	73.0	1.622	74.16	0.76	0.00	0.90
1500	3.08	0.00	34.580	0.000	27.56	63.6	1.829	102.85	1.37	0.00	

DATA FROM CAST 1 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 060 OBSERVED VALUES

DATE	01/12/65	BAROMETER	11.1	WEATHER	X1	WIND VELOC	06	WAVE PERIOD	2
HOUR	04.3	TEMP DRY	27.5	VISIBILITY	7	WIND DIREC	12	SECCHI	
LAT	11-21.1N	TEMP WET	24.5	CLOUD TYPE	8	WAVE DIREC	14	WATER COLOR	
LONG	92-23.2W	REL HUMID	78	CLOUD AMT	2	WAVE HEIGHT	1	SOUNDING	3566

MESSENGER TIMES: 04.3
WIRE ANGLES: 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.64	33.207	20.86	4.13	0.369	0.025	94	0.22	0.2	1
1	9	28.47	33.211	20.92	4.60	0.411	-0.016	104	0.22	0.2	2
1	24	28.46	33.205	20.92	4.59	0.410	-0.015	104	0.22	0.4	2
1	30	28.33	33.232	20.98	4.59	0.410	-0.014	104	0.24	0.2	2
1	50	19.37	34.588	24.63	2.14	0.191	0.263	42	1.70	20.0	15
1	77	15.20	34.729	25.74	0.68	0.061	0.430	12	2.26	28.1	23

T G THOMPSON CRUISE 001 STATION 060 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.64	0.00	33.207	0.000	20.86	692.3	0.000	0.00	4.13	0.00	
10	28.47	0.01	33.209	0.001	20.92	687.2	0.070	0.04	4.61	0.01	0.95
20	25.47	0.03	33.202	0.004	20.91	686.0	0.139	0.14	4.64	0.03	1.01
30	25.33	0.00	33.232	0.000	20.98	681.9	0.208	0.32	4.59	0.00	
50	19.37	0.00	34.588	0.000	24.63	333.5	0.311	0.70	2.14	0.00	
75	15.40#		34.725#		25.69	233.3	0.382	1.15	0.73#		86.96

T G THOMPSON CRUISE 001 STATION 061 OBSERVED VALUES

DATE	01/12/65	BAROMETER	09.4	WEATHER	X1	WIND VELOC	08	WAVE PERIOD	3		
HOUR	17.7	TEMP DRY	28.9	VISIBILITY	8	WIND DIREC	35	SECCHI			
LAT	12-21.8N	TEMP WET	26.2	CLOUD TYPE	8	WAVE DIREC	19	WATER COLOR			
LONG	94-04.7W	REL HUMID	81	CLOUD AMT	3	WAVE HEIGHT	2	SOUNDING	3676		
MESSENGER TIMES:	17.7,	18.3,	19.3								
WIRE ANGLES:		00,	03,	00							

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
3	0	28.28	33.084	20.88	4.58	0.001	-0.002	103	0.28	0.1	2
3	5	28.26	33.087	20.90	4.61	0.412	-0.015	104	0.24	0.1	2
3	10	28.19	33.083	20.92	4.58	0.409	-0.012	103	0.24	0.1	2
3	15	28.12	33.086	20.94					0.24	0.0	2
3	21	27.76	33.203	21.14	4.61	0.412	-0.012	103	0.24	0.1	2
3	31	22.69	34.239	23.47	3.27	0.292	0.138	68	1.22	12.8	10
3	41	18.65	34.618	24.84	1.85	0.165	0.295	36	1.77	22.0	16
3	62	14.97	34.722	25.78	0.78	0.070	0.424	14	2.22	27.6	22
3	82	13.45	34.722	26.11	0.97	0.087	0.422	17	2.16	28.1	26
3	103	13.17	34.837	26.25	0.26	0.023	0.488	5	2.40	31.5	28
3	154	12.68	34.844	26.35	0.17	0.015	0.501	3	2.98	32.2	29
3	206	12.00	34.798	26.45	0.41	0.037	0.487	7	2.44	32.4	31
2	303	10.96	34.702	26.57					2.72	28.5	38
2	403	9.50	34.745	26.86					3.00	26.2	50
2	503	7.97	34.601	26.99					3.22	30.0	65
2	602	6.95	34.574	27.11	0.16	0.014	0.574	2	3.34	36.3	74
2	701	6.24	34.566	27.20					3.40	41.2	81
2	800	5.64	34.533	27.25	0.20	0.018	0.590	3	3.46	42.5	93
2	898	5.17	34.551	27.32					3.50	43.5	99
2	995	4.67	34.559	27.39	0.48	0.043	0.580	7	3.53	45.3	107
2	1095	4.20	34.562	27.44	0.37*	0.033	0.597	5	3.53	43.5	118
2	1193	3.83	34.570	27.48					3.47	44.0	126
2	1291	3.52	34.578	27.52					3.40	43.9	132
2	1487	3.06	34.599	27.58	1.17	0.104	0.544	16	3.28	41.8	145

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 061 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADJ	SATN	PHOS	NITR	SIL
1	0	26.21	33.091	20.91	4.58	0.409	-0.012	103	0.24	0.2	2
1	11	28.15	33.089	20.93					0.22	0.2	2
1	28	26.26	33.422	21.79	4.29	0.383	0.025	94	0.48	2.7	3
1	36	21.46	34.436	23.96	2.71	0.242	0.197	55	1.46	16.8	12
1	59	15.23	34.708	25.72	0.79	0.071	0.420	14	2.20	27.7	23
1	103	13.15	34.850	26.26	0.27	0.024	0.487	5	2.43	31.8	28

T G THOMPSON CRUISE 001 STATION 061 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.28	0.00	33.084	0.000	20.89	689.8	0.000	0.00	4.58	0.00	
10	28.19	0.00	33.083	0.000	20.92	687.4	0.070	0.04	4.58	0.00	
20	27.90	0.04	33.166	0.006	21.07	672.8	0.138	0.14	4.64	0.02	0.89
30	23.30	0.10	34.127	0.026	23.21	468.8	0.196	0.28	3.44	0.02	0.87
50	16.54	0.18	34.570#		25.39	261.4	0.269	0.56	1.15	0.05	0.85
75	13.80	0.03	34.722	0.008	26.03	200.6	0.328	0.93	0.88	0.08	0.72
100	13.17	0.03	34.819	0.004	26.24	181.7	0.376	1.36	0.38	0.03	0.76
150	12.72	0.01	34.851	0.004	26.35	172.0	0.465	2.50	0.13	0.02	0.89
200	12.08	0.00	34.805	0.001	26.44	164.8	0.550	4.02	0.38	0.01	0.81
250	11.53	0.03	34.747	0.006	26.50	160.2	0.632	5.91	0.45	0.07	1.65
300	10.99	0.00	34.704	0.001	26.57	154.9	0.711	8.15	0.37#		2.44
400	9.55	0.00	34.744	0.002	26.85	129.4	0.855	13.24	0.30#		3.03
500	8.01	0.00	34.606	0.001	26.98	117.2	0.979	18.97	0.23#		2.00
600	6.97	0.00	34.574	0.000	27.11	105.7	1.092	25.30	0.17	0.00	1.00
700	6.25	0.00	34.566	0.000	27.20	97.6	1.194	32.15	0.16	0.01	0.99
800	5.64	0.00	34.533	0.000	27.25	93.2	1.291	39.55	0.20	0.00	
1000	4.65	0.00	34.559	0.000	27.39	80.6	1.467	55.73	0.49	0.00	5.21
1200	3.81	0.00	34.571	0.000	27.49	71.0	1.620	73.02	0.85	0.03	19.51

DATA FROM CAST 1 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 062 OBSERVED VALUES

DATE	02/12/65	BAROMETER	11.7	WEATHER		WIND VELOC	08	WAVE PERIOD	2
HOUR	04.2	TEMP DRY	26.7	VISIBILITY	7	WIND DIREC	25	SECCHI	
LAT	13-08.7N	TEMP WET	24.8	CLOUD TYPE	8	WAVE DIREC	33	WATER COLOR	
LONG	95-18.3W	REL HUMID	86	CLOUD AMT	2	WAVE HEIGHT	1	SOUNDING	3931

MESSENGER TIMES: 04.2
WIRE ANGLES: 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	26.32	33.870	22.10	3.96	0.354	0.053	87	0.45	2.8	3
1	11	26.12	33.870	22.17	4.30	0.384	0.024	94	0.49	2.8	3
1	23	19.97	34.409	24.34	1.66	0.148	0.302	33	1.62	18.9	13
1	36	17.69	34.691	25.13	1.17	0.104	0.364	22	1.98	28.8	18
1	52	14.20	34.822	26.03	0.11	0.010	0.491	2	2.50	29.4	25
1	103	12.98	34.847	26.30	0.17	0.015	0.498	3	2.40	28.8	27

T G THOMPSON CRUISE 001 STATION 062 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	26.32	0.00	33.870	0.000	22.10	573.1	0.000	0.00	3.96	0.00	
10	26.27#		33.870#		22.12	572.1	0.058	0.03	4.28#		
20	23.50#		34.130#		23.15	473.7	0.111	0.11	3.60#		0.99
30	19.32	0.02	34.487	0.005	24.57	338.8	0.152	0.21	1.51	0.01	0.73
50	15.10	0.05	34.782#		25.80	221.9	0.208	0.43	0.45	0.01	0.99
75	13.75#		34.835#		26.13	191.3	0.260	0.76	0.13#		70.87
100	13.21	0.05	34.842#		26.25	180.8	0.307	1.13	0.17#		97.98

T G THOMPSON CRUISE 001 STATION 063 OBSERVED VALUES

DATE	02/12/65	BAROMETER	10.9	WEATHER	X1	WIND VELOC	00	WAVE PERIOD	2
HOUR	18.1	TEMP DRY	28.6	VISIBILITY	7	WIND DIREC	00	SECCHI	34
LAT	14-13.2N	TEMP WET	25.7	CLOUD TYPE	0	WAVE DIREC	08	WATER COLOR	
LONG	97-54.7W	REL HUMID	79	CLOUD AMT	1	WAVE HEIGHT	1	SOUNDING	3200
MESSENGER TIMES:		18.1, 19.0, 19.8							
WIRE ANGLES:		00, 02, 05							

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
3	0	29.70	33.633	20.82	4.54	0.405	-0.019	105	0.18	1.0	2
3	5	29.47	33.629	20.90	4.58	0.409	-0.021	105	0.17	0.5	2
3	10	29.27	33.604	20.95	4.55	0.406	-0.017	104	0.16	0.4	2
3	15	29.19	33.594	20.97	4.52	0.404	-0.014	104	0.17	0.4	2
3	21	28.96	33.670	21.12	4.75	0.424	-0.033	108	0.18	0.3	2
3	31	26.98	33.779	21.83	4.88	0.436	-0.033	108	0.33	0.5	2
3	41	24.69	34.108	22.78	4.13	0.369	0.048	89	0.66	4.8	5
3	62	18.99	34.668	24.79	2.51	0.224	0.233	49	1.45	16.7	14
3	82	14.83	34.777	25.86	0.33	0.029	0.465	6	2.37	28.5	24
3	103	13.91	34.829	26.09					2.45	30.1	26
3	153	13.07	34.851	26.28	0.21	0.019	0.493	4	2.43	30.6	27
3	205	12.49	34.825	26.38	0.17	0.015	0.503	3	2.48	31.9	30
2	305	11.54	34.777	26.52	0.15	0.013	0.516	3	2.60	31.6	34
2	405	10.04	34.695	26.73	0.09	0.008	0.539	1	2.90	27.0	47
2	506	8.06	34.693	27.04	0.06	0.005	0.567	1	3.22	30.4	65
2	606	6.80	34.548	27.11	0.13	0.012	0.579	2	3.36	35.8	79
2	706		34.547		0.14	0.013			3.45	39.0	89
2	806	5.47	34.542	27.28	0.17	0.015	0.595	2	3.50	41.5	96
2	905	4.92	34.542	27.34	0.22	0.020	0.599	3	3.52	44.0	105
2	1005	4.47	34.549	27.40	0.34	0.030	0.595	5	3.52	43.9	113
2	1104	4.07	34.563	27.45	0.62	0.055	0.577	9	3.50	43.4	123
2	1204	3.76	34.570	27.49	0.69	0.062	0.575	10	3.44	43.7	127
2	1303	3.44	34.580	27.53	0.85	0.076	0.566	12	3.36	42.0	136
2	1501	2.96	34.603	27.59	1.23	0.110	0.540	17	3.26	42.1	146

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 063 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	29.40	33.560	20.87	4.58	0.409	-0.021	105	0.22	0.1	2
1	12	29.15	33.564	20.96	4.60	0.411	-0.021	105	0.16	0.1	2
1	31	28.07	33.686	21.41	4.93	0.431	-0.035	109	0.25	0.1	1
1	39	26.71	33.797	21.93	4.93	0.440	-0.036	109	0.30	0.1	2
1	75	16.88	34.762	25.37	0.77	0.069	0.405	15	2.18	25.1	19
1	103	14.15	34.725	25.96	0.36	0.032	0.469	8	2.38	29.4	25

T G THOMPSON CRUISE 001 STATION 063 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.70	0.00	33.633	0.000	20.82	695.7	0.000	0.00	4.54	0.00	
10	29.27	0.00	33.604	0.000	20.95	684.3	0.070	0.04	4.55	0.00	
20	28.93	0.01	33.654	0.002	21.08	671.7	0.138	0.14	4.71	0.01	0.75
30	27.22	0.02	33.764	0.004	21.74	609.2	0.203	0.30	4.89	0.01	0.87
50	22.24	0.10	34.387	0.011	23.71	421.8	0.307	0.71	3.48	0.03	0.85
75	16.03	0.07	34.766	0.013	25.58	244.0	0.391	1.22	0.77#		0.66
100	13.92	0.07	34.824	0.001	26.09	196.2	0.446	1.71	0.35#		1.23
150	13.09	0.02	34.852	0.001	26.28	179.1	0.541	2.92	0.22#		0.95
200	12.54	0.00	34.829	0.001	26.37	171.6	0.629	4.50	0.17	0.00	0.84
250	12.08	0.03	34.805	0.002	26.44	166.0	0.714	5.46	0.16	0.00	0.80
300	11.59	0.01	34.780	0.000	26.51	160.1	0.796	8.78	0.15	0.00	0.93
400	10.13	0.00	34.699	0.001	26.71	142.5	0.949	14.23	0.09	0.00	0.93
500	9.17	0.01	34.694	0.002	27.03	113.1	1.078	20.12	0.06	0.00	0.92
600	6.86	0.00	34.557	0.003	27.11	105.5	1.188	26.34	0.13	0.00	0.92
700	6.06	0.05	34.545	0.001	27.21	96.6	1.290	33.15	0.14	0.00	0.95
800	5.50	0.01	34.542	0.000	27.28	90.6	1.385	40.43	0.17	0.00	0.98
1000	4.49	0.00	34.548	0.000	27.40	79.3	1.557	56.24	0.33	0.00	0.93
1200	3.77	0.00	34.570	0.000	27.49	70.6	1.709	73.35	0.69	0.00	0.94
1500	2.96	0.00	34.603	0.000	27.59	60.5	1.908	100.85	1.23	0.00	23.70

DATA FROM CAST 1 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 064 OBSERVED VALUES

DATE	03/12/65	BAROMETER	11.0	WEATHER	X1	WIND VELOC	04	WAVE PERIOD	2
HOUR	04.4	TEMP DRY	28.7	VISIBILITY	6	WIND DIREC	31	SECCHI	
LAT	15-10.0N	TEMP WET	24.3	CLOUD TYPE	2	WAVE DIREC	08	WATER COLOR	
LONG	99-26.9W	REL HUMID	69	CLOUD AMT	7	WAVE HEIGHT	1	SOUNDING	2540

MESSENGER TIMES: 04.4
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADD	SATN	PHOS	NITR	SIL
1	0	28.78	33.592	21.10	4.61	0.412	-0.020	105		0.1	0
1	12	28.66	33.561	21.12	4.63	0.414	-0.021	105	0.20	0.0	0
1	31	27.21	33.730	21.72	4.86	0.434	-0.033	108	0.29	0.8	1
1	39	25.87	33.859	22.24	4.70	0.420	-0.010	102	0.43	1.9	1
1	65	23.49	33.993	23.05	3.61	0.322	0.103	76	1.00	10.9	6
1	103	15.96	34.729	25.57	0.26	0.023	0.460	5	2.44	30.0	22

T G THOMPSON CRUISE 001 STATION 064 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.78	0.00	33.592	0.000	21.10	669.1	0.000	0.00	4.61	0.00	
10	28.58#		33.570#		21.15	664.7	0.068	0.03	4.62#		
20	28.47	0.05	33.592	0.011	21.21	660.0	0.134	0.14	4.76	0.04	4.23
30	27.37	0.01	33.713	0.002	21.65	617.5	0.199	0.30	4.86	0.01	1.09
50	24.45#		33.918	0.034	22.71	516.9	0.313	0.76	4.35	0.00	1.35
75	21.60#		34.150#		23.70	422.8	0.431	1.51	2.94	0.00	52.03
100	16.50#		34.664	0.002	25.39	262.4	0.518	2.25	0.61	0.00	86.90

T G THOMPSON CRUISE 001 STATION 065 OBSERVED VALUES

DATE	03/12/65	BAROMETER	11.4	WEATHER	X1	WIND VELOC	06	WAVE PERIOD	X
HOUR	18.2	TEMP DRY	29.2	VISIBILITY	6	WIND DIREC	36	SECCHI	40
LAT	16-27.2N	TEMP WET	24.9	CLOUD TYPE	4	WAVE DIREC	33	WATER COLOR	
LONG	101-43.9W	REL HUMID	70	CLOUD AMT	6	WAVE HEIGHT	0	SOUNDING	3585

MESSENGER TIMES: 18.2, 18.7, 19.5
WIRE ANGLES: 07, 05, 06

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
3	0	29.16	33.714	21.07	4.29	0.383	-0.006	98	0.18	5.7	2
3	5	29.14	33.713	21.07	4.55	0.406	-0.017	104	0.18	1.5	1
3	10	29.12	33.714	21.08	4.55	0.406	-0.017	104	0.17	1.4	1
3	15	29.12	33.718	21.08	4.55	0.406	-0.017	104	0.18	3.7	1
3	21	29.10	33.714	21.09	4.54	0.405	-0.016	104	0.18	4.2	1
3	31	29.12	33.703	21.07	4.54	0.405	-0.016	104	0.18	3.0	1
3	41	29.07	33.997	21.31	4.66	0.416	-0.027	107	0.20	2.7	1
3	62	29.05	34.370	21.60	4.15	0.371	0.018	95	0.57	2.3	2
3	82	18.39	34.517	24.82	1.37	0.122	0.340	26	1.93	22.7	14
3	103	15.34	34.701	25.69	0.28	0.025	0.465	5	2.46	23.8	23
3	154	13.23	34.813	26.22	0.10	0.009	0.502	2	2.56	29.7	30
3	205	12.49	34.813	26.37	0.16	0.014	0.504	3	2.56	30.2	31
2	305	11.33	34.756	26.55	0.29	0.026	0.506	5	2.72	25.6	37
2	405	9.79	34.663	26.74	0.19	0.017	0.534	3	2.95	25.7	56
2	505	8.13	34.566	26.93	0.14	0.013	0.560	2	3.18	30.7	64
2	606	7.01	34.533	27.07	0.14	0.013	0.575	2	3.33	35.4	77
2	705	6.16	34.526	27.18	0.09	0.008	0.592	1	3.38	39.0	87
2	805	5.62	34.528	27.25	0.13	0.012	0.597	2	3.46	42.2	95
2	904	5.07	34.524	27.31	0.16	0.014	0.602	2	3.50	43.3	103
2	1006	4.67	34.539	27.37	0.25	0.022	0.600	4	3.50	44.1	109
2	1103	4.21	34.547	27.43	0.41	0.037	0.593	6	3.50	43.3	118
2	1203	3.77	34.564	27.48	0.63	0.056	0.581	9	3.45	43.6	126
2	1301	3.43	34.557	27.51	1.00	0.089	0.553	14	3.42	42.8	133
2	1499	2.90	34.600	27.60	1.31	0.117	0.534	18	3.22	41.1	146

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 065 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	29.14	33.709	21.07	4.52	0.404	-0.014	104	0.18	0.3	1
1	14	29.09	33.711	21.09	4.54	0.405	-0.016	104	0.17	0.4	1
1	36	28.63	34.019	21.47	4.64	0.414	-0.023	106	0.20	0.1	1
1	45	26.55	34.145	22.24	4.62	0.413	-0.008	102	0.35	0.2	1
1	74	18.46	34.505	24.60	1.38	0.123	0.339	27	1.90	21.8	13
1	102	14.98	34.728	25.78	0.14	0.013	0.481	3	2.50	29.3	24

T G THOMPSON CRUISE 001 STATION 065 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.16	0.00	33.714	0.000	21.07	672.4	0.000	0.00	4.29	0.00	
10	29.12	0.00	33.714	0.000	21.08	671.6	0.068	0.04	4.55	0.00	
20	29.10	0.00	33.715	0.000	21.09	671.3	0.136	0.14	4.54	0.00	0.75
30	29.12	0.00	33.697	0.005	21.07	673.5	0.204	0.31	4.54	0.00	0.87
50	29.06#		34.191	0.004	21.46	637.0	0.336	0.85	4.66	0.06	0.85
75	22.70#		34.476	0.009	23.64	428.8	0.470	1.68	2.70#		0.66
100	15.65#		34.676	0.002	25.60	242.9	0.554	2.41	0.36	0.03	0.76
150	13.26	0.06	34.815	0.004	26.21	185.2	0.662	3.76	0.12#		1.64
200	12.54	0.02	34.816	0.002	26.36	172.5	0.752	5.37	0.15	0.00	0.81
250	11.98	0.03	34.794	0.002	26.45	164.8	0.837	7.33	0.23	0.01	0.80
300	11.39	0.01	34.760	0.000	26.54	157.8	0.919	9.63	0.29	0.00	0.92
400	9.87	0.00	34.668	0.000	26.73	140.4	1.069	14.99	0.20	0.00	0.93
500	8.21	0.01	34.570	0.001	26.93	122.8	1.202	21.09	0.14	0.00	0.93
600	7.07	0.00	34.534	0.000	27.06	110.1	1.320	27.71	0.14	0.00	0.92
700	6.20	0.00	34.528	0.000	27.18	99.8	1.426	34.77	0.09	0.00	0.93
800	5.62	0.00	34.528	0.000	27.25	93.3	1.523	42.29	0.13	0.00	0.93
1000	4.69	0.00	34.538	0.000	27.37	82.5	1.701	58.66	0.25	0.00	0.94
1200	3.78	0.00	34.564	0.000	27.48	71.1	1.857	76.17	0.62	0.00	0.97

DATA FROM CAST 1 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 066 OBSERVED VALUES

DATE	04/12/65	BAROMETER	10.5	WEATHER	X1	WIND VELOC	08	WAVE PERIOD	2
HOUR	04.5	TEMP DRY	26.3	VISIBILITY	7	WIND DIREC	26	SECCHI	
LAT	17-23.0N	TEMP WET	24.8	CLOUD TYPE	7	WAVE DIREC	14	WATER COLOR	
LONG	103-16.9W	REL HUMID	75	CLOUD AMT	3	WAVE HEIGHT	1	SOUNDING	4170

MESSENGER TIMES: 04.5
WIRE ANGLES: 03

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	29.01	33.709	21.11	4.52	0.404	-0.013	103	0.17	0.2	1
1	14	29.00	33.711	21.12	4.54	0.405	-0.015	104	0.18	0.2	1
1	30	28.76	34.091	21.48	4.64	0.414	-0.024	106	0.20	2.3	1
1	45	26.86	34.145	22.14	4.62	0.413	-0.010	103	0.28	0.0	1
1	75	19.75	34.505	24.47	1.38	0.123	0.328	27	1.11	6.2	4
1	103	15.82	34.728	25.60	0.14	0.013	0.472	3	2.34	26.6	16

T G THOMPSON CRUISE 001 STATION 066 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	29.01	0.00	33.709	0.000	21.11	668.0	0.000	0.00	4.52	0.00	
10	29.02#		33.710#		21.11	668.6	0.068	0.04	4.53#		
20	28.95#		33.725#		21.15	665.7	0.135	0.14	4.57	0.01	0.91
30	28.83#		33.875#		21.30	651.5	0.201	0.31	4.62	0.01	0.99
50	25.30#		34.170#		22.65	523.3	0.320	0.78	4.56#		1.13
75	19.75	0.00	34.505	0.000	24.47	349.8	0.430	1.46	1.38	0.00	
100	16.22	0.03	34.697	0.010	25.48	253.8	0.506	2.13	0.23#		99.99

T G THOMPSON CRUISE 001 STATION 067 OBSERVED VALUES

DATE	04/12/65	BAROMETER	11.4	WEATHER	XO	WIND VELOC	05	WAVE PERIOD	2		
HOUR	16.6	TEMP DRY	27.3	VISIBILITY	7	WIND DIREC	35	SECCHI	46		
LAT	18-43.5N	TEMP WET	22.4	CLOUD TYPE		WAVE DIREC	33	WATER COLOR			
LONG	105-27.2W	REL HUMID	65	CLOUD AMT	0	WAVE HEIGHT	1	SOUNDING	3877		
MESSENGER TIMES:		16.6,	17.2,	18.2							
WIRE ANGLES:		00,	00,	00,	00						

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
1	0	28.15	34.202	21.77	4.55	0.406	-0.012	103	0.21	3.6	1
1	5	28.09	34.200	21.79	4.57	0.408	-0.013	103	0.20	2.8	0
1	10	28.08	34.200	21.79	4.56	0.407	-0.012	103	0.20	3.3	0
1	15	28.08	34.201	21.79	4.58	0.409	-0.014	104	0.20	4.5	1
1	21	28.06	34.201	21.80	4.57	0.408	-0.013	103	0.19	2.4	0
1	31	28.06	34.204	21.80	4.57	0.408	-0.013	103	0.19	1.4	1
1	41	24.91	34.268	22.84	4.71	0.421	-0.006	101	0.35	0.8	2
1	62	21.02	34.330	24.00	4.07	0.364	0.079	82	0.76	5.4	3
1	82	16.90	34.451	25.14	1.68	0.150	0.326	32	1.87	19.7	11
1	103	14.66	34.610	25.76	0.58	0.052	0.445	10	2.44	25.6	18
1	154	12.89	34.724	26.22	0.20	0.018	0.497	3	2.74	26.7	24
1	206	11.89	34.771	26.45	0.32	0.029	0.497	5	2.72	25.4	26
2	303	10.61	34.699	26.63	0.14	0.013	0.528	2	2.91	23.8	33
2	403	9.04	34.613	26.83	0.10	0.009	0.551	2	3.08	24.2	41
2	503	7.53	34.540	27.00	0.17	0.015	0.565	3	3.27	33.5	53
2	602	6.42	34.525	27.14	0.17	0.015	0.581	3	3.38	38.5	63
2	701	5.82	34.531	27.23	0.19	0.017	0.583	3	3.44	39.6	68
2	800	5.27	34.535	27.30	0.21	0.019	0.595	3	3.46	41.7	74
2	899	4.87	34.536	27.34	0.34	0.030	0.589	5	3.53	41.9	80
2	999	4.49	34.544	27.39	0.28	0.025	0.600	4	3.51	43.7	84
2	1097	4.13	34.551	27.44	0.48	0.043	0.588	7	3.51	43.9	89
2	1196	3.75	34.569	27.49	0.69	0.062	0.576	10	3.45	44.0	96
2	1295	3.47	34.576	27.52	0.85	0.076	0.566	12	3.40	43.0	100
2	1490	3.03	34.594	27.58	1.26	0.113	0.536	17	3.27	41.8	106

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 067 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
4	0	28.23	34.200	21.74	4.56	0.407	-0.013	103	0.24	6.1	1
4	15	28.12	34.192	21.77	4.58	0.409	-0.015	104	0.20	0.1	1
4	41	25.34	34.258	22.70	4.71	0.421	-0.009	102	0.35	0.8	2
4	53	23.90	34.305	23.17	4.87	0.435	-0.013	103	0.36	0.2	1
4	87	16.03	34.482	25.36	1.23	0.110	0.374	23	2.13	22.1	13
4	129	13.59	34.693	26.06	0.19	0.017	0.490	3	2.65	27.4	22

T G THOMPSON CRUISE 001 STATION 067 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	PUT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	28.15	0.00	34.202	0.000	21.77	605.3	0.000	0.00	4.55	0.00	
10	28.08	0.00	34.200	0.000	21.79	603.7	0.061	0.03	4.56	0.00	
20	28.06	0.00	34.201	0.000	21.80	603.5	0.122	0.13	4.57	0.00	0.75
30	28.13	0.05	34.202	0.001	21.77	605.9	0.183	0.28	4.57	0.00	0.87
50	23.04	0.17	34.296	0.007	23.41	450.2	0.289	0.70	4.63	0.03	0.85
75	18.25	0.09	34.444	0.001	24.77	320.8	0.387	1.31	2.54	0.12	0.66
100	14.89	0.03	34.588	0.002	25.70	233.2	0.456	1.92	0.68	0.02	0.76
150	12.92	0.05	34.723	0.004	26.21	185.3	0.562	3.24	0.16	0.03	0.89
200	11.98	0.01	34.769	0.000	26.43	165.5	0.650	4.82	0.30	0.01	0.81
250	11.28	0.04	34.752	0.008	26.55	155.2	0.731	6.68	0.26	0.03	0.78
300	10.65	0.01	34.703	0.001	26.63	146.9	0.808	8.84	0.15	0.00	0.95
400	9.09	0.00	34.616	0.000	26.82	131.4	0.949	13.88	0.10	0.00	0.96
500	7.57	0.00	34.542	0.000	27.00	115.3	1.074	19.60	0.17	0.00	0.96
600	6.44	0.00	34.525	0.000	27.14	101.9	1.183	25.77	0.17	0.00	0.97
700	5.82	0.00	34.531	0.000	27.23	94.5	1.283	32.39	0.19	0.00	0.99
800	5.27	0.00	34.535	0.000	27.30	88.1	1.375	39.49	0.21	0.00	
1000	4.49	0.00	34.544	0.000	27.39	79.6	1.545	55.13	0.28	0.00	0.98
1200	3.74	0.00	34.569	0.000	27.49	70.2	1.696	72.22	0.70	0.00	0.95

DATA FROM CAST 4 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 068 OBSERVED VALUES

DATE	05/12/65	BAROMETER	11.1	WEATHER	X1	WIND VELOC	01	WAVE PERIOD	2		
HOUR	04.4	TEMP DRY	26.1	VISIBILITY	7	WIND DIREC	29	SECCHI			
LAT	20-04.1N	TEMP WET	20.0	CLOUD TYPE	8	WAVE DIREC	32	WATER COLOR			
LONG	107-05.9W	REL HUMID	57	CLOUD AMT	1	WAVE HEIGHT	1	SOUNDING	3190		
MESSENGER TIMES:	04.4										
WIRE ANGLES:	00										

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	27.49	34.374	22.11	4.56	0.407	-0.009	102	0.21	0.0	2
1	16	27.40	34.387	22.15	4.57	0.408	-0.010	102	0.22	0.7	1
1	41	26.89	34.540	22.43	4.62	0.413	-0.011	103	0.28	0.2	1
1	53	26.22	34.606	22.69	4.66	0.416	-0.011	103	0.36	0.0	2
1	87	16.60	34.653	25.36	2.86	0.255	0.223	53	1.43	13.4	11
1	129	13.53	34.657	26.04	0.35	0.031	0.477	6	2.63	26.7	30

T G THOMPSON CRUISE 001 STATION 068 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	27.49	0.00	34.374	0.000	22.11	572.4	0.000	0.00	4.56	0.00	
10	27.46#		34.374#		22.12	571.7	0.058	0.03	4.56#		
20	27.37	0.02	34.407	0.004	22.17	567.3	0.115	0.12	4.58	0.00	0.89
30	27.22	0.03	34.464	0.008	22.27	558.7	0.172	0.26	4.59	0.00	0.90
50	26.50	0.06	34.591	0.001	22.59	528.6	0.282	0.71	4.67	0.01	0.66
75	19.45#		34.651	0.006	24.66	331.8	0.390	1.37	3.55#		1.20
100	15.15#		34.658#		25.69	233.6	0.461	2.00	2.10#		33.60

T G THOMPSON CRUISE 001 STATION 069 OBSERVED VALUES

DATE	05/12/65	BAROMETER	12.5	WEATHER	X1	WIND VELOC	07	WAVE PERIOD	2
HOUR	17.2	TEMP DRY	26.0	VISIBILITY	6	WIND DIREC	11	SECCHI	44
LAT	21-40.4N	TEMP WET	21.4	CLOUD TYPE	8	WAVE DIREC	10	WATER COLOR	
LONG	109-14.6W	REL HUMID	66	CLOUD AMT	2	WAVE HEIGHT	2	SOUNDING	2830

MESSENGER TIMES: 17.2, 17.8, 18.7
WIRE ANGLES: 00, 03, 00

CST	DEPTH	TEMP	SAL	SIGMA-T	OXYGEN ML/L	OXYGEN MGA/L	OXYGEN AOU	OXYGEN SATN	PHOS	NITR	SIL
1	0	26.61	34.656	22.60	4.61	0.412	-0.009	102	0.28	1.0	2
1	10	26.55	34.657	22.62	4.62	0.413	-0.010	102	0.28	0.8	2
1	21	26.55	34.657	22.62	4.62	0.413	-0.010	102	0.28	1.0	2
1	31	26.55	34.656	22.62	4.62	0.413	-0.010	102	0.28	0.4	2
1	41	26.45	34.650	22.65	4.62	0.413	-0.009	102	0.30	0.4	2
1	51	24.09	34.463	23.23	4.62	0.413	0.007	98	0.48	0.3	1
1	62	20.89	34.252	23.97	4.86	0.434	0.009	98	0.52	1.1	2
1	72	19.13	34.368	24.52	3.61	0.322	0.135	71	1.13	8.0	7
1	82	16.35	34.221	24.97	3.61	0.322	0.155	68	1.26	9.3	11
1	103	15.74	34.638	25.55	1.22	0.109	0.377	22	2.32	23.4	33
1	154	13.58	34.800	26.14	0.90	0.080	0.427	16	2.76	25.6	37
1	206	12.54	34.753	26.34	0.19	0.017	0.501	3	2.70	24.1	35
2	306	11.32	34.735	26.54	0.14	0.013	0.520	2	2.90	30.4	41
2	407	9.82	34.623	26.71	0.10	0.009	0.541	2	2.98	26.8	53
2	507	8.30	34.541	26.89	0.14	0.013	0.558	2	3.16	31.5	66
2	607	6.95	34.496	27.05	0.31	0.028	0.561	5	3.28	37.0	82
2	706	6.07	34.485	27.16	0.14	0.013	0.589	2	3.38	37.1	93
2	806	5.47	34.496	27.24	0.16	0.014	0.596	2	3.46	39.9	106
2	905	4.83	34.504	27.32	0.24	0.021	0.599	3	3.47	41.3	113
2	1004	4.51	34.513	27.37	0.30	0.027	0.598	4	3.51	42.5	121
2	1102	4.13	34.536	27.43	0.44	0.039	0.592	6	3.47	42.6	127
2	1201	3.83	34.546	27.46	0.58	0.052	0.584	8	3.48	42.2	135
2	1299	3.58	34.556	27.50	0.69	0.062	0.578	10	3.44	42.9	143
2	1495	3.10									

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 069 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	AOU	SATN	PHOS	NITR	SIL
3	2	26.71	34.657	22.57	4.66	0.416	-0.014	104	0.30	0.1	2
3	16	26.55	34.652	22.52	4.66	0.416	-0.013	103	0.28	0.0	2
3	39	26.54	34.656	22.53	4.64	0.414	-0.011	103	0.28	0.0	2
3	50	23.48	34.392	23.36	4.80	0.429	-0.005	101	0.46	0.1	1
3	83	18.00	34.485	24.90	2.79	0.249	0.217	53	1.56	13.5	13
3	129	14.53	34.712	25.87	0.63	0.056	0.441	11	2.60	25.7	29

T G THOMPSON CRUISE 001 STATION 069 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPUT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	26.61	0.00	34.656	0.000	22.60	525.2	0.000	0.00	4.61	0.00	
10	26.55	0.00	34.657	0.000	22.62	523.8	0.053	0.03	4.62	0.00	
20	26.55	0.00	34.657	0.000	22.62	524.1	0.106	0.11	4.62	0.00	0.88
30	26.55	0.00	34.656	0.000	22.62	524.7	0.159	0.24	4.62	0.00	0.87
50	24.39	0.03	34.486	0.003	23.16	474.2	0.260	0.65	4.62	0.00	0.86
75	18.42	0.06	34.324	0.018	24.67	330.5	0.361	1.28	3.58	0.07	0.69
100	15.74	0.10	34.620#		25.53	249.1	0.434	1.92	1.62	0.09	0.78
150	13.71	0.00	34.798#		26.11	195.4	0.546	3.33	0.95#		0.89
200	12.62	0.02	34.787	0.001	26.32	176.2	0.640	5.00	0.27	0.01	1.71
250	11.95	0.05	34.768	0.002	26.44	166.2	0.726	6.99	0.16#		0.80
300	11.36	0.01	34.742	0.000	26.53	158.7	0.808	9.30	0.12	0.02	0.91
400	9.93	0.00	34.632	0.001	26.70	144.0	0.960	14.75	0.10	0.00	0.90
500	9.40	0.00	34.546	0.000	26.88	127.6	1.098	21.05	0.13	0.00	0.90
600	7.03	0.00	34.498	0.000	27.04	112.3	1.219	27.86	0.30	0.01	0.90
700	6.11	0.00	34.485	0.000	27.15	101.8	1.327	35.07	0.15	0.00	0.91
800	5.50	0.00	34.495	0.000	27.24	94.1	1.426	42.69	0.16	0.00	0.92
1000	4.52	0.00	34.512	0.000	27.36	82.3	1.604	59.11	0.30	0.00	0.94
1200	3.83	0.00	34.546	0.000	27.46	73.1	1.762	76.85	0.58	0.00	0.99

DATA FROM CAST 3 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 070 OBSERVED VALUES

DATE	05/12/65	BAROMETER	12.?	WEATHER	X1	WIND VELOC	10	WAVE PERIOD	2
HOUR	04.5	TEMP DRY	25.1	VISIBILITY	6	WIND DIREC	15	SECCHI	
LAT	23-02.3N	TEMP WET	21.9	CLOUD TYPE	2	WAVE DIREC	13	WATER COLOR	
LONG	110-49.8W	REL HUMID	76	CLOUD AMT	4	WAVE HEIGHT	1	SOUNDING	0768

MESSENGER TIMES: 04.5, 04.7
WIRE ANGLES: 02, 02

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	25.45	34.581	22.91	4.74	0.423	-0.013	103	0.30		
1	16	25.46	34.578	22.90	4.76	0.425	-0.015	104	0.30	0.0	1
1	39	20.33	34.135	24.06	5.31	0.474	-0.027	106	0.47	1.0	2
1	58	18.45	34.118	24.51	4.82	0.430	0.033	93	0.64	1.6	3
2	83	14.97	34.218	25.40	2.43	0.217	0.278	44	1.70	17.2	15
2	129	12.77	34.413	26.00	1.04	0.093	0.424	18	2.40	25.0	30

T G THOMPSON CRUISE 001 STATION 070 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	25.45	0.00	34.581	0.000	22.91	496.1	0.000	0.00	4.74	0.00	
10	25.45#		34.580#		22.91	496.6	0.050	0.03	4.72#		
20	24.50#		34.530#		23.16	473.0	0.099	0.10	4.91	0.07	0.87
30	22.25#		34.325#		23.66	425.8	0.145	0.22	5.19	0.11	0.89
50	18.45	0.00	34.118	0.000	24.51	345.4	0.222	0.53	4.82	0.00	
75	15.58	0.06	34.195#		25.23	276.5	0.301	1.02	3.02	0.08	0.84
100	14.03	0.08	34.260#		25.64	238.2	0.365	1.59	1.70#		44.51

T G THOMPSON CRUISE 001 STATION 071 OBSERVED VALUES

DATE	06/12/65	BAROMETER	14.0	WEATHER	X1	WIND VELOC	07	WAVE PERIOD	4
HOUR	17.3	TEMP DRY	25.1	VISIBILITY	8	WIND DIREC	08	SECCHI	
LAT	24-45.5N	TEMP WET	21.6	CLOUD TYPE	8	WAVE DIREC	07	WATER COLOR	
LONG	113-12.7W	REL HUMID	73	CLOUD AMT	7	WAVE HEIGHT	1	SOUNDING	2195
MESSENGER TIMES:		17.3, 18.0, 18.8							
WIRE ANGLES:		00, 02, 00							

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	23.29	34.580	23.55	4.87	0.435	-0.010	102	0.33	0.5	1
1	10	23.17	34.580	23.59	4.95	0.442	-0.016	104	0.34	0.1	1
1	21	23.15	34.580	23.59	4.93	0.440	-0.014	103	0.33	0.1	1
1	31	23.15	34.584	23.60	4.94	0.441	-0.015	104	0.33	0.2	2
1	41	23.14	34.582	23.60	4.92	0.439	-0.013	103	0.34	0.2	1
1	51	23.11	34.576	23.60	4.91	0.439	-0.012	103	0.34	0.2	1
1	62	19.92	34.115	24.13	5.15	0.460	-0.009	102	0.48	0.3	2
1	72	18.40	34.050	24.47	4.97	0.444	0.020	96	0.58	1.5	3
1	82	15.82	33.973	25.02	4.36	0.389	0.098	80	0.90	0.7	6
2	104	14.16	34.065	25.45	2.95	0.263	0.240	52	1.58	15.7	15
2	152	13.48	34.620	26.02	0.82	0.073	0.435	14	2.61	25.8	32
2	201	11.93	34.599	26.31	0.57	0.051	0.475	10	3.23	26.8	38
2	302	10.12	34.583	26.63	0.34	0.030	0.517	6	2.45	27.3	48
2	403	8.88	34.493	26.76	0.35	0.031	0.532	6	3.04	30.1	57
2	504	7.85	34.457	26.89	0.30	0.027	0.550	5	3.16	33.5	67
2	603	6.64	34.434	27.04	0.20	0.018	0.576	3	3.29	36.7	83
2	703	5.37	34.433	27.20	0.30	0.027	0.585	4	3.39	39.7	101
2	802	4.79	34.457	27.29	0.36	0.032	0.589	5	3.39	41.7	112
2	901	4.40	34.476	27.35	0.46	0.041	0.586	7	3.39	42.2	119
2	1000	4.09	34.502	27.40	0.57	0.051	0.581	8	3.39	42.4	126
2	1099	3.80	34.515	27.44	0.67	0.060	0.577	9	3.40	42.4	132
2	1198	3.57	34.535	27.48	0.75	0.067	0.573	10	3.38	42.6	141
2	1295	3.32	34.559	27.52	0.89	0.079	0.565	12	3.35	42.0	146
2	1485	2.96									

(CONTINUED)

T G THOMPSON CRUISE 001 STATION 071 OBSERVED VALUES (CONTINUED)

CST	DEPTH	TEMP	SAL	SIGMA-T	OXYGEN ML/L	OXYGEN MGA/L	OXYGEN ADD	OXYGEN SATN	PHOS	NITR	SIL
3	0	23.40	34.593	23.53	4.92	0.439	-0.015	104	0.33		1
3	12	23.13	34.592	23.59	4.93	0.440	-0.015	103	0.36		2
3	32	23.13	34.585	23.60	4.96	0.443	-0.017	104	0.35		2
3	44	23.14	34.587	23.60	4.95	0.442	-0.016	104	0.35	0.1	2
3	67	19.35	34.110	24.28	5.03	0.449	0.007	99	0.56	0.5	3
3	103	13.94	34.353	25.50	2.84	0.254	0.252	50	1.63	16.0	16

T G THOMPSON CRUISE 001 STATION 071 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	23.29	0.00	34.590	0.000	23.55	434.6	0.000	0.00	4.87	0.00	
10	23.17	0.00	34.580	0.000	23.59	431.7	0.044	0.02	4.95	0.00	
20	23.15	0.00	34.590	0.000	23.59	431.5	0.088	0.09	4.93	0.00	0.88
30	23.15	0.00	34.594	0.000	23.60	431.6	0.131	0.20	4.94	0.00	0.87
50	23.17	0.04	34.596	0.006	23.59	434.0	0.218	0.56	4.91	0.00	0.86
75	17.52	0.08	34.024	0.003	24.64	333.6	0.315	1.16	4.81	0.01	0.69
100	14.24	0.12	34.031	0.006	25.41	260.6	0.390	1.82	3.20	0.01	0.76
150	13.48	0.03	34.593	0.007	26.00	205.3	0.507	3.30	0.83	0.00	0.94
200	11.96	0.00	34.602	0.002	26.31	177.4	0.603	5.01	0.56	0.01	0.96
250	11.90	0.05	34.594	0.005	26.50	160.2	0.689	6.97	0.42	0.01	0.81
300	10.14	0.00	34.583	0.000	25.62	149.0	0.767	9.16	0.34	0.00	0.97
400	8.91	0.00	34.496	0.001	26.76	137.4	0.911	14.33	0.35	0.00	0.96
500	7.39	0.00	34.453	0.000	26.89	126.2	1.044	20.46	0.30	0.00	0.94
600	6.68	0.00	34.434	0.000	27.04	111.9	1.164	27.22	0.20	0.00	0.96
700	5.40	0.00	34.433	0.000	27.20	96.2	1.270	34.21	0.30	0.00	0.96
800	4.80	0.00	34.456	0.000	27.29	87.9	1.363	41.37	0.36	0.00	0.97
1000	4.29	0.00	34.502	0.000	27.40	77.8	1.530	56.30	0.57	0.00	
1200	3.56	0.00	34.535	0.000	27.48	70.6	1.681	73.75	0.75	0.00	5.08

DATA FROM CAST 3 NOT USED FOR INTERPOLATION

T G THOMPSON CRUISE 001 STATION 072 OBSERVED VALUES

DATE	07/12/65	BAROMETER	13.0	WEATHER	X8	WIND VELOC	02	WAVE PERIOD	0
HOUR	04.5	TEMP DRY	22.0	VISIBILITY	7	WIND DIREC	34	SECCHI	
LAT	26-39.4N	TEMP WET	20.4	CLOUD TYPE	8	WAVE DIREC	00	WATER COLOR	
LONG	113-59.9W	REL HUMID	86	CLOUD AMT	8	WAVE HEIGHT	0	SOUNDING	0174

MESSENGER TIMES: 04.5
WIRE ANGLES: 00

CST	DEPTH	TEMP	SAL	SIGMA-T	******** OXYGEN ******** ML/L	MGA/L	ADU	SATN	PHOS	NITR	SIL
1	0	21.57	34.490	23.97	5.08	0.454	-0.016	104	0.46	0.1	2
1	12	21.37	34.501	24.03	4.89	0.437	0.002	99	0.46	0.0	2
1	32	21.31	34.503	24.05	4.87	0.435	0.005	99	0.48	0.0	3
1	40	21.22	34.236	23.87	4.77	0.426	0.015	97	0.48	0.2	2
1	67	17.64	34.239	24.80	3.03	0.271	0.199	58	1.42	10.1	17
1	103	15.25	34.230	25.34	2.39	0.213	0.279	43	1.80	16.1	

T G THOMPSON CRUISE 001 STATION 072 INTERPOLATED AND COMPUTED VALUES

DEPTH	TEMP	E(T)	SAL	E(S)	SIGMA-T	SP VOL ANOMALY	GEOPOT ANOMALY	POT ENERGY	OXY ML/L	E(O)	VAR RATIO
0	21.57	0.00	34.490	0.000	23.97	394.8	0.000	0.00	5.08	0.00	
10	21.39#		34.500#		24.03	389.8	0.040	0.02	4.91#		
20	21.34	0.02	34.500#		24.04	388.7	0.079	0.05	4.88	0.03	0.96
30	21.31	0.01	34.500#		24.05	388.4	0.118	0.18	4.87	0.01	1.00
50	19.95#		34.238#		24.21	373.2	0.195	0.50	4.19	0.13	1.18
75	16.95#		34.235#		24.96	302.9	0.280	1.03	2.80#		47.83
100	15.40#		34.230#		25.31	270.1	0.352	1.67	2.40#		83.18

SPECIAL CHEMISTRY DATA

TT 001 STATION 001

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.13	0.0	8.03										
10	0.14	0.0	8.10										
21	0.28	0.0	8.11										
31	0.23	0.0	8.12										
53	0.12	0.0	8.11										
78	0.14	0.0	8.12										
103	0.14	0.0	8.08										
154	0.18	0.0	8.05										
206	0.15	0.1	7.97										
257	0.29	0.0	7.94										
309	0.24	0.0	7.92										
412	0.45	0.0	7.90										
495	0.97	0.0	7.81										
505		0.0											
510		0.0											
592	1.23	0.0	7.91										
691	1.50	0.0	7.84										
788	1.80	0.0	7.79										
982	1.07	0.0	7.96										
1229	1.35	0.0	7.89										
1481	1.36	0.0	7.88										
1500	1.42	0.0	7.89										

TT 001 STATION 002

DEPTH	TOTAL P04	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.23	0.0	8.25	2.39	1.96								
10	0.29	0.0	8.27	2.40	1.95								
21	0.20	0.0	8.27	2.40	1.95								
31	0.15	0.0	8.27	2.40	1.95								
51	0.13	0.0	8.27	2.41	1.93								
77	0.14	0.0	8.25	2.45	1.98								
103	0.12	0.0	8.24	2.45	2.00								
154	0.16	0.0	8.17	2.46	2.07								
200	0.20	0.0	8.15	2.44	2.06								
248	0.25	0.0	8.12	2.43	2.07								
300	0.39	0.0	8.12	2.43	2.07								
400	0.84	0.0	8.04	2.41	2.09								
500	1.15	0.0	7.98	2.39	2.13								
601	1.55	0.0	7.90	2.36	2.15								
707	1.67	0.0	7.86	2.39	2.19								
806	1.93	0.0	7.85	2.38	2.20								
1005	1.84	0.0	7.85	2.38	2.20								
1256	1.46	0.0	7.90	2.38	2.18								
1506	1.47	0.0	7.91	2.38	2.17								
1759	1.36	0.0	7.91	2.38	2.17								
2008	1.45	0.0	7.91	2.35	2.15								
2259	1.37	0.0	7.92	2.38	2.18								
2509	1.38	0.0	7.91	2.32	2.12								
3012	1.51	0.0	7.90	2.39	2.19								
3517	1.37	0.0	7.91	2.39	2.19								
4019	1.46	0.0	7.91	2.39	2.20								
4517	1.49	0.0	7.90	2.39	2.21								
5019	1.52	0.0	7.90	2.40	2.23								
6271	1.68		7.84	2.39	2.25								
6737	1.81		7.84	2.38	2.26								
7204	1.56		7.86	2.38	2.26								
7675	1.75		7.86	2.38	2.26								
8152	1.79		7.85	2.38	2.27								

TT 001 STATION 003

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.37	0.0	8.25	2.31	1.90	1.95
10	0.10	0.0	8.27	2.32	1.90	
21	0.12	0.0	8.28	2.31	1.87	
31	0.12	0.0	8.28	2.32	1.88	
51	0.12	0.0	8.25	2.38	1.95	1.94
77	0.21	0.0	8.24	2.40	1.98	
103	0.16	0.0	8.24	2.42	1.97	2.13
154	0.13	0.0	8.19	2.43	2.02	
199	0.18	0.0	8.16	2.44	2.05	2.15
248	0.17	0.0	8.15	2.37	1.99	
299	0.30	0.0	8.14	2.30	2.02	
403	0.67	0.0	8.06	2.35	2.03	
507	1.05	0.0	7.90	2.40	2.18	2.22
607	1.63	0.0	7.85	2.37	2.17	
707	1.80	0.0	7.81	2.17	2.01	2.24
806	2.04	0.0	7.79	2.34	2.18	
1005	1.77	0.3	7.83	2.35	2.18	2.21
1255	1.57	0.1	7.88	2.37	2.17	
1503	2.17	0.0	7.90	2.36	2.16	
1753	1.33	0.0	7.91	2.39	2.18	
2001	1.25	0.0	7.91	2.37	2.16	
2253	1.29	0.0	7.91	2.37	2.17	2.23
2505	1.32	0.0	7.91	2.36	2.16	2.23

TT 001 STATION 004

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0	8.39	2.26	1.77	
10		0.0	8.39	2.26	1.77	
20		0.0	8.39	2.26	1.77	
30		0.0	8.39	2.29	1.78	
50		0.0	8.39	2.26	1.76	
75		0.3	8.35	2.37	1.86	
100		0.3	8.33	2.36	1.88	
152		0.0	8.31	2.43	1.94	
202		0.0	8.16	2.39	1.99	
252		0.0	8.20	2.44	2.03	
302		0.0	8.14	2.43	2.06	
402		0.0	8.00	2.37	2.09	
503		0.0	7.90	2.38	2.16	
604		0.0	7.86	2.34	2.15	
1210		0.0	7.90	2.39	2.18	
1310		0.0	7.89	2.39	2.19	
1409		0.0	7.88	2.38	2.18	
1509		0.0	7.82	2.39	2.22	
1758		0.0	7.93	2.38	2.17	
2010		0.0	7.93	2.37	2.16	
2261		0.0	7.93	2.37	2.16	

TT 001 STATION 005

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.15	0.0	8.32	2.32	1.87	
10	0.14	0.0	8.32	2.31	1.86	
21	0.10	0.0	8.33	2.33	1.86	
31	0.12	0.0	8.33	2.31	1.84	
51	0.10	0.0	8.32	2.33	1.88	
77	0.19	0.2	8.27	2.39	1.92	
102	0.19	0.1	8.24	2.42	1.99	
154	0.30	0.0	8.17	2.43	2.03	
204	0.46	0.0	8.09	2.43	2.09	
257	0.63	0.0	8.06	2.42	2.09	
307	0.85	0.0	7.99	2.39	2.11	
410	1.29	0.0	7.91	2.39	2.16	
513	1.80	0.0	7.83	2.37	2.18	
616	1.97	0.0	7.79	2.35	2.18	

TT 001 STATION 006

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.23	0.0	8.21	2.31	1.94	
10	0.21	0.0	8.23	2.31	1.92	
21	0.26	0.0	8.27	2.32	1.91	
31	0.19	0.0	8.29	2.32	1.88	
51	0.20	0.0	8.27	2.37	1.93	
77	0.18	0.0	8.24	2.42	1.99	
103	1.81	0.3	8.23	2.45	2.01	
153	0.40	0.0	8.11	2.43	2.07	
205	0.58	0.0	8.01	2.43	2.13	
255	0.75	0.0	7.94	2.40	2.14	
307	1.08	0.0	7.85	2.39	2.20	
409	1.60	0.0	7.79	2.35	2.17	
511	1.83	0.0	7.76	2.35	2.20	
613	2.02	0.0	7.73	2.35	2.22	
705	2.13	0.0	7.71	2.33	2.21	
905	2.27	0.0	7.73	2.36	2.22	
1006	1.85	0.0	7.78	2.37	2.20	
1252	1.68	0.0	7.82	2.37	2.18	
1500	1.71	0.0	7.83	2.36	2.17	
1750	1.68	0.0	7.84	2.39	2.19	
2000	1.61	0.0	7.84	2.38	2.18	
2248	1.61	0.0	7.84	2.40	2.20	
2496	1.65	0.0	7.84	2.39	2.19	
2870	1.52	0.0	7.84	2.38	2.18	
3193	1.64	0.0	7.84	2.38	2.18	
3607	1.61	0.0	7.84	2.39	2.19	

TT 001 STATION 007

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.1	8.30	2.29	1.86	
10		0.0	8.31	2.30	1.87	
21		0.0	8.31	2.31	1.88	
31		0.0	8.29	2.39	1.92	
50		0.4	8.25	2.42	1.99	
75		0.0	8.21	2.44	2.03	
100		0.0	8.17	2.47	2.07	
150		0.0	8.10	2.44	2.08	
202		0.0	8.05	2.43	2.09	
252		0.0	7.97	2.40	2.13	
303		0.0	7.93	2.40	2.16	
405		0.0	7.84	2.37	2.17	
507		0.0	7.79	2.37	2.20	
609		0.0	7.77	2.36	2.20	

TT 001 STATION 008

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.26	0.0	8.32	2.26	1.82								
10	0.24	0.0	8.32	2.28	1.83								
21	0.25	0.0	8.30	2.33	1.86								
31	0.27	0.0	8.29	2.34	1.87								
51	0.30	0.1	8.26	2.40	1.96								
76	0.24	0.1	8.26	2.42	1.97								
102	0.47	0.1	8.19	2.41	2.00								
153	0.63	0.0	8.12	2.41	2.04								
204	0.73	0.0	8.09	2.40	2.06								
254	0.89	0.0	8.06	2.37	2.05								
306	1.11	0.0											
408	1.66	0.0											
504	1.89	0.0	7.81	2.33	2.15								
603	2.21	0.0	7.77	2.33	2.17								
703	2.21	0.0	7.77	2.32	2.16								
804	2.12	0.0	7.78	2.31	2.15								
1005	1.73	0.0	7.84	2.33	2.14								
1257	1.67	0.0	7.86	2.33	2.13								
1513	1.67	0.0	7.88	2.34	2.14								
1766	1.60	0.0	7.88	2.34	2.14								
1969	1.58	0.0	7.88	2.34	2.14								
1974		0.0											
1980		0.0											
2019	1.56	0.0	7.88	2.34	2.14								

TT 001 STATION 009

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.23	0.1	8.29	2.27	1.83	
5	0.31					
10	0.19	0.0	8.28	2.29	1.85	
21	0.18	0.0	8.28	2.32	1.87	
31		0.0	8.28	2.34	1.89	
51	0.18	0.0	8.26	2.37	1.92	

TT 001 STATION 010

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.25	0.0	8.32	2.33	1.86	
10	0.18	0.0	8.33	2.32	1.85	
21	0.21	0.0	8.34	2.36	1.88	
31	0.21	0.0	8.33	2.44	1.94	
51	0.20	0.0	8.31	2.46	1.97	
77	0.25	0.1	8.27	2.49	2.01	
101	0.31	0.0	8.20	2.49	2.07	
153	0.53	0.0	8.13	2.45	2.08	
204	0.68	0.0	8.11	2.43	2.07	
256	0.93	0.0	8.05	2.38	2.08	
307	1.18	0.0	8.00	2.40	2.12	
409	1.71	0.0	7.88	2.37	2.16	
511	2.03	0.0	7.82	2.35	2.17	
538	2.18	0.0	7.80	2.34	2.17	

TT 001 STATION 011

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0	8.25	2.18	1.82	
10		0.0	8.27	2.35	1.93	
21		0.0	8.28	2.40	1.93	
31		0.0	8.27	2.41	1.96	
51		0.0	8.26	2.42	1.96	
76		0.1	8.15	2.42	2.03	
102		0.0	8.12	2.42	2.06	
143		0.0	8.06	2.40	2.07	

TT 001 STATION 012

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0	8.17	1.93	1.67	
10		0.0	8.23	2.09	1.75	
21		0.3	8.21	2.34	1.94	
31		0.9	8.16	2.39	2.01	
51		0.0	8.13	2.39	2.02	
77		0.1	8.10	2.39	2.04	
103		0.1	8.06	2.40	2.07	
113		0.2	8.06	2.39	2.07	

TT 001 STATION 013

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.28	0.0	8.28	2.34	1.87	
10	0.22	0.0	8.29	2.33	1.86	
21	0.23	0.0	8.29	2.32	1.85	
31	0.24	0.0	8.29	2.33	1.86	
51	0.31	0.1	8.26	2.32	1.87	
77	0.37	0.2	8.22	2.37	1.95	
102	0.39	0.0	8.19	2.37	1.97	
152	0.49	0.0	8.16	2.38	2.00	
202	0.67	0.0	8.09	2.38	2.03	
253	1.12	0.0	8.01	2.38	2.09	
304	1.54	0.0	7.94	2.35	2.10	
406	1.78	0.0	7.88	2.35	2.14	
502	1.90	0.0	7.82	2.34	2.15	
601	2.02	0.0	7.80	2.32	2.15	
700	2.22	0.0	7.81	2.27	2.10	
799	1.79	0.0	7.83	2.29	2.11	
997	1.77	0.0	7.85	2.30	2.11	
1246	1.76	0.0	7.87	2.28	2.08	
1256	1.65	0.0	7.86	2.25	2.05	

TT 001 STATION 014

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.27	0.0	8.24	2.43	1.99		0.3						
10	0.24	0.0	8.26	2.41	1.96								
26	0.33	0.0	8.25	2.39	1.96		0.1						
51	0.41	0.5	8.20	2.42	2.01		0.4						
77	0.41	0.0	8.18	2.41	2.01								
103	0.44	0.0	8.15	2.38	1.99		0.1						
129	0.53	0.0	8.13	2.42	2.05								
153	0.67	0.0	8.10	2.38	2.03		0.2						
205	1.67	0.0	7.88	2.38	2.17		0.1						
255	2.06	0.0	7.84	2.37	2.18		0.1				0.0	00.0	
306	2.24	0.0					0.1				0.0	00.0	
356	2.70	0.0	7.83	2.40	2.21		2.5				2.2	12.9	
367	2.66	0.0	7.82	2.40	2.21		3.6				4.4	15.3	

TT 001 STATION 015

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.18	0.0	8.18	2.41	2.01		0.3						0.00
10	0.22	0.0	8.18	2.42	2.03								
26	0.60	0.0	8.18	2.44	2.05		0.1						
50	0.32	0.6	8.13	2.45	2.07		0.5						
75	0.30	0.4	8.16	2.45	2.06								
101	0.42	0.0	8.14	2.44	2.06		0.0						
125	0.54	0.0	8.12	2.44	2.06		0.1						
152	1.54	0.0	8.08	2.43	2.09		0.2						0.00
202		0.0	8.01	2.44	2.14		0.1						
253		0.0	7.99	2.44	2.16		0.0				0.0		
302	2.27	0.0	7.98	2.44	2.17		0.0				0.0		TRACE
353		0.0	7.98	2.46	2.18		1.9				3.2	4.4	
405	2.68	0.0	7.97	2.46	2.18		4.6				9.2	9.4	0.01
505		0.0	7.97	2.47	2.18		7.6				15.0	15.9	0.03
606	2.96	0.0	7.81	2.48	2.26		9.8				17.2	25.9	
707		0.0	7.81	2.48	2.26		11.4				18.9	18.1	
758	2.88	0.0	7.82	2.48	2.25		12.1				19.3	18.5	
808		0.0	7.82	2.47	2.24		13.3				20.4		0.07
858	3.02	0.0	7.83	2.47	2.23		13.6				19.5		
908		0.0	7.83	2.49	2.25		14.0				21.3		
958	2.98	0.0	7.83	2.48	2.24		14.5				21.4		
1008		0.0	7.83	2.48	2.24		15.0				21.6		0.23
1107	3.03	0.0	7.84	2.49	2.25		15.4				22.8		
1207		0.0	7.84	2.49	2.25		16.2				25.6	24.8	
1307	3.06	0.0	7.85	2.49	2.24		16.2				25.0	24.7	
1311		0.0											
1347		0.0	7.84	2.47	2.22		15.8				20.6	22.8	0.28

TT 001 STATION 016

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.29	0.0	8.29	2.36	1.89		0.1						
10		0.0	8.30	2.38	1.91		0.1						
26	0.29	0.1	8.28	2.38	1.92		0.1						
51		0.1	8.25	2.39	1.94		0.5						
77	0.32	0.7	8.22	2.39	1.96		1.1						
103		0.1	8.16	2.41	2.02		0.3						
129	0.72	0.1	8.08	2.38	2.04		0.1						
153	1.02	0.0	8.01	2.39	2.09		0.1						
204	1.62	0.0	7.90	2.39	2.11		0.3						
254	1.93	0.1	7.86	2.39	2.17		0.3						
305	2.23	0.0	7.84	2.41	2.21		0.3				0.0		
356	2.95	0.0	7.84	2.43	2.23		1.0				0.3	0.8	
407	2.64	0.0	7.83	2.46	2.24		4.2				6.4	6.7	
509	2.80	0.0	7.81	2.43	2.23		6.9				13.4	12.8	
608	2.87	0.0	7.73	2.48	2.30		9.4				17.0	13.5	
709	3.01	0.0	7.75	2.46	2.28		11.4				19.7	25.5	
760	2.94	0.0	7.76	2.45	2.27		12.7				19.6	18.1	
810	3.04	0.0	7.76	2.46	2.27		12.6				19.8	20.1	
863		0.0	7.77	2.43	2.23		14.0				21.8	19.7	
882	3.04		7.78	2.44	2.24		14.3				22.8	20.9	
897											21.1	21.1	
902	2.99	0.0	7.77	2.43	2.23		14.0						

TT 001 STATION 017

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.29	0.0	8.27	2.29	1.84	1.86	0.0						0.00
10	0.26	0.0	8.27	2.29	1.84	1.86							
26	0.20	0.0	8.27	2.30	1.85								
51		0.1	8.24	2.33	1.89	1.95	0.1						
77		0.1	8.19	2.35	1.95								
103		0.0	8.18	2.35	1.96	2.03	0.0						0.00
128		0.0	8.08	2.34	2.00								
153		0.0	8.01	2.35	2.03								
204	1.45	0.1	7.89	2.39	2.17	2.13	0.0						0.00
234		0.0					0.1				0.0		
255		0.0	7.85	2.40	2.19		0.0						
285		0.0					0.0				0.0		
306	2.27	0.0	7.82	2.39	2.20	2.25	0.0				0.0		0.00
337		0.0					0.0				0.0		
356		0.0	7.82	2.40	2.21						0.0		
388		0.0					2.8				3.6		
408	2.51	0.0	7.80	2.40	2.21	2.24	4.1				6.4		0.00
440		0.0					5.4				10.2		
466		0.0					6.2				11.6		
491		0.0					7.0				14.4		
514		0.0	7.73	2.38	2.23	2.25	7.6				13.9		0.01
614	2.85	0.0	7.76	2.37	2.21	2.26	9.5				18.7		0.03
718			7.76	2.38	2.22	2.30	10.9				21.2		0.09
768	2.87		7.75	2.38	2.22		12.0				22.4		
819			7.76	2.38	2.22	2.40	12.1				22.7		0.09
870	2.91		7.75	2.38	2.22		12.6				22.7		
920		0.0	7.76	2.38	2.22	2.32	13.1				22.8		0.16
971	2.88		7.76	2.39	2.23		14.0				23.3		
1020		0.0	7.76	2.37	2.21	2.29	14.4				24.3		0.17
1120	2.93		7.76	2.38	2.22	2.33	14.2				24.2		0.09
1220		0.0	7.77	2.39	2.23	2.24	15.3				23.9		0.25
1320	2.80		7.78	2.38	2.22	2.27	13.8				17.3		0.22
1361		0.0	7.78	2.35	2.20	2.20	13.5				14.2		0.09

TT 001 STATION 018

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.28	0.0	8.25	2.39	1.94								
10	0.23	0.0	8.26	2.39	1.94								
21	0.26	0.0	8.25	2.42	1.97								
51	0.27	0.0	8.22	2.42	2.00								
77	0.32	0.2	8.20	2.43	2.01								
103	0.36	0.1	8.19	2.43	2.02								
129	0.71	0.0	8.05	2.43	2.11								
154	0.86	0.0	8.00	2.42	2.14								
206	1.34	0.0	7.91	2.41	2.17								
257	1.90	0.0	7.83	2.41	2.21								
273	1.97	0.1	7.82	2.42	2.23								

TT 001 STATION 019

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.30	0.0	8.27	2.40	1.94	
10	0.28	0.0	8.30	2.40	1.91	
21	0.32	0.0	8.30	2.39	1.91	
31	0.21	0.0	8.30	2.39	1.91	
51	0.29	0.0	8.27	2.42	1.96	
77		0.1	8.23	2.44	1.98	
103		0.0	8.18	2.43	2.03	
153		0.0	8.16	2.43	2.04	
205		0.0	8.17	2.41	2.01	
256		0.0	8.09			
308		0.0	7.98	2.38	2.11	
410		0.0	7.88	2.35	2.13	

TT 001 STATION 020

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0	8.26	2.40	1.95	
10		0.0	8.30	2.39	1.91	
21		0.0	8.31	2.38	1.89	
31		0.0	8.31	2.38	1.89	
51		0.0	8.27	2.40	1.94	
77		0.1	8.22	2.42	1.99	
103		0.0	8.18	2.43	2.03	
153		0.0	8.11	2.41	2.04	
205		0.0				
255		0.0	8.05	2.41	2.09	
307		0.0	7.99	2.37	2.09	
409		0.0	7.87	2.35	2.14	
511		0.0	7.81	2.34	2.16	
613		0.0	7.77	2.33	2.16	

TT 001 STATION 021

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.19	0.0	8.29	2.30	1.86	
10	0.16	0.0	8.32	2.30	1.85	
21	0.26	0.0	8.33	2.31	1.85	
31	0.19	0.0	8.31	2.34	1.88	
51	0.20	0.0	8.29	2.38	1.93	
77	0.57	0.0	8.22	2.39	1.98	
103	0.37	0.0	8.18	2.40	2.02	
154	0.39	0.0	8.15	2.38	2.02	
206	0.62	0.0	8.09	2.39	2.07	
257	0.71	0.0	8.06	2.37	2.06	
309	1.27	0.0	7.98	2.34	2.08	
412	1.68	0.0	7.88	2.31	2.10	
515	1.92	0.0	7.82	2.30	2.13	
618	2.07					
713		0.0	7.80	2.32	2.15	
814		0.0	7.81	2.33	2.16	
1012		0.0	7.86	2.33	2.14	
1266		0.0	7.88	2.34	2.15	
1516		0.0	7.89	2.35	2.15	
1770		0.0	7.90	2.35	2.15	
2023		0.0	7.90	2.35	2.15	
2273		0.0	7.90	2.34	2.14	
2525		0.0	7.88	2.36	2.17	
3026		0.0	7.90	2.36	2.17	
3530		0.0	7.95	2.36	2.16	
4000		0.0	7.85	2.32	2.16	
4500		0.0	7.80	2.31	2.18	
4570		0.0	7.80	2.33	2.21	

TT 001 STATION 022

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.18		8.30	2.40	1.92	
10	0.19		8.33	2.40	1.90	
21	0.17		8.34	2.40	1.90	
31	0.24		8.34	2.39	1.89	
51	0.17		8.31	2.41	1.91	
77	0.28		8.27	2.43	1.96	
103	0.31		8.21	2.43	2.01	
154	0.55		8.14	2.42	2.05	
207	0.78		8.09	2.40	2.06	
259	1.24		8.01	2.38	2.09	
312	1.50		7.94	2.37	2.13	
415	1.76		7.87	2.34	2.12	
519	1.94		7.83	2.33	2.16	
608	2.07		7.82	2.35	2.18	
709	2.17		7.82	2.34	2.17	
808	2.06		7.83	2.36	2.19	
1008	1.68		7.88	2.35	2.15	
1257	1.60		7.90	2.37	2.17	
1506	1.48		7.92	2.38	2.17	
1756	1.48		7.92	2.37	2.16	
2003	1.40		7.93	2.38	2.17	
2250	1.37		7.93	2.38	2.17	
2495	1.44		7.93	2.38	2.18	
2994	1.45		7.93	2.38	2.18	
3093	1.49		7.93	2.39	2.19	

TT 001 STATION 023

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.32	2.39	1.90	
10			8.33	2.39	1.89	
21			8.33	2.40	1.90	
31			8.33	2.39	1.89	
51			8.30	2.42	1.93	
77			8.25	2.44	1.99	
103			8.19	2.45	2.05	
154			8.04	2.42	2.11	
203			8.03	2.40	2.10	
253			8.00	2.39	2.11	
306			7.94	2.37	2.13	
408			7.86	2.35	2.14	
500			7.78	2.35	2.19	
600			7.78	2.35	2.19	
700			7.78	2.35	2.19	
800			7.80	2.35	2.18	
999			7.84	2.37	2.18	
1251			7.88	2.37	2.16	
1496			7.88	2.36	2.15	

TT 001 STATION 024

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.29		8.32	2.38	1.89	
10	0.18		8.33	2.38	1.89	
21	0.27		8.33	2.39	1.89	
31	0.20		8.32	2.41	1.92	
51	0.23		8.29	2.42	1.94	
77	0.30		8.26	2.42	1.96	
103	0.35		8.22	2.43	1.99	
154	0.44		8.16	2.44	2.06	
206	0.62		8.12	2.41	2.05	
257	0.88		8.05	2.39	2.07	
309	1.22		8.03	2.38	2.06	
412	1.71		7.91	2.36	2.13	
515	1.95		7.90	2.34	2.12	

TT 001 STATION 025

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.25		8.26	2.39	1.95	
10	0.29		8.28	2.40	1.93	
21	0.28		8.27	2.39	1.94	
31	0.29		8.26	2.40	1.96	
41	0.34		8.24	2.40	1.97	

TT 001 STATION 026

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.32	2.36	1.87	
10			8.32	2.39	1.90	
21			8.32	2.36	1.87	
31			8.30	2.39	1.92	
51			8.26	2.37	1.92	
57			8.25	2.38	1.93	

TT 001 STATION 027

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.23		8.27	2.35	1.89	
10	0.24		8.27	2.35	1.89	
21			8.28	2.36	1.90	
31	0.24		8.26	2.35	1.90	
51			8.24	2.36	1.91	
77	0.26		8.23	2.36	1.91	

TT 001 STATION 028

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.30	2.35	1.87	
10			8.30	2.34	1.86	
21			8.30	2.34	1.86	
31			8.30	2.33	1.85	
51			8.28	2.35	1.88	
77			8.22	2.36	1.93	
103			8.18	2.40	2.00	
156			8.11	2.39	2.02	
207			8.07	2.36	2.04	
259			7.99	2.35	2.09	
306			7.92	2.32	2.10	
413			7.85	2.31	2.13	
508			7.82	2.30	2.14	
610			7.77	2.29	2.15	
712			7.79	2.29	2.15	
814			7.80	2.30	2.15	
1018			7.85	2.30	2.13	
1273			7.92	2.33	2.15	

TT 001 STATION 029

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.23		8.28	2.36	1.89								
10	0.22		8.33	2.36	1.86								
21	0.16		8.33	2.35	1.85								
31	0.19		8.33	2.35	1.85								
51	0.26		8.30	2.37	1.86								
75	0.26		8.26	2.39	1.94								
100	0.48		8.19	2.41	2.01								
151	0.31		8.17	2.40	2.00								
202	0.47		8.16	2.38	2.00								
253	0.90		8.05	2.36	2.06								
304	1.18		8.00	2.34	2.07								
406	1.62		7.90	2.32	2.08								
508	1.97		7.84	2.31	2.14								
611	2.12		7.81	2.31	2.19								
700	2.25		7.82	2.31	2.19								
799			7.84	2.30	2.15								
916			7.89	2.32	2.13								
1017			7.85	2.33	2.16								
1271			7.89	2.35	2.17								
1523			7.90	2.33	2.15								
1774			7.92	2.34	2.15								
1975			7.92	2.34	2.15								
2025			7.92	2.34	2.16								
2269			7.92	2.33	2.15								
2514			7.93	2.35	2.17								
3008			7.93	2.34	2.16								
3512			7.93	2.33	2.15								
4019	1.57		7.93	2.34	2.17								
4490			7.93	2.34	2.17								

TT 001 STATION 030

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.24		8.21	2.36	1.94	1.99
10	0.23		8.21	2.38	1.96	1.95
21	0.19		8.21	2.37	1.96	
31	0.19		8.22	2.33	1.92	1.97
51	0.19		8.22	2.36	1.94	1.92
67	0.22		8.21	2.35	1.94	1.90

TT 001 STATION 031

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.21		8.25	2.32	1.89	1.89
9	0.20		8.28	2.31	1.86	1.86
19	0.18		8.26	2.31	1.87	1.96
28	0.26		8.28	2.30	1.85	1.85
43	0.17		8.28	2.30	1.85	1.90
65	0.28		8.25	2.30	1.87	1.89
88	0.31		8.21	2.37	1.95	2.03
132	0.29		8.17	2.37	1.97	2.00
178	0.46		8.12	2.36	1.99	2.08
223			8.08	2.35	2.02	2.08
268			8.02	2.32	2.02	2.03
358	1.56		7.89	2.28	2.07	2.08
459	1.75		7.85	2.26	2.07	2.10
540			7.80	2.29	2.13	2.05
632	2.03		7.78	2.28	2.14	2.11
724	2.12		7.79	2.28	2.13	
914	0.10		7.83	2.29	2.12	
1161	1.50		7.86	2.30	2.12	

TT 001 STATION 032

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.33	2.37	1.86	
10			8.34	2.37	1.86	
20			8.34	2.37	1.86	
30			8.34	2.37	1.86	
50			8.34	2.38	1.87	
72			8.30	2.39	1.90	
98			8.26	2.40	1.93	
147			8.21	2.40	1.97	
198			8.16	2.38	1.99	
248			8.11	2.36	2.02	
297			8.04	2.34	2.02	
398			7.94	2.31	2.08	
500			7.87	2.30	2.10	
601			7.85	2.28	2.10	
703			7.85	2.30	2.12	
804			7.86	2.31	2.13	
1008			7.91	2.32	2.11	
1264			7.93	2.33	2.12	

TT 001 STATION 033

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.18		8.29	2.32	1.85	1.85
10	0.15		8.31	2.32	1.83	1.85
21	0.12		8.34	2.33	1.83	
31	0.17		8.34	2.33	1.83	
51	0.15		8.32	2.35	1.85	1.84
75	0.23		8.28	2.40	1.92	
101	0.24		8.24	2.41	1.96	1.88
152	0.46		8.16	2.40	2.01	
203	0.58		8.09	2.37	2.03	1.99
254	0.80		8.07	2.37	2.05	
306	2.18		7.99	2.34	2.07	2.06
408	1.72		7.93	2.30	2.07	2.07
511	1.90		7.88	2.29	2.10	2.08
613	2.11		7.85	2.28	2.10	2.12
709	2.13		7.78	2.30	2.14	2.12
810	2.01		7.80	2.30	2.14	2.10
1013	1.72		7.85	2.31	2.12	2.03
1265	1.61		7.88	2.32	2.13	
1513	1.41		7.89	2.29	2.09	2.01
1765	1.55		7.90	2.33	2.13	
2010	1.49		7.90	2.33	2.13	2.10
2255	1.53		7.90	2.35	2.14	
2500	1.50		7.91	2.34	2.14	2.03
3000	1.54		7.91	2.34	2.14	2.03
3512	1.60		7.91	2.35	2.15	
3614	1.50		7.91	2.34	2.15	2.06

TT 001 STATION 034

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.21		8.29	2.34	1.87	1.85
10	0.26		8.32	2.36	1.86	
21	0.21		8.33	2.36	1.86	
31	0.21		8.30	2.36	1.89	1.82
51	0.26		8.31	2.37	1.89	
76	0.30		8.28	2.39	1.94	
102	0.30		8.25	2.40	1.95	1.96
153	0.46		8.16	2.40	2.02	
205	0.47		8.14	2.39	2.02	2.03
256	0.79		8.06	2.37	2.05	
308	1.26		7.98	2.36	2.09	2.13
411	1.66		7.89	2.35	2.13	2.14
514	1.93		7.80	2.33	2.14	
617	2.11		7.80	2.34	2.16	2.17
702	2.08		7.76	2.33	2.19	
801	2.01		7.79	2.33	2.17	
1001	1.85		7.83	2.38	2.21	
1251	1.66		7.87	2.35	2.16	
1500	1.57		7.87	2.35	2.16	
1749	1.59		7.89	2.34	2.15	
1997	1.58		7.89	2.36	2.17	
2248	1.57		7.90	2.36	2.17	
2496	1.56		7.89	2.35	2.16	
2996	1.48		7.90	2.36	2.19	
3549	1.53		7.89	2.36	2.19	

TT 001 STATION 035

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.32	2.33	1.86	
10			8.32	2.33	1.86	
20			8.33	2.33	1.86	
49			8.31	2.37	1.87	
74			8.25	2.39	1.95	
100			8.23	2.41	1.97	
151			8.16	2.40	2.01	
199			8.14	2.39	2.02	
249			8.03	2.37	2.06	
300			7.96	2.37	2.11	
400			7.88	2.34	2.13	
501			7.83	2.33	2.15	
603			7.82	2.33	2.16	
705			7.80	2.34	2.17	
806			7.81	2.34	2.17	
1006			7.85	2.36	2.17	
1254			7.88	2.37	2.18	

TT 001 STATION 036

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.26		8.37	2.32	1.83	
10	0.28		8.37	2.32	1.83	
21	0.23		8.38	2.34	1.84	
31	0.26		8.38	2.37	1.84	
51	0.21		8.34	2.39	1.88	
77	0.28		8.32	2.40	1.91	
103	0.46		8.28	2.41	1.93	
153	0.47		8.22	2.41	1.99	
204	0.57		8.18	2.39	2.00	
255	0.79		8.16	2.38	2.00	
306	1.34		8.02	2.36	2.06	
408	1.81		7.92	2.36	2.13	
510	2.02		7.89	2.35	2.14	
612	2.14		7.85	2.35	2.15	
714	2.37		7.84	2.34	2.17	
816	2.18		7.86	2.34	2.14	
1020	1.84		7.91	2.35	2.14	
1275	1.69		7.93	2.36	2.16	

TT 001 STATION 037

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.29		8.37	2.34	1.81	
10	0.18					
21	0.18		8.38	2.35	1.82	
51	0.19		8.35	2.39	1.88	
77	0.19					
102	0.31		8.26	2.40	1.94	
153	0.50					
202	0.60		8.17	2.39	2.01	
254	0.87					
304	1.18		8.05	2.36	2.07	
406	1.70					
509	1.98		7.89	2.33	2.12	
611	2.19					
713	2.19		7.85	2.32	2.14	
816	2.19					
1021	1.95		7.90	2.34	2.13	
1278	1.74					

TT 001 STATION 038

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.39	2.35	1.81	
21			8.39	2.37	1.83	
51			8.37	2.37	1.84	
99			8.32	2.39	1.89	
199			8.18	2.37	1.96	
300			8.06	2.35	2.03	
504			7.89	2.32	2.09	
709			7.86	2.32	2.14	
1015			7.93	2.34	2.14	

TT 001 STATION 039

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.26		8.33	2.32	1.85	
10	0.20		8.33	2.33	1.86	
21	0.20		8.32	2.37	1.87	
51	0.23		8.30	2.39	1.90	
76	0.22		8.28	2.40	1.91	
102	0.27		8.25	2.40	1.95	
152	0.37		8.17	2.40	2.01	
203	0.65		8.13	2.39	2.03	
253	0.90		8.07	2.37	2.03	
305	1.34		8.01	2.36	2.06	
407	1.83		7.88	2.34	2.13	
510	1.85		7.83	2.32	2.14	
612	2.16		7.80	2.32	2.15	
714	2.17		7.79	2.33	2.17	
817	2.18		7.81	2.34	2.17	
1020	1.77		7.86	2.34	2.15	
1275	1.69		7.88	2.34	2.15	

TT 001 STATION 040

DEPTH	TOTAL PO4	NO2	PH,	ALK.	CO2 CALC.	CO2 GAS
0			8.32	2.37	1.87	
10			8.33	2.37	1.86	
21			8.33	2.42	1.91	
31			8.32	2.42	1.91	
51			8.30	2.41	1.92	
76			8.28	2.41	1.94	
102			8.25	2.42	1.96	
153			8.18	2.42	2.02	
204			8.13	2.41	2.04	
255			8.06	2.40	2.07	
307			7.99	2.39	2.12	
408			7.89	2.37	2.16	
509			7.84	2.36	2.18	
611			7.81	2.37	2.20	
713			7.81	2.36	2.19	
815			7.82	2.37	2.20	
1018			7.88	2.37	2.17	
1120			7.89	2.37	2.17	

TT 001 STATION 041

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.34		8.30	2.28	1.84	
10	0.24		8.30	2.28	1.84	
21	0.17		8.32	2.36	1.86	
31	0.16		8.32	2.37	1.87	
51	0.16		8.30	2.39	1.91	
77	1.85		8.28	2.40	1.94	
103	0.24		8.26	2.40	1.94	
154	0.41		8.17	2.41	2.02	

TT 001 STATION 042

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.36	2.36	1.87	
10			8.36	2.36	1.87	
21			8.36	2.39	1.88	
31			8.37	2.40	1.88	
51			8.36	2.41	1.89	
77			8.34	2.41	1.90	
103			8.31	2.43	1.93	
150			8.23	2.43	1.99	
201			8.17	2.42	2.04	
251			8.10	2.41	2.11	
302			8.04	2.40	2.09	
404			7.94	2.39	2.15	
506			7.88	2.38	2.17	
608			7.86	2.39	2.20	
710			7.86	2.39	2.20	
812			7.88	2.39	2.19	
1015			7.92	2.40	2.18	
1268			7.94	2.40	2.18	

TT 001 STATION 043

DEPTH	TOTAL P04	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.17		8.36	2.36	1.87	
10	0.21		8.36	2.36	1.87	
21	0.20		8.37	2.36	1.86	
31	0.21		8.37	2.37	1.87	
51	0.28		8.36	2.41	1.89	
62	0.20		8.34	2.42	1.91	

TT 001 STATION 044

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.40	2.41	1.85	
10			8.40	2.42	1.86	
21			8.40	2.40	1.84	
31			8.39	2.41	1.86	
51			8.38	2.42	1.88	
77			8.36	2.43	1.90	
103			8.33	2.44	1.96	
154			8.24	2.44	1.99	
206			8.21	2.43	2.01	
251			8.12	2.41	2.05	
303			8.05	2.40	2.08	
404			7.97	2.39	2.13	
507			7.92	2.39	2.16	
608			7.88	2.38	2.16	
711			7.88	2.38	2.17	
813			7.90	2.39	2.17	
1019			7.94	2.39	2.15	
1276			7.97	2.40	2.14	

TT 001 STATION 045

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.27		8.38	2.40	1.88	
10	0.18		8.39	2.40	1.88	
21	0.18		8.39	2.42	1.88	
31	0.23		8.39	2.43	1.89	
51			8.37	2.45	1.90	
75			8.34	2.45	1.93	
100			8.30	2.45	1.96	
150			8.24	2.45	1.99	
201			8.20	2.44	2.02	
251			8.13	2.43	2.06	
302			8.06	2.42	2.09	
404			7.96	2.41	2.16	
506			7.91	2.39	2.16	
608			7.88	2.39	2.18	
709			7.87	2.40	2.19	
811			7.89	2.40	2.18	
1016			7.94	2.41	2.17	
1271			7.97	2.41	2.15	

TT 001 STATION 046

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.37	2.34	1.86	
10			8.37	2.34	1.86	
21			8.39	2.41	1.87	
31			8.39	2.41	1.87	
51			8.38	2.42	1.89	
77			8.34	2.44	1.92	
103			8.31	2.44	1.95	
154			8.26	2.44	1.98	
257			8.21	2.43	2.02	
310			8.19	2.42	2.02	
413			8.05	2.40	2.08	
517			7.98	2.39	2.12	
620			7.93	2.39	2.15	
673			7.91	2.38	2.15	

TT 001 STATION 047

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.36	2.42	1.92	
10			8.36	2.44	1.93	
21			8.36	2.44	1.93	
31			8.36	2.44	1.93	
49			8.33	2.44	1.94	

TT 001 STATION 048

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.26	2.04	1.77	
10			8.38	2.42	1.89	
21			8.38	2.44	1.89	
31			8.38	2.44	1.89	
51			8.38	2.45	1.92	
77	0.23		8.36	2.45	1.92	
102	0.21		8.34	2.45	1.93	
153	0.46		8.25	2.45	1.99	
180	0.52		8.23	2.45	2.02	
238	0.68		8.19	2.45	2.04	

TT 001 STATION 049

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.37	2.41	1.88	
10			8.38	2.42	1.88	
21			8.38	2.41	1.87	
31			8.38	2.41	1.87	
51			8.38	2.42	1.88	
77			8.36	2.43	1.90	
103			8.33	2.44	1.93	
156			8.28	2.45	1.97	
201			8.22	2.45	2.01	
251			8.17	2.44	2.04	
300			8.14	2.44	2.07	
401			8.02	2.42	2.11	
502			7.92	2.41	2.16	
602			7.89	2.40	2.17	
704			7.85	2.40	2.18	
805			7.85	2.40	2.20	
1009			7.89	2.41	2.19	
1264			7.92	2.41	2.18	

TT 001 STATION 050

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.20		8.32	2.40	1.92	
10	0.15		8.33	2.40	1.92	
21	0.16		8.34	2.41	1.92	
31	0.18		8.34	2.41	1.92	
51	0.20		8.34	2.41	1.92	
77	0.19		8.32	2.42	1.92	
103	0.21		8.29	2.43	1.95	
154	0.31		8.25	2.45	1.99	
206	0.40		8.18	2.45	2.04	
309	0.70		8.11	2.43	2.07	
411	1.25		8.01	2.42	2.13	
514	1.70		7.91	2.40	2.17	
617	1.93		7.85	2.40	2.20	
702	1.95		7.80	2.40	2.23	
803	2.11		7.80	2.40	2.24	
1002	1.98		7.83	2.40	2.23	
1252	1.72		7.89	2.41	2.20	
1500	1.70		7.91	2.41	2.20	
1751	1.67		7.91	2.41	2.20	
1999	1.54		7.92	2.41	2.20	
2250	1.54		7.92	2.41	2.20	
2500	1.63		7.93	2.42	2.21	
3001	1.61		7.92	2.42	2.22	
3502	1.49		7.92	2.42	2.22	
3925	1.60		7.93	2.42	2.22	

TT 001 STATION 051

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.39	2.41	1.86	
10			8.39	2.42	1.87	
21			8.39	2.41	1.86	
31			8.39	2.41	1.86	
51			8.39	2.41	1.86	
75			8.37	2.41	1.89	
100			8.34	2.43	1.95	
150			8.30	2.45	1.96	
201			8.23	2.45	2.01	
251			8.20	2.44	2.03	
302			8.12	2.43	2.07	
405			8.05	2.42	2.09	
507			7.94	2.40	2.16	
609			7.90	2.40	2.17	
712			7.87	2.40	2.19	
814			7.86	2.40	2.20	
1021			7.89	2.40	2.18	
1280			7.92	2.41	2.17	

TT 001 STATION 052

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.18		8.38	2.42	1.87	
10	0.13		8.38	2.42	1.87	
21	0.15		8.38	2.42	1.87	
31	0.14		8.38	2.43	1.88	
51	2.21		8.38	2.44	1.89	
73	0.18		8.35	2.45	1.94	
98	0.15		8.32	2.45	1.95	
147	0.31		8.24	2.45	1.99	
197	0.57		8.21	2.45	2.02	
246	0.73		8.17	2.44	2.04	
296	0.92		8.11	2.43	2.08	
397	1.54		8.01	2.42	2.12	
498	2.22					
658	2.11		7.88	2.40	2.18	
701	2.16		7.86	2.41	2.19	

TT 001 STATION 053

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0			8.38	2.41	1.87	
10			8.38	2.41	1.87	
20			8.38	2.41	1.87	
30			8.38	2.41	1.87	
49			8.35	2.44	1.92	
73			8.32	2.45	1.95	
97			8.23	2.45	2.00	
144			8.20	2.45	2.02	
193			8.15	2.43	2.05	
242			8.08	2.42	2.08	
290			8.06	2.42	2.09	
387			7.96	2.41	2.16	
484			7.91	2.41	2.18	
581			7.86	2.40	2.21	
679			7.85	2.41	2.22	
776			7.85	2.41	2.22	
972			7.90	2.41	2.19	
1217			7.92	2.42	2.20	

TT 001 STATION 054

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
1520			7.94	2.41	2.19	
1771			7.95	2.41	2.19	
2019			7.95	2.41	2.19	
2267			7.95	2.41	2.19	
2517			7.96	2.41	2.19	
3016			7.96	2.42	2.20	
3094			7.95	2.42	2.21	

TT 001 STATION 055

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.23		8.39	2.42	1.87	
10	0.23		8.40	2.42	1.86	
21	0.18		8.40	2.42	1.86	
31	0.23		8.39	2.43	1.87	
51	0.20		8.36	2.45	1.91	
77	0.23		8.33	2.46	1.95	
102	0.24		8.28	2.46	1.98	
152	0.45		8.22	2.45	2.01	
203	0.62		8.19	2.45	2.04	
506	2.02		7.90	2.40	2.18	
606	2.16		7.88	2.40	2.18	
706	2.21		7.87	2.40	2.20	
805	2.14		7.88	2.40	2.20	
1003	1.83		7.93	2.41	2.19	
1252	1.70					
1498	1.72		7.97	2.42	2.18	
1746	1.60		7.97	2.42	2.19	
1994	1.68		7.97	2.42	2.19	
2248	1.57		7.97	2.42	2.19	
2502	1.60		7.98	2.42	2.19	
2912	1.59					

TT 001 STATION 056

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.22		8.36	2.27	1.80	
10	0.25		8.36	2.32	1.84	
21	0.18		8.37	2.37	1.87	
31	0.17		8.37	2.40	1.88	
51	0.14		8.37	2.41	1.89	
77	0.16		8.35	2.43	1.91	
103	0.25		8.28	2.45	1.97	
154	0.38		8.21	2.45	2.00	
185	0.52		8.17	2.43	2.03	

TT 001 STATION 057

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
8		0.0				
19		0.2				
25		0.2				
40		0.0				
74		0.0				

TT 001 STATION 058

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.57	0.0	8.28	2.25	1.78								
5	0.56	0.0	8.28	2.24	1.77								
10	0.60	0.0	8.28	2.25	1.79								
15	0.80	0.0	8.22	2.30	1.93								
21	1.41	0.2	8.07	2.36	2.06								
31	1.85	0.2	7.93	2.37	2.14								
41	2.00	0.4	7.87	2.37	2.19								
62	2.15	0.6	7.81	2.37	2.20								
82	2.04	0.0	7.82	2.37	2.19								
103	2.33	0.0	7.75	2.37	2.22								
154	2.30	0.0	7.76	2.39	2.23								
206	2.34	0.0	7.75	2.39	2.24								
301	2.50	0.0	7.66	2.38	2.27								
401	2.85	0.0	7.61	2.39	2.29								
501	3.25	0.0	7.57	2.40	2.31								
600	3.30	0.0	7.55	2.40	2.33								
700	3.40	0.0	7.53	2.41	2.34								
799	3.45	0.0											
898	3.54	0.0	7.54	2.42	2.35								
997	3.41	0.0	7.55	2.43	2.36								
1096	3.33	0.0	7.56	2.44	2.37								
1194	3.40	0.0	7.58	2.44	2.36								
1292	3.36	0.0	7.60	2.45	2.36								
1492	3.20	0.0	7.63	2.45	2.34								
0		0.0											
8		0.0											
20		0.1											
26		0.2											
42		0.5											
77		0.0											

TT 001 STATION 059

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0	0.56	0.0	8.26	2.30	1.89	
5	0.50	0.0	8.27	2.29	1.87	
10	0.49	0.0	8.27	2.29	1.87	
15	0.52	0.0	8.27	2.29	1.87	
21	0.84	0.0	8.16	2.35	2.00	
31	1.63	0.1	7.96	2.36	2.11	
41	1.78	0.0	7.89	2.37	2.16	
62	2.12	0.0	7.81	2.37	2.20	
82	2.34	0.0	7.76	2.37	2.21	
103	2.53	0.0	7.70	2.37	2.25	
154	2.28	0.0	7.72	2.37	2.23	
206	2.46	0.0	7.69	2.37	2.25	
303	2.50	0.0	7.69	2.37	2.25	
405	2.97	0.0	7.60	2.38	2.28	
507	3.28	1.2	7.55	2.40	2.33	
608	3.42	0.2	7.53	2.40	2.33	
710	3.56	0.0	7.52	2.41	2.35	
810	3.50	0.0	7.52	2.41	2.35	
910	3.56	0.0	7.52	2.41	2.35	
1010	3.57	0.0	7.53	2.42	2.35	
1109	3.46	0.0	7.54	2.43	2.36	
1207	3.44	0.0	7.55	2.43	2.36	
1305	3.47	0.0	7.57	2.44	2.36	
1500	3.26	0.0	7.60	2.45	2.36	

TT 001 STATION 060

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
9		0.0				
24		0.0				
30		0.0				
50		0.5				
77		0.3				

TT 001 STATION 061

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.60	0.0	8.21	2.27	1.80		1.2						
5	0.43	0.0	8.23	2.26	1.78		1.0						
10	0.49	0.0	8.25	2.26	1.77		0.7						
15	0.50	0.0	8.27	2.27	1.77		0.6						
21	0.52	0.0	8.26	2.28	1.78		0.6						
31	0.44	0.1	8.04	2.33	2.05		1.0						
41	1.93	0.4	7.75	2.35	2.13		0.7						
62	2.32	0.6	7.63	2.36	2.26		0.7						
82	2.23	0.1	7.65	2.36	2.25		0.5						
103	2.46	0.0	7.58	2.36	2.28		0.3						
154	2.52	0.0	7.57	2.36	2.28		0.5						
206	2.52	0.0	7.59	2.36	2.28		0.2						
303	2.70	0.8	7.63	2.37	2.27								
403	3.08	1.3	7.57	2.38	2.29		0.3						
503	3.28	1.1	7.55	2.39	2.32		0.4						
602	3.34	0.3	7.53	2.40	2.33		0.3						
701	3.39	0.0	7.52	2.40	2.34		0.5						
800	3.46	0.0	7.51	2.41	2.35		0.3						
898	3.53	0.0	7.51	2.41	2.35		0.4						
996	3.54	0.0	7.51	2.41	2.35		0.3						
1095	3.58	0.0	7.52	2.42	2.36		0.6						
1193	3.47	0.0	7.53	2.42	2.36		0.6						
1291	3.39	0.0	7.55	2.43	2.36		0.0						
1487	3.30	0.0	7.58	2.43	2.35		0.2						
0		0.0											
11		0.0											
28		0.1											
36		0.2											
59		0.6											
103		0.0											

TT 001 STATION 062

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.1				
11		0.1				
28		0.6				
36		0.1				
59		0.1				
103		0.0				

TT 001 STATION 063

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.41	0.0	8.31	2.29	1.86		1.2						
5	0.39	0.0	8.31	2.30	1.87		1.2						
10	0.37	0.0	8.30	2.29	1.86		0.9						
15	0.39	0.0	8.29	2.29	1.86		0.9						
21	0.43	0.0	8.28	2.29	1.87		1.4						
31	0.50	0.0	8.24	2.30	1.91		1.7						
41	0.86	0.2	8.14	2.31	1.98		1.3						
62	1.85	0.3	7.93	2.34	2.13		1.1						
82	2.40	0.2	7.69	2.35	2.23		0.9						
103	2.50	0.1	7.66	2.36	2.25		0.9						
153	2.43	0.0	7.65	2.36	2.25		0.7						
205	2.55	0.1	7.63	2.36	2.26		0.3						
305	2.79	0.1	7.60	2.37	2.27		1.1						
405	2.96	1.2	7.55	2.37	2.30		0.3						
506	3.29	1.0	7.52	2.38	2.31		0.4						
606	3.42	0.3	7.50	2.39	2.33		0.3						
706	3.51	0.0	7.49	2.39	2.34		0.4						
806	3.50	0.0	7.49	2.40	2.35		0.6						
905	3.69	0.0	7.48	2.41	2.36		0.8						
1005	3.53	0.0	7.48	2.41	2.36		1.8						
1104	3.52	0.0	7.50	2.42	2.36		1.1						
1204	3.40	0.0	7.51	2.42	2.36		1.7						
1303	3.34	0.0	7.54	2.43	2.36		1.3						
1501	3.20	0.0	7.56	2.44	2.37		0.7						
0		0.0											
12		0.0											
31		0.0											
39		0.0											
75		0.3											
103		0.3											

TT 001 STATION 064

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
12		0.0				
31		0.0				
39		0.2				
65		0.0				
103		0.0				

TT 001 STATION 065

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0		0.0	8.31	2.12	1.71								
5		0.0	8.31	2.32	1.89								
10		0.0	8.31	2.30	1.87		0.6						
15		0.0	8.31	2.30	1.87		0.6						
21		0.0	8.31	2.30	1.87		0.4						
31		0.0	8.31	2.30	1.87		0.5						
41		0.0	8.30	2.32	1.89		0.4						
62		0.4	8.16	2.34	2.00								
82		0.1	7.84	2.34	2.16								
103		0.0	7.70	2.35	2.22		0.8						
154		0.7	7.66	2.36	2.25		0.2						
206		0.7	7.65	2.36	2.25		0.1						
305		2.0	7.61	2.37	2.27								
405		1.0	7.57	2.37	2.29		0.0						
505		0.5	7.54	2.38	2.31		0.2						
606		0.2	7.53	2.39	2.32		0.8						
705		0.0	7.51	2.40	2.34		0.6						
805		0.0	7.51	2.40	2.34		0.2						
904		0.0	7.51	2.41	2.35		0.4						
1004		0.0	7.51	2.41	2.35								
1103		0.0	7.52	2.41	2.35		0.5						
1202		0.0	7.54	2.42	2.35		0.6						
1301		0.0	7.56	2.43	2.36		0.2						
1499		0.0	7.59	2.44	2.36		0.7						
0		0.0											
14		0.0											
36		0.0											
45		0.0											
74		0.1											
102		0.0											

TT 001 STATION 066

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
14		0.0				
36		0.0				
45		0.0				
75		0.9				
103		0.0				

TT 001 STATION 067

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.47	0.0	8.29	2.25	1.83		0.4						
5	0.39	0.0	8.29	2.27	1.85		0.4						
10	0.44	0.0	8.28	2.29	1.87		0.4						
15	0.38	0.0	8.28	2.31	1.89		0.4						
21	0.45	0.0	8.28	2.32	1.89		0.5						
31	0.51	0.0	8.28	2.32	1.89		0.3						
41	0.58	0.0	8.20	2.33	1.96		0.4						
62	0.86	0.2	8.10	2.33	2.01		0.2						
82	1.90	0.1	7.83	2.33	2.15		0.1						
103	2.41	0.0	7.69	2.34	2.22		0.2						
154	2.70	0.0	7.63	2.35	2.25		0.0						
206	2.77	2.2	7.61	2.35	2.25								
303	2.87	1.6	7.58	2.36	2.28								
403	3.11	0.6	7.55	2.36	2.29								
503	3.18	0.1	7.53	2.37	2.30		0.0						
602	3.29	0.0	7.52	2.37	2.31		0.2						
701	3.36	0.0	7.51	2.39	2.33		0.1						
800	3.48	0.0	7.50	2.39	2.33		0.0						
899	3.40	0.0	7.51	2.40	2.34		0.2						
999	3.44	0.0	7.51	2.40	2.34		0.0						
1097	3.45	0.0	7.52	2.41	2.35		0.1						
1196	3.44	0.0	7.54	2.41	2.34		0.1						
1295	3.35	0.0	7.55	2.42	2.35		0.1						
1490	3.23	0.0	7.57	2.42	2.34		0.2						
0		0.0											
16		0.0											
42		0.0											
53		0.0											
87		0.0											
129		0.0											

TT 001 STATION 068

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
16		0.0				
41		0.0				
53		0.0				
87		0.0				
129		0.0				

TT 001 STATION 069

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.52	0.0	8.26	2.36	1.93		0.2						
10	0.51	0.0	8.26	2.36	1.93		0.2						
21	0.51	0.0	8.26	2.36	1.93		0.2						
31	0.51	0.0	8.26	2.36	1.93		0.2						
41		0.0	8.26	2.36	1.94		0.2						
51	0.63	0.0	8.17	2.35	1.99		0.2						
62		0.2	8.14	2.34	1.99								
72		0.2	8.01	2.34	2.07								
82		0.3	7.97	2.34	2.10								
103		0.0	7.75	2.35	2.20								
154		0.0	7.66	2.37	2.26		0.2						
206		1.9	7.62	2.36	2.26								
306	2.81	2.3	7.59	2.36	2.28								
407	3.09	0.0	7.54	2.36	2.29		0.1						
507	3.17	0.0	7.53	2.37	2.30		0.1						
607	3.29	0.0	7.51	2.38	2.32		0.0						
706	3.44	0.0	7.50	2.39	2.34		0.0						
806	3.50	0.0	7.49	2.40	2.35		0.0						
905	3.48	0.0	7.49	2.40	2.35		0.0						
1004	3.48	0.0	7.50	2.41	2.35		0.1						
1102	3.64	0.0	7.50	2.42	2.36		0.1						
1201	3.49	0.0	7.51	2.42	2.36		0.3						
1299	3.39	0.0	7.52	2.42	2.36		0.1						
0		0.0											
16		0.0											
39		0.0											
83		0.1											
129		0.0											

TT 001 STATION 070

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0						
16		0.0				
39		0.0				
50		0.3				
83		0.0				
129		0.0				

TT 001 STATION 071

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS	NH3-N	CU	FE SOL.	FE PART.	S--	TOTAL H2S	CH4
0	0.55	0.0	8.23	2.36	1.95		0.2						
10	0.64	0.0	8.23	2.36	1.95		0.2						
21	0.52	0.0	8.23	2.36	1.95		0.2						
31	0.53	0.0	8.22	2.36	1.96		0.3						
41	0.54	0.0	8.22	2.36	1.96		0.2						
51	0.55	0.0	8.22	2.36	1.96		0.3						
62	0.72	0.1	8.14	2.34	2.00		0.3						
72	0.75	0.2	8.11	2.32	2.00		0.5						
82	0.99	0.6	8.02	2.32	2.05								
104	1.62	0.0	7.87	2.31	2.12		0.2						
152	2.50	0.0	7.67	2.34	2.23		0.1						
201	2.69	0.0	7.62	2.34	2.24		0.1						
302	2.96	0.0	7.56	2.34	2.26		0.0						
403	3.07	0.0	7.54	2.34	2.28		0.0						
504	3.13	0.0	7.52	2.35	2.29		0.0						
603	3.23	0.0	7.50	2.37	2.32		0.1						
703	3.29	0.0	7.50	2.38	2.33		0.1						
802	3.45	0.0	7.50	2.39	2.34		0.1						
901	3.36	0.0	7.50	2.40	2.35		0.1						
1000	3.32	0.0	7.51	2.40	2.34		0.1						
1099	3.32	0.0	7.52	2.41	2.35		0.0						
1198	3.31	0.0	7.53	2.41	2.34		0.1						
1296	3.28	0.0	7.53	2.42	2.35		0.1						
1485		0.0					0.1						
0		0.0											
12		0.0											
32		0.0											
40		0.0											
67		0.2											
103		0.1											

TT 001 STATION 072

DEPTH	TOTAL PO4	NO2	PH	ALK.	CO2 CALC.	CO2 GAS
0		0.0				
12		0.0				
32		0.0				
40		0.0				
67		0.1				
103		0.0				

APPENDIX

APPENDIX

PRODUCTIVITY AND CHLOROPHYLL DATA

DISCUSSION

Samples for productivity and/or chlorophyll measurements were obtained at stations 57-72 (Fig. 1) using plastic samplers. Phytoplankton samples were also collected at some locations and preserved for future counting and identification.

The five uppermost depths of chlorophyll and productivity samples usually corresponded to 100, 55, 39, 14, and 4 per cent of the surface illumination. The light depths were determined by extinction coefficeents as obtained from secchi-disk measurements (Poole and Atkins, 1929). All water-column values have been integrated from the surface to the one per cent light depth.

The chlorophyll samples were analyzed according to the method of Richards with Thompson (1952) as modified for use with the Millipore® filter (Creitz and Richards, 1955). Computations were made according to the UNESCO recommendations (UNESCO, 1966). A turbidity correction was made by subtracting extinction at 7500A from spectrophotometer readings at other wave lengths (Strickland and Parsons, 1960).

The radiocarbon method was used for productivity measurements (Steemann Nielsen, 1952). Absolute activity of soulutions of $Na_2{}^{14}CO_3$ and the counting efficiency of the geiger detector were determined by gas phase analysis (Goldman, 1963). Additional checks were made by scintillation counting techniques.

Approximately 2.5 microcuries of radioactive carbonate were added to sea water samples in 125 ml light and dark Pyrex reagent bottles. Simulated in situ experiments were generally started at local apparent noon and ended at sunset.

Samples were incubated in a topside deck incubator exposed to full sunlight illumination. Wire mesh screens were calibrated and used as neutral density filters to simulate appropriate amounts of underwater illumination relative to surface light intensity. Temperature was controlled with running surface sea water. Periods of incubation were noon to sunset. At station 61, samples were also incubated in a constant illumination incubator of about 9,000 lux.

In the laboratory, the filters retaining the ^{14}C were fumed with concentrated HCl for 10-15 minutes to remove traces of inorganic ^{14}C. Geiger counting equipment consisted of a Nuclear-Chicago Model D-47 gas chamber and C-111B printing timer. Each sample was counted until a minimum number of 1280 counts was obtained. Computer processing of the data included corrections for background, dark bottle uptake, variations in inorganic carbon content of sea water, coincidence, and isotope effect (5%).

EXPLANATION OF DATA TABLES

Abbreviations and Headings Used in Data Tables

Depth	The depth sampled.
CA, CB, CC	Chlorophylls *a*, *b*, and *c* in mg chl/m^3.
CA/m^2	Amount of chlorophyll *a* in mg/m^2 integrated to the 1% light depth.
Assimilation	Carbon assimilated in mg C/m^3/1/2 day.
Light	Light bottle assimilation.
Dark	Dark bottle assimilation.
mg C/m^2/1/2 day	Assimilation in mg C/m^2/1/2 day integrated to the 1% light depth (corrected for dark bottle uptake
Date and Hour	Local date and messenger time.
SCD	Secchi disk reading in meters.
1-PCT-LD	One per cent light depth in meters.

REFERENCES

Creitz, G. I. and F. A. Richards
1955. The estimation and characterization of plankton populations by pigment analyses. III. A note on the use of "Millipore" membrane filters in the estimation of plankton pigments. J. Mar Res., 14(3):211-216.

Goldman, C. R.
1963. The measurement of primary productivity and limiting factors in freshwater with carbon-14. pp. 103-113 in Proc. Conf. Primary Productivity Measurement, Marine and Freshwater (M. S. Doty, ed.). U.S. Atomic Energy Commission, TID 7633.

Poole, H. H. and W. G. R. Atkins
1929. Photoelectric measurements of submarine illumination throughout the year. J. Mar. Biol. Assoc. U.K., 16:297-324.

Richards, F. A. with T. G. Thompson
1952. The estimation and characterization of plankton populations by pigment analyses. II. A spectrophotometric method for the estimation of plankton pigments. J. Mar. Res., 2:156-172.

Steemann Nielsen, E.
1952. The use of radioactive carbon (C^{14}) for measuring organic production in the sea. Journ. Cons. Internat. Explor. Mer. 18:47-140.

Steemann Nielsen, E.
1965. On the determination of the activity in C^{14} ampoules for measuring primary production. Limnol. Oceanog., 10(Suppl): R247-R252.

Strickland, J. D. H. and T. R. Parsons
1960. A manual of sea water analysis. Bull. No. 125, Fish. Res. Bd. Canada. 185 pp.

UNESCO
1966. Monographs on oceanographic methodology. 1. Determination of photosynthetic pigments in sea-water. United Nations Educational, Scientific, and Cultural Organization, Paris. 69 pp.

PRODUCTIVITY AND CHLOROPHYLL DATA

Depth	CA	CB mg/chl/m^3	CC	CA/m^2 mg chl a/m^2	Assimilation mg C/m^3/1/2 day Light	Dark	mg C/m^2/1/2 day
TT001-057	Date 11/29/65		Lat 08-38N Long 087-23W		Hour 9024	SCD 22.0	1-PCT-LD 60.0
0.	0.42	0.39	1.28		10.05	1.04	
8.0	0.42	0.36	1.12		9.87	1.21	
19.0	0.76	0.78	2.32		3.99	1.06	
25.0	0.82	0.64	1.58		1.20	1.38	
41.0	0.79	0.76	2.22		0	0.75	
60.0				42.49			181.07
75.0	0.34	0.42	1.28				
TT001-058	Date 11/29/65		Lat 09-09N Long 089-00W		Hour 2027	SCD -0.	1-PCT-LD 60.0
0.	0.47	0.51	1.56				
8.0	0.38	0.27	0.86				
19.0	0.39	0.29	0.80				
25.0	0.47	0.39	0.99				
41.0	0.52	0.36	1.01				
60.0				29.04			
75.0	0.30	0.31	0.78				

Depth	CA	CB mg/chl/m^3	CC	CA/m^2 mg chl a/m^2	Assimilation mg C/m^3/1/2 day Light	Dark	mg C/m^2/1/2 day
TT01-059	Date 11/30/65		Lat 10-22N Long 090-37W		Hour 0926	SCD 26.0	1-PCT-LD 71.0
0.	0.43	0.37	1.13		9.30	2.90	
9.0	0.41	0.35	1.14		10.45	0.97	
23.0	0.79	0.43	1.18		3.62	1.25	
29.0	0.76	0.43	1.21		2.59	1.01	
49.0	0.63	0.57	1.60		0.24	0.65	
71.0				44.42			237.07
75.0	0.35	0.52	1.60				
TT001-060	Date 11/30/65		Lat 11-41N Long 092-23W		Hour 2020	SCD -0.	1-PCT-LD 71.0
0.	0.33	0.43	1.32				
9.0	0.35	0.44	1.35				
23.0	0.35	0.45	1.36				
29.0	0.33	0.47	1.41				
49.0	0.53	0.58	1.56				
71.0				31.42			
75.0	0.41	0.44	1.43				

Depth	CA	CB mg chl/m^3	CC	CA/m^2 mg chl a/m^2	Assimilation mg $C/m^3/1/2$ day Light	Dark	mg $C/m^2/1/2$ day
TT001-061	Date 12/01/65		Lat 12-22N Long 094-05W		Hour 0941	SCD 31.0	1-PCT-LD 84.0
					(simulated in situ incubator)		
0.	0.31	0.36	1.17		2.36	0.58	
11.0	0.27	0.31	0.97		2.59	0.19	
27.0	0.49	0.29	0.91		2.53	0.16	
35.0	0.53	0.33	0.88		1.62	0.15	
57.0	0.54	0.25	0.74		0.08	0.42	
84.0				39.84			104.50
100.0	0.18	0.25	0.78				
TT001-061	Date 12/01/65		Lat 12-22N Long 094-05W		Hour 0941	SCD 31.0	1-PCT-LD 34.0
					(constant illumination incubator)		
0.					0.03	1.65	
11.0					0	0.80	
27.0					0	0.43	
35.0					0.14	0.88	
57.0					0.00	0.71	
84.0							2.27
100.0					0.04	0.49	

Depth	CA	CB	CC	CA/m^2	Assimilation mg $C/m^3/1/2$ day		mg $C/m^2/1/2$ day
	mg chl/m^3			mg chl a/m^2	Light	Dark	
TT001-062	Date 12/01/65		Lat 13-09N Long 095-18W		Hour 2014	SCD -0.	1-PCT-LD 84.0
0.	1.26	0.64	5.11				
11.0	1.06	1.44	4.39				
27.0	1.17	0.83	2.37				
35.0	0.44	0.45	1.30				
57.0	0.41	0.56	1.68				
84.0				60.39			
100.0	0.48	0.75	2.23				
TT001-063	Date 12/02/65		Lat 14-13N Long 097-55W		Hour 1005	SCD 34.0	1-PCT-LD 92.0
0.	0.89	1.29	3.91		4.15	0.79	
12.0	0.56	0.72	2.14		2.73	0.46	
30.0	0.52	0.38	1.23		2.27	1.08	
38.0	0.72	0.39	1.30		0.18	1.15	
63.0	0.68	0.54	1.44		0	2.34	
92.0				60.31			98.33
100.0	0.50	0.58	1.77				

Depth	CA	CB mg chl/m^3	CC	CA/m^2 mg chl a/m^2	Assimilation mg C/m^3/1/2 day Light	Dark	mg C/m^2/1/2 day
TT001-064	Date 12/02/65		Lat 15-10N Long 099-27W		Hour 2020	SCD -0.	1-PCT-LD 92.0
0.	0.39	0.48	1.49				
12.0	0.33	0.36	1.10				
30.0	0.56	0.38	1.19				
38.0	0.61	0.40	1.10				
63.0	0.37	0.32	0.97				
92.0				43.82			
100.0	0.43	0.55	1.51				
TT001-065	Date 12/03/65		Lat 16-27N Long 101-45W		Hour 1014	SCD 40.0	1-PCT-LD 108.0
0.	0.37	0.49	1.51		1.41	0.18	
14.0	0.25	0.29	0.85		1.93	0.23	
35.0	0.39	0.31	0.89		0.92	0.17	
44.0	0.51	0.31	0.91		0.98	0.31	
73.0	0.62	0.89	2.47		0.28	0.24	
100.0	0.21	0.31	0.87				
108.0				44.50			84.72

Depth	CA	CB	CC	CA/m^2	Assimilation mg $C/m^3/1/2$ day		mg $C/m^2/1/2$ day
	mg chl/m^3			mg chl a/m^2	Light	Dark	
TT001-066	Date 12/03/65		Lat 17-23N Long 103-17W		Hour 2026	SCD -0.	1-PCT-LD 108.0
0.	0.27	0.21	1.87				
14.0	0.32	0.34	1.04				
35.0	0.32	0.30	0.85				
44.0	0.52	0.34	1.04				
73.0	0.49	0.43	1.13				
100.0	0.35	0.50	1.52				
108.0				43.97			
TT001-067	Date 12/04/65		Lat 18-44N Long 105-27W		Hour 1007	SCD 46.0	1-PCT-LD 124.0
0.	0.19	0.17	0.51		0.01	0.71	
16.0	0.23	0.22	0.62		0.39	0.67	
40.0	0.38	0.22	0.64		1.39	0.51	
51.0	0.39	0.19	0.52		1.21	0.29	
84.0	0.20	0.18	0.49		0.53	0.27	
124.0				32.39			78.09
125.0	0.16	0.24	0.67				

Depth	CA	CB	CC	CA/m^2	Assimilation mg $C/m^3/1/2$ day		mg $C/m^2/1/2$ day
	mg chl/m^3			mg chl a/m^2	Light	Dark	
TT001-068	Date 12/04/65	Lat 20-04N	Long 107-06W	Hour 2026	SCD -0.	1-PCT-LD 124.0	
0.	0.09	0.10	0.30				
16.0	0.05	0.01	0.05				
40.0	0.16	0.14	0.46				
51.0	0.02	0.02	0.07				
84.0	0.15	0.13	0.43				
124.0				10.58			
125.0	0.30	0.19	0.53				
TT001-069	Date 12/05/65	Lat 21-40N	Long 109-15W	Hour 1041	SCD 44.0	1-PCT-LD 119.0	
0.	0.15	0.11	0.38		1.58	0.67	
16.0	0.16	0.17	0.50		1.77	0.49	
38.0	0.18	0.11	0.47		1.25	0.33	
49.0	0.30	0.12	0.20		0.84	0.27	
81.0	0.27	0.14	0.40		0.11	0.28	
119.0				28.29			88.60
125.0	0.07	0.11	0.31				

Depth	CA	CB	CC	CA/m^2	Assimilation mg C/m^3/1/2 day Light	Dark	mg C/m^2/1/2 day
	mg chl/m^3			mg chl a/m^2			
TT001-070	Date 12/05/65		Lat 23-02N	Long 110-50W	Hour 2027	SCD -0.	1-PCT-LD 119.0
0.	0.17	0.17	0.59				
16.0	0.25	0.32	0.93				
38.0	0.54	0.38	1.09				
49.0	0.65	0.36	0.93				
81.0	0.21	0.20	0.57				
119.0				36.48			
125.0	0.17	0.25	0.65				
TT001-071	Date 12/06/65		Lat 24-46N	Long 113-13W	Hour 1047	SCD 35.0	1-PCT-LD 95.0
0.	0.21	0.17	0.51		0.84	0.61	
12.0	0.22	0.19	0.50		1.35	0.34	
31.0	0.31	0.27	0.79		0.99	0.40	
39.0	0.30	0.25	0.73		0.55	0.35	
65.0	0.74	0.39	0.96		0.31	0.28	
95.0				45.76			57.34
100.0	0.25	0.30	0.78				

Depth	CA	CB	CC	CA/m^2	Assimilation $mg\ C/m^3/1/2\ day$		$mg\ C/m^2/1/2\ day$
		$mg\ chl/m^3$		$mg\ chl\ a/m^2$	Light	Dark	
TT001-072	Date 12/06/65	Lat 26-39N Long 113-59W			Hour 2026	SCD -0.	1-PCT-LD 95.0
0.	0.37	0.26	0.70				
12.0	0.41	0.24	0.64				
31.0	0.58	0.30	0.83				
39.0	0.55	0.26	0.71				
65.0	0.37	0.25	0.59				
95.0				36.03			
100.0	0.22	0.22	0.52				

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This report contains tabulated physical and chemical data collected in 1965 during Cruise 001 of RV *Thomas G. Thompson* and describes the methods of collection and analysis employed. These data are from the Caribbean Sea and the northeastern tropical Pacific Ocean.

Productivity and chlorophyll data collected in the northeastern tropical Pacific Ocean are included in the appendix.

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