

OCEANOGRAPHICAL STATION LIST

VOLUME 54

INVESTIGATIONS BY F.R.V. *DERWENT HUNTER*
ON THE EASTERN AUSTRALIAN TUNA GROUNDS IN 1961

DIVISION OF FISHERIES AND OCEANOGRAPHY
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL
RESEARCH ORGANIZATION, AUSTRALIA 1968

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MELBOURNE, 1968

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When citing this station list, abbreviate as follows:
CSIRO Aust. Oceanogr. Stn List 54.

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Investigations by F.R.V. Derwent Hunter on the Eastern Australian Tuna Grounds in 1961

I. INTRODUCTION

This report records most of the data collected during the 1961 cruises of F.R.V. Derwent Hunter (DHL/61-DHL9/61). No data are presented for Cruises DH5/61 and DH6/61. Cruise DH5/61 was planned to dredge for benthic flora on a bank charted east of Port Hacking, but the bank was not located. Cruise DH6/61 was planned to test an electric tuna-stunning device.

The remaining 17 cruises were planned to investigate conditions on the tuna fishing grounds off the east coast of Australia between about Sydney and Hobart. Cruise tracks and station positions are shown in Figures 1-17.

A description of F.R.V. Derwent Hunter is given in CSIRO Aust. (1965).

II. WORK ACCOMPLISHED

Table 1 gives details of time, scientific personnel, number of stations worked, and numbers of tuna trolled for each cruise.

Longlining results are given in Table 2 (p.234). The longlining gear used is described by Davies (1961).

III. NAVIGATIONAL DETAILS

On Cruises 1 to 11, the procedure adopted in working stations on east-west sections was to start from the western (shore) end of the section and work seaward running the planned distance between stations and adjusting the course of 090° true to allow for estimated wind and current drift. No attempt was made to replot station positions when a true position fix was obtained at the next landfall. The result of this procedure is that the track charts for these cruises show the stations in their planned positions and the station network appears regular from cruise to cruise.

On Cruises 12 to 19, efforts were made to obtain more reliable station fixes by making more sun and star sights and by readjusting plots when a true position fix was obtained at the next landfall. For this reason, the tracks for these cruises are irregular, but the station positions indicated must be considered much more reliable.

TABLE 1

DETAILS OF CRUISES AND WORK DONE

Cruise	Date	Scientific Personnel	Number of Stations Occupied	BT	Hydrology		Zoo-plankton	Longline	Trolling		
					1	2			1	2	3
DH1/61	Feb. 1-9	R. Bradley C. Thomas	24		24	24		1			
DH2/61	Feb. 15-24	C. Thomas	43	7	36	5	5	4			
DH3/61	Mar. 3-11	C. Thomas	8		7	2	2	2			
DH4/61	Mar. 15-28	C. Thomas	80		78	30	8	7			
DH5/61	Apr. 4-6	R. MacIntyre									
DH6/61	Apr. 14-21	W. Lanzing W. Parker									
DH7/61	Apr. 21-May 4	C. Thomas	99	14	95	30		7			
DH8/61	May 12-21	R. Bradley C. Thomas	34		29	11		6			
DH9/61	May 25-June 9	C. Thomas	27	27	35	8	8	8			
DH10/61	June 8-22	C. Thomas	15	15	20	5	5	5			
DH11/61	Aug. 5-11	C. Thomas J. Hue	77	11	77	33					1*

Cruise to collect benthic samples only
Cruise to test an electric tuna-stunning device

TABLE 1 (Cont'd...)

Cruise	Date	Scientific Personnel	Number of Stations Occupied	BT		Hydrology		Zoo-plankton	Longline		Trolling	
				1	3	1	2		1	2	1	2
DHL2/61	Aug. 18-25	C. Thomas W. Prothero	47	3	37	17						
DHL3/61	Aug. 31-Sept. 8	C. Thomas	67	9	67	29					2*	
DHL4/61	Sept. 14-23	C. Thomas J. Derrick	76	16	76	27					6	
DHL5/61	Sept. 28-Oct. 5	C. Thomas K. Godfrey	70	15	70	25			3			
DHL6/61	Oct. 12-22	K. Godfrey	98	20	98	31			3		1	4
DHL7/61	Nov. 9-24	J. Staniforth K. Fleming	73	16	73	26			3		3	4
DHL8/61	Nov. 27-Dec. 7	R. Bradley L. Olsen	83	35	83	31					2	9
DHL9/61	Dec. 12-20	L. Olsen R. Blick	40	10	40						3	1 1 1 1

BT Bathythermographs

Hydrology 1 Number of stations at which surface samples were collected
2 Number of stations at which subsurface samples were collected

Longline Number of times a longline was used

Trolling 1 Southern bluefin tuna 2 Yellowfin tuna
Catch 3 Albacore 4 Striped tuna

* Tuna tagged and released

IV. METHOD OF COLLECTION AND ANALYSIS OF SAMPLES

1. Physics

Temperature.—Water temperatures were taken with deep-sea reversing thermometers.

On Cruises 1 to 7, thermometers graduated to 0.2 degC were used, one to each Nansen water bottle. The calibration of these thermometers was such that resulting temperatures can be considered accurate to only ± 0.2 degC.

On Cruises 8 to 19, thermometers graduated to 0.1 degC were used, two to each Nansen water bottles, and the temperatures obtained are considered accurate to ± 0.05 degC.

Depth of Samples.—No protected thermometers were used on Cruises 1 to 7, and wire angles of water-bottle casts were not measured. Therefore, no estimate of the accuracy of sample depths is possible. After Cruise 7, three unprotected thermometers were used on each deep cast, and wire angles were measured. For these cruises, depths are considered accurate to ± 10 m at depths less than 200 m, ± 20 m at depths between about 200 and 400 m, and to within about 5% at greater depths.

Bathythermographs.—900-ft bathythermographs were used, and slides were digitized according to the method of the U.S. National Oceanographic Data Centre (1964). The results were transferred to punched cards and computer listings are held at Cronulla.

Sigma-t.—Sigma-t values were computed from temperature and salinity values, using the equations of Knudsen (La Fond 1951).

2. Chemistry

Salinity.—A chlorinity-temperature meter of the conductivity type (Hamon 1956) was used at Cronulla to estimate chlorinity, which was subsequently converted to salinity by the relation -

$$\text{Salinity} = 0.03 + 1.805 \times \text{Chlorinity}$$

Salinities are considered accurate to about $\pm 0.05\%$.

Dissolved Oxygen.—A version of the standard Winkler method was used to determine the amount of dissolved oxygen in the seawater samples. The version used is a modification of that described by Thompson and Robinson (1939) and differs in some respects from the revision by Jacobsen, Robinson, and Thompson

(1950). Potassium iodate was used as the iodometric standard, and the reagents necessary to fix the oxygen in solution were used at different concentrations (Rochford 1963). Duplicate titrations were made on approximately every tenth sample. Saturation values, given as ml/l, were computed, using the simpler of the equations given by Richards and Corwin (1956) -

$$O_2(\% \text{ Satn.}) = \frac{O_2(\text{ml/l}) \times (33.5 + T^\circ\text{C}) \times 100}{332.4 - (1.854 \times S\%)}$$

3. Zooplankton Biomass

Sampling consisted of oblique tows in the upper 200 m with a Clarke-Bumpus Sampler. On Cruises DH9 and DH10/61, two tows were made at each station. Samples were weighed at Cronulla using the method of Tranter (1962).

REFERENCES

- CSIRO AUST. (1965).—F.R.V. "Derwent Hunter". Scientific reports of cruises 1950-56. CSIRO Aust. Div. Fish. Oceanogr. Rep. 39.
- DAVIES, R.M. (1961).—Longlining for tuna. Aust. Fish. Newsl. 20(11), 19-22.
- HAMON, B.V. (1956).—A portable temperature-chlorinity bridge for estuarine investigations and seawater analysis. J. scient. Instrum. 33, 329-33.
- JACOBSEN, J.P., ROBINSON, R.J., and THOMPSON, T.G. (1950).—A review of the determination of dissolved oxygen in seawater by the Winkler method. Publs scient. Ass. Oceanogr. phys. 11.
- LA FOND, E.C. (1951).—Processing oceanographic data. U.S. Navy Hydrogr. Off. Publ. No. 614.
- RICHARDS, F.A., and CORWIN, N. (1956).—Some oceanographic applications of the solubility of oxygen in sea-water. Limnol. Oceanogr. 1, 263-7.
- ROCHFORD, D.J. (1963).—SCOR-UNESCO chemical intercalibration tests, results of 2nd series; R.S. Vityaz, August 2-9, 1962, Australia. (Mimeogr.) (CSIRO : Cronulla).

- THOMPSON, T.G., and ROBINSON, R.J. (1939).—Notes on the determination of dissolved oxygen in seawater. J. mar. Res. 2, 1-8.
- TRANter, D.J. (1962).—Zooplankton abundance in Australian waters. Aust. J. mar. Freshwat. Res. 13, 106-42.
- U.S. NATIONAL OCEANOGRAPHIC DATA CENTRE (1964).—Manual for processing bathythermograph data. Part 1 Instructions for manually digitizing bathythermograph data. Publ. M-3. (U.S. Naval Oceanographic Office : Washington, D.C.)
- U.S. NAVY HYDROGRAPHIC OFFICE (1955).—Instruction manual for oceanographic observations. Publ. No. 607.

V. TRACK CHARTS

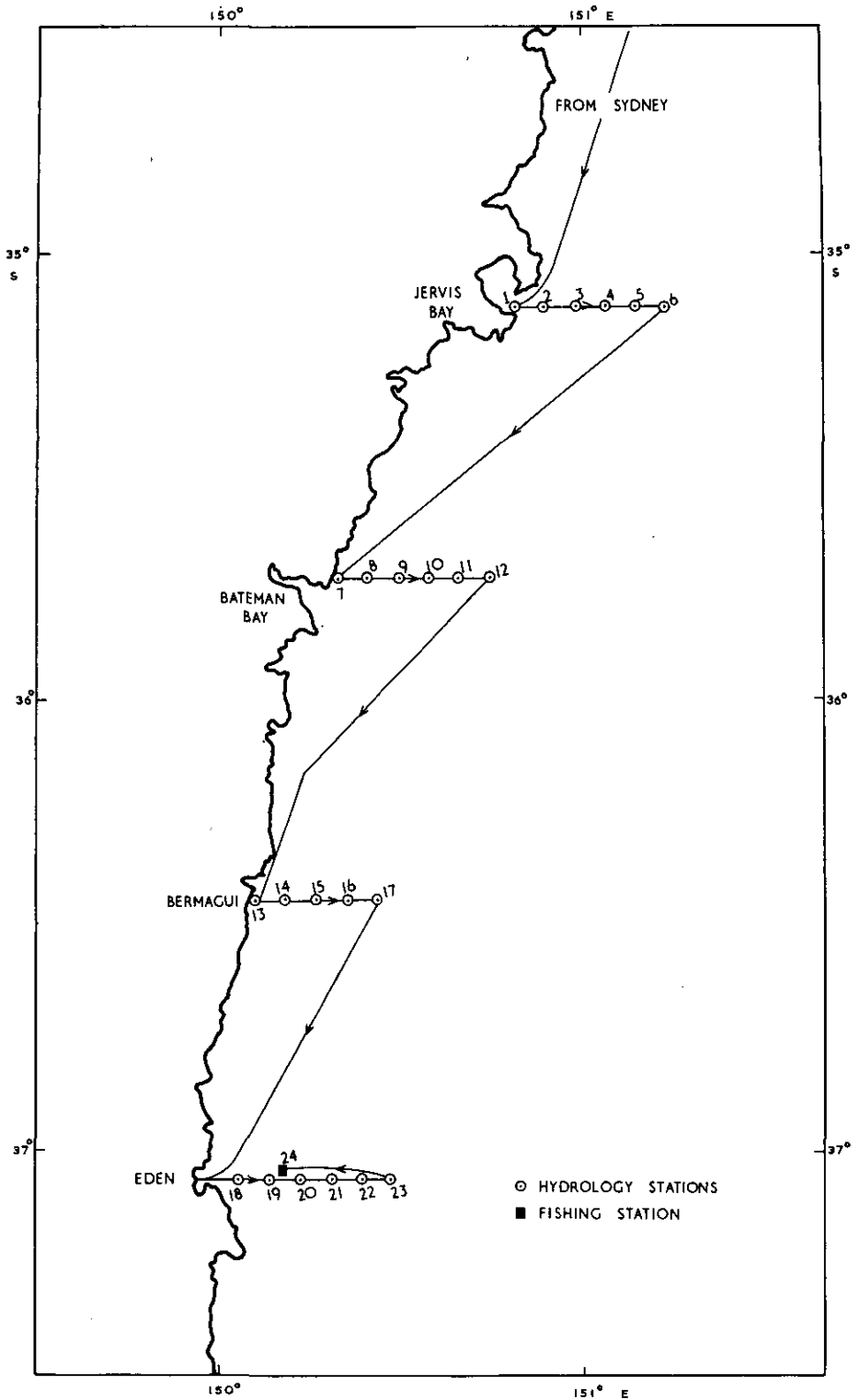


Fig. 1.- Track chart...Cruise D.H. 1/61

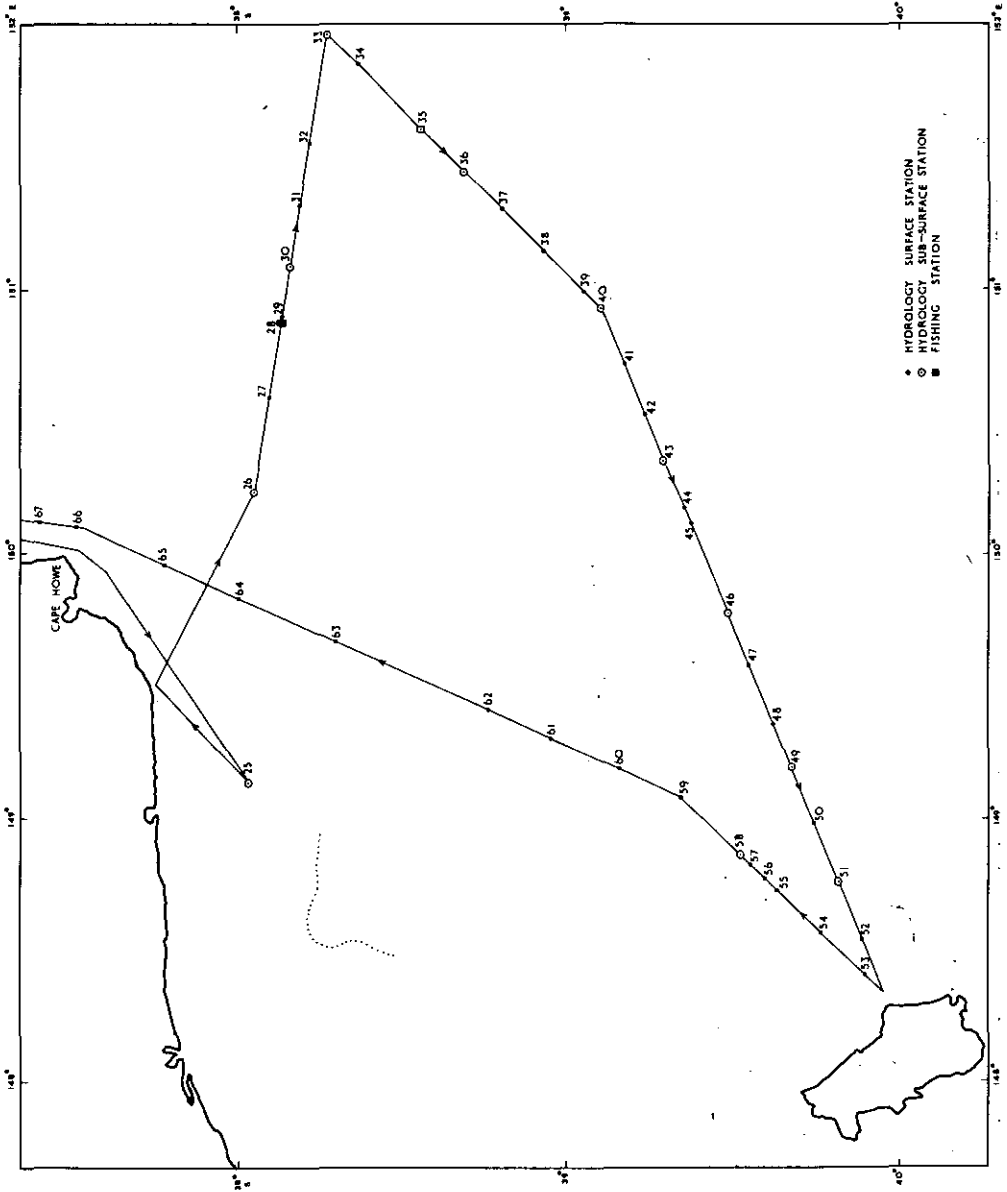


Fig. 2.- Track chart Cruise D.H. 2/61

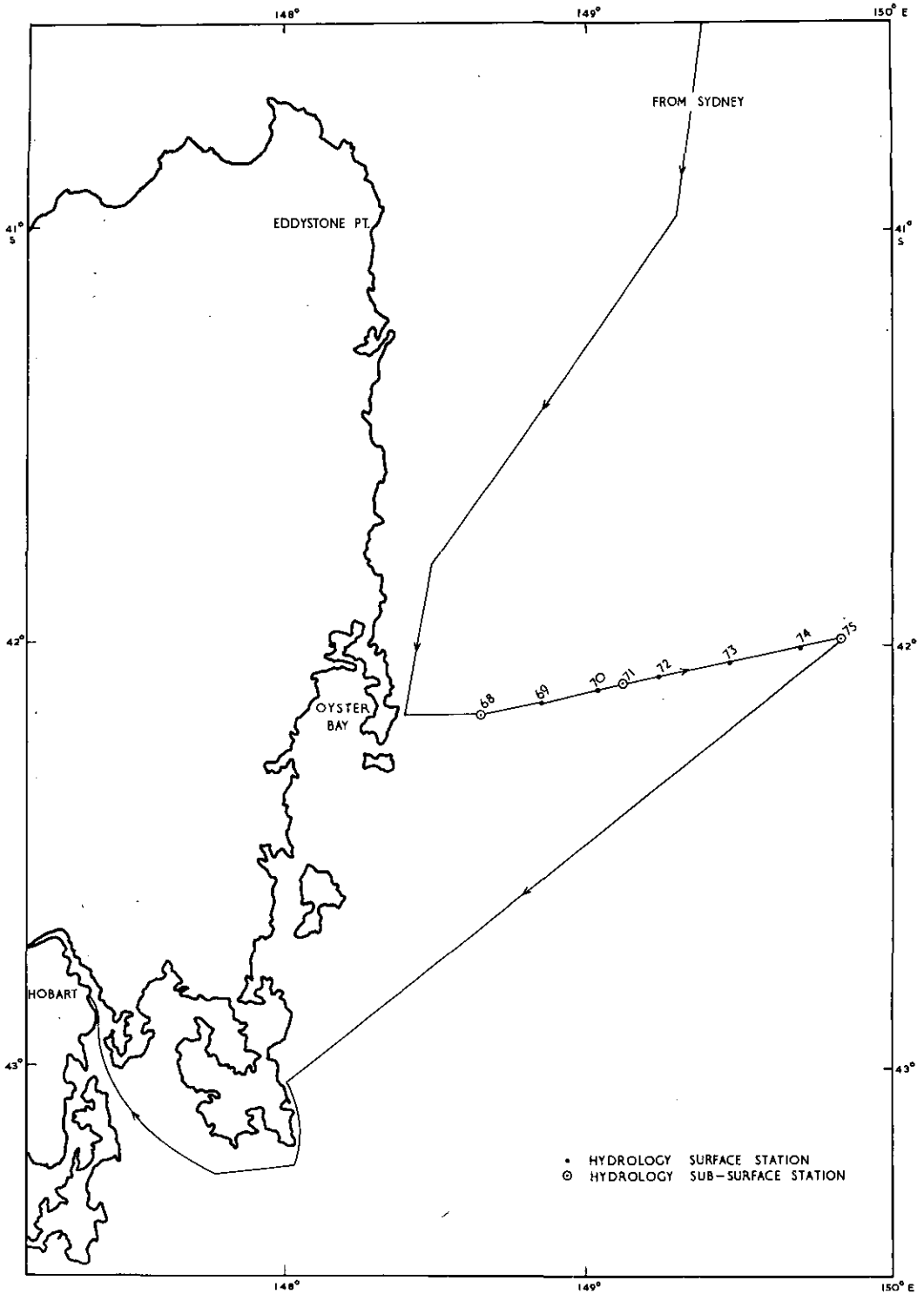


Fig. 3.- Track chart Cruise D.H. 3/61

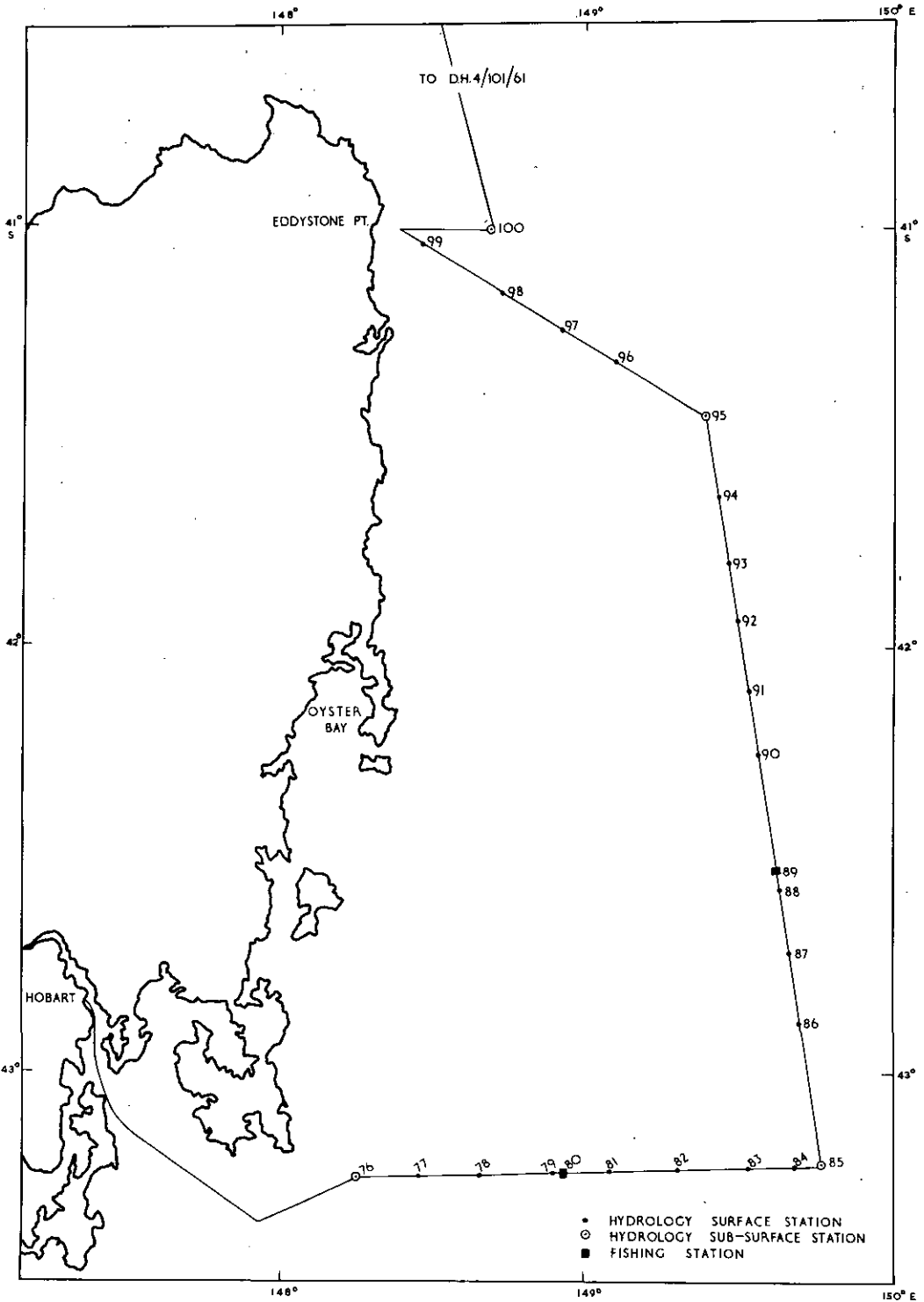


Fig. 4 (a)- Track chart Cruise D.H. 4/61. Stations 76 - 100.

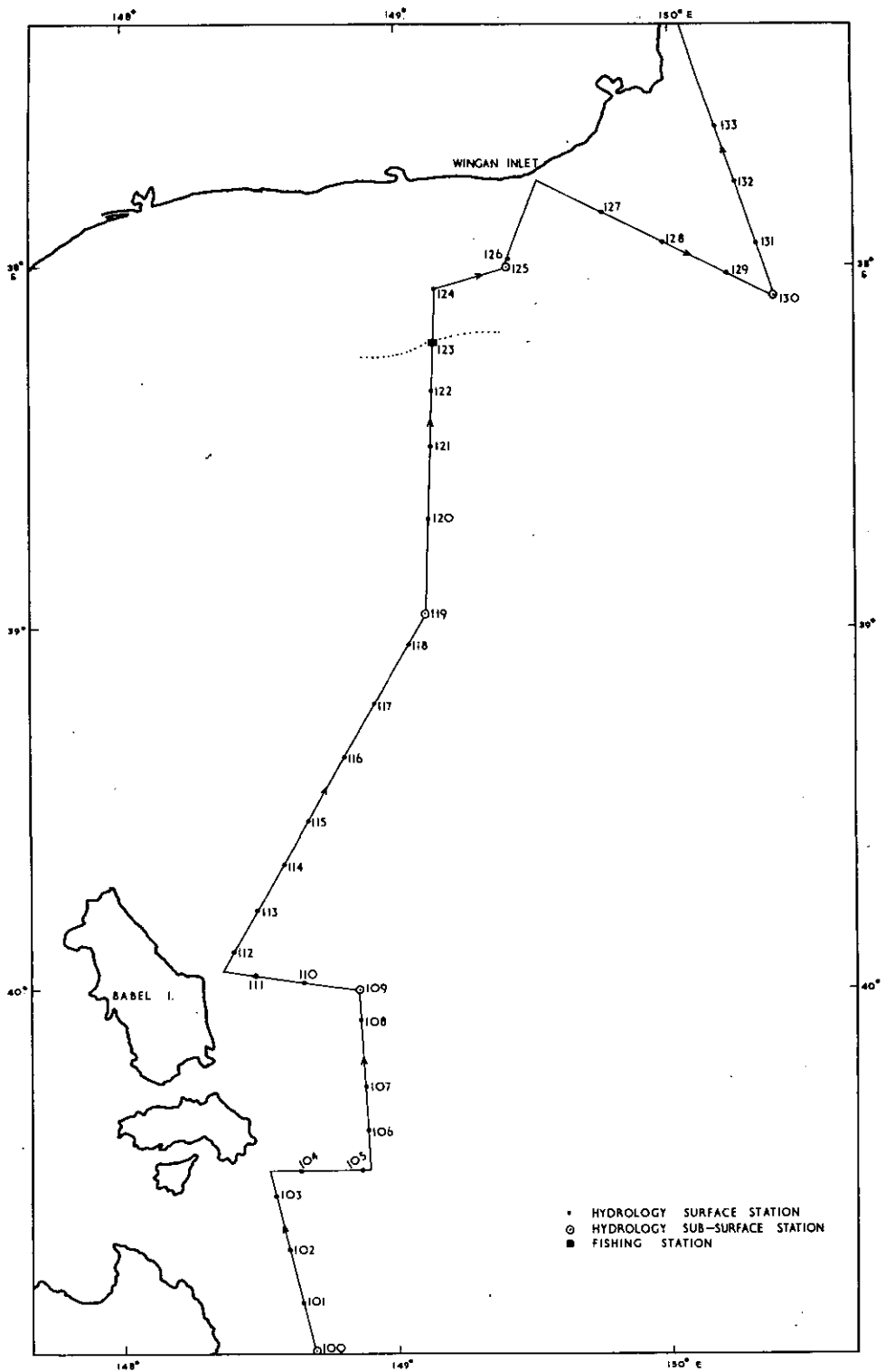


Fig. 4 (b)- Track chart Cruise D.H. 4/61, Stations 100 - 133

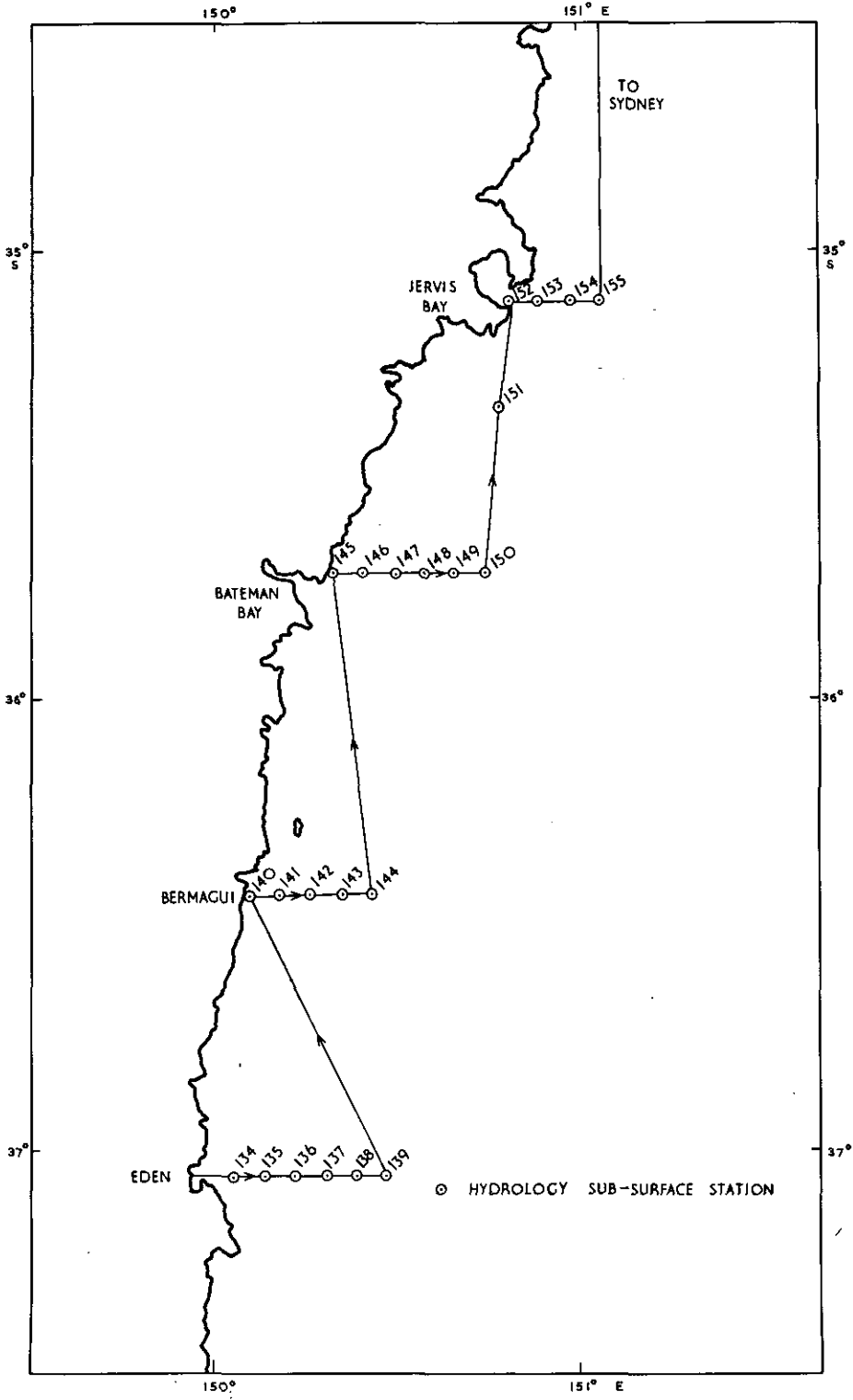


Fig. 4 (c).-Track chart Cruise D.H. 4/61. Stations 134 - 155

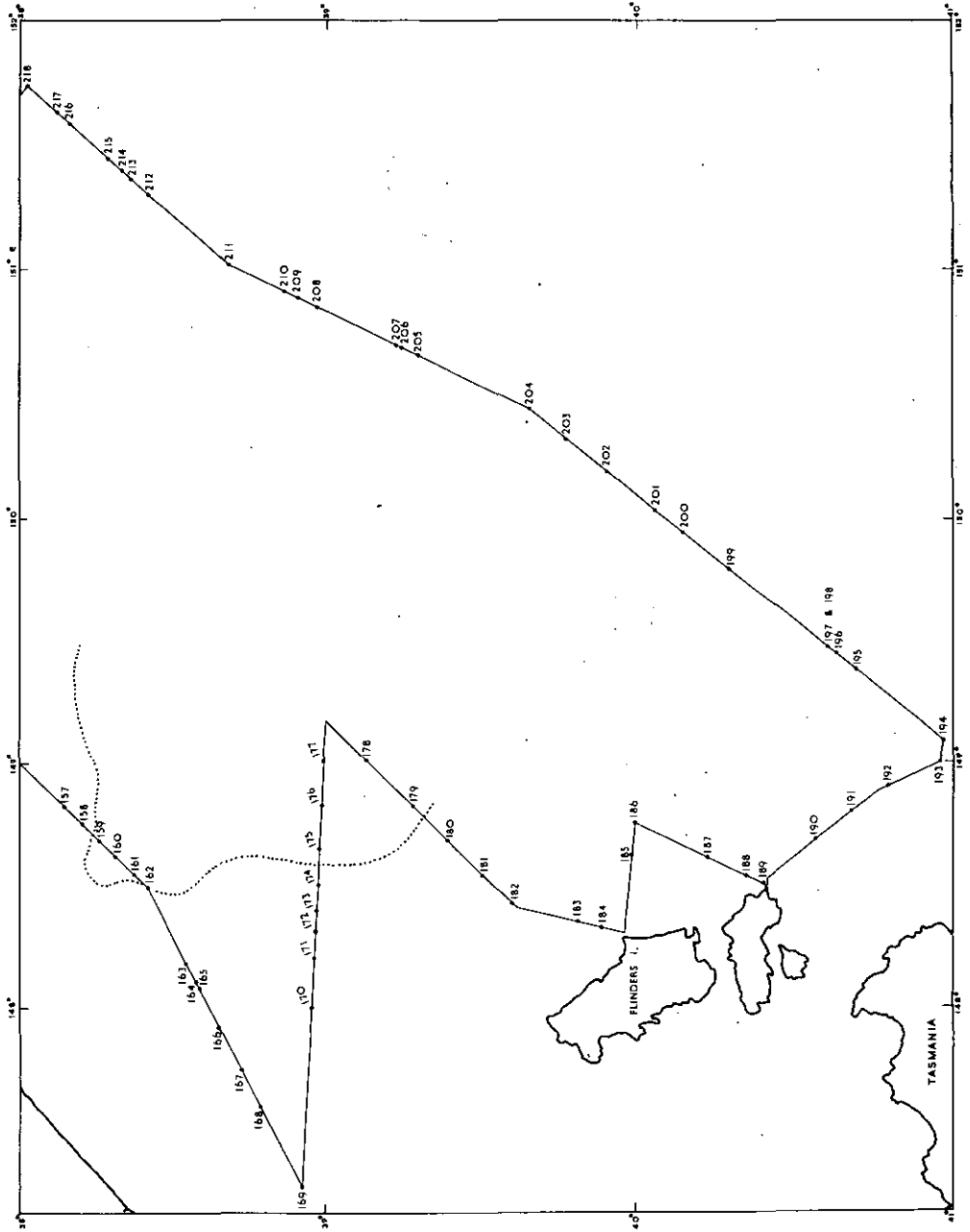


Fig. 5 (a)-Track chart. Cruise D.H. 7/61. Stations 157-218

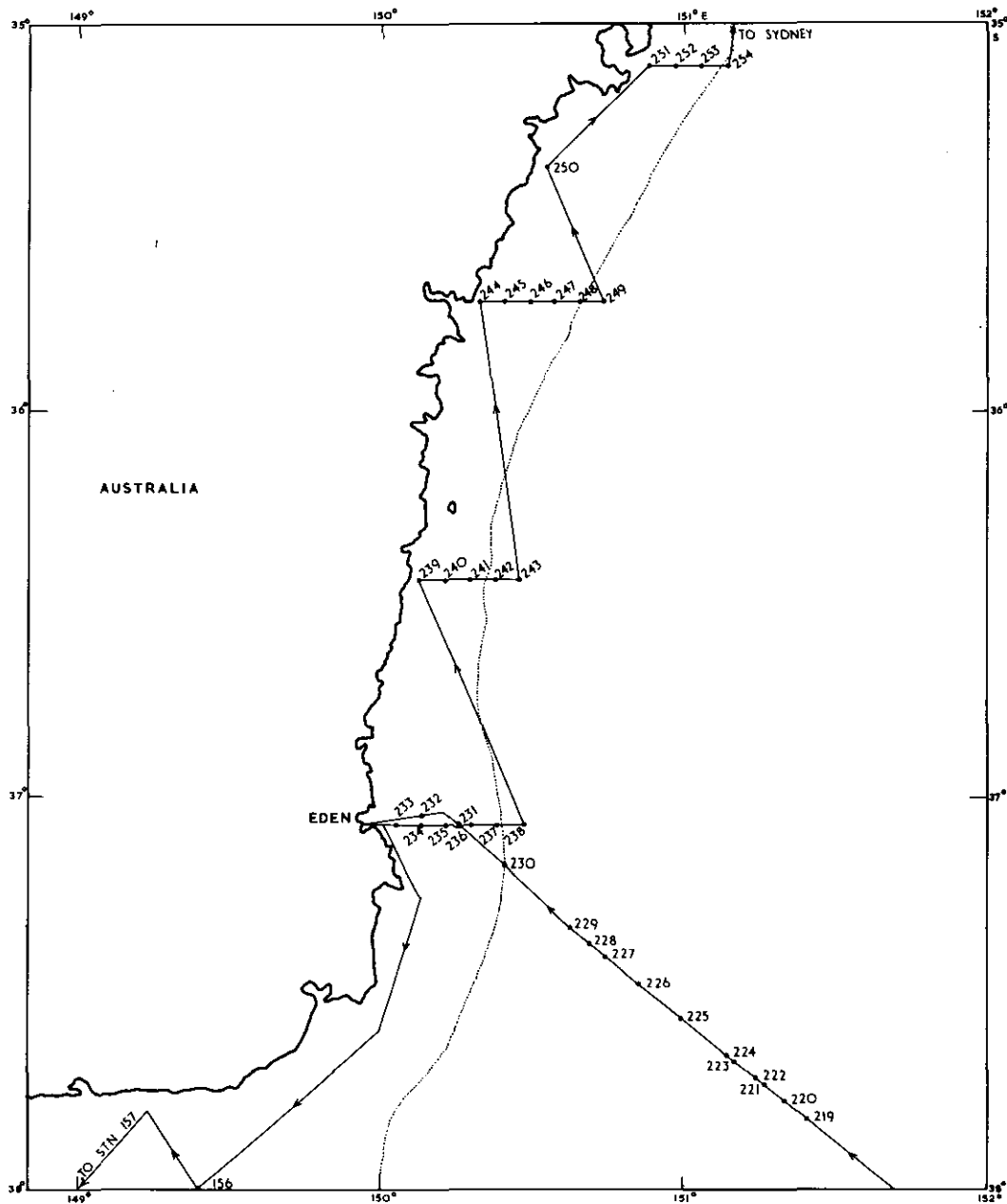


Fig. 5 (b)-Track chart Cruise D.H. 7/61. Stations 156 & 219-254

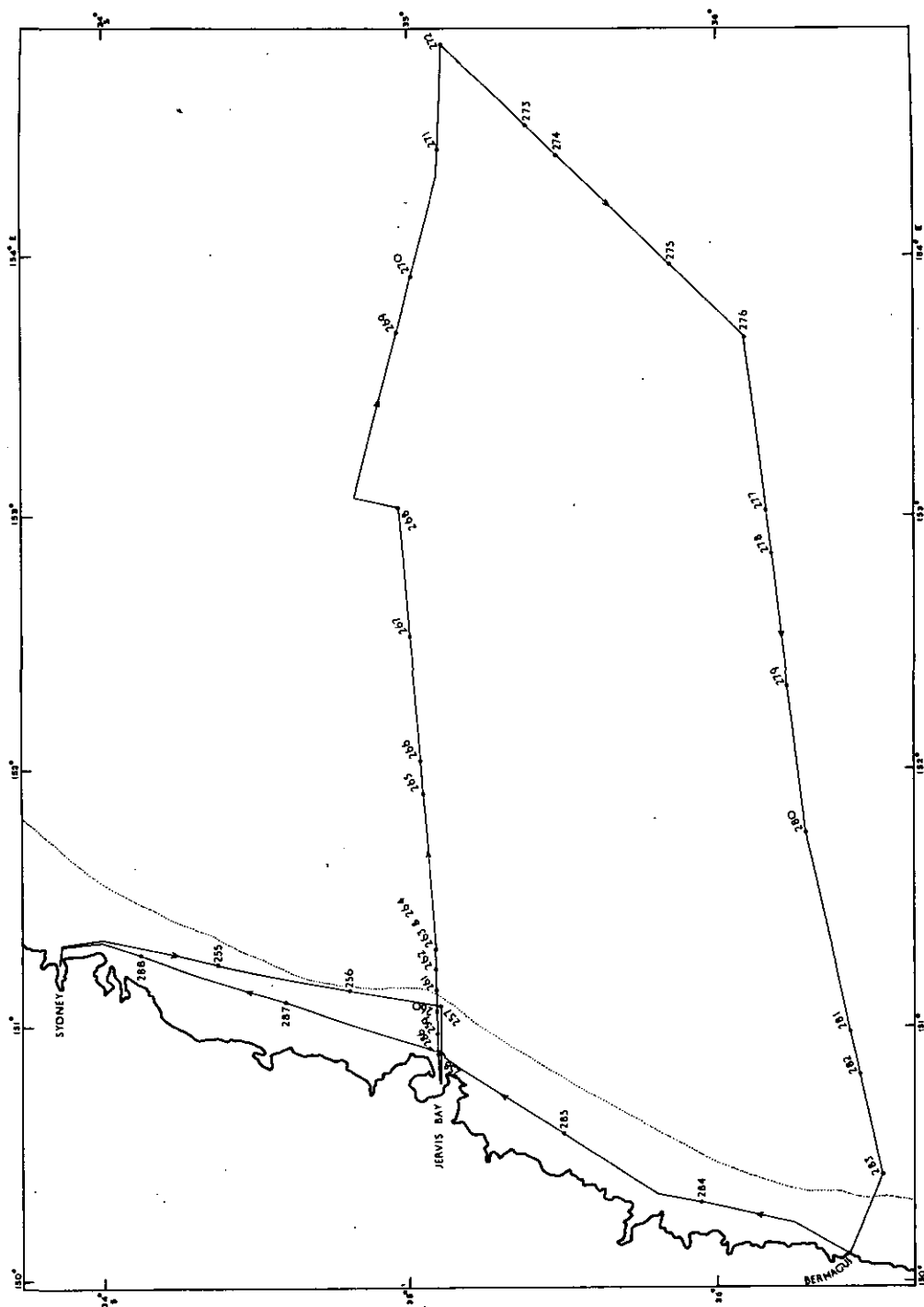


Fig. 6.-Track chart Cruise D.H. 8/61

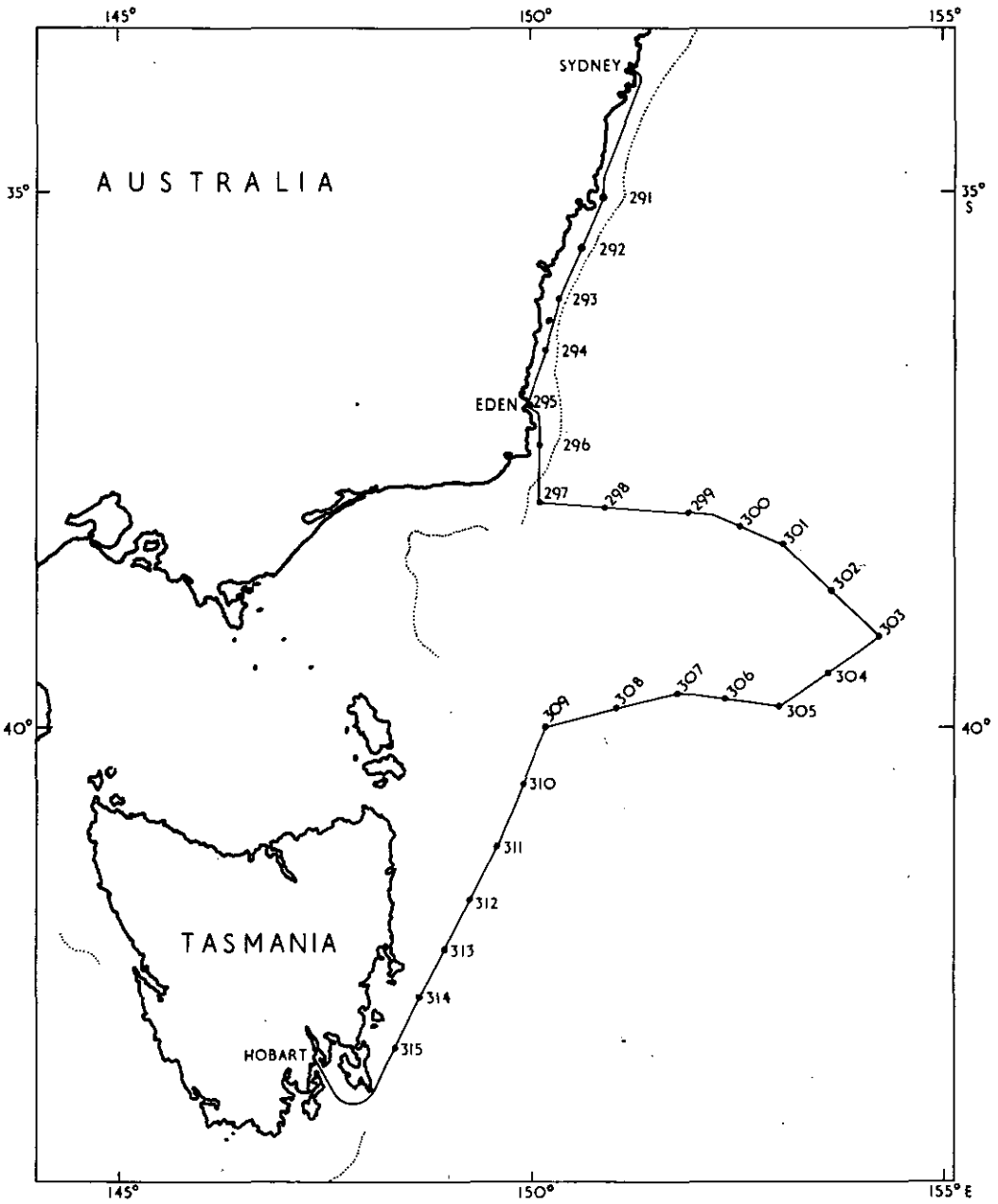


Fig. 7.—Track chart Cruise D.H.9/61

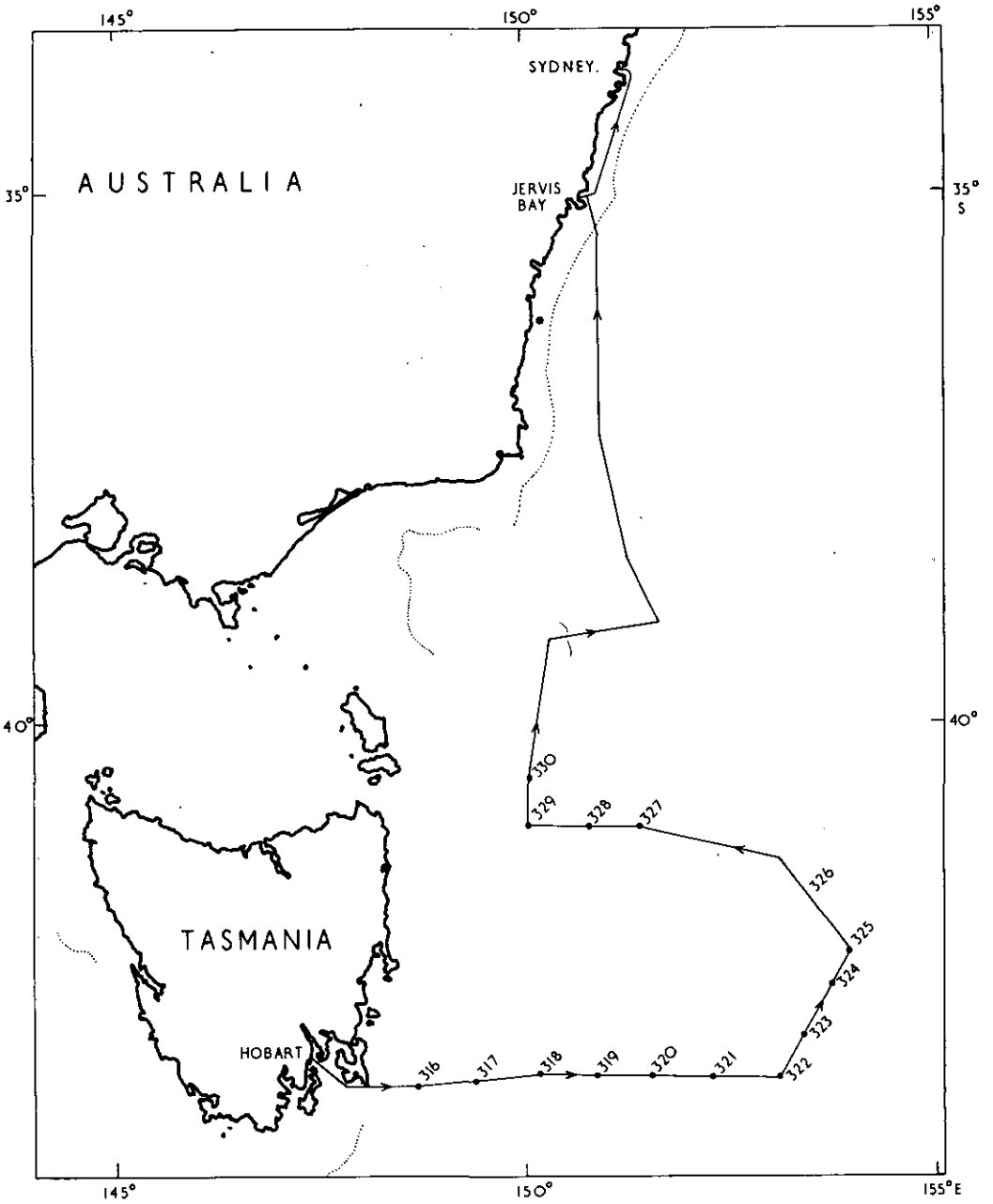


Fig. 8.-Track chart Cruise D.H. 10/61

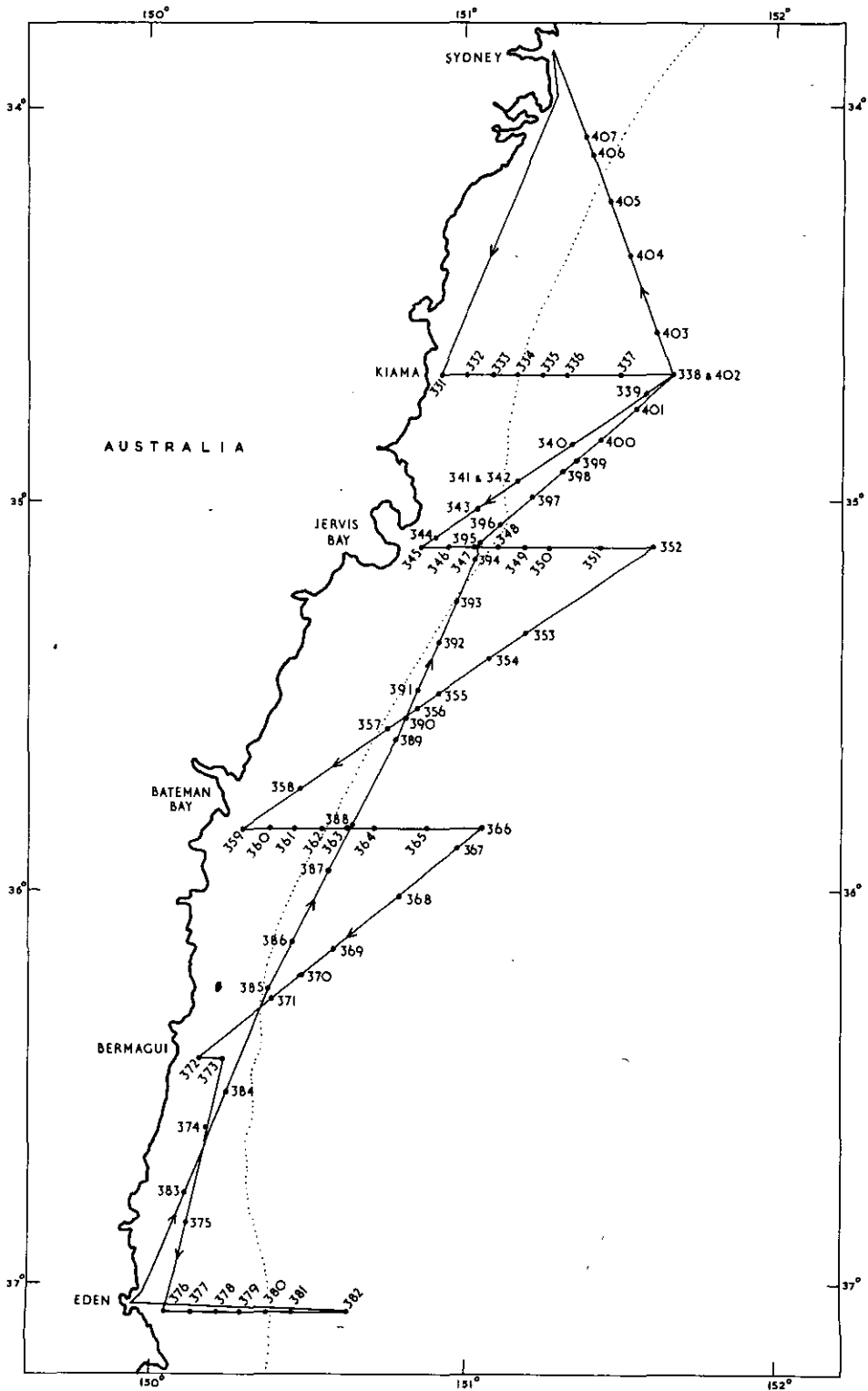


Fig. 9.- Track chart Cruise D.H. 11/61

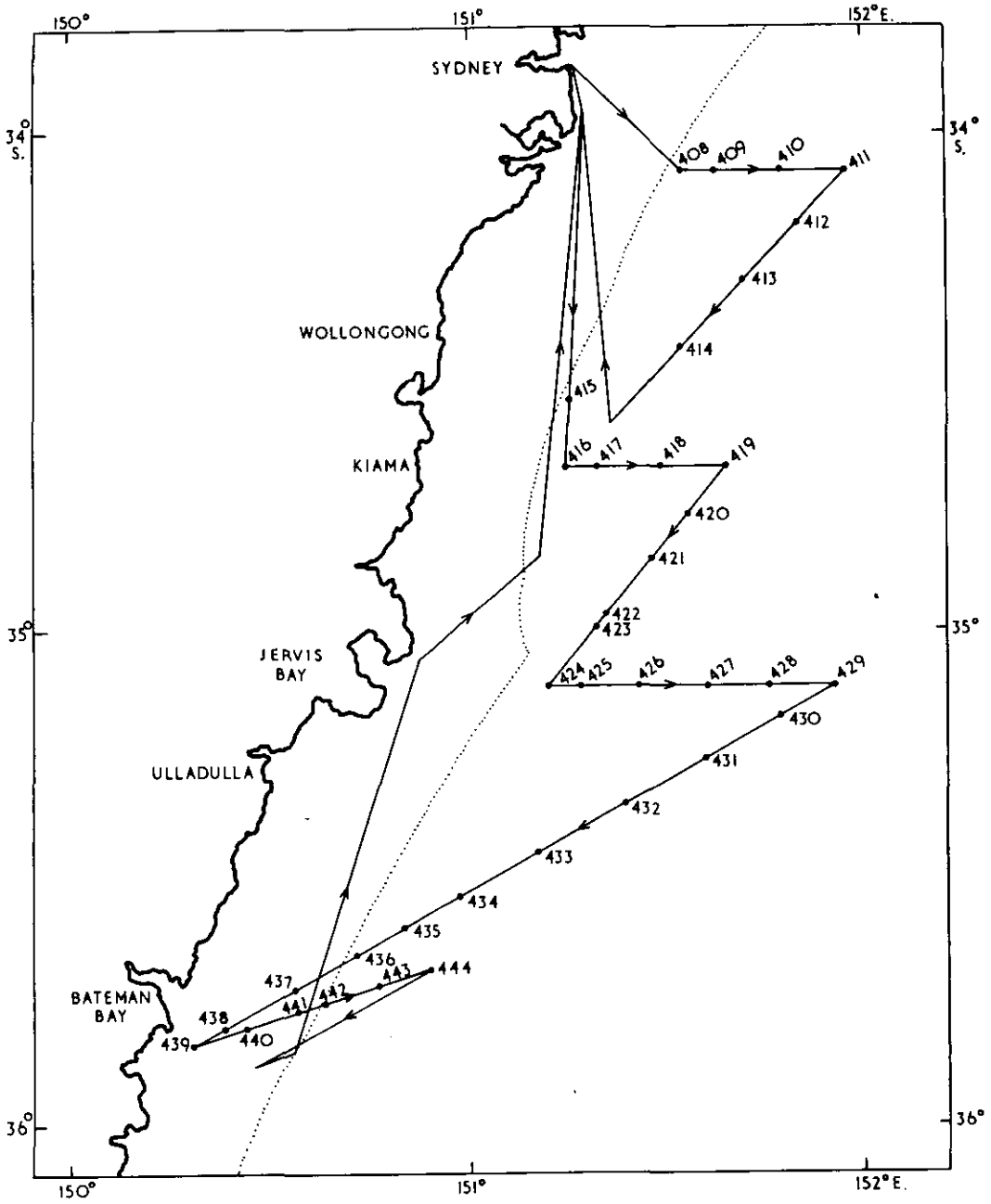


Fig. 10.- Track chart Cruise D.H. 12/61

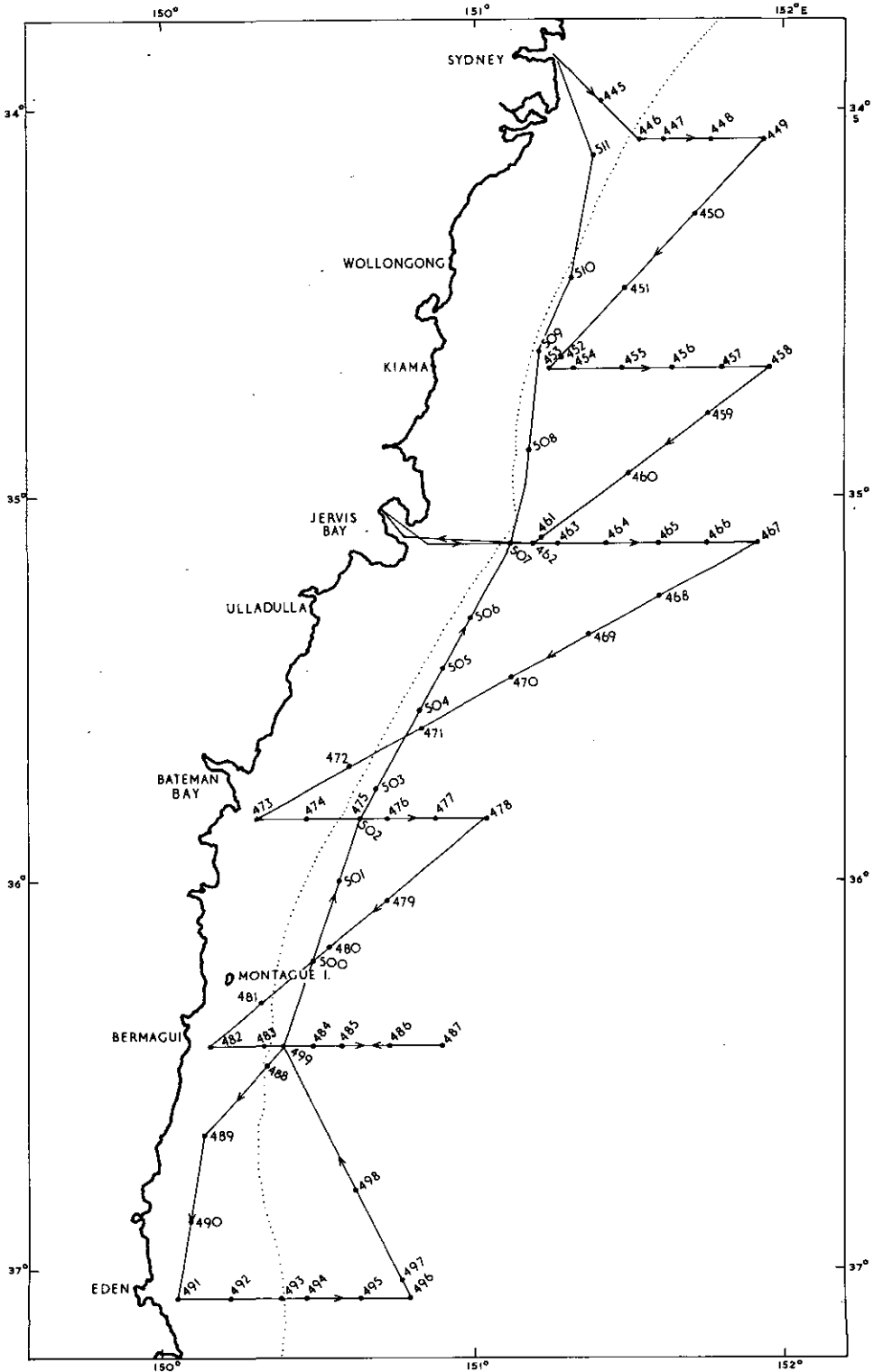


Fig. 11- Track chart Cruise D.H. 13/61

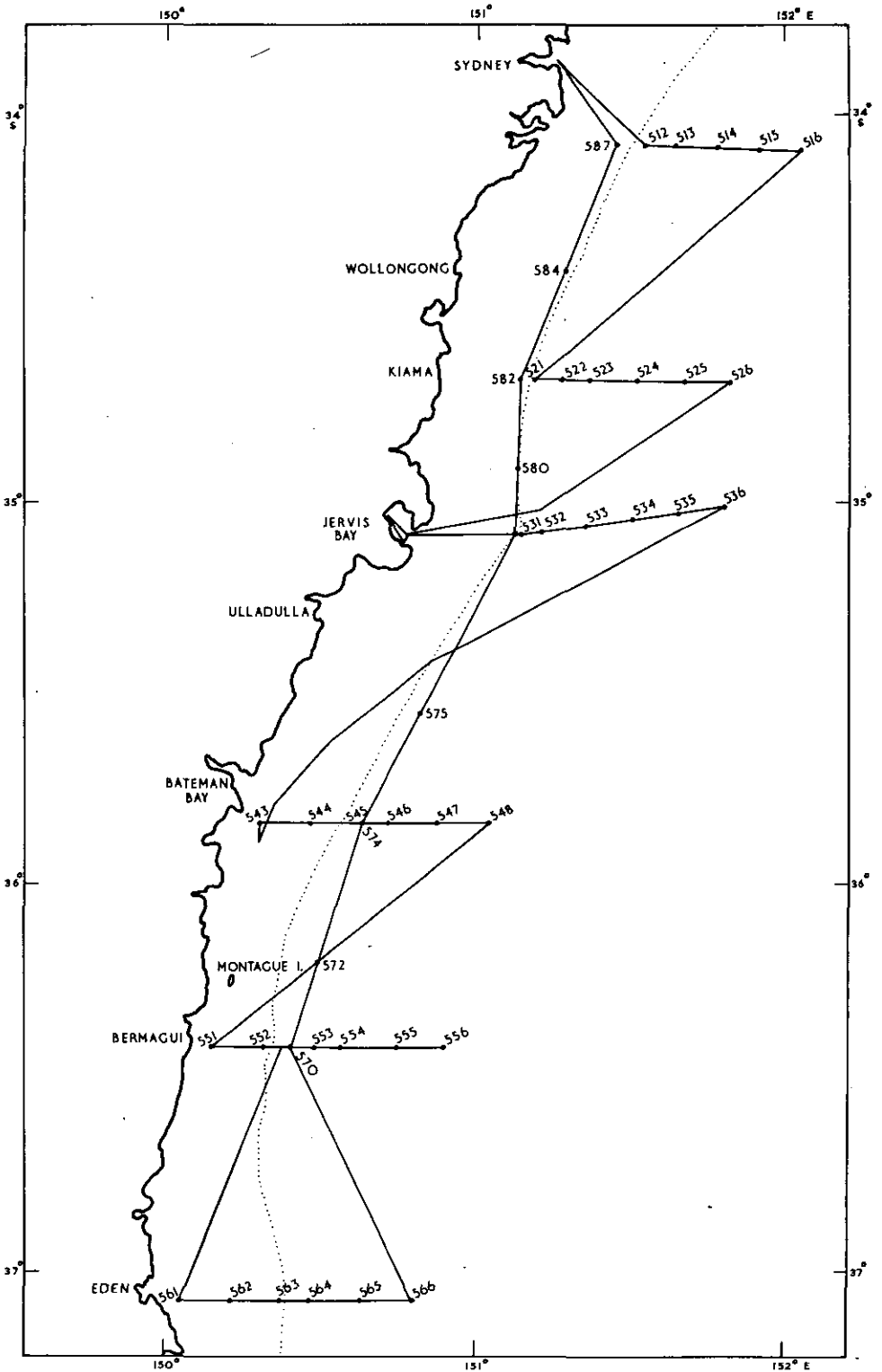


Fig. 12.- Track chart Cruise D.H. 14/61

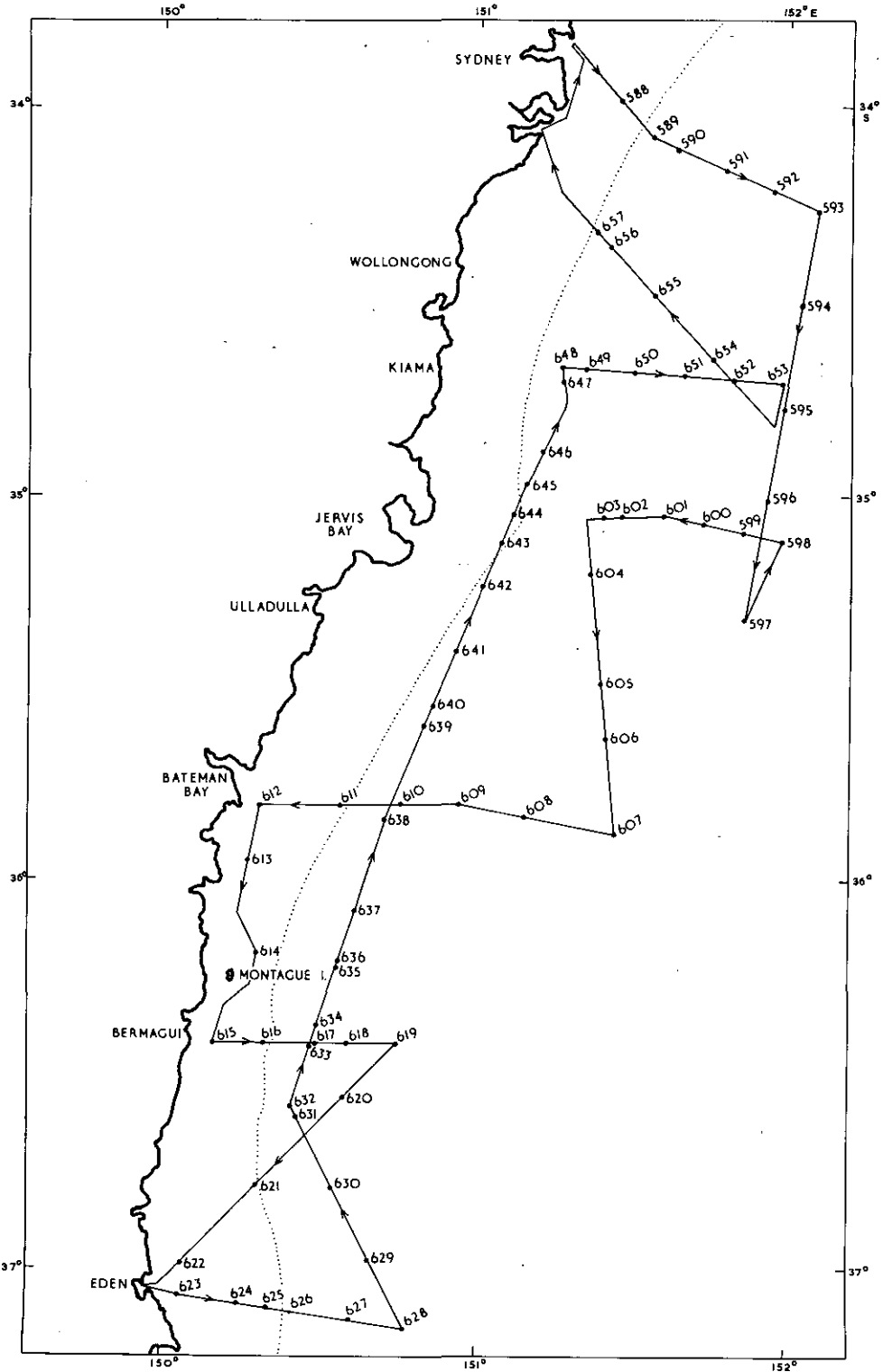


Fig. 13.- Track chart Cruise D.H. 15/61

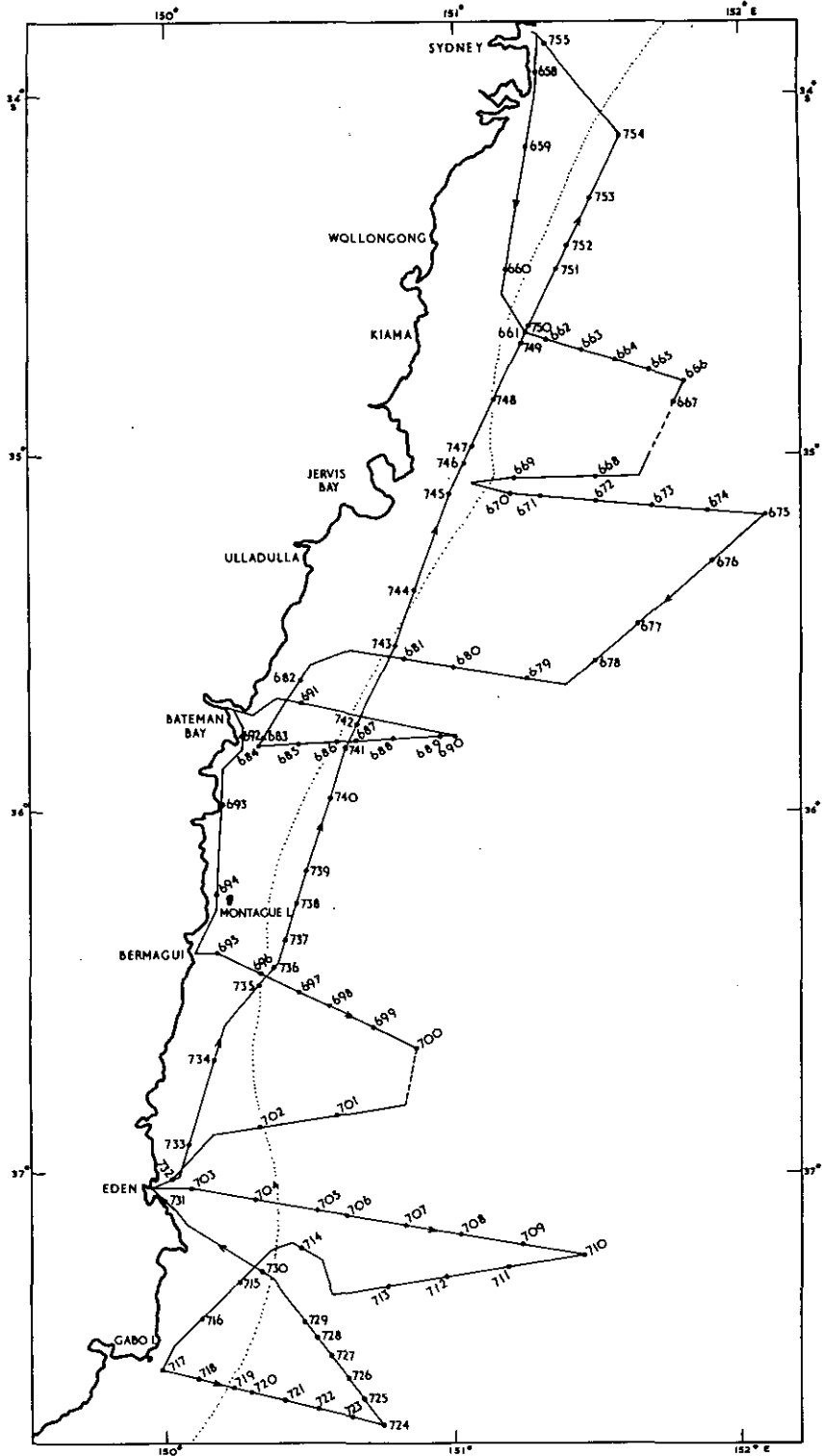


Fig. 14-Track chart Cruise D.H. 16/61

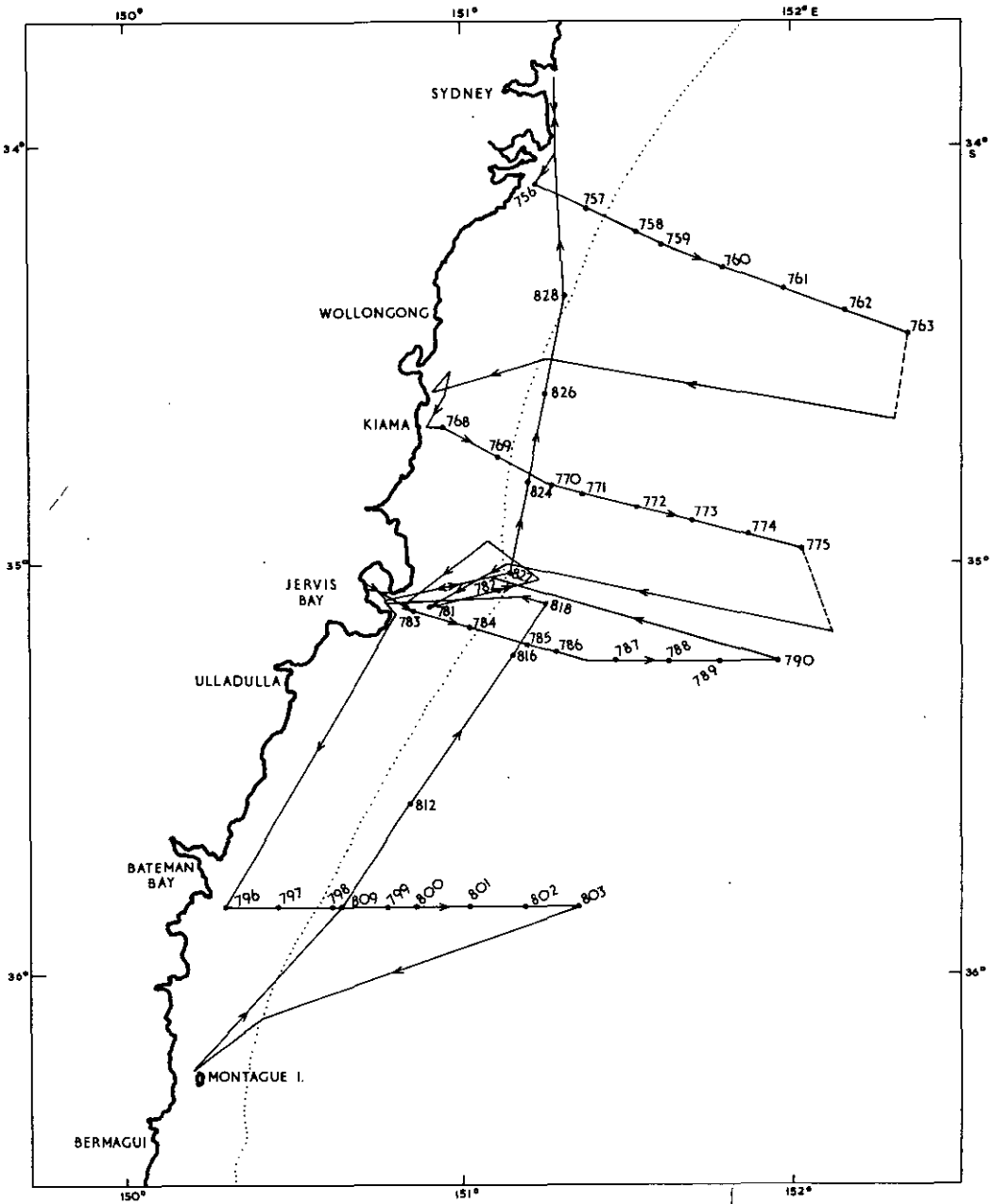


Fig. 15-Track chart Cruise D.H. 17/61

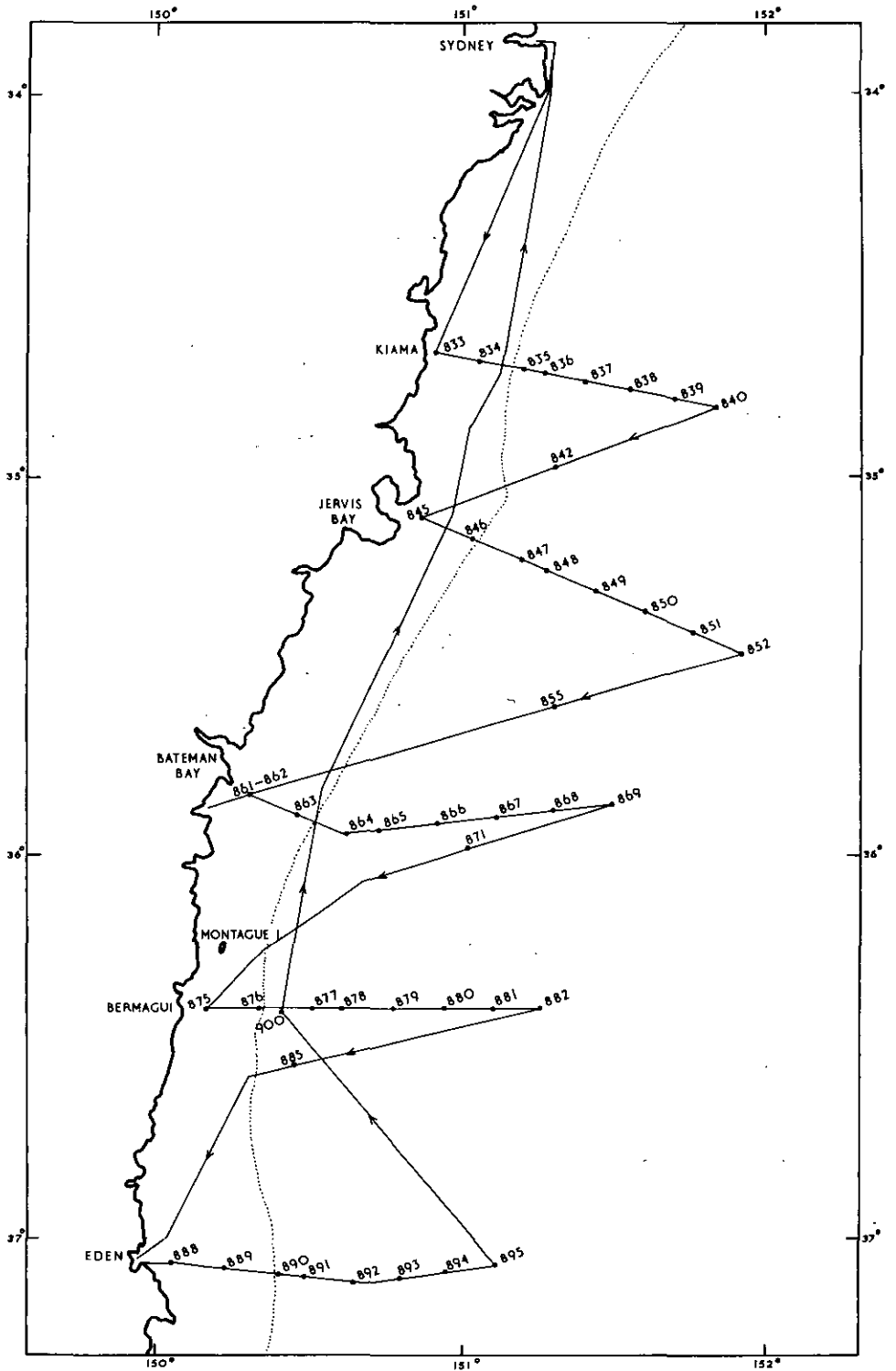


Fig. 16.- Track chart Cruise D.H. 18/61

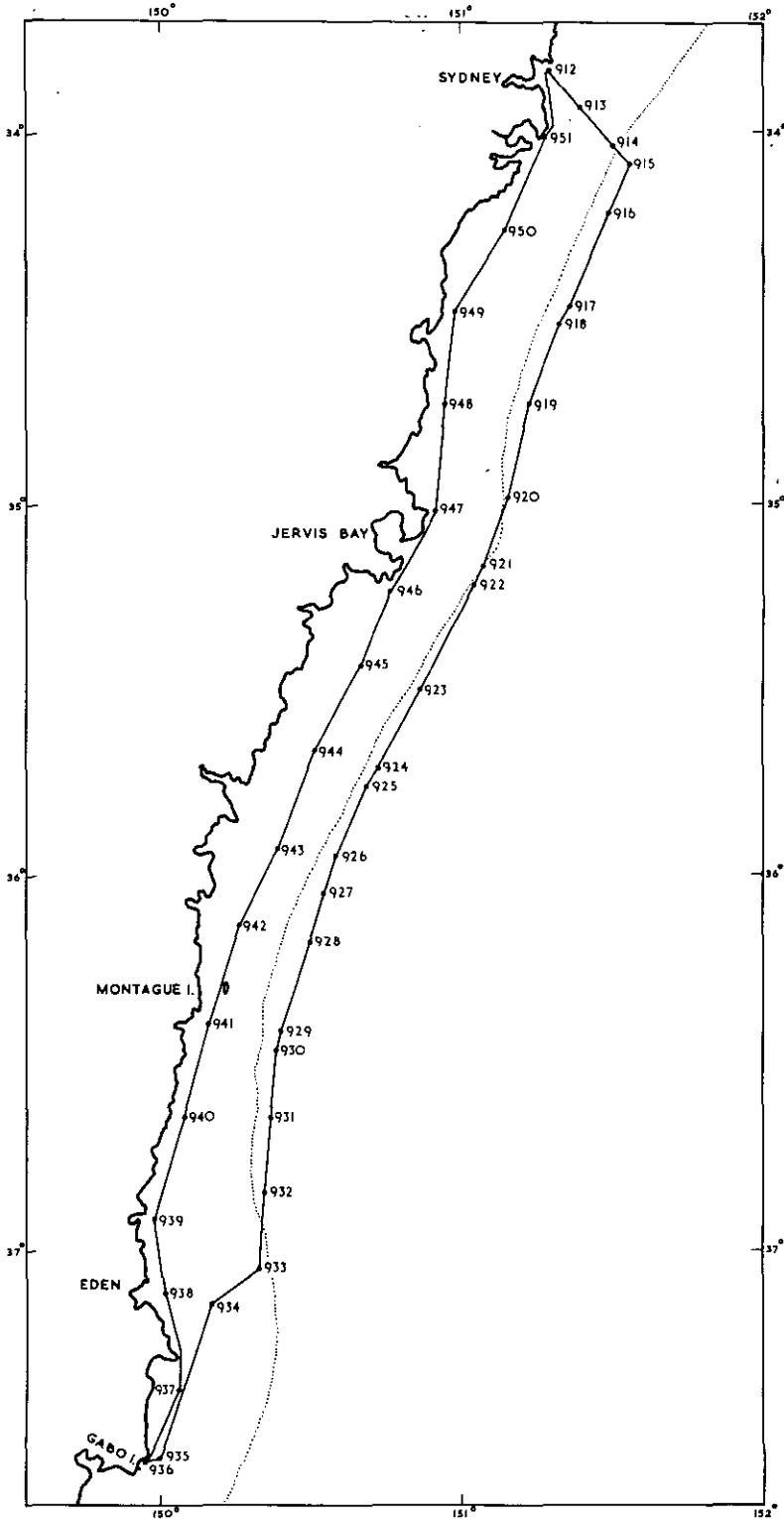


Fig. 17.- Track chart Cruise D.H. 19/61

VI. DATA SHEETS

Hydrological data were processed in a C.D.C. 3600 Computer. An explanation of the headings used is given at the beginning of the surface listing.

DATA
PART 1
HYDROLOGY
SURFACE SAMPLES

EXPLANATION OF HEADINGS

<u>Parts 1 and 2</u>	<u>Hydrology</u>
STATION	Gives the station identification. For example, DHL/1/61 signifies the 1st station worked by <u>Derwent Hunter</u> in 1961, on her 1st cruise for that year
DATE	Given as day/month/year
TIME	Given in Zone Time, and is the time at the beginning of the first cast. Zone Time in all cases was Eastern Australian Standard Time, GMT + 10 hr, Code K
LATITUDE LONGITUDE	Given in degrees and minutes
SONIC DEPTH	Given in metres, measured at standard sound velocity of 800 fm (1463 m) per second
WIND DIR. SP.	Wind direction and speed are coded using Tables 8 and 9 in U.S. Hydrogr. Office (1955)
WEA.	Weather is coded using Table 1 in U.S. Hydrogr. Office (1955)
VIS.	Visibility is coded using Table 4 in U.S. Hydrogr. Office (1955)
SEA DIR. AMT.	Sea direction and amount are coded using Tables 5 and 8 in U.S. Hydrogr. Office (1955)
SWELL DIR. AMT.	Sea swell direction and amount are coded using Tables 6 and 8 in U.S. Hydrogr. Office (1955)
BAROM. or ATMOS. PRESSURE	Atmospheric pressure given in millibars
WIRE ANGLES CAST 1 CAST 2 CAST 3	Wire angles are measured at the surface and expressed in degrees for each cast
CAST	The cast number corresponding to the wire angle is shown

DEPTH	Actual sampling depth, given in metres
TEMP.	Sea temperatures recorded in °C
SALINITY	Given in parts per thousand
SIGMA-T	Sigma-t to two decimal places
OXYGEN	Given in ml/l
OXYGEN % SAT.	Oxygen percentage saturation

*, ***, and a blank indicate no data available.

VESSE-	CRUISE	STATION	YR.	MTH.	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND		SEA	SMELL	BAROM.	SAMPLING
												DN.	AMT.				
10	1	1	61	2	4	0802	K 35	07 S	150	48 E	20.2	34.87	18	1			1
10	1	1	61	2	4	0925	K 35	07 S	150	53 E	21.2	35.41	22	1			1
10	1	3	61	2	4	1033	K 35	07 S	150	58 E	21.6	35.39	22	1			1
10	1	4	61	2	4	1135	K 35	07 S	151	03 E	22.1	35.37	22	1			1
10	1	5	61	2	4	1255	K 35	07 S	151	08 E	22.1	35.34	22	1			1
10	1	6	61	2	4	1421	K 35	07 S	151	13 E	22.2	35.34	22	1			1
10	1	7	61	2	5	0002	K 35	43 S	150	19 E	21.4	35.64	36	4			1
10	1	8	61	2	5	0110	K 35	43 S	150	24 E	21.2	35.73	36	4			1
10	1	9	61	2	5	0255	K 35	43 S	150	29 E	21.1	35.77	36	4			1
10	1	10	61	2	5	0407	K 35	43 S	150	34 E	20.9	35.71	36	4			1
10	1	11	61	2	5	0523	K 35	43 S	150	39 E	20.8	35.68	36	4			1
10	1	12	61	2	5	0640	K 35	43 S	150	44 E	21.1	35.77	36	4			1
10	1	13	61	2	5	1255	K 36	26 S	150	04 E	21.2	35.64	36	3			1
10	1	14	61	2	5	1557	K 36	26 S	150	08 E	21.4	35.77	36	3			1
10	1	15	61	2	5	1511	K 36	26 S	150	14 E	21.4	35.50	36	3			1
10	1	16	61	2	5	1618	K 36	26 S	150	19 E	21.3	35.82	36	3			1
10	1	17	61	2	5	1725	K 36	26 S	150	24 E	21.2	35.81	36	3			1
10	1	18	61	2	6	0844	K 37	04 S	150	03 E	17.8	35.41	02	1			1
10	1	19	61	2	6	0930	K 37	04 S	150	08 E	20.3	35.50	02	1			1
10	1	20	61	2	6	1020	K 37	04 S	150	13 E	20.3	35.62	02	1			1
10	1	21	61	2	6	1113	K 37	04 S	150	18 E	21.4	35.68	02	1			1
10	1	22	61	2	6	1230	K 37	04 S	150	23 E	21.9	35.82	02	1			1
10	1	23	61	2	6	1333	K 37	04 S	150	28 E	22.1	35.77	02	1			1
10	1	24	61	2	7	0945	K 37	03 S	150	10 E	20.8	35.62	02	3			1
10	2	25	61	2	17	0815	K 38	02 S	149	08 E	19.3	35.55	04	4			1
10	2	26	61	2	18	0825	K 38	03 S	150	14 E	21.5	35.84	04	3			1
10	2	27	61	2	18	1730	K 38	06 S	150	36 E	20.4	35.68	04	3			1
10	2	28	61	2	18	1955	K 38	08 S	150	56 E	20.7	35.68	04	3			1
10	2	29	61	2	18	2000	K 38	08 S	150	56 E	20.7	35.68	04	3			1
10	2	30	61	2	18	2157	K 38	10 S	151	06 E	21.4	35.81	04	3			1
10	2	31	61	2	19	0100	K 38	11 S	151	19 E	21.4	35.81	04	3			1
10	2	32	61	2	19	0310	K 38	13 S	151	33 E	21.4	35.82	04	3			1
10	2	33	61	2	19	0753	K 38	17 S	151	58 E	21.9	35.62	04	4			1
10	2	34	61	2	19	1645	K 38	22 S	151	51 E	21.3	35.75	04	4			1
10	2	35	61	2	19	2000	K 38	34 S	151	36 E	21.7	35.75	04	4			1
10	2	36	61	2	19	2219	K 38	41 S	151	27 E	20.6	35.68	02	3			1
10	2	37	61	2	20	0035	K 38	48 S	151	18 E	20.6	35.68	02	3			1
10	2	38	61	2	20	0245	K 38	56 S	151	09 E	21.1	35.77	02	3			1
10	2	39	61	2	20	0425	K 39	03 S	150	59 E	19.8	35.77	02	2			1
10	2	40	61	2	20	0812	K 39	06 S	150	56 E	20.1	35.68	02	2			1

VESSEL CRUISE STATION YR. MTH. DAY TIME LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

VESSEL	CRUISE NUMBER	STATION	YR.	MTH.	DAY	TIME	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND DN.	SEA DN.	SWELL DN.	WEA.	VIS.	BAROM.	SAMPLING METHOD
10	2	41	61	2	20	1515	K 39	11 S 150	43 E 19.4	35.75							1
10	2	42	61	2	20	1630	K 39	14 S 150	32 E 19.3	35.88							1
10	2	43	61	2	20	1803	K 39	18 S 150	28 E 19.3	35.88	02	3					1
10	2	44	61	2	20	2002	K 39	18 S 150	21 E 19.8	35.93							1
10	2	45	61	2	20	2147	K 39	27 S 149	53 E 19.3	35.93							1
10	2	46	61	2	20	2220	K 39	30 S 149	47 E 19.3	35.93	02	3					1
10	2	47	61	2	20	2355	K 39	33 S 149	35 E 20.0	35.75							1
10	2	48	61	2	21	0125	K 39	37 S 149	22 E 19.6	35.62							1
10	2	49	61	2	21	0230	K 39	40 S 149	12 E 19.6	35.62							1
10	2	50	61	2	21	0430	K 39	45 S 148	59 E 19.7	35.73							1
10	2	51	61	2	21	0840	K 39	50 S 148	46 E 20.5	35.88	J2	1					1
10	2	52	61	2	21	1500	K 39	53 S 148	33 E 19.6	35.50							1
10	2	53	61	2	21	1836	K 39	54 S 148	25 E 19.7	35.55							1
10	2	54	61	2	21	2300	K 39	46 S 148	34 E 19.2	35.62							1
10	2	55	61	2	22	0105	K 39	38 S 148	44 E 19.9	35.64							1
10	2	56	61	2	22	0243	K 39	36 S 148	46 E 19.9	35.68							1
10	2	57	61	2	22	0445	K 39	33 S 148	49 E 19.9	35.68							1
10	2	58	61	2	22	0600	K 39	32 S 148	52 E 20.1	35.71							1
10	2	59	61	2	22	1130	K 39	21 S 149	05 E 20.1	35.71							1
10	2	60	61	2	22	1325	K 39	10 S 149	12 E 20.1	35.64							1
10	2	61	61	2	22	1500	K 38	58 S 149	18 E 20.0	35.68							1
10	2	62	61	2	22	1850	K 38	46 S 149	25 E 20.5	35.68							1
10	2	63	61	2	22	2300	K 38	18 S 149	40 E 21.0	35.64							1
10	2	64	61	2	23	0100	K 38	00 S 149	50 E 19.8	35.59							1
10	2	65	61	2	23	0240	K 37	47 S 149	57 E 19.0	35.55							1
10	2	66	61	2	23	0520	K 37	30 S 150	06 E 17.5	35.41							1
10	2	67	61	2	23	0750	K 37	24 S 150	07 E 17.3	35.41							1
10	3	68	61	3	8	0838	K 42	10 S 148	38 E 19.0	35.95	20	2					1
10	3	69	61	3	8	1630	K 42	08 S 148	51 E 18.4	35.70							1
10	3	70	61	3	8	1900	K 42	06 S 149	02 E 18.2	35.71							1
10	3	71	61	3	8	2015	K 42	05 S 149	10 E 18.1	35.77							1
10	3	72	61	3	8	2145	K 42	04 S 149	14 E 18.1	35.77							1
10	3	73	61	3	9	0015	K 42	02 S 149	29 E 17.1	35.46							1
10	3	74	61	3	9	0300	K 42	01 S 149	42 E 16.8	35.44							1
10	3	75	61	3	9	0827	K 41	59 S 149	50 E 19.7	35.39	36	1					1
10	4	76	61	3	16	0850	K 43	15 S 148	15 E 17.9	35.68	34	0					1
10	4	77	61	3	16	1530	K 43	15 S 148	28 E 17.9	35.68							1
10	4	78	61	3	16	1730	K 43	14 S 148	39 E 17.9	35.86							1
10	4	79	61	3	16	1930	K 43	14 S 148	54 E 17.9	35.86							1
10	4	80	61	3	16	2000	K 43	14 S 148	56 E 17.9	35.55							1

VESSEL CRUISE STATION YR. MTH. DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

10	4	81	61	3	16	2145	K 43	14 S	149	05 E	16.8	35.50	1
10	4	82	61	3	16	2345	K 43	13 S	149	19 E	17.1	35.62	1
10	4	83	61	3	17	0145	K 43	13 S	149	33 E	16.8	35.64	1
10	4	84	61	3	17	0345	K 43	13 S	149	42 E	16.7	35.77	1
10	4	85	61	3	17	0841	K 43	12 S	149	46 E	15.2	35.23	1
10	4	86	61	3	17	1620	K 42	53 S	149	43 E	14.6	35.34	1
10	4	87	61	3	17	1740	K 42	42 S	149	40 E	15.1	35.52	1
10	4	88	61	3	17	1900	K 42	34 S	149	38 E	15.6	35.50	1
10	4	89	61	3	17	2040	K 42	27 S	149	36 E	15.9	35.46	1
10	4	90	61	3	17	2200	K 42	15 S	149	34 E	16.2	35.08	1
10	4	91	61	3	17	2320	K 42	06 S	149	32 E	16.2	35.41	1
10	4	92	61	3	18	0100	K 41	56 S	149	30 E	16.0	35.41	1
10	4	93	61	3	18	0220	K 41	48 S	149	28 E	16.0	35.53	1
10	4	94	61	3	18	0400	K 41	38 S	149	26 E	17.1	35.77	1
10	4	95	61	3	18	0750	K 41	27 S	149	29 E	19.2	35.77	1
10	4	96	61	3	18	1540	K 41	20 S	149	06 E	18.2	35.81	1
10	4	97	61	3	18	1700	K 41	15 S	148	55 E	18.2	36.24	1
10	4	98	61	3	18	1815	K 41	09 S	148	44 E	17.8	35.62	1
10	4	99	61	3	18	2000	K 41	03 S	148	28 E	17.9	35.77	1
10	4	100	61	3	19	0805	K 41	01 S	148	41 E	18.7	35.71	1
10	4	101	61	3	19	1530	K 40	52 S	148	39 E	18.2	35.77	1
10	4	102	61	3	19	1730	K 40	43 S	148	36 E	17.9	35.86	1
10	4	103	61	3	19	1910	K 40	34 S	148	33 E	17.7	35.77	1
10	4	104	61	3	19	2055	K 40	30 S	148	39 E	18.2	35.79	1
10	4	105	61	3	19	2300	K 40	30 S	148	52 E	17.8	35.84	1
10	4	106	61	3	20	0100	K 40	23 S	148	53 E	18.4	35.84	1
10	4	107	61	3	20	0300	K 40	16 S	148	53 E	19.1	35.77	1
10	4	108	61	3	20	0500	K 40	05 S	148	51 E	18.6	35.88	1
10	4	109	61	3	20	0750	K 40	00 S	148	51 E	19.6	35.88	1
10	4	110	61	3	20	1500	K 39	59 S	148	39 E	19.6	35.75	1
10	4	111	61	3	20	1700	K 39	58 S	148	29 E	19.5	35.66	1
10	4	112	61	3	20	2000	K 39	54 S	148	24 E	19.9	35.61	1
10	4	113	61	3	20	2115	K 39	47 S	148	29 E	19.6	35.48	1
10	4	114	61	3	20	2230	K 39	39 S	148	35 E	19.5	35.62	1
10	4	115	61	3	20	2400	K 39	32 S	148	40 E		35.59	1
10	4	116	61	3	21	0130	K 39	22 S	148	48 E		35.68	1
10	4	117	61	3	21	0300	K 39	13 S	148	55 E		35.70	1
10	4	118	61	3	21	0430	K 39	03 S	149	03 E		35.68	1
10	4	119	61	3	21	0755	K 38	57 S	149	06 E	20.2	35.75	1
10	4	120	61	3	21	1615	K 38	42 S	149	07 E	18.4		1

VESSE - CRUISE STATION YR. MTH. DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND DN. AMT. SEA SWELL WEA. VIS. BAROM. SMELL DN. AMT. SAMPLING METHOD

10	7	161	61	4	23	0925	K 38	23	S 148	38	E 18.0	35.70							1
10	7	162	61	4	23	1000	K 38	26	S 148	31	E 19.1	35.70	04	2					1
10	7	163	61	4	23	1633	K 38	33	S 148	11	E 18.4	35.64							1
10	7	164	61	4	23	1920	K 38	35	S 148	06	E 16.9	35.92							1
10	7	165	61	4	23	2020	K 38	36	S 148	07	E 17.1								9
10	7	166	61	4	23	2200	K 38	40	S 147	55	E 17.0	35.59							1
10	7	167	61	4	24	0016	K 38	43	S 147	45	E 17.0	35.44							1
10	7	168	61	4	24	0215	K 38	47	S 147	36	E 16.6	35.62							1
10	7	169	61	4	24	0820	K 38	56	S 147	18	E 17.6	35.44							1
10	7	170	61	4	24	1535	K 38	56	S 148	00	E 16.6	35.52							1
10	7	171	61	4	24	1730	K 38	57	S 148	12	E 17.5	35.61							1
10	7	172	61	4	24	1920	K 38	58	S 148	18	E 18.0	35.61							1
10	7	173	61	4	24	2020	K 38	58	S 148	11	E 19.1								1
10	7	174	61	4	24	2128	K 38	58	S 148	23	E 17.6	35.68							8
10	7	175	61	4	24	2332	K 38	59	S 148	39	E 17.6	35.68							1
10	7	176	61	4	25	0145	K 38	59	S 148	49	E 18.8	35.82							1
10	7	177	61	4	25	0400	K 39	00	S 149	00	E 18.6	35.57							1
10	7	178	61	4	25	0800	K 39	08	S 149	01	E 16.8	35.52							1
10	7	179	61	4	25	1021	K 39	17	S 148	49	E 17.5	35.70							1
10	7	180	61	4	25	1200	K 39	24	S 148	41	E 17.5	35.79							1
10	7	181	61	4	25	1345	K 39	30	S 148	32	E 17.7								1
10	7	182	61	4	25	1515	K 39	37	S 148	25	E 17.5	35.64							1
10	7	183	61	4	25	1635	K 39	49	S 148	21	E 16.8	35.64							1
10	7	184	61	4	25	1800	K 39	53	S 148	19	E 16.4	35.70							1
10	7	185	61	4	26	0245	K 39	59	S 148	36	E 16.2	35.71							1
10	7	186	61	4	26	0735	K 40	00	S 148	45	E 18.8	35.66	09	2					1
10	7	187	61	4	26	1445	K 40	14	S 148	36	E 16.5	35.66							1
10	7	188	61	4	26	1620	K 40	21	S 148	32	E 16.0	35.61							1
10	7	189	61	4	26	1755	K 40	25	S 148	30	E 16.3	35.70							1
10	7	190	61	4	27	0143	K 40	34	S 148	40	E 15.1	35.61							1
10	7	191	61	4	27	0305	K 40	41	S 148	47	E 15.8	35.59							1
10	7	192	61	4	27	0425	K 40	48	S 148	54	E 16.5	35.66							1
10	7	193	61	4	27	0550	K 40	58	S 149	00	E 16.4	35.66							1
10	7	194	61	4	27	0905	K 40	59	S 149	05	E 17.7	35.66							1
10	7	195	61	4	27	1640	K 40	42	S 149	22	E 17.8	35.64	18	4					1
10	7	196	61	4	27	1850	K 40	39	S 149	27	E	35.66							1
10	7	197	61	4	27	2000	K 40	37	S 149	28	E	35.71							1
10	7	198	61	4	27	2020	K 40	37	S 149	29	E	35.71							1
10	7	199	61	4	27	2315	K 40	28	S 149	47	E	35.73							8
10	7	200	61	4	28	0045	K 40	14	S 149	57	E	35.86							1

VESSEL CRUISE STATION YR, MTH, DAY TIME & LATITUDE LONGITUDE TEMP. SALINITY WIND DN, AMT, DN, AMT, SEA SWELL WEA, VIS, BAROM, SAMPLING METHOD

VESSEL	CRUISE NUMBER	STATION	YR	MTH	DAY	TIME	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND DN, AMT,	SEA SWELL DN, AMT,	WEA,	VIS,	BAROM,	SAMPLING METHOD
10	7	201	61	4	28	0225	K 40	04 S 150	02 E	35.81						1
10	7	202	61	4	28	0335	K 39	55 S 150	11 E	35.79						1
10	7	203	61	4	28	0455	K 39	47 S 150	19 E	35.70						1
10	7	204	61	4	28	0800	K 39	40 S 150	26 E	18.7						1
10	7	205	61	4	28	1845	K 39	18 S 150	40 E	16.1	16	1				1
10	7	206	61	4	28	1710	K 39	15 S 150	42 E	16.0						1
10	7	207	61	4	28	1730	K 39	14 S 150	42 E	16.5						1
10	7	208	61	4	28	1926	K 38	58 S 150	51 E	16.3						1
10	7	209	61	4	28	2000	K 38	55 S 150	53 E	35.46						1
10	7	210	61	4	28	2123	K 38	52 S 150	55 E	16.6						1
10	7	211	61	4	29	0750	K 38	41 S 151	01 E	17.6						1
10	7	212	61	4	29	1445	K 38	25 S 151	18 E	18.0	34	2				1
10	7	213	61	4	29	1625	K 38	22 S 151	22 E	18.2						1
10	7	214	61	4	29	1715	K 38	20 S 151	25 E	19.5						1
10	7	215	61	4	29	1750	K 38	17 S 151	27 E	18.4						1
10	7	216	61	4	29	1928	K 38	10 S 151	36 E	18.2						1
10	7	217	61	4	29	2000	K 38	08 S 151	38 E	35.70						1
10	7	218	61	4	30	0748	K 38	02 S 151	45 E	19.1						1
10	7	219	61	4	30	1500	K 37	49 S 151	24 E	18.5	34	2				1
10	7	220	61	4	30	1640	K 37	50 S 151	20 E	18.6						1
10	7	221	61	4	30	1815	K 37	45 S 151	16 E	18.6						1
10	7	222	61	4	30	1855	K 37	44 S 151	15 E	19.1						1
10	7	223	61	4	30	1945	K 37	41 S 151	10 E	18.5						1
10	7	224	61	4	30	2000	K 37	40 S 151	08 E	35.90						1
10	7	225	61	4	30	2127	K 37	35 S 151	00 E	17.7						1
10	7	226	61	4	30	2250	K 37	28 S 150	51 E	18.5						1
10	7	227	61	5	1	0033	K 37	25 S 150	45 E	35.81						1
10	7	228	61	5	1	0333	K 37	22 S 150	42 E	17.6						1
10	7	229	61	5	1	0555	K 37	24 S 150	33 E	17.3						1
10	7	230	61	5	1	0325	K 37	10 S 150	23 E	17.3						1
10	7	231	61	5	1	0455	K 37	05 S 150	14 E	16.9						1
10	7	232	61	5	1	0610	K 37	03 S 150	07 E	16.0						1
10	7	233	61	5	2	0522	K 37	04 S 150	03 E	18.0						1
10	7	234	61	5	2	0745	K 37	04 S 150	08 E	18.1	36	2				1
10	7	235	61	5	2	0838	K 37	04 S 150	13 E	18.7	36	2				1
10	7	236	61	5	2	0933	K 37	04 S 150	18 E	19.9	36	2				1
10	7	237	61	5	2	1028	K 37	04 S 150	23 E	20.3	36	2				1
10	7	238	61	5	2	1134	K 37	04 S 150	28 E	20.2	36	2				1
10	7	239	61	5	2	2150	K 36	25 S 150	09 E	19.7	36	2				1
10	7	240	61	5	2	2240	K 36	25 S 150	14 E	19.6	32	2				1

VESSE-- CRUISE STATION YR. MTH, DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

10	7	241	61	5	2	2335	K 36	25	S 150	19	E 20.0	35.77	34	2	1
10	7	242	61	5	3	0130	K 36	25	S 150	34	E 19.7	35.73	34	2	1
10	7	243	61	5	3	0135	K 36	25	S 150	29	E 19.5	35.77	34	2	1
10	7	244	61	5	3	0950	K 35	50	S 150	18	E 19.2	35.73	34	3	1
10	7	245	61	5	3	1038	K 35	50	S 150	23	E 19.1	35.70	34	3	1
10	7	246	61	5	3	1130	K 35	50	S 150	28	E 19.9	35.73	02	2	1
10	7	247	61	5	3	1336	K 35	50	S 150	33	E 19.9	35.86	02	2	1
10	7	248	61	5	3	1355	K 35	50	S 150	33	E 20.2	35.75	02	2	1
10	7	249	61	5	3	1446	K 35	50	S 150	43	E 20.2	35.81	18	3	1
10	7	250	61	5	3	1830	K 35	22	S 150	35	E 19.4	35.70	18	1	1
10	7	251	61	5	3	2205	K 35	07	S 150	52	E 19.0	35.71	18	1	1
10	7	252	61	5	3	2258	K 35	07	S 150	57	E 18.2	35.68	18	2	1
10	7	253	61	5	3	2352	K 35	07	S 151	02	E 19.6	35.71	22	3	1
10	7	254	61	5	4	0058	K 35	07	S 151	07	E 19.8	35.73*	22	3	1
10	8	255	61	5	12	2045	K 34	21	S 151	12	E 18.4	35.71	22	3	1
10	8	256	61	5	13	0210	K 34	47	S 151	12	E 18.4	35.71	22	3	1
10	8	257	61	5	13	0810	K 35	06	S 151	03	E 19.3	35.77	21	2	1
10	8	258	61	5	13	2335	K 35	07	S 150	52	E 19.1	35.75	21	2	1
10	8	259	61	5	14	0045	K 35	07	S 150	57	E 19.1	35.71	21	2	1
10	8	260	61	5	14	0145	K 35	07	S 151	03	E 19.3	35.71	21	2	1
10	8	261	61	5	14	0248	K 35	06	S 151	07	E 19.2	35.75	23	3	1
10	8	262	61	5	14	0403	K 35	06	S 151	13	E 19.1	35.73+	23	3	1
10	8	263	61	5	14	0516	K 35	06	S 151	18	E 19.1	35.71	23	3	1
10	8	264	61	5	14	0640	K 35	05	S 151	18	E 19.6	35.71	23	3	1
10	8	265	61	5	14	1850	K 35	03	S 151	54	E 18.8	35.66	23	3	1
10	8	266	61	5	14	2000	K 35	03	S 152	02	E 18.4	35.62	23	3	1
10	8	267	61	5	15	0015	K 35	00	S 152	31	E 18.4	35.62	23	3	1
10	8	268	61	5	15	0615	K 34	57	S 153	03	E 18.5	35.66	23	3	1
10	8	269	61	5	15	1800	K 34	58	S 153	42	E 18.4	35.66	23	3	1
10	8	270	61	5	15	2000	K 35	01	S 153	55	E 18.4	35.66	23	3	1
10	8	271	61	5	16	0110	K 35	06	S 154	24	E 19.1	35.77	23	4	1
10	8	272	61	5	16	0820	K 35	07	S 154	48	E 18.6	35.62+	23	4	1
10	8	273	61	5	16	2005	K 35	23	S 154	30	E 18.9	35.71	23	4	1
10	8	274	61	5	16	2150	K 35	29	S 154	23	E 18.9	35.71	23	4	1
10	8	275	61	5	17	0315	K 35	51	S 153	58	E 18.8	35.81	23	4	1
10	8	276	61	5	17	0835	K 36	05	S 153	42	E 18.5	35.71	23	4	1
10	8	277	61	5	17	1810	K 36	09	S 153	02	E 18.4	35.82	23	4	1
10	8	278	61	5	17	1957	K 36	11	S 152	51	E 18.5	35.82	23	4	1
10	8	279	61	5	18	0010	K 36	13	S 152	20	E 18.5	35.82	23	4	1
10	8	280	61	5	18	0830	K 36	17	S 151	45	E 19.0	35.71	23	4	1

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

VESSE- CHUISE STATION YR. MTH. DAY TIME Z LATITUDE LONGITUDE TEMP. SALINITY WIND DN. AMT, DN. AMT, SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

10	8	281	61	5	18	2000	K	36	25	S	150	59	E												1
10	8	282	61	5	18	2200	K	36	27	S	150	49	E	17.5											1
10	8	283	61	5	19	0829	K	36	32	S	150	25	E	18.5											1
10	8	284	61	5	20	1047	K	35	57	S	150	16	E	17.2											1
10	8	285	61	5	20	1455	K	35	31	S	150	32	E	18.2											1
10	8	286	61	5	20	1905	K	35	06	S	150	52	E	18.3											1
10	8	287	61	5	21	0055	K	34	38	S	151	02	E	17.5											1
10	8	288	61	5	21	0457	K	34	10	S	151	14	E	17.3											1
10	9	289	61	5	25	2235	K	34	09	S	151	14	E	17.7											1
10	9	290	61	5	26	0340	K	34	37	S	151	02	E	18.0											1
10	9	291	61	5	26	0855	K	35	06	S	150	55	E	17.5											1
10	9	292	61	5	26	1445	K	35	34	S	150	39	E	18.0											1
10	9	293	61	5	26	1900	K	36	03	S	150	22	E	17.5											1
10	9	294	61	5	27	0005	K	36	32	S	150	09	E	18.2											1
10	9	295	61	5	27	0550	K	37	02	S	150	01	E	16.6											1
10	9	296	61	5	27	2320	K	37	27	S	150	07	E	15.5											1
10	9	297	61	5	28	0835	K	37	58	S	150	05	E	16.2											1
10	9	298	61	5	28	2050	K	38	01	S	150	52	E	16.0											1
10	9	299	61	5	29	0805	K	38	04	S	151	57	E	16.5											1
10	9	300	61	5	30	0100	K	38	02	S	152	38	E	17.7											1
10	9	301	61	5	30	0910	K	38	22	S	153	07	E	17.9											1
10	9	302	61	5	30	2210	K	38	45	S	153	39	E	17.2											1
10	9	303	61	5	31	0825	K	39	10	S	154	12	E	17.8											1
10	9	304	61	5	31	2120	K	39	32	S	153	36	E	16.3											1
10	9	305	61	6	1	0815	K	39	51	S	153	04	E	16.1											1
10	9	306	61	6	1	2300	K	39	45	S	152	21	E	17.5											1
10	9	307	61	6	2	0905	K	39	39	S	151	42	E	17.8											1
10	9	308	61	6	2	2115	K	39	49	S	151	03	E	16.5											1
10	9	309	61	6	3	0953	K	40	02	S	150	10	E	16.7											1
10	9	310	61	6	3	2200	K	40	34	S	149	54	E	15.2											1
10	9	311	61	6	4	0850	K	41	05	S	149	37	E	16.3											1
10	9	312	61	6	4	1745	K	41	31	S	149	18	E	15.0											1
10	9	313	61	6	4	2145	K	41	58	S	148	58	E	14.5											1
10	9	314	61	6	5	0145	K	42	24	S	148	38	E	14.5											1
10	9	315	61	6	5	0545	K	42	50	S	148	19	E	13.0											1
10	10	316	61	6	9	0845	K	43	15	S	148	37	E	14.9											1
10	10	317	61	6	9	2145	K	43	13	S	149	17	E	14.5											1
10	10	318	61	6	10	0835	K	43	10	S	150	12	E	13.5											1
10	10	319	61	6	10	2300	K	43	10	S	150	54	E	12.0											1
10	10	320	61	6	11	0835	K	43	11	S	151	31	E	12.6											1

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VESSEL	CRUISE NUMBER	STATION NUMBER	YR.	MTH.	DAY	TIME	LONGITUDE	TEMP.	SALINITY	WIND DN.	SEA DN.	SWELL DN.	VIS.	BAROM.	SAMPLING METHOD
10	10	321	61	6	11	2220	K 43	11 S 152	35.08						1
10	10	322	61	6	12	0840	K 43	12 S 153	35.21	36	1				1
10	10	323	61	6	12	2020	K 42	46 S 153	35.25						1
10	10	324	61	6	13	0220	K 42	22 S 153	35.19						1
10	10	325	61	6	13	0840	K 42	03 S 153	35.17	32	1				1
10	10	326	61	6	13	2250	K 41	35 S 153	35.53						1
10	10	327	61	6	15	0720	K 40	57 S 151	35.53						1
10	10	328	61	6	15	1700	K 40	57 S 150	35.53						1
10	10	329	61	6	16	0300	K 40	57 S 150	35.59						1
10	10	330	61	6	16	1345	K 40	29 S 150	35.71						1
10	10	331	61	8	5	2335	K 34	40 S 150	35.55	18	3				1
10	11	332	61	8	6	0034	K 34	40 S 151	35.62	18	3				1
10	11	333	61	8	6	0143	K 34	40 S 151	35.64	18	2				1
10	11	334	61	8	6	0247	K 34	40 S 151	35.64	18	2				1
10	11	335	61	8	6	0355	K 34	40 S 151	35.68	18	2				1
10	11	336	61	8	6	0520	K 34	40 S 151	35.64	23	2				1
10	11	337	61	8	6	0815	K 34	40 S 151	35.71	18	2				1
10	11	338	61	8	6	1040	K 34	40 S 151	35.75	18	2				1
10	11	339	61	8	6	1245	K 34	44 S 151	35.91						1
10	11	340	61	8	6	1445	K 34	52 S 151	35.79						1
10	11	341	61	8	6	1630	K 34	57 S 151	35.79						1
10	11	342	61	8	6	1630	K 34	57 S 151	35.79						1
10	11	343	61	8	6	1845	K 35	01 S 151	35.66						1
10	11	344	61	8	6	2045	K 35	05 S 150	35.73						1
10	11	345	61	8	6	2155	K 35	07 S 150	35.71	21	1				1
10	11	346	61	8	6	2300	K 35	07 S 150	35.61	05	2				1
10	11	347	61	8	7	0006	K 35	07 S 151	35.68	05	2				1
10	11	348	61	8	7	0120	K 35	07 S 151	35.75	05	2				1
10	11	349	61	8	7	0305	K 35	07 S 151	35.71	32	1				1
10	11	350	61	8	7	0415	K 35	07 S 151	35.70	30	1				1
10	11	351	61	8	7	0710	K 35	07 S 151	35.71	29	1				1
10	11	352	61	8	7	0925	K 35	07 S 151	35.73	03	1				1
10	11	353	61	8	7	1345	K 35	21 S 151	35.73						1
10	11	354	61	8	7	1500	K 35	25 S 151	35.71						1
10	11	355	61	8	7	1645	K 35	30 S 150	35.73						1
10	11	356	61	8	7	1745	K 35	32 S 150	35.66						1
10	11	357	61	8	7	1845	K 35	34 S 150	35.73						1
10	11	358	61	8	7	2045	K 35	44 S 150	35.70						1
10	11	359	61	8	7	2200	K 35	50 S 150	35.55	36	2				1
10	11	360	61	8	7	2310	K 35	50 S 150	35.57	29	1				1

VESSE - CRUISE STATION YR. MTH. DAY TIME Z LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SMOELL WEA. VIS. BAROM. SAMPLING METHOD

VESSE	CRUISE STATION	YR.	MTH.	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SMOELL	WEA.	VIS.	BAROM.	SAMPLING METHOD
10	11	61	8	8	0013	K	35	50	S	150	29	1	35.61				1
10	11	362	61	8	0120	K	35	50	S	150	36	2	35.64				1
10	11	363	61	8	0250	K	35	50	S	150	36	2	35.64				1
10	11	364	61	8	0410	K	35	50	S	150	36	2	35.66				1
10	11	365	61	8	0645	K	35	50	S	150	02	3	35.68				1
10	11	366	61	8	0915	K	35	50	S	151	36	3	35.64				1
10	11	367	61	8	1050	K	35	54	S	150			35.70				1
10	11	368	61	8	1350	K	36	01	S	150	47	E	35.64				1
10	11	369	61	8	1450	K	36	09	S	150	35	E	35.64				1
10	11	370	61	8	1545	K	36	12	S	150	29	E	35.71				1
10	11	371	61	8	1645	K	36	17	S	150	35	E	35.66				1
10	11	372	61	8	1750	K	36	25	S	150	02	E	35.53				1
10	11	373	61	8	1900	K	36	25	S	150	02	E	35.57				1
10	11	374	61	8	2045	K	36	36	S	150	14	E	35.59				1
10	11	375	61	8	2245	K	36	51	S	150	07	E	35.46				1
10	11	376	61	8	0010	K	37	04	S	150	36	3	35.48				1
10	11	377	61	8	0125	K	37	04	S	150	36	3	35.48				1
10	11	378	61	8	0219	K	37	04	S	150	13	E	35.48				1
10	11	379	61	8	0325	K	37	04	S	150	18	E	35.44				1
10	11	380	61	8	0425	K	37	04	S	150	23	E	35.44				1
10	11	381	61	8	0600	K	37	04	S	150	28	E	35.50				1
10	11	382	61	8	0826	K	37	04	S	150	38	E	35.61				1
10	11	383	61	8	1100	K	36	46	S	150	07	E	35.43				1
10	11	384	61	8	1300	K	36	30	S	150	14	E	35.50				1
10	11	385	61	8	1500	K	36	15	S	150	22	E	35.53				1
10	11	386	61	8	1628	K	36	08	S	150	27	E	35.66				1
10	11	387	61	8	1845	K	35	50	S	150	34	E	35.66				1
10	11	388	61	8	2045	K	35	50	S	150	38	E	35.64				1
10	11	389	61	8	2245	K	35	37	S	150	46	E	35.64				1
10	11	390	61	8	2320	K	35	33	S	150	48	E	35.64				1
10	11	391	61	8	2400	K	35	30	S	150	51	E	35.64				1
10	11	392	61	8	0100	K	35	22	S	150	55	E	35.64				1
10	11	393	61	8	0200	K	35	16	S	150	58	E	35.64				1
10	11	394	61	8	0300	K	35	10	S	151	02	E	35.61				1
10	11	395	61	8	0325	K	35	07	S	151	03	E	35.66				1
10	11	396	61	8	0400	K	35	04	S	151	07	E	35.66				1
10	11	397	61	8	0500	K	34	59	S	151	13	E	35.66				1
10	11	398	61	8	0600	K	34	55	S	151	19	E	35.66				1
10	11	399	61	8	0620	K	34	53	S	151	21	E	35.64				1
10	11	400	61	8	0700	K	34	50	S	151	26	E	35.64				1

VESSEL- CRUISE STATION YR. MTH. DAY TIME Z LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SMOELL WEA. VIS. BAROM. SAMPLING METHOD

VESSEL	CRUISE	STATION	YR.	MTH.	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SMOELL	WEA.	VIS.	BAROM.	SAMPLING	METHOD
10	11	401	61	8	11	0800	K 34	46 S 151	32 E 15.7		35.66								1
10	11	402	61	8	11	0900	K 34	40 S 151	40 E 16.0		35.66								1
10	11	403	61	8	11	1100	K 34	29 S 151	34 E 16.4		35.66								1
10	11	404	61	8	11	1150	K 34	22 S 151	32 E 15.1		35.66								1
10	11	405	61	8	11	1300	K 34	14 S 151	28 E 15.0		35.66								1
10	11	406	61	8	11	1400	K 34	08 S 151	25 E 15.5										1
10	11	407	61	8	11	1430	K 34	04 S 151	24 E 15.6		35.68								1
10	12	408	61	8	19	2228	K 34	05 S 151	33 E 17.8		35.64	17	3						1
10	12	409	61	8	19	0005	K 34	05 S 151	38 E 17.7		35.57	24	3						1
10	12	410	61	8	19	0207	K 34	05 S 151	48 E 18.5		35.64	18	4						1
10	12	411	61	8	19	0400	K 34	05 S 151	58 E 18.0		35.73	18	4						1
10	12	412	61	8	19	0700	K 34	11 S 151	50 E 17.7		34.56								1
10	12	413	61	8	19	0900	K 34	18 S 151	42 E 17.5		35.34								1
10	12	414	61	8	19	1100	K 34	26 S 151	32 E 17.6		35.52								1
10	12	415	61	8	21	2100	K 34	32 S 151	15 E 15.8		35.59	25	4						1
10	12	416	61	8	21	2310	K 34	46 S 151	12 E 15.8		35.64	25	6						1
10	12	417	61	8	22	0050	K 34	40 S 151	20 E 16.1		35.64	25	5						1
10	12	418	61	8	22	0355	K 34	46 S 151	30 E 16.3		35.64	25	5						1
10	12	419	61	8	22	0600	K 34	40 S 151	40 E 17.0		35.70								1
10	12	420	61	8	22	0900	K 34	46 S 151	33 E 15.5		35.71								1
10	12	421	61	8	22	1100	K 34	52 S 151	28 E 15.6		35.71								1
10	12	422	61	8	22	1300	K 34	58 S 151	21 E 15.4		35.62								1
10	12	423	61	8	22	1350	K 34	59 S 151	29 E 15.5		35.68								1
10	12	424	61	8	22	1537	K 35	08 S 151	12 E 16.8		35.66	13	3						1
10	12	425	61	8	22	1706	K 35	07 S 151	17 E 16.5		35.64	25	3						1
10	12	426	61	8	22	1935	K 35	07 S 151	26 E 16.4		35.64	25	3						1
10	12	427	61	8	22	2130	K 35	07 S 151	36 E 17.2		35.62	25	3						1
10	12	428	61	8	22	2400	K 35	07 S 151	46 E 16.0										B
10	12	429	61	8	23	0130	K 35	07 S 151	56 E 16.7		35.64	25	2						1
10	12	430	61	8	23	0500	K 35	11 S 151	47 E 15.2		35.66								1
10	12	431	61	8	23	0700	K 35	16 S 151	36 E 16.2		35.68								1
10	12	432	61	8	23	0900	K 35	22 S 151	24 E 14.5		35.64								1
10	12	433	61	8	23	1100	K 35	27 S 151	10 E 15.0		35.71								1
10	12	434	61	8	23	1300	K 35	32 S 150	58 E 15.4		35.64								1
10	12	435	61	8	23	1500	K 35	36 S 150	50 E 15.0		35.64								1
10	12	436	61	8	23	1700	K 35	40 S 150	43 E 14.5		35.64								1
10	12	437	61	8	23	1900	K 35	44 S 150	34 E 14.3		35.57								1
10	12	438	61	8	23	2100	K 35	48 S 150	23 E 14.2		35.55								1
10	12	439	61	8	23	2215	K 35	50 S 150	18 E 13.7		35.44	18	4	18	2	18	1		1018.0
10	12	440	61	8	24	0030	K 35	50 S 150	28 E 15.6		35.64	23	3						1017.0

VESSE-	CRUISE	STATION	YR.	MTH.	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING	METHOD
		NUMBER										DN. AMT.	DN. AMT.	DN. AMT.					
10	14	521	61	9	15	0528	K 34	41 S 151	11 E 161	35.55	04	3							1
10	14	522	61	9	15	0648	K 34	41 S 151	15 E 16.5	35.62	04	3							1
10	14	523	61	9	15	0833	K 34	42 S 151	23 E 16.8	35.59									1
10	14	524	61	9	15	1000	K 34	42 S 151	33 E 16.8	35.66	36	2							1
10	14	525	61	9	15	1205	K 34	42 S 151	41 E 16.9	35.59									1
10	14	526	61	9	15	1312	K 34	42 S 151	49 E 17.7	35.59	18	2	18	1	04	3			1
10	14	527	61	9	15	1645	K 34	48 S 151	37 E 17.6	35.59									1
10	14	529	61	9	15	1845	K 34	55 S 151	26 E 17.1	35.62									1
10	14	530	61	9	15	2045	K 35	02 S 151	14 E 16.8	35.61									1
10	14	531	61	9	15	2245	K 35	08 S 151	02 E 16.3	35.59									1
10	14	532	61	9	19	0903	K 35	05 S 151	10 E 16.6	35.59	14	1							1
10	14	533	61	9	19	1000	K 35	05 S 151	14 E 16.8	35.62	14	1							1
10	14	534	61	9	19	1215	K 35	04 S 151	23 E 18.4	35.52									1
10	14	535	61	9	19	1323	K 35	03 S 151	32 E 18.5	35.57	14	1							1
10	14	536	61	9	19	1545	K 35	02 S 151	40 E 18.3	35.70									1
10	14	537	61	9	19	1625	K 35	01 S 151	48 E 18.2	35.64	09	1							1
10	14	538	61	9	19	1845	K 35	07 S 151	33 E 17.4	35.62									1
10	14	539	61	9	19	2045	K 35	14 S 151	18 E 17.3	35.57									1
10	14	540	61	9	19	2245	K 35	20 S 151	03 E 16.8	35.55									1
10	14	541	61	9	20	0045	K 35	26 S 150	48 E 16.8	35.62									1
10	14	542	61	9	20	0245	K 35	35 S 150	36 E 15.9	35.43									1
10	14	543	61	9	20	0445	K 35	45 S 150	24 E 14.1	34.09									1
10	14	544	61	9	20	0607	K 35	50 S 150	18 E 13.7	32.63	36	2							1
10	14	545	61	9	20	0720	K 35	50 S 150	28 E 15.4	35.48*	36	2							1
10	14	546	61	9	20	0842	K 35	50 S 150	38 E 16.4	35.61	33	2							1
10	14	547	61	9	20	0933	K 35	50 S 150	43 E 16.3	35.62	33	2							1
10	14	548	61	9	20	1120	K 35	50 S 150	53 E 16.6	35.55									1
10	14	549	61	9	20	1218	K 35	50 S 151	03 E 16.8	35.68	34	2							1
10	14	550	61	9	20	1445	K 35	58 S 150	51 E 17.1	35.55									1
10	14	551	61	9	20	1645	K 36	08 S 150	35 E 16.5	35.52									1
10	14	552	61	9	20	1916	K 36	25 S 150	09 E 14.6	34.58	32	1							1
10	14	553	61	9	20	2030	K 36	25 S 150	19 E 15.4	35.44	32	1							1
10	14	554	61	9	20	2147	K 36	25 S 150	29 E 16.6	35.57	32	1							1
10	14	555	61	9	21	0030	K 36	25 S 150	34 E 16.8	35.61	23	2							1
10	14	556	61	9	21	0148	K 36	25 S 150	44 E 16.9	35.68									1
10	14	557	61	9	21	0245	K 36	26 S 150	54 E 16.5	35.71	20	3							1
10	14	558	61	9	21	0445	K 36	26 S 150	51 E 16.4	35.71									1
10	14	559	61	9	21	1045	K 36	51 S 150	12 E 14.5	35.19									1
10	14	560	61	9	21	1245	K 37	04 S 150	09 E 14.8	35.07									1

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

VESSE - CRUISE STATION YR. MTH. DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SWELL WEA. VIS. BARUM. SAMPLING METHOD

VESSE	CRUISE	STATION	YR.	MTH.	DAY	TIME	\angle	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BARUM.	SAMPLING	METHOD
		NUMBER										DN. AMT.	DN. AMT.	DN. AMT.					
10	14	561	61	9	21	1250	K 37	04 S 150	09 E 14.3		35.07	16	1						1
10	14	562	61	9	21	1406	K 37	04 S 150	19 E 14.6		35.35	05	1						1
10	14	563	61	9	21	1525	K 37	04 S 150	29 E 15.4		35.43	05	1						1
10	14	564	61	9	21	1620	K 37	04 S 150	34 E 15.8		35.43	05	1						1
10	14	565	61	9	21	1800	K 37	04 S 150	44 E 15.4		35.39								1
10	14	566	61	9	21	1916	K 37	04 S 150	54 E 14.9		35.46	32	1						1
10	14	567	61	9	21	2045	K 36	58 S 150	52 E 15.4		35.43								1
10	14	568	61	9	21	2245	K 36	46 S 150	41 E 17.1		35.61								1
10	14	569	61	9	22	0045	K 36	33 S 150	20 E 17.4		35.61								1
10	14	570	61	9	22	0145	K 36	25 S 150	24 E 17.2										1
10	14	571	61	9	22	0245	K 36	19 S 150	27 E 16.5		35.61								1
10	14	572	61	9	22	0340	K 36	12 S 150	30 E 16.4		35.53								1
10	14	573	61	9	22	0445	K 36	06 S 150	32 E 16.8		35.62								1
10	14	574	61	9	22	0708	K 35	51 S 150	38 E 17.1		35.62								1
10	14	575	61	9	22	0845	K 35	33 S 150	50 E 17.0		35.62								1
10	14	576	61	9	22	0955	K 35	24 S 150	55 E 17.1		35.62								1
10	14	577	61	9	22	1045	K 35	17 S 151	00 E 16.9		35.62								1
10	14	578	61	9	22	1245	K 35	05 S 151	07 E 17.4		35.64								1
10	14	579	61	9	22	1332	K 35	00 S 151	08 E 17.4		35.64								1
10	14	580	61	9	22	1455	K 34	55 S 151	08 E 17.5		35.64								1
10	14	581	61	9	22	1545	K 34	41 S 151	08 E 17.6		35.62								1
10	14	582	61	9	22	1720	K 34	41 S 151	08 E 17.7		35.62								1
10	14	583	61	9	22	1845	K 34	33 S 151	12 E 17.7		35.61								1
10	14	584	61	9	22	2005	K 34	26 S 151	15 E 17.8		35.61								1
10	14	585	61	9	22	2045	K 34	22 S 151	17 E 17.2		35.61								1
10	14	586	61	9	22	2245	K 34	11 S 151	24 E 18.6		35.64								1
10	14	587	61	9	22	2335	K 34	05 S 151	27 E 18.8		35.64								1
10	15	588	61	9	20	1245	K 33	59 S 151	28 E 18.5										1
10	15	589	61	9	20	1350	K 34	05 S 151	33 E 18.6		35.66	04	2						1
10	15	590	61	9	20	1445	K 34	06 S 151	37 E 19.2		35.61	04	4						1
10	15	591	61	9	20	1645	K 34	10 S 151	47 E 21.0										1
10	15	592	61	9	20	1815	K 34	13 S 151	56 E 22.1		35.61								1
10	15	593	61	9	20	2015	K 34	16 S 152	05 E 20.8										1
10	15	594	61	9	20	0045	K 34	31 S 152	02 E 20.4										1
10	15	595	61	9	20	0245	K 34	46 S 151	58 E 20.6										1
10	15	596	61	9	20	0445	K 35	01 S 151	55 E 20.9										1
10	15	597	61	9	20	0745	K 35	20 S 151	51 E 20.8										1
10	15	598	61	9	20	1445	K 35	07 S 151	58 E 20.8		35.64	32	3						1
10	15	599	61	9	20	1700	K 35	07 S 151	50 E 20.4			00	0						1
10	15	600	61	9	20	1808	K 35	05 S 151	43 E 21.8		35.66	36	1						1

VESSE - CRUISE STATION YN, MTH, DAY TIME Z LATITUDE LONGITUDE TEMP. SALINITY WIND SWELL SEA MEA. VIS. BAROM. SAMPLING METHOD

STATION	YN	MTH	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SWELL	SEA	MEA.	VIS.	BAROM.	SAMPLING METHOD
10	10	641	61	10	3	1245 K 35	25 S 150	54 E 19.3								1
10	15	642	61	10	3	1445 K 35	14 S 150	59 E 18.6								1
10	15	643	61	10	3	1603 K 35	07 S 151	04 E 20.2								1
10	15	644	61	10	3	1645 K 35	04 S 151	05 E 21.1								1
10	15	645	61	10	3	1755 K 34	57 S 151	08 E 22.0								1
10	15	646	61	10	3	1845 K 34	53 S 151	11 E 21.9								1
10	15	647	61	10	3	2045 K 34	42 S 151	16 E 21.4	35.62	36	1					1
10	15	648	61	10	3	2112 K 34	40 S 151	15 E 20.9	35.70	16	1					1
10	15	649	61	10	3	2219 K 34	40 S 151	20 E 21.4								1
10	15	650	61	10	4	0047 K 34	41 S 151	30 E 21.1								1
10	15	651	61	10	4	0211 K 34	42 S 151	39 E 20.5	35.70	09	2					1
10	15	652	61	10	4	0423 K 34	42 S 151	49 E 21.5								1
10	15	653	61	10	4	0742 K 34	42 S 151	58 E 19.6	35.71	13	3					1
10	15	654	61	10	4	1445 K 34	40 S 151	46 E 18.8								1
10	15	655	61	10	4	1645 K 34	30 S 151	34 E 18.8								1
10	15	656	61	10	4	1830 K 34	22 S 151	25 E 20.8								1
10	15	657	61	10	4	1845 K 34	20 S 151	23 E 20.9								1
10	16	658	61	10	12	1245 K 33	37 S 151	18 E 18.0	34.29							1
10	16	659	61	10	12	1445 K 34	09 S 151	15 E 20.1	35.61							1
10	16	660	61	10	12	1645 K 34	29 S 151	12 E 20.0	35.71							1
10	16	661	61	10	12	1840 K 34	40 S 151	15 E 19.6	35.70	05	2					1
10	16	662	61	10	12	1950 K 34	41 S 151	19 E 20.4	35.75	04	1					1
10	16	663	61	10	12	2200 K 34	43 S 151	27 E 19.3	35.71							1
10	16	664	61	10	12	2315 K 34	45 S 151	35 E 19.4	35.70	36	2					1
10	16	665	61	10	13	0210 K 34	47 S 151	41 E 19.1	35.68							1
10	16	666	61	10	13	0330 K 34	48 S 151	48 E 19.8	35.68	36	3					1
10	16	667	61	10	13	0800 K 34	51 S 150	59 E								1
10	16	668	61	10	13	1445 K 35	04 S 151	19 E 19.9	35.75							1
10	16	669	61	10	13	1645 K 35	05 S 151	24 E 20.7	35.61							1
10	16	670	61	10	13	1955 K 35	07 S 151	12 E 18.7	35.70	34	3					1
10	16	671	61	10	13	2045 K 35	08 S 151	18 E 18.8	35.71	34	3					1
10	16	672	61	10	13	2338 K 35	09 S 151	30 E 19.8								1
10	16	673	61	10	14	0050 K 35	10 S 151	41 E 19.7		05	3					1
10	16	674	61	10	14	0313 K 35	10 S 151	53 E 18.6	35.66							1
10	16	675	61	10	14	0425 K 35	11 S 152	04 E 19.9	35.70	33	2					1
10	16	676	61	10	14	0700 K 35	18 S 151	55 E 19.8	35.66							1
10	16	677	61	10	14	0930 K 35	28 S 151	38 E 19.9	35.71							1
10	16	678	61	10	14	1045 K 35	36 S 151	29 E 19.9	35.68							1
10	16	679	61	10	14	1245 K 35	39 S 151	15 E 20.1	35.64							1
10	16	680	61	10	14	1445 K 35	36 S 150	59 E 19.5	35.62							1

VESSE- CRUISE STATION YR. MTH. DAY TIME / LATITUDE LONGITUDE TEMP. SALINITY WIND UN. AMT. DN. AMT. SEA SWELL HEA. VIS. BAROM. SAMPLING METHOD.

10	16	681	61	10	14	1645	K 35	34	S 150	43 E 19.2	35.57	1
10	16	682	61	10	14	1845	K 35	38	S 150	28 E 19.4	35.66	1
10	16	683	61	10	14	2045	K 35	49	S 150	20 E 18.3	35.52	1
10	16	684	61	10	14	2055	K 35	50	S 150	18 E 19.0	35.66	1
10	16	685	61	10	14	2220	K 35	50	S 150	26 E 19.4	35.62	1
10	16	686	61	10	14	2350	K 35	50	S 150	34 E 19.2	35.66	1
10	16	687	61	10	15	0100	K 35	49	S 150	38 E 19.6	35.66	1
10	16	688	61	10	15	0305	K 35	49	S 150	46 E 20.1	35.66	1
10	16	689	61	10	15	0410	K 35	49	S 150	54 E 20.8	35.64	1
10	16	690	61	10	15	0715	K 35	48	S 150	59 E 21.0	35.66	1
10	16	691	61	10	15	1445	K 35	43	S 150	28 E 18.2	35.59	1
10	16	692	61	10	16	0845	K 35	47	S 150	15 E 17.0	35.53	1
10	16	693	61	10	16	1045	K 35	59	S 150	11 E 17.8	35.57	1
10	16	694	61	10	16	1245	K 36	14	S 150	10 E 18.5	35.61	1
10	16	695	61	10	16	2015	K 36	25	S 150	09 E 18.3	35.62	1
10	16	696	61	10	16	2154	K 36	29	S 150	17 E 19.0	35.66	1
10	16	697	61	10	16	2320	K 36	32	S 150	27 E 19.3	35.64	1
10	16	698	61	10	17	0055	K 36	34	S 150	32 E 18.6	35.70	1
10	16	699	61	10	17	0315	K 36	37	S 150	42 E 18.6	35.71	1
10	16	700	61	10	17	0445	K 36	41	S 150	50 E 19.3	35.70	1
10	16	701	61	10	17	1445	K 36	52	S 150	35 E 18.9	35.71	1
10	16	702	61	10	17	1645	K 36	54	S 150	19 E 19.2	35.70	1
10	16	703	61	10	18	0900	K 37	04	S 150	03 E 16.5	35.41	1
10	16	704	61	10	18	1050	K 37	06	S 150	16 E 18.1	35.57	1
10	16	705	61	10	18	1238	K 37	08	S 150	29 E 18.9	35.68	1
10	16	706	61	10	18	1350	K 37	08	S 150	35 E 19.7	35.62	1
10	16	707	61	10	18	1623	K 37	10	S 150	48 E 20.1	35.68	1
10	16	708	61	10	18	1750	K 37	12	S 151	01 E 20.0	35.68	1
10	16	709	61	10	18	2010	K 37	13	S 151	13 E 19.8	35.73	1
10	16	710	61	10	18	2150	K 37	15	S 151	25 E 19.4	35.57	1
10	16	711	61	10	19	0045	K 37	16	S 151	11 E 19.8	35.66	1
10	16	712	61	10	19	0245	K 37	18	S 150	58 E 20.1	35.66	1
10	16	713	61	10	19	0445	K 37	20	S 150	46 E 20.2	35.66	1
10	16	714	61	10	19	0740	K 37	14	S 150	27 E 20.1	35.66	1
10	16	715	61	10	19	0925	K 37	18	S 150	16 E 17.4	35.37	1
10	16	716	61	10	19	1045	K 37	24	S 150	08 E 17.2	35.43	1
10	16	717	61	10	19	1230	K 37	34	S 149	58 E 14.8	35.30	1
10	16	718	61	10	19	1350	K 37	36	S 150	06 E 15.3	35.17	1
10	16	719	61	10	19	1510	K 37	37	S 150	13 E 16.7	35.39	1
10	16	720	61	10	19	1555	K 37	38	S 150	16 E 16.7	35.46	1

VESSE - CRUISE STATION YR. M.H. DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND DN. AMT. SEA SWELL HEA. VIS. BAROM. SAMPLING METHOD

10	17	761	61	11	9	2230	K 34	02 S 151	57 E 21.2	35.64	03	3							1
10	17	762	61	11	10	0230	K 34	23 S 152	08 E 20.9	35.71									1
10	17	763	61	11	10	0357	K 34	26 S 152	18 E 20.9	35.68	32	2							1
10	17	764	61	11	10	1445	K 34	37 S 152	04 E 21.6	35.73									1
10	17	765	61	11	10	1645	K 34	35 S 151	49 E 22.1	35.68									1
10	17	766	61	11	10	1845	K 34	32 S 151	32 E 19.6	35.66									1
10	17	767	61	11	10	2045	K 34	30 S 151	14 E 19.0	35.59									1
10	17	768	61	11	12	1428	K 34	40 S 150	55 E 17.7	35.46	05	3							1
10	17	769	61	11	12	1615	K 34	44 S 151	05 E 18.9	35.55	05	3							1
10	17	770	61	11	12	1805	K 34	49 S 151	15 E 18.7	35.59	05	3							1
10	17	771	61	11	12	1940	K 34	50 S 151	20 E 18.6	35.59+	36	2							1
10	17	772	61	11	12	2245	K 34	52 S 151	30 E 20.8	35.66									1
10	17	773	61	11	13	0020	K 34	54 S 151	40 E 21.1	35.59	36	2							1
10	17	774	61	11	13	0340	K 34	56 S 151	50 E 21.0	35.70									1
10	17	775	61	11	13	0507	K 34	58 S 152	00 E 20.9	35.68	34	2							1
10	17	776	61	11	13	1445	K 35	08 S 151	55 E 21.0	35.91									1
10	17	777	61	11	13	1645	K 35	06 S 151	44 E 21.3	35.91									1
10	17	778	61	11	13	1845	K 35	04 S 151	31 E 19.2	35.64									1
10	17	779	61	11	13	2045	K 35	02 S 151	16 E 18.8	35.59									1
10	17	780	61	11	13	2245	K 35	03 S 151	02 E 18.7	35.61									1
10	17	781	61	11	14	0007	K 35	07 S 150	52 E 17.3	35.43	36	3							1
10	17	782	61	11	14	0250	K 35	05 S 151	05 E 18.4	35.59	02	4							1
10	17	783	61	11	15	0600	K 35	07 S 150	52 E 17.5	35.41	30	2							1
10	17	784	61	11	15	0730	K 35	09 S 151	02 E 17.9	35.44	30	2							1
10	17	785	61	11	15	0902	K 35	12 S 151	12 E 18.7	35.52	36	1							1
10	17	786	61	11	15	1013	K 35	13 S 151	17 E 19.3	35.50	18	4							1
10	17	787	61	11	15	1210	K 35	14 S 151	27 E 18.1	35.66									1
10	17	788	61	11	15	1325	K 35	14 S 151	37 E 20.7	35.62	18	4							1
10	17	789	61	11	15	1545	K 35	14 S 151	47 E 19.9	35.66									1
10	17	790	61	11	15	1720	K 35	14 S 151	57 E 21.9	35.66	18	4							1
10	17	791	61	11	15	2245	K 35	07 S 151	13 E 18.2	35.61									1
10	17	792	61	11	16	0045	K 35	06 S 150	55 E 18.1	35.50									1
10	17	793	61	11	16	1045	K 35	15 S 150	43 E 17.2	35.48									1
10	17	794	61	11	16	1245	K 35	28 S 150	34 E 17.5	35.50									1
10	17	795	61	11	16	1445	K 35	39 S 150	27 E 17.5	35.44									1
10	17	796	61	11	16	1700	K 35	50 S 150	18 E 18.1	35.48	16	1							1
10	17	797	61	11	16	1840	K 35	50 S 150	28 E 18.8	35.59	16	1							1
10	17	798	61	11	16	2025	K 35	50 S 150	38 E 19.2	35.59	14	1							1
10	17	799	61	11	16	2235	K 35	50 S 150	48 E 19.0	35.61	10	1							1
10	17	800	61	11	17	0030	K 35	50 S 150	53 E 18.5	35.59									1

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

VESSE- CHUISE STATION YR. MIN. DAY TIME \angle LATITUDE LONGITUDE TEMP. SALINITY WIND ON. AMT. DN. AMT. SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

VESSE	CHUISE	STATION	YR.	MIN.	DAY	TIME	\angle	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND ON.	AMT. DN.	SEA SWELL	WEA.	VIS.	BAROM.	SAMPLING METHOD
10	17	801	61	11	17	0245	K 35	50 S 151	02 E 19.0		35.61	09	2					1
10	17	802	61	11	17	0420	K 35	50 S 151	12 E 18.4		35.66							1
10	17	803	61	11	17	0937	K 35	50 S 151	22 E 19.3			12	3					1
10	17	804	61	11	17	1445	K 35	54 S 151	11 E 18.2		35.61							1
10	17	805	61	11	17	1645	K 35	58 S 150	56 E 18.0		35.59							1
10	17	806	61	11	17	1845	K 36	02 S 150	42 E 18.4		35.66							1
10	17	807	61	11	17	2045	K 36	06 S 150	28 E 18.1		35.57							1
10	17	808	61	11	22	1245	K 35	54 S 150	34 E 17.5		35.16							1
10	17	809	61	11	22	1350	K 35	50 S 150	38 E 17.8		35.12							1
10	17	810	61	11	22	1445	K 35	47 S 150	41 E 18.3		34.79							1
10	17	811	61	11	22	1645	K 35	39 S 150	47 E 18.6		32.00							1
10	17	812	61	11	22	1740	K 35	35 S 150	51 E 19.0		30.35							1
10	17	813	61	11	22	1845	K 35	32 S 150	53 E 18.7		32.00							1
10	17	814	61	11	22	2045	K 35	26 S 150	59 E 18.4		34.60							1
10	17	815	61	11	22	2245	K 35	18 S 151	05 E 17.9		35.07							1
10	17	816	61	11	23	0020	K 35	14 S 151	10 E 18.4		33.89							1
10	17	817	61	11	23	0045	K 35	12 S 151	11 E 18.9		33.98							1
10	17	818	61	11	23	0205	K 35	06 S 151	16 E 18.8		34.43							1
10	17	819	61	11	23	0245	K 35	05 S 151	12 E 18.5		34.96							1
10	17	820	61	11	23	0445	K 35	06 S 150	59 E 17.7		34.00							1
10	17	821	61	11	23	1245	K 35	04 S 150	59 E 18.5		34.43							1
10	17	822	61	11	23	1415	K 35	02 S 151	08 E 18.5		33.21							1
10	17	823	61	11	23	1445	K 34	59 S 151	09 E 18.4		33.42							1
10	17	824	61	11	23	1538	K 34	49 S 151	12 E 18.3		33.86							1
10	17	825	61	11	23	1845	K 34	59 S 151	14 E 18.5		35.52							1
10	17	826	61	11	23	1910	K 34	36 S 151	15 E 19.3		35.48							1
10	17	827	61	11	23	2045	K 34	29 S 151	17 E 20.2		35.59							1
10	17	828	61	11	23	2213	K 34	19 S 151	19 E 20.9		35.59							1
10	18	829	61	11	27	1900	K 34	01 S 151	16 E 18.2		24.07							1
10	18	830	61	11	27	2100	K 34	12 S 151	11 E 18.8		35.26							1
10	18	831	61	11	28	2300	K 34	20 S 151	07 E 18.7		35.53							1
10	18	832	61	11	28	0045	K 34	31 S 151	01 E 18.4		35.37							1
10	18	833	61	11	28	0300	K 34	40 S 150	55 E 17.7		34.60	18	2					1
10	18	834	61	11	28	0505	K 34	42 S 151	04 E 19.6		35.49	23	3					1
10	18	835	61	11	28	0700	K 34	43 S 151	13 E 20.1		35.52	23	3					1
10	18	836	61	11	28	0810	K 34	44 S 151	17 E 20.5		35.55	20	2					1
10	18	837	61	11	28	1032	K 34	45 S 151	26 E 20.2		35.61							1
10	18	838	61	11	28	1214	K 34	47 S 151	34 E 20.4		35.62	18	2					1
10	18	839	61	11	28	1515	K 34	48 S 151	34 E 20.6		35.82							1
10	18	840	61	11	28	1645	K 34	52 S 151	43 E 20.6		35.59	14	1					1

VESSE - CRUISE STATION YR. MTH. DAY TIME & LATITUDE LONGITUDE TEMP. SALINITY WIND UN. AMT, DN, ANT, SEA SWELL WEA. VIS. BAROM. SAMPLING METHOD

10	18	841	61	11	28	2100	K 34	57	S 151	27	E 20.0	35.88	1	1		
10	18	842	61	11	28	2210	K 34	59	S 151	19	E 20.1	35.61	1	1		
10	18	843	61	11	28	2300	K 35	00	S 151	14	E 19.9	35.68	1	1		
10	18	844	61	11	29	0100	K 35	07	S 150	54	E 17.8	34.16	1	1		
10	18	845	61	11	29	0118	K 35	07	S 150	52	E 18.2	34.09	1	1		
10	18	846	61	11	29	0255	K 35	10	S 151	02	E 20.0	35.53	1	1		
10	18	847	61	11	29	0440	K 35	13	S 151	12	E 20.5	35.53	1	1		
10	18	848	61	11	29	0552	K 35	15	S 151	17	E 20.5	35.55	1	1		
10	18	849	61	11	29	0825	K 35	19	S 151	26	E 20.3	35.66	1	1		
10	18	850	61	11	29	1009	K 35	22	S 151	36	E 20.6	35.62	09	2		
10	18	851	61	11	29	1224	K 35	25	S 151	46	E 20.6	35.66	09	1		
10	18	852	61	11	29	1348	K 35	29	S 151	55	E 20.7	35.66	09	1		
10	18	853	61	11	29	1700	K 35	32	S 151	39	E 20.3	35.66	1	1		
10	18	854	61	11	29	1900	K 35	35	S 151	26	E 20.5	35.62	1	1		
10	18	855	61	11	29	2000	K 35	37	S 151	18	E 18.9	34.58	1	1		
10	18	856	61	11	29	2100	K 35	38	S 151	12	E 18.9	35.37	1	1		
10	18	857	61	11	29	2300	K 35	41	S 150	58	E 19.1	35.44	1	1		
10	18	858	61	11	30	0100	K 35	44	S 150	44	E 19.3	35.50	1	1		
10	18	859	61	11	30	0300	K 35	47	S 150	31	E 19.0	34.99	1	1		
10	18	860	61	11	30	0500	K 35	50	S 150	17	E 18.4	32.77	1	1		
10	18	861	61	11	30	1622	K 35	50	S 150	18	E 18.3	34.79	18	6		
10	18	862	61	12	2	0853	K 35	50	S 150	33.01	02	1	1	1		
10	18	863	61	12	2	1020	K 35	54	S 150	28	E 18.0	34.83	02	1	1	
10	18	864	61	12	2	1205	K 35	57	S 150	37	E 19.7	35.44	07	1	1	
10	18	865	61	12	2	1312	K 35	56	S 180	44	E 20.2	35.43	09	2	1	
10	18	866	61	12	2	1940	K 35	55	S 150	55	E 19.7	35.21	09	2	1	
10	18	867	61	12	2	1720	K 35	54	S 151	07	E 19.6	35.16	09	2	1	
10	18	868	61	12	2	2000	K 35	53	S 151	18	E 20.0	35.62	1	1	1	
10	18	869	61	12	3	2140	K 35	52	S 151	30	E 20.6	35.43	07	2	1	
10	18	870	61	12	3	0100	K 35	56	S 151	15	E 19.0	35.43	1	1	1	
10	18	871	61	12	3	0300	K 36	00	S 151	02	E 19.0	35.25	1	1	1	
10	18	872	61	12	3	0500	K 36	03	S 150	47	E 18.8	35.08	1	1	1	
10	18	873	61	12	3	0700	K 36	08	S 150	34	E 19.6	35.35	1	1	1	
10	18	874	61	12	3	0900	K 36	15	S 150	21	E 19.2	35.01	1	1	1	
10	18	875	61	12	3	1119	K 36	25	S 150	34.96	02	2	2	1	1	
10	18	876	61	12	3	1302	K 36	25	S 150	09	E 19.8	35.53	02	2	1	1
10	18	877	61	12	3	1508	K 36	25	S 150	29	E 20.1	35.53	05	2	1	1
10	18	878	61	12	3	1630	K 36	25	S 150	34	E 20.2	35.53	05	2	1	1
10	18	879	61	12	3	1900	K 36	25	S 150	44	E 18.2	35.19	05	2	1	1
10	18	880	61	12	3	2034	K 36	25	S 150	54	E 19.3	34.99	09	1	1	1

VESSE- CRUISE STATION YR, MIN, DAY TIME & LATITUDE LONGITUDE TEMP. SALINITY WIND SEA SWELL HEA, VIS, BAROM, SAMPLING METHOD

VESSE	CRUISE	STATION	YR,	MIN,	DAY	TIME	&	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	HEA,	VIS,	BAROM,	SAMPLING	METHOD
10	18	881	61	12	3	2253	K 36	25 S 151	04 E 18.7	35.17									1
10	18	882	61	12	4	0025	K 36	25 S 151	14 E 19.7	35.28	09	1							1
10	18	883	61	12	4	0300	K 36	28 S 151	00 E 19.3	35.10									1
10	18	884	61	12	4	0500	K 36	32 S 150	41 E 19.3	34.99									1
10	18	885	61	12	4	0600	K 36	34 S 150	27 E 19.3	35.34									1
10	18	886	61	12	4	0900	K 36	45 S 150	10 E 19.4	35.53									1
10	18	887	61	12	4	1100	K 37	00 S 150	00 E 16.9	34.70									1
10	18	888	61	12	5	0358	K 37	04 S 150	03 E 15.4	34.94	11	1							1
10	18	889	61	12	5	0533	K 37	05 S 150	13 E 19.7	35.53	11	1							1
10	18	890	61	12	5	0715	K 37	06 S 150	23 E 18.9	35.64	11	1							1
10	18	891	61	12	5	0833	K 37	06 S 150	28 E 19.3	35.62	11	1							1
10	18	892	61	12	5	1110	K 37	07 S 150	38 E 19.1	35.71	04	2							1
10	18	893	61	12	5	1251	K 37	07 S 150	48 E 19.0	35.71									1
10	18	894	61	12	5	1545	K 37	05 S 150	58 E 19.3	35.73									1
10	18	895	61	12	5	1730	K 37	04 S 151	07 E 19.9	35.70	04	3	04	2	02	1	00	7	1008.0
10	18	896	61	12	5	2300	K 36	56 S 150	58 E 20.0	35.71									1
10	18	897	61	12	6	0100	K 36	48 S 150	50 E 19.4	35.68									1
10	18	898	61	12	6	0300	K 36	40 S 150	40 E 19.5	35.68									1
10	18	899	61	12	6	0500	K 36	30 S 150	29 E 18.9	35.68									1
10	18	900	61	12	6	0600	K 36	25 S 150	24 E 19.4	35.37									1
10	18	901	61	12	6	0740	K 36	12 S 150	27 E 19.4	34.85									1
10	18	902	61	12	6	0900	K 36	01 S 150	29 E 19.2	34.99									1
10	18	903	61	12	6	1100	K 35	47 S 150	33 E 19.1	35.16									1
10	18	904	61	12	6	1300	K 35	32 S 150	41 E 19.2	34.99									1
10	18	905	61	12	6	1500	K 35	18 S 150	50 E 19.0	34.97									1
10	18	906	61	12	6	1700	K 35	02 S 150	58 E 19.3	34.97									1
10	18	907	61	12	6	1900	K 34	52 S 151	01 E 18.7	34.87									1
10	18	908	61	12	6	2100	K 34	43 S 151	07 E 19.6	34.92									1
10	18	909	61	12	6	2300	K 34	33 S 151	10 E 20.0	35.32									1
10	18	910	61	12	7	0100	K 34	24 S 151	12 E 19.4	35.35									1
10	18	911	61	12	7	0300	K 34	14 S 151	14 E 19.0	34.72									1
10	19	912	61	12	12	1700	K 33	50 S 151	18 E 19.5	35.89	13	2	13	2	15	1	02	8	1023.0
10	19	913	61	12	12	1900	K 33	56 S 151	24 E 21.1	35.28	13	2	13	2	15	1	02	8	1023.0
10	19	914	61	12	12	2100	K 34	02 S 151	31 E 20.7	35.70	13	2	13	2	15	2	02	8	1024.0
10	19	915	61	12	12	2130	K 34	05 S 151	34 E 20.2	35.70	13	2	13	2	15	2	02	8	1024.0
10	19	916	61	12	12	2300	K 34	13 S 151	30 E 20.9	35.70	13	1	13	2	15	2	02	8	1024.0
10	19	917	61	12	13	0100	K 34	28 S 151	22 E 20.8	35.71	13	1	13	2	15	2	02	8	1024.0
10	19	918	61	12	13	0130	K 34	31 S 151	20 E 20.8	35.70	13	1	13	2	15	2	02	8	1024.0
10	19	919	61	12	13	0300	K 34	44 S 151	14 E 20.8	35.71	13	1	13	2	15	2	02	8	1023.0
10	19	920	61	12	13	0440	K 34	59 S 151	10 E 21.1	35.64	13	1	13	2	15	2	02	8	1023.0

VESSEL	CRUISE NUMBER	STATION NUMBER	YR.	MTH.	DAY	TIME	LONGITUDE	TEMP.	SALINITY	WIND UN, AMT.	SEA DN, AMT.	SWELL DN, AMT.	HEA. VIS.	BARDM.	SAMPLING METHOD						
10	19	921	61	12	13	0630	K 35	10 S 151	35.64	09	3	09	3	09	3	15	2	02	8	1020.0	1
10	19	922	61	12	13	0650	K 35	13 S 151	34.97	09	3	09	3	09	3	15	2	02	8	1020.0	1
10	19	923	61	12	13	0855	K 35	30 S 150	35.34	09	3	09	3	09	3	09	1	02	8	1023.0	1
10	19	924	61	12	13	1055	K 35	43 S 150	35.28	04	3	04	3	04	3	04	1	02	8	1022.0	1
10	19	925	61	12	13	1130	K 35	46 S 150	35.25	04	3	04	3	04	3	04	1	02	8	1022.0	1
10	19	926	61	12	13	1300	K 35	57 S 150	35.55	04	3	04	3	04	3	04	1	02	8	1022.0	1
10	19	927	61	12	13	1400	K 36	03 S 150	35.68	04	2	04	2	04	2	04	1	02	7	1021.0	1
10	19	928	61	12	13	1500	K 36	11 S 150	35.55	04	2	04	2	04	2	04	1	02	7	1021.0	1
10	19	929	61	12	13	1700	K 36	25 S 150	35.25	04	3	04	2	04	2	04	2	02	8	1021.0	1
10	19	930	61	12	13	1730	K 36	28 S 150	35.25	04	3	04	2	04	2	04	2	02	8	1021.0	1
10	19	931	61	12	13	1855	K 36	59 S 150	35.70	04	3	04	2	04	2	04	2	02	8	1021.0	1
10	19	932	61	12	13	2040	K 36	51 S 150	35.64	07	3	07	3	07	3	07	3	02	8	1021.0	1
10	19	933	61	12	13	2300	K 37	04 S 150	35.64	03	3	03	3	03	3	05	3	02	8	1021.0	1
10	19	934	61	12	14	0100	K 37	19 S 150	35.41	03	3	03	3	03	3	05	3	02	8	1021.0	1
10	19	935	61	12	14	0300	K 37	34 S 150	35.43	03	3	03	3	03	3	03	2	02	8	1018.0	1
10	19	936	61	12	18	1300	K 37	34 S 149	35.99	18	2	18	2	18	2	09	2	02	8	1009.0	1
10	19	937	61	12	18	1500	K 37	23 S 150	35.17	18	2	18	2	18	2	09	2	02	8	1009.0	1
10	19	938	61	12	18	1700	K 37	07 S 150	35.10	18	2	18	2	18	2	09	2	02	8	1009.0	1
10	19	939	61	12	19	1855	K 36	55 S 149	35.21	23	4	23	2	23	2	09	2	02	8	1025.0	1
10	19	940	61	12	19	2100	K 36	59 S 150	35.26	23	5	23	2	23	2	18	2	02	8	1027.0	1
10	19	941	61	12	19	2255	K 36	24 S 150	35.43	23	3	23	2	23	2	18	2	02	8	1027.0	1
10	19	942	61	12	20	0100	K 36	08 S 150	35.53	23	3	23	2	23	2	18	2	02	8	1027.0	1
10	19	943	61	12	20	0300	K 35	54 S 150	35.52	19	4	19	3	19	3	18	2	02	8	1026.0	1
10	19	944	61	12	20	0500	K 35	40 S 150	35.55	19	4	19	3	19	3	19	2	02	8	1026.0	1
10	19	945	61	12	20	0655	K 35	26 S 150	35.59	19	4	19	3	19	3	19	2	02	8	1026.0	1
10	19	946	61	12	20	0850	K 35	14 S 150	35.52	18	4	18	3	18	3	18	2	03	8	1027.0	1
10	19	947	61	12	20	1055	K 35	01 S 150	35.23	18	4	18	3	18	3	18	2	03	8	1027.0	1
10	19	948	61	12	20	1300	K 34	44 S 150	35.53	18	2	18	2	18	2	18	2	03	8	1027.0	1
10	19	949	61	12	20	1500	K 34	29 S 150	35.53	18	2	18	2	18	2	18	2	03	8	1025.0	1
10	19	950	61	12	20	1700	K 34	16 S 151	35.57	18	2	18	2	18	2	18	2	02	8	1025.0	1
10	19	951	61	12	20	1855	K 34	01 S 151	35.57	18	2	18	2	18	2	18	2	02	8	1025.0	1

DATA
PART 2
HYDROLOGY
SUBSURFACE SAMPLES

STATION 138 DATE 4/ 2/61 TIME 0902 K LATITUDE 35 07 S LONGITUDE 150 48 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH KET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

DEPTH	TEMP.	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3
108	***	18	1	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	20.22	34.870	24.62	5.19	104	***	***	***					
1	10	19.74	34.830	24.72	5.22	104	***	***	***					
1	20	18.98	34.830	24.92	5.33	104	***	***	***					
1	30	18.64	34.780	24.96	5.33	104	***	***	***					
1	40	18.64	34.780	24.96	5.47	106	***	***	***					
1	50	18.64	34.760	24.95	5.44	106	***	***	***					
1	75	15.96	34.760	25.59	4.40	81	***	***	***					
1	100	14.32	34.650	25.87	4.54	81	***	***	***					

STATION 135 DATE 4/ 2/61 TIME 0925 K LATITUDE 35 07 S LONGITUDE 150 53 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH KET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

DEPTH	TEMP.	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3
135	***	22	1	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
2	0	21.19	35.410	24.77	5.02	103	***	***	***					
1	10	21.16	35.410	24.76	4.99	102	***	***	***					
1	20	21.13	35.390	24.78	5.05	103	***	***	***					
1	30	19.03	35.320	25.28	5.27	104	***	***	***					
1	40	17.91	35.260	25.51	5.19	100	***	***	***					
1	50	16.87	35.230	25.74	4.62	87	***	***	***					
1	75	15.37	35.140	26.02	4.40	80	***	***	***					
1	100	13.48	34.960	26.28	4.60	81	***	***	***					
1	125	13.19	34.940	26.33	4.46	78	***	***	***					

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE
CH 1/ 3/61	4/ 2/61	1033 K	35 07 S	150 58 E
SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES DEPTH WET DRY DIR, SP. HEIGHT TYPE AMT.				
274 *** ** 22 1 * * * * * *				
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE				
2 0 21.64 35.390 24.63 4.99 103 *** **				
1 10 21.58 35.370 24.64 4.96 102 *** **				
1 20 21.51 35.370 24.65 4.99 103 *** **				
1 30 21.54 35.370 24.65 5.02 104 *** **				
1 40 21.26 35.370 24.72 5.10 105 *** **				
1 50 18.37 35.300 25.43 5.41 105 *** **				
1 75 15.85 35.170 25.93 4.62 85 *** **				
1 100 15.14+ 35.120+ 26.05 5.30 *** **				
1 150 13.78 34.980 26.24 4.60 *** **				

STATION	DATE	TIME	LATITUDE	LONGITUDE
CH 1/ 4/61	4/ 2/61	1135 K	35 07 S	151 03 E
SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES DEPTH WET DRY DIR, SP. HEIGHT TYPE AMT.				
820 *** ** 22 1 * * * * * *				
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE				
2 0 22.07 35.370 24.50 5.08 106 *** **				
1 25 21.69 35.370 24.60 5.10 105 *** **				
1 50 18.68 35.370 25.40 5.13 100 *** **				
1 75 17.49 35.260 25.61 4.96 *** **				
1 100 16.25 35.230 25.88 4.74 *** **				
1 150 14.72 35.120 26.14 4.68 *** **				
1 200 13.48 34.970 26.29 4.65 *** **				
1 300 12.05 34.780 26.43 4.65 *** **				
1 500 8.74 34.360 26.68 4.48 *** **				

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DH 1/	5/61	1255 K	35 07 S	151 08 E					
SONIC AIR TEMP, WIND ANEM. CLOUD VIS. SEA SHELL ATMOS. WIRE ANGLES									
DEPTH	DIR. SP.	DIR. SP.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1	CAS2	CAS3	
***	***	22	1	*	*	*	*	*	
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.12	35.340	24.46	4.96	103	***	***	***
1	25	21.50	35.340	24.63	5.02	103	***	***	***
1	50	18.59	35.280	25.36	5.47	107	***	***	***
1	75	17.48+	35.250	25.61	***	***	***	***	***
1	100	16.76	35.230	25.77	4.79	90	***	***	***
1	150	14.56	35.070	26.14	4.57	82	***	***	***
1	200	13.08	34.960	26.36	4.79	83	***	***	***
1	300	11.62	34.690	26.44	4.51	76	***	***	***
1	500	8.95	34.360	26.65	4.51	71	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DH 1/	6/61	1421 K	35 07 S	151 13 E					
SONIC AIR TEMP, WIND ANEM. CLOUD VIS. SEA SHELL ATMOS. WIRE ANGLES									
DEPTH	DIR. SP.	DIR. SP.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1	CAS2	CAS3	
***	***	22	1	*	*	*	*	*	
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.20	35.340	24.44	***	***	***	***	***
1	25	21.50	35.340	24.63	***	***	***	***	***
1	50	18.41	35.280	25.40	***	***	***	***	***
1	75	17.84	35.230	25.51	***	***	***	***	***
1	100	16.04	35.210	25.92	***	***	***	***	***
1	150	14.51	35.070	26.15	***	***	***	***	***
1	200	13.38	34.940	26.79	***	***	***	***	***
1	300	11.84	34.760	26.45	***	***	***	***	***
1	500	8.59	34.330	26.68	***	***	***	***	***

* *
PROPERTY DOUBTFUL
PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
PH 1/ 7/61	5/ 2/61	0002 K	35 43 S	150 19 E				
SONIC AIR TEMP.	WIND DIR. SP.	WIND ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
57 ***	*** 36 4	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 21.36	35.640	24.90	***	***	***	***	***
1	10 21.30	35.710	24.97	***	***	***	***	***
1	20 21.30	35.770	25.02	***	***	***	***	***
1	30 21.34	35.700	24.95	***	***	***	***	***
1	40 18.35	35.460	25.54	***	***	***	***	***
1	50 14.75	35.320	26.29	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
PH 1/ 8/61	5/ 2/61	0110 K	35 43 S	150 24 E				
SONIC AIR TEMP.	WIND DIR. SP.	WIND ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
110 ***	*** 36 4	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 21.20	35.730	25.01	***	***	***	***	***
1	10 21.35	35.680	24.94	***	***	***	***	***
1	20 21.20	35.700	24.99	***	***	***	***	***
1	30 21.22	35.710	24.99	***	***	***	***	***
1	40 18.24	35.410	25.54	***	***	***	***	***
1	50 16.68	35.410	25.92	***	***	***	***	***
1	75 14.46	35.340	26.36	***	***	***	***	***
1	100 13.70	35.360	26.55	***	***	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE								
EH 1/		9/61	0255 K	35 43 S		150 29 E								
SONIC AIR TEMP.	WIND DIR.	SP. HEIGHT	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
128 ***	***	36	4	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
2	0	21.09	35.770	25.07	***	***	***	***	***					
1	10	20.89	35.770	25.13	***	***	***	***	***					
1	20	20.84	35.730	25.11	***	***	***	***	***					
1	30	20.90	35.730	25.10	***	***	***	***	***					
1	40	20.89	35.730	25.10	***	***	***	***	***					
1	50	19.93	35.680	25.32	***	***	***	***	***					
1	75	16.66	35.500	25.99	***	***	***	***	***					
1	100	14.69	35.410	26.37	***	***	***	***	***					
1	120	13.97	35.340	26.47	***	***	***	***	***					

STATION		DATE	TIME	LATITUDE		LONGITUDE								
EH 1/		10/61	0407 K	35 43 S		150 34 E								
SONIC AIR TEMP.	WIND DIR.	SP. HEIGHT	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
238 ***	***	36	4	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
2	0	20.89	35.710	25.08	***	***	***	***	***					
1	10	20.90	35.730	25.10	***	***	***	***	***					
1	20	20.89	35.730	25.10	***	***	***	***	***					
1	30	20.95	35.680	25.04	***	***	***	***	***					
1	40	20.84	35.730	25.11	***	***	***	***	***					
1	50	19.01	35.640	25.52	***	***	***	***	***					
1	75	17.34	35.500	25.83	***	***	***	***	***					
1	100	15.05	35.440	26.32	***	***	***	***	***					
1	130	13.98	35.320	26.46	***	***	***	***	***					

STATION	DATE	TIME	LATITUDE	LONGITUDE					
1H 1/ 11/61	5/ 2/61	0923 K	35 43 S	150 39 E					
SONIC AIR TEMP.	WIND DIR. SP.	CLOUD AMEN.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES				
DEPTH *FT DRY	* * * * *	TYPE AMT.	* * * * *	CAST1 CAST2 CAST3	* * * * *				
*** ** 36 4									
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
	2	0	20.80	35.680	25.08	***	***	***	***
	1	25	20.90	35.820	25.16	***	***	***	***
	1	50	20.74	35.710	25.12	***	***	***	***
	1	75	17.95	35.620	25.78	***	***	***	***
	1	100	14.87	35.590	26.02	***	***	***	***
	1	150	14.82	35.590	26.03	***	***	***	***
	1	200	14.31	35.430	26.25	***	***	***	***
	1	300	12.86	35.320	26.69	***	***	***	***
	1	500	9.26	34.700	26.86	***	***	***	***

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STATION	DATE	TIME	LATITUDE	LONGITUDE					
1H 1/ 12/61	5/ 2/61	0640 K	35 43 S	150 44 E					
SONIC AIR TEMP.	WIND DIR. SP.	CLOUD AMEN.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES				
DEPTH *FT DRY	* * * * *	TYPE AMT.	* * * * *	CAST1 CAST2 CAST3	* * * * *				
*** ** 36 4									
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
	2	0	21.05	35.770	25.08	***	***	***	***
	1	25	21.09	35.810	25.10	***	***	***	***
	1	50	14.92	35.710	25.60	***	***	***	***
	1	75	17.63	35.610	25.85	***	***	***	***
	1	100	16.49	35.610	26.12	***	***	***	***
	1	150	14.76	35.660	26.55	***	***	***	***
	1	200	13.83	35.370	26.53	***	***	***	***
	1	300	11.89	35.160	26.75	***	***	***	***
	1	500	9.04	34.870	27.03	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 1/ 15/61	5/ 2/61	1511 K	36 26 S	150 14 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH ***	***	36 3	*	*	*	*	*	*	*
139	***	***	***	***	***	***	***	***	***
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	21.38	35.900	24.79	***	***	***	***	***	
1	21.36	35.900	25.10	***	***	***	***	***	
1	21.26	35.770	25.03	***	***	***	***	***	
1	21.02	35.770	25.09	***	***	***	***	***	
1	14.78	35.750	25.67	***	***	***	***	***	
1	17.25	35.660	25.98	***	***	***	***	***	
1	15.24	35.530	26.35	***	***	***	***	***	
1	14.46	35.340	26.37	***	***	***	***	***	
1	14.14	35.370	26.46	***	***	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 1/ 16/61	5/ 2/61	1618 K	36 26 S	150 19 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH ***	***	36 3	*	*	*	*	*	*	*
***	***	***	***	***	***	***	***	***	***
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	21.27	35.820	25.06	***	***	***	***	***	
1	21.16	35.770	25.06	***	***	***	***	***	
1	17.93	35.640	25.80	***	***	***	***	***	
1	16.38	35.480	26.05	***	***	***	***	***	
1	15.77	35.500	26.20	***	***	***	***	***	
1	14.43	35.370	26.40	***	***	***	***	***	
1	13.51	35.280	26.52	***	***	***	***	***	
1	11.74	35.050	26.70	***	***	***	***	***	

STATION	DATE	TIME	LATITUDE		LONGITUDE				
LH 1/	17/61	1725 K	36 26 S		150 24 E				
SONIC AIR TEMP.	WIND DIR.	SP. DIR.	CLOUD AMT.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3			
DEPTH WET DRY	DIR. SP.	DIR. SP.	TYPE AMT.	DIR. AMT.	CAST1 CAST2 CAST3				
***	***	36	3	*	*	*			
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.19	35.810	25.08	***	***	***	***	***
1	25	20.92	35.810	25.15	***	***	***	***	***
1	50	18.24	35.590	25.68	***	***	***	***	***
1	75	16.71	35.590	26.05	***	***	***	***	***
1	100	15.87	35.530	26.20	***	***	***	***	***
1	150	14.60	35.440	26.42	***	***	***	***	***
1	200	13.57	35.320	26.54	***	***	***	***	***
1	300	11.98	35.100	26.69	***	***	***	***	***
1	500	0.05	34.810	26.98	***	***	***	***	***

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STATION	DATE	TIME	LATITUDE		LONGITUDE				
LH 1/	18/61	0844 K	37 04 S		150 03 E				
SONIC AIR TEMP.	WIND DIR.	SP. DIR.	CLOUD AMT.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3			
DEPTH WET DRY	DIR. SP.	DIR. SP.	TYPE AMT.	DIR. AMT.	CAST1 CAST2 CAST3				
55	***	02	1	*	*	*			
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.76	35.410	25.66	***	***	***	***	***
1	20	16.72	35.350	25.87	***	***	***	***	***
1	30	16.04	35.320	25.86	***	***	***	***	***
1	40	16.61	35.320	25.87	***	***	***	***	***
1	50	16.38	35.300	25.91	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH 1/ 19/61	6/ 2/61	0930 K	37 04 S	150 08 E				
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2
DEPTH MET	DRY	DIR, SP.	TYPE AMT.	DIR, AMT.	DIR, AMT.	CAST1	CAST2	CAST3
73 ***	02 1	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.500	25.09	***	***	***	***	***
1	10	35.410	25.71	***	***	***	***	***
1	20	35.370	25.80	***	***	***	***	***
1	30	35.340	25.87	***	***	***	***	***
1	40	35.250	25.83	***	***	***	***	***
1	60	35.300	26.17	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH 1/ 20/61	6/ 2/61	1020 K	37 04 S	150 13 E				
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2
DEPTH MET	DRY	DIR, SP.	TYPE AMT.	DIR, AMT.	DIR, AMT.	CAST1	CAST2	CAST3
91 ***	02 1	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.620	25.17	***	***	***	***	***
1	10	35.550	25.29	***	***	***	***	***
1	20	35.460	25.27	***	***	***	***	***
1	30	35.550	25.55	***	***	***	***	***
1	40	35.370	26.18	***	***	***	***	***
1	50	35.300	26.40	***	***	***	***	***
1	75	35.280	26.53	***	***	***	***	***
1	90	35.190	26.55	***	***	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
UH 1/ 21/61		6/ 2/61	1113 K	37 04 S	150 18 E				
SONIC ATR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH MET	*** ** 02 1	*	*	*	*	*	*	*	*
113 ***	*** ** 02 1	*	*	*	*	*	*	*	*
CASST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.680	24.93	***	***	***	***	***	***
1	10	35.660	24.94	***	***	***	***	***	***
1	20	35.550	25.04	***	***	***	***	***	***
1	30	35.590	25.46	***	***	***	***	***	***
1	40	35.500	25.76	***	***	***	***	***	***
1	50	35.500	26.08	***	***	***	***	***	***
1	75	35.340	26.38	***	***	***	***	***	***
1	100	35.170	26.62	***	***	***	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
FH 1/ 24/61		7/ 2/61	0945 K	37 03 S	150 10 E				
SONIC ATR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH MET	*** ** 02 3	*	*	*	*	*	*	*	*
91 ***	*** ** 02 3	*	*	*	*	*	*	*	*
CASST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.620	25.05	5.08	103	***	***	***	***
1	10	35.640	25.41	5.41	108	***	***	***	***
1	20	35.440	25.66	5.70	110	***	***	***	***
1	30	35.370	25.99	5.70	106	***	***	***	***
1	40	35.300	26.20	5.08	92	***	***	***	***
1	50	35.300	26.33	4.88	88	***	***	***	***
1	75	35.230	26.49	4.46	78	***	***	***	***
1	90	35.170	26.49	4.29	75	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH 1/ 23/61	6/ 2/61	1333 K	37 04 S	150 28 E				
SONIC AIR TEMP.	WIND DIR, SP,	ANEM. CLOUD	VIS. SEA	ATMOS.	WIRE ANGLES			
DEPTH MET	DRY DIR, SP,	WEIGHT TYPE AMT,	DIR. AMT,	DIR. AMT,	PRESSURE CAST1 CAST2 CAST3			
*** *** 02 1	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.12	35.770	24.79	***	***	***	***
1	25	21.26	35.810	25.06	***	***	***	***
1	50	20.92	35.790	25.13	***	***	***	***
1	75	17.70	35.620	25.84	***	***	***	***
1	100	16.91	35.590	26.01	***	***	***	***
1	150	15.24	35.520	26.34	***	***	***	***
1	200	14.05	35.390	26.49	***	***	***	***
1	300	12.56	35.210	26.66	***	***	***	***
1	500	9.43	34.780	26.90	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH 1/ 22/61	6/ 2/61	1230 K	37 04 S	150 23 E				
SONIC AIR TEMP.	WIND DIR, SP,	ANEM. CLOUD	VIS. SEA	ATMOS.	WIRE ANGLES			
DEPTH MET	DRY DIR, SP,	HEIGHT TYPE AMT,	DIR. AMT,	DIR. AMT,	PRESSURE CAST1 CAST2 CAST3			
252 *** *** 02 1	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.65	35.820	24.90	***	***	***	***
1	25	21.10	35.790	25.09	***	***	***	***
1	50	18.56	35.770	25.74	***	***	***	***
1	75	14.98	35.570	25.97	***	***	***	***
1	100	15.26	35.410	26.25	***	***	***	***
1	125	15.27	35.480	26.30	***	***	***	***
1	150	14.25	35.440	26.49	***	***	***	***
1	175	13.56	35.280	26.51	***	***	***	***
1	200	13.02	35.210	26.57	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
EH 2/ 25/61	17/ 2/61	0815 K	38 02 S	149 08 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
117 ***	04 4	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0 19.32	35.550	25.38	5.30	105	***	***	***	
1	25 16.92	35.440	25.89	5.63	106	***	***	***	
1	50 14.82	35.410	26.35	4.85	88	***	***	***	
1	75 13.26	35.250	26.55	4.80	84	***	***	***	
1	100 12.41	35.210	26.69	4.80	82	***	***	***	
1	115 12.24	35.080	26.62	4.85	83	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DH 2/ 26/61	18/ 2/61	0825 K	38 03 S	150 14 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	04 3	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0 21.52	35.840	25.01	5.19	107	***	***	***	
2	25 20.96	35.640	25.01	4.41	90	***	***	***	
2	50 17.81	35.620	25.81	5.30	102	***	***	***	
2	75 16.44	35.590	26.12	4.97	86	***	***	***	
2	100 15.45	35.590	26.34	4.69	86	***	***	***	
1	150 14.06	35.410	26.51	4.69	84	***	***	***	
1	200 12.94	35.230	26.60	4.80	83	***	***	***	
1	300 11.39	35.230	26.90	4.74	80	***	***	***	
1	500 9.82	34.810	26.85	4.57	74	***	***	***	
1	700 8.00	34.690	27.05	4.41	68	***	***	***	
1	1000 5.34	34.510	27.27	4.18	60	***	***	***	

STATION DATE TIME LATITUDE LONGITUDE
 EH 2/ 33/61 19/ 2/61 0753 K 38 17 S 151 58 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. DIR. SP. HEIGHT TYPE AMT. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 04 4 * . *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
3	0	21.93	35.620	24.73	4.91	102	***	***	***
2	25	21.85	35.590	24.73	4.96	103	***	***	***
2	50	19.81	35.520	25.23	4.85	97	***	***	***
2	75	18.10	35.500	25.65	4.80	93	***	***	***
2	100	17.14	35.410	25.81	4.29	81	***	***	***
1	150	16.05	35.390	26.05	4.57	85	***	***	***
1	200	14.65	35.260	26.27	4.46	80	***	***	***
1	300	13.65	35.170	26.41	4.63	82	***	***	***
1	500	10.40	34.760	26.71	4.46	73	***	***	***
1	700	8.24	34.510	26.87	4.41	69	***	***	***
1	1000	5.95	34.400	27.11	4.18	61	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 EH 2/ 40/61 20/ 2/61 0812 K 39 06 S 150 56 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. DIR. SP. HEIGHT TYPE AMT. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 02 2 *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.14	35.680	25.26	5.14	104	***	***	***
2	25	19.82	35.700	25.36	5.14	103	***	***	***
2	50	18.76	35.500	25.48	5.30	104	***	***	***
2	75	16.25	35.350	25.98	5.58	104	***	***	***
2	100	14.04	35.250	26.39	5.41	96	***	***	***
1	150	12.91	35.230	26.61	***	***	***	***	***
1	200	12.02	35.140	26.71	5.13	87	***	***	***
1	300	11.01	34.960	26.76	5.30	88	***	***	***
1	500	8.42	34.630	26.88	5.19	82	***	***	***
1	700	7.56	34.520	26.98	4.63	71	***	***	***
1	1000	5.42	34.450	27.21	4.13	60	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LP 2/ 51/61	21/ 2/61	0840 K	39 50 S	148 46 E
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES				
DEPTH WET DRY	DIR. SP. HEIGHT	DIR. SP. HEIGHT	DIR. AMT. PRESSURE	CAS1 CAS2 CAS3
128 *** ** 32 1	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
1	0	35.680	25.17	5.01
1	10	35.680	25.16	5.07
1	20	35.680	25.15	5.07
1	30	35.710	25.21	5.07
1	40	35.680	25.20	5.13
1	50	35.680	25.20	5.13
1	75	14.73	26.37	4.79
1	100	13.29	26.55	***
				OXYGEN % SAT.
				102
				103
				103
				103
				104
				104
				87

				TOTAL P

				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
LP 3/ 68/61	8/ 3/61	0838 K	42 10 S	148 38 E
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES				
DEPTH WET DRY	DIR. SP. HEIGHT	DIR. SP. HEIGHT	DIR. AMT. PRESSURE	CAS1 CAS2 CAS3
*** ** 20 2	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
2	0	35.950	25.77	5.31
2	25	35.990	25.79	5.31
2	50	35.990	25.80	5.31
1	75	35.930	25.86	5.23
1	100	35.660	26.42	4.91
1	150	13.24	26.80	4.87
1	200	12.84	26.85	4.93
1	300	9.85	27.14	4.91
				OXYGEN % SAT.
				105
				105
				105
				102
				90
				85
				86
				80

				TOTAL P

				NITRATE

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH 3/ 75/61	9/ 3/61	0927 K	41 59 S	149 50 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES								
DEPTH MET DRY DIR, SP.	HEIGHT	DIR, SP.	DIR, AMT.	PRESSURE	CAS1 CAS2 CAS3			
*** ** 36 1	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2 0	19.66	35.390	25.17	5.67	113	***	***	***
2 25	19.60	35.390	25.18	5.64	112	***	***	***
2 50	17.22	35.390	25.78	5.56	106	***	***	***
2 75	14.11	35.390	26.48	5.42	97	***	***	***
2 100	13.11	35.300	26.62	5.37	94	***	***	***
1 150	11.75	35.140	26.76	5.31	90	***	***	***
1 200	11.49	35.120	26.80	5.56	94	***	***	***
1 300	10.35	34.920	26.85	5.61	92	***	***	***
1 500	8.39	34.700	27.00	5.47	85	***	***	***
1 700	7.45	34.490	26.97	4.72	72	***	***	***
1 1000	5.29	34.490	27.26	4.34	63	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH 4/ 76/61	16/ 3/61	0850 K	43 15 S	148 15 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES								
DEPTH MET DRY DIR, SP.	HEIGHT	DIR, SP.	DIR, AMT.	PRESSURE	CAS1 CAS2 CAS3			
*** ** 34 0	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1 0	17.92	35.680	25.83	5.47	106	***	***	***
1 25	17.96	35.680	25.82	5.41	105	***	***	***
1 50	17.72	35.680	25.88	5.29	102	***	***	***
1 75	14.93	35.410	26.32	5.01	91	***	***	***
1 100	12.63	35.230	26.66	4.89	84	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 4/ 95/61		17/ 3/61		0841 K		43 12 S		149 46 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	***	20	1	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	15.19	35.230	26.13	5.79	106	***	***	***
2	25	15.16	35.230	26.13	5.81	106	***	***	***
2	50	15.05	35.140	26.09	5.81	106	***	***	***
2	75	14.94+	35.070	26.06	5.64	102	***	***	***
2	100	14.80	35.320	26.28	5.12	93	***	***	***
2	150	12.66	35.500	26.86	5.35	93	***	***	***
1	200	12.38	35.320	26.78	5.35	92	***	***	***
1	300	10.95	35.050	26.84	5.47	91	***	***	***
1	500	10.39	34.910	26.76	5.47	90	***	***	***
1	700	8.03	34.690	27.05	5.41	84	***	***	***
1	1000	5.87	34.560	27.24	4.60	67	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 4/ 95/61		18/ 3/61		0750 K		41 27 S		149 29 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	***	02	4	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.16	35.770	25.59	5.21	103	***	***	***
2	25	19.29	35.710	25.51	5.24	104	***	***	***
2	50	14.32+	35.680	25.73	5.18	101	***	***	***
2	75	14.97	35.590	25.99	5.01	95	***	***	***
2	100	15.37	35.550	26.33	4.78	88	***	***	***
2	150	13.78	35.410	26.57	4.60	82	***	***	***
2	200	13.77	35.320	26.50	4.72	84	***	***	***
2	300	11.48	35.050	26.74	4.89	82	***	***	***
1	500	10.22	34.940	26.89	4.78	78	***	***	***
1	700	8.37	34.690	26.99	4.78	75	***	***	***
1	1000	6.33	34.580	27.20	4.52	64	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 4/ 100/61	19/ 3/61	0805 K	41 01 S	148 41 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
*** ** 32 2	*	*	*	*	*	*			
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.74	35.710	25.65	5.35	105	***	***	***
1	25	18.55	35.680	25.67	5.35	105	***	***	***
1	50	17.22	35.590	25.93	4.95	94	***	***	***
1	75	15.51	35.530	26.28	4.63	89	***	***	***
1	100	13.52	35.340	26.57	4.78	84	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
EH 4/ 109/61	20/ 3/61	0750 K	40 00 S	148 51 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
*** ** 29 1	*	*	*	*	*	*			
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.62	35.680	25.55	5.29	106	***	***	***
1	25	19.76	35.620	25.47	5.18	104	***	***	***
1	50	18.09	35.710	25.81	4.95	96	***	***	***
1	75	16.40	35.680	26.19	4.72	88	***	***	***
1	100	15.12	35.520	26.36	4.60	84	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 4/ 119/61 21/ 3/61 0755 K 38 57 S 149 06 E

SONIC AIR TEMP. WIND CLOUD SEA ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. ANEM. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

*** ** 32 1 * * * * * * * * * * * * * * * * * * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.15	35.750	25.31	5.41	109	***	***	***
2	25	19.43	35.790	25.53	5.29	105	***	***	***
2	50	18.78	35.820	25.72	5.29	104	***	***	***
2	75	17.92	35.660	25.82	5.29	102	***	***	***
2	100	14.82	35.500	26.41	5.41	98	***	***	***
1	150	13.05	35.440	26.74	5.35	93	***	***	***
1	200	12.45	35.440	26.86	5.18	89	***	***	***
1	300	10.47	35.210	27.05	4.83	80	***	***	***
3	500	9.71	34.920	26.96	4.83	78	***	***	***
1	700	7.67	34.830	27.21	4.66	72	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 4/ 125/61 22/ 3/61 0620 K 38 00 S 149 24 E

SONIC AIR TEMP. WIND CLOUD SEA ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. ANEM. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

*** ** 14 0 * * * * * * * * * * * * * * * * * * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.90	35.520	24.94	5.21	106	***	***	***
1	25	18.49	35.520	25.57	5.01	98	***	***	***
1	50	15.33	35.410	26.23	4.49	82	***	***	***
1	75	14.35	35.340	26.39	4.72	85	***	***	***
1	100	13.56	35.280	26.51	4.78	84	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE							
CH 4/ 130/61	23/ 3/61	0827 K	38 05 S	150 23 E							
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET	DIR.	SP.	HEIGHT	TYPE	AMT.	DIR.	AMT.	PRESSURE	CASI	CAST2	CAST3
***	***	29	1	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
	2	0	21.26	25.01	5.32	109	***	***	***		
	2	25	20.78	25.13	5.35	109	***	***	***		
	2	50	19.03	25.48	***	***	***	***	***		
	2	75	17.43	25.81	4.55	87	***	***	***		
	2	100	15.31	26.22	4.43	81	***	***	***		
	1	150	14.30	26.41	4.95	89	***	***	***		
	1	200	13.11	26.62	***	***	***	***	***		
	1	300	12.93	26.71	4.89	85	***	***	***		
	1	500	9.78*	26.89	4.69	76	***	***	***		
	1	700	7.30*	27.01	4.58	70	***	***	***		
	1	1000	5.43	27.24	4.38	64	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE							
CH 4/ 134/61	24/ 3/61	1102 K	37 04 S	150 03 E							
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET	DIR.	SP.	HEIGHT	TYPE	AMT.	DIR.	AMT.	PRESSURE	CASI	CAST2	CAST3
124	***	25	1	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
	1	0	20.70	24.93	***	***	***	***	***		
	1	10	20.53	25.00	***	***	***	***	***		
	1	20	20.19	25.07	***	***	***	***	***		
	1	30	16.68	25.84	***	***	***	***	***		
	1	40	15.30	26.14	***	***	***	***	***		
	1	50	14.71	26.27	***	***	***	***	***		

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
135761	24/ 3/61	1201 K	37 04 S	150 08 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3								
155 ***	25 1	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.660	24.69	***	***	***	***	***
1	10	35.640	24.76	***	***	***	***	***
1	20	35.530*	24.74	***	***	***	***	***
1	30	35.460	24.75	***	***	***	***	***
1	40	35.580	25.63	***	***	***	***	***
1	50	35.560	26.28	***	***	***	***	***
1	70	35.230	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
1303 K	24/ 3/61	1303 K	37 04 S	150. 13 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3								
201 ***	25 1	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.530	24.76	***	***	***	***	***
1	10	35.610	24.76	***	***	***	***	***
1	20	35.590	24.79	***	***	***	***	***
1	30	35.440	24.95	***	***	***	***	***
1	40	35.440	25.29	***	***	***	***	***
1	50	35.520	25.65	***	***	***	***	***
1	75	35.480	26.40	***	***	***	***	***
1	90	35.030	***	***	***	***	***	***

* PROPERTY DOUTIFUL
* PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 LH 4/ 137/61 26/ 3/61 1010 K 37 04 S 150 18 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

314 *** ** 11 1 *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	22.10	35.790	24.81	***	***	***	***	***
1	10	22.09+	35.820	24.83	***	***	***	***	***
1	20	22.08	35.770	24.80	***	***	***	***	***
1	30	21.69	35.730	24.88	***	***	***	***	***
1	40	20.45	35.640	25.15	***	***	***	***	***
1	50	19.25+	35.570	25.41	***	***	***	***	***
1	75	14.90+	35.520	25.95	***	***	***	***	***
1	100	14.39	35.340	26.38	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 4/ 138/61 26/ 3/61 1120 K 37 04 S 150 23 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

*** *** ** 11 0 *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.41	35.790	24.72	***	***	***	***	***
1	25	22.41	35.840	24.76	***	***	***	***	***
1	50	21.39	35.810	25.02	***	***	***	***	***
1	75	18.40	35.700	25.73	***	***	***	***	***
1	100	16.18	35.440	26.06	***	***	***	***	***
1	125	15.31	35.410	26.24	***	***	***	***	***
1	150	14.13	35.370	26.46	***	***	***	***	***
1	175	13.82+	35.250	26.44	***	***	***	***	***
1	200	13.22	34.720	26.15	***	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 4/ 139761	26/ 3/61	1221 K	37 04 S	150 28 E					
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH WET DRY	DIR, SP, HEIGHT	TYPE AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3				
*** ** 11 0	* * *	* * *	* * *	* * *	* * *				
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
2	0	22.21	35.750	24.75	***	***	***	***	***
1	25	22.14	35.840	24.84	***	***	***	***	***
1	50	20.30	35.730	25.26	***	***	***	***	***
1	75	18.75	35.660	25.61	***	***	***	***	***
1	100	17.46	35.570	25.86	***	***	***	***	***
1	125	15.17	35.370	26.24	***	***	***	***	***
1	150	13.88	35.300	26.46	***	***	***	***	***
1	175	11.25+	35.010	26.76	***	***	***	***	***
1	200	8.64	34.720	26.98	***	***	***	***	***

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STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 4/ 140761	26/ 3/61	1900 K	36 26 S	150 04 E					
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH WET DRY	DIR, SP, HEIGHT	TYPE AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3				
101 *** ** 1	* * *	* * *	* * *	* * *	* * *				
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	21.04	35.640	24.99	***	***	***	***	***
1	10	21.76	35.610	24.77	***	***	***	***	***
1	20	21.11	35.610	24.95	***	***	***	***	***
1	30	21.04	35.620	24.97	***	***	***	***	***
1	40	21.10	35.620	24.96	***	***	***	***	***
1	50	20.99	35.480	24.88	***	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION LH 4/ 141/61 DATE 26/ 3/61 TIME 1950 K LATITUDE 36 26 S LONGITUDE 150 09 E

SONIC A/R TEMP. WIND ANEM. CLOUD WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
201	0	21.25	35.640	24.93	***	***	***	***	***
1	10	21.37	35.660	24.91	***	***	***	***	***
1	20	21.22	35.640	24.94	***	***	***	***	***
1	30	18.62	35.580*	25.58	***	***	***	***	***
1	40	17.86	35.550	25.75	***	***	***	***	***
1	50	16.67	35.500	25.99	***	***	***	***	***
1	75	15.05*	35.350	26.25	***	***	***	***	***
1	100	14.14	35.340	26.44	***	***	***	***	***

STATION LH 4/ 142/61 DATE 26/ 3/61 TIME 2055 K LATITUDE 36 26 S LONGITUDE 150 14 E

SONIC A/R TEMP. WIND ANEM. CLOUD WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
267	0	21.26	35.530	24.84	***	***	***	***	***
1	25	20.96	35.620	24.99	***	***	***	***	***
1	50	17.77	35.640	25.84	***	***	***	***	***
1	75	15.67	35.430	26.17	***	***	***	***	***
1	100	14.29	35.340	26.41	***	***	***	***	***
1	125	13.01	35.190	26.56	***	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE							
LH 4/ 143/61	26/ 3/61	2150 K	36 26 S	150 19 E							
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES											
DEPTH MET	DRY	DIR. SP.	HEIGHT	TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3
***	***	14	2	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	T	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	21.57		35.620	24.83	***	***	***	***	***	
1	25	20.46		35.700	25.19	***	***	***	***	***	
1	50	17.98		35.640	25.78	***	***	***	***	***	
1	75	16.18		35.500	26.11	***	***	***	***	***	
1	100	15.20		35.370	26.23	***	***	***	***	***	
1	150	13.52		35.260	26.51	***	***	***	***	***	
1	200	12.52+		35.140	26.62	***	***	***	***	***	
1	300	11.40		34.990	26.71	***	***	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE							
LH 4/ 144/61	26/ 3/61	2255 K	36 26 S	150 24 E							
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES											
DEPTH MET	DRY	DIR. SP.	HEIGHT	TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3
***	***	11	1	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	T	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0	21.44		35.610	24.86	***	***	***	***	***	
1	25	20.24		35.710	25.26	***	***	***	***	***	
1	50	18.31		35.620	25.69	***	***	***	***	***	
1	75	16.76		35.480	25.96	***	***	***	***	***	
1	100	15.16		35.370	26.24	***	***	***	***	***	
1	150	14.29		35.320	26.39	***	***	***	***	***	
1	200	13.32		35.210	26.51	***	***	***	***	***	
1	300	10.30+		34.880	26.83	***	***	***	***	***	
1	500	8.47		34.630	26.93	***	***	***	***	***	

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 UH 4/ 145/61 27/ 3/61 0601 K 35 43 S 150 19 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

93 *** ** 16 1 *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE

1 0 20.75 33.910 23.75 *** *** ** *

1 10 21.26 35.350 24.71 *** *** *** *

1 20 21.22 35.410 24.77 *** *** *** *

1 30 21.26 35.410 24.76 *** *** *** *

1 40 20.30 35.440 25.04 *** *** *** *

1 50 14.50 35.370 25.45 *** *** *** *

STATION DATE TIME LATITUDE LONGITUDE
 CH 4/ 146/61 27/ 3/61 0655 K 35 43 S 150 24 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

201 *** ** 16 1 *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE

1 0 21.02 35.370* 24.79 *** *** *** *

1 10 21.03 35.460* 24.85 *** *** *** *

1 20 21.07 35.370* 24.78 *** *** *** *

1 30 21.13 35.460* 24.83 *** *** *** *

1 40 19.06 35.370* 25.31 *** *** *** *

1 50 17.46 35.350* 25.59 *** *** *** *

1 75 16.19* 35.440* 26.06 *** *** *** *

1 100 14.51 35.300* 26.33 *** *** *** *

* PROPERTY DOUBTFUL
 † PROPERTY INTERPOLATED

STATION CH 4/ 147/61 DATE 27/ 3/61 TIME 0750 K LATITUDE 35 43 S LONGITUDE 150 29 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.22	35.440	24.79	***	***	***	***	***
1	10	21.22	35.440	24.79	***	***	***	***	***
1	20	21.25	35.440	24.78	***	***	***	***	***
1	30	21.21	35.440	24.79	***	***	***	***	***
1	40	19.12	35.370	25.29	***	***	***	***	***
1	50	18.15	35.390	25.55	***	***	***	***	***
1	75	15.73	35.390	26.13	***	***	***	***	***
1	100	14.68+	35.320	26.31	***	***	***	***	***
1	125	13.62	35.260	26.49	***	***	***	***	***

STATION CH 4/ 148/61 DATE 27/ 3/61 TIME 0856 K LATITUDE 35 43 S LONGITUDE 150 34 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.40	35.500	24.78	***	***	***	***	***
1	10	21.31	35.500	24.81	***	***	***	***	***
1	20	21.42	35.460	24.75	***	***	***	***	***
1	30	21.38	35.460	24.76	***	***	***	***	***
1	40	19.80	35.410	25.15	***	***	***	***	***
1	50	17.81	35.520	25.73	***	***	***	***	***
1	75	15.71	35.430	26.16	***	***	***	***	***
1	100	13.97+	35.280	26.43	***	***	***	***	***
1	130	13.41	35.230	26.51	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE							
EH 4/ 149/61	27/ 3/61	0956 K	35 43 S	150 39 E							
SONIC AIR TEMP.	WIND DIR.. SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
512 ***	99 0	*	*	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE			
2 0	21.60	35.480	24.71	***	***	***	***	***	***	***	***
1 25	21.50	35.500	24.76	***	***	***	***	***	***	***	***
1 50	18.05	35.570	25.71	***	***	***	***	***	***	***	***
1 75	15.92	35.430	26.11	***	***	***	***	***	***	***	***
1 100	14.52	35.320	26.34	***	***	***	***	***	***	***	***
1 150	13.33	35.320	26.59	***	***	***	***	***	***	***	***
1 200	12.85	35.190	26.59	***	***	***	***	***	***	***	***
1 300	11.42+	35.010	26.72	***	***	***	***	***	***	***	***
1 500	9.37	34.720	26.86	***	***	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE							
EH 4/ 150/61	27/ 3/61	1109 K	35 43 S	150 44 E							
SONIC AIR TEMP.	WIND DIR.. SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
*** ***	99 0	*	*	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE			
2 0	21.61	35.480	24.71	***	***	***	***	***	***	***	***
1 25	19.99	35.590	25.23	***	***	***	***	***	***	***	***
1 50	18.84	35.550	25.50	***	***	***	***	***	***	***	***
1 75	16.10	35.500	26.13	***	***	***	***	***	***	***	***
1 100	15.10	35.390	26.27	***	***	***	***	***	***	***	***
1 150	13.62	35.230	26.46	***	***	***	***	***	***	***	***
1 200	12.54	35.140	26.61	***	***	***	***	***	***	***	***
1 300	11.00+	34.970	26.77	***	***	***	***	***	***	***	***
1 500	8.85	34.700	26.93	***	***	***	***	***	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION LH 4/ 151/61 DATE 27/ 3/61 TIME 1328 K LATITUDE 35 16 S LONGITUDE 150 48 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH KFT DRY DIR, SP. HEIGHT TYPE AMT, DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	22.30	35.330*	24.40	***	***	***	***	***
1	10	22.31	35.330	24.40	***	***	***	***	***
1	20	21.56	35.330	24.61	***	***	***	***	***
1	30	21.58	35.370	24.64	***	***	***	***	***
1	40	20.84	35.330	24.81	***	***	***	***	***
1	50	19.83	35.410	25.24	***	***	***	***	***

STATION LH 4/ 152/61 DATE 27/ 3/61 TIME 1543 K LATITUDE 35 07 S LONGITUDE 150 48 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH KFT DRY DIR, SP. HEIGHT TYPE AMT, DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
104	***	04 0	*	*	*	*	*	*	*
1	0	22.30	35.360	24.43	***	***	***	***	***
1	10	22.35+	35.410	24.45	***	***	***	***	***
1	20	22.39	35.460	24.48	***	***	***	***	***
1	30	21.69	35.460	24.67	***	***	***	***	***
1	40	20.64	35.350	24.88	***	***	***	***	***
1	50	19.94	35.460	25.15	***	***	***	***	***
1	75	17.31+	35.480	25.83	***	***	***	***	***
1	100	14.68	35.300	26.29	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION CH 4/ 153/61 DATE 27/ 3/61 TIME 1649 K LATITUDE 35 07 S LONGITUDE 150 53 E

SONIC AIR TEMP, WIND DIR, SP, WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
120	***	04	0	*	*	*	*	*	*
2	0	22.43	35.550	24.53	***	***	***	***	***
1	10	22.22	35.550	24.59	***	***	***	***	***
1	20	21.94	35.550	24.67	***	***	***	***	***
1	30	21.90	35.570	24.70	***	***	***	***	***
1	40	19.92	35.570	25.23	***	***	***	***	***
1	50	19.97	35.570	25.22	***	***	***	***	***
1	75	14.54	35.480	26.01	***	***	***	***	***
1	100	14.97	35.340	26.26	***	***	***	***	***
1	115	14.52	35.300	26.32	***	***	***	***	***

STATION CH 4/ 154/61 DATE 27/ 3/61 TIME 1753 K LATITUDE 35 07 S LONGITUDE 150 58 E

SONIC AIR TEMP, WIND DIR, SP, WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
137	***	04	0	*	*	*	*	*	*
2	0	22.62	35.620	24.53	***	***	***	***	***
1	10	22.63	35.660	24.56	***	***	***	***	***
1	20	22.50	35.610	24.56	***	***	***	***	***
1	30	22.31	35.640	24.64	***	***	***	***	***
1	40	21.73	35.550	24.73	***	***	***	***	***
1	50	18.87	35.550	25.23	***	***	***	***	***
1	75	18.58	35.730	25.70	***	***	***	***	***
1	100	18.08	35.610	25.74	***	***	***	***	***
1	135	17.37	35.610	25.91	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 4 / 155/61		27 / 3/61		1906 K		35 07 S		151 03 E	
SONIC AIR TEMP.	WIND DIR.	ANEM. SP.	CLOUD HT.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGL.			
DEPTH MET	DRY	DIR.	TYPE	DIR.	DIR.	CAS1	CAS2	CAS3	
512 ***	04	0	*	*	*	*	*	*	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.92	35.770	24.56	***	***	***	***	***
1	25	22.93	35.770	24.56	***	***	***	***	***
1	50	22.96	35.790	24.56	***	***	***	***	***
1	75	22.40	35.770	24.71	***	***	***	***	***
1	100	21.52	35.750	24.94	***	***	***	***	***
1	150	19.97	35.750	25.36	***	***	***	***	***
1	200	16.53	35.500	26.03	***	***	***	***	***
1	300	13.30+	35.190	26.50	***	***	***	***	***
1	500	11.05	34.940	26.74	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 7 / 156/61		22 / 4/61		0820 K		38 00 S		149 25 E	
SONIC AIR TEMP.	WIND DIR.	ANEM. SP.	CLOUD HT.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGL.			
DEPTH MET	DRY	DIR.	TYPE	DIR.	DIR.	CAS1	CAS2	CAS3	
120 ***	04	2	*	*	*	*	*	*	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.63	35.500	25.52	5.12	100	***	***	***
1	25	18.65	35.570	25.56	5.18	101	***	***	***
1	50	18.12	35.500	25.64	5.12	99	***	***	***
1	75	15.92	35.410	26.10	4.32	80	***	***	***
1	100	14.47	35.300	26.34	4.32	78	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 EH 7/ 162/61 23/ 4/61 1000 K 38 26 S 148 31 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 190 *** ** 04 2 *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 19.06 35.700 25.56 5.33 105 *** *** ***
 1 25 18.98 35.660 25.55 5.01 99 *** *** ***
 1 50 18.96 35.660 25.55 5.04 99 *** *** ***
 1 75 17.94 35.610 25.87 4.64 89 *** *** ***
 1 100 16.01 35.430 26.09 4.42 82 *** *** ***
 1 125 15.21 35.370 26.23 4.56 83 *** *** ***
 1 150 14.36 35.320 26.38 4.50 81 *** *** ***
 1 175 13.41 35.250 26.52 4.67 82 *** *** ***

STATION DATE TIME LATITUDE LONGITUDE
 EH 7/ 149/61 24/ 4/61 0820 K 38 56 S 147 18 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 53 *** ** 24 3 *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 17.63 35.440 25.72 5.24 100 *** *** ***
 1 10 17.09 35.450* 25.86 5.30 101 *** *** ***
 1 20 17.11 35.460 25.86 5.27 100 *** *** ***
 1 30 17.21 35.440 25.82 5.33 101 *** *** ***
 1 40 17.19 35.440 25.83 5.21 99 *** *** ***
 1 50 17.15 35.520 25.89 5.13 97 *** *** ***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 7/ 186/61	26/ 4/61	0735 K	40 00 S	148 45 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
113 ***	09 2	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	18.78	35.660	25.60	5.22	102	***	***	***
1	25	18.63	35.700	25.67	5.10	100	***	***	***
1	50	18.14	35.640	25.75	5.19	101	***	***	***
1	75	17.73	35.690	25.88	5.10	98	***	***	***
1	100	15.57	35.440	26.20	4.62	85	***	***	***
1	110	14.32	35.440	26.48	4.54	81	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH 7/ 194/61	27/ 4/61	0905 K	40 59 S	149 05 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	18 4	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0	17.73	35.640	25.85	5.36	103	***	***	***
2	25	17.64	35.610	25.85	5.30	102	***	***	***
2	50	17.47	35.590	25.87	5.30	101	***	***	***
2	71	16.32	35.460	26.05	4.88	91	***	***	***
2	94	14.81	35.360+	26.31	4.71	85	***	***	***
2	141	13.30	35.260	26.55	4.74	83	***	***	***
1	188	12.74	35.190	26.61	4.65	80	***	***	***
1	282	11.12	34.940	26.73	4.48	75	***	***	***
1	470	8.82	34.600	26.85	5.08	80	***	***	***
1	658	8.13	34.570+	26.94	5.30	82	***	***	***
1	940	5.27	34.490	27.26	4.20	61	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION LH 7/ 204/61 DATE 28/ 4/61 TIME 0900 K LATITUDE 39 40 S LONGITUDE 150 26 E

SONIC DEPTH	AIR TEMP.		WIND		ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	VIS.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES
	NET DRY	WET	DIR.	SP.									
***	***	***	16	1	*	*	*	*	*	*	*	*	*
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE				
2	0	18.70	35.680	25.63	5.16	101	***	***	***				
2	25	18.72	35.700	25.65	5.08	100	***	***	***				
2	48	18.62	35.700	25.67	5.13	100	***	***	***				
2	72	17.37	35.520	25.84	5.22	100	***	***	***				
2	97	16.06	35.500	26.14	4.65	86	***	***	***				
1	136	14.78	35.340	26.30	4.68	85	***	***	***				
1	181	13.02	35.250	26.60	5.08	88	***	***	***				
1	272	11.60	35.070	26.74	5.06	85	***	***	***				
1	453	9.60	34.720	26.82	5.33	86	***	***	***				
1	634	8.40	34.600	26.92	5.13	80	***	***	***				
1	906	6.05	34.430	27.12	4.46	66	***	***	***				

STATION LH 7/ 211/61 DATE 29/ 4/61 TIME 0750 K LATITUDE 38 41 S LONGITUDE 151 01 E

SONIC DEPTH	AIR TEMP.		WIND		ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	VIS.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES
	NET DRY	WET	DIR.	SP.									
***	***	***	34	2	*	*	*	*	*	*	*	*	*
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE				
2	0	17.55	35.500	25.78	5.47	105	***	***	***				
2	25	17.41	35.480	25.80	5.47	104	***	***	***				
2	50	17.44	35.500	25.81	5.41	103	***	***	***				
2	75	14.40	35.340	26.38	4.78	86	***	***	***				
2	100	13.88	35.340	26.49	4.83	86	***	***	***				
2	150	12.88	35.260	26.64	5.12	89	***	***	***				
1	193	12.17	35.170	26.71	5.24	90	***	***	***				
1	290	11.15	35.010	26.77	5.41	90	***	***	***				
1	483	8.76	34.610	26.87	5.35	84	***	***	***				
1	676	7.68	34.560	27.00	4.72	72	***	***	***				
1	965	5.24	34.420	27.21	4.37	63	***	***	***				

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 218/61 30/ 4761 0748 K 38 02 S 151 45 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN & SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.06	35.520	25.50	5.21	103	***	***	***
2	25	19.16	35.680	25.51	5.18	102	***	***	***
2	50	19.19	35.790	25.59	5.24	104	***	***	***
2	75	17.74	35.660	25.86	4.83	93	***	***	***
2	100	16.22	35.460	26.07	4.32	81	***	***	***
2	150	14.21	35.320	26.41	3.60	82	***	***	***
1	200	12.97	35.210	26.58	4.55	79	***	***	***
1	300	10.83	35.010	26.83	4.83	80	***	***	***
1	472	8.74	34.650	26.91	4.86	73	***	***	***
1	700	7.06	34.540	27.07	4.49	68	***	***	***
1	1000	5.12	34.520	27.30	4.25	61	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 233/61 2/ 5/61 0452 K 37 04 S 150 03 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN & SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.03	35.520	25.68	***	***	***	***	***
1	10	17.94	35.520	25.70	***	***	***	***	***
1	20	18.05	35.520	25.68	***	***	***	***	***
1	30	18.00	35.530	25.70	***	***	***	***	***
1	40	17.81	35.520	25.73	***	***	***	***	***
1	50	17.70	35.520	25.76	***	***	***	***	***

STATION LH 7/ 234/61 DATE 2/ 5/61 TIME 0745 K LATITUDE 37 04 S LONGITUDE 150 08 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

85 *** ** 36 2 * * * * * * * * * * * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.31	35.590	25.71	***	***	***	***	***
1	10	18.09	35.610	25.74	***	***	***	***	***
1	20	18.21	35.640	25.73	***	***	***	***	***
1	30	18.18	35.570	25.68	***	***	***	***	***
1	40	18.20	35.550	25.66	***	***	***	***	***
1	50	18.20	35.550	25.66	***	***	***	***	***
1	70	17.67	35.500	25.75	***	***	***	***	***

STATION LH 7/ 235/61 DATE 2/ 5/61 TIME 0934 K LATITUDE 37 04 S LONGITUDE 150 13 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

110 *** ** 36 2 * * * * * * * * * * * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.69	35.620	25.69	***	***	***	***	***
1	10	18.27	35.590	25.67	***	***	***	***	***
1	20	18.30	35.550	25.64	***	***	***	***	***
1	30	18.06	35.550	25.70	***	***	***	***	***
1	40	17.97	35.570	25.73	***	***	***	***	***
1	50	17.98	35.550	25.72	***	***	***	***	***
1	70	17.86	35.520	25.72	***	***	***	***	***
1	85	17.72	35.500	25.74	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 236/61 2/ 5/61 0933 K 37 04 S 150 18 E

SONIC DEPTH	AIR TEMP.	WIND DIR.	SP.	WIND DIR.	SP.	CLOUD TYPE	AMT.	ANEM. HEIGHT	SEA DIR.	AMT.	VIS.	DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3	
172	***	36	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE											
1	0	19.87	35.730	25.37	***	***	***	***	***											
1	10	19.87	35.730	25.37	***	***	***	***	***											
1	20	19.81	35.730	25.39	***	***	***	***	***											
1	30	19.76	35.730	25.40	***	***	***	***	***											
1	40	19.77	35.710	25.38	***	***	***	***	***											
1	50	19.78	35.730	25.39	***	***	***	***	***											
1	75	18.67	35.620	25.60	***	***	***	***	***											
1	100	16.78	35.500	25.97	***	***	***	***	***											

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 237/61 2/ 5/61 1028 K 37 04 S 150 23 E

SONIC DEPTH	AIR TEMP.	WIND DIR.	SP.	WIND DIR.	SP.	CLOUD TYPE	AMT.	ANEM. HEIGHT	SEA DIR.	AMT.	VIS.	DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3	
***	***	36	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE											
2	0	20.26	35.790	25.31	***	***	***	***	***											
1	25	20.14	35.810	25.36	***	***	***	***	***											
1	50	19.92	35.730	25.36	***	***	***	***	***											
1	75	19.95	35.730	25.35	***	***	***	***	***											
1	100	19.74	35.810	25.47	***	***	***	***	***											
1	125	18.82	35.640	25.57	***	***	***	***	***											
1	150	17.92	35.550	25.73	***	***	***	***	***											
1	175	17.11	35.460	25.86	***	***	***	***	***											
1	200	13.79	35.430	26.58	***	***	***	***	***											

STATION
 LH 7/ 238/61

DATE	2/ 5/61	TIME	1134 K	LATITUDE	37 04 S	LONGITUDE	150 28 E		
SONIC AIR TEMP. DEPTH	DIR. SP. DIR. SP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	SEA DIR. AMT.	SWELL DIR, AMT,	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
***	***	36 3	*	*	*	*	*	30 0 *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.16	35.460	25.39	***	***	***	***	***
1	22	20.14	35.820	25.37	***	***	***	***	***
1	43	20.10	35.820	25.38	***	***	***	***	***
1	65	20.04	35.810	25.39	***	***	***	***	***
1	67	19.83	35.770	25.41	***	***	***	***	***
1	130	18.81	35.730	25.65	***	***	***	***	***
1	173	17.70	35.590	25.82	***	***	***	***	***
1	260	14.92	35.190	26.46	***	***	***	***	***
1	433	11.56	35.030	26.71	***	***	***	***	***

STATION
 LH 7/ 239/61

DATE	2/ 5/61	TIME	2150 K	LATITUDE	36 25 S	LONGITUDE	150 09 E		
SONIC AIR TEMP. DEPTH	DIR. SP. DIR. SP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	SEA DIR. AMT.	SWELL DIR, AMT,	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
55	***	36 2	*	*	*	*	*	* * *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.72	35.420	25.33	***	***	***	***	***
1	10	18.23	35.590	25.68	***	***	***	***	***
1	20	18.03	35.590	25.73	***	***	***	***	***
1	30	17.68	35.530	25.77	***	***	***	***	***
1	40	16.78	35.440	25.92	***	***	***	***	***
1	50	16.68	35.440	25.94	***	***	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
LM 7/ 240/61		2/ 5/61	2240 K	36 25 S	150 14 E				
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
DEPTH KFT DRY	32 2	*	*	*	*	*	*	*	
110 ***	***	32 2	*	*	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	19.59	35.730	25.44	***	***	***	***	***
1	10	19.54	35.730	25.46	***	***	***	***	***
1	20	19.64	35.730	25.43	***	***	***	***	***
1	30	19.60	35.730	25.44	***	***	***	***	***
1	40	19.51	35.730	25.47	***	***	***	***	***
1	50	19.20	35.680	25.51	***	***	***	***	***
1	75	16.71	35.500	25.98	***	***	***	***	***
1	100	15.17	35.350	26.22	***	***	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
DH 7/ 241/61		2/ 5/61	2335 K	36 25 S	150 19 E				
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
DEPTH KFT DRY	34 2	*	*	*	*	*	*	*	
146 ***	***	34 2	*	*	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	20.01	35.770	25.36	***	***	***	***	***
1	25	19.95	35.770	25.38	***	***	***	***	***
1	50	19.24	35.680	25.50	***	***	***	***	***
1	75	17.76	35.680	25.87	***	***	***	***	***
1	100	16.56	35.590	26.09	***	***	***	***	***
1	125	15.05	35.390	26.28	***	***	***	***	***
1	145	14.39	35.320	26.37	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 242/61 3/ 5/61 0030 K 36 25 S 150 34 E

SONIC DEPTH	AIR TEMP. WFT	WIND DIR, SP.	WIND DIR, SP.	CLOUD TYPE	ANEM. HEIGHT	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
***	***	34	2	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	19.71	35.730	25.41	***	***	***	***	***	***	***
1	25	18.81	35.640	25.58	***	***	***	***	***	***	***
1	50	18.64	35.640	25.62	***	***	***	***	***	***	***
1	75	18.18	35.620	25.72	***	***	***	***	***	***	***
1	100	16.37	35.430	26.01	***	***	***	***	***	***	***
1	150	14.15	35.300	26.41	***	***	***	***	***	***	***
1	200	12.97	35.210	26.58	***	***	***	***	***	***	***
1	300	11.55	35.050	26.73	***	***	***	***	***	***	***

SONIC AIR TEMP. WIND DIR, SP. WIND DIR, SP. CLOUD TYPE ANEM. HEIGHT SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 WIRE ANGLES
 CAST1 CAST2 CAST3

STATION DATE TIME LATITUDE LONGITUDE
 EH 7/ 243/61 3/ 5/61 0135 K 36 25 S 150 29 E

SONIC DEPTH	AIR TEMP. WFT	WIND DIR, SP.	WIND DIR, SP.	CLOUD TYPE	ANEM. HEIGHT	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
***	***	34	2	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
2	0	19.49	35.770	25.50	***	***	***	***	***	***	***
1	25	19.41	35.770	25.52	***	***	***	***	***	***	***
1	50	18.63	35.680	25.65	***	***	***	***	***	***	***
1	75	18.43	35.620	25.66	***	***	***	***	***	***	***
1	97	17.37	35.520	25.84	***	***	***	***	***	***	***
1	146	14.74	35.390	26.35	***	***	***	***	***	***	***
1	194	13.33	35.280	26.56	***	***	***	***	***	***	***
1	291	11.84	35.140	26.75	***	***	***	***	***	***	***
1	465	9.32	34.740	26.88	***	***	***	***	***	***	***

SONIC AIR TEMP. WIND DIR, SP. WIND DIR, SP. CLOUD TYPE ANEM. HEIGHT SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 WIRE ANGLES
 CAST1 CAST2 CAST3

STATION	DATE	TIME	LATITUDE	LONGITUDE			
LH 7/ 246/61	3/ 5/61	1130 K	35 50 S	150 28 E			
SONIC AIR TEMP, WIND ANEM, CLOUD	VIS, SEA SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, DIR, AMT, PRESSURE	CAS1 CAS2 CAS3					
128 *** ** 02 2 * * * * * * * *							
CAS1 DEPTH TEMP,	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT,	INORG. P	TOTAL P	NITRATE
2 0 19.85	35.730	25.38	***	***	***	***	***
1 10 19.88	35.730	25.37	***	***	***	***	***
1 20 19.87	35.730	25.37	***	***	***	***	***
1 30 19.90	35.730	25.36	***	***	***	***	***
1 40 19.70	35.730	25.41	***	***	***	***	***
1 50 19.65	35.730	25.43	***	***	***	***	***
1 75 18.07	35.550	25.69	***	***	***	***	***
1 100 18.22	35.410	26.03	***	***	***	***	***
1 125 15.23	35.350	26.21	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
LH-7/ 247/61	3/ 5/61	1236 K	35 50 S	150 33 E			
SONIC AIR TEMP, WIND ANEM, CLOUD	VIS, SEA SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, DIR, AMT, PRESSURE	CAS1 CAS2 CAS3					
139 *** ** 02 2 * * * * * * * *							
CAS1 DEPTH TEMP,	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT,	INORG. P	TOTAL P	NITRATE
2 0 19.88	35.860	25.47	***	***	***	***	***
1 10 19.76	35.840	25.48	***	***	***	***	***
1 20 19.69	35.860	25.52	***	***	***	***	***
1 30 19.80	35.770	25.42	***	***	***	***	***
1 40 19.76	35.770	25.43	***	***	***	***	***
1 50 19.77	35.750	25.41	***	***	***	***	***
1 75 19.78	35.730	25.40	***	***	***	***	***
1 100 17.63	35.530	25.79	***	***	***	***	***
1 130 15.14	35.320	26.20	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 7 / 246/61		3 / 5/61		1335 K		35 50 S		150 38 E	
		ANEM. CLOUD		VIS. SEA		SWELL		ATMOS.	
SONIC AIR TEMP. WIND DIR. SP.		HEIGHT TYPE AMT.		DIR. AMT.		DIR. AMT. PRESSURE		WIRE ANGLES	
DEPTH MET DRY		02 2		* * *		* * *		CAST1 CAST2 CAST3	
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.19	35.750	25.30	***	***	***	***	***
1	25	21.55	35.820	24.98	***	***	***	***	***
1	50	20.06	35.820	25.39	***	***	***	***	***
1	75	18.75	35.680	25.62	***	***	***	***	***
1	97	17.48	35.590	25.87	***	***	***	***	***
1	146	15.15	35.410	26.27	***	***	***	***	***
1	194	13.85	35.280	26.45	***	***	***	***	***
1	291	11.65	35.050	26.71	***	***	***	***	***
1	485	9.11	34.690	26.88	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH 7 / 249/61		3 / 5/61		1446 K		35 50 S		150 43 E	
		ANEM. CLOUD		VIS. SEA		SWELL		ATMOS.	
SONIC AIR TEMP. WIND DIR. SP.		HEIGHT TYPE AMT.		DIR. AMT.		DIR. AMT. PRESSURE		WIRE ANGLES	
DEPTH MET DRY		18 3		* * *		* * *		CAST1 CAST2 CAST3	
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.20	35.810	25.34	***	***	***	***	***
1	25	20.15	35.810	25.36	***	***	***	***	***
1	50	19.77	35.750	25.41	***	***	***	***	***
1	75	19.16	35.660	25.50	***	***	***	***	***
1	97	17.38	35.620	25.92	***	***	***	***	***
1	146	15.37	35.410	26.22	***	***	***	***	***
1	184	13.85	35.250	26.43	***	***	***	***	***
1	291	12.17	35.050	26.61	***	***	***	***	***
1	485	9.12	34.720	26.90	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH 7/ 250/61	3/ 5/61	1830 K	35 22 S	150 35 E				
SONIC AIR TEMP, WIND	ANEM, CLOUD	VIS, SEA	SWELL	ATMOS,	WIRE ANGLES			
DEPTH WET DRY DIR, SP,	HEIGHT TYPE AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3			
55 *** ** 18 1	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INDRG, P	TOTAL P	NITRATE
1	0	19.35		***	***	***	***	***
1	10	19.90		***	***	***	***	***
1	20	19.99		***	***	***	***	***
1	30	18.82		***	***	***	***	***
1	40	18.67		***	***	***	***	***
1	50	18.13		***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH 7/ 251/61	3/ 5/61	2205 K	35 07 S	150 52 E				
SONIC AIR TEMP, WIND	ANEM, CLOUD	VIS, SEA	SWELL	ATMOS,	WIRE ANGLES			
DEPTH WET DRY DIR, SP,	HEIGHT TYPE AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3			
110 *** ** 18 2	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INDRG, P	TOTAL P	NITRATE
1	0	18.97		***	***	***	***	***
1	10	19.00		***	***	***	***	***
1	20	18.90		***	***	***	***	***
1	30	18.33		***	***	***	***	***
1	40	18.05		***	***	***	***	***
1	50	18.04		***	***	***	***	***
1	75	16.29		***	***	***	***	***
1	100	14.92		***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 7/ 254/61 4/ 5/61 0058 K 35 07 S 151 07 E

SONIC ATM TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP, HEIGHT TYPE AMT, DIR, APT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

*** ** 22 8 * * * * * * * * * * 50 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.42	35.730*	25.38	***	***	***	***	***
1	16	19.91	35.730*	25.36	***	***	***	***	***
1	32	19.44	35.730*	25.38	***	***	***	***	***
1	48	19.04	35.730*	25.35	***	***	***	***	***
1	64	17.73	35.570*	25.79	***	***	***	***	***
1	96	15.41	35.350*	26.12	***	***	***	***	***
1	128	14.81	35.280*	26.25	***	***	***	***	***
1	193	13.82	35.210*	26.57	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 LH 8/ 257/61 13/ 5/61 0810 K 35 06 S 151 03 E

SONIC ATM TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP, HEIGHT TYPE AMT, DIR, APT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

220 *** ** 21 3 * * * * * * * * * * 5 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.34	35.770	25.54	5.09	101	***	***	***
1	10	19.35	35.810	25.57	5.09	101	***	***	***
1	20	19.33	35.840	25.59	5.24	104	***	***	***
1	30	19.33	35.810	25.57	5.27	105	***	***	***
1	50	19.34	35.750	25.52	5.21	103	***	***	***
1	75	19.28	35.710	25.51	5.15	102	***	***	***
1	100	19.07	35.710	25.56	5.12	101	***	***	***
1	150	16.47	35.550	25.98	4.69	89	***	***	***
1	200	15.08	35.350	26.24	4.60	84	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE										
LH 8/ 258/61	13/ 5/61	2335 K	35 07 S	150 52 E										
SONIC AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SHELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH	WET	DRY	***	21	2	*	*	*	*	*	*	*	*	*
110	***	***	21	2	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	19.11	35.750	25.58	5.27	104	***	***	***					
1	10	19.09	35.750	25.59	5.15	102	***	***	***					
1	20	19.09	35.750	25.59	5.21	103	***	***	***					
1	30	19.10	35.750+	25.59	5.21	103	***	***	***					
1	40	19.09	35.750	25.59	5.29	105	***	***	***					
1	50	19.03	35.730	25.59	5.24	103	***	***	***					
1	75	18.88	35.730	25.63	5.27	104	***	***	***					
1	100	18.41	35.710	25.73	5.19	101	***	***	***					

STATION	DATE	TIME	LATITUDE	LONGITUDE										
LH 8/ 259/61	14/ 5/61	0045 K	35 07 S	150 57 E										
SONIC AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SHELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH	WET	DRY	***	21	2	*	*	*	*	*	*	*	*	*
128	***	***	21	2	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	19.15	35.710	25.54	5.18	102	***	***	***					
1	10	19.14	35.730	25.56	5.18	102	***	***	***					
1	20	19.13	35.730	25.56	5.09	101	***	***	***					
1	30	19.14	35.720+	25.55	5.18	102	***	***	***					
1	40	19.14	35.710	25.55	5.18	102	***	***	***					
1	50	19.16	35.750	25.57	5.18	103	***	***	***					
1	75	18.09	35.750	25.59	5.18	102	***	***	***					
1	100	18.98	35.750	25.62	5.12	101	***	***	***					
1	125	17.53	35.610	25.87	4.66	89	***	***	***					

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE			
EH 8/ 260/61	14/ 5/61	0145 K	35 07 S	151 03 E			
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
146 *** **	21 2	*	*	*	*	*	0 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
1	19.29	35.710	25.51	5.24	104	***	*** **
1	19.29	35.700	25.50	5.12	102	***	*** **
1	19.28	35.710	25.51	5.15	102	***	*** **
1	19.28	35.700	25.50	5.18	103	***	*** **
1	19.29	35.700	25.50	5.12	102	***	*** **
1	19.32	35.700	25.49	5.12	102	***	*** **
1	19.17	35.710	25.54	5.27	104	***	*** **
1	18.17	35.640	25.74	4.75	92	***	*** **
1	17.39	35.610	25.91	4.60	88	***	*** **

STATION	DATE	TIME	LATITUDE	LONGITUDE			
EH 8/ 261/61	14/ 5/61	0248 K	35 06 S	151 07 E			
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
695 *** **	23 3	*	*	*	*	*	5 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
1	19.15	35.750	25.57	5.15	102	***	*** **
1	19.17	35.730	25.55	5.18	103	***	*** **
1	19.15	35.730	25.56	5.15	102	***	*** **
1	19.16	35.730	25.56	5.15	102	***	*** **
1	19.18	35.710	25.66	4.83	195	***	*** **
1	16.38	35.500	26.06	4.52	85	***	*** **
1	14.42	35.590	26.57	4.66	84	***	*** **
1	12.66	35.170	26.61	4.98	86	***	*** **
1	9.99	34.690	26.90	4.86	77	***	*** **

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH R/ 262/61		14/ 5/61		0403 K		35 06 S		151 13 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH 5 FT	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
1050 ***	***	23	3	*	*	*	*	10	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.14	35.730*	25.56	5.09	101	***	***	***
1	25	19.15	35.730	25.56	5.15	102	***	***	***
1	47	19.15	35.730	25.56	5.24	104	***	***	***
1	71	19.14	35.730	25.56	5.18	102	***	***	***
1	94	19.02	35.730	25.59	5.01	99	***	***	***
1	141	16.74	35.930	26.00	4.46	84	***	***	***
1	164	14.51	35.320	26.34	4.46	80	***	***	***
1	262	12.64	35.230	26.66	4.95	86	***	***	***
1	470	9.45	34.720	26.85	5.01	80	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
CH R/ 263/61		14/ 5/61		0516 K		35 06 S		151 18 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH 5 FT	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
***	***	23	3	*	*	*	*	0	45
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.09	35.710	25.56	5.21	103	***	***	***
2	21	19.12	35.710	25.55	5.15	102	***	***	***
2	41	19.10	35.730*	25.57	5.21	103	***	***	***
2	61	19.10	35.750	25.59	5.15	102	***	***	***
2	82	19.05	35.750	25.60	5.06	100	***	***	***
2	123	14.40	35.440	25.92	4.37	82	***	***	***
2	164	15.04	35.440	26.32	4.46	81	***	***	***
2	246	12.91	35.350	26.70	4.86	85	***	***	***
2	410	9.87	34.980	26.90	5.52	89	***	***	***

* PROPERTY DOUTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
UH 8/ 280/61		18/ 5/61		0830 K		36 17 S		151 45 E	
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2
DEPTH MET	18	2	*	*	*	*	*	20	0
***	***	***	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0	35.710	25.57	5.06	100	***	***	***	
2	25	35.810	25.65	5.06	100	***	***	***	
2	50	35.810	25.65	5.18	102	***	***	***	
1	58	35.810	25.65	5.06	100	***	***	***	
1	78	35.810	25.66	5.06	100	***	***	***	
1	117	35.810	25.67	5.06	100	***	***	***	
1	155	35.810	25.67	5.01	99	***	***	***	
1	233	35.710	25.75	4.72	92	***	***	***	
1	389	35.570	26.23	4.78	89	***	***	***	
1	544	35.170	26.62	4.83	83	***	***	***	
1	777	34.630	26.88	4.95	78	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE	
UH 8/ 283/61		19/ 5/61		0829 K		36 32 S		150 25 E	
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2
DEPTH MET	14	1	*	*	*	*	*	20	*
***	***	***	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
2	0	35.710	25.70	5.27	103	***	***	***	
2	25	35.710	25.71	5.44	106	***	***	***	
2	50	35.710	25.77	5.32	103	***	***	***	
1	71	35.660	25.78	5.29	102	***	***	***	
1	94	35.660	25.83	5.27	102	***	***	***	
1	141	35.320	26.26	4.32	78	***	***	***	
1	188	35.210	26.49	4.52	79	***	***	***	
1	382	34.990	26.69	4.66	78	***	***	***	
1	470	34.690	26.91	4.66	74	***	***	***	
1	658	34.540	26.99	4.66	69	***	***	***	
1	940	34.450	27.24	4.26	61	***	***	***	

STATION CH 9/ 297/61 DATE 28/ 5/61 TIME 0835 K LATITUDE 37 58 S LONGITUDE 150 05 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

585 *** ** 25 1 * * * * * * * * * * 0 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.24	35.530	26.12	5.47	102	***	***	***
1	28	16.25	35.530	26.11	5.47	102	***	***	***
1	55	16.24	35.530	26.12	5.47	102	***	***	***
1	83	16.20	35.530	26.13	5.43	101	***	***	***
1	110	14.28	35.280	26.36	4.85	87	***	***	***
1	166	12.89	35.170	26.57	4.88	85	***	***	***
1	221	12.16	35.080	26.64	4.88	83	***	***	***
1	331	10.22	34.810	26.79	5.17	84	***	***	***
1	552	8.54	34.560	26.87	5.06	79	***	***	***

STATION CH 9/ 299/61 DATE 29/ 5/61 TIME 0805 K LATITUDE 38 04 S LONGITUDE 151 57 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

*** ** 27 4 * * * * * * * * * * * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	16.47	35.530	26.06	5.49	103	***	***	***
2	28	16.43	35.530	26.07	5.38	101	***	***	***
2	55	16.44	35.530	26.07	5.41	101	***	***	***
2	82	16.47	35.530	26.06	5.35	100	***	***	***
2	110	15.26	35.350	26.20	4.94	90	***	***	***
1	164	13.12	35.170	26.52	4.68	82	***	***	***
1	219	12.25	35.080	26.62	4.77	82	***	***	***
1	328	10.23	34.790	26.77	4.59	75	***	***	***
1	547	7.99	34.560	26.95	4.54	70	***	***	***
1	770	6.24	34.400	27.07	4.36	64	***	***	***
1	1090	4.36	34.400	27.29	3.92	55	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH 9/ 301/61	30/ 5/61	0910 K	38 22 S	153 07 E			
SONIC AIR TEMP.	WIND DIR. SP.	CLOUD AMT.	ANEM. HEIGHT	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH WET DRY	*** 16 2	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
2	0 17.94	35.640	25.79	5.17	100	***	***
1	28 17.92	35.640	25.80	5.17	100	***	***
1	57 17.89	35.640	25.81	5.11	99	***	***
1	65 17.89	35.640	25.81	5.20	100	***	***
1	113 16.91	35.460	25.91	4.91	93	***	***
1	170 15.82	35.440	26.14	5.20	96	***	***
1	227 14.30	35.320	26.39	4.76	85	***	***
1	340 12.32	35.100	26.62	4.88	84	***	***
1	567 9.03	34.630	26.84	4.76	75	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH 9/ 303/61	31/ 5/61	0825 K	39 10 S	154 12 E			
SONIC AIR TEMP.	WIND DIR. SP.	CLOUD AMT.	ANEM. HEIGHT	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH WET DRY	*** 28 2	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *	*** * * * * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
2	0 17.81	35.660	25.84	5.28	102	***	***
2	28 17.79	35.660	25.85	5.29	102	***	***
2	55 17.78	35.660	25.85	5.29	102	***	***
2	82 17.75	35.660	25.86	5.26	101	***	***
2	110 17.26	35.570	25.91	5.06	96	***	***
2	165 15.90	35.430	26.12	4.77	88	***	***
1	188 15.41	35.370	26.18	4.54	83	***	***
1	282 13.36	35.250	26.53	4.88	86	***	***
1	470 10.65	34.870	26.76	5.05	83	***	***
1	638 8.48	34.580	26.89	4.71	74	***	***
1	940 5.92	34.420	27.13	4.29	63	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE							
09 9/ 305/61	1/ 6/61	0815 K	39 51 S	153 04 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
*** ***	*** ** 2	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	DXYGEN % SAT,	INCHG. P	TOTAL P	NITRATE		
2	0	16.14	35.520	26.13	5.35	100	***	***	***		
2	28	16.06	35.520	26.15	5.43	101	***	***	***		
2	55	16.00	35.520	26.17	4.76	88	***	***	***		
2	82	15.94	35.520	26.18	5.37	100	***	***	***		
2	110	13.69	35.250	26.46	4.83	85	***	***	***		
2	165	12.54	35.160	26.63	4.88	84	***	***	***		
1	219	11.61	35.030	26.70	5.03	85	***	***	***		
1	328	10.67	34.830	26.76	5.29	87	***	***	***		
1	547	8.31	34.520	26.87	5.23	81	***	***	***		
1	773	4.77	34.430	27.02	4.45	67	***	***	***		
1	1040	4.64	34.400	27.26	3.95	56	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE							
09 9/ 307/61	2/ 6/61	0805 K	39 39 S	151 42 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
*** ***	*** 30 4	*	*	*	*	*	*	*	45	0	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	DXYGEN % SAT,	INCHG. P	TOTAL P	NITRATE		
2	0	17.82	35.640	25.82	5.29	102	***	***	***		
2	25	17.79	35.640	25.83	5.29	102	***	***	***		
2	50	17.73	35.640	25.85	5.38	103	***	***	***		
2	75	16.82	35.570	26.01	5.44	103	***	***	***		
2	100	16.74	35.550	26.02	5.44	103	***	***	***		
1	113	16.57	35.550	26.06	5.41	102	***	***	***		
1	226	13.59	35.250	26.48	4.71	83	***	***	***		
1	377	10.38	34.810	26.76	4.59	75	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH 9/ 309/61	3/ 6/61	0953 K	40 02 S	150 10 E				
SONIC AIR TEMP, WIND DIR, SP, WIND DIR, AMT, CLOUD TYPE AMT, VIS, SEA DIR, AMT, SHELL DIR, AMT, ATMOS. PRESSURE CAST1 CAST2 CAST3								
*** ** 34 1	*	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
2	0 16.68	35.620	26.08	5.15	97	***	***	***
2	28 16.64	35.620	26.09	5.32	100	***	***	***
2	55 16.13	35.530	26.14	5.15	96	***	***	***
2	62 16.08	35.530	26.15	5.32	99	***	***	***
2	110 15.81	35.500	26.19	5.21	96	***	***	***
1	170 14.25	35.280	26.37	5.21	93	***	***	***
1	230 13.07	35.210	26.56	4.71	82	***	***	***
1	365 11.41	34.970	26.70	4.92	83	***	***	***
1	580 8.36	34.560	26.89	5.32	83	***	***	***
1	810 6.81	34.450	27.03	4.43	67	***	***	***
1	1150 4.66	34.430	27.28	4.05	58	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH 9/ 311/61	4/ 6/61	0950 K	41 05 S	149 37 E				
SONIC AIR TEMP, WIND DIR, SP, WIND DIR, AMT, CLOUD TYPE AMT, VIS, SEA DIR, AMT, SHELL DIR, AMT, ATMOS. PRESSURE CAST1 CAST2 CAST3								
*** ** 12 4	*	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	0 16.32	35.570	26.13	5.35	100	***	***	***
1	25 16.28	35.570	26.14	2.45	46	***	***	***
1	53 16.12	35.550	26.16	5.38	100	***	***	***
1	80 16.03	35.530	26.17	5.38	100	***	***	***
1	106 15.95	35.530	26.18	5.43	101	***	***	***
1	160 14.33	35.340	26.40	4.86	87	***	***	***
1	212 13.17	35.170	26.51	4.71	82	***	***	***
1	317 11.32	34.960	26.71	4.83	81	***	***	***

STATION	DATE	TIME	LATITUDE		LONGITUDE	
CH10/ 316761	9/ 6/61	0845 K	43 15 S		148 37 E	
SONIC AIR TEMP, WIND DIR, SP, WIND ANEM, CLOUD VIS, SEA SWELL ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, APT, DIR, APT, PRESSURE CAST1 CAST2 CAST3						
*** ** 01 1	*	*	*	*	*	*
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
2	0	14.93	26.36	5.33	97	***
2	28	14.92	26.36	5.33	97	***
2	55	14.94	26.36	5.21	95	***
2	82	14.94	26.36	5.36	97	***
2	110	14.79	26.37	5.24	95	***
1	175	13.05	26.58	4.82	84	***
1	233	12.26	26.67	4.79	82	***
1	350	10.47	26.80	4.82	79	***
1	583	8.36	26.93	4.85	76	***
1	820	6.73	27.06	4.85	64	***
1	1170	4.03	27.35	3.85	54	***

STATION	DATE	TIME	LATITUDE		LONGITUDE	
CH10/ 318761	10/ 6/61	0835 K	43 10 S		150 12 E	
SONIC AIR TEMP, WIND DIR, SP, WIND ANEM, CLOUD VIS, SEA SWELL ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, APT, DIR, APT, PRESSURE CAST1 CAST2 CAST3						
*** ** 36 1	*	*	*	*	*	*
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
2	0	13.29	26.50	5.41	95	***
2	25	12.77	26.55	5.50	95	***
2	50	12.62	26.55	5.33	95	***
2	75	12.62	26.54	5.58	96	***
2	100	12.60	26.55	5.50	95	***
1	131	11.89	26.68	4.92	84	***
1	175	10.79	26.74	5.07	84	***
1	350	9.41	26.85	5.16	83	***
1	527	8.48	26.91	5.27	82	***
1	787	7.11	27.02	4.28	65	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
DH10/ 320/61		11/ 6/61		0835 K		43 11 S		151 31 E	
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES		
DEPTH MET	DRY	35	2	*	*	*	*	CAST1	CAST2
***	***	***	2	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	12.62	35.030	26.51	5.83	101	***	***	***
1	27	12.28	35.030	26.58	5.71	98	***	***	***
1	55	12.30	35.030	26.57	5.73	98	***	***	***
1	1	12.31	35.030	26.57	5.81	100	***	***	***
1	109	12.27	35.010	26.56	5.78	99	***	***	***
1	164	11.87	35.070	26.69	5.18	88	***	***	***
1	219	11.02	34.940	26.74	5.21	87	***	***	***
1	328	9.71	34.740	26.82	5.47	88	***	***	***
1	547	8.41	34.540	26.87	5.61	88	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
DH10/ 322/61		12/ 6/61		0840 K		43 12 S		153 05 E	
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES		
DEPTH MET	DRY	36	1	*	*	*	*	CAST1	CAST2
***	***	***	1	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.19	35.210	26.54	5.20	91	***	***	***
1	25	13.17	35.230	26.56	5.50	96	***	***	***
1	50	13.16	35.190	26.53	5.47	96	***	***	***
1	75	13.18	35.190	26.52	5.47	96	***	***	***
1	100	12.40	35.170	26.66	5.53	95	***	***	***
2	154	11.70	35.030	26.69	4.93	83	***	***	***
2	205	10.98	34.970	26.78	4.67	81	***	***	***
2	308	9.58	34.740	26.84	5.10	82	***	***	***
2	513	8.23	34.540	26.90	5.30	82	***	***	***
2	720	7.24	34.450	26.97	4.53	69	***	***	***
2	1030	5.08	34.520	27.20	5.02	74	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH10/ 325/61	13/ 6/61	0840 K	42 03 S	153 57 E

SONIC AIR TEMP.	WIND DIR.	SP.	WIND	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
***	***	32	1	*	*	*	*	*	*	*	*	*	*	*	*

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	13.24	35.170	26.49	5.67	99	***	***	***
2	28	13.20	35.170	26.50	5.70	100	***	***	***
2	55	13.21	35.170	26.50	5.67	99	***	***	***
2	82	13.19	35.170	26.50	5.61	98	***	***	***
2	110	12.85	35.160	26.87	5.53	96	***	***	***
1	166	11.66	35.100	26.75	5.16	87	***	***	***
1	221	10.76	34.920	26.78	5.13	85	***	***	***
1	331	9.31	34.740	26.88	5.27	84	***	***	***
1	552	8.13	34.540	26.91	5.27	82	***	***	***
1	770	6.77	34.430	27.02	4.61	69	***	***	***
1	1100	4.35	34.450	27.33	4.19	59	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH11/ 331/61	5/ 8/61	2335 K	34 40 S	150 55 E

SONIC AIR TEMP.	WIND DIR.	SP.	WIND	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
55	***	18	3	*	*	*	*	*	*	*	*	*	*	*	*

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.45	35.950	26.53	***	***	***	***	***
1	25	14.37	35.950	26.55	***	***	***	***	***
1	50	14.52	35.950	26.52	***	***	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
DH11/ 332/61		6/ 8/61	0034 K	34 40 S	151 00 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	MET DRY DIR. SP.	DIR. SP.	HEIGHT	DIR. AMT.	DIR. AMT.	PRESSURE	CAS11	CAS12	CAS13
110	***	18	3	*	*	*	*	*	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	15.29	35.620	26.40	***	***	***	***	***
1	27	15.28	35.610	26.40	***	***	***	***	***
1	54	15.13	35.610	26.43	***	***	***	***	***
1	81	15.13+	35.610	26.43	***	***	***	***	***
1	109	14.93	35.590	26.46	5.10	93	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE				
DH11/ 333/61		6/ 8/61	0143 K	34 40 S	151 05 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	MET DRY DIR. SP.	DIR. SP.	HEIGHT	DIR. AMT.	DIR. AMT.	PRESSURE	CAS11	CAS12	CAS13
125	***	18	2	*	*	*	*	*	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	15.62	35.640	26.30	***	***	***	***	***
1	25	15.38	35.620	26.38	***	***	***	***	***
1	50	15.27	35.620	26.41	***	***	***	***	***
1	75	15.27+	35.610	26.40	***	***	***	***	***
1	100	15.28	35.590	26.38	***	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH11/ 334/61	6/ 8/61	0247 K	34 40 S	151 10 E
SONIC AIR TEMP, WIND DIR, SP, ANEM. CLOUD	WIS. DIR, AMT, SWELL DIR, AMT, ATMOS. PRESSURE	SEA DIR, AMT, WIRE ANGLES		
DEPTH MET DRY	HEIGHT TYPE AMT,			
190 ***	18 2 * * * * *	* * * * *	* * * * *	* * * * *
CAST DEPTH	TEMP, SALINITY SIGMA-T	OXYGEN OXYGEN % SAT, INORG, P	TOTAL P	NITRATE
1	0 16.31 35.640	26.19 ***	***	***
1	29 16.29 35.640	26.19 ***	***	***
1	58 15.43 35.640	26.39 5.33	98 ***	***
1	87 15.32 35.620	26.40 ***	***	***
1	115 15.29 35.570	26.37 5.10	93 ***	***
1	145 15.23 35.570	26.38 ***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH11/ 335/61	6/ 8/61	0355 K	34 40 S	151 15 E
SONIC AIR TEMP, WIND DIR, SP, ANEM. CLOUD	WIS. DIR, AMT, SWELL DIR, AMT, ATMOS. PRESSURE	SEA DIR, AMT, WIRE ANGLES		
DEPTH MET DRY	HEIGHT TYPE AMT,			
340 ***	18 2 * * * * *	* * * * *	* * * * *	* * * * *
CAST DEPTH	TEMP, SALINITY SIGMA-T	OXYGEN OXYGEN % SAT, INORG, P	TOTAL P	NITRATE
1	0 16.60 35.680	26.15 ***	***	***
1	29 16.50 35.660	26.16 ***	***	***
1	50 15.46 35.620	26.37 ***	***	***
1	75 15.35 35.610	26.38 ***	***	***
1	100 15.17 35.620	26.43 ***	***	***
1	150 14.59 35.480	26.45 ***	***	***
1	200 13.80* 35.370	26.53 ***	***	***
1	300 12.87 35.280	26.65 ***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0111/ 338/61	6/ 8/61	1040 K	34 40 S	151 46 E					
SONIC AIR TEMP. WIND ANEM. CLOUD SIGMA-T OXYGEN .OXYGEN % SAT. INORG. P TOTAL P NITRATE									
DEPTH WET DRY DIR. SP. DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. SWELL DIR. AMT. DIR. AMT. ATMOS. PRESSURE CAST1 CAST2 CAST3									
*** ** 18 2 *	* * * * * 25 * *								
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	.OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.50	35.750	26.23	***	***	***	***	***
2	25	16.52	35.680	26.17	***	***	***	***	***
2	50	16.48	35.660	26.16	5.24	98	***	***	***
2	75	16.21	35.660	26.22	***	***	***	***	***
2	100	14.62	35.370	26.36	4.42	80	***	***	***
1	136	14.39	35.370	26.41	***	***	***	***	***
1	181	13.23	35.410*	26.68	4.37	77	***	***	***
1	272	10.81	34.490	26.43	3.88	64	***	***	***
1	453	8.41	34.490	26.83	4.22	66	***	***	***
1	634	7.10*	34.630	27.13	4.34	66	***	***	***
1	960	4.83	34.900	27.64	4.39	63	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0111/ 345/61	6/ 8/61	2155 K	35 07 S	150 52 E					
SONIC AIR TEMP. WIND ANEM. CLOUD SIGMA-T OXYGEN .OXYGEN % SAT. INORG. P TOTAL P NITRATE									
DEPTH WET DRY DIR. SP. DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. SWELL DIR. AMT. DIR. AMT. ATMOS. PRESSURE CAST1 CAST2 CAST3									
120 *** ** 21 1 *	* * * * * * * * * * * *								
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	.OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.64	35.710	26.16	***	***	***	***	***
1	25	15.54	35.590	26.32	***	***	***	***	***
1	50	15.20	35.570	26.38	***	***	***	***	***
1	75	14.35*	35.440	26.47	***	***	***	***	***
1	100	13.81	35.390	26.55	***	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION CH11/ 346/61 DATE 6/ 8/61 TIME 2300 K LATITUDE 35 07 S LONGITUDE 150 57 E

SONIC AIR TEMP, WIND DIR, SP. WIND ANEM. CLOUD TYPE AMT, VIS. SEA DIR. AMT. SWELL DIR. AMT. ATMOS. WIRE ANGLES
 DEPTH MFT DRY DIR, SP. HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT. PRESSURE CAST1 CAST2 CAST3

130	***	05	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE															
1	0	16.12	35.610	26.21	***	***	***	***	***															
1	25	15.60	35.640	26.35	***	***	***	***	***															
1	50	15.47	35.630+	26.37	5.27	97	***	***	***															
1	75	15.45+	35.620	26.37	***	***	***	***	***															
1	100	14.11	35.390	26.48	4.90	87	***	***	***															

STATION CH11/ 347/61 DATE 7/ 8/61 TIME 0006 K LATITUDE 35 07 S LONGITUDE 151 02 E

SONIC AIR TEMP, WIND DIR, SP. WIND ANEM. CLOUD TYPE AMT, VIS. SEA DIR. AMT. SWELL DIR. AMT. ATMOS. WIRE ANGLES
 DEPTH MFT DRY DIR, SP. HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT. PRESSURE CAST1 CAST2 CAST3

***	***	05	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE															
1	0	14.90	35.680	26.08	***	***	***	***	***															
1	25	14.81	35.680	26.10	***	***	***	***	***															
1	50	15.53	35.610	26.34	***	***	***	***	***															
1	75	15.51	35.590	26.33	***	***	***	***	***															
1	100	15.45	35.610	26.36	***	***	***	***	***															
1	150	14.92	35.480	26.38	***	***	***	***	***															
1	200	14.00+	35.530	26.61	***	***	***	***	***															
1	300	12.16	***	***	***	***	***	***	***															

* * PROPERTY DOUBTFUL
 * * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE						
0H11/ 348/61	7/ 8/61	0120 K	35 07 S	151 02 E						
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR, AMT.	SEA SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
***	***	05	2	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	16.40	35.750	26.115	***	***	***	***	***	
1	25	16.92	35.710	26.110	***	***	***	***	***	
1	50	16.46	35.700	26.110	4.48	85	***	***	***	
1	75	15.55	35.570	26.11	***	***	***	***	***	
1	100	15.55	35.620	26.14	4.96	91	***	***	***	
1	150	15.38	35.590	26.36	***	***	***	***	***	
1	200	14.23	35.370	26.44	4.37	78	***	***	***	
1	300	12.27	35.120	26.65	4.34	74	***	***	***	
1	500	8.40	34.700	26.94	4.46	70	***	***	***	
1	600	7.07	34.520	27.05	4.25	64	***	***	***	
1	980	5.18	34.490	27.27	3.90	56	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE						
0H11/ 349/61	7/ 8/61	0305 K	35 07 S	151 12 E						
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR, AMT.	SEA SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
***	***	32	1	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	16.67	35.710	26.16	***	***	***	***	***	
1	25	16.43	35.710	26.21	***	***	***	***	***	
1	50	16.09	35.680	26.27	***	***	***	***	***	
1	75	15.41	35.550	26.32	***	***	***	***	***	
1	100	15.57	35.620	26.34	***	***	***	***	***	
1	150	15.45	35.620	26.37	***	***	***	***	***	
1	200	13.71	35.250	26.46	***	***	***	***	***	
1	300	11.74	35.050	26.70	***	***	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE					
HM11/ 350/61	7/ 8/61	0415 K	35 07 S	151 17 E					
SONIC AIR TEMP. WIND ANFM. SHELL ATMOS. WIRE ANGLES	DEPTH WFT DIR. SP. HEIGHT TYPE AMT.	VIS. SEA DIR. AMT. PRESSURE	CLOUD AMT.	CAST1 CAST2 CAST3					
*** ** 30 1	* * * * *	* * * * *	* * * * *	* * * *					
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.90	35.700	26.09	***	***	***	***	***
1	25	14.80	35.700	26.12	***	***	***	***	***
1	50	15.93	35.640	26.27	4.37	81	***	***	***
1	75	15.78	35.640	26.31	***	90	***	***	***
1	100	15.62	35.620	26.33	4.90	***	***	***	***
1	150	15.22	35.570	26.38	***	***	***	***	***
1	197	14.12	35.460	24.54	4.82	86	***	***	***
1	295	11.15	34.960	26.74	4.25	71	***	***	***
1	492	8.44	34.610	26.92	4.11	64	***	***	***
1	689	6.67	34.470	27.07	4.18	63	***	***	***
1	985	4.62	***	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
HM11/ 351/61	7/ 8/61	0710 K	35 07 S	151 27 E					
SONIC AIR TEMP. WIND ANFM. SHELL ATMOS. WIRE ANGLES	DEPTH WFT DIR. SP. HEIGHT TYPE AMT.	VIS. SEA DIR. AMT. PRESSURE	CLOUD AMT.	CAST1 CAST2 CAST3					
*** ** 29 1	* * * * *	* * * * *	* * * * *	* * * *					
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.70	35.710	26.15	***	***	***	***	***
1	25	14.25	35.640	26.20	***	***	***	***	***
1	50	15.80	35.640	26.30	***	***	***	***	***
1	75	15.59	35.620	26.34	***	***	***	***	***
1	100	15.54	35.610	26.34	***	***	***	***	***
1	150	15.46	35.590	26.34	***	***	***	***	***
1	200	12.92	35.190	26.57	***	***	***	***	***
1	309	10.45	34.920	26.83	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH11/ 352/61	7/ 8/61	0925 K	35 07 S	151 37 E					
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3									
***	***	03	1	*					
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.90	35.730	26.12	***	***	***	***	***
1	25	16.48	35.700	26.19	***	***	***	***	***
1	50	15.62	35.550	26.28	4.59	85	***	***	***
1	75	15.09	35.460	26.32	***	***	***	***	***
1	100	15.23	35.530	26.35	4.51	82	***	***	***
1	150	13.44	35.190	26.47	***	***	***	***	***
1	200	12.30	35.120	26.64	4.28	73	***	***	***
1	297	9.47	34.740	26.86	4.37	70	***	***	***
1	495	7.14	34.540	27.06	4.20	64	***	***	***
1	693	5.69	34.490	27.21	4.14	60	***	***	***
1	990	4.09	34.520	27.42	3.74	52	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE						
LH11/ 359/61	7/ 8/61	2200 K	35 50 S	150 18 E						
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3										
90	***	36	2	*						
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE	
1	0	14.92	35.550	26.43	***	***	***	***	***	
1	25	14.79	35.570	26.48	***	***	***	***	***	
1	50	14.70	35.570	26.49	***	***	***	***	***	
1	75	14.59	35.570*	26.52	***	***	***	***	***	
		*	PROPERTY DOUBTFUL							
		+	PROPERTY INTERPOLATED							

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH11/ 360/61	7/ 8/61	2310 K	35 50 S	150 23 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
120 ***	29 1	*	*	*	*	*	*	0 *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.15	35.570	26.39	***	***	***	***	***
1	25	15.12	35.570	26.40	***	***	***	***	***
1	50	15.06	35.550	26.40	5.36	98	***	***	***
1	75	14.85	35.530	26.43	***	***	***	***	***
1	100	14.21	35.480	26.53	5.30	95	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH11/ 361/61	8/ 8/61	0013 K	35 50 S	150 28 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
120 ***	29 1	*	*	*	*	*	*	* * *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.39	35.610	26.37	***	***	***	***	***
1	25	15.20	35.570	26.38	***	***	***	***	***
1	50	15.13	35.550	26.38	***	***	***	***	***
1	75	15.15	35.570	26.40	***	***	***	***	***
1	100	14.36	35.460	26.48	***	***	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE										
CH11/ 362/61		R/ 8/61	0120 K	35 50 S		150 33 E										
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP. DR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	AMT.	VIS.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	CAST3
860	***	***	36	2	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
1	0	15.96	35.640	26.27	***	***	***	***	***							
1	25	15.96	35.640	26.27	***	***	***	***	***							
1	50	15.26	35.590	26.39	98	***	***	***	***							
1	75	15.19	35.570	26.39	***	***	***	***	***							
1	100	15.19	35.570	26.39	94	***	***	***	***							
1	150	15.20	35.550	26.37	***	***	***	***	***							
1	200	14.48	35.460	26.46	88	***	***	***	***							
1	300	13.24	35.370	26.65	89	***	***	***	***							
1	495	9.09	34.670	26.86	71	***	***	***	***							
1	690	6.88	34.470	27.04	***	***	***	***	***							

STATION		DATE	TIME	LATITUDE		LONGITUDE										
CH11/ 363/61		R/ 8/61	0250 K	35 50 S		150 38 E										
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP. DR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR.	AMT.	VIS.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	CAST3
***	***	***	36	2	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
1	0	15.73	35.640	26.32	***	***	***	***	***							
1	25	15.73	35.640	26.32	***	***	***	***	***							
1	50	15.64	35.610	26.32	***	***	***	***	***							
1	75	15.54	35.640	26.36	***	***	***	***	***							
1	100	15.50	35.620	26.36	***	***	***	***	***							
1	150	15.18	35.590	26.41	***	***	***	***	***							
1	200	14.62	35.620	26.55	***	***	***	***	***							
1	300	12.16	35.160	26.70	***	***	***	***	***							

STATION		DATE	TIME	LATITUDE		LONGITUDE			
LH11/ 364/61		8/ 8/61	0410 K	35 50 S	150 43 E				
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE		
DEPTH MET	36	2	*	*	*	*	WIRE ANGLES CAST1 CAST2 CAST3		
***	***	***	*	*	*	*	*		
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.60	35.660	26.36	***	***	***	***	***
1	25	15.67	35.730	26.40	***	***	***	***	***
1	50	15.71	35.730	26.39	4.96	92	***	***	***
1	75	15.54	35.620	26.35	***	***	***	***	***
1	100	15.52	35.620	26.35	5.02	92	***	***	***
1	150	15.36	35.640	26.40	***	***	***	***	***
1	196	14.96	35.520	26.40	4.88	89	***	***	***
1	293	12.56	35.170	26.63	4.37	75	***	***	***
1	489	9.37	34.740	26.97	4.54	73	***	***	***
1	685	7.43	34.540	27.02	4.34	66	***	***	***
1	978	5.16	34.510	27.29	3.94	57	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE			
LH11/ 365/61		8/ 8/61	0645 K	35 50 S	150 53 E				
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR. AMT.	SHELL DIR. AMT.	ATMOS. PRESSURE		
DEPTH MET	02	3	*	*	*	*	WIRE ANGLES CAST1 CAST2 CAST3		
***	***	***	*	*	*	*	*		
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.02	35.680	26.28	***	***	***	***	***
1	25	15.56	35.620	26.34	***	***	***	***	***
1	50	15.50	35.570	26.32	***	***	***	***	***
1	75	15.53	35.570	26.31	***	***	***	***	***
1	100	15.43	35.610	26.36	***	***	***	***	***
1	150	15.06	35.530	26.39	***	***	***	***	***
1	200	14.22+	35.390	26.46	***	***	***	***	***
1	300	12.45	35.100	26.60	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE												
CH11/ 373/61	8/ 8/61	1900 K	36 25 S	150 14 E												
SONIC AIR TEMP.	WIND DIR.	SP.	CLOUD	ANEW.	SEAS	DIR.	APT.	SWELL	DIR.	APT.	ATMOS.	DIR.	APT.	WIRE	ANGLES	
DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH
***	***	02	5	*	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
	1	0	14.11	35.570	26.18	***	***	***	***							
	1	25	15.50	35.570	26.41	***	***	***	***							
	1	50	14.96	35.570	26.44	98	***	***	***							
	1	75	14.43	35.500	26.50	***	***	***	***							
	1	100	13.57	***	***	5.39	***	***	***							

STATION	DATE	TIME	LATITUDE	LONGITUDE												
CH11/ 376/61	9/ 8/61	0010 K	37 04 S	150 03 E												
SONIC AIR TEMP.	WIND DIR.	SP.	CLOUD	ANEW.	SEAS	DIR.	APT.	SWELL	DIR.	APT.	ATMOS.	DIR.	APT.	WIRE	ANGLES	
DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH	NET DRY	DEPTH
***	***	36	3	*	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
	1	0	13.20	35.480	26.74	100	***	***	***							
	1	10	13.22	35.440	26.71	98	***	***	***							
	1	20	13.22	35.440	26.71	98	***	***	***							
	1	30	13.16	35.410	26.70	98	***	***	***							
	1	40	13.11	35.410	26.71	98	***	***	***							
	1	50	13.07	35.410	26.71	94	***	***	***							

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH11/ 379/61	9/ 8/61	0325 K	37 04 S	150 18 E				
SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, DIR, APT, PRESSURE CAST1 CAST2 CAST3								
113	***	36	3	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CX YG E N % SAT.	I N O R G . P	T O T A L P	N I T R A T E
1	0	13.48	35.440	26.65	***	***	***	***
1	25	13.49	35.460	26.67	***	***	***	***
1	50	13.26	35.410	26.68	100	***	***	***
1	75	12.94	35.410	26.74	***	***	***	***
1	100	12.88	35.440	26.78	5.39	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH11/ 390/61	9/ 8/61	0425 K	37 04 S	150 23 E				
SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS, WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, DIR, APT, PRESSURE CAST1 CAST2 CAST3								
260	***	36	3	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	I N O R G . P	T O T A L P	N I T R A T E
2	0	13.39	35.440	26.67	***	***	***	***
2	25	13.37	35.440	26.68	***	***	***	***
2	50	13.11	35.390	26.69	***	***	***	***
2	75	12.95	35.370	26.71	***	***	***	***
2	100	12.92	35.370	26.71	***	***	***	***
2	150	12.91	35.370	26.72	***	***	***	***
2	200	12.77	35.370	26.74	***	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE	TIME	LATITUDE	LONGITUDE					
DH11/381761		9/ 8/61	0800 K	37 04 S	150 28 E					
SONIC DEPTH	AIR TEMP, WIND DIR, SP,	WIND DIR, SP,	ANEM, HEIGHT	CLOUD TYPE	AMT,	VIS,	SEA DIR, AMT,	SHELL DIR, AMT,	ATMOS, PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	***	36	2	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.15	35.500	26.77	***	***	***	***	***	***
1	25	13.59	35.480	26.66	***	***	***	***	***	***
1	50	13.48	35.440	26.65	5.81	***	102	***	***	***
1	75	13.28	35.410	26.67	***	***	***	***	***	***
1	100	13.16	35.370	26.67	5.95	***	104	***	***	***
1	150	12.95	35.370	26.71	***	***	***	***	***	***
1	200	12.60+	35.350	26.76	6.18	***	107	***	***	***
1	300	11.99	35.210	26.77	5.58	***	95	***	***	***

STATION		DATE	TIME	LATITUDE	LONGITUDE					
DH11/382761		9/ 8/61	0826 K	37 04 S	150 38 E					
SONIC DEPTH	AIR TEMP, WIND DIR, SP,	WIND DIR, SP,	ANEM, HEIGHT	CLOUD TYPE	AMT,	VIS,	SEA DIR, AMT,	SHELL DIR, AMT,	ATMOS, PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	***	36	5	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.37	35.610	26.38	***	***	***	***	***	***
1	25	15.37	35.610	26.38	***	***	***	***	***	***
1	50	15.40	35.610	26.37	***	***	***	***	***	***
1	74	15.40	35.590	26.35	***	***	***	***	***	***
1	97	15.42	35.570	26.34	***	***	***	***	***	***
1	145	15.37	35.550	26.33	***	***	***	***	***	***
1	193	14.89	35.550	26.45	***	***	***	***	***	***
1	340	12.09	35.170	26.72	***	***	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH12/ 408/61	18/ 8/61	2228 K	34 05 S	151 33 E				
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES								
DEPTH MET DRY DIR, SP, HEIGHT	DIR, SP, HEIGHT	SEA DIR, AMT, PRESSURE	DIR, AMT, PRESSURE	CAST1 CAST2 CAST3				
315 *** 17 3	* * * * *	* * * * *	* * * * *	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.76	35.640	25.84	***	***	***	***
1	25	17.19	35.680	26.01	***	***	***	***
1	50	16.66	35.550	26.03	***	***	***	***
1	75	15.61	35.410	26.17	***	***	***	***
1	100	14.62	35.350	26.34	***	***	***	***
1	150	13.74	35.390	26.56	***	***	***	***
1	200	12.46	35.230	26.70	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
UH12/ 409/61	19/ 8/61	0005 K	34 05 S	151 38 E				
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES								
DEPTH MET DRY DIR, SP, HEIGHT	DIR, SP, HEIGHT	SEA DIR, AMT, PRESSURE	DIR, AMT, PRESSURE	CAST1 CAST2 CAST3				
483 *** 24 3	* * * * *	* * * * *	* * * * *	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.70	35.570	25.80	***	***	***	***
1	25	17.70	35.640	25.85	***	***	***	***
1	50	16.85	35.610	26.04	4.37	83	***	***
1	75	14.75	35.550	26.01	***	***	***	***
1	100	15.19	35.350	26.22	3.95	72	***	***
1	150	13.37	35.210	26.50	***	***	***	***
1	200	12.25	35.110*	26.64	4.46	76	***	***
1	300	10.61	34.940	26.82	4.34	72	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH12/ 410/61	19/ 8/61	0207 K	34 05 S	151 48 E					
SONIC AIR TEMP.	WIND DIR. SP.	WIND ANEM. HEIGHT	CLOUD AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
***	*** 18 4	*	*	*	*	*	*		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.53	35.640	25.65	***	***	***	***	***
1	25	18.54	35.640	25.64	***	***	***	***	***
1	50	18.54	35.680	25.68	***	***	***	***	***
1	75	17.86	35.640	25.81	***	***	***	***	***
1	100	17.39	35.700	25.98	***	***	***	***	***
1	150	15.86	35.480	26.17	***	***	***	***	***
1	200	14.44	35.350	26.38	***	***	***	***	***
1	300	11.21	34.920	26.69	**	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH12/ 411/61	19/ 8/61	0400 K	34 05 S	151 50 E					
SONIC AIR TEMP.	WIND DIR. SP.	WIND ANEM. HEIGHT	CLOUD AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
***	*** 18 4	*	*	*	*	*	0		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.03	35.730	25.84	***	***	***	***	***
1	25	18.00	35.730	25.85	***	***	***	***	***
1	50	17.96	35.730	25.86	3.61	70	***	***	***
1	75	17.98	35.720+	25.85	***	***	***	***	***
1	100	17.77	35.710	25.89	4.46	86	***	***	***
1	150	16.77	35.950	26.01	***	***	***	***	***
1	200	15.70	35.990	26.29	4.71	87	***	***	***
1	300	13.74	35.280	26.48	4.23	75	***	***	***
1	500	9.32	34.720	26.87	4.34	69	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
UH32/ 416/61		21/ 8/61		2310 K		34 46 S		151 12 E	
SONIC AIR TEMP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.
DEPTH MET DRY	4	25	4	25	4	25	4	25	4
497 ***	***	25	4	***	***	***	***	45	***
SONIC AIR TEMP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.
DEPTH MET DRY	4	25	4	25	4	25	4	25	4
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	15.76	35.590	26.27	***	***	***	***	***
1	25	15.76	35.570	26.26	***	***	***	***	***
1	45	15.49	35.620	26.36	***	***	***	***	***
1	68	15.35	35.590	26.37	***	***	***	***	***
1	91	15.37	35.590	26.36	***	***	***	***	***
1	114	14.82	35.530	26.44	***	***	***	***	***
1	181	13.80	35.370	26.53	***	***	***	***	***
1	272	11.89	35.100	26.71	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
EH12/ 417/61		22/ 8/61		.0050 K		34 40 S		151 20 E	
SONIC AIR TEMP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.
DEPTH MET DRY	6	25	6	25	6	25	6	25	6
***	***	25	6	***	***	***	***	40	***
SONIC AIR TEMP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.	WIND DIR. SP.
DEPTH MET DRY	6	25	6	25	6	25	6	25	6
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
2	0	14.12	35.640	26.23	***	***	***	***	***
2	21	14.13	35.640	26.23	***	***	***	***	***
2	41	15.54	35.640	26.36	5.05	93	***	***	***
2	64	15.49	35.640	26.37	***	***	***	***	***
2	86	15.44	35.640	26.38	4.85	89	***	***	***
2	129	15.36	35.640	26.40	***	***	***	***	***
2	171	15.06	35.620	26.45	4.91	90	***	***	***
1	257	12.89	35.230	26.61	4.37	76	***	***	***
1	500	9.43	35.010	27.07	4.09	66	***	***	***
1	700	7.82	34.830	27.19	3.81	59	***	***	***
1	1000	5.65	34.850	27.50	3.89	57	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE								
LH12/ 418/61	22/ 8/61	0355 K	34 46 S	151 30 E								
SONIC AIR TEMP.	WIND DIR.	SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
DEPTH MET	DIR.	SP.	DIR.	AMT.	DIR.	AMT.	DIR.	AMT.	PRESSURE	CAS1	CAS2	CAS3
***	***	25	5	*	*	*	*	*	*	43	*	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE			
1	0	14.26	35.640	26.20	***	***	***	***	***			***
1	22	16.25	35.640	26.20	***	***	***	***	***			***
1	44	15.52	35.610	26.34	***	***	***	***	***			***
1	66	15.46	35.620	26.36	***	***	***	***	***			***
1	88	15.36	35.610	26.38	***	***	***	***	***			***
1	131	15.25	35.590	26.39	***	***	***	***	***			***
1	175	14.34	35.420	26.61	***	***	***	***	***			***
1	267	12.24	35.160	26.69	***	***	***	***	***			***

STATION	DATE	TIME	LATITUDE	LONGITUDE								
LH12/ 424/61	22/ 8/61	1537 K	35 08 S	151 12 E								
SONIC AIR TEMP.	WIND DIR.	SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
DEPTH MET	DIR.	SP.	DIR.	AMT.	DIR.	AMT.	DIR.	AMT.	PRESSURE	CAS1	CAS2	CAS3
***	***	13	3	*	*	*	*	*	*	10	*	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE			
1	0	14.84	35.660	26.08	***	***	***	***	***			***
1	25	15.79	35.570	26.25	***	***	***	***	***			***
1	50	15.50	35.620	26.36	***	***	***	***	***			***
1	75	15.38	35.620	26.38	***	***	***	***	***			***
1	100	15.29	35.620	26.40	***	***	***	***	***			***
1	150	15.02	35.610	26.46	***	***	***	***	***			***
1	200	13.59	35.320	26.54	***	***	***	***	***			***
1	300	11.56	35.050	26.73	***	***	***	***	***			***

STATION		DATE		TIME	LATITUDE		LONGITUDE	
CH12/ 425/61		22/ 8/61		1706 K	35 07 S		151 17 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
***	***	***	3	*	*	*	*	5 15 *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P NITRATE
2	0	14.54	35.640	26.13	***	***	***	***
2	25	14.45	35.620	26.14	***	***	***	***
2	50	15.97	35.550	26.19	4.23	79	***	***
2	75	15.91	35.550	26.21	***	***	***	***
2	100	15.13	35.460	26.32	4.77	87	***	***
2	150	15.11	35.390	26.27	***	***	***	***
2	200	13.77	35.350	26.52	4.54	80	***	***
1	285	11.76	35.100	26.73	4.51	76	***	***
1	476	9.11	34.740	26.92	4.46	71	***	***
1	666	7.48	34.560	27.02	4.15	63	***	***
1	951	5.42	34.490	27.24	3.84	56	***	***

STATION		DATE		TIME	LATITUDE		LONGITUDE	
CH12/ 426/61		22/ 8/61		1935 K	35 07 S		151 26 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
***	***	***	3	*	*	*	*	39 * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P NITRATE
1	0	14.44	35.640	26.15	***	***	***	***
1	21	14.34	35.620	26.16	***	***	***	***
1	42	15.68	35.590	26.25	***	***	***	***
1	64	15.72	35.420	26.31	***	***	***	***
1	85	14.76	35.440	26.36	***	***	***	***
1	127	13.66	35.350	26.48	***	***	***	***
1	170	13.10	35.260	26.59	***	***	***	***
1	254	11.55	35.050	26.73	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE										
CH17/ 427/61	22/ 8/61	2130 K	35 07 S	151 36 E										
SONIC AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
***	***	25	3	*	*	*	*	*	*	*	*	35	30	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
2	17.20	35.620	25.96	***	***	***	***	***						
2	14.77	35.620	26.06	***	***	***	***	***						
2	16.00	35.620	26.24	5.22	97	***	***	***						
2	15.11	35.530	26.37	***	***	***	***	***						
2	15.06	35.620	26.45	5.30	97	***	***	***						
2	14.05	35.480	26.55	***	***	***	***	***						
2	13.12	35.350	26.66	5.08	89	***	***	***						
1	12.70	35.280	26.69	4.94	85	***	***	***						
1	9.06	34.740	26.93	4.23	67	***	***	***						
1	7.48	34.600	27.06	3.95	60	***	***	***						
1	5.23	34.600	27.35	3.78	55	***	***	***						

STATION	DATE	TIME	LATITUDE	LONGITUDE										
CH12/ 429/61	23/ 8/61	0130 K	35 07 S	151 56 E										
SONIC AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
***	***	25	2	*	*	*	*	*	*	*	*	35	45	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
2	14.65	35.640	26.10	***	***	***	***	***						
2	16.40	35.640	26.12	***	***	***	***	***						
2	15.74	35.570	26.26	***	***	***	***	***						
2	15.24	35.530	26.34	5.05	92	***	***	***						
2	15.39	35.610	26.37	5.02	92	***	***	***						
2	15.11	35.610	26.44	***	***	***	***	***						
2	13.64	35.370	26.57	4.65	82	***	***	***						
1	12.85	35.370	26.73	4.65	89	***	***	***						
1	442	***	34.970	4.43	***	***	***	***						
1	618	7.59	34.560	3.89	60	***	***	***						
1	853	5.54	***	3.72	***	***	***	***						

STATION DATE TIME LATITUDE LONGITUDE
 LH12/ 439/61 23/ 8/61 2215 K 35 50 S 150 18 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP. HEIGHT TYPE AMT. DIR, AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

110 *** 18 4 * * * * 18 2 18 1 1018.0 5 * *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE

1 0 15.66 35.440 26.18 *** **

1 25 15.76 35.550 26.24 *** **

1 50 15.26 35.590 26.39 *** **

1 75 15.12 35.590 26.42 *** **

1 100 14.33 35.440 26.47 *** **

STATION DATE TIME LATITUDE LONGITUDE
 TH12/ 440/61 24/ 8/61 0030 K 35 50 S 150 28 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DIR, SP. HEIGHT TYPE AMT. DIR, AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

402 *** 23 3 * * * * * * * 1017.0 15 * *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE

1 0 15.58 35.640 26.35 *** **

1 25 15.59 35.640 26.35 *** **

1 50 15.57 35.640 26.35 *** **

1 75 15.38 35.620 26.38 *** **

1 100 15.23 35.620 26.42 *** **

1 150 14.47 35.550 26.44 *** **

1 200 13.96 *** **

STATION	DATE	TIME	LATITUDE	LONGITUDE
PH12/ 441/61	24/ 8/61	0230 K	35 50 S	150 38 E
SONIC AIR TEMP, WIND DIR, SP, WIND ANEM, CLOUD AMT, SWELL DIR, AMT, PRESSURE ATMOS, WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT				
*** ** 18 5 * * * * *		18 3	18 4	1017.0
				35 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
0	15.55	35.660	26.38	***
1	15.55	35.640	26.36	***
1	15.57	35.640	26.36	***
1	15.59	35.640	26.35	***
1	15.58	35.640	26.35	***
1	106*	35.620	26.37	***
1	141*	35.550	26.32	***
1	211*	35.530	26.49	***
				INORG. P

				TOTAL P

				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
PH12/ 442/61	24/ 8/61	0435 K	35 50 S	150 43 E
SONIC AIR TEMP, WIND DIR, SP, WIND ANEM, CLOUD AMT, SWELL DIR, AMT, PRESSURE ATMOS, WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT				
*** ** 14 4 * * * * *		18 3	18 4	1017.0
				50 25 *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
0	15.38	35.620	26.38	***
2	15.37	35.620	26.38	***
2	15.37	35.620	26.38	5.33
2	6A*	35.610	26.38	***
2	91*	35.590	26.39	5.02
2	136*	35.530	26.45	***
2	181*	35.460	26.52	4.96
1	193*	35.530	26.47	4.88
1	321*	35.340	26.64	4.85
1	450*	34.900	26.77	4.29
1	643*	34.580	26.95	3.95
				INORG. P

				TOTAL P

				NITRATE

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 DH12/ 444/61 24/ 8/61 1110 K 35 50 S 151 02 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 14 4 * * * * 14 3 1019.0 35 25 *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 2 0 15.93 35.570 26.22 *** ** ** ** **
 2 25 15.24 35.530 26.35 *** ** ** **
 2 50 14.99 35.530 26.40 *** ** ** **
 2 71 14.93 35.530 26.41 *** ** ** **
 2 94 14.92 35.530 26.41 *** ** ** **
 2 141 14.18 35.480 26.54 *** ** ** **
 2 188 17.72 35.260 26.67 *** ** ** **
 1 P60 17.13 35.140 26.69 *** ** ** **
 1 433 9.95 34.900 26.90 *** ** ** **
 1 606 *** 34.720 *** ** ** **
 1 806 6.00 34.470 27.16 *** ** ** **

STATION DATE TIME LATITUDE LONGITUDE
 EH13/ 446/61 31/ 8/61 1330 K 34 05 S 151 33 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 258 *** ** * * * * * * * * * * * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 16.73 35.550 26.02 *** ** ** **
 1 25 16.71 35.550 26.02 *** ** ** **
 1 50 16.02 35.500 26.14 *** ** ** **
 1 75 15.39 35.500 26.29 *** ** ** **
 1 100 14.74 35.500 26.43 *** ** ** **
 1 150 14.37 35.460 26.48 *** ** ** **
 1 200 13.19 35.250 26.57 *** ** ** **

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0413/ 447/61	31/ 8/61	1430 K	34 05 S	151 37 E					
SONIC AIR TEMP.	WIND ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MFT DRY DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3				
480 *** ** 18 2	*	*	*	*	*				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	17.00	35.500	25.92	***	***	***	***	***
1	25	16.92	35.590	26.00	***	***	***	***	***
1	50	16.32	35.620	26.17	4.99	93	***	***	***
1	75	15.61	35.550	26.28	***	***	***	***	***
1	100	15.14	35.550	26.38	5.10	93	***	***	***
1	150	14.15	35.390	26.47	***	***	***	***	***
1	200	13.18	35.370	26.66	4.82	84	***	***	***
1	300	11.51	34.420	26.25	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0413/ 448/61	31/ 8/61	1426 K	34 05 S	151 47 E					
SONIC AIR TEMP.	WIND ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MFT DRY DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3				
*** ** **	*	*	*	*	*				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	17.16	35.640	25.98	***	***	***	***	***
1	25	17.14	35.640	25.99	***	***	***	***	***
1	50	16.73	35.570	26.03	***	***	***	***	***
1	75	16.08	35.590	26.20	***	***	***	***	***
1	100	15.59	35.590	26.31	***	***	***	***	***
1	150	14.40	35.460	26.47	***	***	***	***	***
1	200	14.05	35.390	26.50	***	***	***	***	***
1	300	11.51	35.010	26.71	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE		LONGITUDE				
EH13/ 449/61	31/ 8/61	1818 K	34	05 S	151	57 E			
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH *FT DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
***	***	*	*	*	*	*	*	*	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.60	35.640	26.12	***	***	***	***	***
1	25	17.43	35.640	25.92	***	***	***	***	***
1	50	17.16	35.620	25.97	4.99	95	***	***	***
1	75	16.64	35.570	26.05	***	***	***	***	***
1	100	16.08	35.500	26.13	4.54	84	***	***	***
1	150	15.30*	35.480	26.29	***	***	***	***	***
1	200	14.54	35.410	26.41	4.68	84	***	***	***
1	300	13.14	35.280	26.60	4.54	79	***	***	***
1	500	9.15	34.840*	26.99	***	***	***	***	***
1	700	7.47	34.540	27.01	4.23	65	***	***	***
1	1000	5.12	34.450	27.25	3.98	57	***	***	***

STATION	DATE	TIME	LATITUDE		LONGITUDE				
EH13/ 453/61	1/ 9/61	0350 K	34	40 S	151	15 E			
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH *FT DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
320	***	*	*	*	*	*	*	*	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.87	35.550	26.22	***	***	***	***	***
1	25	15.90	35.520	26.19	***	***	***	***	***
1	50	15.42	35.590	26.35	***	***	***	***	***
1	75	15.20	35.550	26.37	***	***	***	***	***
1	100	14.76	35.480	26.41	***	***	***	***	***
1	150	13.63	35.340	26.55	***	***	***	***	***
1	200	13.06	35.250	26.59	***	***	***	***	***
1	300	10.33	34.870	26.81	***	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH13/ 454/61	1/ 9/61	0437 K	34 40 S	151 20 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
750 ***	*	*	*	*	*	*	*	*	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.84	35.480	26.17	***	***	***	***	***
1	25	15.80	35.550	26.23	***	***	***	***	***
1	50	15.46	35.570	26.33	5.56	102	***	***	***
1	75	15.17	35.570	26.39	***	***	***	***	***
1	100	15.09	35.550	26.39	5.33	97	***	***	***
1	150	14.60	35.480	26.45	***	***	***	***	***
1	200	13.22	35.300	26.60	4.99	87	***	***	***
1	300	12.35	35.120	26.63	4.88	84	***	***	***
1	500	9.36	34.740	26.88	4.54	73	***	***	***
1	700	7.27	34.520	27.02	4.26	65	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH13/ 455/61	1/ 9/61	0435 K	34 40 S	151 29 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
***	*	*	*	*	*	*	*	*	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.69	35.590	26.29	***	***	***	***	***
1	25	15.70	35.590	26.29	***	***	***	***	***
1	50	15.63	35.570	26.29	***	***	***	***	***
1	75	15.42	35.530	26.30	***	***	***	***	***
1	100	15.31	35.520	26.32	***	***	***	***	***
1	150	14.42	35.460	26.47	***	***	***	***	***
1	200	13.45	35.370	26.61	***	***	***	***	***
1	300	11.96	35.120	26.71	***	***	***	***	***

STATION
LH13/ 456/61

DATE
1/ 9/61

TIME
0414 K

LATITUDE
34 40 S

LONGITUDE
151 39 E

SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES
DEPTH KFT DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

*** ** *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.00	35.620	26.24	***	***	***	***	***
1	25	16.35	35.620	26.16	***	***	***	***	***
1	50	14.00	35.610	26.23	5.53	103	***	***	***
1	75	15.55	35.610	26.34	***	***	***	***	***
1	100	14.96+	35.480	26.37	5.10	93	***	***	***
1	150	13.41	35.300	26.48	***	***	***	***	***
1	200	12.55	35.190	26.65	4.37	75	***	***	***
2	300	11.08	34.970	26.76	4.48	75	***	***	***
2	500	8.52	34.650	26.94	4.40	69	***	***	***
2	700	6.89	34.540	27.09	4.26	64	***	***	***
2	1000	4.83	34.470	27.30	3.98	57	***	***	***

STATION
LH13/ 458/61

DATE
1/ 9/61

TIME
1205 K

LATITUDE
34 40 S

LONGITUDE
151 58 E

SONIC AIR TEMP, WIND ANEM, CLOUD SWELL ATMOS. WIRE ANGLES
DEPTH KFT DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

*** ** *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.50	35.550	26.07	***	***	***	***	***
1	25	15.98	35.550	26.19	***	***	***	***	***
1	50	15.91	35.570	26.23	5.25	97	***	***	***
1	75	15.29	35.550	26.35	***	***	***	***	***
1	100	15.14	35.550	26.38	5.05	92	***	***	***
1	150	14.24	35.390	26.46	***	***	***	***	***
1	200	13.03	35.210	26.57	4.40	77	***	***	***
1	300	11.53	34.940	26.69	4.43	74	***	***	***
1	500	8.71	34.650	26.91	4.37	69	***	***	***
1	700	7.01	34.520	27.06	4.23	64	***	***	***
1	1000	4.46	34.490	27.31	3.81	54	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH13/ 461/61	1/ 9/61	1935 K	35 07 S	151 12 E			
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
*** ***	*** *	* *	* *	* *	* *	* *	* *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P NITRATE
1	0 15.90	35.570	26.32	***	***	***	***
1	25 15.41	35.570	26.34	***	***	***	***
1	50 15.01	35.550	26.41	***	***	***	***
1	75 14.61	35.500	26.42	***	***	***	***
1	100 14.55	35.480	26.46	***	***	***	***
1	150 14.27	35.460	26.50	***	***	***	***
1	200 13.28+	35.280	26.57	***	***	***	***
1	300 11.72	35.030	26.68	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH13/ 462/61	4/ 9/61	1105 K	35 07 S	151 12 E			
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
*** ***	* *	* *	* *	* *	* *	* *	* *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P NITRATE
1	0 15.22	35.520	26.34	***	***	***	***
1	25 15.11	35.500	26.35	***	***	***	***
1	50 15.06	35.570	26.41	***	***	***	***
1	75 15.10	35.570	26.41	***	***	***	***
1	100 14.48	35.550	26.48	***	***	***	***
1	150 14.41	35.500	26.50	***	***	***	***
1	200 13.70+	35.390	26.57	***	***	***	***
1	300 12.32	35.170	26.68	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH13/ 463/61	4/ 9/61	1212 K	35 07 S	151 17 E					
SONIC AIR TEMP.	WIND	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH WET DRY	DIR. SP.	ANEM. HEIGHT	DIR. AMT. PRESSURE	DIR. AMT. PRESSURE	CAST1 CAST2 CAST3				
***	***	***	***	***	***				
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.10	35.530	26.38	***	***	***	***	***
1	25	15.17	35.570	26.39	***	***	***	***	***
1	50	15.15	35.550	26.38	5.56	101	***	***	***
1	75	15.13	35.530	26.39	***	***	***	***	***
1	100	15.05	35.530	26.39	5.47	100	***	***	***
1	150	14.43	35.500	26.50	***	***	***	***	***
1	200	14.02	35.410	26.92	5.16	92	***	***	***
1	300	12.29	35.170	26.68	4.96	85	***	***	***
1	500	8.71	34.650	26.91	4.48	71	***	***	***
1	700	7.86	34.580	26.99	4.20	65	***	***	***
1	1000	5.18	34.470	27.26	3.78	54	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH13/ 464/61	4/ 9/61	1424 K	35 07 S	151 26 E					
SONIC AIR TEMP.	WIND	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH WET DRY	DIR. SP.	ANEM. HEIGHT	DIR. AMT. PRESSURE	DIR. AMT. PRESSURE	CAST1 CAST2 CAST3				
***	***	***	***	***	***				
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.23	35.570	26.15	***	***	***	***	***
1	25	16.00	35.570	26.20	***	***	***	***	***
1	50	15.41	35.550	26.32	***	***	***	***	***
1	75	15.31	35.520	26.32	***	***	***	***	***
1	100	15.14	35.570	26.40	***	***	***	***	***
1	150	14.72	35.530	26.46	***	***	***	***	***
1	200	13.04	35.340	26.67	***	***	***	***	***
1	300	11.57	35.030	26.71	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH13/ 465/61	4/ 9/61	1405 K	35 07 S	151 36 E				
SONIC AIR TEMP, WIND ANEM, CLOUD VIS, SEA SWELL ATMOS, WIRE ANGLES								
DEPTH MET DRY DIR, SP, DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3								
*** *** * * * * * * * * * * * * * * *								
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	16.50	35.570	26.09	***	***	***	***	***
1	15.51	35.570	26.31	***	***	***	***	***
1	15.46	35.550	26.31	5.25	96	***	***	***
1	15.43	35.550	26.32	***	***	***	***	***
1	100	35.610	26.40	5.36	98	***	***	***
1	150	35.550	26.50	***	***	***	***	***
1	200	14.13	35.440	4.88	87	***	***	***
1	300	12.38	35.170	4.68	80	***	***	***
1	500	8.76	34.670	26.92	70	***	***	***
1	700	7.16	34.520	4.09	62	***	***	***
1	1000	5.06	34.420	3.89	56	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH13/ 467/61	4/ 9/61	1920 K	35 07 S	151 56 E				
SONIC AIR TEMP, WIND ANEM, CLOUD VIS, SEA SWELL ATMOS, WIRE ANGLES								
DEPTH MET DRY DIR, SP, DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3								
*** *** * * * * * * * * * * * * * * *								
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	15.70	***	***	***	***	***	***	***
1	15.25	35.590	26.39	***	***	***	***	***
1	15.16	35.570	26.39	5.27	96	***	***	***
1	14.61	35.530	26.48	***	***	***	***	***
1	14.42	35.500	26.50	5.22	94	***	***	***
1	150	35.460	26.52	***	***	***	***	***
1	200	12.99	35.250	4.65	81	***	***	***
1	300	12.90	35.280	5.30	92	***	***	***
1	500	8.88	34.630	26.87	70	***	***	***
1	700	7.10	34.540	4.15	63	***	***	***
1	1000	5.00	34.490	3.92	56	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE		
LM13/ 473/61	5/ 9/61	0902 K	35 50 S	150 18 E		
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAS11 CAS12 CAS13
HU ***	**	*	*	*	*	*
CAS11	TEMP.	SALINITY	SIGMA-T	OXYGEN	INORG. P	TOTAL P
1	0 14.44	34.490	25.72	***	***	***
1	25 15.05	35.440	26.32	***	***	***
1	50 15.04	35.520	26.38	***	***	***
1	75 14.01	35.390	26.50	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE		
LM13/ 474/61	5/ 9/61	1030 K	35 50 S	150 28 E		
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAS11 CAS12 CAS13
130 ***	**	*	*	*	*	*
CAS11	TEMP.	SALINITY	SIGMA-T	OXYGEN	INORG. P	TOTAL P
1	0 15.06	35.530	26.38	***	***	***
1	25 15.05	35.530	26.39	***	***	***
1	50 15.00	35.570	26.43	***	***	***
1	75 15.05	35.500	26.36	***	***	***
1	100 14.81	35.500	26.42	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH13/ 475/61	5/ 9/61	1202 K	35 50 S	150 38 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. PRESSURE CAST1 CAST2 CAST3								
***	***	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.25	26.39	***	***	***	***	***
1	25	15.23	26.38	***	***	***	***	***
1	50	15.22	26.37	***	***	***	***	***
1	75	15.23	26.36	***	***	***	***	***
1	97	15.23	26.35	***	***	***	***	***
1	145	14.22	26.51	***	***	***	***	***
1	193	13.04	26.60	***	***	***	***	***
1	290	11.46	26.76	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH13/ 476/61	5/ 9/61	1320 K	35 50 S	150 43 E				
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. PRESSURE CAST1 CAST2 CAST3								
***	***	*	*	*				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.40	26.38	***	***	***	***	***
2	25	15.31	26.39	***	***	***	***	***
2	46	15.28	26.38	5.44	100	***	***	***
2	69	15.25	26.39	***	***	***	***	***
2	91	15.22	26.35	5.47	100	***	***	***
1	137	14.57	26.47	***	***	***	***	***
1	183	14.07	26.53	4.99	89	***	***	***
1	274	12.81	26.67	5.02	87	***	***	***
1	457	9.54	26.88	4.29	72	***	***	***
1	639	7.80	27.05	4.29	66	***	***	***
1	914	5.57	27.21	4.03	59	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE		LONGITUDE				
UH13/ 478/61	5/ 9/61	1700 K	35	50 S	151	02 E			
SONIC AIR TEMP.	WIND ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH KFT DRY	DIR. SP. HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3				
***	***	*	*	*	*	*			
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.30	35.660	26.43	***	***	***	***	***
2	25	15.38	35.660	26.41	***	***	***	***	***
2	42	15.39	35.660	26.41	5.44	100	***	***	***
2	64	15.37	35.660	26.42	***	***	***	***	***
2	85	15.34	35.640	26.41	5.50	101	***	***	***
1	127	15.36	35.620	26.39	***	***	***	***	***
1	170	15.35	35.570	26.35	5.30	97	***	***	***
1	254	14.38	35.460	26.48	5.02	90	***	***	***
1	424	11.85	***	***	***	***	***	***	***
1	594	8.86	34.700	26.93	4.57	72	***	***	***
1	848	4.07	34.510	27.18	4.20	62	***	***	***

STATION	DATE	TIME	LATITUDE		LONGITUDE				
UH13/ 482/61	6/ 9/61	0105 K	36	25 S	150	09 E			
SONIC AIR TEMP.	WIND ANEM.	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH KFT DRY	DIR. SP. HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3				
57	***	*	*	*	*	*			
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.49	34.740	26.11	***	***	***	***	***
1	25	13.60	35.390	26.59	***	***	***	***	***
1	50	13.88	35.370	26.52	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH13/ 483/61	6/ 9/61	0240 K	36 25 S	150 19 E					
SONIC AIR TEMP, WIND DIR, SP, ANEM, CLOUD DEPTH NET DRY DIR, SP, HEIGHT TYPE AMT,	VIS, SEA DIR, AMT, SWELL DIR, AMT, ATMOS, WIRE ANGLES PRESSURE CAST1 CAST2 CAST3	OXYGEN	DXYGEN % SAT,	INORG, P	TOTAL P	NITRATE			
*** ** *	* * *	* * *	* * *	* * *	* * *	* * *			
CST	DEPTH	TEMP,	SALINITY	SIGMA-T	OXYGEN	DXYGEN % SAT,	INORG, P	TOTAL P	NITRATE
1	0	14.56	35.390	26.39	***	***	***	***	***
1	25	14.54	35.390	26.39	***	***	***	***	***
1	50	14.46	35.390	26.41	***	***	***	***	***
1	75	14.33	35.390	26.44	***	***	***	***	***
1	100	13.55	35.350	26.57	***	***	***	***	***
1	150	12.71	35.370	26.76	***	***	***	***	***
1	200	12.57	35.340	26.76	***	***	***	***	***
1	300	12.57	35.340	26.76	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH13/ 484/61	6/ 9/61	0422 K	36 25 S	150 29 E					
SONIC AIR TEMP, WIND DIR, SP, ANEM, CLOUD DEPTH NET DRY DIR, SP, HEIGHT TYPE AMT,	VIS, SEA DIR, AMT, SWELL DIR, AMT, ATMOS, WIRE ANGLES PRESSURE CAST1 CAST2 CAST3	OXYGEN	DXYGEN % SAT,	INORG, P	TOTAL P	NITRATE			
*** ** *	* * *	* * *	* * *	* * *	* * *	* * *			
CST	DEPTH	TEMP,	SALINITY	SIGMA-T	OXYGEN	DXYGEN % SAT,	INORG, P	TOTAL P	NITRATE
1	0	14.89	35.460	26.37	***	***	***	***	***
1	25	14.89	35.460	26.37	***	***	***	***	***
1	50	14.81	35.480	26.40	***	***	***	***	***
1	75	14.68	35.480	26.43	***	***	***	***	***
1	100	14.61	35.480	26.44	***	***	***	***	***
1	150	13.16	35.350*	26.65	***	***	***	***	***
1	200	12.86	35.280	26.66	***	***	***	***	***
1	300	11.16	34.990	26.76	***	***	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH13/ 485/61	6/ 9/61	0530 K	36 .25 S	150 34 E				
SONIC AIR TEMP, WIND	ANEM. CLOUD	SEA SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP.	HEIGHT TYPE AMT.	DIR, AMT. PRESSURE	DIR, AMT. PRESSURE	CAST1 CAST2 CAST3				
*** **	* * * * *	* * * * *	* * * * *	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 14.81	35.430	26.36	***	***	***	***	***
1	25 14.85	35.430	26.35	***	***	***	***	***
1	50 14.76	35.440	26.38	5.47	99	***	***	***
1	75 14.79	35.440	26.38	***	***	***	***	***
1	100 14.82	35.460	26.38	5.41	98	***	***	***
1	150 13.93	35.300*	26.45	***	***	***	***	***
1	200 13.04	35.140	26.51	***	***	***	***	***
1	300 10.93	34.940	26.76	4.57	76	***	***	***
1	500 8.76	34.650	26.90	4.60	72	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH13/ 491/61	6/ 9/61	1850 K	37 04 S	150 03 E				
SONIC AIR TEMP, WIND	ANEM. CLOUD	SEA SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP.	HEIGHT TYPE AMT.	DIR, AMT. PRESSURE	DIR, AMT. PRESSURE	CAST1 CAST2 CAST3				
70 *** **	* * * * *	* * * * *	* * * * *	* * * * *				
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 12.67	34.920	26.41	6.23	107	***	***	***
1	10 12.71	34.920	26.41	6.18	107	***	***	***
1	20 12.67	35.080	26.54	5.96	103	***	***	***
1	30 12.62	35.140	26.60	6.02	104	***	***	***
1	40 12.68	35.160	26.60	6.02	104	***	***	***
1	50 ***	35.190	***	5.84	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE		LONGITUDE			
LH13/ 492/61	6/ 9/61	2010 K	37	04 S	150 13 E			
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH WFT DRY DIR, SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
95 ***	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 13.47	35.300	26.55	***	***	***	***	***
1	25 13.16	35.300	26.61	***	***	***	***	***
1	50 12.80	35.280	26.67	***	***	***	***	***
1	75 12.69	35.280	26.69	***	***	***	***	***

STATION	DATE	TIME	LATITUDE		LONGITUDE			
LH13/ 493/61	6/ 9/61	2130 K	37	04 S	150 23 E			
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH WFT DRY DIR, SP.	HEIGHT	TYPE	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
290 ***	*	*	*	*	*			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 14.74	35.550	26.47	***	***	***	***	***
1	25 14.75	35.500	26.43	***	***	***	***	***
1	50 14.67	35.460	26.42	***	***	***	***	***
1	75 14.34	35.460	26.49	***	***	***	***	***
1	100 13.36	35.350	26.61	***	***	***	***	***
1	150 12.98	35.350	26.69	***	***	***	***	***
1	200 12.67	35.340	26.74	***	***	***	***	***

STATION 494/61 DATE 6/9/61 TIME 2228 K LATITUDE 37 04 S LONGITUDE 150 28 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	14.50	36.060	26.92	***	***	***	***	***
1	25	14.90	35.530	26.42	***	***	***	***	***
1	50	14.83	35.520	26.43	5.47	99	***	***	***
1	75	13.85	35.390	26.54	***	***	***	***	***
1	100	13.36	35.300	26.57	4.94	87	***	***	***
1	145	12.74	35.230	26.64	***	***	***	***	***
1	195	12.41	35.210	26.69	5.08	87	***	***	***
1	292	10.64	34.920	26.80	5.47	90	***	***	***
1	487	8.75	34.650	26.90	4.60	72	***	***	***
1	682	7.43	34.520	27.00	4.29	65	***	***	***
1	974	5.19	34.450	27.24	4.00	58	***	***	***

STATION 496/61 DATE 7/9/61 TIME 0130 K LATITUDE 37 04 S LONGITUDE 150 48 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	14.00	35.620	26.68	***	***	***	***	***
1	25	14.76	35.480	26.41	***	***	***	***	***
1	50	14.71	35.460	26.41	5.56	101	***	***	***
1	72	14.67	35.440	26.40	***	***	***	***	***
1	96	14.62	35.460	26.43	5.47	99	***	***	***
1	144	13.29	35.340	26.62	***	***	***	***	***
1	192	12.91	35.340	26.69	5.41	94	***	***	***
1	288	11.35	35.080	26.79	4.79	80	***	***	***
1	481	8.80	***	***	***	***	***	***	***
1	673	7.45	34.520	27.00	4.29	65	***	***	***
1	961	5.03	***	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH14/ 512/61	14/ 9/61	1425 K	34 05 S	151 33 E

SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH NET DRY	DIR.	SP.	HEIGHT	DIR.	DIR.	DIR.	DIR.	DIR.
300 ***	04	3	*	*	*	*	*	*
			SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P
CAST	DEPTH	TEMP.						NITRATE
1	0	16.98	35.590	25.99	***	***	***	***
1	25	16.00	35.590	26.01	***	***	***	***
1	50	16.87	35.590	26.02	***	***	***	***
1	75	16.00	35.500	26.15	***	***	***	***
1	100	15.71	35.500	26.22	***	***	***	***
1	150	14.71	35.430	26.39	***	***	***	***
1	200*	13.01	35.260	26.61	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH14/ 513/61	14/ 9/61	1520 K	34 05 S	151 37 E

SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH NET DRY	DIR.	SP.	HEIGHT	DIR.	DIR.	DIR.	DIR.	DIR.
560 ***	04	3	*	*	*	*	*	*
			SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P
CAST	DEPTH	TEMP.						NITRATE
1	0	16.98	35.590	25.99	***	***	***	***
1	25	16.84	35.570	26.01	***	***	***	***
1	43	16.80	35.590	26.03	***	***	***	***
1	65	16.80	35.590	26.03	***	***	***	***
1	87	15.88	35.500	26.18	4.91	91	***	***
1	130	15.13	35.520	26.36	***	***	***	***
1	173	14.41	35.410	26.43	5.02	90	***	***
1	260	12.21	35.140	26.68	***	***	***	***
1	433	9.51	34.740	26.85	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 CH14/ 514/61 14/ 9/61 1715 K 34 06 S 151 46 E

SONIC AIR TEMP. WIND ANEM. CLOUD SHELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 04 3 * * * * * * * * * * 20 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.11	35.570	25.94	***	***	***	***	***
1	25	16.99	35.570	25.97	***	***	***	***	***
1	50	16.83	35.620	26.05	***	***	***	***	***
1	71	16.70	35.570	26.04	***	***	***	***	***
1	95	15.83	35.520	26.20	***	***	***	***	***
1	143	15.13	35.440	26.30	***	***	***	***	***
1	190	14.06	35.320	26.44	***	***	***	***	***
1	285	12.26	35.100	26.64	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 CH14/ 515/61 14/ 9/61 1920 K 34 06 S 151 55 E

SONIC AIR TEMP. WIND ANEM. CLOUD SHELL ATMOS. WIRE ANGLES
 DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 04 3 * * * * * * * * * * 40 * * *

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.69	35.610	25.83	***	***	***	***	***
1	25	17.67	35.610	25.84	***	***	***	***	***
1	50	16.90	35.570	25.99	4.99	94	***	***	***
1	75	16.37	35.590	26.13	***	***	***	***	***
1	97	15.81	35.530	26.22	***	***	***	***	***
1	145	15.15	35.480	26.33	***	***	***	***	***
1	193	14.35	35.390	26.43	***	***	***	***	***
1	290	11.70	35.030	26.69	***	***	***	***	***
1	483	8.72	34.670	26.92	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH14/ 521/61	15/ 9/61	0928 K	34 41 S	151 11 E				
SONIC AIR TEMP, WIND	ANEM. CLOUD	VIS. SEA	SHELL	ATMOS.	WIRE ANGLES			
DEPTH NET DRY DIR. SP.	HEIGHT TYPE AMT.	DIR. AMT. DIR. AMT.	DIR. AMT. DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
200 *** ** 04 3	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 14.33	35.550	26.11	***	***	***	***	***
1	25 16.32	35.550	26.11	***	***	***	***	***
1	50 16.27	35.530	26.11	***	***	***	***	***
1	75 15.51	35.500	26.26	***	***	***	***	***
1	100 14.93	35.500	26.39	***	***	***	***	***
1	150 13.37	35.250	26.53	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
EH14/ 522/61	15/ 9/61	0648 K	34 41 S	151 15 E				
SONIC AIR TEMP, WIND	ANEM. CLOUD	VIS. SEA	SHELL	ATMOS.	WIRE ANGLES			
DEPTH NET DRY DIR. SP.	HEIGHT TYPE AMT.	DIR. AMT. DIR. AMT.	DIR. AMT. DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
700 *** ** 04 3	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *			
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 16.50	35.620	26.12	***	***	***	***	***
1	25 16.49	35.620	26.13	***	***	***	***	***
1	50 16.41	35.610	26.14	5.67	106	***	***	***
1	75 16.31	35.530	26.10	***	***	***	***	***
1	100 15.23	35.430	26.27	***	***	***	***	***
1	150 14.21	35.390	26.46	***	***	***	***	***
1	200 12.54	35.170	26.64	4.79	83	***	***	***
1	300 11.02	34.970	26.77	***	***	***	***	***
1	500 8.81	34.650	26.89	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE									
PH14/ 524761		15/ 9/61		1000 K		34 42 S		151 33 E									
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP. DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
***	***	36	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE								
1	0	14.80	35.660	26.09	***	***	***	***	***								
1	25	16.87	35.620	26.04	***	***	***	***	***								
1	50	16.85	35.680	26.09	5.61	106	***	***	***								
1	75	16.34	35.610	26.16	***	***	***	***	***								
1	100	15.92	35.530	26.19	5.14	95	***	***	***								
1	150	15.72	35.570	26.27	***	***	***	***	***								
1	197	14.65	35.430	26.40	4.82	87	***	***	***								
1	295	12.77	35.170	26.59	4.79	83	***	***	***								
1	492	8.96	34.700	26.91	***	***	***	***	***								
1	689	6.90+	34.570+	27.11	5.23	79	***	***	***								
1	985	4.87	34.490	27.31	4.14	59	***	***	***								

STATION		DATE		TIME		LATITUDE		LONGITUDE									
PH14/ 526761		15/ 9/61		1312 K		34 42 S		151 49 E									
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP. DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
***	***	18	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE								
2	0	17.66	35.590	25.82	***	***	***	***	***								
2	25	17.59	35.570	25.83	***	***	***	***	***								
1	50	17.58	35.590	25.85	5.43	104	***	***	***								
1	75	17.07	35.570	25.95	***	***	***	***	***								
1	97	16.08	35.480	26.12	4.96	92	***	***	***								
1	145	15.28	35.530	26.34	***	***	***	***	***								
1	193	14.66	35.410	26.38	4.79	86	***	***	***								
1	2	12.11	35.050	26.62	4.58	78	***	***	***								
1	4	8.86	34.670	26.90	4.64	73	***	***	***								
1	67	7.24	34.520	27.03	4.44	67	***	***	***								
1	966	5.21	34.430	27.22	4.17	60	***	***	***								

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH14/ 531/61	19/ 9/61	0903 K	35 05 S	151 10 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
*** ** 14 1	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.60	35.590	26.08	***	***	***	***	***
1	25	16.57	35.570	26.07	***	***	***	***	***
1	50	16.57	35.570	26.07	***	***	***	***	***
1	75	16.59	35.570	26.07	***	***	***	***	***
1	100	16.61	35.590	26.08	***	***	***	***	***
1	150	15.99	35.500	26.35	***	***	***	***	***
1	200	13.97	35.350	26.88	***	***	***	***	***
1	300	11.54	35.030	26.72	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH14/ 532/61	19/ 9/61	1000 K	35 05 S	151 14 E					
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
*** ** 14 1	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	16.83	35.620	26.85	***	***	***	***	***
1	25	16.62	35.610	26.09	***	***	***	***	***
1	50	16.62	35.610	26.09	5.55	104	***	***	***
1	75	16.59	35.610	26.10	***	***	***	***	***
1	100	15.83	35.570	26.24	5.32	98	***	***	***
1	150	15.27	35.530	26.34	***	***	***	***	***
1	200	14.36	35.430	26.46	4.91	88	***	***	***
1	300	11.97	35.070	26.67	4.70	80	***	***	***
1	500	8.86	34.700	26.93	4.70	74	***	***	***
1	700	6.93	34.520	27.07	4.44	67	***	***	***
1	1000	5.09	34.470	27.27	4.05	58	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE		
UH14/ 534/61		19/ 9/61		1323 K		35 03 S		151 32 E		
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES										
DEPTH MET DRY DIR. SP.		HEIGHT TYPE AMT.		VIS. SEA DIR. AMT.		DIR. AMT.		PRESSURE CAST1 CAST2 CAST3		
***	***	14	1	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	14.50	35.970	25.60	***	***	***	***	***	***
1	25	17.81	35.640	25.83	***	***	***	***	***	***
1	50	14.81	35.970	26.01	5.26	99	***	***	***	***
1	75	16.09	35.500	26.13	***	***	***	***	***	***
1	100	15.62	35.460	26.21	4.91	90	***	***	***	***
1	150	14.79	35.430	26.37	***	***	***	***	***	***
1	197	13.57	35.230	26.47	4.52	80	***	***	***	***
1	293	11.78	35.030	26.67	4.58	78	***	***	***	***
1	489	8.85	34.690	26.92	4.44	70	***	***	***	***
1	685	7.12	34.540	27.06	4.41	67	***	***	***	***
1	978	5.08	34.470	27.27	4.06	58	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE		
UH14/ 536/61		19/ 9/61		1625 K		35 01 S		151 48 E		
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES										
DEPTH MET DRY DIR. SP.		HEIGHT TYPE AMT.		VIS. SEA DIR. AMT.		DIR. AMT.		PRESSURE CAST1 CAST2 CAST3		
***	***	09	1	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	14.20	35.640	25.73	***	***	***	***	***	***
1	25	17.43	35.610	25.90	***	***	***	***	***	***
1	50	17.35	35.640	25.94	5.29	101	***	***	***	***
1	75	16.52	35.530	26.05	***	***	***	***	***	***
1	100	15.84	35.460	26.16	4.62	85	***	***	***	***
1	150	14.99	35.460	26.35	***	***	***	***	***	***
1	197	13.07	35.140	26.51	4.30	75	***	***	***	***
1	293	11.45	34.990	26.70	4.62	78	***	***	***	***
1	489	8.60	34.690	26.96	4.53	71	***	***	***	***
1	685	7.20	34.560	27.07	4.56	69	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0H14/ 543/61	20/ 9/61	0407 K	35 50 S	150 18 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH MET DRY DIR, SP.	HEIGHT	TYPE	DIR, AMT, PRESSURE	CAS11 CAST2 CAST3					
90 *** **	36 2	*	* * * * *	* * * * *					
CAST DEPTH TEMP, SALINITY SIGMA-T OXYGEN OXYGEN % SAT, INORG. P TOTAL P NITRATE									
1	0	13.70	32.630	24.44	***	***	***	***	***
1	25	15.30	35.440	26.26	***	***	***	***	***
1	50	15.06	35.430	26.31	***	***	***	***	***
1	75	14.27	35.430	26.48	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
0H14/ 544/61	20/ 9/61	0720 K	35 50 S	150 28 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH MET DRY DIR, SP.	HEIGHT	TYPE	DIR, AMT, PRESSURE	CAS11 CAST2 CAST3					
130 *** **	36 2	*	* * * * *	* * * * *					
CAST DEPTH TEMP, SALINITY SIGMA-T OXYGEN OXYGEN % SAT, INORG. P TOTAL P NITRATE									
1	0	15.36	35.480*	26.28	***	***	***	***	***
1	25	15.35	35.480	26.28	***	***	***	***	***
1	50	14.98	35.440	26.33	***	***	***	***	***
1	75	14.33	35.430	26.47	***	***	***	***	***
1	100	13.93	35.370	26.51	***	***	***	***	***

* PROPERTY DOUBTFUL
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STATION	DATE	TIME	LATITUDE	LONGITUDE
LH14/ 545/61	20/ 9/61	0842 K	35 50 S	150 38 E

DEPTH	SONIC AIR TEMP.	WIND DIR.	SP. WIND	CLOUD AMT.	SEA DIR.	SEA DIR. AMT.	SWELL DIR.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
***	***	33	2	*	*	*	*	*	*	*	*

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.35	35.610	26.15	***	***	***	***	***
1	25	16.28	35.590	26.15	***	***	***	***	***
1	50	16.27	35.610	26.17	***	***	***	***	***
1	75	16.32	35.590	26.14	***	***	***	***	***
1	100	15.26	35.500	26.32	***	***	***	***	***
1	150	14.03	35.390	26.50	***	***	***	***	***
1	200	12.51	35.140	26.62	***	***	***	***	***
1	300	12.11	35.140	26.69	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LH14/ 546/61	20/ 9/61	0933 K	35 50 S	150 43 E

DEPTH	SONIC AIR TEMP.	WIND DIR.	SP. WIND	CLOUD AMT.	SEA DIR.	SEA DIR. AMT.	SWELL DIR.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
***	***	33	2	*	*	*	*	*	*	*	*

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.30	35.620	26.17	***	***	***	***	***
1	25	16.31+	35.610	26.16	***	***	***	***	***
1	45	16.33	35.640	26.18	5.52	103	***	***	***
1	67	16.33	35.610	26.16	***	***	***	***	***
1	89	15.83	35.550	26.23	5.06	94	***	***	***
1	134	15.04	35.460	26.34	***	***	***	***	***
1	178	13.32	35.190	26.49	4.38	77	***	***	***
1	267	11.56	35.050	26.73	4.56	77	***	***	***
1	446	9.39	34.630	26.78	4.59	75	***	***	***
1	624	7.80	34.600	27.01	4.44	68	***	***	***
1	891	5.72	34.520	27.23	4.24	62	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
1M14/ 548/61	20/ 9/61	1218 K	35 50 S	151 03 E				
SONIC AIR TEMP, WIND, ANEM, CLOUD	VIS, SEA	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, PRESSURE	DIR, AMT, PRESSURE	CAS1 CAST2 CAST3					
*** ** 34 2 * * * * *	* * * * *	* * * * *	* * * * *	* * * * *				
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	0	35.680	26.10	***	***	**	***	***
1	25	35.620	26.06	***	***	***	***	***
1	45	35.620	26.07	5.29	100	***	***	***
1	67	35.610	26.07	***	***	***	***	***
1	89	35.610	26.16	5.29	99	***	***	***
1	134	35.550	26.31	***	***	***	***	***
1	178	35.570	26.35	5.20	95	***	***	***
1	267	35.410	26.54	5.06	90	***	***	***
1	446	34.870	26.84	4.59	75	***	***	***
1	624	34.600	26.97	4.53	70	***	***	***
1	891	34.490	27.19	4.09	60	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
1M14/ 551/61	20/ 9/61	1916 K	36 25 S	150 09 E				
SONIC AIR TEMP, WIND, ANEM, CLOUD	VIS, SEA	SWELL	ATMOS.	WIRE ANGLES				
DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, PRESSURE	DIR, AMT, PRESSURE	CAS1 CAST2 CAST3					
65 *** ** 32 1 * * * * *	* * * * *	* * * * *	* * * * *	* * * * *				
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	0	34.580	25.75	***	***	***	***	***
1	25	35.300	26.36	***	***	***	***	***
1	50	35.340	26.80	***	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 DH14/ 552/61 20/ 9/61 2030 K 36 25 S 150 19 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, SEA DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

120 *** ** 32 1 * * * * * * * * * * * * * * *	120 *** ** 32 1 * * * * * * * * * * * * * * *
CST	CST
DEPTH	DEPTH
TEMP.	TEMP.
SALINITY	SALINITY
SIGMA-T	SIGMA-T
OXYGEN	OXYGEN
OXYGEN % SAT,	OXYGEN % SAT,
INORG. P	INORG. P
TOTAL P	TOTAL P
NITRATE	NITRATE

STATION DATE TIME LATITUDE LONGITUDE
 DH14/ 553/61 20/ 9/61 2147 K 36 25 S 150 29 E

SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, SEA DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

*** ** 32 1 * * * * * * * * * * * * * * *	*** ** 32 1 * * * * * * * * * * * * * * *
CST	CST
DEPTH	DEPTH
TEMP.	TEMP.
SALINITY	SALINITY
SIGMA-T	SIGMA-T
OXYGEN	OXYGEN
OXYGEN % SAT,	OXYGEN % SAT,
INORG. P	INORG. P
TOTAL P	TOTAL P
NITRATE	NITRATE

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH14/ 556/61	20/ 9/61	2242 K	36 25 S	150 34 E					
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH WET DRY DIR, SP, HEIGHT TYPE AMT.	VIS, SEA DIR, AMT, PRESSURE	CAST1 CAST2 CAST3							
*** ** 23 2 * * * * *									
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.80	35.610	26.05	**	***	***	***	***
1	22	16.62	35.590	26.08	***	***	***	***	***
1	43	16.59	35.550	26.05	5.41	102	***	***	***
1	65	16.12	35.500	26.12	***	***	***	***	***
1	87	15.66	35.520	26.24	4.82	89	***	***	***
1	130	14.92	35.390	26.31	***	***	***	***	***
1	173	13.96	35.250	26.41	4.38	78	***	***	***
1	260	12.71	35.260	26.67	5.08	88	***	***	***
1	433	9.74	34.760	26.83	4.73	76	***	***	***
1	606	8.10	34.610*	26.97	***	***	***	***	***
1	866	5.89	34.430	27.14	4.24	62	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH14/ 556/61	21/ 9/61	0148 K	36 25 S	150 54 E					
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH WET DRY DIR, SP, HEIGHT TYPE AMT.	VIS, SEA DIR, AMT, PRESSURE	CAST1 CAST2 CAST3							
*** ** 20 3 * * * * *									
CAST	DEPTH	TEMP.	SALINITY	SIGMA-Y	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.51	35.710	26.19	***	***	***	***	***
1	23	16.52	35.710	26.19	***	***	***	***	***
1	45	16.42	35.610	26.14	5.38	101	***	***	***
1	68	16.43	35.610	26.14	***	***	***	***	***
1	91	16.18	35.530	26.13	4.91	92	***	***	***
1	136	15.59	35.550	26.28	***	***	***	***	***
1	181	15.02	35.530	26.39	4.88	89	***	***	***
1	272	13.09	35.230	26.57	4.62	81	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 CH14/ 561/61 21/ 9/61 1250 K 37 04 S 150 09 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH NET DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

70	***	18	1	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE						
1	0	14.34	35.070	26.19	5.73	103	***	***	***						
1	10	13.79	35.140	26.36	5.93	105	***	***	***						
1	20	13.65	35.190	26.43	5.76	102	***	***	***						
1	30	13.67	35.220	26.44	5.67	100	***	***	***						
1	40	13.01	35.280	26.63	5.59	97	***	***	***						
1	50	12.83	35.290	26.67	5.39	94	***	***	***						

STATION DATE TIME LATITUDE LONGITUDE
 CH14/ 562/61 21/ 9/61 1406 K 37 04 S 150 19 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH NET DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3

90	***	05	1	*	*	*	*	*	*	*	*	*	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE						
1	0	14.58	35.350	26.35	***	***	***	***	***						
1	25	13.03	35.350	26.49	***	***	***	***	***						
1	50	***	35.340	***	***	***	***	***	***						
1	75	12.94	35.320	26.67	***	***	***	***	***						

STATION CH14/ 563/61 DATE 21/ 9/61 TIME 1525 K LATITUDE 37 04 S LONGITUDE 150 29 E

SONIC DEPTH	AIR TEMP. WIND DIR. SP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
150	*** 05 1	*	*	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CYGEN X SAT.	INORG. P	TOTAL P	NITRATE			
1	15.35	35.430	26.24	***	***	***	***	***	***	***	***
1	14.72	35.410	26.37	***	***	***	***	***	***	***	***
1	14.39	35.390	26.42	***	***	***	***	***	***	***	***
1	13.27	35.320	26.60	***	***	***	***	***	***	***	***
1	13.02	35.260	26.61	***	***	***	***	***	***	***	***

STATION CH14/ 564/61 DATE 21/ 9/61 TIME 1620 K LATITUDE 37 04 S LONGITUDE 150 34 E

SONIC DEPTH	AIR TEMP. WIND DIR. SP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	WIRE ANGLES CAST2	WIRE ANGLES CAST3
***	*** 05 1	*	*	*	*	*	*	*	*	*	*
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CYGEN X SAT.	INORG. P	TOTAL P	NITRATE			
1	15.80	35.460	26.14	***	***	***	***	***	***	***	***
1	14.29	35.350	26.41	***	***	***	***	***	***	***	***
1	13.76	35.320	26.50	5.49	97	***	***	***	***	***	***
1	13.10	35.260	26.59	***	***	***	***	***	***	***	***
1	12.88	35.250	26.63	5.26	91	***	***	***	***	***	***
1	12.55	35.250	26.69	***	***	***	***	***	***	***	***
1	12.26	35.230	26.74	5.46	94	***	***	***	***	***	***
1	11.47	35.120	26.80	5.17	87	***	***	***	***	***	***
1	8.48	34.650	26.95	4.68	73	***	***	***	***	***	***
1	6.90	34.520	27.03	4.44	67	***	***	***	***	***	***
1	5.26	34.470	27.25	4.12	59	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
MH14/ 566/61	21/ 9/61	1916 K	37 04 S	150 34 E					
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES				
DEPTH NET DRY DIR, SP,	HEIGHT	TYPE AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3				
*** ** 12 1 * * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.90	35.460	26.37	***	***	***	***	***
1	25	14.35	35.460	26.46	***	***	***	***	***
1	50	14.12	35.410	26.50	5.73	102	***	***	***
1	75	13.68	35.390	26.57	***	***	***	***	***
1	100	12.96	35.370	26.71	5.32	93	***	***	***
1	150	12.16	35.230	26.76	***	***	***	***	***
1	197	11.43	35.140	26.82	4.94	83	***	***	***
1	293	9.55	34.780	26.88	4.73	76	***	***	***
1	489	7.95	34.630	27.01	4.56	70	***	***	***
1	686	6.85	34.540	27.10	4.41	66	***	***	***
1	978	5.14	34.490	27.28	4.09	59	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
MH15/ 589/61	28/ 9/61	1750 K	34 05 S	151 33 E					
SONIC AIR TEMP, WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES				
DEPTH NET DRY DIR, SP,	HEIGHT	TYPE AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3				
210 *** ** 04 2 * * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.55	35.660	25.66	***	***	***	***	***
1	25	18.53	35.660	25.66	***	***	***	***	***
1	44	18.47	35.640	25.66	***	***	***	***	***
1	66	17.06	35.520	25.92	***	***	***	***	***
1	88	15.91	35.410	26.10	***	***	***	***	***
1	132	14.52	35.300	26.33	***	***	***	***	***
1	177	13.70	35.250	26.56	***	***	***	***	***

STATION LH15/ 590/61 DATE 28/ 9/61 TIME 1455 K LATITUDE 34 06 S LONGITUDE 151 37 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MFT DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 410 *** ** 04 4 * * * * * * * * * * 40 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN CRYSTAL % SAT. INORG. P TOTAL P NITRATE

1	0	19.18	35.610	25.46	***	***	***	***	***	***	***
1	1R	19.45	35.610	25.39	***	***	***	***	***	***	***
1	37	18.06	35.570	25.46	4.54	90	***	***	***	***	***
1	55	18.01	35.610	25.75	***	***	***	***	***	***	***
1	73	17.23	35.610	25.94	5.18	99	***	***	***	***	***
1	110	15.74	35.440	26.16	***	***	***	***	***	***	***
1	146	14.48	35.280	26.32	4.28	77	***	***	***	***	***
1	219	13.41	35.070	26.38	4.31	76	***	***	***	***	***

STATION LH15/ 592/61 DATE 28/ 9/61 TIME 1815 K LATITUDE 34 13 S LONGITUDE 151 56 E

SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MFT DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** *** ** * * * * * * * * * * 40 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN CRYSTAL % SAT. INORG. P TOTAL P NITRATE

1	0	22.09	35.610	24.68	***	***	***	***	***	***	***
1	23	21.47	35.640	24.82	***	***	***	***	***	***	***
1	45	19.20	35.700	25.52	4.83	96	***	***	***	***	***
1	65	17.65	35.700	25.91	***	***	***	***	***	***	***
1	87	17.50	35.700	25.95	4.83	93	***	***	***	***	***
1	130	17.49	35.700	25.95	***	***	***	***	***	***	***
1	171*	17.46	35.700	25.96	2.26	43	***	***	***	***	***
1	280	12.76*	35.480	26.83	4.19	73	***	***	***	***	***
1	430	12.05	35.120	26.69	4.37	74	***	***	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
DM15/ 597/61	29/ 9/61	0745 K	35 20 S	151 51 E				
SONIC AIR TEMP.	WIND DIR, SP.	CLOUD AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES		
DEPTH MET DRY	DIR, SP.	TYPE	AMT.	DIR, AMT.	DIR, AMT.	CAST1 CAST2 CAST3		
***	*** 32 3	*	*	*	*	30 * *		
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 20.80	***	***	***	***	***	***	***
1	16 19.59	***	***	***	***	***	***	***
1	33 18.11	***	***	***	***	***	***	***
1	49 17.63	***	***	***	***	***	***	***
1	66 17.51	***	***	***	***	***	***	***
1	98 17.54	***	***	***	***	***	***	***
1	131 17.50	***	***	***	***	***	***	***
1	197 16.02	***	***	***	***	***	***	***
1	328 13.02	***	***	***	***	***	***	***
1	459 10.75	***	***	***	***	***	***	***
1	656 7.09	***	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
DM15/ 598/61	29/ 9/61	1445 K	35 07 S	151 58 E				
SONIC AIR TEMP.	WIND DIR, SP.	CLOUD AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES		
DEPTH MET DRY	DIR, SP.	TYPE	AMT.	DIR, AMT.	DIR, AMT.	CAST1 CAST2 CAST3		
***	*** 00 0	*	*	*	*	* * *		
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0 20.80	35.640	25.05	***	***	***	***	***
1	25 18.32	35.730	25.77	***	***	***	***	***
1	50 18.00	35.730	25.85	5.03	97	***	***	***
1	71 17.52	35.730	25.97	***	***	***	***	***
1	94 17.59	35.730	25.95	5.09	98	***	***	***
1	141 17.58	35.730	25.95	***	***	***	***	***
1	188 17.58	35.730	25.95	4.95	95	***	***	***
1	282 17.50	35.700	25.95	5.00	96	***	***	***
1	470 12.27	35.120	26.65	4.48	77	***	***	***
1	658 8.85	34.670	26.90	4.51	71	***	***	***
1	940 6.10	34.490	27.16	4.25	63	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DP15/ 600/61	29/ 9/61	1808 K	35 05 S	151 43 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES		
DEPTH MFT DRY	DIR, SP.	HEIGHT	TYPE AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3		
***	***	36	1	*	*	*	*		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT,	INORG. P	TOTAL P	NITRATE
1	0	21.60	35.660	24.79	***	***	***	***	***
1	25	18.88	35.700	25.61	***	***	***	***	***
1	44	17.70	35.700	25.90	5.26	101	***	***	***
1	66	17.56	35.700	25.93	***	***	***	***	***
1	88	17.54	35.710	25.95	5.15	99	***	***	***
1	132	17.59	35.680	25.91	***	***	***	***	***
1	177	17.56	35.680	25.92	5.18	99	***	***	***
1	265	17.56	35.680	25.92	5.09	98	***	***	***
1	442	14.84	35.340	26.29	4.48	81	***	***	***
1	618	9.38	34.720	26.86	4.25	68	***	***	***
1	863	5.97	34.510	27.19	4.16	61	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DP15/ 602/61	29/ 9/61	2120 K	35 04 S	151 28 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES		
DEPTH MFT DRY	DIR, SP.	HEIGHT	TYPE AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3		
***	***	36	1	*	*	*	*		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT,	INORG. P	TOTAL P	NITRATE
1	0	22.80	35.660	24.51	***	***	***	***	***
1	25	21.01	35.620	24.98	***	***	***	***	***
1	45	19.31	35.730	25.52	4.92	98	***	***	***
1	68	18.92	35.710	25.60	***	***	***	***	***
1	91	17.57	35.660	25.90	5.15	99	***	***	***
1	136	17.57	35.700	25.93	***	***	***	***	***
1	181	17.56	35.700	25.93	5.03	96	***	***	***
1	272	14.68	35.550	26.03	4.54	85	***	***	***
1	453	11.92	35.050	26.66	4.51	73	***	***	***
1	634	8.63	34.650	26.92	4.48	70	***	***	***
1	906	6.09	34.490	27.16	4.19	62	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
IHM15/ 603761	29/ 9/61	2303 K	35 04 S	151 24 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
*** ** 20 2	*	*	*	*	*	*			
CAS1	DEPTH	TEMP.	SALINITY	SIRMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.99	35.680	25.03	***	***	***	***	***
1	25	20.40	35.660	25.07	***	***	***	***	***
1	48	19.41	35.680	25.45	***	***	***	***	***
1	72	18.11	35.680	25.78	***	***	***	***	***
1	97	17.61	35.700	25.92	***	***	***	***	***
1	145	17.52	35.700	25.94	***	***	***	***	***
1	193	17.55	35.700	25.94	***	***	***	***	***
1	290	15.33	35.410	26.23	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
IHM15/ 607761	30/ 9/61	0751 K	35 53 S	151 25 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SHELL	ATMOS.	WIRE ANGLES			
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3			
*** ** 16 2	*	*	*	*	*	*			
CAS1	DEPTH	TEMP.	SALINITY	SIRMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.40	35.590	25.28	***	***	***	***	***
1	25	18.83	35.590	25.53	***	***	***	***	***
1	50	17.08	35.550	25.93	4.98	95	***	***	***
1	75	16.04	35.550	26.18	***	***	***	***	***
1	100	15.59	35.530	26.27	5.24	97	***	***	***
1	150	14.35	35.530	26.32	***	***	***	***	***
1	200	15.03	35.520	26.38	5.26	96	***	***	***
1	300	13.20	35.260	26.57	4.83	84	***	***	***
1	500	9.38	34.760	26.89	4.60	74	***	***	***
1	700	7.48	34.560	27.03	4.28	65	***	***	***
1	985	5.44	34.450	27.21	4.05	59	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
GH15/ 609/61	30/ 9/61	1627 K	35 49 S	150 56 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, VIS, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3									
*** ** 05 2 * * * * * * * * * * * * * * *									
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	0	16.80	35.700	26.12	***	***	***	***	***
1	25	17.50	35.620	25.89	***	***	***	***	***
1	50	17.23	35.620	25.95	5.26	100	***	***	***
1	75	16.62	35.610	26.09	***	***	***	***	***
1	100	15.96	35.530	26.18	4.86	90	***	***	***
1	150	14.97	35.520	26.40	***	***	***	***	***
1	200	13.43	35.190	26.47	4.28	75	***	***	***
1	300	11.85	35.080	26.70	4.63	79	***	***	***
1	495	8.60	34.650	26.93	4.48	70	***	***	***
1	690	7.09	34.540	27.07	4.26	64	***	***	***
1	985	5.15	34.470	27.26	4.06	58	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
GH15/ 611/61	30/ 9/61	1936 K	35 49 S	150 33 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, VIS, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3									
151 *** ** 02 2 * * * * * * * * * * * * * * *									
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE
1	0	14.90	35.070	25.61	***	***	***	***	***
1	25	15.56	35.410	26.18	***	***	***	***	***
1	50	15.29	35.440	26.27	5.32	97	***	***	***
1	75	14.84	35.430	26.36	***	***	***	***	***
1	100	14.04	35.370	26.48	5.24	93	***	***	***
1	150	13.26	35.350	26.63	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH15/ 612/61	30/ 9/61	2235 K	35 49 S	150 18 E
SONIC AIR TEMP, WIND DIR, SP.	ANEM. HEIGHT	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE
DEPTH MET DRY	CLOUD TYPE AMT.	VIS.	WIRE ANGLES CAST1 CAST2 CAST3	
*** ** *	* * *	* * *	* * *	* * *
CAST DEPTH	TEMP,	SALINITY	SIGMA-T	OXYGEN
1	0 15.79	34.810	25.97	***
1	25 15.09	35.230	26.15	***
1	50 14.28	35.370	26.43	***
1	75 13.94	35.350	26.49	***
				OXYGEN % SAT,
				INORG. P
				TOTAL P
				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
DH15/ 615/61	1/10/61	0217 K	36 25 S	150 09 E
SONIC AIR TEMP, WIND DIR, SP.	ANEM. HEIGHT	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE
DEPTH MET DRY	CLOUD TYPE AMT.	VIS.	WIRE ANGLES CAST1 CAST2 CAST3	
70 *** ** *	* * *	* * *	* * *	* * *
CAST DEPTH	TEMP,	SALINITY	SIGMA-T	OXYGEN
1	0 15.57	35.070	25.92	***
1	25 14.63	35.280	26.29	***
1	50 14.42	35.300	26.35	***
				OXYGEN % SAT,
				INORG. P
				TOTAL P
				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH15/ 618761	1/10/61	0457 K	36 25 S	150 34 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH MET	DIR, SP.	DIR, SP.	DIR, AMT.	DIR, AMT.	PRESSURE	CAS1	CAS2	CAS3	
***	***	02 5	*	*	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIRMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.48	35.640*	25.91	***	***	***	***	***
2	25	17.37	35.640*	25.93	***	***	***	***	***
1	45	16.68	35.640	26.10	5.29	100	***	***	***
1	67	16.64*	35.640	26.11	***	***	***	***	***
1	90	16.60*	35.640	26.12	5.29	100	***	***	***
1	135	15.89	35.550	26.21	***	***	***	***	***
1	180	15.77	35.530	26.34	4.86	89	***	***	***
1	270	12.75	35.160	26.59	4.40	76	***	***	***
1	449	9.66	34.810	26.88	4.40	71	***	***	***
1	629	7.82	34.600	27.01	4.26	66	***	***	***
1	899	5.63	34.490	27.22	4.06	59	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH15/ 623/61	2/10/61	1047 K	37 04 S	150 03 E					
SONIC AIR TEMP, WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH MET	DIR, SP.	DIR, SP.	DIR, AMT.	DIR, AMT.	PRESSURE	CAS1	CAS2	CAS3	
***	***	14 2	*	*	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIRMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.38	35.100	26.20	5.84	105	***	***	***
1	10	13.52	35.140	26.41	5.78	102	***	***	***
1	20	13.38	35.160	26.46	5.81	102	***	***	***
1	30	13.17	35.190	26.52	5.76	101	***	***	***
1	40	13.11	35.190	26.54	5.76	100	***	***	***
1	50	13.03	35.190	26.55	5.70	99	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION CH15/ 626/61 DATE 2/10/61 TIME 1445 K LATITUDE 37 07 S LONGITUDE 150 28 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	17.40	35.550	25.76	***	***	***	***	***
1	25	16.22	35.460	26.07	***	***	***	***	***
1	50	15.15	35.340	26.22	5.38	98	***	***	***
1	73	14.49	35.350	26.37	***	***	***	***	***
1	97	13.74	35.280	26.48	5.52	98	***	***	***
1	145	12.88	35.190	26.58	***	***	***	***	***
1	195	12.78+	35.280	26.67	5.27	91	***	***	***
1	290	12.69	35.340	26.74	5.38	93	***	***	***
1	480	10.90	35.030	26.84	5.01	83	***	***	***
1	675	7.47	34.610	27.01	4.40	68	***	***	***
1	965	5.20	34.490	27.27	4.09	59	***	***	***

STATION CH15/ 628/61 DATE 2/10/61 TIME 1754 K LATITUDE 37 10 S LONGITUDE 150 48 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	14.30	35.660	25.72	***	***	***	***	***
1	25	17.29	35.640	25.95	***	***	***	***	***
1	50	16.91	35.620	26.03	5.27	100	***	***	***
1	71	16.40	35.590	26.08	***	***	***	***	***
1	94	16.15	35.550	26.15	***	***	***	***	***
1	141	15.21	35.460	26.30	***	***	***	***	***
1	168	14.37	35.430	26.46	4.58	82	***	***	***
1	282	12.22	35.100	26.64	4.23	72	***	***	***
1	470	9.31	34.740	26.88	4.29	69	***	***	***
1	658	7.62	34.580	27.02	4.23	65	***	***	***
1	940	5.44	34.470	27.22	4.03	58	***	***	***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH15/ 651/61	4/10/61	0211 K	34 42 S	151 39 E				
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	***	09	2	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P	NITRATE
1	0	20.50	35.700	25.18	***	***	***	***
1	25	19.19	35.700	25.53	***	***	***	***
1	50	18.46	35.730	25.73	***	***	***	***
1	75	18.07	35.730	25.83	***	***	***	***
1	100	17.79	35.750	25.92	5.32	103	***	***
1	150	17.55	35.810	26.02	***	***	***	***
1	200	17.55	35.750	25.97	5.04	97	***	***
1	300	17.57	35.730	25.95	5.09	98	***	***
1	442	15.80	35.500	26.19	4.23	78	***	***
1	618*	10.94	34.920	26.74	4.29	71	***	***
1	883	6.61	34.510	27.11	4.29	64	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
CH15/ 653/61	4/10/61	0742 K	34 42 S	151 58 E				
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	***	13	3	*	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P	NITRATE
1	0	19.60	35.710	25.43	***	***	***	***
2	25	18.20	35.730	25.80	***	***	***	***
2	50	17.60	35.710	25.93	5.06	97	***	***
1	75	17.60	35.710	25.93	***	***	***	***
1	100	17.59	35.710	25.93	***	***	***	***
1	150	17.54	35.710	25.95	***	***	***	***
1	250	17.54	35.730	25.96	***	***	***	***
1	300	17.53	35.710	25.95	***	***	***	***
1	500	13.82	35.300	26.48	***	***	***	***
1	700	9.53	34.790	26.89	***	***	***	***
1	1000	6.34	***	***	***	***	***	***

* PROPERTY DOUTRIFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 664/61	12/10/61	2315 K	34 45 S	151 35 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES	
DEPTH NET DRY	36 2	*	*	*	*	*	CAS1 CAS2 CAS3	40 *	
***	***	***	***	***	***	***	***	***	
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.40	35.700	25.47	***	***	***	***	***
1	19	19.06	35.700	25.56	***	***	***	***	***
1	38	18.51	35.700	25.70	5.33	104	***	***	***
1	57	17.69	35.750	25.94	***	***	***	***	***
1	76	17.57	35.770	25.98	5.35	103	***	***	***
1	113	17.53	35.750	25.98	***	***	***	***	***
1	151	17.53	35.750	25.98	5.21	100	***	***	***
1	226	17.50	35.820	26.04	5.15	99	***	***	***
1	377	14.90	35.500	26.40	4.81	87	***	***	***
1	528	9.82	34.850	26.89	4.53	73	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 666/61	13/10/61	0330 K	34 48 S	151 48 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES	
DEPTH NET DRY	36 3	*	*	*	*	*	CAS1 CAS2 CAS3	* *	
***	***	***	***	***	***	***	***	***	
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.80	35.680	25.35	***	***	***	***	***
1	25	19.35	35.730	25.51	***	***	***	***	***
1	48	17.70	35.750	25.94	5.70	110	***	***	***
1	71	17.58	35.730	25.95	***	***	***	***	***
1	95	17.51	35.750	25.98	5.18	99	***	***	***
1	143	17.54	35.750	25.98	***	***	***	***	***
1	190	17.59	35.730	25.95	5.38	103	***	***	***
1	285	17.52	35.770	26.00	5.10	98	***	***	***
1	476	13.17	35.230	26.55	4.39	77	***	***	***
1	666	9.22	34.740	26.90	4.39	70	***	***	***
1	951	6.24	34.510	27.16	4.36	65	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
UH16/ 670/61	13/10/61	1935 K	35 07 S	151 12 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR, AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
***	*** 34 3	*	*	*	*	*	*	7 *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	19.73	35.700	25.38	***	***	***	***	***
1	25	19.45	35.730	25.48	***	***	***	***	***
1	47	18.75	35.700	25.64	***	***	***	***	***
1	71	18.03	35.660	25.79	***	***	***	***	***
1	94	17.38	35.700	25.98	***	***	***	***	***
1	141	16.72	35.610	26.07	***	***	***	***	***
1	188	15.64	35.520	26.25	***	***	***	***	***
1	282	13.36	35.340	26.60	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
UH16/ 671/61	13/10/61	2045 K	35 08 S	151 18 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR, AMT.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
***	*** 34 3	*	*	*	*	*	*	7 *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	18.80	35.710	25.63	***	***	***	***	***
1	25	18.77	35.710	25.64	***	***	***	***	***
1	47	18.73	35.700	25.64	5.13	101	***	***	***
1	71	18.63	35.730	25.69	***	***	***	***	***
1	94	17.84	35.680	25.85	5.24	101	***	***	***
1	141	16.12	35.590	26.19	***	***	***	***	***
1	188	15.25	35.500	26.32	4.78	87	***	***	***
1	282	14.96	35.520	26.40	4.96	90	***	***	***
1	478	12.70	35.250	26.66	4.90	85	***	***	***
1	658	8.54	34.690	26.97	4.53	71	***	***	***
1	940	5.71	34.510	27.22	4.16	61	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE		
1H16/ 673/61		14/10/61		0050 K		35 10 S		151 41 E		
SONIC DEPTH	AIR TEMP.	WIND DIR, SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SEA SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	***	05	3	*	*	*	*	*	*	30 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	***	***	***	***	***	***	***		***
1	17	18.09	35.710	25.50	***	***	***	***		***
1	35	16.25	35.750	25.80	5.18	***	***	***		***
1	52	14.22	35.710	25.78	***	***	***	***		***
1	70	17.59	35.730	25.95	5.13	***	***	***		***
1	104	17.54	35.730	25.96	***	***	***	***		***
1	139	17.55	35.730	25.96	4.78	***	***	***		***
1	208	17.53	35.770	26.00	4.98	***	***	***		***
1	347	15.12	35.460	26.32	4.61	***	***	***		***
1	466	12.54	35.260	26.72	4.67	***	***	***		***
1	695	8.48	34.690	26.96	4.61	***	***	***		***

STATION		DATE		TIME		LATITUDE		LONGITUDE		
0H16/ 675/61		14/10/61		0425 K		35 11 S		152 04 E		
SONIC DEPTH	AIR TEMP.	WIND DIR, SP.	WIND ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SEA SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	***	33	2	*	*	*	*	*	*	10 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	***	***	***	***	***	***	***		***
1	23	18.52	35.700	25.34	***	***	***	***		***
1	45	17.77	35.750	25.69	***	***	***	***		***
1	68	17.58	35.770	25.92	5.38	***	***	***		***
1	91	17.54	35.770	25.98	***	***	***	***		***
1	136	17.56	35.770	25.99	5.18	***	***	***		***
1	181	17.57	35.750	25.99	***	***	***	***		***
1	272	17.57	35.750	25.97	5.04	***	***	***		***
1	453	13.66+	35.300	26.51	5.11	***	***	***		***
1	634	10.27	34.960	26.89	4.36	***	***	***		***
1	906	6.57	34.510	27.11	4.93	***	***	***		***
					4.33	***	***	***		***

* PROPERTY UNRELIABLE
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 689/61	15/10/61	0410 K	35 49 S	150 54 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SMELL	ATMOS.	WIRE ANGLES	
DEPTH WFT	DRY DIR, SP.	HEIGHT	TYPE	AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3	
***	***	16	2	*	*	*	*	20 * *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.80	35.640	25.05	***	***	***	***	***
1	22	18.53	35.550	25.58	***	***	***	***	***
1	44	17.02	35.590	25.76	4.87	94	***	***	***
1	66	17.33	35.660	25.96	***	***	***	***	***
1	88	16.26	35.550	26.13	5.01	94	***	***	***
1	131	15.51	35.500	26.26	***	***	***	***	***
1	175	14.38	35.410	26.44	4.87	87	***	***	***
1	262	12.22	35.120	26.66	4.70	80	***	***	***
1	437	9.56	34.790	26.88	4.64	75	***	***	***
1	612	7.82	34.580	26.99	4.33	67	***	***	***
1	875	5.11	34.470	27.26	4.13	59	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 690/61	15/10/61	0715 K	35 48 S	150 59 E					
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SMELL	ATMOS.	WIRE ANGLES	
DEPTH WFT	DRY DIR, SP.	HEIGHT	TYPE	AMT,	DIR, AMT,	DIR, AMT,	PRESSURE	CAST1 CAST2 CAST3	
***	***	16	2	*	*	*	*	20 * *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	21.00	35.660	25.01	***	***	***	***	***
1	23	19.00	35.590	25.49	***	***	***	***	***
1	45	18.06	35.590	25.73	5.07	96	***	***	***
1	68	17.20	35.550	25.91	***	***	***	***	***
1	91	16.93	35.590	26.00	4.81	91	***	***	***
1	136	15.82	35.500	26.19	***	***	***	***	***
1	181	14.81	35.500	26.42	5.07	92	***	***	***
1	272	12.42	***	***	4.78	***	***	***	***
1	453	9.13	***	***	4.64	***	***	***	***
1	634	7.40	***	***	4.22	***	***	***	***
1	906	4.88	***	***	4.02	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LM16/ 695/61	16/10/61	2015 K	36 25 S	150 09 E
SONIC AIR TEMP, WIND ANEM. CLOUD	SEA SWELL ATMOS.			
DEPTH *FT DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, DIR, AMT, PRESSURE	CAST1 CAST2 CAST3		
70 *** ** 04 2 * * * * * * * * * *				
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE				
1 0 18.28 35.620 25.70 *** **				
1 25 15.82 35.440 26.15 *** **				
1 50 14.77 35.320 26.50 *** **				

STATION	DATE	TIME	LATITUDE	LONGITUDE
LM16/ 696/61	16/10/61	2154 K	36 29 S	150 19 E
SONIC AIR TEMP, WIND ANEM. CLOUD	SEA SWELL ATMOS.			
DEPTH *FT DRY DIR, SP, HEIGHT TYPE AMT,	DIR, AMT, DIR, AMT, PRESSURE	CAST1 CAST2 CAST3		
256 *** ** 04 2 * * * * * * * * * *				
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE				
1 0 19.01 35.660 25.54 *** **				
1 23 18.65 35.660 25.63 *** **				
1 45 17.98 35.640 25.78 *** **				
1 68 18.64 35.590 26.06 *** **				
1 91 15.63 35.480 26.24 *** **				
1 136 14.72 35.430 26.38 *** **				
1 181 13.65 35.430 26.61 *** **				

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DM16/ 697/61	16/10/61	2320 K	36 32 S	150 27 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
*** ** 04 2	*	*	*	*	*	*	*		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.34	35.640	25.44	***	***	***	**	***
1	25	19.33	35.660	25.46	***	***	***	**	***
1	50	17.23	35.590	25.93	***	***	***	**	***
1	75	16.17	35.520	26.13	***	***	***	**	***
1	100	16.00*	35.520	26.17	***	***	***	**	***
1	148	15.56	35.590	26.32	***	***	***	**	***
1	197	15.32	35.610	26.39	***	***	***	**	***
1	295	14.11	35.480	26.55	***	***	***	**	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
DM16/ 698/61	17/10/61	0055 K	36 34 S	150 32 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
*** ** 04 2	*	*	*	*	*	*	*		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.60	35.700	25.68	***	***	***	**	***
1	22	18.34	35.680	25.73	***	***	***	**	***
1	44	17.87	35.640	25.81	4.87	94	***	**	***
1	66	17.11	35.620	25.98	***	***	***	**	***
1	88	16.44	35.590	26.12	4.64	87	***	**	***
1	131	15.69	35.660	26.34	***	***	***	**	***
1	175	15.56	35.640	26.36	5.45	100	***	**	***
1	262	14.94	35.570	26.44	5.24	95	***	**	***
1	437	11.61	35.120	26.78	4.81	81	***	**	***
1	612	8.92	34.720	26.93	4.84	77	***	**	***
1	875	6.50	34.510	27.12	4.39	65	***	**	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION CH16/ 700/61 DATE 17/10/61 TIME 0445 K LATITUDE 36 41 S LONGITUDE 150 50 E

SONIC AIR TEMP. WIND DIR, SP, WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CAVGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	19.30	35.700	25.50	***	***	***	***	***
1	17	17.29	35.620	25.94	***	***	***	***	***
1	34	16.23	35.590	26.17	5.47	102	***	***	***
1	51	16.09	35.680	26.27	***	***	***	***	***
1	68	15.93	35.680	26.30	5.58	104	***	***	***
1	102	15.84	35.680	26.32	***	***	***	***	***
1	136	15.83	35.670+	26.32	5.47	101	***	***	***
1	205	15.75	35.660	26.33	5.41	100	***	***	***
1	341	15.26	35.590	26.39	5.18	95	***	***	***
1	477	13.13	35.300	26.62	4.93	86	***	***	***
1	682	9.94	34.700	26.91	4.84	77	***	***	***

STATION CH16/ 703/61 DATE 18/10/61 TIME 0900 K LATITUDE 37 04 S LONGITUDE 150 03 E

SONIC AIR TEMP. WIND DIR, SP, WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP, HEIGHT TYPE AMT, HEIGHT TYPE AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3

CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	26.48	35.410	25.97	5.90	111	***	***	***
1	10	15.85	35.300	26.03	6.04	112	***	***	***
1	20	14.93	35.250	26.12	6.18	112	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM16/ 704/61	18/10/61	1050 K	37 06 S	150 16 E
SONIC AIR TEMP, WIND ANEM, CLOUD	WIND DIR, SP, HEIGHT	SEA DIR, AMT, PRESSURE	SWELL DIR, AMT, PRESSURE	ATMOS. CAST1 CAST2 CAST3
DEPTH WET DRY	09 1	*	*	*
110 ***	09 1	*	*	5 *
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
1	0 18.11	35.570	25.70	***
1	25 15.86	35.440	26.14	***
1	50 13.65	35.340	26.54	***
1	75 13.01	35.260	26.61	***
1	100 12.96	35.260	26.62	***
				INDORG. P

				TOTAL P

				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
DM16/ 705/61	18/10/61	1238 K	37 08 S	150 29 E
SONIC AIR TEMP, WIND ANEM, CLOUD	WIND DIR, SP, HEIGHT	SEA DIR, AMT, PRESSURE	SWELL DIR, AMT, PRESSURE	ATMOS. CAST1 CAST2 CAST3
DEPTH WET DRY	08 1	*	*	*
***	08 1	*	*	10 *
CST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
1	0 18.95	35.680	25.57	***
1	25 18.61	35.680	25.66	***
1	47 18.22	35.680	25.75	***
1	71 16.83	35.610	26.04	***
1	94 15.64	35.500	26.23	***
1	141 14.44	35.350	26.38	***
1	188 13.52	35.320	26.55	***
1	282 12.32	35.190	26.69	***
				INDORG. P

				TOTAL P

				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 710/61	18/10/61	2150 K	37 15 S	151 25 E					
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH WET DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3									
*** ** 07 1	*	*	*	*					
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	19.40	35.570	25.37	***	***	***	***	***
1	25	16.89	35.680	26.08	***	***	***	***	***
1	50	15.99	35.680	26.29	5.50	102	***	***	***
1	75	15.79	35.680	26.34	***	***	***	***	***
1	100	15.74	35.680	26.35	5.35	99	***	***	***
1	150	15.70	35.660	26.34	***	***	***	***	***
1	200	15.68	35.660	26.35	***	99	***	***	***
1	295	15.07	35.570	26.41	5.18	94	***	***	***
1	492	11.54	35.120	26.79	4.73	80	***	***	***
1	689	8.61	34.650	26.93	4.70	74	***	***	***
1	985	5.95	34.510	27.19	4.27	63	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH16/ 717/61	19/10/61	1230 K	37 34 S	149 58 E					
SONIC AIR TEMP, WIND, ANEM, CLOUD, SWELL, ATMOS, WIRE ANGLES DEPTH WET DRY DIR, SP, HEIGHT TYPE AMT, DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3									
84 *** ** 02 3	*	*	*	*					
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INDRG. P	TOTAL P	NITRATE
1	0	14.75	35.300	26.28	***	***	***	***	***
1	25	14.30	35.370	26.43	***	***	***	***	***
1	50	13.83	35.440	26.58	***	***	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 CH16/ 718/61 19/10/61 1350 K 37 36 S 150 06 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 99 *** ** 04 4 * * * * * * * * * * 0 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE
 1 0 15.29 35.170 26.06 *** *** *** ***
 1 25 14.90 35.250 26.20 *** *** *** ***
 1 50 13.27 35.410 26.67 *** *** *** ***

STATION DATE TIME LATITUDE LONGITUDE
 CH16/ 719/61 19/10/61 1510 K 37 37 S 150 13 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 135 *** ** 04 4 * * * * * * * * * * 7 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE
 1 0 16.70 35.390 25.90 *** *** *** ***
 1 25 15.24 35.430 26.27 *** *** *** ***
 1 50 14.15 35.350 26.44 *** *** *** ***
 1 75 13.42 35.280 26.54 *** *** *** ***
 1 100 13.13 35.410 26.70 *** *** *** ***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH16/ 720/61	19/10/61	1555 K	37 38 S	150 16 E				
SONIC AIR TEMP.	WIND DIR.	SP. WIND DIR.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGLES			
DEPTH MET	DRY	WIND DIR.	SEA DIR.	ATMOS. PRESSURE	CAS11 CAS12 CAS13			
161 ***	02 3	*	*	*	10 *			
CAS1 DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	IMORG. P	TOTAL P	NITRATE
1	0	14.74	35.460	25.95	***	***	***	***
1	25	15.91	35.950	26.21	***	***	***	***
1	50	14.89	35.480	26.38	4.93	R9	***	***
1	72	14.21	35.880	26.53	***	***	***	***
1	97	12.55	35.190	26.65	4.67	R0	***	***
1	145	12.48	35.190	26.66	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE				
LH16/ 722/61	19/10/61	1425 K	37 40 S	150 30 E				
SONIC AIR TEMP.	WIND DIR.	SP. WIND DIR.	SEA DIR.	ATMOS. PRESSURE	WIRE ANGLES			
DEPTH MET	DRY	WIND DIR.	SEA DIR.	ATMOS. PRESSURE	CAS11 CAS12 CAS13			
***	02 4	*	*	*	10 *			
CAS1 DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN X SAT.	IMORG. P	TOTAL P	NITRATE
1	0	18.70	35.460	25.47	***	***	***	***
1	25	16.84	35.460	25.92	***	***	***	***
1	50	15.64	35.500	26.23	4.76	R8	***	***
1	75	15.68	35.500	26.22	***	***	***	***
1	97	14.53	35.440	26.43	4.76	R6	***	***
1	146	14.21	35.410	26.48	***	***	***	***
1	194	13.65	35.410	26.59	5.29	R4	***	***
1	291	11.70	35.160	26.79	4.84	R2	***	***
1	485	8.52	34.630	26.92	4.70	74	***	***
1	679	7.03	34.600	27.12	4.39	66	***	***
1	970	4.92	34.520	27.33	4.02	58	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
EH16/ 724/61	19/10/61	2130 K	37 43 S	150 44 E					
SDNIC ATR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
***	***	02 4	*	*	*	*	*	*	35 * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.80	35.550	25.76	***	***	***	***	***
1	20	17.15	35.520	25.89	***	***	***	***	***
1	41	15.60	35.550	26.28	5.92	109	***	***	***
1	61	15.56	35.520	26.27	***	***	***	***	***
1	81	14.31	35.500	26.53	5.70	102	***	***	***
1	121	13.75	35.410	26.57	5.50	97	***	***	***
1	162	13.70	35.430	26.60	5.50	97	***	***	***
1	243	12.28	35.230	26.73	5.18	89	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
GH17/ 756/61	9/11/61	1325 K	34 05 S	151 13 E					
SONIC ATR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
60	***	24 2	*	*	*	*	*	*	5 * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.07	35.410	25.34	***	***	***	***	***
1	25	16.23	35.410	26.03	***	***	***	***	***
1	50	14.82	35.390	26.33	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LM17/ 759/61	9/11/61	1745 K	34 14 S	151 36 E					
SONIC AIR TEMP.	WIND	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH KFT DRY	DIR. SP.	ANEM. HEIGHT	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3				
510 ***	09 2	*	*	*	30 *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.29	35.590	25.41	***	***	***	***	***
1	22	19.02	35.610	25.50	***	***	***	***	***
1	43	18.82	35.620	25.56	5.22	103	***	***	***
1	65	18.68	35.640	25.61	***	***	***	***	***
1	87	18.15	35.640	25.74	4.41	86	***	***	***
1	130	15.29	35.390	26.23	***	***	***	***	***
1	173	13.26	35.210	26.52	4.37	77	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LM17/ 761/61	9/11/61	2230 K	34 02 S	151 57 E					
SONIC AIR TEMP.	WIND	CLOUD	SWELL	ATMOS.	WIRE ANGLES				
DEPTH KFT DRY	DIR. SP.	ANEM. HEIGHT	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3				
***	03 3	*	*	*	45 20 *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.20	35.640	24.95	***	***	***	***	***
2	23*	21.17	35.640	24.95	***	***	***	***	***
2	45*	19.74	35.700	25.36	4.98	100	***	***	***
2	60*	19.33	35.700	25.49	***	***	***	***	***
1	60*	19.05	35.750	25.60	4.64	92	***	***	***
1	120*	17.75	35.750	25.93	4.28	82	***	***	***
1	275*	14.39	35.480	26.04	4.21	79	***	***	***
1	390*	12.34	35.210	26.70	4.54	78	***	***	***

* PROPERTY ROUGH
* PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE							
CH17/ 769/61	12/11/61	1615 K	34 44 S	151 05 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANFM.	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAS1 CAS2 CAS3			
DEPTH MET	DIRY	DIR, SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3		
150	***	05	3	*	*	*	*	*	10	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	14.86	35.550	25.50	***	***	***	***	***		
1	25	14.61	35.550	25.58	***	***	***	***	***		
1	50	14.03	35.480	26.13	***	***	***	***	***		
1	75	14.78	35.430	26.37	***	***	***	***	***		
1	100	14.12	35.390	26.48	***	***	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE							
CH17/ 770/61	12/11/61	1405 K	34 49 S	151 15 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANFM.	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAS1 CAS2 CAS3			
DEPTH MET	DIRY	DIR, SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3		
500	***	05	3	*	*	*	*	*	20	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	14.71	35.590	25.56	***	***	***	***	***		
1	23	14.53	35.590	25.61	***	***	***	***	***		
1	45	17.79	35.570	25.78	***	***	***	***	***		
1	68	15.82	35.480	26.17	***	***	***	***	***		
1	91	15.12	35.460	26.32	***	***	***	***	***		
1	136	14.46	35.440	26.45	***	***	***	***	***		
1	161	14.00	35.410	26.52	***	***	***	***	***		
1	272	11.96	35.070	26.67	***	***	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH17/ 771/61	12/11/61	1940 K	34 50 S	151 20 E					
SONIC AIR TEMP.	WIND DIR.	SP. DIR.	AMT.	SMELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH MET	36	2	*	*	*	*	25	*	*
***	***	***	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.60	35.590*	25.59	***	***	***	***	***
1	25	14.62	35.590	25.59	***	***	***	***	***
1	47	17.08	35.570	25.73	5.40	104	***	***	***
1	71	14.85	35.550	25.99	***	***	***	***	***
1	94	15.44	35.460	26.25	4.75	87	***	***	***
1	141	14.83	35.480	26.40	***	***	***	***	***
1	168	14.11	35.390	26.48	5.01	89	***	***	***
1	282	11.08	35.050	26.65	4.38	74	***	***	***
1	470	9.33	34.720	26.87	4.59	73	***	***	***
1	658	7.35	34.600	27.08	4.30	65	***	***	***
1	940	5.12	34.470	27.26	4.04	58	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
CH17/ 773/61	13/11/61	0020 K	34 54 S	151 40 E					
SONIC AIR TEMP.	WIND DIR.	SP. DIR.	AMT.	SMELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
DEPTH MET	36	2	*	*	*	*	50	10	*
***	***	***	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	21.12	35.590	24.93	***	***	***	***	***
2	24	21.03	35.620	24.98	***	***	***	***	***
2	48	20.25	35.640	25.20	5.15	104	***	***	***
2	72	18.47	35.610	25.59	***	***	***	***	***
2	95*	17.76	35.530	25.76	4.16	80	***	***	***
1	110*	17.40	35.550	25.86	4.24	81	***	***	***
1	170*	15.89	35.460	26.14	4.67	86	***	***	***
1	320*	13.60	35.260	26.49	4.54	80	***	***	***
1	450*	12.54	35.140	26.61	4.47	77	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 EM17/ 775/61 13/11/61 0507 K 34 58 S 152 00 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3
 *** ** 34 2 * * * * * * * * * * 25 * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 20.90 35.680 25.06 *** *** *** ***
 1 24 20.85 35.680 25.07 *** *** *** ***
 1 47 20.52 35.660 25.15 103 *** *** *** ***
 1 70 19.45 35.680 25.44 *** *** *** ***
 1 94 19.18 35.700 25.53 94 *** *** *** ***
 1 140 18.86 35.700 25.61 *** *** *** ***
 1 280 17.93 35.640 25.80 85 *** *** *** ***
 1 370 14.02 35.280 26.42 80 *** *** *** ***
 1 555 10.08 34.790 26.79 73 *** *** *** ***
 1 830 6.88 34.520 27.08 66 *** *** *** ***

STATION DATE TIME LATITUDE LONGITUDE
 EM17/ 741/61 14/11/61 0007 K 35 07 S 150 52 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT. PRESSURE CAST1 CAST2 CAST3
 110 *** ** 36 3 * * * * * * * * * * 15 * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 17.29 35.430 25.79 *** *** *** ***
 1 25 17.02 35.430 25.86 *** *** *** ***
 1 50 15.97 35.440 26.11 *** *** *** ***
 1 75 15.11 35.430 26.30 *** *** *** ***
 1 100 14.75 35.410 26.35 *** *** *** ***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH17/ 782/61	14/11/61	0250 K	35 05 S	151 05 E			
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
295 ***	02 4	*	*	*	*	*	15 15 *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P NITRATE
1	18.41	35.590	25.64	***	***	***	***
1	18.40	35.610	25.66	***	***	***	***
1	15.90	35.500	26.17	***	***	***	***
1	15.33	35.500	26.30	***	***	***	***
1	14.31	35.370	26.42	***	***	***	***
1	13.79	35.320	26.50	***	***	***	***
2	13.34	35.260	26.54	***	***	***	***
2	13.22	35.230	26.54	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
CH17/ 783/61	15/11/61	0400 K	35 07 S	150 52 E			
SONIC AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
110 ***	10 2	*	*	*	*	*	* * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INDRG. P	TOTAL P NITRATE
1	17.55	35.410	25.71	***	***	***	***
1	15.99	35.410	26.08	***	***	***	***
1	15.01	35.390	26.29	***	***	***	***
1	14.52	35.410	26.41	***	***	***	***
1	14.12	35.370	26.46	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE							
UM17/ 786/61	15/11/61	1013 K	35 13 S	151 17 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM.	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3	WIRE ANGLES
DEPTH MET	DRY	18 4	*	*	*	*	*	*	*	*	5 0 *
***	***	***	***	***	***	***	***	***	***	***	***
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	19.25	35.500	25.36	***	***	***	***	***		
1	25	18.38	35.500	25.58	***	***	***	***	***		
1	50	17.14	35.550	25.92	4.90	93	***	***	***		
1	75	15.38	35.520*	26.31	***	***	***	***	***		
1	100	15.18	35.500	26.34	4.93	90	***	***	***		
1	150	14.35	35.410	26.45	***	***	***	***	***		
1	200	13.28	35.260	26.56	4.81	84	***	***	***		
1	300	11.23	34.970	26.73	4.64	78	***	***	***		
1	455	8.73	34.650	26.91	4.54	71	***	***	***		
1	693	7.44	34.520	27.00	4.34	66	***	***	***		
1	950	4.96	34.470	27.28	3.96	57	***	***	***		

STATION	DATE	TIME	LATITUDE	LONGITUDE							
UM17/ 788/61	15/11/61	1325 K	35 14 S	151 37 E							
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM.	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3	WIRE ANGLES
DEPTH MET	DRY	18 4	*	*	*	*	*	*	*	*	20 *
***	***	***	***	***	***	***	***	***	***	***	***
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE		
1	0	20.70	35.620	25.07	***	***	***	***	***		
1	25	19.61	35.620	25.36	***	***	***	***	***		
1	50	14.60	35.620	25.61	4.58	90	***	***	***		
1	75	17.76	35.590	26.80	***	***	***	***	***		
1	97	14.93	35.550	26.97	4.44	84	***	***	***		
1	145	14.28	35.350	26.42	***	***	***	***	***		
1	193	13.37	35.260	26.54	4.72	83	***	***	***		
1	250	11.73	35.050	26.70	4.55	77	***	***	***		
1	483	8.97	34.670	26.89	4.42	70	***	***	***		
1	676	7.23	34.520	27.03	4.36	66	***	***	***		
1	966	5.10	***	***	***	***	***	***	***		

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION DATE TIME LATITUDE LONGITUDE
 141R/ 634/61 28/11/61 0505 K 34 42 S 151 04 E

SONIC AIR TEMP. WIND ANFM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3
 125 *** ** 23 3 * * * * * * * * * * 10 * * *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INDRG. P TOTAL P NITRATE
 1 0 12.57 35.480 25.26 *** *** *** *** *** ***
 1 25 18.16 35.520 25.65 *** *** *** *** *** ***
 1 50 16.90 35.460 25.91 *** *** *** *** *** ***
 1 75 16.16 35.480 26.10 *** *** *** *** *** ***
 1 100 14.42 35.370 26.36 *** *** *** *** *** ***
 1 125 13.69 35.340 26.53 *** *** *** *** *** ***

STATION DATE TIME LATITUDE LONGITUDE
 141R/ 635/61 28/11/61 0700 K 34 43 S 151 13 E

SONIC AIR TEMP. WIND ANFM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH WFT DRY DIR, SP. HEIGHT TYPE AMT. DIR, AMT, DIR, AMT, PRESSURE CAST1 CAST2 CAST3
 270 *** ** 23 3 * * * * * * * * * * 20 * * *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INDRG. P TOTAL P NITRATE
 1 0 20.08 35.530 25.16 *** *** *** *** *** ***
 1 25 20.06 35.530 25.16 *** *** *** *** *** ***
 1 46 19.63 35.550 25.30 *** *** *** *** *** ***
 1 69 18.52 35.620 25.63 *** *** *** *** *** ***
 1 91 18.19 35.620 25.72 *** *** *** *** *** ***
 1 135 17.25 35.590 25.93 *** *** *** *** *** ***
 1 180 15.18 35.370 26.23 *** *** *** *** *** ***
 1 270 11.16 35.370 27.05 *** *** *** *** *** ***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LHR/ R36/61	28/11/61	0910 K	34 44 S	151 17 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
DEPTH WFT	DIR, SP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
***	***	20 2	*	*	*	*	*	35 10 *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.46	35.550	25.08	***	***	***	***	***
2	24	20.49	35.530	25.05	***	***	***	***	***
2	47*	20.50	35.610	25.11	4.99	101	***	***	***
2	71*	20.36	35.700	25.22	***	***	***	***	***
2	94*	18.42	35.590	25.64	4.90	95	***	***	***
2	125*	16.78	35.550	26.01	***	***	***	***	***
1	120*	17.14	35.610	25.97	4.87	93	***	***	***
1	165*	15.44	35.570	26.28	4.86	90	***	***	***
1	270*	13.85	35.430	26.57	4.73	84	***	***	***
1	380*	11.52	35.140	26.81	4.60	77	***	***	***
1	545*	9.29	34.740	26.89	4.49	72	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LHR/ R36/61	28/11/61	1214 K	34 47 S	151 34 E					
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3		
DEPTH WFT	DIR, SP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
***	***	18 2	*	*	*	*	*	10 10 *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.43	35.620	25.14	***	***	***	***	***
2	25	20.42	35.620	25.14	***	***	***	***	***
2	50	20.34	35.660	25.19	5.04	102	***	***	***
2	75	19.52	35.710	25.45	***	***	***	***	***
2	100	19.32	35.710	25.50	4.73	94	***	***	***
2	150	18.77	35.710	25.64	***	***	***	***	***
1	200	17.75	35.620	25.83	4.34	84	***	***	***
1	300	16.10	35.620	26.22	5.07	94	***	***	***
1	496	11.84	35.070	26.69	4.45	75	***	***	***
1	695	8.34	34.630	26.95	4.42	69	***	***	***
1	993	5.70	34.470	27.19	4.09	60	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION	DATE	TIME	LATITUDE	LONGITUDE
EM18/ 846/61	29/11/61	0255 K	35 10 S	151 02 E
SONIC AIR TEMP, WIND, ANEM, CLOUD, ATMOS, WIRE ANGLES				
DEPTH WFT DRY DIR, SP, HEIGHT TYPE AMT,		VIS, DIR, AMT, SEA	SWELL DIR, AMT, PRESSURE	CAST1 CAST2 CAST3
125 *** ** 09 1 * * * * *		* * * * *	* * * * *	5 * *
CST DEPTH TEMP, SALINITY SIGMA-T		OXYGEN	OXYGEN % SAT, INORG. P	TOTAL P NITRATE
1 0 10.06 35.530 25.20		***	***	***
1 25 19.05 35.530 25.43		***	***	***
1 50 17.11 35.530 25.91		***	***	***
1 75 16.70 35.520 26.00		***	***	***
1 100 15.26 35.410 26.25		***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
EM18/ #47/61	29/11/61	0440 K	35 13 S	151 12 E
SONIC AIR TEMP, WIND, ANEM, CLOUD, ATMOS, WIRE ANGLES				
DEPTH WFT DRY DIR, SP, HEIGHT TYPE AMT,		VIS, DIR, AMT, SEA	SWELL DIR, AMT, PRESSURE	CAST1 CAST2 CAST3
*** ** 16 1 * * * * *		* * * * *	* * * * *	5 * *
CST DEPTH TEMP, SALINITY SIGMA-T		OXYGEN	OXYGEN % SAT, INORG. P	TOTAL P NITRATE
1 0 20.45 35.530 25.06		***	***	***
1 25 20.48 35.530 25.06		***	***	***
1 50 20.48 35.610 25.12		***	***	***
1 75 19.42 35.590 25.38		***	***	***
1 97 17.82 35.610 25.80		***	***	***
1 145 16.27 35.530 26.11		***	***	***
1 193 14.36 35.430 26.46		***	***	***
1 290 12.13 35.120 26.68		***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH1F/ 848/61	29/11/61	0552 K	35 15 S	151 17 F					
SONIC AIR TEMP, WIND DIR, SP, ANEM. HEIGHT	CLOUD TYPE AMT.	VIS, SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3				
*** ** 16 1	* * * * *	* * * * *	* * * * *	* * * * *	30 5 *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.49	35.550	25.07	***	***	***	***	***
2	25	20.52	35.530	25.05	***	***	***	***	***
2	50	20.40	35.620	25.15	5.03	102	***	***	***
2	74	19.96	35.620	25.26	***	***	***	***	***
2	98	19.27	35.620	25.70	4.87	95	***	***	***
2	148	14.09	35.530	26.15	***	***	***	***	***
1	155	15.77	35.530	26.23	4.73	87	***	***	***
1	233	13.99	35.370	26.49	4.70	84	***	***	***
1	389	10.96	34.960	26.77	4.34	72	***	***	***
1	544	8.93	34.700	26.92	4.48	71	***	***	***
1	777	6.64	34.510	27.10	4.22	63	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
LH1B/ 850/61	29/11/61	1009 K	35 22 S	151 36 E					
SONIC AIR TEMP, WIND DIR, SP, ANEM. HEIGHT	CLOUD TYPE AMT.	VIS, SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3				
*** ** 09 2	* * * * *	* * * * *	* * * * *	* * * * *	10 5 *				
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	20.57	35.620	25.10	***	***	***	***	***
2	25	20.48	35.610	25.12	***	***	***	***	***
2	50	20.23	35.700	25.25	4.93	99	***	***	***
2	75	19.31	35.710	25.50	***	***	***	***	***
2	100	19.10	35.730	25.57	4.73	93	***	***	***
2	150	18.71	35.710	25.66	***	***	***	***	***
1	191	17.72	35.620	25.83	4.40	85	***	***	***
1	387	15.91	35.530	26.19	4.65	86	***	***	***
1	478	12.09	35.100	26.67	4.46	76	***	***	***
1	669	8.76	34.650	26.91	4.48	71	***	***	***
1	956	6.04	34.470	27.15	4.18	62	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
EH18/ 852/61	29/11/61	1348 K	35 29 S	151 55 E			
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM. HEIGHT	CLOUD TYPE	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH *ET DRY	*** 09 1	*** * * * *	* * * * *	* * * * *	* * * * *	* * * * *	15 5 *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
2	20.70	35.660	25.10	***	***	***	***
2	20.41	35.640	25.16	***	***	***	***
2	20.32	35.640	25.18	5.02	101	***	***
2	19.64	35.700	25.41	***	***	***	***
2	19.23	35.710	25.52	4.69	93	***	***
2	18.87	35.770	25.66	***	***	***	***
1	19.13	35.680	25.78	***	***	***	***
1	17.01	35.620	26.00	4.60	87	***	***
1	483	35.260	26.52	4.50	79	***	***
1	676	34.780	26.90	4.39	70	***	***
1	966	34.490	27.13	4.18	62	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
EH18/ 861/61	30/11/61	1622 K	35 50 S	150 10 E			
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM. HEIGHT	CLOUD TYPE	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH *ET DRY	*** 18 6	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	5 * *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P NITRATE
1	18.33	34.790	25.05	***	***	***	***
1	24	35.370	25.65	***	***	***	***
1	48	35.390	26.38	***	***	***	***
1	72	***	***	***	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE															
PHR/ 862/61	2/12/61	0853 K	35 50 S	150 18 E															
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM.	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3											
DEPTH MET	DRY	DIRY	SP.	DIRY	SP.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.
73 ***	***	02	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE										
1	0	17.99	33.010	23.77	***	***	***	***	***										
1	25	17.75	35.520	25.75	***	***	***	***	***										
1	50	14.58	35.440	26.42	***	***	***	***	***										

STATION	DATE	TIME	LATITUDE	LONGITUDE															
PHR/ 863/61	2/12/61	1020 K	35 54 S	150 28 E															
SONIC AIR TEMP.	WIND DIR, SP.	WIND ANEM.	CLOUD TYPE AMT.	VIS.	SEA DIR, AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3											
DEPTH MET	DRY	DIRY	SP.	DIRY	SP.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.	DIRY	AMT.
128 ***	***	02	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE										
1	0	14.92	34.830	24.93	***	***	***	***	***										
1	25	18.46	35.440	25.51	***	***	***	***	***										
1	50	15.78	35.460	26.17	***	***	***	***	***										
1	75	14.35	35.350	26.40	***	***	***	***	***										
1	100	13.47	35.320	26.56	***	***	***	***	***										
1	125	12.67	35.210	26.64	***	***	***	***	***										

STATION DATE TIME LATITUDE LONGITUDE
 LHR/ 664/61 2/12/61 1205 K 35 57 S 150 37 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** *** 07 1 * * * * * * * * * * 5 * *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 1 0 19.74 35.440 25.18 *** *** ***
 1 25 19.63 35.430 25.46 *** *** ***
 1 50 17.57 35.590 25.85 *** *** ***
 1 75 15.02 35.460 26.34 *** *** ***
 1 100 14.18 35.370 26.45 *** *** ***
 1 150 12.84 35.290 26.64 *** *** ***
 1 200 12.21 35.170 26.70 *** *** ***
 1 300 10.59 34.920 26.81 *** *** ***

STATION DATE TIME LATITUDE LONGITUDE
 LHR/ 665/61 2/12/61 1312 K 35 56 S 150 44 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3
 *** *** 09 2 * * * * * * * * * * 15 5 *

CST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE
 2 0 20.19 35.430 25.06 *** *** ***
 2 25 19.59 35.520 25.54 *** *** ***
 2 50 17.28 35.550 25.89 *** *** ***
 2 75 15.58 35.460 26.21 *** *** ***
 2 100 14.36 35.370 26.41 *** *** ***
 2 150 13.20 35.260 26.57 *** *** ***
 2 200 11.73 35.080 26.72 *** *** ***
 1 295 10.32 34.900 26.84 *** *** ***
 1 492 7.99 34.830 27.01 *** *** ***
 1 689 6.38 34.520 27.15 *** *** ***
 1 985 4.95 *** 3.94 *** ***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
LHR/ 875/61	3/12/61	1119 K	36 25 S	150 09 E			
SONIC AIR TEMP.	WIND DIR.	SP.	WIND DIR.	SP.	WIRE ANGLES		
DEPTH MET	DRY	WET	DIR.	SP.	CAS1 CAS2 CAS3		
64 ***	02	2	*	*	5	*	
CLOUD TYPE	AMT.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	
SIGMA-T	SALINITY	OXYGEN	CXYGEN	% SAT.	INORG.	P	
CAST DEPTH	TEMP.	SALINITY	OXYGEN	CXYGEN	% SAT.	INORG.	P
1	0	14.74	34.960	25.08	***	***	***
1	25	15.58	35.620	26.34	***	***	***
1	50	14.58	35.500	26.47	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE			
LHR/ 876/61	3/12/61	1302 K	36 25 S	150 19 E			
SONIC AIR TEMP.	WIND DIR.	SP.	WIND DIR.	SP.	WIRE ANGLES		
DEPTH MET	DRY	WET	DIR.	SP.	CAS1 CAS2 CAS3		
230 ***	02	2	*	*	25	*	
CLOUD TYPE	AMT.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	
SIGMA-T	SALINITY	OXYGEN	CXYGEN	% SAT.	INORG.	P	
CAST DEPTH	TEMP.	SALINITY	OXYGEN	CXYGEN	% SAT.	INORG.	P
1	0	15.84	35.530	25.23	***	***	***
1	22	14.86	35.620	25.55	***	***	***
1	44	16.83	35.610	26.04	***	***	***
1	66	15.48	35.620	26.36	***	***	***
1	88	14.59	35.500	26.46	***	***	***
1	132	13.71	35.390	26.57	***	***	***
1	177	12.96	35.260	26.62	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LHR/ 877/61	3/12/61	1508 K	36 25 S	150 29 E
SONIC AIR TEMP, WIND ANEM, CLOUD	WIND SP, ANEM, CLOUD	SEA DIR, AMT, DIR, AMT, PRESSURE	SWELL DIR, AMT, DIR, AMT, PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY
*** ** 05 2	*** ** 05 2	*** ** 05 2	*** ** 05 2	*** ** 05 2
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
1	0	35.530	25.17	***
1	25	35.550	25.27	***
1	50	35.550	25.82	***
1	75	35.500	26.10	***
1	100	35.410	26.31	***
1	147	35.260	26.58	***
1	195	35.160	26.67	***
1	293	34.900	26.84	***
				INORG. P

				TOTAL P

				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
LHR/ 878/61	3/12/61	1630 K	36 25 S	150 34 E
SONIC AIR TEMP, WIND ANEM, CLOUD	WIND SP, ANEM, CLOUD	SEA DIR, AMT, DIR, AMT, PRESSURE	SWELL DIR, AMT, DIR, AMT, PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY	DEPTH MET DRY
*** ** 05 2	*** ** 05 2	*** ** 05 2	*** ** 05 2	*** ** 05 2
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN
2	0	35.530	25.13	***
2	25	35.440	25.32	***
2	50	35.430	25.76	90
2	75	35.430	26.14	***
3	100	35.370	26.37	74
3	150	35.260	26.57	***
1	200	35.140	26.70	77
1	300	34.900	26.64	76
1	500	34.830	26.96	67
1	700	34.520	27.13	62
1	1000	34.520	27.56	56
				INORG. P

				TOTAL P

				NITRATE

STATION CHIR/ 080761 DATE 3/12/61 TIME 2034 K LATITUDE 36 25 S LONGITUDE 150 54 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAS12 CAST3
 *** ** 09 1 * * * * * * * * * * 10 5 *

CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.28	34.990	24.96	***	***	***	***	***
2	25	18.64	35.520	25.53	***	***	***	***	***
2	50	17.89	35.610	25.78	4.62	89	***	***	***
2	75	15.61	35.460	26.21	***	***	***	***	***
2	100	15.05	35.530	26.39	4.82	86	***	***	***
2	150	12.92	35.230	26.61	***	***	***	***	***
1	196	12.05	35.140	26.71	4.46	76	***	***	***
1	293	10.25	34.880	26.84	4.43	72	***	***	***
1	489	7.89	34.610	27.00	4.31	67	***	***	***
1	685	6.42	34.520	27.14	4.15	62	***	***	***
1	978	4.49	34.520	27.37	3.89	55	***	***	***

STATION CHIR/ 082761 DATE 4/12/61 TIME 0025 K LATITUDE 36 25 S LONGITUDE 151 14 E

SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES
 DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAS12 CAST3
 *** ** 09 1 * * * * * * * * * * 16 10 *

CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.74	35.280	25.06	***	***	***	***	***
2	25	18.62	35.230	25.31	***	***	***	***	***
2	50	17.81	35.640	25.83	4.34	84	***	***	***
2	75	17.07	35.570	25.95	***	***	***	***	***
2	100	14.98	35.500	26.36	4.66	85	***	***	***
2	148	13.01	35.260	26.61	***	***	***	***	***
1	190	11.95	35.100	26.69	4.48	76	***	***	***
1	285	9.76	34.910	26.86	4.45	72	***	***	***
1	476	7.62	34.600	27.04	4.25	65	***	***	***
1	666	4.19	34.520	27.17	4.14	61	***	***	***
1	951	4.44	34.520	27.38	3.85	54	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LHR/ 890/61	5/12/61	0715 K	37 06 S	150 23 E
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	
DEPTH *FT DRY	DIR, SP,	HEIGHT	TYPE	AMT.
340 *** 11 1	*	*	*	*
	VIS.	SEA	SWELL	ATMOS.
	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
				CAST1 CAST2 CAST3
				10 * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T
			OXYGEN	OXYGEN % SAT.
			INORG. P	TOTAL P
				NITRATE
1	0	19.91	35.640	25.55
			***	***
1	25	18.50	35.680	25.69
			***	***
1	47	18.08	35.680	25.79
			***	***
1	71	18.06	35.680	25.80
			***	***
1	94	18.00+	35.700	25.83
			***	***
1	141	14.74	35.550	26.01
			***	***
1	188	15.95+	35.530	26.18
			***	***
1	282	14.39	35.520	26.52
			***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
LHR/ 891/61	5/12/61	0833 K	37 06 S	150 28 E
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	
DEPTH *FT DRY	DIR, SP,	HEIGHT	TYPE	AMT.
*** 11 1	*	*	*	*
	VIS.	SEA	SWELL	ATMOS.
	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
				CAST1 CAST2 CAST3
				40 22 *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T
			OXYGEN	OXYGEN % SAT.
			INORG. P	TOTAL P
				NITRATE
2	0	19.35	35.620	25.42
			***	***
2	25	18.87	35.700	25.61
			***	***
2	44	18.29	35.700	25.75
			***	***
2	70	17.77	35.700	25.88
			***	***
2	93	16.68	35.610	26.08
			***	***
2	139	15.23	35.520	26.34
			***	***
2	185	14.97	35.530	26.40
			***	***
1	229	14.45	35.520	26.51
			***	***
1	383	12.34	35.210	26.70
			***	***
1	536	9.32	34.780	26.91
			***	***
1	766	6.78	34.520	27.09
			***	***

* PROPERTY DOUTIFUL
 + PROPERTY INTERPOLATED

DATA

PART 3

ZOOPLANKTON BIOMASS

OBLIQUE TOWS : CLARKE-BUMPUS SAMPLER

STATION POSITION	DATE	TIME	DEPTH RANGE (m)	VOLUME FILTERED (m ³)	BIOMASS (mg/m ³)
DH2/25/61 38° 02'S. 149° 08'E.	17/2/61		100-0	3.5	37
DH2/26/61 38° 03'S. 150° 14'E.	18/2/61		200-0	3.2	44
DH2/33/61 38° 17'S. 151° 58'E.	19/2/61		200-0	4.6	15
DH2/40/61 39° 06'S. 150° 56'E.	20/2/61		200-0	4.9	5860*
DH2/51/61 39° 50'S. 148° 46'E.	21/2/61	0900	100-0	1.5	27
DH3/68/61 42° 10'S. 148° 38'E.	8/3/61		200-0	6.7	6
DH3/75/61 41° 59'S. 149° 50'E.	9/3/61		200-0	7.3	1
DH4/83/61 43° 13'S. 149° 33'E.	16/3/61		100-0	2.7	511*

* Salp swarms

A blank indicates no data available

OBLIQUE TOWS : CLARKE-BUMPUS SAMPLER

STATION POSITION	DATE	TIME	DEPTH RANGE (m)	VOLUME FILTERED (m ³)	BIOMASS (mg/m ³)
DH4/85/61 43°12'S. 149°46'E.	17/3/61		200-0	3.7	54
DH4/95/61 41°27'S. 149°29'E.	18/3/61		200-0	3.8	5
DH4/100/61 41°01'S. 148°41'E.	19/3/61		100-0	1.8	72
DH4/109/61 40°00'S. 148°51'E.	20/3/61		100-0	1.3	100
DH4/119/61 38°57'S. 149°06'E.	21/3/61		200-0	3.9	13
DH4/125/61 38°00'S. 149°24'E.	22/3/61		100-0	2.2	141
DH4/130/61 38°05'S. 150°23'E.	23/3/61		200-0	3.6	11
DH9/297/61 37°58'S. 150°05'E.	28/5/61	1005 0934	100-0 200-100	5.8 5.0	28 26

A blank indicates no data available

OBLIQUE TOWS : CLARKE-BUMPUS SAMPLER

STATION POSITION	DATE	TIME	DEPTH RANGE (m)	VOLUME FILTERED (m ³)	BIOMASS (mg/m ³)
DH9/299/61 38°04'S. 151°57'E.	29/5/61	1019 0957	100-0 200-150	6.0 2.5	8 16
DH9/301/61 38°22'S. 153°07'E.	30/5/61	1110 1039	100-0 200-100	5.5 6.6	20 21
DH9/303/61 39°10'S. 154°12'E.	31/5/61	1030 1005	100-0 200-100	6.8 4.9	25 16
DH9/305/61 39°51'S. 153°04'E.	1/6/61	1034 1011	70-0 200-100	3.3 4.8	6 8
DH9/307/61 39°39'S. 151°42'E.	2/6/61	1055 1029	100-0 200-100	4.3 6.3	77 22
DH9/309/61 40°02'S. 150°10'E.	3/6/61	1352 1330	100-0 200-100	5.3 4.6	23(72*) 24
DH9/311/61 41°05'S. 149°37'E.	4/6/61	1004 0941	100-0 200-100	6.1 4.4	7 16
DH10/316/61 43°15'S. 148°37'E.	9/6/61	1055 1021	100-0 250-150	8.7 5.2	5 27

* Siphonophores

OBLIQUE TOWS : CLARKE-BUMPUS SAMPLER

STATION POSITION	DATE	TIME	DEPTH RANGE (m)	VOLUME FILTERED (m ³)	BIOMASS (mg/m ³)
DH10/318/61 43°10'S. 150°12'E.	10/6/61	1024	100-0	7.0	10
		1002	200-100	4.4	9
DH10/320/61 43°11'S. 151°31'E.	11/6/61	1011	100-0	5.5	5
		0949	200-100	5.5	7
DH10/322/61 43°12'S. 153°05'E.	12/6/61	1122	100-0	7.0	3
		1042	240-140	4.9	4
DH10/325/61 42°03'S. 153°57'E.	13/6/61	1034	100-0	6.1	8
		1020	200-100	5.2	4(54*)

* Siphonophores

DATA
PART 4
LONGLINING

TABLE 2

LONGLINE CATCH DETAILS

Cruise	Stn No.	No. of Units on Longline	Southern Bluefin Tuna	Yellowfin Tuna	Sharks	Other
DH1/61	24	28			1	
DH3/61	68	30			6	
	75	30				1 Marlin
DH4/61	76	30			4	
	85	30	3		3	
	95	28				1 Marlin
	100	29		1	5	
	109	28		1	1	
	119	28				
	125	14				
	130	28			1	
DH7/61	156	28	1		2	
	162	30			1	
	169	16			7	
	186	30			1	
	194	30	1			
	204	32		1	2	
	211	33	1		1	
	218	33			1	
DH8/61	257	32		10	1	
	264	33				1 Marlin
	272	33				
	276	33				
	280	33	11			
	283	33				
DH9/61	297	33			2	
	299	32	5		1	
	301	32	5		2	
	303	32	5			
	305	27	2		1	
	307	32	10		2	
	309	32	3			
	311	32	4		2	

TABLE 2 (Cont'd...)

Cruise	Stn No.	No. of Units on Longline	Southern Bluefin Tuna	Yellowfin Tuna	Sharks	Other
DHL0/61	316	32	5			
	318	32	2		1	
	320	32	5		1	
	322	32				
	325	32	2		4	
DHL5/61	597	32			1	
	607	32	11			
	654	32				
DHL6/61	667	32				
	690	32			1	
	700	32	3			
DHL7/61	763	32			1	
	775	32			1	1 Albacore 1 Marlin
	803	32			2	

OCEANOGRAPHICAL STATION LISTS

1. Hydrological and planktological observations by F.R.V. *Warreen* in south-eastern Australian waters, 1938-39
2. Hydrological and planktological observations by F.R.V. *Warreen* in south-eastern Australian waters, 1940-42
3. Hydrological and planktological observations by F.R.V. *Warreen* in south-western Australian waters, 1947-50
4. Onshore hydrological investigations in eastern Australia, 1942-50
5. Estuarine hydrological investigations in eastern Australia, 1940-50. Queensland: Nerang and Coomera Rivers, Moreton Bay and Brisbane River, Logan River, Dunwich Oyster Lease; New South Wales: Richmond River, Clarence River, Macleay River, Hastings River, Manning River, Port Stephens, Tilligerry Creek, Hawkesbury River
6. Estuarine hydrological investigations in eastern Australia, 1940-50. New South Wales: Middle Harbour and Port Jackson, Georges River-Botany Bay
7. Estuarine hydrological investigations in eastern Australia, 1940-50. New South Wales: Port Hacking, Lake Illawarra, Shoalhaven River, Jervis Bay, Clyde River, Moruya River, Tuross River, Wagonga Inlet; Victoria: Port Phillip; Tasmania: Tamar River, Derwent River, Huon River, D'Entrecasteaux Channel, Pittwater, Lake Dobson (freshwater), Penna Dam (freshwater)
8. Hydrological investigations in south-western Australia, 1944-50
9. Records of twenty-four hourly hydrological observations at selected stations in eastern Australian estuarine systems, 1942-50. Queensland: Logan River; New South Wales: Richmond River, Clarence River, Macleay River, Hastings River, Manning River, Port Stephens, Hawkesbury River, Georges River, Port Hacking, Clyde River, Tuross River; Tasmania: Tamar River, Derwent River
10. Records of twenty-four hourly hydrological observations at Shell Point, Georges River, New South Wales, 1942-50
11. Analyses of bottom deposits in eastern Australia, 1946-50
12. Estuarine hydrological investigations in eastern and south-western Australia, 1951
13. Analysis of bottom deposits in eastern and south-western Australia, 1951 and records of twenty-four hourly hydrological observations at selected stations in eastern Australian estuarine systems, 1951
14. Onshore hydrological investigations in eastern and south-western Australia, 1951
15. Estuarine hydrological investigations in eastern and south-western Australia, 1952
16. Analysis of bottom deposits in eastern and south-western Australia, 1952 and records of twenty-four hourly hydrological observations at selected stations in eastern Australian estuarine systems, 1952
17. Onshore hydrological investigations in eastern and south-western Australia, 1952
18. Onshore hydrological investigations in eastern and south-western Australia, 1953
19. Onshore planktological investigations in eastern Australia, 1945-54
20. Surface sampling in the Tasman Sea, 1953
21. Estuarine hydrological investigations in eastern and south-western Australia, 1953
22. Further onshore planktological investigations in eastern Australia, 1945-54
23. Planktological investigations made by F.R.V. *Derwent Hunter* in eastern Australian waters, 1952-54
24. Onshore hydrological investigations in eastern and south-western Australia, 1954
25. Surface sampling in the Tasman Sea, 1954
26. Estuarine hydrological investigations in eastern and south-western Australia, 1954
27. Onshore and oceanic hydrological investigations in eastern and south-western Australia, 1955
28. Surface sampling in the Tasman and Coral Seas, 1955
29. Estuarine hydrological investigations in eastern and south-western Australia, 1955
30. Onshore and oceanic hydrological investigations in eastern and south-western Australia, 1956
31. Surface sampling in the Tasman and Coral Seas and the south-eastern Indian Ocean, 1956
32. Estuarine hydrological investigations in eastern and south-western Australia, 1956
33. Coastal hydrological investigations in eastern and south-western Australia, 1957
34. Coastal hydrological investigations at Port Hacking, New South Wales, 1957
35. Coastal hydrological investigations at Eden, New South Wales, 1957

OCEANOGRAPHICAL STATION LISTS

(Continued)

36. Surface sampling in the Tasman and Coral Seas, 1957
37. Hydrological investigations from F.R.V. *Derwent Hunter*, 1957
38. Coastal hydrological investigations in the New South Wales tuna fishing area, 1958
39. Surface sampling in the Coral and Tasman Seas, 1958
40. Coastal hydrological investigations in south-eastern Australia, 1958
41. Oceanic investigations in eastern Australian waters, F.R.V. *Derwent Hunter*, 1958
42. Coastal investigations at Port Hacking, New South Wales, 1958
43. Oceanic investigations in eastern Australia, H.M.A. Ships *Queenborough*, *Quickmatch*, and *Warrego*, 1958
44. Oceanic observations in Antarctic waters, M.V. *Magga Dan*, 1959
45. Coastal hydrological investigations in eastern Australia, 1959
46. Coastal hydrological investigations in the New South Wales tuna fishing area, 1959
47. Coastal investigations at Port Hacking, New South Wales, 1959
48. Oceanic investigations in eastern Australian waters, F.R.V. *Derwent Hunter*, 1959
49. Coastal hydrological sampling Rottneest Island, W.A., and Port Moresby, Papua, during the I.G.Y. (1957-58), and surface sampling in the Tasman and Coral Seas, 1959
50. Surface sampling in the Coral and Tasman Seas, 1960
51. Coastal hydrological investigations in eastern Australia, 1960
52. Coastal investigations at Port Hacking, New South Wales, 1960
53. Coastal hydrological investigations in the New South Wales tuna fishing area, 1960
54. Investigations by F.R.V. *Derwent Hunter* on the eastern Australian tuna grounds in 1961