

OCEANOGRAPHICAL STATION LIST

VOLUME 61

INVESTIGATIONS BY F.R.V. *MARELDA* ON THE
EASTERN AUSTRALIAN TUNA GROUNDS IN 1962

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

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AUSTRALIA

MELBOURNE, 1968

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When citing this station list, abbreviate as follows:
CSIRO Aust. Oceanogr. Stn List 61.

OCEANOGRAPHICAL STATION LIST

VOLUME 61

Investigations by F.R.V. Marelda
on the Eastern Australian Tuna Grounds in 1962

I. INTRODUCTION

This report records the data collected during the 1962 cruises of F.R.V. Marelda (M1/62-M13/62).

These cruises were planned to investigate hydrological conditions on the tuna grounds and to troll and tag tuna. Track charts and station positions are given in Figures 1-10. There are no data available for Cruise M10/62.

Marelda is a 36-ft wooden fishing vessel built in 1946 and converted for research in 1955. She is powered by a 48 hp Gardner diesel engine with an auxiliary Coventry Victor diesel of 5 hp, and is equipped with a magnetic compass, a radio transmitter with four transmitting frequencies, and a Kelvin Hughes Fisherman's Asdic. Marelda has two hydraulic drum winches of 4 hp with 1,000 m of wire on each.

II. WORK ACCOMPLISHED

Table 1 gives details of time, number of stations worked, and numbers of fish trolled and tagged on each cruise. On Cruise M2/62, the work was carried out by Mr R. Greig; on all the other cruises he was assisted by Mr K. Johnson.

III. METHOD OF COLLECTION AND ANALYSIS OF SAMPLES

1. Physics

Temperature.—Water temperatures were taken with deep-sea reversing thermometers. One protected thermometer was used in each water bottle, with an unprotected thermometer in the bottom two bottles of each cast. The resulting temperatures can be considered accurate to 0.1 degC.

Bathythermographs.—A 450-ft bathythermograph was 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.

TABLE 1

DETAILS OF CRUISES AND WORK DONE

Cruise	Dates	Number of Stations Occupied	BT	Hydrology				Fish Trolled				Tuna Tagged			
				1	2	1	2	3	4	5	6	1	2	3	
M1/62	Mar.15-Apr.16	7		7	3		5	25			2		5		
M2/62	Apr.12-19	3					5	17			3		4		
M3/62	Apr.26-May 11	4		4	4		3	19		1	3		1		
M4/62	July 24-Aug.10	48	4	48	33	28		42				28			
M5/62	Aug.25-Sept. 6	57	4	57	34	7		22				7			
M6/62	Sept.14-21	16	3	16		16		33		1		16			
M7/62	Sept.26-Oct.10	55	1	55	34	23		23				23			
M8/62	Oct. 17-24	29	9	29		5		17	44		2	5	13		4
M9/62	Mar. 1-14	56	10	56	35	5	29	7	29			5	5	5	
M11/62	Mar.24-Dec. 3	44		44	35	1	6	2	14			1	6	2	
M12/62	Dec.9-12	26	7	26		7	5	14	24			7	4	13	
M13/62	Dec.13-18	30		30	22		1	2	85			1			

BT Bathythermographs

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

Fish trolled and tagged 1 Southern bluefin tuna 2 Yellowfin tuna 3 Albacore
 4 Striped tuna 5 Mackerel tuna 6 Miscellaneous species

Depth of Samples.—Wire angles were usually small (less than 5 degrees), but occasionally the depths of the deeper samples have been adjusted by use of the unprotected thermometer readings. Depths are considered accurate to within 7%.

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) -

$$\text{O}_2(\% \text{ Satn.}) = \frac{\text{O}_2(\text{ml/l}) \times (33.5 + T^\circ\text{C}) \times 100}{332.4 - (1.854 \times S\text{‰})}$$

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IV. TRACK CHARTS

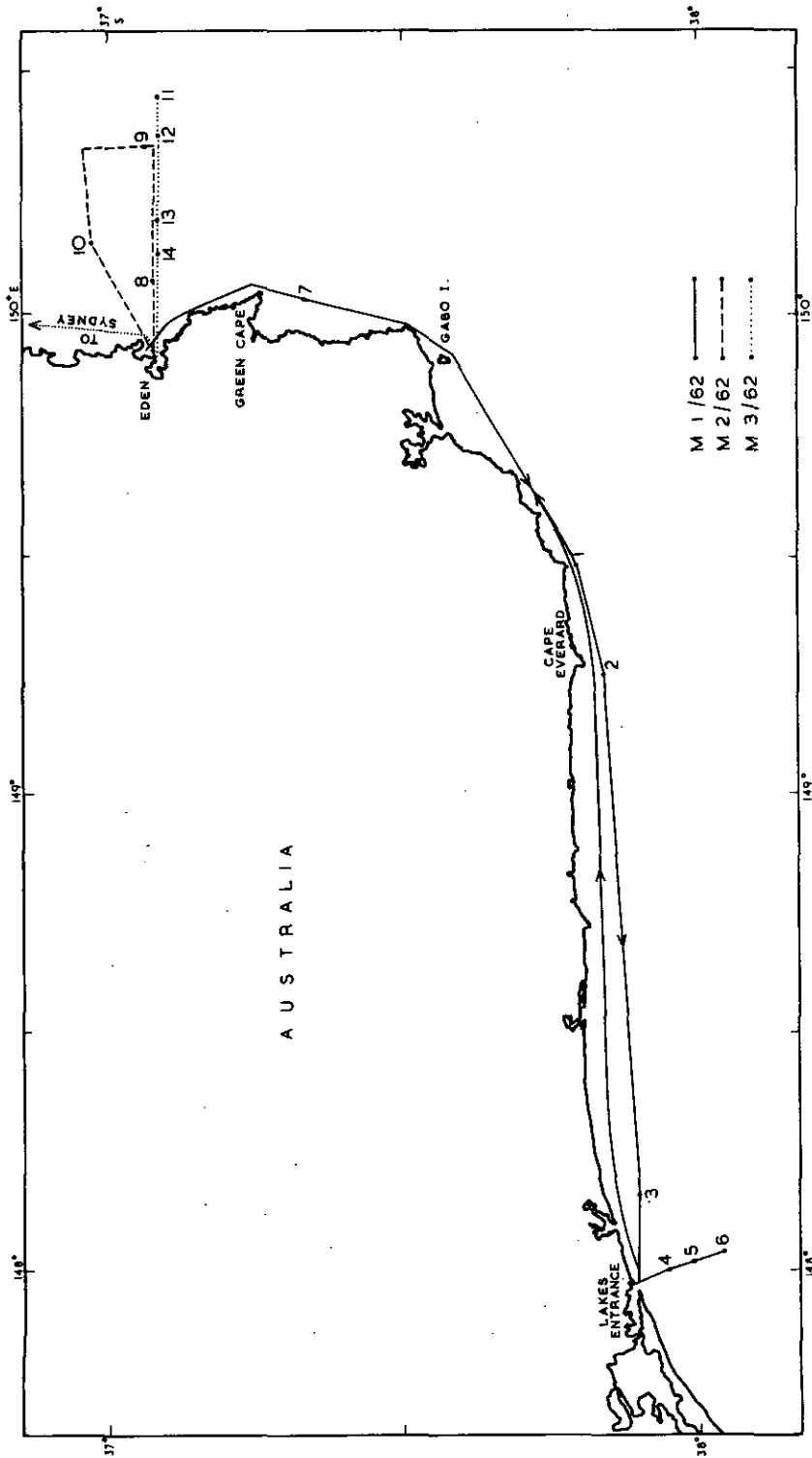


Fig. 1:- Track chart Cruise M 1/62, M 2/62 & M 3/62

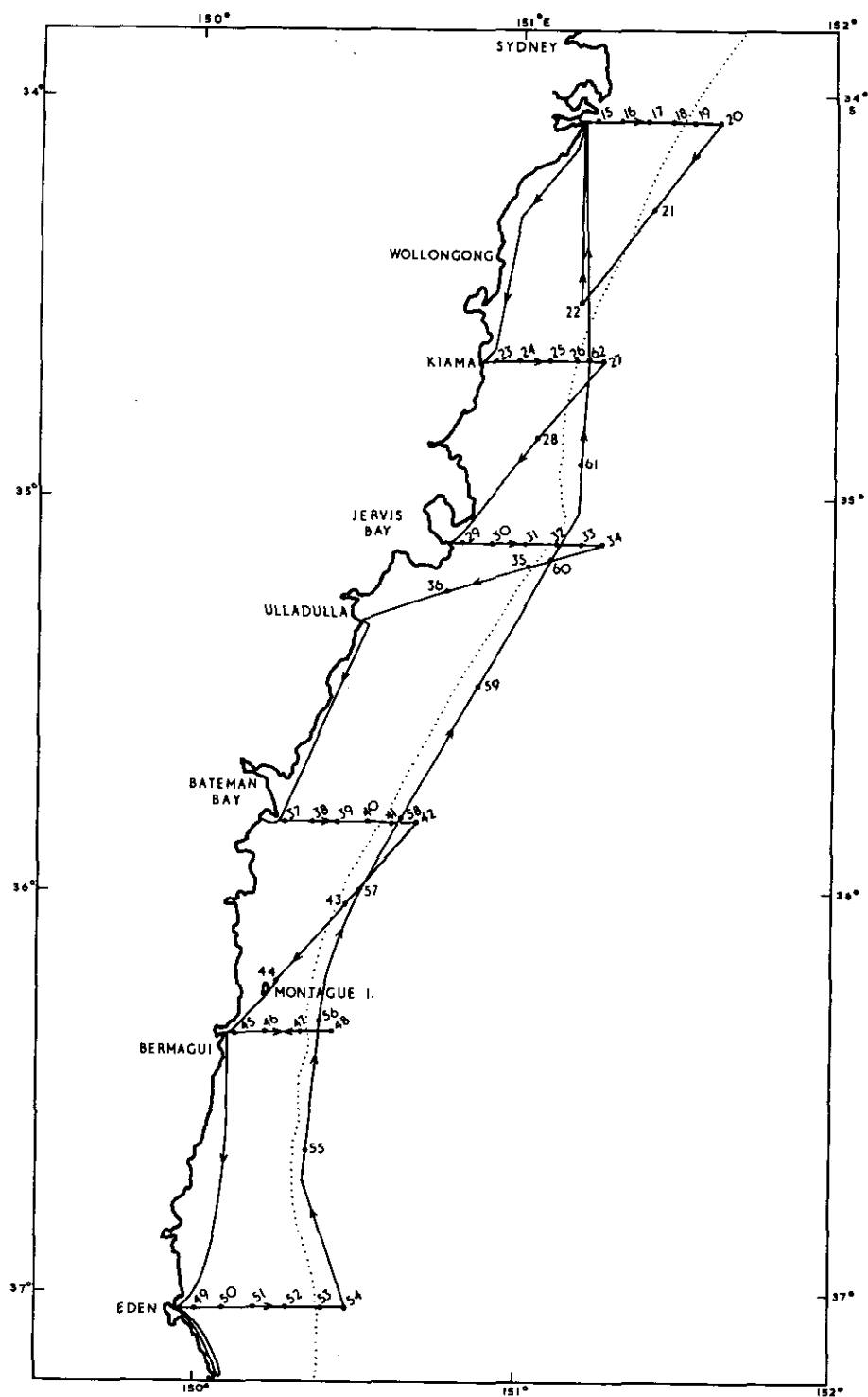


Fig. 2.- Track chart Cruise M 4/62

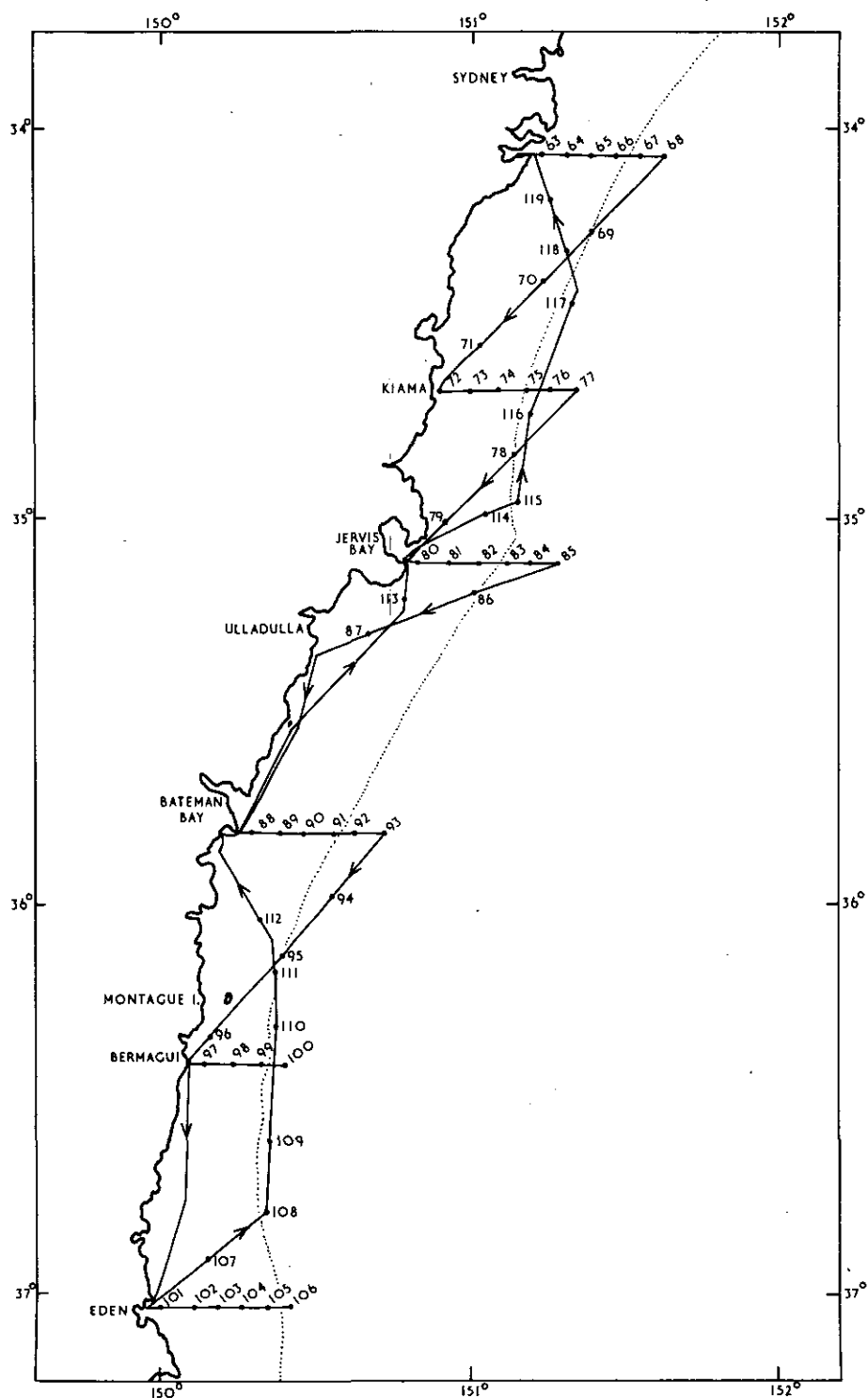


Fig. 3- Track chart Cruise. M 5/62

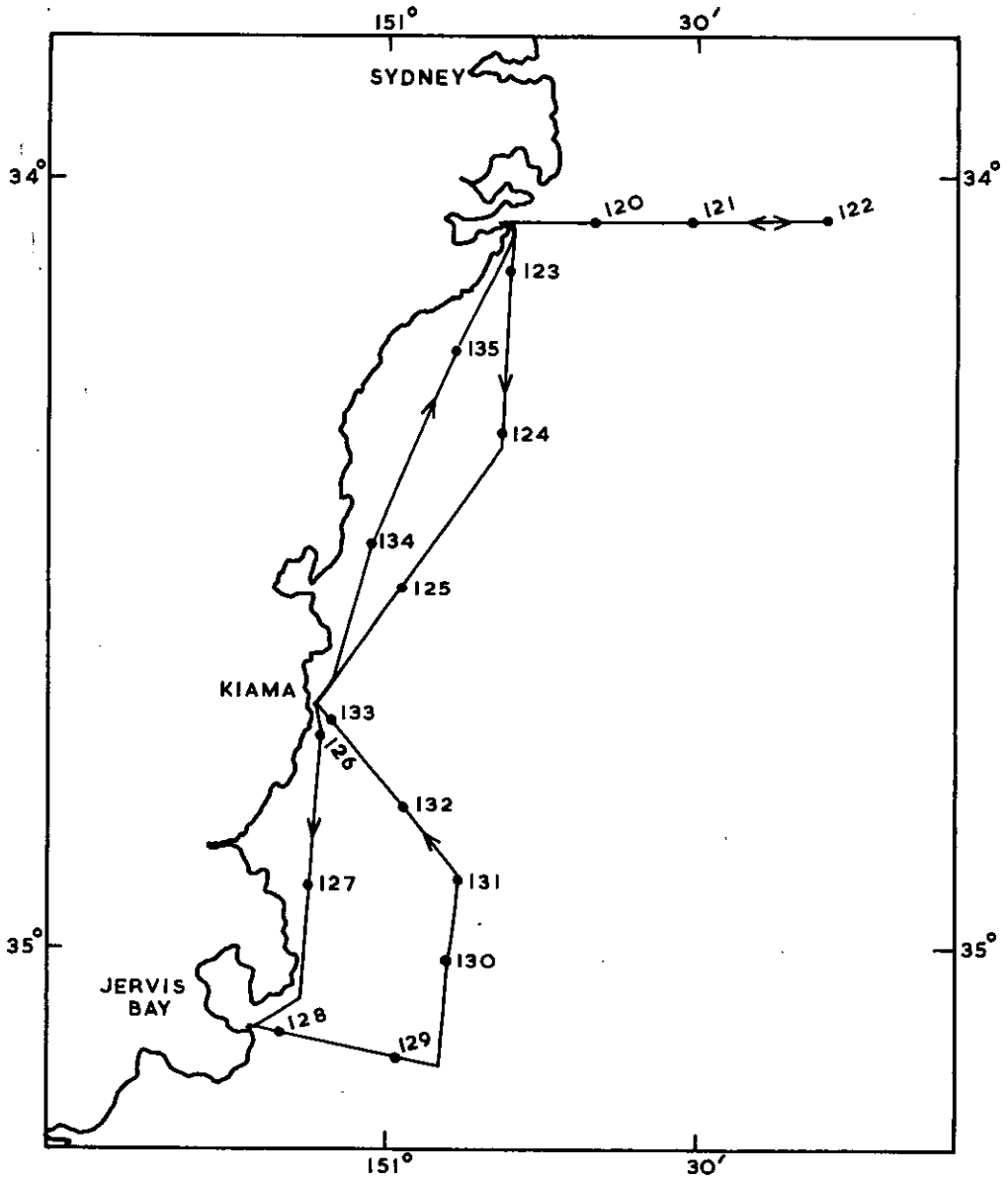


Fig. 4.- Track chart Cruise M 6/62

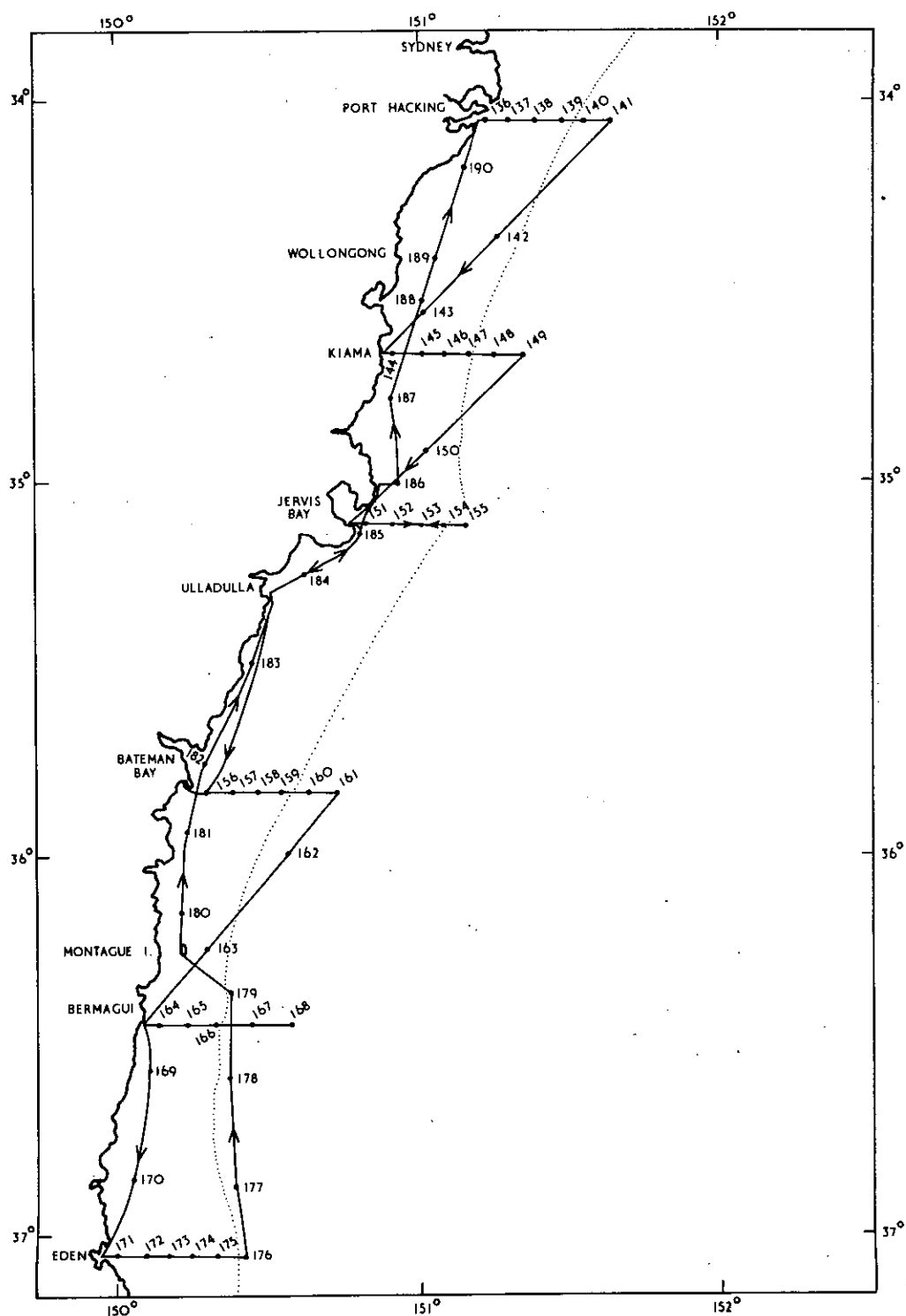


Fig. 5.-Track chart Cruise M 7/62

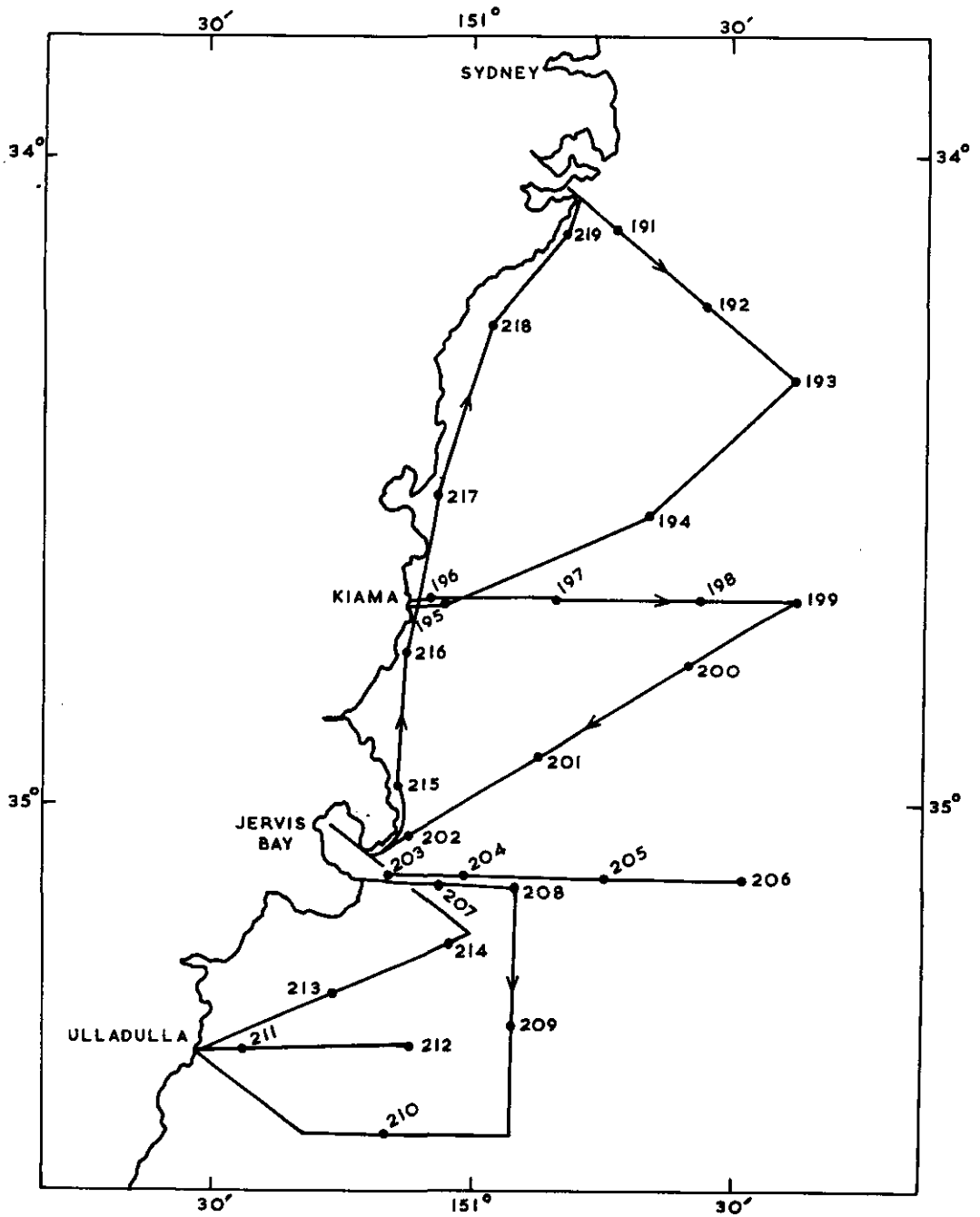


Fig. 6: Track chart Cruise M 8/62

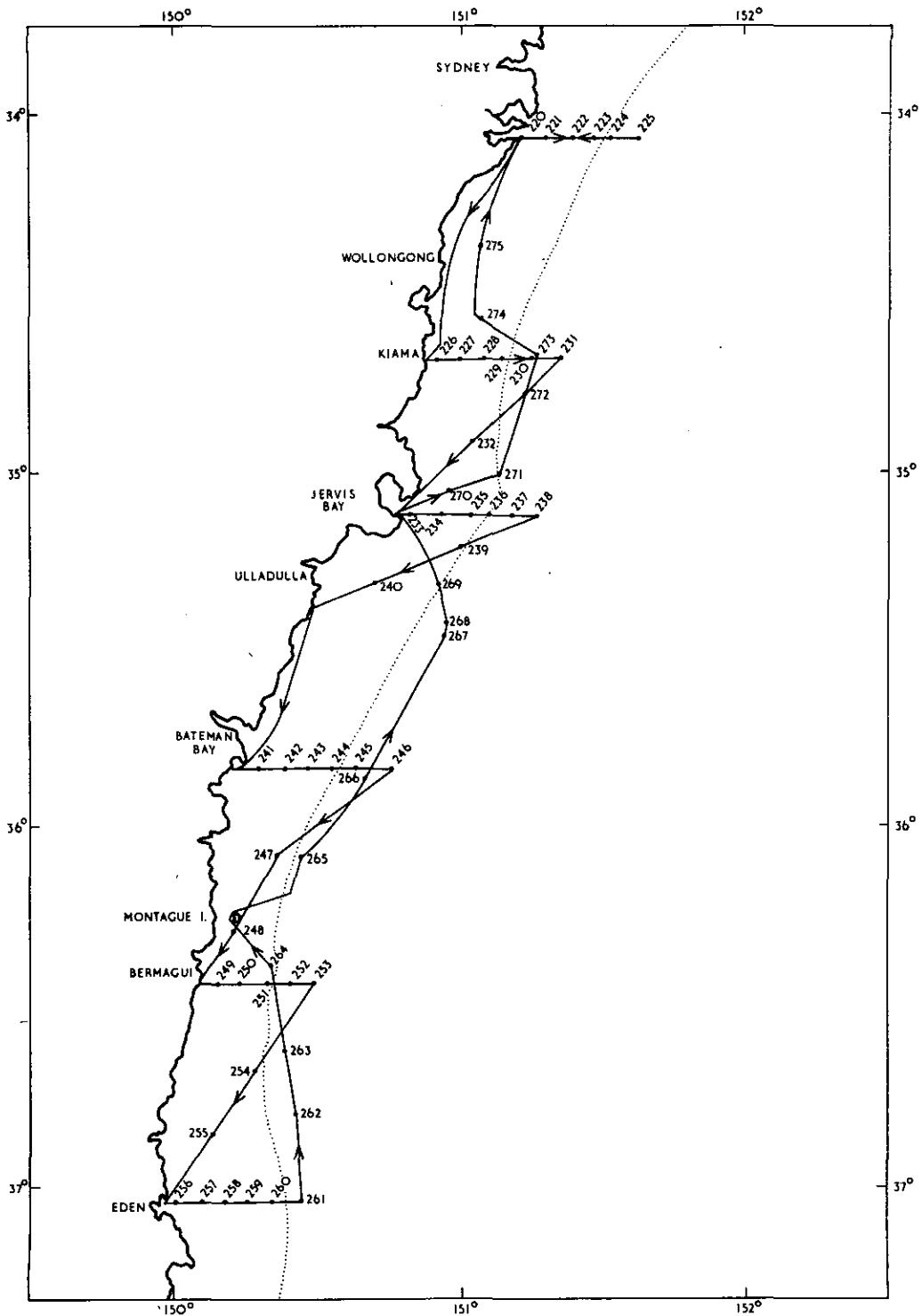


Fig. 7- Track chart Cruise M 9/62

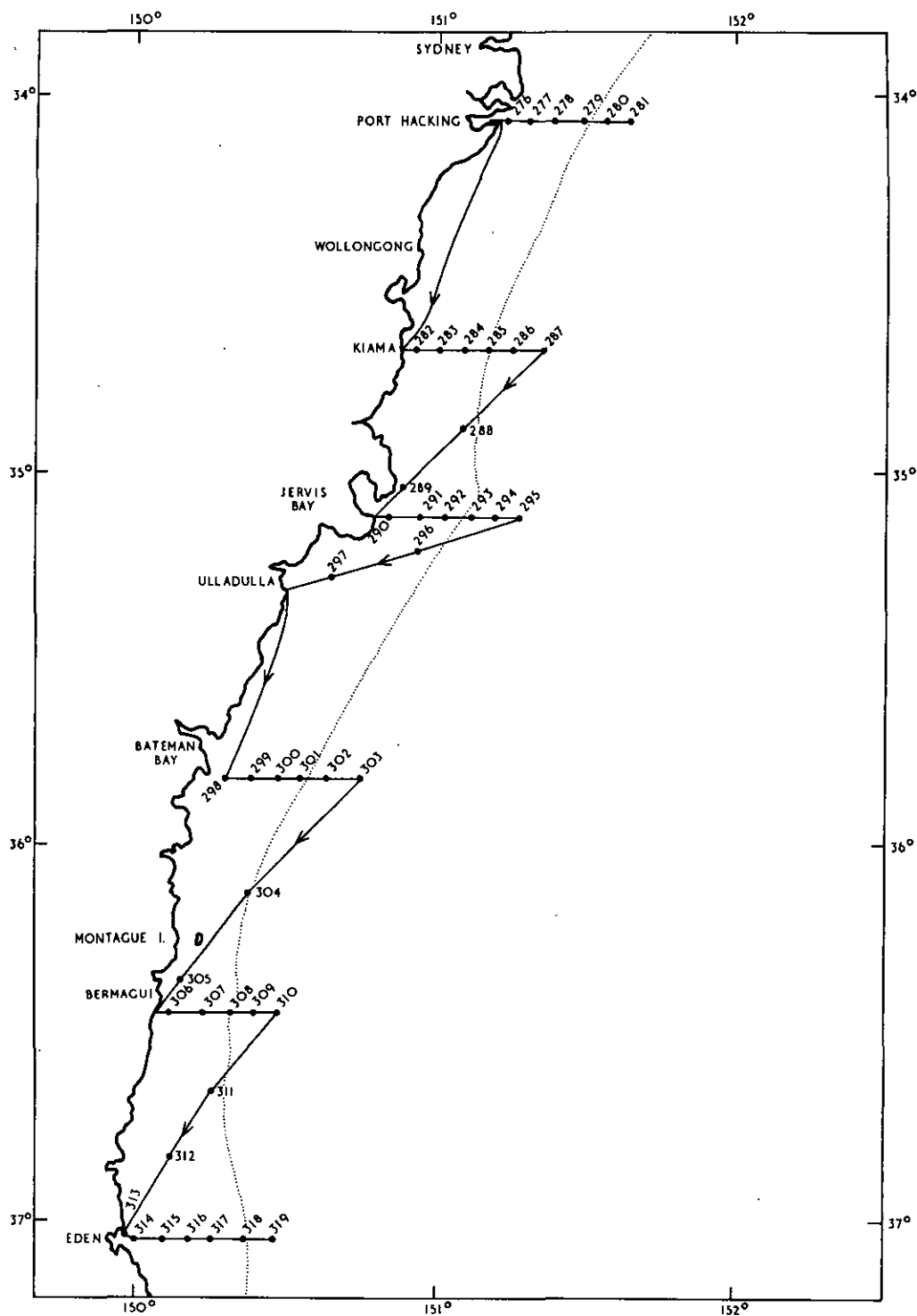


Fig. 8.- Track chart Cruise M 11/62

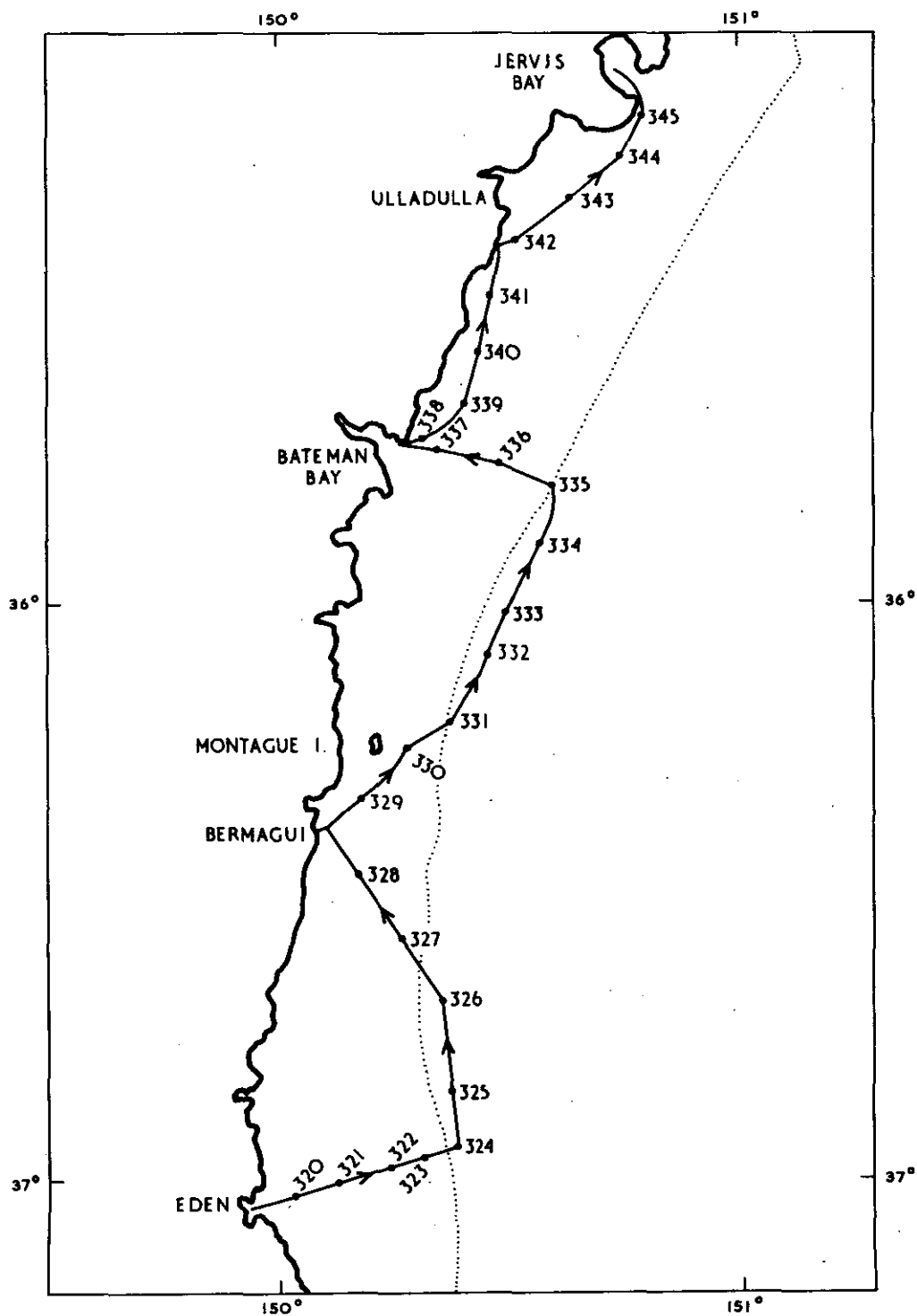


Fig. 9.- Track chart Cruise M 12/62

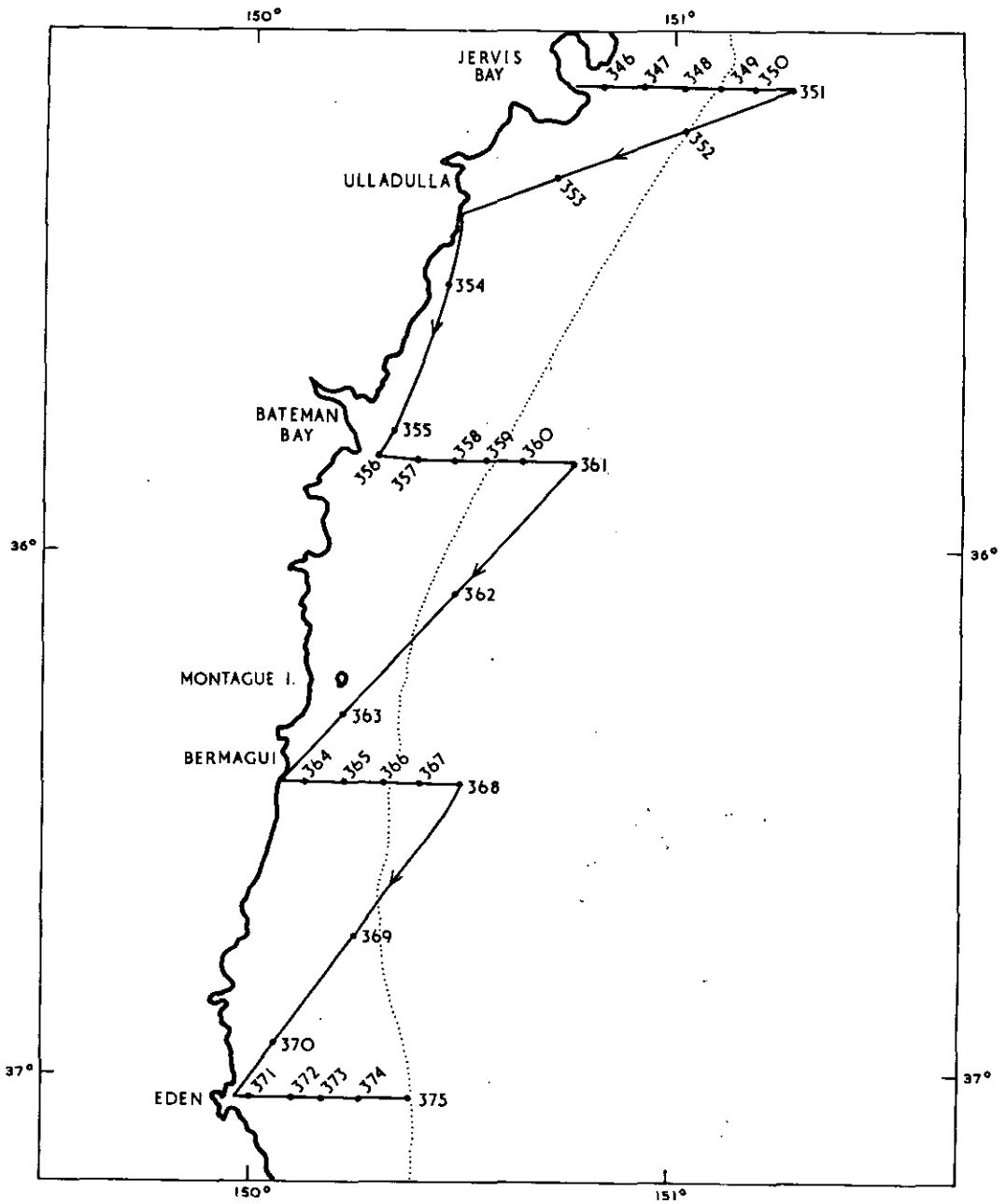


Fig. 10: Track chart Cruise M 13/62

V. DATA SHEETS

The 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

Parts 1 and 2Hydrology

STATION	Gives the station identification. For example, M1/1/62 signifies the 1st station worked by <u>Marelda</u> in 1962, 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. Navy 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
CAST	Gives the cast number
DEPTH	Sampling depth given in metres
TEMP.	Sea temperatures recorded in °C

SALINITY	Given in parts per thousand
SIGMA-T	Sigma-t to 2 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	2	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING	
		NUMBER										DN, AMT,	DN, AMT,	DN, AMT,				METHOD	
38	1	1	62	3	15	1700	K	37	52 S 149	29 E 18.5	05	3	05	2	14	01	1025.0	1	
38	1	2	62	3	15	1745	K	37	52 S 149	21 E 18.7	05	3	05	2	14	01	1025.0	1	
38	1	3	62	4	1	1100	K	37	53 S 148	10 E 19.4	18	1	00	0	09	01	1028.0	1	
38	1	4	62	4	3	0730	K	37	58 S 148	01 E 19.0	36	3	00	0	09	03	1016.0	1	
38	1	5	62	4	3	0820	K	38	01 S 148	03 E 18.7	36	3	36	1	09	03	1014.0	1	
38	1	6	62	4	3	0910	K	38	05 S 148	05 E 18.4	34	4	36	1	09	03	1014.0	1	
38	1	7	62	4	6	1415	K	37	19 S 150	02 E 19.4	14	3	14	2	09	03	1028.0	1	
38	2	8	62	4	13	0750	K											1	
38	2	9	62	4	13	1010	K											1	
38	2	10	62	4	13	1240	K											1	
38	3	11	62	4	26	1200	K	37	04 S 150	23 E 21.3	04	2	04	1	09	01	1024.0	1	
38	3	12	62	4	26	1300	K	37	04 S 150	18 E 20.7	04	2	04	1	09	01	1024.0	1	
38	3	13	62	4	26	1355	K	37	04 S 150	13 E 20.2	04	3	04	2	09	01	1023.0	1	
38	3	14	62	4	26	1450	K	37	04 S 150	08 E 20.1	04	3	04	2	09	01	1023.0	1	
38	4	15	62	7	25	0815	K	34	05 S 151	13 E 16.1	35.44	27	1	04	2	01	1008.0	1	
38	4	16	62	7	25	0915	K	34	05 S 151	18 E 16.6	35.50	36	2	34	1	04	01	1008.0	1
38	4	17	62	7	25	1020	K	34	05 S 151	23 E 17.2	35.54	34	3	34	1	04	01	1008.0	1
38	4	18	62	7	25	1120	K	34	05 S 151	28 E 17.5	35.51	3	34	1	04	01	1009.0	1	
38	4	19	62	7	25	1225	K	34	05 S 151	33 E 17.8	35.57	32	3	34	1	04	01	1009.0	1
38	4	20	62	7	25	1330	K	34	05 S 151	37 E 18.3	35.68	27	1	27	1	04	01	1008.0	1
38	4	21	62	7	25	1615	K	34	15 S 151	27 E 17.8	35.64	27	1	23	3	04	01	1008.0	1
38	4	22	62	7	25	1800	K	34	27 S 151	15 E 17.7	35.61	32	3	32	3	04	01	1008.0	1
38	4	23	62	7	28	0630	K	34	40 S 151	55 E 17.0	35.62	32	2	32	4	14	01	1022.0	1
38	4	24	62	7	28	0735	K	34	40 S 151	00 E 17.3	35.71	32	3	32	2	14	01	1022.0	1
38	4	25	62	7	28	0845	K	34	40 S 151	05 E 17.4	35.66	23	3	22	3	14	01	1023.0	1
38	4	26	62	7	28	0955	K	34	40 S 151	10 E 17.3	35.59	23	3	23	3	14	01	1023.0	1
38	4	27	62	7	28	1105	K	34	40 S 151	15 E 17.3	35.55	23	3	23	3	14	01	1023.0	1
38	4	28	62	7	28	1400	K	34	45 S 151	03 E 17.3	35.64	23	3	23	3	14	01	1023.0	1
38	4	29	62	7	30	0650	K	35	07 S 150	50 E 15.0	35.66	33	3	33	2	14	02	1021.0	1
38	4	30	62	7	30	0746	K	35	07 S 150	55 E 15.6	35.57	32	4	32	2	14	02	1021.0	1
38	4	31	62	7	30	0850	K	35	07 S 151	00 E 15.6	35.57	32	3	32	2	14	02	1021.0	1
38	4	32	62	7	30	0948	K	35	07 S 151	05 E 15.4	35.57	32	3	32	2	14	02	1021.0	1
38	4	33	62	7	30	1100	K	35	07 S 151	10 E 16.1	35.62	26	2	26	2	14	02	1022.0	1
38	4	34	62	7	30	1220	K	35	07 S 151	15 E 16.3	35.64	26	2	26	2	14	02	1022.0	1
38	4	35	62	7	30	1500	K	35	14 S 151	03 E 15.5	35.59	27	1	27	1	14	02	1019.0	1
38	4	36	62	7	30	1700	K	35	15 S 150	45 E 15.7	35.64	36	2	36	1	14	02	1019.0	1
38	4	37	62	8	3	0640	K	35	50 S 150	17 E 14.1	35.52	28	1	28	1	14	01	1018.0	1
38	4	38	62	8	3	0735	K	35	50 S 150	22 E 14.6	35.53	28	2	28	1	14	01	1020.0	1
38	4	39	62	8	3	0835	K	35	50 S 150	27 E 14.8	35.57	28	3	28	1	14	01	1020.0	1
38	4	40	62	8	3	0935	K	35	50 S 150	32 E 14.8	35.53	28	3	28	2	14	01	1020.0	1

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

VESSE-	CRUISE	STATION	YR.	MM.	DAY	TIME	Z	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING
		NUMBER										DN, AMT.	DN, AMT.	DN, AMT.				METHOD
38	4	41	62	8	3	1030	K 35	50 S	150	37 E	14.8	35.50	27	27	01	7	1021.0	1
38	4	42	62	8	3	1135	K 35	50 S	150	42 E	15.1	35.57	00	14	01	7	1020.0	1
38	4	43	62	8	3	1200	K 35	57 S	150	27 E	14.0	35.57	05	14	01	7	1019.0	1
38	4	44	62	8	3	1700	K 36	15 S	150	15 E	14.3	35.55	2	14	01	7	1019.0	1
38	4	45	62	8	4	0640	K 36	25 S	150	09 E	13.4	35.52	22	14	02	7	1023.0	1
38	4	46	62	8	4	0740	K 36	25 S	150	14 E	14.2	35.55	16	14	02	7	1023.0	1
38	4	47	62	8	4	0835	K 36	25 S	150	19 E	14.0	35.52	18	14	02	7	1023.0	1
38	4	48	62	8	4	0940	K 36	25 S	150	24 E	14.7	35.53	18	14	02	7	1024.0	1
38	4	49	62	8	9	0815	K 37	04 S	150	00 E	12.9	35.53	23	14	02	7	1026.0	1
38	4	50	62	8	9	0905	K 37	04 S	150	05 E	13.3	35.61	23	14	02	7	1026.0	1
38	4	51	62	8	9	1005	K 37	04 S	150	10 E	14.0	35.55	27	14	02	7	1026.0	1
38	4	52	62	8	9	1100	K 37	04 S	150	15 E	13.7	35.61	27	14	02	7	1026.0	1
38	4	53	62	8	9	1200	K 37	04 S	150	20 E	15.0	35.53	23	14	02	7	1026.0	1
38	4	54	62	8	9	1305	K 37	04 S	150	25 E	15.1	35.52	20	14	01	7	1025.0	1
38	4	55	62	8	9	1600	K 36	39 S	150	21 E	14.7	35.52	27	14	02	7	1025.0	1
38	4	56	62	8	9	1800	K 36	24 S	150	24 E	14.3	35.53	00	14	02	7	1026.0	1
38	4	57	62	8	9	2100	K 36	03 S	150	27 E	14.4	35.55	32	14	02	7	1027.0	1
38	4	58	62	8	9	2400	K 35	50 S	150	37 E	14.5	35.57	18	14	02	7	1027.0	1
38	4	59	62	8	10	0300	K 35	27 S	150	51 E	15.0	35.52	14	14	02	7	1030.0	1
38	4	60	62	8	10	0600	K 35	10 S	151	04 E	16.4	35.64	14	14	02	7	1030.0	1
38	4	61	62	8	10	0900	K 34	57 S	151	09 E	16.9	35.67	18	14	03	6	1030.0	1
38	4	62	62	8	10	1200	K 34	40 S	151	15 E	16.6	35.64	15	14	03	6	1031.0	1
38	5	63	62	8	25	0755	K 34	05 S	151	13 E	15.7	35.55	23	09	01	7	1020.0	1
38	5	64	62	8	25	0840	K 34	05 S	151	18 E	15.8	35.59	23	09	01	7	1021.0	1
38	5	65	62	8	25	0935	K 34	05 S	151	23 E	15.6	35.55	23	09	01	7	1021.0	1
38	5	66	62	8	25	1035	K 34	05 S	151	28 E	15.6	35.57	23	09	01	7	1021.0	1
38	5	67	62	8	25	1140	K 34	05 S	151	33 E	15.9	35.59	18	09	01	7	1020.0	1
38	5	68	62	8	25	1240	K 34	05 S	151	37 E	15.9	35.64	18	09	01	7	1020.0	1
38	5	69	62	8	25	1330	K 34	15 S	151	21 E	16.2	35.61	18	09	01	7	1020.0	1
38	5	70	62	8	25	1730	K 34	21 S	151	15 E	15.9	35.64	18	09	01	7	1019.0	1
38	5	71	62	8	25	1830	K 34	33 S	151	03 E	15.8	35.61	18	09	01	7	1019.0	1
38	5	72	62	8	26	0615	K 34	40 S	150	55 E	15.6	35.59	27	09	02	7	1017.0	1
38	5	73	62	8	26	0710	K 34	40 S	151	00 E	15.9	35.59	27	14	02	7	1017.0	1
38	5	74	62	8	26	0800	K 34	40 S	151	05 E	16.0	35.61	32	14	02	7	1017.0	1
38	5	75	62	8	26	0850	K 34	40 S	151	10 E	15.8	35.59	23	14	02	7	1017.0	1
38	5	76	62	8	26	0945	K 34	40 S	151	15 E	15.9	35.61	23	14	02	7	1017.0	1
38	5	77	62	8	26	1050	K 34	40 S	151	20 E	15.9	35.61	25	14	02	7	1018.0	1
38	5	78	62	8	26	1330	K 34	51 S	151	09 E	15.9	35.62	27	14	01	7	1016.0	1
38	5	79	62	8	26	1530	K 35	03 S	150	57 E	15.4	35.50	27	14	01	7	1015.0	1
38	5	80	62	8	27	0640	K 35	07 S	150	50 E	15.3	35.62*	27	14	01	7	1022.0	1

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

VESSE -	CRUISE	STATION	YR.	MTH.	DAY	TIME	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING
		NUMBER								DN. AMT.	DN. AMT.	DN. AMT.				METHOD
38	5	81	62	8	27	0735	K 35	07 S 150	35.62	27	2	14	01	7	1022.0	1
38	5	82	62	8	27	0830	K 35	07 S 151	35.61	27	2	14	01	7	1023.0	1
38	5	83	62	8	27	0925	K 35	07 S 151	35.57	27	3	14	01	7	1023.0	1
38	5	84	62	8	27	1030	K 35	07 S 151	35.60	27	2	14	01	7	1023.0	1
38	5	85	62	8	27	1135	K 35	07 S 151	35.60	27	2	14	02	7	1019.0	1
38	5	86	62	8	27	1415	K 35	15 S 150	35.62	32	3	14	02	7	1017.0	1
38	5	87	62	8	27	1615	K 35	21 S 150	35.53	36	3	14	02	7	1017.0	1
38	5	88	62	8	30	0615	K 35	50 S 150	35.55	27	1	15	01	7	1009.0	1
38	5	89	62	8	30	0705	K 35	50 S 150	35.53	32	2	15	01	7	1009.0	1
38	5	90	62	8	30	0755	K 35	50 S 150	35.55	30	2	15	01	7	1010.0	1
38	5	91	62	8	30	0845	K 35	50 S 150	35.55	30	2	15	01	7	1010.0	1
38	5	92	62	8	30	0940	K 35	50 S 150	35.55	30	2	15	01	7	1010.0	1
38	5	93	62	8	30	1045	K 35	50 S 150	35.68	30	2	15	01	7	1010.0	1
38	5	94	62	8	30	1330	K 35	57 S 150	35.52	36	3	15	01	7	1009.0	1
38	5	95	62	8	30	1530	K 36	09 S 150	35.50	27	2	15	01	7	1008.0	1
38	5	96	62	8	30	1730	K 36	21 S 150	35.50	27	2	15	01	7	1007.0	1
38	5	97	62	8	31	0610	K 36	25 S 150	35.41	14	2	14	02	7	1014.0	1
38	5	98	62	8	31	0700	K 36	25 S 150	35.44	14	2	14	02	7	1016.0	1
38	5	99	62	8	31	0810	K 36	25 S 150	35.50	15	3	14	02	7	1017.0	1
38	5	100	62	8	31	0910	K 36	25 S 150	35.50	16	4	14	01	5	1019.0	1
38	5	101	62	9	2	0615	K 37	04 S 150	35.43	27	1	04	01	5	1030.0	1
38	5	102	62	9	2	0705	K 37	04 S 150	35.44	27	1	04	01	5	1030.0	1
38	5	103	62	9	2	0800	K 37	04 S 150	35.44	34	2	04	01	6	1030.0	1
38	5	104	62	9	2	0855	K 37	04 S 150	35.48	36	2	04	01	6	1029.0	1
38	5	105	62	9	2	1005	K 37	04 S 150	35.50*	36	3	04	01	6	1029.0	1
38	5	106	62	9	2	1100	K 37	04 S 150	35.50	36	3	04	01	6	1029.0	1
38	5	107	62	9	2	0900	K 36	57 S 150	35.50	00	0	04	01	6	1015.0	1
38	5	108	62	9	4	1100	K 36	45 S 150	35.48	03	1	04	01	6	1012.0	1
38	5	109	62	9	4	1300	K 36	39 S 150	35.46	03	1	04	01	6	1009.0	1
38	5	110	62	9	4	1500	K 36	21 S 150	35.52	03	1	04	01	6	1008.0	1
38	5	111	62	9	4	1700	K 36	15 S 150	35.53	36	3	04	01	6	1008.0	1
38	5	112	62	9	5	1400	K 35	15 S 150	35.58	14	4	14	02	6	1008.0	1
38	5	113	62	9	6	0800	K 34	57 S 151	35.62	27	3	14	01	7	1006.0	1
38	5	114	62	9	6	0900	K 34	51 S 151	35.66	26	4	14	01	7	1006.0	1
38	5	115	62	9	6	1100	K 34	45 S 151	35.70	26	4	14	01	7	1006.0	1
38	5	116	62	9	6	1300	K 34	27 S 151	35.63	23	3	14	01	7	1006.0	1
38	5	117	62	9	6	1500	K 34	21 S 151	35.71	25	4	14	01	7	1005.0	1
38	5	118	62	9	6	1700	K 34	09 S 151	35.44	25	4	14	01	7	1005.0	1
38	5	119	62	9	14	0900	K 34	03 S 151	35.64	18	1	14	01	6	1019.0	1

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PROPERTY DOUBTFUL
PROPERTY INTERPOLATED

VESSE -	CRUISE	STATION	YR.	MTH.	DAY	TIME	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SHELL	WEA.	VIS.	BAROM.	SAMPLING
		NUMBER								DN. AMT.	DN. AMT.	DN. AMT.				METHOD
38	6	121	62	9	14	0945	X 34	03 S 151	27 E 17.9	18	1	14	01	6	1019.0	1
38	6	122	62	9	14	1130	K 34	03 S 151	45 E 18.0	18	1	14	01	6	1019.0	1
38	6	123	62	9	15	0830	K 34	09 S 151	09 E 16.5	09	4	09	03	7	1016.0	1
38	6	124	62	9	15	1030	K 34	21 S 151	09 E 17.2	04	4	09	03	7	1015.0	1
38	6	125	62	9	15	1230	K 34	33 S 151	03 E 15.4	04	5	04	03	6	1010.0	1
38	6	126	62	9	16	0700	K 34	45 S 151	51 E 14.8	22	1	09	01	6	1010.0	1
38	6	127	62	9	16	0900	K 34	57 S 150	51 E 14.5	22	1	09	03	6	1010.0	1
38	6	128	62	9	19	0700	K 35	09 S 150	51 E 16.0	22	2	14	03	6	1019.0	1
38	6	129	62	9	19	0900	K 35	09 S 151	03 E 17.5	22	2	14	03	6	1019.0	1
38	6	130	62	9	19	1100	K 35	03 S 151	03 E 17.7	18	3	14	02	6	1020.0	1
38	6	131	62	9	19	1300	K 34	57 S 151	09 E 18.0	18	3	14	02	6	1020.0	1
38	6	132	62	9	19	1500	K 34	51 S 151	03 E 17.3	18	3	14	02	6	1020.0	1
38	6	133	62	9	19	1700	K 34	39 S 150	57 E 16.8	18	3	14	02	6	1019.0	1
38	6	134	62	9	20	0800	K 34	27 S 150	57 E 17.2	18	4	14	02	6	1019.0	1
38	6	135	62	9	20	1000	K 34	15 S 151	09 E 18.0	18	5	14	03	6	1020.0	1
38	7	136	62	9	26	0755	K 34	05 S 151	13 E 17.5	20	1	14	01	7	1012.0	1
38	7	137	62	9	26	0845	K 34	05 S 151	18 E 17.7	20	1	14	01	7	1012.0	1
38	7	138	62	9	26	0940	K 34	05 S 151	23 E 17.8	18	1	14	01	7	1013.0	1
38	7	139	62	9	26	1035	K 34	05 S 151	28 E 17.8	00	0	14	01	7	1013.0	1
38	7	140	62	9	26	1135	K 34	05 S 151	33 E 17.7	00	0	14	01	7	1013.0	1
38	7	141	62	9	26	1235	K 34	05 S 151	37 E 17.5	00	0	14	01	7	1013.0	1
38	7	142	62	9	26	1530	K 34	21 S 151	15 E 18.4	05	2	14	01	7	1010.0	1
38	7	143	62	9	26	1730	K 34	33 S 151	03 E 18.0	04	1	14	01	7	1009.0	1
38	7	144	62	9	27	0540	K 34	40 S 150	55 E 17.1	27	1	14	01	7	1009.0	1
38	7	145	62	9	27	0630	K 34	40 S 151	00 E 17.5	32	1	14	01	7	1009.0	1
38	7	146	62	9	27	0720	K 34	40 S 151	05 E 17.8	32	2	14	01	7	1009.0	1
38	7	147	62	9	27	0815	K 34	40 S 151	10 E 17.7	32	2	14	01	7	1009.0	1
38	7	148	62	9	27	0910	K 34	40 S 151	15 E 16.8	34	3	14	01	7	1008.0	1
38	7	149	62	9	27	1005	K 34	40 S 151	20 E 16.9	32	2	14	01	7	1008.0	1
38	7	150	62	9	27	1300	K 34	57 S 151	03 E 17.6	32	3	14	02	7	1008.0	1
38	7	151	62	9	28	0615	K 35	07 S 150	50 E 16.3	27	1	14	02	7	1004.0	1
38	7	152	62	9	28	0705	K 35	07 S 150	55 E 17.5	27	3	14	02	7	1004.0	1
38	7	153	62	9	28	0755	K 35	07 S 151	00 E 17.5	27	3	14	02	7	1004.0	1
38	7	154	62	9	28	0850	K 35	07 S 151	05 E 17.5	27	3	14	02	7	1004.0	1
38	7	155	62	9	28	0955	K 35	07 S 151	10 E 17.6	27	5	14	01	7	1005.0	1
38	7	156	62	10	1	0930	K 35	50 S 150	27 E 14.7	32	1	14	01	7	1010.0	1
38	7	157	62	10	1	0620	K 35	50 S 150	17 E 14.3	32	2	14	01	7	1010.0	1
38	7	158	62	10	1	0715	K 35	50 S 150	27 E 14.8	32	2	14	02	7	1010.0	1
38	7	159	62	10	1	0805	K 35	50 S 150	32 E 15.7	32	2	14	02	7	1010.0	1
38	7	160	62	10	1	0900	K 35	50 S 150	37 E 15.6	32	4	14	01	7	1010.0	1

VESSEL	CRUISE	STATION	YR.	MM.	DAY	TIME	2	LATITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING
		NUMBER										DN. AMT.	DN. AMT.	DN. AMT.				METHOD
38	7	161	62	10	1	1005	K 55	50 S 150	42 E 15.7	35.39	32	3	32	14	01	7	1009.0	1
38	7	162	62	10	1	1245	K 35	57 S 150	33 E 15.2	35.21	32	3	32	14	02	7	1007.0	1
38	7	163	62	10	1	1430	K 36	15 S 150	15 E 14.2	35.46	32	3	32	14	03	7	1005.0	1
38	7	164	62	10	2	0615	K 36	25 S 150	09 E 13.9	35.43	14	1	14	14	03	7	1006.0	1
38	7	165	62	10	2	0710	K 36	25 S 150	14 E 13.6	35.44	14	2	14	14	03	7	1006.0	1
38	7	166	62	10	2	0805	K 36	25 S 150	19 E 15.1	35.53	14	3	14	14	03	7	1006.0	1
38	7	167	62	10	2	0900	K 36	25 S 150	24 E 15.1	35.53	14	3	14	14	03	7	1006.0	1
38	7	168	62	10	2	1015	K 36	25 S 150	29 E 15.2	35.55	14	3	14	14	03	7	1006.0	1
38	7	169	62	10	2	0800	K 36	39 S 150	03 E 14.0	35.46	18	3	18	14	01	7	1010.0	1
38	7	170	62	10	3	1000	K 36	51 S 150	03 E 14.3	35.57	20	3	20	14	01	7	1011.0	1
38	7	171	62	10	3	0540	K 37	04 S 150	00 E 13.4	35.48	22	3	22	14	02	7	1012.0	1
38	7	172	62	10	3	0630	K 37	04 S 150	05 E 13.6	35.48	20	3	20	14	02	7	1012.0	1
38	7	173	62	10	3	0720	K 37	04 S 150	10 E 13.6	35.48	20	2	20	14	02	7	1012.0	1
38	7	174	62	10	3	0815	K 37	04 S 150	15 E 13.4	35.46	20	3	20	14	01	7	1014.0	1
38	7	175	62	10	3	0915	K 37	04 S 150	20 E 14.5	35.53	18	3	18	14	01	7	1014.0	1
38	7	176	62	10	3	1015	K 37	04 S 150	25 E 14.6	35.55	18	3	18	14	01	7	1014.0	1
38	7	177	62	10	3	1300	K 36	57 S 150	21 E 15.0	35.46	18	2	18	14	01	7	1014.0	1
38	7	178	62	10	3	1500	K 36	33 S 150	21 E 15.8	35.59	14	2	14	14	02	7	1012.0	1
38	7	179	62	10	3	1700	K 36	21 S 150	21 E 15.8	35.53	10	3	10	10	02	7	1012.0	1
38	7	180	62	10	3	1800	K 36	09 S 150	15 E 13.8	35.41	36	4	36	3	01	7	1007.0	1
38	7	181	62	10	3	0800	K 35	57 S 150	15 E 13.7	35.41	36	4	36	3	01	7	1007.0	1
38	7	182	62	10	3	1000	K 35	45 S 150	15 E 14.0	35.37	34	5	34	3	01	7	1003.0	1
38	7	183	62	10	3	1300	K 35	27 S 150	27 E 14.4	35.39	27	6	27	3	01	7	1003.0	1
38	7	184	62	10	10	0600	K 35	15 S 150	39 E 14.2	35.41	23	3	23	14	01	7	1014.0	1
38	7	185	62	10	10	0800	K 35	09 S 150	51 E 15.0	35.39	23	3	23	14	01	7	1017.0	1
38	7	186	62	10	10	1000	K 35	03 S 150	57 E 15.0	35.37	23	3	23	14	01	7	1019.0	1
38	7	187	62	10	10	1200	K 34	45 S 150	57 E 17.2	35.57	23	3	23	14	01	7	1019.0	1
38	7	188	62	10	10	1400	K 34	33 S 151	03 E 17.6	35.62	18	1	18	14	01	7	1019.0	1
38	7	189	62	10	10	1600	K 34	27 S 151	03 E 17.6	35.55	09	2	09	14	01	7	1019.0	1
38	7	190	62	10	10	1800	K 34	09 S 151	09 E 17.3	35.59	09	2	09	14	01	7	1019.0	1
38	7	191	62	10	17	0800	K 34	09 S 151	15 E 15.6	35.46	34	3	34	1	01	7	1019.0	1
38	7	192	62	10	17	1000	K 34	15 S 151	27 E 17.6	35.62	34	3	34	14	01	7	1018.0	1
38	7	193	62	10	17	1200	K 34	21 S 151	39 E 19.0	35.62	34	3	34	14	02	7	1016.0	1
38	7	194	62	10	17	1400	K 34	33 S 151	21 E 18.5	35.60	36	3	36	14	02	7	1015.0	1
38	7	195	62	10	17	1600	K 34	39 S 150	57 E 17.7	35.59	36	3	36	14	02	7	1015.0	1
38	7	196	62	10	18	0530	K 34	39 S 150	57 E 16.8	35.62	00	0	00	10	02	7	1012.0	1
38	7	197	62	10	18	0700	K 34	39 S 151	09 E 19.0	35.75	34	1	34	1	02	7	1012.0	1
38	7	198	62	10	18	0900	K 34	39 S 151	27 E 18.8	35.64	36	1	36	10	01	7	1012.0	1
38	7	199	62	10	18	1030	K 34	39 S 151	39 E 18.2	35.62	18	1	04	2	01	7	1012.0	1
38	7	200	62	10	18	1230	K 34	45 S 151	27 E 18.7	35.62	18	3	18	10	01	7	1012.0	1

VESSE-	CRUISE	STATION	YR.	MIN.	DAY	TIME	LONGITUDE	TEMP.	SALINITY	MIND	SEA	SWELL	HEA.	VIS.	BAROM.	SAMPLING
		NUMBER								DN, AMT,	DN, AMT,	DN, AMT,				METHOD
38	B	201	62	10	18	1400	K 34	57 S 151	35.64	18	3	18	3	10	1012.0	1
38	B	202	62	10	18	1600	K 35	03 S 150	35.50	18	4	18	4	10	1012.0	1
38	B	203	62	10	19	0600	K 35	09 S 150	35.37	22	2	22	2	14	1016.0	1
38	B	204	62	10	19	0700	K 35	09 S 150	35.61	18	0	18	0	14	1016.0	1
38	B	205	62	10	19	0900	K 35	09 S 151	35.62	05	2	05	2	09	1015.0	1
38	B	206	62	10	19	1100	K 35	09 S 151	35.68	05	2	05	2	09	1015.0	1
38	B	207	62	10	20	0700	K 35	09 S 150	35.59	04	2	04	2	10	1002.0	1
38	B	208	62	10	20	0745	K 35	09 S 151	35.62	04	2	04	2	10	1002.0	1
38	B	209	62	10	20	1000	K 35	21 S 151	35.62	18	1	18	1	10	1002.0	1
38	B	210	62	10	20	1315	K 35	21 S 150	35.50	22	1	22	1	10	997.0	1
38	B	211	62	10	21	0530	K 35	21 S 150	35.35	14	0	14	0	09	1002.0	1
38	B	212	62	10	21	0730	K 35	21 S 150	35.62	15	3	15	3	14	1002.0	1
38	B	213	62	10	23	0700	K 35	15 S 150	35.35	26	1	26	1	14	999.0	1
38	B	214	62	10	23	0900	K 35	15 S 150	35.59	34	2	34	2	14	999.0	1
38	B	215	62	10	24	0530	K 34	57 S 150	35.35	27	4	27	4	14	997.0	1
38	B	216	62	10	24	0630	K 34	45 S 150	35.43	27	4	27	4	14	997.0	1
38	B	217	62	10	24	1030	K 34	33 S 150	35.50	27	4	27	4	14	997.0	1
38	B	218	62	10	24	1230	K 34	15 S 151	35.55	27	4	27	4	14	996.0	1
38	B	219	62	10	24	1430	K 34	09 S 151	35.50	27	4	27	4	14	996.0	1
38	B	220	62	11	1	0745	K 34	05 S 151	35.68	09	1	09	1	09	1011.0	1
38	B	221	62	11	1	0835	K 34	05 S 151	35.59	22	1	22	1	09	1011.0	1
38	B	222	62	11	1	0930	K 34	05 S 151	35.62	20	2	20	2	09	1010.0	1
38	B	223	62	11	1	1020	K 34	05 S 151	35.62	18	2	18	2	09	1009.0	1
38	B	224	62	11	1	1115	K 34	05 S 151	35.70	18	2	18	2	14	1009.0	1
38	B	225	62	11	1	1220	K 34	05 S 151	35.66	18	4	18	4	14	1009.0	1
38	B	226	62	11	3	0450	K 34	40 S 150	35.51	20	3	20	3	14	1008.0	1
38	B	227	62	11	3	0540	K 34	40 S 151	35.62	22	1	22	1	14	1008.0	1
38	B	228	62	11	3	0635	K 34	40 S 151	35.66	22	2	22	2	14	1008.0	1
38	B	229	62	11	3	0730	K 34	40 S 151	35.66	22	4	22	4	14	1008.0	1
38	B	230	62	11	3	0830	K 34	40 S 151	35.62	22	2	22	2	14	1008.0	1
38	B	231	62	11	3	0930	K 34	40 S 151	35.61	22	2	22	2	14	1008.0	1
38	B	232	62	11	3	1115	K 34	57 S 151	35.66	14	0	14	0	14	1008.0	1
38	B	233	62	11	5	0510	K 35	07 S 150	35.62	18	1	18	1	14	1014.0	1
38	B	234	62	11	5	0605	K 35	07 S 150	35.52	18	1	18	1	14	1015.0	1
38	B	235	62	11	5	0700	K 35	07 S 151	35.52	14	1	14	1	14	1015.0	1
38	B	236	62	11	5	0750	K 35	07 S 151	35.61	14	1	14	1	14	1016.0	1
38	B	237	62	11	5	0900	K 35	07 S 151	35.62	14	1	14	1	14	1017.0	1
38	B	238	62	11	5	1015	K 35	07 S 151	35.62	00	0	00	0	14	1017.0	1
38	B	239	62	11	5	1300	K 35	15 S 151	35.70	04	1	04	1	14	1016.0	1
38	B	240	62	11	5	1500	K 35	21 S 150	35.61	04	2	04	2	14	1015.0	1

VESSE-	CRUISE	STATION	YR,	MTH,	DAY	TIME	✓	LATITUDE	LONGITUDE	TEMP,	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING
NUMBER												DN, AMT,	DN, AMT,	DN, AMT,				METHOD
38	9	241	62	11	7	0500	K 35	50 S 150	17 E 17.2	35.52	22	2	22	14	03	7	1012.0	1
38	9	242	62	11	7	0550	K 35	50 S 150	22 E 17.4	35.61	18	3	18	14	03	7	1012.0	1
38	9	243	62	11	7	0645	K 35	50 S 150	35.52	35.52	18	1	18	14	03	7	1013.0	1
38	9	244	62	11	7	0735	K 35	50 S 150	32 E 17.7	35.59	18	2	18	14	03	7	1013.0	1
38	9	245	62	11	7	0825	K 35	50 S 150	37 E 17.9	35.61	16	2	14	14	03	7	1014.0	1
38	9	246	62	11	7	0930	K 35	50 S 150	42 E 18.4	35.64	14	2	14	14	03	7	1014.0	1
38	9	247	62	11	7	1200	K 36	03 S 150	21 E 18.5	35.61	14	3	14	14	02	7	1014.0	1
38	9	248	62	11	7	1400	K 36	15 S 150	15 E 17.7	35.61	14	3	14	14	02	7	1014.0	1
38	9	249	62	11	9	0500	K 36	25 S 150	09 E 16.5	35.43	27	1	27	14	03	7	1020.0	1
38	9	250	62	11	9	0600	K 36	25 S 150	14 E 17.9	35.62	00	0	00	14	03	7	1020.0	1
38	9	251	62	11	9	0700	K 36	25 S 150	19 E 16.7	35.52	05	2	05	14	03	7	1021.0	1
38	9	252	62	11	9	0800	K 36	25 S 150	24 E 17.4	35.59	04	2	04	14	02	7	1022.0	1
38	9	253	62	11	9	0905	K 36	25 S 150	29 E 17.3	35.62	04	2	04	14	02	7	1023.0	1
38	9	254	62	11	9	1130	K 36	39 S 150	15 E 17.6	35.53	04	3	04	14	01	7	1022.0	1
38	9	255	62	11	9	1330	K 36	51 S 150	09 E 18.2	35.68	04	4	04	14	01	7	1021.0	1
38	9	256	62	11	12	0505	K 37	04 S 150	00 E 15.4	35.50	22	1	00	09	01	7	1012.0	1
38	9	257	62	11	12	0555	K 37	04 S 150	05 E 15.0	35.43	00	0	00	09	01	7	1012.0	1
38	9	258	62	11	12	0645	K 37	04 S 150	10 E 16.2	35.53	27	1	00	09	01	7	1013.0	1
38	9	259	62	11	12	0735	K 37	04 S 150	15 E 16.6	35.50	32	1	00	09	01	7	1013.0	1
38	9	260	62	11	12	0835	K 37	04 S 150	20 E 17.0	35.53	00	0	00	09	01	7	1014.0	1
38	9	261	62	11	12	0930	K 37	04 S 150	25 E 17.1	35.64	00	0	00	09	01	7	1014.0	1
38	9	262	62	11	12	1200	K 36	45 S 150	27 E 18.6	35.64	14	3	14	09	01	7	1014.0	1
38	9	263	62	11	12	1400	K 36	39 S 150	21 E 18.8	35.64	14	3	14	09	01	7	1014.0	1
38	9	264	62	11	12	1700	K 36	21 S 150	21 E 18.2	35.61	14	3	14	09	01	7	1014.0	1
38	9	265	62	11	13	0700	K 36	03 S 150	27 E 17.5	35.55	00	0	00	14	02	7	1012.0	1
38	9	266	62	11	13	1000	K 35	51 S 150	39 E 20.0	35.64	04	1	04	14	01	7	1012.0	1
38	9	267	62	11	13	1300	K 35	27 S 150	51 E 21.1	35.61	04	2	04	14	01	7	1010.0	1
38	9	268	62	11	13	1415	K 35	27 S 150	51 E 20.8	35.61	06	1	06	14	01	7	1009.0	1
38	9	269	62	11	13	1600	K 35	21 S 150	51 E 20.8	35.64	06	1	06	14	01	7	1009.0	1
38	9	270	62	11	14	0400	K 35	03 S 150	57 E 18.0	35.48	14	2	14	14	01	7	1020.0	1
38	9	271	62	11	14	0530	K 35	03 S 151	09 E 19.6	35.61	14	2	14	14	01	7	1012.0	1
38	9	272	62	11	14	0830	K 34	45 S 151	15 E 20.3	35.66	14	2	14	14	01	7	1012.0	1
38	9	273	62	11	14	1130	K 34	39 S 151	15 E 20.7	35.66	09	1	09	14	01	7	1012.0	1
38	9	274	62	11	14	1330	K 34	33 S 151	03 E 20.5	35.61	05	3	05	14	01	7	1011.0	1
38	9	275	62	11	14	1530	K 34	21 S 151	03 E 19.4	35.44	32	1	00	04	02	7	1012.0	1
38	11	276	62	11	24	0745	K 34	05 S 151	13 E 19.1	35.40	32	1	00	04	01	7	1012.0	1
38	11	277	62	11	24	0835	K 34	05 S 151	18 E 20.2	35.58	28	1	00	04	01	7	1011.0	1
38	11	278	62	11	24	0930	K 34	05 S 151	23 E 20.6	35.61	28	1	00	04	01	7	1010.0	1
38	11	279	62	11	24	1020	K 34	05 S 151	28 E 20.4	35.65	00	0	00	04	01	7	1009.0	1
38	11	280	62	11	24	1125	K 34	05 S 151	33 E 20.5	35.67	18	1	00	04	01	7	1009.0	1

VESSE-	CRUISE	STATION	YR.	MIH.	DAY	TIME	4	LAITUDE	LONGITUDE	TEMP.	SALINITY	WIND	SEA	SWELL	WEA.	VIS.	BAROM.	SAMPLING
		NUMBER										DN.	AMT,	DN.	AMT.			METHOD
38	11	281	62	11	24	1230	K	34	05 S	151	35.67	18	00.	04	01	7	1009.0	1
38	11	282	62	11	27	0430	K	34	40 S	150	35.52	36	00.	04	01	6	1012.0	1
38	11	283	62	11	27	0515	K	34	40 S	151	35.52	36	00.	04	01	6	1012.0	1
38	11	284	62	11	27	0610	K	34	40 S	151	35.58	36	00.	04	01	6	1012.0	1
38	11	285	62	11	27	0703	K	34	40 S	151	35.69	36	18.	04	01	6	1013.0	1
38	11	286	62	11	27	0800	K	34	40 S	151	35.67	18	18.	04	01	6	1014.0	1
38	11	287	62	11	27	0900	K	34	40 S	151	35.70	18	18.	04	01	6	1014.0	1
38	11	288	62	11	27	1130	K	34	51 S	151	35.61	18	18.	04	01	6	1014.0	1
38	11	289	62	11	27	1315	K	35	03 S	150	35.54	18	18.	04	01	6	1013.0	1
38	11	290	62	11	28	0450	K	35	07 S	150	35.52	18	18.	04	01	6	1013.0	1
38	11	291	62	11	28	0540	K	35	07 S	150	35.51	18	18.	04	01	6	1014.0	1
38	11	292	62	11	28	0630	K	35	07 S	151	35.56	14	18.	04	01	6	1014.0	1
38	11	293	62	11	28	0725	K	35	07 S	151	35.58	14	18.	04	01	6	1014.0	1
38	11	294	62	11	28	0835	K	35	07 S	151	35.58	14	18.	04	01	6	1014.0	1
38	11	295	62	11	28	0935	K	35	07 S	151	35.67	14	18.	04	01	6	1014.0	1
38	11	296	62	11	28	1200	K	35	15 S	150	35.69	14	18.	04	01	6	1014.0	1
38	11	297	62	11	28	1400	K	35	15 S	150	35.51	14	18.	04	01	6	1014.0	1
38	11	298	62	11	29	0745	K	35	50 S	150	35.61	15	15.	04	01	6	1016.0	1
38	11	299	62	11	29	0830	K	35	50 S	150	35.61	15	15.	04	01	6	1016.0	1
38	11	300	62	11	29	0920	K	35	50 S	150	35.60	18	15.	04	01	6	1016.0	1
38	11	301	62	11	29	1010	K	35	50 S	150	35.67	14	00.	04	01	6	1016.0	1
38	11	302	62	11	29	1100	K	35	50 S	150	35.69	09	00.	04	01	6	1017.0	1
38	11	303	62	11	29	1205	K	35	50 S	150	35.69	04	00.	04	01	6	1017.0	1
38	11	304	62	11	29	1300	K	36	09 S	150	35.67	04	00.	04	01	6	1018.0	1
38	11	305	62	11	29	1400	K	36	21 S	150	35.56	04	00.	04	01	6	1018.0	1
38	11	306	62	11	30	0430	K	36	25 S	150	35.52	36	36.	09	01	7	1018.0	1
38	11	307	62	11	30	0520	K	36	25 S	150	35.61	36	36.	09	01	7	1018.0	1
38	11	308	62	11	30	0615	K	36	25 S	150	35.63	36	36.	09	01	7	1018.0	1
38	11	309	62	11	30	0710	K	36	25 S	150	35.65	36	36.	09	01	7	1018.0	1
38	11	310	62	11	30	0820	K	36	25 S	150	35.65	36	36.	09	01	7	1018.0	1
38	11	311	62	11	30	1100	K	36	39 S	150	35.61	36	36.	09	01	7	1018.0	1
38	11	312	62	11	30	1300	K	36	51 S	150	35.56	36	36.	09	01	7	1018.0	1
38	11	313	62	11	30	1500	K	37	03 S	149	35.52	36	36.	09	01	7	1018.0	1
38	11	314	62	12	3	0855	K	37	04 S	150	35.60	20	20.	04	01	6	1018.0	1
38	11	315	62	12	3	0940	K	37	04 S	150	35.51	20	20.	04	01	6	1018.0	1
38	11	316	62	12	3	1030	K	37	04 S	150	35.58	18	18.	04	01	6	1018.0	1
38	11	317	62	12	3	1125	K	37	04 S	150	35.67	18	18.	04	01	6	1018.0	1
38	11	318	62	12	3	1225	K	37	04 S	150	35.63	18	18.	04	01	6	1018.0	1
38	11	319	62	12	3	1335	K	37	04 S	150	35.63	18	18.	04	01	6	1018.0	1
38	12	320	62	12	9	0600	K	37	03 S	150	35.28	36	36.	09	02	7	1006.0	1

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

38	12	321	62	12	9	0700	K 37	03 S 150	09 E 18.8	35.48	00	0	00	0	09	3	02	7	1007.0	1
38	12	322	62	12	9	0800	K 36	57 S 150	15 E 19.0	35.43	18	3	18	1	09	3	02	7	1007.0	1
38	12	323	62	12	9	0900	K 36	57 S 150	21 E 18.7	35.39	18	3	18	2	09	3	02	7	1007.0	1
38	12	324	62	12	9	1000	K 36	57 S 150	21 E 19.9	35.55	18	3	18	2	09	3	02	7	1007.0	1
38	12	325	62	12	9	1100	K 36	51 S 150	21 E 20.0	35.57	18	3	18	2	09	3	02	7	1007.0	1
38	12	326	62	12	9	1200	K 36	39 S 150	21 E 20.0	35.59	18	4	18	2	09	3	02	7	1007.0	1
38	12	327	62	12	9	1300	K 36	33 S 150	15 E 20.0	35.57	18	4	18	3	09	3	02	7	1007.0	1
38	12	328	62	12	9	1400	K 36	27 S 150	09 E 18.8	35.44	14	4	14	3	09	3	02	7	1007.0	1
38	12	329	62	12	10	0600	K 36	21 S 150	09 E 18.4	35.52	03	2	03	1	09	2	02	7	1012.0	1
38	12	330	62	12	10	0700	K 36	15 S 150	09 E 18.5	35.42	03	2	03	1	09	2	02	7	1012.0	1
38	12	331	62	12	10	0800	K 36	15 S 150	21 E 18.7	35.48	03	2	03	1	09	2	02	7	1012.0	1
38	12	332	62	12	10	0900	K 36	03 S 150	27 E 18.8	35.48	03	2	03	1	09	2	02	7	1012.0	1
38	12	333	62	12	10	1000	K 36	03 S 150	27 E 19.1	35.46	03	3	03	2	09	2	01	7	1012.0	1
38	12	334	62	12	10	1100	K 35	51 S 150	33 E 19.0	35.52	03	3	03	2	09	2	01	7	1012.0	1
38	12	335	62	12	10	1200	K 35	45 S 150	33 E 19.4	35.53	03	4	03	3	09	2	01	7	1012.0	1
38	12	336	62	12	10	1300	K 35	45 S 150	27 E 18.6	35.44	04	4	04	3	09	2	01	7	1011.0	1
38	12	337	62	12	10	1400	K 35	45 S 150	21 E 18.9	35.44	04	4	04	3	09	2	01	7	1010.0	1
38	12	338	62	12	11	0300	K 35	45 S 150	21 E 18.2	35.46	32	1	04	3	09	2	45	2	1002.0	1
38	12	339	62	12	11	0400	K 35	39 S 150	27 E 18.7	35.52	36	3	04	3	09	2	01	6	999.0	1
38	12	340	62	12	11	0500	K 35	33 S 150	27 E 19.3	35.41	36	4	04	3	09	2	01	6	999.0	1
38	12	341	62	12	11	0600	K 35	27 S 150	27 E 18.8	35.59	36	4	04	3	09	2	01	6	998.0	1
38	12	342	62	12	12	0200	K 35	21 S 150	33 E 18.1	35.50	27	1	00	0	09	2	01	6	1008.0	1
38	12	343	62	12	12	0300	K 35	15 S 150	39 E 18.4	35.53	22	4	22	0	14	2	01	7	1009.0	1
38	12	344	62	12	12	0400	K 35	15 S 150	45 E 18.9	35.54	22	4	22	2	14	2	01	7	1010.0	1
38	12	345	62	12	12	0500	K 35	09 S 150	45 E 18.6	35.55	22	3	22	1	14	2	01	7	1010.0	1
38	12	346	62	12	12	0600	K 35	07 S 150	50 E 19.3	35.55	04	1	04	1	14	3	02	7	1018.0	1
38	12	347	62	12	13	0435	K 35	07 S 150	55 E 19.5	35.52	04	1	04	1	14	3	02	7	1019.0	1
38	12	348	62	12	13	0535	K 35	07 S 151	00 E 19.4	35.51*	04	1	04	1	14	3	02	7	1019.0	1
38	12	349	62	12	13	0630	K 35	07 S 151	05 E 19.9	35.77*	00	0	00	0	14	3	02	7	1019.0	1
38	12	350	62	12	13	0735	K 35	07 S 151	10 E 20.2	35.68	04	1	00	0	14	3	02	7	1019.0	1
38	12	351	62	12	13	0840	K 35	07 S 151	15 E 20.4	35.66	00	0	00	0	14	3	02	7	1019.0	1
38	12	352	62	12	13	1215	K 35	15 S 150	57 E 21.5	35.56	00	0	00	0	14	3	01	7	1020.0	1
38	12	353	62	12	13	1415	K 35	21 S 150	45 E 19.7	35.53	00	0	00	0	14	3	01	7	1020.0	1
38	12	354	62	12	13	0800	K 35	27 S 150	27 E 18.6	35.55	18	2	18	1	14	2	02	7	1027.0	1
38	12	355	62	12	13	1100	K 35	45 S 150	21 E 19.1	35.54	04	1	04	1	14	2	01	7	1027.0	1
38	12	356	62	12	13	1130	K 35	50 S 150	17 E 19.1	35.55	04	1	04	1	14	2	01	7	1027.0	1
38	12	357	62	12	13	1215	K 35	50 S 150	27 E 19.8	35.57*	04	2	04	1	14	2	01	7	1026.0	1
38	12	358	62	12	13	1305	K 35	50 S 150	22 E 20.1	35.58	04	3	04	1	14	2	01	7	1025.0	1
38	12	359	62	12	13	1400	K 35	50 S 150	32 E 20.0	35.64	04	3	04	2	14	2	01	7	1025.0	1
38	12	360	62	12	13	1510	K 35	50 S 150	37 E 20.2	35.64	04	4	04	2	14	2	01	7	1024.0	1

* * PROPERTY DOUBTFUL
PROPERTY INTERPOLATED

VESSEL - CRUISE STATION YR. MTH. DAY TIME		LATITUDE		LONGITUDE		TEMP.		SALINITY		WIND		SEA		SWELL		WEA. VIS. BAROM.		SAMPLING METHOD	
	NUMBER									DN. AMT.	DN. AMT.	DN. AMT.	DN. AMT.	DN. AMT.	DN. AMT.				
38	361	62	12	15	1620	K 35	50 S	150	42 E	20.1	35.68	04	3	04	2	14	01	7	1024.0
38	362	62	12	15	1900	K 36	03 S	150	27 E	20.0	35.70	04	4	04	3	14	01	7	1024.0
38	363	62	12	15	2100	K 36	15 S	150	15 E	19.3	35.57	04	4	04	3	14	01	7	1024.0
38	364	62	12	17	0525	K 36	25 S	150	09 E	18.4	35.44	20	2	20	3	09	02	7	1021.0
38	365	62	12	17	0620	K 36	25 S	150	14 E	19.0	35.53	14	2	20	2	09	02	7	1022.0
38	366	62	12	17	0730	K 36	25 S	150	19 E	19.6	35.61	14	2	14	2	09	02	7	1022.0
38	367	62	12	17	0840	K 36	25 S	150	24 E	19.5	35.62	14	2	14	2	09	02	7	1022.0
38	368	62	12	17	0945	K 36	25 S	150	29 E	19.5	35.61	14	2	14	2	09	02	7	1022.0
38	369	62	12	17	1230	K 36	45 S	150	15 E	20.2	35.57	14	2	14	2	09	02	7	1022.0
38	370	62	12	17	1430	K 36	57 S	150	03 E	19.6	35.46	09	2	14	2	09	01	7	1018.0
38	371	62	12	18	0430	K 37	04 S	150	00 E	19.1	35.44	36	2	36	1	09	02	7	1018.0
38	372	62	12	18	0515	K 37	04 S	150	05 E	18.9	35.44	36	3	36	2	09	03	7	1014.0
38	373	62	12	18	0610	K 37	04 S	150	10 E	19.0	35.35	36	4	36	2	09	03	7	1014.0
38	374	62	12	18	0710	K 37	04 S	150	15 E	18.7	35.35	36	4	36	2	09	03	7	1012.0
38	375	62	12	18	0840	K 37	04 S	150	20 E	19.2	35.46	36	4	36	3	09	03	7	1012.0

DATA

PART 2

HYDROLOGY

SUBSURFACE SAMPLES

STATION		DATE	TIME	LATITUDE		LONGITUDE	
P 1/ 4/62		3/ 4/62	0730 K	37 58 S		148 01 E	
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES							
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	PRESSURE
37	***	36	3	*	*	7 00 0	09 1 1016.0
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE							
1	0	18.96	***	***	***	***	***
1	10	18.67	***	***	***	***	***
1	20	18.55	***	***	***	***	***
1	30	18.56	***	***	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
P 1/ 5/62		3/ 4/62	0820 K	38 01 S		148 03 E	
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES							
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	PRESSURE
48	***	36	3	*	*	7 36 1	09 1 1014.0
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE							
1	0	18.68	***	***	***	***	***
1	10	18.48	***	***	***	***	***
1	20	18.25	***	***	***	***	***
1	30	18.10	***	***	***	***	***
1	40	18.05	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE					
N 1/ 6/62		3/ 4/62		0910 K		38 05 S		148 05 E					
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES													
DEPTH KEY DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3													
51	***	34	4	*	*	7	36	1	09 1	1014.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE			
1	0	18.45	***	***	***	***	***	***	***	***			
1	10	18.49	***	***	***	***	***	***	***	***			
1	20	18.25	***	***	***	***	***	***	***	***			
1	30	18.05	***	***	***	***	***	***	***	***			
1	40	18.01	***	***	***	***	***	***	***	***			
1	50	18.02	***	***	***	***	***	***	***	***			

STATION		DATE		TIME		LATITUDE		LONGITUDE					
N 3/ 11/62		26/ 4/62		1200 K		37 04 S		150 23 E					
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES													
DEPTH KEY DRY DIR. SP. HEIGHT TYPE AMT. VIS. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3													
512	***	04	2	*	*	7	04	1	09 1	1024.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE			
1	0	21.27	***	***	***	***	***	***	***	***			
1	25	20.12	***	***	***	***	***	***	***	***			
1	50	19.43	***	***	***	***	***	***	***	***			
1	75	18.72	***	***	***	***	***	***	***	***			
1	100	18.27	***	***	***	***	***	***	***	***			
1	150	15.98	***	***	***	***	***	***	***	***			
1	200	14.54	***	***	***	***	***	***	***	***			
1	300	12.97	***	***	***	***	***	***	***	***			
1	500	9.98	***	***	***	***	***	***	***	***			

STATION	DATE	TIME	LATITUDE	LONGITUDE					
N 3/ 12/62	26/ 4/62	1300 K	37 04 S	150 18 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	
150 *** **	04 2 *	*	*	7	04 1	09 1	1024.0	* * *	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.74	**	**	**	**	**	**	**
1	25	20.52	**	**	**	**	**	**	**
1	50	19.55	**	**	**	**	**	**	**
1	75	18.76	**	**	**	**	**	**	**
1	100	18.05	**	**	**	**	**	**	**
1	150	15.49	**	**	**	**	**	**	**

STATION	DATE	TIME	LATITUDE		LONGITUDE	
M 3/ 13/62	26/ 4/62	1355 K	37	04 S	150	13 E
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES						
DEPTH	DIR. SP.	DIR. SP.	DIR. SP.	DIR. AMT.	DIR. AMT.	DIR. AMT.
115	***	04 3	*	*	7 04 2	09 1 1023.0
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE						
1	0	20.16	***	***	***	***
1	25	20.01	***	***	***	***
1	50	19.39	***	***	***	***
1	75	18.19	***	***	***	***
1	100	16.69	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE				
P 3/ 14/62		26/ 4/62		1450 K		37 04 S		150 08 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												
91	***	***	04 3	*	*	7	04 2	09 1	1023.0	*	*	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE												
1		0	20.10	***	***	***	***	***	***	***	***	***
1		25	19.78	***	***	***	***	***	***	***	***	***
1		50	18.17	***	***	***	***	***	***	***	***	***
1		75	16.51	***	***	***	***	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE				
P 4/ 15/62		25/ 7/62		0815 K		34 05 S		151 13 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												
64	***	***	27 1	*	*	7	04 2	04 2	1008.0	*	*	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE												
1		0	14.13	35.440	26.07	***	***	***	***	***	***	***
1		10	16.11	35.440	26.08	***	***	***	***	***	***	***
1		20	15.94	35.440	26.11	***	***	***	***	***	***	***
1		30	15.67	35.440	26.18	4.72	84	***	***	***	***	***
1		40	15.39	35.410	26.22	***	***	***	***	***	***	***
1		50	15.37	35.410	26.22	4.61	81	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 4/ 16/62		25/ 7/62		0915 K		34 05 S		151 18 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															
126	***	***	36	2	*	*	6	34	1	04	2	1008.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	16.61	35.500	26.01	***	***	***	***	***						
1	10	16.59	35.500	26.01	***	***	***	***	***						
1	20	16.57	***	***	***	***	***	***	***						
1	30	16.52	35.480	26.01	5.09	92	***	***	***						
1	40	16.51	35.490	26.02	***	***	***	***	***						
1	50	16.49	35.480	26.02	4.96	89	***	***	***						
1	75	16.66	35.440	26.18	***	80	***	***	***						
1	100	15.29	35.410	26.24	4.55	80	***	***	***						
1	125	15.08	35.410	26.29	4.58	80	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 4/ 17/62		25/ 7/62		1020 K		34 05 S		151 23 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															
139	***	34	3	*	*	6	34	1	04	2	1008.0	*	*	*	
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	17.20*	35.540*	25.90	***	***	***	***	***						
1	10	17.66	35.570	25.81	***	***	***	***	***						
1	20	17.70	35.540	25.78	***	***	***	***	***						
1	30	17.72	35.570	25.79	5.22	96	***	***	***						
1	40	17.73	35.660	25.86	***	***	***	***	***						
1	50	17.60	35.610	25.86	5.11	94	***	***	***						
1	75	17.09	35.620	25.99	***	***	***	***	***						
1	100	15.55	35.440	26.21	4.83	85	***	***	***						
1	125	15.56	35.460	26.22	4.83	85	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 4/ 18/62		25/ 7/62		1120 K		34 05 S		151 28 E							
SONIC		AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMDS.	WIRE ANGLES					
DEPTH		WET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2	CAST3				
150	***	***	34	3	*	*	6	34	1	04	2	1009.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY		SIGMA-T		OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE			
1	0	17.52	35.510		25.80		***	***	***	***	***	***			
1	10	17.47	35.510		25.81		***	***	***	***	***	***			
1	20	17.48	35.500		25.80		***	***	***	***	***	***			
1	30	17.49	35.500		25.80		5.31	98	***	***	***	***			
1	40	17.53	35.530		25.81		***	***	***	***	***	***			
1	50	17.60	35.570		25.82		5.31	98	***	***	***	***			
1	75	17.47	35.600		25.88		***	***	***	***	***	***			
1	100	17.10	35.550		25.93		4.94	90	***	***	***	***			
1	140	16.09	35.510		26.14		4.97	89	***	***	***	***			

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 27/62		28/ 7/62		1105 K		34 40 S		151 15 E	
SONIC		AIR TEMP.		WIND		ANEM.		CLOUD	
DEPTH		WET DRY		DIR. SP.		HEIGHT		TYPE AMT.	
348 ***		*** 23 4		*		7 23 3		14 2 1022.0	
CAST		DEPTH		TEMP.		SALINITY		SIGMA-T	
1 0		17.27		35.550		25.89		***	
1 25		17.04		35.730*		26.08		***	
1 50		16.90		35.590		26.01		***	
1 75		16.69		35.530		26.01		***	
1 100		16.46		35.520		26.08		***	
1 150		14.54		35.460		26.45		***	
1 200		13.73		35.430		26.59		***	
1 300		13.21		35.550		26.79		***	

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION			DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 20/62			25/ 7/62		1330 K		34 05 S		151 37 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIP, SP,	ANEM. HEIGHT	CLOUD TYPE AMT,	VIS.	SEA DIR, AMT,	SWELL DIR, AMT,	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
732	***	27 1	*	*	7	27 1	04 2	1008.0	* *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE	
1	0	18.26	35.680	25.75	***	***	***	***	***	
1	24	18.24	35.680	25.75	***	***	***	***	***	
1	48	18.20	35.670	25.75	5.09	95	***	***	***	
1	72	18.19	35.690	25.77	***	***	***	***	***	
1	95	18.23	35.680	25.76	5.06	95	***	***	***	
1	140	17.70	35.640	25.85	***	***	***	***	***	
1	185	16.96	35.970	25.98	4.89	89	***	***	***	
1	280	14.41	35.380	26.41	4.83	83	***	***	***	
1	460	10.32	34.840	26.79	4.72	74	***	***	***	

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STATION			DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 23/62			28/ 7/62		0630 K		34 40 S		150 55 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIP, SP,	ANEM. HEIGHT	CLOUD TYPE AMT,	VIS.	SEA DIR, AMT,	SWELL DIR, AMT,	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
64	***	32 2	*	*	7	32 4	14 2	1022.0	* *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT,	INORG. P	TOTAL P	NITRATE	
1	0	17.03	35.620*	26.00	***	***	***	***	***	
1	10	17.03	35.570	25.96	***	***	***	***	***	
1	20	16.93	35.550	25.97	***	***	***	***	***	
1	30	16.76	35.550	26.01	5.10	92	***	***	***	
1	40	16.59	35.530	26.04	***	***	***	***	***	
1	50	16.04	35.500	26.16	4.77	85	***	***	***	

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
Y 4/ 24/62		28/ 7/62		0735 K		34 40 S		151 00 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH	WET DRY	DIP, SP.	HEIGHT	TYPE AMT.	DIR, AMT.	DIR, AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3
119 ***	***	32 3	*	*	7 32 2	14 2	1022.0	*	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	17.28	35.710*	26.01	***	***	***	***	***
1	10	17.30	35.640	25.95	***	***	***	***	***
1	20	17.30	35.600	25.92	***	***	***	***	***
1	30	17.34	35.700*	25.99	3.83	70	***	***	***
1	40	17.31	35.620	25.93	***	***	***	***	***
1	50	17.29	35.600	25.92	4.65	85	***	***	***
1	75	16.42	35.520	26.07	***	***	***	***	***
1	100	14.42	35.530	26.53	4.73	82	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
Y 4/ 25/62		28/ 7/62		0845 K		34 40 S		151 05 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH	WET DRY	DIP, SP.	HEIGHT	TYPE AMT.	DIR, AMT.	DIR, AMT.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3
139 ***	***	23 4	*	*	7 22 3	14 2	1023.0	*	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	17.43	35.660	25.94	***	***	***	***	***
1	10	17.43	35.610	25.90	***	***	***	***	***
1	20	17.42	35.590	25.88	***	***	***	***	***
1	30	17.43	35.620	25.90	5.11	94	***	***	***
1	40	17.44	35.620	25.90	***	***	***	***	***
1	50	17.42	35.610	25.90	5.24	96	***	***	***
1	75	14.73	35.600	26.06	***	***	***	***	***
1	100	14.44	35.480	26.44	4.82	84	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 4/ 26/62		28/ 7/62		0955 K		34 40 S		151 10 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															
210	***	***	23	4	*	*	7	23	3	14	2	1023.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	17.32	35.590	25.91	***	***	***	***	***						
1	25	17.28	35.570	25.90	***	***	***	***	***						
1	50	17.30	35.590	25.91	***	***	***	***	***						
1	75	16.53	35.550	26.06	4.94	89	***	***	***						
1	100	14.79	35.420	26.36	***	***	***	***	***						
1	125	14.43	35.640*	26.61	4.59	79	***	***	***						
1	150	14.24	35.500	26.54	***	***	***	***	***						
1	175	14.24	35.480	26.52	4.19	72	***	***	***						
1	200	14.11	35.460	26.54	4.42	76	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 4/ 19/62		25/ 7/62		1225 K		34 05 S		151 33 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															
320	***	***	32	3	*	*	7	34	1	04	2	1009.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	17.78	35.570	25.78	***	***	***	***	***						
1	25	17.81	35.570	25.77	***	***	***	***	***						
1	50	17.70	35.590	25.82	5.36	99	***	***	***						
1	75	17.72	35.610	25.83	***	***	***	***	***						
1	100	17.70	35.620	25.84	5.23	97	***	***	***						
1	150	17.46	35.620	25.90	***	***	***	***	***						
1	200	16.57	35.540	26.05	4.94	89	***	***	***						
1	300	11.56	35.080	26.75	4.75	77	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 29/62		30/ 7/62		0850 K		35 07 S		150 50 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
106 *** **	33 3	*	*	6	33 2	14 1	1021.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.98	35.600*	26.50	***	***	***	***	***
1	10	14.98	35.520	26.40	***	***	***	***	***
1	20	14.98	35.530	26.40	***	***	***	***	***
1	30	14.98	35.550	26.42	5.47	96	***	***	***
1	40	14.71	35.480	26.42	***	***	***	***	***
1	50	14.47	35.530	26.51	5.47	95	***	***	***
1	75	14.26	35.520	26.57	***	***	***	***	***
1	100	13.93	35.530	26.63	5.56	92	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 30/62		30/ 7/62		0746 K		35 07 S		150 55 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
130 *** **	32 4	*	*	7	32 2	14 1	1021.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.63	35.570	26.29	***	***	***	***	***
1	10	15.59	35.600	26.32	***	***	***	***	***
1	20	15.69	35.640	26.33	***	***	***	***	***
1	30	15.59	35.570	26.30	5.47	97	***	***	***
1	40	15.45	35.620	26.37	***	***	***	***	***
1	50	15.21	35.600	26.41	5.31	93	***	***	***
1	75	14.76	35.440	26.47	***	***	***	***	***
1	100	13.26	35.240	26.54	4.70	79	***	***	***
1	125	12.09	35.330	26.67	5.07*	85	***	***	***

* PROPERTY DOUTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE			
M 4/ 31/62		30/ 7/62		0850 K		35 07 S		151 00 E			
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES											
DEPTH	WET	DIR.	SP.	DIR.	AMT.	DIR.	AMT.	PRESSURE	CAST1 CAST2 CAST3		
152	***	32	3	*	*	7	32	2	14 1 1021.0 * *		
CAST											
DEPTH	TEMP.	SALINITY		SIGMA-T		OXYGEN		OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.570		26.30		***		***	***	***	***
1	10	35.550		26.28		***		***	***	***	***
1	20	35.590		26.32		***		***	***	***	***
1	30	35.550		26.30		5.38		95	***	***	***
1	40	35.570		26.35		***		***	***	***	***
1	50	35.530		26.35		5.36		94	***	***	***
1	75	35.510		26.43		***		***	***	***	***
1	100	35.440		26.47		4.99		86	***	***	***
1	125	35.430		26.56		4.99		85	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE			
M 4/ 32/62		30/ 7/62		0948 K		35 07 S		151 05 E			
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES											
DEPTH	WET	DIR.	SP.	DIR.	AMT.	DIR.	AMT.	PRESSURE	CAST1 CAST2 CAST3		
732	***	32	3	*	*	7	32	2	14 1 1023.0 * *		
CAST											
DEPTH	TEMP.	SALINITY		SIGMA-T		OXYGEN		OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	35.570		26.34		***		***	***	***	***
1	25	35.600		26.50		***		***	***	***	***
1	50	35.710*		26.60		5.47		95	***	***	***
1	75	35.610		26.54		***		***	***	***	***
1	100	35.550		26.91		5.41		94	***	***	***
1	150	35.280		26.60		***		***	***	***	***
1	200	35.240		26.63		4.76		79	***	***	***
1	300	35.170		26.49		4.85		80	***	***	***
1	500	34.920		26.81		4.91		78	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 4/ 33/62		30/ 7/62		1100 K		35 07 S		151 10 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
1317	***	26 2	*	*	7	26 2	14 1	1022.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.14	35.620	26.21	***	***	***	***	***
1	25	16.10	35.600	26.20	***	***	***	***	***
1	50	15.80	35.570	26.25	5.29	94	***	***	***
1	75	15.27	35.930	26.34	***	***	***	***	***
1	100	14.89	35.950	26.44	5.33	93	***	***	***
1	150	14.25	35.550	26.58	***	***	***	***	***
1	200	12.94	35.370	26.71	4.82	81	***	***	***
1	300	12.54	35.280	26.72	4.91	81	***	***	***
1	500	9.62	34.880	26.94	4.99	78	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 4/ 34/62		30/ 7/62		1220 K		35 07 S		151 15 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
***	***	26 1	*	*	7	26 2	14 1	1022.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.30	35.640	26.19	***	***	***	***	***
1	25	16.16	35.620	26.21	***	***	***	***	***
1	50	16.13	35.620	26.21	5.50	98	***	***	***
1	75	16.02	35.660	26.27	***	***	***	***	***
1	100	15.41	35.570	26.34	5.32	94	***	***	***
1	150	14.57	35.620	26.56	***	***	***	***	***
1	200	14.04	35.570	26.64	5.44	93	***	***	***
1	300	12.73	35.280	26.68	5.06	84	***	***	***
1	500	9.25	34.740	26.89	5.02	77	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 4/ 37/62		3/ 8/62		0640 K		35 50 S		150 17 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH WFT DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
57 ***	26 1	*	*	7	28 1	14 2	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.10	35.520	26.58	***	***	***	***	***
1	10	14.18	35.520	26.57	***	***	***	***	***
1	20	14.16	35.530	26.58	***	***	***	***	***
1	30	14.08	35.530	26.60	5.57	96	***	***	***
1	40	14.10	35.550	26.61	***	***	***	***	***
1	50	14.10	35.530	26.59	5.55	95	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 4/ 36/62		3/ 8/62		0735 K		35 50 S		150 22 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH WFT DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
119 ***	26 2	*	*	7	28 1	14 2	1018.0	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.56	35.530	26.49	***	***	***	***	***
1	10	14.57	35.520	26.49	***	***	***	***	***
1	20	14.51	35.520	26.50	***	***	***	***	***
1	30	14.62	35.500	26.46	5.47	95	***	***	***
1	40	14.58	35.900*	26.77	***	***	***	***	***
1	50	14.39	35.490	26.50	5.55	96	***	***	***
1	75	13.84	35.500	26.63	***	***	***	***	***
1	100	13.79	35.520	26.65	5.44	93	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 39/62		3/ 6/62		0835 K		35 50 S		150 27 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP. SP.	HEIGHT	TYPE-AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
130 ***	28 3	*	*	7	28 1	14 2	1020.0	*	*
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.76	35.570	26.48	***	***	***	***	***
1	10	14.78	35.550	26.46	***	***	***	***	***
1	20	14.77	35.520	26.44	***	***	***	***	***
1	30	14.71	35.550	26.48	5.50	96	***	***	***
1	40	14.67	35.520	26.46	***	***	***	***	***
1	50	14.34	35.490	26.51	5.41	93	***	***	***
1	75	13.99	35.460	26.56	***	***	***	***	***
1	100	13.87	35.390	26.53	5.30	90	***	***	***
1	125	13.68	35.460	26.63	5.36	91	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 40/62		3/ 8/62		0935 K		35 50 S		150 32 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP. SP.	HEIGHT	TYPE-AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2
146 ***	28 3	*	*	7	28 2	14 3	1020.0	*	*
CAS	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.84	35.530	26.43	***	***	***	***	***
1	10	14.79	35.480	26.41	***	***	***	***	***
1	20	14.79	35.710*	26.58	***	***	***	***	***
1	30	14.79	35.550	26.46	5.50	96	***	***	***
1	40	14.84	35.530	26.43	***	***	***	***	***
1	50	14.61	35.700*	26.57	5.47	95	***	***	***
1	75	14.42	35.460	26.47	***	***	***	***	***
1	100	13.93	35.440	26.56	5.28	90	***	***	***
1	125	13.78	35.410	26.57	5.33	91	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 41/62		3/ 8/62		1030 K		35 50 S		150 37 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.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3
640	***	27 2	*	*	7	27 2	14 3	1021.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P NITRATE
1	0	14.82	35.500	26.42	***	***	***	***	***
1	25	14.78	35.530	26.45	***	***	***	***	***
1	50	14.77	35.530	26.45	5.50	96	***	***	***
1	75	14.74	35.520	26.45	***	***	***	***	***
1	100	14.66	35.490	26.44	5.44	94	***	***	***
1	150	13.93	35.390	26.52	***	***	***	***	***
1	200	13.65	35.400	26.59	5.27	90	***	***	***
1	300	13.56	35.430	26.63	5.36	91	***	***	***
1	500	10.91	34.960	26.78	4.93	79	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 42/62		3/ 8/62		1135 K		35 50 S		150 42 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.	DIR, AMT.	PRESSURE	CAST1 CAST2 CAST3
***	***	80 0	*	*	7	27 1	14 3	1020.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P NITRATE
1	0	15.06	35.570	26.42	***	***	***	***	***
1	25	14.98	35.550	26.42	***	***	***	***	***
1	50	14.93	35.590	26.46	5.45	95	***	***	***
1	75	14.73	35.530	26.46	***	***	***	***	***
1	100	14.71	35.550	26.48	5.40	94	***	***	***
1	150	14.44	35.530	26.52	***	***	***	***	***
1	200	13.73	35.530	26.67	5.50	94	***	***	***
1	300	13.57	35.440	26.64	5.51	94	***	***	***
1	500	9.91	34.790	26.82	4.60	72	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 4/ 45/62		4/ 8/62		0640 K		36 25 S		150 09 E						
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES														
DEPTH	MET DRY	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.					
57	***	22	2	*	*	7	22	1	14	2	1023.0	*	*	*
CAST														
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	13.36	35.520	26.74	***	***	***	***						
1	10	13.46	35.500	26.70	***	***	***	***						
1	20	13.44	35.610*	26.79	***	***	***	***						
1	30	13.36	35.520	26.74	5.67	96	***	***						
1	40	13.41	35.460	26.68	***	***	***	***						
1	50	13.40	35.530	26.74	5.76	97	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 4/ 46/62		4/ 8/62		0740 K		36 25 S		150 14 E						
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES														
DEPTH	MET DRY	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.	DIR. SP.					
119	***	18	2	*	*	7	18	1	14	2	1023.0	*	*	*
CAST														
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	14.19	35.550	26.59	***	***	***	***						
1	10	14.19	35.550	26.59	***	***	***	***						
1	20	14.03	35.550	26.62	***	***	***	***						
1	30	13.51	35.520	26.71	5.74	97	***	***						
1	40	13.19	35.550	26.80	***	***	***	***						
1	50	13.10	35.550	26.82	5.13	86	***	***						
1	75	13.12	35.530	26.80	***	***	***	***						
1	100	13.09	35.530	26.80	4.53	76	***	***						

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE								
N 4/ 47/62		4/ 8/62		0835 K		36 25 S		150 19 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 CAST1 CAST2 CAST3																
165	***	***	18	3	*	*	*	7	18	3	14	2	1023.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
1	0	14.04	35.920	26.60	***	***	***	***	***							
1	10	14.00	35.920	26.61	***	***	***	***	***							
1	20	14.00	35.920	26.61	***	***	***	***	***							
1	30	13.98	35.920	26.61	5.60	96	***	***	***							
1	40	14.02	35.920	26.60	***	***	***	***	***							
1	50	13.96	35.500	26.60	5.67	97	***	***	***							
1	75	13.73	35.920	26.66	***	***	***	***	***							
1	100	13.62	35.930	26.69	5.70	97	***	***	***							
1	150*	13.49	35.930	26.72	5.78	98	***	***	***							

STATION		DATE		TIME		LATITUDE		LONGITUDE								
N 4/ 48/62		4/ 8/62		0940 K		36 25 S		150 24 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 CAST1 CAST2 CAST3																
***	***	***	18	4	*	*	*	7	18	4	14	2	1024.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
1	0	14.72	35.950	26.47	***	***	***	***	***							
1	24	14.48	35.930	26.47	***	***	***	***	***							
1	47	14.52	35.920	26.49	4.3*	75	***	***	***							
1	70	14.29	35.920	26.55	***	***	***	***	***							
1	90	14.21	35.500	26.55	5.04	87	***	***	***							
1	135	13.69	35.670*	26.79	***	***	***	***	***							
1	180	13.61	35.920	26.69	4.87	83	***	***	***							
1	267	13.41	35.460	26.68	4.82	82	***	***	***							
1	454	12.89	35.440	26.77	5.36	90	***	***	***							

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 49/62		9/ 8/62		0815 K		37 04 S		150 00 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.	DIR. AMT.	PRESSURE	CAST1	CAST2
60 *** **	23 2	*	*	7	23 1	14 2	1026.0	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	12.90	35.530	26.84	***	***	***	***	***
1	10	12.92	35.530	26.84	***	***	***	***	***
1	20	12.91	35.550	26.86	***	***	***	***	***
1	30	12.89	35.550	26.86	5.74	96	***	***	***
1	40	12.93	35.520	26.83	***	***	***	***	***
1	50	12.85	35.530	26.85	5.84	98	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 50/62		9/ 8/62		0905 K		37 04 S		150 -05 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.	DIR. AMT.	PRESSURE	CAST1	CAST2
77 *** **	23 3	*	*	7	23 2	14 2	1026.0	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.30	35.610	26.82	***	***	***	***	***
1	10	13.21	35.610	26.84	***	***	***	***	***
1	20	13.22	35.590	26.79	***	***	***	***	***
1	30	13.01	35.530	26.82	5.84	98	***	***	***
1	40	12.80	35.520	26.85	***	***	***	***	***
1	50	12.80	35.530	26.86	5.87	98	***	***	***
1	70	12.80	35.500	26.84	5.84	98	***	***	***

STATION				DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 51/62				9/ 8/62		1005 K		37 04 S		150 10 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SEA SWELL ATMOS. WIRE ANGLES											
DEPTH	WET	DRY	DIR. SP.	HEIGHT	TYPE	AMT.	VIS.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
95	***	***	27 3	*	*	*	7	27 2	14 2	1026.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	14.04		35.550		26.62	***		***		***
1	10	14.01		35.640		26.70	***		***		***
1	20	13.51		35.530		26.72	***		***		***
1	30	13.10		35.680*		26.92	99		***		***
1	40	13.09		35.530		26.80	***		***		***
1	50	12.97		35.520		26.82	98		***		***
1	75	12.79		35.500		26.84	***		***		***
1	90	12.78		35.530		26.87	98		***		***

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STATION				DATE		TIME		LATITUDE		LONGITUDE	
N 4/ 52/62				9/ 8/62		1100 K		37 04 S		150 15 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SEA SWELL ATMOS. WIRE ANGLES											
DEPTH	WET	DRY	DIR. SP.	HEIGHT	TYPE	AMT.	VIS.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
123	***	***	27 3	*	*	*	7	27 3	14 2	1026.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	13.70		35.610		26.74	***		***		***
1	10	13.68		35.530		26.68	***		***		***
1	20	13.53		35.530		26.71	***		***		***
1	30	13.51		35.520		26.71	98		***		***
1	40	13.35		35.530		26.75	***		***		***
1	50	12.97		35.490		26.80	***		***		***
1	75	12.79		35.710*		27.00	97		***		***
1	100	12.78		35.520		26.86	97		***		***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 4/ 53/62		9/ 8/62	1200 K	37 04 S	150 20 E		
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAST1 CAST2 CAST3
256 ***	***	23 3	*	*	7 23 3	14 2	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	14.96	35.530	26.41	***	***	***
1	25	14.83	35.520	26.43	***	***	***
1	50	14.47	35.530	26.44	5.90	102	***
1	75	14.61	35.500	26.50	***	***	***
1	100	13.49	35.320	26.56	4.99	84	***
1	125	13.02	35.260	26.61	***	***	***
1	150	13.35	35.460	26.69	5.53	93	***
1	175	13.38	35.490	26.71	***	***	***
1	200	13.26	35.500	26.74	5.62	95	***

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STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 4/ 54/62		9/ 8/62	1305 K	37 04 S	150 25 E		
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAST1 CAST2 CAST3
1463 ***	***	20 3	*	*	7 23 3	14 2	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	15.06	35.520	26.38	***	***	***
1	25	15.03	35.550	26.41	***	***	***
1	50	15.00	35.550	26.41	5.47	96	***
1	75	14.89	35.580	26.46	***	***	***
1	100	14.73	35.530	26.46	5.52	96	***
1	150	13.34	35.340	26.61	***	***	***
1	200	13.24	35.440	26.70	5.52	93	***
1	300	12.96	35.440	26.76	5.55	93	***
1	500	12.45	35.460	26.88	5.73	95	***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 5/ 63/62		25/ 8/62		0755 K		34 05 S		151 13 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															
64	***	***	23	2	*	*	7	27	1	09	2	1020.0	*	*	*
CAST		DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE				
1		0	15.70	35.550	26.26	***	***	***	***	***	***				
1		10	15.73	35.530	26.24	***	***	***	***	***	***				
1		20	15.71	35.570	26.27	***	***	***	***	***	***				
1		30	15.68	35.570	26.28	99	99	99	***	***	***				
1		40	15.55	35.530	26.28	***	***	***	***	***	***				
1		50	15.39	35.500	26.29	94	94	94	***	***	***				

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STATION		DATE		TIME		LATITUDE		LONGITUDE							
N 5/ 64/62		25/ 8/62		0840 K		34 05 S		151 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															
128	***	***	23	3	*	*	7	23	2	09	2	1021.0	*	*	*
CAST		DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P	NITRATE				
1		0	15.77	35.590	26.27	***	***	***	***	***	***				
1		10	15.68	35.590	26.29	***	***	***	***	***	***				
1		20	15.69	35.570	26.28	***	***	***	***	***	***				
1		30	15.59	35.610	26.33	5.54	98	98	***	***	***				
1		40	15.62	35.570*	26.29	***	***	***	***	***	***				
1		50	15.60	35.590	26.31	5.52	98	98	***	***	***				
1		75	15.53	35.570	26.31	***	***	***	***	***	***				
1		100	15.19	35.660*	26.46	5.07	89	89	***	***	***				
1		125	15.10	35.500	26.35	5.24	92	92	***	***	***				

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 5/ 65/62		25/ 8/62		0935 K		34 05 S		151 23 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	DIR. AMT.	SEA DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS12 CAS13
139	***	23	3	*	*	7	23	2	1021.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.550	26.29	***	***	***	***	***	
1	10	35.550	26.28	***	***	***	***	***	
1	20	35.530	26.27	***	***	***	***	***	
1	30	35.570	26.31	5.45	96	***	***	***	
1	40	35.570	26.29	***	***	***	***	***	
1	50	35.550	26.28	5.51	98	***	***	***	
1	75	35.590	26.32	***	***	***	***	***	
1	100	35.550	26.29	5.52	98	***	***	***	
1	125	35.550	26.29	5.49	97	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 5/ 66/62		25/ 8/62		1035 K		34 05 S		151 28 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	DIR. AMT.	SEA DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS12 CAS13
148	***	23	3	*	*	7	22	2	1021.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.570	26.24	***	***	***	***	***	
1	10	35.570	26.25	***	***	***	***	***	
1	20	35.570	26.25	***	***	***	***	***	
1	30	35.590	26.29	5.58	99	***	***	***	
1	40	35.640	26.32	***	***	***	***	***	
1	50	35.570	26.27	5.57	99	***	***	***	
1	75	35.570	26.30	***	***	***	***	***	
1	100	35.570	26.30	5.53	98	***	***	***	
1	140	35.550	26.30	5.45	96	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 5/ 67/62		25/ 8/62		1140 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. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3														
320	***	18	2	*	*	7	18	2	09	2	1020.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	15.03	35.590	26.24	***	***	***	***	***					
1	25	15.73	35.570	26.26	***	***	***	***	***					
1	50	15.58	35.550	26.28	5.44	96	***	***	***					
1	75	15.62	35.550	26.28	***	***	***	***	***					
1	100	15.52	35.530	26.28	5.44	96	***	***	***					
1	150	13.07	35.280	26.61	***	***	***	***	***					
1	200	13.05	35.320	26.65	5.04	85	***	***	***					
1	300	12.15	***	***	5.14	***	***	***	***					

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STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 5/ 68/62		25/ 8/62		1240 K		34 05 S		151 37 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														
638	***	18	3	*	*	7	18	2	09	2	1020.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	15.87	35.640	26.29	***	***	***	***	***					
1	25	15.68	35.640	26.33	***	***	***	***	***					
1	50	15.67	35.570	26.28	5.53	98	***	***	***					
1	75	15.59	35.570	26.30	***	***	***	***	***					
1	100	15.62	35.620	26.33	5.52	98	***	***	***					
1	150	13.40	35.520	26.30	***	***	***	***	***					
1	200	13.07	35.300	26.63	4.89	82	***	***	***					
1	300	12.28	35.320	26.80	5.24	87	***	***	***					
1	500	10.57	34.960	26.84	5.00	79	***	***	***					

STATION DATE TIME LATITUDE LONGITUDE
 Y 5/ 72/62 26/ 8/62 0615 K 34 40 S 190 55 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
 70 *** ** 27 4 * * * 7 27 2 14 1 1017.0 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE
 1 0 15.61 35.590 26.31 *** *** ***
 1 10 15.65 35.570 26.28 *** *** ***
 1 20 15.61 35.590 26.31 *** *** ***
 1 30 15.59 35.590 26.31 5.37 *** *** ***
 1 40 15.52 35.590 26.33 *** *** ***
 1 50 15.20 35.500 26.33 5.66 *** 99 ***

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STATION DATE TIME LATITUDE LONGITUDE
 Y 5/ 73/62 26/ 8/62 0710 K 34 40 S 191 00 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
 126 *** ** 99 1 * * * 7 27 2 14 1 1017.0 * * *

CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE
 1 0 15.93 35.590 26.24 *** *** ***
 1 10 15.99 35.610 26.24 *** *** ***
 1 20 16.00 35.590 26.22 *** *** ***
 1 30 16.02 35.610 26.23 5.55 *** *** ***
 1 40 15.96 35.590 26.23 *** *** ***
 1 50 15.63 35.570 26.29 5.38 *** *** ***
 1 75 15.08 35.480 26.34 *** *** ***
 1 100 14.57 35.440 26.42 5.22 *** 90 ***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 74/62		26/ 8/62		0800 K		34 40 S		151 05 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
137	***	32 1	*	* *	7	27 2	14 1	1017.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.02	35.610	26.23	***	***	***	***	***
1	10	15.98	35.610	26.24	***	***	***	***	***
1	20	15.99	35.610	26.24	***	***	***	***	***
1	30	15.89	35.590	26.24	5.65	101	***	***	***
1	40	15.87	***	***	***	***	***	***	***
1	50	15.72	35.570	26.27	5.53	98	***	***	***
1	75	15.58	35.570	26.30	***	***	***	***	***
1	100	15.13	35.530	26.37	5.59	98	***	***	***
1	125	13.86	35.410	26.55	5.01	86	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 75/62		26/ 8/62		0850 K		34 40 S		151 10 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
220	***	23 4	*	* *	7	23 2	14 1	1017.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.43	35.590	26.26	***	***	***	***	***
1	25	15.74	35.590	26.28	***	***	***	***	***
1	50	15.69	35.570	26.28	9.74	102	***	***	***
1	75	15.29	35.530	26.33	***	***	***	***	***
1	100	14.24	35.410	26.47	4.96	85	***	***	***
1	125	13.47	35.410	26.55	***	***	***	***	***
1	150	13.44	35.390	26.62	5.14	87	***	***	***
1	175	13.10	35.410	26.71	***	***	***	***	***
1	200	13.09	35.440	26.73	5.38	90	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 5/ 76/62		26/ 8/62		0945 K		34 40 S		151 15 E	
SONIC AIR TEMP. WIND		ANEM.		VIS. SEA		SHELL		WIRE ANGLES	
DEPTH	KEY DRY DIR. SP.	DIR. SP.	HEIGHT	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1 CAS2 CAS3	CAS1 CAS2 CAS3
421 ***	23 4	*	*	7	23 3	14 1	1017.0	20	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.91	***	***	***	***	***	***	***
1	23	15.90	35.610	26.26	***	***	***	***	***
1	45	15.80	35.590	26.26	5.55	99	***	***	***
1	65	15.72	35.570	26.27	***	***	***	***	***
1	85	15.20	35.530	26.35	5.49	96	***	***	***
1	126	13.89	35.520	26.63	***	***	***	***	***
1	170	13.67	35.480	26.64	5.69	97	***	***	***
1	255	12.89	35.410	26.75	5.41	91	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 5/ 77/62		26/ 8/62		1050 K		34 40 S		151 20 E	
SONIC AIR TEMP. WIND		ANEM.		VIS. SEA		SHELL		WIRE ANGLES	
DEPTH	KEY DRY DIR. SP.	DIR. SP.	HEIGHT	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1 CAS2 CAS3	CAS1 CAS2 CAS3
1097 ***	25 5	*	*	7	25 3	14 1	1018.0	10	*
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.92	35.610	26.25	***	***	***	***	***
1	24	15.89	35.610	26.26	***	***	***	***	***
1	47	15.89	35.610	26.26	5.32	95	***	***	***
1	70	***	35.590	***	***	***	***	***	***
1	93	15.82	35.590	26.26	5.34	95	***	***	***
1	140	13.92	35.340	26.48	***	***	***	***	***
1	187	13.18	35.320	26.62	4.90	82	***	***	***
1	280	11.57	35.080	26.75	4.78	78	***	***	***
1	450	9.53	34.960	27.02	4.65	72	***	***	***

STATION			DATE			TIME			LATITUDE			LONGITUDE		
P 5/ 80/62			27/ 8/62			0640 K			35 07 S			150 50 E		
SONIC AIR TEMP. WIND ANEM. CLOUD SEA VIS. SWELL ATMOS. WIRE ANGLES														
DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3														
110	***	***	27	2	*	*	*	7	27	1	14	2	1022.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE														
1		0	15.28		35.620*			***		***			***	***
1		10	15.28		35.570			***		***			***	***
1		20	15.19		35.550			***		***			***	***
1		30	15.12		35.530			5.61		98			***	***
1		40	14.34		35.480			***		***			***	***
1		50	14.16		35.480			5.53		95			***	***
1		75	13.68		35.460			***		***			***	***
1		100	13.16		35.440			5.61		94			***	***

STATION			DATE			TIME			LATITUDE			LONGITUDE		
P 5/ 81/62			27/ 8/62			0735 K			35 07 S			150 55 E		
SONIC AIR TEMP. WIND ANEM. CLOUD SEA VIS. SWELL ATMOS. WIRE ANGLES														
DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3														
134	***	***	27	2	*	*	*	7	27	1	14	2	1022.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE														
1		0	16.12		35.620			***		***			***	***
1		10	16.07		35.620			***		***			***	***
1		20	15.98		35.590			***		***			***	***
1		30	15.74		35.610			5.52		98			***	***
1		40	15.72		35.610			***		***			***	***
1		50	15.45		35.570			5.49		97			***	***
1		75	14.05		35.370			***		***			***	***
1		100	13.44		35.430			5.07		86			***	***
1		125	13.17		35.370			5.12		86			***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION				DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 82/62				27/ 8/62		0830 K		35 07 S		151 00 E	
SONIC AIR TEMP. WIND											
DEPTH	WET	DRY	DIR. SP.	ANEM. HEIGHT.	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
165	***	***	27 2	* *	* *	7	27 2	14 2	1023.0	* *	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	16.02		35.610	26.23	***	***	***	***	***	***
1	10	15.97		35.610	26.24	***	***	***	***	***	***
1	20	15.91		35.570	26.22	***	***	***	***	***	***
1	30	15.74		35.590	26.28	5.47	***	97	***	***	***
1	40	15.43		35.530	26.30	***	***	***	***	***	***
1	50	15.40		35.570	26.34	5.47	***	96	***	***	***
1	75	14.99		35.520	26.39	***	***	***	***	***	***
1	100	14.27		35.410	26.47	4.87	***	84	***	***	***
1	125	13.40		35.320	26.58	4.73	***	80	***	***	***

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STATION				DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 83/62				27/ 8/62		0925 K		35 07 S		151 05 E	
SONIC AIR TEMP. WIND											
DEPTH	WET	DRY	DIR. SP.	ANEM. HEIGHT.	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
732	***	***	27 3	* *	* *	7	27 2	14 2	1023.0	10 *	*
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	15.61		35.570	26.29	***	***	***	***	***	***
1	24	15.50		35.970	26.32	***	***	***	***	***	***
1	47	15.27		35.550	26.35	5.38	***	95	***	***	***
1	71	15.03		35.530	26.39	***	***	***	***	***	***
1	94	15.06		35.520	26.38	5.35	***	94	***	***	***
1	141	***		35.520	***	***	***	***	***	***	***
1	188	14.15		35.410	26.49	5.01	***	86	***	***	***
1	282	12.23		35.160	26.69	4.70	***	77	***	***	***
1	472	9.32		34.700	26.85	4.45	***	69	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 5/ 84/62		27/ 8/62		1030 K		35 07 S		151 10 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
1189 ***	27 3	*	*	7	27 2	14 2	1023.0	* * *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.06	35.600	26.21	***	***	***	***	***
1	25	15.99	35.590	26.22	***	***	***	***	***
1	50	15.88	35.590	26.25	5.17	92	***	***	***
1	75	15.44	35.530	26.30	***	***	***	***	***
1	100	15.30	35.520	26.32	9.30	93	***	***	***
1	150	15.09	35.520	26.37	***	***	***	***	***
1	200	14.86	35.510	26.41	5.47	95	***	***	***
1	300	12.28	35.190	26.70	4.74	78	***	***	***
1	500	9.05	34.720	26.91	4.55	70	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 5/ 85/62		27/ 8/62		1135 K		35 07 S		151 15 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	27 2	*	*	7	27 2	14 2	*	* * *	
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.09	35.600	26.20	***	***	***	***	***
1	25	15.99	35.590	26.22	***	***	***	***	***
1	50	15.98	35.640	26.26	5.39	96	***	***	***
1	75	15.59	35.550	26.28	***	***	***	***	***
1	100	15.51	35.600	26.34	5.10	90	***	***	***
1	150	15.09	35.520	26.37	***	***	***	***	***
1	200	14.91	35.520	26.41	5.41	94	***	***	***
1	300	12.83	35.300	26.68	4.86	81	***	***	***
1	500	9.00	34.720	26.92	4.68	72	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
5/ 88/52	30/ 8/62	0615 K	35 50 S	150 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 *** 60	*** 27 1	* *	* *	7 00 0	15 1	1009.0	* * *		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.40	35.550	26.55	***	***	***	***	***
1	10	14.42	35.550	26.54	***	***	***	***	***
1	20	14.41	35.550	26.54	***	***	***	***	***
1	30	14.14	35.520	26.97	5.74	99	***	***	***
1	40	13.92	35.500	26.61	***	***	***	***	***
1	50	13.90	35.500	26.61	5.69	97	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE					
5/ 89/62	30/ 8/62	0705 K	35 50 S	150 22 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 *** 119	*** 32 2	* *	* *	7 32 1	15 1	1009.0	* * *		
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.36	35.530	26.54	***	***	***	***	***
1	10	14.36	35.520	26.53	***	***	***	***	***
1	20	14.29	35.520	26.54	***	***	***	***	***
1	30	14.32	35.520	26.54	5.61	97	***	***	***
1	40	14.30	35.510	26.54	***	***	***	***	***
1	50	14.10	35.510	26.59	5.83	100	***	***	***
1	75	13.99	35.510	26.60	***	***	***	***	***
1	100	13.89	35.520	26.63	5.69	97	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
Y 5/ 90/62		30/ 8/62		0755 K		35 50 S		150 27 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR, SP.	DIR, SP.	DIR, AMT.	SEA DIR, AMT.	DIR, AMT.	DIR, AMT.	PRESSURE	CAS1 CAS2 CAS3
134	***	***	30 3	*	*	7	30 2	15 1	1010.0 * * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	14.61	35.550	26.50	***	***	***	***	***
1	10	14.58	35.530	26.49	***	***	***	***	***
1	20	14.57	35.520	26.48	***	***	***	***	***
1	30	14.29	35.520	26.55	5.72	99	***	***	***
1	40	14.31	35.570	26.58	***	***	***	***	***
1	50	14.25	35.530	26.56	5.70	98	***	***	***
1	75	14.02	35.570	26.64	***	***	***	***	***
1	100	13.74	35.480	26.63	5.65	96	***	***	***
1	125	13.68	35.460	26.63	5.63	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 91/62		30/ 8/62		0845 K		35 50 S		150 32 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR, SP.	DIR, SP.	DIR, AMT.	SEA DIR, AMT.	DIR, AMT.	DIR, AMT.	PRESSURE	CAS1 CAS2 CAS3
146	***	***	30 2	*	*	7	30 2	15 1	1010.0 * * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	14.71	35.550	26.48	***	***	***	***	***
1	10	14.58	35.530	26.47	***	***	***	***	***
1	20	14.62	35.530	26.48	***	***	***	***	***
1	30	14.61	35.520	26.48	5.78	100	***	***	***
1	40	14.66	35.520	26.46	***	***	***	***	***
1	50	14.60	35.510	26.47	5.69	99	***	***	***
1	75	14.17	35.500	26.56	***	***	***	***	***
1	100	13.58	35.460	26.65	5.52	94	***	***	***
1	125	13.26	35.390	26.66	5.45	92	***	***	***

STATION DATE TIME LATITUDE LONGITUDE
 N 5/ 92/62 30/ 8/62 0940 K 35 50 S 150 37 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

914 *** ** 30 2 * * * 7 30 2 15 1 1010.0 * * *

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

1 0 14.94 35.550 26.45 ** ** ** **
 1 24 *** 35.530 *** ** **
 1 48 14.47 35.530 26.47 5.68 *** **
 1 72 14.02 35.570 26.64 *** 99 ***
 1 96 14.05 35.480 26.56 5.49 *** **
 1 143 13.46 35.430 26.65 *** 96 ***
 1 191 12.99 35.370 26.70 *** 91 ***
 1 267 12.66 35.340 26.74 5.32 *** 89 ***
 1 478 11.84 35.260 26.84 5.13 *** 84 ***

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STATION DATE TIME LATITUDE LONGITUDE
 N 5/ 93/62 30/ 8/62 1045 K 35 50 S 150 42 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

*** ** 30 2 * * * 7 30 1 15 1 1010.0 10 * *

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

1 0 15.16 35.680 26.48 *** ** **
 1 23 *** 35.550 *** ** **
 1 45 14.60 35.540 26.48 5.67 *** **
 1 67 14.38 35.520 26.53 *** 98 ***
 1 89 14.15 35.440 26.51 5.59 *** **
 1 134 13.01 35.340 26.67 *** 96 ***
 1 178 12.84 35.340 26.71 5.32 *** 89 ***
 1 267 12.76 35.410 26.78 5.29 *** 88 ***
 1 446 10.51 34.970 26.84 5.01 *** 80 ***

STATION		DATE		TIME		LATITUDE		LONGITUDE					
M 5/ 97/62		31/ 8/62		0610 K		36 25 S		150 09 E					
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
59 ***	***	14	2	*	*	*	7	14	1	14	1	1014.0	* * *
CST	DEPTH	TEMP.		SALINITY	SIGMA-T		OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P	NITRATE	
1	0	13.90		35.410	26.34		***	***		***	***	***	
1	10	13.92		35.440	26.86		***	***		***	***	***	
1	20	13.65		35.430	26.61		***	***		***	***	***	
1	30	13.12		35.440	26.73		6.00	101		***	***	***	
1	40	13.10		35.450	26.74		***	***		***	***	***	
1	50	13.04		35.440	26.74		6.00	101		***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE					
M 5/ 98/62		31/ 8/62		0700 K		36 25 S		150 14 E					
SONIC DEPTH	AIR TEMP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	SWELL DIR.	AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
115 ***	***	14	2	*	*	*	7	14	2	14	1	1016.0	* * *
CST	DEPTH	TEMP.		SALINITY	SIGMA-T		OXYGEN	OXYGEN %	SAT.	INORG. P	TOTAL P	NITRATE	
1	0	13.53		35.440	26.64		***	***		***	***	***	
1	10	13.53		35.440	26.64		***	***		***	***	***	
1	20	13.49		35.450	26.66		***	***		***	***	***	
1	30	13.42		35.430	26.66		5.66	96		***	***	***	
1	40	13.20		35.410	26.69		***	***		***	***	***	
1	50	12.92		35.500*	26.81		5.63	94		***	***	***	
1	75	12.95		35.440	26.76		***	***		***	***	***	
1	100	12.97		35.440	26.76		5.13	86		***	***	***	

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE						
P 5/ 99/62		31/ 8/62		0810 K		36 25 S		150 19 E						
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES														
DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. APT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3														
165	***	15	3	*	*	7	14	3	14	2	1017.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	13.92	35.500	26.61	***	***	***	***	***					
1	10	13.73	35.450	26.61	***	***	***	***	***					
1	20	13.48	35.480	26.68	***	***	***	***	***					
1	30	13.34	35.500	26.73	5.80	98	***	***	***					
1	40	13.32	35.440	26.69	***	***	***	***	***					
1	50	13.19	35.430	26.70	5.81	98	***	***	***					
1	75	12.92	35.410	26.75	***	***	***	***	***					
1	100	12.88	35.410	26.75	5.73	96	***	***	***					
1	150	12.78	35.410	26.77	5.72	95	***	***	***					

STATION		DATE		TIME		LATITUDE		LONGITUDE						
P 5/ 100/62		31/ 8/62		0910 K		36 25 S		150 24 E						
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES														
DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT. DIR. APT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3														
732	***	16	5	*	*	7	16	4	14	2	1019.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	14.32	35.500	26.52	***	***	***	***	***					
1	25	14.28	35.640*	26.64	***	***	***	***	***					
1	50	14.23	35.500	26.54	5.63	97	***	***	***					
1	75	13.89	35.440	26.57	***	***	***	***	***					
1	100	13.56	35.410	26.61	5.20	88	***	***	***					
1	150	13.03	35.500*	26.79	***	***	***	***	***					
1	200	12.96	35.390	26.72	5.65	95	***	***	***					
1	300	12.79	35.410	26.77	5.63	94	***	***	***					
1	500	11.19	35.170	26.89	5.19	84	***	***	***					

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE			
N 5/ 101/62		2/ 9/62		0615 K		37 04 S		150 00 E			
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES											
DEPTH	WET DRY	DIR. SP.	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
64	***	***	27	1	*	*	5	27	1	04 2 1030.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	13.00		35.430		26.74	***	***	***	***	***
1	10	13.00		35.480		26.78	***	***	***	***	***
1	20	13.00		35.430		26.74	***	***	***	***	***
1	30	12.98		35.430		26.75	98	***	***	***	***
1	40	12.81		35.450		26.80	***	***	***	***	***
1	50	12.71		35.480		26.84	98	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE			
N 5/ 102/62		2/ 9/62		0705 K		37 04 S		150 05 E			
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES											
DEPTH	WET DRY	DIR. SP.	DIR. SP.	HEIGHT	TYPE	AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3	
79	***	***	27	1	*	*	5	27	1	04 2 1030.0	* * *
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE											
1	0	13.14		35.440		26.72	***	***	***	***	***
1	10	13.14		35.430		26.72	***	***	***	***	***
1	20	13.16		35.440		26.72	***	***	***	***	***
1	30	12.80		35.520*		26.85	98	***	***	***	***
1	40	12.72		35.440		26.81	***	***	***	***	***
1	50	12.54		35.480		26.87	98	***	***	***	***
1	70	12.50		35.480		26.88	98	***	***	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 103/62		2/ 9/62		0800 K		37 04 S		150 10 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	VIS.	SWELL	ATMOS.	WIRE ANGLES
DEPTH	NET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
95 ***	***	34 2	*	*	*	6 30 2	04 2	1030.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	12.96	35.440	26.76	***	***	***	***	***
1	10	12.99	35.440	26.75	***	***	***	***	***
1	20	12.94	35.440	26.76	***	***	***	***	***
1	30	12.82	35.480	26.82	5.65	94	***	***	***
1	40	12.75	35.480	26.83	***	***	***	***	***
1	50	12.34	35.520	26.95	5.83	96	***	***	***
1	75	12.28	35.530	26.96	***	***	***	***	***
1	90	12.24	35.530	26.97	5.94	96	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 104/62		2/ 9/62		0855 K		37 04 S		150 15 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	VIS.	SWELL	ATMOS.	WIRE ANGLES
DEPTH	NET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
119 ***	***	36 2	*	*	*	6 36 2	04 2	1030.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	12.78	35.500	26.84	***	***	***	***	***
1	10	12.79	35.500	26.84	***	***	***	***	***
1	20	12.79	35.500	26.84	***	***	***	***	***
1	30	12.79	35.500	26.84	5.75	96	***	***	***
1	40	12.70	35.500	26.86	***	***	***	***	***
1	50	12.21	35.520	26.97	5.83	96	***	***	***
1	75	12.14	35.520	26.98	***	***	***	***	***
1	100	12.14	35.520	26.98	5.80	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 105/62		2/ 9/62		1005 K		37 04 S		150 20 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	PRESSURE	CAS11	CAS12 CAS13
229	***	36 3	*	*	6	36 2	04 2	1029.0	* * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.96	35.590*	26.67	***	***	***	***	***
1	25	13.87	35.480	26.60	***	***	***	***	***
1	50	13.88	35.460	26.59	5.92	101	***	***	***
1	75	13.73	35.480	26.63	***	***	***	***	***
1	100	13.41	35.520	26.73	5.73	97	***	***	***
1	125	12.88	35.480	26.81	***	***	***	***	***
1	150	12.65	35.480	26.85	5.67	94	***	***	***
1	175	12.60	***	***	***	***	***	***	***
1	200	12.56	35.480	26.87	5.72	95	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 5/ 106/62		2/ 9/62		1100 K		37 04 S		150 25 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	PRESSURE	CAS11	CAS12 CAS13
***	***	36 3	*	*	6	36 3	04 2	1029.0	20 * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.36	35.500	26.51	***	***	***	***	***
1	22	14.23	35.550*	26.98	***	***	***	***	***
1	43	14.28	35.480	26.52	5.54	95	***	***	***
1	65	14.23	35.500	26.54	***	***	***	***	***
1	87	14.32	35.500	26.52	5.59	96	***	***	***
1	130	13.38	35.410	26.65	***	***	***	***	***
1	173	12.07	35.160	26.72	4.91	81	***	***	***
1	260	12.57	35.410	26.82	5.58	93	***	***	***
1	450	12.47	35.480	26.89	5.77	96	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 136/62		26/ 9/62		0755 K		34 05 S		151 13 E	
SONIC AIR TEMP. WIND		ANEM. CLOUD		VIS. SEA		SWELL		ATMOS.	
DEPTH MET DRY DIR. SP.		HEIGHT TYPE AMT.		DIR. AMT.		DIR. AMT.		PRESSURE	
64 *** ** 20 1		* * *		7 20 1		14 3		1012.0	
CAST DEPTH TEMP.		SALINITY SIGMA-T		OXYGEN		CYOGEN % SAT.		INORG. P	
1 0 17.45		35.440 25.76		***		***		***	
1 10 17.47		35.410 25.73		***		***		***	
1 20 17.05		35.390 25.82		***		***		***	
1 30 15.95		35.410 26.09		4.63		83		***	
1 40 15.10		35.430 26.30		***		***		***	
1 50 14.74		35.410 26.36		4.52		79		***	
								TOTAL P	
								NITRATE	

WIRE ANGLES
CAST1 CAST2 CAST3

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 137/62		26/ 9/62		0845 K		34 05 S		151 18 E	
SONIC AIR TEMP. WIND		ANEM. CLOUD		VIS. SEA		SWELL		ATMOS.	
DEPTH MET DRY DIR. SP.		HEIGHT TYPE AMT.		DIR. AMT.		DIR. AMT.		PRESSURE	
160 *** ** 20 1		* * *		7 20 1		14 3		1012.0	
CAST DEPTH TEMP.		SALINITY SIGMA-T		OXYGEN		CYOGEN % SAT.		INORG. P	
1 0 17.67		35.500 25.75		***		***		***	
1 10 17.61		35.520 25.78		***		***		***	
1 20 17.60		35.500 25.77		***		***		***	
1 30 17.60		35.500 25.77		5.33		98		***	
1 40 17.27		35.500 25.85		***		***		***	
1 50 14.30		35.440 26.10		4.67		83		***	
1 75 14.63		35.430 26.40		***		***		***	
1 100 14.04		35.460 26.55		4.54		78		***	
1 125 13.16		35.300 26.61		4.45		75		***	
								TOTAL P	
								NITRATE	

WIRE ANGLES
CAST1 CAST2 CAST3

STATION		DATE		TIME		LATITUDE		LONGITUDE		
N 7/ 130/62		26/ 9/62		0940 K		34 05 S		151 23 E		
SONIC DEPTH	AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR: AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
143 ***	***	18 1	*	*	*	7	18 1	14 3	1013.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.82	35.900	25.72	***	***	***	***	***	
1	10	17.74	35.900	25.74	***	***	***	***	***	
1	20	17.74	35.900	25.74	***	***	***	***	***	
1	30	17.60	35.950	25.81	5.08	94	***	***	***	
1	40	17.07	35.950	25.94	***	***	***	***	***	
1	50	16.58	35.610	26.10	4.73	85	***	***	***	
1	75	15.46	35.480	26.26	***	***	***	***	***	
1	100	14.69	35.480	26.43	4.22	73	***	***	***	
1	125	12.67	35.260	26.68	4.75	79	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE		
N 7/ 130/62		26/ 9/62		1035 K		34 05 S		151 28 E		
SONIC DEPTH	AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR: AMT.	SWELL DIR, AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
152 ***	***	00 0	*	*	*	7	00 0	14 3	1013.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.82	35.940	25.75	***	***	***	***	***	
1	10	17.66	35.970	25.81	***	***	***	***	***	
1	20	17.49	35.950	25.84	***	***	***	***	***	
1	30	17.39	35.950	25.86	5.21	96	***	***	***	
1	40	17.26	35.610	25.94	***	***	***	***	***	
1	50	16.99	35.970	25.97	5.04	92	***	***	***	
1	75	15.95	35.900	26.16	***	***	***	***	***	
1	100	15.48	35.900	26.27	4.73	84	***	***	***	
1	140	14.12	35.950	26.45	4.52	78	***	***	***	

STATION		DATE	TIME	LATITUDE		LONGITUDE	
* 7/ 140/62		26/ 9/62	1135 K	34 05 S		151 33 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES.	
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAS11 CAS12 CAS13	
320 *** **	00 0	*	*	7 00 0	14 3	1013.0	* *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	17.67	35.570	25.81	***	***	***
1	25	17.18	35.590	25.94	***	***	***
1	50	16.74	35.600*	26.10	5.32	96	***
1	75	16.71	35.610	26.07	***	***	***
1	100	15.87	35.540	26.21	4.86	87	***
1	150	14.00	35.320	26.45	***	***	***
1	200	12.42	35.210	26.69	4.83	80	***
1	300	11.63	35.210	26.84	5.22	85	***

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STATION		DATE	TIME	LATITUDE		LONGITUDE	
* 7/ 141/62		26/ 9/62	1235 K	34 05 S		151 37 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES	
DEPTH WET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAS11 CAS12 CAS13	
713 *** **	00 0	*	*	7 00 0	14 3	1012.0	* *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	17.51	35.640	25.90	***	***	***
1	25	17.01	35.610	26.00	***	***	***
1	50	16.93	35.620	26.02	5.37	98	***
1	75	16.79	35.640	26.07	***	***	***
1	100	16.20	35.570	26.16	5.08	91	***
1	150	15.47	35.480	26.25	***	***	***
1	200	13.61	35.300	26.52	4.55	77	***
1	300	11.33	35.010	26.74	4.63	75	***
1	500	9.69	34.760	26.84	4.85	75	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 144/62		27/ 9/62		0540 K		34 40 S		150 55 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
60 ***	*** 27 1	27 1	*	*	7	00 0	14 2	1009.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.06	35.300	25.75	***	***	***	***	***
1	10	17.17	35.370	25.77	***	***	***	***	***
1	20	16.85	35.440	25.91	***	***	***	***	***
1	30	15.48	35.390	26.18	4.87	86	***	***	***
1	40	14.28	35.370	26.43	***	***	***	***	***
1	50	14.15	35.350	26.44	4.51	77	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 145/62		27/ 9/62		0630 K		34 40 S		151 00 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
123 ***	*** 32 2	32 2	*	*	7	32 1	14 2	1009.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.46	35.530	25.83	***	***	***	***	***
1	10	17.49	35.480	25.78	***	***	***	***	***
1	20	17.50	35.500	25.79	***	***	***	***	***
1	30	17.62	35.530	25.79	5.38	99	***	***	***
1	40	15.69	35.460	25.96	***	***	***	***	***
1	50	15.75	35.430	26.15	4.51	80	***	***	***
1	75	14.87	35.500	26.40	***	***	***	***	***
1	100	13.73	35.350	26.53	4.74	81	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 146/62		27/ 9/62		0720 K		34 40 S		151 05 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
137	***	32 2	*	*	7	32 1	14 2	1009.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.76	35.550	25.77	***	***	***	***	***
1	10	17.76	35.530	25.75	***	***	***	***	***
1	20	17.74	35.530	25.76	***	***	***	***	***
1	30	17.38	35.570	25.88	5.21	96	***	***	***
1	40	17.21	35.570	25.92	***	***	***	***	***
1	50	17.09	35.550	25.93	5.10	93	***	***	***
1	75	15.51	35.550	26.30	***	***	***	***	***
1	100	15.19	35.430	26.28	4.40	77	***	***	***
1	125	13.26	35.300	26.59	4.83	81	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 147/62		27/ 9/62		0815 K		34 40 S		151 10 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
220	***	32 2	*	*	7	36 1	14 2	1009.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.73	35.570	25.79	***	***	***	***	***
1	25	17.61	35.570	25.82	***	***	***	***	***
1	50	14.96	35.590	25.99	5.18	94	***	***	***
1	75	14.61	35.590	26.08	***	***	***	***	***
1	100	15.97	35.530	26.18	4.93	88	***	***	***
1	125	15.39	35.480	26.27	***	***	***	***	***
1	150	14.12	35.320	26.43	4.47	77	***	***	***
1	175	13.47	35.350	26.59	***	***	***	***	***
1	200	12.16	35.280	26.79	5.00	82	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 148/62		27/ 9/62		0910 K		34 40 S		151 15 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
439	***	34 3	*	*	7	36 2	14 2	1008.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.81	35.610	26.04	***	***	***	***	***
1	25	16.76	35.620	26.06	***	***	***	***	***
1	50	16.75	35.610	26.06	5.32	96	***	***	***
1	75	16.76	35.610	26.06	***	***	***	***	***
1	100	16.26	35.660	26.21	5.21	94	***	***	***
1	150	15.02	35.550	26.41	***	***	***	***	***
1	200	13.64	35.300	26.51	4.68	79	***	***	***
1	300	12.31	35.280	26.77	5.08	84	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 149/62		27/ 9/62		1005 K		34 40 S		151 20 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
1006	***	32 3	*	*	7	32 2	14 2	1008.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.93	35.640	26.04	***	***	***	***	***
1	25	16.82	35.660	26.08	***	***	***	***	***
1	50	16.80	35.620	26.05	5.39	98	***	***	***
1	75	16.47	35.590	26.11	***	***	***	***	***
1	100	16.06	35.570	26.19	5.09	91	***	***	***
1	150	14.97	35.500	26.38	***	***	***	***	***
1	200	14.13	35.390	26.48	4.86	83	***	***	***
1	300	12.52	35.170	26.64	4.81	80	***	***	***
1	500	11.39	35.190	26.67	5.28	85	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 7/ 151/62		28/ 9/62		0615 K		35 07 S		150 50 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 CAST1 CAST2 CAST3														
110	***	27	3	*	*	7	27	1	14	1	1004.0	*	*	*
CAST														
1	0	16.27					***				***			***
1	10	16.29					***				***			***
1	20	16.07					***				***			***
1	30	15.81					5.24	93			***			***
1	40	14.46					***				***			***
1	50	13.14					5.06	85			***			***
1	75	12.45					***				***			***
1	100	12.44					5.16	85			***			***

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 7/ 152/62		28/ 9/62		0705 K		35 07 S		150 55 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 CAST1 CAST2 CAST3														
134	***	27	3	*	*	7	27	1	14	1	1004.0	*	*	*
CAST														
1	0	17.45					***				***			***
1	10	17.41					***				***			***
1	20	17.42					***				***			***
1	30	16.51					4.73	85			***			***
1	40	15.89					***				***			***
1	50	14.49					4.45	77			***			***
1	100*	13.03					4.54	76			***			***
1	125*	12.94					5.07	85			***			***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION			DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 153/62			28/ 9/62		0755 A		35 07 S		151 00 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	SEA DIR. AMT.	VIS.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
174 ***	***	27 3	*	*	*	7	27 2 14 1	1004.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.52	35.500	25.79	***	***	***	***	***	
1	10	17.49	35.530	25.82	***	***	***	***	***	
1	20	17.50	35.500	25.80	***	***	***	***	***	
1	30	17.46	35.480	25.79	5.25	96	***	***	***	
1	40	16.71	35.430	25.93	***	***	***	***	***	
1	50	15.77	35.440	26.16	4.40	78	***	***	***	
1	75	14.15	35.370	26.46	***	***	***	***	***	
1	100	13.44	35.320	26.57	4.79	81	***	***	***	
1	125	12.56	35.340	26.76	5.22	87	***	***	***	

STATION			DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 154/62			28/ 9/62		0850 K		35 07 S		151 05 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	SEA DIR. AMT.	VIS.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3	
750 ***	***	27 4	*	*	*	7	27 2 14 1	1005.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.47	35.500	25.80	***	***	***	***	***	
1	25	17.45	35.480	25.79	***	***	***	***	***	
1	50	17.45	35.460	25.78	5.41	99	***	***	***	
1	75	16.36	35.440	26.02	***	***	***	***	***	
1	100	14.97	35.260	26.20	4.64	84	***	***	***	
1	150	12.72	35.440	26.81	***	***	***	***	***	
1	200	12.46	35.350	26.79	5.00	83	***	***	***	
1	300	11.00	35.050	26.83	4.91	79	***	***	***	
1	500	9.25	34.780	26.93	4.84	75	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE
Y 7/ 155/62	28/ 9/62	0955 K	35 07 S	151 10 E
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMS. WET DRY DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE 1390 *** ** 27 5 * * * 7 25 3 14 1 1005.0 * * * * *				

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.63	35.550	25.80	**	**	**	**	**
1	23	17.60	35.530	25.79	**	**	**	**	**
1	46	17.49	35.610	25.88	5.24	96	**	**	**
1	69	16.89	35.550	25.98		**	**	**	**
1	92	15.91	35.930	26.19	4.80	86	**	**	**
1	136	14.45	35.970	26.40	***	**	**	**	**
1	184	12.69	35.900	26.71	4.78	80	**	**	**
1	275	11.01	35.070	26.85	4.68	75	**	**	**
1	470	10.19	34.940	26.89	5.04	79	**	**	**

[illegible]

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.28	35.1280	26.136	**	**	**	**	**
1	10	14.34	35.460	26.40	**	**	**	**	**
1	20	13.90	35.410	26.54	**	**	**	**	**
1	30	13.60	35.480	26.66	5.87	100	**	**	**
1	40	13.40	35.440	26.40	**	**	**	**	**
1	50	13.47	35.430	26.65	5.74	97	**	**	**

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 157/62		1/10/62		0620 K		35 50 S		150 22 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
112	***	32 3	*	*	7	32 1	14 1	1010.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.65	35.160	26.19	***	***	***	***	***
1	10	14.43	35.120	26.21	***	***	***	***	***
1	20	14.51	35.610	26.57	***	***	***	***	***
1	30	14.36	35.570	26.57	5.19	90	***	***	***
1	40	13.94	35.410	26.53	***	***	***	***	***
1	50	13.65	35.390	26.58	6.20	105	***	***	***
1	75	13.39	35.440	26.67	***	***	***	***	***
1	100	13.38	35.430	26.67	5.82	98	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 158/62		1/10/62		0715 K		35 50 S		150 27 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
135	***	32 3	*	*	7	32 2	14 1	1010.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.84	35.140	26.13	***	***	***	***	***
1	10	14.68	35.120	26.15	***	***	***	***	***
1	20	14.83	35.120	26.19	***	***	***	***	***
1	30	14.45	35.300	26.34	5.43	94	***	***	***
1	40	14.47	35.460	26.46	***	***	***	***	***
1	50	14.09	35.430	26.52	5.07	87	***	***	***
1	75	13.66	35.390	26.58	***	***	***	***	***
1	100	13.27	35.430	26.69	5.65	95	***	***	***
1	125	13.27	35.430	26.69	5.70	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 159/62		1/10/62		0805 K		35 50 S		150 32 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	VIS.	SWELL	ATMOS.	WIRE ANGLES
DEPTH	WET DRY	DIP. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
177	***	32 3	*	*	*	7	32 2 14 1	1010.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	15.67	35.300	26.07	***	***	***	***	***
1	10	15.68	35.300	26.07	***	***	***	***	***
1	20	15.58	35.410	26.18	***	***	***	***	***
1	30	15.41	35.390	26.20	5.32	94	***	***	***
1	40	15.22	35.440	26.28	***	***	***	***	***
1	50	14.89	35.440	26.35	4.73	82	***	***	***
1	75	14.05	35.390	26.50	***	***	***	***	***
1	100	13.40	35.430	26.66	4.99	84	***	***	***
1	125	13.31	35.410	26.67	5.61	95	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 160/62		1/10/62		0900 K		35 50 S		150 37 E	
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	VIS.	SWELL	ATMOS.	WIRE ANGLES
DEPTH	WET DRY	DIP. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
1042	***	32 4	*	*	*	7	32 2 14 1	1010.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INCRG. P	TOTAL P	NITRATE
1	0	15.64	35.370	26.13	***	***	***	***	***
1	25	15.44	35.410	26.21	***	***	***	***	***
1	50	15.07	35.520	26.37	5.65	99	***	***	***
1	75	14.80	35.500	26.42	***	***	***	***	***
1	100	14.80	35.520	26.44	5.31	92	***	***	***
1	150	13.87	35.520	26.63	***	***	***	***	***
1	200	13.24	35.370	26.65	5.22	86	***	***	***
1	300	12.84	35.390	26.75	5.55	93	***	***	***
1	500	10.84	35.080	26.89	5.14	82	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 161/62		1/10/62		1005 K		35 50 S		150 42 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
***	***	32 3	*	*	7	32 2	14 1	1009.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.71	35.390	26.13	***	***	***	***	***
1	25	15.19	35.480	26.32	***	***	***	***	***
1	50	15.09	35.530	26.38	5.71	100	***	***	***
1	75	15.03	35.550	26.41	***	***	***	***	***
1	100	14.82	35.530	26.44	5.45	95	***	***	***
1	150	14.43	35.500	26.50	***	***	***	***	***
1	200	13.64	35.390	26.58	5.02	85	***	***	***
1	300	11.63	35.170	26.81	4.74	77	***	***	***
1	500	9.35	34.810	26.93	4.80	74	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 164/62		2/10/62		0615 K		36 25 S		150 09 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
59	***	14 1	*	*	7	14 2	14 1	1006.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.92	35.430	26.55	***	***	***	***	***
1	10	14.02	35.410	26.52	***	***	***	***	***
1	20	13.99	35.390	26.51	***	***	***	***	***
1	30	13.68	35.370	26.56	5.48	93	***	***	***
1	40	13.71	35.480	26.64	***	***	***	***	***
1	50	13.69	35.480	26.64	5.75	98	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 165/62		2/10/62		0710 K		36 25 S		150 14 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
123 ***	14 2	*	*	7	14 2	14 1	1006.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.60	35.440	26.63	***	***	***	***	***
1	10	13.60	35.480	26.66	***	***	***	***	***
1	20	13.60	35.440	26.63	***	***	***	***	***
1	30	13.52	35.390	26.61	5.68	96	***	***	***
1	40	13.38	35.390	26.64	***	***	***	***	***
1	50	13.03	35.340	26.67	5.58	94	***	***	***
1	75	12.69	35.340	26.74	***	***	***	***	***
1	100	12.63	35.320	26.73	5.25	87	***	***	***

05

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 7/ 166/62		2/10/62		0805 K		36 25 S		150 19 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
183 ***	14 3	*	*	7	14 2	14 1	1006.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.22	35.530	26.35	***	***	***	***	***
1	10	15.19	35.500	26.33	***	***	***	***	***
1	20	15.17	35.530	26.36	***	***	***	***	***
1	30	15.20	35.550	26.37	5.54	97	***	***	***
1	40	14.92	35.480	26.38	***	***	***	***	***
1	50	14.80	35.480	26.40	5.24	91	***	***	***
1	75	14.42	35.550	26.54	***	***	***	***	***
1	100	13.98	35.410	26.33	5.61	96	***	***	***
1	150	13.06	35.350	26.67	5.51	92	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 167/62		2/10/62		0900 K		36 25 S		150 24 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
603	***	14 3	*	*	7	14 2	14 2	1006.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.09	35.530	26.38	***	***	***	***	***
1	25	14.96	35.530	26.41	***	***	***	***	***
1	50	14.72	35.495	26.43	9.41	94	***	***	***
1	75	14.54	35.460	26.44	***	***	***	***	***
1	100	14.51	35.460	26.45	9.30	92	***	***	***
1	150	14.01	35.410	26.52	***	***	***	***	***
1	200	13.25	35.340	26.62	4.97	84	***	***	***
1	300	12.76	35.370	26.75	9.46	91	***	***	***
1	500	12.20	35.350	26.84	9.37	89	***	***	***

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STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 7/ 168/62		2/10/62		1015 K		36 25 S		150 29 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
***	***	14 3	*	*	7	14 2	14 2	1006.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.20	35.550	26.37	***	***	***	***	***
1	25	15.18	35.510	26.34	***	***	***	***	***
1	50	15.18	35.610	26.42	5.62	99	***	***	***
1	75	14.89	35.520	26.42	***	***	***	***	***
1	100	14.66	35.530	26.47	5.22	91	***	***	***
1	150	14.47	35.550	26.53	***	***	***	***	***
1	200	14.16	35.480	26.54	5.43	93	***	***	***
1	300	12.38	35.190	26.68	4.92	81	***	***	***
1	500	10.50	34.970	26.86	4.95	79	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 7/ 171/62		8/10/62	0540 K	37 04 S		150 00 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	ATMOS.	WIRE ANGLES
DEPTH	WET DRY DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3
64 *** **	22 3	*	*	7	22 1	14 2	1012.0 * * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	13.45	35.480	26.69	***	***	***
1	10	13.42	35.510	26.72	***	***	***
1	20	13.41	35.460	26.68	***	***	***
1	30	13.38	35.500	26.72	5.71	97	***
1	40	13.31	35.530	26.76	***	***	***
1	50	13.00	35.480	26.78	5.88	99	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 7/ 172/62		8/10/62	0630 K	37 04 S		150 05 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	ATMOS.	WIRE ANGLES
DEPTH	WET DRY DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3
81 *** **	20 2	*	*	7	20 1	14 2	1012.0 * * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	13.50	35.480	26.67	***	***	***
1	10	13.51	35.460	26.66	***	***	***
1	20	13.50	35.480	26.68	***	***	***
1	30	13.15	35.480	26.75	5.79	97	***
1	40	13.10	35.480	26.76	***	***	***
1	50	13.10	35.460	26.75	5.88	99	***
1	70	13.09	35.510	26.79	5.84	98	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
M 7/ 173/62		8/10/62	0720 K	37 04 S		150 10 E	
SONIC AIR TEMP. WIND		ANEM. CLOUD		SWELL		WIRE ANGLES	
DEPTH	WET DRY	DIR. SP.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1 CAS2 CAS3	CAS1 CAS2 CAS3
95	***	20 2	*	*	7 20 1 14 2	1012.0	* * *

CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.58	35.480	26.66	***	***	***	***	***
1	10	13.53	35.500	26.69	***	***	***	***	***
1	20	13.31	35.520	26.75	***	***	***	***	***
1	30	12.91	35.510	26.82	5.66	95	***	***	***
1	40	12.90	35.530	26.84	***	***	***	***	***
1	50	12.85	35.510	26.84	5.65	95	***	***	***
1	75	12.85	35.520	26.84	***	***	***	***	***
1	90	12.81	35.520	26.85	5.71	95	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
M 7/ 174/62		8/10/62	0815 K	37 04 S		150 15 E	

SONIC AIR TEMP. WIND		ANEM. CLOUD		SWELL		ATMOS.		WIRE ANGLES	
DEPTH	WET DRY	DIR. SP.	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1 CAS2 CAS3	CAS1 CAS2 CAS3
124	***	20 3	*	*	7 20 2 14 2	1014.0	*	*	*

CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	13.36	35.460	26.69	***	***	***	***	***
1	10	13.37	35.530	26.75	***	***	***	***	***
1	20	13.31	35.460	26.70	***	***	***	***	***
1	30	13.32	35.530	26.76	5.93	100	***	***	***
1	40	13.00	35.460	26.77	***	***	***	***	***
1	50	12.82	35.500	26.83	5.74	96	***	***	***
1	75	12.69	35.620	26.95	***	***	***	***	***
1	100	12.63	35.640	26.98	5.74	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 7/ 175/62		8/10/62		0915 K		37 04 S		150 20 E						
SONIC DEPTH	AIR TEMP.	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3	WIRE ANGLES
220	***	20	3	*	*	*	7	20	2	14	2	1014.0	10	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	14.51	35.530	26.51	***	***	***	***	***					
1	25	13.83	35.460	26.60	***	***	***	***	***					
1	50	13.57	35.480	26.67	5.72	97	***	***	***					
1	75	13.05	35.480	26.77	***	***	***	***	***					
1	100	12.61	35.420	26.81	5.59	93	***	***	***					
1	125	12.52	35.420	26.83	***	***	***	***	***					
1	150	12.40	35.440	26.87	5.59	93	***	***	***					
1	175	12.39	35.480	26.90	***	***	***	***	***					
1	200	12.47	35.530	26.93	5.67	94	***	***	***					

STATION		DATE		TIME		LATITUDE		LONGITUDE						
N 7/ 176/62		8/10/62		1015 K		37 04 S		150 25 E						
SONIC DEPTH	AIR TEMP.	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS.	SEA DIR.	AMT.	ATMOS. PRESSURE	CAST1	CAST2	CAST3	WIRE ANGLES
***	***	18	3	*	*	*	7	18	2	14	2	1014.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE					
1	0	14.64	35.550	26.49	***	***	***	***	***					
1	25	14.58	35.550	26.51	***	***	***	***	***					
1	50	14.56	35.530	26.49	5.58	97	***	***	***					
1	75	14.21	35.460	26.51	***	***	***	***	***					
1	100	13.07	35.280	26.61	4.90	82	***	***	***					
1	150	12.59	35.260	26.70	***	***	***	***	***					
1	200	12.23	35.300	26.80	5.24	86	***	***	***					
1	300	12.67	35.530	26.89	5.63	94	***	***	***					
1	500	12.32	35.530	26.96	5.58	92	***	***	***					

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 220/62		1/11/62		0745 K		34 05 S		151 13 E	
SONIC DEPTH	AIR TEMP, WET DRY	WIND DIR. SP.	ANEM, HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
68	*** **	09 1	* *	* *	7	00 0	09 3	1011.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN	% SAT.	INORG. P	TOTAL P NITRATE
1	0	18.48	35.480	25.54	***	***	***	***	***
1	10	18.26	35.530	25.63	***	***	***	***	***
1	20	17.89	35.530	25.72	***	***	***	***	***
1	30	17.76	35.530	25.75	5.14	95	***	***	***
1	40	17.69	35.530	25.77	***	***	***	***	***
1	50	17.60	35.530	25.79	5.22	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 221/62		1/11/62		0835 K		34 05 S		151 18 E	
SONIC DEPTH	AIR TEMP, WET DRY	WIND DIR. SP.	ANEM, HEIGHT	CLOUD TYPE AMT.	VIS.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
134	*** **	22 1	* *	* *	7	22 1	09 3	1011.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	CXYGEN	% SAT.	INORG. P	TOTAL P NITRATE
1	0	19.52	35.590	25.36	***	***	***	***	***
1	10	19.35	35.610	25.42	***	***	***	***	***
1	20	19.21	35.610	25.45	***	***	***	***	***
1	30	19.13	35.660	25.51	5.15	98	***	***	***
1	40	19.11	35.550	25.43	***	***	***	***	***
1	50	19.07	35.570	25.46	5.23	99	***	***	***
1	75	16.02	35.390	26.06	***	***	***	***	***
1	100	15.27	35.300	26.16	4.19	74	***	***	***
1	125	15.21	35.300	26.17	4.27	75	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 9/ 222/62		1/11/62		0930 K		34 05 S		151 23 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
146 ***	***	20 2	*	*	7	22 1	09 3	1010.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P
1	0	19.82	35.620	25.30	***	***	***	***	***
1	10	19.65	35.620	25.34	***	***	***	***	***
1	20	19.66	35.610	25.33	***	***	***	***	***
1	30	19.63	35.640	25.37	4.86	***	93	***	***
1	40	19.64	35.700*	25.41	***	***	***	***	***
1	50	19.62	35.610	25.35	5.05	***	97	***	***
1	75	19.48	35.610	25.38	***	***	***	***	***
1	100	19.17	35.610	25.71	4.45	***	83	***	***
1	125	17.86	35.590	25.78	4.39	***	81	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
P 9/ 223/62		1/11/62		1020 K		34 05 S		151 38 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
183 ***	***	18 3	*	*	7	18 2	09 2	1009.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN	% SAT.	INORG. P	TOTAL P
1	0	19.69	35.620	25.33	***	***	***	***	***
1	10	19.53	35.620	25.36	***	***	***	***	***
1	20	19.46	35.620	25.39	***	***	***	***	***
1	30	19.44	35.620	25.40	5.06	***	97	***	***
1	40	19.50	35.710*	25.45	***	***	***	***	***
1	50	19.49	35.610	25.38	5.07	***	97	***	***
1	75	19.40	35.750*	25.51	***	***	***	***	***
1	100	19.39	35.650	25.43	4.98	***	95	***	***
1	140	18.05	35.730	25.61	4.63	***	88	***	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 224/62		1/11/62		1115 K		34 05 S		151 28 E	
SONIC AIR TEMP. WIND. ANEM. CLOUD. SWELL. ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	DIR. SP.	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1	CAS2
421	***	18	4	*	*	7	18	2	1009.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.700	25.42	***	***	***	***	***	
1	24	35.660	25.42	***	***	***	***	***	
1	48	35.700	25.46	4.95	95	***	***	***	
1	71	35.660	25.42	***	***	***	***	***	
1	95	35.700	25.46	5.06	97	***	***	***	
1	143	35.680	25.56	***	***	***	***	***	
1	190	35.680	25.69	4.53	85	***	***	***	
1	286	35.460	26.23	4.73	84	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 225/62		1/11/62		1220 K		34 05 S		151 38 E	
SONIC AIR TEMP. WIND. ANEM. CLOUD. SWELL. ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	DIR. SP.	DIR. AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	CAS1	CAS2
805	***	18	4	*	*	7	10	3	1009.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.660	25.41	***	***	***	***	***	
1	22	35.640	25.43	***	***	***	***	***	
1	44	35.660	25.45	5.06	97	***	***	***	
1	66	35.660	25.46	***	***	***	***	***	
1	88	35.660	25.46	4.96	95	***	***	***	
1	132	35.660	25.45	***	***	***	***	***	
1	177	35.660	25.47	4.88	93	***	***	***	
1	265	35.640	25.95	5.11	94	***	***	***	
1	440	35.210	26.72	4.52	75	***	***	***	

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 226/62		3/11/62	0450 K	34 40 S		150 55 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3
64 ***	20 1	*	*	7 20 1	14 2	1008.0	* * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	18.26	35.610	25.69	***	***	***
1	10	17.64	35.680	25.90	***	***	***
1	20	17.11	35.530	25.91	***	***	***
1	30	17.04	35.520	25.92	95	***	***
1	40	16.81	35.520	25.98	***	***	***
1	50	15.66	35.410	26.16	83	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 227/62		3/11/62	0540 K	34 40 S		151 00 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAS1 CAS2 CAS3
119 ***	22 2	*	*	7 22 1	14 2	1008.0	* * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	19.34	35.620	25.42	***	***	***
1	10	18.80	35.620	25.56	***	***	***
1	20	18.50	35.660	25.67	***	***	***
1	30	18.54	35.660	25.66	84	***	***
1	40	18.28	35.620	25.70	***	***	***
1	50	18.00	35.610	25.76	84	***	***
1	75	16.96	35.500	25.92	***	***	***
1	100	14.40	35.340	26.38	70	***	***

STATION DATE TIME LATITUDE LONGITUDE
 N 9/ 228/62 3/11/62 0635 K 34 40 S 151 05 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

135 *** ** 22 3 * * * 7 22 1 14 2 1008.0 * * *

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

1 0 19.20 35.660 25.49 *** ***

1 10 18.78 35.650 25.59 *** ***

1 20 18.73 35.620 25.58 *** ***

1 30 18.70 35.620 25.59 *** ***

1 40 18.72 35.610 25.58 *** ***

1 50 18.52 35.590 25.61 *** ***

1 75 18.18 35.700* 25.78 *** ***

1 100 18.01 35.590 25.74 *** ***

1 125 15.58 35.430 26.19 *** ***

STATION DATE TIME LATITUDE LONGITUDE
 N 9/ 229/62 3/11/62 0730 K 34 40 S 151 10 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

205 *** ** 22 4 * * * 7 22 2 14 2 1008.0 * * *

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

1 0 19.05 35.660 25.53 *** ***

1 24 19.01 35.620 25.51 *** ***

1 48 18.91 35.610 25.53 *** ***

1 72 18.49 35.590 25.62 *** ***

1 95 18.18 35.610 25.71 *** ***

1 118 18.00 35.590 25.74 *** ***

1 142 17.31 35.570 25.89 *** ***

1 165 15.78 35.430 26.15 *** ***

1 190 14.45 35.340 26.33 *** ***

* PROPERTY DOUBTFUL
 + PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 233/62		5/11/62		0510 K		35 07 S		150 50 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
108 ***	***	18 1	*	*	*	7	18 1 14 2	1014.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.30	35.920	26.10	***	***	***	***	***
1	10	16.32	35.900	26.08	***	***	***	***	***
1	20	15.86	35.480	26.17	***	***	***	***	***
1	30	15.86	35.480	26.17	5.35	95	***	***	***
1	40	15.81	35.530	26.22	***	***	***	***	***
1	50	15.77	35.440	26.16	5.39	96	***	***	***
1	75	15.46	35.500	26.27	***	***	***	***	***
1	100	14.88	35.430	26.35	5.30	92	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 234/62		5/11/62		0605 K		35 07 S		150 55 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
134 ***	***	18 1	*	*	*	7	18 1 14 2	1015.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	16.42	35.920	26.07	***	***	***	***	***
1	10	16.32	35.480	26.06	***	***	***	***	***
1	20	16.21	35.460	26.07	***	***	***	***	***
1	30	15.98	35.430	26.10	5.47	98	***	***	***
1	40	15.71	35.500	26.22	***	***	***	***	***
1	50	15.49	35.480	26.25	5.40	95	***	***	***
1	75	14.73	35.440	26.39	***	***	***	***	***
1	100	14.10	35.430	26.52	5.40	93	***	***	***
1	125	13.93	35.370	26.51	5.28	90	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 9/ 237/62		5/11/62		0900 K		35 07 S		151 10 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															
***	***	***	14	1	*	*	7	14	1	14	2	1017.0	20	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	19.63	35.620	25.35	***	***	***	***	***						
1	18	19.35	35.620	25.42	***	***	***	***	***						
1	33	18.68	35.610	25.59	4.74	89	***	***	***						
1	49	17.54	35.570	25.84	***	***	***	***	***						
1	66	17.47	35.590	25.87	4.37	80	***	***	***						
1	98	16.54	35.530	26.05	***	***	***	***	***						
1	130	15.09	35.430	26.30	5.17	91	***	***	***						
1	195	13.33	35.340	26.61	5.05	85	***	***	***						
1	325	12.97	35.370	26.70	5.48	92	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 9/ 238/62		5/11/62		1015 K		35 07 S		151 15 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															
***	***	***	00	0	*	*	7	00	0	14	2	1017.0	25	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	19.81	35.620	25.30	***	***	***	***	***						
1	18	19.73	35.620	25.33	***	***	***	***	***						
1	33	19.31	35.620	25.43	5.02	96	***	***	***						
1	49	18.71	35.640	25.60	***	***	***	***	***						
1	66	18.51	35.620	25.64	4.35	82	***	***	***						
1	98	17.54	35.590	25.85	***	***	***	***	***						
1	131	16.51	35.920	26.05	4.46	80	***	***	***						
1	196	14.51	35.370	26.38	4.61	80	***	***	***						
1	325	13.11	35.440	26.73	5.41	91	***	***	***						

STATION	DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 241/62	7/11/62	0500 K	35	50 S	150 17 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						
62 *** ** 2	*	*	*	7 22 1	14 2 1012.0	* * *
CST DEPTH TEMP.	SALINITY	SIGMA-T	OXYGEN	CAYGEN % SAT.	INORG. P	TOTAL P NITRATE
1 0 17.21	35.520	25.88	***	***	***	***
1 10 17.02	35.590	25.98	***	***	***	***
1 20 16.92	35.590	26.00	***	***	***	***
1 30 16.48	35.570	26.09	5.67	102	***	***
1 40 16.13	35.570	26.17	***	***	***	***
1 50 15.27	35.520	26.33	5.30	93	***	***

STATION	DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 242/62	7/11/62	0550 K	35	50 S	150 22 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						
121 *** ** 3	*	*	*	7 18 1	14 2 1012.0	* * *
CST DEPTH TEMP.	SALINITY	SIGMA-T	OXYGEN	CAYGEN % SAT.	INORG. P	TOTAL P NITRATE
1 0 17.43	35.610	25.90	***	***	***	***
1 10 17.41	35.590	25.89	***	***	***	***
1 20 17.10	35.590	25.96	***	***	***	***
1 30 16.81	35.590	26.03	5.54	101	***	***
1 40 16.39	35.610	26.14	***	***	***	***
1 50 15.24	35.520	26.34	5.35	94	***	***
1 75 14.14	35.410	26.49	***	***	***	***
1 100 13.64	35.140	26.62	5.26	89	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE								
M 9/ 243/62		7/11/62		0645 K		35 50 S		150 27 E								
SONIC DEPTH	AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES							
	WET	DRY	DIR.	SP.	HEIGHT	TYPE	AMT.	DIR.	AMT.	PRESSURE	CAST1	CAST2	CAST3			
132	***	***	18	1	*	*	*	7	18	1	14	2	1013.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE							
1	0	17.42	35.520	25.83	***	***	***	***	***	***	***	***	***	***	***	***
1	10	17.32	35.590	25.91	***	***	***	***	***	***	***	***	***	***	***	***
1	20	16.99	35.610	26.00	***	***	***	***	***	***	***	***	***	***	***	***
1	30	16.48	35.590	26.11	5.44	98	***	***	***	***	***	***	***	***	***	***
1	40	15.90	35.550	26.21	***	***	***	***	***	***	***	***	***	***	***	***
1	50	15.41	35.520	26.30	5.36	95	***	***	***	***	***	***	***	***	***	***
1	75	14.04	35.410	26.51	***	***	***	***	***	***	***	***	***	***	***	***
1	100	13.75	35.410	26.57	5.13	87	***	***	***	***	***	***	***	***	***	***
1	125	13.54	35.410	26.62	5.20	88	***	***	***	***	***	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE		
M 9/ 244/62		7/11/62		0735 K		35 50 S		150 32 E		
SONIC	AIR TEMP.	WIND	ANEM.	CLOUD	SEA	VIS.	SWELL	ATMOS.	WIRE ANGLES	
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
146	***	18 2	*	*	*	7	18 1	14 2	1013.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.60	35.590	25.82	***	***	***	***	***	***
1	10	16.86	35.520	25.96	***	***	***	***	***	***
1	20	16.47	35.550	26.08	***	***	***	***	***	***
1	30	15.99	35.530	26.18	5.13	92	***	***	***	***
1	40	15.85	35.570	26.24	***	***	***	***	***	***
1	50	14.86	35.500	26.40	5.32	93	***	***	***	***
1	75	14.04	35.480	26.57	***	***	***	***	***	***
1	100	14.02	35.460	26.55	5.26	90	***	***	***	***
1	125	13.98	35.440	26.55	5.20	89	***	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 245/62		7/11/62	0825 K	35 50 S		150 37 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE
713 *** **	16 2	*	*	*	7 14 1	14 2	1014.0
WIRE ANGLES CAST1 CAST2 CAST3							
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	17.86	35.610	25.79	***	***	***
1	25	16.44	35.550	26.09	***	***	***
1	50	15.47	35.520	26.29	90	***	***
1	75	14.50	35.520	26.50	***	***	***
1	100	14.15	35.460	26.53	85	***	***
1	150	13.93	35.430	26.55	***	***	***
1	200	12.94	35.300	26.65	82	***	***
1	300	11.61	35.140	26.79	80	***	***
1	500	11.43	35.250	26.91	84	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 9/ 246/62		7/11/62	0930 K	35 50 S		150 42 E	
SONIC DEPTH	AIR TEMP.	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA SWELL DIR. AMT.	ATMOS. PRESSURE
1536 *** **	14 2	*	*	*	7 14 1	14 2	1014.0
WIRE ANGLES CAST1 CAST2 CAST3							
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	18.41	35.640	25.68	***	***	***
1	25	16.94	35.590	26.00	***	***	***
1	50	15.68	35.500	26.22	87	***	***
1	75	15.05	35.530	26.39	***	***	***
1	100	14.16	35.430	26.50	92	***	***
1	150	14.05	35.440	26.53	***	***	***
1	200	13.72	35.460	26.62	90	***	***
1	300	11.45	35.160	26.84	79	***	***
1	500	10.37	34.960	26.88	77	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 9/ 249/62		9/11/62		0500 K		36 25 S		150 09 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP, SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
57 ***	*** 27 1	*	*	7	27 1	14 3	1020.0	*	* *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.430	25.98	***	***	***	***	***	
1	10	35.460	26.02	***	***	***	***	***	
1	20	35.520	26.25	***	***	***	***	***	
1	30	35.500	26.49	5.20	90	***	***	***	
1	40	35.500	26.55	***	***	***	***	***	
1	50	35.500	26.56	5.30	91	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 9/ 250/62		9/11/62		0500 K		36 25 S		150 14 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.	WIRE ANGLES	
DEPTH MET DRY	DIP, SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
119 ***	*** 00 0	*	*	7	00 0	14 3	1020.0	*	* *
CAST DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	35.620	25.80	***	***	***	***	***	
1	10	35.590	25.78	***	***	***	***	***	
1	20	35.570	26.01	***	***	***	***	***	
1	30	35.520	26.20	5.19	92	***	***	***	
1	40	35.500	26.32	***	***	***	***	***	
1	50	35.500	26.41	5.33	93	***	***	***	
1	75	35.500	26.52	***	***	***	***	***	
1	100	35.340	26.68	5.08	85	***	***	***	

STATION	DATE	TIME	LATITUDE	LONGITUDE
N 9/ 251/62	9/11/62	0700 K	36 25 S	150 19 E
SONIC AIR TEMP. WIND	ANEM. CLOUD	VIS. SEA	SWELL	ATMOS.
DEPTH MET DRY DIR. SP.	HEIGHT TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
183 *** 03 2	* * *	7 05 1	14 2	1021.0
				WIRE ANGLES
				CAST1 CAST2 CAST3
CST DEPTH	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.
1 0	35.520	26.00	***	***
1 10	35.500	25.99	***	***
1 20	35.460	25.99	***	***
1 30	35.520	26.29	5.50	97
1 40	35.460	26.30	***	***
1 50	35.500	26.35	5.36	94
1 75	35.530	26.46	***	***
1 100	35.460	26.48	5.18	89
1 150	35.370	26.56	4.70	80
				TOTAL P
				NITRATE

STATION	DATE	TIME	LATITUDE	LONGITUDE
N 9/ 252/62	9/11/62	0800 K	36 25 S	150 24 E
SONIC AIR TEMP. WIND	ANEM. CLOUD	VIS. SEA	SWELL	ATMOS.
DEPTH MET DRY DIR. SP.	HEIGHT TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
622 *** 04 2	* * *	7 04 2	14 2	1022.0
				WIRE ANGLES
				CAST1 CAST2 CAST3
CST DEPTH	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.
1 0	35.590	25.90	***	***
1 25	35.550	25.25	***	***
1 49	35.530	26.34	5.40	95
1 73	35.520	26.37	***	***
1 97	35.500	26.44	5.08	88
1 145	35.350	26.52	***	***
1 193	35.440	26.66	5.33	90
1 290	35.320	26.66	5.25	88
1 490	34.740	26.94	4.57	70
				TOTAL P
				NITRATE

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 9/ 253/62		9/11/62		0905 K		36 25 S		150 29 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									
***	***	04	2	*	*	7	04	2	14 2 1023.0 10 * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.31	35.620	25.93	***	***	***	***	***
1	25	16.64	35.570	26.05	***	***	***	***	***
1	49	15.62	35.700	26.39	5.25	93	***	***	***
1	73	15.25	35.520	26.34	***	***	***	***	***
1	97	14.81	35.480	26.40	5.08	88	***	***	***
1	145	13.67	35.320	26.52	***	***	***	***	***
1	193	13.44	35.460	26.68	5.37	91	***	***	***
1	290	12.48	35.300	26.75	5.14	85	***	***	***
1	490	8.51	34.650	26.94	4.46	68	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 9/ 256/62		12/11/62		0905 K		37 04 S		150 00 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									
64	***	22	1	*	*	7	00	0	09 2 1012.0 * * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	15.37	35.500	26.29	***	***	***	***	***
1	10	14.61	35.440	26.41	***	***	***	***	***
1	20	14.11	35.500	26.57	***	***	***	***	***
1	30	14.00	35.460	26.56	5.20	89	***	***	***
1	40	14.00	35.460	26.56	***	***	***	***	***
1	50	13.99	35.460	26.56	5.27*	107	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 259/62		12/11/62		0735 K		37 04 S		150 15 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	CAS11 CAS12 CAS13
123	***	32	1	*	*	7	00	0	09 2 1013.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	16.56	35.500	26.02	***	***	***	***	
1	10	16.32	35.500	26.07	***	***	***	***	
1	20	15.58	35.610	26.33	***	***	***	***	
1	30	14.98	35.520	26.40	88	***	***	***	
1	40	14.76	35.430	26.37	***	***	***	***	
1	50	14.47	35.500	26.45	92	***	***	***	
1	75	14.17	35.460	26.52	***	***	***	***	
1	100	14.04	35.430	26.53	89	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 250/62		12/11/62		0835 K		37 04 S		150 20 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	CAS11 CAS12 CAS13
256	***	00	0	*	*	7	00	U	09 2 1014.0
CAST									
DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	17.01	35.530	25.04	***	***	***	***	
1	25	14.19	35.520	26.12	***	***	***	***	
1	50	15.40	35.520	26.30	96	***	***	***	
1	75	15.14	35.500	26.34	***	***	***	***	
1	100	15.08	35.610*	26.44	94	***	***	***	
1	125	14.88	35.520	26.42	***	***	***	***	
1	150	14.65	35.520	26.47	94	***	***	***	
1	175	14.34	35.500	26.52	***	***	***	***	
1	200	14.17	35.460	26.52	92	***	***	***	

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 9/ 261/62		12/11/62		0930 K		37 04 S		150 25 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	VIS.	SEA DIR. AMT.	DIR. AMT.	PRESSURE
***	***	00 0	*	*	*	7	00 0	09 2	1014.0
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	17.13	***	***	***	***	***	***	***
1	25	14.66	35.520	26.01	***	***	***	***	***
1	50	14.42	35.520	26.07	5.41	***	97	***	***
1	75	13.21	35.550	26.37	***	***	***	***	***
1	100	14.70	35.440	26.40	5.01	***	87	***	***
1	150	13.91	35.360	26.49	***	***	***	***	***
1	200	13.19	35.340	26.64	5.12	***	86	***	***
1	300	12.32	35.300	26.78	5.12	***	85	***	***
1	500	9.13	34.700	26.88	4.73	***	73	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 11/ 276/62		24/11/62		0745 K		34 05 S		151 13 E	
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES									
DEPTH	WET DRY	DIR. SP.	HEIGHT	TYPE	AMT.	VIS.	SEA DIR. AMT.	DIR. AMT.	PRESSURE
71	***	32 1	*	*	*	7	00 0	04 2	1012.0
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN % SAT. INORG. P TOTAL P NITRATE									
1	0	19.10	35.400	25.32	***	***	***	***	***
1	10	17.10	35.450	25.65	***	***	***	***	***
1	20	15.26	35.450	26.28	***	***	***	***	***
1	30	15.03	35.450	26.34	4.61	***	81	***	***
1	40	15.06	35.470	26.34	***	***	***	***	***
1	50	15.04	35.470	26.34	4.56	***	80	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 11/ 277/62		24/11/62		0835 K		34 05 S		151 18 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
132 ***	28 1	*	*	7	00 0	04 2	1012.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.20	35.580	25.17	***	***	***	***	***
1	10	19.93	35.610	25.26	***	***	***	***	***
1	20	19.90	35.560	25.23	***	***	***	***	***
1	30	19.19	35.580	25.43	5.21	99	***	***	***
1	40	18.18	35.560	25.67	***	***	***	***	***
1	50	17.41	35.340	25.85	4.60	84	***	***	***
1	75	15.77	35.430	26.15	***	***	***	***	***
1	100	15.06	35.420	26.34	4.71	82	***	***	***
1	125	15.10	35.450	26.34	4.68	82	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
N 11/ 278/62		24/11/62		0930 K		34 05 S		151 23 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
143 ***	28 1	*	*	7	00 0	04 2	1011.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.50	35.610	25.08	***	***	***	***	***
1	10	20.48	35.610	25.12	***	***	***	***	***
1	20	20.04	35.700	25.30	***	***	***	***	***
1	30	19.09	35.610	25.48	5.25	100	***	***	***
1	40	17.55	35.600	25.86	***	***	***	***	***
1	50	17.15	35.580	25.94	4.78	87	***	***	***
1	75	16.37	35.610	26.15	***	***	***	***	***
1	100	14.04	35.610	26.23	5.24	94	***	***	***
1	125	15.50	35.540	26.29	4.93	87	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE					
N 11/ 279/62		24/11/62		1020 K		34 05 S		151 28 E					
SONIC AIR TEMP., WIND DEPTH WET DRY DIR. SP. ANEM. CLOUD SEA VIS. SWELL ATMOS. WIRE ANGLES DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3													
155	***	00	0	*	*	7	00	0	04 2	1010.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE				
1	0	20.40	35.650	25.17	***	***	***	***	***		***		
1	10	19.94	35.650	25.29	***	***	***	***	***		***		
1	20	19.90	35.650	25.30	***	***	***	***	***		***		
1	30	19.69	35.630	25.34	5.23	100	***	***	***		***		
1	40	18.44	35.670	25.69	***	***	***	***	***		***		
1	50	17.27	35.600	25.93	4.78	88	***	***	***		***		
1	75	16.12	35.600	26.20	***	***	***	***	***		***		
1	100	16.03	35.610	26.23	4.69	84	***	***	***		***		
1	140	15.14	35.560	26.39	5.01	88	***	***	***		***		

STATION		DATE		TIME		LATITUDE		LONGITUDE					
N 11/ 280/62		24/11/62		1125 K		34 05 S		151 33 E					
SONIC AIR TEMP., WIND DEPTH WET DRY DIR. SP. ANEM. CLOUD SEA VIS. SWELL ATMOS. WIRE ANGLES DIR. SP. HEIGHT TYPE AMT. DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3													
315	***	18	1	*	*	7	00	0	04 2	1009.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE				
1	0	20.53	35.670	25.15	***	***	***	***	***		***		
1	25	19.54	35.650	25.38	***	***	***	***	***		***		
1	50	16.87	35.580	26.01	4.69	85	***	***	***		***		
1	75	16.21	35.560	26.15	***	***	***	***	***		***		
1	100	16.09	35.600	26.21	5.22	93	***	***	***		***		
1	150	15.04	35.490	26.36	***	***	***	***	***		***		
1	200	14.26	35.450	26.50	4.95	85	***	***	***		***		
1	300	12.27	35.110	26.64	4.51	74	***	***	***		***		

STATION		DATE		TIME		LATITUDE		LONGITUDE		
N 11/ 281/62		24/11/62		1220 K		34 05 S		151 37 E		
SONIC DEPTH	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
658 ***	***	18 1	*	*	*	7 00 0	04 2	1009.0	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	20.16	35.670	25.25	***	***	***	***	***	
1	25	18.49	35.630	25.65	***	***	***	***	***	
1	50	16.68	35.580	26.05	4.85	88	***	***	***	
1	75	16.23	35.580	26.16	***	***	***	***	***	
1	100	15.94	35.610	26.25	4.96	88	***	***	***	
1	150	15.35	35.540	26.33	***	***	***	***	***	
1	200	14.35	35.420	26.43	4.92	85	***	***	***	
1	300	12.36	35.130	26.64	4.39	73	***	***	***	
1	500	10.16	35.000	26.94	4.68	77	***	***	***	

STATION		DATE		TIME		LATITUDE		LONGITUDE		
N 11/ 282/62		27/11/62		0430 K		34 40 S		150 55 E		
SONIC DEPTH	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
64 ***	***	36 1	*	*	*	6 00 0	04 2	1012.0	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE	
1	0	18.16	35.520	25.64	***	***	***	***	***	
1	10	17.91	35.520	25.71	***	***	***	***	***	
1	20	16.18	35.490	26.10	***	***	***	***	***	
1	30	15.80	35.540	26.23	4.88	87	***	***	***	
1	40	15.57	35.510	26.26	***	***	***	***	***	
1	50	15.53	35.490	26.25	4.86	86	***	***	***	

STATION		DATE	TIME	LATITUDE		LONGITUDE	
P 11/ 283/62		27/11/62	0515 K	34 40 S		151 00 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
113 ***	36 1	*	*	6 00 0	04 2	1012.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	18.98	35.520	25.44	***	***	***
1	10	18.95	35.560	25.48	***	***	***
1	20	17.97	35.610	25.77	***	***	***
1	30	16.79	35.580	26.03	4.98	90	***
1	40	16.57	35.580	26.08	***	***	***
1	50	15.97	35.520	26.17	4.85	87	***
1	75	15.66	35.580	26.29	***	***	***
1	100	14.45	35.450	26.46	4.95	86	***

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STATION		DATE	TIME	LATITUDE		LONGITUDE	
P 11/ 284/62		27/11/62	0610 K	34 40 S		151 05 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	SEA	SWELL	ATMOS.	WIRE ANGLES
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
139 ***	36 1	*	*	6 00 0	04 2	1012.0	* * *
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	19.73	35.580	25.29	***	***	***
1	10	19.65	35.630	25.35	***	***	***
1	20	19.40	35.610	25.40	***	***	***
1	30	17.86	35.610	25.79	4.56	85	***
1	40	17.37	35.600	25.90	***	***	***
1	50	16.75	35.560	26.02	4.63	84	***
1	75	15.92	35.560	26.21	***	***	***
1	100	15.67	35.540	26.26	5.12	91	***
1	125	14.40	35.450	26.47	4.89	84	***

STATION . DATE TIME LATITUDE LONGITUDE
 P 11/ 285/62 27/11/62 0703 K 34 40 S 151 10 E

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

216 *** ** 36 2 * * * * 6 18 2 04 2 1013.0 * * *

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

1 0 19.80 35.690 25.36 *** *** ***

1 25 19.44 35.670 25.44 *** *** ***

1 50 16.90 35.980 26.00 4.83 *** *** ***

1 75 16.02 35.960 26.19 *** *** ***

1 100 15.10 35.470 26.33 4.98 *** *** ***

1 125 14.24 35.400 26.46 *** *** ***

1 150 13.89 35.360 26.51 4.89 *** *** ***

1 175 13.85 35.400 26.55 *** *** ***

1 200 13.67 35.600 26.74 4.84 *** *** ***

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STATION DATE TIME LATITUDE LONGITUDE
 P 11/ 286/62 27/11/62 0800 K 34 40 S 151 15 E

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

384 *** ** 16 3 * * * * 6 18 2 04 2 1014.0 10 * *

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

1 0 19.84 35.670 25.33 *** *** ***

1 25 19.70 35.670 25.37 *** *** ***

1 50 19.11 35.650 25.51 5.07 *** *** ***

1 75 17.48 35.610 25.89 *** *** ***

1 100 16.04 35.560 26.19 5.14 *** *** ***

1 150 14.16 35.360 26.45 *** *** ***

1 200 13.65 35.400 26.59 4.83 *** *** ***

1 200 13.09 35.340 26.66 4.89 *** *** ***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 11/ 287/62		27/11/62		0900 K		34 40 S		151 20 E							
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3															
914	***	***	10	3	*	*	6	18	2	04	2	1014.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	19.94	35.700	25.33	***	***	***	***	***						
1	25	19.69	35.690	25.39	***	***	***	***	***						
1	50	19.42	35.670	25.44	5.10	97	***	***	***						
1	75	17.15	35.580	25.94	***	***	***	***	***						
1	100	15.94	35.520	26.18	5.05	90	***	***	***						
1	150	14.63	35.580	26.52	***	***	***	***	***						
1	200	13.82	35.380	26.54	4.86	83	***	***	***						
1	300	13.10	35.340	26.65	4.95	83	***	***	***						
1	500	10.08	34.870	26.86	4.60	72	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 11/ 290/62		28/11/62		0450 K		35 07 S		150 50 E							
SONIC AIR TEMP. WIND ANEM. CLOUD SWELL ATMOS. WIRE ANGLES DEPTH WET DRY DIR. SP. HEIGHT TYPE AMT. VIS. SEA DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3															
106	***	***	18	1	*	*	7	18	1	09	2	1014.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	17.48	35.520	25.82	***	***	***	***	***						
1	10	17.51	35.510	25.80	***	***	***	***	***						
1	20	17.48	35.510	25.81	***	***	***	***	***						
1	30	17.01	35.490	25.91	5.24	95	***	***	***						
1	40	16.44	35.470	26.03	***	***	***	***	***						
1	50	16.00	35.470	26.13	5.07	90	***	***	***						
1	75	15.49	35.490	26.26	***	***	***	***	***						
1	100	14.49	35.490	26.48	4.73	82	***	***	***						

STATION				DATE	TIME	LATITUDE		LONGITUDE	
M 11/ 291/62				28/11/62	0540 K	35	07 S	150	55 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
137 ***	18 1	*	*	7	18 1	09 2	1014.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.11	35.610	25.73	***	***	***	***	***
1	10	17.76	35.510	25.74	***	***	***	***	***
1	20	17.48	35.490	25.79	***	***	***	***	***
1	30	17.09	35.510	25.90	5.35	98	***	***	***
1	40	16.50	35.520	26.05	***	***	***	***	***
1	50	15.44	35.490	26.27	4.90	86	***	***	***
1	75	14.20	35.430	26.49	***	***	***	***	***
1	100	14.17	35.450	26.92	4.85	83	***	***	***
1	125	14.13	35.430	26.51	4.85	83	***	***	***

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STATION				DATE	TIME	LATITUDE		LONGITUDE	
M 11/ 292/62				28/11/62	0630 K	35	07 S	151	00 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
150 ***	14 1	*	*	7	18 1	09 2	1014.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.22	35.560	25.66	***	***	***	***	***
1	10	17.98	35.540	25.71	***	***	***	***	***
1	20	17.46	35.490	25.80	***	***	***	***	***
1	30	17.31	35.510	25.85	5.38	99	***	***	***
1	40	17.13	35.510	25.89	***	***	***	***	***
1	50	16.78	35.510	25.97	5.28	96	***	***	***
1	75	14.83	35.510	26.42	***	***	***	***	***
1	100	14.12	35.430	26.51	4.89	84	***	***	***
1	125	13.92	35.430	26.55	4.89	84	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 293/62		28/11/62		0725 K		35 07 S		151 05 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
805 ***	14 2	*	*	7	00 0	09 2	1014.0	*	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.22	35.580	25.43	***	***	***	***	***
1	25	18.46	35.580	25.62	***	***	***	***	***
1	50	16.99	35.540	25.95	5.28	96	***	***	***
1	74	15.99	35.540	26.18	***	***	***	***	***
1	98	15.14	***	***	4.97	***	***	***	***
1	147	14.29	35.470	26.51	***	***	***	***	***
1	196	13.70	35.420	26.59	4.89	83	***	***	***
1	294	13.43	35.420	26.65	5.00	85	***	***	***
1	490	11.59	35.130	26.79	4.89	79	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 294/62		28/11/62		0825 K		35 07 S		151 10 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
1170 ***	14 2	*	*	7	14 1	09 2	1014.0	*	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.71	35.650	25.35	***	***	***	***	***
1	25	19.65	35.670	25.38	***	***	***	***	***
1	50	17.36	35.670	25.96	4.68	86	***	***	***
1	75	16.35	35.560	26.13	***	***	***	***	***
1	100	15.76	35.490	26.20	4.77	85	***	***	***
1	150	14.85	35.450	26.37	***	***	***	***	***
1	200	14.01	35.400	26.51	4.89	84	***	***	***
1	300	12.49	35.200	26.67	4.54	75	***	***	***
1	500	10.22	34.870	26.83	4.45	70	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
P 11/ 299/62		29/11/62		0830 K		35 50 S		150 22 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															
123	***	***	18	1	*	*	7	15	1	14	2	1016.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	18.46	35.610	25.64	***	***	***	***	***						
1	10	18.24	35.610	25.70	***	***	***	***	***						
1	20	18.09	35.610	25.74	***	***	***	***	***						
1	30	17.43	35.560	25.86	5.34	98	***	***	***						
1	40	17.19	35.580	25.93	***	***	***	***	***						
1	50	16.29	35.540	26.11	5.29	95	***	***	***						
1	75	15.05	35.540	26.40	***	***	***	***	***						
1	100	14.96	35.520	26.40	5.41	95	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
P 11/ 300/62		29/11/62		0930 K		35 50 S		150 27 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															
134	***	***	18	1	*	*	7	00	0	14	2	1016.0	*	*	*
CST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	18.10	35.600	25.72	***	***	***	***	***						
1	10	17.53	35.580	25.85	***	***	***	***	***						
1	20	16.76	35.560	26.02	***	***	***	***	***						
1	30	16.04	35.560	26.19	4.60	82	***	***	***						
1	40	15.69	35.490	26.21	***	***	***	***	***						
1	50	15.41	35.470	26.26	4.58	81	***	***	***						
1	75	14.96	35.560	26.43	***	***	***	***	***						
1	100	14.86	35.540	26.44	5.57	97	***	***	***						
1	125	14.64	35.540	26.48	5.47	95	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 301/62		29/11/62		1010 K		35 50 S		150 32 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
150	***	14	1	*	*	7	00 0	14 2 1016.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.00	35.670	25.55	***	***	***	***	***
1	10	18.67	35.630	25.60	***	***	***	***	***
1	20	17.78	35.560	25.77	***	***	***	***	***
1	30	16.92	35.520	25.95	5.24	95	***	***	***
1	40	16.81	35.540	25.99	***	***	***	***	***
1	50	15.76	35.540	26.24	4.89	87	***	***	***
1	75	14.45*	35.470*	26.47	***	***	***	***	***
1	100	14.58	35.560	26.51	5.54	96	***	***	***
1	125	14.45	35.580	26.56	5.52	95	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 302/62		29/11/62		1100 K		35 50 S		150 37 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
549	***	09	1	*	*	7	00	0	14 2 1017.0
									* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.76	35.690	25.37	***	***	***	***	***
1	25	19.50	35.690	25.44	***	***	***	***	***
1	50	16.22	35.540	26.13	4.83	87	***	***	***
1	75	15.26	35.490	26.31	***	***	***	***	***
1	100	14.39	35.470	26.48	5.13	89	***	***	***
1	150	14.32	35.560	26.57	***	***	***	***	***
1	200	13.78	35.540	26.67	***	***	***	***	***
1	300	13.19	35.510	26.77	5.46	92	***	***	***
1	500	10.33	34.980	26.90	4.86	77	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION			DATE		TIME		LATITUDE		LONGITUDE							
N 11/ 303/62			29/11/62		1205 K		35 50 S		150 42 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 CAST1 CAST2 CAST3																
***	***	***	04	1	*	*	*	7	00	0	14	2	1017.0	*	*	*
CST	DEPTH	TEMP.	SALINITY		SIGMA-T		OXYGEN		OXYGEN % SAT.		INORG. P		TOTAL P		NITRATE	
1	0	19.66	35.690		25.40		***		***		***		***		***	
1	25	19.47	35.690		25.45		***		***		***		***		***	
1	50	17.49	35.610		25.88		4.68		86		***		***		***	
1	75	15.68	35.690		26.37		***		***		***		***		***	
1	100	14.76	35.420		26.37		4.94		86		***		***		***	
1	150	13.30	35.250		26.34		***		***		***		***		***	
1	200	12.46	35.220		26.69		4.78		79		***		***		***	
1	300	13.05*	35.470		26.76		5.44		91		***		***		***	
1	500	9.91	34.930		26.93		4.85		76		***		***		***	

STATION			DATE		TIME		LATITUDE		LONGITUDE							
N 11/ 306/62			30/11/62		0430 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. DIR. AMT. PRESSURE CAST1 CAST2 CAST3																
60	***	36	2	*	*	*	7	00	0	09	1	1018.0	*	*	*	
CST	DEPTH	TEMP.	SALINITY		SIGMA-T		OXYGEN		OXYGEN % SAT.		INORG. P		TOTAL P		NITRATE	
1	0	17.52	35.520		25.81		***		***		***		***		***	
1	10	17.54	35.470		25.76		***		***		***		***		***	
1	20	16.64	35.490		25.99		***		***		***		***		***	
1	30	16.16	35.520		26.13		5.42		97		***		***		***	
1	40	15.68	35.520		26.24		***		***		***		***		***	
1	50	15.06	35.560		26.41		5.47		96		***		***		***	

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 307/62		30/11/62		0920 K		36 25 S		150 14 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
123	***	36 3	*	*	7	36 2	09 1	1018.0	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	17.61	35.610	25.80	***	***	***	***	***
1	10	17.69	35.670	25.88	***	***	***	***	***
1	20	17.34	35.610	25.92	***	***	***	***	***
1	30	17.31	35.690*	25.99	5.25	96	***	***	***
1	40	17.22	35.600	25.94	***	***	***	***	***
1	50	16.91	35.610	26.02	5.02	91	***	***	***
1	75	15.45	35.540	26.30	***	***	***	***	***
1	100	14.99	35.520	26.39	5.27	92	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 308/62		30/11/62		0615 K		36 25 S		150 19 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
155	***	36 3	*	*	7	36 2	09 1	1018.0	* *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN X SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.05	35.630	25.76	***	***	***	***	***
1	10	18.00	35.610	25.76	***	***	***	***	***
1	20	17.48*	35.630	25.90	***	***	***	***	***
1	30	17.59	35.600	25.85	5.36	99	***	***	***
1	40	17.53	35.610	25.87	***	***	***	***	***
1	50	17.39	35.610	25.91	5.40	99	***	***	***
1	75	15.63	35.520	26.25	***	***	***	***	***
1	100	14.73	35.520	26.45	5.18	90	***	***	***
1	150	14.54	35.580	26.54	5.32	92	***	***	***

* PROPERTY DOUBTFUL
+ PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE							
P 11/ 309/62		30/11/62		0710 K		36 25 S		150 24 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															
594	***	***	36	4	*	*	7	36	2	09	1	1018.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	18.85	35.650	25.57	***	***	***	***	***						
1	25	18.71	35.670	25.62	***	***	***	***	***						
1	48	17.35	35.560	25.88	4.95	91	***	***	***						
1	72	15.58	35.560	26.29	***	***	***	***	***						
1	95	14.85	35.490	26.40	5.09	89	***	***	***						
1	143	14.07	35.430	26.52	***	***	***	***	***						
1	190	13.26	35.380	26.65	5.02	85	***	***	***						
1	285	***	35.160	***	4.77	***	***	***	***						
1	475	9.13	34.770	26.94	4.69	72	***	***	***						

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STATION		DATE		TIME		LATITUDE		LONGITUDE							
P 11/ 310/62		30/11/62		0820 K		36 25 S		150 29 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															
***	***	***	36	4	*	*	7	36	3	09	1	1018.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	18.90	35.650	25.56	***	***	***	***	***						
1	25	18.76	35.610	25.57	***	***	***	***	***						
1	50	17.85	35.580	25.77	5.17	96	***	***	***						
1	75	16.56	35.470	26.00	***	***	***	***	***						
1	100	15.13	35.470	26.32	5.04	88	***	***	***						
1	150	13.51	35.360	26.59	***	***	***	***	***						
1	200	11.81	35.130	26.74	4.60	75	***	***	***						
1	300	10.89	35.060	26.86	4.84	77	***	***	***						
1	500	9.17	34.820	26.97	4.78	74	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 314/62		3/12/62		0855 K		37 04 S		150 00 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
64	***	20 2	*	*	6	20 1	04 2	1019.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.24	35.600	26.17	***	***	***	***	***
1	10	15.81	35.580	26.25	***	***	***	***	***
1	20	15.21	35.580	26.39	***	***	***	***	***
1	30	15.12	35.580	26.41	5.48	96	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 11/ 315/62		3/12/62		0940 K		37 04 S		150 05 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
81	***	20 1	*	*	7	20 1	04 2	1019.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.60	35.510	26.02	***	***	***	***	***
1	10	14.08	35.540	26.16	***	***	***	***	***
1	20	15.42	35.520	26.25	***	***	***	***	***
1	30	14.99	35.490	26.37	5.35	94	***	***	***
1	40	14.86	35.520	26.42	***	***	***	***	***
1	50	14.88	35.520	26.42	5.41	94	***	***	***
1	70	14.72	35.540	26.47	5.35	93	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE						
M 11/ 316/62		3/12/62		1030 K		37 04 S		150 10 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														
97	***	18	3	*	*	7	18	2	04	2	1019.0	*	*	*
CAST														
1		0												
1		10												
1		20												
1		30												
1		40												
1		50												
1		75												
1		90												

STATION		DATE		TIME		LATITUDE		LONGITUDE						
M 11/ 317/62		3/12/62		1125 K		37 04 S		150 15 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														
119	***	18	3	*	*	7	18	3	04	2	1018.0	*	*	*
CAST														
1		0												
1		10												
1		20												
1		30												
1		40												
1		50												
1		75												
1		100												

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE											
N 11/ 318/62		3/12/62		1225 K		37 04 S		150 20 E											
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES																			
DEPTH	WFT	DRY	DIR. SP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3								
256	***	18	3	*	*	*	*	*	7	18	3	04	2	1018.0	*	*	*		
CAST										OXYGEN		OXYGEN % SAT.		INORG. P		TOTAL P		NITRATE	
1	0	19.46				35.630		25.66	***	***	***	***	***	***	***	***	***		
1	25	18.21				35.610		25.71	***	***	***	***	***	***	***	***	***		
1	50	17.15				35.540		25.91	5.19	***	***	95	***	***	***	***	***		
1	75	16.16				35.540		26.14	***	***	***	***	***	***	***	***	***		
1	100	15.01				35.470		26.35	4.98	***	***	87	***	***	***	***	***		
1	125	14.93				35.510		26.40	***	***	***	90	***	***	***	***	***		
1	150	14.67				35.520		26.46	5.18	***	***	***	***	***	***	***	***		
1	175	14.53				35.510		26.49	***	***	***	***	***	***	***	***	***		
1	200	14.47				35.520		26.51	5.21	***	***	90	***	***	***	***	***		

STATION		DATE		TIME		LATITUDE		LONGITUDE											
N 11/ 319/62		3/12/62		1335 K		37 04 S		150 25 E											
SONIC AIR TEMP. WIND ANEM. CLOUD VIS. SEA SWELL ATMOS. WIRE ANGLES																			
DEPTH	WFT	DRY	DIR. SP.	WIND DIR.	SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3								
***	***	18	3	*	*	*	*	*	7	18	2	04	2	1017.0	*	*	*		
CAST										OXYGEN		OXYGEN % SAT.		INORG. P		TOTAL P		NITRATE	
1	0	19.21				35.630		25.47	***	***	***	***	***	***	***	***	***		
1	25	19.06				35.630		25.51	***	***	***	***	***	***	***	***	***		
1	50	17.55				35.560		25.83	5.06	***	***	93	***	***	***	***	***		
1	75	15.67				35.510		26.23	***	***	***	***	***	***	***	***	***		
1	100	14.85				35.430		26.36	4.83	***	***	84	***	***	***	***	***		
1	150	14.43				35.490		26.49	***	***	***	***	***	***	***	***	***		
1	200	13.94				35.400		26.61	5.04	***	***	85	***	***	***	***	***		
1	300	11.77				35.150		26.77	4.85	***	***	79	***	***	***	***	***		
1	500	9.71				34.860		26.91	4.81	***	***	75	***	***	***	***	***		

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 346/62		13/12/62		0450 K		35 07 S		150 50 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
198	***	04 1	*	*	7	04 1	14 3	1018.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.25	35.550	25.40	***	***	***	***	***
1	10	19.25	35.550	25.40	***	***	***	***	***
1	20	18.93	35.550	25.48	***	***	***	***	***
1	30	18.50	35.570	25.60	***	***	***	***	***
1	40	17.93	35.520	25.71	***	***	***	***	***
1	50	17.37	35.520	25.84	5.14	94	***	***	***
1	75	16.14	35.530	26.14	***	***	***	***	***
1	100	14.46	35.500	26.49	4.71	81	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 347/62		13/12/62		0545 K		35 07 S		150 55 E	
SONIC DEPTH	AIR TEMP. WET DRY	WIND DIR. SP.	ANEM. HEIGHT	CLOUD TYPE AMT.	VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
135	***	04 1	*	*	7	04 1	14 3	1019.0	* * *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.53	35.520	25.30	***	***	***	***	***
1	10	19.47	35.500	25.30	***	***	***	***	***
1	20	19.51	35.500	25.29	***	***	***	***	***
1	30	19.20	35.500	25.37	5.37	102	***	***	***
1	40	18.01	***	***	***	***	***	***	***
1	50	18.47	35.500	25.56	***	***	***	***	***
1	75	15.30	35.500	26.31	***	***	***	***	***
1	100	14.20	35.440	26.50	5.04	87	***	***	***
1	125	13.28	35.390	26.66	4.96	84	***	***	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 13/ 350/62		13/12/62	0835 K	35 07 S		151 10 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAS11	CAS12 CAS13
1280 *** **	04 1	*	*	7	00 0	14 3	1019.0 * * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	20.20	35.680	25.24	***	***	***
1	25	20.14	35.680	25.26	***	***	***
1	50	19.99	35.610	25.25	5.15	99	***
1	75	17.46	35.590	25.87	***	***	***
1	100	16.49	35.570	26.09	4.90	88	***
1	150	15.64	35.530	26.25	***	***	***
1	200	13.45	35.350	26.59	4.88	83	***
1	300	11.09	35.050	26.82	4.71	76	***
1	500	9.09	34.740	26.92	3.18	49	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
N 13/ 351/62		13/12/62	0940 K	35 07 S		151 15 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	WIRE ANGLES	
DEPTH MET DRY	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	CAS11	CAS12 CAS13
*** *** **	00 0	*	*	7	00 0	14 3	1019.0 * * *
CAS1	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	TOTAL P NITRATE
1	0	20.36	35.660	25.19	***	***	***
1	25	20.17	35.660	25.24	***	***	***
1	50	20.12	35.640	25.24	5.23	101	***
1	75	17.32	35.570	25.89	***	***	***
1	100	16.44	35.570	26.10	4.74	85	***
1	150	15.21	35.530	26.35	***	***	***
1	200	14.22	35.440	26.50	4.66	80	***
1	300	12.25	35.250	26.75	4.81	79	***
1	500	9.23	34.760	26.91	4.58	71	***

STATION		DATE		TIME		LATITUDE		LONGITUDE				
M 13/ 356/62		15/12/62		1130 K		35 50 S		150 17 E				
SONIC AIR TEMP. WIND ANEM. CLOUD DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT.												
64	***	04	1	*	*	7	04	1	14 2	1027.0	*	*
VIS. SEA SWELL ATMOS. WIRE ANGLES DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3												
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE												
1	0	19.08	35.550	25.44	***	***	***	***	***	***	***	***
1	10	18.91	35.550	25.48	***	***	***	***	***	***	***	***
1	20	18.87	35.550	25.49	***	***	***	***	***	***	***	***
1	30	18.61	35.530	25.54	5.20	98	***	***	***	***	***	***
1	40	17.78	35.500	25.73	***	***	***	***	***	***	***	***
1	50	17.20	35.480	25.85	5.06	92	***	***	***	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE				
M 13/ 357/62		15/12/62		1215 K		35 50 S		150 22 E				
SONIC AIR TEMP. WIND ANEM. CLOUD DEPTH MET DRY DIR. SP. HEIGHT TYPE AMT.												
119	***	04	2	*	*	7	04	1	14 2	1026.0	*	*
VIS. SEA SWELL ATMOS. WIRE ANGLES DIR. AMT. DIR. AMT. PRESSURE CAST1 CAST2 CAST3												
CAST DEPTH TEMP. SALINITY SIGMA-T OXYGEN OXYGEN X SAT. INORG. P TOTAL P NITRATE												
1	0	19.84	35.570*	25.26	***	***	***	***	***	***	***	***
1	10	19.14	35.660	25.51	***	***	***	***	***	***	***	***
1	20	19.10	35.640*	25.50	***	***	***	***	***	***	***	***
1	30	19.11	35.570	25.45	5.28	100	***	***	***	***	***	***
1	40	18.79	35.530	25.50	***	***	***	***	***	***	***	***
1	50	17.74	35.590	25.81	5.17	96	***	***	***	***	***	***
1	75	15.53	35.520	26.27	***	***	***	***	***	***	***	***
1	100	14.50	35.550	26.52	5.04	87	***	***	***	***	***	***

* PROPERTY DOUBTFUL
 * PROPERTY INTERPOLATED

STATION		DATE	TIME	LATITUDE		LONGITUDE	
M 13/ 358/62		15/12/62	1305 K	35 50 S		150 27 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.
DEPTH KEY DRY DIR. SP.	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
134 *** **	04 3	*	*	7	04 1	14 2	1025.0
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	20.09	35.680	25.27	***	***	***
1	10	19.51*	35.610	25.37	***	***	***
1	20	19.61	35.620	25.36	***	***	***
1	30	19.40	35.710*	25.48	5.20	99	***
1	40	19.24	35.610	25.44	***	***	***
1	50	17.41	35.930	25.84	5.14	94	***
1	75	15.19	35.500	26.33	***	***	***
1	100	14.16	35.370	26.46	5.23	90	***
1	125	13.27	35.320	26.60	4.79	81	***

STATION		DATE	TIME	LATITUDE		LONGITUDE	
M 13/ 359/62		15/12/62	1400 K	35 50 S		150 32 E	
SONIC AIR TEMP.	WIND	ANEM.	CLOUD	VIS.	SEA	SWELL	ATMOS.
DEPTH KEY DRY DIR. SP.	DIR. SP.	HEIGHT	TYPE AMT.	DIR. AMT.	DIR. AMT.	DIR. AMT.	PRESSURE
143 *** **	04 3	*	*	7	04 2	14 2	1025.0
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P
1	0	20.01	35.640	25.27	***	***	***
1	10	19.74	35.640	25.34	***	***	***
1	20	19.70	35.770*	25.45	***	***	***
1	30	19.45	35.660	25.43	5.10	98	***
1	40	16.61	35.610	26.09	***	***	***
1	50	16.04	35.500	26.14	4.44	79	***
1	75	15.09	35.460	26.32	***	***	***
1	100	14.16	35.410	26.49	4.80	82	***
1	125	13.87	35.500	26.62	4.78	82	***

* PROPERTY DOUBTFUL
* PROPERTY INTERPOLATED

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 360/62		15/12/62		1510 K		35 50 S		150 37 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
530 ***	04 4	*	*	7 04 2	14 2	1024.0	20	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.22	35.640	25.21	***	***	***	***	***
1	23	19.87	35.660	25.32	***	***	***	***	***
1	46	17.76	35.570	25.79	4.19	77	***	***	***
1	70	15.61	35.480	26.22	***	***	***	***	***
1	93	14.82	35.500	26.41	4.58	80	***	***	***
1	140	14.21	35.440	26.50	***	***	***	***	***
1	186	12.96	35.350	26.69	4.59	77	***	***	***
1	280	11.95	35.160	26.74	4.59	75	***	***	***
1	480	9.10	34.780	26.95	4.71	72	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 361/62		15/12/62		1620 K		35 50 S		150 42 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.	DIR. AMT.	PRESSURE	CAST1	CAST2 CAST3
***	04 3	*	*	7 04 2	14 2	1024.0	10	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	20.11	35.680	25.27	***	***	***	***	***
1	24	19.90	35.680	25.33	***	***	***	***	***
1	48	19.45	35.680	25.44	4.81	92	***	***	***
1	72	16.43	35.500	26.05	***	***	***	***	***
1	95	15.04	35.500	26.37	4.38	77	***	***	***
1	142	14.03	35.500	26.59	***	***	***	***	***
1	189	13.19	35.370	26.66	5.07	85	***	***	***
1	284	12.46	35.440	26.86	5.03	83	***	***	***
1	491	9.58	34.870	26.94	4.82	75	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 13/ 364/62		17/12/62		0525 K		36 25 S		150 09 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															
60	***	20	2	*	*	*	7	20	2	09	3	1021.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	18.42	35.440	25.52	***	***	***	***	***						
1	10	18.21	35.460	25.59	***	***	***	***	***						
1	20	16.78	35.460	25.94	***	***	***	***	***						
1	30	15.77	35.480	26.19	***	***	***	***	***						
1	40	13.18	35.320	26.62	***	***	***	***	***						
1	50	12.49	35.250	26.71	4.76	79	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE							
M 13/ 363/62		17/12/62		0620 K		36 25 S		150 14 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															
119	***	14	2	*	*	*	7	20	2	09	3	1022.0	*	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE						
1	0	19.00	35.530	25.44	***	***	***	***	***						
1	10	18.95	35.530	25.46	***	***	***	***	***						
1	20	17.15	35.530	25.90	***	***	***	***	***						
1	30	16.23	35.530	26.12	4.80	86	***	***	***						
1	40	15.55	35.920	26.27	***	***	***	***	***						
1	50	14.62	35.460	26.43	4.97	86	***	***	***						
1	75	12.05	35.120	26.69	***	***	***	***	***						
1	100	11.90	35.120	26.72	4.63	76	***	***	***						

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 366/62		17/12/62		0730 K		36 25 S		150 19 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
157 ***	*** 14 2	*	*	7	14 2	09 3	1022.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.57	35.610	25.36	***	***	***	***	***
1	10	19.50	35.610	25.38	***	***	***	***	***
1	20	19.51	35.610	25.37	***	***	***	***	***
1	30	18.14	35.590	25.71	5.00	93	***	***	***
1	40	16.73	35.550	26.02	***	***	***	***	***
1	50	15.69	35.480	26.20	4.52	80	***	***	***
1	75	14.91	35.440	26.35	***	***	***	***	***
1	100	14.27	35.410	26.46	4.58	79	***	***	***
1	150	12.28	35.190	26.70	4.74	78	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 367/62		17/12/62		0840 K		36 25 S		150 24 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3	
1024 ***	*** 14 2	*	*	7	14 2	09 3	1022.0	*	*
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.51	35.620	25.38	***	***	***	***	***
1	25	19.45	35.610	25.39	***	***	***	***	***
1	50	16.33	35.460	26.04	4.32	78	***	***	***
1	75	15.48	35.530	26.29	***	***	***	***	***
1	100	14.54	35.390	26.39	4.51	78	***	***	***
1	150	13.88	35.430	26.56	***	***	***	***	***
1	200	12.80	35.280	26.67	4.75	79	***	***	***
1	300	11.64	35.140	26.79	4.78	78	***	***	***
1	500	8.96	34.690	26.90	4.72	72	***	***	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
M 13/ 368/62	17/12/62	0945 K	36 25 S	150 29 E
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.
DEPTH WET DRY	14 2	0	0	0
***	***	***	***	***
VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
7	14 2	09 3	1022.0	* * *
OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
25.37	35.610	***	***	***
25.40	35.620	***	***	***
26.00	35.530	4.35	79	***
26.19	35.530	***	***	***
26.31	35.460	4.72	83	***
26.48	35.350	***	***	***
26.62	35.300	4.97	84	***
26.76	35.120	4.83	79	***
26.93	34.700	4.75	73	***

STATION	DATE	TIME	LATITUDE	LONGITUDE
M 13/ 371/62	18/12/62	0430 K	37 04 S	150 00 E
SONIC AIR TEMP.	WIND DIR, SP.	ANEM. HEIGHT	CLOUD TYPE	AMT.
DEPTH WET DRY	16 2	0	0	0
62	***	***	***	***
VIS. DIR. AMT.	SEA DIR. AMT.	SWELL DIR. AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1 CAST2 CAST3
7	36 1	09 2	1014.0	* * *
OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
25.36	35.440	***	***	***
25.47	35.440	***	***	***
25.59	35.500	***	***	***
26.00	35.530	5.09	92	***
26.28	35.520	***	***	***
26.33	35.530	5.09	90	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 374/62		18/12/62		0710 K		37 04 S		150 15 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
117 ***	***	36 4	*	*	7	36 2	09 2	*	10 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	18.65	35.350	25.40	***	***	***	***	***
1	10	18.60	35.370	25.42	***	***	***	***	***
1	20	18.29	35.410	25.53	***	***	***	***	***
1	30	18.23	35.410	25.55	5.20	97	***	***	***
1	40	17.27	35.460	25.82	***	***	***	***	***
1	50	16.00	35.520	26.16	4.85	87	***	***	***
1	75	14.29	35.410	26.46	***	***	***	***	***
1	100	13.60	35.370	26.57	4.81	82	***	***	***

STATION		DATE		TIME		LATITUDE		LONGITUDE	
M 13/ 375/62		18/12/62		0840 K		37 04 S		150 20 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.	DIR. AMT.	PRESSURE	CAST1 CAST2 CAST3
256 ***	***	36 4	*	*	7	36 3	09 2	1012.0	20 *
CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	19.20	35.460	25.34	***	***	***	***	***
1	24	19.24	35.590	25.43	***	***	***	***	***
1	47	19.30	35.610	25.68	5.10	95	***	***	***
1	70	16.70	35.550	26.02	***	***	***	***	***
1	94	15.68	35.500	26.22	4.59	81	***	***	***
1	118	15.28	35.460	26.28	***	***	***	***	***
1	141	14.47	35.410	26.42	4.68	81	***	***	***
1	164	13.91	35.430	26.56	***	***	***	***	***
1	190	13.83	35.430	26.57	4.78	82	***	***	***

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 Rottnest 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
55. Investigations by F.R.V. *Weerutta* on the South Australian tuna grounds in 1961
56. Investigations by F.R.V. *Marelda* on the eastern Australian tuna grounds in 1961
57. Investigations by F.V. *Estelle Star* in Western Australian waters in 1961
58. Temperature observations from Australian tuna fishing vessels in 1961
59. Investigations by F.R.V. *Derwent Hunter* on the eastern Australian tuna grounds in 1962
60. Investigations by F.R.V. *Investigator* on the South Australian tuna grounds in 1962
61. Investigations by F.R.V. *Marelda* on the eastern Australian tuna grounds in 1962