OCEANOGRAPHICAL OBSERVATIONS
IN THE PACIFIC OCEAN IN 1961
H.M.A.S. *GASCOYNE*
Cruise G 3/61

OCEANOGRAPHICAL CRUISE REPORT NO. 12

DIVISION OF FISHERIES AND OCEANOGRAPHY
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL
RESEARCH ORGANIZATION, AUSTRALIA 1967

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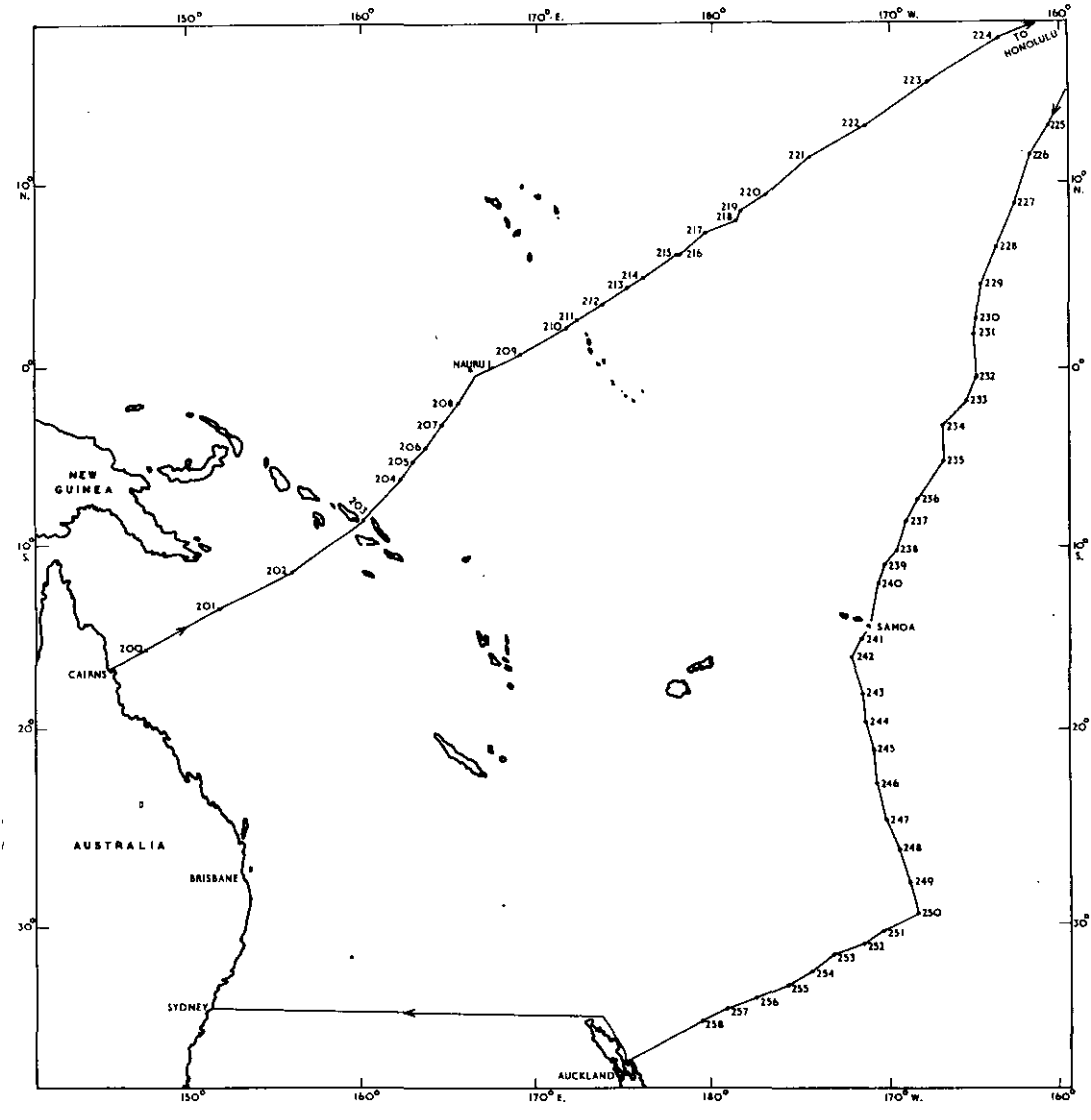
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OCEANOGRAPHICAL CRUISE REPORT

No. 12

Oceanographical Observations in the Pacific Ocean in 1961

H.M.A.S. Gascoyne

Cruise G3/61

August 14 - October 12, 1961

I. INTRODUCTION

This report records the data for the third cruise in 1961 of H.M.A.S. Gascoyne, Royal Australian Navy oceanographical frigate, in the Pacific Ocean. Zooplankton data from the 1961 Gascoyne Sovereignty Cruise are recorded also.

Objectives

The cruise was planned to examine the water mass structure and productivity in tropical and subtropical regions of the Pacific between Australia and Hawaii, to take stramin net tows daily at 140-0 m for tuna larvae, and to take part in intercalibration tests at Honolulu.

Itinerary

The cruise began at Cairns on August 14 and worked a line of stations to Honolulu, arriving there on August 30. The ship took part in intercalibration tests at Honolulu until September 12, then, via Samoa, worked a line of stations to Auckland before proceeding to Sydney where the cruise ended on October 12 (Fig. 1).

Personnel

B. Newell (Cruise Leader 14/8/61 - 30/8/61)
D. Rochford (Cruise Leader 12/9/61 - 2/10/61)
K. Abbott-Smith (14/8/61 - 30/8/61)
F. Davies
N. Dyson

The analyses of hydrological samples were done in the ship's laboratory by Messrs Abbott-Smith, Davies, Newell, and Rochford. The primary production samples were taken, incubated, and counted on board by Mr Dyson. The samples for pigment determination were collected by Mr Dyson and the analyses done at Cronulla by

Mr Wootton.

The data were processed under the direction of Mr Crooks by Mrs Derrick, Mrs Tarbett, and Misses Johnston, Lalor, and Wanstall. The track chart was prepared for publication by Mr Breach and Mrs Cozens.

II. WORK ACCOMPLISHED

Fifty-nine stations were worked (G3/200/61 - G3/258/61). Bathythermograph casts were made at 50 stations. Surface and subsurface hydrology samples were collected at 27 stations. Primary production and pigment samples were collected at 50 stations. Zooplankton samples were collected at 10 stations between Cairns and 10°N. to take tuna larvae for the U.S. Bureau of Commercial Fisheries at Honolulu.

Table 1 shows the work done at each station.

TABLE 1

WORK DONE AT EACH STATION

Stn No.	BT	Hydrology Surface to Depth (m)	Primary Prod.	Pigments	Zoo-plankton
200					+
201					+
202					+
203					+
204	+		+	+	
205					+
206	+	1778	+	+	
207	+		+	+	
208	+	3535	+	+	+
209	+		+	+	
210					+
211	+	3805	+	+	
212	+		+	+	
213	+		+	+	+
214	+	1800	+	+	
215	+		+	+	
216					+
217	+	4860	+	+	
218	+		+	+	
219					+
220	+	1800	+	+	

Stn No.	BT	Hydrology Surface to Depth (m)	Primary Prod.	Pigments	Zoo-plankton
221	+	3875	+	+	
222	+	4750	+	+	
223	+	4370	+	+	
224	+	4445	+	+	
225	+	1760	+	+	
226	+	1790	+	+	
227	+		+	+	
228	+	1773	+	+	
229	+		+	+	
230	+	1565	+	+	
231	+		+	+	
232	+	1710	+	+	
233	+		+	+	
234	+	1707	+	+	
235	+		+	+	
236	+	1755	+	+	
237	+		+	+	
238	+	1795	+	+	
239*					
240	+		+	+	
241	+		+	+	
242	+	6445	+	+	
243	+		+	+	
244	+	4865	+	+	
245	+		+	+	
246	+	4875	+	+	
247	+		+	+	
248	+	4860	+	+	
249	+		+	+	
250	+	4882	+	+	
251	+		+	+	
252	+	4530	+	+	
253	+		+	+	
254	+	4865	+	+	
255	+		+	+	
256	+	6495	+	+	
257	+		+	+	
258	+	1760	+	+	

BT Bathythermograms
Primary Prod. Primary Production
* This station was used for testing thermometers

III. METHOD OF COLLECTION AND ANALYSIS OF SAMPLES

1. Physics

Temperature.- Water temperatures were taken with deep-sea reversing thermometers; protected thermometers with a range of -2°C to 30°C, and unprotected thermometers with a range of -2°C to 30°C or -4°C to 60°C. The accuracy of the temperatures is considered to be $\pm$ 0.03 deg C.

Bathythermograph.- A 900 ft bathythermograph was used at the stations indicated in Table 1. A photograph of each slide is filed at Cronulla.

Thermometric Depth.- Depth calculations were made by the method described by Pollak (1950), and are considered accurate to $\pm$ 15 m below 1000 m and to 1% above that depth.

Sigma-t.- Sigma-t values were calculated by computer, using the Table of σ_t given by the U.S. Hydrographic Office (1955).

2. Chemistry

Salinity.- Salinity was measured on board with an inductive salinometer (Brown and Hamon 1961).

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. Duplicate titrations were made on approximately every tenth sample. Saturation values were calculated by computer using the simpler of the equations given by Richards and Corwin (1956) -

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

Inorganic Phosphate.- The method of Atkins (1923) was used with 1 ml molybdate reagent (300 ml 10% w/v ammonium molybdate and 100 ml 50% v/v sulphuric acid) and 0.1 ml 1% w/v stannous chloride diluted afresh from a 40% stock solution in hydrochloric acid, which was kept under paraffin. The reagents were automatically dispensed by a piston dispenser.

Standard phosphate solutions were made up in distilled water. At air temperatures less than 25°C analyses were carried out in batches of 10; readings were begun within 10 min of adding reagents, and completed within 10 min. At air temperatures greater than 25°C batches of 6 were analysed; readings were begun within 5 min of adding reagents and completed within 7 min. Each batch was compared with a distilled water blank and a 0.65 µg-atom/l standard in a Hilger Spekker absorptiometer using 4 cm cells and Ilford 608 filters. Each week a complete check was made using standards up to 3.25 µg-atom/l. Results are given as µg-atom/l without any correction for salt error and are precise to ± 10% for values less than 0.5 µg-atom/l and ± 5% for higher values. To correct for salt effects the results given can be multiplied by 1.15.

Total Phosphorus.- 100 ml samples were drawn from the Nansen bottles into 150 ml Pyrex conical flasks, 0.2 ml of 72% perchloric acid was added and digestion at 200°-250°C carried out immediately on a sand tray. After evaporation of water, heating was continued until fuming of the salt residue commenced. The samples were then allowed to cool, and 100 ml of distilled water and 2 drops of 2% w/v phenolphthalein were added. If alkaline, perchloric acid was added until a slight acidity persisted. The flasks were allowed to stand for about 24 hr to allow the salts to dissolve. Phosphate was then determined as described above for inorganic phosphate. Results are given as µg-atom/l, without salt correction. To correct for salt effects the results given can be multiplied by 1.15.

Nitrate.- After collection, water samples were stored in plastic bottles and preserved with 2 drops of saturated $HgCl_2$. Nitrate was determined at Cronulla by the strychnidine method (Rochford 1947). The reagent was prepared by the addition of 0.64 g strychnidine to a litre of nitrate-free sulphuric acid. 5 ml of this reagent were added, with minimum agitation, to 5 ml seawater or standard nitrate solution. The standards were made up in a mixture of equal volumes of artificial seawater and nitrate-free sulphuric acid. The standards and samples were shaken to distribute the reagent, and the colour developed for 2 hr. The solutions were read in a Unicam SP 600 spectrophotometer at a wavelength of 530 mµ using a 5 mm cell. Samples with an extinction greater than that of the standard corresponding to 14.4 µg-atom/l were diluted with artificial seawater-sulphuric acid mixture before reading. Results are given in µg-atom/l.

3. Primary Production

Samples were aliquots of those taken in a 5 l. plastic sampler for pigment measurements. They were poured into 300 ml Pyrex bottles and incubated in a constant artificial light bath at 1100 ft candles. The ^{14}C techniques used were as described by Dyson et al. (1965) except that Geiger counting was done on board with a windowless counter, and that the ^{14}C solution was standardised by the method of Jitts and Scott (1961).

4. Pigments

Water samples were taken with a plastic sampler and filtered within one or two hours through HA Millipore filters. The filters were placed in envelopes and stored in metal desiccators over silica gel. The analyses were carried out at Cronulla using the method given by Humphrey (1960).

5. Zooplankton

South of 10°N., on the outward run, a stramin net was towed each day at 2200 h from 140-0 m, to collect tuna larvae. Samples were given to the U.S. Bureau of Commercial Fisheries at Honolulu.

Zooplankton tows were made on the Gascoyne Sovereignty Cruise, November 1961, in the Coral Sea east of Townsville. Oblique tows were made with a Clarke-Bumpus sampler. Depths were estimated from wire angles and are only approximate. The speed of tow was 2-3 kt and the wire was recovered at about 10 m per min. Samples were weighed at Cronulla after washing in 50% alcohol to facilitate removal of external interstitial water (Tranter 1962).

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IV. DATA SHEETS AND TABLES

Hydrology data were processed in a C.D.C. 3600 Computer, and primary production and pigment data in an I.B.M. 1401 Computer. An explanation of the headings for each set of data sheets is given at the beginning of the relevant part.

DATA

PART 1

HYDROLOGY

EXPLANATION OF HEADINGS

Part 1 — Hydrology

STATION — Gives the station identification. For example, G3/206/61 signifies the 206th station worked by Gascoyne in 1961, on her 3rd 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. The code letter used for the time zone (Table 2) follows the time

TABLE 2

CODE FOR TIME ZONES

Longitude Exceeding	Up to but not exceeding	Time Zone (hr)	Code
07°30'E.	22°30'E.	-1	A
22°30'E.	37°30'E.	-2	B
37°30'E.	52°30'E.	-3	C
52°30'E.	67°30'E.	-4	D
67°30'E.	82°30'E.	-5	E
82°30'E.	97°30'E.	-6	F
97°30'E.	112°30'E.	-7	G
112°30'E.	127°30'E.	-8	H
127°30'E.	142°30'E.	-9	I
142°30'E.	157°30'E.	-10	K
157°30'E.	172°30'E.	-11	L
172°30'E.	180°	-12	M
180°	172°30'W.	+12	Y
172°30'W.	157°30'W.	+11	X
157°30'W.	142°30'W.	+10	W
142°30'W.	127°30'W.	+9	V
127°30'W.	112°30'W.	+8	U
112°30'W.	97°30'W.	+7	T
97°30'W.	82°30'W.	+6	S
82°30'W.	67°30'W.	+5	R
67°30'W.	52°30'W.	+4	Q
52°30'W.	37°30'W.	+3	P

Longitude Exceeding	Up to but not exceeding	Time Zone (hrs)	Code
37°30'W. -	22°30'W.	+2	O
22°30'W. -	07°30'W.	+1	N
07°30'W. -	07°30'E.	0	Z

LATITUDE LONGITUDE	Given in degrees and minutes
SONIC DEPTH	Given in metres, measured at standard sound velocity of 800 fm (1463 m) per second
AIR TEMP. WET DRY	Air temperatures are recorded from wet and dry bulb thermometers in °C
WIND DIR. SP.	Wind direction and speed are coded using Tables 8 and 9 in U.S. Hydrogr. Office (1955)
ANEM. HEIGHT	The average height of the anemometer above sea level, given in metres
CLOUD TYPE AMT.	Cloud type and amount are coded using Tables 2 and 3 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)
ATMOS. PRESSURE	Atmospheric pressure given in millibars
WIRE ANGLES CAST 1 CAST 2 CAST 3	Wire angles are measured at the surface and expressed in degrees for each cast
CAST	The cast number corresponding to the wire angles is shown

DEPTH	Actual sampling depth, given in metres
TEMP.	Sea temperatures recorded in °C
SALINITY	Given in parts per thousand
SIGMA-T	Sigma-t to 2 decimal places
OXYGEN	Oxygen is given in ml/l
OXYGEN % SAT.	Oxygen percentage saturation
INORG. P, TOTAL P, and NITRATE	Given in µg-atom/l

A blank indicates no data available

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/206/61	19/8/61	0300 L	4 30 S	163 40 E

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
2195	26.1	28.9	11	1	16		0	7	99	2	12	2	1009.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	29.33	34.826	21.84	4.20	99	0.16	0.21	0.7
1	35	29.33	34.827	21.84	4.16	98	0.15	0.29	1.0
1	67	29.29	34.830	21.86	4.24	99	0.16		0.4
1	88	29.07	35.338	22.32	4.19	98	0.29	0.31	0.0
1	133	27.36	35.526	23.02	3.20	73	0.59		3.2
1	177	23.62	35.959	24.50	3.08	66	0.65	0.76	2.3
1	267	12.32	34.967	26.52	1.94	33	1.48	1.48	13.2
1	445		34.665		2.05		1.87	1.92	20.3
1	622	6.82	34.578	27.13	2.25	34	1.87	1.99	23.4
1	800	5.42	34.543	27.29	2.39	35	2.13	2.17	25.0
1	978	4.45	34.561	27.41	2.34	33	2.23	2.02	26.0
1	1155		34.574		2.36		2.28	2.21	28.6
1	1333	3.42	34.586	27.54	2.68	37	2.18	2.09	26.0
1	1778	2.61	34.630	27.65	2.56	34	2.13	2.15	22.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/208/61	19/8/61	2000 L	2 00 S	165 42 E

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4114	26.1	27.2	09	1	16	8	6	7	99	2	11	2	1011.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	29.31	35.022	22.00	4.18	98	0.19	0.33	0.6
2	23	29.34	35.069	22.02	4.27	100	0.19	0.33	0.5
2	45	29.35	35.107	22.05	4.33	102	0.22	0.33	1.3
2	68	29.29	35.131	22.09	4.33	102	0.23	0.45	0.2
2	91	29.03	35.384	22.36	4.27	100	0.34		0.5
2	113	28.51	35.452	22.59	4.10	95	0.46		2.3
2	136	27.49	35.540	22.99	3.70	85	0.52		2.5
2	181	22.61	35.750	24.63	2.85	60	0.83	0.86	7.2
2	270	11.10	34.805	26.62	2.56	43	1.55	1.47	18.8
2	360	10.07	34.750	26.76	2.16	35	1.73		26.2
2	450	9.26	34.695	26.86	2.51	40	1.76	1.68	24.4
2	630	6.20	34.553	27.20	2.56	38	2.10	2.07	27.0
1	794	5.45	34.546	27.28	2.22	32	2.20	2.15	30.4
1	970	4.54	34.546	27.39	2.62	37	2.20	2.20	30.4
1	1148	3.86	34.561	27.47	2.45	34	2.26	2.22	24.5
1	1325	3.48	34.588	27.53	2.28	31	2.26	2.25	36.8
1	1765	2.56	34.625	27.65	2.56	34	2.33	2.26	34.6
1	2230	2.03	34.653	27.71	2.68	36	2.28		29.4
1	2650	1.77	34.672	27.75	2.91	38	2.23	2.18	31.0
1	3090	1.62	34.673	27.76	3.13	41	2.23	2.20	27.8
1	3535	1.49	34.683	27.78	3.42	45	2.16	1.99	30.0

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/211/61	22/8/61	0300 L	2 20 N	172 10 E

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4389	26.7	28.9	14	1	16	8	5	7	14	2	11	1	1009.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	29.06	34.543	21.72	4.16	97	0.15	0.41	0.4
2	22	29.06	34.528	21.71	4.22	98	0.12	0.44	0.4
2	43	29.05	34.573	21.75	4.33	101	0.15	0.45	0.4
2	65	28.90	34.584	21.81	4.44	103	0.15		0.0
2	86	28.67	34.702	21.97	4.27	99	0.17	0.45	0.0
2	108	26.82	34.799	22.65	3.82	86	0.28		0.0
2	130	25.53	34.896	23.12	3.45	76	0.39		1.7
2	173	19.78	34.938	24.79	3.22	64	0.63	0.93	
2	260	11.71	34.841	26.54	2.68	45	1.32	1.64	16.9
2	345	10.78	34.778	26.66	2.36	39	1.53		18.7
2	432	9.60	34.704	26.81	2.28	37	1.69	1.87	21.2
2	605	7.16	34.573	27.08	2.08	32	2.05	2.18	25.6
2	777	5.65	34.548	27.26	1.97	29	2.19	2.31	28.5
1	975	4.72	34.555	27.38	2.26	32	2.26	2.55	27.6
1	1150	4.01	34.575	27.47	2.08	29	2.30	2.49	27.7
1	1325	3.52	34.589	27.53	2.11	29	2.26	2.47	27.7
1	1770	2.56	34.628	27.65	2.28	31	2.28	2.49	28.6
1	2215	2.00	34.656	27.72	2.56	34	2.28	2.51	27.0
1	2655	1.73	34.670	27.75	2.71	36	2.20	2.33	25.0
1	3100	1.64	34.672	27.76	3.06	40	2.23	2.28	31.4
1	3540	1.50	34.679	27.77	3.35	44	2.07	2.26	31.6
1	3805	1.45	34.693	27.79	3.53	46	2.05	2.30	28.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/214/61	23/8/61	0500 M	4 43 N	176 05 E

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4389	25.6	27.2	09	1	16	8	7	7	99	0	11	2	1011.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	29.09	34.253	21.49	4.33	101	0.11	0.33	0.8
1	35	29.05	34.271	21.52	4.27	99	0.08	0.39	0.7
1	67	28.98	34.283	21.55	4.30	100	0.08		0.0
1	90	28.91	34.391	21.66	4.30	100	0.11	0.31	0.0
1	137	23.62	34.753	23.59	3.93	84	0.31		2.0
1	180		34.513		2.34		1.28	1.50	13.8
1	270	9.12	34.654	26.85	1.42	23	1.89	2.09	23.0
1	450	7.95	34.612	27.00	0.94	15	2.19	2.36	25.4
1	630	6.43	34.566	27.18	1.62	24	2.18	2.36	27.0
1	810	5.22	34.553	27.32	1.65	24	2.30	2.49	29.6
1	990	4.50	34.563	27.41	1.82	26	2.27	2.51	27.8
1	1170	3.96	34.575	27.47	1.99	28	2.28	2.52	22.0
1	1350	3.48	34.594	27.54	2.05	28	2.28	2.47	27.0
1	1800	2.56	34.630	27.65	2.22	30	2.20	2.38	24.4

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/217/61	24/8/61	0630 M	7 12 N	179 46 E

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5577	26.7	28.3	08	2	16	8	3	9	08	2	08	1	1011.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	28.80	34.290	21.62	4.30	100	0.23	0.43	0.8
2	23	28.80	34.281	21.61	4.27	99	0.18	0.38	0.7
2	45	28.80	34.352	21.67	4.39	102	0.20	0.37	0.0
2	68	28.80	34.425	21.72	4.33	100	0.19		0.0
2	90	26.00	34.722	22.85	4.33	96	0.21	0.39	0.0
2	112	23.20	34.824	23.76	3.42	72	0.52		3.8
2	135	20.50	34.825	24.52	3.45	70	0.60		4.4
2	180	12.20	34.670	26.31	2.22	38	1.37	1.47	15.6
2	227	10.20	34.511	26.56	0.51	8	2.18		23.2
2	273	9.50	34.638	26.77	1.40	22	2.05	2.05	23.0
2	362	8.61	34.644	26.92	1.20	19	2.09		23.2
2	452	7.72	34.619	27.04	0.97	15	2.28	2.38	24.4
2	632	6.83	34.575	27.13	0.83	12	2.28	2.44	27.0
2	812	5.55	34.554	27.28	0.97	14	2.49	2.54	26.4
1	973	4.68	34.563	27.39	1.17	17	2.52	2.47	27.5
1	1150	3.94	34.577	27.48	1.40	20	2.48	2.50	27.6
1	1327	3.42	34.593	27.54	1.60	22	2.49	2.67	31.8
1	1768	2.43	34.631	27.66	2.11	28	2.41	2.50	24.4
1	2210		34.658		2.34		2.31	2.30	33.2
1	2650	1.83	34.670	27.74	2.59	34	2.30	2.36	33.2
1	3090	1.62	34.674	27.76	2.96	39	2.26	2.29	33.2
1	3535	1.50	34.687	27.78	3.28	43	2.18	2.15	29.8
1	3975	1.39	34.696	27.80	3.70	48	2.07	2.24	27.8
1	4415	1.28	34.705	27.81	4.00	52	1.99	2.07	27.8
1	4860	1.28	34.708	27.81	4.22	55	1.99	1.98	29.4

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/220/61	24/8/61	0600 Y	9 30 N	177 20 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
6035	26.1	27.8	07	1	16	4	7	7	08	2	08	1	1011.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	28.35	34.584	21.99	4.31	99	0.23	0.39	0.0
1	35	28.30	34.566	21.99	4.26	98	0.23	0.41	0.1
1	67	27.42	34.714	22.39	4.37	99	0.23		0.0
1	89	25.64	34.708	22.95	4.40	97	0.23	0.48	0.0
1	134	16.35	34.598	25.38	3.53	66	0.87		7.7
1	180	11.84	34.547	26.29	0.96	16	2.02		29.8
1	268	10.05	34.682	26.71	0.37	6	2.23		32.6
1	450	8.43	34.626	26.94	0.54	8	2.37		28.8
1	630	6.85	34.558	27.11	0.71	11	2.58	2.63	35.6
1	810	5.57	34.603	27.31	2.20	32	1.78	1.83	25.5
1	990	4.74	34.662	27.46	0.51	7	2.32	2.36	31.8
1	1170	4.08	34.577	27.46	1.35	19	2.52	2.63	35.6
1	1350	3.50	34.579	27.52	1.41	19	2.57	2.63	33.6
1	1800	2.57	34.624	27.65	2.12	29	2.42	2.46	33.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/221/61	25/8/61	0530 Y	10 10 N	174 10 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5394	26.1	27.8	09	1	16	9	6	8	09	2	09	2	1014.2	35		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	27.51	34.861	22.47	4.20	96	0.22	0.34	0.0
2	21	27.51	34.880	22.49	3.95	90	0.19	0.37	0.0
2	41	27.41	34.882	22.52	4.15	94	0.21	0.36	0.0
2	63	27.33	34.888	22.55	4.23	96	0.21		0.0
2	84	27.28	34.880	22.56	4.12	94	0.27	0.44	0.0
2	105	25.78	34.822	22.99	4.17	92	0.39		0.0
2	126	20.42	34.747	24.48	3.89	78	0.52		2.7
2	169	13.68	34.420	25.82	2.88	51	1.16	1.25	11.8
2	212	11.76	34.581	26.33	0.56	9	2.03		23.4
2	253	11.04	34.702	26.56	0.06	1	2.20	2.24	25.8
2	339	10.12	34.691	26.71	0.06	1	2.22		28.2
2	423	9.05	34.632	26.84	0.17	3	2.29	2.36	27.2
2	593	7.46	34.560	27.03	0.17	3	2.50	2.60	30.4
2	762	5.93	34.523	27.21	0.45	7	2.54	2.60	30.6
1	802	5.58	34.530	27.26	0.42	6	2.56	2.64	29.8
1	950	4.88	34.536	27.34	0.71	10	2.56	2.63	29.8
1	1100		34.554		0.87		2.54	2.55	32.2
1	1460	3.08	34.599	27.58	1.41	19	2.48	2.52	32.0
1	1825	2.34	34.630	27.67	1.75	23	2.38	2.45	29.6
1	2190	2.05	34.650	27.71	2.06	27	2.38	2.32	28.1
1	2560	1.82	34.664	27.74	2.26	30	2.36		29.4
1	2925	1.72	34.672	27.75	2.52	33	2.26	2.22	26.8
1	3290	1.59	34.677	27.77	2.79	37	2.19	2.24	28.0
1	3655	1.48	34.690	27.78	3.06	40	2.10	2.14	25.6
1	3875	1.40	34.699	27.80	3.40	44	2.13	2.16	28.0

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/222/61	26/8/61	0630 X	13 20 N	171 05 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5486	23.9	26.7	07	2	16	9	7	7	07	2	07	2	1014.0	20		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	26.96	34.699	22.53	4.36	98	0.20	0.34	0.4
2	22	26.97	34.687	22.51					
2	44	26.96	34.691	22.52	4.46	101	0.20	0.28	0.0
2	66	26.85	34.658	22.53	4.46	100	0.20		0.0
2	88	26.05	34.598	22.74	4.57	101	0.21	0.21	0.0
2	110	25.69	34.599	22.85	4.57	101	0.23		0.0
2	133	24.80	35.074	23.48	4.46	97	0.23		0.0
2	178	21.32	34.666	24.17	4.15	85	0.33	0.34	0.6
2	221	16.59	34.446	25.20	3.72	69	0.63		4.2
2	265	11.95	34.564	26.28	1.55	26	1.72	1.68	22.1
2	352	9.72	34.577	26.69	0.51	8	2.22		31.5
2	442	8.65	34.558	26.85	0.51	8	2.33	2.32	30.5
2	620		34.524		0.79		2.46	2.55	35.6
2	798	5.80	34.542	27.24	0.79	12	2.60	2.60	28.5
1	965		34.558		0.96		2.60	2.60	33.0
1	1145		34.573		1.21		2.46	2.54	33.0
1	1320	3.64	34.616	27.54	1.41	20	2.46	2.49	31.6
1	1760	2.56	34.646	27.66	1.97	26	2.43	2.37	31.6
1	2200	2.00	34.664	27.72	2.26	30	2.27	2.39	31.0
1	2640	1.81	34.675	27.75	2.54	33	2.24	2.22	30.0
1	3080	1.60	34.683	27.77	2.82	37	2.22		26.4
1	3515		34.690		3.13		2.17	2.15	29.0
1	3955	1.43	34.700	27.80	3.47	45	2.15	2.07	
1	4395	1.32	34.706	27.81	3.85	50	2.02	2.07	
1	4750	1.32	34.707	27.81	4.05	53	2.02	2.03	23.0

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/223/61	27/8/61	0614 X	15 26 N	167 40 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5121	25.6	26.7	07	1	16	8	3	9	08	2	08	2	1014.5			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	26.49	34.711	22.68	4.37	98	0.10	0.34	0.9
2	23	26.51	34.705	22.67	4.40	99	0.10	0.34	0.8
2	46	26.45	34.701	22.69	4.43	99	0.10	0.39	0.0
2	67		34.695		4.46		0.10		0.0
2	90	25.93	34.666	22.82	4.54	101	0.17	0.43	0.0
2	111	25.10	34.650	23.07	4.57	100	0.17		0.0
2	133	24.56	34.676	23.25	4.54	98	0.16		0.0
2	178	20.61	34.955	24.58	4.06	82	0.31	0.46	1.3
2	220	16.99	34.735	25.33	4.03	76	0.47		2.4
2	265	12.22	34.267	26.00	3.33	57	1.10	1.28	12.2
2	351	9.20	34.352	26.60	1.35	21	2.02		22.8
2	440	8.68	34.502	26.80	1.24	19	2.22	2.35	25.4
2	614	6.85	34.498	27.07	0.71	11	2.45	2.51	28.4
2	790	5.75	34.494	27.21	0.82	12	2.61	2.60	32.4
1	962	4.76	34.523	27.35	0.85	12	2.55		36.5
1	1137	4.04	34.553	27.45	1.04	15	2.54	2.61	33.4
1	1312	3.42	34.571	27.53	1.27	17	2.52	2.63	38.2
1	1750	2.47	34.614	27.65	1.80	24	2.43	2.47	31.8
1	2185	2.04	34.643	27.70	2.28	30	2.34	2.38	33.8
1	2620	1.78	34.669	27.75	2.54	33	2.22	2.38	34.0
1	3060	1.62	34.675	27.76	2.88	38	2.25	2.25	31.4
1	3495	1.52	34.678	27.77	3.13	41	2.20	2.17	27.6
1	3930	1.46	34.685	27.78	3.40	44	2.12	2.16	31.4
1	4370	1.43	34.695	27.79	3.65	48	2.03	2.15	24.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/224/61	28/8/61	0628 X	17 13 N	164 11 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5486	25.0	27.2	07	2	16	4	3	7	07	2	08	2	1016.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	26.49	34.670	22.65	4.46	100	0.08	0.34	0.9
2	24	26.53	34.693	22.66	4.48	100	0.08	0.35	0.6
2	47	26.42	34.683	22.68	4.51	101	0.10		0.0
2	69	26.21	34.691	22.76	4.57	102	0.10	0.34	0.0
2	90	25.98	34.648	22.80	4.57	101	0.13		0.0
2	113	24.98	34.523	23.01	4.57	100	0.13	0.52	0.0
2	135	22.98	34.735	23.76	4.40	93	0.20		1.5
2	181	19.63	34.940	24.83	4.00	79	0.31	0.85	3.2
2	225	16.31	34.681	25.45	4.20	78	0.43		6.9
2	270	13.01	34.349	25.91	4.34	75	0.66		21.3
2	360	8.81	34.174	26.52	2.65	42	1.67	2.36	29.8
2	450	7.53	34.275	26.79	1.18	18	2.22	2.61	33.0
2	630	6.02	34.390	27.09	0.85	13	2.50	2.64	38.6
2	808	5.06	34.469	27.27	0.79	11	2.49	2.63	34.4
1	980		34.514		1.07		2.47	2.58	34.8
1	1155	3.80	34.547	27.47	1.18	16	2.33	2.53	34.4
1	1335	3.28	34.570	27.54	1.41	19	2.31	2.47	24.8
1	1780	2.38	34.610	27.65	1.86	25	2.18	2.38	25.0
1	2225	1.94	34.645	27.71	2.34	31	2.17	2.33	25.2
1	2670	1.70	34.666	27.75	2.62	34	2.06	2.26	36.2
1	3115	1.56	34.674	27.77	2.93	38	2.05	2.15	35.0
1	3585	1.50	34.679	27.77	3.23	42	2.06	2.15	35.0
1	4000	1.45	34.685	27.78	3.47	45	2.43	2.22	30.8
1	4445	1.43	34.699	27.80	3.71	48	2.47		

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/225/61	14/9/61	2308 X	13 20 N	160 50 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5669	24.4	26.7	07	1	16	9	2	7	99	0	09	1	1014.7	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	27.05	34.544	22.38	4.48	101	0.21	0.35	0.6
1	23		34.566				0.21		
1	45	27.02	34.538	22.39	4.42	100	0.21	0.29	0.6
1	68		34.698				0.21		
1	90	25.72	34.689	22.91	4.66	103	0.21	0.33	0.3
1	133		34.932		4.27		0.35	0.36	0.0
1	177	12.57	34.291	25.95	2.77	47	1.27	1.38	15.0
1	265	9.48	34.367	26.56	1.42	23	1.97	2.04	26.8
1	353	8.45	34.494	26.83	0.62	10	2.24	2.26	28.8
1	442	7.71	34.548	26.98	0.72	11	2.31	2.36	33.0
1	617	6.55	34.530	27.13	0.70	10	2.49	2.55	29.8
1	793	5.37	34.530	27.28	0.88	13	2.52	2.53	34.0
1	968	4.64	34.547	27.38	0.98	14	2.52	2.48	36.2
1	1144	4.02	34.564	27.46	1.27	18	2.48	2.48	29.0
1	1320	3.53	34.576	27.52	1.51	21	2.43	2.53	39.6
1	1760	2.48	34.628	27.66	2.00	27	2.31	2.36	33.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/226/61	15/9/61	1612 X	10 02 N	161 58 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4938	25.6	27.8	07	1	16	8	7	7	07	2	06	0	1010.3	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	27.65	34.450	22.12	4.46	102	0.14	0.41	0.0
1	23		34.457				0.18		
1	45	27.57	34.461	22.15	4.40	100	0.13	0.38	0.0
1	68		34.589				0.64		
1	90	15.46	34.482	25.49	2.46	45	1.11	1.30	12.7
1	135	12.20	34.669	26.31	0.30	5	2.03	2.15	25.6
1	180	10.90	34.660	26.55	0.33	5	2.06	2.24	24.6
1	270	10.01	34.697	26.73	0.31	5	2.14	2.20	25.5
1	358	9.29	34.660	26.82	0.39	6	2.18	2.30	26.0
1	448	8.43	34.623	26.93	0.47	7	2.25	2.40	24.8
1	627	6.53	34.534	27.14	0.29	4	2.56	2.59	26.8
1	805	5.39	34.534	27.28	0.48	7	2.58	2.67	26.0
1	985	4.44	34.558	27.41	1.10	16	2.49	2.53	23.6
1	1162	3.84	34.574	27.49	1.33	19	2.46	2.57	28.0
1	1340	3.37	34.596	27.55	1.56	21	2.38	2.45	29.2
1	1790	2.42	34.632	27.66	2.04	27	2.31	2.43	29.2

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/228/61	16/9/61	1238 X	6 10 N	163 17 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4572	24.4	26.1	17	1	16	8	7	7	17	2	15	1	1012.4	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	28.45	34.230	21.69	4.39	101	0.14	0.36	0.0
1	23		34.413				0.14		
1	45	28.77	34.651	21.90	4.33	101	0.13	0.32	0.0
1	68		34.814				0.15		
1	90	28.51	34.927	22.19	4.32	100	0.14	0.35	1.4
1	134	26.47	35.075	22.96	3.82	86	0.41	0.57	5.4
1	178	17.95	34.700	25.07	3.03	58	0.78	0.92	13.7
1	267	10.11	34.696	26.72	0.46	7	2.10	2.19	36.4
1	355	9.08	34.657	26.86	1.10	17	2.02	2.17	37.0
1	445	8.65	34.640	26.91	1.09	17	2.04	2.27	36.4
1	620	7.12	34.575	27.09	0.75	11	2.36	2.48	41.0
1	798	5.65	34.551	27.26	0.95	14	2.45	2.61	38.0
1	975	4.71	34.563	27.38	1.21	17	2.47	2.58	51.0
1	1152	4.04	34.578	27.47	1.52	21	2.45	2.51	44.0
1	1330	3.51	34.596	27.54	1.77	24	2.39	2.51	46.8
1	1773	2.72	34.623	27.63	1.97	27	2.33	2.46	50.0

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/230/61	17/9/61	0735 X	2 55 N	164 39 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5121	24.4	26.7	16	1	16	8	3	7	15	2	15	2	1011.6	25		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	26.95	35.073	22.81	4.52	102	0.26	0.51	2.1
1	20		35.104				0.30		
1	40	26.96	35.073	22.81	4.53	102	0.28	0.56	1.9
1	60		35.076				0.36		
1	80	26.57	35.061	22.92	4.21	95	0.32	0.61	3.4
1	120	26.40	35.151	23.04	4.26	95	0.36	0.61	2.3
1	158	23.17	34.939	23.86	3.30	70	0.62	0.83	7.8
1	235	11.07	34.790	26.62	2.35	39	1.49	1.67	19.6
1	314	10.79	34.770	26.65	1.75	29	1.65	1.80	23.2
1	392	10.20	34.730	26.73	1.27	21	1.82	2.00	25.4
1	550	8.58	34.661	26.94	1.01	16	2.08	2.24	26.8
1	705	6.56	34.570	27.16	1.26	19	2.27	2.38	29.0
1	862	5.34	34.558	27.31	1.61	23	2.27	2.48	26.8
1	1020	4.63	34.560	27.39	1.96	28	2.30	2.43	28.6
1	1175	3.94	34.581	27.48	1.88	26	2.32	2.46	27.4
1	1565	2.88	34.618	27.61	2.09	28	2.24	2.42	26.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/232/61	18/9/61	0137 X	0 32 S	165 35 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4755	24.4	26.7	09	1	16	8	2	8	09	2	12	1	1009.6	25		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	26.93	35.351	23.03	4.40	100	0.36	0.51	3.3
1	21		35.354				0.42		
1	43	26.88	35.351	23.04	4.34	98	0.42	0.59	4.1
1	65		35.376				0.44		
1	86	26.88	35.398	23.08	4.22	96	0.35	0.60	4.2
1	128	25.10	35.660	23.83	3.25	72	0.63	0.75	7.1
1	172	19.60	35.514	25.28	2.70	54	0.95	1.09	12.7
1	258	12.35	34.901	26.46	2.74	47	1.38	1.49	20.4
1	343	11.19	34.812	26.61	1.44	24	1.79	1.92	30.6
1	428	10.28	34.762	26.74	1.24	20	1.93	2.06	34.6
1	600	7.17	34.602	27.10	1.22	18	2.31	2.45	39.2
1	770	5.91	34.556	27.23	1.80	26	2.29	2.29	41.0
1	942	4.87	34.558	27.36	1.90	27	2.32	2.41	38.8
1	1113	4.13	34.568	27.45	2.05	29	2.33	2.38	42.8
1	1285	3.55	34.595	27.53	1.99	27	2.40	2.47	44.4
1	1710	2.65	34.630	27.64	2.24	30	2.32	2.42	51.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/234/61	18/9/61	1952 X	3 54 S	166 50 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5486	25.6	27.8	09	1	16	8	3	7	10	2	10	1	1010.9	20		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	27.94	35.412	22.75	4.41	102	0.41	0.55	2.7
1	21		35.425				0.46		
1	42	27.93	35.419	22.75	4.40	101	0.39	0.57	3.3
1	63		35.453				0.46		
1	84	27.85	35.447	22.80	4.33	100	0.37	0.52	2.9
1	127	27.71	35.517	22.90	4.21	97	0.50	0.55	1.8
1	170	24.72	36.181	24.34	3.51	77	0.57	0.65	4.8
1	255	12.52	34.963	26.48	1.94	33	1.62	1.62	20.4
1	340	9.49	34.722	26.84	2.07	33	1.82	1.83	23.8
1	425	8.83	34.675	26.91	1.89	30	1.98	1.99	23.4
1	597	7.04	34.593	27.11	1.62	24	2.26	2.31	27.2
1	767	5.62	34.558	27.27	1.60	23	2.42	2.34	25.2
1	938	4.76	34.558	27.37	1.88	27	2.43	2.38	30.4
1	1110	4.16	34.564	27.44	2.24	31	2.39	2.26	24.6
1	1280	3.69	34.579	27.50	2.38	33	2.35	2.39	22.6
1	1707	2.51	34.632	27.66	2.54	34	2.33	2.37	27.0

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/236/61	19/9/61	1335 X	7 12 S	168 00 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4206	25.6	28.3	07	2	16	8	2	7	08	2	08	2	1011.7	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	28.41	35.475	22.64	4.46	104	0.41	0.42	2.0
1	20		35.488				0.38		
1	40	28.29	35.476	22.68	4.40	102	0.35	0.53	2.7
1	64		35.488				0.40		
1	88	28.17	35.469	22.71	4.34	100	0.35	0.53	3.0
1	132	26.66	36.196	23.75	3.87	88	0.45	0.45	1.4
1	177	23.78	36.215	24.65	3.55	77	0.56	0.64	4.1
1	264	16.15	35.264	25.93	2.56	48	1.23	1.19	12.1
1	352	10.58	34.776	26.70	1.86	31	1.87	1.81	34.6
1	440	8.64	34.662	26.93	2.09	33	1.95	1.93	33.4
1	615	6.57	34.561	27.15	2.48	37	2.07	2.12	28.2
1	790	5.39	34.530	27.28	2.46	36	2.27	2.21	36.6
1	965	4.54	34.552	27.39	2.22	31	2.32	2.34	47.0
1	1142	3.98	34.562	27.46	2.42	34	2.41	2.44	39.5
1	1317	3.44	34.581	27.53	2.67	37	2.36	2.29	38.4
1	1755	2.47	34.628	27.66	2.87	38	2.29	2.26	38.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/238/61	20/9/61	0907 X	10 58 S	169 22 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
4572	25.6	28.9	07	1	16	8	2	8	07	2	08	1	1012.6	10		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	28.04	35.625	22.87	4.45	103	0.26	0.45	0.0
1	22		35.648				0.26		
1	44	28.06	35.631	22.87	4.38	101	0.25	0.42	1.2
1	67		35.646				0.27		
1	89	27.98	35.625	22.89	4.33	100	0.26	0.44	0.8
1	135	25.98	36.188	23.96	3.96	89	0.42	0.56	0.0
1	180	23.65	36.179	24.66	3.54	76	0.57	0.67	4.5
1	268	18.34	35.522	25.61	3.29	64	0.85	0.96	10.0
1	358	12.33	34.867	26.44	2.37	41	1.55	1.61	14.8
1	448	8.70	34.630	26.90	2.48	39	1.83	1.85	22.4
1	627	6.35	34.542	27.17	2.68	40	2.06	2.16	27.2
1	807	5.28	34.525	27.29	2.61	38	2.16	2.29	21.5
1	987	4.51	34.536	27.38	2.67	38	2.24	2.34	23.8
1	1167	3.86	34.554	27.47	2.74	38	2.25	2.33	30.6
1	1345	3.43	34.572	27.52	2.82	39	2.27	2.34	24.6
1	1795	2.41	34.630	27.66	3.15	42	2.20	2.23	25.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/242/61	23/9/61	2032 X	16 52 S	172 08 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
7681	24.4	26.7	12	1	16	8	4	8	12	2	13	2	1012.4	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	26.72	35.343	23.09	4.50	102	0.14	0.38	0.0
1	23		35.351				0.12		
1	45	26.20	35.335	23.24	4.50	101	0.12	0.35	0.0
1	68		35.354				0.14		
1	90	25.85	35.350	23.36	4.62	103	0.13	0.40	0.0
1	135	24.33	35.465	23.92	3.89	84	0.10	0.26	1.8
1	180	22.77	35.768	24.60	3.79	80	0.25	0.54	1.8
1	271	19.12	35.631	25.49	3.57	71	0.46	0.62	5.0
1	361	15.26	35.134	26.04	3.67	67	0.78	0.96	10.3
1	452	11.46	34.764	26.53	4.28	72	1.09	1.26	15.5
1	632	6.54	34.403	27.03	3.94	59	1.64	1.72	26.3
2	802	4.97	34.389	27.22	3.54	51	1.86	2.05	30.3
2	980	3.98	34.451	27.37	3.41	48	2.00	2.15	46.3
2	1158	3.30	34.524	27.50	3.23	44	2.07	2.15	45.6
2	1337	2.99	34.569	27.56	3.23	44	2.17	2.19	43.4
2	1781	2.55	34.613	27.64	3.13	42	2.10	2.17	47.2
2	2227	2.17	34.650	27.70	3.20	43	2.08		48.0
3	2626		34.675		3.29		2.13	2.10	41.2
3	3070	1.63	34.685	27.77	3.82	50	2.10		47.0
3	3515	1.42	34.709	27.80	4.46	58	1.99	1.95	43.8
3	3958	1.18	34.725	27.83	4.52	58	1.91		37.4
3	4400	1.12	34.721	27.83	4.59	59	1.91	1.88	37.4
3	4848	1.06	34.721	27.84	4.60	59	1.93		35.4
3	5292	1.12	34.717	27.83	4.59	59	2.00		31.8
3	5835	1.14	34.716	27.83	4.59	59	1.89		33.4
3	6180	1.21	34.717	27.83	4.62	60	1.89	1.96	39.6
3	6445	1.24	34.717	27.82			1.85		40.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/244/61	24/9/61	1737 X	20 05 S	171 19 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5486	22.2	24.4	18	2	16	8	6	8	17	2	17	1	1012.6	15	15	

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	24.72	35.542	23.86	4.70	103	0.14	0.32	0.0
2	23		35.550				0.14		
2	45	24.71	35.548	23.86	4.61	101	0.14	0.30	0.2
2	68		35.585				0.14		
2	90	24.23	35.563	24.02	4.63	100	0.14	0.30	0.7
2	134	24.00	35.578	24.10	4.63	100	0.15	0.29	0.0
2	179	22.09	35.657	24.71	4.16	87	0.21	0.39	0.0
2	267	19.00	35.561	25.47	3.99	79	0.39	0.55	4.5
2	355	16.49	35.406	25.96	4.33	81	0.42	0.59	4.0
2	444	12.01	34.912	26.54	4.27	73	0.89	0.96	8.6
2	620	7.01	34.427	26.99	4.54	68	1.49	1.63	24.8
2	795	5.39	34.376	27.16	4.04	58	1.78	1.93	30.4
2	972	4.27	34.413	27.31	4.36	61	1.94	2.05	31.4
1	2212	2.01	34.664	27.72	3.22	43	2.10		33.4
1	2652	1.86	34.672	27.74	3.24	43	2.14	2.19	36.6
1	3095	1.66	34.684	27.77	3.48	46	2.11		40.6
1	3538	1.58	34.695	27.78	3.71	49	2.06	2.11	32.4
1	3980	1.29	34.725	27.83	4.49	58	1.91		32.2
1	4423	1.07	34.720	27.84	4.60	59	1.84	1.93	28.4
1	4865	1.05	34.715	27.83	4.64	60	1.88		28.4

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/246/61	25/9/61	1408 X	23 25 S	170 35 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
6035	18.9	22.8	19	2	16	8	2	8	19	2	21	2	1013.0	10		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	22.34	35.429	24.47	4.82	101	0.14	0.19	0.0
2	23		35.440				0.13		
2	46	22.05	35.455	24.57	4.81	100	0.14		0.9
2	69		35.579				0.19		
2	91	21.19	35.589	24.91	4.61	95	0.21	0.23	0.8
2	135	19.79	35.643	25.33	4.21	84	0.31	0.43	2.7
2	182	18.83	35.630	25.56	4.32	85	0.32	0.40	2.5
2	270	16.55	35.478	26.01	4.41	83	0.43	0.44	3.9
2	360	14.49	35.264	26.30	4.37	79	0.62	0.62	5.4
2	450	12.12	35.002	26.59	4.37	75	0.84	0.85	9.5
2	630	7.67	34.494	26.95	4.61	71	1.39	1.33	11.6
2	810	5.82	34.354	27.09	4.70	69	1.59	1.65	22.8
2	988	4.54	34.377	27.26	4.17	59	1.87	1.89	24.8
2	1168	3.55	34.445	27.41	3.73	51	1.98	2.05	28.4
2	1350	3.03	34.523	27.52	3.52	48	2.14	2.05	29.4
2	1800	2.44	34.617	27.65	3.26	44	2.12	2.17	30.6
1	2220	2.12	34.644	27.70	3.19	42	2.16		27.2
1	2662	1.94	34.666	27.73	3.18	42	2.15	2.14	28.0
1	3105	1.68	34.681	27.76	3.47	46	2.09		30.8
1	3550	1.50	34.715	27.80	4.11	54	1.96	1.93	22.4
1	3990	1.24	34.721	27.83	4.49	58	1.88		31.0
1	4435	1.08	34.714	27.83	4.61	59	1.88	1.93	30.8
1	4875	1.05	34.714	27.83	4.60	59	1.86		30.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/248/61	26/9/61	1004 X	26 42 S	169 33 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5486	16.7	21.1	16		16	8	7	8	00	0	22	2	1018.8			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	19.44	35.596	25.38	5.10	101	0.13	0.13	0.0
2	23		35.619				0.14		
2	45	19.30	35.615	25.43	5.06	100	0.14	0.16	0.5
2	68		35.630				0.13		
2	90	18.69	35.623	25.59	5.06	99	0.14	0.13	0.8
2	135	17.74	35.593	25.81	5.03	97	0.22	0.21	0.2
2	180	16.64	35.488	25.99	4.57	86	0.33	0.34	2.7
2	270	14.96	35.339	26.26	4.46	81	0.53	0.52	4.5
2	360	12.91	35.075	26.49	4.42	77	0.72	0.69	7.8
2	450	11.12	34.902	26.70	4.49	75	0.93	0.87	10.2
2	640	7.84	34.536	26.95	4.66	72	1.34	1.26	17.2
2	810	6.27	34.393	27.06	4.79	71	1.48	1.45	21.0
2	990	5.06	34.360	27.18	4.41	63	1.68	1.65	26.2
2	1170	3.88	34.407	27.35	4.00	56	1.88	1.84	27.6
2	1350	3.19	34.485	27.48	3.79	52	1.91	1.86	28.8
2	1795	2.46	34.606	27.64	3.35	45	1.99	1.94	29.4
1	2205	2.16	34.639	27.69	3.22	43	2.07		28.0
1	2650	1.97	34.663	27.73	3.28	43	2.10	2.07	26.6
1	3090	1.75	34.681	27.76	3.51	46	2.07		26.6
1	3535	1.58	34.716	27.80	4.14	54	1.88	1.86	22.6
1	3975	1.25	34.721	27.83	4.52	59	1.84		24.8
1	4420	1.05	34.715	27.83	4.62	60	1.84		23.4
1	4860	1.06	34.607	27.75	4.67	60	1.74		22.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/250/61	27/9/61	0536 X	29 50 S	168 30 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5394	13.3	16.7	35		16	8	8	7	35	2	21	2	1018.8	15		

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	17.75	35.592	25.80	5.29	102	0.05	0.34	0.4
2	23		35.607				0.05		
2	45	17.70	35.597	25.82	5.27	101	0.05	0.33	0.4
2	68		35.546				0.11		
2	90	16.67	35.527	26.01	5.28	99	0.08	0.33	0.5
2	135	15.68	35.439	26.18	4.80	89	0.26	0.52	2.5
2	180	14.57	35.321	26.33	4.55	82	0.43	0.69	4.7
2	269	12.84	35.112	26.53	4.45	77	0.62	0.83	7.4
2	358	11.05	34.888	26.70	4.43	74	0.83	1.01	10.9
2	448	9.40	34.693	26.83	4.50	72	0.98	1.27	14.5
2	628	7.26	34.472	26.99	4.84	73	1.26	1.48	15.9
2	805	6.13	34.378	27.07	4.80	71	1.37	1.57	24.8
2	987	5.01	34.364	27.19	4.44	64	1.59	1.84	20.6
2	1166	4.04	34.399	27.33	4.12	58	1.79	1.93	27.0
2	1345	3.24	34.475	27.47	3.81	52	1.86	2.05	25.4
2	1792	2.45	34.603	27.64	3.39	45	1.95	2.16	25.4
1	2223	2.09	34.646	27.70	3.25	43	1.98		28.0
1	2665	1.94	34.664	27.73	3.28	43	2.03	2.17	24.8
1	3110	1.73	34.687	27.76	3.53	46	1.94		22.8
1	3553	1.59	34.717	27.80	4.17	55	1.78	1.90	23.6
1	3996	1.24	34.720	27.83	4.55	59	1.76		30.8
1	4440	1.06	34.715	27.83	4.61	59	1.76	1.96	26.4
1	4882	1.05	34.674	27.80	4.66	60	1.74		28.8

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/252/61	27/9/61	2248 X	31 17 S	171 34 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5907	16.1	18.3	03	1	16	8	5	7	03	2	00	2	1015.3			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	16.17	35.504	26.11	5.47	102	0.07	0.43	0.7
2	23		35.512				0.08		
2	45	16.09	35.508	26.14	5.47	102	0.07	0.36	0.8
2	69		35.506				0.07		
2	88	15.98	35.510	26.16	5.38	100	0.12	0.43	2.2
2	132	15.69	35.475	26.20	5.07	94	0.17	0.49	2.6
2	175	14.39	35.320	26.37	4.61	83	0.35	0.71	6.2
2	261	12.88	35.148	26.55	4.63	80	0.55	0.83	9.0
2	350	11.38	34.937	26.68	4.45	75	0.74	1.05	11.7
2	437	9.90	34.762	26.80	4.39	71	0.94	1.17	13.3
2	610	7.88	34.548	26.96	4.64	72	1.14	1.47	21.4
2	785	6.62	34.442	27.05	4.60	69	1.34	1.62	23.0
2	960	5.37	34.391	27.17	4.48	65	1.48	1.84	26.2
2	1135	4.27	34.404	27.31	4.16	58	1.65	1.93	28.6
2	1310	3.45	34.462	27.44	3.87	53	1.81	2.14	27.8
2	1725	2.55	34.597	27.63	3.42	46	1.86	2.09	30.6
1	2155	2.22	34.636	27.68	3.29	44	1.93		26.6
1	2585	2.02	34.661	27.72	3.26	43	1.92	2.17	32.8
1	3015	1.78	34.686	27.76	3.55	47	1.91		29.4
1	3445	1.56	34.722	27.80	4.21	55	1.75	1.98	32.0
1	3875	1.26	34.725	27.83	4.50	58	1.76		26.6
1	4305	1.08	34.719	27.84	4.59	59	1.78	1.96	27.4
1	4530	1.04	34.715	27.84	4.59	59	1.71		27.2

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/254/61	28/9/61	1603 Y	32 38 S	174 30 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
5852	16.1	17.8	30	2	16	8	1	9	31	2	30	1	1007.1			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	16.32	35.488	26.07	5.44	102	0.13	0.33	2.2
2	23		35.520				0.16		
2	45	16.15	35.523	26.13	5.36	100	0.16	0.34	2.7
2	68		35.464				0.17		
2	90	16.11	35.512	26.13	5.39	100	0.19	0.36	2.4
2	135	16.02	35.510	26.15	5.34	99	0.19	0.33	1.0
2	180	15.39	35.416	26.22	4.87	89	0.33	0.49	0.7
2	265	13.29	35.187	26.50	4.61	81	0.61	0.78	9.5
2	355	11.90	35.001	26.63	4.56	77	0.75	0.91	9.6
2	443	10.34	34.808	26.76	4.45	73	0.96	1.12	15.9
2	622	8.17	34.562	26.92	4.51	70	1.24	1.34	15.5
2	800	6.71	34.434	27.03	4.64	69	1.40	1.58	12.4
2	976	5.50	34.391	27.16	4.39	64	1.60	1.83	10.8
2	1154	4.34	34.399	27.29	4.11	58	1.77	1.90	17.4
2	1331	3.66	34.444	27.40	3.90	54	1.87	1.94	25.4
2	1774	2.60	34.576	27.60	3.41	46	1.97	2.08	33.2
1	2215	2.23	34.615	27.67	3.29	44	2.02		14.6
1	2655	2.03	34.640	27.70	3.30	44	2.04	2.09	15.0
1	3100	1.76	34.721	27.79	3.83	50	1.89		16.8
1	3540	1.52	34.708	27.80	4.41	58	1.78	1.86	14.5
1	3985	1.20	34.733	27.84	4.57	59	1.78		14.4
1	4425	1.06	34.729	27.84	4.65	60	1.79	1.88	13.4
1	4865	1.04	34.719	27.84	4.66	60	1.84		29.6

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/256/61	29/9/61	1217 Y	33 52 S	177 57 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
7498	10.6	12.8	22	2	16	8	6	7	23	2	23	2	1013.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
2	0	15.38	35.399	26.21	5.63	103	0.23	0.32	1.5
2	23		35.441				0.23		
2	45	15.32	35.412	26.24	5.65	103	0.23	0.36	4.1
2	68		35.421				0.28		
2	90	14.49	35.396	26.41	5.05	91	0.41	0.53	7.2
2	135	13.55	35.243	26.49	4.57	81	0.65	0.70	6.4
2	180	13.23	35.217	26.53	4.76	83	0.65	0.72	9.7
2	265	11.89	35.031	26.65	4.64	79	0.81	0.88	15.7
2	355	10.65	34.871	26.76	4.47	74	0.97	1.13	18.4
2	445	9.48	34.743	26.86	4.44	71	1.18	1.26	21.6
2	620	7.80	34.563	26.98	4.54	70	1.33	1.49	21.4
2	800	6.51	34.475	27.09	4.48	67	1.47	1.65	41.3
2	975	5.33	34.445	27.22	4.26	62	1.71	1.80	38.4
2	1155	4.37	34.454	27.33	4.02	57	1.83	1.89	45.5
2	1330	3.53	34.503	27.46	3.77	52	1.93	2.14	38.8
2	1775	2.61	34.603	27.62	3.41	46	1.99	2.09	38.0
1	2165	2.31	34.645	27.68	3.33	44	1.96		45.4
1	2600	2.03	34.669	27.73	3.40	45	1.96	2.14	38.8
1	3035		34.728		4.16		1.78		
1	3465	1.43	34.737	27.83	4.45	58	1.81	1.84	24.6
1	3900	1.12	34.728	27.84	4.56	59	1.79		41.6
1	4335	1.07	34.721	27.84	4.58	59	1.84	1.89	35.4
1	4765	1.03	34.719	27.84	4.62	60	1.78		36.8
1	5200	1.09	34.718	27.83	4.64	60	1.78	1.87	35.6
1	5630	1.13	34.717	27.83	4.64	60	1.78		42.0
1	6065	1.18	34.717	27.83	4.64	60	1.78	1.96	35.0
1	6495	1.23	34.718	27.82	4.65	60	1.78		

STATION	DATE	TIME	LATITUDE	LONGITUDE
G3/258/61	1/10/61	0537 Y	34 57 S	179 12 W

SONIC DEPTH	AIR TEMP. WET	AIR TEMP. DRY	WIND DIR.	WIND SP.	ANEM. HEIGHT	CLOUD TYPE	CLOUD AMT.	VIS.	SEA DIR.	SEA AMT.	SWELL DIR.	SWELL AMT.	ATMOS. PRESSURE	WIRE ANGLES CAST1	CAST2	CAST3
2286	11.7	13.9	18	2	16	8	3	7	18	3			1017.0			

CAST	DEPTH	TEMP.	SALINITY	SIGMA-T	OXYGEN	OXYGEN % SAT.	INORG. P	TOTAL P	NITRATE
1	0	14.86	35.442	26.36	5.63	102	0.31	0.35	3.0
1	22		35.456				0.33		
1	43	14.87	35.448	26.36	5.59	101	0.32	0.38	3.0
1	66		35.379				0.47		
1	88	14.36	35.382	26.42	5.32	95	0.44	0.46	4.7
1	132	13.57	35.278	26.51	5.10	90	0.56	0.53	6.7
1	175	13.29	35.229	26.53	5.04	88	0.58	0.58	7.2
1	263	12.15	35.067	26.63	4.57	78	0.85	0.85	10.6
1	351	11.39	34.965	26.70	4.50	75	0.93	0.90	11.7
1	440	10.27	34.833	26.79	4.39	72	1.06	1.10	14.4
1	615	8.46	34.661	26.96	4.38	69	1.32	1.38	17.3
1	790	6.94	34.535	27.08	4.35	66	1.52	1.50	25.5
1	967	5.93	34.478	27.17	4.30	63	1.61	1.73	24.4
1	1143	4.90	34.488	27.30	4.06	58	1.86	1.87	29.2
1	1318	3.80	34.524	27.45	3.81	53	1.99	1.96	29.8
1	1760	2.61	34.614	27.63	3.55	48	2.02	2.02	24.6

DATA

PART 2

PRIMARY PRODUCTION

EXPLANATION OF HEADINGS

Part 2 — Primary Production

STATION	Gives the station identification. For example, G3/204/61 signifies the 204th station worked by Gascoyne in 1961, on her 3rd cruise for that year
DATE	Given as day/month/year
TIME	Given in Zone Time (Table 2, p. 12)
LATITUDE LONGITUDE	Given in degrees and minutes
INCUBATION METHOD	ARTIFICIAL CONSTANT LIGHT: At 1100 ft candles for 4 hours
ACTIVITY CPM	Activity of the ^{14}C stock used in counts per minute
BACKGROUND	Activity in counts per minute
DEPTH	Depth of sampling in metres
LIGHT	The counts per minute of the filter from the clear bottle
DARK	The counts per minute of the filter from the dark bottle. If this is more than 50 and also more than 10% of the LIGHT count it is assumed to be aberrant and the symbol "B" is placed after it
DARK USED	Usually the same as DARK. However, if this is aberrant or not done, the mean of the other DARK counts at that station which are not aberrant is used, and the symbol "E" is placed after it. If all the other DARK counts are aberrant, an arbitrary count of 20 is used and the symbol "F" is placed after it
NETT	LIGHT minus DARK USED. If this is negative it is assumed to be equal to zero for further calculations and the symbol "G" is placed after it

INC. PER.	Incubation period
PRODUCTION A	The calculated rate of production at the depth sampled, per hour of incubation
PRODUCTION B	The integrated rate of production per day under one square metre of sea surface from the surface to the depth given. The production per day is assumed to equal 10 times the hourly production

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/204/61	18/ 8/61	1500 L	06 13 S	162 18 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	42	7	7	35	04.00	00.02	00.00
25	38	5	5	33	04.25	00.02	00.01
50	31	7	7	24	04.33	00.02	00.01
75	28	5	5	23	04.50	00.01	00.01
100	12	4	4	8	04.66	00.00	00.02
150	9	2	2	7	04.75	00.00	00.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/206/61	19/ 8/61	0300 L	04 30 S	163 40 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	36	5	5	31	04.00	00.02	00.00
25	28	5	5	23	04.00	00.02	00.01
50	22	4	4	18	04.25	00.01	00.01
75	12	6	6	6	04.25	00.00	00.01
100	19	8	8	11	04.33	00.01	00.01
150	10	6	6	4	04.33	00.00	00.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/207/61	19/ 8/61	1300 L	03 06 S	164 45 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	136	5	5	131	04.00	00.09	00.00
25	44	9	9	35	04.00	00.02	00.01
50	80	4	4	76	04.25	00.05	00.02
75	7	4	4	3	04.25	00.00	00.03
100	23	3	3	20	04.50	00.01	00.03
150	8	4	4	4	04.50	00.00	00.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/208/61	19/ 8/61	2000 L	02 00 S	165 42 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	18	4	4	14	03.75	00.01	00.00
25	10	4	4	6	03.75	00.00	00.00
50	15	6	6	9	04.00	00.01	00.00
75	11	2	2	9	04.00	00.01	00.01
100	20	6	6	14	04.00	00.01	00.01
150	12	5	5	7	04.00	00.00	00.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/209/61	21/ 8/61	0800 L	00 49 N	169 17 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	529	113 B	20 F	509	04.00	00.36	00.00
25	507	84 B	20 F	487	04.00	00.34	00.09
50	431	78 B	20 F	411	04.00	00.29	00.17
75	344	95 B	20 F	324	04.25	00.22	00.23
100	459	413 B	20 F	439	04.25	00.29	00.29
150	206	249 B	20 F	186	04.25	00.12	00.40

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/211/61	22/ 8/61	0300 L	02 20 N	172 10 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	258	140 B	20 F	238	04.00	00.17	00.00
25	303	187 B	20 F	283	04.00	00.20	00.05
50	262	187 B	20 F	242	04.00	00.17	00.09
75	285	200 B	20 F	265	04.25	00.18	00.14
100	225	211 B	20 F	205	04.25	00.14	00.18
150	245	259 B	20 F	225	04.25	00.15	00.25

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/212/61	22/ 8/61	1300 M	03 10 N	173 50 E

INCUBATION METHOD.	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	225	148 B	20 F	205	04.00	00.15	00.00
25	334	223 B	20 F	314	04.00	00.22	00.05
50	340	189 B	20 F	320	04.00	00.23	00.10
75	397	367 B	20 F	377	04.25	00.25	00.16
100	253	281 B	20 F	233	04.25	00.16	00.21
150	585	668 B	20 F	565	04.25	00.38	00.35

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/209/61	21/ 8/61	2100 M	04 10 N	175 10 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	60	39	39	21	04.00	00.01	00.00
25	95	127 B	39 E	56	04.25	00.04	00.01
50	112	155 B	39 E	73	04.25	00.05	00.02
75	134	168 B	39 E	95	04.25	00.06	00.03
100	62	68 B	39 E	23	04.25	00.02	00.04
150	143	204 B	39 E	104	04.25	00.07	00.06

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/214/61	23/ 8/61	0500 M	04 43 N	176 05 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	169	58 B	20 F	149	04.25	00.10	00.00
25	165	82 B	20 F	145	04.25	00.10	00.03
50	169	78 B	20 F	149	04.33	00.10	00.05
75	198	98 B	20 F	178	04.45	00.11	C0.08
100	129	60 B	20 F	109	04.45	00.07	00.10
150	125	55 B	20 F	105	04.45	00.07	00.13

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/209/61	21/ 8/61	1930 M	06 00 N	178 00 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH	LIGHT	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	143	69 B	20 F	123	04.00	00.09	00.00
25	135	102 B	20 F	115	04.00	00.08	00.02
50	116	188 B	20 F	96	04.00	00.07	00.04
75	118	190 B	20 F	98	04.17	00.07	00.06
100	85	123 B	20 F	65	04.17	00.04	00.07
150	167	145 B	20 F	147	04.17	00.10	00.11

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/217/61	24/ 8/61	0630 M	07 12 N	179 46 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	295	207 B	18 E	277	04.00	00.20	00.00
25	446	405 B	18 E	428	04.00	00.30	00.06
50	254 P	243 B	18 E	236	04.00	00.17 K	00.12 K
75	304	18	18	286	04.15	00.20	00.17 K
100	100	146 B	18 E	82	04.15	00.06	00.20 K
150	474 P	296 B	18 E	456	04.15	00.31 K	00.29 K

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED
P SUSPECT SAMPLES MIXED
K DOUBTFUL RESULT

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/218/61	24/ 8/61	1830 Y	08 06 N	178 55 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	88	75 B	20 F	68	04.00	00.05	00.00
25	211	217 B	20 F	191	04.00	00.14	00.02
50	80	76 B	20 F	60	04.00	00.04	00.05
75	226	227 B	20 F	206	04.00	00.15	00.07
100	116	239 B	20 F	96	04.00	00.07	00.10
150	126	148 B	20 F	106	04.00	00.08	00.14

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/220/61	24/ 8/61	0600 Y	09 30 N	177 20 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	209	14	14	195	04.15	00.13	00.00
25	417	185 B	26 E	391	04.15	00.27	00.05
50	190	93 B	26 E	164	04.15	00.11	00.10
75	295	220 B	26 E	269	04.33	00.18	00.13
100	65	30	30	35	04.33	00.02	00.16
150	18	34	34	- 16 G	04.33	00.00	00.16

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED
G NEGATIVE VALUE, ASSUMED ZERO

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/221/61	25/ 8/61	0600 Y	10 10 N	174 10 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	311	70 B	20 F	291	04.00	00.21	00.00
25	319	174 B	20 F	299	04.00	00.21	00.05
50	220	71 B	20 F	200	04.00	00.14	00.10
75	317	177 B	20 F	297	04.00	00.21	00.14
100	271	343 B	20 F	251	04.00	00.18	00.19
150	205	890 B	20 F	185	04.00	00.13	00.27

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/222/61	26/ 8/61	0630 X	13 20 N	171 05 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	354	68 B	39 E	315	04.33	00.21	00.00
25	332	140 B	39 E	293	04.33	00.19	00.05
50	247	39	39	208	04.33	00.14	00.09
75	357	200 B	39 E	318	04.50	00.20	00.13
100	345	186 B	39 E	306	04.50	00.19	00.18
150	445	475 B	39 E	406	04.50	00.26	00.30

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/223/61	27/ 8/61	0630 X	15 26 N	167 40 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	307	134 B	20 F	287	04.00	00.20	00.00
25	283	111 B	20 F	263	04.00	00.19	00.05
50	257	100 B	20 F	237	04.00	00.17	00.09
75	266	136 B	20 F	246	04.00	00.17	00.14
100	227	147 B	20 F	207	04.00	00.15	00.18
150	256	243 B	20 F	236	04.00	00.17	00.26

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/224/61	28/ 8/61	0630 X	17 13 N	164 11 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	293	73 B	20 F	273	04.00	00.19	00.00
25	323	125 B	20 F	303	04.00	00.21	00.05
50	259	70 B	20 F	239	04.00	00.17	00.10
75	256	143 B	20 F	236	04.00	00.17	00.14
100	278	187 B	20 F	258	04.00	00.18	00.18
150	233	262 B	20 F	213	04.00	00.15	00.27

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/225/61	14/ 9/61	2300 X	13 20 N	160 50 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	147	124 B	43 E	104	04.00	00.07	00.00
25	73	43	43	30	04.00	00.02	00.01
50	94	43	43	51	04.00	00.04	00.02
75	67	59 B	43 E	24	04.00	00.02	00.03
100	94	87 B	43 E	51	04.00	00.04	00.03
150	155	154 B	43 E	112	04.00	00.08	00.06

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/226/61	15/ 9/61	1600 X	10 02 N	161 58 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	349	104 B	38 E	311	04.00	00.22	00.00
25	282	42	42	240	04.00	00.17	00.05
50	369	77 B	38 E	331	04.00	00.23	00.10
75	65	35	35	30	04.00	00.02	00.13
100	41	62 B	38 E	3	04.00	00.00	00.13
150	76	96 B	38 E	38	04.00	00.03	00.14

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/227/61	16/ 9/61	0300 X	08 05 N	162 40 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	191	66 B	20 F	171	04.00	00.12	00.00
25	143	77 B	20 F	123	04.00	00.09	00.03
50	99	67 B	20 F	79	04.00	00.06	00.05
75	105	68 B	20 F	85	04.00	00.06	00.06
100	157	118 B	20 F	137	04.00	00.10	00.08
150	302	256 B	20 F	282	04.00	00.20	00.16

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/228/61	16/ 9/61	1230 X	06 10 N	163 17 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	316	36	36	280	04.00	00.20	00.00
25	296	32	32	264	04.00	00.19	00.05
50	329	37	37	292	04.00	00.21	00.10
75	250	34	34	216	04.00	00.15	00.14
100	108	83 B	34 E	74	04.00	00.05	00.17
150	96	105 B	34 E	62	04.00	00.04	00.19

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/229/61	16/ 9/61	2230 X	04 35 N	164 21 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	195	77 B	20 F	175	04.00	00.12	00.00
25	189	61 B	20 F	169	04.00	00.12	00.03
50	137	56 B	20 F	117	04.00	00.08	00.06
75	134	51 B	20 F	114	04.00	00.08	00.08
100	128	103 B	20 F	108	04.00	00.08	00.10
150	201	222 B	20 F	181	04.00	00.13	00.15

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/230/61	17/ 9/61	0730 X	02 55 N	164 39 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	967	155 B	36 E	931	04.00	00.66	00.00
25	711	113 B	36 E	675	04.00	00.48	00.14
50	465	57 B	36 E	429	04.00	00.30	00.24
75	134	36	36	98	04.00	00.07	00.29
100	64	76 B	36 E	28	04.00	00.02	00.30
150	138	218 B	36 E	102	04.00	00.07	00.32

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/231/61	17/ 9/61	1700 X	01 21 N	165 08 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	3 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	439	72 B	20 F	419	02.50	00.47	00.00
25	315	69 B	20 F	295	02.50	00.33	00.10
50	184	61 B	20 F	164	02.50	00.19	00.17
75	87	52 B	20 F	67	02.50	00.08	00.20
100	88	54 B	20 F	68	02.50	00.08	00.22
150	119	157 B	20 F	99	02.50	00.11	00.27

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/232/61	18/ 9/61	0130 X	00 32 S	165 35 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	778	287 B	20 F	758	04.00	00.54	00.00
25	712	135 B	20 F	692	04.00	00.49	00.13
50	409	75 B	20 F	389	04.00	00.28	00.23
75	220	144 B	20 F	200	04.00	00.14	00.28
100	119	302 B	20 F	99	04.00	00.07	00.30
150	183	247 B	20 F	163	04.00	00.12	00.35

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/233/61	18/ 9/61	1200 X	02 28 S	166 11 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	512	284 B	46 E	466	04.00	00.33	00.00
25	520	113 B	46 E	474	04.00	00.34	00.08
50	399	75 B	46 E	353	04.00	00.25	00.16
75	210	46	46	164	04.00	00.12	00.20
100	144	125 B	46 E	98	04.00	00.07	00.23
150	237	253 B	46 E	191	04.00	00.14	00.28

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/234/61	18/ 9/61	1945 X	03 54 S	166 50 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	146	148 B	20 F	126	04.00	00.09	00.00
25	109	117 B	20 F	89	04.00	00.06	00.02
50	64	93 B	20 F	44	04.00	00.03	00.03
75	92	80 B	20 F	72	04.00	00.05	00.04
100	97	98 B	20 F	77	04.00	00.05	00.05
150	138	166 B	20 F	118	04.00	00.08	00.09

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/235/61	19/ 9/61	0500 X	05 48 S	167 36 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	447	160 B	20 F	427	04.00	00.30	00.00
25	514	153 B	20 F	494	04.00	00.35	00.08
50	405	429 B	20 F	385	04.00	00.27	00.16
75	226	116 B	20 F	206	04.00	00.15	00.21
100	142	211 B	20 F	122	04.00	00.09	00.24
150	178	243 B	20 F	158	04.00	00.11	00.29

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/236/61	19/ 9/61	1330 X	07 12 S	168 00 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	359	167 B	49 E	310	04.00	00.22	00.00
25	400	88 B	49 E	351	04.00	00.25	00.06
50	329	49	49	280	04.00	00.20	00.12
75	331	169 B	49 E	282	04.00	00.20	00.17
100	156	147 B	49 E	107	04.00	00.08	00.20
150	251	416 B	49 E	202	04.00	00.14	00.26

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/237/61	20/ 9/61	0001 X	09 11 S	168 46 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH	LIGHT	DARK	DARK USED	NETT	INC. PER.	PRODUCTION A	PRODUCTION B
M	CPM	CPM	CPM	CPM	HOURS	MG.C/HR./CU.M.	G.C/DAY/SQ.M.
0	109	88 B	20 F	89	04.00	00.06	00.00
25	95	90 B	20 F	75	04.00	00.05	00.01
50	78	52 B	20 F	58	04.00	00.04	00.03
75	147	107 B	20 F	127	04.00	00.09	00.04
100	114	86 B	20 F	94	04.00	00.07	00.06
150	131	133 B	20 F	111	04.00	00.08	00.10

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/238/61	20/ 9/61	0900 X	10 58 S	169 22 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	101	78 B	20 F	81	04.00	00.06	00.00
25	103	75 B	20 F	83	04.00	00.06	00.02
50	115	128 B	20 F	95	04.00	00.07	00.03
75	126	78 B	20 F	106	04.00	00.08	00.05
100	87	111 B	20 F	67	04.00	00.05	00.07
150	134	147 B	20 F	114	04.00	00.08	00.10

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/240/61	20/ 9/61	2200 X	12 32 S	169 58 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	85	64 B	20 F	65	04.00	00.05	00.00
25	59	91 B	20 F	39	04.00	00.03	00.01
50	54	125 B	20 F	34	04.00	00.02	00.02
75	122	109 B	20 F	102	04.00	00.07	00.03
100	112	115 B	20 F	92	04.00	00.07	00.05
150	81	121 B	20 F	61	04.00	00.04	00.07

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/241/61	23/ 9/61	1400 X	15 50 S	171 41 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	280	156 B	20 F	260	04.00	00.18	00.00
25	362	79 B	20 F	342	04.00	00.24	00.05
50	269	71 B	20 F	249	04.00	00.18	00.11
75	301	116 B	20 F	281	04.00	00.20	00.15
100	225	127 B	20 F	205	04.00	00.15	00.20
150	132	118 B	20 F	112	04.00	00.08	00.25

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/242/61	23/ 9/61	2015 X	16 52 S	172 08 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	170	197 B	20 F	150	04.00	00.11	00.00
25	154	116 B	20 F	134	04.00	00.09	00.03
50	100	84 B	20 F	80	04.00	00.06	00.04
75	161	212 B	20 F	141	04.00	00.10	00.06
100	160	154 B	20 F	140	04.00	00.10	00.09
150	149	129 B	20 F	129	04.00	00.09	00.14

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/243/61	24/ 9/61	0930 X	18 40 S	171 38 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	391	92 B	20 F	371	04.00	00.26	00.00
25	397	111 B	20 F	377	04.00	00.27	00.07
50	376	59 B	20 F	356	04.00	00.25	00.13
75	243	66 B	20 F	223	04.00	00.16	00.18
100	102	69 B	20 F	82	04.00	00.06	00.21
150	63	106 B	20 F	43	04.00	00.03	00.23

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/244/61	24/ 9/61	1730 X	20 05 S	171 19 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	156	373 B	20 F	136	04.00	00.10	00.00
25	110	149 B	20 F	90	04.00	00.06	00.02
50	95	113 B	20 F	75	04.00	00.05	00.03
75	119	61 B	20 F	99	04.00	00.07	00.05
100	106	64 B	20 F	86	04.00	00.06	00.07
150	72	99 B	20 F	52	04.00	00.04	00.09

B ABERRANT VALUE, NOT USED
F ARBITRARY DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/245/61	25/ 9/61	0530 X	21 52 S	170 55 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	284	123 B	38 E	246	04.00	00.17	00.00
25	223	32	32	191	04.00	00.14	00.04
50	188	95 B	38 E	150	04.00	00.11	00.07
75	190	42	42	148	04.00	00.10	00.10
100	187	34	34	153	04.00	00.11	00.12
150	89	46	46	43	04.00	00.03	00.16

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/246/61	25/ 9/61	1500 X	23 25 S	170 35 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	10 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	276	57 B	36 E	240	04.00	00.17	00.00
25	274	97 B	36 E	238	04.00	00.17	00.04
50	251	77 B	36 E	215	04.00	00.15	00.08
75	207	59 B	36 E	171	04.00	00.12	00.12
100	50	36	36	14	04.00	00.01	00.13
150	50	56 B	36 E	14	04.00	00.01	00.14

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/247/61	26/ 9/61	0100 X	25 08 S	170 02 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	122	42	42	80	04.00	00.06	00.00
25	115	66 B	44 E	71	04.00	00.05	00.01
50	101	53 B	44 E	57	04.00	00.04	00.03
75	90	46	46	44	04.00	00.03	00.03
100	51	65 B	44 E	7	04.00	00.00	00.04
150	29	52 B	44 E	- 15 G	04.00	00.00	00.04

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED
G NEGATIVE VALUE, ASSUMED ZERO

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/248/61	26/ 9/61	1000 X	26 42 S	169 33 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	399	23	23	376	04.00	00.27	00.00
25	318	23	23	295	04.00	00.21	00.06
50	405	15	15	390	04.00	00.28	00.12
75	432	37	37	395	04.00	00.28	00.19
100	172	23	23	149	04.00	00.11	00.24
150	28	35	35	- 7 G	04.00	00.00	00.27

G NEGATIVE VALUE, ASSUMED ZERO

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/249/61	26/ 9/61	2100 X	28 20 S	168 59 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	143	24	24	119	04.00	00.08	C0.00
25	99	53 B	31 E	68	04.00	00.05	00.02
50	77	32	32	45	04.00	00.03	00.03
75	139	38	38	101	04.00	00.07	00.04
100	32	28	28	4	04.00	00.00	00.05
150	26	35	35	- 9 G	04.00	00.00	00.05

B ABERRANT VALUE, NOT USED
E MEAN NON-ABERRANT DARK USED
G NEGATIVE VALUE, ASSUMED ZERO

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/250/61	27/ 9/61	1630 X	29 50 S	168 30 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	389	41	41	348	04.00	00.25	00.00
25	342	36	36	306	04.00	00.22	00.06
50	339	22	22	317	04.00	00.22	00.11
75	179	26	26	153	04.00	00.11	00.16
100	59	29	29	30	04.00	00.02	00.17
150	36	39	39	- 3 G	04.00	00.00	00.18

G NEGATIVE VALUE, ASSUMED ZERO

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/251/61	27/ 9/61	1530 X	30 37 S	170 06 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	468	17	17	451	04.00	00.32	00.00
25	481	32	32	449	04.00	00.32	00.08
50	636	20	20	616	04.00	00.44	00.18
75	517	64 O	27 E	490	04.00	00.35	00.27
100	408	44	44	364	04.00	00.26	00.35
150	63	23	23	40	04.00	00.03	00.42

O SUSPECT 14C ADDED TWICE
E MEAN NON-ABERRANT DARK USED

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/252/61	27/ 9/61	2245 X	31 17 S	171 34 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	598	29	29	569	04.00	00.40	00.00
25	423	29	29	394	04.00	00.28	00.09
50	388	20	20	368	04.00	00.26	00.15
75	337	43	43	294	04.00	00.21	00.21
100	106	25	25	81	04.00	00.06	00.25
150	40	32	32	8	04.00	00.01	00.26

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/253/61	28/ 9/61	0830 Y	31 55 S	173 02 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	1089	19	19	1070	04.00	00.76	00.00
25	1110	18	18	1092	04.00	00.77	00.19
50	870	15	15	855	04.00	00.61	00.36
75	748	29	29	719	04.00	00.51	00.50
100	330	21	21	309	04.00	00.22	00.60
150	82	36	36	46	04.00	00.03	00.66

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/254/61	28/ 9/61	1600 Y	32 38 S	174 30 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	918	16	16	902	04.33	00.59	00.00
25	787	31	31	756	04.33	00.49	00.14
50	667	22	22	645	04.33	00.42	00.25
75	550	23	23	527	04.33	00.34	00.34
100	405	21	21	384	04.33	00.25	00.42
150	406	20	20	386	04.33	00.25	00.54

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/255/61	29/ 9/61	0200 Y	33 15 S	176 00 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	5 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	2185	43	43	2142	04.50	01.35	00.00
25	2109	36	36	2073	04.50	01.30	00.33
50	1804	22	22	1782	04.50	01.12	00.63
75	886	24	24	862	04.50	00.54	00.84
100	163	18	18	145	04.50	00.09	00.92
150	56	20	20	36	04.50	00.02	00.95

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/256/61	29/ 9/61	1230 Y	33 52 S	177 57 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	1285	24	24	1261	04.00	00.89	C0.00
25	1284	36	36	1248	04.00	00.88	00.22
50	1239	24	24	1215	04.00	00.86	00.44
75	559	16	16	543	04.00	00.38	C0.59
100	65	29	29	36	04.00	00.03	C0.65
150	60	22	22	38	04.00	00.03	00.66

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/257/61	29/ 9/61	2145 Y	34 21 S	179 20 W

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	1340	52	52	1288	04.00	00.91	00.00
25	1343	79	79	1264	04.00	00.89	00.23
50	1019	38	38	981	04.00	00.69	00.42
75	524	41	41	483	04.00	00.34	00.55
100	187	30	30	157	04.00	00.11	00.61
150	31	26	26	5	04.00	00.00	00.64

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/258/61	1/10/61	0500 M	34 57 S	179 12 E

INCUBATION METHOD	PERIOD	14C STOCK	ACTIVITY CPM	BACKGROUND
ARTIFICIAL CONSTANT LIGHT	4 HOURS	NO. 9	8.67 MILLION	15 CPM

DEPTH M	LIGHT CPM	DARK CPM	DARK USED CPM	NETT CPM	INC. PER. HOURS	PRODUCTION A MG.C/HR./CU.M.	PRODUCTION B G.C/DAY/SQ.M.
0	2450	49	49	2401	04.00	01.70	00.00
25	2472	37	37	2435	04.00	01.72	00.43
50	2317	25	25	2292	04.00	01.62	00.85
75	236	18	18	218	04.00	00.15	01.07
100	71	24	24	47	04.00	00.03	01.09
150	871 H	25	25	846	04.00	00.60 K	01.25 K

H SUSPECT SAMPLE CONTAMINATED
K DOUBTFUL RESULT

DATA

PART 3

PIGMENTS

EXPLANATION OF HEADINGS

Part 3	Pigments
STATION	Gives the station identification. For example, G3/204/61 signifies the 204th station worked by Gascoyne in 1961, on her 3rd cruise for that year
DATE	Given as day/month/year
TIME	Given in Zone Time (Table 2, p. 12)
DEPTH	Actual sampling depth is given in metres
CHLOROPHYLL A B C	A and B given in mg/m^3 C given in $MSPU/m^3$
ASTACIN NON-ASTACIN	Given in $MSPU/m^3$

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/204/61	18/ 8/61	1500 L	06 13 S	162 18 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.06	0.77	0.11	0.06
25	0.12	0.08	0.51	0.11	- 0.02
50	0.08	0.07	0.42	0.09	0.01
75	0.13	0.09	0.40	0.07	0.04
100	0.19	0.13	0.68	0.10	0.04
150	0.07	0.06	0.38	0.05	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/206/61	19/ 8/61	0300 L	04 30 S	163 40 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.06	0.35	0.08	0.01
25	0.04	0.02	0.11	0.02	0.03
50	0.07	0.05	0.49	0.06	0.02
75	0.05	0.04	0.27	0.03	0.03
100	0.11	0.06	0.38	0.05	0.03
150	0.11	0.05	0.37	0.05	0.04

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/207/61	19/ 8/61	1300 L	03 06 S	164 45 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.04	0.26	0.05	0.03
25	0.06	0.03	0.21	0.03	0.01
50	0.05	0.04	0.26	0.03	0.04
75	0.11	0.10	0.60	0.09	0.02
100	0.10	0.04	0.28	0.04	0.04
150	0.09	0.07	0.46	0.06	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/208/61	19/ 8/61	2000 L	02 00 S	165 42 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.05	0.32	0.04	0.02
25	0.07	0.06	0.38	0.08	0.02
50	0.05	0.04	0.28	0.04	0.04
75	0.07	0.06	0.37	0.07	0.03
100	0.14	0.07	0.64	0.08	0.02
150	0.11	0.05	0.33	0.05	0.05

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/209/61	22/ 8/61	0800 L	00 49 N	169 17 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.05	0.34	0.05	0.01
25	0.09	0.06	0.39	0.08	- 0.01
50	0.09	0.07	0.35	0.05	0.01
75	0.13	0.07	0.49	0.07	0.02
100	0.17	0.09	0.64	0.08	0.02
150	0.15	0.09	0.61	0.08	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/211/61	22/ 8/61	0300 L	02 20 N	172 10 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.11	0.68	0.09	- 0.01
25	0.05	0.04	0.28	0.04	0.00
50	0.05	0.04	0.27	0.03	0.01
75	0.11	0.08	0.49	0.08	0.00
100	0.12	0.10	0.46	0.08	0.01
150	0.09	0.09	0.37	0.04	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/212/61	22/ 8/61	1300 M	03 10 N	173 50 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.06	0.67	0.07	- 0.01
25	0.05	0.04	0.27	0.03	0.00
50	0.06	0.05	0.32	0.04	0.00
75	0.12	0.10	0.65	0.10	- 0.01
100	0.13	0.11	0.71	0.11	- 0.01
150	0.09	0.04	0.63	0.05	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/213/61	22/ 8/61	2100 M	04 10 N	175 10 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.04	0.03	0.19	0.02	0.01
25	0.07	0.06	0.65	0.10	- 0.02
50	0.03	0.04	0.26	0.03	0.01
75	0.10	0.07	0.32	0.07	0.00
100	0.05	0.05	0.18	0.03	0.01
150	0.15	0.11	0.68	0.10	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/214/61	23/ 8/61	0500 M	04 43 N	176 05 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.05	0.33	0.07	0.00
25	0.08	0.07	0.41	0.07	0.00
50	0.07	0.06	0.36	0.06	0.00
75	0.07	0.06	0.35	0.06	0.00
100	0.09	0.06	0.39	0.08	0.00
150	0.14	0.07	0.65	0.08	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/215/61	23/ 8/61	1930 M	06 00 N	178 00 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.04	0.46	0.06	0.00
25	0.05	0.04	0.41	0.02	0.02
50	0.05	0.06	0.36	0.05	- 0.01
75	0.08	0.05	0.33	0.04	0.01
100	0.14	0.11	0.51	0.08	0.01
150	0.13	0.12	0.57	0.07	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/217/61	24/ 8/61	0630 M	07 12 N	179 46 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.05	0.34	0.05	0.00
25	0.04	0.02	0.33	0.08	- 0.04
50	0.03	0.03	0.03	0.03	0.01
75	0.08	0.07	0.44	0.07	0.01
100	0.17	0.11	0.70	0.11	0.00
150	0.12	0.05	0.55	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/218/61	24/ 8/61	1830 Y	08 06 N	178 55 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.04	0.40	0.07	- 0.01
25	0.04	0.01	0.21	0.04	- 0.01
50	0.07	0.06	0.37	0.06	- 0.01
75	0.06	0.05	0.32	0.05	- 0.01
100	0.18	0.11	0.74	0.11	0.00
150	0.12	0.10	0.61	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/220/61	24/ 8/61	0600 Y	09 30 N	177 20 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.04	0.41	0.04	0.01
25	0.05	0.04	0.24	0.03	0.00
50	0.06	0.05	0.29	0.05	0.00
75	0.05	0.03	0.36	0.03	0.00
100	0.15	0.12	0.59	0.10	0.00
150	0.10	0.06	0.25	0.04	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/221/61	25/ 8/61	0600 Y	10 10 N	174 10 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.06	0.37	0.07	0.00
25	0.01	0.01	0.06	0.01	0.01
50	0.07	0.05	0.46	0.05	0.00
75	0.07	0.05	0.53	0.06	0.00
100	0.10	0.07	0.69	0.07	0.00
150	0.15	0.09	0.59	0.05	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/222/61	26/ 8/61	0630 X	13 20 N	171 05 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.04	0.44	0.06	- 0.02
25	0.07	0.05	0.35	0.06	0.00
50	0.06	0.05	0.30	0.06	- 0.01
75	0.06	0.05	0.34	0.05	0.00
100	0.10	0.08	0.35	0.08	- 0.01
150	0.10	0.05	0.34	0.04	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/223/61	27/ 8/61	0630 X	15 26 N	167 40 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.11	0.08	0.52	0.06	0.00
25	0.06	0.05	0.30	0.06	- 0.01
50	0.10	0.04	0.44	0.05	0.00
75	0.08	0.05	0.33	0.05	0.00
100	0.15	0.08	0.40	0.04	0.03
150	0.17	0.14	0.67	0.09	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/224/61	28/ 8/61	0630 X	17 13 N	164 11 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.05	0.03	0.17	0.03	0.00
25	0.05	0.00	0.20	0.03	0.00
50	0.07	0.05	0.35	0.05	0.00
75	0.06	0.05	0.33	0.03	0.00
100	0.06	0.00	0.34	0.01	0.01
150	0.14	0.09	0.43	0.04	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/225/61	14/ 9/61	2300 X	13 20 N	160 50 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.05	0.04	0.26	0.02	0.00
25	0.07	0.03	0.39	0.03	0.00
50	0.04	0.03	0.01	0.03	0.00
75	0.06	0.05	0.34	0.05	- 0.01
100	0.08	0.07	0.11	0.04	0.00
150	0.13	0.04	0.30	0.05	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/226/61	15/ 9/61	1600 X	10 02 N	161 58 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.04	0.30	0.06	0.00
25	0.06	0.06	0.23	0.06	- 0.01
50	0.06	0.05	0.33	0.06	0.00
75	0.19	0.11	0.60	0.07	0.02
100	0.14	0.08	0.22	0.04	0.01
150	0.05	0.05	0.16	0.03	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/227/61	16/ 9/61	0300 X	08 05 N	162 40 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.04	0.45	0.06	0.00
25	0.06	0.04	0.43	0.05	0.01
50	0.05	0.04	0.27	0.02	0.01
75	0.14	0.09	0.43	0.08	- 0.01
100	0.14	0.08	0.55	0.08	- 0.01
150	0.13	0.11	0.38	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/228/61	16/ 9/61	1230 X	06 10 N	163 17 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.07	0.12	0.04	0.00
25	0.04	0.03	0.01	0.01	0.01
50	0.10	0.04	0.45	0.07	0.01
75	0.08	0.05	0.32	0.05	0.00
100	0.16	0.09	0.60	0.07	0.00
150	0.08	0.05	0.33	0.05	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/229/61	16/ 9/61	2230 X	04 35 N	164 21 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.08	0.36	0.06	0.00
25	0.12	0.06	0.24	0.04	0.01
50	0.14	0.12	0.39	0.08	- 0.01
75	0.18	0.09	0.60	0.07	0.01
100	0.20	0.08	0.60	0.08	0.00
150	0.16	0.10	0.67	0.07	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/230/61	17/ 9/61	0730 X	02 55 N	164 39 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.12	0.06	0.26	0.06	0.01
25	0.13	0.08	0.52	0.07	0.00
50	0.13	0.11	0.19	0.06	0.01
75	0.14	0.10	0.30	0.05	0.01
100	0.07	0.07	0.25	0.05	0.01
150	0.08	0.06	0.54	0.06	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/231/61	17/ 9/61	1700 X	01 21 N	165 08 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.15	0.09	0.44	0.11	- 0.03
25	0.14	0.05	0.36	0.05	0.01
50	0.14	0.10	0.30	0.06	0.01
75	0.19	0.12	0.81	0.09	0.00
100	0.20	0.19	0.82	0.09	0.00
150	0.15	0.11	0.70	0.09	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/232/61	18/ 9/61	0130 X	00 32 S	165 35 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.02	0.02	0.13	0.08	0.00
25	0.11	0.06	0.38	0.05	0.02
50	0.09	0.08	0.36	0.10	0.00
75	0.15	0.10	0.68	0.10	- 0.02
100	0.13	0.09	0.57	0.09	- 0.02
150	0.07	0.04	0.26	0.05	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/233/61	18/ 9/61	1200 X	02 28 S	166 11 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.08	0.01	0.05	0.01
25	0.19	0.10	0.71	0.11	- 0.02
50	0.17	0.11	0.71	0.12	- 0.01
75	0.13	0.12	0.78	0.11	- 0.01
100	0.17	0.10	0.83	0.07	0.00
150	0.10	0.05	0.33	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/234/61	18/ 9/61	1945 X	03 54 S	166 50 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.12	0.10	0.65	0.09	0.00
25	0.14	0.05	0.36	0.09	- 0.02
50	0.07	0.05	0.35	0.06	- 0.01
75	0.14	0.05	0.36	0.05	0.00
100	0.09	0.02	0.37	0.05	0.00
150	0.09	0.04	0.31	0.09	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/235/61	19/ 9/61	0500 X	05 48 S	167 36 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.11	0.03	0.40	0.05	0.00
25	0.11	0.10	0.46	0.06	0.00
50	0.12	0.06	0.57	0.05	0.01
75	0.12	0.07	0.45	0.05	0.02
100	0.12	0.08	0.35	0.04	0.01
150	0.12	0.10	0.61	0.06	- 0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/236/61	19/ 9/61	1330 X	07 12 S	168 00 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.08	0.06	0.22	0.05	0.00
25	0.14	0.06	0.45	0.09	- 0.01
50	0.09	0.06	0.57	0.08	- 0.01
75	0.06	0.07	0.60	0.07	0.00
100	0.08	0.05	0.33	0.05	0.00
150	0.09	0.09	0.38	0.08	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/237/61	20/ 9/61	0001 X	09 11 S	168 46 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.17	0.09	0.63	0.08	- 0.03
25	0.08	0.06	0.53	0.05	- 0.02
50	0.13	0.11	0.69	0.06	- 0.02
75	0.09	0.08	0.68	0.08	- 0.04
100	0.08	0.06	0.41	0.04	0.00
150	0.09	0.06	0.39	0.04	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/238/61	20/ 9/61	0900 X	10 58 S	169 22 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.06	0.05	0.33	0.04	0.00
25	0.05	0.04	0.27	0.05	0.00
50	0.06	0.05	0.34	0.05	0.02
75	0.08	0.05	0.34	0.05	0.00
100	0.12	0.08	0.53	0.08	0.00
150	0.09	0.06	0.58	0.06	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/240/61	20/ 9/61	2200 X	12 32 S	169 58 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.06	0.04	0.02	0.02
25	0.09	0.09	0.37	0.06	0.00
50	0.07	0.07	0.28	0.06	0.00
75	0.07	0.05	0.35	0.03	0.00
100	0.07	0.05	0.35	0.06	0.00
150	0.14	0.07	0.34	0.07	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/241/61	23/ 9/61	1400 X	15 50 S	171 41 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.04	0.03	0.21	0.06	- 0.01
25	0.06	0.09	0.70	0.08	- 0.04
50	0.06	0.05	0.34	0.05	- 0.01
75	0.06	0.05	0.34	0.03	0.00
100	0.16	0.08	0.87	0.11	- 0.05
150	0.08	0.05	0.33	0.04	0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/242/61	23/ 9/61	2015 X	16 52 S	172 08 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.01	0.01	0.07	0.03	0.00
25	0.10	0.09	0.55	0.05	0.00
50	0.13	0.11	0.68	0.09	- 0.02
75	0.10	0.10	0.43	0.07	- 0.02
100	0.08	0.07	0.30	0.05	- 0.01
150	0.13	0.11	0.38	0.07	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/243/61	24/ 9/61	0930 Y	18 40 S	171 38 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.05	0.35	0.06	- 0.01
25	0.08	0.08	0.30	0.07	- 0.03
50	0.07	0.05	0.35	0.02	0.00
75	0.05	0.03	0.37	0.03	0.00
100	0.10	0.05	0.32	0.04	0.00
150	0.09	0.04	0.31	0.04	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/244/61	24/ 9/61	1730 X	20 05 S	171 19 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.04	0.27	0.06	0.00
25	0.06	0.04	0.45	0.06	- 0.01
50	0.06	0.11	0.46	0.07	- 0.03
75	0.03	0.02	0.14	0.03	0.00
100	0.12	0.10	0.61	0.06	- 0.02
150	0.16	0.12	0.39	0.09	- 0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/245/61	25/ 9/61	0530 X	21 52 S	170 55 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.06	0.40	0.06	- 0.01
25	0.08	0.05	0.31	0.05	- 0.01
50	0.12	0.10	0.61	0.06	- 0.02
75	0.10	0.05	0.32	0.06	0.00
100	0.13	0.11	0.69	0.09	- 0.02
150	0.12	0.08	0.35	0.04	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/246/61	25/ 9/61	1500 X	23 25 S	170 35 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.03	0.07	0.02	0.02
25	0.08	0.04	0.44	0.05	- 0.01
50	0.01	0.01	0.07	0.03	0.00
75	0.13	0.06	0.43	0.05	0.01
100	0.12	0.05	0.37	0.04	0.02
150	0.12	0.10	0.62	0.06	- 0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/247/61	26/ 9/61	0100 X	25 08 S	170 02 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.05	0.15	0.07	- 0.01
25	0.19	0.08	0.74	0.03	0.00
50	0.06	0.05	0.34	0.06	0.00
75	0.16	0.07	0.48	0.08	0.00
100	0.20	0.13	0.67	0.11	0.00
150	0.10	0.04	0.31	0.03	0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/248/61	26/ 9/61	1000 X	26 42 S	169 33 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.14	0.12	0.76	0.07	0.00
25	0.10	0.05	0.33	0.06	0.00
50	0.10	0.07	0.29	0.06	0.00
75	0.14	0.07	0.34	0.09	- 0.01
100	0.14	0.11	0.51	0.07	0.00
150	0.06	0.06	0.23	0.03	0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/249/61	26/ 9/61	2100 X	28 20 S	168 59 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.07	0.05	0.35	0.07	- 0.04
25	0.06	0.05	0.34	0.06	- 0.03
50	0.06	0.05	0.34	0.06	- 0.01
75	0.11	0.08	0.35	0.05	0.02
100	0.09	0.06	0.39	0.05	0.01
150	0.09	0.09	0.37	0.08	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/250/61	27/ 9/61	0600 X	29 50 S	168 30 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.09	0.57	0.06	0.00
25	0.09	0.09	0.57	0.08	- 0.02
50	0.08	0.05	0.34	0.05	- 0.01
75	0.16	0.10	0.84	0.09	0.01
100	0.16	0.10	0.64	0.10	0.00
150	0.07	0.07	0.60	0.07	- 0.01

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/251/61	27/ 9/61	1530 X	30 37 S	170 06 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.05	0.38	0.09	- 0.03
25	0.07	0.03	0.37	0.04	0.00
50	0.10	0.04	0.31	0.05	- 0.01
75	0.15	0.08	0.85	0.08	0.00
100	0.16	0.09	0.78	0.05	0.01
150	0.10	0.10	0.43	0.06	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/252/61	27/ 9/61	2245 X	31 17 S	171 34 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.11	0.68	0.07	- 0.01
25	0.16	0.10	0.65	0.09	- 0.01
50	0.15	0.08	0.85	0.11	- 0.05
75	0.12	0.07	0.45	0.08	- 0.01
100	0.13	0.08	0.51	0.07	0.00
150	0.09	0.03	0.42	0.09	- 0.03

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/253/61	28/ 9/61	0830 Y	31 55 S	173 02 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.13	0.11	0.68	0.09	- 0.02
25	0.11	0.07	0.46	0.06	0.00
50	0.11	0.06	0.38	0.05	0.00
75	0.16	0.10	0.65	0.07	0.01
100	0.15	0.10	0.29	0.09	- 0.01
150	0.14	0.07	0.33	0.06	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/254/61	28/ 9/61	1600 Y	32 38 S	174 30 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.09	0.09	0.38	0.04	0.01
25	0.20	0.18	0.61	0.08	0.00
50	0.16	0.09	0.78	0.08	0.00
75	0.14	0.10	0.67	0.13	- 0.07
100	0.12	0.03	0.60	0.04	0.03
150	0.11	0.04	0.31	0.07	0.00

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/255/61	29/ 9/61	0200 Y	33 15 S	176 00 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.21	0.15	0.82	0.11	- 0.01
25	0.23	0.14	0.91	0.09	- 0.01
50	0.40	0.17	1.20	0.12	0.00
75	0.19	0.06	0.66	0.08	0.00
100	0.13	0.08	0.51	0.06	0.00
150	0.14	0.08	0.53	0.09	- 0.02

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/256/61	29/ 9/61	1230 Y	33 52 S	177 57 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.19	0.10	0.71	0.11	- 0.03
25	0.11	0.04	0.30	0.02	0.02
50	0.16	0.10	0.64	0.06	0.00
75	0.11	0.04	0.29	0.02	0.04
100	0.13	0.12	0.58	0.10	- 0.03
150	0.06	0.07	0.41	0.37	- 0.17

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/257/61	29/ 9/61	2145 Y	34 21 S	179 20 W

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.34	0.18	1.24	0.11	- 0.02
25	0.34	0.24	0.88	0.13	- 0.01
50	0.28	0.15	0.55	0.07	0.02
75	0.25	0.14	0.97	0.09	0.00
100	0.18	0.12	0.79	0.08	0.00
150	0.08	0.12	0.53	0.15	- 0.05

STATION	DATE	TIME	LATITUDE	LONGITUDE
G 3/258/61	1/10/61	0530 M	34 57 S	178 12 E

DEPTH	CHLOROPHYLL A	CHLOROPHYLL B	CHLOROPHYLL C	ASTACIN	NON-ASTACIN
0	0.37	0.11	0.85	0.13	0.01
25	0.39	0.18	0.92	0.12	0.00
50	0.41	0.17	0.91	0.12	0.00
75	0.15	0.10	0.68	0.08	- 0.01
100	0.07	0.05	0.35	0.07	- 0.02
150	0.07	0.05	0.35	0.09	- 0.02

DATA

PART 4

ZOOPLANKTON*

*Zooplankton tows made on the Gascoyne Sovereignty Cruise, November 1961, in the Coral Sea east of Townsville

OBLIQUE TOWS : CLARKE-BUMPUS SAMPLER

STATION	DATE	TIME	LATITUDE	LONGITUDE	DEPTH RANGE (m)	VOLUME FILTERED (m^3)	BIOMASS (mg/m^3)
G4/259/61	30.10.61	0909	19°14'S	147°11'E.	27-0	4.0	55
G4/260/61	31.10.61	1130	19°04'S.	146°59'E.	24-0	3.5	98
G4/261/61	31.10.61	1340	18°43'S.	147°11'E.	200-0	4.5	84
G4/262/61	31.10.61	1740	18°11'S.	147°18'E.	200-0	15.6	43
G4/263/61	1.11.61	1905	16°47'S.	147°35'E.	200-0	20.7	41
G4/264/61	4.11.61	1810	16°21'S.	151°18'E.	33-0	14.9	44
G4/265/61	23.11.61	1245	18°46'S.	147°09'E.	200-0	4.4	91
G4/266/61	23.11.61	1642	18°12'S.	147°21'E.	200-0	13.0	54
G4/267/61	24.11.61	0834	18°33'S.	150°24'E.	200-0	14.7	17
G4/268/61	24.11.61	1336	18°36'S.	151°08'E.	200-0	14.0	21
G4/269/61	24.11.61	1848	18°41'S.	152°00'E.	200-0	11.6	20

OCEANOGRAPHICAL CRUISE REPORTS

1. Oceanographical observations in the Indian Ocean in 1959. H.M.A.S. *Diamantina* Cruises Dm1/59 and Dm2/59.
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3. Oceanographical observations in the Indian Ocean in 1960. H.M.A.S. *Diamantina* Cruise Dm2/60.
4. Oceanographical observations in the Indian Ocean in 1960. H.M.A.S. *Diamantina* Cruise Dm3/60.
5. Oceanographical observations in the Pacific Ocean in 1960. H.M.A.S. *Gascoyne* Cruises G1/60 and G2/60.
6. Oceanographical observations in the Pacific Ocean in 1960. H.M.A.S. *Gascoyne* Cruise G3/60.
7. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm1/61.
8. Oceanographical observations in the Pacific Ocean in 1961. H.M.A.S. *Gascoyne* Cruise G1/61.
9. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm2/61.
10. Oceanographical observations in the Indian and Pacific Oceans in 1961. H.M.A.S. *Gascoyne* Cruise G2/61.
11. Oceanographical observations in the Indian Ocean in 1961. H.M.A.S. *Diamantina* Cruise Dm3/61.
12. Oceanographical observations in the Pacific Ocean in 1961. H.M.A.S. *Gascoyne* Cruise G3/61.
13. Oceanographical observations in the Pacific Ocean in 1962. H.M.A.S. *Gascoyne* Cruise G1/62.
14. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm1/62.
15. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm2/62.
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17. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Gascoyne* Cruise G4/62.
18. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm3/62.
19. Oceanographical observations in the Pacific Ocean in 1962. H.M.A.S. *Gascoyne* Cruise G5/62.
20. Oceanographical observations in the Indian Ocean in 1962. H.M.A.S. *Diamantina* Cruise Dm4/62.
21. Oceanographical observations in the Indian Ocean in 1963. H.M.A.S. *Gascoyne* Cruise G1/63.
22. Oceanographical observations in the Indian Ocean in 1963. H.M.A.S. *Gascoyne* Cruise G2/63.
23. Oceanographical observations in the Indian Ocean in 1963. H.M.A.S. *Diamantina* Cruise Dm1/63.
24. Oceanographical observations in the Indian Ocean in 1963. H.M.A.S. *Diamantina* Cruise Dm2/63.
25. Oceanographical observations in the Indian Ocean in 1963. H.M.A.S. *Diamantina* Cruise Dm3/63.
29. Oceanographical observations in the Pacific Ocean in 1963. H.M.A.S. *Gascoyne* Cruise G4/63.
31. Oceanographical observations in the Pacific Ocean in 1963. H.M.A.S. *Gascoyne* Cruise G5/63.
32. Oceanographical observations in the Pacific Ocean in 1964. H.M.A.S. *Gascoyne* Cruise G1/64.