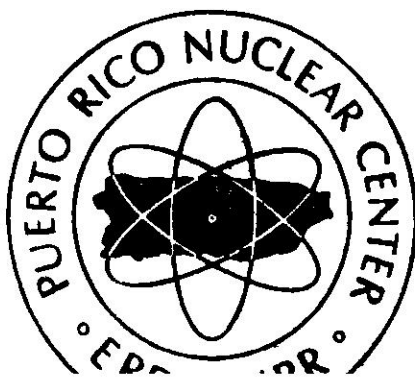


PRNC - 185

PUERTO RICO NUCLEAR CENTER

HYDROGRAPHIC DATA REPORT
SOUTH COAST OF PUERTO RICO
1973-1974

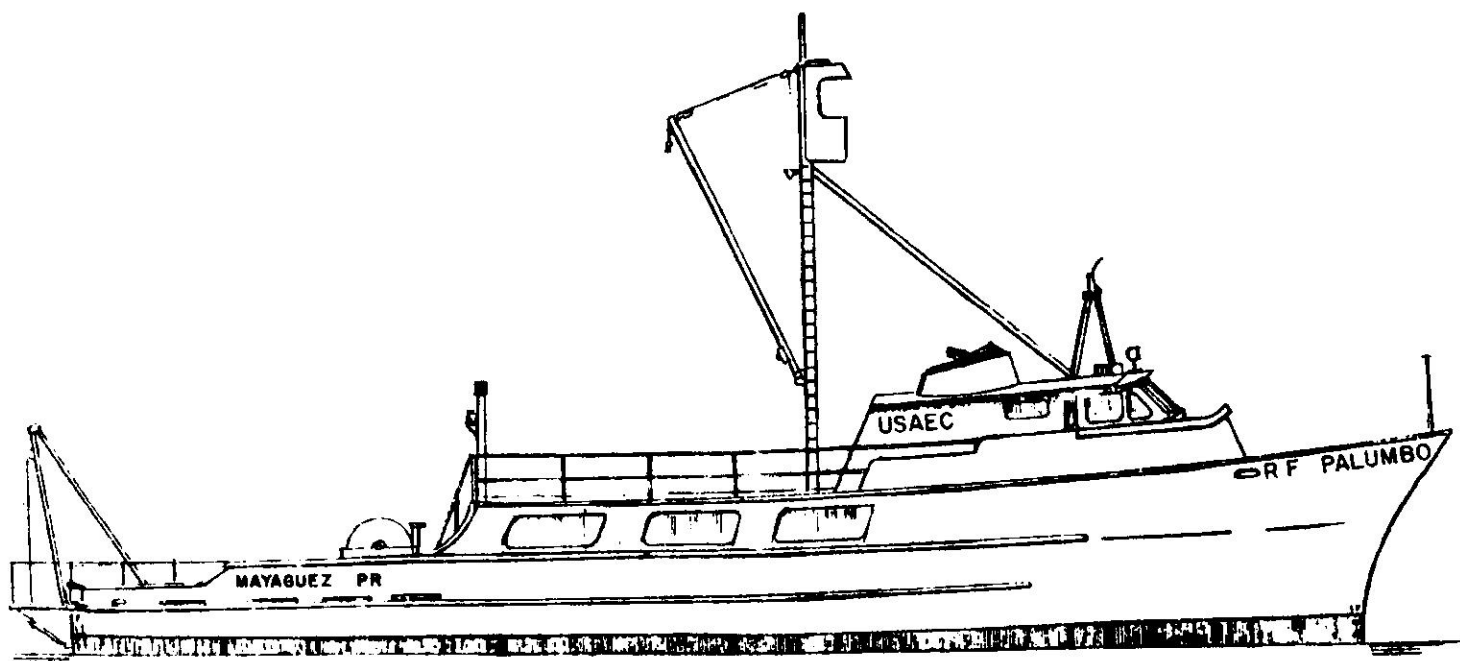
May 15, 1975



HYDROGRAPHIC DATA REPORT
SOUTH COAST OF PUERTO RICO 1973-1974

by

E. D. Wood and Rosa Asencio



INTRODUCTION

The hydrographic data included in this report were collected as part of a site selection survey to provide basic oceanographic data to assist the Puerto Rico Water Resources Authority (PRWRA) in determining the best locations for additional electrical power generating facilities on the island, both nuclear and fossil fuel. This report includes data from two sites and an offshore transect between the sites. The Punta Verraco site, PVE, is on the west side of Guayanilla Bay (Figure 1) and the Cabo Mala Pascua site, CMP, is located on the southeast corner of the island. Data were also collected seaward from Jobos Bay, OJB, to determine the effects of the open sea on nearshore oceanographic parameter characteristics. The two south coast sites are about 90 kilometers apart. The offshore Jobos Bay transect was made about 25 kilometers west of Cabo Mala Pascua.

Cruises were scheduled to sample these sites quarterly to determine the effects of seasonal changes. The 1973 summer season cruise to the south coast was cancelled by PRWRA because of priorities on north coast work, and the 1973 fall season sampling was missed because the ship was not available.

ITINERARY OF CRUISES

The stations sampled are indicated in the figures and their respective coordinates are listed in Table 1. Figures 2 through 14 indicate the chronological order of sampling of the stations on each cruise. The dates and time of sampling are indicated on the figures. Time is Greenwich mean time, GMT, to tenths of hours. The sampling dates were:

February 20, 1973	PVE
February 22, 1973	CMP
May 21, 1973	PVE
May 23, 1973	CMP
February 12, 1974	PVE
February 13, 1974	CMP
April 22, 1974	PVE
April 23, 1974	CMP
April 23-24, 1974	OJB
August 21, 1974	PVE
August 22, 1974	CMP
November 13, 1974	PVE
November 14, 1974	CMP

The data are presented in chronological order.

PARTICIPATING SCIENTIFIC PERSONNEL

The following persons participated in the various cruises. In some instances, cruise members were primarily engaged in other sampling programs as indicated.

Punta Verraco and Cabo Mala Pascua February 20-23, 1973

E.D. Wood - Chief Scientist	J. Parrish
J. Kovarna - Cruise Leader	M. Youngbluth (plankton)
O. Perez Rios	O. Menendez (plankton)
E. Rivera Ruiz	S. Martin (benthos)
K. Watters	R. Castro (benthos)

Punta Verraco and Cabo Mala Pascua May 21-24, 1973

K. Watters - Chief Scientist	G. Owen (plankton)
J. Parrish	J. Munoz (plankton)
O. Perez Rios	V. Vicente (benthos)
E. Rivera Ruiz	B. Buchanan (benthos)
O. Menendez	R. Castro (benthos)

Punta Verraco and Cabo Mala Pascua February 11-14, 1974

E.D. Wood - Chief Scientist	M. Youngbluth (plankton)
O. Perez Rios - Cruise Leader	G. Owen (plankton)
F. Laras	O. Menendez (plankton)
M. Morel	V. Vicente (benthos)
G. Johnson	P. Yoshioka (benthos)
	R. Castro (benthos)

Punta Verraco, Cabo Mala Pascua and Offshore Jobos Bay April 21-25, 1974

E.D. Wood - Chief Scientist	G. Owen (plankton)
O. Perez Rios - Cruise Leader	B. Buchanan (benthos)
F. Laras	P. Yoshioka (benthos)
G. Johnson	R. Castro (benthos)
R. Agrait	P. Davis (benthos)
	E. Klos (benthos)

Punta Verraco and Cabo Mala Pascua
August 20-23, 1974

E.D. Wood - Chief Scientist	P. Yoshioka (benthos)
G. Johnson	V. Vicente (benthos)
J. Stuart	R. Castro (benthos)
G. Owen (plankton)	E. Klos (benthos)

Punta Verraco and Cabo Mala Pascua
November 12-15, 1974

E.D. Wood - Chief Scientist	G. Owen (plankton)
G. Johnson	E. Rodríguez (plankton)
J. Stuart	P. Yoshioka (benthos)
J. Montalvo	V. Vicente (benthos)
M. Nutt	R. Castro (benthos)
	B. Buchanan (benthos)

ATLANTIC OCEAN

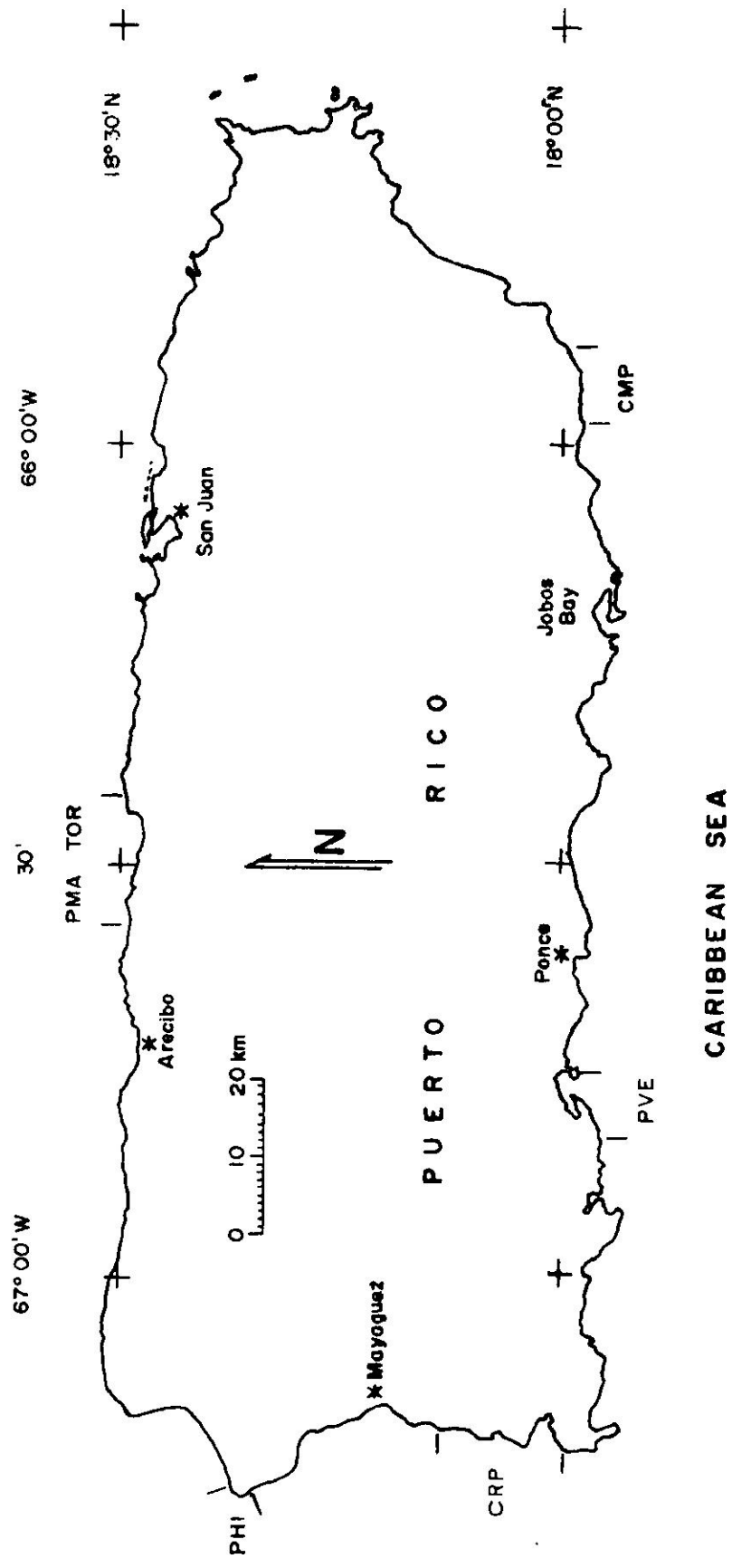


Fig. 1

TABLE 1

Station	Location		Depth Z (m)	Number of Sample Depths
	Lat. N	Long. W		
PVE-1A	17°56.5'	66°51.1'	18	2
1B	17°55.8'	66°51.1'	185	4
1C	17°54.8'	66°51.1'	550	8
PVE-2A	17°56.5'	66°50.0'	18	2
2B	17°55.8'	66°50.0'	(275)	4
2C	17°54.8'	66°50.0'	(600)	8
PVE-3A	17°56.3'	66°48.9'	18	2
3B	17°55.8'	66°48.9'	360	4
3C	17°54.8'	66°48.9'	(650)	8
PVE-4A	17°57.6'	66°48.1'	22	2
4B	17°56.3'	66°47.9'	190	4
4C	17°55.3'	66°47.9'	(600)	8
PVE-5A	17°57.2'	66°46.9'	18	2
5B	17°56.5'	66°46.9'	440	4
5C	17°55.8'	66°46.9'	500	8
PVE-6A	17°58.7'	66°46.1'	20	2
6B	17°57.5'	66°45.8'	260	4
6C	17°56.0'	66°45.8'	620	8
CMP-2A	17°57.7'	65°58.3'	13	2
2B	17°56.9'	65°58.3'	185	4
2C	17°55.7'	65°58.3'	800	8
CMP-3A	17°57.8'	65°57.2'	13	2
3B	17°57.0'	65°57.2'	185	4
3C	17°55.8'	65°57.2'	820	8
CMP-4A	17°58.3'	65°56.2'	17	2
4B	17°57.1'	65°56.2'	185	4
4C	17°56.0'	65°56.2'	900	8
CMP-5A	17°58.4'	65°55.1'	15	2
5B	17°57.3'	65°55.1'	185	4
5C	17°56.1'	65°55.1'	1000	8
CMP-6A	17°58.8'	65°54.1'	20	2
6B	17°57.7'	65°54.1'	185	4
6C	17°56.3'	65°54.1'	1200	8
OJB-00	17°50.0'	66°15.0'	600	8
OJB-15	17°35.0'	66°15.0'	3850	8
OJB-30	17°20.0'	66°15.0'	4350	8
OJB-45	17°05.0'	66°15.0'	4350	8
OJB-60	16°50.0'	66°15.0'	4350	8

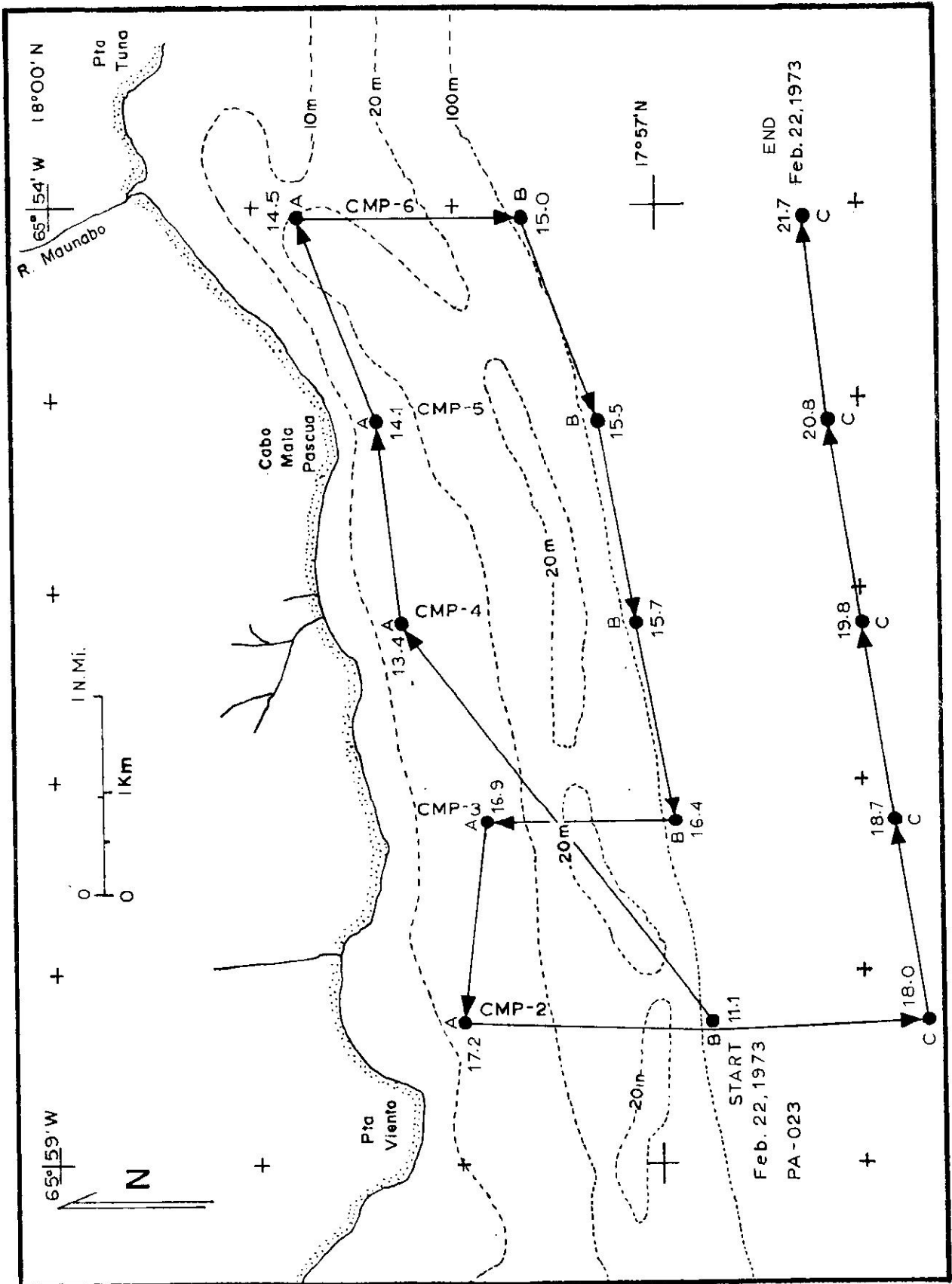


Fig. 3

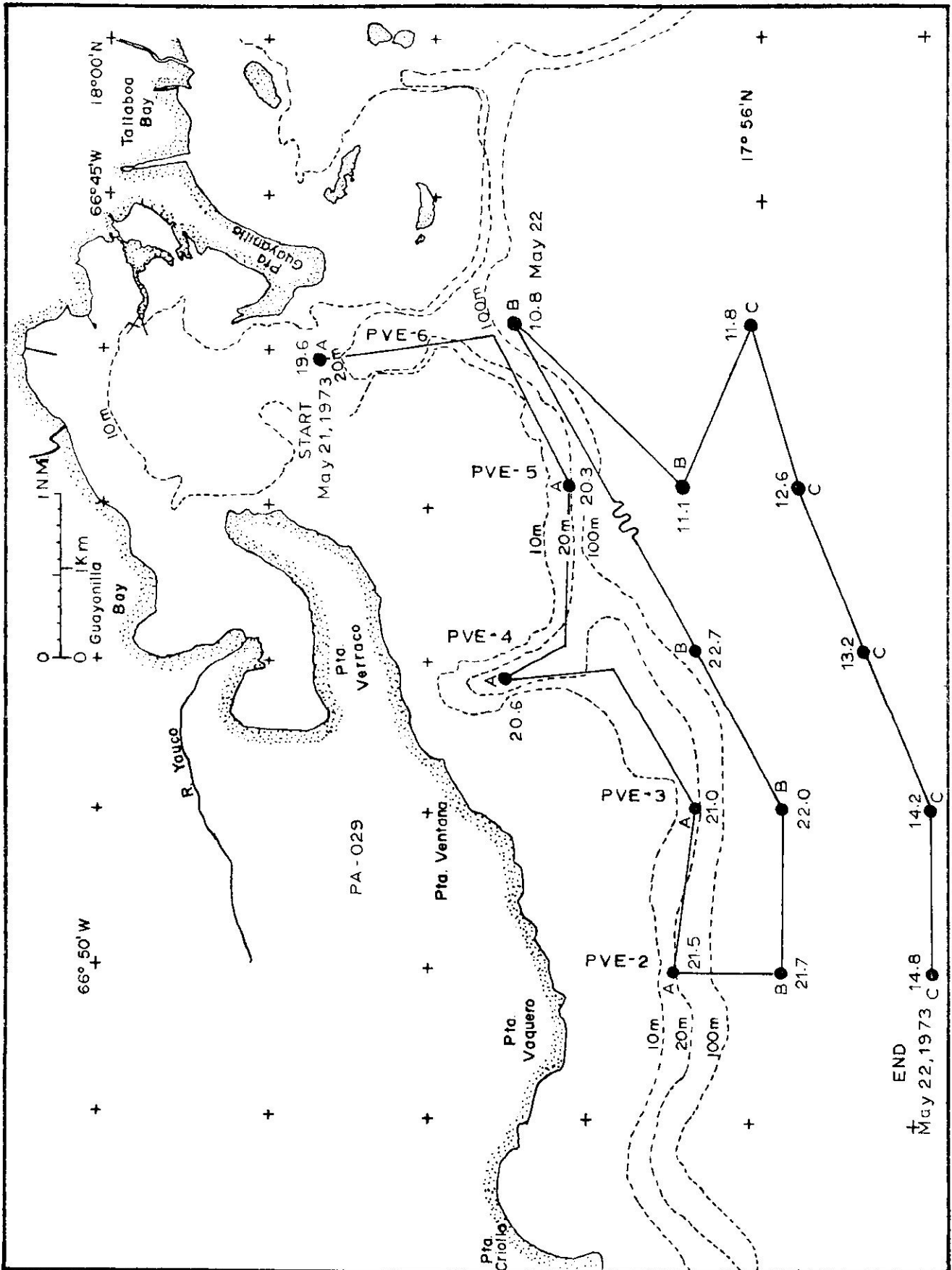


Fig. 4

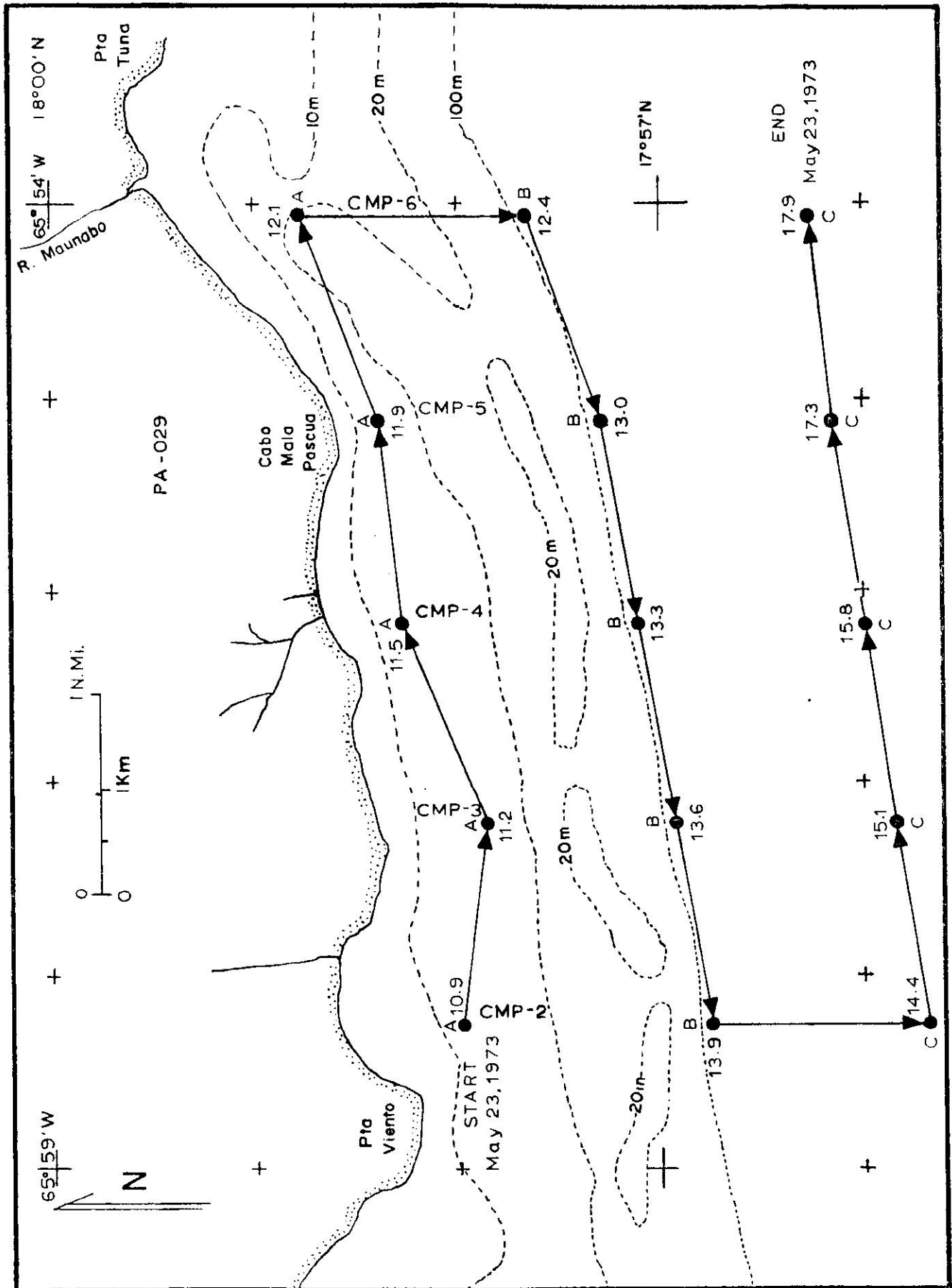


Fig. 5

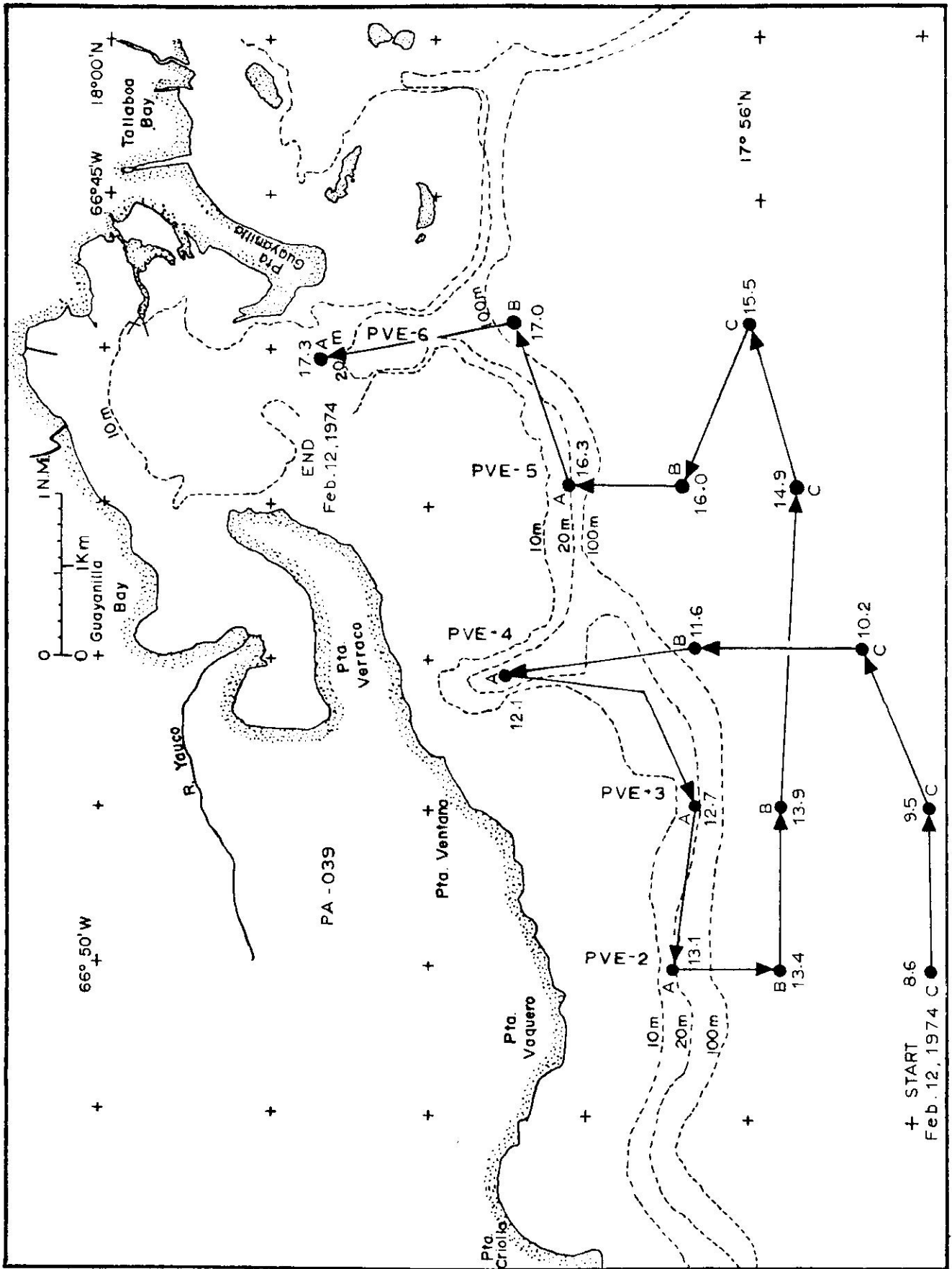


Fig. 6

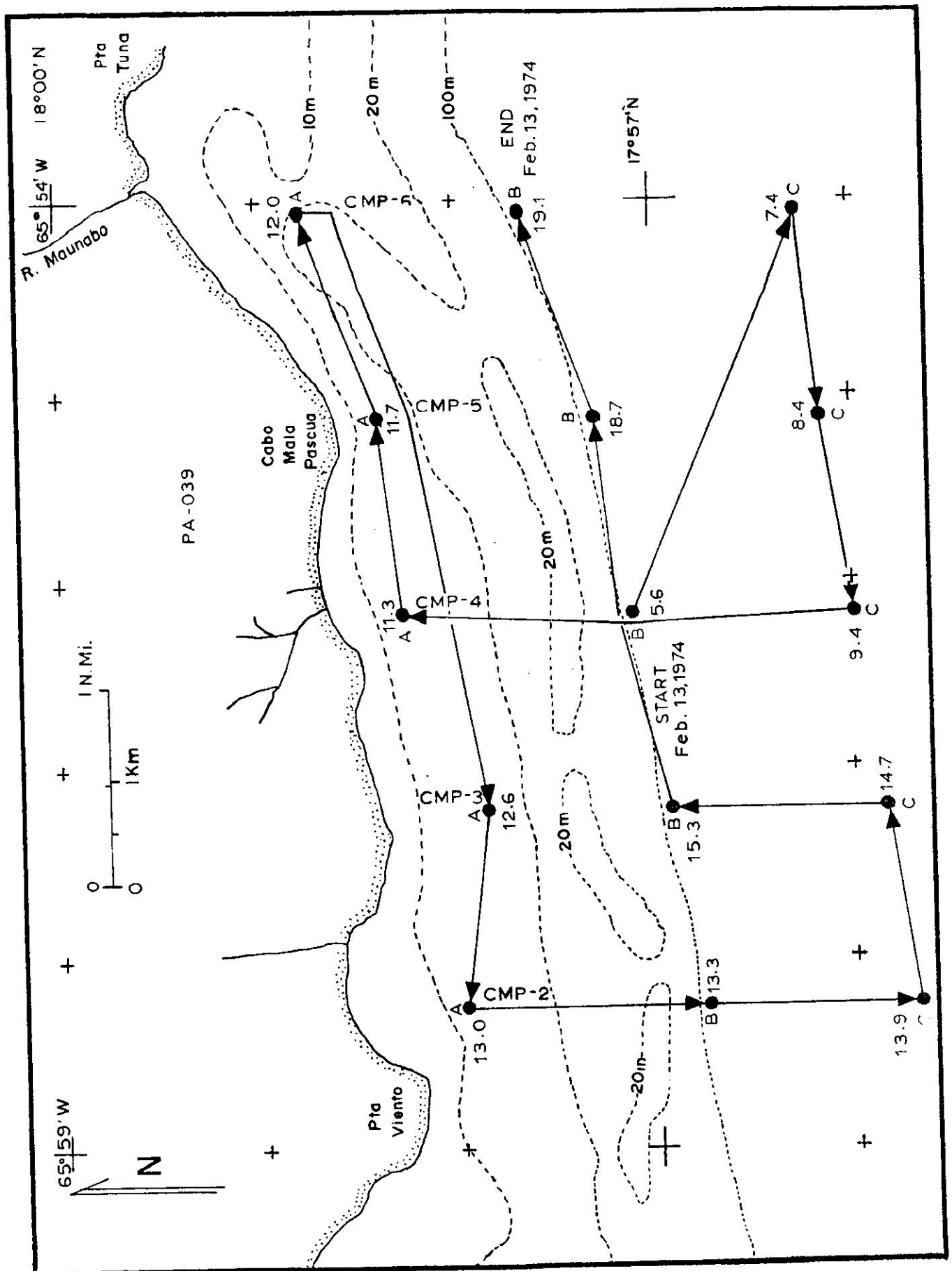


Fig. 7

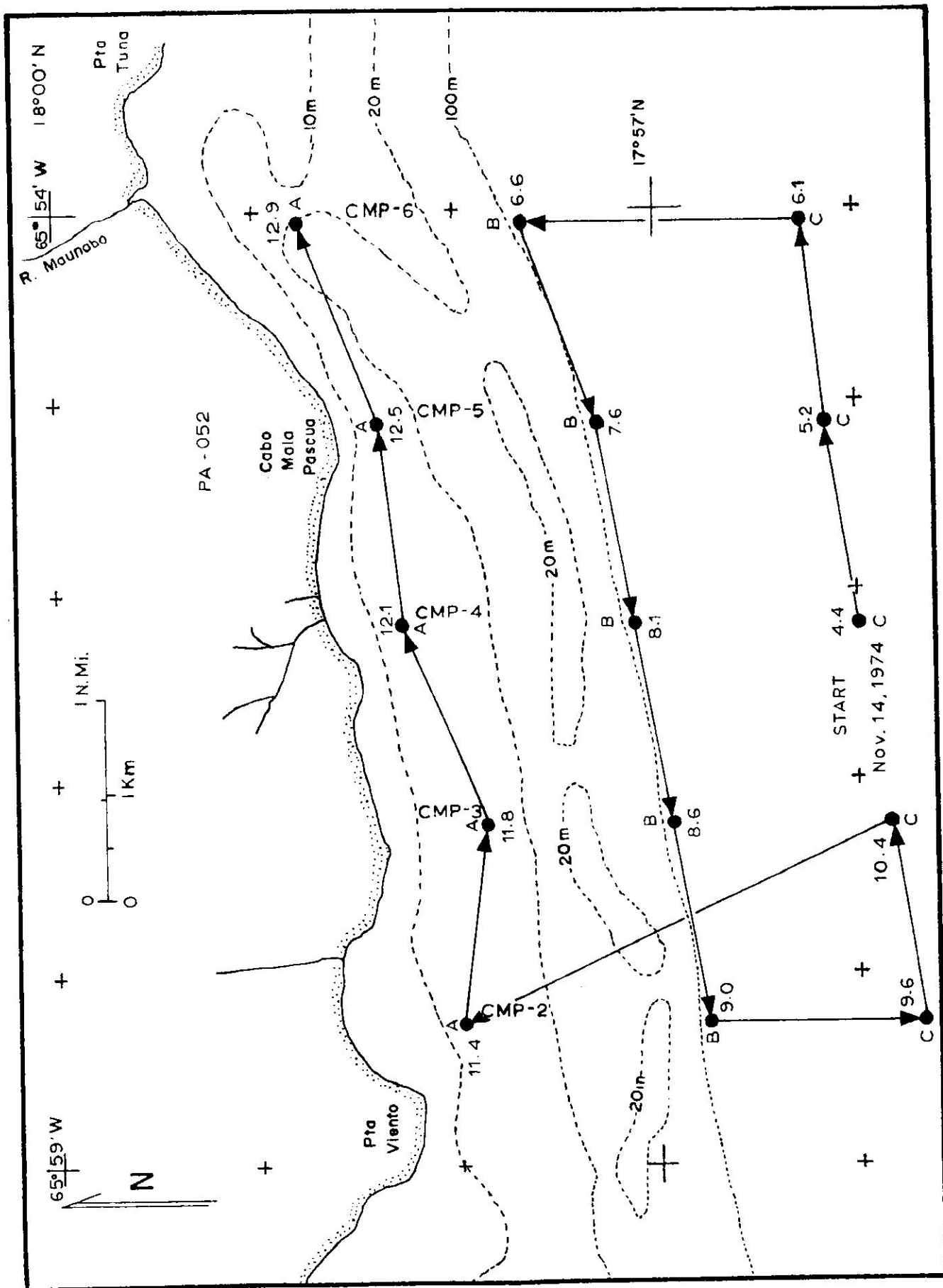


Fig. 14

TABLE 2. Table of codes used to complete station log sheets. Methods are described by Wood (1975).

ALL DEPTHS ARE IN METERS. NUTRIENTS IN $\mu\text{G-AT./L.}$
 MAX-SAMP. DEPTH = MAXIMUM SAMPLING DEPTH X 0.01.
 TRANSPARENCY - SECCHI DISC DEPTH.
 WAVE HEIGHT - H.O. 215 WIND WAVE CODE.
 WAVE PERIOD - IN SECONDS.
 WIND SPEED - IN METERS PER SECOND.
 WEATHER, VISIBILITY, CLOUD TYPE AND AMOUNT - H.O. 215 CODE.

FOREL WATER COLOR SCALE CODE		WEATHER STATE CODE	
Code	Description		
00	Deep blue.	00-49.	No precipitation at the ship at the time of observation.
10	Blue.	00-19.	No precipitation, fog, duststorm, sandstorm, or drifting snow at the ship at the time of observation or during the preceding hour, except for 09.
20	Greenish-blue (or green blue).	00	Cloud development not observed or not observable.
30	Bluish-green (or blue green).	01	Clouds generally dissolving or becoming less developed.
40	Green.	02	State of sky on the whole unchanged.
50	Light green.	03	Clouds, generally forming or developing. Higher number indicate various rain conditions.
60	Yellowish-green.		
70	Yellow green.		
80	Green yellow.		
90	Greenish-yellow.		
99	Yellow.		

STATE OF SEA-WIND WAVES (WMO Code 75)			Height Meters
Code	Description		
0	Calm-glassy---		0
1	Calm-ripples--		0-1/10
2	Smooth-wavelets	1/10-1/2	
3	Slight-----	1/2-1 1/4	
4	Moderate-----	1 1/4-2 1/2	
5	Rough-----	2 1/2-4	
6	Very rough----	4-6	
7	High-----	6-9	
8	Very high-----	9-14	
9	Phenomenal-----	over 14	

COMPASS DIRECTION CODE

True Direction From Which Surface Wind is Blowing
or From Which Wave System is Approaching, in
10° intervals. (WMO Code 23)

Code	Direction
00	Calm
01	50 to 140
02	150 to 240 NNE.
03	250 to 340
04	350 to 440
05	450 to 540 NE.
06	550 to 640
07	650 to 740 ENE.
08	750 to 840
09	850 to 940 E.
10	950 to 1040
11	1050 to 1140 ESE.
12	1150 to 1240
13	1250 to 1340
14	1350 to 1440 SE
15	1450 to 1540
16	1550 to 1640 SSE.
17	1650 to 1740
18	1750 to 1840 S.
19	1850 to 1940
20	1950 to 2040 SSW.
21	2050 to 2140
22	2150 to 2240
23	2250 to 2340 SW.
24	2350 to 2440
25	2450 to 2540 WSW.
26	2550 to 2640
27	2650 to 2740 W.
28	2750 to 2840
29	2850 to 2940 WNW.
30	2950 to 3040
31	3050 to 3140
32	3150 to 3240 NW.
33	3250 to 3340
34	3350 to 3440 NNW.
35	3450 to 3540
36	3550 to 40 N.
99	Direction variable or unknown.

VISIBILITY CODE

(Use range-finder readings of known landmarks
if possible).

Code	Objects not visible at-	Description
0	50 yards	Dense fog.
1	200 yards	Thick fog.
2	400 yards	Fog.
3	1,000 yards	Moderate fog.
4	1 nautical mile	Thin fog or mist.
5	2 nautical miles	Visibility poor.
6	5 nautical miles	Visibility moderate.
7	10 nautical miles	Visibility good.
8	30 nautical miles	Visibility very good
9	Over 30	Visibility excellent

CLOUD COVER CODE

Amount of sky covered in tenths

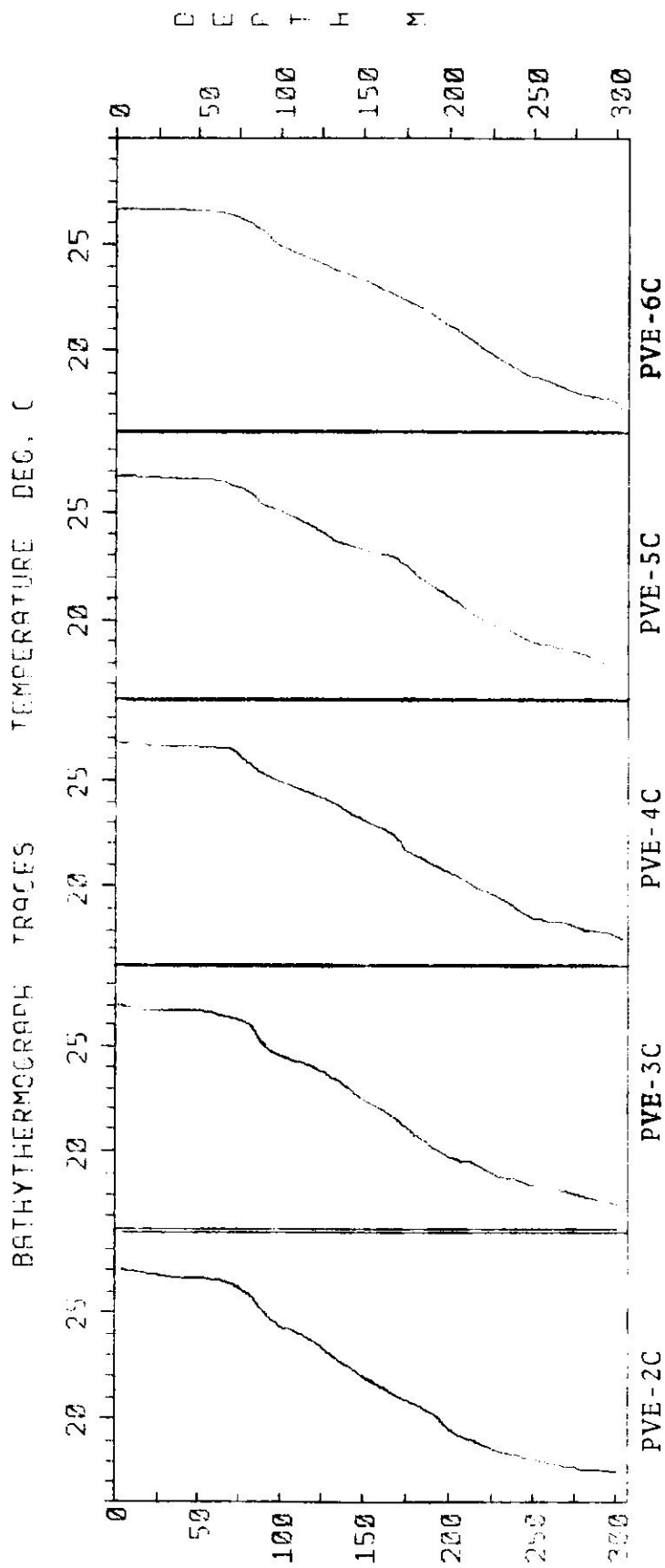
Code	Description
0	No clouds.
1	Less than 1 and 1.
2	2 and 3.
3	4.
4	5.
5	6.
6	7 and 8.
7	9 and 9 plus.
8	10.
9	Sky obscured.

CLOUD TYPE CODE

Cloud Type

Code	Cloud Type
0	Stratus or Fractostratus (St or Fs).
1	Cirrus (Ci).
2	Cirrostratus (Cs).
3	Cirrocumulus (Cc).
4	Alto cumulus (Ac).
	Cloud Type
5	Altostratus (As).
6	Stratocumulus (Sc).
7	Nimbostratus (Ns).
8	Cumulus or Fractocumulus (Cu or Fc).
9	Cumulonimbus (Cb).

HYDROGRAPHIC DATA



Cruise No. PA023
 Feb. 20. 1973

R V PALUMBO CRUISE 023 STATION PVE-2A PRNC REFERENCE 023294

DATE 02 /20/73 BARO 1019,5 WEATHER 01 WIND VELOC 06 WAVE PERIOD 3
 HOUR 19,1 TEMP DRY 32,0 VISIBILITY 8 WIND DIREC 19 TRANSPAR
 LAT 17-56,5 N TEMP WET 0,0 CLOUD TYPE 1 WAVE DIREC 19 SONIC DEP 0015
 LONG 066-51,2 W REL HUMID 065 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19,1 GMT, 15 7 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1,039 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP			OXYGEN			PHOS NITRA							
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	27,12	27,12	27,12	35,742	23,26	4,79	6,84	100,77	,08	0,00	
10	10	0	15	26,79	0,00	26,79	35,723	23,35	4,85	6,93	101,55	,07	0,48	
STANDARD DEPTHS														
023 294	0			27,12	35,742	23,26	4,79	6,84	100,77	0,08	0,00			
10	10			26,79	35,723	23,35	4,85	6,93	101,55	0,07	0,48			

R V PALUMBO CRUISE 023 STATION PVE-3A PRNC REFERENCE 023295

DATE 02 /20/73 BARO 994,2 WEATHER 02 WIND VELOC 04 WAVE PERIOD 3
 HOUR 19,8 TEMP DRY 18,5 VISIBILITY 8 WIND DIREC 18 TRANSPAR
 LAT 17-56,4 N TEMP WET 0,0 CLOUD TYPE 1 WAVE DIREC 19 SONIC DEP 0016
 LONG 066-48,9 W REL HUMID CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19,8 GMT, 1547 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1,239 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP			OXYGEN			PHOS NITRA							
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	27,60	27,07	27,34	35,709	23,16	4,79	6,84	101,00	,04	0,32	
10	10	15	15	26,71	0,00	26,71	35,706	23,36	4,80	6,86	100,31	,11	0,16	
STANDARD DEPTHS														
023 295	0			27,34	35,709	23,16	4,79	6,84	101,00	0,04	0,32			
10	10			26,71	35,706	23,36	4,80	6,86	100,31	0,11	0,16			

R V PALUMBO CRUISE 023 STATION PVE-5B PRNC REFERENCE - 023299

DATE 02 /20/73 BARO 1014.5 WEATHER 03 WIND VELOC 02 WAVE PERIOD 3
 HOUR 21.5 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 18 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 18 SONIC DEP 0457
 LONG 066-46.8 W REL HUMID 072 CLOUD AMT 6 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 21.5 GMT, 1729 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	OXYGEN			PHOS	NITRA
												MG/L	%SAT	WIRE ANGLE		
0	0	0	0	11	26.96	26.95	26.96	35.574	23.19	4.83	6.90	101.00	0.07	0.08		
25	25	26	26	15	26.65	0.00	26.65	35.569	23.28	4.85	6.93	101.02	0.06	0.32		
50	50	49	49	12	26.56	0.00	26.56	35.568	23.31	4.76	6.80	98.95	0.05	0.08		
100	100	0	0	16	24.19	0.00	24.19	36.634	24.84	4.60	6.58	89.24	0.08	0.08		
023	299	STANDARD DEPTHS														
	0							26.96	35.574	23.19	4.83	6.90	101.00	0.07	0.08	
	10							26.83	35.572	23.22	4.84	6.92	101.00	0.07	0.10	
	20							26.71	35.570	23.26	4.85	6.93	101.01	0.06	0.28	
	30							26.61	35.568	23.29	4.84	6.92	100.69	0.06	0.29	
	50							26.56	35.568	23.31	4.76	6.80	98.95	0.05	0.08	
	75							25.74	35.923	23.83	4.68	6.68	96.64	0.06	0.08	
	100							24.19	36.634	24.84	4.60	6.58	89.24	0.08	0.08	

R V PALUMBO CHUISE 023 STATION PVE=3B PRNC REFERENCE 023300
 DATE 02 /20/73 RARO 1014.5 WEATHER 03 WIND VELOC 03 WAVE PERIOD 3
 HOUR 22.0 TEMP DRY 29.0 VISIBILITY 6 WIND DIREC 17 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 18 SONIC DEP 0371
 LONG 066-48.9 W REL HUMID 073 CLOUD AMT 4 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 22.0 GMT, 10.1 LOCAL MAX DEPTH 100 WIRE ANGLE 9
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	C#	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	0	11	26.77	26.76	26.77	35.531	23.21	4.75	6.79	98.92	.05	1.29
25	25	25	25	15	26.62	0.00	26.62	35.555	23.28	4.76	6.80	99.00	.03	1.45
50	50	53	53	12	26.56	0.00	26.56	35.582	23.32	4.77	6.81	99.19	.04	0.08
100	99	103	103	16	24.13	0.00	24.13	36.699	24.01	4.68	6.68	90.85	.03	0.48
STANDARD DEPTHS														
023	300													
	0						26.77	35.531	23.21	4.75	6.79	98.92	0.05	1.29
	10						26.71	35.541	23.24	4.75	6.79	98.95	0.04	1.35
	20						26.65	35.550	23.27	4.76	6.80	98.98	0.03	1.42
	30						26.60	35.560	23.29	4.76	6.80	99.03	0.03	1.22
	50						26.56	35.582	23.32	4.77	6.81	99.19	0.04	0.08
	75						25.51	36.064	24.01	4.73	6.76	97.58	0.04	0.28
	100						24.08	36.722	24.94	4.67	6.68	90.86	0.03	0.49

R V PALUMBO CRUISE 023 STATION PVE-3C PRNC REFERENCE 023303
 DATE 02 /20/73 PARO 1015.3 WEATHER 02 WIND VELOC 03 WAVE PERIOD 6
 HOUR 24.0 TEMP DRY 26.5 VISIBILITY 5 WIND DIREC 18 TRANSPAR
 LAT 17-24.7 N TEMP WET 0.0 CLOUD TYPE WAVE DIREC 16 SONIC DEP 0370
 LONG 066-48.9 W REL HUMID 078 CLOUD AMT WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 24.0 GMT, 1957 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	26.78	26.76	26.77	35.621	23.28	4.75	6.79	99.12	.06	8.06
25	25	26	15	26.62	0.00	26.60	35.616	23.33	4.75	6.79	98.88	.06	0.16
50	50	49	12	26.54	0.00	26.54	35.620	23.35	4.75	6.79	98.81	.05	0.16
100	100	100	16	24.44	0.00	24.44	36.587	24.80	4.60	6.58	89.58	.05	0.32

CAST 2 MESS TIME 0.5 GMT, 2029 LOCAL MAX DEPTH 300 WIRE ANGLE 4
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
150	150	0	11	22.33	22.36	22.35	36.706	25.43	4.13	5.90	79.23	.33	0.65
200	199	195	15	19.52	0.00	19.52	36.479	26.03	3.48	4.97	61.70	.61	4.68
250	249	244	12	18.11	0.00	18.11	36.370	26.31	4.28	6.12	75.07	.29	8.06
300	299	299	16	17.35	0.00	17.35	36.262	26.41	4.54	6.49	79.15	.38	5.00

STANDARD DEPTHS

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	23.28	23.28	23.28	35.621	23.28	4.75	6.79	99.12	0.06	8.06
10	10	0	11	23.30	23.30	23.30	35.619	23.30	4.75	6.79	99.03	0.06	4.90
20	20	0	11	23.32	23.32	23.32	35.617	23.32	4.75	6.79	98.93	0.06	1.58
30	30	0	11	23.34	23.34	23.34	35.617	23.34	4.75	6.79	98.85	0.06	0.16
50	50	0	11	23.35	23.35	23.35	35.620	23.35	4.75	6.79	98.81	0.05	0.16
75	75	0	11	24.01	24.01	24.01	36.131	24.01	4.70	6.72	97.26	0.05	0.22
100	100	0	11	24.01	24.01	24.01	36.687	24.01	4.60	6.58	89.58	0.05	0.32
150	150	0	11	25.43	25.43	25.43	36.706	25.43	4.13	5.90	79.23	0.33	0.65
200	200	0	11	26.04	26.04	26.04	36.476	26.04	3.49	4.99	61.88	0.60	4.78
250	250	0	11	26.31	26.31	26.31	36.368	26.31	4.29	6.13	75.19	0.29	8.03
300	300	0	11	26.42	26.42	26.42	36.260	26.42	4.55	6.50	79.15	0.38	4.94

R V PALUMBO CRUISE 023 STATION PVE-40 PRNC REFERENCE 023304

DATE 02 /21/73 BARO 1016.3 WEATHER 02 WIND VELOC 01 WAVE PERIOD 6
 HOUR 1.1 TEMP DRY 26.4 VISIBILITY 15 WIND DIREC 15 TRANSPAR
 LAT 17-55.3 N TEMP WET 0.0 CLOUD TYPE 16 WAVE DIREC 16 SONIC DEP 0531
 LONG 066-47.8 W REL HUMID 077 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 1.1 GMT, 21 6 LOCAL MAX DEPTH 100 WIRE ANGLE 1
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	XSAT		
0	0	0	11	26.75	26.74	26.75	35.576	23.25	4.83	6.90	100.72	.05	5.00
25	25	25	15	26.60	0.00	26.60	35.563	23.29	4.95	7.07	102.88	.16	0.00
50	50	48	12	26.55	0.00	26.55	35.579	23.32	4.77	6.81	99.18	.14	0.00
100	100	103	16	24.82	0.00	24.82	36.613	24.63	4.56	6.52	88.71	.26	0.00

CAST 2 MESS TIME 1.6 GMT, 2136 LOCAL MAX DEPTH 300 WIRE ANGLE 4
 OXYGEN TITER 1.039 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	XSAT		
150	150	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
200	199	200	15	20.48	0.00	20.48	36.822	26.04	3.81	5.45	72.41	.36	3.23
250	249	246	12	18.35	0.00	18.35	36.565	26.40	4.17	5.95	73.61	.56	0.00
300	299	301	16	17.58	0.00	17.58	36.469	26.52	4.38	6.25	76.74	.33	0.00

023 304 STANDARD DEPTHS

DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN ML/L	OXYGEN MG/L	XSAT	PHOS	NITRA
0	0	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
10	10	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
20	20	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
30	30	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
50	50	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
75	75	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
100	100	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
150	150	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
200	200	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
250	250	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16
300	300	0	11	23.00	23.01	23.01	36.766	25.29	4.25	6.07	82.02	.16	0.16

R V PALUMBO CRUISE 023 STATION CMP-4A PRNC REFERENCE 023322

DATE 02 /22/73 BARO 1015.5 WEATHER 03 WIND VELOC 02 WAVE PERIOD 4
 HOUR 13.4 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC TRANSPAR
 LAT 17-58.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 16 SONIC DEP 0016
 LONG 065-56.2 W REL HUMID 070 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 13.4 GMT, 926 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		XSAT	PHOS	NITRA						
	CZ	TZ	RN	TL				TM	TM	TM			
0	0	0	11	26.38	26.37	26.37	35.766	23.51	4.74	6.78	98.75	.04	0.16
10	10	10	15	26.39	0.00	26.39	35.769	23.51	4.88	6.97	101.61	.04	0.00

023 322 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 023 STATION CMP-5A PRNC REFERENCE 023323

DATE 02 /22/73 BARO 1015.5 WEATHER 03 WIND VELOC 00 WAVE PERIOD 4
 HOUR 14.1 TEMP DRY 28.0 VISIBILITY 8 WIND DIREC TRANSPAR
 LAT 17-58.4 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 16 SONIC DEP 0017
 LONG 065-55.0 W REL HUMID 069 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.1 GMT, 107 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		XSAT	PHOS	NITRA						
	CZ	TZ	BN	TL				TM	TM	TM			
0	0	0	11	26.35	0.00	26.35	35.765	23.52	4.95	7.08	103.07	.07	0.00
10	10	11	15	26.32	0.00	26.32	35.777	23.54	4.88	6.97	101.52	.04	0.08

023 323 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 023 STATION CMP-6A PRNC REFERENCE 023324

DATE 02 /22/73 BARO 1016.3 WEATHER 03 WIND VELOC 02 WAVE PERIOD 4
 HOUR 14.5 TEMP DRY 28.0 VISIBILITY 8 WIND DIREC 05 TRANSPAR
 LAT 17-58.3 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 18 SONIC DEP 0017
 LONG 065-54.0 W REL HUMID 069 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.5 GMT, 1033 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA		
		TZ	BN									TL	TM
0	0	0	11	26.42	26.41	26.42	35.764	23.50	4.59	6.55	95.93	.04	0.08
10	10	9	15	26.33	0.00	26.30	35.786	23.55	5.13	7.33	106.73	.02	0.16
023 324	0	STANDARD DEPTHS											
	10	26.42	35.764	23.50	4.59	6.55	95.93	0.04	0.08				
	10	26.30	35.786	23.55	5.13	7.33	106.73	0.02	0.16				

R V PALUMBO CRUISE 023 STATION CMP-6B PRNC REFERENCE 023325
 DATE 02 /22/73 RARO 1016.3 WEATHER 03 WIND VELOC 00 WAVE PERIOD 8
 HOUR 15.0 TEMP DRY 29.4 VISIBILITY 8 WIND DIREC TRANSPAR
 LAT 17-57.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0475
 LONG 065-54.0 W REL HUMID 066 CLOUD AMT 7 WAVE HEIGHT 0 COLOR

CAST 1 MESS TIME 15.0 GMT, 11 2 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	TZ	TM	BN	TL						
0	0	26.42	26.43	26.43	23.52	4.81	6.87	100.18	.04	0.00
25	28	26.25	0.00	26.25	23.58	4.69	6.70	97.55	.02	0.00
50	48	26.21	0.00	26.21	23.90	4.57	6.52	95.79	.04	0.00
100	104	25.36	0.00	25.36	24.66	4.75	6.79	98.03	.04	0.00

STANDARD DEPTHS	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	TZ	TM	BN	TL						
0	0	26.43	35.790	26.43	23.52	4.81	6.87	100.18	0.04	0.00
10	10	26.36	35.796	26.36	23.54	4.76	6.80	99.12	0.03	0.00
20	20	26.28	35.802	26.28	23.57	4.72	6.74	98.07	0.02	0.00
30	30	26.23	35.868	26.23	23.64	4.66	6.66	96.99	0.02	0.00
50	50	26.21	36.213	26.21	23.90	4.57	6.52	93.79	0.04	0.00
75	75	25.91	36.566	25.91	24.26	4.59	6.55	94.62	0.04	0.03
120	120	25.36	36.865	25.36	24.66	4.75	6.79	98.03	0.04	0.08

R V PALUMBO CRUISE 023 STATION CMP=58 PRNC REFERENCE 023326

DATE 02 /22/73 BARO 1016.2 WEATHER 03 WIND VELOC 01 WAVE PERIOD 7
 HOUR 15.5 TEMP DRY 30.8 VISIBILITY 8 WIND DIREC 11 TRANSPAR
 LAT 17=57.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 14 SONIC DEP 0420
 LONG 065=55.1 W REL HUMID 064 CLOUD AMT 8 WAVE HEIGHT 0 COLOR

CAST 1 MESS TIME 15.5 GMT, 1127 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		TM	YM							ML/L	MG/L			
0	0	26.45	26.46	26.46	11	0	26.46	35.798	23.51	4.71	6.73	98.27	.04	0.00
25	25	26.30	0.00	26.30	15	26	26.30	35.789	23.55	4.80	6.85	99.77	.02	0.00
50	50	26.20	0.00	26.20	12	47	26.20	36.187	23.89	4.77	6.81	97.83	.03	0.16
100	100	25.47	0.00	25.47	16	104	25.47	36.831	24.60	4.71	6.73	97.22	.07	0.48

023 326 STANDARD DEPTHS

0	26.46	35.798	23.51	4.71	6.73	98.27	0.04	0.00
10	26.39	35.794	23.53	4.75	6.78	98.87	0.03	0.00
20	26.33	35.791	23.55	4.78	6.83	99.52	0.02	0.00
30	26.28	35.849	23.61	4.80	6.85	99.85	0.02	0.02
50	26.20	36.187	23.89	4.77	6.81	97.83	0.03	0.16
75	25.92	36.534	24.24	4.74	6.77	97.67	0.05	0.32
100	25.47	36.831	24.60	4.71	6.73	97.22	0.07	0.48

R V PALUMBO CRUISE 023 STATION CMP-4B PRNC REFERENCE 023327

DATE 02 /22/73 BARO 1016.1 WEATHER 03 WIND VELOC 01 WAVE PERIOD
 HOUR 15.7 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 17-57.1 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC SONIC DEP 0366
 LONG 065-56.2 W REL HUMID 064 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.7 GMT, 1145 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			TM	TM											
0	0	0	26.49	26.49	26.49	11	26.49	35.795	23.50	4.78	6.82	99.63	.03	0.16	
25	25	27	26.33	0.00	26.33	15	26.33	35.787	23.54	4.85	6.93	100.90	.05	0.32	
50	50	48	26.21	0.00	26.21	12	26.21	36.415	24.05	4.88	6.97	100.59	.04	0.32	
100	100	102	25.70	0.00	25.70	16	25.70	36.777	24.49	4.83	6.90	99.72	.04	0.48	

023 327	STANDARD DEPTHS	0	10	20	30	50	75	100	0	.03	.04	.05	.05	.04	.04
26.43	35.792	23.52	4.81	6.86	100.14	0.04	0.22								
26.36	35.789	23.54	4.84	6.91	100.66	0.05	0.29								
26.31	35.891	23.63	4.86	6.94	101.27	0.05	0.32								
26.21	36.415	24.06	4.88	6.97	100.59	0.04	0.32								
26.00	36.745	24.37	4.87	6.96	100.85	0.04	0.37								
25.70	36.777	24.49	4.83	6.90	99.72	0.04	0.48								

R V PALUMBO CRUISE 023 STATION CMP-38 PRNC REFERENCE 023328

DATE 02 /22/73 BARO 1015.5 WEATHER 03 WIND VELOC 01 WAVE PERIOD 4
 HOUR 16.4 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-57.1 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 14 SONIC DEP 0391
 LONG 065-57.1 W REL HUMID 064 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.4 GMT, 1222 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	26.59	26.59	0.00	26.59	35.765	23.44	4.75	6.79	99.28	.06	0.48
25	25	28	15	26.31	0.00	0.00	26.31	35.824	23.58	4.71	6.73	98.10	.04	0.48
50	50	51	12	26.13	0.00	0.00	26.13	36.460	24.11	4.84	6.91	99.76	.18	0.48
100	100	105	16	25.45	0.00	0.00	25.45	36.841	24.61	4.78	6.82	98.51	.05	0.48

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	26.59	26.59	0.00	26.59	35.765	23.45	4.75	6.79	99.28	0.06	0.48
10	10	14	15	26.31	0.00	0.00	26.31	35.789	23.50	4.74	6.77	98.81	0.05	0.48
20	20	24	12	26.13	0.00	0.00	26.13	35.812	23.55	4.72	6.74	98.34	0.04	0.48
30	30	34	12	26.13	0.00	0.00	26.13	35.932	23.67	4.73	6.76	98.66	0.06	0.48
50	50	54	12	26.13	0.00	0.00	26.13	36.460	24.11	4.84	6.91	99.76	0.18	0.48
75	75	79	16	25.45	0.00	0.00	25.45	36.799	24.46	4.81	6.87	99.43	0.11	0.48
100	100	105	16	25.45	0.00	0.00	25.45	36.841	24.61	4.78	6.82	98.51	0.05	0.48

023 328 STANDARD DEPTHS

R V PALUMBO CRUISE 023 STATION CMP-3A PRNC REFERENCE 023329

DATE 02 /22/73 BARO 1215.5 WEATHER 03 WIND VELOC 01 WAVE PERIOD 4
HOUR 16.9 TEMP DRY 30.5 VISIBILITY 8 WIND DIREC 10 TRANSPAR
LAT 17-57.8 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 14 SONIC DEP 0183
LONG 065-57.1 W REL HUMID 065 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.9 GMT, 1253 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.247 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	TL	TM	TAVE	SALIN						
0	26.69	26.41	25.55	35.774	23.46	4.78	6.82	99.68	.04	0.48
10	26.67	0.00	26.67	35.767	23.42	4.93	7.05	103.12	.01	0.48

023 329 STANDARD DEPTHS
0
10

R V PALUMBO CRUISE 023 STATION CMP-2A PRNC REFERENCE 023330

DATE 02 /22/73 BARO 1200.0 WEATHER 03 WIND VELOC 01 WAVE PERIOD
HOUR 17.2 TEMP DRY 30.5 VISIBILITY 8 WIND DIREC 10 TRANSPAR
LAT 17-57.7 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 14 SONIC DEP 0018
LONG 065-58.1 W REL HUMID 065 CLOUD AMT 7 WAVE HEIGHT COLOR

CAST 1 MESS TIME 17.2 GMT, 1310 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	TL	TM	TAVE	SALIN						
0	26.58	26.57	26.58	35.789	23.47	4.73	6.76	98.87	.08	0.80
10	26.44	0.00	26.44	35.789	23.51	4.86	6.94	101.29	.07	1.29

023 330 STANDARD DEPTHS
0
10

R V PALUMBO CRUISE 023

STATION CMP-2C

PRNC REFERENCE 023331

DATE 02 /22/73 BARO 1015.0 WEATHER 03 WIND VELOC 01 WAVE PERIOD 6
 HOUR 18.0 TEMP DRY 29.5 VISIBILITY 8 WIND DIREC 13 TRANSPAR
 LAT 17-55.7 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 15 SONIC DEP 0896
 LONG 065-58.3 W REL HUMID 067 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.0 GMT, 1357 LOCAL MAX DEPTH 100 WIRE ANGLE 2
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	CE	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	%SAT		
0	0	0	11	26.55	26.54	26.55	35.789	23.48	4.86	6.94	101.45	.04	0.81
25	25	36	15	26.39	0.00	26.39	35.785	23.52	4.86	6.94	101.21	.05	1.29
50	50	47	12	26.24	0.00	26.24	36.042	23.76	4.80	6.85	100.12	.03	1.45
100	100	101	16	25.20	0.00	25.20	36.932	24.76	4.78	6.82	98.38	.05	1.61

CAST 2 MESS TIME 17.6 GMT, 1338 LOCAL MAX DEPTH 300 WIRE ANGLE 2
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	CE	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	%SAT		
150	150	0	11	22.95	22.95	22.95	37.046	25.52	4.66	6.66	90.77	.07	1.61
200	200	201	15	21.09	0.00	21.09	36.972	25.99	4.26	6.09	81.47	.08	4.03
250	250	244	12	19.04	0.00	19.04	36.781	26.39	4.24	6.06	75.86	.15	4.35
300	299	301	16	17.72	0.00	17.72	36.614	26.59	4.46	6.37	78.62	.25	7.90

023 331 STANDARD DEPTHS

DEPTH (M)	PHOS	NITRA
2	0.04	0.81
10	0.04	1.00
20	0.05	1.20
30	0.05	1.34
50	0.03	1.45
75	0.04	1.55
100	0.05	1.61
150	0.07	1.61
200	0.08	4.03
250	0.15	4.35
300	0.25	7.97

R V PALUMBO CRUISE 023 STATION CMP-3C PRNC REFERENCE 023332
 DATE 02 /22/73 RARO 1015.5 WEATHER 01 WIND VELOC 01 WAVE PERIOD 5
 HOUR 18.7 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 09 TRANSPAR
 LAT 17-55.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0805
 LONG 065-57.2 W REL HUMID 066 CLOUD AMT 4 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.7 GMT, 1444 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	YL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	11	26.63	26.61	26.61	26.62	35.809	23.47	4.95	7.08	103.58	.16	1.61
25	25	25	15	26.38	0.00	26.38	35.798		23.54	4.74	6.78	98.82	.05	1.61
50	50	53	12	26.19	0.00	26.19	36.022		23.76	4.77	6.81	99.35	.05	3.23
100	100	108	16	25.19	0.00	25.19	36.934		24.76	4.78	6.82	98.37	.03	0.22

CAST 2 MESS TIME 19.1 GMT, 15 5 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	YL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
150	149	0	11	23.00	0.00	23.00	37.042		25.50	4.66	6.66	90.80	.42	1.61
200	199	197	15	21.12	0.00	21.12	36.995		26.00	4.24	6.06	81.12	.06	4.03
250	249	243	12	18.59	0.00	18.59	36.717		26.45	4.35	6.21	77.20	.28	4.92
300	298	300	16	17.63	0.00	17.63	36.604		26.61	4.46	6.37	78.55	.25	4.35

DEPTH (M)	STANDARD DEPTHS
0	0
10	10
20	20
30	30
50	50
75	75
100	100
150	150
200	200
250	250
300	300

R V PALUMBO CRUISE 223 STATION CMP-4C PRNC REFERENCE 023333

DATE 02 /22/73 BARO 1014.5 WEATHER 01 WIND VELOC 03 WAVE PERIOD 4
 HOUR 19.8 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 13 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 13 SONIC DEP 1067
 LONG 065-56.2 W REL HUMID 066 CLOUD AMT 3 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19.8 GMT, 1550 LOCAL MAX DEPTH 100 WIRE ANGLE 2
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TEMP			TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
			TZ	BN	TL				TM	ML/L	MG/L		
0	0	0	11	26.51	26.55	26.53	35.781	23.48	4.84	6.91	100.97	.05	0.16
25	25	26	15	26.48	0.00	26.48	35.810	23.51	4.83	6.90	100.74	.00	0.08
50	50	49	12	26.22	0.00	26.22	36.152	23.85	4.78	6.82	97.99	.02	0.16
100	100	100	16	25.30	0.00	25.30	36.913	24.71	4.75	6.79	98.02	.09	0.16

CAST 2 MESS TIME 20.3 GMT, 1610 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TEMP			TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
			TZ	BN	TL				TM	ML/L	MG/L		
150	150	0	11	23.08	23.09	23.09	37.174	25.57	4.59	6.55	89.74	.05	0.81
200	200	200	15	20.60	0.00	20.60	36.947	26.10	4.24	6.06	80.70	.16	1.61
250	249	246	12	18.25	0.00	18.25	36.694	26.52	4.35	6.21	77.04	.22	4.35
300	299	302	16	17.43	0.00	17.43	36.576	26.64	4.46	6.37	78.40	.31	4.84

023 333 STANDARD DEPTHS

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN ML/L	OXYGEN MG/L	XSAT	PHOS	NITRA
0	0	0	11	26.51	26.55	26.53	35.781	23.48	4.84	6.91	100.97	.05	0.16	
10	10	0	11	23.08	23.09	23.09	37.174	25.57	4.59	6.55	89.74	.05	0.81	
20	20	200	15	20.60	0.00	20.60	36.947	26.10	4.24	6.06	80.70	.16	1.61	
30	30	246	12	18.25	0.00	18.25	36.694	26.52	4.35	6.21	77.04	.22	4.35	
50	50	302	16	17.43	0.00	17.43	36.576	26.64	4.46	6.37	78.40	.31	4.84	
75	75	0	11	26.51	26.55	26.53	35.781	23.48	4.84	6.91	100.97	.05	0.16	
100	100	0	11	23.08	23.09	23.09	37.174	25.57	4.59	6.55	89.74	.05	0.81	
150	150	200	15	20.60	0.00	20.60	36.947	26.10	4.24	6.06	80.70	.16	1.61	
200	200	246	12	18.25	0.00	18.25	36.694	26.52	4.35	6.21	77.04	.22	4.35	
250	250	302	16	17.43	0.00	17.43	36.576	26.64	4.46	6.37	78.40	.31	4.84	
300	300	0	11	26.51	26.55	26.53	35.781	23.48	4.84	6.91	100.97	.05	0.16	

R V PALUMBO CRUISE 023

STATION CMP-5C

PRNC REFERENCE 023334

DATE 02 /22/73 FARGO 1014.5 WEATHER W3 WIND VELOC 05 WAVE PERIOD 4
 HOUR 20.8 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 05 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 2 WAVE DIREC 14 SONIC DEP 1061
 LONG 065-55.1 W REL HUMID 069 CLOUD AMT 6 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 20.8 GMT, 1645 LOCAL MAX DEPTH 170 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	26.66	26.64	26.65	35.784	23.44	4.77	6.81	99.63	.03	0.16	
25	25	25	15	26.48	0.00	26.48	35.835	23.53	4.88	6.97	101.88	.05	0.08	
50	50	51	12	26.23	0.00	26.23	36.338	23.99	4.86	6.94	100.03	.02	0.08	
100	100	97	16	24.69	0.00	24.69	37.016	24.98	4.66	6.66	92.13	.03	0.16	

CAST 2 MESS TIME 21.2 GMT, 1713 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
150	150	0	11	23.12	23.12	23.12	37.188	25.58	4.54	6.49	88.95	.06	1.29	
200	200	200	15	20.51	0.00	20.51	36.778	26.00	4.21	6.01	79.91	.12	3.23	
250	250	247	12	18.26	0.00	18.26	36.695	26.52	4.43	6.33	78.54	.22	3.23	
300	300	302	16	17.38	0.00	17.38	36.576	26.65	4.52	6.46	79.48	.32	7.90	

023 334 STANDARD DEPTHS

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	26.65	26.65	26.65	35.784	23.44	4.77	6.81	99.63	0.03	0.16	
10	10	0	11	26.58	26.58	26.58	35.804	23.48	4.81	6.87	100.53	0.04	0.13	
20	20	0	11	26.52	26.52	26.52	35.825	23.51	4.86	6.94	101.49	0.05	0.09	
30	30	0	11	26.45	26.45	26.45	35.916	23.60	4.88	6.97	101.90	0.05	0.08	
50	50	0	11	26.23	26.23	26.23	36.338	23.99	4.86	6.94	100.03	0.02	0.08	
75	75	0	11	25.55	25.55	25.55	36.736	24.50	4.77	6.81	98.32	0.03	0.11	
100	100	0	11	24.69	24.69	24.69	37.016	24.98	4.66	6.66	92.13	0.03	0.16	
150	150	0	11	23.12	23.12	23.12	37.188	25.58	4.54	6.49	88.95	0.06	1.29	
200	200	0	11	20.51	20.51	20.51	36.778	26.00	4.21	6.01	79.91	0.12	3.23	
250	250	0	11	18.26	18.26	18.26	36.695	26.52	4.43	6.33	78.54	0.22	3.23	
300	300	0	11	17.38	17.38	17.38	36.576	26.65	4.52	6.46	79.48	0.32	7.90	

R V PALUMBO CRUISE 023 STATION CMP-6C PRNC REFERENCE 023335
 DATE 02 /22/73 BARO 1014.5 WEATHER 01 WIND VELOC 27 WAVE PERIOD 1
 HOUR 21.7 TEMP DRY 27.0 VISIBILITY 6 WIND DIREC 04 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 04 SONIC DEP 1200
 LONG 065-54.0 W REL HUMID 072 CLOUD AMT 4 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 21.7 GMT, 1743 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.247 METER WHEEL FACTOR .997

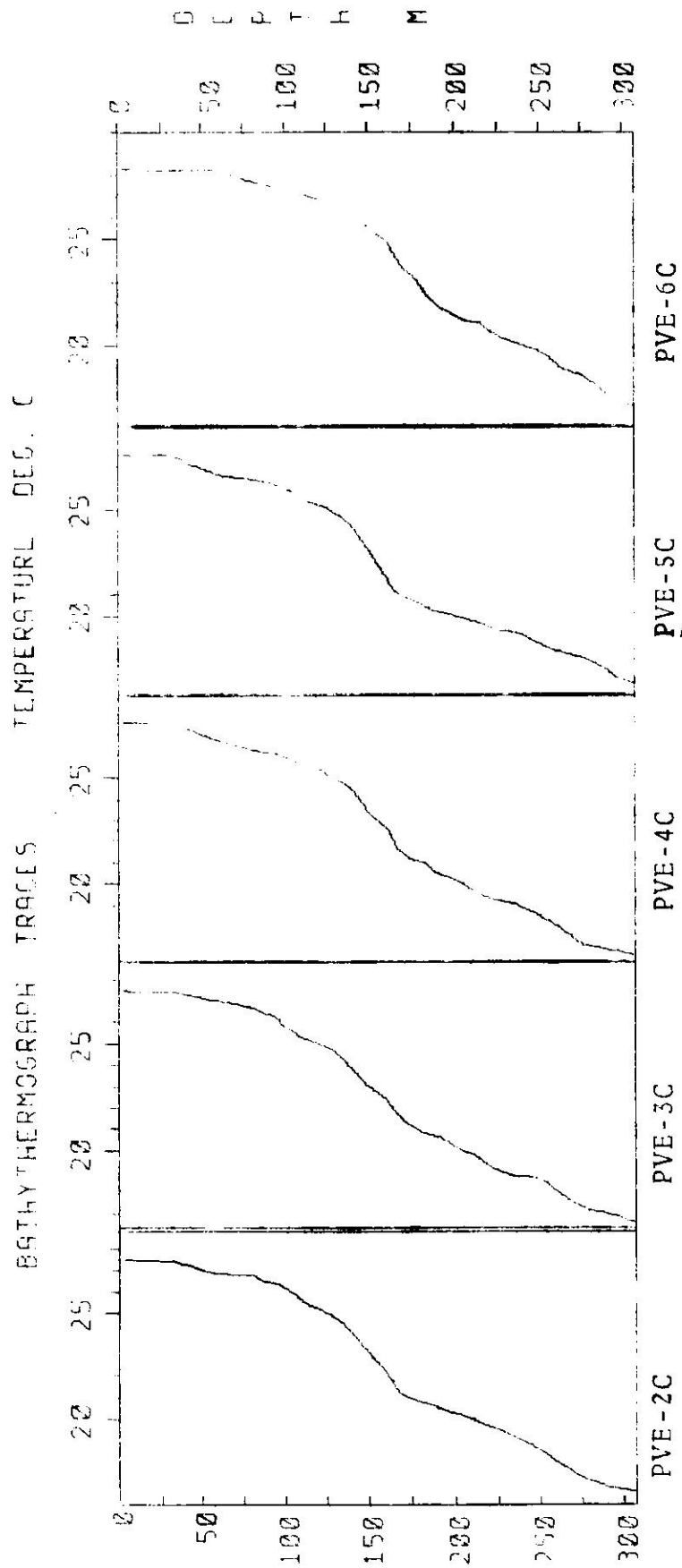
WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	11	26.58	26.57	26.58	35.788	23.47	4.82	6.88	100.62	.02	0.16	
25	25	27	15	26.44	0.00	26.44	35.789	23.51	4.87	6.96	101.51	.04	0.08	
50	50	50	12	26.18	0.00	26.18	36.326	24.00	4.81	6.87	98.91	.12	0.08	
100	100	99	16	24.78	0.00	24.78	37.004	24.94	4.65	6.64	91.95	.05	0.16	

CAST 2 MESS TIME 22.2 GMT, 1812 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.047 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA
150	150	0	11	23.13	23.11	23.12	37.178	25.57	4.54	6.49	88.92	.08	1.53	
200	200	202	15	20.39	0.00	20.39	36.963	26.17	4.23	6.04	80.37	.12	4.03	
250	250	248	12	18.26	0.00	18.26	36.680	26.51	4.37	6.24	77.38	.22	4.35	
300	300	305	16	17.39	0.00	17.39	36.569	26.64	4.55	6.49	79.84	.32	4.84	

023 335 STANDARD DEPTHS

0	23.47	4.82	6.88	100.62	0.02	0.16
10	23.48	4.84	6.91	100.97	0.03	0.13
20	23.50	4.86	6.95	101.38	0.04	0.09
30	23.58	4.86	6.95	101.49	0.06	0.08
50	24.00	4.81	6.87	98.91	0.12	0.08
75	24.49	4.73	6.75	97.50	0.10	0.11
100	24.94	4.65	6.64	91.95	0.05	0.16
150	25.57	4.54	6.49	88.92	0.08	1.53
200	26.17	4.23	6.04	80.37	0.12	4.03
250	26.51	4.37	6.24	77.38	0.22	4.35
300	26.64	4.55	6.49	79.84	0.32	4.84



Cruise No. PA029
May 22, 1973

R V PALUMBO CRUISE 029 STATION PVE-6A PRNC REFERENCE 029478

DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 19.0 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-58.7 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 15 SONIC DEP 0018
 LONG 066-46.1 W REL HUMID 067 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 19.6 GMT, 1536 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	0	11	29.71		29.71	35.765	(22.45)	5.31	7.58	(16.70)	.19	
10	10	0	0	12	28.42	0.00	28.42	35.898	22.95	4.54	6.48	97.90	.15	0.00

029 478 STANDARD DEPTHS

0
 10
~~20~~ ~~35.764~~ ~~22.90~~ ~~4.80~~ ~~6.06~~ ~~102.89~~ ~~0.05~~ ~~0.00~~
 28.42 35.898 22.95 4.54 6.48 97.90 0.15 0.00

R V PALUMBO CRUISE 029 STATION PVE-5A PRNC REFERENCE 029479

DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 20.3 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-57.3 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 13 SONIC DEP 0032
 LONG 066-47.0 W REL HUMID 067 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 20.3 GMT, 1615 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	0	11	28.30	28.25	28.28	35.764	22.90	4.80	6.86	102.89	.05	0.00
10	10	0	0	12	28.27	0.00	28.27	35.766	22.90	4.83	6.89	103.32	.06	0.00

029 479 STANDARD DEPTHS

0
 10
 28.28 35.764 22.90 4.80 6.86 102.89 0.05 0.00
 28.27 35.766 22.90 4.83 6.89 103.32 0.06 0.00

R V PALUMBO CRUISE 029 STATION PVE-4A PRNC REFERENCE 029480
 DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 20.6 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 16 TRANSPAR
 LAT 17-57.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0022
 LONG 066-48.2 W REL HUMID 075 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 20.6 GMT, 1634 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	
0	0	0	11	28.99	28.99	28.99	35.908	22.77	4.90	7.02	106.66	.15	0.00
10	10	11	12	28.58	0.00	28.58	35.862	22.87	4.65	6.64	100.45	.10	0.00

029 480 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 029 STATION PVE-3A PRNC REFERENCE 029481
 DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 21.0 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 17 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0016
 LONG 066-48.9 W REL HUMID 073 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 21.0 GMT, 1711 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.222 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	
0	0	0	11	28.39	28.22	28.31	35.768	22.89	4.83	6.89	103.39	.07	0.00
10	10	12	12	28.13	0.00	28.13	35.770	22.95	4.77	6.82	102.03	.05	0.00

029 481 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 029 STATION PVE-2A PRNC REFERENCE 029482

DATE 05 /21/73 PARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
HOUR 21.5 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 16 TRANSPAR
LAT 17-56.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0033
LONG 065-50.0 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 21.5 GMT, 1727 LOCAL, MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	CZ	0	10	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
				TZ	BN								
0	0	0	11	28.28	28.28	28.28	35.770	22.90	4.87	6.95	104.23	.08	0.00
10	10	0	12	28.27	0.00	28.27	35.790	22.92	4.79	6.85	102.76	.05	0.00
029 482 STANDARD DEPTHS													
		2		28.28	35.770	22.90	4.87	6.95	104.23	.08	0.00		
		10		28.27	35.790	22.92	4.79	6.85	102.76	.05	0.00		

R V PALUMBO CRUISE 029 STATION PVE-2B PKNG REFERENCE 029483

DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 6
 HOUR 21,7 TEMP DRY 31,0 VISIBILITY 8 WIND DIREC 16 TRANSPAR
 LAT 17-56.0 N TEMP WET 0,0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0155
 LONG 066-49,0 W REL HUMID 073 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 21.7 GMT, 1740 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1,222 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		TL	TM				ML/L	MG/L			
0	0	28,26	28,22	28,24	35,792	22,93	4,86	6,94	104,03	.07	0,00
25	25	28,20	0,00	28,20	35,785	22,94	4,79	6,85	102,63	.06	0,00
50	50	27,57	0,00	27,57	35,800	23,16	4,78	6,83	101,47	.04	0,00
100	100	26,76	0,00	26,76	35,596	23,26	4,63	6,62	96,58	.00	0,00
029	453	STANDARD DEPTHS									
	0	28,24	35,792	22,93	4,86	6,94	104,03	.07	0,00		
	10	28,22	35,789	22,94	4,83	6,90	103,47	.07	0,00		
	20	28,21	35,786	22,94	4,81	6,87	102,89	.06	0,00		
	30	28,10	35,786	22,97	4,79	6,84	102,31	.06	0,00		
	50	27,57	35,800	23,16	4,78	6,83	101,47	.04	0,00		
	75	27,09	35,737	23,26	4,73	6,76	99,42	.02	0,00		
	100	26,76	35,596	23,26	4,63	6,62	96,58	.00	0,00		

R V PALUMBO CRUISE 029 STATION PVE-3R PHNC REFERENCE 029484

DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 6
 HOUR 22.0 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 17-56.0 N TEMP WET 2.0 CLOUD TYPE 8 WAVE DIREC 17 SONIC DEP 0155
 LONG 066-48.8 W REL HUMID 075 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 22.0 GMT, 18 3 LOCAL MAX DEPTH 100 WIRE ANGLE 2
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	TM	TAVE	SALIN	SIG T	OXYGEN ML/L	MG/L	%SAT	PHOS	NITRA
		TZ	BN										
0	0	11	11	28.09	28.12	20.11	35.788	22.97	4.73	6.76	101.18	.25	0.00
25	25	12	12	27.60	0.00	27.60	35.880	23.21	4.80	6.86	102.19	.07	0.00
50	50	15	15	26.94	0.00	26.94	35.815	23.37	4.71	6.73	99.03	.07	0.00
100	100	16	16	26.12	0.00	26.12	36.197	23.92	4.58	6.54	94.01	.11	0.00
029 484	STANDARD DEPTHS												
	0			28.11		28.11	35.788	22.97	4.73	6.76	101.18	0.75	0.00
	10			27.90		27.90	35.825	23.07	4.76	6.80	101.60	0.06	0.00
	20			27.70		27.70	35.865	23.16	4.79	6.85	102.08	0.07	0.00
	30			27.47		27.47	35.867	23.24	4.79	6.85	101.72	0.07	0.00
	50			26.94		26.94	35.815	23.37	4.71	6.73	99.03	0.07	0.00
	75			26.45		26.45	35.921	23.61	4.64	6.63	96.92	0.08	0.00
	100			26.12		26.12	36.197	23.92	4.58	6.54	94.01	0.11	0.00

R V PALUMBO CRUISE 029 STATION PVE=4B PRNC REFERENCE 029485

DATE 05 /21/73 BARO 1015.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 22.7 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 17 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0170
 LONG 066-47.8 W REL HUMID 068 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 22.7 GMT, 1841 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	RN	T2	RN	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			TL	YM												
0	0	0	28.00	27.97	27.99	35.762	22.99	4.83	6.89	102.87	.06	0.00				
25	25	26	27.60	0.00	27.60	35.800	23.15	4.80	6.86	101.95	.07	0.00				
50	50	53	27.51	0.00	27.51	35.825	23.20	4.77	6.82	101.23	.07	0.00				
100	100	100	26.08	0.00	26.08	36.198	23.93	4.53	6.47	92.96	.08	0.00				

WIRE	CZ	DEPTH (M)	TEMP		TL	RN	T2	RN	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			TL	YM												
0	0	0	27.99	35.762	22.99	4.83	6.89	102.87	.06	0.00						
10	10	10	27.83	35.777	23.06	4.82	6.88	102.50	.06	0.00						
20	20	20	27.67	35.793	23.12	4.81	6.87	102.13	.07	0.00						
30	30	30	27.55	35.806	23.17	4.80	6.86	101.79	.07	0.20						
50	50	50	27.51	35.825	23.20	4.77	6.82	101.23	.07	0.00						
75	75	75	27.00	35.958	23.46	4.68	6.69	98.82	.07	0.00						
100	100	100	26.08	36.198	23.93	4.53	6.47	92.96	.08	0.00						

029 485 STANDARD DEPTHS

R V PALUMBO CRUISE 029 STATION PVE=6B PRNC REFERENCE 029486

DATE 05 /22/73 BARO 1016.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 12.8 TEMP DRY 26.0 VISIBILITY 8 WIND DIREC 10 TRANSPAR
 LAT 17-57.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0173
 LONG 066-45.8 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 10.8 GMT, 648 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			TL	TM								
0	0	0	28.18	28.17	28.18	35.789	22.95	4.60	6.57	98.45	.18	0.20
25	25	24	27.87	0.00	27.87	35.814	23.07	4.48	6.40	95.45	.11	0.00
50	50	52	27.12	0.00	27.12	35.883	23.36	4.54	6.48	95.81	.06	0.00
100	100	98	26.21	0.00	26.21	36.144	23.85	4.52	6.46	92.70	.07	0.00
STANDARD DEPTHS												
029 486		0	28.18		28.18	35.789	22.95	4.60	6.57	98.45	0.18	0.00
		10	28.05		28.05	35.799	23.10	4.55	6.50	97.25	0.15	0.00
		20	27.94		27.94	35.808	23.24	4.50	6.43	95.98	0.12	0.00
		30	27.74		27.74	35.824	23.12	4.48	6.40	95.37	0.10	0.00
		50	27.12		27.12	35.883	23.37	4.54	6.48	95.81	0.08	0.00
		75	26.57		26.57	35.993	23.62	4.53	6.47	94.97	0.08	0.00
		100	26.21		26.21	36.144	23.85	4.52	6.46	92.70	0.07	0.00

R V PALUMBO CRUISE 029 STATION PVE-58 PRNC REFERENCE 029487

DATE 05 /22/73 BARO 1016.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 11.1 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC 09 TRANSPAR
 LAT 17-57.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0201
 LONG 266-47.9 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 11.1 GMT, 7 9 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN			
										ML/L	MG/L	%SAT	
0	0	0	11	28.10	28.09	28.10	35.761	22.96	4.67	6.67	99.76	.07	0.00
25	25	0	12	27.71	0.00	27.71	35.773	23.09	4.64	6.63	98.57	.07	0.00
50	50	56	15	27.33	0.00	27.33	35.844	23.27	4.58	6.54	96.89	.07	0.00
100	100	100	16	26.17	0.00	26.17	36.162	23.88	4.55	6.50	93.35	.09	0.00

029 487 STANDARD DEPTHS

0	28.10	35.761	22.96	4.67	6.67	99.76	0.07	0.00
10	27.94	35.766	23.01	4.66	6.66	99.28	0.07	0.00
20	27.79	35.771	23.06	4.65	6.64	98.82	0.07	0.00
30	27.64	35.782	23.12	4.63	6.61	98.24	0.07	0.00
50	27.33	35.844	23.27	4.58	6.54	96.89	0.07	0.00
75	26.82	35.974	23.53	4.55	6.50	95.76	0.08	0.00
100	26.17	36.162	23.88	4.55	6.50	93.35	0.09	0.00

R V PALUMBO CRUISE 029 STATION PVE=6C PKNC REFERENCE. 029488

DATE 05 /22/73 BARO 1016.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 11.8 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC 11 TRANSPAR
 LAT 17-58.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0677
 LONG 066-45.7 W REL HUMID CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 11.8 GMT, 748 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.222 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	11	27.67	27.70	27.69	35.765	23.09	4.61	6.59	97.86	.10	0.00
25	25	26	26	12	27.65	0.00	27.65	35.784	23.12	4.58	6.54	97.21	.05	0.00
50	50	47	47	15	27.16	0.00	27.16	35.872	23.34	4.64	6.63	98.00	.12	0.00
100	100	91	91	16	26.12	0.00	26.12	36.204	23.92	4.47	6.38	91.72	.09	0.00
150	150	154	154	1	23.08	0.00	23.08	36.812	25.30	3.99	5.70	77.17	.20	0.00
200	200	197	197	2	20.83	0.00	20.83	36.804	25.93	4.06	5.80	77.23	.15	0.00
250	250	240	240	3	19.08	0.00	19.08	36.626	26.20	4.13	5.90	73.43	.21	0.00

029 488 STANDARD DEPTHS

0	27.69	35.765	23.09	4.61	6.59	97.86	0.10	0.00
10	27.67	35.773	23.10	4.60	6.57	97.60	0.08	0.00
20	27.66	35.780	23.11	4.58	6.55	97.30	0.06	0.00
30	27.58	35.796	23.15	4.59	6.56	97.37	0.06	0.00
50	27.16	35.872	23.34	4.64	6.63	98.00	0.12	0.00
75	26.77	36.008	23.57	4.60	6.57	96.79	0.11	0.00
100	26.12	36.204	23.92	4.47	6.38	91.72	0.09	0.00
150	23.08	36.812	25.30	3.99	5.70	77.17	0.20	0.00
200	20.83	36.804	25.93	4.06	5.80	77.23	0.15	0.00
250	19.08	36.626	26.20	4.13	5.90	73.43	0.21	0.00

R V PALUMBO CRUISE 029 STATION PVE-5C PRNC REFERENCE 029489

DATE 05 /22/73 BARO 1017.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 6
 HOUR 12.6 TEMP DRY 26.0 VISIBILITY 8 WIND DIREC 11 TRANSPAR
 LAT 17-57.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 17 SONIC DEP 0640
 LONG 066-47.0 W REL HUMID 080 CLOUD AMT 6 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 12.6 GMT, 837 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.022 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG	T	OXYGEN		PHOS	NITRA
			TM	TL								ML/L	MG/L		
0	0	0	27.65	27.68	27.67	35.784	23.11	4.63	6.62	98.32	.06	0.00			
25	25	0	27.73	0.00	27.73	35.788	23.10	4.63	6.62	98.43	.00	0.00			
50	50	50	26.96	0.00	26.96	35.892	23.42	4.65	6.64	97.95	.04	0.00			
100	100	98	25.85	0.00	25.85	36.281	24.07	4.40	6.28	90.27	.08	0.00			
150	150	155	21.88	0.00	21.88	36.810	25.64	3.88	5.55	74.51	.13	0.00			
200	200	197	20.50	0.00	20.50	36.785	26.01	4.04	5.77	76.64	.14	0.00			
250	250	0	19.09	0.00	19.09	36.558	26.20	4.21	6.02	74.69	.24	0.00			
300	300	0	17.26	0.00	17.26	36.406	26.55	4.32	6.18	75.60	.28	0.00			

029 489 STANDARD DEPTHS

0	23.11	4.63	6.62	98.32	0.06	0.00
10	23.11	4.63	6.62	98.36	0.04	0.00
20	23.10	4.63	6.62	98.40	0.01	0.00
30	23.14	4.63	6.62	98.33	0.00	0.00
50	23.42	4.65	6.64	97.95	0.04	0.00
75	23.75	4.56	6.52	95.46	0.06	0.00
100	24.07	4.40	6.28	90.27	0.08	0.00
150	25.64	3.88	5.55	74.51	0.13	0.00
200	26.01	4.04	5.77	76.64	0.14	0.00
250	26.21	4.21	6.02	74.69	0.24	0.00
300	26.55	4.32	6.18	75.60	0.28	0.00

OLY PALMBOO CRUISE 029 STATION 029-40 PHOEN REFERENCE 120492
 DATE 05 /22/73 BARO 1019.2 WEATHER P2 WIND VELOC 05 WAVE PERIOD 5
 HOUR 13,2 TEMP SURF 26.8 VISIBILITY 6 WIND DIREC 11 TRANSPAR
 LAT 17-55.3 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 15 SONIC DEP 0608
 LONG 266-47.8 W REL HUMID 078 CLOUD AMT 6 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 13,2 GWT, 913 LOCAL MAX DEPTH 370 WIRE ANGLE 0
 OXYGEN TITER 1,022 METER WKFEL FACTOR .997

WIRE	DEPTH (M)	TEMP				OXYGEN				SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
		TL	TA	TS	TS	T	O2	O2	O2						
0	0	27.72	27.60	27.68	35.786	23.11	4.58	6.54	97.26	1.27	0.20	0.00	0.00	0.00	
25	25	27.62	0.00	27.62	35.793	23.14	4.60	6.57	97.62	1.26	0.20	0.00	0.00	0.00	
50	52	27.01	0.00	27.01	35.734	23.29	4.59	6.50	96.37	1.22	0.20	0.00	0.00	0.00	
100	96	25.94	0.00	25.94	36.246	24.01	4.43	6.32	90.88	1.19	0.20	0.00	0.00	0.00	
150	153	22.35	0.00	22.35	36.520	25.52	4.01	5.73	77.15	1.13	0.20	0.00	0.00	0.00	
200	196	20.29	0.00	20.29	36.773	26.25	4.08	5.83	77.29	1.14	0.20	0.00	0.00	0.00	
250	249	18.25	0.00	18.25	36.550	26.41	4.20	6.00	74.13	1.23	0.20	0.00	0.00	0.00	
300	300	17.27	0.00	17.27	36.386	26.53	4.27	6.12	74.67	1.25	0.20	0.00	0.00	0.00	
STANDARD DEPTHS															
0	0	27.66	35.786	23.11	4.58	6.54	97.26	0.27	0.00	0.00	0.00	0.00	0.00	0.00	
10	10	27.66	35.789	23.12	4.59	6.55	97.41	0.27	0.00	0.00	0.00	0.00	0.00	0.00	
20	20	27.63	35.792	23.13	4.60	6.57	97.56	0.26	0.00	0.00	0.00	0.00	0.00	0.00	
30	30	27.53	35.788	23.16	4.60	6.57	97.43	0.25	0.00	0.00	0.00	0.00	0.00	0.00	
50	50	27.01	35.734	23.29	4.59	6.56	96.37	0.22	0.00	0.00	0.00	0.00	0.00	0.00	
75	75	26.45	35.934	23.62	4.54	6.48	94.83	0.04	0.00	0.00	0.00	0.00	0.00	0.00	
100	100	25.94	36.246	24.01	4.43	6.32	90.88	0.29	0.00	0.00	0.00	0.00	0.00	0.00	
150	150	22.35	36.520	25.52	4.01	5.73	77.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	
200	200	20.29	36.773	26.05	4.08	5.83	77.29	0.14	0.00	0.00	0.00	0.00	0.00	0.00	
250	250	18.25	36.550	26.41	4.20	6.00	74.13	0.23	0.00	0.00	0.00	0.00	0.00	0.00	
300	300	17.27	36.386	26.53	4.27	6.12	74.67	0.25	0.00	0.00	0.00	0.00	0.00	0.00	

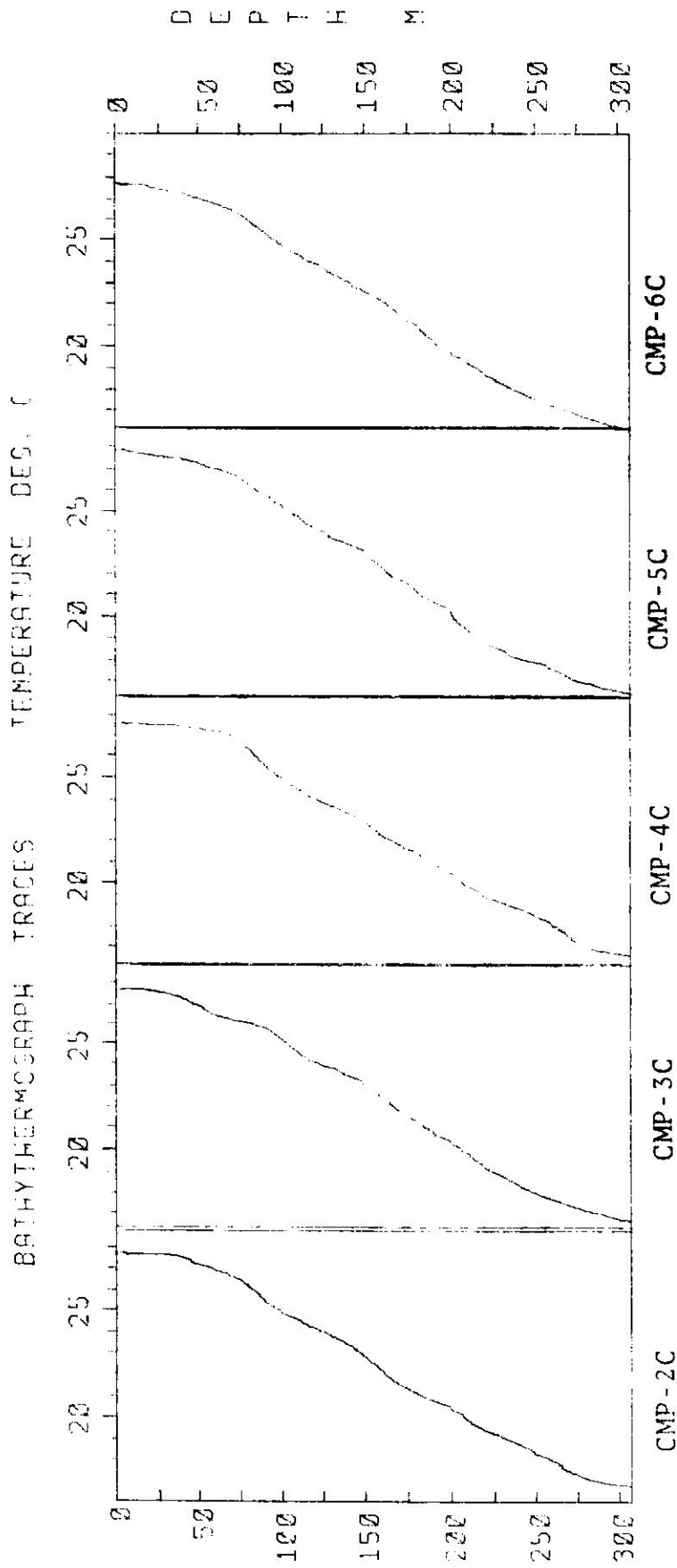
029 492

R V PALUMBO CRUISE 029 STATION PVE-20 PRNC REFERENCE 029492
 DATE 05 /22/73 PARO 1218.5 WEATHER 02 WIND VELOC 01 WAVE PERIOD 5
 HOUR 14.8 TEMP DRY 25.0 VISIBILITY 8 WIND DIREC 09 TRANSPAR
 LAT 17-54.8 N TEMP WET 24.2 CLOUD TYPE 6 WAVE DIREC 15 SONIC DEP 0580
 LONG 066-50.0 W REL HUMID 088 CLOUD AMT 8 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 14.8 GMT, 1048 LOCAL MAX DEPTH 370 WIRE ANGLE 0
 OXYGEN TITR 1.022 METER WHEEL FACTOR .997

WIPE #	CZ	DEPTH (M)	TEMP		TL	TM	TAVE	SALIN	SIG	T ML/L	MG/L	%SAT	PHOS	NITRA
			OXYGEN											
05	25	29	27.59	27.62	27.61	35.773	23.13	4.61	6.59	97.76	.74	0.00		
52	52	54	27.60	27.60	27.60	35.784	23.14	4.63	6.62	98.22	.15	0.00		
100	96	96	27.24	27.24	27.24	35.887	23.33	4.64	6.63	98.17	.21	0.00		
150	150	156	25.79	25.79	25.79	36.305	24.10	4.45	6.35	91.33	.08	0.00		
200	196	2	22.15	22.15	22.15	36.846	25.59	4.03	5.75	77.47	.11	0.00		
250	200	196	20.70	20.70	20.70	36.793	25.96	4.11	5.87	76.11	.14	0.00		
300	250	0	18.35	18.35	18.35	36.570	26.40	4.19	5.99	74.04	.17	0.00		
	300	294	17.45	17.45	17.45	36.416	26.51	4.33	6.19	75.06	.32	0.00		

STANDARD DEPTHS	DEPTH (M)	TEMP	TL	TM	TAVE	SALIN	SIG	T ML/L	MG/L	%SAT	PHOS	NITRA
0	27.61	35.773	23.13	4.61	6.59	97.76	.74	0.00				
10	27.60	35.777	23.13	4.62	6.60	97.94	.78	0.00				
20	27.60	35.782	23.13	4.63	6.61	98.13	.13	0.00				
30	27.56	35.797	23.16	4.63	6.62	98.26	.17	0.00				
50	27.24	35.687	23.33	4.64	6.63	98.17	.21	0.00				
75	25.71	36.271	23.64	4.58	6.54	96.36	.16	0.00				
100	25.79	36.305	24.10	4.45	6.35	91.33	.08	0.00				
150	22.15	36.846	25.60	4.03	5.75	77.47	.11	0.00				
200	20.70	36.793	25.96	4.11	5.87	76.11	.14	0.00				
250	18.35	36.570	26.40	4.19	5.99	74.04	.17	0.00				
300	17.45	36.416	26.51	4.33	6.19	75.06	.32	0.00				



Cruise No. PA0 29
 May 23, 1973

R V PALUMBO CRUISE 029 STATION CMP-2A PRNC REFERENCE 029493

DATE 05 /23/73 BARO 1017.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 12.9 TEMP DRY 26.0 VISIBILITY 8 WIND DIREC 11 TRANSPAR
 LAT 17-57.2 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0016
 LONG 065-58.3 W REL HUMID 084 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 00

CAST 1 MESS TIME 10.9 GMT, 653 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP		OXYGEN		SIG T	SALIN	TAVE	ML/L	%SAT	PHOS	NITRA	
	TZ	BN	TL	TM								
0	0	11	27.99	28.01	28.00	35.673	22.92	4.65	6.64	98.85	.12	0.00
10	10	11	28.00	0.00	28.00	35.679	22.93	4.73	6.75	100.55	.12	0.00

029 493 STANDARD DEPTHS

0 28.00 35.673 22.92 4.65 6.64 98.85 0.12 0.00
 10 28.00 35.679 22.93 4.73 6.75 100.55 0.12 0.00

R V PALUMBO CRUISE 029 STATION CMP-3A PRNC REFERENCE 029494

DATE 05 /23/73 BARO 1016.0 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 11.2 TEMP DRY 26.0 VISIBILITY 8 WIND DIREC 11 TRANSPAR
 LAT 17-57.7 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 12 SONIC DEP 0021
 LONG 065-57.2 W REL HUMID 085 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 11.2 GMT, 714 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP		OXYGEN		SIG T	SALIN	TAVE	ML/L	%SAT	PHOS	NITRA	
	TZ	BN	TL	TM								
0	0	11	27.95	27.95	27.95	35.704	22.96	4.60	6.57	97.82	.06	0.00
10	10	11	27.95	0.00	27.95	35.714	22.97	4.63	6.61	98.49	.05	0.00

029 494 STANDARD DEPTHS

0 27.95 35.704 22.96 4.60 6.57 97.82 0.06 0.00
 10 27.95 35.714 22.97 4.63 6.61 98.49 0.05 0.00

R V PALUMBO CRUISE 029 STATION CMP-4A PRNC REFERENCE 029495

DATE 05 /23/73 BARO 1017.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 11.5 TEMP DRY 30.0 VISIBILITY 0 WIND DIREC 12 TRANSPAR
 LAT 17-58.1 S TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0020
 LONG 065-56.1 W REL HUMID 063 CLOUD AMT 3 WAVE HEIGHT 2 -COLOR 20

CAST 1 MESS TIME 11.5 GMT, 733 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP		OXYGEN		SIG T	SALIN	TAVE	ML/L	MG/L	XSAT	PHOS	NITRA
	TZ	BN	TL	TM								
0	0	11	27.90	27.91	22.98	35.713	27.91	4.68	6.68	99.47	.03	0.00
10	10	12	27.90	0.00	22.98	35.712	27.90	4.72	6.74	100.30	.07	0.00

STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 029 STATION CMP-5A PRNC REFERENCE 029496

DATE 05 /23/73 BARO 1017.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 11.9 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-58.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0022
 LONG 065-55.1 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 11.9 GMT, 751 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP		OXYGEN		SIG T	SALIN	TAVE	ML/L	MG/L	XSAT	PHOS	NITRA
	TZ	BN	TL	TM								
0	0	11	28.02	28.03	22.94	35.704	28.03	4.75	6.78	101.09	.03	0.00
10	10	12	28.01	0.00	22.95	35.713	28.01	4.65	6.64	98.99	.04	0.00

STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 029 STATION CMP=6A PRNC REFERENCE 029497

DATE 05 /23/73 BARO 1017.2 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5

 12.1 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 11 TRANSPAR

LAT 17-58.6 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0021

LONG 065-54.0 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 12.1 GMT. 8 9 LOCAL MAX DEPTH 10 WIRE ANGLE 0

 OXYGEN TITER .989 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN				PHOS	NITRA				
	CZ	TM	TZ	RN	TL	TM			SIG T	ML/L	MG/L	%SAT
0	0	28.23	28.24	28.24	28.24	35.677	22.85	4.66	6.66	99.40	.06	0.00
10	10	28.03	0.00	28.03	35.720	22.95	4.60	6.57	97.99	.04	0.00	0.00
STANDARD DEPTHS												
0	0	28.24	35.677	22.85	4.66	6.66	99.40	0.06	0.00	0.00	0.00	0.00
10	10	28.03	35.720	22.95	4.60	6.57	97.99	0.04	0.00	0.00	0.00	0.00

R V PALUMBO CRUISE 029 STATION CMP-6B PHNC REFERENCE 029498
 DATE 05 /23/73 BARO 1017.2 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 12.4 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-57.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0250
 LONG 065-54.0 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 12.4 GMT, 825 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	11	27.93	27.85	27.89	35.728	23.00	4.74	6.77	102.76	.07	0.00	
25	25	30	12	27.79	0.00	27.79	35.734	23.04	4.66	6.66	98.95	.04	0.00	
50	50	56	15	26.69	0.00	26.69	36.027	23.61	4.69	6.70	98.60	.05	0.00	
100	100	100	16	25.29	0.00	25.29	36.519	24.42	4.45	6.36	91.42	.07	0.00	
029 498 STANDARD DEPTHS														
0	0	0	27.89	35.728	23.00	4.74	6.77	100.76	0.07	0.00	0.00	0.00	0.00	
17	17	20	27.85	35.730	23.01	4.71	6.72	100.03	0.06	0.00	0.00	0.00	0.00	
20	20	20	27.81	35.733	23.03	4.67	6.68	99.26	0.05	0.00	0.00	0.00	0.00	
30	30	30	27.61	35.779	23.13	4.67	6.66	98.95	0.04	0.00	0.00	0.00	0.00	
50	50	50	26.69	36.027	23.61	4.69	6.70	98.60	0.05	0.00	0.00	0.00	0.00	
75	75	75	25.86	36.289	24.07	4.62	6.60	94.88	0.06	0.00	0.00	0.00	0.00	
100	100	100	25.29	36.519	24.42	4.45	6.36	91.42	0.07	0.00	0.00	0.00	0.00	

R V PALUMBO CRUISE 029 STATION CMP#58 PRNC REFERENCE 029499

DATE 05 /23/73 BARO 1017.2 WEATHER P2 WIND VELOC 03 WAVE PERIOD 6
 HOUR 13.0 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-57.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0250
 LONG 065-55.2 W REL HUMID 070 CLOUD AMY 3 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 13.0 G.T. 9 1 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SIG T	OXYGEN		PHOS	NITRA
	TL	TM		ML/L	MG/L		
0	27.81	27.82	23.03	4.69	6.70	.06	0.00
25	27.79	0.00	23.03	4.77	6.81	.06	0.00
50	26.98	0.00	23.46	4.56	6.51	.00	0.00
100	24.44	0.00	24.85	4.28	6.12	.33	0.00
029 499	STANDARD DEPTHS						
0	27.82	35.736	23.03	4.69	6.70	99.62	0.00
10	27.81	35.735	23.03	4.72	6.74	100.28	0.00
20	27.80	35.734	23.03	4.75	6.79	100.93	0.00
30	27.68	35.759	23.09	4.74	6.77	100.58	0.00
50	26.98	35.946	23.46	4.56	6.51	96.19	0.00
75	25.86	36.285	24.07	4.40	6.28	90.34	0.00
100	24.44	36.751	24.85	4.28	6.12	83.55	0.33

R V PALUMBO CRUISE 029 STATION CMP-30 PRNC REFERENCE 029501

DATE 05 /23/73 PARO 1017.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 13.6 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-57.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0380
 LONG 165-57.2 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 13.6 GMT, 935 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	OXYGEN	%SAT	PHOS	NITRA
0	1	0	11	27.84	27.84	27.84	27.84	27.84	35.723	23.01	4.82	6.88	102.35	.06	0.00	
25	25	27	12	27.78	0.00	27.78	0.00	27.78	35.723	23.03	4.76	6.80	101.00	.04	0.00	
50	50	59	15	26.50	0.00	26.50	0.00	26.50	36.080	23.71	4.71	6.73	98.80	.14	0.00	
100	100	100	16	24.55	0.00	24.55	0.00	24.55	36.729	24.80	4.43	6.33	86.44	.11	0.00	

020 501 STANDARD DEPTHS

2	27.84	35.723	23.01	4.82	6.88	102.35	0.06	0.00
10	27.82	35.723	23.02	4.79	6.85	101.81	0.05	0.00
20	27.79	35.723	23.03	4.77	6.81	101.26	0.04	0.00
30	27.58	35.776	23.14	4.75	6.79	100.69	0.06	0.00
50	26.50	36.080	23.71	4.71	6.73	98.80	0.14	0.00
75	25.42	36.415	24.30	4.60	6.57	94.44	0.13	0.00
100	24.55	36.729	24.80	4.43	6.33	86.44	0.11	0.00

R V PALUMB0 CRUISE 029 STATION CMP-2B PRNC REFERENCE 029502

DATE 05 /23/73 RAPO 1017.5 WEATHER V2 WIND VELOC 05 WAVE PERIOD 5
 HOUR 13.0 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-56.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0300
 LONG 065-58.2 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 13.9 GMT, 955 LOCAL MAX DEPTH 120 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

WIRE	02	0	25	50	100	DEPTH (M)	TEMP		SIG T	OXYGEN	ML/L	MG/L	XSAT	PHOS	NITRA
							TL	TM							
		0	11	27.90	27.91	27.91	27.91	35.718	22.99	4.75	6.78	100.96	.06	0.00	
		24	12	27.86	0.00	27.86	35.709	22.99	22.99	4.74	6.77	100.65	.06	0.00	
		0	15	26.80	0.00	26.80	35.939	23.51	23.51	4.66	6.66	97.97	.04	0.00	
		95	16	24.65	0.00	24.65	36.686	24.74	24.74	4.45	6.36	86.72	.15	0.00	

WIRE	02	0 <th rowspan="2">11 <th rowspan="2">27.89 <th rowspan="2">35.714 <th rowspan="2">22.99 <th rowspan="2">4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th></th></th></th></th></th>	11 <th rowspan="2">27.89 <th rowspan="2">35.714 <th rowspan="2">22.99 <th rowspan="2">4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th></th></th></th></th>	27.89 <th rowspan="2">35.714 <th rowspan="2">22.99 <th rowspan="2">4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th></th></th></th>	35.714 <th rowspan="2">22.99 <th rowspan="2">4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th></th></th>	22.99 <th rowspan="2">4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th></th>	4.74 <th rowspan="2">6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th></th>	6.78 <th rowspan="2">100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th></th>	100.84 <th rowspan="2">.06 <th rowspan="2">0.00 </th></th>	.06 <th rowspan="2">0.00 </th>	0.00
029	502	0	27.91	35.718	22.99	4.75	6.78	100.96	.06	0.00	
		11	27.89	35.714	22.99	4.74	6.78	100.84	.06	0.00	
		24	27.87	35.711	22.99	4.74	6.77	100.71	.06	0.00	
		30	27.70	35.738	23.27	4.73	6.75	100.27	.06	0.00	
		50	26.80	35.939	23.51	4.66	6.66	97.97	.04	0.00	
		75	25.73	36.265	24.09	4.56	6.52	93.65	.07	0.00	
		100	24.65	36.686	24.74	4.45	6.36	86.72	.15	0.00	

R V PALUMBO CRUISE 029 STATION CWP-20 PHNG REFERENCE 029503

DATE 05 /23/73 BARO 1016.0 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 14.4 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-55.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0860
 LONG 065-58.2 W REL HUMID 073 CLOUD AMT 3 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 14.4 GMT, 1023 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	TEMP				TAVE	SALIN	SIG Y	OXYGEN			PHOS	NITRA
		TZ	RN	TL	TM				ML/L	MG/L	%SAT		
0	0	0	11	27.83	27.86	27.85	35.733	23.02	4.79	6.84	101.76	.00	0.00
25	25	26	12	27.75	0.00	27.75	35.725	23.04	4.71	6.73	99.91	.00	0.00
50	50	53	15	27.26	0.00	27.26	35.839	23.29	4.75	6.78	100.33	.05	0.00
100	100	0	16	24.90	0.00	24.90	36.683	24.66	4.52	6.46	88.21	.00	0.00
150	150	0	1	22.62	0.00	22.62	36.838	25.45	4.16	5.95	80.38	.14	0.00
200	200	192	2	20.35	0.00	20.35	36.778	26.04	4.04	5.77	76.51	.10	0.00
250	250	0	3	18.39	0.00	18.39	36.593	26.41	4.03	5.75	71.19	.20	0.00
300	300	0	4	17.60	0.00	17.60	36.466	26.51	4.34	6.20	76.16	.32	0.00

029 503 STANDARD DEPTHS

0	27.85	35.733	23.02	4.79	6.84	101.76	0.00	0.00
10	27.81	35.730	23.03	4.76	6.79	101.02	0.00	0.00
20	27.77	35.727	23.24	4.72	6.75	102.23	0.20	0.00
30	27.69	35.733	23.07	4.72	6.74	100.02	0.01	0.00
50	27.26	35.839	23.29	4.75	6.78	100.33	0.05	0.00
75	26.19	36.253	23.94	4.67	6.67	95.93	0.25	0.00
100	24.90	36.683	24.66	4.52	6.46	88.21	0.00	0.00
150	22.62	36.838	25.46	4.16	5.95	80.38	0.14	0.00
200	20.35	36.778	26.04	4.04	5.77	76.51	0.10	0.00
250	18.39	36.593	26.41	4.03	5.75	71.19	0.20	0.00
300	17.60	36.466	26.51	4.34	6.20	76.16	0.32	0.00

PRNC REFERENCE 029505

STATION CMP-4C

R V PALV-80 CRUISE 029

DATE 05 /23/73 BARO 1016.6 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 15.8 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0810
 LONG 065-56.2 W REL HUMID 072 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 15.8 GMT, 1148 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER ,989 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	27.77	0.00	27.77	35.733	23.24	4.71	6.73	99.97	.04	0.00	
25	25	25	12	27.69	0.00	27.69	35.733	23.07	4.82	6.88	102.15	.05	0.00	
50	50	50	15	27.50	0.00	27.50	35.766	23.15	4.68	6.68	99.03	.08	0.00	
100	100	100	16	24.97	0.00	24.97	36.658	24.62	4.47	6.39	87.18	.05	0.00	
150	150	152	1	22.67	0.00	22.67	36.870	25.46	4.13	5.91	79.91	.08	0.00	
200	200	199	2	20.38	0.00	20.38	36.790	26.04	4.01	5.72	75.97	.20	0.00	
250	250	0	3	18.34	0.00	18.34	36.529	26.37	4.15	5.94	73.29	.19	0.00	
300	300	295	4	17.47	0.00	17.47	36.418	26.50	4.32	6.18	75.67	.23	0.00	

029 505 STANDARD DEPTHS

0	27.77	35.733	23.04	4.71	6.73	99.97	0.04	0.00
10	27.74	35.733	23.05	4.75	6.79	100.84	0.04	0.00
20	27.71	35.733	23.06	4.80	6.86	101.83	0.05	0.00
30	27.66	35.736	23.08	4.80	6.86	101.80	0.06	0.00
50	27.50	35.766	23.15	4.68	6.68	99.03	0.08	0.00
75	26.40	36.186	23.82	4.58	6.54	94.02	0.08	0.00
100	24.97	36.658	24.62	4.47	6.39	87.18	0.05	0.00
150	22.67	36.870	25.47	4.13	5.91	79.91	0.08	0.00
200	20.38	36.790	26.04	4.01	5.72	75.97	0.20	0.00
250	18.34	36.529	26.37	4.15	5.94	73.29	0.19	0.00
300	17.47	36.418	26.51	4.32	6.18	75.67	0.23	0.00

R V PALUMBO CRUISE 029 STATION CMP-5C PHNC REFERENCE C29506

DATE 05 /23/73 BARO 1016.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 17.3 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-57.6 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 16 SONIC DEP 1280
 LONG 065-55.0 W REL HUMID 073 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 17.3 GMT, 1317 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	YZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			XSAT	PHOS	NITRA
										ML/L	MG/L	ML/L			
0	0	0	0	11	27.97	27.97	27.97	35.748	22.99	4.72	6.74	100.52	.04	0.00	0.00
25	25	21	21	12	27.68	0.00	27.68	35.694	23.04	4.75	6.78	100.55	.07	0.00	0.00
50	50	53	53	15	27.32	0.00	27.32	35.820	23.25	4.65	6.64	98.28	.05	0.00	0.00
100	100	101	101	16	25.04	0.00	25.04	36.575	24.54	4.38	6.26	89.91	.08	0.00	0.00
150	150	150	150	1	22.68	0.00	22.68	36.861	25.45	4.15	5.94	80.27	.07	0.00	0.00
200	200	198	198	2	19.79	0.00	19.79	36.700	26.13	4.00	5.71	71.62	.13	0.00	0.00
250	250	251	251	3	18.14	0.00	18.14	36.506	26.41	4.21	6.02	74.20	.21	0.00	0.00
300	300	294	294	4	17.27	0.00	17.27	36.391	26.53	4.34	6.20	75.89	.29	0.00	0.00

029 506 STANDARD DEPTHS

0	27.97	35.748	22.99	4.72	6.74	100.52	0.04	0.00	0.00
10	27.85	35.726	23.01	4.73	6.76	100.53	0.05	0.00	0.00
20	27.74	35.705	23.03	4.74	6.77	100.55	0.07	0.00	0.00
30	27.63	35.703	23.06	4.74	6.77	100.26	0.07	0.00	0.00
50	27.32	35.820	23.25	4.65	6.64	98.28	0.05	0.00	0.00
75	26.32	36.185	23.85	4.52	6.46	92.80	0.06	0.00	0.00
100	25.04	36.575	24.54	4.38	6.26	89.91	0.08	0.00	0.00
150	22.68	36.861	25.46	4.15	5.94	80.27	0.07	0.00	0.00
200	19.79	36.700	26.13	4.00	5.71	71.62	0.13	0.00	0.00
250	18.14	36.506	26.41	4.21	6.02	74.20	0.21	0.00	0.00
300	17.27	36.391	26.53	4.34	6.20	75.89	0.29	0.00	0.00

R V PALUMBO CRUISE 029 STATION CMP-6C PRNC REFERENCE 029507

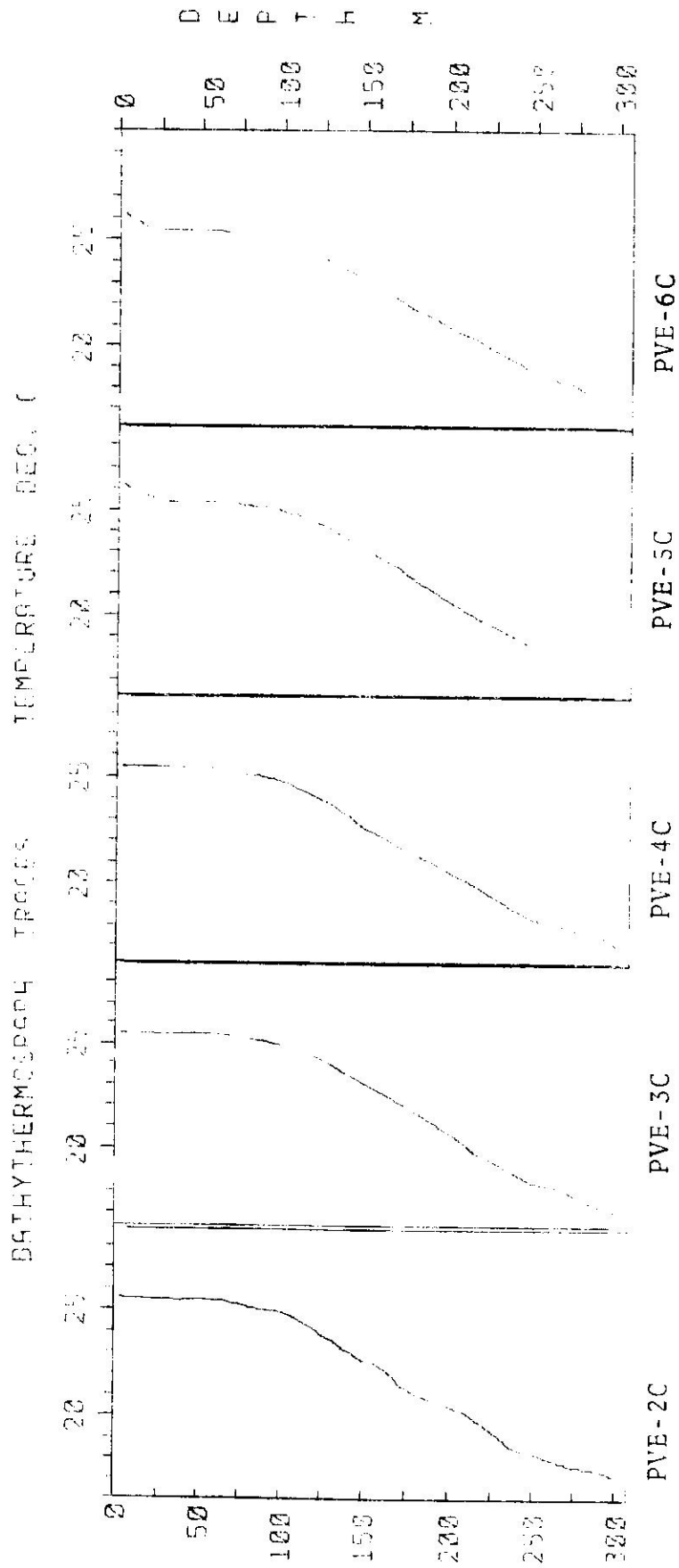
DATE 05 /23/73 BARO 1016.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 17.9 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 1463
 LONG 065-54.0 W REL HUMID 072 CLOUD AMT 4 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 17.9 GMT, 1355 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .989 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	YL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	11	27.89	27.94	0.00	27.92	35.706	22.97	4.79	6.84	101.77	.03	0.00
25	25	22	56	12	27.68	0.00	0.00	27.68	35.694	23.04	4.64	6.63	98.25	.03	0.00
50	50	56	99	15	27.25	0.00	0.00	27.25	35.840	23.30	4.64	6.63	98.04	.05	0.00
100	100	99	99	16	25.08	0.00	0.00	25.08	36.562	24.52	4.37	6.25	89.72	.08	0.00
150	150	153	0	1	23.08	0.00	0.00	23.08	36.838	25.32	4.15	5.94	80.47	.05	0.00
200	200	199	0	2	20.06	0.00	0.00	20.06	36.721	26.07	4.03	5.75	76.13	.10	0.00
250	250	247	0	3	18.18	0.00	0.00	18.18	36.515	26.40	4.19	5.99	73.89	.19	0.00
300	300	0	0	4	17.35	0.00	0.00	17.35	36.400	26.52	4.31	6.16	75.42	.28	0.00

029 507 STANDARD DEPTHS

0	27.92	35.706	22.97	4.79	6.84	101.77	0.03	0.00
10	27.82	35.701	23.00	4.73	6.75	100.36	0.03	0.00
20	27.73	35.696	23.03	4.67	6.67	98.89	0.03	0.00
30	27.62	35.711	23.07	4.64	6.63	98.21	0.03	0.00
50	27.25	35.848	23.30	4.64	6.63	98.04	0.05	0.00
75	26.26	36.199	23.88	4.52	6.46	92.93	0.07	0.00
100	25.08	36.562	24.52	4.37	6.25	89.72	0.08	0.00
150	23.08	36.838	25.32	4.15	5.94	80.47	0.05	0.00
200	20.06	36.721	26.08	4.03	5.75	76.13	0.10	0.00
250	18.18	36.515	26.40	4.19	5.99	73.89	0.19	0.00
300	17.35	36.400	26.52	4.31	6.16	75.42	0.28	0.00



Cruise No. PA039
Feb. 12, 1974

R V PALUMBO CRUISE 039 STATION PVE-2C PRNC REFERENCE 039661
 DATE 02 /12/74 BARO 1017.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 8.6 TEMP DPY 23.0 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 17-55.1 N TEMP WET 0.2 CLOUD TYPE WAVE DIREC 17 SONIC DEP 0375
 LONG 066-50.0 W REL HUMID 084 CLOUD AMT 0 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 8.6 GMT, 434 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	OK	TM	TAVEOK	SALIN	SIG	T	OXYGEN		XSAT	PHOS	NITRA
												ML/L	MG/L			
0	0	0	0	10	(25.44)	0.00	0.00	(25.44)	35.331	23.48	5.01	7.16	102.45	.05	0.00	
25	25	24	24	11	25.47	0.00	0.00	25.47	35.319	23.46	5.12	7.29	104.25	.04	0.00	
50	50	48	48	12	25.45	0.00	0.00	25.45	35.339	23.48	5.05	7.21	103.13	.04	0.00	
100	100	102	102	16	24.89	0.00	0.00	24.89	36.587	24.59	4.69	6.70	91.05	.05	0.00	
150	150	0	0	1	22.66	0.00	0.00	22.66	36.976	25.54	4.26	6.09	82.62	.11	0.00	
200	200	201	201	2	20.54	0.00	0.00	20.54	36.848	26.04	4.17	5.95	79.12	.16	0.00	
250	250	247	247	3	18.21	0.00	0.00	18.21	36.533	26.41	4.27	6.11	75.34	.28	0.00	
300	300	294	294	4	17.12	0.00	0.00	17.12	36.344	26.53	4.31	6.15	75.13	.48	0.00	

039 661	STANDARD DEPTHS	PK	SIG	T	OXYGEN	XSAT	PHOS	NITRA
12	25.45	35.326	23.47	5.05	7.21	103.17	0.05	0.00
20	25.47	35.321	23.46	5.09	7.26	103.94	0.04	0.00
30	25.47	35.320	23.46	5.10	7.29	104.24	0.04	0.00
50	25.45	35.339	23.48	5.05	7.21	103.13	0.04	0.00
75	25.26	35.916	23.98	4.89	6.99	100.20	0.04	0.00
100	24.89	36.587	24.59	4.69	6.70	91.05	0.05	0.00
150	22.66	36.976	25.54	4.26	6.09	82.62	0.11	0.00
200	20.54	36.848	26.24	4.17	5.95	79.12	0.16	0.00
250	18.21	36.533	26.41	4.27	6.11	75.34	0.28	0.00
300	17.12	36.344	26.53	4.31	6.15	75.13	0.48	0.00

R V PALUMBO CRUISE 039 STATION PVE-3C PRNC REFERENCE 039662

DATE 02 /12/74 BARO 1017.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 6
 HOUR 9.5 TEMP DRY 23.0 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 17-55.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 17 SONIC DEP 0385
 LONG 066-48.8 W REL HUMID 082 CLOUD AMT 0 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 9.5 GMT, 531 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA				
	WIRE	CZ	TZ	RN	TL	TM	TL	TM			SIG	T	ML/L	MG/L
0	0	0	0	10	(25.46)	0.00	YAVE	0.00	23.47	5.03	7.19	102.91	.04	0.00
25	25	25	11	10	(25.46)	0.00	(25.46)	35.330	23.47	5.13	7.33	104.09	.04	0.00
50	50	47	12	12	25.47	0.00	25.47	35.315	23.46	5.02	7.18	102.69	.04	0.00
100	100	103	16	16	24.97	0.00	24.97	36.427	24.45	4.74	6.77	91.50	.05	0.00
150	150	0	1	1	22.68	0.00	22.68	36.948	25.52	4.36	6.23	84.45	.09	0.00
200	200	198	2	2	20.66	0.00	20.66	36.817	25.99	4.21	6.01	79.99	.17	0.00
250	250	250	3	3	18.34	0.00	18.34	36.504	26.35	4.25	6.07	74.94	.33	0.00
300	300	294	4	4	17.05	0.00	17.05	36.283	26.50	4.30	6.14	74.81	.47	0.00

STANDARD DEPTHS	TEMP				OXYGEN				PHOS	NITRA				
	WIRE	CZ	TZ	RN	TL	TM	TL	TM			SIG	T	ML/L	MG/L
0	0	0	0	10	(25.46)	0.00	YAVE	0.00	23.47	5.03	7.19	102.91	.04	0.00
10	10	20	11	11	(25.46)	0.00	(25.46)	35.330	23.47	5.07	7.25	103.71	.04	0.00
20	20	30	12	12	25.45	0.00	25.45	35.324	23.47	5.12	7.31	104.58	.04	0.00
30	30	40	13	13	25.45	0.00	25.45	35.322	23.47	5.12	7.32	104.69	.04	0.00
50	50	60	14	14	25.47	0.00	25.47	35.315	23.46	5.02	7.18	102.69	.04	0.00
75	75	85	15	15	25.31	0.00	25.31	35.814	23.88	4.89	6.99	100.33	.04	0.00
100	100	110	16	16	24.97	0.00	24.97	36.427	24.45	4.74	6.77	91.50	.05	0.00
150	150	160	17	17	22.68	0.00	22.68	36.948	25.52	4.36	6.23	84.45	.09	0.00
200	200	210	18	18	20.66	0.00	20.66	36.817	25.99	4.21	6.01	79.99	.17	0.00
250	250	260	19	19	18.34	0.00	18.34	36.504	26.35	4.25	6.07	74.94	.33	0.00
300	300	310	20	20	17.05	0.00	17.05	36.283	26.50	4.30	6.14	74.81	.47	0.00

R V PALUMBO CRUISE 039 STATION PVE-4C PRNC REFERENCE 739663

DATE 02 /12/74 RARO 1017.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 10.2 TEMP DRY 23.0 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE WAVE DIREC 17 SONIC DEP 0378
 LONG 066-47.8 W REL HUMID 086 CLOUD AMT 0 WAVE HEIGHT 2 COLOR

CAS 1 MESS TIME 10.2 GMT, 613 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	OXYGEN	XSAT	PHOS	NITRA
0	0	0	0	10	(25.50)	0.00	0.00	(25.50)	35.279	23.42	5.01	7.16	102.46	.05	0.00	0.00
25	25	25	25	11	25.47	0.00	0.00	25.47	35.276	23.43	5.05	7.21	103.09	.04	0.00	0.00
50	50	50	50	12	25.46	0.00	0.00	25.46	35.285	23.44	5.05	7.21	103.09	.05	0.00	0.00
100	100	100	100	16	24.87	0.00	0.00	24.87	36.280	24.37	4.69	6.70	89.83	.04	0.00	0.00
150	150	0	0	1	22.68	0.00	0.00	22.68	36.932	25.51	4.28	6.12	82.94	.11	0.00	0.00
200	200	198	198	2	20.58	0.00	0.00	20.58	36.809	26.00	4.18	5.97	79.32	.16	0.00	0.00
250	250	250	250	3	18.24	0.00	0.00	18.24	36.484	26.36	4.27	6.11	75.24	.33	0.00	0.00
300	300	294	294	4	17.14	0.00	0.00	17.14	36.302	26.50	4.32	6.17	75.25	.45	0.00	0.00

239 663 STANDARD DEPTHS

0	(25.50)	35.279	23.42	5.01	7.16	102.46	0.05	0.00
10	25.49	35.278	23.42	5.03	7.18	102.71	0.05	0.00
20	25.48	35.277	23.43	5.04	7.20	102.97	0.04	0.00
30	25.47	35.277	23.43	5.05	7.21	103.08	0.04	0.00
50	25.46	35.285	23.44	5.05	7.21	103.09	0.05	0.00
75	25.26	35.723	23.83	4.90	7.00	100.27	0.05	0.00
100	24.87	36.280	24.37	4.69	6.70	89.83	0.04	0.00
150	22.68	36.932	25.51	4.28	6.12	82.94	0.11	0.00
200	20.58	36.809	26.00	4.18	5.97	79.32	0.16	0.00
250	18.24	36.484	26.37	4.27	6.11	75.24	0.33	0.00
300	17.14	36.302	26.50	4.32	6.17	75.25	0.45	0.00

R V PALUMBO CRUISE 039 STATION PVE-48 PRNG REFERENCE 039664

DATE 02 /12/74 BARO 1118.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 11.6 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 018W
 LONG 066-48.0 W REL HUMID 084 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 11.6 GMT, 735 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	XSAT		
0	0	0	10	(25.50)	0.00	(25.50)	35.232	23.38	4.94	7.05	100.85	.03	0.00
25	25	0	11	25.52	0.00	25.52	35.233	23.38	5.00	7.15	102.20	.04	0.00
50	50	47	12	25.42	0.00	25.42	35.315	23.47	5.00	7.15	102.19	.00	0.00
100	100	104	16	24.45	0.00	24.45	36.477	24.64	4.60	6.57	86.74	.08	0.00

039 664 STANDARD DEPTHS

0	(25.50)	35.232	23.38	4.94	7.05	100.85	0.03	0.00
10	25.51	35.232	23.38	4.96	7.09	101.39	0.03	0.00
20	25.52	35.233	23.38	4.99	7.13	101.96	0.04	0.00
30	25.51	35.241	23.39	5.00	7.15	102.20	0.03	0.00
50	25.42	35.315	23.47	5.00	7.15	102.19	0.00	0.00
75	25.06	35.730	23.89	4.87	6.95	99.37	0.01	0.00
100	24.45	36.477	24.64	4.60	6.57	86.74	0.08	0.00

R V PALUMBO CRUISE 039 STATION PVE-4A PRNC REFERENCE 039665
 DATE 02 /12/74 BARO 1018.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 12.1 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
 LAT 17=57.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0024
 LONG 066=48.0 W REL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 12.1 GMT, 8 9 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT		
0	0	2	25.63	0.00	25.63	35.296	23.39	4.78	6.84	97.94	.06	0.00
10	10	3	25.67	0.00	25.67	35.285	23.37	4.77	6.82	97.75	.06	0.00

CAST 2 MESS TIME 22.3 GMT, 1818 LOCAL MAX DEPTH 31 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT		
31	31	4	25.61	0.00	25.61	35.285	23.39	5.20	7.43	106.49	.06	0.00

039 665 STANDARD DEPTHS

0	25.63	35.296	23.39	4.78	6.84	97.94	0.06	0.00
10	25.67	35.285	23.37	4.77	6.82	97.75	0.06	0.00
20	25.64	35.285	23.38	4.89	6.98	100.04	0.06	0.00
30	25.62	35.285	23.39	5.17	7.38	105.74	0.06	0.00

R V PALUMBO CRUISE 039 STATION PVE=3A PRNC REFERENCE 039666
 DATE 02 /12/74 PARO 1019.5 WEATHER P2 WIND VELOC 02 WAVE PERIOD 6
 HOUR 12,7 TEMP DRY 28,0 VISIBILITY 7 WIND DIREC 15 TRANSPAR
 LAT 17-56,2 N TEMP WET 0,0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0036
 LONG 066-49,0 W REL HUMID 082 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 12,7 GMT, 843 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1,087 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	2	11	25,54	0,00	25,54	35,297	23,42	4,82	6,88	98,52	,05	0,00	
10	10	10	12	25,52	0,00	25,52	35,305	23,43	4,86	6,94	99,40	,04	0,00	

039 666 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 039 STATION PVE=2A PRNC REFERENCE 039667
 DATE 02 /12/74 PARO 1019.5 WEATHER 00 WIND VELOC 02 WAVE PERIOD 6
 HOUR 13,1 TEMP DRY 29,0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
 LAT 17-56,5 N TEMP WET 0,0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0022
 LONG 066-49,7 W REL HUMID 084 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 13,1 GMT, 96 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1,087 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	2	11	25,50	0,00	25,50	35,289	23,43	4,94	7,05	100,91	,00	0,00	
10	10	8	12	25,51	0,00	25,51	35,178	23,34	4,86	6,94	99,25	,00	0,00	

039 667 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 039 STATION PVE=28 PKNC REFERENCE 039666
 DATE 02 /12/74 BARO 1020.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 5
 HOUR 13.4 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 15 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0183
 LONG 066-49.0 W REL HUMID 069 CLOUD AMT 1 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 13.4 GMT, 921 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL OK	TM	TEMP	TAVE OK	SALIN	SIG	T	ML/L	MG/L	OXYGEN	XSAT	PHOS	NITRA
0	25	0	0	10	(25,49)	0,00	0,00	(25,49)	35,162	23,33	5,02	7,18	102,54	.04	0,00	0,00	
25	25	20	20	11	25,46	0,00	0,00	25,46	35,159	23,34	5,05	7,21	102,95	.04	0,00	0,00	
50	50	47	47	12	25,44	0,00	0,00	25,44	35,211	23,39	5,13	7,33	104,76	.04	0,00	0,00	
100	100	101	101	16	24,78	0,00	0,00	24,78	36,203	24,34	4,65	6,65	88,88	.23	0,00	0,00	
0	239	668															
10					(25,49)			35,162		23,33	5,02	7,18	102,54	0,04	0,00	0,00	
20					25,48			35,161		23,34	5,03	7,19	102,70	0,04	0,00	0,00	
30					25,47			35,160		23,34	5,04	7,20	102,87	0,04	0,00	0,00	
50					25,45			35,164		23,35	5,06	7,22	103,16	0,04	0,00	0,00	
75					25,44			35,211		23,39	5,13	7,33	104,76	0,04	0,00	0,00	
100					25,21			35,559		23,72	5,00	7,15	102,17	0,04	0,00	0,00	
					24,78			36,203		24,34	4,65	6,65	88,88	0,23	0,00	0,00	

STANDARD DEPTHS

R V PALUMBO CRUISE 039 STATION PVE-50 PRNC REFERENCE 239670

DATE 02 /12/74 BARO 1019.5 WEATHER 02 WIND VELOC 01 WAVE PERIOD 6
 HOUR 14.9 TEMP DRY 28.0 VISIBILITY 0 WIND DIREC 12 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0586
 LONG 066-46.9 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.9 GMT, 1051 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
											ML/L	MG/L			
0	0	0	0	10	(24.45)	0.00	(24.45)	35.164	23.65	5.02	7.18	97.73	.05	0.00	
25	25	24	45	11	25.44	0.00	25.44	35.169	23.36	5.14	7.35	104.94	.03	0.00	
50	50	45	45	12	25.46	0.00	25.46	35.181	23.36	5.05	7.21	102.97	.04	0.00	
100	100	101	101	16	25.06	0.00	25.06	36.354	24.37	4.75	6.79	97.35	.00	0.00	
150	149	0	0	1	23.22	0.00	23.22	36.801	25.31	4.39	6.28	85.30	.06	0.00	
200	199	200	200	2	20.66	0.00	20.66	36.730	25.92	4.18	5.97	79.29	.19	0.00	
250	249	246	246	3	18.56	0.00	18.56	36.453	26.26	4.18	5.97	73.56	.32	0.00	
300	298	293	293	4	17.46	0.00	17.46	36.271	26.39	4.38	6.26	76.42	.32	0.00	

STANDARD DEPTHS	WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
											ML/L	MG/L			
0	0	0	0	10	(24.45)	0.00	(24.45)	35.164	23.65	5.02	7.18	97.73	0.05	0.00	
10	10	20	20	11	24.85	0.00	24.85	35.166	23.53	5.07	7.25	99.03	0.04	0.00	
20	20	30	30	12	25.26	0.00	25.26	35.168	23.41	5.12	7.32	104.36	0.03	0.00	
30	30	40	40	13	25.44	0.00	25.44	35.171	23.36	5.14	7.34	104.81	0.03	0.00	
50	50	60	60	14	25.46	0.00	25.46	35.181	23.36	5.05	7.21	102.97	0.04	0.00	
75	75	85	85	15	25.33	0.00	25.33	35.712	23.80	4.91	7.02	100.63	0.00	0.00	
100	100	110	110	16	25.06	0.00	25.06	36.354	24.37	4.75	6.79	97.35	0.00	0.00	
150	150	160	160	17	23.17	0.00	23.17	36.878	25.33	4.39	6.27	85.14	0.06	0.00	
200	200	210	210	18	20.61	0.00	20.61	36.725	25.93	4.18	5.97	79.26	0.19	0.00	
250	250	260	260	19	18.53	0.00	18.53	36.449	26.26	4.18	5.97	73.60	0.32	0.00	
300	300	310	310	20	17.42	0.00	17.42	36.264	26.40	4.39	6.27	76.54	0.32	0.00	

R V PALUMBO CRUISE 039 STATION PVE-6C PRNC REFERENCE 039671

DATE 02 /12/74 BARO 1019.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 7
 HOUR 15.5 TEMP DRY 27.3 VISIBILITY 8 WIND DIREC 12 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0606
 LONG 066-45.7 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.5 GMT, 1128 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TZ								ML/L	MG/L			
0	0	0	0	10	(25.45)	0.00	(25.45)	35.217	23.39	5.03	7.19	102.78	.05	0.00	
25	25	26	0	11	25.43	0.00	25.43	35.225	23.40	5.10	7.29	104.10	.00	0.00	
50	50	48	0	12	25.47	0.00	25.47	35.218	23.38	5.05	7.21	103.02	.00	0.00	
100	100	104	0	16	25.02	0.00	25.02	35.945	24.07	4.73	6.76	96.64	.05	0.00	
150	150	0	0	1	23.29	0.00	23.29	36.841	25.26	4.46	6.37	86.51	.06	0.00	
200	200	202	0	2	20.96	0.00	20.96	36.732	25.84	4.17	5.95	79.25	.17	0.00	
250	250	247	0	3	18.75	0.00	18.75	36.441	26.20	4.22	6.03	74.36	.20	0.00	
300	300	294	0	4	17.50	0.00	17.50	36.246	26.37	4.35	6.21	75.81	.39	0.00	

039 671 STANDARD DEPTHS

0	(25.45)	35.217	23.39	5.03	7.19	102.78	0.05	0.00
10	25.44	35.220	23.39	5.06	7.23	103.31	0.03	0.00
20	25.43	35.224	23.40	5.09	7.27	103.88	0.01	0.00
30	25.43	35.224	23.40	5.10	7.28	104.06	0.00	0.00
50	25.47	35.218	23.38	5.05	7.21	103.02	0.00	0.00
75	25.33	35.509	23.64	4.90	7.00	100.24	0.02	0.00
100	25.02	35.945	24.07	4.73	6.76	96.64	0.05	0.00
150	23.29	36.841	25.26	4.46	6.37	86.51	0.06	0.00
200	20.96	36.732	25.84	4.17	5.95	79.25	0.17	0.00
250	18.75	36.441	26.20	4.22	6.03	74.36	0.20	0.00
300	17.50	36.246	26.37	4.35	6.21	75.81	0.39	0.00

R V PALUMBO CRUISE 039 STATION PVE-5B PRNC REFERENCE 039672

DATE 02 /12/74 BARO 1019.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 16.0 TEMP DRY 28.0 VISIBILITY 8 WIND DIREC 14 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 14 SONIC DEP 0521
 LONG 066-46.9 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.0 GMT, 1156 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.087 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG	T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	10	(24,45)	0,00	(24,45)	35,190	23,67	5,01	7,16	97,62	,00	0,00	
25	25	30	11	25,43	0,00	25,43	35,161	23,35	5,15	7,36	105,14	,03	0,00	
50	50	45	12	25,39	0,00	25,39	35,278	23,45	5,02	7,18	102,56	,03	0,00	
100	100	101	15	25,00	0,00	25,00	35,882	24,03	4,74	6,77	96,79	,05	0,00	
STANDARD DEPTHS														
039 672	0			(24,45)		(24,45)	35,190	23,67	5,01	7,16	97,62	0,00	0,00	
	10			24,84		24,84	35,178	23,54	5,07	7,24	99,03	0,01	0,00	
	20			25,25		25,25	35,167	23,41	5,13	7,33	104,51	0,02	0,00	
	30			25,42		25,42	35,172	23,36	5,14	7,35	104,91	0,03	0,00	
	50			25,39		25,39	35,278	23,45	5,02	7,18	102,56	0,03	0,00	
	75			25,25		25,25	35,518	23,68	4,89	6,98	99,81	0,04	0,00	
	100			25,00		25,00	35,882	24,03	4,74	6,77	96,79	0,05	0,00	

R V PALUMBO CRUISE 239 STATION PVE-5A PRNC REFERENCE 039673

DATE 02 /12/74 RARO 1419.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 5
 HOUR 16.3 TEMP DRY 28.2 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 17-57.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 14 SONIC DEP 0027
 LONG 066-47.0 W REL HUMID 069 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.3 GMT, 1221 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.257 METER WHEEL FACTOR .997

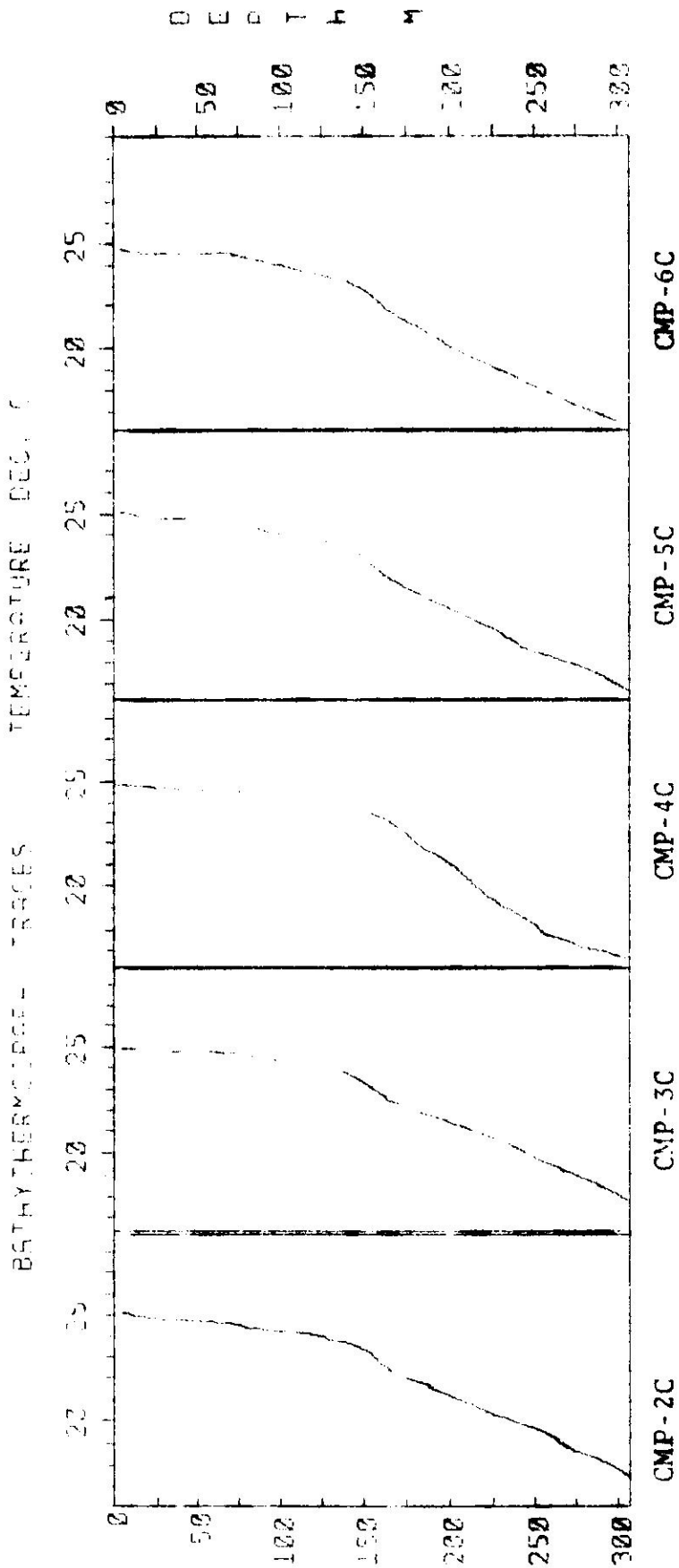
WIRE	CF	TZ	FN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA	TEMP	
														DEPTH (M)	STANDARD DEPTHS
0	2	2	2	26.31	0.00	26.31	35.248	23.14	4.64	6.63	95.66	.26	0.00		
10	11	3	3	25.61	2.00	25.61	35.166	23.30	5.06	7.22	103.33	.25	0.00		
039	673														
						26.31	35.248	23.14	4.64	6.63	95.66	0.26	0.00		
						25.61	35.166	23.30	5.06	7.22	103.33	0.25	0.00		

R V PALUMBO CRUISE 039 STATION PVE-6A PRNC REFERENCE 039675

DATE 02 /12/74 BARO 1020.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD
 HOUR 17.3 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 17=58.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC SONIC DEP 0019
 LONG 066=46.1 W REL HUMID CLOUD AMT WAVE HEIGHT COLOR

CAST 1 MESS TIME 17.3 GMT, 1320 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER 1.037 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA	OXYGEN	
														DEPTH (M)	STANDARD DEPTHS
0	0	0	2	26.28	0.00	26.28	35.249	23.15	4.55	6.49	93.62	.22	0.00		
10	10	14	4	25.62	0.00	25.62	35.160	23.29	4.94	7.05	100.88	.20	0.00		
039	675														
						26.28	35.249	23.15	4.55	6.49	93.62	0.00	0.00		
						25.62	35.160	23.29	4.94	7.05	100.88	0.00	0.00		



Cruise No. PA039
Feb. 13, 1974

R V PALUMBO CRUISE 139 STATION SMP-43 PRNC REFERENCE 039676
 DATE #2 7/13/74 0800 1-15.5 WEATHER #2 WIND VELOC 01 WAVE PERIOD 5
 HOUR 5.6 TEMP DEPT 23.0 VISIBILITY 8 WIND DIRECTION 04 TRANSPAR
 LAT 17-57.1 N TLP AFT 0.0 CLOUD TYPE 0 WAVE DIRECTION 12 SONIC DEP 0375
 LONG 105-56.2 W REL HU ID 002 CLOUD ANT 1 WAVE HEIGHT 2 COLOR

CAST 1 WESS TIME 5.6 GT, 139 LOCAL MAX DEPTH 170 WIFE 4.61E 7
 OXYGEN TITER 1.000 PETER WHEEL FACTOR .997

DEPTH (M)	TEMP	TL	TS	TA	TSALIN	SIG T	ML/L	%SAT	PHOS	NITRA
0	25.30	25.30	25.30	25.30	35.652	23.76	4.83	6.90	.25	0.00
25	25.24	25.24	25.24	25.24	35.643	23.77	4.97	7.10	.75	0.70
50	25.27	25.27	25.27	25.27	35.533	23.78	4.96	7.08	.75	0.00
100	24.53	24.53	24.53	24.53	34.714	24.10	4.67	6.68	.04	0.00

R39 676 STANDARD DEPTHS

10	(25.30)	35.652	23.76	4.83	6.90	98.08	0.05	0.00
25	25.28	35.648	23.77	4.89	6.98	99.97	0.05	0.00
30	25.25	35.645	23.77	4.94	7.06	101.11	0.05	0.00
35	25.23	35.641	23.78	4.97	7.09	101.53	0.05	0.00
50	25.20	35.633	23.78	4.96	7.08	101.31	0.05	0.00
75	24.91	36.093	24.22	4.83	6.91	98.54	0.75	0.00
100	24.52	36.736	24.12	4.67	6.67	91.06	0.04	0.00

R V PALOMAR CRUISE 039 STATION EXP-60 PRNG REFERENCE 039679

DATE 02 /13/74 PASD 1418.5 WEATHER 72 WIND VELOC 01 WAVE PERIOD 5
 HOUR 7.4 TEMP DRY 25.1 VISIBILITY 7 WIND DIREC K4 TRANSPAR
 LAT 17-56.3 N TEMP WET 24.2 CLOUD TYPE 6 WAVE DIREC 13 SONIC DEP 1170
 LONG 065-54.1 W SLL H0010 084 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 PRESS TIME 7.6 S T, 327 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITRA 1.250 METERS WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		SIG T	OXYGEN	%SAT	PHOS	NITRA
		TL	TM					
0	0	25.30	25.30	23.72	4.87	6.06	99.69	0.00
25	25	25.15	25.15	23.77	4.94	7.25	100.80	0.00
50	49	25.15	25.15	23.77	4.90	7.21	100.14	0.00
100	102	24.39	24.39	24.25	4.65	6.69	91.26	0.00
150	124	22.41	22.40	25.60	4.33	6.18	83.60	0.00
200	197	20.42	20.42	26.5	4.04	5.81	77.13	0.00
250	250	18.66	18.66	26.10	4.13	5.90	73.02	0.00
300	300	17.43	17.43	26.49	4.23	6.25	74.22	0.00

WIRE	DEPTH (M)	TEMP		SIG T	OXYGEN	%SAT	PHOS	NITRA
		TL	TM					
0	0	25.20	25.20	23.72	4.87	6.96	99.69	0.00
10	10	25.20	25.20	23.74	4.90	7.00	100.14	0.00
20	20	25.19	25.19	23.76	4.93	7.04	100.62	0.00
30	30	25.16	25.16	23.77	4.95	7.04	100.67	0.00
50	50	25.15	25.15	23.77	4.90	7.01	100.14	0.00
75	75	24.91	24.91	24.14	4.82	6.80	98.31	0.00
100	100	24.39	24.39	24.2	4.63	6.69	91.26	0.00
150	150	22.40	22.40	25.60	4.33	6.18	83.60	0.00
200	200	20.42	20.42	26.5	4.04	5.81	77.13	0.00
250	250	18.66	18.66	26.10	4.13	5.90	73.02	0.00
300	300	17.43	17.43	26.49	4.23	6.25	74.12	0.00

039 679 STANDARD DEPTHS

R V PALUNBO CRUISE 839 STATION CMP-40 PRIC REFERENCE 059681

DATE 22 / 13 / 74 TIME 11:18.5 WEATHER 92 WIND VELOC 12 WAVE PERIOD 5
 HOUR 9.4 TEMP SURF 23.0 VISIBILITY 7 WIND DIREC 28 TRANSPAR
 LAT 17-56.0 S TEMP WAT 21.2 CLOUD TYPE 0 WAVE DIREC 13 SONIC DEP 1124
 LONG 165-56.2 W REL HUMID 885 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CASE 1 PRESS TIME 9.4 G/T, 522 LOCAL MAX DEPTH 362 WIRE ANGLE 0
 OXYGEN TITR. 1.216 STEEL WHEEL FACTOR .997

WIRE	DEPTH (M)	TL	FM	TEMP	TMR	TAVE	SALIN	SIG T	ML/L	%O2/L	%SAT	PHOS	NITRA
25	2	0	10	25.20	0.00	25.20	35.598	23.73	4.88	6.95	99.88	.03	0.00
50	25	0	11	25.16	0.00	25.16	35.579	23.75	4.89	6.99	99.92	.04	0.00
100	50	42	12	25.12	0.00	25.15	35.574	23.75	4.92	7.02	100.54	.04	0.00
150	100	172	16	24.51	0.00	24.51	36.718	24.51	4.69	6.71	91.50	.04	0.00
200	150	0	1	22.76	2.00	22.76	36.923	25.48	4.35	6.21	84.22	.27	0.00
250	200	180	2	20.51	4.00	20.51	36.791	26.1	4.11	5.87	77.95	.12	0.00
300	250	249	3	18.37	6.00	18.37	36.516	26.36	4.14	5.91	72.93	.30	0.00
350	300	292	4	17.52	8.00	17.52	36.378	26.46	4.21	6.00	70.48	.39	0.00

839 641 STANDARD DEPTHS

0	(21.23)	35.598	23.73	4.88	6.95	99.88	.03	0.00
10	25.23	35.591	23.74	4.89	6.96	99.91	.03	0.00
20	25.18	35.503	23.75	4.89	6.99	99.91	.04	0.00
30	25.15	35.577	23.75	4.90	7.00	99.98	.04	0.00
40	25.15	35.574	23.75	4.92	7.02	100.54	.04	0.00
75	24.69	36.109	24.71	4.64	6.91	99.09	.24	0.00
100	24.51	36.718	24.1	4.69	6.71	91.21	.24	0.00
150	22.76	36.923	25.30	4.35	6.21	84.22	.27	0.00
200	20.51	36.791	26.1	4.11	5.87	77.95	.12	0.00
250	18.37	36.516	26.36	4.14	5.91	72.93	.30	0.00
300	17.52	36.378	26.46	4.21	6.00	70.48	.39	0.00

R V PALUMBO CRUISE 439 STATION CMP-4A PRNC REFERENCE 039682
 DATE 02 /13/74 BARO 1018.5 WEATHER 02 WIND VELOC 22 WAVE PERIOD 6
 HOUR 11,3 TEMP DRY 24.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-58.3 N TEMP WET 24.0 CLOUD TYPE 5 WAVE DIREC 12 SONIC DEP 0017
 LONG 065-26.1 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 11.5 G-T, 715 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.002 PETER WHEEL FACTOR .997

DEPTH (M)	WIRE	CE	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	25.19	0.00	25.19	35.579	23.74	4.83	6.80	98.03	.04	0.00	
10	10	6	12	25.34	0.10	25.34	35.577	23.69	4.84	6.92	99.08	.03	0.20	

039 602 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 439 STATION CMP-5A PRNC REFERENCE 039683
 DATE 02 /13/74 BARO 1019.5 WEATHER 02 WIND VELOC 22 WAVE PERIOD 6
 HOUR 11,7 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-58.4 N TEMP WET 24.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0017
 LONG 065-25.7 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 1 COLOR
 CAST 1 MESS TIME 11.7 G-T, 741 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.002 PETER WHEEL FACTOR .997

DEPTH (M)	WIRE	CE	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	11	25.32	0.00	25.32	35.575	23.70	4.83	6.90	98.04	.03	0.00	
10	10	8	12	25.34	0.10	25.34	35.576	23.69	4.87	6.96	99.73	.03	0.20	

039 603 STANDARD DEPTHS

0
10

R V PALUMBQ CRUISE 339 STATION CMP-6A PRNC REFERENCE 239684
 DATE 12/13/74 BARO 1219.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 6
 HOUR 12.0 TEMP DRY 24.2 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-58.0 N TEMP WET 22.0 CLOUD TYPE 0 WAVE DIREC 11 SONIC DEP 0016
 LONG 165-24.1 W REL HUMID 874 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.6 GT, 8.1 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.000 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	GT	DN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	2	11	25.42	2.00	25.42	25.594	25.42	35.594	23.68	4.85	6.03	99.42	.25	0.00
10	12	9	25.42	7.00	25.42	35.576	23.67	4.01	6.87	98.51	.25	0.00		

039 664 STANDARD DEPTHS

R V PALUMBQ CRUISE 339 STATION CMP-3A PRNC REFERENCE 239685
 DATE 12/13/74 BARO 1219.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 5
 HOUR 12.6 TEMP DRY 20.7 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-57.6 N TEMP WET 20.0 CLOUD TYPE 6 WAVE DIREC 10 SONIC DEP 0018
 LONG 165-27.3 W REL HUMID 863 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 12.6 GT, 6.38 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.000 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	GT	DN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	2	11	25.32	2.00	25.32	35.598	23.72	4.80	6.86	98.22	.25	0.00		
10	12	12	25.30	7.00	25.30	35.600	23.72	4.80	6.86	98.19	.25	0.00		

039 665 STANDARD DEPTHS

R V FALCONER CRUISE 009 STATION CYP-2A PRIC REFERENCE 039686

DATE 02 / 13 / 74 DARG 1419.5 WEATHER 00 WIND VELOC 03 WAVE PERIOD 6
 HOUR 13.0 TEMP DAY 27.0 VISIBILITY 7 WIND DIREC 27 TRANSPAR
 LAT 17-27.7 W TEMP SURF 27.0 CLOUD TYPE 8 WAVE DIREC 09 SONIC DEP 0017
 LONG 265-58.5 W REL HUMID 100 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

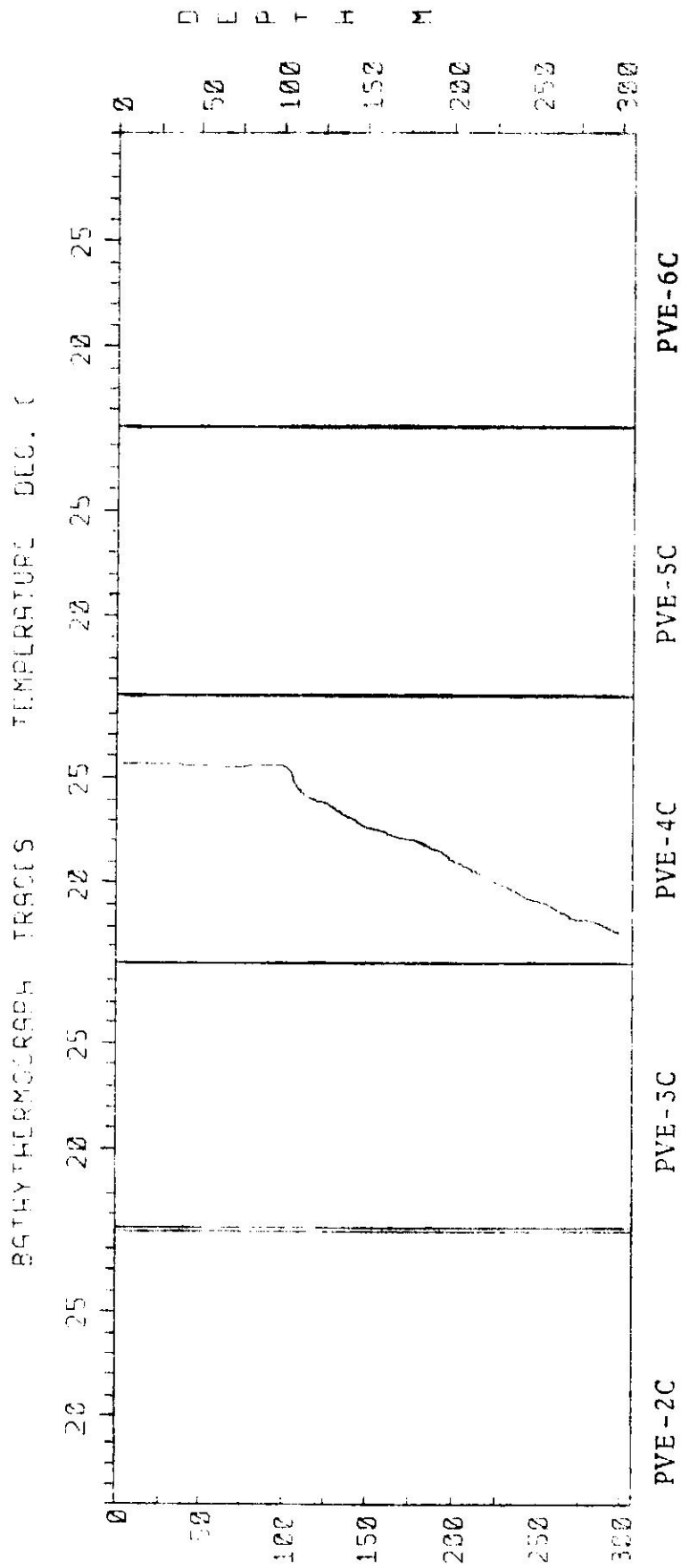
CAST 1 PRESS TIME 13.0 6 1, 058 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN FILTER 1.0 CM METER SHELF FACTOR .997

WIRE	CZ	TZ	RN	TL	TY	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	2	11	25.36	0.10	25.36	35.606	23.71	4.82	6.89	98.71	0.00	0.20		
10	6	12	25.35	0.10	25.35	35.604	23.71	4.82	6.89	98.69	0.00	0.00		
039	606	STANDARD DEPTHS												
	10					25.36	35.606	23.71	4.82	6.89	98.71	0.00	0.00	
	10					25.35	35.604	23.71	4.82	6.89	98.69	0.00	0.00	

R V PALUMB0 CHUISE 139 STATION C-P-5R PRNC REFERENCE 039691
 DATE 02 /13/74 R2P0 1010.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 5
 HOUR 18.7 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 17-07.0 N TEMP WET 24.0 CLOUD TYPE 0 WAVE DIREC 09 SONIC DEP 0390
 LONG 162-55.2 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 10.7 GMT, 1440 LOCAL RAY DEPTH 100 WIRE ANGLE 7
 OXYGEN TITER 1.050 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
2	2	0	10	(25.35)	25.35	35.601	23.77	4.85	6.93	99.52	.24	0.00		
25	25	23	11	25.17	25.17	35.643	23.80	4.94	7.05	100.85	.24	0.00		
50	50	45	12	25.15	25.15	35.643	24.55	4.89	6.99	100.55	.25	0.00		
100	99	112	16	24.77	24.77	35.596	24.64	4.74	6.77	92.20	.04	0.00		
039 691														
							(25.31)	35.561	23.77	4.85	6.93	99.52	2.04	0.00
	10				25.25	35.554	23.73	4.89	6.90	99.93	0.24	0.00		
	20				25.19	35.647	23.79	4.92	7.03	100.59	0.24	0.00		
	50				25.17	35.616	23.73	4.94	7.05	100.98	0.24	0.00		
	50				25.16	35.643	24.55	4.89	6.99	100.55	0.25	0.00		
	75				24.99	35.619	24.59	4.82	6.89	93.84	0.25	0.00		
	100				24.76	35.595	24.64	4.73	6.76	91.93	0.04	0.00		

039 691 STANDARD DEPTHS



Cruise No. PA042
Apr. 22, 1974

R V PALUMBO CRUISE 042 STATION PVE-2C PRNC REFERENCE 042724

DATE 04 /22/74 BARO 1019.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 12.0 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-55.1 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 10 SONIC DEP 0384
 LONG 066-50.0 W REL HUMID 075 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 12.0 GMT, 758 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		TM	TM							ML/L	MG/L			
0	0	0	0	25.65	10	0	25.65	35.765	23.74	4.82	6.88	99.18	.06	0.00
25	25	0	0	25.86	11	0	25.86	35.758	23.67	4.84	6.91	99.89	.06	0.00
50	50	55	55	25.72	12	55	25.72	35.767	23.72	4.84	6.91	99.70	.06	0.00
100	100	102	102	25.43	16	102	25.43	36.077	24.04	4.62	6.60	95.17	.09	0.00
150	150	148	148	22.41	1	148	22.41	36.981	25.62	4.23	6.04	81.82	.05	0.00
200	200	197	197	20.43	2	197	20.43	36.823	26.05	4.10	5.86	77.87	.05	0.00
250	250	0	0	25.70	3	0	25.70	35.759	23.72	4.83	6.90	99.52	.04	0.00
300	300	0	0	25.45	4	0	25.45	35.761	23.80	4.83	6.90	99.16	.05	0.00

Pre-trip

042 724 STANDARD DEPTHS

0	25.65	35.765	23.74	4.82	6.88	99.18	0.06	0.00
10	25.73	35.762	23.71	4.82	6.89	99.46	0.06	0.00
20	25.83	35.759	23.68	4.83	6.90	99.76	0.06	0.00
30	25.85	35.758	23.67	4.84	6.91	99.87	0.06	0.00
50	25.72	35.767	23.72	4.84	6.91	99.70	0.06	0.00
75	25.57	35.864	23.84	4.76	6.79	97.93	0.07	0.00
100	25.38	36.098	24.08	4.61	6.59	94.93	0.09	0.00
150	22.31	36.975	25.65	4.22	6.03	81.54	0.05	0.00
200	20.73	36.756	25.92	4.15	5.92	78.79	0.05	0.00
250	25.68	35.759	23.73	4.83	6.90	99.49	0.04	0.00
300	25.42	35.761	23.81	4.83	6.90	99.12	0.05	0.00

Pre-trip

R V PALUMBO CRUISE 042 STATION PVE-2B PRNC REFERENCE 042725
 DATE 04 /22/74 BARO 1020.0 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 13.2 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 10 SONIC DEP 0165
 LONG 067-50.0 W PEL HUMID 076 CLOUD AMT 1 WAVE HEIGHT 3 COLOR
 CAST 1 MESS TIME 13.2 GMT, 912 LOCAL MAX DEPTH 100 WIRE ANGLE 9
 OXYGEN TITER .672 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA				
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN			SIG Y	ML/L	MG/L	%SAT
0	0	0	0	1	25.85	0.00	25.85	35.772	23.68	4.82	6.89	99.61	.05	0.00
25	25	28	28	2	25.83	0.00	25.83	35.763	23.68	4.82	6.89	99.57	.05	0.00
50	50	49	49	3	25.78	0.00	25.78	35.751	23.69	4.82	6.88	99.35	.05	0.00
100	99	101	101	4	24.31	0.00	24.31	35.763	24.15	4.49	6.41	89.31	.05	0.00
STANDARD DEPTHS														
042 725	0				25.85			35.772	23.68	4.82	6.89	99.61	0.05	0.00
	10				25.84			35.768	23.68	4.82	6.89	99.60	0.05	0.00
	20				25.83			35.765	23.68	4.82	6.89	99.58	0.05	0.00
	30				25.82			35.760	23.68	4.82	6.89	99.55	0.05	0.00
	50				25.78			35.751	23.69	4.82	6.88	99.35	0.05	0.00
	75				25.14			35.754	23.89	4.67	6.68	95.54	0.05	0.00
	100				24.28			35.763	24.16	4.48	6.40	89.14	0.05	0.00

R V PALUMBO CRUISE 042 STATION PVE-2A PRNC REFERENCE 042726
 DATE 04 /22/74 BARO 1020.5 WEATHER 00 WIND VELOC 05 WAVE PERIOD 4
 HOUR 13.6 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 12 SONIC DEP 0018
 LONG 067-50.0 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 13.6 GMT, 937 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,672 METER WHEEL FACTOR ,997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	25.92	0.00	25.92	35.778	23.67	4.71	6.73	97.36	.05	0.00
10	10	10	4	25.92	0.00	25.92	35.771	23.66	4.74	6.77	98.05	.05	0.00
042 726 STANDARD DEPTHS													
0				25.92	35.778	23.67	4.71	6.73	97.36	0.05	0.00		
10				25.92	35.771	23.66	4.74	6.77	98.05	0.05	0.00		

R V PALUMBO CRUISE 042 STATION PVE-4A PRNC REFERENCE 042727
 DATE 04 /22/74 PARO 1020.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 14.3 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 18-57.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 14 SONIC DEP 0023
 LONG 067-48.6 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 14.3 GMT, 1019 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,672 METER WHEEL FACTOR ,997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	4	3	26.22	0.00	26.22	35.895	23.66	4.58	6.54	99.34	.06	0.00
10	10	14	4	26.35	0.00	26.35	35.979	23.68	4.42	6.31	92.32	.11	0.00
042 727 STANDARD DEPTHS													
0				26.22	35.895	23.66	4.58	6.54	99.34	0.06	0.00		
10				26.35	35.979	23.68	4.42	6.31	92.32	0.11	0.00		

R V PALUMBO CRUISE 042 STATION PVE-48 PRNC REFERENCE 042728

DATE 04 /22/74 BARO 1021.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 14.0 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0195
 LONG 067-47.9 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 14.0 GMT, 1046 LOCAL MAX DEPTH 100 WIRE ANGLE 23
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
0	2	0	1	26.00	0.00	26.08	35.774	23.61	4.88	6.97	101.07	.05	0.00	
25	23	25	2	25.88	0.00	25.88	35.776	23.68	4.85	6.93	100.22	.05	0.00	
50	46	0	3	25.86	0.00	25.86	35.777	23.68	4.82	6.89	99.64	.05	0.00	
100	92	0	4	25.71	0.00	25.71	35.893	23.82	4.64	6.63	95.82	.06	0.00	

042 728 STANDARD DEPTHS

STANDARD DEPTHS	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN ML/L	OXYGEN MG/L	%SAT	PHOS	NITRA
3	0	2	0	1	26.08	0.00	26.08	35.774	23.61	4.88	6.97	101.07	0.05	0.00	
10	25	23	25	2	25.88	0.00	25.88	35.775	23.64	4.86	6.95	100.70	0.05	0.00	
20	50	46	0	3	25.86	0.00	25.86	35.776	23.67	4.85	6.93	100.33	0.05	0.00	
30	100	92	0	4	25.71	0.00	25.71	35.893	23.68	4.84	6.92	100.07	0.05	0.00	
50									23.69	4.81	6.87	99.38	0.05	0.00	
75									23.76	4.72	6.74	97.44	0.06	0.00	
100									23.84	4.61	6.59	95.15	0.06	0.00	

R V PALUMBO CRUISE 242 STATION PVE-4C PRNG REFERENCE 242729

DATE 04 /22/74 RARO 1021.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 6
 HOUR 15.8 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-55.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0430
 LONG 067-48.0 W REL HUMID 072 CLOUD AMT 2 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 15.8 GMT, 1148 LOCAL MAX DEPTH 300 WIRE ANGLE 22
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				TAVE	SALIN	SIG T	OXYGEN	%SAT	PHOS	NITRA	
		TZ	BN	TL	TM								
0	0	0	10	25.94	0.00	25.94	35.783	23.66	4.82	6.88	99.62	.05	0.00
25	24	23	11	25.86	0.00	25.86	35.773	23.68	4.82	6.89	99.63	.05	0.00
50	47	55	12	25.75	0.00	25.75	35.754	23.70	4.83	6.90	99.58	.05	0.00
100	93	0	16	25.71	0.00	25.71	35.754	23.71	4.85	6.93	99.94	.06	0.00
150	139	0	1	22.75	0.00	22.75	36.974	25.52	4.28	6.11	82.97	.09	1.40
200	185	192	2	20.97	0.00	21.97	36.878	25.95	4.16	5.94	79.27	.13	2.99
250	232	0	3	19.06	0.00	19.06	36.648	26.28	4.13	5.92	73.49	.25	8.76
300	278	0	4	17.93	0.00	17.93	35.471	25.67	4.25	6.07	75.62	.36	8.29
							6?						

242 729 STANDARD DEPTHS

0	25.94	35.783	23.66	4.82	6.88	99.62	.05	0.00
10	25.91	35.779	23.67	4.82	6.88	99.63	.05	0.00
20	25.87	35.775	23.68	4.82	6.89	99.63	.05	0.00
30	25.83	35.768	23.69	4.82	6.89	99.61	.05	0.00
50	25.74	35.754	23.70	4.83	6.90	99.59	.05	0.00
75	25.73	35.754	23.71	4.84	6.92	99.78	.05	0.00
100	25.32	35.943	23.98	4.77	6.81	97.86	.06	0.16
150	22.27	36.951	25.64	4.22	6.04	81.54	.10	1.76
200	20.32	36.819	26.08	4.14	5.91	78.46	.16	4.95
250	18.57	36.244	26.10	4.17	5.96	72.92	.29	8.58
300	17.39	34.908	25.37	4.31	6.16	75.07	.41	8.07

R V PALUMBO CRUISE 042 STATION PVE-6C PRNC REFERENCE 042730
 DATE 04 /22/74 BARO 1020.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 17.1 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0622
 LONG 067-46.0 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 17.1 GMT, 13 7 LOCAL MAX DEPTH 300 WIRE ANGLE 12
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG Y	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	0	10	25.82	0.30	25.82	35.756	23.68	4.88	6.97	100.66	.06	0.00
25	25	19	19	11	25.81	0.00	25.81	35.753	23.68	4.83	6.90	99.67	.26	0.00
50	49	51	51	12	25.76	0.00	25.76	35.750	23.69	4.84	6.92	99.87	.06	0.00
100	98	0	0	16	25.47	0.00	25.47	35.967	23.95	4.63	6.61	95.26	.06	0.00
150	147	0	0	1	22.86	0.00	22.86	36.960	25.48	4.30	6.14	83.41	.08	0.00
200	196	195	195	2	20.80	0.00	20.80	36.642	25.82	4.07	5.81	77.27	.17	0.00
250	244	248	248	3	19.08	0.00	19.08	36.641	26.27	4.16	5.94	73.96	.22	0.00
300	293	291	291	4	17.60	0.00	17.60	36.429	26.48	4.34	6.20	76.02	.34	0.00

042 730 STANDARD DEPTHS

0	25.82	35.756	23.68	4.88	6.97	100.66	0.06	0.00
10	25.82	35.755	23.68	4.86	6.94	100.26	0.06	0.00
20	25.81	35.754	23.68	4.84	6.91	99.84	0.06	0.00
30	25.80	35.752	23.68	4.83	6.90	99.72	0.06	0.00
50	25.76	35.751	23.70	4.84	6.92	99.82	0.06	0.00
75	25.64	35.828	23.79	4.76	6.79	98.00	0.05	0.00
100	25.38	36.013	24.01	4.61	6.59	94.89	0.06	0.00
150	22.72	36.955	25.52	4.28	6.11	82.91	0.09	0.00
200	20.65	36.642	25.86	4.08	5.82	77.34	0.17	0.00
250	18.89	36.621	26.30	4.18	5.97	74.17	0.23	0.00
300	17.39	36.399	26.51	4.36	6.24	76.34	0.36	0.00

R V PALUMBO CRUISE 042 STATION PVE-69 PRNG REFERENCE 042731
 DATE 04 /22/74 BARO 1020.5 WEATHER 02 WIND VELOC 26 WAVE PERIOD 5
 HOUR 17.8 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-57.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0360
 LONG 067-45.4 W REL HUMID 074 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 17.8 GMT, 1347 LOCAL MAX DEPTH 100 WIRE ANGLE 11
 OXYGEN TITER .672 METEP WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	26.04	26.04	26.04	26.04	35.824	23.66	4.97	7.10	103.04	.06	0.00
25	25	25	24	2	25.97	0.20	25.97	25.97	35.807	23.67	4.82	6.88	99.70	.05	0.00
50	49	49	55	3	25.83	0.00	25.83	25.83	35.771	23.69	4.82	6.89	99.58	.04	0.00
100	98	98	99	4	25.46	0.00	25.46	25.46	36.031	24.00	4.63	6.62	95.45	.06	0.00

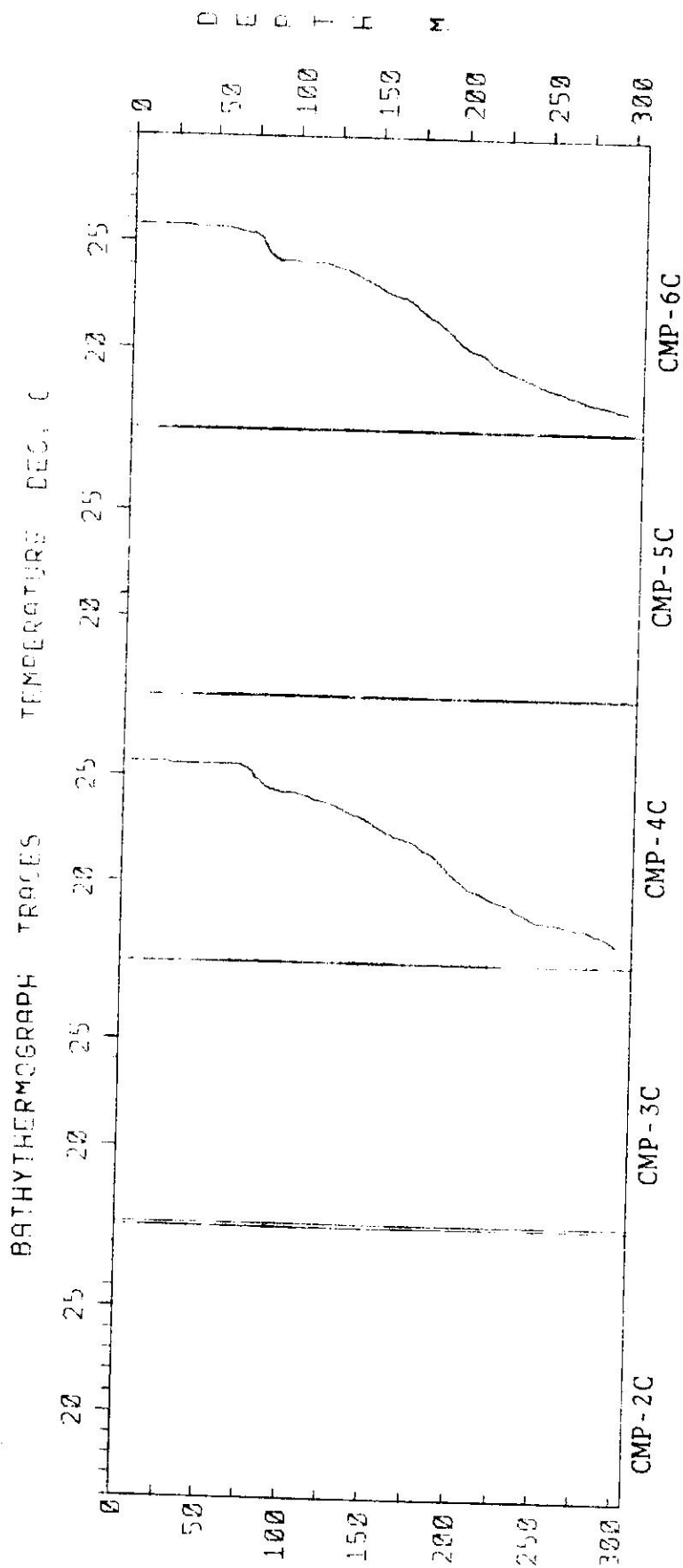
042 731	STANDARD DEPTHS	CZ	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG Y	ML/L	MG/L	XSAT	PHOS	NITRA
	0	0	0	1	26.04	26.04	26.04	26.04	35.824	23.66	4.97	7.10	103.04	0.06	0.00
	10	10	24	2	26.01	0.17	26.01	26.01	35.817	23.67	4.91	7.01	101.71	0.06	0.00
	20	20	55	3	25.99	0.11	25.99	25.99	35.811	23.67	4.84	6.92	100.31	0.05	0.00
	30	30	99	4	25.95	0.02	25.95	25.95	35.802	23.68	4.82	6.88	99.69	0.05	0.00
	50	50	99	4	25.82	0.74	25.82	25.82	35.774	23.69	4.82	6.89	99.53	0.04	0.00
	75	75	99	4	25.64	0.81	25.64	25.64	35.881	23.83	4.74	6.77	97.73	0.05	0.00
	100	100	99	4	25.44	0.42	25.44	25.44	36.042	24.01	4.63	6.61	95.27	0.06	0.00

R V PALUMBO CRUISE 042 STATION PVE-6A PRNC REFERENCE 042732

DATE 04 /22/74 BARO 1020.0 WEATHER 02 WIND VELOC 06 WAVE PERIOD 1
 HOUR 18,3 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-58,3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0010
 LONG 067-46,0 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18,3 GMT, 1415 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,672 METER WHEEL FACTOR ,997

WIRE	CZ	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			TL	TM								
0	0	0	27,06	0,00	27,06	36,001	23,47	4,57	6,52	96,60	,00	0,00
10	10	11	27,02	0,00	27,02	36,018	23,50	4,61	6,50	97,43	,00	0,00
042 732 STANDARD DEPTHS												
		0	27,06	0,001	27,06	36,001	23,47	4,57	6,52	96,60	0,00	0,00
		10	27,02	0,018	27,02	36,018	23,50	4,61	6,50	97,43	0,00	0,00



Cruise No. 042
Apr. 23, 1974

R V PALUMBO CRUISE 042 STATION CMP-6C PRNC REFERENCE 042733

DATE 04 /23/74 BARO 1010.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 8.8 TEMP DRY 24.0 VISIBILITY WIND DIREC 11 TRANSPAR
 LAT 17-55.0 N TEMP WET 0.0 CLOUD TYPE WAVE DIREC 10 SONIC DEP 0457
 LONG 069-54.0 W REL HUMID 080 CLOUD AMT WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 8.8 GMT, 445 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA		
			TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L			MG/L	%SAT
0	0	0	0	10	25.83	0.00	25.83	35.758	23.68	4.96	7.09	102.44	.00	0.00
25	25	20	0	11	25.88	0.00	25.88	35.749	23.66	4.91	7.01	101.38	.04	0.00
50	50	54	0	12	25.84	0.00	25.84	35.742	23.66	4.91	7.02	101.45	.04	0.00
100	100	0	0	16	24.43	0.00	24.43	36.655	24.78	4.80	6.86	93.23	.05	0.00
150	150	0	0	1	22.82	0.00	22.82	36.853	25.41	4.50	6.43	87.01	.07	0.00
200	200	190	0	2	20.25	0.00	20.25	36.749	26.05	4.28	6.12	81.09	.09	0.00
250	250	251	0	3	18.38	0.00	18.38	36.523	26.36	4.34	6.19	76.49	.24	0.00
300	300	289	0	4	17.39	0.00	17.39	36.373	26.49	4.40	6.29	76.98	.39	0.00

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA		
			TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L			MG/L	%SAT
0	0	0	0	10	25.83	0.00	25.83	35.758	23.68	4.96	7.09	102.44	.00	0.00
10	10	10	0	11	25.88	0.00	25.88	35.749	23.66	4.91	7.01	101.38	.04	0.00
20	20	20	0	12	25.84	0.00	25.84	35.742	23.66	4.91	7.02	101.45	.04	0.00
30	30	30	0	16	24.43	0.00	24.43	36.655	24.78	4.80	6.86	93.23	.05	0.00
50	50	50	0	1	22.82	0.00	22.82	36.853	25.41	4.50	6.43	87.01	.07	0.00
75	75	75	0	2	20.25	0.00	20.25	36.749	26.05	4.28	6.12	81.09	.09	0.00
100	100	100	0	3	18.38	0.00	18.38	36.523	26.36	4.34	6.19	76.49	.24	0.00
150	150	150	0	4	17.39	0.00	17.39	36.373	26.49	4.40	6.29	76.98	.39	0.00
200	200	200	0	10	25.83	0.00	25.83	35.758	23.68	4.96	7.09	102.44	.00	0.00
250	250	250	0	11	25.88	0.00	25.88	35.749	23.66	4.91	7.01	101.38	.04	0.00
300	300	300	0	12	25.84	0.00	25.84	35.742	23.66	4.91	7.02	101.45	.04	0.00
350	350	350	0	16	24.43	0.00	24.43	36.655	24.78	4.80	6.86	93.23	.05	0.00
400	400	400	0	1	22.82	0.00	22.82	36.853	25.41	4.50	6.43	87.01	.07	0.00
450	450	450	0	2	20.25	0.00	20.25	36.749	26.05	4.28	6.12	81.09	.09	0.00
500	500	500	0	3	18.38	0.00	18.38	36.523	26.36	4.34	6.19	76.49	.24	0.00
550	550	550	0	4	17.39	0.00	17.39	36.373	26.49	4.40	6.29	76.98	.39	0.00

042 733 STANDARD DEPTHS

R V PALUMBO CRUISE 042 STATION C4P-6B PHNC REFERENCE P42734

DATE 04 /23/74 RARD 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 9.4 TEMP DRY 24.0 VISIBILITY 10 WIND DIREC 10 TRANSPAR 4
 LAT 17-57.8 N TEMP WET 0.0 CLOUD TYPE 11 WAVE DIREC 11 SONIC DEP 0220
 LONG 065-54.1 W PEL HUMID 082 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 9.4 GMT, 526 LOCAL MAX DEPTH 100 WIRE ANGLE 11
 OXYGEN TITER ,080 METER WHEEL FACTOR ,997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA		
			TZ	BN	TL	TM	SIG	T	ML/L	MG/L			XSAT	
0	0	0	0	1	25.83	25.83	25.83	25.83	23.66	4.89	6.99	100.99	.07	0.00
25	25	25	30	2	25.84	0.00	25.84	35.728	23.65	4.90	7.00	101.15	.04	0.00
50	49	50	53	3	25.85	0.00	25.85	35.726	23.65	4.87	6.95	100.46	.04	0.00
100	98	100	96	4	24.43	0.00	24.43	36.646	24.78	4.79	6.84	92.93	.05	0.00

042 734 STANDARD DEPTHS

DEPTH (M)	TEMP	OXYGEN	PHOS	NITRA
0	25.83	4.89	100.99	0.07
10	25.83	4.90	101.06	0.06
20	25.84	4.90	101.12	0.05
30	25.84	4.90	101.05	0.04
50	25.83	4.87	100.41	0.04
75	25.22	4.82	98.71	0.04
100	24.37	4.78	92.98	0.05

R V PALUMBO CRUISE 042 STATION CMP=6A PRNC REFERENCE 742735

DATE 04 /23/74 BARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 9.6 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-59.0 N TEMP WET 0.0 CLOUD TYPE WAVE DIREC 10 SONIC DEP 0014
 LONG 065-54.0 W REL HUMID 081 CLOUD AMT WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 9.6 GMT, 539 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS NITRA					
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN		SIG T	ML/L	MG/L	XSAT	
0	0	0	1	26.05	26.05	26.05	26.05	35.786	23.63	4.83	6.90	100.14	.07	0.00
10	10	14	2	26.11	0.00	26.11	35.782	23.61	4.83	6.90	100.22	.05	0.00	

042 735 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 042 STATION CMP=4A PRNC REFERENCE 042736

DATE 04 /23/74 BARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 11.5 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-58.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 10 SONIC DEP 0016
 LONG 065-56.5 W REL HUMID 081 CLOUD AMT WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 11.5 GMT, 728 LOCAL MAX DEPTH 10 WIRE ANGLE 5
 OXYGEN TITER .680 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS NITRA				
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN		SIG T	ML/L	MG/L	XSAT
0	0	0	1	25.98	25.98	25.98	35.747	23.62	4.85	6.93	100.40	.05	0.00
10	10	13	2	25.99	0.00	25.99	35.745	23.62	4.88	6.97	100.97	.06	0.00

042 736 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 042 STATION CMP-4B PRNC REFERENCE 042737

DATE 04 /23/74 BARO 1018.0 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 11.8 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-57.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0220
 LONG 065-56.5 W REL HUMID 073 CLOUD AMT 3 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 11.8 GMT, 750 LOCAL MAX DEPTH 100 WIRE ANGLE 7
 OXYGEN TITER .680 METER WHEEL FACTOR .997

DEPTH (M)	WIRE CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	25.68	25.68	25.68	25.68	35.713	23.69	4.89	6.99	100.76	.05	0.00
25	25	25	2	25.70	0.00	25.70	35.709		23.68	4.90	7.00	100.92	.05	0.00
50	50	48	3	25.71	0.00	25.71	35.711		23.68	4.88	6.97	100.52	.04	0.00
100	99	98	4	24.42	0.00	24.42	36.645		24.78	4.81	6.86	93.32	.04	0.00
STANDARD DEPTHS														
0	0			25.68	35.713		23.69	4.89	6.99	100.76	0.05	0.00		
10	10			25.69	35.711		23.69	4.90	7.00	100.82	0.05	0.00		
20	20			25.70	35.710		23.68	4.90	7.00	100.89	0.05	0.00		
30	30			25.70	35.709		23.68	4.90	7.00	100.88	0.05	0.00		
50	50			25.71	35.711		23.68	4.88	6.97	100.52	0.04	0.00		
75	75			25.16	36.111		24.15	4.84	6.92	99.34	0.04	0.00		
100	100			24.39	36.664		24.80	4.80	6.86	93.35	0.04	0.00		

042 737

R V PALUMBO CRUISE 042 STATION CWP-4C PRNC REFERENCE 042738

DATE 04 /23/74 BARO 1019.0 WEATHER 02 WIND VELOC WAVE PERIOD 5
 HOUR 12.4 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-56.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0450
 LONG 065-56.2 W PEL HUMID 073 CLOUD AMT 3 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 12.4 GMT, 823 LOCAL MAX DEPTH 320 WIRE ANGLE 0
 OXYGEN TITER .642 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				TAVF	SALIN	SIG T	OXYGEN			PHOS	NITRA
		TL	TM	RN	TZ				ML/L	MG/L	%SAT		
0	0	25.68	0.00	25.68	35.738	23.71	4.93	7.04	101.49	.24	0.00		
25	25	25.69	0.00	25.69	35.798	23.75	4.95	7.08	102.14	.04	0.00		
50	50	25.69	0.00	25.69	35.754	23.72	4.89	6.98	102.68	.04	0.00		
100	100	25.68	0.00	25.68	35.787	23.75	4.89	6.98	100.71	.05	0.00		
150	150	23.15	0.00	23.15	36.881	25.33	4.52	6.46	87.71	.26	0.00		
200	200	20.91	0.00	20.91	36.824	25.92	4.27	6.11	81.41	.10	0.00		
250	250	18.41	0.00	18.41	36.549	26.37	4.28	6.12	75.61	.27	0.00		
300	300	17.40	0.00	17.40	36.404	26.51	4.42	6.32	77.40	.31	0.00		

242 738 STANDARD DEPTHS

0	25.68	35.738	23.71	4.93	7.04	101.49	0.04	0.00
10	25.68	35.762	23.73	4.94	7.06	101.75	0.24	0.00
20	25.69	35.788	23.75	4.95	7.07	102.01	0.04	0.00
30	25.69	35.793	23.75	4.94	7.06	101.92	0.04	0.00
50	25.69	35.754	23.72	4.89	6.98	100.68	0.04	0.00
75	25.69	35.771	23.73	4.89	6.98	100.70	0.04	0.00
100	25.68	35.787	23.75	4.89	6.98	100.71	0.05	0.00
150	23.15	36.881	25.34	4.52	6.46	87.71	0.06	0.20
200	20.91	36.824	25.92	4.27	6.11	81.41	0.10	0.00
250	18.41	36.549	26.37	4.28	6.12	75.61	0.27	0.00
300	17.40	36.404	26.51	4.42	6.32	77.40	0.31	0.00

R V PALUMBO CRUISE 042 STATION CMP-28 PWNC REFERENCE 242742

DATE 04 /23/74 BARO 1019.0 WFATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 13.6 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 11 SONIC DEP 0274
 LONG 265-58.5 W REL HUMID 071 CLOUD AMT 3 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.6 GMT, 939 LOCAL MAX DEPTH 100 WIRE ANGLE 7
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
														DEPTH (M)	TEMP
0	0	0	1	25.74	0.00	25.74	35.732	23.69	4.89	6.99	100.87	.04	0.00		
25	25	27	2	25.70	0.00	25.70	35.733	23.70	4.90	7.00	100.95	.04	0.00		
50	50	0	3	25.70	0.00	25.70	35.730	23.70	4.89	6.98	100.67	.05	0.00		
100	99	96	4	24.47	0.00	24.47	36.666	24.78	4.76	6.81	92.64	.05	0.00		
042 742 STANDARD DEPTHS															
		0		25.74		25.74	35.732	23.69	4.89	6.99	102.87	0.04	0.00		
		10		25.72		25.72	35.732	23.69	4.90	7.00	100.90	0.04	0.00		
		20		25.71		25.71	35.733	23.70	4.90	7.00	100.94	0.04	0.00		
		30		25.70		25.70	35.733	23.70	4.90	7.00	100.94	0.04	0.00		
		50		25.70		25.70	35.730	23.70	4.89	6.98	102.67	0.05	0.00		
		75		25.17		25.17	36.130	24.16	4.83	6.90	99.13	0.05	0.00		
		100		24.44		24.44	36.685	24.80	4.76	6.80	92.65	0.05	0.00		

R V PALUMBO CRUISE 042 STATION CMP-2A PRNC REFERENCE 042741

DATE 04 /23/74 RARO 1020,0 WEATHER 00 WIND VELOC 11 WAVE PERIOD 6
 HOUR 14,0 TEMP DRY 27,0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-57,8 N TEMP WET 0,0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0020
 LONG 065-58,5 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 8 COLOR

CAST 1 MESS TIME 14,0 GMT, 10 3 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,680 METER WHEEL FACTOR ,997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	25,92	25,92	25,92	35,762	23,65	4,88	6,97	100,89	,05	0,00
10	10	11	2	25,91	0,00	25,91	35,764	23,66	4,89	6,98	101,02	,04	0,00
042 741 STANDARD DEPTHS													
						25,92	35,762	23,65	4,88	6,97	100,89	,05	0,00
						25,91	35,764	23,66	4,89	6,98	101,02	,04	0,00

DATE 04 /23/74 BARO 1019.3 WEATHER 00 WIND VELOC 45 WAVE PERIOD 5
 HOUR 23.1 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 29 TRANSPAR
 LAT 17-48.0 N TEMP WET 0.0 CLOUD TYPE WAVE DIRFC 10 SONIC DEF 0.67
 LONG 066-16.0 W REL HUMID 075 CLOUD AMT WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 23.1 GHT. 19.7 LOCAL MAX DEPTH 340 WIRE ANGLE 11
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	3	1	25.75	25.75	25.75	35.778	23.72	4.00	6.66	99.06	.05	0.00	
50	49	55	2	25.69	0.00	25.69	35.762	23.72	4.03	6.90	99.51	.05	0.00	
100	99	100	3	24.20	24.20	24.20	36.759	24.93	4.62	6.60	90.22	.05	0.00	
150	147	147	4	22.84	22.84	22.84	36.887	25.43	4.43	6.32	85.69	.07	0.00	

CAST 2 MESS TIME 0.2 GHT. 2010 LOCAL MAX DEPTH 750 WIRE ANGLE 20
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
200	188	0	1	20.29	20.29	20.29	36.785	26.26	2.70	3.94	52.26	.13	0.00	
300	282	291	2	17.31	0.00	17.31	36.379	26.51	4.30	6.14	75.11	.35	0.00	
500	469	489	3	13.16	13.16	13.16	35.654	26.88	3.47	4.96	50.93	.99	0.00	
750	703	723	4	7.60	7.60	7.60	34.806	27.25	3.08	4.40	44.11	1.59	0.10	

042 742 STANDARD DEPTHS

DEPTH (M)	OXYGEN	PHOS	NITRA
0	25.75	35.778	23.72
10	25.74	35.775	23.72
20	25.73	35.771	23.72
30	25.71	35.768	23.72
50	25.67	35.760	23.75
75	25.01	36.251	24.31
100	24.16	36.781	24.96
150	22.66	36.184	25.48
200	19.78	36.739	26.16
250	16.07	36.529	26.44
300	16.86	36.305	26.50
400	14.57	35.910	26.79
500	12.45	35.542	26.94
600	12.10	35.197	27.11
700	7.67	34.875	27.24

R V PALUMBO CRUISE 042 STATION 04B-15 DRIC REFERENCE 142743
 DATE 04 /24/74 BARO 1020.5 WEATHER 02 WIND VELOC 07 WAVE PERIOD 5
 HOUR 2.6 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-14.0 N TEMP WET 0.0 CLOUD TYPE WAVE DIREC 10 ROIC DEP 2377
 LONG 065-51.0 W REL HUMID 084 CLOUD AMT WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 2.6 GMT, 2315 LOCAL MAX DEPTH 300 WIRE ANGLE 16
 OXYGEN TITER .672 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	25.59	25.59	25.59	35.697	23.71	4.88	6.98	100.39	.22	0.00	
50	48	53	2	25.61	0.00	25.61	35.705	23.71	4.84	6.92	99.62	.26	0.00	
100	96	100	3	25.49	25.49	25.49	36.546	24.37	4.82	6.86	99.05	.08	0.00	
150	144	146	4	23.10	23.10	23.10	36.913	25.37	4.45	6.36	86.46	.08	0.00	

CAST 2 MESS TIME 3.2 GMT, 2314 LOCAL MAX DEPTH 750 WIRE ANGLE 16
 OXYGEN TITER .672 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
200	192	189	1	20.80	20.80	20.80	36.058	25.98	2.74	3.91	52.15	.14	0.00	
300	288	291	2	17.17	0.00	17.17	36.355	26.53	4.22	6.04	73.74	.43	0.00	
500	480	495	3	13.05	13.05	13.05	35.655	26.91	3.57	5.09	58.39	1.03	0.00	
750	719	727	4	7.66	7.66	7.66	34.890	27.26	3.14	4.48	44.93	1.94	0.00	

042 743 STANDARD DEPTHS

0	25.59	35.697	23.71	4.88	6.98	100.39	0.00
10	25.59	35.699	23.71	4.87	6.96	100.23	0.00
20	25.60	35.700	23.71	4.87	6.95	100.06	0.00
30	25.60	35.702	23.71	4.86	6.94	99.89	0.00
50	25.61	35.733	23.73	4.84	6.92	99.60	0.00
75	25.57	36.135	24.25	4.83	6.89	98.02	0.00
100	25.33	36.508	24.46	4.66	6.86	96.64	0.00
150	22.80	36.906	25.46	4.23	6.04	81.93	0.00
200	20.45	36.824	26.05	2.76	3.94	52.41	0.16
250	18.47	36.579	26.36	3.32	4.74	56.60	0.30
300	16.85	36.304	26.57	4.18	5.98	72.04	0.47
400	14.52	35.917	26.80	4.12	5.80	69.74	0.00
500	12.61	35.586	26.94	3.51	5.02	57.05	1.15
600	10.36	35.256	27.10	3.30	4.71	51.76	1.52
700	8.10	34.947	27.24	3.15	4.51	45.46	1.87

R V PALUMBO CRUISE 042 STATION 046-3A PNOC REFERENCE 242/44

DATE 04 /24/74 BARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 5.4 TEMP DRY 25.0 VISIBILITY 10 TRA SPAN
 LAT 17-28.0 N TEMP WET 0.0 CLOUD TYPE 10 SONIC DEP 21.5
 LONG 066-15.0 W REL HUMID 086 CLOUD AMT WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 5.4 GMT, 124 LOCAL MAX DEPTH 150 WIRE ANGLE 15
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN				
									ML/L	MG/L	%SAT	PHOS NITRA	
0	0	0	1	25.63	25.63	25.63	35.651	23.66	4.91	7.01	100.94	.15	0.00
50	49	49	2	25.43	0.00	25.43	35.794	23.63	4.68	6.98	100.27	.05	0.00
100	97	98	3	24.86	24.86	24.86	36.232	24.33	4.94	7.05	94.42	.05	0.00
150	145	144	4	23.36	23.36	23.36	37.228	25.38	4.24	6.06	82.91	.09	0.00

CAST 2 MESS TIME 6.3 GMT, 219 LOCAL MAX DEPTH 750 WIRE ANGLE 25
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN				
									ML/L	MG/L	%SAT	PHOS NITRA	
200	181	178	1	21.89	21.89	21.89	36.978	25.77	2.75	3.93	52.99	.11	0.00
300	272	270	2	17.92	0.00	17.92	36.483	26.44	4.06	5.80	71.41	.32	0.00
500	452	462	3	12.99	0.00	12.99	35.618	26.89	4.02	5.74	65.62	1.18	0.00
750	678	687	4	7.69	7.69	7.69	34.897	27.26	3.21	4.59	46.62	1.95	0.00

042 744 STANDARD DEPTHS

0	25.63	35.651	23.66	4.91	7.01	100.94	0.05	0.00
10	25.59	35.684	23.69	4.90	7.01	100.81	0.25	0.00
20	25.55	35.709	23.73	4.90	7.00	100.67	0.25	0.00
30	25.51	35.734	23.76	4.89	6.99	100.54	0.25	0.00
50	25.43	35.799	23.84	4.88	6.98	100.27	0.25	0.00
75	25.21	35.985	24.24	4.90	7.00	100.45	0.25	0.00
100	24.79	36.291	24.40	4.92	7.02	94.23	0.25	0.00
150	23.17	37.021	25.44	4.03	5.76	70.23	0.25	0.00
200	21.04	36.895	25.94	2.76	3.95	52.72	0.14	0.00
250	18.85	36.625	26.32	3.45	4.93	51.32	0.25	0.00
300	17.00	36.335	26.55	4.06	5.79	46.71	0.44	0.00
400	14.18	35.847	26.82	4.83	5.76	67.64	1.91	0.00
500	11.78	35.431	26.98	3.91	5.59	62.63	1.37	0.00
600	9.41	35.100	27.15	3.58	5.12	52.65	1.72	0.00

DATE 04 /24/74 RARO 1018.5 WEATH-FR 02 KING WELCC 00 WAVE PERIOD 5
 HOUR 9.0 TEMP DRY 24.2 VISIBILITY 02 WIND DIREC 11 TIDE PHAS 0
 LAT 17- 9.0 N TEMP WET 0.2 CLOUD TYPE 8 WAVE DIREC 11 SOLIC DEP 2377
 LONG 066- 9.0 W REL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 9.0 GMT, 457 LOCAL MAX DEPTH 150 WIRE ANGLE 0
 OXYGEN TITER ,072 METER WHEEL FACTOR ,997

DEPTH (M)	WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	25.60	25.60	25.60	35.608	23.70	4.85	6.93	99.72	0.00	0.00	
50	53	53	2	25.54	0.00	25.54	35.747	23.76	4.89	6.99	100.52	0.00	0.00	
100	96	96	3	24.56	24.56	24.56	36.401	24.61	4.88	6.98	94.27	0.00	0.00	
150	147	147	4	23.43	23.43	23.43	37.013	25.35	4.27	6.10	83.45	0.00	0.00	

CAST 2 MESS TIME 10.0 GMT, 557 LOCAL MAX DEPTH 750 WIRE ANGLE 12
 OXYGEN TITER ,672 METER WHEEL FACTOR ,997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	21.03	21.03	21.03	36.907	25.95	3.64	3.78	50.47	0.27	0.00	
100	196	196	2	16.38	0.00	16.38	36.189	26.59	3.81	5.44	66.05	0.60	0.00	
200	293	293	3	11.49	11.49	11.49	35.385	27.00	3.22	4.60	51.24	1.42	0.00	
300	488	488	4	7.04	7.04	7.04	34.615	27.29	3.22	4.60	45.86	2.07	0.00	

042 745 STANDARD DEPTHS

0	25.60	35.688	23.70	4.85	6.93	99.72	0.00
10	25.59	35.747	23.71	4.86	6.94	99.87	0.01
20	25.58	35.712	23.72	4.87	6.95	102.33	0.00
30	25.56	35.723	23.74	4.87	6.96	100.20	0.00
50	25.54	35.747	23.76	4.89	6.99	100.52	0.00
75	25.13	36.278	24.14	4.89	6.98	100.11	0.00
100	24.54	36.496	24.63	4.88	6.97	94.24	0.00
150	23.34	37.009	25.38	4.20	6.00	81.96	0.11
200	20.82	36.002	25.99	2.69	3.05	51.28	0.23
250	18.33	36.536	26.38	2.98	4.26	52.66	0.40
300	16.14	36.150	26.62	3.79	5.41	65.60	0.63
400	13.25	35.676	26.88	3.69	5.20	60.69	1.15
500	11.23	35.346	27.02	3.22	4.60	51.25	1.40
600	9.22	35.063	27.15	3.22	4.60	47.14	1.77
700	7.52	34.862	27.26	3.22	4.60	40.08	2.01

R V PALUMBO CRUISE 042 STATION OJB-60 FRND REFERENCE 042746

DATE 04 /24/74 BARO 1019.0 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 12.1 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 10 TRANSPAN
 LAT 16-57.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 10 SOLIC DEP 22.0
 LONG 066-10.0 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 12.1 GMT, 8 9 LOCAL MAX DEPTH 150 WIRE ANGLE 10
 OXYGEN TITER .672 METER WHEEL FACTOR .997

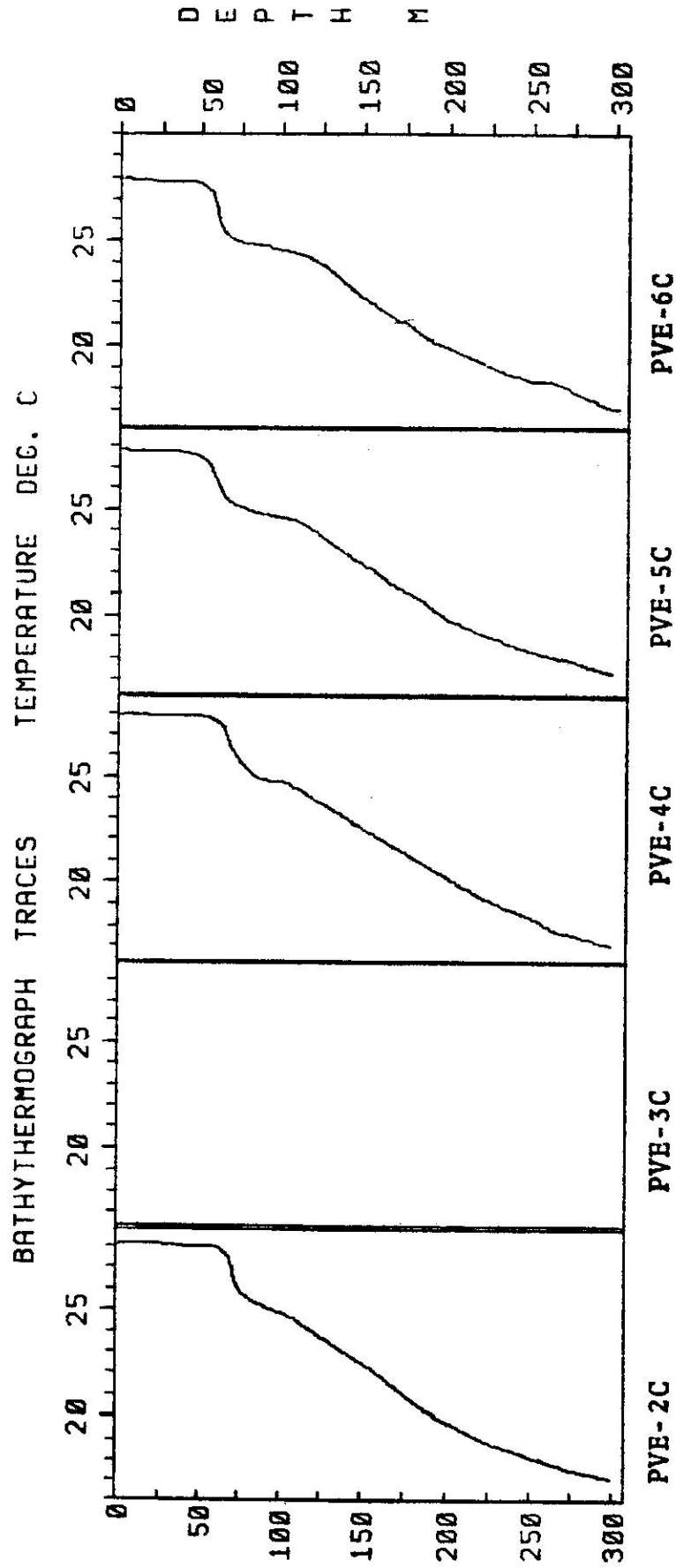
WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	%SAT		
0	0	0	1	25.76	25.76	25.76	35.660	23.43	4.84	6.92	99.75	0.03	0.70
50	50	52	2	25.62	0.00	25.62	35.771	23.75	4.86	6.94	99.97	0.04	0.70
100	99	97	3	24.85	24.05	24.85	36.400	24.46	4.83	6.91	99.04	0.03	0.70
150	148	147	4	23.25	23.25	23.25	37.008	25.40	4.22	6.89	82.25	0.11	2.93

CAST 2 MESS TIME 12.9 GMT, 854 LOCAL MAX DEPTH 750 WIRE ANGLE 16
 OXYGEN TITER .672 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	%SAT		
200	192	192	1	20.99	20.99	20.99	36.060	25.93	2.66	3.80	52.77	0.21	0.49
300	288	284	2	16.64	0.00	16.64	36.260	26.88	3.03	5.48	60.66	0.58	15.57
500	480	480	3	11.05	11.05	11.05	35.360	27.06	3.15	4.50	49.89	1.43	13.70
750	719	732	4	6.65	6.65	6.65	34.762	27.30	3.22	4.60	45.07	2.79	38.71

042 746 STANDARD DEPTHS

0	25.76	35.660	23.63	4.84	6.92	99.75	0.03	0.70
10	25.73	35.682	23.65	4.85	6.92	99.80	0.03	0.72
20	25.70	35.704	23.68	4.85	6.93	99.84	0.03	0.73
30	25.68	35.727	23.70	4.85	6.93	99.88	0.04	0.75
50	25.62	35.771	23.75	4.86	6.94	99.97	0.04	0.78
75	25.33	36.000	24.05	4.85	6.93	99.57	0.04	0.77
100	24.83	36.417	24.48	4.83	6.89	93.02	0.03	0.72
150	23.15	37.001	25.43	4.14	5.92	84.70	0.11	3.07
200	20.59	36.815	26.00	2.76	3.94	52.44	0.24	7.31
250	18.25	36.514	26.39	3.06	4.37	53.87	0.42	12.17
300	16.20	36.192	26.63	3.79	5.42	62.75	0.54	15.85
400	13.02	35.688	26.04	3.64	5.20	59.64	1.08	17.48
500	10.57	35.208	27.10	3.16	4.51	49.07	1.50	19.69
600	8.49	34.907	27.21	3.19	4.55	46.16	1.82	26.51
700	6.90	34.708	27.29	3.18	4.54	42.16	2.05	36.47



Cruise No. PA046
 Aug. 20, 1974

R V PALUMBO CRUISE 246 STATION PVE-20 PRNC REFERENCE 046825

DATE 08 /21/74 PARO 1419.6 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 4.4 TEMP DRY 27.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.2 CLOUD TYPE 0 WAVE DIREC 13 SONIC DEP 0640
 LONG 066-50.0 W REL HUMID 079 CLOUD AMT WAVE HEIGHT 5 COLOR

CAST 1 WESS TIME 4.4 GMT, 022 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .026 METER WHEEL FACTOR .997

DEPTH (M)	TEMP	TAVE	SALIN	SIG T	OXYGEN	%SAT	PHOS	NITRA			
PIPE	CE	TL	PN	TE	TM	ML/L	MG/L				
2	2	27.97	0.00	27.97	55.340	22.68	4.74	6.77	99.60	.11	0.00
25	25	28.01	0.00	28.01	55.340	22.67	4.85	6.94	102.10	.00	0.00
50	50	27.95	0.00	27.95	55.384	22.72	4.87	6.96	102.46	.74	0.00
100	99	24.86	0.00	24.86	56.572	24.59	4.82	6.89	95.57	.00	0.00
150	148	22.46	0.00	22.46	56.900	25.55	4.46	6.37	86.05	.26	0.00
200	197	19.80	0.00	19.80	56.740	26.16	4.23	6.04	75.95	.12	0.00
250	246	18.30	0.00	18.30	56.561	26.41	4.34	6.20	76.62	.23	0.00
300	295	17.32	0.00	17.30	56.398	26.53	4.36	5.23	76.23	.36	0.00

P46 825 STANDARD DEPTHS

0	27.97	55.340	22.68	4.74	6.77	99.60	0.11	0.00
10	27.99	55.340	22.68	4.78	6.84	100.60	0.07	0.00
20	23.00	55.340	22.67	4.83	6.91	101.64	0.22	0.00
30	23.01	55.344	22.67	4.86	6.95	102.31	0.00	0.00
50	27.95	55.384	22.72	4.87	6.96	102.46	0.04	0.00
75	26.58	55.953	23.59	4.86	6.94	101.77	0.04	0.00
100	24.81	56.585	24.62	4.81	6.88	95.47	0.00	0.00
150	22.34	56.898	25.58	4.44	6.35	85.69	0.06	0.00
200	19.68	56.729	26.18	4.23	6.05	75.91	0.13	0.00
250	18.21	56.547	26.42	4.34	6.21	76.61	0.24	0.00
300	17.20	56.381	26.54	4.36	6.23	76.21	0.37	0.00

R V PALUMBO CRUISE 346 STATION PVE-3C PRNC REFERENCE 046826

DATE 06 /21/74 BARO 1019.0 WEATHER 02 WIND VELOC 26 WAVE PERIOD 4
 HOUR 5.1 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-55.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0530
 LONG 066-48.7 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 5.1 GMT, 1 8 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITER .696 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
0	0	0	0	16	27.97	0.00	27.97	35.345	22.68	4.84	6.92	101.78	.07	0.00
25	25	0	0	1	27.98	0.00	27.98	35.338	22.68	4.81	6.87	101.05	.08	0.00
50	50	0	0	2	27.95	0.00	27.95	35.378	22.72	4.84	6.92	101.87	.08	0.00
100	100	99	99	6	24.84	0.00	24.84	36.395	24.46	4.85	6.93	93.37	.04	0.00
150	150	148	148	4	22.78	0.00	22.78	36.982	25.44	4.55	6.50	88.09	.07	0.00
200	200	0	0	5	20.30	0.00	20.30	36.801	26.77	4.29	6.13	81.35	.12	0.00
250	249	242	242	7	18.30	0.00	18.30	36.558	26.41	4.32	6.17	76.25	.27	0.00
300	299	0	0	8	17.20	0.00	17.20	36.380	26.54	4.34	6.20	75.81	.33	0.00

046 826 STANDARD DEPTHS

0	27.97	35.345	22.68	4.84	6.92	101.78	2.07	0.00
10	27.97	35.342	22.68	4.83	6.90	101.49	0.07	0.00
20	27.98	35.339	22.68	4.81	6.87	101.17	0.08	0.00
30	27.98	35.341	22.68	4.81	6.87	101.14	0.08	0.00
50	27.95	35.378	22.72	4.84	6.92	101.87	0.08	0.00
75	26.58	35.842	23.51	4.84	6.92	101.30	0.06	0.00
100	24.84	36.395	24.46	4.85	6.93	93.37	0.04	0.00
150	22.78	36.882	25.44	4.55	6.50	88.09	0.07	0.00
200	20.30	36.801	26.07	4.29	6.13	81.35	0.12	0.00
250	18.30	36.554	26.41	4.32	6.17	76.24	0.27	0.00
300	17.18	36.376	26.54	4.34	6.20	75.80	0.33	0.00

R V PALUMBO CRUISE #46 STATION PVE-40 PRAC REFERENCE 145827
 DATE 08 /21/74 RARO 1019.0 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 5.9 TEMP DAY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-55.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0402
 LONG 066-47.8 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 3 COLOR
 CAST 1 MESS TIME 5.9 GMT, 152 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	RN	T2	RN	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
			TM	TL								ML/L	MG/L			
0	0	0	27.99	0.00	27.99	16	27.99	35.346	22.68	4.85	6.93	101.95	.05	0.00		
25	25	0	27.99	0.00	27.99	1	27.99	35.342	22.68	4.80	6.86	100.93	.00	0.76		
5	50	0	28.00	0.00	28.00	2	28.00	35.352	22.68	4.79	6.85	100.83	.00	0.36		
100	100	99	24.82	0.00	24.82	6	24.82	36.577	24.61	4.72	6.75	91.71	.25	1.00		
150	150	149	22.57	0.00	22.57	4	22.57	36.887	25.51	4.57	6.52	88.22	.06	3.22		
200	200	0	20.41	0.00	20.41	5	20.41	36.814	26.05	4.29	6.12	81.30	.11	5.25		
250	249	250	18.59	0.00	18.59	7	18.59	36.601	26.37	4.29	6.12	75.89	.22	10.59		
300	299	294	17.24	0.00	17.24	8	17.24	36.399	26.55	4.49	6.42	75.49	.33	10.85		

046 R27 STANDARD DEPTHS

DEPTH (M)	TEMP	SALIN	SIG T	OXYGEN ML/L	XSAT	PHOS	NITRA
0	27.99	35.346	22.68	4.85	6.93	101.95	0.00
10	27.99	35.344	22.68	4.83	6.90	101.54	0.30
20	27.99	35.343	22.68	4.81	6.87	101.12	0.63
30	27.99	35.343	22.68	4.79	6.85	100.81	0.72
50	28.00	35.352	22.68	4.79	6.85	100.83	0.36
75	26.62	35.921	23.55	4.77	6.81	99.94	0.44
100	24.82	36.577	24.61	4.72	6.75	91.71	1.00
150	22.57	36.887	25.51	4.57	6.52	88.22	3.22
200	20.41	36.814	26.05	4.29	6.12	81.30	5.25
250	18.56	36.597	26.37	4.29	6.12	75.92	10.62
300	17.21	36.395	26.55	4.50	6.42	78.55	10.86

R V PALLASCO CRUISE 246 STATION PVE-50 PRAC REFERENCE 24682E
 DATE 26 /21/74 BARO 1418.3 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 5.8 TEMP DRY 20.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.7 N TEMP WET 21.2 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0530
 LONG 166-46.8 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 6.8 GMT, 246 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER ,686 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
0	0	2	16	27.98	0.00	27.98	35.337	22.68	4.84	6.92	101.77	.03	0.00	
25	25	0	1	27.72	0.00	28.00	35.329	22.66	4.85	6.94	102.05	.00	0.00	
50	52	0	2	27.86	0.00	27.86	35.417	22.77	4.84	6.92	101.89	.04	0.00	
150	148	140	4	22.50	0.00	22.50	36.890	25.53	4.47	6.39	86.32	.06	0.00	
200	197	0	5	19.93	0.00	19.93	36.752	26.13	4.27	6.10	76.81	.13	0.00	
250	246	245	7	18.51	0.00	18.51	36.577	26.37	4.31	6.16	76.28	.27	0.00	
300	295	295	8	17.39	0.00	17.39	36.406	26.51	4.38	6.26	76.64	.42	0.00	

CAST 2 MESS TIME 7.0 GMT, 32 LOCAL MAX DEPTH 120 WIRE ANGLE 0
 OXYGEN TITER ,686 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
100	100	100	6	24.81	0.00	24.81	36.563	24.60	3.22	4.62	62.42	.20	0.00	
246	528													
	0													
	10													
	20													
	30													
	50													
	75													
	100													
	150													
	200													
	250													

STANDARD DEPTHS

R V PALUMBO CRUISE 046 STATION PVE-6C PRNC REFERENCE 046829
 DATE 06 /21/74 RARO 1018.2 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 7.8 TEMP DRY 26.2 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.2 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0620
 LONG 066-45.6 W REL HUMID 081 CLOUD AMT 1 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 7.8 GMT, 350 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		TM	TM								ML/L	MG/L			
0	0	27.96	0.00	27.96	35.334	22.68	4.83	6.91	101.59	.08	0.00				
25	25	28.00	0.00	28.00	35.330	22.66	4.81	6.88	101.19	.04	0.00				
50	50	27.76	0.00	27.76	35.477	22.85	4.84	6.92	101.95	.07	0.00				
100	100	24.69	0.00	24.69	36.622	24.68	4.76	6.80	92.48	.07	0.00				
150	150	22.07	0.00	22.07	36.885	25.65	4.41	6.30	84.82	.07	0.00				
200	200	19.93	0.00	19.93	36.749	26.13	4.24	6.05	76.18	.15	0.00				
250	250	18.43	0.00	18.43	36.561	26.38	4.30	6.14	75.96	.25	0.00				
300	300	17.27	0.00	17.27	36.389	26.53	4.43	6.33	77.41	.42	0.00				

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		TM	TM								ML/L	MG/L			
0	0	27.96	0.00	27.96	35.334	22.68	4.83	6.91	101.59	.08	0.00				
10	10	27.98	0.00	27.98	35.332	22.67	4.83	6.89	101.43	.06	0.00				
20	20	27.99	0.00	27.99	35.331	22.67	4.82	6.88	101.25	.05	0.00				
30	30	27.98	0.00	27.98	35.340	22.68	4.82	6.88	101.30	.04	0.00				
50	50	27.76	0.00	27.76	35.477	22.85	4.84	6.92	101.95	.07	0.00				
75	75	26.41	0.00	26.41	36.034	23.70	4.82	6.89	100.95	.07	0.00				
100	100	24.69	0.00	24.69	36.622	24.68	4.76	6.80	92.48	.07	0.00				
150	150	22.07	0.00	22.07	36.885	25.65	4.41	6.30	84.82	.07	0.00				
200	200	19.93	0.00	19.93	36.749	26.13	4.24	6.05	76.18	.15	0.00				
250	250	18.43	0.00	18.43	36.561	26.38	4.30	6.14	75.96	.25	0.00				
300	300	17.27	0.00	17.27	36.389	26.53	4.43	6.33	77.41	.42	0.00				

046 829 STANDARD DEPTHS

R V PALUMBO CRUISE 046 STATION PVE=58 PRNC REFERENCE 046830
 DATE 08 /21/74 BARO 1018.3 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 8.5 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-56.6 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 12 SONIC DEP 0250
 LONG 066-46.9 W REL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 4 COLOR
 CAST 1 MESS TIME 8.5 GMT, 430 LOCAL MAX DEPTH 100 WIRE ANGLE 9
 OXYGEN TITER .636 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				XSAT	PHOS	NITRA	
			YZ	RN	TL	TM	YAVE	SALIN	SIG	T				ML/L
0	0	0	0	1	28.25	0.00	28.25	35.419	22.65	4.66	6.65	98.45	.08	0.00
25	25	0	0	2	28.10	0.00	28.10	35.352	22.65	4.79	6.84	100.80	.08	0.00
50	50	54	54	6	27.65	0.00	27.65	35.507	22.91	4.79	6.84	100.75	.07	0.00
100	99	97	97	4	24.55	0.00	24.55	36.626	24.73	4.68	6.68	90.82	.08	0.00
046 830 STANDARD DEPTHS														
	0	0			28.25		35.419		22.65	4.66	6.65	98.45	0.08	0.00
	10	10			28.19		35.392		22.65	4.71	6.73	99.39	0.08	0.00
	20	20			28.14		35.365		22.65	4.76	6.80	100.39	0.08	0.00
	30	30			28.06		35.300		22.67	4.79	6.84	100.78	0.08	0.00
	50	50			27.65		35.507		22.91	4.79	6.84	100.75	0.07	0.00
	75	75			26.25		36.210		23.74	4.74	6.77	98.89	0.07	0.00
	100	100			24.49		36.649		24.76	4.67	6.68	90.82	0.08	0.00

R V PALUMBO CRUISE 046 STATION PVE-4B PRNC REFERENCE 046831
 DATE 08 /21/74 BARO 1019.1 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 8.9 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0250
 LONG 066-47.5 W REL HUMID 003 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 8.9 GMT, 455 LOCAL MAX DEPTH 100 WIRE ANGLE 6
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVF	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.08	0.00	28.08	35.362	22.66	4.78	6.83	100.67	.04	0.00
25	25	0	2	28.04	0.00	28.04	35.339	22.66	4.80	6.86	100.98	.00	0.55
50	50	50	6	27.76	0.00	27.76	35.492	22.86	4.85	6.93	102.14	.04	0.25
100	100	95	4	24.55	0.00	24.55	36.642	24.74	4.82	6.89	93.68	.09	1.82

WIRE	CZ	TZ	RN	TL	TM	TAVF	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.08	0.00	28.08	35.362	22.66	4.78	6.83	100.67	0.04	0.00
10	10	0	2	28.06	0.00	28.06	35.353	22.66	4.79	6.84	100.79	0.02	0.22
20	20	0	3	28.05	0.00	28.05	35.344	22.66	4.80	6.85	100.90	0.01	0.46
30	30	0	4	28.01	0.00	28.01	35.349	22.67	4.81	6.87	101.18	0.00	0.49
50	50	50	5	27.76	0.00	27.76	35.492	22.86	4.85	6.93	102.14	0.04	0.25
75	75	75	6	26.60	0.00	26.60	35.926	23.56	4.83	6.91	101.28	0.07	0.67
100	100	100	7	24.55	0.00	24.55	36.642	24.74	4.82	6.89	93.68	0.09	1.82

R V PALUMBO CRUISE 246 STATION PVE-38 PRNC REFERENCE 046832
 DATE 26 /21/74 BARO 1018.1 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 9.5 TEMP SURF 25.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
 LAT 17-55.3 N TEMP WFT 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0182
 LONG 066-50.0 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 4 COLOR
 CAST 1 MESS TIME 9.5 GMT, 527 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .006 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TZ	RN	TL	TEMP		TAVE	SALIN	SIG	T	OXYGEN		PHOS	NITRA
						TM	TL					ML/L	MG/L		
0	0	0	0	1	27.96	0.00	27.96	35.358	22.70	4.83	6.90	101.52	.04	0.00	
25	25	0	0	2	28.00	0.00	28.00	35.359	22.69	4.74	6.77	99.70	.00	0.00	
50	50	48	48	6	26.91	0.00	26.91	35.911	23.45	4.90	7.00	103.21	.04	0.00	
100	100	100	100	4	24.47	0.00	24.47	36.675	24.79	4.64	6.62	90.16	.04	0.00	
046 932		STANDARD DEPTHS													
	0				27.96			35.358	22.70	4.83	6.90	101.52	.04	0.00	
	10				27.98			35.358	22.69	4.79	6.85	100.79	.02	0.00	
	20				27.99			35.359	22.69	4.75	6.79	99.96	.01	0.00	
	30				27.85			35.445	22.80	4.77	6.81	100.37	.00	0.00	
	50				26.91			35.911	23.45	4.90	7.00	103.21	.04	0.00	
	75				25.73			36.350	24.16	4.87	6.96	100.02	.04	0.00	
	100				24.47			36.675	24.79	4.64	6.62	90.16	.04	0.00	

R V PALUMBO CRUISE 046 STATION PVE-2R PRNC REFERENCE 046833

DATE 08 /21/74 BARO 1018.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 9.8 TEMP DRY 25.0 VISIBILITY 1 WIND DIREC 11 TRANSPAR
 LAT 17-55.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0220
 LONG 066-50.0 W REL HUMID 084 CLOUD AMT 7 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 9.8 GMT, 550 LOCAL MAX DEPTH 100 WIRE ANGLE 10
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
			TZ	TM				ML/L	MG/L	XSAT		
0	0	0	0	0	28.01	35.370	22.69	4.84	6.92	101.91	.08	0.00
25	25	0	0	0	28.01	35.364	22.69	4.72	6.74	99.29	.00	0.00
50	50	49	0	0	27.72	35.530	22.91	4.85	6.94	102.36	.00	0.00
100	99	101	0	0	24.39	36.683	24.82	4.64	6.62	90.14	.07	0.00
STANDARD DEPTHS												
0	0	0	0	0	28.01	35.370	22.69	4.84	6.92	101.91	0.08	0.00
10	10	0	0	0	28.01	35.368	22.69	4.79	6.85	100.86	0.05	0.00
20	20	0	0	0	28.01	35.365	22.69	4.74	6.77	99.71	0.01	0.00
30	30	0	0	0	27.98	35.377	22.70	4.74	6.77	99.73	0.00	0.00
50	50	0	0	0	27.72	35.530	22.91	4.85	6.94	102.36	0.00	0.00
75	75	0	0	0	26.25	36.050	23.77	4.78	6.83	99.87	0.03	0.00
100	100	0	0	0	24.32	36.707	24.86	4.63	6.62	90.09	0.07	0.00

046 833

R V PALUMBO CRUISE 246 STATION PVE-2A PRNC REFERENCE 246834

DATE 28 /21/74 BARO 1018.5 WFAATHER 00 WIND VELOC 05 WAVE PERIOD 5
 HOUR 17.8 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.2 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 12 SONIC DEP 0022
 LONG 266-57.2 W REL HUMID 279 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 10.8 GMT, 646 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .686 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	BN	YL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.13	0.00	28.13	35.393	22.67	4.73	6.76	99.82	.05	0.00	
10	10	0	2	28.12	0.00	28.12	35.385	22.67	4.70	6.72	99.20	.03	0.00	
STANDARD DEPTHS														
0	0						28.13	35.393	22.67	4.73	6.76	99.82	0.05	0.00
10	10						28.12	35.385	22.67	4.70	6.72	99.20	0.03	0.00

R V PALUMBO CRUISE 046 STATION PVE-3A PRNC REFERENCE 246835

DATE 08 /21/74 BARO 1018.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 11.1 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0023
 LONG 066-48.9 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 11.1 GMT, 78 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .686 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	6	28.11	0.00	28.11	35.381	22.67	4.83	6.91	101.92	.00	0.00	
10	10	7	4	28.10	0.20	28.10	35.373	22.66	4.79	6.84	100.87	.00	0.00	
STANDARD DEPTHS														
0	0						28.11	35.381	22.67	4.83	6.91	101.92	0.00	0.00
10	10						28.10	35.373	22.66	4.79	6.84	100.87	0.00	0.00

R V PALUMBO CRUISE 246 STATION PVE-4A PRNC REFERENCE 746836
 DATE 08 /21/74 RARO 1018.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 11.7 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-57.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0028
 LONG 066-48.1 W REL HUMID 079 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 11.7 GMT, 740 LOCAL MAX DEPTH 10 WIRE ANGLE 4
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	OXYGEN		
													MG/L	MG/L	
0	0	0	1	28.56	0.00	28.56	35.555	22.65	4.33	6.18	92.31	.07	0.00		
10	10	0	2	28.57	0.00	28.57	35.556	22.65	4.33	6.19	92.47	.00	0.00		

046 836 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 046 STATION PVE-5A PRNC REFERENCE 046837
 DATE 08 /21/74 RARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 12.0 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-55.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0021
 LONG 256-46.9 W REL HUMID 060 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 12.0 GMT, 82 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .696 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	OXYGEN		
													MG/L	MG/L	
0	0	6	6	28.14	0.00	28.14	35.400	22.67	4.77	6.62	100.72	.00	0.00		
10	10	9	4	28.19	0.00	28.19	35.399	22.65	4.77	6.81	100.63	.25	0.00		

046 837 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 046 STATION PVE-6R PRNC REFERENCE 246838
 DATE 08 /21/74 RARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 12.5 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0219
 LONG 066-45.9 W REL HUMID 060 CLOUD AMT 1 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 12.5 GMT, 827 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	OXYGEN	XSAT	PHOS	NITRA
0	0	0	0	1	28.22	0.00	28.22	35.412	22.65	4.77	6.82	100.86	1.04	0.00	0.00	
25	25	25	0	2	28.21	0.00	28.21	35.410	22.65	4.77	6.81	100.69	1.04	0.00	0.00	
50	50	50	46	6	25.73	0.00	25.73	36.262	24.09	4.84	6.92	99.34	1.03	0.00	0.00	
100	100	100	100	4	24.37	0.00	24.37	36.686	24.83	4.68	6.69	91.07	1.05	0.00	0.00	

046 R38 STANDARD DEPTHS

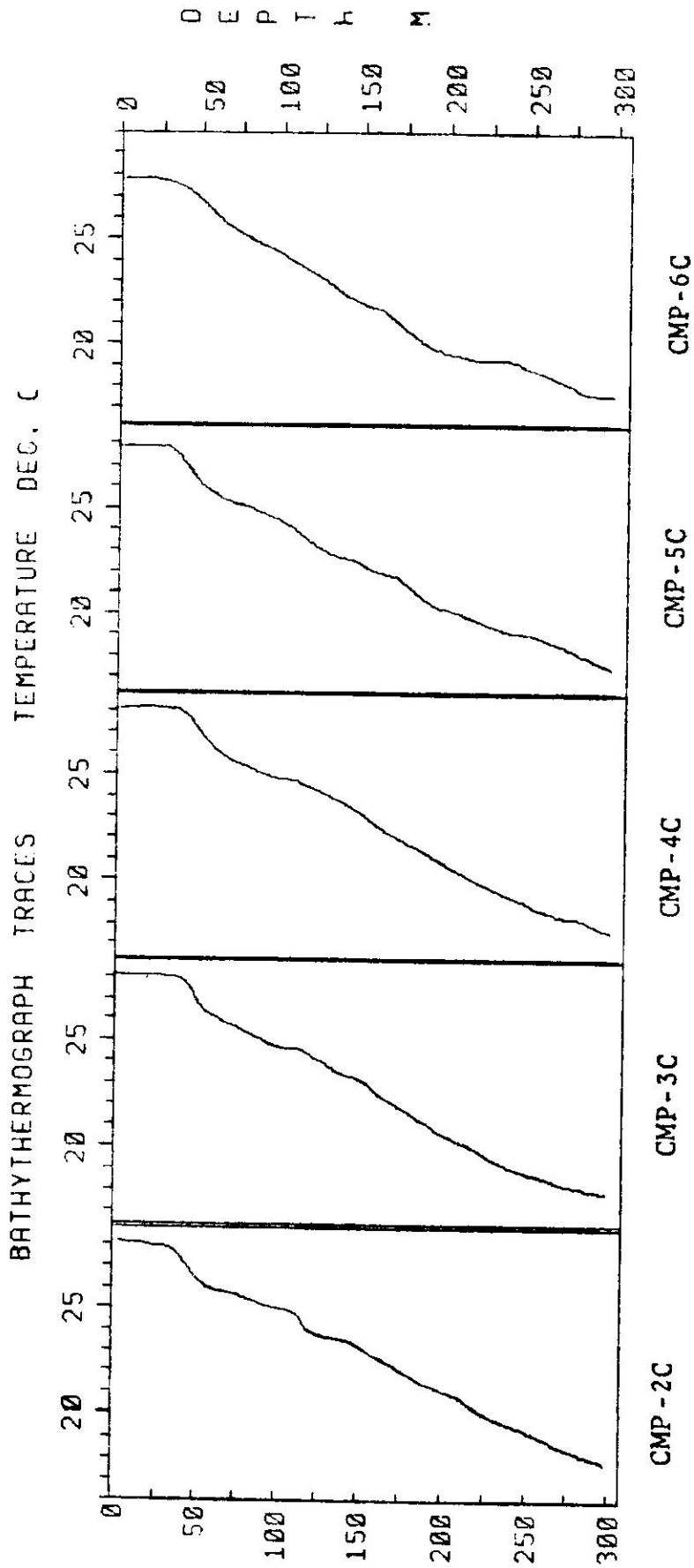
0	24.22	35.412	22.65	4.77	6.82	100.86	0.24	0.00
10	28.22	35.411	22.65	4.77	6.81	100.79	0.04	0.00
20	28.21	35.410	22.65	4.77	6.81	100.73	0.04	0.00
30	27.80	35.552	22.90	4.78	6.83	100.96	0.04	0.00
52	25.73	36.262	24.09	4.84	6.92	99.34	0.03	0.00
75	24.45	36.474	24.64	4.01	6.88	92.85	0.03	0.00
100	24.37	36.686	24.83	4.68	6.69	91.07	0.05	0.00

R V PALUMBO CRUISE 046 STATION PVE-6A PRNC REFERENCE 046039

DATE 08 /21/74 PARO 1018.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 5
 HOUR 12.9 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-58.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0015
 LONG 066-46.0 W REL HUMID 060 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.9 GMT, 852 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .686 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	YM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	29.15	0.00	29.15	35.643	22.52	4.42	6.32	95.47	.18	0.00
10	10	0	2	28.48	0.00	28.48	35.464	22.61	4.57	6.52	97.00	.11	0.00
046 639 STANDARD DEPTHS													
						29.15	35.643	22.52	4.42	6.32	95.47	0.18	0.00
						28.48	35.464	22.61	4.57	6.52	97.00	0.11	0.00



Cruise No. PA046
 Aug. 21, 1974

R V PALUMBO CRUISE 046 STATION CMP=2C PRNC REFERENCE 046840

DATE 08 /22/74 BARO 1019.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4

HOUR 3.6 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR

LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0232

LONG 065-58.3 W REL HUMID 001 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 3.6 GMT, 2334 LOCAL MAX DEPTH 300 WIRE ANGLE 9
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TM				ML/L	MG/L			
0	0	0	0.00	28.21	35.528	22.74	4.70	6.71	99.62	.04	0.00
25	25	0	0.00	28.21	35.517	22.74	4.76	6.79	100.86	.04	0.00
50	50	0	0.00	26.56	35.233	23.05	5.01	7.16	103.48	.03	0.00
100	99	98	0.00	25.06	36.675	24.61	5.00	7.14	102.63	.05	0.00
150	148	148	0.00	23.38	36.796	25.20	4.66	6.66	90.38	.06	0.00
200	197	0	0.00	21.19	36.800	25.83	4.48	6.40	85.47	.08	0.00
250	247	240	0.00	19.07	36.643	26.27	4.33	6.19	77.07	.13	0.00
300	296	293	0.00	17.83	36.489	26.47	4.48	6.40	78.71	.24	0.00

046 840 STANDARD DEPTHS

0	28.21	35.528	22.74	4.70	6.71	99.62	0.04	0.00
10	28.21	35.524	22.74	4.72	6.74	100.12	0.04	0.00
20	28.21	35.519	22.74	4.74	6.78	100.62	0.04	0.00
30	27.94	35.489	22.80	4.80	6.86	101.44	0.04	0.00
50	26.56	35.233	23.05	5.01	7.16	103.48	0.03	0.00
75	25.66	35.886	23.83	5.00	7.15	103.24	0.04	0.00
100	25.03	36.685	24.63	4.99	7.13	102.49	0.05	0.00
150	23.29	36.798	25.23	4.65	6.65	90.15	0.06	0.00
200	21.05	36.793	25.86	4.47	6.39	85.18	0.08	0.00
250	18.98	36.634	26.29	4.34	6.20	77.08	0.14	0.00
300	17.73	36.476	26.49	4.49	6.42	78.85	0.25	0.00

R V PALUMBO CRUISE 046 STATION CMP-3C PRNC REFERENCE 046841
 DATE 08 /22/74 BARO 1019.4 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 4.4 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0750
 LONG 065-57.3 W REL HUMID 082 CLOUD AMT 1 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 4.4 GMT, 2424 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER ,673 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP			OXYGEN				PHOS	NITRA					
	WIRE	CZ	TZ	RN	TL	TM	TAVE			SALIN	SIG T	ML/L	MG/L	XSAT
0	0	0	2	14	28.17	0.00	28.17	35.530	22.76	4.76	6.80	101.00	.00	0.00
25	25	0	0	1	28.17	0.00	28.17	35.527	22.76	4.78	6.82	101.28	.03	0.00
50	50	0	0	2	27.19	0.00	27.19	35.884	23.34	4.90	7.01	103.63	.00	0.00
100	99	98	0	6	24.68	0.00	24.68	36.597	24.66	5.02	7.17	97.42	.03	0.00
150	148	148	0	4	23.31	0.00	23.31	36.831	25.25	4.81	6.87	93.31	.04	0.00
200	197	0	0	5	20.72	0.00	20.72	36.791	25.95	4.37	6.24	82.99	.08	0.00
250	246	0	0	7	18.88	0.00	18.88	36.608	26.30	4.38	6.26	77.71	.14	0.00
300	295	293	0	8	17.94	0.00	17.94	36.667	26.58	4.44	6.34	78.46	.14	0.00
046 841 STANDARD DEPTHS														
0	0				28.17	35.530	22.76	4.76	6.80	101.00	0.00	0.00	0.00	0.00
10	10				28.17	35.529	22.76	4.77	6.81	101.11	0.01	0.00	0.00	0.00
20	20				28.17	35.528	22.76	4.77	6.82	101.22	0.03	0.00	0.00	0.00
30	30				28.03	35.579	22.84	4.80	6.85	101.73	0.03	0.00	0.00	0.00
50	50				27.19	35.884	23.34	4.90	7.01	103.63	0.00	0.00	0.00	0.00
75	75				25.89	36.277	24.05	4.98	7.12	102.37	0.01	0.00	0.00	0.00
100	100				24.65	36.606	24.68	5.02	7.17	97.41	0.03	0.00	0.00	0.00
150	150				23.21	36.829	25.28	4.79	6.84	92.84	0.04	0.00	0.00	0.00
200	200				20.58	36.778	25.98	4.37	6.24	82.91	0.08	0.00	0.00	0.00
250	250				18.79	36.608	26.32	4.38	6.26	77.73	0.14	0.00	0.00	0.00
300	300				17.84	36.673	26.61	4.45	6.34	78.53	0.14	0.00	0.00	0.00

R V PALJUNBO CRUISE 046 STATION CMP=40 PRNC REFERENCE 046842

DATE 05 /22/74 BARO 1019.4 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4

HOUR 5.2 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR

LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0680

LONG 065-56.3 W REL HUMID 082 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 5.2 GMT, 112 LOCAL MAX DEPTH 300 WIRE ANGLE 12
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	YL	TM	TEMP	TAVE	SALIN	SIG	Y	OXYGEN			PHOS	NITRA
												ML/L	MG/L	XSAT		
0	0	0	7	14	28.14	0.00	28.14	35.544	22.78	4.77	6.81	101.15	.08	0.00		
25	25	0	0	1	28.13	0.00	28.13	35.537	22.78	4.74	6.77	100.40	.04	0.38		
50	49	0	0	2	26.55	0.00	26.55	36.215	23.80	5.06	7.23	104.02	.00	0.00		
100	98	103	0	6	24.85	0.00	24.85	36.686	24.68	4.98	7.12	97.24	.07	0.00		
150	147	145	0	4	23.06	0.00	23.06	36.823	25.32	4.82	6.88	93.23	.04	0.76		
200	196	0	0	5	20.80	0.00	20.80	36.775	25.92	4.47	6.38	84.94	.06	2.25		
250	244	246	0	7	18.91	0.00	18.91	36.625	26.30	4.36	6.23	77.41	.17	7.15		
300	293	294	0	8	17.70	0.00	17.70	36.471	26.49	4.49	6.42	70.85	.24	10.17		

046 842 STANDARD DEPTHS

0	28.14	35.544	22.78	4.77	6.81	101.15	0.08	0.00
10	28.14	35.541	22.78	4.76	6.79	100.85	0.06	0.15
20	28.13	35.538	22.78	4.74	6.77	100.55	0.05	0.32
30	27.87	35.653	22.95	4.79	6.85	101.65	0.03	0.33
50	26.51	36.232	23.82	5.06	7.22	104.01	0.00	0.00
75	25.53	36.562	24.38	5.02	7.17	103.28	0.03	0.00
100	24.78	36.697	24.71	4.98	7.12	97.16	0.07	0.02
150	22.92	36.820	25.35	4.79	6.85	92.70	0.04	0.83
200	20.62	36.764	25.96	4.45	6.36	84.48	0.07	2.63
250	18.74	36.606	26.33	4.37	6.24	77.45	0.18	7.57
300	17.53	36.449	26.52	4.51	6.45	79.08	0.25	10.60

R V PALUMBO CRUISE 046 STATION CMP-5C PRNC REFERENCE 046843

DATE 08 /22/74 BARO 1019.4 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 6.1 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.2 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 12 SONIC DEP 1097
 LONG 065-55.1 W REL HUMID 082 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 6.1 GMT, 2 5 LOCAL MAX DEPTH 303 WIRE ANGLE 6
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	YM	TEMP	TAVE	SALIN	SIG T	OXYGEN				PHOS	NITRA
										ML/L	MG/L	%SAT	WIRE ANGLE		
0	0	1	14	28.09	0.00	28.09	35.528	22.78	4.76	6.79	100.75	.07	0.00		
25	25	0	1	28.09	0.00	28.09	35.517	22.77	4.78	6.83	101.28	.04	0.00		
50	50	0	2	26.66	0.00	26.66	36.181	23.74	5.08	7.26	104.40	.07	0.00		
100	100	103	6	24.63	0.00	24.63	36.745	24.79	4.92	7.03	96.16	.10	0.00		
150	149	153	4	22.31	0.00	22.31	36.769	25.49	4.78	6.83	91.93	.07	0.00		
200	199	0	5	20.18	0.00	20.18	36.726	26.05	4.35	6.21	82.24	.24	0.00		
250	248	252	7	19.10	0.00	19.10	36.620	26.25	4.35	6.21	77.25	.19	0.00		
300	298	297	8	17.57	0.00	17.57	36.423	26.48	4.47	6.38	78.23	.37	0.00		

246 843	STANDARD DEPTHS	DEPTH (M)	WIRE	CZ	TZ	BN	TL	YM	TEMP	TAVE	SALIN	SIG T	OXYGEN				PHOS	NITRA
													ML/L	MG/L	%SAT	WIRE ANGLE		
0	0	0	28.09	35.528	22.78	4.76	6.79	100.75	0.07	0.00								
10	10	28.09	35.524	22.78	4.77	6.81	100.96	0.06	0.00									
20	20	28.09	35.519	22.78	4.78	6.82	101.17	0.04	0.00									
30	30	27.87	35.624	22.93	4.84	6.91	102.50	0.04	0.00									
50	50	26.66	36.181	23.74	5.08	7.26	104.40	0.07	0.00									
75	75	25.60	36.561	24.36	5.06	7.23	104.22	0.09	0.00									
100	100	24.63	36.745	24.79	4.92	7.03	96.16	0.10	0.00									
150	150	22.26	36.769	25.51	4.77	6.82	91.72	0.07	0.00									
200	200	20.16	36.725	26.05	4.35	6.21	82.22	0.24	0.00									
250	250	19.04	36.613	26.26	4.35	6.21	77.27	0.19	0.00									
300	300	17.51	36.415	26.49	4.47	6.39	78.27	0.38	0.00									

R V PALUMB0 CRUISE 046
 STATION CMP-6C PRNC REFERENCE 046844
 DATE 08 /22/74 BARO 1000.0 WEATHER P2 WIND VELOC 06 WAVE PERIOD 4
 HOUR 7.0 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 1097
 LONG 065-54.5 W REL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 2 COLOR
 CAST 1 PRESS TIME 7.0 GAT. 5 1 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
0	0	0	2	14	28.04	0.00	28.04	35.538	22.81	4.77	6.81	101.00	.06	0.00
25	25	0	0	1	28.08	0.00	28.08	35.534	22.79	4.75	6.78	100.61	.04	0.00
50	50	0	0	2	26.89	0.00	26.89	36.067	23.58	5.05	7.21	106.56	.03	0.00
100	99	99	99	6	24.29	0.00	24.29	36.766	24.91	4.90	7.00	95.48	.06	0.00
150	149	148	148	4	21.80	0.00	21.88	36.788	25.63	4.65	6.65	89.24	.12	0.00
200	198	0	0	5	19.51	0.00	19.51	36.669	26.18	4.37	6.24	77.98	.08	0.00
250	248	248	248	7	18.72	0.00	18.72	36.580	26.32	4.39	6.27	77.67	.15	0.00
300	297	295	295	8	17.69	0.20	17.69	36.442	26.47	4.52	6.46	79.26	.30	0.00
046 844 STANDARD DEPTHS														
	2				28.04		28.04	35.538	22.81	4.77	6.81	101.00	.06	0.00
	13				26.26		26.26	35.536	22.80	4.76	6.80	100.84	.05	0.00
	24				23.27		23.27	35.535	22.79	4.75	6.79	100.69	.04	0.00
	34				27.91		27.91	35.617	22.91	4.80	6.86	121.77	.04	0.00
	50				26.89		26.89	36.067	23.58	5.05	7.21	106.56	.03	0.00
	75				25.57		25.57	36.494	24.31	5.04	7.19	103.26	.04	0.00
	100				24.24		24.24	36.773	24.93	4.89	6.94	95.40	.06	0.00
	150				21.82		21.82	36.786	25.64	4.65	6.64	89.06	.12	0.00
	200				19.47		19.47	36.666	26.19	4.37	6.24	77.96	.08	0.00
	250				17.68		17.68	36.575	26.32	4.39	6.27	77.72	.16	0.00
	300				17.63		17.63	36.434	26.48	4.53	6.47	79.36	.31	0.00

F V PALUMBO CRUISE 246 STATION CMP-6R PRNC REFERENCE 246845
 DATE 06/22/74 RAPO 1218.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 7:6 TEMP DRY 26.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-27.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0597
 LONG 105-54.7 W PEL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 7.6 GMT, 339 LOCAL MAX DEPTH 100 WIRE ANGLE 6
 OXYGEN TITER .673 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
	TZ	TL						
0	1	28.29	22.78	4.78	6.83	101.30	.00	0.00
25	0	28.12	22.77	4.76	6.80	100.92	.05	0.00
50	52	26.82	23.58	5.04	7.20	106.24	.05	0.00
100	97	24.12	24.97	4.88	6.98	95.15	.05	0.00
STANDARD DEPTHS								
1		28.09	22.78	4.78	6.83	101.30	.02	0.00
2		28.10	22.78	4.77	6.82	101.15	.02	0.00
3		28.11	22.77	4.77	6.81	101.00	.04	0.00
4		27.93	22.89	4.81	6.87	101.98	.05	0.00
5		26.82	23.59	5.04	7.20	106.24	.05	0.00
6		25.49	24.32	4.96	7.09	101.95	.05	0.00
7		24.12	24.97	4.88	6.96	95.15	.05	0.00

R V PALUMBO CRUISE 046 STATION CMP=58 PRNC REFERENCE 046846

DATE 08 /22/74 BARO 1018.2 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 8.1 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0535
 LONG 065-55.2 W REL HUMID 084 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 8.1 GMT, 4 4 LOCAL MAX DEPTH 100 WIRE ANGLE 10
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	OXYGEN			
											MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.07	0.00	0.00	28.07	35.525	22.79	4.79	6.84	101.42	.04	0.00
25	25	0	2	28.09	0.00	0.00	28.09	35.523	22.78	4.75	6.78	100.59	.00	0.00
50	50	48	6	26.51	0.00	0.00	26.51	36.136	23.75	5.00	7.14	102.60	.00	0.00
100	99	94	4	23.65	0.00	0.00	23.65	36.787	25.12	4.86	6.95	94.46	.03	0.00

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	XSAT	PHOS	NITRA	
														0
10	10	0	2	28.08	0.00	0.00	28.08	35.524	22.78	4.77	6.82	101.09	.02	0.00
20	20	0	3	28.09	0.00	0.00	28.09	35.523	22.78	4.76	6.80	100.75	.01	0.00
30	30	0	4	27.86	0.00	0.00	27.86	35.620	22.93	4.79	6.85	101.50	.00	0.00
50	50	0	5	26.51	0.00	0.00	26.51	36.136	23.75	5.00	7.14	102.60	.00	0.00
75	75	0	6	25.03	0.00	0.00	25.03	36.514	24.50	4.98	7.12	102.14	.01	0.00
100	100	0	7	23.59	0.00	0.00	23.59	36.800	25.14	4.86	6.94	94.40	.03	0.00

046 846 STANDARD DEPTHS

R V PALUMBO CRUISE 046 STATION CMP-4R PRNG REFERENCE 246847

DATE 08 /22/74 PARO 1016.2 WEATHER 22 WIND VELOC 24 WAVE PERIOD 4
 HOUR 8.6 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0823
 LONG 065-56.2 W REL HUMID 083 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 0.6 GMT, 439 LOCAL MAX DEPTH 100 WIRE ANGLE 15
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	CE	TZ	RN	TL	TM	TAVP	SALIN	SIG T	OXYGEN				PHOS	NITRA
									ML/L	MG/L	%SAT			
0	0	0	1	28.11	0.00	28.11	35.548	22.79	4.75	6.78	100.70	.04	0.25	
25	25	0	2	28.11	0.00	28.11	35.553	22.80	4.75	6.78	100.72	.04	1.25	
50	49	52	6	26.95	0.00	26.95	35.995	23.50	4.92	7.02	103.79	.03	0.17	
100	97	96	4	23.67	0.00	23.67	36.353	25.16	4.80	6.86	93.51	.04	0.36	

046 847 STANDARD DEPTHS

0	28.11	35.548	22.79	4.75	6.78	100.70	.04	0.25
10	28.11	35.550	22.79	4.75	6.78	100.71	.04	0.65
20	28.11	35.552	22.79	4.75	6.78	100.71	.04	1.09
30	27.94	35.622	22.90	4.78	6.85	101.40	.04	1.10
50	26.89	36.013	23.54	4.91	7.02	103.68	.03	0.17
75	25.25	36.462	24.39	4.89	6.99	100.41	0.03	0.27
100	23.47	36.907	25.26	4.80	6.85	93.38	.04	0.37

R V PALUNBO CRUISE 046 STATION CMP-38 PRNC REFERENCE 046848

DATE 08 /22/74 BARO 1018.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 9.1 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 17-56.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0312
 LONG 065-57.1 W REL HUMID 084 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 9.1 UNT, 5.5 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
														DEPTH (M)	TEMP
0	0	0	1	28.15	0.00	28.15	35.548	22.78	4.75	6.78	100.75	.03	0.00		
25	25	0	2	28.17	0.00	28.17	35.548	22.77	4.74	6.77	100.49	.03	0.00		
50	50	53	6	27.35	0.00	27.35	35.830	23.25	4.82	6.88	101.89	.03	0.00		
100	100	98	4	23.19	0.00	23.19	36.845	25.30	4.81	6.87	93.26	.05	0.00		
046 848 STANDARD DEPTHS															
	0					28.15	35.548	22.78	4.75	6.78	100.75	0.03	0.00		
	10					28.16	35.548	22.78	4.74	6.78	100.65	0.03	0.00		
	20					28.17	35.548	22.77	4.74	6.77	100.54	0.03	0.00		
	30					28.08	35.583	22.83	4.75	6.78	100.78	0.03	0.00		
	50					27.35	35.830	23.25	4.82	6.88	101.89	0.03	0.00		
	75					25.69	36.262	24.10	4.81	6.88	98.76	0.04	0.00		
	100					23.19	36.845	25.30	4.81	6.87	93.26	0.05	0.00		

R V PALUMBO CRUISE 046 STATION CMP-2B PKNC REFERENCE 046849

DATE 08 /22/74 BARO 1018.4 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 9.6 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0426
 LONG 065-58.2 W REL HUMID 084 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 9.6 GMT, 535 LOCAL MAX DEPTH 100 WIRE ANGLE 3
 OXYGEN TITER .673 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TEMP		TAVE	SALIN	SIG	T	OXYGEN		XSAT	PHOS	NITRA
						TM	TL					ML/L	MG/L			
0	0	0	0	1	28.13	0.00	0.00	28.13	35.527	22.77	4.73	6.76	100.22	.06	0.00	
25	25	0	0	2	28.15	0.00	0.00	28.15	35.530	22.76	4.74	6.77	100.40	.03	0.00	
50	50	54	54	6	26.23	0.00	0.00	26.23	36.231	23.91	5.04	7.20	103.53	.05	0.00	
100	100	98	98	4	23.38	0.00	0.00	23.38	36.823	25.22	4.88	6.98	94.77	.04	0.00	
046 849 STANDARD DEPTHS																
	0				28.13			28.13	35.527	22.77	4.73	6.76	100.22	0.06	0.00	
	10				28.14			28.14	35.528	22.77	4.73	6.76	100.30	0.05	0.00	
	20				28.15			28.15	35.529	22.77	4.73	6.76	100.37	0.04	0.00	
	30				27.86			27.86	35.644	22.95	4.79	6.84	101.55	0.03	0.00	
	50				26.23			26.23	36.231	23.91	5.04	7.20	103.53	0.05	0.00	
	75				24.64			24.64	36.662	24.73	4.96	7.09	96.55	0.04	0.00	
	100				23.38			23.38	36.823	25.22	4.88	6.98	94.77	0.04	0.00	

R V PALUMBO CRUISE 046 STATION CMP-2A PRNC REFERENCE 246850
 DATE 18/22/74 BARO 1218.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 12.4 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.8 N TEMP WET 24.2 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 2221
 LONG 265-58.3 W REL HUMID 087 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 WESS TIME 10.4 GMT, 621 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .673 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TL	TM	TAVE	TS	7	8	ML/L	%SAT	04	12	13	0,00
0	25.32	0.00	28.30	35.540	22.72	4.68	6.68	99.35	.24	0.00	.73	0.00
10	28.31	0.00	28.31	35.540	22.72	4.68	6.69	99.51	.24	0.00	.73	0.00
STANDARD DEPTHS												
0	28.30	35.540	22.72	4.68	6.68	99.35	0.24	2.00				
10	28.31	35.540	22.72	4.68	6.69	99.51	0.03	0.00				

R V PALUMBO CRUISE 046 STATION CMP-3A PRNC REFERENCE 246851
 DATE 18/22/74 BARO 1222.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 12.6 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.9 N TEMP WET 24.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0223
 LONG 265-57.2 W REL HUMID 085 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 WESS TIME 12.0 GMT, 638 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .673 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TL	TM	TAVE	TS	7	8	ML/L	%SAT	04	12	13	0,00
0	28.27	0.00	28.27	35.540	22.73	4.63	6.61	98.31	.24	0.00	.04	0.00
10	28.31	0.00	28.31	35.530	22.71	4.61	6.59	98.04	.04	0.00	.04	0.00
STANDARD DEPTHS												
0	28.27	35.540	22.73	4.63	6.61	98.31	0.24	0.00				
10	28.31	35.530	22.71	4.61	6.59	98.04	0.04	0.00				

R V PALUMBO CRUISE 046

STATION CMP=4A

PRNC REFERENCE 046852

DATE 08 /22/74 BARO 1018.9 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 11.1 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0010
 LONG 065-56.4 W REL HUMID 084 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 11.1 GMT, 7 6 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .673 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		MG/L		XSAT		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA				
0	0	0	1	28.26	0.00	28.26	35.550	22.74	4.57	6.53	97.19	.00	0.33				
10	10	0	2	28.29	0.00	28.29	35.550	22.73	4.53	6.48	96.37	.04	0.91				

046 852 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 046

STATION CMP=5A

PRNC REFERENCE 046853

DATE 08 /22/74 BARO 1019.0 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 11.4 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0021
 LONG 065-55.1 W REL HUMID 080 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 11.4 GMT, 725 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .673 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		MG/L		XSAT		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA				
0	0	4	6	28.30	0.00	28.30	35.552	22.73	4.61	6.59	98.10	.00	0.00				
10	10	9	4	28.35	0.00	28.35	35.558	22.72	4.64	6.63	98.76	.04	0.00				

046 853 STANDARD DEPTHS

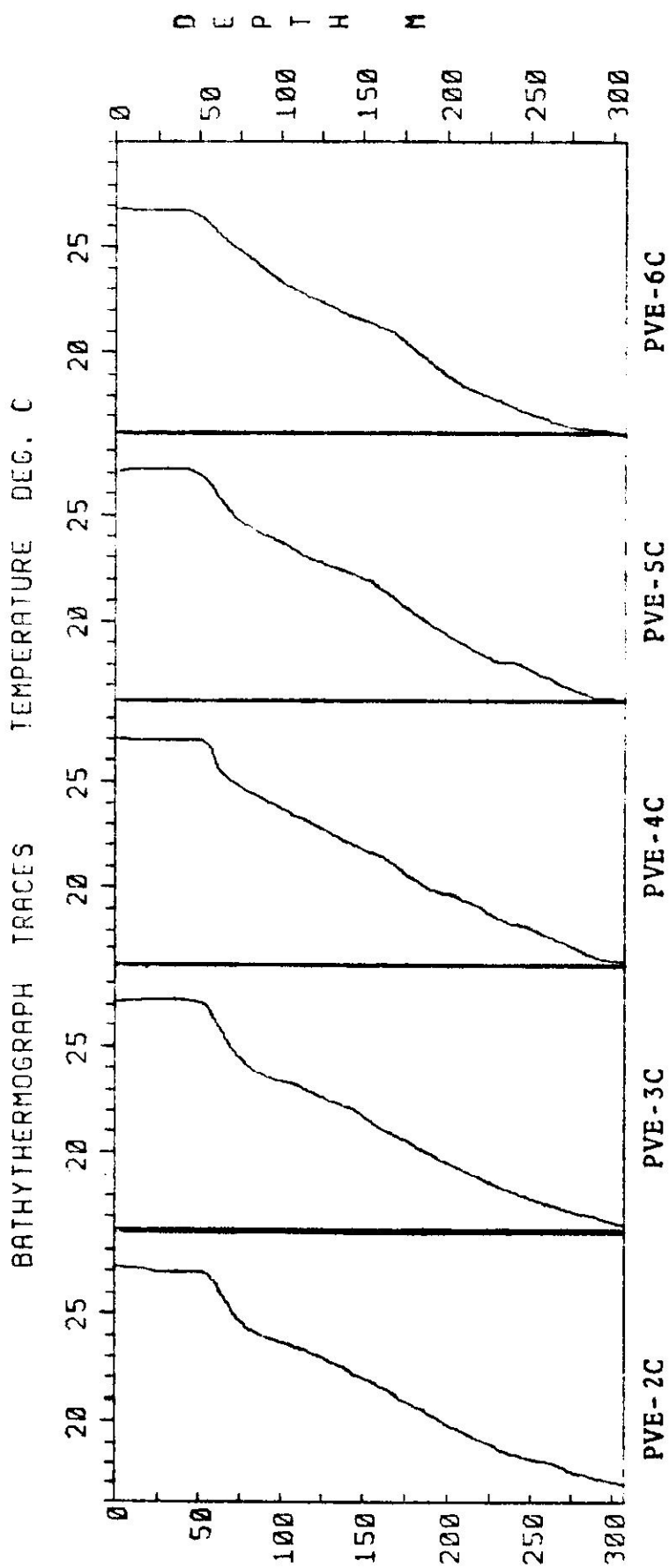
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R V PALUMBO CRUISE 046 STATION CMP-6A PRNC REFERENCE 046854

DATE 08 /22/74 BARO 1019.2 WEATHER 02 WIND VELOC 05 WAVE PERIOD 3
 HOUR 11.7 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-58.6 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 13 SONIC DEP 0018
 LONG 065-54.8 W REL HUMID 079 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 11.7 GMT. 743 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,675 METER WHEEL FACTOR ,997

DEPTH (M)	TEMP		OXYGEN		SIG T	SALIN	TAVE	ML/L	MG/L	%SAT	PHOS	NITRA
	TZ	BN	TL	YM								
0	0	1	28.30	0.00	22.74	35.564	28.30	4.61	6.59	98.15	.04	0.00
10	0	2	28.31	0.00	22.73	35.560	28.31	4.63	6.61	98.43	.00	0.00
046 854 STANDARD DEPTHS												
0			28.30	35.564	22.74	4.61	6.59	98.15	0.04	0.00		
10			28.31	35.560	22.73	4.63	6.61	98.43	0.00	0.00		



Cruise No. PA052
Nov. 13, 1974

R V PALUMBO CRUISE 052 STATION PVE=2C PRNC REFERENCE 052973
 DATE 11 /13/74 BARO 1016.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 6.3 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-54.8 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0410
 LONG 067-50.0 W REL HUMID 089 CLOUD AMT WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 6.3 GMT. 218 LOCAL MAX DEPTH 300 WIRE ANGLE 12
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
			TL	TM				ML/L	MG/L			
0	0	0	27.38	0.00	27.38	34.320	22.11	4.77	6.81	100.41	.00	0.00
25	25	0	27.42	0.00	27.42	34.320	22.09	4.75	6.78	100.07	.00	0.00
50	49	50	27.04	0.00	27.04	35.929	23.42	4.65	6.64	98.09	.05	0.00
100	98	0	23.02	0.00	23.02	36.815	25.09	4.68	6.69	91.10	.08	0.00
150	147	149	22.06	0.00	22.06	36.867	25.64	4.58	6.54	87.98	.07	0.00
200	196	197	19.91	0.00	19.91	36.728	26.12	4.35	6.21	78.06	.07	0.00
250	244	251	18.36	0.00	18.36	36.540	26.38	4.47	6.39	78.92	.17	0.00
300	293	291	17.35	0.00	17.35	36.400	26.53	4.53	6.50	79.57	.26	0.00

052 973 STANDARD DEPTHS

0	27.38	34.320	22.11	4.77	6.81	100.41	0.00	0.00
10	27.40	34.320	22.10	4.76	6.80	100.27	0.00	0.00
20	27.41	34.320	22.10	4.75	6.79	100.13	0.00	0.00
30	27.39	34.600	22.31	4.73	6.75	96.75	0.01	0.00
50	26.98	35.967	23.47	4.65	6.64	98.10	0.05	0.00
75	25.44	36.652	24.47	4.66	6.66	96.03	0.07	0.00
100	23.74	36.833	25.13	4.68	6.68	91.07	0.00	0.00
150	21.93	36.062	25.67	4.56	6.51	87.55	0.07	0.00
200	19.76	36.713	26.15	4.35	6.22	78.01	0.00	0.00
250	18.22	36.530	26.41	4.48	6.40	79.01	0.10	0.00
300	17.21	36.389	26.55	4.56	6.52	79.68	0.27	0.00

R V PALUMBO CRUISE 052 STATION PVE-3C PRNC REFERENCE 052974

DATE 11 /13/74 BARO 1016.6 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 6.9 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-54.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0398
 LONG 067-49.2 W REL HUMID 089 CLOUD AMT 8 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 6.9 GMT, 256 LOCAL MAX DEPTH 300 WIRE ANGLE 11
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	M	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	27.38	0.00	0.00	27.38	34.305	22.10	4.78	6.83	100.64	.05	0.00	0.00
25	25	0	0	2	27.40	0.00	0.00	27.40	34.305	22.09	4.80	6.86	101.23	.05	0.00	0.00
50	49	47	3	3	27.41	0.00	0.00	27.41	35.613	23.27	4.71	6.73	99.20	.04	0.00	0.00
100	96	99	4	4	23.78	0.00	0.00	23.78	36.827	25.11	4.64	6.63	90.35	.04	0.00	0.00
150	147	152	5	5	21.74	0.00	0.00	21.74	36.855	25.72	5.21	7.44	99.91	.05	0.00	0.00
200	196	195	6	6	19.64	0.00	0.00	19.64	36.690	26.16	4.34	6.20	77.66	.07	0.00	0.00
250	245	252	7	7	18.23	0.00	0.00	18.23	36.540	26.41	4.50	6.42	79.31	.18	0.00	0.00
300	294	293	8	8	17.28	0.00	0.00	17.28	36.401	26.54	4.54	6.49	79.42	.28	0.00	0.00

052 974 STANDARD DEPTHS

0	27.38	34.305	22.09	4.78	6.83	100.64	0.05	0.00
10	27.39	34.305	22.09	4.79	6.84	100.68	0.05	0.00
20	27.40	34.305	22.09	4.80	6.86	101.11	0.05	0.00
30	27.40	34.526	22.25	4.79	6.84	97.87	0.05	0.00
50	27.35	35.653	23.12	4.71	6.73	99.16	0.04	0.00
75	25.69	36.453	24.25	4.66	6.65	95.75	0.04	0.00
100	23.68	36.851	25.16	4.65	6.65	90.57	0.04	0.00
150	21.60	36.847	25.75	5.16	7.38	98.88	0.05	0.00
200	19.50	36.677	26.19	4.35	6.22	77.77	0.08	0.00
250	18.12	36.526	26.43	4.50	6.43	79.35	0.19	0.00
300	17.16	36.384	26.55	4.55	6.50	79.44	0.29	0.00

R V PALUMBO CRUISE 052 STATION PVE-40 PRNC REFERENCE 052975
 DATE 11 /13/74 BARO 1016.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 7.7 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.2 N TEMP WET 0.6 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0420
 LONG 067-47.8 W REL HUMID 089 CLOUD AMT 5 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 7.7 GMT, 344 LOCAL MAX DEPTH 300 WIRE ANGLE 8
 OXYGEN TITER ,654 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN			PHOS	NITRA
											ML/L	MG/L	%SAT		
0	0	0	0	1	27.35	0.00	27.35	34.316	22.11	4.78	6.84	100.75	.04	0.56	
25	25	0	0	2	27.38	0.00	27.38	34.308	22.10	4.79	6.84	100.93	.04	0.45	
50	50	0	0	3	26.89	0.00	26.89	36.215	23.69	4.74	6.77	97.55	.00	0.58	
100	99	100	0	4	23.83	0.00	23.83	36.801	25.27	4.67	6.68	90.94	.08	2.49	
150	149	152	0	5	21.66	0.00	21.66	36.836	25.73	4.52	6.46	86.65	.08	2.00	
200	198	198	0	6	19.83	0.00	19.83	36.704	26.12	4.35	6.21	77.93	.13	4.76	
250	247	254	0	7	18.06	0.00	18.06	36.497	26.42	4.48	6.40	78.78	.21	10.96	
300	297	296	0	8	17.23	0.00	17.23	36.385	26.54	4.54	6.49	79.37	.34	14.04	

052 975 STANDARD DEPTHS

10	27.35	34.316	22.11	4.78	6.84	100.75	0.04	0.56
20	27.36	34.313	22.11	4.79	6.84	100.82	0.04	0.52
30	27.37	34.310	22.10	4.79	6.84	100.89	0.04	0.47
50	27.34	34.631	22.35	4.78	6.83	97.97	0.03	0.45
75	26.89	36.215	23.69	4.74	6.77	97.55	0.00	0.58
100	25.44	36.514	24.37	4.71	6.73	96.77	0.03	1.51
150	23.78	36.807	25.09	4.67	6.67	90.87	0.08	2.51
200	21.62	36.835	25.74	4.52	6.45	86.53	0.08	2.88
250	19.75	36.695	26.14	4.35	6.21	77.91	0.13	5.00
300	18.00	36.489	26.43	4.48	6.40	78.82	0.22	11.19
	17.18	36.378	26.55	4.55	6.50	79.41	0.35	14.22

R V PALUMBO CRUISE 052 STATION PVE-50 BRAC REFERENCE 750976

DATE 11 /13/74 BARO 1000.0 WEATHER P2 WIND VELOC 04 WAVE PERIOD 5
 HOUR 08.5 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0.92
 LONG 067-47.3 W REL HUMID 089 CLOUD AMT 4 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 8.5 GMT, 428 LOCAL MAX DEPTH 300 WIRE ANGLE 6
 OXYGEN TITER .054 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	RN	TAVE	SALIN	SIG T	OXYGEN		PHOS	NITRA
		T2	TM						ML/L	%SAT		
0	0	0	0	27.30	1	27.30	34.247	22.78	4.75	6.78	.06	0.00
25	25	0	0	27.37	2	27.37	34.283	22.28	4.80	6.85	.05	0.00
50	50	49	0	26.39	3	26.39	36.270	23.89	4.69	6.70	.06	0.00
100	100	95	0	23.63	4	23.63	36.833	25.16	4.69	6.70	.05	0.00
150	149	0	0	21.74	5	21.74	36.842	25.71	4.54	6.40	.06	0.00
200	199	194	0	19.35	6	19.35	36.665	26.22	4.38	6.26	.11	0.00
250	248	253	0	17.96	7	17.96	36.499	26.45	4.48	6.40	.25	0.00
300	298	292	0	17.19	8	17.19	36.385	26.55	4.54	6.49	.32	0.00

52 976 STANDARD DEPTHS

10	27.30	34.247	22.28	4.75	6.78	99.66	0.06	0.00
20	27.33	34.261	22.28	4.77	6.81	100.18	0.06	0.00
30	27.36	34.276	22.28	4.79	6.84	100.78	0.05	0.00
50	27.24	34.522	22.38	4.78	6.83	97.89	0.25	0.00
75	26.39	36.270	23.89	4.69	6.70	96.55	0.06	0.00
100	25.02	36.552	24.53	4.69	6.70	90.20	0.06	0.00
150	23.63	36.833	25.16	4.69	6.70	91.15	0.25	0.00
200	21.69	36.859	25.72	4.53	6.47	86.84	0.16	0.00
250	19.31	36.661	26.23	4.38	6.26	76.11	0.11	0.00
290	17.92	36.494	26.45	4.48	6.40	78.77	0.25	0.00
300	17.16	36.380	26.55	4.55	6.49	79.38	0.32	0.00

R V PALUMBO CRUISE 052 STATION PVE-6C PRNC REFERENCE 052977

DATE 11 /13/74 RARO 1415.6 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 9.1 TEMP DRY 25.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.2 N TEMP WET 0.2 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0412
 LONG 067-45.8 W REL HUMID 089 CLOUD AMT 3 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 9.1 GMT, 5 7 LOCAL MAX DEPTH 300 WIRE ANGLE 6
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	27.32	0.00	27.32	34.231	22.16	4.74	6.77	99.51	.06	0.00
25	0	0	2	27.38	0.00	27.38	34.295	22.19	4.76	6.80	100.20	.25	0.00
50	0	49	3	26.34	0.00	26.34	36.274	23.21	4.71	6.72	96.81	.08	0.00
100	0	101	4	23.64	0.00	23.64	36.841	25.16	4.74	6.77	92.20	.08	0.00
150	0	151	5	21.55	0.00	21.55	36.942	25.76	4.53	6.47	86.71	.10	0.00
200	0	196	6	19.26	0.00	19.26	36.688	26.26	4.22	6.02	75.23	.22	0.00
250	0	254	7	17.71	0.00	17.71	36.476	26.49	4.52	6.46	79.39	.30	0.00
300	0	297	8	17.16	0.00	17.16	36.374	26.55	4.54	6.49	79.32	.32	0.00

052 977	STANDARD	DEPTH	0	10	20	30	50	75	100	150	200	250	300
27.34	34.257	22.27	4.75	6.78	99.79	.06	0.00						
27.37	34.282	22.18	4.75	6.79	100.06	.05	0.00						
27.24	34.634	22.39	4.75	6.79	97.25	.05	0.00						
25.34	36.274	23.91	4.71	6.76	96.81	.08	0.00						
25.01	36.558	24.54	4.72	6.75	96.86	.08	0.00						
23.64	36.841	25.16	4.74	6.77	92.20	.08	0.00						
21.52	36.840	25.77	4.52	6.46	86.28	.10	0.00						
19.22	36.683	26.27	4.22	6.02	75.28	.22	0.00						
17.68	36.471	26.49	4.53	6.47	79.45	.30	0.00						
17.14	36.370	26.55	4.54	6.49	79.32	.32	0.00						

R V PALUMBO CRUISE 052 STATION PVE-58 PHNC REFERENCE 752978

DATE 11 /13/74 PASU 1015.5 WEATHER 72 WIND VELOC 04 WAVE PERIOD 5
 HOUR 9.8 TEMP SUR 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.4 N TEMP SUR 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0192
 LONG 067-46.8 W REL HUMID 089 CLOUD AMT 2 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 9.0 SURT, 240 LOCAL MAX DEPTH 120 WIRE ANGLE 7
 OXYGEN TITR .604 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
		TL	HN	TM	TS						
0	0	1	27.13	0.00	27.13	21.98	4.71	6.73	98.19	.05	0.00
25	25	2	27.29	0.00	27.29	22.13	4.70	6.71	98.51	.13	0.00
50	50	3	26.78	0.00	26.78	23.53	4.61	6.58	96.91	.00	0.00
100	100	4	23.52	0.00	23.52	25.20	4.67	6.68	90.85	.00	0.00
052 978 STANDARD DEPTHS											
3			27.13		27.13	21.98	4.71	6.73	98.19	.05	0.00
10			27.19		27.19	22.10	4.71	6.73	98.31	.08	0.00
20			27.26		27.26	22.12	4.72	6.72	98.44	.12	0.00
30			27.25		27.25	22.17	4.68	6.68	95.77	.11	0.00
40			26.78		26.78	23.53	4.61	6.58	96.91	.00	0.00
75			25.52		25.52	24.26	4.64	6.63	92.92	.11	0.00
100			23.52		23.52	25.20	4.67	6.68	90.85	.00	0.00

R V PALUMBO CRUISE 052 STATION PVE-48 PRIC REFERENCE 052979

DATE 11 /13/74 BARO 1015.3 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 10.3 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0185
 LONG 067-47.8 W REL HUMID 086 CLOUD AMT 2 WAVE HEIGHT 6 COLOR

CAST 1 MESS TIME 10.3 GMT, 616 LOCAL MAX DEPTH 100 WIRE ANGLE 12
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN				
									ML/L	MG/L	%SAT		
0	0	0	1	27.11	0.00	27.11	34.000	21.95	4.66	6.66	96.97	.07	2.88
25	25	0	2	27.32	0.00	27.32	34.236	22.06	4.75	6.79	99.80	.04	0.47
50	50	57	3	27.15	0.00	27.15	35.792	23.29	4.61	6.59	97.23	.03	1.65
100	99	101	4	23.74	0.00	23.74	36.044	25.13	4.71	6.73	91.78	.08	2.17

CAST 2 MESS TIME 12.0 GMT, 847 LOCAL MAX DEPTH 125 WIRE ANGLE 9
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN				
									ML/L	MG/L	%SAT		
75	74	71	4	24.93	0.00	24.93	36.593	24.59	3.03	4.32	58.82	.09	2.67
125	124	122	6	23.15	0.00	23.15	36.867	25.32	4.49	6.42	87.10	.10	3.68

052 979 STANDARD DEPTHS

DEPTH (M)	OXYGEN	PHOS	NITRA					
0	27.11	34.000	21.95	4.66	6.66	96.97	.07	2.88
10	27.19	34.094	22.00	4.70	6.71	98.08	.06	1.92
20	27.29	34.189	22.04	4.74	6.77	99.33	.05	0.88
30	27.29	34.504	22.27	4.73	6.76	96.57	.04	0.54
50	27.15	35.792	23.29	4.61	6.59	97.23	.03	1.65
75	25.39	36.659	24.50	4.66	6.66	96.00	.04	1.92
100	23.70	36.849	25.15	3.79	5.41	73.75	.10	3.20

R V PALUMBO CRUISE 052 STATION PVE-39 PRNC REFERENCE 052980

DATE 11 /13/74 BARO 1015.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 10.8 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-55.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0190
 LONG 067-49.2 W REL HUMID 086 CLOUD AMT 2 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 10.8 GMT, 645 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
									ML/L	MG/L	%SAT		
0	0	0	1	27.06	0.00	27.06	33.987	21.96	4.68	6.69	97.27	.05	0.00
25	25	0	2	27.35	0.00	27.35	34.281	22.09	4.73	6.75	99.42	.05	0.00
50	50	0	3	26.34	0.00	26.34	36.298	23.03	4.74	6.77	97.53	.04	0.00
100	100	98	4	24.12	0.00	24.12	36.702	24.91	4.57	6.53	88.76	.06	0.00
052 980 STANDARD DEPTHS													
0				27.06		33.987		21.96	4.68	6.69	97.27	.05	0.00
10				27.18		34.105		22.01	4.70	6.71	98.11	.05	0.00
20				27.29		34.222		22.06	4.72	6.74	98.99	.05	0.00
30				27.22		34.641		22.40	4.73	6.76	96.89	.05	0.00
50				26.34		36.298		23.03	4.74	6.77	97.53	.04	0.00
75				25.26		36.500		24.41	4.69	6.70	96.22	.04	0.00
100				24.12		36.702		24.91	4.57	6.53	88.76	.06	0.00

R V PALUMBO CRUISE 452 STATION PVE-2A PRNC REFERENCE 052982

DATE 11 /13/74 BARO 1014.8 WEATHER 00 WIND VELOC 04 WAVE PERIOD 4
 HOUR 12.0 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0017
 LONG 067-50.2 W REL HUMID 076 CLOUD AMT 2 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 12.0 GMT, 758 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .654 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA		
	TZ	BN										
0	0	1	26.81	0.00	26.81	33.364	21.57	4.48	6.40	91.49	.15	0.00
10	0	2	27.39	0.00	27.39	34.222	22.03	4.61	6.58	96.86	.06	0.00
STANDARD DEPTHS												
052 982			26.81	33.364	21.57	4.48	6.40	91.49	0.15	0.00		
10			27.39	34.222	22.03	4.61	6.58	96.86	0.06	0.00		

R V PALUMBO CRUISE 052 STATION PVE-3A PRNC REFERENCE 052983

DATE 11 /13/74 BARO 1017.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 12.4 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 18-56.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0015
 LONG 066-48.5 W REL HUMID 076 CLOUD AMT 3 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 12.4 GMT, 823 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .654 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA		
	TZ	BN										
0	0	3	26.84	0.00	26.84	33.668	21.79	4.51	6.44	92.79	.13	0.00
10	10	4	27.23	0.00	27.23	34.098	21.99	4.55	6.50	95.06	.09	0.00
STANDARD DEPTHS												
052 983			26.84	33.668	21.79	4.51	6.44	92.79	0.13	0.00		
10			27.23	34.098	21.99	4.55	6.50	95.06	0.09	0.00		

R V PALUMBO CRUISE 052 STATION PVE-4A PRNC REFERENCE 052984

DATE 11 /13/74 BARO 1017.1 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 13.2 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 18-57.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0019
 LONG 066-47.8 W REL HUMID 077 CLOUD AMT 3 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 13.2 GMT, 912 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .654 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		ML/L		XSAT		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	SIG T	ML/L	ML/L	XSAT	XSAT	PHOS	PHOS	NITRA	NITRA
0	0	0	1	26.89	0.00	26.89	33.082	21.33	21.33	4.54	6.49	92.32	92.32	.16	.16	6.00	6.00
10	10	0	2	27.22	0.00	27.22	34.019	21.93	21.93	4.67	6.67	97.31	97.31	.06	.06	0.87	0.87

052 984 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 052 STATION PVE-5A PRNC REFERENCE 052985

DATE 11 /13/74 BARO 1018.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 13.6 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0022
 LONG 066-46.5 W REL HUMID 076 CLOUD AMT 2 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 13.6 GMT, 935 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .654 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		ML/L		XSAT		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	SIG T	ML/L	ML/L	XSAT	XSAT	PHOS	PHOS	NITRA	NITRA
0	0	2	3	27.04	0.00	27.04	33.715	21.76	21.76	4.61	6.58	95.14	95.14	.11	.11	0.00	0.00
10	10	11	4	27.11	0.00	27.11	33.976	21.93	21.93	4.61	6.59	95.96	95.96	.04	.04	0.00	0.00

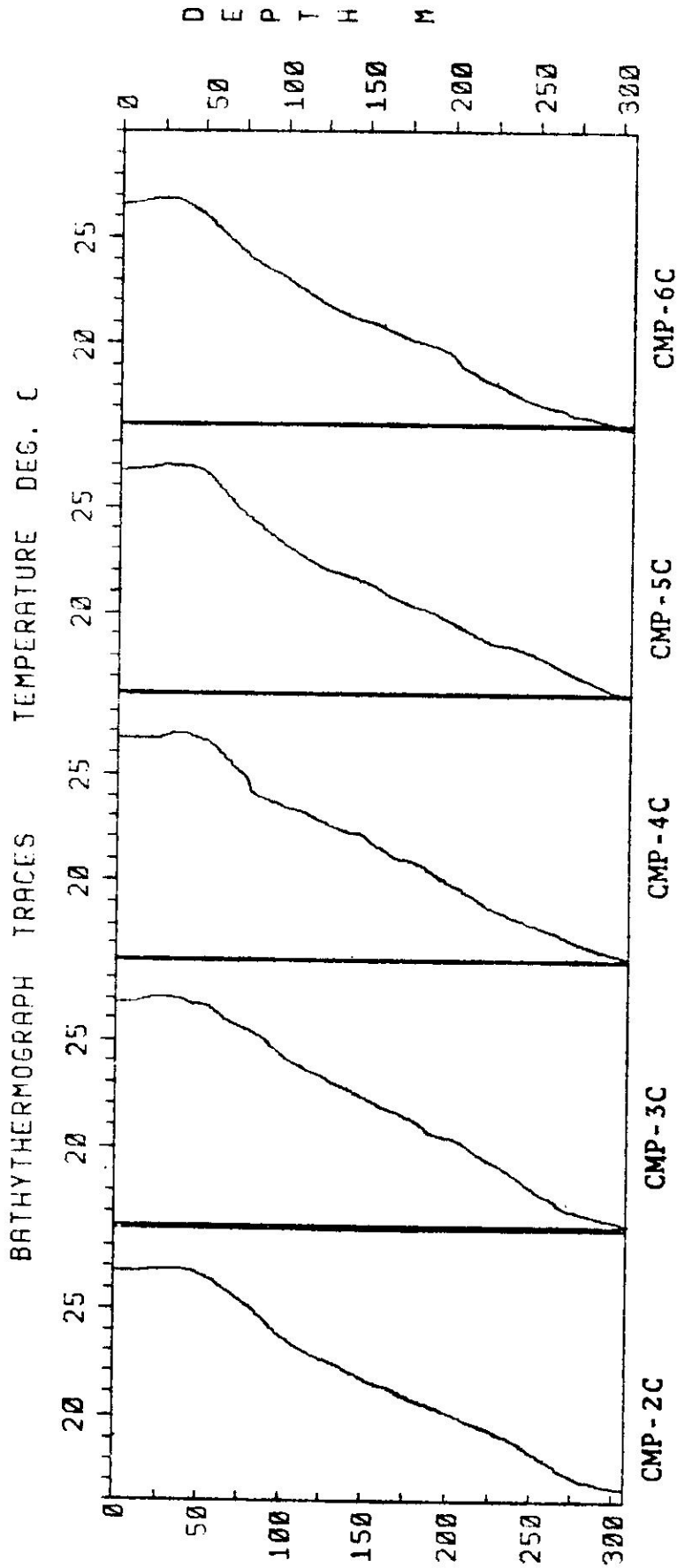
052 985 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 052 STATION PVE=68 PRNC REFERENCE 052906

DATE 11 /13/74 BARO 1018.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 14.0 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 17-57.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0210
 LONG 066-45.3 W REL HUMID 076 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 14.0 GMT, 957 LOCAL MAX DEPTH 100 WIRE ANGLE 12
 OXYGEN TITER .654 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				XSAT	PHOS	NITRA
			TZ	BN	YL	TM	TAVE	SALIN	SIG T	ML/L			
0	0	0	1	27.13	0.00	27.13	33.750	21.76	4.58	6.54	94.65	.16	0.00
25	25	0	2	27.22	0.00	27.22	34.114	22.00	4.73	6.76	98.91	.05	0.00
50	49	51	3	25.79	0.00	25.79	36.438	24.20	4.71	6.73	96.07	.05	0.00
100	98	98	4	24.08	0.00	24.08	36.763	24.97	4.64	6.63	90.34	.08	0.00
052 986 STANDARD DEPTHS													
		0		27.13		33.750		21.76	4.58	6.54	94.65	0.16	0.00
		10		27.17		33.896		21.86	4.64	6.63	96.34	0.12	0.00
		20		27.20		34.041		21.95	4.70	6.72	98.12	0.07	0.00
		30		26.99		34.550		22.40	4.73	6.76	96.49	0.05	0.00
		50		25.75		36.474		24.24	4.71	6.73	96.96	0.05	0.00
		75		24.78		36.610		24.64	4.68	6.68	90.91	0.06	0.00
		100		24.01		36.776		25.00	4.64	6.63	90.28	0.08	0.00



Cruise No. PA052
Nov. 14, 1974

R V PALUMBO CRUISE 052 STATION CWP-4C PRNC REFERENCE 052988

DATE 11 /14/74 BARO 1017.7 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 4.4 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 05 SONIC DEP 0412
 LONG 065-56.0 W REL HUMID 091 CLOUD AMT 6 WAVE HEIGHT 6 COLOR

CAST 1 MESS TIME 4.4 GMT. 026 LOCAL MAX DEPTH 300 WIRE ANGLE 2
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BM	TZ	TN	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		YM	YB								ML/L	MG/L			
0	0	0	0	27.06	1	0	0	27.06	33.706	21.75	4.85	6.93	100.15	.20	0.10
25	25	0	0	27.29	2	0	0	27.29	34.878	22.55	4.61	6.58	94.97	.00	0.16
50	50	53	0	26.78	3	53	0	26.78	36.244	23.75	4.84	6.92	99.74	.04	0.10
100	100	98	0	23.71	4	98	0	23.71	36.917	25.20	4.75	6.79	92.71	.03	0.98
150	150	154	0	21.82	5	154	0	21.82	36.858	25.70	4.53	6.47	86.87	.07	1.65
200	200	198	0	19.60	6	198	0	19.60	36.683	26.17	4.41	6.29	78.79	.14	4.97
250	250	254	0	18.04	7	254	0	18.04	36.513	26.44	4.46	6.37	70.50	.26	10.31
300	299	296	0	17.14	8	296	0	17.14	36.383	26.56	4.61	6.59	80.59	.35	19.60

052 988 STANDARD DEPTHS

0	27.06	33.706	21.75	4.85	6.93	100.15	0.20	0.10
10	27.15	34.175	22.07	4.75	6.79	99.40	0.00	0.12
20	27.24	34.640	22.39	4.65	6.64	95.16	0.00	0.15
30	27.25	35.168	22.78	4.64	6.62	96.27	0.01	0.15
50	26.78	36.244	23.75	4.84	6.92	99.74	0.04	0.10
75	25.34	36.798	24.61	4.80	6.85	98.82	0.04	0.47
100	23.71	36.917	25.20	4.75	6.79	92.71	0.03	0.98
150	21.82	36.858	25.70	4.53	6.47	86.87	0.07	1.65
200	19.60	36.683	26.17	4.41	6.29	78.79	0.14	4.97
250	18.04	36.513	26.44	4.46	6.37	70.50	0.26	10.31
300	17.12	36.380	26.56	4.62	6.60	80.63	0.35	19.79

R V PALUMBO CRUISE 052 STATION CMP-50 PRNC REFERENCE 052989

DATE 11 /14/74 BARO 1017.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 5.2 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0420
 LONG 065-55.7 W REL HUMID 092 CLOUD AMT 6 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 5.2 GMT; 113 LOCAL MAX DEPTH 300 WIRE ANGLE 4
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG Y	OXYGEN		XSAT	PHOS	NITRA
		TZ	TL				ML/L	MG/L			
0	0	0	27.00	0.00	33.669	21.74	4.90	7.00	100.97	.04	0.00
25	25	0	27.31	0.00	34.880	22.55	4.71	6.73	97.07	.05	0.00
50	50	51	26.64	0.00	36.324	23.85	4.93	7.04	101.53	.07	0.00
100	100	0	23.23	0.00	36.942	25.36	4.76	6.80	92.54	.06	0.00
150	150	153	21.35	0.00	36.860	25.83	4.46	6.37	85.26	.07	0.00
200	199	197	19.54	0.00	36.897	26.35	4.34	6.20	78.26	.09	0.00
250	249	251	18.05	0.00	36.479	26.41	4.53	6.47	79.61	.23	0.00
300	299	294	17.10	0.00	36.357	26.55	4.64	6.63	81.00	.00	0.00

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG Y	OXYGEN		XSAT	PHOS	NITRA
		TZ	TL				ML/L	MG/L			
0	0	0	27.00	0.00	33.669	21.74	4.90	7.00	100.97	0.04	0.00
10	10	0	27.12	0.00	34.153	22.06	4.82	6.89	100.74	0.04	0.00
20	20	0	27.25	0.00	34.633	22.38	4.74	6.77	97.02	0.05	0.00
30	30	0	27.26	0.00	35.187	22.80	4.74	6.77	98.43	0.05	0.00
50	50	0	26.64	0.00	36.324	23.85	4.93	7.04	101.53	0.07	0.00
75	75	0	25.01	0.00	36.866	24.77	4.90	7.00	100.70	0.07	0.00
100	100	0	23.23	0.00	36.942	25.36	4.76	6.80	92.54	0.06	0.00
150	150	0	21.35	0.00	36.860	25.83	4.46	6.37	85.26	0.07	0.00
200	200	0	19.51	0.00	36.889	26.35	4.34	6.20	78.26	0.09	0.00
250	250	0	18.03	0.00	36.475	26.41	4.53	6.47	79.63	0.23	0.00
300	300	0	17.08	0.00	36.355	26.55	4.64	6.63	81.03	0.00	0.00

052 989 STANDARD DEPTHS

R V PALUMBO CRUISE 052 STATION CMP-6C PRNC REFERENCE 052990
 DATE 11 /14/74 BARO 1017.8 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 6.1 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-56.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0398
 LONG 065-54.2 W REL HUMID 086 CLOUD AMT 6 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 6.1 GMT, 2 5 LOCAL MAX DEPTH 300 WIRE ANGLE 12
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		SALIN		OXYGEN		%SAT	PHOS	NITRA	
		CZ	TL	TAVE	SIG	Y	ML/L				
0	0	0	27.02	0.00	27.02	53.677	21.74	4.80	6.86	.04	0.00
25	25	0	27.30	0.00	27.36	34.965	22.60	4.74	6.77	.05	0.00
50	49	51	26.20	0.00	26.20	36.465	24.10	4.93	7.05	.04	0.00
100	98	102	23.14	0.00	23.14	36.964	25.40	4.74	6.78	.00	0.00
150	147	151	21.50	0.00	21.50	36.858	25.79	4.49	6.41	.05	0.00
200	196	196	19.32	0.00	19.32	36.665	26.23	4.36	6.23	.15	0.00
250	244	250	17.98	0.00	17.98	36.491	26.43	4.53	6.47	.00	0.00
300	293	292	17.10	0.00	17.10	36.381	26.57	4.59	6.56	.37	0.00

052 990	STANDARD DEPTHS	PHOS	NITRA
0	0	0.06	0.00
10	10	0.04	0.00
20	20	0.04	0.00
30	30	0.05	0.00
50	50	0.05	0.00
75	75	0.04	0.00
100	100	0.02	0.00
150	150	0.00	0.00
200	200	0.05	0.00
250	250	0.15	0.00
300	300	0.03	0.00

R V PALUMBO CRUISE 052 STATION CMP-68 PRNC REFERENCE 052991

DATE 11 /14/74 BARO 1017.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 6.6 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-57.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0257
 LONG 065-54.8 W REL HUMID 086 CLOUD AMT 6 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 6.6 GMT, 239 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG Y	OXYGEN				PHOS	NITRA
									ML/L	MG/L	%SAT			
0	0	0	1	27.01	0.00	27.01	33.657	21.73	4.84	6.92	99.84	.06	0.00	
25	25	0	2	27.24	0.00	27.24	35.168	22.79	4.67	6.67	96.91	.04	0.00	
50	50	50	3	26.01	0.00	26.01	36.627	24.28	4.95	7.07	102.16	.04	0.00	
100	97	97	4	23.40	0.00	23.40	36.677	25.11	4.78	6.82	92.27	.04	0.00	
052 991 STANDARD DEPTHS														
	0					27.01	33.657	21.73	4.84	6.92	99.84	0.06	0.00	
	10					27.10	34.261	22.15	4.77	6.82	99.95	0.05	0.00	
	20					27.19	34.867	22.58	4.69	6.71	96.66	0.04	0.00	
	30					27.07	35.501	23.09	4.71	6.73	98.40	0.04	0.00	
	50					26.01	36.627	24.28	4.95	7.07	102.16	0.04	0.00	
	75					24.73	36.652	24.69	4.86	6.94	94.62	0.04	0.00	
	100					23.40	36.677	25.11	4.78	6.82	92.27	0.04	0.00	

R V PALUMBO CRUISE 052 STATION CMP-5R PRNC REFERENCE 052992

DATE 11 /14/74 BARO 1017.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 7.6 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-57.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0260
 LONG 065-55.6 W REL HUMID 086 CLOUD AMT 6 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 7.6 GMT, 335 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	OXYGEN	%SAT	PHOS	NITRA
0	0	0	1	26.98	0.00	26.98	33.733	21.79	4.81	6.87	99.28	.24	0.00		
25	25	0	2	27.33	0.00	27.33	34.938	22.59	4.66	6.66	96.26	.03	0.00		
50	50	50	3	26.10	0.00	26.10	36.499	24.15	4.93	7.05	101.73	.00	0.00		
100	100	98	4	23.62	0.00	23.62	36.940	25.24	4.80	6.86	93.77	.25	0.00		

052 992 STANDARD DEPTHS

0	26.98	33.733	21.79	4.81	6.87	99.28	.24	0.00
10	27.12	34.215	22.11	4.75	6.79	99.39	.04	0.00
20	27.26	34.690	22.42	4.68	6.69	96.03	.03	0.00
30	27.17	35.267	22.89	4.70	6.72	97.79	.02	0.00
50	26.10	36.499	24.15	4.93	7.05	101.73	.00	0.00
75	24.86	36.720	24.70	4.87	6.95	95.11	.01	0.00
100	23.62	36.940	25.24	4.80	6.86	93.77	.25	0.00

R V PALUMBO CRUISE 052 STATION CMP-4B PRNC REFERENCE 052993

DATE 11 /14/74 BARO 1017.7 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 8.1 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-56.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0265
 LONG 065-56.5 W REL HUMID 089 CLOUD AMT 5 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 8.1 GMT. 4 4 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .675 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA				
	WIRE	CZ	YZ	BN	TL	TM	TAVE	SALIN			SIG T	HL/L	MG/L	%SAT
0	0	0	0	1	26.99	0.00	26.99	33.709	21.77	4.82	6.88	99.38	.07	0.69
25	25	0	0	2	27.35	0.00	27.35	35.040	22.66	4.73	6.76	97.94	.05	0.37
50	50	52	0	3	26.19	0.00	26.19	36.519	24.14	4.95	7.07	102.24	.00	0.01
100	100	96	0	4	23.60	0.00	23.60	36.935	25.24	4.80	6.86	93.74	.06	1.37
052 993 STANDARD DEPTHS														
0	0							26.99	21.77	4.82	6.88	99.38	0.07	0.69
10	10							27.13	22.13	4.78	6.83	100.12	0.06	0.56
20	20							27.28	22.48	4.75	6.78	97.55	0.05	0.43
30	30							27.20	22.95	4.77	6.81	99.37	0.04	0.27
50	50							26.19	24.14	4.95	7.07	102.24	0.00	0.01
75	75							24.94	24.68	4.88	6.97	95.39	0.00	0.34
100	100							23.60	25.24	4.80	6.86	93.74	0.06	1.37

R V PALUMBO CRUISE 052 STATION CMP-3B PRNC REFERENCE 052994

DATE 11 /14/74 BARO 1017.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 8.6 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-57.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 07 SONIC DEP 0257
 LONG 065-57.7 W REL HUMID 089 CLOUD AMT 4 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 8.6 GMT. 434 LOCAL MAX DEPTH 100 WIRE ANGLE 7
 OXYGEN TITER ,675 METER WHEEL FACTOR ,997

WIRE	DEPTH (M)	CZ	YZ	RN	YL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	OXYGEN			PHOS	NITRA
												MG/L	XSAT	ANGLE		
0	0	0	0	1	26,98	0,00	26,98	33,768	21,82	4,85	6,93	100,20	,05	0,00		
25	25	0	0	2	26,32	0,00	26,32	35,247	23,14	4,70	6,72	96,89	,00	0,00		
50	50	51	0	3	26,61	0,00	26,61	36,447	23,95	4,95	7,07	102,19	,04	0,00		
100	99	97	0	4	23,32	0,00	23,32	36,939	25,33	4,84	6,91	94,18	,04	0,00		
052 994 STANDARD DEPTHS																
	0				26,98			33,768	21,82	4,85	6,93	100,20	0,05	0,00		
	10				26,72			34,360	22,35	4,79	6,85	97,28	0,03	0,00		
	20				26,43			34,957	22,89	4,72	6,75	96,92	0,01	0,00		
	30				26,38			35,528	23,33	4,74	6,77	98,19	0,00	0,00		
	50				26,61			36,447	23,95	4,95	7,07	102,19	0,04	0,00		
	75				25,25			36,052	24,68	4,94	7,06	101,71	0,04	0,00		
	100				23,25			36,949	25,36	4,84	6,91	94,11	0,04	0,00		

R V PALUMBO CRUISE 052 STATION CMP=2B PRNC REFERENCE 052995
 DATE 11 /14/74 BARO 1017.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 9.0 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-56.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0285
 LONG 065-58.0 W REL HUMID 009 CLOUD AMT 1 WAVE HEIGHT 3 COLOR
 CAST 1 MESS TIME 9.0 GMT, 5 3 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	XSAT		
0	0	0	1	26.99	0.00	26.99	33.825	21.86	4.85	6.93	100.34	.03	0.00	
25	25	0	2	27.27	0.00	27.27	34.720	22.44	4.59	6.56	94.29	.06	0.00	
50	50	51	3	26.78	0.00	26.78	36.381	23.85	4.92	7.03	101.58	.05	0.00	
100	100	96	4	23.69	0.00	23.69	36.921	25.21	4.87	6.96	95.08	.05	0.00	
052 995 STANDARD DEPTHS														
	0			26.99			33.825	21.86	4.85	6.93	100.34	0.03	0.00	0.00
	10			27.10			34.183	22.09	4.75	6.78	99.22	0.04	0.00	0.00
	20			27.23			34.526	22.31	4.63	6.62	94.61	0.05	0.00	0.00
	30			27.24			35.040	22.70	4.64	6.63	95.97	0.06	0.00	0.00
	50			26.78			36.381	23.85	4.92	7.03	101.58	0.05	0.00	0.00
	75			25.59			36.651	24.43	4.89	6.99	100.86	0.05	0.00	0.00
	100			23.69			36.921	25.21	4.87	6.96	95.08	0.05	0.00	0.00

R V PALUMBO CRUISE 052 STATION CMP-2C PRNG REFERENCE 052996

DATE 11 /14/74 BARO 1017.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 9.6 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 17-56.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0480
 LONG 065-58.2 W REL HUMID 087 CLOUD AMT 1 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 9.6 GMT, 538 LOCAL MAX DEPTH 300 WIRE ANGLE 9
 OXYGEN TITER .675 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	27.03	0.00	27.03	33.804	21.83	4.86	6.95	100.63	.06	0.00
25	25	0	0	2	27.26	0.00	27.26	34.762	22.48	4.59	6.56	94.38	.05	0.00
50	50	50	0	3	26.83	0.00	26.83	36.296	23.77	4.80	6.85	98.90	.04	0.00
100	99	101	0	4	23.66	0.00	23.66	36.923	25.22	4.80	6.86	93.75	.05	0.00
150	148	150	0	5	21.73	0.00	21.73	36.918	25.76	4.52	6.46	86.77	.05	0.00
200	197	199	0	6	20.35	0.00	20.35	36.824	26.08	4.37	6.24	82.78	.08	0.00
250	247	253	0	7	18.13	0.00	18.13	36.536	26.43	4.50	6.43	79.30	.26	0.00
300	296	292	0	8	17.24	0.00	17.24	36.436	26.57	4.65	6.64	81.32	.33	0.00

052 996 STANDARD DEPTHS

0	27.03	33.804	21.83	4.86	6.95	100.63	0.06	0.00
10	27.12	34.187	22.09	4.76	6.80	99.43	0.06	0.00
20	27.23	34.559	22.33	4.64	6.63	94.79	0.05	0.00
30	27.24	35.071	22.72	4.62	6.59	95.56	0.05	0.00
50	26.83	36.296	23.77	4.80	6.85	98.90	0.04	0.00
75	25.33	36.853	24.66	4.80	6.86	98.93	0.04	0.00
100	23.61	36.923	25.23	4.80	6.86	93.61	0.05	0.00
150	21.68	36.908	25.78	4.51	6.44	86.53	0.05	0.00
200	20.21	36.807	26.10	4.37	6.24	82.75	0.09	0.00
250	18.06	36.827	26.44	4.51	6.44	79.41	0.27	0.00
300	17.17	36.428	26.59	4.66	6.66	81.48	0.34	0.00

R V PALUMBO CRUISE 052 STATION CMP-36 PRNG REFERENCE 052997

DATE 11 /14/74 BARO 1017.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 10.4 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-55.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0520
 LONG 065-57.2 W REL HUMID 088 CLOUD AMT 2 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 10.4 GMT, 621 LOCAL MAX DEPTH 300 WIRE ANGLE 11
 OXYGEN TITER .675 METER WHEEL FACTOR .997

WIRE	CE	DEPTH (M)	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
										ML/L	MG/L			
0	0	0	0	1	27.00	0.00	27.00	33.791	21.83	4.89	6.99	101.11	.00	0.00
25	25	0	0	2	27.31	0.00	27.31	34.982	22.63	4.67	6.67	96.50	.04	0.00
50	49	0	0	3	26.90	0.00	26.90	36.201	23.67	4.88	6.97	100.38	.00	0.00
100	98	101	0	4	24.28	0.00	24.28	36.856	24.98	4.95	7.07	96.76	.00	0.00
150	147	151	0	5	22.54	0.00	22.54	36.944	25.56	4.67	6.67	90.30	.03	0.00
200	196	198	0	6	20.31	0.00	20.31	36.818	26.08	4.32	6.18	81.98	.08	0.00
250	245	251	0	7	18.00	0.00	18.00	36.538	26.47	4.53	6.48	79.85	.27	0.00
300	294	295	0	8	17.14	0.00	17.14	36.415	26.58	4.63	6.61	80.88	.37	0.00

052 997 STANDARD DEPTHS

0	27.00	33.791	21.83	4.89	6.99	101.11	0.00	0.00
10	27.12	34.267	22.15	4.80	6.86	100.59	0.02	0.00
20	27.26	34.742	22.46	4.70	6.72	99.59	0.03	0.00
30	27.29	35.256	22.84	4.69	6.71	97.71	0.03	0.00
50	26.85	36.230	23.71	4.88	6.98	100.56	0.00	0.00
75	25.60	36.737	24.49	4.91	7.02	101.37	0.00	0.00
100	24.21	36.871	25.02	4.94	7.05	96.62	0.00	0.00
150	22.41	36.942	25.59	4.64	6.63	89.65	0.03	0.00
200	20.10	36.795	26.12	4.33	6.19	82.01	0.09	0.00
250	17.88	36.522	26.48	4.55	6.49	79.97	0.28	0.00
300	17.03	36.400	26.60	4.64	6.63	81.02	0.38	0.00

R V PALUMBO CRUISE 052 STATION CMP=2A PHNC REFERENCE 052998
 DATE 11 /14/74 BARO 1018.5 WEATHER 00 WIND VELOC 05 WAVE PERIOD 4
 HOUR 11.4 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-58.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0016
 LONG 065-58.6 W REL HUMID 072 CLOUD AMT 2 WAVE HEIGHT 8 COLOR

CAST 1 MESS TIME 11.4 GMT, 726 LOCAL MAX DEPTH 10 WIRE ANGLE 4
 OXYGEN TITER .675 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS NITRA					
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	26.86	0.00	0.00	26.86	33.239	21.46	4.86	6.94	99.04	.06	0.00
10	10	0	2	26.93	0.00	0.00	26.93	33.619	21.72	4.84	6.91	99.52	.07	0.00

052 998 STANDARD DEPTHS
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R V PALUMBO CRUISE 052 STATION CMP=3A PHNC REFERENCE 052999
 DATE 11 /14/74 BARO 1018.5 WEATHER 00 WIND VELOC 05 WAVE PERIOD 5
 HOUR 11.8 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 17-58.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0020
 LONG 065-57.1 W REL HUMID 070 CLOUD AMT 2 WAVE HEIGHT 7 COLOR

CAST 1 MESS TIME 11.8 GMT, 745 LOCAL MAX DEPTH 10 WIRE ANGLE 6
 OXYGEN TITER .675 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN				PHOS NITRA					
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	3	3	26.87	0.00	0.00	26.87	33.160	21.40	4.84	6.92	98.60	.08	0.00
10	10	10	4	26.99	0.00	0.00	26.99	33.691	21.76	4.74	6.78	97.81	.09	0.00

052 999 STANDARD DEPTHS
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N O T I C E

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