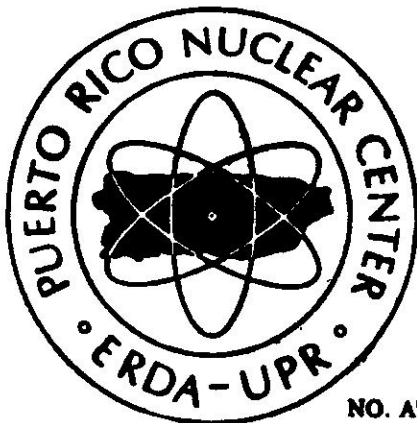


PRNC - 184

PUERTO RICO NUCLEAR CENTER

HYDROGRAPHIC DATA REPORT
WEST COAST OF PUERTO RICO
1973-1974

May 1, 1975

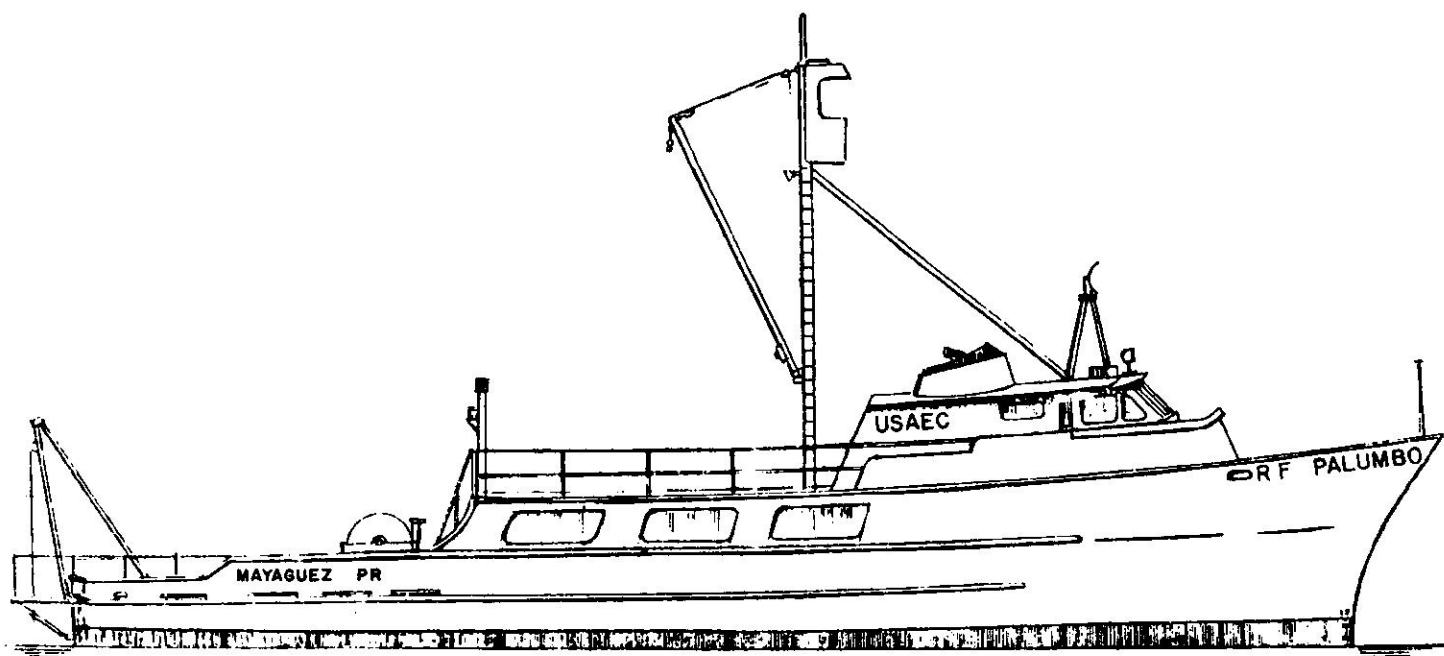


OPERATED BY UNIVERSITY OF PUERTO RICO UNDER CONTRACT
NO. AT (40-1)-1838 FOR U S ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

HYDROGRAPHIC DATA REPORT
WEST 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 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: the Punta Higuero site, PHI, is the site of the former "BONUS" nuclear power plant and the Cabo Rojo Platform, CRP, is a possible site for offshore power generating plants. The locations of both sites are shown in Figure 1 along with the other sites under consideration. The two west coast sites, PHI and CRP, are centered about 30 kilometers apart.

Cruises were scheduled to sample these sites quarterly to determine the effects of seasonal changes. The fall season of the 1973 cruise was cancelled 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 13 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 GMT to tenths of hours. The sampling dates were:

January 17-18, 1973	PHI
May 1-2, 1973	PHI
August 13-14, 1973	PHI
September 12, 1973	CRP
January 14-15, 1974	PHI
January 16, 1974	CRP
April 2, 1974	CRP
April 9, 1974	PHI
August 27, 1974	CRP
August 28-29, 1974	PHI
November 7, 1974	PHI
November 15, 1974	CRP

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 Higuero - January 17-18, 1973

E.D. Wood - Chief Scientist	S. Martin (benthos)
J. Kovarna - Cruise Leader	A. Szmant-Froelich (benthos)
O. Perez Rios	E. Rivera Ruiz
W. Ramirez Ramirez	B. Buchanan (benthos)
K. Gough	R. Castro (benthos)

Punta Higuero - May 1-2, 1973

E.D. Wood - Chief Scientist	J. Muñoz (plankton)
O. Perez Rios - Cruise Leader	E. Rivera Ruiz
J. Parrish	V. Vicente (benthos)
W. Ramirez Ramirez	R. Castro (benthos)
M. Youngbluth (plankton)	B. Buchanan (benthos)
G. Owen (plankton)	

Punta Higuero - August 13-14, 1973

E.D. Wood - Chief Scientist	E. Rodriguez
O. Perez Rios - Cruise Leader	M. Atwood
W. Ramirez Ramirez	F. Laras

Cabo Rojo Platform - September 12, 1973

O. Perez Rios - Cruise Leader	E. Rivera Ruiz
O. Menendez	J. Echevarria
W. Ramirez Ramirez	

Punta Higuero - January 14-15, 1974

E.D. Wood - Chief Scientist	J. Parrish
O. Perez Rios - Cruise Leader	J. Bissell

Cabo Rojo Platform - January 16, 1974

E.D. Wood - Chief Scientist	J. Parrish
O. Perez Rios - Cruise Leader	J. Bissell

Cabo Rojo Platform - April 2, 1974

O. Perez Rios - Cruise Leader	G. Johnson
F. Laras	J. Rivera

Punta Higuero - April 9, 1974

E.D. Wood - Chief Scientist	W. Gracia
O. Perez Rios - Cruise Leader	C. Bonafe
F. Laras	

Cabo Rojo Platform - August 27, 1974

G. Johnson - Cruise Leader	J. Montalvo
J. Stuart	

Punta Higuero - August 28-29, 1974

E.D. Wood - Chief Scientist
G. Johnson

J. Stuart
J. Montalvo

Punta Higuero - November 7, 1974

E.D. Wood - Chief Scientist
G. Johnson

J. Stuart
J. Montalvo

Cabo Rojo Platform - November 15, 1974

G. Johnson - Cruise Leader
J. Stuart

J. Montalvo

METHODS

Classical oceanographic methods were used in sampling and analyzing sea water. Depths of 0, (10), 25, 50, 100, 150, 200, 250, and 300 meters were sampled where the sea floor depth permitted. The samples were analyzed for temperature (Celsius), salinity (parts per thousand), dissolved oxygen (ml/l, mg/l, % sat.), reactive phosphate and reactive nitrate in the later cruises (both in $\mu\text{g-at./l}$).

All cruises were made on the RMV R.F. Palumbo. Water samples were collected in 5l PVC Niskin bottles (Nos. 1-8) augmented at times with 1.5l Nansen bottles (Nos. >9). Temperatures were determined using deep sea reversing thermometers calibrated annually at the Dept. of Oceanography, University of Washington, Seattle, Washington. Although only one temperature appears on the printout, each value is usually an average of two or three thermometers as the thermometer data are corrected and averaged on a separate routine from the regular hydro-data program. The thermometers were allowed to equilibrate at least 3 minutes before being tripped and then allowed about 5 minutes equilibration on deck before being read by at least two different people. Salinity samples were drawn into 250 ml Nalgene polycarbonate salt water aged bottles and analyzed on shore with a Beckman induction salinometer. Dissolved oxygen samples were drawn into 300 ml BOD bottles, pickled and titrated using the Winkler method on board ship within a few hours of being drawn. Samples for nitrate and phosphate were drawn into 500 ml and 125 ml polyethylene bottles, respectively, frozen and returned to the laboratory for analyses. Phosphate concentrations were determined by the Murphy and Riley method and nitrate by the method described by Wood, Richards and Armstrong.

SHIP

The RMV R.F. Palumbo is owned by ERDA (USAEC) and has been operated by the Puerto Rico Nuclear Center since 1971. The ship is 4 years old. It is 29 m (95.5 feet) in length, has a net displacement of 250 tonnes (275 tons) and has a 350 hp Caterpillar diesel engine cruising at 10 knots. The RMV R.F. Palumbo is berthed at Punta Guanajibo near the PRNC Marine Biology Laboratory just south of the city of Mayaguez, Puerto Rico. The ship was under the command of David Green, Captain USN (retired), or Cayetano Hernandez on the 1973-1974 cruises.

ACKNOWLEDGEMENTS

The Puerto Rico Nuclear Center is operated by the University of Puerto Rico under contract for the Energy Research and Development Administration (ERDA-formerly USAEC) No. AT(40-1)-1833. The data reported here were collected under contract with the Puerto Rico Water Resources Authority, San Juan, P.R.

AUTHORS

E.D. Wood, Oceanographer, Head of the Site Selection Survey Project - January 1973 to June 1975.

Rosa Asencio, In charge of data processing.

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Mayaguez, Puerto Rico 00708

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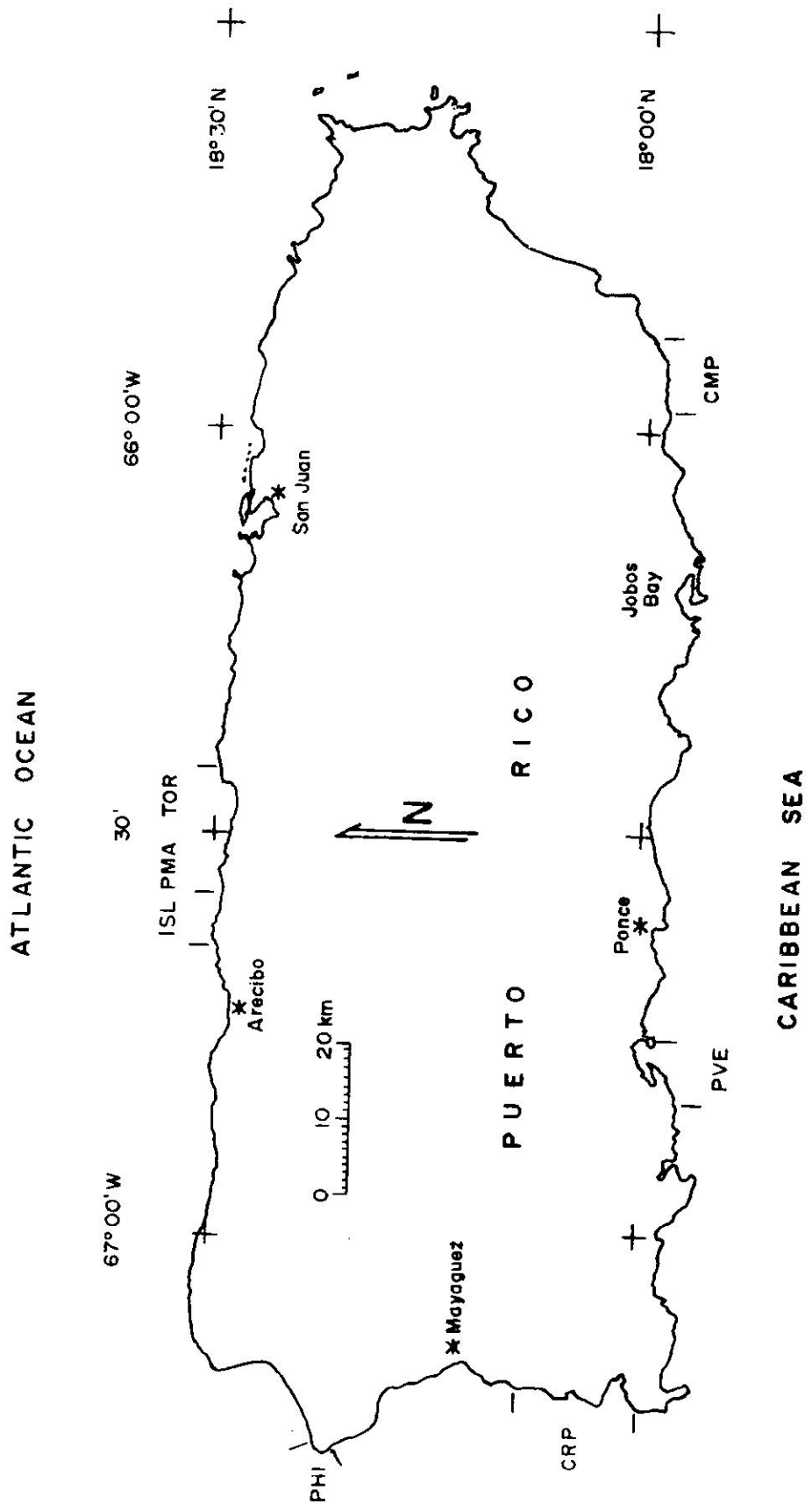


Fig. 1

Table 1

<u>Station</u>	<u>Location</u>		<u>Depth Z (m)</u>	<u>Number of Sample Depths</u>
	<u>Lat. N</u>	<u>Long. W</u>		
PHI-1A	18°19.8'	67°15.4'	15	2
1B	18°19.6'	67°16.0'	(175)	4
1C	18°19.1'	67°16.8'	270	8
PHI-2A	18°20.8'	67°16.1'	25	2
2B	18°20.5'	67°16.6'	420	4
2C	18°20.0'	67°17.2'	510	8
PHI-3A	18°21.4'	67°16.5'	15	2
3B	18°21.3'	67°17.1'	146	4
3C	18°21.2'	67°17.7'	480	8
PHI-4A	18°22.1'	67°16.5'	11	2
4B	18°22.7'	67°18.0'	120	4
4C	18°23.4'	67°19.5'	320	8
PHI-5A	18°22.6'	67°15.9'	15	2
5B	18°23.5'	67°16.6'	160	4
5C	18°24.6'	67°17.4'	420	8
PHI-6A	18°22.8'	67°15.2'	18	2
6B	18°23.9'	67°15.5'	165	4
6C	18°25.1'	67°15.8'	480	8
CRP-1B	18°00.0'	67°13.5'	14.64	2
CRP-2A	18°01.0'	67°12.6'	11.90	2
2B	18°01.0'	67°13.5'	14.64	2
CRP-3A	18°02.0'	67°12.0'	8.24	2
3B	18°02.0'	67°13.6'	12.81	2
CRP-4A	18°03.0'	67°12.4'	9.15	2
4B	18°03.0'	67°13.5'	14.64	2
4C	18°03.0'	67°15.6'	21.96	2
CRP-5A	18°04.0'	67°12.2'	9.61	2
5B	18°04.0'	67°13.5'	16.47	2
CRP-6B	18°05.0'	67°13.5'	14.64	2
CRP-7A	18°06.0'	67°12.2'	9.61	2
7B	18°06.0'	67°13.5'	14.64	2
CRP-8B	18°07.0'	67°13.5'	16.47	2
CRP-9A	18°08.0'	67°11.3'	6.86	2
9B	18°08.0'	67°13.5'	18.3	2

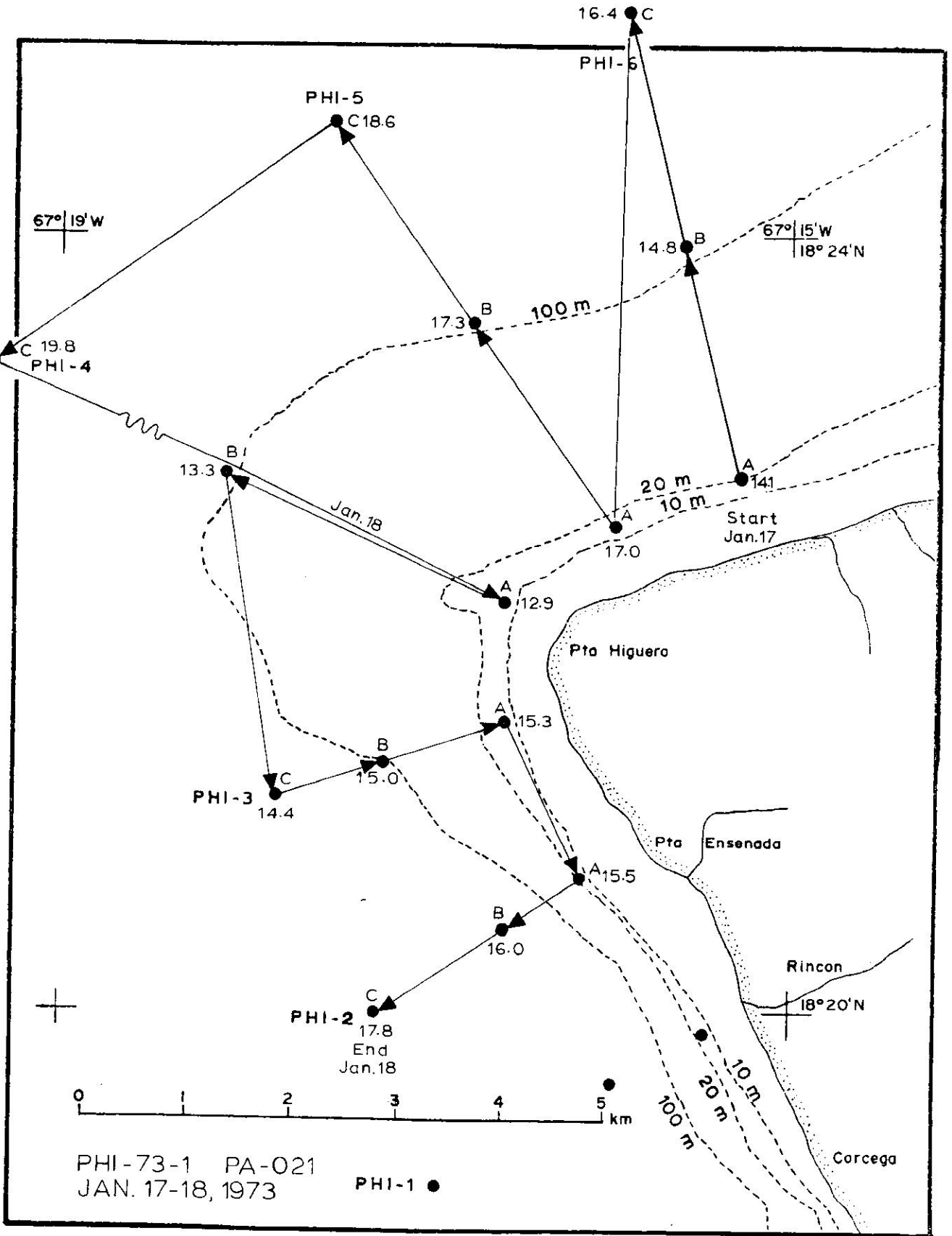


Fig. 2

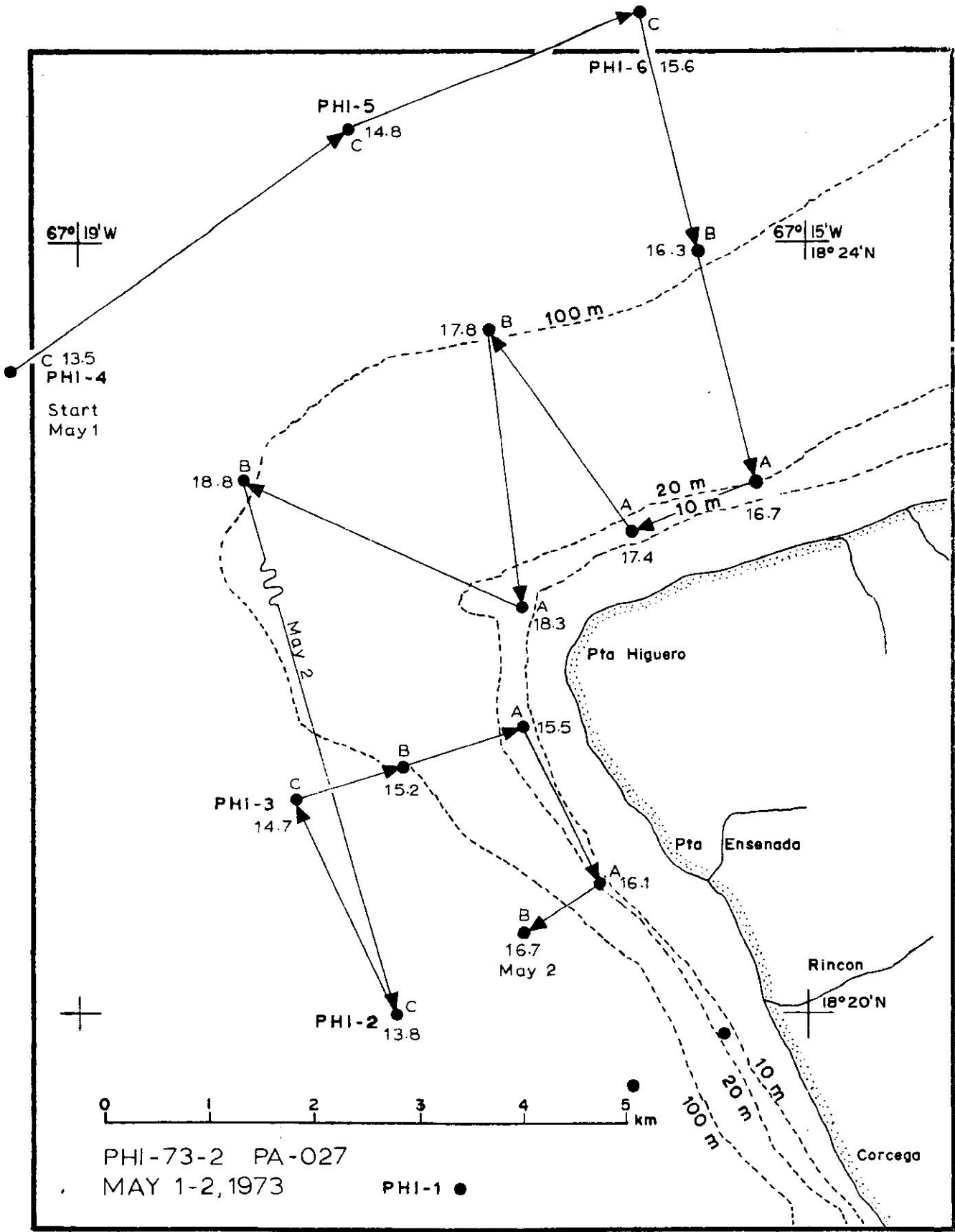


Fig. 3

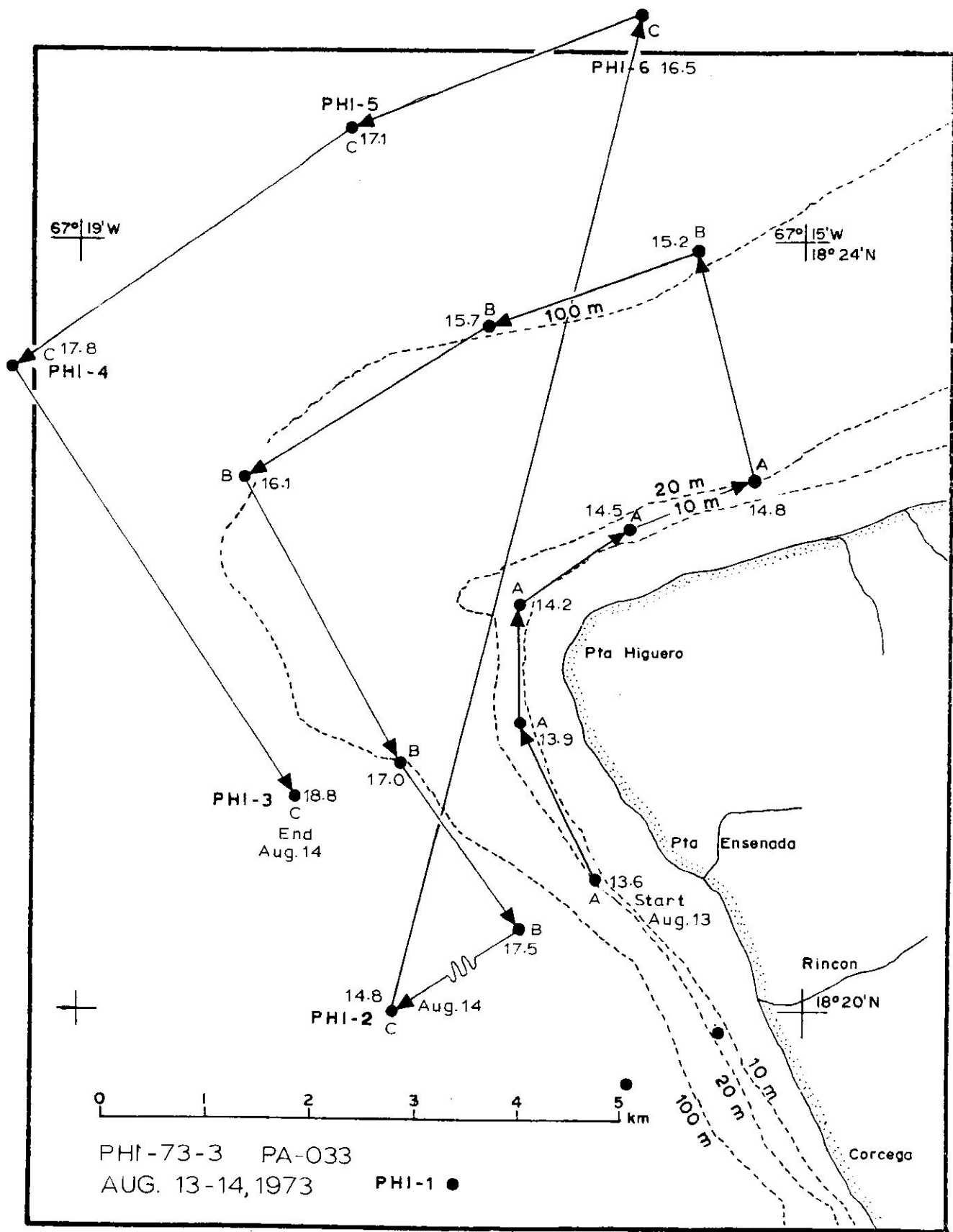


Fig. 4

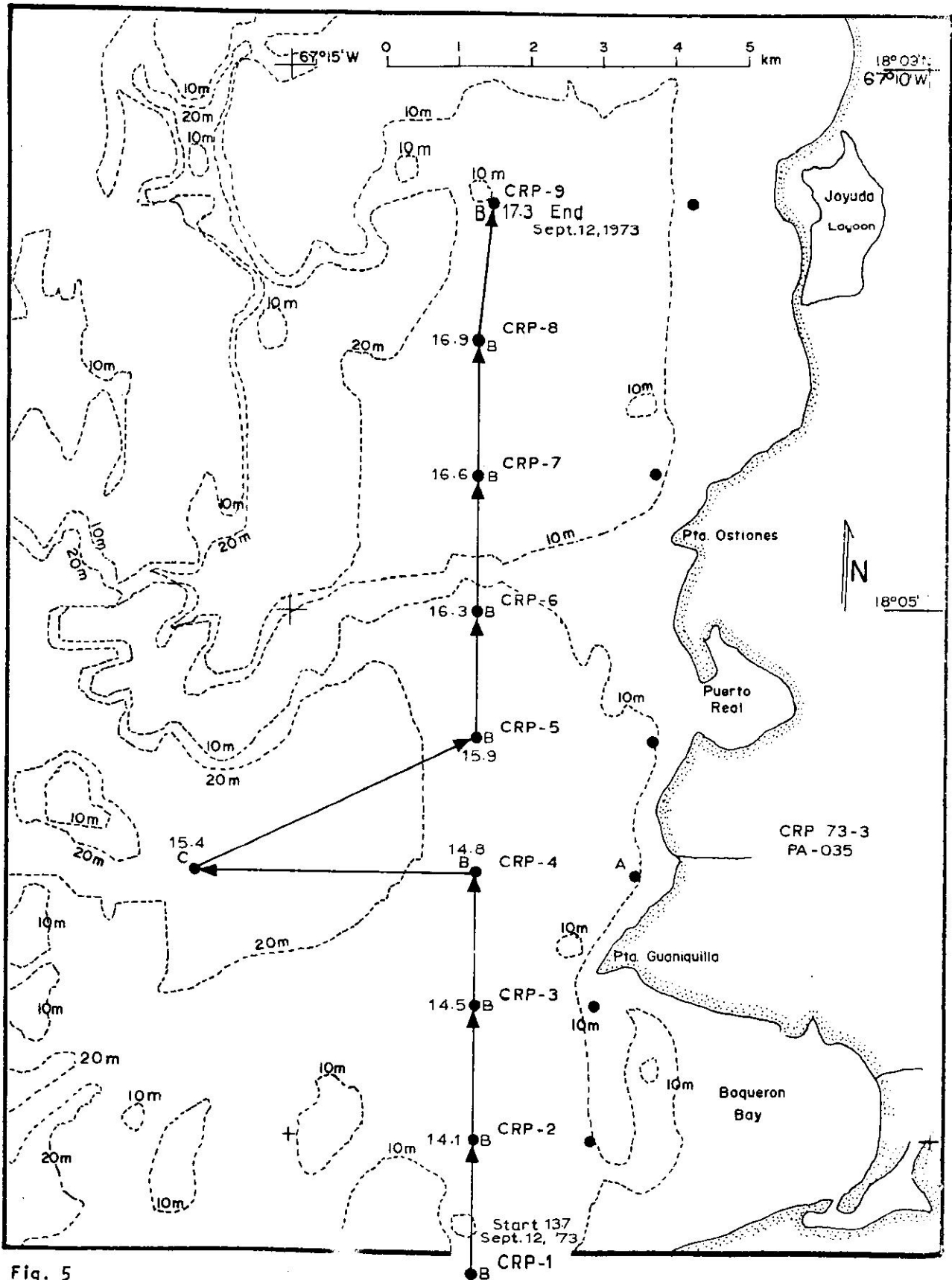


Fig. 5

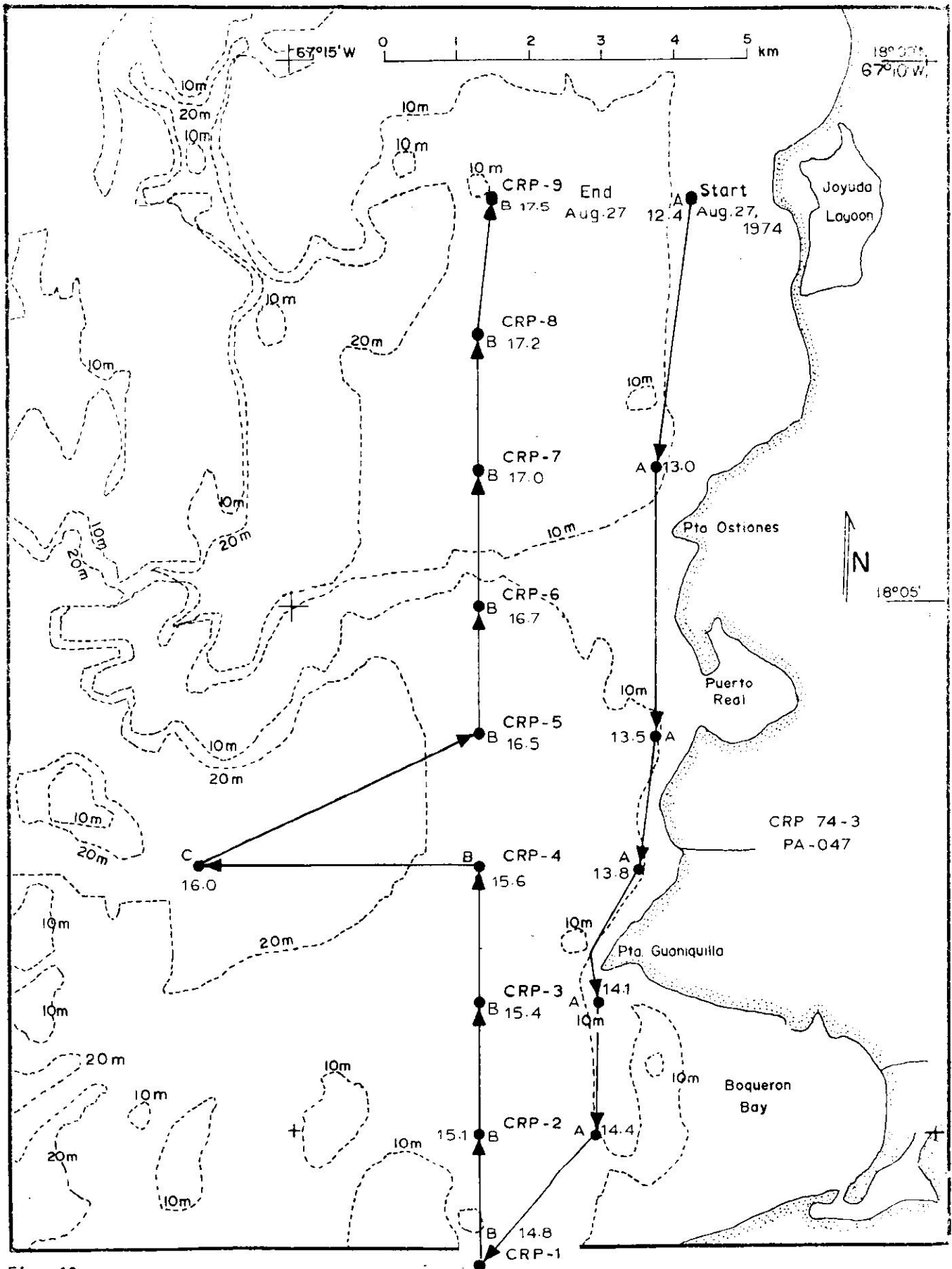


Fig. 10

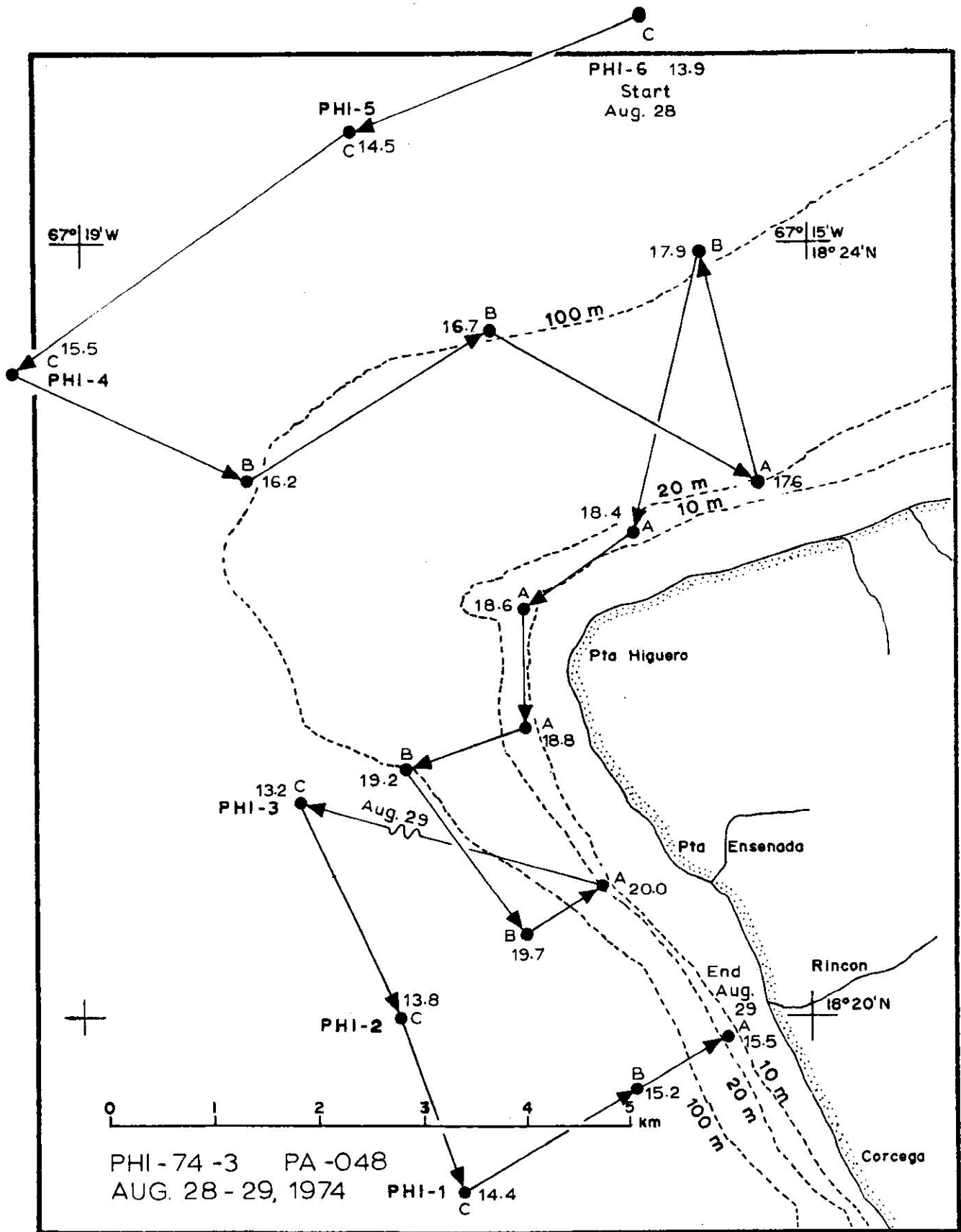


Fig. 11

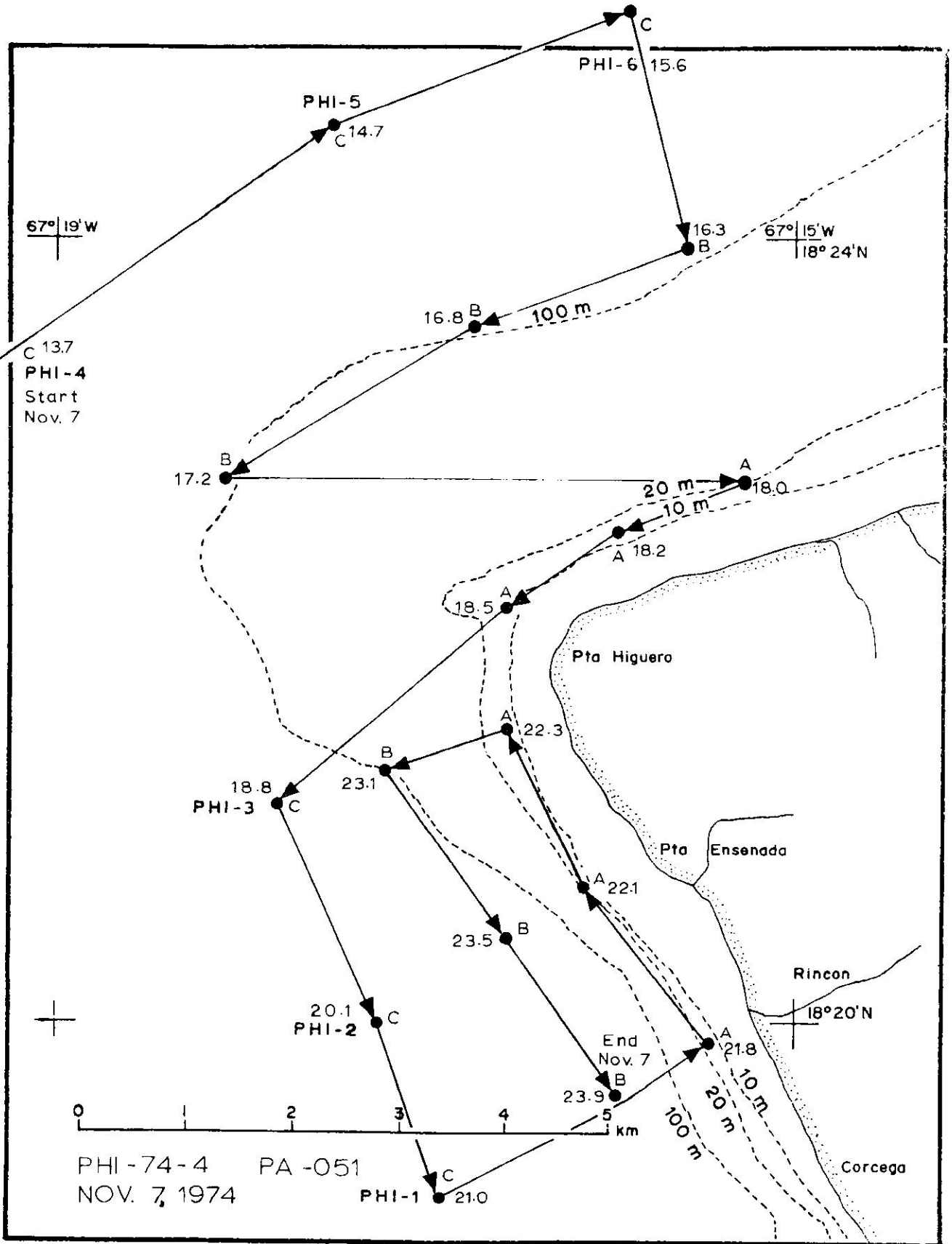


Fig. 12

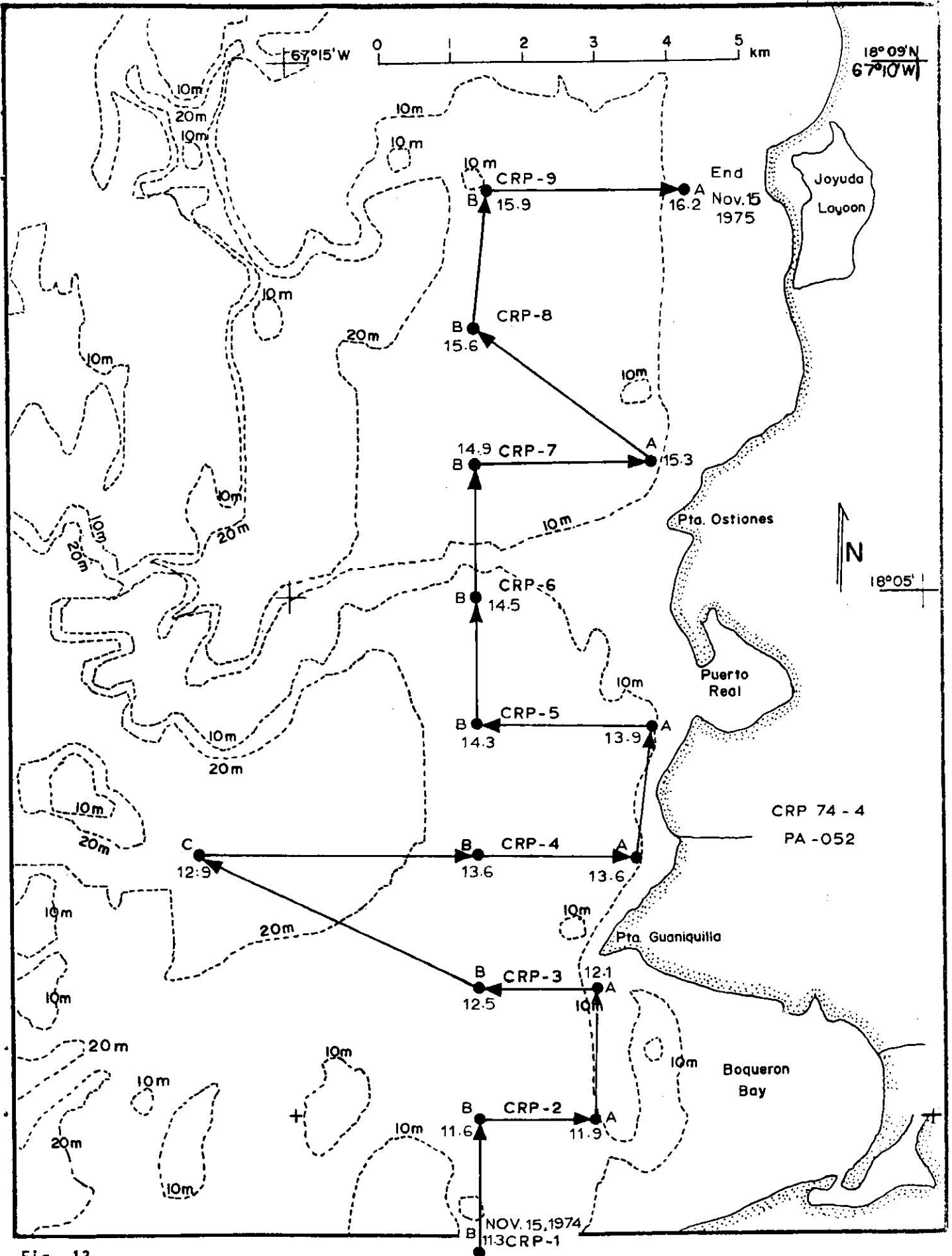


Fig. 13

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.		
20-----	Greenish-blue (or green 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.
30-----	Bluish-green (or blue green).		
40-----	Green.		
50-----	Light green.		
60-----	Yellowish-green.	00	Cloud development not observed or not observable. No hydrometeors except clouds.
70-----	Yellow green.		
80-----	Green yellow.		
90-----	Greenish-yellow.	01	Clouds generally dissolving or becoming less developed.
99-----	Yellow.	02	State of sky on the whole unchanged. Characteristic change of the state of sky during past hour.
STATE OF SEA-WIND WAVES (WMO Code 75)			
Code	Description	Height Meters	
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	Higher number indicate various rain conditions.

Table 2 (continued)

COMPASS DIRECTION CODE

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

00	---	Calm
01	5° to 14°	
02	15° to 24°	NNE.
03	25° to 34°	
04	35° to 44°	
05	45° to 54°	NE.
06	55° to 64°	
07	65° to 74°	ENE.
08	75° to 84°	
09	85° to 94°	E.
10	95° to 104°	
11	105° to 114°	ESE.
12	115° to 124°	
13	125° to 134°	
14	135° to 144°	SE
15	145° to 154°	
16	155° to 164°	SSE.
17	165° to 174°	
18	175° to 184°	S.
19	185° to 194°	
20	195° to 204°	SSW.
21	205° to 214°	
22	215° to 224°	
23	225° to 234°	SW.
24	235° to 244°	
25	245° to 254°	WSW.
26	255° to 264°	
27	265° to 274°	W.
28	275° to 284°	
29	285° to 294°	WNW.
30	295° to 304°	
31	305° to 314°	
32	315° to 324°	NW.
33	325° to 334°	
34	335° to 344°	NNW.
35	345° to 354°	
36	355° to 4°	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

Code	Amount of sky covered in tenths
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

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

HYDROGRAPHIC DATA

R V PALUMBO CRUISE 021 STATION PHJ-6A PRNC REFERENCE 021250

DATE 01 /17/73 BARO 1016.4 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 14.1 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 18-22.8 N TEMP WET 0.0 CLOUD TYPE 9 WAVE DIREC 02 SONIC DEP 0015
 LONG 067-15.2 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 14.1 GMT, 10 6 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	XSAT	PHOS	NITRA
0	0	0	10	26.72	26.71	26.72	35.384	23.12	4.77	6.77	98.29	.07	0.81
10	10	6	12	26.69	0.00	26.69	35.381	23.12	4.77	6.82	98.96	.16	0.16
STANDARD DEPTHS													
021	250					26.72	35.384	23.12	4.77	6.77	98.29	0.07	0.81
						26.69	35.381	23.12	4.77	6.82	98.96	0.16	0.16

R V PALUMBO CRUISE 021 STATION PHI-68 PRNC REFERENCE 021251

DATE 01 /17/73 BARO 1015.0 WEATHER 02 WIND VELOC 01 WAVE PERIOD 5
 HOUR 14.8 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 16-23.8 N TEMP WET 0.0 CLOUD TYPE 9 WAVE DIREC 02 SONIC DEP 0152
 LONG 067-15.5 W REL HUMID 070 CLOUD AMT 1 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 14.8 GMT, 1049 LOCAL MAX DEPTH 50 WIRE ANGLE %
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		PHOS	NITRA		
		TZ	BN				TL	TM			ML/L	MG/L
0	0	0	10	26.86	26.86	26.86	26.86	4.80	6.86	99.74	.06	0.48
25	25	0	16	26.80	0.00	26.80	35.392	4.80	6.97	101.37	.06	0.08
50	50	45	12	26.75	0.00	26.75	35.396	4.81	6.86	99.77	.04	0.16
100	100	96	15	26.37	0.00	26.37	35.798	4.60	6.68	97.38	.05	0.48
STANDARD DEPTHS												
021 251				26.86	35.391	23.08	4.80	6.86	99.74	0.06	0.48	
	10			26.84	35.391	23.79	4.80	6.90	100.39	0.06	0.32	
	20			26.81	35.392	23.09	4.87	6.95	101.11	0.06	0.15	
	30			26.79	35.392	23.10	4.87	6.96	101.22	0.06	0.10	
	50			26.75	35.396	23.12	4.81	6.86	99.77	0.04	0.16	
	75			26.61	35.531	23.26	4.74	6.77	98.47	0.04	0.29	
	100			26.37	35.798	23.54	4.60	6.68	97.38	0.05	0.48	

R V PALUMBO CRUISE 021

STATION PHI-6C

PRNC REFERENCE 021252

DATE 01 /17/73 BARO 1014.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 16.4 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 06 TRANSPAR
 LAT 18-25.2 N TEMP WET 0.0 CLOUD TYPE 9 WAVE DIREC 03 SONIC DEP 0507
 LONG 067-15.9 W REL HUMID 060 CLOUD AMT 2 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 16.4 GMT, 1222 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	10	26.76	26.75	26.76	35.378	23.10	4.81	6.86	99.73	.08	0.32
25	25	28	16	26.69	0.00	26.69	35.371	23.12	4.79	6.84	99.22	.03	0.45
50	50	50	12	26.67	0.00	26.67	35.380	23.13	4.72	6.75	97.95	.07	0.16
100	100	95	15	26.23	0.00	26.23	35.928	23.68	4.62	6.60	96.26	.07	0.56

CAST 2 MESS TIME 15.9 GMT, 1155 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
150	150	0	10	20.85	20.85	20.85	36.652	25.81	2.92	4.17	55.48	.18	4.19
200	200	200	16	18.89	0.00	18.89	36.562	26.26	4.32	6.17	76.46	.24	4.04
250	249	247	12	17.69	0.00	17.69	36.565	26.56	4.38	6.25	77.01	.40	7.42
300	299	294	15	16.97	0.00	16.97	36.325	26.55	4.44	6.34	77.35	.37	8.06

021 252 STANDARD DEPTHS

0	26.76	35.378	23.10	4.81	6.86	99.73	0.08	0.32
10	26.73	35.375	23.11	4.80	6.85	99.55	0.06	0.37
20	26.70	35.372	23.11	4.79	6.84	99.34	0.04	0.42
30	26.68	35.371	23.12	4.77	6.82	99.00	0.03	0.40
50	26.67	35.380	23.13	4.72	6.75	97.95	0.07	0.16
75	26.52	35.599	23.34	4.67	6.67	97.07	0.07	0.20
100	26.23	35.928	23.68	4.62	6.60	96.26	0.07	0.56
150	20.85	36.652	25.81	2.92	4.17	55.48	0.18	4.19
200	18.89	36.562	26.26	4.32	6.17	76.46	0.24	4.04
250	17.67	36.561	26.57	4.38	6.25	77.01	0.40	7.44
300	16.96	36.320	26.55	4.44	6.34	77.36	0.37	8.07

R V FALUBO CRUISE #21 STATION PHI-5R PRNC REFERENCE 021254
 DATE 01 /17/73 PARO 1013.9 WEATHER 02 WIND VELOC 01 WAVE PERIOD 5
 HOUR 17.3 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 18-24.4 N TEMP WET 0.0 CLOUD TYPE 4 WAVE DIREC 04 SONIC DEP 0109
 LONG 067-16.6 W REL HUMID 069 CLOUD AMT 6 WAVE HEIGHT 2 COLOR 10
 CAST 1 MESS TIME 17.5 GMT, 1328 LOCAL MAX DEPTH 100 WIRE ANGLE 8
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
		TZ	TL	TM	TN						
0	0	0	26.97	26.96	26.97	23.04	4.80	6.86	99.87	.04	0.00
25	25	26	26.78	0.00	26.78	23.10	4.74	6.77	98.37	.02	0.00
50	50	48	26.70	0.00	26.70	23.20	4.79	6.84	99.47	.02	0.16
100	99	106	24.98	0.00	24.98	24.34	4.52	6.46	86.66	.14	0.90

#21 254 STANDARD DEPTHS

0	26.97	35.392	23.05	4.80	6.86	99.87	0.04	0.00
10	26.89	35.390	23.07	4.77	6.82	99.27	0.03	0.00
20	26.81	35.369	23.09	4.75	6.78	98.62	0.02	0.00
30	26.75	35.396	23.12	4.75	6.78	98.56	0.02	0.02
50	26.70	35.483	23.20	4.79	6.84	99.47	0.02	0.16
75	25.95	35.840	23.70	4.68	6.68	96.90	0.07	0.50
100	24.94	36.298	24.36	4.51	6.45	86.61	0.14	0.92

R V PALUMBO CRUISE 021 STATION PHI-5C PRNC REFERENCE 021255

DATE 01 /17/73 BARO 1012.8 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4

HOUR 18.6 TEMP DRY 34.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR

LAT 18-24.7 N TEMP WFT 0.0 CLOUD TYPE 4 WAVE DIREC 03 SONIC DEP 0369

LONG 067-17.5 W REL HUMID 065 CLOUD AMT 6 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 18.6 GMT, 1438 LOCAL MAX DEPTH 100 WIRE ANGLE 0

OXYGEN TITER .680 METER WHEEL FACTOR .997

CAST 2 MESS TIME 18.1 GMT, 14 8 LOCAL MAX DEPTH 300 WIRE ANGLE 15

OXYGEN TITER .630 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		OXYGEN		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
0	0	0	10	26.84	26.84	26.84	35.384	23.08	4.80	6.86	99.70	.07	0.32		
25	25	27	15	26.77	0.00	26.77	35.387	23.10	4.81	6.86	99.77	.04	0.32		
50	50	48	12	26.53	0.00	26.53	35.732	23.44	4.67	6.67	97.35	.06	0.48		
100	100	101	16	24.95	0.00	24.95	36.411	24.44	4.51	6.45	87.02	.05	0.94		

DEPTH (M)		TEMP		TAVE		SALIN		SIG T		OXYGEN		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
150	145	0	10	24.03	24.05	24.04	36.640	24.89	3.00	4.40	59.63	.11	1.45		
200	193	184	15	20.48	0.00	20.48	36.647	25.91	4.41	6.30	83.59	.32	4.67		
250	241	0	12	18.96	0.00	18.96	36.564	26.24	4.31	6.16	76.38	.18	11.84		
300	289	0	16	17.87	0.00	17.87	36.539	26.50	4.32	6.17	75.95	.26	7.42		

STANDARD DEPTHS	
0	26.84 55.384
10	26.81 55.385
20	26.79 55.386
30	26.75 55.438
50	26.53 55.732
75	25.79 36.100
100	24.95 36.411
150	23.68 36.641
200	20.18 36.636
250	18.74 36.557
300	17.62 36.533

DATE 01 /17/73 PARO 1012.4 WEATHER 02 WIND VELOC 23 WAVE PERIOD 3
 HOUR 19.8 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 18-23.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0374
 LONG 067-19.3 W REL HUMID 071 CLOUD AMT 6 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 19.8 GMT, 1546 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP			OXYGEN			%SAT	PHOS	NITRA		
			TZ	BN	TL	TM	TAVE	SALIN				SIG T	ML/L
0	0	0	10	26.78	26.75	26.77	35.383	23.10	4.84	6.91	100.46	.06	0.32
25	25	28	15	26.71	0.00	26.71	35.400	23.13	4.78	6.83	99.17	.08	0.08
50	50	51	12	26.59	26.98	26.79	35.530	23.21	4.60	6.65	96.99	.05	0.16
100	100	103	16	25.65	0.00	25.65	36.306	24.15	4.62	6.60	94.87	.07	0.81

CAST 2 MESS TIME 19.0 GMT, 15 3 LOCAL MAX DEPTH 300 WIRE ANGLE 12
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP			OXYGEN			%SAT	PHOS	NITRA		
			TZ	BN	TL	TM	TAVE	SALIN				SIG T	ML/L
150	147	0	10	22.88	22.88	22.88	36.692	25.27	2.90	4.25	57.33	.16	1.61
200	196	192	15	19.79	0.00	19.79	36.549	26.02	4.40	6.28	78.27	.27	4.84
250	244	0	12	18.73	0.00	18.73	36.474	26.23	4.35	6.18	76.39	.27	7.10
300	293	289	16	17.72	0.00	17.72	36.422	26.45	4.44	6.34	77.79	.33	7.42

021 256 STANDARD DEPTHS

WIRE	CZ	DEPTH (M)	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	26.77	35.383	23.10	4.84	6.91	100.46	0.06	0.32
10	10	10	26.74	35.390	23.11	4.81	6.88	99.94	0.07	0.22
20	20	20	26.72	35.397	23.13	4.79	6.85	99.45	0.08	0.12
30	30	30	26.71	35.413	23.14	4.75	6.79	98.70	0.08	0.10
50	50	50	26.79	35.530	23.21	4.60	6.65	96.99	0.05	0.16
75	75	75	26.44	35.899	23.59	4.64	6.63	96.89	0.06	0.43
100	100	100	25.65	36.306	24.15	4.62	6.60	94.87	0.07	0.81
150	150	150	22.66	36.690	25.33	3.04	4.34	58.45	0.17	1.79
200	200	200	19.66	36.541	26.04	4.39	6.27	78.09	0.27	5.08
250	250	250	18.60	36.467	26.26	4.34	6.20	76.47	0.28	7.19
300	300	300	17.58	36.415	26.48	4.45	6.36	77.99	0.34	7.47

R V PALUMBO CRUISE 021 STATION PHJ-4A PRNC REFERENCE 021257

DATE 01 /18/73 BARO 1014.4 WEATHER 02 WIND VELOC 03 WAVE PERIOD 5
 HOUR 12.9 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 07 TRANSPAR *
 LAT 18-22.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 20 SONIC DEP 0018
 LONG 067-16.5 W REL HUMID 068 CLOUD AMT 5 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 12.9 GMT, 852 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
		TZ	TL								
0	0	0	26.65	26.55	35.381	23.15	4.50	6.52	94.49	.06	0.00
10	10	12	26.51	0.00	35.319	23.13	4.60	6.66	96.39	.05	0.32
STANDARD DEPTHS											
021 257				26.60	35.381	23.15	4.50	6.52	94.49	0.06	0.00
				26.51	35.319	23.13	4.60	6.66	96.39	0.05	0.32

C V PALUMBO CRUISE #21 STATION PHI-4R PRNC REFERENCE 021258
 DATE 01 / 18 / 73 PARO 1014.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 13.3 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 08 TRANSPAR *
 LAT 18-22.6 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 21 SONIC DEP 0152
 LONG 067-18.0 W REL HUMID 068 CLOUD AMT 5 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 13.3 GMT, 915 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	RN	TZ	T2	T1	TAVE	SALIN	SIG T	ML/L MG/L	%SAT	PHOS	NITRA
			TM	TM												
0	0	0	26.74	26.73	26.74	35.381	23.11	4.80	6.86	99.58	.04	0.00				
25	25	23	26.71	0.00	26.71	35.414	23.14	4.97	7.10	103.15	.03	0.00				
50	50	49	26.69	0.00	26.69	35.413	23.15	4.80	6.86	99.59	.04	0.00				
100	100	100	26.23	0.00	26.23	35.797	23.58	4.52	6.51	94.63	.06	0.48				

STANDARD DEPTHS	0	10	20	30	50	75	100
26.74	35.381	23.11	4.80	6.86	99.58	.04	0.00
26.73	35.394	23.12	4.87	6.95	101.00	.04	0.00
26.71	35.408	23.14	4.94	7.06	102.58	.03	0.00
26.71	35.414	23.14	4.92	7.07	102.79	.03	0.00
26.69	35.413	23.15	4.80	6.86	99.59	.04	0.00
26.53	35.541	23.30	4.60	6.66	96.79	.05	0.16
26.23	35.797	23.58	4.52	6.51	94.63	.06	0.48

021 258

R V PALUMBO CRUISE 021 STATION PHI-3C PRNC REFERENCE 021259

DATE 01 /18/73 RARD 1014.4 WEATHER 02 WIND VELOC W1 WAVE PERIOD 6
 HOUR 14.4 TEMP DRY 30.0 VISIBILITY 6 WIND DIREC 08 TRANSPAR *
 LAT 18-21.2 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 33 SONIC DEP 0457
 LONG 067-17.8 W REL HUMID 067 CLOUD AMT 5 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 14.4 GMT, 1025 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITR .690 METER WHEEL FACTOR .997

WIRE #	DEPTH (M)	TEMP			TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
		TZ	PN	TL								
0	0	10	10	26.75	26.75	35.365	23.09	4.76	6.80	98.71	.03	0.00
25	25	29	15	26.72	0.00	35.400	23.13	4.76	6.80	98.75	.02	0.16
50	50	62	12	26.72	0.00	35.413	23.15	4.59	6.49	94.24	.04	0.00
100	100	0	16	25.74	0.00	36.236	24.07	4.79	6.84	98.16	.09	0.00

CAST 2 MESS TIME 14.0 GMT, 958 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE #	DEPTH (M)	TEMP			TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
		TZ	BN	TL								
150	150	0	10	20.73	20.71	36.642	25.84	2.91	4.16	55.26	.23	4.67
200	200	209	15	19.25	0.00	36.531	26.14	4.27	6.11	75.80	.21	0.00
250	250	247	12	18.09	0.00	36.419	26.35	4.27	6.10	74.93	.30	0.00
300	300	304	16	17.48	0.00	36.347	26.45	4.25	6.08	74.34	.32	7.90

021 259 STANDARD DEPTHS

WIRE #	DEPTH (M)	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	26.75	35.365	23.09	4.76	6.80	98.71	0.03	0.00	
10	10	26.74	35.379	23.11	4.76	6.80	98.73	0.03	0.06	
20	20	26.73	35.393	23.12	4.76	6.80	98.75	0.02	0.13	
30	30	26.71	35.405	23.13	4.72	6.74	97.91	0.02	0.14	
50	50	26.70	35.413	23.15	4.54	6.49	94.24	0.04	0.00	
75	75	26.37	35.784	23.53	4.52	6.50	94.72	0.06	0.00	
100	100	25.74	36.236	24.07	4.79	6.84	98.16	0.09	0.00	
150	150	20.72	36.642	25.84	2.91	4.16	55.26	0.23	4.67	
200	200	19.25	36.531	26.14	4.27	6.11	75.80	0.21	0.00	
250	250	18.09	36.419	26.35	4.27	6.10	74.93	0.30	0.00	
300	300	17.48	36.347	26.45	4.25	6.08	74.34	0.32	7.90	

R V PALUMBO CRUISE M21 STATION PHI-3E PRNC REFERENCE 021260
 DATE 01 /18/73 BARO 1014.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 15.0 TEMP DRY 30.5 VISIBILITY 8 WIND DIREC 18 TRANSPAR *
 LAT 18-20.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 35 SONIC DEP 0256
 LONG 067-17.2 W REL HUMID 067 CLOUD AMT 5 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 15.0 GMT, 11 3 LOCAL MAX DEPTH 100 WIRE ANGLE 2
 OXYGEN TITER .680 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	10	26.74	26.74	26.74	35.370	23.10	4.70	6.80	98.71	.02	0.48
25	25	29	15	26.68	0.00	26.68	35.349	23.10	4.70	6.84	99.16	.02	0.16
50	50	51	12	26.65	0.00	26.65	35.402	23.15	4.70	6.72	97.55	.03	0.32
100	100	106	16	24.66	0.00	24.66	36.444	24.55	4.42	6.36	85.85	.07	0.97
STANDARD DEPTHS													
0	0					26.74	35.370	23.10	4.70	6.80	98.71	0.02	0.48
10	10					26.72	35.362	23.10	4.77	6.81	98.89	0.02	0.35
20	20					26.69	35.353	23.10	4.78	6.83	99.07	0.02	0.21
30	30					26.67	35.352	23.11	4.78	6.82	98.97	0.02	0.16
50	50					26.65	35.402	23.15	4.70	6.72	97.55	0.03	0.32
75	75					25.98	35.767	23.64	4.50	6.56	95.03	0.05	0.59
100	100					24.66	36.444	24.56	4.42	6.36	85.85	0.07	0.97

R V PALUMBO CRUISE 021

STATION PHI-3A

PRNC REFERENCE 021261

DATE 01 /18/73 BARO 1014.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 15.3 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 19 TRANSPAR *
 LAT 18-20.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 36 SONIC DEP
 LONG 067-16.5 W REL HUMID 066 CLOUD AMT 4 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 15.3 GMT, 1118 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			PHOS NITRA					
	CZ	TZ	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT		
0	0	0	10	26.69	26.70	35.367	23.11	4.70	6.72	97.53	.02	0.08
10	8	15	26.67	0.00	26.67	35.381	23.13	4.68	6.68	96.96	.04	0.48

021 261 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 021

STATION PHI-2A

PRNC REFERENCE 021262

DATE 01 /18/73 BARO 1014.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 15.5 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 16 TRANSPAR *
 LAT 18-20.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 33 SONIC DEP 0016
 LONG 067-16.7 W REL HUMID 064 CLOUD AMT 4 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 15.5 GMT, 1132 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .650 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			PHOS NITRA					
	CZ	TZ	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT		
0	0	10	26.75	26.73	26.74	35.364	23.10	4.79	6.77	98.28	.03	0.08
10	13	15	26.66	0.00	26.66	35.364	23.12	4.79	6.85	99.31	.06	0.08

021 262 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 021 STATION PHI-2B PRNC REFERENCE 021263
 DATE 01 /18/73 BARO 1014.4 WEATHER 02 WIND VELOC 09 WAVE PERIOD 5
 HOUR 16.0 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 15 TRANSPAR *
 LAT 14-20.6 N TEMP WET 0.0 CLOUD TYPE 6 WAVE DIREC 33 SONIC DEP 0338
 LONG 067-16.7 W REL HUMID 062 CLOUD AMT 4 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 16.0 GMT, 1158 LOCAL MAX DEPTH 100 WIRE ANGLE 8
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CF	DEPTH (M)	TEMP		TL	RN	TZ	RN	TL	TAVE	SALIN	SIG T	ML/L	OXYGEN		
			TM	TM										%SAT	PHOS	NITRA
0	*	0	26.76	26.77	26.77	0	10	26.76	26.77	35.365	23.09	4.78	6.83	99.15	.05	0.08
25	25	29	26.68	0.00	26.68	15	15	26.68	35.287	23.06	4.79	6.85	99.18	.04	0.00	
50	50	49	26.59	0.00	26.59	12	12	26.59	35.465	23.22	4.69	6.61	96.05	.04	0.40	
100	99	102	23.73	0.00	23.73	16	16	23.73	36.567	24.93	4.51	6.44	86.89	.11	1.61	

021 263 STANDARD DEPTHS

0	26.77	35.365	23.09	4.78	6.83	99.15	.05	0.08
10	26.73	35.334	23.08	4.78	6.83	99.16	.05	0.05
20	26.70	35.303	23.06	4.79	6.84	99.17	.04	0.02
30	26.66	35.299	23.07	4.77	6.81	98.64	.04	0.05
50	26.59	35.465	23.22	4.63	6.61	96.05	.04	0.40
75	25.35	35.965	23.98	4.52	6.50	93.47	.07	0.98
100	23.67	36.589	24.96	4.50	6.43	86.88	.11	1.63

R V PALUMBO CRUISE 021 STATION PHI-2C PRNC REFERENCE 021264

DATE 01/18/73 BARO 1013.8 WEATHER 02 WIND VELOC 09 WAVE PERIOD 6
 HOUR 17.8 TEMP DRY 32.0 VISIBILITY 8 WIND DIREC 15 TRANSPAR *
 LAT 18-20.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 33 SONIC DEP 0585
 LONG 067-17.4 W REL HUMID 062 CLOUD AMT 2 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 17.8 GMT, 1345 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .680 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	TEMP		
													OXYGEN	NITRA	
0	4	0	10	26.79	26.76	26.78	35.383	23.10	4.82	6.88	100.05	.05	0.08		
25	25	25	15	26.72	0.00	26.72	35.412	23.14	4.81	6.87	99.91	.06	0.08		
50	50	51	12	26.66	0.00	26.66	35.429	23.17	4.79	6.85	99.45	.04	0.32		
100	100	109	16	23.00	0.00	23.00	36.577	25.15	4.40	6.29	84.60	.11	1.61		

CAST 2 MESS TIME 16.6 GMT, 1235 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER .620 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	TEMP		
													OXYGEN	NITRA	
150	149	0	10	22.34	22.32	22.33	36.693	25.43	2.94	4.21	56.50	.14	2.90		
200	198	173	15	19.68	0.00	19.68	36.541	26.04	4.30	6.15	76.50	.27	4.83		
250	248	238	12	17.94	0.00	17.94	36.404	26.38	4.27	6.10	74.84	.31	7.42		
300	297	300	16	16.74	0.00	16.74	36.284	26.58	4.30	6.14	74.73	.47	8.06		

21 264 STANDARD DEPTHS

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA
0	0	0	10	26.78	26.76	26.78	35.383	23.10	4.82	6.88	100.05	0.05
10	10	10	15	26.75	0.00	26.75	35.395	23.11	4.82	6.88	99.99	0.05
20	20	20	12	26.73	0.00	26.73	35.406	23.13	4.81	6.88	99.94	0.06
30	30	30	12	26.71	0.00	26.71	35.417	23.15	4.81	6.87	99.85	0.06
50	50	50	12	26.66	0.00	26.66	35.429	23.17	4.79	6.85	99.45	0.04
75	75	75	12	24.94	0.00	24.94	35.975	24.12	4.60	6.65	94.42	0.07
100	100	100	12	23.00	0.00	23.00	36.577	25.15	4.40	6.29	84.60	0.11
150	150	150	12	22.28	0.00	22.28	36.691	25.44	2.96	4.24	56.87	0.14
200	200	200	12	19.60	0.00	19.60	36.535	26.06	4.30	6.14	76.42	0.27
250	250	250	12	17.89	0.00	17.89	36.399	26.39	4.27	6.10	74.82	0.32
300	300	300	16	16.67	0.00	16.67	36.277	26.59	4.30	6.14	74.73	0.48

R V PALUMBO CRUISE 027 STATION PHI-4C PRNC REFERENCE 027430
 DATE 05 /01/73 BARO 1017.5 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 13.5 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 10-23.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0325
 LONG 067-19.2 W REL HUMID 081 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 13.5 GMT, 931 LOCAL MAX DEPTH 300 WIRE ANGLE 2
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	25	0	11	27.27	27.26	27.27	35.853	23.30	4.85	6.90	102.17	0.31	0.00	
0	50	0	12	27.22	0.00	27.22	35.827	23.29	4.90	7.01	103.55	.11	0.00	
0	100	52	15	26.74	0.00	26.74	35.824	23.44	4.79	6.85	100.40	.11	0.00	
0	150	97	16	25.44	0.00	25.44	36.297	24.21	4.81	6.87	98.69	.10	0.09	
0	200	153	1	21.40	0.00	21.40	36.656	25.66	4.20	5.99	79.97	.23	3.39	
0	250	198	2	19.19	0.00	19.19	36.513	26.14	4.09	5.85	72.49	.42	11.43	
0	300	247	3	17.80	0.00	17.80	36.406	26.41	4.10	5.86	71.91	.86	14.24	
0	350	294	4	17.17	0.00	17.17	36.343	26.52	4.15	5.91	72.13	.60	17.97	

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
027	430													
0	10													
0	20													
0	30													
0	50													
0	75													
0	100													
0	150													
0	200													
0	250													
0	300													

STANDARD DEPTHS

R V PALUMBO CRUISE 027 STATION PHI-5C PRNC REFERENCE 027431
 DATE 05 /01/73 BARO 1017.8 WEATHER 02 WIND VELOC WAVE PERIOD 5
 HOUR 14.8 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18-24.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0375
 LONG 067-17.4 W REL HUMID 074 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10
 CAST 1 MESS TIME 14.0 GMT, 1047 LOCAL MAX DEPTH 300 WIRE ANGLE 3
 OXYGEN TITR 1.028 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN		PHOS	NITRA	
										ML/L	MG/L			
0	0	0	0	11	27.66	27.64	27.65	35.927	23.23	4.79	6.85	.10	0.00	
25	25	26	26	12	27.12	0.00	27.12	35.911	23.39	4.81	6.87	.08	0.00	
50	50	52	52	15	26.83	0.00	26.83	35.891	23.46	4.76	6.80	.05	0.00	
100	100	97	97	16	25.76	0.00	25.76	36.262	24.08	4.79	6.85	.02	0.00	
150	150	151	151	1	21.76	0.00	21.76	36.682	25.58	4.20	5.99	.18	0.00	
200	200	199	199	2	19.72	0.00	19.72	36.550	26.03	4.07	5.82	.55	0.00	
250	249	0	0	3	18.02	0.00	18.02	36.422	26.37	4.10	5.86	.44	0.00	
300	299	297	297	4	16.64	0.00	16.64	36.289	26.61	4.23	6.04	.60	0.00	
027 431 STANDARD DEPTHS														
0	0						27.65	35.927	23.23	4.79	6.85	102.15	0.10	0.00
10	10						27.44	35.921	23.29	4.80	6.86	101.95	0.09	0.00
20	20						27.22	35.914	23.36	4.81	6.87	101.74	0.08	0.00
30	30						27.06	35.907	23.40	4.80	6.86	101.36	0.07	0.00
50	50						26.83	35.891	23.46	4.76	6.80	100.05	0.05	0.00
75	75						26.38	36.039	23.72	4.78	6.82	99.93	0.03	0.00
100	100						25.76	36.262	24.08	4.79	6.85	98.34	0.02	0.00
150	150						21.76	36.682	25.58	4.20	5.99	80.19	0.18	0.00
200	200						19.72	36.550	26.04	4.07	5.82	72.46	0.55	0.00
250	250						17.99	36.419	26.38	4.11	5.86	72.03	0.44	0.00
300	300						16.61	36.286	26.61	4.23	6.04	73.54	0.60	0.00

R V PALUNBO CRUISE 027 STATION PHI-6C PRNC REFERENCE 027432
 DATE 05 /01/73 PARO 1017.8 WEATHER 02 WIND VELOC 01 WAVE PERIOD 6
 HOUR 15.6 TEMP DRY 29.0 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 16-25.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0530
 LONG 067-15.9 W REL HUMID 073 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 15.6 GMT, 1138 LOCAL MAX DEPTH 300 WIRE ANGLE 4
 OXYGEN TITR 1.028 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE		SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		CZ	TL	BN	TL			TM	MG/L			
0	0	0	11	27.61	27.62	35.922	23.23	4.72	6.74	100.54	.10	0.00
25	25	26	12	27.08	27.08	35.902	23.39	4.70	6.83	100.91	.06	0.00
50	50	53	15	26.86	26.86	36.007	23.54	4.80	6.90	101.88	.11	0.00
100	100	101	16	26.16	26.16	36.098	23.83	4.81	6.87	100.41	.10	0.00
150	150	166	1	22.84	22.84	36.743	25.32	4.14	5.92	79.90	.13	0.00
200	199	201	2	19.46	19.46	36.539	26.09	4.09	5.85	72.68	.35	0.00
250	249	248	3	17.81	17.81	36.410	26.41	4.12	5.89	72.28	.38	0.00
300	299	296	4	16.42	16.42	36.243	26.62	4.12	5.89	71.61	.50	0.00

WIRE	DEPTH (M)	TEMP		TAVE		SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		CZ	TL	BN	TL			TM	MG/L			
0	0	0	11	27.61	27.62	35.922	23.23	4.72	6.74	100.54	.10	0.00
10	10	26	12	27.08	27.08	35.902	23.30	4.74	6.78	100.69	.08	0.00
20	20	53	15	26.86	26.86	36.007	23.36	4.77	6.81	100.83	.07	0.00
30	30	101	16	26.16	26.16	36.098	23.42	4.79	6.85	101.12	.07	0.00
50	50	166	1	22.84	22.84	36.743	23.54	4.80	6.90	101.88	.11	0.00
75	75	201	2	19.46	19.46	36.539	23.69	4.82	6.89	101.27	.11	0.00
100	100	248	3	17.81	17.81	36.410	23.83	4.81	6.87	100.41	.10	0.00
150	150	296	4	16.42	16.42	36.243	25.32	4.14	5.92	79.90	.13	0.00
200	200						26.10	4.09	5.85	72.66	.35	0.00
250	250						26.42	4.12	5.89	72.26	.38	0.00
300	300						26.63	4.12	5.89	71.59	.50	0.00

027 432 STANDARD DEPTHS

R V PALUMBO CRUISE 027 STATION PHI-68 PRNC REFERENCE 027433

DATE 05 /01/73 BARO 1018.0 WEATHER 02 WIND VELOC 02 WAVE PERIOD 5
 HOUR 16.3 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 18-24.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0143
 LONG 067-15.5 W REL HUMID CLOUD AMT 9 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 16.3 GMT, 1221 LOCAL MAX DEPTH 100 WIRE ANGLE 20
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		TZ	TL				ML/L	MG/L			
2	4	11	27.48	27.48	35.889	23.25	4.79	6.85	101.75	.04	0.00
25	24	12	26.90	0.00	35.854	23.41	4.81	6.87	101.16	.03	0.00
50	47	15	26.78	0.00	35.852	23.45	4.81	6.87	100.96	.05	0.00
100	94	16	26.40	0.00	35.963	23.65	4.80	6.86	100.36	.03	0.00
027 433	STANDARD DEPTHS										
	0	27.48	35.889	23.25	4.79	6.85	101.75	0.04	0.00	0.00	0.00
	10	27.24	35.874	23.32	4.80	6.86	101.50	0.04	0.00	0.00	0.00
	20	26.99	35.859	23.39	4.81	6.87	101.24	0.03	0.00	0.00	0.00
	30	26.84	35.853	23.43	4.81	6.87	101.06	0.03	0.00	0.00	0.00
	50	26.76	35.857	23.46	4.81	6.87	100.93	0.05	0.00	0.00	0.00
	75	26.56	35.909	23.56	4.81	6.87	100.63	0.04	0.00	0.00	0.00
	100	26.35	35.977	23.68	4.80	6.86	100.28	0.03	0.00	0.00	0.00

R V PALUMBO CRUISE 027 STATION PHI-6A PRNC REFERENCE 027434

DATE 05 / 11 / 73 BARO 1017.7 WEATHER 02 WIND VELOC WAVE PERIOD 4
HOUR 16.7 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC TRANSPAR
LAT 18-22.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0016
LONG 067-15.0 W REL HUMID 070 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 16.7 GMT, 1244 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.028 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			%SAT	PHOS	NITRA			
	WIRE	CZ	TM	TAVE	SALIN	SIG T				ML/L	MG/L	
0	0	0	11	27.52	27.52	35.881	23.23	4.50	6.54	97.21	.05	0.00
10	10	11	12	27.04	0.00	35.854	23.37	4.80	6.86	101.16	.05	0.00

027 434 STANDARD DEPTHS

0	27.52	35.881	23.23	4.50	6.54	97.21	0.05	0.00
10	27.04	35.854	23.37	4.80	6.86	101.16	0.05	0.00

R V PALUMBO CRUISE 027 STATION PHI-5A PRNC REFERENCE 027435

DATE 05 / 01 / 73 BARO 1017.8 WEATHER 02 WIND VELOC WAVE PERIOD 4
HOUR 17.4 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC TRANSPAR
LAT 18-22.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0015
LONG 067-16.0 W REL HUMID 069 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 17.4 GMT, 1322 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.028 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			%SAT	PHOS	NITRA			
	WIRE	CZ	TM	TAVE	SALIN	SIG T				ML/L	MG/L	
0	0	0	11	27.44	27.43	35.878	23.26	4.52	6.46	95.97	.05	0.00
10	10	13	12	27.03	0.00	35.861	23.38	4.77	6.82	100.51	.05	0.00

027 435 STANDARD DEPTHS

0	27.44	35.878	23.26	4.52	6.46	95.97	0.05	0.00
10	27.03	35.861	23.38	4.77	6.82	100.51	0.05	0.00

R V PALUMBO CRUISE 027 STATION PHI-58 PRNC REFERENCE 027436

DATE 05 /01/73 RARO 1017.7 WEATHER 02 WIND VELOC WAVE PERIOD 5
 HOUR 17.8 TEMP DRY 30.0 VISIBILITY 8 WIND DIREC TRANSPAR
 LAT 18-23.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0182
 LONG 067-16.6 W REL HUMID 068 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 17.8 GMT, 1349 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
		TZ	BN	TL	TM				ML/L	MG/L	XSAT		
0	0	0	1	27.87	0.00	27.87	35.881	23.12	4.70	6.80	101.71	.04	0.00
25	25	27	2	27.03	0.00	27.03	35.870	23.38	4.80	6.86	101.19	.04	0.00
50	50	54	3	26.92	0.00	26.92	35.855	23.41	4.83	6.90	101.62	.03	0.00
100	100	103	4	26.34	0.00	26.34	35.967	23.68	4.79	6.85	100.05	.05	0.00
027	436	STANDARD DEPTHS											
	0	27.87	35.881	23.12	4.70	6.80	101.71	.04	0.00				
	10	27.53	35.877	23.23	4.78	6.82	101.50	.04	0.00				
	20	27.18	35.872	23.34	4.79	6.85	101.27	.04	0.00				
	30	26.97	35.867	23.40	4.81	6.87	101.26	.04	0.00				
	50	26.92	35.855	23.41	4.85	6.90	101.62	.03	0.00				
	75	26.69	35.867	23.51	4.85	6.90	101.25	.03	0.00				
	100	26.34	35.967	23.68	4.79	6.85	100.05	.05	0.00				

R V PALUMBO CRUISE 027 STATION PHI-4A PRNC REFERENCE 027437
 DATE 05 / 01/73 PARO 1017.6 WEATHER 02 WIND VELOC 03 WAVE PERIOD 2
 HOUR 18.3 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 03 TRANSPAR
 LAT 18-22.0 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 19 SONIC DEP 0017
 LONG 067-16.5 W REL HUMID 068 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 20
 CAST 1 MESS TIME 18.3 GMT, 1421 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN							
	TZ	TL	TAVE	SALIN	SIG T	ML/L MG/L	%SAT	PHOS	NITRA	
0	0	27.28	27.28	35.877	23.31	4.59	6.55	97.04	.07	0.00
10	10	26.98	26.98	35.881	23.41	4.75	6.76	99.62	.04	0.00
027 437	STANDARD DEPTHS									
0			27.28	35.877	23.31	4.59	6.55	97.04	0.07	0.00
10			26.98	35.881	23.41	4.75	6.76	99.62	0.04	0.00

R V PALUMBO CRUISE 027 STATION PHI-43 PRNC REFERENCE 027438

DATE 05 /01/73 BARO 1016.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 4
 HOUR 18.8 TEMP DRY 31.0 VISIBILITY 8 WIND DIREC 02 TRANSPAR
 LAT 18-22.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 19 SONIC DEP 0174
 LONG 067-18.1 W REL HUMID 069 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 18.8 GMT, 1448 LOCAL MAX DEPTH 100 WIRE ANGLE 3
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN ML/L MG/L	XSAT	PHOS	NITRA
0	1	0	27.67	0.00	27.67	35.884	23.19	4.72	6.74	100.52	.03	0.00	
25	2	26	26.96	0.00	26.96	35.876	23.41	4.72	6.79	100.01	.02	0.00	
50	3	50	26.84	0.00	26.84	35.853	23.43	4.72	6.85	100.63	.03	0.00	
100	4	101	25.54	0.00	25.54	36.233	24.13	4.80	6.90	99.08	.04	0.00	
027 438 STANDARD DEPTHS													
0			27.67		35.884	23.19	4.72	6.74	100.52	.03	0.00		
10			27.39		35.881	23.28	4.72	6.76	100.31	.03	0.00		
20			27.09		35.878	23.37	4.74	6.78	100.08	.02	0.00		
30			26.87		35.873	23.44	4.76	6.80	100.03	.02	0.00		
50			26.84		35.853	23.43	4.72	6.85	100.63	.03	0.00		
75			26.37		35.972	23.67	4.82	6.88	100.68	.04	0.00		
100			25.54		36.233	24.13	4.80	6.90	99.08	.04	0.00		

R V PALUMBO CRUISE 027 STATION PHI-20 PRNC REFERENCE 027439

DATE 05 /02/73 BARO 1019.0 WEATHER 03 WIND VELOC 03 WAVE PERIOD 3
 HOUR 13.8 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 18-20.0 N TEMP WET 0.0 CLOUD TYPE 2 WAVE DIREC 01 SONIC DEP 0539
 LONG 067-17.2 W REL HUMID 073 CLOUD AMT 1 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 13.8 GMT, 949 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		PHOS	NITRA
			TL	TM				ML/L	MG/L		
0	0	0	27.17	27.16	27.17	35.831	23.31	4.60	6.57	.07	0.00
25	25	25	27.06	0.00	27.06	35.883	23.38	4.73	6.76	.05	0.00
50	50	52	26.91	0.00	26.91	35.868	23.42	4.73	6.76	.06	0.00
100	100	103	26.16	0.00	26.16	36.041	23.79	4.73	6.76	.12	0.00
150	150	148	24.82	0.00	24.82	36.482	24.53	4.69	6.70	.06	0.00
200	200	194	19.89	0.00	19.89	36.545	25.99	4.00	5.80	.28	0.00
250	250	249	17.00	0.00	17.00	36.256	26.49	3.99	5.70	.55	0.00
300	300	297	16.45	0.00	16.45	36.165	26.55	3.99	5.70	.65	0.00
027 439 STANDARD DEPTHS											
	0		27.17	35.831	27.17	35.831	23.31	4.60	6.57	0.07	0.00
	10		27.12	35.852	27.12	35.852	23.34	4.62	6.64	0.08	0.00
	20		27.08	35.874	27.08	35.874	23.37	4.71	6.72	0.25	0.00
	30		27.04	35.880	27.04	35.880	23.39	4.73	6.76	0.71	0.00
	50		26.91	35.868	26.91	35.868	23.42	4.73	6.76	0.47	0.00
	75		26.61	35.921	26.61	35.921	23.56	4.73	6.76	0.11	0.00
	100		26.16	36.041	26.16	36.041	23.79	4.73	6.76	0.59	0.00
	150		24.82	36.482	24.82	36.482	24.54	4.69	6.70	0.64	0.00
	200		19.89	36.545	19.89	36.545	25.99	4.00	5.80	0.33	0.00
	250		17.00	36.256	17.00	36.256	26.50	3.99	5.70	0.44	0.00
	300		16.45	36.165	16.45	36.165	26.56	3.99	5.70	0.19	0.00

R V PALUMBO CRUISE #27 STATION PHI-3C PRNC REFERENCE 027440
 DATE 05 /02/73 BARO 1000.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 6
 HOUR 14.7 TEMP DRY 28.0 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 18-21.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0533
 LONG 067-17.8 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 4 COLOR 10
 CAST 1 MESS TIME 14.7 GMT, 1041 LOCAL MAX DEPTH 300 WIRE ANGLE 2
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		I2	CZ							ML/L	MG/L			
0	0	0	0	11	27.18	27.17	27.18	35.794	23.28	4.69	6.70	98.84	.10	0.00
25	25	26	50	12	26.93	0.00	26.93	35.849	23.40	4.75	6.79	99.89	.10	0.00
50	50	53	100	15	26.88	0.00	26.88	35.840	23.41	4.71	6.73	98.93	.64	0.00
100	100	106	150	16	25.65	0.00	25.65	36.161	24.04	4.64	6.63	95.02	.22	0.00
150	150	148	200	1	23.85	0.00	23.85	36.533	24.86	4.38	6.26	84.42	.20	0.00
200	200	197	250	2	21.32	0.00	21.32	36.601	25.64	4.09	5.85	77.90	.28	0.00
250	250	248	300	3	18.22	0.00	18.22	36.382	26.29	4.06	5.80	71.27	.31	0.00
300	300	299		4	17.43	0.00	17.43	36.295	26.42	4.04	5.77	70.50	.47	0.00
027 440 STANDARD DEPTHS														
	10				27.18			35.794	23.28	4.69	6.70	98.84	0.10	0.00
	20				27.08			35.816	23.33	4.71	6.73	99.26	0.10	0.00
	30				26.98			35.839	23.38	4.74	6.77	99.73	0.10	0.00
	50				26.90			35.847	23.41	4.75	6.78	99.78	0.20	0.00
	75				26.88			35.840	23.41	4.71	6.73	98.93	0.64	0.00
	100				26.39			35.969	23.66	4.67	6.67	97.64	0.53	0.00
	150				25.65			36.161	24.04	4.64	6.63	95.02	0.22	0.00
	200				23.85			36.533	24.87	4.38	6.26	84.42	0.20	0.00
	250				21.32			36.601	25.64	4.09	5.85	77.90	0.28	0.00
	300				18.22			36.382	26.29	4.06	5.80	71.27	0.31	0.00
					17.41			36.293	26.42	4.04	5.77	70.49	0.47	0.00

R V PALUMBO CRUISE 027 STATION PHI-38 PRNC REFERENCE 027441
 DATE 05 /02/73 BARO 1019.1 WEATHER 02 WIND VELOC 06 WAVE PERIOD 6
 HOUR 15.2 TEMP DRY 28.0 VISIBILITY 8 WIND DIREC 02 TRANSPAR
 LAT 18-21.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 00 SONIC DEP 0219
 LONG 067-17.2 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 4 COLOR 10

CAST 1 MESS TIME 15.2 GMT, 1111 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN ML/L MG/L	XSAT	PHOS	NITRA
0	0	1	1	27.27	0.00	27.27	35.867	23.30	4.70	100.69	0.33	0.00
25	25	29	2	27.13	0.00	27.13	35.844	23.33	4.74	99.98	0.06	0.00
50	50	51	3	26.91	0.00	26.91	35.953	23.41	4.71	99.01	0.04	0.00
100	100	0	4	24.58	0.00	24.58	36.370	24.52	4.50	86.56	0.06	0.00
STANDARD DEPTHS												
0	0			27.27	35.867	23.30	4.70	100.69	0.33	0.00	0.00	0.00
10	10			27.21	35.858	23.32	4.70	100.41	0.22	0.00	0.00	0.00
20	20			27.16	35.848	23.33	4.74	100.13	0.11	0.00	0.00	0.00
30	30			27.09	35.846	23.35	4.74	99.85	0.04	0.00	0.00	0.00
50	50			26.91	35.853	23.41	4.71	99.01	0.04	0.00	0.00	0.00
75	75			26.06	36.028	23.81	4.60	96.34	0.04	0.00	0.00	0.00
100	100			24.58	36.370	24.52	4.50	86.56	0.06	0.00	0.00	0.00

R V PALUMBO CRUISE 027 STATION PHI-3A PRNC REFERENCE 027442
 DATE 05 /02/73 BARO 1019.3 WEATHER 01 WIND VELOC 05 WAVE PERIOD 6
 HOUR 15.5 TEMP DRY 27.5 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 18-21.4 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 02 SONIC DEP 0015
 LONG 067-16.7 W REL HUMID CLOUD AMT 1 WAVE HEIGHT 4 COLOR 20

CAST 1 MESS TIME 15.5 GMT, 1132 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.020 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	WIRE	CZ	TM	TAVE	SALIN	XSAT						
0	0	11	27.29	27.28	35.876	23.31	4.70	6.71	99.44	.01	0.00	
10	10	12	27.11	0.00	27.11	55.880	23.37	4.70	6.80	100.47	.01	0.00
027 442	STANDARD DEPTHS											
0			27.29	35.876	23.31	4.70	6.71	99.44	0.01	0.00		
10			27.11	35.880	23.37	4.70	6.80	100.47	0.01	0.00		

R V PALUMBO CRUISE 027 STATION PHI-2A PRNC REFERENCE 027443
 DATE 05 /02/73 BARO 1019.5 WEATHER 03 WIND VELOC 06 WAVE PERIOD 4
 HOUR 16.1 TEMP DRY 27.0 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 18-20.7 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0015
 LONG 067-16.3 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 20

CAST 1 MESS TIME 16.1 GMT, 12 6 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.020 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			OXYGEN			SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	WIRE	CZ	TM	TAVE	SALIN	XSAT						
0	0	11	27.39	27.36	27.37	35.989	23.29	4.60	6.65	98.74	.03	0.00
10	10	12	27.15	0.00	27.15	55.875	23.35	4.70	6.76	99.87	.03	0.00
027 443	STANDARD DEPTHS											
0			27.37	35.889	23.29	4.60	6.65	98.74	0.03	0.00		
10			27.15	55.875	23.35	4.70	6.76	99.87	0.03	0.00		

R V PALUMBO CRUISE 027 STATION PHI-28 HRNC REFERENCE 027444
 DATE 05 /02/73 BARO 1018.3 WEATHER 03 WIND VELOC 07 WAVE PERIOD 5
 HOUR 16.7 TEMP DRY 27.5 VISIBILITY 8 WIND DIREC 01 TRANSPAR
 LAT 16-20.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0152
 LONG 067-16.3 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 16.7 GMT, 1240 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.028 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
					TM	TM								
0	0	3	1	27.36	0.00	0.00	27.36	35.863	23.27	4.71	6.73	99.74	.03	0.00
25	25	30	2	27.13	0.00	0.00	27.13	35.880	23.36	4.71	6.73	99.42	.03	0.00
50	50	0	3	0.00	0.00	0.00	0.00	35.854	0.00	4.71	6.73	*****	.04	0.00
100	100	101	4	24.36	0.00	0.00	24.36	36.458	24.66	4.40	6.40	86.38	.15	0.00
STANDARD DEPTHS														
0	0						27.36	35.863	23.27	4.71	6.73	99.74	0.03	0.00
10	10						27.27	35.870	23.31	4.71	6.73	99.61	0.03	0.00
20	20						27.18	35.877	23.34	4.71	6.73	99.49	0.03	0.00
30	30						27.06	35.879	23.38	4.71	6.73	99.30	0.03	0.00
50	50						26.60	35.854	23.51	4.71	6.73	98.53	0.04	0.00
75	75						25.68	36.047	23.94	4.63	6.62	95.81	0.08	0.00
100	100						24.36	36.458	24.66	4.40	6.40	86.38	0.15	0.00

R V PALUMBO CRUISE 033 STATION PHI-2A PRNC REFERENCE 033553

DATE 08 /13/73 BARO 1017.5 WEATHER 05 WIND VELOC 11 WAVE PERIOD 5
 HOUR 13.6 TEMP DRY 30.2 VISIBILITY 6 WIND DIREC 05 TRANSPAR
 LAT 18-20.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 32 SONIC DEP 0018
 LONG 067-16.1 W REL HUMID 072 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.6 GMT, 934 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .971 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA			
	TZ	BN										
0	0	11	28.49	28.51	28.50	35.332	22.50	4.73	6.76	99.99	.03	0.00
10	7	12	28.47	0.00	28.47	35.392	22.56	4.77	6.81	101.00	.03	0.00
033 553	STANDARD DEPTHS											
0	28.50 35.332 22.50 4.73 6.76 99.99 0.03 0.00											
10	28.47 35.392 22.56 4.77 6.81 101.00 0.03 0.00											

R V PALUMBO CRUISE 033 STATION PHI-3A PRNC REFERENCE 033554

DATE 08 /13/73 BARO 1017.6 WEATHER 05 WIND VELOC 09 WAVE PERIOD 5
 HOUR 13.9 TEMP DRY 30.4 VISIBILITY 6 WIND DIREC 07 TRANSPAR
 LAT 18-21.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 32 SONIC DEP 0015
 LONG 067-16.5 W REL HUMID 073 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.9 GMT, 953 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .971 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA			
	TZ	BN										
0	0	11	28.49	28.45	28.47	35.360	22.53	4.80	6.85	101.50	.04	0.00
10	13	12	28.48	0.00	28.48	35.387	22.55	4.64	6.63	98.32	.00	0.00
033 554	STANDARD DEPTHS											
0	28.47 35.360 22.53 4.80 6.85 101.50 0.04 0.00											
10	28.48 35.387 22.55 4.64 6.63 98.32 0.00 0.00											

R V PALUMBO CRUISE 033 STATION PHI-4A PRNC REFERENCE 033555

DATE 08 /13/73 BARO 1017.5 WEATHER 05 WIND VELOC 11 WAVE PERIOD 5
 HOUR 14.2 TEMP DRY 30.5 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-22.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0016
 LONG 067-16.5 W REL HUMID 074 CLOUD AMT 9 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.2 GMT, 1011 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .971 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	11	28.50	28.51	20.51	35.389	22.54	4.57	6.53	96.91	.04	0.00	
10	10	13	12	28.47	0.00	28.47	35.399	22.56	4.72	6.74	100.00	.00	0.00	
033 555 STANDARD DEPTHS														
0							28.51	35.389	22.54	4.57	6.53	96.91	0.04	0.00
10							28.47	35.399	22.56	4.72	6.74	100.00	0.00	0.00

R V PALUMBO CRUISE 033 STATION PHI-5A PRNC REFERENCE 033556

DATE 08 /13/73 BARO 1017.0 WEATHER 05 WIND VELOC 14 WAVE PERIOD 5
 HOUR 14.5 TEMP DRY 30.6 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-22.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0016
 LONG 067-15.8 W REL HUMID 073 CLOUD AMT 8 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.5 GMT, 1033 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .971 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	11	28.51	28.50	28.51	35.355	22.52	4.70	6.83	101.11	.04	0.00	
10	10	13	12	28.49	0.00	28.49	35.361	22.53	4.52	6.45	95.56	.00	0.00	
033 556 STANDARD DEPTHS														
0							28.51	35.355	22.52	4.70	6.83	101.11	0.04	0.00
10							28.49	35.361	22.53	4.52	6.45	95.56	0.00	0.00

R V PALUMBO CRUISE 033 STATION PHI-6A PRNC REFERENCE 033557

DATE 08 /13/73 BARO 1017.8 WEATHER 05 WIND VELOC 16 WAVE PERIOD 4
 HOUR 14.8 TEMP DRY 30.9 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 18-22.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0015
 LONG 067-15.2 W REL HUMID 073 CLOUD AMT 9 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 14.8 GMT, 1050 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .971 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
	TZ	BN	TL	TM								
0	0	11	28.46	28.47	28.47	35.282	22.47	4.89	6.99	103.25	.05	0.00
10	10	12	28.47	0.00	28.47	35.302	22.49	4.58	6.55	96.77	.03	0.00
033 557 STANDARD DEPTHS												
0			28.47	35.282	22.47	4.89	6.99	103.25	0.05	0.00		
10			28.47	35.302	22.49	4.58	6.55	96.77	0.03	0.00		

R V PALUMBO CRUISE 033 STATION PHI-6B PRNC REFERENCE 033558

DATE 08 /13/73 BARO 1017.7 WEATHER 05 WIND VELOC 12 WAVE PERIOD 4
 HOUR 15.2 TEMP DRY 31.1 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-23.9 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0200
 LONG 067-15.5 W REL HUMID 074 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.2 GMT, 1114 LOCAL MAX DEPTH 100 WIRE ANGLE 15
 OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
		TZ	RN	TL	TM						
0	0	0	11	28.34	28.36	22.34	4.77	6.84	100.05	.05	0.00
25	25	27	12	28.45	0.00	22.56	4.78	6.83	101.18	.07	0.00
50	49	51	15	28.50	0.00	22.73	4.70	6.71	100.52	.00	0.00
100	97	0	16	29.03	0.00	22.61	4.80	6.96	105.36	.00	0.00
033	550										
	0			28.35	35.054	22.34	4.77	6.84	100.05	0.05	0.00
	10			28.39	35.190	22.43	4.78	6.83	100.49	0.06	0.00
	20			28.43	35.327	22.52	4.78	6.83	100.96	0.07	0.00
	30			28.47	35.454	22.60	4.76	6.80	101.07	0.06	0.00
	50			28.51	35.643	22.73	4.70	6.72	100.58	0.00	0.00
	75			28.75	35.677	22.68	4.77	6.81	102.48	0.00	0.00
	100			29.06	35.713	22.60	4.80	6.98	105.67	0.00	0.00

STANDARD DEPTHS

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R V PALUMBO CRUISE 033 STATION PHI-5B PRNC REFERENCE 033559

DATE 08 /13/73 RARO 1017.8 WFATHER 05 WIND VELOC 16 WAVE PERIOD 5
HOUR 15.7 TEMP DRY 30.0 VISIBILITY 6 WIND DIREC 09 TRANSPAR
LAT 18-23.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 05 SONIC DEP 0100
LONG 067-16.6 W REL HUMID 073 CLOUD AMT 7 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 15.7 GMT, 1141 LOCAL MAX DEPTH 100 WIRE ANGLE 20
OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP										OXYGEN			PHOS	NITRA
			TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	ML/L	MG/L			
0	0	0	11	28.47	28.50	28.50	28.49	35.278	22.46	4.79	6.84	101.00	.06	0.00			
25	24	27	12	28.46	0.00	28.46	35.334	22.52	4.82	6.92	102.41	.06	0.00				
50	47	49	15	28.48	0.00	28.48	35.401	22.56	4.80	6.85	101.66	.08	0.00				
100	94	0	16	28.17	0.00	28.17	35.907	23.04	4.82	6.88	103.50	.09	0.00				

033 559	STANDARD DEPTHS	TEMP										OXYGEN			PHOS	NITRA
		TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	ML/L	MG/L			
0	0	28.49	35.278	22.47	4.79	6.84	101.00	.06	0.00							
10	10	28.47	35.301	22.49	4.81	6.87	101.59	.06	0.00							
20	20	28.46	35.324	22.51	4.84	6.91	102.22	.06	0.00							
30	30	28.47	35.345	22.52	4.84	6.91	102.29	.06	0.00							
50	50	28.47	35.426	22.58	4.80	6.86	101.77	.08	0.00							
75	75	28.32	35.673	22.81	4.80	6.86	102.51	.09	0.00							
100	100	28.13	35.972	23.10	4.82	6.88	103.72	.09	0.00							

R V PALUMBO CRUISE 033 STATION PHI-48 PRNC REFERENCE 033560
 DATE 08 /13/73 BARO 1017.7 WEATHER 05 WIND VELOC 19 WAVE PERIOD 5
 HOUR 16.1 TEMP DRY 31.1 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 18-22.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0174
 LONG 067-18.0 W REL HUMID 071 CLOUD AMT 4 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 16.1 GMT, 12 7 LOCAL MAX DEPTH 100 WIRE ANGLE 9
 OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			OXYGEN	OXYGEN											
0	0	0	28.48	28.49	28.49	11	28.48	35.280	22.47	4.72	6.78	100.22	.04	0.000	
25	25	25	28.47	0.00	28.47	12	28.47	35.480	22.62	4.80	6.85	101.95	.07	0.000	
50	50	50	28.23	0.00	28.23	15	28.23	35.695	22.86	4.54	6.48	96.82	.10	0.000	
100	99	0	26.29	0.00	26.29	16	26.29	36.271	23.92	4.59	6.56	94.47	.09	0.000	
STANDARD DEPTHS															
033 560	0	0	28.49	35.280	22.47	4.72	6.78	100.22	0.04	0.000					
	10	10	28.48	35.365	22.53	4.77	6.81	100.91	0.05	0.000					
	20	20	28.47	35.441	22.59	4.79	6.84	101.60	0.06	0.000					
	30	30	28.45	35.520	22.66	4.75	6.79	101.14	0.08	0.000					
	50	50	28.23	35.695	22.86	4.54	6.48	96.82	0.10	0.000					
	75	75	27.36	35.976	23.36	4.57	6.52	96.98	0.09	0.000					
	100	100	26.25	36.283	23.94	4.59	6.56	94.50	0.09	0.000					

R V PALUMBO CRUISE 033 STATION PHI-3B PRNC REFERENCE 033561
 DATE 08 /13/73 BARO 1017.6 WEATHER 05 WIND VELOC 16 WAVE PERIOD 4
 HOUR 17.0 TEMP DRY 30.7 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-21.3 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0180
 LONG 067-17.1 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 2 COLOR
 CAST 1 MESS TIME 17.0 GMT, 1259 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE #	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	
		TL	TM								
0	0	11 28.57	28.56	28.57	35.347	22.49	4.80	6.85	101.56	.10	0.00
25	24	12 28.47	0.00	28.47	35.446	22.60	4.78	6.83	101.41	.06	0.00
50	45	15 28.19	0.00	28.19	35.851	22.99	4.80	6.94	104.17	.04	0.00
100	0	16 25.57	0.00	25.57	36.313	24.18	4.61	6.59	94.67	.10	0.00
P33 561 STANDARD DEPTHS											
0	0	28.57	35.347	22.49	4.80	6.85	101.56	0.10	0.00	0.00	
10	10	28.53	35.387	22.53	4.79	6.84	101.50	0.08	0.00	0.00	
20	20	28.49	35.426	22.57	4.78	6.83	101.44	0.07	0.00	0.00	
30	30	28.43	35.515	22.66	4.79	6.85	101.96	0.05	0.00	0.00	
50	50	28.19	35.851	22.99	4.80	6.94	104.17	0.04	0.00	0.00	
75	75	27.22	36.140	23.53	4.80	6.86	98.73	0.05	0.00	0.00	
100	100	25.57	36.313	24.18	4.61	6.59	94.67	0.10	0.00	0.00	

R V PALUMBO CRUISE 033 STATION PHI-2R PRNC REFERENCE 033562
 DATE 08 /13/73 RARO 1017.8 WEATHER 05 WIND VELOC 12 WAVE PERIOD 4
 HOUR 17.5 TEMP DRY 30.5 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-20.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 00 SONIC DEP 0367
 LONG 067-16.6 W REL HUMID 070 CLOUD AMT 3 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 17.5 GMT, 1320 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITFR .971 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
			TM	TL							ML/L	MG/L			
0	0	0	28.63	28.62	28.63	11	28.62	35.334	22.46	4.87	6.99	103.63	.06	0.00	
25	25	27	28.50	0.00	28.50	12	28.50	35.387	22.54	4.80	6.85	101.63	.09	0.00	
50	50	52	28.39	0.00	28.39	15	28.39	35.707	22.82	4.60	6.58	98.54	.06	0.00	
100	100	97	24.94	0.00	24.94	16	24.94	36.451	24.48	4.60	6.58	88.92	.11	0.00	
033 562 STANDARD DEPTHS															
0	0	0					28.62	35.334	22.46	4.87	6.99	103.63	0.06	0.00	
10	10	20					28.58	35.355	22.49	4.80	6.94	102.83	0.07	0.00	
20	20	30					28.52	35.376	22.53	4.82	6.88	102.07	0.09	0.00	
30	30	50					28.48	35.435	22.59	4.70	6.80	100.96	0.09	0.00	
50	50	75					28.39	35.707	22.82	4.60	6.58	98.54	0.06	0.00	
75	75	100					27.20	36.062	23.47	4.60	6.58	97.75	0.07	0.00	
100	100						24.94	36.451	24.48	4.60	6.58	88.92	0.11	0.00	

R V PALUMBO CRUISE 033 STATION PHI-2C PRNC REFERENCE 033563
 DATE 08 /14/73 BARO 1017.0 WEATHFR 05 WIND VELOC 12 WAVE PERIOD 5
 HOUR 14.8 TEMP DRY 28.6 VISIBILITY 6 WIND DIREC 09 TRANSPAR
 LAT 18-20.0 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0494
 LONG 067-17.0 W REL HUMID 067 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.8 GAT, 1049 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .971 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	28.59	28.63	28.61	35.254	22.41	4.80	6.85	101.25	.05	0.00
25	25	27	28.51	0.00	28.51	35.369	22.52	4.66	6.66	98.70	.07	0.00
50	50	50	28.43	0.00	28.43	35.656	22.77	4.72	6.74	100.90	.08	0.00
100	99	97	26.01	0.00	26.01	36.262	24.00	4.49	6.41	92.17	.12	0.00
150	148	149	23.36	0.00	23.36	36.708	25.14	4.37	6.24	84.48	.14	0.00
200	197	194	19.56	0.00	19.56	36.570	26.09	4.12	5.88	73.26	.26	0.00
250	246	247	17.91	0.00	17.91	36.374	26.36	4.10	5.85	71.79	.44	0.00
300	295	295	16.79	0.00	16.79	36.234	26.53	4.04	5.77	70.23	.50	0.00

033 563 STANDARD DEPTHS

0	28.61	35.254	22.41	4.80	6.85	101.25	0.05	0.00
10	28.57	35.300	22.45	4.74	6.78	100.23	0.06	0.00
20	28.53	35.343	22.50	4.68	6.69	99.12	0.07	0.00
30	28.49	35.417	22.57	4.67	6.68	99.10	0.07	0.00
50	28.43	35.656	22.77	4.72	6.74	100.90	0.08	0.00
75	27.40	35.972	23.34	4.62	6.60	98.25	0.10	0.00
100	25.96	36.275	24.03	4.48	6.41	92.12	0.12	0.00
150	23.20	36.702	25.19	4.36	6.23	84.15	0.14	0.00
200	19.42	36.558	26.12	4.11	5.87	73.03	0.27	0.00
250	17.81	36.362	26.38	4.09	5.85	71.67	0.45	0.00
300	16.68	36.220	26.54	4.05	5.76	70.00	0.51	0.00

R V PALUMBO CRUISE #33 STATION PHI-4C PRNC REFERENCE #33566

DATE 08 /14/73 PARO 1015.8 WEATHER 05 WIND VELOC 18 WAVE PERIOD 5
 HOUR 17.8 TEMP DRY 31.4 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-23.4 N TEMP WET 0.0 CLOUD TYPF 8 WAVE DIREC 05 SONIC DEP 0375
 LONG 067-19.5 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 17.8 GMT, 1351 LOCAL MAX DEPTH 300 WIRE ANGLE 8
 OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
										ML/L	MG/L	%SAT		
0	0	0	11	28.66	28.66	28.66	28.66	35.305	22.43	4.80	6.85	101.50	.07	0.00
25	25	28	12	28.47	0.00	28.47	28.47	35.437	22.59	4.70	6.71	99.73	.06	0.00
50	50	51	15	28.39	0.00	28.39	28.39	35.673	22.79	4.66	6.66	99.66	.06	0.00
100	99	89	16	25.48	0.00	25.48	25.48	36.410	24.28	4.60	6.58	94.53	.09	0.00
150	149	156	1	22.80	0.00	22.80	22.80	36.802	25.38	4.33	6.19	83.63	.13	0.00
200	198	197	2	20.39	0.00	20.39	20.39	36.682	25.96	4.07	5.81	77.09	.21	0.00
250	247	251	3	18.21	0.00	18.21	18.21	36.444	26.34	4.17	5.95	73.24	.33	0.00
300	297	293	4	17.15	0.00	17.15	17.15	36.294	26.49	4.12	5.88	71.76	.43	0.00
STANDARD DEPTHS														
0	0			28.66	35.305	22.43	4.80	6.85	101.50	0.07	0.00	0.00	0.00	0.00
10	20			28.58	35.358	22.49	4.76	6.80	100.80	0.07	0.00	0.00	0.00	0.00
20	30			28.51	35.409	22.56	4.72	6.74	100.05	0.06	0.00	0.00	0.00	0.00
30	50			28.44	35.475	22.63	4.69	6.70	99.60	0.06	0.00	0.00	0.00	0.00
50	75			28.39	35.673	22.79	4.66	6.66	99.66	0.06	0.00	0.00	0.00	0.00
75	100			27.12	36.048	23.49	4.63	6.61	98.11	0.07	0.00	0.00	0.00	0.00
100	150			25.42	36.422	24.31	4.60	6.57	94.43	0.09	0.00	0.00	0.00	0.00
150	200			22.75	36.800	25.39	4.32	6.18	83.45	0.13	0.00	0.00	0.00	0.00
200	250			20.29	36.673	25.98	4.07	5.82	77.07	0.21	0.00	0.00	0.00	0.00
250	300			18.13	36.434	26.35	4.17	5.95	73.18	0.34	0.00	0.00	0.00	0.00
300				17.09	36.285	26.50	4.11	5.88	71.68	0.44	0.00	0.00	0.00	0.00

#33 566

R V PALUMBO CRUISE 033 STATION PHI-3C PRNC REFERENCE 033567

DATE 08 /14/73 BARO 1015.5 WEATHER 05 WIND VELOC 16 WAVE PERIOD 6
 HOUR 18.8 TEMP DRY 30.2 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-21.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0466
 LONG 067-17.8 W REL HUMID 074 CLOUD AMT 3 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.8 GMT, 1446 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER .971 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		RN	TL	TM	TAVE	SALIN	SIG T	OXYGEN		PHOS	NITRA
			TZ	AN							ML/L	MG/L		
0	0	0	11	28.68	28.68	28.68	35.245	22.38	4.70	6.71	99.24	.06	0.00	
25	25	31	12	28.46	0.00	28.46	35.458	22.61	4.62	6.65	98.76	.05	0.00	
50	50	54	15	27.82	0.00	27.82	35.979	23.21	4.63	6.62	99.19	.05	0.00	
100	100	91	16	25.42	0.00	25.42	36.428	24.31	4.70	6.71	96.52	.09	0.00	
150	149	153	1	21.79	0.00	21.79	36.626	25.53	4.08	5.83	77.89	.21	0.00	
200	199	198	2	19.22	0.00	19.22	36.493	26.12	4.04	5.77	71.52	.31	0.00	
250	249	252	3	18.02	0.00	18.02	36.353	26.32	3.94	5.63	69.06	.41	0.00	
300	298	298	4	17.09	0.00	17.09	36.243	26.46	3.99	5.70	69.47	.50	0.00	
033 567 STANDARD DEPTHS														
J														
10								28.68	35.245	22.38	4.70	6.71	99.24	0.06
20								28.59	35.330	22.47	4.68	6.69	99.06	0.06
30								28.51	35.409	22.55	4.66	6.66	98.84	0.05
50								28.37	35.554	22.71	4.64	6.64	98.85	0.05
75								27.82	35.979	23.21	4.63	6.62	99.19	0.05
100								26.80	36.269	23.76	4.62	6.64	95.77	0.06
150								25.42	36.428	24.31	4.70	6.71	96.52	0.09
200								21.73	36.625	25.55	4.08	5.82	77.79	0.21
250								19.19	36.490	26.13	4.04	5.77	71.45	0.31
300								18.00	36.351	26.32	3.94	5.63	69.05	0.41
								17.05	36.239	26.47	3.99	5.71	69.48	0.50

R V PALUMBO CRUISE 035 STATION CRP-19 PRAC REFERENCE 035582

DATE 09 /12/73 BARO 1018.5 WEATHER 00 WIND VELOC 00 WAVE PERIOD 2
 HOUR 13.7 TEMP DRY 32.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 0.0 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 21 SONIC DEP 0131
 LONG 067-13.5 W REL HUMID 695 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 13.7 GMT, 943 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
															WAVE HEIGHT	COLOR
0	0	0	0	3	29.07	29.15	29.11	34.929	21.99	4.74	6.77	99.18	.08	0.00		
10	10	0	0	2	29.30	29.23	29.27	34.903	21.92	4.79	6.80	99.66	.05	0.00		

035 582 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 035 STATION CRP-20 PRAC REFERENCE 035583

DATE 09 /12/73 BARO 1018.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 3
 HOUR 14.1 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 1.0 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 21 SONIC DEP 0146
 LONG 067-13.5 W REL HUMID 735 CLOUD AMT 1 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 14.1 GMT, 104 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
															WAVE HEIGHT	COLOR
0	0	0	0	3	29.17	29.12	29.14	34.940	21.99	4.68	6.69	98.08	.05	0.00		
10	10	0	0	4	29.23	29.15	29.19	34.960	21.99	4.74	6.77	99.38	.05	0.00		

035 583 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 035 STATION CRP-30 PRNC REFERENCE 035584
 DATE 09 /12/76 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 1
 HOUR 14.5 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 15 TRANSPAR
 LAT 18- 1.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 11 SONIC DEP 0.161
 LONG 067-13.5 W REL HUMID 735 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 14.5 GMT, 1027 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN							
	CZ	TZ	RN	TL	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	29.18	29.17	34.990	22.02	4.70	6.80	99.90	.03	0.00
10	10	0	4	29.00	29.10	34.984	22.04	4.74	6.77	99.40	.07	0.00

035 564 STANDARD DEPTHS
 0 29.18 34.990 22.02 4.70 6.80 99.96 0.03 0.00
 10 29.00 34.984 22.04 4.75 6.77 99.40 0.07 0.00

R V PALUMBO CRUISE 035 STATION CRP-48 PRNC REFERENCE 035585
 DATE 09 /12/73 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 1
 HOUR 14.8 TEMP DRY 30.0 VISIBILITY 5 WIND DIREC 14 TRANSPAR
 LAT 18- 3.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 12 SONIC DEP 0.161
 LONG 067-13.5 W REL HUMID 735 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 14.8 GMT, 1050 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN							
	CZ	TZ	BN	TL	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	29.12	29.12	34.991	22.04	4.64	6.63	97.34	.05	0.00
10	10	0	4	29.07	29.01	34.977	22.05	4.60	6.61	96.98	.09	0.00

035 585 STANDARD DEPTHS
 0 29.12 34.991 22.04 4.64 6.63 97.34 0.05 0.00
 10 29.07 34.977 22.05 4.60 6.61 96.98 0.09 0.00

R V PALUMBO CRUISE 035 STATION CPP-40 PRNC REFERENCE 035586

DATE 09 / 12/73 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 2
HOUR 15.4 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
LAT 18- 3.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0219
LONG 067-15.5 W REL HUMID 73% CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 15.4 GMT, 1121 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.120 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	2	29.11	29.17	29.14	34.965	22.01	4.67	6.68	97.95	.11	0.00
10	10	0	3	28.99	29.02	29.01	34.972	22.06	4.80	6.85	100.45	.08	0.00
20	20	0	4	28.97	28.89	28.93	34.977	22.09	4.74	6.77	99.24	.08	0.00

035 586 STANDARD DEPTHS

0	29.14	34.965	22.01	4.67	6.68	97.95	0.11	0.00
10	29.01	34.972	22.06	4.80	6.85	100.45	0.08	0.00
20	28.93	34.977	22.09	4.74	6.77	99.24	0.08	0.00

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R V PALUMBO CRUISE 035 STATION CPP-5R PRNC REFERENCE 035587

DATE 09 / 12/73 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 2
HOUR 15.9 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 15 TRANSPAR
LAT 18- 4.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0155
LONG 067-13.5 W REL HUMID 071 CLOUD AMT 9 WAVE HEIGHT 2 COLOR 10

CAST 1 MESS TIME 15.9 GMT, 1153 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.120 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	29.31	29.32	29.32	35.059	22.02	4.68	6.69	98.73	.06	0.00
10	10	0	4	29.25	29.21	29.23	35.045	22.04	4.68	6.69	98.60	.07	0.00

035 587 STANDARD DEPTHS

0	29.32	35.059	22.02	4.68	6.69	98.73	0.06	0.00
10	29.23	35.045	22.04	4.68	6.69	98.60	0.07	0.00

R V PALUMBO CRUISE 033 STATION CRP-68 PRNC REFERENCE 035583

DATE 09 /12/73 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 3
 HOUR 16.3 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 17 TRANSPAR
 LAT 18- 5.0 N TEMP WET 30.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0146
 LONG 067-13.5 W REL HUMID 70% CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 16.5 GMT, 1215 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	29.32	29.33	29.33	35.058	22.02	4.74	6.77	99.92	.06	0.20
10	10	0	4	29.19	29.21	29.20	35.041	22.05	4.64	6.63	97.61	.06	0.00
035	588	STANDARD DEPTHS											
	0	29.33	35.058	22.02	4.74	6.77	99.92	0.06	0.20				
	10	29.20	35.041	22.05	4.64	6.63	97.61	.06	0.00				

R V PALUMBO CRUISE 035 STATION CRP-7R PRNC REFERENCE 035584

DATE 09 /12/73 BARO 1017.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 3
 HOUR 16.6 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
 LAT 18- 6.0 N TEMP WET 30.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0165
 LONG 067-13.5 W REL HUMID 07% CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 16.6 GMT, 1237 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.120 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		OXYGEN		PHOS NITRA							
WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	29.28	29.22	29.25	35.066	22.05	4.66	6.66	98.23	.12	0.20
10	10	0	4	29.06	28.99	29.03	35.085	22.14	4.65	6.64	97.88	.12	0.00
035	589	STANDARD DEPTHS											
	0	29.25	35.066	22.05	4.66	6.66	98.23	0.12	0.20				
	10	29.03	35.085	22.14	4.65	6.64	97.88	0.12	0.00				

R V PALUMBO CRUISE 033 STATION CPP-30 PRNC REFERENCE 035591

DATE 09 /12/73 BARO 1217.2 WEATHER 00 WIND VELOC 10 WAVE PERIOD 2
HOUR 16.9 TEMP DRY 32.2 VISIBILITY 7 WIND DIREC 10 TRANSPAR
LAT 18- 7.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 17 SONIC DEP 0174
LONG 067-13.5 W REL HUMID 269 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 16.9 GMT, 1256 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.120 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	OXYGEN	
														TEMP	DEPTH (M)
0	0	0	3	29.27	29.24	29.26	35.128	22.10	4.62	6.60	97.56	.09	0.00		
10	10	0	4	29.15	29.10	29.12	35.148	22.15	4.62	6.64	98.23	.26	0.00		

035 590 STANDARD DEPTHS

0	29.26	35.128	22.10	4.62	6.60	97.56	0.09	0.00
10	29.12	35.148	22.15	4.62	6.64	98.23	0.26	0.00

R V PALUMBO CRUISE 035 STATION CPP-9R PRNC REFERENCE 035591

DATE 09 /12/73 BARO 1016.5 WEATHER 00 WIND VELOC 10 WAVE PERIOD 3
HOUR 17.3 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
LAT 16- 8.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0195
LONG 067-13.5 W REL HUMID 068 CLOUD AMT 9 WAVE HEIGHT 3 COLOR 10

CAST 1 MESS TIME 17.3 GMT, 1315 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.120 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	OXYGEN	
														TEMP	DEPTH (M)
0	0	0	3	29.21	29.21	29.21	35.167	22.14	4.40	6.37	94.36	.09	0.00		
10	10	0	4	29.12	29.12	29.12	35.223	22.21	4.52	6.45	95.69	.08	0.00		

035 591 STANDARD DEPTHS

0	29.21	35.167	22.14	4.40	6.37	94.36	0.09	0.00
10	29.12	35.223	22.21	4.52	6.45	95.69	0.08	0.00

R V PALUMBO CRUISE 036 STATION PHI-2C PRNC REFERENCE 036592

DATE 01 /14/74 BARO 1023.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 1
 HOUR 14.5 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-20.0 N TEMP WET 27.0 CLOUD TYPE 0 WAVE DIREC 08 SONIC DEP 0549
 LONG 067-17.2 W REL HUMID 740 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.5 GMT. 1028 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.075 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA		
		TZ	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L			%SAT	
0	0	0	11	25.76	25.77	25.77	35.296	23.35	4.54	6.56	94.13	.09	0.00
25	25	25	12	25.89	0.00	25.89	35.372	23.37	4.74	6.78	97.46	.07	0.00
50	50	47	15	25.94	0.00	25.94	35.477	23.43	4.74	6.78	97.66	.06	0.00
100	100	106	16	25.46	0.00	25.46	36.045	24.01	4.61	6.59	95.03	.09	0.00
150	150	0	1	21.93	0.00	21.93	36.665	25.52	4.24	6.05	81.05	.25	0.00
200	200	192	2	19.55	0.00	19.55	36.481	26.03	4.19	5.90	73.19	.42	0.00
250	250	252	3	18.36	0.00	18.36	36.407	26.28	4.09	5.79	71.24	.50	0.00
300	300	293	4	17.53	0.00	17.53	36.325	26.42	4.07	5.81	71.00	.55	0.00

036 592 STANDARD DEPTHS

0	25.77	35.296	23.35	4.54	6.56	94.13	0.09	0.00
10	25.82	35.326	23.36	4.62	6.65	95.46	0.08	0.00
20	25.87	35.356	23.36	4.72	6.74	96.85	0.07	0.00
30	25.91	35.387	23.37	4.74	6.78	97.50	0.07	0.00
50	25.94	35.477	23.43	4.74	6.78	97.66	0.06	0.00
75	25.80	35.728	23.67	4.70	6.72	97.03	0.07	0.00
100	25.46	36.045	24.01	4.61	6.59	95.03	0.09	0.00
150	21.93	36.665	25.52	4.24	6.05	81.05	0.25	0.00
200	19.55	36.481	26.03	4.19	5.90	73.19	0.42	0.00
250	18.36	36.407	26.28	4.09	5.79	71.24	0.50	0.00
300	17.53	36.325	26.42	4.07	5.81	71.00	0.55	0.00

R V PALUMBO CRUISE 036 STATION PHI-3C PRNC REFERENCE 036593
 DATE 01 /14/74 BARO 1024.5 WEATHER 02 WIND VELOC WAVE PERIOD 1
 HOUR 15.5 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-21.2 N TEMP WET 28.0 CLOUD TYPE 8 WAVE DIREC 09 SONIC DEP 0520
 LONG 067-18.7 W REL HUMID 715 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.5 GMT, 1128 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER 1.075 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	11	25.89	25.88	25.89	35.389	23.38	4.73	6.76	97.25	.09	0.00
25	25	25	28	12	25.89	0.00	25.89	35.411	23.40	4.74	6.78	97.51	.10	0.00
50	50	50	50	15	25.85	0.00	25.85	35.598	23.55	4.71	6.73	97.06	.07	0.00
100	100	100	101	16	25.66	0.00	25.66	35.932	23.86	4.67	6.67	96.33	.06	0.00
150	149	149	147	1	21.53	0.00	21.53	36.685	25.65	4.27	6.10	81.49	.28	0.00
200	199	199	196	2	19.76	0.00	19.76	36.515	26.00	4.20	6.01	74.72	.32	0.00
250	249	249	247	3	17.59	0.00	17.59	36.366	26.44	4.11	5.87	71.85	.46	0.00
300	298	298	290	4	16.75	0.00	16.75	36.303	26.59	4.08	5.82	70.94	.58	0.00

STANDARD DEPTHS	WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	0	0	11	25.89	25.88	25.89	35.389	23.38	4.73	6.76	97.25	0.09	0.00
10	10	25	25	28	12	25.89	0.00	25.89	35.398	23.39	4.74	6.77	97.36	0.09	0.00
20	20	50	50	50	15	25.85	0.00	25.85	35.407	23.40	4.74	6.77	97.46	0.10	0.00
30	30	100	100	101	16	25.66	0.00	25.66	35.440	23.42	4.74	6.77	97.45	0.10	0.00
50	50	150	149	147	1	21.53	0.00	21.53	35.598	23.55	4.71	6.73	97.06	0.07	0.00
75	75	200	199	196	2	19.76	0.00	19.76	35.741	23.68	4.69	6.69	96.63	0.07	0.00
100	100	250	249	247	3	17.59	0.00	17.59	35.932	23.86	4.67	6.67	96.33	0.06	0.00
150	150	300	298	290	4	16.75	0.00	16.75	36.682	25.66	4.27	6.10	81.40	0.28	0.00
200	200								36.515	26.01	4.20	6.00	74.65	0.32	0.00
250	250								36.366	26.44	4.11	5.87	71.82	0.46	0.00
300	300								36.303	26.60	4.07	5.82	70.91	0.58	0.00

R V PALUMBO CRUISE 036 STATION PHI-4B PRNC REFERENCE 036594

DATE 01/14/74 BARO 1023.5 WEATHER 02 WIND VELOC 07 WAVE PERIOD 4
 HOUR 16.4 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 16-22.7 N TEMP WET 29.0 CLOUD TYPE 8 WAVE DIREC 08 SONIC DEP 0164
 LONG 66-18.0 W REL HUMID 70% CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 WESS TIME 16.3 GMT, 1218 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.275 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	25.89	25.90	25.90	35.327	23.33	4.83	6.90	99.16	.24	0.00
25	25	28	2	25.96	0.00	25.96	35.424	23.39	4.80	6.85	98.71	.08	0.00
50	50	49	3	25.94	0.00	25.94	36.039	23.86	4.73	6.76	98.26	.08	0.00
100	100	0	4	25.59	0.00	25.59	36.205	24.09	4.52	6.50	93.24	.07	0.00
STANDARD DEPTHS													
036 594						25.90	35.327	23.33	4.83	6.90	99.16	0.04	0.00
	10					25.92	35.366	23.35	4.82	6.88	98.98	0.06	0.00
	20					25.95	35.405	23.38	4.80	6.86	98.82	0.07	0.00
	30					25.96	35.534	23.47	4.77	6.84	98.66	0.08	0.00
	50					25.94	36.039	23.86	4.73	6.76	98.26	0.08	0.00
	75					25.82	36.122	23.96	4.62	6.64	96.45	0.08	0.00
	100					25.59	36.205	24.19	4.52	6.50	93.24	0.07	0.00

R V PALUMBO CRUISE 036 STATION PHI-4C PRNC REFERENCE 036595

DATE 01 /14/74 PARO 1023.0 WEATHER 02 WIND VELOC WAVE PERIOD 3
 HOUR 16.8 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 18-23.3 N TEMP WET 30.0 CLOUD TYPE 0 WAVE DIREC 07 SONIC DEP 0350
 LONG 067-19.4 W REL HUMID 685 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.8 GMT, 1250 LOCAL MAX DEPTH 300 WIRE ANGLE 18
 OXYGEN TITER 1.075 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	11	25.92	25.93	25.93	35.260	23.27	4.86	6.94	99.76	.04	0.00	
25	24	0	0	12	25.93	0.00	25.93	35.291	23.30	4.83	6.90	99.15	.05	0.00	
50	48	43	0	15	25.96	0.00	25.96	35.433	23.39	4.83	6.90	99.39	.04	0.00	
100	95	89	0	16	25.81	0.00	25.81	35.953	23.83	4.62	6.61	95.70	.08	0.00	
150	143	139	0	1	23.64	0.00	23.64	36.540	24.93	4.50	6.42	86.56	.13	0.00	
200	190	182	0	2	19.64	0.00	19.64	36.464	25.99	4.20	6.01	74.51	.33	0.00	
250	238	0	0	3	18.65	0.00	18.65	36.375	26.18	4.19	5.99	73.71	.42	0.00	
300	285	0	0	4	16.30	0.00	16.30	36.209	26.62	4.10	5.85	71.08	.67	0.00	

036 595 STANDARD DEPTHS

0	25.93	35.260	23.27	4.86	6.94	99.76	.04	0.00
10	25.93	35.273	23.28	4.85	6.92	99.51	.04	0.00
20	25.93	35.286	23.29	4.83	6.90	99.24	.05	0.00
30	25.93	35.316	23.31	4.83	6.90	99.19	.05	0.00
50	25.96	35.451	23.41	4.82	6.89	99.28	.04	0.00
75	25.91	35.709	23.62	4.72	6.75	97.55	.06	0.00
100	25.68	36.028	23.93	4.61	6.59	95.35	.08	0.00
150	23.01	36.529	25.11	4.42	6.35	85.33	.16	0.00
200	19.36	36.449	26.03	4.20	6.00	74.32	.35	0.00
250	10.11	36.336	26.28	4.17	5.96	73.09	.48	0.00
300	15.55	36.156	26.76	4.07	5.81	70.35	.75	0.00

R V PALUMBO CRUISE 036
 STATION PHI-6C PRNC REFERENCE 036597
 DATE 01 /14/74 BARO 1022.5 WEATHER 02 WIND VELOC 15 WAVE PERIOD 5
 HOUR 18.6 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-25.2 N TEMP WET 30.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0475
 LONG 067-16.0 W REL HUMID 680 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.6 GMT, 1435 LOCAL MAX DEPTH 300 WIRE ANGLE 13
 OXYGEN TITER 1.075 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG	T	OXYGEN		XSAT	PHOS	NITRA
											ML/L	MG/L			
0	0			11	25.83	25.84	25.84	35.221	23.27	4.98	7.11	102.04	.07	0.00	
25	25		28	12	25.85	0.00	25.85	35.054	23.14	4.87	6.96	99.62	.07	0.00	
50	49		47	15	25.95	0.00	25.95	35.253	23.26	4.81	6.87	98.67	.04	0.00	
100	98		0	16	25.61	0.00	25.61	35.832	23.80	4.66	6.65	95.91	.08	0.00	
150	146		145	1	21.43	0.00	21.43	36.417	25.47	4.32	6.18	82.08	.19	0.00	
200	195		192	2	19.84	0.00	19.84	36.297	25.81	4.28	6.11	75.35	.31	0.00	
250	243		239	3	18.23	0.00	18.23	36.184	26.14	4.20	6.01	73.32	.41	0.00	
300	292		292	4	16.92	0.00	16.92	36.047	26.35	4.17	5.96	74.30	.53	0.00	

036 597 STANDARD DEPTHS

0	25.84	35.221	23.27	4.98	7.11	102.04	0.07	0.00
10	25.84	35.154	23.22	4.94	7.05	101.07	0.07	0.00
20	25.85	35.080	23.16	4.89	6.99	100.07	0.07	0.00
30	25.87	35.074	23.15	4.86	6.94	99.35	0.06	0.00
50	25.94	35.264	23.27	4.81	6.86	98.64	0.04	0.00
75	25.86	35.545	23.51	4.74	6.77	97.62	0.05	0.00
100	25.45	35.863	23.88	4.64	6.63	95.40	0.08	0.00
150	21.25	36.407	25.51	4.31	6.16	81.84	0.20	0.00
200	19.67	36.286	25.85	4.27	6.10	75.13	0.32	0.00
250	18.03	36.165	26.17	4.20	6.00	73.13	0.43	0.00
300	16.71	36.025	26.39	4.17	5.95	73.91	0.55	0.00

R V PALUMBO CRUISE 036 STATION PHI-5B PRNC REFERENCE 036598

DATE 01 /14/74 BARO 1021.5 WEATHER 02 WIND VELOC 16 WAVE PERIOD 4
 HOUR 19.7 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-23.5 N TEMP WET 29.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0180
 LONG 067-16.6 W REL HUMID 710 CLOUD AMT 3 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19.6 GMT, 1535 LOCAL MAX DEPTH 100 WIRE ANGLE 6
 OXYGEN TITER 1.075 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	1	25.85	0.00	25.85	35.059	23.15	4.79	6.84	97.87	.07	0.00		
25	25	2	25.92	0.00	25.92	35.189	23.22	4.81	6.87	98.55	.06	0.00		
50	50	3	25.93	0.00	25.93	35.201	23.23	4.84	6.91	99.24	.06	0.00		
100	100	4	25.34	0.00	25.34	35.455	23.60	4.65	6.65	95.17	.09	0.00		
STANDARD DEPTHS														
036 598	0						25.85	35.059	23.15	4.79	6.84	97.87	.07	0.00
	10						25.88	35.111	23.18	4.79	6.85	98.14	0.07	0.00
	20						25.91	35.165	23.21	4.80	6.86	98.41	0.06	0.00
	30						25.93	35.191	23.22	4.81	6.87	98.67	0.06	0.00
	50						25.93	35.201	23.23	4.84	6.91	99.24	0.06	0.00
	75						25.74	35.290	23.35	4.79	6.84	98.14	0.07	0.00
	100						25.34	35.455	23.60	4.65	6.65	95.17	0.09	0.00

R V PALUMBO CRUISE 036 STATION PHI-68 PRNC REFERENCE 036599

DATE 01 /14/74 BARO 1020.5 WEATHER 02 WIND VELOC 14 WAVE PERIOD 4
 HOUR 20.0 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-24.0 N TEMP WET 28.0 CLOUD TYPE 6 WAVE DIREC 06 SONIC DEP 0201
 LONG 067-15.5 W REL HUMID 711 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 20.0 GMT, 16 3 LOCAL MAX DEPTH 100 WIRE ANGLE 2
 OXYGEN TITER 1.075 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA
			TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT		
0	0	0	25.85	0.00	25.85	35.005	23.10	4.93	7.04	100.65	.00	0.00
25	25	27	25.92	0.00	25.92	35.136	23.18	4.80	6.94	99.58	.03	0.00
50	50	54	25.92	0.00	25.92	35.159	23.20	4.83	6.90	98.95	.07	0.00
100	100	99	25.12	0.00	25.12	35.828	23.95	4.63	6.62	94.76	.05	0.00
STANDARD DEPTHS												
036 599	0	0	25.85	35.005	23.10	4.93	7.04	100.65	0.00	0.00	0.00	0.00
	10	10	25.88	35.057	23.14	4.90	7.00	100.22	0.01	0.00	0.00	0.00
	20	20	25.91	35.112	23.17	4.87	6.96	99.78	0.02	0.00	0.00	0.00
	30	30	25.92	35.152	23.19	4.83	6.93	99.47	0.04	0.00	0.00	0.00
	50	50	25.92	35.159	23.20	4.83	6.90	98.95	0.07	0.00	0.00	0.00
	75	75	25.65	35.390	23.46	4.73	6.79	97.44	0.06	0.00	0.00	0.00
	100	100	25.12	35.828	23.95	4.63	6.62	94.76	0.05	0.00	0.00	0.00

R V PALUMBO CRUISE 036 STATION PHI-6A PRNC REFERENCE 036600

DATE 01 /14/74 BARO 1020.5 WEATHER 02 WIND VELOC 14 WAVE PERIOD 4
HOUR 20.5 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
LAT 16-22.8 N TEMP WET 28.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0022
LONG 067-15.0 W REL HUMID 720 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 20.5 GMT, 1630 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.075 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	3	1	25.86	0.00	25.86	35.025	23.12	4.87	6.96	99.59	.00	0.00
10	10	10	9	2	25.89	0.00	25.89	34.992	23.08	4.80	6.94	99.34	.06	0.00
036 600														
							25.86	35.025	23.12	4.87	6.96	99.59	0.00	0.00
							25.89	34.992	23.08	4.80	6.94	99.34	0.06	0.00

R V PALUMBO CRUISE 036 STATION PHI-5A PRNC REFERENCE 036601

DATE 01 /14/74 BARO 1019.5 WEATHER 02 WIND VELOC 14 WAVE PERIOD 4
HOUR 20.8 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
LAT 18-22.5 N TEMP WET 29.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0219
LONG 067-16.0 W REL HUMID 670 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 20.8 GMT, 1646 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.075 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	2	1	25.88	0.00	25.88	35.071	23.15	4.84	6.91	99.01	.05	0.00
10	10	11	11	2	25.89	0.00	25.89	35.068	23.14	4.84	6.91	99.01	.03	0.00
036 601														
							25.88	35.071	23.15	4.84	6.91	99.01	0.05	0.00
							25.89	35.068	23.14	4.84	6.91	99.01	0.03	0.00

R V PALUMBO CRUISE 036 STATION PHI-4A PRNC REFERENCE 036602

DATE 01 /14/74 BARO 1020.5 WEATHER 02 WIND VELOC 15 WAVE PERIOD 4
 HOUR 21.1 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-22.0 N TEMP WET 29.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0021
 LONG 067-16.5 W REL HUMID 670 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 21.1 GMT, 17 5 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.075 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	1	25.86	0.00	0.00	25.86	34.998	23.10	4.92	7.07	101.09	.07	0.00
10	10	12	2	25.88	0.00	0.00	25.88	35.024	23.11	4.87	6.96	99.60	.08	0.00

036 602 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 036 STATION PHI-3A PRNC REFERENCE 036603

DATE 01 /14/74 BARO 1020.5 WEATHER 02 WIND VELOC 13 WAVE PERIOD 4
 HOUR 21.4 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-20.7 N TEMP WET 28.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0229
 LONG 067-16.3 W REL HUMID 720 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 21.4 GMT, 1725 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.075 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	1	0.00	0.00	0.00	0.00	35.059	0.00	4.82	6.93	*****	.05	0.00
10	10	12	2	25.87	0.00	0.00	25.87	35.043	23.13	4.87	6.96	99.62	.08	0.00

036 603 STANDARD DEPTHS
 0
 10

~~25.75~~ 35.059
~~25.84~~ 35.043
~~23.10~~ 4.82
~~23.14~~ 4.87

Temps from previous station (PHI-2A)

R V PALUMBO CRUISE 036 STATION PHI-2A PRNC REFERENCE 036605

DATE 01 /14/74 BARO 1020.5 WEATHER 00 WIND VELOC 08 WAVE PERIOD
 HOUR 23.8 TEMP DRY 0.0 VISIBILITY 0 WIND DIREC 07 TRANSPAR
 LAT 18-20.9 N TEMP WET 27.0 CLOUD TYPE 8 WAVE DIREC SONIC DEP 0023
 LONG 067-16.2 W REL HUMID 710 CLOUD AMT 2 WAVE HEIGHT COLOR

CAST 1 MESS TIME 23.8 GMT, 1945 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.075 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	25.75	0.00	25.75	35.004	23.14	4.89	6.99	99.91	.05	0.00
10	10	12	2	25.84	0.00	25.84	35.047	23.14	4.87	6.96	99.60	.08	0.00
036 605 STANDARD DEPTHS													
						25.75	35.004	23.14	4.89	6.99	99.91	0.05	0.00
						25.84	35.047	23.14	4.87	6.96	99.60	0.08	0.00

R V PALUMBO CRUISE 036 STATION PHI-25 PRNC REFERENCE 036606

DATE 01 /15/74 BARO 1020.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 6
 HOUR 0.1 TEMP DRY 0.0 VISIBILITY 0 WIND DIREC 07 TRANSPAR
 LAT 18-20.5 N TEMP WET 27.0 CLOUD TYPE WAVE DIREC 06 SONIC DEP 0185
 LONG 067-16.6 W REL HUMID 770 CLOUD AMT WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 0.1 GMT, 20 7 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER 1.075 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				XSAT	PHOS	NITRA
			TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L			
0	0	0	1	25.75	0.00	25.75	35.010	23.14	4.89	6.99	99.91	.09	0.00
25	25	30	2	25.87	0.00	25.87	35.049	23.13	4.85	6.93	99.19	.10	0.00
50	50	50	3	25.89	0.00	25.89	35.272	23.29	4.79	6.84	98.20	.07	0.00
100	100	98	4	25.04	0.00	25.04	36.026	24.12	4.65	6.62	94.78	.10	0.00
036 606 STANDARD DEPTHS													
	0	0		25.75	35.010	23.14	4.89	6.99	99.91	0.09	0.00		
	10	10		25.80	35.026	23.14	4.88	6.97	99.62	0.09	0.00		
	20	20		25.85	35.041	23.13	4.80	6.94	99.34	0.10	0.00		
	30	30		25.88	35.080	23.15	4.84	6.91	99.01	0.09	0.00		
	50	50		25.89	35.272	23.29	4.79	6.84	98.20	0.07	0.00		
	75	75		25.61	35.598	23.63	4.71	6.73	96.83	0.07	0.00		
	100	100		25.04	36.026	24.12	4.65	6.62	94.78	0.10	0.00		

R V PALUMBO CRUISE 476 STATION CRP-19 PRNC REFERENCE 036608

DATE 1/10/74 07:00 1024.5 WEATHER 00 WIND VELOC 23 WAVE PERIOD 6
HOUR 13.3 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
LAT 16-04.0 N TEMP WET 27.0 CLOUD TYPE 5 WAVE DIREC 12 SONIC DEP 0013
LONG 067-13.5 W REL HUMID 735 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 PRESS TIME 13.5 GUT, 915 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.274 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	3	1	25.43	0.00	25.43	34.902	23.16	4.81	6.87	97.77	.05	0.00		
10	10	9	2	25.43	0.00	25.43	34.896	23.15	4.76	6.80	96.90	.03	0.00		

036 609 STANDARD DEPTHS

10

R V PALUMBO CRUISE 476 STATION CRP-29 PRNC REFERENCE 036609

DATE 01/16/74 08:00 1024.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 6
HOUR 13.5 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
LAT 15-11.0 N TEMP WET 27.0 CLOUD TYPE 5 WAVE DIREC 02 SONIC DEP 0013
LONG 067-13.5 W REL HUMID 725 CLOUD AMT 6 WAVE HEIGHT 3 COLOR

CAST 1 PRESS TIME 13.5 GUT, 932 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.274 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	RN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	6	1	25.52	0.00	25.52	34.898	23.13	4.77	6.82	97.18	.04	0.00		
10	10	9	2	25.52	0.00	25.52	34.899	23.13	4.81	6.87	97.83	.04	0.00		

036 609 STANDARD DEPTHS

10

DATE 01/16/74 BARO 1023.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 13.9 TEMP DRY 4.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18- 2.0 N TEMP WET 28.0 CLOUD TYPE 5 WAVE DIREC 07 SONIC DEP 0015
 LONG 067-13.5 W REL HUMID 695 CLOUD AMT 5 WAVE HEIGHT 3 COLOR

CAST 1 PRESS TIME 14.2 GFT, 1410 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.070 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ							
0	1	25.42	0.00	23.10	4.80	6.85	97.47	.03	0.00
10	2	25.40	0.00	23.11	4.83	6.90	98.12	.03	0.00
STANDARD DEPTHS									
0	1	25.42	34.828	23.10	4.80	6.85	97.47	0.03	0.00
10	2	25.42	34.830	23.11	4.83	6.90	98.12	0.03	0.00

DATE 01/16/74 BARO 1024.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 14.2 TEMP DRY 6.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18- 3.0 N TEMP WET 28.0 CLOUD TYPE 5 WAVE DIREC 08 SONIC DEP 0015
 LONG 067-13.5 W REL HUMID 695 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 PRESS TIME 14.2 GFT, 1410 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.070 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ							
0	1	25.46	0.00	23.10	4.78	6.84	97.30	.04	0.00
10	2	25.42	0.00	23.11	4.82	6.88	97.92	.04	0.00
STANDARD DEPTHS									
0	1	25.46	34.843	23.10	4.78	6.84	97.32	0.04	0.00
10	2	25.42	34.836	23.11	4.82	6.88	97.92	0.04	0.00

DATE 01 /16/74 BARO 1023.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 14.5 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 33 TRANSPAR
 LAT 19- 4.0 N TEMP WET 28.0 CLOUD TYPE 5 WAVE DIREC 06 SONIC DEP 0015
 LONG 067-13.5 W REL HUMID 710 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.5 G-T, 1028 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.070 ETHER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	4	1	25.46	0.00	25.46	34.765	23.04	4.83	6.90	98.09	.07	0.00	
10	10	12	2	25.43	0.00	25.43	34.750	23.04	4.83	6.90	98.05	.06	0.00	

036 612 STANDARD DEPTHS

0	25.46	34.765	23.04	4.83	6.90	98.09	0.07	0.00
10	25.43	34.750	23.04	4.83	6.90	98.05	0.06	0.00

DATE 01 /16/74 BARO 1023.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 14.8 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 33 TRANSPAR
 LAT 19- 5.0 N TEMP WET 28.0 CLOUD TYPE 5 WAVE DIREC 07 SONIC DEP 0014
 LONG 067-13.5 W REL HUMID 710 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.8 G-T, 1045 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER 1.070 ETHER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	T2	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	8	1	25.52	0.00	25.52	34.695	22.97	4.84	6.91	98.26	.12	0.00	
10	10	11	2	25.41	0.00	25.41	35.200	23.39	4.83	6.90	98.49	.05	0.00	

036 613 STANDARD DEPTHS

0	25.52	34.695	22.97	4.84	6.91	98.26	.12	0.00
10	25.41	35.200	23.39	4.83	6.90	98.49	.05	0.00

R V PALUMBO CRUISE 036 STATION CRP-78 PRNC REFERENCE 036614

DATE 01 /16/74 BARO 1023.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
HOUR 15.0 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 33 TRANSPAR
LAT 18-06.0 N TEMP WET 29.0 CLOUD TYPE 5 WAVE IREC 03 SONIC DEF 0014
LONG 067-13.5 W WIND HUMID 71.0 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 WESS TIME 15.5 G 1, 1119 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.070 METER WHEEL FACTOR .997

WIRE NO 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
STANDARD DEPTHS
036614
1

R V PALUMBO CRUISE 036 STATION CRP-88 PRNC REFERENCE 036615

DATE 01 /16/74 BARO 1022.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
HOUR 15.3 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 33 TRANSPAR
LAT 18-07.0 N TEMP WET 29.0 CLOUD TYPE 5 WAVE DIREC 04 SONIC DEP 0015
LONG 067-13.5 W WIND HUMID 71.0 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 WESS TIME 15.5 G 1, 1119 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.070 METER WHEEL FACTOR .997

WIRE NO 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
STANDARD DEPTHS
036615
1

R V PALUMBO CRUISE 030 STATION CRP-98 PRNC REFERENCE 036616

DATE 01 / 16 / 74 BARO 1022.5 WEATHER 02 WIND VELOC WAVE PERIOD 1
 HOUR 15.6 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18° 0.0 N TEMP WET 29.0 CLOUD TYPE 5 WAVE DIREC 03 SONIC DEP 0017
 LONG 067° 13.5 W REL HUMID 710 CLOUD AMT 7 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.6 GMT, 1135 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.070 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA			
	WIRE	CE	TZ	BN							TL	TM	TAVE
0	0	7	1	25.47	0.00	25.47	35.138	23.32	4.85	6.93	98.92	.03	0.00
10	10	14	2	25.46	0.00	25.46	35.188	23.36	4.87	6.96	99.40	.00	0.00
STANDARD DEPTHS													
036 614	0			25.47	35.138	23.32	4.85	6.93	98.92	0.03	0.00		
	10			25.46	35.188	23.36	4.87	6.96	99.40	0.00	0.00		

R V PALUMBO CRUISE 036 STATION CRP-40 PRNC REFERENCE 036617

DATE 01 / 16 / 74 BARO 1021.5 WEATHER 02 WIND VELOC WAVE PERIOD 6
 HOUR 17.3 TEMP DRY 0.0 VISIBILITY 7 WIND DIREC 18 TRANSPAR
 LAT 19° 23.0 N TEMP WET 24.0 CLOUD TYPE 5 WAVE DIREC 00 SONIC DEP 0022
 LONG 067° 15.0 W REL HUMID 802 CLOUD AMT 7 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 17.3 GMT, 1320 LOCAL MAX DEPTH 20 WIRE ANGLE 0
 OXYGEN TITER 1.070 METER WHEEL FACTOR .997

DEPT (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA			
	WIRE	CE	TZ	BN							TL	TM	TAVE
0	0	6	1	25.87	0.00	25.87	34.854	22.99	4.83	6.90	98.46	.04	0.00
10	10	13	2	25.65	0.00	25.65	34.854	23.05	4.81	6.87	97.87	.05	0.00
20	20	22	3	25.61	0.00	25.61	35.177	23.31	4.82	6.88	98.44	.04	0.00
STANDARD DEPTHS													
036 617	0			25.87	34.854	22.98	4.83	6.90	98.46	0.04	0.00		
	10			25.65	34.854	23.05	4.81	6.87	97.87	0.05	0.00		
	20			25.61	35.177	23.31	4.82	6.88	98.44	0.04	0.00		

R V PALUMBO CRUISE 040 STATION CRP-5A PRNC REFERENCE 040693

DATE 04 /02/74 BARO 1021.1 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 13.4 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18- 4.1 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 06 SONIC DEP 0091
 LONG 067-12.2 W REL HUMID 078 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.4 GMT, 923 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
	WIRE	CZ	TM							
0	0	11	26.34	26.34	23.57	4.80	6.86	99.96	.06	0.00
5	5	10	26.39	26.39	23.55	4.79	6.84	99.52	.05	0.00

040 693 STANDARD DEPTHS
 26.34 35.821 23.57 4.80 6.86 99.96 .06 0.00

R V PALUMBO CRUISE 040 STATION CRP-4A PRNC REFERENCE 040694

DATE 04 /02/74 BARO 1020.9 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 14.0 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18- 3.1 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 07 SONIC DEP 0085
 LONG 067-12.4 W REL HUMID 078 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.0 GMT, 953 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
	WIRE	CZ	TM							
0	0	10	26.44	26.44	23.56	4.70	6.75	98.66	.07	0.00
5	5	11	26.42	26.42	23.56	4.81	6.87	100.34	.05	0.00

040 694 STANDARD DEPTHS
 26.44 35.849 23.56 4.70 6.75 98.66 0.07 0.00

R V PALUMBO CRUISE 040 STATION CRP=3A PRNC REFERENCE 040695

DATE 04 /02/74 BARO 1021.3 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
HOUR 14.5 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
LAT 18° 2.0 N REL HUMID 0.0 CLOUD TYPE 0 WAVE DIREC 07 SONIC DEP 0060
LONG 067° 12.0 W REL HUMID 077 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.5 GMT, 1027 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			OXYGEN	OXYGEN											
0	0	0	26.27	26.27	26.27	10	26.27	26.27	35.914	23.66	4.65	6.65	97.01	.05	0.00
5	5	5	26.20	26.20	26.20	11	26.20	26.20	35.916	23.68	4.72	6.74	98.19	.07	0.00
040 695 STANDARD DEPTHS															
0															
26.27 35.914 23.66 4.65 6.65 97.01 0.05 0.00															

R V PALUMBO CRUISE 040 STATION CRP=2A PRNC REFERENCE 040696

DATE 04 /02/74 BARO 1020.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
HOUR 15.0 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
LAT 18° 1.0 N REL HUMID 0.0 CLOUD TYPE 0 WAVE DIREC 07 SONIC DEP 0064
LONG 067° 12.6 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.0 GMT, 1058 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
			OXYGEN	OXYGEN											
0	0	0	26.42	26.42	26.42	10	26.42	26.42	35.909	23.61	4.73	6.73	98.74	.05	0.00
5	5	5	26.26	26.26	26.26	11	26.26	26.26	35.907	23.66	4.72	6.74	98.27	.07	0.00
040 696 STANDARD DEPTHS															
0															
26.42 35.909 23.61 4.73 6.73 98.74 0.05 0.00															

R V PALUMBO CRUISE 040 STATION CRP-1R PRIC REFERENCE 040697

DATE 04 /02/74 BARO 1021.3 WEATHER 00 WIND VELOC 03 WAVE PERIOD 1
HOUR 15.3 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
LAT 18- 0.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 09 SONIC DEP 0131
LONG 067-13.5 W REL HUMID 068 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.3 GMT, 1119 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITR 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
	WIRE	CZ	TZ	BN	TL	TM							TAVE	SALIN
0	0	0	0	10	26.30	26.28	26.29	35.961	23.69	4.84	6.92	100.99	.27	0.00
10	10	0	0	11	26.30	26.30	26.30	35.963	23.69	4.80	6.95	101.45	.27	0.00
040 697	STANDARD DEPTHS													
0					26.29	35.960	23.69	4.84	6.92	100.99	0.27	0.00		
10					26.30	35.963	23.69	4.80	6.95	101.45	0.27	0.00		

R V PALUMBO CRUISE 040 STATION CRP-2R PRIC REFERENCE 040698

DATE 04 /02/74 BARO 1021.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
HOUR 15.6 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 10 TRANSPAR
LAT 18- 1.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0134
LONG 067-13.5 W REL HUMID 065 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.6 GMT, 1134 LOCAL MAX DEPTH 10 WIRE ANGLE 1
OXYGEN TITR 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
	WIRE	CZ	TZ	BN	TL	TM							TAVE	SALIN
0	0	0	0	10	26.39	26.39	26.39	35.948	23.65	4.81	6.87	100.49	.27	0.00
10	10	0	0	11	26.27	26.27	26.27	35.923	23.66	4.97	7.00	103.47	.25	0.00
040 698	STANDARD DEPTHS													
0					26.39	35.948	23.65	4.81	6.87	100.49	0.27	0.00		
10					26.27	35.923	23.67	4.97	7.00	103.47	0.25	0.00		

R V PALUMBO CRUISE 040 STATION CRP-3R PRNC REFERENCE 240699

DATE 04 /02/74 BARO 1021.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 15.8 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 18- 2.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0152
 LONG 067-13.6 W REL HUMID 064 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.6 GMT, 1150 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA			
	WIRE	CZ	TZ	BN							TL	TM	TAVE
0	0	0	0	10	26.42	26.42	35.876	23.58	4.77	6.81	99.54	.03	0.00
10	10	0	0	11	26.27	26.27	35.863	23.62	4.81	6.87	100.14	.03	0.00
040 699 STANDARD DEPTHS													
0					26.42	35.876	23.58	4.77	6.81	99.54	0.03	0.00	
10					26.27	35.863	23.62	4.81	6.87	100.14	0.03	0.00	

R V PALUMBO CRUISE 040 STATION CRP-4R PRNC REFERENCE 240700

DATE 04 /02/74 BARO 1021.2 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 16.1 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 11 TRANSPAR
 LAT 18- 3.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0146
 LONG 67-13.5 W REL HUMID 064 CLOUD AMT

CAST 1 MESS TIME 16.1 GMT, 12 6 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA			
	WIRE	CZ	TZ	BN							TL	TM	TAVE
0	0	0	0	10	26.41	26.41	35.840	23.56	4.79	6.75	98.60	.00	0.00
10	10	0	0	11	26.30	26.31	35.884	23.62	4.82	6.89	100.45	.04	0.20
040 700 STANDARD DEPTHS													
0					26.41	35.840	23.56	4.79	6.75	98.60	0.00	0.00	
10					26.31	35.884	23.63	4.82	6.89	100.45	0.04	0.20	

R V PALUMBO CRUISE 040 STATION CRP-4C PRNC REFERENCE 040701

DATE 04 /02/74 BARO 1021.1 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 16.6 TEMP DRY 29.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 10- 3.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0207
 LONG 067-15.6 W REL HUMID 064 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 16.6 GMT, 1234 LOCAL MAX DEPTH 20 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	
	CZ	TZ	TL								
0	0	0	26.35	26.35	35.886	23.61	4.81	6.87	100.31	.04	0.00
10	0	0	26.23	26.23	35.881	23.65	4.91	7.02	102.25	.04	0.00
20	0	0	26.23	26.23	35.873	23.64	4.81	6.87	100.10	.04	0.00

040 701 STANDARD DEPTHS
 0
 10
 20

R V PALUMBO CRUISE 040 STATION CRP-5B PRNC REFERENCE 040702

DATE 04 /02/74 BARO 1020.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 17.0 TEMP DRY 29.2 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 10- 4.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 11 SONIC DEP 0152
 LONG 067-13.5 W REL HUMID 064 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 17.0 GMT, 130 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP			TAVE	SALIN	SIG T	ML/L	%SAT	PHOS	NITRA	
	CZ	TZ	TL								
0	0	0	26.48	26.48	35.813	23.52	4.74	6.77	98.87	.24	0.00
10	0	0	26.30	26.30	35.803	23.57	4.89	6.99	101.60	.20	0.00

040 702 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 040

STATION CRP-6B

PRNC REFERENCE 040703

DATE 04 /02/74 BARO 1020.4 WEATHER P2 WIND VELOC 04 WAVE PERIOD 2
 HOUR 17.2 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 18- 5.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0140
 LONG 067-13.5 W REL HUMID 065 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 17.2 GMT, 1313 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
	WIRE	CZ	TZ	BN							TL	TM
0	0	0	10	26.52	26.52	35.809	23.50	4.78	6.83	99.78	.00	0.00
10	10	0	11	26.27	26.27	35.807	23.58	4.64	6.92	100.69	.20	0.00
STANDARD DEPTHS												
040 703	0			26.52	35.809	23.50	4.78	6.83	99.78	0.00	0.00	
	10			26.27	35.807	23.58	4.84	6.92	100.69	0.00	0.00	

R V PALUMBO CRUISE 040

STATION CRP-7B

PRNC REFERENCE 040704

DATE 04 /02/74 BARO 1020.9 WEATHER 02 WIND VELOC 04 WAVE PERIOD 3
 HOUR 17.5 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
 LAT 18- 6.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0140
 LONG 067-13.5 W REL HUMID 064 CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 17.5 GMT, 1327 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA		
	WIRE	CZ	TZ	BN							TL	TM
0	0	0	10	26.48	26.48	35.817	23.52	4.70	6.80	99.30	.00	0.00
10	10	0	11	26.32	26.32	35.812	23.57	4.68	6.98	101.63	.53	2.00
STANDARD DEPTHS												
040 704	0			26.48	35.817	23.52	4.70	6.80	99.30	.00	0.00	
	10			26.32	35.812	23.57	4.68	6.98	101.63	.53	2.00	

R V PALUMBO CRUISE 040 STATION CRP-7A MRNC REFERENCE 748705

DATE 04 /02/74 BARO 1020.8 WEATHER 02 WIND VELOC 04 WAVE PERIOD 3
HOUR 17.8 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
LAT 16- 6.0 N TEMP WET 2.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0070
LONG 067-12.2 W REL HUMID CLOUD AMT 1 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 17.8 GMT, 1351 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN PHOS NITRA
WIRE CZ TZ RN TL TM TAVE SALIN SIG T ML/L MG/L %SAT .04 0.00
0 0 10 26.72 26.72 26.72 35.821 23.45 4.71 6.72 98.60
5 0 11 26.43 26.43 26.43 35.827 23.54 4.82 6.89 100.54 .05 0.00

040 705 STANDARD DEPTHS 26.72 35.821 23.45 4.71 6.72 98.60 0.04 0.00

R V PALUMBO CRUISE 240 STATION CRP-8B MRNC REFERENCE 748726

DATE 04 /02/74 BARO 1020.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
HOUR 18.3 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
LAT 18- 7.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0150
LONG 067-13.5 W REL HUMID 067 METER WHEEL FACTOR .997

CAST 1 MESS TIME 18.3 GMT, 1416 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN PHOS NITRA
WIRE CZ TZ RN TL TM TAVE SALIN SIG T ML/L MG/L %SAT .07 0.00
0 0 10 26.48 26.48 26.48 35.797 23.50 4.77 6.84 99.91
10 0 11 26.37 26.37 26.37 35.792 23.53 4.79 6.84 99.74 .06 0.00

040 706 STANDARD DEPTHS 26.48 35.797 23.50 4.77 6.84 99.91 0.07 0.00
10- 26.37 35.792 23.53 4.79 6.84 99.74 .06 0.00

R V PALUMBO CRUISE 040 STATION CRP-98 PRNC REFERENCE 040707

DATE 04 /02/74 BARO 1020.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
HOUR 18.7 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
LAT 16- 8.0 N TEMP WFT 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0150
LONG 067-13.5 W REL HUMID 071 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 18.7 GMT, 1442 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN
WIRE CZ TZ RN TL TM TAVE SALIN SIG T ML/L MG/L %SAT PHOS NITRA
ERROR, DATA CARD FROM DIFFERENT CRUISE OR STATION 463

R V PALUMBO CRUISE 040 STATION CRP-9A PRNC REFERENCE 040708

DATE 04 /02/74 BARO 1020.7 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
HOUR 19.9 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 16 TRANSPAR
LAT 18- 8.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 16 SONIC DEP 0067
LONG 067-11.9 W REL HUMID 071 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 19.9 GMT, 1553 LOCAL MAX DEPTH 5 WIRE ANGLE 1
OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN
WIRE CZ TZ RN TL TM TAVE SALIN SIG T ML/L MG/L %SAT PHOS NITRA
0 0 10 26.72 26.72 26.72 26.72 35.512 23.44 4.82 6.89 100.96 .05 0.00
5 5 11 26.62 26.62 26.62 26.62 35.802 23.46 4.84 6.92 101.21 .05 0.00
040 708 STANDARD DEPTHS 26.72 35.812 23.44 4.82 6.89 100.96 .05 0.00

R V PALUMBO CRUISE 041 STATION PHI-2C PRNC REFERENCE 041710

DATE 04 /09/74 BARO 1021.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 2
 HOUR 13.6 TEMP DRY 44.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 16-20.0 N TEMP WFT 0.0 CLOUD TYPE 0 WAVE DIREC 09 SONIC DEP 0457
 LONG 067-17.2 W REL HUMID 058 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.6 GMT, 935 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				SIG T	SALIN	TAVE	XSAT	PHOS	NITRA
			TZ	BN	TL	TM	ML/L	MG/L	ML/L	MG/L						
0	0	0	0	10	25.60	0.00	0.00	25.60	23.75	35.762	25.60	4.81	6.87	98.99	.12	0.00
25	25	25	22	11	25.58	0.00	0.00	25.58	23.75	35.749	25.58	4.80	6.98	100.43	.07	0.00
50	50	50	54	12	25.56	0.00	0.00	25.56	23.76	35.756	25.56	4.84	6.92	99.56	.06	0.00
100	100	100	100	16	25.04	0.00	0.00	25.04	24.11	36.004	25.04	4.74	6.77	96.88	.06	0.00
150	150	150	0	1	21.28	0.00	0.00	21.28	25.67	36.626	21.28	4.28	6.12	81.56	.24	0.00
200	200	200	199	2	18.78	0.00	0.00	18.78	26.20	36.453	18.78	4.07	5.81	71.73	.41	0.00
250	250	250	246	3	17.67	0.00	0.00	17.67	26.41	36.352	17.67	4.00	5.71	69.87	.43	0.00
300	300	300	0	4	16.88	0.00	0.00	16.88	26.54	36.272	16.88	3.97	5.68	69.16	.56	0.00

041 710 STANDARD DEPTHS

0	25.60	35.762	23.75	4.81	6.87	98.99	0.12	0.00
10	25.59	35.757	23.75	4.84	6.91	99.56	0.10	0.00
20	25.58	35.751	23.75	4.87	6.96	100.19	0.08	0.00
30	25.58	35.750	23.75	4.86	6.97	100.38	0.07	0.00
50	25.56	35.756	23.76	4.84	6.92	99.56	0.06	0.00
75	25.38	35.837	23.88	4.79	6.85	98.39	0.06	0.00
100	25.04	36.004	24.11	4.74	6.77	96.88	0.06	0.00
150	21.28	36.626	25.67	4.28	6.12	81.56	0.24	0.00
200	18.78	36.453	26.21	4.07	5.81	71.73	0.41	0.00
250	17.67	36.352	26.41	4.00	5.71	69.87	0.43	0.00
300	16.88	36.272	26.54	3.97	5.68	69.16	0.56	0.00

R V PALUMBO CRUISE 041 STATION PHI-3C PRNC REFERENCE 041711

DATE 04 /09/74 BARO 1020.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 14.3 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-20.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 09 SONIC DEP 0450
 LONG 067-17.7 W REL HUMID 059 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.3 GMT, 1018 LOCAL MAX DEPTH 300 WIRE ANGLE 4
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				XSAT	PHOS	NITRA	
			TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L				MG/L
0	0	0	0	10	25.67	0.00	25.67	35.745	23.72	4.83	6.90	99.49	.09	0.00
25	25	19	19	11	25.62	0.00	25.62	35.742	23.73	4.82	6.89	99.20	.07	0.00
50	50	51	51	12	25.53	0.00	25.53	35.761	23.77	4.90	7.11	102.20	.07	0.00
100	100	101	16	16	25.14	0.00	25.14	35.966	24.05	4.81	6.87	98.49	.16	0.00
150	150	0	1	22.05	0.00	22.05	36.624	25.45	4.33	6.10	82.72	.19	0.00	
200	199	202	2	19.43	0.00	19.43	36.521	26.09	4.09	5.84	72.53	.41	0.00	
250	249	248	3	17.45	0.00	17.45	36.317	26.43	4.00	5.71	69.74	.57	0.00	
300	299	291	4	16.64	0.00	16.64	36.223	26.55	3.90	5.69	69.22	.58	0.00	

041 711 STANDARD DEPTHS

0	25.67	35.745	23.72	4.83	6.90	99.49	0.09	0.00
10	25.65	35.744	23.72	4.83	6.90	99.38	0.08	0.00
20	25.63	35.743	23.73	4.82	6.89	99.26	0.07	0.00
30	25.61	35.743	23.74	4.83	6.93	99.77	0.07	0.00
50	25.53	35.761	23.77	4.90	7.11	102.28	0.07	0.00
75	25.37	35.836	23.88	4.92	7.08	101.64	0.11	0.00
100	25.14	35.966	24.05	4.81	6.87	98.49	0.16	0.00
150	22.05	36.624	25.46	4.33	6.18	82.72	0.19	0.00
200	19.43	36.517	26.10	4.09	5.84	72.44	0.41	0.00
250	17.45	36.315	26.44	3.99	5.71	69.72	0.57	0.00
300	16.62	36.221	26.56	3.90	5.69	69.21	0.58	0.00

R V PALUMBO CRUISE 041 STATION PHI-4B PRNC REFERENCE 041712

DATE 04 /09/74 BARO 1020.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 15.0 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-22.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 09 SONIC DEP 0180
 LONG 067-18.1 W REL HUMID 061 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.0 GMT, 11 3 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA			
			TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L			MG/L	XSAT	
0	0	0	0	1	25.96	0.00	0.00	25.96	35.719	23.61	4.84	6.92	100.08	.07	0.00
25	25	25	24	2	25.63	0.00	0.00	25.63	35.720	23.71	4.89	6.99	100.68	.07	0.00
50	50	50	52	3	25.42	0.00	0.00	25.42	35.771	23.81	4.90	7.00	100.64	.07	0.00
100	100	100	100	4	24.60	0.00	0.00	24.60	36.111	24.32	4.77	6.81	96.78	.08	0.00
041 712 STANDARD DEPTHS															
	0	0			25.96	35.719	23.61	4.84	6.92	100.08	0.07	0.00			
	10	10			25.83	35.719	23.65	4.86	6.95	100.32	0.07	0.00			
	20	20			25.69	35.720	23.69	4.88	6.98	100.57	0.07	0.00			
	30	30			25.59	35.724	23.73	4.90	7.00	100.75	0.07	0.00			
	50	50			25.42	35.771	23.82	4.90	7.00	100.64	0.07	0.00			
	75	75			25.08	35.901	24.02	4.86	6.95	99.39	0.07	0.00			
	100	100			24.60	36.111	24.32	4.77	6.81	96.78	0.08	0.00			

R V PALUMBO CRUISE 041 STATION PHI-4C PRNC REFERENCE 041713

DATE 04 /09/74 BARO 1020.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 15.7 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 18-23.5 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 08 SONIC DEP 0365
 LONG 067-19.3 W REL HUMID 063 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.7 GMT, 1140 LOCAL MAX DEPTH 300 WIRE ANGLE 6
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	DEPTH (M)		TEMP		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
	CZ	TZ	BN	TL				ML/L	MG/L			
0	0	0	10	25.85	0.00	25.85	23.68	4.80	6.95	100.41	.07	0.00
25	25	0	11	25.71	0.00	25.71	23.72	4.89	6.99	100.85	.07	0.00
50	50	50	12	25.67	0.00	25.67	23.73	4.82	6.89	99.29	.08	0.00
100	100	104	16	24.99	0.00	24.99	24.26	4.79	6.84	91.44	.08	0.00
150	149	0	1	20.99	0.00	20.99	25.74	4.20	6.12	81.40	.23	0.00
200	199	203	2	19.22	0.00	19.22	26.12	4.10	5.85	72.54	.30	0.00
250	248	256	3	17.58	0.00	17.58	26.41	4.00	5.80	70.88	.43	0.00
300	298	294	4	16.48	0.00	16.48	26.58	4.00	5.78	70.24	.64	0.00

041 713	STANDARD DEPTHS		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
	CZ	TZ				ML/L	MG/L			
0	0	0	25.85	35.762	23.68	4.80	6.95	100.41	0.07	0.00
10	10	0	25.79	35.762	23.69	4.87	6.96	100.59	0.07	0.00
20	20	0	25.74	35.763	23.71	4.89	6.98	100.76	0.07	0.00
30	30	0	25.69	35.762	23.73	4.80	6.98	100.60	0.07	0.00
50	50	50	25.67	35.756	23.73	4.82	6.89	99.29	0.08	0.00
75	75	0	25.43	35.932	23.93	4.81	6.86	98.81	0.08	0.00
100	100	0	24.99	36.183	24.26	4.79	6.84	91.44	0.08	0.00
150	150	0	20.94	36.612	25.75	4.20	6.11	81.26	0.23	0.00
200	200	0	19.18	36.487	26.13	4.10	5.85	72.48	0.30	0.00
250	250	0	17.53	36.320	26.42	4.00	5.79	70.84	0.44	0.00
300	300	0	16.44	36.206	26.59	4.00	5.78	70.22	0.65	0.00

R V PALUMBO CRUISE 041 STATION PHI-6C PRNC REFERENCE 041714

DATE 04 / 09 / 74 RAKO 1020.0 WFATHER 02 WIND VELOC 06 WAVE PERIOD 3
 HOUR 16.5 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-25.0 N TEMP WET 0.0 CLOUD TYPF 8 WAVE DIREC 06 SONIC DEP 0395
 LONG 067-16.0 W REL HUMID 071 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 16.5 GMT, 1233 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		TZ	BN	TL	TM				ML/L	MG/L			
0	0	0	10	25.79	0.00	25.79	35.749	23.68	4.84	6.92	99.88	.07	0.00
25	25	20	11	25.61	0.00	25.61	35.739	23.73	4.82	6.89	99.19	.07	0.00
50	50	54	12	25.54	0.00	25.54	35.757	23.77	4.81	6.87	98.89	.07	0.00
100	99	102	16	24.64	0.00	24.64	36.158	24.34	4.72	6.74	89.89	.06	0.00
150	149	0	1	20.96	0.00	20.96	36.742	25.85	4.22	6.03	80.35	.23	0.00
200	198	198	2	19.88	0.00	19.88	36.526	25.97	4.17	5.96	74.20	.33	0.00
250	248	0	3	17.59	0.00	17.59	36.268	26.36	4.01	5.72	69.87	.58	0.00
300	297	293	4	16.77	0.00	16.77	35.274	<u>25.80</u>	4.20	6.00	73.43	.50	0.00

WIRE	DEPTH (M)	TEMP				TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA
		TZ	BN	TL	TM				ML/L	MG/L			
0	0	0	10	25.79	0.00	25.79	35.749	23.68	4.84	6.92	99.88	.07	0.00
10	10	20	11	25.61	0.00	25.61	35.745	23.70	4.83	6.90	99.60	.07	0.00
20	20	54	12	25.54	0.00	25.54	35.740	23.72	4.82	6.89	99.32	.07	0.00
30	30	102	16	24.64	0.00	24.64	36.158	23.74	4.82	6.80	99.08	.07	0.00
50	50	0	1	20.96	0.00	20.96	36.742	23.77	4.81	6.87	98.89	.07	0.00
75	75	198	2	19.88	0.00	19.88	36.526	23.99	4.76	6.82	97.83	.07	0.00
100	100	0	3	17.59	0.00	17.59	36.268	24.38	4.71	6.73	89.73	.06	0.00
150	150	198	4	16.77	0.00	16.77	35.274	25.86	4.22	6.02	80.23	.23	0.00
200	200	0	0	0	0.00	0	0	25.99	4.17	5.95	74.05	.34	0.00
250	250	0	0	0	0.00	0	0	26.35	4.01	5.73	69.88	.58	0.00
300	300	0	0	0	0.00	0	0	<u>25.76</u>	4.21	6.02	73.51	.50	0.00

041 714 STANDARD DEPTHS

6?

9

R V PALUMBO CRUISE 041 STATION PHI-6B PRNC REFERENCE 041715

DATE 04 /09/74 BARO 1020.0 WEATHER 02 WIND VELOC 06 WAVE PERIOD 2
 HOUR 17.2 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-24.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0173
 LONG 067-15.6 W REL HUMID 071 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 17.2 GMT, 1310 LOCAL MAX DEPTH 100 WIRE ANGLE 8
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA	
			YZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L			MG/L
0	0	0	1	25.60	0.00	25.60	35.764	23.75	4.79	6.84	98.56	.09	0.00
25	27	25	2	25.59	0.00	25.59	35.765	23.76	4.82	6.89	99.19	.09	0.00
50	51	50	3	25.54	0.00	25.54	35.782	23.79	4.81	6.87	98.92	.08	0.00
100	101	100	4	23.91	0.00	23.91	36.324	24.69	4.59	6.56	87.89	.12	0.00

041 715 STANDARD DEPTHS

0	25.60	35.764	23.75	4.79	6.84	98.56	0.09	0.00
10	25.60	35.764	23.76	4.80	6.86	98.81	0.09	0.00
20	25.59	35.765	23.76	4.82	6.88	99.08	0.09	0.00
30	25.58	35.767	23.76	4.82	6.88	99.14	0.09	0.00
50	25.54	35.782	23.79	4.81	6.87	98.92	0.08	0.00
75	24.84	36.016	24.18	4.72	6.74	95.67	0.10	0.00
100	23.88	36.335	24.71	4.59	6.56	87.83	0.12	0.00

R V PALUMBO CRUISE 041 STATION PHI-6A PRNC REFERENCE 041716

DATE 04 /09/74 BARO 1019.4 WEATHER 02 WIND VELOC 06 WAVE PERIOD 4
 HOUR 17.7 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-23.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0192
 LONG 067-15.0 W REL HUMID 072 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 17.7 GMT, 1343 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ	TZ	BN							TL
0	0	0	3	25.63	0.00	23.74	4.79	6.84	98.59	.05	0.00
10	10	13	4	25.64	0.00	23.73	4.80	6.90	99.45	.05	0.00
041 716 STANDARD DEPTHS											
0				25.63	35.752	23.74	4.79	6.84	98.59	0.05	0.00
10				25.64	35.744	23.73	4.80	6.90	99.45	0.05	0.00

R V PALUMBO CRUISE 041 STATION PHI-4A PRNC REFERENCE 041717

DATE 04 /09/74 BARO 1020.1 WEATHER 02 WIND VELOC 08 WAVE PERIOD 4
 HOUR 18.1 TEMP DRY 26.1 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-22.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 07 SONIC DEP 0019
 LONG 067-16.5 W REL HUMID 073 CLOUD AMT 3 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 18.1 GMT, 14 5 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ	TZ	BN							TL
0	0	0	3	25.61	0.00	23.73	4.80	6.98	100.46	.06	0.00
10	10	10	4	25.64	0.00	23.72	4.80	6.93	99.87	.06	0.00
041 717 STANDARD DEPTHS											
0				25.61	35.740	23.73	4.80	6.98	100.46	0.06	0.00
10				25.64	35.740	23.72	4.80	6.93	99.87	0.06	0.00

R V PALUMBO CRUISE 041 STATION PHI-3A PRNC REFERENCE 041718

DATE 04 /09/74 BARO 1018.6 WEATHER 02 WIND VELOC 07 WAVE PERIOD 3
 HOUR 18.4 TEMP DRY 26.1 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-21.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0014
 LONG 067-16.5 W REL HUMID 075 CLOUD AMT 5 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 18.4 GMT. 1426 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
														DEPTH (M)	TEMP
0	0	0	3	25.60	0.00	25.60	35.735	23.73	4.82	6.89	99.17	.06	0.00		
10	10	11	4	25.63	0.00	25.63	35.741	23.73	4.78	6.83	98.37	.05	0.00		
041 718 STANDARD DEPTHS															
						25.60	35.735	23.73	4.82	6.89	99.17	0.06	0.00		
						25.63	35.741	23.73	4.78	6.83	98.37	0.05	0.00		

R V PALU 480 CRUISE 041 STATION PHI-1R PRNG REFERENCE 041723
 DATE 9 / 27/74 1419.0 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 20.3 TEMP SURF 26.1 VISIBILITY 6 WIND DIREC 03 TRANSPAR
 LAT 10-10.5 N TEMP WET 9.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0182
 LONG 067-15.9 WIND WIND DIRS CLOUD AMT 7 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 20.3 GAT, 1615 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.000 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0			1	25.78	2.04	25.78	35.774	23.71	4.84	6.86	99.05	.05	0.00
25			2	25.63	2.00	25.63	35.756	23.74	4.84	6.89	99.23	.05	0.00
50			3	25.54	1.99	25.54	36.311	24.19	4.79	6.84	98.28	.07	0.00
100			4	24.23	1.90	24.27	35.769	24.18	4.59	6.52	90.71	.06	0.00

DEPTH (M)	STANDARD DEPTHS	TEMP	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0		25.78	35.778	23.71	4.84	6.86	99.05	0.05	0.00
10		25.72	35.769	23.72	4.83	6.87	99.13	0.05	0.00
25		25.66	35.760	23.73	4.82	6.88	99.22	0.05	0.00
50		25.61	35.858	23.82	4.84	6.89	99.29	0.05	0.00
75		25.54	36.311	24.19	4.79	6.84	98.28	0.07	0.00
100		24.20	36.311	24.13	4.74	6.72	96.24	0.07	0.00
			35.769	24.18	4.59	6.52	90.71	0.06	0.00

R V PALUMBO CRUISE 041 STATION PH1-3R PRNC REFERENCE 041719
 DATE 04 /09/74 BARO 1017.6 WEATHER 02 WIND VELOC WAVE PERIOD 3
 HOUR 18.6 TEMP DRY 25.5 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 16-21.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0165
 LONG 067-17.0 W REL HUMID 082 CLOUD AMT 7 WAVE HEIGHT 4 COLOR
 CAST 1 MESS TIME 18.6 GMT, 1437 LOCAL MAX DEPTH 100 WIRE ANGLE 8
 OXYGEN TITER 1.032 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	0	1	25.77	0.00	25.77	35.681	23.64	4.82	6.89	99.34	.10	0.00
25	25	26	26	2	25.64	0.00	25.64	35.735	23.72	4.82	6.89	99.22	.04	0.00
50	50	51	51	3	25.57	0.00	25.57	35.740	23.75	4.81	6.87	98.92	.05	0.00
100	99	97	97	4	25.22	0.00	25.22	35.916	23.99	4.82	6.90	98.99	.05	0.00
041 719 STANDARD DEPTHS														
0	0				25.77		35.681		23.64	4.82	6.89	99.34	0.10	0.00
10	10				25.72		35.703		23.67	4.82	6.89	99.29	0.08	0.00
20	20				25.66		35.725		23.71	4.82	6.89	99.25	0.05	0.00
30	30				25.63		35.736		23.73	4.82	6.88	99.16	0.04	0.00
50	50				25.57		35.740		23.75	4.81	6.87	98.92	0.05	0.00
75	75				25.41		35.816		23.85	4.82	6.88	98.91	0.05	0.00
100	100				25.21		35.920		23.99	4.82	6.90	98.99	0.05	0.00

R V PALUMBO CRUISE 041 STATION PHI-28 PRNC REFERENCE 041720
 DATE 04 / 09/74 BARO 1016.4 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 19.3 TEMP DRY 26.1 VISIBILITY 7 WIND DIREC 03 TRANSPAR
 LAT 18-20.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 1650
 LONG 067-16.6 W REL HUMID 085 CLOUD AMT 7 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 19.3 GMT, 1518 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER 1.032 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	1	25.82	0.00	25.82	35.714	23.65	4.80	6.86	99.03	.05	0.00	
25	25	26	2	25.64	0.00	25.64	35.725	23.71	4.82	6.89	99.21	.05	0.00	
50	50	52	3	25.54	0.00	25.54	35.737	23.75	4.79	6.84	98.45	.05	0.00	
100	100	103	4	25.03	0.00	25.03	35.948	24.07	4.72	6.74	96.40	.04	0.00	
041 720 STANDARD DEPTHS														
	0			25.82		35.714		23.65	4.80	6.86	99.03	0.05	0.00	
	10			25.75		35.718		23.67	4.81	6.87	99.10	0.05	0.00	
	20			25.67		35.723		23.70	4.82	6.88	99.19	0.05	0.00	
	30			25.62		35.727		23.72	4.82	6.88	99.12	0.05	0.00	
	50			25.54		35.737		23.75	4.79	6.84	98.45	0.05	0.00	
	75			25.34		35.811		23.87	4.70	6.79	97.53	0.05	0.00	
	100			25.03		35.948		24.07	4.72	6.74	96.40	0.04	0.00	

R V PALUMBO CRUISE 041 STATION PHI-2A PRNC REFERENCE 041721

DATE 04 /09/74 BARO 1019.3 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 19.7 TEMP DRY 26.1 VISIBILITY 6 WIND DIREC 03 TRANSPAR
 LAT 18-20.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0019
 LONG 067-16.0 W REL HUMID 001 CLOUD AMT 7 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 19.7 GMT, 1542 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TZ	BN	TL	TM	TAVE	TAVE	ML/L	MG/L	%SAT	%SAT		
0	0	3	25.74	0.00	25.74	35.729	23.68	4.80	6.95	100.21	.05	0.00
10	0	4	25.69	0.00	25.69	35.735	23.70	4.84	6.92	99.72	.05	0.00

041 721 STANDARD DEPTHS

R V PALUMBO CRUISE 041 STATION PHI-1A PRNC REFERENCE 041722

DATE 04 /09/74 BARO 1017.6 WEATHER 00 WIND VELOC 04 WAVE PERIOD 1
 HOUR 20.0 TEMP DRY 26.2 VISIBILITY 6 WIND DIREC 03 TRANSPAR
 LAT 18-19.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0021
 LONG 067-15.6 W REL HUMID 005 CLOUD AMT 7 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 20.0 GMT, 1557 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER 1.032 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
	TZ	BN	TL	TM	TAVE	TAVE	ML/L	MG/L	%SAT	%SAT		
0	2	3	25.73	0.00	25.73	35.668	23.64	4.82	6.93	99.90	.05	0.00
10	12	4	25.73	0.00	25.73	35.728	23.69	4.81	6.87	99.13	.05	0.00

041 722 STANDARD DEPTHS

25.73	35.668	23.64	4.82	6.93	99.90	.05	0.00
25.73	35.728	23.69	4.81	6.87	99.13	.05	0.00

R V PALUMBO CRUISE 047 STATION CRP-9A PRNC REFERENCE 047855

DATE 08 /27/74 BARO 1019.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
HOUR 12.4 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 18 TRANSPAR
LAT 18- 8.0 N TEMP WET 0.2 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0009
LONG 067-12.1 W REL HUMID 079 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.4 GMT, 826 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITR .524 METER WHEEL FACTOR .997

DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	28.64	0.00	28.64	35.472	22.56	4.59	6.55	97.64	.05	0.00
5	5	0	2	28.65	0.00	28.65	35.469	22.55	4.60	6.69	99.65	.06	0.00

047 855 STANDARD DEPTHS 28.64 35.472 22.56 4.59 6.55 97.64 0.06 0.00

R V PALUMBO CRUISE 047 STATION CRP-7A PRNC REFERENCE 047856

DATE 08 /27/74 BARO 1000.0 WEATHER 02 WIND VELOC 00 WAVE PERIOD 1
HOUR 13.0 TEMP DRY 19.5 VISIBILITY 7 WIND DIREC 00 TRANSPAR
LAT 18- 6.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0010
LONG 067-12.3 W REL HUMID 074 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.0 GMT, 857 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	3	28.82	0.00	28.82	35.473	22.50	4.71	6.72	100.44	.05	0.38
5	5	6	4	28.70	0.00	28.70	35.473	22.54	4.70	6.71	100.07	.07	0.45

047 856 STANDARD DEPTHS 28.82 35.473 22.50 4.71 6.72 100.44 0.05 0.38

R V PALUMBO CRUISE 047 STATION CRP-5A PRNC REFERENCE 047857

DATE 08 /27/74 BARO 1019.0 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
HOUR 13.5 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 28 TRANSPAR
LAT 18= 4.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0009
LONG 067-12.2 W REL HUMID 072 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.5 GMT, 933 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN
WIRE CZ T2 RN TL TM TAVE SALIN SIG T ML/L MG/L XSAT PHOS NITRA
0 0 1 28.61 0.00 28.61 35.366 22.49 4.75 6.75 100.21 .04 0.00
5 5 0 28.51 0.00 28.51 35.396 22.55 4.72 6.75 102.10 .04 0.00

047 857 STANDARD DEPTHS 28.61 35.366 22.49 4.75 6.75 100.21 0.04 0.00

R V PALUMBO CRUISE 047 STATION CRP-4A PRNC REFERENCE 047858

DATE 08 /27/74 BARO 1020.0 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
HOUR 13.8 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 28 TRANSPAR
LAT 18= 3.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0009
LONG 067-12.3 W REL HUMID 072 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.8 GMT, 949 LOCAL MAX DEPTH 5 WIRE ANGLE 5
OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M) TEMP OXYGEN
WIRE CZ T2 RN TL TM TAVE SALIN SIG T ML/L MG/L XSAT PHOS NITRA
0 0 3 28.80 0.00 28.80 35.364 22.42 4.67 6.66 99.09 .06 7.00
5 5 7 28.59 0.00 28.59 35.431 22.54 4.75 6.75 100.44 .06 2.34

047 858 STANDARD DEPTHS 28.80 35.364 22.42 4.67 6.66 99.09 0.06 0.00

R V PALUMBO CRUISE 047

STATION CRP-2A

PRINC REFERENCE 047859

DATE 08 /27/74 BARO 1020.0 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 14.1 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 2.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0010
 LONG 067-12.6 W REL HUMID 071 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.1 GMT, 10 7 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA			
	CZ	TZ	BN	TL							TAVE	SALIN	
0	0	0	1	28.72	0.00	28.72	35.401	22.48	4.72	6.75	100.36	.12	0.00
5	5	0	2	28.61	0.00	28.61	35.405	22.52	4.70	6.71	99.69	.07	0.00

047 859 STANDARD DEPTHS

28.72 35.401 22.48 4.72 6.75 100.36 0.12 0.00

R V PALUMBO CRUISE 047

STATION CRP-2A

PRINC REFERENCE 047860

DATE 08 /27/74 BARO 1020.0 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 14.4 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 1.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 09 SONIC DEP 0010
 LONG 067-12.6 W REL HUMID 071 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.4 GMT, 1025 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA			
	CZ	TZ	BN	TL							TAVE	SALIN	
0	0	3	3	28.80	0.00	28.80	35.495	22.52	4.62	6.65	99.39	.04	0.00
5	5	6	4	28.80	0.00	28.80	35.520	22.55	4.72	6.79	101.65	.06	0.00

047 860 STANDARD DEPTHS

28.80 35.495 22.52 4.62 6.65 99.39 0.04 0.00

R V PALUMBO CRUISE 047 STATION CRP-1B PRNC REFERENCE 047861

DATE 08 /27/74 BARO 1020.0 WEATHER 00 WIND VELOC 05 WAVE PERIOD 1
 HOUR 14.8 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 0.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0013
 LONG 067-13.5 W REL HUMID 071 CLOUD AMT 5 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.8 GMT, 1047 LOCAL MAX DEPTH 10 WIRE ANGLE 5
 OXYGEN TITER .524 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	
0	0	0	1	28.60	0.00	0.00	28.60	35.409	22.53	4.69	6.70	99.58	.05	0.00
10	10	0	2	28.51	0.00	0.00	28.51	35.409	22.55	4.49	6.42	95.26	.04	0.00
047 861 STANDARD DEPTHS														
0	0			28.60	35.409		28.60	35.409	22.53	4.69	6.70	99.58	0.05	0.00
10	10			28.51	35.409		28.51	35.409	22.56	4.49	6.42	95.26	0.04	0.00

R V PALUMBO CRUISE 047 STATION CRP-2B PRNC REFERENCE 047862

DATE 08 /27/74 BARO 1019.8 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 15.1 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18- 1.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 13 SONIC DEP 0013
 LONG 067-13.5 W REL HUMID 068 CLOUD AMT 3 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.1 GMT, 11 7 LOCAL MAX DEPTH 10 WIRE ANGLE 7
 OXYGEN TITER .524 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	
0	0	1	3	28.68	0.00	0.00	28.68	35.460	22.54	4.69	6.69	99.77	.03	0.00
10	10	12	4	28.68	0.00	0.00	28.68	35.464	22.54	4.79	6.84	101.90	.00	0.00
047 862 STANDARD DEPTHS														
0	0			28.68	35.460		28.68	35.460	22.54	4.69	6.69	99.77	0.03	0.00
10	10			28.68	35.464		28.68	35.464	22.54	4.79	6.84	101.90	0.00	0.00

R V PALUMBO CRUISE 247 STATION CRP-3B PRNG REFERENCE 047863

DATE 08 /27/74 BARO 1020.0 WEATHER 02 WIND VELOC 025 WAVE PERIOD 1
 HOUR 15.4 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
 LAT 18- 3.0 N TEMP WET 20.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0014
 LONG 067-13.7 W REL HUMID 064 CLOUD AMT 3 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.4 GMT, 1123 LOCAL MAX DEPTH 10 WIRE ANGLE 7
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA			
	CZ	TZ	BN	TL							TAVE	SALIN	XSAT
0	0	0	1	28.83	0.00	28.83	35.452	22.48	4.80	6.94	103.61	.05	0.00
10	10	0	2	28.71	0.00	28.71	35.464	22.53	4.71	6.73	100.38	.06	0.00
047 863 STANDARD DEPTHS													
0				28.83	35.452	22.48	4.80	6.94	103.61	0.05	0.00		
10				28.71	35.464	22.53	4.71	6.73	100.38	0.06	0.00		

R V PALUMBO CRUISE 047 STATION CRP-4B PRNG REFERENCE 047864

DATE 08 /27/74 BARO 1019.8 WEATHER 02 WIND VELOC 005 WAVE PERIOD 1
 HOUR 15.6 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 12 TRANSPAR
 LAT 18- 4.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 12 SONIC DEP 0013
 LONG 067-13.6 W REL HUMID 067 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.6 GMT, 1135 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA			
	CZ	TZ	BN	TL							TAVE	SALIN	XSAT
0	0	0	3	28.88	0.00	28.88	35.442	22.46	4.79	6.84	102.07	.04	0.17
10	10	12	4	28.63	0.00	28.63	35.442	22.54	4.70	6.83	101.64	.05	0.25
047 864 STANDARD DEPTHS													
0				28.88	35.442	22.46	4.79	6.84	102.07	0.04	0.17		
10				28.63	35.442	22.54	4.70	6.83	101.64	0.05	0.25		

R V PALUMBO CRUISE 047 STATION CRP-40 PRNC REFERENCE 047865

DATE 08 /27/74 BARO 1019.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 2
 HOUR 16.0 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 13 TRANSPAR
 LAT 18= 4.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 14 SONIC DEP. 0019
 LONG 067-15.4 W REL HUMID 066 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.0 GMT, 12 2 LOCAL MAX DEPTH 15 WIRE ANGLE 0
 OXYGEN TITER .524 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
0	0	0	1	28.75	0.00	0.00	28.75	35.400	22.47	4.72	6.74	100.29	.04	0.55
5	5	0	2	28.60	0.00	0.00	28.60	35.376	22.50	4.77	6.81	101.13	.00	0.00
10	10	13	3	28.47	0.00	0.00	28.47	35.372	22.54	4.74	6.78	100.40	.05	0.42
15	15	15	4	28.48	0.00	0.00	28.48	35.380	22.54	4.75	6.75	100.11	.05	0.20

047 865 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 047 STATION CRP-58 PRNC REFERENCE 047866

DATE 08 /27/74 BARO 1019.3 WEATHER 18 WIND VELOC 05 WAVE PERIOD 2
 HOUR 16.5 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 14 TRANSPAR
 LAT 18= 5.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 15 SONIC DEP 0015
 LONG 067-13.5 W REL HUMID 068 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 16.5 GMT, 1229 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 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
0	0	0	1	28.75	0.00	0.00	28.75	35.285	22.38	4.75	6.79	100.61	***	0.00
10	10	0	2	28.54	0.00	0.00	28.54	35.358	22.51	4.78	6.83	101.21	.06	0.00

047 866 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 047

STATION CRP-50

PRIC REFERENCE 047867

DATE 08 / 27 / 74 BARO 1000.0 WEATHER 00 WIND VELOC 04 WAVE PERIOD 1
 HOUR 15.7 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 32 TRANSPAR
 LAT 18- 6.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 33 SONIC DEP 0015
 LONG 067-13.5 W REL HUMID 072 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 16.7 GMT, 1241 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 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	7	3	28.82	0.00	28.92	35.413	22.45	4.70	6.71	99.98	.05	0.00	
10	10	10	4	28.66	0.00	28.66	35.436	22.53	4.69	6.68	99.43	.06	0.00	

047 867 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 047

STATION CRP-7R

PRIC REFERENCE 047868

DATE 08 / 27 / 74 BARO 1019.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 17.0 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 32 TRANSPAR
 LAT 18- 7.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 33 SONIC DEP 0013
 LONG 067-13.5 W REL HUMID 071 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 17.0 GMT, 1257 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 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	28.81	0.00	28.81	35.440	22.48	4.73	6.75	100.74	.05	0.38	
10	10	0	2	28.64	0.00	28.64	35.446	22.54	4.65	6.65	99.00	.05	1.85	

047 868 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 047 STATION CRP-8B PRNC REFERENCE 047869
 DATE 08 /27/74 BARO 1019.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 17,2 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 32 TRANSPAR
 LAT 18° 8.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 30 SONIC DEP 0014
 LONG 067-13.5 W REL HUMID 072 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 17.2 GMT, 1311 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ	TZ	BN									TL
0	0	0	3	28.72	0.00	28.72	35.408	22.48	4.75	6.79	101.06	.05	0.00
10	10	13	4	28.65	0.00	28.65	35.440	22.53	4.75	6.76	100.66	.03	0.00
047 869 STANDARD DEPTHS													
0				28.72	35.408	22.48	4.75	6.79	101.06	0.05	0.00		
10				28.65	35.440	22.53	4.75	6.76	100.66	0.03	0.00		

R V PALUMBO CRUISE 047 STATION CRP-9B PRNC REFERENCE 047870
 DATE 08 /27/74 BARO 1018.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 1
 HOUR 17,5 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 30 TRANSPAR
 LAT 18° 9.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 31 SONIC DEP 0016
 LONG 067-13.5 W REL HUMID 073 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 17.5 GMT, 1328 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .524 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA	
	WIRE	CZ	TZ	BN									TL
0	0	0	1	28.87	0.00	28.87	35.468	22.48	4.72	6.74	100.71	.05	0.00
10	10	0	2	28.71	0.00	28.71	35.468	22.53	4.75	6.76	101.06	.04	0.00
047 870 STANDARD DEPTHS													
0				28.87	35.468	22.48	4.72	6.74	100.71	0.05	0.00		
10				28.71	35.468	22.53	4.75	6.76	101.06	0.04	0.00		

R V PALUMBO CRUISE 048 STATION PHI-6C PRNC REFERENCE 048871

DATE 08 /28/74 BARO 1019.1 WEATHER 02 WIND VELOC 06 WAVE PERIOD 6
 HOUR 13.9 TEMP DRY 33.0 VISIBILITY 7 WIND DIREC 03 TRANSPAR
 LAT 18-25.0 N TEMP WET 0.0 CLOUD TYPE 5 WAVE DIREC 04 SONIC DEP 0420
 LONG 067-16.0 W REL HUMID 068 CLOUD AMT 3 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 13.9 GMT, 951 LOCAL MAX DEPTH 300 WIRE ANGLE 6
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		SALIN		OXYGEN		XSAT	PHOS	NITRA			
		TZ	BN	TL	TM	SIG	T				ML/L	MG/L	
0	0	0	1	28.19	0.00	28.19	0.00	22.60	4.68	6.69	98.68	.04	0.42
25	25	0	2	28.07	0.00	35.320	0.00	22.75	4.72	6.74	99.80	.05	0.45
50	50	50	3	28.05	0.00	35.472	0.00	23.16	4.76	6.80	102.50	.09	3.09
100	100	101	4	23.44	0.00	36.008	0.00	25.05	4.77	6.82	92.07	.10	2.04
150	149	0	5	20.88	0.00	36.623	0.00	25.84	4.51	6.44	85.76	.12	3.94
200	199	199	6	18.80	0.00	36.706	0.00	26.26	4.40	6.28	77.75	.24	7.85
250	248	242	7	17.71	0.00	36.532	0.00	26.43	4.30	6.14	75.23	.28	26.49
300	298	293	8	16.43	0.00	36.393	0.00	26.62	4.29	6.13	74.52	.46	8.00

048 871 STANDARD DEPTHS

DEPTH (M)	TEMP	SALIN	OXYGEN	XSAT	PHOS	NITRA
0	28.19	35.320	4.68	98.68	0.04	0.42
10	28.14	35.306	4.70	99.13	0.04	0.43
20	28.09	35.435	4.71	99.55	0.05	0.44
30	28.06	35.564	4.73	100.28	0.06	0.92
50	28.05	36.008	4.76	102.50	0.09	3.09
75	26.00	36.387	4.77	98.14	0.09	2.56
100	23.44	36.623	4.77	92.07	0.10	2.04
150	20.83	36.704	4.51	85.67	0.12	4.00
200	18.77	36.529	4.39	77.68	0.24	8.34
250	17.66	36.307	4.29	75.18	0.29	26.11
300	16.38	36.241	4.29	74.49	0.47	7.26

R V PALUMBO CRUISE 048 STATION PH1-5C PRNC REFERENCE 048872

DATE 08 /28/74 BARO 1019.1 WEATHER 02 WIND VELOC 05 WAVE PERIOD 6
 HOUR 14.5 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 03 TRANSPAR
 LAT 18-25.2 N TEMP WET 0.0 CLOUD TYPE 5 WAVE DIREC 04 SONIC DEP 0430
 LONG 067-17.0 W REL HUMID 069 CLOUD AMT 2 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 14.5 GMT, 1033 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER .525 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		SIG T	ML/L	MG/L	XSAT	PHOS	NITRA			
	WIRE	CZ	TL	TM							TAVE	SALIN	TSAT
0	0	0	1	26.12	0.00	28.12	35.287	22.59	4.79	6.84	100.67	.07	0.40
25	25	0	2	27.99	0.00	27.99	35.738	22.97	4.75	6.78	101.14	.04	0.41
50	50	52	3	27.98	0.00	27.98	36.348	23.43	4.80	6.86	99.57	.00	0.00
100	100	101	4	24.08	0.00	24.08	36.546	24.81	4.70	6.80	91.86	.05	1.65
150	149	0	5	21.29	0.00	21.29	36.702	25.73	4.60	6.57	87.69	.14	6.65
200	199	203	6	19.46	0.00	19.46	36.601	26.14	4.40	6.29	78.36	.21	6.73
250	249	245	7	18.22	0.00	18.22	36.472	26.36	4.40	6.28	77.35	.32	6.99
300	298	296	8	16.91	0.00	16.91	36.328	26.57	4.40	6.28	76.59	.47	9.02

048 872 STANDARD DEPTHS

0	28.12	35.287	22.59	4.79	6.84	100.67	0.07	0.40
10	28.07	35.467	22.74	4.77	6.82	100.87	0.06	0.40
20	28.01	35.645	22.90	4.75	6.79	101.00	0.05	0.41
30	27.99	35.865	23.07	4.75	6.79	101.72	0.03	0.38
50	27.98	36.348	23.44	4.80	6.86	99.57	0.00	0.00
75	26.29	36.535	24.12	4.70	6.83	98.74	0.01	0.49
100	24.08	36.546	24.81	4.70	6.80	91.86	0.05	1.65
150	21.25	36.701	25.74	4.60	6.57	87.57	0.14	6.85
200	19.43	36.599	26.15	4.40	6.29	78.32	0.21	6.73
250	18.19	36.469	26.37	4.40	6.28	77.33	0.32	7.02
300	16.86	36.322	26.58	4.40	6.28	76.57	0.48	9.10

R V PALUMBO CRUISE 048 STATION PHI-4C PRNC REFERENCE 048873

DATE 08 /28/74 RARO 1019.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 15.5 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 04 TRANSPAR
 LAT 18-23.8 N TEMP WET 0.0 CLOUD TYPE 5 WAVE DIREC 03 SONIC DEP 0385
 LONG 067-20.0 W REL HUMID 076 CLOUD AMT 2 WAVE HEIGHT 4 COLOR

CAST 1 MESS TIME 15.5 GMT, 1128 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
		TL	TM									
0	0	1	28.23	0.00	28.23	35.289	22.56	4.74	6.77	99.80	.04	0.13
25	25	2	28.04	0.00	28.04	36.231	23.33	4.80	6.86	99.22	.06	0.25
50	50	3	27.63	0.00	27.63	36.358	23.56	4.85	6.93	100.54	.06	0.00
100	99	4	24.04	0.00	24.04	36.559	24.83	4.81	6.87	92.90	.09	1.19
150	149	5	21.39	0.00	21.39	36.666	25.67	4.61	6.58	87.80	.13	0.61
200	198	6	20.48	0.00	20.48	36.632	25.89	4.53	6.47	85.77	.24	12.53
250	248	7	18.64	0.00	18.64	36.504	26.28	4.38	6.26	77.32	.29	11.25
300	297	8	17.17	0.00	17.17	0.000	0.00	4.35	6.21	76.16	.40	13.04

missing data

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
		TL	TM									
0	0	1	28.23	0.00	28.23	35.289	22.56	4.74	6.77	99.80	.04	0.13
10	10	2	28.15	0.00	28.15	35.666	22.87	4.77	6.81	101.51	.05	0.18
20	20	3	28.08	0.00	28.08	36.059	23.18	4.79	6.84	103.28	.06	0.23
30	30	4	27.98	0.00	27.98	36.301	23.40	4.81	6.88	99.69	.06	0.24
50	50	5	27.63	0.00	27.63	36.358	23.56	4.85	6.93	100.54	.06	0.00
75	75	6	25.97	0.00	25.97	36.470	24.17	4.84	6.90	99.53	.07	0.58
100	100	7	23.97	0.00	23.97	36.562	24.85	4.81	6.87	92.80	.09	1.18
150	150	8	21.37	0.00	21.37	36.665	25.68	4.60	6.58	87.75	.13	0.86
200	200		20.41	0.00	20.41	36.629	25.91	4.52	6.46	85.61	.24	12.48
250	250		18.58	0.00	18.58	35.742	25.71	4.38	6.25	79.23	.29	11.29
300	300		17.08	0.00	17.08	32.235	22.89	4.35	6.21	76.16	.41	13.15

R V PALUMBO CRUISE 040 STATION PHI-48 PRNC REFERENCE 040074

DATE 08 /28/74 BARO 1020.5 WEATHER 02 WIND VELOC 06 WAVE PERIOD 6
 HOUR 16.2 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 03 TRANSPAR
 LAT 18-23.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 04 SONIC DEP 0165
 LONG 067-18.4 W REL HUMID 099 CLOUD AMT 8 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 16.2 GMT, 1213 LOCAL MAX DEPTH 100 WIRE ANGLE 6
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA
			TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT		
0	0	0	26.12	0.00	20.12	35.115	22.46	4.68	6.68	97.78	.04	0.00
25	25	0	26.11	0.00	20.11	35.995	23.13	4.80	6.86	103.35	.00	0.13
50	50	50	27.98	0.00	27.98	36.366	23.45	4.81	6.87	99.85	.05	0.00
100	100	101	24.26	0.00	24.26	36.495	24.71	4.83	6.89	93.08	.07	1.40

040 874 STANDARD DEPTHS

0	20.12	35.115	22.46	4.68	6.68	97.78	0.04	0.00
10	20.12	35.467	22.73	4.73	6.75	99.97	0.02	0.05
20	28.11	35.829	23.00	4.76	6.83	102.29	0.01	0.11
30	28.10	36.105	23.21	4.81	6.87	103.89	0.01	0.10
50	27.98	36.366	23.45	4.81	6.87	99.85	0.05	0.00
75	26.70	36.431	23.91	4.82	6.88	99.59	0.06	0.42
100	24.26	36.495	24.71	4.83	6.89	93.08	0.07	1.40

R V PALUMBO CRUISE 048 STATION PHI-5B PRNC REFERENCE 048875

DATE 08 /28/74 BARO 1019.8 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 16.7 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 03 TRANSPAR
 LAT 18-23.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0182
 LONG 067-16.6 W REL HUMID 083 CLOUD AMT 8 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 16.7 GMT, 1241 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.09	0.00	28.09	35.050	22.42	4.82	6.88	100.39	.05	0.00	
25	25	0	2	28.08	0.00	28.08	36.087	23.21	4.81	6.87	103.85	.03	0.17	
50	50	0	3	27.50	0.00	27.50	36.331	23.58	4.90	7.00	101.38	.05	0.13	
100	100	105	4	24.49	0.00	24.49	36.490	24.64	4.85	6.93	93.68	.06	1.10	

WIRE	CZ	TZ	BN	TL	TM	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.09	0.00	28.09	35.050	22.42	4.82	6.88	100.39	.05	0.00	
10	10	0	2	28.09	0.00	28.09	35.465	22.74	4.81	6.88	101.75	.04	0.07	
20	20	0	3	28.08	0.00	28.08	35.895	23.06	4.81	6.87	103.20	.03	0.14	
30	30	0	4	28.02	0.00	28.02	36.182	23.30	4.83	6.89	99.60	.03	0.16	
50	50	0	5	27.50	0.00	27.50	36.331	23.58	4.90	7.00	101.38	.05	0.13	
75	75	0	6	26.30	0.00	26.30	36.465	24.06	4.88	6.97	100.63	.06	0.44	
100	100	105	7	24.49	0.00	24.49	36.490	24.64	4.85	6.93	93.68	.06	1.10	

048 875 STANDARD DEPTHS

R V PALUMBO CRUISE 048 STATION PHI-6A PRNC REFERENCE 048077

DATE 08 /28/74 BARO 1019.0 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 17.6 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18-22.8 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 04 SONIC DEP 0025
 LONG 067-15.0 W REL HUMID 080 CLOUD AMT 6 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 17.6 GMT, 1336 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .525 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		OXYGEN		XSAT	PHOS	NITRA					
	TZ	BN	TL	TM								
0	0	1	28.14	0.00	28.14	35.428	22.69	4.64	6.70	99.07	.04	0.55
10	0	2	28.09	0.00	28.09	35.468	22.74	4.66	6.66	98.59	.04	0.13
STANDARD DEPTHS												
048 877			28.14	35.428	22.69	4.64	6.70	99.07	0.04	0.55		
	10		28.09	35.468	22.74	4.66	6.66	98.59	0.04	0.13		

R V PALUMBO CRUISE 048
 STATION PHI-6B PRNC REFERENCE 048878
 DATE 08 /28/74 BARO 1020.5 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 17.9 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18-24.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0182
 LONG 067-15.6 W REL HUMID 080 CLOUD AMT 6 WAVE HEIGHT 2 COLOR

CAST 2 MESS TIME 17.9 GMT, 1356 LOCAL MAX DEPTH 100 WIRE ANGLE 3
 OXYGEN TITER .525 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	1	28.16	0.00	28.16	35.254	22.55	4.81	6.86	100.93	.05	0.13
25	25	0	0	2	27.96	0.00	27.96	36.270	23.38	4.80	6.86	99.32	.03	0.00
50	50	0	0	3	26.52	0.00	26.52	36.321	23.89	4.83	6.89	99.44	.04	1.69
100	100	0	0	4	24.07	0.00	24.07	36.508	24.78	4.83	6.90	93.14	.07	1.73
048 878 STANDARD DEPTHS														
	0	0			28.16		28.16	35.254	22.55	4.81	6.86	100.93	0.05	0.13
	10	0			28.08		28.08	35.660	22.89	4.80	6.86	102.19	0.04	0.08
	20	0			28.00		28.00	36.086	23.23	4.80	6.86	103.49	0.03	0.03
	30	0			27.73		27.73	36.280	23.47	4.80	6.86	99.35	0.03	0.29
	50	0			26.52		26.52	36.321	23.89	4.83	6.89	99.44	0.04	1.69
	75	0			25.22		25.22	36.400	24.35	4.83	6.90	99.04	0.05	1.71
	100	0			24.07		24.07	36.508	24.78	4.83	6.90	93.14	0.07	1.73

R V PALUMBO CRUISE 048 STATION PHI-3A PRNC REFERENCE 048879

DATE 08 / 28 / 74 BARO 1018.5 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 18.4 TEMP DRY 27.0 VISIBILITY 4 WIND DIREC TRANSPAR
 LAT 18-22.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0023
 LONG 067-15.8 W REL HUMID 480 CLOUD AMT 8 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.4 GMT, 1423 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .525 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	28.14	0.00	28.14	35.194	22.52	4.69	6.71	98.39	.06	0.55
10	10	12	4	28.11	0.00	28.11	35.502	22.76	4.65	6.64	98.40	.06	0.13
048 879 STANDARD DEPTHS													
	0			28.14	35.194	22.52	4.69	6.71	98.39	0.06	0.55		
	10			28.11	35.502	22.76	4.65	6.64	98.40	0.06	0.13		

R V PALUMBO CRUISE 048 STATION PHI-4A PRNC REFERENCE 048880

DATE 08 / 28 / 74 BARO 1018.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 18.6 TEMP DRY 27.0 VISIBILITY 5 WIND DIREC 05 TRANSPAR
 LAT 18-22.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 03 SONIC DEP 0021
 LONG 067-16.5 W REL HUMID 086 CLOUD AMT 0 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 18.6 GMT, 1436 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .525 METER WHEEL FACTOR .997

DEPTH (M)		TEMP		SALIN		SIG T		OXYGEN		PHOS		NITRA	
WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	28.23	0.00	28.23	35.130	22.44	4.77	6.81	99.80	.07	0.34
10	10	0	2	28.20	0.00	28.20	35.378	22.63	4.77	6.82	100.74	.05	0.00
048 880 STANDARD DEPTHS													
	0			28.23	35.130	22.44	4.77	6.81	99.80	0.07	0.34		
	10			28.20	35.378	22.63	4.77	6.82	100.74	0.05	0.00		

R V PALUMBO CRUISE 048 STATION PHI-3A PRNC REFERENCE 040881

DATE 08 /28/74 BARO 1018.5 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 18.8 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18-21.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0022
 LONG 067-16.5 W REL HUMID 091 CLOUD AMT 8 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 18.8 GMT, 1449 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .525 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		%SAT	PHOS	NITRA		
	TZ	BN				TL	TM				ML/L	MG/L
0	6	3	28.33	0.00	28.33	35.325	22.55	4.78	6.83	100.82	.07	0.00
10	8	4	28.28	0.00	28.28	35.376	22.61	4.79	6.80	100.61	.04	0.16
STANDARD DEPTHS												
048 881			20.33	35.325	22.55	4.78	6.83	100.82	0.07	0.00		
	10		20.28	35.376	22.61	4.79	6.80	100.61	0.04	0.16		

R V PALUMBO CRUISE 048 STATION PHI-3B PRNC REFERENCE 048882
 DATE 08 /28/74 BARO 1018.6 WEATHER 02 WIND VELOC 02 WAVE PERIOD 4
 HOUR 19.2 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-21.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0220
 LONG 067-17.1 W REL HUMID 090 CLOUD AMT 7 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19.2 GMT, 1512 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TEMP	YAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	1	28.22	0.00	28.22	35.214	22.50	4.70	6.83	100.41	.00	0.00	
25	25	0	2	28.11	0.00	28.11	35.363	22.65	4.71	6.73	99.26	.07	0.00	
50	50	48	3	28.08	0.00	28.08	36.039	23.17	4.77	6.82	102.09	.06	0.93	
100	100	102	4	24.36	0.00	24.36	36.472	24.67	4.80	6.86	92.54	.08	1.85	
048 882 STANDARD DEPTHS														
	0			28.22		35.214	22.50	4.70	6.83	100.41	0.00	0.00	0.00	
	10			28.18		35.274	22.56	4.75	6.79	99.96	0.03	0.00	0.00	
	20			28.13		35.333	22.62	4.72	6.75	99.43	0.06	0.00	0.00	
	30			28.10		35.482	22.75	4.72	6.74	99.78	0.07	0.15	0.00	
	50			28.08		36.039	23.17	4.77	6.82	102.89	0.06	0.93	0.00	
	75			26.83		36.409	23.85	4.79	6.84	98.94	0.06	1.55	0.00	
	100			24.36		36.472	24.67	4.80	6.86	92.54	0.08	1.85	0.00	

R V PALUMBO CRUISE 040 STATION PHI-28 PRNC REFERENCE 048883

DATE 08 /28/74 BARO 1010.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 19.7 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-20.5 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0160
 LONG 067-16.5 W REL HUMID 084 CLOUD AMT 6 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 19.7 GMT, 1540 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .525 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	0	1	28.29	0.00	28.29	35.174	22.45	4.83	6.90	101.34	.05	0.34
25	25	0	0	2	27.98	0.00	27.98	35.511	22.81	4.60	6.56	97.15	.06	0.33
50	50	52	0	3	27.77	0.00	27.77	35.602	22.94	4.60	6.65	98.90	.06	0.55
100	100	102	0	4	24.85	0.00	24.85	36.427	24.48	4.81	6.86	92.68	.05	1.93

048 883 STANDARD DEPTHS

0	28.29	35.174	22.45	4.83	6.90	101.34	0.05	0.34
10	28.17	35.309	22.59	4.79	6.77	99.69	0.05	0.34
20	28.04	35.449	22.74	4.69	6.62	97.89	0.06	0.33
30	27.93	35.555	22.86	4.61	6.58	97.49	0.06	0.35
50	27.77	35.602	22.94	4.60	6.65	98.50	0.06	0.55
75	26.73	35.907	23.51	4.73	6.75	99.23	0.06	1.08
100	24.85	36.427	24.49	4.81	6.86	92.68	0.05	1.93

R V PALUMBO CRUISE 048 STATION PHI-2A FRNC REFERENCE 048884

DATE 08 /28/74 BARO 1018.0 WEATHER 02 WIND VELOC WAVE PERIOD 2
 HOUR 20.0 TEMP DRY 27.0 VISIBILITY 7 WIND DIREC TRANSPAR
 LAT 18-20.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0021
 LONG 067-16.2 W REL HUMID 083 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 20.0 GMT, 1559 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	OXYGEN	
														DEPTH (M)	TEMP
0	0	0	1	28.36	0.00	28.36	35.340	22.55	4.83	6.93	102.46	.07	0.00		
10	10	0	2	28.30	0.00	28.30	35.358	22.59	4.83	6.90	102.01	.05	0.00		
048 884 STANDARD DEPTHS															
						28.36	35.340	22.55	4.83	6.93	102.46	0.07	0.00		
						28.30	35.358	22.59	4.83	6.90	102.01	0.05	0.00		

R V PALUMBO CRUISE 040 STATION PHI-3C PRNC REFERENCE 048864
 DATE 08 /29/74 BARO 1010.4 WEATHER 02 WIND VELOC 04 WAVE PERIOD 5
 HOUR 13.2 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-21.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0384
 LONG 067-17.6 W REL HUMID 079 CLOUD AMT WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 13.2 GMT, 912 LOCAL MAX DEPTH 300 WIRE ANGLE 0
 OXYGEN TITER .525 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	28.04	0.00	28.04	35.197	22.55	4.77	6.81	99.85	.04	0.00
25	25	0	0	2	28.02	0.00	28.02	35.193	22.55	4.77	6.82	99.92	.05	0.17
50	50	0	0	3	28.11	0.00	28.11	35.350	22.64	4.82	6.88	101.43	.06	0.00
100	100	99	99	4	23.47	0.00	23.47	36.583	25.01	4.80	6.86	92.47	.07	1.82
150	150	0	0	5	21.89	0.00	21.89	36.607	25.49	4.68	6.68	89.37	.13	4.65
200	200	201	201	6	19.61	0.00	19.61	36.524	26.04	4.46	6.37	79.20	.25	9.44
250	250	243	243	7	18.29	0.00	18.29	36.427	26.31	4.39	6.14	75.51	.39	13.25
300	300	297	297	8	17.12	0.00	17.12	36.296	26.50	4.29	6.08	74.22	.42	15.24

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	28.04	0.00	28.04	35.197	22.55	4.77	6.81	99.85	.04	0.00
10	10	0	0	2	28.03	0.00	28.03	35.195	22.55	4.77	6.82	99.88	.04	0.07
20	20	0	0	3	28.02	0.00	28.02	35.194	22.55	4.77	6.82	99.91	.05	0.14
30	30	0	0	4	28.03	0.00	28.03	35.204	22.56	4.76	6.83	100.13	.05	0.14
50	50	0	0	5	28.11	0.00	28.11	35.350	22.64	4.82	6.86	101.43	.06	0.00
75	75	0	0	6	26.00	0.00	26.00	35.965	23.78	4.81	6.87	99.83	.07	0.67
100	100	0	0	7	23.47	0.00	23.47	36.583	25.02	4.80	6.86	92.47	.07	1.82
150	150	0	0	8	21.89	0.00	21.89	36.607	25.49	4.68	6.68	89.37	.13	4.65
200	200	0	0	9	19.61	0.00	19.61	36.524	26.04	4.46	6.37	79.20	.25	9.44
250	250	0	0	10	18.29	0.00	18.29	36.427	26.31	4.39	6.14	75.51	.39	13.25
300	300	0	0	11	17.12	0.00	17.12	36.296	26.50	4.29	6.08	74.22	.42	15.24

048 884 STANDARD DEPTHS

R V PHOENIX CRUISE 246 STATION PHI-10 PRUC REFERENCE 048886

DATE 07/27/74 0500 100.4 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 14.4 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 09 TRANSPAR
 LAT 18-19.2 N TEMP WET 8.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0512
 LONG 067-16.7 W REL HUMID 078 CLOUD AMT 8 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 14.4 GMT, 1021 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .515 METER WHEEL FACTOR .997

WIRE NO	DEPTH (M)	TZ	BN	TL	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
					TM	TP								
0	0	0	1	28.11	0.00	28.11	35.222	22.55	4.72	6.75	99.06	.00	0.34	
25	25	0	2	28.13	0.00	28.13	35.321	22.61	4.68	6.69	98.55	.00	0.29	
50	50	0	3	27.78	0.00	27.78	35.844	23.12	4.61	6.58	98.13	.03	0.00	
100	99	08	4	23.64	0.00	23.64	36.573	24.96	4.70	6.72	98.66	.05	1.21	
150	149	2	5	21.72	2.00	21.72	36.645	25.56	4.55	6.52	97.15	.14	4.66	
200	197	193	6	19.50	3.00	19.50	36.510	26.06	4.32	6.17	76.59	.31	7.13	
250	246	289	7	18.37	3.00	18.37	36.437	26.30	4.22	6.07	74.76	.31	8.26	
300	295	293	8	16.73	0.00	16.73	36.269	26.57	4.20	6.01	70.11	.45	17.93	

048 860 STANDARD DEPTHS

WIRE NO	DEPTH (M)	TZ	BN	TL	TEMP	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
10	10	0	1	28.11	0.00	28.11	35.222	22.55	4.72	6.75	99.06	0.00	0.34
20	20	0	2	28.13	0.00	28.13	35.262	22.57	4.71	6.72	98.86	0.00	0.32
30	30	0	3	27.78	0.00	27.78	35.301	22.60	4.69	6.70	98.07	0.00	0.30
40	40	0	4	27.78	0.00	27.78	35.407	22.69	4.67	6.67	98.44	0.01	0.26
50	50	0	5	27.78	0.00	27.78	35.644	23.12	4.61	6.58	98.13	0.03	0.00
75	75	0	7	25.81	0.00	25.81	36.281	24.08	4.61	6.59	94.74	0.05	0.33
100	100	0	8	23.59	0.00	23.59	36.581	24.98	4.75	6.72	90.64	0.05	1.27
150	150	0	15	21.62	0.00	21.62	36.641	25.59	4.52	6.50	86.89	0.15	4.78
200	200	0	20	19.42	0.00	19.42	36.906	26.08	4.31	6.16	76.42	0.31	7.24
250	250	0	25	18.25	0.00	18.25	36.425	26.32	4.22	6.07	74.61	0.32	8.89
300	300	0	30	16.56	0.00	16.56	36.252	26.60	4.20	6.00	72.96	0.46	18.92

R V CALUMOC CRUISE 865 STATION PFI-18 PRIC REFERENCE 048887

DATE 06 /29/74 BARO 1018.4 WEATHER 02 WIND VELOC 05 WAVE PERIOD. 1
 HOUR 15.2 TEMP DRY 30.0 VISIBILITY 7 WIND DIREC 08 TRANSPAR
 LAT 18-19.5 N TEMP WET 0.0 CLOUD TYPE 5 WAVE DIREC 09 SONIC DEP 0214
 LONG 067-15.9 W REL HUMID 070 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.2 GMT, 1111 LOCAL MAX DEPTH 100 WIRE ANGLE 4
 OXYGEN TITER .515 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	28.27	0.00	28.27	35.315	22.56	4.60	6.65	98.14	.08	0.00	
25	25	0	2	28.20	0.00	28.20	35.335	22.60	4.61	6.59	97.15	.05	0.00	
50	50	54	3	27.95	0.00	27.95	35.482	22.79	4.54	6.56	90.91	.05	0.12	
100	100	103	4	23.61	0.00	23.61	36.554	24.95	4.64	6.70	90.29	.08	0.00	

048 867 STANDARD DEPTHS

0	28.27	35.315	22.56	4.60	6.65	98.14	0.08	0.00
10	28.24	35.323	22.58	4.64	6.63	97.75	0.07	0.00
20	28.22	35.331	22.59	4.62	6.60	97.34	0.06	0.00
30	28.17	35.347	22.62	4.60	6.58	97.02	0.05	0.12
50	27.95	35.482	22.79	4.54	6.56	96.91	0.05	0.12
75	25.42	35.888	23.59	4.62	6.59	96.36	0.06	0.12
100	23.61	36.554	24.95	4.64	6.70	90.29	0.08	0.00

R V PASUNGO CRUISE 048

STATION DATA

STATION REFERENCE 048000

DATE 08 /29/74 BARO 1016.0 FRESHWATER 00 WIND VELOS 00 WAVE PERIOD 2
 HOUR 15.5 TEMP DRY 32.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-19.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0023
 LONG 067-15.5 W REL HUMID 072 CLOUD AMT 6 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.5 GMT, 1133 LOCAL MAX DEPTH 10 WIRE ANGLE 5
 OXYGEN YPFR 0.987 METER WHEEL FACTOR .987

DEPTH (M)	TEMP	OXYGEN	SALIN	SIG T	ML/L	MG/L	XSAT	PHCS	NITRA
0	28.26	0.00	35.327	22.57	4.66	6.66	98.30	.06	0.00
10	28.22	0.04	35.323	22.59	4.67	6.70	98.76	.05	0.17
STANDARD DEPTHS									
0	28.28	0.00	35.327	22.57	4.66	6.66	98.30	0.06	0.20
10	28.22	0.04	35.323	22.59	4.67	6.70	98.76	0.05	0.17

R V PALUMBO CRUISE 051 STATION PHI-4C PRNC REFERENCE 051940
 DATE 11 /07/74 BARO 1016.3 WEATHER 02 WIND VELOC 06 WAVE PERIOD 3
 HOUR 13.7 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-24.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0402
 LONG 067-20.0 W REL HUMID 081 CLOUD AMT 3 WAVE HEIGHT 4 COLOR
 CAST 1 MESS TIME 13.7 GMT, 944 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TM							ML/L	MG/L			
0	0	0	0.00	27.43	1	0	27.43	34.784	22.44	4.72	6.75	97.18	.04	0.00
25	25	0	0.00	27.62	2	0	27.62	35.611	23.00	4.74	6.77	100.03	.04	0.00
50	50	48	0.00	27.45	3	48	27.45	36.251	23.53	4.80	6.86	99.06	.04	0.00
100	99	102	0.00	23.67	4	102	23.67	36.691	25.04	4.64	6.62	89.73	.11	2.40
150	148	146	0.00	20.53	5	146	20.53	36.648	25.89	4.53	6.47	85.89	.14	3.92
200	197	217	0.00	19.27	6	217	19.27	36.575	26.17	4.38	6.26	77.87	.23	6.99
250	246	248	0.00	18.56	7	248	18.56	36.479	26.20	4.40	6.29	77.57	.31	16.61 ?
300	295	300	0.00	17.67	8	300	17.67	36.392	26.44	4.37	6.24	76.46	.39	11.07

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TM							ML/L	MG/L			
0	0	0	0.00	27.43	1	0	27.43	34.784	22.44	4.72	6.75	97.18	0.04	0.00
10	10	0	0.00	27.51	2	0	27.51	35.115	22.66	4.73	6.76	98.27	0.04	0.00
20	20	0	0.00	27.59	3	0	27.59	35.449	22.89	4.73	6.76	99.42	0.04	0.00
30	30	0	0.00	27.59	4	0	27.59	35.760	23.12	4.72	6.79	100.71	0.04	0.00
50	50	0	0.00	27.45	5	0	27.45	36.251	23.54	4.80	6.86	99.06	0.04	0.00
75	75	0	0.00	25.77	6	0	25.77	36.573	24.31	4.73	6.76	97.58	0.07	1.08
100	100	0	0.00	23.59	7	0	23.59	36.690	25.06	4.63	6.62	89.64	0.11	2.43
150	150	0	0.00	20.45	8	0	20.45	36.646	25.91	4.52	6.46	85.71	0.14	4.01
200	200	0	0.00	19.22	9	0	19.22	36.569	26.18	4.30	6.26	77.05	0.24	7.69
250	250	0	0.00	18.49	10	0	18.49	36.472	26.29	4.40	6.28	77.50	0.32	16.48 ?
300	300	0	0.00	17.58	11	0	17.58	36.383	26.45	4.30	6.23	76.35	0.40	11.10

051 940 STANDARD DEPTHS

R V PALUMBO CRUISE 051 STATION PHI-5C PRNC REFERENCE 051941
 DATE 11 /07/74 BARO 1016.3 WEATHER 02 WIND VELOC 26 WAVE PERIOD 4
 HOUR 14.7 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-24.6 N TEMP WET 28.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0398
 LONG 067-17.4 W REL HUMID 081 CLOUD AMT 3 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 14.7 GMT, 1040 LOCAL MAX DEPTH 300 WIRE ANGLE 10
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA		
		TZ	BN				TL	TM				ML/L	MG/L
0	0	0	1	27.41	0.00	27.41	34.854	22.50	4.80	6.95	100.28	.05	0.10
25	24	0	2	27.51	0.00	27.51	35.129	22.67	4.80	6.86	99.88	.10	0.00
50	48	49	3	27.54	0.00	27.54	36.104	23.40	4.79	6.79	101.60	.08	0.00
100	95	97	4	25.00	0.00	25.00	36.559	24.54	4.79	6.85	98.32	.07	1.37
150	143	0	5	22.05	0.00	22.05	36.747	25.55	4.47	6.39	85.74	.13	4.55
200	190	0	6	19.55	0.00	19.55	36.566	26.09	4.42	6.32	78.65	.21	0.38
250	238	0	7	18.23	0.00	18.23	36.459	26.35	4.41	6.29	77.49	.28	11.53
300	285	0	8	17.81	0.00	17.81	36.379	26.39	4.37	6.25	76.57	.36	13.70

051 941	STANDARD DEPTHS												
		0	10	20	30	50	75	100	150	200	250	300	
	0	27.41	34.854	22.50	4.80	6.95	100.28	0.05	0.10				
	10	27.45	34.969	22.57	4.84	6.91	100.11	0.07	0.06				
	20	27.49	35.070	22.63	4.81	6.88	99.91	0.09	0.01				
	30	27.53	35.353	22.83	4.79	6.84	100.19	0.10	0.00				
	50	27.47	36.146	23.45	4.79	6.79	97.81	0.08	0.02				
	75	26.31	36.499	24.09	4.79	6.79	98.11	0.07	0.57				
	100	24.69	36.592	24.66	4.70	6.80	92.43	0.07	1.64				
	150	21.63	36.729	25.65	4.49	6.36	85.14	0.14	5.12				
	200	19.19	36.539	26.17	4.42	6.31	78.33	0.22	9.11				
	250	18.08	36.437	26.37	4.40	6.28	77.25	0.30	12.13				
	300	17.68	36.353	26.41	4.36	6.23	76.29	0.39	14.39				

R V PALUMBO CRUISE 051 STATION PHI-6C PRNC REFERENCE 051942
 DATE 11 /07/74 BARO 1015.6 WEATHER 02 WIND VELOC WAVE PERIOD 4
 HOUR 15.6 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-25.1 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0382
 LONG 067-15.4 W REL HUMID 077 CLOUD AMT 4 WAVE HEIGHT 5 COLOR
 CAST 1 MESS TIME 15.6 GMT, 1134 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	OXYGEN			XSAT	PHOS	NITRA
										ML/L	MG/L	ML/L			
0	0	0	0	1	27.03	0.00	27.03	34.951	22.69	4.80	6.97	100.47	.05	0.56	
25	25	0	0	2	27.61	0.00	27.61	35.802	23.21	4.74	6.78	100.94	.06	0.54	
50	50	45	0	3	27.21	0.00	27.21	36.332	23.67	4.76	6.80	98.39	.07	0.49	
100	99	0	0	4	24.92	0.00	24.92	36.575	24.57	4.84	6.91	93.95	.07	1.11	
150	149	0	0	5	22.66	0.00	22.66	36.738	25.37	4.53	6.47	87.24	.11	3.35	
200	198	0	0	6	20.04	0.00	20.04	36.611	26.00	4.41	6.30	83.33	.25	3.51	
250	248	0	0	7	17.98	0.00	17.98	36.417	26.38	4.38	6.26	76.91	.58	14.18	
300	297	0	0	8	17.46	0.00	17.46	36.358	26.46	4.37	6.27	76.70	.37	15.50	
051 942	STANDARD DEPTHS														
0	0	0	0	0	27.03	0.00	27.03	34.951	22.69	4.80	6.97	100.47	0.05	0.56	
10	10	0	0	0	27.26	0.00	27.26	35.323	22.90	4.82	6.89	100.54	0.05	0.55	
20	20	0	0	0	27.51	0.00	27.51	35.705	23.10	4.77	6.81	100.76	0.06	0.54	
30	30	0	0	0	27.60	0.00	27.60	36.006	23.30	4.75	6.78	101.37	0.06	0.53	
50	50	0	0	0	27.21	0.00	27.21	36.332	23.67	4.76	6.80	98.39	0.07	0.49	
75	75	0	0	0	26.16	0.00	26.16	36.514	24.15	4.79	6.85	98.92	0.07	0.69	
100	100	0	0	0	24.80	0.00	24.80	36.580	24.59	4.83	6.90	93.84	0.07	1.16	
150	150	0	0	0	22.61	0.00	22.61	36.737	25.38	4.53	6.47	87.14	0.11	3.37	
200	200	0	0	0	19.94	0.00	19.94	36.603	26.02	4.41	6.30	78.73	0.26	3.93	
250	250	0	0	0	17.94	0.00	17.94	36.413	26.39	4.38	6.26	76.89	0.38	14.32	
300	300	0	0	0	17.43	0.00	17.43	36.354	26.47	4.37	6.27	76.69	0.37	15.58	

R V PALUMBO CRUISE 051 STATION PHI-5B PRNC REFERENCE 051944

DATE 11 /07/74 BARO 1015.3 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 16.8 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-23.2 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0172
 LONG 067-16.4 W REL HUMID 078 CLOUD AMT 7 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 16.8 GMT, 1248 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .547 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	1	27.49	0.00	27.49	35.052	22.62	4.87	6.96	101.01	.09	0.10
25	25	0	2	27.58	0.00	27.58	35.284	22.77	4.83	6.90	100.97	.06	0.10
50	50	53	3	26.87	0.00	26.87	36.303	23.76	4.74	6.78	97.85	.03	2.38 ?
100	100	102	4	23.12	0.00	23.12	36.704	25.21	4.50	6.52	88.07	.11	1.83
051 944 STANDARD DEPTHS													
	0					27.49	35.052	22.62	4.87	6.96	101.01	0.09	0.10
	10					27.53	35.145	22.68	4.85	6.94	100.99	0.08	0.10
	20					27.56	35.238	22.74	4.84	6.92	100.99	0.07	0.10
	30					27.51	35.468	22.93	4.82	6.88	101.11	0.05	0.50
	50					26.87	36.303	23.76	4.74	6.78	97.85	0.03	2.38
	75					25.38	36.503	24.38	4.60	6.65	95.64	0.05	2.10 ?
	100					23.12	36.704	25.21	4.50	6.52	88.07	0.11	1.83

R V PALUMBO CRUISE 051 STATION PWI-4B PRNC REFERENCE 051945
 DATE 11 /07/74 BARO 1014.9 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 17.2 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 16-23.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0168
 LONG 067-18.5 W REL HUMID 079 CLOUD AMT 6 WAVE HEIGHT 5 COLOR
 CAST 1 MESS TIME 17.2 GMT, 1311 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	27.50	0.00	27.50	34.919	22.52	4.85	6.90	99.85	.05	0.00
25	25	0	0	2	27.57	0.00	27.57	35.143	22.66	4.85	6.90	100.43	.04	0.69
50	50	0	0	3	24.94	0.00	24.94	36.577	24.57	4.70	6.72	91.31	.00	2.88
100	100	0	0	5	22.13	0.00	22.13	36.704	25.49	4.44	6.35	85.18	.14	3.55
051	945	STANDARD DEPTHS												
	0				27.50	34.919	22.52	4.85	6.90	99.85	0.05	0.00		
	10				27.53	35.009	22.58	4.85	6.90	100.08	0.05	0.28		
	20				27.56	35.098	22.63	4.85	6.90	100.31	0.04	0.52		
	30				27.16	35.402	22.99	4.81	6.87	100.30	0.03	1.10		
	50				24.94	36.577	24.57	4.70	6.72	91.31	0.00	2.88		
	75				23.13	36.641	25.16	4.57	6.53	88.08	0.03	3.22		
	100				22.13	36.704	25.49	4.44	6.35	85.18	0.14	3.55		

R V PALUMBO CRUISE 051 STATION PHI-6A PRNC REFERENCE 051946

DATE 11 /07/74 BARO 1014.7 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 18.0 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-22.8 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0021
 LONG 067-15.0 W REL HUMID 081 CLOUD AMT 6 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 18.0 GMT, 14 0 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN									
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	27.54	0.00	0.00	27.54	35.111	22.65	4.79	6.85	99.63	.06	0.00
10	10	0	2	27.57	0.00	0.00	27.57	35.156	22.67	4.80	6.86	99.90	.04	0.30

051 946 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 051 STATION PHI-5A PRNC REFERENCE 051947

DATE 11 /07/74 BARO 1014.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 4
 HOUR 18.2 TEMP DRY 27.5 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-22.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0020
 LONG 067-16.0 W REL HUMID 085 CLOUD AMT 7 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 18.2 GMT, 1414 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN									
	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	27.49	0.00	0.00	27.49	35.053	22.62	4.79	6.85	99.42	.06	0.69
10	10	0	2	27.57	0.00	0.00	27.57	35.226	22.73	4.81	6.87	100.33	.04	0.00

051 947 STANDARD DEPTHS
 0
 10

R V PALUMBO CRUISE 051 STATION PHI-4A PRNC REFERENCE 051948

DATE 11 /07/74 PARO 1014.5 WEATHER 02 WIND VELOC 04 WAVE PERIOD 4
 HOUR 18.5 TEMP DRY 28.5 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-22.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 06 SONIC DEP 0020
 LONG 067-16.2 W REL HUMID 082 CLOUD AMT 6 WAVE HEIGHT 5 COLOR

CAST 1 MESS TIME 18.5 GHT, 1427 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA		
	TZ	BN									TL	TM
0	0	1	27.53	0.00	27.53	35.112	22.65	4.87	6.96	101.21	.06	0.37
10	0	2	27.55	0.00	27.55	35.128	22.66	4.82	6.88	100.14	.04	0.00
051 948	STANDARD DEPTHS											
0	27.53 35.112 22.65 4.87 6.96 101.21 0.06 0.37											
10	27.55 35.128 22.66 4.82 6.88 100.14 0.04 0.00											

R V PALUMBO CRUISE 051 STATION PHI-3C PRNC REFERENCE 051949

DATE 11 /07/74 BARO 1014.5 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 18.6 TEMP DRY 28.5 VISIBILITY 7 WIND DIREC 06 TRANSPAR
 LAT 18-21.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 03 SONIC DEP 0401
 LONG 067-17.6 W REL HUMID 080 CLOUD AMT 6 WAVE HEIGHT 3 COLOR

CAST 1 MESS TIME 18.8 GMT, 1448 LOCAL MAX DEPTH 300 WIRE ANGLE 8
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	BN	TZ	TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TM							ML/L	MG/L			
0	0	0	0.00	27.51	1	0	27.51	34.814	22.44	4.99	7.04	101.59	.04	0.10
25	25	0	0.00	27.54	2	0	27.54	34.861	22.46	4.80	6.86	99.15	.07	0.94
50	50	53	0.00	27.54	3	53	27.54	35.838	23.20	4.79	6.76	100.46	.07	0.45
100	99	103	0.00	23.27	4	103	23.27	36.734	25.19	4.50	6.43	86.97	.15	5.52
150	149	147	0.00	21.37	5	147	21.37	36.734	25.73	4.37	6.24	83.33	.17	3.09
200	198	196	0.00	18.88	6	196	18.88	36.508	26.22	4.48	6.39	79.14	.25	7.69
250	247	242	0.00	18.15	7	242	18.15	36.445	26.36	4.53	6.47	79.63	.26	9.88
300	297	291	0.00	16.62	8	291	16.62	36.401	26.70	4.44	6.34	77.35	.32	9.15

051 949 STANDARD DEPTHS

0	27.51	34.814	22.44	4.99	7.04	101.59	0.04	0.10
10	27.52	34.833	22.45	4.88	6.97	100.61	0.05	0.28
20	27.53	34.852	22.46	4.89	6.90	99.61	0.06	0.46
30	27.54	35.021	22.58	4.79	6.84	99.27	0.07	0.52
50	27.54	35.838	23.20	4.79	6.76	100.46	0.07	0.45
75	25.57	36.435	24.27	4.61	6.59	94.84	0.11	3.06
100	23.22	36.734	25.20	4.49	6.42	86.86	0.15	5.47
150	21.31	36.730	25.74	4.37	6.24	83.32	0.17	3.16
200	18.84	36.504	26.23	4.48	6.40	79.17	0.25	7.03
250	18.07	36.442	26.38	4.53	6.47	79.53	0.26	9.88
300	16.53	36.398	26.72	4.49	6.33	77.22	0.32	9.11

R V PALUMBO CRUISE 051 STATION PHI-2C PRNC REFERENCE 051950

DATE 11 /07/74 RAPO 1014.6 WEATHER 02 WIND VELOC 05 WAVE PERIOD 5
 HOUR 20.1 TEMP DRY 28.5 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-20.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 02 SONIC DEP 0392
 LONG 067-17.2 W REL HUMID 085 CLOUD AMT 8 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 20.1 GMT, 16 7 LOCAL MAX DEPTH 300 WIRE ANGLE 7
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP		TL	TM	TAVE	SALIN	SIG T	OXYGEN			PHOS	NITRA
		TZ	BN						ML/L	MG/L	XSAT		
0	0	0	1	27.50	0.00	27.50	34.772	22.41	4.80	6.97	100.34	.07	0.79
25	25	0	2	27.61	0.00	27.61	35.362	22.81	4.80	6.86	100.66	.06	0.45
50	50	49	3	27.67	0.00	27.67	35.848	23.16	4.81	6.87	102.33	.06	0.00
100	99	102	4	23.42	0.00	23.42	36.734	25.14	4.54	6.48	87.80	.13	3.78
150	149	149	5	21.50	0.00	21.50	36.750	25.70	4.42	6.32	84.47	.19	4.85
200	198	194	6	19.15	0.00	19.15	36.544	26.18	4.48	6.39	79.37	.25	9.23
250	248	248	7	17.83	0.00	17.83	36.421	26.42	4.30	6.22	76.30	.39	9.76
300	297	290	8	17.20	0.00	17.20	36.330	26.50	4.45	6.32	77.23	.37	13.74

051 950 STANDARD DEPTHS

0	27.50	34.772	22.41	4.80	6.97	100.34	0.07	0.79
10	27.54	35.008	22.57	4.80	6.92	100.45	0.07	0.65
20	27.59	35.246	22.73	4.82	6.80	100.56	0.06	0.52
30	27.63	35.466	22.89	4.81	6.87	101.01	0.06	0.37
50	27.67	35.848	23.16	4.81	6.87	102.33	0.06	0.00
75	25.72	36.359	24.17	4.60	6.69	96.24	0.09	1.71
100	23.37	36.743	25.17	4.53	6.48	87.72	0.13	3.83
150	21.45	36.746	25.72	4.42	6.32	84.46	0.19	4.94
200	19.08	36.538	26.19	4.47	6.39	79.23	0.26	9.33
250	17.80	36.417	26.42	4.36	6.22	76.30	0.39	9.89
300	17.16	36.324	26.51	4.45	6.33	77.29	0.37	13.98

R V PALUMBO CRUISE 051 STATION PHI-1C PRNC REFERENCE 051951

DATE 11 /07/74 BARO 1013.7 WEATHER 02 WIND VELOC 03 WAVE PERIOD 5
 HOUR 21.0 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 05 TRANSPAR
 LAT 18-19.2 N TEMP WET 0.0 CLOUD TYPE 5 WAVE DIREC 01 SONIC DEP 0391
 LONG 067-16.7 W REL HUMID 074 CLOUD AMT 7 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 21.0 GMT, 1657 LOCAL MAX DEPTH 300 WIRE ANGLE 5
 OXYGEN TITER .547 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	27.50	34.757	22.40	4.80	6.95	100.07	.07	0.03
25	25	0	0.00	27.63	35.525	22.93	4.83	6.90	101.63	.05	0.00
50	50	55	0.00	26.95	36.330	23.76	4.78	6.82	98.62	.03	1.25
100	100	97	0.00	23.21	36.742	25.21	4.55	6.50	88.01	.11	2.22
150	149	153	0.00	21.54	36.742	25.69	4.43	6.33	84.69	.12	6.43
200	199	198	0.00	19.39	36.579	26.14	4.40	6.37	79.30	.22	9.30
250	249	251	0.00	18.15	36.437	26.35	4.38	6.25	76.92	.28	10.36
300	298	294	0.00	16.98	36.314	26.54	4.42	6.32	77.04	.40	15.37

051 951	STANDARD DEPTHS	TEMP		TAVE	SALIN	SIG T	OXYGEN		XSAT	PHOS	NITRA
		CZ	TM				ML/L	MG/L			
0	0	0	0.00	27.50	34.757	22.40	4.80	6.95	100.07	0.07	0.03
10	10	0	0.00	27.55	35.064	22.61	4.83	6.93	100.66	0.06	0.50
20	20	0	0.00	27.60	35.371	22.82	4.83	6.91	101.30	0.05	0.12
30	30	0	0.00	27.57	35.700	23.08	4.82	6.88	101.91	0.05	0.16
50	50	0	0.00	26.95	36.330	23.76	4.78	6.82	98.62	0.03	1.25
75	75	0	0.00	25.15	36.662	24.57	4.67	6.67	95.93	0.06	1.99
100	100	0	0.00	23.21	36.742	25.21	4.55	6.50	88.01	0.11	2.22
150	150	0	0.00	21.49	36.739	25.70	4.43	6.33	84.67	0.12	6.50
200	200	0	0.00	19.36	36.576	26.15	4.40	6.37	79.25	0.22	9.34
250	250	0	0.00	18.13	36.434	26.36	4.38	6.25	76.91	0.28	10.42
300	300	0	0.00	16.93	36.309	26.55	4.42	6.32	77.05	0.40	15.57

R V PALUMBO CRUISE 051 STATION PHI-1A PRNC REFERENCE 051952

DATE 11 /07/74 BARO 1013.5 WEATHER 00 WIND VELOC 05 WAVE PERIOD 5
 HOUR 21.0 TEMP DRY 33.0 VISIBILITY 7 WIND DIREC 05 TRANSPAR
 LAT 18-19.6 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0020
 LONG 067-15.5 W REL HUMID 070 CLOUD AMT 6 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 21.0 GMT, 1751 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA		
	TZ	BN									TL	TM
0	0	1	27.45	0.00	27.45	34.886	22.51	4.88	6.97	100.62	.00	0.56
10	0	2	27.51	0.00	27.51	34.918	22.51	4.83	6.90	99.74	.00	3.83
STANDARD DEPTHS												
0			27.45	34.886	22.51	4.88	6.97	100.62	0.00	0.56		
10			27.51	34.918	22.51	4.83	6.90	99.74	0.00	3.83		

near sewage
 Discharge ?
 PO₄-P

R V PALUMBO CRUISE 051 STATION PHI-2A PRNC REFERENCE 051953A
 DATE 11 /07/74 BARO 1014.0 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 22.1 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-20.7 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0020
 LONG 067-16.0 W REL HUMID 083 CLOUD AMT 8 WAVE HEIGHT 1 COLOR
 CAST 1 MESS TIME 22.1 GMT, 10 5 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	WIRE	CZ								
0	0	0	27.41	34.867	22.51	4.87	6.99	100.88	.04	0.16
10	10	0	27.45	34.859	22.49	4.86	6.95	100.32	.04	0.00
051 953	STANDARD DEPTHS									
0			27.41	34.867	22.51	4.87	6.99	100.88	0.04	0.16
10			27.45	34.859	22.49	4.86	6.95	100.32	0.04	0.00

R V PALUMBO CRUISE 051 STATION PHI-3A PRNC REFERENCE 051953B
 DATE 11 /07/74 BARO 1013.0 WEATHER 02 WIND VELOC 04 WAVE PERIOD 1
 HOUR 22.3 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-21.3 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0017
 LONG 067-16.6 W REL HUMID 083 CLOUD AMT 8 WAVE HEIGHT 1 COLOR
 CAST 1 MESS TIME 22.3 GMT, 1017 LOCAL MAX DEPTH 10 WIRE ANGLE 3
 OXYGEN TITER .547 METER WHEEL FACTOR .997

DEPTH (M)	TEMP		TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
	WIRE	CZ								
0	0	0	27.39	34.839	22.49	4.87	6.96	100.34	.04	0.21
10	10	0	27.56	34.967	22.53	4.86	6.97	101.05	.04	0.39
051 953	STANDARD DEPTHS									
0			27.39	34.839	22.49	4.87	6.96	100.34	0.04	0.21
10			27.56	34.967	22.53	4.86	6.97	101.05	0.04	0.39

R V PALUMBO CRUISE 051 STATION PHI-3B PRNC REFERENCE 051954

DATE 11 /07/74 BARO 1014.0 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 23.1 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-21.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0175
 LONG 067-17.6 W REL HUMID 086 CLOUD AMT WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 23.1 GMT, 19 7 LOCAL MAX DEPTH 100 WIRE ANGLE 5
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	0	0	1	27.39	0.00	27.39	34.856	22.51	4.89	6.98	100.72	.06	0.58
25	25	0	0	2	27.60	0.00	27.60	35.150	22.66	4.86	6.94	101.16	.09	0.56
50	50	56	56	3	25.75	0.00	25.75	36.437	24.21	4.79	6.85	98.61	.08	1.41
100	100	101	101	4	22.14	0.00	22.14	36.757	25.53	4.48	6.40	86.02	.14	4.97
051 954 STANDARD DEPTHS														
		0			27.39	34.856	22.51	4.89	6.98	100.72	0.06	0.58		
		10			27.47	34.974	22.57	4.88	6.97	100.88	0.07	0.57		
		20			27.56	35.091	22.63	4.87	6.95	101.08	0.08	0.56		
		30			27.34	35.384	22.92	4.82	6.93	101.37	0.09	0.66		
		50			25.75	36.437	24.22	4.79	6.85	98.61	0.08	1.41		
		75			23.93	36.597	24.89	4.67	6.67	90.21	0.10	2.88		
		100			22.14	36.757	25.53	4.48	6.40	86.02	0.14	4.97		

R V PALUMBO CRUISE 051 STATION PHI-28 PRNG REFERENCE 051955

DATE 11 /07/74 BARO 1014.1 WEATHER 02 WIND VELOC 03 WAVE PERIOD 4
 HOUR 23.5 TEMP DRY 24.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-20.4 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0162
 LONG 067-16.6 W REL HUMID 087 CLOUD AMT 8 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 23.5 GMT, 1931 LOCAL MAX DEPTH 100 WIRE ANGLE 3
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA		
		TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L			MG/L	XSAT
0	0	0	1	27.43	0.00	27.43	34.910	22.53	4.80	6.95	100.45	.05	0.33
25	25	0	2	27.64	0.00	27.64	35.601	23.04	4.82	6.88	101.88	.03	0.56
50	50	59	3	24.87	0.00	24.87	35.681	23.92	4.71	6.72	94.06	.07	2.04
100	100	111	4	22.14	0.00	22.14	36.772	25.54	4.47	6.38	85.74	.16	6.35
051 955	STANDARD DEPTHS												
0	0			27.43		34.910		22.53	4.80	6.95	100.45	0.05	0.33
10	10			27.51		35.218		22.74	4.85	6.92	100.98	0.04	0.42
20	20			27.60		35.542		22.95	4.89	6.90	101.64	0.03	0.51
30	30			27.21		35.681		23.18	4.80	6.85	100.87	0.03	0.77
50	50			24.87		35.681		23.92	4.71	6.72	94.06	0.07	2.04
75	75			23.04		36.045		24.73	4.59	6.56	90.55	0.11	3.97
100	100			22.14		36.772		25.54	4.47	6.38	85.74	0.16	6.35

R V PALUMBO CRUISE 051 STATION PHI-18 PRNC REFERENCE 051956
 DATE 11 /07/74 BARO 1014.1 WEATHER 02 WIND VELOC 03 WAVE PERIOD
 HOUR 23.9 TEMP DRY 25.0 VISIBILITY 7 WIND DIREC 07 TRANSPAR
 LAT 18-19.5 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC SONIC DEP 0165
 LONG 067-15.9 W REL HUMID 087 CLOUD AMT 7 WAVE HEIGHT COLOR

CAST 1 MESS TIME 23.9 GMT, 1956 LOCAL MAX DEPTH 100 WIRE ANGLE 0
 OXYGEN TITER .547 METER WHEEL FACTOR .997

WIRE	CZ	DEPTH (M)	TEMP				OXYGEN				PHOS	NITRA	
			TZ	BN	TL	TM	TAVE	SALIN	SIG Y	ML/L			MG/L
0	0	0	1	27.49	0.00	27.49	34.980	22.57	4.82	6.88	99.67	.00	0.49
25	0	0	2	27.63	0.00	27.63	35.468	22.89	4.80	6.86	100.88	.04	0.00
50	0	0	3	25.90	0.00	25.90	36.503	24.22	4.70	6.83	98.55	.04	1.39
100	100	100	4	22.93	0.00	22.93	36.757	25.30	4.53	6.47	87.46	.15	4.43
STANDARD DEPTHS													
051	956	0		27.49	34.980	22.57	4.82	6.88	99.67	0.00	0.49		
	10	10		27.55	35.175	22.70	4.81	6.87	100.14	0.02	0.29		
	20	20		27.60	35.359	22.82	4.80	6.86	100.59	0.03	0.10		
	30	30		27.38	35.670	23.12	4.80	6.85	101.06	0.04	0.17		
	50	50		25.90	36.503	24.22	4.70	6.83	98.55	0.04	1.39		
	75	75		24.33	36.630	24.79	4.69	6.70	91.04	0.08	2.87		
	100	100		22.93	36.757	25.31	4.53	6.47	87.46	0.15	4.43		

R V PALUMBO CRUISE #52 STATION CRP-1B PRNC REFERENCE #52003

DATE 11 /15/74 PARO 1017.5 WEATHER 00 WIND VELOC 03 WAVE PERIOD 1
 HOUR 11.3 TEMP DRY 26.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 10- 0.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0012
 LONG 067-13.5 W REL HUMID 073 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 11.3 GMT, 718 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	1	27.08	0.00	27.08	33.865	21.86	4.83	6.92	100.06	.08	0.00
10	0	0	2	27.05	0.00	27.05	33.885	21.89	4.85	6.92	100.38	.08	0.00
052 003													
10													

STANDARD DEPTHS

R V PALUMBO CRUISE #52 STATION CRP-2B PRNC REFERENCE #52004

DATE 11 /15/74 PARO 1017.5 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 11.6 TEMP DRY 28.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 1.0 N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0013
 LONG 067-12.6 W REL HUMID 073 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 11.6 GMT, 735 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	CZ	TZ	PN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	PHOS	NITRA
0	0	0	3	26.96	0.00	26.96	33.754	21.82	4.81	6.87	99.34	.05	0.00
10	0	8	4	26.95	0.00	26.95	33.754	21.82	4.75	6.78	97.94	.05	0.00
052 004													
10													

STANDARD DEPTHS

R V PALUMBO CRUISE 052 STATION CPP-2A PRNC REFERENCE 052005

DATE 11 /15/74 BARO 1017.6 WEATHER 02 WIND VELOC 03 WAVE PERIOD 1
 HOUR 11.9 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 1.0' N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0012
 LONG 067-12.6 W REL HUMID 072 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 11.9 GMT, 752 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .744 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
0	1	0	1	26.93	0.00	26.93	33.046	21.29	4.00	6.86	97.59	.20	0.00
5	5	0	2	27.04	0.00	27.04	33.828	21.85	4.77	6.82	96.84	.25	0.00
052 005	STANDARD DEPTHS												
0					26.93	33.046	21.29	4.00	6.86	97.59	0.20	0.00	0.00

R V PALUMBO CRUISE 052 STATION CRP-3A PRNC REFERENCE 052006

DATE 11 /15/74 BARO 1017.6 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 12.1 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 2.0' N TEMP WET 0.0 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0012
 LONG 067-12.0 W REL HUMID 070 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.1 GMT, 8 9 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .744 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
0	0	2	3	26.93	0.00	26.93	33.469	21.61	4.77	6.82	97.90	.08	0.00
5	5	6	4	27.13	0.00	27.13	33.834	21.82	4.78	6.83	99.13	.06	0.00
052 006	STANDARD DEPTHS												
0					26.93	33.469	21.61	4.77	6.82	97.90	0.08	0.00	0.00

R V PALUMBO CRUISE 052 STATION CRP-30 PRNC REFERENCE 052007

DATE 11 /15/74 DAPU 1.11/.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 12.5 TEMP DRY 39.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 2.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0015
 LONG 067-13.6 W REL HUMID 059 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.5 GMT, 823 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	OXYGEN	
												PHOS	NITRA
0	1	0	1	26.72	0.00	26.72	33.372	21.61	4.70	6.80	97.20	.11	0.00
10	0	0	2	26.92	0.00	26.92	33.779	21.85	4.83	6.91	99.80	.07	0.00

052 007 STANDARD DEPTHS

0
10

R V PALUMBO CRUISE 052 STATION CRP-40 PRNC REFERENCE 052008

DATE 11 /15/74 PARO 1017.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 12.9 TEMP DRY 39.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 3.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0021
 LONG 067-15.6 W REL HUMID 059 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 12.9 GMT, 855 LOCAL MAX DEPTH 20 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

WIRE	CZ	TZ	RN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	OXYGEN	
												PHOS	NITRA
0	1	0	1	26.93	0.00	26.93	33.845	21.89	4.80	6.95	100.58	.00	0.65
10	0	0	2	27.02	0.00	27.02	34.029	22.00	4.70	6.83	99.43	.05	1.75
20	0	0	3	27.17	0.00	27.17	34.129	22.03	4.81	6.87	100.53	.07	1.07

052 008 STANDARD DEPTHS

0
10
20

R V PALUMBO CRUISE 052 STATION CRP-4A PRNC REFERENCE 052010

DATE 11 /15/74 BARO 1018.3 WEATHER 02 WIND VELOC 22 WAVE PERIOD 3
 HOUR 13.4 TEMP DAY 32.2 VISIBILITY 7 WIND DIREC 02 TRANSPAR
 LAT 18- 3.4 N TEMP WET 20.0 CLOUD TYPE 8 WAVE DIREC 22 SONIC DEP 0015
 LONG 067-13.2 W REL HUMID 77.0 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 13.4 GMT, 921 LOCAL MAX DEPTH 10 WIRE ANGLE 2
 OXYGEN TITER .744 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	1	26.92	0.00	26.92	33.623	21.73	4.87	6.96	100.22	.07	2.07		
10	10	2	27.26	0.00	27.26	33.984	21.96	4.67	6.67	97.07	.26	1.48		
052 009			STANDARD DEPTHS											
0			26.92		33.623		21.73	4.87	6.96	100.22		0.07		0.07
10			27.06		33.984		21.96	4.67	6.67	97.07		0.26		1.48

R V PALUMBO CRUISE 052 STATION CRP-4A PRNC REFERENCE 052010

DATE 11 /15/74 BARO 1218.5 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 13.6 TEMP DRY 29.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 3.0 N TEMP WET 0.2 CLOUD TYPE 8 WAVE DIREC 01 SONIC DEP 0012
 LONG 067-12.4 W REL HUMID 074 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.6 GMT, 938 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .744 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	3	27.15	0.00	27.15	33.734	21.74	4.67	6.67	96.61	.08	1.75		
5	5	4	27.01	0.00	27.01	33.781	21.82	4.68	6.68	96.69	.28	0.78		
052 010			STANDARD DEPTHS											
0			27.15		33.734		21.74	4.67	6.67	96.61		0.28		1.75

R V PALUMBO CRUISE 052 STATION CRP-5A PRNC REFERENCE 052011

DATE 11 /15/74 BARO 1018.5 WEATHER 02 WIND VELOC 01 WAVE PERIOD 1
HOUR 13.9 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
LAT 18- 4.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0010
LONG 067-12.2 W REL HUMID 070 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 13.9 GMT, 956 LOCAL MAX DEPTH 5 WIRE ANGLE 0
OXYGEN TITER .744 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	1	27.05	0.00	27.05	33.597	21.67	4.83	6.91	99.54	.04	0.00	
5	5	0	2	27.05	0.00	27.05	33.834	21.85	4.80	6.86	99.48	.07	0.00	
052 011	STANDARD DEPTHS													
0							27.05	33.597	21.67	4.83	6.91	99.54	0.04	0.00

R V PALUMBO CRUISE 052 STATION CRP-5B PRNC REFERENCE 052012

DATE 11 /15/74 BARO 1018.5 WEATHER 02 WIND VELOC 01 WAVE PERIOD 1
HOUR 14.3 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
LAT 18- 4.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0015
LONG 067-13.5 W REL HUMID 068 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.3 GMT, 1015 LOCAL MAX DEPTH 10 WIRE ANGLE 0
OXYGEN TITER .744 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	3	27.22	0.00	27.22	33.775	21.75	4.92	7.02	101.88	.10	0.00	
10	10	10	4	26.95	0.00	26.95	33.861	21.90	4.83	6.90	99.87	.04	0.00	
052 012	STANDARD DEPTHS													
0							27.22	33.775	21.75	4.92	7.02	101.88	0.10	0.00
10							26.95	33.861	21.90	4.83	6.90	99.87	0.04	0.00

R V PALUMBO CRUISE 052 STATION CRP-6R PRNC REFERENCE 052010

DATE 11 /15/74 BARO 1010.7 WEATHER 02 WIND VELOC 12 WAVE PERIOD 1
 HOUR 14.5 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 01 TRANSPAR
 LAT 18- 5.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 01 SONIC DEP 0014
 LONG 067-13.5 W REL HUMID 072 CLOUD AMT 1 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.5 GMT, 1032 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,744 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	YZ	RN	TL	TM	TEMP	YAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	1	27.00	0.00	27.08	33.779	21.80	4.70	6.76	97.86	.06	0.00			
10	10	2	26.90	0.00	26.96	33.892	21.92	4.70	6.80	98.57	.09	0.00			
STANDARD DEPTHS															
0	0	27.08	33.779	21.80	4.70	6.76	97.86	.06	0.00						
10	10	26.96	33.892	21.92	4.70	6.80	98.57	.09	0.00						

R V PALUMBO CRUISE 052 STATION CRP-7B PRNC REFERENCE 052014

DATE 11 /15/74 BARO 1010.7 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 14.9 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 02 TRANSPAR
 LAT 18- 6.2 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 02 SONIC DEP 0014
 LONG 067-13.5 W REL HUMID 060 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 14.9 GMT, 1054 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER ,744 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	YZ	RN	TL	TM	TEMP	YAVE	SALIN	SIG T	ML/L	MG/L	XSAT	PHOS	NITRA
0	0	1	27.12	0.00	27.12	33.810	21.81	4.87	6.96	100.91	.06	0.00			
10	10	2	26.91	0.00	26.91	33.885	21.93	4.80	6.85	99.26	.10	0.49			
STANDARD DEPTHS															
0	0	27.12	33.810	21.81	4.87	6.96	100.91	.06	0.00						
10	10	26.91	33.885	21.93	4.80	6.85	99.26	.10	0.49						

R V PALUMBO CRUISE 052 STATION CRP-7A PRNC REFERENCE 052015

DATE 11 /15/74 BARO 1018.7 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 15.3 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 02 TRANSPAR
 LAT 18- 6.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 02 SONIC DEP 0010
 LONG 067-12.2 W REL HUMID 067 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.3 GMT, 1116 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
	CZ	TZ	BN	TL	TM	TAVE							SALIN
0	0	0	1	27.17	0.00	27.17	33.756	21.75	4.82	6.89	99.76	.00	0.33
5	0	0	2	26.80	0.00	26.80	33.799	21.90	4.72	6.79	98.00	.10	0.44

052 015 STANDARD DEPTHS
 27.17 33.756 21.75 4.82 6.89 99.76 0.00 0.33

R V PALUMBO CRUISE 052 STATION CRP-6B PRNC REFERENCE 052015

DATE 11 /15/74 BARO 1018.7 WEATHER 02 WIND VELOC 02 WAVE PERIOD 1
 HOUR 15.6 TEMP DRY 31.0 VISIBILITY 7 WIND DIREC 20 TRANSPAR
 LAT 18- 7.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 21 SONIC DEP 0016
 LONG 067-13.5 W REL HUMID 068 CLOUD AMT 2 WAVE HEIGHT 1 COLOR

CAST 1 MESS TIME 15.6 GMT, 1134 LOCAL MAX DEPTH 10 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	TEMP				OXYGEN		SIG T	ML/L	MG/L	%SAT	PHOS	NITRA	
	CZ	TZ	BN	TL	TM	TAVE							SALIN
0	0	0	3	27.17	0.00	27.17	33.744	21.74	4.80	6.94	100.50	.10	0.20
10	0	0	4	26.99	0.00	26.99	34.072	22.05	4.70	6.72	97.79	.25	0.00

052 016 STANDARD DEPTHS
 27.17 33.744 21.74 4.80 6.94 100.50 0.10 0.20
 26.99 34.072 22.04 4.70 6.72 97.79 0.25 0.00

DATE 11 / 15 / 74 BAR 1018.3 WEATHER 02 WIND VELOC 24 WAVE PERIOD 1
 HOUR 15.9 TEMP DRY 33.0 VISIBILITY 7 WIND DIREC 24 TRANSPAR
 LAT 18- 8.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 25 SONIC DEP 0017
 LONG 067-13.5 W REL HUMID 064 CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 15.9 GMT, 1152 LOCAL MAX DEPTH 10 WIRE ANGLE
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	OXYGEN	
													PHOS	NITRA
0	2	0	0	1	27.05	0.00	27.05	34.733	22.00	4.75	6.79	98.87	.08	0.00
10	10	0	0	2	26.95	0.00	26.95	34.029	22.03	4.72	6.74	97.94	.08	0.00
STANDARD DEPTHS														
0	052	017												
10							27.05	34.033	22.00	4.72	6.79	98.87	0.08	0.00
							26.95	34.029	22.02	4.72	6.74	97.94	0.08	0.00

R V PALUMBO CRUISE 052 STATION CRP-9A PRNC REFERENCE 052018

DATE 11 / 15 / 74 BAR 1018.3 WEATHER 02 WIND VELOC 04 WAVE PERIOD 2
 HOUR 16.2 TEMP DRY 34.0 VISIBILITY 7 WIND DIREC 24 TRANSPAR
 LAT 18- 8.0 N TEMP WET 0.0 CLOUD TYPE 0 WAVE DIREC 25 SONIC DEP 0010
 LONG 067-11.3 W REL HUMID CLOUD AMT 2 WAVE HEIGHT 2 COLOR

CAST 1 MESS TIME 16.2 GMT, 1211 LOCAL MAX DEPTH 5 WIRE ANGLE 0
 OXYGEN TITER .744 METER WHEEL FACTOR .997

DEPTH (M)	WIRE	CZ	TZ	BN	TL	TM	TAVE	SALIN	SIG T	ML/L	MG/L	%SAT	OXYGEN	
													PHOS	NITRA
0	0	0	1	3	27.05	0.00	27.05	33.149	21.33	4.69	6.69	95.40	.21	0.00
5	5	0	0	4	26.84	0.00	26.84	33.521	21.00	4.62	6.58	94.41	.34	0.00
STANDARD DEPTHS														
0	052	018												
							27.05	33.149	21.33	4.69	6.69	95.40	0.21	0.00

N O T I C E

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