

G-4



**A SUMMARY  
OF  
TEMPERATURE-SALINITY CHARACTERISTICS  
OF THE  
PERSIAN GULF**

**GENERAL SERIES**

**PUBLICATION G-4**

*The National Oceanographic Data Center is sponsored by government agencies having an interest in the marine environment; it is governed by an Advisory Board composed of representatives of these activities and the National Academy of Sciences. The U. S. Naval Oceanographic Office is assigned responsibility for management of the National Oceanographic Data Center.*

*The Sponsoring Agencies are:*

Atomic Energy Commission  
Bureau of Commercial Fisheries  
Coast and Geodetic Survey  
Coast Guard  
Coastal Engineering Research Center  
Department of the Navy  
Geological Survey  
Health, Education & Welfare  
National Science Foundation  
Weather Bureau

Office



**NATIONAL OCEANOGRAPHIC DATA CENTER**

**GENERAL SERIES**

**A SUMMARY OF TEMPERATURE-SALINITY CHARACTERISTICS  
OF THE  
PERSIAN GULF**

**PUBLICATION G-4**

**1964**

This is a chronological compilation of pertinent analysis, data and textual material taken from publications (papers) authored by:

GERHARD SCHOTT (1908) (1918)  
BRUNO SHULTZ (1914)  
H. BLEGVAD (1944)  
K. O. EMERY (1956)  
H. DUBACH & T. WEHE (1959)

Assemblage of this material, with an analysis of recent unpublished (post 1950) temperature and salinity data, was by:

HAROLD W. DUBACH

*Publications in the NODC General Series:*

1. Introduction to the National Oceanographic Data Center, NODC Pub. G-1, 1963
2. Oceanographic Vessels of the World, NODC Pub. G-2, Volume I, 1961, and Volume II, 1963
3. Data Report EQUALANT I, NODC Pub. G-3, 1964

## PREFACE

In the performance of its prime mission, which is to process and archive oceanographic data and provide these data on request to the scientific community, the Data Center has found it essential that the data be evaluated before being added to the archive. In the evaluation process, certain analyses of the data are made; these formulate the basis by which the Data Center oceanographers assess the data quality. Of course, referral to the analyses contained in contemporary and historical research papers of recognized scientists serve as a basic evaluation reference point. When such analytical information is assembled, it seems desirable that the Data Center make this material available in a consolidated package for use by others. This is the first such document; others will follow at irregular intervals as our processing of station data for the world oceans proceeds.

## ACKNOWLEDGMENTS

*The assistance of Mr. William Lyons and Mrs. Wilhelmenia Bowe in preparing the art work, Mr. Albert Bargeski in preparing the data appendixes, Miss Jacqueline Mothershead for her typing assistance, Mrs. Eugenia Pakulis for her aid in preparing translations, and Mr. William Myers for his helpful comments is sincerely appreciated.*

## TABLE OF CONTENTS

	<i>Page</i>
<i>Introduction</i> . . . . .	1
<i>Comment</i> . . . . .	1
<i>Section I—Location Charts</i> . . . . .	5
<i>Section II—Schott's and Schultz's Analyses</i> . . . . .	15
<i>Section III—Blegvad's Analysis</i> . . . . .	29
<i>Section IV—Emery's Analysis</i> . . . . .	33
<i>Section V—Dubach's and Wehe's Analysis</i> . . . . .	41
<i>Section VI—Recent Data Analysis</i> . . . . .	53
 <i>Data Appendix</i>	
<i>Appendix A— Historical Data (Pre—1950)</i> . . . . .	87
<i>Appendix B— Recent Observations (Post—1950)</i> . . . . .	103
<i>Bibliography</i> . . . . .	221

TABLE OF CONTENTS

1	Introduction
2	Chapter I
3	Chapter II
11	Chapter III
20	Chapter IV
27	Chapter V
34	Chapter VI
41	Chapter VII
48	Chapter VIII
55	Chapter IX
62	Chapter X
69	Chapter XI
76	Chapter XII
83	Chapter XIII
90	Chapter XIV
97	Chapter XV
104	Chapter XVI
111	Chapter XVII
118	Chapter XVIII
125	Chapter XIX
132	Chapter XX
139	Chapter XXI
146	Chapter XXII
153	Chapter XXIII
160	Chapter XXIV
167	Chapter XXV
174	Chapter XXVI
181	Chapter XXVII
188	Chapter XXVIII
195	Chapter XXIX
202	Chapter XXX

## FIGURES

		Page
Figure I-	1. Location of Surface Observations—Persian Gulf, 1907 . . . . .	7
	2. Location of Surface Observations—Persian Gulf, 1910-11 . . . . .	8
	3. Station Locations—Persian Gulf, Mar.-Apr. 1937 and Feb.-Apr. 1938 . . . . .	9
	4. Station Locations—Persian Gulf, Aug. 1948 . . . . .	10
	5. Station Locations—Kuwait Harbor, Feb. 1949 . . . . .	11
	6. Station Locations—Northern Part Persian Gulf, Dec. 1949-Apr. 1950, Nov. 1951, Feb. 1952, and Apr. 1952 . . . . .	12
	7. Station Locations—Northern Part Persian Gulf, Feb.-Mar. 1960 . . . . .	13
	8. Inventory of Bathythermograph Data—Persian Gulf, monthly for each 1° square . . . . .	14
Figure II-	1. Persian Gulf—Temperature (°C)—surface, Feb. . . . .	17
	2. Persian Gulf—Temperature (°C)—surface, May . . . . .	18
	3. Persian Gulf—Temperature (°C)—surface, Aug. . . . .	19
	4. Persian Gulf—Temperature (°C)—surface, Nov. . . . .	20
	5. Persian Gulf—Salinity (‰)—surface, Jan., Feb., Mar. . . . .	21
	6. Persian Gulf—Salinity (‰)—surface, Jul., Aug., Sept. . . . .	22
	7. Persian Gulf—Fluctuation of Mean Monthly Air and Water Temperatures at 29°N, 49°-50°E, 26°N, and 56°-57°E . . . . .	23
Figure III-	1. Persian Gulf—Temperature (°F)—surface, Feb., Mar., and Apr. (after K. O. Emery) . . . . .	31
Figure IV-	1. Persian Gulf—Temperature (°F)—surface, Aug. . . . .	35
	2. Persian Gulf—Salinity (‰)—surface, Aug. . . . .	36
	3. Persian Gulf—Temperature (°F) and Salinity (‰) Sections, Aug. . . . .	37
Figure V-	1. Kuwait Harbor—Temperature (°F)—surface, Feb. . . . .	43
	2. Kuwait Harbor—Temperature (°F)—bottom, Feb. . . . .	44
	3. Kuwait Harbor—Salinity (‰)—surface, Feb. . . . .	45
	4. Kuwait Harbor—Salinity (‰)—bottom, Feb. . . . .	46
	5. Kuwait Harbor—Diurnal Warming Study, 3 Jan. 1949 . . . . .	47
	6. Kuwait Harbor—Diurnal Warming Study, 27 Feb. 1949 . . . . .	48
	7. Fahihil—Diurnal Warming Study, 21 Mar. 1949 . . . . .	49
Figure VI-	1. Northern Part, Persian Gulf—Temperature (°C)— surface, Feb. 1952, Mar. 1950 . . . . .	55
	2. Northern Part, Persian Gulf—Temperature (°C)— 10 meters, Feb. 1952, Mar. 1950 . . . . .	56
	3. Northern Part, Persian Gulf—Temperature (°C)— 20 meters, Feb. 1952, Mar. 1950 . . . . .	57
	4. Northern Part, Persian Gulf—Temperature (°C)— 30 meters, Feb. 1952 . . . . .	58
	5. Northern Part, Persian Gulf—Salinity (‰)—surface, Feb. 1952, Mar. 1950 . . . . .	59

## FIGURES (con't)

	Page
Figure VI- 6. Northern Part, Persian Gulf—Salinity (‰)— 10 meters, Feb. 1952, Mar. 1950 .....	60
VI- 7. Northern Part, Persian Gulf—Salinity (‰)— 20 meters, Feb. 1952, Mar. 1950 .....	61
VI- 8. Northern Part, Persian Gulf—Salinity (‰)— 30 meters, Feb. 1952 .....	62
VI- 9. Northern Part, Persian Gulf—Temperature (°C)— surface, Feb.-Mar. 1960 .....	63
VI-10. Northern Part, Persian Gulf—Temperature (°C)— 10 meters, Feb.-Mar. 1960 .....	64
VI-11. Northern Part, Persian Gulf—Temperature (°C)— 20 meters, Feb.-Mar. 1960 .....	65
VI-12. Northern Part, Persian Gulf—Temperature (°C)— 30 meters, Feb.-Mar. 1960 .....	66
VI-13. Northern Part, Persian Gulf—Salinity (‰)— surface, Feb.-Mar. 1960 .....	67
VI-14. Northern Part, Persian Gulf—Salinity (‰)— 10 meters, Feb.-Mar. 1960 .....	68
VI-15. Northern Part, Persian Gulf—Salinity (‰)— 20 meters, Feb.-Mar. 1960 .....	69
VI-16. Northern Part, Persian Gulf—Salinity (‰)— 30 meters, Feb.-Mar. 1960 .....	70
VI-17. Northern Part, Persian Gulf—Temperature (°C)— surface, Apr. 1952 .....	71
VI-18. Northern Part, Persian Gulf—Temperature (°C)— 10 meters, Apr. 1952 .....	72
VI-19. Northern Part, Persian Gulf—Temperature (°C)— 20 meters, Apr. 1952 .....	73
VI-20. Northern Part, Persian Gulf—Temperature (°C)— 30 meters, Apr. 1952 .....	74
VI-21. Northern Part, Persian Gulf—Salinity (‰)— surface, Apr. 1952 .....	75
VI-22. Northern Part, Persian Gulf—Salinity (‰)— 10 meters, Apr. 1952 .....	76
VI-23. Northern Part, Persian Gulf—Salinity (‰)— 20 meters, Apr. 1952 .....	77
VI-24. Northern Part, Persian Gulf—Salinity (‰)— 30 meters, Apr. 1952 .....	78
VI-25. Northern Part, Persian Gulf—Temperature (°C)— surface, Nov. 1951 .....	79
VI-26. Northern Part, Persian Gulf—Temperature (°C)— 10 meters, Nov. 1951 .....	80

## FIGURES (con't)

	Page
Figure VI-27. Northern Part, Persian Gulf—Temperature ( $^{\circ}\text{C}$ )— 20 meters, Nov. 1951 .....	81
VI-28. Northern Part, Persian Gulf—Temperature ( $^{\circ}\text{C}$ )— 30 meters, Nov. 1951 .....	82
VI-29. Northern Part, Persian Gulf—Salinity ( $^{\circ}/\text{o.o}$ )— surface, Nov. 1951 .....	83
VI-30. Northern Part, Persian Gulf—Salinity ( $^{\circ}/\text{o.o}$ )— 10 meters, Nov. 1951 .....	84
VI-31. Northern Part, Persian Gulf—Salinity ( $^{\circ}/\text{o.o}$ )— 20 meters, Nov. 1951 .....	85
VI-32. Northern Part, Persian Gulf—Salinity ( $^{\circ}/\text{o.o}$ )— 30 meters, Nov. 1951 .....	86



## INTRODUCTION.

Between the covers of this publication are assembled the data and analyses of all the known temperature and salinity observations made in the Persian Gulf. Charts previously published have been reproduced along with each author's comments on the temperature-salinity regime and its relationship to other environmental factors as determined by the particular set(s) of observations available for study at the time.

An analysis of recent temperature-salinity observations (taken since 1950) has been prepared and is included; charts for each observation series are presented for the surface, 10-meter, 20-meter, and 30-meter levels. The position or location of observations are shown in Section I; the appendixes contain the observational data upon which the analyses are based. The distribution of bathythermograph data by 1° squares has been charted and included in Section I (Figure I-8). Results of a 1961 survey (NODC Cruise 31865) were received and the processing completed just before going to press. These are included in order that this document might be as complete as possible; analyses for these data are not presented.

## COMMENT.

Schott, in his classical treatment of the Gulf, presents four seasonal temperature distributions and two (winter and summer) for salinity conditions. From the information and data contained in References 5 and 6 and Tables 1 and 2, it appears that the summer salinity chart is based primarily on data collected in the month of September and may not be totally indicative of the summer extreme. Salinity data for the winter (February) season appears to be adequate and representative. Temperature data appears to be plentiful for August as well as other months. Schott's data summary shows that the absolute temperature maximum for all latitudes in the Gulf occur in August; all areas except one show the maximum occurring in the ten-day period between the 11th and 21st.

Apparently, K. O. Emery was guided by Schott's temperature analysis in planning his 1948 survey; his survey was undertaken at the very height of the summer season, all the work being conducted between the 15th and 30th of August (NODC Cruise 31804). Emery's work alone provides the only collection of oceanographic stations for the summer months; he also has provided probably the greatest volume of BT observations covering mid-summer

conditions for the Persian Gulf. Of course, surface samples (shown on chart) aided Emery in his analyses of surface conditions (Figures IV-1 and IV-2).

Blegvad's work was confined to the winter and early-spring months and was concentrated in the eastern half of the Gulf. Since his work was done as a supplement to a fishery investigation of the Persian Gulf funded by the Iranian Government, it may not have been appropriate for him to sample the temperature-salinity conditions of the entire Gulf area. Apparently, no analysis was ever attempted by Blegvad; only a table of observations is shown in his work (Reference 1, Table 4). K. O. Emery prepared the analysis shown in Figure III-1; it is based on a composite of Schott's and Blegvad's data.

The study by Dubach and Wehe (Reference 2) covers a very limited area (Kuwait Harbor) and a short time interval; however, it probably supplies a good indication of mid-winter inshore conditions.

The more recent surveys conducted in the decade 1950-59 obviously were not intended to provide information to improve the past understanding of the temperature-salinity characteristics and their interrelationship with other environmental features for the entire Gulf area. The 1951-52 (NODC Cruises 31805 and 31496) data provides material for appraising the variation in temperature-salinity features in the northern part of the Gulf along two lines of observations extending from Iran to the Arabian Peninsula. The arrangement of observations for March 1950 (NODC Cruise 31382) leaves something to be desired; the two station lines oriented SE-NE show the influence of the outflow of Shatt al Arab. It would be interesting, indeed, to examine other environmental data including stream flow rates, rainfall, wind, etc. for the same period and to relate these to the conditions observed in the Gulf. The reason for the arrangement of the remaining stations is not known; it appears most haphazard.

The design of the February-March 1960 survey (NODC Cruise 31658) is systematic and provides a good pattern of data. Both the surface temperature and surface salinity patterns indicate a very weak outflow (almost unnoticeable effect) of Shatt al Arab; this makes for an interesting comparison with the March observations of a decade earlier. Again, it is highly probable that meteorological conditions for the Gulf and its surrounding area were influential in establishing the recorded temperature-salinity conditions. (In all post 1950 analyses, dashed and dotted lines are used for intermediate intervals and/or extrapolative analysis.)

In the early analysis by Schott and Emery, the isolines for both surface temperature and salinity generally parallel the long

axis of the Gulf, a condition which is most pronounced in the summer months. The more recent data, available only for the northern portion of the Gulf, produces a more east-west orientation of isolines; this is particularly apparent in the February-March 1960 surface-temperature and salinity analysis (Figures VI-9 through VI-16). It is not truly clear whether this geographic stratification within the Persian Gulf is indicative of a seasonal change, a long-term (decade) change, or a bias occurring in sampling the area.

This review of the existing information for the Persian Gulf, I believe, emphasizes the need to develop adequate data sampling patterns. This and several other gulfs and lakes of the world offer excellent model areas in which to conduct full-scale studies in a "natural environmental laboratory."

Certainly, a better understanding of some of the air-sea relationships can be obtained by instrumenting such bodies of water for special studies; perhaps, initially, some more definitive values for energy transfer between air and sea can be derived by using "model-scale bodies of water" located at different latitudes. Other microstructure studies might be conducted simultaneously as well. Following are some comparative areal figures for gulfs and lakes that might serve as models:

<u>WATER BODY</u>	<u>AREA*</u> (approximate)
Persian Gulf . . . . .	92,200 sq. miles
Great Lakes (total) . . . . .	94,700 sq. miles
Gulf of St. Lawrence . . . . .	91,800 sq. miles
Gulf of California . . . . .	62,600 sq. miles
Baltic Sea . . . . .	163,000 sq. miles
Hudson Bay . . . . .	475,800 sq. miles
Lake Superior . . . . .	31,800 sq. miles

\*Source: The World Almanac and Book of Facts,  
New York World-Telegram and The Sun,  
1964.

The present day availability of improved oceanographic instrumentation and numbers of buoys, towers, and other platforms makes a rigorous study of energy exchange for "model areas" entirely feasible. Considering that many nations (and activities within each) have an active interest in oceanographic (marine) studies, perhaps a joint cooperative-comparative investigation could be undertaken, with each conducting work in the closest adjacent area; thus costs would be kept reasonable.



**SECTION I**  
**LOCATION CHARTS**



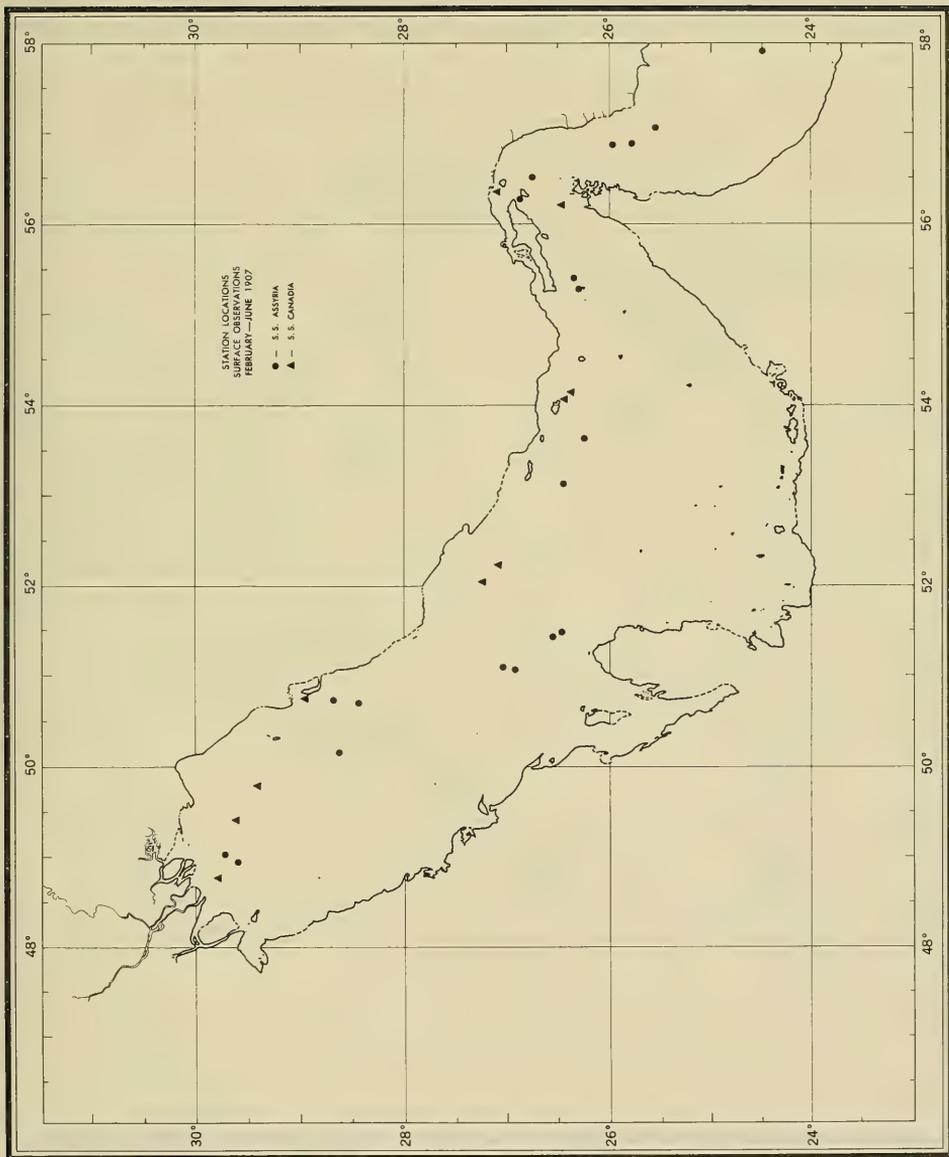


Figure 1-1. Location of Surface Observations—Persian Gulf, 1967

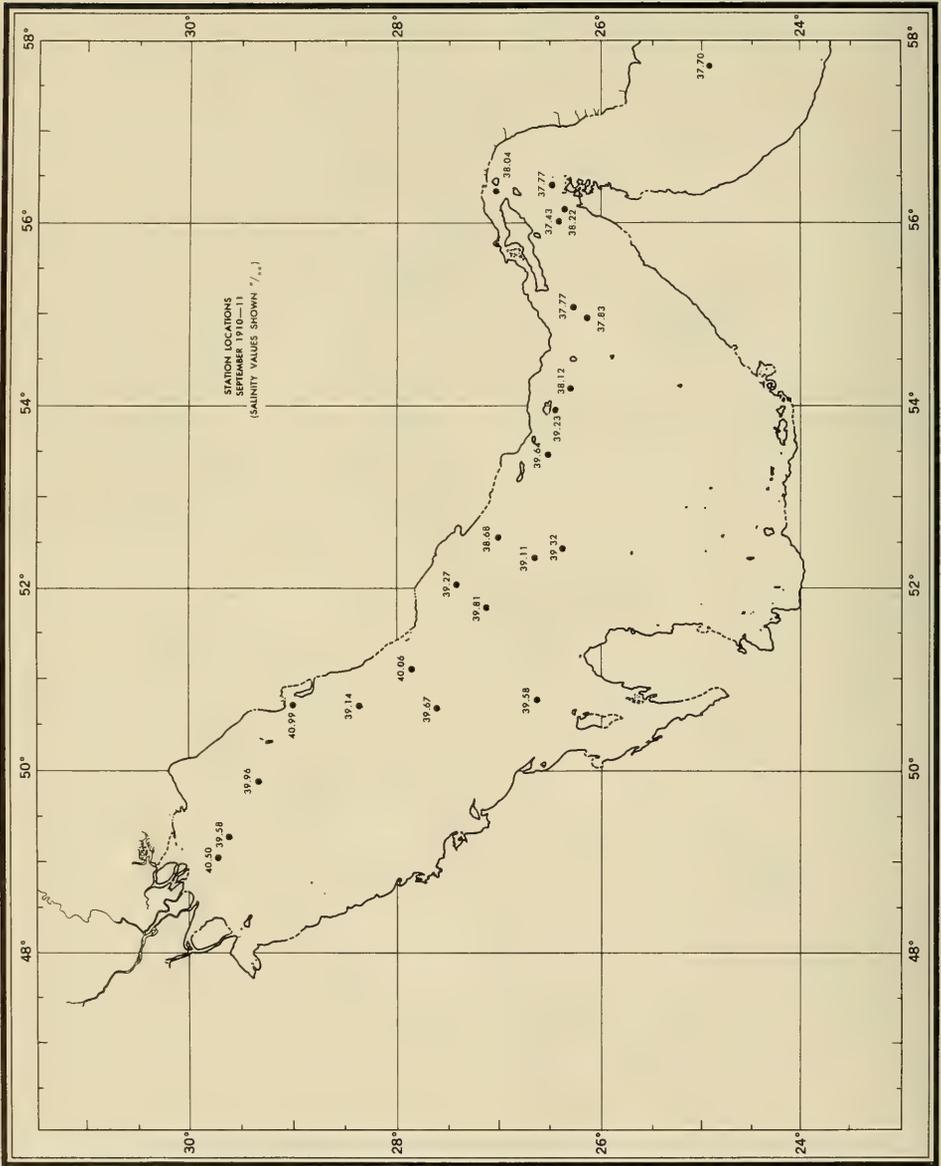


Figure 1-2. Location of Surface Observations—Persian Gulf, 1910-11

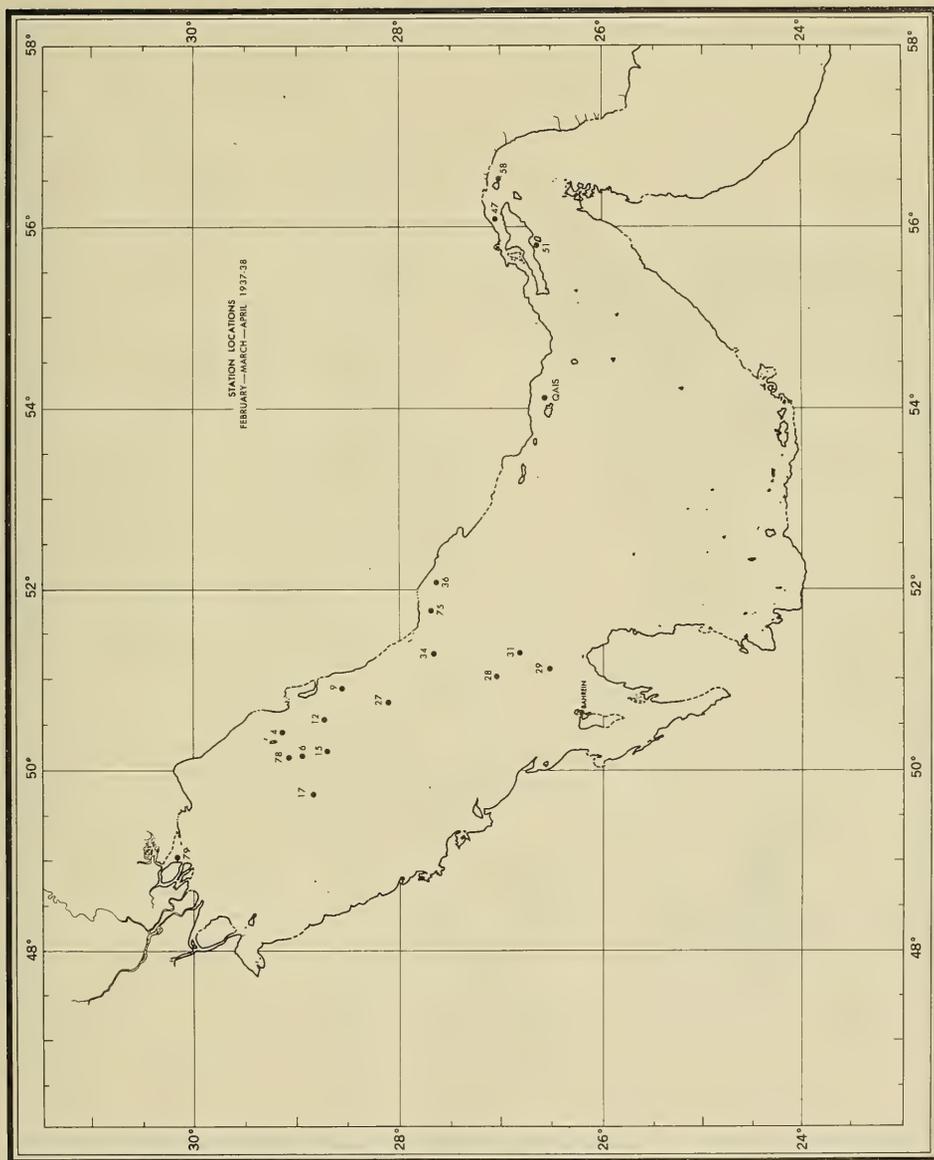


Figure 1-3. Station Locations—Persian Gulf, Mar.-Apr. 1937 and Feb.-Apr. 1938

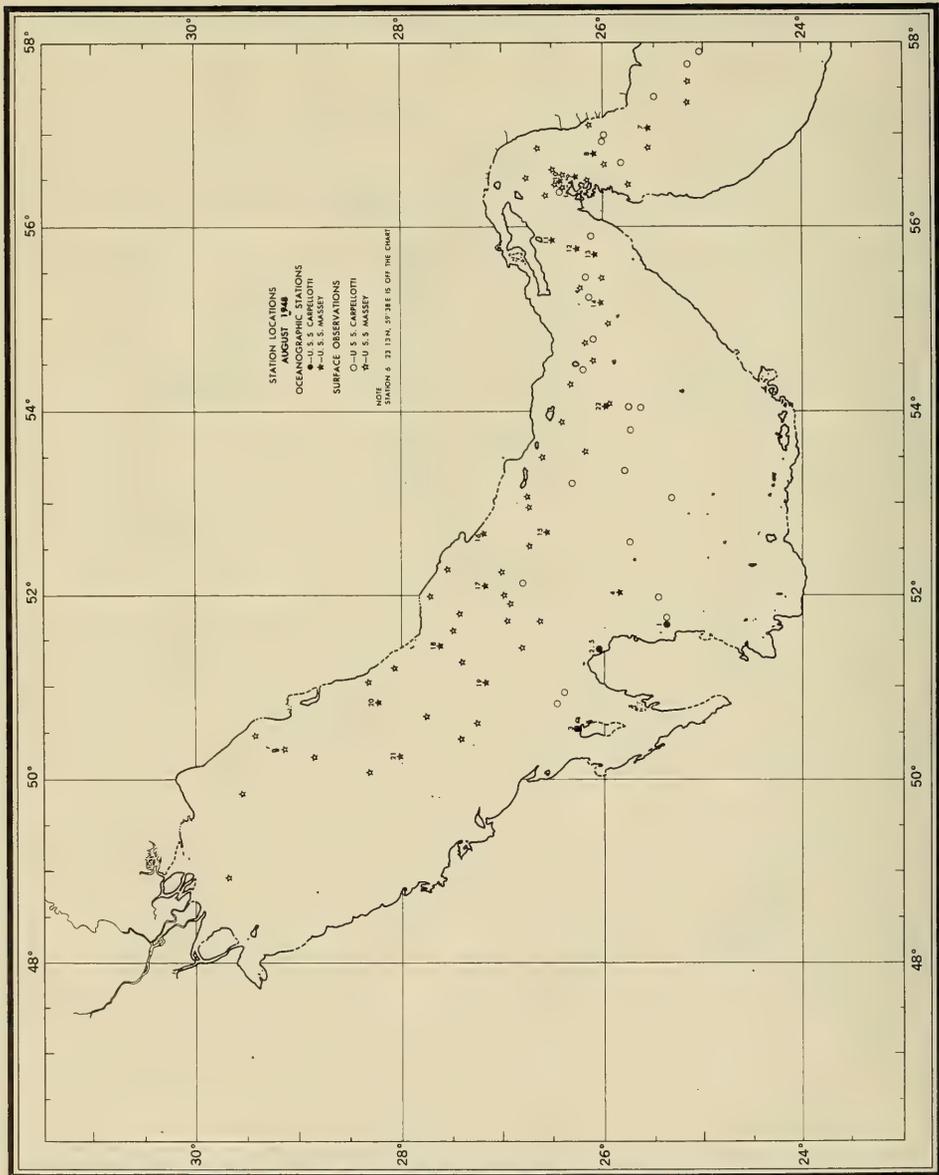


Figure 1-4. Station Locations—Persian Gulf, Aug. 1948

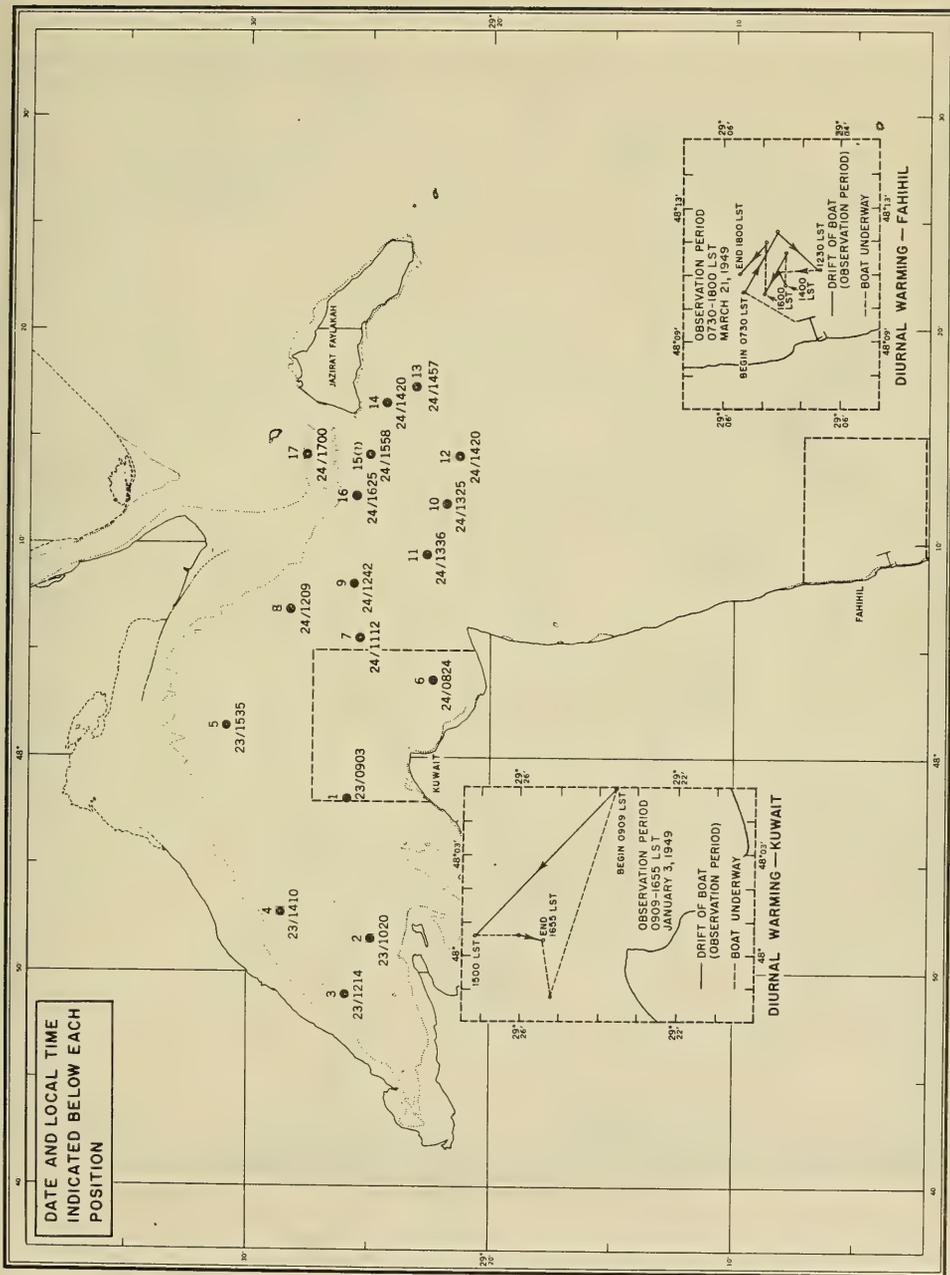


Figure 1-5. Station Locations—Kuwait Harbor, Feb. 1949

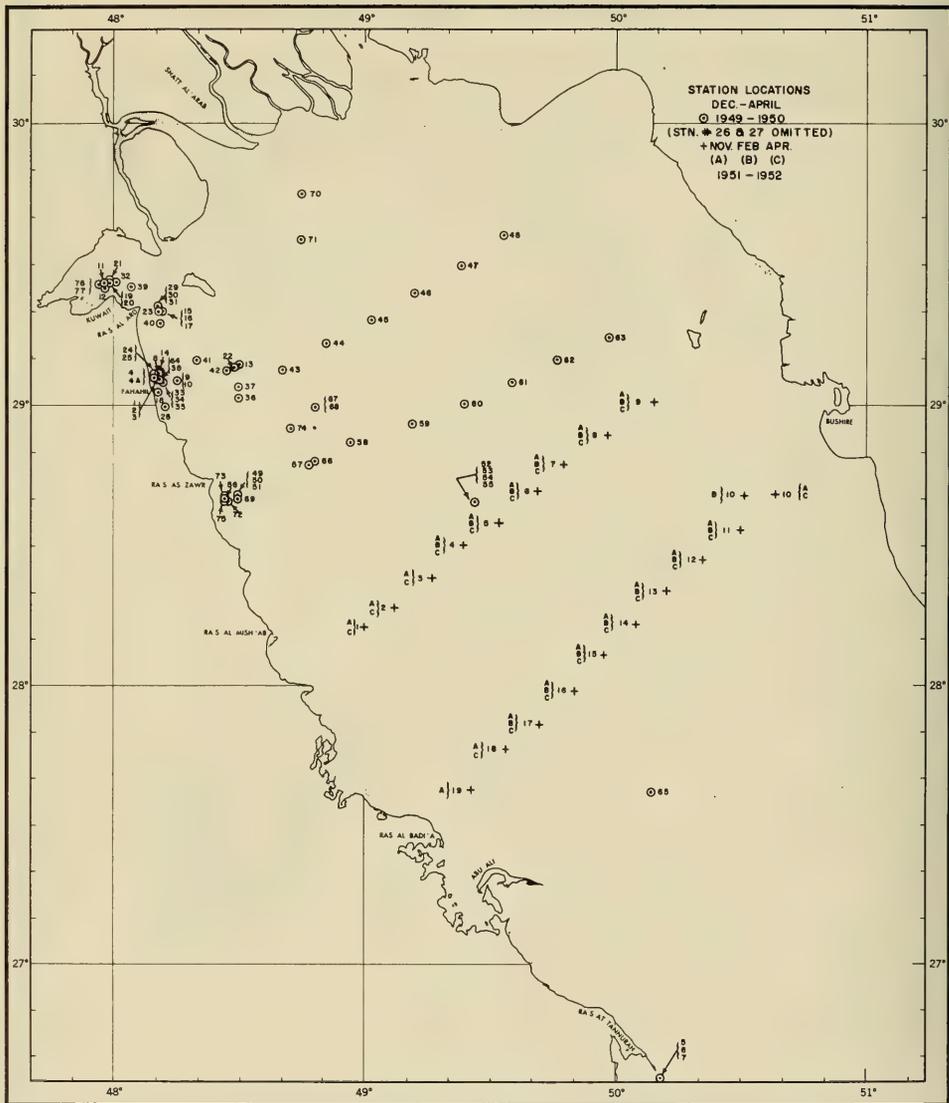


Figure 1- 6. Station Locations—Northern Part Persian Gulf, Dec. 1949-Apr. 1950, Nov. 1951, Feb. 1952, and Apr. 1952

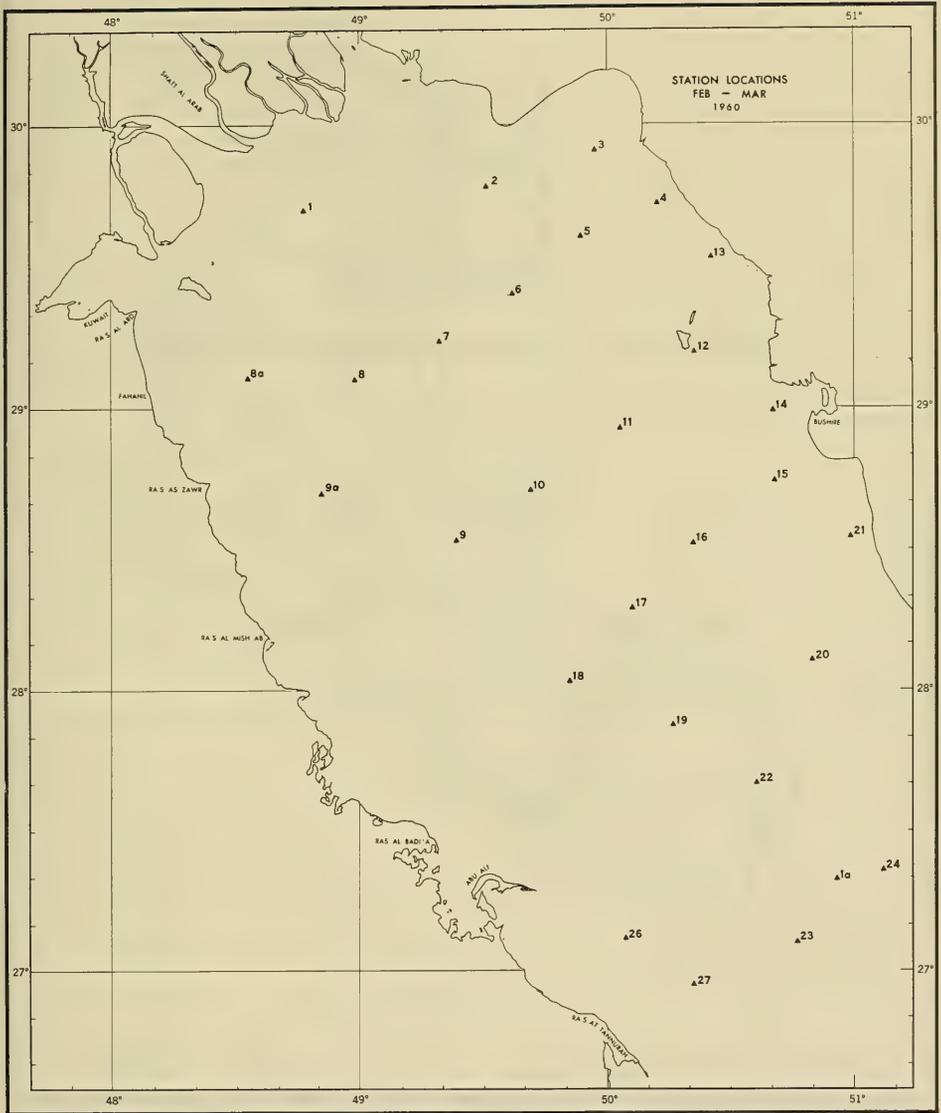


Figure I- 7. Station Locations—Northern Part Persian Gulf, Feb.-Mar. 1960



**SECTION II**  
**SCHOTT'S AND SCHULTZ'S ANALYSES**



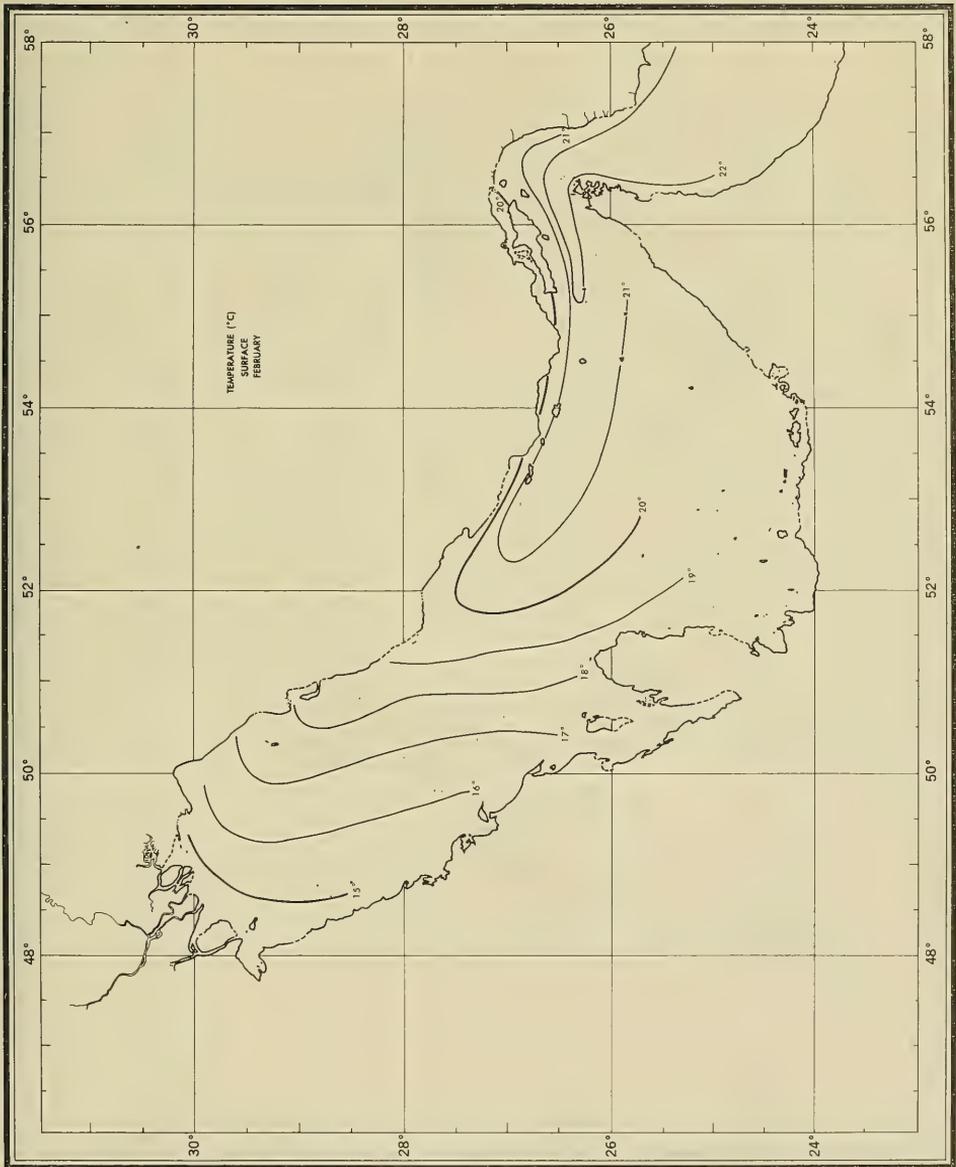


Figure II. 1. Persian Gulf—Temperature (°C)—surface, Feb.

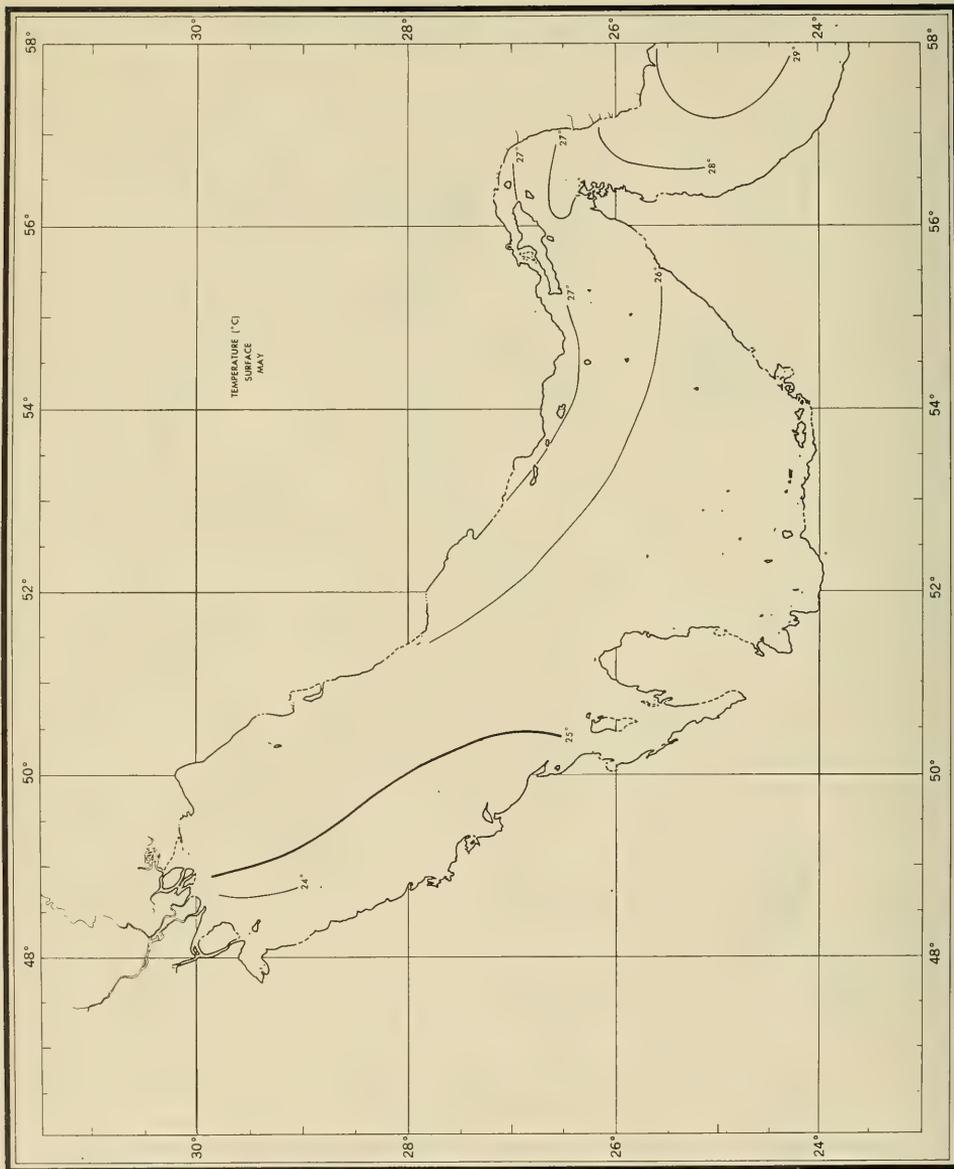


Figure II- 2. Persian Gulf—Temperature (°C)—surface, May

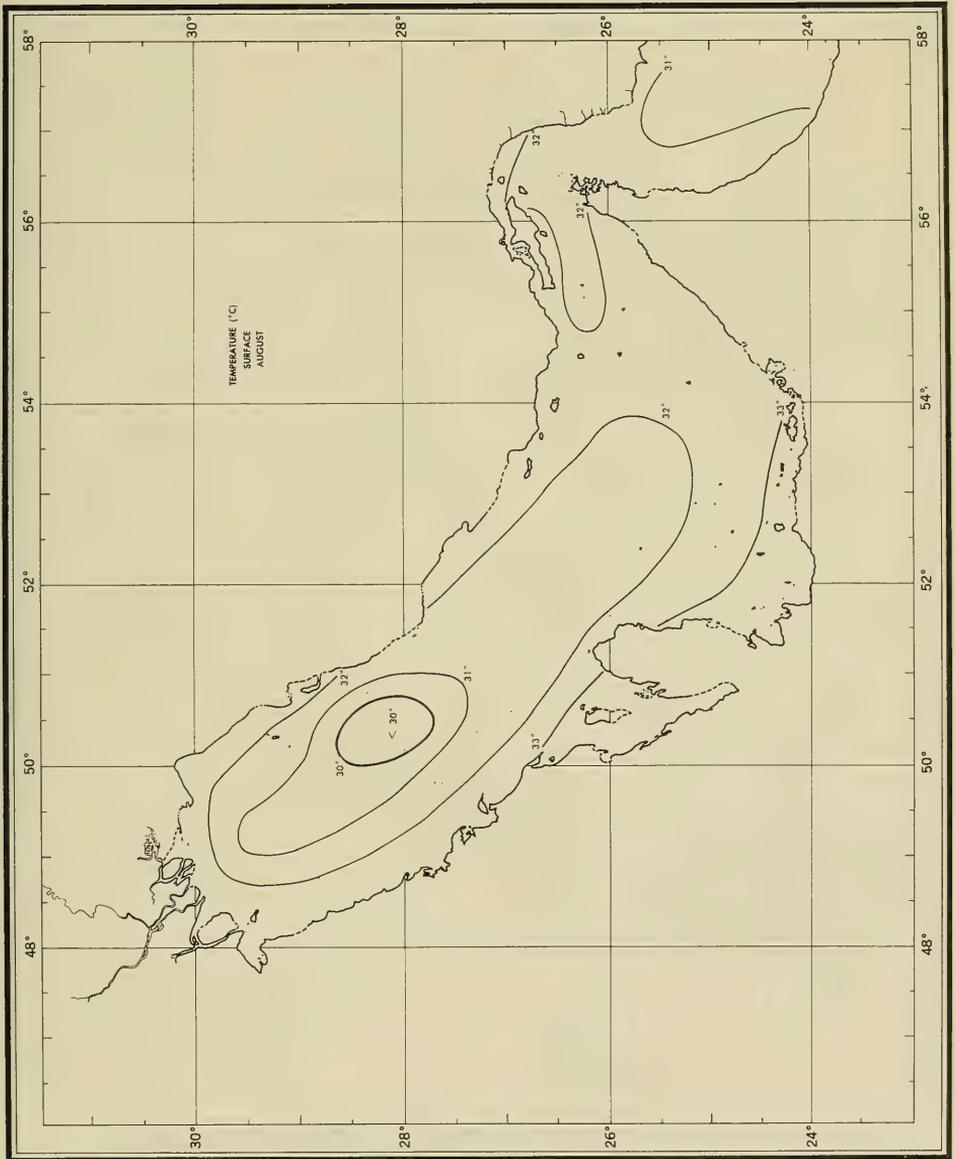


Figure II- 3. Persian Gulf—Temperature (°C)—surface, Aug.

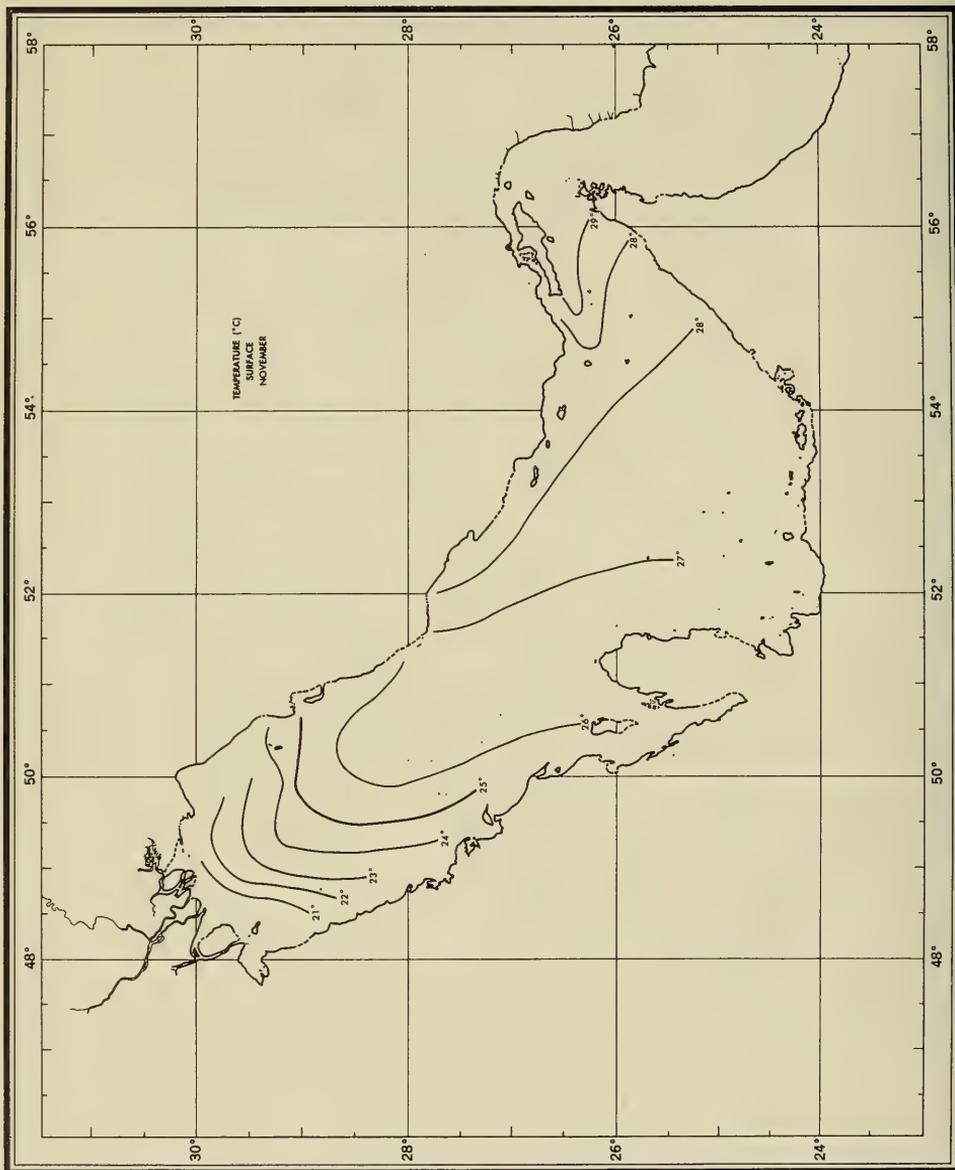


Figure II- 4. Persian Gulf—Temperature (°C)—surface, Nov.

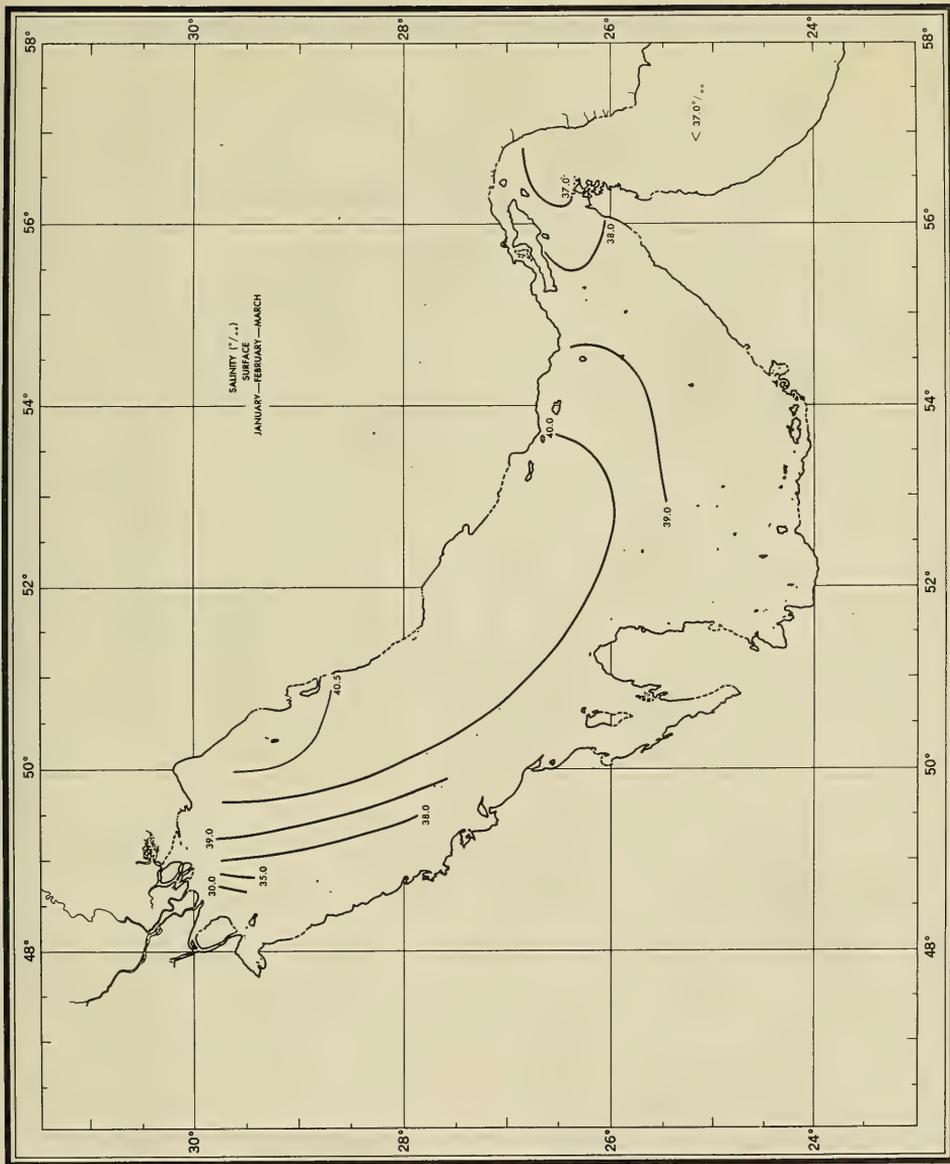


Figure II-5. Persian Gulf—Salinity ( $\text{‰}$ )—surface, Jan., Feb., Mar.

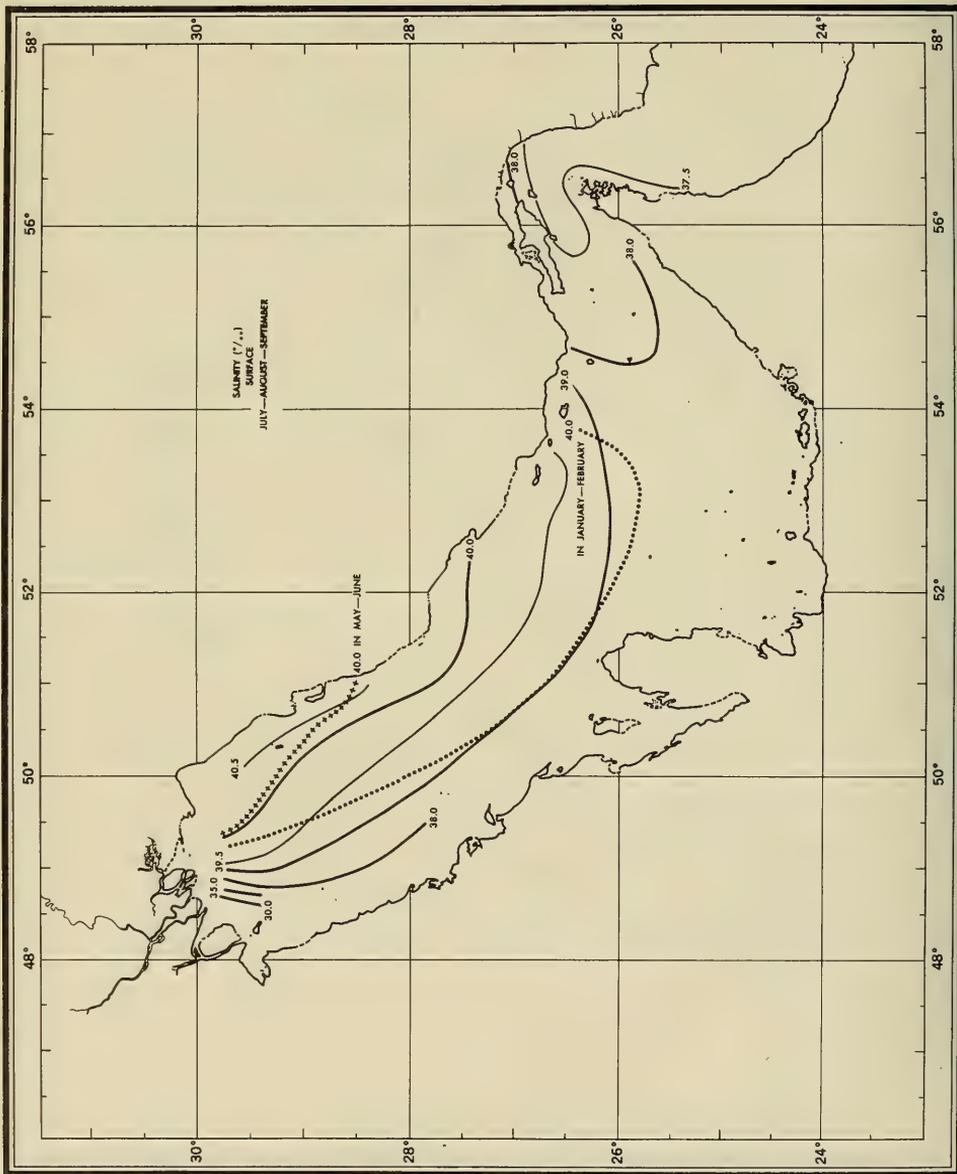


Figure II- 6. Persian Gulf—Salinity (‰)—surface, Jul., Aug., Sept.

# PERSIAN GULF

## FLUCTUATION OF MEAN MONTHLY TEMPERATURES

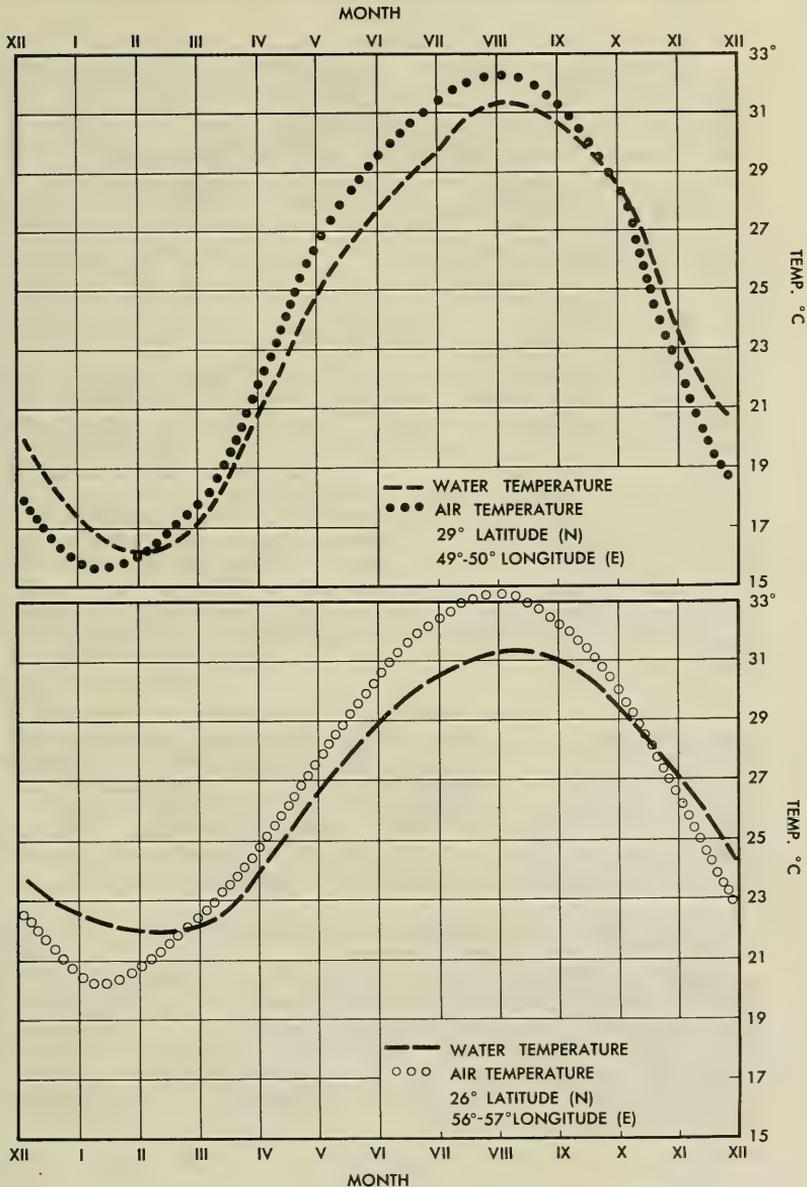


Figure II- 7. Persian Gulf—Fluctuation of Mean Monthly Air and Water Temperatures at 29°N, 49°-50°E, and 26°N, 56°-57°E

The following excerpts (translated from German) are taken from Reference 6, Section III. Ozeanographie, pages 7-9.

"1. Water Temperature. Up to now, only observations of surface water temperature can be evaluated. If we start with winter (February) . . . we can immediately notice in numerous places the contrast between the Persian side and the Arabian side of the Gulf. This contrast is the basis of the essential characteristics of almost all natural conditions in the Gulf. Along the Persian coast, the water in winter at the same latitude is definitely warmer than along the Arabian coast. The same is also evident, to a varying extent, for temperatures during the spring and fall months. Only in mid-summer are all coastal zones heated more, up to 32°C. and even 33°C., than the central northern part where observations show 30°C. and less. The distribution of the February isotherms shows clearly that warm ocean water of over 20°C. penetrates the Strait of Hormuz and flows to the right (north) toward the Persian coast, while on the other side, cool water of less than 15°C. from Shatt al Arab bypasses the Bay of Kuwait and flows south along the Arabian coast. Thus it happens that at this time off Bahrein the temperature is approximately 17°C., whereas in the vicinity of Lingeh, at the same geographic latitude, it is 21°C. to 21.5°C. Due to these conditions, the spreading of corals and pearls, which is restricted according to different sources mainly by the northern border of Cape Abu Ali, most likely depends upon the following: The cooler and simultaneously less saline water of the northern part of the Arabian side of the Gulf, which is also apparently mixed with detrital materials of the Shatt, is unfavorable to these organisms.

"Compared with the Persian Gulf, the water of the Gulf of Oman, as a part of the open ocean, seems to be relatively warm during all months except for summer and part of fall. In August when the Southwest Monsoon of the Arabian Sea provides strong direct cooling and simultaneously also an indirect supply of cold water from the lower part of the south Arabian coast up to Ras al Hadd, the Gulf of Oman is considerably cooler than the closed-up, shallow, and intensively heated water of the Persian Gulf.

"The mean water temperature fluctuations, which were determined from the February-August differences . . . bring out the aforementioned difference between the two gulfs. A yearly fluctuation of 15°C. to 17°C. and more in the northwest corner off Kuwait and Bushire stands in contrast to a fluctuation of 8°C. at Masqat and only 2°C. to 3°C. at Ras al Hadd to the southeast. The modifying effect of the ocean water can still be recognized westward of the Strait of Hormuz by other factors, especially the configuration of the 10°C. amplitude isoline.

"Although in Table 2, showing the data for 1° longitudinal sections running from north to south, the differences between the Arabian side and Persian side are eliminated, one can observe the following facts about the yearly course: Accordingly, in both gulfs the lowest temperatures occur in February, while in the Persian Gulf and in the Strait of Hormuz, the highest occur in August. This warming is thus in agreement with the general warming applicable to greater water surfaces. A different situation presents itself in the Gulf of Oman where in the northwestern part (the section between 57° to 58°E.) the maximum of 31.0°C. is reached in July, while in other sections located farther to the east maximums of 29.8°C. and 28.7°C. are attained in June; the most easterly section has, in addition, a secondary maximum of 28.1°C. in October, while the secondary minimum (27.6°C.) occurs in September. This is analogous to the typical Indian Ocean conditions: May and June are the warmest months in the western Indian Ocean, constituting a transitional period between the two monsoons. Then, with the rainy stormy Southwest Monsoon comes a cooling over the northern Arabian sea. The effect of this cooling period ends only in October when this wind diminishes. Air temperatures follow similar patterns.

"Noteworthy are the combined absolute extremes of water temperature shown at the bottom of Table 2. The maximums definitely exceed 31°C., are up to 33°C. in the Gulf of Oman, up to 34°C. in the Strait of Hormuz, and even up to 36.0°C. in the Persian Gulf. This unusually high water temperature has been observed halfway between Lingeh and Bahrein about 25 sea miles off the Persian coast in mid-August at 4 p.m.! The absolute minimum observed up to now in mid-January not far from the mouth of the Schatt was 12.3°C.

"2. Salinity (Table 1). In two earlier reports prepared by Schott (Reference 5) and Schulz (Reference 7), it was shown on the basis of recent salinity observations that in the Persian Gulf the surface water along the northern half of the Persian coast reaches and exceeds 40‰ salinity and that there is a noticeable fluctuation of salinity during the year, so that a minimum occurs in early summer and a maximum in late fall and winter. Inasmuch as the collection of surface water samples is now more abundant, one can see the actual conditions more clearly. Throughout the entire year, there is an area in the Persian Gulf where the salinity exceeds 40‰ reaching its greatest expansion in winter between the islands west of Lingeh and almost touching the Qatar Peninsula, and up to the northeast corner of the Gulf north of Bushire where salinities up to 40.5‰ have been observed. This area shrinks during spring and early summer to such an extent that in May and June the 40.0‰ isohaline encloses only a narrow strip off Bushire in the direction of the Shatt, approximately where the 40.5‰ isohaline lies in February. The late-summer and fall months seem to be in agreement

with the yearly average. The 40.0% isohaline then extends approximately from Cape Naband northward to the delta of the Shatt.

"Such a high salinity concentration in the Persian Gulf depends, like in the Red Sea, upon the very high air temperatures and great evaporation of water and upon the extremely small supply of fresh water runoff. Considering this last point, one might naturally assume that the highest salinity could be expected along the Arabian coast in the deep bays of the Pirate Coast where no rivers reach the sea, while along the Persian coast there are a few small rivers that flow into the Gulf and besides, the Persian side . . . receives quite an amount of rain, at least more than the Arabian side does. However, these two factors are not decisive. Decisive is the flow received from the sole large stream system, the Euphrates and Tigris, whose quantities of fresh water due to the influence of the earth's rotation (Coriolos Force. Ed.), flow exclusively southward along the Arabian coast (are deflected to the right. Ed.), as might already have been guessed from the isotherms of the surface waters . . . The runoff from the Shatt al Arab affects the constantly present strong pressure of the isohalines toward the east from the mouth, where the salinity is about 40%, while 35% and even 30% appear halfway between Fao and Kuwait Bay. The isohalines here, like the isotherms, run from north to south instead of from west to east.

"With these facts in mind the yearly fluctuations, especially the freshening of the Gulf water in spring and early summer (May-June), can be explained. In contrast to the Nile, which has its high flood in October and its low-water stand in April-May, the Euphrates and Tigris taken together show their greatest runoff in April at Hit and Baghdad resulting from the melting of snow in the Armenian mountains. Both combined carry approximately 5,700 cubic meters of water per second. In August flow has decreased, and in October the combined flow of both streams returns to a minimum of 700 cubic meters. If we consider that the stream flow takes several weeks after passing Baghdad until it reaches the Gulf, the minimum salinity of the months May-June seems to fit pretty well into the picture. Without the Euphrates and Tigris runoff, we could analogously expect the salinity in the Persian Gulf area not affected by the Indian Ocean, that is, approximately west from Lingeh, to be the same as in the northern Red Sea (39.5%). However in August-September, that is, during the period between extremes, the 39.5% isohaline runs exactly in the middle or along the longitudinal axis of the Gulf from NW to SE, and the area in which there is a noticeable general decrease of salinity, due to the dispersion of the Shatt water, can be estimated to occupy a little less than half of the Persian Gulf, that is, about 100,000 square kilometers.

"It should be kept in mind that in this area, which borders and is influenced by the Arabian Sea, salinities can be considered

high, at values of 38‰, when compared with oceanic conditions. Even the Gulf of Oman only occasionally in its northwestern part gets over 37‰, and at Ras al Hadd the average observed value should be at most 36.5‰ and possibly even less, since along the southern coast of Arabia there is a heterogeneous cold and low-saline water which usually comes from the depth up to the surface (Reference 7) . . . . "

---

The following excerpts (translated from German) are taken from Reference 7, pages 400-401.

"For the Persian Gulf, reliable surface salinity data were obtained for the first time in 1907 when, during the months of February and May-June, officers of the Hamburg-American Line collected water samples for titrimetric determination of salinity (Reference 5). These observations become useful (for analysis) when complemented by the observations taken in the years 1910 and 1911 because out of the total of 25 water samples, only three were taken in May and three in October; the remaining samples were all taken in September (presumably 1910-11. Ed.). The September observations are regularly scattered throughout the area, so that one can obtain an insight to the salinity distribution during this month.

"Just as in February and May-June, the salinity in September increases from east to west, and by following the 39.5‰ isohaline which runs approximately from Ras Rekkān (the most northern point of the Qatar Peninsula) up to Kangan, Persia (now Iran. Ed.), the Persian Gulf may be divided into a less saline eastern and a more saline western half. Toward the east, the salinity decreases in the Strait of Hormuz down to between 38.22‰ and 37.43‰. West of the 39.5‰ isohaline, however, the salinity increases off Bushire to 40.90‰. Two additional observations of over 40‰ indicate that the Persian coast, from approximately 52° E. up to Shatt al Arab, is bordered by a lens of water of over 40‰ salinity. This appears to be true also in February and May-June, and salinities may be over 40‰ throughout the year in the northeastern part of the Gulf.

"The observed differences in salinities for September and for February and May-June are considerable. The generally valid assumption that salinity in September is higher than in June, but lower than in February is evident; thus, September can be considered as a transitional period between the months of salinity extremes. This can be seen from the following observations taken at approximately the same locations in February and June 1907 and in September 1911 . . . . "

Latitude N	Longitude E	June 1907	September 1911	February 1907	Remarks
26° 32'	51° 26'	38.74	—	—	} Approx. 16 sea miles N. from Ras Rekkam
26° 29'	50° 52'	—	39.58	—	
26° 28'	51° 28'	—	—	40.01	
26° 18'	55° 18'	37.10	—	—	} Approx. 25 sea miles S.E. from Lingeh
26° 18'	55° 13'	—	37.77	—	
26° 20'	55° 22'	—	—	38.12	

" . . . During February, the month of maximum salinity, the isohaline (39.0%) runs approximately north-south along 54° E. In May-June, it runs farthest to the west in a northeasterly direction between 50° and 51° E. In September, it occupies the already described position, approximately between 51° and 52° E. This indicates that the salinity in September has again increased from the summer minimum which is due, according to Schott's theory, to the high runoff of the Tigris and Euphrates (Reference 5) . . . ."

**SECTION III**  
**BLEGVAD'S ANALYSIS**



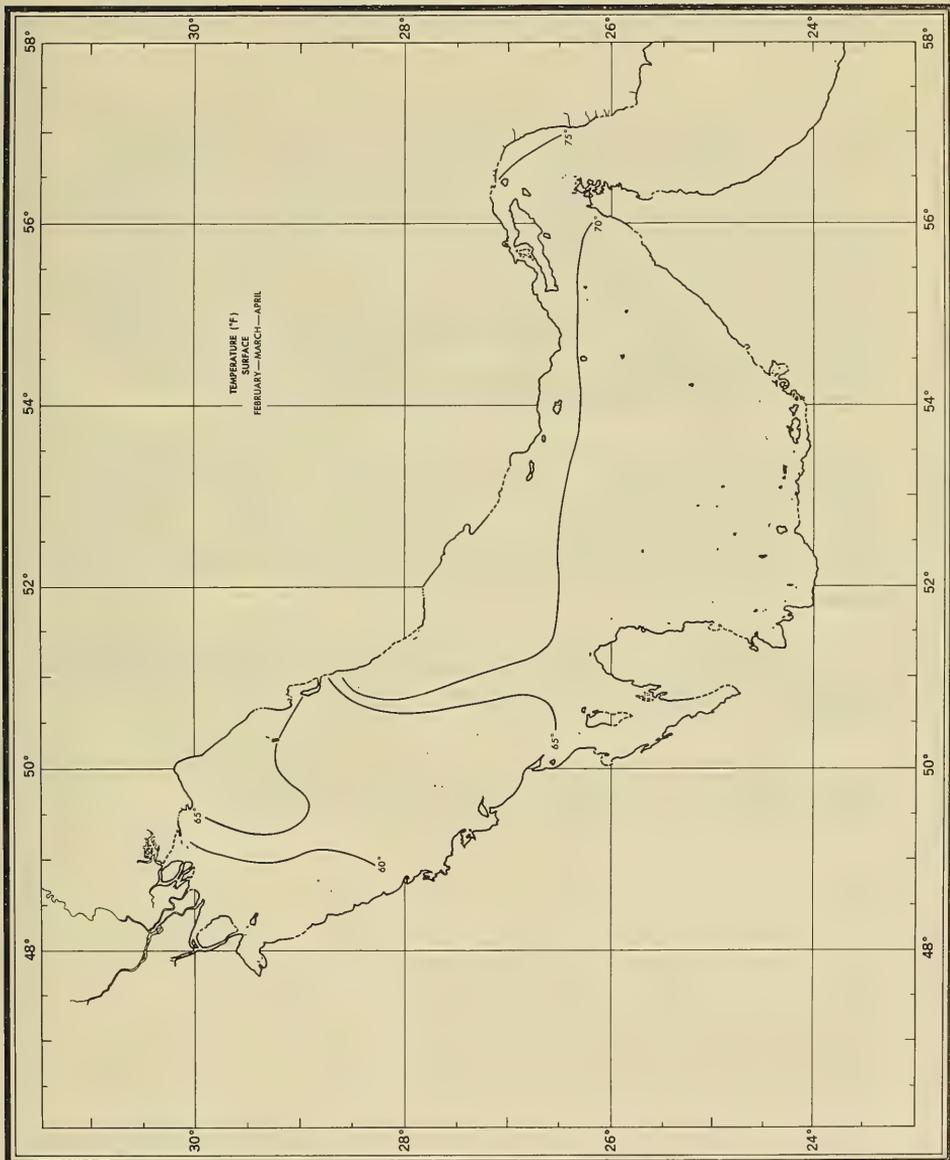


Figure III. 1. Persian Gulf—Temperature (°F)—surface, Feb., Mar., and Apr. (after K. O. Emery)

The following excerpts are taken from Reference 1, Section on The Physical Conditions of the Iranian Gulf, pages 11-12.

"Of the physical conditions of the Iranian Gulf the following statements may be given here. In spite of the large quantities of fresh water that are carried into the Gulf through Shatt al Arab by the rivers Euphrat, Tigris and Karun the salinity is very high, averaging about 40-41‰. This is undoubtedly due to the very rapid evaporation from the surface of the sea, particularly in summer, for during the hot season the temperature of both air and water is very high. At the Bahrein Islands, for instance, the sea water has been found to have a temperature of 36.5°C. (A. Mohr). In winter, however, the temperature is much lower, the average mostly being 15-18°C. in the open sea. The . . . temperatures and salinities measured during the cruise (appear in Appendix A. Ed.) . . . salinities being determined by means of the areometer . . .

"In other words the highest salinity, 42.6‰, was measured at the Bahrein Islands, the lowest one, 37.2-37.3‰ (Stations 47, 51 and 58), in the Strait of Hormuz. Generally speaking the salinity of the Gulf seems to decrease in an easterly direction: between the Strait of Hormuz and Bushire it was about 38‰, at Bushire about 40‰, and at the island of Kharg about 41‰. Even in the estuary at Bender Shahpur (St. 79) it was found to be 41.2‰.

"The lowest temperature of the sea water, 14.9°C., was observed in the locality last mentioned during a windy and rainy period in the month of February. In March the temperature of the surface rises to 18-22°, in April to 23-24°C."

Figure III-1 shows surface temperatures for February, March and April compiled from Blegvad and Schott by K. O. Emery.

**SECTION IV**  
**EMERY'S ANALYSIS**



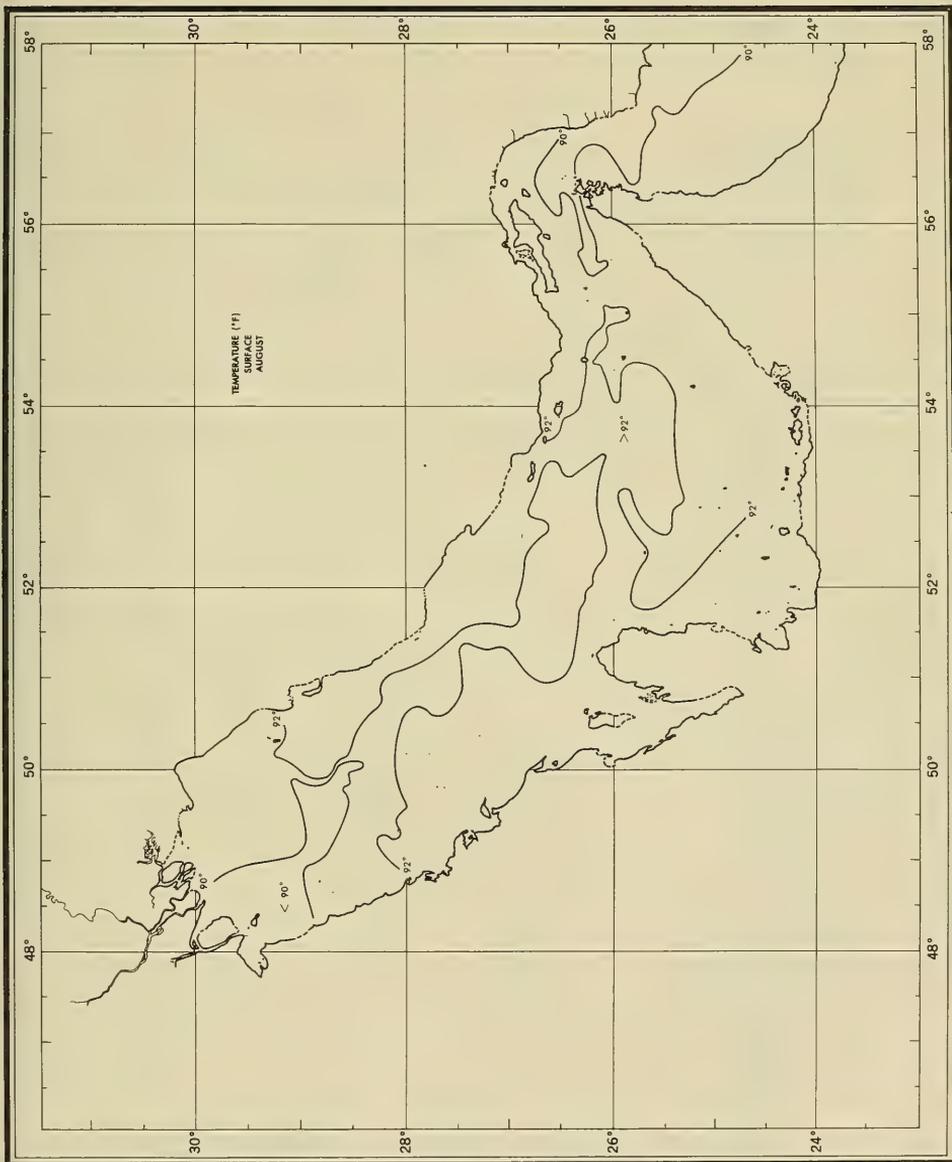


Figure IV- 1. Persian Gulf—Temperature (°F)—surface, Aug.

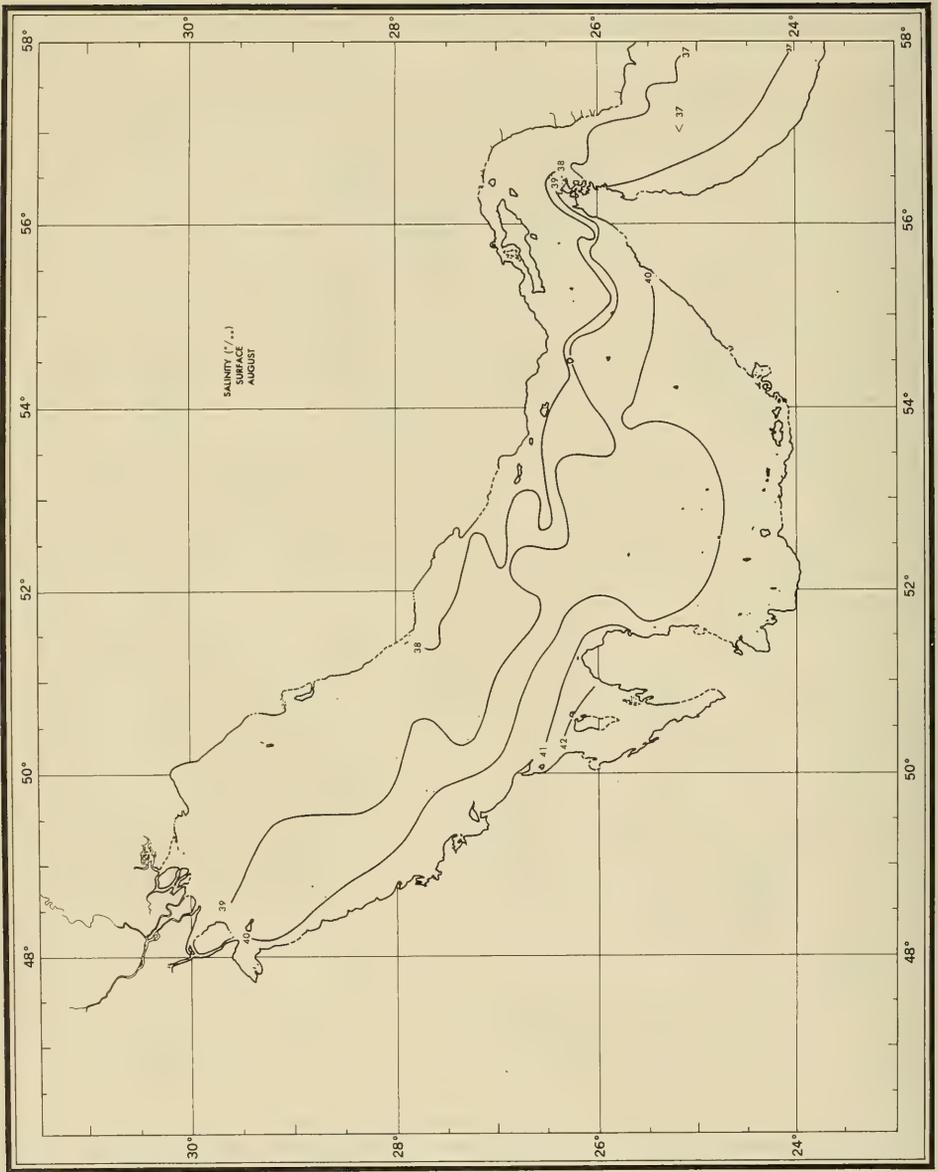


Figure IV- 2. Persian Gulf—Salinity ( $^{\circ}$  /  $_{\circ}$ )—surface, Aug.

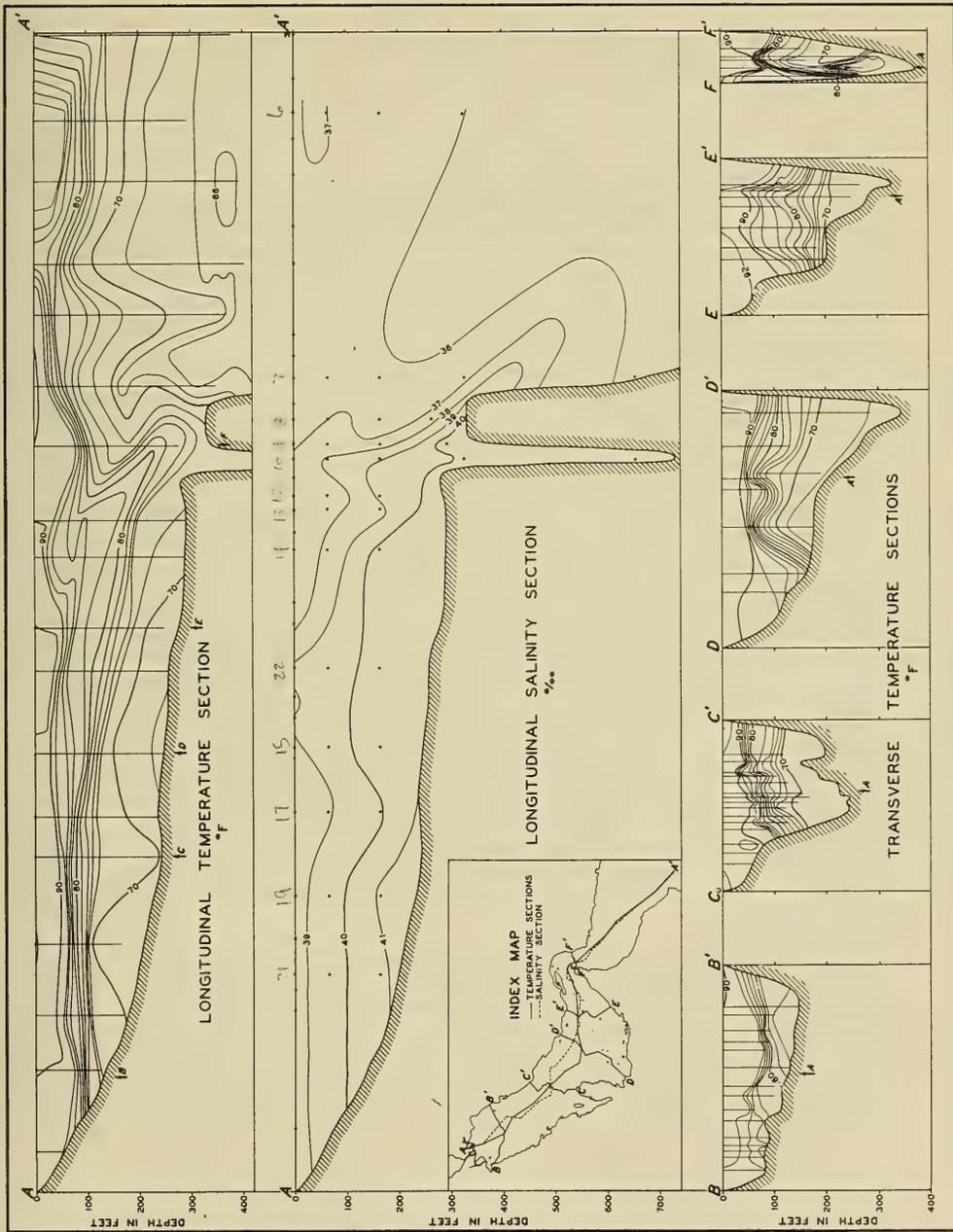


Figure IV-3 Persian Gulf-Temperature (°F) and Salinity (‰) Sections, Aug.

The following excerpts are taken from Reference 3, Sections on Temperature and Salinity, pages 2358-2363.

#### "TEMPERATURE

"Studies of water temperature in this region are of special interest because summer air temperatures are as great as  $123^{\circ}\text{F}$ . . . . During the 2 weeks spent in the Gulf of Oman and the Persian Gulf, 625 bathythermograph lowerings were made, but the records for 185 were lost in shipping. Most of the lowerings were accompanied by a thermometer measurement of the surface water collected in a bucket or in a cup attached to the thermometer. Strong surface heating in the afternoon produced a marked temperature gradient near the water surface. Below the zone of surface heating the water was usually isothermal to depths of 20 to 75 feet. In order to avoid the effects of diurnal temperature variations the surface temperature was taken from the bathythermograms at an indicated depth of 10 feet.

"The resulting 'surface' temperature values were plotted and isotherms drawn as shown by Figure IV-1. During this August study there was noted a general increase in temperature from about  $75^{\circ}\text{F}$ . in the Arabian Sea to more than  $92^{\circ}$  along both sides of the Persian Gulf. In the Strait of Hormuz the surface temperatures were mostly between  $89^{\circ}$  and  $90^{\circ}$ , with the lower values extending as a tongue through the middle of the strait into the Persian Gulf. A similar tongue of  $89^{\circ}$ - $90^{\circ}$  water extended from the delta southeastward into the other end of the Gulf. This tongue was reflected and continued in the  $90^{\circ}$ - $92^{\circ}$  temperature belt which extended from the head of the Gulf to a point two-thirds of the distance to the Strait of Hormuz. Along both sides of the Gulf the nearshore water temperature reached nearly  $94^{\circ}$ . In fact, several thermometer measurements of surface-water temperatures in the early afternoon yielded values of  $95.2^{\circ}$ , indicating gradients of about  $2^{\circ}$  in 5-10 feet. The whole picture of the distribution of surface temperatures in August, 1948, is different from that presented by Schott (1918b) for the summer months, but it is based on considerably more data than were available to Schott.

"Some idea of the distribution of surface temperatures in winter is given in Figure III-1, a compilation of measurements by Schott (1908) and Blegvad (1944). Although details can not be determined from so few data, it is obvious that the temperatures of winter are far different from those of summer, with values of only  $60^{\circ}$  at the head of the Gulf, increasing to about the same  $75^{\circ}$  in the Arabian Sea that we found in August. Thus, the water at the head of the Gulf undergoes an annual change of at least  $30^{\circ}$ .

"Temperatures at a depth of 164 feet (50 meters) were based only on bathythermograms. These data are less numerous than for surface temperatures because much of the area of the Gulf is shallower than 164 feet and also because many of the lowerings made in the rest of the area were too shallow. Temperatures at 164 feet were less than 70° in the Arabian Sea, increasing to more than 80° in the Strait of Hormuz. Values again decreased from the strait to as low as 67.2° within the Persian Gulf. The latter temperatures are lower than those of water found at any depth in the strait, so they probably mark the position of patches of bottom water remaining after the previous winter.

#### "SALINITY

"During the two-week stay in the Persian Gulf and the Gulf of Oman, samples of the surface water were collected at 122 stations for salinity determinations. At eighteen of these stations vertical series of water samples were also obtained, usually from depths of 66, 164, and 328 feet (20, 50, and 100 meters). All of the water samples were titrated for chloride content, from which total salinity was computed.

"Results of the salinity measurements are shown in Figure IV-2. Some of the irregularity of the isohalines results from the use of water samples collected a few days apart by different ships. Surface salinity increased from about 36.5% . . . in the middle of the Gulf of Oman to values higher than 42.0% in the Persian Gulf. The main surface salinity gradient was transverse to the Persian Gulf, with salinities of less than 38.0% common on the northeastern side, increasing to more than 41.0% on the southwestern side. The greatest salinities of all, 42.4%, occurred in Kuwait and Bahrein bays, where water circulation is impeded. It is interesting to note that the salinity off the delta at the head of the Gulf was about 38.0%, greater than the salinity along most of the northeastern side of the Gulf. Thus, it appears that the discharge of fresh river water was small during this period.

"The vertical series of salinity determinations show that within the Persian Gulf, salinity consistently increased with depth. The value at 164 feet was about 40.0% along the northeastern side and about 41.0% along the axis of the Gulf. In the Gulf of Oman salinity remained more nearly constant with depth, and in one series even decreased with depth. The lowest salinity obtained in the region was 35.5% at a depth of 672 feet (200 meters) in the Gulf of Oman.

"Only three earlier sets of salinity measurements from the Persian Gulf could be found. Two sets were taken by German steamships. One of these, covering the period February, May, and June,

1907, was discussed by Schott (1908), while the other set, obtained in September of both 1910 and 1911, was described by Schulz (1914). The third set was taken by Blegvad (1944) in March and April, 1937, and February, March, and April, 1938. Although the data are less complete than our records for August, they yield interesting comparisons. The sketchy information for the Gulf of Oman and most of the Strait of Hormuz shows that the salinity is fairly constant from February through September. In the Persian Gulf during all four seasons the salinity increases from northeast to southwest across the Gulf, although on the basis of scantier information Schott (1918b) indicated an increase in the opposite direction for late winter and early fall. No very great seasonal variation appears to exist in the southeastern half of the Gulf, but the condition is different in the northwestern half. A comparison of the four sets of isohalines shows that over much of the latter area the salinity for the February-March-April period was between 40‰ and 41‰, whereas for the May-June period it was between 39‰ and 40‰, and for August it was mostly between 38‰ and 39‰, but for September it rose again to 39‰ to 40‰. Thus, it appears that the salinity during winter is greater than in summer. Schott (1908) considered this condition to result from variation in flow of fresh water through the Shatt al Arab. He stated that the flow is least from September to November and that in December local rainfall causes an increase, and the discharge continues rather high through January, February, and March. In April the melting snow of the Armenian mountains causes another increase that finally reaches a high point in May and June. In July the river discharge falls again. The high salinity in the northwestern half of the Gulf may also be controlled by variation in the rate of evaporation. When the temperature of the air is greater than that of the water, as during the summer, evaporation from the sea is at a minimum. During the winter the air is colder than the sea, so evaporation is greater than . . . . Thus, the annual variation of evaporation exerts a seasonal control on surface salinity that is nearly parallel with the control by variation of runoff."

Sections of temperature and salinity for the Persian Gulf for August prepared by K. O. Emery are shown in Figure IV-3.

**SECTION V**  
**DUBACH'S AND WEHE'S ANALYSIS**



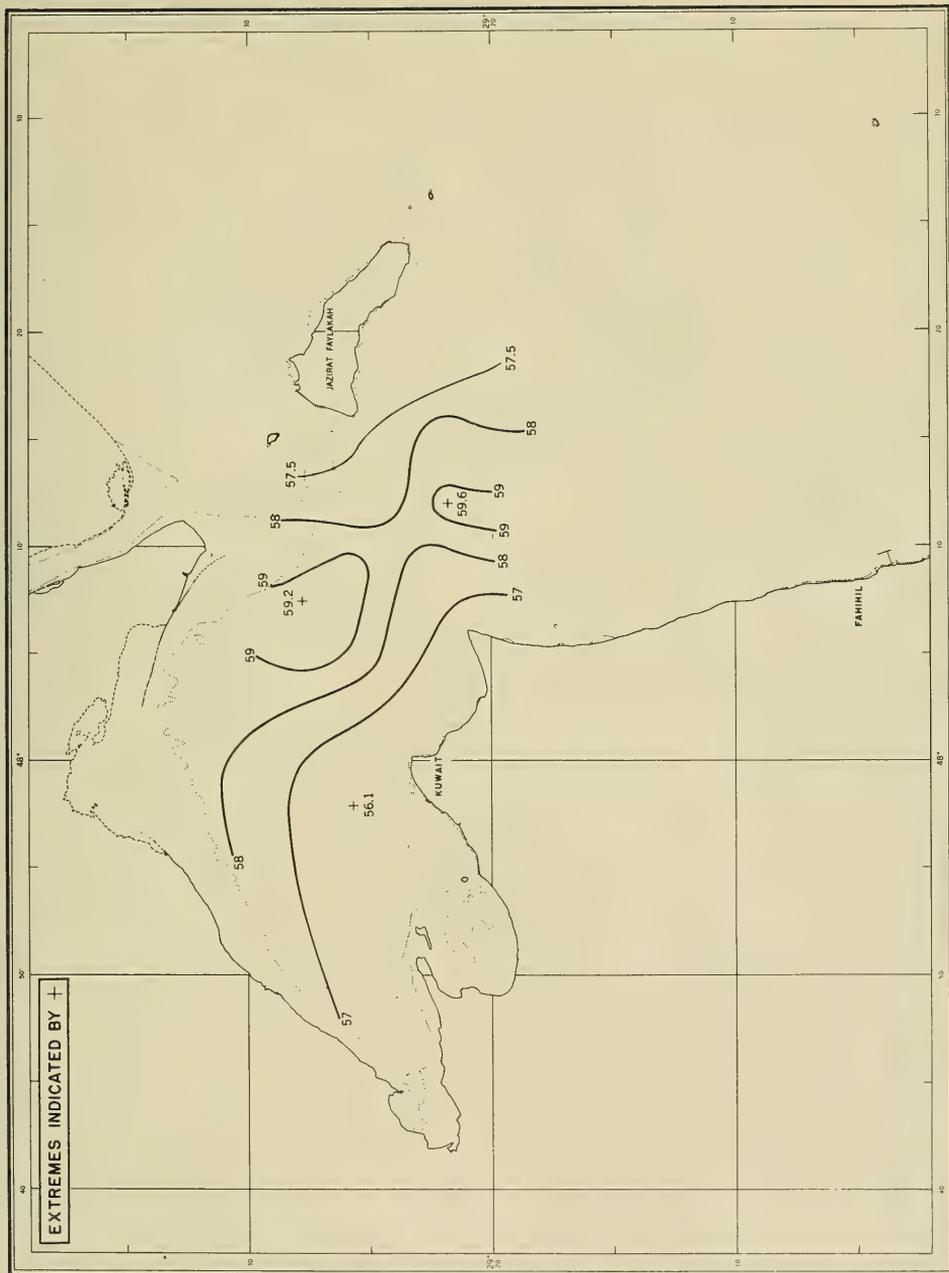


Figure V. 1. Kuwait Harbor—Temperature ( $^{\circ}$ F)—surface, Feb.

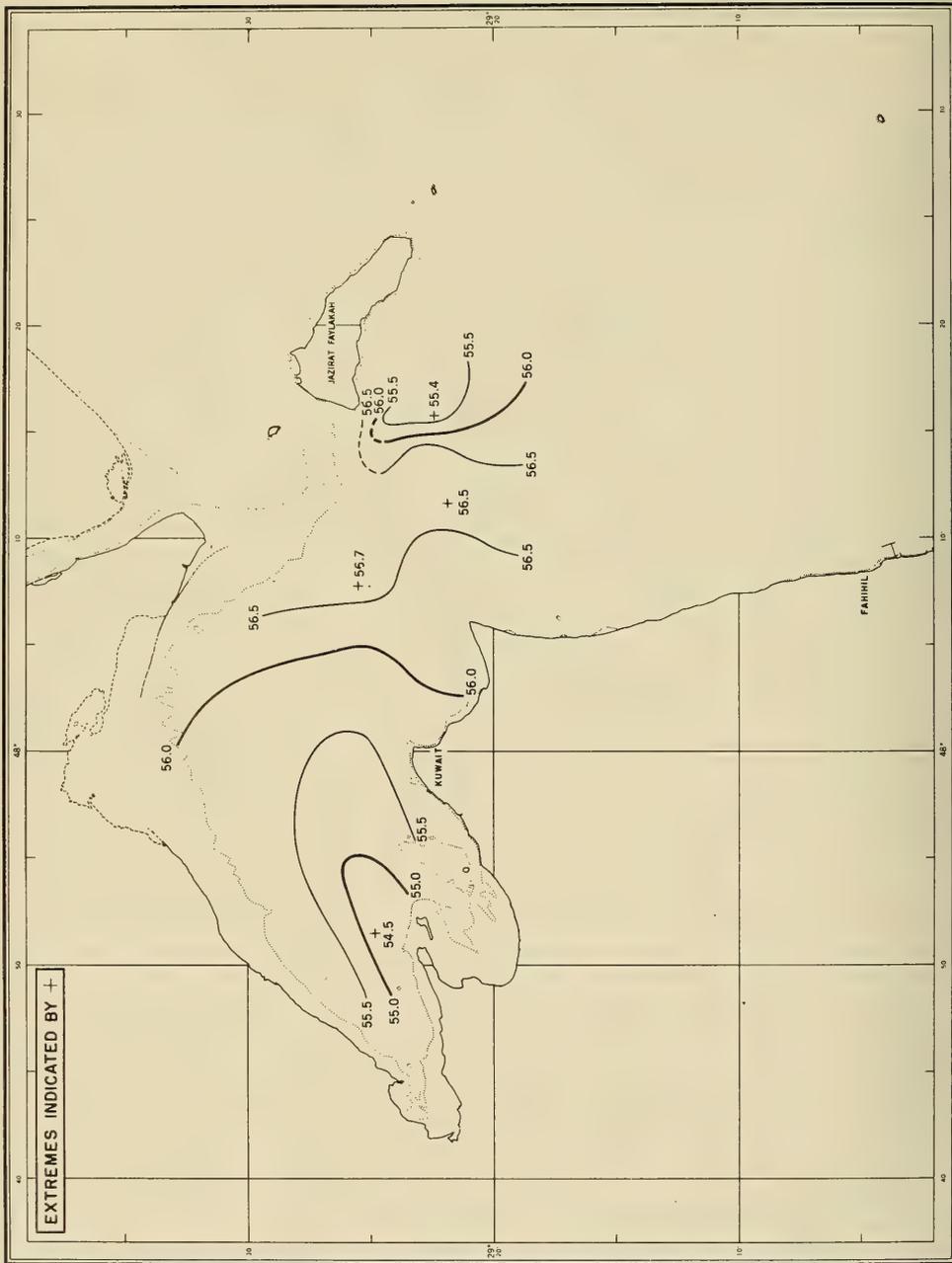


Figure V. 2. Kuwait Harbor—Temperature (°F)—bottom, Feb.

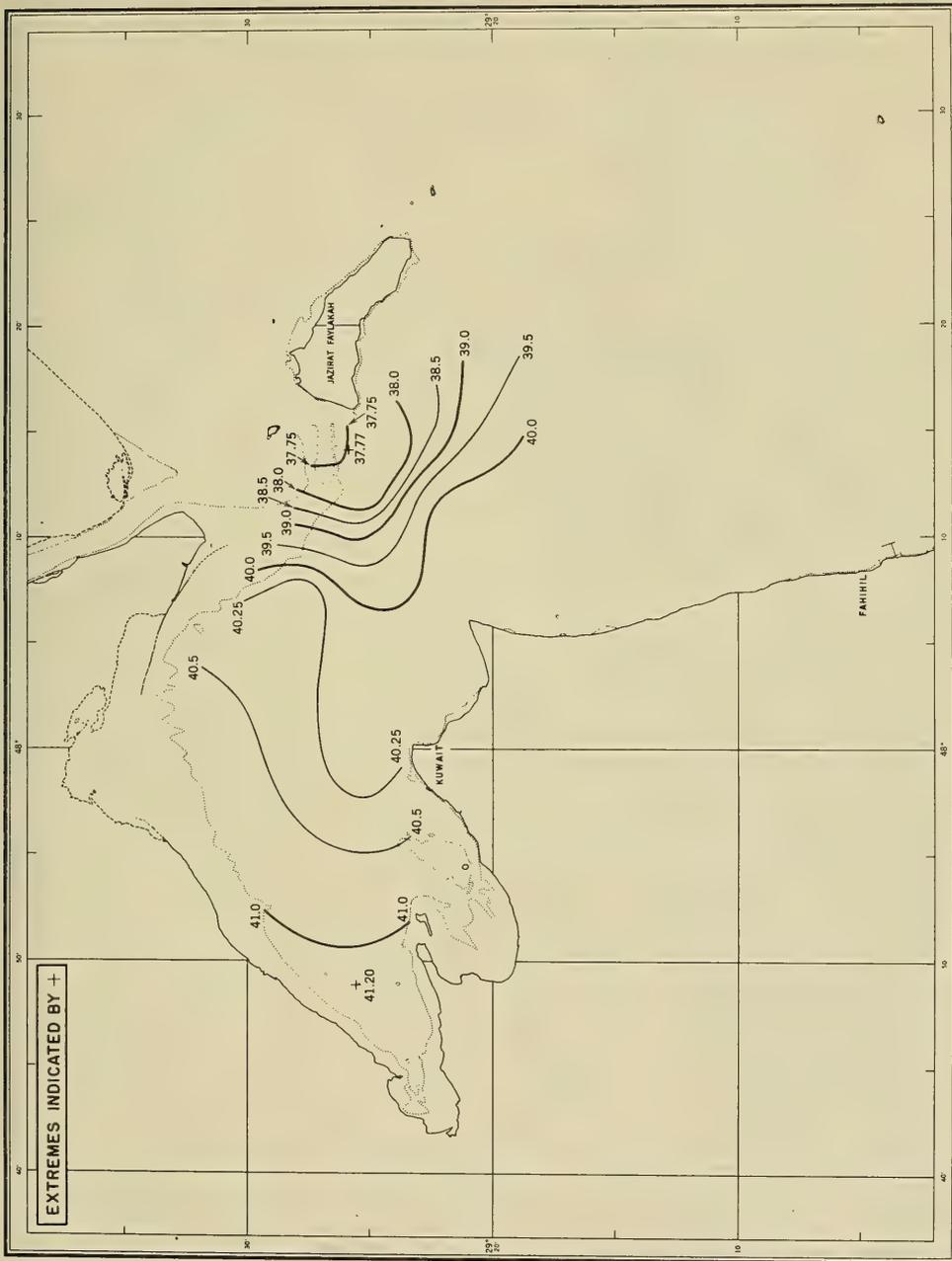


Figure V. 3. Kuwait Harbor—Salinity (‰)—surface, Feb.

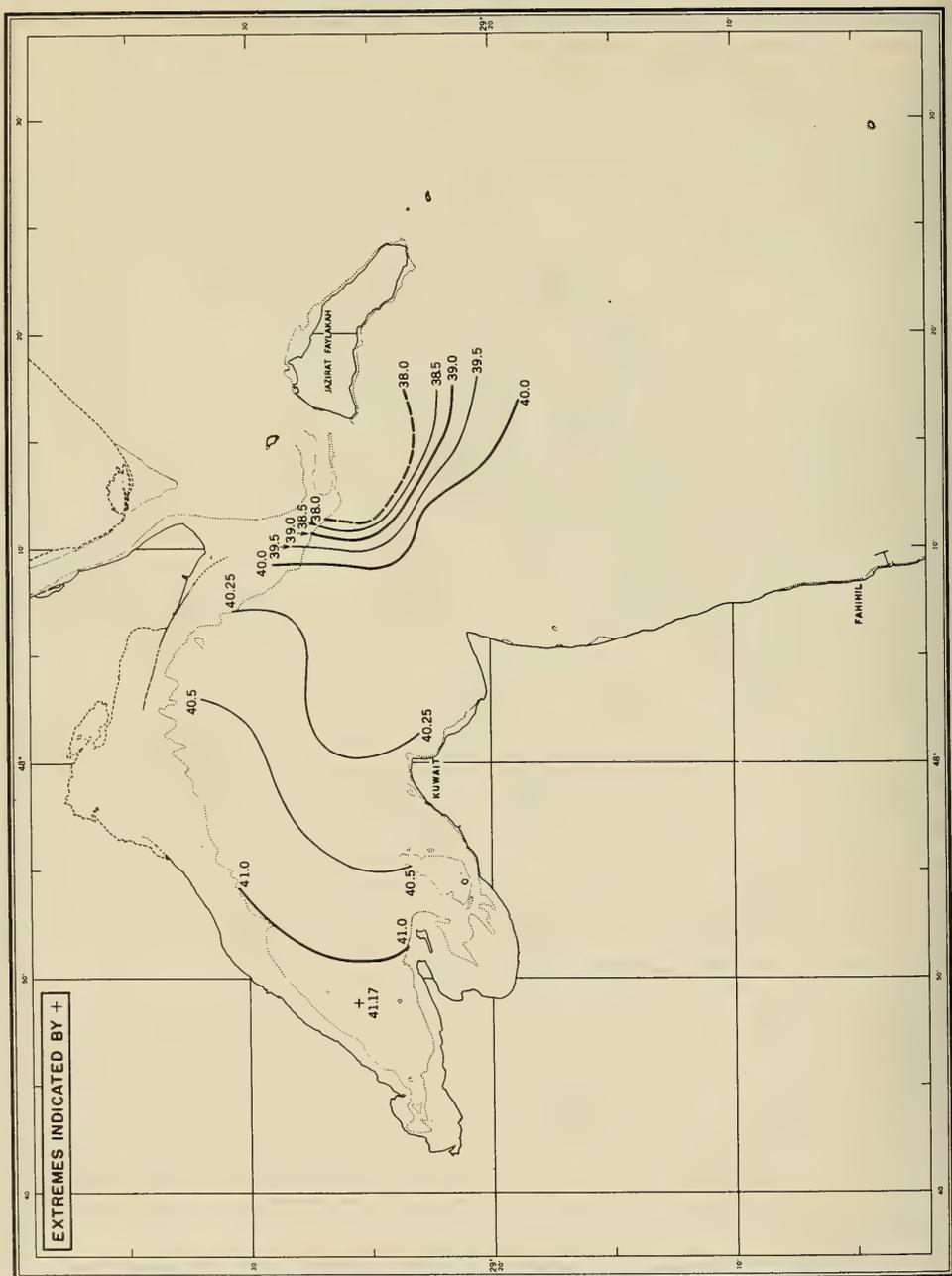
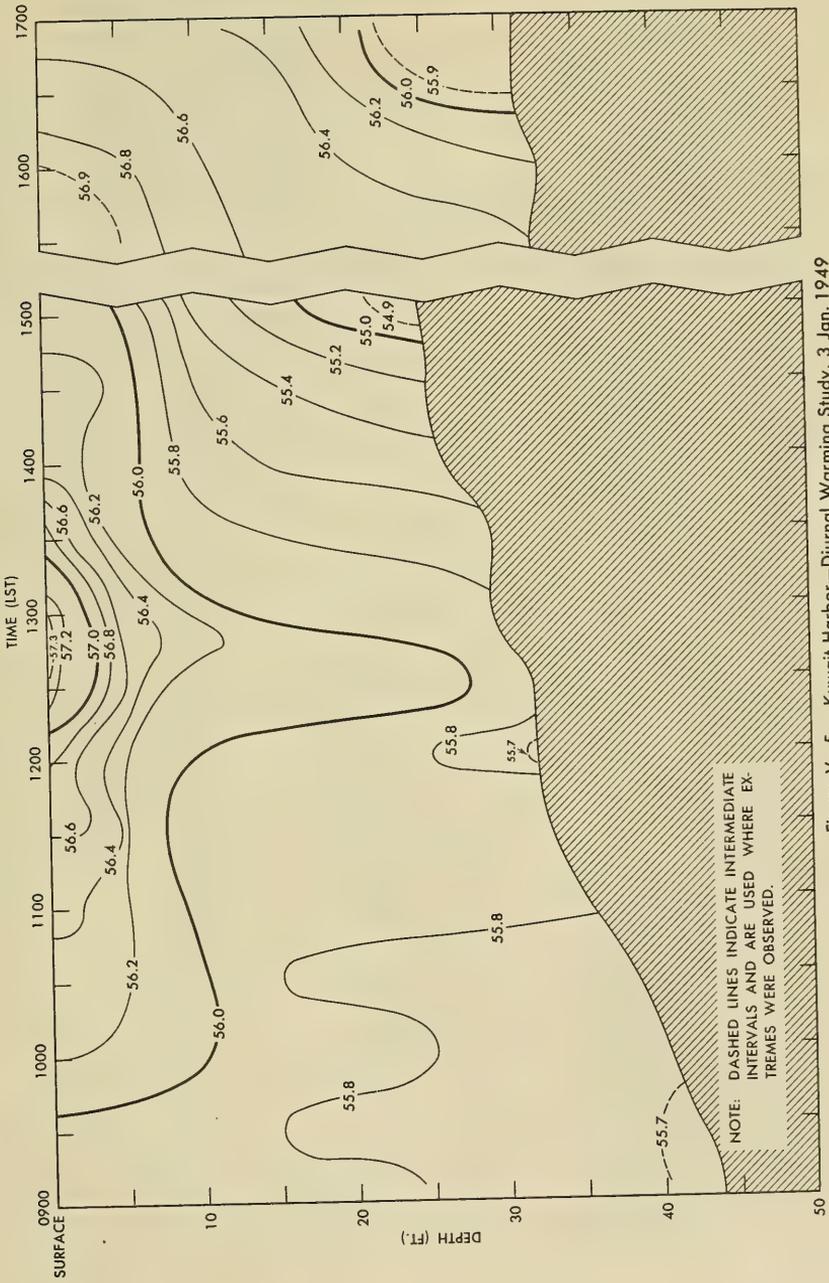


Figure V. 4. Kuwait Harbor—Salinity (‰)—bottom, Feb.



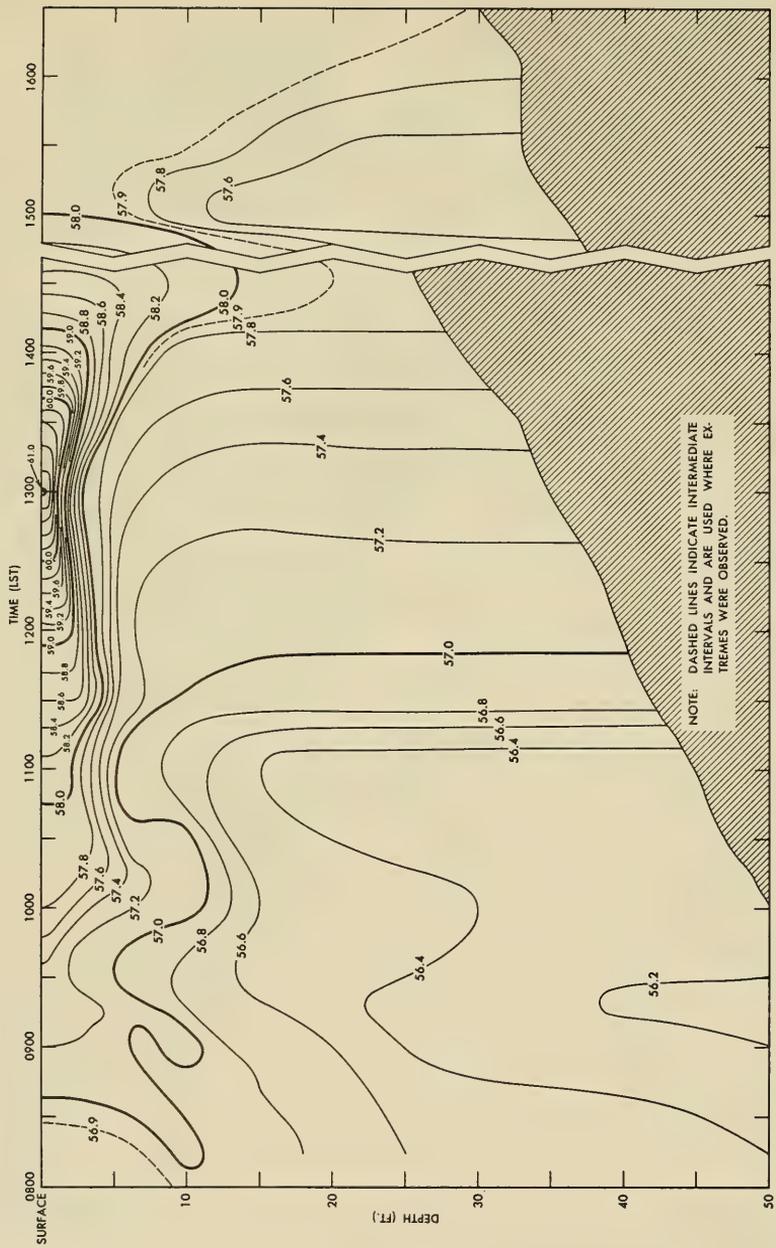


Figure V-6. Kuwait Harbor—Diurnal Warming Study, 27 Feb. 1949

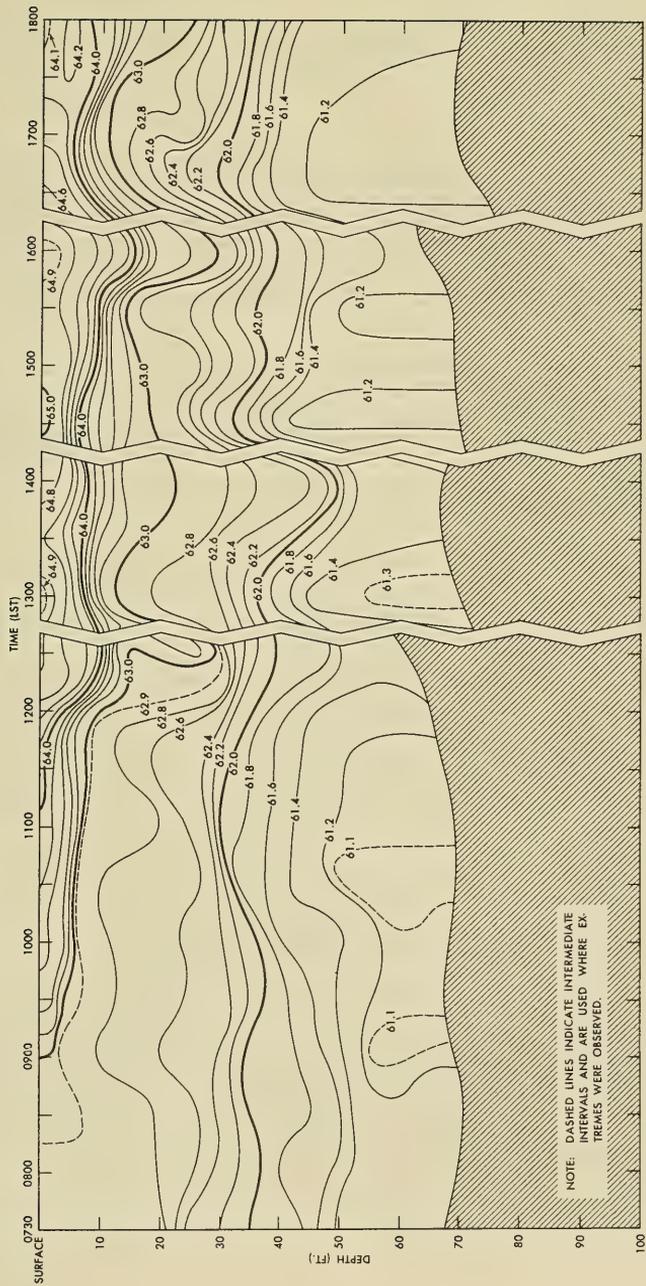


Figure V. 7. Fahihil—Diurnal Warming Study, 21 Mar. 1949

The following excerpts are taken from Reference 2, Sections II. Temperature and III. Salinity, pages 2-5.

"II. Temperature

"Figure I-5 shows the locations of oceanographic stations and diurnal warming observations made in and near Kuwait Harbor. Figures V-1 and V-2, respectively, present typical midwinter surface and bottom temperatures in Kuwait Harbor, and Table 5 gives the observed data upon which these figures are based. The usual Nansen bottles and reversing thermometers were used for making the oceanographic stations.

"In winter, water temperature in Kuwait Harbor and vicinity varies little either horizontally or vertically. The surface temperature ranges from a low of about 56°F. in the southern and western portions of the bay to nearly 60°F. just off Jazirat Faylakah. The difference between the surface and bottom is of the same order of magnitude; a maximum vertical temperature gradient of 3°F. was recorded at the mouth of the harbor in a depth of 26 feet.

"This is quite in contrast to the summer conditions reported by Dr. K. O. Emery for August 1948. Observations taken by him show surface temperatures in excess of 90°F. and bottom temperatures of about 85 F. These temperatures result in a gradient of 5° to 7°F. in approximately 45 or 50 feet of water. The gradient increases markedly farther east of Fahihil where bottom temperatures reach 75° to 77°F. in a depth of about 75 feet. Development of this extremely warm surface layer probably begins in April or May when the mean maximum air temperature begins to show an appreciable increase. Also the general decrease in cloudiness with the advent of spring provides for increased solar heating (insolation) of surface waters. A reduction in frequency of frontal passages with their typical gusty "shamal" type winds is another factor contributing to the development of a strong gradient between the surface and bottom water through the spring and early summer months. Without these squally "shamal" type winds, mixing is reduced to a minimum. In autumn, beginning in October, the processes are reversed.

"Even in winter, solar insolation frequently raises midafternoon air temperatures to the seventies; thus it is reasonable to expect some diurnal fluctuations in the water temperature near the surface. The two time-depth sections taken in Kuwait Harbor in January and February and one section taken off Fahihil in March illustrate well midwinter diurnal warming of the surface waters (Figs. V-5, V-6, and V-7, respectively). These sections are based on BT observations taken at approximately half-hourly intervals

while drifting along the tracks shown in the insets on Figure I-5. No drift chart is available for the February observations, but the drifting boat started from approximately the same position as that for the January observations. . . . .

"Diurnal temperature ranges of 1.3° and 3.1°F. were recorded at the surface for the two Kuwait Harbor series of observations; off Fahihil the range was 2.2°F. The February series is particularly interesting in that it shows an appreciable diurnal range and the mixing effect of a strong wind in midafternoon. In this series the highest surface temperature was observed at 1300 LST (about the time of maximum air temperature and maximum solar insolation). Soon after 1300 a "shamal" type wind began; wind speeds increased to Beaufort force 4 by 1400 and remained so to the end of the observation period. Within two hours after the maximum temperature was observed, mixing had reduced the surface temperature by 3°F., and by 1600 (3 hours after the beginning of the "shamal") the entire water column was nearly isothermal.

"It is possible then that diurnal heating could account entirely for the total range of temperatures shown on the surface temperature chart, Figure V-1; the oceanographic station observations were taken in the same week as the BT observations for the second time-depth section. (This is the reason that local time also is given for the oceanographic stations shown in Figure I-5.)

"A comparison of the three diurnal warming sections illustrates well the monthly increase in water temperature, particularly that in the surface layer. It appears that as a general rule the maximum air temperature and maximum surface water temperature are within a few degrees of each other except, of course, when increased wind speeds prevent formation of or destroy the warmer surface layer by mixing.

### "III. Salinity

"Salinity observations were taken on 23-24 February 1949 only, when the series of oceanographic stations (Figure I-5) was occupied. Water samples were collected at the surface and near the bottom, and only at the surface where depths were less than 2 meters. Of the 32 samples taken, eight were missing or the sample bottles broken in transit before reaching the laboratory. Three of these, the surface samples for Stations 2, 4, and 14, would have been helpful in adding detail to the analysis in certain areas.

"Surface and bottom salinity charts, presented as Figures V-3 and V-4, respectively, are based on these data. Over the harbor area the total salinity range at the surface is about 3.5% (parts per thousand); maximum salinities are observed in the shoal waters

near the head of the embayment. The freshest water, which incidentally exceeds the average salinity of water in the open ocean by more than 2‰, was observed in the very shallow water immediately west of Jazirat Faylakah. Apparently brackish drainage water from Khawr as Sabiniyan and/or Shatt al Arab reaches the area here and reduces the gulf surface salinity from its normal value of about 40‰ to about 38‰. Even though rainfall is meager in this area (4 to 11 inches annually), most of the precipitation can be expected during the months of January and February. It is reasonable then to expect salinities in the extreme eastern portion of Kuwait Harbor (in the vicinity of Jazirat Faylakah) to be reduced slightly below the indicated surface values which were observed during a period of no rainfall. Salinities of 39‰ or less extending into Kuwait Harbor would be most unusual, because the tides produce strong currents between Ras al Ardh and Jazirat Faylakah that effectively mix the surface waters every few hours.

"As would be expected salinity values at depth are nearly the same or slightly higher than the surface values. Even the greatest difference between the surface and bottom is hardly significant; at the harbor entrance (Station 12) a gradient of only 0.4‰ is observed through a 12-foot depth."

**SECTION VI**  
**RECENT DATA ANALYSIS**



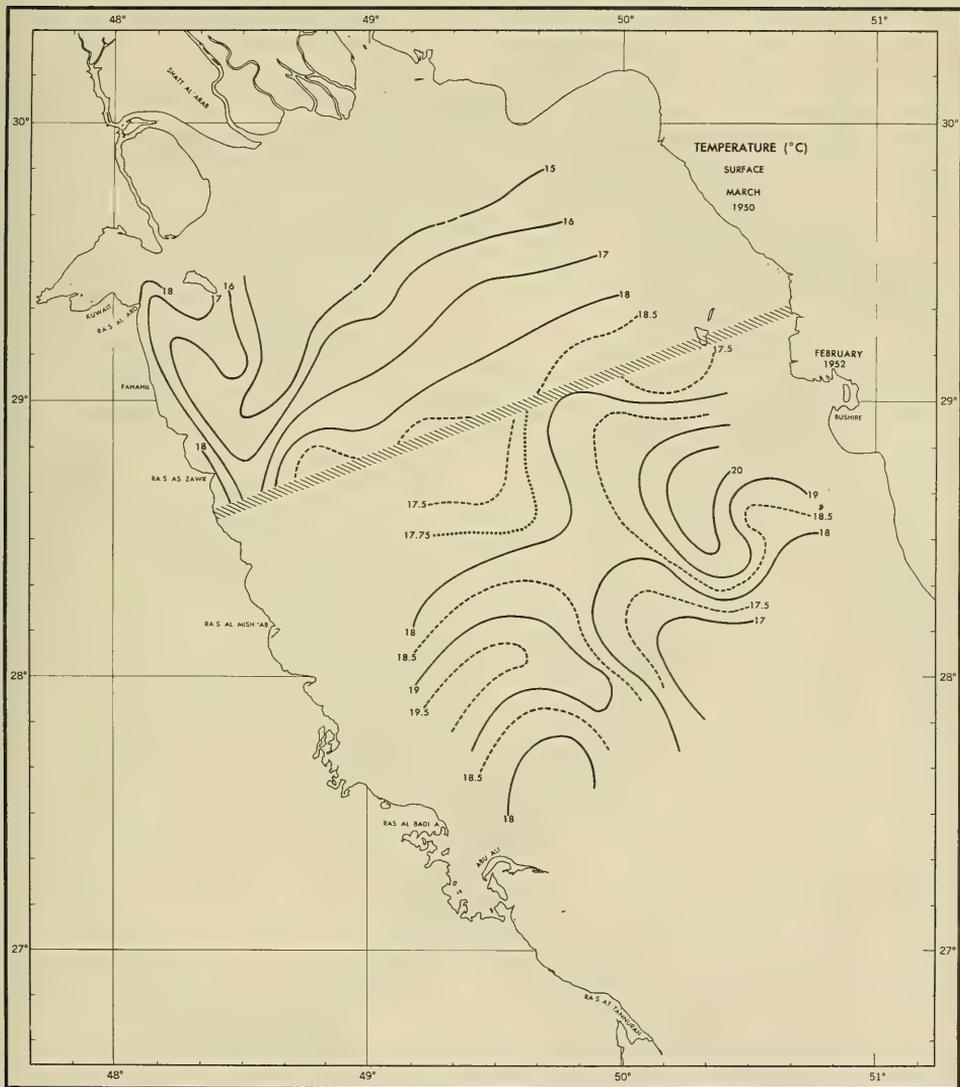


Figure VI- 1. Northern Part, Persian Gulf—Temperature (°C)—  
surface, Feb. 1952, Mar. 1950

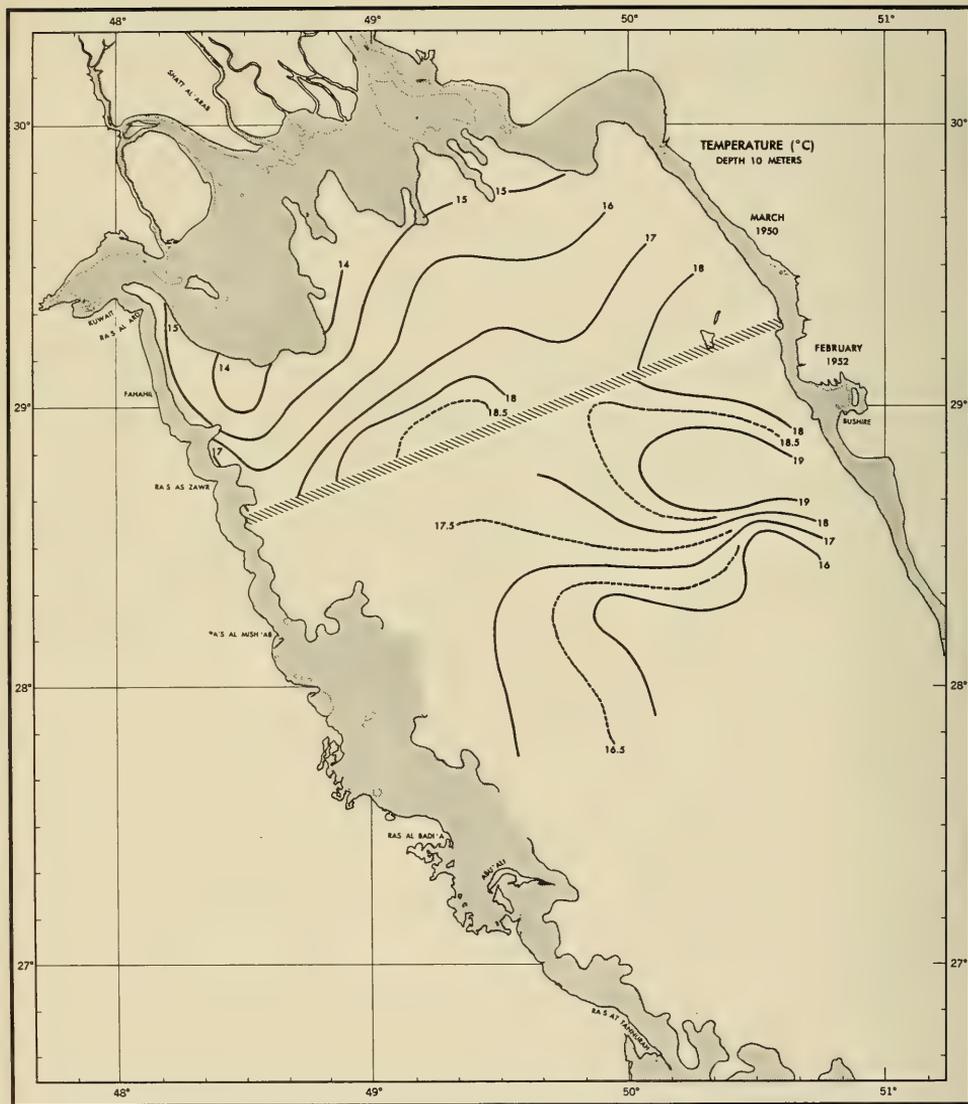


Figure VI- 2. Northern Part, Persian Gulf—Temperature ( $^{\circ}$ C)—  
10 meters, Feb. 1952, Mar. 1950

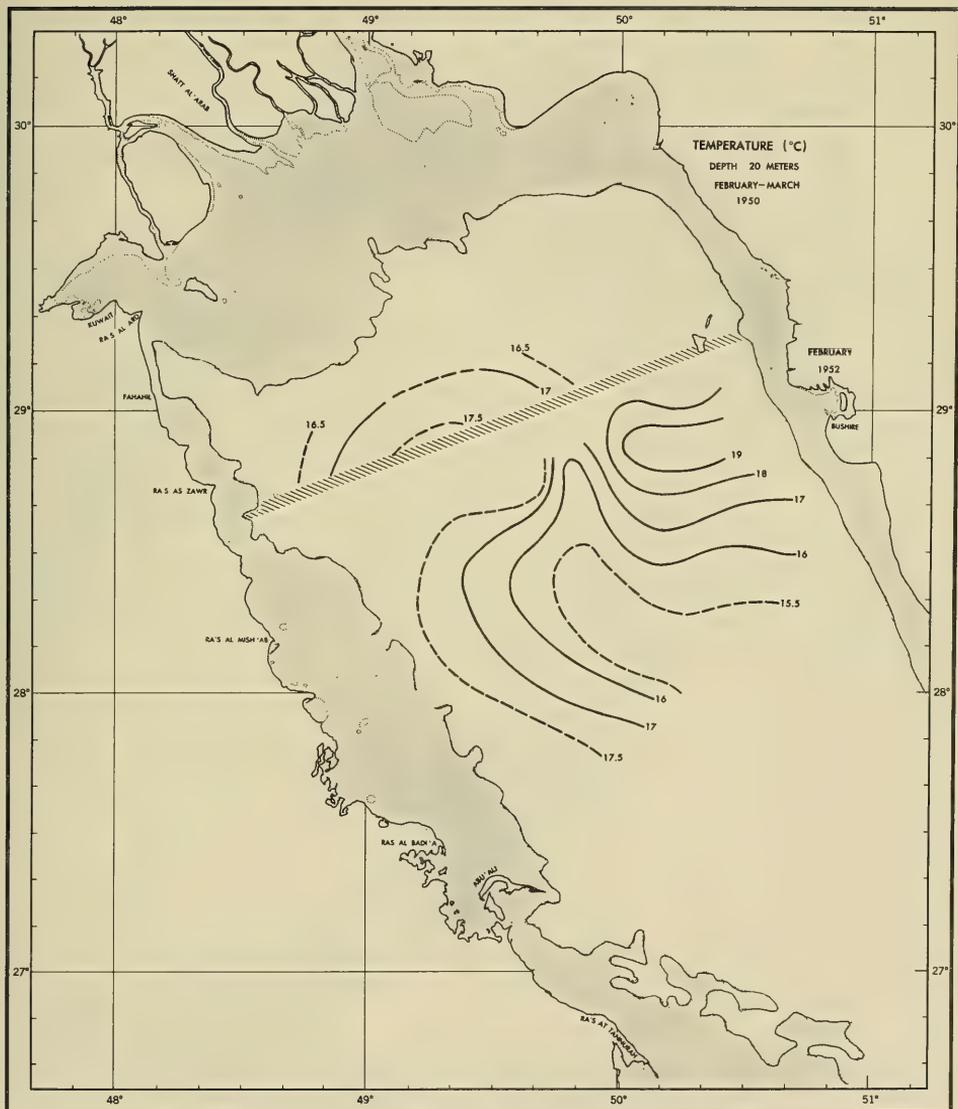


Figure VI- 3. Northern Part, Persian Gulf—Temperature (°C)—  
20 meters, Feb. 1952, Mar. 1950

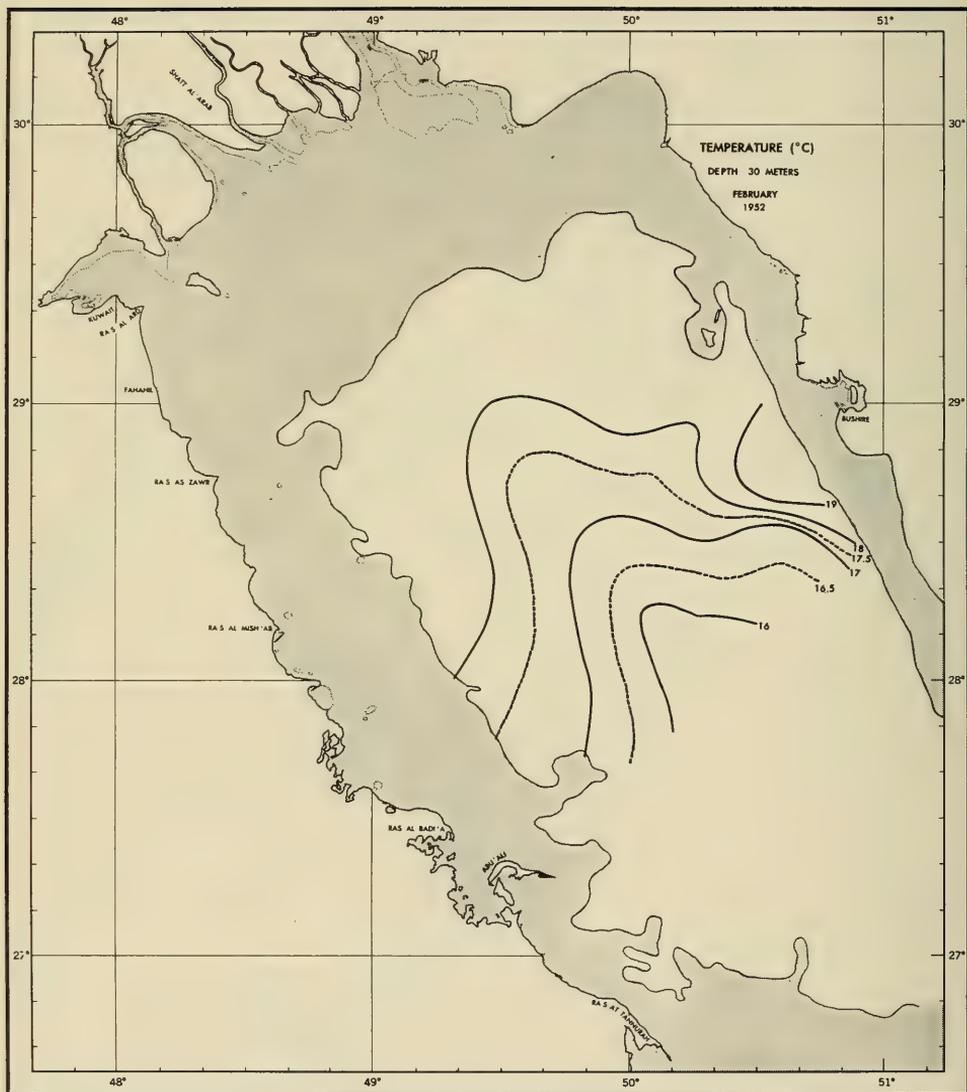


Figure VI- 4. Northern Part, Persian Gulf—Temperature (°C)—  
30 meters, Feb. 1952

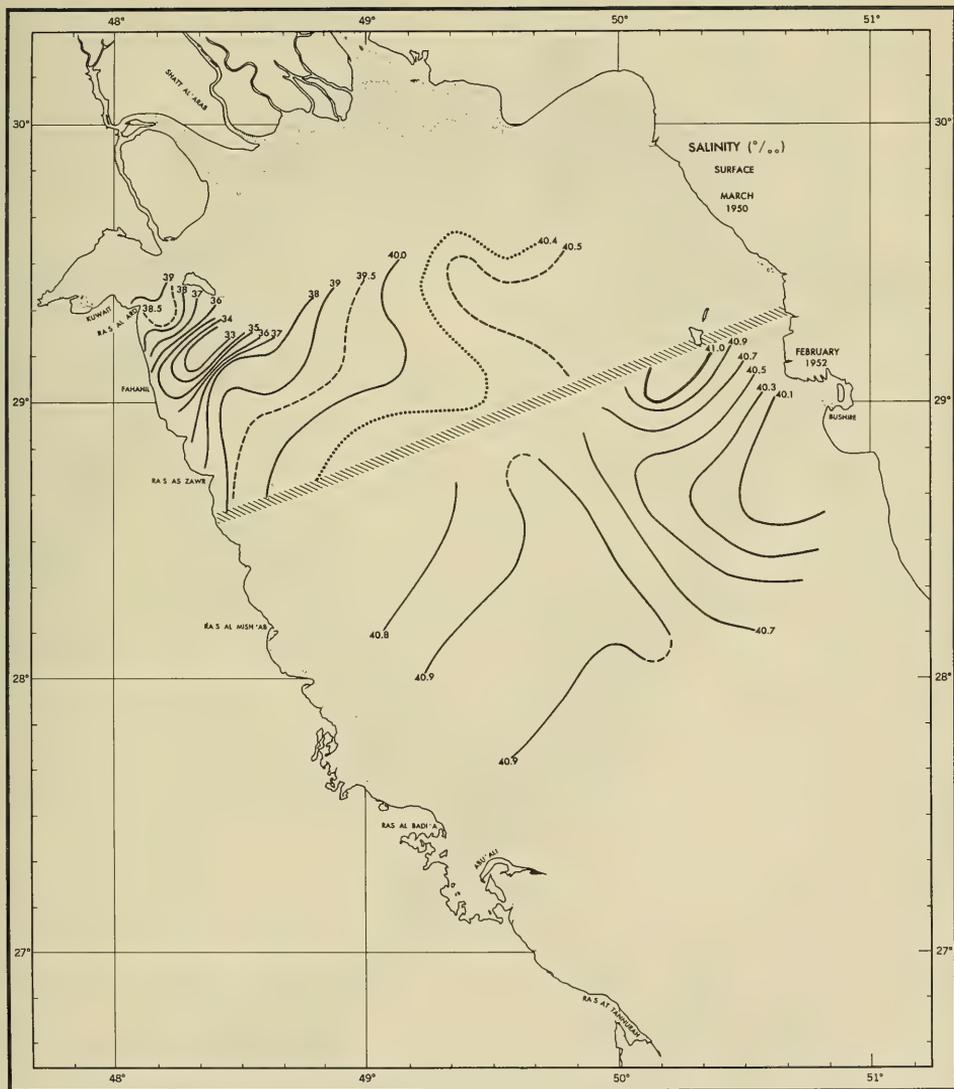


Figure VI- 5. Northern Part, Persian Gulf—Salinity (‰)—surface, Feb. 1952, Mar. 1950

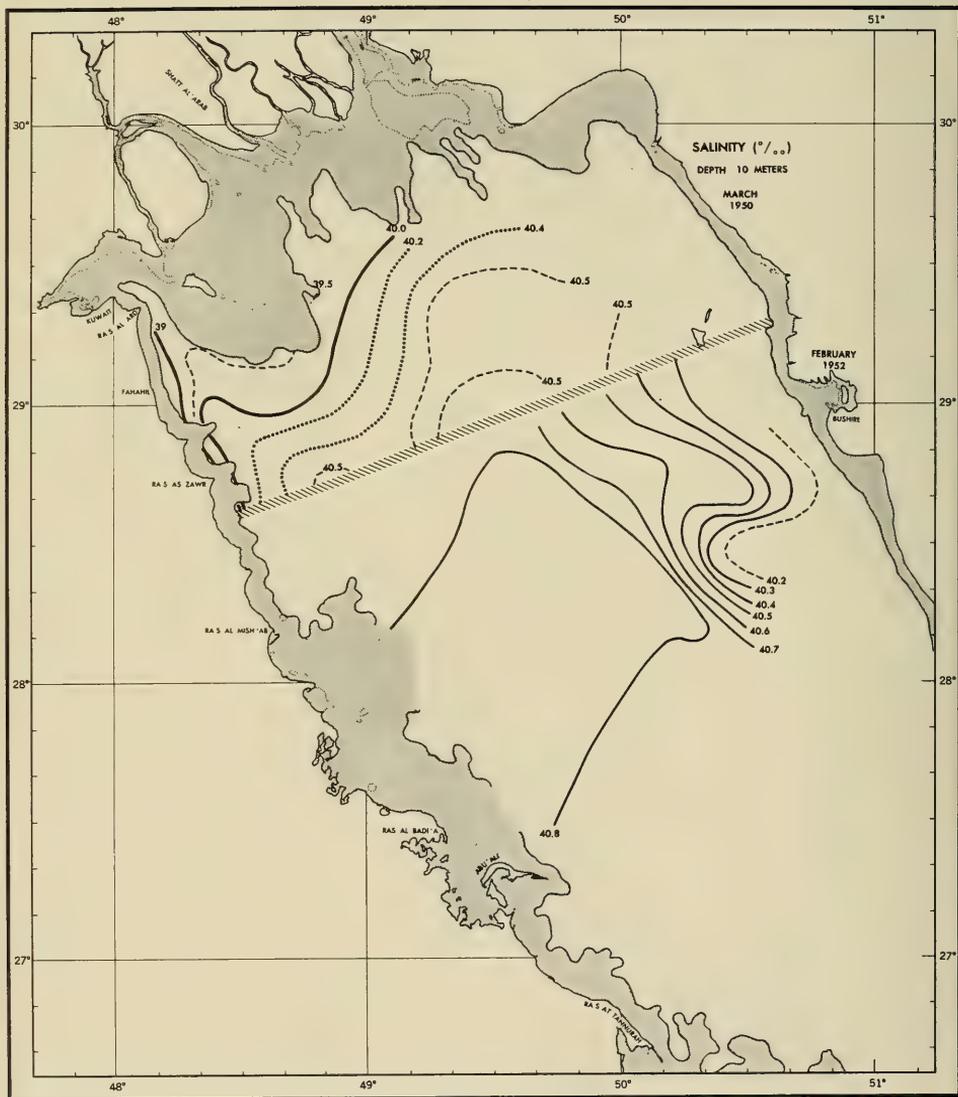


Figure VI- 6. Northern Part, Persian Gulf—Salinity (‰)—  
10 meters, Feb. 1952, Mar. 1950

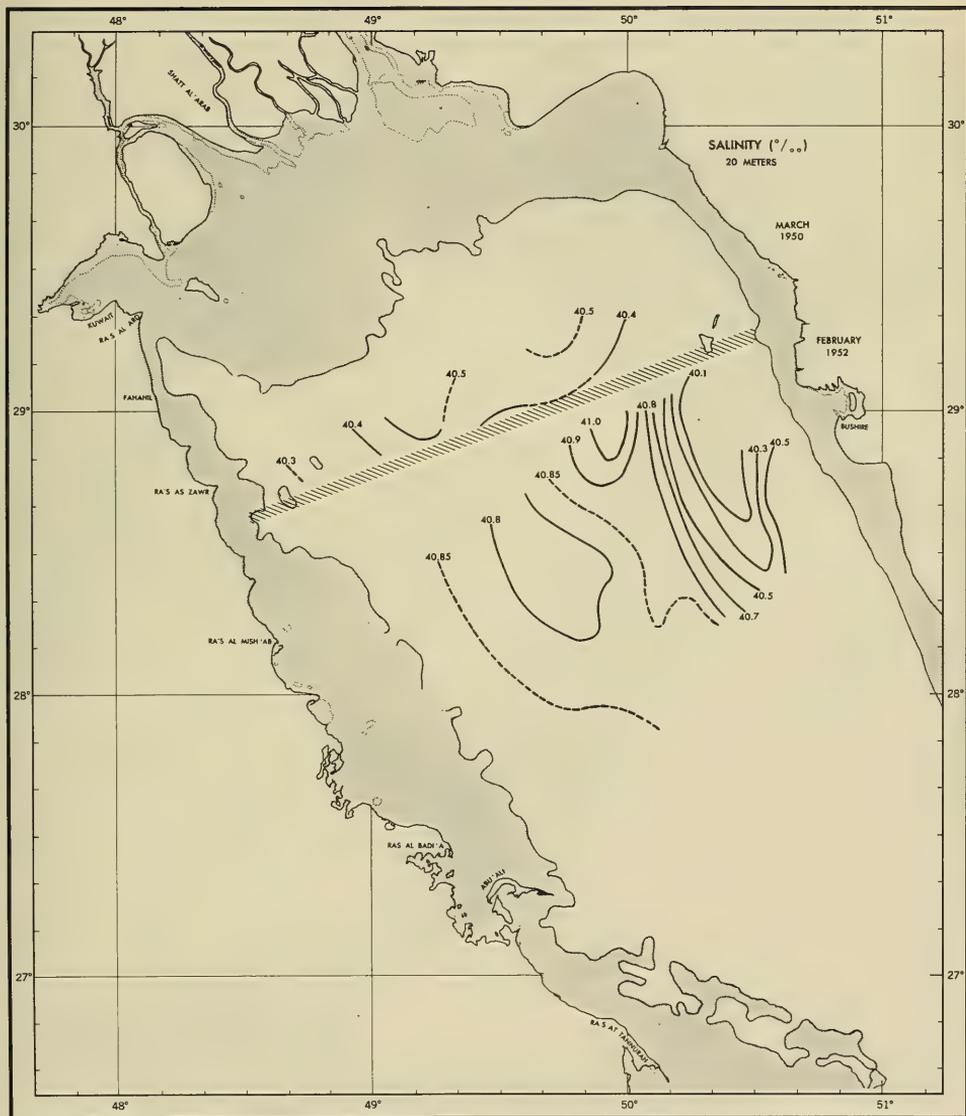


Figure VI- 7. Northern Part, Persian Gulf—Salinity (‰)—  
20 meters, Feb. 1952, Mar. 1950

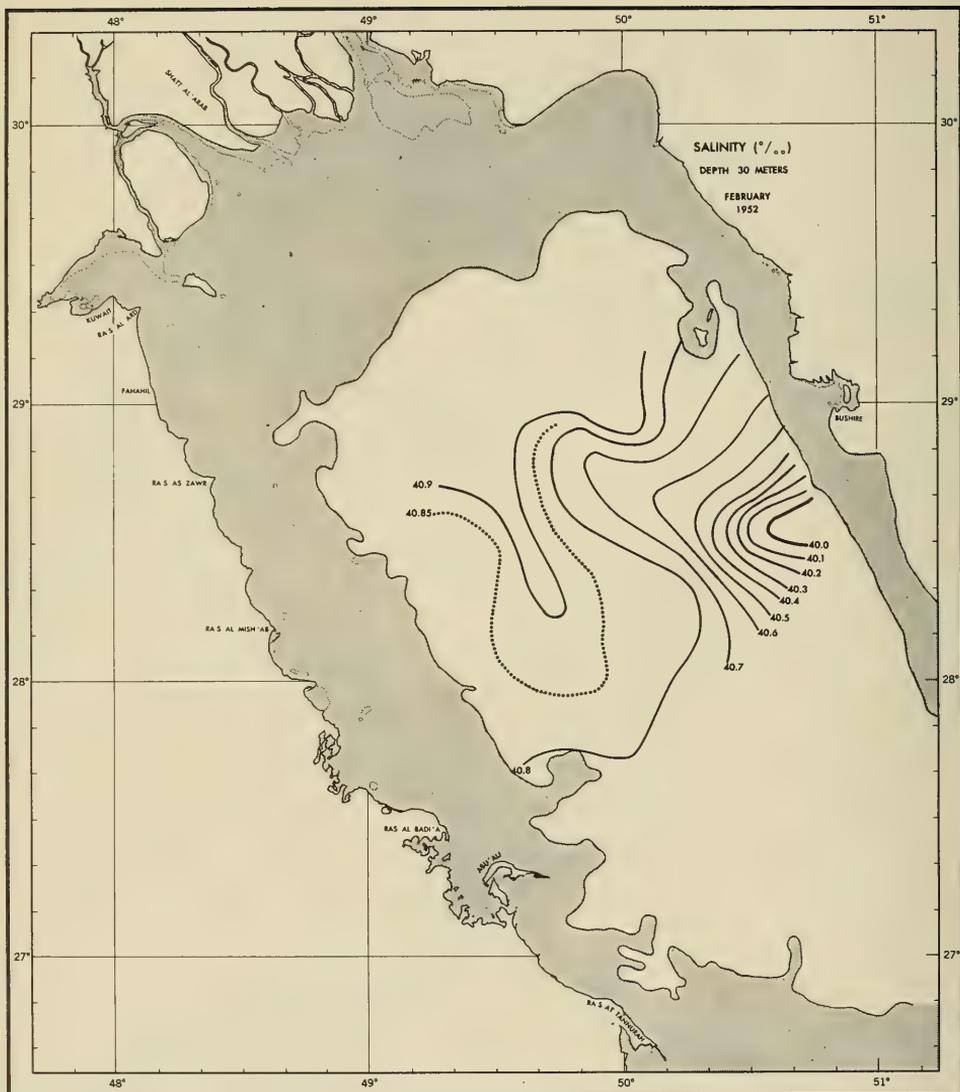


Figure VI- 8. Northern Part, Persian Gulf—Salinity (‰)—  
30 meters, Feb. 1952

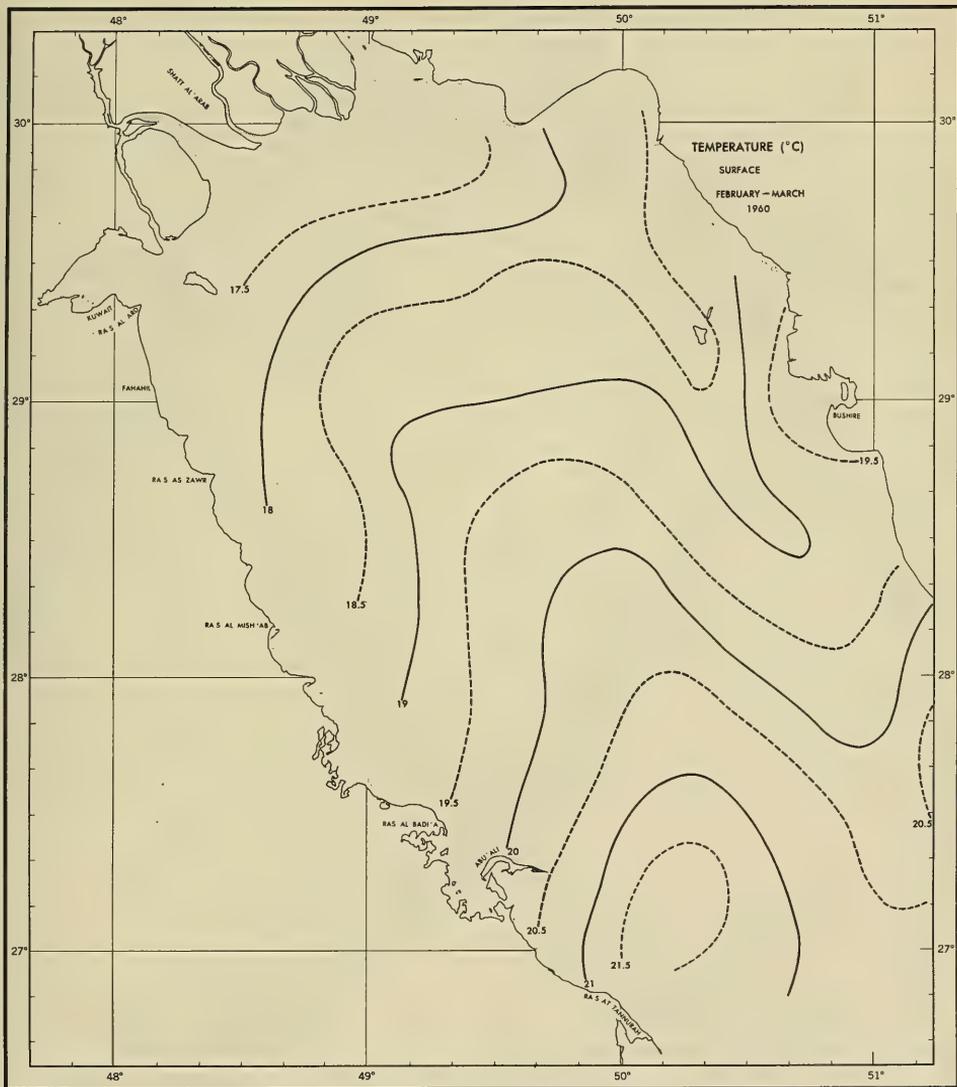


Figure VI- 9. Northern Part, Persian Gulf—Temperature (°C)—  
surface, Feb.-Mar. 1960

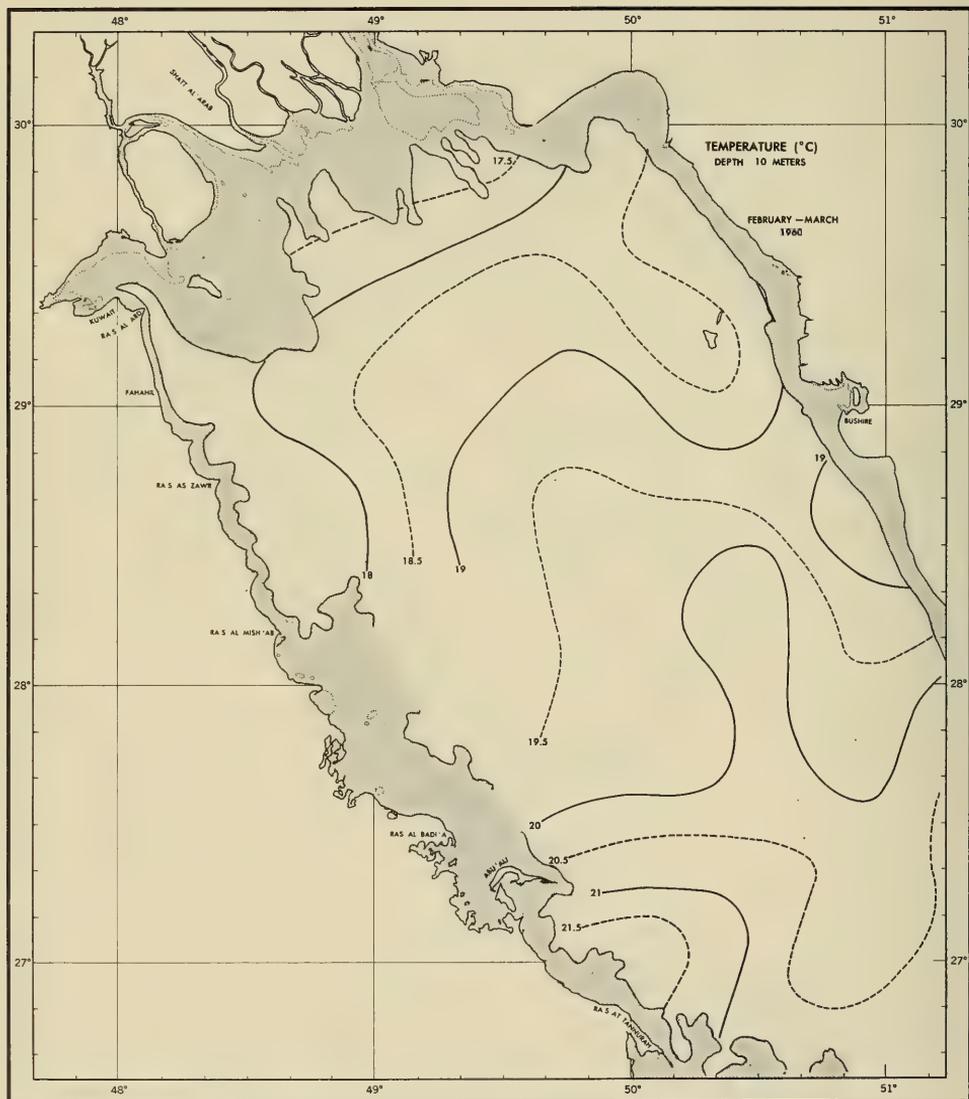


Figure VI-10. Northern Part, Persian Gulf—Temperature (°C)—  
10 meters, Feb.-Mar. 1960

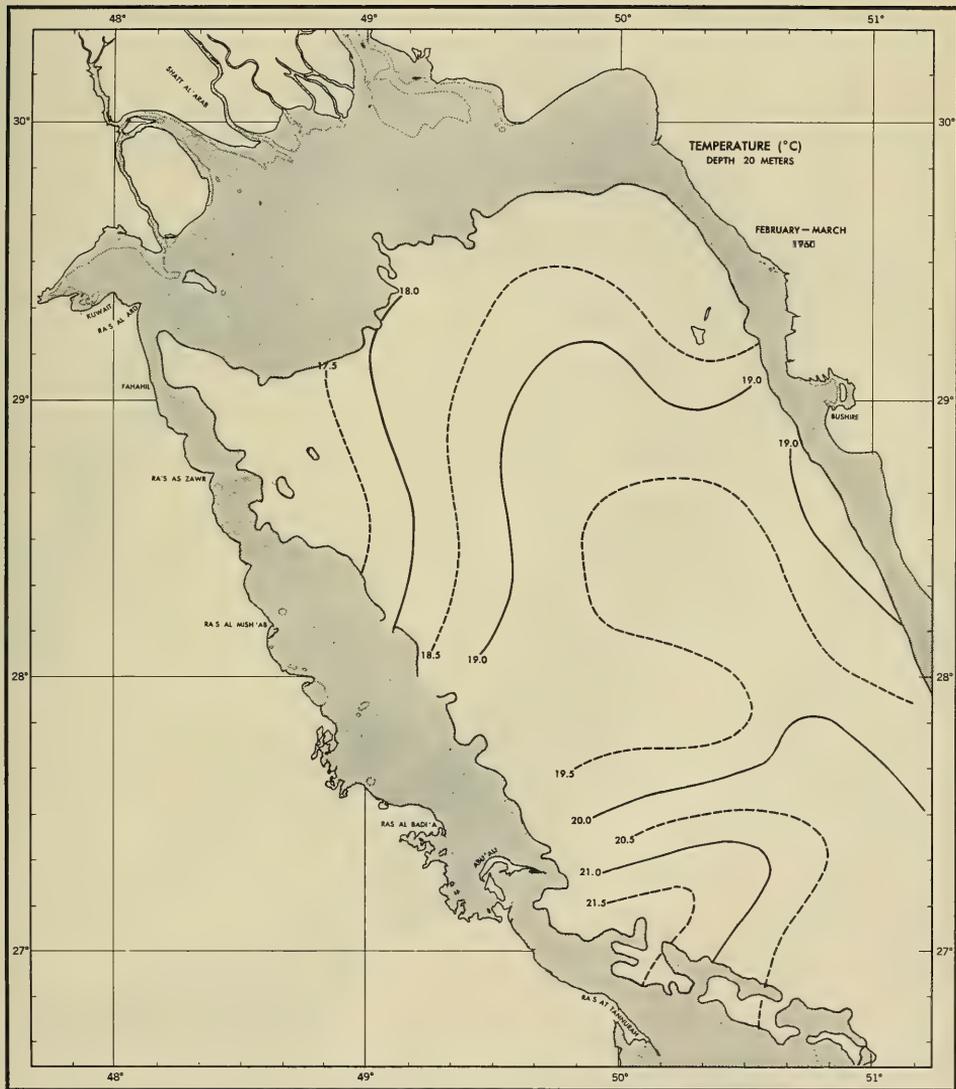


Figure VI-11. Northern Part, Persian Gulf—Temperature (°C)—  
20 meters, Feb.-Mar. 1960

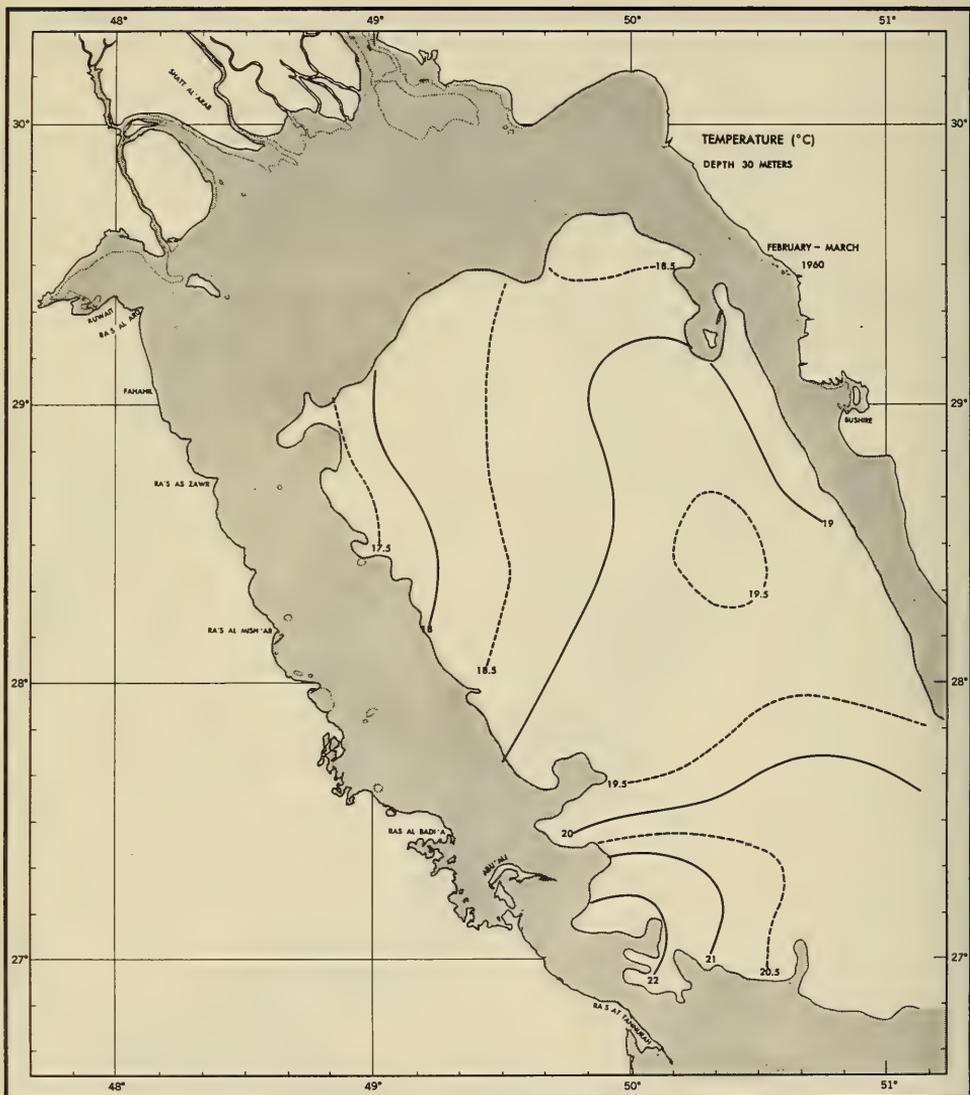


Figure VI-12. Northern Part, Persian Gulf—Temperature (°C)—  
30 meters, Feb.-Mar. 1960

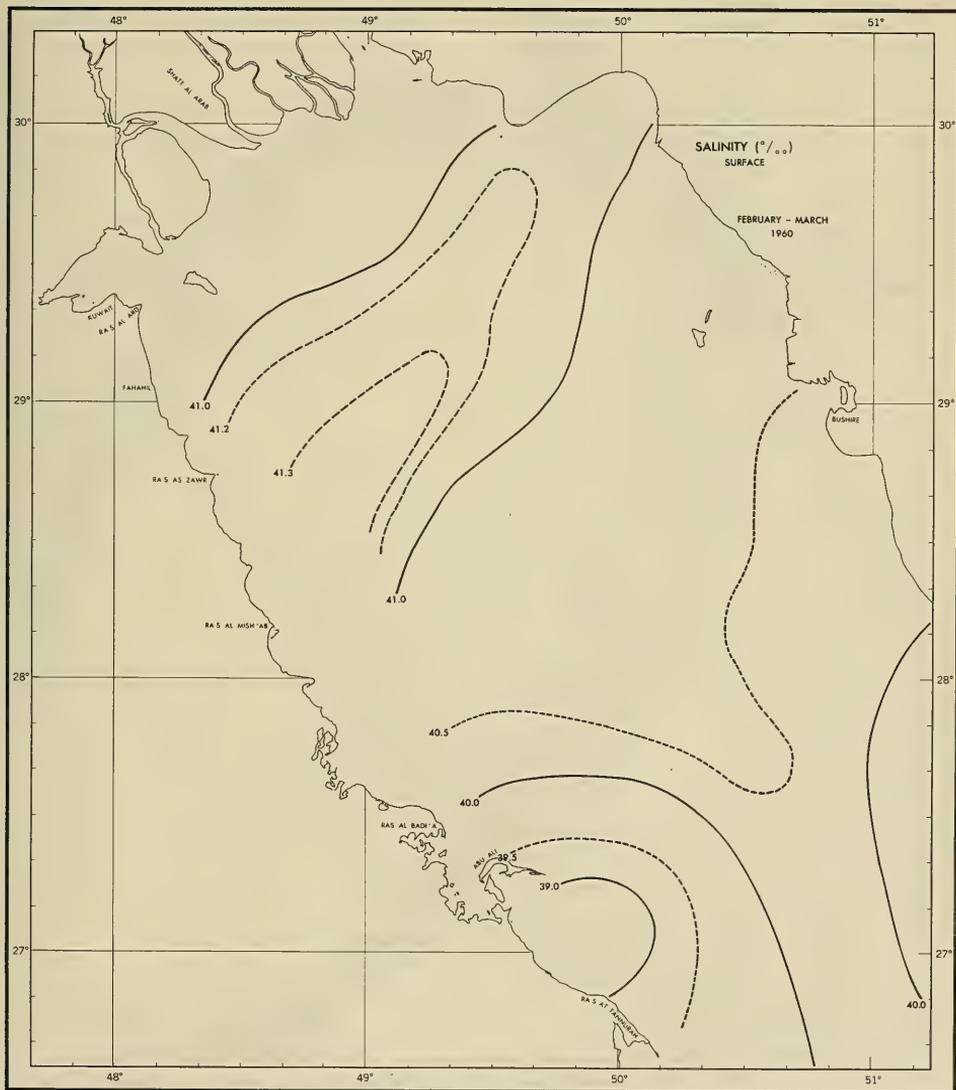


Figure VI-13. Northern Part, Persian Gulf—Salinity (‰)—  
surface, Feb.-Mar. 1960

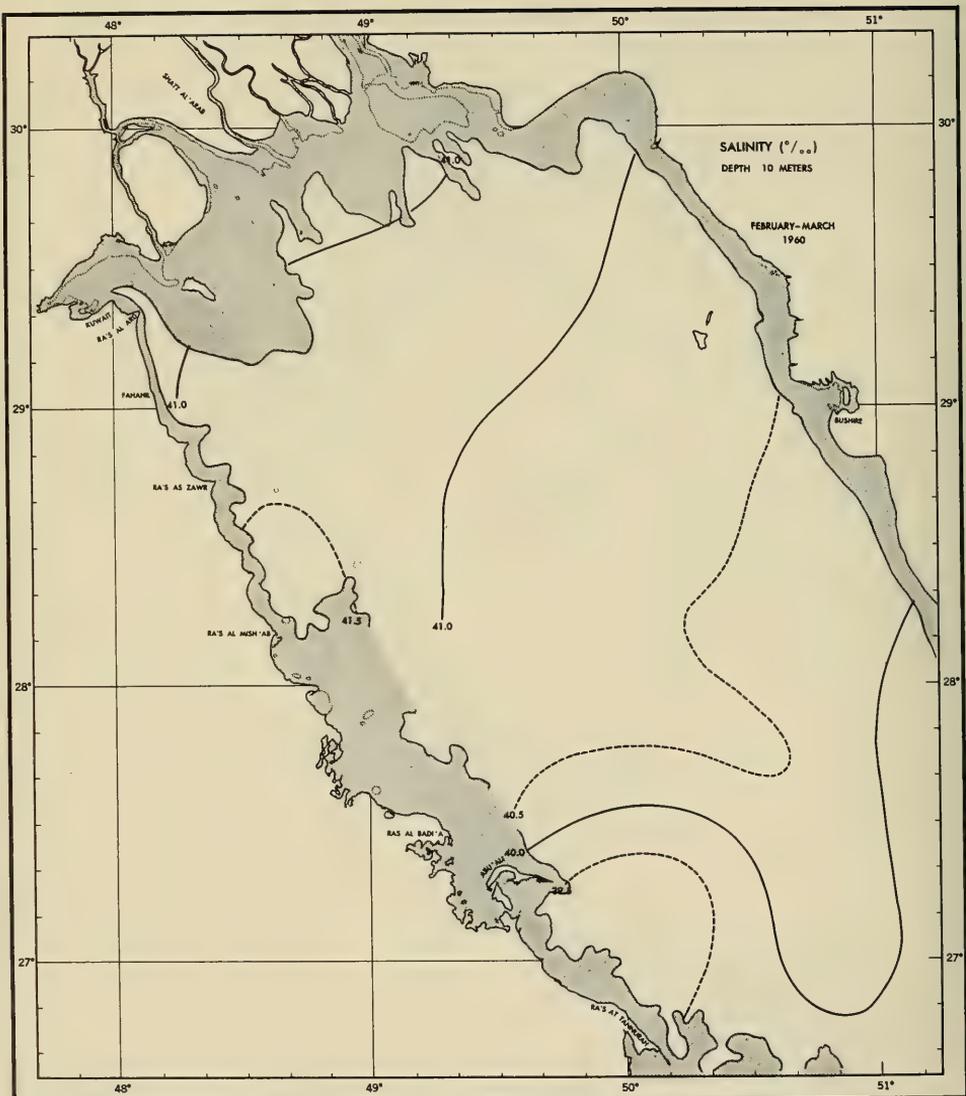


Figure VI-14. Northern Part, Persian Gulf—Salinity (‰)—  
10 meters, Feb.-Mar. 1960

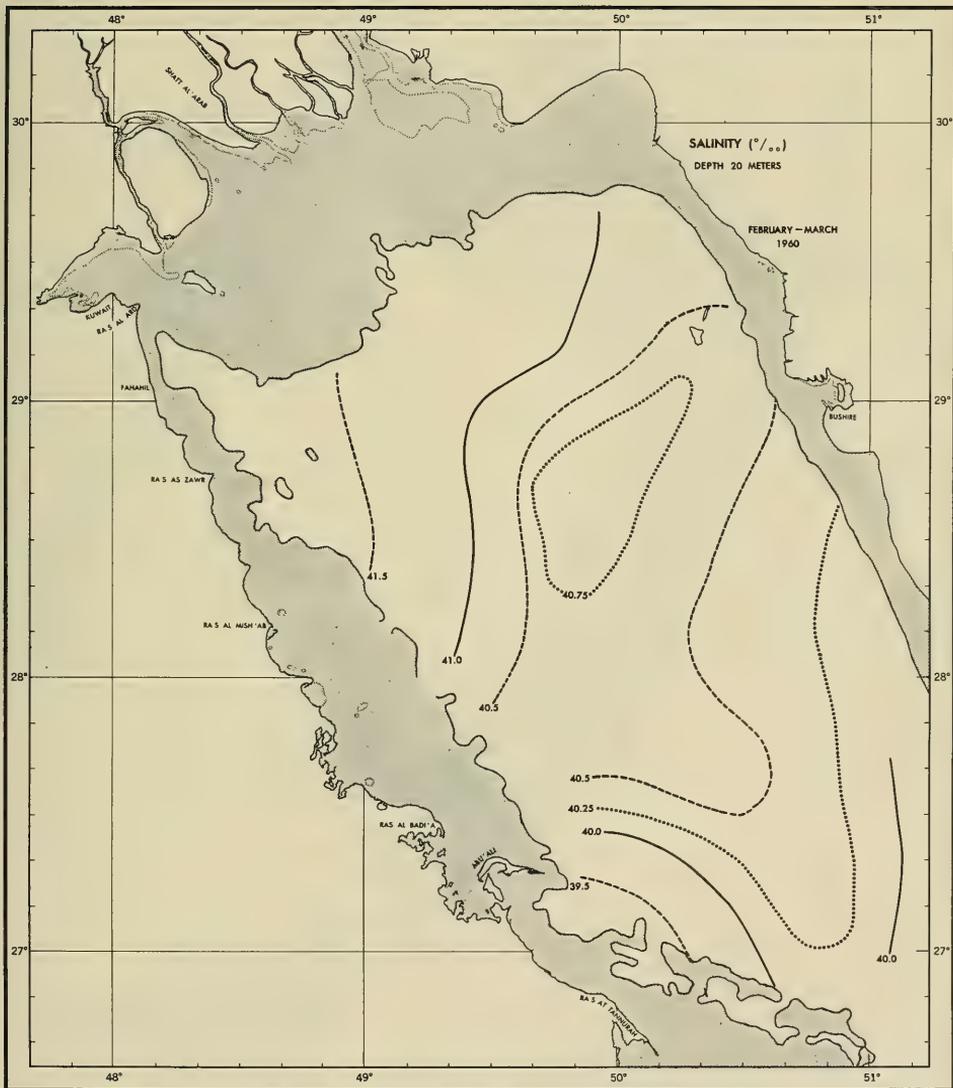


Figure VI-15. Northern Part, Persian Gulf—Salinity (‰)—  
20 meters, Feb.-Mar. 1960

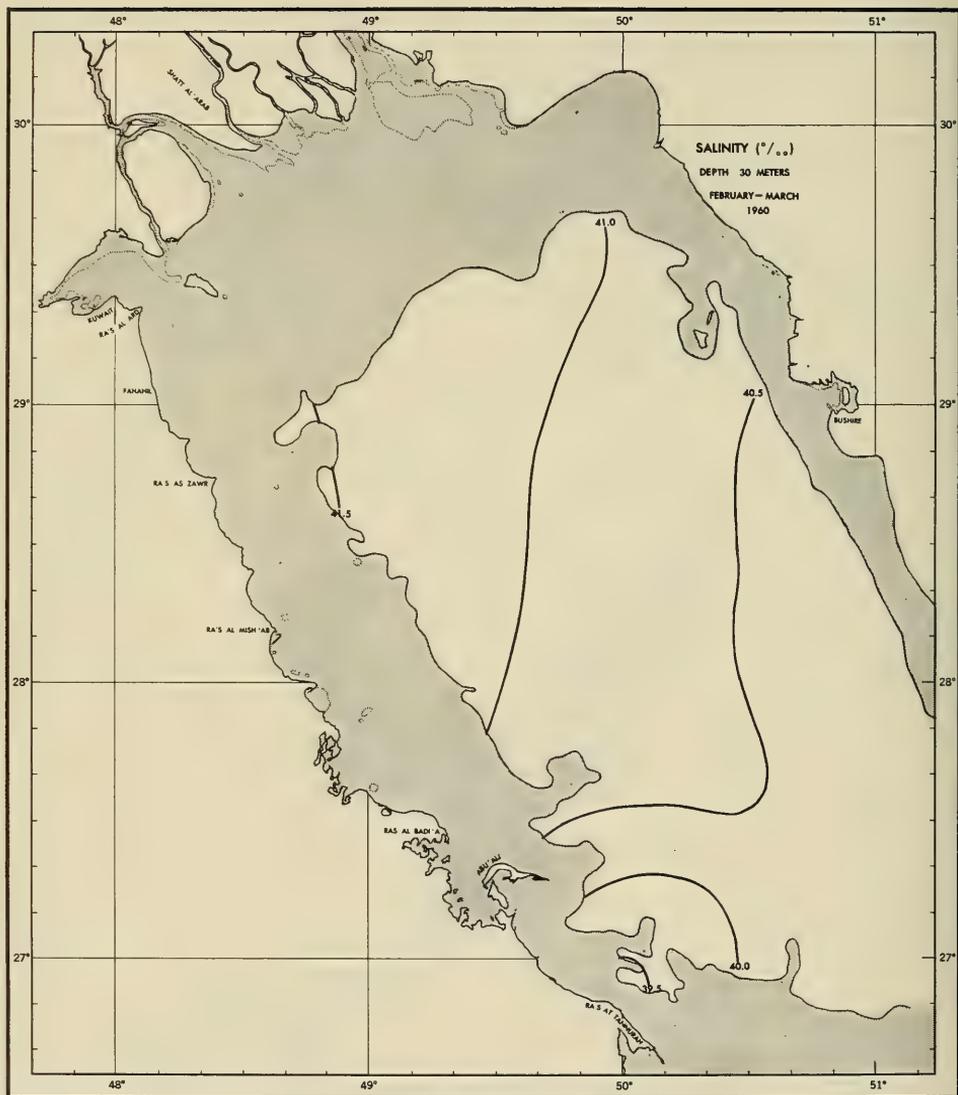


Figure VI-16. Northern Part, Persian Gulf—Salinity (‰)—  
30 meters, Feb.-Mar. 1960

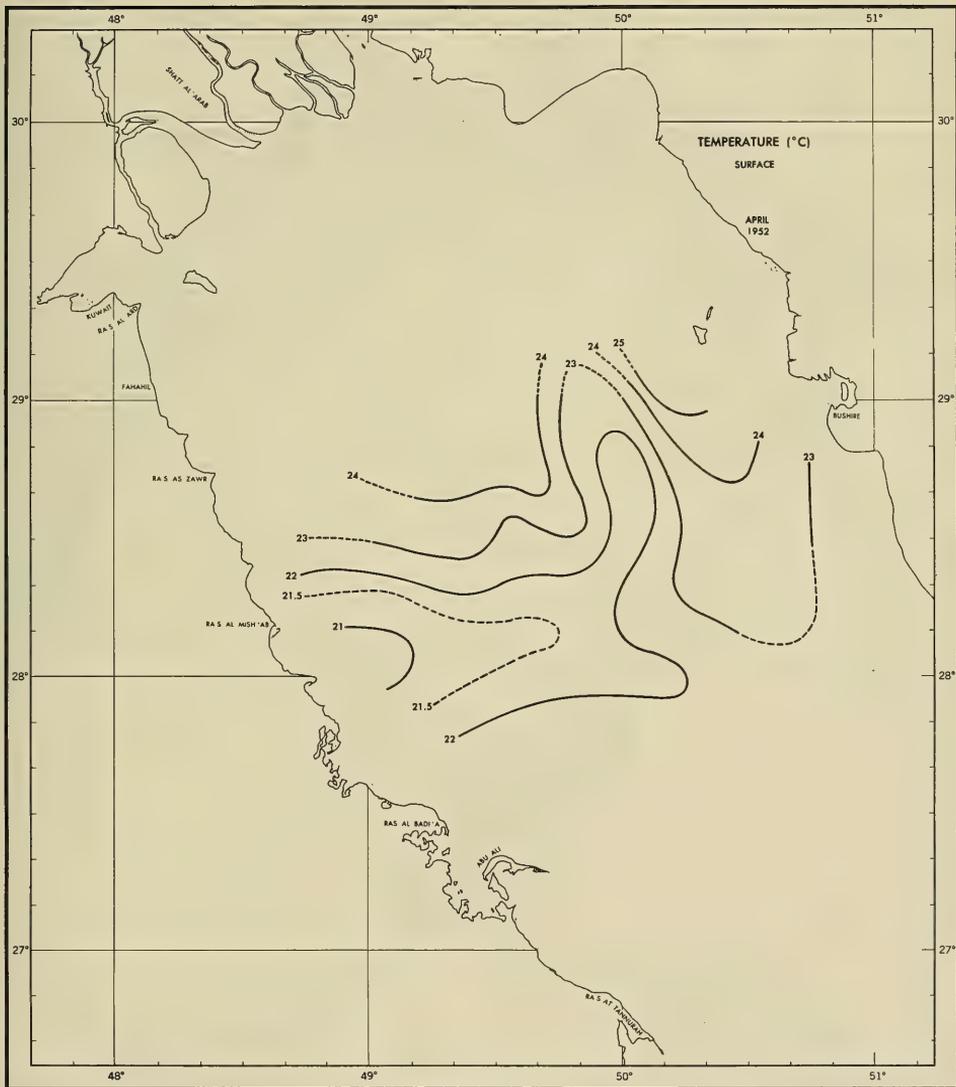


Figure VI-17. Northern Part, Persian Gulf—Temperature ( $^{\circ}$ C)—  
surface, Apr. 1952

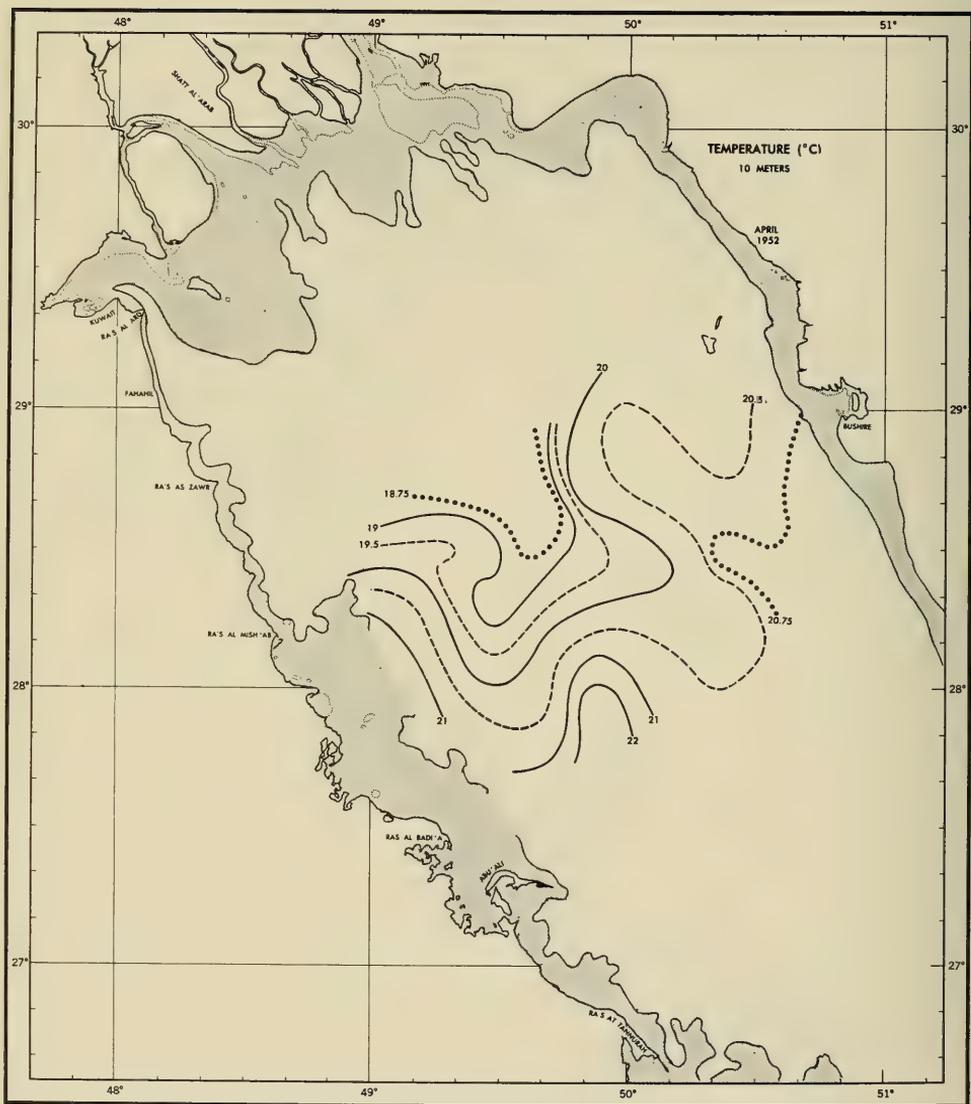


Figure VI-18. Northern Part, Persian Gulf—Temperature (°C)—  
10 meters, Apr. 1952

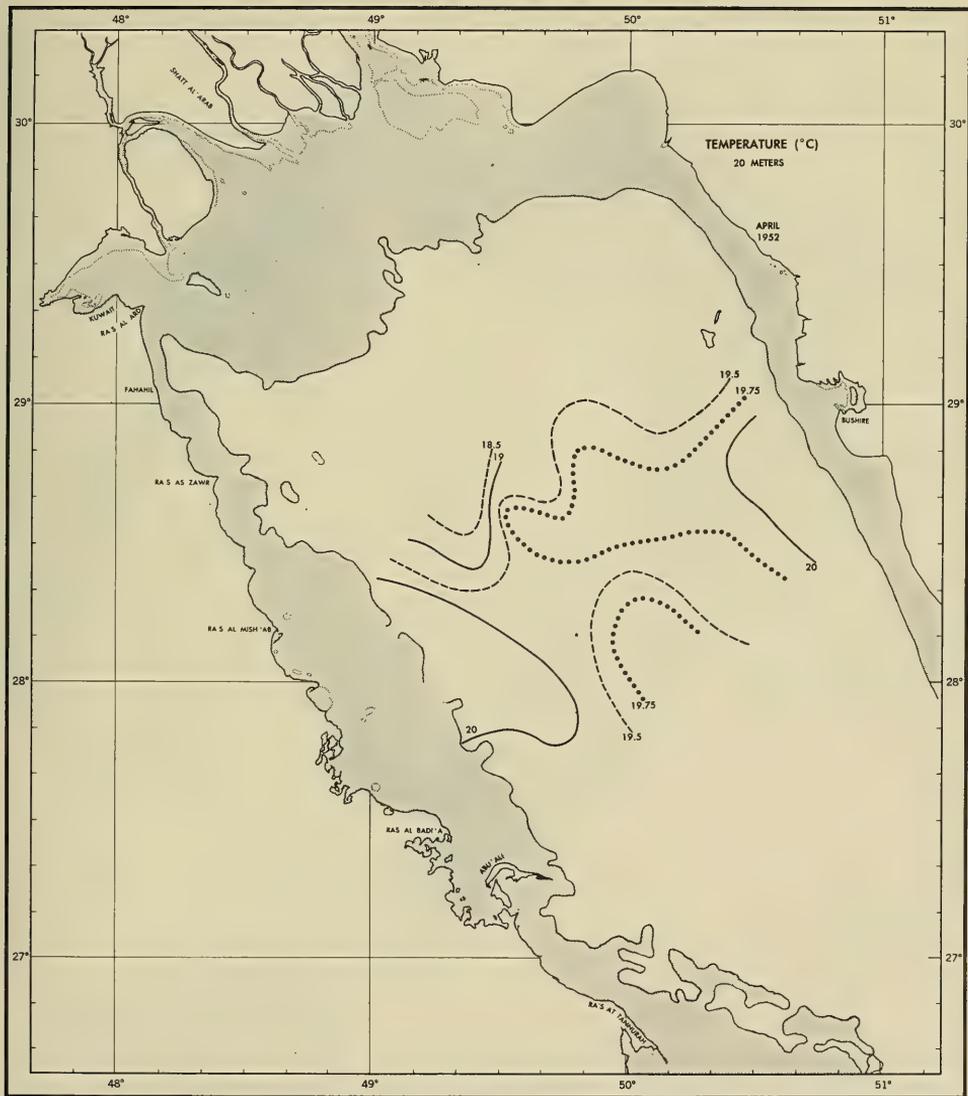


Figure VI-19. Northern Part, Persian Gulf—Temperature (°C)—  
20 meters, Apr. 1952

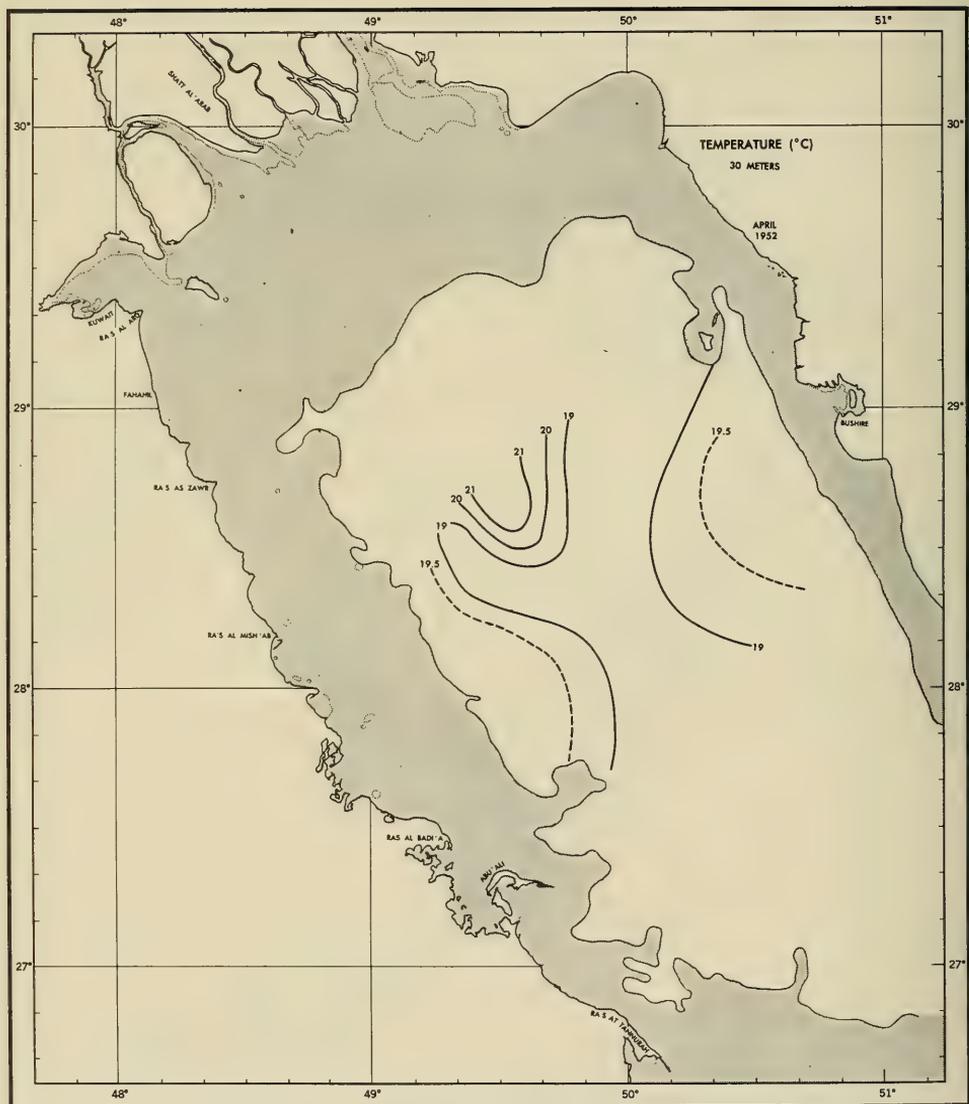


Figure VI-20. Northern Part, Persian Gulf—Temperature (°C)—  
30 meters, Apr. 1952

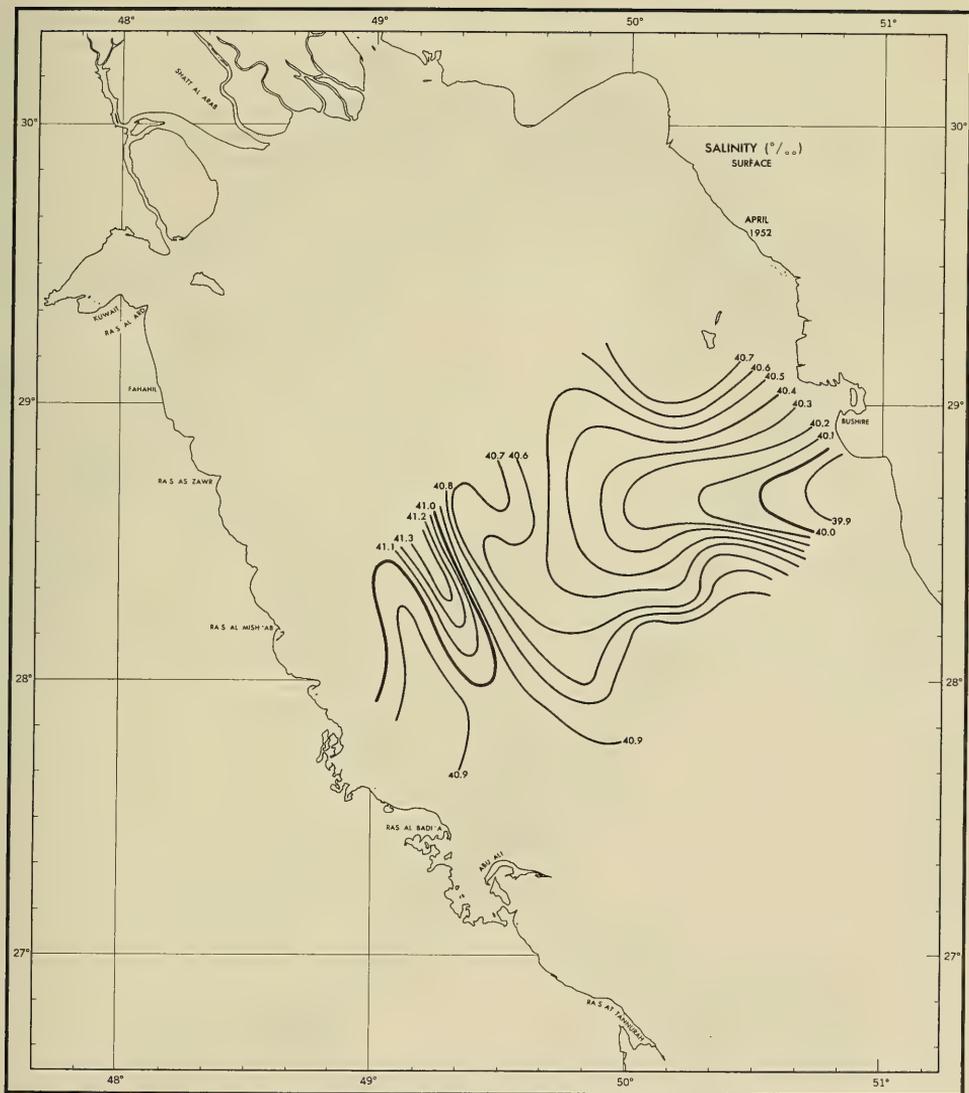


Figure VI-21. Northern Part, Persian Gulf—Salinity (‰)—  
surface, Apr. 1952

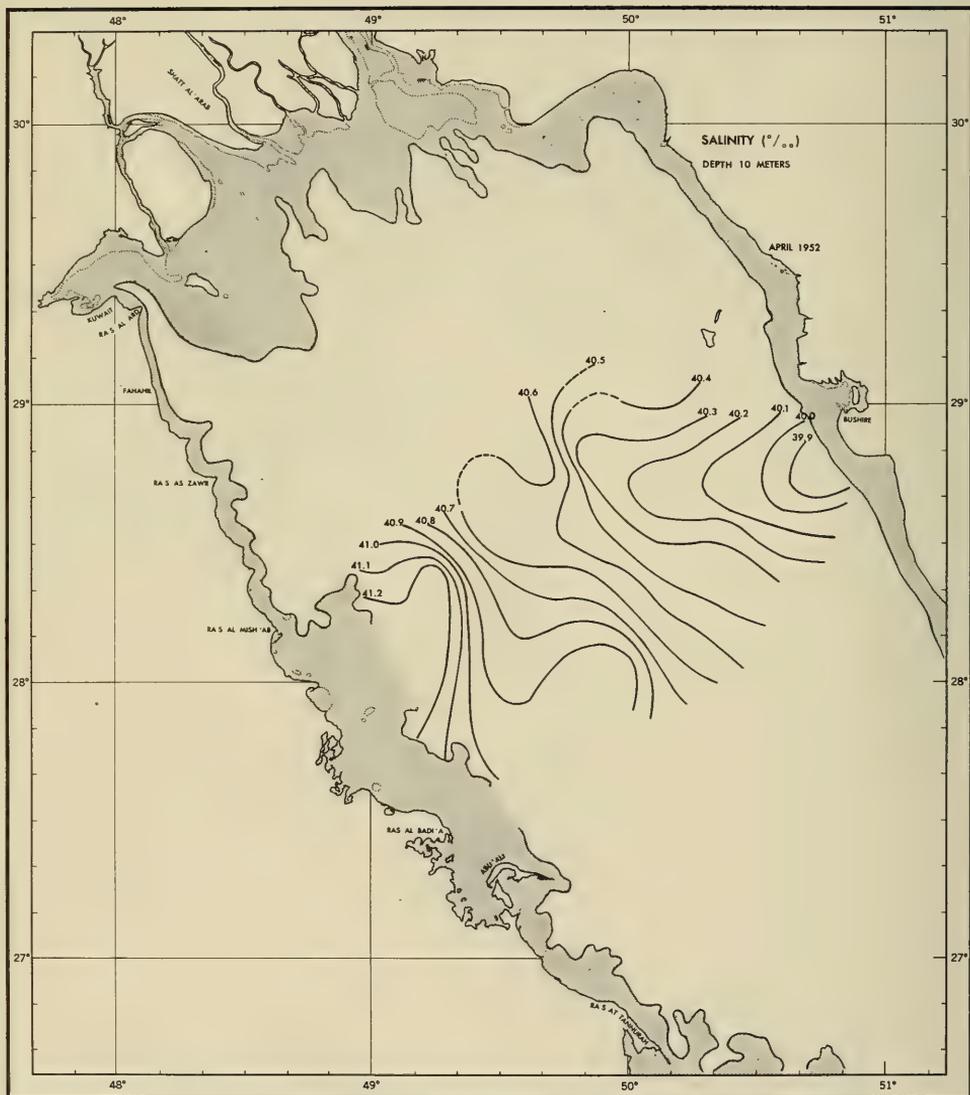


Figure VI-22. Northern Part, Persian Gulf—Salinity (‰)—  
10 meters, Apr. 1952

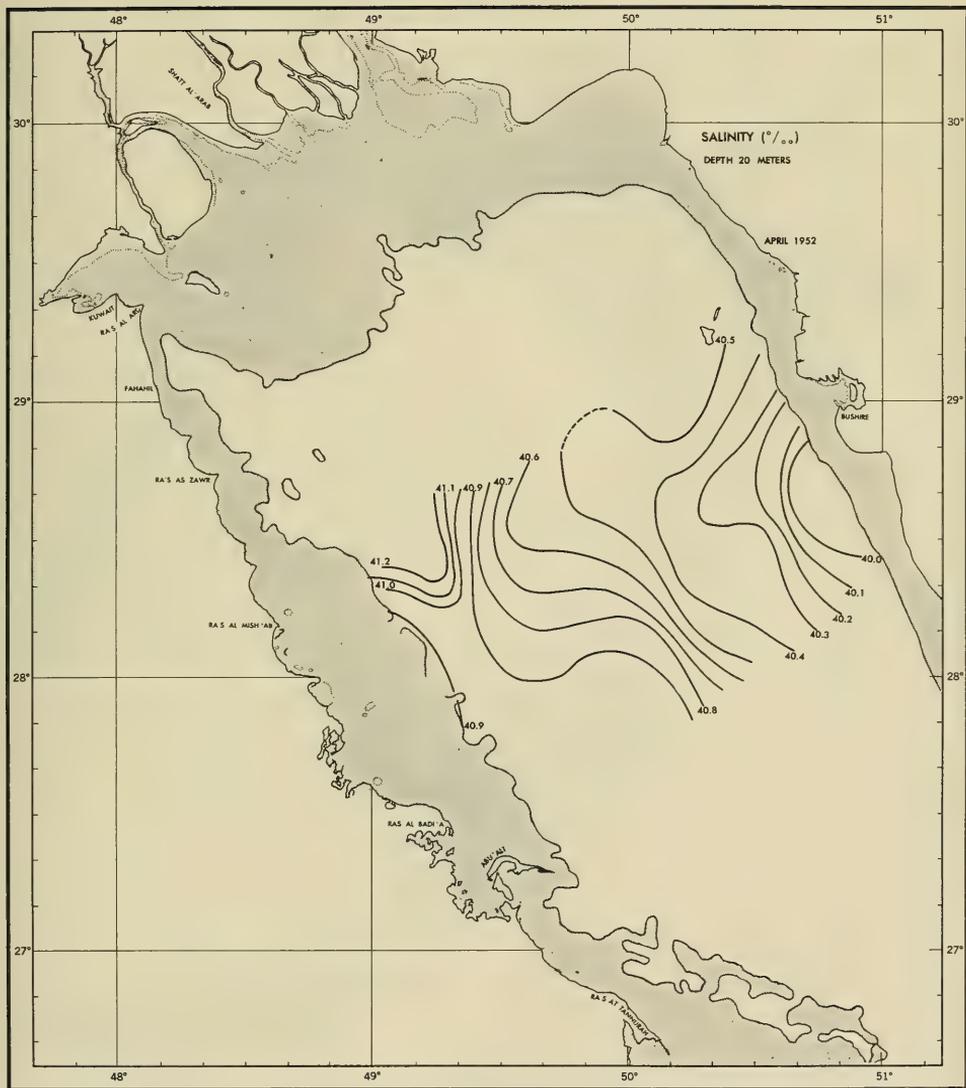


Figure VI-23. Northern Part, Persian Gulf—Salinity (‰)—  
20 meters, Apr. 1952

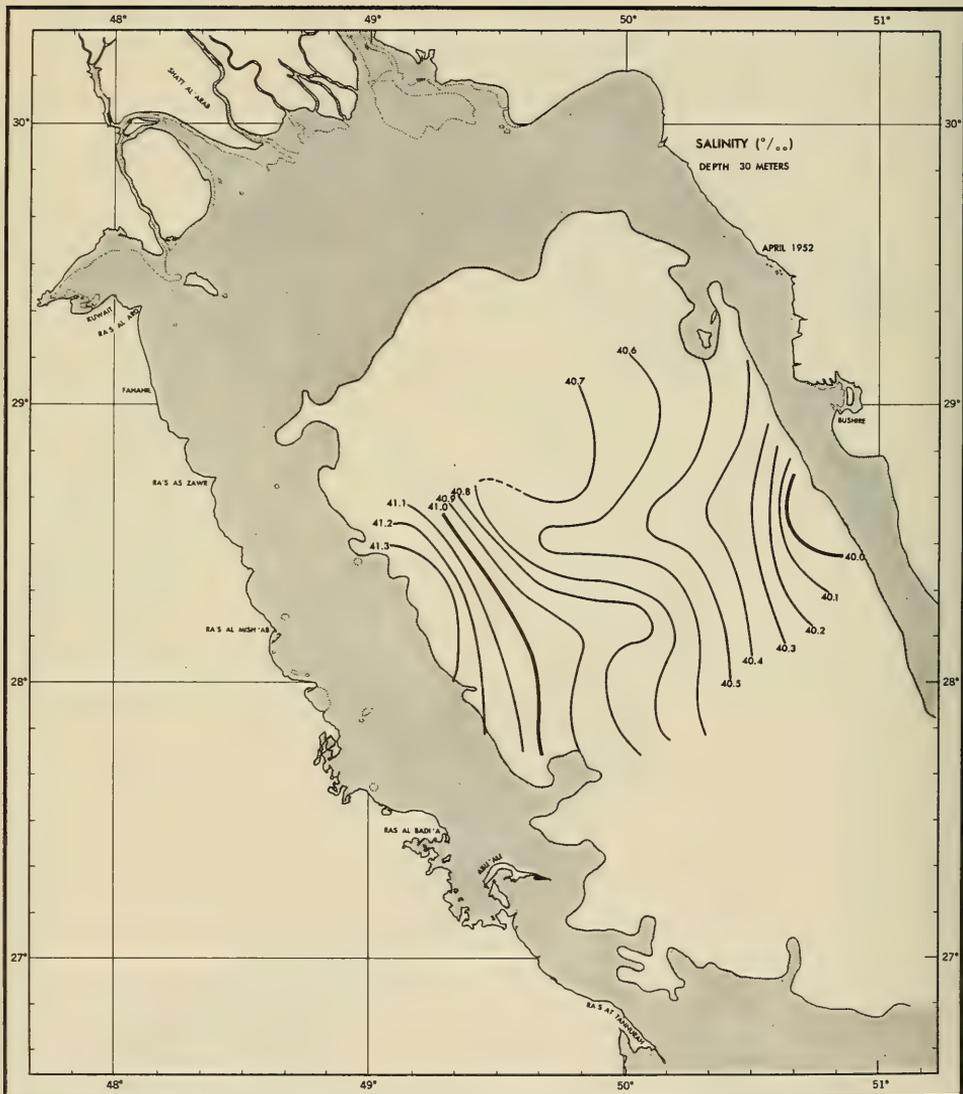


Figure VI-24. Northern Part, Persian Gulf—Salinity (‰)—  
30 meters, Apr. 1952



Figure VI-25. Northern Part, Persian Gulf—Temperature ( $^{\circ}$ C)—  
surface, Nov. 1951

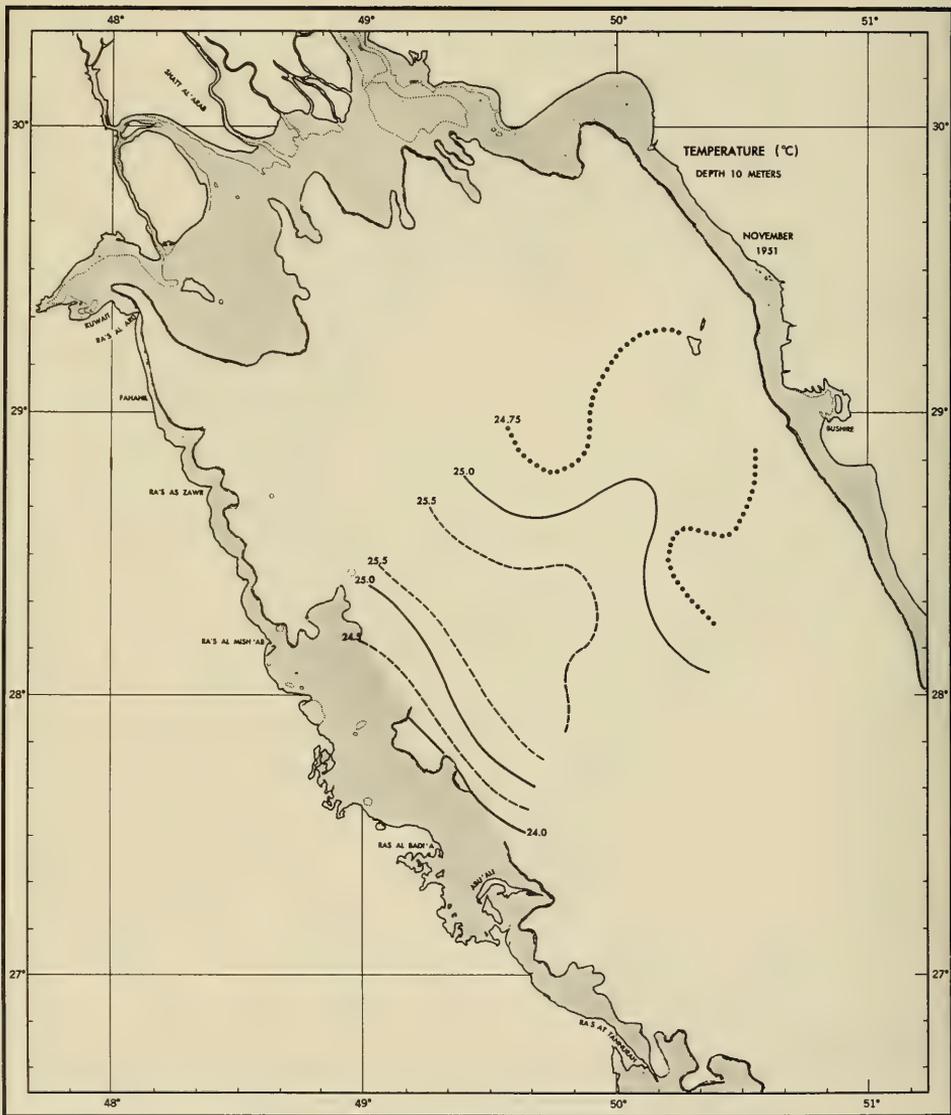


Figure VI-26. Northern Part, Persian Gulf—Temperature (°C)—  
10 meters, Nov. 1951

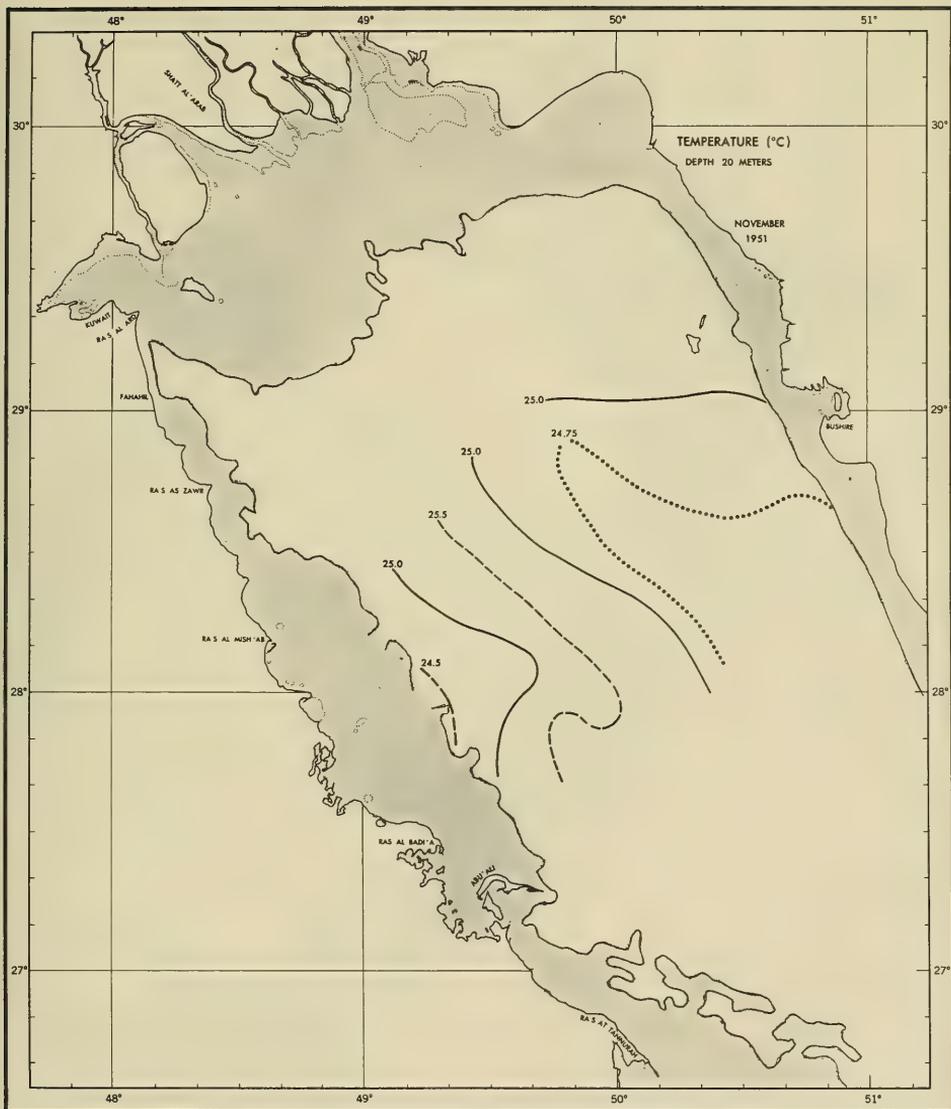


Figure VI-27. Northern Part, Persian Gulf—Temperature (°C)—  
20 meters, Nov. 1951



Figure VI-28. Northern Part, Persian Gulf—Temperature (°C)—  
30 meters, Nov. 1951

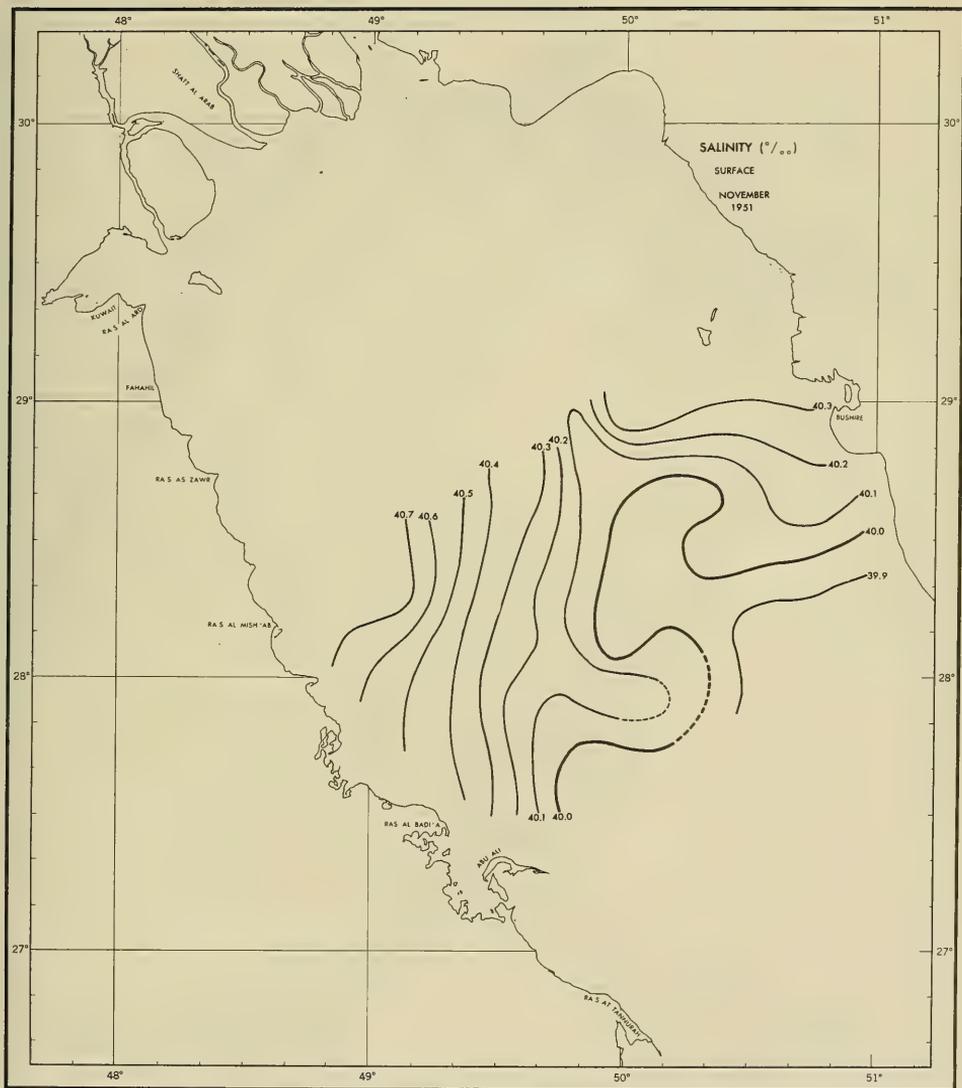


Figure VI-29. Northern Part, Persian Gulf—Salinity (‰)—  
surface, Nov. 1951

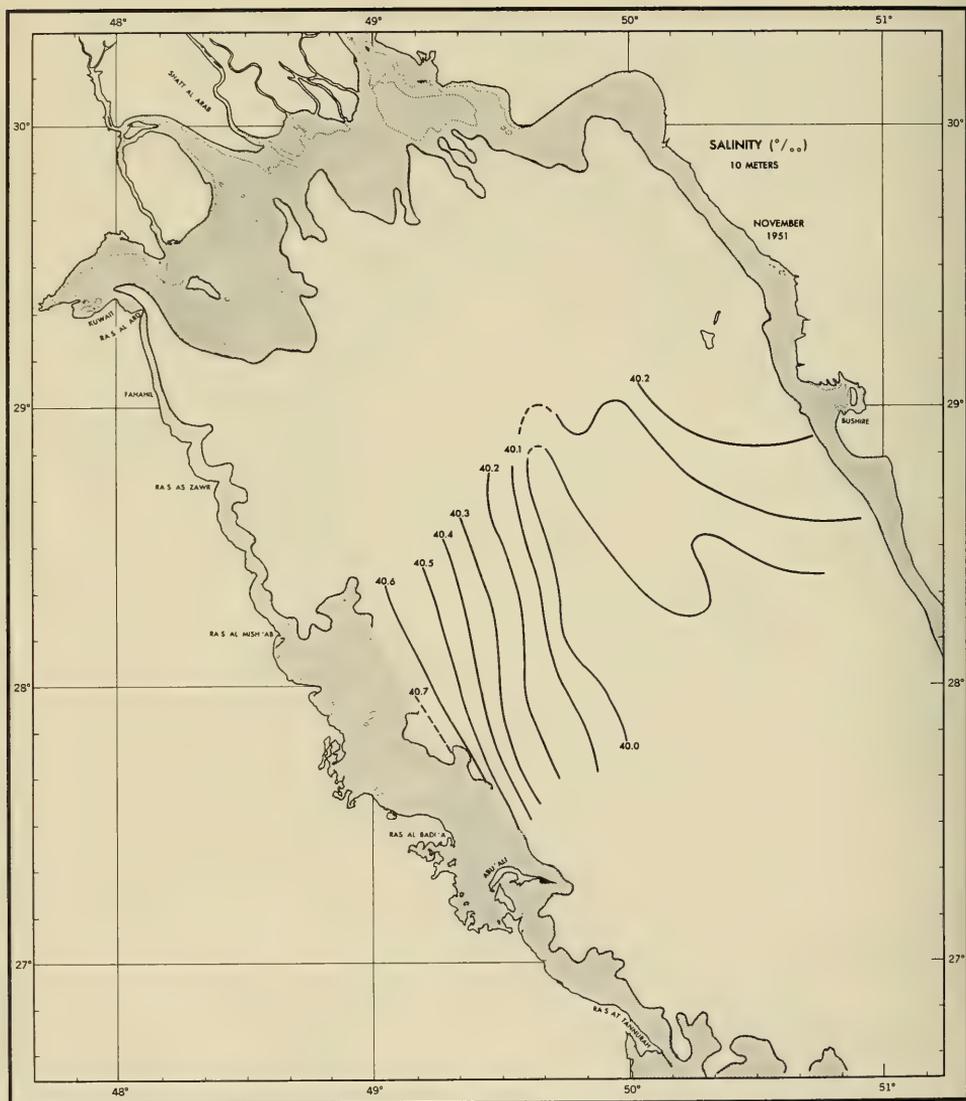


Figure VI-30. Northern Part, Persian Gulf—Salinity (‰)—  
10 meters, Nov. 1951

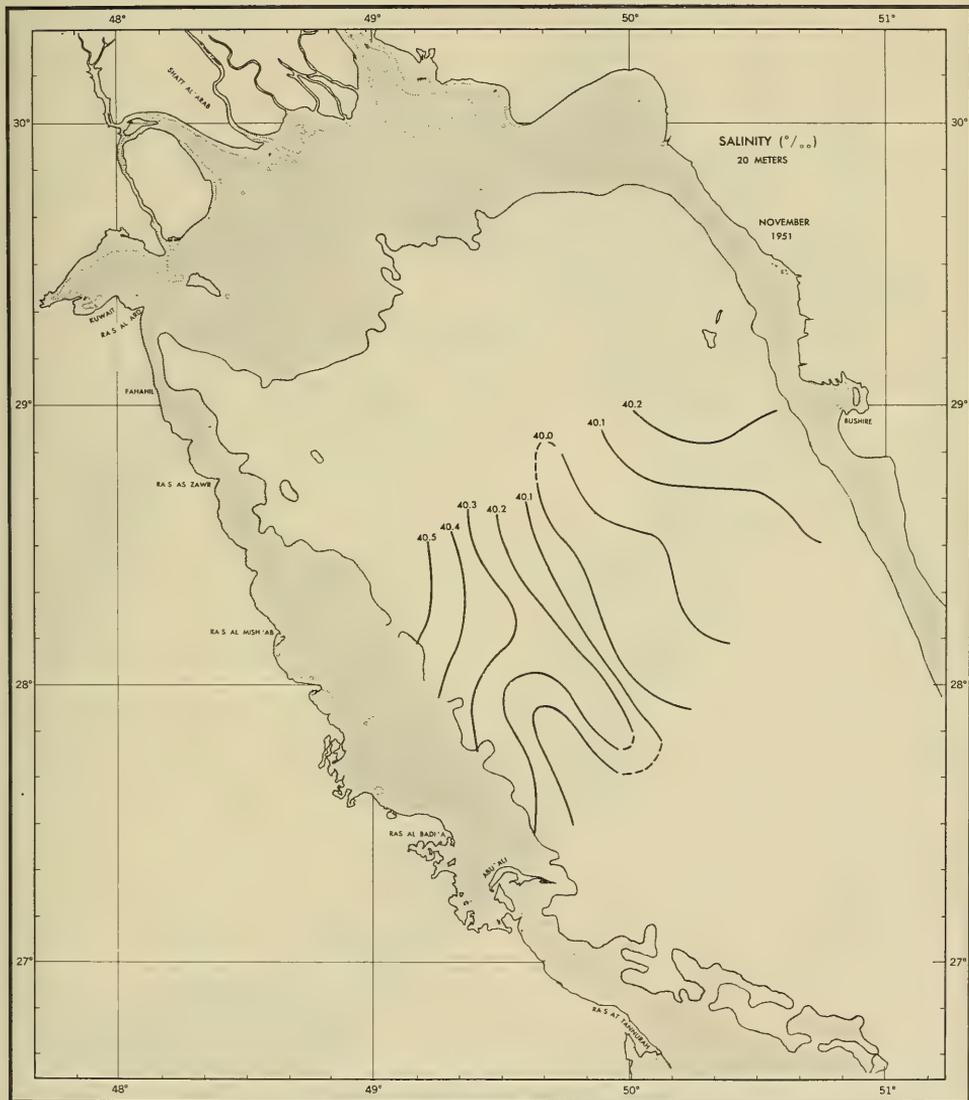


Figure VI-31. Northern Part, Persian Gulf—Salinity (‰)—  
20 meters, Nov. 1951



**APPENDIX A**  
**HISTORICAL DATA (PRE-1950)**

## INDEX OF HISTORICAL DATA (PRE-1950)

- Table 1: Surface Water Observations (Temperature and Salinity) Persian Gulf (ASSYRIA and CANADIA), 1907, Schott.
- Table 2: Surface Water Temperature ( $^{\circ}$ C) Observations, 1908, Schott.
- Table 3: Surface Water Observations (Temperature and Salinity) of the Persian Gulf (SICILIA and EKBATANA), 1910-11, Schulz.
- Table 4: Observations of the Persian Gulf (M/S RASHGOO), 1937-38, Blegvad.
- NODC Machine Listing:
- |         |   |                       |
|---------|---|-----------------------|
| 31S04 — | U. S. Naval Oceanographic Office,<br>Washington, D. C. Manuscript Data.<br>For Stations in the Persian Gulf. 15-26<br>Aug. 1948 22 Stations | CARPELLOTTI<br>MASSEY |
|---------|---|-----------------------|
- Table 5: Oceanographic Stations—Kuwait Harbor (USS JOHN BLISH), 1949, Dubach and Wehe.

## SURFACE WATER OBSERVATIONS OF THE PERSIAN GULF

DATE	LATITUDE (N)	LONGITUDE (E)	WATER TEMP. °C	SALINITY ‰	
1907		SHIP ASSYRIA			
7	FEBRUARY	24° 30'	58° 00'	22.5	36.78
8		25° 34'	57° 02'	21.0	36.26
—		25° 58'	56° 51'	23.6	36.67
9		26° 20'	55° 22'	21.2	38.12
10		26° 26'	53° 07'	21.3	40.10
11		26° 28'	51° 28'	19.2	40.01
12		26° 55'	51° 03'	19.3	40.17
13		28° 24'	50° 42'	17.0	40.43
13		28° 38'	50° 45'	17.2	40.35
13		29° 08'	50° 08'	17.2	40.53
14		29° 35'	48° 55'	15.0	37.57
5	JUNE	25° 47'	56° 53'	30.0	37.00
5		26° 45'	56° 29'	29.4	37.01
5		26° 52'	56° 16'	28.9	37.05
6		26° 18'	55° 18'	28.5	37.10
7		26° 14'	53° 40'	30.0	37.84
8		26° 32'	51° 26'	28.7	38.74
9		27° 04'	51° 05'	28.5	39.13
11		29° 45'	49° 00'	26.5	39.14
1907		SHIP CANADIA			
15	MAY	27° 05'	56° 20'	29.5	37.50
19		26° 25'	54° 04'	28.8	37.34
20		27° 15'	52° 01'	28.0	38.51
20		28° 55'	50° 45'	27.8	40.41
21		29° 36'	49° 21'	24.9	40.26
6	JUNE	29° 48'	48° 45'	28.2	26.09
9		29° 23'	49° 45'	28.0	39.79
11		27° 05'	52° 12'	28.9	37.75
11		26° 20'	54° 09'	30.4	37.46
11		26° 26'	56° 13'	30.0	37.10

Table 1: Surface Water Observations (Temperature and Salinity) Persian Gulf (ASSYRIA and CANADIA), 1907, Schott.

## SURFACE WATER TEMPERATURE

LOCATION  MONTH	PERSIAN GULF						
	EAST LONGITUDE						
	48°-49°	49°-50°	50°-51°	51°-52°	52°-53°	53°-54°	54°-55°
DECEMBER	18.4	20.3	21.6	22.6	23.3	23.5	24.2
JANUARY	16.0	17.3	19.7	20.8	21.1	21.4	22.1
FEBRUARY	15.2	16.4	18.1	19.4	19.8	20.9	21.8
MARCH	17.0	17.7	19.1	20.0	20.8	21.8	22.0
APRIL	19.8	20.7	22.0	22.6	23.2	23.8	24.1
MAY	24.5	25.0	25.5	26.0	26.3	26.9	27.0
JUNE	27.4	27.8	28.4	28.2	28.4	28.6	28.9
JULY	29.6	29.8	30.4	30.4	31.2	31.0	31.0
AUGUST	31.9	31.5	31.2	31.8	32.0	32.4	32.3
SEPTEMBER	29.8	30.6	31.1	31.7	31.8	31.9	31.8
OCTOBER	27.5	28.7	29.4	29.6	29.9	30.3	30.5
NOVEMBER	22.8	24.1	25.6	26.1	27.3	27.6	27.9
NO. OF OBS.	86	243	595	326	260	241	242
YEARLY AVERAGE	23.3	24.2	25.2	25.8	26.2	26.7	27.0
ABSOLUTE MAXIMUM	33.1	33.1	34.5	34.2	34.5	36.0	34.9
( DATE )	11 AUG.	21 AUG.	5 AUG.	17 AUG.	17 AUG.	17 AUG.	21 AUG.
ABSOLUTE MINIMUM	13.8	12.3	15.8	16.3	18.0	17.9	17.9
( DATE )	20 FEB.	22 JAN.	20 FEB.	20 FEB.	10 MAR.	12 FEB.	17 JAN.

Table 2: Surface Water Temperature (°C) Observations, 1908, Schott.

## SURFACE WATER OBSERVATIONS OF THE PERSIAN GULF

DATE		LATITUDE (N)	LONGITUDE (E)	WATER TEMP. °C	SALINITY ‰
1910		SHIP SICILIA			
22	SEPTEMBER	26° 24'	56° 07'	31.5	37.43
22		26° 13'	55° 10'	31.9	37.83
23		26° 17'	54° 13'	31.8	38.12
23		26° 30'	53° 30'	31.9	39.54
23		26° 58'	52° 35'	32.5	38.68
23		27° 03'	51° 54'	31.0	39.81
24		27° 48'	51° 04'	31.0	40.06
24			OFF BŪSHEHR (BUSHIRE)	28.0	40.99
25		29° 20'	49° 54'	29.0	39.96
25		29° 42'	49° 07'	29.5	40.50
8	OCTOBER	27° 40'	50° 45'	29.5	39.67
10		26° 16'	52° 24'	29.6	39.32
13		26° 22'	56° 17'	31.0	38.22
1911		SHIP EKBATANA			
4	MAY	28° 08'	50° 52'	20.8	39.51
4		28° 15'	50° 52'	20.8	39.88
13		29° 15'	50° 03'	25.5	39.88
18		24° 56'	58° 04'	29.8	36.55
31	AUGUST	25° 26'	57° 19'	27.4	37.16
1	SEPTEMBER	27° 08'	56° 18'	32.8	38.04
2		26° 18'	55° 13'	30.5	37.77
3		26° 34'	52° 23'	32.0	39.11
5		26° 29'	50° 52'	33.0	39.58
6		28° 20'	50° 52'	31.5	39.14
8		29° 35'	49° 18'	31.0	39.58
17		27° 20'	52° 01'	30.4	39.27
18		26° 23'	54° 00'	30.0	39.23
18		26° 27'	56° 21'	30.0	37.77
19		24° 54'	57° 41'	28.8	37.07

Table 3: Surface Water Observations (Temperature and Salinity) of the Persian Gulf (SICILIA and EKBATANA), 1910-11, Schulz.

## OBSERVATIONS OF THE PERSIAN GULF

SHIP: M/S RASHGOO

DATE	STATION NUMBER	DEPTH (METERS)	WATER TEMP. °C	SALINITY ‰
4 MARCH 1937	4	SFC (0)	18.6	40.8
5	6	SFC (0)	17.5	41.0
11	9	SFC (0)	18.1	40.6
12	12	SFC (0)	19.1	40.6
13	15	SFC (0)	17.9	40.8
14	17	SFC (0)	18.9	41.0
26	27	SFC (0)	22.7	40.2
		20	19.4	41.0
		41	18.5	41.1
27	28	SFC (0)	21.5	40.0
		10	20.8	40.1
		20	19.8	40.4
		30	18.8	40.6
		50	18.2	40.8
		71	18.2	40.9
27	29	SFC (0)	21.3	40.3
		22	20.5	40.9
30	31	SFC (0)	22.1	40.4
		10	21.4	40.2
		30	20.5	40.4
		32	19.7	40.5
31	34	SFC (0)	22.2	39.9
5 APRIL	36	SFC (0)	22.8	39.3
12	47	SFC (0)	23.7	37.3
17	51	SFC (0)	23.0	37.3
22	58	SFC (0)	24.7	37.2
9 FEBRUARY 1938	75	SFC (0)	23.0	40.0
14	78	SFC (0)	18.6	41.2
16	79	SFC (0)	14.9	41.2
20 MARCH	BAHREIN	SFC (0)	18.8	42.6
9 APRIL	N. E. OF QAIS			
	26° 38' N			
	54° 12' E	SFC (0)	23.2	37.9
		10	23.0	38.1
		28	22.8	38.3

Table 4: Observations of the Persian Gulf (M/S RASHGOO), 1937-38, Blegvad.

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARKSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					CRUISE NUMBER	STATION NUMBER	10"		1"	MONTH			DAY	HR. 1/10	CRUISE NUMBER			
31	S04	CP	2523 N	051415E	103	51	08	17	040	1948		0007	00					0001	
WATER		WIND		BAROMETER		AIR TEMP. °C		HIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS							
COLOR CODE		TRANS (m)	DIR	SPEED OR FORCE	BAROMETER (mbs)		DRY BULB	WET BULB	HIS. CODE		ADD'L OBS.	SPECIAL OBSERVATIONS							
MESSINGER HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH			
	1	STD	0000	3390	4090	2478	0031803	0000	15596										
	1	OBS	0000	339	4090	2478			15596										
	2	OBS	0007	350 P	4021 P	2384 Q													

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARKSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					CRUISE NUMBER	STATION NUMBER	10"		1"	MONTH			DAY	HR. 1/10	CRUISE NUMBER			
31	S04	CP	26055N	05124 E	103	61	08	20	055	1948		0007	00				0002		
WATER		WIND		BAROMETER		AIR TEMP. °C		HIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS							
COLOR CODE		TRANS (m)	DIR	SPEED OR FORCE	BAROMETER (mbs)		DRY BULB	WET BULB	HIS. CODE		ADD'L OBS.	SPECIAL OBSERVATIONS							
MESSINGER HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH			
		OBS	0007	339	4095	2481			15598										

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARKSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					CRUISE NUMBER	STATION NUMBER	10"		1"	MONTH			DAY	HR. 1/10	CRUISE NUMBER			
31	S04	CP	2616 N	05033 E	103	60	08	26	118	1948		0015	00				0003		
WATER		WIND		BAROMETER		AIR TEMP. °C		HIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS							
COLOR CODE		TRANS (m)	DIR	SPEED OR FORCE	BAROMETER (mbs)		DRY BULB	WET BULB	HIS. CODE		ADD'L OBS.	SPECIAL OBSERVATIONS							
MESSINGER HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH			
	1	STD	0000	3440	4241	2572	0022777	0000	15621										
	1	OBS	0000	344	4241	2572			15621										
		STD	0010	3440															
	2	OBS	0015	344	4318	2631			15631										

REFERENCE COUNTRY IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
				10°	1'	MONTH	DAY		HR. 1/10	CRUISE NUMBER			STATION NUMBER	DIR.	HGT		PER	SEA AMT	
31	S04	CP	25510N	052010E	103	52	08 16 24 0	1948				00							0004
		WATER		WIND		AIR TEMP. °C													
		COLOR CODE		TRANS. (m)	DIR.	SPEED OR FORCE	BAROMETER (mba)	DRY BULB	WET BULB	VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS							
		06																	
MESSAGE NO.	CAST TIME 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH		
		1	STD	0000	3400	3994	2402	0039038	0000	15888									
		1	OBS	0000	340	3994	2402												
		1	OBS	0006			4021												

REFERENCE COUNTRY IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
				10°	1'	MONTH	DAY		HR. 1/10	CRUISE NUMBER			STATION NUMBER	DIR.	HGT		PER	SEA AMT	
31	S04	CP	26055N	051240E	103	61	08 20 05 5	1948			0007	00							0005
		WATER		WIND		AIR TEMP. °C													
		COLOR CODE		TRANS. (m)	DIR.	SPEED OR FORCE	BAROMETER (mba)	DRY BULB	WET BULB	VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS							
		09																	
MESSAGE NO.	CAST TIME 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH		
		1	STD	0000	3390														
		1	OBS	0000	339														
		1	OBS	0006			4095												

REFERENCE COUNTRY IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
				10°	1'	MONTH	DAY		HR. 1/10	CRUISE NUMBER			STATION NUMBER	DIR.	HGT		PER	SEA AMT	
31	S04	MY	2913 N	059380E	103	39	08 15 13 0	1948			3274	01							0006
		WATER		WIND		AIR TEMP. °C													
		COLOR CODE		TRANS. (m)	DIR.	SPEED OR FORCE	BAROMETER (mba)	DRY BULB	WET BULB	VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS							
		32																	
MESSAGE NO.	CAST TIME 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ D DYN. AL X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH		
		1	STD	0000	3230	3694	2239	0054561	0000	15525									
		1	OBS	0000	323	3694	2239												
			STD	0010	3156	3697	2268	0051855	0053	15512									
			STD	0020	3010	3700	2321	0046799	0103	15485									
		1	OBS	0020	301	3700	2321			15485									
			STD	0030	2661	3662	2408	0038527	0145	15408									
			STD	0050	2140	3608	2522	0027723	0211	15279									
		1	OBS	0050	214	3608	2522			15279									
			STD	0075	2005	3604	2556	0024619	0277	15247									
			STD	0100	1870	3600	2588	0021655	0335	15213									
		1	OBS	0100	187	3600	2588			15213									

REFERENCE COUNTRY IDENTITY CODE NUMBER	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	WIND DIRECTION IN DEGREES	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT.	NODC STATION NUMBER
						10"	1"	10"		10"	1"			10"	1"	CRUISE NUMBER			
31	S04	MY	25340N	057045E	103	57	08	16	030	1948			0205	02					0007

WATER		WIND		AIR TEMP. °C		VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	BAROMETER (mbs)	DRY BULB			

MESSINER TIME HR	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH
		STD	0000	3180	3655	2228	0055639	0000	15511							
1	OBS	0000		318	3655	2228			15511							
		STD	0010	2805	3643	2347	0044252	0050	15434							
		STD	0020	2500	3635	2438	0035641	0090	15367							
1	OBS	0020		250	3635	2438			15367							
		STD	0030	2302	3635	2497	0030045	0123	15321							
		STD	0050	2010	3636	2579	0022339	0175	15248							
1	OBS	0050		201	3636	2579			15248							
		STD	0075	1945	3637	2597	0020727	0229	15235							
		STD	0100	1880	3638	2614	0019146	0279	15221							
1	OBS	0100		188	3638	2614			15221							
		STD	0125		3628											
		STD	0150		3611											
		STD	0200		3554											
1	OBS	0203			3550											

REFERENCE COUNTRY IDENTITY CODE NUMBER	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	WIND DIRECTION IN DEGREES	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT.	NODC STATION NUMBER
						10"	1"	10"		10"	1"			10"	1"	CRUISE NUMBER			
31	S04	MY	26045N	056470E	103	66	08	16	105	1948			0080	01					0008

WATER		WIND		AIR TEMP. °C		VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	BAROMETER (mbs)	DRY BULB			

MESSINER TIME HR	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH
		STD	0000	3250	3689	2228	0055611	0000	15528							
1	OBS	0000		325	3689	2228			15528							
		STD	0010	3183	3695	2256	0052955	0054	15517							
		STD	0020	3040	3700	2311	0047791	0105	15491							
1	OBS	0020		304	3700	2311			15491							
		STD	0030	2620	3667	2425	0036930	0147	15399							
		STD	0050	2160	3629	2533	0026735	0211	15287							
1	OBS	0050		216	3629	2533			15287							
		STD	0075		3636											
1	OBS	0080		242	P 3644	2469 Q										

REFERENCE COUNTRY IDENTITY CODE NUMBER	SHIP CODE	LATITUDE ° ' /10	LONGITUDE ° ' /10	WIND DIRECTION IN DEGREES	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT.	NODC STATION NUMBER
						10"	1"	10"		10"	1"			10"	1"	CRUISE NUMBER			
31	S04	MY	26165N	056340E	103	66	08	16	140	1948			0123	01					0009

WATER		WIND		AIR TEMP. °C		VIS. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	BAROMETER (mbs)	DRY BULB			

MESSINER TIME HR	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	Σ Δ DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SI O <sub>2</sub> -Si μg-at/l	pH
		STD	0000	3440	3689	2158	0062332	0000	15564							
1	OBS	0000		344	3689	2158			15564							
		STD	0010	3365	3693	2181	0060159	0061	15551							
		STD	0020	3210	3676	2233	0055252	0119	15522							
1	OBS	0020		321	3676	2233			15522							
		STD	0030	2796	3705	2397	0039605	0166	15442							
		STD	0050	2270	3783	2619	0018598	0225	15333							
1	OBS	0050		227	3783	2619			15333							
		STD	0075	2364	3921	2696	0011389	0262	15376							
1	OBS	0090		242	4026	2759			15404							

REFERENCE COUNTRY CODE	SHIP IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN NUMBER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER											
						10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HGT				PER	SEA	AMT								
31	504	MY	26250N	056315E	103	66	08	16	202	1948									0010												
																			WATER		WIND		AIR TEMP. °C		SPECIAL						
																			COLOR	TRANS (m)	DIR	SPEED KTS	BAROMETER (mbs)	DRY BULB	WET BULB	WV. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS			
																			14												
MESSNGR RE 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY - X10 <sup>3</sup>	S & D DYN. M. X 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>2</sub> -Si µg-at/l	pH															
1		STD	0000	3230	3748	2280	0050690	0000	15530																						
		OBS	0000	323	3748	2280			15530																						
		STD	0010	3205	3787	2318	0047079	0049	15591																						
		STD	0020	3180	3824	2355	0043618	0094	15592																						
1		OBS	0020	318	3824	2355			15592																						
		STD	0030	2880	3860	2486	0031149	0132	15477																						
		STD	0050	2440	3920	2672	0013531	0176	15390																						
1		OBS	0050	244	3920	2672			15390																						
		STD	0075	2347	3968	2737	0007534	0203	15277																						
		STD	0100	2280	4006	2785	0003033	0216	15369																						
1		OBS	0100	228	4006	2785			15369																						
		STD	0125	2280	4033	2806	0001200	0221	15377																						
		STD	0150	2280	4050	2819	0000087	0223	15383																						
		STD	0200	2280	4053	2821	0000090	0223	15391																						
1		OBS	0200	228	4053	2821			15391																						

REFERENCE COUNTRY CODE	SHIP IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN NUMBER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER											
						10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HGT				PER	SEA	AMT								
31	504	MY	26310N	055510E	103	65	08	17	070	1948									0011												
																			WATER		WIND		AIR TEMP. °C		SPECIAL						
																			COLOR	TRANS (m)	DIR	SPEED KTS	BAROMETER (mbs)	DRY BULB	WET BULB	WV. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS			
																			14												
MESSNGR RE 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY - X10 <sup>3</sup>	S & D DYN. M. X 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>2</sub> -Si µg-at/l	pH															
1		STD	0000	3310	3748	2250	0053476	0000	15546																						
		OBS	0000	331	3748	2250			15546																						
		STD	0010	3111	3741	2317	0047179	0050	15508																						
		STD	0020	2960	3734	2364	0042724	0095	15478																						
1		OBS	0020	296	3734	2364			15478																						
		STD	0030	2856	3768	2425	0036981	0135	15462																						
		STD	0050	2790	3916	2558	0024370	0196	15468																						
1		OBS	0050	279	3916	2558			15468																						

REFERENCE COUNTRY CODE	SHIP IDENTITY NUMBER	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN NUMBER	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER											
						10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HGT				PER	SEA	AMT								
31	504	MY	26165N	055455E	103	65	08	17	085	1948									0012												
																			WATER		WIND		AIR TEMP. °C		SPECIAL						
																			COLOR	TRANS (m)	DIR	SPEED KTS	BAROMETER (mbs)	DRY BULB	WET BULB	WV. CODE	ADD'L OBS.	SPECIAL OBSERVATIONS			
																			22												
MESSNGR RE 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S %	SIGMA-T	SPECIFIC VOLUME ANOMALY - X10 <sup>3</sup>	S & D DYN. M. X 10 <sup>2</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>2</sub> -Si µg-at/l	pH															
1		STD	0000	3280	3732	2249	0053572	0000	15538																						
		OBS	0000	328	3732	2249			15538																						
		STD	0010	3066	3754	2342	0044738	0049	15500																						
		STD	0020	2910	3775	2412	0038163	0091	15472																						
1		OBS	0020	291	3775	2412			15472																						
		STD	0030	2812	3796	2460	0033578	0126	15456																						
		STD	0050	2790	3835	2497	0030178	0190	15459																						
1		OBS	0050	279	3835	2497			15459																						

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MUT. INDICATOR	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
COUNTRY	IDENTITY NUMBER					10"	1"	MONTH	DAY	HR. 1/10	CRUISE NUMBER		STATION NUMBER	DIR.			HGT	PER	SEA AMT.		TYPE	AMT.	
31	S04	MY	26050N	055420E		103	65	08	17	100	1948			0068	00							0013	
		WATER		WIND		AIR TEMP. °C																	
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		WIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
								24															

MESSNGR. TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3300	3716	2230	0055419	0000	15540							
		OBS	0000	330	3716	2230			15540							
		STD	0010		3720											
		STD	0020		3723											
	1	OBS	0020		3723											
		STD	0030		3779											
		STD	0050		3994											
	1	OBS	0050		3994											

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MUT. INDICATOR	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
COUNTRY	IDENTITY NUMBER					10"	1"	MONTH	DAY	HR. 1/10	CRUISE NUMBER		STATION NUMBER	DIR.			HGT	PER	SEA AMT.		TYPE	AMT.	
31	S04	MY	26025N	055115E		103	65	08	17	136	1948			0095	00							0014	
		WATER		WIND		AIR TEMP. °C																	
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		WIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
								14															

MESSNGR. TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3380	3722	2205	0057815	0000	15556							
		OBS	0000	338	3722	2205			15556							
		STD	0010	3103	3765	2338	0045189	0052	15509							
		STD	0020	2890	3817	2450	0034508	0091	15473							
	1	OBS	0020	289	3817	2450			15473							
		STD	0030	2742	3877	2544	0025577	0121	15450							
		STD	0050	2640	4023	2688	0012061	0159	15447							
	1	OBS	0050	264	4023	2688			15447							

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MUT. INDICATOR	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER
COUNTRY	IDENTITY NUMBER					10"	1"	MONTH	DAY	HR. 1/10	CRUISE NUMBER		STATION NUMBER	DIR.			HGT	PER	SEA AMT.		TYPE	AMT.	
31	S04	MY	26350N	052400E		103	62	08	18	110	1948			0069	00							0015	
		WATER		WIND		AIR TEMP. °C																	
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		WIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
								18															

MESSNGR. TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	Σ Δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>2</sub> -N μg-at/l	NO <sub>3</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3430	3875	2301	0048641	0000	15581							
		OBS	0000	343	3875	2301			15581							
		STD	0010	3186	3934	2435	0035895	0042	15543							
		STD	0020	2930	3979	2559	0024184	0072	15499							
	1	OBS	0020	293	3979	2559			15499							
		STD	0030	2662	4011	2672	0013500	0091	15447							
		STD	0050	2090	4034	2861	-0004341	0100	15316							
	1	OBS	0050	209	4034	2861			15316							

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
COUNTRY CODE	IDENTITY NUMBER					10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR				HGT	PER
31	S04	MY	27130N	052400E	103	72	08	18	145	1948		0069	00					0016			
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	
		13																			
MESSNGER TIME 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 <sup>3</sup>	Σ δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>4</sub> -Si µg-at/l	pH					
1	STD	0000	0000	3460	3803	2236	0054883	0000	15579												
	OBS	0000	0000	346	3803	2236			15579												
	STD	0010	0010		3811																
	STD	0020	0020		3819																
1	OBS	0020	0020		3819																
	STD	0030	0030		3868																
1	OBS	0040	0040		3945																

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
COUNTRY CODE	IDENTITY NUMBER					10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR				HGT	PER
31	S04	MY	27125N	052070E	103	72	08	19	015	1948		0051	00				0017				
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	
		17																			
MESSNGER TIME 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 <sup>3</sup>	Σ δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>4</sub> -Si µg-at/l	pH					
1	STD	0000	0000	3460	3842	2265	0052088	0000	15583												
	OBS	0000	0000	346	3842	2265			15583												
	STD	0010	0010	3195	3866	2381	0041075	0047	15537												
	STD	0020	0020	2930	3893	2494	0030349	0082	15489												
1	OBS	0020	0020	293	3893	2494			15489												
	STD	0030	0030	2664	3923	2604	0019876	0107	15438												
	STD	0050	0050	2130	3992	2818	-0000253	0127	15322												
1	OBS	0050	0050	213	3992	2818			15322												

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
COUNTRY CODE	IDENTITY NUMBER					10 <sup>1</sup>	1 <sup>1</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR				HGT	PER
31	S04	MY	27360N	051255E	103	71	08	19	080	1948		0035	00				0018				
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OF FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	
		17																			
MESSNGER TIME 1/10	CST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10 <sup>3</sup>	Σ δ D DYN. AL. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SiO <sub>4</sub> -Si µg-at/l	pH					
1	STD	0000	0000	3400	3795	2252	0053297	0000	15567												
	OBS	0000	0000	340	3795	2252			15567												
	STD	0020	0020		3855																
1	OBS	0020	0020		3855																

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	HAUSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE		CLOUD CODES		NODIC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					10 <sup>th</sup>	1 <sup>st</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HST	PER	SEA AMT	TYPE	
31	S04	MY	27115N	051015E	103	71	08	19	110	1948			0064	00							0019
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	
								26													

MESSINGER TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	# & Δ D. DYN. Δ X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>3</sub> -N μg-at/l	NO <sub>2</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3350	3875	2331	0045785	0000	15566							
		OBS	0000	335	3875	2331			15566							
		STD	0010	3126	3908	2437	0035716	0041	15529							
		STD	0020	2890	3947	2548	0025187	0071	15487							
	1	OBS	0020	289	3947	2548			15487							
		STD	0030	2642	3993	2664	0014183	0091	15441							
		STD	0050	2110	4106	2910	-0009004	0096	15330							
	1	OBS	0050	211	4106	2910			15330							

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	HAUSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE		CLOUD CODES		NODIC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					10 <sup>th</sup>	1 <sup>st</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HST	PER	SEA AMT	TYPE	
31	S04	MY	28130N	050485E	103	80	08	19	190	1948			0059	00							0020
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	

MESSINGER TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	# & Δ D. DYN. Δ X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>3</sub> -N μg-at/l	NO <sub>2</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3420	3831	2272	0051434	0000	15575							
		OBS	0000	342	3831	2272			15575							
		STD	0010		3831											
		STD	0020		3831											
	1	OBS	0020		3831											
		STD	0030		3881											
		STD	0050		4082											
	1	OBS	0050		4082											

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	HAUSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE		CLOUD CODES		NODIC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					10 <sup>th</sup>	1 <sup>st</sup>	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR	HST	PER	SEA AMT	TYPE	
31	S04	MY	28020N	050140E	103	80	08	19	217	1948			0057	00							0021
		WATER		WIND		AIR TEMP. °C															
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		BAROMETER (mba)		DRY BULB		WET BULB		VIS. CODE		ADD'L OBS.		SPECIAL OBSERVATIONS	

MESSINGER TIME 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY - X 10 <sup>3</sup>	# & Δ D. DYN. Δ X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>3</sub> -N μg-at/l	NO <sub>2</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH
	1	STD	0000	3360	3869	2323	0046570	0000	15567							
		OBS	0000	336	3869	2323			15567							
		STD	0010	3165	3934	2443	0035177	0041	15539							
		STD	0020	2940	3988	2562	0023864	0070	15502							
	1	OBS	0020	294	3988	2562			15502							
		STD	0030	2684	4031	2680	0012738	0089	15454							
		STD	0050	2080	4082	2900	-0008067	0093	15319							
	1	OBS	0050	208	4082	2900			15319							

REFERENCE		SHIP	LATITUDE	LONGITUDE	HEIGHT METERS	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS				WEATHER		CLOUD CODES		NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER	CODE	" ' / 10	" ' / 10		10"	1"	MONTH	DAY	HR. / 10	YEAR	CRUISE NUMBER	STATION NUMBER			DIR.	HGT.	PER.	SEA AMT.	WIND CODE	TYPE	AMT.			

31	S04	MY	2559 N	05403 E	103	54	08	17	219	1948				00											0022								
WATER		WIND		AIR TEMP. °C			SPECIAL OBSERVATIONS																										
COLOR CODE		TRANS. (m)		SPEED OR FORCE		BAROMETER (mb)		DRY BULB		WET BULB		REL. HUM.		SPEC. HUM.		WIND DIRECTION		WIND SPEED		WAVE DIRECTION		WAVE PERIOD		WAVE HEIGHT		WAVE PERIOD		WAVE HEIGHT		WAVE PERIOD		WAVE HEIGHT	

MISSIONER TIME	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	S.V.D. DYN. H. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH
		STD	0000	3390	3947	2370	0042048	0000	15581							
1		OBS	0000	339	3947	2370			15581							
		STD	0010	3128	3964	2478	0031771	0037	15535							
		STD	0020	2880	3979	2576	0022572	0064	15488							
1		OBS	0020	288	3979	2576			15488							
		STD	0030	2646	3992	2662	0014376	0083	15441							
		STD	0050	2220	4014	2809	0000588	0098	15347							
1		OBS	0050	222	4014	2809			15347							

OCEANOGRAPHIC STATIONS - Kuwait Harbor

Date: 23-24 February 1949

Ship: U.S.S. JOHN BLISH

Station No.	Date	Time (LST)	Depth (m.)	Temp. (°F.)	Sal. (‰)
1	2/23	0903	Surf.	56.1*	40.21
			12	55.29	40.28
2	2/23	1020	Surf.	56.8*	M.**
			11	54.45	40.93
3	2/23	1214	Surf.	56.8*	41.20
			2	55.86	41.17
4	2/23	1410	Surf.	57.2*	M.**
			4	55.81	M.**
5	2/23	1635	Surf.	58.1*	40.53
			3.5	55.84	40.51
6	2/24	0824	Surf.	56.5*	40.16
			5.5	56.33	M.**
7	2/24	1112	Surf.	58.63	40.11
			17	55.96	40.10
8	2/24	1209	Surf.	59.23	40.29
			3.5	56.60	40.22
9	2/24	1242	Surf.	59.43	39.96
			5	56.69	40.17
10	2/24	1325	Surf.	59.59	40.06
			8	56.53	M.**
11	2/24	1336	Surf.	57.39	M.**
			8	56.22	40.06
12	2/24	1420	Surf.	58.32	39.52
			4	56.40	39.90
13	2/24	1457	Surf.	57.73	39.32
			3	55.77	39.59
14	2/24	1531	Surf.	57.98	M.**
			2.5	55.43	38.20
15	2/24	1558	Surf.	57.86	M.**
			2.5	56.69	37.89
16	2/24	1625	Surf.	57.91	37.97
			17	57.50	37.77

Note:

\* Bucket thermometer used, read only to tenths °F.

\*\* Sample bottles lost or broken, values missing.

23 Feb. - Wind: B. F. 2  
 Sea: Code 2  
 Weather: 00/01

24 Feb. - Wind: B. F. 1  
 Sea: Code 2  
 Weather: 02

Table 5: Oceanographic Stations—Kuwait Harbor (USS JOHN BLISH), 1949, Dubach and Wehe.



**APPENDIX B**  
**RECENT OBSERVATIONS (POST-1950)**

## INDEX OF RECENT OBSERVATIONS (POST-1950)

NODC Machine Listing:

31382 —	U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data. 4 Dec.—20 April 1950 74 Stations	MAURY STALLION ALLEGHENY
---------	---	--------------------------------

Table 6: Surface and Subsurface Salinity Observations (USS STALLION and MAURY), 1951, U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data.

NODC Machine Listings:

31505 —	U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data. 9, 12, 15, 17, 23 Feb. 1951. 5 Stations	MAURY & others
31496 —	U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data. Cruise A, B, C, 24-25 Nov. 1951, 20-21 Feb. 1952, 9-10 April, 1952. 51 Stations	ALLEGHENY
31658 —	U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data. 16 Feb.—5 Mar. 1960, 55 Stations	REQUISITE
31865 —	U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data. For Stations in the Persian Gulf and Arabian Sea. 4 Jan.—31 Mar. 1961 206 Stations	REQUISITE

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0001	12	04	1949	09	29° 06' N	048° 10' E	0018	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
14	14							02				3				

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>i</sub> ↓
STD	0000	21 04	40 58	28 75	0 000		
OBS	0000	21 04	40 58	28 75			
STD	0010	21 06	40 53	28 71	0 006-		
OBS	0010	21 06	40 53	28 71			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0002	12	05	1949	06	29° 06' N	048° 10' E	0018	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	14							01				3				

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>i</sub> ↓
STD	0000	20 95	40 70	28 87	0 000		
OBS	0000	20 95	40 70	28 87			
STD	0010	20 91	40 53	28 75	0 006-		
OBS	0010	20 91	40 53	28 75			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0003	12	05	1949	10	29° 06' N	048° 10' E	0018	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	18							01				2				

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>i</sub> ↓
STD	0000	20 91	40 50	28 73	0 000		
QBS	0000	20 91	40 50	28 73			
STD	0010	20 88	40 66	28 86	0 006-		
OBS	0010	20 88	40 66	28 86			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0004	12	07	1949	06	29° 06' N		048° 09' E	0013	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							02			2						

SUBSURFACE OBSERVATIONS											
STD	OBS	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
			↓	↓	↓	↓	↓	↓			
		0000	20	18	40	79	29	15	0 000		
		0000	20	18	40	79	29	15			
		0010	20	14	40	76	29	14	0 010-		
		0010	20	14	40	76	29	14			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0004	12	09	1949	07	29° 06' N		048° 09' E	0013	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							01			1						

SUBSURFACE OBSERVATIONS											
STD	OBS	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
			↓	↓	↓	↓	↓	↓			
		0000	20	29	40	51	28	91	0 000		
		0000	20	29	40	51	28	91			
		0010	20	00	40	54	29	01	0 008-		
		0010	20	00	40	54	29	01			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0005	12	14	1949	10	26° 37' N		050° 11' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
11	33						01			3						06

SUBSURFACE OBSERVATIONS											
STD	OBS	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
			↓	↓	↓	↓	↓	↓			
		0000	21	06	40	30	28	53	0 000		
		0000	21	06	40	30	28	53			
		0010	20	95	40	23	28	51	0 004-		
		0010	20	95	40	23	28	51			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0006	12	16	1949	10	26° 37' N	050° 11' E		0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	29						01				2					07

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	19	86	40	28	28	85	0	000	
OBS	0000	19	86	40	28	28	85			
STD	0010	19	76	40	26	28	86	0	007-	
OBS	0010	19	76	40	26	28	86			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0007	12	17	1949	11	26° 37' N	050° 11' E		0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	35						01				1					08

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	19	98	40	24	28	78	0	000	
OBS	0000	19	98	40	24	28	78			
STD	0010	19	73	40	19	28	81	0	006-	
OBS	0010	19	73	40	19	28	81			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0008	01	17	1950	14	29° 06' N	048° 11' E		0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	35						00				4					04

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	14	40	40	23	30	16	0	000	
ORS	0000	14	40	40	23	30	16			
STD	0010	14	39	40	12	30	08	0	019-	
ORS	0010	14	39	40	12	30	08			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0009	01	17	1950	05	29	06' N	048	15' E	0027	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	32						01				4					03

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	13	71	39	71	29	91	0 000		
OBS	0000	13	71	39	71	29	91			
STD	0010	13	71	39	63	29	85	0 017-		
OBS	0010	13	71	39	63	29	85			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0010	01	20	1950	06	29	06' N	048	15' E	0019	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	31						00				1					03

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> ml/l ↓	§ 10' ↓
STD	0000	13	64	39	56	29	81	0 000-		
OBS	0000	13	64	39	56	29	81			
STD	0010	13	58	39	68	29	91	0 016-		
OBS	0010	13	58	39	68	29	91			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0011	01	21	1950	08	29	26' N	047	57' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
11							02				2					03

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000			40	70					
OBS	0000	11	22*	40	70	31	19*			
STD	0010			40	93					
OBS	0010	15	71*	40	93	30	40*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00382	0012	01	21	1950	11	29	25' N	047	57' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
14							02				3					04

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	11	80	40	44	30	88	0	000
OBS	0000	11	80	40	44	30	88		
STD	0010	11	78	40	51	30	93	0	026-
OBS	0010	11	78	40	51	30	93		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00382	0013	01	23	1950	06	29	08' N	048	30' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	36						00				4					01

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	11	28	39	18	30	00	0	000
OBS	0000	11	28	39	18	30	00		
STD	0010	11	67	39	24	29	97	0	018-
OBS	0010	11	67	39	24	29	97		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00382	0014	01	24	1950	05	29	07' N	048	10' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	36						00				4					03

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000			40	01				
OBS	0000	13	22*	40	01	30	25*		
STD	0010			40	02				
OBS	0010	15	85*	40	02	29	66*		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0015	01	25	1950	06	29	20' N	048	11' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
22							00				3					00

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	
STD	0000	11	58	38	37	29	31	0	000
OBS	0000	11	58	38	37	29	31		
STD	0010	11	88	39	49	30	12	0	015-
OBS	0010	11	88	39	49	30	12		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0016	01	26	1950	05	29	20' N	048	11' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	02						02				2					00

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	
STD	0000	11	53	38	35	29	30	0	000
OBS	0000	11	53	38	35	29	30		
STD	0010	12	23	39	76	30	26	0	016-
OBS	0010	12	23	39	76	30	26		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0017	01	27	1950	04	29	20' N	048	11' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	33						02				3					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	
STD	0000	11	68	38	77	29	60	0	000
OBS	0000	11	68	38	77	29	60		
STD	0010	12	44	39	78	30	23	0	017-
OBS	0010	12	44	39	78	30	23		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0018	01	27	1950	09	29° 03' N	048° 10' E		0015	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	28							02			3					04

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000		40 08				
OBS	0000	10 42*	40 08	30 86*			
STD	0010		40 11				
OBS	0010	13 00*	40 11	30 37*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0019	01	27	1950	18	29° 26' N	047° 58' E		0015	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
18	29							00			4					02

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000		40 02				
OBS	0000	06 82*	40 02	31 42*			
STD	0010		40 12				
OBS	0010	11 69*	40 12	30 65*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0020	01	28	1950	06	29° 26' N	047° 58' E		0015	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
12	31							00			4					03

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	10 61	40 32	31 01	0 000		
OBS	0000	10 61	40 32	31 01			
STD	0010	08 97	40 32	31 31	0 029-		
OBS	0010	08 97	40 32	31 31			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0021	01	29	1950	14	29° 26' N	047° 58' E	0015	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	35						00			3						03

SUBSURFACE OBSERVATIONS									
		SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓	
STD		0000	11 54	39 76	30 40	0 000			
OBS		0000	11 54	39 76	30 40				
STD		0010	09 18	39 72	30 80	0 023-			
OBS		0010	09 18	39 72	30 80				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0022	01	30	1950	07	29° 08' N	048° 29' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	34						00			3						02

SUBSURFACE OBSERVATIONS									
		SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓	
STD		0000	11 78	39 24	29 95	0 000			
OBS		0000	11 78	39 24	29 95				
STD		0010	11 82	39 20	29 91	0 017-			
OBS		0010	11 82	39 20	29 91				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0023	01	30	1950	10	29° 20' N	048° 10' E	0020	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	31						00			3						04

SUBSURFACE OBSERVATIONS									
		SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓	
STD		0000	12 14	39 67	30 21	0 000			
OBS		0000	12 14	39 67	30 21				
STD		0010	12 04	39 74	30 28	0 020-			
OBS		0010	12 04	39 74	30 28				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0024	01	30	1950	15	29° 06' N		048° 10' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	32						00				3					03

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	12	43	40	08	30	47	0 000		
OBS	0000	12	43	40	08	30	47			
STD	0010	12	43							
OBS	0010	12	43							

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0025	01	31	1950	04	29° 06' N		048° 10' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	31						00				3					04

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	11	87							
OBS	0000	11	87							
STD	0010	12	15							
OBS	0010	12	15							

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0028	02	19	1950	07	29° 00' N		048° 12' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	32						00				4					04

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	
STD	0000	11	74	39	88	30	45	0 000		
OBS	0000	11	74	39	88	30	45			
STD	0010	11	69	39	88	30	46	0 022-		
OBS	0010	11	69	39	88	30	46			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0029	02	20	1950	10	29° 21' N	048° 10' E		0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
12	14						02				4					01

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	12	10	39	86	30	36	0 000		
OBS	0000	12	10	39	86	30	36			
STD	0010	11	90	39	90	30	44	0 021-		
OBS	0010	11	90	39	90	30	44			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0030	02	22	1950	06	29° 21' N	048° 10' E		0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	18						02				4					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	12	55	39	29	29	83	0 000		
OBS	0000	12	55	39	29	29	83			
STD	0010	11	63	39	95	30	53	0 019-		
OBS	0010	11	63	39	95	30	53			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0031	02	23	1950	05	29° 21' N	048° 10' E		0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04							02				3					00

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	12	96	39	07	29	57	0 000		
OBS	0000	12	96	39	07	29	57			
STD	0010	13	56	39	69	29	93	0 015-		
OBS	0010	13	56	39	69	29	93			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0032	02	27	1950	05	29° 24' N	048° 00' E	0022	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL	TRANS.
06	29						00				3					

SUBSURFACE OBSERVATIONS								
SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$		
OBS 0000	12 94*40	72*	30 86*					
OBS 0010	13 20*39	43*	29 80*					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0033	02	28	1950	10	29° 06' N	048° 10' E	0018	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL	TRANS.
04	02						00				1					

SUBSURFACE OBSERVATIONS								
SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$		
STD 0000	13 82 39 73		29 90	0 000				
OBS 0000	13 82 39 73		29 90					
STD 0010	12 71 39 73		30 14	0 018-				
OBS 0010	12 71 39 73		30 14					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0034	03	01	1950	04	29° 06' N	048° 10' E	0018	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL	TRANS.
07	32						00				3					

SUBSURFACE OBSERVATIONS								
SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$		
STD 0000	13 79							
OBS 0000	13 79							
OBS 0005	13 38 39 76		30 02					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0035	03	01	1950	09	29° 06' N	048° 10' E		0018	00

WIND SPEED	WIND DIR.	ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
				DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	03						00				1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓
STD	0000	14	11					
OBS	0000	14	11					
STD	0010	13	56					
OBS	0010	13	56					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0036	03	05	1950	11	29° 02' N	048° 30' E		0016	00

WIND SPEED	WIND DIR.	ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
				DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00	09						02				1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓
STD	0000	14	94	39	47	29	45	0 000
OBS	0000	14	94	39	47	29	45	
OBS	0010	17	20*					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0037	03	06	1950	05	29° 05' N	048° 30' E		0016	00

WIND SPEED	WIND DIR.	ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
				DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	16						02				1					04

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓
STD	0000	14	96	39	51	29	48	0 000
OBS	0000	14	96	39	51	29	48	
STD	0010	13	36					
OBS	0010	13	36					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0038	03	14	1950	10	29° 00' N	048° 10' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	07						00				1					03

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
STD	0000	17	31	39	15	28	64	0 000		
OBS	0000	17	31	39	15	28	64			
STD	0010	15	61	39	22	29	10	0 007-		
OBS	0010	15	61	39	22	29	10			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0039	03	14	1950	14	29° 25' N	048° 04' E	0020	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00	00						00				1					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
STD	0000	18	86	39	16	28	26	0 000		
OBS	0000	18	86	39	16	28	26			
OBS	0005	15	71	39	19	29	06			
STD	0010	15	43	39	26	29	18	0 006		
OBS	0010	15	43							
OBS	0015	16	91*	39	36	28	90*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0040	03	14	1950	15	29° 17' N	048° 12' E	0020	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00	00						00				1					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
STD	0000	16	34	38	58	28	44	0 000		
OBS	0000	16	34	38	58	28	44			
OBS	0005	15	62	38	86	28	82			
STD	0010	15	00	39	10	29	15	0 006-		
OBS	0010	15	00							
OBS	0015	15	00	39	29	29	30			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0041	03	14	1950	17	29° 09' N		048° 20' E		0020	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	20						00				2					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	15	77	32	88	24	19	0 000		
OBS	0000	15	77	32	88	24	19			
OBS	0005	15	43	38	60	28	67			
STD	0010	14	31	39	83	29	87	0 010		
OBS	0010	14	31	39	83	29	87			
OBS	0015	14	24	39	87	29	92			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0042	03	14	1950	18	29° 07' N		048° 28' E		0018	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	20						00				2					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	16	81	38	86	28	54	0 000		
OBS	0000	16	81	38	86	28	54			
OBS	0005	15	21	39	54	29	44			
STD	0010	13	48	39	67	29	93	0 010-		
OBS	0010	13	48							
OBS	0015	13	77	39	79	29	96			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0043	03	14	1950	19	29° 07' N		048° 40' E		0015	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	20						00				2					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	14	43	38	80	29	05	0 000		
OBS	0000	14	43	38	80	29	05			
OBS	0005			39	45					
STD	0010	14	55	39	65	29	68	0 012-		
OBS	0010	14	55	39	65	29	68			
OBS	0015	14	25	40	09	30	09			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0044	03	14	1950	21	29° 13' N	048° 51' E	0013	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	20						00				2					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	ν <sub>t</sub>
STD	0000	16	12	39	25	29 01	0 000		
OBS	0000	16	12	39	25	29 01			
OBS	0005	15	43	39	32	29 22			
STD	0010	14	47	39	97	29 94	0 013-		
OBS	0010			39	97				
OBS	0015	13	25	39	97	30 21			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0045	03	14	1950	22	29° 18' N	049° 02' E	0024	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	23						00				2					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	ν <sub>t</sub>
STD	0000			39	86				
OBS	0000	14	00	39	86	29 96			
OBS	0005	15	65	39	96	29 66			
STD	0010	15	71	40	20	29 84			
OBS	0010	15	71	40	20	29 84			
OBS	0015	15	40	40	36	30 03			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0046	03	14	1950	23	29° 24' N	049° 12' E	0031	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	23						00				2					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	ν <sub>t</sub>
STD	0000	16	33	40	37	29 82	0 000		
OBS	0000	16	33	40	37	29 82			
OBS	0005	16	33	40	41	29 85			
STD	0010	16	11	40	48	29 96	0 017-		
OBS	0015	15	89	40	52	30 04			
STD	0020	14	39	40	52	30 39	0 036-		
OBS	0020	14	39	40	52	30 39			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0047	03	15	1950	01	29	23' N	049	34' E	0026	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.
02	01						00				2				

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000			40	52				
OBS	0000	14	80*	40	52	30	29*		
OBS	0005	16	33	40	52	29	93		
STD	0010	16	04	40	48	29	97		
OBS	0010	16	04	40	48	29	97		
STD	0020	15	92	40	54	30	05		
OBS	0020	15	92	40	54	30	05		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0049	03	15	1950	11	28	20' N	048	40' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.
02	09						00				0				05

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	16	67	39	85	29	34	0	000
OBS	0000	16	67	39	85	29	34		
STD	0010	16	62						
OBS	0010	16	62						

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0048	03	15	1950	02	29	36' N	049	34' E	0026	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.
02	02						00				2				

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	16	03	40	37	29	89	0	000
OBS	0000	16	03	40	37	29	89		
OBS	0005	16	04	40	40	29	91		
STD	0010	15	91	40	44	29	97	0	017-
OBS	0010	15	91	40	44	29	97		
STD	0020	14	79	40	50	30	28	0	036-
OBS	0020	14	79	40	50	30	28		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0050	03	16	1950	04	28°	20' N	048°	40' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	27						00				0					06

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$v_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	16	72	39	87	29	34	0	000	
OBS	0000	16	72	39	87	29	34			
STD	0010	16	81	40	03	29	44	0	012-	
OBS	0010	16	81	40	03	29	44			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0052	03	22	1950	05	28°	40' N	048°	27' E	0007	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	24						00				0					06

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$v_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	17	44	39	20	28	65	0	000	
OBS	0000	17	44	39	20	28	65			
STD	0010	10	88	39	18	30	07	0	012-	
OBS	0010	10	88	39	18	30	07			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00382	0053	03	23	1950	04	28°	40' N	048°	27' E	0007	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
12	12						00				2					05

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$v_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	17	57	39	16	28	58	0	000	
OBS	0000	17	57	39	16	28	58			
STD	0010	08	32	39	21	30	55	0	014-	
OBS	0010	08	32	39	21	30	55			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0054	03	24	1950	04	28° 40' N	048° 27' E	0007	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	30						00			2						04

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\gamma_t$
		↓	↓	↓	↓				
STD	0000	17	61	39	02	28	47	0	000
OBS	0000	17	61	39	02	28	47		
STD	0010	17	62	38	88	28	36	0	003-
OBS	0010	17	62	38	88	28	36		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0055	03	25	1950	04	28° 40' N	048° 27' E	0007	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	31						00			1						05

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\gamma_t$
		↓	↓	↓	↓				
STD	0000	18	34	38	84	28	14	0	000
OBS	0000	18	34	38	84	28	14		
STD	0010	18	06	38	96	28	31	0	001-
OBS	0010	18	06	38	96	28	31		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0056	03	26	1950	07	28° 40' N	048° 27' E	0007	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	12						00			0						06

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\gamma_t$
		↓	↓	↓	↓				
STD	0000	19	47	38	82	27	83	0	000
OBS	0000	19	47	38	82	27	83		
STD	0010	18	34	38	95	28	23	0	001
OBS	0010	18	34	38	95	28	23		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0057	03	27	1950	12	28° 47' N	048° 47' E	0038	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	34						00				2					08

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000		40 35				
OBS	0000		40 35				
OBS	0005	17 89	40 48	29 52			
STD	0010		40 47				
OBS	0015	16 64	40 46	29 81			
STD	0020		40 33				
OBS	0025		40 11				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0058	03	27	1950	13	28° 51' N	048° 57' E	0024	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					10

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	18 29	40 42	29 37	0 000		
OBS	0000	18 29	40 42	29 37			
OBS	0005	18 30	40 43	29 37			
STD	0010	18 13	40 44	29 43	0 012-		
OBS	0015		40 44				
STD	0020	17 23	40 39	29 61	0 025-		
OBS	0025	16 51	40 30	29 72			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0059	03	27	1950	15	28° 56' N	049° 11' E	0048	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					10

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	18 50	40 47	29 35	0 000		
OBS	0000	18 50	40 47	29 35			
OBS	0005	18 44	40 44	29 35			
STD	0010		40 52				
OBS	0015		40 55				
STD	0020		40 52				
OBS	0025		40 44				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0060	03	27	1950	16	29° 00' N	049° 24' E	0048	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY	WET			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	44	40	39	29	31	0	000
OBS	0000	18	44	40	39	29	31		
OBS	0005	18	44	40	44	29	35		
STD	0010	18	27	40	42	29	37	0	011-
OBS	0015			40	41				
STD	0020	17	42	40	42	29	59	0	024-
OBS	0025	16	74	40	43	29	77		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0061	03	27	1950	17	29° 04' N	049° 36' E	0044	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY	WET			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	40	40	41	29	33	0	000
OBS	0000	18	40	40	41	29	33		
OBS	0005	18	35	40	43	29	36		
STD	0010	18	15	40	47	29	44	0	012-
OBS	0015			40	47				
STD	0020	17	29	40	43	29	63	0	025-
OBS	0025	16	64	40	35	29	73		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00382	0062	03	27	1950	19	29° 09' N	049° 47' E	0044	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY	WET			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	52	40	55	29	41	0	000
OBS	0000	18	52	40	55	29	41		
OBS	0005	18	55	40	65	29	48		
STD	0010	18	19	40	50	29	46	0	012-
OBS	0015			40	44				
STD	0020	16	28	40	47	29	91	0	027-
OBS	0025	14	73	40	60	30	37		

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE					
00382	0063	03	27	1950	20	29	14	N	049	19	E	0037	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	01						00				3					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$ ↓
STD	0000	18	55	40	52	29	38	0	000
OBS	0000	18	55	40	52	29	38		
OBS	0005	18	55	40	43	29	31		
STD	0010			40	48				
OBS	0015			40	53				
STD	0020			39	93				
OBS	0025			38	90				

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE					
00382	0064	04	01	1950	05	29	06	N	048	10	E	0009	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	25						00				2					03

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$ ↓
STD	0000	19	02	35	25	25	23	0	000
OBS	0000	19	02	35	25	25	23		
STD	0010	17	62	37	01	26	92	0	019
OBS	0010	17	62	37	01	26	92		

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE					
00382	0065	04	03	1950	05	27	38	N	050	11	E	0016	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	30						00				0					13

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$\nu_t$ ↓
STD	0000	19	56	40	64	29	20	0	000
OBS	0000	19	56	40	64	29	20		
STD	0010	19	52	40	97	29	47	0	011-
OBS	0010	19	52	40	97	29	47		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0066	04	04	1950	05	28° 48' N		048° 48' E	0027	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	32						00			0						08

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>i</sub> ↓
OBS	0000	18	29*	39	79*	28	89*	
OBS	0010	17	77*	38	46*	28	00*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0067	04	07	1950	12	29° 00' N		048° 48' E	0026	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	12						02			4						07

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>i</sub> ↓
STD	0000	20	13	37	59	26	72	0 000
OBS	0000	20	13	37	59	26	72	
STD	0010	18	16	39	79	28	92	0 003
OBS	0010	18	16	39	79	28	92	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00382	0068	04	08	1950	04	29° 00' N		048° 48' E	0026	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
11	11						02			3						08

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>i</sub> ↓
STD	0000	19	85	37	80	26	95	0 000
OBS	0000	19	85	37	80	26	95	
STD	0010	18	50	39	95	28	95	0 002
OBS	0010	18	50	39	95	28	95	

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0069	04	10	1950	04	28° 40' N	048° 30' E	0015	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	05						01				2					09

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	19	79	38	42	27	44	0 000		
OBS	0000	19	79	38	42	27	44			
STD	0010	19	84	38	63	27	59	0 006		
OBS	0010	19	84	38	63	27	59			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0070	04	11	1950	04	29° 35' N	048° 45' E	0035	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	09						01				1					10

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	20	09	38	28	27	26	0 000		
OBS	0000	20	09	38	28	27	26			
STD	0010	19	03	38	69	27	85	0 005		
OBS	0010	19	03	38	69	27	85			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0071	04	11	1950	08	29° 35' N	048° 45' E	0027	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	10						01				2					08

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	δ <sub>10'</sub>
STD	0000	20	29	38	48	27	36	0 000		
OBS	0000	20	29	38	48	27	36			
STD	0010	18	64	38	63	27	91	0 005		
OBS	0010	18	64	38	63	27	91			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0072	04	13	1950	12	28° 40' N	048° 26' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	02						00				2					05

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	19	83	38	40	27	42	0	000
OBS	0000	19	83	38	40	27	42		
STD	0010	19	79	38	46	27	47	0	006
OBS	0010	19	79	38	46	27	47		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0074	04	16	1950	09	28° 55' N	048° 42' E	0035	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	35						00				2					08

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	21	07	37	17	26	14	0	000
OBS	0000	21	07	37	17	26	14		
STD	0010	19	39	37	89	27	15	0	014
OBS	0010	19	39	37	89	27	15		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0075	04	18	1950	05	28° 40' N	048° 26' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00							00				1					06

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	γ <sub>t</sub>
STD	0000	20	94						
OBS	0000	20	94						
STD	0010	20	81	37	88	26	76		
OBS	0010	20	81	37	88	26	76		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0076	04	20	1950	10	29° 26' N	047° 56' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00							02				0					00

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	34	37	26	25	86	0 000		
OBS	0000	22	34	37	26	25	86			
STD	0010	21	52	37	37	26	17	0 020		
OBS	0010	21	52	37	37	26	17			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00382	0077	04	21	1950	04	29° 26' N	047° 56' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	21						00				1					01

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	88	37	35	26	06	0 000		
OBS	0000	21	88	37	35	26	06			
STD	0010	21	87	37	24	25	97	0 020		
OBS	0010	21	87	37	24	25	97			

LATITUDE (N) LONGITUDE (E)	DATE TIME (GMT) 1951	DEPTH (METERS)	SALINITY ‰
SHIPS: USS STALLION — USS MAURY			
26° 57' 50° 00'	0939 9 FEBRUARY	0	40.46
26° 57' 50° 00'	0939 9 FEBRUARY (?)	37	40.62
26° 57' 50° 00'	0957 10 FEBRUARY	0	40.61
26° 57' 50° 00'	0945 12 FEBRUARY	24	40.52
26° 57' 50° 03'	0930 14 FEBRUARY	38	—
26° 57' 50° 00'	0930 15 FEBRUARY	24	40.62
26° 57' 50° 03'	0930 17 FEBRUARY	24	40.50
26° 57' 50° 00'	0930 18 FEBRUARY	0	40.48
26° 57' 50° 03'	1300 18 FEBRUARY	0	40.55
27° 04' 50° 12'	0930 20 FEBRUARY	0	40:55
26° 58' 50° 01'	1205 21 FEBRUARY	0	40.44
29° 25' 47° 56'	0957 23 FEBRUARY	12	39.69
29° 25' 47° 56'	0915 27 FEBRUARY	0	39.61
26° 35.5' 52° 32.5'	0000 22 APRIL	0	37.68
26° 11' 54° 39'	0800 22 APRIL	0	36.67
24° 35' 58° 06'	2000 22 APRIL	0	40.03
23° 34' 58° 53'	0400 23 APRIL	0	40.17
18° 51' 57° 57'	0400 24 APRIL	0	36.38
18° 10.3' 57° 14'	1200 24 APRIL	0	36.22
16° 06' 53° 40'	— 25 APRIL	0	36.09

Table 6: Surface and Subsurface Salinity Observations (USS STALLION and MAURY), 1951, U. S. Naval Oceanographic Office, Washington, D. C. Manuscript Data.

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE 10° 1'	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS				CLOUD CODES		NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					CRUISE NUMBER	STATION NUMBER	10°		1'	MONTH			DAY	HR. 1/10	CRUISE NUMBER	STATION NUMBER	DIR.	HGT.	
31	S05	MU	2657 N	05000 E	103	60	02	09	096	1951			00						0001	
		WATER		WIND		AIR TEMP °C				SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	BAROMETER (mb)		DRY BULB	WET BULB	VIS. CODE	ADD'L OBS.									
MESSANGER TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-X10 <sup>3</sup>		Σ Δ D DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>3</sub> -N μg-at/l	NO <sub>2</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH		
	1	STD	0000	1890	4046	2924		-0010529		-0000	15256									
		OBS	0000	189	4046	2924					15256									
		STD	0010		4050															
		STD	0020		4055															
		STD	0030		4059															
	1	OBS	0037	193	4062	2926					15275									

REFERENCE		SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE 10° 1'	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS				CLOUD CODES		NODC STATION NUMBER
COUNTRY CODE	IDENTITY NUMBER					CRUISE NUMBER	STATION NUMBER	10°		1'	MONTH			DAY	HR. 1/10	CRUISE NUMBER	STATION NUMBER	DIR.	HGT.	
31	S05	MU	2657 N	05000 E	103	60	02	12	097	1951			00						0002	
		WATER		WIND		AIR TEMP °C				SPECIAL OBSERVATIONS										
		COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	BAROMETER (mb)		DRY BULB	WET BULB	VIS. CODE	ADD'L OBS.									
MESSANGER TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T		SPECIFIC VOLUME ANOMALY-X10 <sup>3</sup>		Σ Δ D DYN. M. X 10 <sup>3</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>2</sub> -P μg-at/l	TOTAL-P μg-at/l	NO <sub>3</sub> -N μg-at/l	NO <sub>2</sub> -N μg-at/l	SiO <sub>2</sub> -Si μg-at/l	pH		
		OBS	0024	183	4052	2944					15244									

REFERENCE COUNTRY CODE	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE 10° 1'	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER	
					10° 1'	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR.		HGT.	PER.		SEA AMT.
31	S05	MU	2657 N	05000 E	103	60	02 15	095	1951			00						0003	
				WATER		WIND		BAROMETER		AIR TEMP °C		VIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH
		MESSINGER RE. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH	
				OBS	0024	184	4062	2949			15248								

REFERENCE COUNTRY CODE	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE 10° 1'	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER	
					10° 1'	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR.		HGT.	PER.		SEA AMT.
31	S05	MU	2657 N	05003 E	103	60	02 17	095	1951			00						0004	
				WATER		WIND		BAROMETER		AIR TEMP °C		VIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH
		MESSINGER RE. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH	
				OBS	0024	183	4050	2943			15244								

REFERENCE COUNTRY CODE	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	MARS DEN SQUARE 10° 1'	STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER	
					10° 1'	MONTH		DAY	HR. 1/10			CRUISE NUMBER	STATION NUMBER	DIR.		HGT.	PER.		SEA AMT.
31	S05	MU	2925 N	04756 E	104	97	02 23	095	1951			00						0005	
				WATER		WIND		BAROMETER		AIR TEMP °C		VIS. CODE		ADD'L. OBS.		SPECIAL OBSERVATIONS			
				COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	(mbs)	DRY BULB	WET BULB	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH
		MESSINGER RE. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—X10 <sup>3</sup>	W & D DYN. AL. X 10 <sup>5</sup>	SOUND VELOCITY	O <sub>2</sub> ml/l	PO <sub>4</sub> -P µg-at/l	TOTAL-P µg-at/l	NO <sub>2</sub> -N µg-at/l	NO <sub>3</sub> -N µg-at/l	SI O <sub>2</sub> -Si µg-at/l	pH	
				OBS	0012	139	3969	2985			15099								

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0001	11	24	1951	10	28° 13' N	049° 00' E		00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	34						00			33	1					05

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	23	83						
OBS	0000	23	83	40	70*	28	03*		
OBS	0010	24	57	40	68*	27	79*		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0002	11	24	1951	12	28° 18' N	049° 07' E	0029	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	01						00			36	1					07

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	24	72						
OBS	0000	24	72	40	71*	27	77*		
OBS	0003	24	90	40	61*	27	64*		
OBS	0008	24	82	40	64*	27	69*		
STD	0010	24	80						
STD	0020	24	80						
OBS	0020	24	80	40	53*	27	61*		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0003	11	24	1951	14	28° 24' N	049° 16' E	0032	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	01						00			36	1					06

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>i</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	26	39						
OBS	0000	26	39	40	59*	27	15*		
OBS	0005	26	18						
STD	0010	25	60						
OBS	0010	25	60	40	44*	27	29*		
STD	0020	25	44						
OBS	0020	25	44	40	48*	27	37*		
STD	0030	25	34						
OBS	0030	25	34	40	48*	27	40*		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0004	11	24	1951	15	28°	31' N	049°	24' E	0043	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	02						00			36	1					05

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓			
STD	0000	24	44							
OBS	0000	24	44	40	44*	27	65*			
OBS	0005	26	41	40	28*	26	91*			
STD	0010	25	53							
OBS	0010	25	53	40	28*	27	19*			
STD	0020	25	51							
OBS	0020	25	51	40	28*	27	20*			
STD	0030	25	52							
OBS	0030	25	52	40	32*	27	22*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0005	11	24	1951	17	28°	36' N	049°	33' E	0037	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	02						00			36	1					05

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓			
STD	0000	23	72							
OBS	0000	23	72	40	34*	27	79*			
OBS	0005	25	11	40	17*	27	24*			
STD	0010	25	04							
OBS	0010	25	04	40	17*	27	26*			
STD	0020	25	04							
OBS	0020	25	04	40	17*	27	26*			
STD	0030	26	24							
OBS	0030	26	24	40	19*	26	90*			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0006	11	24	1951	18	28° 42' N	049° 42' E	0040	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	32						00			35	1					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	23 89					
OBS	0000	23 89	40 30*	27 71*			
OBS	0005	24 94	40 28*	27 37*			
STD	0010	24 94					
OBS	0010	24 94	39 97*	27 14*			
STD	0020	24 96					
OBS	0020	24 96		*	*		
STD	0030	25 42					
OBS	0030	25 42	40 19*	27 16*			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0007	11	24	1951	20	28° 49' N	049° 51' E	0040	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	32						00			35	1					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	23 83					
OBS	0000	23 83	40 03*	27 52*			
OBS	0005	24 74	40 28*	27 44*			
STD	0010	24 75					
OBS	0010	24 75					
STD	0020	24 73					
OBS	0020	24 73	40 03*	27 25*			
STD	0030	24 98					
OBS	0030	24 98					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0008	11	24	1951	21	28° 54' N		049° 59' E	0036	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	03						00			30	1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22	22					
OBS	0000	22	22					
OBS	0005	24	91	40	05*	27	21*	
STD	0010	24	91					
OBS	0010	24	91	40	01*	27	18*	
STD	0020	24	93					
OBS	0020	24	93	40	14*	27	27*	
STD	0030	25	96					
OBS	0030	25	96	40	23*	27	02*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0009	11	24	1951	22	29° 01' N		050° 09' E	0038	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	35						00			35	1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	21	94					
OBS	0000	21	94	40	35*	28	32*	
OBS	0005	24	91	40	30*	27	40*	
STD	0010	24	92					
OBS	0010	24	92	40	21*	27	33*	
STD	0020	24	93					
OBS	0020	24	93	40	25*	27	36*	
STD	0030	25	44					
OBS	0030	25	44	40	37*	27	29*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0010	11	24	1951	02	28° 42' N	050° 38' E	0036	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	01						00			36	1					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	23	61							
OBS	0000	23	61	40	14*	27	67*			
OBS	0005	24	71	40	10*	27	31*			
STD	0010	24	71							
OBS	0010	24	71	40	12*	27	32*			
STD	0020	24	74							
OBS	0020	24	74	40	12*	27	32*			
STD	0030	25	03							
OBS	0030	25	03	40	08*	27	20*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0011	11	25	1951	03	28° 35' N	050° 30' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	22						00			36	1					

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	24	06							
OBS	0000	24	06	40	06*	27	48*			
OBS	0005	24	76	40	06*	27	26*			
STD	0010	24	74							
OBS	0010	24	74							
STD	0020	24	73							
OBS	0020	24	73	40	03*	27	25*			
STD	0030	23	56							
OBS	0030	23	56	40	03*	27	60*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0012	11	25	1951	05	28° 28' N		050° 22' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	28						00			27	1					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>i</sub> ↓
STD	0000	23 94					
OBS	0000	23 94	40 08*	27 53*			
OBS	0005	24 67	40 05*	27 28*			
STD	0010	24 66					
OBS	0010	24 66	39 99*	27 24*			
STD	0020	24 66					
OBS	0020	24 66	40 05*	27 29*			
STD	0030	25 21					
OBS	0030	25 21	40 05*	27 12*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0013	11	25	1951	06	28° 21' N		050° 14' E	0054	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	36						00			00	0					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>i</sub> ↓
STD	0000	23 78					
OBS	0000	23 78	39 96*	27 49*			
STD	0010	24 77					
OBS	0010	24 77	40 03*	27 24*			
STD	0020	24 69					
OBS	0020	24 69	40 03*	27 26*			
STD	0030	24 74					
OBS	0030	24 74	40 01*	27 23*			
OBS	0040	24 95	40 05*	27 20*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0014	11	25	1951	07	28° 14' N	050° 06' E	0053	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	24						00			00	0					

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH (M)		T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	$\nu_t$ ↓
STD	0000	24 33					
OBS	0000	24 33	39 99*	27 34*			
STD	0010	25 39					
OBS	0010	25 39	39 99*	27 02*			
STD	0020	25 38					
OBS	0020	25 38	39 92*	26 97*			
STD	0030	25 31					
OBS	0030	25 31	39 92*	26 99*			
STD	0050	25 28					
OBS	0050	25 28	39 94*	27 01*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0015	11	25	1951	09	28° 08' N	049° 58' E	0045	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	35						00			00	0					06

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH (M)		T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	$\nu_t$ ↓
STD	0000	24 89					
OBS	0000	24 89	39 94*	27 13*			
STD	0010	25 46					
OBS	0010	25 46	39 90*	26 93*			
STD	0020	25 33					
OBS	0020	25 33	39 96*	27 01*			
STD	0030	25 35					
OBS	0030	25 35	39 92*	26 97*			
OBS	0040	26 30	40 03*	26 76*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0016	11	25	1951	10	28° 00' N		049° 51' E	0043	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	35						00			00	0					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	$\nu_t$ ↓
STD	0000	22 17					
OBS	0000	22 17	40 16*	28 11*			
OBS	0005	25 53	40 12*	27 07*			
STD	0010	25 49					
OBS	0010	25 49	40 06*	27 04*			
STD	0020	25 52					
OBS	0020	25 52	40 37*	27 26*			
STD	0030	26 65					
OBS	0030	26 65	40 17*	26 75*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0017	11	25	1951	11	27° 53' N		049° 43' E	0042	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	35						00			00	0					09

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	$\nu_t$ ↓
STD	0000	25 28					
OBS	0000	25 28	40 08*	27 12*			
OBS	0005	25 50	40 12*	27 08*			
STD	0010	25 50					
OBS	0010	25 50	40 14*	27 09*			
STD	0020	25 50					
OBS	0020	25 50	40 06*	27 03*			
STD	0030	26 10					
OBS	0030	26 10	40 08*	26 86*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0018	11	25	1951	13	27° 48' N	049° 34' E		0036	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.
03	35						00			00	0				08

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	24	67					
OBS	0000	24	67	40	17*	27	37*	
OBS	0005	25	15	40	21*	27	26*	
STD	0010	25	14					
OBS	0010	25	14	40	23*	27	28*	
STD	0020	25	15					
OBS	0020	25	15	40	21*	27	26*	
STD	0030	25	67					
OBS	0030	25	67	40	50*	27	31*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0019	11	25	1951	14	27° 39' N	049° 26' E		0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.	VIS.	COL.
02	21						00			00	0				05

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	24	94					
OBS	0000	24	94	40	37*	27	44*	
OBS	0005	24	17	40	43*	27	72*	
STD	0010	23	70					
OBS	0010	23	70	40	68*	28	06*	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0017	02	20	1952	20	27°	53' N	049°	43' E	0041	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00	00						00									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	18	33					
OBS	0000	18	33	40	90*	29	73*	
OBS	0005	17	80					
STD	0010	16	94					
OBS	0010	16	94	40	88*	30	06*	
STD	0020	17	59					
OBS	0020	17	59	40	88*	29	90*	
STD	0030	17	85					
OBS	0030	17	85	40	82*	29	79*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0016	02	20	1952	22	28°	00' N	049°	51' E	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							00									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	19	44					
OBS	0000	19	44	40	90*	29	44*	
OBS	0005	16	83	40	86*	30	07*	
STD	0010	16	63					
OBS	0010	16	63	40	88*	30	14*	
STD	0020	16	88					
OBS	0020	16	88					
STD	0030	17	08					
OBS	0030	17	08	40	86*	30	01*	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0015	02	20	1952	24	28°	08' N	049°	58' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							00									

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$v_t$
STD	0000	17 78					
OBS	0000	17 78	40 88*	29 85*			
STD	0010	16 07					
OBS	0010	16 07	40 88*	30 27*			
STD	0020	15 42					
OBS	0020	15 42	40 82*	30 38*			
STD	0030	16 12					
OBS	0030	16 12	40 84*	30 23*			
OBS	0040	16 17	40 82*	30 20*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0014	02	21	1952	01	28°	14' N	050°	06' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
00	00						01									

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	$v_t$
STD	0000	17 22					
OBS	0000	17 22	40 93*	30 03*			
STD	0010	15 88					
OBS	0010	15 88	40 82*	30 27*			
STD	0020	15 93					
OBS	0020	15 93	40 86*	*			
STD	0030	15 97					
OBS	0030	15 97	40 84*	30 27*			
OBS	0040	16 74	40 80*	30 05*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0013	02	21	1952	02	28° 21' N		050° 14' E	0053	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	27						01									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	17	78					
OBS	0000	17	78	40	73*	29	74*	
STD	0010	16	07					
OBS	0010	16	07	40	86*	30	26*	
STD	0020	15	62					
OBS	0020	15	62	40	84*	30	35*	
STD	0030	16	17					
OBS	0030	16	17	40	84*	30	22*	
OBS	0040	16	93	40	88*	30	07*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0012	02	21	1952	04	28° 28' N		050° 22' E	0053	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	27						01									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	20	00					
OBS	0000	20	00					
STD	0010	16	68					
OBS	0010	16	68	40	26*	29	65*	
STD	0020	15	81					
OBS	0020	15	81	40	55*	30	08*	
STD	0030	16	93					
OBS	0030	16	93	40	39*	29	69*	
OBS	0040	16	98	40	53*	29	78*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0011	02	21	1952	05	28° 35' N		050° 30' E	0051	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	10						01									

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	18 33					
OBS	0000	18 33					
STD	0010	16 16					
OBS	0010	16 16	40 23*	29 75*			
STD	0020	16 27					
OBS	0020	16 27	40 14*	29 66*			
STD	0030	16 87					
OBS	0030	16 87	40 05*	29 44*			
OBS	0040	16 92					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0010	02	21	1952	06	28° 42' N		050° 30' E	0044	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	18 89					
OBS	0000	18 89	40 08*	28 95*			
STD	0010	19 34					
OBS	0010	19 34	40 55*	29 19*			
STD	0020	31 29					
OBS	0020	31 29	40 61*	25 51*			
STD	0030	21 06					
OBS	0030	21 06	40 41*	28 62*			
OBS	0040	19 10	40 57*	29 27*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0009	02	21	1952	10	29°	01' N	050°	09' E	0042	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	16						00					1				

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	ν <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	17	50							
OBS	0000	17	50	41	02*	30	03*			
OBS	0005	18	26	40	62*	29	53*			
STD	0010	18	22							
STD	0020	18	14							
OBS	0020	18	14	40	12*	29	18*			
STD	0030	18	05							
OBS	0030	18	05	40	79*	29	71*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0008	02	21	1952	12	28°	54' N	049°	59' E	0042	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	15						01					1				13

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	ν <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	83							
OBS	0000	18	83	40	61*	29	37*			
OBS	0009	18	74	40	59*	29	38*			
STD	0010	18	83							
OBS	0018	18	99	41	06*	29	68*			
STD	0020	18	64							
OBS	0027	18	01	40	93*	29	83*			
STD	0030	18	02							
OBS	0036	18	55	40	80*	29	59*			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0007	02	21	1952	01	28° 49' N	049° 51' E	0048	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	14						01			1						11

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>	
STD 0000	18 33						
OBS 0000	18 33	40 77*	29 63*				
OBS 0008	18 10	40 62*	29 57*				
STD 0010	17 10						
OBS 0016	15 57	40 90*	30 41*				
STD 0020	16 57						
OBS 0025	17 46	40 70*	29 80*				
STD 0030	17 95						
OBS 0033	18 06	40 73*	29 67*				

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0006	02	21	1952	14	28° 42' N	049° 42' E	0044	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	15						01			1						10

SUBSURFACE OBSERVATIONS							
SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>	
STD 0000	17 78						
OBS 0000	17 78	40 93*	29 89*				
OBS 0009	13 90	40 88*	30 78*				
STD 0010	14 48						
OBS 0018	17 49	40 82*	29 88*				
STD 0020	17 52						
OBS 0026	17 59	40 82*	29 85*				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0005	02	21	1952	16	28° 36' N	049° 33' E	0045	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	14						02				2					09

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	17 61					
OBS	0000	17 61	40 86*	29 88*			
OBS	0008	17 61	40 84*	29 86*			
STD	0010	17 60					
OBS	0016		40 80*		*		
STD	0020	17 55					
OBS	0025	17 51	40 91*	29 94*			
STD	0030	17 47					
OBS	0033	17 44	40 73*	29 82*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00496	0004	02	21	1952	17	28° 31' N	049° 24' E	0045	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	14						02				3					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	17 78					
OBS	0000	17 78	40 84*	29 82*			
OBS	0008	17 11	40 82*	29 97*			
STD	0010	17 10					
OBS	0015	17 07	40 82*	29 98*			
STD	0020	17 82					
OBS	0023	18 11	40 82*	29 72*			
STD	0030	18 25					
OBS	0031	18 27	40 70*	29 59*			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0001	04	09	1952	08	28° 13' N	049° 00' E	0011	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	24						01			24	1					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	11						
OBS	0000	21	11	41	15*	29	17*		
OBS	0005	21	45	41	24*	29	14*		
STD	0010	21	46						
OBS	0010	21	46	41	29*	29	18*		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH.
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0002	04	09	1952	10	28° 18' N	049° 07' E	0025	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	21						01			21	1					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	39						
OBS	0000	21	39	40	90*	28	90*		
OBS	0005	21	35	40	06*	28	27*		
STD	0010	20	44						
OBS	0010	20	44	40	16*	28	60*		
STD	0020	20	04						
OBS	0020	20	04	40	97*	29	33*		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0003	04	09	1952	11	28° 24' N	049° 16' E	0038	00		

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	21						01			21	1					12

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22	78					
OBS	0000	22	78	41	35*	28	84*	
OBS	0005	19	91	41	31*	29	62*	
STD	0010	19	17					
OBS	0010	19	17	41	26*	29	78*	
STD	0020	19	17					
OBS	0020	19	17	41	27*	29	79*	
OBS	0030			41	35*		*	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0004	04	09	1952	12	28° 31' N	049° 24' E	0043	00		

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	21						00			21	1					12

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	v <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	23	33					
OBS	0000	23	33	40	61*	28	11*	
STD	0010	19	41					
OBS	0010	19	41	40	62*	29	23*	
STD	0020	18	56					
OBS	0020	18	56	40	86*	29	64*	
STD	0030	18	48					
OBS	0030	18	48	40	97*	29	74*	
OBS	0040	17	92	41	00*	29	91*	

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0005	04	09	1952	14	28° 36' N	049° 33' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	20						04			20	1					15

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	23 06					
OBS	0000	23 06	40 68*	28 25*			
STD	0010	18 73					
OBS	0010	18 73	40 55*	29 35*			
STD	0020	19 81					
OBS	0020	19 81	40 57*	29 08*			
STD	0030	21 94					
OBS	0030	21 94	40 61*	28 52*			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0006	04	09	1952	15	28° 42' N	049° 42' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	08						04			08	1					15

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	24 17					
OBS	0000	24 17	40 50*	27 78*			
STD	0010	18 70					
OBS	0010	18 70	40 61*	29 41*			
STD	0020	19 36					
OBS	0020	19 36	40 57*	29 20*			
STD	0030	20 24					
OBS	0030	20 24	40 77*	29 12*			
OBS	0040		40 79*	*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00496	0007	04	09	1952	17	28° 49' N	049° 51' E		0049	00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	08						00			08	1					16

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰/‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	23 00					
ORS	0000	23 00	40 37*	28 03*			
STD	0010	20 31					
ORS	0010	20 31	40 30*	28 74*			
STD	0020	19 75					
ORS	0020	19 75	40 44*	29 00*			
STD	0030	18 61					
ORS	0030	18 61	40 73*	29 52*			
ORS	0040		40 71*	*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00496	0008	04	09	1952	18	28° 54' N	049° 59' E			00	

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	10						01			10	1					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰/‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	21 94					
OBS	0000	21 94	40 39*	28 35*			
STD	0010	20 81					
OBS	0010	20 81	40 34*	28 63*			
STD	0020	19 53					
OBS	0020	19 53	40 46*	29 07*			
STD	0030	18 84					
OBS	0030	18 84	40 66*	29 41*			
OBS	0040	18 03	40 80*	29 73*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0010	04	09	1952	22	28	42' N	050	38' E	0042	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY $\Psi$	WET $\Psi$			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							01									

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	23 33					
OBS	0000	23 33					
STD	0010	20 86					
OBS	0010	20 86	39 90*	28 28*			
STD	0020	20 16					
OBS	0020	20 16	39 96*	28 52*			
STD	0030	19 86					
OBS	0030	19 86	39 99*	28 63*			
OBS	0040	19 27	40 06*	28 84*			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0009	04	09	1952	19	29	01' N	050	09' E	0047	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY $\Psi$	WET $\Psi$			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	10						01			10	1					

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	25 00					
OBS	0000	25 00	40 70*	27 68*			
STD	0010	20 18					
OBS	0010	20 18	40 44*	28 88*			
STD	0020	19 19					
OBS	0020	19 19	40 57*	29 25*			
STD	0030	18 86					
OBS	0030	18 86	40 59*	29 35*			
OBS	0040	18 36	40 62*	29 50*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0011	04	09	1952	23	28° 35' N		050° 30' E	0060	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	14						01			14	1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	23	78					
OBS	0000	23	78	40	12*	27	61*	
STD	0010	20	65					
OBS	0010	20	65	40	10*	28	49*	
OBS	0019	19	85	40	35*	28	90*	
STD	0020	19	80					
STD	0030	19	30					
OBS	0038	18	91	40	39*	29	18*	
STD	0050	18	35					
OBS	0057	18	04	40	53*	29	52*	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00496	0012	04	10	1952	01	28° 28' N		050° 22' E	0056	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							00									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	v <sub>t</sub> ↓
STD	0000	23	67					
OBS	0000	23	67	40	61*	28	01*	
STD	0010	20	86					
OBS	0010	20	86	40	34*	28	62*	
OBS	0019	19	60	40	35*	28	97*	
STD	0020	19	59					
OBS	0029	19	36	40	44*	29	10*	
STD	0030	19	32					
OBS	0048	17	96	40	66*	29	64*	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0013	04	10	1952	03	28	14' N	050	06' E	0056	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD TYPE	SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓				AMT.	DIR.	AMT.	DIR.		AMT.	COL.
01	20						01		20	1					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	78						
OBS	0000	22	78	40	80*	28	42*		
STD	0010	20	56						
OBS	0010	20	56	40	57*	28	88*		
STD	0020	19	10						
OBS	0020	19	10	40	80*	29	45*		
STD	0030	18	82						
OBS	0030	18	82	40	82*	29	54*		
STD	0050	16	09						
OBS	0050	16	09	40	86*	30	25*		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00496	0013	04	10	1952	02	28	21' N	050	14' E	0058	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD TYPE	SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓				AMT.	DIR.	AMT.	DIR.		AMT.	COL.
01	10						00								

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	23	06						
OBS	0000	23	06	40	52*	28	13*		
STD	0010	20	03						
OBS	0010	20	03	40	39*	28	89*		
STD	0020	19	68						
OBS	0020	19	68	40	34*	28	94*		
STD	0030	19	13						
OBS	0030	19	13	40	62*	29	30*		
STD	0050	18	30						
OBS	0050	18	30	40	95*	29	77*		

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH			
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE						
00496	0015	04	10	1952	04	28° 08' N	049° 58' E		0051	00			

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
							01									

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	21	67					
OBS	0000	21	67	40	71*	28	67*	
OBS	0007	21	20	40	84*	28	91*	
STD	0010	20	46					
OBS	0017	19	30	40	97*	29	53*	
STD	0020	19	18					
OBS	0026	18	97	40	84*	29	51*	
STD	0030	18	84					
OBS	0046	18	45	40	77*	29	60*	

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH			
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE						
00496	0016	04	10	1952	06	28° 00' N	049° 51' E		0045	00			

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	16						01			16	1					

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	v <sub>t</sub>
STD	0000	21	94					
OBS	0000	21	94	40	70*	28	59*	
STD	0010	22	06					
OBS	0010	22	06	40	82*	28	65*	
STD	0020	19	66					
OBS	0020	19	66	40	88*	29	36*	
STD	0030	19	34					
OBS	0030	19	34	40	88*	29	45*	
OBS	0039	18	84	40	91*	29	60*	

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0017	04	10	1952	07	27° 53' N	049° 43' E	0043	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	16						01			16	1					

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
OBS	0000			40	95*				
OBS	0009	20	53	40	95*	29	18*		
STD	0010	20	49						
OBS	0019	20	17	40	86*	29	21*		
STD	0020	20	14						
OBS	0028	19	84	40	91*	29	34*		
STD	0030	19	74						
OBS	0038	19	24	40	91*	29	50*		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00496	0018	04	10	1952	09	27° 48' N	049° 34' E	0042	00

WIND		ANEMO. HGT.	AIR PRESS.	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	18						01			18	1					17

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	22						
OBS	0000	22	22	40	99*	28	73*		
STD	0010	20	60						
OBS	0010	20	60	40	93*	29	14*		
STD	0020	19	86						
OBS	0020	19	86	40	86*	29	29*		
STD	0030	19	76						
OBS	0030	19	76	41	15*	29	54*		
OBS	0040	19	27	41	17*	29	69*		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG1A	02	16	1960	12	27° 20' N	050° 58' E	0065	01	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	34		18	21	7		02	0	2	32	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	20 52	40 28	28 67	0 000-		
OBS	0000	20 52	40 28	28 67			
STD	0010	20 47	40 28	28 68	0 005-		
STD	0020	20 44	40 27	28 68	0 010-		
OBS	0025	20 42	40 27	28 69			
STD	0030	20 41	40 27	28 69	0 016-		
STD	0050	20 37	40 28	28 71	0 026-		
OBS	0055	20 37	40 28	28 71			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG14	02	17	1960	12	28° 59' N	050° 40' E	0021	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	30		16	23	9		02	4	8	29	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	19 78	40 50	29 04	0 000-		
OBS	0000	19 78	40 50	29 04			
OBS	0005	19 20	40 49	29 18			
STD	0010	19 11	40 50	29 22	0 009-		
OBS	0010	19 11	40 50	29 22			
OBS	0015	19 08	40 49	29 22			
STD	0020	19 08	40 49	29 22	0 020-		
OBS	0020	19 08	40 49	29 22			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG12	02	19	1959	06	29° 14' N		050° 21' E	0022	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		19	23	9			01	6	2	32	2			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	26	40	66	29	56	0 000-		
OBS	0000	18	26	40	66	29	56			
OBS	0005	18	28	40	64	29	54			
STD	0010	18	30	40	66	29	55	0 013-		
OBS	0010	18	30	40	66	29	55			
OBS	0015	18	37	40	64	29	52			
STD	0020	18	24	40	69	29	59	0 027-		
OBS	0020	18	24	40	69	29	59			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG11	02	19	1959	19	28° 57' N		050° 03' E	0049	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		17	18	3			02	0	32	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	19	15	40	83	29	46	0 000-		
OBS	0000	19	15	40	83	29	46			
OBS	0005	19	15	40	83	29	46			
STD	0010	19	17	40	84	29	46	0 013-		
OBS	0010	19	17	40	84	29	46			
STD	0020	19	10	40	82	29	46	0 025-		
OBS	0020	19	10	40	82	29	46			
STD	0030	19	07	40	85	29	50	0 038-		
OBS	0030	19	07	40	85	29	50			
OBS	0040	19	09	40	82	29	47			
OBS	0049	19	08	40	89	29	52			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG15	02	20	1960	00	28° 44' N		050° 40' E	0037	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	34		16	18	9		02		0	34	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	19 03	40 37	29 14	0 000-		
OBS	0000	19 03	40 37	29 14			
OBS	0005	19 02	40 37	29 14			
STD	0010	19 03	40 37	29 14	0 010-		
OBS	0010	19 03	40 37	29 14			
STD	0020	18 99	40 37	29 15	0 019-		
OBS	0020	18 99	40 37	29 15			
STD	0030	18 93	40 38	29 17	0 029-		
OBS	0030	18 93	40 38	29 17			
OBS	0035	18 91	40 39	29 18			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG21	02	20	1960	08	28° 32' N		051° 00' E	0013	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	14		16	20	0		02	8	4	14	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	19 04	40 26	29 05	0 000-		
OBS	0000	19 04	40 26	29 05			
OBS	0005	19 07	40 26	29 04			
STD	0010	18 83	40 27	29 11	0 009-		
OBS	0010	18 83	40 27	29 11			
OBS	0014	18 82	40 26	29 11			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG20	02	20	1960	12	28° 07' N		050° 50' E	0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	33		13	18	3		02	8	1	33	3			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	19	55	40	26	28	92	0 000-
OBS	0000	19	55	40	26	28	92	
OBS	0005	19	54	40	27	28	93	
STD	0010	19	54	40	27	28	93	0 007-
OBS	0010	19	54	40	27	28	93	
STD	0020	19	46	40	26	28	94	0 015-
OBS	0020	19	46	40	26	28	94	
STD	0030	19	31	40	25	28	97	0 023-
OBS	0030	19	31	40	25	28	97	
OBS	0040	19	33	40	26	28	97	
STD	0050	19	61	40	64	29	19	0 040-
OBS	0050	19	61	40	64	29	19	
OBS	0055	19	59	40	66	29	21	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG24	02	20	1960	17	27° 22' N		051° 07' E	0058	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	30		14	18	9		02		0	30	3			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	20	39	39	84	28	37	0 000-
OBS	0000	20	39	39	84	28	37	
OBS	0005	20	39	39	84	28	37	
STD	0010	20	38	39	85	28	38	0 002-
OBS	0010	20	38	39	85	28	38	
OBS	0015	20	40	39	86	28	38	
STD	0020	20	33	40	06	28	55	0 005-
OBS	0025	20	29	40	18	28	65	
STD	0030	20	30	40	21	28	67	0 010-
OBS	0035	20	30	40	22	28	68	
OBS	0045	20	27	40	22	28	69	
STD	0050	20	28	40	22	28	69	0 020-
OBS	0063	20	29	40	22	28	68	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG23	02	22	1960	11	27° 06' N		050° 46' E	0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	16		16	21	7		02	9	16	1			7			

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	20 94	40 28	28 55	0 000-		
OBS	0000	20 94	40 28	28 55			
OBS	0005	20 51	40 27	28 66			
STD	0010	20 43	40 27	28 68	0 005-		
OBS	0010	20 43	40 27	28 68			
STD	0020	20 38	40 28	28 71	0 010-		
OBS	0020	20 38	40 28	28 71			
STD	0030	20 36	40 30	28 73	0 015-		
OBS	0030	20 36	40 30	28 73			
OBS	0040	20 14	40 41	28 87			
STD	0050	20 02	40 48	28 96	0 029-		
OBS	0050	20 02	40 48	28 96			
OBS	0055	20 03	40 48	28 95			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG27	02	22	1960	21	26° 54' N		051° 41' E	0053	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	10		15	20	0		02	0	10	1			7			

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	21 37	39 64	27 94	0 000		
OBS	0000	21 37	39 64	27 94			
OBS	0005	21 37	39 64	27 94			
STD	0010	21 27	39 62	27 96	0 002		
OBS	0010	21 27	39 62	27 96			
STD	0020	20 95	39 62	28 04	0 003		
OBS	0020	20 95	39 62	28 04			
STD	0030	20 77	39 79	28 22	0 003		
OBS	0030	20 77	39 79	28 22			
OBS	0040	20 69	39 79	28 25			
STD	0050	20 60	39 81	28 29	0 001		
OBS	0050	20 60	39 81	28 29			
OBS	0053	20 65	39 82	28 28			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG26	02	23	1960	00	27	16' N	051	56' E	0050	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
32			15	21	1		02		0	34	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2m</sub> I/I ↓	V <sub>f</sub> ↓
STD	0000	21	85	38	96	27	29	0 000		
OBS	0000	21	85	38	96	27	29			
OBS	0005	21	88	38	97	27	29			
STD	0010	21	72	39	10	27	43	0 007		
OBS	0010	21	72	39	10	27	43			
STD	0020	21	67	39	14	27	48	0 014		
OBS	0020	21	67	39	14	27	48			
STD	0030	22	03	39	55	27	69	0 019		
OBS	0030	22	03	39	55	27	69			
OBS	0040	22	31	39	97	27	93			
STD	0050	22	29	39	97	27	93	0 025		
OBS	0050	22	29	39	97	27	93			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG25	02	23	1960	06	27	42' N	051	25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
33			17	21	7		02		0	33	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2m</sub> I/I ↓	V <sub>f</sub> ↓
STD	0000	21	13	39	31	27	76	0 000		
OBS	0000	21	13	39	31	27	76			
OBS	0005	21	10	39	33	27	78			
STD	0010	20	89	39	50	27	97	0 003		
OBS	0010	20	89	39	50	27	97			
OBS	0015	20	81	39	54	28	02			
OBS	0018	20	78	39	56	28	05			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG25	02	23	1960	12	27° 42' N	051° 25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	28		16	21	1		02	0	28	1			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>		
STD	0000	22 00	39 14	27 38	0 000				
OBS	0000	22 00	39 14	27 38					
STD	0010	21 35	39 19	27 60	0 006				
OBS	0010	21 35	39 19	27 60					
OBS	0018	21 29	39 25	27 67					

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG25	02	23	1960	24	27° 42' N	051° 25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	35		15	20	6		02	0	35	2			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>		
STD	0000	21 03	39 49	27 92	0 000				
OBS	0000	21 03	39 49	27 92					
STD	0010	21 06	39 50	27 92	0 002				
OBS	0010	21 06	39 50	27 92					
OBS	0018	21 03	39 49	27 92					

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG25	02	24	1960	06	27° 42' N	051° 25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		16	19	4		05	0	31	2			5			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>		
STD	0000	21 42	39 19	27 59	0 000				
OBS	0000	21 42	39 19	27 59					
STD	0010	21 39	39 26	27 65	0 005				
OBS	0010	21 39	39 26	27 65					
OBS	0019	21 20	39 36	27 78					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG25	02	24	1960	12	27° 42' N		051° 25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
32		13	21	7		05		0	30	3			6			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	21	87	39	01	27	32	0 000		
OBS	0000	21	87	39	01	27	32			
STD	0010	21	60	39	06	27	44	0 007		
OBS	0010	21	60	39	06	27	44			
OBS	0018	21	53	39	09	27	48			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG25	02	24	1960	19	27° 42' N		051° 25' E	0018	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
34		13	20	1		05		0	31	1			5			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	21	47	39	16	27	55	0 000		
OBS	0000	21	47	39	16	27	55			
STD	0010	21	45	39	18	27	57	0 005		
OBS	0010	21	45	39	18	27	57			
OBS	0018	21	39	39	20	27	60			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG22	02	26	1960	10	27° 40' N	050° 36' E		0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
36		12	25	0			01	0	1	36	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} l/l$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	77	40	51	28	77	0 000-		
OBS	0000	20	77	40	51	28	77			
OBS	0005	20	40	40	51	28	88			
STD	0010	20	27	40	51	28	91	0 007-		
OBS	0010	20	27	40	51	28	91			
STD	0020	20	16	40	53	28	96	0 014-		
OBS	0020	20	16	40	53	28	96			
STD	0030	20	01	40	52	28	99	0 022-		
OBS	0030	20	01	40	52	28	99			
OBS	0040	19	96	40	54	29	02			
STD	0050	19	95	40	53	29	01	0 038-		
OBS	0050	19	95	40	53	29	01			
OBS	0055	19	96	40	52	29	00			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG19	02	26	1960	13	27° 52' N	050° 15' E		0058	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
35		11	23	9			02	0	31	1			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} l/l$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	86	40	62	28	83	0 000-		
OBS	0000	20	86	40	62	28	83			
OBS	0005	20	15	40	62	29	03			
STD	0010	19	75	40	64	29	15	0 008-		
OBS	0010	19	75	40	64	29	15			
STD	0020	19	42	40	69	29	28	0 018-		
OBS	0020	19	42	40	69	29	28			
STD	0030	19	29	40	72	29	34	0 029-		
OBS	0030	19	29	40	72	29	34			
OBS	0040	19	21	40	73	29	37			
STD	0050	19	20	40	74	29	38	0 052-		
OBS	0050	19	20	40	74	29	38			
OBS	0058	19	19	40	75	29	39			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG18	02	26	1960	15	28°	02' N	049°	51' E	0046	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	15		11	22	8		02		0	15	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	13	40	69	29	09	0 000-		
OBS	0000	20	13	40	69	29	09			
OBS	0005	20	08	40	72	29	12			
STD	0010	19	51	40	71	29	27	0 010-		
OBS	0010	19	51	40	71	29	27			
STD	0020	19	24	40	75	29	37	0 021-		
OBS	0020	19	24	40	75	29	37			
STD	0030	19	05	40	82	29	48	0 033-		
OBS	0030	19	05	40	82	29	48			
OBS	0040	18	98	41	03*	29	66*			
OBS	0045	18	98	40	94	29	59			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG17	02	27	1960	10	28°	17' N	050°	06' E	0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		15	23	9		02		0	33	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	26	40	55	28	95	0 000-		
OBS	0000	20	26	40	55	28	95			
OBS	0005	20	08	40	75*	29	15*			
STD	0010	19	90	40	58	29	07	0 008-		
OBS	0010	19	90	40	58	29	07			
STD	0020	19	69	40	57	29	12	0 017-		
OBS	0020	19	69	40	57	29	12			
STD	0030	19	43	40	75	29	32	0 028-		
OBS	0030	19	43	40	75	29	32			
STD	0050	18	95	40	83	29	51	0 052-		
OBS	0050	18	95	40	83	29	51			
OBS	0055	18	94	40	87	29	54			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG16	02	28	1960	00	28° 31' N	050° 21' E	0052	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	34		12	20	0			02	0	34	2			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>		
STD	0000	19 99	40 58	29 04	0 000-				
OBS	0000	19 99	40 58	29 04					
OBS	0005	20 00	40 58	29 04					
STD	0010	19 98	40 58	29 04	0 009-				
OBS	0010	19 98	40 58	29 04					
STD	0020	19 79	40 58	29 10	0 017-				
OBS	0020	19 79	40 58	29 10					
STD	0030	19 58	40 65	29 21	0 027-				
OBS	0030	19 58	40 65	29 21					
OBS	0040	19 52	40 64	29 21					
STD	0050	19 50	40 66	29 24	0 047-				
OBS	0050	19 50	40 66	29 24					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG10	02	28	1960	08	28° 44' N	049° 42' E	0046	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		13	21	7			02	0	32	2			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>		
STD	0000	19 60	40 88	29 38	0 000-				
OBS	0000	19 60	40 88	29 38					
OBS	0005	19 58	40 88	29 38					
STD	0010	19 51	40 88	29 40	0 012-				
OBS	0010	19 51	40 88	29 40					
STD	0020	19 37	40 88	29 44	0 024-				
OBS	0020	19 37	40 88	29 44					
STD	0030	18 75	41 00	29 69	0 038-				
OBS	0030	18 75	41 00	29 69					
OBS	0040	18 58	41 05	29 78					
OBS	0046	18 60	41 04	29 76					

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG09	02	28	1960	10	28	33' N	049	24' E	0043	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	34		11	21	1			02	2	1	33	1			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰/‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>f</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	19	49	40	91	29	43	0	000-	
OBS	0000	19	49	40	91	29	43			
OBS	0005	19	51	40	90	29	42			
STD	0010	19	25	40	92	29	50	0	013-	
OBS	0010	19	25	40	92	29	50			
STD	0020	18	78	41	04	29	72	0	027-	
OBS	0020	18	78	41	04	29	72			
STD	0030	18	45	41	10	29	85	0	042-	
OBS	0030	18	45	41	10	29	85			
OBS	0040	18	38	41	12	29	88			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG9A	02	28	1960	13	28	43' N	048	54' E	0037	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	04		10	21	7			02	1	3	33	1			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰/‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>f</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	18	31	41	37	30	09	0	000-	
OBS	0000	18	31	41	37	30	09			
OBS	0005	18	21	41	36	30	11			
STD	0010	17	94	41	40	30	21	0	019-	
OBS	0010	17	94	41	40	30	21			
STD	0020	17	38	41	56	30	48	0	040-	
OBS	0020	17	38	41	56	30	48			
STD	0030	17	36	41	56	30	48	0	062-	
OBS	0030	17	36	41	56	30	48			
OBS	0036	17	34	41	55	30	48			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG08	02	28	1960	16	29° 07' N	049° 02' E	0034	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
14			09	20	0		02	5	2	14	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	18	91	41	27	29	86	0 000-		
OBS	0000	18	91	41	27	29	86			
STD	0010	18	58	41	26	29	94	0 017-		
OBS	0010	18	58	41	26	29	94			
OBS	0015	18	32	41	29	30	03			
STD	0020	18	15	41	30	30	08	0 034-		
OBS	0025	18	05	41	30	30	11			
STD	0030	18	01	41	31	30	12	0 053-		
OBS	0030	18	01	41	31	30	12			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	02	29	1960	00	29° 42' N	048° 50' E	0017	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
16			07	18	9		02	8	1	16	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> ml/l ↓	V <sub>t</sub> ↓
STD	0000	17	30	40	68	29	82	0 000-		
OBS	0000	17	30	40	68	29	82			
OBS	0008	17	32	40	89	29	98			
STD	0010	17	32	40	92	30	00	0 017-		
OBS	0016	17	33	40	96	30	03			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG01	02	29	1960	03	29° 42' N	048° 50' E	0017	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	12		06	18	9		03	8	4	15	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>f</sub>
STD	0000	17 43	39 35	28 76	0 000-		
OBS	0000	17 43	39 35	28 76			
OBS	0007	17 23	40 55	29 74			
STD	0010	17 19	40 63	29 81	0 011-		
OBS	0015	17 19	40 77	29 92			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG01	02	29	1960	06	29° 42' N	048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	15		08	19	4		02	4	3	14	2			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>f</sub>
STD	0000	17 47	39 90	29 18	0 000-		
OBS	0000	17 47	39 90	29 18			
OBS	0008	17 22	40 35	29 59			
STD	0010	17 23	40 46	29 67	0 012-		
OBS	0016	17 25	40 81	29 93			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG01	02	29	1960	09	29° 42' N	048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	16		05	21	1		02	6	2	14	2			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>f</sub>
STD	0000	17 52	40 88	29 92	0 000-		
OBS	0000	17 52	40 88	29 92			
OBS	0008	17 44	40 93	29 98			
STD	0010	17 42	40 94	29 99	0 017-		
OBS	0016	17 38	40 97	30 02			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG01	02	29	1960	16	29° 42' N		048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	19		06.	18	9		02	6	4	19	2			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	17	61	40	27	29	43	0 000-
OBS	0000	17	61	40	27	29	43	
OBS	0008	17	41	40	65	29	77	
STD	0010	17	38	40	70	29	82	0 014-
OBS	0016	17	36	40	74	29	85	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG01	02	29	1960	18	29° 42' N		048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	31		08	19	4		02		0	35	1			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	17	60	40	07	29	28	0 000-
OBS	0000	17	60	40	07	29	28	
OBS	0007	17	51	40	61	29	71	
STD	0010	17	47	40	75	29	83	0 013-
OBS	0015	17	42	40	85	29	92	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG01	02	29	1960	22	29° 42' N		048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	36		08	18	3		02		0	36	2			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	17	46	40	85	29	91	0 000-
OBS	0000	17	46	40	85	29	91	
OBS	0007	17	55	40	99	30	00	
STD	0010	17	55	41	00	30	00	0 017-
OBS	0015	17	54	41	01	30	01	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	00	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	32		08	18	9		02	0	33	1			7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> m/l ↓	V <sub>f</sub> ↓	
STD	0000	17 39	40 54	29 69	0 000-			
OBS	0000	17 39	40 54	29 69				
OBS	0007	17 41	40 90	29 96				
STD	0010	17 42	40 97	30 01	0 016-			
OBS	0015	17 44	40 97	30 01				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	03	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	05		08	18	3		03	6	2	02	1		7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> m/l ↓	V <sub>f</sub> ↓	
STD	0000	17 50	39 76	29 06	0 000-			
OBS	0000	17 50	39 76	29 06				
OBS	0007	17 51	39 81	29 10				
STD	0010	17 50	40 08	29 31	0 010-			
OBS	0015	17 46	40 87	29 93				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	06	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	04		09	21	1		02	6	4	04	2		7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	σ <sub>t</sub> ↓	Σ ΔD ↓	O <sub>2</sub> m/l ↓	V <sub>f</sub> ↓	
STD	0000	17 51	40 07	29 30	0 000-			
OBS	0000	17 51	40 07	29 30				
OBS	0007	17 44	40 14	29 37				
STD	0010	17 42	40 21	29 43	0 012-			
OBS	0015	17 39	40 37	29 56				

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	09	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	06		09	22	8		02	4	4	03	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_f$
		↓	↓	↓	↓	↓	↓			
STD	0000	17	72	40	80	29	81	0	000-	
OBS	0000	17	72	40	80	29	81			
OBS	0007	17	59	40	84	29	87			
STD	0010	17	55	40	87	29	90	0	016-	
OBS	0015	17	49	40	94	29	97			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	12	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	04		05	27	8		10	4	6	04	1			6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_f$
		↓	↓	↓	↓	↓	↓			
STD	0000	18	74	40	71	29	47	0	000-	
OBS	0000	18	74	40	71	29	47			
OBS	0007	17	63	40	81	29	84			
STD	0010	17	58	40	85	29	88	0	015-	
OBS	0015	17	50	40	93	29	96			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00658	PG01	03	01	1960	15	29° 42' N	048° 50' E	0016	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	03		06	22	2		02	9	7	03	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ ml/l	$V_f$
		↓	↓	↓	↓	↓	↓			
STD	0000	17	91	40	45	29	49	0	000-	
OBS	0000	17	91	40	45	29	49			
OBS	0007	17	91	40	55	29	57			
STD	0010	17	82	40	60	29	63	0	014-	
OBS	0015	17	54	40	71	29	78			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG01	03	01	1960	17	29° 42' N		048° 50' E	0016	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	02		05	21	1		02	8	7	01	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$Q_{zm}$ l/l	$V_t$
STD	0000	17	65	40	28	29	42	0 000-		
OBS	0000	17	65	40	28	29	42			
OBS	0007	17	46	40	55	29	68			
STD	0010	17	48	40	68	29	77	0 014-		
OBS	0015	17	52	40	91	29	94			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG8A	03	02	1960	03	29° 07' N		048° 37' E	0014	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	02		05	20	0		02	0	8	02	1			6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$Q_{zm}$ l/l	$V_t$
STD	0000	17	99	41	21	30	05	0 000-		
OBS	0000	17	99	41	21	30	05			
OBS	0005	18	03	41	21	30	04			
STD	0010	18	02	41	22	30	05	0 018-		
OBS	0010	18	02	41	22	30	05			
OBS	0014	18	00							

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG07	03	02	1960	06	29° 15' N		049° 20' E	0037	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	02		07	21	1		02	7	8	29	2			6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_t$
		↓	↓	↓	↓	↓	↓			
STD	0000	18	65	41	29	29	94	0 000-		
OBS	0000	18	65	41	29	29	94			
OBS	0005	18	64	41	29	29	95			
.STD	0010	18	54	41	29	29	97	0 017-		
OBS	0010	18	54	41	29	29	97			
STD	0020	18	38	41	31	30	03	0 035-		
OBS	0020	18	38	41	31	30	03			
STD	0030	18	37	41	31	30	03	0 053-		
OBS	0030	18	37	41	31	30	03			
OBS	0037	18	38	41	31	30	03			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00658	PG06	03	02	1960	09	29° 25' N		049° 38' E	0034	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	03		07	23	3		02	0	9	03	2			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_t$
		↓	↓	↓	↓	↓	↓			
STD	0000	18	84	41	17	29	80	0 000-		
OBS	0000	18	84	41	17	29	80			
OBS	0005	18	86	41	17	29	80			
STD	0010	18	80	41	17	29	81	0 016-		
OBS	0010	18	80	41	17	29	81			
STD	0020	18	52	41	17	29	89	0 032-		
OBS	0020	18	52	41	17	29	89			
STD	0030	18	53	41	17	29	88	0 049-		
OBS	0030	18	53	41	17	29	88			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG03	03	02	1960	12	29°	55' N	049°	57' E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	12		06	21	7		02	7	8	12	2			6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	18	25	41	12	29	92	0	000-
OBS	0000	18	25	41	12	29	92		
OBS	0005	18	27	41	14	29	93		
STD	0010	18	26	41	12	29	91	0	017-
OBS	0010	18	26	41	12	29	91		
OBS	0015	18	24	41	13	29	93		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG02	03	02	1960	15	29°	47' N	049°	32' E	0012	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	15		08	19	4		02	6	8	15	2			6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	17	69	41	20	30	12	0	000-
OBS	0000	17	69	41	20	30	12		
OBS	0005	17	71	41	20	30	12		
STD	0010	17	69	41	20	30	12	0	019-
OBS	0010	17	69	41	20	30	12		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG02	03	02	1960	21	29°	47' N	049°	32' E	0014	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	34		10	17	8		01		0	34	2			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	17	61	41	18	30	13	0	000-
OBS	0000	17	61	41	18	30	13		
OBS	0005	17	65	41	18	30	12		
STD	0010	17	64	41	18	30	12	0	019-
OBS	0010	17	64	41	18	30	12		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG02	03	03	1960	03	29° 47' N	049° 32' E	0014	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
30			12	17	2		02	0	34	2			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
STD	0000	17	53	41	19	30	15	0	000-
OBS	0000	17	53	41	19	30	15		
OBS	0005	17	57	41	18	30	14		
STD	0010	17	56	41	18	30	14	0	019-
OBS	0010	17	56	41	18	30	14		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG02	03	03	1960	09	29° 47' N	049° 32' E	0014	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	31		15	16	7		02	0	31	2			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
STD	0000	17	75	41	18	30	09	0	000-
OBS	0000	17	75	41	18	30	09		
OBS	0005	17	69	41	18	30	11		
STD	0010	17	65	41	18	30	12	0	019-
OBS	0010	17	65	41	18	30	12		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG02	03	03	1960	15	29° 47' N	049° 32' E	0012	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	26		14	20	0		02	0	28	1			6			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
STD	0000	17	73	41	19	30	10	0	000-
OBS	0000	17	73	41	19	30	10		
OBS	0005	17	72	41	19	30	11		
STD	0010	17	64	41	18	30	12	0	019-
OBS	0010	17	64	41	18	30	12		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG02	03	03	1960	22	29°	47' N	049°	32' E	0012	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	33		15	19	4		02	0	28	1			7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>f</sub>	
STD	0000	17 58	41 19	30 14	0 000-			
OBS	0000	17 58	41 19	30 14				
OBS	0005	17 63	41 18	30 12				
STD	0010	17 62	41 21	30 15	0 019-			
OBS	0010	17 62	41 21	30 15				

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG02	03	04	1960	03	29°	47' N	049°	32' E	0013	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	36		15	18	3		02	0	35	1			7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>f</sub>	
STD	0000	17 53	41 22	30 18	0 000-			
OBS	0000	17 53	41 22	30 18				
OBS	0005	17 56	41 24	30 19				
STD	0010	17 55	41 22	30 17	0 019-			
OBS	0010	17 55	41 22	30 17				

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00658	PG02	03	04	1960	09	29°	47' N	049°	32' E	0013	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	29		16	18	3		05	0	30	1			7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C	S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>f</sub>	
STD	0000	17 91	41 20	30 07	0 000-			
OBS	0000	17 91	41 20	30 07				
OBS	0005	17 66	41 20	30 13				
STD	0010	17 57	41 20	30 15	0 019-			
OBS	0010	17 57	41 20	30 15				

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG05	03	05	1960	00	29° 37' N	049° 53' E	0030	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	10		14	17	8			02	0	35	1			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ m/l	$V_f$
STD	0000	18	35	41	06	29	84	0 000-
OBS	0000	18	35	41	06	29	84	
OBS	0005	18	38	41	05	29	83	
STD	0010	18	37	41	04	29	82	0 016-
OBS	0010	18	37	41	04	29	82	
STD	0020	18	36	41	06	29	84	0 032-
OBS	0020	18	36	41	06	29	84	
STD	0030	18	33	41	04	29	83	0 048-
OBS	0030	18	33	41	04	29	83	

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG04	03	05	1960	02	29° 44' N	050° 12' E	0017	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	02		14	18	3			05	0	36	1			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ m/l	$V_f$
STD	0000	18	76	40	88	29	60	0 000-
OBS	0000	18	76	40	88	29	60	
OBS	0005	18	76	40	88	29	60	
STD	0010	18	74	40	87	29	60	0 014-
OBS	0010	18	74	40	87	29	60	
OBS	0016	18	75	40	88	29	60	

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00658	PG13	03	05	1960	04	29° 33' N	050° 25' E	0012	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
	09		14	18	9			02	5	1	36	1		7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ m/l	$V_f$
STD	0000	18	98	40	76	29	45	0 000-
OBS	0000	18	98	40	76	29	45	
OBS	0005	18	94	40	74	29	45	
STD	0010	18	94	40	75	29	45	0 012-
OBS	0010	18	94	40	80*	29	49*	
OBS	0013	18	93	40	75	29	46	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG29	01	13	1961	16	26° 34' N		055° 48' E	0051	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	03		18	17	8		50	6	8	03	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
STD	0000	22	45	36	99	25	62	0 000		
OBS	0000	22	45	36	99	25	62			
STD	0010	22	44	37	01	25	64	0 024		
OBS	0010	22	44	37	01	25	64			
STD	0020	22	38	37	10	25	72	0 047		
OBS	0020	22	38	37	10	25	72			
STD	0030	22	37	37	14	25	76	0 070		
OBS	0030	22	37	37	14	25	76			
OBS	0040	22	42	37	18	25	77			
STD	0050	22	42	37	22	25	80	0 114		
OBS	0050	22	42	37	22	25	80			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG29	01	13	1961	20	26° 34' N		055° 48' E	0051	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	09		17	18	9		80	6	6	09	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
STD	0000	22	39	37	02	25	66	0 000		
OBS	0000	22	39	37	02	25	66			
STD	0010	22	39	37	06	25	69	0 023		
STD	0020	22	40	37	10	25	72	0 046		
OBS	0025	22	40	37	12	25	73			
STD	0030	22	38	37	14	25	75	0 069		
STD	0050	22	24	37	21	25	85	0 113		
OBS	0050	22	24	37	21	25	85			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	13	1961	23	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	01		18	17	2			50	7	8	01	1		7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ M/L	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	38	36	99	25	64	0 000		
OBS	0000	22	38	36	99	25	64			
STD	0010	22	42	37	02	25	65	0 024		
OBS	0010	22	42	37	02	25	65			
STD	0020	22	41	37	04	25	67	0 047		
OBS	0020	22	41	37	04	25	67			
STD	0030	22	38	37	13	25	75	0 070		
OBS	0030	22	38	37	13	25	75			
OBS	0040	22	34	37	14	25	77			
STD	0050	22	24	37	20	25	84	0 115		
OBS	0050	22	24	37	20	25	84			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	14	1961	02	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	35		17	17	2			50	7	7	01	1		6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ M/L	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	49	36	96	25	59	0 000		
OBS	0000	22	49	36	96	25	59			
STD	0010	22	49	36	96	25	59	0 024		
STD	0020	22	49	36	96	25	59	0 048		
OBS	0025	22	49	36	96	25	59			
STD	0030	22	45	36	99	25	62	0 072		
OBS	0049	22	16	37	17	25	84			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	14	1961	05	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	04		19	17	8		01	7	6	04	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	78	36	87	25	43	0 000		
OBS	0000	22	78	36	87	25	43			
STD	0010	22	78	36	85	25	42	0 026		
OBS	0010	22	78	36	85	25	42			
STD	0020	22	63	36	97	25	55	0 051		
OBS	0020	22	63	36	97	25	55			
STD	0030	22	47	37	00	25	62	0 075		
OBS	0030	22	47	37	00	25	62			
OBS	0040	22	23	37	13	25	79			
STD	0050	22	24	37	11	25	77	0 121		
OBS	0050	22	24	37	11	25	77			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	14	1961	09	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	06		19	23	3		01	8	5	06	2			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	83	36	82	25	38	0 000		
OBS	0000	22	83	36	82	25	38			
STD	0010	22	76	36	87	25	44	0 026		
STD	0020	22	66	36	93	25	51	0 051		
OBS	0025	22	60	36	96	25	55			
STD	0030	22	54	36	99	25	59	0 075		
STD	0050	22	22	37	15	25	81	0 122		
OBS	0050	22	22	37	15	25	81			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	14	1961	11	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	06		18	19	4		01	4	5	06	3			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
		↓	↓	↓	↓				
STD	0000	22	88	36	86	25	40	0	000
OBS	0000	22	88	36	86	25	40		
STD	0010	22	84	36	90	25	44	0	026
OBS	0010	22	84	36	90	25	44		
STD	0020	22	52	37	00	25	61	0	050
OBS	0020	22	52	37	00	25	61		
STD	0030	22	37	37	04	25	68	0	074
OBS	0030	22	37	37	04	25	68		
OBS	0040	22	25	37	18	25	82		
OBS	0049	22	24	37	19	25	83		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG29	01	14	1961	14	26° 34' N	055° 48' E	0051	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	06		19	20	0		01	8	3	07	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
		↓	↓	↓	↓				
STD	0000	22	58	36	99	25	58	0	000
OBS	0000	22	58	36	99	25	58		
STD	0010	22	60	36	99	25	58	0	024
STD	0020	22	61	37	00	25	58	0	048
OBS	0023	22	62	37	00	25	58		
STD	0030	22	57	37	03	25	62	0	072
OBS	0049	22	30	37	20	25	82		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG29	01	14	1961	17	26° 34' N		055° 48' E	0051	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	04		19	19	4		02	8	3	04	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$		$\Sigma \Delta D$	$O_{2m}/l$	$V_f$
STD	0000	22	44	37	00	25	63	0	000
OBS	0000	22	44	37	00	25	63		
STD	0010	22	48	37	00	25	62	0	024
OBS	0010	22	48	37	00	25	62		
STD	0020	22	34	37	08	25	72	0	047
OBS	0020	22	34	37	08	25	72		
STD	0030	22	26	37	18	25	82	0	070
OBS	0030	22	26	37	18	25	82		
OBS	0040	22	25	37	18	25	82		
OBS	0049	22	26	37	20	25	83		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	14	1961	21	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	05		19	21	7		03	9	8	02	2			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰	$\sigma_t$		$\Sigma \Delta D$	$O_{2m}/l$	$V_f$
STD	0000	22	96	37	39	25	78	0	000
OBS	0000	22	96	37	39	25	78		
STD	0010	22	99	37	39	25	77	0	022
OBS	0010	22	99	37	39	25	77		
STD	0020	22	96	37	40	25	78	0	045
OBS	0020	22	96	37	40	25	78		
STD	0030	23	00	37	40	25	77	0	067
OBS	0030	23	00	37	40	25	77		
STD	0050	23	30	37	71	25	92	0	111
OBS	0050	23	30	37	71	25	92		
OBS	0070	24	12	39	92	27	35		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	00	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	02		18	21	1			03		9	02	1				

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	79	37	34	25	79	0 000		
OBS	0000	22	79	37	34	25	79			
STD	0010	22	82	37	35	25	79	0 022		
STD	0020	22	86	37	35	25	78	0 044		
STD	0030	22	81	37	36	25	80	0 067		
OBS	0036	22	91	37	36	25	77			
STD	0050	23	28	38	08	26	21	0 107		
OBS	0070	24	11	39	81	27	27			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	03	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	04		19	19	4			50	6	7	04	2		6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	58	37	23	25	77	0 000		
OBS	0000	22	58	37	23	25	77			
STD	0010	22	61	37	24	25	76	0 022		
OBS	0015	22	62	37	25	25	77			
STD	0020	22	62	37	25	25	77	0 045		
STD	0030	22	61	37	24	25	76	0 067		
OBS	0030	22	61	37	24	25	76			
OBS	0040	22	62	37	24	25	76			
STD	0050	22	86	37	38	25	80	0 112		
OBS	0050	22	86	37	38	25	80			
OBS	0060	23	98	39	25	26	89			
OBS	0070	24	13	39	70	27	18			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	06	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	02		22	18	9		60	6	8	01	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m/1}$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	55	37	21	25	76	0 000		
OBS	0000	22	55	37	21	25	76			
STD	0010	22	56	37	21	25	76	0 022		
STD	0020	22	58	37	22	25	76	0 045		
STD	0030	22	59	37	22	25	75	0 068		
OBS	0036	22	60	37	22	25	75			
STD	0050	23	05	37	98	26	20	0 109		
OBS	0069	24	04	39	69	27	20			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	09	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	03		21	21	1		02	6	8	03	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m/1}$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	60	37	22	25	75	0 000		
OBS	0000	22	60	37	22	25	75			
STD	0010	22	61	37	22	25	75	0 023		
OBS	0015	22	61	37	22	25	75			
STD	0020	22	60	37	22	25	75	0 045		
STD	0030	22	59	37	21	25	75	0 068		
OBS	0030	22	59	37	21	25	75			
OBS	0040	22	58	37	21	25	75			
STD	0050	22	57	37	21	25	75	0 113		
OBS	0050	22	57	37	21	25	75			
OBS	0060	23	06	37	88	26	12			
OBS	0070	23	00	39	45	27	06			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	12	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	06		20	20	0			50	4	9	06	1		6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	56	37	22	25 76	0 000		
OBS	0000	22	56	37	22	25 76			
STD	0010	22	56	37	22	25 76	0 022		
STD	0020	22	57	37	23	25 77	0 045		
OBS	0029	22	57	37	23	25 77			
STD	0030	22	59	37	27	25 79	0 067		
STD	0050	23	35	38	45	26 47	0 105		
OBS	0061	24	01	39	50	27 07			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG30	01	15	1961	15	26° 20' N		055° 51' E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	07		20	20	0			01	0	3	08	2		7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	80	37	45	25 87	0 000		
OBS	0000	22	80	37	45	25 87			
STD	0010	22	81	37	39	25 82	0 022		
OBS	0019	22	82	37	36	25 79			
STD	0020	22	82	37	36	25 79	0 044		
STD	0030	22	82	37	36	25 79	0 066		
OBS	0033	22	82	37	36	25 79			
OBS	0043	22	88	37	39	25 80			
STD	0050	23	09	37	59	25 89	0 110		
OBS	0052	23	19	37	77	26 00			
OBS	0062	23	59	39	45	27 04			
OBS	0071	24	01	39	48	27 05			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG30	01	15	1961	18	26	20 N	055	51 E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	06		21	21	7		02	6	3	06	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	$Q_{sm/l}$ ↓	$V_t$ ↓
STD	0000	22 76	37 36	25 81	0 000		
OBS	0000	22 76	37 36	25 81			
STD	0010	22 78	37 44	25 87	0 022		
STD	0020	22 86	37 52	25 90	0 043		
STD	0030	23 00	37 48	25 83	0 065		
OBS	0036	23 11	37 65	25 93			
STD	0050	23 44	38 24	26 28	0 104		
OBS	0069	24 07	39 46	27 02			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG30	01	15	1961	21	26	20 N	055	51 E		01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	03		20	20	0		02	6	3	03	1			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C ↓	S ‰ ↓	$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	$Q_{sm/l}$ ↓	$V_t$ ↓
STD	0000	22 53	37 25	25 79	0 000		
OBS	0000	22 53	37 25	25 79			
STD	0010	22 54	37 24	25 78	0 022		
STD	0020	22 54	37 24	25 78	0 044		
OBS	0020	22 54	37 24	25 78			
STD	0030	22 54	37 25	25 79	0 067		
OBS	0035	22 54	37 25	25 79			
OBS	0045	22 74	37 43	25 87			
STD	0050	23 49	38 58	26 52	0 104		
OBS	0055	23 95	39 34	26 96			
OBS	0065	24 02	39 70	27 22			
STD	0075	24 01	39 72	27 23	0 135		
OBS	0075	24 01	39 72	27 23			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG30	01	16	1961	00	26	20 N	055	51 E	0073	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	01		19	20	6		00	0	01	1			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> m l/l	V <sub>t</sub>
STD	0000	22	39	37	21	25	80	0 000		
OBS	0000	22	39	37	21	25	80			
STD	0010	22	40	37	21	25	80	0 022		
STD	0020	22	41	37	21	25	80	0 044		
STD	0030	22	41	37	21	25	80	0 066		
OBS	0036	22	42	37	21	25	80			
STD	0050	22	91	37	94	26	21	0 107		
OBS	0070	24	06	39	70	27	20			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	16	1961	06	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	02		19	30	6		00	0	0				7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> m l/l	V <sub>t</sub>
STD	0000	22	31	36	85	25	55	0 000		
OBS	0000	22	31	36	85	25	55			
OBS	0005	22	30	36	85	25	56			
STD	0010	22	05	36	86	25	64	0 024		
OBS	0010	22	05	36	86	25	64			
OBS	0015	21	97	36	92	25	70			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	16	1961	09	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	03		20	28	3			02	8	2	03	0			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> m l/l ↓	V <sub>f</sub> ↓
STD	0000	22	72	36	81	25	41	0	000	
OBS	0000	22	72	36	81	25	41			
OBS	0005	22	71	36	82	25	42			
STD	0010	22	44	36	85	25	52	0	025	
OBS	0010	22	44	36	85	25	52			
OBS	0015	22	02	36	87	25	65			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	16	1961	12	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	03		18	25	6			03	4	4	00	0			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C ↓		S ‰ ↓		σ <sub>t</sub> ↓		Σ ΔD ↓	O <sub>2</sub> m l/l ↓	V <sub>f</sub> ↓
STD	0000	23	16	36	82	25	29	0	000	
OBS	0000	23	16	36	82	25	29			
OBS	0005	22	77	36	82	25	40			
STD	0010	22	41	36	83	25	51	0	026	
OBS	0010	22	41	36	87*	25	54*			
OBS	0015	22	37	36	85	25	54			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	16	1961	15	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	14		18	21	7		01	6	14	0			7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22	85	36	85	25	40	0 000
OBS	0000	22	85	36	85	25	40	
OBS	0005	21	81*	36	86	25	70*	
STD	0010	22	50	36	86	25	51	0 025
OBS	0010	22	50	36	86	25	51	
OBS	0015	22	46	36	85	25	51	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	16	1961	18	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	32		18	21	1		80	4	6				7			

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22	67					
OBS	0000	22	67	37	01*	25	57*	
OBS	0005	22	60	36	85	25	47	
STD	0010	22	59	36	85	25	47	
OBS	0010	22	59	36	85	25	47	
OBS	0015	22	50	36	85	25	50	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	17	1961	01	26	39' N	055	48' E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	33		17	20	0			63	4	8	33	1		7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	22	48	36	88	25	53	0	000	
OBS	0000	22	48	36	88	25	53			
OBS	0005	22	49	36	86	25	51			
STD	0010	22	50	36	85	25	50	0	025	
OBS	0010	22	50	36	85	25	50			
OBS	0015	22	50	36	84	25	49			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	17	1961	04	26	39' N	055	48' E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	01		18	18	9			03	6	9	01	1		7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	22	42	36	84	25	51	0	000	
OBS	0000	22	42	36	84	25	51			
OBS	0005	22	42	36	84	25	51			
STD	0010	22	40	36	83	25	51	0	025	
OBS	0010	22	40	36	83	25	51			
OBS	0015	22	42							

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG45	01	17	1961	07	26	39 N	055	48 E	0015	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	02		18	18	3		02	4	5	02	1			6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	66						
OBS	0000	22	66						
OBS	0005	22	69	36	84	25	44		
STD	0010	22	68	36	84	25	44		
OBS	0010	22	68	36	84	25	44		
OBS	0015	22	46	36	84	25	50		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG32	01	17	1961	07	26	30 N	056	11 E	0084	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	24		20	21	1		01	6	2	03	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	23	35	37	29	25	59	0	000
OBS	0000	23	35	37	29	25	59		
STD	0010	23	78	37	98	25	98	0	022
OBS	0010	23	78	37	98	25	98		
STD	0020	23	80	38	26	26	19	0	042
OBS	0020	23	80	38	26	26	19		
STD	0030	23	90	38	53	26	36	0	059
OBS	0030	23	90	38	53	26	36		
OBS	0044	24	15	39	77	27	23		
STD	0050	24	20	40	08	27	45	0	083
OBS	0064	24	25	40	56	27	80		
STD	0075	24	22	40	64	27	87	0	094
OBS	0084	24	16	40	70	27	93		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	17	1961	12	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	26		18	22	2			02	8	1	26	2		7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	23 00	37 38	25 76	0 000		
OBS	0000	23 00	37 38	25 76			
OBS	0005	22 95	37 37	25 76			
STD	0010	23 07	37 37	25 73	0 023		
OBS	0015	22 78*	37 37	25 81*			
STD	0020	23 23	37 63	25 88	0 045		
OBS	0025	23 27	37 84	26 03			
STD	0030	23 26	37 93	26 10	0 065		
OBS	0035	23 26	38 12	26 24			
OBS	0045	23 44	38 78	26 69			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	17	1961	15	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	24		19	21	1			03	0	24	1		7			

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> ml/l	V <sub>t</sub>
STD	0000	22 88	37 37	25 78	0 000		
OBS	0000	22 88	37 37	25 78			
STD	0010	22 95	37 45	25 83	0 022		
STD	0020	22 98	37 43	25 80	0 044		
OBS	0023	23 03	37 56	25 89			
STD	0030	23 19	37 98	26 16	0 064		
OBS	0043	23 62	39 21	26 96			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	17	1961	18	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	24		20	20	0			03	8	2	00	0			7	

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	22 85	37 41	25 82	0 000		
OBS	0000	22 85	37 41	25 82			
STD	0010	22 90	37 44	25 83	0 022		
OBS	0010	22 90	37 44	25 83			
STD	0020	23 10	37 76	26 02	0 043		
OBS	0020	23 10	37 76	26 02			
STD	0030	23 24	37 94	26 11	0 062		
OBS	0030	23 24	37 94	26 11			
OBS	0045	23 67	39 34	27 05			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	17	1961	21	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	28		19	19	4			02	8	2	00	0			7	

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	22 74	37 37	25 83	0 000		
OBS	0000	22 74	37 37	25 83			
STD	0010	22 95	37 46	25 85	0 022		
STD	0020	23 15	37 75	25 99	0 043		
OBS	0023	23 21	37 87	26 07			
STD	0030	23 34	38 20	26 28	0 062		
OBS	0044	23 60	39 11	26 89			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	18	1961	01	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	25		19	19	4		01	6	5	25	1			7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C	S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>f</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22 74	37	39	25 84	0 000		
OBS	0000	22 74	37	39	25 84			
STD	0010	22 80	37	37	25 81	0 022		
OBS	0010	22 80	37	37	25 81			
STD	0020	22 88	37	41	25 82	0 044		
OBS	0020	22 88	37	41	25 82			
STD	0030	23 28	37	93	26 09	0 065		
OBS	0030	23 28	37	93	26 09			
OBS	0045	23 50	38	88	26 75			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	18	1961	03	26	05 N	055	55 E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	20		20	20	0		01	6	6	20	1			6		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C	S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>f</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	22 75	37	37	25 82	0 000		
OBS	0000	22 75	37	37	25 82			
STD	0010	22 80	37	39	25 82	0 022		
STD	0020	22 79	37	40	25 83	0 044		
OBS	0024	22 86	37	41	25 82			
STD	0030	23 00	37	62	25 94	0 065		
OBS	0045	23 55	38	47	26 42			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	18	1961	06	26	05' N	055	55' E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	20		21	20	0			03	6	6	20	1		6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ m/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	79						
OBS	0000	22	79	38	48*	26	65*		
STD	0010	22	76	37	36	25	81		
OBS	0010	22	76	37	36	25	81		
STD	0020	22	73	37	36	25	82		
OBS	0020	22	73	37	36	25	82		
STD	0030	23	30	37	88	26	05		
OBS	0030	23	30	37	88	26	05		
OBS	0045	23	47	38	69	26	61		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG31	01	18	1961	09	26	05' N	055	55' E	0048	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	21		19	21	1			02	6	4	21	1		6		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_2$ m/l	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	80	37	33	25	78	0	000
OBS	0000	22	80	37	33	25	78		
STD	0010	22	77	37	33	25	79	0	022
STD	0020	22	73	37	32	25	79	0	044
OBS	0024	22	72	37	32	25	79		
STD	0030	22	85	37	58	25	95	0	066
OBS	0044	23	40	38	59	26	56		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00865	PG31	01	18	1961	12	26° 05' N	055° 55' E	0048	00		

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	22		17	22	2			01	4	4	22	2		6		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>f</sub>
STD	0000	22 86	37 33	25 76	0 000		
OBS	0000	22 86	37 33	25 76			
STD	0010	22 78	37 34	25 79	0 022		
OBS	0010	22 78	37 34	25 79			
STD	0020	22 76	37 36	25 81	0 044		
OBS	0020	22 76	37 36	25 81			
STD	0030	23 38	38 52	26 51	0 063		
OBS	0030	23 38	38 52	26 51			
OBS	0045	23 56	39 14	26 93			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE				
00865	PG28	01	20	1961	06	26° 17' N	055° 30' E	0070	01		

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	05		17	22	8			02	1	6	05	3		7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	O <sub>2</sub> m/l	V <sub>f</sub>
STD	0000	23 02	36 95	25 43	0 000		
OBS	0000	23 02	36 95	25 43			
STD	0010	23 03	36 94	25 41	0 026		
OBS	0010	23 03	36 94	25 41			
OBS	0019	23 00	36 95	25 43			
STD	0020	22 97	36 99	25 47	0 051		
OBS	0029	22 82	37 34	25 78			
STD	0030	22 84	37 36	25 79	0 075		
OBS	0048	23 23	38 24	26 34			
STD	0050	23 28	38 39	26 44	0 113		
OBS	0067	23 76	40 06	27 57			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG18	01	20	1961	22	24	50 N	053	28 E	0020	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	10		13	20	6		02		0	00	0			6		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ m/l	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	62	41	60	29	37	0	000-	
OBS	0000	21	62	41	60	29	37			
OBS	0005	21	64	41	50	29	29			
STD	0010	21	64	41	45	29	25	0	011-	
OBS	0010	21	64	41	45	29	25			
OBS	0015	21	56	41	82	29	55			
STD	0020	21	53	41	90	29	62	0	023-	
OBS	0020	21	53	41	90	29	62			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG18	01	21	1961	06	24	50 N	053	28 E	0020	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	17		17	22	2		03	1	6	16	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_2$ m/l	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	52	41	94	29	66	0	000-	
OBS	0000	21	52	41	94	29	66			
OBS	0005	21	54	41	91	29	63			
STD	0010	21	51	42	07	29	76	0	015-	
OBS	0010	21	51	42	07	29	76			
OBS	0015	21	49	42	09	29	78			
STD	0020	21	50	42	08	29	77	0	030-	
OBS	0020	21	50	42	08	29	77			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG18	01	21	1961	14	24 50 N		053 28 E	0020	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	09		12	26	7		00		0	09	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	$O_{2m} I/I$ ↓	$V_f$ ↓
		↓	↓	↓	↓				
STD	0000	22	01	41	54	29	21	0	000-
OBS	0000	22	01	41	54	29	21		
OBS	0005	21	78	41	57	29	30		
STD	0010	21	58	41	82	29	55	0	012-
OBS	0010	21	58	41	82	29	55		
OBS	0015	21	52	41	95	29	66		
STD	0020	21	53	41	97	29	68	0	026-
OBS	0020	21	53	41	97	29	68		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG18	01	21	1961	22	24 50 N		053 28 E	0020	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	12		12	22	2		02		0	12	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓	$\Sigma \Delta D$ ↓	$O_{2m} I/I$ ↓	$V_f$ ↓
		↓	↓	↓	↓				
STD	0000	21	84	41	38	29	14	0	000-
OBS	0000	21	84	41	38	29	14		
OBS	0005	20	58	41	36	29	48*		
STD	0010	21	70	41	52	29	28	0	010-
OBS	0010	21	70	41	52	29	28		
OBS	0015	21	57	41	84	29	57		
STD	0020	21	56	41	87	29	59	0	023-
OBS	0020	21	56	41	87	29	59		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG01	01	25	1961	11	26	28 N	051	20 E	0027	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	34		20	18	9		01	1	2	34	1			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	18	40	55	28	97	0	000-
OBS	0000	20	18	40	55	28	97		
OBS	0005	20	19	40	55	28	96		
STD	0010	20	14	40	55	28	98	0	008-
OBS	0015	20	10	40	55	28	99		
STD	0020	20	07	40	57	29	01	0	016-
OBS	0025	20	04	40	60	29	04		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG07	01	25	1961	18	26	52 N	051	48 E	0068	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	33		19	18	9		03	3	6	34	4			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	38	39	68	27	97	0	000
OBS	0000	21	38	39	68	27	97		
STD	0010	21	42	39	80	28	05	0	001
OBS	0010	21	42	39	80	28	05		
STD	0020	21	42	39	94	28	16	0	001
OBS	0020	21	42	39	68*	27	96*		
STD	0030	21	57	40	10	28	24	0	001
OBS	0030	21	57	40	10	28	24		
OBS	0045	21	56	40	38	28	45		
STD	0050	21	57	40	39	28	46	0	003-
OBS	0065	21	58	40	42	28	48		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG07	01	26	1961	06	26	52 N	051	48 E	0068	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	33		20	27	2			03	1	6	33	2		7		

SUBSURFACE OBSERVATIONS								
		SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_{2m l/l}$	$V_f$
STD		0000	21 02	39 81	28 17	0 000-		
OBS		0000	21 02	39 81	28 17			
STD		0010	21 26	39 96	28 22	0 001-		
OBS		0010	21 26	39 96	28 22			
STD		0020	21 22	40 04	28 29	0 002-		
OBS		0020	21 22	40 04	28 29			
STD		0030	21 24	40 05	28 29	0 003-		
OBS		0030	21 24	40 05	28 29			
OBS		0045	21 46	40 33	28 44			
STD		0050	21 50	40 39	28 48	0 008-		
OBS		0065	21 54	40 45	28 51			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG07	01	26	1961	18	26	52 N	051	48 E	0068	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	25		17	19	4			02	5	6	25	1		7		

SUBSURFACE OBSERVATIONS								
		SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_{2m l/l}$	$V_f$
STD		0000	21 28	39 68	28 00	0 000		
OBS		0000	21 28	39 68	28 00			
STD		0010	21 26	39 72	28 03	0 001		
OBS		0010	21 26	39 72	28 03			
STD		0020	21 24	39 92	28 19	0 001		
OBS		0020	21 24	39 92	28 19			
STD		0030	21 22	40 02	28 27	0 000		
OBS		0030	21 22	40 02	28 27			
OBS		0045	21 36	40 17	28 35			
STD		0050	21 40	40 23	28 38	0 003-		
OBS		0065	21 52	40 46	28 53			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG03	01	27	1961	01	27	16 N	051	56 E	0051	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	15		15	21	i		02	6	3	15	0			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	78	39	03	27	36	0	000	
OBS	0000	21	78	39	03	27	36			
STD	0010	21	82	39	05	27	37	0	007	
OBS	0010	21	82	39	05	27	37			
STD	0020	21	80	39	15	27	45	0	014	
OBS	0020	21	80	39	15	27	45			
STD	0030	21	96	39	14	27	39	0	021	
OBS	0030	21	96	39	14	27	39			
STD	0050	22	44	40	05	27	95	0	030	
OBS	0050	22	44	40	05	27	95			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG04	01	27	1961	04	27	36 N	052	17 E	0060	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	04		16	21	l		03	6	2	00	0			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	86	39	07	27	37	0	000	
OBS	0000	21	86	39	07	27	37			
STD	0010	21	87	39	05	27	35	0	007	
OBS	0010	21	87	39	05	27	35			
STD	0020	21	89	39	06	27	35	0	015	
OBS	0020	21	89	39	06	27	35			
STD	0030	22	82	39	69	27	56	0	021	
OBS	0035	23	10	39	92	27	66			
STD	0050	23	16	40	25	27	89	0	029	
OBS	0050	23	16	40	25	27	89			
OBS	0060	22	88	40	31	28	02			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG05	01	27	1961	10	27 17 N		052 40 E	0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	27		14	22	2		00		0	27	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓		$\Sigma \Delta D$ ↓	$O_2$ ml/l ↓	$V_t$ ↓
STD	0000	22	22	38	56	26	88	0 000		
OBS	0000	22	22	38	56	26	88			
STD	0010	21	81	38	57	27	00	0 011		
OBS	0010	21	81	38	57	27	00			
STD	0020	21	91	38	69	27	07	0 022		
OBS	0020	21	91	38	69	27	07			
STD	0030	23	05	40	11	27	82	0 028		
OBS	0030	23	05	40	11	27	82			
OBS	0040	23	05	40	20	27	89			
STD	0050	23	03	40	21	27	90	0 034		
OBS	0055	23	02	40	22	27	91			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG05	01	27	1961	23	27 17 N		052 40 E	0055	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	31		14	20	0		00		0	31	1			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$ ↓		$\Sigma \Delta D$ ↓	$O_2$ ml/l ↓	$V_t$ ↓
STD	0000	21	57	38	47	26	99	0 000		
OBS	0000	21	57	38	47	26	99			
STD	0010	21	60	38	45	26	97	0 011		
OBS	0010	21	60	38	45	26	97			
STD	0020	21	90	38	68	27	06	0 021		
OBS	0020	21	90	38	68	27	06			
STD	0030	22	88	39	76	27	60	0 029		
OBS	0030	22	88	39	76	27	60			
OBS	0040	23	06	40	18	27	87			
STD	0050	23	04	40	23	27	91	0 036		
OBS	0055	22	96	40	26	27	96			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG05	01	28	1961	10	27	17 N	052	40 E	0055	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	30		13	19	4		02	1	5	30	2			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	66	38	44	26	95	0	000	
OBS	0000	21	66	38	44	26	95			
STD	0010	21	67	38	45	26	95	0	011	
OBS	0010	21	67	38	45	26	95			
STD	0020	21	98	38	85	27	17	0	021	
OBS	0020	21	98	38	85	27	17			
STD	0030	22	84	39	88	27	70	0	028	
OBS	0030	22	84	39	88	27	70			
OBS	0040	23	05	40	13	27	83			
STD	0050	22	98	40	24	27	94	0	034	
OBS	0050	22	98	40	24	27	94			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG06	01	29	1961	16	26	55 N	052	21 E	0077	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	31		14	19	4		03	4	7	31	3			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	44	39	49	27	81	0	000	
OBS	0000	21	44	39	49	27	81			
STD	0010	21	42	39	48	27	81	0	003	
OBS	0010	21	42	39	48	27	81			
STD	0020	21	47	39	53	27	83	0	006	
OBS	0020	21	47	39	53	27	83			
STD	0030	21	90	39	96	28	04	0	008	
OBS	0030	21	90	39	96	28	04			
OBS	0039	21	96	40	01	28	06			
STD	0050	21	97	40	03	28	07	0	010	
OBS	0054	21	97	40	05	28	08			
OBS	0074	22	34	40	26	28	14			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG11	01	30	1961	04	26	22 N	052	28 E	0066	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
13	33		13	18	9			03	5	6	33	2		7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	21	28	39	83	28	11	0 000
OBS	0000	21	28	39	83	28	11	
STD	0010	21	26	39	76	28	06	0 000
OBS	0010	21	26	39	76	28	06	
STD	0020	21	29	39	76	28	06	0 001
OBS	0020	21	29	39	76	28	06	
STD	0030	21	30	39	77	28	06	0 002
OBS	0030	21	30	39	77	28	06	
OBS	0040	21	44	39	95	28	16	
STD	0050	21	46	40	10	28	27	0 001
OBS	0060	21	48	40	22	28	35	

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG08	01	30	1961	09	26	02 N	051	56 E	0033	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	31		13	20	0			03	5	3	30	2		7		

SUBSURFACE OBSERVATIONS								
	SAMPLE DEPTH (M)	T °C		S ‰	σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓
STD	0000	20	96	40	07	28	39	0 000-
OBS	0000	20	96	40	07	28	39	
STD	0010	20	99	40	06	28	37	0 002-
OBS	0010	20	99	40	06	28	37	
OBS	0019	20	72	40	25	28	59	
STD	0020	20	67	40	28	28	63	0 006-
STD	0030	19	98	40	72	29	15	0 013-
OBS	0032	19	80	40	84	29	29	

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG10	01	30	1961	13	25° 44' N	052° 28' E	0046	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	31		12	19	4		02	5	8	31	2			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ M/L	$V_t$		
STD	0000	21 55	40 12	28 26	0 000-				
OBS	0000	21 55	40 12	28 26					
STD	0010	21 54	40 13	28 27	0 001-				
OBS	0010	21 54	40 13	28 27					
STD	0020	21 56	40 16	28 29	0 003-				
OBS	0020	21 56	40 16	28 29					
STD	0030	21 55	40 14	28 27	0 004-				
OBS	0035	21 54	40 12	28 26					

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG09	01	31	1961	04	25° 21' N	052° 36' E	0029	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	33		12	19	4		02	4	6	33	4			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ M/L	$V_t$		
STD	0000	20 98	40 38	28 62	0 000-				
OBS	0000	20 98	40 38	28 62					
STD	0010	21 00	40 37	28 60	0 005-				
OBS	0010	21 00	40 37	28 60					
STD	0020	21 00	40 36	28 60	0 009-				
OBS	0020	21 00	40 36	28 60					
STD	0030	21 00	40 37	28 60	0 013-				
OBS	0030	21 00	40 37	28 60					

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE					
00865	PG09	01	31	1961	14	25	21	N	052	36	E	0029	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	33		12	20	0		01	1	2	33	2			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
STD	0000	20 90	40 39	28 65	0 000-		
OBS	0000	20 90	40 39	28 65			
OBS	0005	20 94	40 40	28 64			
STD	0010	20 94	40 40	28 64	0 005-		
OBS	0015	20 92	40 40	28 65			
STD	0020	20 90	40 44	28 68	0 010-		
OBS	0025	20 86	40 50	28 74			

SURFACE OBSERVATIONS													
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH		
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE					
00865	PG25	02	02	1961	11	25	38	N	055	18	E	0033	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	16		11	16	7		63	7	8	01	2			7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_2$ ml/l	$V_t$
STD	0000	21 88	38 52	26 95	0 000		
OBS	0000	21 88	38 52	26 95			
STD	0010	21 96	38 56	26 95	0 011		
OBS	0010	21 96	38 56	26 95			
OBS	0019	22 58	40 34	28 13			
STD	0020	22 58	40 45	28 21	0 016		
OBS	0029	22 60	40 66	28 37			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG26	02	03	1961	05	26 03 N	055 09 E	0082	01	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	29		13	22	2			03	4	5	29	4			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	22	32	37	66	26	17	0 000		
OBS	0000	22	32	37	66	26	17			
STD	0010	22	36	37	66	26	15	0 019		
OBS	0010	22	36	37	66	26	15			
STD	0020	22	36	37	67	26	16	0 037		
OBS	0020	22	36	37	67	26	16			
OBS	0029	22	60	37	97	26	32			
STD	0030	22	64	38	05	26	37	0 055		
OBS	0044	23	02	39	01	26	99			
STD	0050	23	14	39	27	27	15	0 081		
OBS	0054	23	17	39	47	27	29			
STD	0075	22	73	40	81	28	44	0 090		
OBS	0078	22	58	41	04	28	66			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG27	02	03	1961	09	26 26 N	055 01 E	0015	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	27		12	20	0			01	1	5	27	1			7	

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m} I/I$	$V_f$
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	58	37	22	26	04	0 000		
OBS	0000	21	58	37	22	26	04			
OBS	0005	21	57	37	20	26	03			
STD	0010	21	10	37	21	26	17	0 019		
OBS	0010	21	10	37	21	26	17			
OBS	0015	20	60	37	20	26	30			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG22	02	06	1961	04	26° 09' N		054° 36' E	0088	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	08		18	20	5			02	8	2	08	1		7		

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_{2m}/l$	$V_t$
STD	0000	21 98	38 32	26 76	0 000		
OBS	0000	21 98	38 32	26 76			
STD	0010	22 01	38 32	26 76	0 013		
OBS	0010	22 01	38 32	26 76			
STD	0020	21 98	38 32	26 76	0 026		
OBS	0020	21 98	38 32	26 76			
STD	0030	22 04	38 39	26 80	0 039		
OBS	0030	22 04	38 39	26 80			
OBS	0045	23 04	40 33	27 99			
STD	0050	23 06	40 32	27 97	0 053		
OBS	0060	23 08	40 31	27 96			
STD	0075	23 08					
OBS	0085	23 08	38 39*	26 50*			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION			SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE		
00865	PG22	02	06	1961	14	26° 09' N		054° 36' E	0088	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	07		17	25	6			00	0	07	1		7			

SUBSURFACE OBSERVATIONS							
	SAMPLE DEPTH (M)	T °C	S ‰	$\sigma_t$	$\Sigma \Delta D$	$O_{2m}/l$	$V_t$
STD	0000	22 04	38 17	26 63	0 000		
OBS	0000	22 04	38 17	26 63			
STD	0010	22 05	38 17	26 63	0 014		
OBS	0015	22 05	38 17	26 63			
STD	0020	22 05	38 20	26 65	0 028		
OBS	0025	22 05	38 22	26 67			
STD	0030	22 52	38 97	27 10	0 040		
OBS	0035	22 84	39 54	27 44			
OBS	0045	23 06	40 16	27 85			
STD	0050	23 06	40 20	27 88	0 053		
OBS	0060	23 06	40 26	27 93			
STD	0075	23 07	40 32	27 97	0 058		
OBS	0085	23 08	40 34	27 98			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG23	02	06	1961	19	25	41 N	054	43 E		01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
08	06		18	25	6		00	0	07	3				7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	80	39	34	27	59	0 000		
OBS	0000	21	80	39	34	27	59			
STD	0010	21	88	39	36	27	58	0 005		
OBS	0010	21	88	39	36	27	58			
STD	0020	21	98							
OBS	0020	21	98							
STD	0030	22	10							
OBS	0030	22	10							
OBS	0039	21	74							
STD	0050	21	67							
OBS	0054	21	64							

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG24	02	06	1961	22	25	17 N	054	57 E	0024	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	08		18	20	6		00	0	08	3			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	84							
OBS	0000	20	84							
STD	0010	20	88							
OBS	0013	20	89							
STD	0020	20	90							
OBS	0023	20	90	41	44	29	45			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG20	02	07	1961	05	25	20' N	054	15' E	0035	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	10		19	21	7		00		0	01	2			7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	96	40	96	29	07	0 000-		
OBS	0000	20	96	40	96	29	07			
STD	0010	20	92	40	96	29	08	0 009-		
OBS	0010	20	92	40	96	29	08			
STD	0020	20	91	40	95	29	07	0 018-		
OBS	0020	20	91	40	95	29	07			
STD	0030	20	92	40	95	29	07	0 027-		
OBS	0033	20	92	40	95	29	07			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG20	02	07	1961	15	25	20' N	054	15' E	0035	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	13		17	25	0		00		0	0				7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> ml/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	16	40	81	28	89	0 000-		
OBS	0000	21	16	40	81	28	89			
STD	0010	21	13	40	80	28	90	0 007-		
OBS	0010	21	13	40	80	28	90			
STD	0020	20	96	40	89	29	01	0 015-		
OBS	0020	20	96	40	89	29	01			
STD	0030	20	95	40	96	29	07	0 024-		
OBS	0033	20	95	40	98	29	08			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG20	02	08	1961	03	25° 20' N	054° 15' E	0035	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	12		17	21	1			02	4	6	00	0		7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	20	95	40	73	28	89	0 000-	
OBS	0000	20	95	40	73	28	89		
STD	0010	21	02	40	80	28	93	0 007-	
OBS	0010	21	02	40	80	28	93		
STD	0020	20	98	40	92	29	03	0 015-	
OBS	0020	20	98	40	92	29	03		
STD	0030	20	93	40	99	29	10	0 024-	
OBS	0033	20	92	41	00	29	11		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG21	02	08	1961	07	25° 50' N	054° 10' E	0073	01	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
01	15		20	25	0			01	4	6	07	1		7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_t$
		↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	65	40	03	28	16	0 000-	
OBS	0000	21	65	40	03	28	16		
STD	0010	21	59	40	04	28	19	0 000-	
OBS	0010	21	59	40	04	28	19		
STD	0020	21	57	40	05	28	20	0 001-	
OBS	0020	21	57	40	05	28	20		
STD	0030	21	52	40	05	28	21	0 002-	
OBS	0030	21	52	40	05	28	21		
OBS	0045	21	45	40	09	28	26		
STD	0050	21	48	40	11	28	27	0 003-	
OBS	0060	21	50	40	17	28	31		
OBS	0070	21	47	40	26	28	39		

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG13	02	09	1961	04	26° 53' N	053° 26' E	0022	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
07	30		17	18	3			21	7	8	30	2		7		

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> m l/l	V <sub>f</sub>
STD	0000	21	10	38	59	27	22	0 000		
OBS	0000	21	10	38	59	27	22			
OBS	0005	21	10	38	60	27	22			
STD	0010	21	14	38	61	27	22	0 009		
OBS	0010	21	14	38	61	27	22			
OBS	0015	21	12	38	63	27	24			
STD	0020	21	03	38	74	27	35	0 017		
OBS	0020	21	03	38	74	27	35			

SURFACE OBSERVATIONS										
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH	
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE			
00865	PG13	02	10	1961	04	26° 53' N	053° 26' E	0022	00	

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID-ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
03	12		15	20	0			00	0	12	1		7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2</sub> m l/l	V <sub>f</sub>
STD	0000	20	98	38	74	27	36	0 000		
OBS	0000	20	98	38	74	27	36			
OBS	0005	20	98	38	74	27	36			
STD	0010	20	99	38	76	27	38	0 007		
OBS	0010	20	99	38	76	27	38			
OBS	0015	21	02	38	75	27	36			
STD	0020	21	00	38	76	27	37	0 014		
OBS	0020	21	00	38	76	27	37			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG13	02	11	1961	04	26	53 N	053	26 E	0022	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY $\Psi$	WET $\Psi$			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
02	35		17	17	8		02	5	4	00	0			7		

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
		$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$
STD	0000	21	14	38	74	27	32	0	000
OBS	0000	21	14	38	74	27	32		
OBS	0005	21	14	38	75	27	33		
STD	0010	21	13	38	75	27	33	0	008
OBS	0010	21	13	38	75	27	33		
OBS	0015	21	10	38	74	27	33		
STD	0020	21	06	38	77	27	37	0	015
OBS	0020	21	06	38	77	27	37		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG13	02	12	1961	04	26	53 N	053	26 E	0022	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMID. ITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY $\Psi$	WET $\Psi$			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
05	32		18	20	6		00	0	32	1			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$	$\Sigma \Delta D$	$O_{2m/l}$	$V_f$
		$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$	$\Psi$
STD	0000	21	18	38	72	27	29	0	000
OBS	0000	21	18	38	72	27	29		
OBS	0005	21	18	38	70	27	28		
STD	0010	21	20	38	72	27	29	0	008
OBS	0010	21	20	38	72	27	29		
OBS	0015	21	18	38	73	27	30		
STD	0020	21	16	38	75	27	32	0	016
OBS	0020	21	16	38	75	27	32		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG12	02	12	1961	13	26	51 N	053	00 E	0080	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
06	30		15	23	3		02	0	30	1			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	54	38	77	27	23	0	000	
OBS	0000	21	54	38	77	27	23			
STD	0010	21	50	38	77	27	24	0	008	
OBS	0010	21	50	38	77	27	24			
STD	0020	21	35	38	77	27	28	0	017	
OBS	0020	21	35	38	77	27	28			
STD	0030	21	46	38	93	27	38	0	024	
OBS	0030	21	46	38	93	27	38			
OBS	0045	21	73	39	45	27	70			
STD	0050	22	17	39	71	27	77	0	035	
OBS	0059	22	70	40	02	27	85			
STD	0075	22	68	40	03	27	86	0	043	
OBS	0079	22	68	40	03	27	86			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG14	02	16	1961	00	26	39 N	053	28 E	0086	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	32		12	21	1		00	0	32	2			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>		Σ ΔD	O <sub>2m</sub> l/l	V <sub>t</sub>
		↓	↓	↓	↓	↓	↓	↓	↓	↓
STD	0000	21	61	38	52	27	02	0	000	
OBS	0000	21	61	38	52	27	02			
OBS	0009	21	57	38	55	27	06			
STD	0010	21	58	38	58	27	08	0	010	
OBS	0018	21	64	38	76	27	20			
STD	0020	21	64	38	79	27	22	0	020	
OBS	0027	21	63	38	92	27	32			
STD	0030	21	57	39	09	27	47	0	027	
OBS	0045	21	55	38	52*	27	04*			
STD	0050	21	76	39	90	28	03	0	035	
OBS	0068	22	39	40	19	28	07			
STD	0075	22	59	40	19	28	01	0	038	
OBS	0077	22	64	40	18	27	99			

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00865	PG15	02	16	1961	04	26° 11' N	053° 28' E	0080	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
10	32		14	20	0		00	0	32	3			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	21	82	38	79	27	17	0	000
OBS	0000	21	82	38	79	27	17		
STD	0010	21	88	38	85	27	20	0	009
OBS	0010	21	88	38	85	27	20		
OBS	0019	21	94	39	56	27	72		
STD	0020	21	95	39	58	27	73	0	015
OBS	0029	22	06	39	75	27	83		
STD	0030	22	09	39	76	27	83	0	019
OBS	0043	22	22	39	90	27	90		
STD	0050	21	83	39	92	28	03	0	023
OBS	0068	21	26	39	98	28	23		
STD	0075	21	20	40	00	28	26	0	023
OBS	0077	21	20	40	01	28	27		

SURFACE OBSERVATIONS									
NODC REF. NO.	STATION	DATE				POSITION		SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE	LONGITUDE		
00865	PG16	02	16	1961	07	25° 49' N	053° 25' E	0062	01

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
09	31		16	22	8		00	0	31	3			7			

SUBSURFACE OBSERVATIONS									
	SAMPLE DEPTH (M)	T °C		S ‰		σ <sub>t</sub>	Σ ΔD	O <sub>2</sub> m/l	V <sub>t</sub>
STD	0000	21	70	39	70	27	89	0	000
OBS	0000	21	70	39	70	27	89		
STD	0010	21	66	39	70	27	91	0	002
OBS	0010	21	66	39	70	27	91		
STD	0020	21	66	39	70	27	91	0	004
OBS	0020	21	66	39	70	27	91		
STD	0030	21	62	39	72	27	93	0	006
OBS	0030	21	62	39	72	27	93		
OBS	0040	21	32	39	95	28	19		
STD	0050	21	06	40	09	28	37	0	006
OBS	0050	21	06	40	09	28	37		
OBS	0060	21	04	40	10	28	39		

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG17	02	16	1961	18	25	19 N	053	25 E	0037	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	31		14	19	4		00	0	31	1			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m}/l$	$V_f$
		↓	↓	↓	↓	↓	↓			
STD	0000	20	88	40	42	28	67	0	000-	
OBS	0000	20	88	40	42	28	67			
OBS	0005	20	88	40	42	28	67			
STD	0010	20	90	40	42	28	67	0	005-	
OBS	0015	20	91	40	42	28	67			
STD	0020	20	89	40	45	28	69	0	010-	
OBS	0025	20	87	40	46	28	71			
STD	0030	20	86	40	46	28	71	0	016-	
OBS	0035	20	86	40	46	28	71			

SURFACE OBSERVATIONS											
NODC REF. NO.	STATION	DATE				POSITION				SONIC DEPTH UNCORRECTED	MAX. SAMPLE DEPTH
		MO.	DAY	YEAR	HOUR	LATITUDE		LONGITUDE			
00865	PG18	02	16	1961	20	25	07 N	053	27 E	0026	00

WIND		ANEMO. HGT.	AIR PRESS	AIR TEMPERATURE		HUMIDITY	WEATHER	CLOUD		SEA		SWELL		VIS.	WATER	
SPEED	DIR.			DRY ↓	WET ↓			TYPE	AMT.	DIR.	AMT.	DIR.	AMT.		COL.	TRANS.
04	30		15	19	4		00	0	30	1			7			

SUBSURFACE OBSERVATIONS										
	SAMPLE DEPTH (M)	T °C		S ‰		$\sigma_t$		$\Sigma \Delta D$	$O_{2m}/l$	$V_f$
		↓	↓	↓	↓	↓	↓			
STD	0000	20	74							
OBS	0000	20	74	37	33*	26	36*			
OBS	0009	20	76	40	57	28	82			
STD	0010	20	69	40	67	28	92			
OBS	0014	20	53	40	93	29	16			
OBS	0019	20	54	40	96	29	18			
STD	0020	20	54	40	96	29	18			
OBS	0023	20	52	40	96	29	19			



## **BIBLIOGRAPHY**



National Oceanographic Data Center	Cross-index:	National Oceanographic Data Center	Cross-index:
<p>A SUMMARY OF TEMPERATURE-SALINITY CHARACTERISTICS OF THE PERSIAN GULF, 1964. 223 P. Prepared by Harold W. Dubach. Publication G-4 in NODC General Series.</p>	<ol style="list-style-type: none"> <li>1. Persian Gulf.</li> <li>2. Oceanography.</li> <li>3. National Oceanographic Data Center.</li> <li>4. Dubach, Harold W.</li> </ol>	<p>A SUMMARY OF TEMPERATURE-SALINITY CHARACTERISTICS OF THE PERSIAN GULF, 1964. 223 p. Prepared by Harold W. Dubach. Publication G-4 in NODC General Series.</p>	<ol style="list-style-type: none"> <li>1. Persian Gulf.</li> <li>2. Oceanography.</li> <li>3. National Oceanographic Data Center.</li> <li>4. Dubach, Harold W.</li> </ol>
<p>Data and analyses of all temperature-salinity investigations made in the Persian Gulf since 1907, including charts for each observation series. This study is essentially divided into two parts: Historical data and Analyses (pre-1950) and Recent Observations and Analyses (post-1950).</p>	<p><u>Title:</u></p> <ol style="list-style-type: none"> <li>1. A Summary of Temperature-Salinity Characteristics of the Persian Gulf, 1964.</li> <li>2. Publication G-4 in NODC General Series.</li> </ol>	<p>Data and analyses of all temperature-salinity investigations made in the Persian Gulf since 1907, including charts for each observation series. This study is essentially divided into two parts: Historical data and Analyses (pre-1950) and Recent Observations and Analyses (post-1950).</p>	<p><u>Title:</u></p> <ol style="list-style-type: none"> <li>1. A Summary of Temperature-Salinity Characteristics of the Persian Gulf, 1964.</li> <li>2. Publication G-4 in NODC General Series.</li> </ol>
National Oceanographic Data Center	Cross-index:	National Oceanographic Data Center	Cross-index:
<p>A SUMMARY OF TEMPERATURE-SALINITY CHARACTERISTICS OF THE PERSIAN GULF, 1964. 223 P. Prepared by Harold W. Dubach. Publication G-4 in NODC General Series.</p>	<ol style="list-style-type: none"> <li>1. Persian Gulf.</li> <li>2. Oceanography.</li> <li>3. National Oceanographic Data Center.</li> <li>4. Dubach, Harold W.</li> </ol>	<p>A SUMMARY OF TEMPERATURE-SALINITY CHARACTERISTICS OF THE PERSIAN GULF, 1964. 223 p. Prepared by Harold W. Dubach. Publication G-4 in NODC General Series.</p>	<ol style="list-style-type: none"> <li>1. Persian Gulf.</li> <li>2. Oceanography.</li> <li>3. National Oceanographic Data Center.</li> <li>4. Dubach, Harold W.</li> </ol>
<p>Data and analyses of all temperature-salinity investigations made in the Persian Gulf since 1907, including charts for each observation series. This study is essentially divided into two parts: Historical data and Analyses (pre-1950) and Recent Observations and Analyses (post-1950).</p>	<p><u>Title:</u></p> <ol style="list-style-type: none"> <li>1. A Summary of Temperature-Salinity Characteristics of the Persian Gulf, 1964.</li> <li>2. Publication G-4 in NODC General Series.</li> </ol>	<p>Data and analyses of all temperature-salinity investigations made in the Persian Gulf since 1907, including charts for each observation series. This study is essentially divided into two parts: Historical data and Analyses (pre-1950) and Recent Observations and Analyses (post-1950).</p>	<p><u>Title:</u></p> <ol style="list-style-type: none"> <li>1. A Summary of Temperature-Salinity Characteristics of the Persian Gulf, 1964.</li> <li>2. Publication G-4 in NODC General Series.</li> </ol>





