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BILL DUNKLE

**DYNAMIC OCEANOGRAPHIC
DATA**

For the Central Eastern Pacific Ocean

SURFACE TEMPERATURE AND SALINITY DATA

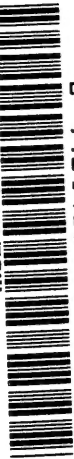
For the Eastern Pacific Ocean

Issued by the Hydrographic Office under the Authority
of the Secretary of the Navy

Woods Hole Oceanographic Institution
ATLAS-GAZETTEER COLLECTION

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BILL DUNKLE

**DYNAMIC OCEANOGRAPHIC
DATA**

For the Central Eastern Pacific Ocean

Collected by the
U.S.S. "HANNIBAL" AND THE YACHT "VELERO III"

and

SURFACE TEMPERATURE AND SALINITY DATA

For the Eastern Pacific Ocean

Collected by
U.S. NAVAL VESSELS

Issued by the Hydrographic Office under the Authority
of the Secretary of the Navy



H.O. 212

Woods Hole Oceanographic Institution

ATLAS-GAZETTEER COLLECTION

UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON: 1934

BU. DUNKLE

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PREFACE

This report is the result of the dynamic oceanographic work inaugurated in the year 1933 by the U.S.S. *Hannibal* in Pacific Panaman and Costa Rican waters. Commanders C. C. Slayton and R. M. Hinckley, United States Navy, were in command of the U.S.S. *Hannibal*.

The leading oceanographical institutions of this country, including the Scripps Institution of Oceanography; the Woods Hole Oceanographic Institution; and the Carnegie Institution of Washington, D.C., greatly aided the Hydrographic Office in making possible the inauguration of the dynamic oceanographic surveys by their advice relating to methods, the loan of equipment, and their encouragement.

Mr. R. H. Fleming of the Scripps Institution of Oceanography, University of California, La Jolla, Calif., Dr. T. Wayland Vaughan, director, was granted permission by the United States Navy Department to accompany the U.S.S. *Hannibal* and greatly assisted in making observations necessary for the dynamical study of the waters traversed, and in addition made observations on the dissolved oxygen, phosphate, silicate, nitrite and other chemicals, and plankton. The values of the samples of water collected were determined and checked at the Scripps Institution of Oceanography for temperature, chlorinity, salinity, specific gravity, and other quantitative hydrodynamic data.

There are also included in this report the dynamic oceanographic data collected by the yacht *Velero III*, G. Allan Hancock, captain and owner, and surface temperature and salinity data collected by United States naval vessels. These data were also checked by the Scripps Institution of Oceanography and the resulting values determined.

W. R. GHERARDI,

Rear Admiral, United States Navy, Hydrographer.

UNITED STATES HYDROGRAPHIC OFFICE,

August 1934.

U.S.S. "HANNIBAL" TEMPERATURE AND SALINITY DATA

RICHARD H. FLEMING,
*Scripps Institution of Oceanography,
University of California, La Jolla, Calif.*

The following tables contain the corrected temperature and salinity data for the 127 oceanographic stations occupied by the U.S.S. *Hannibal* between March 9, 1933, and May 24, 1933, in the Pacific Ocean. These are stations H-17 to H-102, located in the Gulf of Panama and occupied between March 9 and March 24, and stations H-105 to H-145, situated off the Pacific coast of Costa Rica and Panama and occupied between May 16 and May 24. The prefix "H-" has been used to denote the collecting vessel, namely, the U.S.S. *Hannibal*. H-103 was a test station run in shallow water and the results are not included. The serial number H-104 was accidentally omitted.

The tables contain the temperature observations, which have been carefully corrected and checked, and the chlorinity and salinity determinations, which were made at the Scripps Institution of Oceanography. All of this material has been checked and all doubtful observations thrown out. For those stations at which the collections were not obtained at the standard depths, tables have been prepared that give the interpolated temperature and salinity values at standard depths. This has been done to facilitate comparisons between stations and to simplify the dynamic computations. For the stations H-105 to H-145, for which the preliminary dynamic computations have been made, the σ_t and $V_{s, t, p}$ values are included in these tables.

The temperature observations have been corrected in the following ways. For those thermometers for which the V_o value was known, the temperature readings were corrected from tables compiled from data based on Schumacher's formula. The V_o is the volume of mercury in the thermometer when reversed at 0° C. expressed in degrees. For those thermometers for which the V_o value was not given the corrections were made from tables compiled from graphs for each thermometer based upon the calibration data supplied by the United States Bureau of Standards. After these corrections had been applied it was found that certain of the thermometers showed small constant errors. These were determined by comparison with trustworthy thermometers and the necessary corrections applied. The probable error of the corrected temperature observations was

computed and found to be $\pm 0.02^\circ$ for single observations and $\pm 0.015^\circ$ for the mean of duplicate observations.

Unprotected reversing thermometers were used in conjunction with protected thermometers to determine the depth of sampling. At stations where the cable was vertical the accuracy of this method could be checked. The probable error in depth of sampling, when relying on the unprotected thermometers, was computed and found to be less than ± 5 meters.

Chlorinities were determined by titration with silver nitrate solutions standardized against standard sea water. The corresponding salinities were then found by referring to Knudsen's tables. The accuracy of the results obtained by this method is of the order of $\pm 0.02\%$.

The σ_t and V_s, t, p values were computed from tables prepared by Dr. G. F. McEwen of the Scripps Institution of Oceanography.

In the tables are indicated certain other observations, collections, and analyses that were made at the stations. Surface plankton collections were made at most of the stations and at other locations in the region covered by the survey. Certain chemical analyses were made on board the U.S.S. *Hannibal* during the course of the survey. These include serial determinations of the amount of dissolved oxygen in the water column at 93 stations, phosphate series at 5 stations, silica and nitrite series each at 2 stations. At the Scripps Institution of Oceanography serial water samples from three stations have been analyzed for boron content by Miss K. Gehring, technical assistant.

The chlorinity determinations were all made by Miss K. Gehring. The temperature corrections, thermometric depth computations, checking, and the preparation of these tables were carried out at the Scripps Institution of Oceanography, where the author is preparing a complete report on the physical oceanography of this region based on these data and the additional observations as indicated in the tables.

EXPLANATION OF TABLES

For each station a general form has been used that gives the location of the station and other pertinent material as well as the temperature and salinity data on the samples collected. Most of this material has been taken from the forms used to record field notes and observations, namely, "Oceanographic Observations—Temperatures and Salinities" (H.O. Misc. No. 8027-3). For those stations at which the observations were not made at the standard depths a second table is attached which contains the temperatures and salinities at standard depths obtained by interpolation from graphs constructed from the observed data.

Most of the headings on these tables are self-explanatory. "Wire angle" is that which was found by measuring the angle that the cable

made with the vertical at the time the messenger was released. "Soundings" and "depths of observation" are given in meters. The sounding recorded is usually that obtained by the hydrographic cable. The direction from which the wind blew is given in degrees and the force of the wind is noted by values according to the Beaufort scale. A number following "bottom sample" indicates that the sample was retained and is now stored at the Scripps Institution of Oceanography. The "type" of the bottom sediment is that which was recorded at the time of collection. Under "additional observations" are recorded collections and analyses other than those for temperature, salinity, and bottom samples. The following symbols have been used:

- O = Analyses for the dissolved oxygen content of samples.
- Pl = Quantitative surface plankton collection.
- PO₄ = Analyses of water samples for phosphate content.
- SiO₂ = Analyses of water samples for silica content.
- NO₂ = Analyses of water samples for nitrite content.
- Boron = Analyses of water samples for boron content.

The columns contain the following data:

Estimated depth.—This is the depth to which the closing bottles were lowered. This column has only been filled in when the cable was vertical. Depths are in meters below the surface.

Depth by pressure.—This column contains the depths as computed from the values obtained by using an unprotected reversing thermometer in conjunction with a protected thermometer. Where the wire angle is zero the comparison of the estimated depth with the thermometric depth gives a measure of their accuracy. In those cases where the cable was not vertical the depths of sampling are based entirely upon the thermometric depths. As unprotected thermometers were not attached to all the sampling bottles, depths at which certain of the bottles closed had to be obtained by interpolating upon a graph constructed from the available observations of thermometric depths for that cast.

Temperature.—This column contains the corrected temperature in °C. If duplicate thermometers were used the value recorded is the average of the two corrected readings.

Chlorinity.—Determined by titration with silver nitrate solution standardized against "standard sea water." Reported as grams per kilogram of sea water.

Salinity.—Obtained from the chlorinity by reference to Knudsen's Hydrographical Tables. Reported as grams per kilogram of sea water.

σ_t .—This is defined as $\sigma_t = (\rho_{s,t,o} - 1) \times 10^3$, where $\rho_{s,t,o}$ is the specific gravity of the water *in situ* not corrected for pressure. σ_t should not be confused with σ_o , as $\sigma_o = (s_o - 1) \times 10^3$, where s_o is the

specific gravity of the sample at 0° C., referred to distilled water at 4° C.

$V_{s,t,p}$.—This is the specific volume of the sample *in situ*, that is, corrected for temperature and pressure, multiplied by 10⁵.

In the general tables, where observations were lacking or had been discarded, the values have been substituted by interpolating upon graphs drawn from the available observations. These interpolated or extrapolated values have been indicated by the symbol *.

U.S.S. "HANNIBAL" OCEANOGRAPHIC STATIONS

PHYSICAL AND CHEMICAL DATA

STATION H-17

[Lat. 8°13'00" N.; long. 80°05'00" W.; Mar. 9, 1933; time, 0710-0724; wire angle, 0°; sounding, 35 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 3; bottom sample, P-1; type, green mud]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	°C.				
0	-----	21.73	*19.09	*34.49	-----	-----
5	-----	-----	-----	-----	-----	-----
10	-----	21.72	19.09	34.49	-----	-----
25	-----	20.90	19.31	34.88	-----	-----

STATION H-18

[Lat. 8°09'30" N.; long. 80°09'00" W.; Mar. 9, 1933; time, 0830-0848; wire angle, 0°; sounding, 30 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 3; bottom sample, none; type, green mud]

0	-----	21.33	19.09	34.49	-----	-----
5	-----	21.32	19.11	34.52	-----	-----
10	-----	21.24	19.12	34.54	-----	-----
25	-----	21.06	19.35	34.96	-----	-----

STATION H-19

[Lat. 8°06'30" N.; long. 80°12'30" W.; Mar. 9, 1933; time, 0931-0942; wire angle, 0°; sounding, 30 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, none; type, green mud]

0	-----	21.45	19.13	34.56	-----	-----
5	-----	21.49	19.13	34.56	-----	-----
10	-----	21.37	19.14	34.58	-----	-----
25	-----	17.10	19.23	34.74	-----	-----

STATION H-20

[Lat. 8°11'30" N.; long. 80°16'00" W.; Mar. 9, 1933; time, 1120-1132; wire angle, 0°; sounding, 27 m; depth of observation, 20 m; weather, fair; sea, calm; wind, 350°, force 4; bottom sample, none; type, green mud]

0	-----	21.65	19.07	34.45	-----	-----
5	-----	21.71	19.07	34.45	-----	-----
10	-----	21.57	19.07	34.45	-----	-----
20	-----	20.71	19.16	34.61	-----	-----
25	-----	*20.20	*19.20	*34.69	-----	-----

STATION H-21

[Lat. 8°02'45" N.; long. 80°15'45" W.; Mar. 9, 1933; time, 1340-1358; wire angle, 0°; sounding, 30 m; depth of observation, 20 m; weather, fair; sea, light; wind, 355°, force 4; bottom sample, none; type, green mud]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Selinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	-----	21.90	19.05	34.42	-----	-----
5	-----	21.82	19.06	34.43	-----	-----
10	-----	21.50	19.06	34.43	-----	-----
20	-----	21.71	19.06	34.43	-----	-----
25	-----	*21.60	*19.06	*34.43	-----	-----

STATION H-22

[Lat. 7°48'00" N.; long. 80°09'00" W.; Mar. 9, 1933; time, 1649-1657; wire angle, 0°; sounding, 22 m; depth of observation, 10 m; weather, overcast; sea, light; wind, 340°, force 4; bottom sample, P-6; type, green mud; additional observations, O]

0	-----	25.20	18.90	34.14	-----	-----
5	-----	*25.00	18.90	34.14	-----	-----
10	-----	22.70	18.95	34.23	-----	-----

STATION H-23

[Lat. 7°51'30" N.; long. 80°05'30" W.; Mar. 9, 1933; time, 1808-1826; wire angle, 0°; sounding, 35 m; depth of observation, 20 m; weather, overcast; sea, light; wind, 350°, force 5; bottom sample, none; type, green mud; additional observations, O]

0	-----	22.36	*19.09	*34.49	-----	-----
5	-----	*22.20	19.09	34.49	-----	-----
10	-----	21.96	19.10	34.51	-----	-----
20	-----	21.57	19.16	34.61	-----	-----
25	-----	*21.40	*19.18	*34.65	-----	-----

STATION H-24

[Lat. 7°56'00" N.; long. 80°02'00" W.; Mar. 10, 1933; time, 0630-0703; wire angle, 0°; sounding, 41 m; depth of observation, 25 m; weather, fair; sea, smooth; wind, 70°, force 3; bottom sample, P-8; type, green mud; additional observations, O]

0	-----	21.07	19.16	34.61	-----	-----
5	-----	21.21	19.15	34.60	-----	-----
10	-----	21.17	19.17	34.63	-----	-----
25	-----	21.95	19.17	34.63	-----	-----

STATION H-25

[Lat. 7°59'00" N.; long. 79°58'00" W.; Mar. 10, 1933; time, 0802-0818; wire angle, 0°; sounding, 55 m.; depth of observation, 45 m; weather, fair; sea, calm; wind, 40°, force 3; bottom sample, none; type, green mud]

0	-----	21.04	19.15	34.60	-----	-----
5	-----	21.10	19.15	34.60	-----	-----
10	-----	21.02	19.15	34.60	-----	-----
25	-----	20.80	19.15	34.60	-----	-----
44	-----	20.68	19.34	34.94	-----	-----
50	-----	*20.60	*19.36	*34.97	-----	-----

STATION H-26

[Lat. 7°46'00" N.; long. 79°50'00" W.; Mar. 10, 1933; time, 1052-1115; wire angle, 15°; sounding, 80 m; depth of observation, 46 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, none; type, green mud; additional observations, O]

-----	0	20.75	19.15	34.60	-----	-----
-----	5	20.72	19.15	34.60	-----	-----
-----	10	20.59	19.15	34.60	-----	-----
-----	22	20.01	19.16	24.61	-----	-----
-----	46	14.86	19.37	34.99	-----	-----

STATION H-26

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
Meters	Meters	°C.				
0	-----	20.75	-----	34.60	-----	-----
5	-----	20.72	-----	34.66	-----	-----
10	-----	20.59	-----	34.60	-----	-----
25	-----	19.70	-----	34.62	-----	-----
50	-----	14.00	-----	34.99	-----	-----

STATION H-27

[Lat. 7°41'30" N.; long. 79°56'30" W.; Mar. 10, 1933; time, 1230-1246; wire angle, 0°; sounding, 63 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, none; type, sand and shell]

0	-----	22.59	19.05	34.42	-----	-----
5	-----	22.74	19.05	34.42	-----	-----
10	-----	21.67	19.08	34.47	-----	-----
25	-----	20.58	19.17	34.63	-----	-----
50	-----	14.44	19.36	34.97	-----	-----

STATION H-28

[Lat. 7°39'00" N.; long. 79°58'45" W.; Mar. 10, 1933; time, 1323-1340; wire angle, 0°; sounding, 60 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, P-12; type, green sand, shell, and pebbles]

0	-----	22.90	19.05	34.42	-----	-----
5	-----	22.83	19.06	34.44	-----	-----
10	-----	21.04	19.15	34.60	-----	-----
25	-----	20.18	19.18	34.65	-----	-----
50	-----	14.57	19.35	34.96	-----	-----

STATION H-29

[Lat. 7°30'20" N.; long. 79°53'50" W.; Mar. 10, 1933; time, 1517-1533; wire angle, 15°; sounding, 75 m; depth of observation, 67 m; weather, fair; sea, calm; wind, 360°, force 3; bottom sample, P-13; type, shell and pebbles]

-----	0	21.11	19.16	34.61	-----	-----
-----	5	20.85	19.18	34.65	-----	-----
-----	10	20.25	19.18	34.65	-----	-----
-----	24	-----	19.28	34.83	-----	-----
-----	48	14.51	19.37	34.99	-----	-----
-----	67	-----	19.37	34.99	-----	-----

STATION H-29

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	21.11	-----	34.61	-----	-----
5	-----	20.85	-----	34.65	-----	-----
10	-----	20.25	-----	34.65	-----	-----
25	-----	17.50	-----	34.83	-----	-----
50	-----	14.40	-----	34.99	-----	-----
75	-----	-----	-----	34.99	-----	-----

STATION H-30

[Lat. 7°26'30" N.; long. 79°52'00" W.; Mar. 10, 1933; time, 1611-1634; wire angle, 20°; sounding, 106 m; depth of observation, 94 m; weather, fair; sea, smooth; wind, 360°, force 3; bottom sample, none; additional observations, O]

-----	0	21.07	19.19	34.67	-----	-----
-----	5	20.31	19.20	34.69	-----	-----
-----	10	19.90	19.17	34.63	-----	-----
-----	23	15.23	19.37	34.99	-----	-----
-----	47	*15.18	19.38	35.01	-----	-----
-----	70	15.06	19.37	34.99	-----	-----
-----	94	14.54	19.37	34.99	-----	-----

STATION H-30

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		21.07		34.67		
5		20.31		34.69		
10		19.90		34.63		
25		15.22		34.99		
50		15.15		35.01		
75		14.95		34.99		
100		14.40		34.99		

STATION H-31

[Lat. 7°24'00" N.; long. 79°40'00" W.; Mar. 10, 1933; time, 1836-1935; wire angle, 50°; sounding, 485 m; depth of observation, 294 m; weather, fair; sea, moderate; wind, 020°, force 7; bottom sample, none; additional observations, O, Pl.]

	0	19.26	19.27	34.81		
	10	19.34	19.27	34.81		
	20	*19.20	19.26	34.79		
	40	14.79	19.36	34.97		
	75	14.50	19.35	34.96		
	90	14.20	19.37	34.99		
	115	13.94	19.36	34.97		
	131	13.77	19.35	34.96		
	294	11.97	19.34	34.94		

STATION H-31

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0		19.26		34.81		
10		19.34		34.81		
25		19.20		34.79		
50		14.65		34.97		
75		14.50		34.98		
100		14.10		34.99		
150		13.55		34.96		
200		13.00		34.95		
300		11.90		34.94		

STATION H-32

[Lat. 7°14'00" N.; long. 79°38'00" W.; Mar. 10, 1933; time, 2044-2227; wire angle, 50°; sounding, 800 m; depth of observation 421 m; weather, fair; sea, moderate; wind, 360°, force 7; bottom sample, none; additional observations, O, Pl.]

	0	18.96	19.28	34.83		
	10	18.74	19.23	34.74		
	25	14.64	19.35	34.96		
	40	14.59	19.41	35.07		
	66	14.16	*19.39	*35.03		
	85	14.10	19.37	34.99		
	110	13.91	19.35	34.96		
	162	13.36	19.31	34.88		
	295	12.68	19.28	34.83		
	421	9.84	19.22	34.72		

STATION H-32

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	V.S.T.P.
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		18.96		34.83		
10		18.74		34.74		
25		14.64		34.96		
50		14.40		35.05		
75		14.15		35.01		
100		14.00		34.97		
200		13.20		34.87		
300		12.60		34.83		
400		10.10		34.75		

STATION H-33

[(1) Lat. 7°23'00" N.; long. 79°27'00" W.; (2) lat. 7°24'00" N.; long. 79°30'00" W.; Mar. 11, 1933; time, 0639-0849; wire angle, 45°; sounding, 1,400 m; depth of observation, 1,060 m; weather, fair; sea, moderate; wind, 340°, force, 7; bottom sample, none; type, gray sand; additional observations, O, Pl.]

	0	18.04	19.20	34.69		
	5	17.96	19.23	34.74		
	25	16.62	19.27	34.81		
	50	14.50	19.31	34.88		
	75	14.33	19.35	34.96		
	99	14.19	19.36	34.97		
	165	13.72	19.33	34.92		
	190		19.32	34.90		
	290	13.00	19.30	34.87		
	350	12.31	19.28	34.83		
	720	6.03	19.15	34.60		
	1,060	4.79	19.15	34.60		

NOTE.—Due to the adverse conditions this series is not very trustworthy.

STATION H-33

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

	0	18.04		34.69		
	5	17.96		34.74		
	10	17.70		34.76		
	25	16.62		34.81		
	50	14.50		34.88		
	75	14.33		34.96		
	100	14.19		34.97		
	150	13.90		34.93		
	200	13.70		34.90		
	300	12.90		34.86		
	400	11.50		34.79		
	500	9.70		34.72		
	600	8.00		34.66		
	800	5.60		34.60		
	1,000	5.00		34.60		

STATION H-34

[Lat. 7°23'00" N.; long. 79°05'00" W.; Mar. 11, 1933; time, 1400-1649; wire angle, 60°; sounding, 3,380 m; depth of observation, 1,500 m; weather, fair; sea, moderate; wind, 020°, force 5; bottom sample, none; additional observations, O, Pl.]

	0	19.44	19.28	34.83		
	35	14.89	19.39	35.03		
	45	14.50	19.39	35.03		
	50		19.38	35.01		
	70		19.39	35.03		
	100	14.11	19.38	35.01		
	115	13.94	19.39	35.03		
	195		19.37	34.99		
	253	12.19				
	397	9.49	19.22	34.72		
	717	7.06				
	1,300	3.34	19.19	34.67		
	1,500	3.16	19.20	34.69		

NOTE.—Due to the adverse conditions this series is not very trustworthy.

STATION H-34

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0		19.44		34.83		
10		19.30		34.85		
25		17.20		35.01		
50		14.40		35.03		
75		14.20		35.03		
100		14.11		35.01		
200		12.80		34.99		
300		11.30		34.86		
400		9.49		34.72		
500		8.50				
600		7.80				
800		6.50				
1,000		5.00				
1,300		3.34		34.67		
1,500		3.16		34.69		

STATION H-35

[(1) Lat., 7°26'00" N., long. 73°55'00" W.; (2) lat. 7°25'03" N., long. 78°55'08" W.; Mar. 11, 1933; time, 2010-2256; wire angle, 55°; sounding, 3,100 m; depth of observation, 1,500 m; weather, fair; sea, moderate; wind, 330°, force 7 to 5; bottom sample, none; additional observations, O, Pl., Boron]

	0	19.35	19.23	34.74		
	10	18.97	19.25	34.78		
	25	14.60	19.39	35.03		
	50		19.39	35.03		
	100	14.37	19.35	34.96		
	150	13.39	19.34	34.94		
	400	10.09	19.27	34.81		
	540	8.36	19.23	34.74		
	736	6.66	19.18	34.65		
	878	5.68	19.17	34.63		
	1,500	3.20	19.20	34.69		

NOTE.—Due to the adverse conditions this series is not very trustworthy.

STATION H-35

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

	0	19.35		34.74		
	10	18.97		34.78		
	25	14.60		35.03		
	50	14.45		35.03		
	75	14.41		35.00		
	100	14.37		34.96		
	150	13.39		34.94		
	200	13.00		34.91		
	300	12.15		34.86		
	400	10.09		34.81		
	500	8.80		34.76		
	600	7.80		34.71		
	800	6.20		34.64		
	1,000	5.00		34.62		
	1,500	3.20		34.69		

STATION H-36

[Lat. 7°15'45" N., long. 78°23'30" W.; Mar. 12, 1933; time, 0632-0900; wire angle, 45°; sounding, 2,300 m; depth of observation, 2,183 m; weather, cloudy; sea, smooth; wind, 360°, force 4; bottom sample, P-20; type, green mud; additional observations, O, Pl.]

	0	20.72	19.22	34.72		
	510	9.10	19.18	34.65		
	610	7.35	19.19	34.67		
	862	5.25	19.13	34.56		
	985		19.14	34.58		
	1,500	3.12	19.16	34.61		
	2,183	2.18	19.20	34.69		

STATION H-36

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	V _{s,t,D}
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		20.72		34.72		
500		9.30		34.67		
600		7.50		34.65		
800		5.70		34.57		
1,000		4.75		34.58		
1,500		3.12		34.61		
2,000		2.30		34.68		

STATION H-37

[Lat. 7°21'30" N., long. 73°27'30" W., Mar. 12, 1933; time, 1400-1521; wire angle, 20°; sounding, 1,400 m; depth of observation, 870 m; weather, fair; sea, smooth; wind, 330°, force 4; bottom sample, P-21; type, green mud and sand; additional observations, O, P1.]

	0	18.36	19.27	34.81		
	10	18.20	19.27	34.81		
	25	15.04	19.36	34.97		
	45	14.57	19.38	35.01		
	99	14.12	19.39	35.03		
	150	13.76	19.38	35.01		
	200	13.37	19.34	34.94		
	300	12.43	19.30	34.87		
	370	10.56	19.23	34.74		
	465	9.00	19.20	34.69		
	530	8.03	19.17	34.63		
	563	7.72	19.16	34.61		
	870	5.19	19.17	34.63		

STATION H-37

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

	0	18.36		34.81		
	10	18.20		34.81		
	25	15.04		34.97		
	50	14.50		35.01		
	75	14.35		35.03		
	100	14.12		35.03		
	150	13.76		35.01		
	200	13.37		34.94		
	300	12.43		34.87		
	400	10.00		34.72		
	500	8.40		34.66		
	600	7.40		34.61		
	800	5.75		34.62		

STATION H-38

[Lat. 7°23'30" N., long. 73°22'30" W.; Mar. 12, 1933; time, 1627-1718; wire angle, 0°; sounding, 1,650 m; depth of observation, 1,000 m; weather, fair; sea, smooth; wind, 330°, force 4; bottom sample, none; additional observations, O, P1.]

	0	19.66	19.14	34.58		
	10	18.60	19.21	34.70		
	25	15.20	19.33	34.92		
	50	14.23	19.36	34.97		
	100	14.19	19.36	34.97		
	200	202	13.18	19.38	35.01	
	300		11.90	19.31	34.88	
	500	500	8.35	19.21	34.70	
	600		*7.55		*34.63	
	631	631	7.35	19.15	34.60	
	800		*5.20		*34.61	
	1,000		4.92	19.17	34.63	

STATION H-39

[Lat. 7°28'00" N., long. 78°17'00" W.; Mar. 12, 1933; time, 1833-1907; wire angle, 0°; sounding, 290 m; depth of observation, 232 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, P-23; type, green sand and shell; additional observations, O]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	V _{s.t.p}
Meters	Meters	°C.				
0	-----	20.45	19.11	34.52	-----	-----
10	-----	17.53	19.27	34.81	-----	-----
15	-----	15.70	19.32	34.90	-----	-----
40	-----	14.93	19.36	34.97	-----	-----
90	-----	14.43	19.37	34.99	-----	-----
127	127	13.95	19.36	34.97	-----	-----
180	-----	13.52	19.35	34.96	-----	-----
232	232	12.97	19.30	34.87	-----	-----

STATION H-39

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	20.45	-----	34.52	-----	-----
10	-----	18.95	-----	34.81	-----	-----
25	-----	15.20	-----	34.93	-----	-----
50	-----	14.82	-----	34.98	-----	-----
75	-----	14.60	-----	34.99	-----	-----
100	-----	14.35	-----	34.99	-----	-----
150	-----	13.75	-----	34.98	-----	-----
200	-----	13.30	-----	34.94	-----	-----
300	-----	12.20	-----	34.80	-----	-----

STATION H-40

[Lat. 7°31'20" N., long. 78°14'45" W.; Mar. 12, 1933; time, 2012-2028; wire angle, 0°; sounding, 90 m; depth of observation, 80 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, P-24; type, green mud; additional observations, O, Pl.]

0	-----	18.60	19.14	34.58	-----	-----
5	-----	17.11	19.23	34.74	-----	-----
10	-----	16.57	19.24	34.76	-----	-----
25	-----	*15.75	19.29	34.85	-----	-----
50	-----	15.35	19.30	34.87	-----	-----
75	-----	*14.90	*19.34	*34.94	-----	-----
80	-----	14.82	19.35	34.96	-----	-----

STATION H-41

[Lat. 7°39'40" N., long. 78°20'00" W.; Mar. 13, 1933; time, 0819-0839; wire angle, 0°; sounding, 85 m; depth of observation, 75 m; weather, fair; sea, calm; wind, 040°, force 2; bottom sample, P-25; type, green mud, sand; additional observations, O, Pl.]

0	-----	17.66	19.22	34.72	-----	-----
5	-----	17.69	19.23	34.74	-----	-----
10	-----	17.16	19.24	34.76	-----	-----
25	31	15.22	19.29	34.85	-----	-----
50	49	14.86	19.35	34.96	-----	-----
75	-----	14.72	19.35	34.96	-----	-----

STATION H-42

[Lat. 7°52'00" N., long. 78°20'20" W.; Mar. 13, 1933; time, 1112-1125; wire angle, 0°; sounding, 75; depth of observation, 50 m; weather, fair; sea, smooth; wind, 355°, force 2; bottom sample, P-26; type, green sand; additional observations, O, Pl.]

0	-----	17.61	19.30	34.87	-----	-----
5	-----	16.38	19.29	34.85	-----	-----
10	-----	15.88	19.30	34.87	-----	-----
25	24	15.33	19.28	34.83	-----	-----
50	-----	15.02	19.35	34.96	-----	-----

STATION H-43

[Lat. 7°50'00" N., long. 78°31'00" W.; Mar. 13, 1933; time, 1243-1300; wire angle, 0°; sounding, 80 m; depth of observation, 50 m; weather, fair; sea, smooth; wind, 355°, force 3; bottom sample, none; additional observations, O, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
Meters	Meters	°C.				
0	-----	16.45	19.27	34.81	-----	-----
5	-----	16.42	19.30	34.87	-----	-----
10	-----	16.30	19.32	34.90	-----	-----
25	-----	15.90	19.36	34.97	-----	-----
50	-----	(*)	19.36	34.97	-----	-----

STATION H-44

[Lat. 7°48'00" N., long. 78°38'30" W.; Mar. 13, 1933; time, 1422-1440; wire angle, 0°; sounding, 75 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 310°, force 3; bottom sample, P-28; type, green sand; additional observations, O, P1.]

0	-----	17.44	19.24	34.76	-----	-----
5	-----	17.42	19.28	34.83	-----	-----
10	-----	16.56	19.29	34.85	-----	-----
25	26	15.20	19.37	34.99	-----	-----
50	-----	14.69	19.35	34.96	-----	-----

STATION H-45

[Lat. 7°45'00" N., long. 78°49'00" W.; Mar. 13, 1933; time, 1628-1644; wire angle, 0°; sounding, 80 m; depth of observation, 75 m; weather, hazy; sea, calm; wind, 310°, force 3; bottom sample, P-29; type, green sand and shell; additional observations, O, P1.]

0	-----	18.53	19.27	34.81	-----	-----
5	-----	18.41	19.26	34.79	-----	-----
10	-----	17.41	19.29	34.85	-----	-----
25	-----	14.99	19.35	34.96	-----	-----
50	48	14.47	19.35	34.96	-----	-----
75	-----	14.37	19.37	34.99	-----	-----

STATION H-46

[Lat. 7°43'00" N., long. 79°00'00" W.; Mar. 13, 1933; time, 1826-1845; wire angle, 13°; sounding, 110 m; depth of observation, 95 m; weather, cloudy; sea, calm; wind, 310°, force 6; bottom sample, P-30; type, green sand; additional observations, O, P1.]

-----	0	18.84	19.26	34.79	-----	-----
-----	8	16.61	19.28	34.83	-----	-----
-----	12	16.15	19.30	34.87	-----	-----
-----	26	15.05	19.37	34.99	-----	-----
-----	54	14.61	19.35	34.96	-----	-----
-----	95	13.77	-----	-----	-----	-----

STATION H-46

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	18.84	-----	34.79	-----	-----
5	-----	17.20	-----	34.81	-----	-----
10	-----	16.40	-----	34.95	-----	-----
25	-----	15.10	-----	34.99	-----	-----
50	-----	14.70	-----	34.97	-----	-----
100	-----	13.65	-----	-----	-----	-----

STATION H-47

Lat. 7°39'45" N., long. 79°08'30" W.; Mar. 14, 1933; time, 0804-0823; wire angle, 0°; sounding, 150 m; depth of observation, 145 m; weather, fair; sea, calm; wind, 360°, force 5; bottom sample, P-31; type, green sand, shell; additional observations, O, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	-----	18.87	19.26	34.79	-----	-----
5	-----	18.46	19.26	34.79	-----	-----
10	-----	18.14	19.26	34.79	-----	-----
20	17	17.07	19.28	34.83	-----	-----
45	46	14.69	19.34	34.94	-----	-----
70	-----	14.30	19.32	34.90	-----	-----
95	93	13.87	19.31	34.88	-----	-----
145	-----	12.69	19.31	34.88	-----	-----

STATION H-47

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	18.87	-----	34.79	-----	-----
5	-----	18.46	-----	34.79	-----	-----
10	-----	18.14	-----	34.79	-----	-----
25	-----	16.50	-----	34.86	-----	-----
50	-----	14.60	-----	34.94	-----	-----
75	-----	14.25	-----	34.89	-----	-----
100	-----	13.78	-----	34.88	-----	-----
150	-----	12.60	-----	34.88	-----	-----

STATION H-48

[Lat. 7°33'45" N., long. 79°00'45" W.; Mar. 14, 1933; time, 1006-1055; wire angle, 20°; sounding, 1040 m; depth of observation, 850 m; weather, cloudy; sea, smooth; wind, 360°, force 3; bottom sample, none; additional observations, O, P1.]

0	0	18.14	19.28	34.83	-----	-----
-----	10	17.77	19.28	34.83	-----	-----
-----	25	16.33	19.30	34.87	-----	-----
-----	40	14.56	19.37	34.99	-----	-----
-----	60	14.07	19.36	34.97	-----	-----
-----	111	13.68	19.35	34.96	-----	-----
-----	190	13.14	19.35	34.96	-----	-----
-----	341	11.04	19.26	34.79	-----	-----
-----	440	-----	19.23	34.74	-----	-----
-----	646	6.79	19.16	34.61	-----	-----
-----	850	5.36	19.17	34.63	-----	-----

STATION H-48

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	18.14	-----	34.83	-----	-----
10	-----	17.77	-----	34.83	-----	-----
25	-----	16.33	-----	34.87	-----	-----
50	-----	14.25	-----	34.99	-----	-----
75	-----	13.90	-----	34.97	-----	-----
100	-----	13.70	-----	34.96	-----	-----
150	-----	13.50	-----	34.96	-----	-----
200	-----	13.05	-----	34.96	-----	-----
300	-----	11.60	-----	34.84	-----	-----
400	-----	10.15	-----	34.76	-----	-----
500	-----	8.60	-----	34.70	-----	-----
600	-----	7.30	-----	34.62	-----	-----
800	-----	5.70	-----	34.63	-----	-----

STATION H-49

[Lat. 7°31'07" N., long. 78°47'00" W.; Mar. 14, 1933; time, 1308-1631; wire angle, 30°; sounding, 2400 m; depth of observation, 2,060 m; weather, fair; sea, calm; wind, 340°, force 3; bottom sample, none; additional observations, O, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
<i>Meters</i>	<i>Meters</i>	°C.				
-----	0	17.66	19.30	34.87	-----	-----
-----	10	17.15	19.28	34.83	-----	-----
-----	25	15.48	19.87	34.99	-----	-----
-----	50	14.45	19.33	34.92	-----	-----
-----	100	14.39	19.36	34.97	-----	-----
-----	150	13.77	19.36	34.97	-----	-----
-----	200	13.43	19.33	34.92	-----	-----
-----	300	12.90	19.33	34.92	-----	-----
-----	500	9.33	19.22	34.72	-----	-----
-----	840	5.15	19.15	34.60	-----	-----
-----	1,030	4.22	19.18	34.65	-----	-----
-----	1,230	3.65	19.18	34.65	-----	-----
-----	1,760	2.57	19.19	34.67	-----	-----
-----	2,060	2.23	19.21	34.70	-----	-----

STATION H-49

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	17.66	-----	34.87	-----	-----
10	-----	17.15	-----	34.83	-----	-----
25	-----	15.48	-----	34.99	-----	-----
50	-----	14.45	-----	34.92	-----	-----
100	-----	14.39	-----	34.97	-----	-----
150	-----	13.77	-----	34.97	-----	-----
200	-----	13.43	-----	34.92	-----	-----
300	-----	12.90	-----	34.92	-----	-----
400	-----	11.10	-----	34.84	-----	-----
500	-----	9.33	-----	34.72	-----	-----
600	-----	7.80	-----	34.68	-----	-----
800	-----	5.50	-----	34.60	-----	-----
1,000	-----	4.35	-----	34.64	-----	-----
1,500	-----	3.05	-----	34.67	-----	-----
2,000	-----	2.30	-----	34.70	-----	-----

STATION H-50

[Lat. 7°38'00" N., long. 78°39'15" W.; Mar. 14, 1933; time, 1920-1940; wire angle, 0°; sounding, 123 m; depth of observation, 100 m; weather, fair; sea, calm; wind, 335°, force 3; bottom sample, P-34; type, green sand; additional observations, O, P1.]

0	-----	18.05	19.28	34.83	-----	-----
10	-----	17.54	19.30	34.87	-----	-----
25	-----	* 15.70	(*)	* 34.97	-----	-----
50	-----	14.53	19.40	35.05	-----	-----
75	77	14.23	19.37	34.99	-----	-----
100	-----	14.04	19.40	35.05	-----	-----

STATION H-51

[Lat. 8°05'30" N., long. 78°29'45" W.; Mar. 15, 1933; time, 0739-0749; wire angle, 0°; sounding, 55 m; depth of observation, 25 m; weather, fair; sea, smooth; wind, 040°, force 3; bottom sample, P-35; type, green sand; additional observations, O, P1.]

0	-----	16.18	19.31	34.88	-----	-----
5	-----	16.04	19.33	34.92	-----	-----
10	9	15.65	19.36	34.97	-----	-----
25	-----	15.32	19.36	34.97	-----	-----

STATION H-52

[Lat. 8°05'40" N., long 78°35'00" W.; Mar. 15, 1933; time, 0349-0907; wire angle, 0°; sounding, 35 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 040°, force 2; bottom sample, none; type, sand and shell; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	-----	18.25	19.30	34.87	-----	-----
5	-----	17.59	19.28	34.83	-----	-----
10	-----	16.20	19.33	34.92	-----	-----
25	-----	* 15.80	19.34	34.94	-----	-----

STATION H-53

[Lat. 8°05'30" N., long. 78°40'15" W.; Mar. 15, 1933; time, 0954-1021; wire angle, 0°; sounding, 115 m; depth of observation, 100 m; weather, fair; sea, calm; wind, 040°, force 2; bottom sample, P-37; type, green mud, sand; additional observations, O, Pl.]

0	-----	16.30	19.36	34.97	-----	-----
10	-----	16.31	19.35	34.96	-----	-----
25	-----	16.27	19.33	34.92	-----	-----
50	-----	15.71	19.33	34.92	-----	-----
75	89	15.60	19.33	34.92	-----	-----
100	-----	* 15.50	19.35	34.96	-----	-----

STATION H-54

[Lat. 8°03'00" N., long. 78°43'45" W.; Mar. 15, 1933; time, 1058-1115; wire angle, 0°; sounding, 55 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 346°, force 1; bottom sample, P-33; type, shell, pebbles; additional observations, O, Pl.]

0	-----	18.03	19.33	34.92	-----	-----
5	-----	16.85	19.29	34.85	-----	-----
10	-----	15.71	19.35	34.96	-----	-----
25	-----	15.42	19.37	34.99	-----	-----
50	50	15.34	19.38	35.01	-----	-----

STATION H-55

[Lat. 8°01'00" N., long. 78°52'00" W.; Mar. 15, 1933; time, 1256-1308; wire angle, 0°; sounding, 50 m; depth of observation, 48 m; weather, fair; sea, calm; wind, 360°, force 2; bottom sample, P-39; type, green sand, shell; additional observations, O, Pl.]

0	-----	18.80	19.25	34.78	-----	-----
3	-----	18.16	19.25	34.78	-----	-----
8	-----	17.30	19.28	34.83	-----	-----
23	-----	15.60	19.33	34.92	-----	-----
48	45	15.09	19.35	34.96	-----	-----

STATION H-55

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	18.80	-----	34.78	-----	-----
5	-----	17.80	-----	34.79	-----	-----
10	-----	17.00	-----	34.84	-----	-----
25	-----	15.50	-----	34.93	-----	-----
50	-----	15.09	-----	34.96	-----	-----

STATION H-56

[Lat. 7°57'40" N., long. 79°02'30" W.; Mar. 15, 1933; time, 1501-1514; wire angle, 0°; sounding, 74 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 260°, force, 2; bottom sample, none; type, fine green sand; additional observations, O, P.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		20.52	19.27	34.81		
5		18.49	19.24	34.76		
10		17.95	19.27	34.81		
25		15.69	19.38	35.01		
50		14.71	19.36	34.97		

STATION H-57

[Lat. 8°03'00" N., long. 79°08'00" W.; Mar. 15, 1933; time, 1649-1703; wire angle, 0°; sounding, 80 m; depth of observation, 75 m; weather, fair; sea, calm; wind, 260°, force 2; bottom sample, none; type, green sand; additional observations, O, P.]

0		19.27	19.28	34.83		
10		18.20	19.25	34.78		
25	27	15.01	19.34	34.94		
50		14.69	19.37	34.99		
75	76	14.48	19.37	34.99		

STATION H-58

[Lat. 8°08'30" N., long. 79°00'00" W.; Mar. 15, 1933; time, 1916-1927; wire angle, 0°; sounding, 45 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 360°, force 2; bottom sample, none; type, green mud; additional observations, O, P.]

0		18.26	19.29	34.85		
5		18.29	19.28	34.83		
10		17.83	19.31	34.88		
25	17	16.13	19.31	34.88		

STATION H-59

[Lat. 8°10'15" N., long. 78°55'30" W.; Mar. 16, 1933; time, 0618-0633; wire angle, 0°; sounding, 30 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, none; additional observations, O]

0		17.08	19.24	34.76		
5		16.86	19.31	34.88		
10		16.67	19.32	34.90		
25		16.27	19.31	34.88		

STATION H-60

[Lat. 8°11'50" N., long. 78°53'30" W.; Mar. 16, 1933; time, 0710-0729; wire angle, 0°; sounding, 25 m; depth of observation, 20 m; weather, fair; sea, calm; wind, 350°, force 3; bottom sample, none; type, rocky; additional observations, O, P.]

0		17.92	19.29	34.85		
5		19.42	19.28	34.83		
10		18.63	19.31	34.88		
20	29	16.86	19.31	34.88		
25		* 16.10	* 19.31	* 34.88		

STATION H-61

[Lat. 8°17'20" N., long. 78°46'30" W.; Mar. 16, 1933; time, 0935-0945; wire angle, 0°; sounding, 40 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 060°; force, 3; bottom sample, none; type, green sand, shell; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	V _{s.t.p.}
Meters	Meters	°C.				
0	-----	21.42	19.21	34.70	-----	-----
5	-----	19.31	19.23	34.74	-----	-----
10	-----	18.01	19.31	34.88	-----	-----
25	32	15.95	19.32	34.90	-----	-----

STATION H-62

[Lat. 8°17'30" N.; long. 78°41'00" W.; Mar. 16, 1933; time, 1047-1059; wire angle, 0°; sounding, 54 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 060°; force 2; bottom sample, none; type, green mud; additional observations, O, Pl.]

0	-----	19.13	19.18	34.65	-----	-----
10	-----	17.98	19.30	34.87	-----	-----
25	-----	15.89	19.34	34.94	-----	-----
50	50	15.63	19.36	34.97	-----	-----

STATION H-63

[Lat. 8°19'00" N., long. 78°36'00" W.; Mar. 16, 1933; time, 1200-1212; wire angle, 0°; sounding 36 m; depth of observation, 25 m; weather, fair; sea, smooth; wind, 060°, force 2; bottom sample, none; additional observation, O, Pl.]

0	-----	21.63	19.18	34.65	-----	-----
5	-----	20.17	19.24	34.76	-----	-----
10	-----	17.71	19.31	34.88	-----	-----
25	26	16.10	19.32	34.90	-----	-----

STATION H-64

[Lat. 8°20'20" N.; long. 78°30'30" W.; Mar. 16, 1933; time, 1304-1312; wire angle, 0°; sounding, 10 m; depth of observation, 10 m; weather, fair; sea, smooth; wind, 260°, force 2; bottom sample, none; additional observations, O, Pl.]

0	-----	19.32	18.98	34.29	-----	-----
5	-----	18.27	19.19	34.67	-----	-----
10	9	18.05	19.22	34.72	-----	-----

STATION H-65

[Lat. 8°29'00" N., long. 78°36'00" W.; Mar. 16, 1933; time, 1435-1446; wire angle, 0°; sounding, 23 m; depth of observation, 18 m; weather, fair; sea, smooth; wind, 300°, force 2; bottom sample, none; additional observations, O, Pl.]

0	-----	24.37	19.07	34.45	-----	-----
3	-----	19.56	19.15	34.60	-----	-----
8	-----	17.47	19.21	34.70	-----	-----
18	23	16.47	19.26	34.79	-----	-----

STATION H-65

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	24.37	-----	34.45	-----	-----
5	-----	18.20	-----	34.65	-----	-----
10	-----	17.20	-----	34.72	-----	-----
25	-----	16.00	-----	34.84	-----	-----

STATION H-66

[Lat. 8°37'00" N., long. 78°42'00" W.; Mar. 16, 1933; time, 1601-1613; wire angle, 0°; sounding, 20 m; depth of observation, 10 m; weather, fair; sea, calm; wind, 300°, force 2; bottom sample, none; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	-----	22.92	19.01	34.34	-----	-----
5	-----	18.64	19.18	34.65	-----	-----
10	-----	17.01	19.28	34.83	-----	-----

STATION H-67

[Lat. 8°33'45" N., long. 78°45'15" W.; Mar. 16, 1933; time, 1701-1714; wire angle, 0°; sounding 35 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 2; bottom sample, none; additional observations, O]

0	-----	23.14	19.07	34.45	-----	-----
5	-----	23.00	19.10	34.51	-----	-----
10	-----	17.52	19.26	34.79	-----	-----
25	22	16.10	19.30	34.87	-----	-----

STATION H-68

[Lat. 8°31'00" N., long. 78°48'30" W.; Mar. 16, 1933; time, 1756-1810; wire angle, 0°; sounding, 31 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 3; bottom sample, none; additional observations, O, Pl.]

0	-----	22.76	19.16	34.61	-----	-----
5	-----	22.65	19.20	34.69	-----	-----
10	-----	16.85	19.31	34.88	-----	-----
25	25	15.76	19.31	34.88	-----	-----

STATION H-69

[Lat. 8°23'15" N., long. 78°51'10" W.; Mar. 16, 1933; time, 1841-1854; wire angle, 0°; sounding, 35 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 3; bottom sample, none; type, green mud; additional observations, O, Pl.]

0	-----	22.73	19.20	34.69	-----	-----
5	-----	21.01	19.23	34.74	-----	-----
10	-----	17.11	19.30	34.87	-----	-----
25	27	15.68	19.32	34.90	-----	-----

STATION H-70

[Lat. 8°33'45" N., long. 78°55'50" W.; Mar. 17, 1933; time, 0615-0625; wire angle, 0°; sounding, 32 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 320°, force 3; bottom sample, none; type, green mud; additional observations, O]

0	-----	22.00	19.19	34.67	-----	-----
5	-----	20.98	19.25	34.78	-----	-----
10	-----	17.37	19.32	34.90	-----	-----
25	21	15.80	19.34	34.94	-----	-----

STATION H-71

[Lat. 8°41'20" N., long. 79°03'00" W.; Mar. 17, 1933; time, 0807-0818; wire angle, 0°; sounding, 41 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 320°, force 3; bottom sample, none; additional observations, O, Pl.]

0	-----	19.55	19.30	34.87	-----	-----
5	-----	19.01	19.32	34.90	-----	-----
10	-----	17.27	19.34	34.94	-----	-----
25	23	15.82	19.37	34.99	-----	-----

STATION H-72

[Lat. 8°42'40" N., long. 79°01'30" W.; Mar. 17, 1933; time, 0843-0848; wire angle, 0°; sounding, 37 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 320°, force 3; bottom sample, none; additional observations, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ _t	V _{s, t, p}
<i>Meters</i>	<i>Meters</i>	<i>° C</i>				
0	-----	19.50	19.31	34.88	-----	-----
5	-----	19.19	* 19.32	* 34.90	-----	-----
10	-----	17.13	* 19.34	* 34.94	-----	-----
25	28	15.46	19.37	34.99	-----	-----

STATION H-73

[Lat. 8°44'30" N., long. 79°00'15" W.; Mar. 17, 1933; time, 0923-0934; wire angle, 0°; sounding, 28 m; depth of observation, 25 m; weather, fair; sea, smooth; wind, 350°, force 2; bottom sample, none; additional observations, O, Pl.]

0	-----	19.08	-----	-----	-----	-----
5	-----	18.46	-----	-----	-----	-----
10	-----	17.17	19.17	34.63	-----	-----
25	25	15.80	19.30	34.87	-----	-----

STATION H-74

[Lat. 8°52'30" N., long. 79°07'15" W.; Mar. 17, 1933; time, 1102-1110; wire angle, 0°; sounding, 21 m; depth of observation, 10 m; weather, fair; sea, smooth; wind, 350°, force 2; bottom sample none; additional observations, O, Pl.]

0	-----	18.53	(1)	(1)	-----	-----
5	-----	16.95	(1)	(1)	-----	-----
10	-----	15.93	(1)	(1)	-----	-----

¹ All water samples lost, bottles broken.

STATION H-75

[Lat. 8°46'15" N., long. 79°13'30" W.; Mar. 17, 1933; time, 1220-1235; wire angle, 0°; sounding, 45 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 350° force 1; bottom sample, none; additional observations, O, Pl.]

0	-----	20.34	19.26	34.79	-----	-----
5	-----	19.88	19.28	34.83	-----	-----
10	-----	18.04	19.30	34.87	-----	-----
25	25	15.05	19.33	34.92	-----	-----

STATION H-76

[Lat. 8°51'00" N., long. 79°30'50" W.; Mar. 21, 1933; time, 0847-0856; wire angle, 0°; sounding, 17 m; depth of observation, 10 m; weather, hazy; sea, calm; wind, 085° force 1; bottom sample, P-60; type, green mud; additional observations, O, Pl.]

0	-----	23.51	19.30	34.87	-----	-----
5	-----	22.53	19.30	34.87	-----	-----
10	6	18.58	19.30	34.87	-----	-----

STATION H-77

[Lat. 8°47'30" N., long. 79°27'30" W.; Mar. 21, 1933; time, 0956-1006; wire angle, 0°; sounding, 28 m; depth of observation, 25 m; weather, hazy; sea, calm; wind, 090°, force 1; bottom sample, P-61; type, green mud; additional observations, O, Pl.]

0	-----	23.35	19.31	34.88	-----	-----
5	-----	22.06	19.26	34.79	-----	-----
10	-----	17.68	19.31	34.88	-----	-----
25	27	15.82	19.34	34.94	-----	-----

STATION H-78

[Lat. 8°44'00" N., long. 79°23'45" W.; Mar. 21, 1933; time, 1059-1109; wire angle, 0°; sounding, 36 m; depth of observation, 25m; weather, hazy; sea, calm; wind, 315°, force 1; bottom sample, none; type, green mud; additional observations, O, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	-----	23.11	19.32	34.90	-----	-----
5	-----	20.79	19.25	34.78	-----	-----
10	-----	17.46	19.30	34.87	-----	-----
25	25	15.70	19.33	34.92	-----	-----

STATION H-79

[Lat. 8°39'45" N., long. 79°20'15" W.; Mar. 21, 1933; time, 1210-1221; wire angle, 0°; sounding, 45 m; depth of observation, 25 m; weather, hazy; sea, calm; wind, 315°, force 1; bottom sample, none; additional observations, O, P1.]

0	-----	22.45	19.28	34.83	-----	-----
5	-----	20.93	19.34	34.94	-----	-----
10	-----	18.78	19.28	34.83	-----	-----
25	24	15.97	19.30	34.87	-----	-----

STATION H-80

[Lat. 8°34'00" N., long. 79°13'00" W.; Mar. 21, 1933; time, 1340-1355; wire angle, 0°; sounding, 65 m; depth of observation 50 m; weather, hazy; sea, smooth; wind, 150°, force 1; bottom sample, P-64; type, green mud; additional observations, O, P1.]

0	-----	22.06	*19.29	*34.85	-----	-----
5	-----	21.61	19.30	34.87	-----	-----
10	-----	21.06	19.29	34.85	-----	-----
25	-----	17.15	19.31	34.88	-----	-----
50	54	14.90	19.35	34.96	-----	-----

STATION H-81

[Lat. 8°27'30" N., long. 79°07'30" W.; Mar. 21, 1933; time 1517-1527; wire angle, 0°; sounding, 38 m; depth of observation, 25 m; weather, hazy; sea, smooth; wind, 150°, force 1; bottom sample, P-65; type, green sand; additional observations, O, P1.]

0	-----	21.04	19.23	34.74	-----	-----
5	-----	20.96	19.25	34.78	-----	-----
10	-----	20.02	19.27	34.81	-----	-----
25	23	17.00	19.29	34.85	-----	-----

STATION H-82

[Lat. 8°22'00" N., long. 79°09'15" W.; Mar. 21, 1933; time, 1705-1722; wire angle, 0°; sounding, 54 m; depth of observation, 50 m; weather, fair; sea, calm; wind 250°, force 1; bottom sample, P-66; type, green mud, sand and shell; additional observations, O, P1.]

0	-----	22.12	19.26	34.79	-----	-----
5	-----	22.09	19.27	34.81	-----	-----
10	-----	20.10	19.25	34.78	-----	-----
25	20	17.40	19.32	34.90	-----	-----
50	-----	14.84	19.35	34.96	-----	-----

STATION H-83

[Lat. 8°20'00" N., long. 79°09'15" W.; Mar. 21, 1933; time, 1740-1756; wire angle, 0°; sounding, 54 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 250°, force 1; bottom sample, none; additional observations, O, P1.]

0	-----	22.26	19.30	34.87	-----	-----
5	-----	20.37	19.29	34.85	-----	-----
10	-----	18.98	19.30	34.87	-----	-----
25	27	17.43	19.30	34.87	-----	-----
50	-----	*15.00	19.35	34.96	-----	-----

STATION H-84

[Lat. 8°10'45" N., long. 79°14'45" W.; Mar. 22, 1933; time, 0836-0904; wire angle, 0°; sounding, 98 m; depth of observation, 75 m; weather, hazy; sea, calm; wind, 350°, force 2; bottom sample, P-68; type, green mud, sand and shell; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	-----	21.74	19.24	34.76	-----	-----
10	-----	17.80	19.28	34.83	-----	-----
25	29	16.64	19.29	34.85	-----	-----
50	-----	15.35	19.34	34.94	-----	-----
75	-----	14.60	19.35	34.96	-----	-----

STATION H-85

[Lat. 8°17'30" N., long. 79°21'30" W.; Mar. 22, 1933; time, 1045-1057; wire angle, 0°; sounding, 82 m; depth of observation, 75 m; weather, hazy; sea, calm; wind, 350°, force 2; bottom sample, P-69; type, green mud, sand and shell; additional observations, O, Pl.]

0	-----	23.05	19.22	34.72	-----	-----
5	-----	19.48	19.27	34.81	-----	-----
25	28	16.55	19.29	34.85	-----	-----
50	-----	16.03	19.30	24.87	-----	-----
75	-----	14.80	19.37	34.99	-----	-----

STATION H-86

[Lat. 8°23'00" N., long. 79°29'00" W.; Mar. 22, 1933; time, 1216-1226; wire angle, 0°; sounding, 68 m; depth of observation, 50 m; weather, hazy; sea, calm; wind, 045°, force 2; bottom sample, P-70; type, green mud; additional observations, O, Pl.]

0	-----	24.13	19.28	34.83	-----	-----
10	-----	19.51	19.29	34.85	-----	-----
25	-----	16.75	19.30	34.87	-----	-----
50	51	15.05	19.33	34.92	-----	-----

STATION H-87

[Lat. 8°27'45" N., long. 79°31'30" W.; Mar. 22, 1933; time, 1308-1318; wire angle, 0°; sounding, 54 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 045°, force 2; bottom sample, none; type, green mud; additional observations, O, Pl.]

0	-----	24.04	19.33	34.92	-----	-----
10	-----	*19.50	(*)	*34.84	-----	-----
15	-----	19.05	19.28	34.83	-----	-----
25	-----	17.26	19.31	34.88	-----	-----
50	48	15.33	19.34	34.94	-----	-----

STATION H-88

[Lat. 8°31'19" N., long. 79°35'30" W.; Mar. 22, 1933; time, 1409-1419; wire angle, 0°; sounding, 36 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 045°, force 2; bottom sample, none; type, green mud; additional observations, O, Pl.]

0	-----	23.74	19.31	34.88	-----	-----
5	-----	20.93	19.20	34.69	-----	-----
10	-----	18.94	19.28	34.83	-----	-----
25	25	16.58	19.39	35.03	-----	-----

STATION H-89

[Lat. 8°22'15" N., long. 79°50'20" W.; Mar. 22, 1933; time, 1834-1842; wire angle, 0°; sounding, 18 m; depth of observation, 10 m; weather, fair; sea, calm; wind, 050° force 2; bottom sample, P-73; type, green mud; additional observations, O, Pl.]

0	-----	24.86	19.34	34.94	-----	-----
5	-----	24.98	19.27	34.81	-----	-----
10	-----	22.68	19.25	34.78	-----	-----

STATION H-90

[Lat. 8°19'30" N., long. 79°46'45" W.; Mar. 22, 1933; time, 1929-1938; wire angle, 0°; sounding, 34 m; depth of observation, 20 m; weather, fair; sea, calm; wind, 050°, force 2; bottom sample, P-74; type, green mud; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	-----	25.38	19.22	34.72	-----	-----
5	-----	24.67	19.24	34.76	-----	-----
10	-----	22.44	19.25	34.78	-----	-----
20	-----	17.10	19.29	34.85	-----	-----
25	-----	*16.50	(*)	*34.87	-----	-----

STATION H-91

[Lat. 7°47'00" N., long. 79°15'45" W.; Mar. 23, 1933; time, 0652-0710; wire angle, 0°; sounding, 133 m; depth of observation, 100 m; weather, fair; sea, smooth; wind, 340°, force 4; bottom sample, P-75; type, green mud, sand, and shell; additional observations, O, Pl.]

0	-----	21.55	19.31	34.88	-----	-----
10	-----	17.22	19.34	34.94	-----	-----
25	-----	15.27	19.37	34.99	-----	-----
50	49	14.71	19.39	35.03	-----	-----
75	-----	14.68	19.39	35.03	-----	-----
100	102	14.17	19.36	34.97	-----	-----

STATION H-92

[Lat. 7°31'45" N., long. 79°22'00" W.; Mar. 23, 1933; time, 0914-0958; wire angle, 11°; sounding, 585 m; depth of observation, 478 m; weather, fair; sea, smooth; wind, 355°, force 3; bottom sample, P-76; type, green sand; additional observations, O, Pl.]

-----	0	20.26	19.31	34.88	-----	-----
-----	10	20.12	19.31	34.88	-----	-----
-----	25	15.52	19.34	34.94	-----	-----
-----	50	14.53	19.37	34.99	-----	-----
-----	75	14.28	19.37	34.99	-----	-----
-----	98	14.14	19.37	34.99	-----	-----
-----	146	13.81	19.35	34.96	-----	-----
-----	197	13.41	19.36	34.97	-----	-----
-----	290	12.75	19.31	34.88	-----	-----
-----	384	-----	19.31	34.88	-----	-----
-----	478	8.51	19.29	34.85	-----	-----

STATION H-92

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	20.26	-----	34.88	-----	-----
10	-----	20.12	-----	34.88	-----	-----
25	-----	15.52	-----	34.94	-----	-----
50	-----	14.53	-----	34.99	-----	-----
75	-----	14.28	-----	34.99	-----	-----
100	-----	14.10	-----	34.99	-----	-----
150	-----	13.78	-----	34.97	-----	-----
200	-----	13.40	-----	34.96	-----	-----
300	-----	12.65	-----	34.88	-----	-----
400	-----	10.60	-----	34.87	-----	-----
500	-----	8.30	-----	34.84	-----	-----

STATION H-93

[Lat. 7°36'45" N., long. 79°29'00" W.; Mar. 23, 1933; time, 1129-1151; wire angle, 10°; sounding, 275 m; depth of observation, 190 m; weather, fair; sea, calm; wind, 355°, force 3; bottom sample, P-77; type, green sand; additional observations, O, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
-----	0	19.26	19.31	34.88	-----	-----
-----	10	18.22	19.30	34.87	-----	-----
-----	25	14.92	19.36	34.97	-----	-----
-----	45	14.26	19.37	34.99	-----	-----
-----	75	13.56	19.33	34.92	-----	-----
-----	98	13.12	19.32	34.90	-----	-----
-----	145	12.74	19.32	34.90	-----	-----
-----	190	12.63	19.32	34.90	-----	-----

STATION H-93

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	19.26	-----	34.88	-----	-----
10	-----	18.22	-----	34.87	-----	-----
25	-----	14.92	-----	34.97	-----	-----
50	-----	14.10	-----	34.99	-----	-----
75	-----	13.56	-----	34.92	-----	-----
100	-----	13.08	-----	34.90	-----	-----
150	-----	12.70	-----	34.90	-----	-----
200	-----	12.60	-----	34.90	-----	-----

STATION H-94

[Lat. 7°43'15" N., long. 79°33'15" W.; Mar. 23, 1933; time 1347-1403; wire angle, 8°; sounding, 142 m; depth of observation, 100 m; weather, fair; sea, calm; wind, 355°, force 3; bottom sample, P-78; type, green mud and sand; additional observations, O, P1.]

0	-----	22.55	19.30	34.87	-----	-----
10	-----	20.83	19.26	34.79	-----	-----
25	-----	17.55	19.29	34.85	-----	-----
50	-----	16.43	19.36	34.97	-----	-----
75	80	14.23	19.36	34.97	-----	-----
100	(100)	14.01	19.34	34.94	-----	-----

STATION H-95

[Lat. 7°52'00" N., long. 79°44'00" W.; Mar. 23, 1933; time, 1622-1631; wire angle, 0°; sounding 75 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 360°, force 4; bottom sample, P-79; type, green mud, sand, and shell; additional observations, O.]

0	-----	23.56	19.28	34.83	-----	-----
10	-----	20.42	19.23	34.74	-----	-----
25	19	15.38	19.34	34.94	-----	-----
50	(73)	14.46	19.36	34.97	-----	-----

STATION H-96

[Lat. 7°57'00" N., long. 79°48'30" W.; Mar. 23, 1933; time, 1731-1740; wire angle, 0°; sounding, 63 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 360°, force 4; bottom sample, P-80; type, green mud, sand, and shell; additional observations, O, P1.]

0	-----	24.04	19.24	34.76	-----	-----
10	-----	22.82	19.23	34.74	-----	-----
25	29	15.44	19.29	34.85	-----	-----
50	(61)	14.54	19.33	34.92	-----	-----

STATION H-97

[Lat. 8°01'00" N., long. 79°53'00" W.; Mar. 23, 1933; Time, 1842-1850; wire angle, 0°; sounding, 54 m; depth of observation, 50 m; weather, fair; sea, light; wind, 360°, force 5; bottom sample, P-31; type, green mud, sand, and shell; additional observations, O]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s, tp}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		24.35	19.18	34.65		
10		24.12	19.16	34.61		
25	26	15.08	19.32	34.90		
50	52	14.60	19.35	34.96		

STATION H-98

[Lat. 8°06'00" N., long. 79°59'00" W.; Mar. 24, 1933; time 0617-0627; wire angle, 0°; sounding, 44 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 340°, force 2; bottom sample, none; type green mud; additional observations, O]

0		22.73	19.26	34.79		
5		22.83	19.26	34.79		
10		22.59	19.27	34.81		
25	31	15.85	19.30	34.87		

STATION H-99

[Lat. 8°14'30" N., long. 79°44'00" W.; Mar. 24, 1933; time, 1021-1045; wire angle, 0°; sounding, 66 m; depth of observation, 25 m; weather, fair; sea, light; wind, 360°, force 3; bottom sample, P-83; type, green mud; additional observations, O, P1.]

0		22.06	19.27	34.81		
10		20.74	19.26	34.79		
25		16.72	19.30	34.87		

STATION H-100

[Lat. 8°06'50" N., long. 79°37'45" W.; Mar. 24, 1933; time, 1220-1234; wire angle, 3°; sounding, 87 m; depth of observation, 75 m; weather, fair; sea, calm; wind, 360°, force 3; bottom sample, none; type, green sand and shell; additional observations, O, P1.]

0		21.53	19.24	34.76		
10		21.26	19.23	34.74		
25		17.22	19.32	34.90		
50	52	14.93	19.36	34.97		
75	76	14.43	19.36	34.97		

STATION H-101

[Lat. 8°01'30" N., long. 79°30'00" W.; Mar. 24, 1933; time, 1415-1433; wire angle, 5°; sounding, 104 m; depth of observation, 75 m; weather, fair; sea, calm; wind, 360°, force 3; bottom sample, P-85; type, green sand and shell; additional observations, O, P1.]

0		23.44	18.77	33.91		
10		21.74	18.94	34.22		
25		15.56	19.32	34.90		
50		15.34	19.37	34.99		
75	71	14.28	19.34	34.94		

STATION H-102

[Lat. 7°54'00" N., long. 79°22'15" W.; Mar. 24, 1933; time, 1622-1640; wire angle, 0°; sounding, 128 m; depth of observation, 100 m; weather, fair; sea, calm; wind, 360°, force 3; bottom sample, none; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	-----	23.71	18.65	33.69	-----	-----
10	-----	19.25	19.13	34.56	-----	-----
25	-----	15.91	19.37	34.99	-----	-----
50	(73)	14.81	19.38	35.01	-----	-----
100	-----	14.52	19.35	34.96	-----	-----

STATION H-105

[Lat. 9°28'00" N.; long. 84°24'00" W.; May 16, 1933; time, 1135-1146; wire angle, 0°; sounding, 25 m; depth of observation, 25 m; weather, fair; sea, calm; wind, 200° force 1; bottom sample, no. 105; type, mud, shell; additional observations; Pl., PO₄]

0	-----	29.10	18.16	32.81	20.41	98,000
10	-----	29.04	18.15	32.79	20.41	98,000
25	-----	27.40	18.43	33.30	21.33	97,901

STATION H-106

[Lat. 9°24'30" N., long. 84°28'10" N.; May 16, 1933; time, 1529-1551; wire angle, 0° sounding, 50 m; depth of observation, 50 m; weather, fair; sea, calm; wind, 245°, force 2; bottom sample, no. 106; type, green mud; additional observations, O, Pl.]

0	-----	28.90	18.32	33.10	20.69	97,973
10	-----	28.22	18.47	33.37	21.12	97,927
25	-----	20.70	19.29	34.85	24.48	97,601
45	-----	19.04	19.30	34.87	24.93	97,547
50	-----	*18.65	*19.30	*34.87	25.03	97,536

STATION H-107

[Lat. 9°19'45" N., long. 84°28'40" W.; May 16, 1933; time, 1702-1714; wire angle, 10°; sounding, 83 m; depth of observation, 75 m; weather, cloudy; sea, calm; wind, 245°, force 3; bottom sample, no. 107; type, green mud; additional observations, Pl., PO₄]

0	-----	29.00	18.35	33.15	20.70	97,972
10	-----	28.60	18.36	33.17	20.85	97,952
25	-----	24.43	18.88	34.11	22.86	97,755
50	-----	20.29	19.33	34.92	24.65	97,573
70	-----	18.76	19.26	34.79	24.94	97,537
*75	-----	*18.35	*19.24	*34.76	25.02	97,527

STATION H-108

[Lat. 9°10'40" N., long. 84°29'15" W.; May 16, 1933; time, 1902-1950; wire angle, 25°; sounding, 852 m; depth of observation, 800 m; weather, cloudy; sea, light; wind, 245°, force 3; bottom sample, no. 108; type, green mud; additional observations, O, Pl.]

-----	0	28.60	18.40	33.24	-----	-----
-----	10	28.39	18.37	33.19	-----	-----
-----	25	*24.85	18.82	34.00	-----	-----
-----	50	18.89	19.20	34.69	-----	-----
-----	75	16.62	19.23	34.74	-----	-----
-----	106	15.11	19.31	34.88	-----	-----
-----	199	12.48	19.33	34.92	-----	-----
-----	291	10.70	19.26	34.79	-----	-----
-----	386	8.55	19.19	34.67	-----	-----
-----	481	7.59	19.16	34.61	-----	-----
-----	580	7.28	19.16	34.61	-----	-----
-----	777	6.07	19.13	34.56	-----	-----

STATION H-108

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	0	28.60	18.28	33.24	20.90	97,952
10	10	28.39	18.55	33.19	20.93	97,945
25	25	24.85	19.15	34.00	22.65	97,775
50	50	18.89	19.22	34.69	24.53	97,555
75	75	16.62	19.29	34.74	25.42	97,489
100	100	15.40	19.31	34.84	25.78	97,445
200	200	12.48	19.28	34.92	26.46	97,337
300	300	10.50	19.23	34.78	26.72	97,270
400	400	8.37	19.22	34.66	26.97	97,201
500	500	7.51	19.15	34.61	27.06	97,149
600	600	7.17	19.15	34.61	27.11	97,102
800	800	5.92	19.16	34.56	27.24	97,002

STATION H-109

[Lat. 8°59'00" N., long. 84°32'00" W.; May 16, 1933; time, 2208-2400; wire angle, 17°; sounding, 1,950 m depth of observation, 1,500 m; weather, fair; sea, light; wind, 275°, force 4; bottom sample, no. 109 type, gray mud; additional observations, O, Pl., PO₄ (surface)]

0	0	28.60	18.28	33.03		
10	10	28.36	18.55	33.51		
25	25	22.20	19.15	34.60		
50	50	18.68	19.22	34.72		
75	75	15.63	19.29	34.85		
101	101	14.72	19.31	34.88		
200	200	12.84	19.28	34.83		
300	300	10.98	19.23	34.74		
397	397	8.30	19.22	34.72		
493	493	7.66	19.17	34.63		
592	592	7.13	19.15	34.60		
792	792	5.80	19.15	34.60		
990	990	4.92	19.15	34.60		
1,485	1,485	3.33	19.16	34.61		

STATION H-109

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0		28.60		33.03	20.74	97,968
10		28.36		33.51	21.18	97,922
25		22.20		34.60	22.88	97,753
50		18.68		34.72	24.91	97,547
75		15.63		34.85	25.74	97,458
100		14.72		34.88	25.96	97,428
200		12.84		34.83	26.31	97,351
300		10.98		34.74	26.60	97,281
400		8.28		34.72	27.03	97,195
500		7.62		34.63	27.06	97,150
600		7.09		34.60	27.11	97,102
800		5.76		34.60	27.29	96,997
1,000		4.89		34.60	27.39	96,900
1,500		3.30		34.61	27.57	96,665

STATION H-110

[Lat. 9°10'20" N., long. 84°17'00" W.; May 17, 1933; time, 0640-0712; wire angle, 0°; sounding, 462 m depth of observation, 300 m; weather, fair; sea, calm; wind, 015°, force 3; bottom sample, none; additional observations, P₁.]

0		28.42	18.30	33.06	20.82	97,960
10		28.33	18.28	33.03	20.83	97,954
25		21.10	19.16	34.61	24.19	97,628
50		17.70	19.28	34.83	25.24	97,516
75		16.27	19.32	34.90	25.63	97,469
100	112	15.50	19.26	34.79	25.72	97,450
200		12.43	19.23	34.83	26.40	97,343
300	304	8.95	19.22	34.72	26.93	97,248

STATION H-111

[Lat. 9°18'10" N., long. 84°13'10" W.; May 17, 1933; time, 0842-0902; wire angle, 0°; sounding, 123 m; depth of observation, 100 m; weather, c.d.; sea, smooth; wind 240°, force 2; bottom sample, no. 111; type, green mud; additional observations, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,1,D}$
Meters	Meters	°C.				
0	-----	28.64	17.96	32.45	20.29	98,011
10	-----	27.99	18.37	33.19	21.06	97,933
25	-----	20.86	19.12	34.54	24.20	97,627
50	45	16.85	19.24	34.76	25.38	97,503
75	-----	15.81	19.29	34.85	25.70	97,462
100	112	15.63	19.30	34.87	25.75	97,448

STATION H-112

[Lat. 9°21'45" N., long. 84°12'15" W.; May 17, 1933; time, 1020-1029; wire angle, 0°; sounding, 59 m; depth of observation, 50 m; weather, c.d.; sea, smooth; wind 030°, force 1; bottom sample, no. 112; type, green mud; additional observations, O, P1.]

0	-----	29.12	17.77	32.10	19.87	98,052
10	-----	26.26	18.61	33.62	21.94	97,848
25	-----	23.68	19.16	34.61	23.46	97,698
50	57	19.83	19.22	34.72	24.61	97,576

STATION H-113

[Lat. 9°04'00" N., long. 84°17'00" W.; May 17, 1933; time, 1421-1456; wire angle, 0°; sounding, 520 m; depth of observation, 500 m; weather, cloudy; sea, calm; wind 200°, force 3; bottom sample, no. 113; type, green mud; additional observations, O, P1.]

0	-----	29.12	18.29	33.04	20.58	97,984
10	-----	29.14	18.04	32.59	20.23	98,012
25	-----	23.58	19.11	34.52	23.42	97,702
50	-----	19.02	19.18	34.65	24.77	97,561
75	-----	16.79	19.14	34.58	25.26	97,504
100	91	15.62	19.29	34.85	25.74	97,448
200	-----	13.23	19.34	34.94	26.32	97,350
300	294	9.89	19.23	34.74	26.79	97,263
400	-----	9.42	19.18	34.65	26.80	97,218
500	500	8.04	19.14	34.58	26.96	97,159

STATION H-114

[Lat. 8°52'15" N., long. 84°20'00" W.; May 17, 1933; time, 1704-1857; wire angle, 25°; sounding, 1,440 m; depth of observation, 1,000 m; weather, fair; sea, calm; wind 245°, force 3; bottom sample, none; additional observations, O, P1.]

-----	0	28.37	18.27	33.01	-----	-----
-----	10	28.33	18.27	33.01	-----	-----
-----	25	23.41	19.02	34.36	-----	-----
-----	50	18.86	19.27	34.81	-----	-----
-----	75	16.13	19.30	34.87	-----	-----
-----	100	14.81	19.34	34.94	-----	-----
-----	197	12.85	19.33	34.92	-----	-----
-----	294	10.30	19.24	34.76	-----	-----
-----	400	8.41	19.18	34.65	-----	-----
-----	492	7.85	19.18	34.65	-----	-----
-----	591	7.44	19.16	34.61	-----	-----
-----	789	-----	19.17	34.63	-----	-----
-----	987	5.04	19.12	34.54	-----	-----

STATION H-114

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS.

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0		28.37		33.01	20.80	97,962
10		28.33		33.01	20.81	97,956
25		23.41		34.36	23.35	97,709
50		18.86		34.81	24.93	97,545
75		16.13		34.87	25.64	97,468
100		14.81		34.94	25.99	97,424
200		12.75		34.92	26.40	97,343
300		10.20		34.76	26.75	97,267
400		8.41		34.65	26.96	97,202
500		7.80		34.65	27.05	97,151
600		7.40		34.61	27.08	97,105
800		6.18		34.62	27.25	97,001
1,000		4.95		34.54	27.34	96,905

STATION H-115

[Lat. 8°11'00" N., long. 84°15'00" W.; May 18, 1933; time, 0555-0717; wire angle, 0°; sounding, 1,700 m; depth of observation, 1,500 m; weather, b.c.; sea, calm; wind 340°, force 2; bottom sample, none; additional observations, Pl., PO₄]

0		28.78	18.14	32.77	20.49	97,993
10		28.50	18.20	32.88	20.66	97,971
25		18.12	19.24	34.76	25.08	97,543
50		16.06	19.32	34.90	25.68	97,474
75		15.09	19.34	34.94	25.93	97,440
100	97	14.16	19.35	34.96	26.14	97,410
200		* 12.85	19.34	34.94	26.40	97,343
300		11.54	19.28	34.83	26.56	97,286
400		9.64	19.22	34.72	26.81	97,218
500		8.05	19.17	34.63	27.00	97,156
600		7.12	19.15	34.60	27.11	97,102
800		5.80	19.16	34.61	27.29	96,997
1,000	988	4.69	19.14	34.58	27.40	96,899
1,500	1,496	3.14	19.19	34.67	27.63	96,658

STATION H-116

[Lat. 8°17'00" N., long. 84°09'00" W.; May 18, 1933; time, 0925-1105; wire angle, 0°; sounding, 1,875 m; depth of observation, 1,500 m; weather, fair; sea, calm; wind 290°, force 2; bottom sample, no. 116; type, green mud; additional observations, O, Pl.]

0		29.05	18.09	32.68	20.33	98,007
10		27.53	18.49	33.40	21.36	97,904
25		19.87	19.20	34.69	24.58	97,591
50		16.45	19.33	34.92	25.60	97,482
75		14.61	19.35	34.96	26.05	97,429
100	97	14.25		* 34.98	26.14	97,410
200	204	13.00	19.37	34.99	26.41	97,342
300		10.57		* 34.84	26.75	97,267
400		9.15	19.20	34.69	26.87	97,211
500		8.06	19.18	34.65	27.01	97,154
600	603	7.34	19.17	34.63	27.10	97,103
800		* 5.90	19.16	34.61	27.28	96,998
1,000		4.81	19.16	34.61	27.41	96,898
1,500	1,516	3.00	19.15	34.60	27.59	96,662

STATION H-117

[Lat. 8°24'00" N., long. 84°00'30" W.; May 18, 1933; time, 1336-1500; wire angle, 0°; sounding, 2,005 m; depth of observation, 2,000 m; weather, fair; sea, calm; wind 200°, force 3; bottom sample, none; additional observations, Pl., O (below 800 m)]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
Meters	Meters	°C.				
0	-----	28.85	17.87	32.29	20.10	98,030
10	-----	26.98	18.58	33.57	21.67	97,874
25	-----	22.58	19.06	34.43	23.64	97,680
50	-----	17.32	19.24	34.76	25.27	97,513
75	-----	15.48	19.32	34.90	25.81	97,452
100	96	14.46	19.35	34.96	26.08	97,416
200	-----	14.13	19.34	34.94	26.14	97,367
300	-----	* 11.00	-----	* 34.80	26.64	97,277
400	-----	8.98	19.18	34.65	26.87	97,211
500	-----	* 8.20	19.16	34.61	26.96	97,159
600	-----	7.61	19.16	34.61	27.05	97,109
800	-----	5.90	19.14	34.58	27.25	97,001
1,000	1,003	4.89	19.14	34.58	27.38	96,901
1,500	-----	3.08	-----	* 34.60	27.58	96,663
2,000	-----	* 2.80	19.17	34.63	27.63	96,448

STATION H-118

[Lat. 8°29'00" N.; long. 83°54'00" W.; May 18, 1933; time, 1642-1723; wire angle, 0°; sounding, 640 m; depth of observation, 600 m; weather, cloudy; sea, calm; wind 200°, force 3; bottom sample, no. 118; type, green mud; additional observations, Pl.]

0	-----	28.88	18.21	32.90	20.56	97,986
10	-----	25.70	18.98	34.29	22.61	97,784
25	-----	20.22	19.25	34.78	24.56	97,593
50	-----	17.25	19.35	34.96	25.44	97,497
75	-----	15.34	19.31	34.88	25.82	97,451
100	97	14.66	19.36	34.97	26.04	97,420
200	193	13.05	19.32	34.90	26.32	97,350
300	-----	10.63	19.23	34.74	26.66	97,277
400	-----	* 9.25	19.19	34.67	26.84	97,214
500	496	8.14	19.20	34.69	27.03	97,152
600	-----	7.00	19.18	34.65	27.16	97,098

STATION H-119

[Lat. 8°32'00" N., long. 83°49'00" W.; May 18, 1933; time, 1829-42; wire angle, 0°; sounding, 87 m; depth of observation, 75 m; weather, cloudy; sea, calm; wind 120°, force 3; bottom sample, no. 119; type, green mud; additional observations, Pl.]

0	-----	28.13	18.53	33.48	21.23	97,922
10	-----	24.56	-----	* 34.00	22.74	97,771
25	-----	20.09	19.22	34.72	24.55	97,593
50	-----	17.94	19.24	34.76	25.12	97,527
75	-----	16.05	19.33	34.92	25.70	97,462

STATION H-120

[Lat. 8°25'26" N., long. 83°34'36" W.; May 19, 1933; time, 0744-0801; wire angle, 0°; sounding, 55 m; depth of observation, 50 m; weather, cloudy; sea, smooth; wind 100°, force 2; bottom sample, no. 120; type, green mud, sand, shell; additional observations, Pl.]

0	-----	27.70	18.78	33.93	21.72	97,834
10	-----	23.21	18.92	34.18	23.27	97,721
25	-----	20.13	19.14	34.58	24.43	97,605
50	-----	18.35	19.22	34.72	24.99	97,540

STATION H-121

[Lat. 8°20'30" N., long. 83°34'30" W.; May 19, 1933; time, 0912-1025; wire angle, 0°; sounding, 1,400 (sonic); depth of observation, 1,000 m; weather, fair; sea, calm; wind 100°, force 2; bottom sample, none; additional observations, O, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0		27.94	18.46	33.35	21.20	97,925
10		25.21		* 33.50	22.17	97,826
25		22.35	18.99	34.31	23.62	97,682
50	51	18.10		* 34.85	25.15	97,525
75		15.65		* 35.03	25.87	97,446
100		14.89	19.39	35.03	26.04	97,420
200		12.89	19.31	34.88	26.34	97,348
300	296	10.75	19.26	34.79	26.68	97,274
400	406	9.24	19.20	34.68	26.85	97,213
500		7.74	19.16	34.61	27.03	97,162
600		* 7.15	19.16	34.61	27.11	97,102
800		6.33	19.14	34.58	27.20	97,006
1,000	993	5.05	19.13	34.56	27.34	96,905

STATION H-122

[(1) Lat. 8°15'15" N., long. 83°34'30" W. (2) Lat. 8°18'15" N., long. 83°36'00" W.; May 19, 1933; time, 1156-1451; wire angle, 30°; sounding, 2,100 m; depth of observation, 1,900 m; weather, fair; sea, calm; wind 100°-205°, force 2-3; bottom sample no. 122; type, green mud; additional observations, Fl.]

	0	28.40	18.39	33.22		
	10	27.79	18.45	33.33		
	25	23.36	18.94	34.22		
	50	18.44	19.25	34.78		
	75	15.27	19.34	34.94		
	100	14.65	19.34	34.94		
	200	13.31	19.32	34.90		
	290	10.32	19.22	34.72		
	370	8.98	19.21	34.70		
	482	7.93				
	571	7.76	19.19	34.67		
	750	6.33	19.14	34.58		
	965	5.12	19.16	34.61		
	1,422	* 4.10	19.16	34.61		
	1,906	2.97	* 19.17	* 34.63		

STATION H-122

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	28.40	33.22	20.95	97,948
10	27.79	33.33	21.23	97,917
25	23.36	34.22	23.26	97,717
50	18.44	34.78	25.02	97,537
75	15.27	34.94	25.89	97,444
100	14.65	34.94	26.02	97,422
200	13.31	34.90	26.27	97,355
300	10.15	34.71	26.72	97,270
400	8.70	34.70	26.95	97,204
500	7.89	24.68	27.06	97,150
600	7.55	34.66	27.09	97,104
800	6.07	34.59	27.34	96,992
1,000	5.05	34.61	27.38	96,901
1,500	3.90	34.61	27.51	96,673
2,000	2.75	34.63	27.64	96,447

STATION H-123

[(1) Lat. 8°04'15" N., long. 83°34'15" W. (2) Lat. 8°05'00" N., long. 83°34'15" W.; May 19, 1933; time, 1816-1955; wire angle, 0°; sounding, 1,000 m (no bottom); depth of observation, 1,000 m; weather, clear; sea, calm; wind 215°, force 1; bottom sample, none; additional observations, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0		28.62	18.41	33.26	20.91	97,951
10		27.55	18.49	33.40	21.36	97,904
25		22.76	18.98	34.29	23.48	97,696
50	49	18.37	19.22	34.72	24.99	97,540
75		15.38	19.32	34.90	25.83	97,450
100		14.50	19.34	34.94	26.05	97,419
200		13.19	19.34	34.94	26.33	97,349
300	295	11.40	19.26	34.79	26.56	97,285
400	399	8.89	19.21	34.70	26.92	97,206
500	506	7.80	19.19	34.67	27.07	97,149
600		7.01	19.15	34.60	27.12	97,101
800	801	5.73	19.13	34.56	27.26	97,000
1,000	997	5.04	19.14	34.58	27.36	96,903

STATION H-124

[Lat. 7°53'45" N.; long. 83°34'15" W.; May 19, 1933; time, 2214-2407; wire angle, 15°; sounding, 1,450 m (sonic); depth of observation, 1,500 m; weather, fair; sea, calm; wind 210°, force 2; bottom sample, none; additional observations, O; P1.]

0	28.84	18.36	33.17		
10	27.31	18.47	33.37		
25	24.21	18.82	34.00		
50	19.98	19.09	34.49		
75	17.04	19.26	34.79		
98	15.13	19.33	34.92		
125	14.16	19.34	34.94		
225	12.85	19.31	34.88		
325	10.88	19.25	34.78		
485	8.06	19.18	34.65		
571	7.18	19.17	34.63		
774	5.84	19.16	34.61		
1,326	3.75	19.15	34.60		

STATION H-124

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	28.84		33.17	20.77	97,965
10	27.31		33.37	21.41	97,899
25	24.21		34.00	22.84	97,757
50	19.98		34.49	24.40	97,596
75	17.04		34.79	25.36	97,495
100	15.13		34.92	25.90	97,433
200	13.18		34.90	26.30	97,352
300	11.40		34.80	26.57	97,284
400	9.55		34.70	26.81	97,218
500	7.90		34.64	27.03	97,152
600	7.00		34.62	27.14	97,099
800	5.75		34.61	27.30	96,996
1,000	5.00		34.61	27.39	96,900
1,500	3.10		34.60	27.58	96,663

STATION H-125

[Lat. 8°00'45" N., long. 82°54'36" W.; May 20, 1933; time, 0749-0800; wire angle, 0°; sounding, 58 m; depth of observation, 50 m; weather, clear; sea, calm; wind, 080°, force 1; bottom sample, no. 125; type, green sand; additional observations, P1.]

0	27.00	18.48	33.39	21.53	97,892
10	26.17	18.66	33.71	22.03	97,840
25	23.37	18.86	34.07	23.14	97,728
50	21.22	19.20	34.69	24.22	97,613

STATION H-126

[(1) Lat. 7°56'00" N., long. 82°54'00" W. (2) Lat. 7°56'15" N., long. 82°54'30" W.; May 20, 1933; time, 0908-1037; wire angle, 13°; sounding, 1,075 m; depth of observation, 1,000 m; weather, clear; sea, calm; wind, 080°, force 1; bottom sample, no. 126; type, green mud; additional observations, P1.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	0	30.00	18.41	33.26		
0	0	27.55				
10	10	28.16	18.17	32.83		
25	25	24.00	18.89	34.13		
50	50	19.65	19.13	34.56		
75	75	16.50	19.25	34.78		
100	100	13.94	19.34	34.94		
200	200	13.06	19.27	34.81		
298	298	10.90	19.26	34.79		
395	395	8.90	19.19	34.67		
490	490	7.69	19.16	34.61		
590	590	7.18	19.13	34.56		
796	796	6.09	19.15	34.60		
1,000	1,000	5.03	19.13	34.56		

STATION H-126

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	30.00	33.26	20.44	97,997
0	27.55	33.26	21.25	97,920
10	28.16	32.83	20.73	97,964
25	24.00	34.13	23.00	97,742
50	19.65	34.56	24.54	97,583
75	16.50	34.78	25.48	97,483
100	13.94	34.94	26.18	97,407
200	13.06	34.81	26.25	97,357
300	10.85	34.79	26.66	97,276
400	8.83	34.67	26.91	97,207
500	7.62	34.60	27.06	97,150
600	7.12	34.56	27.08	97,105
800	6.06	34.60	27.25	97,001
1,000	5.03	34.56	27.35	96,904

STATION H-127

[Lat. 7°50'30" N., long. 82°53'50" W.; May 20, 1933; time, 1159-1340; wire angle, 0°; sounding 1,743 m; depth of observation, 1,000 m; weather, clear; sea, calm; wind, 220°, force 1; bottom sample, no. 127; type, green mud; additional observations, O, P1.]

0	27.55	18.28	33.03	21.08	97,936
10	26.08	18.64	33.68	22.04	97,839
25	24.34	18.82	34.00	22.80	97,761
50	19.10	19.16	34.61	24.72	97,566
75	16.25	19.31	34.88	25.62	97,470
100	14.61	19.37	34.99	26.07	97,417
200	12.96	19.31	34.88	26.33	97,349
300	10.94	19.25	34.78	26.64	97,277
400	8.75	19.20	34.69	26.93	97,205
500	498	7.72	34.58	27.01	97,154
600	593	7.36	*34.56	27.04	97,108
800		5.89	19.11	34.52	97,005
1,000	1,005	5.00	19.14	34.58	96,902

STATION H-128

[Lat. 7°43'30" N., long., 82°53'30" W.; May 20, 1933; time, 1520-1649; wire angle, 0°; sounding, 1,700 m; depth of observation, 1,500 m; weather, clear; sea, calm; wind, 220°, force 1; bottom sample, no. 128; type, green mud; additional observations, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0		28.65		*33.05	20.74	97,968
10		27.48	18.36	33.17	21.21	97,919
25		22.41	19.02	34.36	23.64	97,680
50		18.12	19.26	34.79	25.10	97,529
75		*16.00	19.29	34.85	25.65	97,467
100		14.64	19.37	34.99	26.06	97,418
200	199	12.76	19.32	34.90	26.38	97,345
300		11.04	19.25	34.78	26.62	97,279
400		8.97	19.20	34.69	26.90	97,208
500	501	7.83	19.17	34.63	27.03	97,152
600		6.91	19.12	34.54	27.09	97,104
800		5.82	19.15	34.60	27.28	96,998
1,000	995	4.83	19.16	34.61	27.41	96,898
1,500	1,506	3.11	19.19	34.67	27.64	96,657

STATION H-129

[Lat. 7°36'15" N., long. 82°53'45" W.; May 20, 1933; time, 1846-2110; wire angle, 40°; sounding 1,700 m (sonic); depth of observation, 1,500 m; weather, fair; sea, calm; wind, 290°, force 2; bottom sample, none; additional observations, O.]

	0	28.47	18.35	33.15		
	10	27.45	18.31	33.08		
	25	22.65	18.96	34.25		
	50	18.17	19.26	34.79		
	76	15.73	19.32	34.90		
	100	14.59	19.34	34.94		
	210	12.84	19.31	34.88		
	300	11.06	19.27	34.81		
	395	9.24	19.20	34.69		
	485	8.36	19.18	34.65		
	608	7.61	19.18	34.65		
	808	5.83	19.18	34.65		
	1,020	4.83	19.13	34.56		
	1,510	3.15	19.15	34.60		

STATION H-129

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	28.47	33.15	20.87	97,955
10	27.45	33.08	21.15	97,925
25	22.65	34.25	23.49	97,695
50	18.17	34.79	25.09	97,530
75	15.73	34.90	25.75	97,458
100	14.59	34.94	26.03	97,421
200	13.00	34.89	26.33	97,349
300	11.06	34.81	26.64	97,277
400	9.20	34.69	26.86	97,212
500	8.28	34.65	26.98	97,157
600	7.68	34.65	27.07	97,107
800	5.90	34.65	27.31	97,095
1,000	4.93	34.57	27.37	96,902
1,500	3.20	34.60	27.57	96,664

STATION H-130

[Lat. 7°54'45" N., long. 82°41'00" W.; May 21, 1933; time, 0530-0641; wire angle, 0°; sounding, 1,246 m; depth of observation, 800 m; weather, clear; sea, calm; wind, 300°, force 1; bottom sample, no. 130; type, green mud; additional observations, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0		27.82	18.34	33.13	20.07	97,937
10		27.16		* 33.26	21.38	97,902
25		25.60	18.71	33.80	22.28	97,811
50	51	20.21	19.11	34.52	24.36	97,600
75		17.40	19.22	34.72	25.22	97,508
100		15.51	19.31	34.88	25.79	97,444
200		* 13.25		* 34.88	26.27	97,355
300	301	11.45	19.23	34.74	26.71	97,271
400		8.68	19.20	34.69	26.95	97,204
500	499	7.74	19.18	34.65	27.06	97,150
600		7.22	19.13	34.56	27.06	97,107
800		5.88		34.60	27.27	96,999

STATION H-131

[Lat. 7°50'00" N., long. 82°30'15" W., May 21, 1933; time, 1015-1040; wire angle, 0°; sounding, 304 m; depth of observation, 300 m; weather, fair; sea, calm; wind, 250° force 1; bottom sample no. 131; type, sand, shell; additional observations, Pl., PO₄]

0		29.30	18.44	33.31	20.72	97,970
10		27.69	18.49	33.40	21.31	97,908
25		26.38	18.55	33.51	21.82	97,855
50	52	21.69	19.03	34.38	23.85	97,649
75		17.78	19.19	34.67	25.09	97,520
100	101	15.33	19.30	34.87	25.82	97,441
200		13.13		* 34.85	26.27	97,360
300		11.32	19.28	34.83	26.61	97,280

STATION H-132

[Lat. 7°43'30" N., long. 82°18'30" W.; May 21, 1922; time, 1354-1405; wire angle, 0°; sounding, 70 m; depth of observation, 50 m; weather, cloudy; sea, calm; wind, 240° force 2; bottom sample, no. 132; type, sand, shell; additional observations, Pl.]

0		28.93	18.46	33.35	20.87	97,955
10		27.60	18.40	33.24	21.22	97,918
25		26.12	18.59	33.58	21.95	97,843
50		* 22.00	19.07	34.45	23.82	97,651

STATION H-133

[Lat. 7°40'00" N., long. 82°12'00" W.; May 21, 1933; time, 1522-1537; wire angle, 0°; sounding, 91 m; depth of observation, 75 m; weather, cloudy; sea, calm; wind, 240° force 2; bottom sample, no. 133; type, sand, shell; additional observations, O, Pl.]

0		28.45	18.41	33.26	20.96	97,947
10		27.38	18.49	33.40	21.41	97,899
25		25.76	18.70	33.78	22.21	97,817
50	56	21.34	19.02	34.36	23.94	97,640
75	80	18.28	19.18	34.65	24.96	97,533

STATION H-134

[Lat. 7°36'25" N., long. 81°58'30" W.; May 21, 1933; time, 1713-1933; wire angle, 20°; sounding, 480 m; depth of observation, 260 m; weather, clear; sea, calm; wind, 140°, force 2; bottom sample, no. 134; type, green mud; additional observations, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	-----	27.40	18.29	33.04	21.14	97,930
10	-----	27.43	18.40	33.24	21.28	97,911
25	-----	24.98	18.67	33.73	22.41	97,798
50	-----	20.28	18.99	34.31	24.18	97,617
75	72	17.20	19.00	34.33	24.97	97,532
100	-----	* 16.60	19.23	34.74	25.43	97,478
200	-----	14.28	19.36	34.97	26.13	97,368
242	242	* 13.07	19.33	34.92		
300	-----	* 11.50	-----	* 34.85	26.59	97,283

STATION H-135

[Lat. 6°56'20" N., long. 82°00'30" W.; May 22, 1933; time, 0713-0916; wire angle, 20°; sounding, 2,700 m (sonic); depth of observation, 2,400 m; weather, cloudy; sea, calm; wind, 330°, force, 2; bottom sample, none; additional observations, O, Pl., Boron.]

-----	0	27.77	18.21	32.90	-----	-----
-----	10	27.72	18.27	33.01	-----	-----
-----	25	26.80	18.51	33.44	-----	-----
-----	50	20.81	19.15	34.60	-----	-----
-----	75	16.23	19.29	34.85	-----	-----
-----	100	14.15	19.32	34.90	-----	-----
-----	200	12.87	19.29	34.85	-----	-----
-----	282	9.78	19.19	34.67	-----	-----
-----	375	8.68	19.20	34.69	-----	-----
-----	470	8.03	19.18	34.65	-----	-----
-----	565	7.40	19.15	34.60	-----	-----
-----	755	5.76	19.14	34.58	-----	-----
-----	945	4.92	19.15	34.60	-----	-----
-----	1,422	3.35	19.18	34.65	-----	-----
-----	1,912	2.45	19.20	34.69	-----	-----
-----	2,407	2.10	19.19	34.67	-----	-----

STATION H-135

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	27.77	-----	32.90	20.91	97,951
10	-----	27.72	-----	33.01	21.01	97,938
25	-----	26.80	-----	33.44	21.63	97,873
50	-----	20.81	-----	34.60	24.26	97,610
75	-----	16.23	-----	34.85	25.60	97,472
100	-----	14.15	-----	34.90	26.10	97,414
200	-----	12.87	-----	34.85	26.32	97,350
300	-----	9.45	-----	34.67	26.81	97,260
400	-----	8.50	-----	34.69	26.97	97,202
500	-----	7.83	-----	34.64	27.04	97,151
600	-----	7.12	-----	34.60	27.11	97,102
800	-----	5.50	-----	34.59	27.31	96,995
1,000	-----	4.75	-----	34.61	27.42	96,897
1,500	-----	3.20	-----	34.66	27.62	96,659
2,000	-----	2.40	-----	34.69	27.72	96,436
2,500	-----	2.02	-----	34.67	27.73	96,225

STATION H-136

[(1) Lat. 7°04'52" N., long. 81°52'36" W. (2) Lat. 7°05'05" N., long. 81°53'06" W.; May 22, 1933; time, 1159-1350; wire angle, 30°; sounding, 2,150 m; depth of observation, 1,425 m; weather, cloudy; sea, calm; wind, 280°, force 2; bottom sample, none; additional observations, Pl., SiO₂]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
<i>Meters</i>	<i>Meters</i>	<i>°C.</i>				
0	0	28.40	18.14	32.77		
10	10	27.51	18.35	33.15		
25	25	26.38	18.55	33.51		
50	50	22.46	18.98	34.29		
98	98	14.52				
190	190	12.98	19.32	34.90		
285	285	11.60	19.27	34.81		
380	380	9.30				
460	460	8.19	19.22	34.72		
567	567	7.31	19.17	34.63		
732	732	6.07	19.17	34.63		
930	930	5.06	19.14	34.58		
1,423	1,423	3.35				

STATION H-136

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	28.40		32.77	20.61	97,981
10	27.51		33.15	21.18	97,922
25	26.38		33.51	21.82	97,855
50	22.46		34.29	23.57	97,675
75	18.30		34.88	25.13	97,516
100	14.50		34.92	26.04	97,420
200	12.82		34.89	26.36	97,347
300	11.30		34.80	26.59	97,282
400	9.02		34.74	26.93	97,205
500	7.85		34.69	27.07	97,149
600	7.09		34.63	27.13	97,100
800	5.72		34.62	27.31	96,995
1,000	4.82		34.58	27.39	96,900
1,500	3.10		34.60	27.58	96,663

STATION H-137

[(1) Lat. 7°07'45" N., long. 81°50'00" W. (2) Lat. 7°08'00" N., long. 80°49'00" W.; May 22, 1933; time, 1515-1634; wire angle, 0°; sounding, 1,310 m; depth of observation, 1,000 m; weather, cloudy; sea, calm; wind 200°, force 4; bottom sample, no. 137; type, green mud; additional observations, Pl.]

0	27.82	18.30	33.06	20.02	97,942
10	26.68	18.46	33.35	21.60	97,881
25	25.41	18.65	33.69	22.25	97,814
50	20.46		*34.67	24.41	97,595
75	16.35	19.33	34.92	25.63	97,469
100	15.03	19.36	34.97	25.96	97,428
200	13.39	19.33	34.92	26.27	97,355
300	11.54	19.31	34.88	26.60	97,282
400	8.90	19.19	34.67	26.90	97,208
500	8.44	19.12	34.54	26.87	97,167
600	7.18	19.13	*34.56	27.07	97,106
800	5.85		*34.59	27.27	96,999
1,000	4.56	19.16	34.61	27.44	96,895

STATION H-138

[Lat. 7°11'00" N., long. 81°48'45" W.; May 22, 1933; time, 1719-1730; wire angle, 0°; sounding, 94 m; depth of observation, 75 m; weather, cloudy; sea, light; wind 200°, force 5; bottom sample, no. 138; type, sand, shell]

0	26.50	18.43	33.30	21.62	97,884
10	25.76	18.56	33.53	22.02	97,841
25	25.11		*33.72	22.37	97,802
50	21.24	19.01	34.34	23.95	97,639
75	17.26	19.26	34.79	25.31	97,499

STATION H-139

[Lat. 7°17'15" N., long. 81°27'15" W.; May 22, 1933; time, 2129-2143; wire angle, 0°; sounding, 95 m; depth of observation, 75 m; weather, cloudy; sea, light; wind 360°, force 3; bottom sample, no. 139; type, sand, shell; additional observations, O]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,D}$
Meters	Meters	°C.				
0	-----	27.92	18.14	32.77	20.77	97.965
10	-----	27.90	18.14	32.77	20.77	97.960
25	-----	25.86	18.53	33.48	21.95	97.843
50	-----	21.32	19.05	34.42	23.99	97.635
75	75	17.49	19.24	34.76	25.23	97.507

STATION H-140

[Lat. 7°17'00" N., long. 81°17'45" W.; May 22, 1933; time, 2341-2352; wire angle, 0°; sounding, 68 m; depth of observation, 50 m; weather, cloudy; sea, light; wind 360°, force, 3; bottom sample, no. 140; type, coral]

0	-----	27.47	18.24	32.95	21.05	97.939
10	-----	27.40	18.21	32.90	21.03	97.936
25	-----	26.19	18.57	33.55	21.91	97.846
50	-----	21.55	19.04	34.40	23.91	97.643

STATION H-141

(1) Lat. 6°58'00" N., long. 81°02'45" W. (2) Lat. 6°59'15" N., long. 81°03'00" W.; May 23, 1933; time, 0714-0933; wire angle, 0°; sounding, 1,911 m; depth of observation, 1,000 m; weather, cloudy; sea, light; wind 270°, force, 3; bottom sample, no. 141; type, green mud; additional observations, Fl., O, NO₂]

0	-----	27.64	-----	33.00	21.03	97.961
10	-----	27.57	18.26	32.99	21.04	97.935
25	-----	26.44	18.53	33.48	21.77	97.860
50	62	20.77	19.15	34.60	24.27	97.609
75	-----	15.93	19.33	34.92	25.72	97.460
100	101	14.70	19.39	35.03	26.08	97.412
200	-----	13.47	19.33	34.92	26.26	97.356
300	-----	12.04	19.28	34.83	26.47	97.294
400	-----	9.77	19.20	34.69	26.77	97.222
500	502	8.22	19.19	34.67	27.00	97.155
600	-----	7.30	19.16	34.61	27.09	97.104
800	-----	*6.25	-----	*34.65	27.27	96.999
1,000	-----	4.83	19.13	34.56	27.37	96.902

STATION H-142

[Lat. 7°04'00" N., long. 80°58'30" W.; May 23, 1933; time, 1117-1225; wire angle, 0°; sounding, 1272 m; depth of observation, 1,000 m; weather, b.c.; sea, light; wind 310°, force 2; bottom sample, no. 142; type, green mud; additional observations, Fl.]

0	-----	27.64	18.17	32.83	20.90	97.952
10	-----	27.48	18.15	32.79	20.88	97.949
25	-----	26.50	18.49	33.40	21.69	97.867
50	-----	20.78	19.12	34.54	24.22	97.613
75	75	16.50	19.35	34.96	25.62	97.470
100	-----	13.83	19.34	34.94	26.20	97.405
200	203	13.61	-----	*34.91	26.22	97.360
300	301	11.95	19.31	34.88	26.53	97.288
400	-----	9.03	19.16	34.61	26.83	97.215
500	505	8.22	19.16	34.61	26.96	97.159
600	-----	7.11	19.19	34.67	27.16	97.098
800	-----	5.72	19.18	34.65	27.33	96.993
1,000	-----	4.49	19.14	34.58	27.42	96.895

STATION H-143

[(1) Lat. 7°07'45" N., long., 80°55'45" W. (2) Lat. 7°08'20" N., long., 80°56'36" W.; May 23, 1933; time, 1347-1519; wire angle, 15°; sounding, 1,025 m.; depth of observation, 1,000 m.; weather, b.c.; sea, light; wind 360°, force 2; bottom sample, no. 143; type, green mud; additional observations, Pl.]

Estimated depth	Depth by pressure	Temperature	Chlorinity ‰	Salinity ‰	σ_t	$V_{s,t,p}$
Meters	Meters	°C.				
0	0	27.99	18.10	32.70		
-----	10	27.73	18.13	32.75		
-----	25	27.01	18.30	33.06		
-----	47	20.95	19.12	34.54		
-----	70	16.98	19.29	34.85		
-----	100	14.76	19.34	34.94		
-----	197	13.72	19.32	34.90		
-----	283	12.28	19.31	34.88		
-----	372	10.72	19.26	34.79		
-----	460	8.32	19.23	34.74		
-----	568	7.51	19.18	34.65		
-----	770	6.29	19.15	34.60		
-----	972	4.97	19.15	34.60		

STATION H-143

INTERPOLATED VALUES REDUCED TO STANDARD DEPTHS

0	-----	27.99	-----	32.70	20.69	97,973
10	-----	27.73	-----	32.75	20.81	97,956
25	-----	27.01	-----	33.06	21.28	97,906
50	-----	20.55	-----	34.57	24.31	97,605
75	-----	16.60	-----	34.87	25.53	97,478
100	-----	14.76	-----	34.94	26.00	97,424
200	-----	13.69	-----	34.90	26.19	97,363
300	-----	11.98	-----	34.87	26.51	97,290
400	-----	10.00	-----	34.77	26.79	97,220
500	-----	8.00	-----	34.74	27.09	97,147
600	-----	7.32	-----	34.64	27.11	97,102
800	-----	6.08	-----	34.60	27.25	97,001
1,000	-----	4.80	-----	34.60	27.40	96,899

STATION H-144

[Lat. 7°11'15" N., long. 80°52'40" W.; May 23, 1933; time, 1648-1658; wire angle, 0°; sounding, 75 m.; depth of observation, 50 m.; weather, cloudy; sea, moderate; wind 350°, force 4; bottom sample, none; additional observations, Pl.]

0	-----	27.43	18.08	32.66	20.84	97,958
10	-----	27.07	18.63	33.66	21.71	97,870
25	-----	* 26.50	-----	* 34.00	22.14	97,824
50	49	21.24	19.04	34.40	23.99	97,635

STATION H-145

[Lat. 7°18'00" N., long. 79°52'30" W.; May 24, 1933; time, 0958-1113; wire angle, 0°; sounding, 408 m.; depth of observation, 300 m.; weather, b.c.; sea, calm; wind 090°, force 2; bottom sample, no. 145; type, green mud; additional observations, Pl., O, PO₄, NO₂, SiO₂, Boron]

0	-----	27.43	17.40	31.44	19.93	98,046
10	-----	27.12	18.05	32.61	20.91	97,946
25	-----	25.77	18.74	33.86	22.27	97,812
50	-----	21.20	19.01	34.34	23.96	97,638
75	-----	* 17.95	19.36	34.97	25.28	97,502
100	-----	16.83	-----	* 35.00	25.58	97,464
200	200	13.48	19.32	34.90	26.24	97,358
300	-----	11.55	19.30	34.87	26.59	97,283

YACHT "VELERO III"

Hancock Expedition, 1934, Temperature and Salinity Data

Dr. Waldo L. Schmitt, Chief of the Division of Marine Invertebrates of the United States National Museum, while on an expedition on Capt. Allan Hancock's yacht, *Velero III*, along and off the west coast of South America in February 1934 made a few vertical sections at which the surface and subsurface temperatures were read and water samples for the determination of salinity were collected. The water samples and temperature records were sent to the Scripps Institution.

The chlorinity of each sample was determined by Miss Katherine Gehring, technical assistant at the Scripps Institution.

The temperature readings were corrected by Mr. Richard H. Fleming, research assistant at the Scripps Institution, by means of data from the Bureau of Standards test sheets for the two thermometers used. For the left-hand thermometer (Richter and Wiese no. 1453), the V_0 value was given on the Bureau of Standards test sheet. As this value was known, the readings were corrected by means of tables based on Schumacher's formula. The V_0 value for the right-hand thermometer was not recorded (Fried and Lustig no. 762), but this was calculated from the Bureau of Standards data by means of Schumacher's formula. The calculated V_0 was found to be 183. The temperature readings were then corrected from Schumacher's tables and the calibration errors as found by the Bureau of Standards.

Except for a few of the 1-fathom observations duplicate temperatures were obtained in all cases. As the majority of the readings were read only to the nearest 0.1°C ., in all cases where one or both of the values were only given to the nearest tenth the average of the corrected values are given to the nearest 0.05° .

Except in five cases where the duplicate observations differed by more than 0.2°C ., the average difference between the two thermometer readings was 0.06°C . The average corrected values may be considered accurate to $\pm 0.05^\circ \text{C}$.

This material has been prepared for publication by Mr. Fleming.

YACHT "VELERO III"

Hancock expedition, 1934, temperature and salinity data

	Depth		Average (corrected) tempera- ture, °C.	Chlorinity ‰	Salinity ‰
	Fathoms	Meters			
Station no. 1: Lat. 1°28' S., long. 89°15' W.; Feb. 1; 8:15-10:10 a.m.-----	0	0		18.76	33.91
	1	2	25.0	18.75	33.87
	25	46	17.15	19.47	35.17
	75	137	13.9	19.41	35.07
	150	274	12.7	19.36	34.97
	270	493	9.65	19.25	34.78
Station no. 2: Lat. 1°45' S., long. 87°40' W.; Feb. 1; 5:18-6:10 p.m.-----	0	0		18.74	33.86
	1	2	24.55	18.75	33.87
	25	46	15.2	19.41	35.07
	75	137	13.7	19.37	34.99
	150	274	12.7	19.34	34.94
	270	493	8.6	19.20	34.69
Station no. 3: Lat. 2°09' S., long. 86°07' W.; Feb. 2; 2:05-2:50 a.m.-----	0	0		18.68	33.75
	1	2	24.2	18.68	33.75
	25	46	14.7	19.41	35.07
	75	137	13.9	19.39	35.03
	150	274	12.15	19.34	34.94
	270	493	8.6	19.21	34.70
Station no. 4: Lat. 2°22' S., long. 84°36' W.; Feb. 2; 11-11:48 a.m.-----	0	0		18.48	33.39
	1	2	24.55	18.49	33.40
	25	46	14.75	19.41	35.07
	75	137	13.7	19.39	35.03
	150	274	12.1	19.32	34.90
	270	493	8.47	19.22	34.72
Station no. 5: Lat. 2°44' S., long. 82°48' W.; Feb. 2; 8:40-9:24 p.m.-----	0	0		18.24	32.95
	1	2	25.6	18.23	32.94
	25	46	14.4	19.34	34.94
	75	137	13.48	19.35	34.96
	150	274	12.1	19.29	34.85
	270	493	8.35	19.17	34.63
Station no. 6: Lat. 3°12' S., long. 80°39' W.; Feb. 7; 6:36-7:15 p.m.-----	0	0		18.24	32.95
	1	2	25.6	18.21	32.90
	25	46	14.7	19.34	34.94
	35	64	14.4	19.34	34.94
Station no. 7: Lat. 3°08' S., long. 80°49' W.; Feb. 7; 8:11-8:38 p.m.-----	0	0		18.25	32.97
	1	2	25.9	18.24	32.95
	25	46	15.5	19.29	34.85
	35	64	15.3	19.29	34.85
Station no. 8: Lat. 3°03' S., long. 81°01' W.; Feb. 7; 9:40-10:33 p.m.-----	0	0		18.24	32.95
	1	2	25.7	18.24	32.95
	25	46	15.4	19.30	34.87
	75	137	13.65	19.35	34.96
	150	274	13.15	19.34	34.94
	270	493	9.05	19.22	34.72
Station no. 9: Lat. 2°59' S., long. 81°12' W.; Feb. 7; 11:33-12 p.m.-----	0	0		18.25	32.97
	1	2	25.5	18.25	32.97
	25	46	15.3	19.34	34.94
	75	137	13.5	19.37	34.99
	150	274	13.1	19.37	34.99
	270	493	9.0	19.19	34.67
Station no. 10: Lat. 1°02'30'' S., long. 81°12' W.; Feb. 10, 3:38-4:23 p.m.-----	1	2	27.8	17.76	32.09
	18	33	15.4	19.37	34.99
Station no. 11: Lat. 1°02'30'' S., long. 80°58'15'' W.; Feb. 10, 4:13-4:23 p.m.-----	1	2	27.5	17.78	32.12
	30	55	15.3	19.36	34.97
Station no. 12: At anchorage San Francisco; Feb. 11, 4:29-4:39 p.m.-----	1	2	27.4	17.27	31.20
	4	7	18.25	19.15	34.60
Station no. 13: Bay Ecuador, near anchorage, San Francisco; Feb. 11, 5:02-5:21 p.m.-----	1	2	26.93	17.41	31.46
	30	55	14.45	19.39	35.03
Station no. 14: Lat. 0°38'50'' N., long. 80°13'30'' W.; Feb. 11, 5:36-5:57 p.m.-----	1	2	27.23	17.20	31.08
	48	88	14.2	19.36	34.97
Station no. 15: Lat. 0°39'20'' N., long. 80°15'30'' W.; Feb. 11, 6:10-6:33 p.m.-----	1	2	26.2	17.26	31.18
	25	46	14.3	19.38	35.01
	58	106	14.13	19.38	35.01

Hancock expedition, 1934, temperature and salinity data—Continued

	Depth		Average (corrected) tempera- ture, °C.	Chlorinity ‰	Salinity ‰
	Fathoms	Meters			
Station no. 16: Lat. 5°28'15" N., long. 77°30' W.;					
Feb. 14, 5:35-5:42 a.m.	1	2	24.2	17.49	31.60
	16	29	15.38	19.26	34.79
Station no. 17: Lat. 5°27'30" N., long. 77°32'30" W.;					
Feb. 14, 6:01-6:36 a.m.	1	2	24.67	17.00	30.72
	36	66	14.8	19.32	34.90
Station no. 18: Lat. 5°27'40" N., long. 77°34'10" W.;					
Feb. 14, 6:46-6:57 a.m.	1	2	24.35	17.11	30.91
	25	46	15.05	19.30	34.87
	55	101	14.5	19.33	34.92
Station no. 19: Lat. 5°29' N., long. 77°36' W.;					
Feb. 14, 7:05-7:33 a.m.	1	2	24.25	17.20	31.08
	25	46	13.5	19.35	34.96
	75	137	15.1	19.35	34.96
	116	212	13.5	19.35	34.96

U.S.S. "CHAUMONT"

Temperature and salinity records between San Diego and Balboa, Feb. 28 to Mar. 7, 1933

[R. H. Fleming, Observer]

Sample no.	Date	Latitude north	Longi- tude west	Tempera- ture (corrected)	Salinity ‰
		° /	° /	°C.	
Ch-33-1	Feb. 28, 1933, 9:30 a.m.	27 12	115 32	14.95	33.69
Ch-33-2	Feb. 28, 1933, 11:30 a.m.	26 46	115 04	15.03	33.87
Ch-33-3	Feb. 28, 1933, 3:45 p.m.	26 05	114 20	15.23	33.77
Ch-33-4	Feb. 28, 1933, 9:30 p.m.	25 08	113 10	17.91	34.70
Ch-33-5	Mar. 1, 1933, 9 a.m.	23 21	111 03	18.21	34.70
Ch-33-6	Mar. 1, 1933, 12:30 p.m.	22 48	110 18	18.21	34.83
Ch-33-7	Mar. 1, 1933, 6:15 p.m.	21 55	109 02	21.25	34.88
Ch-33-8	Mar. 2, 1933, 9 a.m.	19 38	105 50	22.01	34.65
Ch-33-9 ¹	Mar. 2, 1933, 10:15 a.m.	19 27	105 34	23.56	34.56
Ch-33-10	Mar. 2, 1933, 1:30 p.m.	18 56	104 51	25.60	34.61
Ch-33-11	Mar. 2, 1933, 7:30 p.m.	18 02	103 38	26.35	34.49
Ch-33-12	Mar. 3, 1933, 9:30 a.m.	16 26	100 19	27.95	34.34
Ch-33-13	Mar. 3, 1933, 6 p.m.	15 22	98 10	28.45	34.16
	Mar. 4, 1933 ²				
Ch-33-14	Mar. 5, 1933, 1:30 p.m.	10 41	89 02	³ 25.10	34.00
Ch-33-15	Mar. 6, 1933, 9 a.m.	8 56	85 00	28.70	32.66
Ch-33-16	Mar. 6, 1933, 1:30 p.m.	8 16	83 39	29.55	33.04
Ch-33-17	Mar. 6, 1933, 6 p.m.	7 45	82 48	28.75	34.79
Ch-33-18	Mar. 6, 1933, 10 p.m.	7 02	81 58	28.55	34.76
Ch-33-19 ⁴	Mar. 7, 1933, 10 a.m.	7 55	79 47	20.03	34.70
Ch-33-20	Mar. 7, 1933, 11:45 a.m.	8 21	79 38	20.84	34.67

¹ Colorado discharge; water yellow brown.² No samples taken.³ Drop in temperature 3.35°.⁴ See "Chaumont" temperature record. Temperature of water dropped from 83° to 68° F. between 3 a.m. and 8 a.m. Climbed slightly and dropped again.

Air and injector temperatures, San Diego to Balboa

[E. B. Rinard, observer]

Date	Latitude north		Longitude west		Dry bulb		Wet bulb		Relative humidity	Injector	Sea temperature	
	°	'	°	'	° F.	° C.	° F.	° C.			° F.	° C.
Feb. 27, 1933, 12 noon	32	27	117	11	55	12.78	52	11.11	82	56	13.33	
Feb. 27, 1933, 4 p.m.	31	27	117	01	58	14.44	53	11.67	72	58	14.44	
Feb. 27, 1933, 8 p.m.	30	28	116	44	57	13.89	55	12.78	88	58	14.44	
Feb. 28, 1933, 8 a.m.	27	30	115	47	58	14.44	56	13.33	88	58	14.44	
Feb. 28, 1933, 12 noon	26	40	115	04	59	15.00	58	14.44	94	59	15.00	
Feb. 28, 1933, 4 p.m.	26	02	114	18	59	15.00	58	14.00	94	60	15.56	
Feb. 28, 1933, 8 p.m.	25	24	113	30	63	17.22	61	16.11	89	62	16.67	
Mar. 1, 1933, 8 a.m.	23	30	111	16	66	18.89	61	16.11	75	66	18.89	
Mar. 1, 1933, 12 noon	22	53	110	21	67	19.44	63	17.22	80	66	18.89	
Mar. 1, 1933, 4 p.m.	22	17	109	32	71	21.67	64	17.78	68	72	22.22	
Mar. 1, 1933, 8 p.m.	21	40	108	38	68	20.00	63	17.22	76	72	22.22	
Mar. 2, 1933, 8 a.m.	19	47	106	02	75	23.89	68	20.00	70	73	22.78	
Mar. 2, 1933, 12 noon	19	10	105	10	73	22.78	69	20.56	82	76	24.44	
Mar. 2, 1933, 4 p.m.	18	33	104	19	75	23.89	70	21.11	78	80	26.67	
Mar. 2, 1933, 8 p.m.	17	59	103	28	76	24.44	71	21.67	78	79	26.11	
Mar. 3, 1933, 8 a.m.	16	36	100	40	80	26.67	73	22.78	72	82	27.78	
Mar. 3, 1933, 12 noon	16	08	99	42	80	26.67	73	22.78	72	83	28.33	
Mar. 3, 1933, 4 p.m.	15	36	98	37	81	27.22	73	22.78	69	84	28.89	
Mar. 3, 1933, 8 p.m.	15	15	97	56	81	27.22	73	22.78	69	84	28.89	
Mar. 4, 1933, 8 a.m.	14	05	95	39	76	24.44	71	21.67	78	74	23.33	
Mar. 4, 1933, 12 noon	13	40	94	45	77	25.00	73	22.78	83	79	26.11	
Mar. 4, 1933, 4 p.m.	13	08	93	53	79	26.11	75	23.89	83	80	26.67	
Mar. 4, 1933, 8 p.m.	12	43	92	57	80	26.67	73	22.78	72	80	26.67	
Mar. 5, 1933, 8 a.m.	11	28	90	15	81	27.22	75	23.89	75	82	27.78	
Mar. 5, 1933, 12 noon	10	53	89	24	80	26.67	73	22.78	72	79	26.11	
Mar. 5, 1933, 4 p.m.	10	25	88	30	77	25.00	72	22.22	79	78	25.56	
Mar. 5, 1933, 8 p.m.	10	02	87	48	78	25.56	73	22.78	79	78	25.56	
Mar. 6, 1933, 8 a.m.	8	58	85	13	83	28.33	77	25.00	76	83	28.33	
Mar. 6, 1933, 12 noon	8	26	84	26	85	29.50	77	25.00	70	83	28.33	
Mar. 6, 1933, 4 p.m.	8	05	83	25	84	28.89	77	25.00	73	86	30.00	
Mar. 6, 1933, 8 p.m.	7	22	82	22	83	28.33	78	25.56	80	86	30.00	
Mar. 7, 1933, 8 a.m.	7	27	79	57	72	22.22	70	21.11	91	72	22.22	
Mar. 7, 1933, 12 noon	8	15	79	40	73	22.78	71	21.67	91	69	20.56	

U.S.S. "PORTLAND"

Temperature and salinity records between Balboa and San Diego, June 5-9, 1933

[R. H. Fleming, Observer]

Sample no.	Date	Latitude, north			Longitude, west			Temperature (corrected)	Salinity ‰
		°	'	"	°	'	"		
Port-33-1	June 5, 1933, 9:25 a.m.	15	37	00	98	14	00	28.80	34.76
Port-33-2	June 5, 1933, 1:45 p.m.	15	55	00	98	45	00	29.10	34.88
Port-33-3	June 5, 1933, 10:45 p.m.	16	58	00	100	52	00	27.05	33.80
Port-33-4	June 6, 1933, 10:30 a.m.	18	05	00	103	25	00	26.15	34.85
Port-33-5	June 6, 1933, 3 p.m.	18	27	00	104	03	00	25.85	35.07
Port-33-6	June 7, 1933, 10:30 a.m.	21	07	30	107	46	30	25.37	35.08
Port-33-7	June 7, 1933, 5:30 p.m.	21	53	30	108	54	00	23.56	35.21
Port-33-8	June 7, 1933, 11 p.m.	22	50	00	110	05	00	21.98	34.85
Port-33-9	June 8, 1933, 11 a.m.	23	54	00	111	27	00	16.61	34.51
Port-33-10	June 8, 1933, 5:30 p.m.	24	47	00	112	35	00	16.11	34.31
Port-33-11	June 8, 1933, 11:30 p.m.	25	47	00	113	33	00	14.75	33.71
Port-33-12	June 9, 1933, 11:15 p.m.	27	55	00	115	30	00	15.53	33.62

U.S.S. "SIRIUS"

Surface temperature and salinity records from San Diego to Balboa

Sample no.	Date	Latitude	Longitude	Temperature		Salinity by specific gravity ‰
		north	west	°F.	°C.	
1	Jan. 16, 1926, 5 p.m.	32 38	117 14	60	15.56	---
2	Jan. 16, 1926, 6 p.m.	32 27	117 11	62	16.67	33.60
3	Jan. 16, 1926, 7 p.m.	32 17	117 09	62	16.67	33.60
4	Jan. 16, 1926, 8 p.m.	32 06	117 06	62	16.67	33.74
5	Jan. 16, 1926, 9 p.m.	31 55	117 04	62	16.67	33.42
6	Jan. 16, 1926, 10 p.m.	31 44	117 01	62	16.67	33.47
7	Jan. 16, 1926, 11 p.m.	31 32	116 58	63	17.22	33.66
8	Jan. 16, 1926, 12 midnight	31 20	116 55	63	17.22	33.64
9	Jan. 17, 1926, 1 a.m.	31 09	116 53	63	17.22	33.64
10	Jan. 17, 1926, 2 a.m.	30 57	116 50	63	17.22	33.58
11	Jan. 17, 1926, 3 a.m.	30 46	116 48	63	17.22	33.53
12	Jan. 17, 1926, 4 a.m.	30 34	116 45	64	17.78	33.81
13	Jan. 17, 1926, 5 a.m.	30 22	116 42	64	17.78	33.77
14	Jan. 17, 1926, 6 a.m.	30 11	116 40	64	17.78	33.67
15	Jan. 17, 1926, 7 a.m.	29 59	116 37	64	17.78	33.62
16	Jan. 17, 1926, 8 a.m.	29 46	116 36	64	17.78	33.67
17	Jan. 17, 1926, 9 a.m.	29 35	116 35	64	17.78	33.67
18	Jan. 17, 1926, 10 a.m.	29 25	116 33	64	17.78	33.75
19	Jan. 17, 1926, 11 a.m.	29 15	116 30	64	17.78	33.68
20	Jan. 17, 1926, 12 noon	29 04	116 29	64	17.78	33.62
21	Jan. 17, 1926, 1 p.m.	28 53	116 24	64	17.78	33.67
22	Jan. 17, 1926, 2 p.m.	28 42	116 19	65	18.33	33.67
23	Jan. 17, 1926, 3 p.m.	28 31	116 14	65	18.33	33.67
24	Jan. 17, 1926, 4 p.m.	28 20	116 08	67	19.44	34.43
25	Jan. 17, 1926, 5 p.m.	28 09	116 04	67	19.44	34.40
26	Jan. 17, 1926, 6 p.m.	27 58	115 55	67	19.44	34.51
27	Jan. 17, 1926, 7 p.m.	27 50	115 46	67	19.44	34.51
28	Jan. 17, 1926, 8 p.m.	27 42	115 38	66	18.89	34.33
29	Jan. 17, 1926, 9 p.m.	27 33	115 30	68	20.00	34.66
30	Jan. 17, 1926, 10 p.m.	27 24	115 21	69	20.56	34.73
31	Jan. 17, 1926, 11 p.m.	27 15	115 13	69	20.56	34.72
32	Jan. 17, 1926, 12 midnight	27 07	115 04	69	20.56	34.69
33	Jan. 18, 1926, 1 a.m.	26 58	---	68	20.00	34.42
34	Jan. 18, 1926, 2 a.m.	26 59	---	68	20.00	34.49
35	Jan. 18, 1926, 3 a.m.	26 40	114 40	68	20.00	34.61
36	Jan. 18, 1926, 4 a.m.	26 41	114 32	68	20.00	34.67
37	Jan. 18, 1926, 5 a.m.	26 23	114 24	68	20.00	34.58
38	Jan. 18, 1926, 6 a.m.	26 15	114 15	70	21.11	34.60
39	Jan. 18, 1926, 7 a.m.	26 06	114 06	70	21.11	34.47
40	Jan. 18, 1926, 8 a.m.	25 57	113 57	68	20.00	34.22
41	Jan. 18, 1926, 9 a.m.	25 48	113 49	69	20.56	34.42
42	Jan. 18, 1926, 10 a.m.	25 40	113 40	70	21.11	34.65
43	Jan. 18, 1926, 11 a.m.	25 30	113 31	70	21.11	34.58
44	Jan. 18, 1926, 12 noon	25 21	113 20	70	21.11	34.61
45	Jan. 18, 1926, 1 p.m.	25 12	113 11	70	21.11	34.69
46	Jan. 18, 1926, 2 p.m.	25 04	113 03	70	21.11	34.51
47	Jan. 18, 1926, 3 p.m.	24 55	112 55	71	21.67	34.74
48	Jan. 18, 1926, 4 p.m.	24 47	112 46	71	21.67	34.70
49	Jan. 18, 1926, 5 p.m.	24 39	112 38	71	21.67	34.63
50	Jan. 18, 1926, 6 p.m.	24 30	112 29	71	21.67	34.69
51	Jan. 18, 1926, 7 p.m.	24 22	112 21	71	21.67	(1)
52	Jan. 18, 1926, 8 p.m. ²	24 15	112 13	71	21.67	34.67
53	Jan. 18, 1926, 10 p.m.	24 07	112 04	71	21.67	(1)
54	Jan. 18, 1926, 11 p.m.	23 59	111 56	72	22.22	34.67
55	Jan. 18, 1926, 12 midnight	23 51	111 46	71	21.67	(1)
56	Jan. 19, 1926, 1 a.m.	23 44	111 31	72	22.22	34.50
58	Jan. 19, 1926, 2 a.m.	23 36	111 26	72	22.22	34.63
59	Jan. 19, 1926, 3 a.m.	23 28	111 16	72	22.22	34.69
60	Jan. 19, 1926, 4 a.m.	23 21	111 06	73	22.78	34.63
61	Jan. 19, 1926, 5 a.m.	23 13	110 55	73	22.78	34.63
62	Jan. 19, 1926, 6 a.m.	23 05	110 45	73	22.78	---
63	Jan. 19, 1926, 7 a.m.	22 57	110 35	72	22.22	---
64	Jan. 19, 1926, 8 a.m.	22 57	110 24	72	22.22	34.73
65	Jan. 19, 1926, 9 a.m.	22 43	110 13	74	---	---
66	Jan. 19, 1926, 10 a.m.	22 36	110 04	74	23.33	34.60
67	Jan. 19, 1926, 11 a.m.	22 28	109 54	74	23.33	34.56
68	Jan. 19, 1926, 12 noon	22 22	109 44	74	23.33	34.60
69	Jan. 19, 1926, 1 p.m.	22 15	109 35	75	---	---
70	Jan. 19, 1926, 2 p.m.	22 07	109 25	76	24.44	---
71	Jan. 19, 1926, 3 p.m.	22 00	109 15	76	24.44	34.34
72	Jan. 19, 1926, 4 p.m.	21 52	109 05	76	24.44	---
73	Jan. 19, 1926, 5 p.m.	21 45	108 56	76	24.44	34.25
74	Jan. 19, 1926, 6 p.m.	21 37	108 46	77	25.00	34.01
75	Jan. 19, 1926, 7 p.m.	21 30	108 36	77	25.00	34.05
76	Jan. 19, 1926, 8 p.m.	21 22	108 26	77	25.00	34.02

1 No water sample.

2 Clock set ahead 1 hour.

Surface temperature and salinity records from San Diego to Balboa—Continued

Sample no.	Date	Latitude north		Longitude west		Temperature		Salinity by specific gravity $\frac{o}{oo}$
		°	'	°	'	°F.	°C.	
77	Jan. 19, 1926, 9 p.m.	21	15	108	16	76	24.44	34.16
78	Jan. 19, 1926, 10 p.m.	21	07	108	07	77	25.00	33.87
79	Jan. 19, 1926, 11 p.m.	21	00	107	57	77	25.00	33.90
80	Jan. 20, 1926, 3 a.m.	20	32	107	21	78	25.56	33.75
81	Jan. 20, 1926, 7 a.m.	20	04	106	33	80	26.67	33.57
82	Jan. 20, 1926, 11 a.m.	19	32	106	10	80	26.67	33.60
83	Jan. 20, 1926, 3 p.m.	19	03	105	31	78	25.56	33.64
84	Jan. 20, 1926, 7 p.m.	18	30	104	46	80	26.67	33.57
85	Jan. 20, 1926, 11 p.m.	18	00	104	07	80	26.67	33.57
86	Jan. 21, 1926, 3 a.m.	17	33	103	19	80	26.67	33.50
87	Jan. 21, 1926, 7 a.m.	17	11	102	33	87	30.56	33.64
88	Jan. 21, 1926, 11 a.m.	16	50	101	54	82	27.78	33.53
89	Jan. 21, 1926, 3 p.m.	16	26	101	10	82	27.78	33.31
90	Jan. 21, 1926, 7 p.m.	16	04	100	27	82	27.78	33.57
91	Jan. 21, 1926, 11 p.m.	15	43	99	43	82	27.78	33.57
92	Jan. 22, 1926, 3 a.m.	15	23	98	59	81	27.22	33.51
93	Jan. 22, 1926, 7 a.m.	15	02	98	15	82	27.78	33.57
94	Jan. 22, 1926, 11 a.m.	14	45	97	29	82	27.78	33.60
95	Jan. 22, 1926, 3 p.m.	14	30	97	02	79	26.11	33.64
96	Jan. 22, 1926, 7 p.m. ²	14	20	96	33	77	25.00	33.62
97	Jan. 22, 1926, 12 midnight	13	51	95	51	78	25.56	33.73
98	Jan. 23, 1926, 4 a.m.	13	18	95	43	77	25.00	33.31
99	Jan. 23, 1926, 8 a.m.	12	57	95	28	80	26.67	33.38
100	Jan. 23, 1926, 12 noon	12	29	95	09	83	28.33	33.30
101	Jan. 23, 1926, 4 p.m.	12	13	94	37	81	27.22	33.22
102	Jan. 23, 1926, 8 p.m.	11	49	93	47	81	27.22	33.19
103	Jan. 23, 1926, 12 midnight	11	37	93	12	81	27.22	33.47
104	Jan. 24, 1926, 4 a.m.	11	22	92	31	81	27.22	33.48
105	Jan. 24, 1926, 8 a.m.	11	07	91	41	81	27.22	33.30
106	Jan. 24, 1926, 12 noon	10	54	91	07	80	26.67	33.15
107	Jan. 24, 1926, 4 p.m.	10	53	90	40	80	26.67	32.77
108	Jan. 24, 1926, 8 p.m.	10	42	90	14	80	26.67	32.58
109	Jan. 24, 1926, 12 midnight	10	29	89	45	80	26.67	32.57
110	Jan. 25, 1926, 4 a.m.	10	13	89	20	80	26.67	(3) 33.35
111	Jan. 25, 1926, 8 a.m.	9	58	88	44	80	26.67	33.35
112	Jan. 25, 1926, 12 noon	9	38	88	20	74	23.33	34.09
113	Jan. 25, 1926, 4 p.m.	9	19	87	42	78	25.56	34.10
114	Jan. 25, 1926, 8 p.m.	8	59	87	03	80	26.67	33.62
115	Jan. 25, 1926, 12 midnight	8	45	86	23	82	27.78	33.50
116	Jan. 26, 1926, 4 a.m.	8	30	85	43	83	28.33	33.26
117	Jan. 26, 1926, 8 a.m.	8	16	85	03	83	28.33	33.18
118	Jan. 26, 1926, 12 noon	8	03	84	04	84	28.89	30.94
119	Jan. 26, 1926, 4 p.m.	7	47	83	20	85	29.33	-----
120	Jan. 26, 1926, 8 p.m.	7	30	82	34	84	28.89	30.60
121	Jan. 26, 1926, 12 midnight	7	08	82	03	83	28.33	30.67
122	Jan. 27, 1926, 4 a.m.	6	49	81	23	83	28.33	31.08
123	Jan. 27, 1926, 8 a.m.	6	48	80	37	82	27.78	31.18
124	Jan. 27, 1926, 12 noon	7	03	80	04	77	25.00	33.04
125	Jan. 27, 1926, 4 p.m.	7	07	79	48	74	23.33	34.13
126	Jan. 27, 1926, 8 p.m. ⁴	8	12	79	37	74	23.33	33.95
127	Jan. 27, 1926, 12 midnight	8	12	79	37	70	21.11	34.17
128	Jan. 28, 1926, 4 a.m.	8	12	79	37	71	21.67	34.11

² Clock set ahead 1 hour.³ Broken bottle.⁴ Anchored.

San Diego North

Sample no.	Date	Latitude north			Longitude west			Temperature		Salinity by specific gravity ‰
		°	'	"	°	'	"	°F.	°C.	
1	June 15, 1926, 2 p.m.	32	51	45	119	28	15	67	19.44	33.55
2	June 15, 1926, 6 p.m.	33	28	30	118	02	00	67	19.44	33.60
3	June 16, 1926, 3 p.m.	33	42	00	118	20	00	66	18.89	33.57
4	June 16, 1926, 7 p.m.	33	54	00	118	56	30	66	18.89	33.61
5	June 16, 1926, 11 p.m.	34	11	00	119	47	00	58	14.44	33.61
6	June 17, 1926, 3 a.m.	34	24	35	120	38	20	54	12.22	33.71
7	June 17, 1926, 7 a.m.	---	---	---	---	---	---	56	13.33	33.61
8	June 17, 1926, 11 a.m.	35	32	40	121	37	00	52	11.11	33.69
9	June 17, 1926, 3 p.m.	36	10	15	121	55	50	50	10.00	33.70
10	June 17, 1926, 7 p.m.	36	41	30	122	13	00	54	12.22	33.62
11	June 17, 1926, 11 p.m.	37	05	10	122	30	00	53	11.67	33.73
12	June 18, 1926, 3 a.m.	---	---	---	---	---	---	53	11.67	33.38
13	June 18, 1926, 7 a.m.	---	---	---	---	---	---	61	16.11	(1)
14	June 26, 1926, 6 p.m.	37	47	30	122	41	30	52	11.11	33.33
15	June 26, 1926, 10 p.m.	38	17	30	123	20	00	48	8.89	33.91
16	June 27, 1926, 2 a.m.	38	46	00	123	52	00	50	10.00	33.54
17	June 27, 1926, 7 a.m.	38	46	00	123	52	00	52	11.11	33.08
18	June 27, 1926, 10 a.m.	39	51	00	124	48	00	55	12.78	32.86
19	June 27, 1926, 2 p.m.	40	27	00	124	53	30	54	12.22	32.97
20	June 27, 1926, 6 p.m.	41	06	00	124	53	30	55	12.78	32.72
21	June 27, 1926, 10 p.m.	41	48	00	124	53	00	51	10.56	33.60
22	June 28, 1926, 2 a.m.	42	29	30	124	53	00	56	13.33	32.56
23	June 28, 1926, 6 a.m.	43	12	00	125	07	00	58	14.44	(2)
24	June 28, 1926, 10 a.m.	43	55	00	125	07	00	60	15.56	(2)
25	June 28, 1926, 2 p.m.	44	41	00	125	14	00	61	16.11	(2)
26	June 28, 1926, 6 p.m.	45	18	00	125	08	00	62	16.67	(2)
27	June 28, 1926, 10 p.m.	46	02	00	125	04	30	60	15.56	(2)
28	June 29, 1926, 2 a.m.	46	43	00	124	57	30	60	15.56	---
29	June 29, 1926, 6 a.m.	47	24	00	124	51	00	58	14.44	---
30	June 29, 1926, 10 a.m.	---	---	---	---	---	---	52	11.11	---
31	June 29, 1926, 2 p.m.	---	---	---	---	---	---	52	11.11	---
32	June 29, 1926, 6 p.m.	---	---	---	---	---	---	51	10.56	---

Surface temperature and salinity records from Puget Sound to San Francisco

34	July 13, 1926, 6 a.m.	---	---	---	---	---	---	54	12.22	---
35	July 13, 1926, 10 a.m.	---	---	---	---	---	---	52	11.11	---
36	July 13, 1926, 6 p.m.	---	---	---	---	---	---	52	11.11	---
37	July 13, 1926, 10 p.m.	48	27	00	124	44	00	51	10.56	---
38	July 14, 1926, 2 a.m.	47	51	00	125	00	00	57	13.89	---
39	July 14, 1926, 6 a.m.	47	11	00	125	00	00	59	15.00	---
40	July 14, 1926, 10 a.m.	46	13	00	125	09	00	60	15.56	---
41	July 14, 1926, 2 p.m.	45	22	00	125	10	00	62	16.67	---
42	July 14, 1926, 6 p.m.	44	34	00	125	10	00	62	16.67	---
43	July 14, 1926, 10 p.m.	43	46	30	125	10	00	60	15.56	---
44	July 15, 1926, 2 a.m.	43	03	00	125	10	00	54	12.22	32.61
45	July 15, 1926, 6 a.m.	42	20	00	125	07	00	58	14.44	32.38
46	July 15, 1926, 10 a.m.	---	---	---	---	---	---	53	11.67	33.01
47	July 15, 1926, 2 p.m.	---	---	---	---	---	---	52	11.11	33.87
48	July 15, 1926, 6 p.m.	---	---	---	---	---	---	48	8.89	33.74
49	July 15, 1926, 10 p.m.	---	---	---	---	---	---	50	10.00	33.44
50	July 16, 1926, 2 a.m.	---	---	---	---	---	---	50	10.00	33.71
51	July 16, 1926, 6 a.m.	---	---	---	---	---	---	54	12.22	33.55
52	July 16, 1926, 10 a.m.	---	---	---	---	---	---	67	19.44	(3)
53	July 24, 1926, 2 a.m.	---	---	---	---	---	---	56	13.33	33.44
54	July 24, 1926, 6 p.m.	36	45	15	122	16	30	53	11.67	33.71
55	July 24, 1926, 10 p.m.	36	00	00	121	51	20	52	11.11	33.80
56	July 25, 1926, 2 a.m.	35	17	00	121	26	30	56	13.33	33.51
57	July 25, 1926, 6 a.m.	34	33	30	121	02	00	58	14.44	(4)
58	July 25, 1926, 10 a.m.	34	19	00	120	13	00	59	15.00	33.61
59	July 25, 1926, 2 p.m.	34	03	00	119	20	00	66	18.89	33.60
60	July 25, 1926, 6 p.m.	---	---	---	---	---	---	70	21.11	33.62
61	July 26, 1926, 10 a.m.	33	29	00	118	02	00	70	21.11	33.67
62	July 26, 1926, 2 p.m.	33	51	00	117	30	30	70	21.11	33.67

1 Too low for tables.

2 Not on tables.

3 Very low.

4 Bottle broken.

U.S.S. "VEGA"

(Lt. B. W. Lambert, Observer)

Temperature and salinity records from San Diego to San Francisco

Sample no.	Date	Latitude north			Longitude west			Temperature		Salinity by specific gravity ‰
		°	'	"	°	'	"	°F.	°C.	
1	Feb. 5, 1926, 5 p.m.	32	37	00	117	14	30	67	19.44	33.53
2	Feb. 5, 1926, 7 p.m.	32	53	00	117	32	00	66	18.89	33.57
3	Feb. 5, 1926, 9 p.m.	33	09	00	117	50	00	66	18.89	33.57
4	Feb. 5, 1926, 11 p.m.	33	21	00	118	11	00	65	18.33	33.57
5	Feb. 6, 1926, 1 a.m.	33	43	00	118	38	00	65	18.33	33.57
6	Feb. 6, 1926, 3 a.m.	33	55	00	119	00	00	65	18.33	33.53
7	Feb. 6, 1926, 5 a.m.	34	09	00	119	22	00	64	17.78	33.49
8	Feb. 6, 1926, 7 a.m.	34	13	00	119	49	00	64	17.78	33.49
9	Feb. 6, 1926, 9 a.m.	34	21	00	120	18	30	64	17.78	33.46
10	Feb. 6, 1926, 11 a.m.	34	32	00	120	41	00	63	17.22	33.39
11	Feb. 6, 1926, 1 p.m.	34	52	00	120	54	00	63	17.22	33.39
12	Feb. 6, 1926, 3 p.m.	35	09	30	121	08	00	61	16.11	33.46
13	Feb. 6, 1926, 5 p.m.	35	29	30	121	22	30	61	16.11	33.44
14	Feb. 6, 1926, 7 p.m.	35	48	30	121	28	00	61	16.11	33.39
15	Feb. 6, 1926, 9 p.m.	36	08	00	121	52	15	61	16.11	33.41
16	Feb. 6, 1926, 11 p.m.	36	26	00	122	03	15	63	17.22	33.37
17										
18	Feb. 7, 1926, 1 a.m.	36	47	00	122	16	15	62	16.67	33.41
19	Feb. 7, 1926, 3 a.m.	37	10	00	122	28	30	63	17.22	33.17
20	Feb. 7, 1926, 5 a.m.	37	33	00	122	36	45	61	16.11	33.31

¹ Broken.*Temperature and salinity records from San Francisco to Seattle*

1	Feb. 17, 1926, 2 p.m.	37	51.	5	122	41.		60	15.56	(¹)
2	Feb. 17, 1926, 6 p.m.	38	22		123	23		61	16.11	33.21
3	Feb. 17, 1926, 10 p.m.	39	01		123	52.8		60	15.56	33.11
4	Feb. 18, 1926, 2 a.m.	39	47.4		124	13.2		60	15.56	33.26
5	Feb. 18, 1926, 6 a.m.	40	32.7		124	36.4		59	15.00	33.12
6	Feb. 18, 1926, 10 a.m.	41	27.6		124	36.6		59	15.00	33.01
7	Feb. 18, 1926, 2 p.m.	42	13.7		124	36.6		59	15.00	33.01
8	Feb. 18, 1926, 6 p.m.	43	05.5		124	45.6		59	15.00	32.55
9	Feb. 18, 1926, 10 p.m.	43	54.4		124	43.4		57	13.89	32.75
10	Feb. 19, 1926, 2 a.m.	44	43.6		124	44.5		59	15.00	32.92
11	Feb. 19, 1926, 6 a.m.	45	31.8		124	43.4		57	13.89	32.67
12	Feb. 19, 1926, 10 a.m.	46	19.9		124	44.1		57	13.89	32.72
13	Feb. 19, 1926, 2 p.m.	47	19.5		124	48.7		58	14.44	32.70
14	Feb. 19, 1926, 6 p.m.	48	19.4		124	51.		55	12.78	(²)
15	Feb. 19, 1926, 10 p.m.							54	12.22	31.26

Temperature and salinity records from Seattle to San Francisco

1	Mar. 1, 1926, 7 p.m.	48	21.5		124	48.5		55	12.78	28.31
2	Mar. 1, 1926, 11 p.m.	47	33.5		124	49		57	13.89	32.75
3	Mar. 2, 1926, 3 a.m.	46	45.3		124	46		56	13.33	32.12
4	Mar. 2, 1926, 7 a.m.	45	56.3		124	43		56	13.33	32.59
5	Mar. 2, 1926, 11 a.m.	45	07.4		124	42.8		56	13.33	32.63
6	Mar. 2, 1926, 3 p.m.	44	18.3		124	43.1		57	13.89	31.87
7	Mar. 2, 1926, 7 p.m.	43	26.1		124	41.6		57	13.89	31.69
8	Mar. 2, 1926, 11 p.m.	42	35.8		124	43.2		57	13.89	31.75
9	Mar. 3, 1926, 3 a.m.	41	44.7		124	38.7		59	15.00	32.18
10	Mar. 3, 1926, 7 a.m.	40	50		124	33		58	14.44	32.27
11	Mar. 3, 1926, 11 a.m.	40	05.5		124	26		60	15.56	33.01
12	Mar. 3, 1926, 3 p.m.	39	21		124	02		61	16.11	30.32
13	Mar. 3, 1926, 7 p.m.	38	34.7		123	33.3		61	16.11	33.15
14	Mar. 3, 1926, 11 p.m.	37	53.7		122	54.7		63	17.22	(³)

¹ Not on tables.² Too low for tables.³ Missing.

Temperature and salinity records from San Francisco to San Diego

Sample no.	Date	Latitude north		Longitude west		Temperature		Salinity by specific gravity ‰
		°	'	°	'	°F.	°C.	
1	Mar. 9, 1926, 8 p.m.					61	16.11	
2	Mar. 9, 1926, 11 p.m.	37	24.3	122	20.9	61	16.11	32.83
3	Mar. 9, 1926, 12 midnight	37	00.6	122	20.7	61	16.11	33.30
4	Mar. 10, 1926, 2 a.m.	36	37.7	122	07.7	61	16.11	33.28
5	Mar. 10, 1926, 4 a.m.	36	13.8	121	54.2	61	16.11	33.31
6	Mar. 10, 1926, 6 a.m.	35	54.0	121	28.9	61	16.11	33.39
7	Mar. 10, 1926, 8 a.m.	35	30.3	121	21.2	62	16.67	33.46
8	Mar. 10, 1926, 10 a.m.	35	12.1	121	06.8	63	17.22	33.30
9	Mar. 10, 1926, 12 noon	34	51	120	51	65	18.33	33.46
10	Mar. 10, 1926, 2 p.m.	34	29	120	35.2	65	18.33	33.46
11	Mar. 10, 1926, 4 p.m.	34	18.6	120	06.7	65	18.33	33.57
12	Mar. 10, 1926, 6 p.m.	34	09.3	119	38	66	18.89	33.57
13	Mar. 10, 1926, 8 p.m.	33	58.3	119	12.6	67	19.44	33.55
14	Mar. 10, 1926, 10 p.m.	33	42.8	118	49.3	68	20.00	33.58
15	Mar. 10, 1926, 12 midnight	33	28.8	118	24.1	68	20.00	33.53
16	Mar. 11, 1926, 2 a.m.	33	13.2	118	02.7	68	20.00	33.55
17	Mar. 11, 1926, 4 a.m.	32	57.3	117	40.9	67	19.44	33.54
18	Mar. 11, 1926, 6 a.m.	32	40.8	117	19	67	19.44	33.54

Temperature and salinity records from San Diego to Balboa

1	Mar. 12, 1926, 2 p.m.	32	35	117	13.5	68	20.00	33.54
2	Mar. 12, 1926, 3 p.m.	32	20.9	117	09.7	66	18.89	33.49
3	Mar. 12, 1926, 4 p.m.	32	09	117	04.5	66	18.89	33.54
4	Mar. 12, 1926, 5 p.m.	31	56.6	117	01.7	60	15.56	33.54
5	Mar. 12, 1926, 6 p.m.	31	44.2	116	59	67	19.44	(1)
6	Mar. 12, 1926, 7 p.m.	31	32.1	116	56	67	19.44	33.51
7	Mar. 12, 1926, 8 p.m.	31	19.8	116	52.4	66	18.89	33.55
8	Mar. 12, 1926, 9 p.m.	31	07.1	116	49	66	18.89	33.60
9	Mar. 12, 1926, 10 p.m.	30	55	116	45.7	66	18.89	33.61
10	Mar. 12, 1926, 11 p.m.	30	42.2	116	42.5	66	18.89	33.53
11	Mar. 12, 1926, 12 midnight	30	30	116	38.6	66	18.89	33.57
12	Mar. 13, 1926, 1 a.m.	30	17.6	116	36	68	20.00	33.62
13	Mar. 13, 1926, 2 a.m.	30	05	116	32.4	68	20.00	33.58
14	Mar. 13, 1926, 3 a.m.	29	52.2	116	29.8	68	20.00	33.60
15	Mar. 13, 1926, 4 a.m.	29	41	116	26.6	67	19.44	33.62
16	Mar. 13, 1926, 5 a.m.	29	27	116	23	68	20.00	33.60
17	Mar. 13, 1926, 6 a.m.	29	15	116	19.7	68	20.00	33.70
18	Mar. 13, 1926, 7 a.m.	29	02.5	116	16.5	68	20.00	33.69
19	Mar. 13, 1926, 8 a.m.	28	54.2	116	13.8	68	20.00	33.77
20	Mar. 13, 1926, 9 a.m.	28	42	116	11	68	20.00	33.68
21	Mar. 13, 1926, 10 a.m.	28	33.2	116	08.7	70	21.11	33.74
22	Mar. 13, 1926, 11 a.m.	28	22.5	116	05.7	68	20.00	33.78
23	Mar. 13, 1926, 12 noon	28	11.3	115	59.1	68	20.00	33.74
24	Mar. 13, 1926, 1 p.m.	28	01	115	51.2	66	18.89	33.74
25	Mar. 13, 1926, 2 p.m.	27	51.1	115	41.5	67	19.44	33.74
26	Mar. 13, 1926, 3 p.m.	27	41.5	115	32.6	67	19.44	33.73
27	Mar. 13, 1926, 4 p.m.	27	32.1	115	23	68	20.00	33.87
28	Mar. 13, 1926, 5 p.m.	27	24	115	18	68	20.00	33.84
29	Mar. 13, 1926, 6 p.m.	27	13.7	115	03	68	20.00	34.36
30	Mar. 13, 1926, 7 p.m.	27	03.2	114	52	69	20.56	34.42
31	Mar. 13, 1926, 8 p.m.	26	54.2	114	42	70	21.11	34.31
32	Mar. 13, 1926, 9 p.m.	26	45	114	32	68	20.00	34.40
33	Mar. 13, 1926, 10 p.m.	26	36.5	114	23	68	20.00	34.30
34	Mar. 13, 1926, 11 p.m.	26	27.4	114	13.2	70	21.11	34.47
35	Mar. 13, 1926, 12 midnight	26	27.4	114	13.2	70	21.11	34.47
36	Mar. 14, 1926, 1 a.m.	26	09.3	113	54.1	70	21.11	34.54
37	Mar. 14, 1926, 2 a.m.	26	00.5	113	44.9	69	20.56	34.56
38	Mar. 14, 1926, 3 a.m.	25	52.8	113	35	69	20.56	34.53
39	Mar. 14, 1926, 4 a.m.	25	42.7	113	25.6	69	20.56	34.56
40	Mar. 14, 1926, 5 a.m.	25	33.2	113	16.1	70	21.11	34.60
41	Mar. 14, 1926, 6 a.m.	25	24.2	113	06.9	70	21.11	34.58
42	Mar. 14, 1926, 7 a.m.	25	14.2	112	58.2	70	21.11	34.53
43	Mar. 14, 1926, 8 a.m.	25	04.5	112	49.2	70	21.11	34.54
44	Mar. 14, 1926, 9 a.m.	24	55.3	112	40	70	21.11	34.49
45	Mar. 14, 1926, 10 a.m.	24	45.5	112	29.7	70	21.11	34.49
46	Mar. 14, 1926, 11 a.m.	24	36.4	112	19.4	70	21.11	34.49
47	Mar. 14, 1926, 12 noon	24	28.1	112	11.8	70	21.11	34.50
48	Mar. 14, 1926, 1 p.m.	24	19	112	03	72	22.22	34.63
49	Mar. 14, 1926, 2 p.m.	24	08.5	111	47.8	73	22.78	34.69
50	Mar. 14, 1926, 3 p.m.	23	58.8	111	37	74	23.33	34.72
51	Mar. 14, 1926, 4 p.m.	23	50.6	111	25.7	74	23.33	34.72

1 Bottle open.

Temperature and salinity records from San Diego to Balboa—Continued

Sample no.	Date	Latitude north		Longitude west		Temperature		Salinity by specific gravity ‰
		°	'	°	'	° F.	° C.	
52	Mar. 14, 1926, 5 p.m.	23	40	111	15	74	23.33	34.61
53	Mar. 14, 1926, 6 p.m.	23	32.7	111	04	74	23.33	34.66
54	Mar. 14, 1926, 7 p.m.	23	25.3	110	51.9	74	23.33	34.69
55	Mar. 14, 1926, 8 p.m.	23	17.9	110	43	74	23.33	34.69
56	Mar. 14, 1926, 9 p.m.	23	10.8	110	34	74	23.33	34.70
57	Mar. 14, 1926, 10 p.m.	23	04.2	110	23.8	74	23.33	34.69
58	Mar. 14, 1926, 11 p.m.	22	55.5	110	13.8	74	23.33	34.74
59	Mar. 14, 1926, 12 midnight ²	22	49	110	04	74	23.33	34.80
60	Mar. 15, 1926, 2 a.m.	22	40	109	51.1	74	23.33	34.69
61	Mar. 15, 1926, 3 a.m.	22	33	109	41	76	24.44	34.60
62	Mar. 15, 1926, 4 a.m.	22	25.8	109	30.9	77	25.00	34.31
63	Mar. 15, 1926, 5 a.m.	22	18.1	109	20.8	77	25.00	34.40
64	Mar. 15, 1926, 6 a.m.	22	11	109	09.9	77	25.00	34.57
65	Mar. 15, 1926, 7 a.m.	22	04	108	59	77	25.00	34.56
66	Mar. 15, 1926, 8 a.m.	21	56.8	108	48.7	77	25.00	34.57
67	Mar. 15, 1926, 9 a.m.	21	48.4	108	39.4	77	25.00	34.58
68	Mar. 15, 1926, 10 a.m.	21	40.2	108	31	77	25.00	34.61
69	Mar. 15, 1926, 11 a.m.	21	32.3	108	21.9	77	25.00	34.54
70	Mar. 15, 1926, 12 noon	21	24.2	108	13	78	25.56	34.45
71	Mar. 15, 1926, 1 p.m.	21	16.7	108	02.1	78	25.56	34.43
72	Mar. 15, 1926, 2 p.m.	21	08.1	107	40.5	78	25.56	34.37
73	Mar. 15, 1926, 3 p.m.	21	00.8	107	40.8	79	26.11	34.07
74	Mar. 15, 1926, 4 p.m.	20	53	107	30	80	26.67	33.97
75	Mar. 15, 1926, 6 p.m.	20	36.8	107	10	80	26.67	34.10
76	Mar. 15, 1926, 10 p.m.	20	05.8	106	29	80	26.67	34.01
77	Mar. 16, 1926, 2 a.m.	19	33.6	105	48	80	26.67	34.22
78	Mar. 16, 1926, 6 a.m.	19	01	105	04.8	82	27.78	34.26
79	Mar. 16, 1926, 10 a.m.	18	38	104	24.8	82	27.78	34.00
80	Mar. 16, 1926, 2 p.m.	18	16	103	43.8	84	28.89	34.13
81	Mar. 16, 1926, 6 p.m.	17	51.5	102	57.2	84	28.89	34.11
82	Mar. 16, 1926, 10 p.m.	17	30	102	08.1	83	28.33	33.87
83	Mar. 17, 1926, 2 a.m.	17	08	101	19.4	84	28.89	34.06
84	Mar. 17, 1926, 6 a.m.	16	45.9	100	31.8	83	28.33	34.04
85	Mar. 17, 1926, 10 a.m.	16	23.4	99	43.1	84	28.89	33.91
86	Mar. 17, 1926, 2 p.m.	16	01.3	98	54	85	29.44	33.95
87	Mar. 17, 1926, 6 p.m.	15	39.3	98	05	87	30.56	33.86
88	Mar. 17, 1926, 10 p.m.	15	18.6	97	15.8	86	30.00	33.84
89	Mar. 18, 1926, 2 a.m.	15	01	96	39.1	86	30.00	33.89
90	Mar. 18, 1926, 6 a.m.	14	39.2	95	49.1	86	30.00	33.84
91	Mar. 18, 1926, 10 a.m.	14	15.8	95	01	86	30.00	33.80
92	Mar. 18, 1926, 2 p.m.	13	53.9	94	15.6	82	27.78	34.20
93	Mar. 18, 1926, 6 p.m.	13	32	93	30.1	88	31.11	33.89
94	Mar. 18, 1926, 10 p.m.	13	13.1	92	47.4	88	31.11	33.94
95	Mar. 19, 1926, 2 a.m.	12	54.2	92	05.9	86	30.00	33.77
96	Mar. 19, 1926, 6 a.m.	12	35.8	91	24	84	28.89	33.86
97	Mar. 19, 1926, 10 a.m.	12	22.8	90	34.2	84	28.89	33.67
98	Mar. 19, 1926, 2 p.m.	12	02.7	89	49.2	84	28.89	33.66
99	Mar. 19, 1926, 6 p.m.	11	35.8	89	09.2	85	29.44	33.71
100	Mar. 19, 1926, 10 p.m.	11	10.2	88	34.1	84	28.89	33.73
101	Mar. 20, 1926, 2 a.m.	10	46.3	87	58.9	80	26.67	34.16
102	Mar. 20, 1926, 6 a.m.	10	21.9	87	24.1	76	24.44	34.56
103	Mar. 20, 1926, 10 a.m.	10	01.5	86	47.3	76	24.44	34.40
104	Mar. 20, 1926, 2 p.m.	9	40.5	86	07.2	86	30.00	34.45
105	Mar. 20, 1926, 6 p.m.	9	18	85	25	88	31.11	34.17
106	Mar. 20, 1926, 10 p.m.	8	54.9	84	42.4	88	31.11	33.04
107	Mar. 21, 1926, 2 a.m.	8	38	84	11	88	31.11	32.94
108	Mar. 21, 1926, 6 a.m.	8	15.4	83	28.5	89	31.67	33.28
109	Mar. 21, 1926, 10 a.m.	7	43.3	82	48	90	32.22	33.21
110	Mar. 21, 1926, 2 p.m.	7	21.4	82	07	88	31.11	33.74
111	Mar. 21, 1926, 6 p.m.	7	08.2	81	23.5	81	28.89	34.43
112	Mar. 21, 1926, 10 p.m.	7	05.5	80	32	80	26.67	34.60
113	Mar. 22, 1926, 2 a.m.	7	19.6	79	59.2	74	23.33	34.88
114	Mar. 22, 1926, 6 a.m.	7	58.8	79	45.3	74	23.33	34.90
115	Mar. 22, 1926, 10 a.m.	8	42.9	79	32	74	23.33	34.86

² Clocks set ahead 1 hour.

U.S.S. "OMAHA"

[G. Veltan, Observer]

Surface temperature and salinity records southwest of San Diego

Sample no.	Date	Latitude north		Longitude west		Temperature (corrected)		Salinity by specific gravity ‰
		°	'	°	'	°F.	°C.	
1	Mar. 2, 1925, 11 a.m.	32	46	117	36	58.7	14.83	33.46
2	Mar. 2, 1925, 1 p.m.	32	51	117	53	59.7	15.39	33.53
3	Mar. 2, 1925, 3 p.m.	32	49	117	47	59.7	15.39	33.49
4	Mar. 2, 1925, 5 p.m.	32	33	117	38	58.7	14.83	33.58
5	Mar. 3, 1925, 7 a.m.	31	20	119	40	58.7	14.83	33.22
6	Mar. 3, 1925, 9 a.m.	31	14	119	45	59.7	15.39	33.24
7	Mar. 3, 1925, 11 a.m.	31	09	120	02	59.2	15.11	33.26
8	Mar. 3, 1925, 3 p.m.	30	56	120	15	59.7	15.39	33.26
9	Mar. 3, 1925, 5 p.m.	30	50	120	21	59.7	15.39	33.30
10	Mar. 4, 1925, 7 a.m.	29	49	122	04	62.2	16.78	33.48
11	Mar. 4, 1925, 9 a.m.	29	42	122	09	62.2	16.78	33.55
12	Mar. 4, 1925, 11 a.m.	29	35	122	20	64.2	17.89	33.70
13	Mar. 4, 1925, 1 p.m.	29	28	122	30	62.2	16.78	33.28
14	Mar. 4, 1925, 3 p.m.	29	24	122	38	62.2	16.78	33.30
15	Mar. 4, 1925, 5 p.m.	29	14	122	56	61.2	16.22	33.38
16	Mar. 5, 1925, 7 a.m.	29	01	125	11	62.7	17.05	33.84
17	Mar. 5, 1925, 9 a.m.	29	01	125	20	63.2	17.33	33.40
18	Mar. 5, 1925, 11 a.m.	28	55	125	48	63.2	17.33	33.62
19	Mar. 5, 1925, 1 p.m.	28	55	126	07	63.2	17.33	33.74
20	Mar. 5, 1925, 3 p.m.	28	55	126	24	63.2	17.33	33.47
21	Mar. 5, 1925, 5 p.m.	28	55	126	47	63.2	17.33	33.37
22	Mar. 6, 1925, 7 a.m.	27	37	128	52	64.5	18.05	33.96
23	Mar. 6, 1925, 11 a.m.	27	12	129	23	64.5	18.05	33.95
24	Mar. 6, 1925, 1 p.m.	27	08	129	32	65	18.33	34.04
25	Mar. 6, 1925, 3 p.m.	27	07	129	38	65	18.33	34.26
26	Mar. 6, 1925, 5 p.m.	27	04	129	48	65	18.33	34.13
27	Mar. 7, 1925, 7 a.m.	26	14	131	37	66	18.89	34.60
28	Mar. 7, 1925, 9 a.m.	26	02	131	39	66	18.89	34.70
29	Mar. 7, 1925, 11 a.m.	25	55	131	32	66	18.89	34.73
30	Mar. 7, 1925, 1 p.m.	25	25			66	18.89	34.78
31	Mar. 7, 1925, 3 p.m.	25	12	131	10	66	18.89	34.61
32	Mar. 7, 1925, 5 p.m.	25	52	130	59	65	18.33	34.69
33	Mar. 8, 1925, 7 a.m.	25	11	129	00	65	18.33	34.47
34	Mar. 8, 1925, 9 a.m.	25	19	128	43	65	18.33	34.57
35	Mar. 8, 1925, 11 a.m.	25	27	128	25	65	18.33	34.57
36	Mar. 8, 1925, 1 p.m.	25	29	128	08	66	18.89	34.31
37	Mar. 8, 1925, 3 p.m.	25	34	127	40	66	18.89	34.33
38	Mar. 8, 1925, 5 p.m.	25	41	127	30	66	18.89	34.57
39	Mar. 9, 1925, 7 a.m.	26	31	125	29	64	17.78	34.20
40	Mar. 9, 1925, 9 a.m.	26	39	125	10	63	17.22	34.07
41	Mar. 9, 1925, 11 a.m.	26	45	124	50	63	17.22	33.90
42	Mar. 9, 1925, 1 p.m.	26	54	124	30	64.5	18.05	33.97
43	Mar. 9, 1925, 3 p.m.	27	00	124	10	65	18.33	34.04
44	Mar. 9, 1925, 5 p.m.	27	08	123	50	65	18.33	34.02
45	Mar. 10, 1925, 7 a.m.	27	25	121	29	62	16.67	34.01
46	Mar. 10, 1925, 9 a.m.	27	31	121	12	63	17.22	33.67
47	Mar. 10, 1925, 11 a.m.	27	36	121	07	62	16.67	33.49
48	Mar. 10, 1925, 1 p.m.	27	42	120	47	61.5	16.39	33.54
49	Mar. 10, 1925, 3 p.m.	27	49	120	26	63	17.22	33.57
50	Mar. 10, 1925, 5 p.m.	28	02	119	58	62	16.69	33.46
51	Mar. 11, 1925, 7:30 a.m.	28	49	118	08	60	15.56	33.62
52	Mar. 11, 1925, 11 a.m.	29	25	118	08	62	16.67	33.68
53	Mar. 11, 1925, 1 p.m.	29	24	118	05	62	16.67	33.77
54	Mar. 11, 1925, 3 p.m.	29	38	118	03	61	16.11	33.78
55	Mar. 11, 1925, 5 p.m.	30		118	00	61	16.11	33.53
56	Mar. 12, 1925, 7 a.m.	32	12	117	25	60	15.56	33.69
57	Mar. 12, 1925, 9 a.m.	32	32	117	20	60.5	15.83	33.66

¹ No correction.

Mar. 6, 1925, thermometer P-43 was lost at sea and thermometer P-55 was found broken in case. No other thermometer available except water thermometers of Navy type. From Mar. 6 to 12, 1925, water thermometer 666624 was used.

U.S.S. "HENDERSON"

[Lt. A. S. Witherspoon, United States Navy, Observer]

Surface temperature and salinity records between San Diego and Balboa

Sample no.	Date	Latitude		Longitude		Temperature		Salinity by specific gravity ‰
		north	west	west	west	°F.	°C.	
1	Nov. 24, 1925, 8 a.m.	32 27	117 13	60	15.56		33.17	
2	Nov. 24, 1925, 9 a.m.	32 14	117 09	64	17.78		33.41	
3	Nov. 24, 1925, 10 a.m.	32 02	117 06	64	17.78		33.47	
4	Nov. 24, 1925, 11 a.m.	31 49	117 02	64	17.78		33.47	
5	Nov. 24, 1925, 12 noon	31 37½	116 59	65	18.33		33.46	
6	Nov. 24, 1925, 1 p.m.	31 25	116 55	64	17.78		33.47	
7	Nov. 24, 1925, 2 p.m.	31 12	116 52	66	18.89		33.49	
8	Nov. 24, 1925, 3 p.m.	31 00	116 49	66	18.89		33.49	
9	Nov. 24, 1925, 4 p.m.	30 48½	116 45	66	18.89		33.39	
10	Nov. 24, 1925, 5 p.m.	30 36	116 42	62	16.67		33.38	
11	Nov. 24, 1925, 6 p.m.	30 24	116 38½	64	17.78		33.30	
12	Nov. 24, 1925, 7 p.m.	30 11	116 35	65	18.33		33.37	
13	Nov. 24, 1925, 8 p.m.	29 58½	116 34½	66	18.89		33.47	
14	Nov. 24, 1925, 9 p.m.	29 46	116 30	66	18.89		33.48	
15	Nov. 24, 1925, 10 p.m.	29 33	116 25	66	18.89		33.38	
16	Nov. 24, 1925, 11 p.m.	29 20	116 20	66	18.89		33.27	
17	Nov. 24, 1925, 12 midnight	29 07	116 16	66	18.89		33.38	
18	Nov. 25, 1925, 1 a.m.	28 55	116 11	65	18.33		33.39	
19	Nov. 25, 1925, 2 a.m.	28 42	116 06½	65	18.33		33.35	
20	Nov. 25, 1925, 3 a.m.	28 30½	116 02	65	18.33		33.31	
21	Nov. 25, 1925, 4 a.m.	28 18	115 57½	65	18.33		33.40	
22	Nov. 25, 1925, 5 a.m.	28 05½	115 53½	66	18.89		33.60	
23	Nov. 25, 1925, 6 a.m.	27 53½	115 49	68	20.00		33.80	
24	Nov. 25, 1925, 7 a.m.	27 41	115 44	65	18.33		33.54	
25	Nov. 25, 1925, 8 a.m.	27 28	115 40	66	18.89		33.74	
26	Nov. 25, 1925, 9 a.m.	27 18	115 30	68	20.00		33.75	
27	Nov. 25, 1925, 10 a.m.	27 08	115 20	68	20.00		33.71	
28	Nov. 25, 1925, 11 a.m.	26 58	115 10	68	20.00		33.75	
29	Nov. 25, 1925, 12 noon	26 48	115 00	68	20.00		33.74	
30	Nov. 25, 1925, 1 p.m.	26 38	114 50½	68	20.00		33.80	
31	Nov. 25, 1925, 2 p.m.	26 28½	114 41	69	20.56		33.77	
32	Nov. 25, 1925, 3 p.m.	26 19	114 31	73	22.78		34.29	
33	Nov. 25, 1925, 4 p.m.	26 08	114 21½	72	22.22		34.25	
34	Nov. 25, 1925, 5 p.m.	25 59	114 13	70	21.11		33.89	
35	Nov. 25, 1925, 6 p.m.	25 49	114 03	70	21.11		34.05	
36	Nov. 25, 1925, 8 p.m.	25 39	113 54	70	21.11		34.06	
37	Nov. 25, 1925, 9 p.m.	25 29½	113 44½	72	22.22		34.27	
38	Nov. 25, 1925, 10 p.m.	25 20	113 34½	72	22.22		34.30	
39	Nov. 25, 1925, 11 p.m.	25 10½	113 35	75	23.89		34.78	
40	Nov. 25, 1925, 12 midnight	25 01½	113 16	77	25.00		34.60	
41	Nov. 26, 1925, 1 a.m.	24 51½	113 06½	78	25.56		34.88	
42	Nov. 26, 1925, 2 a.m.	24 42	112 57	78	25.56		34.90	
43	Nov. 26, 1925, 3 a.m.	24 32½	112 47	76	24.44		34.56	
44	Nov. 26, 1925, 4 a.m.	24 23	112 37½	79	26.11		34.90	
45	Nov. 26, 1925, 5 a.m.	24 13½	112 28	78	25.56		34.85	
46	Nov. 26, 1925, 6 a.m.	24 04	112 18	78	25.56		34.85	
47	Nov. 26, 1925, 7 a.m.	23 54½	112 09	78	25.56		34.86	
48	Nov. 26, 1925, 8 a.m.	23 45	111 59	77	25.00		34.85	
49	Nov. 26, 1925, 9 a.m.	23 37	111 48½	79	26.11		34.77	
50	Nov. 26, 1925, 10 a.m.	23 29½	111 37	79	26.11		34.79	
51	Nov. 26, 1925, 11 a.m.	23 21½	111 27	78	25.56		34.76	
52	Nov. 26, 1925, 12 noon	23 14	111 16	78	25.56		34.76	
53	Nov. 26, 1925, 1 p.m.	23 06½	111 06½	78	25.56		34.80	
54	Nov. 26, 1925, 2 p.m.	22 59	110 55	78	25.56		34.67	
55	Nov. 26, 1925, 3 p.m.	22 51½	110 39	78	25.56		34.67	
56	Nov. 26, 1925, 4 p.m.	22 43½	110 33	78	25.56		34.54	
57	Nov. 26, 1925, 5 p.m.	22 36	110 23	78	25.56		34.66	
58	Nov. 26, 1925, 6 p.m.	22 28	110 12½	80	26.67		34.61	
59	Nov. 26, 1925, 7 p.m.	22 20½	110 01½	80	26.67		34.78	
60	Nov. 26, 1925, 8 p.m.	22 12½	109 51	79	26.11		34.89	
61	Nov. 26, 1925, 9 p.m.	22 05	109 38	79	26.11		34.86	
62	Nov. 26, 1925, 10 p.m.	21 57½	109 26	79	26.11		34.72	
63	Nov. 26, 1925, 11 p.m.	21 50	109 14½	80	26.67		34.65	
64	Nov. 26, 1925, 12 midnight	21 42	109 02	80	26.67		34.67	
65	Nov. 27, 1925, 1 a.m.	21 34½	108 49	81	27.22		34.61	
66	Nov. 27, 1925, 2 a.m.	21 27	108 37	81	27.22		34.63	
67	Nov. 27, 1925, 3 a.m.	21 19	108 25	81	27.22		34.69	
68	Nov. 27, 1925, 4 a.m.	21 11	108 12½	81	27.22		34.23	
69	Nov. 27, 1925, 5 a.m.	21 03½	108 00	83	28.33		34.25	
70	Nov. 27, 1925, 6 a.m.	20 56	107 47½	83	28.33		34.23	
71	Nov. 27, 1925, 7 a.m.	20 48	107 35	83	28.33		34.25	
72	Nov. 27, 1925, 8 a.m.	20 40	107 22½	82	27.78		34.20	
73	Nov. 27, 1925, 12 noon	20 09	106 35	84	28.89		34.02	
74	Nov. 27, 1925, 4 p.m.	19 39	105 53	83	28.33		34.00	
75	Nov. 27, 1925, 8 p.m.	19 07½	105 08	84	28.89		34.31	
76	Nov. 27, 1925, 12 midnight	18 36	104 26	83	28.33		33.97	

¹ Clocks set ahead 1 hour.

Surface temperature and salinity records between San Diego and Balboa—Continued

Sample no.	Date	Latitude north		Longitude west		Temperature		Salinity by specific gravity ‰
		°	'	°	'	° F.	° C.	
77	Nov. 28, 1925, 4 a.m.	18	07	103	38	83	28.33	33.96
78	Nov. 28, 1925, 8 a.m.	17	42½	102	50	84	28.99	33.61
79	Nov. 28, 1925, 12 noon	17	20½	101	59½	86	30.00	33.54
80	Nov. 28, 1925, 4 p.m.	16	59	101	08	85	29.33	32.99
81	Nov. 28, 1925, 8 p.m.	16	35	100	20	85	29.33	33.17
82	Nov. 28, 1925, 12 midnight	16	15	99	31	84	28.89	33.04
83	Nov. 29, 1925, 4 a.m.	15	51½	98	37	84	28.89	33.21
84	Nov. 29, 1925, 8 a.m.	15	30	97	38	83	28.33	33.34
85	Nov. 29, 1925, 12 noon	15	08	96	47½	85	29.33	33.28
86	Nov. 29, 1925, 4 p.m.	14	42	95	48	85	29.33	33.26
87	Nov. 29, 1925, 8 p.m.	14	19½	94	59	83	28.33	33.42
88	Nov. 29, 1925, 12 midnight	13	58	94	13	83	28.33	33.61
89	Nov. 30, 1925, 4 a.m.	13	37	93	27	83	28.33	33.62
90	Nov. 30, 1925, 8 a.m.	13	16	92	41	83	28.33	33.35
91	Nov. 30, 1925, 12 noon	13	00	91	53	84	28.89	32.94
92	Nov. 30, 1925, 4 p.m.	12	39	91	02½	85	29.33	32.86
93	Nov. 30, 1925, 8 p.m.	12	21	90	17	86	30.00	32.74
94	Nov. 30, 1925, 12 midnight	11	58	89	29½	85	29.33	32.84
95	Dec. 1, 1925, 4 a.m.	11	35	88	41	84	28.89	32.70
96	Dec. 1, 1925, 8 a.m.	11	11	87	53	83	28.33	33.12
97	Dec. 1, 1925, 12 noon	10	48½	87	05	82	27.78	33.17
98	Dec. 1, 1925, 4 p.m.	10	17	86	22½	83	28.33	32.99
99	Dec. 1, 1925, 8 p.m.	9	54	85	52½	83	28.33	30.41
100	Dec. 1, 1925, 12 midnight	9	31	85	20	83	28.33	29.98
101	Dec. 2, 1925, 4 a.m.	9	07	84	47	81	27.22	29.96
102	Dec. 2, 1925, 8 a.m.	8	44½	84	15	82	27.78	29.60
103	Dec. 2, 1925, 12 noon	8	21	83	39	82	27.78	29.46
104	Dec. 2, 1925, 4 p.m.	8	00	83	00	84	28.89	29.59
105	Dec. 2, 1925, 8 p.m.	7	35½	82	29½	83	28.33	29.87
106	Dec. 2, 1925, 12 midnight	7	06½	81	34½	83	28.33	29.88
107	Dec. 3, 1925, 4 a.m.	7	16	80	51½	83	28.33	29.87
108	Dec. 3, 1925, 8 a.m.	7	08	80	03	83	28.33	29.23
109	Dec. 3, 1925, 12 noon	8	00	79	45	83	28.33	29.29
110	Dec. 3, 1925, 4 p.m.	8	47½	79	29½	84	28.89	28.51

¹ Clocks set ahead 1 hour.

Surface temperature and salinity records between San Diego and San Pedro

1	Apr. 22, 1926, 8 a.m.	32	44	30	117	21	00	66	18.89	33.46
2	Apr. 22, 1926, 10 a.m.	33	04	30	117	39	30	66	18.89	33.48
3	Apr. 22, 1926, 12 noon	33	24	00	117	58	00	66	18.89	33.42
4	Apr. 22, 1926, 1:30 p.m.	33	38	30	118	11	30	66	18.89	33.40

Surface temperature and salinity records between San Pedro and San Francisco

5	Apr. 23, 1926, 6 a.m.	33	42	30	118	25	30	64	17.78	33.48
6	Apr. 23, 1926, 8 a.m.	33	53	30	118	51	30	63	17.22	33.44
7	Apr. 23, 1926, 10 a.m.	34	04	30	119	19	30	63	17.22	33.46
8	Apr. 23, 1926, 12 noon	34	14	45	119	49	00	62	16.67	33.48
9	Apr. 23, 1926, 2 p.m.	34	24	45	120	22	15	64	17.78	33.50
10	Apr. 23, 1926, 4 p.m.	34	38	00	120	45	00	58	14.44	33.40
11	Apr. 23, 1926, 6 p.m.	34	53	30	121	02	00	58	14.44	33.40
12	Apr. 23, 1926, 8 p.m.	35	19	00	121	19	00	58	14.44	33.35
13	Apr. 23, 1926, 10 p.m.	35	38	00	121	31	00	55	12.78	33.50
14	Apr. 23, 1926, 12 midnight	36	00	30	121	52	30	53	11.67	33.35
15	Apr. 24, 1926, 2 a.m.	36	14	00	122	05	00	53	11.67	33.28
16	Apr. 24, 1926, 4 a.m.	36	36	30	122	15	00	57	13.89	33.03
17	Apr. 24, 1926, 6 a.m.	36	59	00	122	25	30	58	14.44	32.84
18	Apr. 24, 1926, 8 a.m.	37	22	00	122	33	00	57	13.89	32.55
19	Apr. 24, 1926, 10 a.m.	37	46	40	122	36	00	57	13.89	32.55

Surface temperature and salinity records between San Francisco and San Diego

Sample no.	Date	Latitude north		Longitude west		Temperature		Salinity by specific gravity ‰
		°	'	°	'	° F.	° C.	
20	May 5, 1926, 1 a.m.	37	44 00	122	41 00	54	12.22	32.42
21	May 5, 1926, 2 a.m.	37	31 00	122	37 00	54	12.22	
22	May 5, 1926, 4 a.m.	37	05 00	122	31 00	58	14.44	32.47
23	May 5, 1926, 6 a.m.	36	42 00	122	16 30	60	15.56	32.74
24	May 5, 1926, 8 a.m.	36	16 45	122	03 30	58	14.44	33.35
25	May 5, 1926, 10 a.m.	35	55 30	121	46 30	56	13.33	33.39
26	May 5, 1926, 12 noon	35	32 00	121	29 30	58	14.44	33.18
27	May 5, 1926, 2 p.m.	35	10 30	121	12 30	62	16.67	33.27
28	May 5, 1926, 4 p.m.	34	44 15	120	52 00	60	15.56	33.30
29	May 5, 1926, 6 p.m.	34	26 45	120	34 00	60	15.56	33.34
30	May 5, 1926, 8 p.m.	34	17 45	120	05 30	60	15.56	33.47
31	May 5, 1926, 10 p.m.	34	07 00	119	34 30	60	15.56	33.47
32	May 5, 1926, 12 midnight	33	56 45	119	06 00	60	15.56	33.53
33	May 6, 1926, 2 a.m.	33	45 30	118	39 15	63	17.22	33.46
34	May 6, 1926, 4 a.m.	33	28 30	118	15 00	63	17.22	33.47
35	May 6, 1926, 6 a.m.	33	09 00	117	52 00	63	17.22	33.47
36	May 6, 1926, 8 a.m.	32	51 30	117	31 00	64	17.78	33.40

Surface temperature and salinity records between San Diego and Balboa

37	May 6, 1926, 4 p.m.	32	20 15	117	09 45	63	17.22	33.51
38	May 6, 1926, 8 p.m.	31	30 30	116	50 45	64	17.78	33.50
39	May 6, 1926, 12 midnight	30	40 30	116	33 15	62	16.67	33.58
40	May 7, 1926, 4 a.m.	29	46 00	116	14 00	64	17.78	33.51
41	May 7, 1926, 8 a.m.	28	56 00	116	00 30	64	17.78	33.48
42	May 7, 1926, 12 noon	28	08 00	115	32 00	64	17.78	33.67
43	May 7, 1926, 4 p.m.	27	26 00	114	56 00	64	17.78	33.58
44	May 7, 1926, 8 p.m.	26	41 00	114	17 30	64	17.78	33.62
45	May 7, 1926, 12 midnight	26	00 00	113	41 15	64	17.78	33.57
46	May 8, 1926, 4 a.m.	25	10 00	112	46 30	66	18.89	33.58
47	May 8, 1926, 8 a.m.	24	27 00	112	26 00	64	17.78	33.71
48	May 8, 1926, 12 noon	23	52 00	111	41 00	69	20.56	34.13
49	May 8, 1926, 4 p.m.	23	17 30	110	56 30	68	20.22	34.16
50	May 8, 1926, 8 p.m. ¹	22	43 00	110	12 00	70	21.11	34.45
51	May 8, 1926, 12 midnight	22	21 00	109	33 00	72	22.22	34.73
52	May 9, 1926, 4 a.m.	21	50 00	108	46 00	74	23.33	34.77
53	May 9, 1926, 8 a.m.	21	16 00	108	01 00	76	24.44	34.65
54	May 9, 1926, 12 noon	20	48 00	107	16 00	77	25.00	34.69
55	May 9, 1926, 4 p.m.	20	15 00	106	33 00	78	25.56	34.66
56	May 9, 1926, 8 p.m.	19	38 30	105	49 00	78	25.56	34.72
57	May 9, 1926, 12 midnight	19	05 00	105	07 00	77	25.00	34.53
58	May 10, 1926, 4 a.m.	18	32 00	104	24 00	80	26.67	34.43
59	May 10, 1926, 8 a.m.	18	06 30	103	37 00	80	26.67	34.33
60	May 10, 1926, 12 noon	17	45 00	102	48 00	82	27.78	34.33
61	May 10, 1926, 4 p.m.	17	24 30	101	58 30	83	28.33	34.29
62	May 10, 1926, 8 p.m.	17	05 00	101	09 00	81	27.22	34.30
63	May 10, 1926, 12 midnight	16	45 00	100	00 19	81	27.22	34.22
64	May 11, 1926, 4 a.m.	16	26 00	99	29 00	82	27.78	34.16
65	May 11, 1926, 8 a.m.	16	05 30	98	38 00	82	27.78	34.43
66	May 11, 1926, 12 noon	15	44 00	97	40 00	82	27.78	34.29
67	May 11, 1926, 4 p.m.	15	22 00	96	49 00	79	26.11	34.38
68	May 11, 1926, 8 p.m. ¹	14	57 00	95	54 00	82	27.78	34.29
69	May 11, 1926, 12 midnight	14	35 00	95	05 00	82	27.78	34.16
70	May 12, 1926, 4 a.m.	14	16 30	94	17 00	83	28.33	34.11
71	May 12, 1926, 8 a.m.	14	00 00	93	40 30	88	31.11	34.09
72	May 12, 1926, 12 noon	13	43 00	92	52 00	88	31.11	34.23
73	May 12, 1926, 4 p.m.	13	19 00	92	06 00	88	31.11	34.09
74	May 12, 1926, 8 p.m.	12	51 00	91	21 00	88	31.11	34.20
75	May 12, 1926, 12 midnight	12	30 30	90	32 15	86	30.00	34.22
76	May 13, 1926, 4 a.m.	12	10 30	89	43 00	85	29.33	34.33
77	May 13, 1926, 8 a.m.	11	50 00	88	56 00	85	29.33	34.23
78	May 13, 1926, 12 noon	11	28 00	88	13 00	84	28.89	34.20
79	May 13, 1926, 4 p.m.	11	05 00	87	44 00	86	30.00	34.10
80	May 13, 1926, 8 p.m.	10	42 30	87	14 30	86	30.00	34.26
81	May 13, 1926, 12 midnight	10	20 00	86	41 00	85	29.33	33.94
82	May 14, 1926, 4 a.m.	9	52 00	86	00 00	86	30.00	33.50
83	May 14, 1926, 8 a.m.	9	16 00	85	12 00	85	29.33	33.80
84	May 14, 1926, 12 noon	8	50 00	84	25 00	85	29.33	33.38
85	May 14, 1926, 4 p.m.	8	22 00	83	41 30	85	29.33	33.46
86	May 14, 1926, 8 p.m. ¹	7	48 30	82	59 00	85	29.33	33.37
87	May 14, 1926, 12 midnight	7	31 00	82	28 00	84	28.89	33.39
88	May 15, 1926, 4 a.m.	7	09 00	81	37 00	81	27.22	33.39
89	May 15, 1926, 8 a.m.	7	08 00	80	45 30	82	27.78	34.56
90	May 15, 1926, 12 noon	7	25 30	80	00 00	78	25.56	34.90
91	May 15, 1926, 4 p.m.	9	10 00	79	42 00	81	27.22	33.97

¹ Clocks set ahead 1 hour.

U.S.S. "NITRO"

[Lt. Edward G. Affleck (engineer), observer]

Temperature and salinity records from San Diego to Bremerton and return

Sample no.	Date	Latitude north			Longitude west			Temperature		Salinity by specific gravity ‰
		°	'	"	°	'	"	°F.	°C.	
1	Dec. 10, 1925, 7 a.m.	32	39	00	117	17	00	60	15.56	33.48
2	Dec. 10, 1925, 9 a.m.	32	58	00	117	34	00	62	16.67	33.46
3	Dec. 10, 1925, 11 a.m.	33	17	00	117	51	30	62	16.67	33.46
4	Dec. 10, 1925, 1 p.m.	33	36	15	118	09	00	63	17.22	33.44
5	Dec. 10, 1925, 9 p.m.	33	41	30	118	39	15	62	16.67	33.35
6	Dec. 10, 1925, 11 p.m.	33	41	30	119	09	30	61	16.11	33.38
7	Dec. 11, 1925, 1 a.m.	33	41	30	119	37	20	60	15.56	33.40
8	Dec. 11, 1925, 3 a.m.	33	41	20	120	06	10	60	15.56	33.39
9	Dec. 11, 1925, 5 a.m.	33	41	20	120	35	00	60	15.56	33.38
10	Dec. 11, 1925, 7 a.m.	33	53	00	120	40	00	60	15.56	33.28
11	Dec. 11, 1925, 9 a.m.	34	04	00	120	56	00	60	15.56	33.24
12	Dec. 11, 1925, 11 a.m.	34	23	00	121	12	00	60	15.56	33.44
13	Dec. 11, 1925, 1 p.m.	34	43	00	121	25	00	60	15.56	33.14
14	Dec. 11, 1925, 3 p.m.	35	05	00	121	32	00	60	15.56	33.21
15	Dec. 11, 1925, 5 p.m.	35	26	00	121	54	00	59	15.00	33.13
16	Dec. 11, 1925, 7 p.m.	35	46	30	122	00	00	58	14.44	33.44
17	Dec. 11, 1925, 9 p.m.	36	08	00	122	08	00	58	14.44	33.22
18	Dec. 11, 1925, 11 p.m.	36	29	00	122	17	00	56	13.33	33.41
19	Dec. 12, 1925, 1 a.m.	36	53	00	122	25	00	58	14.44	33.28
20	Dec. 12, 1925, 3 a.m.	37	15	00	---	---	---	58	14.44	33.21
21	Dec. 12, 1925, 5 a.m.	37	36	15	122	39	00	56	13.33	33.38
22	Dec. 12, 1925, 7 a.m.	37	45	00	122	37	00	55	12.78	33.47
23	Dec. 12, 1925, 9 a.m.	37	50	00	122	22	30	54	12.22	31.35
24	Dec. 26, 1925, 11 a.m.	37	48	00	122	57	00	54	12.22	32.94
25	Dec. 26, 1925, 3 p.m.	38	26	00	123	27	00	54	12.22	33.24
26	Dec. 26, 1925, 7 p.m.	39	07	00	124	07	00	56	13.33	32.70
27	Dec. 26, 1925, 11 p.m.	40	09	00	124	46	00	54	12.22	32.99
28	Dec. 27, 1925, 3 a.m.	41	00	00	124	57	00	55	12.78	33.04
29	Dec. 27, 1925, 7 a.m.	41	52	00	124	56	00	53	11.67	32.70
30	Dec. 27, 1925, 11 a.m.	42	58	00	124	51	00	53	11.67	32.62
31	Dec. 27, 1925, 3 p.m.	43	55	00	124	55	00	53	11.67	32.70
32	Dec. 27, 1925, 7 p.m.	44	50	00	124	51	00	53	11.67	32.46
33	Dec. 27, 1925, 11 p.m.	45	49	00	124	51	00	53	11.67	32.41
34	Dec. 28, 1925, 3 a.m.	46	46	00	124	48	00	52	11.11	32.31
35	Dec. 28, 1925, 7 a.m.	47	38	00	124	43	00	51	10.56	32.38
36	Dec. 28, 1925, 11 a.m.	48	29	00	124	46	00	50	10.00	30.62
37	Dec. 28, 1925, 3 p.m.	48	14	00	122	37	00	48	8.89	31.40
38	Dec. 28, 1925, 7 p.m.	48	09	00	122	49	00	48	8.89	30.74
39	Dec. 29, 1925, 3 p.m.	47	49	30	122	28	00	48	8.89	29.07
40	Jan. 6, 1926, 4 p.m.	48	12	00	123	15	00	45	7.22	30.60
41	Jan. 6, 1926, 8 p.m.	48	25	00	124	21	30	47	8.33	30.07
42	Jan. 6, 1926, 12 midnight	47	53	00	125	00	00	50	10.00	32.27
43	Jan. 7, 1926, 4 a.m.	47	05	00	125	00	00	50	10.00	32.32
44	Jan. 7, 1926, 8 a.m.	46	16	00	125	00	00	46	7.78	32.46
45	Jan. 7, 1926, 12 noon	45	22	00	125	00	00	53	11.67	32.36
46	Jan. 7, 1926, 4 p.m.	44	27	00	125	00	00	53	11.67	32.83
47	Jan. 7, 1926, 8 p.m.	43	36	00	125	00	00	53	11.67	32.97
48	Jan. 7, 1926, 12 midnight	42	46	00	125	00	00	52	11.11	32.84
49	Jan. 8, 1926, 4 a.m.	42	00	00	125	00	00	53	11.67	32.95
50	Jan. 8, 1926, 8 a.m.	41	13	30	125	00	00	54	12.22	32.70
51	Jan. 8, 1926, 12 noon	40	22	00	125	00	00	56	13.33	33.06
52	Jan. 8, 1926, 4 p.m.	39	40	00	124	32	00	55	12.78	33.01
53	Jan. 8, 1926, 8 p.m.	39	05	00	124	02	00	57	13.89	33.21
54	Jan. 8, 1926, 12 midnight	38	30	00	123	31	00	56	13.33	33.21
55	Jan. 9, 1926, 4 a.m.	37	57	00	123	07	00	56	13.33	33.21
56	Jan. 9, 1926, 8 a.m.	38	07	00	122	23	00	48	8.89	(1)
57	Jan. 19, 1926, 2 p.m.	37	40	00	122	37	00	50	10.00	32.01
58	Jan. 19, 1926, 4 p.m.	37	11	00	122	36	00	55	12.78	33.14
59	Jan. 19, 1926, 6 p.m.	36	45	30	122	20	00	56	13.33	33.45
60	Jan. 19, 1926, 8 p.m.	36	20	00	122	05	00	56	13.33	33.40
61	Jan. 19, 1926, 10 p.m.	35	55	00	121	50	00	56	13.33	33.41
62	Jan. 19, 1926, 12 midnight	35	29	00	121	34	00	56	13.33	33.40
63	Jan. 20, 1926, 2 a.m.	35	03	00	121	20	00	---	---	33.27
64	Jan. 20, 1926, 4 a.m.	34	37	00	121	07	00	58	14.44	33.44
65	Jan. 20, 1926, 6 a.m.	34	27	00	120	49	00	58	14.44	33.39
66	Jan. 20, 1926, 8 a.m.	34	22	30	120	35	15	59	15.00	33.51
67	Jan. 20, 1926, 10 a.m.	34	10	00	120	04	00	60	15.56	33.53
68	Jan. 20, 1926, 12 noon	34	08	45	119	35	45	60	15.56	33.53
69	Jan. 20, 1926, 2 p.m.	33	58	00	119	02	00	60	15.56	33.53
70	Jan. 30, 1926, 4 p.m.	33	42	00	118	35	00	60	15.56	33.54
71	Jan. 30, 1926, 9 a.m.	33	25	00	118	00	00	60	15.56	(2)
72	Jan. 20, 1926, 11 a.m.	33	02	00	117	33	30	60	15.56	33.57
73	Jan. 20, 1926, 1 p.m.	32	38	00	117	17	30	62	16.67	33.60

¹ Too low for tables.² Missing.

U.S. MINING

MINING AND QUARRYING IN THE UNITED STATES

MINING AND QUARRYING IN THE UNITED STATES, 1917

State	Value of products	Number of employees	Value of products	Number of employees
Alabama	1,171,000	1,171	1,171,000	1,171
Arizona	1,171,000	1,171	1,171,000	1,171
Arkansas	1,171,000	1,171	1,171,000	1,171
California	1,171,000	1,171	1,171,000	1,171
Colorado	1,171,000	1,171	1,171,000	1,171
Connecticut	1,171,000	1,171	1,171,000	1,171
Delaware	1,171,000	1,171	1,171,000	1,171
District of Columbia	1,171,000	1,171	1,171,000	1,171
Florida	1,171,000	1,171	1,171,000	1,171
Georgia	1,171,000	1,171	1,171,000	1,171
Idaho	1,171,000	1,171	1,171,000	1,171
Illinois	1,171,000	1,171	1,171,000	1,171
Indiana	1,171,000	1,171	1,171,000	1,171
Iowa	1,171,000	1,171	1,171,000	1,171
Kansas	1,171,000	1,171	1,171,000	1,171
Kentucky	1,171,000	1,171	1,171,000	1,171
Louisiana	1,171,000	1,171	1,171,000	1,171
Maine	1,171,000	1,171	1,171,000	1,171
Maryland	1,171,000	1,171	1,171,000	1,171
Massachusetts	1,171,000	1,171	1,171,000	1,171
Michigan	1,171,000	1,171	1,171,000	1,171
Minnesota	1,171,000	1,171	1,171,000	1,171
Mississippi	1,171,000	1,171	1,171,000	1,171
Missouri	1,171,000	1,171	1,171,000	1,171
Montana	1,171,000	1,171	1,171,000	1,171
Nebraska	1,171,000	1,171	1,171,000	1,171
Nevada	1,171,000	1,171	1,171,000	1,171
New Hampshire	1,171,000	1,171	1,171,000	1,171
New Jersey	1,171,000	1,171	1,171,000	1,171
New Mexico	1,171,000	1,171	1,171,000	1,171
New York	1,171,000	1,171	1,171,000	1,171
North Carolina	1,171,000	1,171	1,171,000	1,171
North Dakota	1,171,000	1,171	1,171,000	1,171
Ohio	1,171,000	1,171	1,171,000	1,171
Oklahoma	1,171,000	1,171	1,171,000	1,171
Oregon	1,171,000	1,171	1,171,000	1,171
Pennsylvania	1,171,000	1,171	1,171,000	1,171
Rhode Island	1,171,000	1,171	1,171,000	1,171
South Carolina	1,171,000	1,171	1,171,000	1,171
South Dakota	1,171,000	1,171	1,171,000	1,171
Tennessee	1,171,000	1,171	1,171,000	1,171
Texas	1,171,000	1,171	1,171,000	1,171
Utah	1,171,000	1,171	1,171,000	1,171
Vermont	1,171,000	1,171	1,171,000	1,171
Virginia	1,171,000	1,171	1,171,000	1,171
Washington	1,171,000	1,171	1,171,000	1,171
West Virginia	1,171,000	1,171	1,171,000	1,171
Wisconsin	1,171,000	1,171	1,171,000	1,171
Wyoming	1,171,000	1,171	1,171,000	1,171
Total	1,171,000	1,171	1,171,000	1,171

