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OCEANOGRAPHY IN THE GULF OF MAINE AND ADJACENT WATERS IN SUPPORT OF THE INTERNATIONAL COMMISSION FOR NORTHWEST ATLANTIC FISHERIES

January 1968; January-February 1969

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Washington, D.C.

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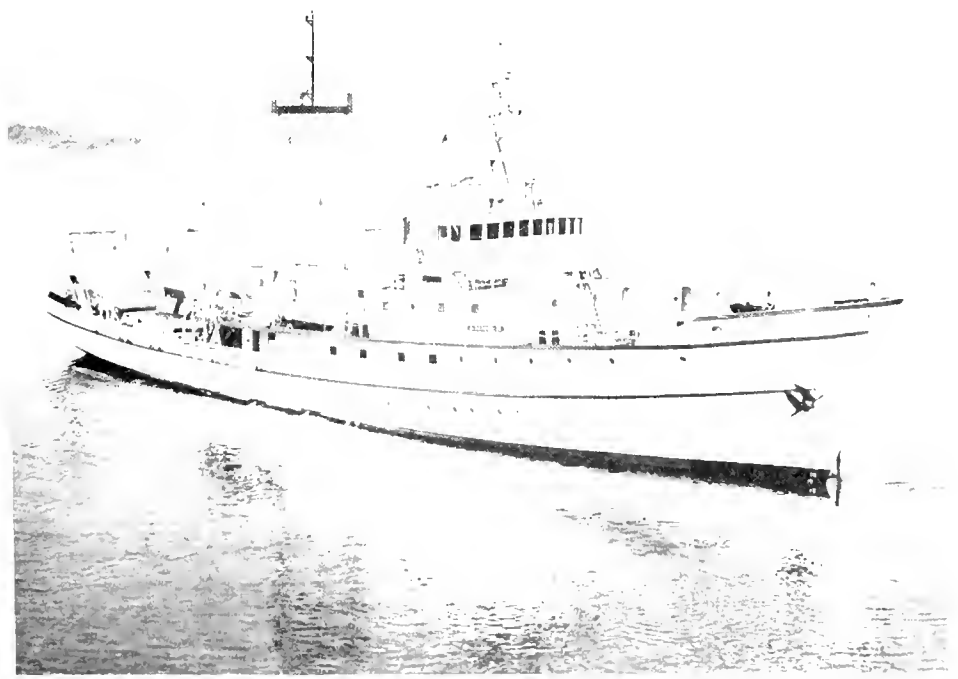
USCGC EVERGREEN (WAGO-295), ICNAF CRUISE 68-1



BCF R/V ALBATROSS IV, ICNAF CRUISE 69-1

ABSTRACT

The physical oceanography of the Gulf of Maine and adjacent waters in January 1968 and January-February 1969 is described. Temperature, salinity, and density data are presented in surface contours and profiles. Dissolved oxygen and chlorophyll data are presented in section profiles. Climatic conditions of the region were reflected in the temperature and salinity of the surface waters. Intrusion of Gulf Stream water into the Gulf of Maine is inferred from T-S relations and dissolved oxygen data.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

OCEANOGRAPHY IN THE GULF OF MAINE AND ADJACENT WATERS IN SUPPORT OF ICNAF

January 1968; January-February 1969

by

MELVIN LIGHT AND SCOTT J. HENDERSON[1]

INTRODUCTION

This is the second report on a series of oceanographic surveys of Northwest Atlantic coastal waters conducted by the U.S. Coast Guard in cooperation with the Bureau of Commercial Fisheries (BCF; now the National Marine Fisheries Service). These surveys were carried out in support of a fisheries research program planned by the International Commission for the Northwest Atlantic Fisheries (ICNAF). Whitcomb (1970) reported on two earlier surveys (ICNAF Cruises 67–2 and 67–3) which encompassed the waters of the Mid-Atlantic Bight. This report presents the physical oceanographic data observed on two later surveys (ICNAF Cruises 68–1 and 69–1) which included the Gulf of Maine and adjacent waters (Figs. 1–3). Coast Guard oceanographers and marine science technicians aboard the USCGC EVERGREEN (WAGO–295) conducted ICNAF Cruise 68–1 (15–26 January 1968). ICNAF Cruise 69–1 (28 January-27 February 1969) was conducted by Coast Guard and BCF personnel aboard the BCF ALBATROSS IV.

The purpose of these surveys was to describe the physical and chemical environment of the region to gain a better understanding of the factors affecting the seasonal and annual distribution and abundance of living marine resources. Shortly after each oceanographic cruise, BCF and other ICNAF research groups conducted groundfish surveys of the same areas.

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PROCEDURES

Oceanographic Sampling

Oceanographic sampling procedures, sample analyses, bathymetric and meteorological observation methods, and quality control procedures employed during these two cruises were generally the same as those described by Whitcomb (1970). Oceanographic parameters measured at each station included temperature, salinity, dissolved oxygen, and chlorophyll. Beginning with ICNAF cruise 69–1, water samples were routinely analyzed for nutrients. As on the previous two ICNAF cruises, drift bottles and sea-bed drifters were released for the Woods Hole Oceanographic Institution. Expendable bathythermograph (XBT) casts were generally made midway between oceanographic stations.

Rosette Multi-Sampler

For the first time during a Coast Guard oceanographic survey, a General Oceanics Rosette Multi-Bottle Array sampler was used during ICNAF Cruise 69–1 with the Salinity-Temperature-Depth Measuring System (STD) to obtain salinity samples and temperature measurements. This sampler allowed for calculation of thermometric depths for quality control of the STD system. This device enables one or more of a cluster of 12 Niskin sampling bottles to be triggered and their deep-sea thermometers (installed on every other bottle) to be reversed upon command from a deck control unit via the electrical conducting STD cable. Because of the configuration of the A-frames and oceanographic

winches aboard the R/V ALBATROSS IV, the rosette multi-sampler was clamped to the protective cage of the STD "fish", rather than directly to the STD cable immediately above the "fish". This arrangement allowed a maximum of 9 sample bottles to be used. Since this device could be triggered to collect water samples for chemical analyses from selected depths, the need for separate Nansen casts was eliminated.

Nutrient Analyses

Water samples collected during ICNAF Cruise 69–1 for nutrient determination were frozen and stored aboard ship for later analyses ashore. The samples were analyzed at the U.S. Coast Guard Academy, using a Beckman DU–2 spectrophotometer. Inorganic phosphorous was determined by the method of Murphy and Riley (1962), using an ascorbic acid single-solution reagent. Inorganic nitrate-nitrogen was analyzed by reduction with cadmium-mercury amalgam and the development of an azo dye complex with sulfanilamide (Morris and Riley, 1963). Silicate-silicon was determined by the method of Grasshoff (1965).

The nutrient data are included in the oceanographic data listings in appendix A.

Shipboard Operational Summary

	1968	*1969*
Oceanographic stations occupied	56	66
STD casts	56	19
Nansen casts	56	48
Bathythermograph casts	15	46
Dissolved oxygen analyses	465	560
Chlorophyll extractions	403	472
Nutrient samples processed	---	561
Drift bottles released	280	325
Sea-bed drifters released	215	195

DATA PRESENTATION

Data listings for ICNAF cruises 68–1 and 69–1 are contained in Tables I and II of Appendix A. Surface isotherms, isohalines and isopycnals are presented in figures 9 through 14. Profiles of temperature, salinity, sigma-t, oxygen, and chlorophyll are depicted in figures 15 through 79.

RESULTS

Temperature Distribution

Gulf of Maine Basin:

Surface Layer (0–100 meters)

Surface waters in the Gulf of Maine Basin (that region north of the 50 fathom (91.4 m.) isobath along the Eastern and South Channel slopes) tended to be slightly warmer in 1969 than in 1968. In 1968 surface isotherms ranged from 3°–4° C., whereas in 1969 they ranged from 4°–5° C. This 1.0° C. difference (in surface waters) was also evident in the upper 100 meters in the same region as shown by temperature profiles (figs. 15–17 and 47–49). Both years were characterized by weak temperature gradients. However, the gradients in 1968 tended to be vertical, whereas in 1969 they were more horizontal. On ICNAF 68–1, a pocket of very cold water (2.0° C.) was observed at station 8, extending from the surface down to 50 meters. Other than this small pocket, waters in this region appeared to be very well mixed.

The temperature of the upper 100 meters of water is governed mainly by local climatic influences. "The gulf owes the particular temperatures proper to it, and especially the wide seasonal range of temperature, chiefly to its geographic location to the leeward of the continent and to the rigorous land climate. Only to a much smaller degree is it influenced by warm or cold currents flowing into it," (Bigelow, 1927). Weather records (Local Climatological Data Annual Summaries 1967, 1968, 1969, Mariners Weather Logs, and U.S. Coast Guard Weather Observation Logs for various light vessels and light stations) were examined for months preceding and during both cruises. These records show that the 1969 winter season was 1°–2° C. warmer than that of 1968. The 1°–2° C. deviation is significant in view of the ninety day observation period, the temperature difference between the two years being reflected by the surface water temperatures. Table 1 summarizes air temperatures, wind data, and precipitation observed at selected inland, coastal, and offshore stations.

The surface radiates out very large amounts of heat from September on, whenever the air is colder than the water. The coldest winter winds of the region blow from land out over the gulf, and these cold westerly winds predominate in the western side of the gulf during the three winter months (Bigelow, 1927).

TABLE 1—Meteorological data averages for the Gulf of Maine region and New England coast, December, 1967-February 1968 and December, 1968-February, 1969. * Averages are taken over 90 day periods (Dec.-Feb.). ** Precipitation values include snowfall.

LOCATION	Type of Sta.	Average* Temperature (°C) '67–'68	'68–'69	Average* Precipitation** (In.) '67–'68	'68–'69	Average Wind* Dir. Speed (kn.) '67–'68		Dir. Speed (kn.) '68–'69	
Concord, N.H.	Inl	− 6.4	− 5.2	2.80	5.61	30	4.6	31	4.8
Gorham, N.H.	Inl	−15.4	−13.3	5.69	16.75	--	--	--	--
Portland, Me.	Coast	− 6.0	− 4.0	4.50	5.87	30	3.8	31	4.8
Boston, Mass.	Coast	− 1.7	− 1.2	5.13	5.19	31	6.8	31	9.1
Milton, Mass.	Coast	− 3.4	− 2.9	6.06	5.98	--	--	--	--
Nantucket, Mass.	Coast	0.7	0.9	3.34	3.90	34	14.2	32	15.2
Mt. Desert L/V	Off Sh.	--	− 0.9	--	--	--	--	--	--
Portland L/Sta	Off Sh.	− 0.8	− 0.4	--	--	330	10.0	330	9.0
Boston L/Sta	Off Sh.	1.1	1.1	--	--	316	7.0	306	10.0
Nantucket L/Sta	Off Sh.	4.4	3.5	--	--	324	4.0	321	9.0

Table 1 summarizes precipitation data from the New England Climatological Data Summaries (1967 through 1969). It can be seen that total precipitation for New England inland and coastal weather stations in December 1967 and January-February 1968 was not significantly higher than the total precipitation for the same period one year later.

Shore and inland stations showed northeasterly winds while the offshore light stations recorded northwesterly winds. The latter would thus explain the colder temperatures found in the gulf in 1968.

Intermediate and Bottom Waters (100 meters to bottom)

A distinct region of cold (<5° C.) mid layer water extending from 100 to 150 meters is generally observed during most of the year in the Gulf of Maine Basin except during winter months when thorough mixing occurs (Hachey et al., 1954). As expected, no distinct mid layer was observed during the periods of these surveys.

Mid and bottom waters (150 to 250 meters) in the basin were also found to be approximately 1°–2° C. warmer in 1969 than in 1968. In 1968, temperatures of these waters ranged from approximately 4.5°–6.3° C., whereas in 1969, they ranged from 5.5°–8.0° C.

Transition Zone

The surface layer waters overlying the shelf edge represent a transition zone between Coastal (Gulf of Maine Basin) and Slope Waters. As can be seen from examinations of the profiles of temperature for sections 1, 2, and 3 for ICNAF 68–1 (figs. 15, 16, and 17) and for sections 3, 4, and 5 for ICNAF 69–1 (figs. 47, 48, and 49), the temperature gradients in this zone tend to be strong and horizontal. On ICNAF 68–1 a marked increase in temperature from about 5°–10° C. was observed over a horizontal distance (to the south) of approximately 30 nautical miles. This same phenomenon was again observed on the 1969 survey, but with temperatures ranging approximately 1.0° C. higher.

Slope Water

Slope Water along the east coast of the United States is considered to be a mixture of Gulf Stream and Coastal Waters (McLellan, 1957) (fig. 4). ICNAF cruise 68–1 stations 1, 2, and 24–27, and ICNAF cruise 69–1 stations 16–20 and 41–46 are considered to lie within the Slope Water region adjacent to the Gulf of Maine Basin. Temperature-Salinity curves constructed from 1968 temperature and salinity data (figs. 6 and 8) were shown to be characteristic of Slope Water as determined by McLellan (1957) (fig. 5). However, the warmer temperatures and higher salinity values of the 1969 observations indicated the presence of Gulf Stream water in the region normally occupied by Slope Water. Comparison of T-S profiles constructed from the 1969 data (figs. 7 and 8), again with McLellan's T-S relations for Gulf Stream water (fig. 5) further confirmed the intrusion of Gulf Stream water over the slope region. This intrusion is examined further in the forthcoming discussion.

Surface Layer

ICNAF 68–1 profiles for temperature in the surface layer of the slope water region (figs. 15, 16 and 17) show strong horizontal gradients with little apparent mixing. Temperatures in this region ranged approximately from 6°–14° C.

Vertical sections of ICNAF 69–1 temperature data in this region disclose a somewhat different picture. Moderate mixing was evident as portrayed by the weak gradients of sections 3 and 5 (figs. 47 and 49). Temperature data for most stations showed an increase of 2°–3° C. over temperatures observed at the same locations in 1968. Inspection of the sea surface temperature chart for 1969 (fig. 10) revealed a band of dense temperature gradients extending roughly along the 1000 fathom (1829 m.) isobath; in 1968 (fig. 9) however, this band extended shoreward only as far as the 3000 fathom (5486 m.) isobath.

A region of extremely warm water was found in the southeastern section of the Gulf of Maine off Georges Bank during ICNAF 69–1 (sections 1–3; figs. 45–47). In this region temperatures increased some 15° C. over a horizontal span (southerly direction) of approximately 40 nautical miles. Temperatures as high as 19° C. were observed at the surface as well as to a depth of 80 meters. A pocket of very warm water centered around station 20 in section 3 (fig. 47) was also characterized by strong surrounding gradients with temperatures of adjacent stations as much as 4°–5° C. lower at the surface and 2°–3° C. lower at 50–75 meter depths. Analysis of these anomalies indicated Gulf Stream influence.

According to Bigelow (1927), at most times there is no dominant drift of the Gulf Stream across Georges Bank into the Gulf of Maine, but on rare occasions overflows of tropic waters take place at the surface, probably via that route. Small amounts of Gulf Stream water have been known to drift as far west as the coastline bounded by Martha's Vineyard and Narragansett Bay. Although the data in this report do not encompass that immediate area, evidence that such an intrusion occurred in 1969 is apparent by examination of surface contours and T-S diagrams of the Slope Water region.

Intermediate and Bottom Waters

Warmer temperatures were also evident in the deeper waters off the shelf in 1969. Water temperatures of the 150 to 300 meter depth range (9°–18° C.) were approximately 2° C. higher than those observed in 1968.

This increase in temperature at these lower depths was probably attributable to horizontal mixing of coastal water overlying the shelf with Gulf Stream-influenced offshore waters, and the subsequent sinking of the products of the mixing—a process known as caballing.

Mixing takes place most efficiently along surfaces of constant sigma-t where exchange is not inhibited by buoyant forces. When two different water types—coastal and Gulf Stream in this case—each with the same sigma-t value mix, the product, represented by a straight line on a T-S diagram, will be of greater density (sigma-t) than either of the two parent water types. This resultant "heavy water", having a greater density, will thus tend to sink. This is the caballing process.

Caballing can potentially contribute to vertical circulation. As indicated by relatively weak isopycnals, the vertical stability in the Gulf of Maine is quite low as expected during the winter months (Bigelow, 1927). Accordingly, the "heavy water" formed, as outlined above, will sink and flow under lighter waters. In the shelf region this is probably seen as what McLellan (1953) has called underrunning shoreward (fig. 4). This process might then help explain the increase in temperature at the greater depths.

McLellan (1957) discussed the three distinctly different oceanographic regions found off the New England and Nova Scotian coasts—Coastal Slope, and Gulf Stream waters. These waters are not only separated by sharp geographical boundaries, but are also well defined graphically through T-S plots. Temperature-Salinity relations as presented by McLellan (1957) for the upper 150 meters of water off the Scotian shelf are shown in figure 5. The three groups indicated on this T-S plot do not overlap and, in addition, are separated by blank areas into which no observations fall.

A fourth water mass, Nova Scotian Current Water, is often included in discussions of the Gulf of Maine region. This cold (2°–8° C.), low saline ($<32°/_{oo}$) water is usually restricted to the coast off Cape Sable. Bigelow (1927) has noted that this Nova Scotian Current Water exerts its chief thermal effect to the eastward of

Cape Sable, although for only a few weeks during the spring, it can act to retard vernal warming in the Gulf of Maine.

Hayes (in press) identifies Gulf of Maine Bottom Water (below 150 m.) as Slope Water, which, on entering the Gulf of Maine through the Eastern Channel, is slightly modified. However, for the purposes of the present discussion, this Bottom Water will be considered to be in the realm of Slope Water.

T-S diagrams were constructed from data observed during ICNAF cruises 68–1 and 69–1 for selected offshore stations (figs. 6, 7, and 8). It is readily apparent from examination of figures 7 and 8 that the 1969 T-S curves fall within McLellan's boundaries for Gulf Stream Water as well as within his limits for Coastal Water and Slope Water. The T-S curves drawn for 1968 data do not fall within the boundaries for Gulf Stream Water. However, it should be noted that the 1968 station locations do not extend quite as far seaward as those for 1969. This is not to say that a Gulf Stream intrusion did occur in 1968, for as previously noted water temperatures of this region in this year were significantly lower than those of 1969. It should be emphasized that the ICNAF cruise data were observed in midwinter (January-February), whereas McLellan's data were collected during June when vernal warming is well in progress.

The T-S curves for 1968 and 1969 did not reveal the presence of distinct bounded regions with blank areas between them, thus indicating thorough horizontal mixing throughout the region. In both years the distribution of T-S points for the surface layer (0–150 meters) was confined to a relatively narrow band nearly parallel with the isopycnals. McLellan (1957) presents a detailed discussion of "isopycnic mixing" and stirring as determined from T-S diagrams.

"The distinction between 'stirring' and 'mixing' as brought out by Eckart (1948) is important. Stirring obviously can, and probably always does, take place on surfaces of equal density, since low internal friction in the fluid makes hydrostatic equilibrium (or quasi-equilibrium) the only state admissible. The very nature of mixing, however, implies a change in entropy. At the same time, the physical nature of sea water is such that the mixing of waters of equal density is accompanied by an increase in density in the product (except for the trivial case where the original constituents are identical as to temperature and salinity) . . . but it must be remembered that the products are represented by a straight line on the T-S plot and not by the curve of equal sigma-t."

When points at like depths for several stations within the narrow band are joined, a straight line relationship is apparent. This strengthens the above inference to horizontal mixing.

Dissolved oxygen measurements were made at most stations occupied during both ICNAF cruises. Water types can be identified as Coastal, Slope, or Gulf Stream according to their characteristic dissolved oxygen values (McLellan, 1957). Table 2 compares typical dissolved oxygen values observed by McLellan with dissolved oxygen data from selected ICNAF stations. It is evident that Gulf Stream Water was present at the 1969 stations, while the 1968 data indicated only Slope and Coastal Water.

Table 2—Dissolved oxygen values for selected ICNAF stations, 1968 and 1969.

Depth (m)	McLellan's Stations (ml/l)			ICNAF 68–1 Stations (ml/l)				ICNAF 69–1 Stations (ml/l)			
	Gulf	Slope	Coast	1	2	24	25	1	2	15	16
0	--	--	--	6.6	7.0	7.1	5.7	4.7	4.7	5.0	5.0
50	--	--	--	6.0	5.8	6.8	5.4	4.7	4.8	4.7	4.7
100	4.9	4.4	6.3	5.5	4.6	5.2	5.3	4.7	4.8	4.6	4.5
150	5.0	4.8	6.5	3.9	4.0	3.5	5.2	4.6	4.5	4.7	4.8
200	4.7	4.1	5.5	5.3	3.8	3.6	5.2	4.6	4.5	5.4	4.3
250	--	--	--	4.0	4.0	3.7	3.9	4.8	--	5.2	5.0
300	4.7	3.9	5.7	--	--	--	--	--	--	--	--
400	--	3.3	6.1	--	--	--	--	--	--	--	--
500	--	3.9	6.1	--	--	--	--	--	--	--	--

TABLE 3—Pemigwasset River runoff (in inches) Plymouth, N.H. Higher values in late 1967 and early 1968 are typical of most New England stations.

	Jan	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1967		6.64	5.87	2.24	0.84	0.51	0.73	2.22	1.95	2.37
1968	0.72	7.61	4.14	4.07	1.34	0.43	0.47	0.44	1.04	1.77
1969	0.61									

Hachey et al. (1954) claim that an incursion of warm Slope Water into the Gulf of Maine would adversely affect the haddock and cod fisheries on Georges Bank. Examination of catch statistics for these species could prove to be interesting.

Salinity Distribution

Gulf of Maine Basin

Surface Layer

Comparison of surface salinity and temperature contours for 1968 and 1969 (figs. 9, 10, 11, and 12) showed that the surface isohaline distribution resembled that of surface isotherms during both years. The areas of strong surface salinity gradients were located further northwest in 1969 than in 1968. The average surface salinity in 1968 (31.5°/₀₀–33°/₀₀) was approximately 0.5°/₀₀–1°/₀₀ lower than the 1969 average.

Salinity gradients of the surface layer in 1969 (figs. 54, 55 and 56) were stronger and tended to be more horizontal than those in 1968 (figs. 21, 22, and 23).

River runoff for the major New England rivers in 1968–1969 appeared to have a more conclusive effect than did precipitation on surface salinity. Table 3 summarizes the runoff for the Pemigwasset River extracted from "Water Resources Data-Surface Water Records" (1967, 1968, and 1969). The flow for the Pemigwasset River is considered to be typical of the major New England rivers (Chase, 1972). These data show that the monthly flows for the major rivers during the period of September-December 1967 were from two to five times as great as the runoff observed for the same four month period in 1968. It has been estimated that it takes approximately 3 to 4 months for flow conditions observed upstream on major New England rivers to be reflected in offshore salinity conditions (Bigelow, 1927; Ketchum and Keen, 1955). Thus, the lower salinity conditions observed in the surface layer of the Gulf of Maine in January 1968 were at least partially influenced by the high river runoff of the preceding few months.

Wind conditions observed for the periods of December 1967 through February 1968 and December 1968 through February 1969 for selected coastal, inland, and offshore stations of the Gulf of Maine region were also studied. Inland and coastal observation station data showed that the predominant direction of wind set for both years was from the northeast with an average speed of 4 to 6 knots. Wind observations recorded at Coast Guard offshore light stations and light vessels showed that the resultant average wind set was from the northwest with average speeds of 6 knots for the 1968 season and 9 to 10 knots for 1969.

Undoubtedly, weather conditions immediately preceding and during the cruise periods did affect the surface salinity conditions in the Gulf of Maine in both years.

Intermediate and Bottom Waters

Comparison of salinity vertical profiles for the midwater layer inside Georges Bank for both years revealed similar salinity values and distribution of salinity gradients (figs. 21–23 and 54–56). The salinity gradients showed a weak to moderate vertical distribution throughout the region, with values ranging from 32.8°/₀₀ at 100 meters to 34.3°/₀₀ at 150 meters. Bottom waters within the Gulf of Maine Basin were well mixed and had a salinity approximately 0.5°/₀₀ higher than that of the midwater layer directly above.

Transition Zone

Salinity gradients of transition zone waters approximated those of temperature for both 1968 and 1969. Again, a narrow band of strong horizontal gradients was observed for both years. For example, in 1968 between stations 3 and 4 of section 1 (fig. 21), there was a change of >2°/₀₀ within a distance of 15 nautical miles.

Slope Water

Surface Layer

In 1969 the pocket of warm water centered around station 20 noted under the temperature discussion was also characterized by salinity values typical of Gulf Stream water (>36°/₀₀) (fig. 54). Vertical gradients are apparent in the surface layer waters in section 1 of the 1968 salinity profiles. However, to the west (sections 2 and 3) there was a shift to moderate horizontal gradients. This feature is similarly exhibited in the temperature and sigma-t profiles.

Intermediate and Bottom Waters

Both years were manifest of weak gradients. Salinity values ranged from 35.3°/₀₀ at the 150 meter level to 34.9°/₀₀ in the deeper waters in 1968 while 1969 values averaged 0.2°/₀₀ higher.

SIGMA-T

Examination of profiles of sigma-t for both cruises revealed one feature of particular interest. Isopycnals for ICNAF 69–1 sigma-t section 4 (fig. 62) indicated a moderate current through the Eastern Channel. Isopycnals with a slope of one meter per nautical mile or greater were observed in this vicinity. Salinity and temperature profiles for the same section (figs. 48 and 55) also suggested this same movement as the isohalines and isotherms were nearly congruent with the isopycnals.

The comparatively warm (6°–7° C.) and highly saline (>34°/₀₀) bottom water in the Gulf of Maine basin alludes to an origin of Slope Water or even, perhaps, Gulf Stream Water. Dissolved oxygen content of the water in the basin (4.3–5.4ml/l) (fig. 68) was typical of Gulf Stream Water.

The distribution of density along the edge of the continental slope is probably the motive power that brings water of these characteristics into the Gulf of Maine via the Eastern Channel. A considerable body of evidence has been accumulated to the effect that the zone along which coastal and oceanic waters mix and where Slope Water is formed averages somewhat higher in density than water on the continental slope. Bigelow (1927) confirmed the findings of several earlier surveys in this region. He concluded that lower densities exist along the outer edge of the offshore banks, abreast of the Gulf of Maine and off Nova Scotia, than along the continental slope that bounds the banks on the offshore sides.

Examination of sigma-t profiles for stations 2–5 of section 1, and for stations 12–14 of section 2, reveals strikingly steep density gradients down to 250 meters, with the higher values toward the offshore side of the slope. Consequently, the mass of water on the shelf above 250 meters had a tendency to drift seaward (to the south).

With dynamic forces tending to drive Slope Water out to sea from the continental shelf (southerly off Cape Sable and La Have Bank), the Coriolis force would deflect this drift to the right. In this manner a dominant drift from east to west develops along the upper part of the continental slope off La Have and Browns Banks.

So long as the dynamic motion for this drift persists, the entrance of the Eastern Channel is supplied with the Slope Water from the east. In this fashion, the current that flows into the bottom of the Gulf of Maine basin draws from Slope Water formed at approximately equal depths on the Nova Scotian slope. This is confirmed by the fact that temperatures and salinities proved to be very nearly the same in the bottom of the Channel (7°–8° C. and 33.50°/₀₀–34.75°/₀₀ at 150–200 meters) as at equal depths on the slope off La Have and Browns Banks (6.5°–9° C. and 33.50°/₀₀–35.25°/₀₀).

The Slope Water, moving westward is forced against Browns Bank by the earth's rotation (Coriolis force). Consequently with the Eastern Channel offering an open route for this water to the right, Bigelow (1927) has suggested that ". . . it is reasonable to think of a screwing motion as taking place into the Eastern Channel . . ." so long as the necessary density gradients exist off the Scotian Slope.

CIRCULATION

A knowledge of the circulation patterns in the Gulf of Maine should provide further insight into the seasonal variance of isothermal and isohaline conditions.

Circulation patterns in this region have been described by various authors. Bigelow (1927) determined the circulation pattern in the Gulf of Maine to be a general counterclockwise eddy augmented by an inflow of water on the eastern side from over the Nova Scotian banks. The inflow causes a displacement of water south and

east across the end of Georges Bank (fig. 80). This counterclockwise eddy is fed by the inflow of water from without the Gulf of Maine in the winter and early spring. Cold water (<5° C.) shown in ICNAF 69–1 temperature sections 3, 4, and 5 (figs. 47, 48, and 49) suggests a similar pattern. Bumpus (1969) and Bumpus and Lauzier (1965), from analysis of surface current observations, suggested that, in the winter, the northward flow from Browns Bank into the Bay of Fundy will be considerably diminished, and that some of the water will be deflected along the southeastern coast of Nova Scotia.

Pronounced southerly movement along the western shore of the Gulf of Maine for late February and early March was noted by Day (1958). He also noted indications of a strong seaward movement east of Cape Cod through South Channel during this same period. It is not possible from the present data to evaluate the outflow movement from the Gulf of Maine eddy. However, the presence of water with a temperature of less than 5° C. and salinity near 33‰ in slope areas of sections (ICNAF 69–1) 4, 5 and 7 (figs. 48, 49 and 51) supports Day's premise.

Although poorly defined at this time of the year, the cyclonic circulation of the inshore areas appears to be present. A more definitive analysis of circulation patterns cannot be made because of insufficient data.

CONCLUSIONS

As a result of variances in climatic conditions between 1968 and 1969 coupled with pronounced Gulf Stream influences in 1969, oceanographic features of the Gulf of Maine differed for those years. Water temperatures throughout the Gulf were 1°–2° C. warmer in 1969, reflecting an unusually mild winter and an apparent intrusion of Gulf Stream water. The higher salinities and characteristic dissolved oxygen values observed in the same year apparently were also a result of a Gulf Stream influx. The considerably heavier river runoff for the 1968 season resulted in lower salinity values for that year. Surface temperature and salinity maxima in 1969 extended as far shoreward as the 1000 fathom (1829 m.) isobath, whereas in 1968 these maxima extended shoreward only to the 3000 fathom (5486 m.) isobath.

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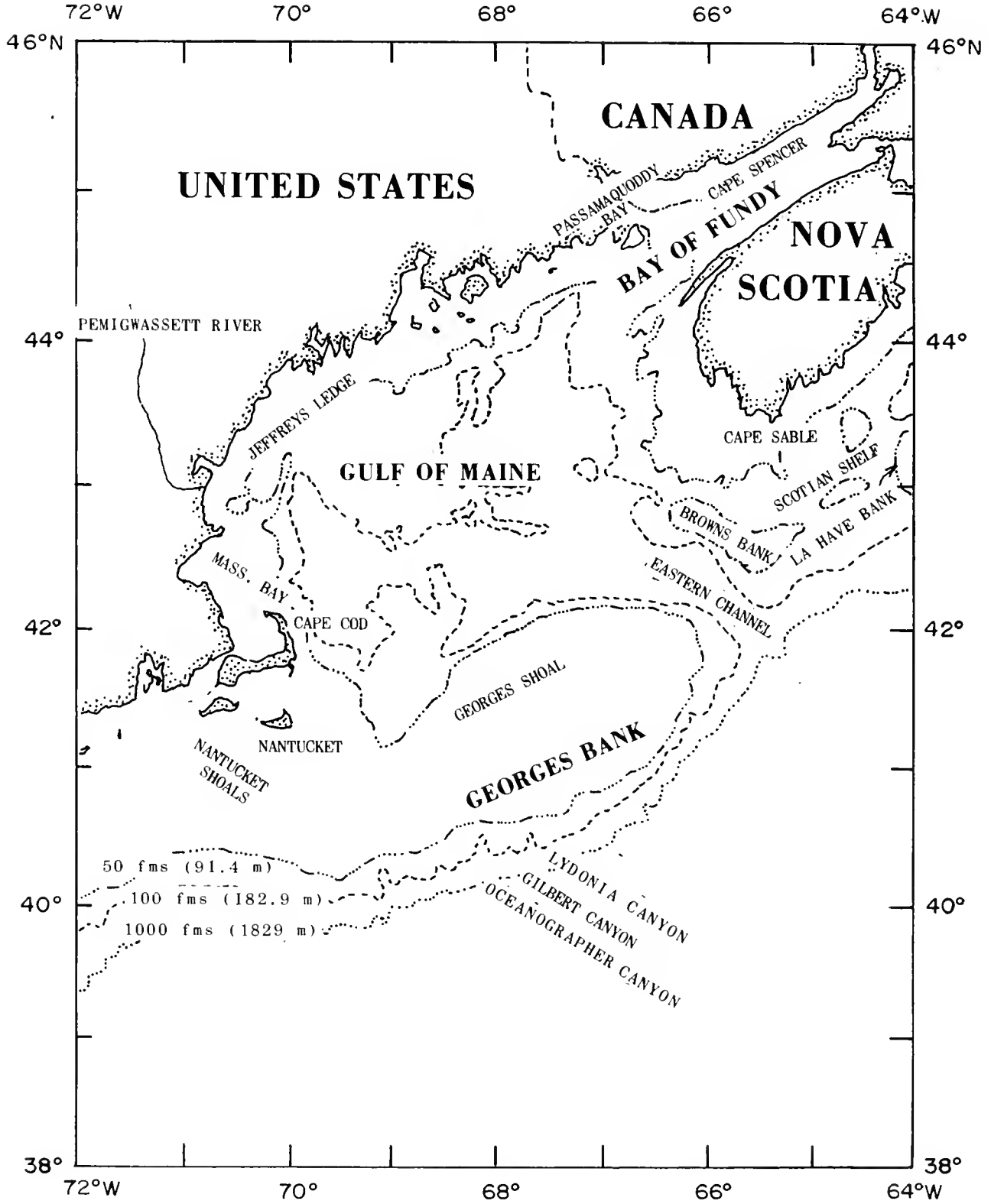

FIGURE 1.—Orientation chart of the Gulf of Maine (Colton, J. B., 1964).

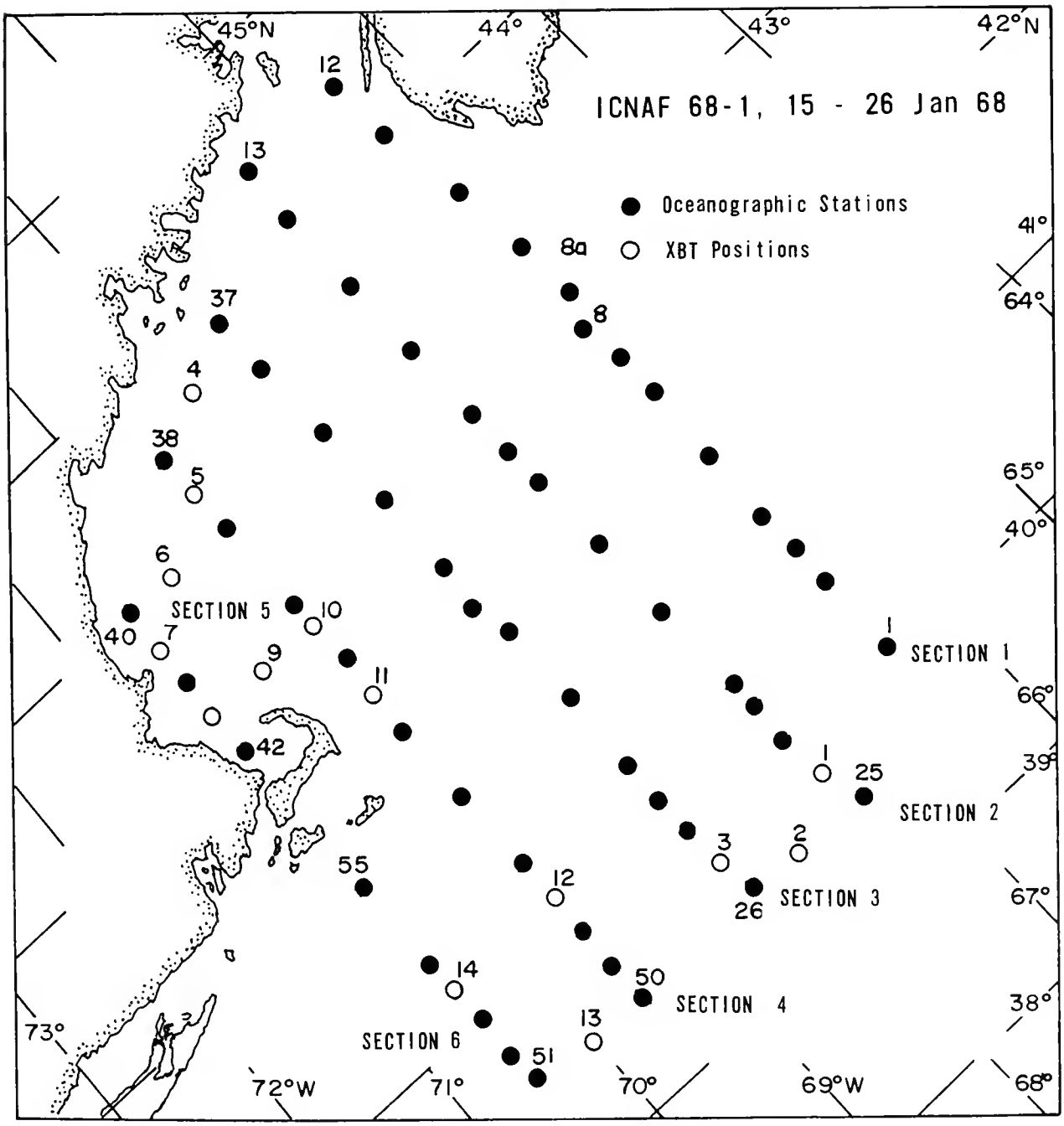

FIGURE 2.—Oceanographic stations and XBT locations, ICNAF 68–1, 15–26 January 1968.

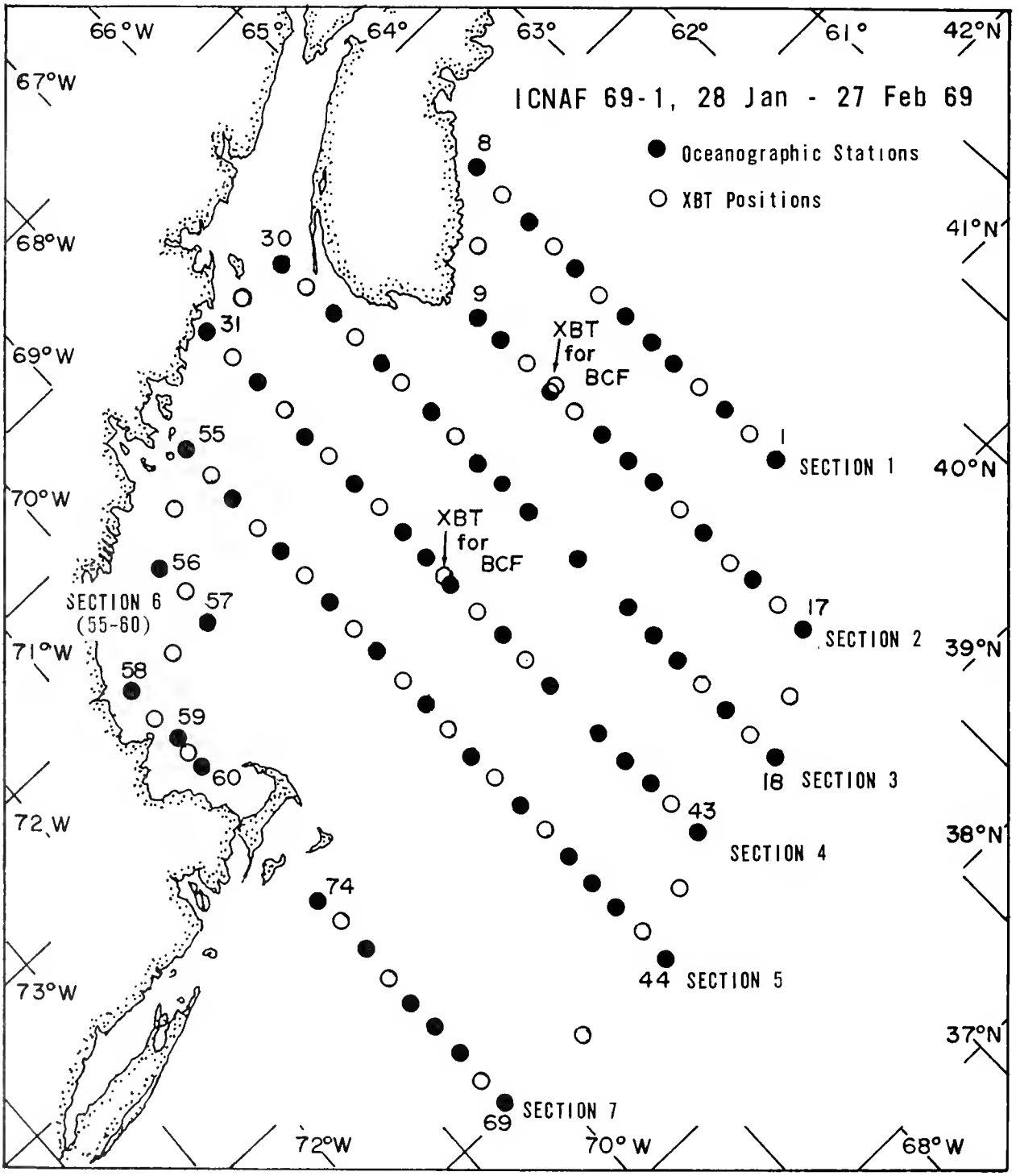

FIGURE 3.—Oceanographic stations and XBT locations, ICNAF 69-1, 28 January-27 February 1969.

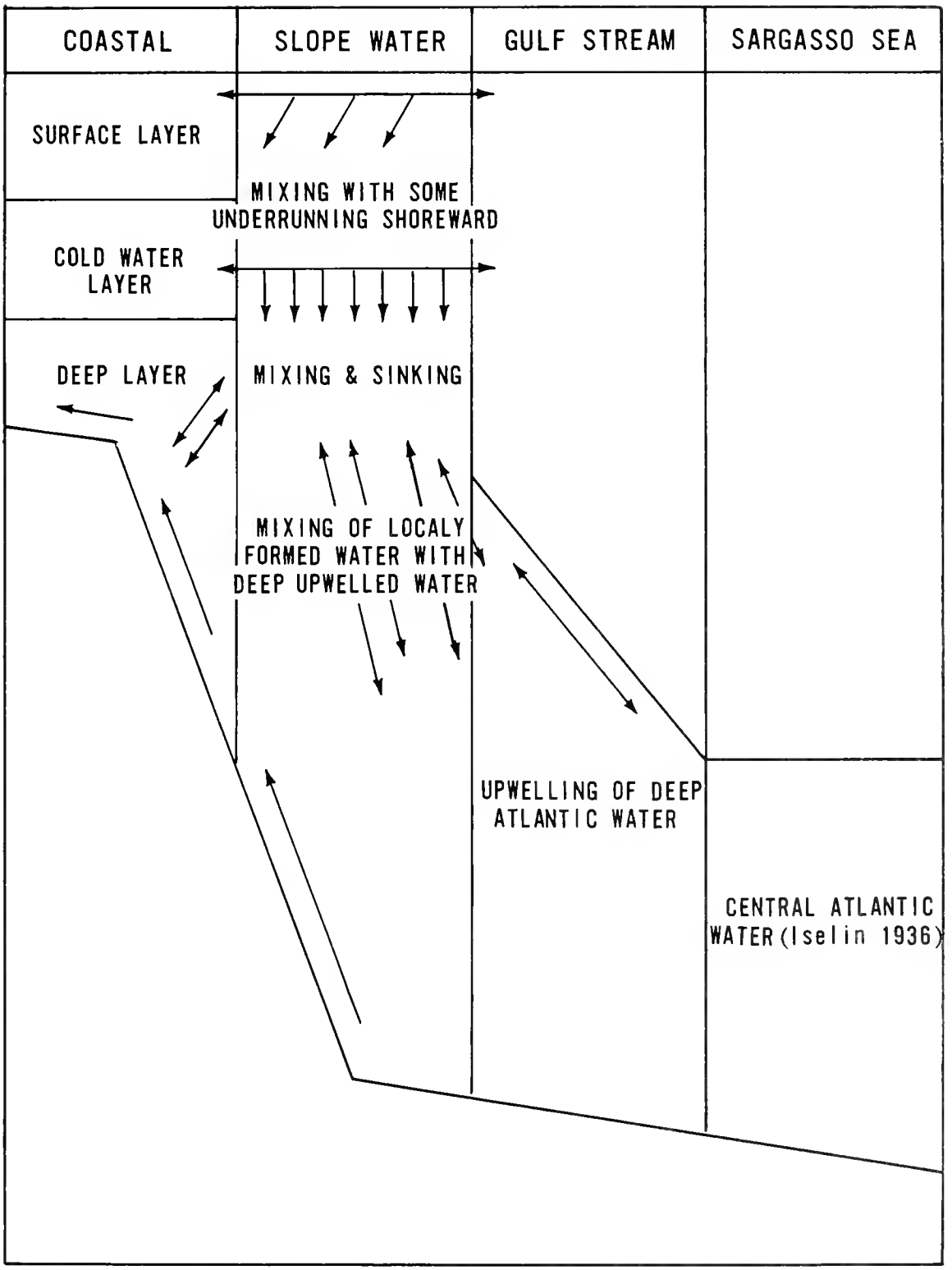

FIGURE 4.—Schematic diagram showing the way in which Slope Water may be formed (McLellan et al., 1953).

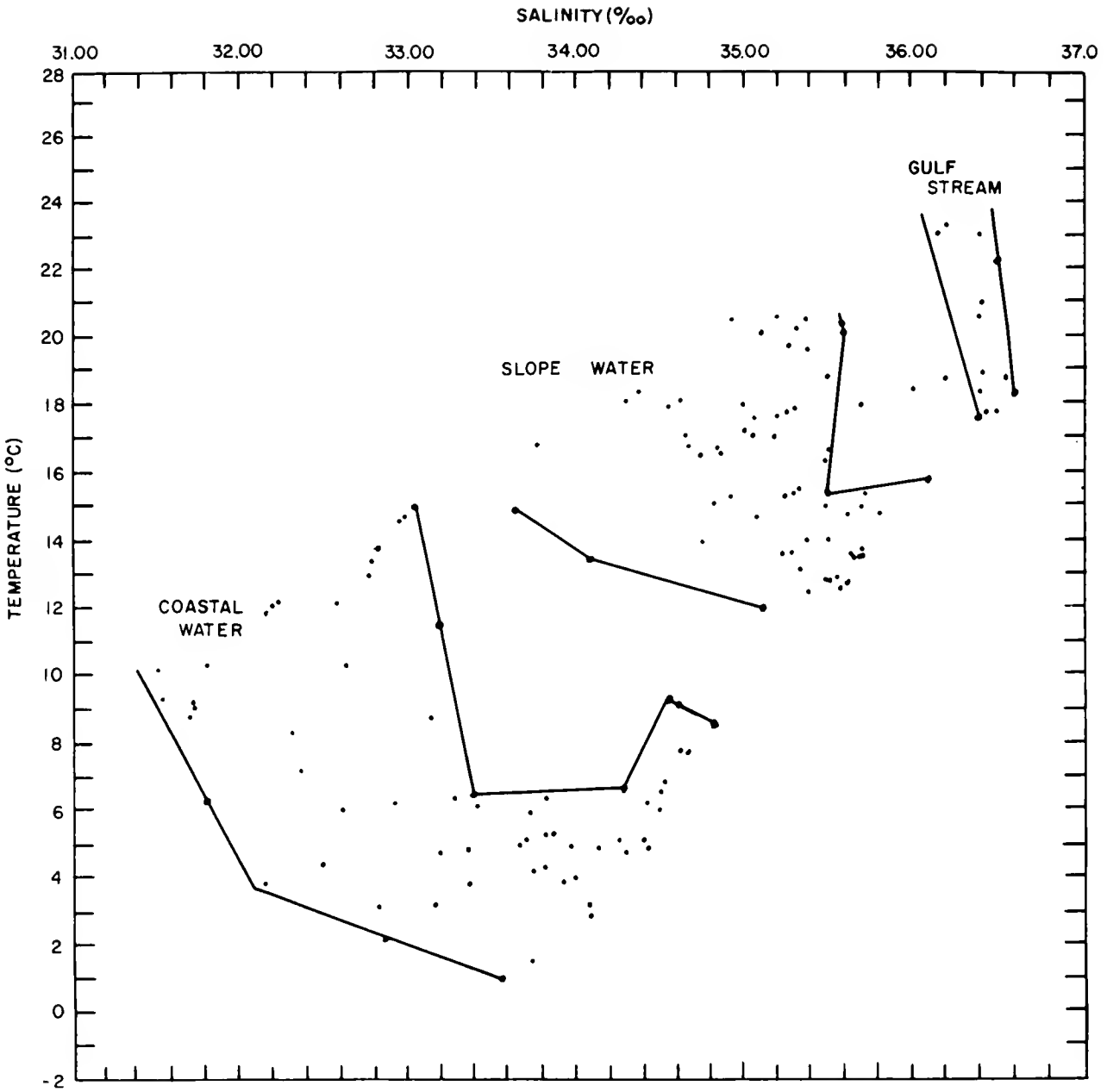

FIGURE 5.—T-S relations in the upper 150 m off the Scotian Shelf as observed during June 1952, (McLellan, 1957).

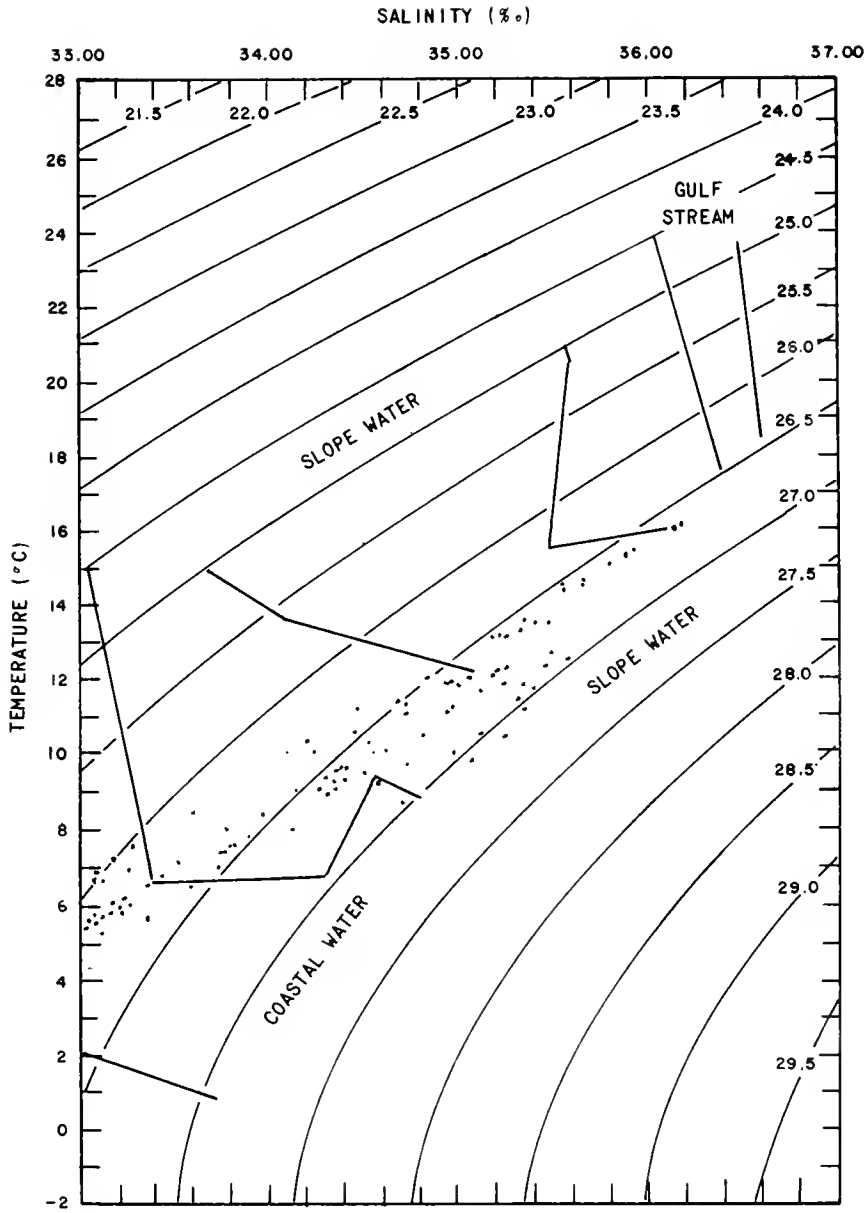

FIGURE 6.—T-S relations for the upper 150 m for stations 1–4, 22–28, 49, 50 (Sections 1–4) ICNAF 68–1, 15–26 January 1968.

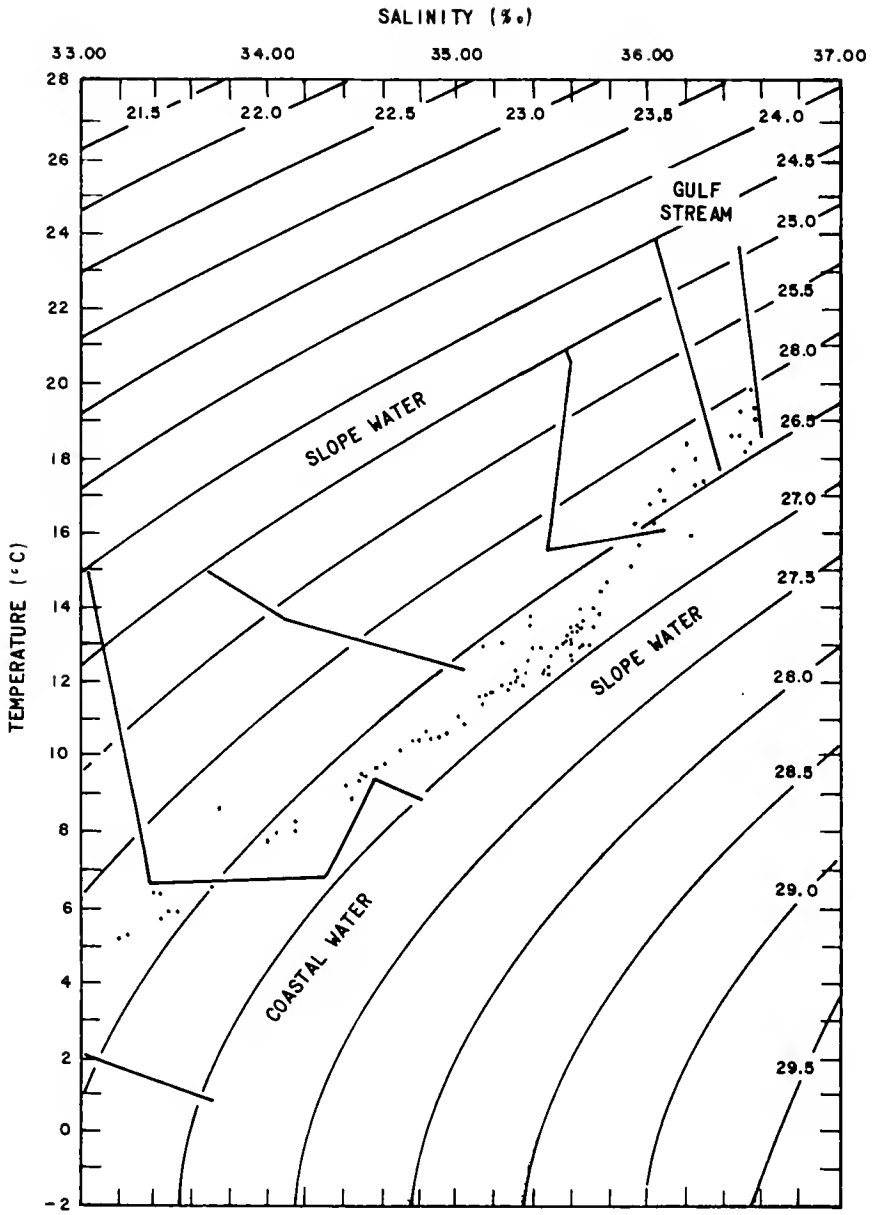

FIGURE 7.—T-S relations for the upper 150 m for stations 1–3, 14–21, 41–46, 48 (Sections 1–5), ICNAF 69–1, 28 January-27 February 1969.

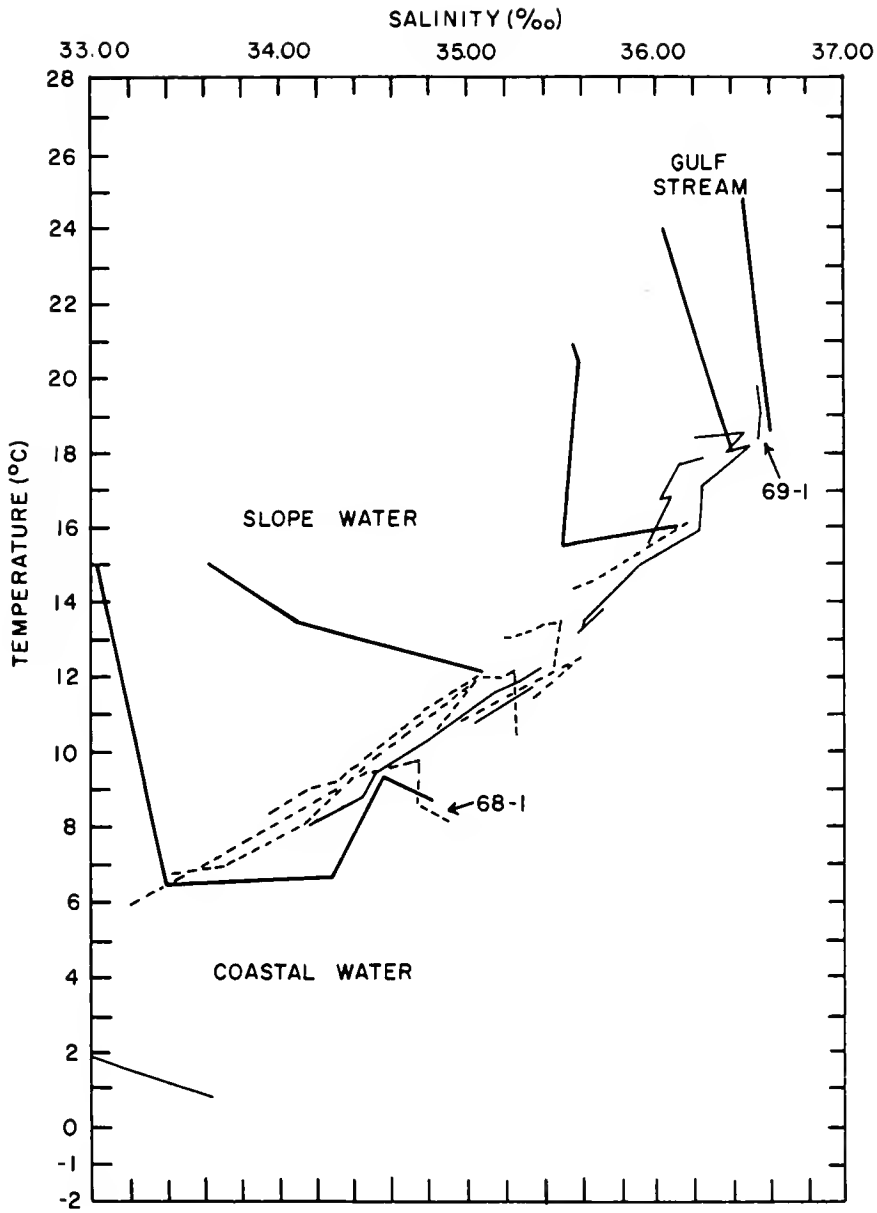

FIGURE 8.—T-S distribution in upper 150 m over the Eastern Channel and Georges Bank; stippled lines are drawn for stations 1, 2, 3, 4, 25, 26 (Sections 1–3) ICNAF 68–1, 15–26 January 1968 and solid lines are drawn for stations 1, 2, 15, 16, 17, 20, 42, 46 (Sections 1–5) ICNAF 69–1, 28 January-27 February 1969.

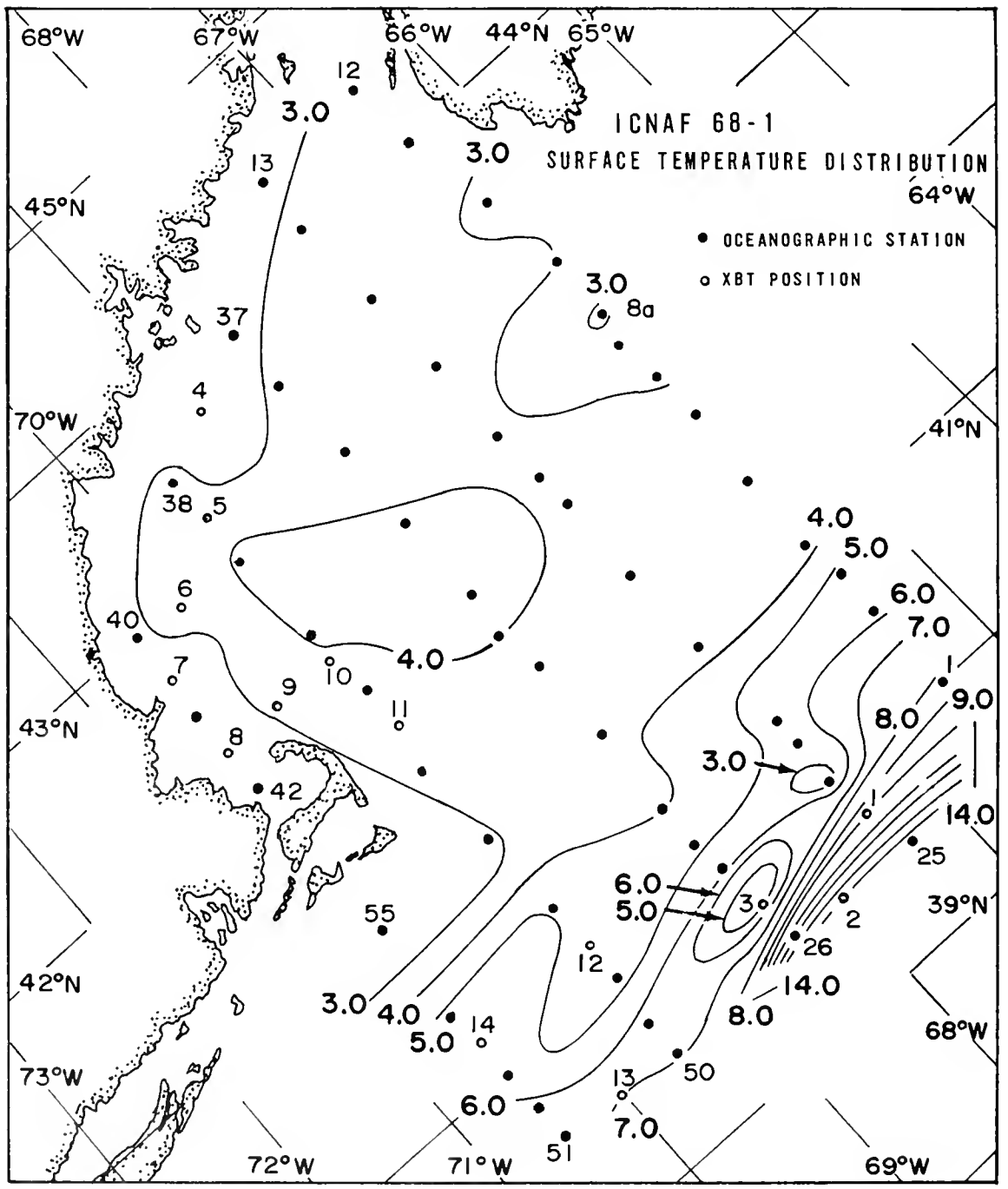

FIGURE 9.—Surface temperature (°C.) distribution, ICNAF 68–1, 15–26 January 1968.

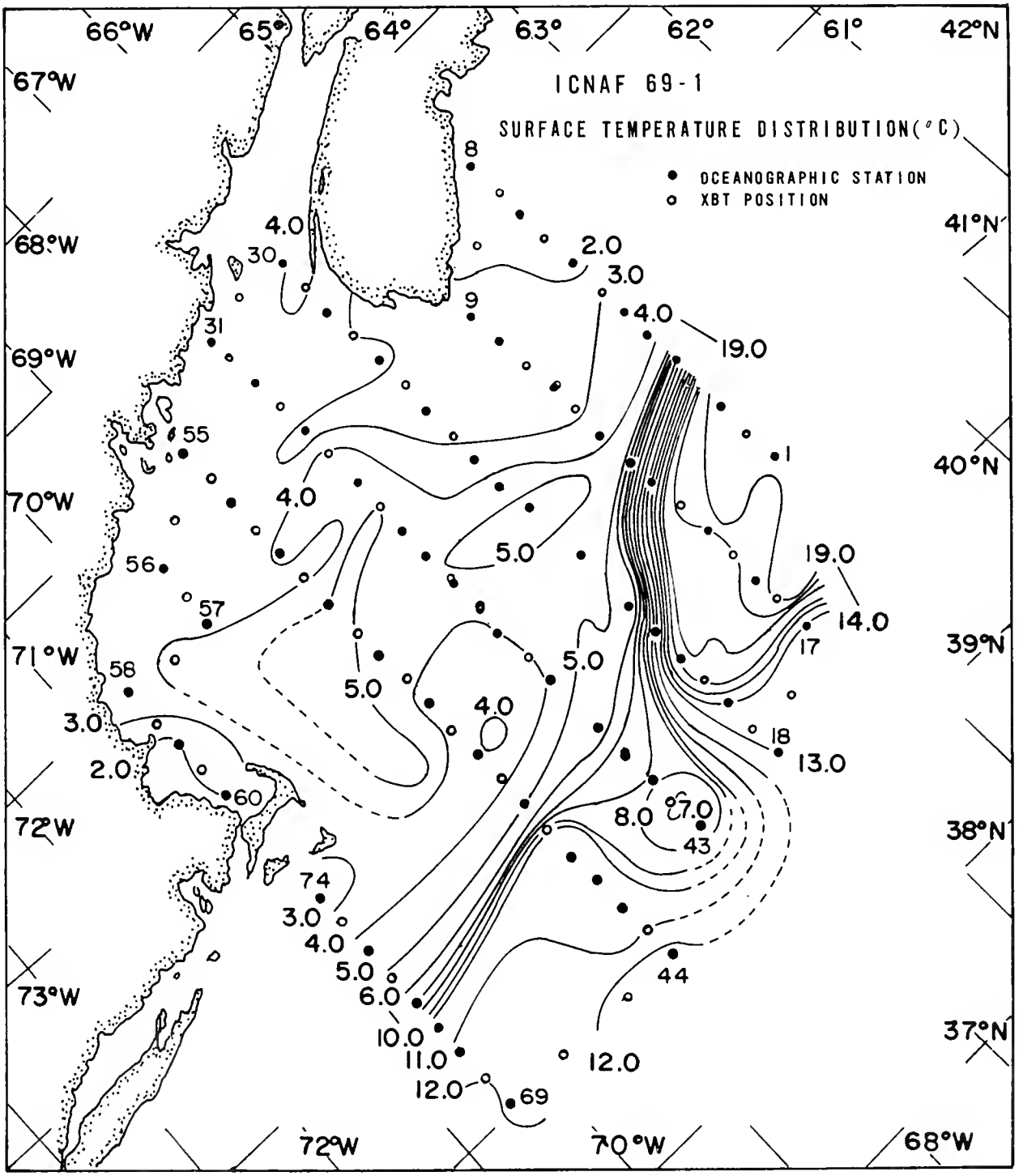

FIGURE 10.—Surface temperature (°C.) distribution, ICNAF 69–1, 28 January-27 February 1969.

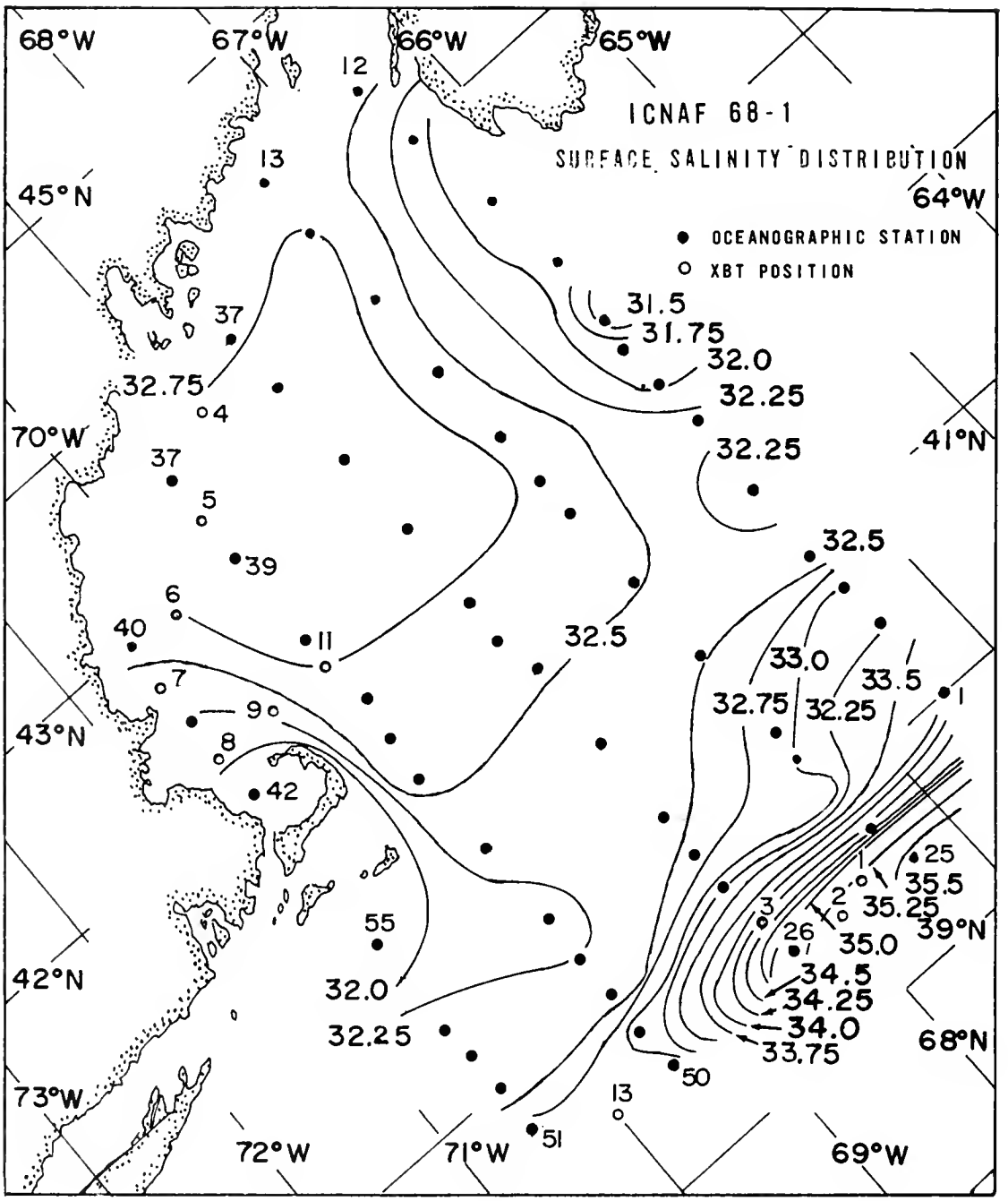

FIGURE 11.—Surface salinity (‰) distribution, ICNAF 68–1, 15–26 January 1968.

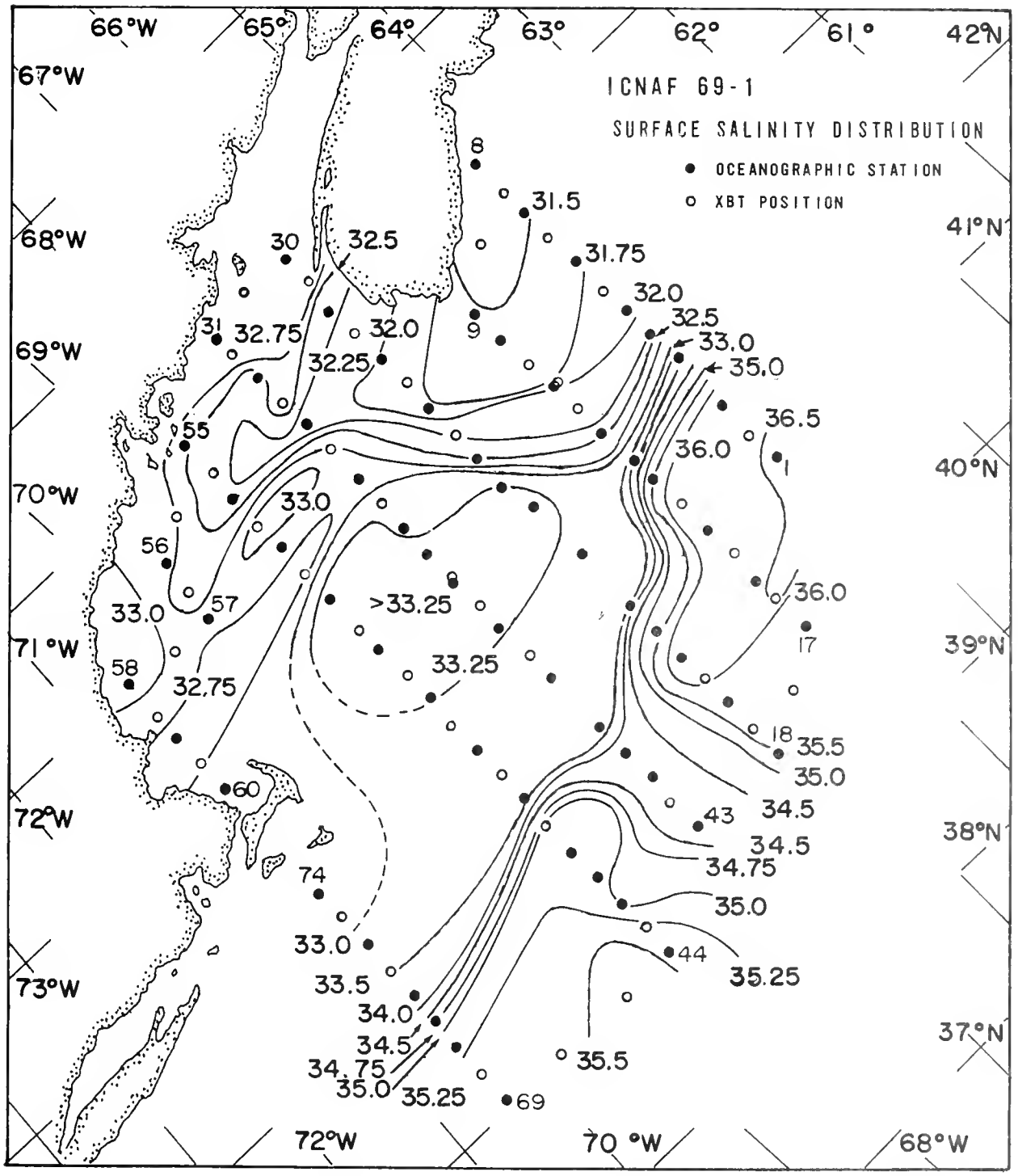

FIGURE 12.—Surface salinity (‰) distribution, ICNAF 69–1, 28 January-27 February 1969.

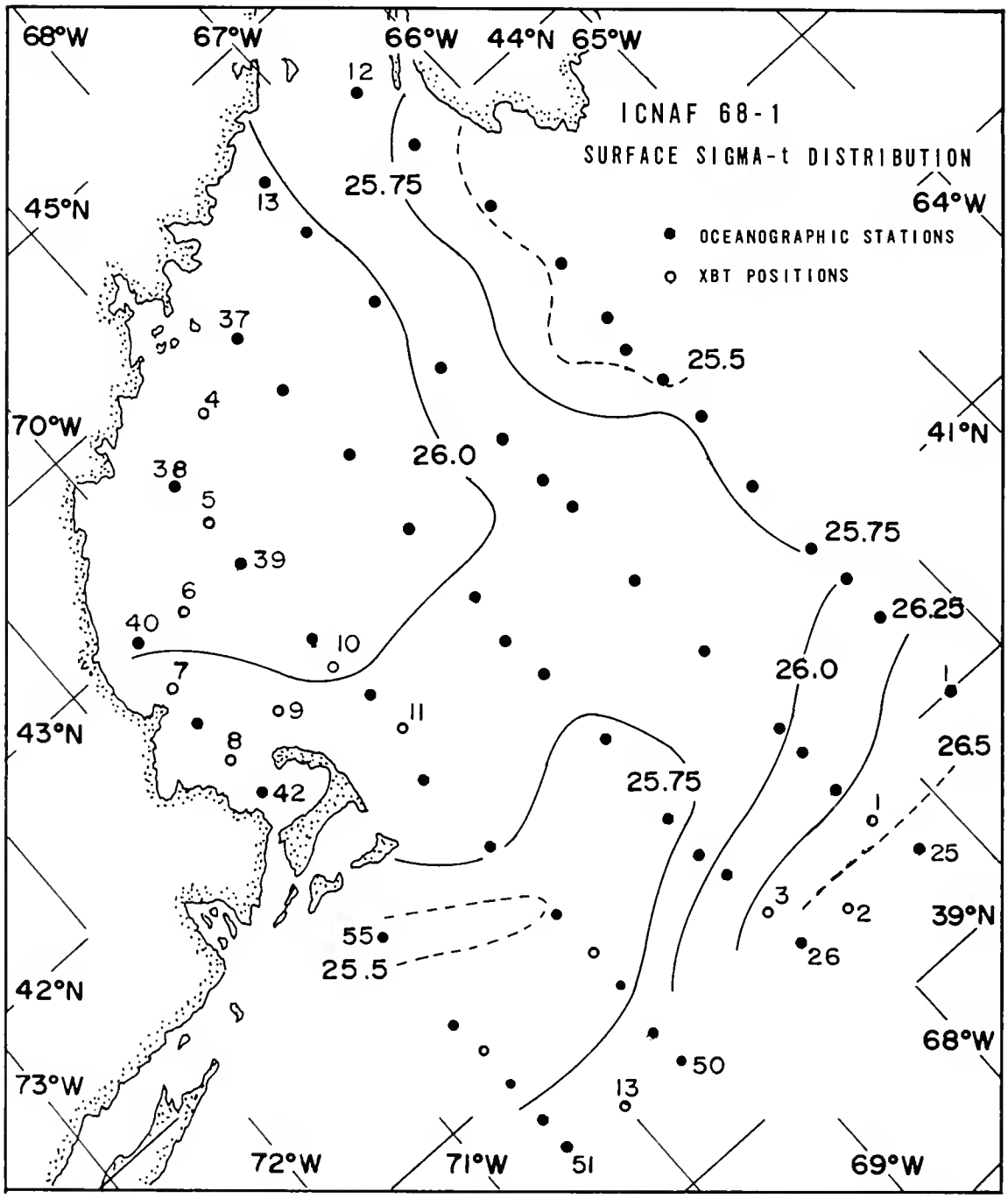

FIGURE 13.—Surface sigma-t (g/l) distribution, ICNAF 68–1, 15–26 January 1968.

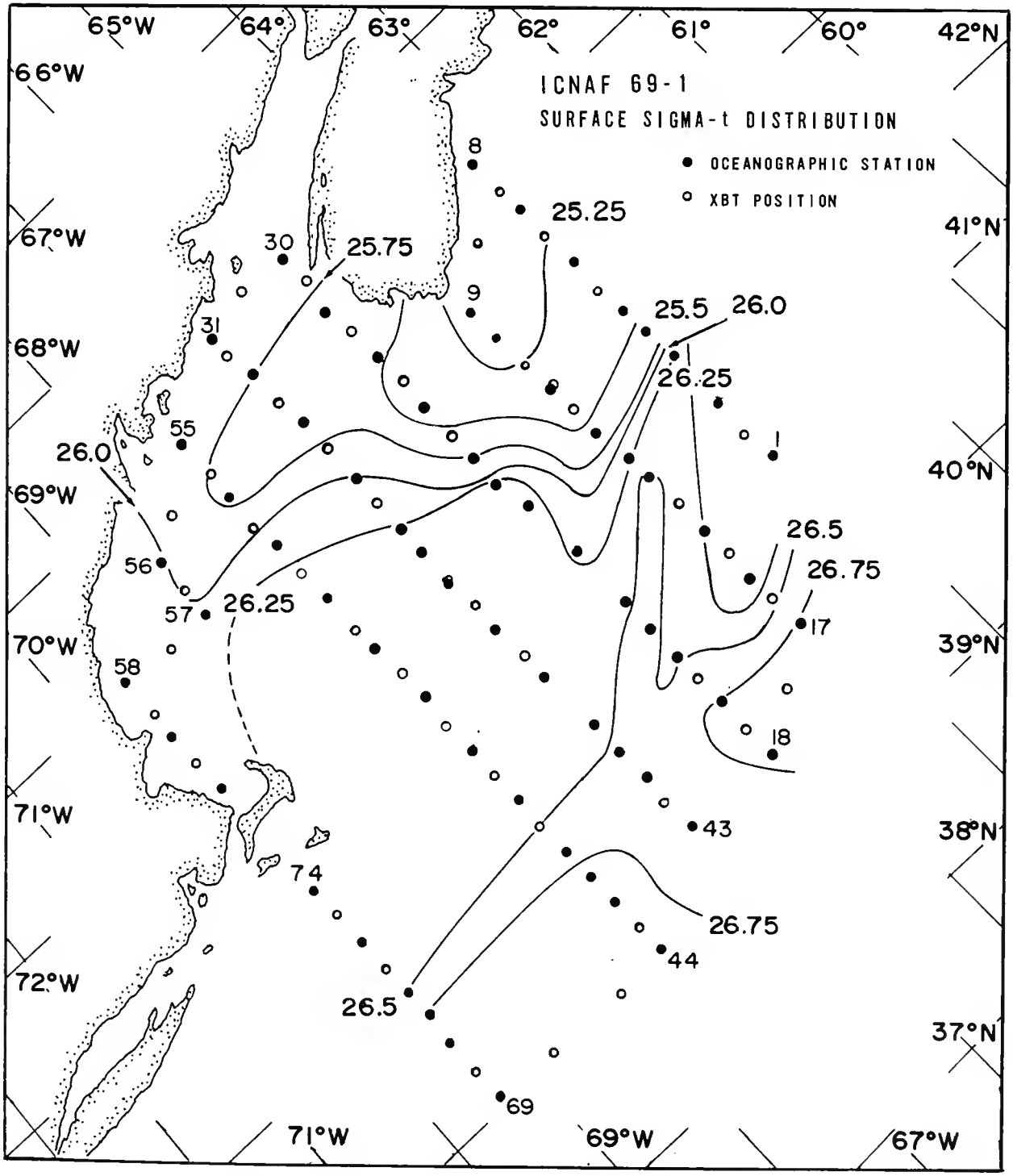

FIGURE 14.—Surface sigma-t (g/l) distribution, ICNAF 69-1, 28 January-27 February 1969.

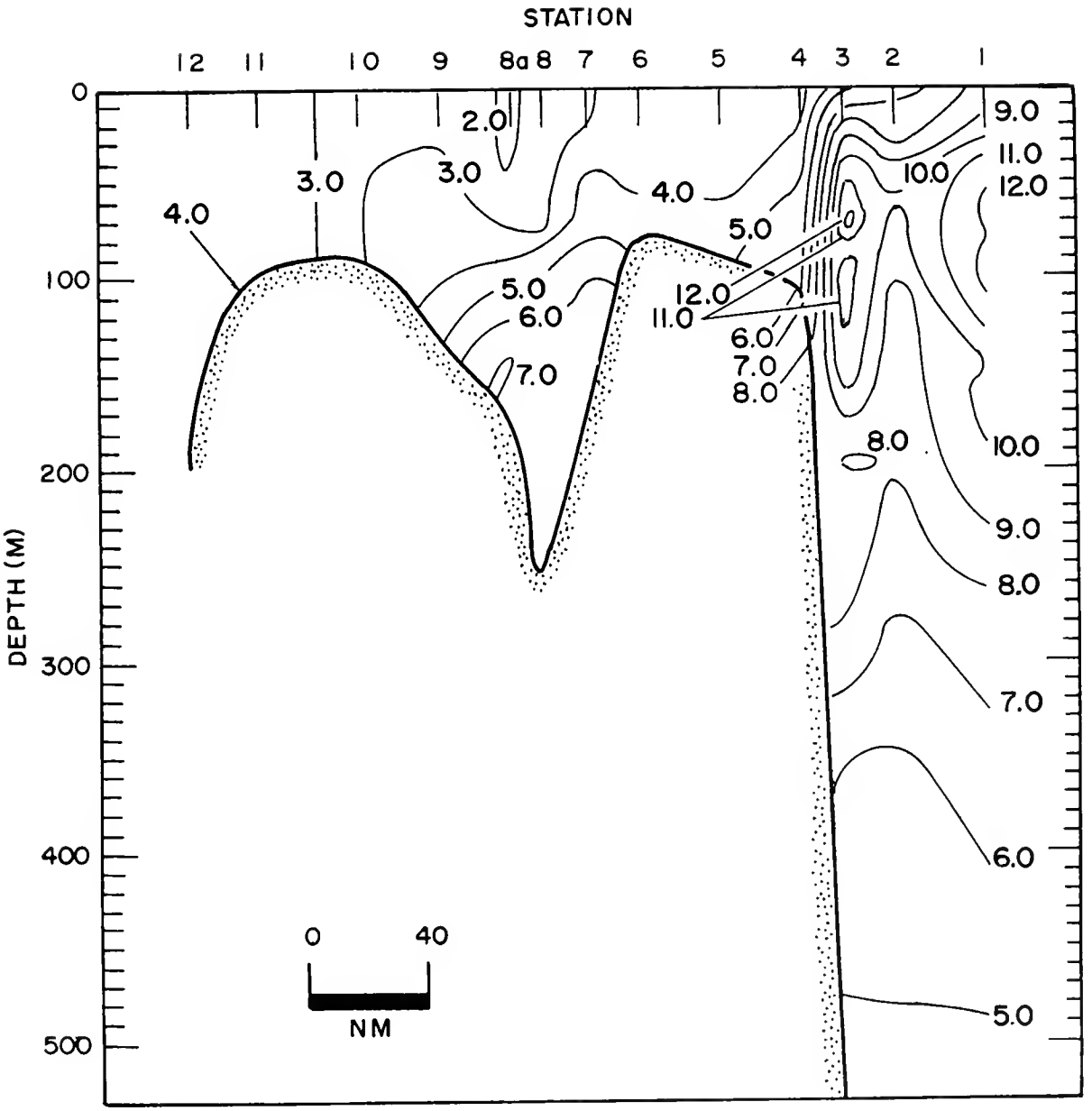

FIGURE 15.—Profile of temperature (°C.) section 1, ICNAF 68-1, 15-26 January 1968.

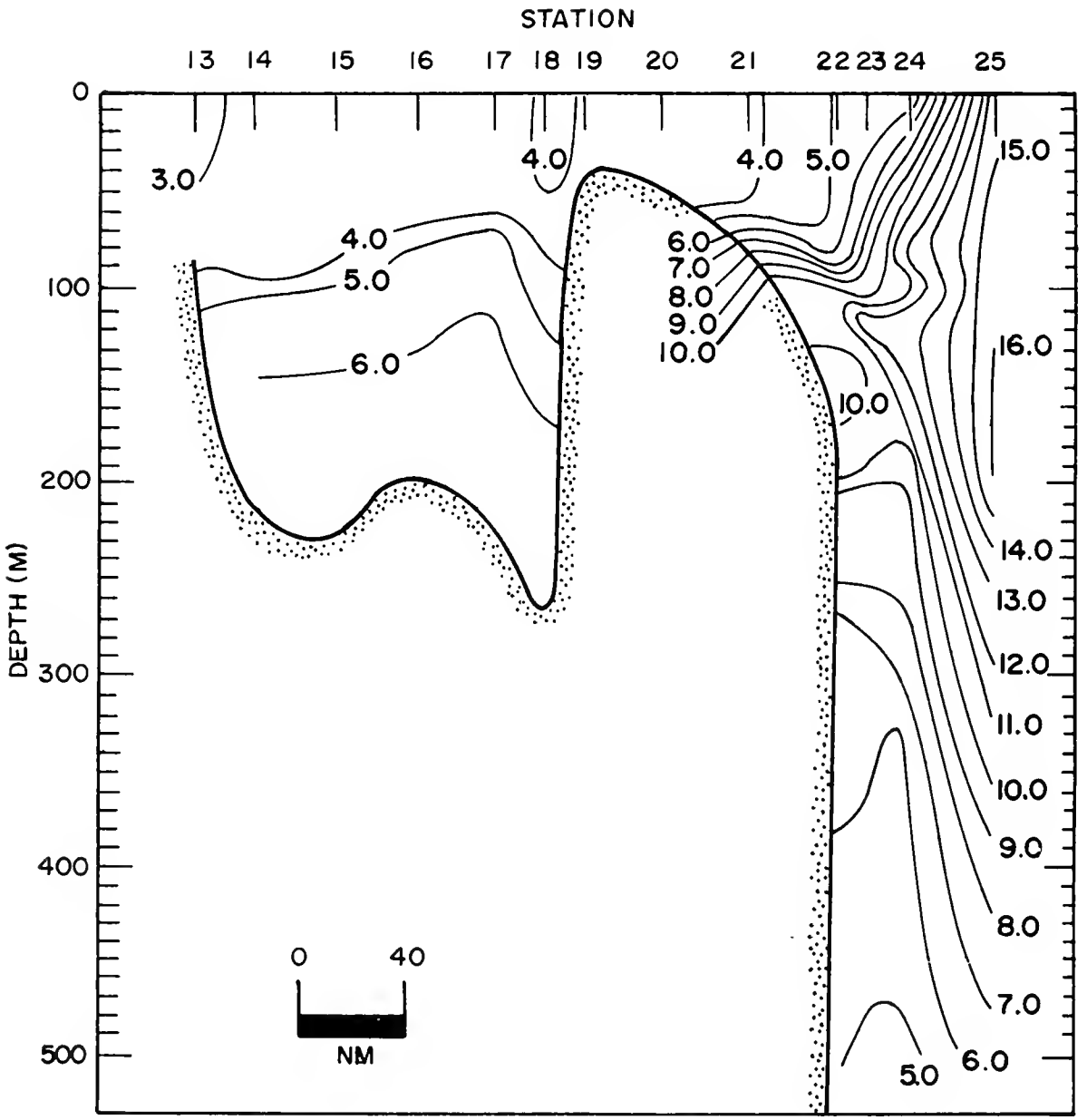

FIGURE 16.—Profile of temperature (°C.) section 2, ICNAF 68-1, 15-26 January 1968.

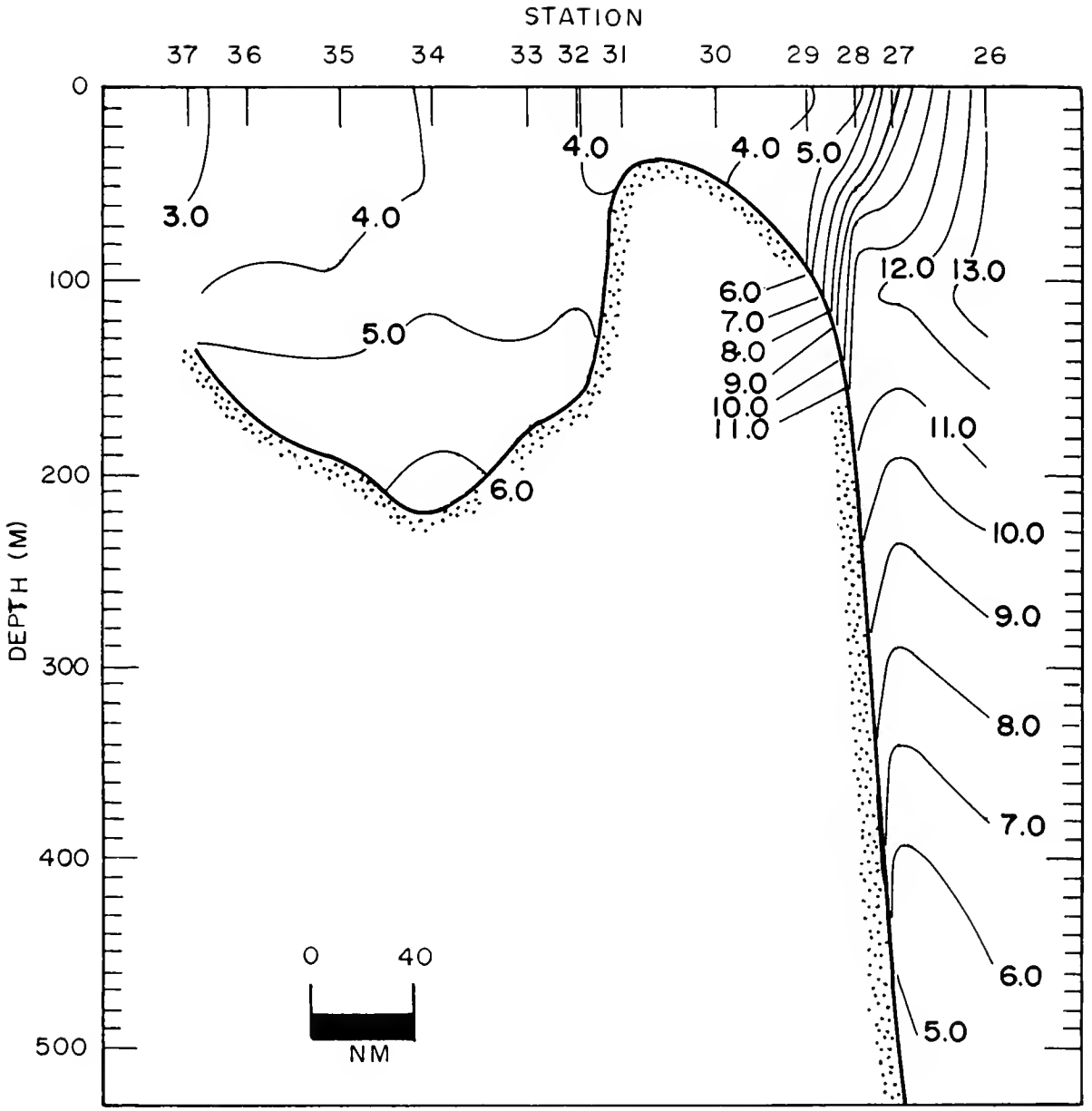

FIGURE 17.—Profile of temperature (°C.), section 3, ICNAF 68–1, 15–26 January 1968.

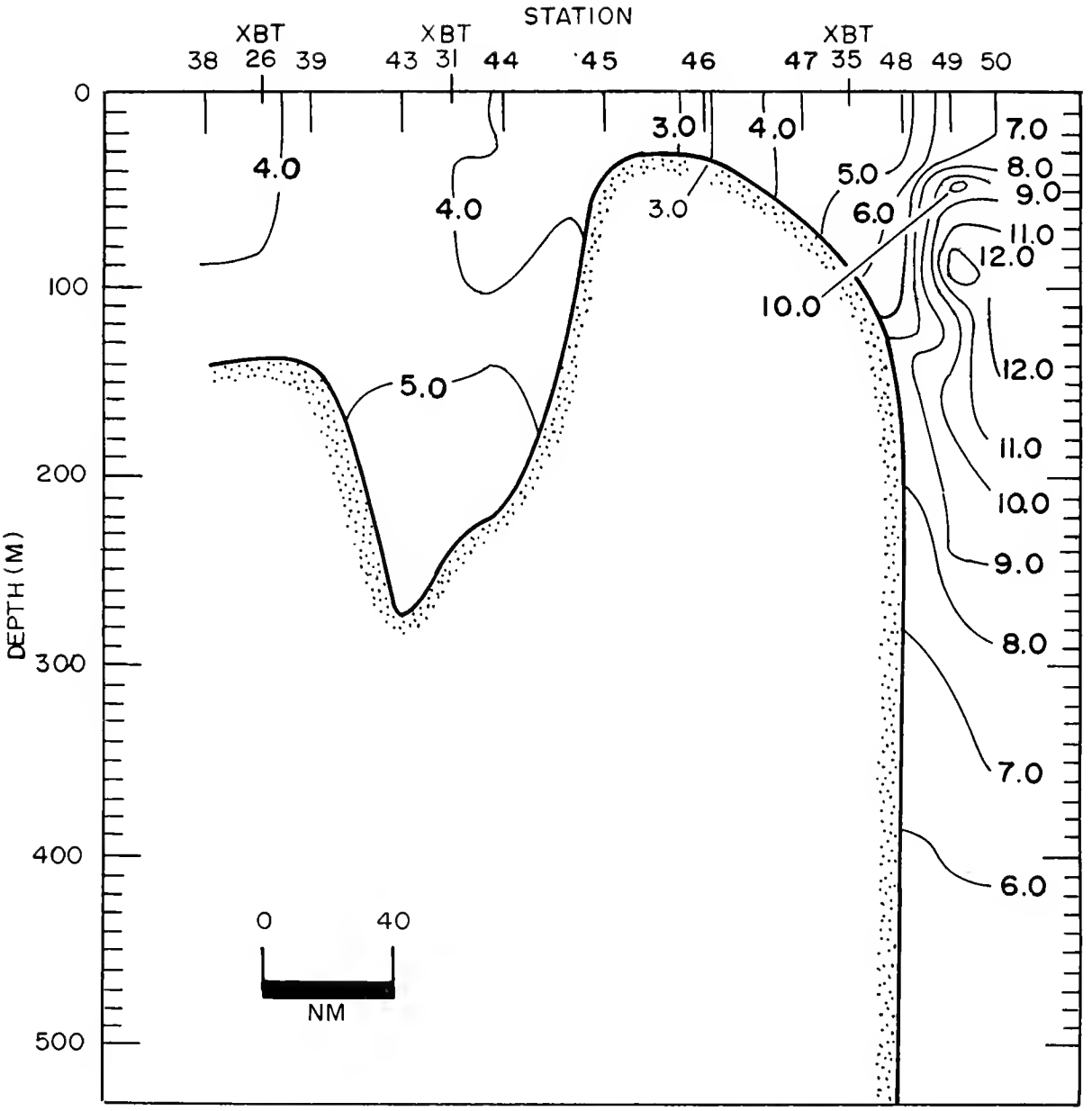

FIGURE 18.—Profile of temperature (°C.), section 4, ICNAF 68–1, 15–26 January 1968.

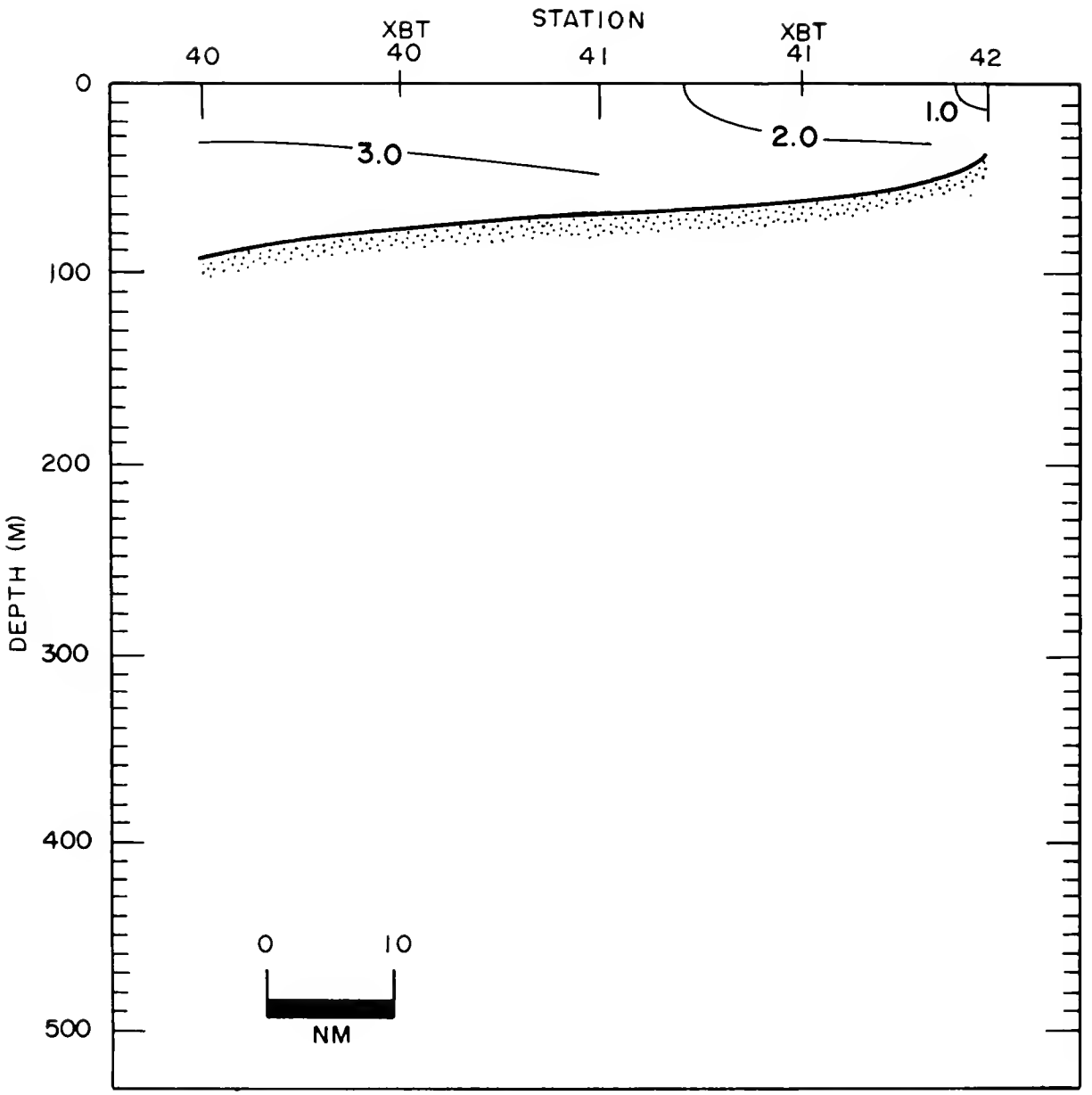

FIGURE 19.—Profile of temperature (°C.), section 5, ICNAF 68-1, 15-26 January 1968.

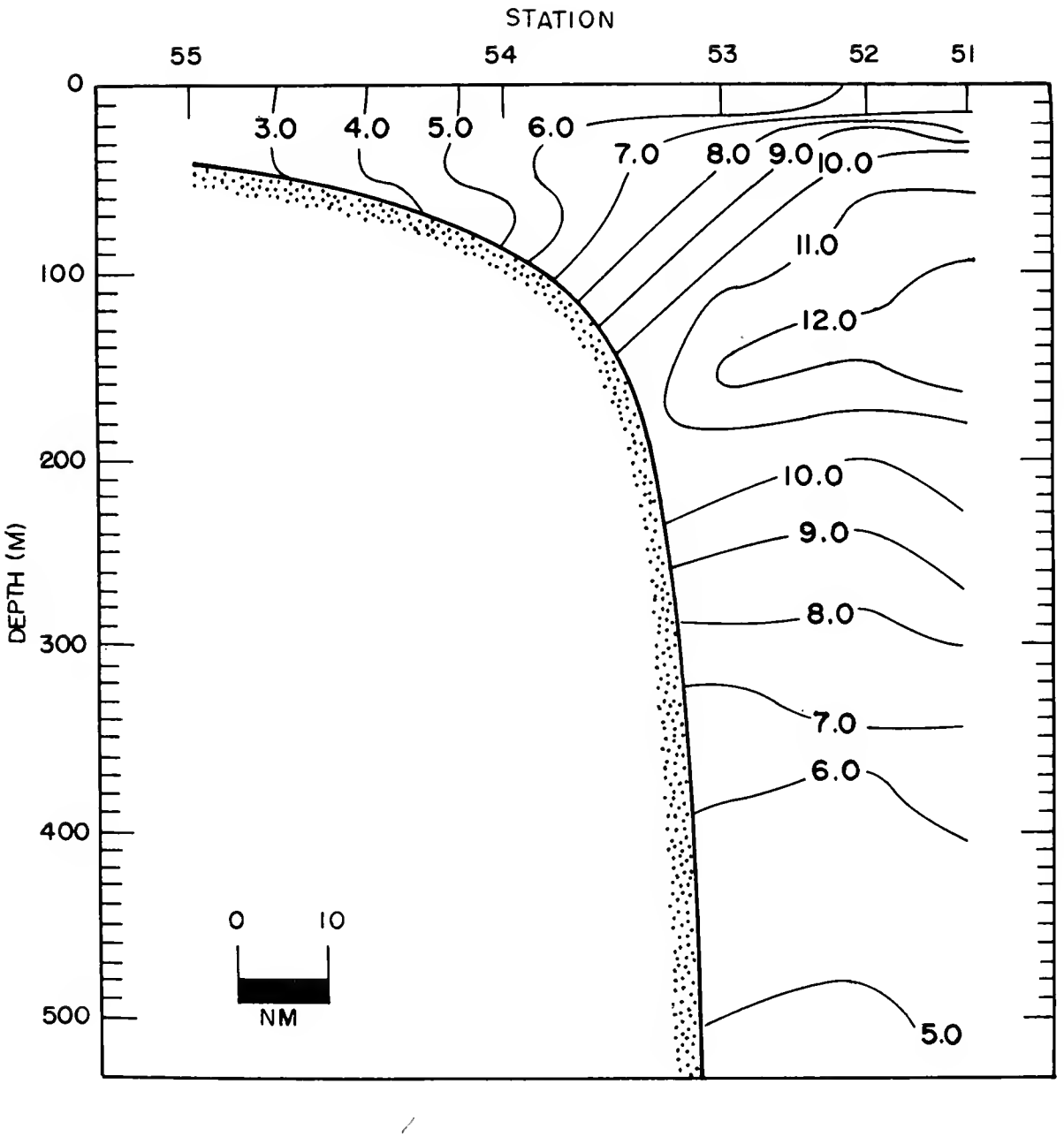

FIGURE 20.—Profile of temperature (°C.), section 6, ICNAF 68-1, 15-26 January 1968.

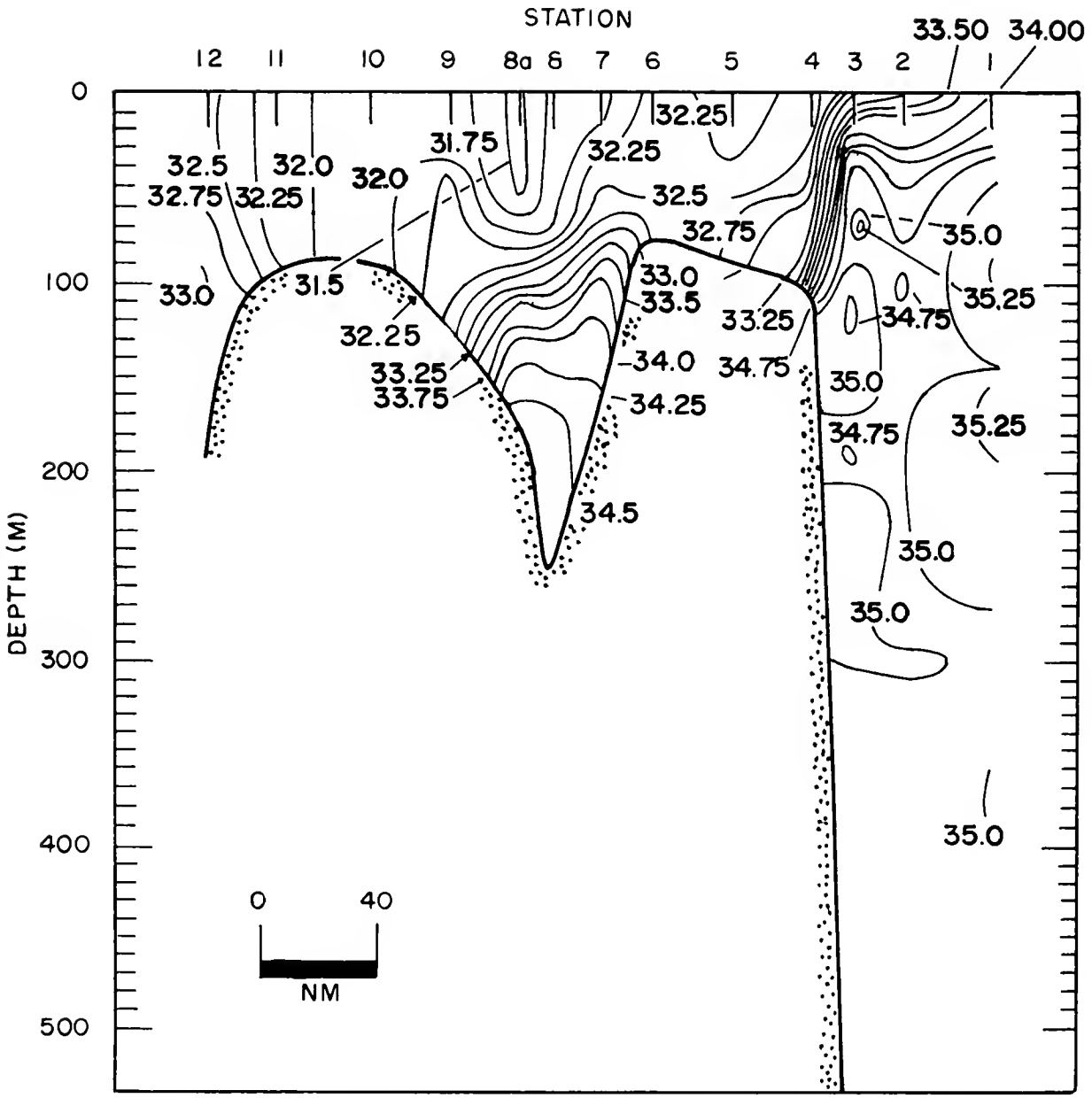

FIGURE 21.—Profile of salinity (‰), section 1, ICNAF 68–1, 15–26 January 1968.

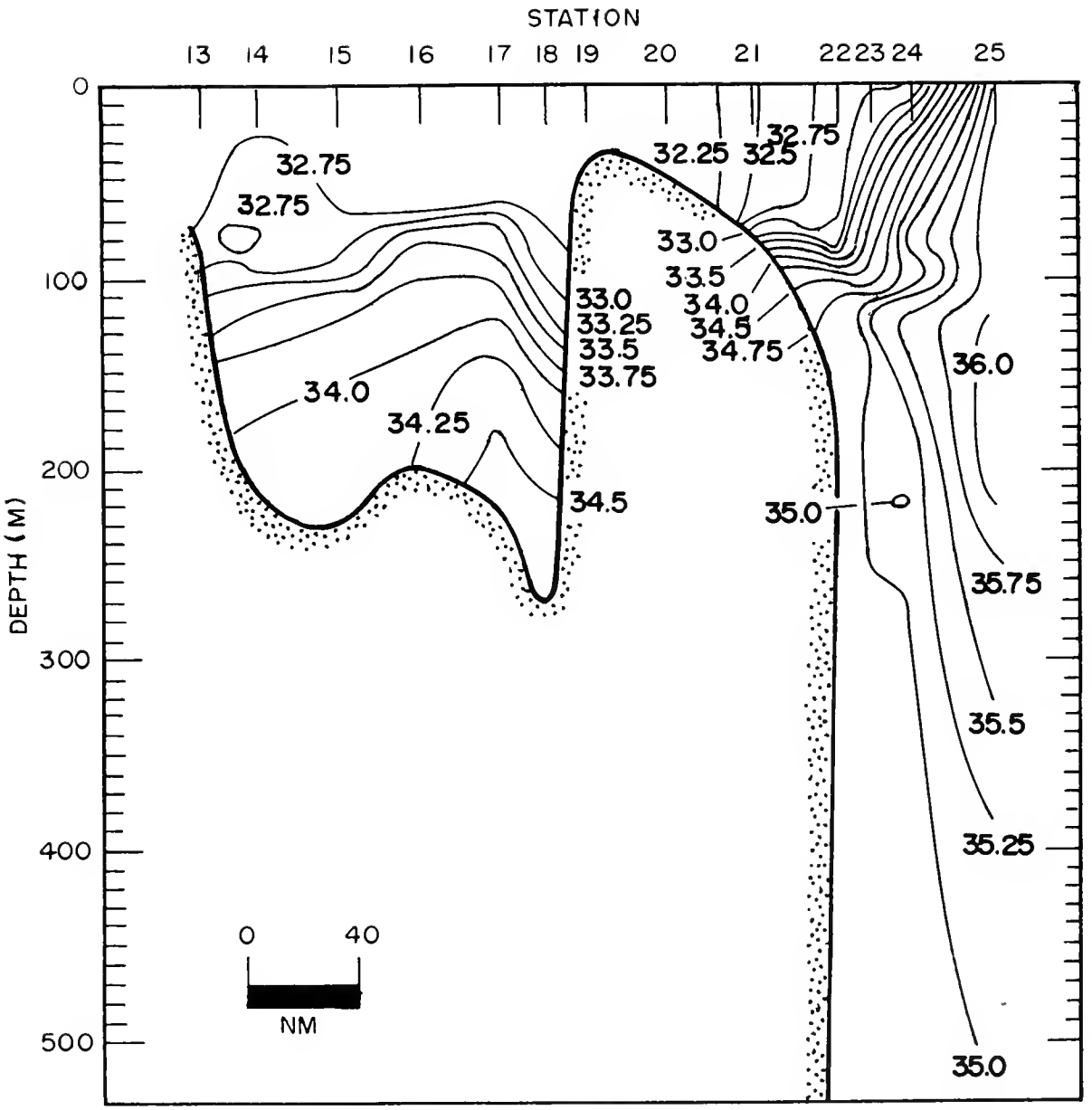

FIGURE 22.—Profile of salinity (‰), section 2, ICNAF 68–1, 15–26 January 1968.

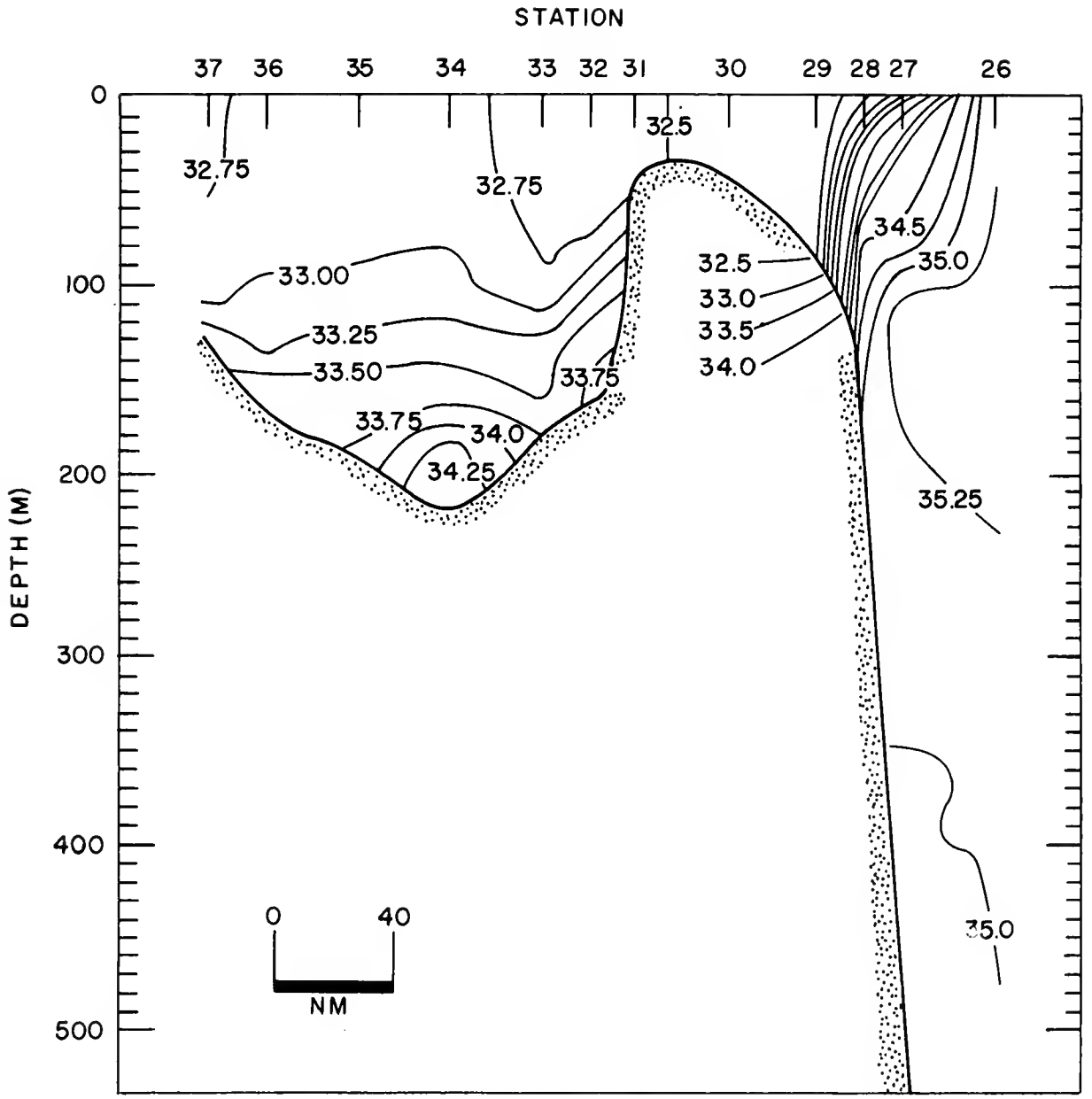

FIGURE 23.—Profile of salinity (°/$_{oo}$), section 3, ICNAF 68-1, 15-26 January 1968.

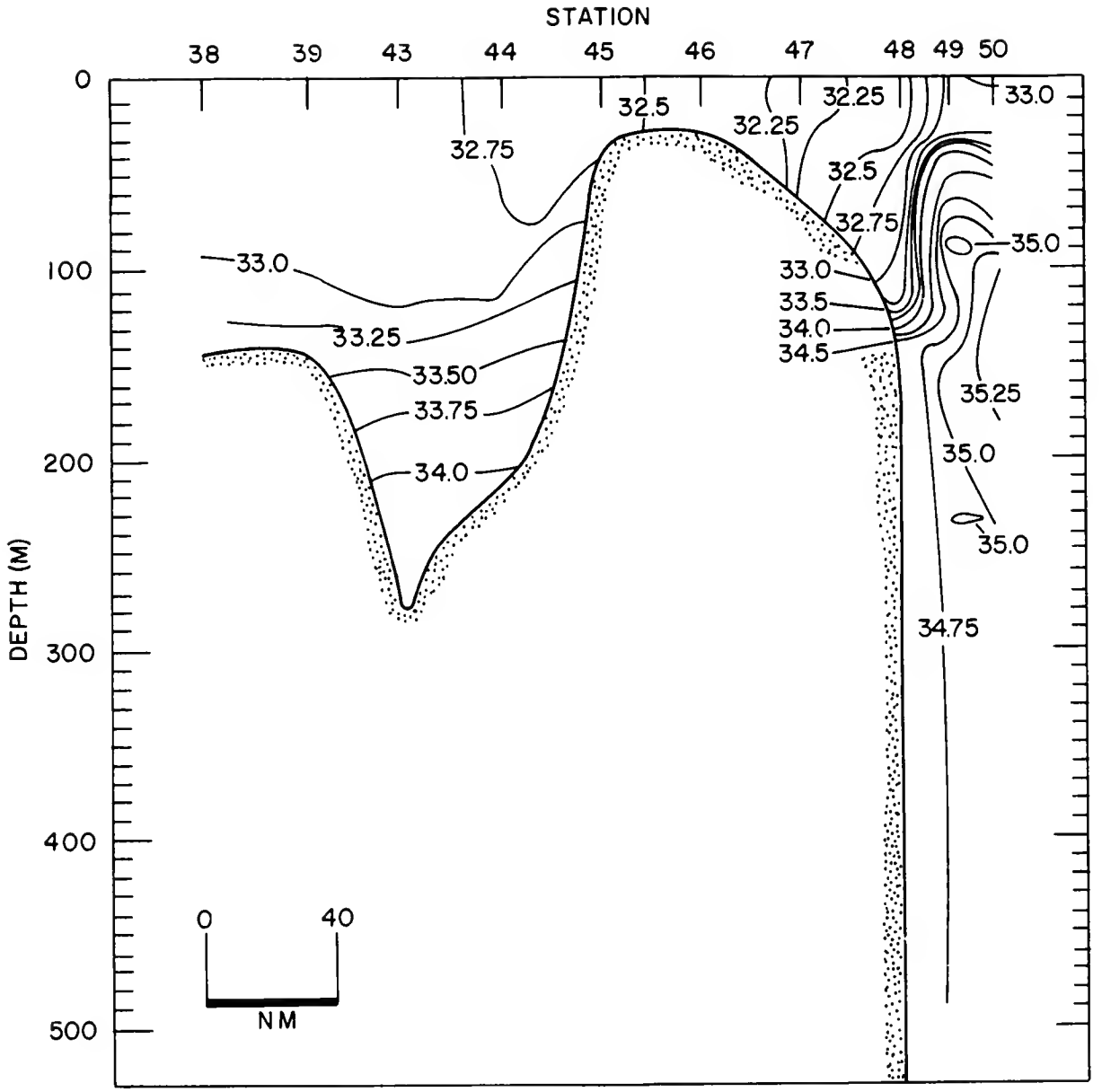

FIGURE 24.—Profile of salinity (‰), section 4, ICNAF 68–1, 15–26 January 1968.

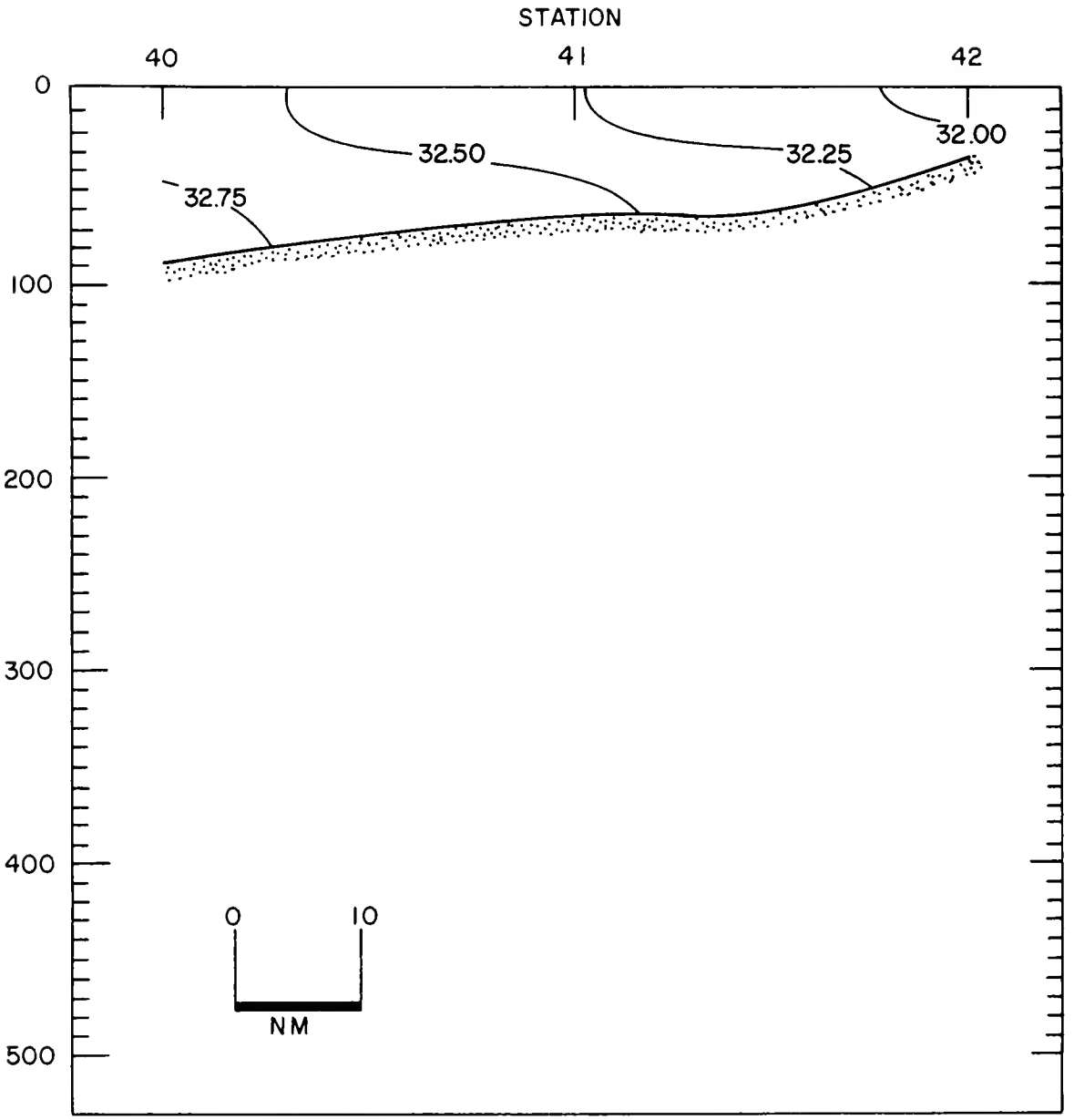

FIGURE 25.—Profile of salinity (‰), section 5, ICNAF 68-1, 15-26 January 1968.

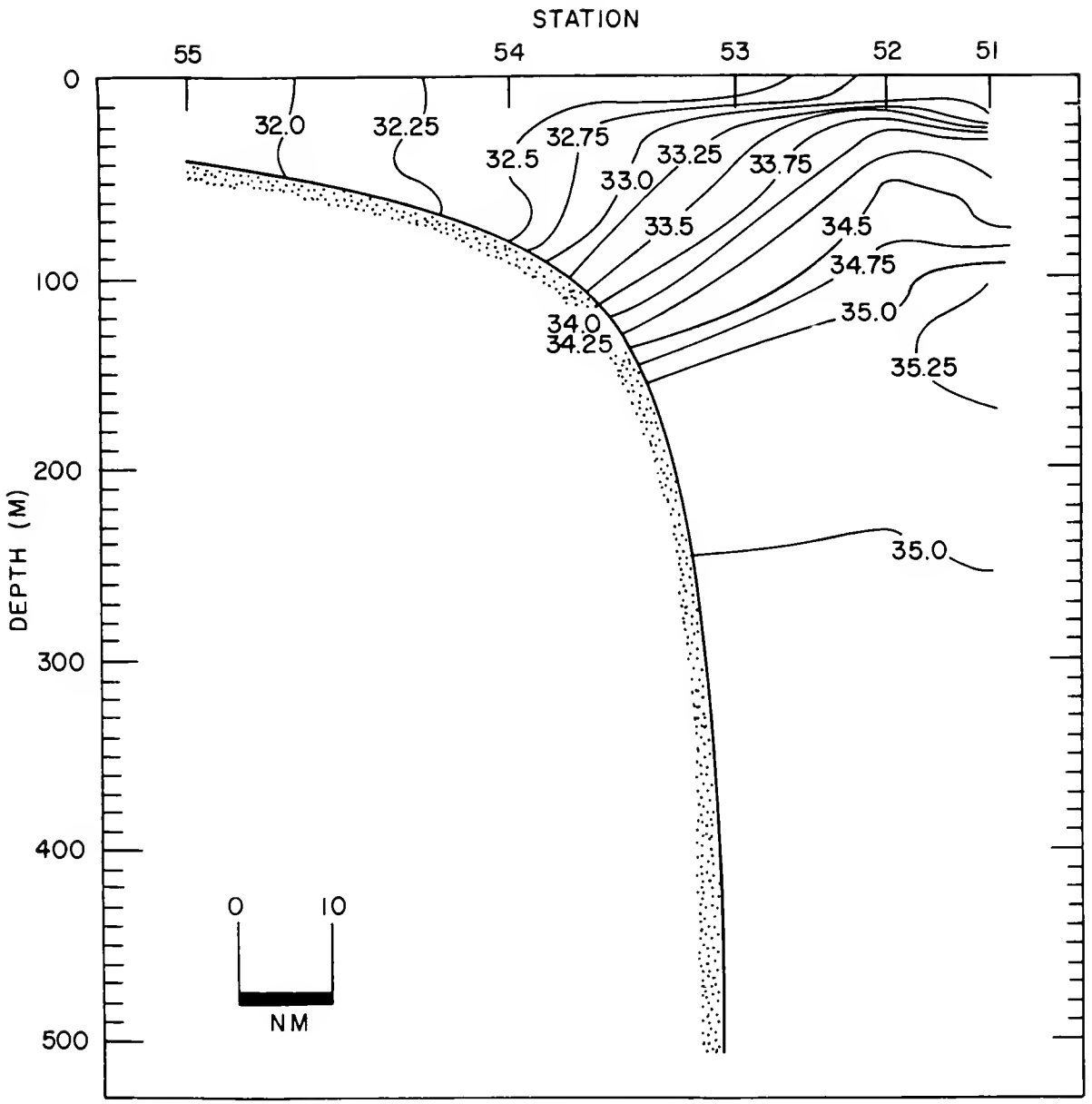

FIGURE 26.—Profile of salinity (‰), section 6, ICNAF 68-1, 15-26 January 1968.

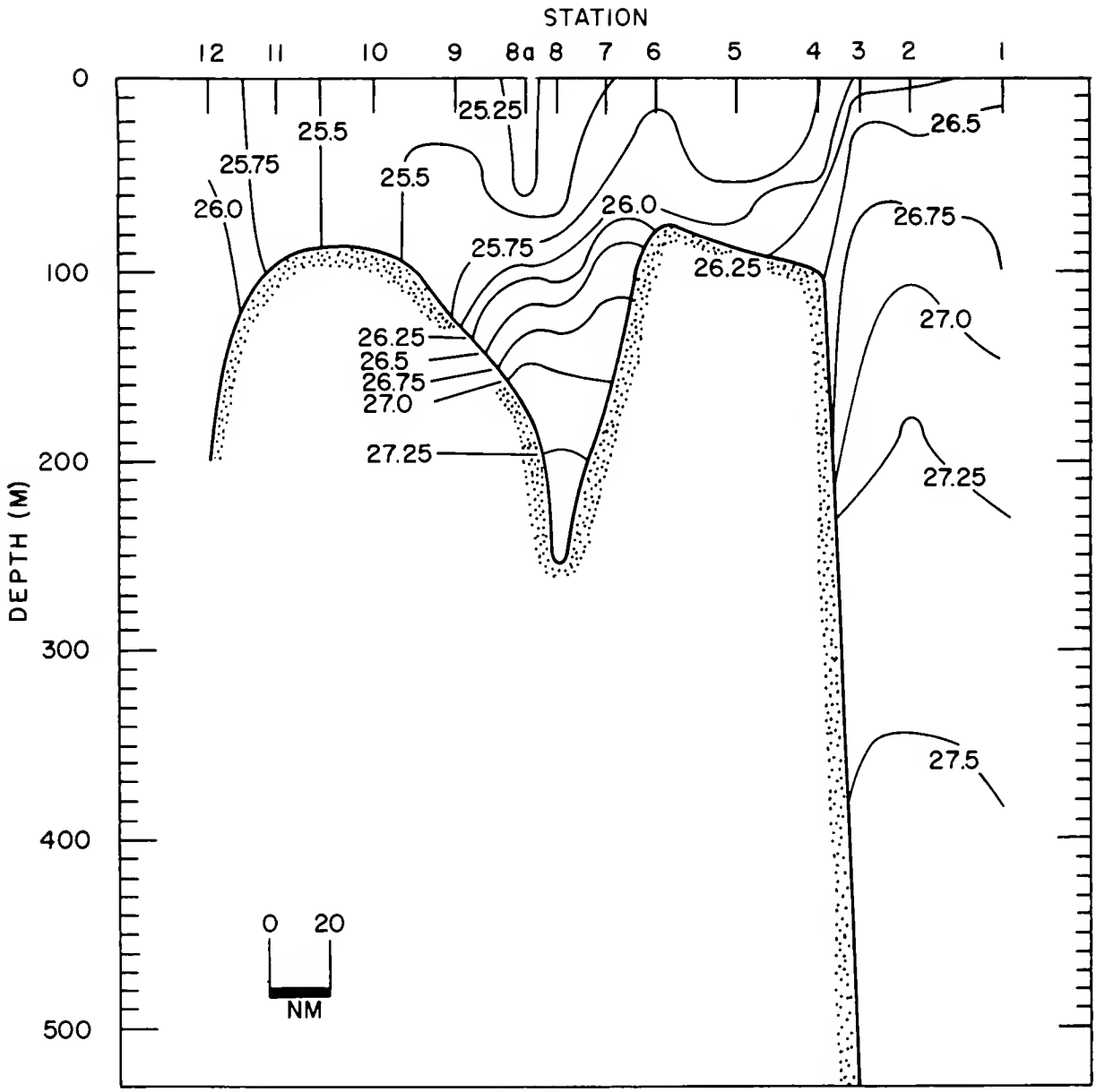

FIGURE 27.—Profile of sigma-t (g/l), section 1, ICNAF 68–1, 15–26 January 1968.

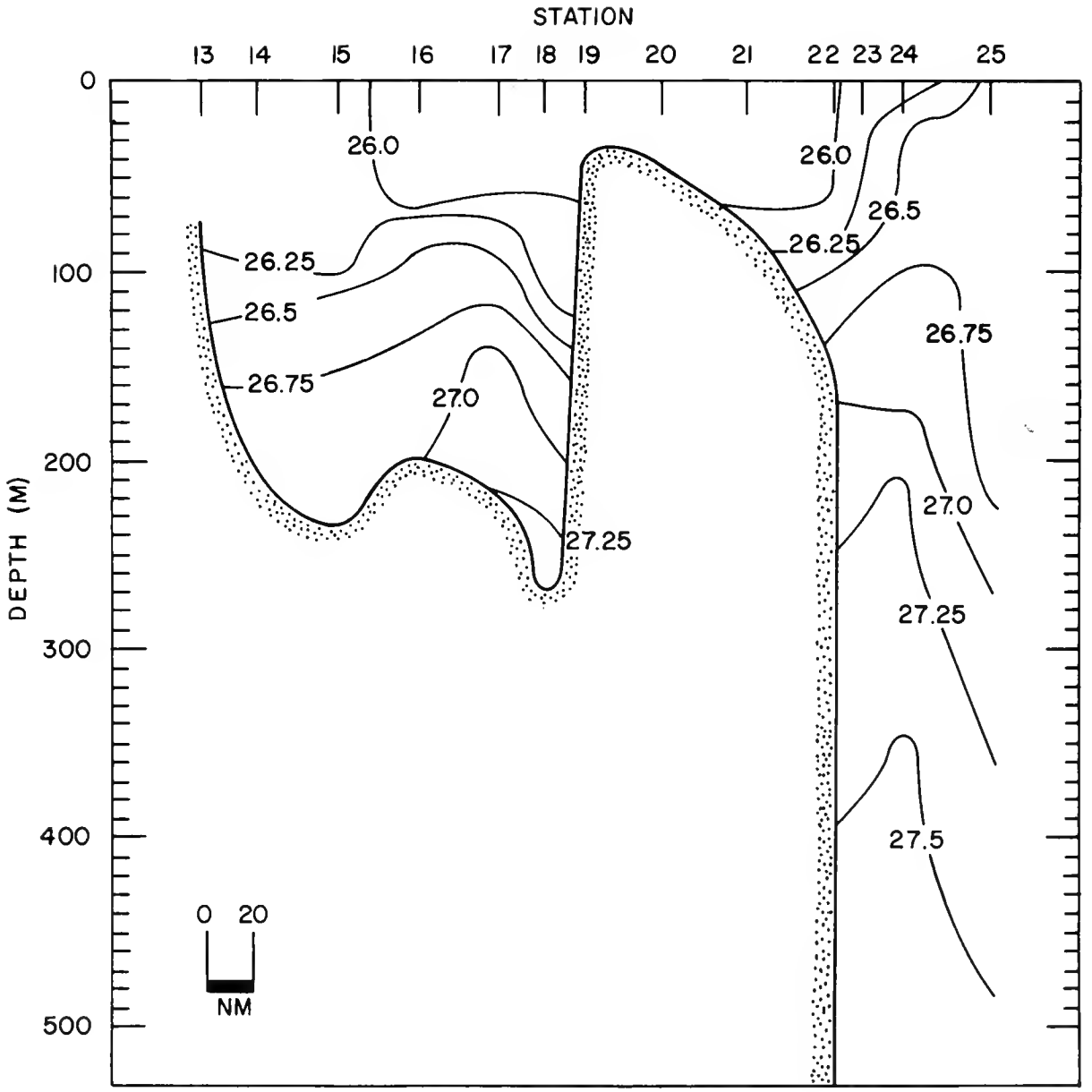

FIGURE 28.—Profile of sigma-t (g/l), section 2, ICNAF 68-1, 15–26 January 1968.

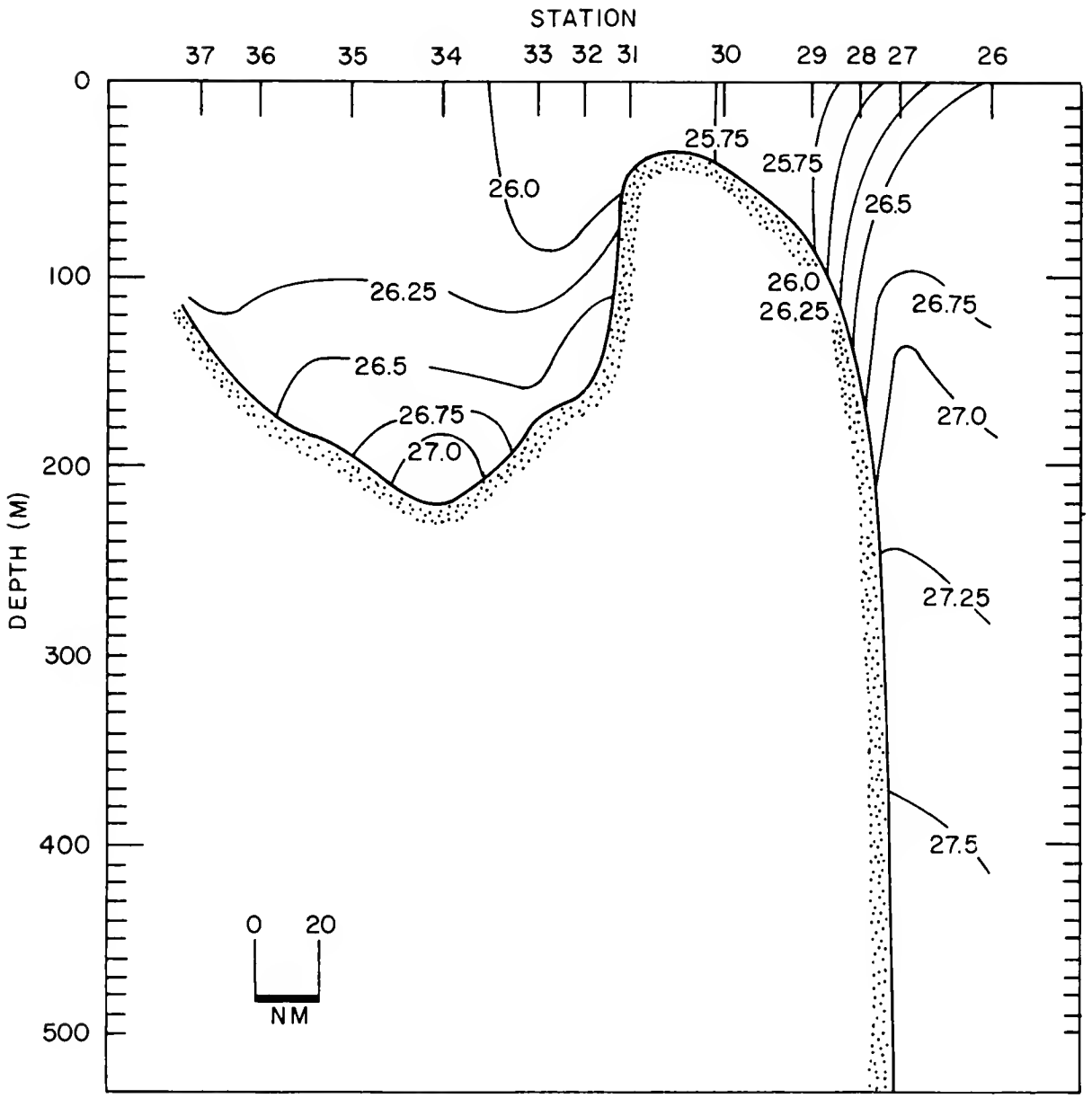

FIGURE 29.—Profile of sigma-t (g/l), section 3, ICNAF 68-1, 15-26 January 1968.

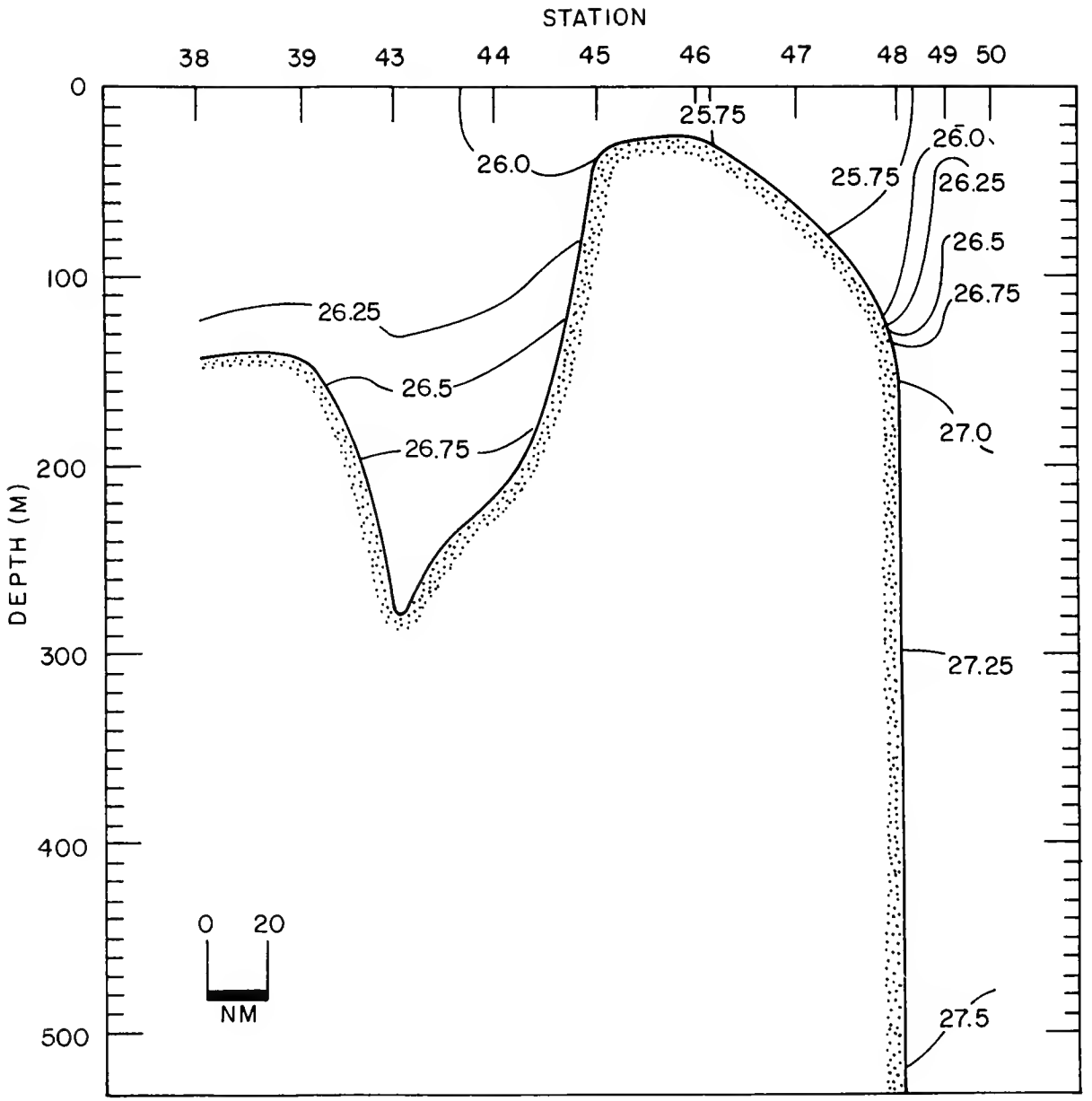

FIGURE 30.—Profile of sigma-t (g/l), section 4, ICNAF 68-1, 15-26 January 1968.

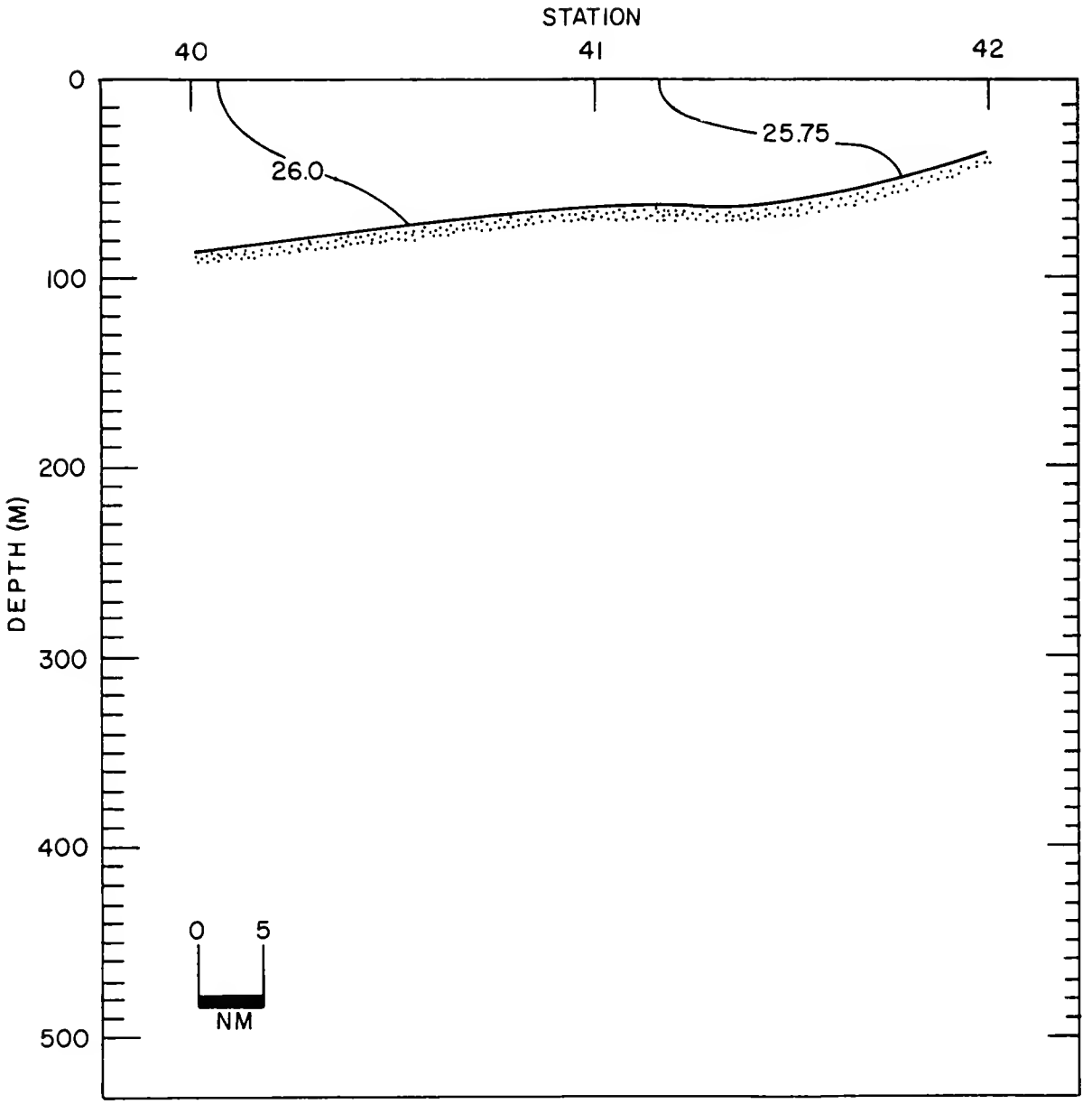

FIGURE 31.—Profile of sigma-t (g/l), section 5, ICNAF 68-1, 15-26 January 1968.

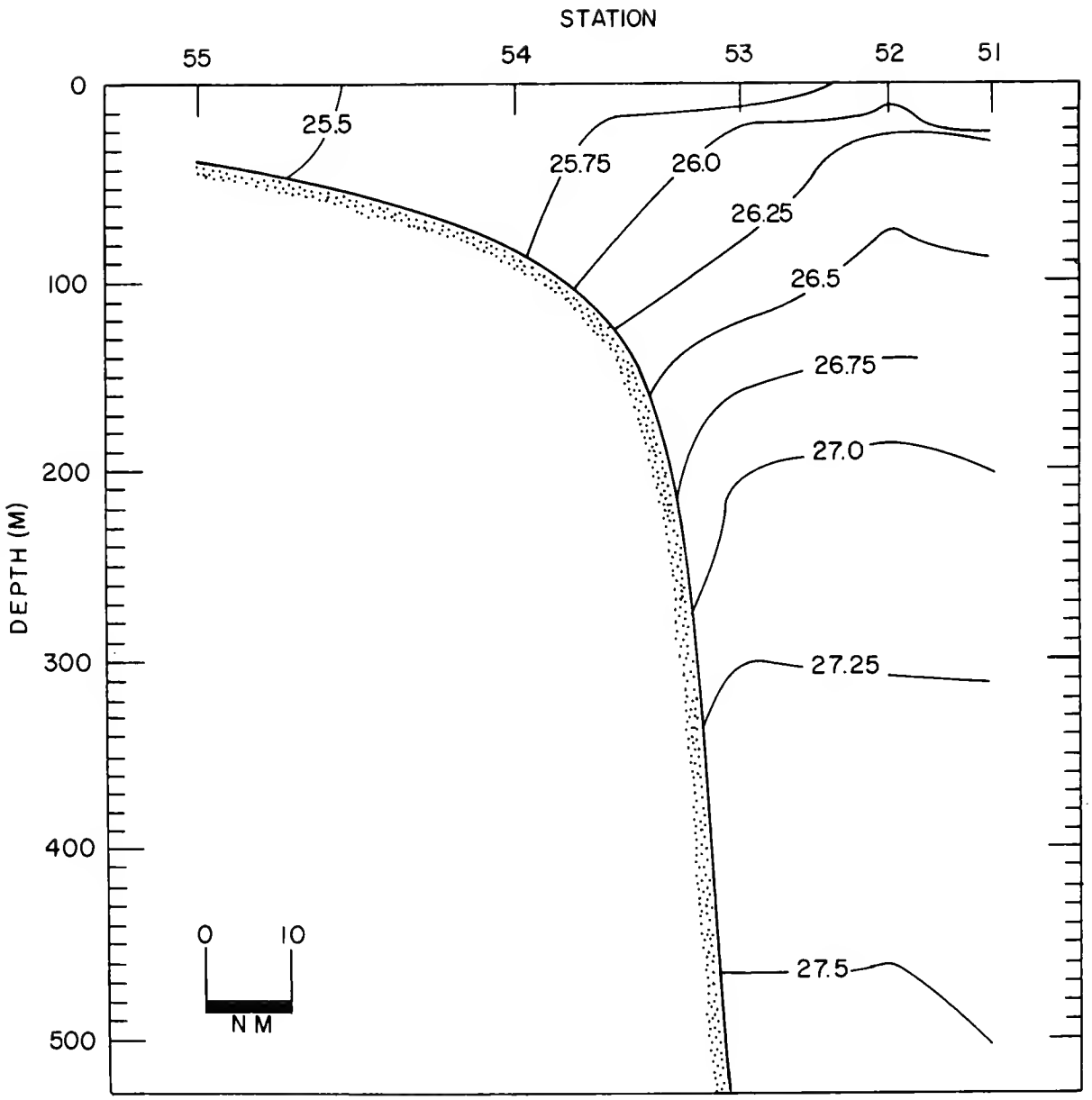

FIGURE 32.—Profile of sigma-t (g/l), section 6, ICNAF 68-1, 15-26 January 1968.

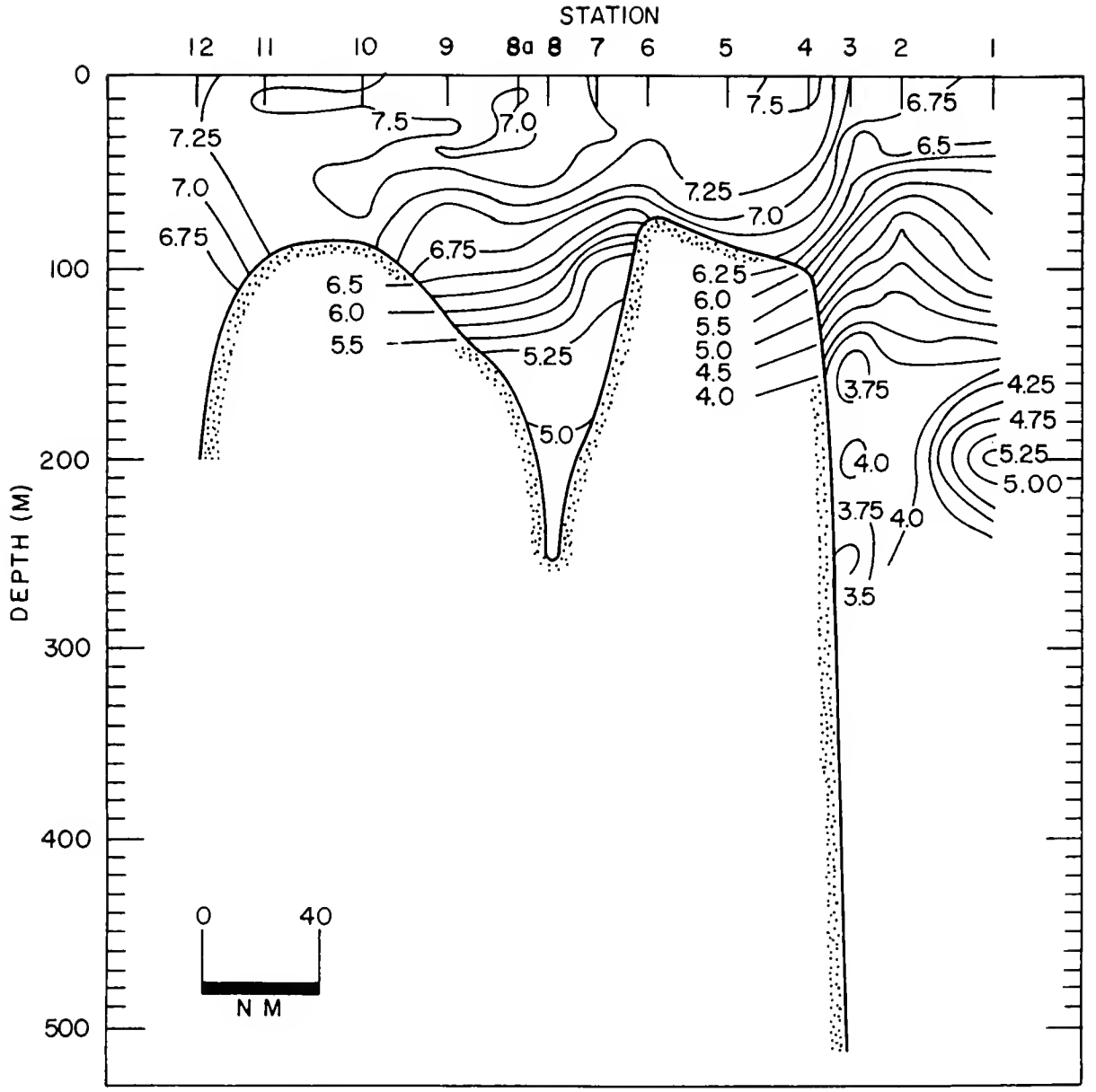

FIGURE 33.—Profile of dissolved oxygen (ml/l), section 1, ICNAF 68-1, 15-26 January 1968.

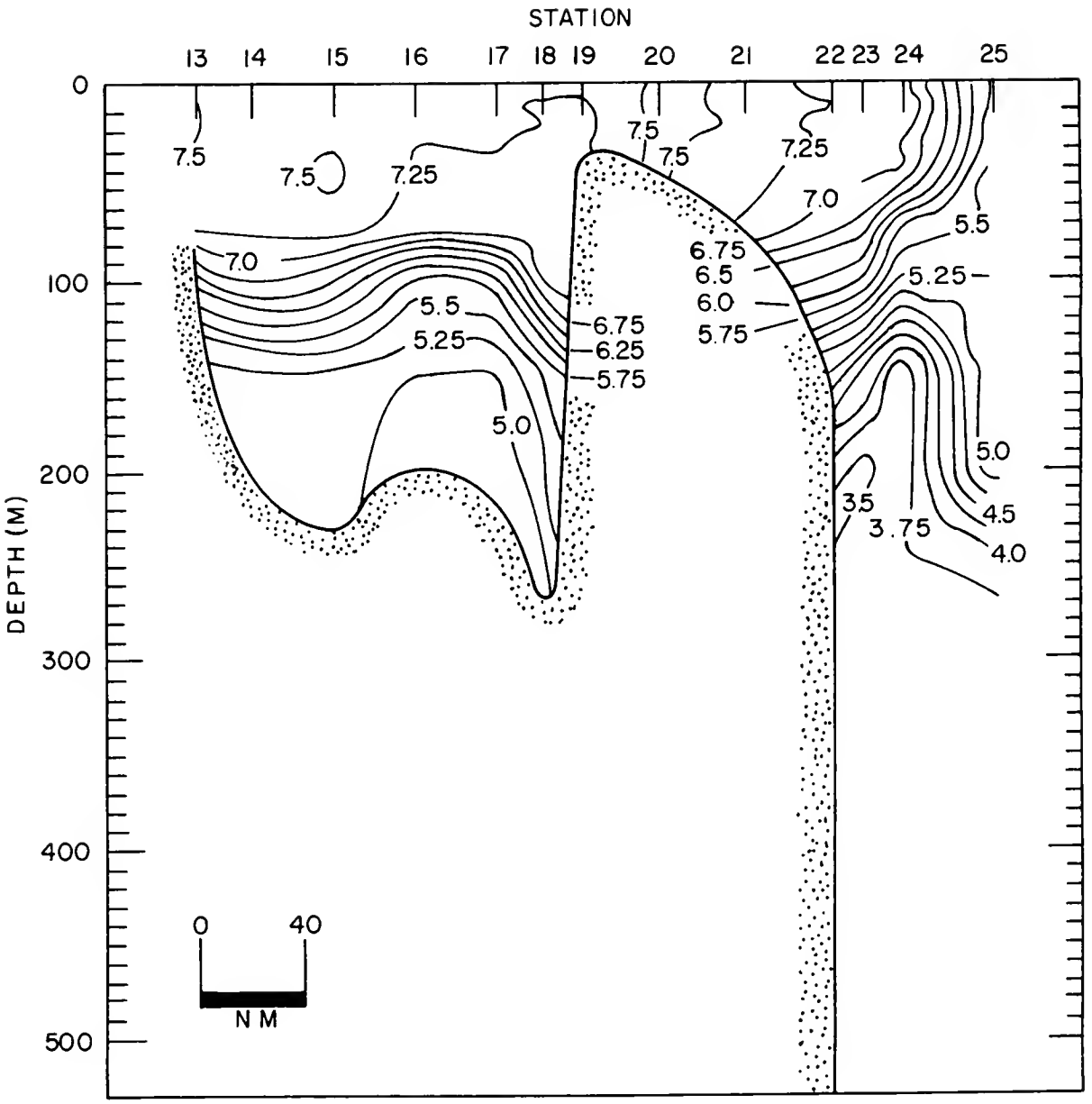

FIGURE 34.—Profile of dissolved oxygen (ml/l), section 2, ICNAF 68-1, 15-26 January 1968.

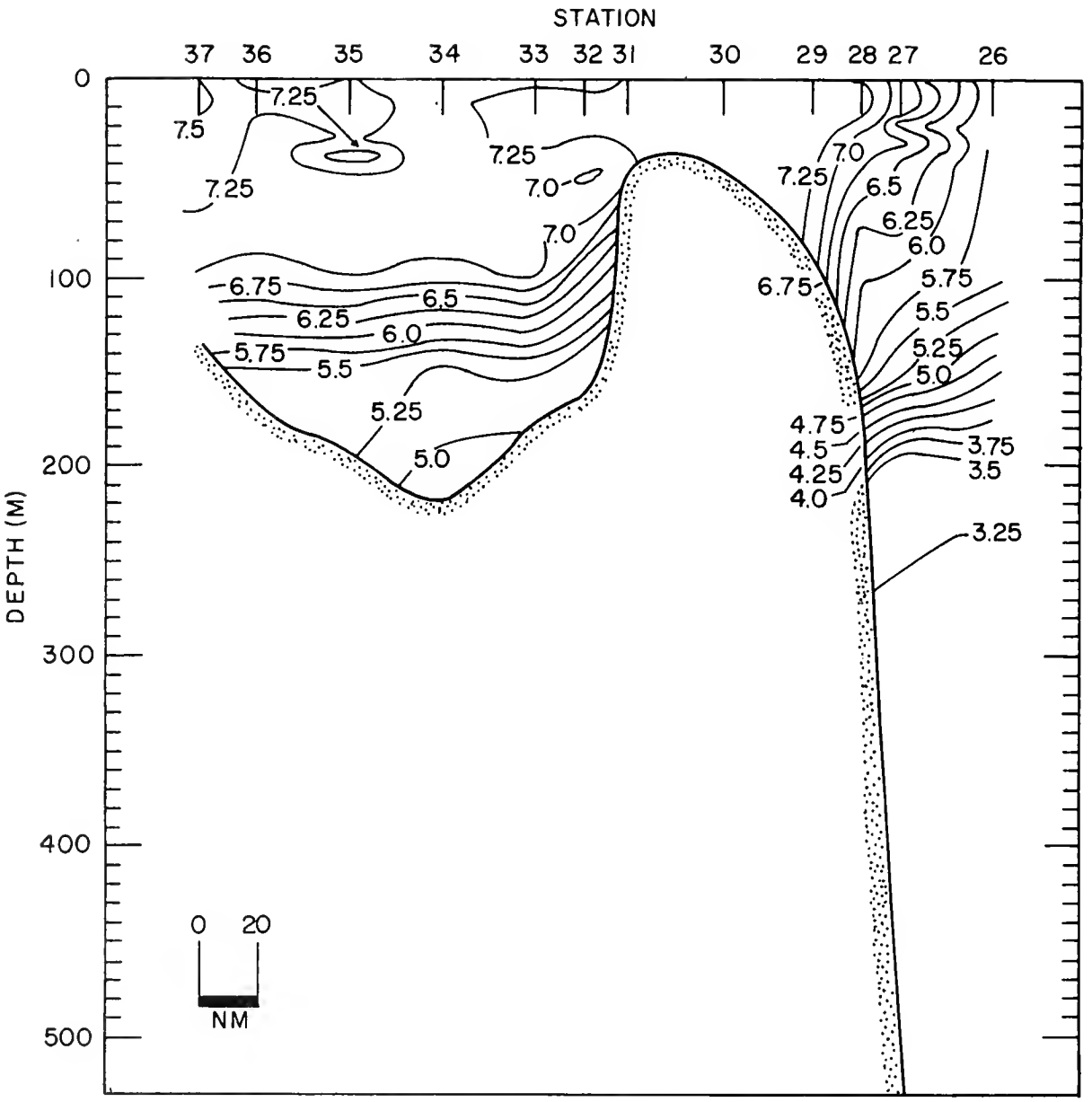

FIGURE 35.—Profile of dissolved oxygen (ml/l), section 3, ICNAF 68-1, 15-26 January 1968.

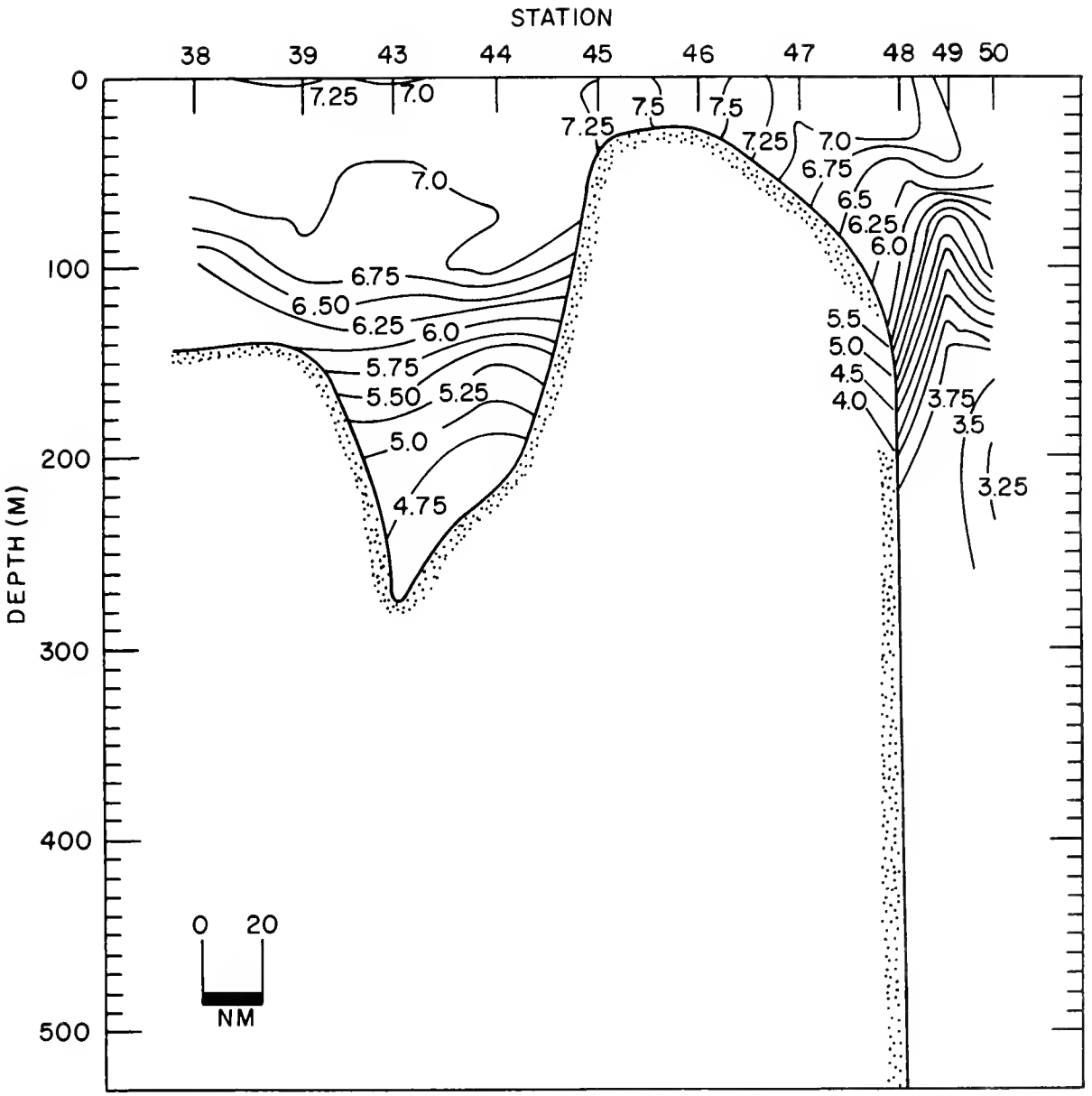

FIGURE 36.—Profile of dissolved oxygen (ml/l), section 4, ICNAF 68–1, 15–26 January 1968.

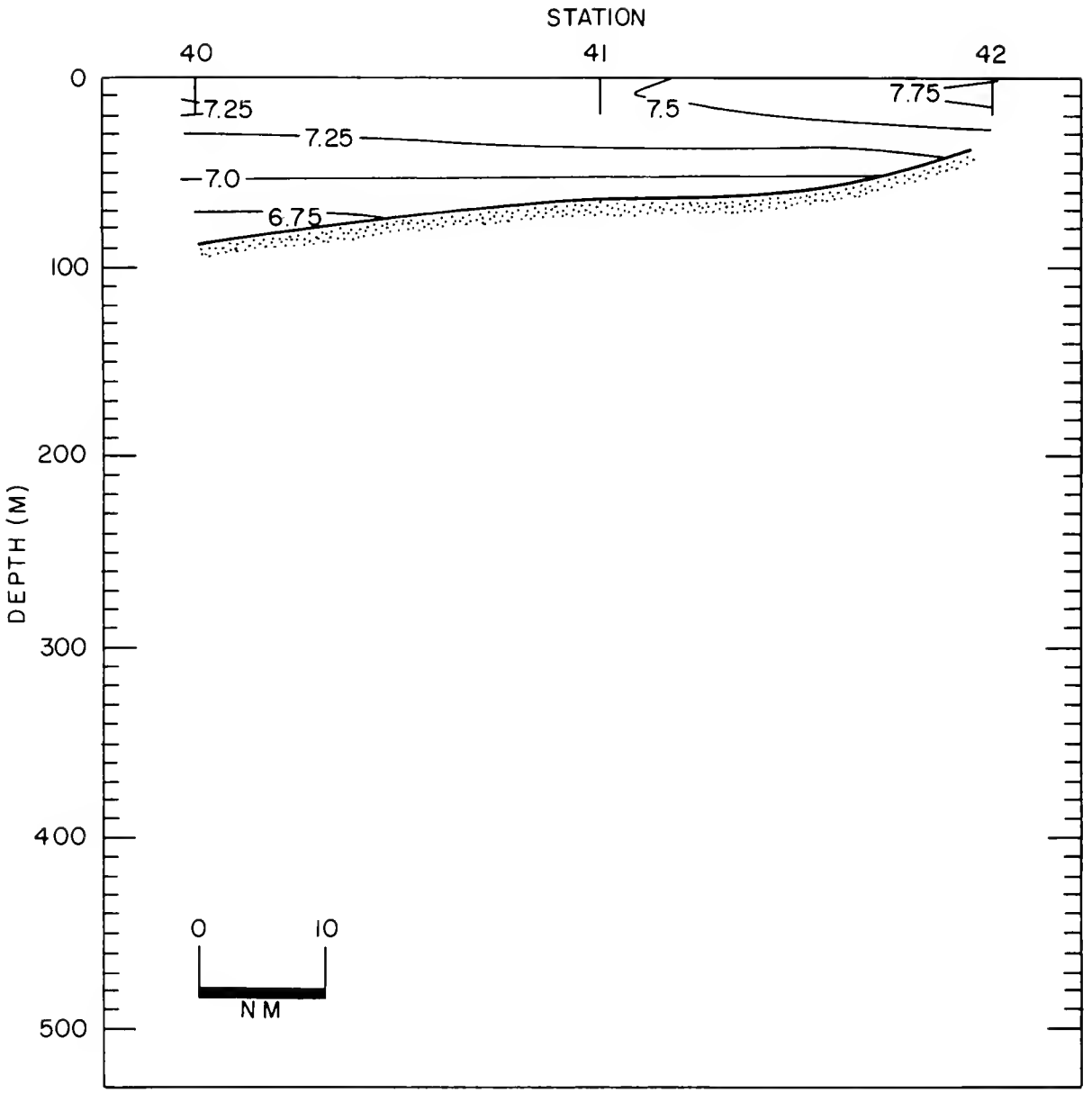

FIGURE 37.—Profile of dissolved oxygen (ml/l), section 5, ICNAF 68-1, 15–26 January 1968.

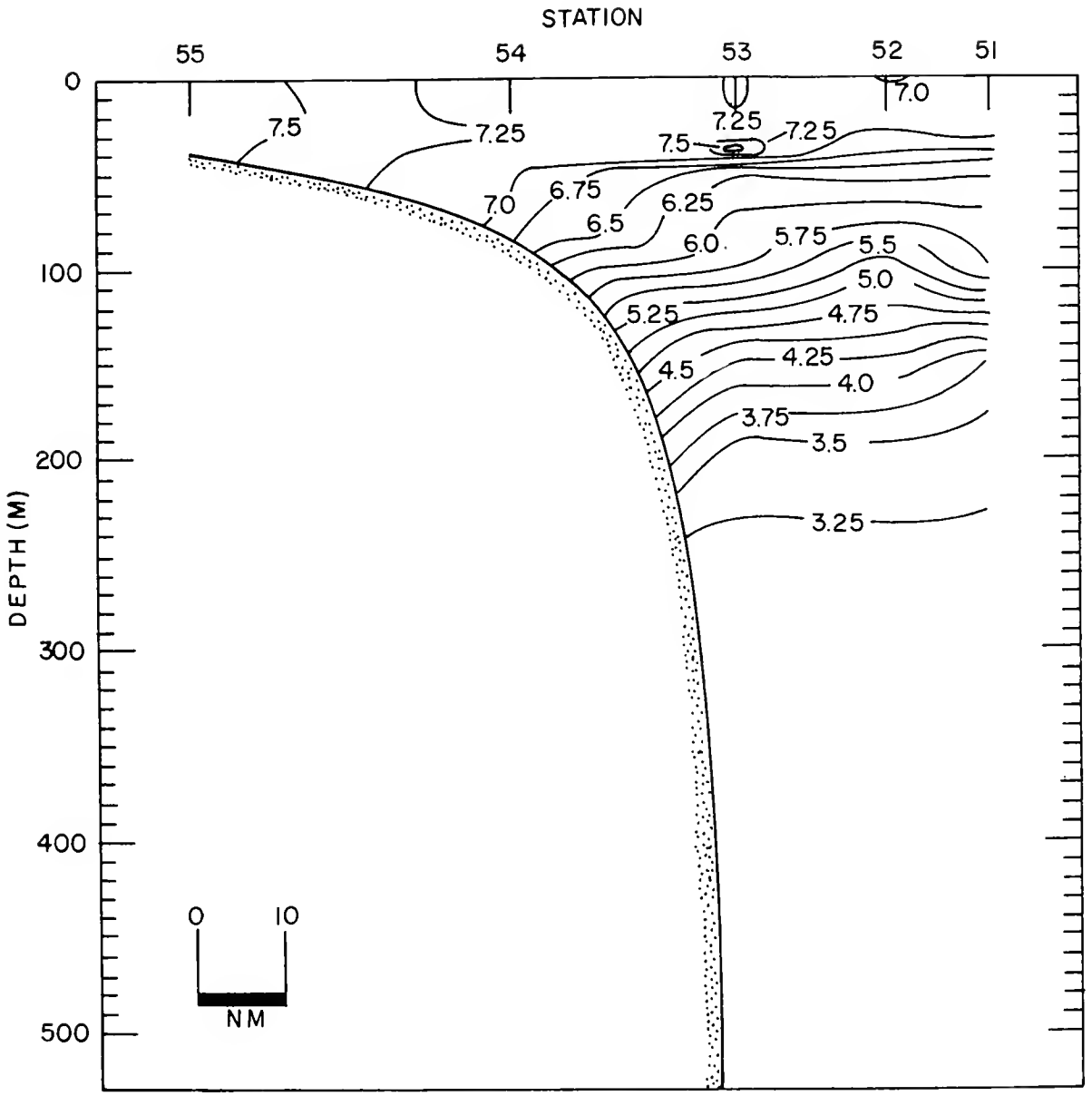

FIGURE 38.—Profile of dissolved oxygen (ml/l), section 6, ICNAF 68-1, 15–26 January 1968.

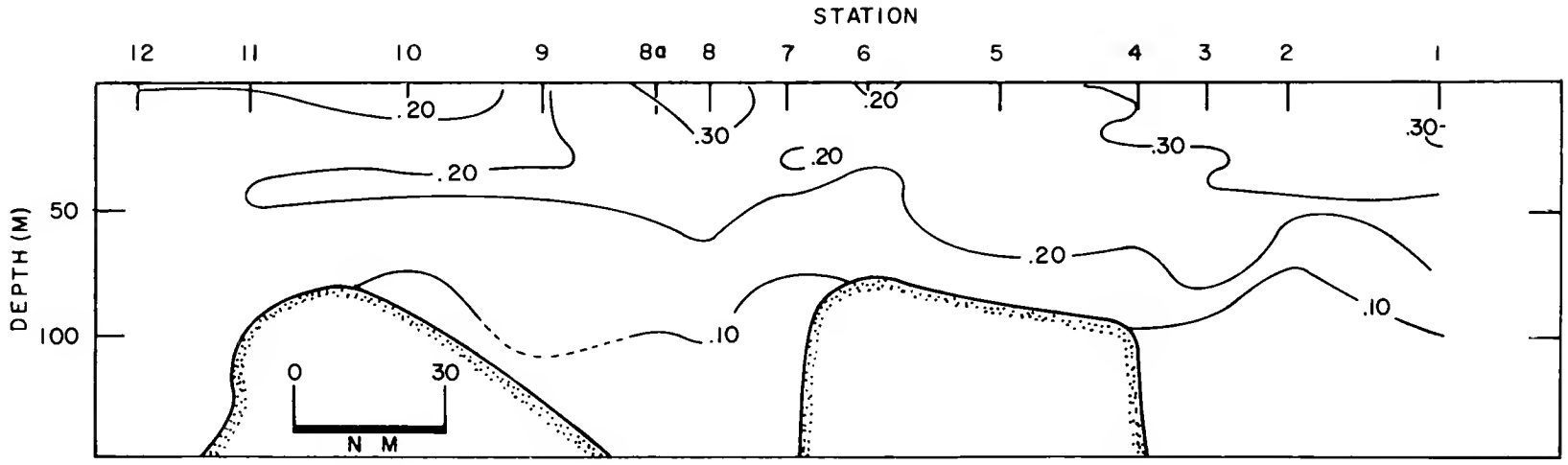

FIGURE 39.—Profile of chlorophyll (mg/m³), section 1, ICNAF 68–1, 15–26 January 1968.

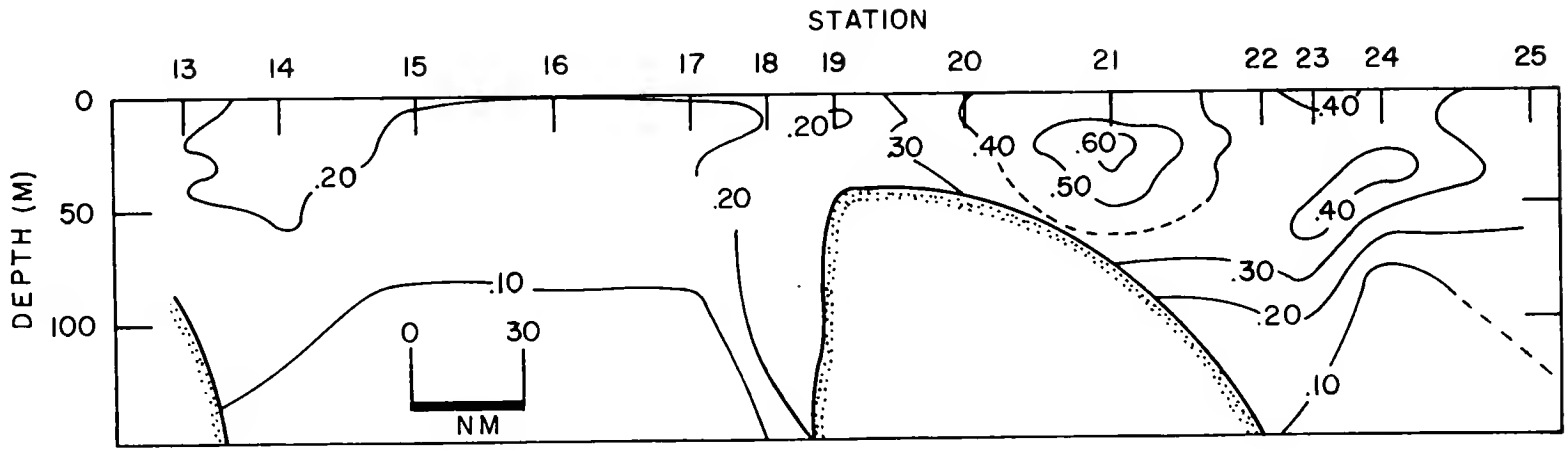

FIGURE 40.—Profile of chlorophyll (mg/m³), section 2, ICNAF 68-1, 15-26 January 1968.

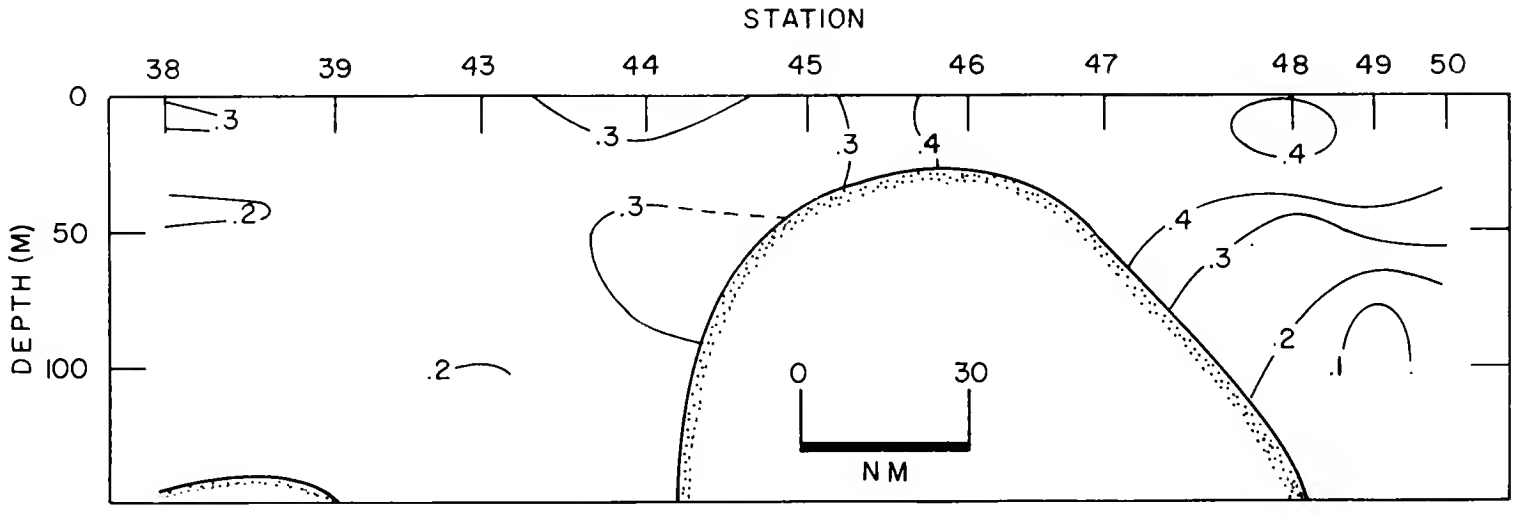

FIGURE 41.—Profile of chlorophyll (mg/m³), section 3, ICNAF 68–1, 15–26 January 1968.

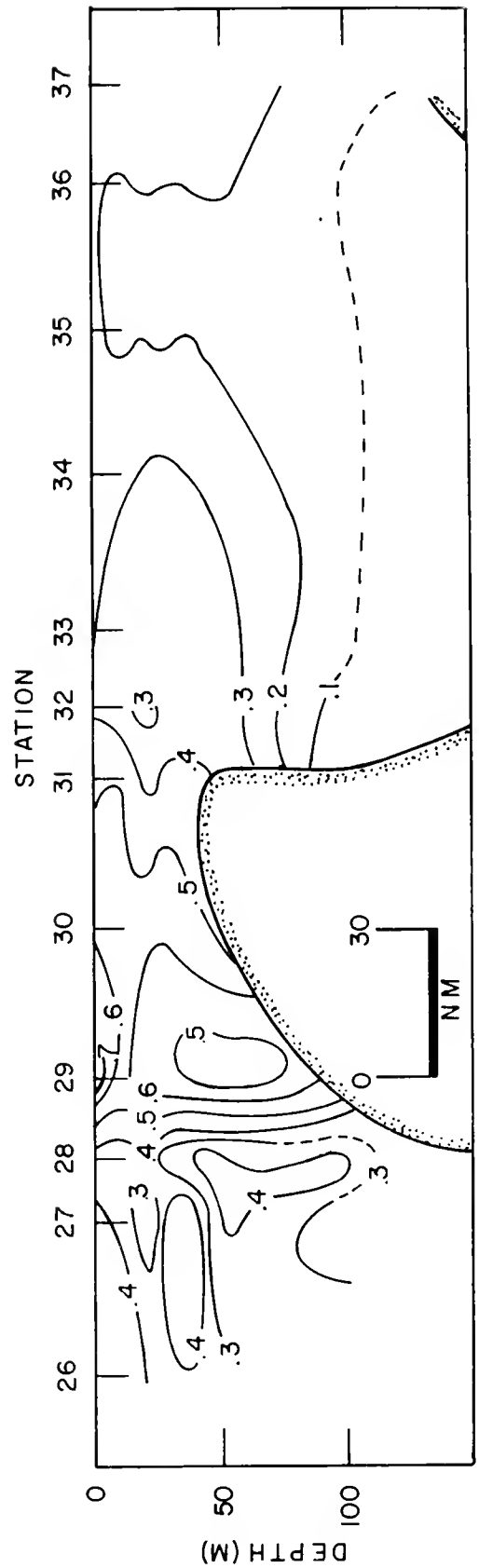

FIGURE 42.—Profile of chlorophyll (mg/m³), section 4, ICNAF 68–1, 15-26 January 1968.

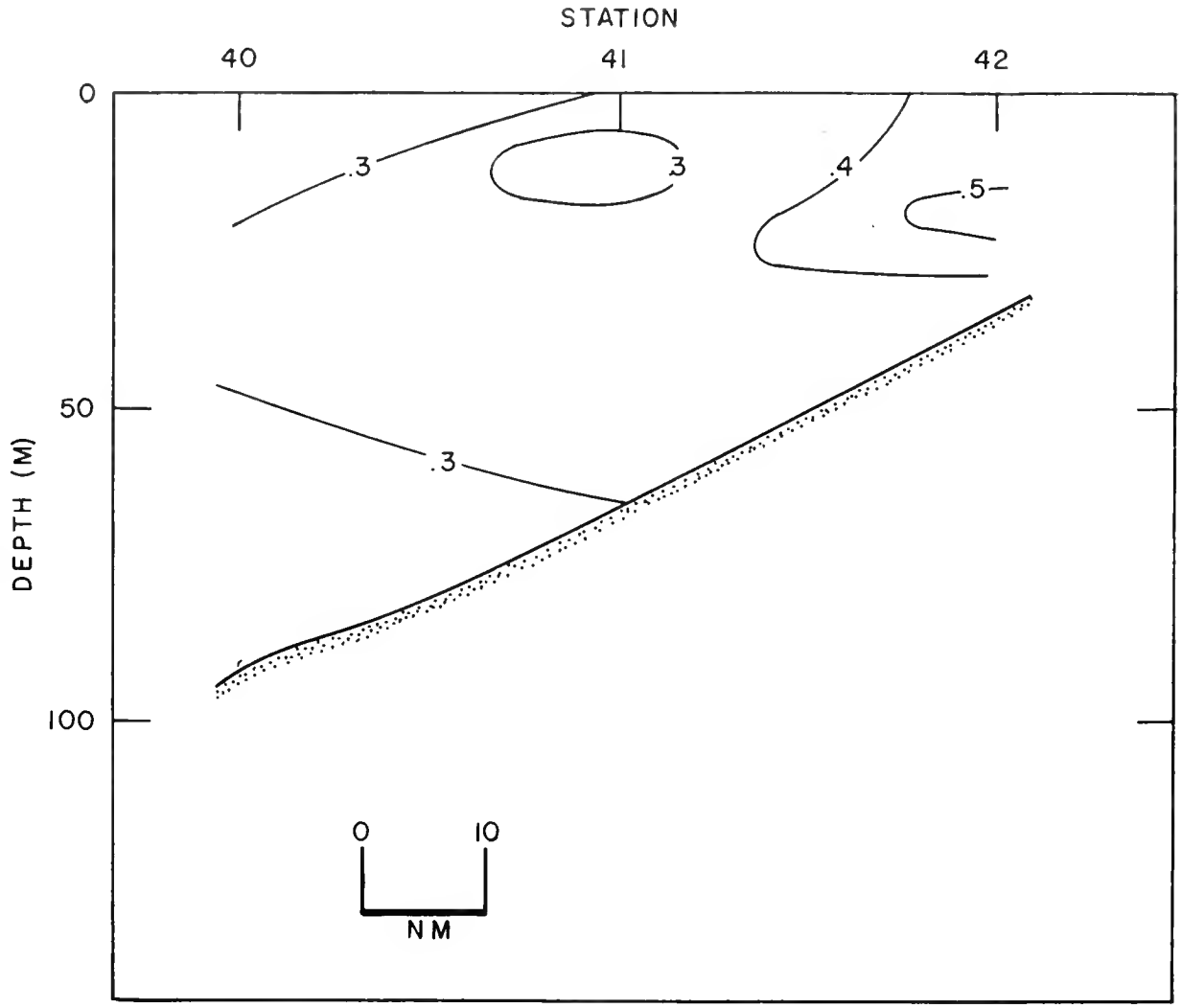

FIGURE 43.—Profile of chlorophyll (mg/m³), section 5, ICNAF 68–1, 15–26 January 1968.

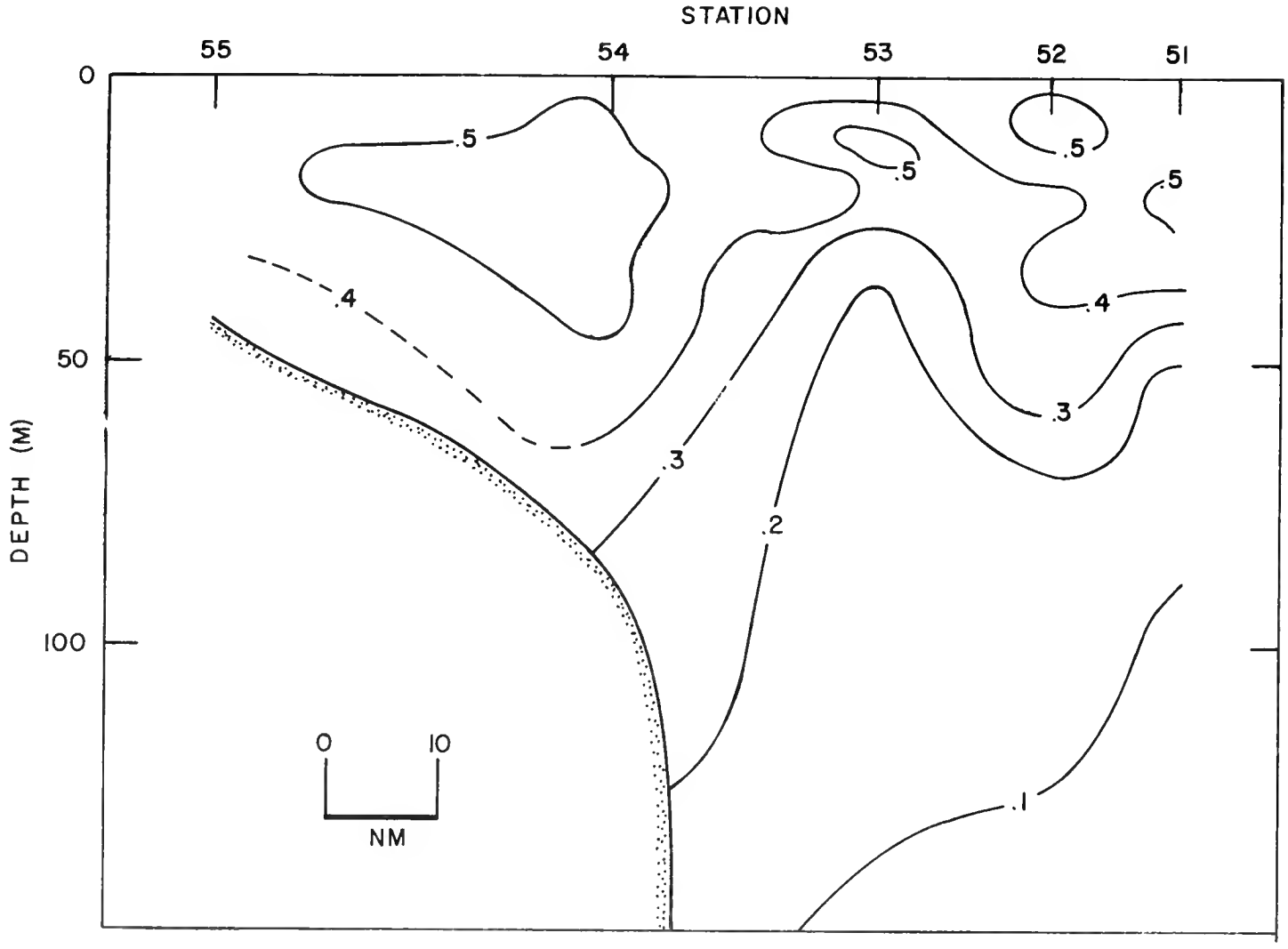

FIGURE 44.—Profile of chlorophyll (mg/m³), section 6, ICNAF 68–1, 15–26 January 1968.

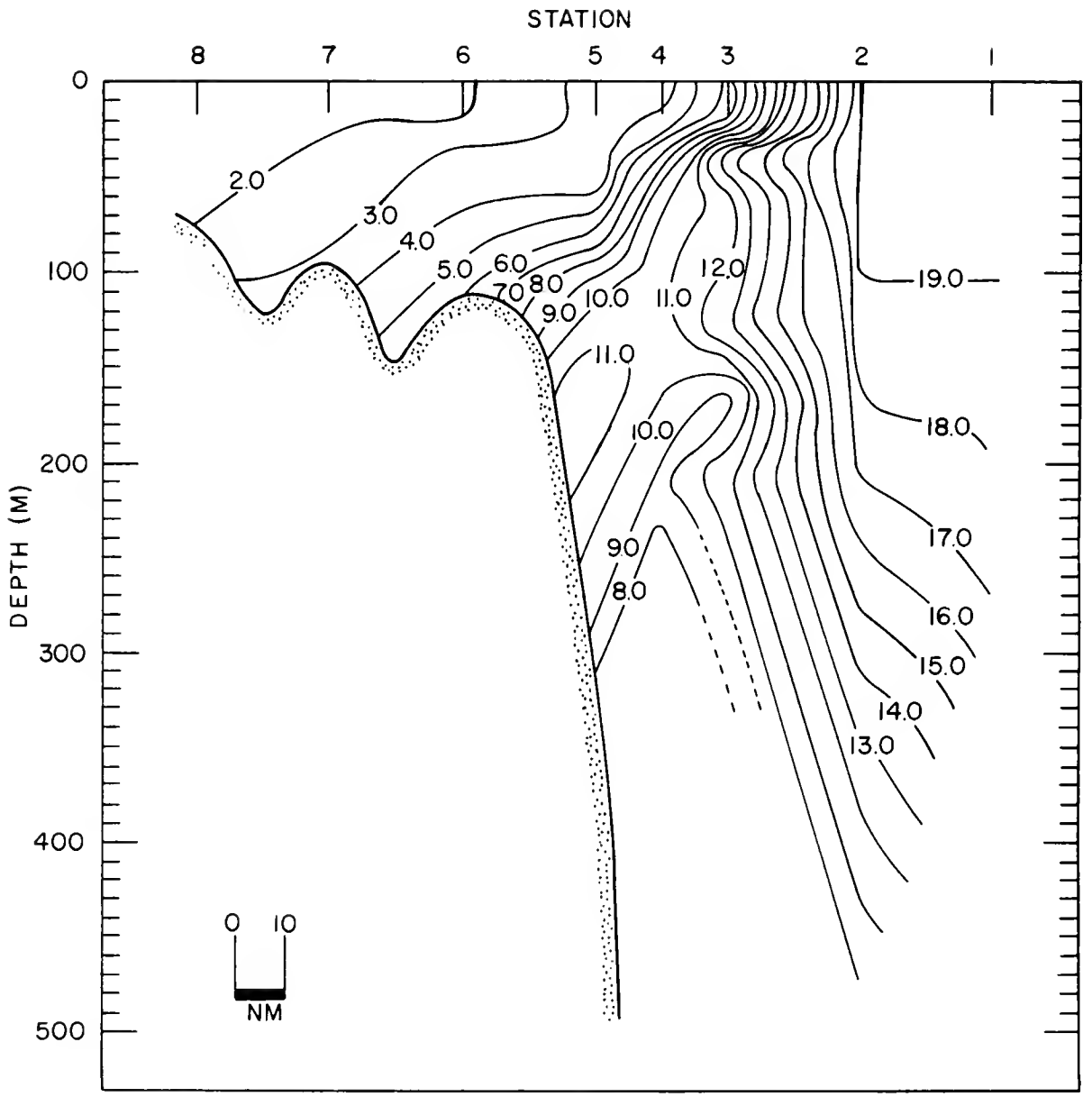

FIGURE 45.—Profile of temperature (°C.), section 1, ICNAF 69-1, 28 January-27 February 1969.

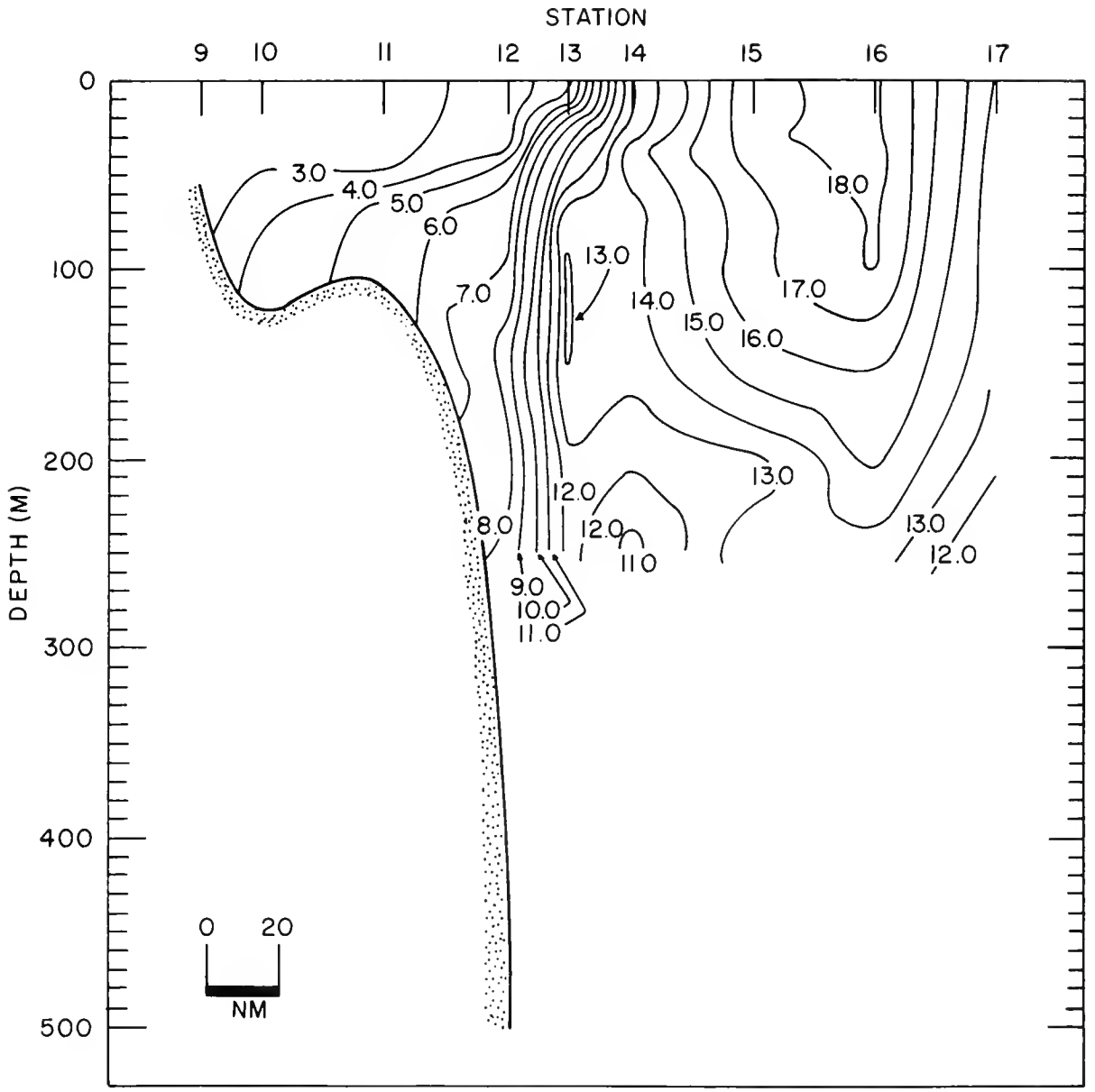

FIGURE 46.—Profile of temperature (°C.), section 2, ICNAF 69–1, 28 January-27 February 1969.

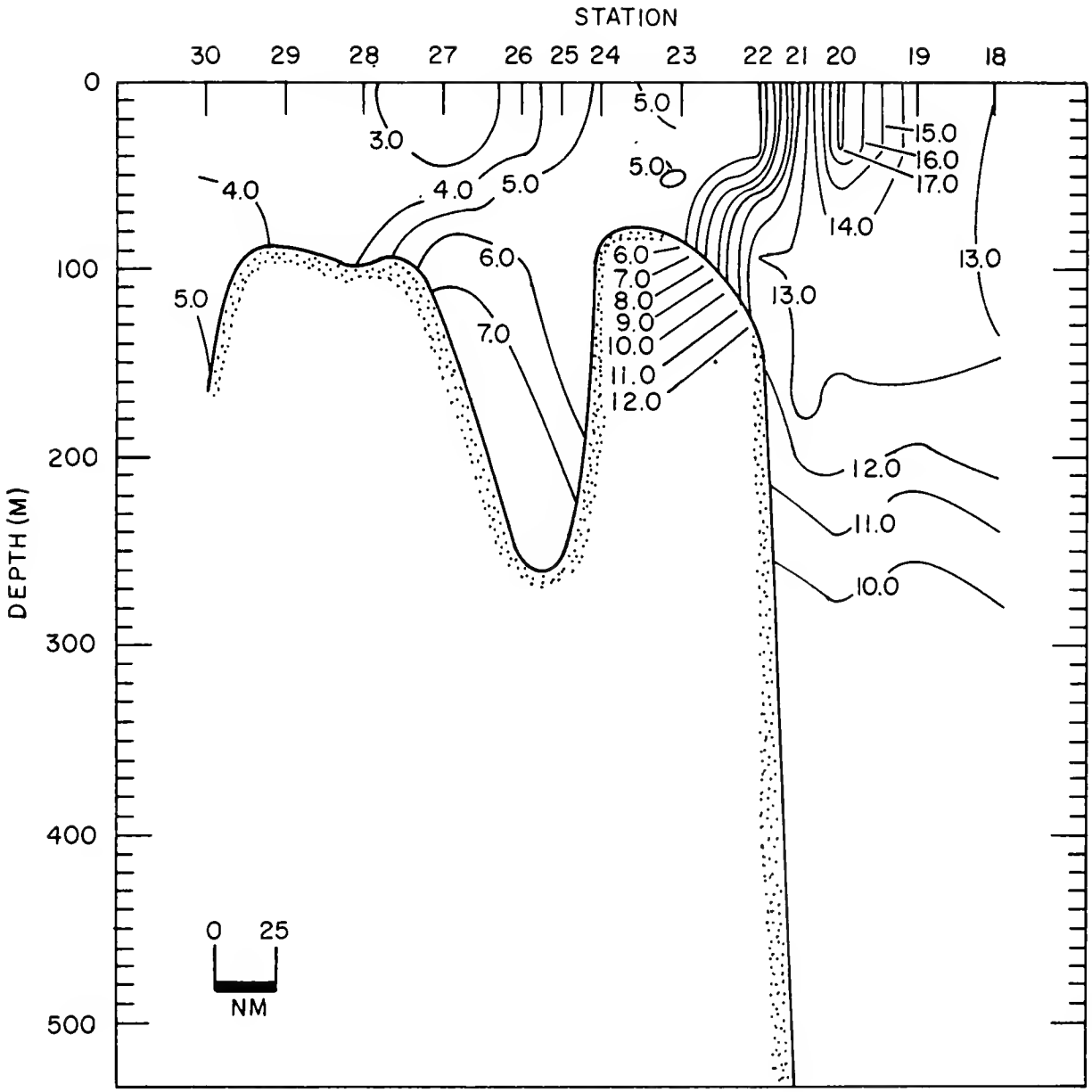

FIGURE 47.—Profile of temperature (°C.), section 3, ICNAF 69-1, 28 January-27 February 1969.

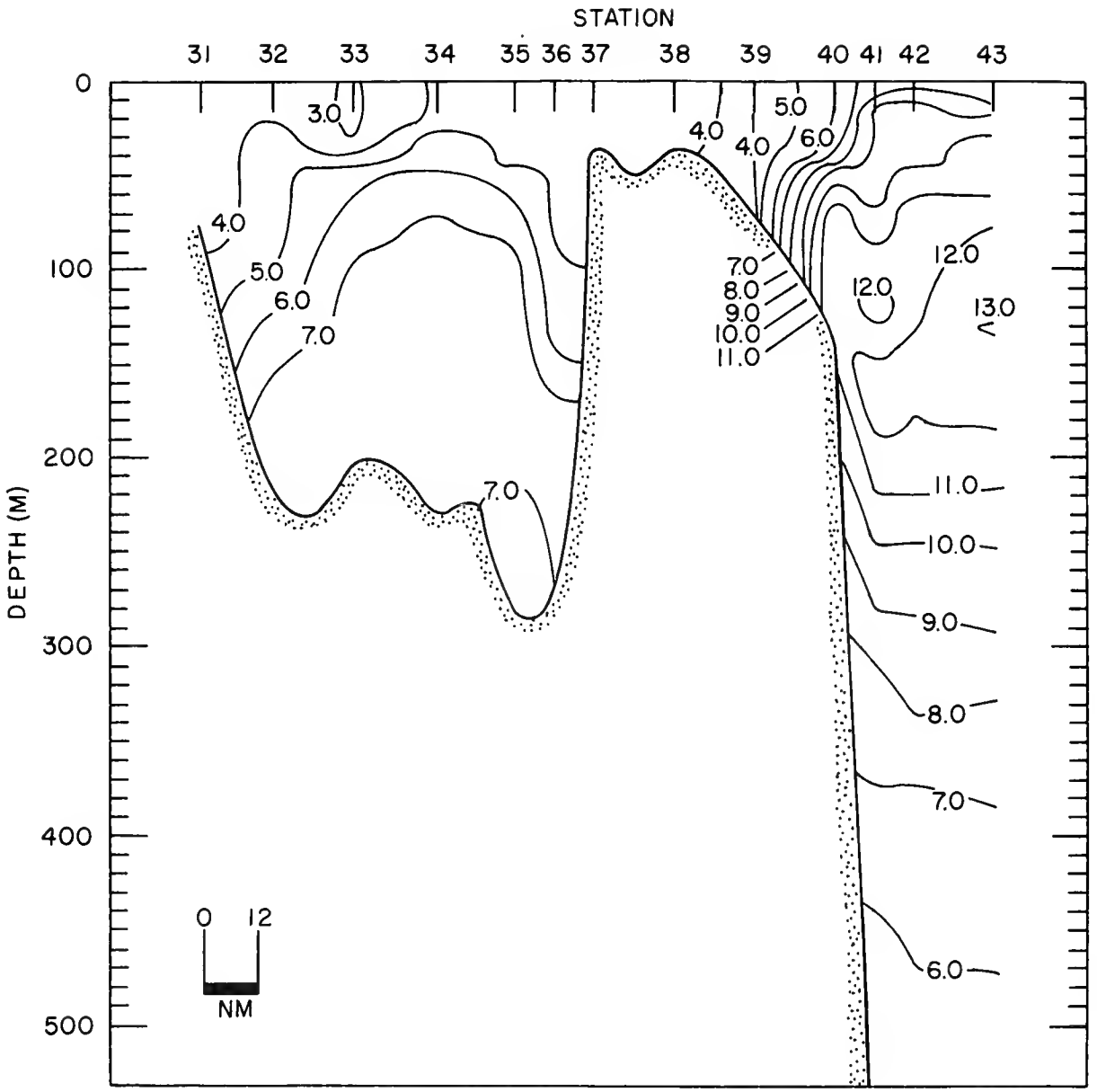

FIGURE 48.—Profile of temperature (°C.), section 4, ICNAF 69-1, 28 January-27 February 1969.

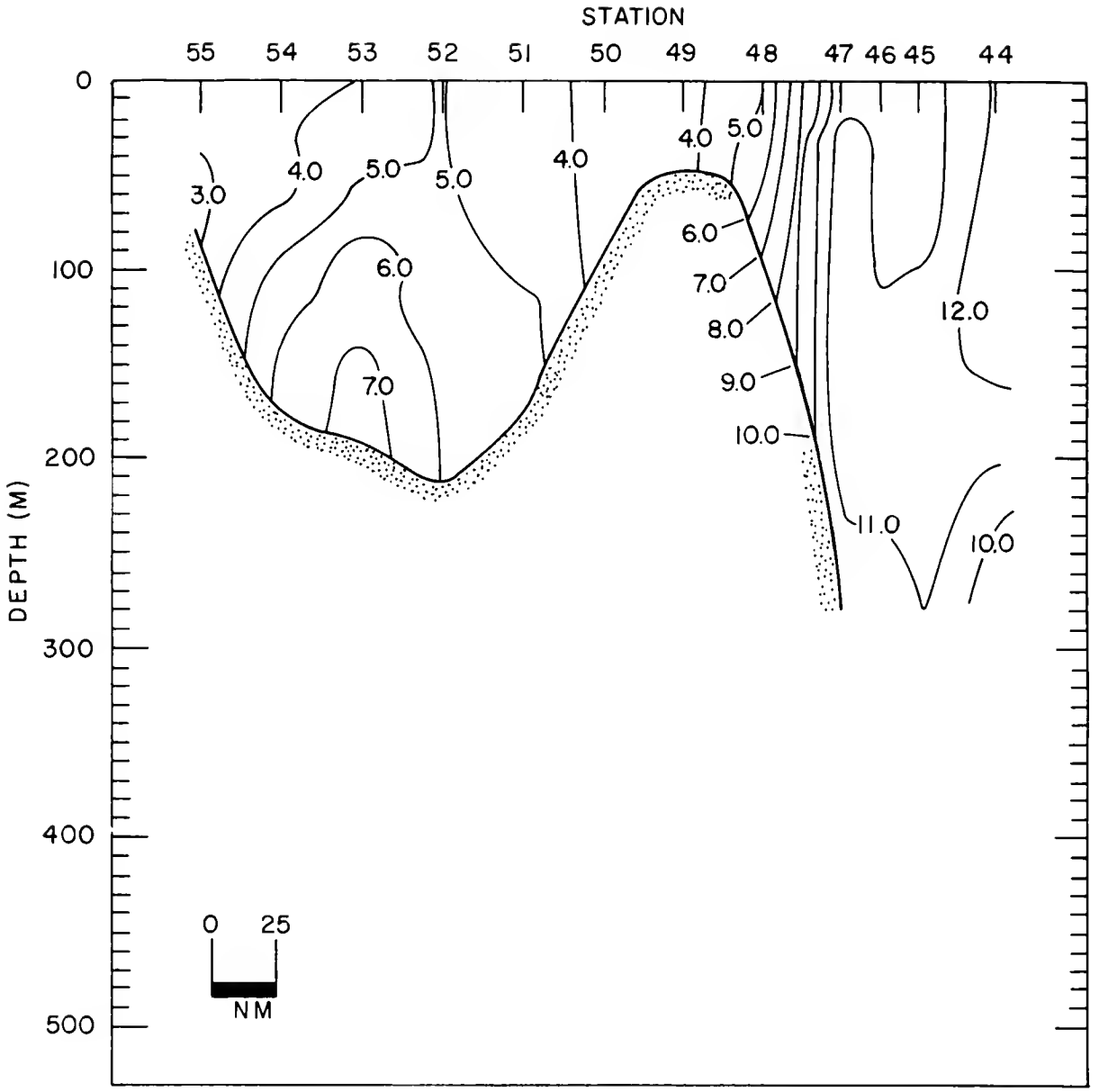

FIGURE 49.—Profile of temperature (°C.), section 5, ICNAF 69–1, 28 January-27 February 1969.

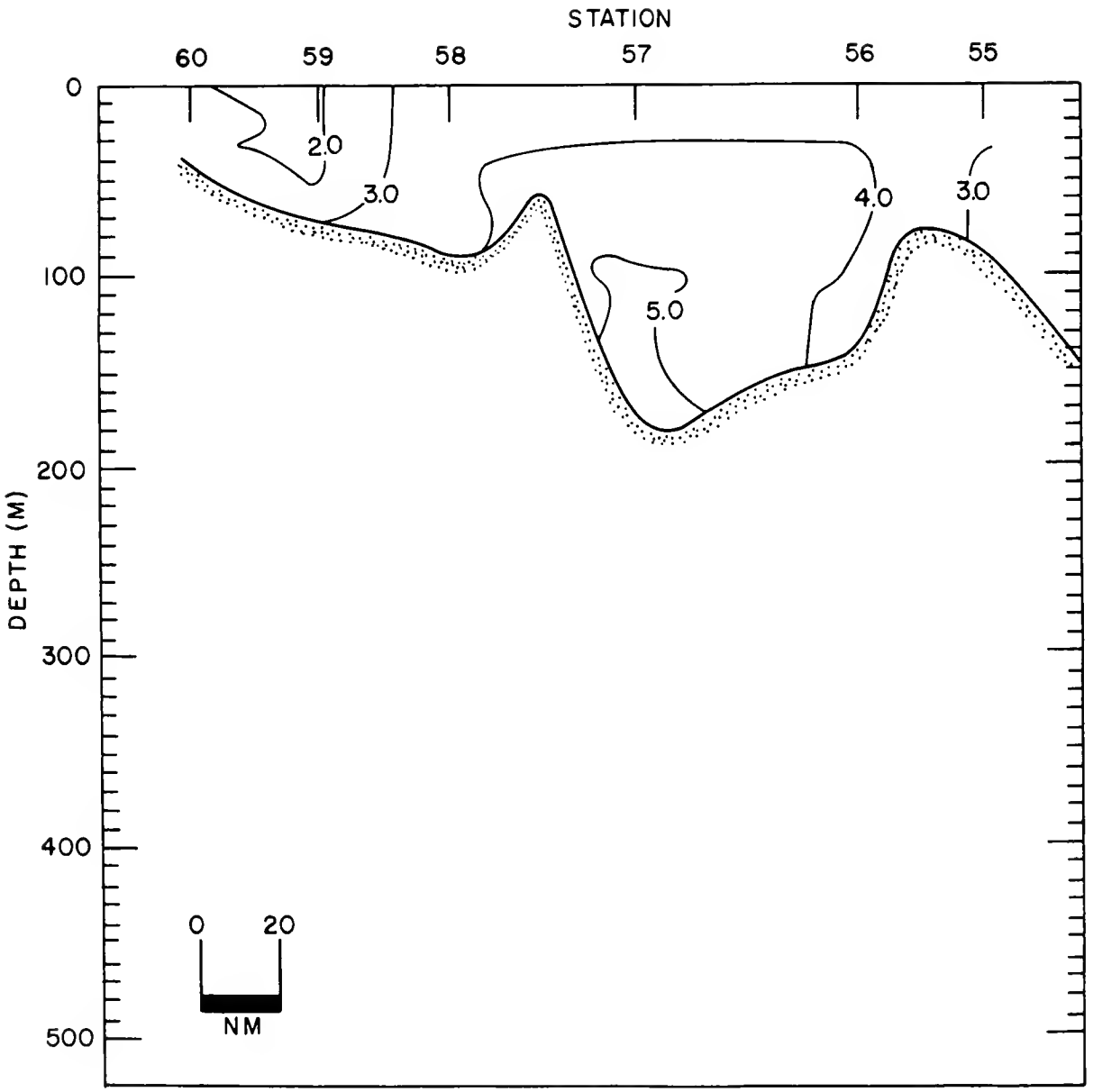

FIGURE 50.—Profile of temperature (°C.), section 6, ICNAF 69-1, 28 January-27 February 1969.

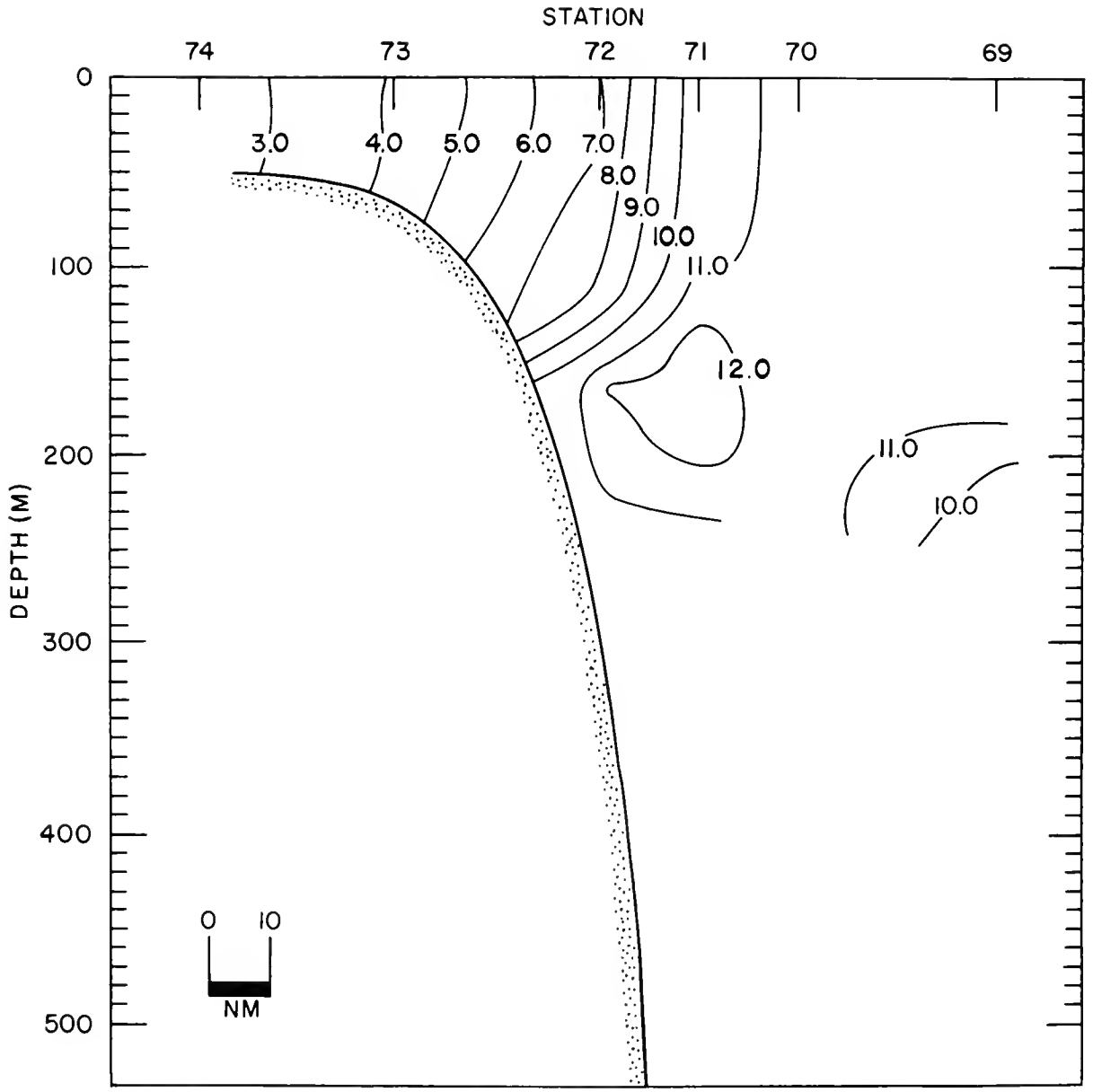

FIGURE 51.—Profile of temperature (°C.), section 7, ICNAF 69-1, 28 January-27 February 1969.

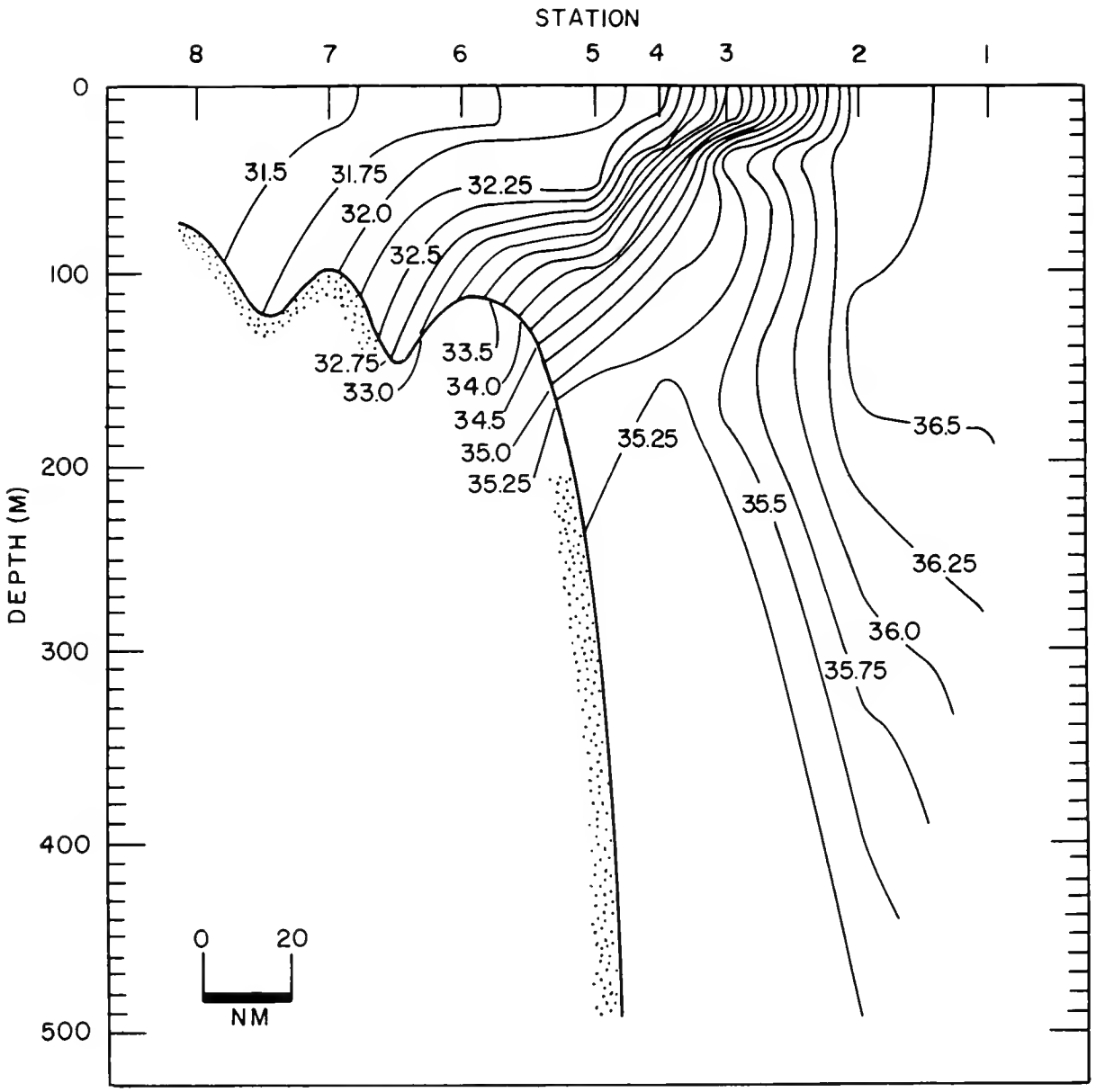

FIGURE 52.—Profile of salinity (°/$_{oo}$), section 1, ICNAF 69–1, 28 January-27 February 1969.

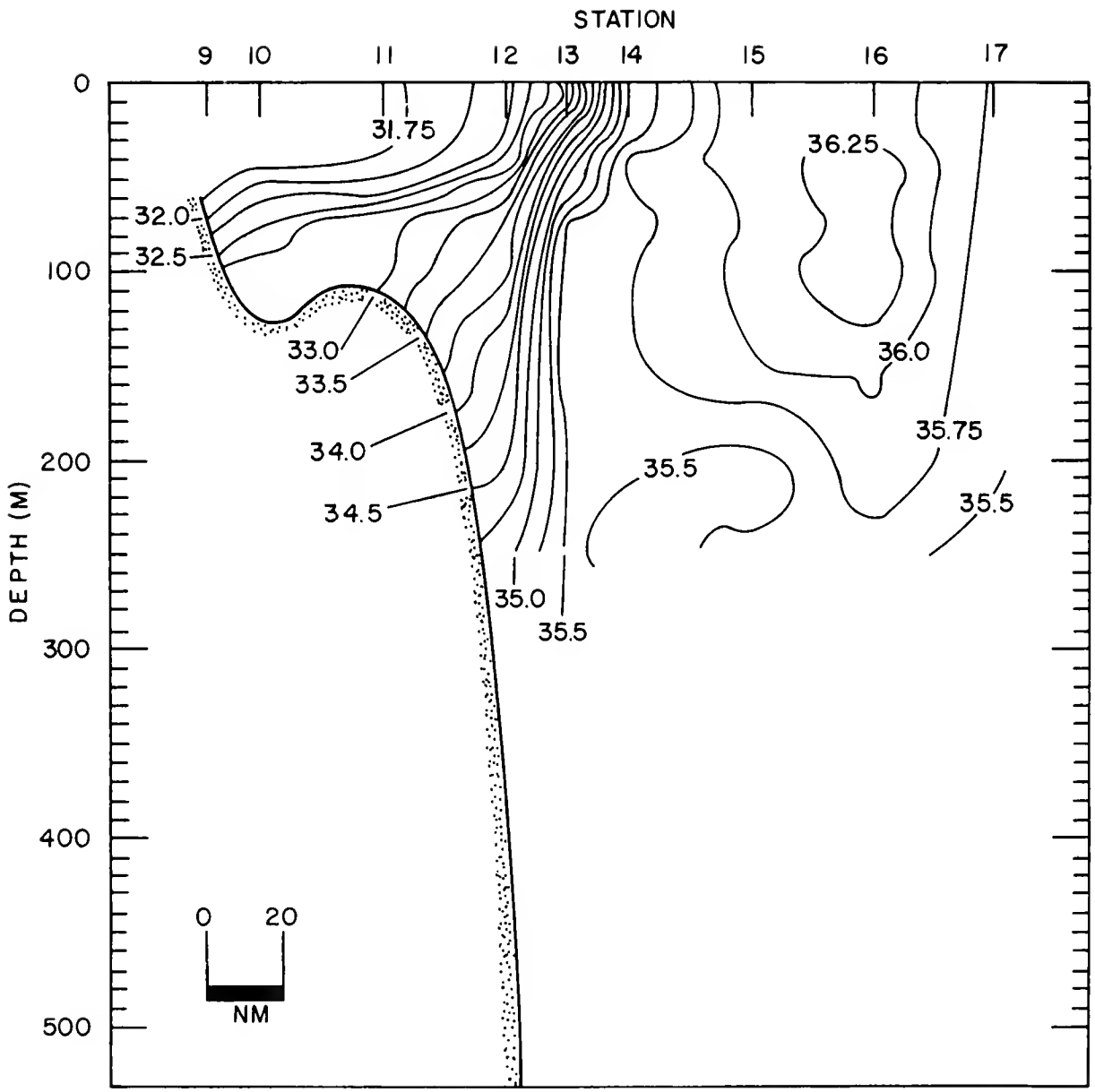

FIGURE 53.—Profile of salinity (‰), section 2, ICNAF 69–1, 28 January-27 February 1969.

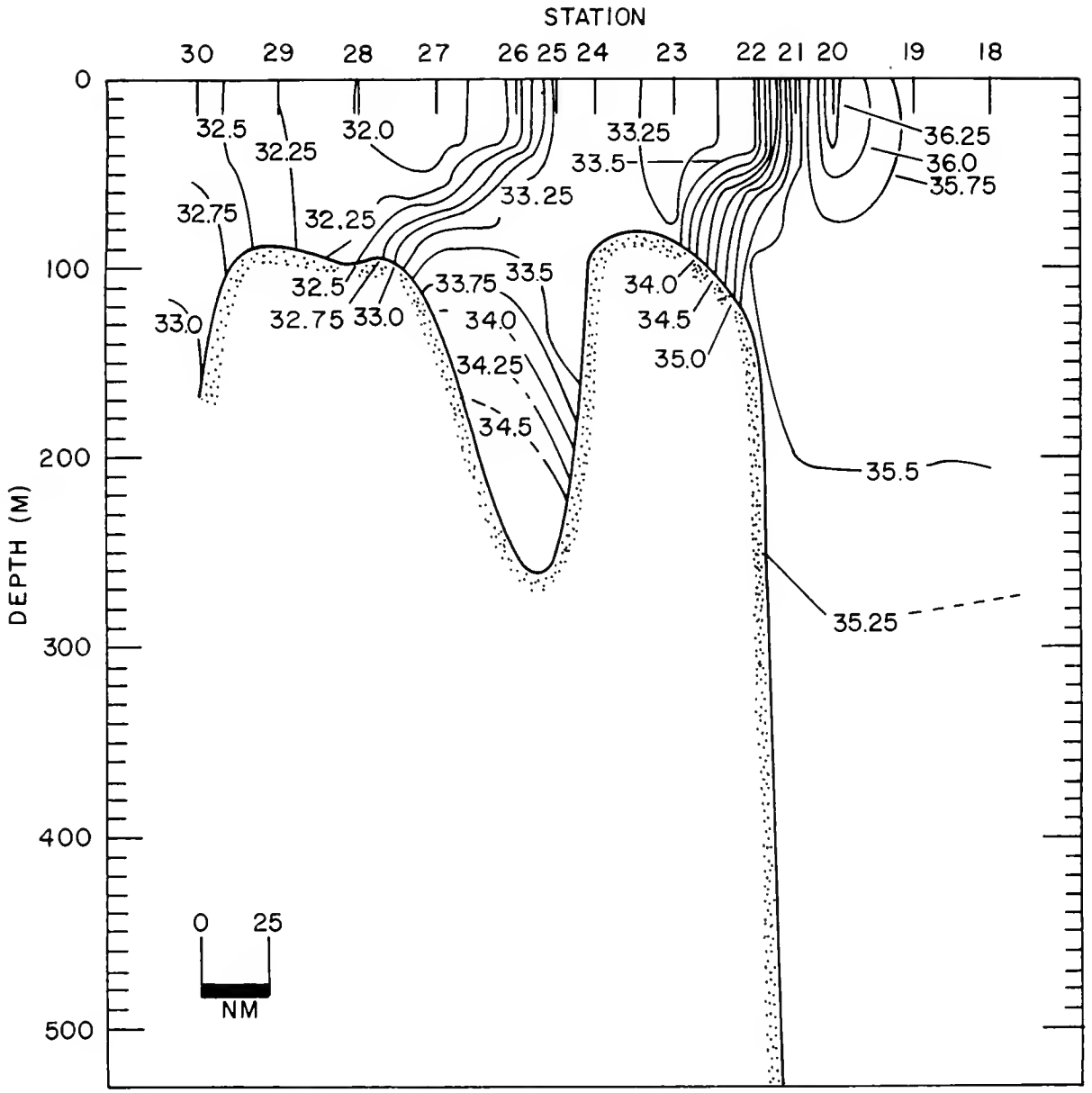

FIGURE 54.—Profile of salinity (‰), section 3, ICNAF 69-1, 28 January-27 February 1969.

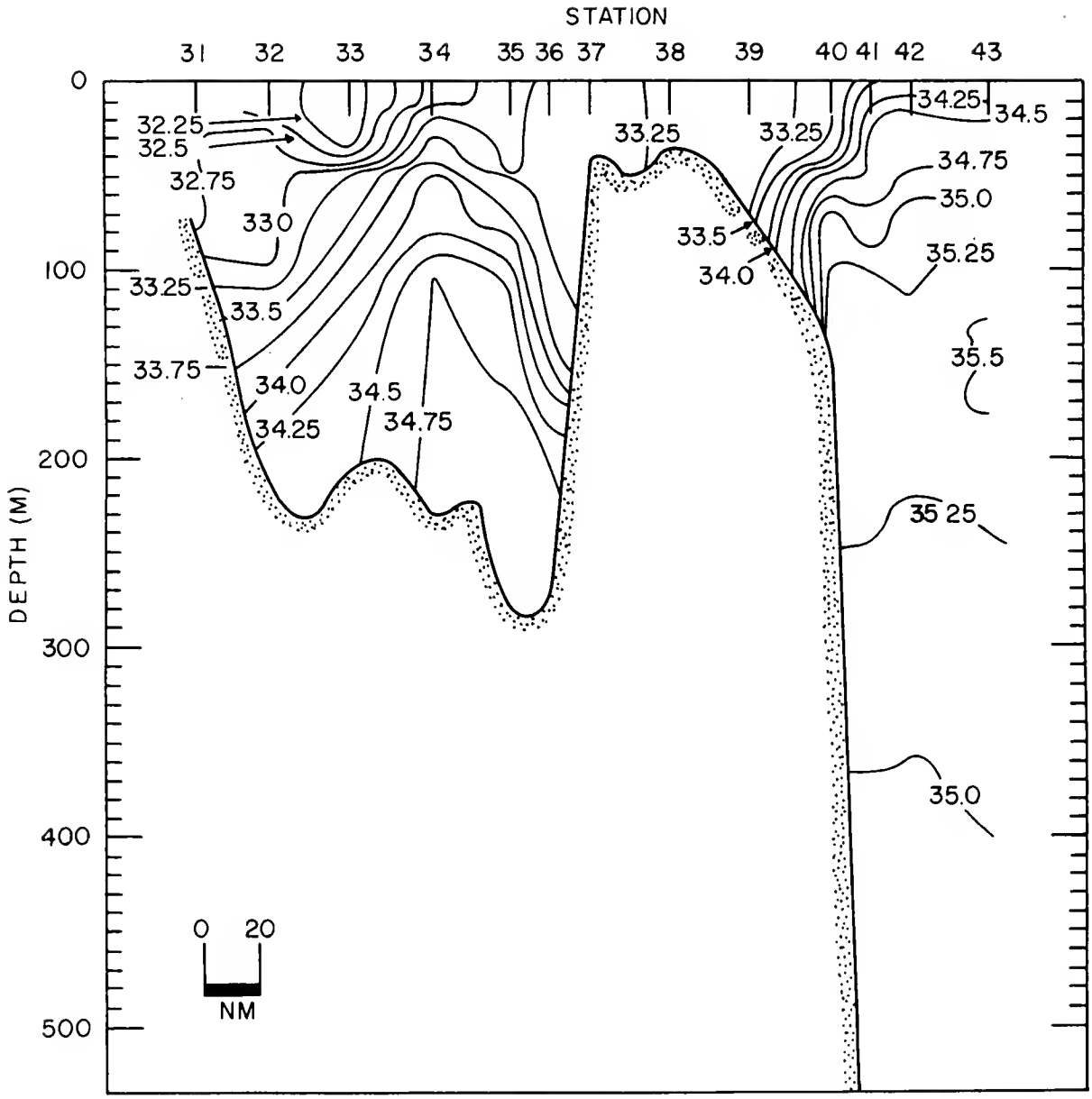

FIGURE 55.—Profile of salinity (‰), section 4, ICNAF 69-1, 28 January-27 February 1969.

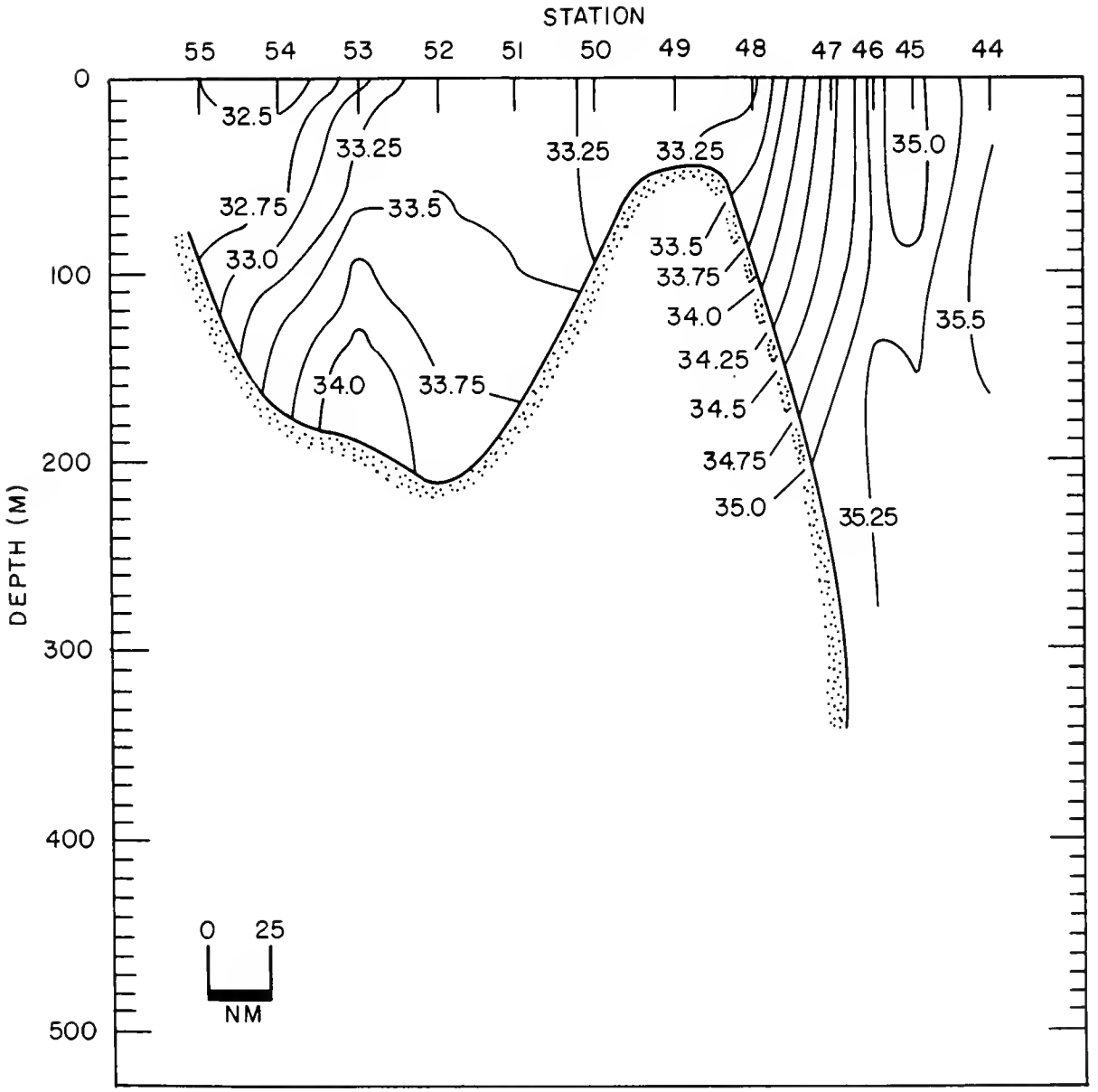

FIGURE 56.—Profile of salinity (‰), section 5, ICNAF 69–1, 28 January-27 February 1969.

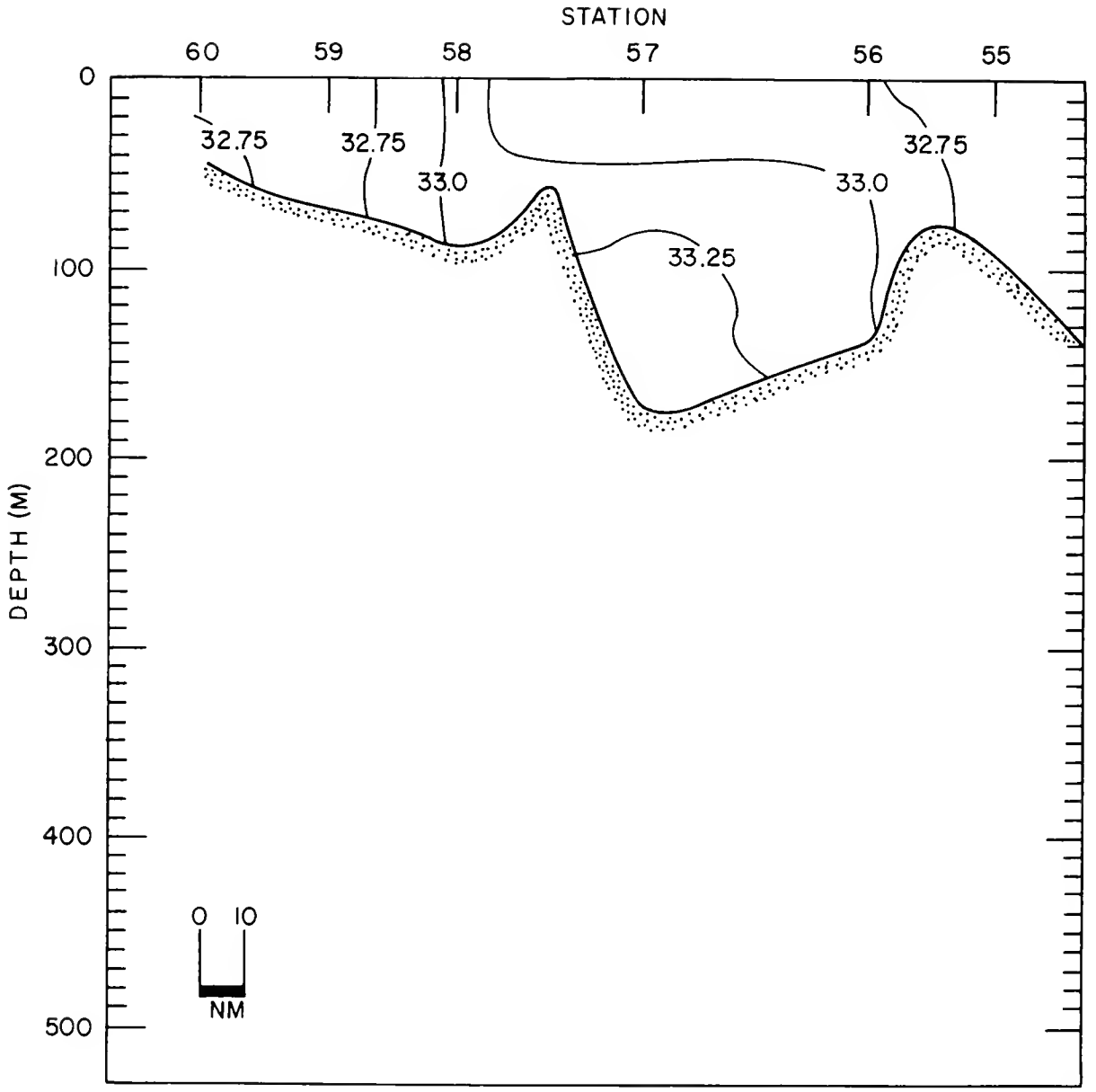

FIGURE 57.—Profile of salinity (‰), section 6, ICNAF 69-1, 28 January-27 February 1969.

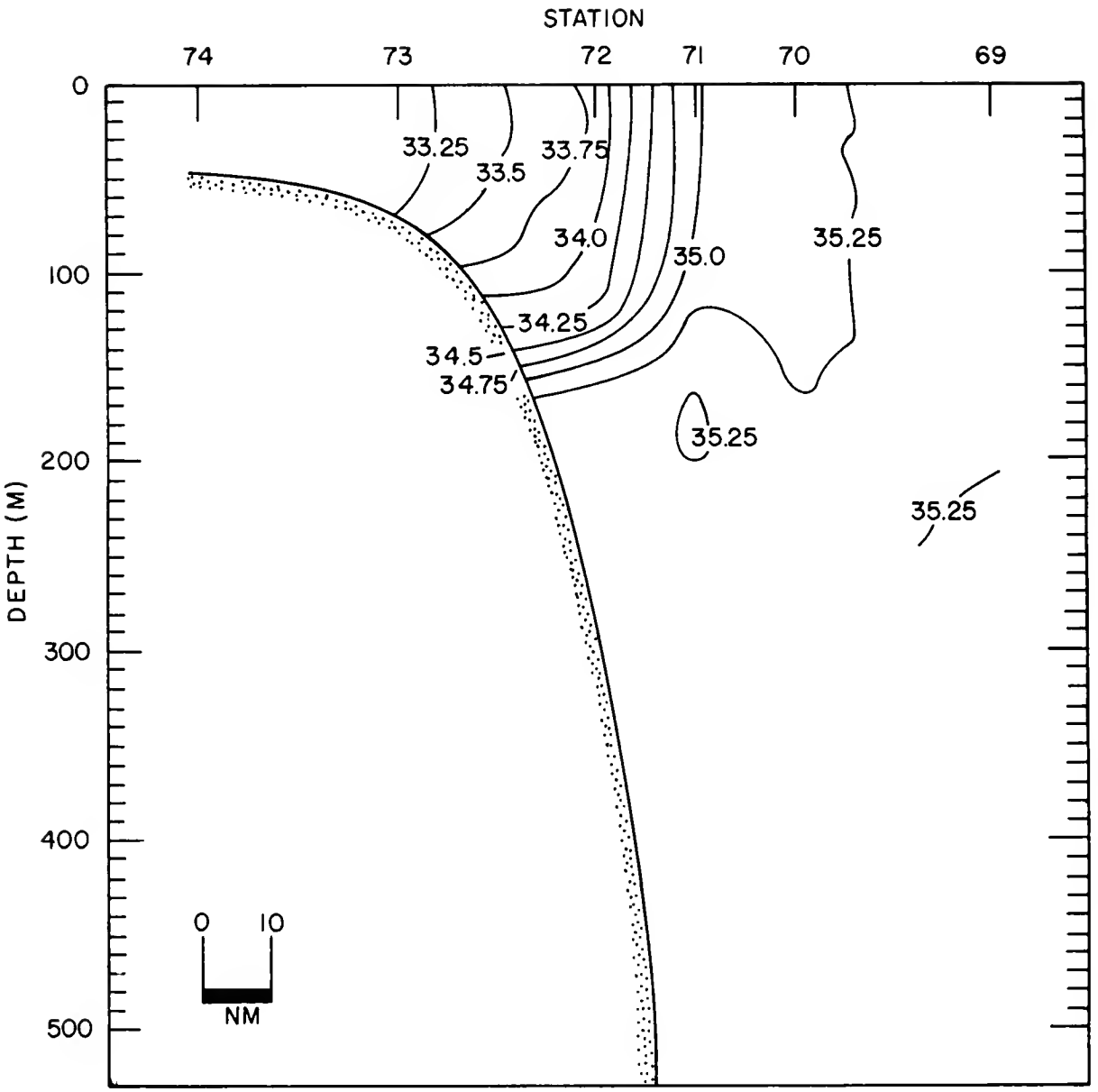

FIGURE 58.—Profile of salinity (‰), section 7, ICNAF 69–1, 28 January-27 February 1969.

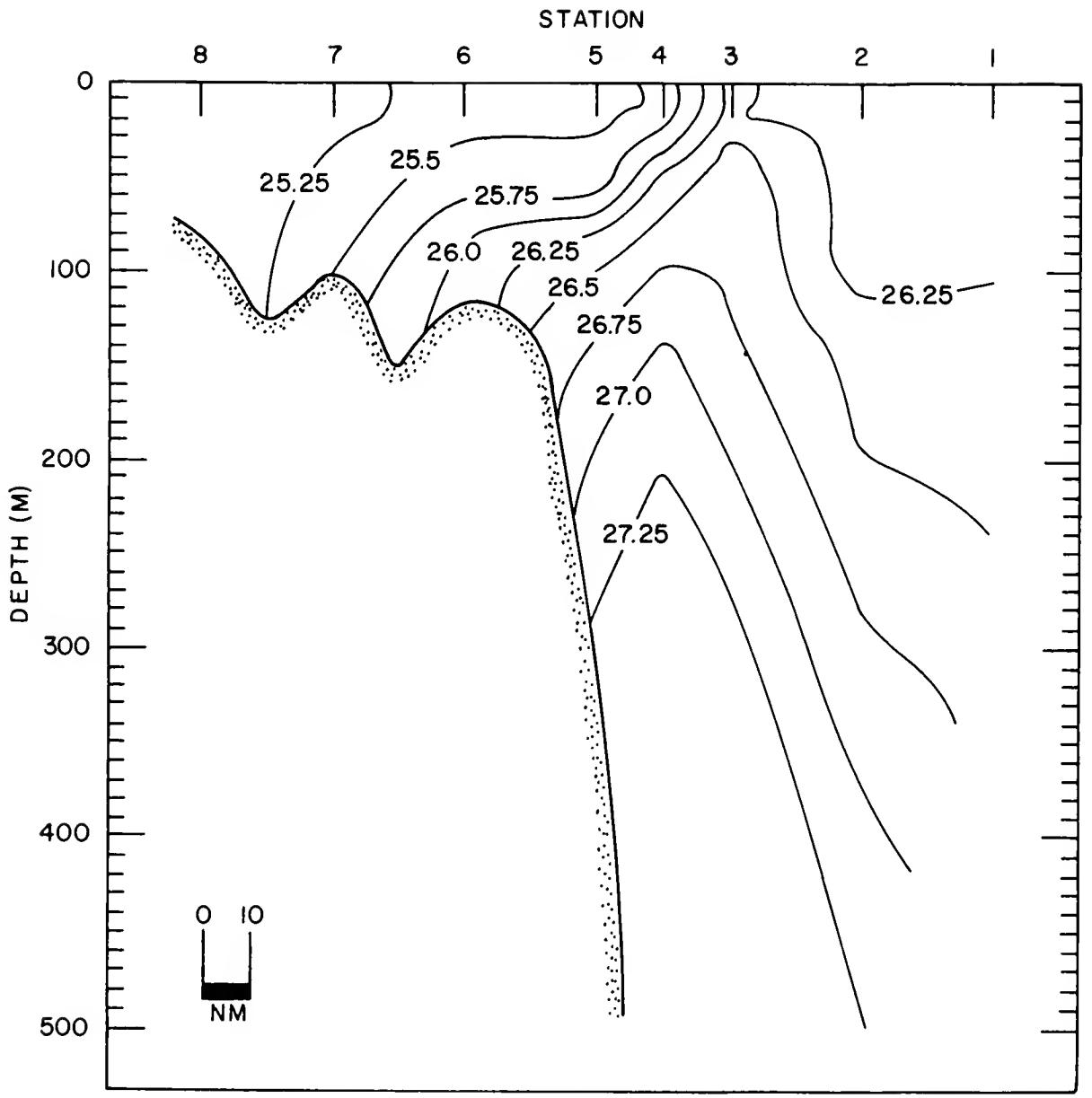

FIGURE 59.—Profile of sigma-t (g/l), section 1, ICNAF 69–1, 28 January-27 February 1969.

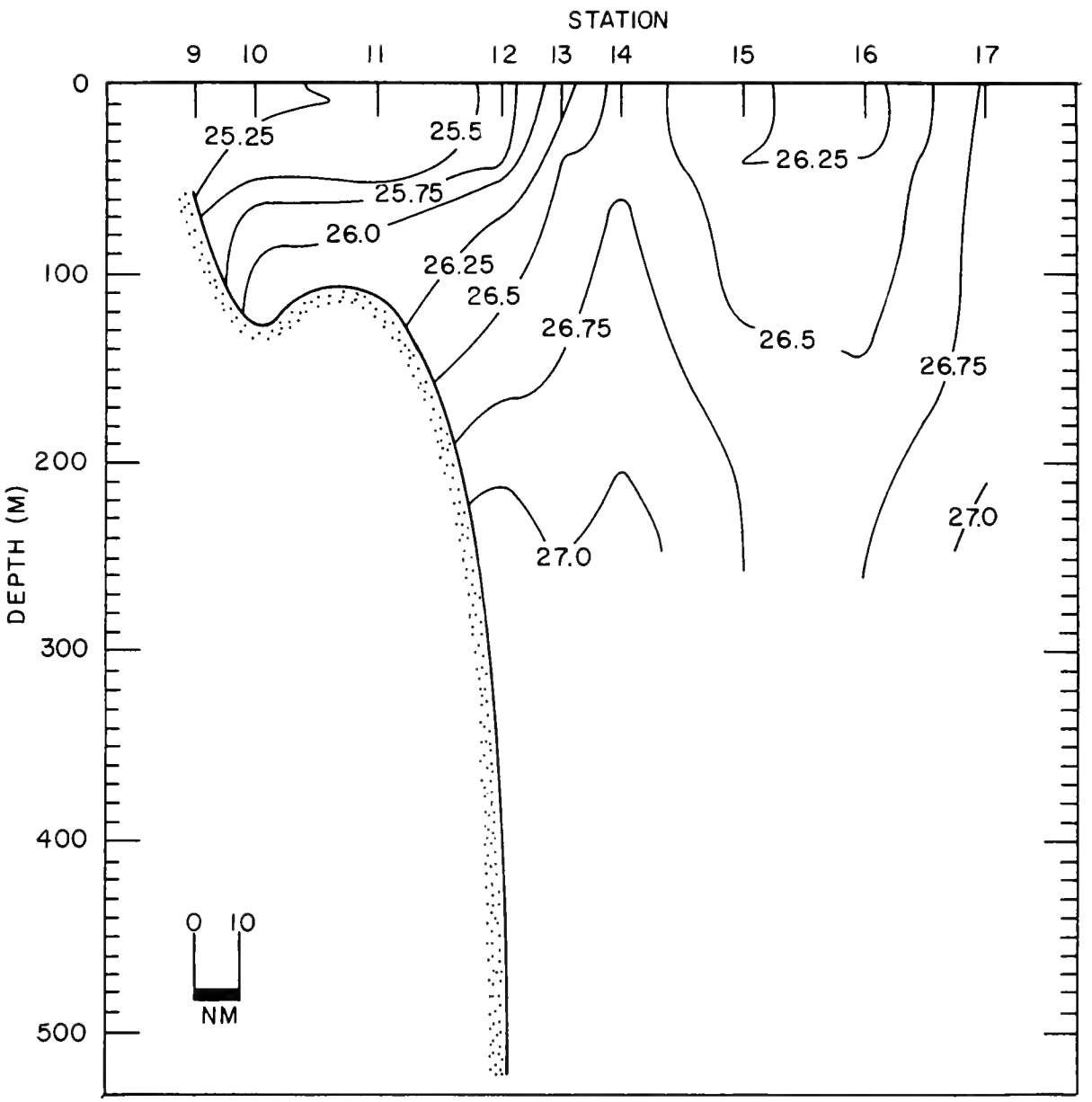

FIGURE 60.—Profile of sigma-t (g/l), section 2, ICNAF 69-1, 28 January-27 February 1969.

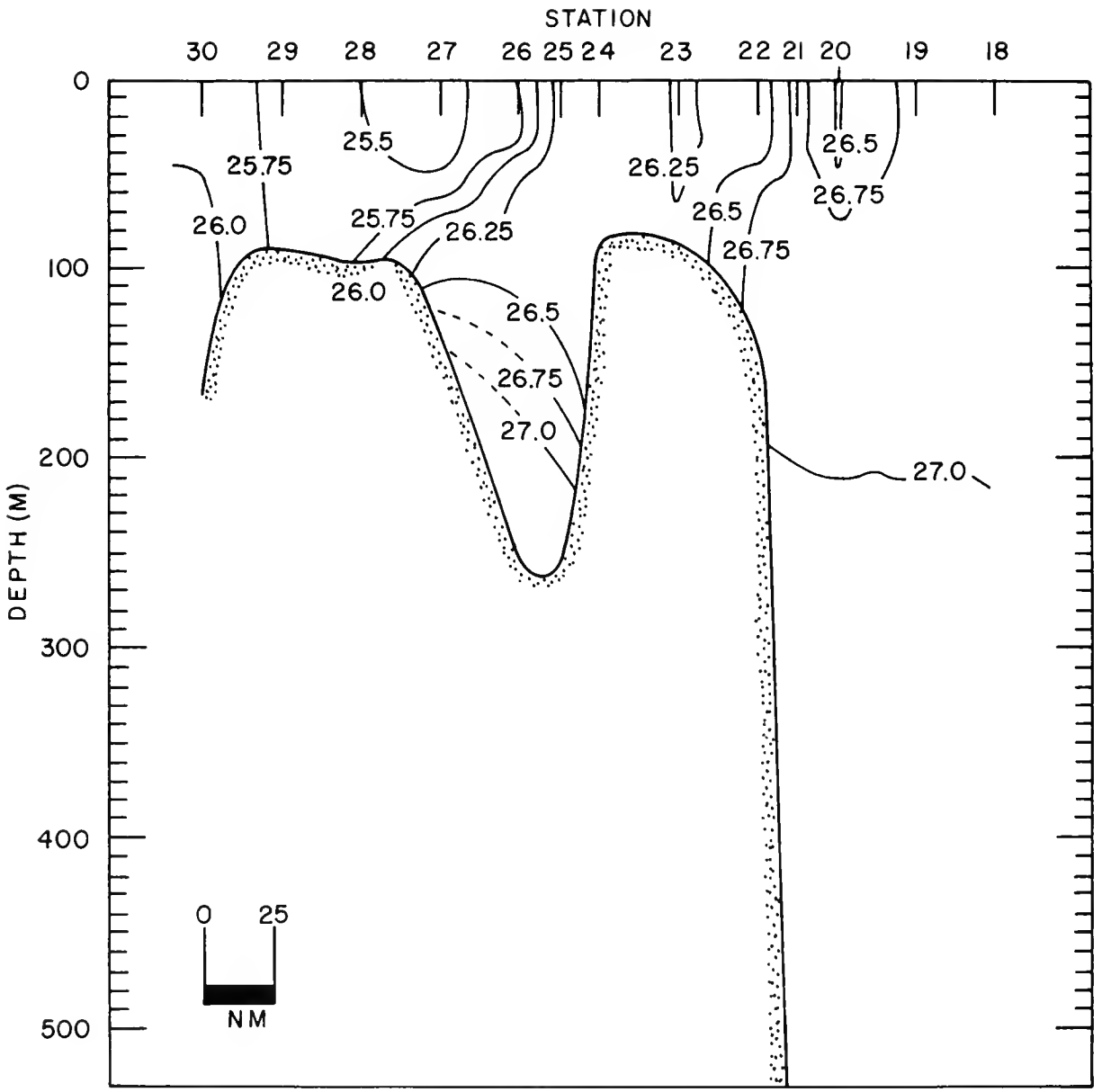

FIGURE 61.—Profile of sigma-t (g/l), section 3, ICNAF 69-1, 28 January-27 February 1969.

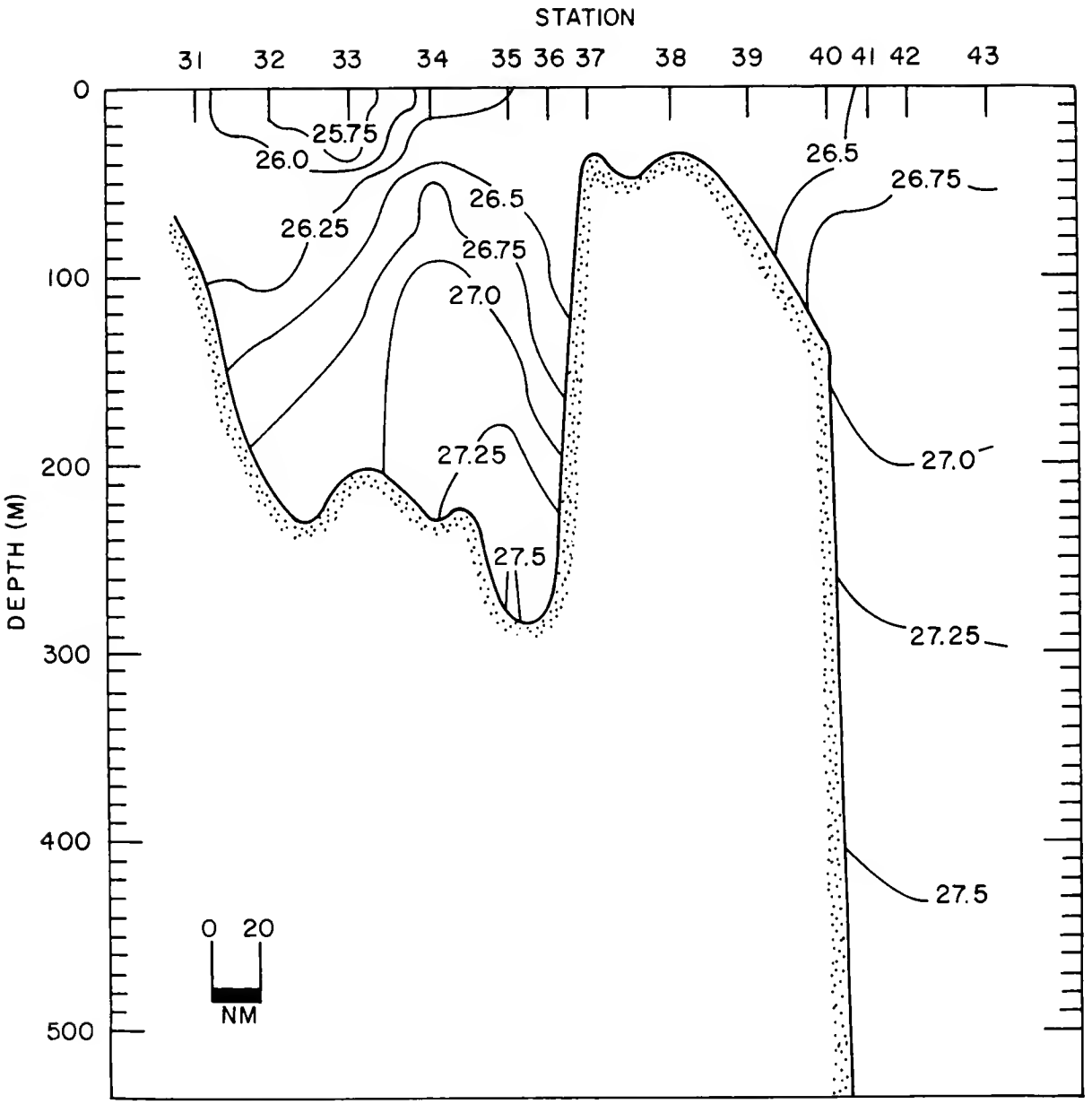

FIGURE 62.—Profile of sigma-t (g/l), section 4, ICNAF 69-1, 28 January-27 February 1969.

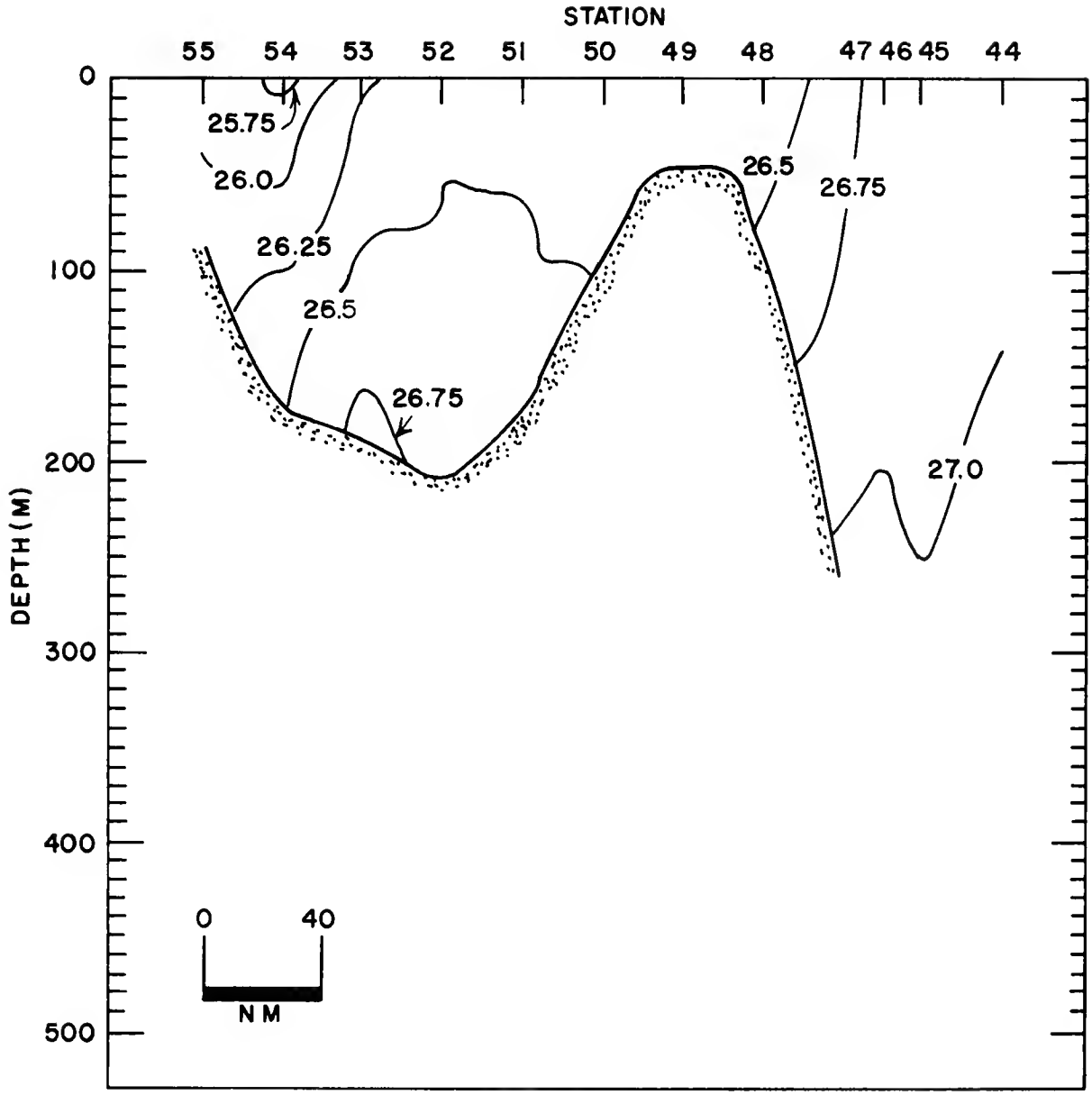

FIGURE 63.—Profile of sigma-t (g/l), section 5, ICNAF 69-1, 28 January-27 February 1969.

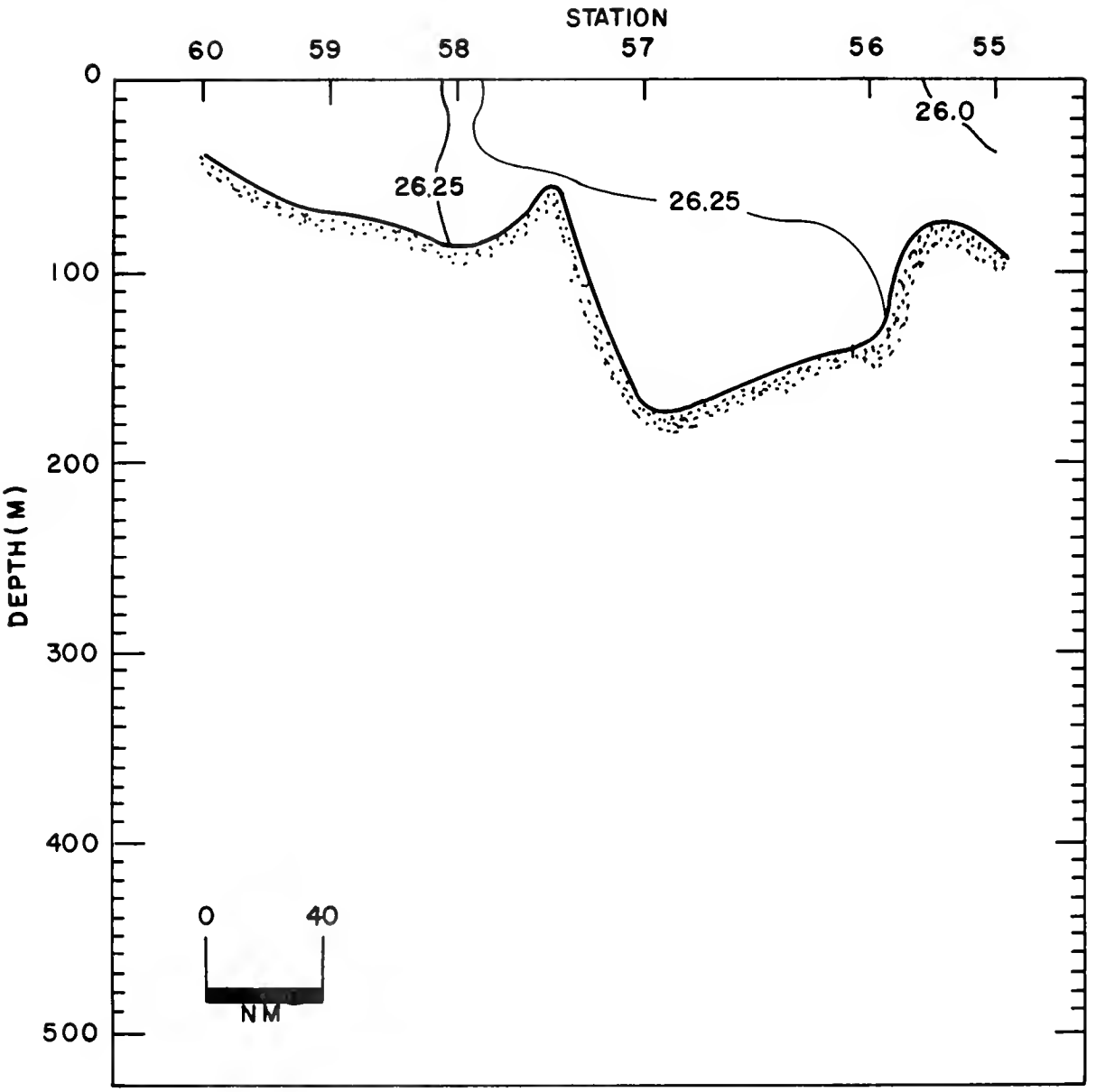

FIGURE 64.—Profile ofsigma-t (g/l), section 6, ICNAF 69-1, 28 January-27 February 1969.

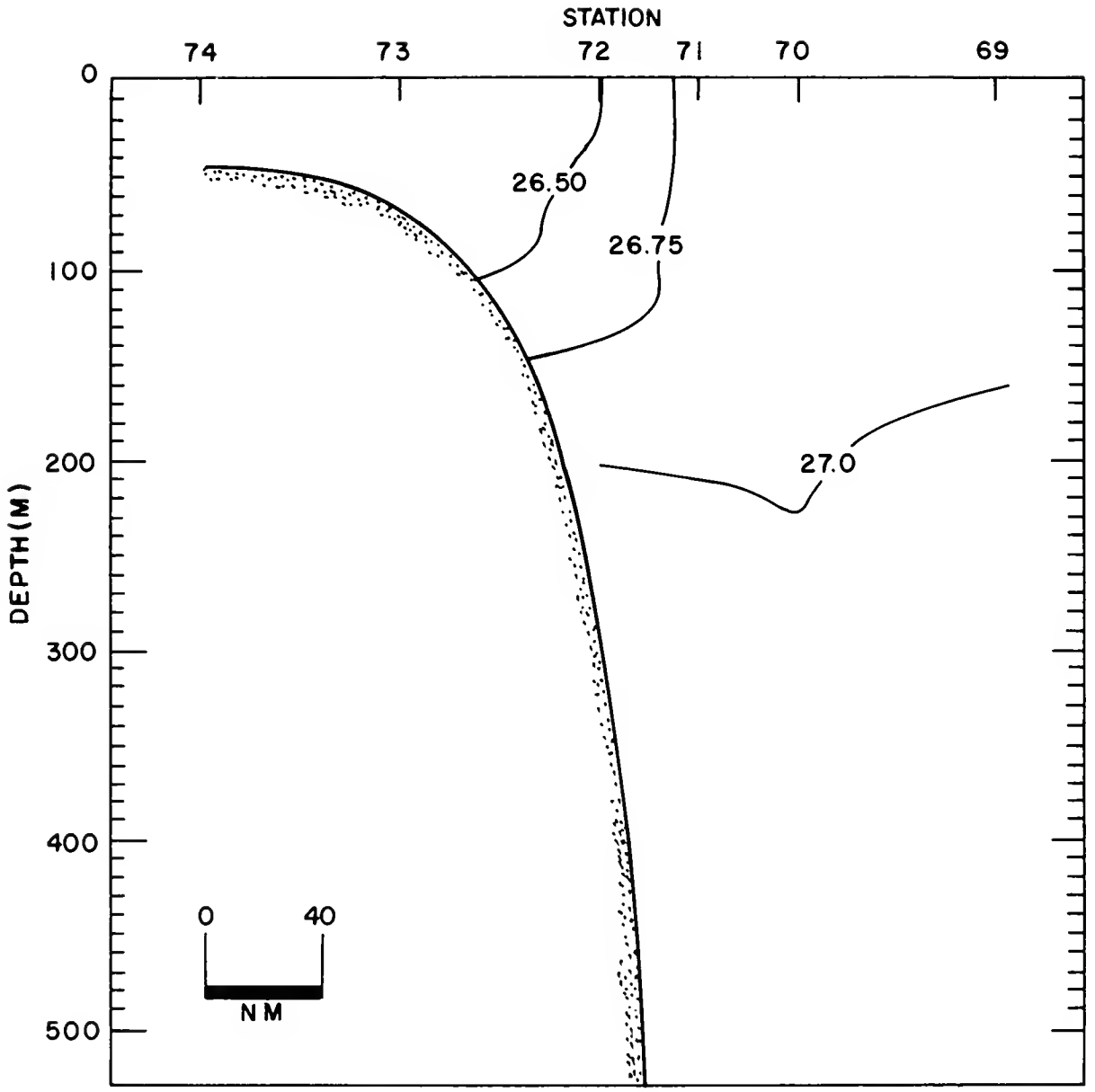

FIGURE 65.—Profile of sigma-t (g/l), section 7, ICNAF 69-1, 28 January-27 February 1969.

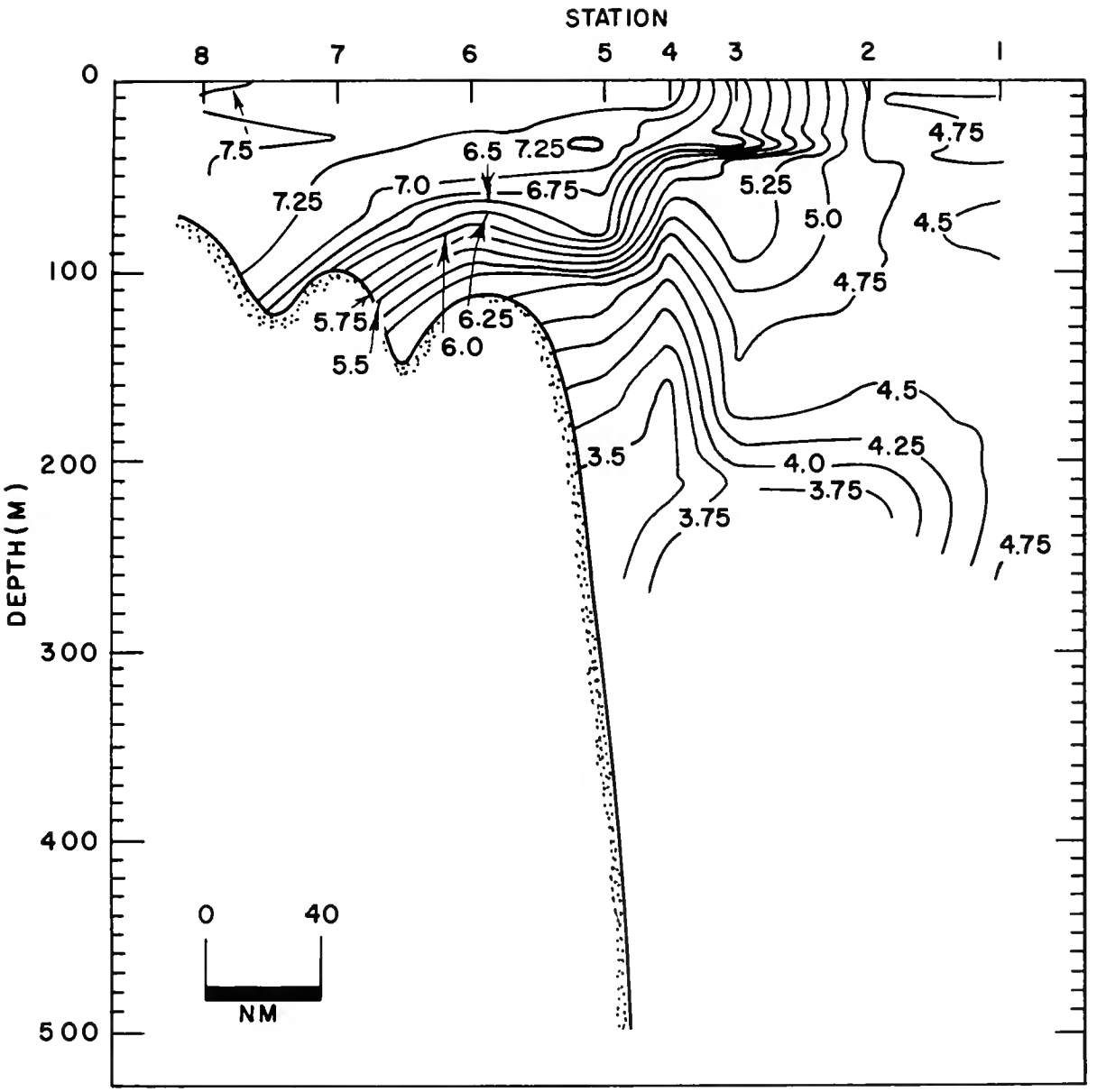

FIGURE 66.—Profile of dissolved oxygen (ml/l), section 1, ICNAF 69–1, 28 January-27 February 1969.

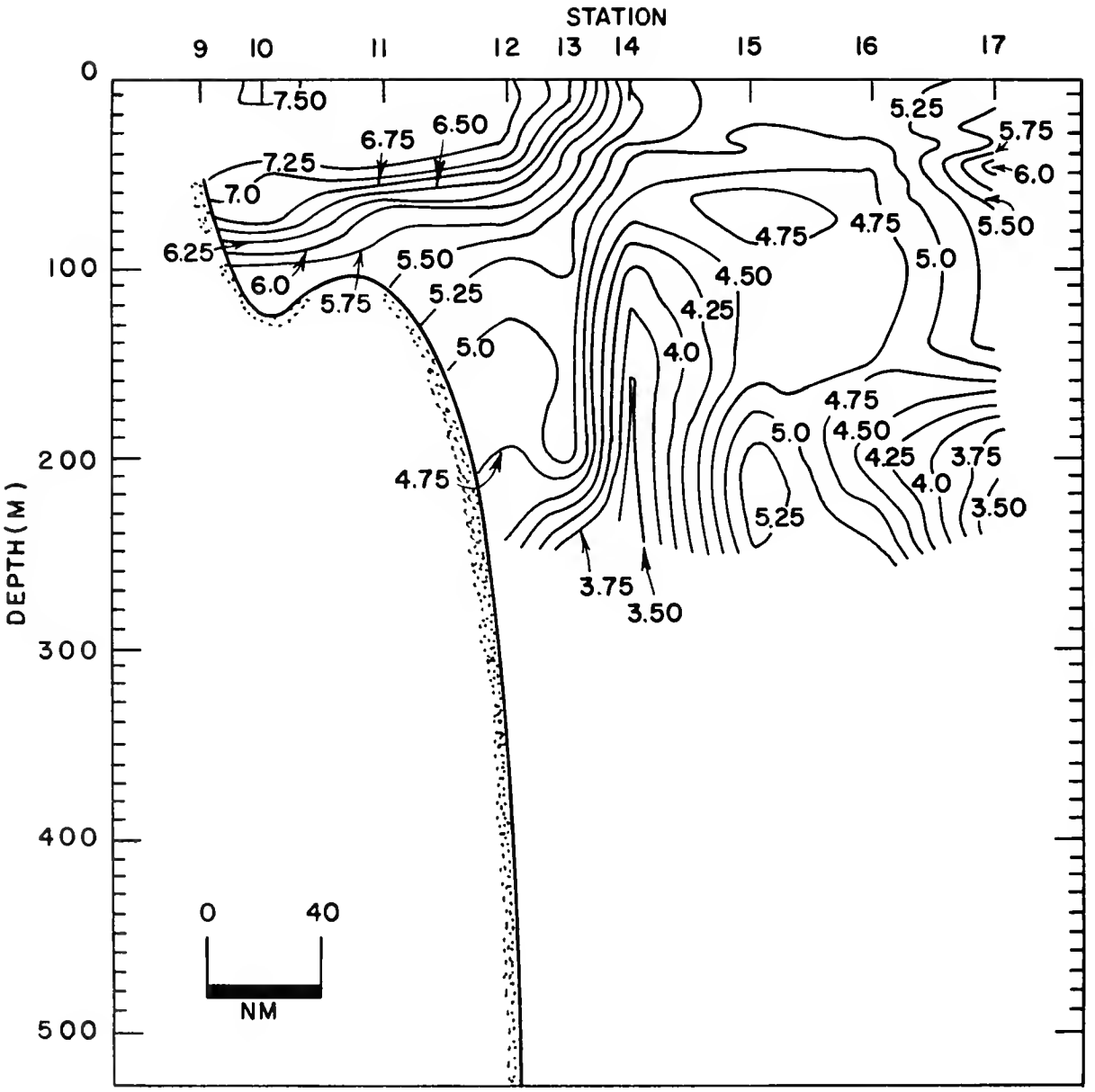

FIGURE 67.—Profile of dissolved oxygen (ml/l), section 2, ICNAF 69-1, 28 January-27 February 1969.

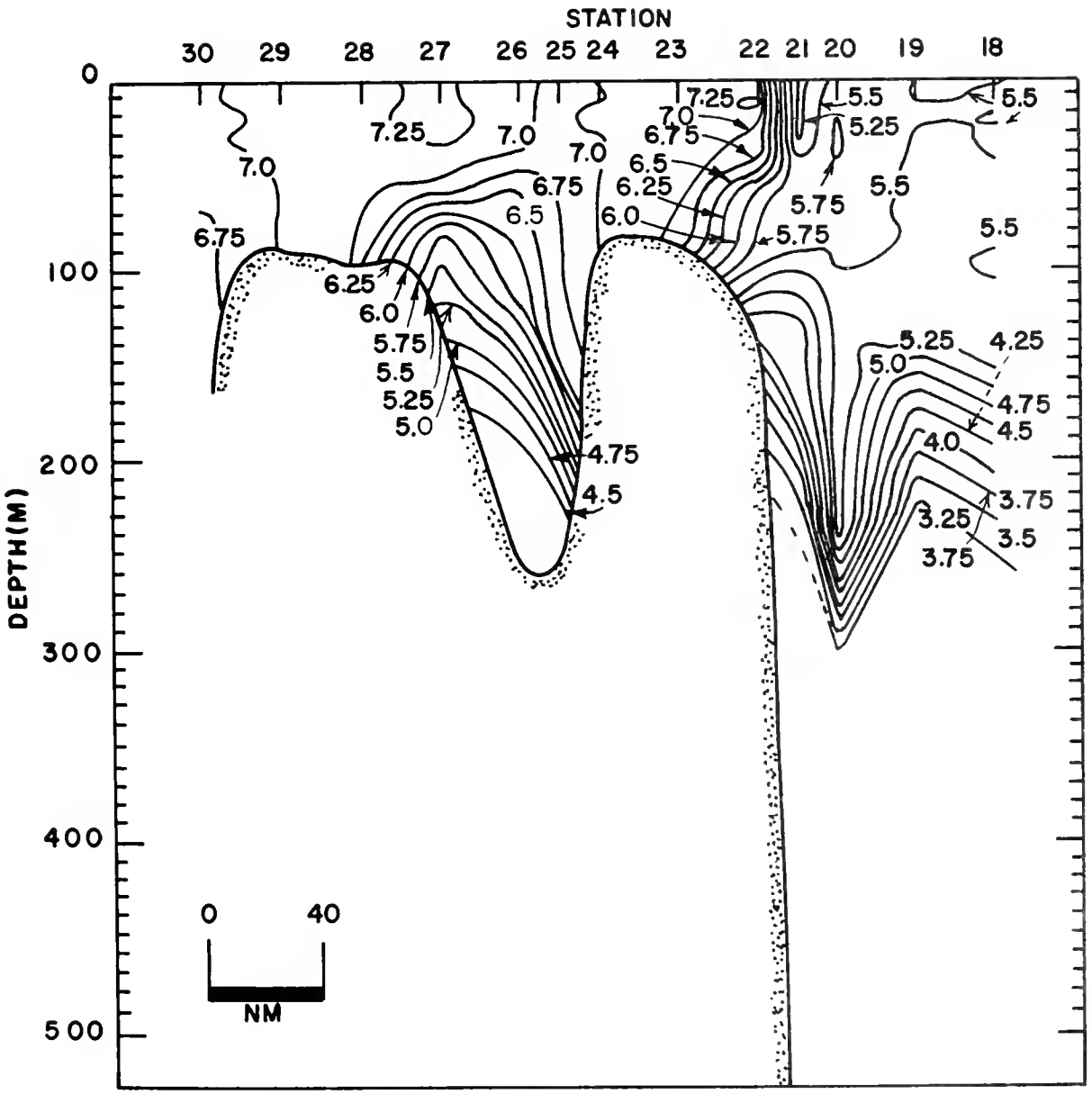

FIGURE 68.—Profile of dissolved oxygen (ml/l), section 3, ICNAF 69–1, 28 January-27 February 1969.

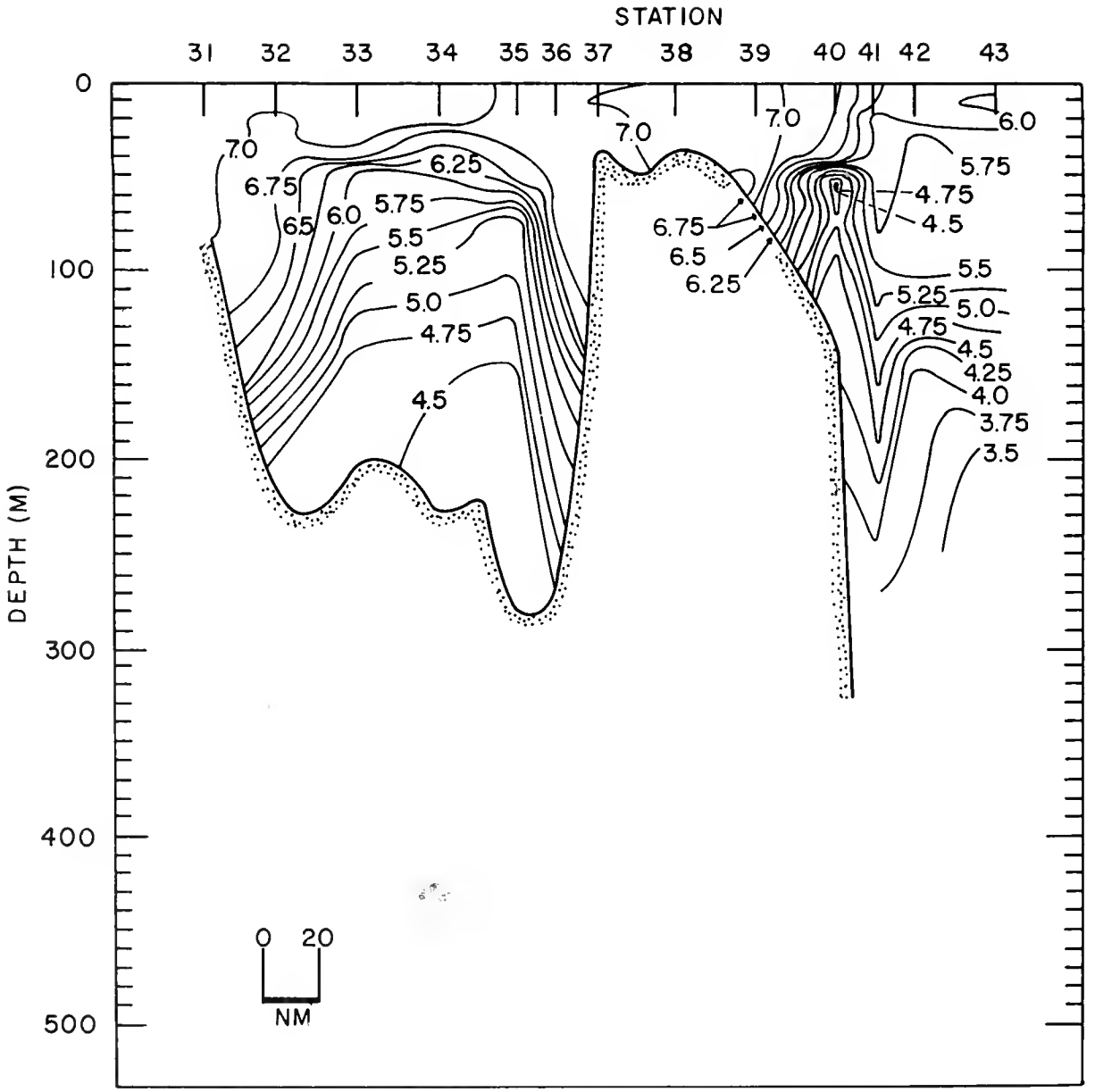

FIGURE 69.—Profile of dissolved oxygen (ml/l), section 4, ICNAF 69-1, 28 January-27 February 1969.

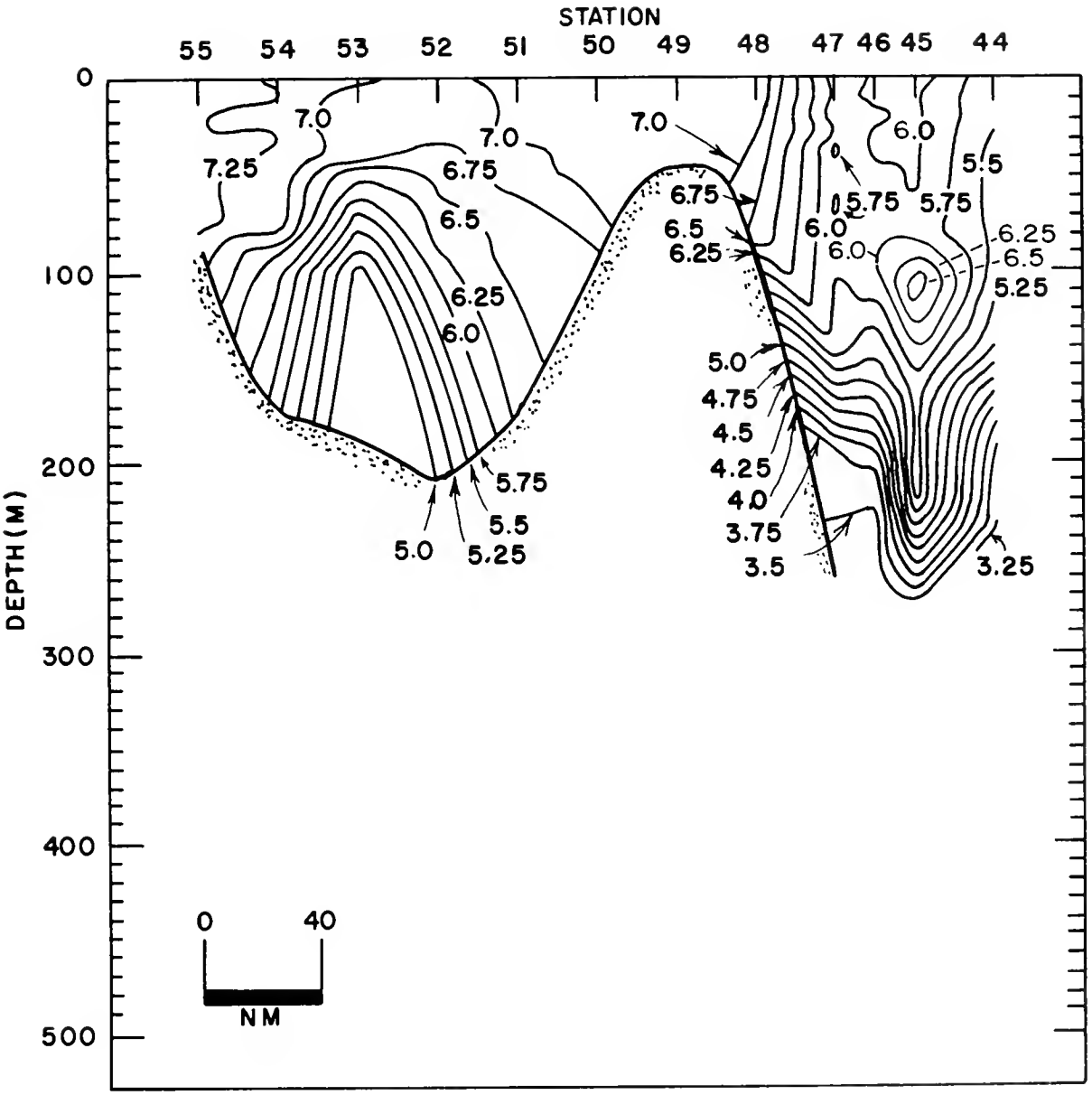

FIGURE 70.—Profile of dissolved oxygen (ml/l), section 5, ICNAF 69–1, 28 January-27 February 1969.

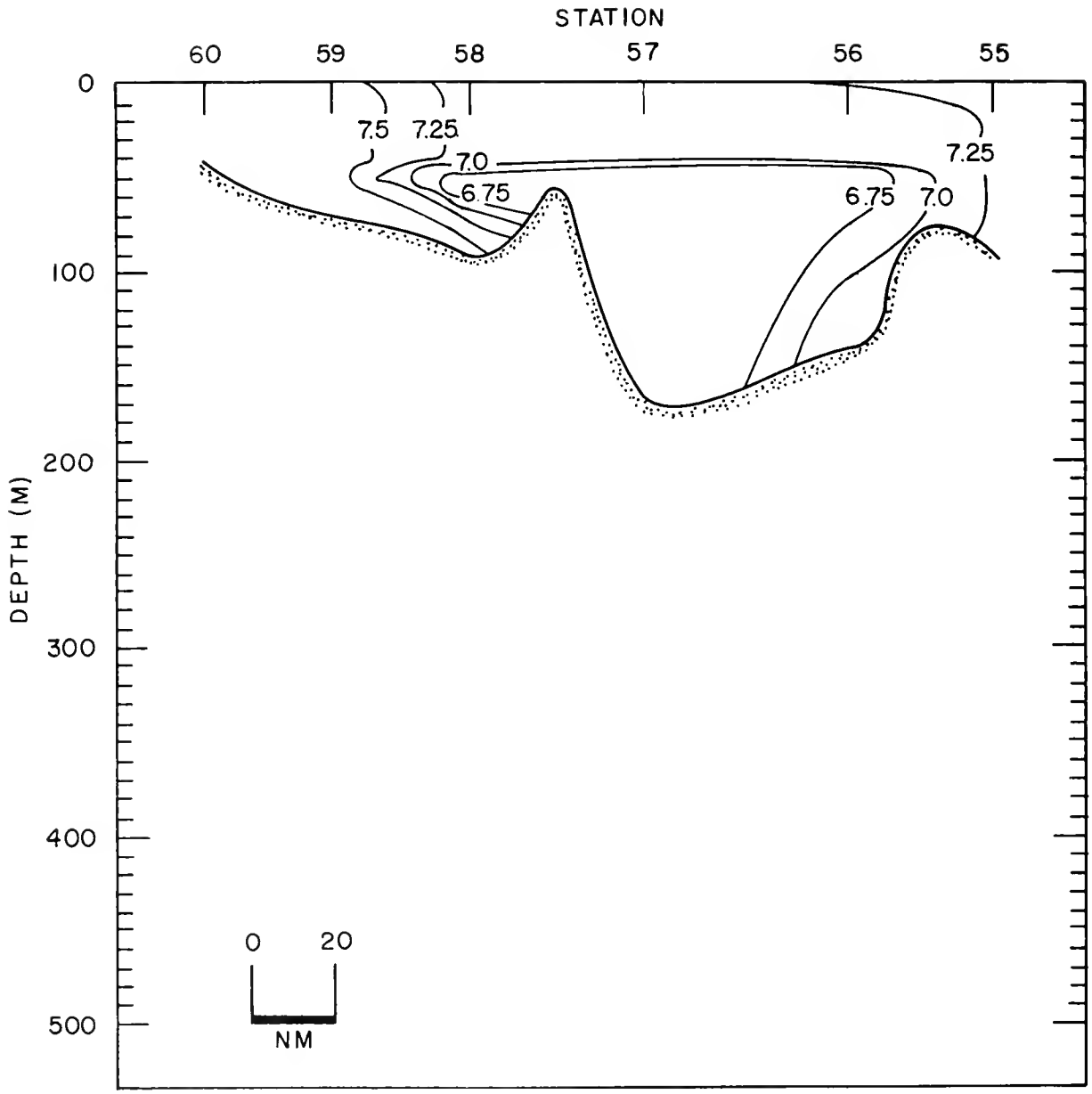

FIGURE 71.—Profile of dissolved oxygen (ml/l), section 6, ICNAF 69-1, 28 January-27 February 1969.

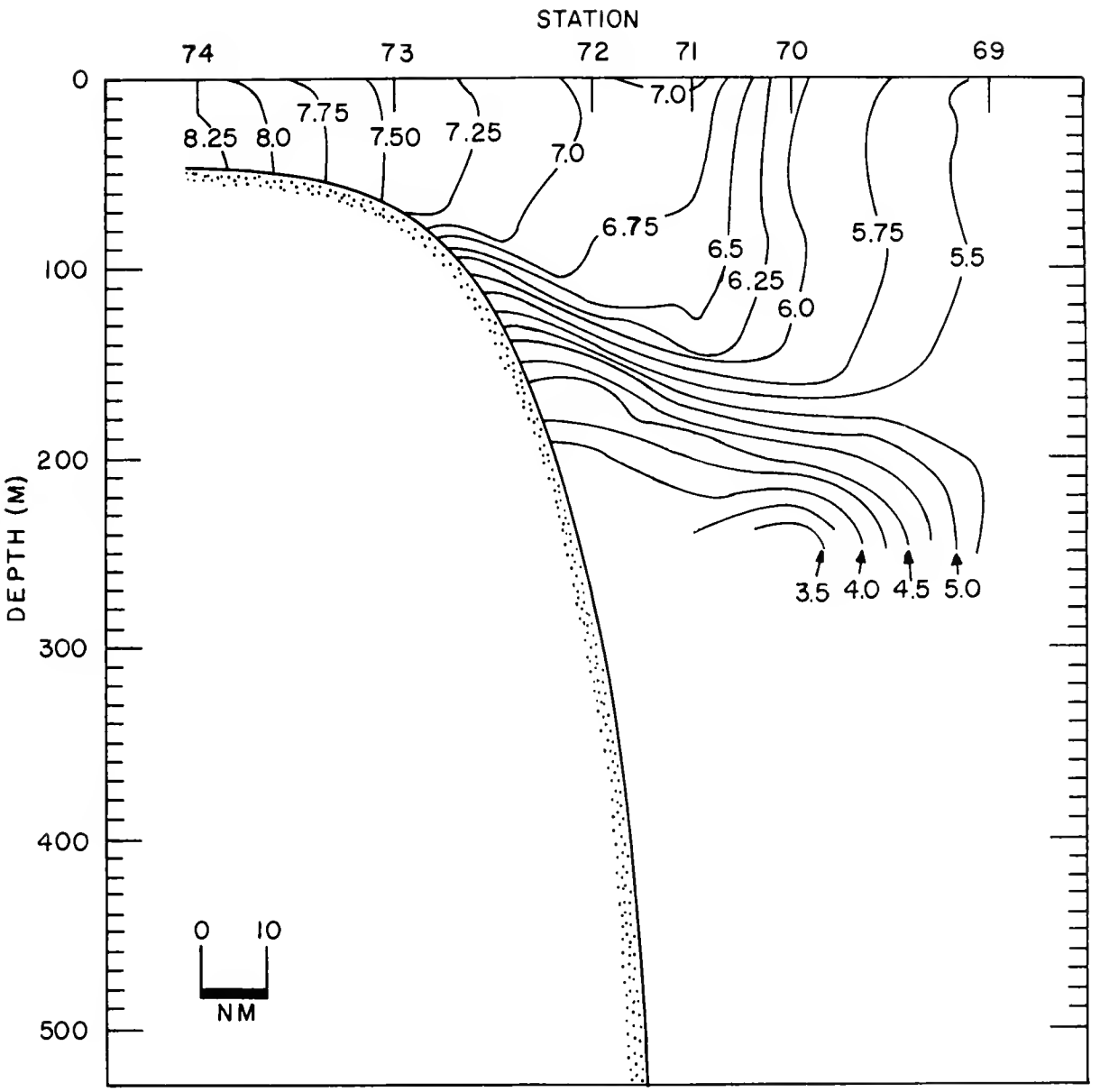

FIGURE 72.—Profile of dissolved oxygen (ml/l), section 7, ICNAF 69-1, 28 January-27 February 1969.

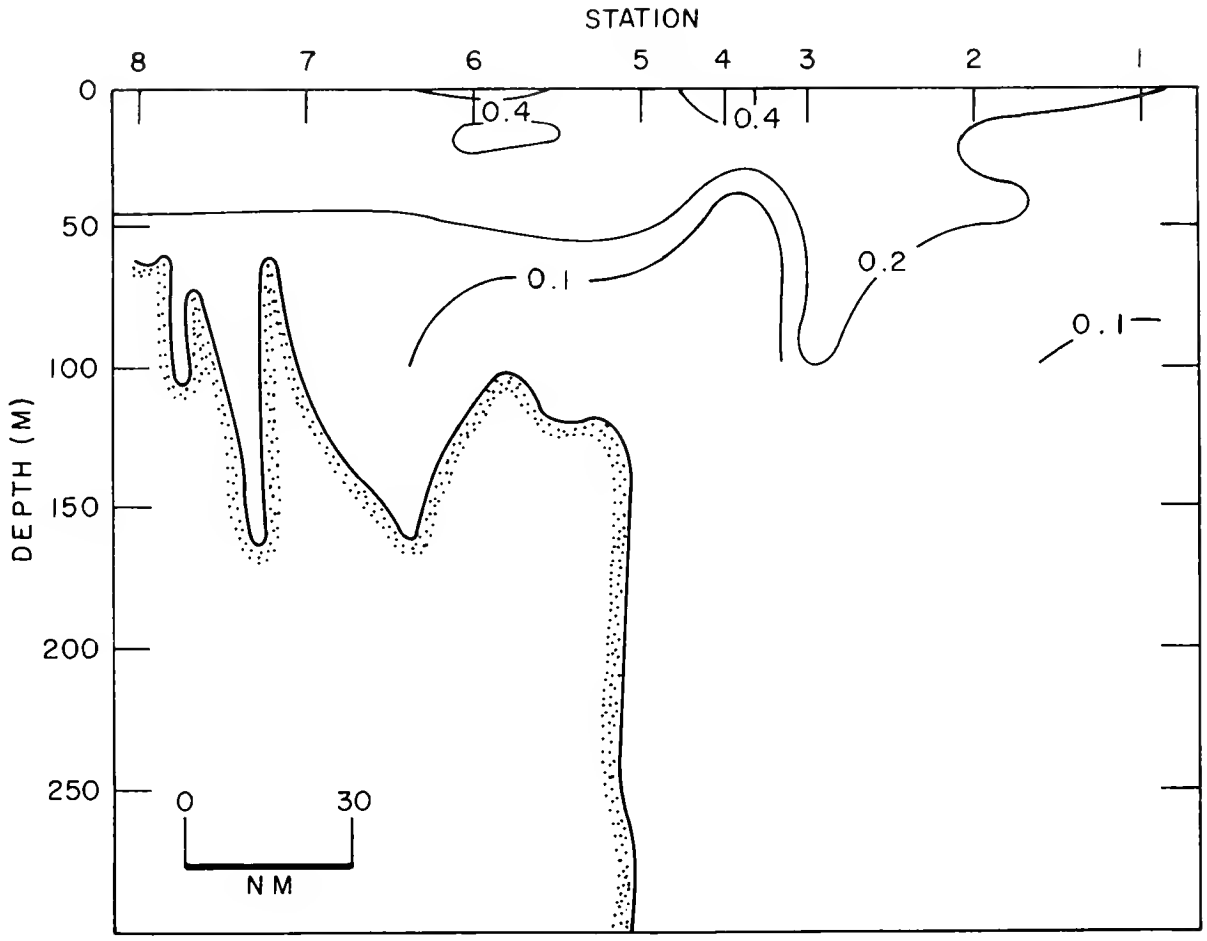

FIGURE 73.—Profile of chlorophyll (mg/m³), section 1, ICNAF 69–1, 28 January-27 February 1969.

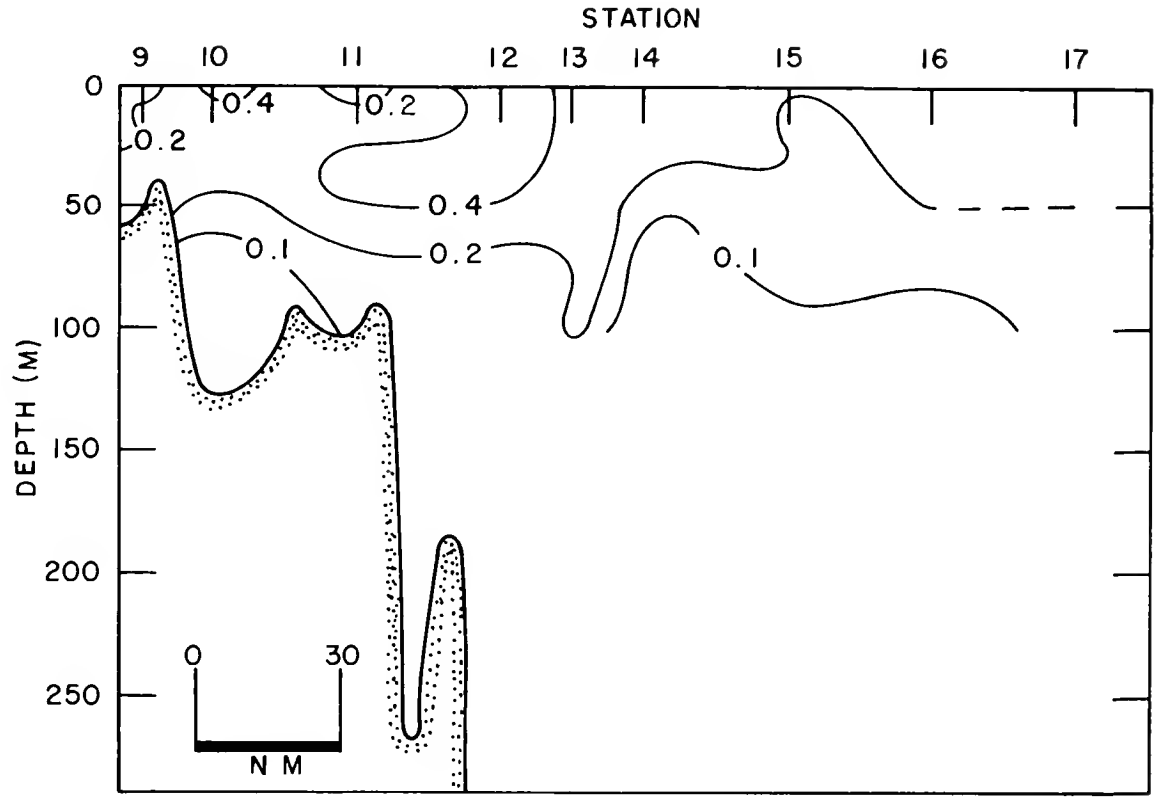

FIGURE 74.--Profile of chlorophyll (mg/m³), section 2, ICNAF 69-1, 28 January-27 February 1969.

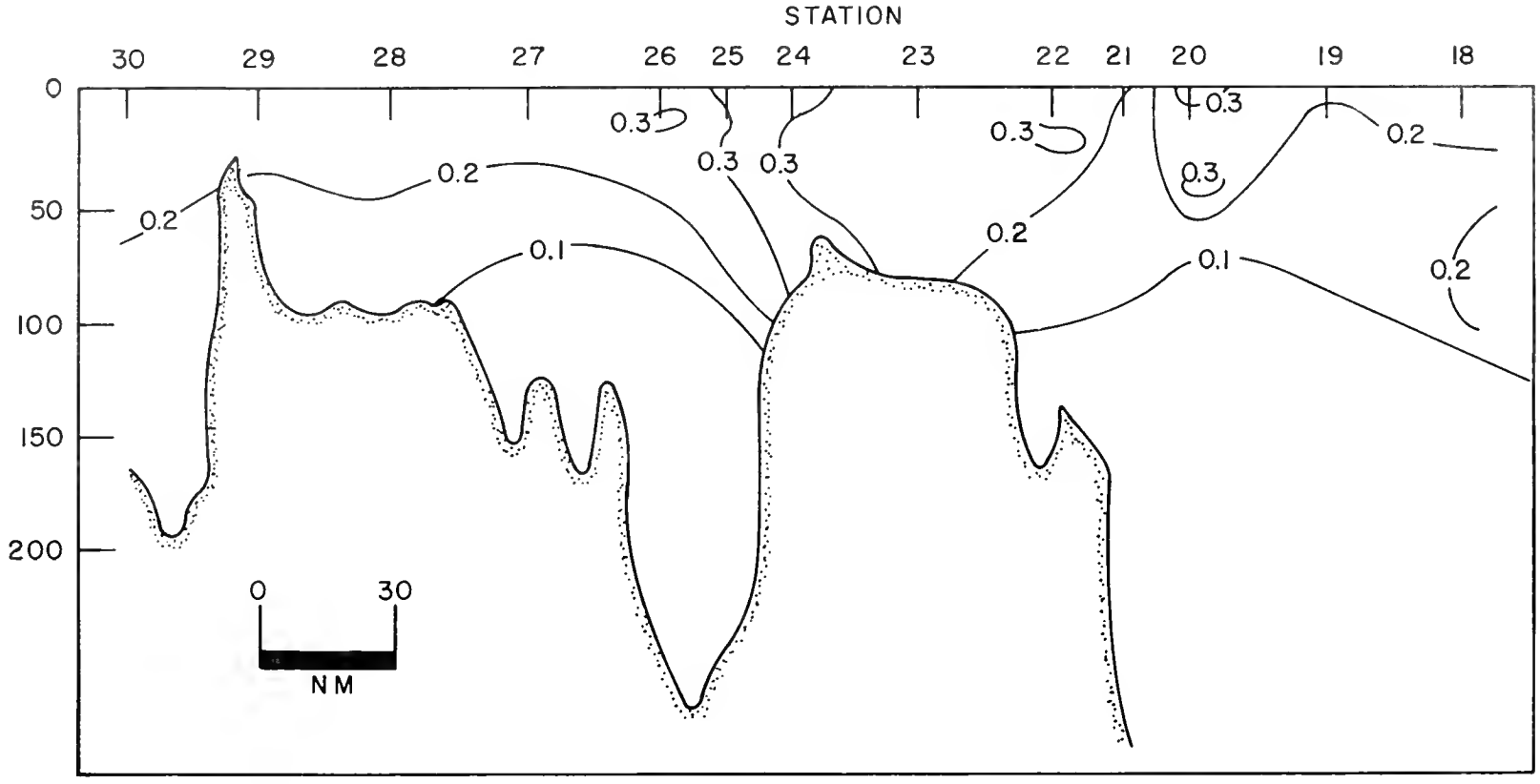

FIGURE 75.—Profile of chlorophyll (mg/m³), section 3, ICNAF 69–1, 28 January-27 February 1969.

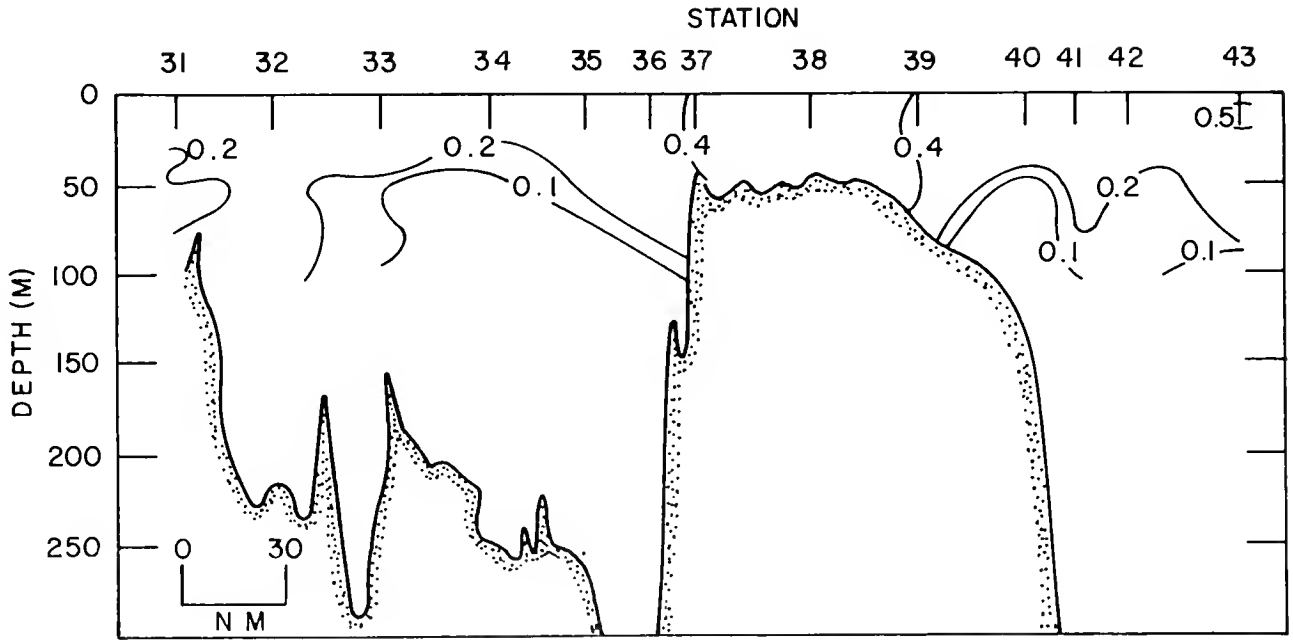

FIGURE 76.—Profile of chlorophyll (mg/m^3), section 4, ICNAF 69–1, 28 January–27 February 1969.

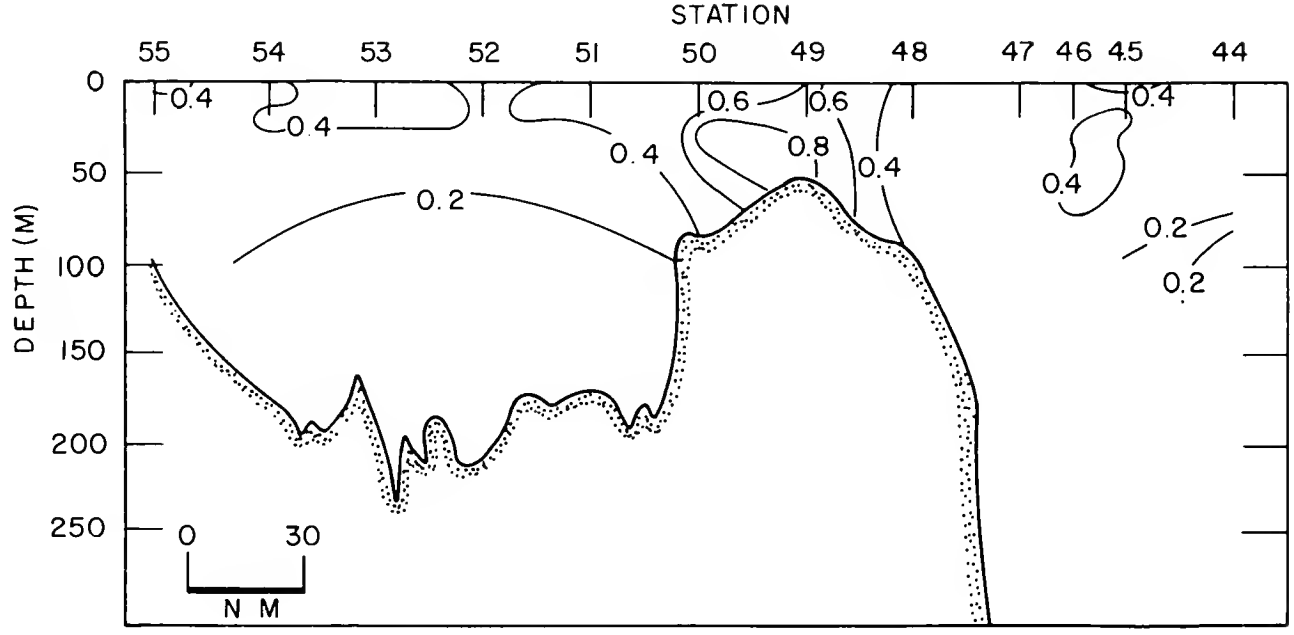

FIGURE 77.—Profile of chlorophyll (mg/m³), section 5, ICNAF 69–1, 28 January-27 February 1969.

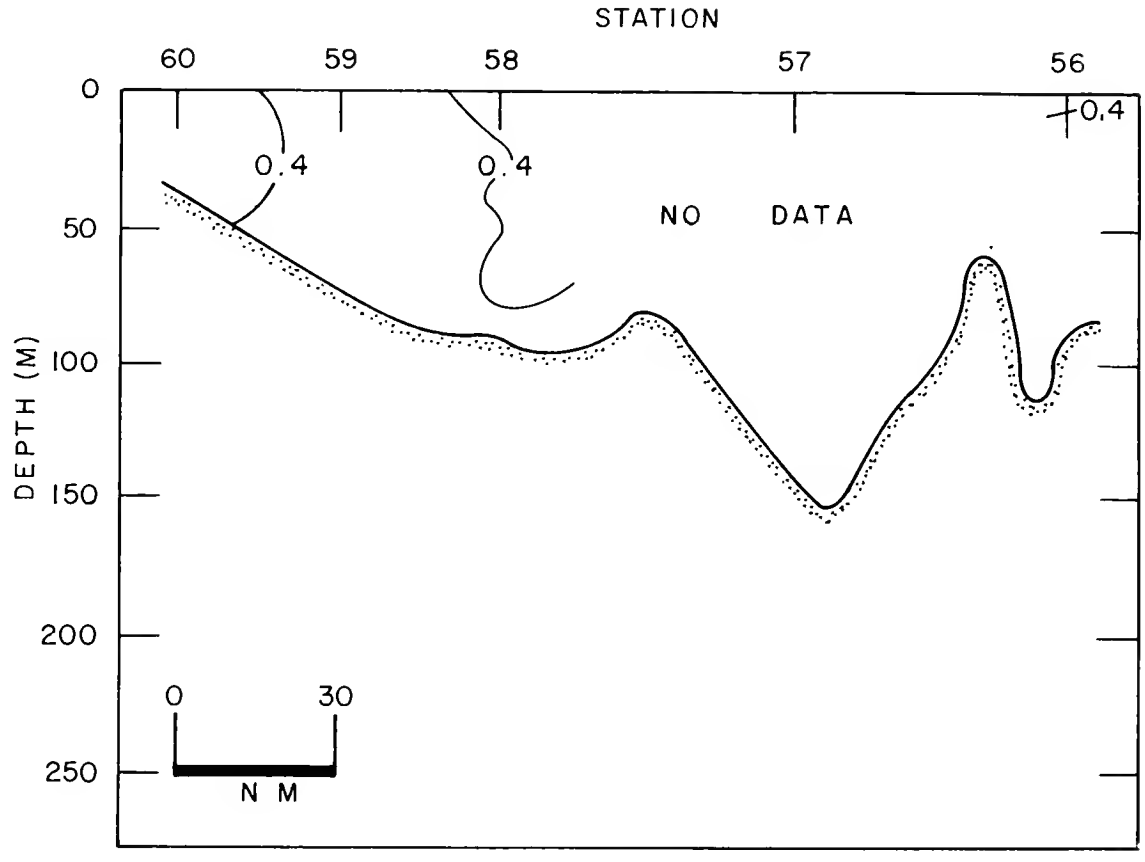

FIGURE 78.—Profile of chlorophyll (mg/m^3), section 6, ICNAF 69-1, 28 January-27 February 1969.

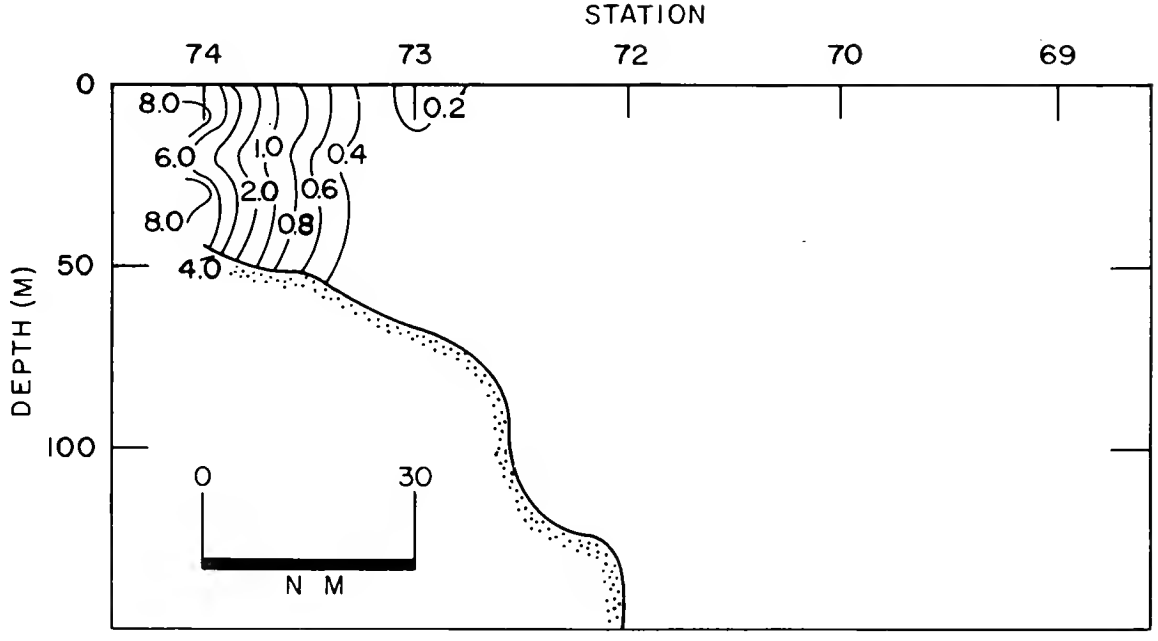

FIGURE 79.—Profile of chlorophyll (mg/m³), section 7, ICNAF 69–1, 28 January-27 February 1969.

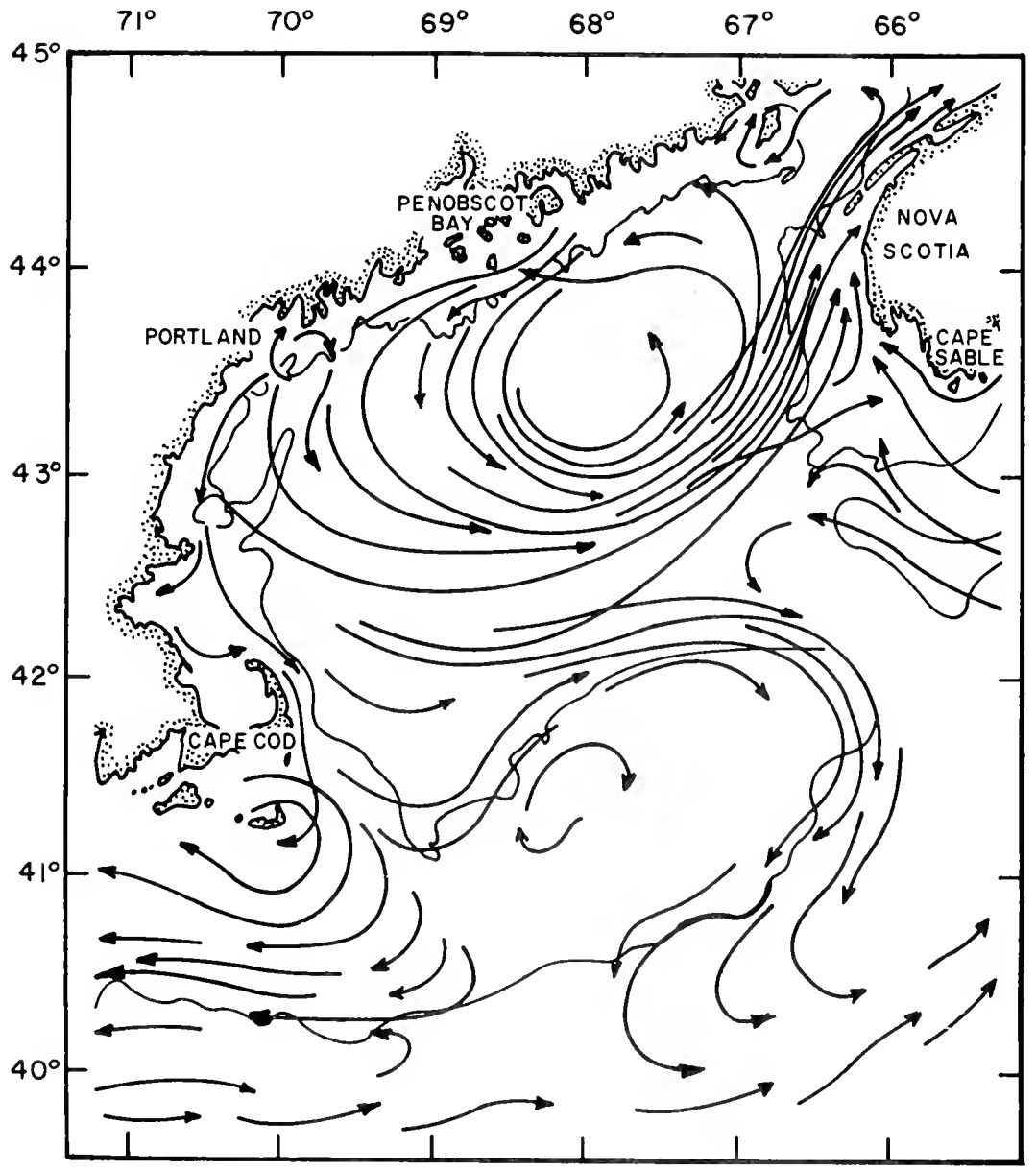

FIGURE 80.—Schematic representation of the dominant nontidal circulation of the Gulf of Maine (Bigelow, 1927).

APPENDIX A
OCEANOGRAPHIC DATA

Cruises Listed

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M–2, *Processing Physical and Chemical Data from Oceanographic Stations.* (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

Depth to Bottom ——— Corrected or uncorrected sounding in meters.

Max. Depth of Samples ——— Depth of deepest sample to nearest multiple of one hundred meters.

Wave observations

- DIR. ——— Rounded to nearest multiple of 10 degrees.
- HGT. ——— In increments of ½ m. Sum of 5 meters plus increments of ½ m if 50 is added to direction.
- PER. ——— If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2X (numeric entry) + 1. For other entries see WMO Code 3155.
- SEA ——— Sea state according to WMO Code 3700.

Weather Code ——— If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.

Cloud Code

- Type ——— Cloud type according to WMO Code 0500.
- Amount ——— Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.

Water

- Color Code ——— Color according to Forel-Ule scale.
- Trans. ——— Transparency in whole meters as determined by Secchi disc.

Wind

- Dir. ——— Rounded to nearest multiple of 10 degrees.
- Speed or Force ——— If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.

Barometer ——— Barometric pressure given in 10, units and tenths of millibars.

Air Temp. °C. ——— Air temperature to tenths of a degree centigrade.

Vis. Code ——— Visibility according to WMO Code 4300.

No obs. depths ——— Number of observed levels associated with the station.

Messenger time ——— Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, indicates the starting time of lowering the sensor.

Card type ——— OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.

Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C.	Temperature to hundredths of a degree Centigrade.
S $^{o}/_{oo}$	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.
Specific-volume	Multiply entry by 10^{-7} to obtain specific-volume anomly in cubic centimeters per gram.
$\Sigma\Delta$D Dyn. M. x 10^{3}	Multiply entry by 10^{-3} to obtain anomly of dynamic height in dynamic meters referenced to the sea surface.
Sound Velocity	Sound velocity according to Wilson's formula entered to tenths of a meter per second.
O_2 ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO_4–P ug–at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total–P ug–at/l	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO_2–N ug–at/l	Nitrite-nitrogen in microgram-atoms per liter entered to hundredths.
NO_3–N ug–at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO_4–Si ug–at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
CHL–A	Chlorophyll–A (total pigment) in milligrams per cubic meter entered to hundredths.

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.

REFERENCE: CITE CODE	REFERENCE: NO. NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	INDEX	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPLS	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	3958 N	066305W		115	96	01	17	179	1968		001	3548	15	12	2	2		X1	0	3		0001

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
07	50	33	508	278	017	017	8	32	

MESSENGER TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10E7	3 Δ O DYN M 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CH_4-A	SiO_4-Si µg-at/l	pH	ICC
		STD	0000	0838	3396	2642	0016179	0000	14830	661							
179		OBS	0000	0838	33957	2642			14830	661				042			
		STD	0010	0900	3416	2648	0015639	0016	14858	649							
		OBS	0010	0900	34156	2648			14858	649				037			
		STD	0020	0925	3434	2658	0014662	0031	14871	654							
		OBS	0020	0925	34342	2658			14871	654				030			
		OBS	0025	1000	34505	2659			14902								
		STD	0030	1100	3476	2661	0014480	0046	14942	655							
		OBS	0030	1100	34757	2661			14942	655				032			
		OBS	0040	1178	34998	2665			14974	620				036			
		STD	0050	1200	3505	2665	0014126	0074	14984	594							
		OBS	0050	1200	35053	2665			14984	594				022			
		OBS	0062	1245	35206	2668			15003								
		OBS	0072	1189	35098	2670			14984								
		STD	0075	1200	3517	2674	0013352	0109	14989	572							
		OBS	0075	1200	35167	2674			14989	572				021			
		OBS	0093	1254	35310	2674			15012								
		STD	0100	1220	3526	2677	0013124	0142	15001	548							
		OBS	0100	1220	35257	2677			15001	548				011			
		STD	0125	1092	3511	2689	0011961	0173	14959	430							
		OBS	0145	0990	34994	2698			14924								
		STD	0150	1039	3527	2711	0009957	0200	14946	389							
		OBS	0150	1039	35267	2711			14946	389							
		OBS	0162	1053	35327	2713			14954								
		STD	0200	0971	3523	2720	0009228	0248	14929	537							
		OBS	0200	0971	35227	2720			14929	537							
		STD	0250	0859	3512	2729	0008364	0292	14894	404							
		OBS	0250	0859	35117	2729			14894	404							
		OBS	0275	0740	34977	2736			14851								
		STD	0300	0720	3499	2740	0007370	0332	14847								
		OBS	0300	0720	34987	2740			14847								
		OBS	0380	0661	35006	2750			14838								
		STD	0400	0609	3499	2755	0006024	0399	14820								
		OBS	0400	0609	34986	2755			14820								
		STD	0500	0485	3492	2765	0005116	0454	14785								
		OBS	0500	0485	34916	2765			14785								
		STD	0600	0458	3493	2769	0004808	0504	14791								
		OBS	0600	0458	34929	2769			14791								
		STD	0700	0440	3495	2773	0004536	0551	14800								
		OBS	0700	0440	34951	2773			14800								
		STD	0800	0430	3497	2775	0004415	0595	14813								
		OBS	0800	0430	34965	2775			14813								
		STD	0900	0420	3497	2776	0004393	0640	14825								
		OBS	0900	0420	34965	2776			14825								
		STD	1000	0410	3497	2777	0004353	0683	14838								
		OBS	1000	0410	34967	2777			14838								
		STD	1100	0402	3497	2778	0004348	0727	14851								
		OBS	1100	0402	34967	2778			14851								
		STD	1200	0398	3497	2778	0004391	0770	14866								
		OBS	1200	0398	34967	2778			14866								
		STD	1300	0390	3497	2779	0004380	0814	14880								
		OBS	1300	0390	34967	2779			14880								
		STD	1400	0380	3497	2780	0004341	0858	14892								
		OBS	1400	0380	34967	2780			14892								
		STD	1500	0380	3497	2780	0004427	0902	14909								
		OBS	1500	0380	34967	2780			14909								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	SHIP'S BOOK	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	40289N	066319W		151	06	01	17	225	1968		002	2304	15	12	1	2		X1	0	3		0002

WATER: COLOR CODE	WATER: TRANS. (M)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	5D	31	508	298	017	011		34	

MESSENG. TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (M)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	DYN M	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO3-N µg-at/l	OR—A	SiO4-Si µg-at/l	pH	CCC
		STD	0000	0592	3321	2617	0018558	0000	14724	701							
	225	OBS	0000	0592	33206	2617			14724	701				029			
		STD	0010	0740	3376	2641	0016309	0017	14792	685							
		OBS	0010	0740	33758	2641			14792	685				032			
		STD	0020	0761	3381	2642	0016245	0034	14802	674							
		OBS	0020	0761	33807	2642			14802	674				038			
		OBS	0025	0765	33855	2645			14805								
		STD	0030	0820	3402	2649	0015519	0050	14829	657							
		OBS	0030	0820	34018	2649			14829	657				036			
		OBS	0040	0911	34347	2661			14869	652				039			
		STD	0050	0950	3449	2666	0014033	0079	14887	583							
		OBS	0050	0950	34488	2666			14887	583				022			
		OBS	0055	1017	34688	2670			14915								
		OBS	0060	0960	34598	2673			14894								
		STD	0075	0972	3473	2681	0012668	0113	14902	508							
		OBS	0075	0972	34727	2681			14902	508				010			
		OBS	0085	0975	34777	2684			14906								
		STD	0100	0870	3472	2697	0011163	0142	14869	466							
		OBS	0100	0870	34722	2697			14869	466				003			
		OBS	0110	0843	34747	2703			14860								
		STD	0125	0837	3481	2709	0010064	0169	14861	433							
		STD	0150	0820	3490	2718	0009229	0193	14860	407							
		OBS	0150	0820	34895	2718			14860	407							
		OBS	0165	0805	34927	2723			14857								
		OBS	0175	0820	34980	2725			14865								
		STD	0200	0800	3499	2728	0008352	0237	14862	379							
		OBS	0200	0800	34986	2728			14862	379							
		STD	0250	0740	3497	2736	0007716	0277	14847	403							
		OBS	0250	0740	34967	2736			14847	403							
		OBS	0280	0692	34970	2743			14833								
		STD	0300	0700	3503	2746	0006802	0313	14840								
		OBS	0300	0700	35026	2746			14840								
		OBS	0340	0620	34890	2746			14813								
		OBS	0350	0567	34905	2754			14794								
		STD	0400	0550	3493	2758	0005707	0376	14795								
		OBS	0400	0550	34927	2758			14795								
		STD	0500	0488	3494	2766	0005011	0430	14787								
		OBS	0500	0488	34935	2766			14787								
		STD	0600	0465	3495	2769	0004758	0478	14794								
		OBS	0600	0465	34947	2769			14794								
		STD	0700	0447	3496	2772	0004575	0525	14803								
		OBS	0700	0447	34957	2772			14803								
		STD	0800	0439	3497	2774	0004516	0570	14817								
		OBS	0800	0439	34966	2774			14817								
		STD	0900	0423	3497	2776	0004378	0615	14827								
		OBS	0900	0423	34972	2776			14827								
		STD	1000	0415	3497	2777	0004370	0659	14840								
		OBS	1000	0415	34973	2777			14840								
		STD	1100	0403	3497	2778	0004339	0702	14852								
		OBS	1100	0403	34970	2778			14852								
		STD	1200	0399	3497	2778	0004403	0746	14867								
		OBS	1200	0399	34967	2778			14867								
		STD	1300	0390	3497	2779	0004380	0790	14880								
		OBS	1300	0390	34967	2779			14880								
		STD	1400	0385	3497	2780	0004390	0834	14894								
		OBS	1400	0385	34969	2780			14894								
		STD	1500	0382	3498	2781	0004387	0878	14910								
		OBS	1500	0382	34976	2781			14910								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4045.5N	06628 W		151	06	01	18	018	1968		003	2012	15	11	0	2		X1	0	3		0003

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
07	50	30	510	301	-011	-011	8	35	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	O₂-A	SiO₄-Si µg-at/l	pH	SECCHI
		STD	0000	0573	3302	2605	0019717	0000	14714	699							
018		OBS	0000	0573	33022	2605			14714	699				036			
		STD	0010	0778	3389	2645	0015867	0018	14808	694							
		OBS	0010	0778	33887	2645			14808	694				041			
		STD	0020	0900	3416	2648	0015606	0034	14860	681							
		OBS	0020	0900	34163	2648			14860	681				034			
		OBS	0025	0960	34487	2664			14887								
		STD	0030	1000	3462	2668	0013801	0048	14904	643							
		OBS	0030	1000	34622	2668			14904	643				028			
		OBS	0040	1112	34942	2673			14950	648				031			
		STD	0050	1125	3498	2673	0013313	0075	14957	629							
		OBS	0050	1125	34981	2673			14957	629				024			
		OBS	0057	1130	35006	2674			14960								
		OBS	0067	1251	35323	2676			15007								
		STD	0075	1161	3510	2676	0013115	0108	14975	599							
		OBS	0075	1161	35103	2676			14975	599				029			
		OBS	0082	1063	34884	2677			14939								
		OBS	0090	1166	35158	2679			14980								
		STD	0100	1180	3523	2682	0012609	0141	14987	510							
		OBS	0100	1180	35227	2682			14987	510				008			
		OBS	0102	1141	35161	2684			14973								
		OBS	0103	1157	35282	2691			14980								
		STD	0125	1150	3525	2690	0011946	0171	14981	405							
		STD	0150	1079	3522	2700	0011011	0200	14960	353							
		OBS	0150	1079	35217	2700			14960	353							
		OBS	0195	0780	34700	2709			14850								
		STD	0200	0815	3490	2719	0009210	0250	14866	407							
		OBS	0200	0815	34900	2719			14866	407							
		OBS	0210	0880	35096	2724			14895								
		OBS	0220	0880	35119	2726			14897								
		STD	0250	0860	3507	2726	0008726	0295	14894	345							
		OBS	0250	0860	35070	2726			14894	345							
		STD	0300	0744	3500	2738	0007599	0336	14857								
		OBS	0300	0744	35002	2738			14857								
		OBS	0350	0608	34912	2749			14810								
		STD	0400	0558	3490	2754	0006038	0404	14798								
		OBS	0400	0558	34896	2754			14798								
		STD	0500	0482	3491	2765	0005095	0460	14784								
		OBS	0500	0482	34914	2765			14784								
		STD	0600	0453	3493	2769	0004741	0509	14789								
		OBS	0600	0453	34930	2769			14789								
		STD	0700	0439	3495	2772	0004568	0556	14800								
		OBS	0700	0439	34945	2772			14800								
		STD	0800	0427	3496	2774	0004445	0601	14811								
		OBS	0800	0427	34956	2774			14811								
		STD	0900	0420	3496	2776	0004423	0645	14825								
		OBS	0900	0420	34961	2776			14825								
		STD	1000	0418	3497	2777	0004407	0689	14841								
		OBS	1000	0418	34973	2777			14841								
		STD	1100	0403	3497	2778	0004361	0733	14852								
		OBS	1100	0403	34967	2778			14852								
		STD	1200	0399	3497	2778	0004403	0777	14867								
		OBS	1200	0399	34967	2778			14867								
		STD	1300	0391	3497	2779	0004393	0821	14880								
		OBS	1300	0391	34967	2779			14880								
		STD	1400	0386	3497	2780	0004418	0865	14895								
		OBS	1400	0386	34967	2780			14895								
		STD	1500	0380	3497	2780	0004427	0909	14909								
		OBS	1500	0380	34967	2780			14909								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE CODE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4100 N	06630 W		15	1	6	01	18	043	1968		004		0101	01	12	1	2		X1	0	3		0004

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	31	510	312	-011	-011	8	10	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\frac{1}{2}\Delta D$ DYN. M E 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	OE-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0380	3234	2571	0022901	0000	14624	766							
043		OBS	0000	0380	32335	2571			14624	766				033			
		STD	0010	0380	3234	2571	0022891	0023	14626	768							
		OBS	0010	0380	32337	2571			14626	768				030			
		OBS	0018	0380	32337	2571			14627								
		STD	0020	0397	3240	2575	0022556	0046	14636	747							
		OBS	0020	0397	32403	2575			14636	747				033			
		OBS	0025	0420	32457	2577			14647								
		STD	0030	0422	3249	2579	0022167	0068	14649	742							
		OBS	0030	0422	32487	2579			14649	742				029			
		OBS	0040	0450	32654	2589			14665	729				023			
		STD	0050	0471	3271	2591	0021018	0111	14676	722							
		OBS	0050	0471	32707	2591			14676	722				028			
		OBS	0058	0520	33107	2618			14703								
		STD	0075	0560	3335	2632	0017180	0159	14725	676							
		OBS	0075	0560	33352	2632			14725	67				015			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE CODE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4127 N	06629 W		15	1	6	01	18	070	1968		005		0088	01	15	1	2		X1	0	3		0005

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	27	505	315	-006	-006	8	11	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\frac{1}{2}\Delta D$ DYN. M E 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	OE-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0340	3215	2560	0023968	0000	14605	737							
070		OBS	0000	0340	32147	2560			14605	737				027			
		STD	0010	0341	3218	2562	0023762	0024	14607	742							
		OBS	0010	0341	32176	2562			14607	742				026			
		STD	0020	0342	3220	2564	0023624	0048	14609	748							
		OBS	0020	0342	32196	2564			14609	748				023			
		OBS	0025	0345	32207	2564			14612								
		STD	0030	0345	3221	2564	0023572	0071	14612	739							
		OBS	0030	0345	32207	2564			14612	739				023			
		OBS	0040	0352	32267	2568			14618	740				027			
		STD	0050	0361	3233	2572	0022825	0118	14624	750							
		OBS	0050	0361	32326	2572			14624	750				030			
		OBS	0054	0364	32372	2576			14627								
		OBS	0057	0420	32607	2589			14654								
		OBS	0064	0443	32722	2596			14667								
		STD	0075	0454	3276	2597	0020459	0172	14673	701							
		OBS	0075	0454	32761	2597			14673	701				018			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DSDT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4154 N	06626 W		151	16	01	18	098	1968		006	0077	00	10	0	2		X1	0	3		0006

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OF FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	22	S05	315	-017	-022	8	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\frac{1}{2}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	OIL-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0359	3235	2574	0022622	0000	14615	728							
098		OBS	0000	0359	32347	2574			14615	728				019			
		STD	0010	0374	3238	2575	0022535	0023	14624	728							
		OBS	0010	0374	32377	2575			14624	728				023			
		STD	0020	0386	3240	2576	0022454	0045	14631	727							
		OBS	0020	0386	32403	2576			14631	727				022			
		OBS	0025	0389	32416	2577			14633								
		STD	0030	0389	3243	2578	0022315	0067	14634	730							
		OBS	0030	0389	32426	2578			14634	730				021			
		OBS	0040	0391	32443	2579			14637	719				018			
		STD	0050	0390	3244	2579	0022208	0112	14638	714							
		OBS	0050	0390	32443	2579			14638	714				017			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DSDT	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4211 N	06626 W		151	26	01	18	116	1968		007	0174	01	09	0	2		X1	0	3		0007

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OF FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	27	S06	315	-006	-011	8	17	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\frac{1}{2}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	OIL-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0290	3195	2548	0025070	0000	14580	746							
116		OBS	0000	0290	31947	2548			14580	746				026			
		STD	0010	0290	3195	2548	0025073	0025	14582	748							
		OBS	0010	0290	31947	2548			14582	748				027			
		OBS	0016	0290	31947	2548			14583								
		STD	0020	0321	3207	2556	0024368	0050	14599	747							
		OBS	0020	0321	32074	2556			14599	747				022			
		OBS	0025	0334	32113	2556			14606								
		STD	0030	0347	3216	2560	0023944	0074	14613	764							
		OBS	0030	0347	32160	2560			14613	764				019			
		OBS	0034	0355	32197	2563			14617								
		OBS	0036	0391	32390	2574			14636								
		OBS	0040	0401	32415	2575			14641	735				022			
		STD	0050	0416	3253	2583	0021800	0120	14650	730							
		OBS	0050	0416	32530	2583			14650	730				015			
		OBS	0066	0425	32583	2586			14657								
		OBS	0069	0487	32625	2599			14687								
		STD	0075	0487	3299	2612	0019106	0171	14690	668							
		OBS	0075	0487	32987	2612			14690	668				011			
		OBS	0094	0594	33827	2666			14748								
		STD	0100	0608	3389	2669	0013762	0212	14756	539							
		OBS	0100	0608	33887	2669			14756	539				004			
		OBS	0120	0620	34055	2680			14766								
		STD	0125	0622	3409	2683	0012473	0245	14768	524							
		STD	0150	0630	3423	2693	0011564	0275	14777	509							
		OBS	0150	0630	34230	2693			14777	509							

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034	Ev	4227 N	06625 W		151	26	01	18	135	1968		008		0256	02	00	0	x		X1	0	3		0008

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OF FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	50	23	505	312	-011	-011	8	19	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	∑ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OR-A	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	0221	3178	2540	0025861	0000	14548	771							
		OBS	0000	0221	31775	2540			14548	771				034			
		STD	0010	0220	3179	2541	0025779	0026	14549	768							
		OBS	0010	0220	31785	2541			14549	768				034			
		STD	0020	0220	3180	2542	0025689	0052	14551	767							
		OBS	0020	0220	31797	2542			14551	767				032			
		OBS	0025	0220	31802	2542			14552								
		STD	0030	0224	3181	2543	0025620	0077	14555	770							
		OBS	0030											026			
		OBS	0040	0235	31825	2543			14561	773				028			
		STD	0050	0248	3185	2544	0025517	0128	14569	758							
		OBS	0050	0248	31847	2544			14569	758				024			
		OBS	0060	0260	31877	2545			14576								
		OBS	0070	0270	31929	2549			14583								
		STD	0075	0298	3205	2556	0024402	0191	14597	702							
		OBS	0075	0298	32047	2556			14597	702				017			
		OBS	0090	0460	32667	2589			14677								
		STD	0100	0500	3289	2603	0020003	0246	14698	636							
		OBS	0100	0500	32889	2603			14698	636				011			
		OBS	0120	0608	33649	2650			14756								
		STD	0125	0608	3370	2654	0015180	0290	14757	559							
		OBS	0125	0608	33704	2654			14757								
		OBS	0133	0645	33997	2672			14777								
		OBS	0136	0618	33980	2675			14767								
		STD	0150	0625	3426	2696	0011277	0323	14776	510							
		OBS	0150	0625	34260	2696			14776	510							
		OBS	0175	0637	34582	2720			14789								
		STD	0200	0632	3467	2727	0008406	0373	14792	497							
		OBS	0200	0632	34667	2727			14792	497							
		OBS	0240	0630	34677	2728			14798								

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034	Ev	42375N	06625 W		151	26	01	18	150	1968		008A		0165	01	09	0	2		X1	0	3		0009

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OF FORCE	BARO-METER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	50	24	510	308	000	000	8	17	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	∑ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OR-A	SiO₄-Si µg-at/l	pH	NODC
		STD	0000	0188	3141	2514	0028361	0000	14528	768							
		OBS	0000	0188	31414	2514			14528	768				034			
		STD	0010	0188	3142	2514	0028366	0028	14530	778							
		OBS	0010	0188	31416	2514			14530	778				030			
		OBS	0017	0192	31432	2515			14533								
		STD	0020	0190	3144	2515	0028196	0057	14533	767							
		OBS	0020	0190	31440	2515			14533	767				028			
		OBS	0025	0192	31442	2515			14535								
		STD	0030	0194	3145	2516	0028176	0085	14536	782							
		OBS	0030	0194	31446	2516			14536	782				024			
		OBS	0040	0195	31447	2516			14538	774				025			
		STD	0050	0197	3147	2517	0028044	0141	14541	767							
		OBS	0050	0197	31466	2517			14541	767				022			
		OBS	0058	0209	31484	2518			14548								
		STD	0075	0320	3206	2555	0024464	0207	14607	710							
		OBS	0075	0320	32063	2555			14607	710				013			
		STD	0100	0448	3283	2604	0019877	0262	14676	659							
		OBS	0100	0448	32833	2604			14676	659				010			
		OBS	0107	0569	33549	2647			14737								
		OBS	0115	0581	33608	2650			14744								
		STD	0125	0616	3377	2658	0014786	0305	14761	592							
		OBS	0126	0627	33835	2662			14767								
		OBS	0130	0683	34162	2680			14794								
		OBS	0140	0713	34297	2687			14809								
		STD	0150	0700	3450	2704	0010490	0337	14808	508							
		OBS	0150	0700	34497	2704			14808	508							

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	43010N	066235W		15	36	01	18	183	1968		009	0128	01	06	0	2	*	X1	0	3	0010

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO OBS DEPTHS	SPECIAL OBSERVATIONS
OT	SD	23	S10	159	-006	-006	8	12	

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	Chl-a	SiO₄-Si µg-at/l	pH	SEC
		STD	0000	0300	3194	2547	0025187	0000	14585	747							
183		OBS	0000	0300	31942	2547			14585	747				019			
		STD	0010	0300	3194	2547	0025191	0025	14586	769							
		OBS	0010	0300	31942	2547			14586	769				019			
		STD	0020	0300	3194	2547	0025194	0050	14588	757							
		OBS	0020	0300	31942	2547			14588	757				019			
		OBS	0025	0299	31947	2548			14588								
		STD	0030	0302	3198	2550	0024948	0075	14591	740							
		OBS	0030	0302	31977	2550			14591	740				018			
		OBS	0035	0302	31977	2550			14592								
		OBS	0040	0338	32227	2566			14611	781				023			
		OBS	0043	0358	32269	2568			14621								
		STD	0050	0362	3229	2569	0023105	0124	14624	748							
		OBS	0050	0362	32290	2569			14624	748				019			
		STD	0075	0393	3237	2572	0022839	0181	14642	679							
		OBS	0075	0393	32365	2572			14642	679				014			
		STD	0100	0400	3239	2573	0022770	0238	14650	670							
		OBS	0100	0400	32385	2573			14650	670				014			
		OBS	0112	0400	32386	2573			14652								

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	4328 N	066287W		15	36	01	18	235	1968		010	0091	01	05	1	2		X1	0	3	0011

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO OBS DEPTHS	SPECIAL OBSERVATIONS
OT	SD	23	S12	281	028	028	8	09	

MESSNGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	Chl-a	SiO₄-Si µg-at/l	pH	SEC
		STD	0000	0290	3184	2539	0025910	0000	14579	749							
235		OBS	0000	0290	31836	2539			14579	749				023			
		STD	0010	0290	3184	2539	0025913	0026	14580	750							
		OBS	0010	0290	31836	2539			14580	750				022			
		STD	0020	0290	3184	2539	0025916	0052	14582	749							
		OBS	0020	0290	31836	2539			14582	749				016			
		OBS	0025	0290	31836	2539			14583								
		STD	0030	0290	3184	2539	0025919	0078	14584	749							
		OBS	0030	0290	31836	2539			14584	749				019			
		OBS	0040	0290	31836	2539			14585	744				021			
		STD	0050	0290	3184	2539	0025925	0130	14587	758							
		OBS	0050	0290	31836	2539			14587	758				019			
		STD	0075	0290	3184	2539	0025932	0194	14591	751							
		OBS	0075	0290	31836	2539			14591	751				010			
		OBS	0081	0290	31836	2539			14592								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1: prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE TD NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPLS	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	44225N	056315W	1	51	46	01	19	010	1968		011	0101	01	07	1				0	3	0012

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
OT	SD	24	S12	261	033	033	8	08	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Δ D DYN M Σ 10²	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	DCC
		STD	0000	0317	3212	2560	0023994	0000	14594	738							
010		OBS	0000	0317	32118	2560			14594	738				020			
		STD	0010	0317	3212	2560	0023998	0024	14596	759							
		OBS	0010	0317	32118	2560			14596	759				015			
		STD	0020	0317	3212	2560	0023994	0048	14598	750							
		OBS	0020	0317	32119	2560			14598	750				018			
		OBS	0025	0317	32119	2560			14598								
		STD	0030	0317	3213	2560	0023953	0072	14599	744							
		OBS	0030	0317	32125	2560			14599	744				018			
		OBS	0040	0317	32126	2560			14601	744				020			
		STD	0050	0317	3213	2560	0023946	0120	14603	744							
		OBS	0050	0317	32127	2560			14603	744				020			
		STD	0075	0318	3213	2560	0023956	0180	14607	743							
		OBS	0075	0318	32128	2560			14607	743				017			

REFERENCE CTRY CODE	REFERENCE TD NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPLS	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	44230N	056330W	1	51	46	01	19	030	1968		012	0201	01	07	1			X1	0	3	0013

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
OT	SD	23	S10	254	039	039	8	09	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Δ D DYN M Σ 10²	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	DCC
		STD	0000	0364	3259	2593	0020870	0000	14621	714							
030		OBS	0000	0364	32585	2593			14621	714				020			
		STD	0010	0364	3259	2593	0020861	0021	14622	721							
		OBS	0010	0364	32587	2593			14622	721				016			
		STD	0020	0366	3260	2594	0020771	0042	14625	724							
		OBS	0020	0366	32602	2594			14625	724				017			
		OBS	0025	0369	32606	2594			14627								
		STD	0040	0369	3261	2594	0020767	0062	14628	725							
		OBS	0030	0369	32607	2594			14628	725				013			
		OBS	0040	0374	32647	2596			14632	722				015			
		STD	0050	0375	3267	2598	0020396	0104	14635	713							
		OBS	0050	0375	32665	2598			14635	713				013			
		STD	0075	0405	3289	2613	0019024	0153	14655	685							
		OBS	0075	0405	32887	2613			14655	685				013			
		STD	0100	0458	3303	2618	0018523	0200	14683	660							
		OBS	0100	0458	33027	2618			14683	660				012			

REFERENCE CTRY CODE	REFERENCE TD NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPLS	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	44220N	067310W	1	51	47	01	19	072	1968		013	0091	01					X0	0	3	0014

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
OT	SD	30	S04	230	022	022	8	09	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Δ D DYN M Σ 10²	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	DCC
		STD	0000	0254	3259	2602	0019922	0000	14573	739							
072		OBS	0000	0254	32590	2602			14573	739				017			
		STD	0010	0260	3261	2603	0019842	0020	14578	751							
		OBS	0010	0260	32607	2603			14578	751				017			
		STD	0020	0272	3262	2604	0019826	0040	14585	752							
		OBS	0020	0272	32622	2604			14585	752				020			
		OBS	0025	0277	32634	2604			14588								
		STD	0030	0280	3264	2604	0019757	0060	14590	750							
		OBS	0030	0280	32640	2604			14590	750				016			
		OBS	0040	0284	32655	2605			14596	735				020			
		STD	0050	0307	3269	2606	0019634	0099	14606	734							
		OBS	0050	0307	32686	2606			14606	734				016			
		OBS	0053	0317	32707	2607			14611								
		STD	0075	0318	3271	2607	0019571	0148	14615	726							
		OBS	0075	0318	32709	2607			14615	726				014			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68-1: prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CSBY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	8034	EV	44.1	067.3	15	47	01	19	096	1968		014	0214	01					x2	0	3	0015

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
0T	50	22	507	224	056	044	7	17	

MESSENGER TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY 10^5	Δ D DYN M 10^3	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO3-N µg-at/l	CHL-A	SiO4-Si µg-at/l	pH	DCC
		STD	0000	0345	3275	2607	0019472	0000	14615	734							
046		OBS	0000	0345	32748	2607			14615	734				023			
		STD	0010	0345	3275	2607	0019470	0019	14617	738							
		OBS	0010	0345	32749	2607			14617	738				028			
		STD	0020	0345	3275	2607	0019475	0039	14618	740							
046		OBS	0020	0345	32749	2607			14618	740				023			
		OBS	0025	0345	32749	2607			14619								
		STD	0030	0345	3285	2615	0018734	0058	14621	730							
		OBS	0030	0345	32848	2615			14621	730				026			
		OBS	0040	0345	32850	2615			14623	736				021			
		STD	0050	0345	3285	2615	0018730	0096	14624	734							
		OBS	0050	0345	32850	2615			14624	734				021			
		OBS	0068	0345	32850	2615			14627								
		STD	0075	0332	3275	2608	0019413	0143	14622	732							
		OBS	0075	0332	32746	2608			14622	732				018			
		OBS	0093	0327	32759	2610			14623								
		STD	0100	0461	3320	2631	0017271	0189	14686	689							
		OBS	0100	0461	33198	2631			14686	689				012			
		OBS	0106	0521	33332	2635			14714								
		OBS	0111	0521	33332	2635			14715								
		OBS	0117	0581	33612	2650			14744								
		STD	0125	0596	3363	2650	0015586	0230	14752	619							
		OBS	0126	0597	33639	2650			14752								
		OBS	0146	0597	33879	2669			14759								
		STD	0150	0608	3393	2672	0013518	0266	14764	521							
		OBS	0150	0608	33931	2672			14764	521							

REFERENCE: CSBY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	8034	EV	43.1	067.3	15	37	01	19	125	1968		015	0229	02	02	1	2		x1	0	3	0016

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
0T	50	22	507	213	033	028	8	20	

MESSENGER TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY 10^5	Δ D DYN M 10^3	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO3-N µg-at/l	CHL-A	SiO4-Si µg-at/l	pH	DCC
		STD	0000	0342	3271	2605	0019717	0000	14613	735							
125		OBS	0000	0342	32712	2605			14613	735				022			
		STD	0010	0342	3271	2605	0019706	0020	14615	749							
		OBS	0010	0342	32714	2605			14615	749				016			
		STD	0020	0342	3271	2605	0019713	0039	14616	751							
		OBS	0020	0342	32714	2605			14616	751				019			
		OBS	0025	0342	32714	2605			14617								
		STD	0030	0342	3272	2605	0019711	0059	14618	749							
		OBS	0030	0342	32715	2605			14618	749				017			
		OBS	0040	0342	32715	2605			14620	756				014			
		STD	0050	0342	3272	2605	0019722	0099	14621	754							
		OBS	0050	0342	32715	2605			14621	754				016			
		STD	0075	0353	3278	2609	0019366	0147	14631	742							
		OBS	0075	0353	32777	2609			14631	742				011			
		OBS	0077	0353	32795	2610			14632								
		OBS	0080	0389	32891	2614			14649								
		OBS	0091	0403	32935	2617			14657								
		OBS	0097	0498	33086	2618			14700								
		STD	0100	0495	3311	2621	0018677	0194	14699	658							
		OBS	0100	0495	33112	2621			14699	658				006			
		OBS	0102	0495	33257	2632			14702								
		OBS	0110	0581	33657	2654			14743								
		STD	0125	0584	3379	2664	0014247	0235	14749	573							
		OBS	0140	0596	33902	2671			14758								
		STD	0150	0609	3397	2675	0013240	0269	14765	521							
		OBS	0150	0609	33970	2675			14765	521							
		OBS	0170	0633	34045	2678			14779								
		STD	0200	0625	3417	2688	0012039	0333	14783	513							
		OBS	0200	0625	34167	2688			14783	513							
		OBS	0210	0625	34167	2688			14784								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT INDCTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS STA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	8034	EV	43010N	067315W		151	37	01	19	159	1968		016	0198	02	03	1	2		X0	0	3		0017

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbst)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	23	510	203	050	030	7	14	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CHL-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0360	3259	2593	0020819	0000	14619	725							
159		OBS	0000	0360	32587	2593			14619	725				020			
		STD	0010	0360	3259	2593	0020825	0021	14621	730							
		OBS	0010	0360	32587	2593			14621	730				019			
		STD	0020	0360	3259	2593	0020831	0042	14622	728							
		OBS	0020	0360	32587	2593			14622	728				018			
		OBS	0025	0360	32590	2593			14623								
		STD	0030	0360	3259	2593	0020814	0062	14624	725							
		OBS	0030	0360	32590	2593			14624	725				016			
		OBS	0040	0360	32589	2593			14626	722				018			
		STD	0050	0360	3259	2594	0020802	0104	14627	720							
		OBS	0050	0360	32593	2594			14627	720				016			
		OBS	0065	0360	32617	2595			14630								
		STD	0075	0482	3336	2642	0016277	0150	14693	708							
		OBS	0075	0482	33357	2642			14693	708				013			
		OBS	0080	0541	33497	2646			14720								
		STD	0100	0592	3378	2662	0014424	0189	14748	565							
		OBS	0100	0592	33775	2662			14748	565				003			
		STD	0125	0593	3388	2670	0013683	0224	14754	532							
		OBS	0135	0600	33972	2676			14759								
		STD	0150	0619	3416	2689	0011962	0256	14772	499							
		OBS	0150	0619	34158	2689			14772	499							
		OBS	0170	0619	34178	2690			14775								

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT INDCTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS STA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31	8034	EV	42315N	06731 W		151	27	01	19	195	1968		017	0220	02	03	2	2		X1	0	3		0018

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbst)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	21	518	176	061	061		14	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CHL-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0371	3259	2592	0020918	0000	14624	724							
195		OBS	0000	0371	32587	2592			14624	724				020			
		STD	0010	0370	3259	2592	0020907	0021	14625	729							
		OBS	0010	0370	32585	2592			14625	729				020			
		STD	0020	0370	3259	2592	0020906	0042	14627	730							
		OBS	0020	0370	32585	2592			14627	730				018			
		OBS	0025	0369	32590	2592			14627								
		STD	0030	0369	3259	2593	0020865	0063	14628	729							
		OBS	0030	0369	32594	2593			14628	729				020			
		OBS	0040	0368	32595	2593			14629	723				018			
		STD	0050	0368	3260	2593	0020860	0104	14631	724							
		OBS	0050	0368	32595	2593			14631	724				017			
		OBS	0057	0368	32604	2594			14632								
		OBS	0071	0530	33289	2631			14711								
		STD	0075	0530	3329	2631	0017311	0152	14712	715							
		OBS	0075	0530	33289	2631			14712	715				014			
		STD	0100	0592	3375	2658	0014783	0192	14747	588							
		OBS	0100	0592	33727	2658			14747	588				003			
		STD	0125	0613	3414	2688	0011988	0226	14765	533							
		STD	0150	0626	3442	2708	0010105	0253	14776	497							
		OBS	0150	0626	34417	2708			14778	497							
		STD	0200	0629	3458	2720	0009037	0301	14790	486							
		OBS	0200	0629	34577	2720			14790	486							
		OBS	0210	0629	34608	2723			14792								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	EV	42145N	06731 W		151	27	01	19	208	1968		018		0271	03	03	2	4		X1	0	3	0019

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	21	S18	159	067	067	7	15	

MESSENGR. TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	QUAL
		STD	0000	0409	3271	2598	0020380	0000	14642	735							
206		OBS	0000	0409	32705	2598			14642	735				026			
		STD	0010	0409	3271	2598	0020387	0020	14643	722							
		OBS	0010	0409	32705	2598			14643	724				019			
		STD	0020	0409	3271	2598	0020394	0041	14645	726							
		OBS	0020	0409	32705	2598			14645	726				022			
		OBS	0025	0409	32705	2598			14646								
		STD	0030	0409	3271	2598	0020401	0061	14646	715							
		OBS	0030	0409	32705	2598			14646	715				022			
		OBS	0040	0409	32705	2598			14648	716				028			
		STD	0050	0400	3270	2598	0020352	0102	14646	717							
		OBS	0050	0400	32702	2598			14646	717				021			
		STD	0075	0400	3274	2601	0020082	0152	14650	716							
		OBS	0075	0400	32740	2601			14650	716				025			
		OBS	0083	0400	32777	2604			14652								
		STD	0100	0458	3297	2613	0018973	0201	14682	706							
		OBS	0100	0458	32967	2613			14682	706				025			
		OBS	0110	0460	33057	2620			14686								
		STD	0125	0513	3345	2646	0015967	0245	14715	612							
		STD	0150	0581	3396	2678	0012987	0281	14754	548							
		OBS	0150	0581	33958	2678			14754	548							
		STD	0200	0635	3444	2709	0010142	0339	14790	513							
		OBS	0200	0635	34439	2709			14790	513							
		STD	0250	0619	3474	2734	0007805	0384	14796	497							
		OBS	0250	0619	34735	2734			14796	497							
		OBS	0262	0614	34750	2736			14796								

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	EV	42000N	067310W		151	27	01	19	229	1968		019		0040	00	04	2	4		X1	0	3	0020

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	22	S22	152	061	061	7	05	

MESSENGR. TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	QUAL
		STD	0000	0399	3266	2595	0020617	0000	14637	729							
229		OBS	0000	0399	32661	2595			14637	729				024			
		STD	0010	0399	3266	2595	0020624	0021	14638	720							
		OBS	0010	0399	32661	2595			14638	720				018			
		STD	0020	0399	3266	2595	0020631	0041	14640	715							
		OBS	0020	0399	32661	2595			14640	715				025			
		OBS	0025	0399	32661	2595			14641								
		STD	0030	0399	3266	2595	0020637	0062	14642	720							
		OBS	0030	0399	32661	2595			14642	720				022			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	EV	41310N	067310W		151	17	01	20	025	1968		020		0044	02	27	3	4		X0	0	3	0021

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	24	S20	169	050	050	7	05	

MESSENGR. TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	QUAL
		STD	0000	0328	3253	2591	0020979	0000	14605	756							
025		OBS	0000	0328	32529	2591			14605	756				040			
		STD	0010	0328	3253	2592	0020946	0021	14606	758							
		OBS	0010	0328	32534	2592			14606	758				041			
		STD	0020	0328	3254	2592	0020928	0042	14608	758							
		OBS	0020	0328	32537	2592			14608	758				037			
		OBS	0025	0328	32540	2592			14609								
		STD	0030	0328	3254	2592	0020903	0063	14610	756							
		OBS	0030	0328	32541	2592			14610	756				034			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68-1: prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	40595N	067310W		15	1	07	01	20	1968		021	0075	00	07	2	4		X0	0	3		0022

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
0T	50	28	S12	183	050	050	7	07	

MESSENGER TIME OF DAY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN M x 10^2	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	Oϕ-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0376	3248	2583	0021793	0000	14624	746							
056		OBS	0000	0376	32472	2583			14624	746				050			
		STD	0010	0376	3248	2583	0021799	0022	14626	744							
		OBS	0010	0376	32477	2583			14626	744				046			
		STD	0020	0376	3248	2583	0021805	0044	14628	748							
		OBS	0020	0376	32477	2583			14628	748				065			
		OBS	0025	0376	32477	2583			14629								
		STD	0030	0376	3248	2583	0021811	0065	14629	738							
		OBS	0030	0376	32477	2583			14629	738				062			
		OBS	0040	0376	32477	2583			14631	738				056			
		STD	0050	0376	3248	2583	0021822	0109	14633	738							
		OBS	0050	0376	32477	2583			14633	738				050			

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	40270N	067300W		15	1	07	01	20	1968		022	0155	01	09	1	2		X0	0	3		0023

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
0T	50	27	S09	163	056	050	7	12	

MESSENGER TIME OF DAY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN M x 10^2	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	Oϕ-A	SiO_4-Si µg-at/l	pH	
		STD	0000	0507	3285	2598	0020315	0000	14684	708							
086		OBS	0000	0507	32845	2598			14684	708				033			
		STD	0010	0506	3285	2599	0020299	0020	14686	726							
		OBS	0010	0506	32847	2599			14686	726				036			
		STD	0020	0506	3285	2599	0020308	0041	14687	710							
		OBS	0020	0506	32847	2599			14687	710				034			
		OBS	0025	0506	32850	2599			14688								
		STD	0030	0507	3286	2600	0020223	0061	14689	723							
		OBS	0030	0507	32861	2600			14689	723				031			
		OBS	0040	0507	32861	2600			14691	706				034			
		STD	0050	0510	3287	2600	0020222	0101	14694	705							
		OBS	0050	0510	32868	2600			14694	705				034			
		OBS	0066	0511	32887	2601			14697								
		STD	0075	0581	3315	2614	0018928	0150	14731	687							
		OBS	0075	0581	33151	2614			14731	687				031			
		OBS	0085	0607	33227	2617			14744								
		OBS	0093	0949	34246	2647			14891								
		STD	0100	1084	3458	2650	0015641	0193	14945	536							
		OBS	0100	1084	34584	2650			14945	536				017			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'G	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	Ev	40160N	067300W		15	07	01	20	101	1968		023	1554	15	11	1	2		X1	0	3		0024

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	29	510	193	056	050	7	41	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10⁷	Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄–P µg-at/l	TOTAL–P µg-at/l	NO₃–N µg-at/l	CHL–A	SiO₄–Si µg-at/l	PH	TCO
		STD	0000	0530	3301	2609	0019348	0000.	14696	700							
101		OBS	0000	0530	33007	2609			14696	700				045			
		STD	0010	0554	3305	2609	0019287	0019	14708	715							
		OBS	0010	0554	33052	2609			14708	715				036			
		STD	0020	0560	3307	2610	0019246	0039	14712	709							
		OBS	0020	0560	33068	2610			14712	709				036			
		OBS	0025	0565	33101	2612			14716								
		STD	0030	0600	3326	2620	0018321	0057	14733	709							
		OBS	0030	0600	33255	2620			14733	709				037			
		OBS	0040	0641	33346	2622			14752	723				036			
		STD	0050	0715	3351	2625	0017870	0094	14785	708							
		OBS	0050	0715	33512	2625			14785	708				047			
		OBS	0060	0745	33646	2631			14800								
		STD	0075	0828	3402	2648	0015721	0136	14839	666							
		OBS	0075	0828	34017	2648			14839	666				034			
		OBS	0081	0819	34004	2648			14837								
		STD	0100	0952	3435	2655	0015164	0174	14894	610							
		OBS	0100	0952	34353	2655			14894	610				018			
		OBS	0105	0960	34474	2660			14907								
		OBS	0115	1328	35498	2674			15043								
		STD	0125	1106	3507	2684	0012504	0209	14963	506							
		OBS	0133	1000	34891	2689			14924								
		STD	0150	0983	3498	2698	0011139	0238	14922	426							
		OBS	0150	0983	34980	2698			14922	426							
		OBS	0158	0972	34968	2699			14919								
		OBS	0170	1061	35180	2700			14956								
		OBS	0188	1010	35083	2702			14939								
		OBS	0198	1017	35109	2703			14944								
		STD	0200	0900	3510	2722	0009027	0289	14901	342							
		OBS	0200	0900	35100	2722			14901	342							
		OBS	0221	0838	35000	2724			14880								
		STD	0250	0815	3500	2727	0008562	0333	14876	365							
		OBS	0250	0815	35000	2727			14876	365							
		OBS	0275	0695	34780	2727			14831								
		OBS	0289	0695	34940	2740			14835								
		STD	0300	0683	3497	2744	0006983	0372	14833								
		OBS	0300	0683	34970	2744			14833								
		OBS	0308	0658	34940	2745			14824								
		OBS	0369	0611	34900	2748			14815								
		OBS	0373	0580	34900	2752			14803								
		STD	0400	0536	3489	2757	0005809	0435	14789								
		OBS	0400	0536	34890	2757			14789								
		STD	0500	0494	3491	2764	0005239	0491	14789								
		OBS	0500	0494	34914	2764			14789								
		STD	0600	0465	3492	2768	0004936	0542	14794								
		OBS	0600	0465	34923	2768			14794								
		STD	0700	0450	3493	2770	0004826	0590	14804								
		OBS	0700	0450	34928	2770			14804								
		STD	0800	0445	3494	2771	0004759	0638	14819								
		OBS	0800	0445	34943	2771			14819								
		STD	0900	0438	3496	2773	0004687	0686	14833								
		OBS	0900	0438	34955	2773			14833								
		STD	1000	0424	3496	2775	0004577	0732	14844								
		OBS	1000	0424	34960	2775			14844								
		STD	1100	0413	3496	2776	0004522	0777	14856								
		OBS	1100	0413	34962	2776			14856								
		STD	1200	0401	3496	2778	0004465	0822	14867								
		OBS	1200	0401	34962	2778			14867								
		STD	1300	0400	3496	2778	0004544	0867	14884								
		OBS	1300	0400	34962	2778			14884								
		OBS	1360	0399	34962	2778			14893								
		STD	1400	0389	3496	2779	0004507	0913	14896								
		OBS	1400	0389	34960	2779			14896								
		STD	1500	0378	3496	2780	0004452	0957	14908								
		OBS	1500	0378	34960	2780			14908								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: Ctry Code	REFERENCE: IO No.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	40010N	067310W		15	1	07	01	20	1968		024	2191	15	09	1	2		X2	0	3		0025

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	29	S09	193	056	050	7	37	

MESSENGER TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₂-Si µg-at/l	pH	
		STD	0000	0491	3287	2602	0019951	0000	14678	716							
124		OBS	0000	0491	32871	2602			14678	716				036			
		STD	0010	0670	3342	2624	0017889	0019	14760	732							
		OBS	0010	0670	33424	2624			14760	732				036			
		OBS	0016	0675	33470	2627			14763								
		OBS	0018	0708	33600	2633			14778								
		STD	0020	0695	3373	2645	0015962	0036	14775	720							
		OBS	0020	0695	33727	2645			14775	720				036			
		OBS	0022	0686	33767	2649			14772								
		OBS	0025	0750	33898	2650			14800								
		STD	0030	0800	3413	2661	0014424	0051	14823	698							
		OBS	0030	0800	34127	2661			14823	698				047			
		OBS	0040	0895	34317	2661			14863	714				038			
		STD	0050	1000	3455	2662	0014413	0080	14906	679							
		OBS	0050	1000	34545	2662			14906	679				029			
		STD	0075	1200	3506	2665	0014153	0116	14988	565							
		OBS	0075	1200	35058	2665			14988	565				008			
		OBS	0083	1206	35087	2666			14991								
		OBS	0097	1018	34647	2667			14922								
		STD	0100	1040	3481	2675	0013250	0150	14932	522							
		OBS	0100	1040	34807	2675			14932	522				004			
		OBS	0105	1182	35200	2680			14988								
		OBS	0122	1249	35587	2697			15019								
		STD	0125	1237	3556	2697	0011284	0181	15015	416							
		STD	0150	1142	3533	2697	0011313	0209	14983	354							
		OBS	0150	1142	35327	2697			14983	354							
		OBS	0175	1057	35167	2700			14955								
		OBS	0181	0941	35027	2709			14912								
		OBS	0187	0967	35087	2710			14924								
		STD	0200	0898	3504	2717	0009446	0261	14930	363							
		OBS	0200	0898	35039	2717			14930	363							
		OBS	0215	0810	34987	2727			14868								
		OBS	0222	0848	35062	2727			14885								
		STD	0250	0821	3505	2730	0008304	0305	14879	372							
		OBS	0250	0821	35047	2730			14879	372							
		OBS	0265	0785	35027	2734			14867								
		OBS	0267	0752	34980	2735			14854								
		OBS	0290	0740	34967	2736			14853								
		STD	0300	0700	3495	2740	0007358	0344	14839								
		OBS	0300	0700	34951	2740			14839								
		OBS	0320	0652	34914	2744			14823								
		OBS	0330	0595	34886	2749			14802								
		STD	0400	0527	3486	2755	0005922	0411	14785								
		OBS	0400	0527	34860	2755			14785								
		STD	0500	0490	3491	2764	0005228	0466	14787								
		OBS	0500	0490	34909	2764			14787								
		STD	0600	0467	3493	2768	0004901	0517	14795								
		OBS	0600	0467	34931	2768			14795								
		STD	0700	0453	3494	2770	0004774	0565	14805								
		STD	0800	0440	3495	2773	0004617	0612	14817								
		OBS	0800	0440	34954	2773			14817								
		STD	0900	0430	3497	2775	0004478	0658	14829								
		STD	1000	0420	3498	2777	0004402	0702	14842								
		OBS	1000	0420	34977	2777			14842								
		STD	1100	0411	3498	2778	0004365	0746	14855								
		STD	1200	0402	3498	2779	0004331	0789	14868								
		OBS	1200	0402	34982	2779			14868								
		STD	1300	0394	3498	2780	0004314	0833	14881								
		STD	1400	0386	3498	2781	0004300	0876	14895								
		STD	1500	0379	3498	2782	0004289	0919	14909								
		OBS	1500	0379	34984	2782			14909								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	3929 N	06722 W		11	5	01	20	156	1968		025	3658	15	00	0			x1	0	3		0026

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	27	S10	200	111	106	7	27	

MESSENGER TIME OF RELEASE HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-STD	Δ D DYN M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	CHL—A	SiO₄-Si µg-at/l	pH	REMARKS
		STD	0000	1435	3556	2656	0014816	0000	15060	570							
156		OBS	0000	1435	35560	2656			15060	570				024			
		STD	0010	1455	3567	2660	0014451	0015	15069	578							
		OBS	0010	1455	35670	2660			15069	576				021			
		STD	0020	1498	3580	2661	0014426	0029	15086	563							
		OBS	0020	1498	35800	2661			15086	563				024			
		OBS	0025	1508	35840	2662			15091								
		STD	0030	1522	3589	2663	0014306	0043	15097	573							
		OBS	0030	1522	35890	2663			15097	573				023			
		OBS	0040	1532	35920	2663			15102	555				024			
		STD	0050	1534	3593	2663	0014303	0072	15104	536							
		OBS	0050	1534	35934	2663			15104	536				022			
		STD	0075	1535	3594	2664	0014359	0108	15109	542							
		OBS	0075	1535	35940	2664			15109	542				017			
		STD	0100	1535	3594	2663	0014458	0144	15113	527							
		OBS	0100	1535	35937	2663			15113	527				013			
		OBS	0110	1540	35954	2664			15116								
		STD	0125	1599	3613	2664	0014523	0180	15139	523							
		OBS	0127	1604	36145	2664			15141								
		STD	0150	1609	3616	2664	0014606	0217	15147	520							
		OBS	0150	1609	36160	2664			15147	520							
		OBS	0190	1623	36202	2664			15158								
		STD	0200	1616	3618	2664	0014770	0290	15157	518							
		OBS	0200	1616	36181	2664			15157	518							
		OBS	0219	1498	35940	2672			15121								
		STD	0250	1329	3573	2691	0012179	0357	15068	386							
		OBS	0250	1329	35727	2691			15068	386							
		STD	0300	1180	3561	2712	0010335	0414	15025								
		OBS	0300	1180	35606	2712			15025								
		STD	0400	0869	3519	2733	0008294	0507	14923								
		OBS	0400	0869	35187	2733			14923								
		STD	0500	0650	3503	2753	0006372	0580	14853								
		OBS	0500	0650	35033	2753			14853								
		OBS	0550	0581	35017	2761			14834								
		STD	0600	0555	3500	2763	0005525	0640	14831								
		OBS	0600	0555	34995	2763			14831								
		OBS	0630	0515	34977	2766			14820								
		STD	0700	0492	3499	2770	0004882	0692	14822								
		STD	0800	0466	3500	2773	0004626	0739	14828								
		OBS	0800	0466	34996	2773			14828								
		STD	0900	0453	3500	2775	0004564	0785	14839								
		STD	1000	0439	3500	2776	0004485	0830	14850								
		OBS	1000	0439	34998	2776			14850								
		STD	1100	0424	3499	2777	0004454	0875	14861								
		STD	1200	0412	3499	2779	0004413	0919	14872								
		OBS	1200	0412	34988	2779			14872								
		STD	1300	0405	3499	2779	0004425	0964	14886								
		STD	1400	0399	3499	2780	0004446	1008	14900								
		OBS	1400	0399	34986	2780			14900								
		OBS	1470	0395	34987	2780			14910								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15-26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	3932 N	06823 W		11	5	01	20	210	1968		026	2926	15	9	1	2		X1	0	3		0027

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	27	508	193	078	072	7	21	

MESSENGER TIME OF DROP HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-P10⁷	DYN M B 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	O₂-A	SiO₄-Si µg-at/l	pH	I C C
		STD	0000	1303	3520	2656	0014865	0000	15012	582							
210		OBS	0000	1303	35197	2656			15012	582				044			
		STD	0010	1304	3521	2656	0014838	0015	15014	581							
		OBS	0010	1304	35207	2656			15014	581				047			
		STD	0020	1306	3523	2658	0014720	0030	15017	579							
		OBS	0020	1306	35232	2658			15017	579				040			
		OBS	0025	1308	35238	2658			15018								
		STD	0030	1308	3524	2658	0014742	0044	15019	583							
		OBS	0030	1308	35238	2658			15019	583				039			
		OBS	0040	1309	35241	2658			15021	569				041			
		STD	0050	1309	3525	2658	0014757	0074	15023	571							
		OBS	0050	1309	35246	2658			15023	571				034			
		STD	0075	1320	3533	2662	0014445	0110	15032	561							
		OBS	0075	1320	35327	2662			15032	561				024			
		STD	0100	1339	3540	2664	0014321	0146	15043	558							
		OBS	0100	1339	35404	2664			15043	558				023			
		OBS	0120	1344	35495	2670			15049								
		STD	0125	1321	3549	2675	0013408	0181	15042	511							
		STD	0150	1221	3546	2692	0011783	0212	15012	460							
		OBS	0150	1221	35460	2692			15012	460							
		STD	0200	1105	3534	2705	0010702	0269	14979	343							
		OBS	0200	1105	35337	2705			14979	343							
		STD	0250	0962	3521	2720	0009313	0319	14934	319							
		OBS	0250	0962	35210	2720			14934	319							
		STD	0300	0865	3511	2728	0008590	0363	14905								
		OBS	0300	0865	35112	2728			14905								
		STD	0400	0679	3501	2748	0006759	0440	14848								
		OBS	0400	0679	35014	2748			14848								
		STD	0500	0560	3500	2762	0005452	0501	14817								
		OBS	0500	0560	34996	2762			14817								
		STD	0600	0501	3499	2769	0004878	0553	14809								
		OBS	0600	0501	34990	2769			14809								
		STD	0700	0472	3500	2773	0004560	0600	14814								
		STD	0800	0449	3500	2776	0004372	0645	14821								
		OBS	0800	0449	35002	2776			14821								
		STD	0900	0435	3499	2776	0004392	0689	14832								
		STD	1000	0422	3499	2777	0004361	0732	14843								
		OBS	1000	0422	34986	2777			14843								
		STD	1100	0409	3499	2779	0004296	0776	14854								
		STD	1200	0399	3499	2780	0004271	0818	14867								
		OBS	1200	0399	34985	2780			14867								
		STD	1300	0391	3498	2780	0004297	0861	14880								
		STD	1400	0384	3498	2781	0004297	0904	14894								
		STD	1500	0380	3498	2781	0004346	0948	14909								
		OBS	1500	0380	34978	2781			14909								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH REDUCTION	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR, 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4002 N	06828 W		15	08	01	21	011	1968		027	2250	15	9	1	2		X0	0	3		0028

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	27	S16	179	050	050	7	34	

MESSENGER TIME OF (HR 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10^7)	Σ Δ D DYN. M. (10^3)	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CHL-A	SiO_4-Si µg-at/l	pH	LOC
		STD	0000	0600	3316	2612	0019012	0000	14726	693							
011		OBS	0000	0600	33158	2612			14726	693				043			
		OBS	0005	0860	33716	2620			14836								
		STD	0010	0800	3376	2632	0017097	0018	14815	705							
		OBS	0010	0800	33763	2632			14815	705				038			
		STD	0020	0839	3395	2641	0016289	0035	14834	641							
		OBS	0020	0839	33949	2641			14834	641				022			
		OBS	0025	0900	34227	2653			14861								
		STD	0030	0907	3425	2654	0015109	0050	14865	682							
		OBS	0030	0907	34247	2654			14865	682				050			
		OBS	0040	0931	34297	2654			14876	649				043			
		STD	0050	0966	3438	2655	0015070	0081	14892	642							
		OBS	0050	0966	34382	2655			14892	642				018			
		STD	0075	1020	3454	2658	0014824	0118	14918	630							
		OBS	0075	1020	34541	2658			14918	630				024			
		STD	0100	1202	3519	2675	0013306	0153	14994	596							
		OBS	0100	1202	35187	2675			14994	596				035			
		OBS	0110	1257	35400	2681			15017								
		OBS	0115	1163	35387	2698			14986								
		STD	0125	1164	3540	2699	0011106	0184	14988	582							
		OBS	0130	1164	35407	2699			14989								
		STD	0150	1114	3535	2704	0010675	0211	14974	533							
		OBS	0150	1114	35346	2704			14974	533							
		STD	0200	0979	3520	2717	0009529	0261	14932	327							
		OBS	0200	0979	35204	2717			14932	327							
		STD	0250	0868	3511	2727	0008583	0307	14897	327							
		OBS	0250	0868	35106	2727			14897	327							
		STD	0300	0783	3505	2736	0007831	0348	14873								
		OBS	0300	0783	35047	2736			14873								
		OBS	0340	0721	35047	2745			14855								
		OBS	0360	0650	34944	2746			14829								
		STD	0400	0592	3499	2758	0005765	0416	14813								
		OBS	0400	0592	34991	2758			14813								
		OBS	0420	0527	34905	2759			14789								
		OBS	0445	0541	34954	2761			14800								
		OBS	0465	0501	34922	2763			14786								
		STD	0500	0487	3493	2765	0005058	0470	14786								
		OBS	0500	0487	34927	2765			14786								
		STD	0600	0462	3495	2770	0004737	0519	14793								
		OBS	0600	0462	34945	2770			14793								
		STD	0700	0441	3494	2772	0004600	0565	14800								
		OBS	0700	0441	34944	2772			14800								
		STD	0800	0439	3496	2773	0004560	0611	14816								
		OBS	0800	0439	34960	2773			14816								
		STD	0900	0431	3497	2775	0004527	0657	14830								
		OBS	0900	0431	34965	2775			14830								
		STD	1000	0420	3497	2776	0004469	0702	14842								
		OBS	1000	0420	34968	2776			14842								
		STD	1100	0416	3497	2776	0004523	0747	14857								
		OBS	1100	0416	34967	2776			14857								
		STD	1200	0408	3497	2777	0004510	0792	14870								
		OBS	1200	0408	34968	2777			14870								
		STD	1300	0400	3497	2778	0004508	0837	14884								
		OBS	1300	0400	34967	2778			14884								
		STD	1400	0391	3497	2779	0004482	0882	14897								
		OBS	1400	0391	34967	2779			14897								
		STD	1500	0384	3497	2780	0004457	0927	14911								
		OBS	1500	0384	34970	2780			14911								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034		EV	40150N	068290W		15	1	08	01	21	030	1968	028	0174	01	06	2	4		X0	0	3		0029

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	26	514	179	050	050	7	14	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M ÷ 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0475	3264	2585	0021544	0000	14668	725							
	030	OBS	0000	0475	32637	2585			14668	725				034			
		STD	0010	0475	3266	2587	0021364	0021	14670	740							
		OBS	0010	0475	32662	2587			14670	740				033			
		STD	0020	0559	3304	2608	0019452	0042	14711	723							
		OBS	0020	0559	33039	2608			14711	723				040			
		STD	0030	0581	3311	2610	0019221	0061	14723	679							
		OBS	0030	0581	33105	2610			14723	679				022			
		OBS	0037	0600	33267	2621			14734								
		OBS	0040	0648	33587	2640			14758	683				019			
		STD	0050	0760	3380	2641	0016331	0097	14806	671							
		OBS	0050	0760	33800	2641			14806	671				020			
		OBS	0060	0959	34200	2642			14888								
		STD	0075	1065	3445	2643	0016248	0137	14933	624							
		OBS	0075	1065	34450	2643			14933	624				023			
		OBS	0080	1094	34570	2647			14945								
		STD	0100	1129	3468	2649	0015718	0177	14962	604							
		OBS	0100	1129	34680	2649			14962	604				020			
		STD	0125	1174	3492	2660	0014809	0216	14985	591							
		OBS	0132	1186	34940	2659			14991								
		OBS	0136	1181	34940	2660			14990								
		STD	0150	1181	3495	2661	0014787	0253	14992	584							
		OBS	0150	1181	34950	2661			14992	584							

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034		EV	40310N	068280W		15	1	08	01	21	047	1968	029	0088	01	09	1	4		X1	0	3		0030

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	27	508	176	050	050	7	08	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M ÷ 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0397	3231	2567	0023268	0000	14631	735							
	047	OBS	0000	0397	32307	2567			14631	735				074			
		STD	0010	0397	3232	2568	0023198	0023	14633	738							
		OBS	0010	0397	32317	2568			14633	738				057			
		STD	0020	0397	3232	2568	0023182	0046	14635	749							
		OBS	0020	0397	32320	2568			14635	749				068			
		OBS	0025	0402	32326	2568			14638								
		STD	0030	0404	3234	2569	0023103	0070	14639	742							
		OBS	0030	0404	32340	2569			14639	742				068			
		OBS	0040	0415	32362	2570			14646	740				076			
		STD	0050	0421	3237	2570	0023030	0116	14650	733							
		OBS	0050	0421	32373	2570			14650	733				074			
		STD	0075	0425	3238	2570	0023018	0173	14656	722							
		OBS	0075	0425	32382	2570			14656	722				071			

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034		EV	41000N	682606W		13	12	01	21	075	1968	030		0048	00	09	1	2		X0	0	3		0031

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	27	504	166	050	050	7	06	

MESSENGR TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M ÷ 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	QCC
		STD	0000	0395	3239	2574	0022646	0000	14631	733							
	075	OBS	0000	0395	32387	2574			14631	733				058			
		STD	0010	0395	3239	2574	0022652	0023	14633	738							
		OBS	0010	0395	32387	2574			14633	738				052			
		STD	0020	0395	3239	2574	0022658	0045	14635	738							
		OBS	0020	0395	32387	2574			14635	738				056			
		OBS	0025	0395	32387	2574			14635								
		STD	0030	0395	3239	2574	0022664	0068	14636	748							
		OBS	0030	0395	32387	2574			14636	748				059			
		OBS	0040	0395	32387	2574			14638	733				052			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PRD	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034	EV	41310N	068255W		151	18	01	21	102	1968		031	0044	00	02	0	2			X2	0	3		0032

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
OT	50	21	504	190	050	050	7	06	

MESSENGR TIME BY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL P µg-at/l	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	TCO
		STD	0000	0387	3257	2589	0021215	0000	14630	726							
		OBS	0000	0387	32567	2589			14630	726				048			
		STD	0010	0387	3257	2589	0021221	0021	14632	727							
		OBS	0010	0387	32567	2589			14632	727				051			
		STD	0020	0387	3257	2589	0021227	0042	14634	730							
		OBS	0020	0387	32567	2589			14634	730				038			
		OBS	0025	0387	32567	2589			14634								
		STD	0030	0387	3257	2589	0021233	0064	14635	726							
		OBS	0030	0387	32567	2589			14635	726				043			
		OBS	0040	0387	32567	2589			14637	724				044			

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PRD	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034	EV	41450N	068305W		151	18	01	21	118	1968		032	0166	01	09	0	2			X2	0	3		0033

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
OT	50	21	504	183	050	050	7	14	

MESSENGR TIME BY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL P µg-at/l	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	TCO
		STD	0000	0400	3263	2593	0020830	0000	14637	720							
118		OBS	0000	0400	32634	2593			14637	720				039			
		STD	0010	0400	3263	2593	0020837	0021	14638	734							
		OBS	0010	0400	32634	2593			14638	734				033			
		STD	0020	0402	3264	2593	0020802	0042	14641	738							
		OBS	0020	0402	32642	2593			14641	738				029			
		OBS	0025	0403	32645	2594			14642								
		STD	0030	0404	3265	2594	0020790	0062	14644	723							
		OBS	0030	0404	32647	2594			14644	723				031			
		OBS	0040	0403	32645	2594			14645	717				031			
		STD	0050	0404	3265	2594	0020804	0104	14647	726							
		OBS	0050	0404	32647	2594			14647	726				038			
		OBS	0070	0405	32666	2595			14651								
		STD	0075	0415	3273	2599	0020325	0155	14657	699							
		OBS	0075	0415	32727	2599			14657	699				021			
		STD	0100	0477	3313	2624	0017987	0203	14692	625							
		OBS	0100	0477	33125	2624			14692	625				006			
		OBS	0110	0487	33227	2631			14699								
		OBS	0115	0504	33455	2647			14710								
		STD	0125	0518	3356	2654	0015200	0245	14719	559							
		OBS	0130	0523	33610	2657			14722								
		STD	0150	0536	3378	2669	0013801	0281	14733	502							
		OBS	0150	0536	33778	2669			14733	502							

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PRD	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
31B034	EV	42005N	068275W		151	28	01	21	137	1968		033	0177	02	00	0	X			X2	0	3		0034

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	50	21	512	125	056	056	7	13	

MESSENGR TIME BY HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL P µg-at/l	NO₂-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	TCO
		STD	0000	0405	3261	2590	0021081	0000	14638	722							
137		OBS	0000	0405	32607	2590			14638	722				029			
		STD	0010	0405	3262	2592	0020959	0021	14640	735							
		OBS	0010	0405	32624	2592			14640	735				039			
		STD	0020	0405	3263	2592	0020936	0042	14642	730							
		OBS	0020	0405	32628	2592			14642	730				036			
		OBS	0025	0405	32629	2592			14643								
		STD	0030	0405	3263	2592	0020928	0063	14644	731							
		OBS	0030	0405	32630	2592			14644	731				039			
		OBS	0040	0405	32641	2593			14646	720				035			
		STD	0050	0405	3267	2596	0020610	0104	14648	721							
		OBS	0050	0405	32674	2596			14648	721				037			
		STD	0075	0405	3271	2598	0020356	0156	14652	705							
		OBS	0075	0405	32710	2598			14652	705				021			
		STD	0100	0418	3277	2602	0020019	0206	14663	708							
		OBS	0100	0418	32774	2602			14663	708				018			
		OBS	0120	0453	33052	2621			14684								
		STD	0125	0474	3320	2630	0017415	0253	14696	652							
		OBS	0135	0501	33398	2643			14711								
		STD	0150	0508	3344	2645	0016027	0295	14717	638							
		OBS	0150	0508	33438	2645			14717	638							
		OBS	0159	0509	33447	2646			14719								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE IO NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR T/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	42315N	068270W		151	28	01	21	169	1968		034	0216	02	03	0	2		x2	0	3	0035

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	21	S12	091	050	044	7	20	

MESSENGR TIME OF HR T/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CHL-A	SiO_4-Si µg-at/l	pH	ICC
		STD	0000	0407	3286	2610	0019223	0000	14643	713							
169		OBS	0000	0407	32856	2610			14643	713				036			
		STD	0010	0403	3285	2610	0019215	0019	14643	722							
		OBS	0010	0403	32853	2610			14643	722				027			
		STD	0020	0403	3285	2610	0019222	0038	14644	720							
		OBS	0020	0403	32853	2610			14644	720				031			
		OBS	0025	0403	32853	2610			14645								
		STD	0030	0403	3286	2610	0019199	0058	14646	720							
		OBS	0030	0403	32857	2610			14646	720				033			
		OBS	0040	0401	32857	2611			14647	710				030			
		STD	0050	0401	3288	2613	0019006	0096	14649	715							
		OBS	0050	0401	32882	2613			14649	715				027			
		OBS	0070	0415	32927	2615			14659								
		STD	0075	0428	3297	2617	0018648	0143	14665	724							
		OBS	0075	0428	32967	2617			14665	724				020			
		OBS	0085	0460	33026	2618			14681								
		STD	0100	0476	3308	2621	0018299	0189	14691	690							
		OBS	0100	0476	33082	2621			14691	690				014			
		STD	0125	0514	3332	2635	0016949	0233	14714	587							
		OBS	0128	0519	33350	2637			14717								
		OBS	0132	0500	33347	2639			14710								
		OBS	0138	0507	33417	2644			14715								
		OBS	0140	0527	33480	2646			14724								
		STD	0150	0529	3353	2650	0015583	0274	14727	520							
		OBS	0150	0529	33529	2650			14727	520							
		OBS	0160	0529	33706	2664			14731								
		OBS	0170	0540	33818	2671			14739								
		OBS	0190	0601	34417	2711			14775								
		STD	0200	0603	3448	2716	0009468	0336	14778	495							
		OBS	0200	0603	34475	2716			14778	495							

REFERENCE CTRY CODE	REFERENCE IO NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICATOR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR T/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	43010N	068260W		151	38	01	21	213	1968		035	0196	02	05	2	2		x2	0	3	0036

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	25	S15	054	044	044	7	14	

MESSENGR TIME OF HR T/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CHL-A	SiO_4-Si µg-at/l	pH	ICC
		STD	0000	0375	3291	2617	0018540	0000	14630	727							
213		OBS	0000	0375	32907	2617			14630	727				022			
		STD	0010	0375	3291	2617	0018547	0019	14631	729							
		OBS	0010	0375	32907	2617			14631	729				019			
		STD	0020	0375	3291	2617	0018553	0037	14633	729							
		OBS	0020	0375	32907	2617			14633	729				020			
		OBS	0025	0376	32910	2617			14634								
		STD	0030	0376	3292	2618	0018509	0056	14635	726							
		OBS	0030	0376	32915	2618			14635	726				016			
		OBS	0040	0380	32924	2618			14639	751				022			
		STD	0050	0380	3293	2618	0018469	0093	14640	713							
		OBS	0050	0380	32927	2618			14640	713				018			
		STD	0075	0389	3297	2620	0018284	0139	14649	714							
		OBS	0075	0389	32965	2620			14649	714				019			
		STD	0100	0401	3303	2624	0017965	0184	14659	704							
		OBS	0100	0401	33025	2624			14659	704				012			
		OBS	0124	0441	33252	2638			14683								
		STD	0125	0452	3328	2639	0016583	0227	14688	650							
		OBS	0127	0470	33317	2640			14696								
		OBS	0141	0495	33436	2646			14710								
		STD	0150	0530	3362	2657	0014936	0266	14729	552							
		OBS	0150	0530	33617	2657			14729	552							
		OBS	0180	0551	33705	2661			14743								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15-26 January 1968, on , ICNAF Cruise 68-1; prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPLS	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
318034	EV	43310N	068285W			151	38	01	21	233	1968		036	0168	02	08	1	2		X1	0	3		0037

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
OT	SO	29	S18	058	044	044	7	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY×10⁷	∑ Δ D DYN M. ×10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OBS—A	SiO₄-Si µg-at/l	pH	
		STD	0000	0367	3284	2612	0019008	0000	14625	715							
233		OBS	0000	0367	32836	2612			14625	715				021			
		STD	0010	0367	3284	2612	0019014	0019	14627	729							
		OBS	0010	0367	32836	2612			14627	729				018			
		STD	0020	0367	3284	2612	0019020	0038	14629	722							
		OBS	0020	0367	32836	2612			14629	722				021			
		OBS	0025	0367	32836	2612			14630								
		STD	0030	0367	3284	2612	0019027	0057	14630	720							
		OBS	0030	0367	32836	2612			14630	720				019			
		OBS	0040	0367	32836	2612			14632	708				020			
		STD	0050	0374	3285	2613	0018958	0095	14637	718							
		OBS	0050	0374	32855	2613			14637	718				021			
		STD	0075	0380	3287	2614	0018894	0142	14644	717							
		OBS	0075	0380	32873	2614			14644	717				018			
		OBS	0087	0395	32909	2615			14653								
		STD	0100	0455	3307	2622	0018142	0188	14682	689							
		OBS	0100	0455	33074	2622			14682	689				010			
		OBS	0120	0482	33167	2627			14698								
		STD	0125	0487	3319	2628	0017631	0233	14701	633							
		OBS	0137	0500	33247	2631			14709								
		STD	0150	0573	3352	2644	0016132	0275	14745	549							
		OBS	0150	0573	33525	2644			14745	549							
		OBS	0160	0590	33567	2646			14754								

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPLS	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
318034	EV	43500N	068280 W			213	32	01	22	016	1968		037	0137	01	12	3	2		X0	0	3		0038

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
OT	SD	29	S30	095	022	017	7	15	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY×10⁷	∑ Δ D DYN M. ×10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OBS—A	SiO₄-Si µg-at/l	pH	
		STD	0000	0252	3270	2612	0019058	0000	14574	751							
016		OBS	0000	0252	32702	2612			14574	751				027			
		STD	0010	0254	3271	2612	0018986	0019	14577	758							
		OBS	0010	0254	32714	2612			14577	758				026			
		STD	0020	0257	3272	2612	0018990	0038	14580	747							
		OBS	0020	0257	32717	2612			14580	747				022			
		OBS	0025	0260	32720	2612			14582								
		STD	0030	0260	3272	2612	0018986	0057	14583	756							
		OBS	0030	0260	32721	2612			14583	756				025			
		OBS	0034	0261	32722	2612			14584								
		OBS	0037	0275	32737	2612			14591								
		OBS	0040	0273	32737	2613			14590	742				021			
		STD	0050	0278	3275	2613	0018954	0095	14594	751							
		OBS	0050	0278	32745	2613			14594	751				023			
		OBS	0052	0282	32764	2614			14596								
		OBS	0058	0317	32802	2614			14613								
		OBS	0070	0338	32830	2614			14624								
		STD	0075	0340	3283	2614	0018835	0142	14626	715							
		OBS	0075	0340	32832	2614			14626	715				020			
		OBS	0080	0342	32855	2616			14628								
		STD	0100	0371	3290	2617	0018628	0189	14644	699							
		OBS	0100	0371	32899	2617			14644	699				017			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT BLOCK	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	Ev	4330 N	06930 W		151	39	01	22	065	1908		038		0146	01	11	2	2		X0	0	3	0039

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	29	518	159	506	506	8	12	

MESSENGR TIME OR HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	ΣΔD DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	CODE
		STD	0000	0375	3283	2611	0019151	0000	14629	724							
065		OBS	0000	0375	32826	2611			14629	724				030			
		STD	0010	0375	3283	2611	0019158	0019	14630	717							
		OBS	0010	0375	32826	2611			14630	717				031			
		STD	0020	0376	3283	2611	0019151	0038	14632	715							
		OBS	0020	0376	32829	2611			14632	715				024			
		OBS	0025	0376	32829	2611			14633								
		STD	0030	0376	3283	2611	0019157	0057	14634	702							
		OBS	0030	0376	32829	2611			14634	702				028			
		OBS	0040	0376	32829	2611			14636	713				010			
		STD	0050	0376	3283	2611	0019170	0096	14637	706							
		OBS	0050	0376	32829	2611			14637	706				023			
		STD	0075	0376	3283	2611	0019186	0144	14642	697							
		OBS	0075	0376	32829	2611			14642	697				025			
		OBS	0082	0382	32845	2611			14645								
		OBS	0090	0410	32927	2615			14660								
065		OBS	0093	0454	33019	2618			14680								
		STD	0100	0472	3307	2620	0018369	0191	14689	613							
		OBS	0100	0472	33067	2620			14689	613				022			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT BLOCK	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	Ev	42580N	06930 W		151	29	01	22	095	1968		039		0150	01	12	0	2		X0	0	3	0040

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	30	520	190	506	506	7	09	

MESSENGR TIME OR HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	ΣΔD DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	CODE
		STD	0000	0410	3294	2617	0018589	0000	14645	734							
095		OBS	0000	0410	32944	2617			14645	734				029			
		STD	0010	0410	3294	2617	0018596	0019	14647	716							
		OBS	0010	0410	32944	2617			14647	716				029			
		STD	0020	0410	3294	2617	0018604	0037	14648	708							
		OBS	0020	0410	32944	2617			14648	708				029			
		OBS	0025	0410	32944	2617			14649								
		STD	0030	0410	3294	2617	0018611	0056	14650	700							
		OBS	0030	0410	32944	2617			14650	700				028			
		OBS	0040	0411	32945	2617			14652	704				027			
		STD	0050	0412	3295	2617	0018623	0093	14654	706							
		OBS	0050	0412	32947	2617			14654	706				025			
		STD	0075	0415	3295	2617	0018640	0140	14660	704							
		OBS	0075	0415	32951	2617			14660	704				027			
		STD	0100	0418	3295	2617	0018666	0186	14665	696							
		OBS	0100	0418	32954	2617			14665	696				027			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT BLOCK	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR.1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.	NODC STATION NUMBER
31B034	Ev	42598N	070298W		152	20	01	22	137	1968		040		0091	01					X0	0	3	0041

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	36	505	220	006	006	8	12	

MESSENGR TIME OR HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁵	ΣΔD DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	CODE
		STD	0000	0265	3260	2602	0019931	0000	14578	732							
137		OBS	0000	0265	32600	2602			14578	732				034			
		STD	0010	0265	3260	2602	0019934	0020	14580	732							
		OBS	0010	0265	32600	2602			14580	732				032			
		STD	0020	0272	3261	2602	0019932	0040	14585	724							
		OBS	0020	0272	32608	2602			14585	724				030			
		OBS	0025	0273	32626	2604			14586								
		STD	0030	0279	3263	2604	0019802	0060	14590	730							
		OBS	0030	0279	32633	2604			14590	730				031			
		OBS	0031	0279	32634	2604			14590								
		OBS	0034	0326	32685	2604			14611								
		OBS	0040	0340	32703	2604			14619	713				031			
		OBS	0044	0340	32704	2604			14619								
		STD	0050	0379	3276	2605	0019740	0099	14638	710							
		OBS	0050	0379	32757	2605			14638	710				030			
		STD	0075	0395	3282	2608	0019463	0148	14649	672							
		OBS	0075	0395	32816	2608			14649	672				021			
		OBS	0078	0395	32816	2608			14650								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15-26 January 1968, on ICNAF Cruise 68-1; prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	8034	EV	42294N	070302W		15	2	0	1	22	1968		041	0064	00	00	0	X		X1	0	3		0042

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	00	S00	217	017	017	8	07	

MESSENGR TIME BT HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CM—A	SiO_3-Si µg-at/l	pH	LOG
		STD	0000	0232	3227	2578	0022207	0000	14559	743							
166		OBS	0000	0232	32267	2578			14559	743				030			
		STD	0010	0232	3227	2578	0022209	0022	14561	747							
		OBS	0010	0232	32267	2578			14561	747				026			
		STD	0020	0232	3227	2579	0022203	0044	14563	740							
		OBS	0020	0232	32268	2579			14563	740				031			
		OBS	0025	0231	32283	2580			14563								
		STD	0030	0235	3232	2582	0021856	0066	14566	736							
		OBS	0030	0235	32317	2582			14566	736				032			
		OBS	0040	0281	32459	2590			14590	724				030			
		STD	0050	0308	3252	2592	0020924	0109	14604	705							
		OBS	0050	0308	32517	2592			14604	705				031			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	8034	EV	41595N	070305W		15	2	01	22	193	1968		042	0034	00	00	0	X		X1	0	3		0043

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	00	S00	207	022	022	8	05	

MESSENGR TIME BT HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CM—A	SiO_3-Si µg-at/l	pH	LOG
		STD	0000	0089	3192	2560	0023937	0000	14491	772							
193		OBS	0000	0089	31921	2560			14491	772				043			
		STD	0010	0092	3194	2562	0023806	0024	14494	783							
		OBS	0010	0092	31940	2562			14494	783				048			
		STD	0020	0141	3202	2565	0023485	0048	14519	767							
		OBS	0020	0141	32019	2565			14519	767				055			
		OBS	0025	0169	32087	2569			14533								
		STD	0030	0186	3210	2569	0023141	0071	14542	745							
		OBS	0030	0186	32102	2569			14542	745				036			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	8034	EV	4231 N	06929 W		15	1	29	01	23	002	1968		043	0270	02	18	0	4	X1	0	3		0044

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	17	S12	200	022	022	8	18	

MESSENGR TIME BT HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta$ DYN M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	CM—A	SiO_3-Si µg-at/l	pH	LOG
		STD	0000	0414	3296	2617	0018545	0000	14647	692							
		OBS	0000	0414	32955	2617			14647	692				026			
		STD	0010	0414	3296	2617	0018530	0019	14649	716							
		OBS	0010	0414	32958	2617			14649	716				028			
		STD	0020	0420	3297	2617	0018527	0037	14653	707							
		OBS	0020	0420	32967	2617			14653	707				023			
		OBS	0025	0420	32967	2617			14654								
		STD	0030	0420	3297	2617	0018535	0056	14655	701							
		OBS	0030	0420	32967	2617			14655	701				028			
		OBS	0040	0420	32967	2617			14656	715				026			
		STD	0050	0420	3297	2617	0018550	0093	14658	694							
		OBS	0050	0420	32967	2617			14658	694				028			
		STD	0075	0420	3297	2618	0018539	0139	14662	687							
		OBS	0075	0420	32971	2618			14662	687				025			
		STD	0100	0421	3297	2618	0018553	0185	14667	686							
		OBS	0100	0421	32973	2618			14667	686				020			
		OBS	0120	0426	32993	2619			14672								
		STD	0125	0432	3303	2621	0018254	0231	14676	636							
		OBS	0130	0440	33085	2625			14681								
		STD	0150	0495	3339	2642	0016280	0275	14711	586							
		OBS	0150	0495	33385	2642			14711	586							
		OBS	0154	0509	33439	2645			14718								
		OBS	0169	0526	33617	2657			14730								
		OBS	0174	0546	33728	2664			14741								
		STD	0200	0559	3396	2680	0012770	0347	14753	489							
		OBS	0200	0559	33960	2680			14753	489							
		OBS	0214	0569	34045	2686			14761								
		STD	0250	0573	3407	2687	0012172	0410	14769	472							
		OBS	0250	0573	34071	2687			14769	472							

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	42005N	069265W		151	29	01	23	035	1968		044	0210	02	02	1	2		X1	0	3		0045

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
OT	50	19	512	196	028	028	8	20	

MESSENGR TIME OF OBS HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	
		STD	0000	0398	3263	2592	0020879	0000	14636	723							
	035	OBS	0000	0398	32625	2592			14636	723				037			
		STD	0010	0398	3263	2592	0020886	0021	14637	722							
		OBS	0010	0398	32625	2592			14637	722				031			
		STD	0020	0399	3263	2592	0020887	0042	14640	714							
		OBS	0020	0399	32627	2592			14640	714				028			
		OBS	0025	0399	32627	2592			14640								
		OBS	0028	0402	32630	2592			14642								
		STD	0030	0392	3262	2592	0020896	0063	14638	710							
		OBS	0030	0392	32618	2592			14638	710				024			
		OBS	0032	0381	32627	2594			14634								
		OBS	0040	0381	32713	2601			14636	703				030			
		STD	0050	0383	3274	2603	0019883	0103	14639	712							
		OBS	0050	0383	32743	2603			14639	712				031			
		STD	0075	0387	3276	2604	0019793	0153	14645	698							
		OBS	0075	0387	32762	2604			14645	698				031			
		OBS	0098	0388	32793	2607			14650								
		STD	0100	0392	3282	2609	0019413	0202	14652	714							
		OBS	0100	0392	32821	2609			14652	714				027			
		OBS	0112	0430	32926	2613			14672								
		OBS	0122	0480	33177	2628			14698								
		STD	0125	0487	3321	2629	0017480	0248	14701	604							
		OBS	0131	0498	33288	2634			14708								
		STD	0150	0509	3350	2650	0015582	0289	14718	524							
		OBS	0150	0509	33499	2650			14718	524							
		OBS	0182	0529	33798	2671			14736								
		OBS	0190	0530	33810	2672			14738								
		OBS	0195	0545	33925	2679			14746								
		STD	0200	0546	3393	2680	0012809	0360	14748	458							
		OBS	0200	0546	33934	2680			14748	458							

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	41300N	069310W		151	19	01	23	069	1968		045	0037	00	34	0	2		X0	0	3		0046

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	16	515	186	067	067	8	05	

MESSENGR TIME OF OBS HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	
		STD	0000	0352	3263	2597	0020424	0000	14616	723							
	069	OBS	0000	0352	32630	2597			14616	723				025			
		STD	0010	0352	3263	2597	0020430	0020	14618	726							
		OBS	0010	0352	32630	2597			14618	726				024			
		STD	0020	0352	3263	2597	0020427	0041	14620	726							
		OBS	0020	0352	32631	2597			14620	726				025			
		OBS	0025	0352	32631	2597			14620								
		STD	0030	0352	3263	2597	0020425	0061	14621	726							
		OBS	0030	0352	32632	2597			14621	726				024			

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT INDICATOR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	41000N	069310W		151	19	01	23	099	1968		046	0046	00	36	0	2		X0	0	3		0047

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	18	517	166	050	050	8	03	

MESSENGR TIME OF OBS HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OR—A	SiO₄-Si µg-at/l	pH	
		STD	0000	0284	3233	2579	0022123	0000	14583	773							
	099	OBS	0000	0284	32330	2579			14583	773				048			
		STD	0010	0284	3233	2579	0022127	0022	14585	764							
		OBS	0010	0284	32330	2579			14585	764				048			
		STD	0020	0284	3233	2579	0022123	0044	14586	772							
		OBS	0020	0284	32331	2579			14586	772				044			

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	40300N	069300W		15	09	01	23	126	1968		047	0062	00	36	1			X1	0	3	0048

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	50	18	S18	179	050	050	8	09	

MESSENGR TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	ICC
		STD	0000	0491	3222	2551	0024859	0000	14669	708							
126		OBS	0000	0491	32218	2551			14669	708				045			
		OBS	0006	0491	32221	2551			14670								
		STD	0010	0470	3221	2552	0024735	0025	14662	712							
		OBS	0010	0470	32207	2552			14662	712				048			
		OBS	0014	0452	32207	2554			14655								
		STD	0020	0450	3222	2555	0024452	0049	14656	704							
		OBS	0020	0450	32219	2555			14656	702				049			
		OBS	0025	0448	32230	2556			14656								
		STD	0030	0448	3223	2556	0024334	0074	14656	697							
		OBS	0030	0448	32233	2556			14656	697				042			
		OBS	0040	0446	32236	2557			14657	699				046			
		STD	0050	0446	3224	2557	0024291	0122	14659	693							
		OBS	0050	0446	32238	2557			14659	693				044			

REFERENCE CTRY CODE	REFERENCE ID NO	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IND	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
31	8034	EV	40000N	069310W		15	09	01	23	157	1968		048	0137	01	35	1	2		X2	0	3	0049

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	50	17	S16	169	122	111	7	15	

MESSENGR TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	ICC
		STD	0000	0455	3229	2560	0023952	0000	14655	719							
157		OBS	0000	0455	32290	2560			14655	719				039			
		STD	0010	0451	3229	2560	0023958	0024	14655	719							
		OBS	0010	0451	32285	2560			14655	719				035			
		STD	0020	0451	3229	2560	0023942	0048	14657	721							
		OBS	0020	0451	32288	2560			14657	721				039			
		OBS	0025	0453	32318	2563			14659								
		STD	0030	0462	3234	2564	0023646	0072	14664	717							
		OBS	0030	0462	32343	2564			14664	717				046			
		OBS	0036	0481	32410	2567			14674								
		OBS	0040	0545	32640	2578			14704	658				032			
		STD	0050	0608	3275	2579	0022218	0118	14732	632							
		OBS	0050	0608	32750	2579			14732	632				024			
		OBS	0060	0631	32830	2582			14744								
		STD	0075	0635	3284	2583	0021900	0173	14749	621							
		OBS	0075	0635	32840	2583			14749	621				025			
		OBS	0087	0640	32930	2589			14754								
		STD	0100	0679	3308	2596	0020692	0226	14773	619							
		OBS	0100	0679	33080	2596			14773	619				015			
		OBS	0116	0688	33121	2598			14780								
		OBS	0128	0830	33790	2630			14846								
		OBS	0130	0887	34403	2669			14876								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° '1/10	QUAD NODC	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLS	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	8034	EV	3945 N	069315W		115	99	01	23	176	1968		049	1966	15	33	1	2		x2	0	3	0050

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	S0	1S	S17	142	094	094	7	33	

MESSENGR TIME & HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY—10^5	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	CHL–A	SiO_4–Si µg-at/l	pH	QUALITY CODE
		STD	0000	0659	3309	2599	0020263	0000	14749	661							
	176	OBS	0000	0659	33086	2599			14749	661				049			
		STD	0010	0659	3309	2599	0020269	0020	14751	673							
		OBS	0010	0659	33087	2599			14751	673				044			
		STD	0020	0659	3311	2601	0020133	0040	14753	673							
		OBS	0020	0659	33107	2601			14753	673				043			
		OBS	0025	0675	33168	2603			14761								
		STD	0030	0690	3326	2608	0019418	0060	14769	678							
		OBS	0030	0690	33257	2608			14769	678				045			
		OBS	0040	1025	34210	2631			14909	684				040			
		OBS	0042	1005	34200	2634			14902								
		OBS	0044	1042	34284	2634			14917								
		OBS	0049	0988	34168	2634			14897								
		STD	0050	1010	3423	2635	0016925	0097	14906	665							
		OBS	0050	1010	34227	2635			14906	665				033			
		STD	0075	1185	3482	2649	0015651	0137	14979	511							
		OBS	0075	1185	34817	2649			14979	511				010			
		OBS	0090	1279	35100	2653			15018								
		STD	0100	1120	3471	2653	0015361	0176	14959	449							
		OBS	0100	1120	34707	2653			14959	449				007			
		OBS	0110	0937	34566	2674			14893								
		STD	0125	0922	3457	2676	0013159	0212	14890	393							
		OBS	0128	0919	34567	2677			14889								
		OBS	0139	1004	34750	2677			14925								
		OBS	0144	0945	34627	2677			14903								
		STD	0150	1050	3512	2698	0011219	0242	14948	360							
		OBS	0150	1050	35121	2698			14948	360							
		OBS	0152	1051	35127	2698			14949								
		STD	0200	0928	3495	2705	0010599	0297	14910	360							
		OBS	0200	0928	34947	2705			14910	360							
		OBS	0220	0890	34868	2705			14898								
		OBS	0234	0923	35013	2711			14914								
		STD	0250	0855	3489	2712	0009979	0348	14890								
		OBS	0250	0855	34890	2712			14890								
		STD	0300	0703	3477	2725	0008741	0395	14838								
		OBS	0300	0703	34770	2725			14838								
		OBS	0330	0659	34784	2733			14826								
		STD	0400	0610	3480	2740	0007417	0476	14818								
		OBS	0400	0610	34800	2740			14818								
		OBS	0465	0518	34764	2749			14791								
		STD	0500	0502	3476	2750	0006480	0545	14790								
		OBS	0500	0502	34760	2750			14790								
		STD	0600	0466	3477	2755	0006099	0608	14792								
		OBS	0600	0466	34768	2755			14792								
		STD	0700	0452	3479	2758	0005873	0668	14803								
		STD	0800	0440	3480	2761	0005727	0726	14815								
		OBS	0800	0440	34804	2761			14815								
		STD	0900	0430	3481	2762	0005661	0783	14827								
		STD	1000	0421	3481	2764	0005625	0839	14840								
		OBS	1000	0421	34813	2764			14840								
		STD	1100	0415	3482	2764	0005630	0896	14854								
		STD	1200	0408	3482	2765	0005627	0952	14868								
		OBS	1200	0408	34816	2765			14868								
		STD	1300	0401	3482	2766	0005622	1008	14882								
		STD	1400	0394	3482	2767	0005613	1064	14896								
		STD	1500	0387	3482	2768	0005601	1120	14910								
		OBS	1500	0387	34819	2768			14910								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD NOCTS	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	8034	EV	3931SN	06931 W		115	99	01	23	199	1968		050	2423	15	33	1	2		X2	0	3		0051

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	50	15	511	152	100	100	7	27	

MESSENGE TIME (GMT) HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	3 Δ D DYN. M x 10³	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO3-N µg-at/l	CHL-A	SIO4-SI µg-at/l	SN	
		STD	0000	0639	3293	2589	0021184	0000	14739	669							
199		OBS	0000	0639	32930	2589			14739	669				037			
		STD	0010	0679	3308	2595	0020609	0021	14759	671							
		OBS	0010	0679	33075	2595			14759	671				043			
		STD	0020	0709	3317	2599	0020283	0041	14773	666							
		OBS	0020	0709	33172	2599			14773	666				043			
		OBS	0025	0728	33210	2599			14782								
		STD	0030	0760	3327	2600	0020245	0062	14796	666							
		OBS	0030	0760	33270	2600			14796	666				041			
		OBS	0040	0846	33600	2613			14835	647				037			
		STD	0050	1004	3408	2625	0017884	0100	14902	643							
		OBS	0050	1004	34084	2625			14902	643				034			
		OBS	0053	1060	34250	2628			14925								
		STD	0075	1120	3446	2634	0017113	0143	14952	580							
		OBS	0075	1120	34461	2634			14952	580				015			
		STD	0100	1204	3518	2674	0013394	0182	14995	549							
		OBS	0100	1204	35180	2674			14995	549				012			
		OBS	0110	1245	35299	2675			15012								
		OBS	0121	1262	35490	2687			15022								
		STD	0125	1250	3546	2687	0012263	0214	15018	434							
		STD	0150	1186	3534	2690	0012016	0244	14999	357							
		OBS	0150	1186	35340	2690			14999	357							
		OBS	0170	1150	35286	2692			14989								
		STD	0200	1019	3510	2702	0010961	0301	14945	320							
		OBS	0200	1019	35100	2702			14945	320							
		STD	0250	0887	3495	2712	0010030	0354	14903	329							
		OBS	0250	0887	34950	2712			14903	329							
		STD	0300	0765	3485	2723	0009004	0402	14863								
		OBS	0300	0765	34853	2723			14863								
		OBS	0329	0746	34889	2729			14861								
		STD	0400	0616	3483	2742	0007295	0483	14821								
		OBS	0400	0616	34827	2742			14821								
		OBS	0456	0553	34800	2747			14804								
		STD	0500	0540	3485	2753	0006266	0551	14807								
		OBS	0500	0540	34852	2753			14807								
		OBS	0532	0490	34779	2753			14791								
		STD	0600	0465	3481	2759	0005775	0611	14792								
		OBS	0600	0465	34810	2759			14792								
		STD	0700	0457	3483	2761	0005637	0668	14806								
		STD	0800	0445	3484	2763	0005529	0724	14817								
		OBS	0800	0445	34839	2763			14817								
		STD	0900	0425	3483	2765	0005452	0779	14826								
		STD	1000	0411	3482	2765	0005465	0833	14836								
		OBS	1000	0411	34818	2765			14836								
		STD	1100	0404	3482	2766	0005486	0888	14850								
		STD	1200	0398	3481	2766	0005524	0943	14864								
		OBS	1200	0398	34813	2766			14864								
		STD	1300	0392	3482	2767	0005522	0998	14878								
		STD	1400	0387	3482	2768	0005523	1054	14893								
		STD	1500	0382	3482	2768	0005529	1109	14908								
		OBS	1500	0382	34820	2768			14908								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15-26 January 1968, on ICNAF Cruise 68-1; prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE RECORD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT. PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT.		NODC STATION NUMBER
31	8034	Ev	3934 N	07029 W		116	90	01	24	009	1968		051	2468	15	36	1	2	x2	0	3		0052

WATER: COLOR CODE	WATER: TRANS. cm-1	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	50	19	S12	149	100	100	5	35	

MESSENGER TIME GMT HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-3/10⁷	ΣΔD DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	O₂-A	SiO₄-Si µg-at/l	pH	QUAL. CODE
		STD	0000	0618	3276	2579	0022170	0000	14728	708							
009		OBS	0000	0618	32765	2579			14728	708				043			
		STD	0010	0640	3286	2584	0021702	0021	14740	708							
		OBS	0010	0640	32865	2584			14740	708				042			
		STD	0020	0742	3310	2589	0021275	0043	14785	700							
		OBS	0020	0742	33098	2589			14785	700				055			
		OBS	0025	0823	33730	2619			14845								
		STD	0030	1010	3415	2629	0017450	0062	14902	713							
		OBS	0030	1010	34151	2629			14902	713				048			
		STD	0050	1066	3426	2628	0017616	0097	14926	630				033			
		OBS	0050	1066	34260	2628			14926	630							
		OBS	0061	1148	34466	2629			14960					018			
		OBS	0070	1101	34416	2634			14944								
		STD	0075	1118	3449	2637	0016874	0141	14952	591							
		OBS	0075	1118	34490	2637			14952	591							
		STD	0100	1263	3516	2661	0014646	0180	15015	574				011			
		OBS	0100	1263	35160	2661			15015	574							
		OBS	0110	1283	35279	2666			15024					009			
		STD	0125	1288	3542	2676	0013318	0215	15030	456							
		OBS	0135	1292	35440	2677			15034								
		STD	0150	1263	3538	2678	0013207	0248	15025	376							
		OBS	0150	1263	35375	2678			15025	376							
		OBS	0182	1080	35168	2696			14965								
		STD	0200	1058	3516	2700	0011180	0309	14960	329							
		OBS	0200	1058	35161	2700			14960	329							
		STD	0250	0946	3503	2709	0010383	0363	14925	322							
		OBS	0250	0946	35030	2709			14925	322							
		STD	0300	0800	3478	2712	0010054	0414	14876								
		OBS	0300	0800	34781	2712			14876								
		OBS	0305	0771	34880	2724			14867								
		OBS	0325	0763	34897	2727			14867								
		OBS	0350	0681	34830	2733			14838								
		STD	0400	0609	3481	2741	0007343	0501	14818								
		OBS	0400	0609	34809	2741			14818								
		OBS	0437	0541	34778	2747			14796								
		STD	0500	0514	3478	2750	0006503	0570	14795								
		OBS	0500	0514	34777	2750			14795								
		STD	0600	0469	3478	2755	0006074	0633	14793								
		OBS	0600	0469	34776	2755			14793								
		STD	0700	0457	3479	2758	0005939	0693	14805								
		OBS	0700	0457	34790	2758			14805								
		STD	0800	0441	3480	2760	0005772	0752	14815								
		OBS	0800	0441	34800	2760			14815								
		OBS	0850	0443	34829	2763			14825								
		STD	0900	0435	3483	2763	0005593	0809	14830								
		OBS	0900	0435	34827	2763			14830								
		STD	1000	0423	3483	2765	0005521	0864	14841								
		OBS	1000	0423	34830	2765			14841								
		STD	1100	0411	3482	2766	0005524	0919	14853								
		OBS	1100	0411	34823	2766			14853								
		STD	1200	0406	3482	2766	0005566	0975	14868								
		OBS	1200	0406	34821	2766			14868								
		STD	1300	0399	3482	2767	0005547	1030	14881								
		OBS	1300	0399	34824	2767			14881								
		STD	1400	0396	3483	2768	0005555	1086	14897								
		OBS	1400	0396	34829	2768			14897								
		STD	1500	0387	3483	2769	0005522	1141	14910								
		OBS	1500	0387	34829	2769			14910								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CARD CODE	REFERENCE: IDENT. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECORD	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR. T/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS: DIR.	WAVE OBSERVATIONS: HGT.	WAVE OBSERVATIONS: PER.	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT.		NODC STATION NUMBER
31	8034	EV	39450N	070305W		116	90	01	24	028	1968		052	1920	15	04	0	2		X4	0	3		0053

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	24	512	119	089	089	5	37	

MESSENGR TIME HR T/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10⁻⁸)	Δ DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	Chl-a	SiO₄-Si µg-at/l	pH	TCO
		STD	0000	0621	3288	2588	0021334	0000	14731	697							
028		OBS	0000	0621	32881	2588			14731	697				049			
		OBS	0009	0629	32938	2591			14737								
		STD	0010	0665	3311	2600	0020172	0021	14753	705							
		OBS	0010	0665	33110	2600			14753	705				055			
		STD	0020	1000	3385	2607	0019488	0041	14892	718							
		OBS	0020	1000	33850	2607			14892	718				035			
		OBS	0025	0967	34039	2628			14884								
		STD	0030	0975	3411	2632	0017199	0059	14888	698							
		OBS	0030	0975	34108	2632			14888	698				042			
		OBS	0040	1054	34359	2638			14922	680				040			
		STD	0050	1080	3446	2641	0016373	0092	14934	640							
		OBS	0050	1080	34460	2641			14934	640				039			
		OBS	0055	1119	34555	2641			14950								
		OBS	0065	1129	34590	2642			14955								
		OBS	0070	1114	34556	2642			14951								
		STD	0075	1119	3467	2650	0015564	0132	14955	578							
		OBS	0075	1119	34669	2650			14955	578				014			
		STD	0100	1160	3492	2662	0014497	0170	14976	511							
		OBS	0100	1160	34921	2662			14976	511				012			
		OBS	0115	1159	34923	2663			14978								
		OBS	0119	1220	35084	2663			15002								
		STD	0125	1237	3513	2664	0014438	0206	15009	465							
		OBS	0130	1241	35163	2665			15012								
		STD	0150	1168	3519	2682	0012773	0240	14991	421							
		OBS	0150	1168	35192	2682			14991	421							
		STD	0200	0981	3508	2707	0010476	0298	14931	336							
		OBS	0200	0981	35080	2707			14931	336							
		OBS	0202	0969	35064	2707			14926								
		OBS	0215	0966	35064	2708			14928								
		STD	0250	0839	3494	2719	0009366	0348	14884	320							
		OBS	0250	0839	34940	2719			14884	320							
		STD	0300	0760	3487	2725	0008791	0393	14861								
		OBS	0300	0760	34872	2725			14861								
		OBS	0340	0715	34798	2726			14850								
		OBS	0365	0593	34796	2742			14805								
		STD	0400	0561	3477	2744	0007019	0472	14798								
		OBS	0400	0561	34769	2744			14798								
		OBS	0419	0528	34754	2747			14787								
		STD	0500	0488	3478	2753	0006185	0538	14785								
		OBS	0500	0488	34777	2753			14785								
		STD	0600	0468	3479	2756	0005996	0599	14793								
		OBS	0600	0468	34785	2756			14793								
		STD	0700	0448	3480	2759	0005781	0658	14801								
		OBS	0700	0448	34796	2759			14801								
		STD	0800	0440	3481	2761	0005697	0716	14815								
		OBS	0800	0440	34808	2761			14815								
		STD	0900	0434	3481	2762	0005680	0772	14829								
		OBS	0900	0434	34814	2762			14829								
		STD	1000	0427	3482	2764	0005647	0829	14843								
		OBS	1000	0427	34820	2764			14843								
		STD	1100	0420	3482	2765	0005634	0885	14857								
		OBS	1100	0420	34823	2765			14857								
		STD	1200	0412	3483	2766	0005605	0942	14870								
		OBS	1200	0412	34826	2766			14870								
		STD	1300	0402	3482	2767	0005583	0998	14883								
		OBS	1300	0402	34824	2767			14883								
		STD	1400	0397	3482	2767	0005622	1054	14897								
		OBS	1400	0397	34822	2767			14897								
		STD	1500	0391	3482	2768	0005624	1110	14912								
		OBS	1500	0391	34823	2768			14912								

TABLE 1.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15–26 January 1968, on ICNAF Cruise 68–1; prepared from NODC Listing No. 31–8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	MSQ SQUARE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
31	8034	EV	4001 N	070305W		152	00	01	24	049	1968		053	0640	05	09	0	2		X4	0	3		0054

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
01	50	27	508	119	067	067	4	31	

MISSING TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-E10⁸	ΔD DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	OIL—A	SiO₄-Si µg-at/l	pH	QUAL
		STD	0000	0510	3231	2556	0024351	0000	14678	727							
049		OBS	0000	0510	32312	2556			14678	727				048			
		STD	0010	0539	3253	2570	0023035	0024	14695	742							
		OBS	0010	0539	32530	2570			14695	742				030			
		STD	0020	0692	3317	2601	0020079	0045	14767	726							
		OBS	0020	0692	33170	2601			14767	726				039			
		OBS	0025	0742	33295	2604			14789								
		STD	0030	0768	3335	2605	0019759	0065	14800	706							
		OBS	0030	0768	33350	2605			14800	706				023			
		OBS	0040	0795	33440	2608			14814	752							
		STD	0050	0807	3349	2610	0019292	0104	14820	629							
		OBS	0050	0807	33490	2610			14820	629				013			
		OBS	0054	0810	33510	2611			14823								
		OBS	0063	0913	33839	2621			14867								
		STD	0075	0939	3395	2625	0017891	0151	14880	594							
		OBS	0075	0939	33950	2625			14880	594				012			
		STD	0100	1040	3431	2636	0016945	0194	14926	579							
		OBS	0100	1040	34306	2636			14926	579				011			
		OBS	0116	1169	34740	2646			14980								
		OBS	0120	1152	34720	2648			14974								
		STD	0125	1162	3477	2650	0015711	0235	14979	493							
		OBS	0143	1200	35080	2667			14999								
		OBS	0149	1257	35235	2668			15022								
		STD	0150	1250	3523	2669	0013985	0272	15019	424							
		OBS	0150	1250	35234	2669			15019	424							
		OBS	0175	1145	35175	2685			14986								
		OBS	0176	1120	35174	2689			14978								
		STD	0200	1041	3510	2698	0011319	0335	14953	335							
		OBS	0200	1041	35102	2698			14953	335							
		OBS	0233	0973	35102	2710			14934								
		STD	0250	0894	3495	2711	0010155	0389	14905	319							
		OBS	0250	0894	34948	2711			14905	319							
		OBS	0284	0840	34940	2719			14890								
		OBS	0290	0780	34890	2724			14868								
		STD	0300	0760	3486	2724	0008880	0437	14861								
		OBS	0300	0760	34860	2724			14861								
		OBS	0325	0685	34831	2733			14836								
		STD	0400	0577	3476	2742	0007266	0517	14804								
		OBS	0400	0577	34763	2742			14804								
		OBS	0425	0542	34771	2747			14794								
		OBS	0450	0533	34771	2748			14795								
		OBS	0475	0508	34780	2751			14789								
		STD	0500	0500	3479	2753	0006270	0585	14790								
		OBS	0500	0500	34785	2753			14790								
		OBS	0550	0494	34789	2754			14795								

TABLE I.—Observed and interpolated oceanographic data taken by USCGC EVERGREEN, 15-26 January 1968, on ICNAF Cruise 68-1; prepared from NODC Listing No. 31-8034.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	8034	EV	4025 N	07031 W		15	2	00	01	24	075	1968	054		0088	01	13	0	2	X2	0	3	0055

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	31	S14	186	039	039	7	11	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	NCC
		STD	0000	0545	3241	2560	0024000	0000	14694	706							
075		OBS	0000	0545	32409	2560			14694	706				049			
		STD	0010	0546	3241	2560	0024005	0024	14696	709							
		OBS	0010	0546	32411	2560			14696	709				051			
		STD	0020	0546	3242	2560	0023977	0048	14698	708							
		OBS	0020	0546	32416	2560			14698	708				053			
		OBS	0025	0555	32455	2562			14703								
		STD	0030	0562	3247	2562	0023776	0072	14707	726							
		OBS	0030	0562	32468	2562			14707	726				053			
		OBS	0040	0569	32482	2563			14711	715				052			
		STD	0050	0565	3248	2563	0023740	0119	14711	705							
		OBS	0050	0565	32480	2563			14711	705				048			
		OBS	0054	0555	32487	2565			14708								
		OBS	0061	0485	32389	2565			14679								
		OBS	0071	0479	32380	2565			14678								
		STD	0075	0467	3238	2566	0023491	0178	14674	697							
		OBS	0075	0467	32375	2566			14674	697				033			

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DATE INDICTR	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
31	8034	EV	4059 N	07030 W		15	2	00	01	24	110	1968	055		0044	00	13	2	2	X2	0	3	0056

WATER: COLOR CODE	WATER: TRANS (m)	WIND: DIR	WIND: SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
DT	SD	32	S12	149	022	022	7	06	

MESSENGR TIME OF HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg at/l	NO₃-N µg-at/l	CHL-A	SiO₄-Si µg-at/l	pH	NCC
		STD	0000	0208	3179	2542	0025635	0000	14542	768							
110		OBS	0000	0208	31793	2542			14542	768				049			
		STD	0010	0208	3179	2542	0025635	0026	14544	771							
		OBS	0010	0208	31793	2542			14544	771				047			
		STD	0020	0208	3180	2543	0025583	0051	14546	775							
		OBS	0020	0208	31800	2543			14546	775				049			
		OBS	0025	0208	31810	2544			14547								
		STD	0030	0208	3181	2544	0025500	0077	14547	763							
		OBS	0030	0208	31811	2544			14547	763				040			
		OBS	0040	0208	31815	2544			14549								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.

REFERENCE CSTY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD 1° SQUARE	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	41000	064300W		151	14	01	30	017	1969	691 001	3840	03								0001

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
				345	044			10	

MESSENGR TIME OF NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY×10⁵	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	QC
		STD	0000	1972	3653	2602	0019939	0000	15232								
017		OBS	0000	1972	36534	2602			15232	4710	010		036	012	000	022	
		STD	0010	1973	3654	2603	0019955	0020	15234								
017		OBS	0011	1973	36542	2603			15234	4780	014		032	013	000	017	
		STD	0020	1972	3654	2603	0019971	0040	15235								
017		OBS	0021	1972	36535	2602			15235	4770	011		029	008	001	019	
		STD	0030	1975	3653	2601	0020139	0060	15237								
017		OBS	0032	1976	36531	2601			15238	4800	009		013	005	000	018	
		STD	0050	1976	3653	2601	0020288	0100	15241								
017		OBS	0053	1976	36524	2601			15241	4700	007		013	004	000	019	
		STD	0075	1976	3653	2601	0020380	0151	15245								
017		OBS	0080	1976	36525	2601			15246	4240	031		000	029	000	015	
		STD	0100	1910	3655	2620	0018649	0200	15231								
017		OBS	0106	1894	36560	2625			15228	4720	012		000	014	000	001	
		STD	0125	1868	3655	2630	0017712	0245	15223								
		STD	0150	1838	3654	2637	0017146	0289	15219								
017		OBS	T0160	1828	36530	2639			15218	4560	013		006	023	000		
		STD	0200	1799	3650	2644	0016676	0374	15215								
017		OBS	0213	1786	36482	2646			15214	4580	019		006	012	000		
		STD	0250	1736	3639	2651	0016157	0456	15204								
017		OBS	T0267	1708	36335	2654			15198	4800	009		021	006	000		

REFERENCE CSTY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUAD 1° SQUARE	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	41300	064300W		151	14	01	30	063	1969	691 002	3146	12		2						0002

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		35	512	312	022		7	15	

MESSENGR TIME OF NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY×10⁵	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	QC
		STD	0000	1915	3645	2611	0019106	0000	15215	469							
063		OBS	0000	1915	36454	2611			15215	469	011		053	021	000	024	
		STD	0010	1915	3645	2611	0019150	0019	15217	476							
063		OBS	0010	1915	36453	2611			15217	476	014		034	013	000	022	
063		OBS	0019	1916	36444	2610			15218		016		029	023	000	014	
		STD	0020	1916	3645	2610	0019273	0038	15218	470							
063		OBS	0029	1918	36455	2610			15221	464	025		032	022	000	015	
		STD	0030	1918	3646	2611	0019247	0058	15221	466							
063		OBS	0038	1919	36482	2612			15223	474	048		038	024	000	021	
063		OBS	0047	1915	36479	2613			15223	476	058		025	008	011	020	
		STD	0050	1915	3648	2613	0019106	0096	15223	477							
063		OBS	0071	1915	36480	2613			15227	480	033		038	021	000	017	
		STD	0075	1918	3648	2612	0019263	0144	15228	480							
063		OBS	T0093	1919	36480	2612			15232	479	015		034	010	000	013	
		STD	0100	1903	3650	2618	0018839	0192	15229	478							
		STD	0125	1853	3653	2633	0017493	0237	15219	470							
063		OBS	0138	1832	36539	2639			15215	464	016		000	054	000		
		STD	0150	1829	3653	2639	0017031	0280	15216	461							
063		OBS	T0181	1789	36491	2646			15209	436	027		004	041	000		
		STD	0200	1731	3637	2651	0016017	0363	15194	409							
063		OBS	0226	1652	36223	2658			15173	358	060		006	067	002		
		STD	0250	1575	3610	2667	0014610	0439	15152								
		STD	0300	1424	3586	2682	0013279	0509	15109								
063		OBS	T0360	1257	35614	2697			15061								
		STD	0400	1155	3548	2707	0011043	0631	15031								
		STD	0500	0930	3521	2725	0009308	0732	14963								
063		OBS	T0526	0879	35152	2729			14948								
		STD	0600	0763	3509	2742	0007740	0818	14915								
		STD	0700	0634	3502	2754	0006541	0889	14880								
		STD	0800	0537	3497	2763	0005727	0950	14857								
063		OBS	0848	0501	34954	2766			14850								
		STD	0900	0492	3496	2767	0005360	1006	14855								
		STD	1000	0474	3496	2770	0005206	1059	14864								
		STD	1100	0457	3497	2772	0005048	1110	14874								
063		OBS	1160	0446	34969	2773			14879								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT OF GLOBE	1° SQUARE: 10°	1°	TIME (GMT): MO	DAY	HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES: TYPE	AMT	NODC STATION NUMBER
318084	A4	42000	064295W		151	24	01	30	104	1969	691	003		2377	02								0003

WATER: COLOR CODE	TRANS (m)	WIND: DIR	SPEED OF FORCE	BARO-METER (mbar)	AIR TEMP °C: DRY BULB	WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
		36	510	308	-006			11	

MESSENGR TIME (GMT) HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	∑ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL—A	QCC
		STD	0000	0624	3342	2629	0017369	0000	14739	636							
104		OBS	0000	0624	33416	2629			14739	636	070		011	040	004	033	
104		OBS	0009	0627	33416	2629			14742	642	072		011	014	003	034	
		STD	0010	0628	3342	2629	0017436	0017	14743	643							
104		OBS	0017	0634	33415	2627			14748	643	074		008	024	006	032	
		STD	0020	0639	3384	2655	0014445	0033	14770	631							
104		OBS	0026	0656						630	066		008	022	003	037	
		STD	0030	1119	3488	2667	0013911	0048	14949	673							
104		OBS	0034	1240	35137	2656			15013	673	046		015	017	000	039	
104		OBS	0042	1365	35387	2668			15042	645	037		019	024	004	034	
		STD	0050	1259	3520	2665	0014143	0076	15006	645							
104		OBS	0064	1150	35013	2671			14968	646	052		018	024	001	020	
		STD	0075	1152	3502	2671	0013680	0110	14971	646							
104		OBS	T0084	1160	35042	2672			14979	642	043		006	059	001	020	
		STD	0100	1206	3518	2673	0013444	0144	14995	612							
		STD	0125	1277	3539	2678	0013298	0177	15026	480							
104		OBS	0128	1286	35416	2676			15030	478	040		000	027	006		
		STD	0150	0990	3485	2686	0012364	0210	14923	475							
104		OBS	T0169	0871	34638	2690			14879	473	107		000	049	007		
		STD	0200	0946	3494	2702	0010946	0248	14916	414							
104		OBS	0.12	1065	35263	2706			14965	378	107		000	048	006		

REFERENCE: CTRY CODE	REFERENCE: ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT OF GLOBE	1° SQUARE: 10°	1°	TIME (GMT): MO	DAY	HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES: TYPE	AMT	NODC STATION NUMBER
318084	A4	42150	064300W		151	24	01	30	132	1969	691	004		1829	03		2						0004

WATER: COLOR CODE	TRANS (m)	WIND: DIR	SPEED OF FORCE	BARO-METER (mbar)	AIR TEMP °C: DRY BULB	WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
		36	512	308	-011			11	

MESSENGR TIME (GMT) HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	∑ Δ D DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL—A	QCC
		STD	0000	0335	3207	2554	0024507	0000	14601	748							
132		OBS	0000	0335	32070	2554			14601	748	059		011	015	004	047	
		STD	0010	0359	3209	2553	0024598	0025	14614	740							
132		OBS	0011	0364	32088	2553			14616	737	055		013	035	006	043	
		STD	0020	0429	3237	2569	0023109	0048	14649	694							
132		OBS	0021	0437	32398	2570			14653	691	086		008	016	006	026	
		STD	0030	0507	3266	2584	0021732	0071	14687	679							
132		OBS	0032	0537	32759	2588			14701	670	064		008	018	003	025	
132		OBS	0042	0762	33505	2618			14802	592	066		000	021	006	010	
		STD	0050	0867	3393	2635	0016895	0109	14849	558							
132		OBS	0053	0901	34060	2640			14864	546	066		002	034	003	006	
		STD	0075	1036	3461	2661	0014581	0149	14924	481							
132		OBS	0080	1055	34704	2664			14933	469	076		000	034	003	002	
		STD	0100	1082	3494	2678	0012985	0183	14949	428							
132		OBS	T0104	1084	34983	2681			14951	421	098		002	105	007	000	
		STD	0125	1071	3513	2695	0011454	0214	14952	382							
		STD	0150	1038	3523	2708	0010212	0241	14945	351							
132		OBS	0159	1021	35247	2713			14941	344	138		000	062	008		
		STD	0200	0907	3514	2724	0008841	0289	14904	343							
132		OBS	T0212	0871	35116	2727			14892	343	130		000	053	007		
		STD	0250	0752	3504	2740	0007346	0329	14852	374							
132		OBS	0265	0702	35011	2745			14835	394	134		000	051	009		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69-1; prepared from NODC Listing No. 31-8084.—Continued

REFERENCE CARD TYPE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DRIFT BLOCK	SOEN SQUARE 10°	SOEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	42300	064300W		151	24	01	30	154	1969	691	005		0311	03		3			X2			0005

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S15	312	000		7	11	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁵	ΔD DYN M ×10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CML—A	ICC
		STD	0000	0326	3194	2544	0028445	0000	14596	741							
154		OBS	0000	0326	31936	2544			14596	741	062		004	012	002	038	
		STD	0010	0332	3193	2543	0025578	0026	14600	735							
154		OBS	0011	0332	31924	2543			14600	734	066		004	033	003	038	
		STD	0020	0328	3192	2543	0025568	0051	14600	712							
154		OBS	0021	0327	31923	2543			14599	711	066		002	012	000	038	
		STD	0030	0320	3203	2552	0024696	0076	14599	728							
154		OBS	0032	0319	32048	2554			14599	729	057		004	009	001	030	
154		OBS	0042	0321	32082	2556			14602	717	058		000	010	000	034	
		STD	0050	0325	3210	2557	0024243	0125	14606	706							
154		OBS	0053	0327	32102	2557			14607	681Q	066		002	023	003	025	
		STD	0075	0547	3311	2615	0018843	0179	14717	671							
154		OBS	0080	0603	33328	2625			14743	664	094		000	033	004	007	
		STD	0100	0871	3415	2652	0015415	0222	14862	513							
154		OBS	T0107	0946	34391	2659			14894	473	065		000	011	001	000	
		STD	0125	1078	3486	2673	0013563	0258	14951	443							
		STD	0150	1183	3529	2687	0012327	0290	14997	406							
154		OBS	0160	1200	35387	2691			15006	392	099		000	044	009		
		STD	0200	1088	3529	2704	0010748	0348	14972	339							
154		OBS	T0211	1060	35270	2708			14964	331	116		000	044	000		
		STD	0250	0973	3520	2717	0009568	0399	14938	334							
154		OBS	T0267	0940	35175	2721			14928	335	118		000	039	000		

REFERENCE CARD TYPE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DRIFT BLOCK	SOEN SQUARE 10°	SOEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43000	064300W		151	34	01	30	208	1969	691	006		0113	01		2			X2			0006

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		02	S09	291	011		7	08	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁵	ΔD DYN M ×10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CML—A	ICC
		STD	0000	0184	3168	2535	0026341	0000	14530	742							
208		OBS	0000	0184	31660	2535			14530	742	065		004	014	005	045	
		STD	0010	0185	3167	2534	0026386	0026	14532	747							
208		OBS	0010	0185	31674	2534			14532	747	074		000	038	003	037	
		STD	0020	0187	3168	2535	0026386	0052	14535	741							
208		OBS	0020	0187	31675	2535			14535	741	074		002	014	001	041	
		STD	0030	0282	3197	2551	0024854	0078	14582	715							
208		OBS	0030	0282	31969	2551			14582	715	059		013	010	000	033	
208		OBS	0040	0412	32108	2564			14599	713	060		000	011	000	025	
		STD	0050	0333	3218	2564	0024842	0126	14610	703							
208		OBS	0051	0335	32189	2564			14611	701	060		011	012	003	021	
		STD	0075	0418						696							
208		OBS	0076	0419	32698	2591P				592	092		000	023	003	008	
		STD	0100	0510						501							
208		OBS	T0101	0514						497	107		002	070	007	006	

REFERENCE CARD TYPE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ' 1/10	LONGITUDE ° ' 1/10	DRIFT BLOCK	SOEN SQUARE 10°	SOEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43300	064300W		151	34	01	31	002	1969	691	007		0097	01		1			X2			0007

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		36	S07	288	017			07	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ×10⁵	ΔD DYN M ×10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CML—A	ICC
		STD	0000	0179	3145	2517	0028042	0000	14525	741							
002		OBS	0000	0179	31451	2517			14525	741	068		008	013	001	032	
		STD	0010	0176	3145	2517	0028015	0028	14525	744							
002		OBS	0010	0176	31452	2517			14525	744	075		004	016	000	033	
		STD	0020	0178	3147	2519	0027905	0056	14528	744							
002		OBS	0020	0178	31468	2519			14528	744	071		015	009	001	035	
		STD	0030	0197	3155	2524	0027429	0084	14539	751							
002		OBS	0030	0197	31547	2524			14539	751	075		002	015	009	030	
002		OBS	0040	0215	31621	2528			14550	727	075		000	023	004	028	
		STD	0050	0245	3170	2533	0026578	0138	14566	720							
002		OBS	0050	0245	31704	2533			14566	720	072		000	010	004	017	
		STD	0075	0247	3175	2536	0026279	0204	14571	715							
002		OBS	0075	0247	31746	2536			14571	715	063		000	013	003	017	

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CARD CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE 10°	1°	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	44000	064300W		151	44	01	31	032	1969	691	008	0077	00		2			X2			0008

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
		04	510	261	022		8	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A
		STD	0000	0150	3126	2504	0029287	0000	14509	756						
032		OBS	0000	0150	31264	2504			14509	756	078		006	014	004	027
		STD	0010	0149	3127	2504	0029264	0029	14510	747						
032		OBS	0010	0149	31266	2504			14510	747	079		002	017	000	022
		STD	0020	0152	3127	2504	0029288	0059	14513	752						
032		OBS	0020	0152	31265	2504			14513	752	075		000	017	000	029
		STD	0030	0151	3126	2504	0029288	0088	14515	761						
032		OBS	0030	0151	31264	2504			14515	761	078		000	023	005	028
032		OBS	0040	0149	31268	2504			14515	751	077		000	010	004	024
		STD	0050	0150	3127	2504	0029256	0146	14518	751						
032		OBS	0050	0150	31267	2504			14518	751	079		000	011	001	017

REFERENCE CARD CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE 10°	1°	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43150	065300W		151	35	02	02	195	1969	691	009	0058	00		1						0009

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
				200	056		7	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A
		STD	0000	0210	3151	2520	0027782	0000	14539	742						
195		OBS	0000	0210	31512	2520			14539	742	072		000	010	000	018
		STD	0010	0208	3151	2519	0027822	0028	14540	746						
195		OBS	0010	0208	31505	2519			14540	746	076		000	012	003	023
		STD	0020	0207	3150	2519	0027823	0056	14541	750						
195		OBS	0020	0207	31504	2519			14541	750	065		000	022	003	020
		STD	0030	0207	3151	2520	0027793	0083	14543	746						
195		OBS	0030	0207	31508	2520			14543	746	079		013	011	005	024
195		OBS	0040	0205	31509	2520			14544	744	069		019	006	002	022
		STD	0050	0205	3151	2520	0027780	0139	14545	739						
195		OBS	0050	0205	31508	2520			14545	739	081		027	011	005	024

REFERENCE CARD CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT SQUARE 10°	1°	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43000	065300W		151	35	02	02	213	1969	691	010	0126	01		1			X1			0010

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
		31	505	207	028			08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A
		STD	0000	0243	3160	2524	0027368	0000	14555	753						
213		OBS	0000	0243	31597	2524			14555	753	077		023	015	003	045
		STD	0010	0240	3160	2524	0027355	0027	14555	753						
213		OBS	0010	0240	31596	2524			14555	753	076		011	017	002	033
		STD	0020	0231	3161	2526	0027155	0055	14553	748						
213		OBS	0020	0231	31614	2526			14553	748	075		015	024	002	036
		STD	0030	0233	3164	2528	0026996	0082	14556	744						
213		OBS	0030	0233	31637	2528			14556	744	077		015	010	004	032
213		OBS	0040	0232	31648	2529			14557	746						033
		STD	0050	0302	3203	2554	0024585	0133	14595	700						
213		OBS	0050	0302	32026	2554			14595	700	071		008	009	002	015
		STD	0075	0394	3266	2596	0020620	0190	14647	696						
213		OBS	0075	0394	32661	2596			14647	696	105		015	017	007	006
		STD	0100	0440	3284	2605	0019780	0240	14673	578						
213		OBS	T0103	0443	32856	2606			14675	556	104		000	015	010	006

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE		10° SQUARE	1° SQUARE	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	HGT	PER	STA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
CTRY CODE	ID NO.		° 1/10	° 1/10																				
318084	A4	42301	065300W			151	25	02	03	016	1969	691	011	0110	01		3			X2	3	8		0011

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO OBS DEPTHS	SPECIAL OBSERVATIONS
		02	508	186	017			08	

MESSENGR TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CHL—A	SCC
		STD	0000	0259	3165	2527	0027121	0000	14563	744							
016		OBS	0000	0259	31645	2527			14563	744	071		006	016	005	018	
016		OBS	0009	0261	31640	2526			14565	744	074		000	004	004	037	
		STD	0010	0261	3164	2526	0027168	0027	14565	744							
016		OBS	0019	0260	31646	2527			14566	746	072		000	005	004	035	
		STD	0020	0260	3165	2527	0027109	0054	14566	746							
016		OBS	0028	0260	31661	2528			14568	746	063		000	004	003	049	
		STD	0030	0260	3168	2530	0026865	0081	14568	747							
016		OBS	0038	0258	31744	2535			14570	748	074		002	009	004	044	
016		OBS	0047	0268	31836	2541			14577	740	075		000	004	005	039	
		STD	0050	0316	3203	2553	0024670	0133	14601	714							
016		OBS	0071	0532	32912	2601			14707	589	103		000	059	010	015	
		STD	0075	0532	3291	2601	0020154	0189	14708	576							
016		OBS	T0094	0534	32919	2601			14712	560	103		000	010	007	015	

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE		10° SQUARE	1° SQUARE	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	HGT	PER	STA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
CTRY CODE	ID NO.		° 1/10	° 1/10																				
318084	A4	42000	065300W			151	25	02	03	079	1969	691	012	0914	02		2							0012

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO OBS DEPTHS	SPECIAL OBSERVATIONS
		04	515	210	022		7	11	

MESSENGR TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CHL—A	SCC
		STD	0000	0340	3210	2556	0024338	0000	14604	727							
079		OBS	0000	0340	32098	2556			14604	727	068		008	004	003	047	
		STD	0010	0342	3209	2555	0024398	0024	14606	738							
079		OBS	0010	0342	32093	2555			14606	738	068		000	003	004	052	
079		OBS	0019	0342	32102	2556			14608	730	058		000	009	002	046	
		STD	0020	0345	3212	2557	0024224	0049	14610	730							
079		OBS	0029	0370	32216	2563			14623	730	066		004	024	005	052	
		STD	0030	0372	3222	2563	0023689	0073	14624	729							
079		OBS	0040	0391	32297	2567			14635	715	066		004	011	002	045	
079		OBS	0049	0556	32920	2599			14713	668	048		000	007	001	030	
		STD	0050	0563	3295	2600	0020197	0117	14717	664							
079		OBS	0074	0681	33494	2628			14775	582						018	
		STD	0075	0682	3350	2628	0017560	0164	14776	579							
079		OBS	0099	0695	33696	2642			14788	518						014	
		STD	0100	0700	3371	2642	0016271	0206	14790	517							
		STD	0125	0797	3406	2656	0015042	0245	14836	497							
079		OBS	0148	0837	34281	2667			14858	484	101		000	024	009		
		STD	0150	0832	3429	2669	0013903	0281	14857	484							
079		OBS	T0196	0766	34440	2691			14841	473	099		000	026	006		
		STD	0200	0770	3447	2692	0011735	0345	14843	471							
079		OBS	T0248	0812	34940	2723			14874	446	132		002	040	010		

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE		10° SQUARE	1° SQUARE	STATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	HGT	PER	STA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
CTRY CODE	ID NO.		° 1/10	° 1/10																				
318084	A4	41450	065300W			151	15	02	03	099	1969	691	013	1737	02		3			X2				0013

WATER COLOR CODE	WATER TRANS (m)	WIND DIR	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO OBS DEPTHS	SPECIAL OBSERVATIONS
		04	512	203	022			11	

MESSENGR TIME HR 1/10	CAST NO	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CHL—A	SCC
		STD	0000	0494	3307	2617	0018502	0000	14682	682							
099		OBS	0000	0494	33068	2617			14682	682						033	
		STD	0010	0495	3307	2618	0018485	0018	14684	684							
099		OBS	0010	0495	33073	2618			14684	684	077		000	016	005	037	
099		OBS	0019	0697	33569	2632			14774	654	069		000	015	002	032	
		STD	0020	0720	3362	2633	0017087	0036	14784	650							
099		OBS	0029	0907	34061	2639			14862	619	051		002	009	003	032	
		STD	0030	0930	3413	2641	0016330	0053	14872	615							
099		OBS	0039	1069	34547	2650			14929	591	054		011	014	002	033	
099		OBS	0049	1084	34593	2651			14937	586						024	
		STD	0050	1102	3465	2652	0015350	0085	14944	583							
099		OBS	0073	1383	35505	2663			15054	532	043		015	017	000	020	
		STD	0075	1385	3551	2663	0014389	0122	15055	532							
099		OBS	0098	1405	35558	2663			15066	531	050		013	038	008	021	
		STD	0100	1405	3557	2663	0014425	0158	15067	529							
		STD	0125	1406	3569	2673	0013633	0193	15073	511							
099		OBS	0147	1406	35720	2675			15077	505	046		002	008	000		
		STD	0150	1398	3570	2675	0013478	0227	15074	511							
099		OBS	T0196	1301	35510	2680			15048	521	057		008	013	009		
		STD	0200	1294	3552	2682	0012904	0293	15046	515							
099		OBS	0247	1236	35568	2698			15035	359							

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69-1; prepared from NODC Listing No. 31-8084.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IN DECIM	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	TATION TIME (GMT) MO	TATION TIME (GMT) DAY	TATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES LYR	CLOUD CODES AMT	NODC STATION NUMBER
318084		A4	41300	065300W		151	15	02	03	121	1969	691	014	2395	02		2			X2			0014

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
		04	520	193	039			11	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^5$	$\Sigma\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO2-N µg-at/l	NO3-N µg-at/l	SiO4-Si µg-at/l	CHL-A	VCC
		STD	0000	1293	3525	2662	0014314	0000	15009	541							
121		OBS	0000	1293	35246	2662			15009	541	053		017	012	001	029	
		STD	0010	1293	3524	2661	0014378	0014	15011	553							
121		OBS	0010	1293	35241	2661			15011	553	049		019	017	008	035	
121		OBS	0019	1292	35253	2662			15012	556	049		027	014	002	034	
		STD	0020	1295	3526	2662	0014304	0029	15014	555							
121		OBS	0029	1344	35393	2663			15033	548	047		019	035	000	030	
		STD	0030	1360	3545	2664	0014202	0043	15039	542							
121		OBS	0040	1455	35798	2670			15076	499	051		011	016	000	017	
121		OBS	0049	1434	35762	2672			15070	494	060		015	016	000	012	
		STD	0050	1429	3575	2672	0013452	0071	15069	493							
121		OBS	0073	1358	35657	2680			15048	455	072		000	019	000	003	
		STD	0075	1360	3567	2681	0012719	0103	15049	449							
121		OBS	0099	1370	35751	2685			15057	393	085		000	030	000		
		STD	0100	1370	3575	2685	0012397	0135	15058	392							
		STD	0125	1361	3574	2686	0012347	0166	15059	368							
121		OBS	0148	1335	35736	2691			15054	352	104		000	098	001		
		STD	0150	1331	3573	2691	0011918	0196	15053	352							
121		OBS	T0198	1224	35557	2699			15022	341	126		000	033	011		
		STD	0200	1219	3555	2700	0011216	0254	15021	341							
121		OBS	0248	1073	35369	2713			14976	329	143		004	038	006		

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRFT IN DECIM	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	TATION TIME (GMT) MO	TATION TIME (GMT) DAY	TATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES LYR	CLOUD CODES AMT	NODC STATION NUMBER
318084		A4	41000	065300W		151	15	02	03	156	1969	691	015	3109	03								0015

WATER COLOR CODE	WATER TRANS (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS DEPTHS	SPECIAL OBSERVATIONS
								11	

MESSENGER TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY $\times 10^5$	$\Sigma\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O2 ml/l	PO4-P µg-at/l	TOTAL-P µg-at/l	NO2-N µg-at/l	NO3-N µg-at/l	SiO4-Si µg-at/l	CHL-A	VCC
		STD	0000	1784	3625	2629	0017451	0000	15175	504							
156		OBS	0000	1784	36255	2629			15175	504	024		032	006	000	024	
		STD	0010	1780	3624	2629	0017458	0017	15176	505							
156		OBS	0010	1780	36243	2629			15176	505	021		029	008	001	018	
		STD	0020	1781	3625	2629	0017447	0034	15178	505							
156		OBS	0021	1781	36249	2629			15178	505	024		029	011	000	019	
		STD	0030	1785	3624	2628	0017409	0052	15180	503							
156		OBS	0030	1785	36245	2628			15180	4910	046		000	039	000	020	
156		OBS	0040	1763	36134	2625			15174	500	032		038	007	000	019	
		STD	0050	1706	3608	2635	0017047	0087	15159	472							
156		OBS	0051	1702	36077	2635			15157	470	036		011	008	000	011	
		STD	0075	1672	3603	2638	0016756	0129	15152	468							
156		OBS	0077	1671	36025	2639			15152	469	042		000	011	000	012	
		STD	0100	1679	3608	2641	0016586	0171	15159	463							
156		OBS	T0104	1680	36084	2641			15159	461	032		021	017	000		
		STD	0125	1645	3603	2645	0016255	0212	15152	463							
		STD	0150	1469	3598	2659	0015063	0251	15132	466							
156		OBS	0153	1557	35969	2661			15129	466	014		019	013	003		
		STD	0200	1263	3531	2672	0014817	0323	15033	548							
156		OBS	T0207	1250	35285	2673			15029	552	038		000	009	006		
		STD	0250	1343	3556	2675	0013696	0392	15071	532							
156		OBS	0256	1380	35654	2675			15085	523	148		046	014	009		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
318084		A4	40300	065300W		15	1	05	02	03	1969	691	016	3658	03		2						0016

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		14	510	125	139		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^5	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	DUP CDC
		STD	0000	1830	3620	2613	0018886	0000	15188	503							
193		OBS	0000	1830	36201	2613			15188	503	018		025	008	000	030	
		STD	0010	1828	3621	2614	0018823	0019	15189	512							
193		OBS	0010	1828	36208	2614			15189	512	015		017	007	000	025	
		STD	0020	1829	3621	2614	0018874	0038	15191	510							
193		OBS	0020	1829	36209	2614			15191	510	015		019	010	000	023	
		STD	0030	1834	3621	2613	0019029	0057	15194	508							
193		OBS	0030	1834	36209	2613			15194	508	014		015	013	001	028	
193		OBS	0040	1851	36445	2627			15203	481	016		013	008	000	028	
		STD	0050	1849	3648	2630	0017522	0093	15205	473							
193		OBS	0050	1849	36476	2630			15205	473	019		015	008	000	020	
		STD	0075	1808	3638	2633	0017326	0137	15196	470							
193		OBS	0075	1808	36380	2633			15196	470	020		013	006	000	018	
		STD	0100	1812	3651	2641	0016595	0179	15203	450							
193		OBS	0100	1812	36506	2641			15203	450	021		000	010	002	002	
		STD	0125	1710	3624	2646	0016223	0220	15174	463							
		STD	0150	1628	3605	2651	0015829	0260	15151	475							
193		OBS	T0154	1617	36029	2652			15148	477	034		015	028	001		
		STD	0200	1527	3595	2666	0014501	0336	15127	437							
193		OBS	T0203	1520	35942	2667			15125	434	054		000	018	001		
		STD	0250	1377	3565	2676	0013703	0407	15083	500							
193		OBS	T0259	1344	35576	2677			15073	525	046		002	012	001		

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
318084		A4	40000	065307W		15	1	05	02	03	1969	691	017	4206	02		3			X2			0017

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		16	530	076	122			11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^5	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	DUP CDC
		STD	0000	1388	3573	2679	0012652	0000	15047								
229		OBS	0000	1388	35726	2679			15047	5330	044		017	014	001	025	
229		OBS	0008	1391	35726	2676			15049	5480	044		008	019	001	028	
		STD	0010	1391	3573	2678	0012740	0013	15049								
229		OBS	0017	1389	35719	2678			15050	551	044		011	016	003	026	
		STD	0020	1372	3569	2680	0012654	0025	15044	562							
229		OBS	0026	1346	35658	2682			15037	570	043		004	034	001		
		STD	0030	1345	3565	2682	0012442	0036	15037	549							
229		OBS	0035	1341	35640	2682			15036	546	041		002	010	001		
229		OBS	0045	1335	35637	2685			15036	618	046		004	010	001		
		STD	0050	1334	3564	2683	0012392	0063	15036	597							
229		OBS	0068	1327	35628	2684			15037	546	046		000	011	000	013	
		STD	0075	1322	3561	2684	0012411	0094	15036	542							
229		OBS	T0092	1314	35569	2684			15036	536	057		000	020	000	017	
		STD	0100	1316	3560	2684	0012471	0125	15038	537							
		STD	0125	1324	3562	2684	0012530	0156	15045	539							
229		OBS	0140	1328	35630	2684			15049	541	050		000	016	000	013	
		STD	0150	1320	3563	2686	0012433	0187	15048	495							
229		OBS	T0189	1260	35588	2695			15034	368	110		000	066	008		
		STD	0200	1235	3556	2697	0011444	0247	15027	347							
229		OBS	T0241	1108	35390	2708			14987	327	133		000	028	009		

REFERENCE: CTRY CODE	REFERENCE: NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO.	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT	NODC STATION NUMBER
318084		A4	39300	066300W		11	5	96	02	04	048	1969	691	018	4389	02		4		X2			0016

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C: DRY BULB	AIR TEMP. °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		27	527	983	100		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^5	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	DUP CDC
		STD	0000	1303	3558	2685	0012062	0000	15017	550							
048		OBS	0000	1303	35579	2685			15017	550	049		000	011	004	024	
048		OBS	0009	1303	35572	2685			15018	551	049		000	011	004	023	
		STD	0010	1302	3557	2685	0012137	0012	15018	551							
048		OBS	0019	1297	35569	2686			15018	550	058		000	019	003	022	
		STD	0020	1298	3557	2686	0012095	0024	15018	550							
048		OBS	0029	1299	35564	2685			15020	551	056		000	017	004	019	
		STD	0030	1298	3556	2685	0012188	0036	15020	551							
048		OBS	0038	1294	35555	2685			15020	551	054		000	036	003	016	
048		OBS	0048	1293	35542	2684			15021	549	057		000	014	002	017	
		STD	0050	1292	3554	2685	0012274	0061	15021	548							
048		OBS	0072	1287	35532	2685			15023	546	057		000	014	004	024	
		STD	0075	1287	3553	2685	0012309	0092	15023	547							
048		OBS	0096	1289	35533	2685			15027	552	057		000	020	001	020	
		STD	0100	1290	3554	2685	0012374	0122	15029	551							
		STD	0125	1297	3558	2687	0012286	0153	15036	546							
048		OBS	T0145	1303	35590	2686			15041	542	057		000	021	004		
		STD	0150	1299	3559	2687	0012314	0184	15040	528							
048		OBS	0194	1263	35554	2691			15035	422	094		000	069	006		
		STD	0200	1248	3554	2693	0011837	0244	15031	409							
046		OBS	T0243	1079	35354	2711			14977	330	139		000	034	013		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CSTY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE CHECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	40000	066300W		151	06	02	04	095	1969	691	019		3383	02		4			X1			0019

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		27	S35	997	044			11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	OIL—A
		STD	0000	1336	3562	2682	0012408	0000	15028	550						
095		OBS	0000	1336	35619	2682			15028	550	057		000	016	004	020
095		OBS	0008	1338	35662	2685			15031	549	057		000	015	004	017
		STD	0010	1337	3566	2685	0012155	0012	15031	551						
095		OBS	0017	1336	35654	2684			15032	553	049		000	016	001	019
		STD	0020	1337	3566	2684	0012220	0024	15033	551						
095		OBS	0025	1338	35656	2684			15034	549	060		000	019	001	015
		STD	0030	1338	3566	2684	0012253	0037	15034	549						
095		OBS	0033	1337	35658	2684			15035	548	055		000	033	004	015
095		OBS	0042	1333	35653	2685			15035	545	055		000	013	004	015
		STD	0050	1333	3566	2685	0012197	0061	15036	545						
095		OBS	0064	1334	35661	2685			15039	544	056		000	013	004	014
		STD	0075	1335	3566	2685	0012299	0092	15041	547						
095		OBS	T0084	1336	35659	2685			15043	548	047		000	009	001	009
		STD	0100	1334	3566	2685	0012367	0123	15045	546						
		STD	0125	1330	3565	2686	0012392	0154	15047	543						
095		OBS	0128	1330	35653	2686			15048	543	057		000	030	003	
		STD	0150	1328	3564	2685	0012517	0185	15051	477						
095		OBS	T0172	1290	35607	2690			15041	420	074			009	004	
		STD	0200	1191						360						
095		OBS	0222	1072						323	143		000	031	012	

REFERENCE CSTY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE CHECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	40300	066300W		151	06	02	05	169	1969	691	020		2560	03		7			X3			0020

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S30	051	006		4	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	OIL—A
		STD	0000	1722	3629	2647	0015731	0000	15158							
169		OBS	0000	1722	36288	2647			15158	563Q	024		019	011	000	037
		STD	0010	1721	3629	2647	0015755	0015	15159							
169		OBS	0012	1721	36287	2647			15159	574Q	022		017	011	000	028
		STD	0020	1721	3629	2647	0015798	0031	15161							
169		OBS	0023	1721	36285	2647			15161	576Q	025		013	011	000	024
		STD	0030	1717	3628	2647	0015787	0047	15161							
169		OBS	0035	1715	36258	2646			15161	579	024		015	017	000	022
169		OBS	0047	1583						572Q	024		008	007	000	032
		STD	0050	1559	3603	2665	0014124	0077	15113	571						
169		OBS	0059	1495	35918	2671			15093	567	035		019	013	001	023
		STD	0075	1403	3573	2676	0013162	0111	15064	558						
169		OBS	0089	1350	35627	2679			15048		043		000	009	000	008
		STD	0100	1339	3562	2681	0012718	0143	15046	547						
169		OBS	T0119	1322	35615	2684			15043	542	044		000	011	000	009
		STD	0125	1318	3561	2685	0012476	0175	15043	542						
		STD	0150	1303	3559	2686	0012388	0206	15042	543						
169		OBS	0179	1286	35572	2688			15040	543	078		000	049	002	
		STD	0200	1221	3552	2697	0011503	0266	15021	543						
169		OBS	T0239	1106	35408	2710			14986	537	082		000	038	010	
		STD	0250	1075	3537	2713	0010015	0319	14976							
		STD	0300	0938	3521	2724	0009025	0367	14933							
169		OBS	T0301	0935	35207	2724			14932	323Q	158		000	039	013	

REFERENCE CSTY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE CHECK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	40450	066300W		151	06	02	05	193	1969	691	021		2034	02		7			X7			0021

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S30	051	-017		6	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	OIL—A
		STD	0000	1189	3530	2666	0011997	0000	14975	516						
193		OBS	0000	1189	35298	2666			14975	516	055		000	011	003	015
193		OBS	0009	1190	35297	2666			14977	520	056		000	015	002	017
		STD	0010	1190	3530	2666	0012034	0012	14977	520						
193		OBS	0017	1193	35305	2666			14979	519	061		000	017	002	015
		STD	0020	1196	3530	2665	0012139	0024	14980	522						
193		OBS	0024	1199	35300	2664			14982	524	055		004	028	001	016
		STD	0030	1198	3529	2664	0012291	0036	14983	524						
193		OBS	0033	1197	35289	2664			14983	524	055		006	012	001	017
193		OBS	0041	1223	35312	2661			14993	550	046		000	007	001	018
		STD	0050	1263	3547	2685	0012235	0061	15010	550						
193		OBS	0063	1300	35604	2688			15027	551	041		004	005	004	012
		STD	0075	1304	3560	2687	0012112	0091	15030	556						
193		OBS	T0084	1306	35602	2686			15032	560	043		000	011	000	012
		STD	0100	1306	3561	2687	0012213	0122	15035	518						
		STD	0125	1307	3561	2687	0012262	0152	15039	470						
193		OBS	T0129	1307	35610	2687			15040	465	075		000	024	001	
		STD	0150	1308	3561	2687	0012314	0183	15044	456						
193		OBS	T0177	1309	35620	2687			15048	445	054		000	012	000	
		STD	0200	1234	3554	2696	0011572	0243	15026	401						
193		OBS	0223	1109	35399	2709			14985	334	115		000	022	003	

TABLE II.—Observed and interpolated oceanographic data taken by ICF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	41000	066300W		151	16	02	06	023	1969	691	022	0141	01	86	0			X3				0022

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	530	119	-022		4	08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^7	$\frac{1}{2}\Delta O$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CR—A 000—
		STD	0000	0391	3334	2632	0017114	0000	14709	702						
023		OBS	0000	0391	33336	2632			14709	702	090		008	017	008	025
		STD	0010	0393	3333	2632	0017159	0017	14711	728						
023		OBS	0012	0393	33333	2632			14712	729	085		008	018	003	024
		STD	0020	0392	3333	2631	0017195	0034	14713	706						
023		OBS	0024	0552	33328	2631			14713	699	081		000	014	001	033
		STD	0030	0593	3333	2631	0017222	0052	14715	699						
023		OBS	0036	0594	33330	2631			14718	699	088		000	028	002	029
023		OBS	0049	0724	33993	2661			14793	6660	068		000	008	000	022
		STD	0050	0739	3409	2684	0014160	0083	14810	626						
023		OBS	0061	1080	34920	2677			14942	586	066		013	013	006	015
		STD	0075	1211	3526	2679	0012071	0117	14994	583						
023		OBS	0092	1301	35517	2661			15031	560	042		000	006	000	015
		STD	0100	1294	3552	2683	0012579	0149	15029	542						
023		OBS	T0122	1273	35532	2688			15026	471	075		006	019	008	808

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	41300	066300W		151	16	02	06	075	1969	691	023	0086	01		4			X3				0023

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	530	125	-039		4	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^7	$\frac{1}{2}\Delta O$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CR—A 000—
		STD	0000	0497	3315	2823	0017948	0000	14684	714						
075		OBS	0000	0497	33146	2623			14684	714	065		000	019	004	028
		STD	0010	0499	3315	2623	0017947	0018	14687	710						
075		OBS	0011	0499	33150	2623			14687	710	085		015	011	002	028
		STD	0020	0499	3315	2823	0017959	0036	14688	710						
075		OBS	0021	0499	33148	2623			14688	710	082		000	013	008	024
		STD	0030	0502	3315	2623	0017995	0054	14691	710						
075		OBS	0032	0502	33152	2623			14692	710	089		000	018	000	027
075		OBS	0043	0501	33151	2623			14693	710	087		000	023	004	020
		STD	0050	0499	3315	2623	0017979	0090	14693	712						
075		OBS	0053	0498	33151	2624			14693	713	089		000	040	008	022
		STD	0075	0525	3322	2626	0017772	0135	14709	703						
075		OBS	T0081	0540	33260	2627			14717	697	091		008	030	001	025

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO SOUNDM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	42000N	066300W		151	26	02	06	157	1969	691	024	0067	01		9			X3				0024

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	527	139	000		5	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^7	$\frac{1}{2}\Delta O$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	CR—A 000—
		STD	0000	0503	3340	2643	0018079	0000	14690	701						
157		OBS	0000	0503	33404	2643			14690	701	099		011	021	004	033
		STD	0010	0503	3341	2643	0016063	0016	14692	699						
157		OBS	0010	0503	33407	2643			14692	699	096		000	022	010	030
		STD	0020	0505	3341	2643	0016102	0032	14694	724						
157		OBS	0020	0505	33406	2643			14694	724	101		000	016	008	029
		STD	0030	0505	3341	2643	0016112	0046	14696	699						
157		OBS	0030	0505	33406	2643			14696	699	091		000	028	021	029
157		OBS	0040	0506	33405	2643			14698	699	094		002	035	019	028
		STD	0050	0506	3340	2643	0016166	0081	14700	700						
157		OBS	0051	0506	33403	2643			14700	700	096		002	017	023	032
		STD	0075	0507	3341	2643	0016167	0121	14704	701						
157		OBS	0076	0507	33405	2643			14704	701	096		000	020	014	032

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP.	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	42190		066300W		151	26	02	06	189	1969	691	025	0250	02		2			X7		4	0029

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		27	S15	149	-011		9	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY ΔA	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QUAL CODE
		STD	0000	0485	3326	2633	0016989	0000	14681	691							
189		OBS	0000	0485	33257	2633			14681	691	073		002	011	006	034	
189		OBS	0009	0484	33252	2633			14682	686	078		000	019	013	029	
		STD	0010	0484	3325	2633	0017025	0017	14682	686							
189		OBS	0018	0486	33252	2633			14684	687	082		000	015	009	035	
		STD	0020	0487	3326	2633	0017035	0034	14685	687							
189		OBS	0026	0490	33273	2634			14687	686	092		000	029	014	032	
		STD	0030	0494	3329	2635	0016882	0051	14690	686							
189		OBS	0035	0498	33307	2636			14692	685	072		000	008	012	020	
189		OBS	0045	0505	33344	2638			14697	683	093		002	021	010	029	
		STD	0050	0510	3336	2638	0016560	0084	14700	681							
189		OBS	0068	0522	33395	2640			14709	676	094		002	018	007	020	
		STD	0075	0523	3340	2641	0016389	0125	14711	676							
189		OBS	0093	0527						674	093		000	020	007	007	
		STD	0100	0528	3343	2642	0016262	0166	14717	673							
		STD	0125	0533	3346	2644	0016146	0206	14724	670							
189		OBS	T0139	0536	33473	2645			14727	668	097		002	036	006		
		STD	0150	0549	3356	2650	0015564	0246	14736	654							
		STD	0200	0658	3424	2689	0011957	0315	14797	533							
189		OBS	0224	0741	34712	2715			14839	441	117		000	021	008		

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP.	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	42300		066300W		151	26	02	06	211	1969	691	026	0252	01		3			X7			0026

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S15	152	-017		5	08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QUAL CODE
		STD	0000	0324	3230	2573	0022705	0000	14600	710							
211		OBS	0000	0324	32297	2573			14600	710	076		002	010	003	028	
		STD	0010	0323	3229	2573	0022718	0022	14601	710							
211		OBS	0011	0323	32294	2573			14601	710	072		002	011	001	033	
		STD	0020	0326	3229	2573	0022753	0045	14604	710							
211		OBS	0021	0326	32294	2573			14604	710	078		004	011	004	028	
		STD	0030	0329	3229	2573	0022782	0068	14607	710							
211		OBS	0032	0330	32295	2573			14608	710	075		019	015	004	029	
211		OBS	0042	0449	32845	2605			14667	685	086		017	011	006	028	
		STD	0050	0505	3313	2621	0018233	0109	14695	659							
211		OBS	0053	0522	33210	2626			14704	651	082		000	011	002	016	
		STD	0075	0560	3338	2635	0016974	0159	14725	642							
211		OBS	0081	0571	33425	2637			14731	638	083		000	011	003	009	
		STD	0100	0610	3356	2643	0016236	0194	14752	620							
211		OBS	0108	0628	33619	2645			14761	610	091		000	017	005	008	

REFERENCE CTRY CODE	REFERENCE ID NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUADRANT	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP.	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43000		066300W		151	36	02	07	023	1969	691	027	0132	01		3			X7			0027

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		27	S15	159	-011		5	08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QUAL CODE
		STD	0000	0248	3178	2538	0026016	0000	14560	729							
023		OBS	0000	0248	31780	2538			14560	729	077		000	008	007	019	
		STD	0010	0245	3178	2539	0025998	0026	14560	730							
023		OBS	0011	0245	31780	2539			14560	730	080		000	010	006	022	
		STD	0020	0249	3178	2538	0026009	0052	14563	736							
023		OBS	0021	0249	31782	2538			14564	737	080		000	009	006	020	
		STD	0030	0250	3180	2539	0025922	0078	14566	731							
023		OBS	0033	0256	31799	2539			14569	727	083		004	018	006	020	
023		OBS	0043	0294	31919	2546			14589	710	083		000	008	007	018	
		STD	0050	0308	3198	2549	0024982	0129	14597	704							
023		OBS	0054	0325	32052	2554			14606	696	085		000	009	006	014	
		STD	0075	0563	3311	2613	0019026	0184	14723	588							
023		OBS	0082	0618	33363	2626			14750	565	101		002	012	007	008	
		STD	0100	0701	3380	2649	0015614	0227	14792	534							
023		OBS	T0109	0712	33899	2656			14799	534	103		000	018	011	005	

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE (CTRY CODE)	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	1°	TATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
318084	A4	43300		066300W		151	36	02	07	058	1969	691	028	0098	01		2			X1		6		0028

WATER COLOR CODE	TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		31	512	152	-017		6	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	SCC
		STD	0000	0314	32.01	25.51	0.0024824	0000	1459.1	7.22							
058		08S	0000	0314	32.005	25.51			1459.1	7.22	0.82		000	017	006	022	
		STD	0010	0310	32.00	25.51	0.0024810	0025	1459.1	7.19							
058		08S	0010	0310	32.003	25.51			1459.1	7.19	0.81		006	008	006	022	
		STD	0020	0317	32.01	25.51	0.0024826	0050	1459.6	7.19							
058		08S	0020	0317	32.009	25.51			1459.6	7.19	0.81		000	008	006	020	
		STD	0030	0325	32.04	25.52	0.0024700	0074	1460.2	7.21							
058		08S	0030	0325	32.035	25.52			1460.2	7.21	0.81		000	008	006	023	
058		08S	0041	0343	32.075	25.54			1461.2	7.08	0.83		000	011	006	023	
		STD	0050	0345	32.09	25.55	0.0024463	0124	1461.4	7.11							
058		08S	0051	0345	32.092	25.55			1461.4	7.11	0.74		000	009	006	018	
		STD	0075	0357	32.13	25.57	0.0024295	0185	1462.4	7.02							
058		08S	0076	0358	32.129	25.57			1462.5	7.01	0.85		000	019	006	015	

REFERENCE (CTRY CODE)	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	1°	TATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
318084	A4	44000		066300W		151	46	02	07	095	1969	691	029	0090	01		2			X2				0029

WATER COLOR CODE	TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		36	510	159	-044			07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	SCC
		STD	0000	0370	32.27	25.67	0.0023286	0000	1461.9	7.05							
095		08S	0000	0370	32.272	25.67			1461.9	7.05	0.83		013	010	006	023	
		STD	0010	0368	32.26	25.66	0.0023379	0023	1462.0	7.04							
095		08S	0010	0368	32.258	25.66			1462.0	7.04	0.86		000	009	006	021	
		STD	0020	0372	32.27	25.67	0.0023345	0047	1462.3	7.05							
095		08S	0020	0372	32.268	25.67			1462.3	7.05	1.03		000	008	005	022	
		STD	0030	0378	32.28	25.67	0.0023333	0070	1462.7	7.05							
095		08S	0031	0378	32.278	25.67			1462.8	7.05	0.77		000	014	012	022	
095		08S	0042	0375	32.278	25.67			1462.8	7.02	0.77		006	023	016	018	
		STD	0050	0374	32.28	25.67	0.0023291	0117	1462.9	7.01							
095		08S	0052	0374	32.281	25.67			1462.9	7.01*	0.80		000	012	016	016	
		STD	0075	0375	32.28	25.67	0.0023297	0175	1463.4	7.03							
095		08S	0076	0375	32.282	25.67			1463.4	7.03	0.79		000	013	014	025	

REFERENCE (CTRY CODE)	ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	1°	TATION TIME (GMT) MO	DAY	HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR	HGT	PER	SEA	WEATHER CODE	CLOUD CODES TYPE	AMT		NODC STATION NUMBER
318084	A4	44300		066300W		151	46	02	07	135	1969	691	030	0165	02		2			X1				0030

WATER COLOR CODE	TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	512	173	-072		7	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	SCC
		STD	0000	0390	32.69	25.99	0.0020295	0000	1463.3	6.98							
135		08S	0000	0390	32.693	25.99			1463.3	6.98	0.63		002	011	009	024	
		STD	0010	0395	32.70	25.99	0.0020283	0020	1463.7	6.99							
135		08S	0010	0395	32.702	25.99			1463.7	6.99	0.61		000	008	006	020	
		STD	0020	0388	32.70	25.99	0.0020271	0040	1463.6	6.92							
135		08S	0020	0388	32.696	25.99			1463.6	6.92	0.65		000	010	007	022	
		STD	0030	0390	32.69	25.99	0.0020314	0060	1463.8	6.98							
135		08S	0030	0390	32.693	25.99			1463.8	6.98	0.68		002	014	009	026	
135		08S	0040	0390	32.690	25.98			1464.0	6.95	0.69		002	007	005	026	
		STD	0050	0400	32.73	26.01	0.0020147	0101	1464.6	6.91							
135		08S	0050	0400	32.730	26.01			1464.6	6.91	0.70		000	010	010	022	
		STD	0075	0493	32.93	26.08	0.0019519	0150	1468.8	6.68							
135		08S	0076	0485	32.932	26.08			1468.9	6.63	0.63		000	008	009	018	
		STD	0100	0498	32.97	26.10	0.0019337	0199	1469.9	6.69							
135		08S	T0100	0498	32.975	26.10			1469.9	6.69	0.70		000	011	014	014	
		STD	0125	0500	33.01	26.12	0.0019153	0247	1470.4	6.68							
		STD	0150	0502	33.02	26.13	0.0019068	0295	1470.9	6.65							
135		08S	T0153	0502	33.024	26.13			1471.0	6.64	0.76		002	015	009		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUART SQUARE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
316084		A4	44270	067300W		151	47	02	07	186	1969	691	031	0082	01					X1				0031

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		29	505	176	-017		7	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	DUP
		STD	0000	0341	3274	2607	0019512	0000	14613								
186		OBS	0000	0341	32738	2607			14613	7120	069		032	006	008	030	
		STD	0010	0339	3274	2607	0019493	0020	14614	706							
186		OBS	0010	0339	32739	2607			14614	706	074		000	008	008	032	
		STD	0020	0342	3274	2607	0019547	0039	14617	714							
186		OBS	0020	0342	32736	2607			14617	714	077		000	008	010	025	
		STD	0030	0341	3274	2607	0019513	0059	14618	711							
186		OBS	0030	0341	32740	2607			14618	711	075		008	011	011	019	
186		OBS	0040	0336	32730	2607			14617	709	085		000	013	011	021	
		STD	0050	0335	3273	2607	0019518	0098	14619	706							
186		OBS	0051	0335	32733	2607			14619	706	075		000	013	009	016	
		STD	0075	0337	3273	2607	0019570	0146	14624	706							
186		OBS	0076	0337	32731	2607			14624	706	088		000	012	014	021	

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUART SQUARE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
316084		A4	44000	067310W		151	47	02	07	217	1969	691	032	0220	02		1			X1				0032

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	508	190	-028			10	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	DUP
		STD	0000	0383	3241	2576	0022397	0000	14626	720							
217		OBS	0000	0383	32406	2576			14626	720	077		000	008	009	025	
217		OBS	0009	0384	32405	2576			14628	727	063		000	004	007	034	
		STD	0010	0284	3241	2576	0022421	0022	14629	721							
217		OBS	0018	0387	32408	2576			14631	691	062		000	006	006	026	
		STD	0020	0401	3252	2584	0021712	0044	14639	692							
217		OBS	0027	0436	32788	2602			14658	693	076		002	019	011	031	
		STD	0030	0443	3281	2603	0019929	0065	14662	693							
217		OBS	0036	0454	32853	2605			14668	690	060		000	004	007	026	
217		OBS	0046	0466	32904	2608			14676	678	064		000	005	007	021	
		STD	0050	0467	3291	2608	0019468	0104	14677	678							
		STD	0075	0470	3293	2609	0019345	0153	14682	678							
217		OBS	0092	0472	32947	2610			14686	678	068		002	009	004	022	
		STD	0100	0412	3313	2620	0018364	0200	14707	673							
		STD	0125	0620	3361	2645	0016054	0243	14761	642							
217		OBS	T0136	0659	33781	2654			14781	622	086		002	013	009		
		STD	0150	0701	3397	2663	0014444	0281	14802	591							
217		OBS	T0179	0761	34235	2675			14834	506	108		000	024	013		

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	QUART SQUARE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
316084		A4	43300	067300W		151	37	02	08	013	1969	691	033	0201	01		2			X0				0033

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	507	200	-017		7	09	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\frac{1}{2}\Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	DUP
		STD	0000	0286	3206	2558	0024168	0000	14580	716							
013		OBS	0000	0286	32062	2558			14580	716	076		000	008	011	032	
013		OBS	0009	0281	32054	2558			14579	720	063		000	005	008	034	
		STD	0010	0282	3205	2558	0024200	0024	14580	720							
013		OBS	0018	0285	32053	2557			14583	722	077		008	010	010	028	
		STD	0020	0285	3205	2557	0024237	0048	14583	721							
013		OBS	0028	0287	32052	2557			14585	718	074		002	009	010	032	
		STD	0030	0292	3206	2557	0024240	0073	14588	718							
013		OBS	0037	0355	32277	2569			14619	695	080		004	016	012	028	
013		OBS	0047	0569	33157	2616			14722	597	092		000	014	014	010	
		STD	0050	0577	3320	2618	0018486	0115	14726	597							
013		OBS	0071	0633	33501	2635			14756	586	091		000	014	011	011	
		STD	0075	0647	3356	2638	0016673	0159	14763	579							
013		OBS	T0095	0704	33848	2653			14793	544	100		000	018	008	008	
		STD	0100	0715	3391	2656	0014981	0199	14798	536							
		STD	0125	0751	3418	2672	0013503	0234	14820	495							
013		OBS	T0143	0757	34316	2682			14827	467	121		000	033	014		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE RECORD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	42590	067295W		151	27	02	12	016	1969	691	034		0230	02		3			X0			0034

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		32	S15	091	011		7	10	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	DUP. RECORD
		STD	0000	0413	3284	2608	0019407	0000	14645	715							
016		OBS	0000	0413	32840	2608			14645	715	074		008	014	011	037	
		STD	0010	0410	3284	2608	0019378	0019	14645	720							
016		OBS	0010	0410	32841	2608			14645	720	078		006	019	011	031	
		STD	0020	0416	3330	2644	0015991	0037	14656	718							
016		OBS	0020	0416	33299	2644			14656	718	076		002	013	009	026	
		STD	0030	0535	3353	2649	0015510	0052	14710	656							
016		OBS	0030	0535	33531	2649			14710	656	087		002	017	008	015	
016		OBS	0040	0591	33704	2656			14737	622	085		002	014	012	012	
		STD	0050	0628	3408	2681	0012515	0080	14758	599							
016		OBS	0051	0632	34110	2683			14760	597	087		000	014	006	009	
		STD	0075	0723	3425	2682	0012492	0112	14802	544							
016		OBS	0076	0725	34266	2683			14803	542	106		000	029	004	004	
		STD	0100	0749	3474	2716	0009298	0139	14823	515							
016		OBS	0102	0751	34765	2718			14824	513	112		000	017	012	002	
		STD	0125	0774	3481	2719	0009121	0162	14837	478							
		STD	0150	0789	3485	2719	0009134	0185	14848	453							
016		OBS	T0151	0789	34848	2719			14848	452	128		000	026	019		
		STD	0200	0783	3485	2720	0009139	0230	14854	443							
016		OBS	T0202	0782	34846	2720			14853	443	117		000	020	010		

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE RECORD	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	42300	067300W		151	27	02	12	051	1969	691	035		0283	03		2			X0	0	3	0035

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
OT	S0	22	S08	091	028		7	18	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	DUP. RECORD
		STD	0000	0453	3311	2625	0017800	0000	14665	694							
051		OBS	0000	0453	33105	2625			14665	694	087		000	021	014	037	
		STD	0010	0460	3312	2626	0017745	0018	14670	694							
		OBS	0010	0460	33123	2626			14670	694	088		000	017	010	035	
		STD	0020	0468	3316	2628	0017535	0035	14676	688							
004		OBS	0020	0468	33163	2628			14676	688	086		004	019	015	036	
		STD	0030	0470	3317	2628	0017490	0053	14678	689							
		OBS	0030	0470	33173	2628			14678	689	078		000	011	009	032	
		OBS	0040	0472	33176	2628			14681								
		OBS	0044	0473	33178	2628			14682								
		STD	0050	0530	3341	2640	0016415	0087	14709	654							
		OBS	0050	0530	33405	2640			14709	654	072		011	011	007	022	
		OBS	0052	0561	33499	2644			14724								
		OBS	0059	0600	33663	2652			14743								
		STD	0075	0636	3379	2658	0014796	0126	14762	504							
		OBS	0075	0636	33793	2658			14762	504	107		000	022	011	009	
		OBS	0080	0689	34023	2669			14786								
		STD	0100	0755	3436	2686	0012157	0160	14820	502							
		OBS	0100	0755	34363	2686			14820	502	094		000	024	009	002	
		STD	0125	0772	3455	2698	0011027	0189	14833	483							
		OBS	0125	0772	34553	2698			14833								
		STD	0150	0778	3469	2709	0010116	0215	14841	447							
		OBS	0150	0778	34693	2709			14841	447	116		000	041	010		
		STD	0200	0725	3496	2737	0007466	0259	14833								
		OBS	0200	0725	34961	2737			14833								
		OBS	0230	0646	34883	2742			14805								
		STD	0250	0637	3498	2751	0006209	0293	14806								
		OBS	0250	0637	34981	2751			14806								
		OBS	0275	0634	34985	2752			14809								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE BLOCK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084		A4	42150	06730DW		151	27	02	12	085	1969	691	036	0272	03		2			X0	0	3		0036

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	22	508	085	033		7	26	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN. M. x 10⁵	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	
		STD	0000	0482	3336	2642	0016190	0000	14681	683							
085		OBS	0000	0482	33359	2642			14681	683	081		004	015	009	035	
		STD	0010	0484	3337	2642	0016160	0016	14683	685							
		OBS	0010	0484	33367	2642			14683	685	097		000	022	011	030	
		STD	0020	0488	3338	2643	0016092	0032	14687	683							
005		OBS	0020	0488	33383	2643			14687	683	102		000	026	009	033	
		STD	0030	0490	3340	2644	0016011	0048	14690	681							
		OBS	0030	0490	33398	2644			14690	681	104		008	023	014	026	
		OBS	0040	0492	33401	2644			14692								
		STD	0050	0492	3341	2645	0015962	0080	14694	683							
		OBS	0050	0492	33410	2645			14694	683	093		000	017	015	031	
		STD	0075	0494	3341	2645	0015978	0120	14699	684							
		OBS	0075	0494	33414	2645			14699	684	101		000	027	010	027	
		OBS	0088	0494	33424	2646			14701								
		OBS	0091	0508	33493	2649			14708								
		STD	0100	0518	3351	2650	0015555	0160	14714	637							
		OBS	0100	0518	33509	2650			14714								
		STD	0125	0553	3364	2656	0015031	0198	14734	596							
		OBS	0125	0553	33636	2656			14734								
		OBS	0140	0590	33752	2660			14753								
		OBS	0145	0670	34003	2670			14789								
		OBS	0147	0643	33963	2670			14778								
		STD	0150	0646	3400	2673	0013459	0234	14781	561							
		OBS	0150	0646	34003	2673			14781	561	132		000	026	014		
		OBS	0160	0678	34132	2679			14797								
		OBS	0164	0679	34136	2680			14798								
		OBS	0167	0721	34303	2686			14817								
		OBS	0171	0711	34295	2687			14814								
		OBS	0193	0769	34649	2706			14844								
		OBS	0198	0761	34668	2709			14842								
		STD	0200	0778	3470	2709	0010129	0292	14850	509							
		OBS	0200	0778	34703	2709			14850								
		OBS	0230	0720	34853	2730			14834								
		STD	0250	0712	3487	2732	0008014	0338	14835	480							
		OBS	0250	0712	34874	2732			14835	480	133		000	029	015		
		OBS	0262	0704	34887	2734			14834								
		OBS	0268	0686	34917	2739			14826								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE BLOCK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084		A4	42000	067300W		151	27	02	12	146	1969	691	037	0036	00		2			X7	0	3		0037

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	22	510	091	033		6	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN. M. x 10⁵	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	
		STD	0000	0477	3336	2643	0016122	0000	14679	690							
146		OBS	0000	0477	33361	2643			14679	690	074		000	011	006	045	
		STD	0010	0477	3336	2643	0016124	0016	14680	704							
		OBS	0010	0477	33362	2643			14680	704	088		000	011	007	044	
		STD	0020	0477	3336	2643	0016126	0032	14682	688							
004		OBS	0020	0477	33363	2643			14682	688	102		008	024	010	047	
		STD	0030	0477	3336	2643	0016136	0048	14684	690							
		OBS	0030	0477	33363	2643			14684	690	099		002	013	009	045	
		OBS	0040	0477	33363	2643			14685								
		OBS	0041	0477	33363	2643			14686								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE BLOCK	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084		A4	41300	067300W		151	17	02	12	175	1969	691	038	0037	00					X7	0	3		0038

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50	00	500	075	022		5	05	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁸	ΔD DYN. M. x 10⁵	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	OIL—A	
		STD	0000	0402	3320	2638	0016569	0000	14645	707							
175		OBS	0000	0402	33202	2638			14645	707	069		002	010	004	057	
		STD	0010	0402	3320	2638	0016569	0017	14647	715							
		OBS	0010	0402	33203	2638			14647								
		STD	0020	0402	3321	2638	0016554	0033	14649	717							
004		OBS	0020	0402	33206	2638			14649	717	076		011	011	004	057	
		STD	0030	0402	3321	2638	0016554	0050	14650	712							
		OBS	0030	0402	33207	2638			14650	712	077		002	017	003	054	
		OBS	0036	0402	33207	2638			14651								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH SOURCE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'G	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP.	CLOUD CODES AMT.	NODC STATION NUMBER
318084	A4	41000	067300W			151	17	02	12	219	1969	691	039	0070	01		1			X2	0	3	0039

WATER COLOR CODE	WATER TRANS. m	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	50	36	508	071	039		6	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH m	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O3 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QUAL. CODE
		STD	0000	0399	3305	2626	0017701	0000	14642	711							
219		OBS	0000	0399	33048	2626			14642	711	074		006	017	003	039	
		STD	0010	0399	3305	2626	0017693	0018	14644	712							
		OBS	0010	0399	33050	2626			14644	712	087		017	027	008	037	
		STD	0020	0398	3305	2626	0017668	0035	14645	714							
003		OBS	0020	0398	33053	2626			14645	714	069		008	013	004	033	
		STD	0030	0398	3305	2626	0017668	0053	14646	714							
		OBS	0030	0398	33054	2626			14646	714	082		008	013	004	043	
		OBS	0040	0397	33056	2627			14648	716	093		013	009		040	
		STD	0050	0397	3306	2627	0017643	0086	14649	726							
		OBS	0050	0397	33058	2627			14649	726	082		015	028	007	041	
		OBS	0060	0397	33058	2627			14651								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DEPTH SOURCE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'G	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP.	CLOUD CODES AMT.	NODC STATION NUMBER
318084	A4	40300	06730 W			151	07	02	13	026	1969	691	040	0137	01		1			X4	0	3	0040

WATER COLOR CODE	WATER TRANS. m	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	50			091	044		6	14	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH m	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O3 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QUAL. CODE
		STD	0000	0588	3339	2632	0017149	0000	14725	674							
026		OBS	0000	0588	33388	2632			14725	674	076		008	024	006	035	
		STD	0010	0590	3339	2632	0017147	0017	14727	678							
		OBS	0010	0590	33393	2632			14727	678	076		015	017	008	035	
		STD	0020	0597	3341	2632	0017137	0034	14732	672							
008		OBS	0020	0597	33407	2632			14732	672	077		008	016	005	032	
		STD	0030	0607	3343	2633	0017073	0051	14738	670							
		OBS	0030	0607	33433	2633			14738	670	075		008	012	006	030	
		OBS	0040	0683	33657	2640			14774	652	077		013	018	006	027	
		STD	0030	0987	3445	2657	0014897	0083	14900	443							
		OBS	0050	0987	34451	2657			14900	443	071		000	013	007	005	
		OBS	0058	1016	34661	2660			14915								
		OBS	0060	1069	34813	2670			14936								
		OBS	0062	1071	34833	2672			14937								
		STD	0075	1165	3519	2682	0012562	0118	14977	479							
		OBS	0075	1165	35108	2682			14977	479	069		000	015	004	004	
		OBS	0077	1172	35227	2684			14980								
		OBS	0092	1177	35273	2686			14983								
		STD	0100	1173	3530	2689	0011924	0140	14986	434							
		OBS	0100	1173	35303	2689			14986	434	091		002	012	007	005	
		STD	0123	1170	3532	2691	0011844	0178	14989								
		OBS	0123	1170	35315	2691			14989								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR. 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318	064	A4	40150	067300W		151	07	02	13	047	1969	691	041	1646	15		0			X4	0	3		0041

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbar)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	22	S01	098	056		6	47	

MESSENGR TIME NR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10⁷	Σ Δ D DYN. M. x 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₂-N µg-at/l	NO₃-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	
		STD	0000	0766	3401	2657	0014770	0000	14803	632							
047		OBS	0000	0766	34010	2657			14803	632	071		006	009	006	034	
		OBS	0003	0766	34013	2657			14804								
013		OBS	0004	0792	34061	2657			14815								
		OBS	0005	0774	34064	2660			14808								
		OBS	0007	0798	34113	2660			14816								
		OBS	0009	0780	34081	2660			14811								
		STD	0010	0811	3416	2661	0014338	0015	14824	629							
		OBS	0010	0811	34155	2661			14824	629	064		004	011	006		
		OBS	0014	0928	34488	2669			14873								
		STD	0020	0922	3449	2670	0013542	0028	14872	591							
		OBS	0020	0922	34487	2670			14872	591	068		011	013	005	033	
		STD	0030	0932	3451	2671	0013517	0042	14878	596							
		OBS	0030	0932	34514	2671			14878	596	058		011	014	006	028	
		OBS	0040	0938	34532	2671			14882								
		STD	0050	0941	3454	2671	0013513	0069	14885	590							
		OBS	0050	0941	34539	2671			14885	590	069		006	011	007	032	
		OBS	0060	0943	34548	2671			14887								
		OBS	0065	0967	34643	2675			14898								
		OBS	0070	1054	34838	2675			14933								
		STD	0075	1038	3480	2675	0013205	0102	14927	580							
		OBS	0075	1038	34801	2675			14927	580	066		011	010	004	022	
		OBS	0082	1058	34867	2677			14937								
		OBS	0095	1150	35161	2683			14975								
		OBS	0096	1170	35222	2684			14983								
		STD	0100	1184	3526	2684	0012462	0135	14989	546							
		OBS	0100	1184	35257	2684			14989								
		OBS	0116	1217	35340	2684			15004								
		STD	0125	1209	3532	2684	0012522	0166	15002	514							
		OBS	0125	1209	35320	2684			15002								
		OBS	0134	1183	35263	2684			14994								
		OBS	0146	1191	35295	2685			14999								
		STD	0150	1213	3537	2687	0012316	0197	15008	485							
		OBS	0150	1213	35367	2687			15008	485	087		002	013	008		
		OBS	0172	1222	35439	2691			15016								
		OBS	0184	1220	35461	2693			15018								
		STD	0200	1162	3545	2703	0010917	0255	15000	436							
		OBS	0200	1162	35447	2703			15000								
		OBS	0205	1133	35395	2704			14990								
		OBS	0210	1132	35398	2704			14990								
		STD	0250	0986	3523	2718	0009540	0306	14943	398							
		OBS	0250	0986	35233	2718			14943	398	142		000	027	014		
		STD	0300	0845	3509	2730	0008422	0351	14897								
		OBS	0300	0845	35093	2730			14897								
		OBS	0333	0744	35016	2739			14863								
		OBS	0365	0719	35023	2743			14858								
		STD	0400	0643	3496	2748	0006705	0427	14833								
		OBS	0400	0643	34955	2748			14833								
		STD	0500	0535	3496	2762	0005387	0487	14806								
		OBS	0500	0535	34962	2762			14806								
		OBS	0555	0496	34963	2767			14799								
		STD	0600	0492	3496	2767	0005004	0539	14805								
		OBS	0600	0492	34958	2767			14805								
		STD	0700	0463	3496	2771	0004761	0588	14810								
		OBS	0700	0463	34958	2771			14810								
		STD	0800	0447	3496	2773	0004636	0635	14820								
		OBS	0800	0447	34963	2773			14820								
		STD	0900	0439	3497	2774	0004582	0681	14833								
		OBS	0900	0439	34971	2774			14833								
		STD	1000	0424	3496	2775	0004555	0727	14844								
		OBS	1000	0424	34963	2775			14844								
		STD	1100	0411	3496	2776	0004512	0772	14855								
		OBS	1100	0411	34960	2776			14855								
		STD	1200	0407	3496	2777	0004548	0817	14870								
		OBS	1200	0407	34961	2777			14870								
		STD	1300	0398	3496	2778	0004526	0863	14883								
		OBS	1300	0398	34961	2778			14883								
		STD	1400	0389	3496	2779	0004507	0908	14896								
		OBS	1400	0389	34960	2779			14896								
		STD	1500	0386	3496	2779	0004542	0953	14911								
		OBS	1500	0386	34962	2779			14911								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'G	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318	084	A4	40000	067500W		131	07	02	13	073	1969	691	042	2200	15		0			80	0	9	0042

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	50			091	056		7	38	

MESSENGR TIME OF CAST HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^{-8}	DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	QUAL.
		STD	0000	0800	3415	2663	0014210	0000	14818	627						
073		OBS	0000	0800	34150	2663			14818	627	077		011	011	006	024
		OBS	0006	0800	34154	2663			14819							
		STD	0010	0882	3440	2670	0013560	0013	14854	615						
015		OBS	0010	0682	34400	2670			14854	615	069		008	015	008	027
		OBS	0014	0939	34515	2670			14878							
		STD	0020	0947	3454	2670	0013554	0027	14882	610						
		OBS	0020	0947	34538	2670			14882	610	068		006	009	006	026
		STD	0030	0962	3459	2671	0013458	0040	14890	570						
		OBS	0030	0962	34586	2671			14890	570	065		011	008	005	029
		OBS	0040	0977	34626	2672			14897							
		OBS	0044	0969	34613	2672			14895							
		OBS	0047	1023	34799	2677			14917							
		STD	0050	1032	3481	2677	0013010	0067	14921	567						
		OBS	0050	1032	34807	2677			14921	567	068		006	012	007	017
		OBS	0052	1072	34899	2677			14937							
		OBS	0059	1079	34918	2677			14941							
		OBS	0065	1150	35132	2680			14970							
		STD	0075	1159	3515	2681	0012704	0099	14975	562						
		OBS	0075	1159	35155	2681			14975	562	061		002	013	004	813
		STD	0100	1170	3520	2682	0012642	0131	14983	561						
		OBS	0100	1170	35199	2682			14983	561	058		006	015	004	013
		STD	0125	1188	3529	2686	0012356	0162	14995	507						
		OBS	0125	1188	35291	2686			14995							
		OBS	0138	1211	35378	2688			15006							
		STD	0150	1214	3539	2689	0012129	0193	15009	401						
		OBS	0150	1214	35395	2689			15009	401	103		000	017	011	
		STD	0200	1187	3547	2700	0011193	0251	15009							
		OBS	0200	1187	35473	2700			15009							
		OBS	0232	1041	35153	2702			14959							
		OBS	0242	1029	35272	2713			14958							
		OBS	0244	1003	35219	2714			14948							
		STD	0250	0992	3522	2716	0009713	0303	14945							
		OBS	0250	0992	35223	2716			14945							
		STD	0300	0858	3510	2728	0008580	0349	14902							
		OBS	0300	0858	35099	2728			14902							
		OBS	0350	0778	35022	2734			14879							
		OBS	0359	0720	34994	2741			14857							
		STD	0400	0660	3497	2747	0006806	0426	14840							
		OBS	0400	0660	34973	2747			14840							
		STD	0500	0575	3495	2757	0005965	0490	14822							
		OBS	0500	0575	34953	2757			14822							
		STD	0600	0517	3495	2764	0005356	0546	14815							
		OBS	0600	0517	34952	2764			14815							
		STD	0700	0474	3496	2769	0004915	0598	14814							
		OBS	0700	0474	34956	2769			14814							
		STD	0800	0455	3496	2772	0004749	0646	14823							
		OBS	0800	0455	34961	2772			14823							
		STD	0900	0438	3496	2774	0004649	0693	14833							
		OBS	0900	0438	34960	2774			14833							
		STD	1000	0421	3497	2776	0004480	0739	14842							
		OBS	1000	0421	34968	2776			14842							
		STD	1100	0410	3496	2777	0004477	0783	14854							
		OBS	1100	0410	34963	2777			14854							
		STD	1200	0402	3496	2777	0004504	0828	14868							
		OBS	1200	0402	34958	2777			14868							
		STD	1300	0394	3496	2778	0004509	0873	14881							
		OBS	1300	0394	34956	2778			14881							
		STD	1400	0387	3495	2778	0004522	0919	14895							
		OBS	1400	0387	34954	2778			14895							
		STD	1500	0380	3493	2779	0004514	0964	14909							
		OBS	1500	0380	34955	2779			14909							

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT BUOY	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	39300	047300W		115	97	02	13	112	1969	691	043	3720	11						0	3	0043

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbar)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	50							30	

MESSENGR TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	NOTE
		STD	0000	0770	3401	2656	0014810	0000	14805								
112		OBS	0000	0770	34012	2656			14805	6400	085		006	011	004	037	
		STD	0010	0787	3405	2657	0014772	0015	14814								
		OBS	0010	0787	34051	2657			14814	5860	074		006	009	005	043	
012		OBS	0018	0853	34309	2667			14843								
		STD	0020	0916	3444	2667	0013812	0029	14869								
		OBS	0020	0916	34438	2667			14869	6140	058		006	014	005	038	
		STD	0030	1012	3472	2673	0013287	0043	14910	593							
		OBS	0030	1012	34718	2673			14910	593	066		006	015	003	035	
		OBS	0034	1035	34772	2673			14919								
		OBS	0040	1036	34775	2673			14921								
		STD	0050	1059	3484	2674	0013214	0069	14931	571							
		OBS	0050	1059	34840	2674			14931	571	061		011	018	006	039	
		STD	0075	1157	3512	2679	0012889	0102	14974	556							
		OBS	0075	1157	35124	2679			14974	556	061		008	014	007	026	
		OBS	0078	1203	35238	2679			14992								
		STD	0100	1253	3538	2680	0012840	0134	15014	546							
		OBS	0100	1253	35380	2680			15014	546	054		006	017	001	003	
		STD	0125	1280	3546	2681	0012834	0166	15028	494							
		OBS	0125	1280	35460	2681			15028								
		OBS	0131	1319	35565	2681			15044								
		OBS	0136	1290	35533	2684			15034								
		STD	0150	1267	3552	2688	0012249	0197	15029	442							
		OBS	0150	1267	35515	2688			15029	442	083		002	015	006		
		OBS	0166	1260	35543	2691			15029								
		OBS	0188	1186	35460	2699			15006								
		STD	0200	1169	3545	2702	0011001	0255	15002	341							
		OBS	0200	1169	35453	2702			15002	341	122		008	033	007		
		OBS	0238	1007	35253	2716			14949								
		STD	0250	0999	3525	2717	0009639	0307	14948								
		OBS	0250	0999	35249	2717			14948								
		STD	0300	0879	3511	2726	0008838	0353	14910								
		OBS	0300	0879	35108	2726			14910								
		OBS	0310	0830	35080	2731			14893								
		STD	0400	0672	3500	2748	0006766	0431	14845								
		OBS	0400	0672	35000	2748			14845								
		STD	0500	0573	3496	2758	0005863	0494	14822								
		OBS	0500	0573	34963	2758			14822								
		STD	0600	0494	3497	2768	0004969	0549	14806								
		OBS	0600	0494	34966	2768			14806								
		STD	0700	0466	3496	2771	0004761	0597	14811								
		OBS	0700	0466	34963	2771			14811								
		STD	0800	0449	3497	2773	0004586	0644	14821								
		OBS	0800	0449	34973	2773			14821								
		STD	0900	0433	3497	2775	0004500	0689	14831								
		OBS	0900	0433	34972	2775			14831								
		STD	1000	0419	3496	2776	0004486	0734	14841								
		OBS	1000	0419	34964	2776			14841								
		OBS	1087	0407	34963	2777			14851								

REFERENCE CTRY CODE	REFERENCE IO. NO.	SHIP CODE	LATITUDE ° '/10	LONGITUDE ° '/10	DRIFT BUOY	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	39000	068300W		115	98	02	22	136	1969	691	044	3292	02		8				x2			0044

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BARO-METER (mbar)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		02	S30	227	089		6	11	

MESSENGR TIME HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-10^8	$\Sigma\Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	NOTE
		STD	0000	1219	3546	2693	0011340	0000	14987	555							
136		OBS	0000	1219	35462	2693			14987	555	064		013	022	009	028	
		STD	0010	1216	3546	2693	0011340	0011	14988	552							
136		OBS	0010	1216	35458	2693			14988	552	056		008	013	010	028	
136		OBS	0019	1217	35457	2693			14989	556	060		015	014	011	030	
		STD	0020	1218	3546	2693	0011383	0023	14990	555							
136		OBS	0029	1224	35470	2693			14994	550	057		008	010	005	033	
		STD	0030	1225	3547	2693	0011452	0034	14994	549							
136		OBS	0038	1235	35493	2692			14999	543	060		013	013	009	023	
136		OBS	0047	1262	35605	2696			15011	5410	047		015	010	010	030	
		STD	0050	1266	3561	2695	0011265	0057	15013	543							
136		OBS	0071	1286	35656	2695			15024	544	060		008	019	006	019	
		STD	0075	1288	3567	2695	0011313	0085	15025	545							
136		OBS	T0095	1290	35691	2697			15030	546	060		019	017	009	022	
		STD	0100	1289	3569	2697	0011254	0113	15030	541							
		STD	0125	1271	3565	2697	0011270	0141	15028	519							
136		OBS	T0142	1247	35613	2699			15022	503	073		017	019	012		
		STD	0150	1230	3558	2700	0011072	0169	15017	469							
136		OBS	T0189	1134	35433	2707			14988	353	103		004	024	011		
		STD	0200	1103	3539	2709	0010277	0223	14979	335							
136		OBS	0237	0985	35251	2719			14940	323	118		008	019	014		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° '1/10	DRIFT BUCKET	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	39300	068300W		115	98	02	22	183	1969	691	045		3292	03		4			X2			0045

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	515	220	100		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	TOC
		STD	0000	1042	3490	2682	0012350	0000	14918	618							
183		085	0000	1042	34903	2682			14918	618	041		011	008	008	044	
		STD	0010	1040	3488	2681	0012513	0012	14919	604							
183		085	0011	1040	34878	2681			14919	603	047		013	009	006	025	
		STD	0020	1042	3488	2680	0012577	0025	14921	605							
183		085	0021	1042	34878	2680			14921	605	059		019	014	014	043	
		STD	0030	1042	3490	2682	0012470	0037	14923	603							
183		085	0032	1042	34900	2682			14923	603	055		011	013	007	035	
183		085	0043	1043	34897	2682			14925	603	052		013	012	005	034	
		STD	0050	1044	3490	2682	0012527	0062	14927	603							
183		085	0054	1044	34899	2682			14927	603	049		017	010	007	039	
		STD	0075	1051	3493	2683	0012467	0094	14934	594							
183		085	0082	1053	34941	2683			14936	591	060		017	014	007	030	
		STD	0100	1109	3503	2680	0012791	0125	14960	653							
183		085	T0109	1131	35150	26850				670	053		011	010	011	016	
		STD	0125	1144	3514	2682	0012661	0157	14977	626							
		STD	0150	1161	3523	2686	0012366	0188	14989	575							
183		085	T0169	1170	35272	2688			14995	552	048		011	009	009		
		STD	0200	1177	3530	2688	0012268	0250	15003	555							
183		085	T0223	1182	35322	2689			15009	557	052		011	013	007		
		STD	0250	1156	3535	2696	0011644	0310	15005	486							
183		085	T0263	1096	35384	2710			14990	332	115		000	136	014		

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° '1/10	DRIFT BUCKET	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	39450	068300W		115	98	02	22	205	1969	691	046		2651	03		4			X2			0046

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	516	224	078		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_3-N µg-at/l	NO_2-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	TOC
		STD	0000	1081	3505	2687	0011945	0000	14934	603							
205		085	0000	1081	35047	2687			14934	603	058		002	044	011	039	
		STD	0010	1076	3505	2687	0011883	0012	14934	605							
205		085	0010	1076	35047	2687			14934	605	044		004	038	008	031	
		STD	0020	1079	3505	2687	0011951	0024	14936	597							
205		085	0020	1079	35048	2687			14936	597	064		002	061	009	039	
		STD	0030	1079	3503	2685	0012129	0036	14938	605							
205		085	0030	1079	35027	2685			14938	605	061		000	046	004	043	
205		085	0040	1081	35046	2686			14940	604	044		000	033	004	040	
		STD	0050	1080	3504	2686	0012069	0060	14941	592							
205		085	0051	1080	35044	2686			14942	591	059		000	061	007	043	
		STD	0075	1080	3505	2687	0012097	0090	14946	598							
205		085	0077	1080	35048	2687			14946	598	060		002	047	009	039	
		STD	0100	1083	3504	2686	0012258	0121	14951	601							
205		085	T0101	1084	35041	2686			14951	601	040		002	066	006	035	
		STD	0125	1140	3521	2688	0012075	0151	14977	567							
		STD	0150	1174	3533	2691	0011869	0181	14994	521							
205		085	T0159	1160	35359	2692			14998	502	074		002	074	009		
		STD	0200	1164	3539	2698	0011365	0239	15000	381							
205		085	T0214	1146	35402	2702			14996	355	099		000	061	009		
		STD	0250	1073	3533	2710	0010309	0293	14975	339							
205		085	T0269	1018	35261	2714			14958	330	137		000	123	018		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	DEEP RECTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	40000	068300W			151	08	02	22	226	1969	691	047	2250	02		4			X2			0047

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S25	227	072		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	QUAL CODE
		STD	0000	1078						388							
226		OBS	0000	1078						388	042		000	023	004	039	
226		OBS	0009	1073						394	080		002	061	004	039	
		STD	0010	1074						391							
226		OBS	0019	1087						382	037		000	045	007	029	
		STD	0020	1096						386							
226		OBS	0028	1148						600	053		000	033	006	033	
		STD	0030	1153						392							
226		OBS	0038	1164						573	044		000	032	003	031	
226		OBS	0047	1164						578	044		000	030	007	028	
		STD	0050	1163						377							
226		OBS	0072	1161						574	059		000	042	008	020	
		STD	0075	1161						575							
226		OBS	T0098	1162						578	060		000	086	009	035	
		STD	0100	1166						577							
		STD	0125	1182						570							
226		OBS	T0144	1188						564	061		000	051	011		
		STD	0150	1186						535							
226		OBS	T0197	1173						574	113		000	087	012		
		STD	0200	1169						568							
226		OBS	0249	1057						539	133		000	121	024		

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	DEEP RECTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	40300	068300W			151	08	02	23	024	1969	691	048	0097	01		3			X2			0048

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		02	S20	240	044			07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	QUAL CODE
		STD	0000	0302	3322	2629	0017438	0000	14687	719							
024		OBS	0000	0302	33221	2629			14687	719	080		013	041	014	035	
		STD	0010	0300	3323	2629	0017389	0017	14686	715							
024		OBS	0010	0300	33226	2629			14688	715	071		011	053	014	031	
		STD	0020	0316	3327	2631	0017227	0033	14697	711							
024		OBS	0020	0316	33272	2631			14697	711	083		011	052	016	031	
		STD	0030	0358	3344	2640	0016429	0052	14718	698							
024		OBS	0030	0358	33443	2640			14718	698	066		004	026	010	033	
024		OBS	0040	0374	33493	2642			14727	692	083		015	064	013	028	
		STD	0050	0378	3354	2645	0015991	0084	14731	688							
024		OBS	0050	0378	33535	2645			14731	688	083		013	052	014	024	
		STD	0075	0645	3372	2651	0015431	0123	14764	672							
024		OBS	0075	0645	33723	2651			14764	672	082		013	045	013	030	

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′ 1/10	LONGITUDE ° ′ 1/10	DEEP RECTR	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	41000	068300W			151	18	02	23	054	1969	691	049	0049	00		2			X2	0	3	0049

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
07	S0	04	S10	234	033		7	06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CHL–A	QUAL CODE
		STD	0000	0362	3316	2638	0016352	0000	14628	746							
054		OBS	0000	0362	33155	2638			14628	746	086		011	067	014	061	
		STD	0010	0362	3316	2638	0016343	0017	14629	747							
		OBS	0010	0362	33157	2638			14629								
		STD	0020	0362	3316	2638	0016327	0033	14631	747							
004		OBS	0020	0362	33160	2638			14631	747	088		008	047	015	068	
		STD	0030	0362	3316	2639	0016311	0050	14633	747							
		OBS	0030	0362	33163	2639			14633	747	086		011	041	010	080	
		OBS	0040	0362	33165	2639			14634								
		OBS	0047	0362	33166	2639			14635								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′/10	LONGITUDE ° ′/10	QUAD NODC	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	41300	068300W		151	18	02	23	084	1969	691	050		0090	01		2			X2	0	3		0050

WATER COLOR CODE	WATER TRANS. m/1	WIND DIR.	WIND SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	04	S07	230	022		7	08	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg–at/l	TOTAL–P µg–at/l	NO_2–N µg–at/l	NO_3–N µg–at/l	SiO_4–Si µg–at/l	CHL–A	QUAL CODE
		STD	0000	0360	3320	2642	0016171	0000	14627	745							
	084	OBS	0000	0360	33203	2642			14627	745	072		006	036	006	054	
		STD	0010	0360	3321	2642	0016163	0016	14629	745							
		OBS	0010	0360	33205	2642			14629								
		STD	0020	0360	3321	2642	0016169	0032	14631	744							
	007	OBS	0020	0360	33205	2642			14631	744	061		002	021	006	075	
		STD	0030	0360	3321	2642	0016176	0049	14632	729							
		OBS	0030	0360	33205	2642			14632	729	070		011	045	004	081	
		OBS	0040	0360	33206	2642			14634								
		STD	0050	0360	3321	2642	0016174	0081	14636	711							
		OBS	0050	0360	33207	2642			14636	711	073		006	040	006		
		STD	0075	0361	3321	2643	0016154	0121	14640								
		OBS	0075	0361	33213	2643			14640								
		OBS	0084	0361	33213	2643			14642								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′/10	LONGITUDE ° ′/10	QUAD NODC	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	42000	068300W		151	28	02	23	117	1969	691	051		0174	02		2			X2	0	3		0051

WATER COLOR CODE	WATER TRANS. m/1	WIND DIR.	WIND SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	S0	04	S10	234	028		7	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg–at/l	TOTAL–P µg–at/l	NO_2–N µg–at/l	NO_3–N µg–at/l	SiO_4–Si µg–at/l	CHL–A	QUAL CODE
		STD	0000	0462	3341	2648	0015621	0000	14673	712							
	117	OBS	0000	0462	33407	2648			14673	712	105		000	050	020	046	
		STD	0010	0463	3342	2648	0015566	0016	14675	707							
		OBS	0010	0463	33417	2648			14675	707	102		002	076	016	044	
		STD	0020	0463	3342	2648	0015575	0031	14677	707							
	007	OBS	0020	0463	33417	2648			14677	707	105		002	058	018	047	
		STD	0030	0463	3342	2648	0015584	0047	14679	713							
		OBS	0030	0463	33417	2648			14679	713	102		004	049	021	033	
		OBS	0040	0467	33427	2649			14682	683	103		002	097	019	035	
		STD	0050	0473	3344	2649	0015557	0078	14686	690							
		OBS	0050	0473	33437	2649			14686	690	103		002	061	017	029	
		STD	0075	0487	3348	2651	0015392	0117	14697	662							
		OBS	0075	0487	33482	2651			14697	662	079		004	044	013	025	
		STD	0100	0494	3350	2652	0015343	0155	14704	660							
		OBS	0100	0494	33502	2652			14704								
		STD	0125	0547	3373	2663	0014281	0192	14733	658							
		OBS	0125	0547	33727	2663			14733								
		STD	0150	0547	3373	2664	0014287	0228	14737	656							
		OBS	0150	0547	33730	2664			14737	656	126		000	115	024		
		OBS	0163	0547	33730	2664			14739								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° ′/10	LONGITUDE ° ′/10	QUAD NODC	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	42300	068300W		151	28	02	23	150	1969	691	052		0210	02		3			X2	0	3		0052

WATER COLOR CODE	WATER TRANS. m/1	WIND DIR.	WIND SPEED OF FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	09	S15	247	044		6	12	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg–at/l	TOTAL–P µg–at/l	NO_2–N µg–at/l	NO_3–N µg–at/l	SiO_4–Si µg–at/l	CHL–A	QUAL CODE
		STD	0000	0503	3349	2649	0015459	0000	14691	692							
	150	OBS	0000	0503	33486	2649			14691	692	092		006	071	017	037	
		STD	0010	0502	3349	2650	0015451	0015	14692	678							
		OBS	0010	0502	33487	2650			14692	678	088		006	085	017	037	
		STD	0020	0502	3349	2650	0015454	0031	14694	678							
	009	OBS	0020	0502	33488	2650			14694	678	092		000	077	016	039	
		STD	0030	0502	3349	2650	0015457	0046	14696	678							
		OBS	0030	0502	33489	2650			14696	678	103		008	066	016	034	
		OBS	0040	0502	33492	2650			14697								
		STD	0050	0504	3350	2650	0015454	0077	14700	671							
		OBS	0050	0504	33495	2650			14700								
		STD	0075	0514	3352	2651	0015440	0116	14708	651							
		OBS	0075	0514	33515	2651			14708								
		STD	0100	0524	3355	2652	0015338	0154	14717	616							
		OBS	0100	0524	33547	2652			14717	616	103		000	093	018		
		STD	0125	0543	3363	2656	0014990	0192	14730								
		OBS	0125	0543	33626	2656			14730								
		STD	0150	0567	3373	2661	0014545	0229	14745								
		OBS	0150	0567	33727	2661			14745								
		STD	0200	0583	3387	2670	0013753	0300	14762								
		OBS	0200	0583	33867	2670			14762								
		OBS	0210	0585	33871	2670			14764								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	43000	068300W		151	38	02	23	186	1969	691	053		0190	02		1			X1	0	3		0053

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	07	S08	227	033		7	21	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\Sigma\Delta$ O DYN. M. $\times 10^2$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	OK—A	SEC
		STD	0000	0413	3290	2612	0018972	0000	14646	709							
186		08S	0000	0413	32897	2612			14646	709	077		000	054	013	046	
		08S	0002	0411	32897	2613			14645								
		STD	0010	0471	3315	2626	0017670	0018	14675	685							
008		08S	0010	0471	33148	2626			14675	685	080		006	054	015		
		08S	0015	0495	33194	2627			14686								
		STD	0020	0480	3321	2630	0017337	0036	14681	678							
		08S	0020	0480	33206	2630			14681	678	075		008	056	014	047	
		STD	0030	0477	3323	2632	0017120	0053	14682	682							
		08S	0030	0477	33232	2632			14682	682	076		002	058	013	038	
		08S	0040	0490	33272	2634			14690	685	087		008	061	016	037	
		STD	0050	0510	3333	2636	0016787	0087	14700	624							
		08S	0050	0510	33326	2636			14700	624	093		000	072	014	027	
		08S	0058	0516	33342	2637			14704								
		08S	0067	0592	33498	2640			14739								
		STD	0075	0600	3355	2643	0016141	0128	14744	521							
		08S	0075	0600	33554	2643			14744								
		08S	0079	0604	33572	2644			14746								
		08S	0084	0637	33696	2650			14762								
		STD	0100	0658	3380	2655	0015093	0167	14774	490							
		08S	0100	0658	33795	2655			14774	490	117		002	086	021	012	
		08S	0113	0647	33819	2656			14773								
		STD	0125	0661	3391	2664	0014294	0204	14781								
		08S	0125	0661	33912	2664			14781								
		08S	0150	0683	34007	2668			14792								
		08S	0139	0691	34033	2669			14797								
		08S	0144	0723	34129	2672			14812								
		STD	0150	0735	3417	2674	0013367	0238	14818								
		08S	0150	0735	34174	2674			14818								
		08S	0170	0745	34235	2677			14826								

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	43300	068300W		151	38	02	23	221	1969	691	054		0174	01		1			X2	0	3		0054

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	04	S12	234	006		7	15	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^5	$\Sigma\Delta$ O DYN. M. $\times 10^2$	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	OK—A	SEC
		STD	0000	0320	3225	2570	0022991	0000	14597	724							
221		08S	0000	0320	32254	2570			14597	724	079		008	052	014	039	
		08S	0007	0320	32256	2570			14599								
		STD	0010	0330	3230	2573	0022754	0023	14604	727							
007		08S	0010	0330	32297	2573			14604	727	074		000	041	011	036	
		STD	0020	0355	3249	2585	0021548	0045	14619	712							
		08S	0020	0355	32486	2585			14619	712	081		008	048	015	045	
		08S	0024	0364	32542	2589			14624								
		08S	0026	0387	32580	2590			14635								
		STD	0030	0380	3260	2592	0020920	0066	14633	726							
		08S	0030	0380	32600	2592			14633	726	067		006	038	014	037	
		08S	0040	0365	32618	2595			14628	724	082		002	051	015	031	
		STD	0050	0361	3263	2597	0020502	0108	14628	717							
		08S	0050	0361	32634	2597			14628	717	071		008	039	014	025	
		08S	0060	0369	32680	2600			14634								
		08S	0063	0427	32807	2604			14661								
		STD	0075	0435	3283	2605	0019733	0158	14666	719							
		08S	0075	0435	32832	2605			14666	719	081		011	059	014	031	
		STD	0100	0540	3319	2622	0018161	0205	14719	631							
		08S	0100	0540	33194	2622			14719	631	090		000	062	014	015	
		STD	0125	0590	3347	2638	0016679	0249	14747	614							
		08S	0125	0590	33474	2638			14747								
		STD	0150	0617	3360	2644	0016136	0290	14764	597							
		08S	0150	0617	33595	2644			14764	597	100		006	064	017		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69-1; prepared from NODC Listing No. 31-8084.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	44000	068300W		151	48	02	24	020	1969	691	055		0091	01		3			X2	0	3	0055

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	SD	04	S25	227	028		6	07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QCC
		STD	0000	0340	3252	2589	0021173	0000	14610	730							
020		OBS	0000	0340	32517	2589			14610	730	075		000	048	010	043	
		STD	0010	0340	3252	2589	0021178	0021	14611	730							
		OBS	0010	0340	32517	2589			14611	730	075		000	038	014	037	
		STD	0020	0327	3256	2594	0020769	0042	14608	726							
004		OBS	0020	0327	32557	2594			14608	726	077		000	059	010	034	
		STD	0030	0312	3258	2597	0020480	0063	14603	727							
		OBS	0030	0312	32579	2597			14603	727	083		000	048	010	027	
		OBS	0040	0292	32597	2600			14597	730	082		002	044	014	030	
		STD	0050	0290	3261	2601	0020042	0103	14598	728							
		OBS	0050	0290	32614	2601			14598	728	085		000	062	014	028	
		STD	0075	0289	3262	2602	0020021	0153	14601	728							
		OBS	0075	0289	32617	2602			14601	728	088		000	050	010	026	

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT	NODC STATION NUMBER
318084	A4	43300	068300W		151	38	02	24	072	1969	691	056		0139	01						0	3	0056

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C DRY BULB	AIR TEMP °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
DT	S0							11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10^7	$\Sigma\Delta D$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4-P µg-at/l	TOTAL-P µg-at/l	NO_2-N µg-at/l	NO_3-N µg-at/l	SiO_4-Si µg-at/l	CHL-A	QCC
		STD	0000	0368	3279	2608	0019382	0000	14625	729							
072		OBS	0000	0368	32787	2608			14625	729	077		006	036	010	059	
		STD	0010	0370	3281	2610	0019255	0019	14628	721							
		OBS	0010	0370	32807	2610			14628	721	076		000	056	009	044	
		STD	0020	0394	3291	2615	0018738	0038	14641	714							
006		OBS	0020	0394	32906	2615			14641	714	077		002	044	007	041	
		STD	0030	0398	3292	2616	0018654	0057	14645	709							
		OBS	0030	0398	32923	2616			14645	709	078		006	041	011	033	
		OBS	0040	0409	32954	2617			14651	708	080		002	050	009	031	
		STD	0050	0419	3299	2620	0018337	0094	14658	659							
		OBS	0050	0419	32994	2620			14658	659	079		006	044	012	032	
		OBS	0064	0420	33010	2621			14661								
		STD	0075	0407	3302	2623	0018028	0139	14657	681							
		OBS	0075	0407	33022	2623			14657								
		STD	0100	0395	3303	2625	0017855	0184	14656	703							
		OBS	0100	0395	33032	2625			14656	703	079		008	062	011	031	
		OBS	0114	0369	33012	2626			14647								
		STD	0125	0366	3302	2627	0017709	0229	14648								
		OBS	0125	0366	33017	2627			14648								

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECTS	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	43000	069300W		151	39	02	24	107	1969	691	057	0174	02						0	3		0057

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
0T	50							17	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\Sigma\Delta O$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CR—A
		STD	0000	0387	3277	2605	0019699	0000	14633	712						
107		OBS	0000	0387	32768	2605			14633	712	072		000	039	007	
		STD	0010	0387	3277	2605	0019706	0020	14635	713						
		OBS	0010	0387	32768	2605			14635	713	058		000	021	008	
		STD	0020	0387	3277	2605	0019667	0039	14636	714						
007		OBS	0020	0387	32774	2605			14636	714	060		000	030	006	
		STD	0030	0393	3279	2606	0019579	0059	14641	708						
		OBS	0030	0393	32794	2606			14641	708	049		000	024	003	
		OBS	0040	0410	32853	2609			14650	678	066		000	029	007	
		OBS	0046	0478	33086	2621			14683							
		STD	0050	0480	3310	2622	0018131	0097	14685	674						
		OBS	0050	0480	33104	2622			14685	674	075		000	050	007	
		OBS	0072	0480	33179	2628			14689							
		STD	0075	0465	3319	2630	0017388	0141	14684	665						
		OBS	0075	0465	33185	2630			14684	665	074		000	039	007	
		OBS	0078	0485	33254	2633			14693							
		STD	0100	0503	3335	2639	0016588	0184	14706							
		OBS	0100	0503	33349	2639			14706	6660	088		002	040	011	
		OBS	0104	0533	33393	2639			14719							
		OBS	0113	0531	33406	2640			14720							
		OBS	0115	0515	33386	2640			14714							
		STD	0125	0520	3340	2641	0016442	0225	14718							
		OBS	0125	0520	33397	2641			14718							
		STD	0150	0511	3340	2642	0016367	0266	14718							
		OBS	0150	0511	33397	2642			14718							
		OBS	0162	0520	33434	2643			14724							

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECTS	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	43000	070300W		152	30	02	24	156	1969	691	058	0091	01									0058

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
								07	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\Sigma\Delta O$ DYN. M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CR—A
		STD	0000	0381	3305	2628	0017540	0000	14634	715						
156		OBS	0000	0381	33047	2628			14634	715	081		002	048	016	046
		STD	0010	0378	3305	2628	0017534	0018	14635	720						
156		OBS	0010	0378	33045	2628			14635	720	071		000	032	012	043
		STD	0020	0382	3304	2627	0017585	0035	14638	718						
156		OBS	0020	0382	33044	2627			14638	718	085		002	082	013	041
		STD	0030	0381	3304	2627	0017598	0053	14639	720						
156		OBS	0030	0381	33042	2627			14639	720	082		000	045	014	038
156		OBS	0040	0379	33045	2628			14640	720	080		006	038	014	043
		STD	0050	0382	3306	2629	0017470	0086	14643	722						
156		OBS	0050	0382	33062	2629			14643	6560	085		006	064	012	037
		STD	0075	0375	3304	2628	0017595	0132	14644	735						
158		OBS	0075	0375	33039	2628			14644	735	075		000	029	010	042

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT RECTS	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	42300	070300W		152	20	02	24	196	1969	691	059	0071	00									0059

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
								06	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\Sigma\Delta O$ DYN. M x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_2–N µg-at/l	NO_3–N µg-at/l	SiO_4–Si µg-at/l	CR—A
		STD	0000	0182	3256	2605	0019642	0000	14541	765						
196		OBS	0000	0182	32559	2605			14541	765	081		002	028	013	031
		STD	0010	0188	3258	2606	0019562	0020	14546	772						
196		OBS	0010	0188	32575	2606			14546	772	102		008	067	019	033
		STD	0020	0187	3258	2607	0019511	0039	14547	765						
196		OBS	0020	0187	32581	2607			14547	765	100		002	054	020	034
		STD	0030	0187	3257	2606	0019566	0059	14549	762						
196		OBS	0030	0187	32574	2606			14549	762	105		006	042	023	037
196		OBS	0040	0192	32584	2607			14553	765	083		000	026	011	030
		STD	0050	0199	3262	2609	0019303	0098	14558	760						
196		OBS	0050	0199	32620	2609			14558	760	092		000	036	016	033

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69-1; prepared from NODC Listing No. 31-8084.—Continued

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	42000	070300W		152	20	02	25	004	1969	691	060	0037	00									0060

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
								04	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M ± 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	
		STD	0000	0205	3273	2618	0018494	0000	14554	762							
	004	OBS	0000	0205	32731	2618			14954	762	102		011	063	016	045	
		STD	0010	0211	3274	2618	0018493	0018	14558	760							
	004	OBS	0010	0211	32737	2618			14558	760	104		008	050	020	048	
		STD	0020	0223	3275	2618	0018484	0037	14565	759							
	004	OBS	0020	0223	32750	2618			14565	759	107		011	052	019	054	
		STD	0030	0208	3281	2624	0017915	0055	14561	755							
	004	OBS	0030	0208	32811	2624			14561	735	109		011	064	021	047	

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	39300	070300W		116	90	02	21	145	1969	691	070	2467	02	50	0			X2				0061

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S30	207	067		6	11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M ± 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	
		STD	0000	1122	3518	2690	0011659	0000	14950	605							
	145	OBS	0000	1122	35182	2690			14950	605	044		000	023	004	030	
	145	OBS	0009	1120	35176	2689			14951	602	055		000	040	006	026	
		STD	0010	1120	3518	2689	0011702	0011	14951	602							
	145	OBS	0017	1120						602	045		000	034	009	029	
		STD	0020	1121	3517	2689	0011798	0023	14953	604							
	145	OBS	0026	1122	35163	2688			14954	604	053		000	043	011	029	
		STD	0030	1121	3518	2690	0011714	0035	14955	601							
	145	OBS	0034	1121	35194	2691			14955	599	040		000	020	006	028	
	145	OBS	0043		35185					599	040		000	024	006	033	
		STD	0050	1123	3518	2689	0011844	0058	14958	599							
	145	OBS	0065	1124	35168	2688			14961	600	054		000	037	010	029	
		STD	0075	1124	3518	2689	0011913	0088	14963	603							
	145	OBS	0087	1123	35182	2689			14964	605	043		000	036	006	027	
		STD	0100	1122	3518	2689	0011947	0118	14966	604							
		STD	0125	1121	3517	2689	0012052	0148	14970	600							
	145	OBS	T0134	1120	35164	2689			14971	598	036		000	020	008		
		STD	0150	1126	3521	2691	0011924	0178	14976	597							
	145	OBS	T0159	1129	35228	2692			14979	590	059		000	039	009		
		STD	0200	1144	3533	2697	0011456	0236	14992	501							
	145	OBS	T0238	1157	35416	2701			15004	333	130		000	111	009		

REFERENCE CTRY CODE	REFERENCE ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPLICATE	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR 1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT.	WAVE OBSERVATIONS PER.	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYPE	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	39450	070300W		116	90	02	21	100	1969	691	071	1829	02									0062

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
								11	

MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-STD	Σ Δ D DYN. M ± 10³	SOUND VELOCITY	O₂ ml/l	PO₄-P µg-at/l	TOTAL-P µg-at/l	NO₃-N µg-at/l	NO₂-N µg-at/l	SiO₄-Si µg-at/l	CHL-A	
		STD	0000	1066	3499	2684	0012148	0000	14928	714							
	100	OBS	0000	1066	34985	2684			14928	714	052		000	038	006		
	100	OBS	0009	1063	34981	2685			14928	697	050		000	030	005		
		STD	0010	1063	3498	2684	0012162	0012	14928	697							
	100	OBS	0018	1066	34978	2684			14930	694	053		000	048	006		
		STD	0020	1066	3498	2684	0012235	0024	14931	694							
	100	OBS	0028	1067	34983	2684			14932	692	048		000	034	008		
		STD	0030	1067	3498	2684	0012249	0037	14933	692							
	100	OBS	0038	1067	34983	2684			14934	691	045		000	027	009		
	100	OBS	0047		34990					683	044		000	036	004		
		STD	0050	1070	3499	2684	0012287	0061	14937	681							
	100	OBS	0071	1075	35001	2684			14943	674	050		000	032	004		
		STD	0075	1076	3501	2684	0012348	0092	14944	674							
	100	OBS	T0095	1082	35026	2685			14949	673	048		000	044	001		
		STD	0100	1107	3509	2685	0012314	0123	14960	670							
		STD	0125	1206	3535	2687	0012247	0153	15002	654							
	100	OBS	T0140	1244	35462	2688			15019	644	054		000	041	001		
		STD	0150	1247	3550	2690	0011971	0184	15022	593							
	100	OBS	T0190	1257	35544	2692			15032	442	051		000	023	001		
		STD	0200	1236	3553	2695	0011683	0243	15026	418							
	100	OBS	T0240	1074	35335	2710			14974	374	122		000	101	008		

TABLE II.—Observed and interpolated oceanographic data taken by BCF R/V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDEX	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAR. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
318084	A4	40000	070300W		152	00	02	21	063	1969	691	072	0302	02		8			X2				0063

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S30	186	044		7	11	

MESSENGR TIME OR NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{\Delta D}{\text{DYN M}} \times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	OIL—A	QUAL
		STD	0000	0687	3380	2651	0015296	0000	14770	694							
063		OBS	0000	0687	33799	2651			14770	694	082		000	040	004	029	
063		OBS	0007	0684	33803	2652			14770	694	067		000	035	003	030	
		STD	0010	0684	3378	2651	0015383	0015	14770	695							
063		OBS	0014	0684	33770	2649			14770	696	065		000	038	001	030	
		STD	0020	0684	3377	2650	0015488	0030	14771	698							
063		OBS	0021	0684	33773	2650			14772	698	067		000	033	002	022	
063		OBS	0028	0691	33785	2650			14776	694	065		000	044	001	027	
		STD	0030	0692	3380	2651	0015403	0046	14776	694							
063		OBS	0035	0696	33831	2653			14779	694	060		000	041	004	033	
		STD	0050	0727	3386	2650	0015455	0077	14794	689							
063		OBS	0054	0734	33876	2651			14798	687	062		000	036	004	025	
063		OBS	0073	0764	34029	2659			14815	677	059		000	028	001	037	
		STD	0075	0767	3403	2659	0014722	0114	14816	677							
		STD	0100	0794	3411	2654	0014689	0151	14834	671							
063		OBS	T0116	0821	34152	2660			14845	668	051		000	034	003		
		STD	0125	0826	3448	2669	0013889	0187	14890	611							
		STD	0150	1136	3515	2684	0012513	0220	14979	485							
063		OBS	T0163	1197	35267	2690			15005	439	077		000	054	004		
		STD	0200	1187	3536	2691	0012031	0281	15008	396							
063		OBS	T0212	1126	35356	2702			14988	382	108		000	068	006		

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDEX	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAR. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
318084	A4	40300	070300W		152	00	02	21	010	1969	691	073	0068	00		6			X2				0064

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S35	193	033		6	06	

MESSENGR TIME OR NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{\Delta D}{\text{DYN M}} \times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	OIL—A	QUAL
		STD	0000	0414	3311	2630	0017355	0000	14649	741							
010		OBS	0000	0414	33113	2630			14649	741	070		000	036	004	019	
		STD	0010	0417	3311	2629	0017452	0017	14652	746							
010		OBS	0010	0417	33105	2629			14652	746	078		000	040	009	017	
		STD	0020	0419	3311	2629	0017434	0035	14654	746							
010		OBS	0020	0419	33111	2629			14654	746	092		000	038	006	030	
		STD	0030	0417	3311	2629	0017399	0052	14655	746							
010		OBS	0030	0417	33114	2629			14655	746	093		004	053	009	025	
010		OBS	0040	0415	33123	2630			14656	746	097		008	045	011	036	
		STD	0050	0419	3313	2631	0017299	0087	14660	746							
010		OBS	0050	0419	33132	2631			14660	746	096		015	031	016	028	

REFERENCE: CTRY CODE	REFERENCE: ID. NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDEX	MARSDEN SQUARE: 10°	MARSDEN SQUARE: 1°	STATION TIME (GMT): MO	STATION TIME (GMT): DAY	STATION TIME (GMT): HR 1/10	YEAR	ORIGINATOR'S: CRUISE NO	ORIGINATOR'S: STATION NUMBER	DEPTH TO BOTTOM	MAR. DEPTH OF SMPL'S	WAVE OBSERVATIONS: DIR	WAVE OBSERVATIONS: HGT	WAVE OBSERVATIONS: PER	WAVE OBSERVATIONS: SEA	WEATHER CODE	CLOUD CODES: TYPE	CLOUD CODES: AMT		NODC STATION NUMBER
318084	A4	41000	070300W		152	10	02	20	200	1969	691	074	0046	00		4			X2				0065

WATER: COLOR CODE	WATER: TRANS. (m)	WIND: DIR.	WIND: SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP °C: DRY BULB	AIR TEMP °C: WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	S20	169	028		6	05	

MESSENGR TIME OR NR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{\Delta D}{\text{DYN M}} \times 10^3$	SOUND VELOCITY	O_2 ml/l	PO_4–P µg-at/l	TOTAL–P µg-at/l	NO_3–N µg-at/l	NO_2–N µg-at/l	SiO_4–Si µg-at/l	OIL—A	QUAL
		STD	0000	0242	3303	2639	0016498	0000	14574	812							
200		OBS	0000	0242	33030	2639			14574	812	056		006	007	015	6.64	
		STD	0010	0240	3303	2639	0016464	0016	14575	821							
200		OBS	0010	0240	33033	2639			14575	826Q	047		000	009	012	8.08	
		STD	0020	0242	3303	2639	0016505	0033	14577	828							
200		OBS	0020	0242	33030	2639			14577	828	046		000	008	013	4.21	
		STD	0030	0240	3304	2640	0016417	0049	14578	834							
200		OBS	0030	0240	33040	2640			14578	834	061		006	011	012	8.84	
200		OBS	0040	0243	33027	2638			14581	838	049		000	008	011	6.84	

TABLE II.—Observed and interpolated oceanographic data taken by BCF R V ALBATROSS IV, 28 January–27 February 1969, on ICNAF Cruise 69–1; prepared from NODC Listing No. 31–8084.—Continued

REFERENCE CTRY CODE	REFERENCE NO.	SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DUPE BOGUS	MARSDEN SQUARE 10°	MARSDEN SQUARE 1°	STATION TIME (GMT) MO	STATION TIME (GMT) DAY	STATION TIME (GMT) HR.1/10	YEAR	ORIGINATOR'S CRUISE NO.	ORIGINATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF SMPL'S	WAVE OBSERVATIONS DIR.	WAVE OBSERVATIONS HGT	WAVE OBSERVATIONS PER	WAVE OBSERVATIONS SEA	WEATHER CODE	CLOUD CODES TYP	CLOUD CODES AMT		NODC STATION NUMBER
318084	A4	39000N	070300W		116	90	02	21	2206	1969	691	069		2898	1		7			X2				0066

WATER COLOR CODE	WATER TRANS. (m)	WIND DIR.	WIND SPEED OR FORCE	BAROMETER (mbs)	AIR TEMP. °C DRY BULB	AIR TEMP. °C WET BULB	VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
		04	530	217	089		7	11	

MESSENGER TIME OF NB 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA–T	SPECIFIC VOLUME ANOMALY–10^8	$\frac{1}{2}\Delta D$ DYN M. x 10^3	SOUND VELOCITY	O_2 ml/l	PO_4–P µg–at/l	TOTAL–P µg–at/l	NO_2–N µg–at/l	NO_3–N µg–at/l	SiO_4–Si µg–at/l	CHL–a	SEC
206		OBS	0000	1187	35426	2696			14976	546	067		002	051	012	032	
		STD	0000	1187	3543	2696	0011026	0000	14976	546							
		STD	0010	1184	3543	2697	0010998	0011	14976	535							
206		OBS	0011	1184	35427	2697			14976	535	065		000	041	010	035	
		STD	0020	1187	3543	2696	0011068	0022	14979	540							
206		OBS	0020	1187	35427	2696			14979	540	053		000	041	006	036	
		STD	0030	1187	3542	2696	0011112	0033	14981	540							
206		OBS	0031	1187	35424	2696			14981	540	061		000	037	009	036	
206		OBS	0041	1189	35424	2696			14983	539	052		000	032	007	034	
		STD	0050	1188	3542	2696	0011218	0055	14984	538							
206		OBS	0051	1188	35420	2696			14984	538	072		004	056	010	031	
		STD	0075	1187	3542	2696	0011263	0084	14988	540							
206		OBS	0077	1187	35420	2696			14988	540	065		000	045	008	032	
		STD	0100	1189	3542	2695	0011363	0112	14993	543							
206		OBS	T0101	1189	35420	2695			14993	543	060		002	064	010	029	
		STD	0125	1187	3543	2696	0011336	0140	14996	532							
		STD	0150	1186	3544	2697	0011309	0169	15000	526							
206		OBS	T0160	1185	35440	2698			15001	525	051		000	031	009		
		STD	0200	1020	3528	2715	0009687	0221	14947	531							
206		OBS	T0204	1007	35262	2716			14943	532	117		000	067	015		
		STD	0250	0905	3515	2725	0008850	0267	14912	543							
206		OBS	T0255	0899	35141	2725			14910	545	151		000	138	020		