OCEANOGRAPHIC OBSERVATIONS IN THE CENTRAL NORTH PACIFIC, SEPTEMBER 1954 - AUGUST 1955

SPECIAL SCIENTIFIC REPORT - FISHERIES No. 252

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

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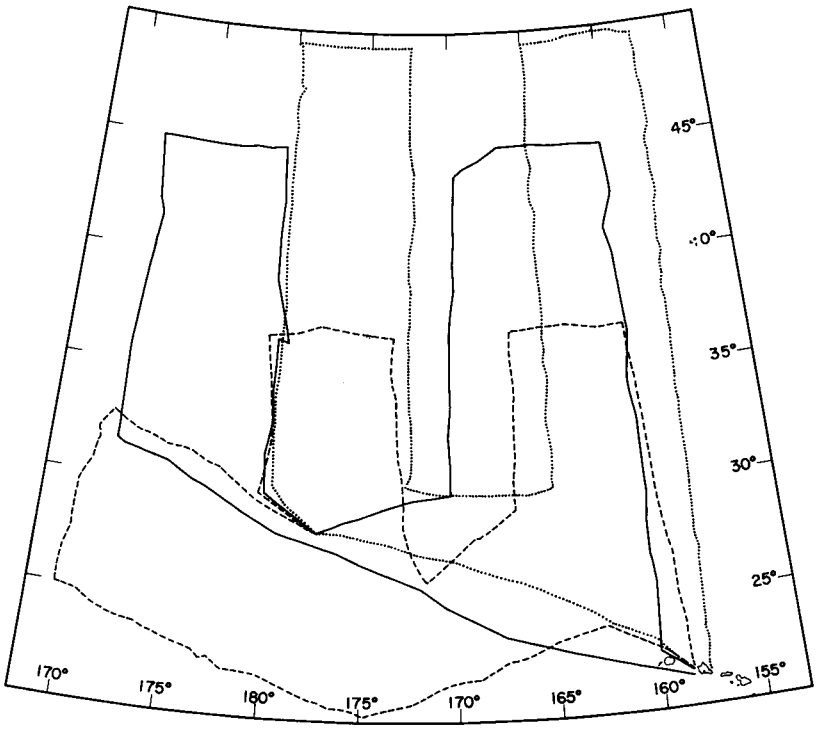

OCEANOGRAPHIC OBSERVATIONS IN THE CENTRAL NORTH PACIFIC, SEPTEMBER 1954 - AUGUST 1955

By

James W. McGary, Oceanographer, and Edward D. Stroup
Pacific Oceanic Fishery Investigations
Honolulu, T. H.
Bureau of Commercial Fisheries

Special Scientific Report--Fisheries No. 252

WASHINGTON: January 1958

ABSTRACT

This report presents the results of three oceanographic cruises to the temperate central North Pacific by the research vessels Charles H. Gilbert and Hugh M. Smith of the Pacific Oceanic Fishery Investigations, U. S. Fish and Wildlife Service. The cruises were confined to the area bounded roughly by 157°30'W. and 170°E. longitude and 20°N. and 49°30'N. latitude. The report includes the observed and interpolated data for the first two cruises and the plots of the various field, such as salinity and dissolved oxygen, for all three cruises.

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OCEANOGRAPHIC OBSERVATIONS IN THE CENTRAL NORTH PACIFIC, SEPTEMBER 1954 - AUGUST 1955

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This report is the fourth in a series of oceanographic data reports by the Pacific Oceanic Fishery Investigations (POFI) on the waters to the north and northeast of the Hawaiian Islands. It contains physical and chemical data collected on three oceanographic cruises between September 1954 and August 1955. The surveys covered by this and the previous reports were made as part of the albacore, Germo alalunga, investigations which are being supported by funds made available by the Saltonstall-Kennedy Act. The first two reports (McGary and Stroup 1956; McGary, Jones, and Austin, 1956) embody only data collected on individual oceanographic cruises during the winter of 1954 and summer of 1955; the third report (Callaway 1957) contains oceanographic data collected on three exploratory fishing cruises during the summer and fall of 1956. The manner and detail of the presentation in this report are somewhat different from those of the first two of the series. The text does not contain the detailed discussion and partial analysis of the data that was included in the first report (McGary and Stroup 1956), but like the second (McGary, Jones, and Austin, 1956) it merely contains a discussion of the methods and a resumé of the results. In common with the first report, however, it contains plots of the lateral and vertical fields of the various parameters in addition to the tabulated data. The biological data taken on these cruises and the limited physical data taken on fishing cruises in conjunction with the oceanographic cruises have been published elsewhere, as cited in this report.

The first survey, Charles H. Gilbert cruise 17, during the period September 17 to November 7, 1954, was confined to the area between 21°N. and 45°N. latitude, 160°W. to 170°E. longitude. An exploratory-fishing cruise, John R. Manning cruise 22, was made concurrent with this survey, and the data have been analyzed and published by Shomura and Otsu (1956). The second survey, Hugh M. Smith cruise 27, during the period January 5 to February 21, 1955, covered the area bounded by 20°N. and 39°N. latitude between 160°W. and 170°E. longitude. The latter part of John R. Manning cruise 23, an exploratory fishing cruise, was made concurrent with this survey; the resulting data are included in the report by Shomura and Otsu (1956). The third survey, Hugh M. Smith cruise 30, was made during the period July 15 to August 28, 1955, in the area between the Hawaiian Islands and 49°30'N., from 157°30'W. to 180°. This cruise was a part of Operation NORPAC, a quasi-synoptic oceanographic and biological survey of the Pacific north of 20°N., including a portion of the Bering Sea, undertaken jointly by research agencies of Canada, Japan, and the United States. The tabulated data and temperature cross sections have already been published (McGary, Jones, and Austin, 1956), and much of the resulting data will also be incorporated in an atlas which is to be published jointly by Scripps Institution of Oceanography and the Japanese Hydrographic Office.

CHARLES H. GILBERT CRUISE 17

Itinerary

The Gilbert departed from Pearl Harbor on September 17, 1954. The vessel stopped at Midway Islands on October 11-14, 1954, for fuel, stores, and to exchange personnel. A brief stop was made at Laysan Island on November 3 to inspect the wildfowl refuge and to make a bait-fish survey of the reefs. The vessel returned to Pearl Harbor on November 7, 1954. The cruise track and station positions are shown in figure 1.

Primary Missions

1. Forty oceanographic stations were occupied at the positions indicated in figure 1. Twenty-five scheduled stations were omitted because of high winds and rough seas.

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Casts with 13 Nansen bottles were made at all stations. The bottle intervals in the upper 200 meters were determined from the vertical temperature structure as indicated by the bathythermogram taken at the station. Below 200 meters they were placed at standard depths (U. S. Navy Hydrographic Office, 1955). All bottles carried two reversing thermometers; bottles 5, 7, 9, 11, and 13 carried one protected and one unprotected thermometer; all others carried two protected thermometers.

At the first 8 stations the casts were made to 1,200 meters, but after station 8 they were made to only 1,000 meters. This change in depth was necessary because of the loss of a portion of the wire cable.

At station 34 (35°45'N., 171°32'E.) the bottom three bottles of the cast (600, 800, and 1,000 m.) fouled a ridge or pinnacle. The position was on a bearing of 340°T. and a distance of 30 miles from a sea mount shown on the chart (H.O. 0528). Possibly an uncharted ridge extending out from this sea mount was fouled. Unfortunately all of the echo sounding equipment was inoperative so bottom profiles could not be obtained. A few, small, pelecypod shells and bits of well-aged coral were brought up in the thermometer frame of the 800-meter bottle.

2. Salinity samples were drawn from each Nansen bottle and returned to the POFI laboratory for analysis. Additional surface samples were taken at every third BT on the run from station 40 to Pearl Harbor. To prevent evaporation during storage, each sample was stoppered with a paraffin-impregnated cork in addition to the ordinary screw cap. The salinities of the station samples are given in the station data (table 1) and the surface salinities at the BT's are given in the last column of the BT data (table 2). The salinity profiles are shown in figures 28 to 30, the surface salinity in figure 31, and the salinity on the 25.2, 26.0, and 26.8 sigma-t surfaces in figures 32 to 34.

3. Dissolved oxygen analyses by the Winkler method were made aboard ship on samples from each depth at all oceanographic stations. The results are given in table 1. The profiles along 160°W., 170°W., and 180° longitudes are shown in figures 35 to 37. The distributions on the 25.2, 26.0, and 26.8 sigma-t surfaces are shown in figures 38 to 40.

4. Inorganic-phosphate analyses were also made aboard ship by the molybdenum-blue method (Wooster and Rakestraw 1951). Analyses were made on samples from all depths at all stations except 19 through 26. Photometer (Lumetron) failure, which could not be repaired until parts were obtained at Midway, prevented analyses at these stations. The observed values are given in table 1 and the profiles in figures 41 to 43. Adequate charts of the surface distribution and on surfaces of constant sigma-t could not be drawn because of missing data resulting from instrument failure and the omission of stations in rough weather.

5. Bathythermograph lowerings were made at all oceanographic stations and at 30-mile intervals between stations. On the run along the islands of the Hawaiian Archipelago between station 40 and Pearl Harbor the interval was shortened to 2-1/2 hours or approximately 20 miles to obtain a more detailed profile. The observations (Log Sheet B) made at the BT lowerings are summarized in table 2. Figures 13 to 20 are the surface temperature distribution and profiles drawn from the BT data.

6. Throughout the cruise a continuous record of the surface temperature was made with a recording thermograph.

7. When weather conditions permitted, Secchi disc observations (total of 12) of transparency and water color according to the Forel scale were made at all daylight oceanographic stations. These observations are recorded in the station data headings (table 1).

Secondary Missions

1. Oblique 0-100 m. zooplankton hauls of 30 minutes' duration with a 1-meter net of 30XXX silk grit gauze were made at each station. These data will be summarized in a separate report.[2/]

2. From two to six lines were trolled during all daylight runs. The results have been summarized by Shomura and Otsu (1956).

2/ "Zooplankton distribution and biological indicators related to oceanographic conditions and to albacore abundance in the central North Pacific," manuscript being prepared by E. C. Jones of Pacific Oceanic Fishery Investigations.

3. The wheel watch maintained a record of all tuna schools, bird flocks, and scattered birds and mammals sighted.

4. Synoptic weather observations, made daily at 0000, 0600, 1200, and 1800 GCT, are summarized in table 3. In addition, certain standard weather observations accompanied all BT lowerings.

   Seven storms with winds of moderate gale force (28 knots) or greater were encountered. They varied in duration from less than 6 hours to over 72 hours. The most violent occurred on October 25 at approximately 45°N., 172°E., when the barometer dropped to 986.5 mb. and the winds reached a velocity of 68 knots. The storm tracks during the months of the cruise are shown in figures 44 to 46.

5. The EDO depth sounder failed completely on September 30, so bottom profiles were obtained of only the southern part of the section along 160°W. longitude. While the instrument was functioning, some excellent recordings were made of the evening rise of the deep-scattering layers to the surface.

6. On November 3, 1954, about 6 hours were spent ashore on Laysan Island, which is a part of the Hawaiian National Wildlife Refuge. Only a few scattered Laysan albatross and small numbers of blackfooted albatross, Laysan finch, shearwater, terns, and one flock of about 50 young frigate birds were sighted on the island. There were no signs of nesting at this time. The Hawaiian monk seal population was estimated to be between 100 and 150.

Form and Location of Field Data

The following records were kept on Charles H. Gilbert cruise 17; they are on file at POFI except as otherwise noted:

Original oceanographic data, Log Sheet "A"
Bathythermograph Log Sheet "B" (duplicates at Scripps Institution of Oceanography)
Chemical data sheets
BT slides (Scripps Institution of Oceanography)
Thermograph records
Track charts
Deck log
Occurrence of tuna schools, birds, and aquatic mammals
Plankton log
Flowmeter and sampler calibration log
Standardized surface trolling data sheets
Scientists' log
USWB Form 1210F (original at U. S. Weather Bureau Records Center, Asheville, N. C.)
EDO depth recorder charts
Barograph records
Tuna morphometric sheets - short form

HUGH M. SMITH CRUISE 27

Itinerary

The Smith departed from Pearl Harbor on January 5, 1955. Engine trouble developed on January 19 at 32°30'N., 170°30'E. The vessel put into Midway Islands for repairs, arriving on January 24 and departing Midway on January 31. About 12 hours were spent on February 10 surveying the wildfowl refuge at Laysan Island. The vessel returned to Pearl Harbor on February 21, 1955. The cruise track and station positions are shown in figure 47.

Primary Missions

1. Forty-nine oceanographic stations were occupied at the positions indicated on figure 47. Casts with 13 bottles were made on all stations to approximately 1,200 m. The bottle intervals in the upper 200 meters were determined from the vertical temperature structure indicated by the bathythermogram taken at the station. Each bottle carried two protected reversing thermometers and bottles 5, 7, 9, 11, and 13 also carried an unprotected thermometer.

2. Salinity samples were drawn from each Nansen bottle and returned to the POFI laboratory for analysis. In addition, at every second BT between 32°30'N., 170°30'E. and Midway Islands, surface samples were taken. The salinity of the station samples is given in the station data (table 4) and at the BT's in the last column of the BT data, table 5. The salinity profiles are presented in figures 78 to 82 and the distribution at the surface and on the 25.2, 26.0, and 26.8 sigma-t surfaces in figures 83 to 86.

3. Dissolved oxygen analyses using the Winkler method were made aboard ship on samples from each depth. The observed values are given in table 4, the profiles in figures 87 to 91, and the distribution on the 25.2, 26.0, and 26.8 sigma-t surfaces in figures 92 to 94.

4. Inorganic phosphate analyses were also made aboard ship on samples from each depth at all stations. Additional surface samples

were collected and analyzed on the run between 32°30'N., 170°30'E. and Midway Islands. The results are tabulated in the station data, table 4, and BT log sheet summaries, table 5. The profiles are given in figures 95 to 99 and the surface distribution in figure 100. Only the plots on the 26.0 and 26.8 sigma-t surfaces were plotted (figs. 101 and 102), since the range on the 25.2 sigma-t surface was only from 0.19 to 0.40 μg at./L.

5. Bathythermograph lowerings were made at each oceanographic station and at approximately 30-mile intervals between stations. The observations (Log Sheet "B") are summarized in table 5; figures 63 to 68 show the temperature profiles and surface temperature distribution drawn from the BT data.

6. A continuous record of the surface water temperature was made by means of a recording thermograph.

7. A 30-minute, 0-100 m. oblique plankton haul with a 1-meter net of 30XXX silk grit gauze was made at each oceanographic station except at station 14. This haul was omitted because of rough seas. The plankton data will be summarized in another report (Jones MS.).

8. Twenty-six collections were made with 6- and 10-foot Isaacs-Kidd mid-water trawls. An analysis of these collections will be presented in a separate report.

9. Night-light collections were attempted at oceanographic stations 61 and 66. At station 61 only 12 sauries were taken and at station 66 there was no catch.

Secondary Missions

1. Five lines were trolled during daylight hours. The results have been summarized by Shomura and Otsu (1956).

2. The wheel watch maintained a record of all tuna schools, bird flocks, and scattered birds and mammals sighted.

3. Synoptic weather observations were made daily at 0000, 0600, 1200, and 1800 GCT; the resulting data are summarized in table 6. In addition, certain standard weather observations accompanied all BT lowerings. The anemometer failed on February 8, 1955, and the winds recorded after 1640 GCT on that date were estimated. Five storms with winds of moderate gale force (28 knots) or greater were encountered. They varied in duration from 4 to 21 hours. The storm tracks during the months of the cruise are shown in figures 103 and 104.

4. A bait-fish survey was conducted on Midway and Laysan Islands. The results will be summarized in a separate report.

5. A bird count was conducted on Laysan Island with emphasis on the rare Laysan Duck. These data will also be covered in a separate report.

6. A count was made of the Hawaiian monk seals on Midway Islands and on Laysan Island. A total of 26 seals were counted on Midway Islands. On Laysan Island there were 105, consisting of 67 adults (200 lbs. or over), 19 juveniles (50-200 lbs.) and 19 pups (about 25 lbs.). One of the pups was born on the day the survey was made (February 10, 1955).

Form and Location of Field Data

The following records were kept on Hugh M. Smith cruise 27; they are on file at POFI except as otherwise noted:

- Barograph records
- Bathythermograph Log Sheet "B" (duplicates at Scripps Institution of Oceanography)
- Bathythermograph slides (Scripps Institution of Oceanography)
- Chemical data sheets
- Deck log
- Flowmeter and sampler calibration log
- Light fishing station log
- Occurrence of tuna schools, birds, and aquatic mammals
- Original oceanographic data, Log Sheet "A"
- Plankton log
- Scientists' log
- Tuna morphometric sheets - short form
- Standardized surface trolling data sheets
- Thermograph records
- Thermometer arrangement forms
- Track charts
- Trawling log
- USWB Form 1210F (original at U. S. Weather Bureau Records Center, Asheville, N. C.)

HUGH M. SMITH CRUISE 30

The description of the cruise, methods, and the observed data have already been published (McGary, Jones, and Austin 1956). Only the

processed data, consisting largely of profiles and distribution of the various fields at the sea surface and on surfaces of constant thermosteric anomaly, are included in this report (figs. 105 through 144).

LABCRATORY METHODS AND TECHNIQUES

Most of the methods used in the chemical analyses and in preparing the graphs of the distribution of the various fields have been described in previous reports (Cromwell 1951, Stroup 1954, McGary and Stroup 1956, McGary, Jones, and Austin 1956, King et al. 1957). Only the procedures that varied to some degree from those of previous reports will be discussed.

The salinity determinations were made by a new modification of Fajan's adsorption indicator method developed by Van Landingham (1957) and adapted to Knudsen's techniques for sea water. It gives a much sharper end point than the potassium chromate indicator and permits a routine precision of about 0.03 percent.

The relative density profiles and surfaces for Charles H. Gilbert cruise 17 (figs. 21-24) and Hugh M. Smith cruise 27 (figs. 74-77) are expressed in the terms of sigma-t (LaFond 1951). Following the suggestion of Montgomery and Wooster (1954), the use of sigma-t was replaced with the thermosteric anomaly (δ_t) in the plots of Hugh M. Smith cruise 30 (figs. 120-122). The latter consists of the salinity and temperature terms of the anomaly of specific volume, i. e.

$$\delta_t = \delta_s + \delta_t + \delta_{st}$$

Montgomery and Wooster defined thermosteric anomaly as "the anomaly of specific volume (steric anomaly) that would be attained if the water were changed isothermally to a standard pressure of one atmosphere" and assigned the dimensions centiliters per ton (cl./ton). The advantage of the thermosteric anomaly is that, if extreme precision is not desired, it can be used for graphical hydrostatic computations for the upper 500-1,000 m. Montgomery and Wooster found that, in the equatorial Pacific, the range of the pressure terms amounted to only 6 cl./ton, which is 3 cm. in thickness for a 500-db. layer.

Two different methods were also employed in making the hydrostatic calculations. Those for Charles H. Gilbert cruise 17 (figs. 2-4 and 8-12) and for Hugh M. Smith 27 (figs. 48-52 and 58-62) were calculated from the equations developed by Ekman in the manner described by LaFond (1951), whereas those for Hugh M. Smith cruise 30 (figs. 106-109 and 114-118) were computed by a graphical method developed by Klein (MS.).[3/]

The zonal (east-west) components of the geostrophic currents were computed and contoured for all three cruises (figs. 5-7, 53-57, and 110-113). This was done to permit future calculations of the volume transport through the upper 1,000 m. of each section. The currents were computed by the formulae derived by Sandstrom and Helland-Hansen (LaFond 1951, p. 17, and Cromwell 1951). Briefly, the procedure was to compute the mean current for each degree of latitude at each depth by using the dynamic heights from the isobaric surface profiles. The values were then plotted at the mid-point of each degree of latitude and at the proper depth. The velocity field was then contoured assuming that the computed values represented the velocity at each point.

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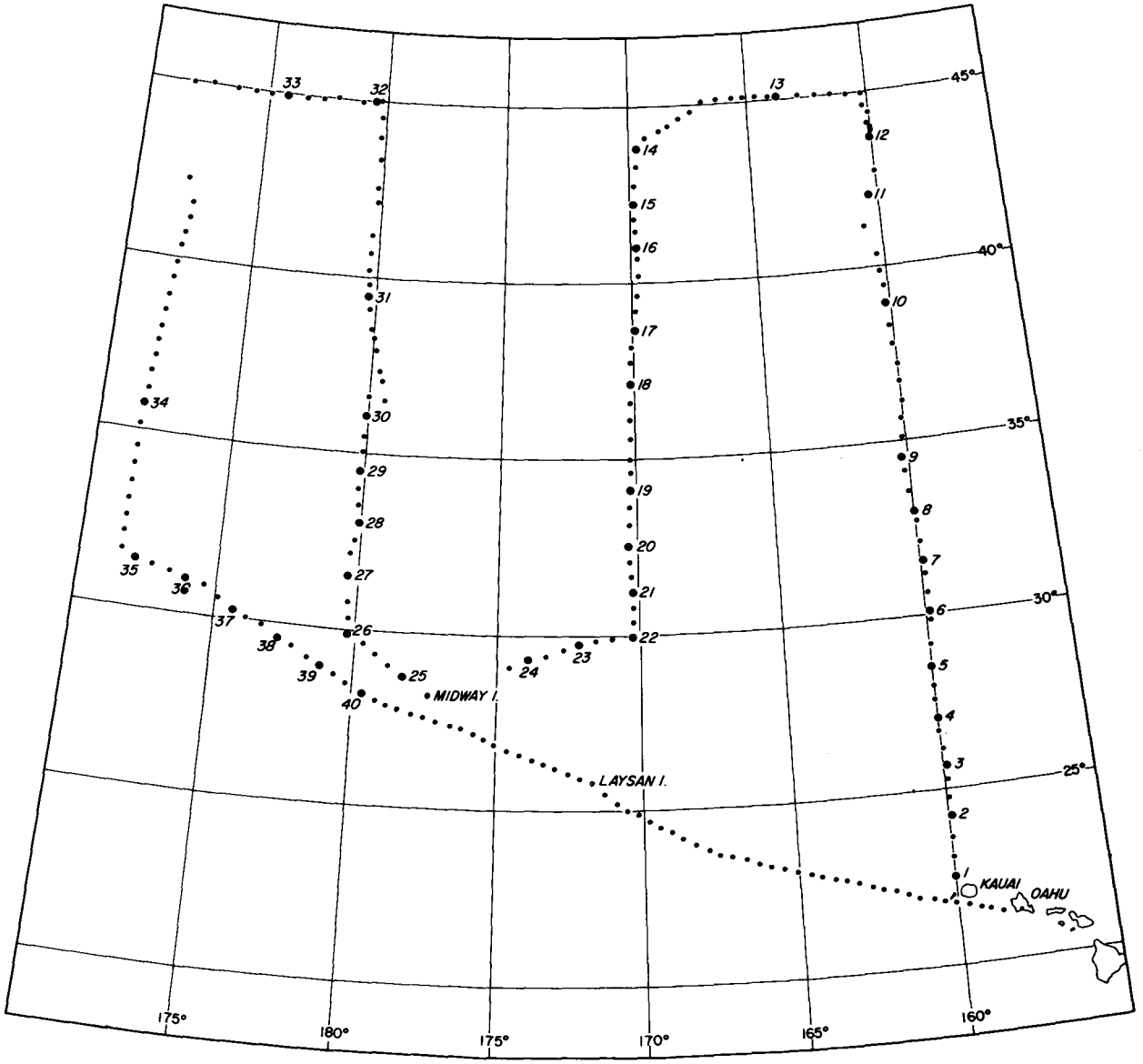

Figure 1.--Oceanographic station positions, Charles H. Gilbert cruise 17, September-November 1954. Large numbered dots indicate oceanographic stations; small dots indicate positions of BT lowerings between stations.

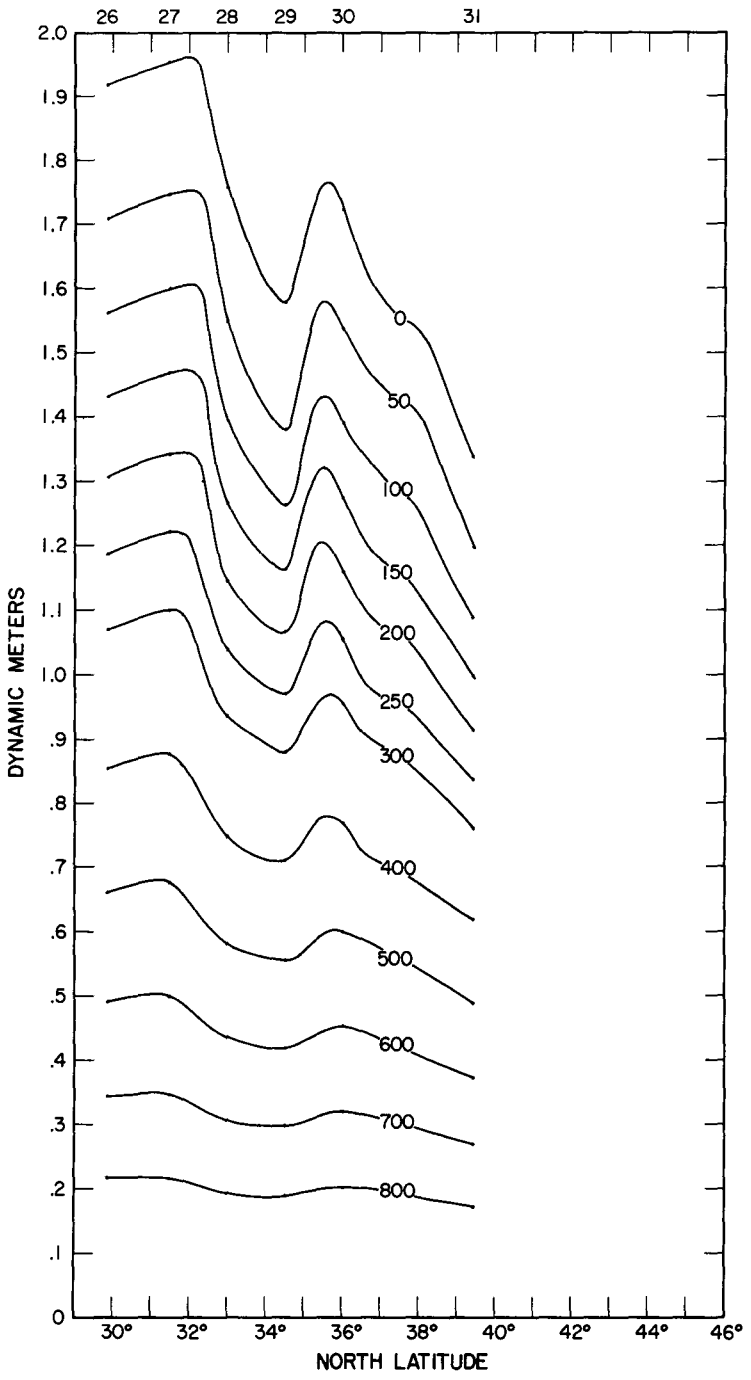

Figure 2.--Smoothed geopotential anomaly of the isobaric surfaces relative to the 1,000-db. surface along the 180th meridian; Charles H. Gilbert cruise 17, stations 26-31, September-November 1954. Points represent computed values.

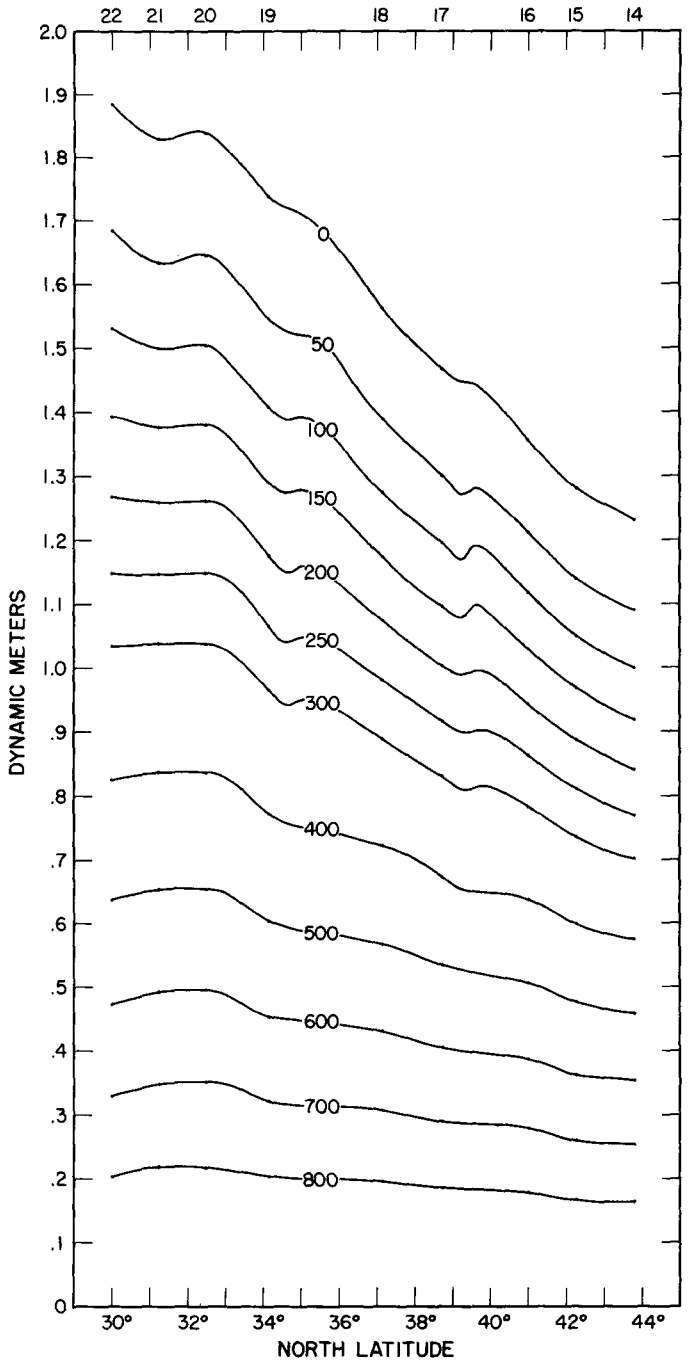

Figure 3.--Smoothed geopotential anomaly of the isobaric surfaces relative to the 1,000-db. surface along 170°W. longitude; Charles H. Gilbert cruise 17, stations 14-22, September-November 1954. Points represent computed values.

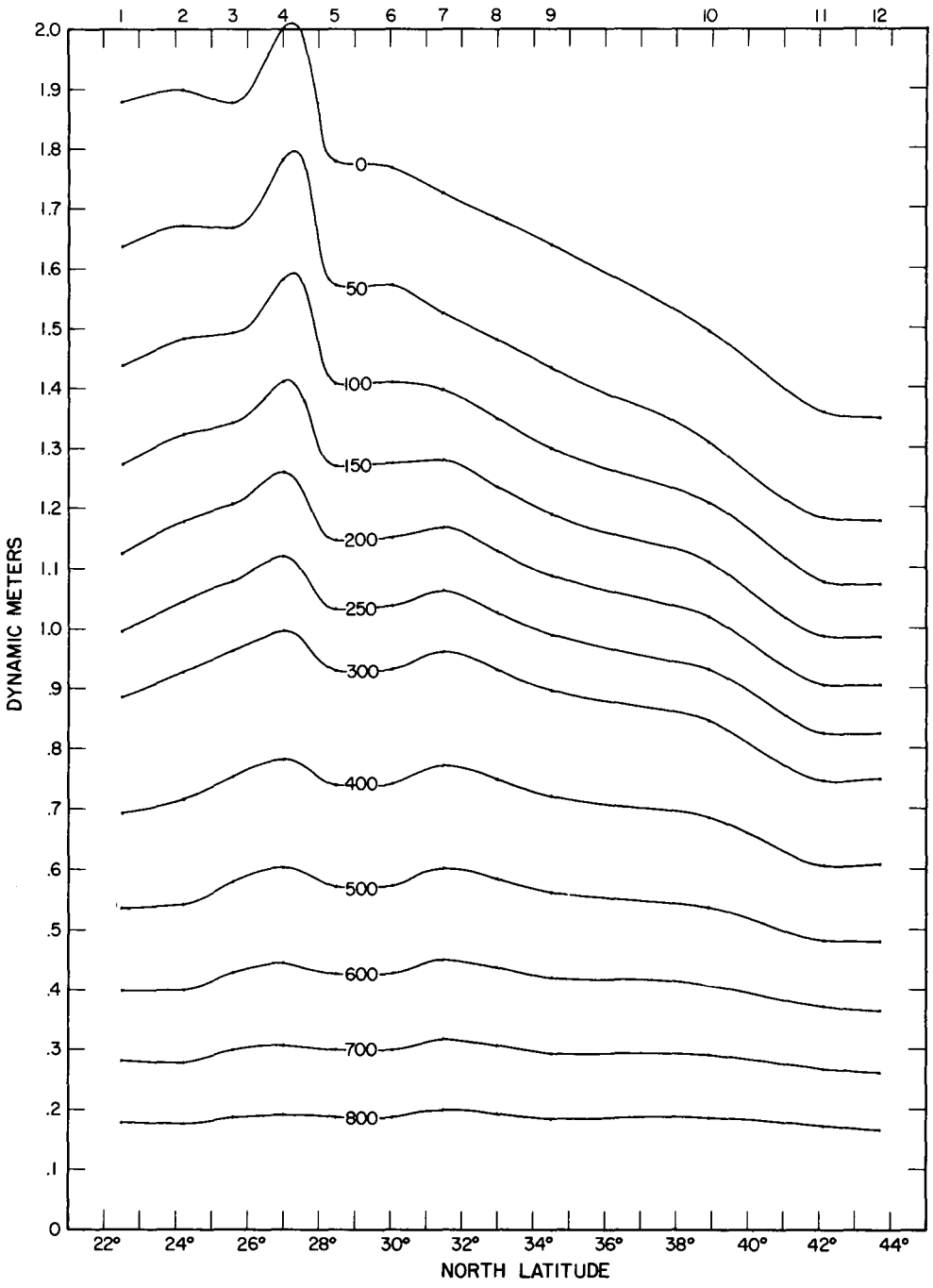

Figure 4.--Smoothed geopotential anomaly of the isobaric surfaces relative to the 1,000-db. surface along 160° W. longitude; Charles H. Gilbert cruise 17, stations 1-12, September-November 1954. Points represent computed values.

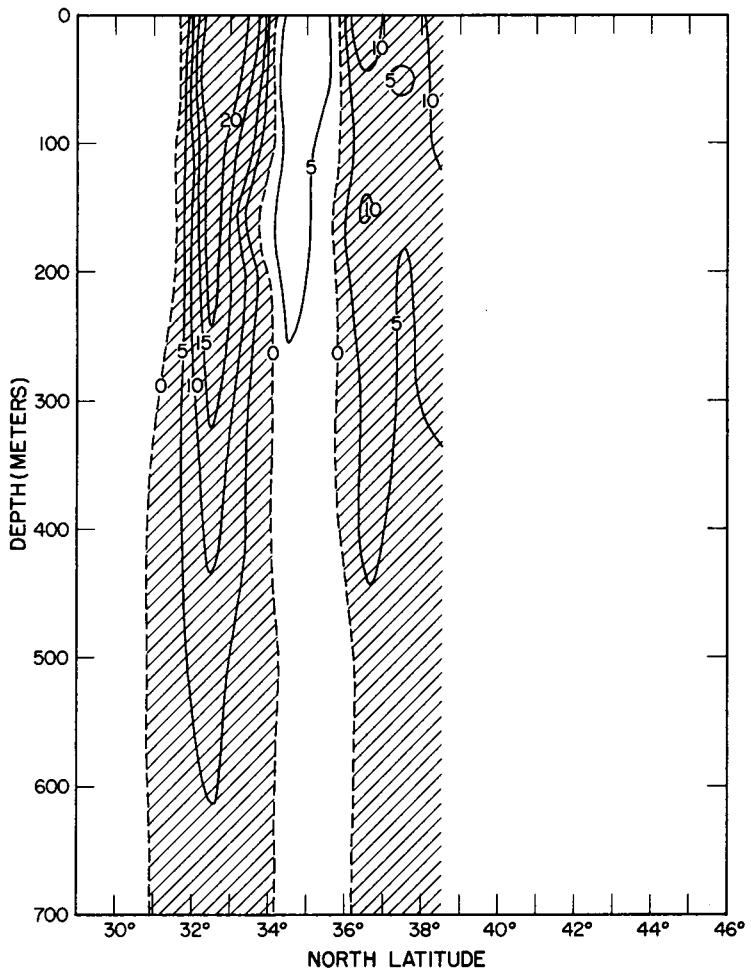

Figure 5.--Zonal components of the geostrophic currents in cm. per second across the 180th meridian; Charles H. Gilbert cruise 17, September-November 1954. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

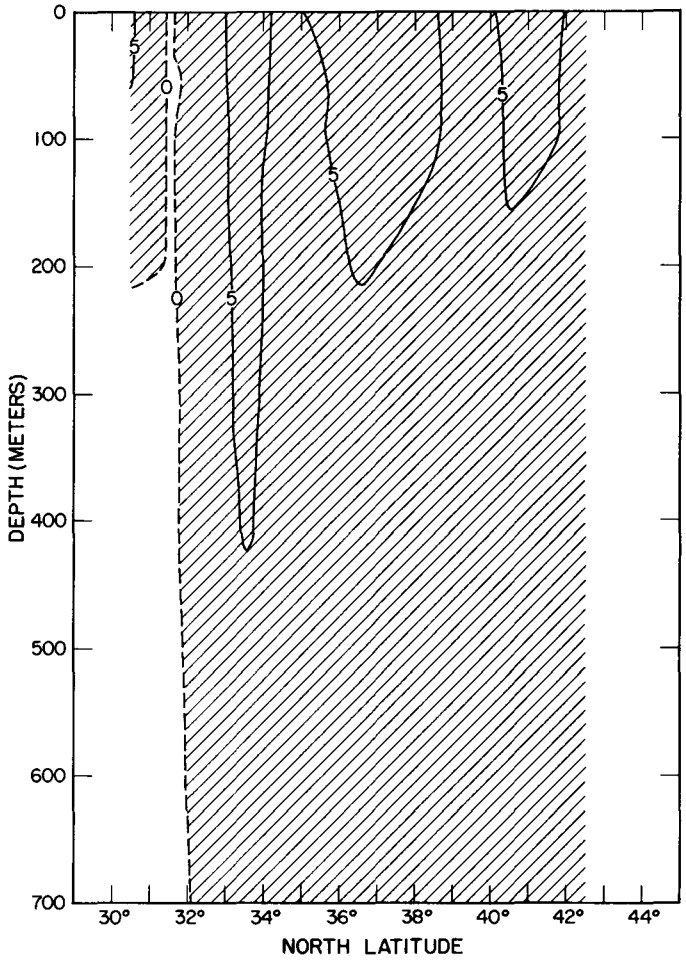

Figure 6.--Zonal components of the geostrophic currents in cm. per second across 170°W. longitude; Charles H. Gilbert cruise 17, September-November 1954. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

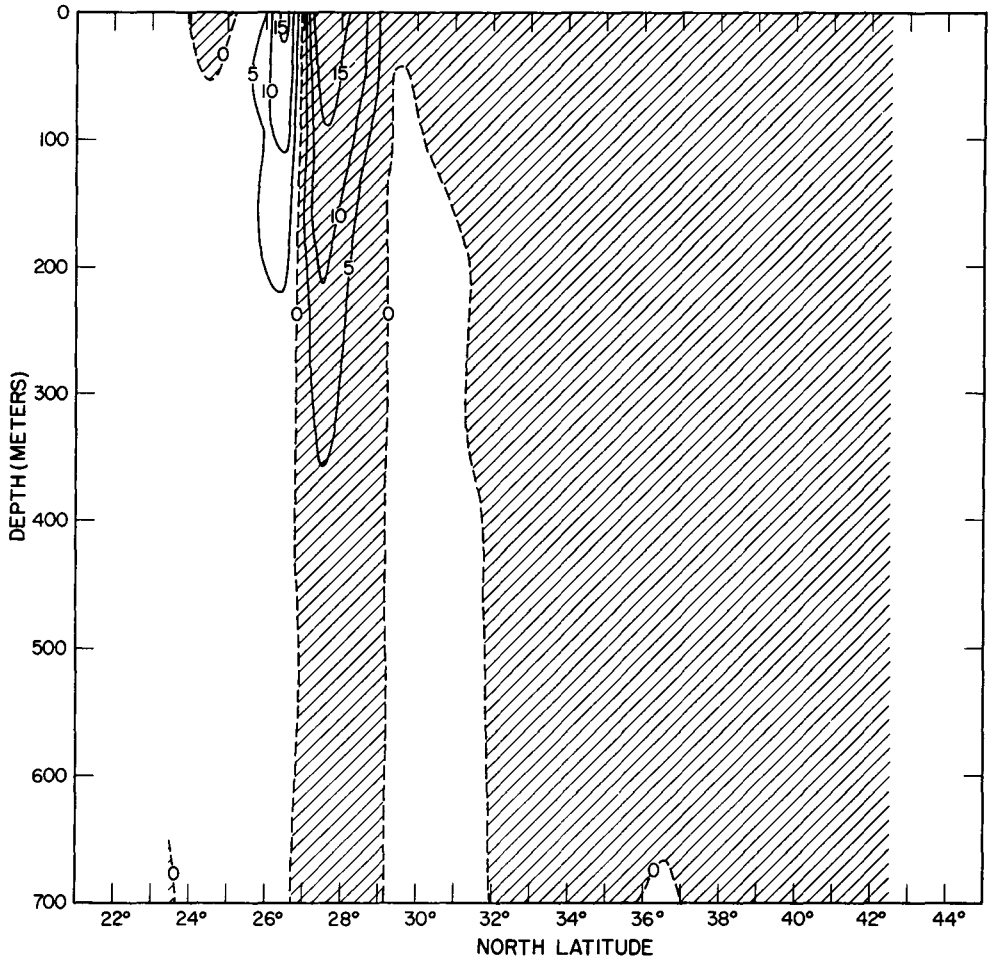

Figure 7.--Zonal components of the geostrophic currents in cm. per second across 160°W. longitude; Charles H. Gilbert cruise 17, September-November 1954. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

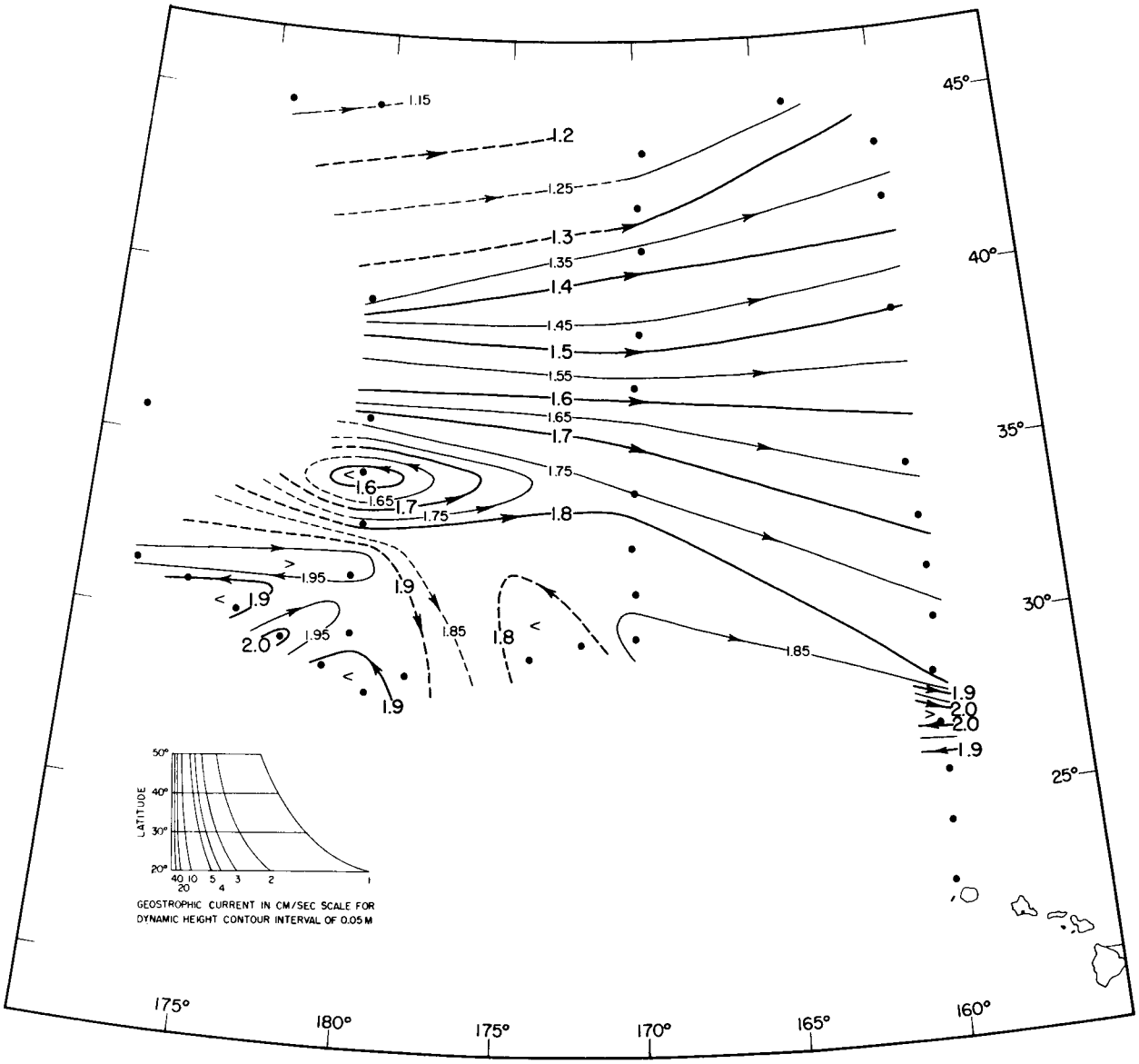

Figure 8.--Anomaly of the geopotential topography of the sea surface in dynamic meters relative to the 1,000-db. surface; Charles H. Gilbert cruise 17, September-November 1954. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

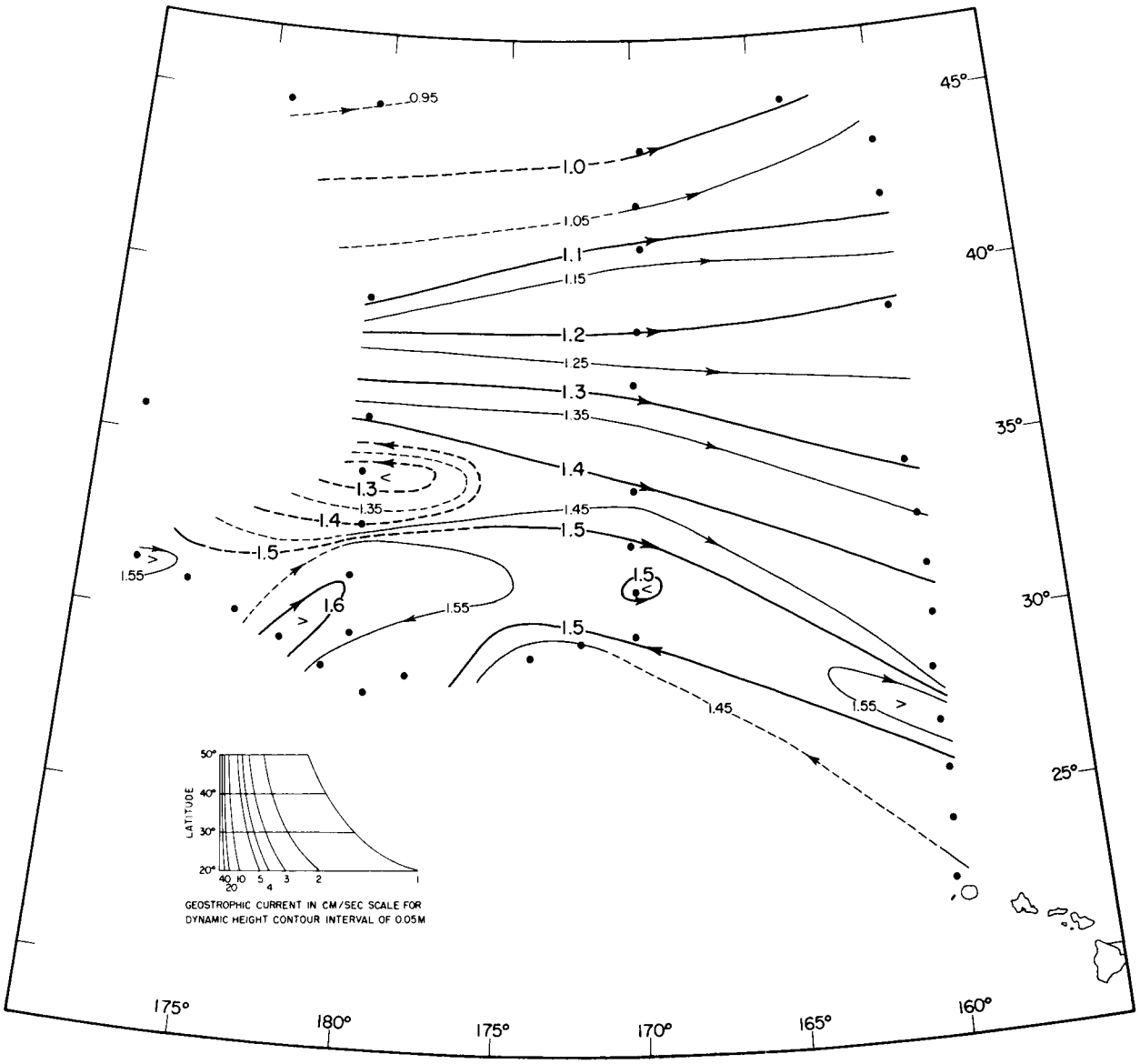

Figure 9.--Anonaly of the geopotential topography of the 100-db. surface in dynamic meters relative to the 1000-db. surface; Charles H. Gilbert cruise 17, September-November 1954. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

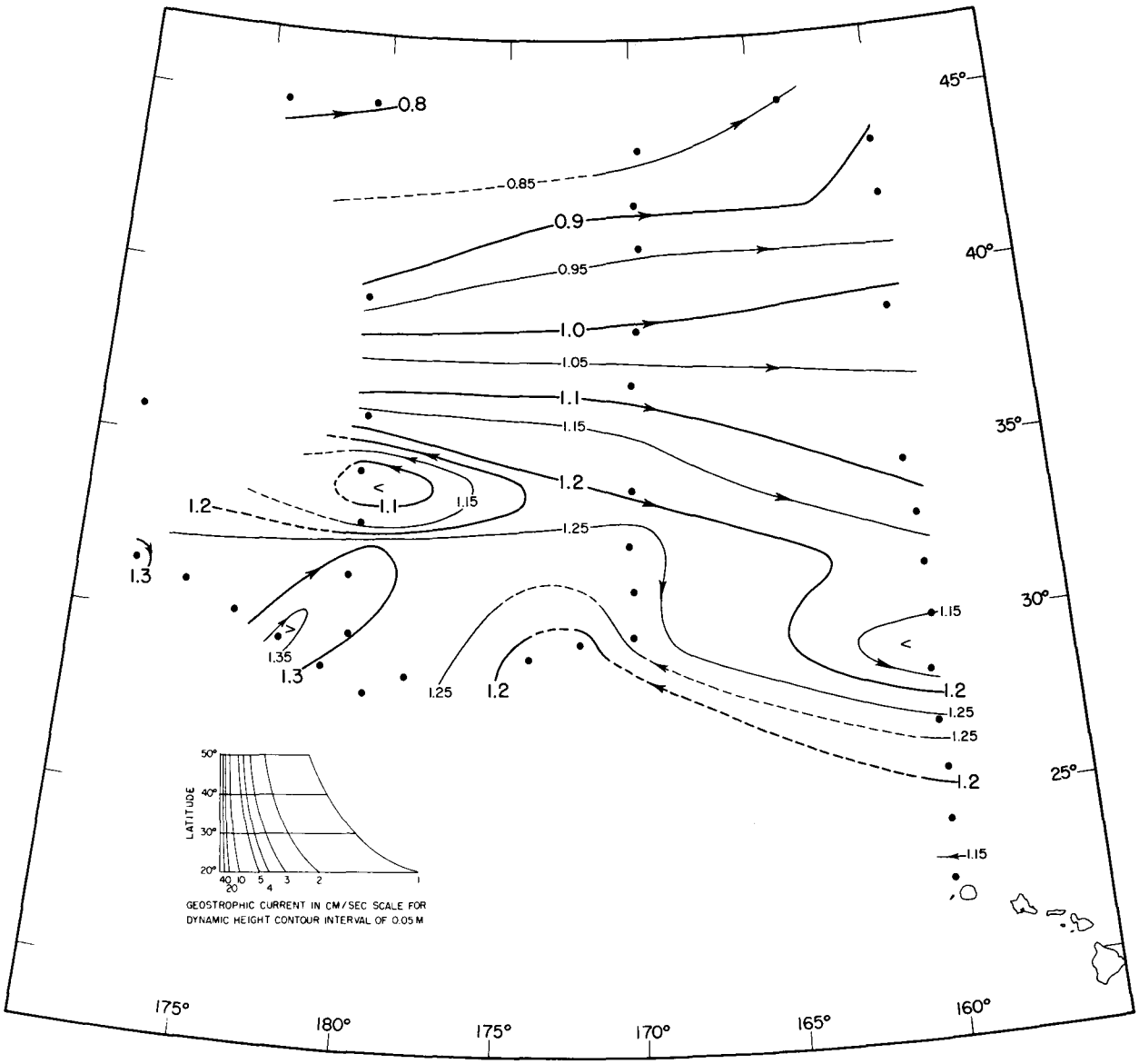

Figure 10.--Anomaly of the geopotential topography of the 200-db. surface in dynamic meters relative to the 1000-db. surface; Charles H. Gilbert cruise 17, September-November 1954. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

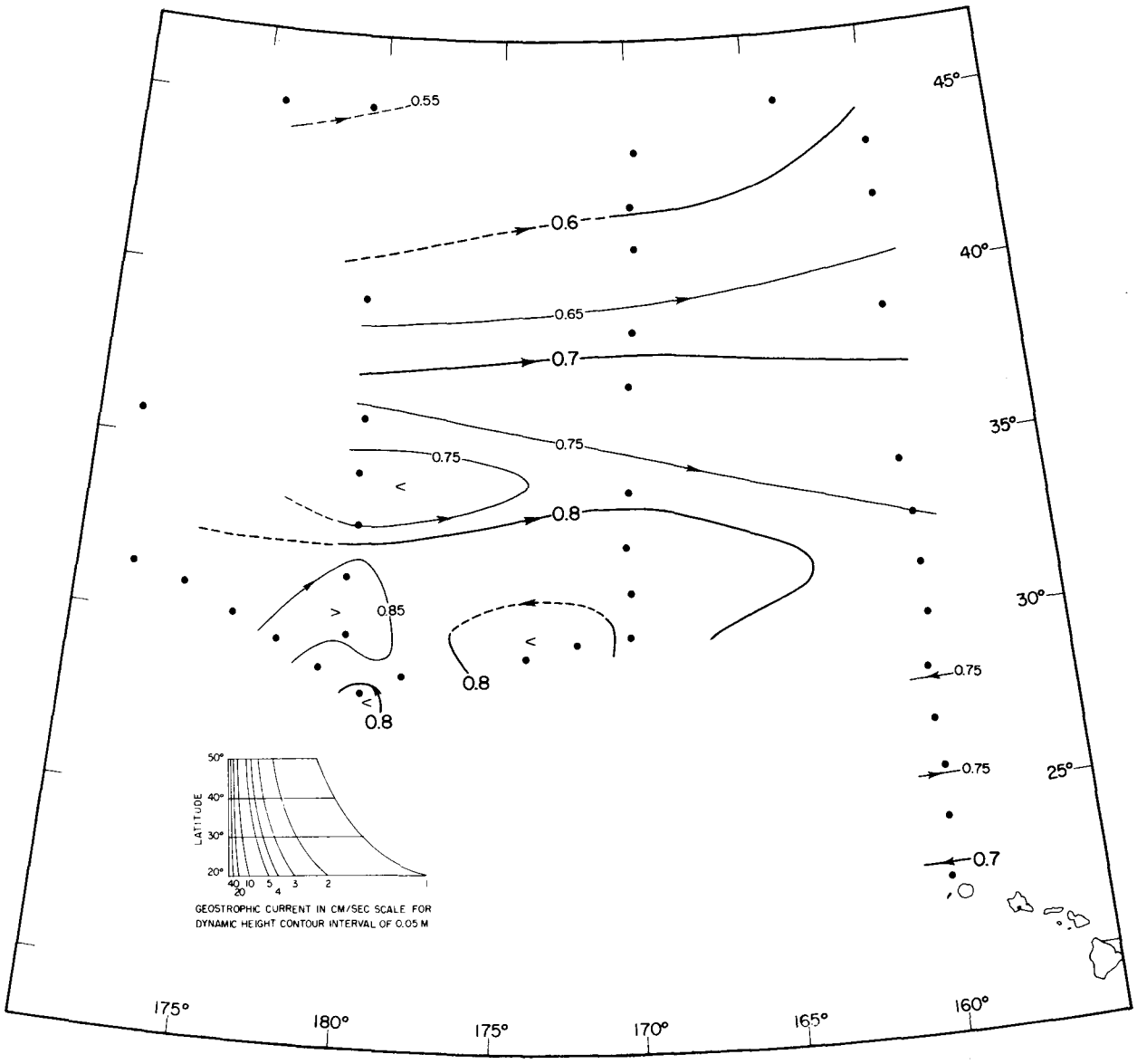

Figure 11.--Anomaly of the geopotential topography of the 400-db. surface in dynamic meters relative to the 1000-db. surface; Charles H. Gilbert cruise 17, September-November 1954. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

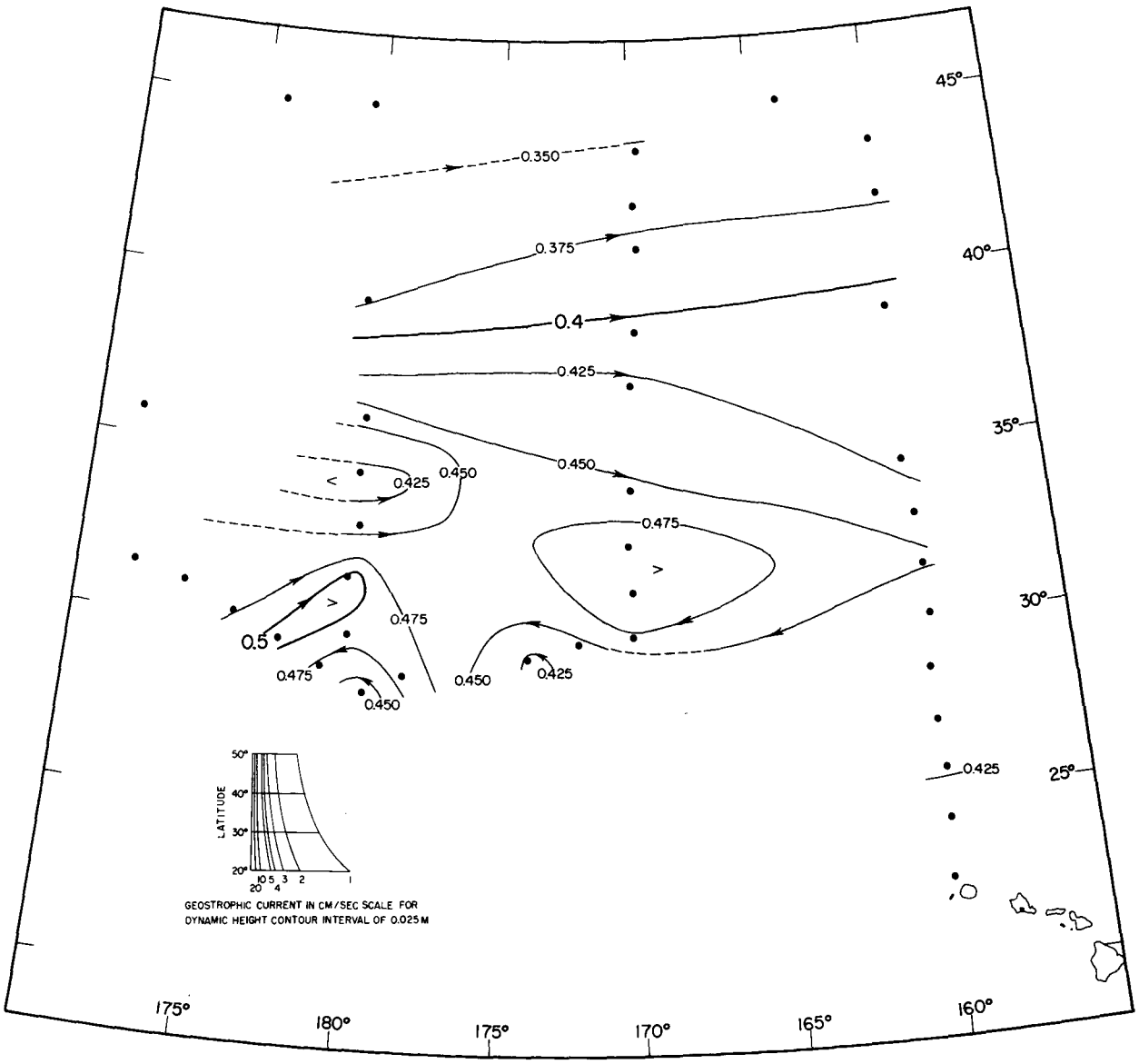

Figure 12.--Anomaly of the geopotential topography of the 600-db. surface in dynamic meters relative to the 1000-db. surface; Charles H. Gilbert cruise 17, September-November 1954. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.025 m.

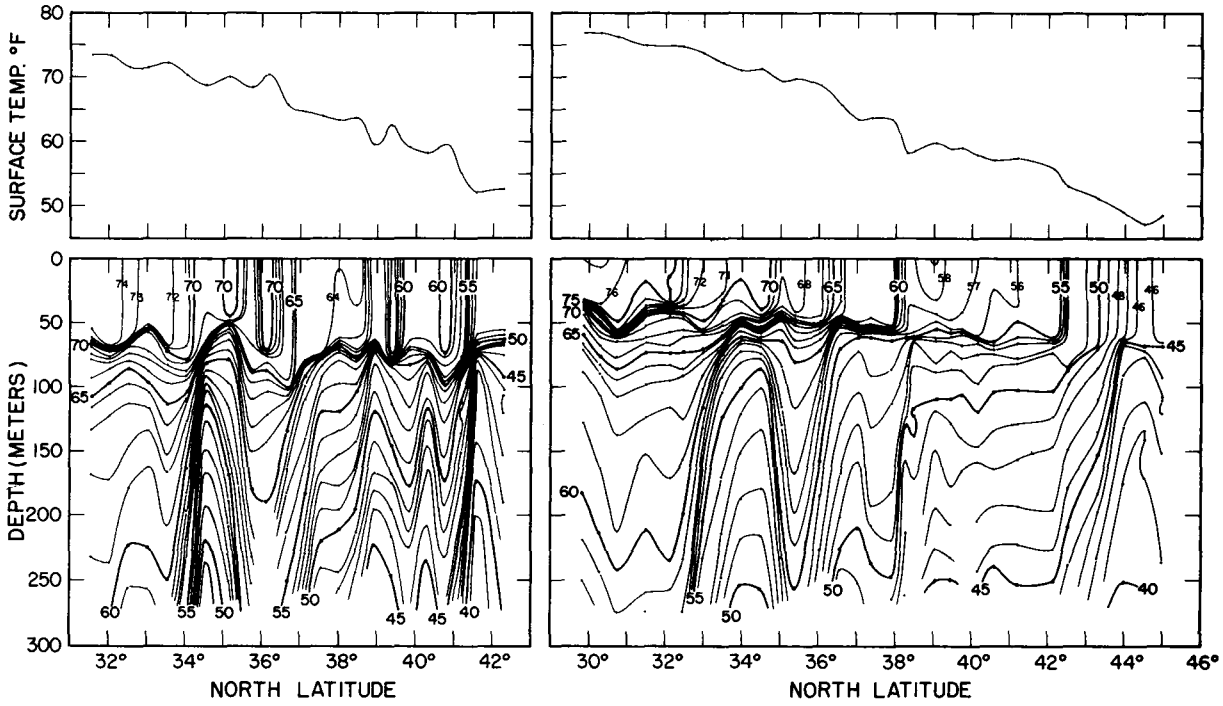

Figure 13.--Surface (bucket) temperature (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit along 172°E. longitude from BT observations; Charles H. Gilbert cruise 17, September-November 1954. Small dashes indicate the depth of lowering. Contour interval 1°F.

Figure 14.--Same along the 180th meridian.

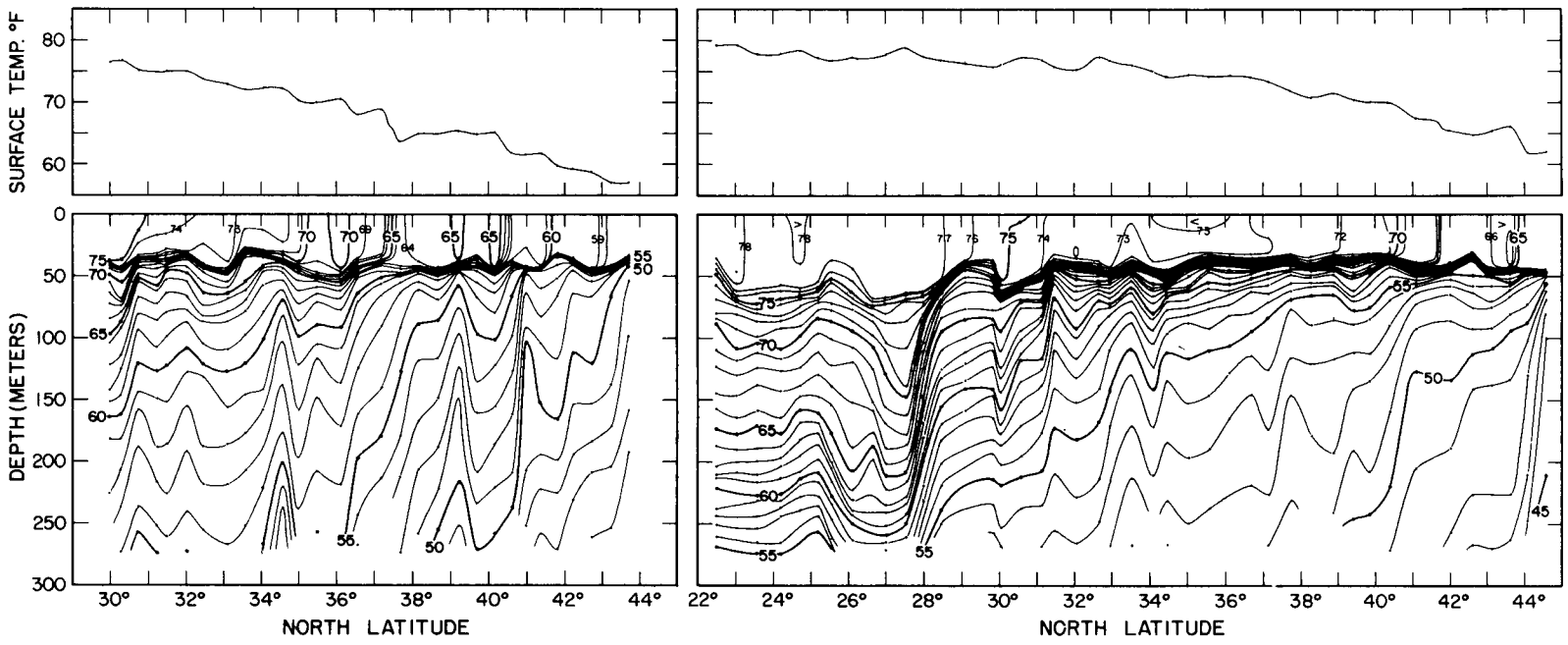

Figure 15.--Surface (bucket) temperature (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit along 170°W. longitude from BT observations; Charles H. Gilbert cruise 17, September-November 1954. Small dashes indicate the depth of lowering. Contour interval 1°F.

Figure 16.--Same along 160°W. longitude.

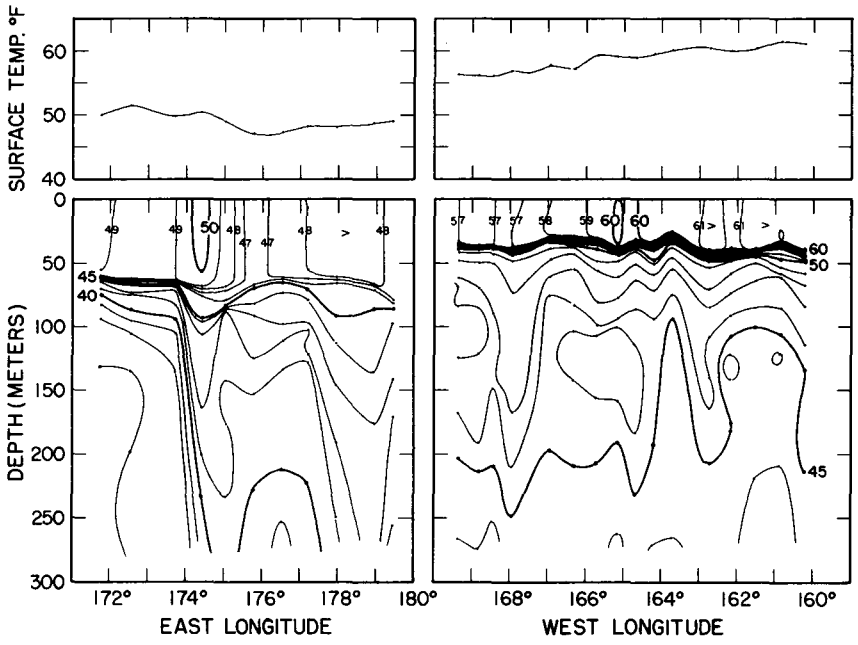

Figure 17.--Surface (bucket) temperature (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit along 45°N. latitude between 172°E. and the 180th meridian from BT observations (lower panel); Charles H. Gilbert cruise 17, September-November 1954.

Figure 18.--Same along 45°N. between 160° and 170°W. longitude.

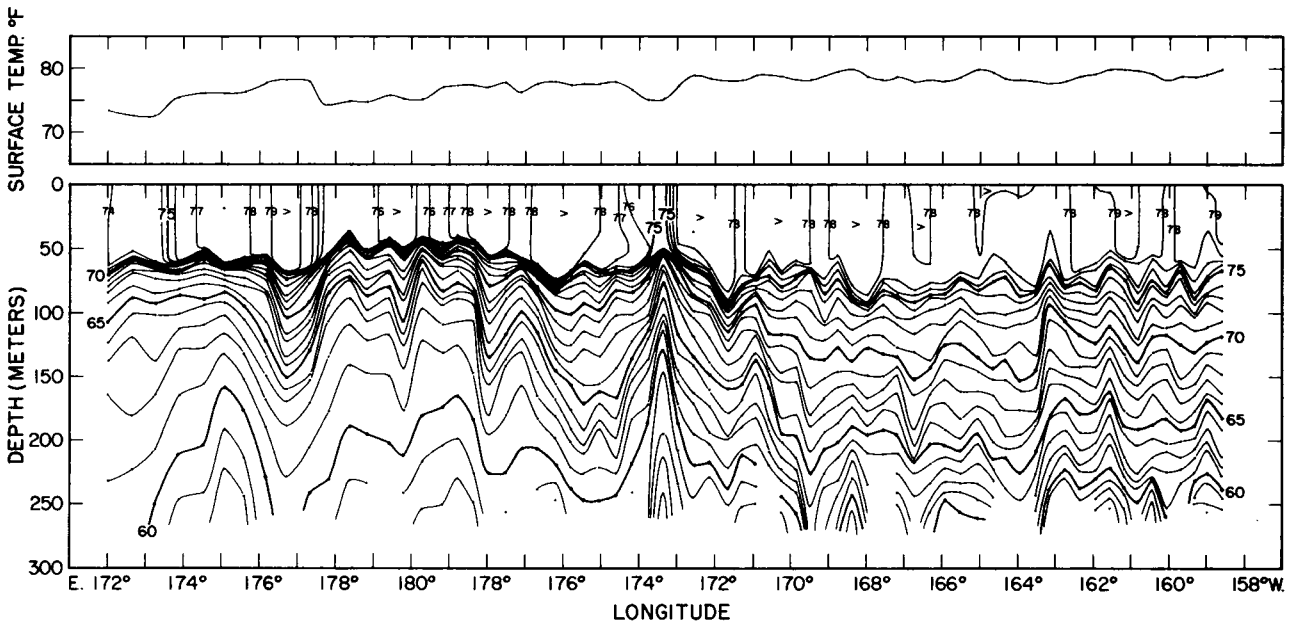

Figure 19. -- Surface (bucket) temperatures (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit from 31°23'N., 172°E. to 21°23'N., 158°35'W. from BT observations; Charles H. Gilbert cruise 17, September-November 1954. Contour interval 1°F.

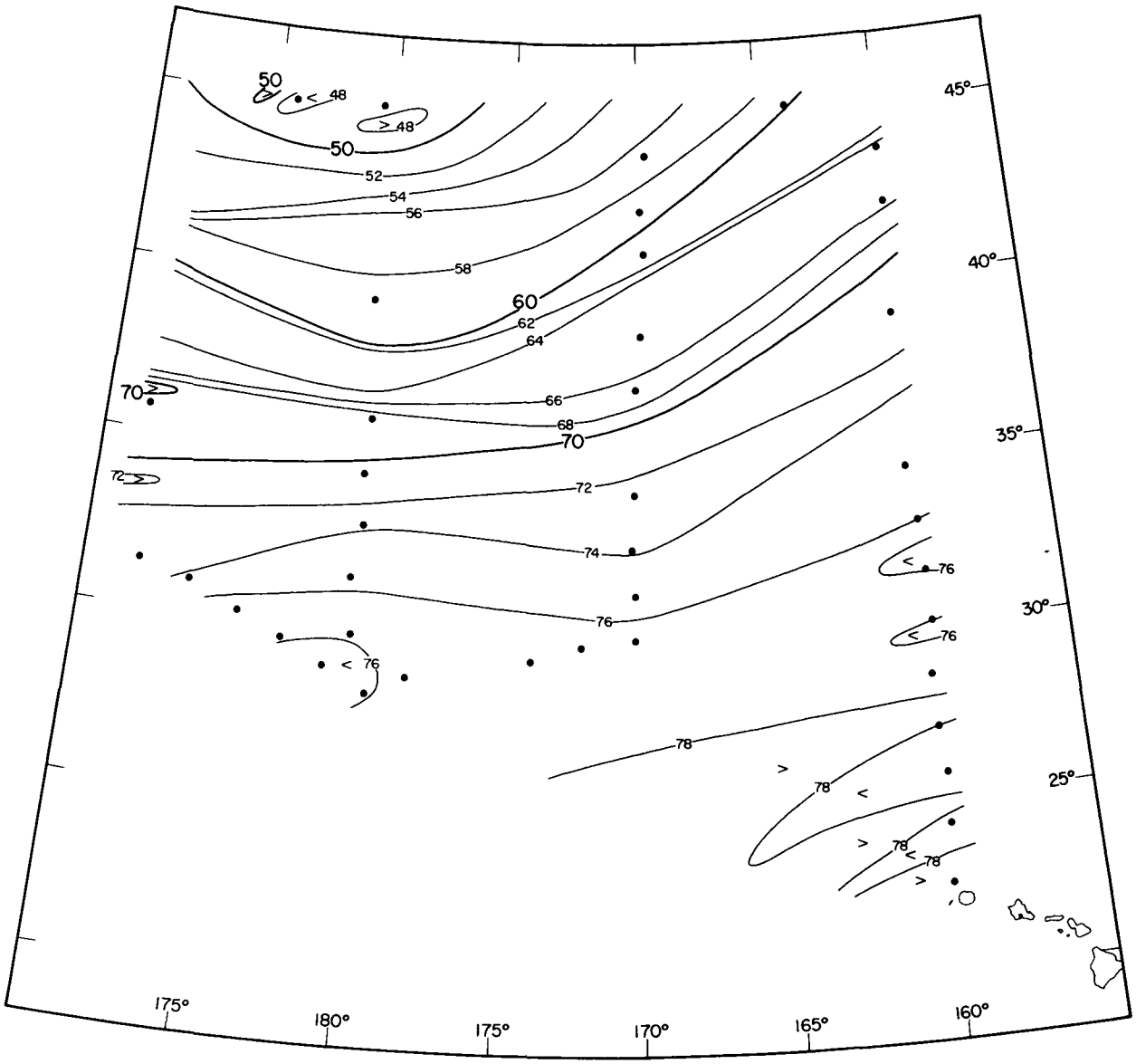

Figure 20.--Surface (bucket) temperatures in degrees Fahrenheit; Charles H. Gilbert cruise 17, September-November 1954. Contour interval 2°F.

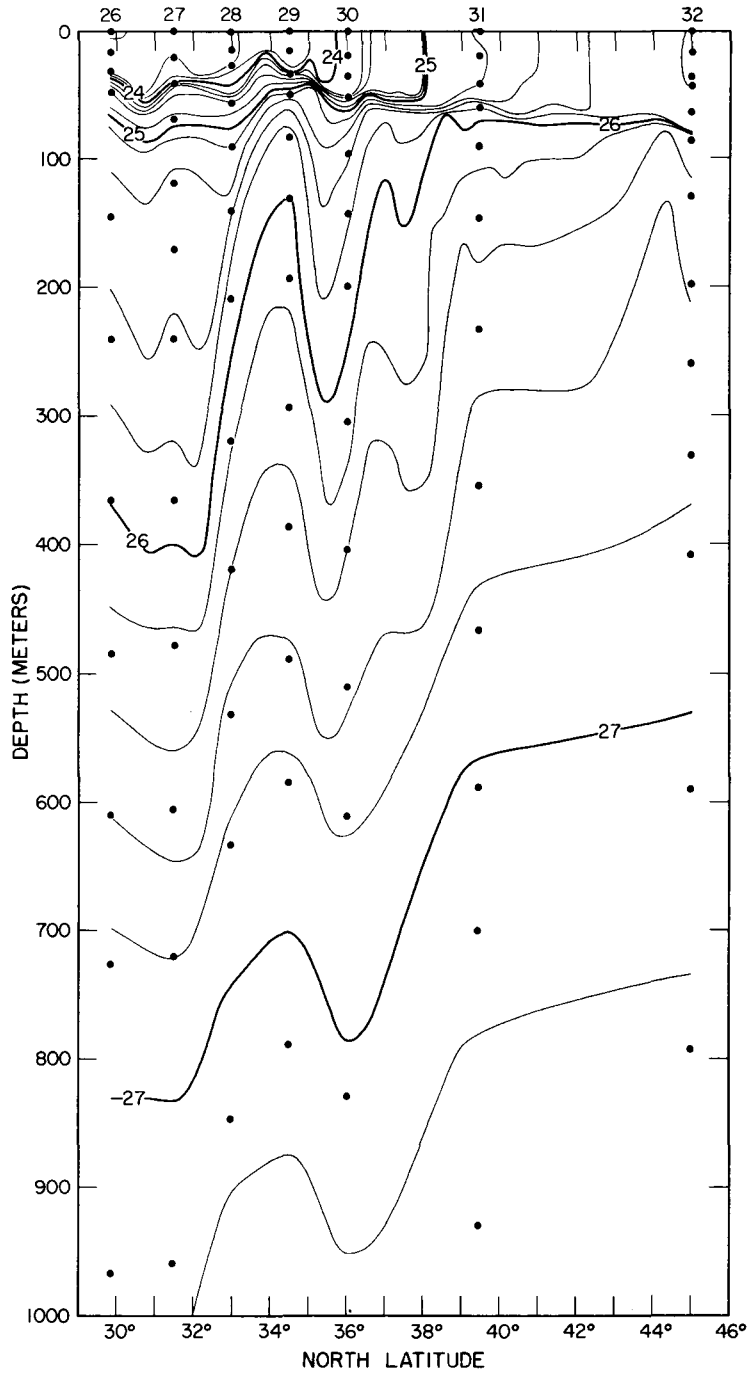

Figure 21.--Vertical section of sigma-t along the 180th meridian; Charles H. Gilbert cruise 17, stations 26-32, September-November 1954. Contour interval 0.2. Points indicate observed values.

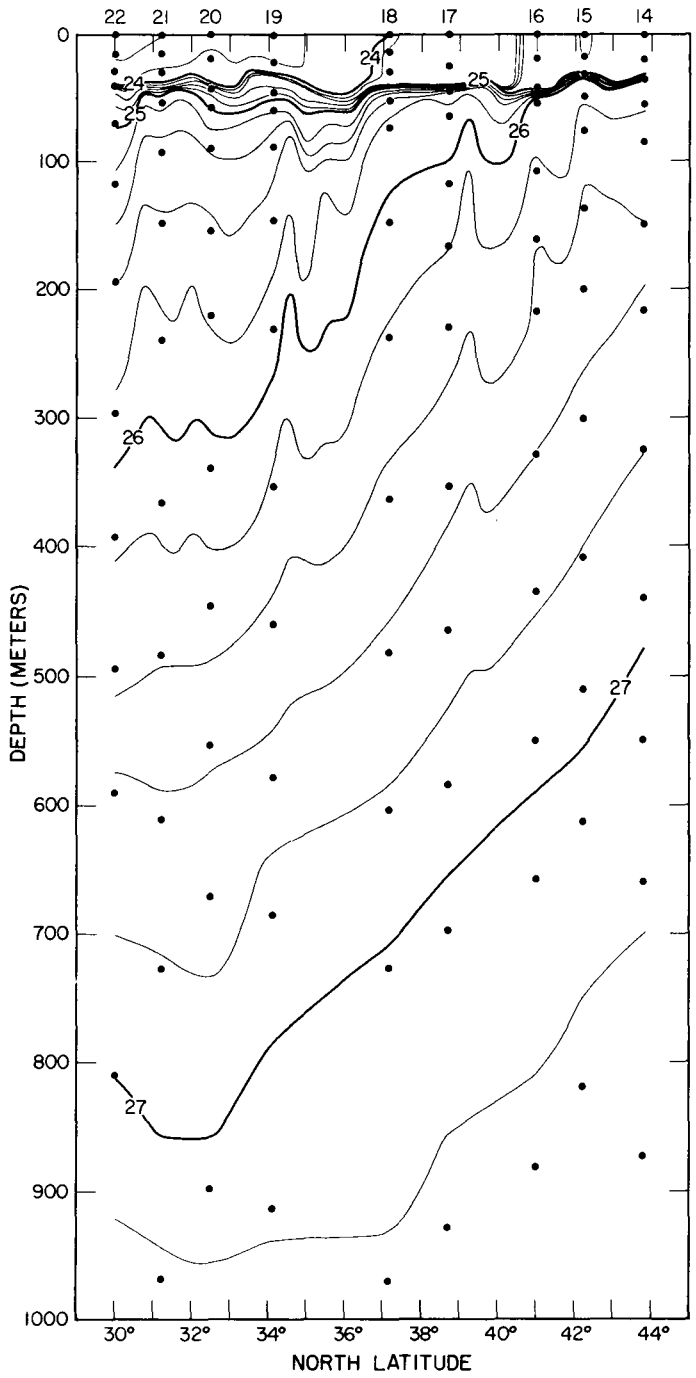

Figure 22.--Vertical section of sigma-t along 170°W. longitude; Charles H. Gilbert cruise 17, stations 14-22, September-November 1954. Contour interval 0.2. Points indicate observed values.

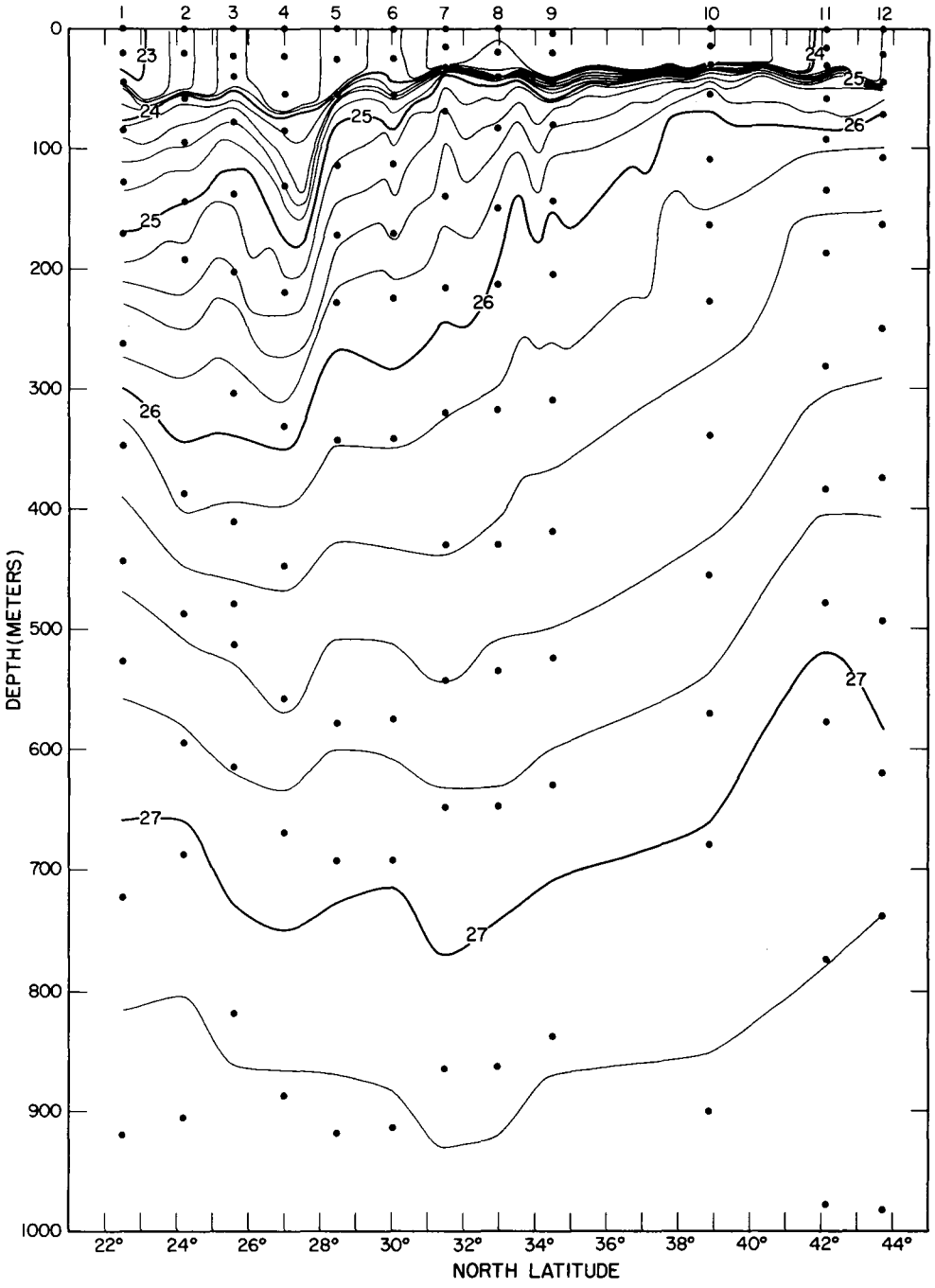

Figure 23.--Vertical section of sigma-t along 160°W. longitude; Charles H. Gilbert cruise 17, stations 1-12, September-November 1954. Contour interval 0.2. Points indicate observed values.

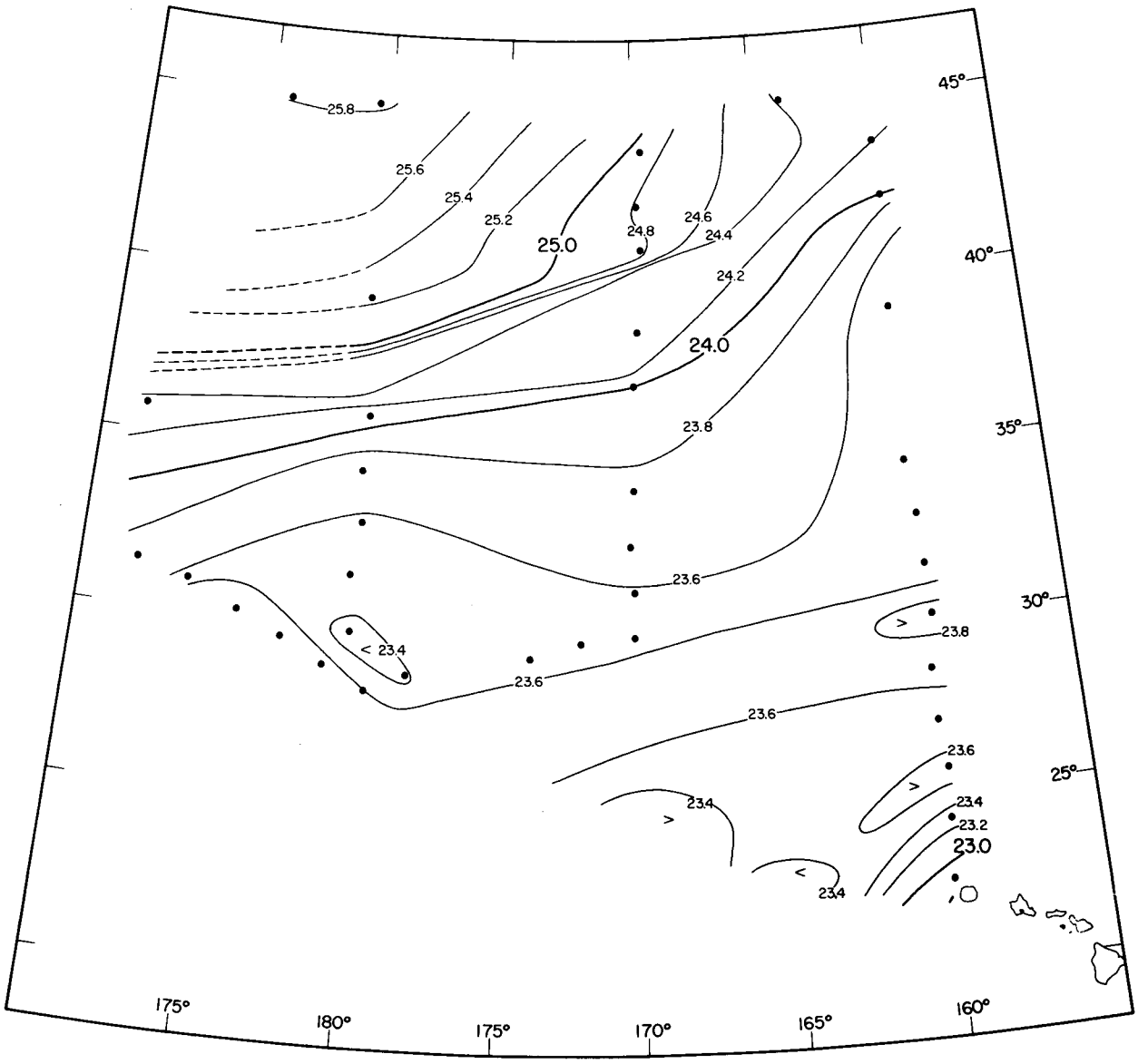

Figure 24.--Surface sigma-t, Charles H. Gilbert cruise 17, September-November 1954. Contour interval 0.2. Dots indicate station positions.

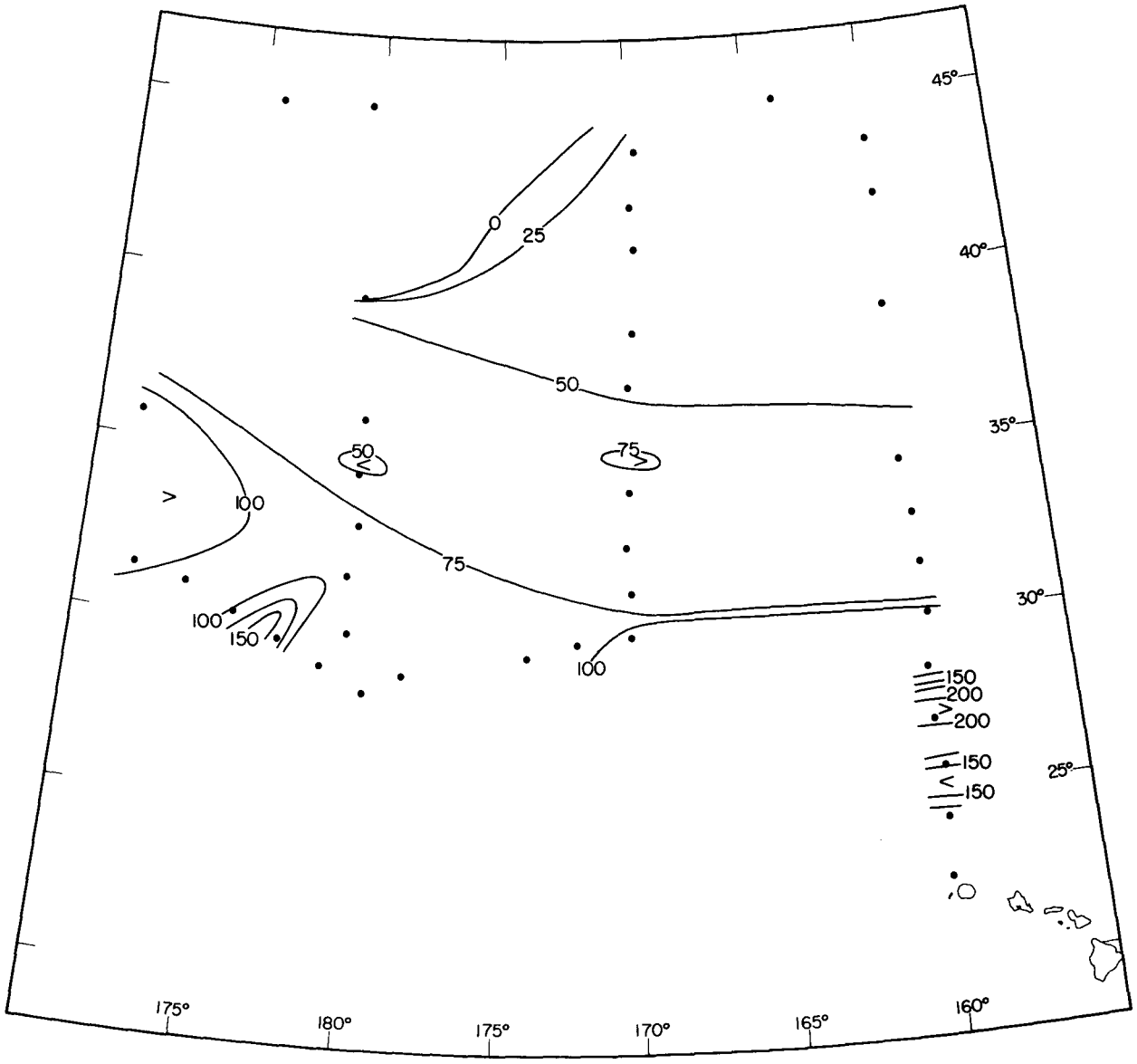

Figure 25.--Depth of the 25.2 sigma-t surface in meters, Charles H. Gilbert cruise 17, September-November 1954. Contour interval 25 m. Dots indicate station positions.

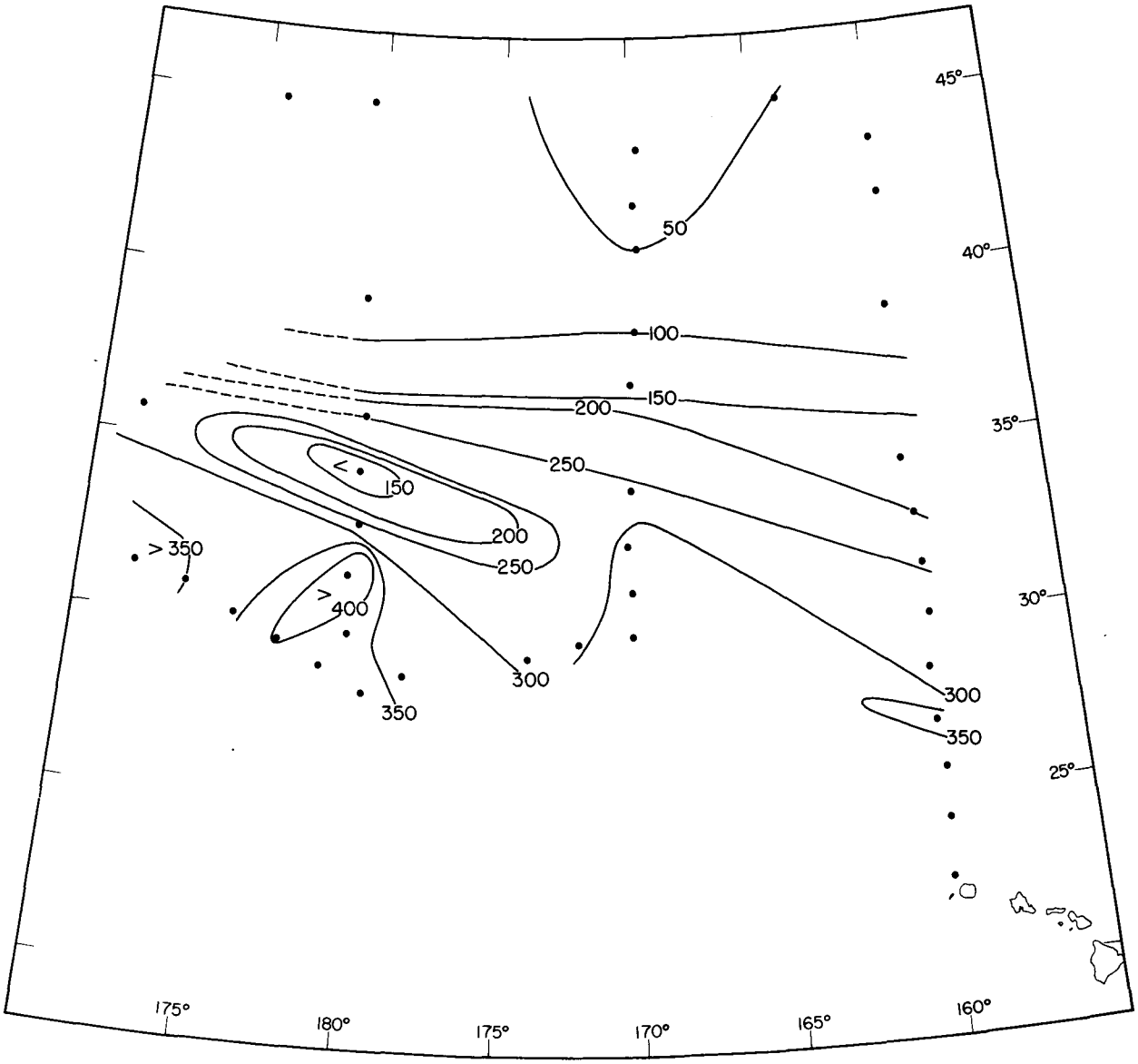

Figure 26.--Depth of the 26.0 sigma-t surface in meters; Charles H. Gilbert cruise 17, September-November 1954. Contour interval 50 m. Dots indicate station positions.

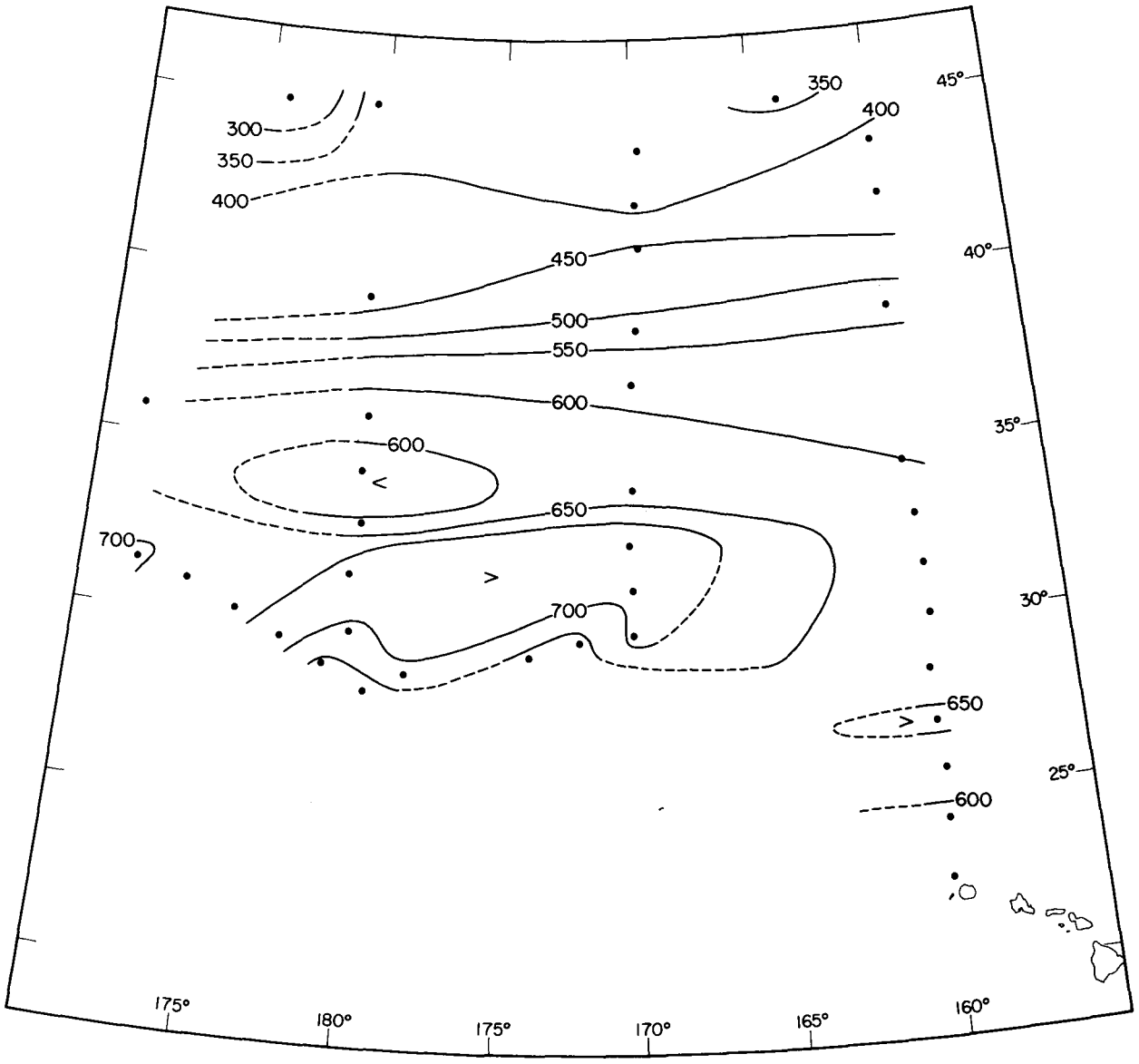

Figure 27.--Depth of the 26.8 sigma-t surface in meters; Charles H. Gilbert cruise 17, September-November 1954. Contour interval 50 m. Dots indicate station positions.

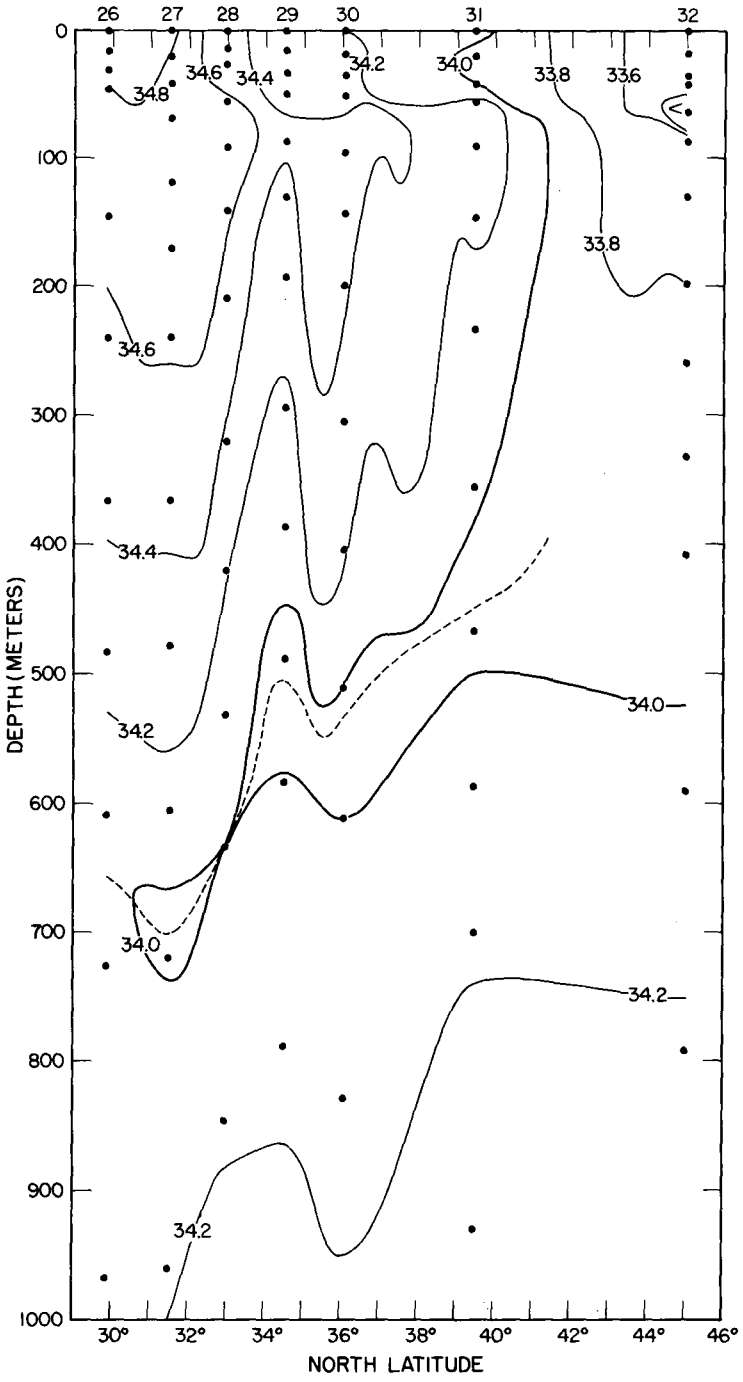

Figure 28.--Vertical section of salinity in parts per thousand along the 180th meridian; Charles H. Gilbert cruise 17, stations 26-32, September-November 1954. Contour interval 0.2 ‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

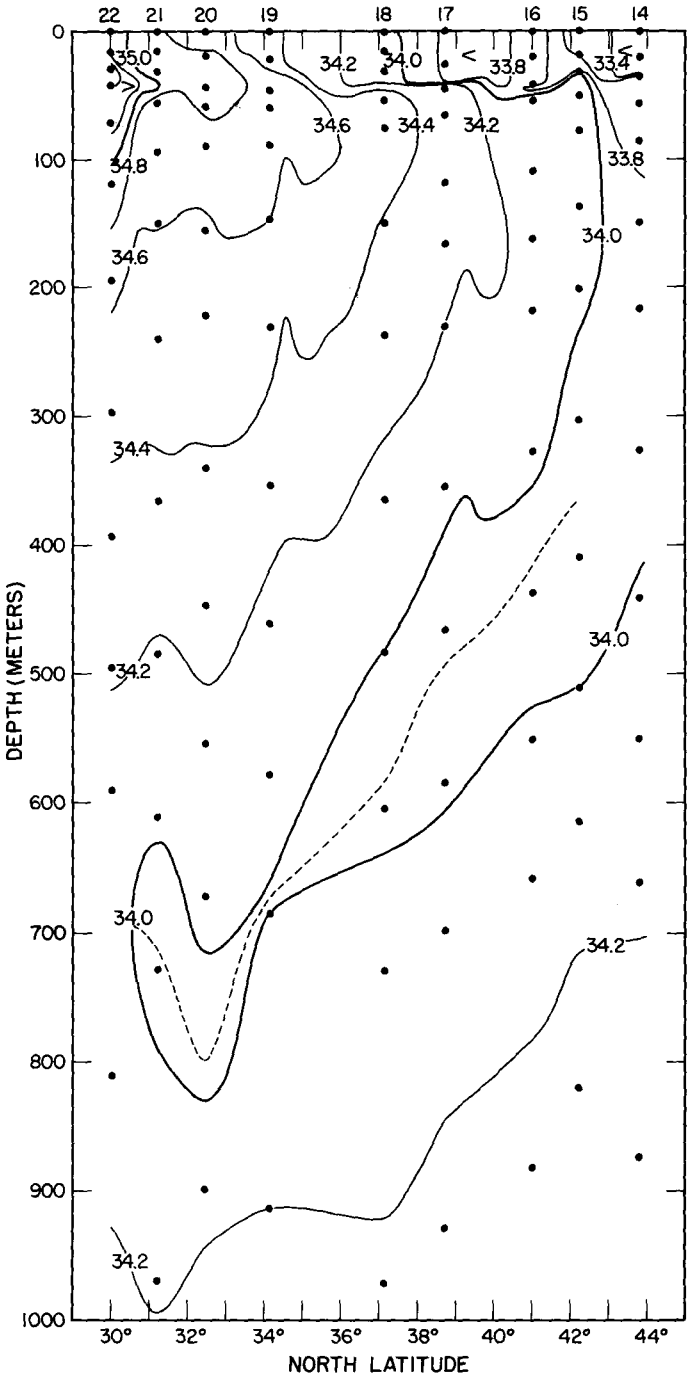

Figure 29.--Vertical section of salinity in parts per thousand along 170°W. longitude; Charles H. Gilbert cruise 17, stations 14-22, September-November 1954. Contour interval 0.2‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

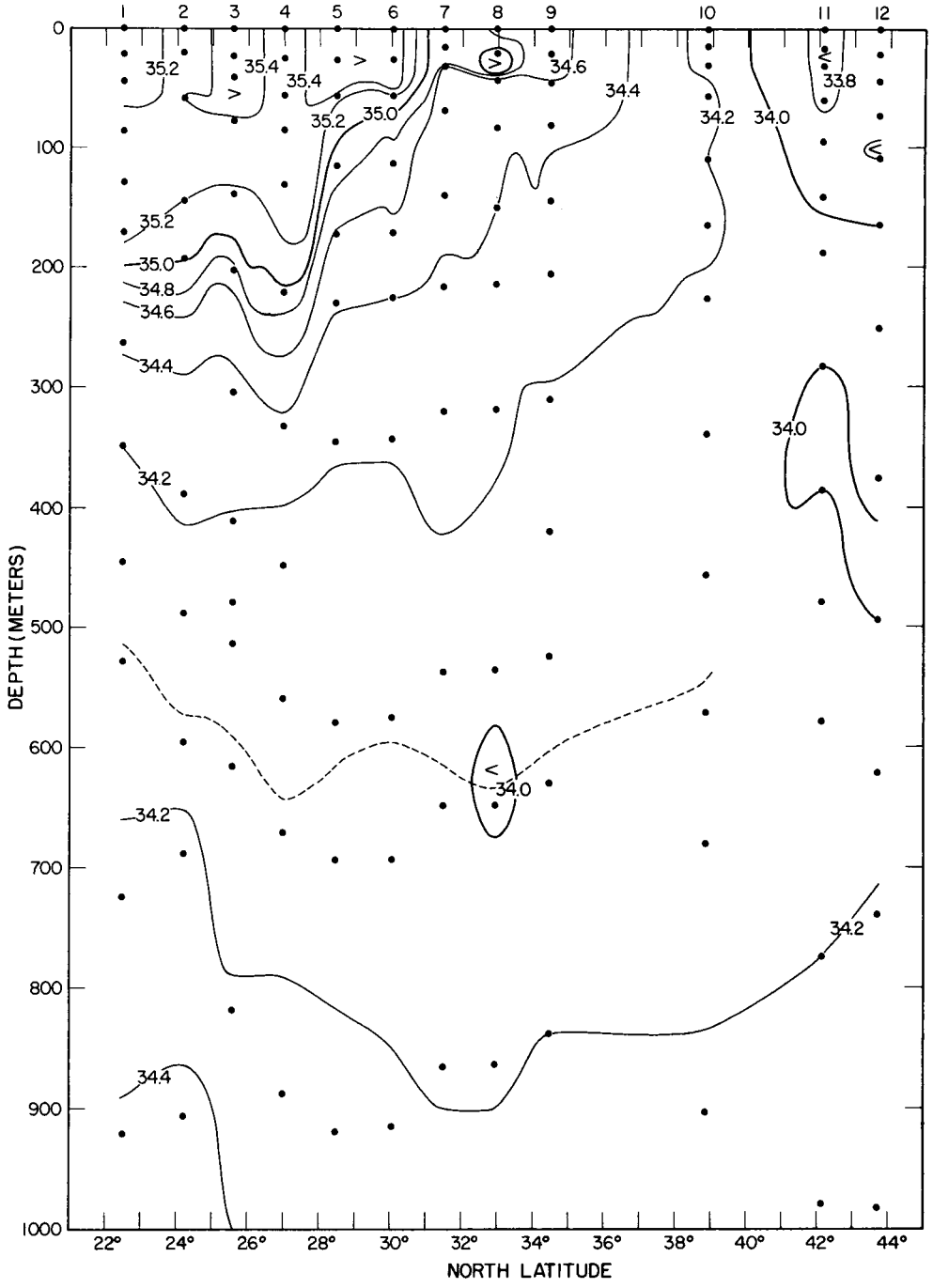

Figure 30.--Vertical section of salinity in parts per thousand along 160°W. longitude; Charles H. Gilbert cruise 17, stations 1-12, September-November 1954. Contour interval 0.2‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

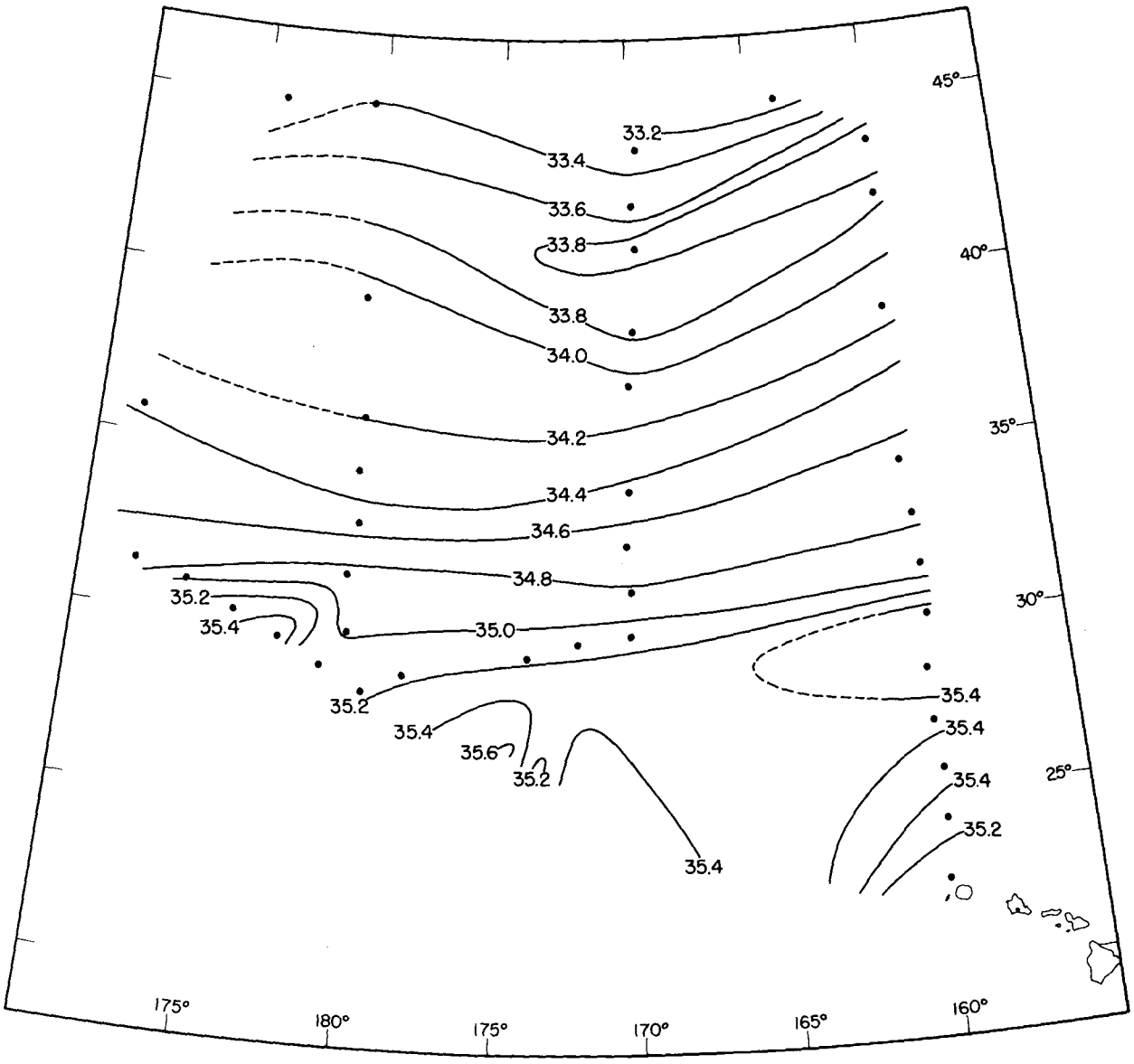

Figure 31.--Surface salinity in parts per thousand; Charles H. Gilbert cruise 17, September-November 1954. Contour interval 0.2 ‰. Dots indicate observed values.

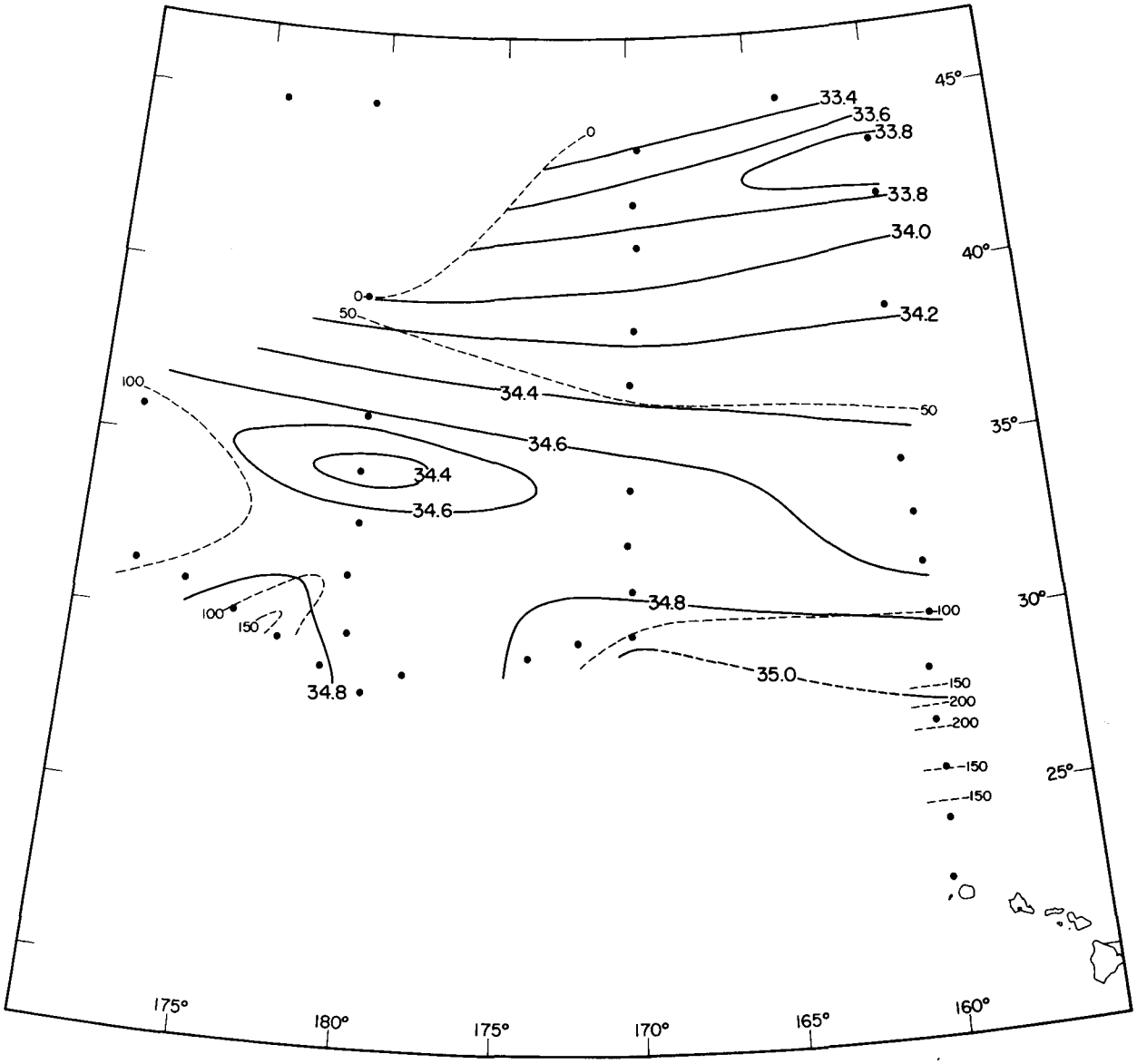

Figure 32.--Salinity in parts per thousand (solid lines) on the 25.2 sigma-t surface (depth in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: salinity 0.2 ‰, depth of sigma-t surface 50 m. Dots indicate station positions.

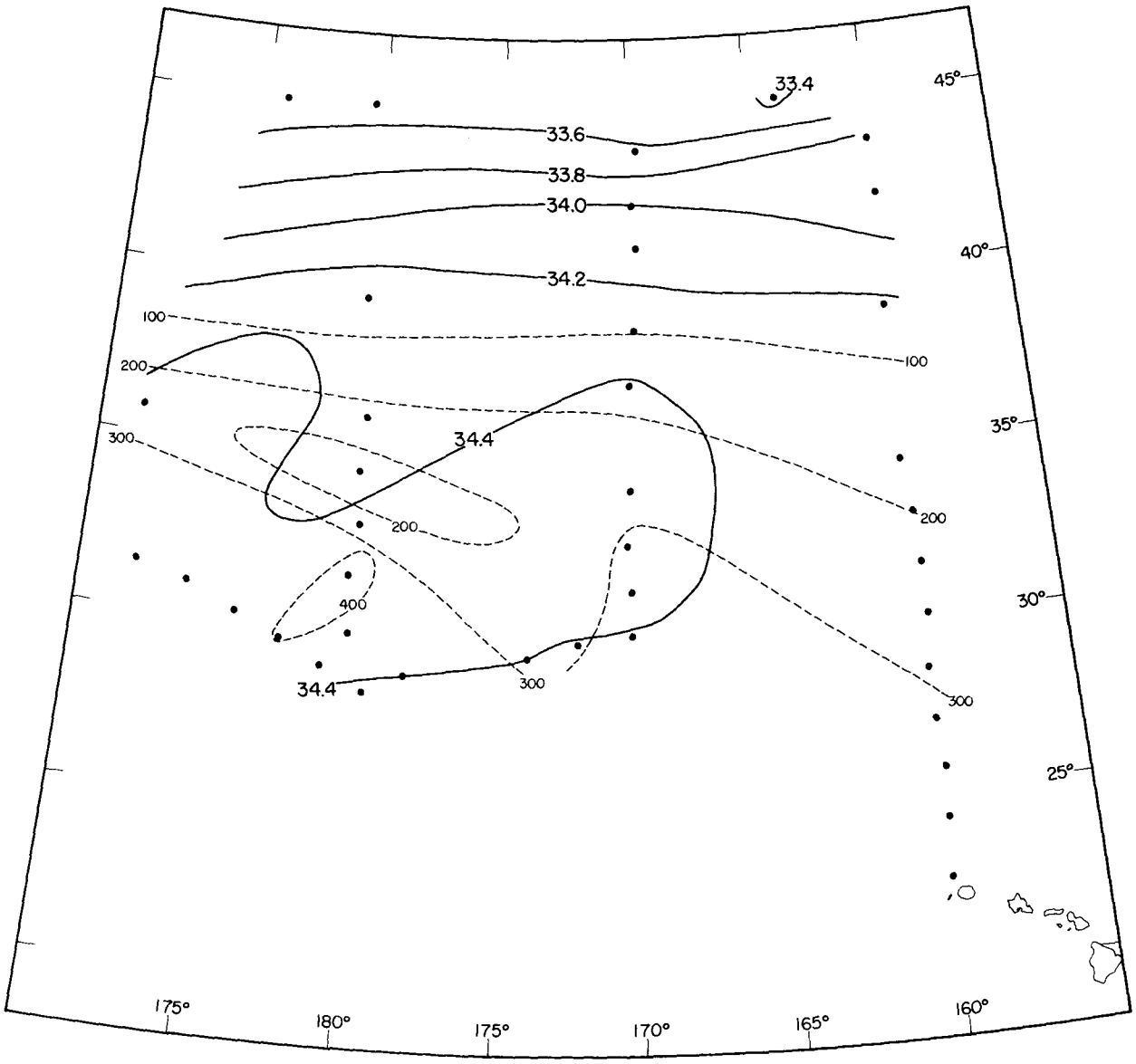

Figure 33.--Salinity in parts per thousand (solid lines) on the 26.0 sigma-t surface (depth in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: salinity 0.2 ‰, depth of sigma-t surface 100 m. Dots indicate station positions.

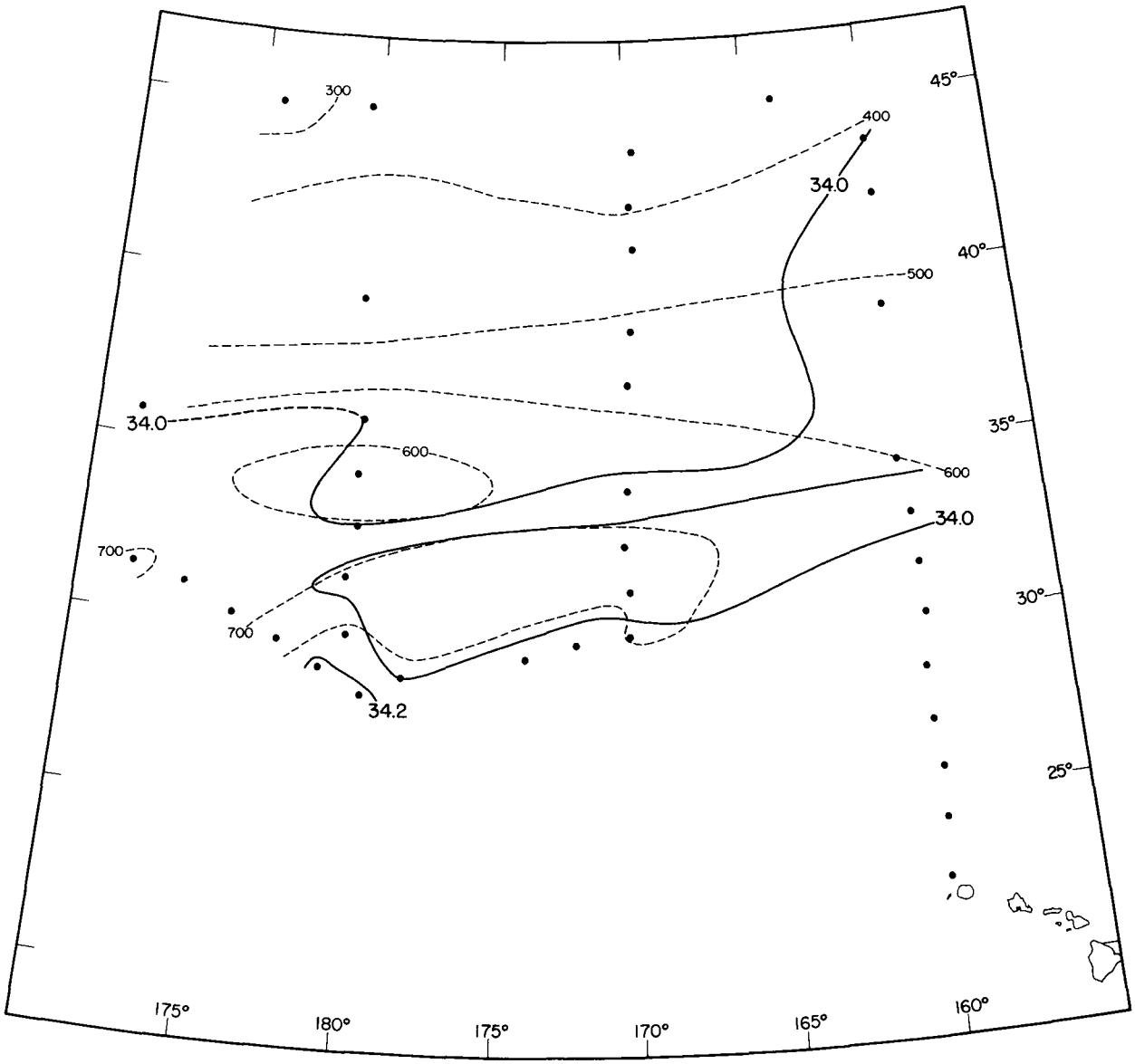

Figure 34.--Salinity in parts per thousand (solid lines) on the 26.8 sigma-t surface (depth in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: salinity 0.2 ‰, depth of sigma-t surface 100 m. Dots indicate station positions.

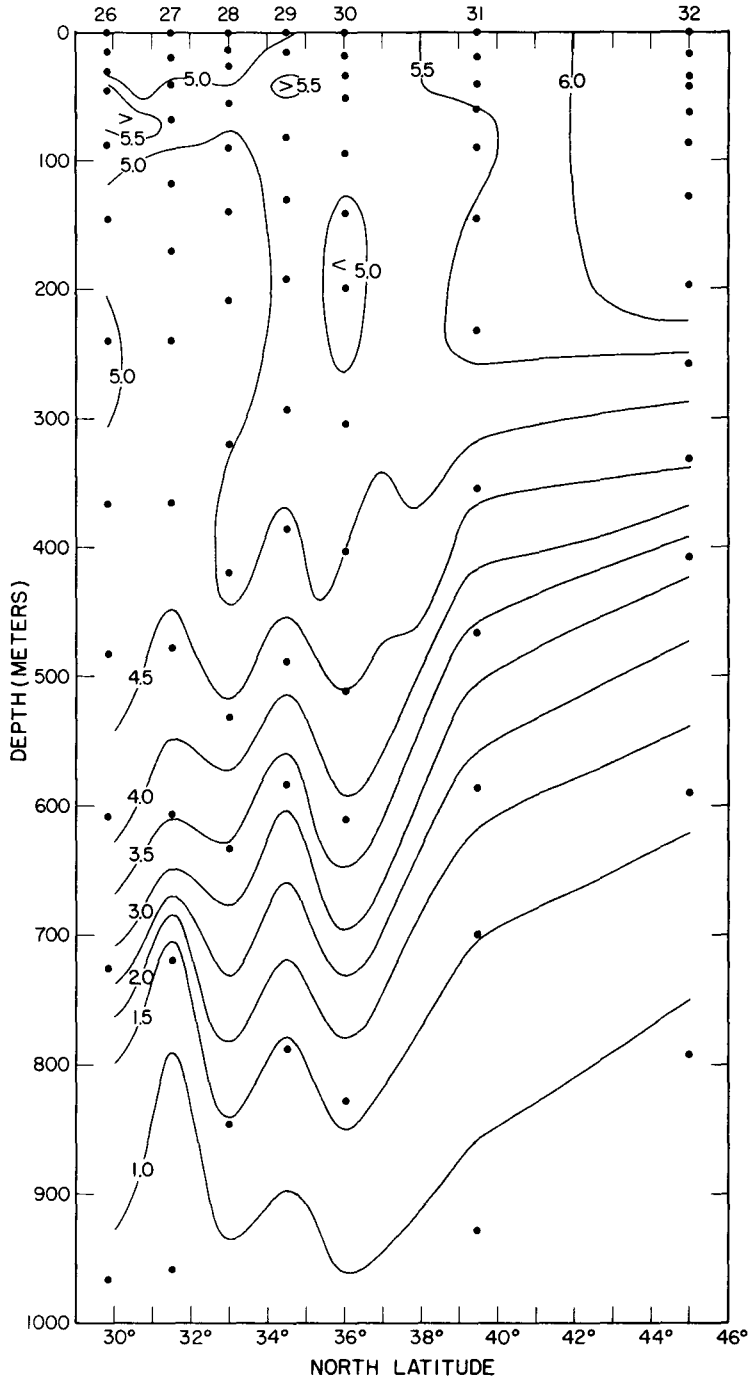

Figure 35.--Vertical section of dissolved oxygen in milliliters per liter along the 180th meridian; Charles H. Gilbert cruise 17, stations 26-32, September- November 1954. Contour interval: 0.5 ml./l. Points indicate observed values.

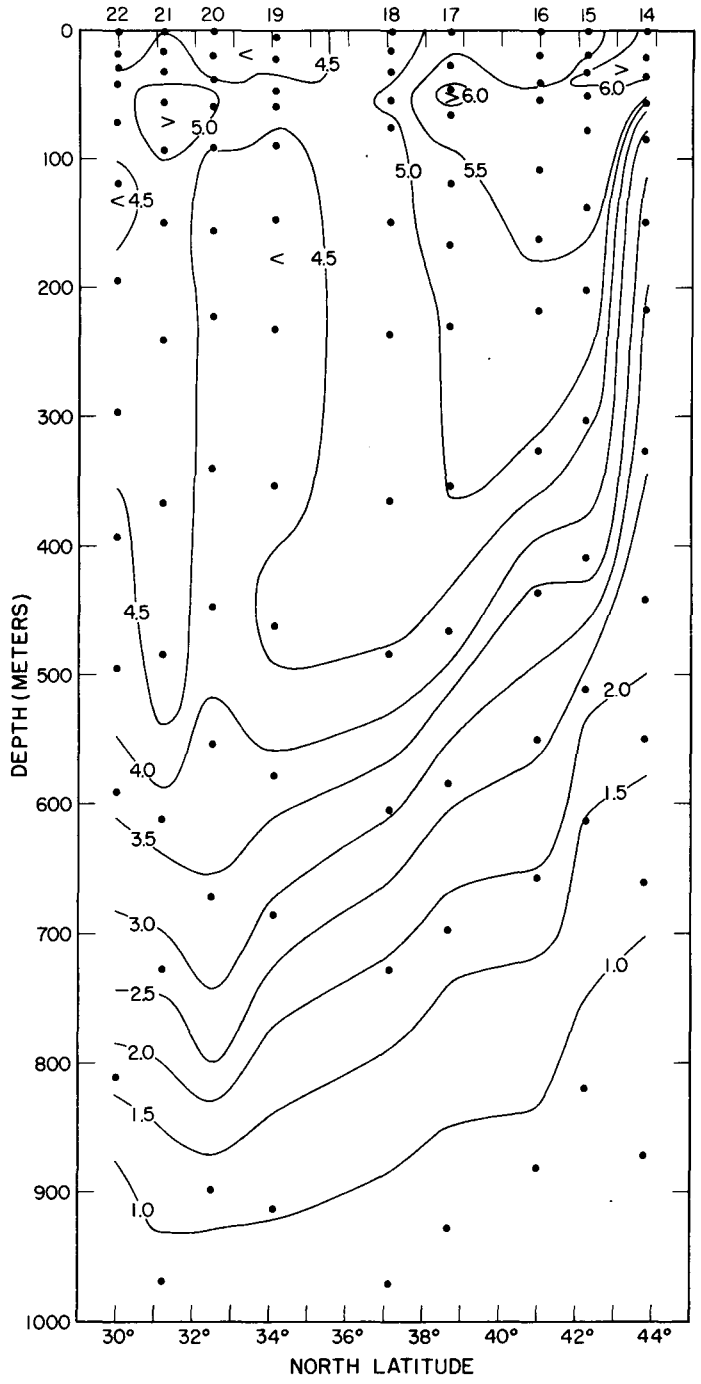

Figure 36.--Vertical section of dissolved oxygen in milliliters per liter along 170°W. longitude; Charles H. Gilbert cruise 17, stations 14-22, September-November 1954. Contour interval: 0.5 ml./l. Points indicate observed values.

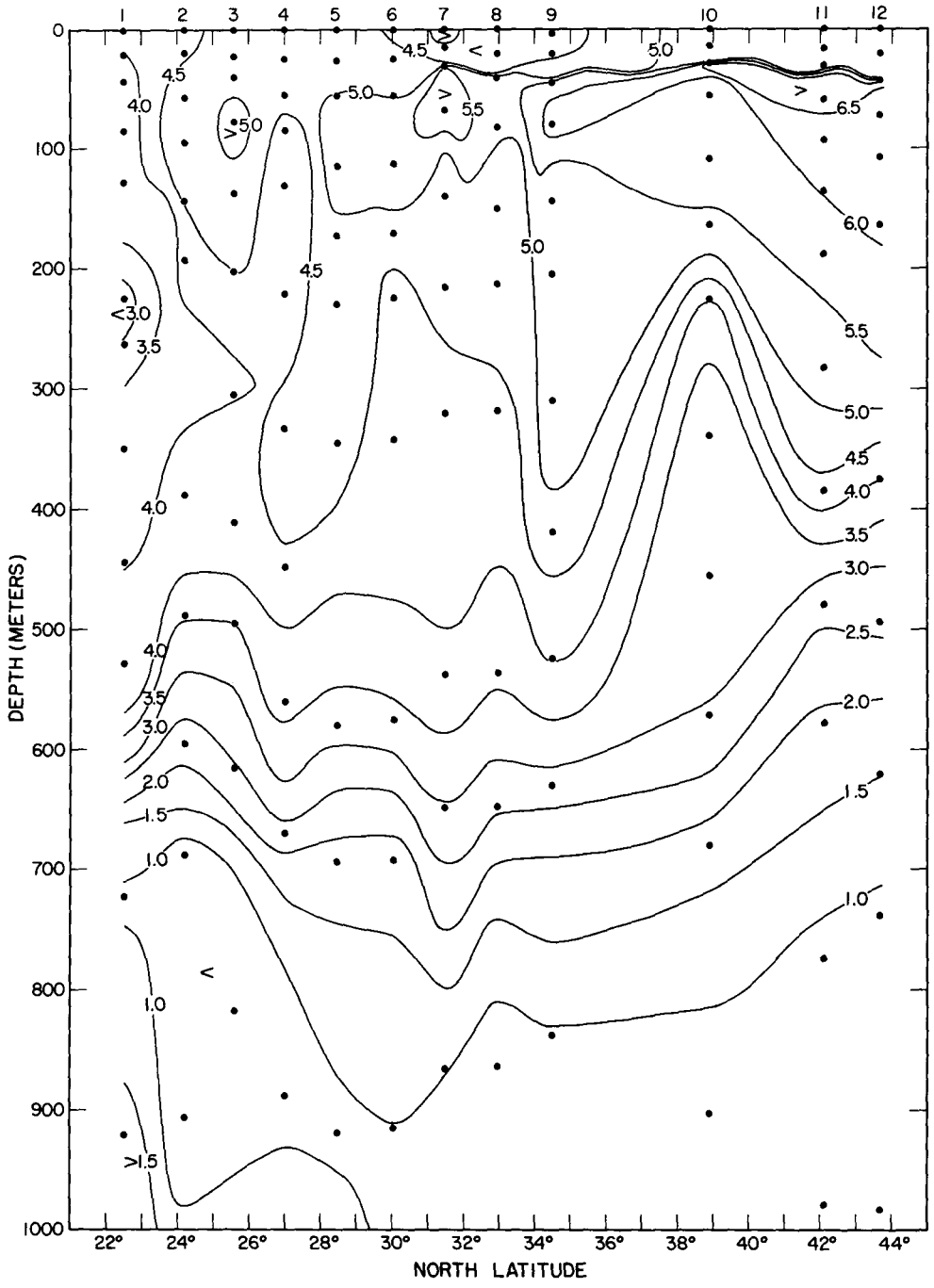

Figure 37.--Vertical section of dissolved oxygen in milliliters per liter along 160°W. longitude; Charles H. Gilbert cruise 17, stations 1-12, September-November 1954. Contour interval: 0.5 ml./l. Points indicate observed values.

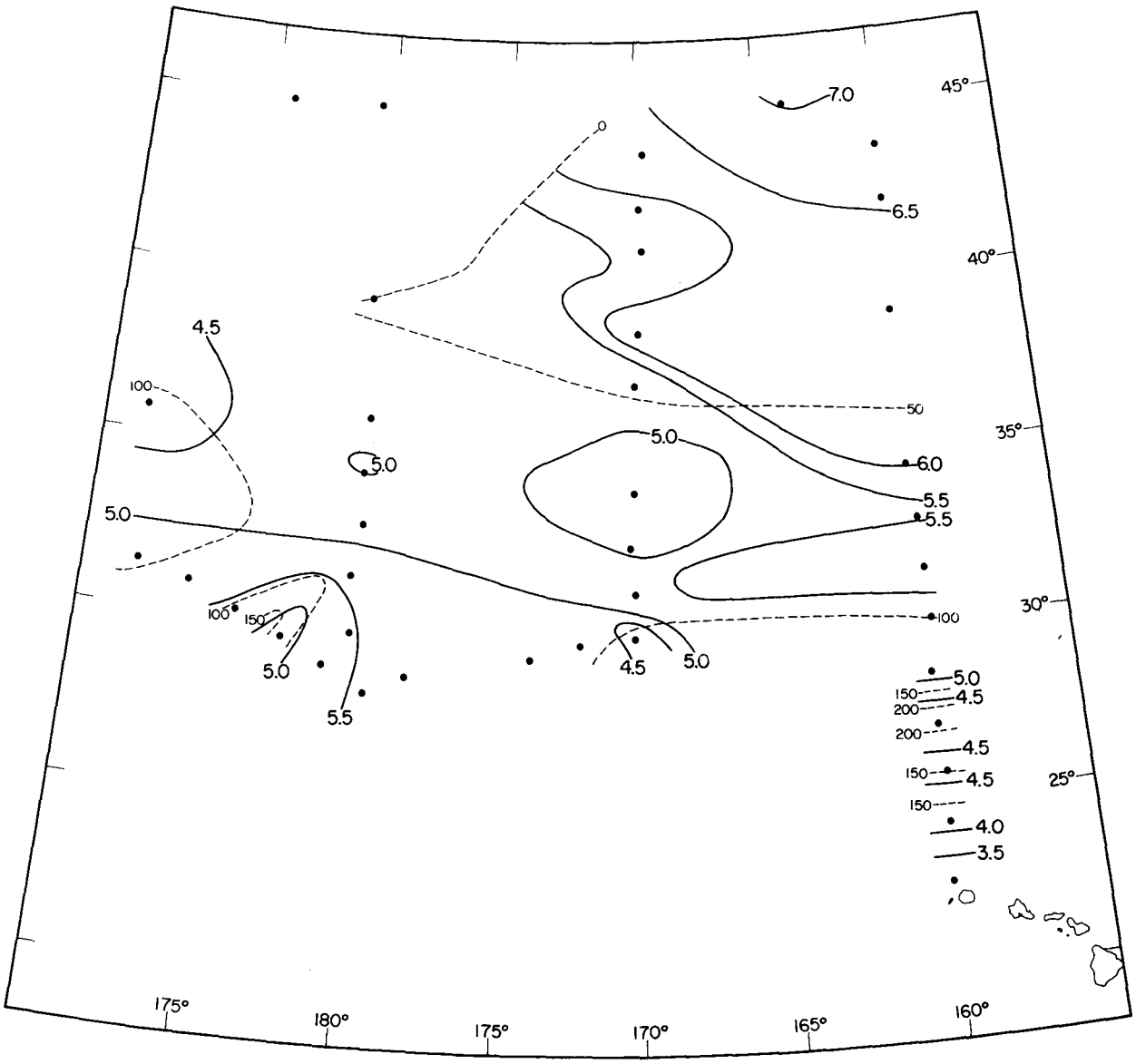

Figure 38.--Dissolved oxygen in milliliters per liter (solid lines) on the 25.2 sigma-t surface (depths in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: dissolved oxygen 0.5 ml./l., depth of sigma-t surface 50 m. Dots indicate station positions.

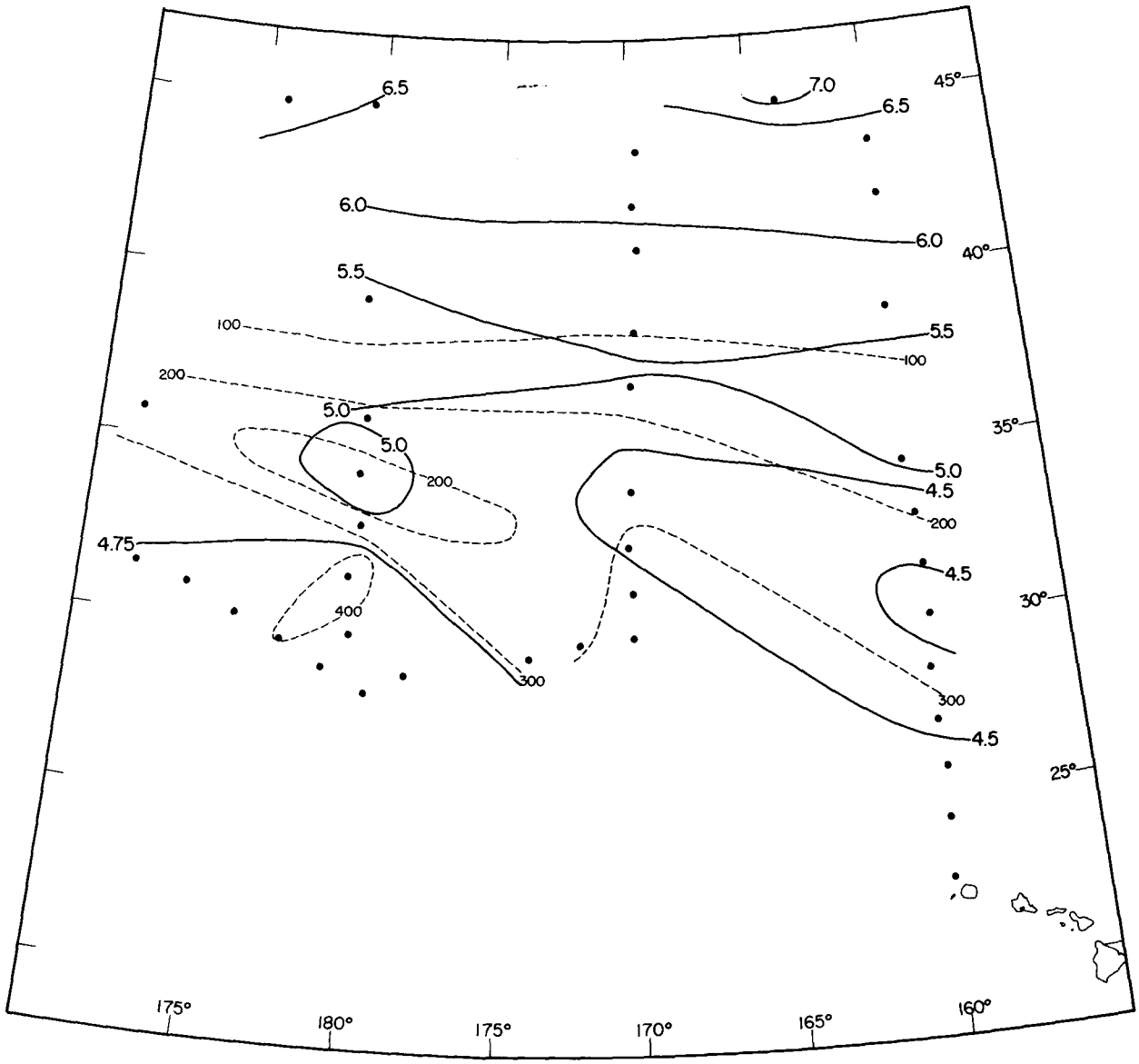

Figure 39.--Dissolved oxygen in milliliters per liter (solid lines) on the 26.0 sigma-t surface (depth in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: dissolved oxygen 0.5 ml./l., depth of sigma-t surface 100 m. Dots indicate station positions.

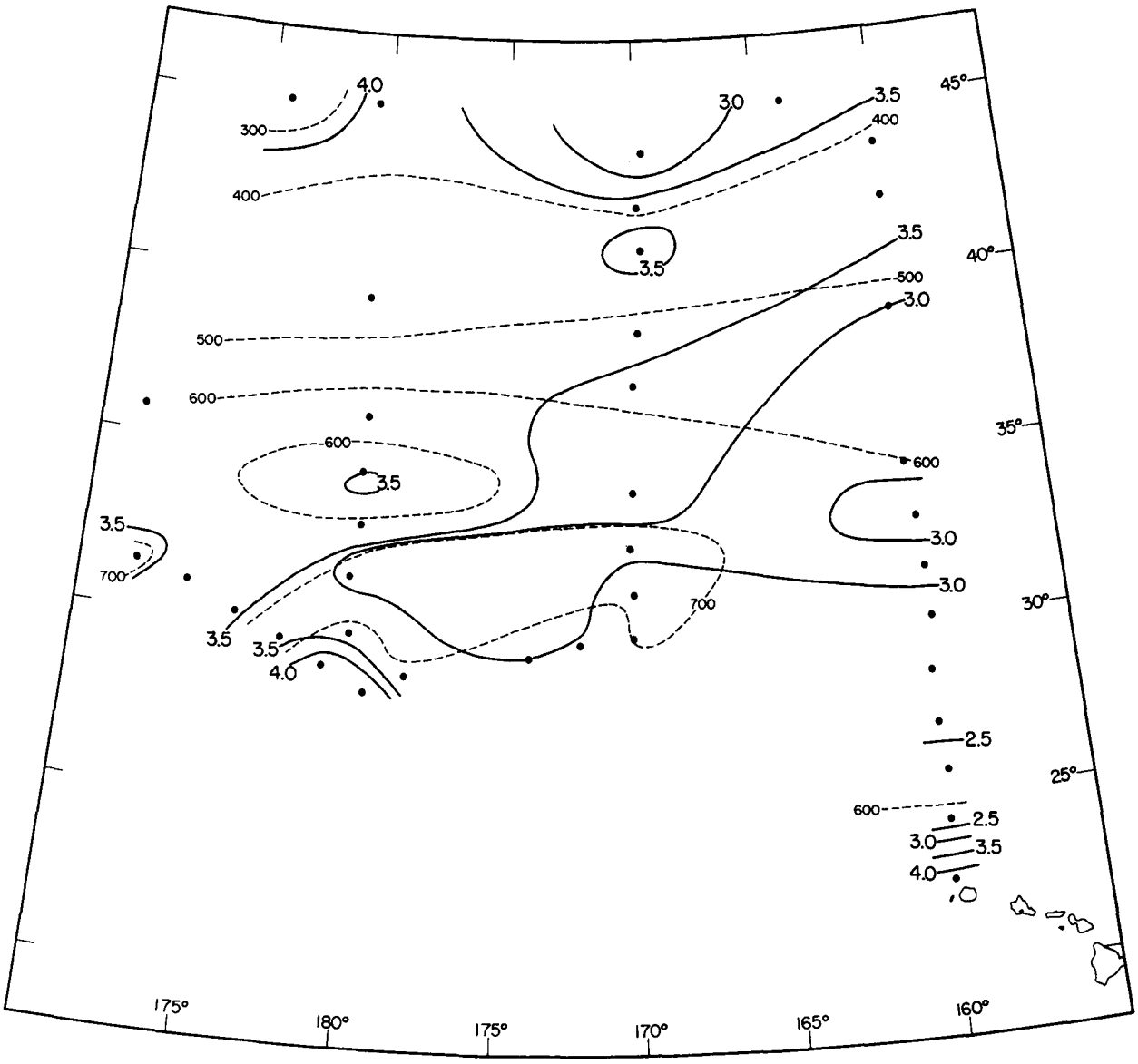

Figure 40.--Dissolved oxygen in milliliters per liter (solid lines) on the 26.8 sigma-t surface (depth in meters, dotted lines); Charles H. Gilbert cruise 17, September-November 1954. Contour intervals: dissolved oxygen 0.5 ml./l., depth of sigma-t surface 100 m. Dots indicate station positions.

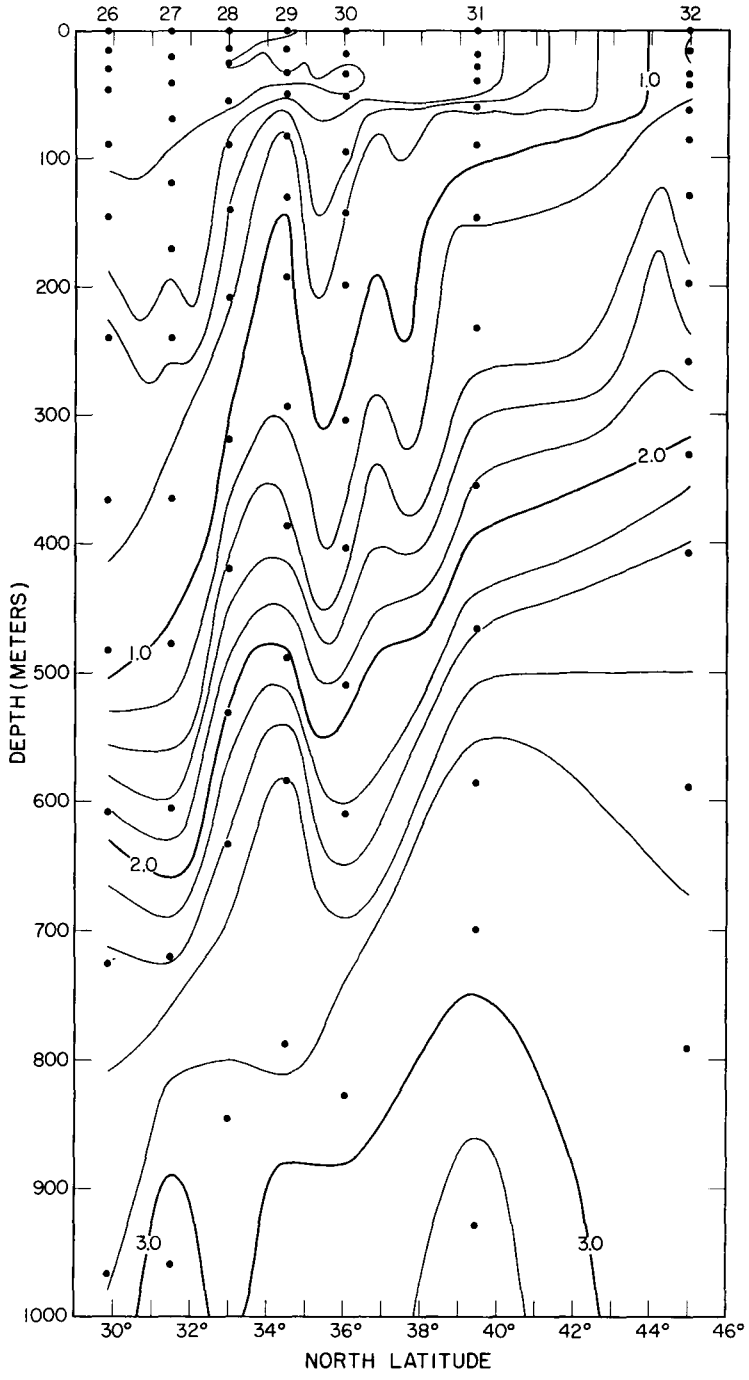

Figure 41.--Vertical section of inorganic phosphate in microgram-atoms per liter along the 180th meridian; Charles H. Gilbert cruise 17, stations 26-32, September-November 1954. Contour interval 0.2 μg at./l.

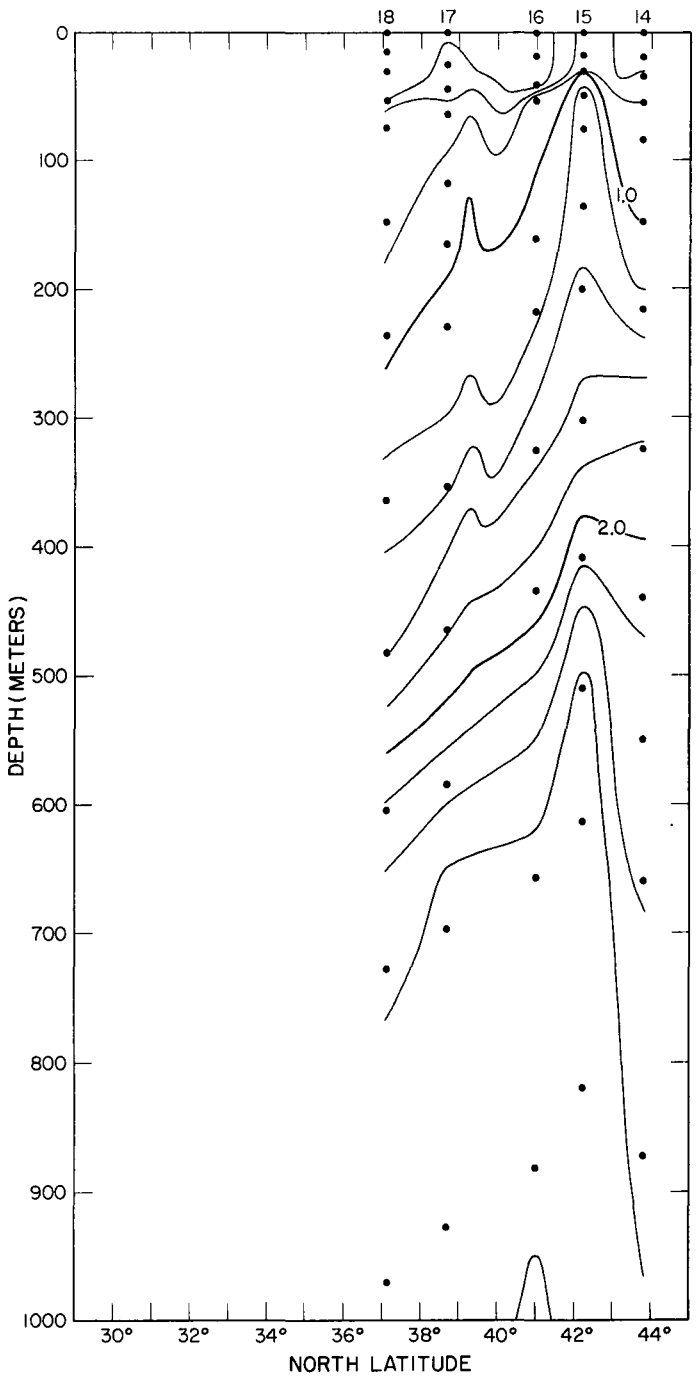

Figure 42.--Vertical section of inorganic phosphate in microgram-atoms per liter along 170°W. longitude; Charles H. Gilbert cruise 17, stations 14-18, September-November 1954. Contour interval 0.2 μg at./l.

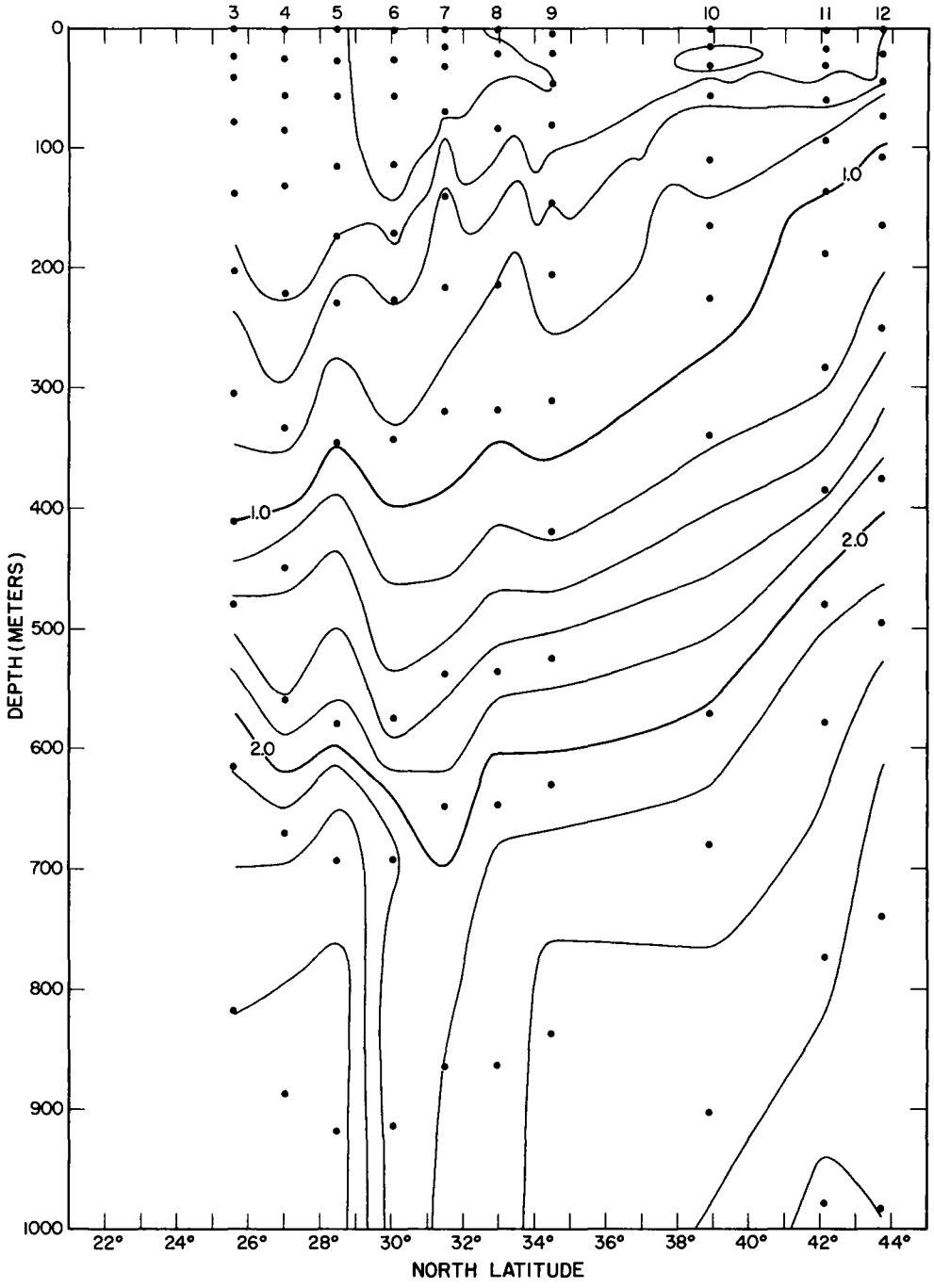

Figure 43.--Vertical section of inorganic phosphate in microgram-atoms per liter along 160°W. longitude; Charles H. Gilbert cruise 17, stations 3-12, September-November 1954. Contour interval 0.2 μg at./l.

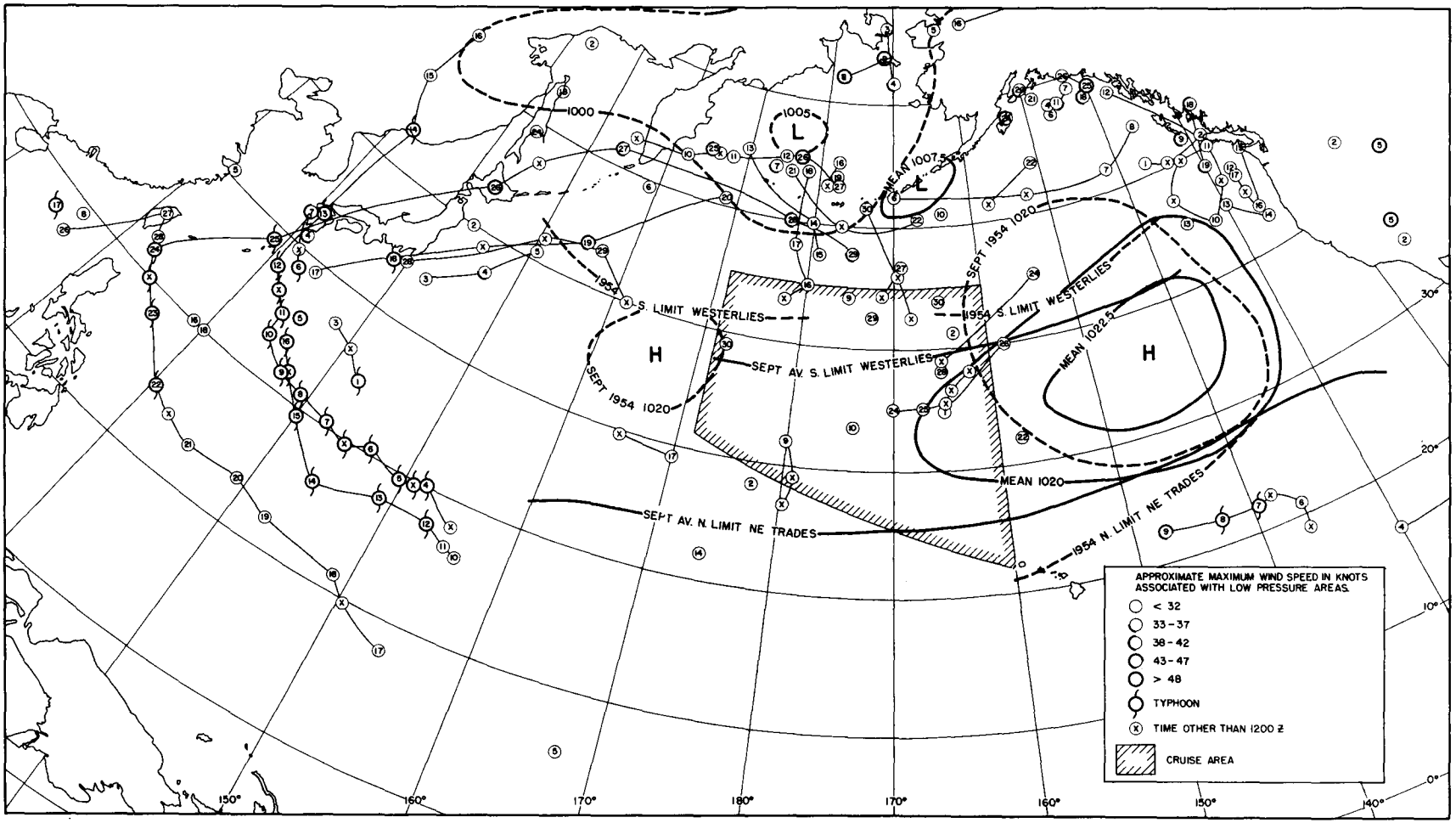

Figure 44.--Normal (heavy solid lines) and mean September 1954 (broken lines) position of the Aleutian Low and Eastern North Pacific High; normal and 1954 mean monthly limits of the northeast trades and westerlies; tracks of centers of low pressure areas, showing daily positions.

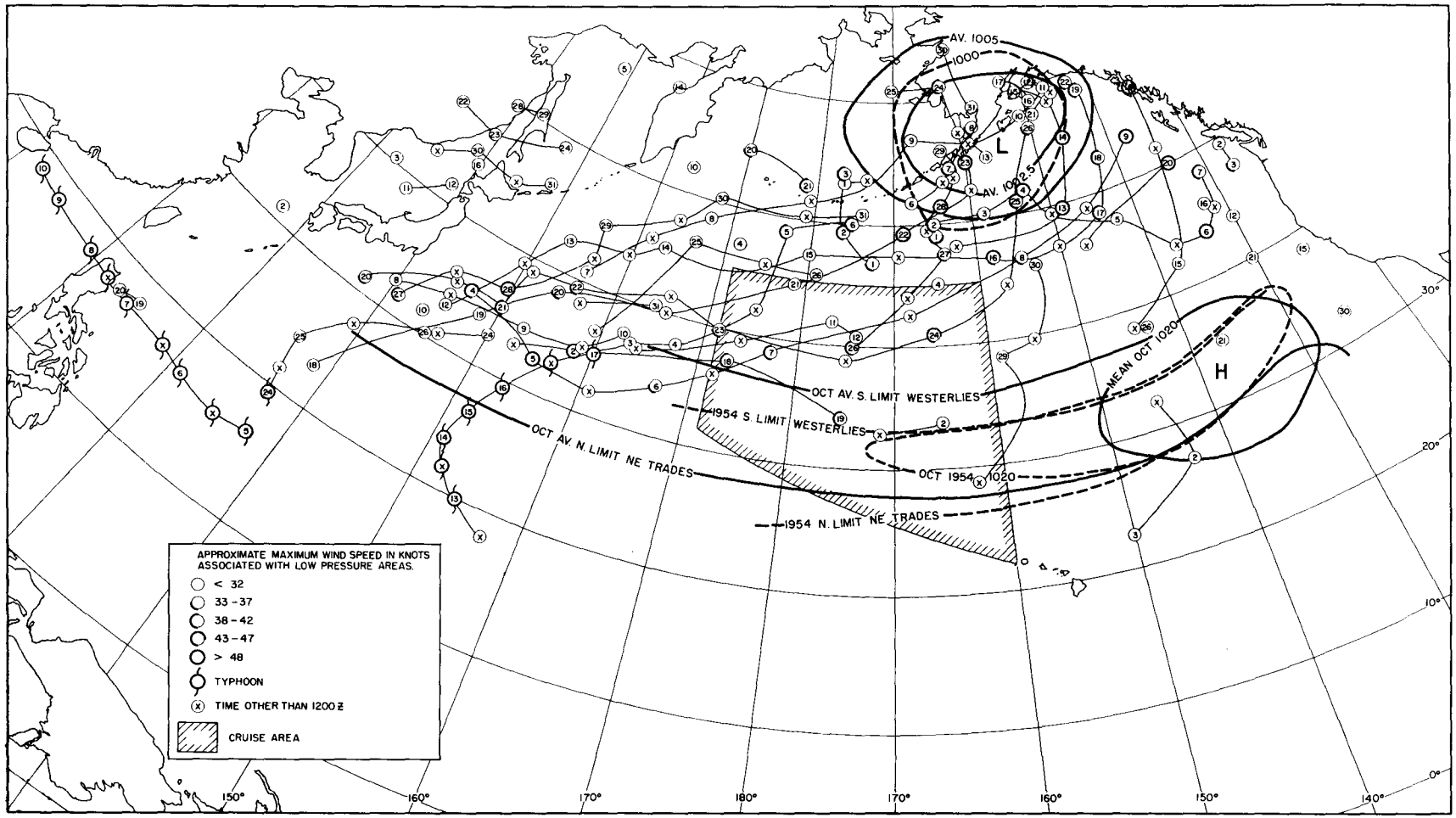

Figure 45. --Normal (heavy solid lines) and mean October 1954 (broken lines) position of the Aleutian Low and Eastern North Pacific High; normal and 1954 mean monthly limits of the northeast trades and westerlies; tracks of centers of low pressure areas, showing daily positions.

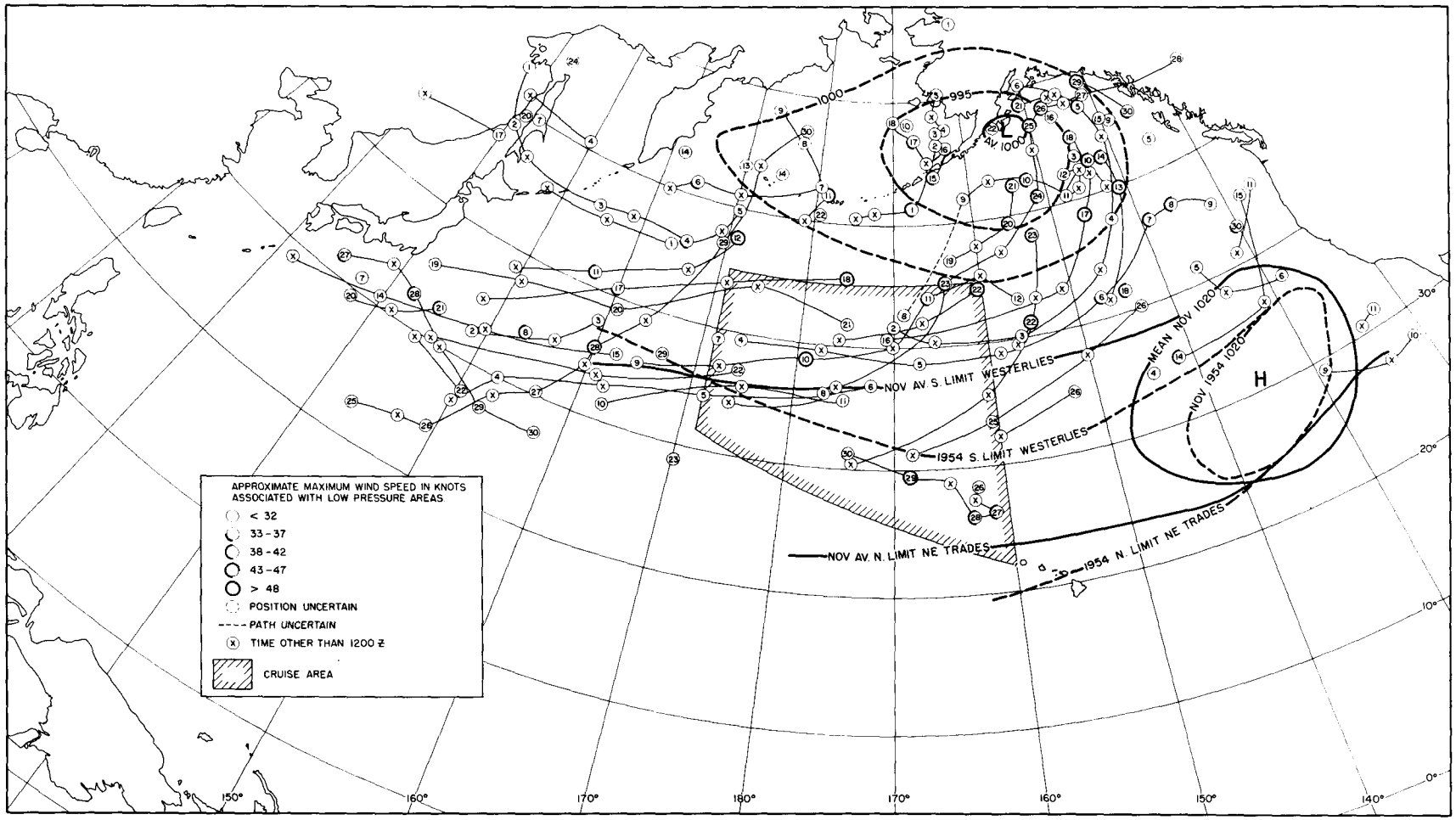

Figure 46.--Normal (heavy solid lines) and mean November 1954 (broken lines) position of the Aleutian Low and Eastern North Pacific High; normal and 1954 mean monthly limits of the northeast trades and westerlies; tracks of centers of low pressure areas, showing daily positions.

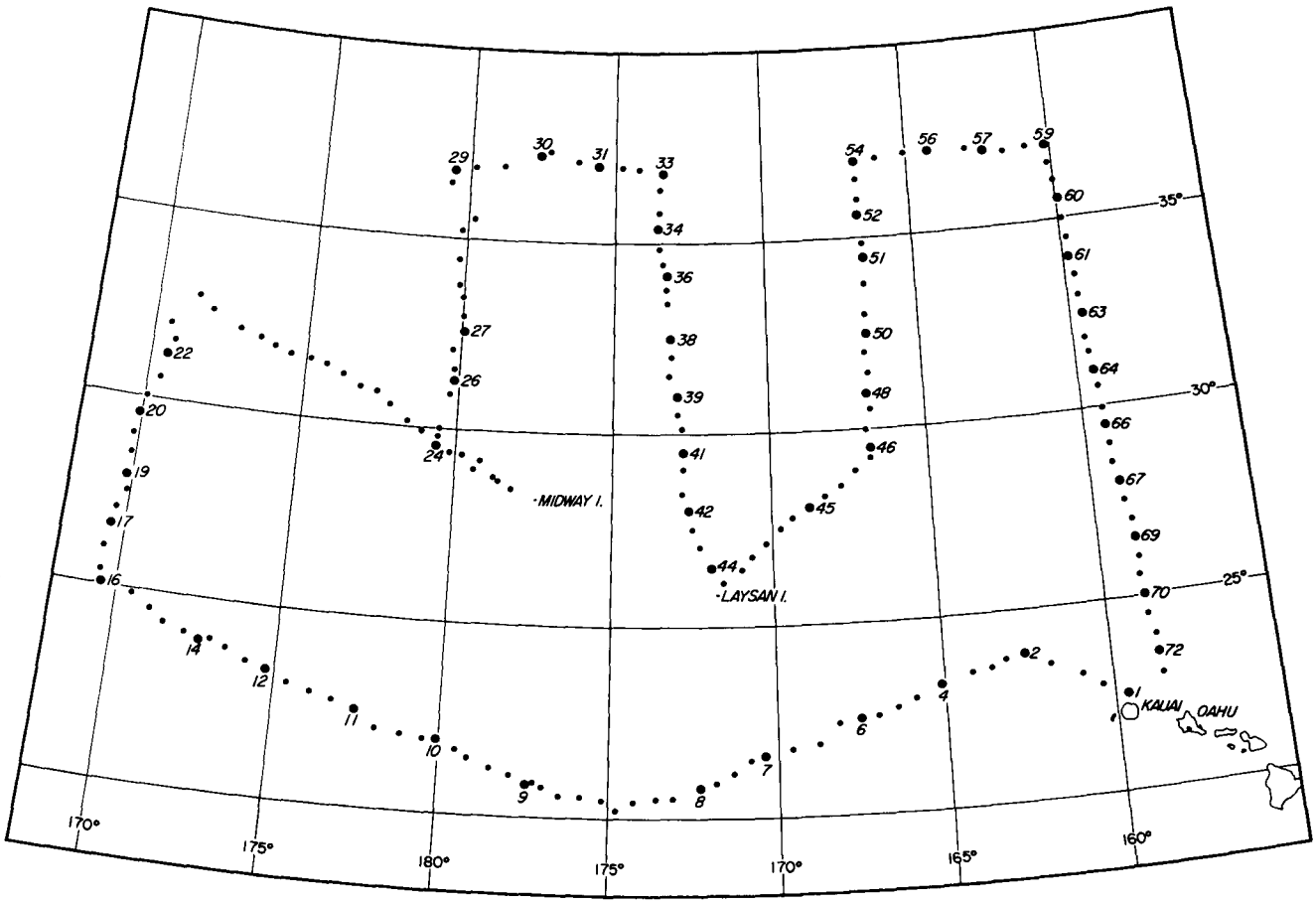

Figure 47.--Oceanographic station positions, Hugh M. Smith cruise 27, January-February 1955. Large numbered dots indicate oceanographic stations. Small dots indicate positions of BT lowerings between stations.

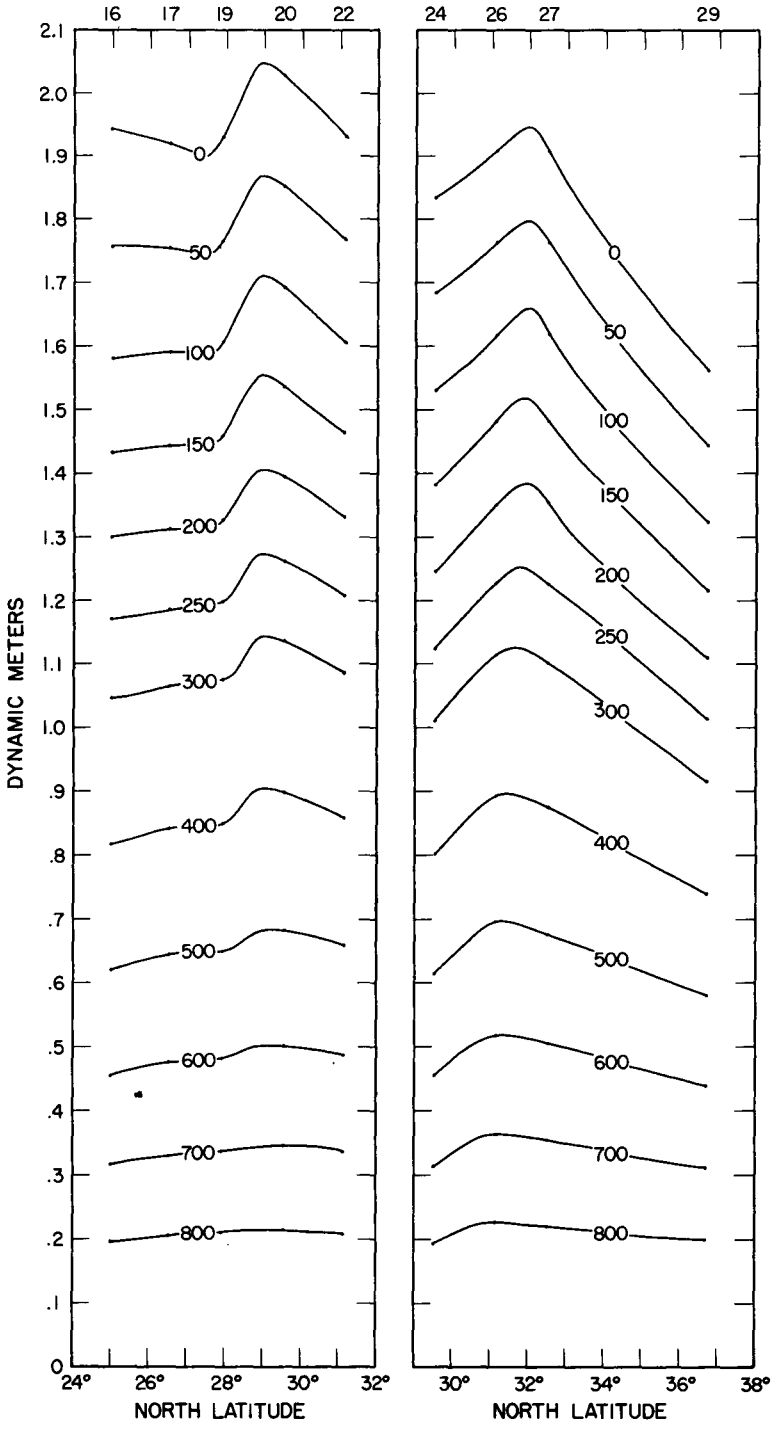

Figure 48.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface along 170°E. longitude; Hugh M. Smith cruise 27, stations 16-22, January-February 1955. Points represent computed values.

Figure 49.--Same along the 180th meridian, stations 24-29.

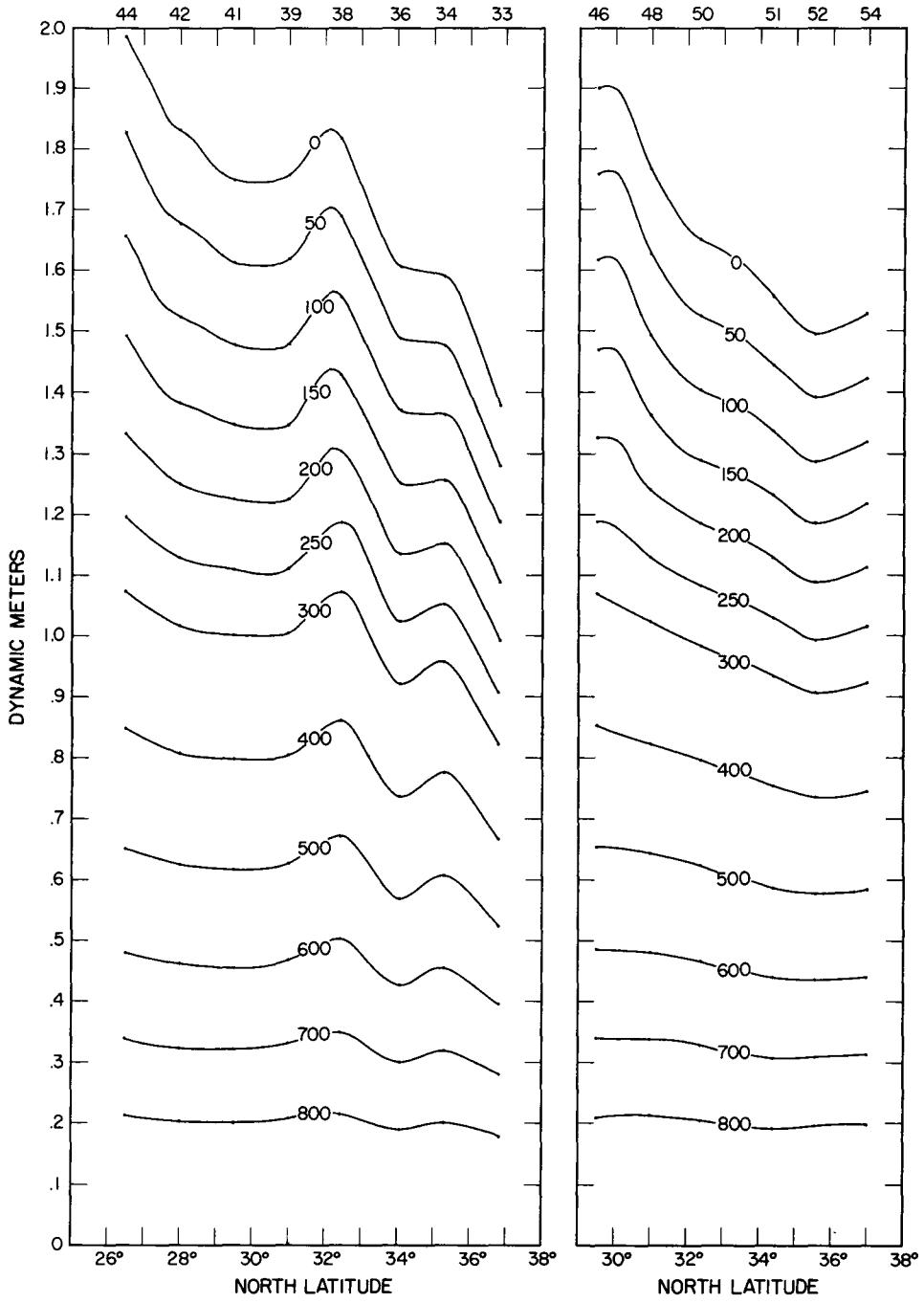

Figure 50.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface along 172°W. longitude; Hugh M. Smith cruise 27, stations 33-44, January-February 1955. Points represent computed values.

Figure 51.--Same along 167°W. longitude, stations 46-54.

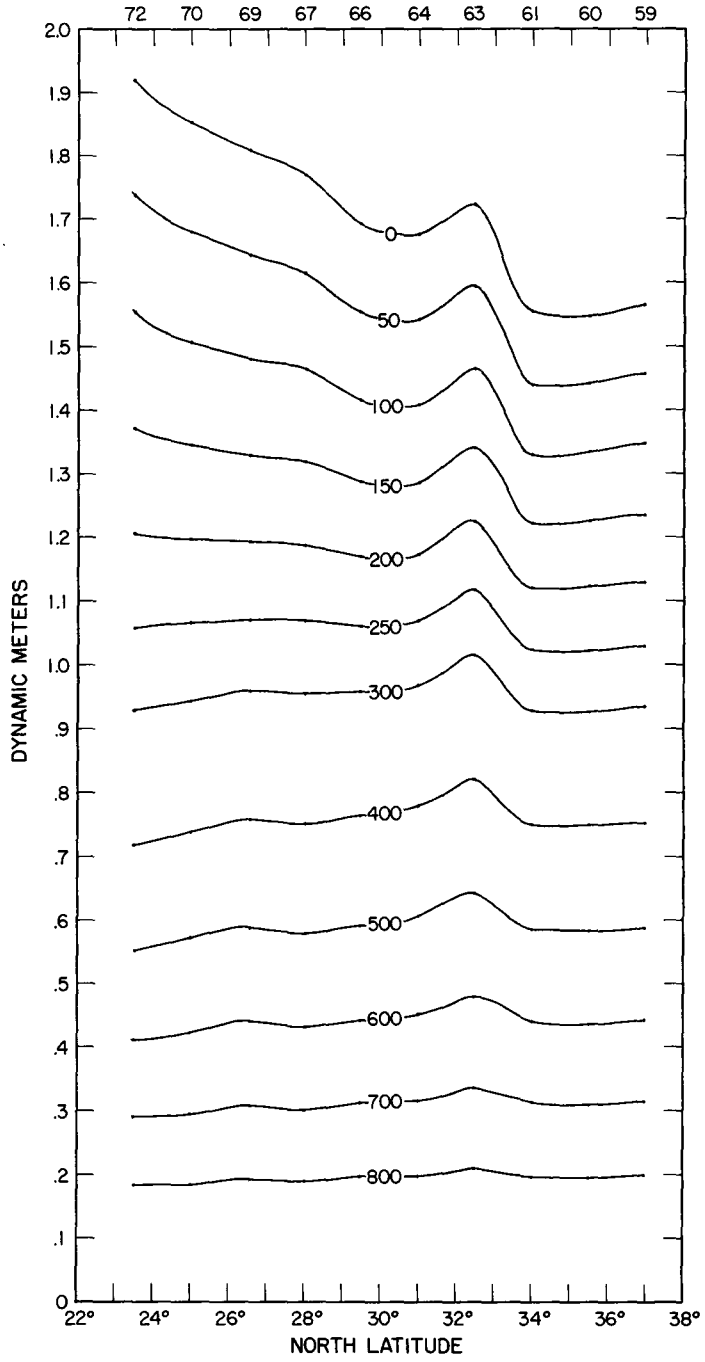

Figure 52.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface along 159°W. longitude; Hugh M. Smith cruise 27, stations 59-72, January-February 1955. Points represent computed values.

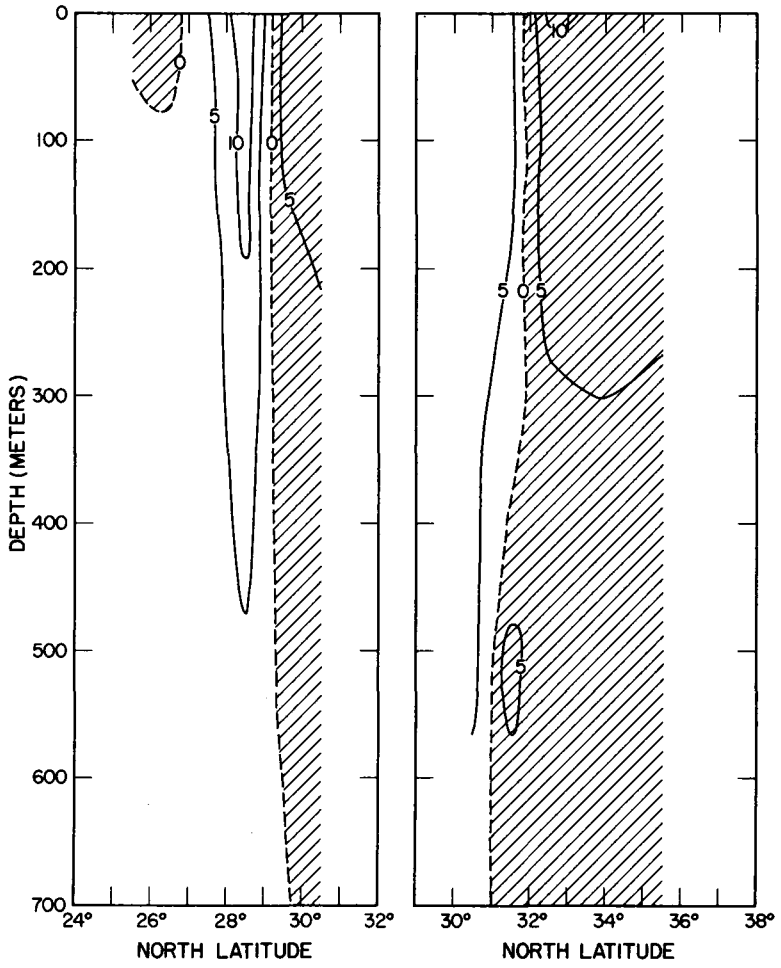

Figure 53. --Zonal components of the geostrophic currents in centimeters per second across 170°E. longitude; Hugh M. Smith cruise 27, January-February 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

Figure 54. --Same across the 180th meridian.

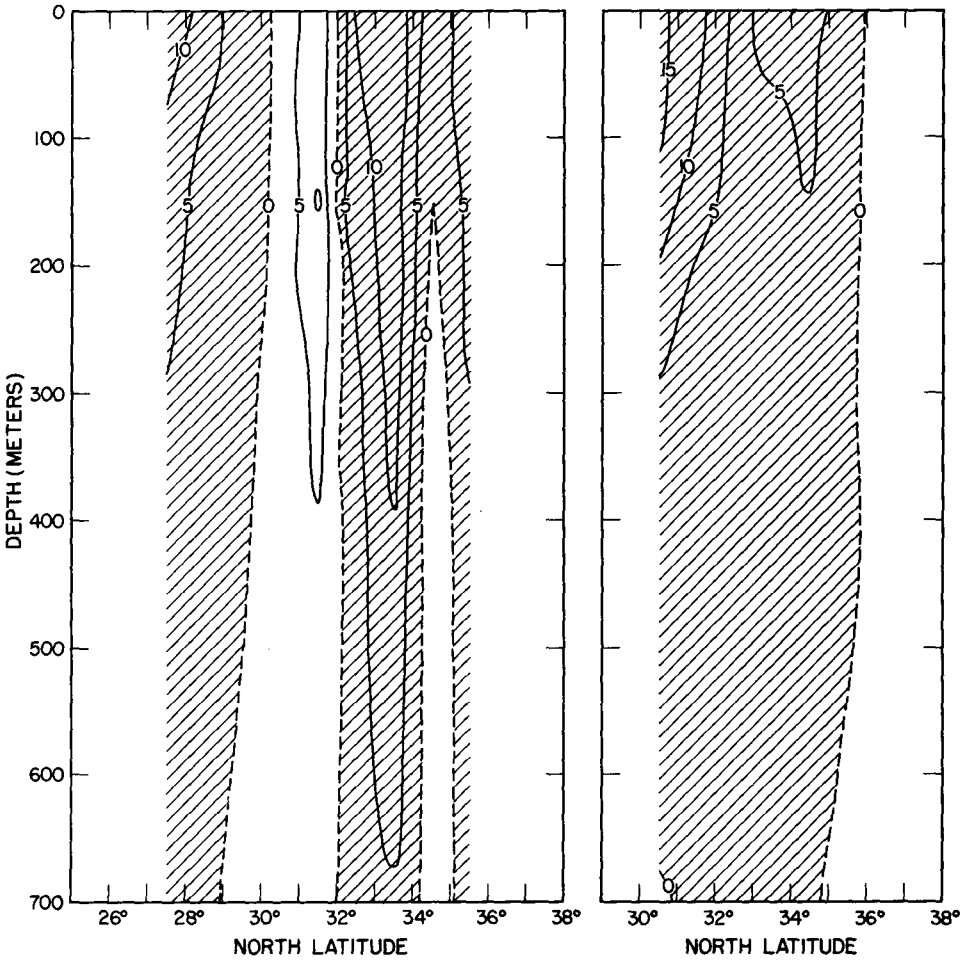

Figure 55. --Zonal components of the geostrophic currents in centimeters per second across 172°W. longitude; Hugh M. Smith cruise 27, January-February 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

Figure 56. --Same across 167°W. longitude.

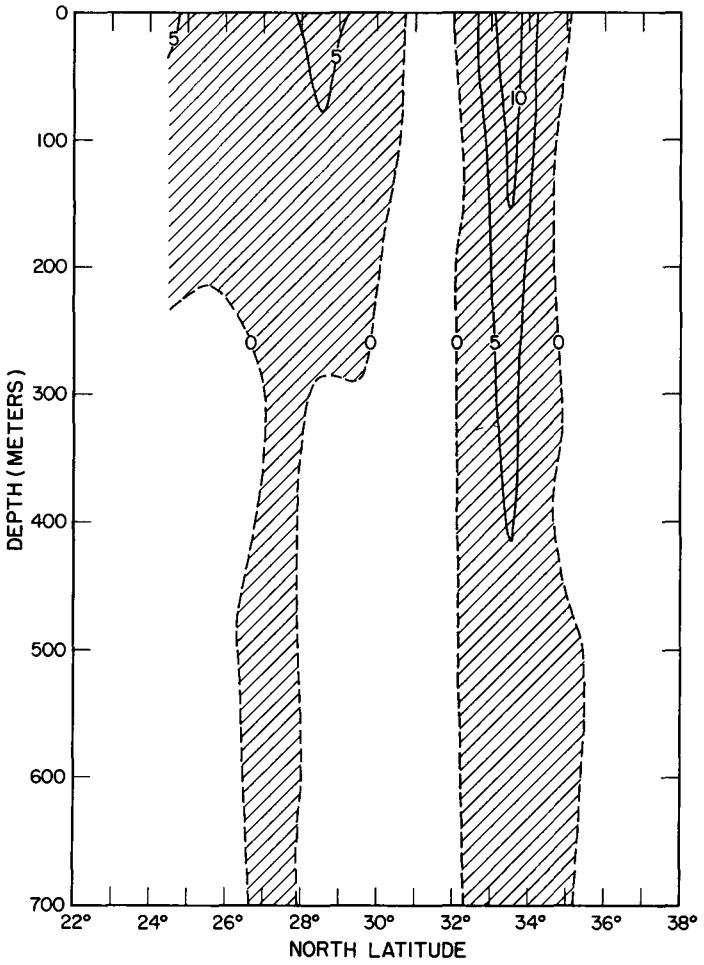

Figure 57.--Zonal components of the geostrophic currents in centimeters per second across 159°W. longitude; Hugh M. Smith cruise 27, January-February 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

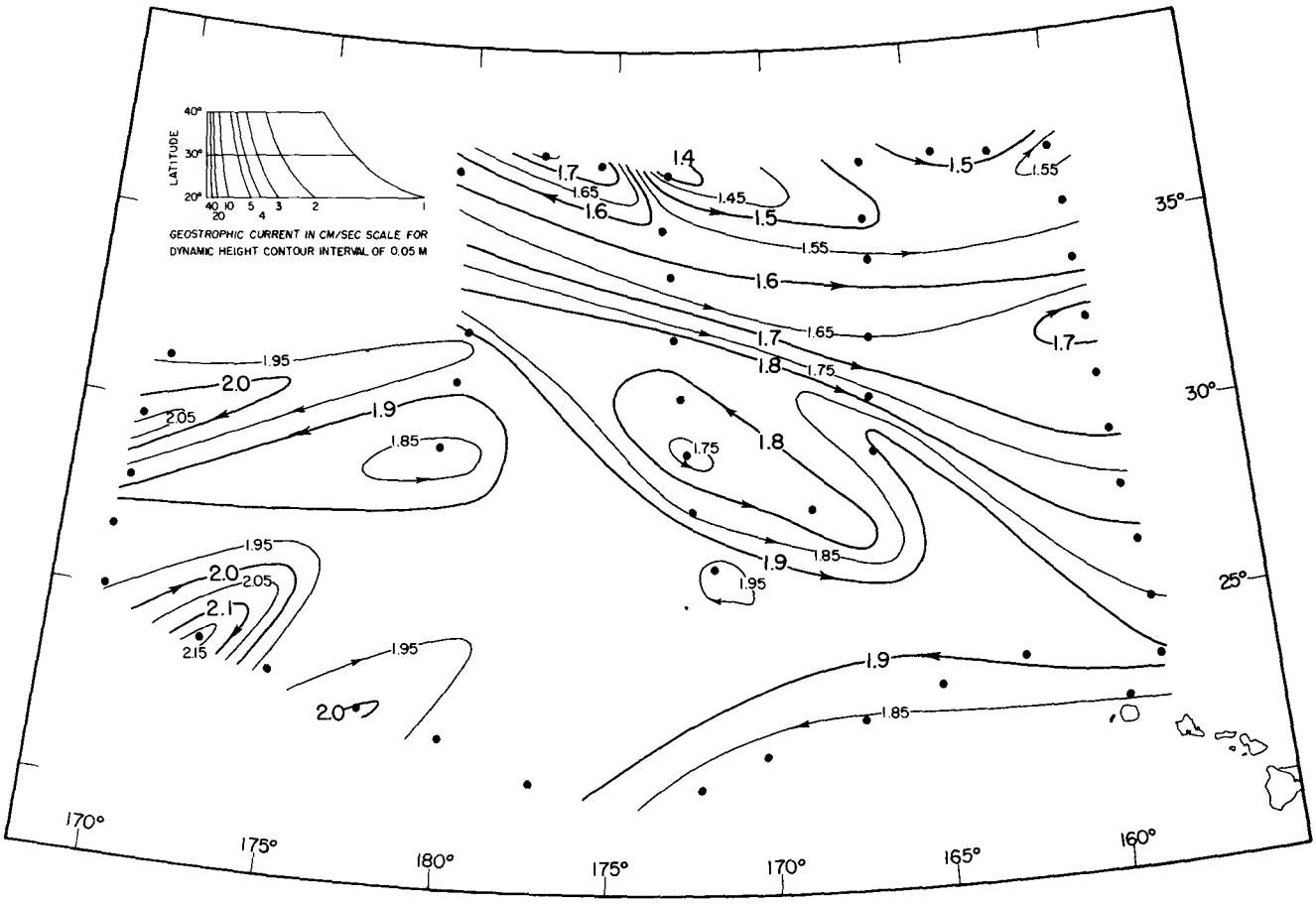

Figure 58. --Anomaly of the geopotential topography of the sea surface in dynamic meters relative to the 1,000-db. surface; Hugh M. Smith cruise 27, January-February 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

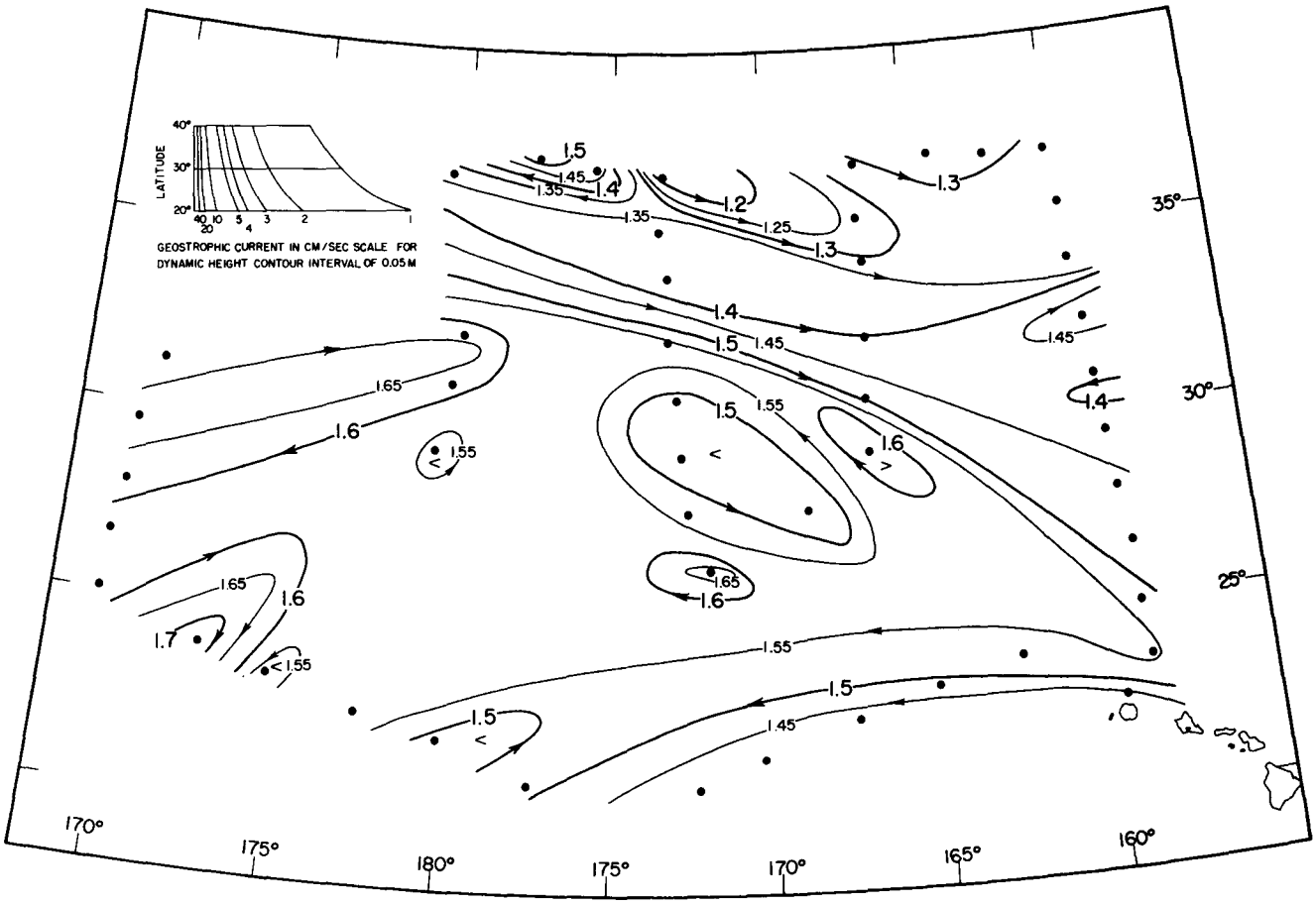

Figure 59.--Anomaly of the geopotential topography of the 100-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 27, January-February 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

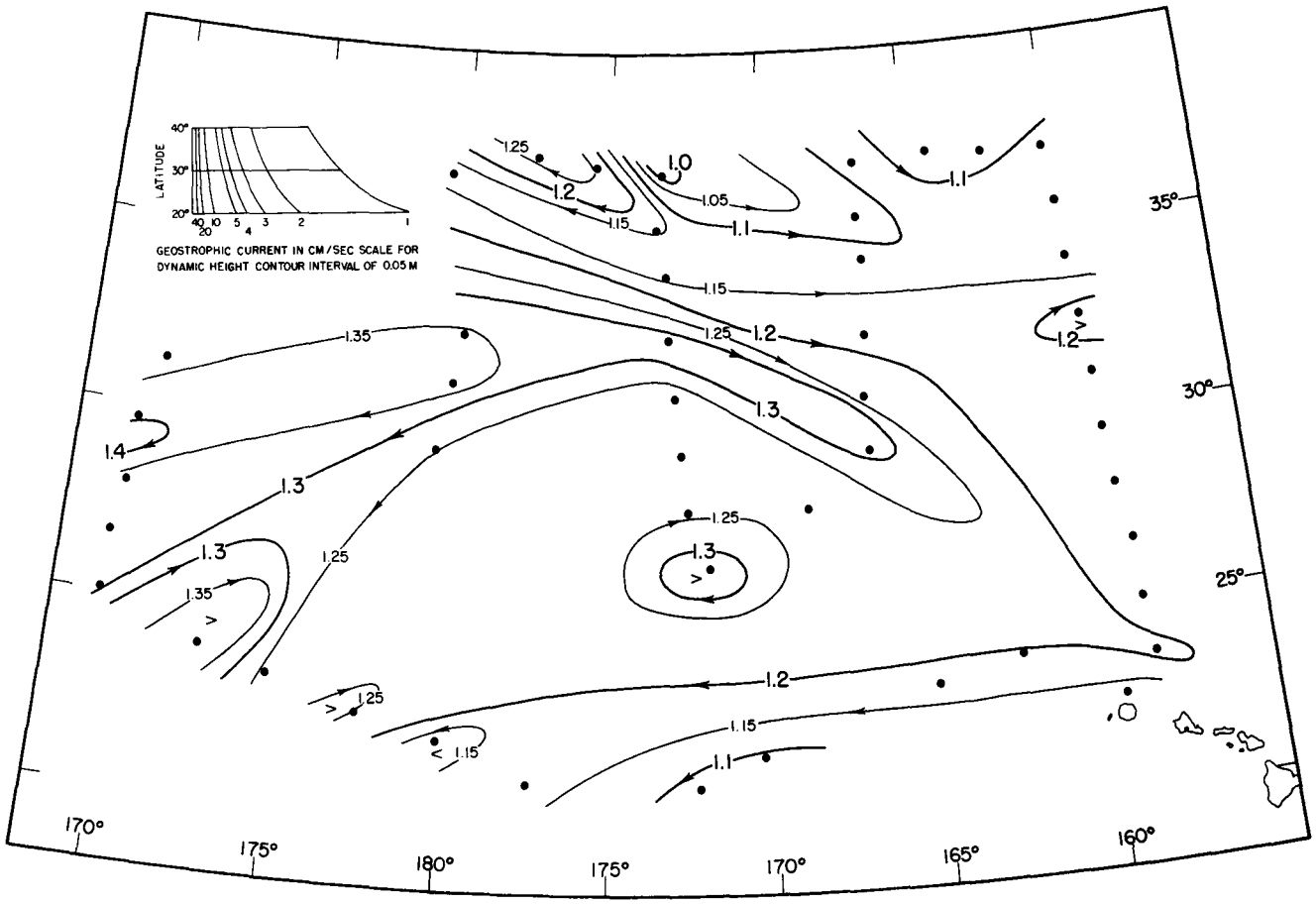

Figure 60.--Anomaly of the geopotential topography of the 200-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 27, January-February 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

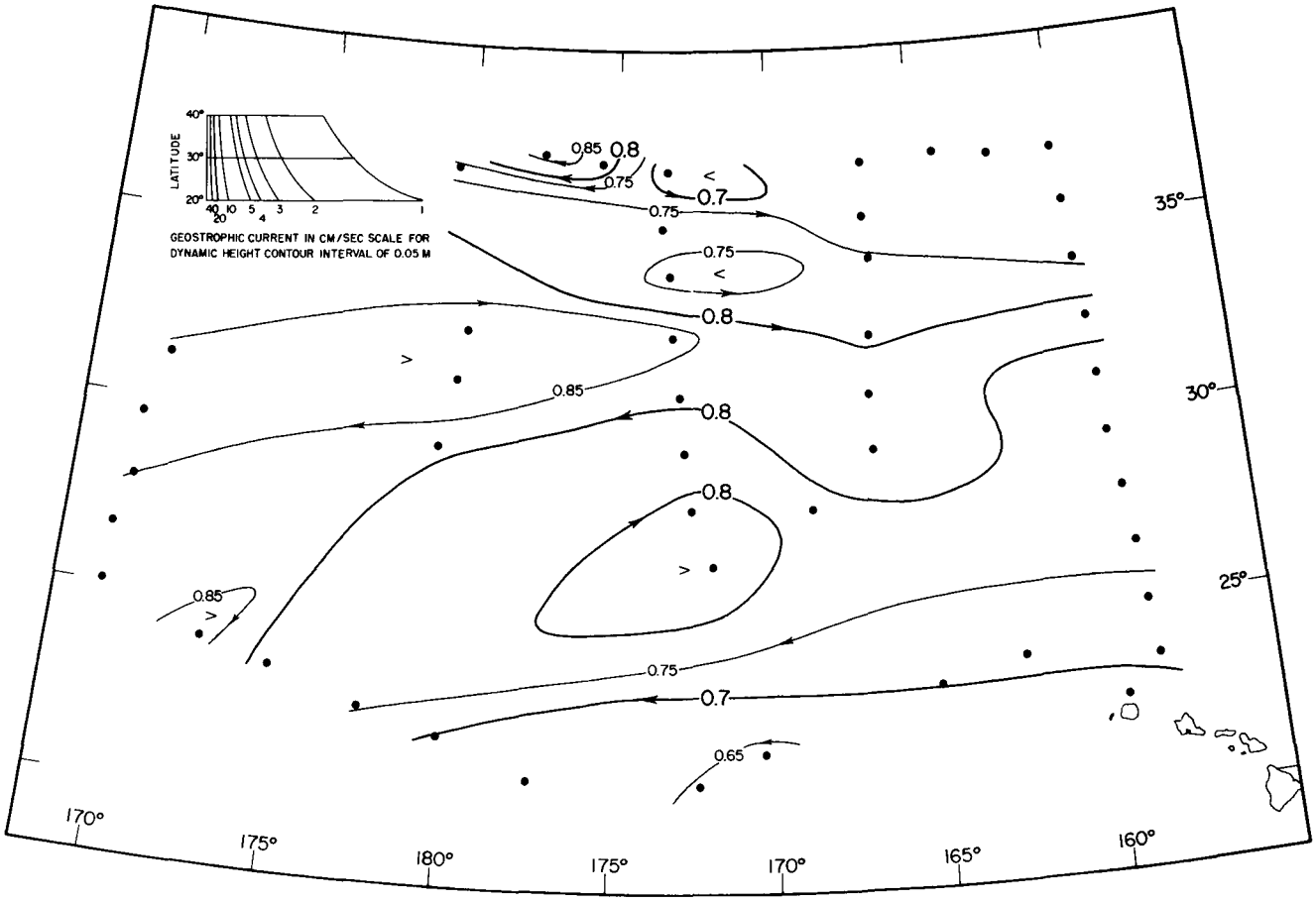

Figure 61.--Anomaly of the geopotential topography of the 400-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 27, January-February 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

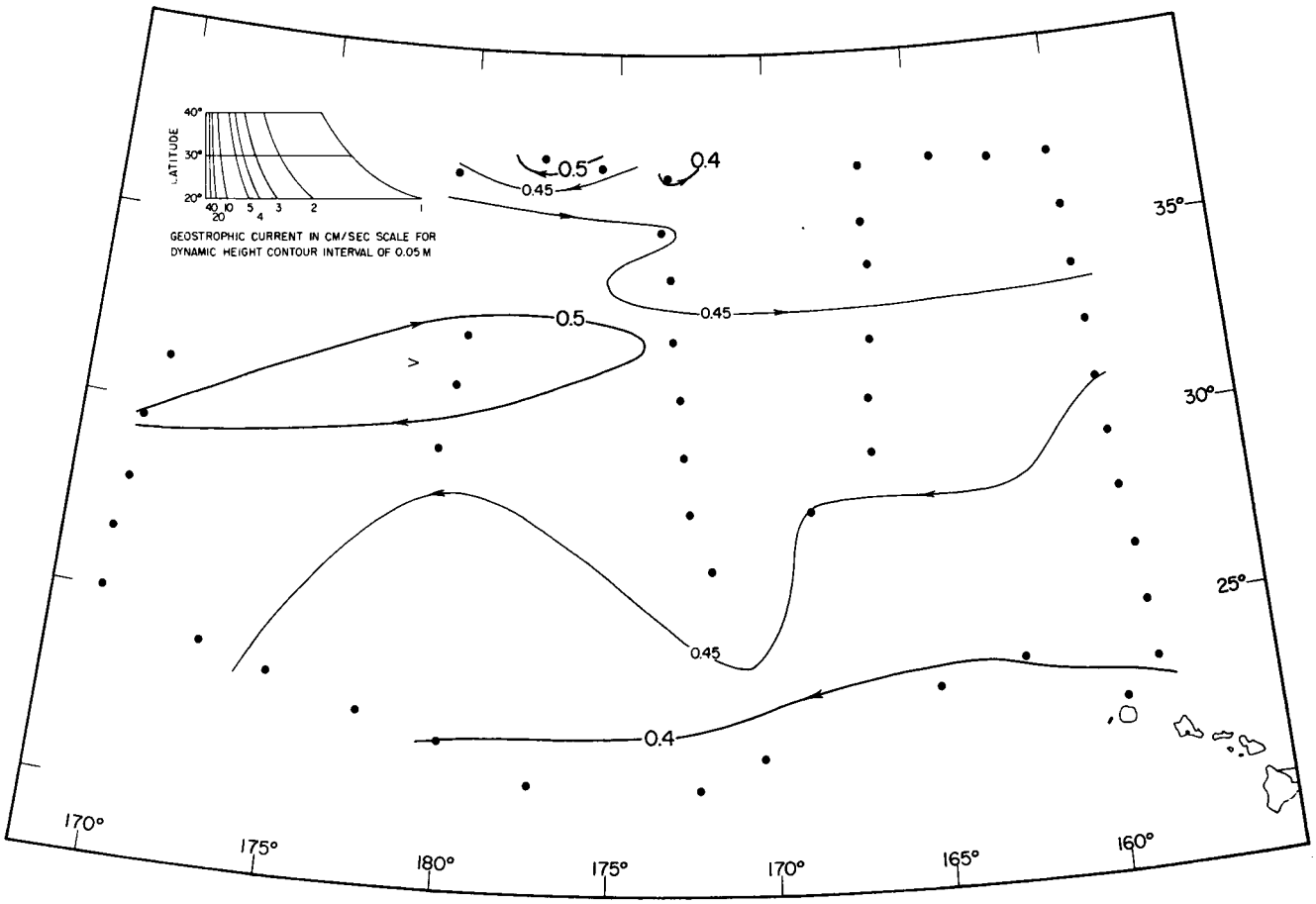

Figure 62.--Anomaly of the geopotential topography of the 600-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 27, January-February 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

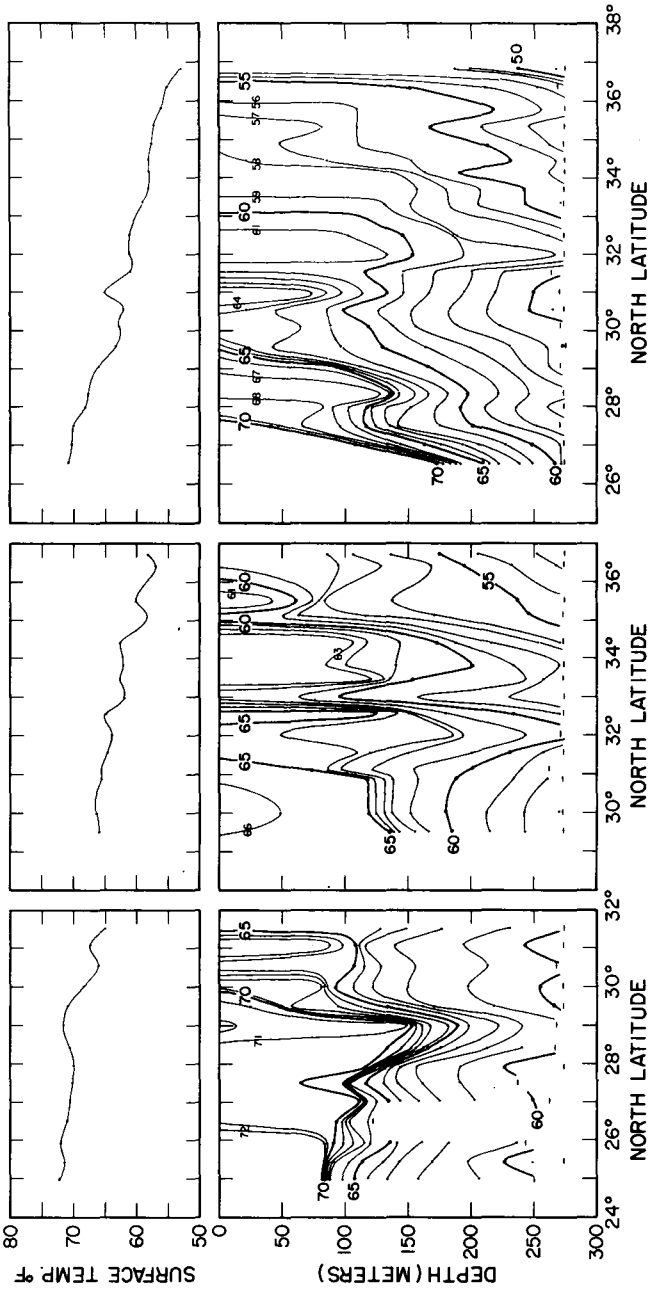

Figure 63.--Surface (bucket) temperatures (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit along 170°E. longitude from BT observations; Hugh M. Smith cruise 27, January-February 1955. Contour interval 1°F. Small dashes indicate the depth of lowering.

Figure 64.--Same along the 180th meridian.

Figure 65.--Same along 172°W. longitude.

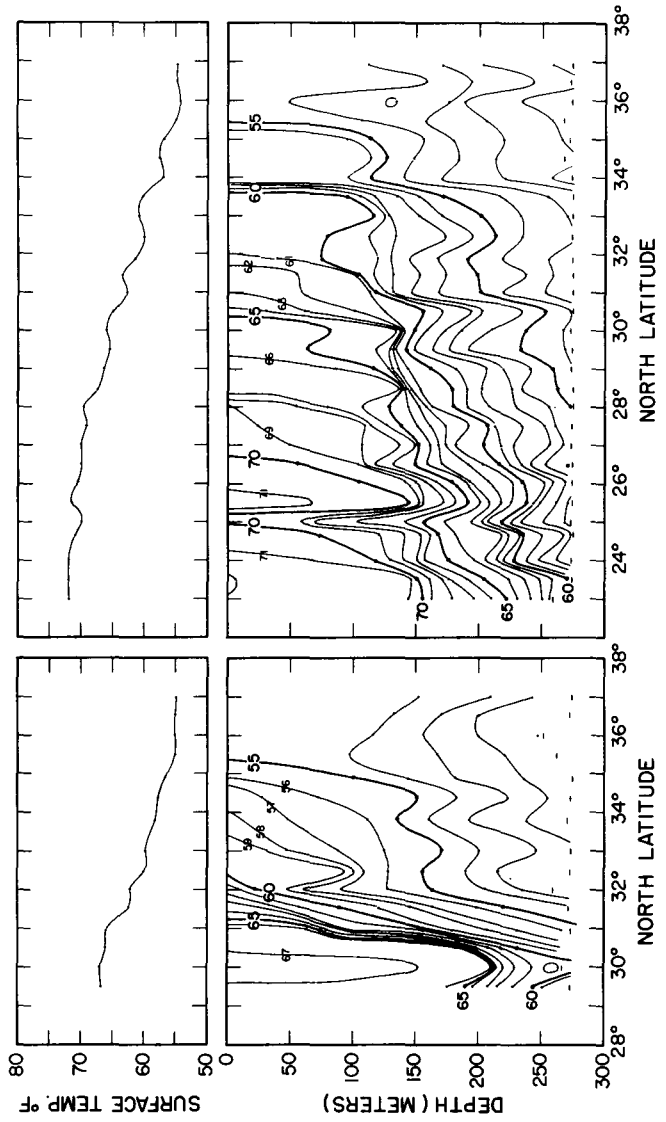

Figure 66.--Surface (bucket) temperatures (upper panel) and temperature-depth section (lower panel) in degrees Fahrenheit along 167°W. longitude from BT observations; Hugh M. Smith cruise 27, January-February 1955. Contour interval 1°F. Small dashes indicate the depth of lowering.

Figure 67.--Same along 159°W. longitude.

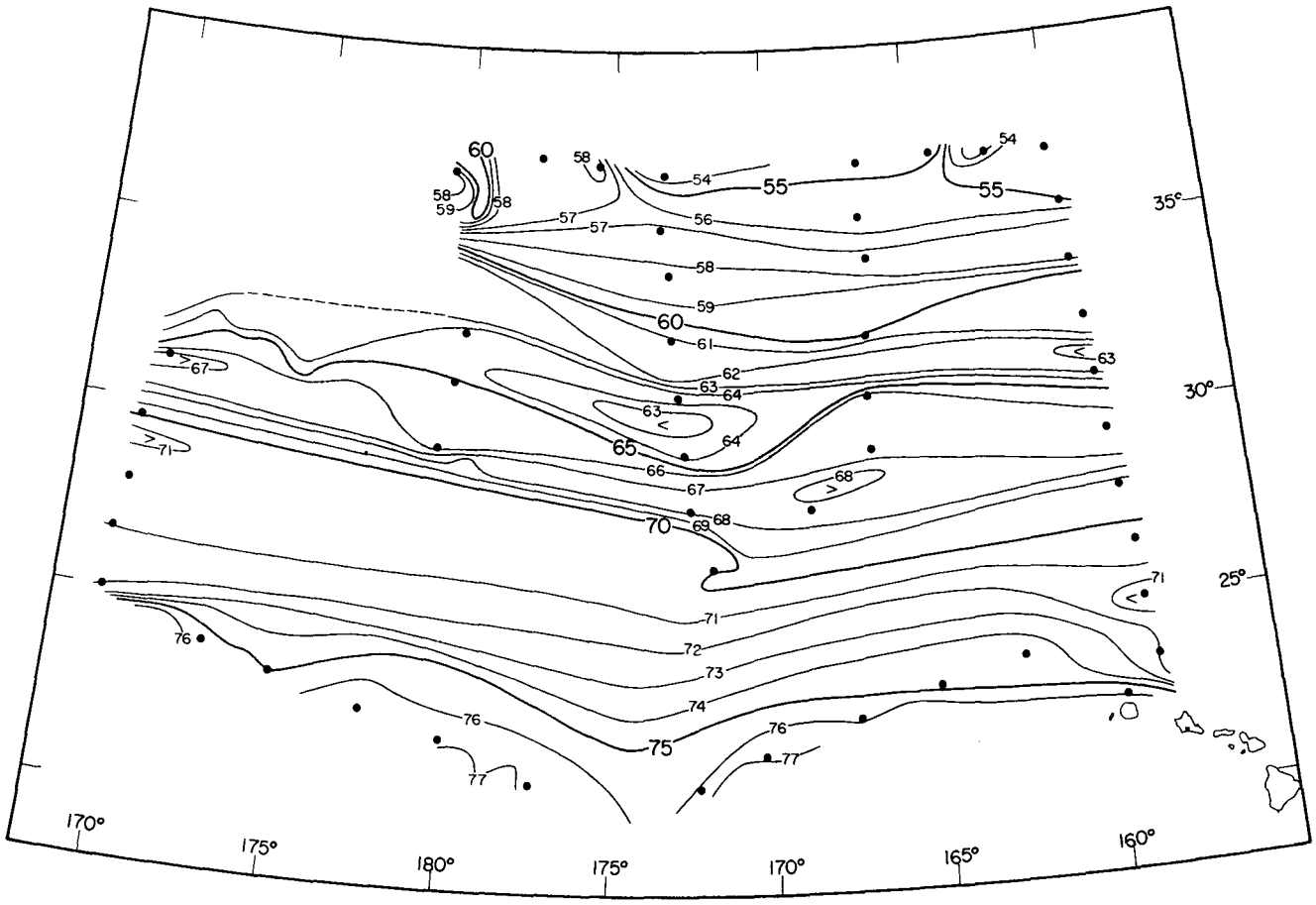

Figure 68. --Surface (bucket) temperatures in degrees Fahrenheit; Hugh M. Smith cruise 27, January-February 1955. Contour interval 1°F.

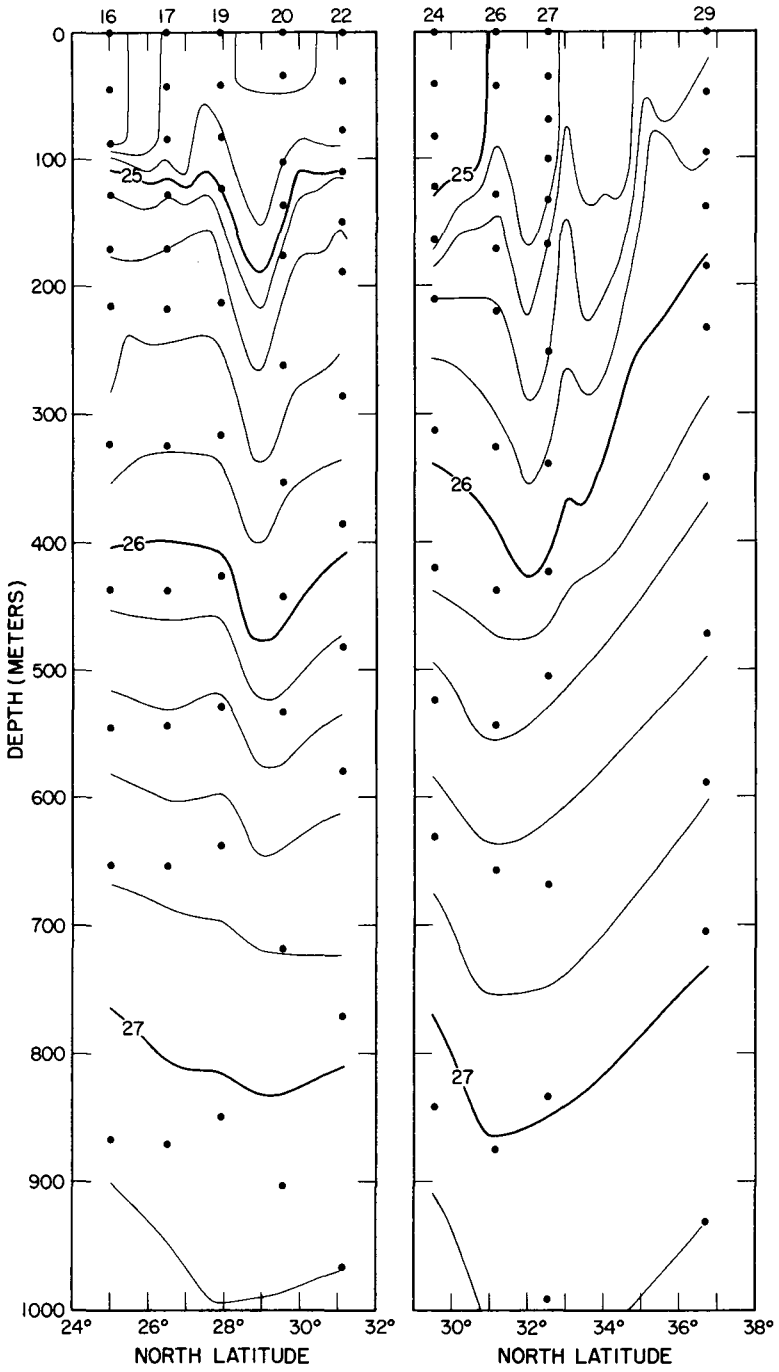

Figure 69. --Vertical section of sigma-t along 170°E. longitude; Hugh M. Smith cruise 27, stations 16-22, January-February 1955. Contour interval 0.2. Points indicate observed values.

Figure 70. --Same along 180th meridian, stations 24-29.

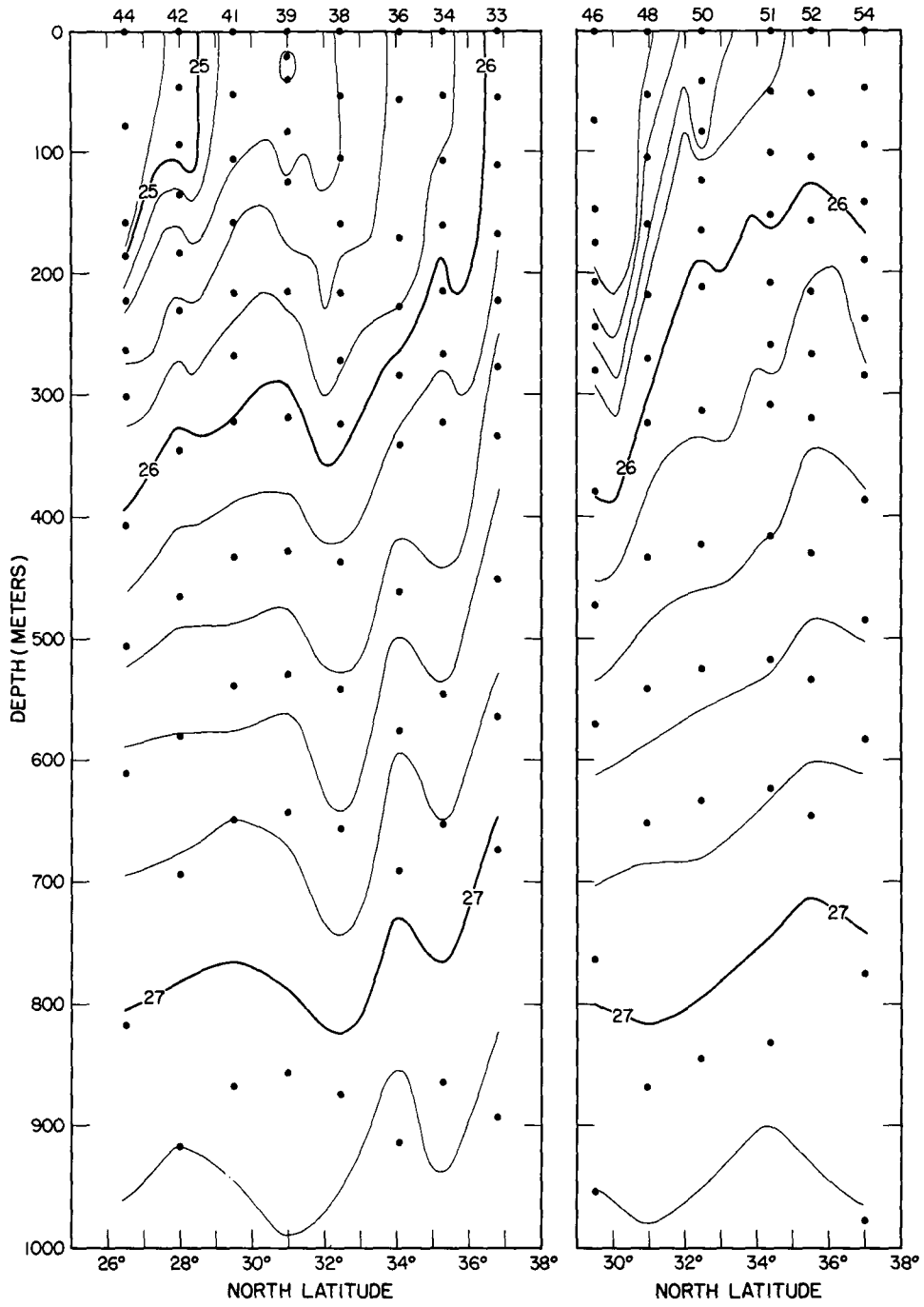

Figure 71.--Vertical section of sigma-t along 172°W. longitude; Hugh M. Smith cruise 27, stations 33-44, January-February 1955. Contour interval 0.2. Points indicate observed values.

Figure 72.--Same along 167°W. longitude, stations 46-54.

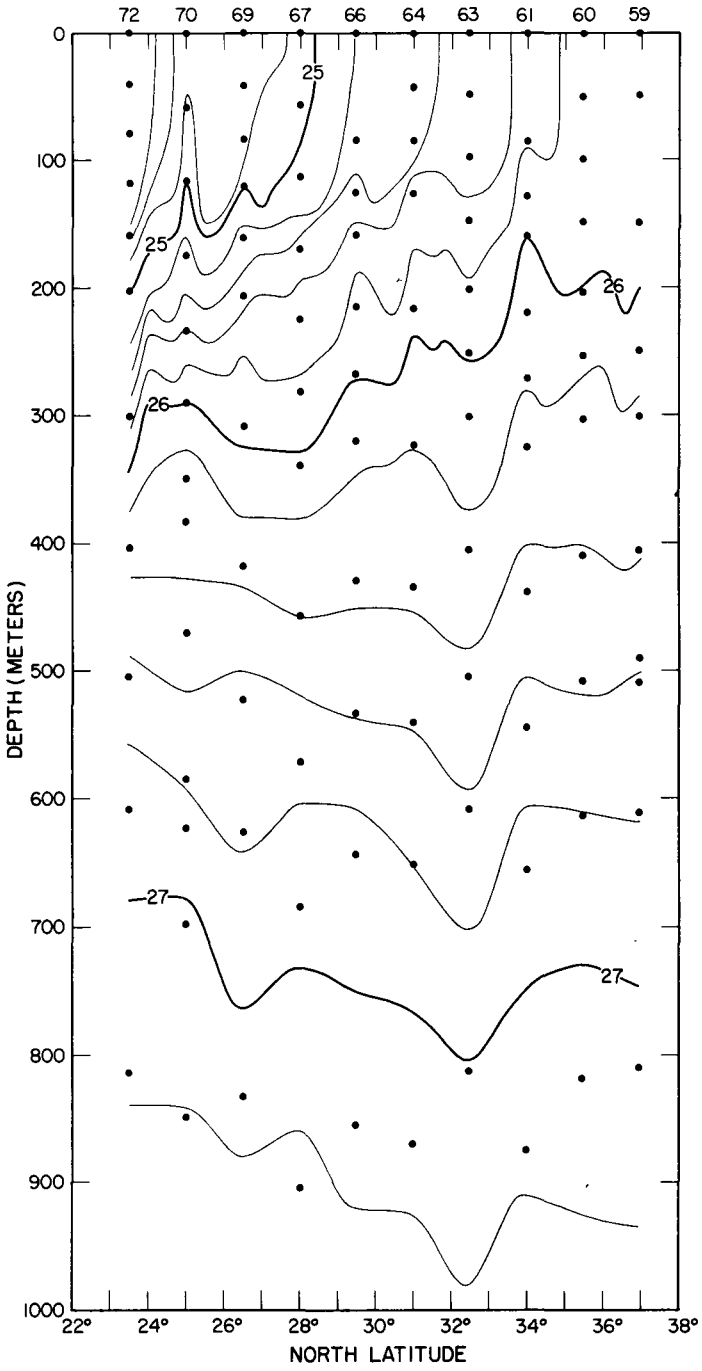

Figure 73.--Vertical section of sigma-t along 159°W. longitude; Hugh M. Smith cruise 27, stations 59-72, January-February 1955. Contour interval 0.2. Points indicate observed values.

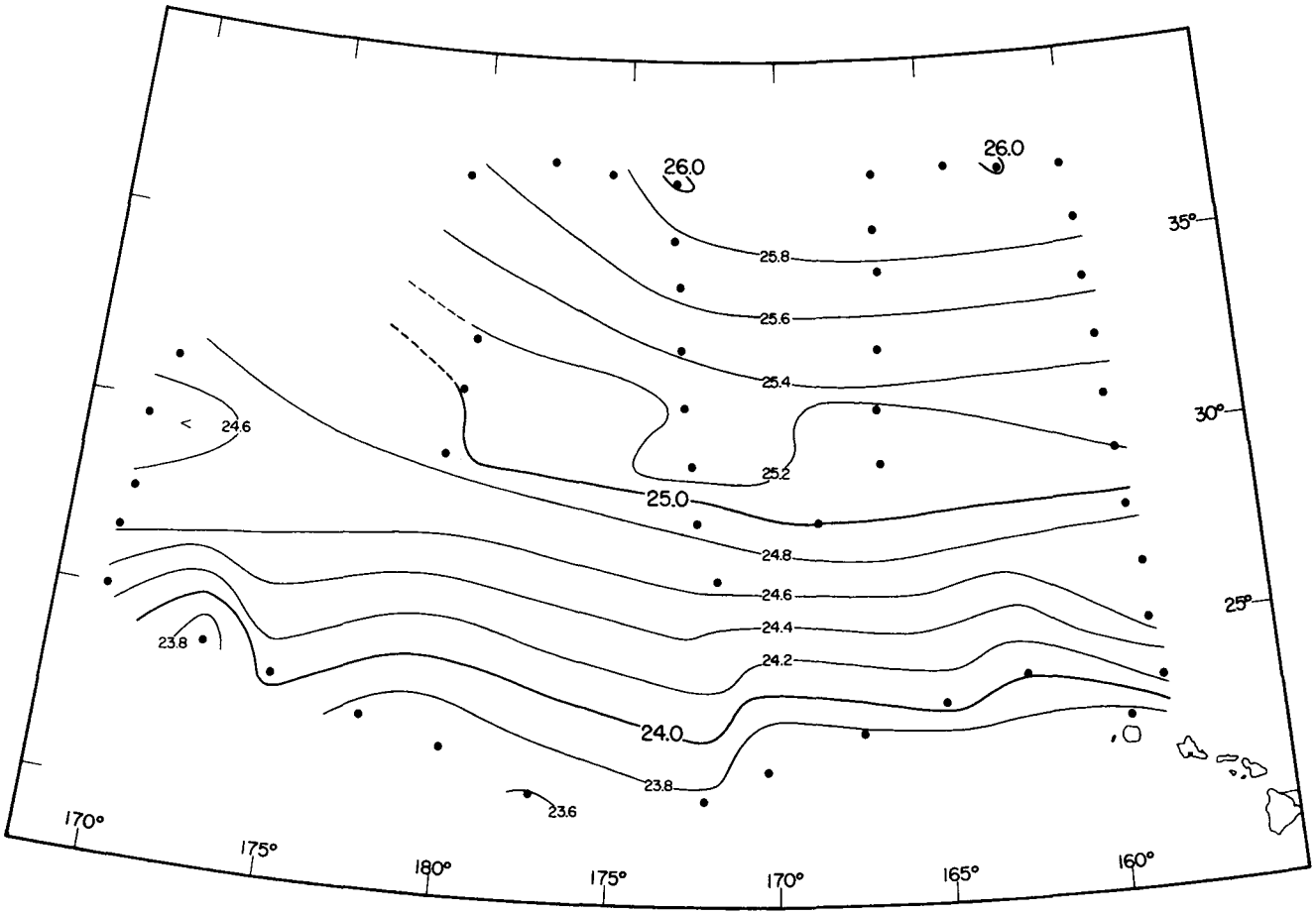

Figure 74.--Surface sigma-t; Hugh M. Smith cruise 27, January-February 1955. Contour interval 0.2. Dots indicate station positions.

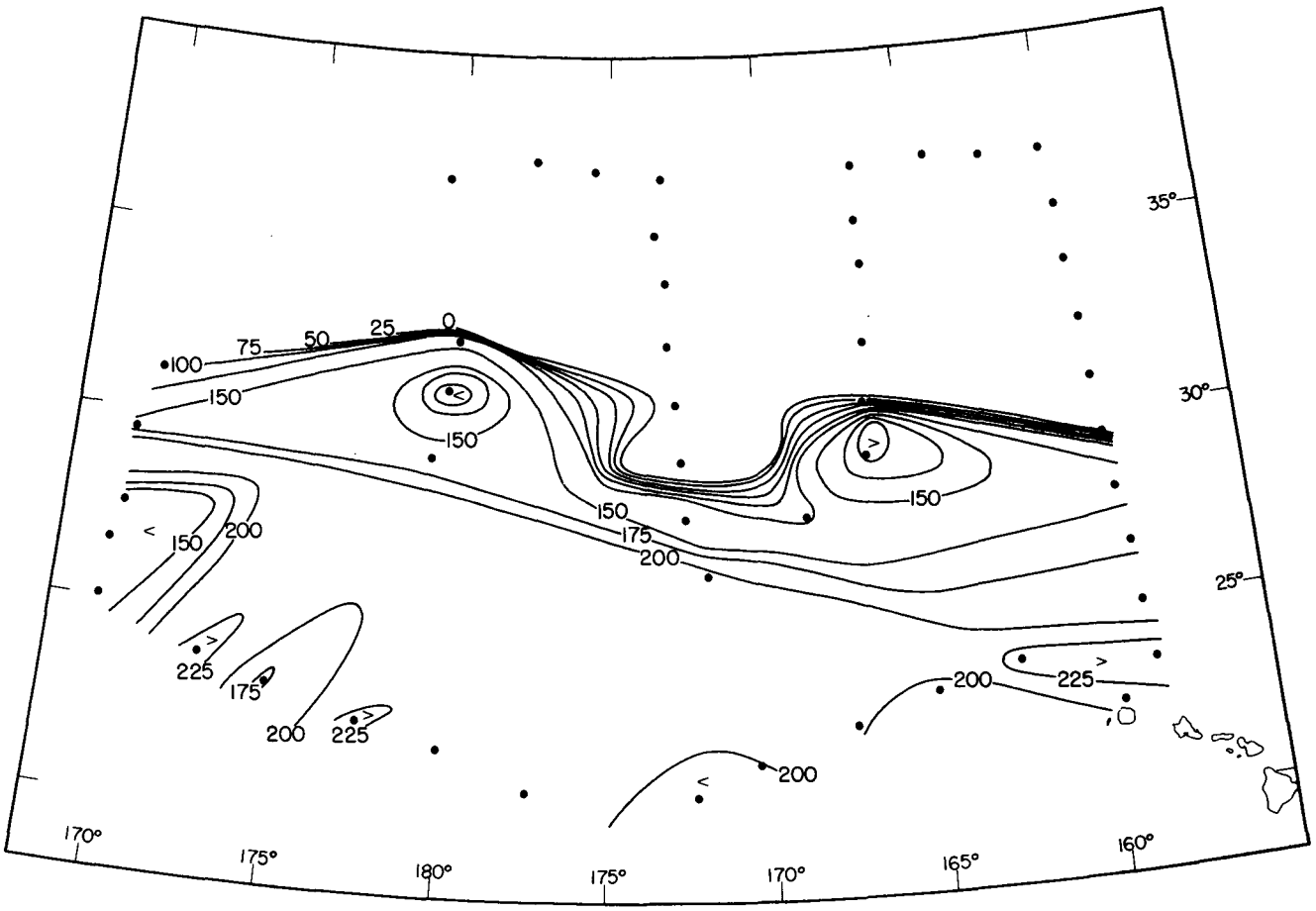

Figure 75.--Depth of the 25.2 sigma-t surface in meters; Hugh M. Smith cruise 27, January-February 1955. Contour interval 25 m. Dots indicate station positions.

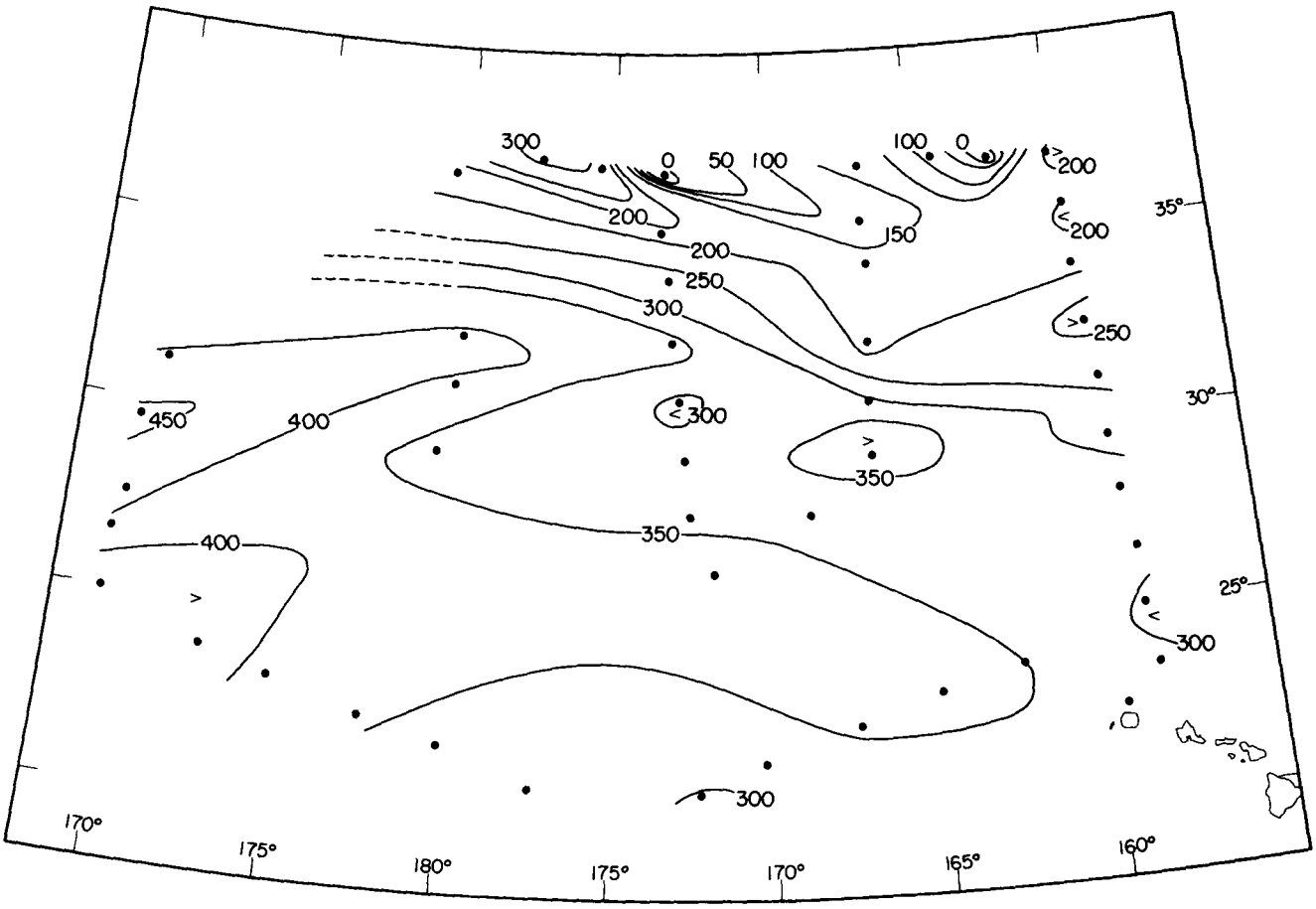

Figure 76. --Depth of the 26.0 sigma-t surface in meters; Hugh M. Smith cruise 27, January-February 1955. Contour interval 50 m. Dots indicate station positions.

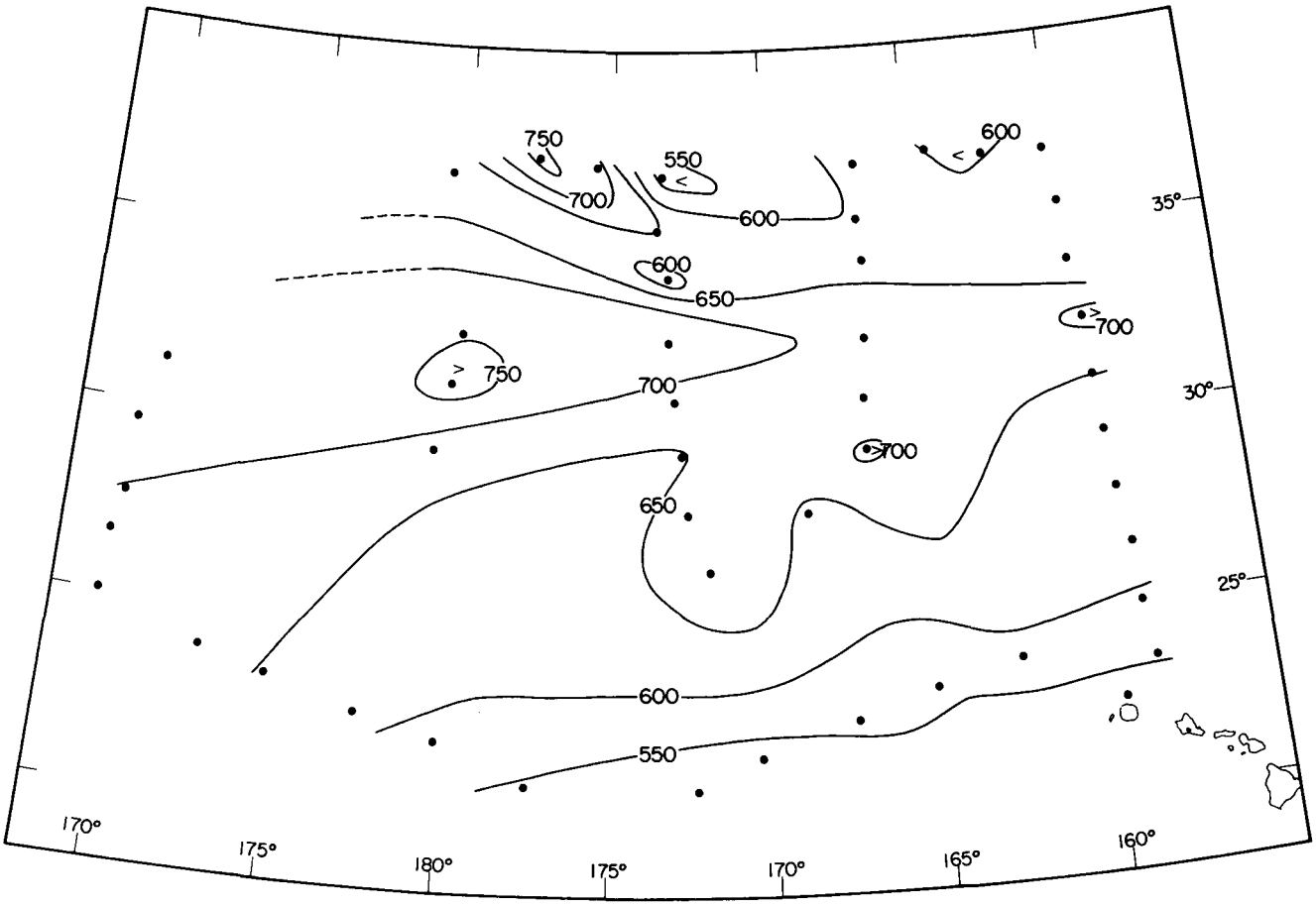

Figure 77. --Depth of the 26.8 sigma-t surface in meters; Hugh M. Smith cruise 27, January-February 1955. Contour interval 50 m. Dots indicate station positions.

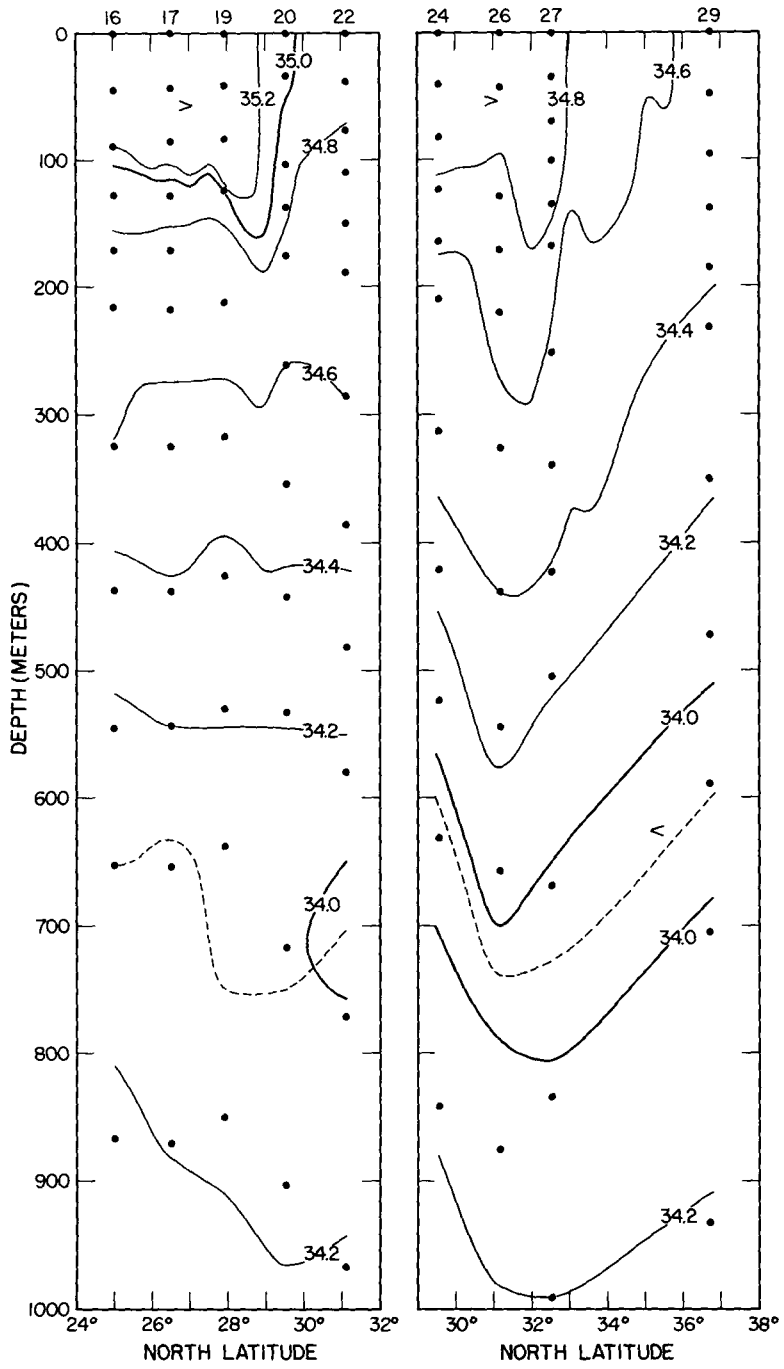

Figure 78.--Vertical section of salinity in parts per thousand along 170°E. longitude; Hugh M. Smith cruise 27, stations 16-22, January-February 1955. Points indicate observed values. Dotted lines indicate depth of salinity minima.

Figure 79.--Same along 180th meridian, stations 24-29.

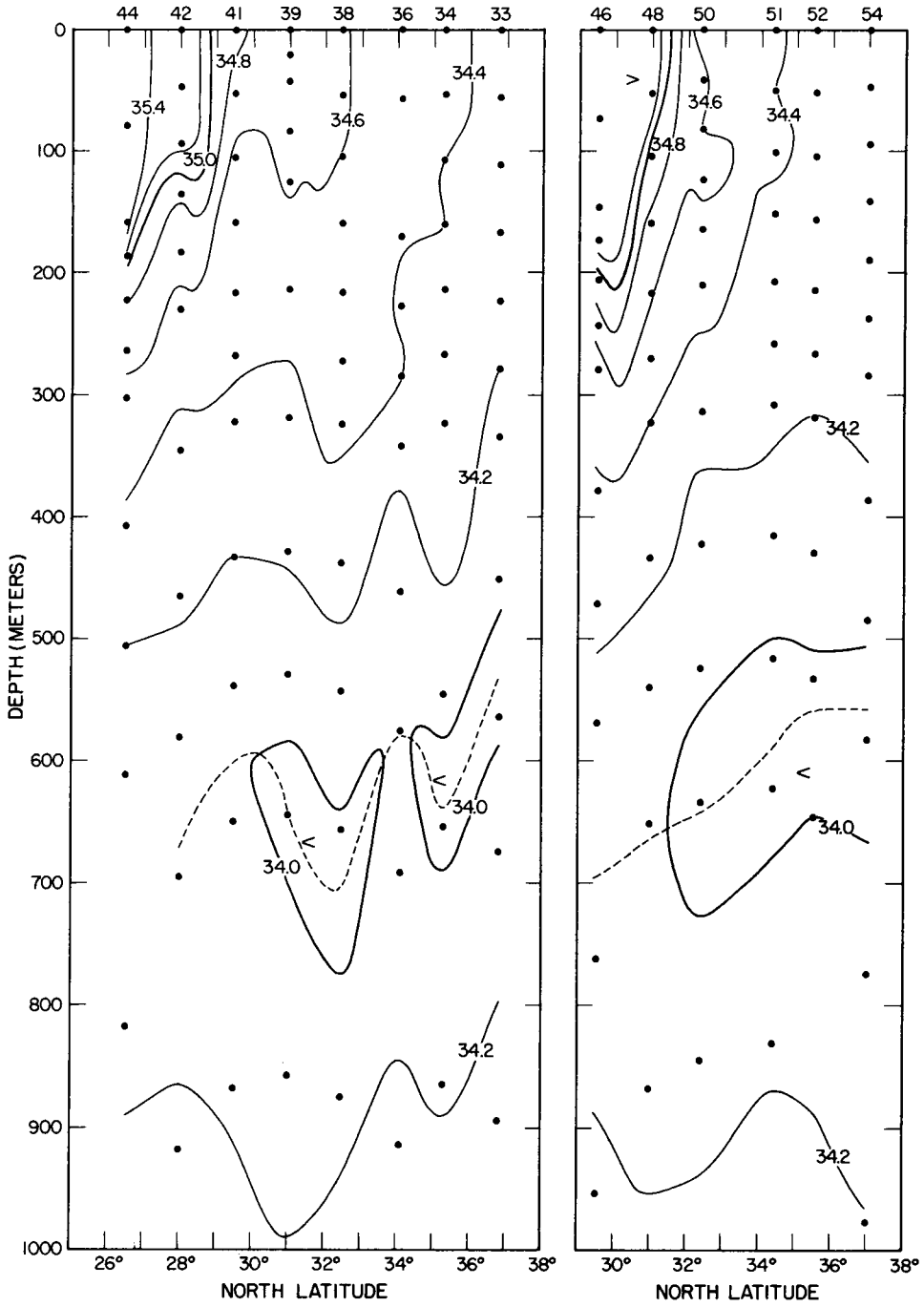

Figure 80.--Vertical section of salinity in parts per thousand along 172°W. longitude; Hugh M. Smith cruise 27, stations 33-44, January-February 1955. Points indicate observed values. Dotted lines indicate depth of salinity minima.

Figure 81.--Same along 167°W. longitude, stations 46-54.

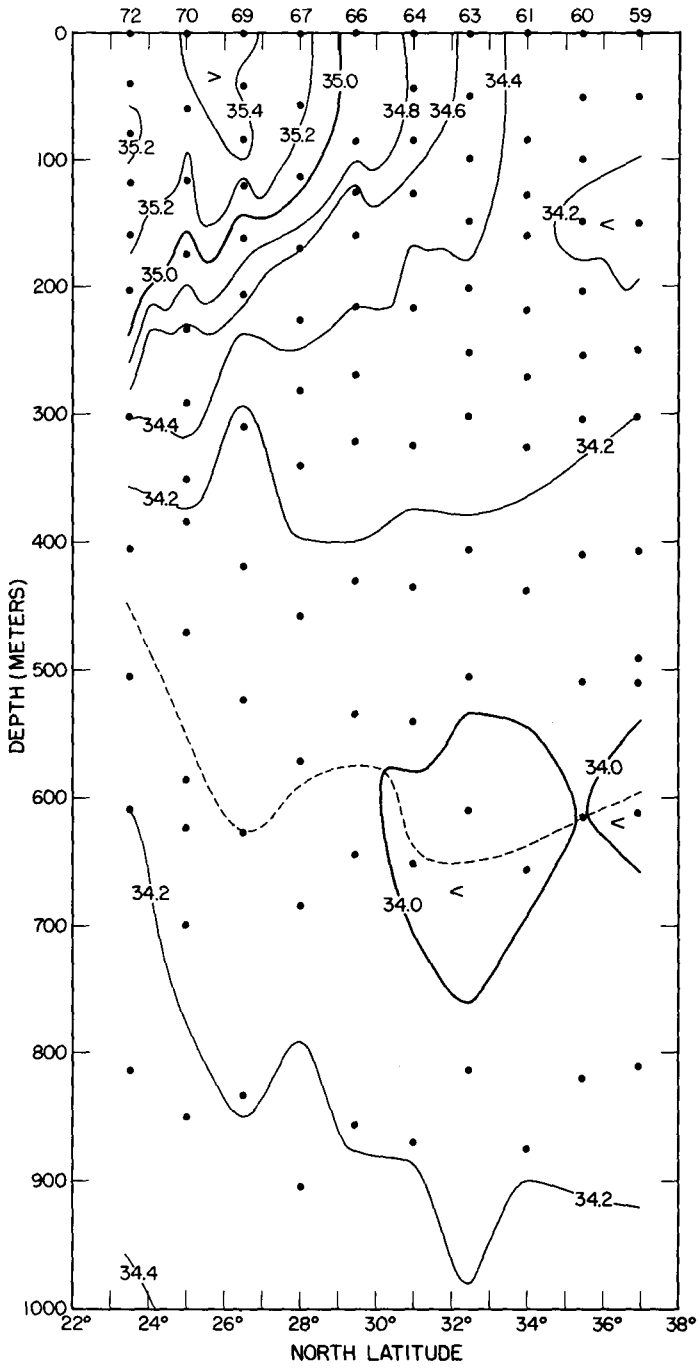

Figure 82.--Vertical section of salinity in parts per thousand along 159°W. longitude; Hugh M. Smith cruise 27, stations 59-72, January-February 1955. Points indicate observed values. Dotted lines indicate depth of salinity minima.

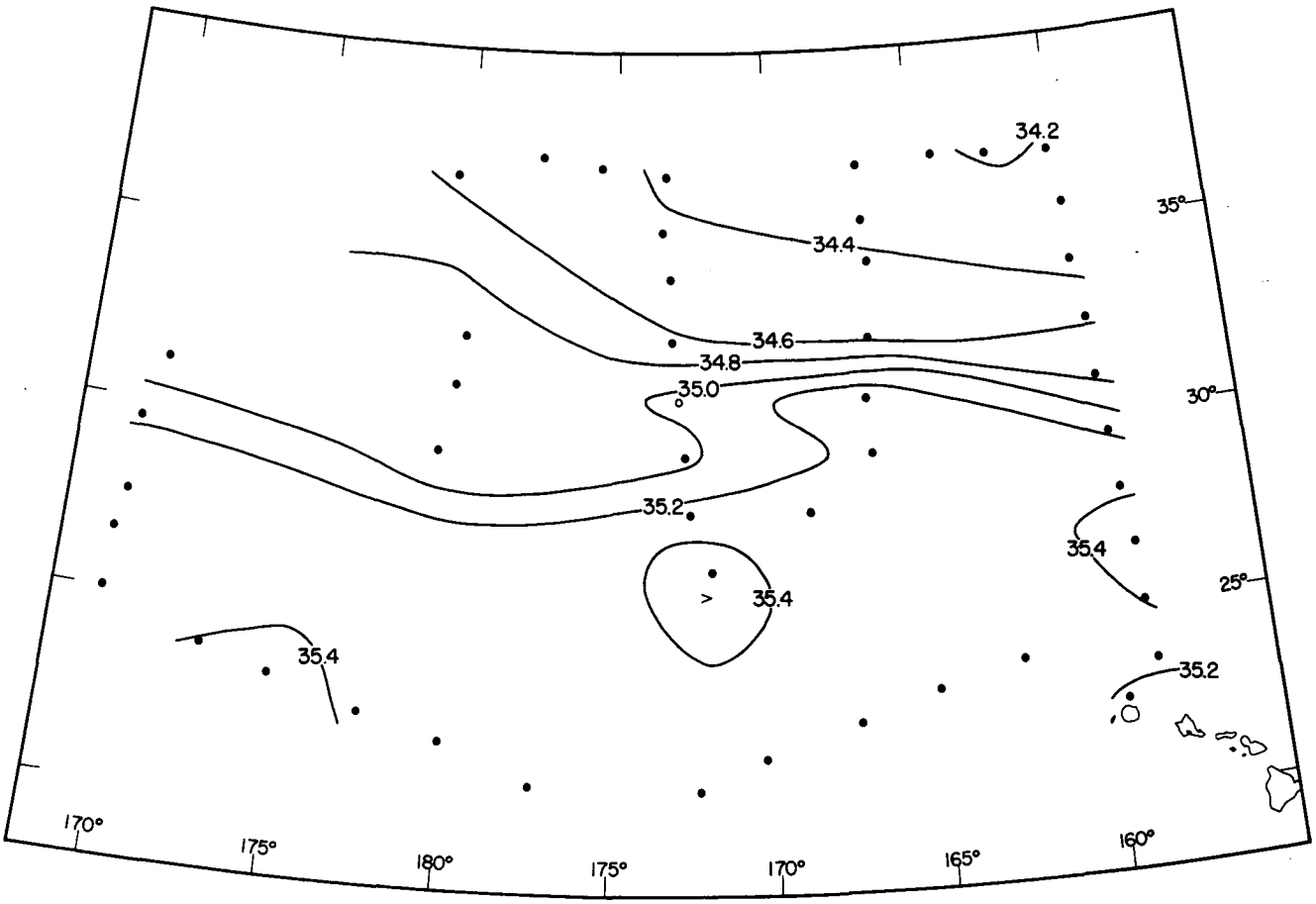

Figure 83.--Surface salinity in parts per thousand; Hugh M. Smith cruise 27, January-February 1955. Contour interval 0.2 ‰. Dots indicate observed values.

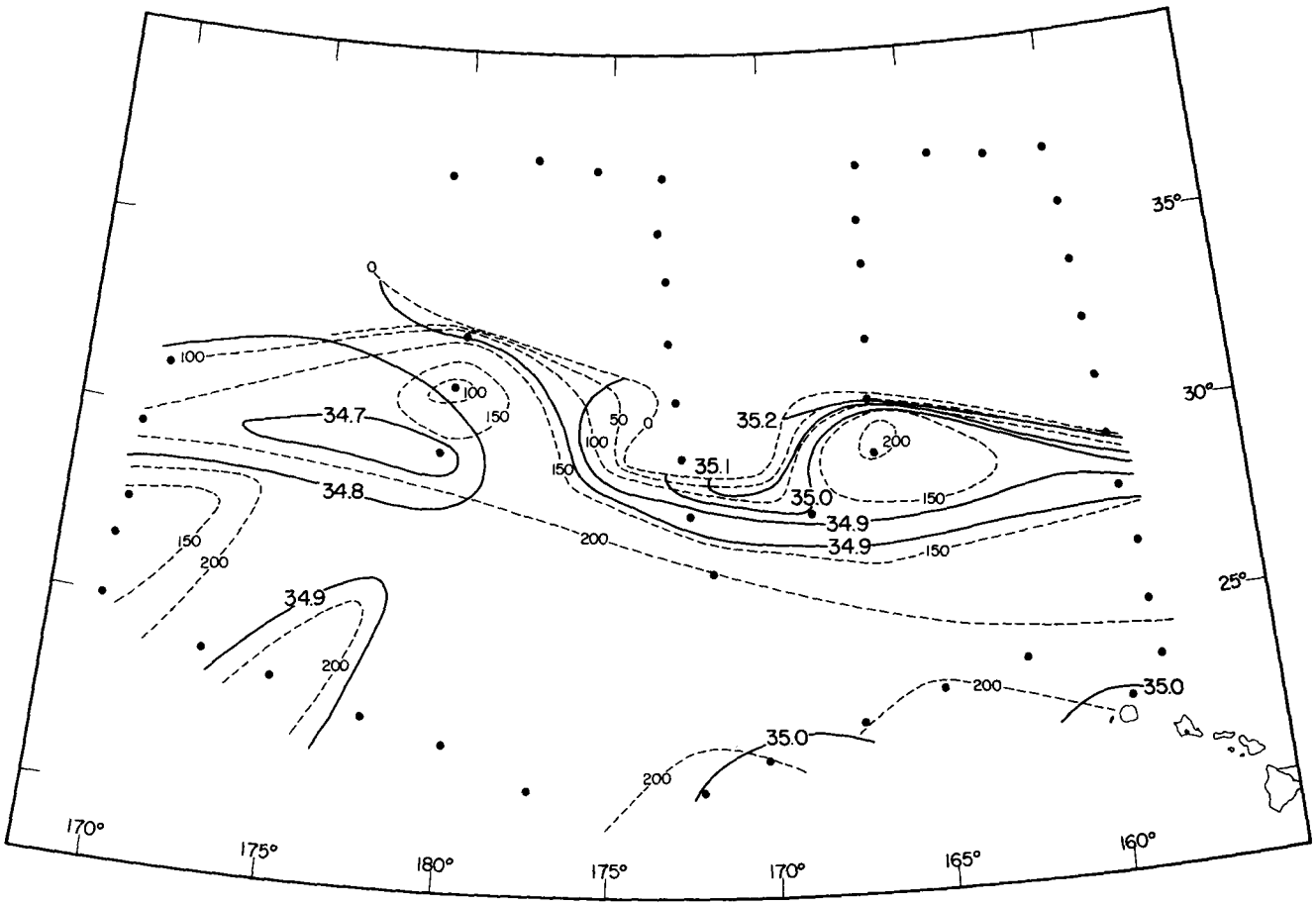

Figure 84.--Salinity in parts per thousand (solid lines) on the 25.2 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: salinity 0.1 ‰, depth of sigma-t surface 50 m. Dots indicate station positions.

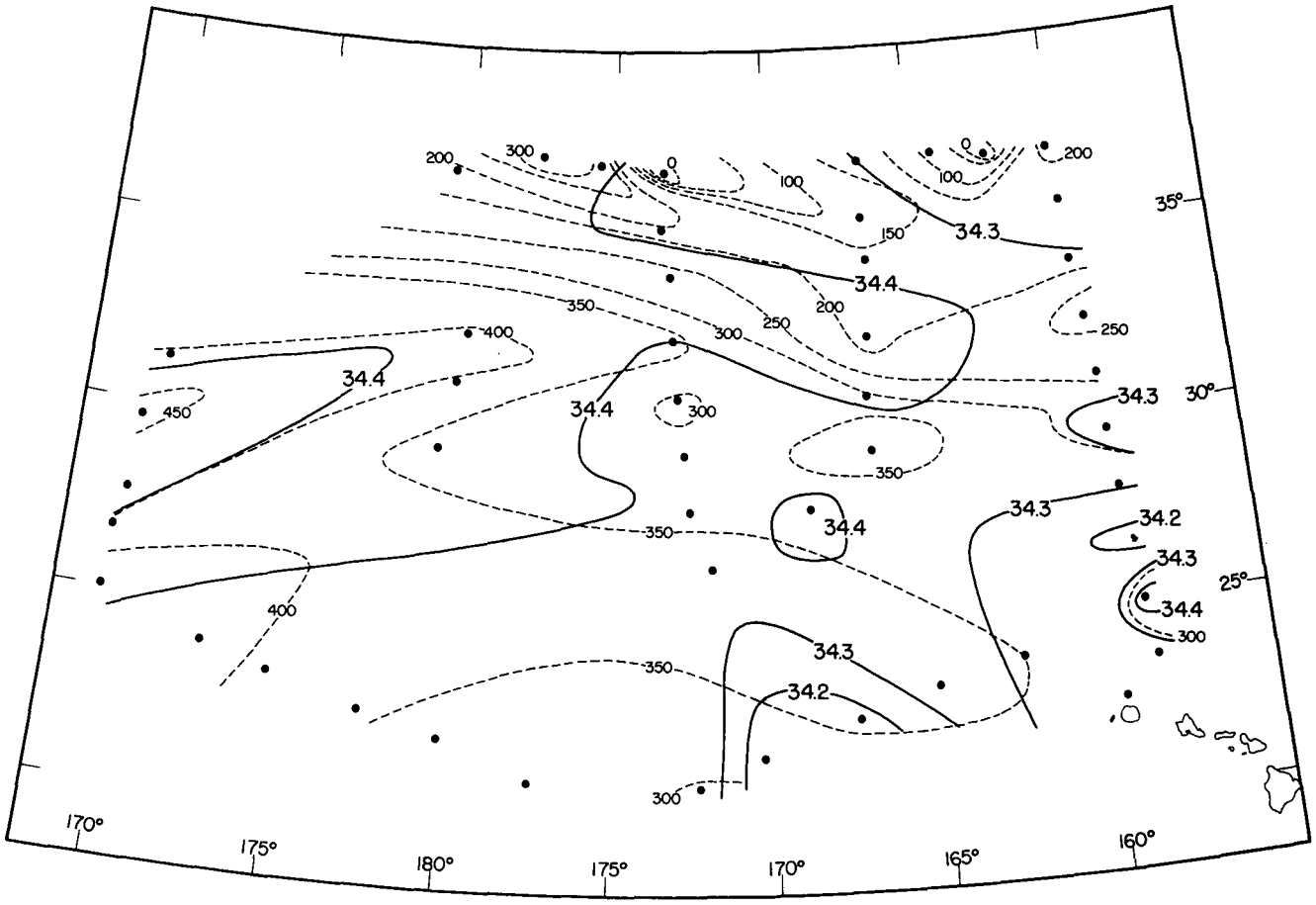

Figure 85. --Salinity in parts per thousand (solid lines) on the 26.0 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: salinity 0.1 ‰, depth of sigma-t surface 50 m. Dots indicate station positions.

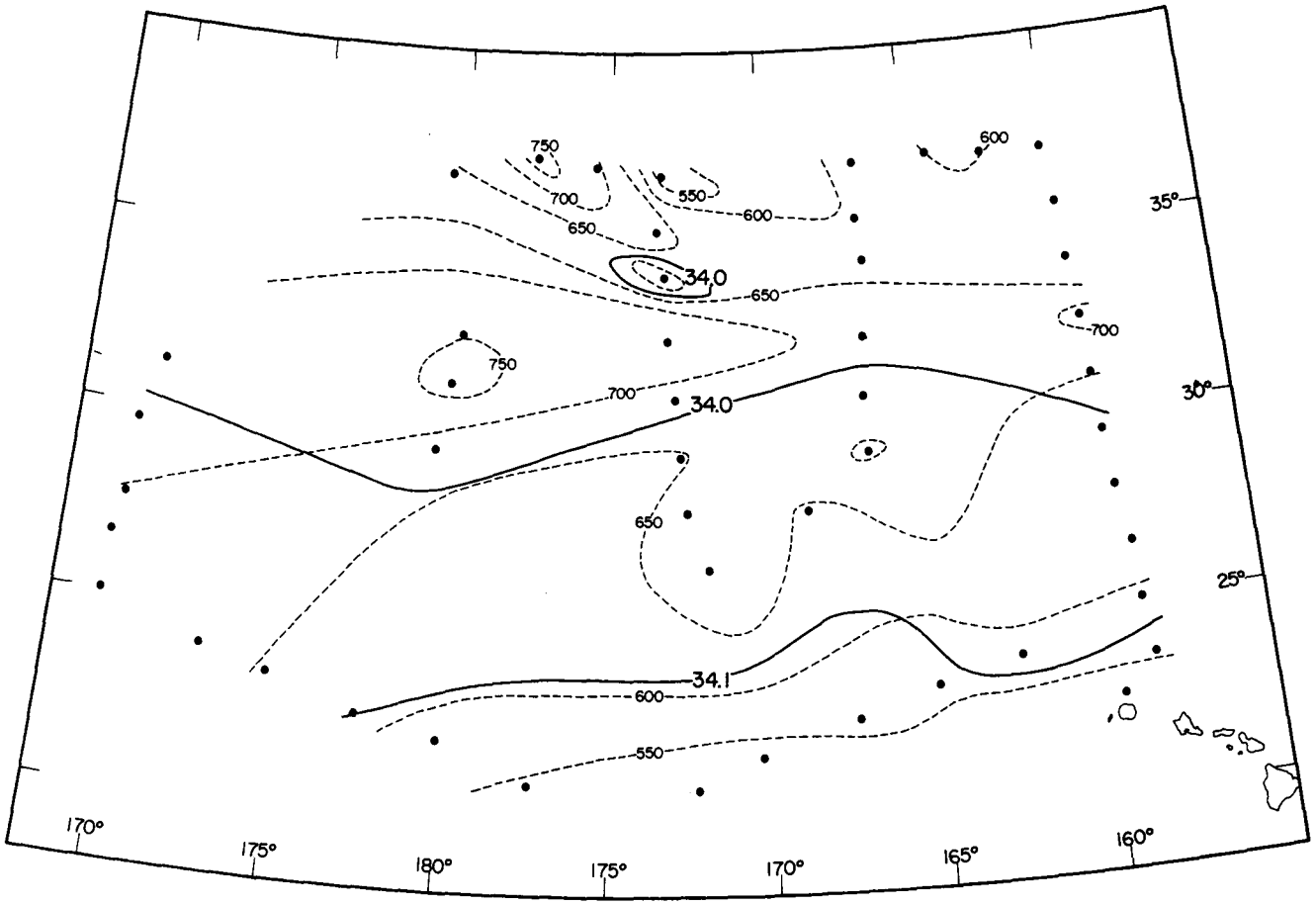

Figure 86.--Salinity in parts per thousand (solid lines) on the 26.8 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: salinity 0.1 ‰, depth of sigma-t surface 50 m. Dots indicate station positions.

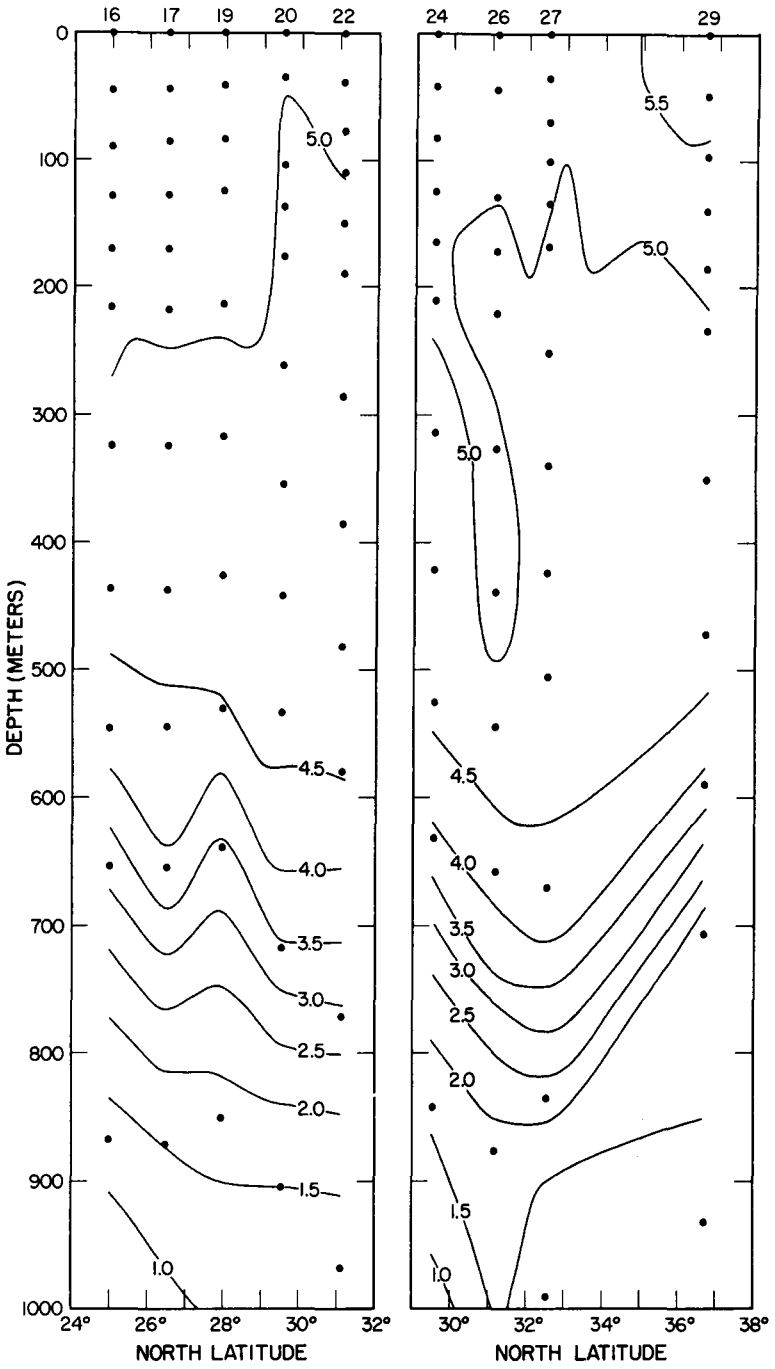

Figure 87.--Vertical section of dissolved oxygen in milliliters per liter along 170°E. longitude; Hugh M. Smith cruise 27, stations 16-22, January-February 1955. Contour interval 0.5 ml./l.

Figure 88.--Same along the 180th meridian, stations 24-29.

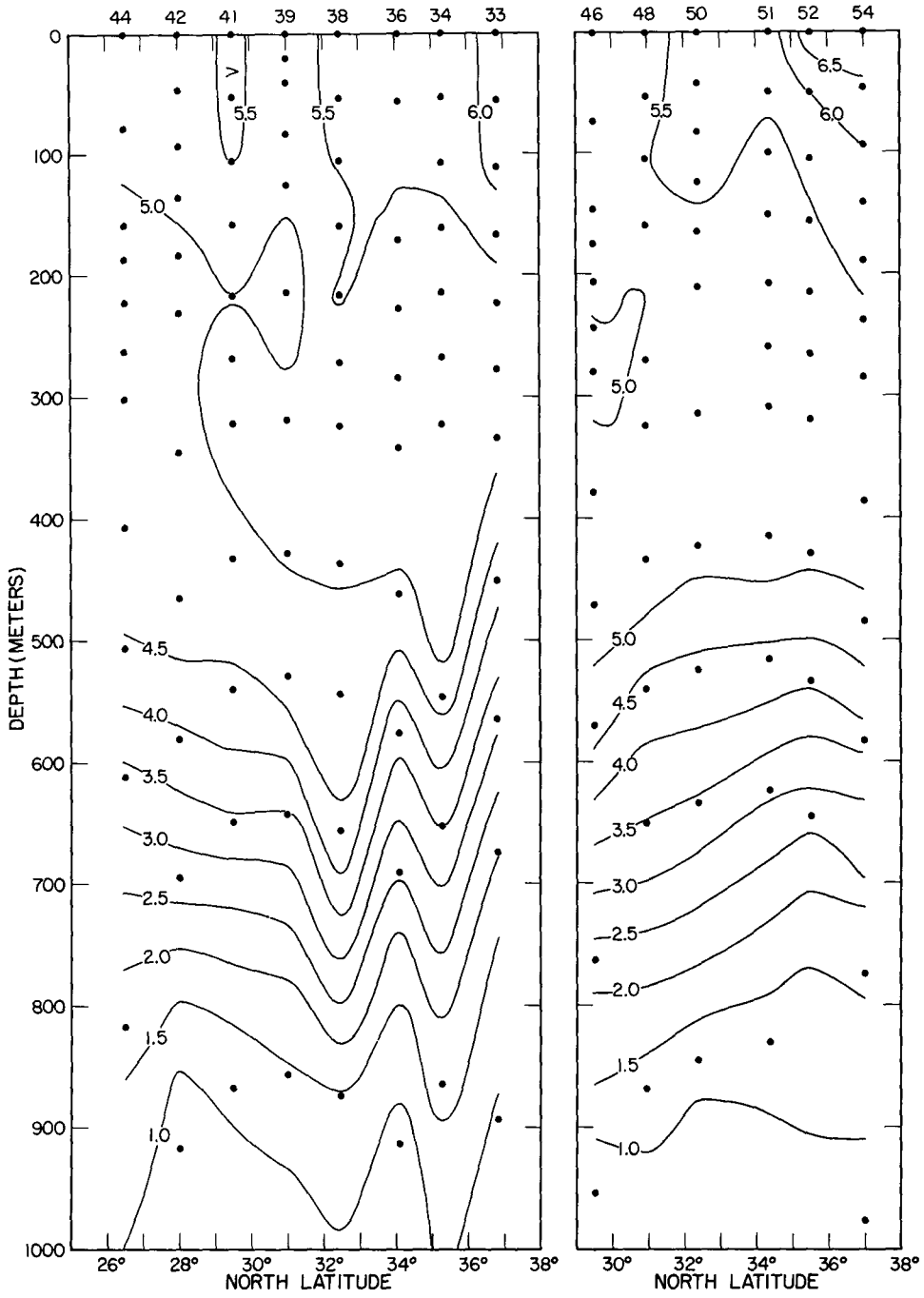

Figure 89.--Vertical section of dissolved oxygen in milliliters per liter along 172°W. longitude; Hugh M. Smith cruise 27, stations 33-44, January-February 1955. Contour interval 0.5 ml./l.

Figure 90.--Same along 167°W. longitude, stations 46-54.

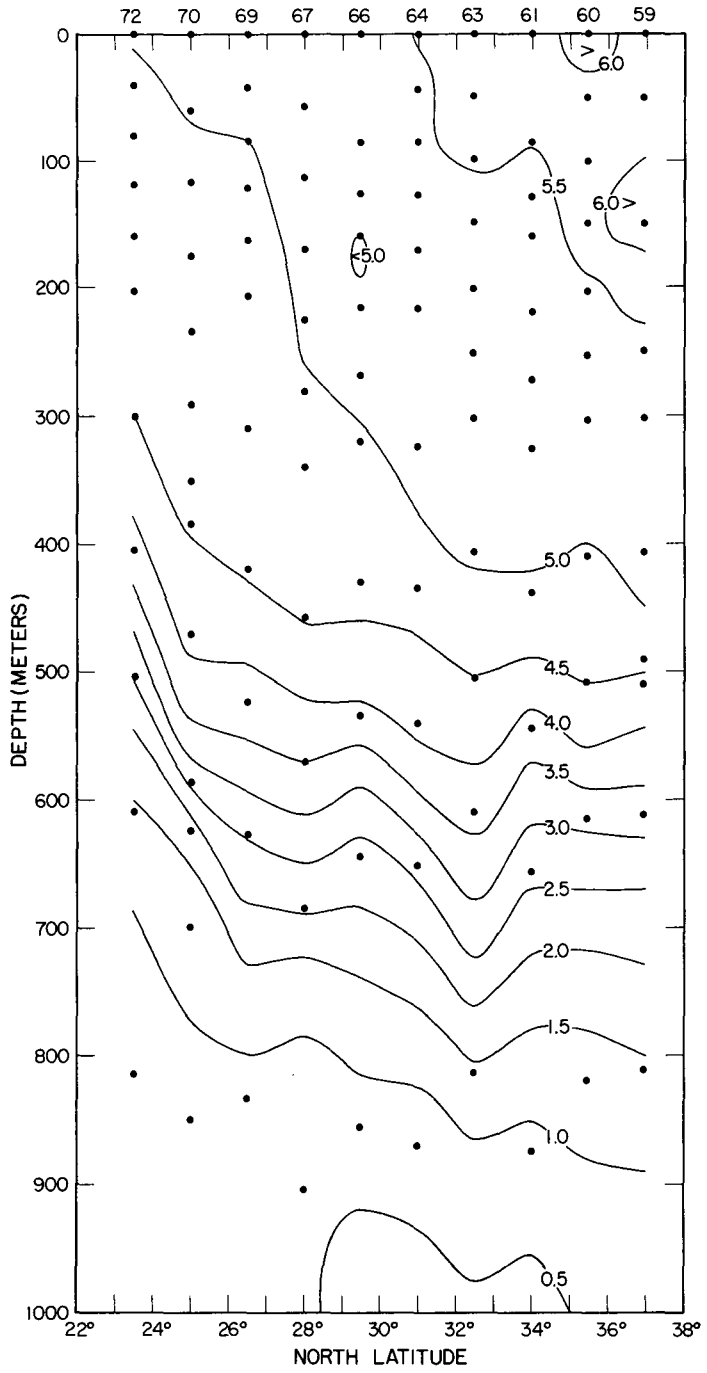

Figure 91. --Vertical section of dissolved oxygen in milliliters per liter along 159°W. longitude; Hugh M. Smith cruise 27, stations 59-72, January-February 1955. Contour interval 0.5 ml./l.

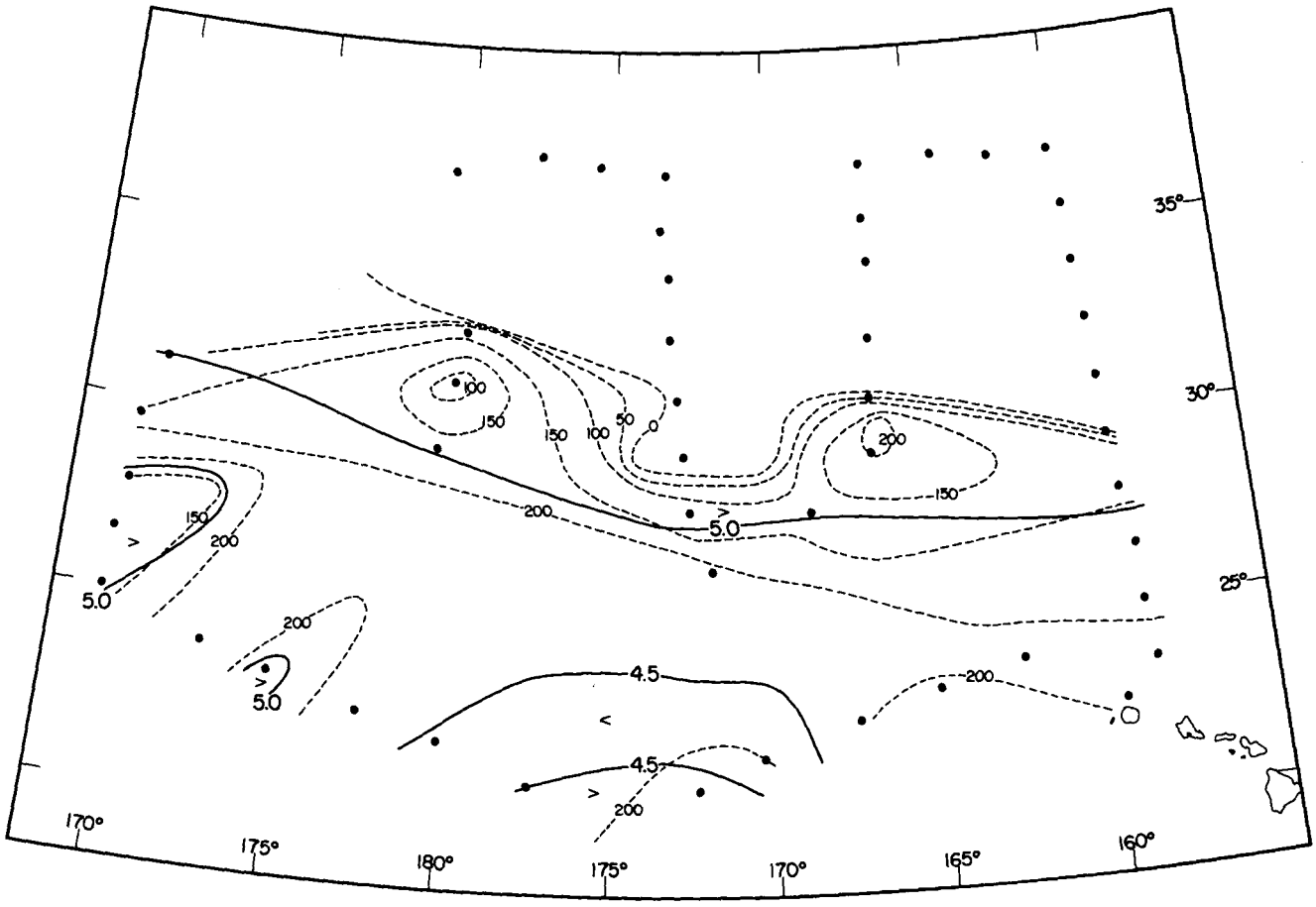

Figure 92.--Dissolved oxygen in milliliters per liter (solid lines) on the 25.2 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: dissolved oxygen 0, 5 ml./l., depth of sigma-t surface 50 m. Dots indicate station positions.

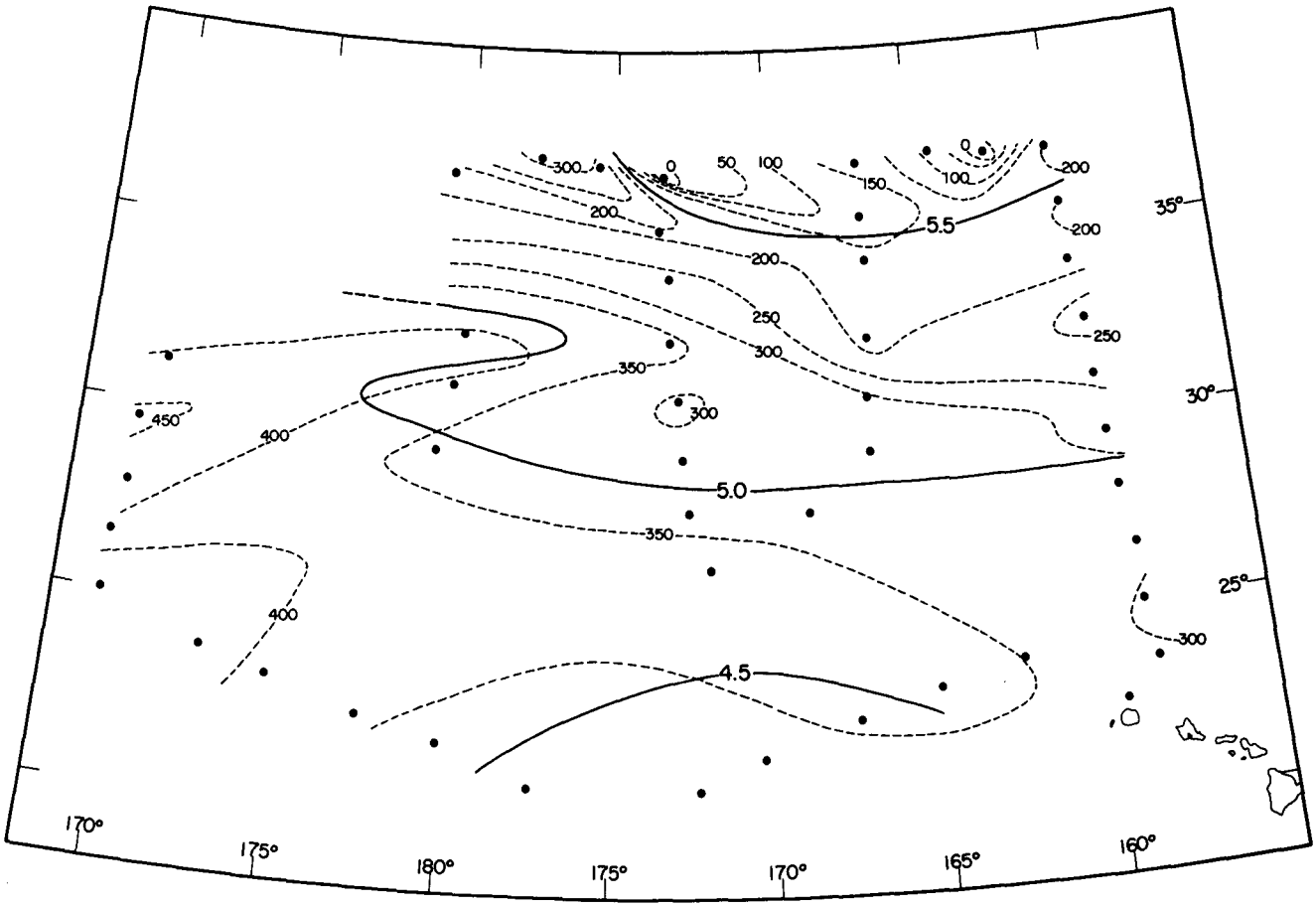

Figure 93.--Dissolved oxygen in milliliters per liter (solid lines) on the 26.0 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: dissolved oxygen 0.5 ml./l., depth of sigma-t surface 50 m. Dots indicate station positions.

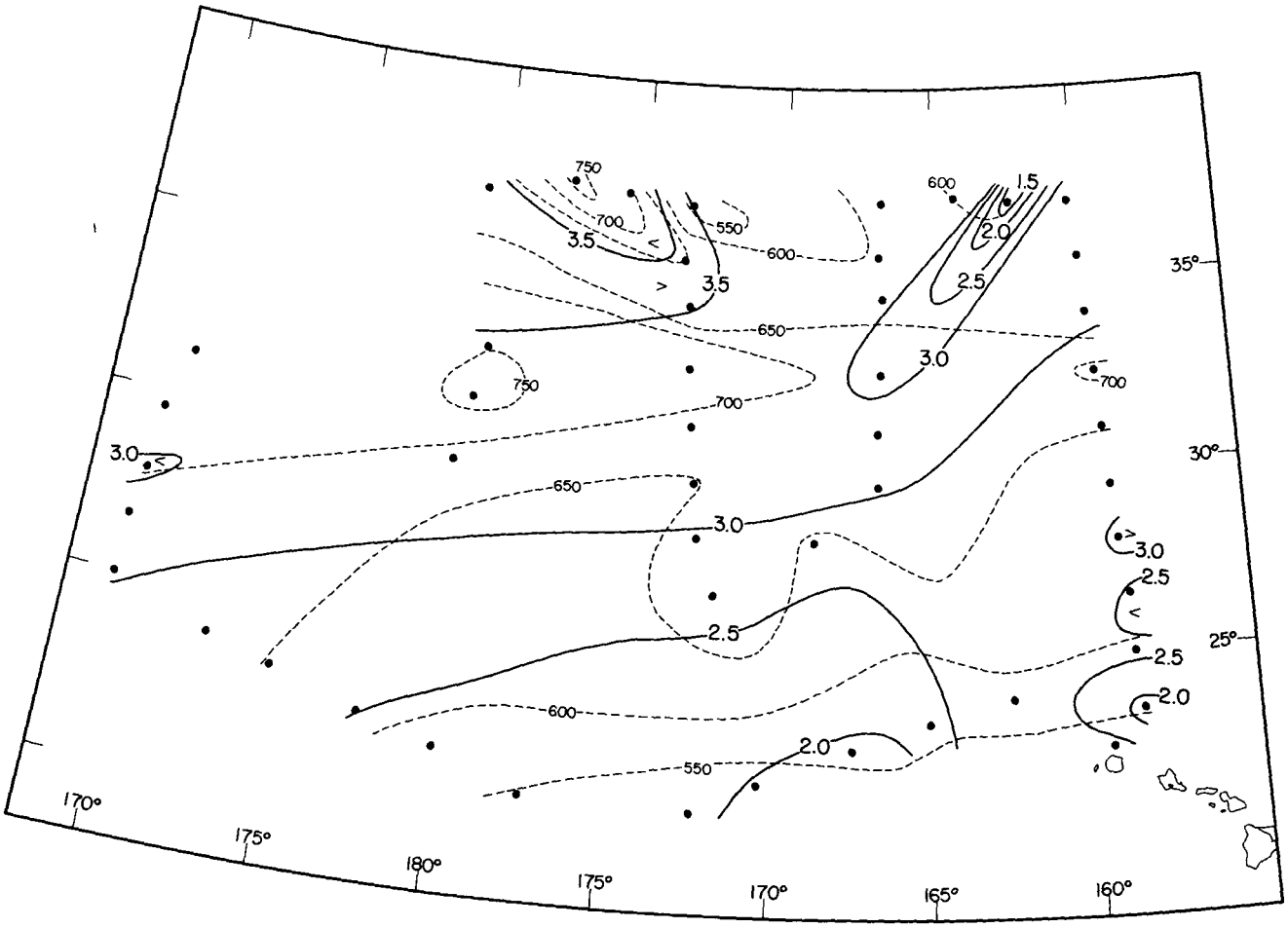

Figure 94.--Dissolved oxygen in milliliters per liter (solid lines) on the 26.8 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: dissolved oxygen 0.5 ml./l., depth of sigma-t surface 50 m. Dots indicate station positions.

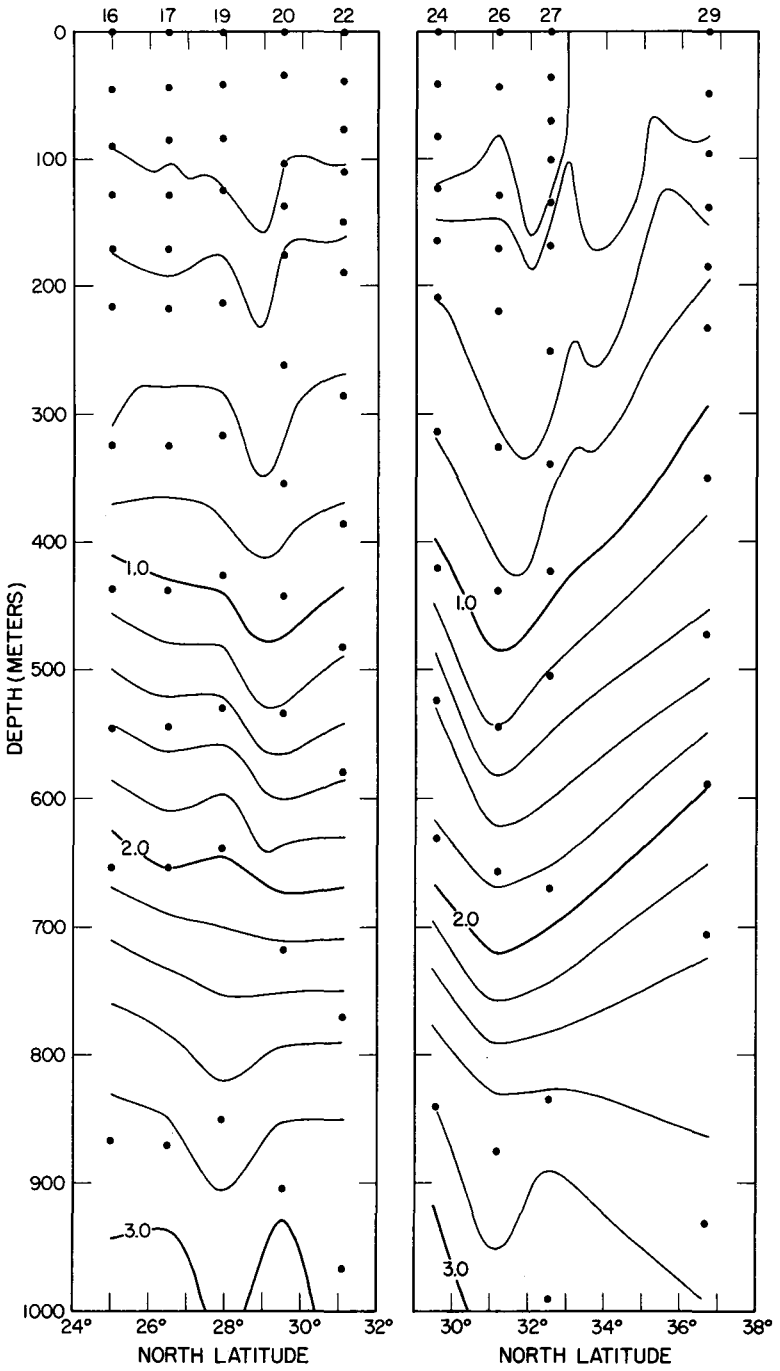

Figure 95.--Vertical section of inorganic phosphate in microgram-atoms per liter along 170°E. longitude, Hugh M. Smith cruise 27, stations 16-22, January-February 1955. Contour interval 0.2 μg at./l.

Figure 96.--Same along the 180th meridian, stations 24-29.

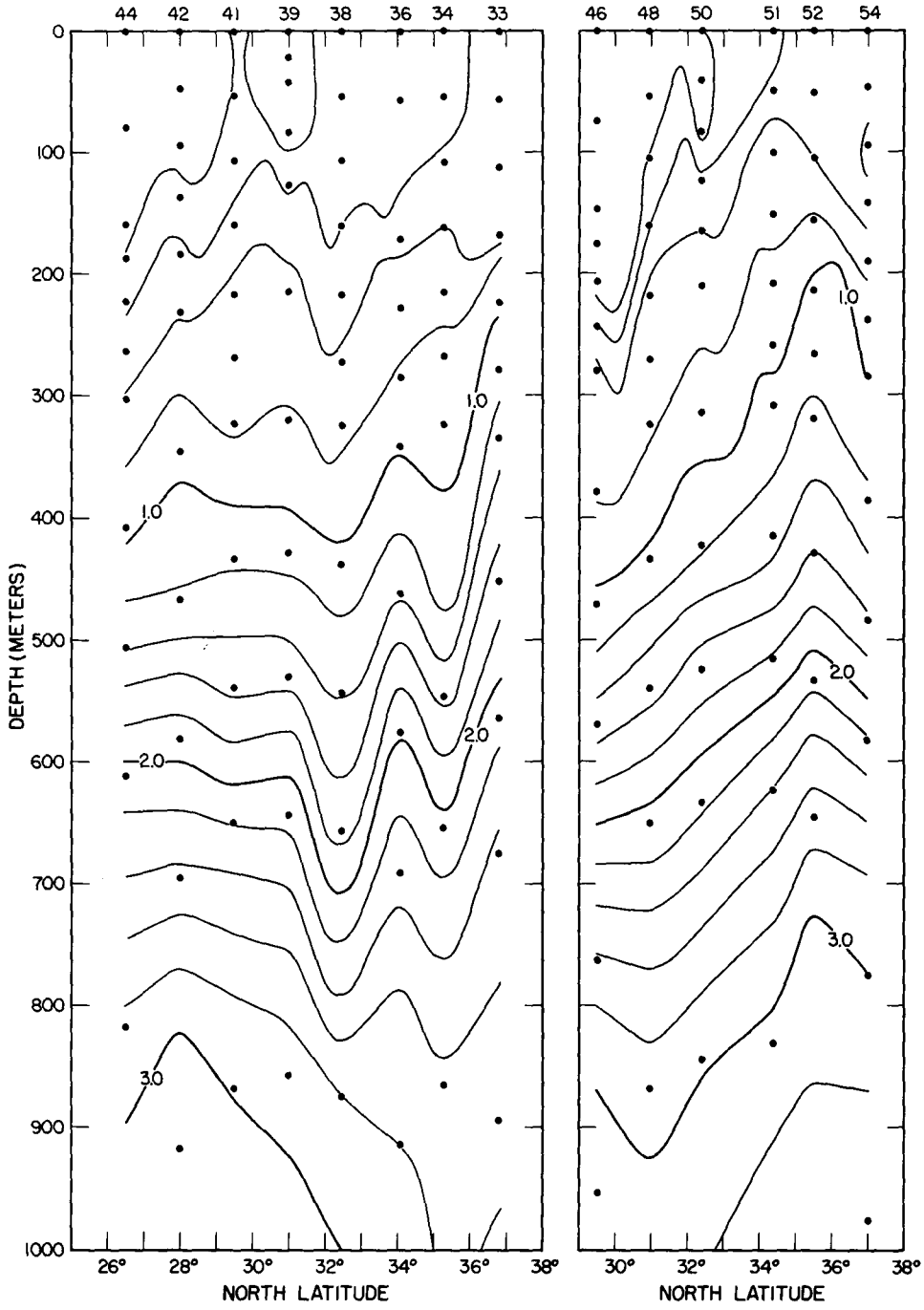

Figure 97.--Vertical section of inorganic phosphate in microgram-atoms per liter along 172°W. longitude, Hugh M. Smith cruise 27, stations 33-44, January-February 1955. Contour interval 0.2 μg at./l.

Figure 98.--Same along 167°W. longitude, stations 46-54.

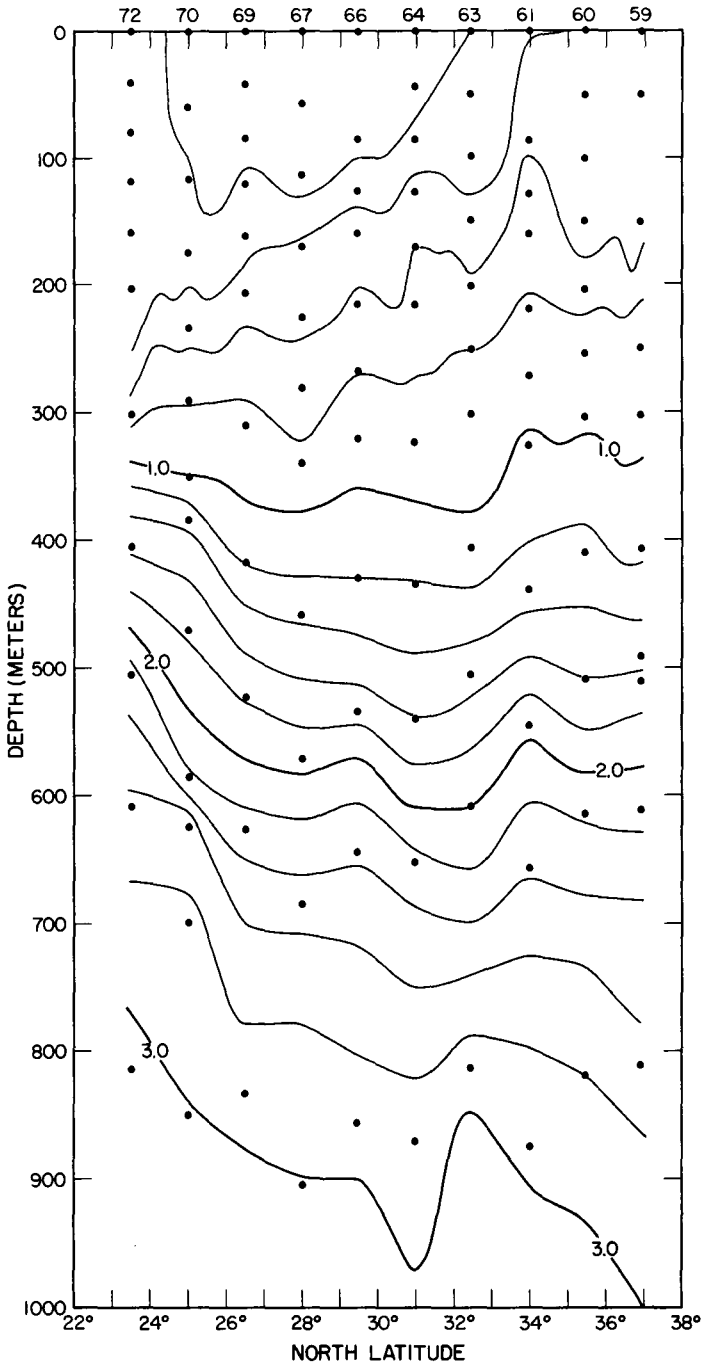

Figure 99.--Vertical section of inorganic phosphate in microgram-atoms per liter along 159°W. longitude, Hugh M. Smith cruise 27, stations 59-72, January-February 1955. Contour interval 0.2 μg at./l.

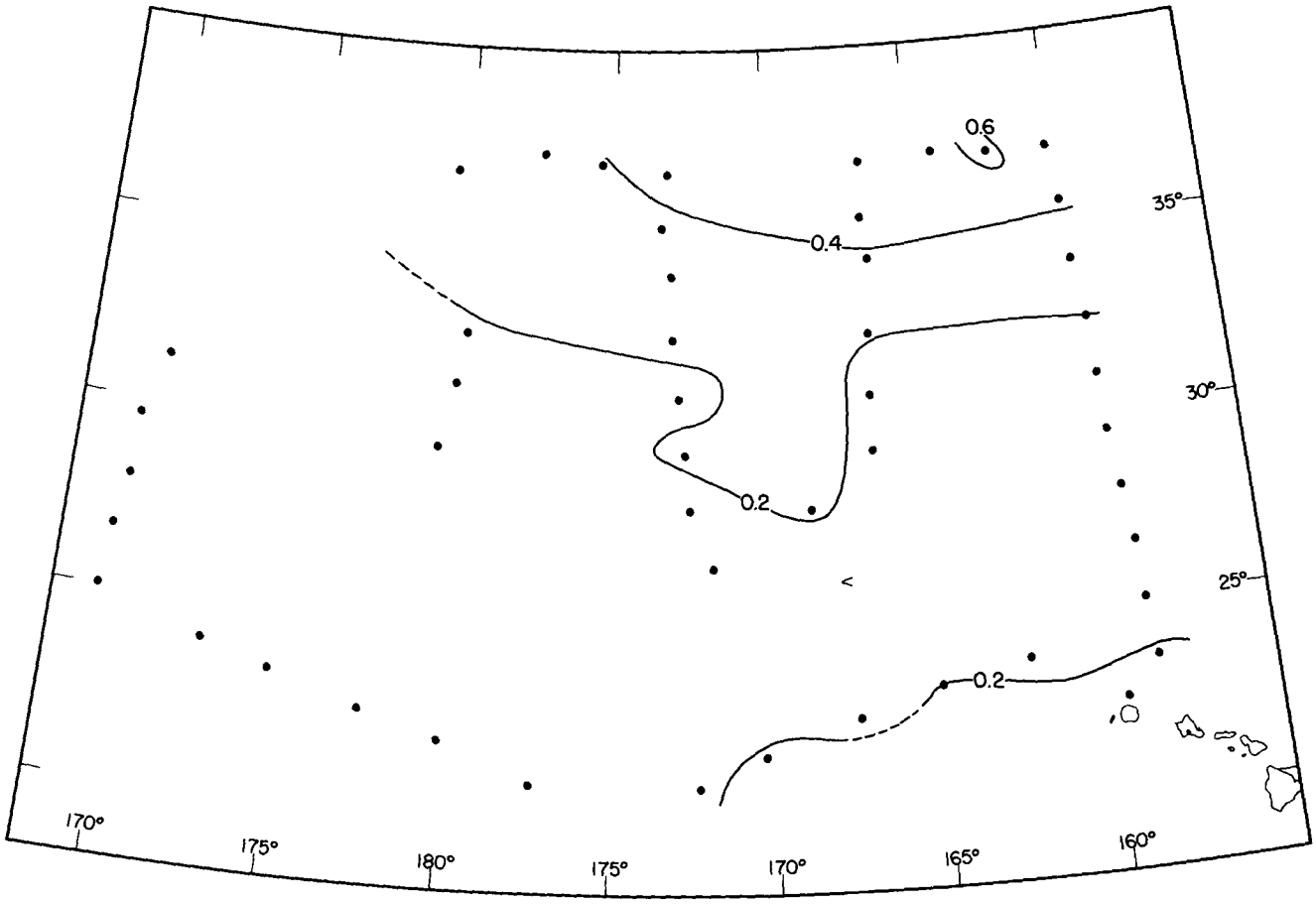

Figure 100.--Surface inorganic phosphate in microgram-atoms per liter; Hugh M. Smith cruise 27, January-February 1955. Contour interval 0.2 μg at./l. Dots indicate observed values.

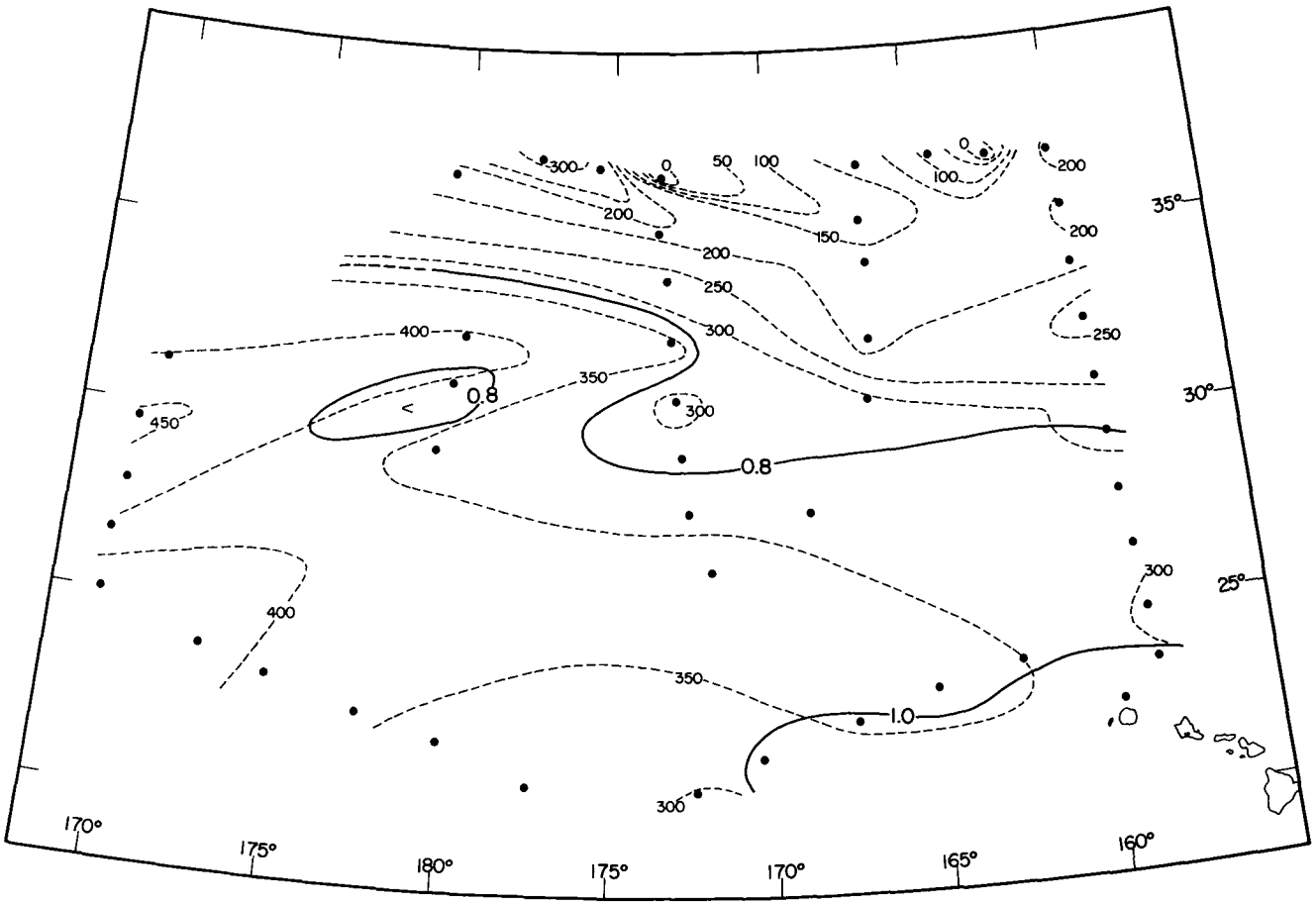

Figure 101.--Inorganic phosphate in microgram-atoms per liter (solid lines) on the 26.0 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: inorganic phosphate 0.2 µg at./l., depth of sigma-t surface 50 m. Dots indicate station positions.

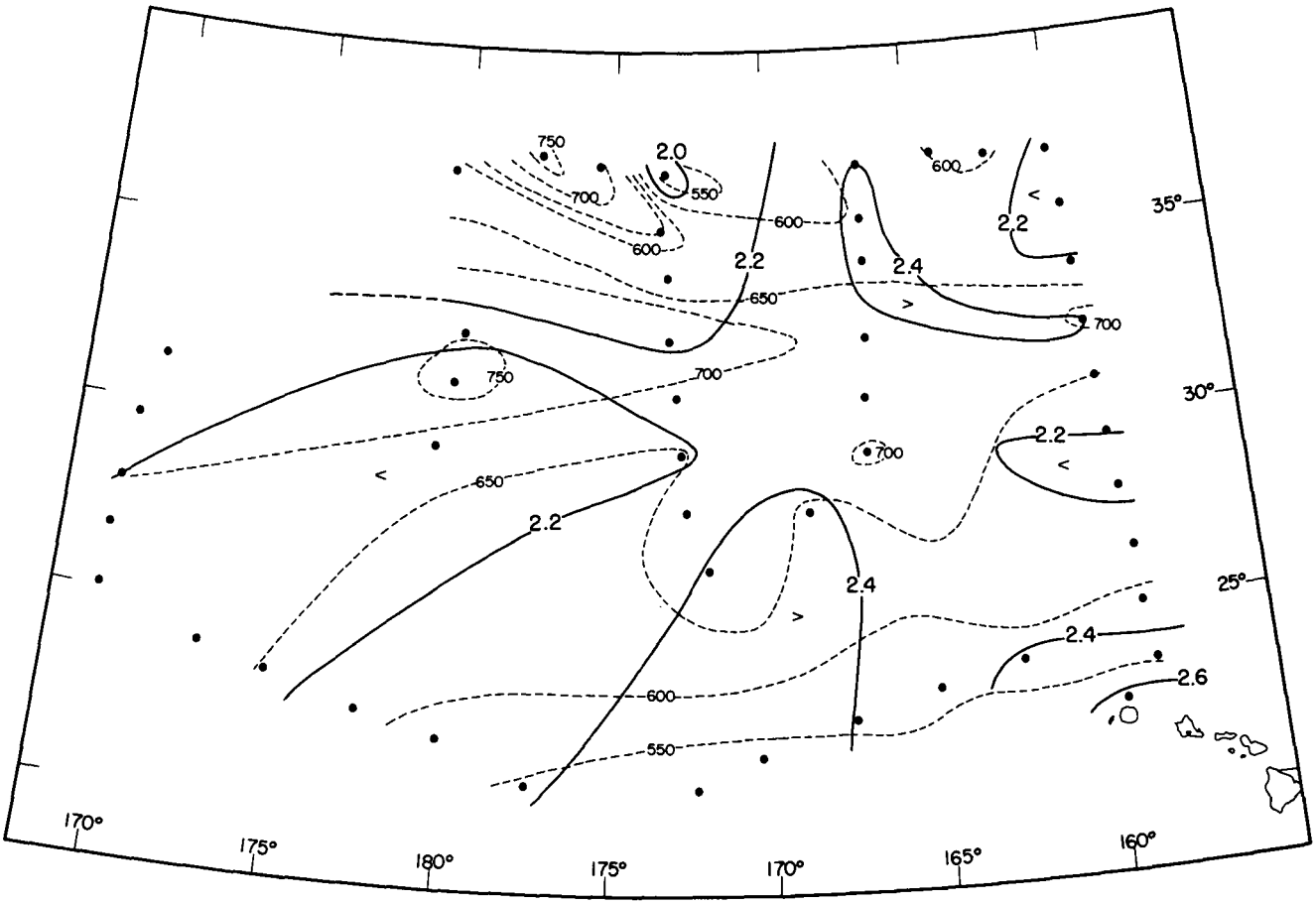

Figure 102.--Inorganic phosphate in microgram-atoms per liter (solid lines) on the 26.8 sigma-t surface (depth in meters, dotted lines); Hugh M. Smith cruise 27, January-February 1955. Contour intervals: inorganic phosphate 0.2 μg at./l., depth of sigma-t surface 50 m. Dots indicate station positions.

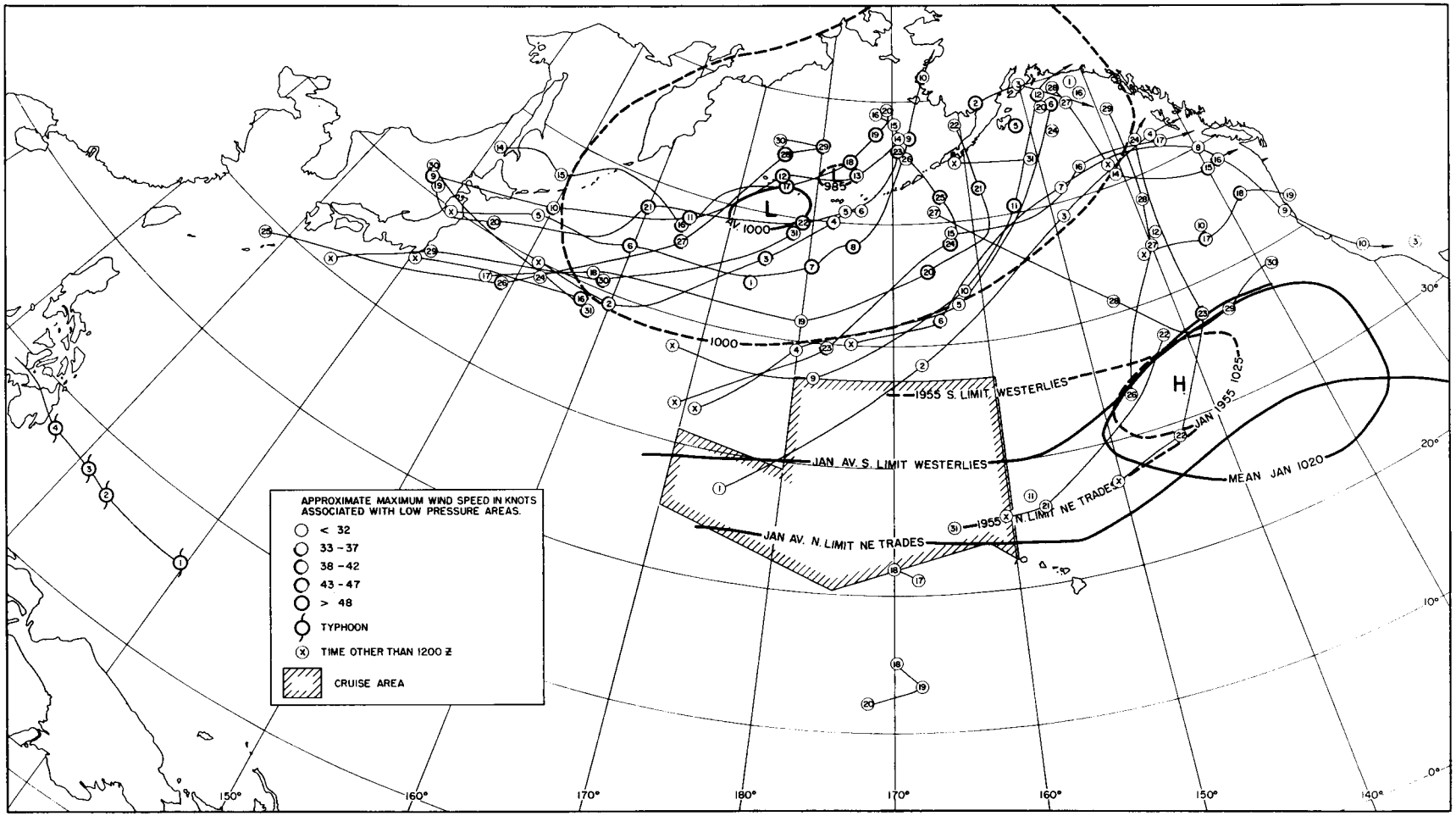

Figure 103.--Normal (heavy solid lines) and mean January 1955 (broken lines) position of the Aleutian Low and Eastern North Pacific High; normal and 1954 mean monthly limits of northeast trades and westerlies; tracks of centers of low pressure areas, showing daily positions.

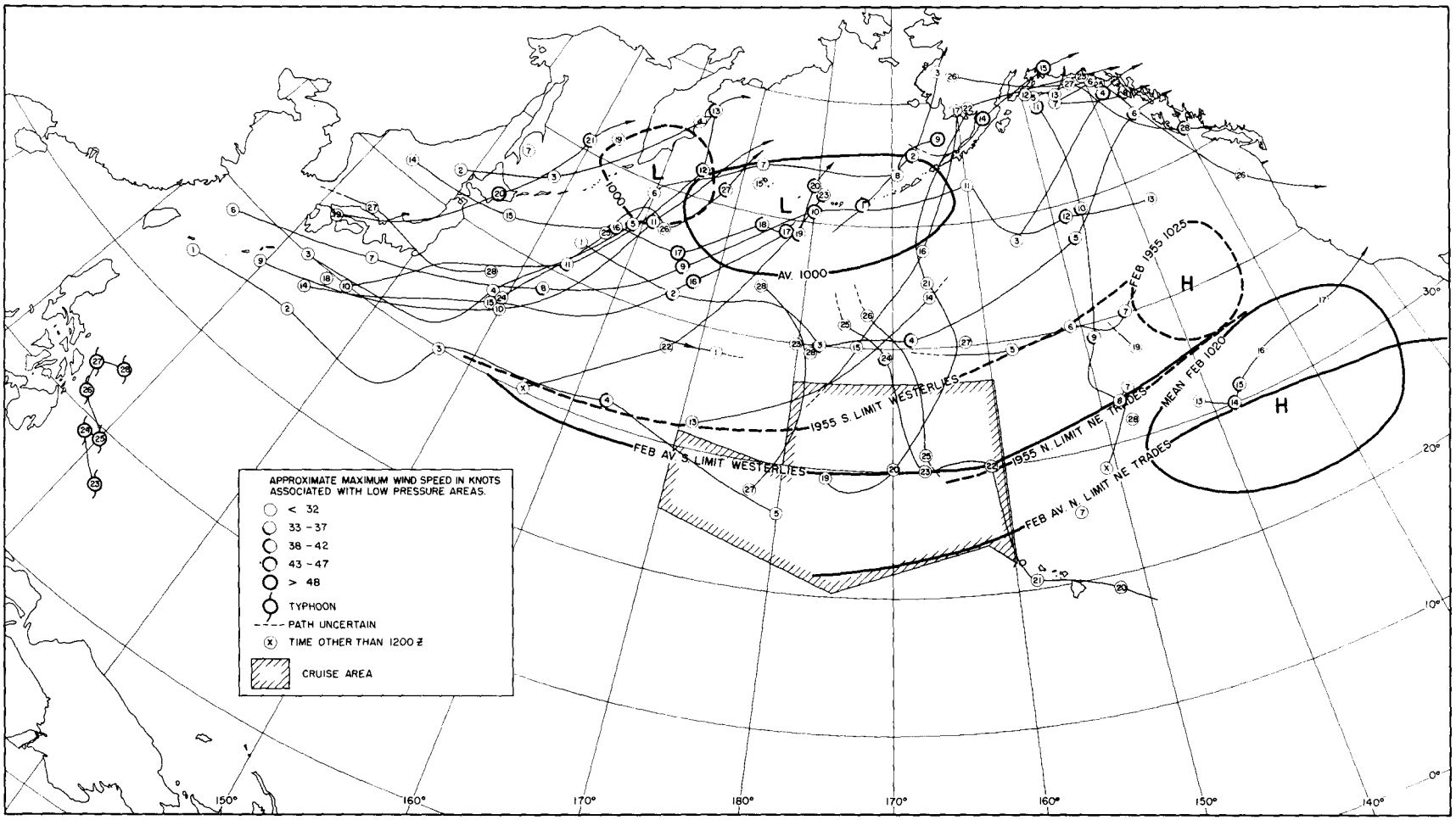

Figure 104.--Normal (heavy solid lines) and mean February 1955 (broken lines) position of the Aleutian Low and Eastern North Pacific High; normal and 1954 mean monthly limits of northeast trades and westerlies; tracks of centers of low pressure areas, showing daily positions.

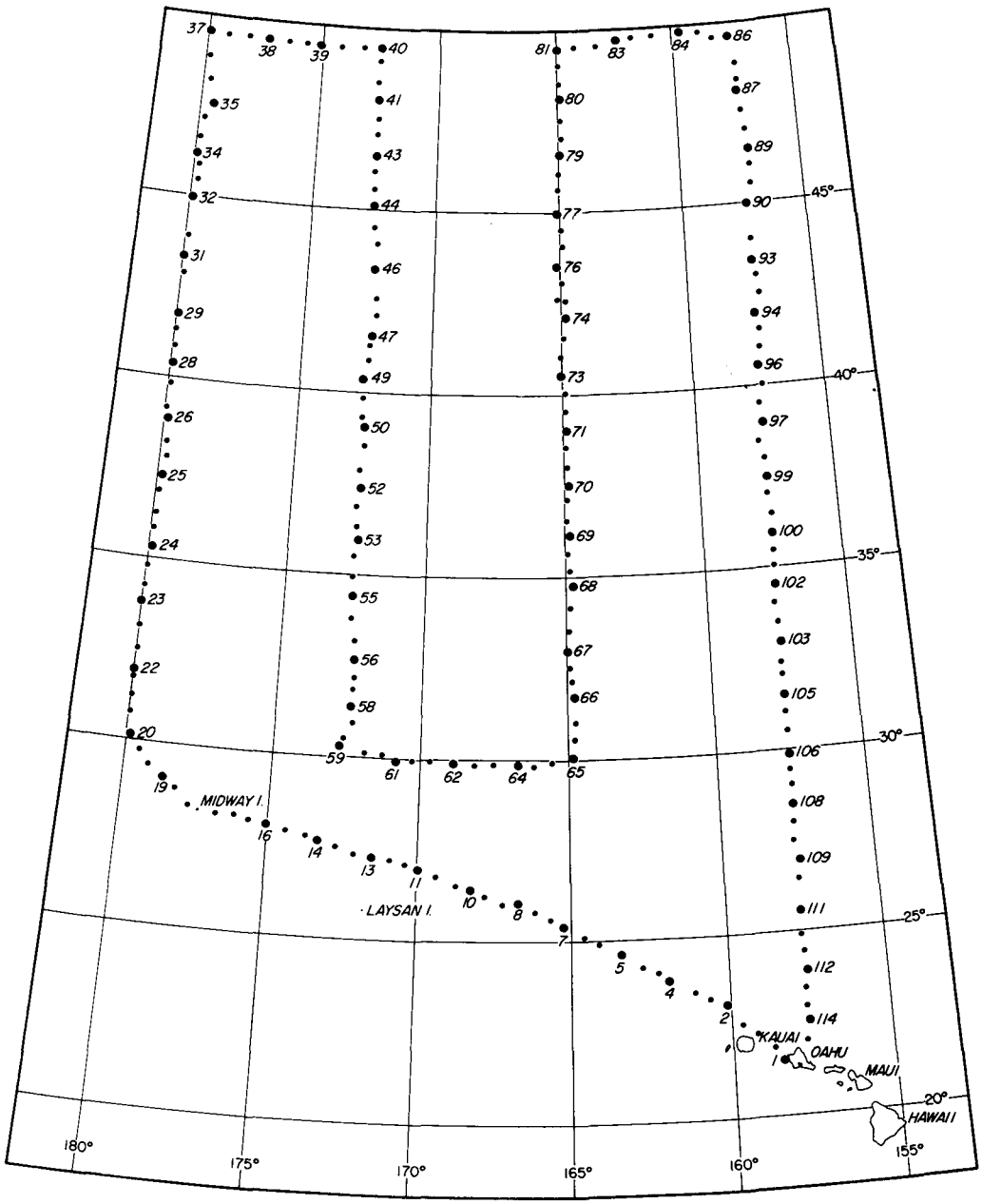

Figure 105.--Oceanographic station positions; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Larged numbered dots indicate oceanographic stations. Small dots indicate positions of BT lowerings between stations.

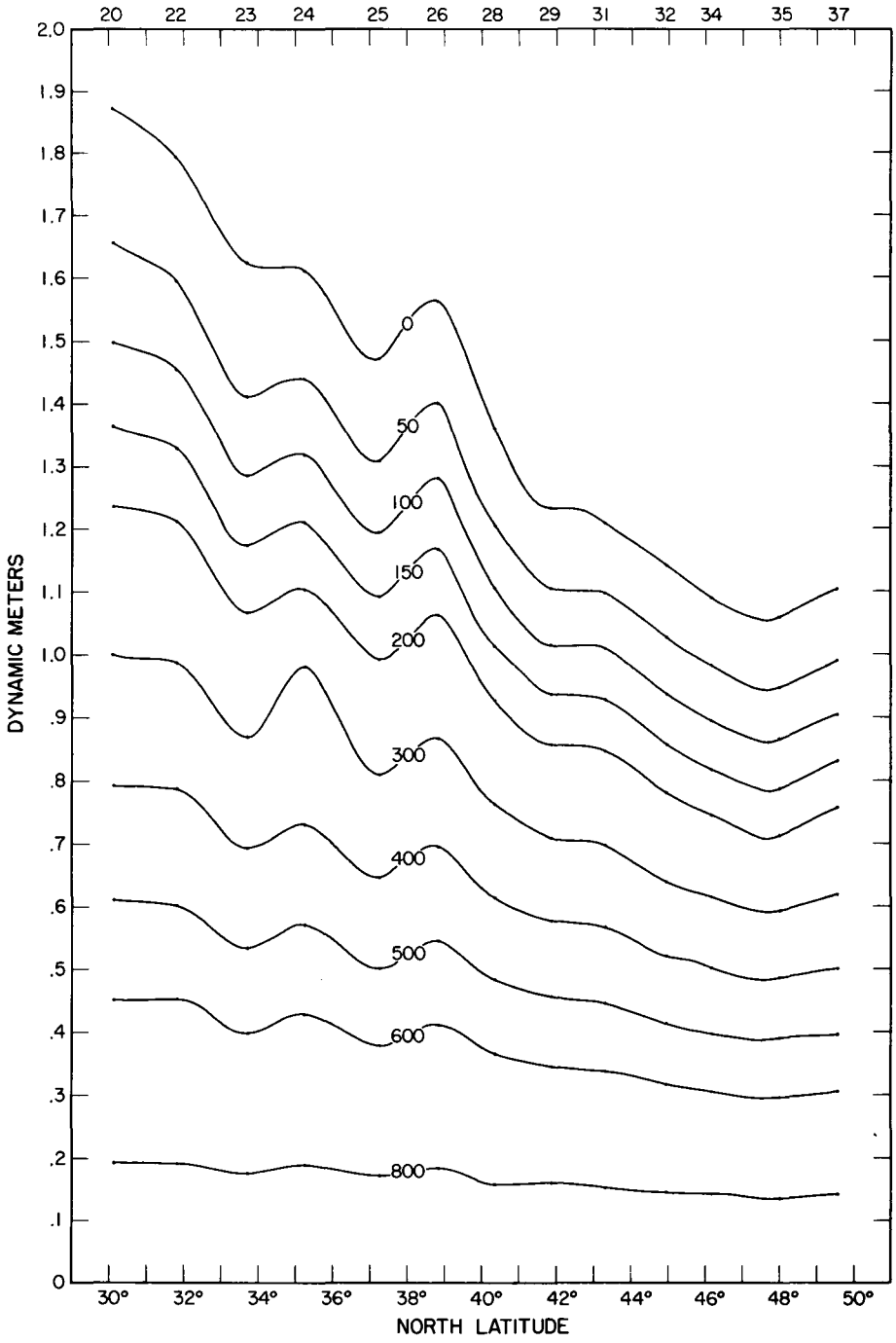

Figure 106.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface, neglecting pressure terms in the specific volume anomaly, along the 180th meridian; Hugh M. Smith cruise 30 (NORPAC), stations 20-37, July-August 1955. Points represent computed values.

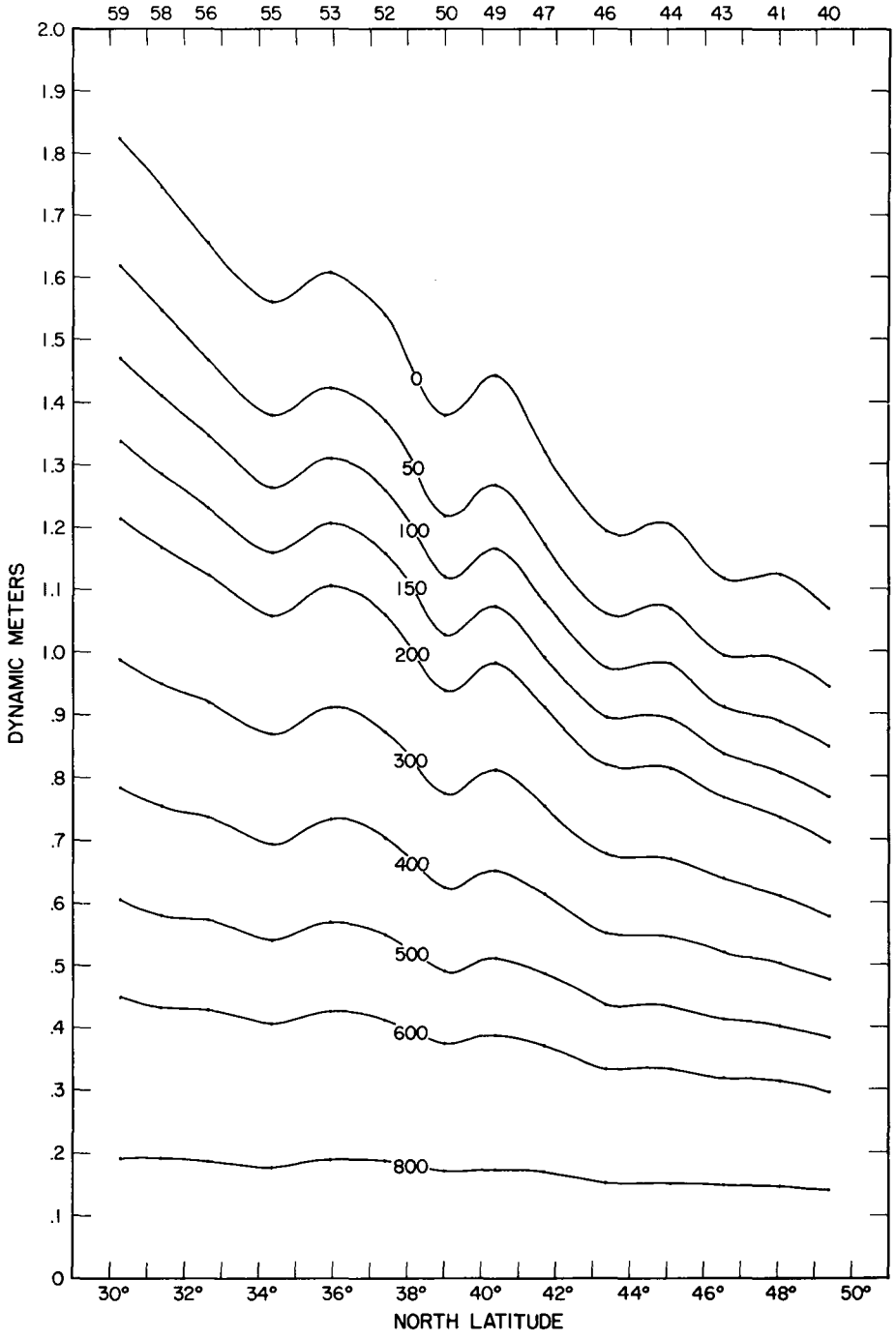

Figure 107.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface, neglecting pressure terms in the specific volume anomaly, along 172°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 40-59, July-August 1955. Points represent computed values.

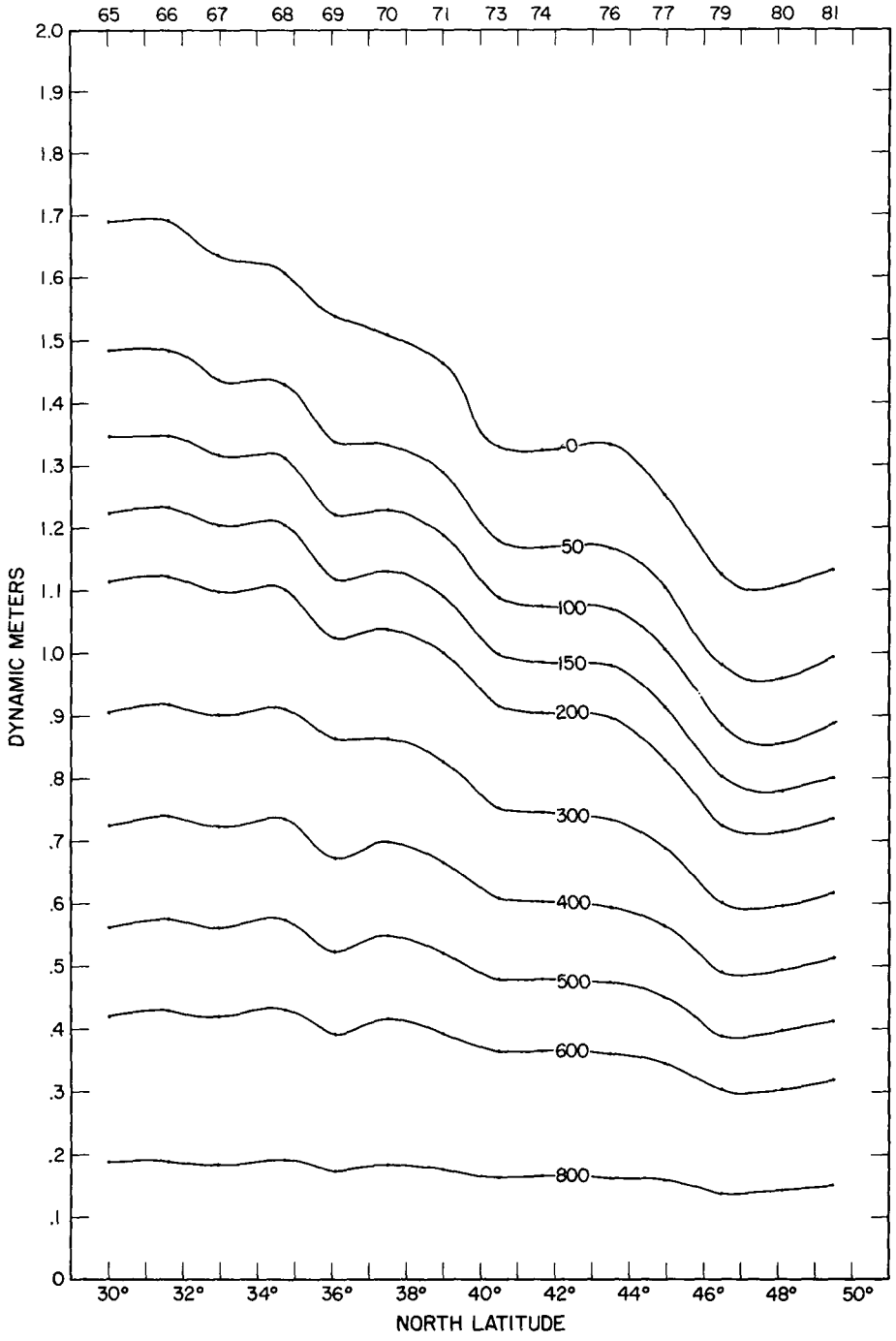

Figure 108.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface, neglecting pressure terms in the specific volume anomaly, along 165°W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 65-81, July-August 1955. Points represent computed values.

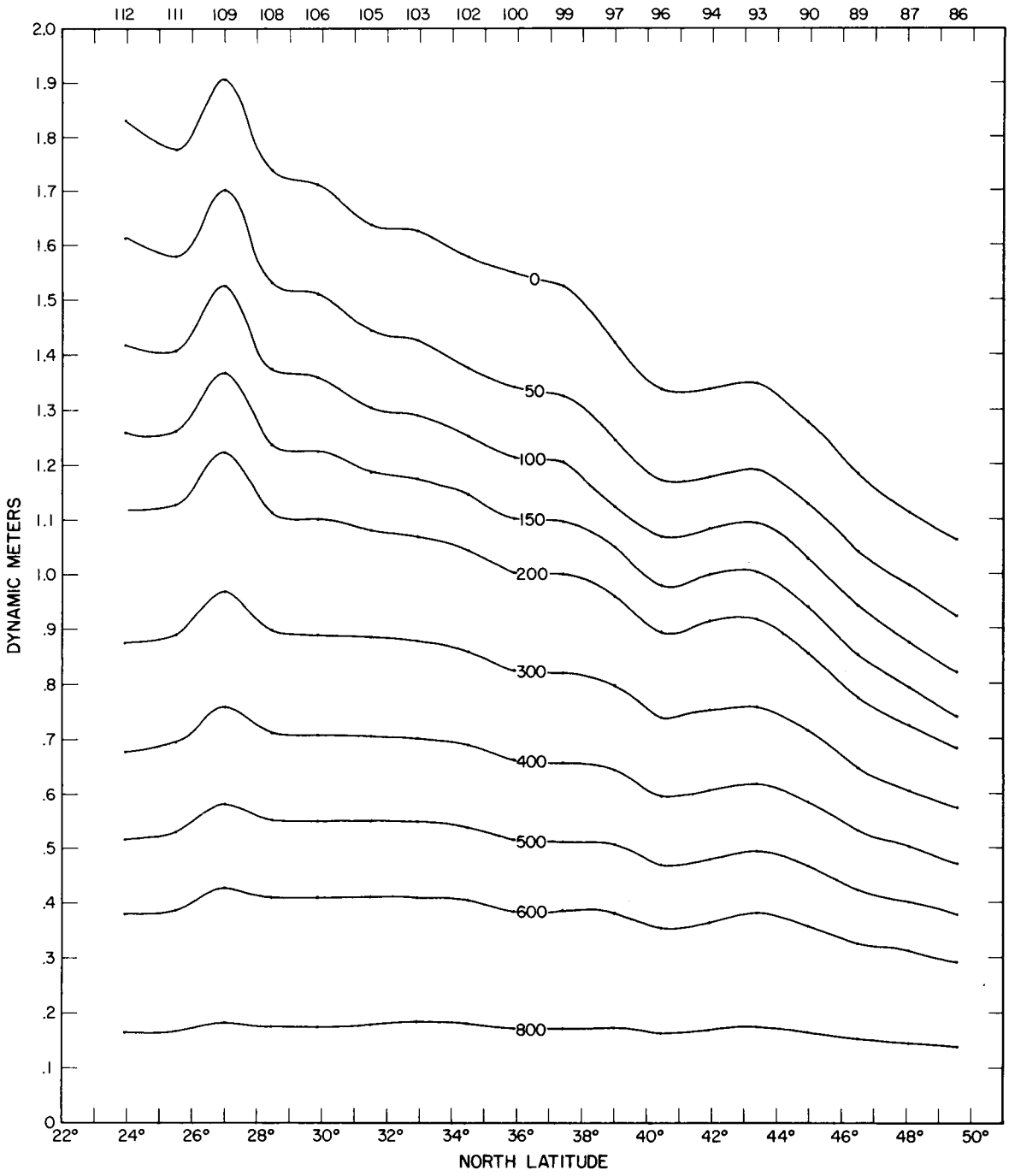

Figure 109.--Smoothed geopotential anomaly of the isobaric surfaces in dynamic meters relative to the 1,000-db. surface, neglecting pressure terms in the specific volume anomaly, along 157°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 86-112, July-August 1955. Points represent computed values.

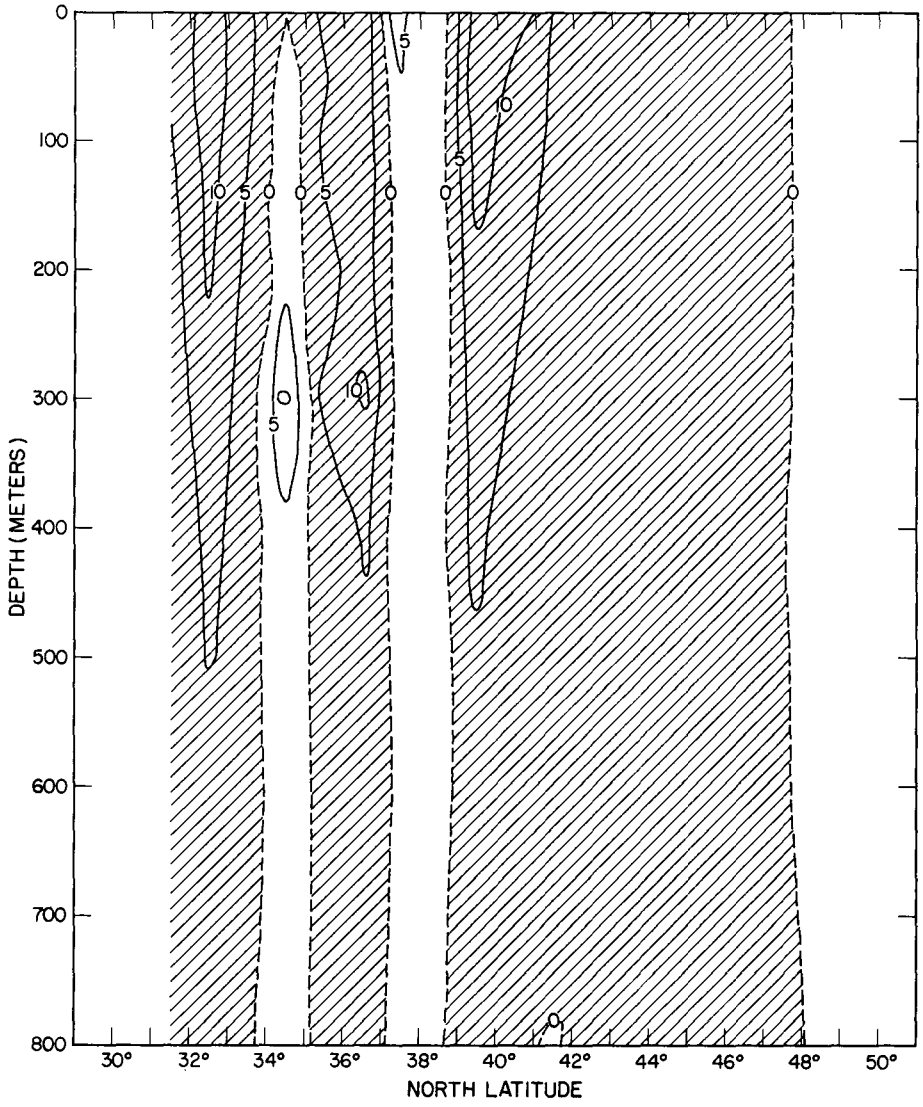

Figure 110.--Zonal components of the geostrophic currents in centimeters per second across the 180th meridian; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

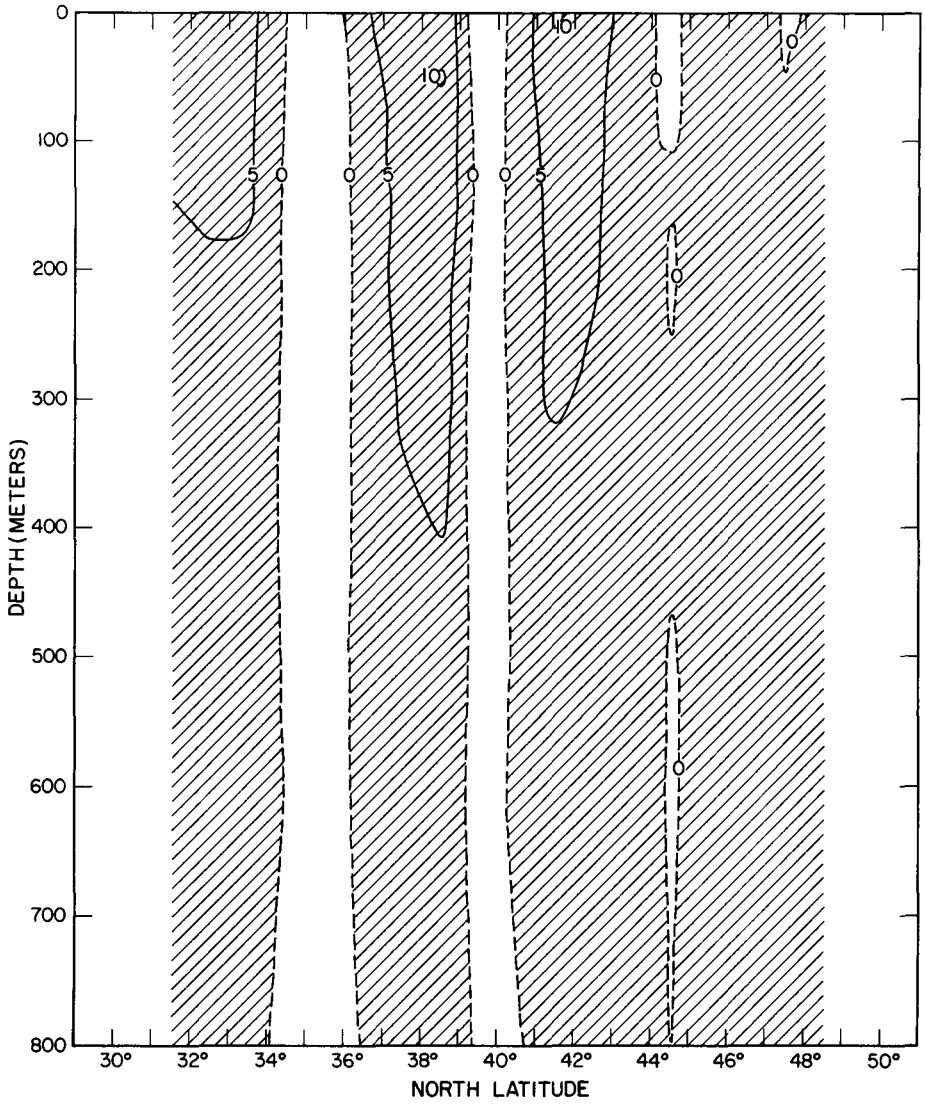

Figure 111.--Zonal components of the geostrophic currents in centimeters per second across 172°W. longitude; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

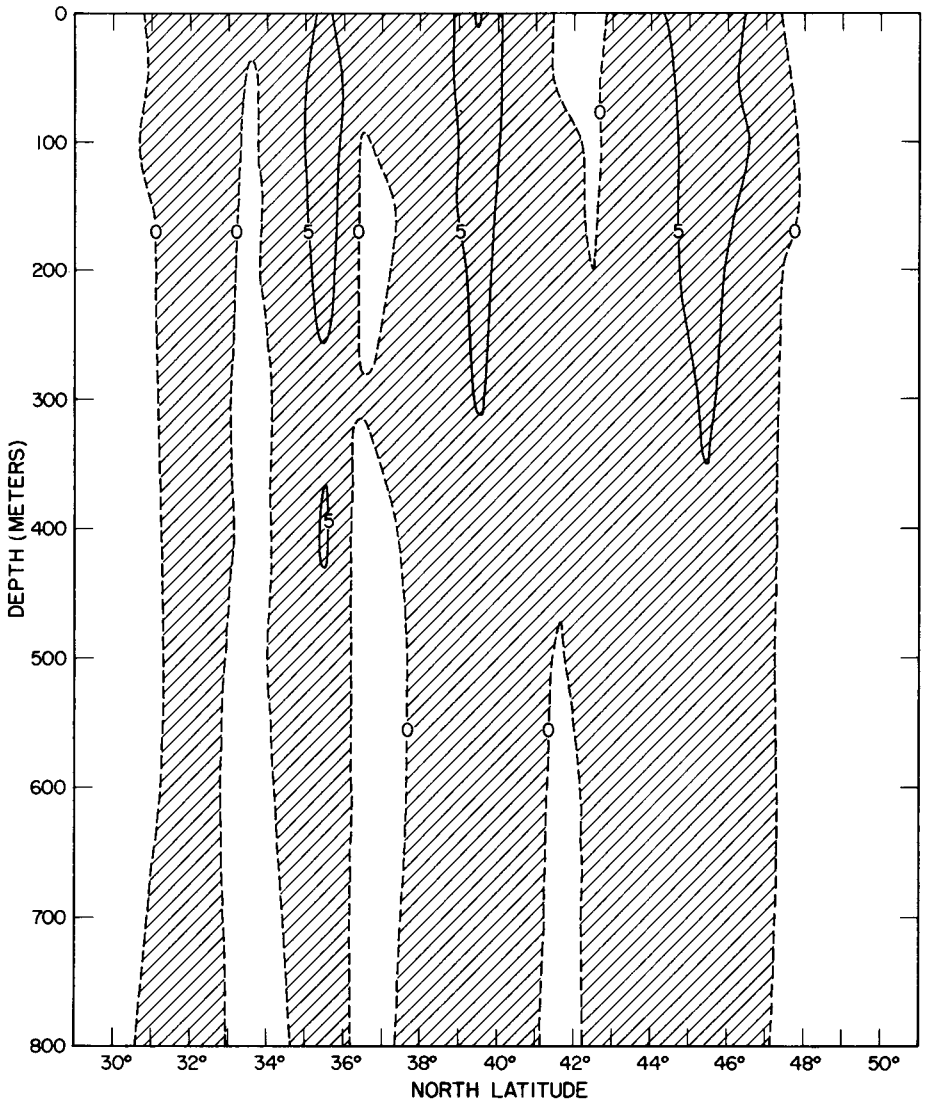

Figure 112.--Zonal components of the geostrophic currents in centimeters per second across 165°W. longitude; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

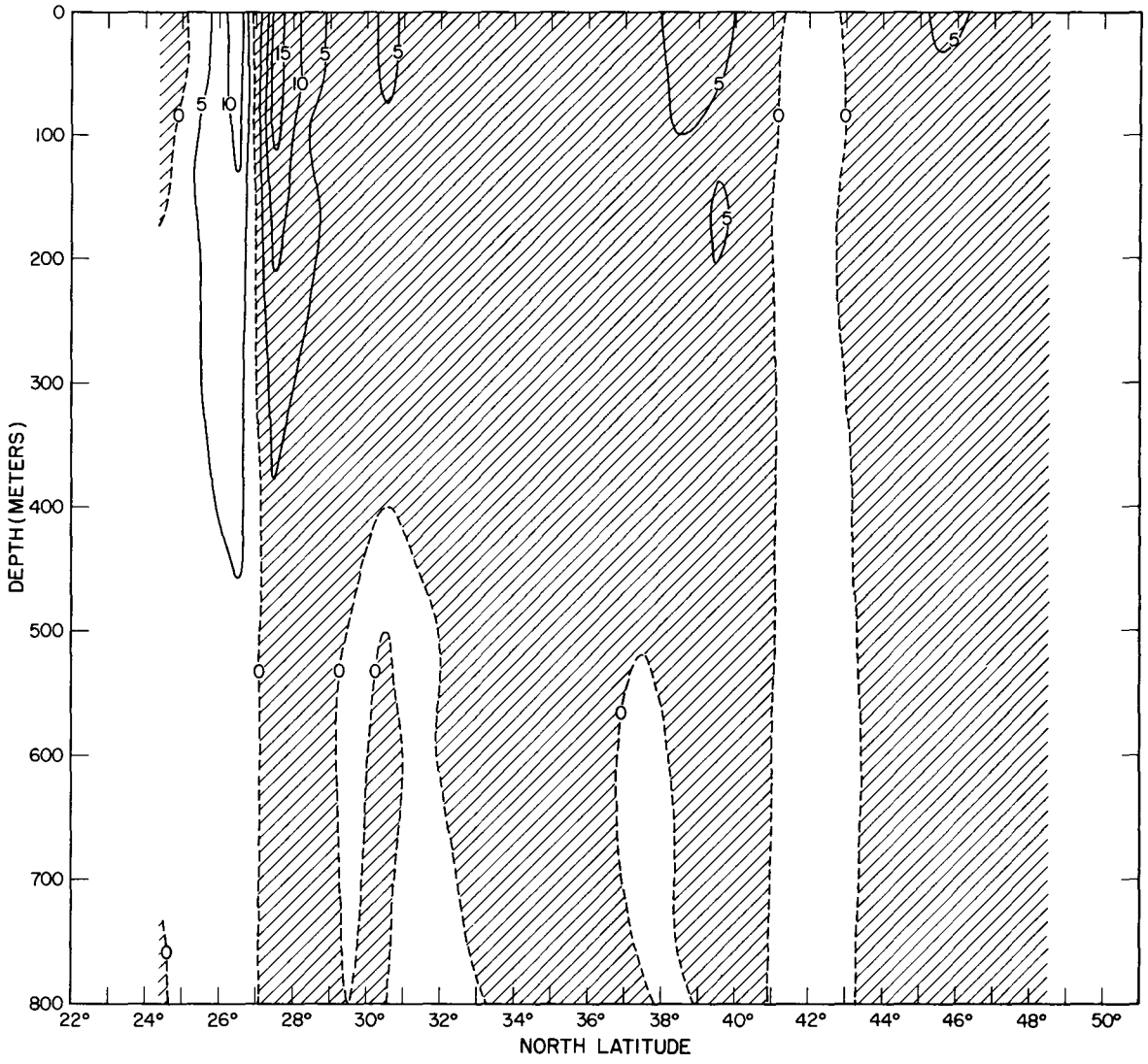

Figure 113.--Zonal components of the geostrophic currents in centimeters per second across 157°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Hatched areas indicate easterly flow. Contour interval 5 cm./sec.

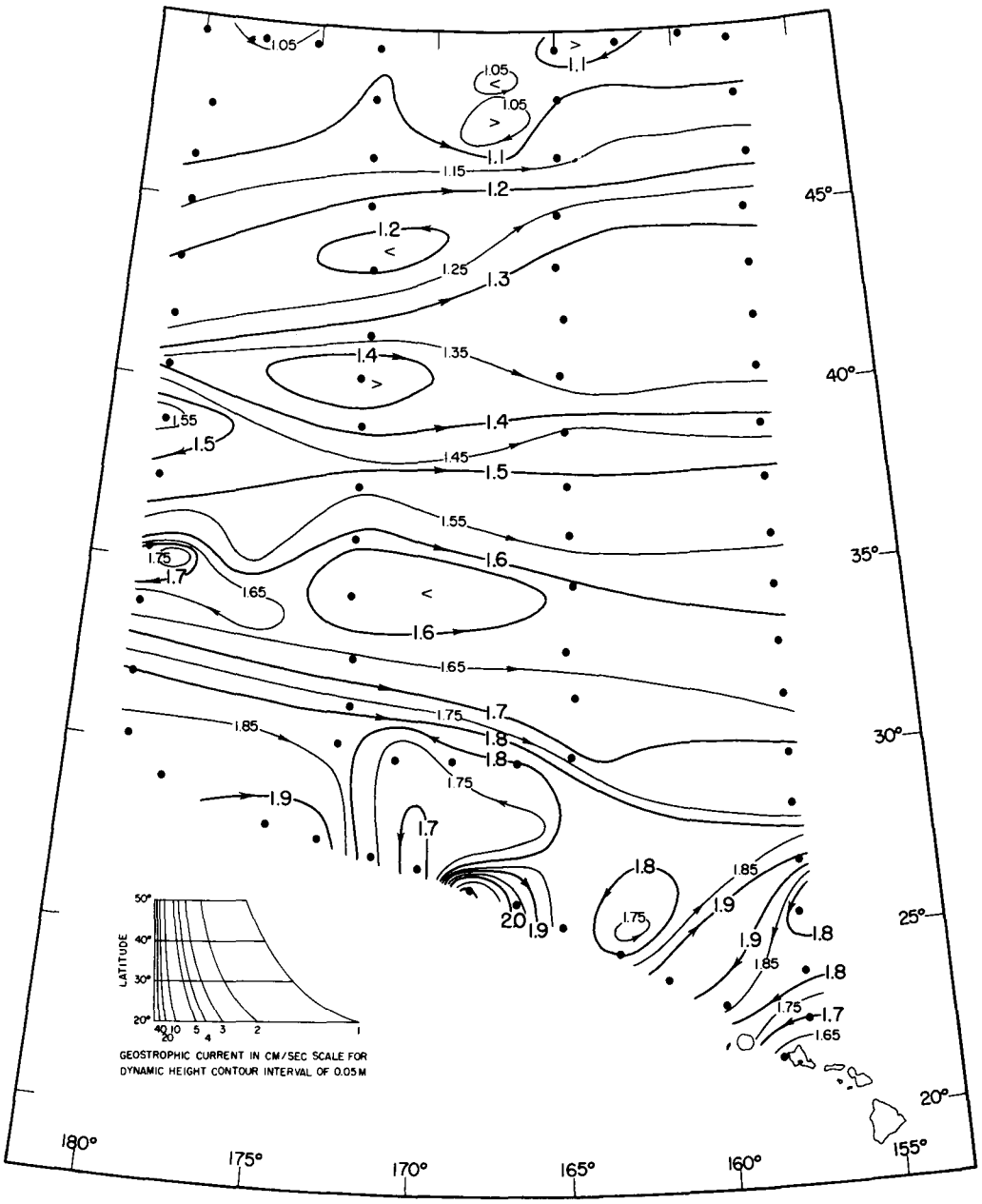

Figure 114.--Anomaly of the geopotential topography of the sea surface in dynamic meters relative to the 1,000-db. surface; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

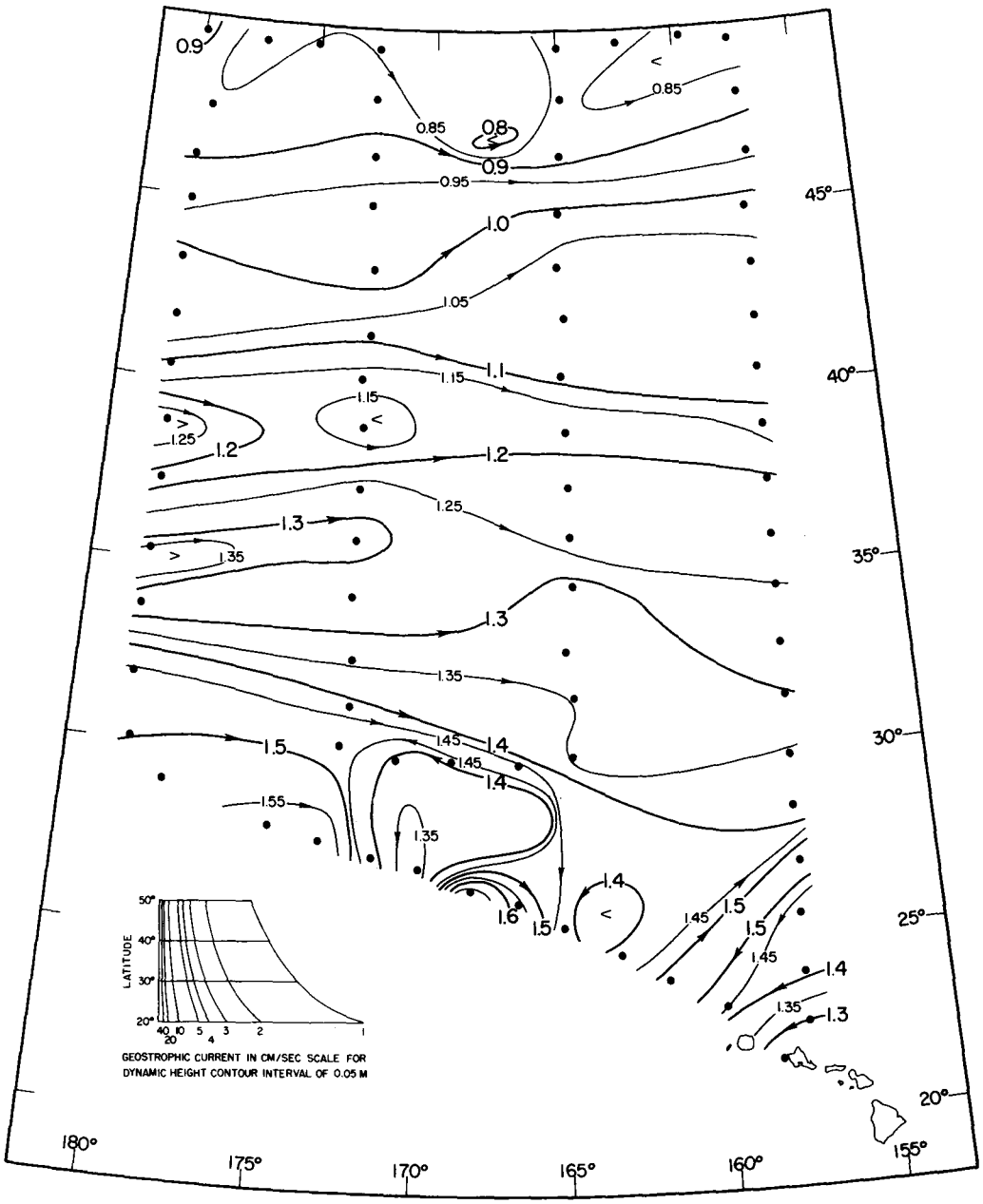

Figure 115.--Anomaly of the geopotential topography of the 100-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

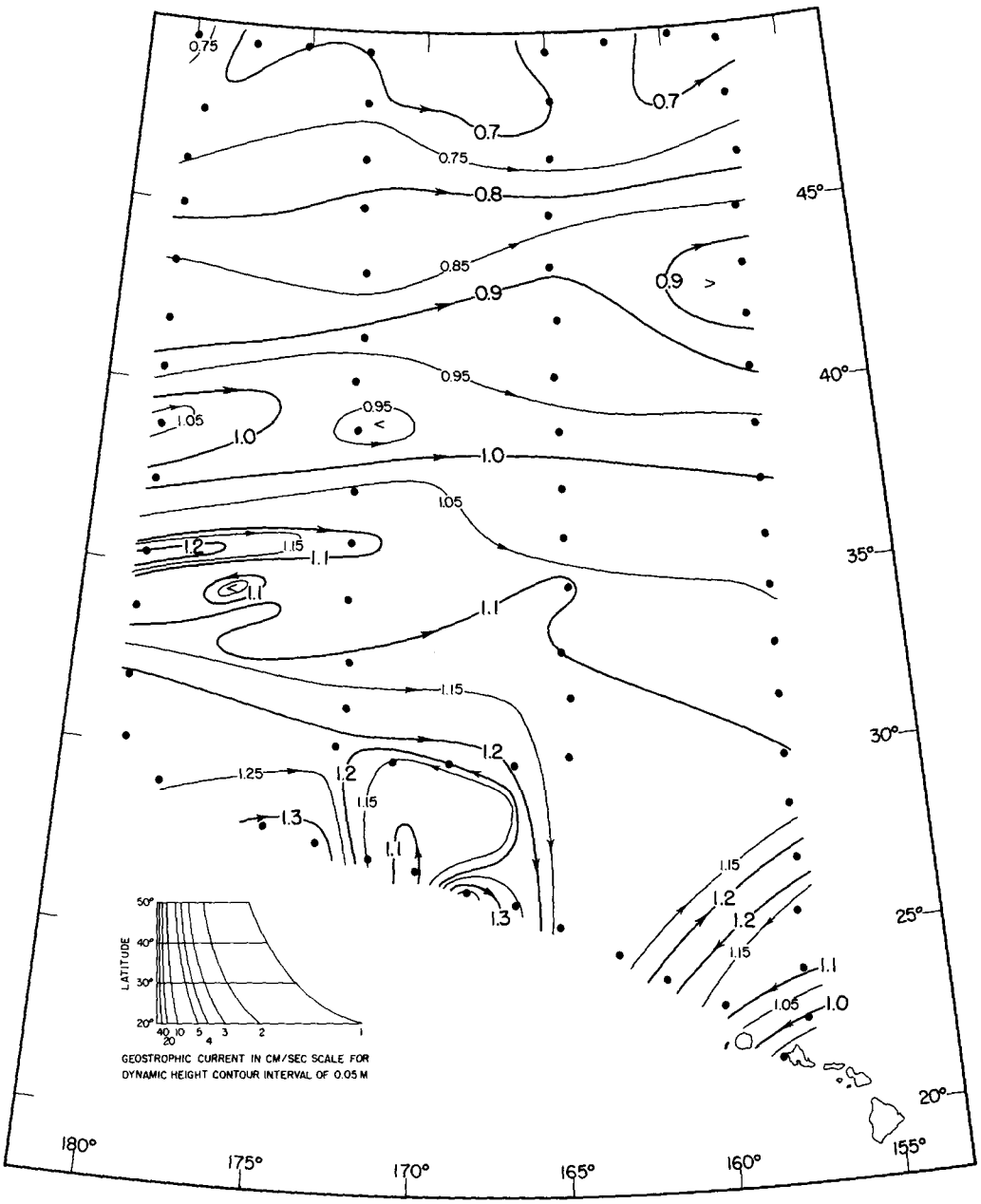

Figure 116.--Anomaly of the geopotential topography of the 200-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

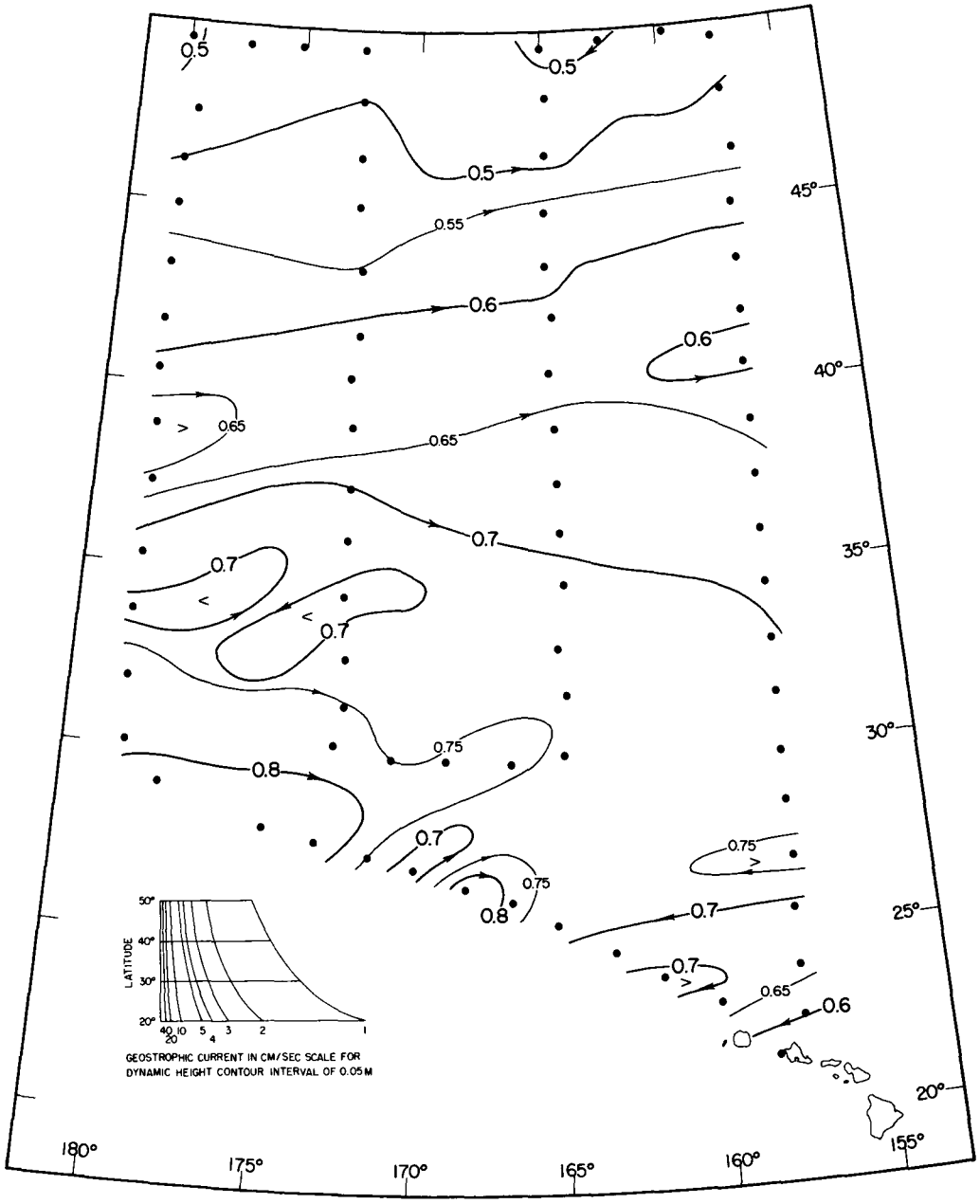

Figure 117.--Anomaly of the geopotential topography of the 400-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.05 m.

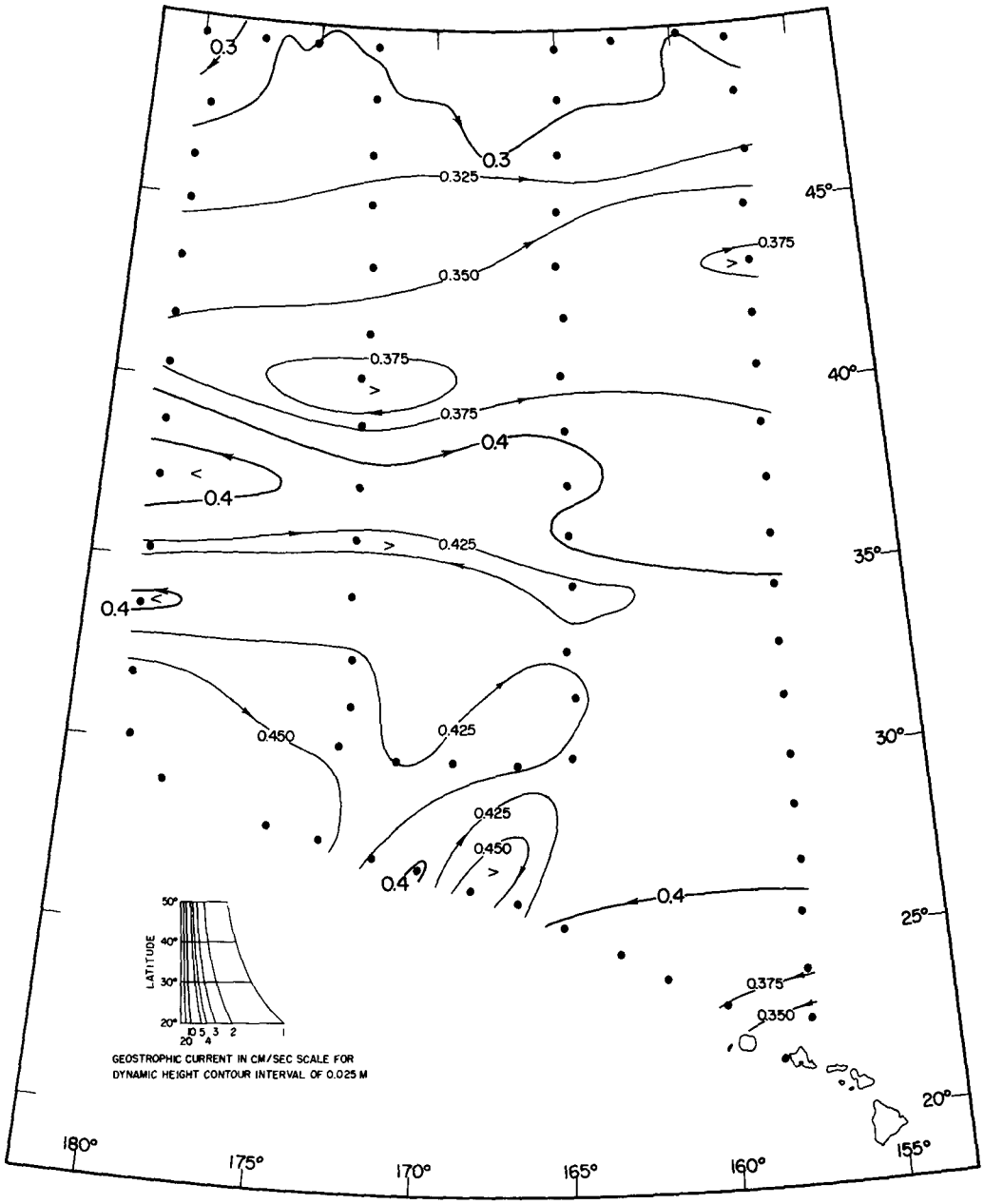

Figure 118.--Anomaly of the geopotential topography of the 600-db. surface in dynamic meters relative to the 1000-db. surface; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Points indicate computed values. Arrows indicate direction of flow. Contour interval 0.025 m.

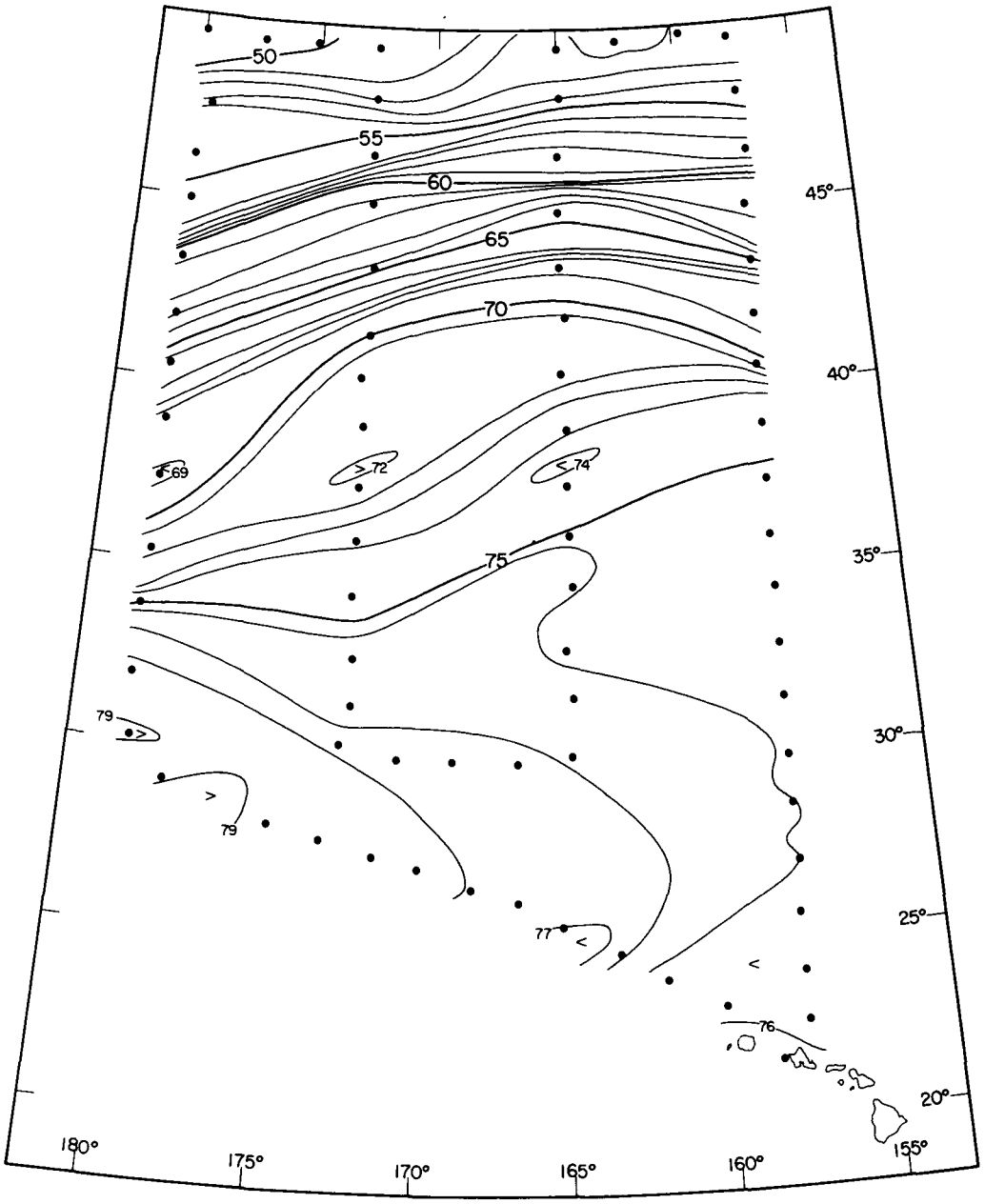

Figure 119.--Surface (bucket) temperature in degrees Fahrenheit; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 1°F.

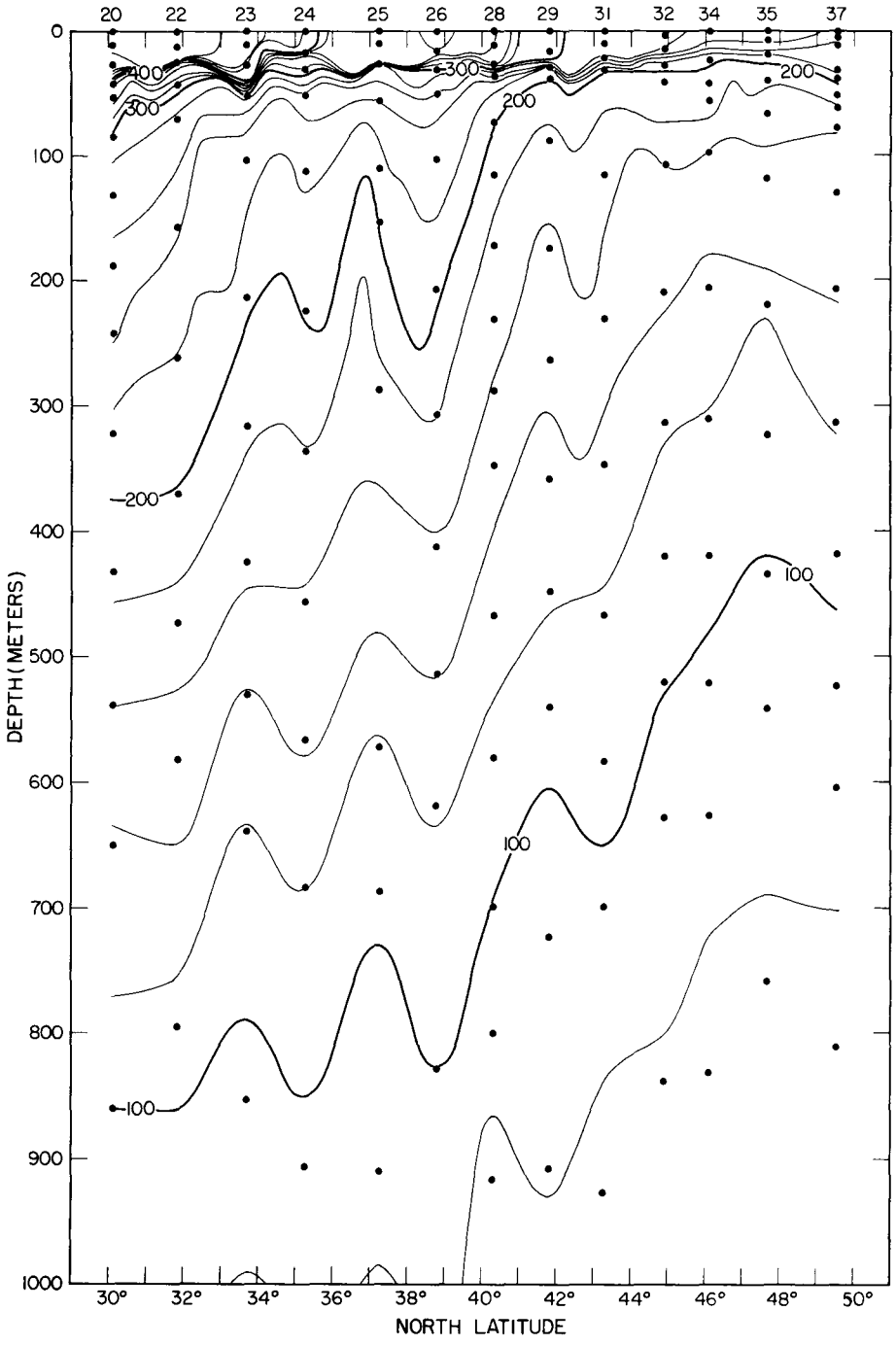

Figure 120.--Vertical section of a thermosteric anomaly in centiliters per ton along the 180th meridian; Hugh M. Smith cruise 30 (NORPAC), stations 20-37, July-August 1955. Contour interval 20 cl./ton. Points indicate observed values.

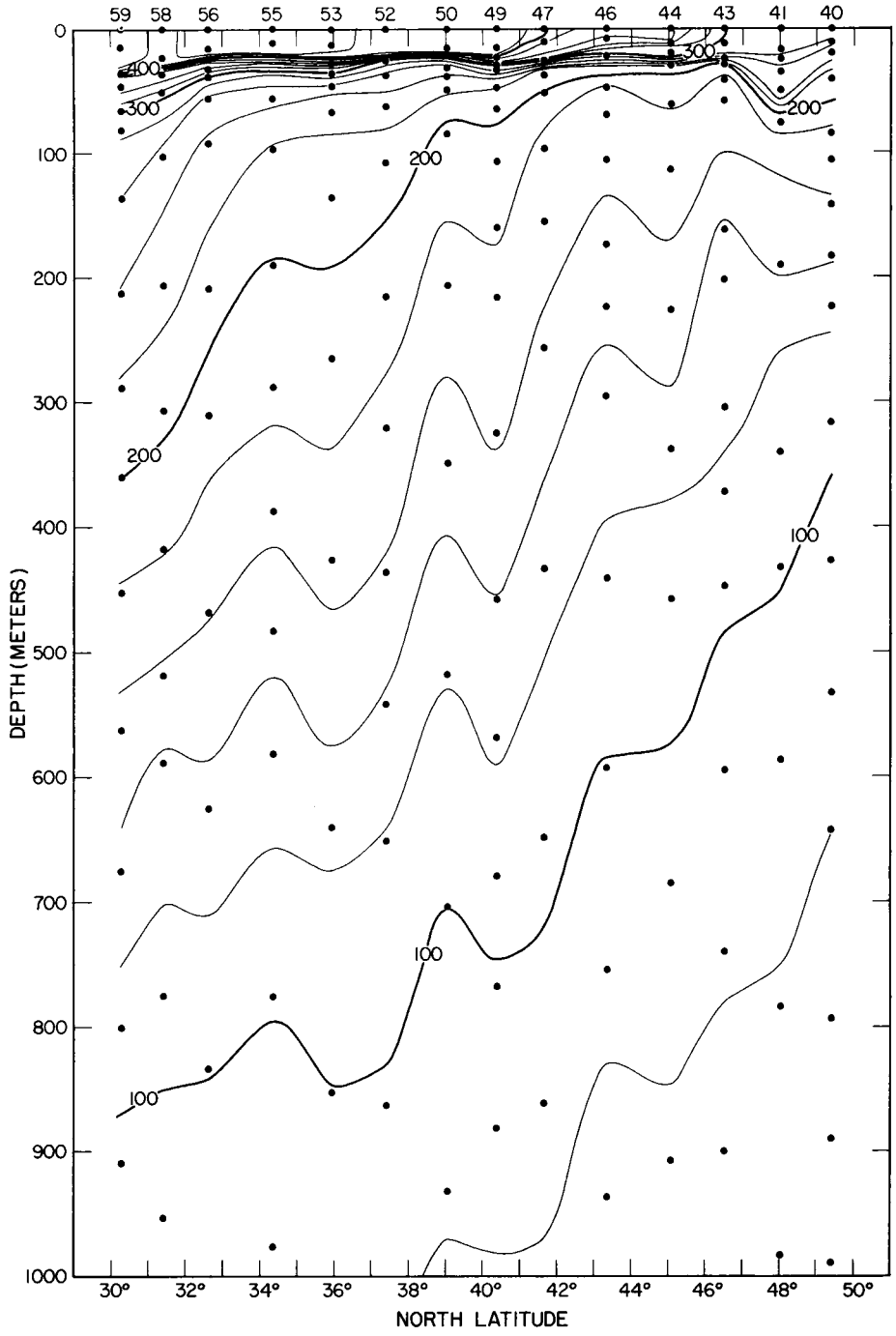

Figure 121.--Vertical section of a thermosteric anomaly in centiliters per ton along 172°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 40-59, July-August 1955. Contour interval 20 cl./ton. Points indicate observed values.

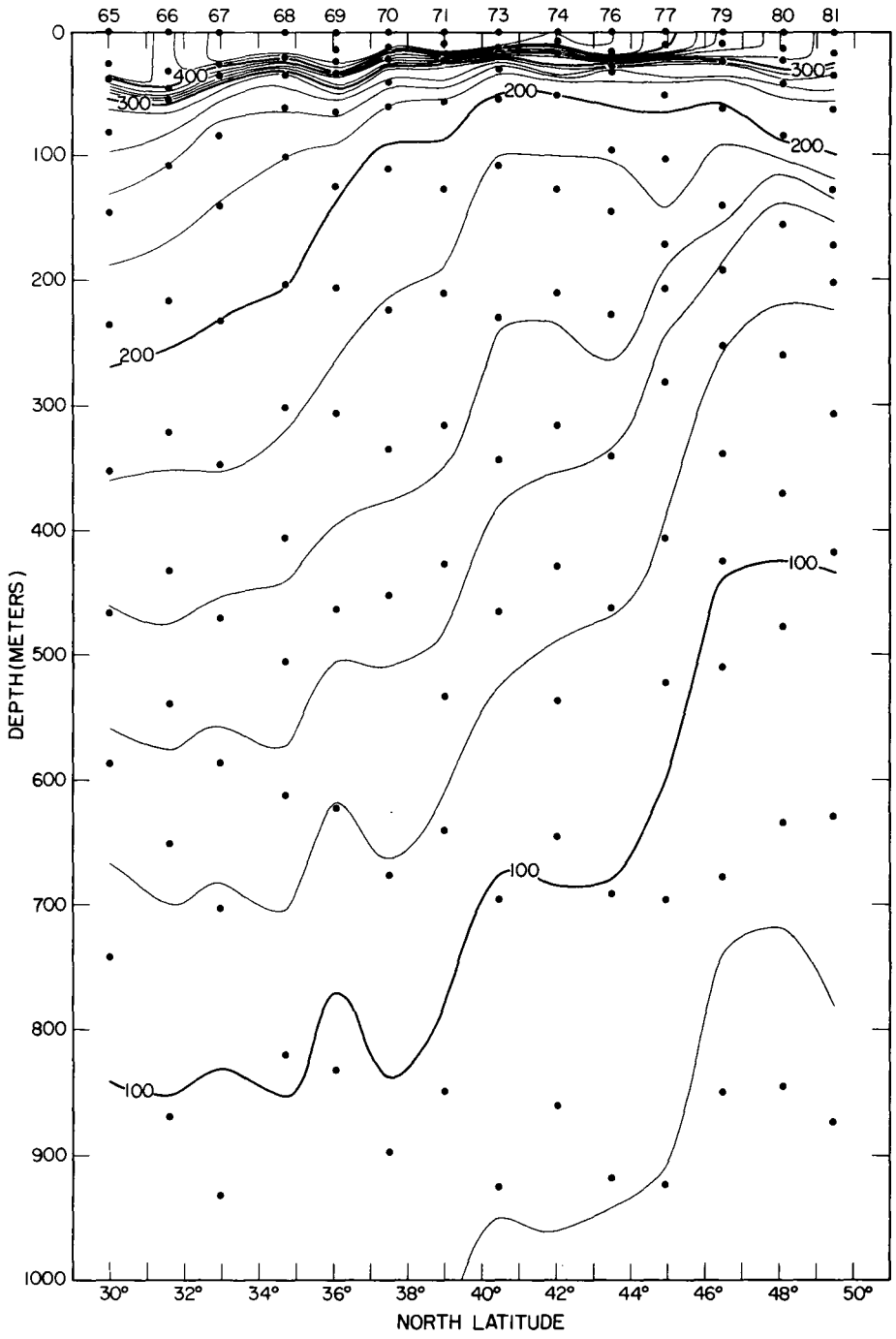

Figure 122.--Vertical section of a thermosteric anomaly in centiliters per ton along 165°W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 65-81, July-August 1955. Contour interval 20 cl./ton. Points indicate observed values.

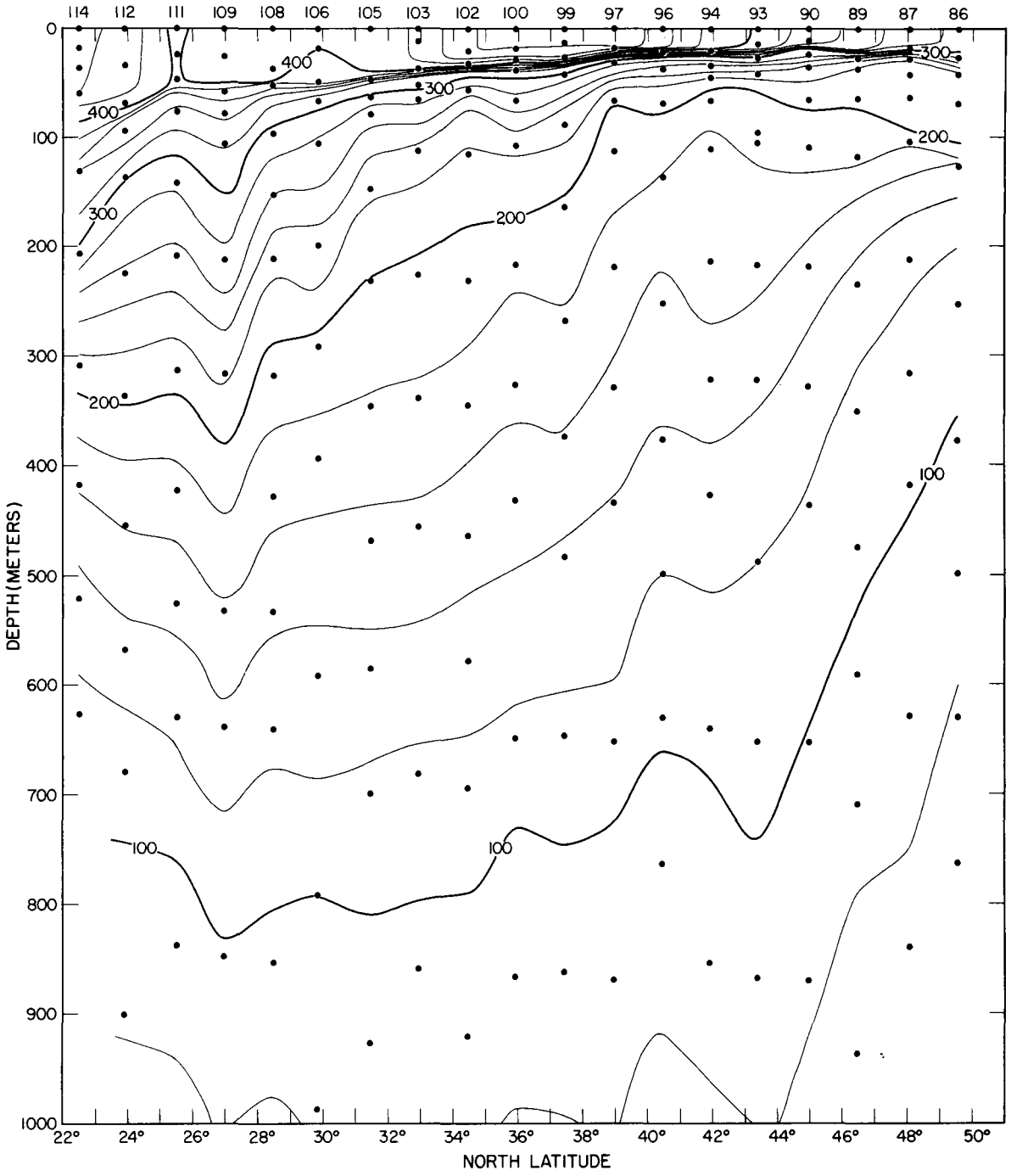

Figure 123.--Vertical section of a thermosteric anomaly in centiliters per ton along 157°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 86-114, July-August 1955. Contour interval 20 cl./ton. Points indicate observed values.

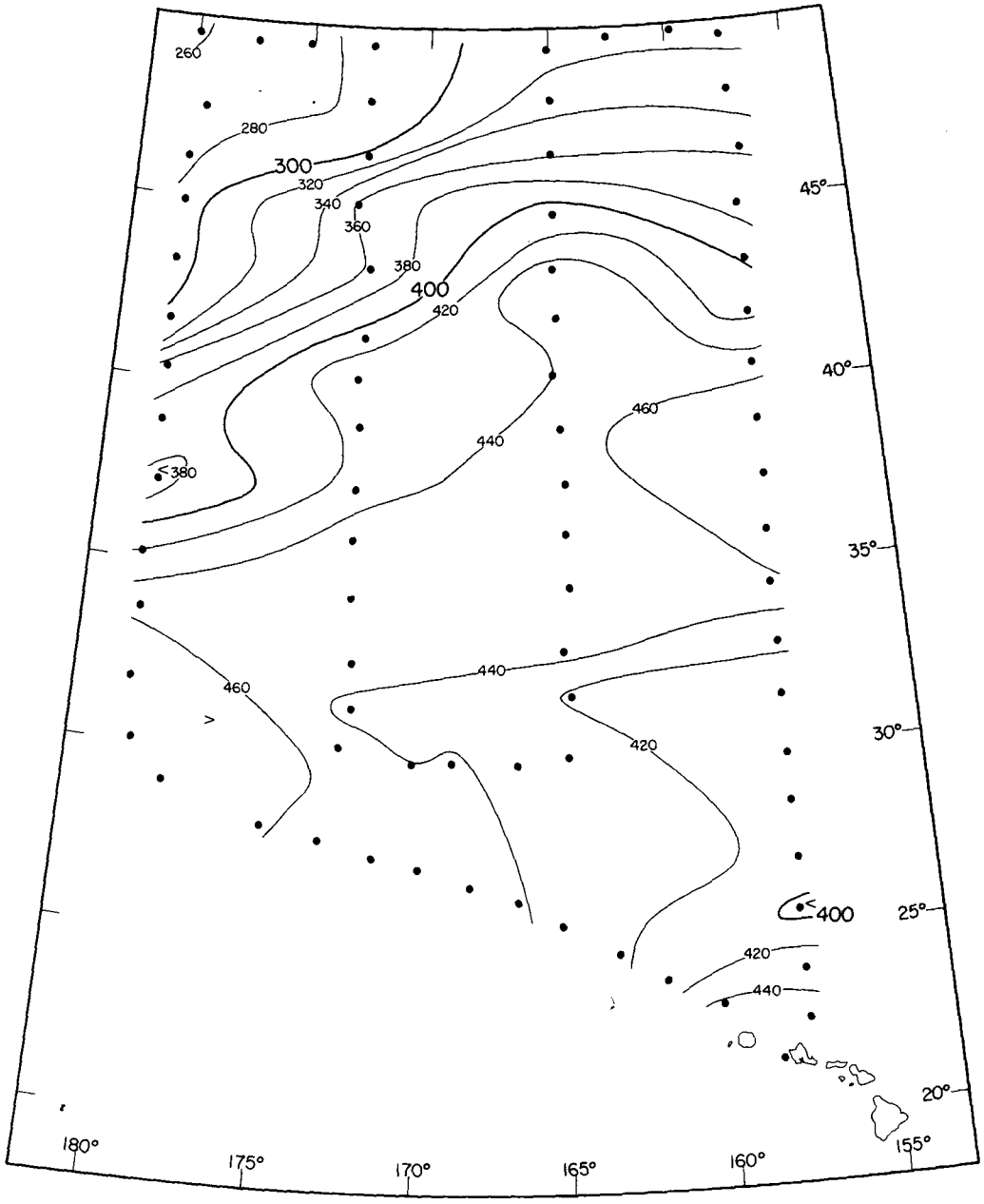

Figure 124.--Surface thermosteric anomaly in centiliters per ton; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 20 cl./ton. Dots indicate station positions.

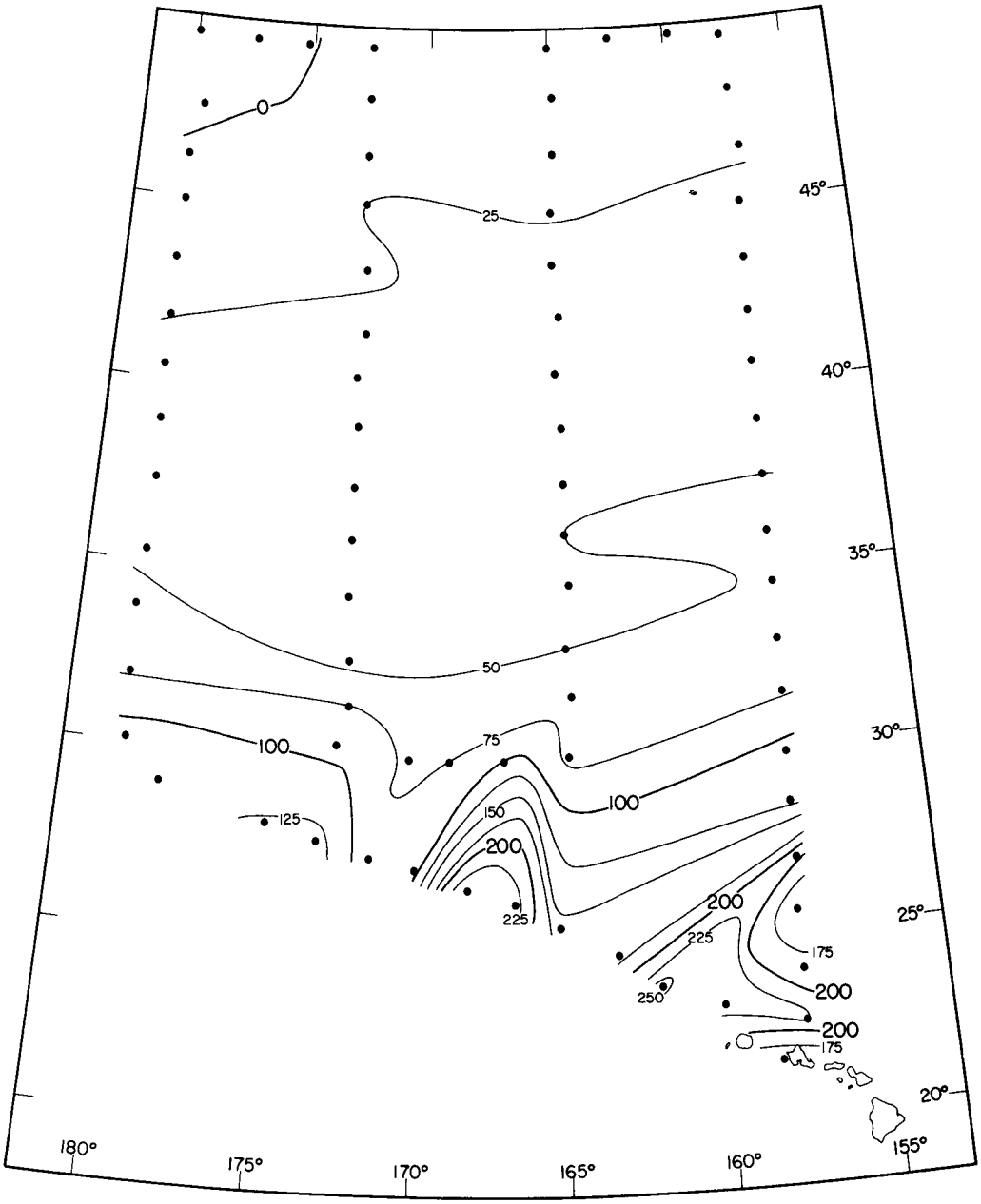

Figure 125.--Depth of the 277.7 cl./ton (sigma-t 25.2) thermosteric anomaly surface in meters; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 25 meters. Dots indicate station positions.

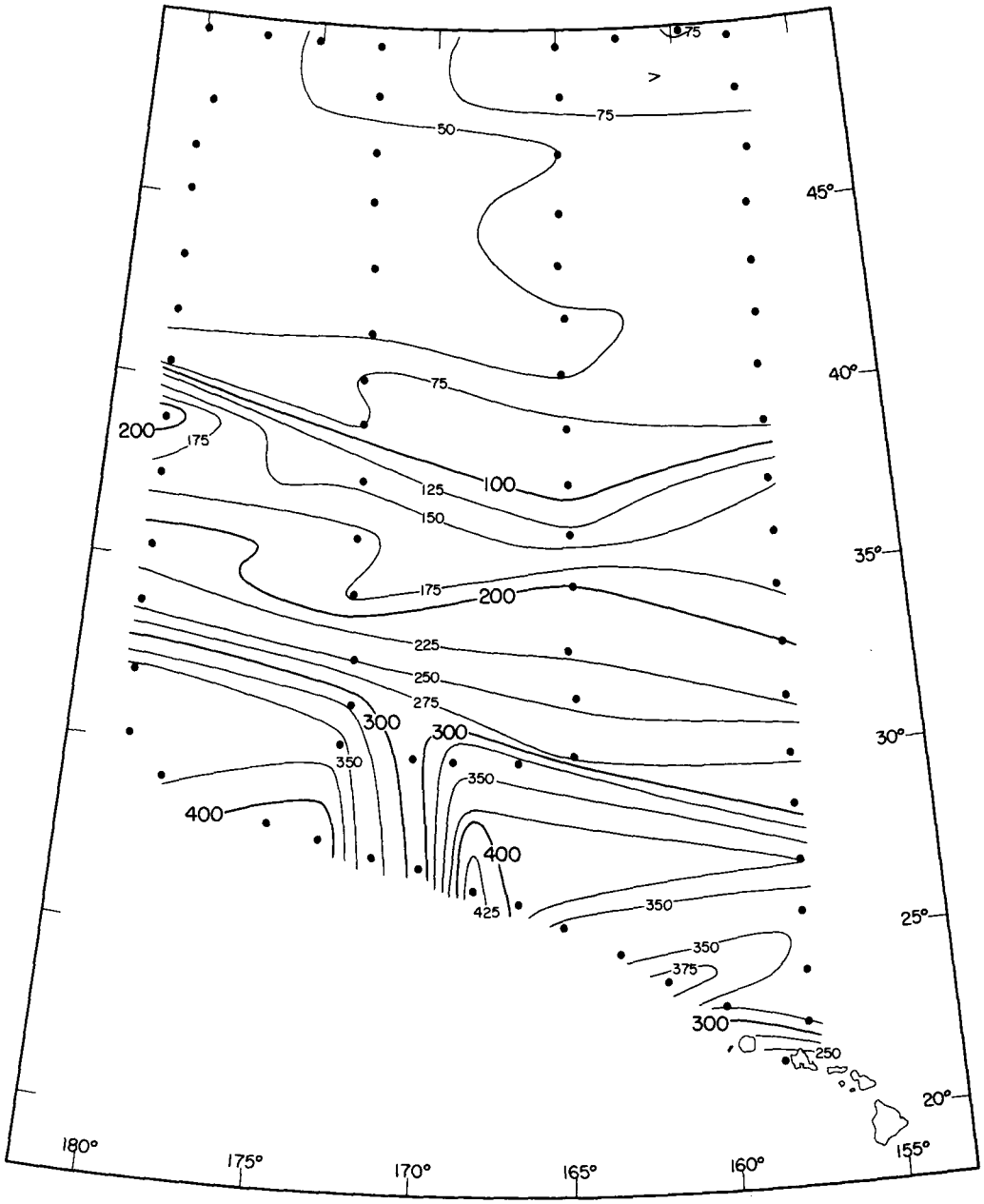

Figure 126.--Depth of the 201.7 cl./ton (sigma-t 26.0) thermosteric anomaly surface in meters; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 25 meters. Dots indicate station positions.

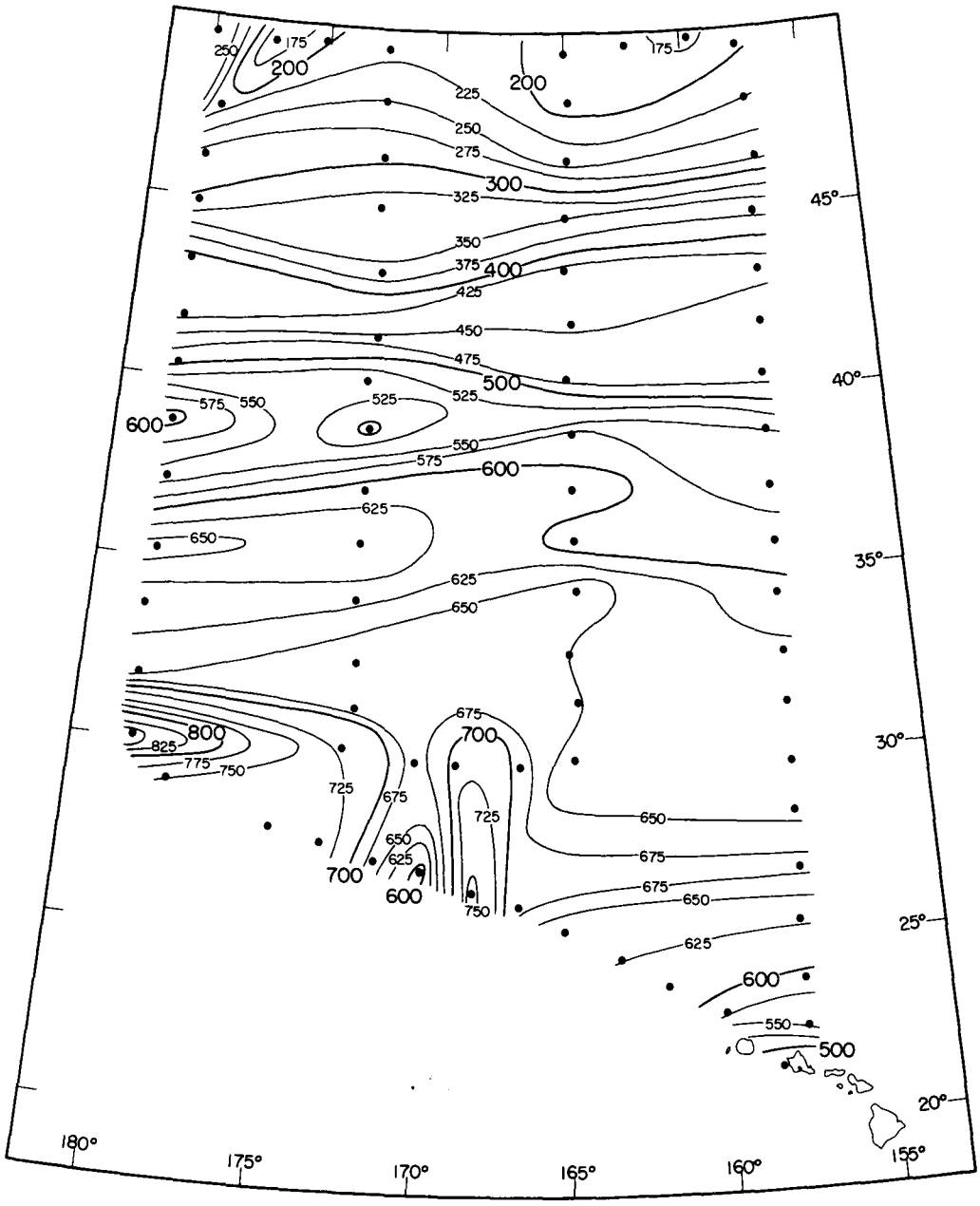

Figure 127.--Depth of the 125.5 cl./ton (sigma-t 26.8) thermosteric anomaly surface in meters; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 25 meters. Dots indicate station positions.

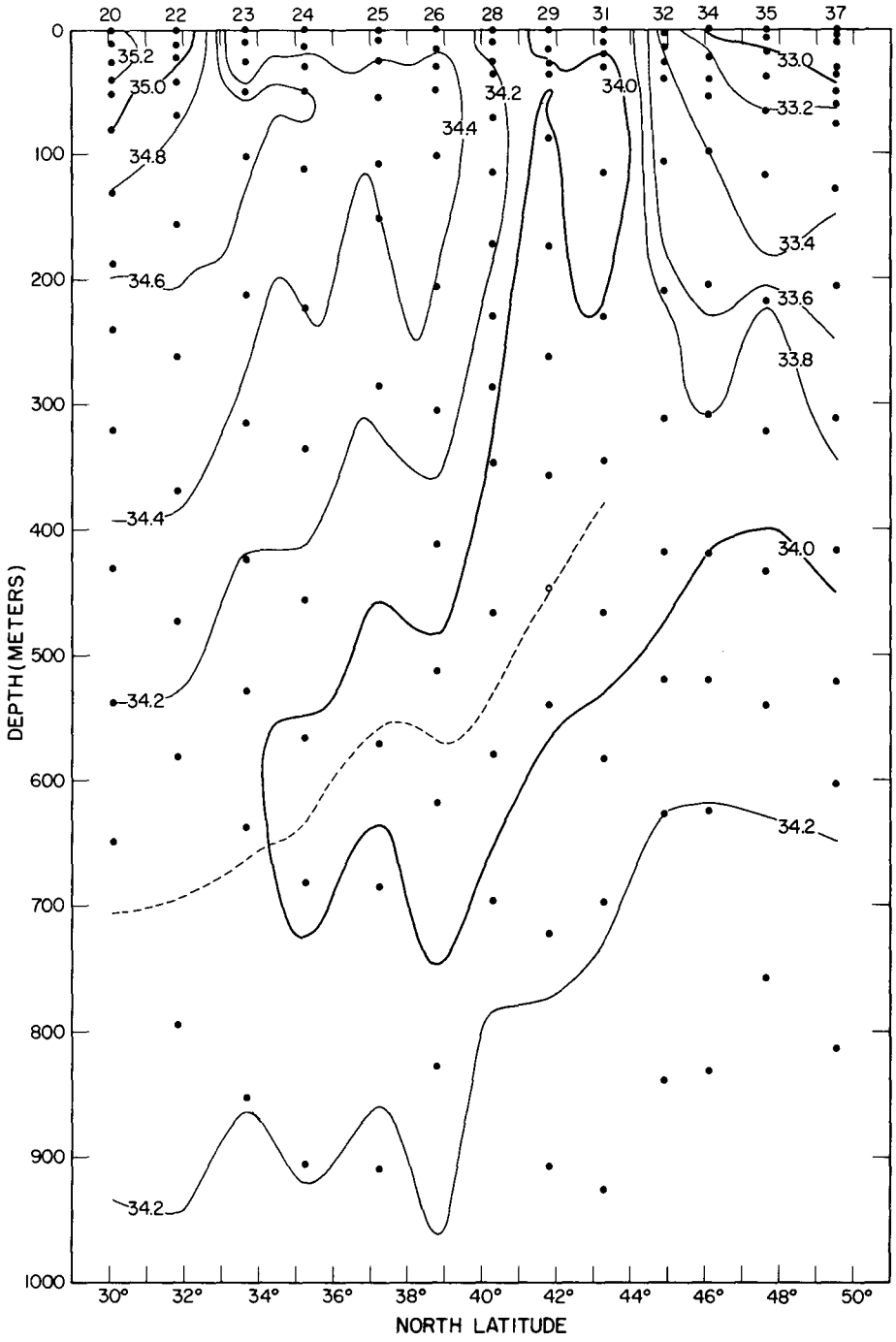

Figure 128.--Vertical section of salinity in parts per thousand along the 180th meridian; Hugh M. Smith cruise 30 (NORPAC), stations 20-37, July-August 1955. Contour interval 0.2 ‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

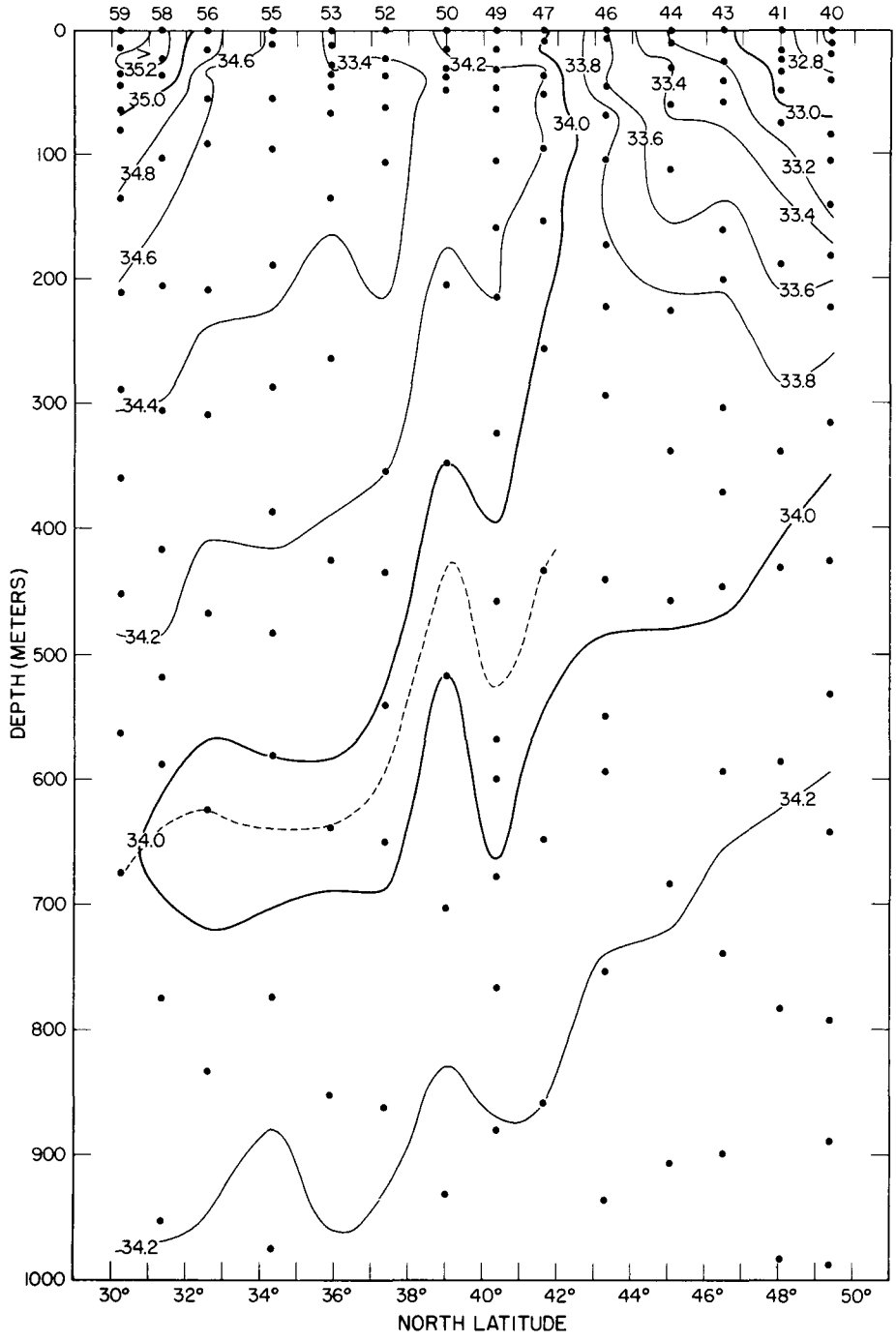

Figure 129.--Vertical section of salinity in parts per thousand along 172°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 40-59, July-August 1955. Contour interval 0.2 ‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

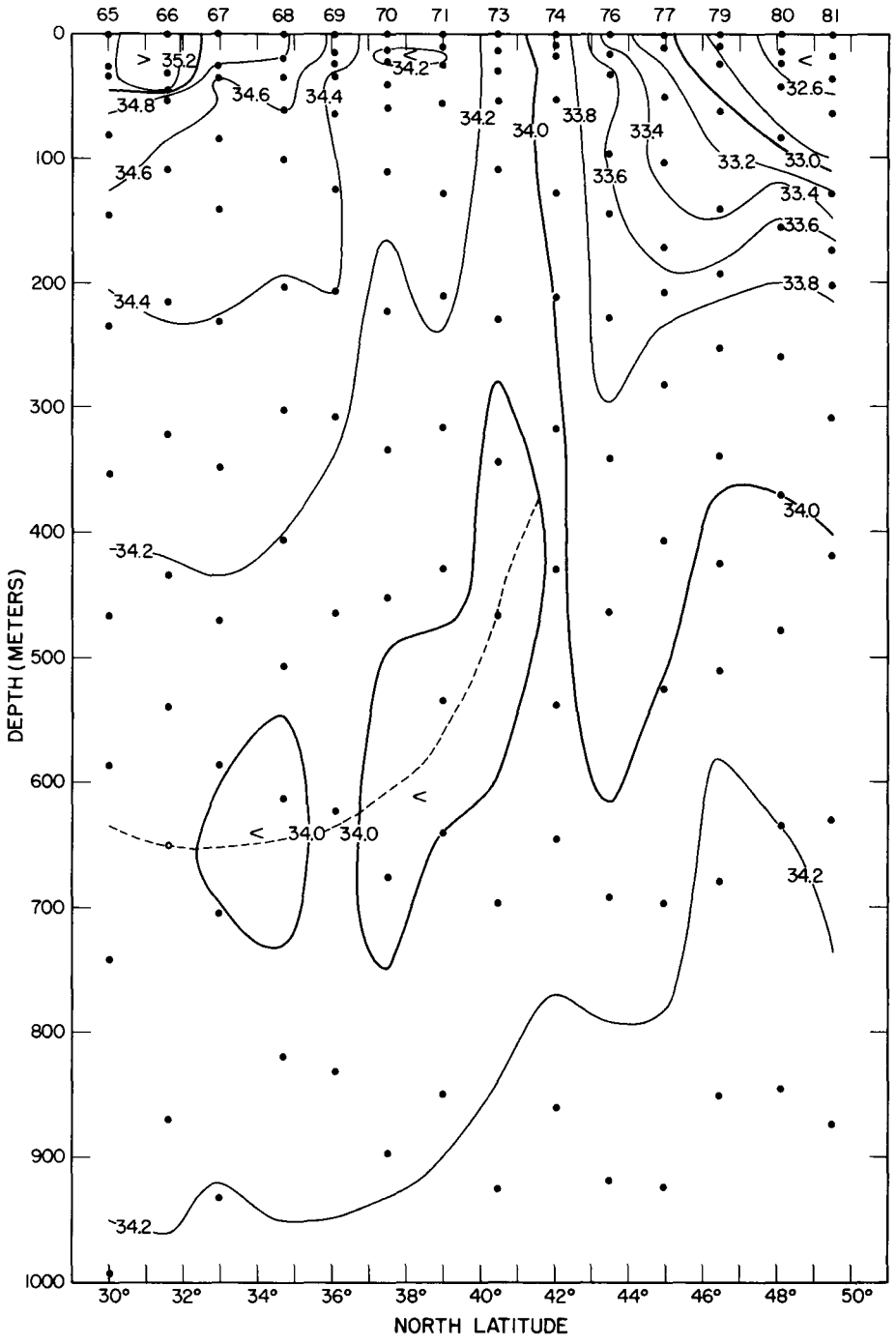

Figure 130.--Vertical section of salinity in parts per thousand along 165°W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 65-81, July-August 1955. Contour interval 0.2 ‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

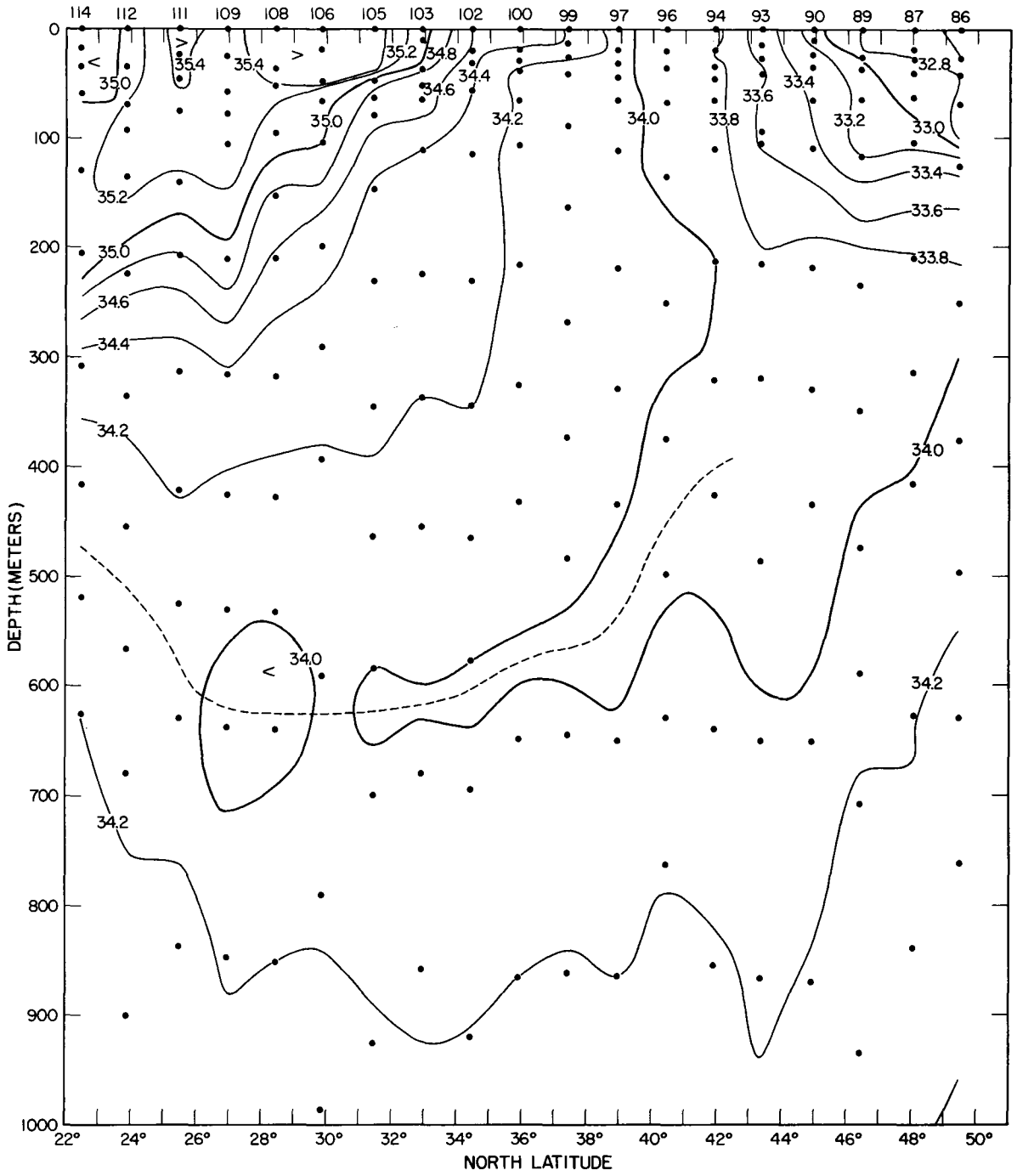

Figure 131. --Vertical section of salinity in parts per thousand along 157°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 86-114, July-August 1955. Contour interval 0.2 ‰. Points indicate observed values. Dotted line indicates depth of salinity minima.

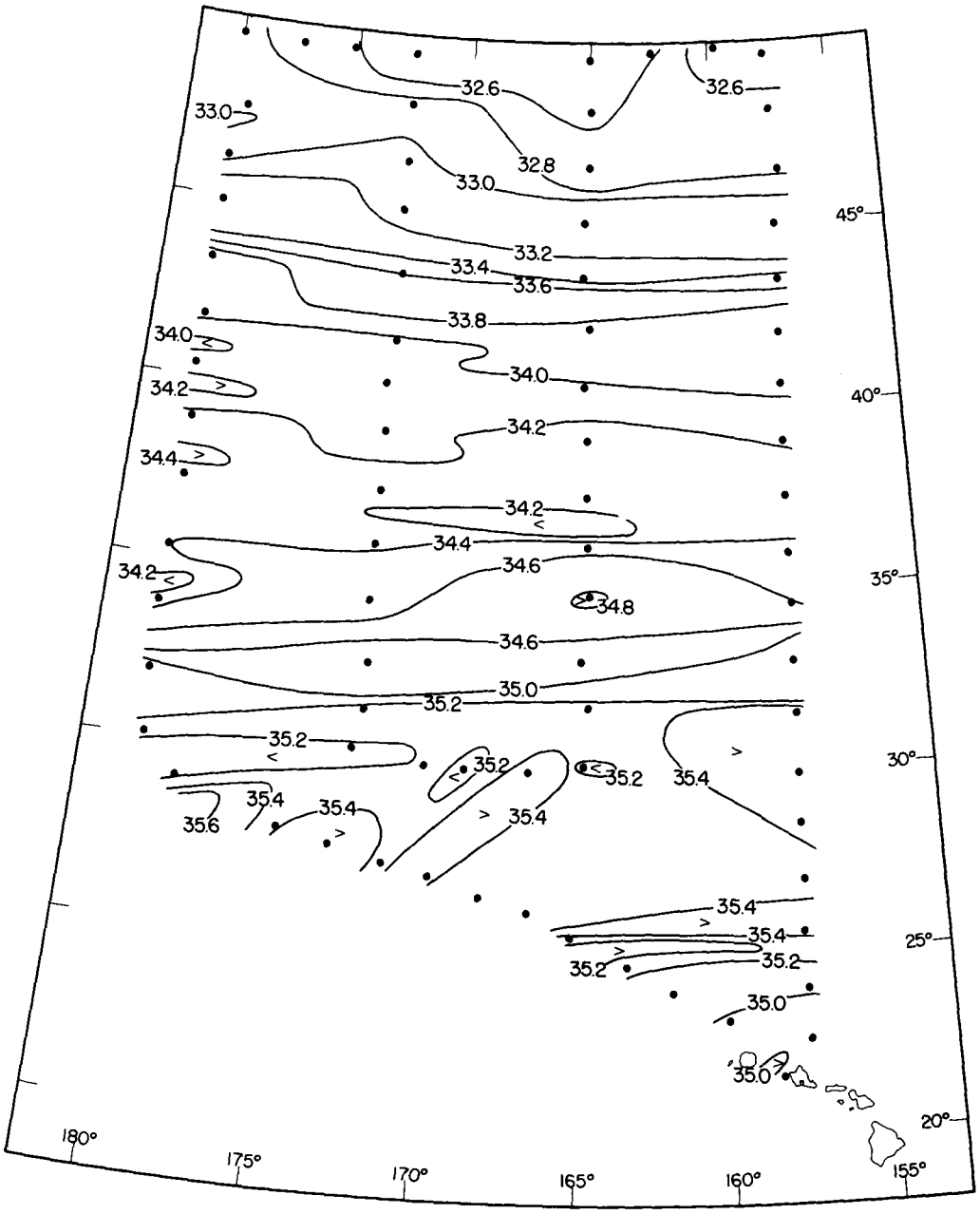

Figure 132.--Surface salinity in parts per thousand; Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour interval 0.2 ‰.

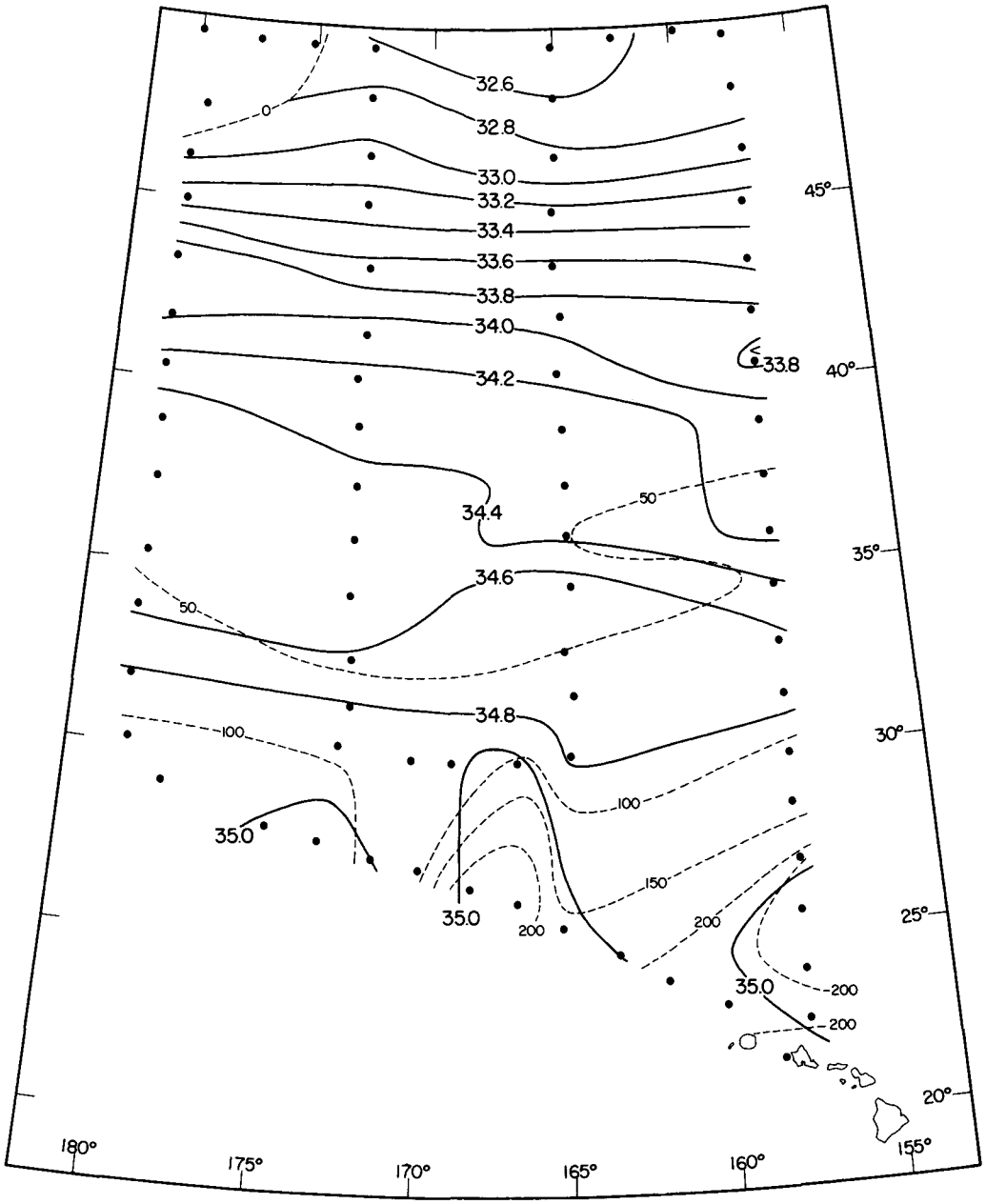

Figure 133.--Salinity in parts per thousand (solid lines) on the 277.7 cl./ton thermosteric anomaly (25.2 sigma-t) surface (depth in meters, dotted lines); Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: salinity 0.2 ‰, depth of the thermosteric anomaly surface 50 m. Dots indicate station positions.

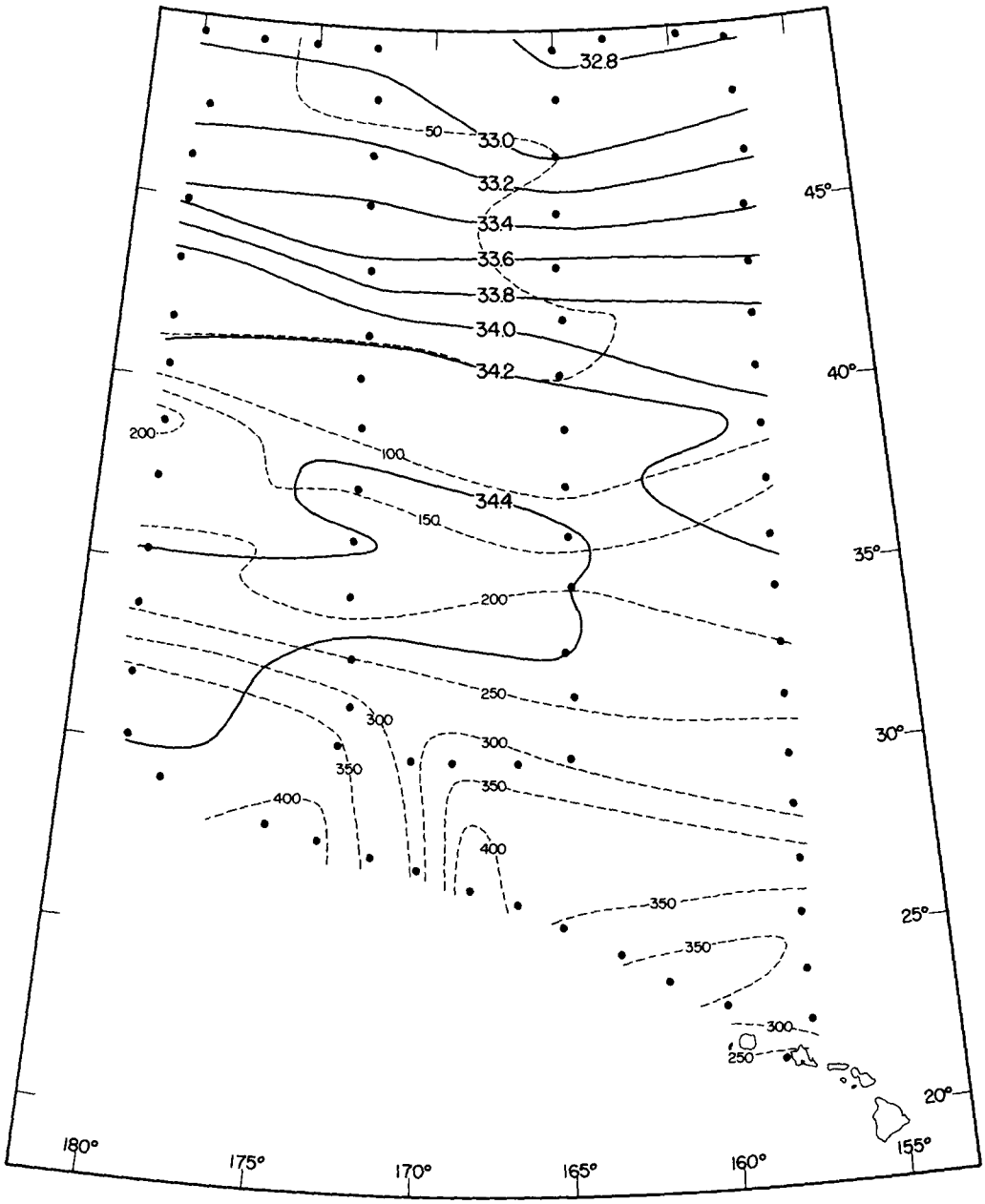

Figure 134.--Salinity in parts per thousand (solid lines) on the 201.7 cl./ton thermosteric anomaly (26.0 sigma-t) surface (depth in meters, dotted lines); Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: salinity 0.2 ‰, depth of the thermosteric anomaly surface 50 m. Dots indicate station positions.

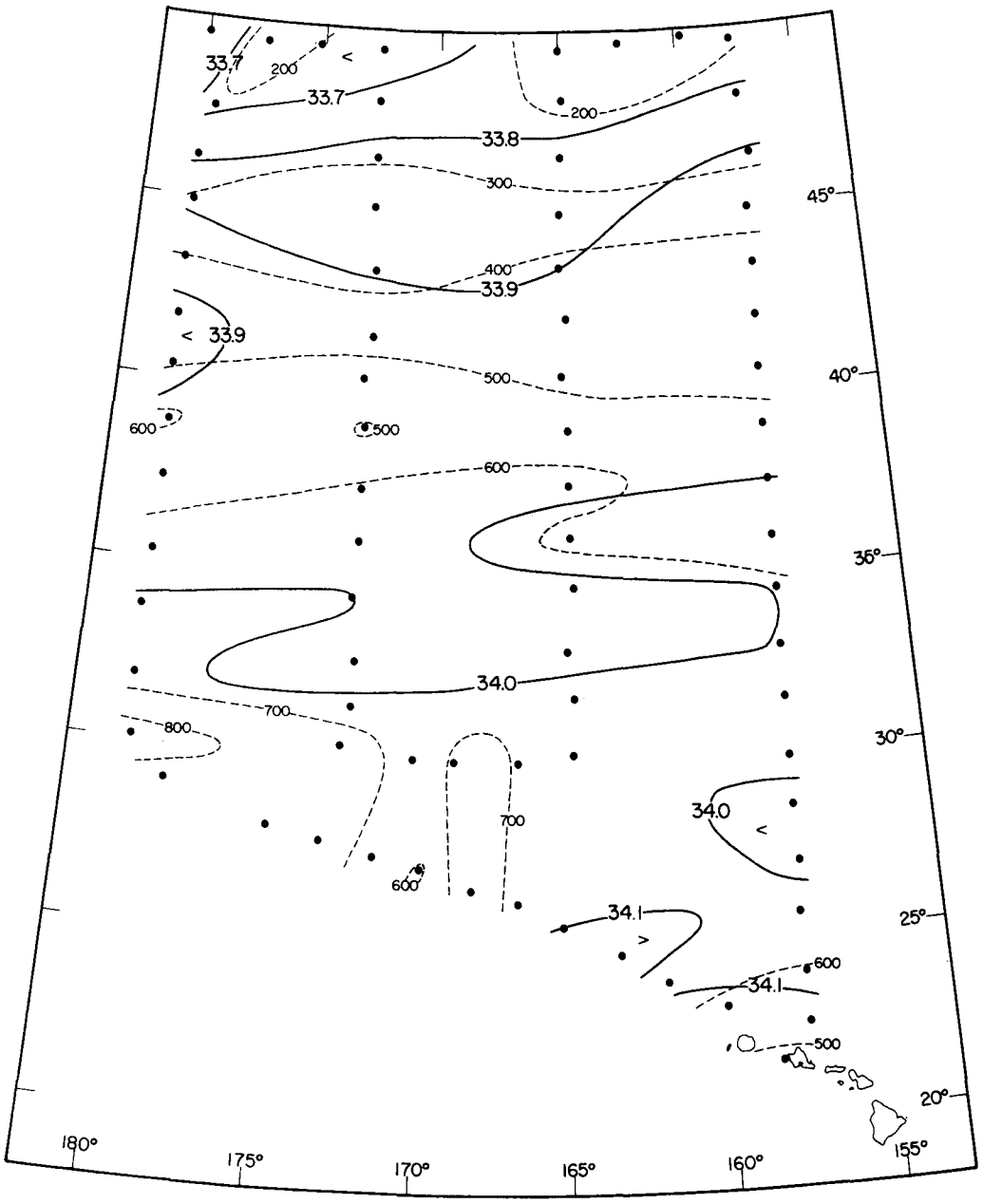

Figure 135.--Salinity in parts per thousand (solid lines) on the 125.5 cl./ton thermosteric anomaly (26.8 sigma-t) surface (depths in meters, dotted lines); Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: salinity 0.1 ‰, depth of the thermosteric anomaly surface 100 m. Dots indicate station positions.

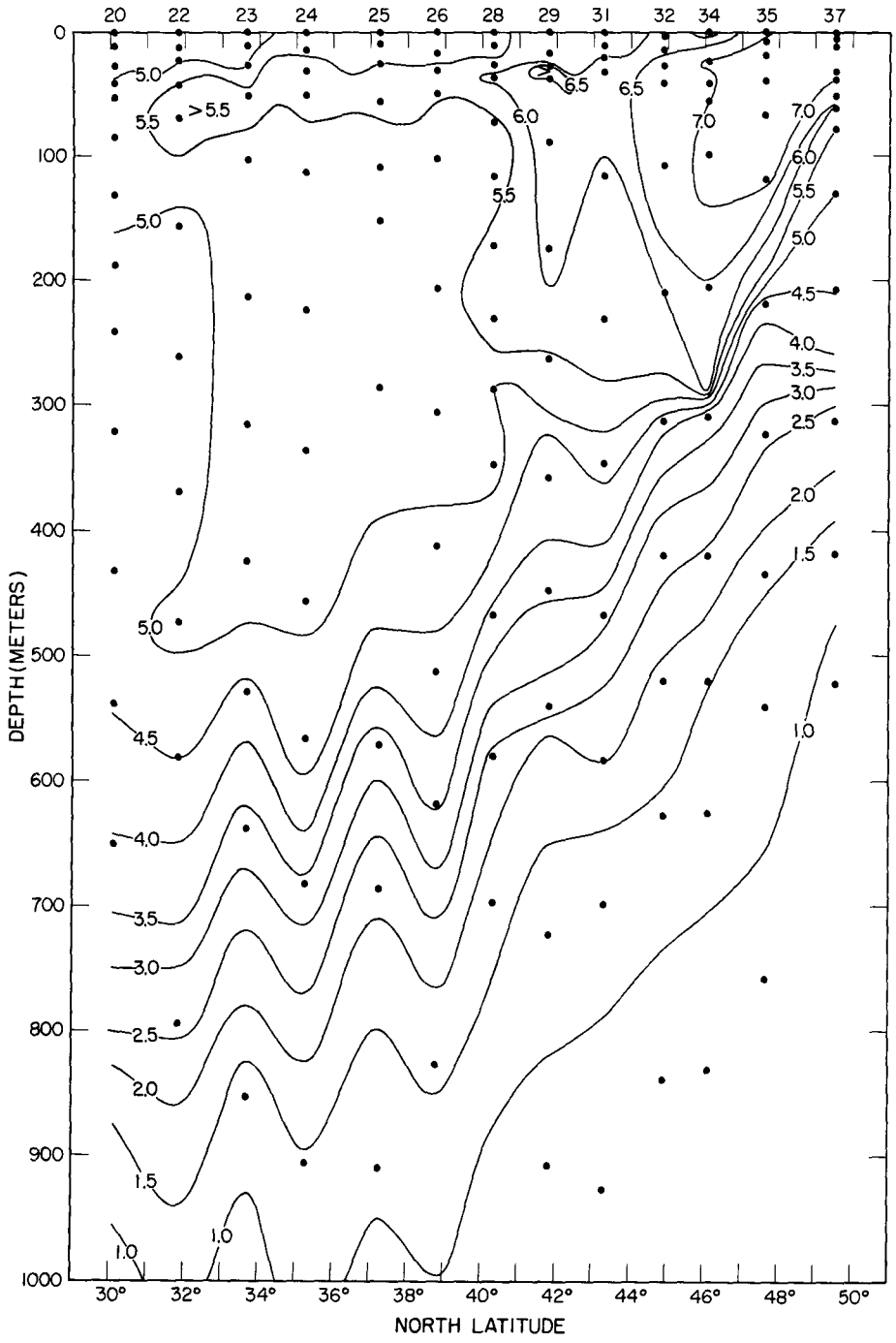

Figure 136.--Vertical section of dissolved oxygen in milliliters per liter along the 180th meridian; Hugh M. Smith cruise 30 (NORPAC), stations 20-37, July-August 1955. Contour interval 0.5 ml./l. Points indicate observed values.

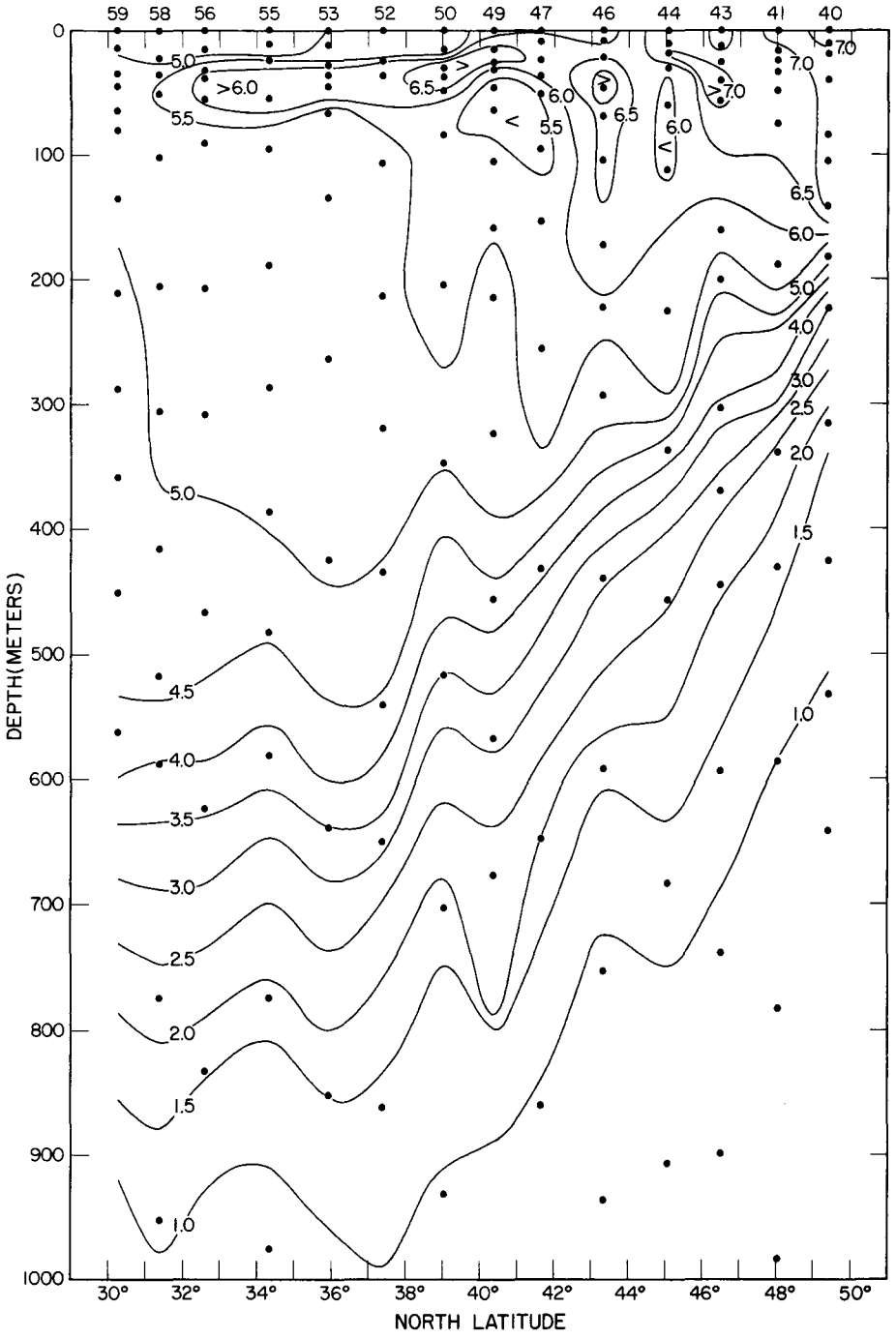

Figure 137.--Vertical section of dissolved oxygen in milliliters per liter along 172°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 40-59, July-August 1955. Contour interval 0.5 ml./l. Points indicate observed values.

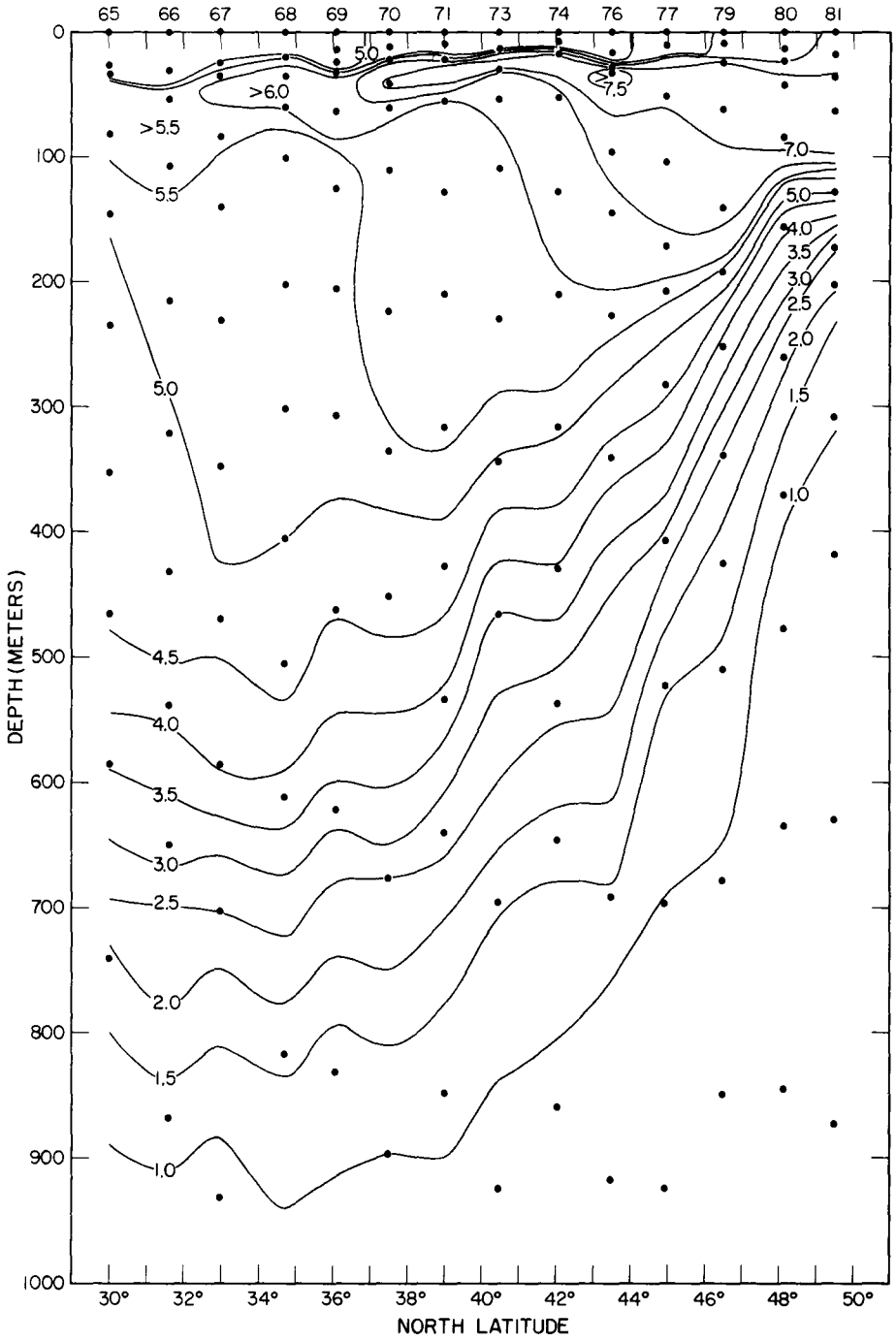

Figure 138.--Vertical section of dissolved oxygen in milliliters per liter along 165°W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 65-81, July-August 1955. Contour interval 0.5 ml./l. Points indicate observed values.

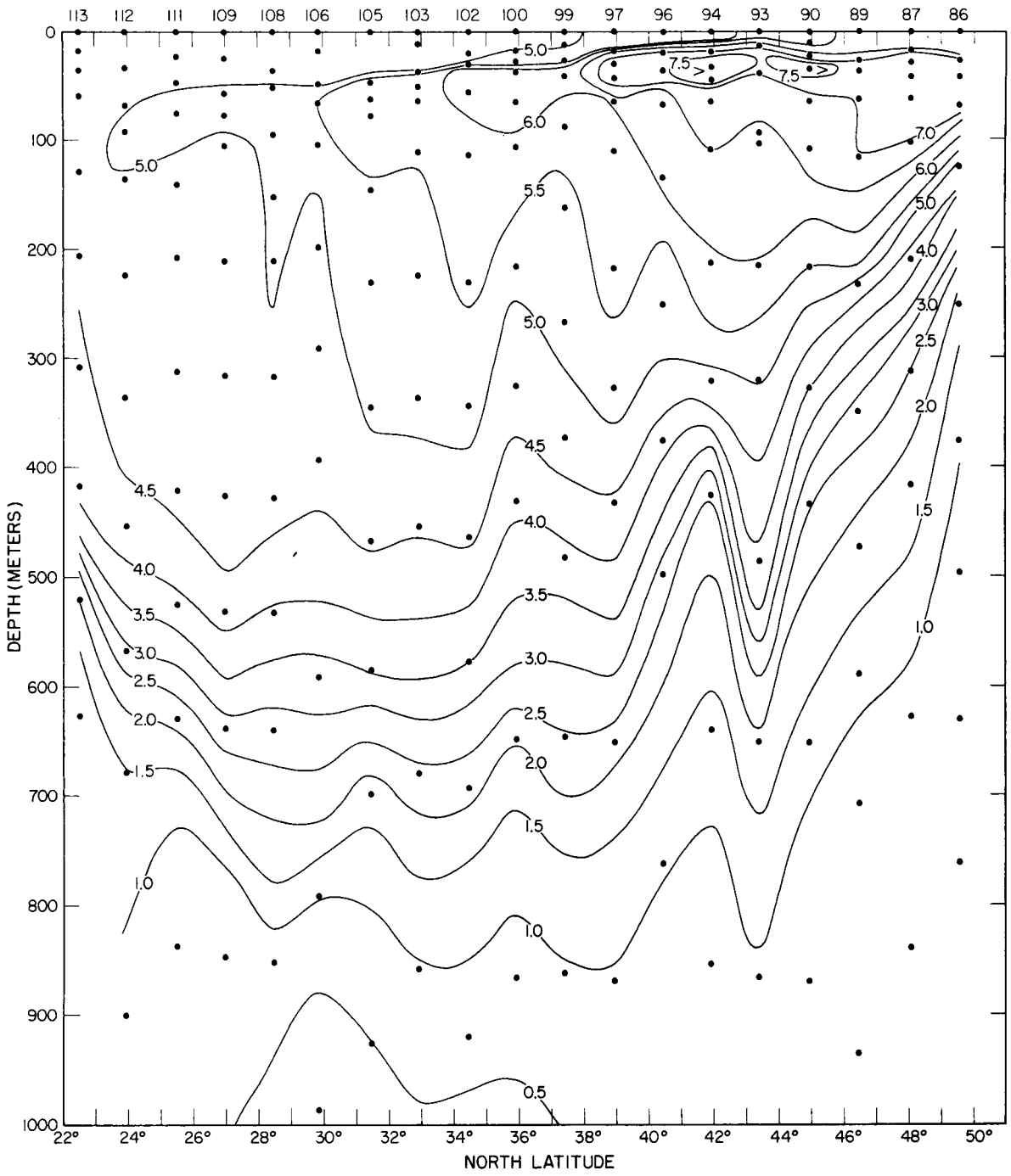

Figure 139.--Vertical section of dissolved oxygen in milliliters per liter along 157°30'W. longitude; Hugh M. Smith cruise 30 (NORPAC), stations 86-114, July-August 1955. Contour interval 0.5 ml./l. Points indicate observed values.

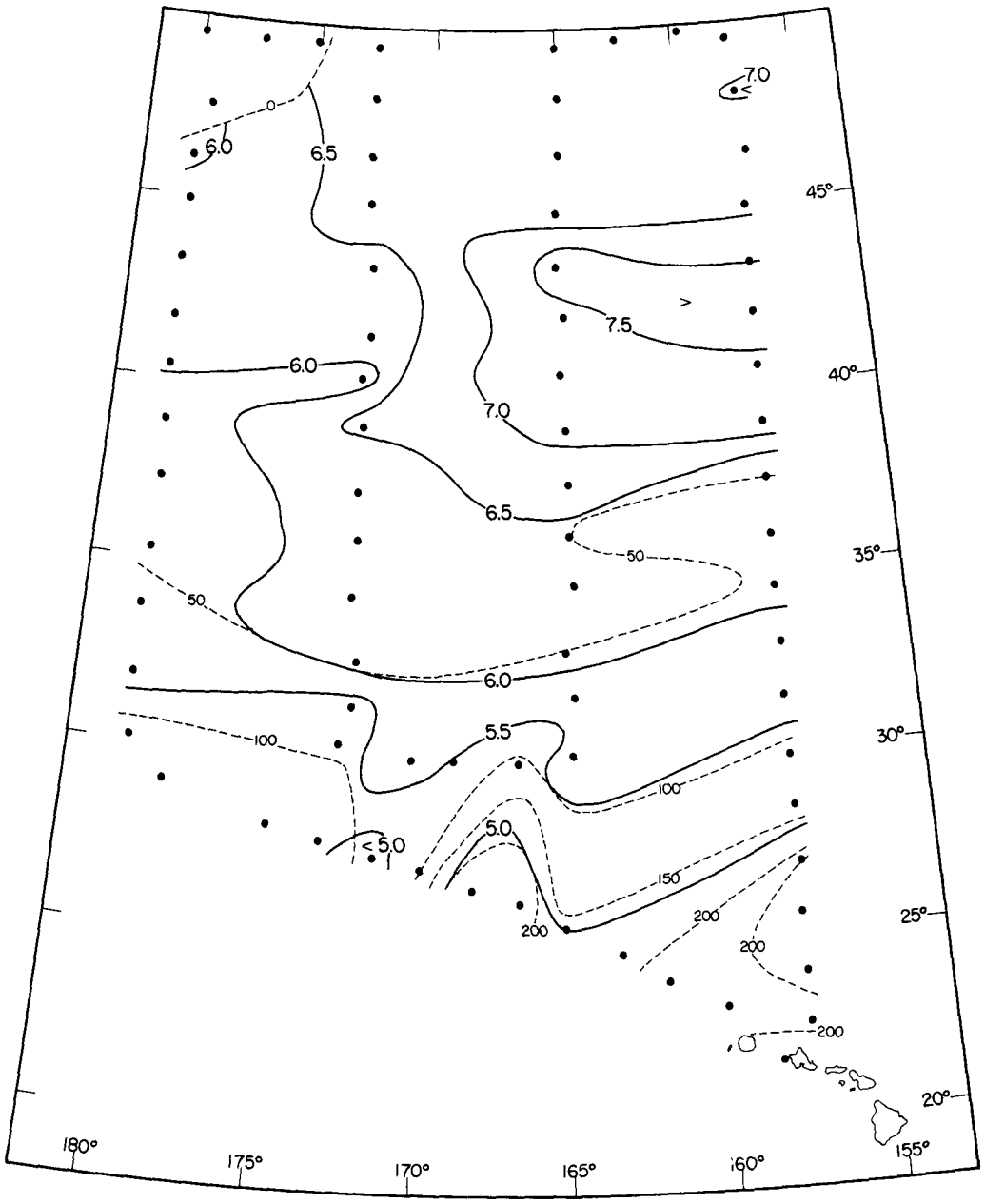

Figure 140.--Dissolved oxygen in milliliters per liter (solid lines) on the 277.7 cl./ton thermosteric anomaly (sigma-t 25.2) surface (depth in meters, dotted lines), Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: dissolved oxygen 0.5 ml./l., depth of thermosteric anomaly surface 50 m.

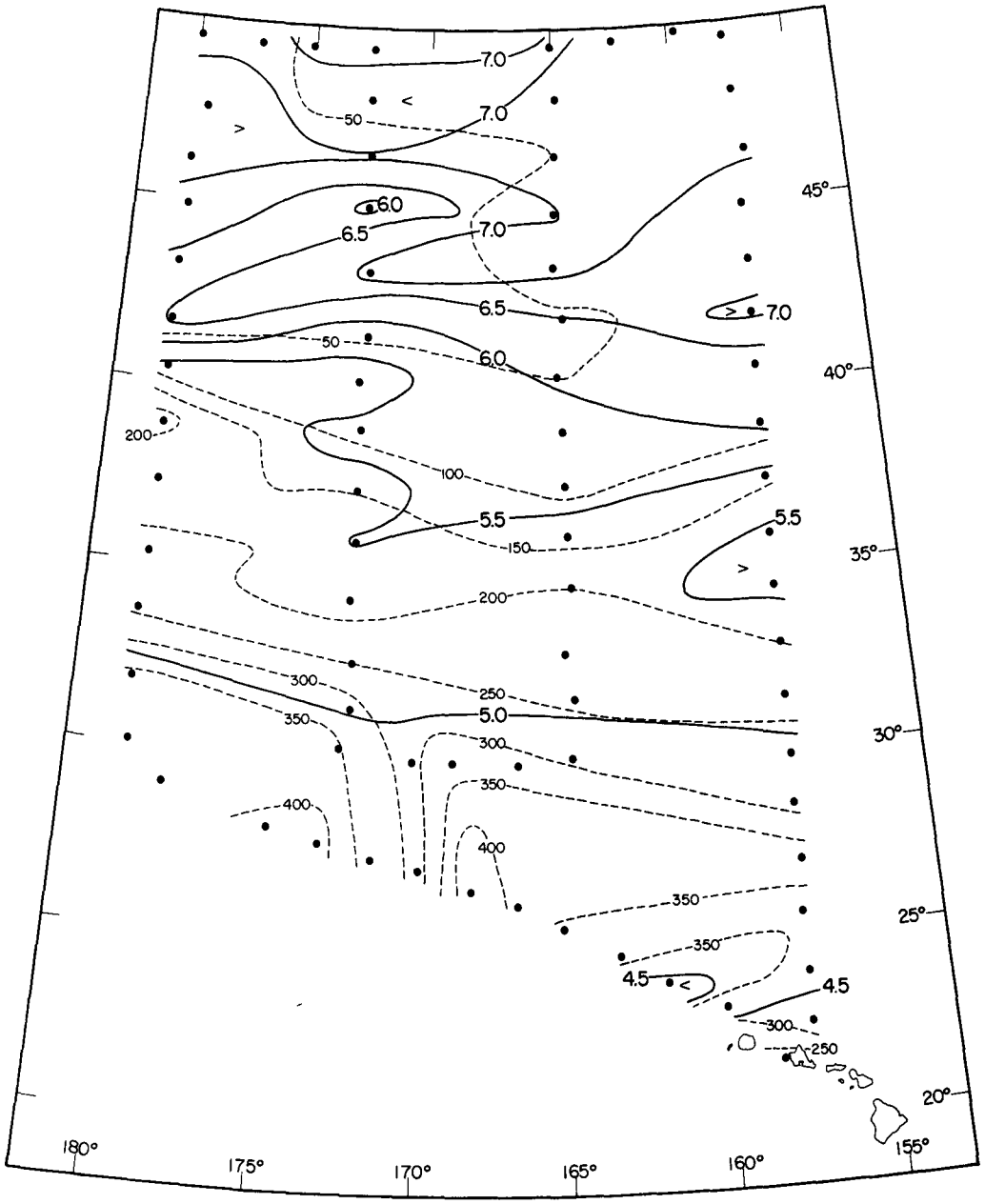

Figure 141.--Dissolved oxygen in milliliters per liter (solid lines) on the 201.7 cl./ton thermosteric anomaly (sigma-t 26.0) surface (depth in meters, dotted lines), Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: dissolved oxygen 0.5 ml./l., depth of thermosteric anomaly surface 50 m.

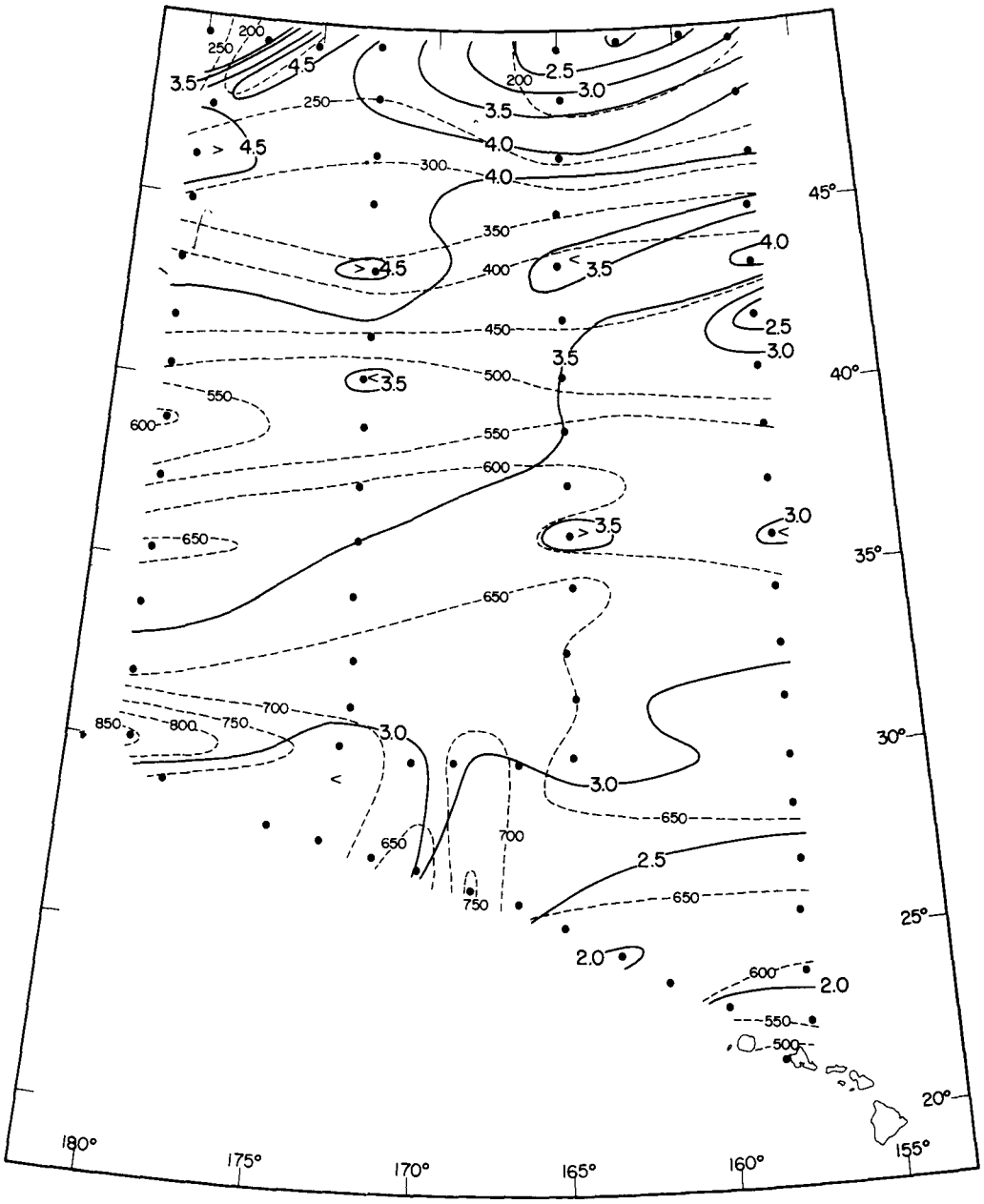

Figure 142.--Dissolved oxygen in milliliters per liter (solid lines) on the 125.5 cl./ton thermosteric anomaly (sigma-t 26.8) surface (depth in meters, dotted lines), Hugh M. Smith cruise 30 (NORPAC), July-August 1955. Contour intervals: dissolved oxygen 0.5 ml./l., depth of thermosteric anomaly surface 50 m.

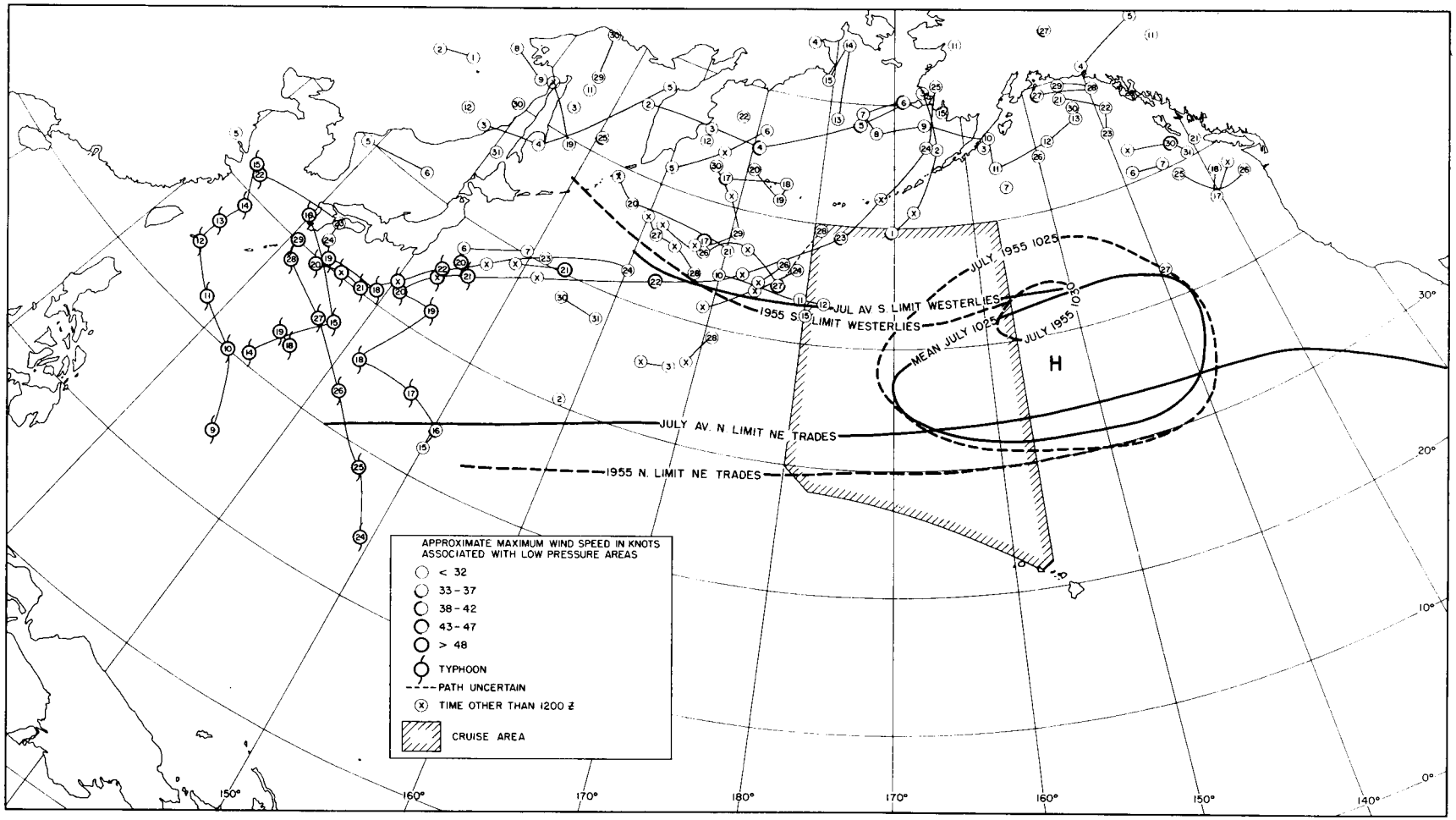

Figure 143.--Normal (heavy solid lines) and mean July 1955 (broken lines) position of the Eastern North Pacific High; normal and 1955 mean monthly limits of the northeast trades and westerlies; tracks of centers of low pressure areas showing daily positions.

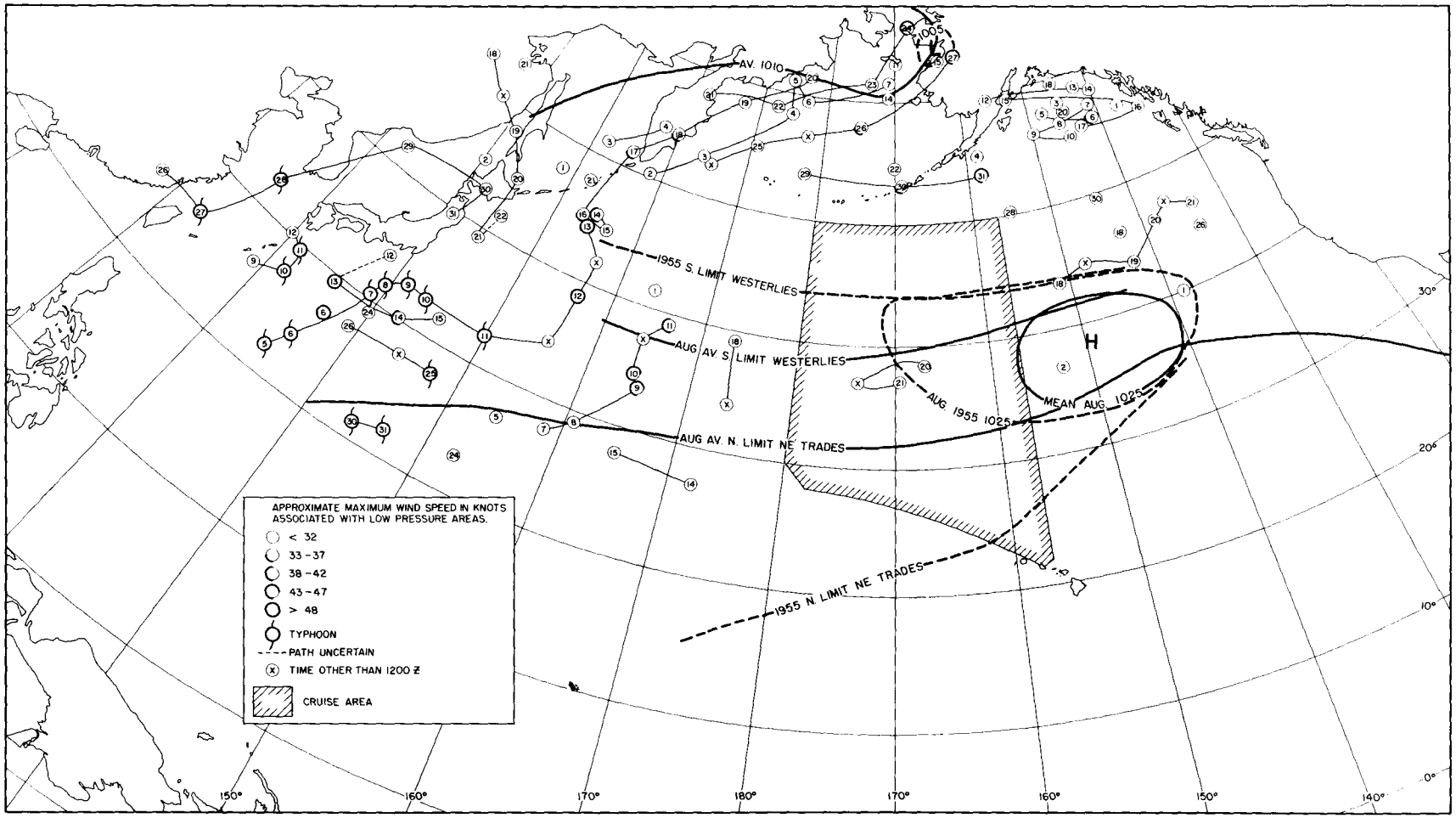

Figure 144.--Normal (heavy solid lines) and mean August 1955 (broken lines) position of the Eastern North Pacific High; normal and 1955 mean monthly limits of the northeast trades and westerlies; tracks of centers of low pressure areas showing daily positions.

NOTES ON TABLE 1, TABULATED OCEANOGRAPHIC DATA, CHG 17

Where more than one cast was made on a station, they are divided in the observed data by a horizontal line, and the cast number indicated by Roman numerals.

Weather is recorded in the ww (present weather) code given in the U. S. Weather Bureau circular M, eighth edition, Manual of Marine Meteorological Observations. Cloud cover is in tenths of the sky.

Wind velocity was measured with an anemometer approximately 8 meters above the sea surface. The direction (given to the nearest 10^{o}) is that from which the wind was blowing, measured through 360^{o} from north.

The following abbreviations, when appended to values or lines in the tabulated data have he following meanings:

Q -- The value seems questionable, but was used in construction of the station curve.

P -- The value is poor, and while carried was not used in drawing the station curve.

NG -- The value is obviously in error, and was dropped from the tabulations.

Table 1.--Oceanographic station data

STATION 1

M/V Charles H. Gilbert: Cruise 17, 22°30'N., 159°58'W., September 19, 1954. Messenger time: 0245 GCT. Weather 02, cloud coverage 4. Wind: 070°, 16 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 2

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	26.58	35.07	22.93	4.25	- *
22	26.58	35.08	22.93	3.97	-
43	25.98	35.12	23.15	3.69	-
86	22.66	35.25	24.24	3.89	-
129	20.96	35.30	24.75	3.85	-
172	19.67	35.21	25.03	2.21 Q/	-
263	14.21	34.45	25.74	3.02	-
349	10.42	34.20	26.27	3.91	-
445	08.57	34.13	26.52	3.98	-
528	06.94	34.09	26.73	4.35	-
724	05.17	34.27	27.10	0.98	-
921	04.58	34.43	27.29	1.62	-
1115	03.96	34.51	27.42	NS	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	26.58	35.07	22.93	0.000	1.878
10	26.58	35.07	22.93	0.049	1.829
20	26.58	35.08	22.93	0.099	1.779
30	26.52	35.08	22.95	0.148	1.730
50	24.70	35.18	23.59	0.241	1.637
75	23.65	35.21	23.92	0.345	1.533
100	21.93	35.28	24.47	0.440	1.438
150	20.40	35.28	24.89	0.605	1.273
200	17.85	34.95	25.29	0.753	1.125
250	14.60	34.49	25.68	0.881	0.997
300	12.40	34.29	25.98	0.993	0.885
400	09.42	34.16	26.41	1.184	0.694
500	07.38	34.09	26.67	1.342	0.536
600	06.08	34.14	26.89	1.478	0.400
700	05.29	34.24	27.06	1.595	0.283
800	04.88	34.34	27.19	1.698	0.180
1000	04.31	34.47	27.35	1.878	0.000

* Due to malfunctioning colorimeter, PO_4-P samples could not be analyzed.

Table 1.--Oceanographic station data (cont'd)

STATION 2

M/V Charles H. Gilbert: Cruise 17, 24°12'N., 159°59'W., September 19, 1954. Messenger time: first cast 1806 GCT, second cast 1844 GCT. Weather: 02, cloud coverage 3. Wind: 090°, 16 kt. Sea: 1-3 ft. Wire angle: first cast 18°, second cast 19°. BT slide: 6

OBSERVED

	DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
I	0	25.64	35.26	23.36	4.30	- *
	20	25.64	35.26	23.36	4.38	-
	58	23.68	35.41	24.06	4.96	-
	96	21.78	NS	-	4.85	-
	145	19.82	35.19	24.97	4.53	-
	193	18.20	35.01	25.25	4.23	-
II	389	11.36	34.23	26.13	4.37	-
	489	08.42	34.13	26.55	3.60	-
	596	06.20	34.09	26.83	2.22	-
	688	05.50	34.25	27.04	0.98	-
	907	04.39	34.43	27.31	0.91	-
	1115	03.78	34.52	27.45	1.14	-
	PT	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	25.64	35.26	23.36	0.000	1.898
10	25.64	35.26	23.36	0.045	1.853
20	25.64	35.26	23.36	0.091	1.807
30	25.64	35.26	23.36	0.136	1.762
50	25.64	35.26	23.36	0.227	1.671
75	22.64	35.36	24.33	0.329	1.569
100	21.56	35.32	24.60	0.417	1.481
150	19.55	35.16	25.02	0.576	1.322
200	18.00	34.97	25.27	0.721	1.177
250	15.28	34.56	25.59	0.852	1.046
300	13.42	34.36	25.83	0.971	0.927
400	11.08	34.22	26.17	1.180	0.718
500	08.17	34.11	26.57	1.355	0.543
600	06.16	34.10	26.84	1.498	0.400
700	05.42	34.26	27.06	1.618	0.280
800	04.88	34.34	27.19	1.721	0.177
1000	04.06	34.47	27.38	1.898	0.000

* Due to malfunctioning colorimeter, PO_4-P samples could not be analyzed.

Table 1.--Oceanographic station data (cont'd)

STATION 3

M/V Charles H. Gilbert: Cruise 17, 25°35'N., 159°52'W., September 20, 1954. Messenger time: 0736 GCT. Weather: 02, cloud coverage 1. Wind: 040°, 8 kt. Sea: 1-3 ft. Wire angle: 25°. BT slide: 9

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	25.14	35.53	23.72	4.94	0.23
23	NG	35.57	-	4.92	0.24
41	25.00	35.57	23.79	4.67	0.24
78	21.92	35.39	24.56	5.22	0.23
138	19.15	35.17	25.13	4.80	0.27
203	16.58	34.74	25.43	4.50	0.52
305	13.14	34.34	25.87	3.97	0.72
412	10.44	34.18	26.26	4.44	1.01
480	08.52	34.09	26.50	3.50	1.54
514	-	-	-	-	-
616	06.23	34.04	26.79	2.46	2.18
818	04.63	34.23	27.13	0.62	2.59
1024	03.80	34.42	27.37	1.05	2.74
1220	03.29	34.51	27.49	1.22	2.81

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	25.14	35.53	23.72	0.000	1.876
10	25.10	35.55	23.75	0.042	1.834
20	25.08	35.56	23.76	0.083	1.793
30	25.05	35.56	23.77	0.125	1.751
50	24.90	35.57	23.82	0.207	1.669
75	21.95	35.39	24.55	0.302	1.574
100	20.70	35.31	24.83	0.384	1.492
150	18.77	35.12	25.19	0.534	1.342
200	16.80	34.77	25.40	0.671	1.205
250	14.61	34.48	25.67	0.797	1.079
300	13.28	34.35	25.85	0.913	0.963
400	10.82	34.21	26.21	1.120	0.756
500	08.42	34.08	26.51	1.296	0.580
600	06.47	34.04	26.76	1.446	0.430
700	05.41	34.11	26.94	1.575	0.301
800	04.78	34.22	27.10	1.688	0.188
1000	03.88	34.40	27.34	1.876	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 4

M/V Charles H. Gilbert: Cruise 17, 27°00'N., 160°00'W., September 20, 1954. Messenger time: 2015 GCT. Weather: 02, cloud coverage 5. Wind: 040°, 10 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 14

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	25.53	35.34	23.45	4.65	0.31
25	25.50	35.34	23.46	4.66	0.33
56	25.49	35.35	23.47	4.56	0.28
86	23.30	35.35	24.13	4.43	0.31
132	21.71	35.37	24.60	4.26	0.25
222	17.87	34.96	25.29	4.14	0.38
333	13.04	34.36	25.90	4.62	0.72
449	09.76	34.14	26.34	4.33	1.32
560	08.01	34.09	26.58	3.64	1.61
671	06.12	34.07	26.82	2.30	2.31
888	04.38	34.31	27.22	0.98	2.68
1105	03.68	34.43	27.39	1.08	2.53
1311	03.28	34.51	27.49	1.31	2.82

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	25.53	35.34	23.46	0.000	2.004
10	25.53	35.34	23.46	0.044	1.960
20	25.53	35.34	23.46	0.089	1.915
30	25.52	35.34	23.46	0.133	1.871
50	25.49	35.35	23.48	0.222	1.782
75	23.80	35.35	23.99	0.327	1.677
100	22.70	35.36	24.31	0.422	1.582
150	20.82	35.32	24.81	0.594	1.410
200	18.82	35.10	25.16	0.746	1.258
250	16.50	34.74	25.45	0.884	1.120
300	14.33	34.48	25.73	1.008	0.996
400	10.82	34.20	26.20	1.221	0.783
500	08.90	34.11	26.46	1.400	0.604
600	07.37	34.07	26.66	1.558	0.446
700	05.75	34.09	26.89	1.695	0.309
800	04.83	34.21	27.09	1.812	0.192
1000	03.99	34.38	27.32	2.004	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 5

M/V Charles H. Gilbert: Cruise 17, 28°28'N., 159°59'W., September 21, 1954. Messenger time: 0937 GCT. Weather: 02, cloud coverage not recorded. Wind: 100°, 10 kt. Sea: 1-3 ft. Wire angle: 06°. BT slide: 17

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	25.04	35.55	23.76	4.77	0.22
27	24.98	35.52	23.76	4.84	0.21
57	22.76	35.30	24.25	5.06	0.21
116	18.08	34.92	25.21	5.12	0.24
173	15.59	34.58	25.54	4.92	0.39
230	13.46	34.43	25.88	4.65	0.68
346	10.99	34.22	26.19	4.80	0.99
463	08.69	NG	-	NG	NG
580	06.53	34.05	26.75	3.29	1.87
694	05.22	34.09	26.95	1.83	2.51
919	04.07	34.31	27.25	0.91	2.68
1136	03.56	34.45	27.45	0.74	2.71
1346	03.06	34.54	27.53	1.13	2.88

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	25.04	35.55	23.77	0.000	1.780
10	25.02	35.54	23.76	0.041	1.739
20	25.00	35.52	23.75	0.083	1.697
30	24.95	35.52	23.77	0.125	1.655
50	24.89	35.51	23.78	0.208	1.572
75	19.70	35.08	24.92	0.298	1.482
100	18.66	34.98	25.11	0.372	1.408
150	16.42	34.68	25.42	0.510	1.270
200	14.66	34.51	25.69	0.634	1.146
250	12.88	34.37	25.95	0.747	1.033
300	11.81	34.28	26.09	0.850	0.930
400	09.96	34.16	26.32	1.040	0.740
500	08.00	34.08	26.57	1.208	0.572
600	06.20	34.04	26.79	1.353	0.427
700	05.20	34.09	26.95	1.479	0.301
800	04.59	34.19	27.10	1.591	0.189
1000	03.81	34.37	27.33	1.780	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 6

M/V Charles H. Gilbert: Cruise 17, 30°03'N., 159°49'W., September 21, 1954. Messenger time: 2100 GCT. Weather: 02_6 cloud coverage 1. Wind: Calm. Sea: <1 ft. Wire angle: 07^0. BT slide: 21

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.82	35.57	23.85	4.46	0.02
26	24.47	35.57	23.95	4.51	0.01
57	22.00	35.17	24.36	4.97	0.09
114	17.26	34.74	25.26	5.36	0.13
172	15.21	34.52	25.58	4.72	0.35
226	13.60	34.40	25.82	4.42	0.59
343	11.12	34.22	26.17	4.31	0.83
463	08.71	NG	-	NG	NG
576	06.58	34.02	26.73	3.38	1.52
693	05.00	34.07	26.96	1.81	2.21
915	03.86	34.25	27.23	0.95	2.03
1134	03.35	34.43	27.42	0.70	2.13
1345	03.07	34.40	27.42	0.92	1.99

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.82	35.57	23.85	0.000	1.769
10	24.58	35.57	23.92	0.040	1.729
20	24.50	35.57	23.94	0.080	1.689
30	24.45	35.57	23.96	0.120	1.649
50	23.68	35.45	24.10	0.198	1.571
75	19.70	34.97	24.84	0.286	1.483
100	17.69	34.78	25.20	0.360	1.409
150	16.18	34.62	25.43	0.495	1.274
200	14.19	34.45	25.74	0.618	1.151
250	13.12	34.37	25.90	0.731	1.038
300	12.05	34.29	26.05	0.836	0.933
400	10.00	34.16	26.32	1.028	0.741
500	08.00	34.07	26.56	1.196	0.573
600	06.20	34.02	26.78	1.342	0.427
700	04.96	34.07	26.97	1.469	0.300
800	04.38	34.15	27.09	1.581	0.188
1000	03.60	34.35	27.33	1.769	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 7

M/V Charles H. Gilbert: Cruise 17, 31°29'N., 159°50'W., September 22, 1954. Messenger time: 1008 GCT. Weather: 02, clear. Wind: calm. Sea: <1 ft. Wire angle: 05°. BT slide: 26

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	24.38	34.85	23.44	4.71	0.01
16	24.12	34.87	23.53	4.41	0.07
32	19.60	34.61	24.59	5.36	0.13
69	15.89	34.52	25.42	5.76	0.16
141	14.04	34.43	25.75	4.65	0.61
217	13.00	34.38	25.93	4.55	0.68
321	11.36	34.29	26.18	4.39	0.88
431	09.76	NG	-	NG	NG
538	07.81	34.05	26.58	3.82	1.49
649	05.98	34.04	26.82	2.98	1.88
866	04.12	34.16	26.13	1.02	2.20
1075	03.54	34.34	27.33	0.58	2.27
1289	03.05	34.43	27.45	0.86	2.56

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	24.38	34.85	23.44	0.000	1.726
10	24.21	34.86	23.49	0.044	1.682
20	24.02	34.87	23.56	0.088	1.638
30	23.60	34.84	23.66	0.131	1.595
50	16.90	34.55	25.21	0.201	1.525
75	15.64	34.51	25.47	0.268	1.458
100	14.82	34.47	25.62	0.330	1.396
150	13.99	34.42	25.76	0.447	1.279
200	13.24	34.39	25.89	0.558	1.168
250	12.48	34.35	26.01	0.664	1.062
300	11.68	34.31	26.13	0.765	0.961
400	10.22	34.22	26.33	0.953	0.773
500	08.52	34.10	26.51	1.123	0.603
600	06.66	34.04	26.73	1.275	0.451
700	05.40	34.05	26.90	1.407	0.319
800	04.57	34.10	27.03	1.525	0.201
1000	03.72	34.28	27.26	1.726	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 8

M/V Charles H. Gilbert: Cruise 17, 32°57'N., 159°55'W., September 22, 1954. Messenger time: 2143 GCT. Weather: 02, cloud coverage 1. Wind: 300°, 6 kt. Sea: <1 ft. Wire angle: 00°. BT slide: 29

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	23.64	34.74	23.57	4.45	0.22
21	24.18	35.10	23.68	4.26	0.14
42	18.85	34.58	24.76	5.18	0.20
83	15.62	34.49	25.46	5.24	0.21
151	13.48	34.40	25.85	4.70	0.60
214	12.30	34.34	26.04	4.61	0.81
319	10.99	34.25	26.22	4.44	0.95
431	09.11	NG	-	NG	NG
537	07.26	34.04	26.65	3.60	1.69
648	05.54	33.98	26.82	2.58	2.14
864	04.08	34.16	27.13	0.79	2.31
1073	03.39	34.34	27.34	0.60	2.14
1286	02.99	34.45	27.47	0.24	2.71

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	23.64	34.74	23.57	0.000	1.684
10	23.90	34.86	23.59	0.043	1.641
20	24.17	35.09	23.68	0.086	1.598
30	24.10	35.10	23.71	0.128	1.556
50	17.63	34.55	25.04	0.200	1.484
75	16.10	34.51	25.37	0.270	1.414
100	14.85	34.47	25.62	0.333	1.351
150	13.50	34.40	25.85	0.448	1.236
200	12.55	34.35	26.00	0.555	1.129
250	11.77	34.31	26.12	0.656	1.028
300	11.19	34.27	26.19	0.752	0.932
400	09.67	34.17	26.38	0.934	0.750
500	07.88	34.07	26.58	1.098	0.586
600	06.20	33.99	26.75	1.245	0.439
700	05.01	34.02	26.92	1.375	0.309
800	04.35	34.12	27.07	1.489	0.195
1000	03.60	34.29	27.28	1.684	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 9

M/V Charles H. Gilbert: Cruise 17, 34°29'N., 160°08'W., September 23, 1954. Messenger time: 1018 GCT. Weather: 02, clear. Wind: 240°, 18 kt. Sea: 3-5 ft. Wire angle: 31°. BT slide: 33

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
4	23.60	34.69	23.55	4.31	0.28
21	23.60	34.69	23.55	4.49	0.22
46	21.20	34.58	24.14	5.58	0.20
81	14.80	34.42	25.59	6.12	0.24
145	12.72	34.36	25.97	5.11	0.59
206	11.92	34.31	26.09	5.24	0.71
311	10.26	34.18	26.29	5.42	0.88
420	08.95	34.14	26.47	4.76	1.17
525	07.33	34.05	26.64	4.02	1.68
631	05.48	34.02	26.86	2.80	2.09
838	04.06	34.20	27.17	0.98	2.52
1047	03.31	34.36	27.37	0.45	2.46
1251	02.91	34.43	27.46	0.30	2.67

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	23.60	34.69	23.55	0.000	1.642
10	23.60	34.69	23.55	0.044	1.598
20	23.60	34.69	23.55	0.087	1.555
30	23.60	34.69	23.55	0.131	1.511
50	19.80	34.55	24.49	0.209	1.433
75	15.10	34.43	25.53	0.284	1.358
100	14.00	34.40	25.74	0.343	1.299
150	12.61	34.35	25.99	0.452	1.190
200	11.98	34.32	26.08	0.553	1.089
250	11.30	34.26	26.16	0.651	0.991
300	10.48	34.20	26.26	0.745	0.897
400	09.18	34.15	26.44	0.920	0.722
500	07.73	34.07	26.60	1.079	0.563
600	06.00	34.01	26.79	1.222	0.420
700	04.82	34.08	26.99	1.347	0.295
800	04.25	34.16	27.11	1.456	0.186
1000	03.44	34.33	27.33	1.642	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 10

M/V Charles H. Gilbert: Cruise 17, 38°54'N., 160°07'W., September 24, 1954. Messenger time: 2206 GCT. Weather: 60, cloud coverage 9. Wind: 060°, 10 kt. Sea: 1-3 ft. Wire angle: 06°. BT slide: 43

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	22.22	34.14	23.52	5.45	0.21
15	22.22	34.16	23.54	5.28	0.20
31	18.23	34.14	24.58	6.80	0.16
57	12.50	34.23	25.92	5.67	0.57
110	11.44	34.20	26.09	5.65	0.70
165	10.82	34.22	26.22	5.42	0.86
227	10.16	34.18	26.31	4.04	0.92
340	08.94	34.14	26.47	3.09	1.15
457	07.22	34.04	26.65	3.09	1.60
572	05.54	34.02	26.86	2.96	2.03
681	04.65	34.09	27.02	1.76	2.31
903	03.81	34.23	27.21	0.73	2.49
1126	03.17	34.36	27.38	0.33	2.84

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	22.22	34.14	23.52	0.000	1.499
10	22.22	34.15	23.53	0.044	1.455
20	22.22	34.16	23.54	0.087	1.412
30	19.80	34.14	24.18	0.128	1.371
50	13.20	34.22	25.77	0.188	1.311
75	11.98	34.23	26.01	0.241	1.258
100	11.60	34.20	26.06	0.291	1.208
150	11.00	34.22	26.19	0.388	1.111
200	10.45	34.20	26.27	0.480	1.019
250	09.88	34.18	26.35	0.568	0.931
300	09.39	34.16	26.42	0.653	0.846
400	08.10	34.10	26.57	0.814	0.685
500	06.55	34.02	26.73	0.961	0.538
600	05.23	34.04	26.91	1.091	0.408
700	04.55	34.12	27.05	1.207	0.292
800	04.15	34.18	27.14	1.311	0.188
1000	03.52	34.29	27.29	1.499	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 11

M/V Charles H. Gilbert: Cruise 17, 42°07'N., 159°59'W., September 26, 1954. Messenger time: 2356 GCT. Weather: 02, cloud coverage 4. Wind: 340°, 15 kt. Sea: 1-3 ft. Wire angle: 35°. BT slide: 49

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.00	33.75	24.09	5.50	0.27
17	18.95	33.75	24.10	5.16	0.27
31	18.82	33.78	24.16	5.24	0.28
60	11.87	33.78	25.68	6.74	0.57
94	09.85	33.89	26.13	6.25	0.84
137	08.92	33.93	26.31	6.05	0.98
188	08.70	34.04	26.43	5.68	1.07
283	07.70	34.00	26.55	5.24	1.15
385	06.28	34.00	26.75	4.36	1.55
480	05.18	34.07	26.94	2.72	2.13
579	04.59	NG	-	NG	NG
774	03.84	34.20	27.19	0.88	2.53
979	03.27	34.33	27.35	0.55	2.86

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D 1000 - \Delta D$ (dyn. m)
00	19.00	33.75	24.09	0.000	1.360
10	18.98	33.75	24.09	0.038	1.322
20	18.90	33.76	24.12	0.077	1.283
30	18.83	33.77	24.15	0.115	1.245
50	12.38	33.78	25.59	0.177	1.183
75	10.65	33.84	25.96	0.233	1.127
100	09.64	33.90	26.17	0.282	1.078
150	08.81	33.96	26.36	0.372	0.988
200	08.65	34.04	26.44	0.455	0.905
250	08.08	34.02	26.51	0.535	0.825
300	07.47	34.00	26.59	0.612	0.748
400	06.08	34.01	26.78	0.754	0.606
500	04.99	34.08	26.97	0.877	0.483
600	04.47	34.13	27.07	0.988	0.372
700	04.07	34.17	27.14	1.091	0.269
800	03.78	34.22	27.21	1.187	0.173
1000	03.23	34.34	27.36	1.360	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 12

M/V Charles H. Gilbert: Cruise 17, 43°42'N., 160°00'W., September 27, 1954. Messenger time: 1331 GCT. Weather: 02, clear. Wind: 100°, 14 kt. Sea: 1-3 ft. Wire angle: 03°. BT slide: 53

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	19.17	33.95	24.20	5.34	0.39
21	19.18	33.98	24.21	5.37	0.42
44	18.01	33.89	24.45	5.78	0.42
73	10.45	33.86	26.01	6.23	0.89
108	08.87	33.80	26.22	6.16	1.02
165	08.59	34.00	26.42	6.05	1.07
251	08.01	34.04	26.54	5.46	1.34
376	06.38	34.02	26.75	4.05	1.89
495	05.03	34.00	26.90	2.60	2.27
622	04.33	34.09	27.05	1.51	2.60
739	03.89	34.22	27.20	0.97	2.62
983	03.28	34.34	27.35	0.56	2.79
1215	02.87	34.42	27.45	0.41	2.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	19.17	33.95	24.20	0.000	1.350
10	19.17	33.96	24.20	0.037	1.313
20	19.18	33.98	24.22	0.075	1.275
30	19.15	33.98	24.22	0.112	1.238
50	12.60	33.87	25.62	0.173	1.177
75	10.40	33.86	26.01	0.228	1.122
100	08.95	33.80	26.21	0.276	1.074
150	08.67	33.96	26.38	0.364	0.986
200	08.38	34.03	26.48	0.446	0.904
250	08.02	34.04	26.54	0.525	0.825
300	07.57	34.04	26.60	0.601	0.749
400	06.01	34.01	26.79	0.741	0.609
500	05.00	34.00	26.91	0.868	0.482
600	04.43	34.06	27.02	0.984	0.366
700	04.00	34.18	27.16	1.088	0.262
800	03.70	34.26	27.25	1.182	0.168
1000	03.25	34.35	27.37	1.350	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 13

M/V Charles H. Gilbert: Cruise 17, 45°03'N., 163°43'W., October 1, 1954. Messenger time: 1926 GCT. Weather: 50, cloud coverage 8. Wind: 180°, 18 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 65

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	15.53	33.06	24.39	6.11	0.69
13	15.51	33.12	24.44	6.38	0.77
27	15.51	33.08	24.41	6.68	0.75
44	08.69	33.37	25.91	7.04	1.07
84	06.80	33.40	26.21	6.72	1.20
142	06.39	33.57	26.39	6.29	1.18
214	06.33	33.86	26.63	5.45	1.34
321	05.38	33.87	26.76	3.73	1.99
424	04.69	33.98	26.92	2.35	2.20
532	04.27	34.05	27.02	1.68	2.51
637	03.90	34.13	27.13	1.05	2.60
856	03.40	34.27	27.29	0.68	2.41
NG	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	15.53	33.06	24.38	0.000	1.238
10	15.52	33.10	24.42	0.035	1.203
20	15.51	33.10	24.42	0.071	1.167
30	13.40	33.30	25.02	0.103	1.135
50	08.20	33.37	25.99	0.153	1.085
75	07.05	33.39	26.17	0.202	1.036
100	06.59	33.84	26.58	0.244	0.994
150	06.39	33.87	26.63	0.316	0.922
200	06.35	33.87	26.64	0.388	0.850
250	06.00	33.86	26.67	0.459	0.779
300	05.53	33.86	26.73	0.529	0.709
400	04.81	33.96	26.89	0.657	0.581
500	04.40	34.03	27.00	0.773	0.465
600	04.00	34.10	27.09	0.880	0.358
700	03.72	34.17	27.18	0.980	0.258
800	03.53	34.24	27.25	1.072	0.166
1000	03.15	34.36	27.38	1.238	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 14

M/V Charles H. Gilbert: Cruise 17, 43°47'N., 169°43'W., October 4, 1954. Messenger time: 0531 GCT. Weather: 02, cloud coverage 8. Wind: 330°, 3 kt. Sea: 3-5 ft. Wire angle: 18°. BT slide: 77

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	14.04	33.33	24.91	6.05	0.50
20	14.00	33.33	24.92	6.20	0.52
35	09.52	33.66	26.01	6.08	0.75
56	08.64	33.71	26.18	5.20	0.81
85	07.79	33.75	26.35	3.86	0.96
149	07.67	33.89	26.47	3.17	0.99
217	06.62	33.89	26.62	2.99	1.24
326	05.48	33.93	26.79	2.56	1.82
441	04.67	34.02	26.96	2.38	2.10
550	04.28	34.11	27.07	1.70	2.31
661	03.90	34.18	27.17	1.13	2.38
873	03.35	34.31	27.32	0.71	2.54
1089	02.95	34.42	27.45	0.55	2.65

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	14.04	33.33	24.91	0.000	1.229
10	14.02	33.33	24.91	0.031	1.198
20	14.00	33.33	24.92	0.061	1.168
30	13.99	33.34	24.93	0.091	1.138
50	09.00	33.69	26.11	0.141	1.088
75	07.92	33.73	26.31	0.187	1.042
100	07.77	33.76	26.36	0.230	0.999
150	07.66	33.89	26.47	0.312	0.917
200	06.84	33.90	26.60	0.388	0.841
250	06.21	33.90	26.68	0.461	0.768
300	05.72	33.91	26.75	0.529	0.700
400	04.91	33.98	26.90	0.656	0.573
500	04.46	34.06	27.01	0.772	0.457
600	04.08	34.14	27.12	0.877	0.352
700	03.79	34.20	27.19	0.975	0.254
800	03.52	34.25	27.26	1.066	0.163
1000	03.06	34.38	27.41	1.229	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 15

M/V Charles H. Gilbert: Cruise 17, 42°14'N., 169°53'W., October 4, 1954. Messenger time: 1834 GCT. Weather: 50, cloud coverage 8. Wind: 140°, 13 kt. Sea: 1-3 ft. Wire angle: 26°. BT slide: 80

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	15.16	33.48	24.79	5.40	0.66
18	15.16	33.49	24.80	5.49	0.67
32	11.42	33.98	25.92	6.30	0.94
50	10.33	34.02	26.15	5.80	1.30
77	09.53	34.02	26.28	5.84	1.39
137	09.12	34.11	26.42	5.60	1.26
201 *	08.12	34.02	26.51	5.37	1.45
303	06.84	33.96	26.64	4.61	1.68
409	05.48	33.95	26.81	3.70	2.15
511	04.76	34.00	26.93	2.21	2.63
614	04.28	34.13	27.09	1.49	2.71
820	03.62	34.27	27.27	0.82	2.65
1032	02.92	34.38	27.42	0.63	2.77

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	15.16	33.48	24.79	0.000	1.281
10	15.16	33.49	24.79	0.032	1.249
20	15.18	33.54	24.83	0.063	1.218
30	15.15	33.72	24.97	0.094	1.187
50	10.33	34.02	26.15	0.143	1.138
75	09.55	34.02	26.28	0.188	1.093
100	09.30	34.09	26.38	0.231	1.050
150	08.99	34.11	26.44	0.314	0.967
200	08.14	34.02	26.50	0.394	0.887
250	07.50	33.99	26.58	0.471	0.810
300	06.90	33.96	26.64	0.545	0.736
400	05.58	33.95	26.80	0.683	0.598
500	04.81	33.99	26.92	0.808	0.473
600	04.32	34.11	27.07	0.921	0.360
700	04.00	34.19	27.16	1.022	0.259
800	03.72	34.25	27.24	1.116	0.165
1000	03.00	34.37	27.40	1.281	0.000

* This bottle flipped almost upright by a heavy roll as it broke the surface, but data look good.

Table 1.--Oceanographic station data (cont'd)

STATION 16

M/V Charles H. Gilbert: Cruise 17, 41°00'N., 169°47'W., October 5, 1954. Messenger time: 0726 GCT. Weather: 02, cloud coverage not recorded. Wind: 210°, 22 kt. Sea: 3-5 ft. Wire angle: 26°. BT slide: 83

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 * (ml/l)	PO_4-P (μg at/l)
0	16.53	33.95	24.84	5.02	0.33
19	16.52	33.93	24.83	5.09	0.35
42	15.92	33.86	24.91	5.48	0.38
54	11.33	34.13	26.06	5.76	0.81
108	09.86	34.09	26.29	5.76	1.00
162	09.52	34.14	26.38	5.61	1.06
218	08.89	34.11	26.46	5.40	1.14
327	07.51	34.02	26.60	4.94	1.54
436	05.82	33.96	26.78	3.46	1.90
551	04.81	34.02	26.94	2.61	2.40
658	04.40	34.11	27.06	1.91	2.64
882	03.64	34.25	27.25	0.88	2.74
1112	03.08	34.38	27.40	0.57	2.95

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	16.53	33.95	24.84	0.000	1.355
10	16.53	33.94	24.83	0.031	1.324
20	16.52	33.93	24.83	0.063	1.292
30	16.25	33.89	24.86	0.094	1.261
50	11.41	34.11	26.03	0.145	1.210
75	10.83	34.13	26.15	0.194	1.161
100	10.20	34.09	26.23	0.240	1.115
150	09.82	34.10	26.30	0.330	1.025
200	09.03	34.12	26.45	0.414	0.941
250	08.51	34.09	26.50	0.495	0.860
300	07.87	34.04	26.56	0.573	0.782
400	06.30	33.96	26.71	0.719	0.636
500	05.20	33.98	26.87	0.851	0.504
600	04.60	34.07	27.01	0.969	0.386
700	04.22	34.14	27.10	1.077	0.278
800	03.90	34.21	27.19	1.177	0.178
1000	03.34	34.31	27.33	1.355	0.000

* Order of O_2 samples is unsure, but appears correct.

Table 1.--Oceanographic station data (cont'd)

STATION 17

M/V Charles H. Gilbert: Cruise 17, 38°41'N., 169°57'W., October 6, 1954. Messenger time: 0708 GCT. Weather: 02, clear. Wind: 200°, 05 kt. Sea: 1-3 ft. Wire angle: 12°. BT slide: 88

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	18.12	33.78	24.33	5.24	0.34
26	18.10	33.77	24.33	5.61	0.44
45	14.44	34.31	25.58	6.36	0.56
65	13.10	34.36	25.90	5.74	0.63
118	12.03	34.31	26.07	5.34	0.92
166	10.99	34.22	26.19	5.29	0.96
230	10.12	34.20	26.33	5.03	1.06
354	07.96	34.04	26.55	5.01	1.38
466	06.27	33.95	26.71	4.17	1.79
585	05.00	33.98	26.89	2.65	2.32
698	04.37	34.09	27.05	1.80	2.67
928	03.64	34.25	27.25	0.80	2.66
1162	03.05	34.36	27.39	0.58	2.73

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	18.12	33.78	24.33	0.000	1.469
10	18.12	33.78	24.33	0.036	1.433
20	18.11	33.77	24.32	0.072	1.397
30	18.10	33.77	24.33	0.108	1.361
50	13.93	34.35	25.72	0.168	1.301
75	12.86	34.34	25.93	0.223	1.246
100	12.42	34.33	26.01	0.274	1.195
150	11.25	34.24	26.16	0.373	1.096
200	10.50	34.21	26.27	0.465	1.004
250	09.81	34.17	26.36	0.553	0.916
300	08.96	34.10	26.44	0.638	0.831
400	07.20	33.99	26.62	0.795	0.674
500	05.82	33.95	26.77	0.937	0.532
600	04.88	33.99	26.91	1.065	0.404
700	04.33	34.10	27.06	1.180	0.289
800	03.99	34.17	27.15	1.283	0.186
1000	03.44	34.29	27.30	1.469	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 18

M/V Charles H. Gilbert: Cruise 17, 37°07'N., 170°05'W., October 7, 1954. Messenger time: 0528 GCT. Weather: 28, cloud coverage 9. Wind: calm. Sea: <1 ft. Wire angle: 03°. BT slide: 91

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	20.22	34.05	24.00	4.83	0.35
15	19.42	34.07	24.22	4.94	0.30
31	19.40	34.07	24.23	4.79	0.26
54	14.64	34.45	25.64	5.47	0.38
75	13.64	34.43	25.84	4.90	0.71
149	12.48	34.40	26.05	4.92	0.76
237	11.24	34.31	26.21	4.55	0.93
365	09.01	34.13	26.45	4.90	1.30
483	07.16	34.00	26.63	4.45	1.59
605	05.45	33.98	26.84	3.03	2.23
728	04.56	34.07	27.01	1.91	2.57
971	03.69	34.23	27.23	0.75	2.65
1209	03.03	34.36	27.39	0.41	2.83

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	20.22	34.05	24.00	0.000	1.561
10	19.52	34.06	24.19	0.038	1.523
20	19.41	34.07	24.23	0.076	1.485
30	19.40	34.07	24.23	0.113	1.448
50	15.20	34.44	25.52	0.175	1.386
75	13.64	34.43	25.84	0.233	1.328
100	13.12	34.42	25.94	0.287	1.274
150	12.47	34.40	26.05	0.389	1.172
200	11.80	34.36	26.15	0.488	1.073
250	11.00	34.29	26.24	0.582	0.979
300	10.19	34.23	26.34	0.672	0.889
400	08.48	34.08	26.50	0.840	0.721
500	06.87	33.99	26.66	0.994	0.567
600	05.50	33.98	26.83	1.132	0.429
700	04.70	34.05	26.98	1.254	0.307
800	04.22	34.12	27.09	1.365	0.196
1000	03.60	34.25	27.25	1.561	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 19

M/V Charles H. Gilbert: Cruise 17, 34°07'N., 170°12'W., October 8, 1954. Messenger time: 0629 GCT. Weather: 02, cloud coverage 3. Wind: 190°, 19 kt. Sea: 3-5 ft. Wire angle: 22°. BT slide: 97

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
4	22.35	34.42	23.70	4.22	- *
22	22.22	34.52	23.81	4.12	-
46	18.76	34.69	24.86	4.79	-
59	17.50	34.69	25.18	4.64	-
89	16.04	34.67	25.50	4.41	-
147	14.89	34.60	25.71	4.31	-
232	13.42	34.47	25.92	4.15	-
353	11.14	34.31	26.23	4.38	-
461	09.09	34.13	26.44	4.57	-
579	07.02	34.04	26.68	3.80	-
686	05.27	34.00	26.87	2.86	-
913	04.02	34.20	27.17	1.08	-
1141	03.02	34.34	27.38	0.56	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t (gm/l)	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	22.35	34.42	23.70	0.000	1.738
10	22.35	34.44	23.72	0.042	1.696
20	22.27	34.46	23.75	0.084	1.654
30	21.80	34.61	24.00	0.124	1.614
50	18.25	34.70	25.00	0.193	1.545
75	16.60	34.68	25.38	0.264	1.474
100	15.78	34.66	25.55	0.327	1.411
150	14.82	34.60	25.72	0.447	1.291
200	14.01	34.52	25.83	0.561	1.177
250	13.12	34.45	25.96	0.670	1.068
300	12.20	34.37	26.08	0.773	0.965
400	10.22	34.22	26.33	0.963	0.775
500	08.42	34.10	26.53	1.133	0.605
600	06.61	34.03	26.73	1.284	0.454
700	05.19	34.01	26.89	1.416	0.322
800	04.59	34.08	27.01	1.535	0.203
1000	03.59	34.26	27.26	1.738	0.000

* Colorimeter out of operation, no PO_4-P analyses stations No. 19 to No. 24.

Table 1.--Oceanographic station data (cont'd)

STATION 20

M/V Charles H. Gilbert: Cruise 17, 32°29'N., 170°17'W., October 8, 1954. Messenger time: 2000 GCT. Weather: 02, cloud coverage 1. Wind: 220°, 8 kt. Sea: <1 ft. Wire angle: 20°. BT slide: 101

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	23.17	34.78	23.74	3.99	- *
19	22.94	34.81	23.83	4.05	-
38	21.02	34.99	24.50	4.73	-
58	18.68	34.85	25.00	5.06	-
90	16.67	34.69	25.37	4.55	-
155	15.13	34.58	25.64	4.08	-
222	14.15	34.49	25.78	4.30	-
340	12.37	34.38	26.06	4.40	-
447	10.75	34.29	26.29	4.25	-
554	08.30	34.11	26.55	3.83	-
672	06.54	34.02	26.73	3.43	-
898	04.33	34.13	27.08	1.23	-
1126	03.04	34.29	27.34	0.54	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	23.17	34.78	23.74	0.000	1.840
10	23.08	34.79	23.77	0.042	1.798
20	22.92	34.81	23.83	0.083	1.757
30	22.90	34.82	23.85	0.123	1.717
50	19.22	34.88	24.89	0.195	1.645
75	17.60	34.76	25.20	0.269	1.571
100	16.25	34.66	25.45	0.336	1.504
150	15.20	34.59	25.63	0.460	1.380
200	14.45	34.52	25.74	0.579	1.261
250	13.70	34.46	25.85	0.692	1.148
300	12.95	34.42	25.97	0.801	1.039
400	11.48	34.33	26.19	1.003	0.837
500	09.55	34.21	26.43	1.185	0.655
600	07.48	34.08	26.65	1.345	0.495
700	06.20	34.01	26.77	1.489	0.351
800	05.18	33.98	26.87	1.622	0.218
1000	03.58	34.25	27.25	1.840	0.000

* See Station 19

Table 1.--Oceanographic station data (cont'd)

STATION 21

M/V Charles H. Gilbert: Cruise 17, 31°12'N., 170°10'W., October 9, 1954. Messenger time: 0651 GCT. Weather: 02, clear. Wind: 180°, 14 kt. Sea: 1-3 ft. Wire angle: 05°. BT slide: 103

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	23.78	34.81	23.55	4.47	- *
15	23.38	34.85	23.73	4.66	-
31	23.11	34.92	23.86	4.74	-
55	17.97	34.78	25.13	5.48	-
93	16.39	34.72	25.46	5.06	-
149	15.30	34.61	25.62	4.73	-
240	13.88	34.51	25.85	4.83	-
367	11.86	34.34	26.12	5.00	-
484	09.71	34.18	26.38	4.89	-
612	07.18	34.02	26.65	3.75	-
728	05.53	33.96	26.81	2.76	-
969	03.98	34.18	27.16	0.83	-
1206	03.03	34.36	27.39	0.38	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	23.78	34.81	23.58	0.000	1.829
10	23.42	34.84	23.71	0.043	1.786
20	23.32	34.86	23.76	0.084	1.745
30	23.15	34.91	23.84	0.126	1.703
50	18.25	34.80	25.08	0.195	1.634
75	16.86	34.74	25.37	0.265	1.564
100	16.20	34.70	25.49	0.330	1.499
150	15.29	34.61	25.63	0.453	1.376
200	14.46	34.55	25.76	0.571	1.258
250	13.72	34.50	25.88	0.684	1.145
300	12.98	34.44	25.98	0.791	1.038
400	11.27	34.29	26.19	0.993	0.836
500	09.40	34.16	26.42	1.175	0.654
600	07.40	34.03	26.62	1.337	0.492
700	05.80	33.96	26.78	1.481	0.348
800	04.90	34.01	26.92	1.610	0.219
1000	03.80	34.20	27.19	1.829	0.000

* See Station 19

Table 1.--Oceanographic station data (cont'd)

STATION 22

M/V Charles H. Gilbert: Cruise 17, 30°00'N., 170°10'W., October 9, 1954. Messenger time: 1651 GCT. Weather: 02, cloud coverage 1. Wind: 090°, 8 kt. Sea: <1 ft. Wire angle: 34°. BT slide: 106

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.70	35.12	23.54	4.31	- *
17	24.40	35.07	23.59	4.23	-
29	24.76	35.41	23.74	4.45	-
42	22.00	35.23	24.41	4.86	-
71	19.87	35.23	24.99	4.74	-
118	18.13	34.97	25.23	4.46	-
194	15.53	34.65	25.60	4.56	-
297	13.80	34.49	25.85	4.81	-
393	11.50	34.29	26.15	4.32	-
495	10.19	34.23	26.34	4.28	-
591	07.57	34.07	26.63	3.63	-
811	04.85	34.09	26.99	1.66	-
1034	03.03	34.29	27.34	0.44	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.70	35.12	23.54	0.000	1.884
10	24.41	35.07	23.59	0.043	1.841
20	24.63	35.27	23.68	0.086	1.798
30	24.75	35.40	23.74	0.128	1.756
50	21.10	35.23	24.66	0.203	1.681
75	19.70	35.22	25.03	0.281	1.603
100	18.59	35.03	25.17	0.354	1.530
150	16.90	34.81	25.41	0.491	1.393
200	15.40	34.63	25.62	0.617	1.267
250	14.61	34.56	25.74	0.737	1.147
300	13.70	34.48	25.87	0.851	1.033
400	11.40	34.28	26.16	1.060	0.824
500	10.08	34.22	26.35	1.247	0.637
600	07.40	34.06	26.64	1.411	0.473
700	06.15	34.03	26.79	1.554	0.330
800	05.00	34.08	26.97	1.681	0.203
1000	03.20	34.27	27.31	1.884	0.000

* See Station 19

Table 1.--Oceanographic station data (cont'd)

STATION 23

M/V Charles H. Gilbert: Cruise 17, 29°45'N., 172°05'W., October 10, 1954. Messenger time: 0548 GCT. Weather: 02, cloud coverage 1. Wind: 110°, 12 kt. Sea: 1-3 ft. Wire angle: 14°. BT slide: 109

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	24.99	35.16	23.48	4.07	- *
15	24.75	35.12	23.53	4.08	-
30	24.36	35.07	23.61	4.42	-
41	22.59	35.03	24.10	4.56	-
61	18.81	34.92	25.03	5.23	-
112	16.34	34.72	25.47	4.92	-
238	13.81	34.45	25.82	4.57	-
360	11.34	34.31	26.19	4.59	-
474	09.12	34.18	26.48	4.38	-
598	06.73	34.05	26.73	3.41	-
712	05.23	34.07	26.93	2.15	-
950	03.88	34.27	27.24	0.64	-
1182	03.25	34.45	27.44	0.58	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	24.99	35.16	23.49	0.000	1.774
10	24.82	35.13	23.52	0.044	1.730
20	24.60	35.10	23.56	0.088	1.686
30	24.36	35.07	23.61	0.131	1.643
50	19.52	34.95	24.87	0.205	1.569
75	18.10	34.86	25.16	0.279	1.495
100	16.80	34.76	25.40	0.348	1.426
150	15.50	34.63	25.59	0.474	1.300
200	14.51	34.51	25.72	0.594	1.180
250	13.58	34.44	25.86	0.708	1.066
300	12.59	34.38	26.01	0.815	0.959
400	10.52	34.26	26.30	1.010	0.764
500	08.60	34.14	26.53	1.181	0.593
600	06.65	34.05	26.74	1.331	0.443
700	05.38	34.06	26.91	1.463	0.311
800	04.60	34.14	27.06	1.579	0.195
1000	03.70	34.32	27.30	1.774	0.000

* See Station 19

Table 1.--Oceanographic station data (cont'd)

STATION 24

M/V Charles H. Gilbert: Cruise 17, 29°17'N., 173°54'W., October 10, 1954. Messenger time: 1824 GCT. Weather: 02, cloud coverage 2. Wind: 090°, 12 kt. Sea: 1-2 ft. Wire angle: 20°. BT slide: 112

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.86	35.17	23.53	3.76	- *
15	24.85	35.17	23.53	3.82	-
33	23.62	35.08	23.84	4.58	-
60	19.24	34.88	24.88	5.52	-
110	16.59	34.76	25.45	4.74	-
160	15.28	34.61	25.63	4.82	-
228	13.98	34.49	25.81	4.77	-
350	11.64	34.33	26.15	4.69	-
460	09.78	34.18	26.37	4.42	-
570	07.22	34.05	26.66	3.64	-
690	05.60	34.05	26.87	2.53	-
920	04.00	34.43	27.36	0.76	-
1150	03.30	34.40	27.40	0.63	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.86	35.17	23.53	0.000	1.767
10	24.86	35.17	23.53	0.044	1.723
20	24.85	35.17	23.54	0.087	1.680
30	24.08	35.10	23.71	0.130	1.637
50	19.73	34.90	24.78	0.204	1.563
75	18.54	34.85	25.04	0.281	1.486
100	16.88	34.78	25.39	0.351	1.416
150	15.62	34.65	25.58	0.478	1.289
200	14.61	34.54	25.72	0.598	1.169
250	13.58	34.46	25.88	0.711	1.056
300	12.61	34.39	26.02	0.818	0.949
400	10.82	34.27	26.26	1.015	0.752
500	08.85	34.11	26.47	1.191	0.576
600	06.70	34.03	26.72	1.345	0.422
700	05.50	34.06	26.89	1.479	0.288
800	04.75	34.30	27.17	1.591	0.176
1000	03.61	34.43	27.39	1.767	0.000

* See Station 19

Table 1.--Oceanographic station data (cont'd)

STATION 25

M/V Charles H. Gilbert: Cruise 17, 28°48'N., 178°18'W., October 15, 1954. Messenger time: 0850 GCT. Weather: 02, cloud coverage 6. Wind: 090°, 10 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 114

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	25.32	35.16	23.39	5.05	0.21
20	25.34	35.16	23.38	5.06	0.23
40	23.40	35.05	23.88	5.30	0.15
60	21.22	34.87	24.35	5.53	0.14
91	17.81	34.72	25.12	5.44	0.22
142	16.20	34.67	25.47	4.12 Q	0.43
232	14.71	34.52	25.68	4.81	0.62
353	12.46	34.38	26.04	4.95	1.22
463	10.71	34.20	26.22	4.77	1.35
584	08.30	34.07	26.52	4.23	1.83
695	05.99	34.00	26.79	3.25	2.51
926	04.08	34.18	27.15	1.09	2.93
1158	03.33	34.36	27.36	0.55	3.27

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	25.32	35.16	23.39	0.000	1.932
10	25.33	35.16	23.38	0.045	1.887
20	25.34	35.16	23.38	0.090	1.842
30	25.30	35.16	23.39	0.135	1.797
50	22.28	34.95	24.12	0.219	1.713
75	19.40	34.78	24.77	0.307	1.625
100	17.40	34.71	25.22	0.382	1.550
150	16.05	34.66	25.49	0.515	1.417
200	15.22	34.57	25.61	0.640	1.292
250	14.40	34.50	25.74	0.759	1.173
300	13.48	34.44	25.88	0.873	1.059
400	11.70	34.30	26.12	1.083	0.849
500	10.02	34.14	26.30	1.275	0.657
600	07.99	34.05	26.55	1.446	0.486
700	05.90	34.00	26.80	1.593	0.339
800	04.96	34.05	26.95	1.721	0.211
1000	03.72	34.26	27.25	1.932	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 26

M/V Charles H. Gilbert: Cruise 17, 29°51'N., 179°45'E., October 16, 1954. Messenger time: 0120 GCT. Weather: 02, cloud coverage 1. Wind: 150°, 5 kt. Sea: <1 ft. Wire angle: 02°. BT slide: 119

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	25.08	34.99	23.33	4.72	0.13
16	24.70	34.99	23.45	4.83	0.15
31	24.46	34.99	23.52	4.86	0.01
47	20.25	34.79	24.55	5.71	0.09
89	17.02	NS	-	5.42	0.16
146	16.08	34.67	25.50	4.87	0.27
240	14.82	34.54	25.68	5.05	0.64
367	12.90	34.43	25.99	4.89	0.75
483	10.76	34.29	26.28	4.69	0.91
609	07.74	34.05	26.59	4.23	1.84
726	05.67	34.04	26.86	2.85	2.43
967	04.05	34.16	27.14	0.93	2.77
1204	03.34	34.38	27.38	0.78	3.14

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	25.08	34.99	23.33	0.000	1.916
10	24.79	34.99	23.42	0.045	1.871
20	24.65	34.99	23.46	0.090	1.826
30	24.47	34.99	23.51	0.134	1.782
50	19.80	34.77	24.66	0.211	1.705
75	17.58	34.72	25.18	0.288	1.628
100	16.78	34.71	25.36	0.356	1.560
150	16.05	34.66	25.49	0.486	1.430
200	15.41	34.60	25.59	0.611	1.305
250	14.70	34.54	25.70	0.732	1.184
300	13.97	34.49	25.82	0.848	1.068
400	12.35	34.40	26.08	1.064	0.852
500	10.40	34.26	26.33	1.257	0.659
600	07.92	34.06	26.57	1.426	0.490
700	06.01	34.02	26.80	1.572	0.344
800	04.99	34.07	26.96	1.699	0.217
1000	03.90	34.19	27.17	1.916	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 27

M/V Charles H. Gilbert: Cruise 17, 31°30'N., 179°37'E., October 16, 1954. Messenger time: 1420 GCT. Weather: 02, cloud coverage 2. Wind: 180°, 04 kt. Sea: <1 ft. Wire angle: 07°. BT slide: 122

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	24.00	34.83	23.53	4.83	0.01
21	23.58	34.78	23.62	4.82	0.00
42	20.58	34.70	24.40	5.44	0.09
69	18.78	34.70	24.86	5.49	0.06
119	16.60	34.76	25.44	4.78	NS
171	16.05	34.70	25.53	4.72	0.35
240	15.31	34.63	25.64	4.69	0.53
366	13.38	34.45	25.91	4.79	0.89
478	11.36	34.34	26.21	4.37	1.04
606	08.54	34.09	26.50	3.52	1.65
720	05.81	33.98	26.79	1.29	2.37
959	04.08	34.18	27.15	0.72	3.13
1195	03.34	34.31	27.32	NS	3.37

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	24.00	34.83	23.53	0.000	1.952
10	24.00	34.83	23.53	0.044	1.908
20	23.60	34.79	23.62	0.087	1.865
30	23.19	34.74	23.70	0.129	1.823
50	19.97	34.70	24.56	0.206	1.746
75	18.22	34.72	25.02	0.285	1.667
100	16.98	34.76	25.35	0.356	1.596
150	16.28	34.72	25.49	0.486	1.466
200	15.77	34.67	25.56	0.612	1.340
250	15.15	34.61	25.66	0.735	1.217
300	14.45	34.54	25.76	0.853	1.099
400	12.74	34.41	26.01	1.075	0.877
500	10.90	34.30	26.27	1.275	0.677
600	08.66	34.10	26.49	1.451	0.501
700	06.22	33.98	26.74	1.605	0.347
800	04.99	34.06	26.95	1.735	0.217
1000	03.94	34.20	27.18	1.952	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 28

M/V Charles H. Gilbert: Cruise 17, 32°59'N., 179°58'E., October 17, 1954. Messenger time: 0214 GCT. Weather: 02, cloud coverage 3. Wind: 080°, 22 kt. Sea: 1-3 ft. Wire angle: 26°. BT slide: 125

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	23.20	34.47	23.50	4.96	0.16
14	23.20	34.47	23.50	4.97	0.08
27	22.56	34.45	23.67	4.91	0.20
56	19.44	34.67	24.67	5.20	0.18
91	17.50	34.72	25.20	4.82	0.45
141	15.90	34.63	25.50	4.74	0.61
209	13.86	34.51	25.86	4.95	0.77
320	11.85	34.38	26.15	4.99	1.02
420	09.81	34.22	26.39	5.08	1.42
532	07.41	34.07	26.65	4.37	2.02
633	05.64	34.00	26.83	3.42	2.41
846	04.17	34.16	27.12	1.47	2.87
1070	03.34	34.34	27.35	0.74	3.01

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	23.20	34.47	23.50	0.000	1.761
10	23.20	34.47	23.50	0.044	1.717
20	23.14	34.47	23.51	0.088	1.673
30	22.22	34.46	23.77	0.131	1.630
50	20.70	34.58	24.28	0.209	1.552
75	18.38	34.72	24.98	0.293	1.468
100	17.28	34.71	25.24	0.365	1.396
150	15.54	34.62	25.58	0.495	1.266
200	14.04	34.52	25.83	0.613	1.148
250	13.10	34.46	25.97	0.721	1.040
300	12.22	34.41	26.11	0.824	0.937
400	10.23	34.25	26.35	1.012	0.749
500	08.14	34.10	26.57	1.178	0.583
600	06.15	34.01	26.77	1.324	0.437
700	05.08	34.05	26.94	1.453	0.308
800	04.43	34.12	27.06	1.567	0.194
1000	03.48	34.30	27.30	1.761	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 29

M/V Charles H. Gilbert: Cruise 17, 34°30'N., 179°52'E., October 17, 1954. Messenger time: 1426 GCT. Weather: 02, cloud coverage 3. Wind: 120°, 18 kt. Sea: 1-3 ft. Wire angle: 33°. BT slide: 128

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	22.06	34.22	23.63	4.97	0.13
16	22.04	34.29	23.69	5.08	0.22
33	19.88	34.34	24.31	5.91	0.18
50	15.84	34.25	25.22	6.74	0.27
83	13.53	34.45	25.88	5.31	0.82
131	12.49	34.34	26.00	5.19	0.95
193	11.64	34.34	26.16	5.03	1.06
294	10.16	34.16	26.29	5.22	1.17
387	08.70	34.11	26.49	4.91	1.46
489	06.98	33.95	26.62	4.25	2.05
584	05.54	34.00	26.84	3.21	2.61
788	04.19	34.11	27.08	1.48	2.77
1003	03.46	34.31	27.31	0.74	3.30

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	22.06	34.22	23.63	0.000	1.577
10	22.05	34.26	23.66	0.043	1.534
20	22.03	34.31	23.71	0.085	1.492
30	22.00	34.32	23.72	0.127	1.450
50	15.84	34.25	25.23	0.196	1.381
75	13.88	34.43	25.79	0.259	1.318
100	13.10	34.41	25.94	0.313	1.264
150	12.23	34.34	26.05	0.416	1.161
200	11.57	34.33	26.17	0.514	1.063
250	10.82	34.24	26.24	0.607	0.970
300	10.04	34.16	26.31	0.698	0.879
400	08.48	34.08	26.50	0.868	0.709
500	06.78	33.95	26.64	1.022	0.555
600	05.38	34.01	26.87	1.159	0.418
700	04.62	34.06	27.00	1.279	0.298
800	04.13	34.13	27.10	1.388	0.189
1000	03.45	34.31	27.31	1.577	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 30

M/V Charles H. Gilbert: Cruise 17, 36°02'N., 179°58'E., October 18, 1954. Messenger time: 0319 GCT. Weather: 01, cloud coverage 8. Wind: 190°, 22 kt. Sea: 3-5 ft. Wire angle: 36°. BT slide: 131

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	20.54	34.20	24.03	5.15	0.25
19	20.51	34.29	24.10	5.12	0.24
35	20.48	34.22	24.06	5.16	0.18
52	19.51	34.42	24.47	5.46	0.26
96	15.65	34.60	25.54	5.16	0.54
143	14.18	34.43	25.73	4.96	0.79
200	13.29	34.45	25.93	4.88	0.86
305	11.74	34.27	26.09	5.05	1.06
404	09.84	34.23	26.40	4.99	1.31
511	07.78	34.00	26.54	4.48	1.88
611	06.05	34.00	26.78	3.81	2.25
828	04.32	34.07	27.03	1.63	2.96
1053	03.49	34.31	27.31	0.87	3.02

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	20.54	34.20	24.03	0.000	1.725
10	20.53	34.25	24.07	0.039	1.686
20	20.51	34.29	24.11	0.077	1.648
30	20.49	34.24	24.07	0.116	1.609
50	19.85	34.37	24.34	0.190	1.535
75	16.80	34.64	25.30	0.269	1.456
100	15.50	34.59	25.56	0.334	1.391
150	14.05	34.43	25.76	0.452	1.273
200	13.29	34.45	25.93	0.563	1.162
250	12.59	34.36	26.00	0.669	1.056
300	11.81	34.28	26.09	0.771	0.954
400	09.94	34.24	26.39	0.958	0.767
500	08.01	34.02	26.52	1.124	0.601
600	06.21	34.00	26.76	1.273	0.452
700	05.19	34.02	26.90	1.404	0.321
800	04.47	34.06	27.01	1.522	0.203
1000	03.58	34.26	27.26	1.725	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 31

M/V Charles H. Gilbert: Cruise 17, 39°28'N., 179°38'E., October 20, 1954. Messenger time: 2037 GCT. Weather: 02, cloud coverage 7. Wind: 140°, 12 kt. Sea: 1-3 ft. Wire angle: 16°. BT slide: 140

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	15.24	34.07	25.22	5.76	0.32
20	15.24	33.95	25.13	5.87	0.29
41	15.04	34.00	25.22	5.81	0.32
61	13.21	34.33	25.85	5.45	0.77
91	11.76	34.33	26.13	5.46	0.93
147	10.44	34.25	26.31	5.52	1.18
233	08.60	34.11	26.50	5.59	1.27
355	06.68	34.02	26.71	4.62	1.82
467	05.38	33.98	26.84	3.48	2.35
587	04.44	34.07	27.02	2.30	2.87
700	04.08	34.16	27.13	1.52	2.95
929	03.50	34.31	27.31	0.84	3.27
PT	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	15.24	34.07	25.22	0.000	1.337
10	15.24	34.01	25.18	0.028	1.309
20	15.24	33.95	25.13	0.056	1.281
30	15.20	33.96	25.15	0.084	1.253
50	14.87	34.02	25.26	0.140	1.197
75	12.38	34.36	26.04	0.199	1.138
100	11.53	34.31	26.16	0.248	1.089
150	10.38	34.24	26.31	0.339	0.998
200	09.22	34.16	26.45	0.423	0.914
250	08.35	34.10	26.54	0.503	0.834
300	07.53	34.06	26.63	0.578	0.759
400	06.16	33.99	26.76	0.719	0.618
500	05.02	34.00	26.90	0.848	0.489
600	04.39	34.08	27.04	0.963	0.374
700	04.08	34.16	27.13	1.067	0.270
800	03.82	34.24	27.22	1.164	0.173
1000	03.51	34.36	27.35	1.337	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 32

M/V Charles H. Gilbert: Cruise 17, 45°00'N., 179°27'E., October 23, 1954. Messenger time: 2137 GCT. Weather: 02, cloud coverage 7. Wind: 250°, 25 kt. Sea: 3-5 ft. Wire angle: 51°. BT slide: 151

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	09.56	33.42	25.81	6.42	1.16
17	09.56	33.48	25.85	6.48	1.22
35	09.56	33.51	25.88	6.45	1.15
43	09.57	33.42	25.81	6.43	1.17
63	09.55	33.35	25.76	6.46	1.21
87	07.86	33.69	26.29	6.43	1.33
130	07.38	33.78	26.42	6.40	1.35
198	06.53	33.80	26.56	6.40	1.43
259	06.21	33.84	26.63	5.48	1.68
332	05.38	33.86	26.75	4.55	2.06
408	04.79	33.89	26.84	3.26	2.43
590	04.10	34.09	27.08	1.66	2.72
792	03.56	34.22	27.23	0.96	2.90

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	09.56	33.42	-	-	-
10	09.56	33.44	-	-	-
20	09.56	33.49	-	-	-
30	09.56	33.50	-	-	-
50	09.56	33.38	-	-	-
75	09.48	33.35	-	-	-
100	07.62	33.75	-	-	-
150	07.12	33.79	-	-	-
200	06.49	33.81	-	-	-
250	06.25	33.84	-	-	-
300	05.72	33.85	-	-	-
400	04.81	33.88	-	-	-
500	04.40	33.97	-	-	-
600	04.05	34.10	-	-	-
700	03.79	34.16	-	-	-
800	03.54	34.23	-	-	-

Table 1.--Oceanographic station data (cont'd)

STATION 33

M/V Charles H. Gilbert: Cruise 17, 44°57'N., 175°47'E., October 24, 1954. Messenger time: 2326 GCT. Weather: 02, cloud coverage 6. Wind: 340°, 14 kt. Sea: 3-5 ft. Wire angle: 06°. BT slide: 156

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	08.54	33.22	25.82	6.62	1.38
30	08.52	33.28	25.87	6.61	1.37
66	07.76	33.53	26.18	6.46	1.29
98	06.76	33.69	26.44	6.43	1.31
141	05.84	33.71	26.57	6.36	1.43
183	05.54	33.77	26.66	6.10	1.56
246	04.98	33.84	26.78	4.66	1.96
373	04.20	33.93	26.94	2.75	2.55
489	03.92	34.04	27.05	1.86	2.73
613	03.57	34.16	27.18	1.09	2.76
726	03.38	34.25	27.27	0.87	2.89
961	03.02	34.36	27.39	0.80	2.86
PT	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	08.54	33.22	25.82	0.000	1.132
10	08.54	33.23	25.83	0.022	1.110
20	08.53	33.25	25.84	0.044	1.088
30	08.52	33.28	25.87	0.065	1.067
50	08.52	33.40	25.96	0.107	1.025
75	07.39	33.59	26.28	0.155	0.977
100	06.66	33.69	26.46	0.197	0.935
150	05.79	33.72	26.59	0.274	0.858
200	05.39	33.80	26.70	0.345	0.787
250	04.92	33.85	26.80	0.412	0.720
300	04.49	33.89	26.87	0.474	0.658
400	04.12	33.96	26.97	0.591	0.541
500	03.86	34.07	27.08	0.699	0.433
600	03.60	34.14	27.16	0.799	0.333
700	03.40	34.23	27.26	0.890	0.242
800	03.24	34.28	27.31	0.975	0.157
1000	03.00	34.38	27.41	1.132	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 34

M/V Charles H. Gilbert: Cruise 17, 35°45'N., 171°32'E., October 28, 1954. Messenger time: 1910 GCT. Weather: 02, cloud coverage 8. Wind: 060°, 07 kt. Sea: 1-3 ft. Wire angle: 30°. BT slide: 175

OBSERVED

DEPTH * (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	NG	34.38	-	5.15	0.27
21	20.28	34.49	24.32	5.21	0.30
46	20.26	34.49	24.33	5.15	0.20
74	20.10	34.49	24.37	4.92	0.33
106	18.23	34.78	25.06	4.08	0.70
145	16.72	34.79	25.44	4.69	0.63
180	15.94	34.74	25.58	4.64	0.62
251	14.00	34.58	25.88	4.43	0.89
312	12.32	34.49	26.15	4.78	1.03
381	11.76	34.45	26.23	4.48	1.17
**	-	-	-	-	-
**	-	-	-	-	-
**	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	20.30	34.38	-	-	-
10	20.29	34.44	-	-	-
20	20.28	34.49	-	-	-
30	20.27	34.49	-	-	-
50	20.26	34.49	-	-	-
75	20.09	34.49	-	-	-
100	19.82	34.51	-	-	-
150	16.60	34.79	-	-	-
200	15.47	34.70	-	-	-
250	14.10	34.59	-	-	-
300	12.54	34.50	-	-	-
400	11.65	34.45	-	-	-

* All depths somewhat questionable.

** Last three bottles apparently fouled a ridge.

Table 1.--Oceanographic station data (cont'd)

STATION 35

M/V Charles H. Gilbert: Cruise 17, 31°23'N., 172°01'E., October 29, 1954. Messenger time: 0549 GCT. Weather: 02, cloud coverage 6. Wind: 170°, 18 kt. Sea: 5-8 ft. Wire angle: 27°. BT slide: 184

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	23.12	34.69	23.69	4.90	0.29
23	22.96	34.76	23.78	4.88	0.28
51	22.94	34.74	23.77	4.88	0.23
69	21.10	34.74	24.29	5.31	0.25
97	18.38	34.76	25.01	5.21	0.33
149	16.73	34.74	25.40	4.88	0.56
204	16.10	NS	-	4.70	0.63
308	14.70	NS	-	4.55	0.74
414	12.66	34.45	26.05	4.78	1.05
521	10.38	34.34	26.39	4.65	1.40
628	07.31	33.96	26.58	4.23	1.98
846	NG	34.22	-	1.71	3.64
1064	03.52	34.36	27.35	0.87	3.46

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	23.12	34.69	23.68	0.000	1.967
10	23.00	34.74	23.76	0.042	1.925
20	22.97	34.76	23.78	0.083	1.884
30	22.95	34.75	23.78	0.125	1.842
50	22.94	34.74	23.77	0.208	1.759
75	20.15	34.75	24.55	0.302	1.665
100	18.18	34.76	25.06	0.382	1.585
150	16.72	34.74	25.40	0.521	1.446
200	16.17	34.70	25.50	0.651	1.316
250	15.55	34.66	25.61	0.776	1.191
300	14.81	34.60	25.72	0.897	1.070
400	12.95	34.46	26.00	1.121	0.846
500	10.99	34.36	26.30	1.319	0.648
600	07.99	34.02	26.53	1.492	0.475
700	06.20	34.02	26.78	1.641	0.326
800	05.15	34.17	27.02	1.767	0.200
1000	03.74	34.33	27.30	1.967	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 36

M/V Charles H. Gilbert: Cruise 17, 30°59'N., 173°52'E., October 30, 1954. Messenger time: 1852 GCT. Weather: 60, cloud coverage 8. Wind: 200°, 14 kt. Sea: 3-5 ft. Wire angle: 29°. BT slide: 187

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.52	34.94	23.46	4.65	0.04
26	24.54	35.35	23.76	4.71	0.04
52	24.46	35.35	23.79	4.70	0.12
66	20.38	34.97	24.66	5.42	0.11
83	18.47	34.83	25.04	5.27	0.19
137	16.58	34.70	25.40	4.89	0.40
195	15.82	34.65	25.54	4.78	0.56
293	14.02	34.52	25.83	4.63	0.84
391	12.14	34.40	26.12	4.70	1.07
490	10.24	34.23	26.33	4.42	1.35
590	07.81	34.13	26.64	4.01	1.87
798	04.82	34.13	27.03	1.98	2.90
1008	03.80	34.31	27.28	0.86	3.36

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.52	34.94	23.46	0.000	1.900
10	24.53	35.06	23.55	0.044	1.856
20	24.54	35.26	23.70	0.087	1.813
30	24.54	35.35	23.77	0.129	1.771
50	24.47	35.35	23.79	0.212	1.688
75	19.12	34.87	24.91	0.302	1.598
100	17.56	34.76	25.21	0.375	1.525
150	16.39	34.68	25.43	0.510	1.390
200	15.78	34.65	25.55	0.638	1.262
250	14.92	34.59	25.69	0.760	1.140
300	13.94	34.51	25.84	0.876	1.024
400	11.98	34.38	26.13	1.088	0.812
500	10.02	34.22	26.36	1.276	0.624
600	07.61	34.12	26.66	1.439	0.461
700	06.01	34.09	26.85	1.578	0.322
800	04.81	34.13	27.03	1.699	0.201
1000	03.81	34.31	27.28	1.900	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 37

M/V Charles H. Gilbert: Cruise 17, 30°15'N., 175°36'E., October 31, 1954. Messenger time: 0756 GCT. Weather: 02, cloud coverage not recorded. Wind: 190°, 14 kt. Sea: 1-3 ft. Wire angle: 27°. BT slide: 190

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	24.75	35.37	23.72	4.70	0.23
22	24.72	35.35	23.71	4.71	0.22
49	24.63	35.37	23.75	4.67	0.17
63	24.17	35.30	23.84	4.85	0.29
99	17.91	34.83	25.18	5.60	0.28
126	16.54	34.72	25.43	5.23	0.42
198	15.12	34.61	25.66	4.80	0.70
296	13.61	34.49	25.89	4.69	0.93
396	11.63	34.33	26.15	4.61	1.23
495	09.77	34.20	26.39	4.41	1.66
595	07.73	34.11	26.63	4.05	1.88
796	04.82	34.09	27.00	2.09	3.28
976	03.71	34.25	27.24	0.78	3.70

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	24.75	35.37	23.72	0.000	1.885
10	24.74	35.36	23.71	0.042	1.843
20	24.72	35.35	23.71	0.084	1.801
30	24.70	35.36	23.72	0.126	1.759
50	24.62	35.37	23.76	0.210	1.675
75	19.50	34.94	24.87	0.301	1.584
100	17.80	34.82	25.20	0.375	1.510
150	15.86	34.67	25.54	0.507	1.378
200	15.09	34.61	25.67	0.629	1.256
250	14.40	34.55	25.77	0.747	1.138
300	13.55	34.48	25.90	0.859	1.026
400	11.58	34.32	26.16	1.067	0.818
500	09.64	34.20	26.41	1.251	0.634
600	07.62	34.10	26.64	1.412	0.473
700	05.99	34.05	26.83	1.553	0.332
800	04.80	34.09	27.00	1.677	0.208
1000	03.71	34.24	27.23	1.885	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 38

M/V Charles H. Gilbert: Cruise 17, 29°39'N., 177°19'E., October 31, 1954. Messenger time: 2041 GCT. Weather: 02, cloud coverage 1. Wind: 210°, 18 kt. Sea: 3-5 ft. Wire angle: 25°. BT slide: 193

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	25.63	35.59	23.61	4.59	0.12
30	25.63	35.55	23.58	4.61	0.15
60	25.64	35.57	23.59	4.57	0.09
70	22.98	35.32	24.20	5.23	0.14
100	20.32	35.17	24.83	4.84	0.17
160	17.24	34.79	25.31	4.91	0.42
220	16.13	34.69	25.50	4.91	0.59
330	14.47	34.56	25.77	4.57	0.81
440	12.12	34.38	26.11	4.68	1.10
550	10.00	34.23	26.37	4.38	1.36
660	07.35	NG	-	NG	NG
880	04.83	34.11	27.01	1.67	3.46
1163	03.37	34.40	27.39	0.59	3.64

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	25.63	35.59	23.61	0.000	2.040
10	25.63	35.58	23.61	0.043	1.997
20	25.63	35.57	23.60	0.086	1.954
30	25.63	35.55	23.58	0.129	1.911
50	25.64	35.57	23.60	0.216	1.824
75	22.28	35.26	24.36	0.315	1.725
100	20.32	35.17	24.83	0.400	1.640
150	17.60	34.82	25.25	0.548	1.492
200	16.42	34.72	25.45	0.683	1.357
250	15.70	34.66	25.57	0.810	1.230
300	15.00	34.60	25.68	0.932	1.108
400	12.98	34.45	25.99	1.159	0.881
500	10.98	34.30	26.25	1.360	0.680
600	08.62	34.17	26.55	1.534	0.506
700	06.67	34.08	26.76	1.684	0.356
800	05.52	34.07	26.90	1.817	0.223
1000	04.04	34.22	27.18	2.040	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 39

M/V Charles H. Gilbert: Cruise 17, 28°55'N., 178°50'E., November 1, 1954. Messenger time: 0832 GCT. Weather: 02, cloud coverage 1. Wind: 220°, 13 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 196

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.12	35.17	23.76	4.83	0.16
26	24.12	35.16	23.75	4.82	0.20
44	21.28	34.90	24.36	5.54	0.18
62	19.76	34.88	24.75	5.64	0.16
92	17.89	34.85	25.20	5.38	0.33
149	16.29	34.69	25.46	4.95	0.48
225	15.29	34.65	25.66	4.81	0.62
337	13.34	34.51	25.96	4.95	0.83
449	11.52	34.33	26.18	4.81	1.16
561	09.15	34.18	26.47	4.21	1.67
673	06.80	34.25	26.88	3.94	1.77
895	04.83	34.16	27.04	1.35	3.43
1076	03.58	34.36	27.34	0.68	3.54

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.12	35.17	23.76	0.000	1.894
10	24.12	35.17	23.76	0.042	1.852
20	24.12	35.16	23.75	0.083	1.811
30	24.11	35.16	23.75	0.125	1.769
50	20.62	34.88	24.52	0.201	1.693
75	18.85	34.88	24.99	0.281	1.613
100	17.62	34.82	25.25	0.354	1.540
150	16.30	34.69	25.46	0.487	1.407
200	15.65	34.66	25.58	0.613	1.281
250	14.90	34.63	25.73	0.734	1.160
300	14.00	34.56	25.87	0.848	1.046
400	12.32	34.41	26.09	1.061	0.833
500	10.53	34.26	26.30	1.254	0.640
600	08.22	34.19	26.63	1.422	0.472
700	06.45	34.24	26.92	1.561	0.333
800	05.59	34.19	26.99	1.682	0.212
1000	04.01	34.27	27.23	1.894	0.000

Table 1.--Oceanographic station data (cont'd)

STATION 40

M/V Charles H. Gilbert: Cruise 17, 28°11'N., 179°43'W., November 1, 1954. Messenger time: 1928 GCT. Weather: 02, cloud coverage 1. Wind: 260°, 10 kt. Sea: <1 ft. Wire angle: 15°. BT slide: 199

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.19	35.14	23.71	4.74	0.21
20	24.19	35.14	23.71	4.75	0.14
35	24.19	35.16	23.73	4.77	0.17
50	20.51	34.84	24.52	5.67	0.19
76	17.58	34.72	25.18	5.59	0.21
132	16.08	34.65	25.48	4.91	0.54
224	15.09	34.52	25.60	4.89	0.72
337	13.38	34.43	25.89	4.75	0.97
449	11.21	34.29	26.20	4.76	1.29
561	08.77	34.13	26.49	4.39	1.83
671	06.30	34.27	26.96	4.06	1.52 P
892	04.16	34.22	27.17	1.00	3.56
1112	03.40	34.47	27.45	0.61	3.55

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.19	35.14	23.71	0.000	1.854
10	24.19	35.14	23.71	0.042	1.812
20	24.19	35.14	23.71	0.084	1.770
30	24.19	35.15	23.72	0.126	1.728
50	20.51	34.84	24.52	0.202	1.652
75	17.60	34.72	25.17	0.281	1.573
100	16.75	34.68	25.35	0.349	1.505
150	15.87	34.62	25.50	0.479	1.375
200	15.36	34.54	25.56	0.605	1.249
250	14.78	34.50	25.65	0.728	1.126
300	14.02	34.47	25.79	0.846	1.008
400	12.19	34.33	26.05	1.064	0.790
500	10.15	34.22	26.34	1.257	0.597
600	07.85	34.19	26.68	1.420	0.434
700	05.86	34.25	27.00	1.552	0.302
800	04.76	34.23	27.11	1.662	0.192
1000	03.70	34.30	27.28	1.854	0.000

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
1	2345	9/18	22°30'N	160°00'W	79.1	100	24	79.9	76.2	1015.2	01	6	5	9	3
2	0405	9/19	22°29'N	160°02'W	79.4	070	16	78.2	72.9	1011.2	02	9	4	9	4
3	0800	9/19	23°03'N	159°59'W	79.2	050	24	77.3	71.4	1015.2	02	4	8	X	4
4	1215	9/19	23°35'N	159°58'W	77.9	070	16	78.2	73.8	1014.9	02	4	1	9	3
5	1630	9/19	24°13'N	159°54'W	77.8	090	16	75.9	72.8	1015.2	02	4,6	2	9	2
6	1950	9/19	24°12'N	159°59'W	78.0	090	16	77.2	73.5	1012.5	02	4,6	3	9	2
7	0000	9/20	24°44'N	159°56'W	78.4	070	16	78.2	71.7	1013.5	02	4	2	9	2
8	0410	9/20	25°13'N	159°53'W	77.2	055	10	76.3	72.5	1014.2	02	9	1	9	2
9	0625	9/20	25°34'N	159°53'W	76.8	040	17	76.9	73.0	1015.2	02	9	1	9	2
10	0840	9/20	25°34'N	159°55'W	76.9	035	08	75.8	72.2	1015.6	02	X	X	9	2
11	1255	9/20	26°07'N	159°57'W	77.2	070	09	75.2	72.3	1014.6	02	9	1	9	2
12	1645	9/20	26°40'N	160°00'W	77.0	060	10	75.9	69.9	1015.2	02	9	3	8	2
13	1905	9/20	27°01'N	159°59'W	77.8	045	10	77.8	75.0	1015.9	02	8	2	9	2
14	2120	9/20	27°00'N	160°01'W	78.2	045	10	80.5	75.0	1016.6	02	8,6	5	9	2
15	0115	9/21	27°32'N	160°00'W	78.9	050	13	77.7	71.8	1015.2	02	8,6	3	9	2
16	0515	9/21	28°00'N	160°00'W	77.3	040	10	76.2	73.0	1014.2	02	1,8,9	3	X	2
17	0845	9/21	28°29'N	160°00'W	76.8	095	10	75.8	72.8	1016.6	02	X	X	8	2
18	1045	9/21	28°28'N	159°59'W	76.6	calm	calm	75.2	72.0	1017.6	02	X	X	8	1
19	1435	9/21	29°07'N	159°54'W	76.4	030	05	73.7	67.7	1016.9	02	8	1	X	1
20	1850	9/21	29°51'N	159°49'W	75.7	040	07	74.6	72.8	1018.3	02	9,2	2	9	1
21	1955	9/21	30°03'N	159°49'W	76.0	calm	calm	78.9	72.8	1015.9	02	9	1	9	1
22	2210	9/21	30°03'N	159°46'W	77.1	000	01	78.2	71.9	1018.6	02	8	2	9	1
23	0215	9/22	30°35'N	159°47'W	77.2	000	12	78.9	72.6	1016.6	02	8	1	9	1
24	0600	9/22	31°08'N	159°50'W	76.8	000	12	77.4	72.8	1018.3	02	8	2	9	1
25	0855	9/22	31°29'N	159°50'W	75.6	calm	calm	74.5	69.0	1018.3	02	X	X	9	1
26	1115	9/22	31°31'N	159°50'W	75.7	calm	calm	74.0	69.7	1018.3	02	0	0	9	1
27	1510	9/22	32°04'N	159°52'W	75.2	calm	calm	73.6	70.1	1018.0	23	X	X	6	1
28	1915	9/22	32°40'N	159°54'W	77.2	300	06	74.0	71.2	1018.0	01	4,8	1	9	1
29	2045	9/22	32°57'N	159°55'W	76.7	300	06	74.6	72.3	1018.0	02	4,8	1	9	1
30	2245	9/22	32°58'N	159°55'W	75.0	255	09	75.0	73.5	1016.9	03	8,4	6	9	1

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
31	0345	9/23	33°33'N	160°02'W	76.0	270	12	76.5	74.4	1015.6	02	8,7	7	8	2
32	0615	9/23	34°06'N	160°07'W	75.0	315	07	75.2	72.1	1015.6	02	1,4,8	3	9	3
33	0923	9/23	34°29'N	160°08'W	74.1	235	18	74.5	74.0	1013.2	02	X	0	9	3
34	1130	9/23	34°30'N	160°09'W	73.9	280	20	73.9	71.0	1015.2	02	0	0	9	3
35	1530	9/23	35°03'N	160°05'W	74.5	230	18	73.7	70.0	1013.5	02	3,6,8	6	6	3
36	1840	9/23	35°34'N	160°02'W	74.1	250	21	75.3	73.6	1013.2	02	8,3	4	9	4
37	2225	9/23	36°08'N	159°57'W	74.3	260	30	75.3	74.0	1011.9	02	8,2	7	6	5
38	0400	9/24	36°42'N	159°57'W	74.0	235	30	75.3	75.0	1010.5	02	8,5	6	6	5
39	0720	9/24	37°09'N	159°59'W	73.4	270	22	74.0	71.8	1008.5	02	X	X	X	5
40	1120	9/24	37°44'N	160°02'W	72.0	300	19	69.5	68.5	1013.2	02	X	9	X	4
41	1435	9/24	38°17'N	160°04'W	70.9	340	14	68.2	63.5	1014.2	02	8	7	X	3
42	1830	9/24	38°54'N	160°06'W	71.5	000	11	68.3	63.8	1015.2	02	4,5	6	8	3
43	2300	9/24	38°57'N	160°05'W	71.4	065	10	69.1	63.8	1018.0	60	7,5,4	9	8	2
44	0400	9/25	39°25'N	160°08'W	70.5	065	24	63.9	61.8	1016.9	61	7	9	7	3
45	0730	9/25	39°51'N	160°11'W	70.1	045	23	65.5	63.3	1018.3	61	X	X	X	3
46	1115	9/25	40°19'N	160°14'W	70.0	040	34	63.3	62.8	1016.9	65	X	9	4	5
47	0045	9/26	41°07'N	160°42'W	67.5	030	35	61.0	59.8	1015.9	60	0	9	4	6
48	1645	9/26	42°02'N	160°17'W	65.1	330	26	62.0	60.2	1014.6	02	0	9	0	5
49	2310	9/26	42°07'N	159°59'W	65.6	345	15	66.1	61.3	1012.5	02	6,8	4	8	2
50	0510	9/27	42°38'N	160°01'W	64.8	350	10	59.3	58.6	1011.2	50	6,9	7	7	2
51	0845	9/27	43°09'N	160°01'W	65.3	000	04	62.0	58.5	1011.9	02	8	1	8	2
52	1210	9/27	43°39'N	160°01'W	66.0	150	04	64.8	59.6	1011.5	02	X	0	X	2
53	1425	9/27	43°42'N	160°00'W	65.9	105	14	62.5	58.1	1013.5	02	X	0	8	2
54	1900	9/27	43°21'N	160°00'W	61.5	125	20	63.6	60.8	1010.8	02	1,2,3	5	8	2
55	2230	9/27	43°54'N	160°00'W	62.5	135	27	64.8	63.9	1008.5	60	0	9	4	3
56	2300	9/27	43°51'N	160°00'W	62.8	135	27	65.4	64.9	XXXX	XX	X	X	X	X
57	2350	9/27	43°47'N	160°00'W	66.1	135	27	68.2	66.7	1007.8	60	0	8	4	3
58	1915	9/30	44°06'N	160°05'W	61.9	000	XX	64.0	63.5	994.9	03	0,1,2	3	8	6
59	2035	9/30	44°36'N	160°12'W	62.0	110	22	64.0	62.3	995.3	15	0,1,2,9	5	7	4
60	2305	9/30	44°58'N	160°12'W	61.0	115	20	63.8	62.0	995.3	02	7,0	9	7	4

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
61	0230	10/1	44°59'N	160°50'W	61.4	230	05	63.9	62.2	994.2	02	4,8,6	6	7	5
62	0620	10/1	45°00'N	161°30'W	60.4	260	22	60.1	57.2	995.6	26	X	X	4	5
63	0930	10/1	45°01'N	162°09'W	59.9	260	22	59.0	55.2	998.3	01	6,8	4	X	4
64	1300	10/1	45°02'N	162°59'W	60.4	205	18	60.4	57.3	998.3	02	X	X	X	5
65	1235	10/1	45°03'N	163°43'W	59.9	180	18	58.2	57.4	996.6	50	0,8	8	5	4
66	0035	10/2	45°04'N	164°11'W	59.5	280	22	57.2	53.5	993.6	01	2,5,8	2	8	3
67	0400	10/2	45°04'N	164°40'W	58.9	210	26	56.0	53.0	995.3	52	6,9	5	7	4
68	0730	10/2	45°05'N	165°08'W	58.7	250	20	56.6	54.8	997.3	25	8	3	X	4
69	1120	10/2	45°05'N	165°41'W	59.1	230	24	55.7	52.4	996.3	01	8,2	2	8	4
70	1505	10/2	45°05'N	166°17'W	57.0	210	24	52.1	51.5	996.6	52	8,9	5	X	4
71	2335	10/2	45°03'N	166°55'W	57.5	235	30	55.8	51.8	1000.0	02	8	3	8	6
72	0415	10/3	44°50'N	167°27'W	56.3	230	32	55.0	51.3	1002.7	02	0,8	7	7	5
73	1110	10/3	44°38'N	167°56'W	56.5	230	29	54.8	52.7	1003.4	02	X	8	7	5
74	1715	10/3	44°26'N	168°25'W	56.0	210	28	55.0	53.2	1005.1	15	6,9	8	7	4
75	2100	10/3	44°17'N	168°48'W	56.1	212	28	56.2	54.3	1007.5	02	0,9	8	7	4
76	0100	10/4	44°05'N	169°20'W	56.2	245	18	59.0	55.8	1007.1	02	1,6,8	6	7	5
77	0430	10/4	43°48'N	169°43'W	57.0	330	03	56.9	55.0	1005.4	02	8,9	8	7	3
78	1040	10/4	43°15'N	169°47'W	57.0	210	07	58.2	56.1	1009.1	02	0	8	7	1
79	1400	10/4	42°44'N	169°50'W	58.7	160	10	58.3	57.2	1010.8	02	X	8	X	2
80	1750	10/4	42°14'N	169°53'W	59.1	140	13	60.2	59.6	1012.5	50	0	8	6	2
81	2330	10/4	41°48'N	169°51'W	59.8	180	22	61.7	61.9	1014.6	47	X	X	0	2
82	0300	10/5	41°24'N	169°49'W	61.5	185	19	63.9	63.2	1013.9	01	X	0	9	3
83	0645	10/5	41°00'N	169°47'W	61.5	210	22	63.5	62.5	1013.2	02	X	X	9	3
84	1235	10/5	40°37'N	169°47'W	61.7	160	25	64.5	63.6	1011.2	02	X	6	X	4
85	1815	10/5	40°10'N	169°45'W	65.1	210	30	66.0	65.0	1009.5	02	0	8	9	5
86	2300	10/5	39°42'N	169°43'W	64.8	200	22	67.8	66.0	1011.2	02	0,2	6	9	4
87	0300	10/6	39°13'N	169°49'W	65.1	200	13	67.6	66.1	1012.2	02	4	1	9	4
88	0730	10/6	38°41'N	169°57'W	64.9	200	05	66.0	65.0	1013.5	02	0	0	9	2
89	1345	10/6	38°10'N	170°01'W	64.9	190	05	64.8	64.5	1013.5	28	X	X	3	1
90	1715	10/6	37°42'N	170°04'W	64.6	230	03	64.3	64.3	1014.2	44	X	8	0	1

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
91	0445	10/7	37°07'N	170°05'W	68.9	000	00	68.5	68.0	1012.5	28	X	9	3	1
92	1030	10/7	36°34'N	170°05'W	68.0	180	26	71.7	70.0	1012.5	00	X	X	X	4
93	1400	10/7	36°06'N	170°06'W	70.5	160	26	72.0	70.5	1012.9	00	X	X	X	4
94	1910	10/7	35°29'N	170°07'W	70.0	210	27	72.2	70.0	1014.9	02	8	5	X	4
95	2235	10/7	35°00'N	170°07'W	70.3	210	25	73.6	71.0	1015.2	03	8,6	7	8	4
96	0230	10/8	34°34'N	170°09'W	72.1	210	21	74.5	72.1	1015.2	02	8,6	6	9	4
97	0550	10/8	34°07'N	170°12'W	72.2	190	19	74.0	72.0	1016.3	02	2,6	3	9	3
98	0750	10/8	34°04'N	170°12'W	72.4	190	18	74.3	72.0	1017.6	02	2,6	3	9	3
99	1130	10/8	33°35'N	170°13'W	72.0	195	19	73.8	72.0	1018.6	03	7,2	6	9	3
100	1510	10/8	33°06'N	170°15'W	72.9	190	15	74.8	72.4	1019.0	02	X	0	9	2
101	1920	10/8	32°29'N	170°18'W	73.8	220	08	75.8	73.3	1022.4	02	8	1	9	1
102	0100	10/9	32°02'N	170°15'W	74.9	160	11	77.0	73.9	1022.0	02	8	1	9	2
103	0400	10/9	31°36'N	170°12'W	75.0	180	14	76.1	73.9	1024.0	02	X	0	9	2
104	1100	10/9	30°45'N	170°10'W	75.2	150	15	76.4	74.0	1025.4	01	4	1	9	2
105	1415	10/9	30°17'N	170°10'W	76.7	180	16	77.0	74.2	1024.4	02	2,8	2	9	2
106	1615	10/9	30°00'N	170°10'W	76.4	090	08	77.0	74.0	1025.1	02	8	1	9	1
107	2205	10/9	29°55'N	170°51'W	76.8	130	10	81.0	74.6	1027.4	02	8	2	7	2
108	0130	10/10	29°50'N	171°30'W	77.9	220	04	82.4	75.6	1026.1	02	8,4	2	9	2
109	0515	10/10	29°45'N	172°05'W	77.3	110	12	77.7	73.0	1026.4	02	8,2	1	9	2
110	1030	10/10	29°36'N	172°38'W	77.0	050	12	78.0	74.1	1028.1	02	8	1	9	2
111	1350	10/10	29°28'N	173°10'W	76.3	150	05	79.2	74.5	1026.4	02	8	3	9	2
112	1745	10/10	29°17'N	173°54'W	76.6	090	12	78.2	72.5	1029.8	02	8	2	9	2
113	2340	10/10	29°04'N	174°34'W	77.0	070	16	80.1	72.5	1025.7	02	8	2	8	3
114	0815	10/15	28°47'N	178°18'W	77.3	090	10	76.0	73.2	1021.0	02	0	6	8	2
115	1050	10/15	28°47'N	178°18'W	77.4	090	08	76.0	72.8	1021.0	02	0	6	8	1
116	1430	10/15	29°03'N	178°45'W	76.7	080	14	76.0	72.8	1020.3	02	0	6	8	1
117	1800	10/15	29°25'N	179°10'W	76.3	060	05	75.5	68.8	1021.3	02	6	1	8	1
118	2120	10/15	29°34'N	179°42'W	77.4	000	00	78.3	73.1	1020.7	02	X	0	8	1
119	0145	10/16	29°51'N	179°45'E	76.9	150	05	81.8	73.3	1019.6	02	8	1	8	1
120	0545	10/16	30°18'N	179°45'E	76.8	000	00	77.9	74.8	1019.3	02	0	7	8	1

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
121	0850	10/16	30°45'N	179°42'E	76.1	000	00	76.9	71.7	1020.0	02	8	3	8	1
122	1345	10/16	31°30'N	179°37'E	74.9	180	04	75.2	72.0	1020.0	02	8	2	8	1
123	1915	10/16	32°08'N	179°40'E	75.0	000	12	72.5	71.0	1021.0	51	1,9	7	7	2
124	2200	10/16	32°29'N	179°47'E	74.6	065	07	75.3	72.0	1020.7	01	8,2	3	8	2
125	0150	10/17	32°59'N	179°58'E	73.8	080	22	75.3	70.5	1020.3	02	8,2	3	8	2
126	0715	10/17	33°30'N	179°53'E	72.2	105	16	71.8	67.7	1022.4	03	5,8	4	8	2
127	1035	10/17	33°59'N	179°49'E	71.0	080	18	70.0	66.0	1022.0	02	5,8	4	X	3
128	1400	10/17	34°30'N	179°52'E	71.3	115	18	70.0	66.8	1021.0	02	8	3	8	2
129	1915	10/17	35°03'N	179°54'E	69.2	160	18	70.0	67.5	1020.0	02	6	8	8	2
130	2250	10/17	35°28'N	179°57'E	69.8	160	15	70.8	69.5	1017.3	02	0,5	8	8	2
131	0250	10/18	36°02'N	179°58'E	68.8	185	22	71.8	69.3	1012.5	01	2,5	8	8	3
132	0815	10/18	36°35'N	179°59'E	65.6	180	33	70.9	68.5	1009.1	02	X	7	X	4
133	2020	10/19	36°33'N	179°32'W	64.7	045	26	60.0	64.7	1026.4	02	8	6	8	5
134	0030	10/20	37°02'N	179°37'W	63.0	060	20	59.8	53.5	1026.4	02	1,8	4	8	4
135	0430	10/20	37°21'N	179°42'W	63.8	060	21	60.0	52.2	1028.8	02	1,8	4	8	4
136	0850	10/20	37°55'N	179°53'W	63.5	065	17	57.8	56.7	1030.1	02	X	X	8	4
137	1145	10/20	38°17'N	180°00'	58.4	070	10	55.7	50.3	1030.5	02	X	9	5	3
138	1300	10/20	38°30'N	179°56'E	58.7	000	10	55.0	48.0	1030.8	01	6	5	5	3
139	1700	10/20	39°04'N	179°46'E	59.7	075	06	55.3	48.7	1030.5	01	6	7	8	2
140	2000	10/20	39°28'N	179°38'E	58.9	135	12	55.7	54.1	1030.5	02	2,5,8	7	8	2
141	0040	10/21	39°45'N	179°38'E	59.1	175	20	58.1	52.3	1029.5	02	2,5,8	2	8	2
142	0320	10/21	40°10'N	179°38'E	58.0	180	24	57.0	52.3	1022.4	02	1,3,4,8	6	8	4
143	0600	10/21	40°35'N	179°38'E	57.2	170	27	59.2	54.4	1020.3	02	5,6	9	8	4
144	0920	10/21	41°12'N	179°38'E	57.5	170	34	58.1	56.2	1012.5	65	X	X	1	5
145	1830	10/22	42°09'N	179°50'E	55.9	310	38	50.8	47.7	1016.6	02	8	2	8	5
146	0000	10/23	42°31'N	179°49'E	53.0	350	22	50.0	45.0	1015.6	03	6,9	9	8	5
147	0600	10/23	43°19'N	179°49'E	51.1	310	10	47.2	42.2	1014.6	02	4,8	9	8	2
148	1120	10/23	43°59'N	179°47'E	49.1	270	08	47.2	46.5	1011.5	02	X	X	8	2
149	1500	10/23	44°31'N	179°46'E	47.3	310	15	46.9	43.8	1009.1	02	X	X	8	2
150	1900	10/23	45°00'N	179°42'E	48.5	250	22	45.5	41.2	1008.5	02	6,4,8	7	8	3

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
151	2035	10/23	45°00'N	179°27'E	49.0	250	25	46.0	42.2	1010.2	02	6,9	7	7	3
152	0300	10/24	44°57'N	178°58'E	48.6	030	40	45.8	42.5	1011.5	02	8	6	8	4
153	1040	10/24	45°00'N	177°58'E	48.1	350	24	44.0	41.9	1019.3	02	X	X	8	5
154	1435	10/24	44°56'N	177°11'E	48.2	350	28	45.2	40.5	1019.6	02	X	7	7	4
155	1830	10/24	44°56'N	176°32'E	47.2	030	28	45.6	41.9	1023.4	02	5,8	9	8	4
156	2220	10/24	44°57'N	175°47'E	47.0	340	14	45.9	42.0	1024.0	02	6,4,8	6	8	3
157	0435	10/25	44°58'N	175°02'E	48.9	185	19	48.4	45.1	1021.0	02	6,8	7	8	2
158	0805	10/25	44°58'N	174°25'E	50.3	190	18	48.7	44.3	1015.9	02	X	8	7	3
159	1150	10/25	44°58'N	173°43'E	49.7	145	34	48.0	46.0	1008.5	53	X	9	X	4
160	1620	10/25	45°00'N	172°33'E	48.7	285	25	49.1	47.3	993.9	53	X	X	X	4
160A	1940	10/25	44°59'N	171°46'E	49.9	285	27	49.1	47.3	988.8	02	4,8	2	8	4
161	2045	10/26	42°18'N	172°07'E	52.8	330	19	49.0	44.5	1017.3	02	0	8	7	4
162	0300	10/27	41°36'N	172°14'E	52.2	330	22	52.1	48.0	1016.3	02	0	7	7	4
163	0630	10/27	41°12'N	172°17'E	55.1	300	24	53.0	47.1	1016.3	02	6	8	7	4
164	0935	10/27	40°45'N	172°13'E	59.7	300	32	55.7	50.0	1016.9	02	6	8	7	4
165	1235	10/27	40°18'N	172°09'E	58.9	270	30	55.2	49.8	1017.6	02	X	X	7	4
166	1535	10/27	39°51'N	172°05'E	59.2	285	30	55.0	49.8	1018.3	02	X	X	7	4
167	1835	10/27	39°23'N	172°01'E	62.6	300	27	58.4	51.8	1019.0	02	4,8	9	8	4
168	2130	10/27	38°56'N	171°57'E	59.8	290	20	56.2	53.2	1020.7	02	4,8	8	8	4
169	0030	10/28	38°27'N	171°53'E	63.6	300	28	59.0	53.9	1020.3	01	4,8	4	8	4
170	0340	10/28	38°01'N	171°50'E	63.4	305	16	60.0	55.0	1020.3	02	8	4	8	5
171	0630	10/28	37°34'N	171°46'E	64.0	310	22	60.0	54.4	1020.3	02	6	8	8	4
172	0930	10/28	37°08'N	171°42'E	64.6	310	20	60.3	55.4	1021.7	02	X	8	8	3
173	1230	10/28	36°40'N	171°38'E	65.7	000	14	60.2	55.0	1021.7	02	X	X	8	3
174	1530	10/28	36°13'N	171°36'E	70.3	010	15	65.0	59.0	1021.7	02	X	X	8	2
175	1830	10/28	35°45'N	171°32'E	68.5	060	07	63.7	57.3	1021.0	02	0	8	8	2
176	0035	10/29	35°09'N	171°32'E	70.0	130	13	66.0	60.5	1019.3	60	0	8	5	3
177	0400	10/29	34°33'N	171°32'E	68.7	090	21	72.0	59.6	1018.6	02	8	8	7	3
178	0730	10/29	34°01'N	171°31'E	70.3	125	25	67.5	61.9	1018.3	02	1	1	7	4
179	1130	10/29	33°32'N	171°30'E	72.2	166	27	66.0	63.2	1017.6	60	X	X	2	4

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
180	1500	10/29	33°02'N	171°30'E	71.5	150	28	70.0	66.0	1016.3	02	X	8	X	4
181	1830	10/29	32°32'N	171°29'E	72.6	190	23	71.0	68.5	1016.6	50	0	9	3	4
182	2200	10/29	32°03'N	171°28'E	73.4	160	21	74.5	71.2	1017.6	02	0	9	4	4
183	0130	10/30	31°34'N	171°30'E	73.3	150	19	76.0	72.0	1015.6	02	6,8,1	7	8	4
184	0500	10/30	31°23'N	172°01'E	73.3	170	18	73.8	71.2	1016.3	02	1,3,8	6	8	4
185	1100	10/30	31°15'N	172°39'E	72.6	130	04	74.5	71.5	1017.6	02	X	X	8	3
186	1430	10/30	31°07'N	173°15'E	72.4	130	10	75.0	72.0	1015.6	02	X	X	3	2
187	1800	10/30	30°59'N	173°52'E	75.3	200	14	74.8	72.3	1016.6	60	0,5	8	6	3
188	0000	10/31	30°50'N	174°32'E	75.9	170	20	77.0	73.5	1015.9	02	6,5	7	8	3
189	0330	10/31	30°33'N	175°04'E	76.0	190	13	77.8	73.6	1014.9	02	5,6	7	7	3
190	0700	10/31	30°15'N	175°36'E	76.2	190	14	77.0	73.2	1016.3	02	X	X	7	2
191	1305	10/31	30°04'N	176°10'E	77.6	145	16	77.0	73.9	1015.6	02	X	X	7	2
192	1630	10/31	29°53'N	176°43'E	78.2	200	12	76.0	71.6	1015.6	02	8	2	8	3
193	2010	10/31	29°39'N	177°19'E	77.8	205	18	77.8	72.1	1016.6	02	5	1	8	3
194	0130	11/1	29°23'N	177°49'E	74.4	185	14	76.2	70.6	1014.9	03	5	1	8	3
195	0505	11/1	29°08'N	178°22'E	74.8	220	11	75.8	70.5	1014.9	02	5	1	8	2
196	0755	11/1	28°55'N	178°50'E	74.9	220	13	75.6	70.0	1015.6	02	5	1	8	2
197	1300	11/1	28°40'N	179°20'E	75.8	190	16	75.3	70.5	1015.9	02	X	1	8	3
198	1600	11/1	28°26'N	179°47'E	75.3	200	05	75.0	69.5	1015.2	02	8	1	8	2
199	1900	11/1	28°11'N	179°43'W	75.1	260	10	75.1	69.7	1016.3	02	8	1	8	1
200	2330	11/1	28°03'N	179°10'W	77.0	250	11	77.9	71.1	1014.9	02	2,8	1	8	1
201	0200	11/2	27°56'N	178°47'W	77.2	250	08	79.2	74.0	1015.2	02	5,8	1	8	2
202	0430	11/2	27°49'N	178°22'W	77.4	270	10	77.7	71.9	1013.9	02	1,8	2	8	2
203	0700	11/2	27°42'N	177°56'W	77.0	285	05	77.7	72.1	1014.9	02	8	2	8	1
204	0930	11/2	27°35'N	177°30'W	77.7	250	04	76.8	71.7	1014.9	02	8	2	8	1
205	1200	11/2	27°28'N	177°06'W	76.3	250	08	76.0	70.2	1015.6	02	X	1	8	2
206	1430	11/2	27°22'N	176°40'W	77.6	275	07	75.8	70.1	1013.9	02	X	1	8	1
207	1700	11/2	27°14'N	176°12'W	78.0	288	05	76.0	71.8	1014.2	02	8	2	8	1
208	1935	11/2	27°08'N	175°47'W	77.3	260	05	77.5	72.3	1015.6	02	1,8	1	8	1
209	2200	11/2	27°02'N	175°27'W	77.5	250	10	78.0	72.0	1015.9	02	1,8	3	8	3

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
210	0030	11/3	26°53'N	175°02'W	77.6	260	07	79.9	74.7	1013.5	02	1,8	4	8	2
211	0300	11/3	26°46'N	174°36'W	77.8	285	12	78.1	73.0	1012.9	01	1,8	1	8	1
212	0530	11/3	26°37'N	174°10'W	76.7	290	10	79.8	75.4	1013.5	02	1,8	1	8	2
213	0800	11/3	26°29'N	173°45'W	75.1	290	02	77.1	72.0	1016.3	02	1,8	3	8	1
214	1030	11/3	26°21'N	173°21'W	75.3	245	04	75.7	72.8	1014.9	02	1,8	1	8	1
215	1300	11/3	26°14'N	172°57'W	77.2	245	06	75.2	72.0	1014.2	02	1,8	1	8	1
216	1530	11/3	26°04'N	172°34'W	78.9	285	09	77.3	72.0	1013.5	02	X	X	8	2
217	1800	11/3	25°55'N	172°09'W	78.5	340	12	76.0	72.6	1015.6	16	8,9	8	7	2
218	0500	11/4	25°40'N	171°38'W	78.3	065	15	78.0	72.3	1013.9	01	2,8	6	7	3
219	0730	11/4	25°27'N	171°16'W	78.1	095	14	78.0	73.2	1014.9	01	1,5,8	7	7	2
220	1000	11/4	25°13'N	170°54'W	79.0	060	12	74.7	73.2	1016.3	63	0	8	3	2
221	1230	11/4	24°59'N	170°33'W	79.0	030	10	75.0	72.4	1015.6	02	X	8	7	2
222	1500	11/4	24°49'N	170°12'W	78.8	010	05	76.7	73.3	1014.9	02	1,8	8	7	2
223	1730	11/4	24°39'N	169°50'W	78.4	170	06	74.1	73.0	1015.9	58	1	9	5	1
224	2000	11/4	24°29'N	169°28'W	78.2	230	04	75.2	73.5	1016.9	02	1	7	8	2
225	2230	11/4	24°18'N	169°06'W	79.0	200	05	79.0	72.9	1015.9	02	0,3,1,5	2	8	1
226	0100	11/5	24°09'N	168°44'W	79.5	210	08	78.0	72.6	1015.6	02	0,3,1,5	2	8	1
227	0330	11/5	23°59'N	168°21'W	79.9	235	07	80.0	73.0	1016.9	02	1,5,8	1	8	1
228	0600	11/5	23°49'N	167°57'W	78.8	000	00	77.6	71.2	1016.6	02	1,8	1	8	1
229	0830	11/5	23°40'N	167°34'W	78.4	000	00	76.8	70.1	1017.6	02	8	1	8	0
230	1100	11/5	23°33'N	167°10'W	78.8	100	02	76.9	70.5	1016.9	02	8	1	8	0
231	1330	11/5	23°26'N	166°43'W	78.0	135	05	76.9	71.5	1014.9	02	5	1	8	0
232	1600	11/5	23°20'N	166°18'W	78.4	160	03	76.2	71.5	1015.6	02	8	1	8	0
233	1830	11/5	23°14'N	165°54'W	78.1	090	10	78.1	70.7	1016.9	02	6,8	1	8	1
234	2100	11/5	23°08'N	165°29'W	78.6	105	03	80.7	73.6	1017.3	02	6,8	1	8	1
235	2330	11/5	23°01'N	165°02'W	79.9	105	05	81.7	75.4	1015.6	03	0,4,5,8	7	8	0
236	0200	11/6	22°54'N	164°37'W	79.4	095	07	77.1	74.8	1015.2	02	8	1	8	0
237	0430	11/6	22°49'N	164°18'W	78.5	060	06	76.0	70.6	1016.3	02	8	1	8	1
238	0700	11/6	22°44'N	163°55'W	78.4	040	07	77.8	73.6	1017.3	01	X	0	8	0
239	0930	11/6	22°37'N	163°30'W	78.0	094	11	77.8	74.0	1020.0	03	4,5,8	1	8	1

Table 2.--Summary of observations at bathythermograph lowerings, Charles H. Gilbert cruise 17, September 17 to November 7, 1954 (For coded values see H. O. Pub. 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1954	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
240	1200	11/6	22°31'N	163°07'W	77.9	095	07	78.1	73.0	1016.6	02	8	1	8	1
241	1430	11/6	22°25'N	162°44'W	78.1	060	10	77.0	71.0	1016.6	02	8	1	8	2
242	1700	11/6	22°20'N	162°20'W	78.9	040	18	83.2	78.6	1016.9	03	4,5,8	3	8	3
243	1930	11/6	22°14'N	161°55'W	79.2	090	17	78.3	75.5	1017.6	15	4,5,8,9	5	8	2
244	2200	11/6	22°07'N	161°32'W	79.9	065	16	81.9	76.3	1016.9	02	8	3	8	1
245	0030	11/7	22°02'N	161°09'W	80.0	060	14	79.5	72.0	1015.2	02	8	1	8	3
246	0300	11/7	21°56'N	160°48'W	79.8	065	17	80.7	73.9	1014.9	02	8	1	8	3
247	0530	11/7	21°50'N	160°25'W	79.3	055	20	78.6	74.0	1016.3	03	4,5,8	2	8	2
248	0800	11/7	21°43'N	160°03'W	78.4	070	22	77.8	74.1	1017.3	02	8	2	8	2
249	1030	11/7	21°37'N	159°40'W	78.9	070	25	79.8	71.2	1016.9	03	8	3	8	3-4
250	1300	11/7	21°33'N	159°18'W	78.9	060	22	77.3	72.5	1015.9	03	8	3	8	3
251	1530	11/7	21°29'N	158°58'W	79.2	052	21	77.6	75.2	1016.3	02	8	1	8	3
252	1800	11/7	21°23'N	158°35'W	79.9	055	19	80.8	75.1	1017.3	02	8	3	8	3

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/19	22.9°N	160.0°W	0600	99	07	26	02	1	1014.6	3	1.0	78.0	70.4	78.6	X	X	X	X	X	X	07	4	4
9/19	23.7°N	160.0°W	1200	99	07	16	02	1	1014.9	8	1.0	78.2	73.8	77.9	1	1	1	6	0	0	07	3	3
9/20	24.7°N	160.0°W	0000	99	07	16	02	1	1013.5	8	1.0	78.2	71.7	78.4	2	2	2	6	0	0	07	2	1
9/20	25.3°N	160.0°W	0600	99	04	17	02	1	1014.6	3	1.2	75.2	69.8	77.2	1	1	8	7	4	0	04	2	2
9/20	25.8°N	160.0°W	1200	99	04	10	02	1	1014.9	8	0.6	76.0	72.8	76.9	1	1	2	7	0	0	04	2	1
9/20	26.8°N	160.0°W	1800	99	06	10	02	1	1015.2	3	1.2	75.9	69.9	77.0	3	3	2	6	0	0	06	2	2
9/21	27.2°N	160.0°W	0000	97	05	16	16	1	1015.9	8	0.6	74.8	71.2	78.5	7	5	6	6	0	2	05	3	2
9/21	28.3°N	160.0°W	0600	98	04	10	02	1	1014.2	3	1.6	76.2	73.0	77.3	4	3	2	5	0	2	04	2	1
9/21	28.6°N	160.0°W	1200	98	00	00	02	1	1017.6	8	0.8	75.2	72.0	76.6	X	X	X	X	X	X	09	2	0
9/21	29.8°N	160.0°W	1800	99	06	09	02	1	1018.0	3	0.8	74.7	70.8	75.6	2	1	1	5	0	9	03	3	1
9/22	30.4°N	160.0°W	0000	99	02	08	02	1	1018.0	0	0.6	77.2	71.0	77.8	2	2	5	5	0	0	03	3	2
9/22	31.2°N	160.0°W	0600	-	02	08	02	1	1018.3	3	1.4	77.4	72.8	76.8	3	3	8	6	0	0	03	3	2
9/22	31.6°N	160.0°W	1200	99	00	00	02	1	1018.3	8	0.3	74.0	69.7	75.7	0	0	0	9	0	0	03	2	1
9/22	32.5°N	160.0°W	1800	99	31	12	15	6	1018.0	3	0.0	72.4	69.3	75.3	4	2	3	6	6	0	33	2	2
9/23	33.2°N	160.0°W	0000	99	26	09	03	1	1016.9	8	1.2	75.0	73.5	75.0	4	2	8	5	2	0	30	2	2
9/23	34.1°N	160.0°W	0600	99	31	07	02	1	1014.9	8	0.8	75.2	72.1	75.0	3	2	2	5	6	1	32	3	3
9/23	34.6°N	160.0°W	1200	98	28	20	02	0	1015.2	9	1.0	73.9	71.0	73.9	0	0	0	9	0	0	28	3	3
9/23	35.4°N	160.0°W	1800	99	25	20	02	1	1013.5	6	0.3	74.3	71.1	73.9	3	3	2	5	3	1	26	3	3
9/24	37.0°N	160.0°W	0600	97	34	30	02	2	1010.8	5	0.4	75.3	75.0	74.0	5	5	7	5	0	0	34	3	7
9/24	37.9°N	160.0°W	1200	97	30	19	02	2	1012.5	3	2.0	69.5	68.5	72.0	9	9	X	0	X	X	34	3	4
9/24	38.9°N	160.0°W	1800	98	00	11	02	1	1015.2	5	1.7	68.3	63.8	71.5	7	0	0	9	7	0	26	4	3
9/25	39.1°N	160.0°W	0000	98	07	14	60	2	1017.6	1	0.6	69.1	63.8	71.4	8	6	6	4	2	X	24	3	5
9/25	39.7°N	160.2°W	0600	97	04	21	63	2	1016.6	1	0.8	66.0	62.2	70.2	8	7	3	4	2	X	04	2	5
9/25	40.6°N	160.3°W	1200	95	04	34	65	6	1016.9	9	1.0	63.3	62.8	70.0	9	9	X	0	X	X	04	3	6
9/25	40.8°N	160.7°W	1800	97	04	34	60	6	1016.6	4	0.8	61.5	59.4	69.5	8	8	7	4	X	X	04	4	6
9/26	41.0°N	160.7°W	0000	97	03	35	60	6	1015.9	8	1.4	61.0	59.8	67.5	8	8	7	4	X	X	03	4	9
9/26	41.6°N	160.6°W	0600	96	03	35	21	6	1015.9	5	0.0	62.0	59.8	67.0	8	8	7	4	X	X	03	4	9
9/26	42.0°N	160.0°W	1200	95	03	29	65	6	1014.9	6	2.0	59.5	59.0	66.5	9	9	X	0	X	X	03	4	7
9/26	42.0°N	160.2°W	1800	98	33	26	02	2	1014.6	0	0.0	62.0	60.2	65.1	8	8	7	4	X	X	01	4	7
9/27	42.0°N	160.0°W	0000	98	27	18	02	2	1012.5	6	2.1	66.1	61.3	65.6	6	6	4	5	0	0	29	3	5

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954 (cont'd)

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
9/27	42.8°N	160.0°W	0600	97	35	10	50	1	1011.2	3	1.0	59.3	58.6	64.8	7	7	3	4	0	0	02	2	3
9/27	43.6°N	160.0°W	1200	-	15	04	02	0	1011.5	6	0.1	64.8	59.6	66.0	0	0	0	9	0	0	20	2	2
9/28	44.0°N	160.0°W	0000	98	14	27	21	6	1007.8	6	2.0	68.2	66.7	66.1	8	6	7	4	5	2	14	4	4
9/28	44.1°N	160.0°W	0600	98	14	34	02	2	1007.8	4	1.0	68.5	67.5	65.5	8	2	7	4	5	2	15	4	9
9/28	44.3°N	160.0°W	1800	98	14	26	02	2	1008.8	4	1.0	68.0	66.3	64.8	8	9	2	4	5	2	14	4	8
9/29	43.0°N	160.0°W	0000	98	15	38	02	2	1005.8	8	2.0	68.2	67.5	64.8	8	0	0	9	2	X	65	5	1
9/29	42.8°N	160.0°W	0600	97	14	39	02	2	1002.7	8	1.0	67.3	68.5	66.0	8	8	0	6	2	X	67	8	3
9/29	42.8°N	159.8°W	1800	94	14	34	02	2	997.6	5	0.7	65.2	64.7	65.5	8	8	7	3	X	X	65	5	4
9/30	43.2°N	159.8°W	0000	95	15	22	21	6	995.9	9	1.1	64.5	63.4	64.2	8	8	9	3	X	X	15	6	9
9/30	43.5°N	159.9°W	0600	96	14	20	62	1	996.3	3	0.0	65.1	64.9	65.0	6	4	7	4	8	6	14	5	9
9/30	44.1°N	160.0°W	1200	99	11	17	02	2	994.9	5	0.0	64.0	63.5	61.9	3	2	2	3	0	2	11	6	9
10/1	45.0°N	160.2°W	0000	98	12	20	02	2	961.4	3	0.0	63.8	62.0	61.0	8	2	3	4	2	X	62	8	0
10/1	45.0°N	161.5°W	0600	95	26	22	36	8	995.6	3	2.0	60.1	57.2	60.4	8	8	2	4	X	X	11	7	9
10/1	45.0°N	162.6°W	1200	98	23	21	01	1	998.6	1	0.6	59.9	55.9	60.0	2	2	1	5	0	0	23	4	6
10/1	45.0°N	163.6°W	1800	96	18	18	21	2	996.6	8	1.3	58.2	57.4	59.9	8	8	7	4	X	X	XX	X	X
10/2	45.0°N	164.3°W	0000	99	28	22	01	1	993.6	3	0.0	57.2	53.5	59.5	2	1	2	5	6	1	28	3	3
10/2	45.0°N	165.0°W	0600	98	22	26	02	1	995.9	3	2.0	57.5	53.0	58.8	4	3	5	6	2	0	22	3	6
10/2	45.0°N	165.9°W	1200	99	23	24	01	1	996.3	6	0.3	55.7	52.4	59.1	2	2	3	6	0	2	24	3	5
10/2	45.0°N	166.4°W	1800	99	27	36	62	1	998.3	4	1.3	52.2	50.2	57.3	3	2	2	6	0	2	27	5	7
10/3	45.0°N	166.8°W	0000	99	24	30	02	1	1000.0	3	1.7	55.8	51.8	57.5	3	3	4	6	0	0	24	3	8
10/3	44.8°N	167.5°W	0600	98	23	32	02	1	1002.7	3	2.7	55.0	51.3	56.3	7	7	4	5	0	0	24	3	7
10/3	44.6°N	168.0°W	1200	98	23	29	02	2	1003.4	3	0.0	54.8	52.7	56.5	X	X	X	X	X	X	23	3	7
10/3	44.4°N	168.5°W	1800	98	21	28	15	2	1005.1	3	1.6	55.0	53.2	56.0	8	8	4	4	X	X	21	3	6
10/4	44.1°N	169.2°W	0000	98	24	18	02	2	1006.8	0	1.7	59.0	55.8	56.2	6	5	4	4	4	1	24	3	7
10/4	43.6°N	169.7°W	0600	98	33	03	02	2	1005.4	6	0.2	56.9	55.0	57.0	8	4	4	4	6	X	28	3	5
10/4	43.1°N	169.9°W	1200	98	22	07	02	2	1009.1	3	2.0	58.2	56.1	57.0	8	8	6	4	X	X	27	2	1
10/4	42.3°N	170.0°W	1800	97	14	13	50	2	1012.5	3	1.6	60.2	59.6	59.1	8	8	6	4	X	X	24	2	2
10/5	41.6°N	170.0°W	0000	90	18	22	47	4	1014.6	3	1.0	61.7	61.9	59.8	X	X	X	X	X	X	23	3	6
10/5	41.0°N	169.8°W	0600	99	17	20	02	4	1013.9	3	0.0	63.0	62.7	60.0	1	0	0	9	7	1	19	2	3
10/5	40.6°N	169.8°W	1200	90	16	25	02	2	1011.2	6	1.8	64.8	63.6	61.7	6	X	X	X	X	X	16	3	6

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954 (cont'd)

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
10/5	40.0°N	169.9°W	1800	99	21	30	02	2	1009.5	1	1.1	66.0	65.0	65.1	8	8	7	4	X	X	21	3	5
10/6	39.6°N	170.0°W	0000	99	20	22	02	2	1011.2	2	0.6	67.8	66.0	64.8	7	0	0	9	0	8	21	2	7
10/6	38.8°N	170.0°W	0600	99	20	05	02	0	1013.5	3	1.2	66.0	65.0	64.9	1	0	0	9	3	0	19	2	3
10/6	38.4°N	170.0°W	1200	99	19	04	02	0	1013.9	0	0.0	64.8	63.9	64.7	X	X	X	X	X	X	19	2	1
10/6	37.7°N	170.0°W	1800	90	23	03	44	4	1014.2	3	0.6	64.3	64.3	64.6	8	X	X	X	X	X	23	3	3
10/7	37.7°N	170.0°W	0000	96	23	06	46	1	1014.6	8	1.0	65.0	65.0	65.4	7	0	0	9	0	7	23	3	3
10/7	37.1°N	170.1°W	0600	94	00	00	28	4	1012.5	4	0.3	68.5	68.0	69.9	9	9	X	0	X	X	21	2	0
10/7	36.4°N	170.1°W	1200	-	18	26	00	4	1012.5	0	0.0	71.7	70.0	68.0	0	0	0	9	0	0	20	3	4
10/7	35.6°N	170.1°W	1800	99	21	27	02	1	1014.9	4	1.3	72.2	70.0	70.0	5	5	1	4	0	0	21	3	3
10/8	34.8°N	170.1°W	0000	98	21	25	03	1	1015.2	3	0.2	73.6	71.0	70.3	7	7	3	X	0	0	21	3	4
10/8	34.1°N	170.2°W	0600	99	19	19	02	1	1016.3	3	1.3	74.0	72.0	72.2	3	2	5	4	0	8	19	2	2
10/8	33.5°N	170.2°W	1200	98	19	19	03	1	1018.6	3	0.8	73.8	72.0	72.0	5	2	3	5	2	3	19	2	3
10/8	32.7°N	170.3°W	1800	99	22	08	02	1	1022.4	3	2.7	75.8	73.3	73.8	1	1	1	4	0	0	22	2	1
10/9	32.1°N	170.3°W	0000	99	17	11	02	0	1022.7	8	1.0	77.0	73.9	74.9	1	1	8	X	0	0	25	4	3
10/9	31.2°N	170.2°W	0600	99	18	14	02	0	1024.0	4	2.0	76.1	73.9	75.0	0	0	0	9	0	0	22	3	2
10/9	30.6°N	170.2°W	1200	99	15	15	01	0	1025.4	3	0.0	76.4	74.0	75.2	1	0	0	9	3	0	16	3	2
10/9	30.0°N	170.2°W	1800	99	09	08	02	0	1025.7	3	2.0	77.0	74.0	76.4	1	1	1	4	0	0	09	2	0
10/10	29.9°N	171.2°W	0000	99	13	10	02	0	1027.4	0	0.6	81.0	74.6	76.8	1	1	8	4	0	0	18	3	3
10/10	29.7°N	172.1°W	0600	99	11	12	02	0	1026.4	3	1.1	77.3	73.0	77.3	1	1	2	4	0	1	13	3	2
10/10	29.5°N	172.9°W	1200	99	05	12	02	0	1028.1	3	0.0	78.0	74.1	77.0	1	1	1	4	0	0	05	3	2
10/10	29.3°N	173.9°W	1800	99	09	12	02	0	1029.8	3	1.0	78.2	72.5	76.6	1	1	1	4	0	0	10	4	2
10/11	28.8°N	175.5°W	0600	99	11	12	02	0	1024.4	5	0.6	81.3	73.9	78.0	3	3	2	5	0	0	14	3	3
10/11	28.5°N	176.4°W	1200	99	06	16	02	0	1025.1	0	0.8	77.0	72.9	77.0	1	1	1	5	0	0	06	3	4
10/15	28.6°N	178.1°W	0600	99	08	12	02	2	1019.6	4	0.7	76.4	72.9	78.4	8	8	6	5	X	X	04	2	1
10/15	28.9°N	178.6°W	1200	99	09	08	02	2	1020.7	6	0.7	76.0	72.8	77.4	6	6	4	5	0	0	XX	X	X
10/15	29.3°N	179.2°W	1800	99	06	05	02	0	1021.3	4	0.2	75.5	68.8	76.3	1	1	8	X	0	0	06	3	2
10/16	29.8°N	179.9°E	0000	99	15	10	02	0	1019.0	8	1.7	81.3	74.5	76.9	1	1	8	6	0	0	12	2	0
10/16	30.3°N	179.7°E	0600	99	00	00	02	1	1019.3	4	0.7	77.9	74.8	76.8	7	7	5	4	0	0	15	4	0
10/16	31.2°N	179.7°E	1200	99	18	05	02	1	1020.0	3	0.0	76.1	72.2	74.9	1	1	1	4	0	0	15	5	0
10/17	32.7°N	179.9°E	0000	99	08	16	03	1	1021.0	0	1.0	74.2	71.9	74.5	6	4	8	4	0	8	36	3	2

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954 (cont'd)

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
10/17	33.4°N	179.9°E	0600	99	10	16	03	1	1021.7	4	1.3	71.2	68.2	73.0	6	5	2	4	2	0	09	2	2
10/17	34.9°N	179.9°E	1800	99	17	12	03	1	1020.3	6	1.0	70.0	67.5	72.2	7	7	5	4	0	0	31	2	2
10/18	35.6°N	179.9°E	0000	99	16	15	02	2	1017.3	8	2.1	70.1	69.5	69.8	8	6	6	5	2	X	16	2	1
10/18	36.6°N	180.0°	0600	90	21	24	02	2	1010.8	8	1.8	71.1	68.9	68.0	9	9	X	0	X	X	21	2	3
10/18	36.4°N	180.0°	1200	95	20	26	80	2	1006.1	8	3.0	71.8	69.3	65.6	X	X	X	X	X	X	20	3	7
10/18	36.1°N	179.9°W	1800	95	20	35	80	2	1002.4	6	2.0	71.8	70.2	68.0	8	8	7	4	X	X	20	3	9
10/19	35.8°N	179.9°W	0000	96	23	17	16	2	1004.1	3	0.0	70.5	69.0	69.0	7	6	3	4	0	9	23	3	8
10/19	36.0°N	180.0°	0600	97	04	35	01	1	1011.5	3	5.2	62.6	60.9	68.7	6	6	4	4	0	0	05	4	9
10/19	36.2°N	179.8°W	1200	98	06	30	02	1	1018.6	3	1.2	62.7	56.0	66.6	6	X	X	X	X	X	06	3	7
10/19	36.4°N	179.6°W	1800	99	04	30	02	1	1022.4	3	2.0	60.5	59.2	65.2	8	6	2	4	6	1	06	3	7
10/20	37.0°N	179.6°W	0000	99	06	20	02	1	1026.4	0	0.4	59.8	53.5	63.0	4	3	4	4	8	0	06	3	6
10/20	37.5°N	179.8°W	0600	98	06	21	02	1	1028.8	3	1.2	60.0	52.2	63.8	4	4	4	4	8	8	06	3	6
10/20	38.3°N	180.0°	1200	98	07	10	02	1	1030.5	0	0.0	55.7	50.3	58.4	X	X	X	X	X	X	06	3	4
10/20	39.2°N	179.7°E	1800	99	07	06	01	2	1030.5	5	0.8	55.3	48.7	59.7	7	3	4	4	1	9	05	3	2
10/21	39.7°N	179.6°E	0000	99	17	20	02	1	1029.5	8	3.7	58.1	52.3	59.1	3	1	1	4	7	6	19	2	1
10/21	40.6°N	179.6°E	0600	99	20	27	02	1	1021.3	6	2.0	59.2	54.4	57.2	8	6	4	4	6	X	17	4	4
10/21	41.8°N	179.6°E	1200	90	20	42	51	6	1002.7	8	10.0	57.5	57.0	58.7	9	9	X	0	X	X	20	3	7
10/22	41.9°N	179.7°W	0000	99	04	37	02	1	1073.6	3	0.6	53.1	48.2	55.6	8	6	4	4	1	X	36	6	8
10/22	42.0°N	179.8°W	0600	98	29	49	15	1	1011.5	1	1.6	51.8	46.7	56.1	6	4	8	4	9	9	29	3	9
10/22	42.0°N	180.0°	1200	98	33	32	02	1	1014.9	1	1.1	57.0	47.2	55.9	1	1	1	4	0	0	33	4	9
10/22	42.1°N	179.9°E	1800	99	31	38	02	1	1016.6	3	1.3	50.2	47.7	55.9	2	1	1	4	0	0	32	4	8
10/23	42.5°N	179.8°E	0000	99	35	22	03	1	1015.6	7	2.0	50.0	45.0	53.0	8	8	3	4	X	X	01	4	8
10/23	43.3°N	179.8°E	0600	99	31	07	02	1	1014.6	6	0.6	48.0	46.8	52.1	8	7	4	4	3	X	31	4	4
10/23	44.1°N	179.8°E	1200	99	27	08	02	1	1011.5	8	2.1	47.2	46.5	49.1	X	X	X	X	X	X	36	5	4
10/23	44.8°N	179.8°E	1800	99	31	15	03	1	1008.8	6	0.8	46.3	42.9	48.5	2	2	4	4	0	8	36	5	2
10/24	45.0°N	178.7°E	0600	99	30	29	02	1	1013.9	1	3.0	44.8	40.0	49.0	2	2	2	4	0	0	30	4	4
10/24	45.0°N	177.7°E	1200	99	35	25	02	1	1019.3	3	2.0	44.0	41.9	48.1	X	X	X	X	X	X	34	4	6
10/24	44.9°N	176.4°E	1800	99	03	28	02	1	1023.4	3	2.4	45.6	41.9	47.2	8	4	4	4	6	X	04	4	5
10/25	45.0°N	174.8°E	0600	99	21	14	02	2	1020.0	8	1.7	48.4	45.1	48.9	8	8	4	4	X	X	22	4	2
10/25	45.0°N	173.5°E	1200	90	15	34	53	7	1008.5	8	6.8	48.0	46.0	49.7	9	9	X	0	X	X	17	3	5

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954 (cont'd)

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
10/25	45.0°N	172.1°E	1800	99	29	27	02	2	988.5	8	3.7	49.0	45.1	48.9	3	3	2	4	0	0	29	3	5
10/26	44.5°N	171.7°E	0000	92	33	62	25	6	-	3	11.0	-	-	-	8	8	7	4	X	X	84	6	5
10/26	43.9°N	171.8°E	0600	96	34	38	25	6	1006.8	3	6.0	48.3	-	53.4	8	8	7	4	X	X	84	6	5
10/27	41.3°N	172.3°E	0600	98	31	25	15	2	1015.6	3	0.0	51.3	47.1	52.7	8	8	5	-	X	X	31	3	5
10/27	40.3°N	172.2°E	1200	98	27	25	50	5	1018.0	1	1.1	55.2	49.8	59.0	X	X	X	X	X	X	30	3	6
10/27	39.5°N	172.0°E	1800	99	30	27	02	2	1019.0	1	1.2	58.4	51.8	62.6	8	8	4	4	X	X	27	3	5
10/28	38.5°N	171.9°E	0000	99	30	28	01	2	1020.3	0	0.8	59.0	53.9	63.6	4	1	8	4	8	0	30	3	4
10/28	37.6°N	171.8°E	0600	99	34	21	02	2	1020.7	3	0.2	59.7	54.2	65.4	6	5	2	4	2	9	34	4	4
10/28	36.7°N	171.7°E	1200	99	31	17	02	2	1021.3	3	0.2	60.0	56.7	65.3	8	X	X	X	X	X	31	4	4
10/29	35.2°N	171.5°E	0000	96	13	13	60	2	1019.3	9	2.0	66.0	60.5	70.0	8	8	7	3	X	X	33	5	2
10/29	34.2°N	171.5°E	0600	98	10	17	02	2	1017.3	0	0.6	72.8	59.8	68.8	8	8	8	X	X	X	01	4	3
10/29	33.4°N	171.5°E	1200	93	17	27	60	2	1017.6	6	1.0	66.0	63.2	72.2	X	X	X	X	X	X	17	2	3
10/29	32.2°N	171.5°E	1800	94	19	23	50	2	1016.6	1	1.0	71.0	68.5	72.6	8	8	7	3	X	X	17	3	4
10/30	31.4°N	172.0°E	0600	99	17	18	01	2	1016.3	1	0.6	73.8	71.2	73.3	6	4	7	4	0	9	17	3	3
10/30	31.2°N	172.8°E	1200	99	13	04	02	2	1017.6	3	0.6	74.5	71.5	72.6	X	X	X	X	X	X	13	3	3
10/30	31.0°N	173.9°E	1800	97	20	14	60	2	1016.9	1	2.0	74.8	72.3	75.3	8	6	4	4	3	X	20	2	3
10/31	30.8°N	174.5°E	0000	99	17	20	02	2	1015.9	-	-	77.0	73.5	75.9	7	5	4	4	2	0	17	3	3
10/31	30.4°N	175.4°E	0600	99	19	14	01	1	1015.6	1	1.0	80.0	74.5	76.2	3	2	8	4	4	0	19	3	2
10/31	30.1°N	176.0°E	1200	99	16	14	01	1	1015.9	9	0.6	77.1	73.1	77.7	X	X	X	X	X	X	16	2	0
11/1	29.5°N	177.6°E	0000	99	19	15	03	0	1015.2	6	1.0	78.8	71.2	76.7	1	1	0	X	4	9	20	2	2
11/1	29.1°N	178.5°E	0600	99	22	11	02	0	1015.2	3	0.3	75.8	70.5	74.8	1	1	0	X	4	0	18	0	1
11/1	28.7°N	179.2°E	1200	99	22	12	02	0	1016.3	8	0.4	75.3	70.5	75.5	1	X	X	X	X	X	20	3	2
11/1	28.3°N	179.9°W	1800	99	26	10	02	0	1016.3	3	1.1	75.1	69.7	75.1	1	1	1	6	2	1	25	0	1
11/2	28.0°N	179.1°W	0000	99	25	11	02	0	1014.6	8	2.0	77.9	71.1	77.0	1	1	1	7	0	8	25	2	0
11/2	27.7°N	178.1°W	0600	99	27	10	02	0	1013.9	3	0.2	77.7	71.9	77.4	2	2	1	5	0	1	27	2	1
11/2	27.2°N	176.2°W	1700	99	29	05	02	1	1014.2	3	0.2	76.0	71.8	78.0	2	2	1	5	0	0	29	X	1
11/3	26.9°N	175.1°W	0000	99	26	07	02	1	1013.5	8	1.6	79.9	74.7	77.6	4	4	1	5	0	1	26	2	2
11/3	26.6°N	174.1°W	0600	99	29	10	02	1	1013.5	1	0.7	79.8	75.4	76.7	1	1	1	5	0	1	30	2	1
11/3	26.2°N	173.1°W	1200	99	25	04	02	0	1014.9	6	0.6	75.7	72.8	75.3	1	X	X	X	X	X	25	2	1
11/3	25.9°N	172.1°W	1800	98	34	12	16	2	1015.6	4	1.0	76.0	72.6	78.5	8	8	3	X	X	X	34	3	3

Table 3.--Log of ship's weather observations, Charles H. Gilbert cruise 17, September 17 to November 7, 1954. Results in International Ship's Weather Code, January 1954 (cont'd)

Date, 1954	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
11/4	25.6°N	171.5°W	0600	98	06	15	01	2	1013.9	3	0.2	78.0	72.3	78.3	7	2	1	4	9	6	06	3	3
11/4	25.0°N	170.5°W	1200	94	06	12	21	6	1015.9	9	0.7	74.7	73.2	79.0	6	6	7	X	0	0	XX	X	X
11/4	24.7°N	169.9°W	1700	96	17	06	58	5	1015.9	0	0.4	74.1	73.0	78.4	9	9	X	3	X	X	04	X	0
11/5	24.2°N	168.9°W	0000	99	20	05	02	0	1015.9	9	0.8	79.0	72.9	79.0	1	1	5	4	7	9	36	3	4
11/5	23.8°N	167.9°W	0600	99	21	05	02	0	1016.3	1	0.9	80.0	73.0	79.9	1	1	1	4	0	1	33	3	3
11/5	23.5°N	167.0°W	1200	99	10	02	02	0	1016.9	9	1.0	76.9	70.5	78.8	1	1	1	4	0	0	10	X	0
11/5	23.3°N	166.0°W	1800	99	09	10	02	0	1016.9	3	1.4	78.1	70.7	78.1	1	1	5	X	0	0	02	3	3
11/6	23.0°N	165.0°W	0000	99	11	05	03	1	1015.6	6	2.0	81.7	75.4	79.9	7	4	X	7	7	0	00	X	0
11/6	22.8°N	164.1°W	0600	99	06	06	02	0	1016.3	3	1.0	76.0	70.6	78.5	1	1	1	X	0	0	02	4	3
11/6	22.5°N	163.1°W	1200	99	10	09	02	0	1017.3	0	0.3	78.2	73.1	77.9	1	1	1	5	0	0	XX	X	X
11/6	22.3°N	162.2°W	1800	99	04	18	03	0	1016.9	3	1.2	83.2	78.6	78.9	3	1	2	5	7	1	04	3	2
11/7	22.0°N	161.2°W	0000	99	06	14	02	0	1015.2	8	2.0	79.5	72.0	80.0	1	1	1	4	0	0	02	4	3

NOTES ON TABLE 4, TABULATED OCEANOGRAPHIC DATA, HMS 27

Where more than one cast was made on a station, they are divided in the observed data by a horizontal line, and the cast number indicated by Roman numerals.

Weather is recorded in the ww (present weather) code given in the U. S. Weather Bureau circular M, eighth edition, Manual of Marine Meteorological Observations. Cloud cover is in tenths of the sky.

At stations 1 through 38 the wind velocity was measured with an anemometer approximately 15 meters above the sea surface. At the remainder of the stations, they were estimated according to the Beaufort scale and were converted to speed using range of the Beaufort force given in the Manual of Marine Meteorological Observations, circular M, table 3. The direction (given to the nearest 10^{o}) is that from which the wind was blowing, measured through 360^{o} from north.

The following abbreviations, when appended to values or lines in the tabulated data have the following meanings:

Q -- The value seems questionable, but was used in construction of the station curve.

P -- The value is poor, and while carried was not used in drawing the station curve.

NG -- The value is obviously in error, and was dropped from the tabulations.

PT -- Nansen bottle pretripped, and data was unuseable.

Table 4.--Oceanographic station data

STATION 1

M/V Hugh M. Smith: Cruise 27, 22°34'N., 159°38'W., January 6, 1955. Messenger time: 1943 GCT. Weather: 02, cloud coverage 3. Wind: 160°, 8 kt. Sea: 3-5 ft. Wire angle: 03°. BT slide: 1

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	24.33	35.19	23.71	5.27	0.21
53	23.94	35.26	23.88	5.02	0.37
105	22.22	35.32 Q	24.42 Q	4.97	0.35
158	20.13	35.26	24.94	4.88	0.34
215	18.17	34.97	25.23	4.82	0.39
320	12.21	34.25	25.99	4.59	1.11
430	08.55	34.14	26.53	3.89	1.84
533	06.56	34.13	26.81	2.44	2.69
644	05.56	34.23	27.02	1.59	2.82
859	04.56	34.40	27.27	1.21	2.74
1065	03.79	34.51	27.43	1.44	2.98
1065	03.74	34.51	27.44	-	-
1263	03.27	34.54	27.51	1.63	3.18

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	24.33	35.19	23.71	0.000	1.851
10	24.29	35.20	23.73	0.042	1.809
20	24.24	35.21	23.75	0.084	1.767
30	24.16	35.22	23.78	0.125	1.726
50	23.98	35.25	23.86	0.207	1.644
75	23.54	35.29	24.02	0.307	1.544
100	22.58	35.32	24.32	0.402	1.449
150	20.10	35.25	24.94	0.571	1.280
200	19.12	35.11	25.09	0.721	1.130
250	16.70	34.75	25.41	0.861	0.990
300	13.50	34.37	25.82	0.984	0.867
400	09.40	34.16	26.42	1.182	0.669
500	07.07	34.12	26.74	1.337	0.514
600	05.90	34.19	26.95	1.466	0.385
700	05.21	34.28	27.10	1.578	0.273
800	04.80	34.36	27.21	1.678	0.173
1000	03.99	34.48	27.40	1.851	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 2

M/V Hugh M. Smith: Cruise 27, 23°52'N., 162°29'W., January 7, 1955. Messenger time: first cast 2146 GCT, second cast 2253 GCT. Weather: 02, cloud coverage 1. Wind: 170°, 20 kt. Sea: 3-5 ft. Wire angle: first cast 15°, second cast not recorded. BT slide: 6

OBSERVED

	DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
	0	23.63	35.32	24.01	5.21	0.19
I	31	23.61	35.32	24.02	5.04	0.25
	67	23.61	35.34	24.03	5.18	0.26
	104	23.45	35.37	24.10	4.98	0.28
	162	20.40	35.25	24.86	4.84	0.28
II	229	18.30	34.97	25.19	4.75	0.37
	344	12.43	34.29	25.97	4.69	0.95
	464	08.50	34.05	26.47	4.20	1.60
	578	06.36	34.05	26.78	2.86	2.41
	692	05.28	34.29	27.10	1.78	2.84
	915	04.49	34.38	27.26	1.09	3.08
	1154	03.57	34.45	27.41	1.26	3.04
	1154	03.50	34.45	27.42	-	-
	1367	03.14	34.54	27.53	1.57	2.88

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	23.63	35.32	24.01	0.000	1.926
10	23.62	35.32	24.02	0.039	1.887
20	23.62	35.32	24.02	0.078	1.848
30	23.61	35.32	24.02	0.117	1.809
50	23.61	35.31	24.01	0.196	1.730
75	23.60	35.36	24.05	0.294	1.632
100	23.49	35.36	24.08	0.391	1.535
150	20.83	35.28	24.77	0.569	1.357
200	19.59	35.15	25.00	0.725	1.201
250	17.28	34.84	25.34	0.869	1.057
300	14.80	34.52	25.66	0.998	0.928
400	10.28	34.15	26.26	1.211	0.715
500	07.75	34.02	26.56	1.382	0.544
600	06.06	34.10	26.86	1.525	0.401
700	05.25	34.29	27.11	1.641	0.285
800	04.90	34.34	27.19	1.742	0.184
1000	04.12	34.41	27.33	1.926	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 4

M/V Hugh M. Smith: Cruise 27, 23°12'N., 165°03'W., January 8, 1955. Messenger time: 1738 GCT. Weather: 16, cloud coverage 3. Wind: 140°, 15 kt. Sea: 1-3 ft. Wire angle: 05°. BT slide: 10

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	23.42	35.26	24.03	4.56	0.20
22	23.26	35.34	24.14	5.16	0.21
54	23.04	35.35	24.21	5.19	0.18
107	21.63	35.35	24.60	5.08	0.20
127	20.74	35.21	24.74	5.04	0.23
219	17.27	34.85	25.35	4.93	0.39
PT	-	-	-	-	-
446	10.11	34.22	26.34	4.61	1.21
553	06.89	34.11	26.76	2.67	2.24
666	05.60	34.22	27.01	1.42	2.61
903	04.44	34.40	27.28	1.03	2.90
1183	03.64	34.49	27.44	1.44	2.95
1183	03.58	34.49	27.45	-	-
1424	03.14	34.54	27.53	1.65	2.73

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	23.42	35.26	24.03	0.000	1.873
10	23.33	35.33	24.11	0.039	1.834
20	23.27	35.34	24.13	0.077	1.796
30	23.19	35.35	24.16	0.115	1.758
50	23.07	35.36	24.21	0.190	1.683
75	22.79	35.38	24.30	0.282	1.591
100	22.20	35.38	24.47	0.372	1.501
150	19.82	35.13	24.93	0.537	1.336
200	17.88	34.92	25.26	0.684	1.189
250	16.28	34.72	25.49	0.818	1.055
300	14.72	34.54	25.70	0.942	0.931
400	11.58	34.31	26.15	1.160	0.713
500	08.14	34.11	26.58	1.336	0.537
600	06.28	34.15	26.87	1.477	0.396
700	05.33	34.28	27.09	1.594	0.279
800	04.80	34.36	27.21	1.695	0.178
1000	04.11	34.44	27.35	1.873	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 6

M/V Hugh M. Smith: Cruise 27, 22°29'N., 167°30'W., January 9, 1955. Messenger time: 1237 GCT. Weather: 64, cloud coverage 2. Wind: 120°, 18 kt. Sea: 1-3 ft. Wire angle: 07°. BT slide: 14

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.27	35.28	23.79	5.08	0.15
23	23.74	35.43	24.06	5.02	0.14
65	23.22	35.48	24.26	4.92	0.10
109	22.03	35.35	24.49	4.67	0.15
161	19.82	35.19	24.97	4.70	0.20
219	17.27	34.83	25.34	4.68	0.34
326	12.67	34.16	25.83	4.34	0.86
436	09.51	34.16	26.40	3.46	1.42
534	07.42	34.14	26.70	1.92	2.22
650	05.98	34.22	26.96	1.28	2.60
860	04.78	34.42	27.26	0.87	2.90
PT	-	-	-	-	-
PT	-	-	-	-	-

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.27	35.28	-	-	-
10	24.25	35.30	-	-	-
20	23.80	35.41	-	-	-
30	23.69	35.42	-	-	-
50	23.55	35.45	-	-	-
75	23.18	35.48	-	-	-
100	22.33	35.38	-	-	-
150	20.35	35.24	-	-	-
200	18.45	35.00	-	-	-
250	15.67	34.56	-	-	-
300	13.59	34.28	-	-	-
400	10.45	34.16	-	-	-
500	08.02	34.14	-	-	-
600	06.48	34.17	-	-	-
700	05.60	34.27	-	-	-
800	05.04	34.36	-	-	-

Table 4.--Oceanographic station data (cont'd)

STATION 7

M/V Hugh M. Smith: Cruise 27, 21°35'N., 170°18'W., January 10, 1955. Messenger time: 0640 GCT. Weather: 02, cloud coverage 2. Wind: 190°, 7 kt. Sea: 3-5 ft. Wire angle: 02°. BT slide: 18

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	25.00	35.19	23.50	4.89	0.23
19	24.54	35.26	23.70	4.84	0.22
52	24.52	35.28	23.72	4.82	0.17
100	22.68	35.32	24.29	4.86	0.20
156	20.95 Q	35.19	24.67 Q	4.38	0.31
156	20.79 Q	35.19	24.71 Q	-	-
210	17.96	35.01	25.31	4.30	0.42
311	12.33	34.14	25.88	4.44	0.92
417	08.72	34.14	26.51	3.55	1.69
520	06.84	34.20	26.83	1.77	2.57
626	05.58	34.27	27.05	1.13	2.75
835	04.59	34.47	27.32	1.07	2.89
1035	04.26	34.52	27.40	1.34	2.90
1241	03.76	34.56	27.48	1.54	2.69

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	25.00	35.19	23.51	0.000	1.840
10	24.77	35.23	23.61	0.043	1.797
20	24.53	35.26	23.70	0.086	1.754
30	24.53	35.28	23.72	0.128	1.712
50	24.52	35.28	23.72	0.212	1.628
75	24.50	35.28	23.72	0.317	1.523
100	22.68	35.32	24.29	0.416	1.424
150	21.03	35.20	24.66	0.592	1.248
200	18.55	35.06	25.20	0.747	1.093
250	15.85	34.61	25.50	0.882	0.958
300	12.98	34.18	25.78	1.004	0.836
400	09.12	34.14	26.45	1.202	0.638
500	07.18	34.18	26.77	1.354	0.486
600	05.83	34.24	27.00	1.479	0.361
700	05.02	34.38	27.20	1.584	0.256
800	04.63	34.46	27.31	1.674	0.166
1000	04.32	34.51	27.38	1.840	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 8

M/V Hugh M. Smith: Cruise 27, 20°41'N., 172°18'W., January 11, 1955. Messenger time: 0034 GCT. Weather: 62, cloud coverage 5. Wind: 020°, 20 kt. Sea: 5-8 ft. Wire angle: 22°. BT slide: 22

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.60	35.32	23.72	4.86	0.18
20	24.58	35.35	23.75	4.79	0.19
66	24.48	35.37	23.80	4.80	0.16
110	24.34	35.37	23.84	4.81	0.16
163	20.09	35.19	24.90	4.72	0.28
219	17.28	34.85	25.35	4.64	0.45
329	11.32	34.23	26.13	4.15	1.14
443	08.26	34.14	26.58	2.97	2.03
550	06.46	34.18	26.87	1.69	2.57
662	05.35	34.33	27.13	1.10	2.74
875	04.66	34.45	27.30	1.24	2.83
1091	03.96	34.54	27.45	1.63	2.68
1091	03.90	34.54	27.45	-	-
1296	03.41	34.51	27.47	1.85	2.52

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.60	35.32	23.72	0.000	1.827
10	24.60	35.34	23.74	0.042	1.785
20	24.58	35.35	23.75	0.083	1.744
30	24.55	35.38	23.79	0.125	1.702
50	24.51	35.38	23.80	0.208	1.619
75	24.47	35.38	23.81	0.311	1.516
100	24.41	35.38	23.83	0.414	1.413
150	20.45	35.22	24.83	0.597	1.230
200	18.08	34.96	25.24	0.746	1.081
250	15.30	34.62	25.63	0.878	0.949
300	12.38	34.32	26.01	0.991	0.836
400	09.28	34.15	26.43	1.179	0.648
500	07.22	34.15	26.74	1.333	0.494
600	05.90	34.25	26.99	1.460	0.367
700	05.12	34.38	27.19	1.566	0.261
800	04.82	34.43	27.27	1.659	0.168
1000	04.25	34.52	27.40	1.827	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 9

M/V Hugh M. Smith: Cruise 27, 20°50'N., 177°23'W., January 12, 1955. Messenger time: 1850 GCT. Weather: 02, cloud coverage 3. Wind: 070°, 22 kt. Sea: 5-8 ft. Wire angle: 25°. BT slide: 32

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.89	35.25	23.58	4.80	0.17
19	24.92	35.25	23.55	4.80	0.17
62	24.92	35.26	23.58	4.78	0.16
104	23.41	35.30	24.06	4.90	0.15
157	20.87	35.26	24.76	4.60	0.25
209	18.36	34.96	25.17	4.51	0.38
314	13.27	34.40	25.89	4.46	0.83
424	10.18	NG	-	NG	NG
530	07.12	34.14	26.75	2.34	2.35
635	05.80	34.23	26.99	1.44	2.50
844	04.96	34.43	27.25	1.24	2.76
1054	04.19	34.51	27.40	1.67	2.75
1054	04.12	34.51	27.41	-	-
1259	03.54	34.58	27.52	1.58	2.61

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.89	35.25	23.58	0.000	1.951
10	24.91	35.25	23.58	0.043	1.908
20	24.92	35.25	23.58	0.087	1.864
30	24.92	35.25	23.58	0.130	1.821
50	24.92	35.26	23.58	0.217	1.734
75	24.93	35.28	23.59	0.325	1.626
100	24.61	35.25	23.67	0.433	1.518
150	21.02	35.27	24.71	0.622	1.329
200	18.98	35.05	25.08	0.778	1.173
250	16.38	34.74	25.48	0.917	1.034
300	14.05	34.47	25.79	1.039	0.912
400	10.90	34.21	26.20	1.250	0.701
500	07.94	34.14	26.63	1.421	0.530
600	06.08	34.20	26.93	1.557	0.394
700	05.49	34.30	27.08	1.671	0.280
800	05.12	34.39	27.20	1.773	0.178
1000	04.35	34.49	27.37	1.951	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 10

M/V Hugh M. Smith: Cruise 27, 21°52'N., 179°58'E., January 13, 1955. Messenger time: 1355 GCT. Weather: 02, cloud coverage 3. Wind: 090°, 20 kt. Sea: not recorded. Wire angle: 25°. BT slide: 37

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.91	35.32	23.62	4.92	0.16
20	24.93	35.32	23.62	4.80	0.15
61	24.93	35.34	23.64	4.76	0.14
104	24.66	35.41	23.77	4.81	0.15
156	21.42	35.26	24.60	4.68	0.22
210	18.10	34.92	25.20	4.37	0.46
315	12.55	34.34	25.99	4.66	0.89
424	08.77	34.14	26.50	3.67	1.57
529	07.24	34.11	26.71	2.78	2.15
633	05.92	34.14	26.91	1.88	2.46
841	04.52	34.36	27.24	1.16	2.76
1051	03.92	34.51	27.43	1.43	2.85
1051	03.86	34.51	27.43	-	-
1254	03.38	34.56	27.52	1.67	2.64

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	24.91	35.32	23.63	0.000	1.922
10	24.92	35.32	23.63	0.043	1.879
20	24.93	35.32	23.63	0.086	1.836
30	24.93	35.32	23.63	0.128	1.794
50	24.93	35.33	23.63	0.214	1.708
75	24.92	35.34	23.64	0.321	1.601
100	24.72	35.39	23.74	0.428	1.494
150	21.81	35.29	24.51	0.620	1.302
200	18.85	35.01	25.09	0.781	1.141
250	15.40	34.63	25.62	0.916	1.006
300	13.28	34.41	25.90	1.032	0.890
400	09.25	34.16	26.44	1.226	0.696
500	07.69	34.12	26.65	1.383	0.539
600	06.30	34.12	26.84	1.522	0.400
700	05.32	34.22	27.04	1.643	0.279
800	04.69	34.32	27.19	1.746	0.176
1000	04.02	34.48	27.39	1.922	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 11

M/V Hugh M. Smith: Cruise 27, 22°31'N., 177°29'E., January 14, 1955. Messenger time: 0707 GCT. Weather: 02, cloud coverage 9. Wind: 090°, 17 kt. Sea: 3-5 ft. Wire angle: 13°. BT slide: 41

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.70	35.37	23.73	4.83	0.17
41	24.70	35.37	23.73	4.85	0.16
82	24.43	35.46	23.88	4.81	0.12
122	22.86	35.08 P	24.06 P	4.91	0.16
164	20.86	35.25	24.73	4.64	0.25
209	18.93	35.34 P	25.32 P	4.74	0.29
312	14.60	34.54	25.72	4.87	0.61
420	11.04	34.27	26.22	4.44	1.14
521	08.43	34.13	26.54	3.58	1.83
628	06.48	34.11	26.81	2.46	2.31
836	04.52	34.31	27.20	1.05	2.88
1041	04.10	34.47	27.38	1.34	2.93
1041	04.02	34.47	27.39	-	-
1244	03.48	34.56	27.51	1.62	2.65

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	24.70	35.37	23.73	0.000	2.006
10	24.70	35.37	23.73	0.042	1.964
20	24.70	35.37	23.73	0.084	1.922
30	24.70	35.37	23.73	0.125	1.881
50	24.68	35.37	23.74	0.209	1.797
75	24.49	35.45	23.86	0.313	1.693
100	24.39	35.46	23.89	0.414	1.592
150	21.35	35.30	24.65	0.600	1.406
200	19.35	35.05	24.99	0.760	1.246
250	17.12	34.82	25.37	0.904	1.102
300	15.05	34.58	25.66	1.032	0.974
400	11.68	34.32	26.14	1.252	0.754
500	08.90	34.15	26.49	1.433	0.573
600	06.98	34.10	26.73	1.586	0.420
700	05.50	34.17	26.98	1.715	0.291
800	04.67	34.28	27.16	1.823	0.183
1000	04.18	34.44	27.34	2.006	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 12

M/V Hugh M. Smith: Cruise 27, 23°18'N., 174°46'E., January 15, 1955. Messenger time: 0051 GCT. Weather: 02, cloud coverage 1. Wind: 080°, 13 kt. Sea: 3-5 ft. Wire angle: 00°. BT slide: 45

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	23.91	35.50	24.07	4.92	0.10
22	23.75	35.48	24.10	4.89	0.07
65	23.68	35.50	24.13	4.85	0.07
107	21.74	35.25	24.50	5.06	0.11
161	18.34	34.90	25.13	5.01	0.23
218	16.40	34.69	25.44	4.88	0.40
325	13.98	34.49	25.81	4.90	0.65
436	10.70	34.23	26.25	4.57	1.10
542	08.08	34.11	26.59	3.40	1.87
650	06.41	34.09	26.79	2.76	2.16
870	04.57	34.33	27.21	1.09	2.80
1081	03.86	34.49	27.42	1.26	2.89
1081	03.79	34.49	27.42	-	-
1295	03.40	34.54	27.50	1.63	2.60

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	23.91	35.50	24.07	0.000	1.925
10	23.79	35.49	24.09	0.038	1.887
20	23.76	35.48	24.10	0.077	1.848
30	23.76	35.49	24.10	0.115	1.810
50	23.75	35.50	24.11	0.192	1.733
75	23.66	35.50	24.14	0.287	1.638
100	22.25	35.30	24.40	0.380	1.545
150	18.95	34.96	25.02	0.544	1.381
200	16.82	34.74	25.38	0.686	1.239
250	15.49	34.61	25.58	0.815	1.110
300	14.42	34.53	25.75	0.935	0.990
400	11.80	34.32	26.12	1.152	0.773
500	09.02	34.16	26.48	1.335	0.590
600	07.10	34.09	26.71	1.489	0.436
700	05.83	34.14	26.92	1.623	0.302
800	05.00	34.24	27.09	1.737	0.188
1000	04.02	34.44	27.36	1.925	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 14

M/V Hugh M. Smith: Cruise 27, 23°57'N., 172°36'E., January 15, 1955. Messenger time: 1720 GCT. Weather: 60, cloud coverage 8. Wind: 060°, 30 kt. Sea: 8-12 ft. Wire angle: 28°. BT slide: 49

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	24.84	35.41	23.72	5.14	0.20
41	24.82	35.41	23.72	4.80	0.14
82	24.77	35.44	23.76	4.79	0.11
117	22.68	35.39	24.34	5.01	0.12
157	21.15	35.35	24.73	4.71	0.20
198	19.95	35.21	24.95	4.65	0.32
298	16.34	34.69	25.45	4.89	0.41
403	13.86	NG	NG	NG	NG
504	10.88	34.25	26.23	4.43	1.16
602	08.40	34.13	26.55	3.62	1.64
809	05.12	34.18	27.03	1.48	2.52
1003	04.28	34.38	27.29	1.23	2.70
1003	04.23	34.38	27.29	-	-
1205	03.66	34.52	27.46	1.47	2.72

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	24.84	35.41	23.72	0.000	2.156
10	24.83	35.41	23.72	0.042	2.114
20	24.83	35.41	23.72	0.084	2.072
30	24.82	35.41	23.73	0.126	2.030
50	24.81	35.42	23.74	0.210	1.946
75	24.78	35.44	23.76	0.314	1.842
100	24.41	35.44	23.87	0.417	1.739
150	21.40	35.36	24.68	0.603	1.553
200	19.90	35.20	24.96	0.763	1.393
250	17.50	34.83	25.28	0.909	1.247
300	16.29	34.68	25.45	1.044	1.112
400	13.98	34.45	25.79	1.292	0.864
500	11.01	34.26	26.22	1.504	0.652
600	08.44	34.13	26.55	1.681	0.475
700	06.46	34.09	26.80	1.829	0.327
800	05.20	34.18	27.02	1.953	0.203
1000	04.28	34.38	27.29	2.156	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 16

M/V Hugh M. Smith: Cruise 27, 25°00'N., 169°30'E., January 16, 1955. Messenger time: 1519 GCT. Weather: 02, cloud coverage 3. Wind: 080°, 21 kt. Sea: 3-5 ft. Wire angle: 22°. BT slide: 54

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	22.51	35.23	24.27	5.06	0.11
45	22.52	35.21	24.25	5.06	0.13
89	21.84	35.12	24.38	5.13	0.14
128	18.04	34.88	25.19	5.02	0.29
171	16.85	34.76	25.38	5.01	0.39
216	16.29	34.70	25.47	5.12	0.47
324	14.94	34.60	25.70	4.76	0.63
437	11.81	34.34	26.13	4.63	1.10
546	09.00	34.18	26.50	4.29	1.61
653	06.78	34.11	26.77	3.15	2.15
867	04.48	34.25	27.16	1.25	2.89
1078	03.47	34.40	27.38	0.87	3.12
1078	03.42	34.40	27.39	-	-
1284	03.03	34.52	27.52	1.22	3.03

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	22.51	35.23	24.27	0.000	1.944
10	22.51	35.23	24.27	0.037	1.907
20	22.51	35.22	24.26	0.073	1.871
30	22.51	35.22	24.26	0.110	1.834
50	22.50	35.20	24.25	0.184	1.760
75	22.49	35.20	24.25	0.277	1.667
100	19.89	35.03	24.83	0.363	1.581
150	17.39	34.82	25.30	0.510	1.434
200	16.46	34.72	25.45	0.643	1.301
250	15.95	34.68	25.53	0.772	1.172
300	15.34	34.62	25.62	0.897	1.047
400	12.85	34.42	25.99	1.126	0.818
500	10.13	34.22	26.34	1.322	0.622
600	07.79	34.13	26.64	1.487	0.457
700	06.08	34.12	26.87	1.626	0.318
800	05.00	34.19	27.06	1.746	0.198
1000	03.80	34.34	27.30	1.944	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 17

M/V Hugh M. Smith: Cruise 27, 26°30'N., 169°35'E., January 17, 1955. Messenger time: 0345 GCT. Weather: 02, cloud coverage 1. Wind: 100°, 16 kt. Sea: 3-5 ft. Wire angle: 05°. BT slide: 57

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	21.64	35.37	24.62	5.10	0.12
43	21.48	35.37	24.67	5.09	0.11
85	21.51	35.37	24.65	5.12	0.13
128	18.24	34.90	25.15	5.02	0.28
171	16.78	34.76	25.40	5.06	0.34
218	15.94	34.69	25.54	5.04	0.48
325	14.26	34.52	25.78	4.84	0.70
438	12.04	34.38	26.12	4.82	1.03
544	09.47	34.20	26.44	4.34	1.52
654	06.96	34.07	26.71	3.86	2.01
871	04.66	34.18	27.08	1.52	2.86
1079	03.62	34.38	27.35	0.85	3.19
1079	03.57	34.38	27.36	-	-
1287	03.04	34.42	27.44	0.94	3.11

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	21.64	35.37	24.62	0.000	1.921
10	21.62	35.37	24.62	0.033	1.888
20	21.59	35.37	24.63	0.067	1.854
30	21.51	35.37	24.65	0.100	1.821
50	21.47	35.37	24.67	0.166	1.755
75	21.48	35.37	24.66	0.249	1.672
100	20.65	35.26	24.81	0.330	1.591
150	17.30	34.81	25.32	0.477	1.444
200	16.21	34.71	25.50	0.609	1.312
250	15.45	34.64	25.61	0.735	1.186
300	14.71	34.56	25.71	0.855	1.066
400	12.82	34.44	26.01	1.079	0.842
500	10.63	34.29	26.31	1.276	0.645
600	08.05	34.12	26.60	1.445	0.476
700	06.23	34.09	26.83	1.589	0.332
800	05.20	34.14	26.99	1.713	0.208
1000	03.96	34.32	27.27	1.921	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 19

M/V Hugh M. Smith: Cruise 27, 27°56'N., 169°50'E., January 17, 1955. Messenger time: 1558 GCT. Weather: 02, clear. Wind: 150°, 8 kt. Sea: 3-5 ft. Wire angle: 14°. BT slide: 60

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	21.33	35.37	24.70	5.09	0.14
41	21.35	35.34	24.67	5.14	0.13
83	20.78	35.35	24.83	5.30	0.13
124	19.20	34.97	24.96	5.09	0.23
NG	-	-	-	-	-
213	16.05	34.69	25.52	5.07	0.49
317	14.56	34.54	25.73	4.88	0.65
426	12.18	34.34	26.07	4.76	0.94
530	09.60	34.22	26.43	4.46	1.45
638	07.33	34.09	26.68	3.47	1.97
638	07.27	34.09	26.69	-	-
850	04.90	34.16	27.04	1.78	2.68
1060	03.86	34.29	27.26	0.91	3.04
1060	03.81	34.29	27.26	-	-
1269	03.14	34.42	27.43	0.90	3.02

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	21.33	35.37	24.70	0.000	1.931
10	21.33	35.36	24.70	0.033	1.898
20	21.33	35.35	24.69	0.065	1.866
30	21.34	35.34	24.68	0.098	1.833
50	21.32	35.34	24.68	0.164	1.767
75	20.90	35.35	24.81	0.244	1.687
100	20.75	35.35	24.85	0.324	1.607
150	17.80	34.85	25.23	0.472	1.459
200	16.38	34.72	25.46	0.607	1.324
250	15.47	34.63	25.60	0.733	1.198
300	14.80	34.57	25.70	0.855	1.076
400	12.85	34.39	25.97	1.081	0.850
500	10.35	34.26	26.33	1.279	0.652
600	07.98	34.11	26.60	1.447	0.484
700	06.40	34.09	26.80	1.591	0.340
800	05.28	34.14	26.98	1.717	0.214
1000	04.08	34.25	27.20	1.931	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 20

M/V Hugh M. Smith: Cruise 27, 29°33'N., 169°57'E., January 18, 1955. Messenger time: 0610 GCT. Weather: 02, cloud coverage 5. Wind: 250°, 16 kt. Sea: 3-5 ft. Wire angle: 30°. BT slide: 63

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	21.70	35.17	24.45	5.08	0.11
34	21.58	35.16	24.47	5.05	0.13
69	19.77	NG	NG	NG	NG
103	19.56	34.88	24.80	4.97	0.20
137	19.17 Q	34.85	24.88	4.76	0.31
137	19.05 Q	34.85	24.91	-	-
176	17.01	34.69	25.29	4.79	0.44
262	15.79	34.60	25.51	4.91	0.48
354	14.34	34.51	25.75	4.79	0.69
442	12.91	34.36	25.93	4.83	0.90
533	10.66	34.22	26.25	4.63	1.23
717	06.16	34.02	26.78	3.44	2.22
903	04.33	34.14	27.09	1.49	2.97
903	04.27	34.14	27.09	-	-
1102	03.50	34.29	27.29	0.80	3.05

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	21.70	35.17	24.45	0.000	2.027
10	21.68	35.17	24.46	0.035	1.992
20	21.62	35.16	24.46	0.070	1.957
30	21.59	35.16	24.47	0.105	1.922
50	20.58	35.02	24.64	0.173	1.854
75	19.67	34.90	24.79	0.254	1.773
100	19.58	34.88	24.80	0.334	1.693
150	18.61	34.80	24.99	0.489	1.538
200	16.65	34.66	25.35	0.632	1.395
250	15.89	34.61	25.49	0.764	1.263
300	15.33	34.58	25.59	0.891	1.136
400	13.61	34.43	25.85	1.129	0.898
500	11.58	34.28	26.13	1.343	0.684
600	08.80	34.12	26.48	1.526	0.501
700	06.45	34.02	26.74	1.680	0.347
800	05.12	34.06	26.94	1.811	0.216
1000	03.80	34.23	27.22	2.027	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 22

M/V Hugh M. Smith: Cruise 27, 31°07'N., 170°35'E., January 18, 1955. Messenger time: 1828 GCT. Weather: 02, cloud coverage 5. Wind: 270°, 20 kt. Sea: 3-5 ft. Wire angle: 31°. BT slide: 66

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.86	34.85	24.75	5.19	0.14
38	19.86	34.83	24.74	5.24	0.14
77	19.40	34.78	24.77	5.19	0.15
110	18.18	34.76	25.07	5.06	0.26
150	16.74	34.70	25.36	4.94	0.38
189	16.28	34.72	25.49	4.96	0.45
286	15.14	34.60	25.65	4.72	0.63
386	13.15	34.45	25.96	4.87	0.84
386	13.34	34.45	25.92	-	-
482	11.30	34.33	26.22	4.63	1.16
580	08.62	34.14	26.52	4.52	1.56
771	05.04	34.02	26.92	2.90	2.49
967	03.96	34.22	27.19	1.20	2.96
967	03.90	34.22	27.20	-	-
1160	03.25	34.40	27.40	0.76	2.97

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	19.86	34.85	24.70	0.000	1.931
10	19.86	34.84	24.70	0.033	1.898
20	19.86	34.84	24.70	0.065	1.866
30	19.86	34.83	24.69	0.098	1.833
50	19.86	34.83	24.69	0.163	1.768
75	19.45	34.78	24.76	0.245	1.686
100	18.87	34.78	24.91	0.324	1.607
150	16.74	34.70	25.36	0.468	1.463
200	16.15	34.70	25.50	0.598	1.333
250	15.59	34.64	25.58	0.724	1.207
300	14.89	34.59	25.70	0.846	1.085
400	12.98	34.43	25.97	1.072	0.859
500	10.81	34.30	26.28	1.272	0.659
600	08.12	34.10	26.57	1.444	0.487
700	06.09	33.96	26.74	1.593	0.338
800	04.73	34.05	26.98	1.722	0.209
1000	03.79	34.25	27.23	1.931	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 24

M/V Hugh M. Smith: Cruise 27, 29°33'N., 179°20'E., February 2, 1955. Messenger time: 0425 GCT. Weather: 61, cloud coverage 8. Wind: 220°, 18 kt. Sea: 3-5 ft. Wire angle: 13°. BT slide: 91

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.02	34.92	24.97	5.67	0.18
41	19.04	34.88	24.94	5.37	0.15
82	19.06	34.85	24.91	5.30	0.16
123	18.58	34.78	24.98	5.22	0.21
164	17.78 Q	34.69 Q	25.11 Q	5.02 Q	0.43 Q
210	15.07	34.51	25.60	5.02	0.58
313	13.38	34.51	25.95	4.92	0.79
421	11.31	34.25	26.15	4.88	1.07
421	11.47	34.25	26.12	-	-
524	08.62	34.11	26.50	4.64	1.57
631	06.32	33.93	26.69	3.88	2.04
841	04.36	34.14	27.09	1.63	2.81
1045	03.57	34.33	27.32	0.72	3.16
1254	03.16	34.34	27.36	0.65	3.08

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	19.02	34.92	24.97	0.000	1.839
10	19.02	34.91	24.97	0.030	1.809
20	19.03	34.90	24.96	0.060	1.779
30	19.03	34.89	24.95	0.090	1.749
50	19.05	34.88	24.94	0.151	1.688
75	19.06	34.86	24.92	0.227	1.612
100	18.91	34.83	24.93	0.304	1.535
150	17.92	34.71	25.09	0.454	1.385
200	15.45	34.53	25.53	0.590	1.249
250	14.25	34.51	25.77	0.711	1.128
300	13.58	34.51	25.91	0.823	1.016
400	11.86	34.30	26.09	1.033	0.806
500	09.28	34.14	26.42	1.220	0.619
600	06.88	33.94	26.62	1.381	0.458
700	05.39	34.00	26.86	1.521	0.318
800	04.60	34.10	27.03	1.641	0.198
1000	03.67	34.31	27.29	1.839	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 26

M/V Hugh M. Smith: Cruise 27, 31°10'N., 179°52'E., February 2, 1955. Messenger time: 1835 GCT. Weather: 02, cloud coverage 6. Wind: 320°, 12 kt. Sea: 3-5 ft. Wire angle: 05°. BT slide: 94

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	18.80	34.90	25.01	5.29	0.14
43	18.80	34.90	25.01	5.34	0.14
PT	-	-	-	-	-
128	16.96	34.74	25.34	5.02	0.36
171	16.24	34.69	25.47	4.91	0.47
220	15.62	34.70	25.62	4.90	0.55
326	13.92	34.52	25.85	5.04	0.62
438	12.18	34.40	26.11	5.10	0.86
544	10.14	34.25	26.36	4.82	1.20
657	07.44	34.07	26.64	4.21	1.76
875	04.50	34.07	27.02	1.83	2.72
1084	03.70	34.16	27.17	1.27	2.90
1084	03.64	34.16	27.17	-	-
1300	03.12	34.34	27.37	0.64	3.00

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	18.80	34.90	25.01	0.000	1.911
10	18.80	34.90	25.01	0.030	1.881
20	18.80	34.90	25.01	0.059	1.852
30	18.80	34.90	25.01	0.089	1.822
50	18.80	34.90	25.01	0.148	1.763
75	18.70	34.89	25.03	0.222	1.689
100	17.48	34.78	25.25	0.294	1.617
150	16.60	34.71	25.40	0.429	1.482
200	15.88	34.70	25.56	0.557	1.354
250	15.17	34.64	25.68	0.679	1.232
300	14.35	34.55	25.78	0.796	1.115
400	12.79	34.45	26.03	1.016	0.895
500	11.03	34.31	26.25	1.215	0.696
600	08.80	34.16	26.51	1.391	0.520
700	06.62	34.00	26.70	1.546	0.365
800	05.15	34.01	26.90	1.681	0.230
1000	03.99	34.12	27.11	1.911	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 27

M/V Hugh M. Smith: Cruise 27, 32°32'N., 179°56'W., February 3, 1955. Messenger time: 0505 GCT. Weather: 15, cloud coverage 7. Wind: 290°, 19 kt. Sea: 5-8 ft. Wire angle: 40°. BT slide: 97

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	18.47	34.94	25.13	5.45	0.14
35	18.49	34.94	25.12	5.41	0.15
69	18.52	34.92	25.10	5.35	0.13
100	18.48	34.92	25.11	5.34	0.14
134	18.18	34.92	25.19	5.25	0.23
168	16.41	34.65	25.40	4.92	0.46
252	15.38	34.58	25.59	4.94	0.49
339	14.00	34.52	25.83	4.78	0.74
423	12.46	34.38	26.04	4.90	0.91
505	10.28	34.23	26.32	4.71	1.22
669	06.68	33.98	26.68	4.33	1.86
834	04.72	34.04	26.97	2.28	2.64
834	04.67	34.04	26.98	-	-
990	03.87	34.20	27.18	1.02	2.93

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	18.47	34.94	25.13	0.000	1.910
10	18.48	34.94	25.13	0.028	1.882
20	18.48	34.94	25.13	0.057	1.853
30	18.49	34.94	25.12	0.086	1.824
50	18.50	34.93	25.11	0.143	1.767
75	18.49	34.92	25.11	0.215	1.695
100	18.48	34.92	25.11	0.287	1.623
150	16.80	34.70	25.35	0.427	1.483
200	15.99	34.61	25.47	0.558	1.352
250	15.39	34.58	25.58	0.685	1.225
300	14.87	34.56	25.68	0.807	1.103
400	12.93	34.43	25.98	1.034	0.876
500	10.42	34.24	26.31	1.233	0.677
600	08.00	34.06	26.56	1.404	0.506
700	06.26	33.96	26.72	1.554	0.356
800	05.05	34.00	26.90	1.688	0.222
1000	03.87	34.20	27.19	1.910	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 29

M/V Hugh M. Smith: Cruise 27, 36°43'N., 179°30'E., February 4, 1955. Messenger time: 2115 GCT. Weather: 02, cloud coverage 4. Wind: 060°, 21 kt. Sea: 8-12 ft. Wire angle: 10°. BT slide: 105

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	15.03	34.56	25.56	5.73	0.31
48	15.00	34.54	25.64	5.72	0.31
96	14.13	34.49	25.78	5.23	0.54
138	13.50	34.42	25.86	5.26	0.57
185	12.60	34.42	26.04	5.20	0.74
233	12.10	34.36	26.09	4.82	0.90
350	10.09	34.22	26.35	4.36	1.13
472	07.95	34.07	26.57	4.67	1.46
589	05.68	33.93	26.77	3.85	1.98
705	04.66	34.02	26.96	1.86	2.37
931	03.84	34.22	27.20	1.30	2.71
1158	03.22	34.34	27.36	0.76	2.93
1158	03.17	34.34	27.36	-	-
1373	02.81	34.42	27.46	0.72	2.85

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	15.03	34.56	25.65	0.000	1.561
10	15.02	34.56	25.65	0.024	1.537
20	15.02	34.55	25.64	0.047	1.514
30	15.01	34.55	25.64	0.071	1.490
50	15.00	34.54	25.64	0.118	1.443
75	14.92	34.53	25.65	0.178	1.383
100	14.08	34.49	25.80	0.235	1.326
150	13.33	34.42	25.90	0.345	1.216
200	12.41	34.40	26.06	0.449	1.112
250	11.92	34.35	26.12	0.548	1.013
300	11.12	34.29	26.22	0.644	0.917
400	09.16	34.16	26.46	0.821	0.740
500	07.42	34.02	26.61	0.980	0.581
600	05.53	33.94	26.80	1.122	0.439
700	04.72	34.02	26.95	1.248	0.313
800	04.32	34.11	27.07	1.361	0.200
1000	03.65	34.26	27.25	1.561	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 30

M/V Hugh M. Smith: Cruise 27, 37°13'N., 177°36'W., February 5, 1955. Messenger time: 1441 GCT. Weather: 02, cloud coverage 5. Wind: 050°, 15 kt. Sea: 8-12 ft. Wire angle: 00°. BT slide: 108

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	14.87	34.58	25.70	5.71	0.27
42	14.87	34.60	25.71	5.65	0.26
84	14.55	34.52	25.72	5.65	0.31
126	14.28	34.51	25.77	5.67	0.31
168	14.02	34.51	25.82	5.75	0.34
215	13.74	34.47	25.85	5.82	0.40
320	12.68	34.42	26.03	5.14	0.67
429	11.00	34.31	26.26	5.17	0.88
534	09.46	34.22	26.45	5.22	1.10
642	07.54	34.09	26.65	4.40	1.51
857	04.84	34.00	26.92	2.40	2.35
1064	03.82	NG	NG	NG	NG
1275	03.26	NG	NG	NG	NG

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	14.87	34.58	25.70	0.000	1.753
10	14.87	34.58	25.70	0.023	1.730
20	14.87	34.59	25.70	0.046	1.707
30	14.87	34.60	25.71	0.069	1.684
50	14.87	34.60	25.71	0.115	1.638
75	14.70	34.54	25.70	0.173	1.580
100	14.41	34.52	25.75	0.231	1.522
150	14.15	34.50	25.79	0.344	1.409
200	13.78	34.48	25.85	0.456	1.297
250	13.61	34.46	25.87	0.566	1.187
300	12.99	34.43	25.97	0.675	1.078
400	11.47	34.34	26.20	0.877	0.876
500	10.00	34.25	26.39	1.060	0.693
600	08.29	34.15	26.58	1.226	0.527
700	06.61	34.01	26.71	1.377	0.376
800	05.36	33.97	26.84	1.514	0.239
1000	04.12	34.10	27.08	1.753	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 31

M/V Hugh M. Smith: Cruise 27, 37°00'N., 175°30'W., February 6, 1955. Messenger time: 0513 GCT. Weather: 02, cloud coverage 4. Wind: 120°, 16 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 111

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	14.88	34.58	25.69	5.66	0.36
31	14.90	34.60	25.71	5.66	0.30
63	14.92	34.58	25.69	5.65	0.35
95	14.90	34.58	25.69	5.66	0.35
126	14.85	34.60	25.72	5.63	0.33
162	14.88	34.58	25.69	5.65	0.42
243	13.60	34.47	25.88	5.12	0.58
327	12.43	34.40	26.06	5.22	0.77
407	11.14	34.33	26.25	5.32	0.90
495	09.66	34.18	26.39	5.25	1.11
661	06.44	34.00	26.73	4.02	1.88
828	04.58	34.09	27.02	2.04	2.56
1006	03.90	34.23	27.21	1.14	2.81

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	14.88	34.58	25.69	0.000	1.709
10	14.88	34.59	25.70	0.023	1.686
20	14.89	34.59	25.70	0.046	1.663
30	14.90	34.60	25.70	0.069	1.640
50	14.91	34.59	25.69	0.115	1.594
75	14.91	34.58	25.69	0.174	1.535
100	14.90	34.58	25.69	0.232	1.477
150	14.87	34.59	25.70	0.349	1.360
200	14.11	34.51	25.80	0.464	1.245
250	13.41	34.46	25.91	0.575	1.134
300	12.73	34.42	26.02	0.681	1.028
400	11.28	34.34	26.23	0.879	0.830
500	09.60	34.18	26.40	1.060	0.649
600	07.60	34.06	26.62	1.224	0.485
700	05.87	33.98	26.79	1.368	0.341
800	04.80	34.05	26.97	1.495	0.214
1000	03.90	34.22	27.20	1.709	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 33

M/V Hugh M. Smith: Cruise 27, 36°49'N., 173°18'W., February 6, 1955. Messenger time: 2035 GCT. Weather: 02, cloud coverage 2. Wind: 080°, 20 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 114

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	11.91	34.33	26.11	6.09 *	0.54
56	11.90	34.31	26.09	6.07	0.54
112	11.86	34.33	26.11	6.03	0.55
168	11.80	34.31	26.11	5.88	0.58
224	10.37	34.27	26.34	5.07	0.97
279	09.48	34.20	26.43	5.30	1.10
335	08.50	34.09	26.50	5.23	1.30
452	06.68	34.02	26.71	4.21	1.68
565	05.40	33.98	26.84	3.23	2.11
675	04.47	34.09	27.04	2.04	2.45
894	03.68	34.25	27.24	0.96	2.72
1112	03.08	34.36	27.39	0.59	2.88
1112	03.02	34.36	27.39	-	-
1319	02.74	34.45	27.49	0.55	2.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	11.91	34.33	26.11	0.000	1.377
10	11.91	34.33	26.11	0.019	1.358
20	11.91	34.32	26.10	0.038	1.339
30	11.90	34.32	26.10	0.058	1.319
50	11.90	34.31	26.09	0.096	1.281
75	11.88	34.32	26.10	0.145	1.232
100	11.87	34.33	26.11	0.193	1.184
150	11.81	34.32	26.12	0.290	1.087
200	10.78	34.28	26.27	0.384	0.993
250	09.94	34.24	26.39	0.471	0.906
300	09.07	34.14	26.45	0.555	0.822
400	07.40	34.04	26.63	0.711	0.666
500	06.08	33.99	26.77	0.852	0.525
600	05.07	34.00	26.90	0.982	0.395
700	04.34	34.12	27.07	1.096	0.281
800	03.94	34.20	27.18	1.198	0.179
1000	03.35	34.32	27.33	1.377	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 34

M/V Hugh M. Smith: Cruise 27, 35°17'N., 173°27'W., February 7, 1955. Messenger time: 0738 GCT. Weather: 02, cloud coverage 7. Wind: 140°, 19 kt. Sea: 5-8 ft. Wire angle: 22°. BT slide: 117

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	14.21	34.47	25.75	5.89	0.31
54	14.22	34.49	25.77	5.86	0.32
108	13.63	34.40	25.82	5.69	0.45
161	13.10	34.40	25.93	5.39	0.60
215	12.34	34.38	26.06	5.32	0.72
268	11.65	34.33	26.15	5.22	0.88
324	10.78	34.29	26.28	5.28	0.94
437	09.85 Q	NG	NG	NG	NG
546	07.50	34.04	26.61	4.69	1.55
654	05.68	33.98	26.81	3.50	2.06
865	04.29	34.18	27.13	1.64	2.63
1080	03.46	34.33	27.33	0.81	2.85
1080	03.40	34.33	27.33	-	-
1283	03.04	34.40	27.43	0.37	2.96

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	14.21	34.47	25.75	0.000	1.590
10	14.21	34.47	25.75	0.023	1.567
20	14.22	34.48	25.76	0.045	1.545
30	14.22	34.49	25.77	0.068	1.522
50	14.22	34.49	25.77	0.113	1.477
75	14.19	34.49	25.77	0.169	1.421
100	13.77	34.41	25.80	0.225	1.365
150	13.20	34.40	25.91	0.334	1.256
200	12.53	34.38	26.02	0.439	1.151
250	11.90	34.35	26.12	0.539	1.051
300	11.13	34.30	26.23	0.635	0.955
400	10.14	34.24	26.36	0.816	0.774
500	08.59	34.12	26.51	0.985	0.605
600	06.45	33.98	26.71	1.137	0.453
700	05.28	34.01	26.88	1.272	0.318
800	04.60	34.12	27.04	1.390	0.200
1000	03.72	34.28	27.26	1.590	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 36

M/V Hugh M. Smith: Cruise 27, 34°06'N., 173°12'W., February 7, 1955. Messenger time: 1829 GCT. Weather: 02, cloud coverage 8. Wind: 180°, 19 kt. Sea: 3-5 ft. Wire angle: 10°. BT slide: 120

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	14.65	34.47	25.66	5.71	0.30
57	14.68	34.47	25.65	5.71	0.30
PT	-	-	-	-	-
171	14.64	34.47	25.66	5.39	0.47
228	13.50	34.36	25.81	5.20	0.69
285	12.24	34.42	26.11	5.16	0.84
342	11.04	34.27	26.22	5.09	0.99
462	08.54	34.09	26.50	4.97	1.38
576	06.24	34.02	26.77	3.71	1.97
691	04.98	34.04	26.94	2.56	2.33
914	03.65	34.25	27.25	0.90	2.80
1138	03.18	34.40	27.41	0.69	2.90
1349	02.95	34.42	27.45	0.61	2.91

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D_{1000} - \Delta D$ (dyn. m)
00	14.65	34.47	25.66	0.000	1.604
10	14.66	34.47	25.66	0.023	1.581
20	14.66	34.47	25.66	0.047	1.557
30	14.67	34.47	25.65	0.070	1.534
50	14.68	34.47	25.65	0.118	1.486
75	14.68	34.47	25.65	0.177	1.427
100	14.68	34.47	25.65	0.236	1.368
150	14.66	34.47	25.66	0.355	1.249
200	13.62	34.36	25.79	0.471	1.133
250	13.22	34.39	25.90	0.582	1.022
300	11.95	34.38	26.14	0.686	0.918
400	09.84	34.17	26.35	0.872	0.732
500	07.67	34.05	26.60	1.037	0.567
600	05.93	34.02	26.81	1.179	0.425
700	04.89	34.04	26.95	1.305	0.299
800	04.16	34.14	27.11	1.416	0.188
1000	03.45	34.31	27.31	1.604	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 38

M/V Hugh M. Smith: Cruise 27, 32°27'N., 173°02'W., February 8, 1955. Messenger time: 0917 GCT. Weather: 01, cloud coverage 8. Wind: 190°, 16 kt. Sea: 5-8 ft. Wire angle: 05°. BT slide: 123

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	16.30	34.65	25.43	5.62	0.27
54	16.30	34.63	25.41	5.55	0.25
106	16.28	34.61	25.40	5.51	0.27
160	15.65	34.58	25.52	5.30	0.40
217	14.68	34.49	25.67	5.51	0.41
273	14.06	34.47	25.78	5.12	0.65
325	13.25	34.43	25.92	5.11	0.74
438	11.08	34.29	26.23	5.03	1.04
544	09.10	34.11	26.43	4.75	1.39
657	07.21	33.98	26.61	4.38	1.75
657	07.15	33.98	26.62	-	-
875	04.16	34.14	27.11	1.48	2.81
1086	03.53	34.29	27.29	0.71	3.07
1086	03.46	34.29	27.30	-	-
1302	03.05	34.45	27.46	0.47	3.09

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	16.30	34.65	25.43	0.000	1.814
10	16.30	34.65	25.43	0.026	1.788
20	16.30	34.64	25.42	0.051	1.763
30	16.30	34.64	25.42	0.077	1.737
50	16.30	34.63	25.41	0.129	1.685
75	16.29	34.62	25.41	0.194	1.620
100	16.28	34.61	25.40	0.259	1.555
150	15.81	34.59	25.49	0.388	1.426
200	14.95	34.51	25.62	0.512	1.302
250	14.30	34.48	25.74	0.631	1.183
300	13.72	34.46	25.85	0.745	1.069
400	11.79	34.33	26.13	0.957	0.857
500	09.87	34.18	26.35	1.145	0.669
600	08.12	34.05	26.53	1.315	0.499
700	06.45	33.97	26.70	1.468	0.346
800	04.95	34.04	26.94	1.601	0.213
1000	03.72	34.24	27.23	1.814	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 39

M/V Hugh M. Smith: Cruise 27, 30°59'N., 172°57'W., February 8, 1955. Messenger time: 2058 GCT. Weather: 02, cloud coverage 8. Wind: 140°, 1-3 kt. Sea: 1-3 ft. Wire angle: 00°. BT slide: 126

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	18.45	35.07	25.23	5.33	0.17
21	18.45	35.05	25.22	5.33	0.17
42	18.46	35.03	25.20	5.32	0.16
84	18.36	35.01	25.21	5.33	0.17
126	16.30	34.63	25.41	5.22	0.37
215	14.46	34.51	25.73	4.76	0.69
320	12.16	34.34	26.07	5.11	0.82
429	10.44	34.22	26.29	5.03	1.13
530	08.28	34.05	26.51	4.74	1.53
644	06.16	33.98	26.75	3.46	2.14
857	04.28	34.13	27.09	1.41	2.89
1063	03.50	34.25	27.26	0.52	3.18
1063	03.43	34.25	27.27	-	-
1274	03.04	34.40	27.42	0.43	3.23

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	18.45	35.07	25.23	0.000	1.755
10	18.45	35.06	25.22	0.028	1.727
20	18.45	35.05	25.22	0.055	1.700
30	18.45	35.04	25.21	0.083	1.672
50	18.46	35.03	25.20	0.139	1.616
75	18.42	35.02	25.20	0.208	1.547
100	17.40	34.75	25.25	0.278	1.477
150	15.47	34.58	25.56	0.409	1.346
200	14.81	34.53	25.67	0.531	1.224
250	13.54	34.44	25.87	0.645	1.110
300	12.50	34.36	26.02	0.753	1.002
400	10.97	34.26	26.22	0.951	0.804
500	08.95	34.10	26.44	1.130	0.625
600	06.80	33.99	26.67	1.288	0.467
700	05.52	34.00	26.84	1.426	0.329
800	04.62	34.08	27.01	1.547	0.208
1000	03.69	34.21	27.21	1.755	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 41

M/V Hugh M. Smith: Cruise 27, 29°29'N., 172°41'W., February 9, 1955. Messenger time: 0923 GCT. Weather: 02, cloud coverage 2. Wind: 080°, 7-10 kt. Sea: 1-3 ft. Wire angle: 10°. BT slide: 129

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	17.70	34.88	25.27	5.57	0.22
53	16.82	34.60	25.27	5.60	0.21
106	16.39	34.60	25.37	5.50	0.29
159	15.41	34.58	25.58	5.12	0.48
217	14.36	34.47	25.72	5.00	0.64
269	13.44	34.42	25.87	5.17	0.72
323	12.46	34.34	26.01	5.15	0.78
434	10.29	34.20	26.30	4.81	1.17
540	08.50	34.07	26.49	4.40	1.57
650	06.18	34.04	26.80	3.40	2.19
868	04.16	34.16	27.12	1.18	2.98
1078	03.53	34.33	27.32	0.59	3.22
1078	03.48	34.33	27.33	-	-
1292	03.04	34.47	27.48	0.86	3.13

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	17.70	34.88	25.27	0.000	1.748
10	17.68	34.87	25.27	0.027	1.721
20	17.60	34.83	25.26	0.054	1.694
30	17.42	34.75	25.24	0.082	1.666
50	16.87	34.60	25.26	0.137	1.611
75	16.79	34.60	25.28	0.205	1.543
100	16.52	34.60	25.34	0.272	1.476
150	15.62	34.59	25.54	0.402	1.346
200	14.66	34.50	25.68	0.524	1.224
250	13.79	34.44	25.82	0.640	1.108
300	12.94	34.38	25.94	0.750	0.998
400	10.92	34.24	26.22	0.952	0.796
500	09.19	34.11	26.41	1.133	0.615
600	07.21	34.05	26.66	1.293	0.455
700	05.45	34.05	26.89	1.429	0.319
800	04.52	34.11	27.05	1.547	0.201
1000	03.76	34.27	27.25	1.748	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 42

M/V Hugh M. Smith: Cruise 27, 28°00'N., 172°34'W., February 9, 1955. Messenger time: 2029 GCT. Weather: 01, cloud coverage 8. Wind: 080°, 11-16 kt. Sea: 3-5 ft. Wire angle: 09°. BT slide: 132

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	20.42	35.34	24.93	5.18	0.14
47	20.44	35.35	24.93	5.10	0.12
94	20.04	35.25	24.96	5.18	0.15
136	17.72	34.83	25.23	5.10	0.27
184	16.28	34.70	25.47	4.91	0.44
231	14.98	34.54	25.64	4.91	0.58
346	12.29	34.36	26.06	4.92	0.94
466	10.35	34.23	26.31	4.84	1.23
581	07.58	34.04	26.61	3.90	1.91
695	05.71	34.00	26.82	2.75	2.45
918	03.94	34.23	27.20	0.76	3.16
1141	03.34	34.36	27.36	0.70	3.18
1141	03.28	34.36	27.37	-	-
1352	02.86	34.47	27.49	1.01	3.16

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	20.42	35.34	24.93	0.000	1.828
10	20.42	35.34	24.93	0.030	1.798
20	20.43	35.34	24.93	0.061	1.767
30	20.43	35.35	24.93	0.091	1.737
50	20.44	35.35	24.93	0.152	1.676
75	20.42	35.34	24.93	0.229	1.599
100	19.85	35.21	24.98	0.305	1.523
150	17.28	34.78	25.30	0.448	1.380
200	15.93	34.66	25.52	0.580	1.248
250	14.55	34.50	25.70	0.703	1.125
300	13.29	34.42	25.90	0.816	1.012
400	11.47	34.31	26.17	1.023	0.805
500	09.45	34.17	26.42	1.206	0.622
600	07.24	34.03	26.64	1.367	0.461
700	05.65	34.01	26.84	1.507	0.321
800	04.65	34.11	27.03	1.628	0.200
1000	03.65	34.29	27.28	1.828	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 44

M/V Hugh M. Smith: Cruise 27, 26°30'N., 171°56'W., February 10, 1955. Messenger time: 1010 GCT. Weather: 02, cloud coverage 3. Wind: 090°, 17-21 kt. Sea: 5-8 ft. Wire angle: 20°. BT slide: 135

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	21.75	35.46	24.65	5.01	0.12
79	21.76	35.48	24.67	5.04	0.12
159	21.76	35.44	24.63	4.96	0.12
187	19.56	35.08	24.96	4.80	0.25
223	17.30	34.85	25.34	4.83	0.36
264	15.83	34.67	25.55	4.90	0.47
303	14.62	34.54	25.72	4.88	0.62
408	12.40	34.36	26.04	4.79	0.95
507	10.16	34.20	26.32	4.43	1.39
612	07.41	34.07	26.65	3.37	2.06
818	05.06	34.14	27.01	1.66	2.86
1016	03.97	34.31	27.26	0.96	3.15
1222	03.44	34.38	27.37	0.96	3.13

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	21.75	35.46	24.66	0.000	1.985
10	21.75	35.46	24.66	0.033	1.952
20	21.75	35.46	24.66	0.066	1.919
30	21.75	35.46	24.66	0.099	1.886
50	21.76	35.47	24.66	0.165	1.820
75	21.76	35.48	24.67	0.248	1.737
100	21.76	35.46	24.65	0.331	1.654
150	21.76	35.44	24.64	0.498	1.487
200	18.58	34.98	25.13	0.655	1.330
250	16.24	34.70	25.48	0.793	1.192
300	14.75	34.55	25.70	0.917	1.068
400	12.56	34.38	26.02	1.141	0.844
500	10.32	34.21	26.30	1.338	0.647
600	07.67	34.08	26.62	1.506	0.479
700	06.22	34.06	26.80	1.650	0.335
800	05.21	34.13	26.98	1.775	0.210
1000	04.03	34.30	27.25	1.985	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 45

M/V Hugh M. Smith: Cruise 27, 28°00'N., 168°42'W., February 12, 1955. Messenger time: 1110 GCT. Weather: 01, cloud coverage 3. Wind: 050°, 17-21 kt. Sea: 5-8 ft. Wire angle: 20°. BT slide: 142

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.92	35.26	25.00	5.13	0.23
65	19.94	35.28	25.01	5.21	0.16
129	17.60	34.87	25.29	4.95	0.32
174	15.74	34.63	25.54	4.91	0.48
218	14.92	34.56	25.67	4.84	0.56
263	13.96	34.49	25.82	4.84	0.68
329	12.60	34.40	26.03	4.88	0.83
444	09.89	34.18	26.35	4.67	1.28
553	07.40	34.07	26.65	3.63	1.97
662	05.92	34.04	26.83	2.43	2.56
877	04.10	34.20	27.16	0.75	3.21
1092	03.50	34.33	27.32	0.47	3.39
1298	03.02	34.45	27.46	0.71	3.13

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	19.92	35.26	25.00	0.000	1.768
10	19.92	35.26	25.00	0.030	1.738
20	19.92	35.27	25.01	0.059	1.709
30	19.92	35.27	25.01	0.089	1.679
50	19.93	35.28	25.01	0.148	1.620
75	19.94	35.28	25.01	0.223	1.545
100	19.87	35.28	25.03	0.297	1.471
150	16.62	34.74	25.42	0.437	1.331
200	15.25	34.59	25.62	0.563	1.205
250	14.24	34.51	25.78	0.682	1.086
300	13.20	34.44	25.94	0.793	0.975
400	10.78	34.25	26.25	0.994	0.774
500	08.60	34.12	26.51	1.168	0.600
600	06.68	34.05	26.74	1.319	0.449
700	05.47	34.05	26.89	1.452	0.316
800	04.55	34.13	27.06	1.569	0.199
1000	03.72	34.28	27.26	1.768	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 46

M/V Hugh M. Smith: Cruise 27, 29°30'N., 166°41'W., February 13, 1955. Messenger time: 0617 GCT. Weather: 02, cloud coverage 2. Wind: 060°, 17-21 kt. Sea: 5-8 ft. Wire angle: 26°. BT slide: 147

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.53	35.30	25.13	5.27	0.15
74	19.48	35.30	25.14	5.24	0.16
147	19.40	35.26	25.13	5.23	0.16
175	19.40	35.28	25.15	5.22	0.12
207	17.98	34.90	25.22	5.33	0.14
244	16.29	34.72	25.49	4.88	0.42
280	14.42	34.52	25.74	4.86	0.63
379	12.76	34.38	25.98	5.20	0.78
472	10.86	34.27	26.25	5.19	1.05
570	08.72	34.11	26.48	4.67	1.51
763	05.44	34.09	26.92	2.28	2.61
954	04.13	34.25	27.20	0.73	3.15
954	04.05	34.25	27.21	-	-
1154	03.53	34.38	27.36	0.43	3.21

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	19.53	35.30	25.13	0.000	1.898
10	19.53	35.30	25.13	0.028	1.870
20	19.53	35.30	25.13	0.057	1.841
30	19.52	35.30	25.13	0.085	1.813
50	19.50	35.30	25.14	0.142	1.756
75	19.48	35.30	25.15	0.214	1.684
100	19.46	35.26	25.12	0.285	1.613
150	19.40	35.25	25.13	0.430	1.468
200	18.46	34.99	25.17	0.574	1.324
250	16.01	34.68	25.52	0.710	1.188
300	14.02	34.49	25.81	0.831	1.067
400	12.39	34.37	26.04	1.048	0.850
500	10.35	34.22	26.30	1.244	0.654
600	08.08	34.09	26.57	1.414	0.484
700	06.30	34.05	26.79	1.561	0.337
800	05.06	34.12	26.99	1.688	0.210
1000	03.95	34.28	27.24	1.898	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 48

M/V Hugh M. Smith: Cruise 27, 30°57'N., 166°49'W., February 13, 1955. Messenger time: 1933 GCT. Weather: 02, cloud coverage 4. Wind: 090°, 7-10 kt. Sea: 3-5 ft. Wire angle: 05°. BT slide: 150

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	19.40	35.32	25.18	5.24	0.20
53	18.92	35.21	25.22	5.33	0.18
105	16.95	34.85	25.43	5.49	0.21
160	16.20	34.67	25.47	5.30	0.31
218	14.38	34.61	25.82	5.00	0.62
271	13.32	34.45	25.92	5.15	0.73
324	12.53	34.40	26.04	5.16	0.76
434	10.38	34.25	26.32	5.26	1.05
434	10.44	34.25	26.31	-	-
541	08.69	34.11	26.49	4.39	1.53
652	06.58	34.04	26.74	3.42	2.08
868	04.52	34.13	27.06	1.28	2.89
1079	03.66	34.34	27.32	0.41	3.21
1079	03.61	34.34	27.32	-	-
1295	03.19	34.47	27.47	0.59	3.16

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	19.40	35.32	25.18	0.000	1.769
10	19.32	35.30	25.19	0.028	1.741
20	19.22	35.28	25.20	0.056	1.713
30	19.13	35.26	25.21	0.084	1.685
50	18.96	35.22	25.22	0.139	1.630
75	18.15	35.08	25.31	0.208	1.561
100	17.07	34.87	25.42	0.274	1.495
150	16.54	34.69	25.40	0.405	1.364
200	14.78	34.63	25.75	0.528	1.241
250	13.73	34.51	25.88	0.641	1.128
300	12.86	34.42	25.99	0.748	1.021
400	10.99	34.29	26.24	0.947	0.822
500	09.38	34.15	26.41	1.127	0.642
600	07.54	34.06	26.62	1.289	0.480
700	06.00	34.05	26.82	1.431	0.338
800	04.98	34.08	26.97	1.556	0.213
1000	03.97	34.25	27.22	1.769	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 50

M/V Hugh M. Smith: Cruise 27, 32°23'N., 166°39'W., February 14, 1955. Messenger time: 0810 GCT. Weather: 02, cloud coverage 6. Wind: 090°, 7-10 kt. Sea: 3-5 ft. Wire angle: 14°. BT slide: 153

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	15.73	34.58	25.50	5.87	0.20
42	15.74	34.61	25.53	5.79	0.18
83	15.70	34.60	25.53	5.75	0.19
124	14.39	34.70	25.89	5.63	0.43
165	13.45	34.49	25.92	5.35	0.59
211	12.65	34.45	26.05	5.30	0.73
314	11.28	34.25	26.16	5.42	0.91
423	09.95	34.16	26.32	5.15	1.18
423	10.00	34.16	26.32	-	-
525	07.98	34.04	26.54	4.38	1.70
634	06.16	33.96	26.73	3.41	2.17
845	04.24	34.11	27.07	1.24	2.96
1050	03.52	34.27	27.27	0.45	3.19
1050	03.45	34.27	27.28	-	-
1259	03.08	34.42	27.44	0.35	3.18

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	15.73	34.58	25.50	0.000	1.649
10	15.73	34.58	25.50	0.025	1.624
20	15.73	34.59	25.51	0.050	1.599
30	15.74	34.60	25.52	0.075	1.574
50	15.74	34.61	25.53	0.124	1.525
75	15.72	34.60	25.52	0.186	1.463
100	15.22	34.65	25.67	0.247	1.402
150	13.79	34.54	25.89	0.360	1.289
200	12.86	34.46	26.02	0.465	1.184
250	12.30	34.40	26.09	0.566	1.083
300	11.54	34.27	26.13	0.665	0.984
400	10.21	34.18	26.30	0.854	0.795
500	08.47	34.07	26.49	1.027	0.622
600	06.65	33.97	26.68	1.182	0.467
700	05.48	33.97	26.83	1.320	0.329
800	04.57	34.07	27.01	1.443	0.206
1000	03.64	34.23	27.23	1.649	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 51

M/V Hugh M. Smith: Cruise 27, 34°23'N., 166°36'W., February 14, 1955. Messenger time: 2055 GCT. Weather: 02, cloud coverage 8. Wind: 160°, 7-10 kt. Sea: 1-3 ft. Wire angle: 15°. BT slide: 156

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	13.98	34.43	25.77	5.89	0.38
50	13.67	34.40	25.81	5.71	0.48
101	13.22	34.42	25.92	5.34	0.67
152	12.74	34.38	25.98	5.25	0.76
208	12.17	34.34	26.06	5.26	0.84
259	11.54	34.29	26.14	5.25	0.94
309	10.77	34.23	26.24	5.18	1.06
416	09.26	34.11	26.40	5.14	1.34
517	07.50	33.98	26.56	4.37	1.83
624	05.72	33.96	26.79	3.08	2.41
831	04.18	34.16	27.12	1.24	3.08
1035	03.47	34.33	27.33	0.43	3.36
1242	02.97	34.42	27.45	0.34	3.39

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	13.98	34.43	25.77	0.000	1.555
10	13.95	34.42	25.77	0.022	1.533
20	13.93	34.42	25.77	0.045	1.510
30	13.89	34.41	25.77	0.067	1.488
50	13.67	34.40	25.81	0.112	1.443
75	13.45	34.41	25.86	0.166	1.389
100	13.25	34.42	25.91	0.220	1.335
150	12.78	34.38	25.98	0.325	1.230
200	12.23	34.34	26.05	0.427	1.128
250	11.63	34.29	26.13	0.527	1.028
300	10.90	34.25	26.23	0.622	0.933
400	09.54	34.13	26.37	0.802	0.753
500	07.85	34.00	26.53	0.969	0.586
600	06.06	33.96	26.75	1.118	0.437
700	05.02	34.02	26.92	1.248	0.307
800	04.34	34.13	27.08	1.363	0.192
1000	03.60	34.31	27.30	1.555	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 52

M/V Hugh M. Smith: Cruise 27, 35°31'N., 166°42'W., February 15, 1955. Messenger time: 0613 GCT. Weather: 02, cloud coverage 8. Wind: 180°, 10 kt. Sea: 1-3 ft. Wire angle: 12°. BT slide: 158

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	12.91	34.31	25.90	6.79	0.47
52	12.78	34.31	25.92	6.00	0.50
105	12.68	34.33	25.96	5.91	0.60
157	12.16	34.34	26.07	5.35	0.82
215	11.23	34.31	26.22	5.28	1.04
267	10.66	34.25	26.27	5.33	1.12
320	09.77	34.18	26.37	5.21	1.29
430	08.37	34.07	26.51	5.03	1.60
534	06.65	33.98	26.68	4.05	2.16
646	05.16	34.00	26.89	2.59	2.75
PT	-	-	-	-	-
1067	03.62	34.34	27.32	0.39	3.42
1067	03.55	34.34	27.33	-	-
1277	02.97	34.47	27.49	0.25	3.50

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	12.91	34.31	25.90	0.000	1.497
10	12.87	34.31	25.90	0.021	1.476
20	12.83	34.31	25.91	0.042	1.455
30	12.80	34.31	25.92	0.063	1.434
50	12.77	34.31	25.92	0.105	1.392
75	12.72	34.32	25.94	0.158	1.339
100	12.70	34.33	25.95	0.210	1.287
150	12.25	34.34	26.05	0.312	1.185
200	11.50	34.32	26.17	0.410	1.087
250	10.86	34.28	26.26	0.503	0.994
300	10.06	34.21	26.35	0.592	0.905
400	08.74	34.10	26.48	0.762	0.735
500	07.30	34.01	26.62	0.919	0.578
600	05.78	33.97	26.79	1.061	0.436
700	04.80	34.05	26.97	1.187	0.310
800	04.35	34.14	27.09	1.299	0.198
1000	03.84	34.29	27.26	1.497	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 54

M/V Hugh M. Smith: Cruise 27, 37°00'N., 166°43'W., February 15, 1955. Messenger time: 1831 GCT. Weather: 50, cloud coverage 9. Wind: 220°, 22-27 kt. Sea: 5-8 ft. Wire angle: 35°. BT slide: 161

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	12.67	34.33	25.96	5.98	0.55
47	12.41	34.31	25.99	6.06 *	0.56
95	12.41	34.29	25.98	6.00	0.62
142	12.41	34.29	25.98	5.96	0.56
190	12.20	34.31	26.04	5.71	0.72
238	11.68	34.31	26.13	5.38	0.92
285	10.94	34.23	26.21	5.35	0.99
387	09.52	34.18	26.41	5.25	1.25
485	07.70	34.02	26.57	4.86	1.65
583	06.12	33.96	26.74	3.74	2.22
775	04.40	34.07	27.03	1.69	3.00
977	03.68	34.22	27.22	0.79	3.31
977	03.63	34.22	27.22	-	-
1177	03.05	34.38	27.41	0.48	3.40

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	12.67	34.33	25.96	0.000	1.527
10	12.67	34.33	25.96	0.021	1.506
20	12.67	34.33	25.96	0.041	1.486
30	12.67	34.32	25.95	0.062	1.465
50	12.42	34.31	25.99	0.103	1.424
75	12.41	34.30	25.99	0.154	1.373
100	12.41	34.29	25.98	0.205	1.322
150	12.39	34.29	25.98	0.309	1.218
200	12.10	34.31	26.05	0.411	1.116
250	11.51	34.29	26.15	0.509	1.018
300	10.78	34.23	26.24	0.604	0.923
400	09.28	34.16	26.44	0.781	0.746
500	07.48	34.01	26.59	0.942	0.585
600	05.88	33.96	26.77	1.086	0.441
700	04.79	34.02	26.94	1.214	0.313
800	04.24	34.10	27.07	1.327	0.200
1000	03.60	34.22	27.23	1.527	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 56

M/V Hugh M. Smith: Cruise 27, 37°08'N., 164°09'W., February 16, 1955. Messenger time: 0845 GCT. Weather: 01, cloud coverage 8. Wind: 290°, 11-16 kt. Sea: 5-8 ft. Wire angle: 26°. BT slide: 164

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	12.32	34.29	26.00	6.22 *	0.53
52	12.19	34.23	25.98	6.03 *	0.57
PT	-	-	-	-	-
157	11.64	34.23	26.08	5.88	0.71
210	11.14	34.18	26.13	5.95	0.76
262	10.88	34.23	26.22	5.48	0.97
316	09.94	34.16	26.32	5.53	1.07
426	08.33	34.05	26.50	5.15	1.45
532	06.60	33.98	26.69	3.97	1.99
639	05.20	33.98	26.87	2.73	2.44
847	04.04	34.18	27.15	1.20	2.94
1058	03.37	34.31	27.32	0.49	3.16
1058	03.31	34.31	27.33	-	-
1260	02.92	34.42	27.45	0.33	3.24

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D 1000 - \Delta D$ (dyn. m)
00	12.32	34.29	26.00	0.000	1.485
10	12.28	34.26	25.98	0.020	1.465
20	12.25	34.24	25.97	0.041	1.444
30	12.21	34.23	25.97	0.061	1.424
50	12.19	34.23	25.97	0.102	1.383
75	12.14	34.22	25.98	0.154	1.331
100	11.82	34.22	26.04	0.204	1.281
150	11.67	34.22	26.07	0.304	1.181
200	11.24	34.19	26.12	0.403	1.082
250	10.97	34.22	26.19	0.498	0.987
300	10.23	34.18	26.29	0.591	0.894
400	08.70	34.07	26.46	0.763	0.722
500	07.14	34.00	26.63	0.921	0.564
600	05.63	33.96	26.80	1.062	0.423
700	04.68	34.06	26.99	1.185	0.300
800	04.20	34.15	27.11	1.294	0.191
1000	03.50	34.28	27.29	1.485	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 57

M/V Hugh M. Smith: Cruise 27, 37°00'N., 162°16'W., February 16, 1955. Messenger time: 1924 GCT. Weather: 02, cloud coverage 3. Wind: 300°, 17-21 kt. Sea: 3-5 ft. Wire angle: 30°. BT slide: 167

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	11.34	34.16	26.08	6.25 *	0.65
46	11.26	34.16	26.09	6.15 *	0.66
92	11.20	34.14	26.09	6.16 *	0.67
139	11.04	34.14	26.12	6.21 *	0.69
190	10.96	34.13	26.13	5.48	0.72
236	10.50	34.22	26.27	5.45	1.06
283	09.94	34.18	26.34	5.30	1.12
382	08.71	34.07	26.46	4.39	1.37
474	07.24	33.98	26.60	3.35	1.86
576	05.86	33.96	26.77	1.60	2.30
769	04.39	34.07	27.03	0.81	2.94
962	03.69	34.20	27.20	0.41	3.27
1166	03.15	34.34	27.37	NS	3.35

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	11.34	34.16	26.08	0.000	1.472
10	11.32	34.16	26.08	0.019	1.453
20	11.29	34.16	26.09	0.039	1.433
30	11.27	34.16	26.09	0.058	1.414
50	11.24	34.15	26.09	0.097	1.375
75	11.22	34.14	26.09	0.146	1.326
100	11.18	34.14	26.09	0.194	1.278
150	11.01	34.13	26.12	0.292	1.180
200	10.94	34.13	26.13	0.388	1.084
250	10.35	34.21	26.30	0.482	0.990
300	09.79	34.17	26.36	0.570	0.902
400	08.52	34.06	26.48	0.738	0.734
500	06.87	33.97	26.65	0.894	0.578
600	05.62	33.97	26.81	1.033	0.439
700	04.80	34.02	26.94	1.159	0.313
800	04.22	34.10	27.07	1.272	0.200
1000	03.62	34.22	27.23	1.472	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 59

M/V Hugh M. Smith: Cruise 27, 36°57'N., 160°05'W., February 17, 1955. Messenger time: 0817 GCT. Weather: 02, cloud coverage 3. Wind: 330°, 30 kt. Sea: 5-8 ft. Wire angle: 36°. BT slide: 170

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	12.86	34.22	25.84	5.94	0.42
50	12.86	34.22	25.84	5.93	0.43
NG	-	-	-	-	-
150	12.54	34.14	25.84	6.08 *	0.54
NG	-	-	-	-	-
250	11.48	34.27	26.14	5.39	0.90
302	10.81	34.20	26.21	5.28	0.95
407	09.10	34.05	26.38	5.24	1.16
510	07.38	34.02	26.62	4.38	1.65
612	05.83	33.98	26.79	3.26	2.13
811	04.30	34.11	27.07	1.42	2.67
1017	03.53	34.25	27.26	0.55	3.01
1219	03.05	34.36	27.39	0.27	3.07

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D 1000 - \Delta D$ (dyn. m)
00	12.86	34.22	25.84	0.000	1.564
10	12.86	34.22	25.84	0.022	1.542
20	12.86	34.22	25.84	0.043	1.521
30	12.86	34.22	25.84	0.065	1.499
50	12.86	34.22	25.84	0.109	1.455
75	12.85	34.21	25.83	0.164	1.400
100	12.76	34.19	25.83	0.219	1.345
150	12.54	34.14	25.84	0.329	1.235
200	12.01	34.21	25.99	0.436	1.128
250	11.48	34.27	26.14	0.536	1.028
300	10.81	34.20	26.21	0.632	0.932
400	09.18	34.06	26.37	0.813	0.751
500	07.58	34.02	26.59	0.977	0.587
600	05.98	33.98	26.77	1.122	0.442
700	04.92	34.03	26.94	1.250	0.314
800	04.38	34.10	27.05	1.364	0.200
1000	03.58	34.25	27.25	1.564	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 60

M/V Hugh M. Smith: Cruise 27, 35°28'N., 159°53'W., February 17, 1955. Messenger time: 1919 GCT. Weather: 02, cloud coverage 2. Wind: 040°, 4-6 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 173

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	12.87	34.31	25.90	6.06 *	0.41
50	12.84	34.27	25.88	5.99 *	0.42
100	12.79	34.27	25.89	5.88	0.45
149	12.21	34.16	25.92	5.99	0.49
204	11.99	34.23	26.02	5.40	0.73
254	11.20	34.23	26.16	5.42	0.87
304	10.66	34.23	26.26	5.41	0.97
410	09.10	34.09	26.41	4.96	1.27
509	07.68	34.02	26.57	4.50	1.61
614	05.81	34.00	26.81	3.11	2.18
819	04.22	34.14	27.10	1.27	2.80
1019	03.54	34.25	27.25	0.65	3.05
1019	03.49	34.25	27.26	-	-
1224	03.02	34.36	27.39	0.28	3.09

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	12.87	34.31	25.90	0.000	1.547
10	12.86	34.30	25.90	0.021	1.526
20	12.86	34.29	25.89	0.042	1.505
30	12.85	34.28	25.88	0.064	1.483
50	12.84	34.27	25.88	0.106	1.441
75	12.84	34.27	25.88	0.160	1.387
100	12.79	34.27	25.89	0.214	1.333
150	12.22	34.16	25.91	0.321	1.226
200	12.06	34.23	26.00	0.426	1.121
250	11.32	34.23	26.14	0.526	1.021
300	10.71	34.23	26.25	0.621	0.926
400	09.25	34.10	26.39	0.799	0.748
500	07.84	34.02	26.55	0.964	0.583
600	06.12	34.00	26.77	1.111	0.436
700	05.00	34.06	26.95	1.238	0.309
800	04.33	34.13	27.08	1.351	0.196
1000	03.53	34.25	27.26	1.547	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 61

M/V Hugh M. Smith: Cruise 27, 34°00'N., 159°42'W., February 18, 1955. Messenger time: 0536 GCT. Weather: 02, cloud coverage 1. Wind: 140°, 4-6 kt. Sea: 3-5 ft. Wire angle: 07°. BT slide: 176

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	14.03	34.31	25.66	5.95 *	0.32
85	13.80	34.34	25.73	5.55	0.46
128	12.89	34.34	25.92	5.18	0.70
160	12.48	34.33	26.00	5.25	0.74
219	11.69	34.29	26.12	5.35	0.82
272	11.10	34.22	26.17	5.32	0.93
326	10.43	34.22	26.29	5.21	1.01
438	09.08	34.14	26.46	4.92	1.32
545	06.70	34.00	26.69	3.78	1.94
656	05.23	33.98	26.86	2.67	2.36
874	03.95	34.18	27.16	0.87	2.94
1083	03.34	34.33	27.34	0.28	3.16
1083	03.28	34.33	27.35	-	-
1296	02.98	34.42	27.45	0.35	NG

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	14.03	34.31	25.67	0.000	1.556
10	13.85	34.34	25.73	0.023	1.533
20	13.80	34.34	25.74	0.046	1.510
30	13.80	34.34	25.74	0.069	1.487
50	13.80	34.34	25.74	0.114	1.442
75	13.80	34.34	25.74	0.171	1.385
100	13.38	34.34	25.82	0.227	1.329
150	12.61	34.34	25.98	0.334	1.222
200	11.95	34.30	26.07	0.436	1.120
250	11.33	34.25	26.15	0.534	1.022
300	10.75	34.22	26.23	0.629	0.927
400	09.60	34.17	26.39	0.808	0.748
500	07.81	34.06	26.59	0.971	0.585
600	05.87	33.98	26.79	1.116	0.440
700	04.90	34.00	26.92	1.244	0.312
800	04.27	34.10	27.06	1.359	0.197
1000	03.57	34.26	27.26	1.556	0.000

* Estimated burette reading.

Table 4.--Oceanographic station data (cont'd)

STATION 63

M/V Hugh M. Smith: Cruise 27, 32°27'N., 159°30'W., February 18, 1955. Messenger time: 1720 GCT. Weather: 02, cloud coverage 1. Wind: 140°, 4-6 kt. Sea: 3-5 ft. Wire angle: 20°. BT slide: 179

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	16.02	34.58	25.44	5.59	0.20
49	16.01	34.58	25.45	5.57	0.21
98	16.00	34.56	25.43	5.54	0.22
148	14.54	34.45	25.67	5.29	0.48
202	13.29	34.33	25.83	5.13	0.66
252	12.52	34.33	25.99	5.18	0.80
302	11.90	34.29	26.08	5.23	0.82
406	10.46	34.16	26.24	5.06	1.08
505	08.70	34.05	26.44	4.49	1.51
609	06.69	33.91	26.62	3.64	2.00
609	06.64	33.91	26.63	-	-
813	04.50	34.05	27.00	1.42	2.89
1013	03.64	34.23	27.23	0.43	3.21
1013	03.58	34.23	27.24	-	-
1218	03.08	34.38	27.40	0.31	3.23

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	16.02	34.58	25.44	0.000	1.722
10	16.01	34.58	25.44	0.025	1.697
20	16.01	34.58	25.44	0.051	1.671
30	16.01	34.58	25.44	0.077	1.645
50	16.01	34.58	25.44	0.128	1.594
75	16.02	34.57	25.43	0.192	1.530
100	15.98	34.56	25.43	0.257	1.465
150	14.52	34.45	25.67	0.380	1.342
200	13.40	34.34	25.82	0.496	1.226
250	12.55	34.33	25.98	0.604	1.118
300	11.92	34.30	26.08	0.707	1.015
400	10.58	34.18	26.23	0.901	0.821
500	08.81	34.06	26.43	1.080	0.642
600	06.85	33.92	26.61	1.241	0.481
700	05.60	33.95	26.79	1.385	0.337
800	04.60	34.04	26.98	1.510	0.212
1000	03.66	34.22	27.22	1.722	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 64

M/V Hugh M. Smith: Cruise 27, 30°59'N., 159°22'W., February 19, 1955. Messenger time: 0315 GCT. Weather: 02, cloud coverage 4. Wind: 070°, 4-6 kt. Sea: 1-3 ft. Wire angle: 06°. BT slide: 182

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (μg at/l)
0	17.16	34.78	25.33	5.52	0.19
43	17.15	34.79	25.33	5.46	0.18
85	16.74	34.70	25.36	5.49	0.21
127	14.70	34.47	25.65	5.18	0.47
171	13.63	34.47 P	25.87 P	5.09	0.60
217	12.74	34.33	25.94	5.09	0.75
324	11.26	34.29	26.20	5.21	0.85
435	09.64	34.14	26.36	4.68	1.21
435	09.71	34.14	26.34	-	-
541	07.78	34.05	26.58	4.13	1.61
652	05.68	33.96	26.79	2.65	2.24
870	04.20	34.18	27.14	0.76	2.87
1080	03.57	34.34	27.32	0.32	3.05
1080	03.51	34.34	27.33	-	-
1295	03.13	34.43	27.44	0.44	3.00

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	ΔD 1000 - ΔD (dyn. m)
00	17.16	34.78	25.33	0.000	1.674
10	17.16	34.78	25.33	0.027	1.647
20	17.16	34.78	25.33	0.053	1.621
30	17.16	34.78	25.33	0.080	1.594
50	17.05	34.76	25.34	0.133	1.541
75	16.80	34.71	25.36	0.200	1.474
100	16.58	34.67	25.38	0.266	1.408
150	14.20	34.43	25.72	0.390	1.284
200	13.07	34.35	25.89	0.502	1.172
250	12.21	34.30	26.03	0.607	1.067
300	11.54	34.28	26.14	0.708	0.966
400	10.16	34.17	26.30	0.896	0.778
500	08.52	34.08	26.49	1.069	0.605
600	06.60	33.98	26.69	1.223	0.451
700	05.21	34.00	26.88	1.358	0.316
800	04.52	34.11	27.05	1.476	0.198
1000	03.74	34.30	27.28	1.674	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 66

M/V Hugh M. Smith: Cruise 27, 29°28'N., 159°12'W., February 19, 1955. Messenger time: 1501 GCT. Weather: 02, cloud coverage 2. Wind: 120°, 11-16 kt. Sea: 3-5 ft. Wire angle: 10°. BT slide: 185

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	18.95	35.19	25.20	5.24	0.17
85	18.40	35.07	25.24	5.30	0.16
126	15.88	34.58	25.47	5.12	0.34
159	14.80	34.51	25.66	5.00	0.49
216	13.38	34.40	25.87	5.01	0.63
268	12.40	34.29	25.98	5.02	0.79
321	11.55	34.29	26.14	4.98	0.89
430	09.91	34.18	26.34	4.69	1.20
534	07.70	34.05	26.59	3.89	1.72
644	05.76	34.02	26.84	2.43	2.32
856	04.30	34.18	27.12	0.74	2.93
1062	03.66	34.34	27.32	0.36	3.11
1273	03.23	34.49	27.48	0.72	2.98

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	18.95	35.19	25.20	0.000	1.691
10	18.95	35.19	25.20	0.028	1.663
20	18.94	35.18	25.19	0.056	1.635
30	18.94	35.18	25.19	0.084	1.607
50	18.80	35.15	25.21	0.139	1.552
75	18.50	35.09	25.24	0.209	1.482
100	17.60	34.88	25.30	0.277	1.414
150	15.08	34.53	25.61	0.406	1.285
200	13.75	34.44	25.83	0.523	1.168
250	12.70	34.32	25.95	0.632	1.059
300	11.87	34.29	26.08	0.735	0.956
400	10.36	34.20	26.29	0.927	0.764
500	08.49	34.09	26.51	1.100	0.591
600	06.20	34.02	26.78	1.249	0.442
700	05.18	34.06	26.93	1.378	0.313
800	04.62	34.13	27.05	1.493	0.198
1000	03.80	34.32	27.29	1.691	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 67

M/V Hugh M. Smith: Cruise 27, 28°00'N., 159°03'W., February 20, 1955. Messenger time: 0204 GCT. Weather: 02, cloud coverage 6. Wind: 070°, 17-21 kt. Sea: 5-8 ft. Wire angle: 20°. BT slide: 188

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	20.91	35.39	24.83	5.12	0.14
57	20.19	35.28	24.94	5.11	0.15
113	19.08	35.05	25.06	5.23	0.17
170	16.00	34.61	25.47	5.05	0.43
226	14.40	34.43	25.68	5.03	0.55
282	13.44	34.36	25.83	4.97	0.71
340	12.04	34.29	26.05	4.99	0.86
458	09.38	34.13	26.39	4.54	1.33
572	07.08	34.13	26.74	3.45	1.95
684	05.54	34.07	26.89	2.02	2.51
904	04.22	34.31	27.24	0.58	3.01
1124	03.54	34.51	27.46	0.63	3.13
1334	03.09	34.49	27.49	1.01	2.93

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	20.91	35.39	24.83	0.000	1.769
10	20.90	35.39	24.84	0.031	1.738
20	20.88	35.39	24.84	0.062	1.707
30	20.88	35.39	24.84	0.094	1.675
50	20.39	35.32	24.92	0.156	1.613
75	19.79	35.20	24.99	0.231	1.538
100	19.39	35.11	25.02	0.306	1.463
150	17.77	34.85	25.23	0.451	1.318
200	14.94	34.48	25.60	0.582	1.187
250	14.00	34.40	25.74	0.701	1.068
300	13.10	34.34	25.88	0.815	0.954
400	10.58	34.20	26.25	1.018	0.751
500	08.43	34.12	26.54	1.191	0.578
600	06.65	34.12	26.79	1.338	0.431
700	05.38	34.08	26.92	1.467	0.302
800	04.65	34.21	27.11	1.580	0.189
1000	03.98	34.39	27.33	1.769	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 69

M/V Hugh M. Smith: Cruise 27, 26°30'N., 158°47'W., February 20, 1955. Messenger time: 1424 GCT. Weather: 02, cloud coverage 2. Wind: 070°, 17-21 kt. Sea: 5-8 ft. Wire angle: 25°. BT slide: 191

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	21.61	35.43	24.67	5.03	0.13
42	21.60	35.37	24.63	5.01	0.12
84	21.25	35.41	24.75	5.00	0.14
121	19.53	35.12	24.99	4.79	0.26
162	17.75	34.87	25.25	4.66	0.37
207	16.18	34.69	25.49	4.80	0.44
310	12.12	34.18	25.95	4.64	0.84
419	09.75	34.13	26.33	4.57	1.11
419	09.95	34.13	26.30	-	-
523	07.44	34.07	26.64	3.72	1.79
627	06.18	34.00	26.76	2.60	2.27
833	04.44	34.18	27.11	0.75	2.94
1041	03.76	34.42	27.37	0.69	3.08
1243	03.30	34.49	27.47	1.03	2.94

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	21.61	35.43	24.67	0.000	1.808
10	21.61	35.42	24.67	0.033	1.775
20	21.60	35.40	24.65	0.066	1.742
30	21.60	35.38	24.64	0.099	1.709
50	21.52	35.37	24.65	0.165	1.643
75	21.27	35.41	24.75	0.247	1.561
100	21.15	35.40	24.78	0.328	1.480
150	18.35	34.95	25.17	0.480	1.328
200	16.38	34.71	25.46	0.616	1.192
250	13.58	34.33	25.78	0.738	1.070
300	12.27	34.20	25.94	0.849	0.959
400	10.23	34.14	26.26	1.050	0.758
500	07.88	34.09	26.60	1.219	0.589
600	06.46	34.00	26.73	1.366	0.442
700	05.35	34.05	26.90	1.498	0.310
800	04.65	34.14	27.06	1.615	0.193
1000	03.86	34.38	27.33	1.808	0.000

Table 4.--Oceanographic station data (cont'd)

STATION 70

M/V Hugh M. Smith: Cruise 27, 25°00'N., 158°40'W., February 21, 1955. Messenger time: first cast 0155 GCT, second cast 0224 GCT. Weather: 15, cloud coverage 6. Wind: 060°, 17-21 kt. Sea: 8-12 ft. Wire angle: first cast 05°, second cast 06°. BT slide: 194

OBSERVED

	DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
	0	21.55	35.41	24.67	5.05	0.13
	59	20.94	35.39	24.82	5.08	0.14
	117	19.55	35.12	24.99	4.78	0.23
	175	17.92	34.92	25.25	4.75	0.34
	234	15.26	34.58	25.61	4.62	0.52
	292	12.84	34.45	26.02	4.81	0.79
I	351	11.06	34.33	26.26	4.65	1.01
	471	08.43	34.07	26.50	4.17	1.77
	587	06.31	34.04	26.78	2.68	2.24
	699	04.94	34.13	27.02	1.21	2.83
	384	10.10	34.16	26.30	4.52	1.36
II	624	05.56	34.09	26.91	1.73	2.70
	850	04.41	34.31	27.22	0.90	3.01

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	20.95	35.41	-	-	-
10	20.95	35.41	-	-	-
20	20.95	35.40	-	-	-
30	20.96	35.40	-	-	-
50	20.98	35.39	-	-	-
75	20.30	35.26	-	-	-
100	19.85	35.17	-	-	-
150	18.72	35.02	-	-	-
200	17.04	34.77	-	-	-
250	14.58	34.54	-	-	-
300	12.61	34.44	-	-	-
400	09.81	34.14	-	-	-
500	07.93	34.05	-	-	-
600	06.01	34.05	-	-	-
700	04.94	34.13	-	-	-
800	04.60	34.21	-	-	-

Table 4.--Oceanographic station data (cont'd)

STATION 72

M/V Hugh M. Smith: Cruise 27, 23°29'N., 158°27'W., February 21, 1955. Messenger time: 1506 GCT. Weather: 02, cloud coverage 2. Wind: 200°, 4-6 kt. Sea: 1-3 ft. Wire angle: 20°. BT slide: 197

OBSERVED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	O_2 (ml/l)	PO_4-P (µg at/l)
0	22.41	35.21	24.28	5.04	0.24
40	22.39	35.21	24.29	4.88	0.22
79	22.34	35.17	24.27	4.88	0.24
118	22.34	35.21	24.30	4.89	0.24
159	21.64	35.26	24.53	4.69	0.23
203	19.64	35.12	24.96	4.68	0.29
302	14.23	34.42	25.71	4.50	0.71
405	09.88	34.14	26.32	3.81	1.57
505	08.02	34.16	26.63	2.54	2.23
609	06.38	34.20	26.90	1.43	2.64
814	04.60	34.25	27.15	0.79	3.07
1013	03.97	34.43	27.36	1.03	3.16
1013	03.92	34.43	27.36	-	-
1218	03.46	34.52	27.48	1.28	3.06

INTERPOLATED AND CALCULATED

DEPTH (m)	T (°C)	S (°/oo)	σ_t	ΔD (dyn. m)	$\Delta D\,1000 - \Delta D$ (dyn. m)
00	22.41	35.21	24.28	0.000	1.920
10	22.39	35.21	24.29	0.037	1.883
20	22.39	35.21	24.29	0.073	1.847
30	22.39	35.21	24.29	0.110	1.810
50	22.38	35.20	24.28	0.183	1.737
75	22.34	35.17	24.27	0.275	1.645
100	22.34	35.20	24.29	0.367	1.553
150	22.01	35.25	24.42	0.548	1.372
200	19.78	35.13	24.94	0.715	1.205
250	17.99	34.92	25.23	0.863	1.057
300	14.37	34.44	25.70	0.993	0.927
400	10.02	34.15	26.31	1.203	0.717
500	08.08	34.16	26.62	1.369	0.551
600	06.49	34.20	26.88	1.508	0.412
700	05.48	34.21	27.01	1.628	0.292
800	04.66	34.24	27.13	1.736	0.184
1000	03.95	34.42	27.35	1.920	0.000

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955 (For coded values see H. O. Pub 606-C)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
1	1840	1/6	22°34'N	159°38'W	76.0	130	08	74.5	69.0	1016.4	02	8	3	8	3
2	0200	1/7	22°53'N	160°17'W	75.0	320	06	76.5	70.5	1013.4	03	8	6	7	3
3	0610	1/7	23°10'N	160°51'W	74.1	050	19	74.0	68.5	1014.4	02	8	7	7	3
4	1200	1/7	23°36'N	161°43'W	74.2	090	22	73.0	69.0	1014.4	02	8	8	7	3
5	1805	1/7	23°52'N	162°28'W	74.7	170	15	73.5	67.5	1013.8	02	8	3	9	3
6	2330	1/8	23°52'N	162°30'W	74.7	170	17	75.5	70.5	1014.0	02	8	1	9	3
7	0230	1/8	23°47'N	163°01'W	74.8	170	18	75.5	70.5	1013.6	02	8	2	9	3
8	0630	1/8	23°37'N	163°33'W	74.9	170	15	74.4	70.8	1015.4	02	8	2	9	3
9	1100	1/8	23°31'N	164°07'W	74.7	190	27	71.0	70.0	1016.0	50	8	6	8	3
10	1600	1/8	23°14'N	165°00'W	74.1	140	15	73.6	70.9	1016.1	01	8	3	9	2
11	2300	1/8	22°59'N	165°47'W	75.9	180	12	76.5	72.0	1016.7	03	8	4	9	2
12	0300	1/9	22°49'N	166°21'W	76.3	150	08	76.0	71.0	1016.4	01	3	2	9	2
13	0800	1/9	22°39'N	166°59'W	76.0	180	08	75.1	71.5	1017.9	02	8	3	9	2
14	1138	1/9	22°29'N	167°30'W	75.9	120	18	74.8	71.2	1019.2	02	8	2	9	2
15	1755	1/9	22°22'N	168°09'W	76.1	150	10	75.0	72.0	1017.4	02	8	2	9	3
16	2215	1/9	21°51'N	168°46'W	77.0	180	16	77.1	73.0	1018.1	02	8	3	8	3
17	0255	1/10	21°44'N	169°27'W	76.8	180	11	76.2	72.0	1016.5	18	8	4	8	3
18	0600	1/10	21°38'N	170°20'W	76.9	190	07	76.5	72.5	1017.5	02	8	2	9	3
19	1200	1/10	21°25'N	170°48'W	77.2	210	05	77.0	72.5	1017.6	02	3	1	9	3
20	1545	1/10	21°10'N	171°16'W	77.9	190	07	77.0	72.0	1017.6	01	1	1	9	3
21	1950	1/10	20°55'N	171°46'W	76.4	000	24	75.1	71.0	1020.5	14	0, 8	5	8	3
22	2305	1/10	20°39'N	172°17'W	76.2	020	20	74.0	70.0	1019.2	62	0, 8	5	8	4
23	0545	1/11	20°33'N	173°01'W	75.2	030	27	74.5	69.5	1020.4	02	4, 8	8	7	5
24	0945	1/11	20°27'N	173°32'W	75.1	030	29	74.1	66.1	1021.4	02	8	8	7	5
25	1350	1/11	20°20'N	174°11'W	75.5	050	35	72.5	65.5	1022.0	03	8	8	7	5
26	1800	1/11	20°15'N	174°43'W	76.6	080	32	72.0	64.8	1023.4	02	7	8	7	5-6
27	2200	1/11	20°26'N	175°15'W	76.8	050	30	74.5	64.5	1025.2	02	8	5	9	5-6
28	0130	1/12	20°33'N	175°50'W	76.8	080	31	74.0	65.0	1023.0	01	8	3	9	5
29	0505	1/12	20°37'N	176°20'W	76.5	070	27	73.5	64.5	1023.9	02	8	8	8	5
30	0910	1/12	20°48'N	176°57'W	76.6	080	24	73.0	65.4	1024.0	02	8	3	9	5

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955 (For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
31	1200	1/12	20°53'N	177°13'W	76.8	080	18	73.5	65.0	1023.4	02	8	7	9	4
32	1800	1/12	20°50'N	177°23'W	76.0	070	22	73.5	66.0	1023.9	02	8	3	9	4
33	2330	1/12	21°03'N	177°54'W	77.5	080	18	75.1	66.5	1022.9	02	8	8	8	4
34	0330	1/13	21°15'N	178°26'W	76.5	090	25	75.0	67.5	1022.4	02	8	7	9	4
35	0650	1/13	21°28'N	179°05'W	77.2	080	20	74.8	66.1	1023.3	02	8	5	9	4
36	1015	1/13	21°40'N	179°31'W	77.0	090	13	76.0	68.5	1023.4	02	8	4	9	3
37	1315	1/13	21°51'N	180°00'	76.7	090	20	74.0	66.9	1022.0	02	8	3	9	X
38	1715	1/13	21°56'N	179°33'E	76.5	090	20	75.5	67.5	1023.0	02	8	3	9	3
39	2130	1/13	22°00'N	178°52'E	76.2	090	16	76.1	67.0	1022.7	02	8	7	9	3
40	0155	1/14	22°09'N	178°08'E	77.2	090	12	78.0	68.0	1019.7	02	8	7	9	2
41	0630	1/14	22°31'N	177°30'E	76.4	090	18	75.2	66.5	1020.4	02	6	9	8	3
42	1230	1/14	22°45'N	176°47'E	76.1	070	08	75.1	66.1	1020.4	02	6	9	8	3
43	1615	1/14	22°57'N	176°10'E	75.8	050	11	75.5	66.5	1019.0	02	6	7	8	3
44	2020	1/14	23°08'N	175°21'E	76.4	040	11	75.5	66.5	1020.9	01	6	7	9	3
45	0005	1/15	23°19'N	174°46'E	75.0	080	13	75.0	66.5	1018.0	01	2	1	9	3
46	0550	1/15	23°33'N	174°03'E	76.0	020	09	76.5	67.0	1017.9	02	6	2	9	3
47	1020	1/15	23°49'N	173°30'E	75.0	020	19	71.5	67.4	1019.9	02	6	3	9	5
48	1315	1/15	23°57'N	173°00'E	75.2	260	09	66.5	66.0	1020.0	51	8	9	0	5
49	1630	1/15	23°57'N	172°38'E	76.2	060	30	70.0	65.8	1020.0	03	8	8	3	5
50	2210	1/15	24°03'N	172°09'E	75.9	060	26	73.0	67.0	1023.4	02	8	8	8	5
51	0200	1/16	24°17'N	171°37'E	76.5	030	33	74.0	65.0	1023.0	03	6	7	8	5
52	0600	1/16	24°34'N	171°05'E	76.3	080	31	71.5	63.0	1022.5	01	6	3	9	5
53	1100	1/16	24°50'N	170°31'E	73.0	070	19	71.5	63.0	1024.9	02	6	4	9	4
54	1440	1/16	24°59'N	169°31'E	72.2	080	21	71.1	63.1	1023.4	02	8	3	9	3
55	1930	1/16	25°25'N	169°30'E	71.4	090	26	70.2	64.0	1023.9	01	8	7	9	3
56	2300	1/16	25°56'N	169°28'E	72.0	100	18	73.0	64.0	1025.4	02	4,8	7	9	3
57	0300	1/17	26°29'N	169°32'E	71.0	100	18	76.0	65.0	1024.0	02	8	1	9	3
58	0755	1/17	27°02'N	169°39'E	70.5	140	14	69.9	62.5	1024.8	02	X	0	9	3
59	1200	1/17	27°30'N	169°49'E	70.1	120	07	70.0	62.2	1025.4	02	X	0	9	3
60	1515	1/17	27°55'N	169°50'E	70.0	130	10	69.0	61.0	1024.7	02	X	0	9	3

Table 5.--Summary of observations at bathythermograph loweringS, Hugh M. Smith cruise 27, January 5 to February 21, 1955 (For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
61	2115	1/17	28°25'N	169°50'E	70.5	000	05	69.0	62.0	1024.9	02	6	1	9	3
62	0120	1/18	29°00'N	169°53'E	71.5	200	10	69.5	64.7	1022.4	02	6	6	9	3
63	0505	1/18	29°30'N	169°56'E	70.9	250	16	69.4	65.1	1021.8	02	4,8	5	9	3
64	1030	1/18	30°00'N	170°05'E	68.4	230	14	68.2	65.2	1021.1	02	1	5	9	3
65	1350	1/18	30°33'N	170°22'E	66.0	260	18	67.0	66.0	1020.0	02	X	X	9	4
66	1720	1/18	31°05'N	170°34'E	67.4	270	20	66.4	64.9	1018.0	02	4,8	5	9	3
67	2215	1/18	31°31'N	170°46'E	65.0	270	15	65.2	62.2	1018.4	02	4,8	5	9	3
68	0130	1/19	32°00'N	170°37'E	63.4	280	25	65.1	62.5	1016.2	02	4	4	9	3
69	2325	1/19	32°41'N	171°20'E	62.0	330	16	56.1	50.0	1024.4	02	8	3	9	3
70	0405	1/20	32°28'N	171°55'E	64.0	350	16	56.5	51.5	1024.1	02	8	5	9	5
71	1200	1/20	32°08'N	172°50'E	63.9	090	05	58.0	50.0	1026.4	02	X	3	9	4
72	1800	1/20	31°56'N	173°29'E	63.5	190	12	59.0	49.5	1025.0	01	4	4	9	4
73	0000	1/21	31°45'N	174°00'E	65.8	140	15	61.0	53.0	1024.9	02	6	4	9	4
74	0600	1/21	31°37'N	174°35'E	64.5	160	25	62.9	55.6	1021.5	02	8	7	9	4
75	1200	1/21	31°30'N	175°10'E	63.5	190	30	63.5	56.0	1020.4	02	X	4	9	5
76	1800	1/21	31°23'N	175°45'E	65.5	190	33	66.0	61.5	1016.6	01	X	3	9	5
77	0000	1/22	31°15'N	176°20'E	65.8	210	32	68.0	64.0	1014.9	02	6	8	7	5
78	0600	1/22	30°58'N	176°52'E	66.5	240	23	66.8	65.1	1015.5	63	0	9	5	5
79	1200	1/22	30°43'N	177°23'E	66.0	250	04	65.0	63.5	1018.4	51	X	9	7	3
80	1800	1/22	30°26'N	177°54'E	66.0	190	20	67.0	65.0	1018.4	02	X	9	7	3
81	0000	1/23	30°09'N	178°27'E	65.5	200	15	68.0	65.1	1018.8	01	6	8	8	3
82	0600	1/23	29°55'N	178°58'E	66.2	210	20	66.0	65.8	1017.5	46	8	9	1	3
83	1200	1/23	29°42'N	179°28'E	66.0	240	23	67.0	66.1	1018.9	46	X	9	4	3
84	1900	1/23	29°15'N	179°42'W	68.0	200	20	68.0	67.0	1019.0	01	3	6	9	4
85	0000	1/24	29°09'N	179°07'W	67.5	240	15	70.1	67.2	1018.9	02	6	2	9	4
86	0600	1/24	28°46'N	178°46'W	68.0	280	16	70.0	64.5	1019.4	03	4,6	7	9	4
87	1200	1/24	28°27'N	178°10'W	69.5	270	16	69.8	63.0	1020.9	02	X	2	9	3
88	1200	2/1	28°39'N	178°32'W	69.0	290	11	78.0	78.2	1016.4	02	8	5	9	3
89	1800	2/1	28°59'N	179°19'W	68.0	270	10	70.0	68.0	1014.7	50	X	9	0	2
90	0000	2/2	29°19'N	179°54'E	67.0	290	07	64.0	61.0	1015.4	51	0	9	7	3

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955 (For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
91	0320	2/2	29°31'N	179°20'E	65.9	220	18	64.2	61.8	1013.3	61	6	8	7	3
92	0845	2/2	30°00'N	179°31'E	66.3	280	15	64.8	59.5	1014.7	21	6	8	8	3
93	1340	2/2	30°52'N	179°41'E	65.5	330	10	64.0	59.5	1014.0	01	4	3	7	3
94	1725	2/2	31°08'N	179°52'E	65.5	320	10	62.8	55.8	1014.3	02	4,6	6	9	3
95	2115	2/2	31°33'N	179°53'E	64.6	280	10	63.0	56.5	1015.4	02	3	6	9	3
96	0044	2/3	32°01'N	179°50'E	65.0	280	10	64.0	58.5	1014.4	03	6	8	8	3
97	0350	2/3	32°34'N	179°56'W	64.8	290	19	62.0	56.0	1014.6	15	5,6	7	9	4
98	1030	2/3	32°59'N	179°57'W	62.0	330	34	57.0	53.0	1017.4	02	6	9	8	5
99	1445	2/3	33°27'N	180°00'	62.5	330	30	55.5	50.0	1017.8	03	8	6	8	5
100	1810	2/3	33°49'N	179°56'E	62.0	330	30	54.5	50.0	1020.0	02	8	3	9	5
101	0015	2/4	34°25'N	179°52'E	62.5	000	29	54.0	47.0	1023.0	02	8	5	8	6
102	0810	2/4	35°08'N	179°51'E	56.0	030	22	54.0	46.5	1027.4	03	8	6	8	5
103	1230	2/4	35°30'N	179°44'W	60.0	030	24	53.0	45.8	1028.4	02	6	8	8	5
104	1805	2/4	36°25'N	179°25'E	57.0	030	18	55.0	47.5	1031.0	03	8	7	7	5
105	2010	2/4	36°43'N	179°28'E	58.2	060	21	49.8	44.7	1031.8	02	4	4	9	5
106	0215	2/5	36°49'N	179°43'W	60.5	050	22	51.8	47.0	1033.4	02	8	3	9	5
107	0735	2/5	36°58'N	178°47'W	57.6	090	20	51.5	45.5	1034.0	02	8	3	9	5
108	1315	2/5	37°13'N	177°40'W	58.0	050	15	53.5	47.0	1037.0	02	8	5	8	5
109	1900	2/5	37°12'N	177°07'W	57.9	060	20	51.5	46.5	1035.9	02	8	3	9	5
110	0000	2/6	37°06'N	176°11'W	57.2	100	18	52.8	46.9	1036.8	02	8	3	9	5
111	0405	2/6	37°00'N	175°32'W	58.2	120	16	51.4	46.9	1035.9	02	8,4,1	4	9	4
112	1100	2/6	36°56'N	174°47'W	55.7	140	10	50.5	46.2	1037.6	02	8	2	9	3
113	1500	2/6	36°52'N	174°05'W	53.5	120	10	50.0	45.5	1037.4	02	8	2	9	3
114	1915	2/6	36°49'N	173°20'W	53.0	080	20	52.9	46.9	1036.0	02	6	2	9	3
115	0000	2/7	36°21'N	173°20'W	55.0	110	22	52.1	46.7	1034.9	02	6	9	9	3
116	0330	2/7	35°48'N	173°24'W	56.0	140	20	53.0	47.1	1033.4	02	7	9	9	4
117	0630	2/7	35°20'N	173°27'W	57.1	140	19	52.8	47.2	1032.9	02	7	7	9	4
118	1200	2/7	34°52'N	173°22'W	57.5	130	23	54.8	49.4	1031.0	02	7	8	9	4
119	1540	2/7	34°27'N	173°17'W	58.0	150	24	55.0	49.0	1029.4	02	6	8	8	4
120	1715	2/7	34°09'N	173°13'W	58.0	180	19	57.0	52.0	1029.4	02	0	8	8	3

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955 (For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
121	2220	2/7	33°42'N	173°08'W	58.0	180	17	59.0	52.5	1028.9	02	0	8	8	3
122	0130	2/8	33°20'N	173°04'W	59.0	150	22	60.5	54.5	1026.0	02	0	8	8	4
123	0820	2/8	32°30'N	173°02'W	61.1	190	16	60.8	55.4	1027.6	01	5	8	9	3
124	1245	2/8	32°00'N	173°02'W	61.1	180	17	62.0	57.0	1026.4	01	6	7	9	3
125	1640	2/8	31°33'N	173°03'W	61.0	160	13	62.0	56.5	1025.4	02	6	6	9	2
126	1950	2/8	31°00'N	172°57'W	65.0	140	1*	64.0	57.0	1027.4	02	6	8	9	2
127	2345	2/8	30°33'N	172°52'W	62.0	140	2*	64.0	57.0	1027.0	01	8	1	9	2
128	0330	2/9	30°07'N	172°47'W	62.9	130	3*	63.0	57.5	1024.7	02	8	1	9	3
129	0820	2/9	29°35'N	172°42'W	63.2	080	3*	62.8	57.1	1026.6	02	8	2	9	2
130	1310	2/9	29°04'N	172°42'W	66.0	080	3*	64.2	58.6	1026.0	03	8	6	9	3
131	1650	2/9	28°21'N	172°40'W	67.5	080	5*	64.0	57.5	1024.4	03	8	7	8	3
132	1920	2/9	28°00'N	172°37'W	68.0	080	4*	67.0	59.0	1025.9	01	6	8	9	3
133	0030	2/10	27°31'N	172°24'W	70.0	100	4*	68.0	60.0	1025.0	03	6	7	9	4
134	0420	2/10	27°02'N	172°13'W	70.2	110	5*	68.0	58.9	1024.4	02	8	6	9	4
135	0800	2/10	26°32'N	171°57'W	70.8	090	5*	68.1	61.0	1025.3	02	8	3	9	4
136	1030	2/11	26°06'N	171°21'W	69.9	050	5*	67.5	61.5	1025.4	01	8	4	9	4
137	1430	2/11	26°27'N	170°57'W	70.0	050	5*	67.0	60.5	1024.4	02	8	4	9	4
138	1810	2/11	26°47'N	170°34'W	69.0	050	5*	64.5	62.0	1025.9	03	8	6	7	4
139	2210	2/11	27°05'N	170°07'W	68.7	050	5*	69.0	61.0	1027.1	03	8	7	9	4
140	0215	2/12	27°24'N	169°40'W	68.0	040	5*	67.0	61.5	1025.9	02	7	8	8	4
141	0600	2/12	27°43'N	169°13'W	67.3	050	7*	66.2	58.9	1027.1	02	7	8	9	5
142	1000	2/12	28°00'N	168°42'W	67.0	050	5*	65.5	58.5	1029.9	01	8	3	9	4
143	1545	2/12	28°19'N	168°13'W	68.5	050	5*	64.0	57.0	1027.4	02	8	4	9	4
144	2010	2/12	28°37'N	167°47'W	68.0	050	5*	65.5	58.0	1029.8	01	8	3	9	4
145	2345	2/12	28°58'N	167°15'W	68.0	080	5*	65.8	58.0	1029.4	02	8	3	9	4
146	0250	2/13	29°14'N	166°48'W	67.0	080	5*	67.5	60.0	1029.0	02	8	3	9	4
147	0505	2/13	29°30'N	166°44'W	66.8	080	5*	64.0	58.5	1030.1	02	8	2	9	4
148	1110	2/13	30°00'N	166°42'W	66.9	040	5*	61.8	57.8	1031.0	02	8	2	9	4
149	1445	2/13	30°30'N	166°46'W	66.1	040	4*	61.5	56.5	1030.4	03	8	4	9	3
150	1830	2/13	30°57'N	166°49'W	66.0	090	3*	59.0	54.9	1031.4	02	8	4	9	3

* Anemometer failed; Beaufort force

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955(For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
151	2325	2/13	31°32'N	166°46'W	62.3	090	3*	65.0	57.0	1031.0	01	8	2	9	3
152	0305	2/14	32°00'N	166°45'W	62.0	090	3*	61.0	56.0	1029.9	03	8	4	9	3
153	0710	2/14	32°27'N	166°40'W	60.0	120	3*	59.1	55.1	1032.9	02	7,8	6	9	3
154	1240	2/14	33°00'N	166°40'W	59.8	140	3*	60.2	55.5	1030.2	02	7,8	6	9	3
155	1615	2/14	33°48'N	166°39'W	58.3	120	2*	62.0	57.0	1029.1	03	7,8	8	8	2
156	1945	2/14	34°22'N	166°37'W	57.6	160	2*	60.1	56.0	1028.9	02	0	8	8	2
157	0100	2/15	34°54'N	166°38'W	56.5	140	2*	60.0	57.0	1027.4	03	0	8	9	2
158	0515	2/15	35°30'N	166°40'W	55.1	180	3*	57.5	55.3	1025.5	02	6	8	9	2
159	1050	2/15	36°01'N	166°44'W	55.1	210	4*	56.8	55.2	1021.6	02	X	8	8	3
160	1415	2/15	36°32'N	166°43'W	55.0	220	4*	56.5	55.5	1019.4	61	X	9	4	3
161	1725	2/15	37°00'N	166°43'W	54.9	220	6*	57.0	56.0	1016.4	50	0	9	7	4
162	2310	2/15	37°02'N	166°00'W	54.2	220	5*	56.0	55.0	1016.4	50	X	9	5	4
163	0320	2/16	37°05'N	165°00'W	54.0	270	4*	55.0	53.0	1016.4	45	X	9	1	4
164	0740	2/16	37°07'N	164°11'W	54.4	290	4*	53.3	50.5	1018.0	01	0	8	8	4
165	1215	2/16	37°07'N	163°36'W	53.1	300	3*	53.5	49.5	1019.1	02	0	7	9	3
166	1520	2/16	37°04'N	162°55'W	53.0	290	3*	54.0	50.5	1018.4	01	4	3	9	2
167	1820	2/16	37°00'N	162°20'W	52.1	300	5*	53.0	49.5	1018.9	02	8	3	9	3
168	2340	2/16	36°59'N	161°31'W	54.0	330	5*	50.2	46.2	1021.6	01	4,8	4	9	4
169	0330	2/17	37°00'N	160°46'W	55.0	330	5*	50.0	44.0	1023.1	02	4,8	4	9	4
170	0710	2/17	36°56'N	160°05'W	54.8	330	5*	49.4	43.5	1024.2	02	8	3	9	4
171	1155	2/17	36°30'N	160°01'W	54.8	270	3*	49.8	44.2	1024.1	02	8	3	9	4
172	1500	2/17	36°00'N	159°57'W	54.2	280	2*	51.0	45.0	1024.9	01	4	2	9	3
173	1815	2/17	35°30'N	159°53'W	55.0	040	2*	51.0	45.0	1026.9	02	1,2	2	9	3
174	2205	2/17	35°00'N	159°50'W	57.0	120	2*	54.0	47.0	1027.4	01	4	1	9	3
175	0115	2/18	34°30'N	159°47'W	57.5	120	2*	53.0	47.0	1026.0	02	4	1	9	3
176	0435	2/18	34°00'N	159°42'W	57.0	140	2*	53.1	48.5	1025.8	02	1,4	1	9	3
177	0945	2/18	33°30'N	159°39'W	60.3	120	3*	54.9	50.5	1026.4	02	4	1	9	3
178	1255	2/18	33°00'N	159°35'W	60.8	120	3*	56.0	51.5	1026.9	02	4	1	9	3
179	1615	2/18	32°27'N	159°30'W	60.0	140	2*	57.5	51.9	1026.9	02	4	1	9	3
180	2045	2/18	31°52'N	159°28'W	61.5	140	2*	61.0	55.0	1027.3	03	4,8	2	9	3

* Anemometer failed; Beaufort force

Table 5.--Summary of observations at bathythermograph lowerings, Hugh M. Smith cruise 27, January 5 to February 21, 1955(For coded values see H. O. Pub 606-C) (cont'd)

Ser. No.	Time, GCT	Date, 1955	Latitude	Longitude	Bkt. temp., °F.	Wind		Air temp.		Barometer, mb.	Weather	Clouds		Visibility	Sea
						Dir., °T.	Force, kt.	Dry bulb, °F.	Wet bulb, °F.			Type	Cover		
181	2330	2/18	31°28'N	159°25'W	63.5	140	4*	61.5	55.5	1024.9	02	1,4	3	9	3
182	0215	2/19	31°00'N	159°22'W	62.9	070	2*	61.2	56.0	1025.0	02	1	4	9	2
183	0730	2/19	30°30'N	159°18'W	65.0	080	4*	63.0	57.5	1027.9	02	1	2	9	3
184	1055	2/19	30°00'N	159°15'W	66.0	090	3*	64.5	58.2	1026.7	02	1	2	8	3
185	1400	2/19	29°30'N	159°12'W	65.5	120	4*	65.0	57.0	1024.9	02	X	2	8	3
186	1830	2/19	29°00'N	159°89'W	66.5	120	3*	66.0	60.5	1025.6	03	4,8	6	8	3
187	2150	2/19	28°28'N	159°05'W	67.5	120	5*	68.5	64.0	1024.4	03	4,8	8	8	4
188	0055	2/20	28°00'N	159°03'W	69.6	080	5*	68.2	63.2	1021.9	02	8	6	8	4
189	0605	2/20	27°30'N	158°56'W	69.2	080	5*	68.0	63.0	1022.5	02	8	6	8	4
190	0945	2/20	27°00'N	158°53'W	70.0	080	5*	69.0	63.5	1021.4	01	8	4	9	4
191	1320	2/20	26°30'N	158°47'W	70.0	070	5*	69.0	63.0	1018.4	02	X	2	9	4
192	1810	2/20	26°03'N	158°45'W	70.5	070	5*	67.5	65.0	1018.0	50	8	7	8	4
193	2140	2/20	25°30'N	158°43'W	71.5	070	4*	70.5	67.5	1016.9	50	6	8	7	4
194	0100	2/21	25°00'N	158°40'W	70.0	060	5*	70.5	67.3	1012.6	15	6	6	8	5
195	0455	2/21	24°39'N	158°35'W	71.0	060	2*	70.3	68.2	1011.7	01	6	5	8	5
196	1055	2/21	24°00'N	158°28'W	72.0	090	3*	71.0	68.0	1010.9	02	6	2	9	3
197	1400	2/21	23°30'N	158°27'W	72.0	200	2*	71.0	67.0	1008.9	02	X	2	9	2
198	1850	2/21	23°00'N	158°24'W	72.0	200	2*	79.8	68.2	1000.1	16	8	4	9	3

* Anemometer failed; Beaufort force

Table 6.--Log of ship's weather observations, Hugh M. Smith cruise 27, January 5 to February 21, 1955. Results in International Ship's Weather Code, January 1955

Date, 1955	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
1/7	22.9°N	160.1°W	0000	98	00	00	03	0	1013.8	8	0.6	78.8	69.0	76.2	4	3	3	6	1	0	09	3	3
1/7	23.2°N	160.9°W	0600	97	05	19	03	2	1014.4	1	1.0	74.0	68.5	74.1	8	8	4	5	X	X	05	X	4
1/7	23.6°N	161.7°W	1200	97	09	22	02	2	1014.4	0	0.4	73.0	69.0	74.2	8	8	0	5	X	X	09	X	4
1/7	23.9°N	162.4°W	1800	99	17	15	02	1	1013.8	3	1.6	73.5	67.5	74.7	4	4	3	4	0	0	09	3	4
1/8	23.1°N	162.5°W	0000	99	17	17	01	1	1014.0	0	2.4	75.5	70.5	74.7	1	1	0	4	0	0	19	3	4
1/8	23.8°N	162.4°W	0600	98	17	15	02	1	1015.4	3	1.6	74.4	70.8	74.9	6	6	8	5	0	0	23	3	5
1/8	23.6°N	164.1°W	1200	92	19	27	50	1	1016.0	1	0.6	71.0	70.0	74.7	6	6	8	5	0	0	23	3	5
1/8	23.2°N	155.2°W	1800	98	14	15	16	2	1016.9	3	1.6	73.6	70.9	74.1	7	7	4	3	0	0	14	3	3
1/9	22.1°N	165.1°W	0000	98	18	12	01	1	1016.2	8	2.2	77.0	72.0	76.0	3	3	2	3	0	0	15	3	3
1/9	22.6°N	166.9°W	0600	99	16	09	02	0	1017.4	1	1.2	75.5	71.4	76.0	1	1	1	5	0	0	11	3	2
1/9	22.6°N	167.6°W	1200	97	12	18	64	0	1017.5	3	0.0	74.8	71.2	75.9	5	5	3	4	0	0	11	3	3
1/9	22.3°N	168.1°W	1800	99	15	10	02	0	1017.4	3	0.6	75.0	72.0	76.1	3	2	2	5	8	0	13	3	3
1/10	21.7°N	169.1°W	0000	99	19	15	02	1	1016.9	8	2.2	78.0	74.0	77.0	3	2	2	5	6	0	13	3	4
1/10	21.6°N	170.2°W	0600	99	19	07	02	0	1017.5	3	1.0	76.5	72.5	76.9	2	2	2	5	0	0	14	3	4
1/10	21.5°N	170.1°W	1200	98	21	05	01	1	1017.6	6	0.6	77.0	72.5	77.2	1	1	1	5	0	9	14	3	3
1/10	21.1°N	172.1°W	1800	98	27	10	01	5	1018.4	3	1.0	75.1	71.5	77.0	3	3	2	5	0	0	14	3	3
1/11	20.7°N	172.5°W	0000	99	02	20	62	2	1019.2	8	1.6	74.0	70.0	76.2	6	4	6	4	8	0	35	3	5
1/11	20.5°N	173.1°W	0600	97	03	27	02	2	1020.4	3	2.0	74.5	69.5	75.2	6	4	4	5	6	0	32	3	6
1/11	20.2°N	174.4°W	1200	98	05	35	03	2	1022.0	5	0.2	72.5	65.5	75.5	8	4	4	5	9	X	02	3	6
1/11	19.8°N	175.1°W	1800	97	08	32	02	2	1023.4	3	2.0	72.0	64.8	76.6	6	6	4	5	0	0	07	3	8
1/12	20.6°N	175.3°W	0000	97	08	31	01	2	1023.0	8	2.6	74.0	65.0	76.8	2	2	1	5	0	0	05	3	8
1/12	20.6°N	176.3°W	0600	97	07	27	02	2	1023.9	3	1.8	73.5	64.5	76.5	6	6	4	5	0	0	05	3	6
1/12	20.8°N	176.1°W	1200	99	08	18	02	1	1023.4	8	0.6	73.5	65.0	76.8	5	X	X	X	X	X	05	3	6
1/12	20.8°N	177.4°W	1800	99	07	22	02	X	1023.9	X	X	73.5	66.0	76.0	2	X	X	X	X	X	X	X	X
1/13	21.1°N	178.0°W	0000	99	09	22	01	1	1022.0	8	2.2	78.0	68.5	77.2	2	2	1	5	0	0	09	3	4
1/13	21.4°N	178.9°W	0600	99	09	20	02	0	1023.0	3	0.6	75.0	65.5	77.1	1	1	1	4	0	0	09	3	4
1/13	21.8°N	179.8°W	1200	99	08	18	02	0	1022.9	6	1.0	74.5	66.5	77.0	3	3	4	5	0	0	09	3	4
1/13	22.0°N	179.4°E	1800	99	09	20	02	X	1023.0	3	0.6	75.5	67.5	76.5	4	4	4	5	0	0	07	3	3
1/14	22.2°N	178.5°E	0000	99	09	16	03	1	1021.0	8	2.0	77.5	67.5	76.7	7	7	4	5	0	0	08	3	3
1/14	22.5°N	177.6°E	0600	98	09	18	02	2	1019.9	3	0.2	76.0	67.0	76.5	7	7	4	4	0	0	08	3	3

Table 6.--Log of ship's weather observations, Hugh M. Smith cruise 27, January 5 to February 21, 1955. Results in International Ship's Weather Code, January 1955 (cont'd)

Date, 1955	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
1/14	22.7°N	177.2°E	1200	98	07	08	02	2	1020.4	3	0.0	75.5	67.0	76.8	7	7	4	4	0	0	08	3	3
1/14	23.0°N	175.8°E	1800	98	01	10	02	2	1019.9	3	0.6	75.1	67.0	76.0	7	7	4	4	0	0	01	3	3
1/15	23.3°N	174.8°E	0000	99	08	13	01	1	1018.0	8	3.2	75.0	66.5	75.0	1	1	4	5	0	0	11	3	2
1/15	23.6°N	174.0°E	0600	99	02	09	02	0	1017.9	3	1.0	76.5	67.0	76.0	1	1	4	5	0	0	34	3	6
1/15	23.9°N	173.3°E	1200	99	02	19	02	0	1019.9	3	0.6	71.5	67.2	75.0	1	1	4	5	0	0	34	3	6
1/15	24.0°N	172.6°E	1800	94	10	35	50	2	1020.7	5	1.6	70.0	65.8	76.2	8	8	8	5	X	X	10	3	6
1/16	24.2°N	171.9°E	0000	99	03	33	03	6	1023.0	0	0.2	74.0	66.5	76.2	6	6	4	5	6	0	08	3	7
1/16	24.6°N	171.1°E	0600	99	08	31	01	2	1022.5	3	1.0	71.5	63.0	76.3	3	3	4	5	0	0	08	3	7
1/16	24.9°N	170.4°E	1200	99	07	19	02	0	1024.4	0	0.4	71.5	63.0	73.0	3	3	4	5	0	0	08	3	5
1/16	25.2°N	169.5°E	1800	98	09	30	03	1	1023.0	3	0.6	71.5	65.5	72.5	7	7	4	5	0	0	08	3	5
1/17	26.0°N	169.5°E	0000	99	10	18	02	1	1024.9	0	0.0	73.0	63.5	71.8	3	3	4	5	0	0	08	3	5
1/17	26.7°N	169.6°E	0600	99	10	16	02	0	1024.8	3	0.8	69.9	62.5	70.4	0	0	0	X	0	0	08	3	4
1/17	27.5°N	169.8°E	1200	99	12	07	02	0	1025.4	3	0.2	70.0	62.2	70.0	0	0	0	X	0	0	08	3	4
1/17	28.1°N	169.8°E	1800	99	12	05	02	0	1024.0	3	0.6	68.5	61.0	70.5	0	0	0	X	0	0	08	3	2
1/18	28.8°N	169.9°E	0000	99	20	10	02	0	1023.4	6	1.0	72.0	65.1	71.4	1	1	4	5	0	0	08	3	4
1/18	29.5°N	169.6°E	0600	99	25	16	02	1	1021.8	6	0.2	70.0	65.1	70.9	4	1	1	4	3	0	25	3	3
1/18	30.2°N	170.0°E	1200	99	23	16	03	0	1021.4	8	0.6	68.5	66.0	69.5	6	0	0	9	1	0	25	3	4
1/18	31.1°N	170.6°E	1800	99	27	20	02	1	1018.0	6	0.6	66.4	64.9	67.4	4	4	1	X	1	0	25	3	4
1/19	31.8°N	170.7°E	0000	99	28	25	03	0	1017.9	8	1.6	65.1	62.5	64.8	1	1	8	4	0	0	29	3	4
1/19	32.5°N	170.9°E	0600	97	29	20	50	1	1015.0	8	1.0	62.5	62.5	62.5	8	0	0	9	2	0	29	3	4
1/19	32.5°N	171.7°E	1200	99	34	20	01	2	1018.8	3	2.0	60.0	54.9	61.5	2	X	X	X	X	X	29	3	4
1/20	32.6°N	171.4°E	0000	99	34	18	01	1	1024.0	1	1.0	56.5	51.5	61.9	3	3	2	4	0	0	33	3	7
1/20	32.4°N	173.2°E	0600	99	00	11	03	1	1024.7	5	1.0	58.0	53.0	64.0	5	5	8	4	0	0	33	3	5
1/20	32.0°N	172.9°E	1200	99	09	05	02	0	1026.4	3	0.6	58.0	50.0	63.9	2	X	X	X	X	X	30	3	5
1/20	31.9°N	173.5°E	1800	99	19	12	01	1	1025.0	3	1.0	59.0	49.5	63.5	3	1	8	X	6	0	31	3	2
1/21	31.8°N	174.0°E	0000	99	14	15	02	1	1024.9	9	1.0	61.0	53.0	65.8	3	3	4	5	0	0	33	3	4
1/21	31.5°N	174.6°E	0600	99	16	25	02	1	1021.5	8	0.6	62.9	55.6	64.5	7	7	4	5	0	0	17	2	4
1/21	31.6°N	175.2°E	1200	99	19	30	02	1	1020.4	8	1.6	63.5	56.0	63.5	3	X	X	X	X	X	17	2	4
1/21	31.4°N	175.8°E	1800	99	19	33	01	1	1016.6	8	1.6	66.0	61.5	65.5	2	X	X	X	X	X	17	3	4
1/22	31.3°N	176.3°E	0000	97	21	32	02	1	1014.9	8	1.6	68.0	64.0	65.0	6	6	4	4	0	0	18	3	6

Table 6.--Log of ship's weather observations, Hugh M. Smith cruise 27, January 5 to February 21, 1955. Results in International Ship's Weather Code, January 1955 (cont'd)

Date, 1955	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
1/22	31.0°N	176.9°E	0600	96	24	23	63	2	1015.5	3	1.6	66.8	65.1	66.5	8	8	5	3	X	X	19	3	5
1/22	30.8°N	177.4°E	1200	96	25	04	51	2	1018.4	3	1.2	65.0	63.5	66.0	9	9	X	0	X	X	18	3	3
1/22	30.4°N	177.9°E	1800	96	19	20	02	2	1018.4	3	0.2	67.0	65.0	66.0	9	9	X	0	X	X	19	3	3
1/23	30.2°N	178.4°E	0000	99	20	15	01	1	1018.8	0	1.0	68.0	65.1	65.5	6	6	6	4	0	0	24	3	3
1/23	29.9°N	178.9°E	0600	93	21	20	46	1	1017.5	3	0.6	66.0	65.8	66.2	2	2	1	4	0	0	24	3	3
1/23	29.7°N	179.5°E	1200	95	24	23	46	1	1018.9	3	0.0	67.0	66.1	66.0	9	9	X	0	X	X	24	3	3
1/23	29.2°N	179.7°W	1800	99	20	20	01	2	1019.0	5	0.0	68.0	67.0	68.0	7	3	4	4	0	9	24	3	4
1/24	29.1°N	179.1°W	0000	99	24	15	02	0	1018.9	8	0.8	70.1	67.2	67.5	1	1	4	4	0	0	24	3	4
1/24	28.8°N	178.3°W	0600	99	28	16	03	1	1019.4	3	1.0	70.0	64.5	68.0	7	7	4	4	0	0	27	3	4
1/24	28.1°N	178.1°W	1200	99	27	16	02	0	1020.9	9	0.6	69.8	63.0	69.5	1	X	X	X	X	X	27	3	2
1/24	28.2°N	177.6°W	1800	98	33	13	01	-	1020.6	3	0.6	67.5	62.5	67.5	1	1	2	4	0	0	27	3	2
2/1	29.1°N	179.3°W	1800	91	30	10	60	1	1014.7	5	0.6	70.0	67.0	68.0	9	9	X	0	X	X	27	3	1
2/2	29.3°N	179.9°E	0000	98	29	07	51	5	1015.4	8	1.2	64.0	61.0	67.0	9	0	0	9	2	0	36	3	3
2/2	29.7°N	179.4°E	0600	96	22	18	61	6	1013.1	3	0.2	63.5	62.0	65.9	8	8	6	3	X	X	14	3	3
2/2	30.3°N	179.7°E	1200	99	33	11	02	0	1014.9	3	0.0	65.5	60.0	66.1	4	4	4	4	0	0	27	3	4
2/2	31.0°N	180.0°	1800	99	32	10	02	2	1014.3	3	0.0	62.8	55.8	65.5	0	0	0	9	0	0	27	3	4
2/3	32.0°N	179.8°W	0000	99	28	10	03	1	1015.4	9	0.0	65.0	58.1	65.0	5	5	4	4	0	0	30	3	4
2/3	32.6°N	180.0°	0600	98	29	19	03	1	1015.0	3	2.6	61.0	55.5	64.5	7	7	4	4	0	0	29	3	4
2/3	33.0°N	179.9°E	1200	98	33	35	01	2	1015.0	3	0.6	57.8	51.0	63.0	4	4	4	4	0	0	30	3	6
2/3	33.8°N	179.9°E	1800	99	33	30	02	1	1020.0	3	2.0	54.5	50.0	62.0	3	2	1	4	0	1	33	3	6
2/4	34.4°N	179.9°E	0000	98	36	29	02	1	1023.0	3	0.0	54.0	47.0	62.5	5	5	1	3	0	0	34	3	8
2/4	35.0°N	179.8°E	0600	97	03	22	03	1	1027.4	3	2.6	54.0	46.5	56.0	6	6	1	3	0	0	32	3	6
2/4	35.5°N	179.7°E	1200	99	03	24	02	1	1028.4	3	0.8	53.0	45.8	60.0	7	7	4	4	0	0	33	3	6
2/4	36.4°N	179.4°E	1800	97	03	18	03	1	1031.0	3	2.0	55.0	47.5	57.0	7	7	7	4	0	0	33	3	6
2/5	36.8°N	180.0°	0000	99	07	20	02	0	1032.1	0	0.0	51.0	46.0	58.5	3	3	1	5	0	0	36	3	5
2/5	37.0°N	179.0°W	0600	99	07	16	02	0	1032.9	3	1.2	52.1	46.7	58.7	3	3	1	5	0	0	36	3	5
2/5	36.9°N	178.1°W	1200	99	10	14	02	0	1035.7	3	0.7	52.1	46.9	59.0	3	3	1	5	0	0	36	3	5
2/5	37.2°N	177.3°W	1800	99	06	24	02	0	1035.4	1	0.8	51.5	45.8	58.0	2	2	4	4	0	0	05	3	5
2/6	37.1°N	176.2°W	0000	99	10	18	02	0	1036.8	0	0.0	52.8	46.9	57.2	3	3	4	5	0	0	05	3	5
2/6	37.0°N	175.5°W	0600	99	11	16	02	0	1036.5	5	0.0	51.0	46.0	58.2	3	3	1	5	0	8	05	3	2

Table 6.--Log of ship's weather observations, Hugh M. Smith cruise 27, January 5 to February 21, 1955. Results in International Ship's Weather Code, January 1955 (cont'd)

Date, 1955	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
2/6	37.0°N	174.8°W	1200	99	14	10	02	0	1037.6	1	0.6	50.5	46.2	55.7	4	2	1	5	0	8	05	3	2
2/6	36.8°N	173.6°W	1800	99	10	21	02	0	1035.8	8	1.3	50.9	45.8	53.5	3	2	1	5	0	8	03	3	2
2/7	36.4°N	173.3°W	0000	99	11	22	02	1	1034.9	8	1.0	52.1	46.7	55.0	7	7	4	4	0	0	09	3	3
2/7	35.4°N	173.5°W	0600	99	11	22	02	1	1033.4	6	0.6	52.0	48.0	56.0	7	0	0	9	2	0	09	3	5
2/7	34.8°N	173.5°W	1200	99	13	23	02	1	1031.0	6	0.6	54.8	49.4	57.3	8	0	0	9	2	X	07	3	5
2/7	34.1°N	173.2°W	1800	98	18	19	02	2	1029.4	2	0.0	57.0	52.0	58.0	8	0	0	9	2	X	11	3	3
2/8	33.5°N	173.1°W	0000	98	15	22	03	2	1027.4	8	2.6	60.0	53.5	59.0	8	0	0	9	2	X	13	3	4
2/8	32.6°N	173.1°W	0600	97	18	16	02	2	1027.4	3	2.2	62.0	54.5	61.0	7	X	X	X	X	X	13	3	3
2/8	32.1°N	173.1°W	1200	99	17	17	01	2	1026.1	6	1.3	62.0	57.0	60.9	7	7	8	5	0	0	16	3	3
2/9	30.5°N	172.9°W	0000	99	14	04	01	1	1027.0	9	2.0	64.0	57.0	62.0	1	1	1	4	0	0	12	3	2
2/9	29.7°N	173.0°W	0600	99	14	10	02	0	1025.4	3	0.6	62.5	57.5	62.9	1	1	1	4	0	0	11	3	3
2/9	29.2°N	172.7°W	1200	99	08	10	03	0	1026.3	0	0.6	63.9	57.5	67.8	6	6	1	4	0	0	11	3	3
2/9	28.3°N	172.7°W	1700	99	08	16	02	1	1026.0	6	1.3	64.0	57.5	67.5	7	7	8	4	0	0	07	3	4
2/10	27.6°N	172.4°W	0000	99	08	16	01	2	1025.4	8	1.0	68.0	59.0	70.0	5	5	4	4	0	0	09	3	4
2/10	26.7°N	172.0°W	0600	98	08	21	03	2	1024.9	3	0.6	62.9	60.9	70.5	6	X	X	X	X	X	11	3	4
2/11	26.2°N	171.0°W	1200	99	04	17	01	1	1024.9	3	0.0	67.5	60.4	69.0	2	2	2	5	0	0	07	3	4
2/11	26.8°N	170.6°W	1800	99	05	20	03	1	1025.9	3	1.0	64.5	62.0	69.0	6	6	2	5	0	0	07	3	4
2/12	27.3°N	169.9°W	0000	98	06	21	02	2	1025.9	6	1.0	67.2	60.0	67.7	7	7	8	5	0	0	05	3	4
2/12	27.8°N	169.2°W	0600	99	05	28	02	2	1027.1	3	1.4	66.2	58.9	67.3	7	7	8	5	0	0	05	3	5
2/12	28.0°N	168.7°W	1200	99	05	20	01	1	1028.4	8	0.8	65.0	57.5	67.0	4	4	1	4	0	0	05	3	5
2/13	29.0°N	167.2°W	0000	99	08	20	02	0	1029.4	8	1.2	65.8	58.0	68.0	2	2	1	4	0	0	08	3	5
2/13	29.5°N	166.7°W	0600	99	08	20	02	0	1030.5	3	2.0	64.0	58.5	66.8	2	2	1	4	0	0	08	3	4
2/13	30.0°N	166.7°W	1200	99	04	18	02	0	1031.0	3	0.6	61.8	57.8	66.9	2	2	1	4	0	0	05	3	4
2/13	30.9°N	166.8°W	1800	99	09	08	02	0	1031.4	3	1.2	59.0	54.9	66.0	3	3	1	4	0	0	07	3	3
2/14	31.6°N	166.8°W	0000	99	09	08	01	1	1030.7	9	2.0	63.0	57.0	62.3	2	2	1	4	0	0	09	3	3
2/14	32.0°N	166.7°W	0600	99	09	08	03	0	1030.7	3	1.2	58.8	54.6	60.2	6	3	1	4	6	0	09	3	3
2/14	32.7°N	166.7°W	1200	99	14	08	02	1	1030.6	8	0.8	60.6	55.5	60.0	6	3	1	4	6	0	16	3	3
2/14	34.1°N	166.6°W	1800	99	12	05	02	1	1029.1	6	0.6	62.0	57.0	58.2	8	0	0	9	6	X	16	3	3
2/15	34.8°N	166.6°W	0000	99	14	02	03	2	1027.1	8	2.0	59.0	57.0	56.5	7	7	4	4	0	0	16	3	2
2/15	35.5°N	166.7°W	0600	99	18	10	02	2	1025.5	3	0.0	57.5	55.3	55.1	7	0	0	9	6	0	16	3	2

Table 6.--Log of ship's weather observations, Hugh M. Smith cruise 27, January 5 to February 21, 1955. Results in International Ship's Weather Code, January 1955 (cont'd)

Date, 1955	Latitude	Longitude	Time, GCT	Visibility	Wind		Weather		Pressure			Temperature			Clouds						Waves		
					Direction	Speed, kt.	Present	Past	Bar. corr., mb.	Characteristic	Amt. change	Dry bulb, °F.	Wet bulb, °F.	Sea water, °F.	Total amount	Amount low	Type low	Height low	Type middle	Type high	Direction	Period	Height
2/15	36.1°N	166.7°W	1200	98	21	15	02	2	1021.6	8	2.0	56.8	55.2	55.1	8	X	X	X	X	X	18	3	3
2/15	37.0°N	166.7°W	1800	97	21	30	62	2	1017.0	8	2.0	57.0	56.0	54.9	8	0	0	9	2	X	21	3	4
2/16	37.0°N	166.0°W	0000	95	27	15	50	5	1016.4	6	0.6	56.0	55.0	54.2	9	9	X	0	X	X	23	3	5
2/16	37.0°N	164.2°W	0600	99	30	15	01	5	1017.3	3	1.3	53.8	51.4	54.0	7	7	5	3	0	0	27	3	4
2/16	37.2°N	163.7°W	1200	99	30	10	02	1	1019.1	1	0.6	53.5	49.5	53.1	6	6	5	3	0	0	27	3	3
2/16	37.0°N	162.4°W	1800	99	30	17	02	0	1018.9	3	2.0	53.0	49.5	52.1	4	4	8	4	0	0	29	3	4
2/17	37.0°N	161.4°W	0000	99	33	17	01	2	1021.6	0	1.2	50.2	46.2	54.0	3	3	2	4	2	0	30	3	4
2/17	37.0°N	160.2°W	0600	99	32	20	02	1	1023.5	5	1.0	49.4	43.5	55.0	3	3	2	4	2	0	30	3	4
2/17	36.5°N	160.0°W	1200	99	27	10	02	1	1024.1	2	0.0	49.8	44.2	54.8	2	2	2	4	0	0	32	3	4
2/17	35.6°N	159.9°W	1800	99	04	06	02	0	1026.9	3	1.8	51.0	45.0	55.0	3	0	0	9	0	6	04	3	3
2/18	34.7°N	159.8°W	0000	99	12	06	01	0	1026.4	9	1.2	53.0	46.5	57.0	1	1	0	3	1	0	30	3	4
2/18	34.0°N	159.7°W	0600	99	14	08	02	0	1026.5	3	1.0	53.8	49.0	57.0	1	0	0	9	8	5	30	3	5
2/18	33.1°N	159.7°W	1200	99	13	15	02	0	1026.7	3	0.6	55.4	51.0	60.0	0	0	0	9	0	0	30	3	3
2/18	32.4°N	159.5°W	1800	99	12	06	03	0	1027.4	3	0.0	58.8	53.0	60.0	2	0	0	9	9	2	30	3	3
2/19	31.4°N	159.4°W	0000	99	14	15	02	0	1024.9	8	2.0	61.5	55.5	63.5	2	0	0	9	9	1	13	3	3
2/19	31.0°N	159.3°W	0600	99	07	10	02	0	1027.0	3	2.0	62.2	58.8	63.9	3	0	0	9	1	1	14	3	2
2/19	29.9°N	159.3°W	1100	99	09	10	02	0	1026.5	8	1.0	64.5	58.2	66.0	2	0	0	9	0	1	11	3	2
2/19	29.1°N	159.2°W	1800	99	12	10	03	2	1025.6	3	0.6	66.0	60.5	66.5	6	2	1	4	2	0	12	3	2
2/20	28.2°N	159.1°W	0000	99	12	20	01	1	1022.4	8	2.4	69.0	64.0	70.0	4	4	2	5	0	0	12	3	4
2/20	27.5°N	158.9°W	0600	99	08	20	03	1	1022.5	3	0.7	68.0	63.0	69.2	6	6	2	5	0	0	08	3	4
2/20	26.6°N	158.8°W	1300	99	07	20	02	1	1018.4	6	1.0	69.0	63.0	70.0	X	X	X	X	X	X	08	3	4
2/20	26.1°N	158.8°W	1800	98	07	20	50	2	1028.0	3	1.0	67.5	65.0	70.5	7	7	2	4	0	0	08	3	4
2/21	25.1°N	158.7°W	0000	92	07	20	63	2	1014.4	8	1.6	69.5	67.5	71.5	9	9	X	0	X	X	08	3	5
2/21	24.5°N	158.5°W	0700	98	06	05	01	1	1012.2	3	0.7	70.5	67.8	71.0	6	6	8	4	0	0	06	3	5
2/21	23.9°N	158.5°W	1100	99	09	10	02	1	1010.9	8	0.4	71.0	68.0	72.0	2	2	8	4	0	0	06	3	3
2/21	23.1°N	158.4°W	1800	99	20	05	16	1	1010.0	1	1.0	69.0	68.0	72.0	4	4	8	4	6	0	08	3	3