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July 1967

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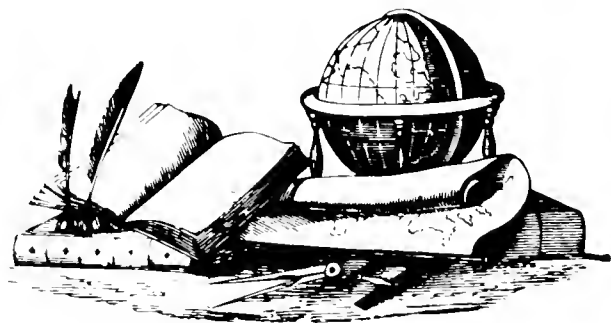
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UNITED STATES COAST GUARD
OCEANOGRAPHIC



UNITED STATES COAST GUARD OCEANOGRAPHIC UNIT

REPORT No. 24 CG 373-24



REPORT OF OCEANOGRAPHIC CRUISE
USCGC NORTHWIND
NORTHERN BERING SEA-BERING STRAIT—
CHUCKCHI SEA

July 1967

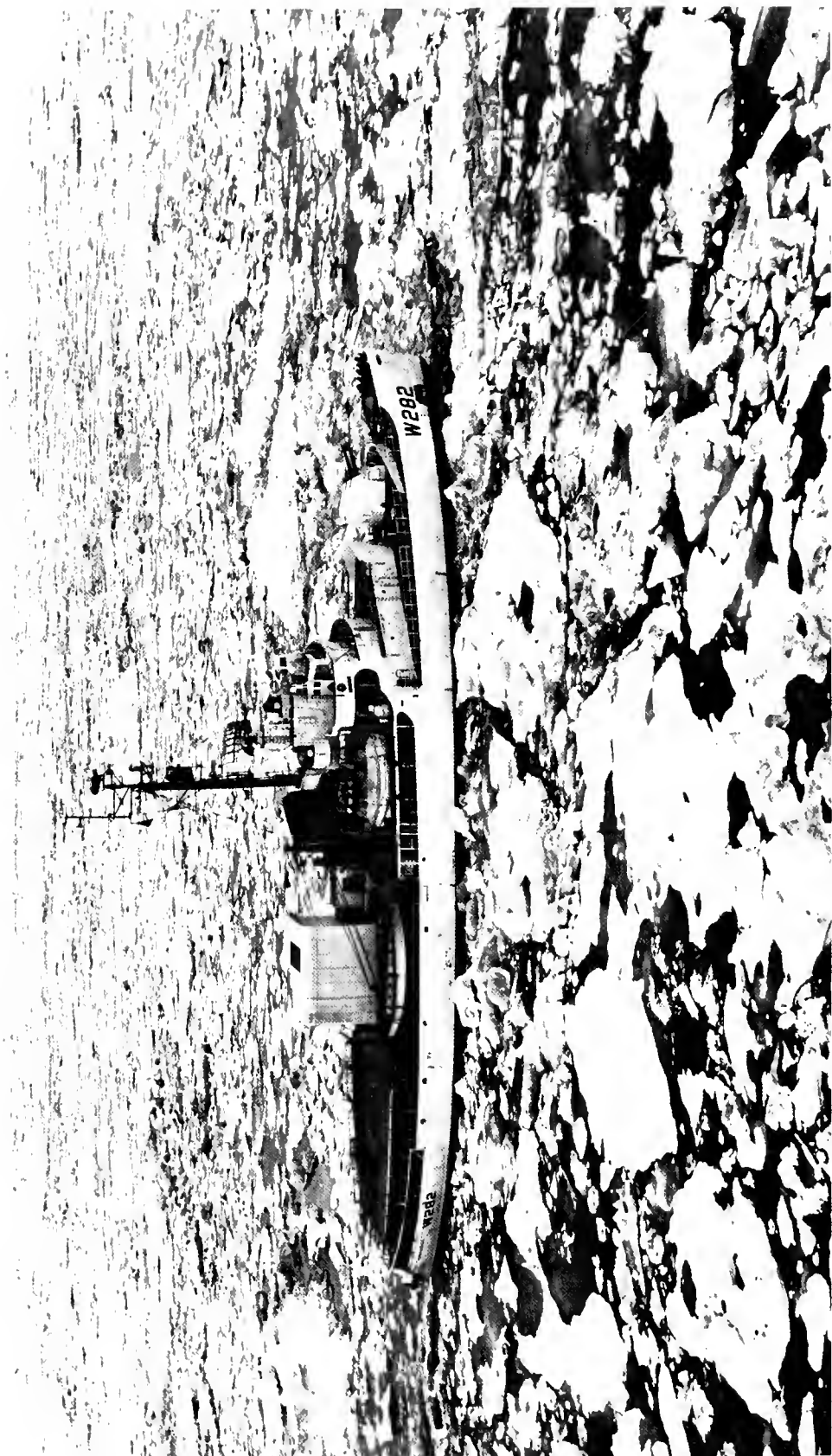
By David M. Husby



WASHINGTON, D.C.



JUNE 1969



ABSTRACT

This report contains the observed and interpolated temperature, salinity and dissolved oxygen data plus the computed sigma-t, geopotential anomalies and sound velocities for 83 oceanographic stations occupied by the USCGC NORTHWIND (WAGB 282) in the Bering and Chukchi Seas during 12-23 July 1967. Also included are the direct current observations made at 66 of the oceanographic stations. Serial observations were made of temperature, salinity, oxygen and water flow at 5-meter intervals from the surface to near the bottom. This survey was a cooperative effort by the U.S. Coast Guard Oceanographic Unit, Washington, D.C. and the University of Washington, Seattle, Washington.

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Oceanographic Cruise of USCGC NORTHWIND, Northern Bering Sea-Bering Strait—Chukchi Sea

By David M. Husby

Introduction

This report contains the oceanographic data obtained on the cruise of the USCGC NORTHWIND (WAGB 282) from 8–30 July 1967 in the northern Bering Sea-Bering Strait-Chukchi Sea area. The oceanographic survey was a joint U.S. Coast Guard-University of Washington project with the purpose of providing information on: (1) the circulation and interaction of the water masses of the northern Bering and Chukchi Seas for the peak summer period; (2) the flow regime in Bering Strait, its short-term variations and possible causes; (3) the exchange of water, salt and heat between the Bering and Chukchi Seas during summer, and (4) the tidal wave pattern in the northern Bering and Chukchi Seas.

All physical and chemical data collected aboard the USCGC NORTHWIND during the 8–30 July 1967 period are contained in this report as well as all the direct current observations made by the University of Washington personnel on the 83 oceanographic stations. This report also includes a discussion of methods used in collecting and processing the data, plots of vertical and horizontal distribution of the various water properties measured and a tabulation of the physical and chemical data.

Personnel

CAPTAIN J.F. PHAIR, U.S. Coast Guard, Commanding Officer, USCGC NORTHWIND (WAGB 282).

The following personnel were associated with the data collected aboard the USCGC NORTHWIND:

U.S. Coast Guard Oceanographic Unit:
DAVID M. HUSBY, Field Party Chief.
DONALD A. HAAGENSON, Oceanographer.
PETER SAN JULE, Aerographer Second Class.

University of Washington:
JERRY A. GALT, Senior Scientist.
J. ROSENBERG.
L. LAYMAN.
P. JOPPA.

Military (stationed aboard USCGC NORTHWIND):

CDR S. S. BECKWITH, U.S. Coast Guard, Executive Officer and Scientific Coordinator.

ENS A. W. LONGACRE, U.S. Coast Guard, Oceanography Officer.
SEAMAN R. EDWARDS.

Chronology of Events

The events listed below were taken from the ship's cruise report. The locations of the oceanographic stations are shown in figure 1.

<i>Date 1967</i>	<i>Event</i>
15 June	USCGC NORTHWIND (WAGB 282) departed Seattle, Wash. enroute Bering Sea on 1967 Arctic West Patrol.
8 July	Arrived U.S. Coast Guard LORAN Station, Port Clarence, Alaska, embarked scientific party.
10 July	Placed water level pressure gauge on bottom at position 67°04'N, 171°12'W.
11 July	Anchored first current meter array in position 66°36'N, 168°15'W.
12 July	Anchored second current meter array in position 64°55'N, 168°39'W.

<i>Date 1967</i>	<i>Event</i>
12 July	Arrived at first oceanographic station in position 65°01'N, 171°34'W.
17 July	Completed station 42 and first occupation of sections E-E', D-D', C-C' and B-B'. Enroute section E-E' for re-occupation.
19 July	Completed re-occupation of section E-E'.
23 July	Completed re-occupation of section B-B' with the exception of one station; ship at position 67°15'N, 170°48'W. Enroute Point Barrow to assist CSS RICHARDSON, trapped in 10/10 concentration of thick winter ice.
26 July	Completed RICHARDSON SAR case. Enroute southern Chukchi Sea to recover tidal gauge.
28 July	Retrieved tidal gauge and two anchored current meter arrays with little difficulty. Enroute Port Clarence, Alaska.
29 July	Arrived Port Clarence and disembarked scientific party.

Cruise Narrative

The oceanographic phase of the USCGC NORTHWIND 1967 Arctic West Patrol began with the embarkation of seven scientific personnel at the U.S. Coast Guard LORAN Station, Port Clarence, Alaska on 8 July 1967. The ship then steamed north to the position 67°04'N, 171°12'W off the northern Siberian coast to install a recording water level gauge on the sea bottom. This gauge was one of six such instruments anchored by the University of Washington during the survey period at various locations in the Chukchi Sea-Bering Sea area to monitor the tidal oscillations. On 11 and 12 July two buoys with current meter arrays attached were anchored in the positions 66°36'N, 168°15'W and 64°55'N, 168°39'W. Each buoy marked the location of two Braincon Type 316 Histogram Current Meters at depths of about 13 and 25 meters. These meters utilize a Savonius Rotor as a current speed sensor and current direction is sensed by complete instrument pressure case orientation to flow. Three of the four meters recorded continuously over the entire observational period from 12 July to 29 July.

Between 12 July and 23 July the USCGC NORTHWIND occupied 83 oceanographic stations comprising two occupations of the four sections shown in figure 1. The ship anchored at each of these stations and the water properties of temperature, salinity, and dissolved

oxygen were measured as well as making direct current measurements. The oxygen data are incomplete for section D-D' due to a shortage of sample bottles and the close station spacing.

On 23 July the USCGC NORTHWIND was diverted from the survey to assist in the rescue of the CSS RICHARDSON trapped in thick winter ice five miles northwest of Point Barrow. After the rescue mission the USCGC NORTHWIND returned to the survey area on 28 July and recovered the water level gauges and the two current meter arrays. The oceanographic field party was disembarked at Port Clarence on 29 July completing one of the most successful surveys of the Bering Strait current regime to date.

Data Collection

Personnel from the U.S. Coast Guard Oceanographic Unit (CG Oceanographic Unit) conducted Nansen bottle casts at each station, taking observations from the surface to near the bottom at 5-meter intervals. A total of 83 oceanographic stations were occupied. The Nansen bottles were equipped with two protected reversing thermometers, mainly of Yoshino Keike manufacture. Shoal water in the Bering Sea area precluded the use of unprotected thermometers. Water depth rarely exceeded 50 meters. The Nansen bottles were allowed to sit at the desired depths for a minimum of six minutes before being reversed.

Upon retrieval of the cast, water samples were drawn immediately for the dissolved oxygen analyses. The method used was a modified Winkler determination involving the titration of an aliquot portion of the treated sample with sodium thiosulfate using starch as an endpoint indicator.

Salinity samples were drawn from each Nansen bottle and determinations run at least every fourth station. Salinities were determined using the Model 6220 inductive salinometer manufactured by the Bissett-Berman Corporation. This instrument has an accuracy stated by the manufacturer of $\pm .003\%$. At least two determinations were made on each sample.

Temperature, salinity and oxygen data were processed by personnel at CG Oceanographic Unit, Washington, D.C. Corrected data were recorded on form NHO/NODC-3167/1(1-61),

Physical and Chemical Data form for oceanographic stations, and delivered to the National Oceanographic Data Center (NODC). These data are listed by NODC as Ref. No. 31-1089 NW.

The field party from the University of Washington made direct measurements of currents from 5 meters to near the bottom at 5-meter intervals at each station. Current velocity and direction were measured by the Kelvin-Hughes Direct Reading Current Meter. The ship was anchored at each station when the meter was operating and the ship's magnetic heading was recorded. The meter was inoperative on the first line of stations due to a faulty termination between the conducting cables and the deck read-out. Current measurements were made on a total of 66 stations. All current data were processed at the University of Washington Department of Oceanography.

Mechanical bathythermograph lowerings were made on all 83 oceanographic stations by the ship's personnel. The slides and completed logs were submitted to the NODC for final processing.

A continuous sounding program was undertaken during the survey utilizing an AN/UQN-1C echo sounder. However, routine electronic failures hampered full-time use of the echo sounder, along with several instances when the instrument was needed on the bridge for navigation purposes and no soundings were obtained. The bottom profiles are included in the vertical profiles of temperature, salinity, oxygen, and current velocity.

Weather and Ice Observations

Weather

Surface observations were taken at the rate of four per day at 0000, 0600, 1200 and 1800 hrs. GMT. These regular surface observations were transmitted to the appropriate weather stations. No upper air observations were taken during the survey. Four bathythermograph observations were taken daily in conjunction with the six-hourly surface observations. In addition, bathythermograph observations were taken on each oceanographic station.

Sea surface temperature observations were taken on the odd hours, 24 hours per day, in support of the Antisubmarine Warfare Environmental Prediction System (ASWEPS).

One collective sea surface temperature message was transmitted daily after the 2300 GMT observation to Fleet Weather Central, Pearl Harbor. A summary of the 147 recorded and transmitted surface observations is given in Table 1.

In general, in summer when low pressure cells move into the Bering Sea, they occasionally continue northward, then eastward following the coast of Alaska. The air which moves in from the northeast is relatively moist having picked up some moisture from the Arctic Ocean. This airflow frequently causes widespread low level cloudiness. During the survey period this cloudiness was very prevalent, nearly 90% of the time. Fog was also very common with a 35% occurrence. In general there was good visibility with light winds and calm seas despite the low level cloudiness. The average air temperature on station for the first occupation of the four sections was 46°F. For the second occupation the average air temperature on station was 45°F. The lowest air temperature recorded during the survey was 39°F on the second occupation of section E-E'.

Ice Conditions

No ice was encountered in the survey area since the southern boundary of the ice pack during the entire period was about 70°N (figure 2). Figure 2 is a reproduction of a U.S. Navy Ice forecast received by facsimile from Fleet Weather Central, Kodiak, Alaska. The USCGC NORTHWIND encountered the first ice of the cruise off Wainwright, Alaska on 23 July while on the rescue mission to save the Canadian vessel CSS RICHARDSON trapped north of Point Barrow. Scattered brash ice increased in concentration becoming 10/10 coverage of thick winter ice by midnight. Some young polar ice was observed from time to time. Figure 3 shows the ice conditions from Point Barrow to approximately 80°N on 24 July as a result of a U.S. Navy ice observer flight from the Arctic Research Laboratory, Point Barrow, Alaska.

Ice observations were made at six-hourly intervals when the USCGC NORTHWIND was in sight of or operating in ice. Ice observations were taken at 0000, 0600, 1200 and 1800 hrs. GMT in conjunction with the surface weather observations. Several ice reconnaissance flights

were flown by the ship's helicopters with R. A. LINDSAY, AGC, as ice observer. The observations during these flights together with the ice observations made during U.S. Navy flights were used to prepare the chart of figure 4 showing the ice conditions of 26–30 July from Point Barrow eastward to Barter Island.

Field Data Disposition

1. U.S. Coast Guard Oceanographic Unit, Washington, D.C.
 - (a) Temperature
 - (b) Salinity
 - (c) Oxygen
2. University of Washington, Seattle, Washington
 - (a) Direct current measurements
 - (b) Water level measurements
3. U.S. Naval Oceanographic Office, Washington, D.C.

- (a) Fathometer traces
4. National Oceanographic Data Center, Washington, D.C.
 - (a) Mechanical BT logs and slides

Data Presentation

The temperature and salinity distributions at the surface for the two occupations of the sections are shown in figures 5–8. These figures were prepared making the assumption of quasi-synoptic observations. Figure 9 and 10 are representations of the mean current vectors at 5 meters from direct measurement at each oceanographic station taken nearly simultaneously with the physical and chemical observations. Vertical profiles of temperature, salinity, oxygen and current speed for each section are included in this report along with the bottom profiles (figures 11–18). The vertical exaggeration for these cross sections is 1798:1.

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- Coachman, L. K. and K. Aagaard. 1966. Water exchange through Bering Strait, *Limnol. and Ocean.* 11 (1): 44–59.
- Gladfelter, W. H., et al. 1964. Oceanographic Cruise, USCGC NORTHWIND, Bering and Chukchi Seas, July–September 1962, U.S. Coast Guard Oceanographic Report No. 1, CG 373–1.
- LaFond, E. C. and D. W. Pritchard. 1952. Physical Oceanographic Investigation in the Eastern Bering and Chukchi Seas during the summer of 1947, *J. Mar. Res.*, 11 (1): 69–86.
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- U.S. Coast Guard, Report of Oceanographic Cruise, U.S. Coast Guard Cutter CHELAN, Bering Sea and Bering Strait, 1934, 1936.

EXPLANATION OF OCEANOGRAPHIC STATION DATA

A. Description of Entries, Units and Codes on NODC Station Listing

1. Surface Observations

<i>Entry</i>	<i>Description of Field</i>
NODC REF. ID. NO.	NODC reference identity number.
COUNTRY CODE	Indicates nationality of the institute or agency conducting the survey or expedition.
CRUISE NUMBER	A reference number assigned by NODC for storage-retrieval purposes. NODC Publication C-1, <i>Reference Sources of Oceanographic Station Data</i> , gives complete bibliographic and other pertinent information for each cruise.
SHIP CODE	Alphabetic representation of ship's name (or ICES numeric ship code).
LATITUDE	Degrees, minutes, and tenths of minutes, N. or S.
LONGITUDE	Degrees, minutes, and tenths of minutes, E. or W.
DRIFT INDICATOR	The letter D appears in this column if extensive drift occurred while on station.
MARSDEN SQUARE:	
10°	Marsden square number according to the Marsden square system.
1°	The one-degree square number according to the Marsden square system.
STATION TIME:	
(GMT)	Date and time given by the originator. (GMT).
MONTH	Month (GMT)
DAY	Day (GMT).
HR. 1/10	GMT to nearest tenth of an hour.
YEAR	Year.
ORIGINATOR'S CRUISE NUMBER	Alphabetic or alpha-numeric designator as assigned by the originator. If the year of the cruise forms part of the cruise numbering system, the year digits are found in preceding field.
STATION NUMBER	Originator's station number or designator.
DEPTH TO BOTTOM	Corrected or uncorrected sounding depth in meters.
MAX. DEPTH OF SAMPLES	Depth of deepest sample in hundreds of meters to nearest hundred-meter interval.
WAVE OBSERVATIONS:	
DIR.	Direction from which the dominant waves are coming, in tens of degrees, according to WMO Code 0885.
HGT.	Height of dominant waves according to WMO Code 1555.
PER.	Period of dominant waves according to WMO Code 3155.
SEA AMT.	Sea amount (sea state) according to WMO Code 3700 (preceded by the letter A).
WEATHER CODE	If preceded by the letter X, weather according to WMO Code 4501. A numeric two-digit entry indicates weather according to WMO Code 4677.
*INSTR./CLOUD	This field is used either for recording instrument code when electronically obtained data are being reported, or for reporting cloud type and cloud amount when conventional Nansen cast data are being reported.
*INSTR.	A two character code representing instrument package of system.
TYPE	Cloud type according to WMO Code 0500.
AMT.	Cloud amount according to WMO Code 2700.
NODC STATION NUMBER	Assigned by NODC for data storage and retrieval purposes. The NODC Reference Identity and Station numbers combined, uniquely define each station in the NODC archives.
*DT/*SU/D	This indicator specifies that the reported data have been obtained electronically rather than by Nansen-type casts. U (up) and D (down) are cast indicators for electronically obtained serial data and specify that the data were taken while hoisting or lowering respectively.
WATER COLOR	Water color according to Forel-Ule Code.

<i>Entry</i>	<i>Description of Field</i>
TRANS. (m)	Water transparency in meters as determined by Secchi disc.
WIND:	
DIR.	Direction from which wind is blowing in tens of degrees, according to WMO Code 0877.
SPEED OR FORCE	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force in Beaufort code.
BAROMETER (mbs)	Barometric pressure in millibars; tens, units, and tenths places only.
AIR TEMPERATURE	
°C:	
DRY BULB	Dry bulb air temperature in degrees centigrade, to tenths.
WET BULB	Wet bulb air temperature in degrees centigrade, to tenths.
VIS CODE	Visibility according to WMO Code 4300
NUMBER OBS. LEVEL	The number of observed levels associated with the station.
SPECIAL	Entries in this space vary with individual cruises or stations. Information concerning
OBSERVATIONS	entries in this field can be requested from the NODC.

2. A complete description of the codes can be found in NODC publication M-2 (Rev. August 1964), "Processing Physical and Chemical Data from Oceanographic Stations."

Publications of U.S. Coast Guard Oceanographic Unit Relating to Arctic Research

- | | |
|---|--|
| CG 373-1—Gladfelter, W. H. et al (1964) Oceanographic Cruise USCGC NORTHWIND, Bering and Chukchi Seas, July-September 1962. | East Siberian, and Laptev Seas, August-September 1963. |
| CG 373-5—Franceschetti, A. P., D. A. McGill, N. Corwin and Elazar Uchupi (1964) Oceanographic Observations, Kennedy Channel, Kane Basin, Smith Sound and Baffin Bay, Summer 1963. | CG 373-12—Kollmeyer, R. C., et al (1967) Oceanography of the Labrador Sea in the vicinity of Hudson Straits in 1965. |
| CG 373-6—Gladfelter, W. H., et al (1965) Oceanographic Cruise, USCGC NORTHWIND, Chukchi, | CG 373-16—Palfrey, K. M. (1968) Oceanography of Baffin Bay and Nares Strait in the Summer of 1966. |
| | CG 373-24—Husby, D. M. (1969) Report of Oceanographic Cruise, USCGC NORTHWIND, Northern Bering Sea-Bering Strait-Chukchi Sea, July 1967. |

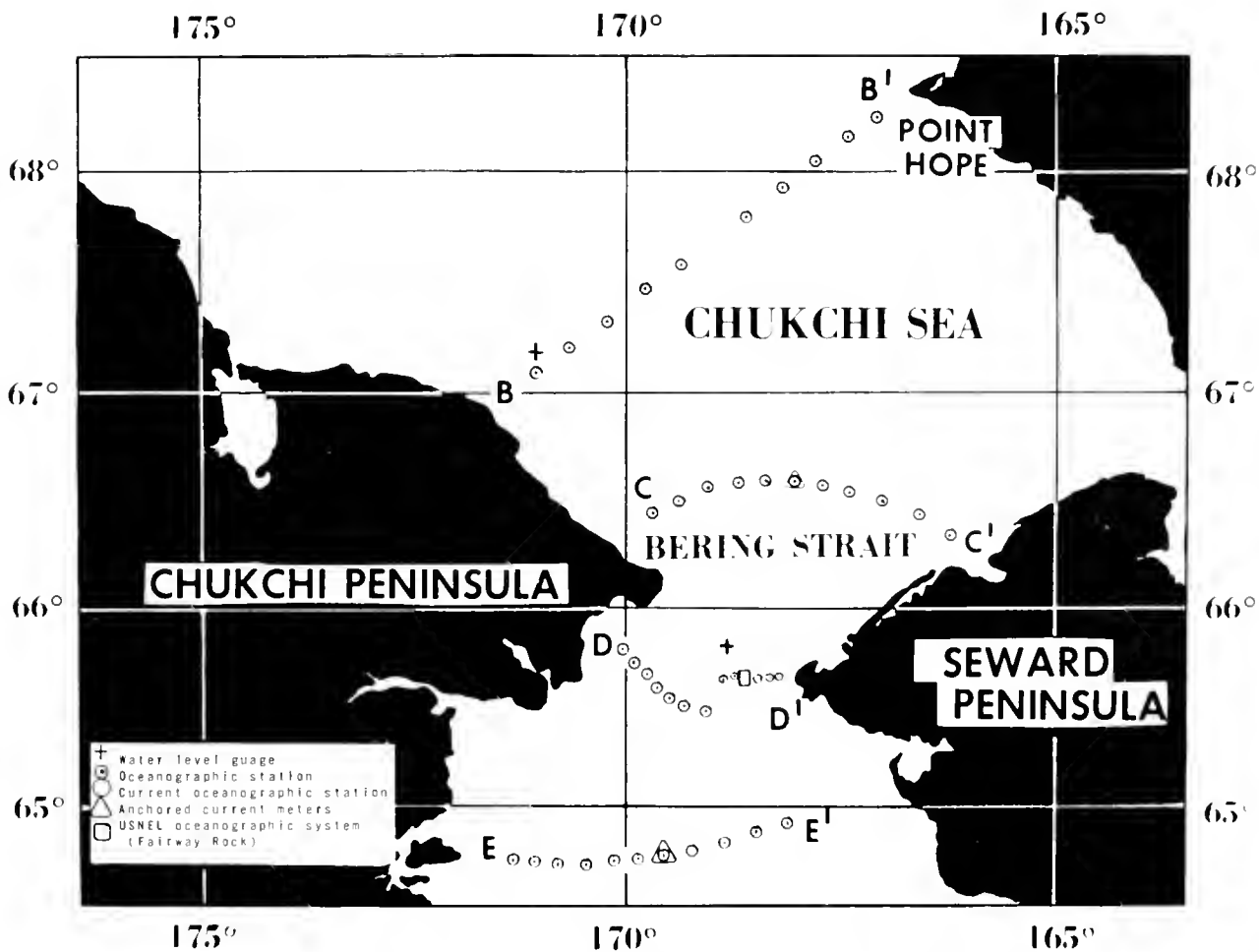


Figure 1. Oceanographic stations occupied by the USCGC NORTHWIND in the Bering and Chukchi Seas, 12-23 July 1967.

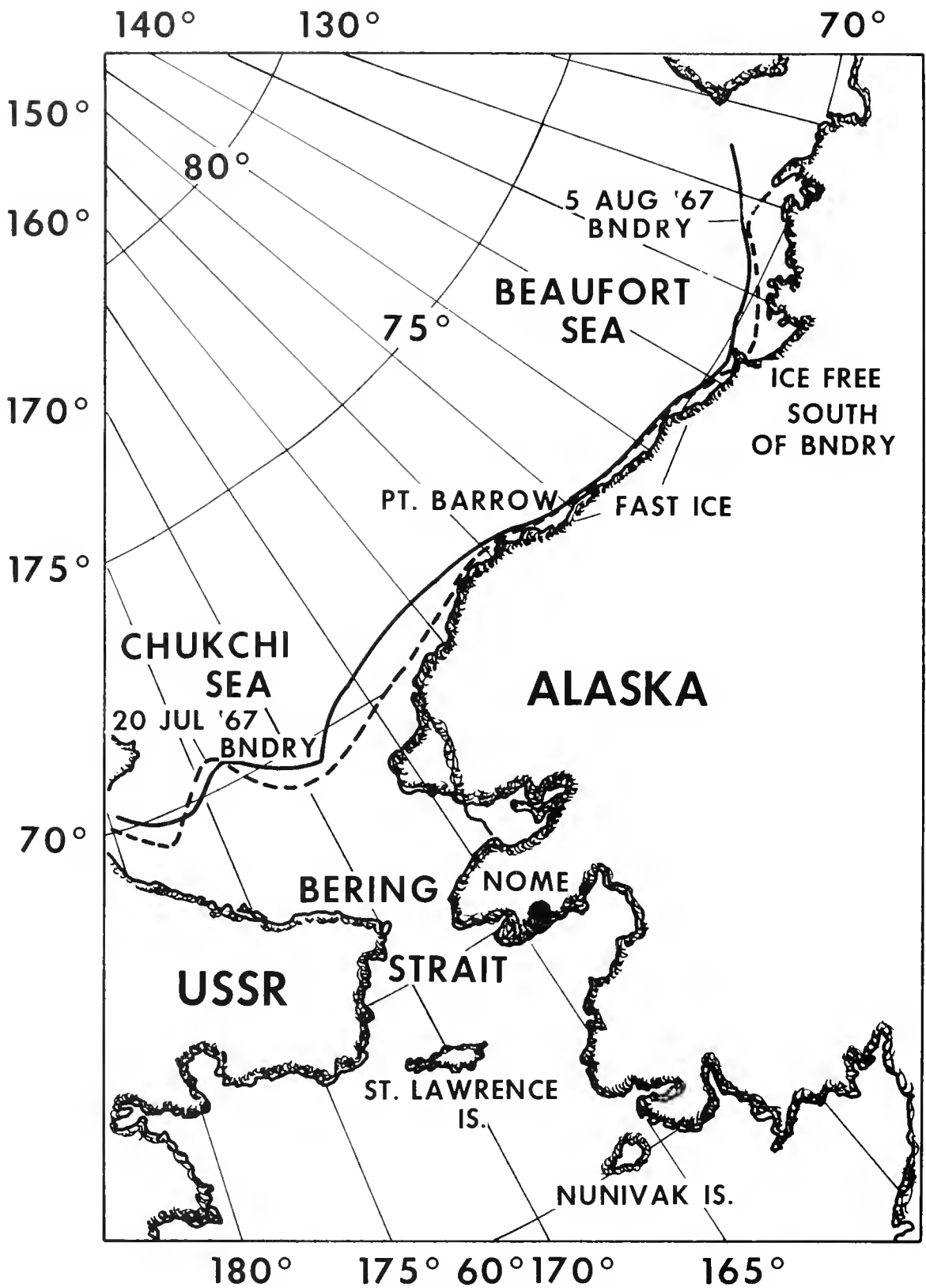


Figure 2. U. S. Navy Ice Chart from Fleet Weather Central, Kodiak, Alaska, 5 July 1967, NAVOCEANO 15-30 day forecast (boundary for 20 July and 5 August 1967.)

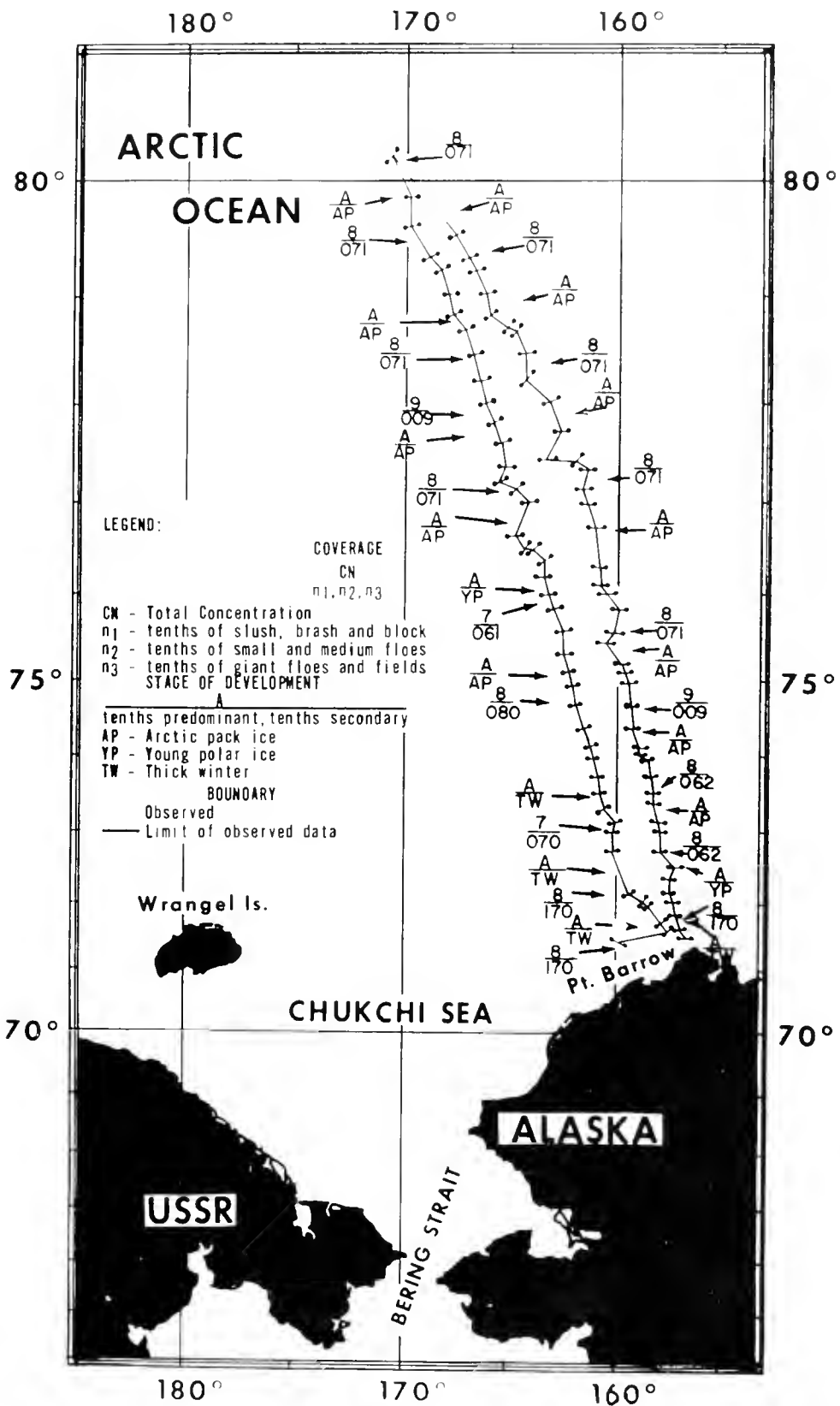


Figure 3. Results of flight by U. S. Navy Ice Observer from Arctic Research Laboratory, Point Barrow, Alaska to approximately 80°N., 24 July 1967.

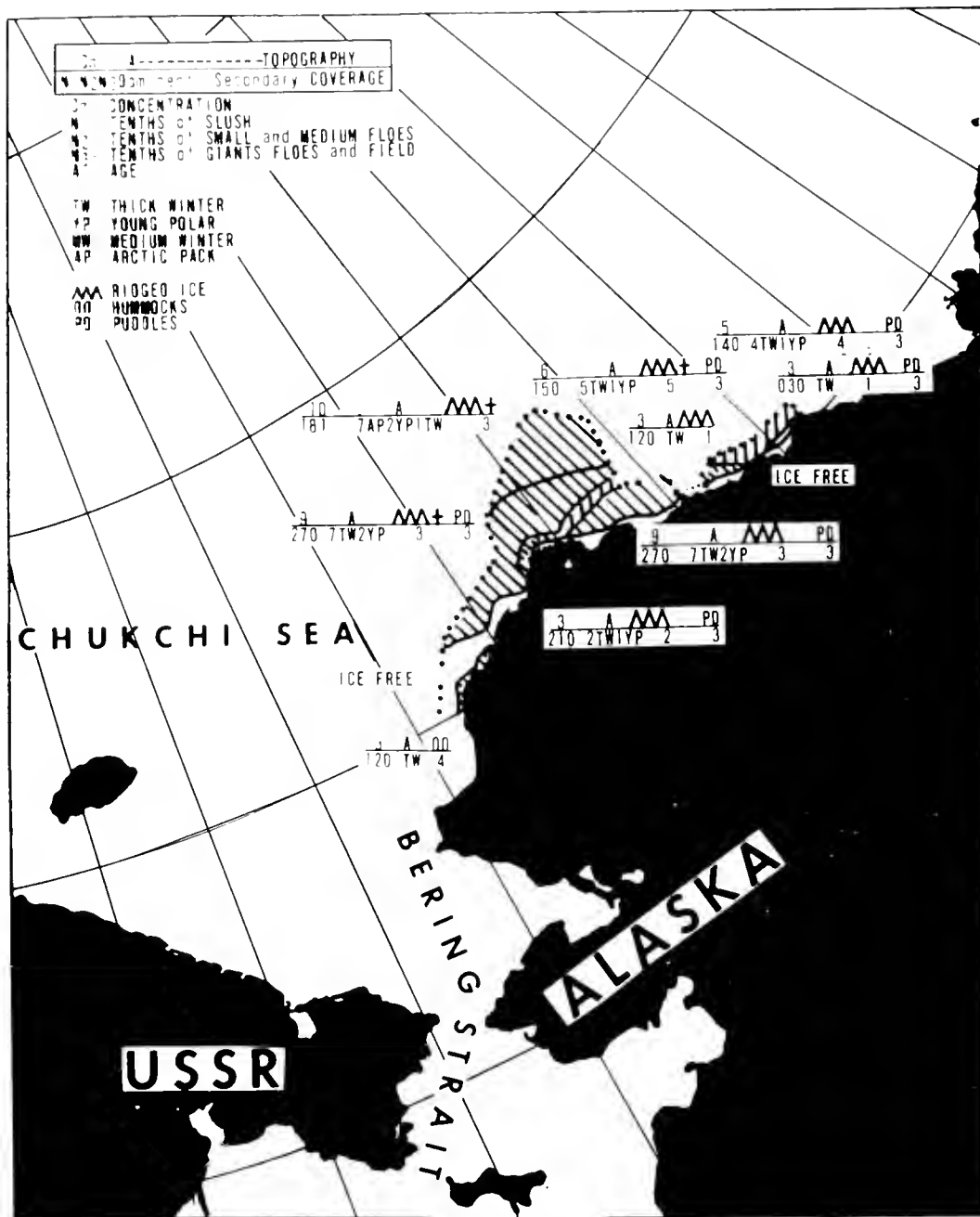


Figure 4. NAVOCEANO Ice Chart, 26-30 July 1967 from Icy Cape, Alaska to Barter Island (conditions along coastline).

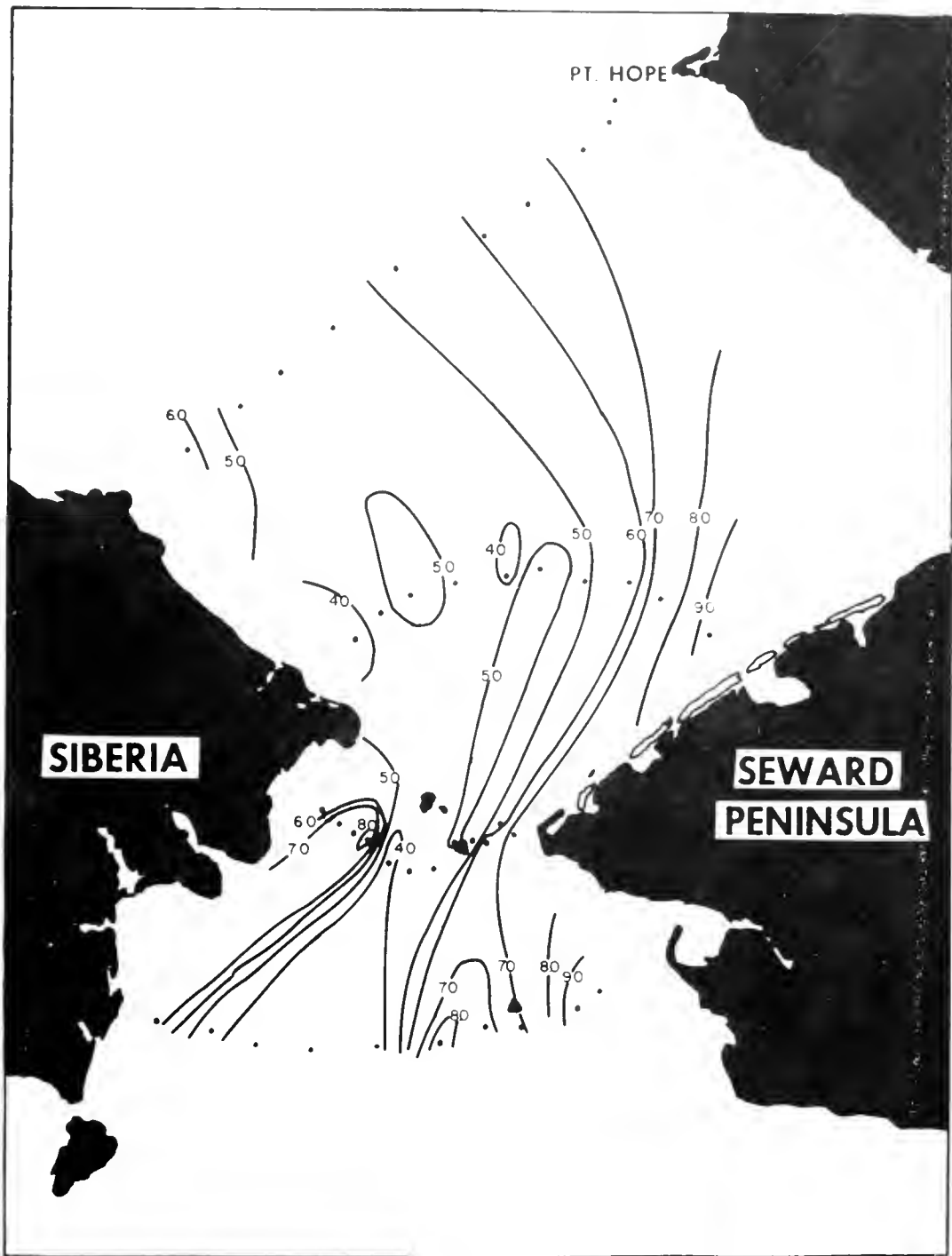


Figure 5. Horizontal distribution of surface water temperature ($^{\circ}\text{C}$) on first occupation of the four oceanographic sections, 12-17 July 1967.

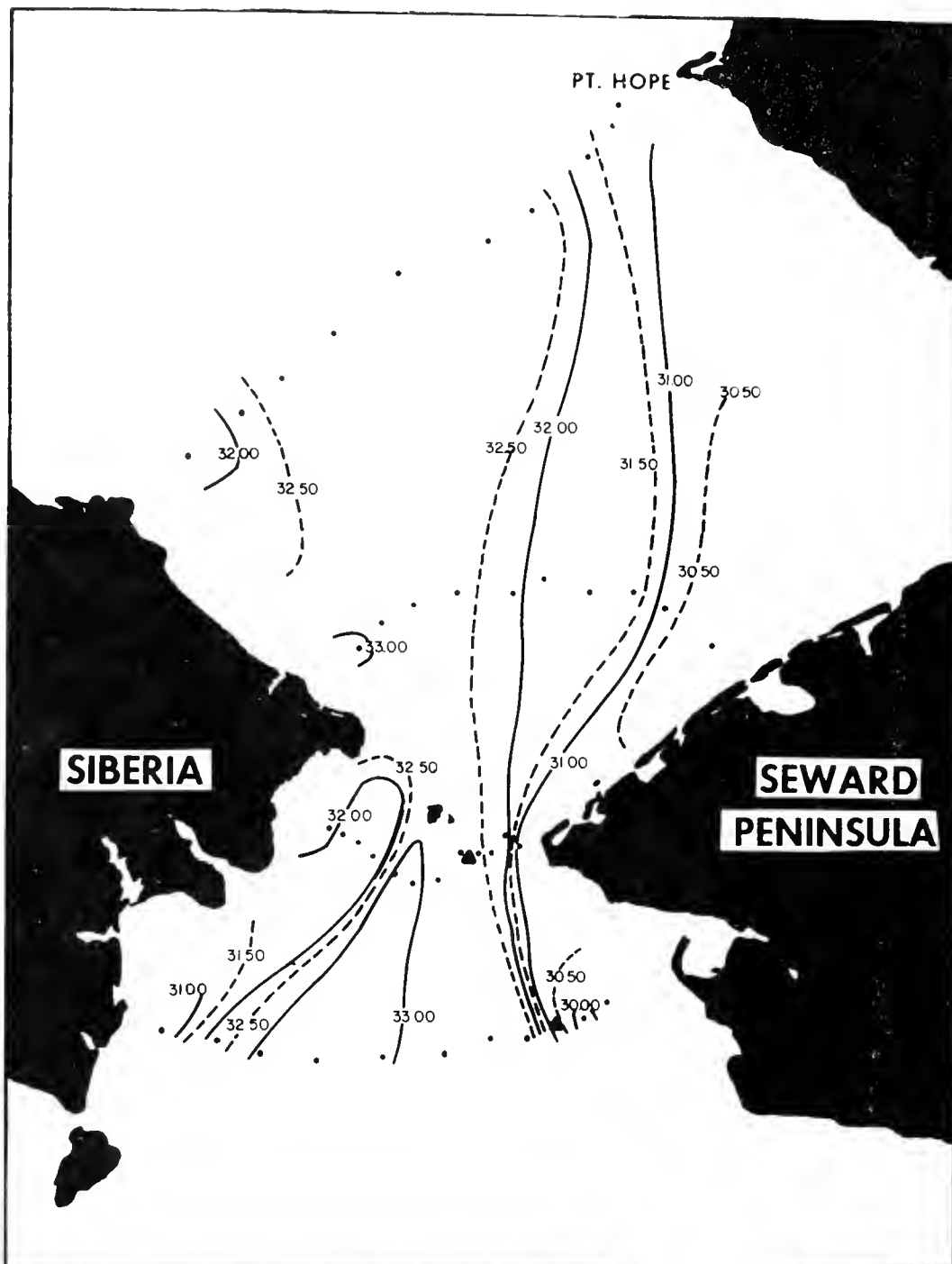


Figure 6. Horizontal distribution of surface salinity (‰) in first occupation of the four oceanographic sections, 12-17 July 1967.

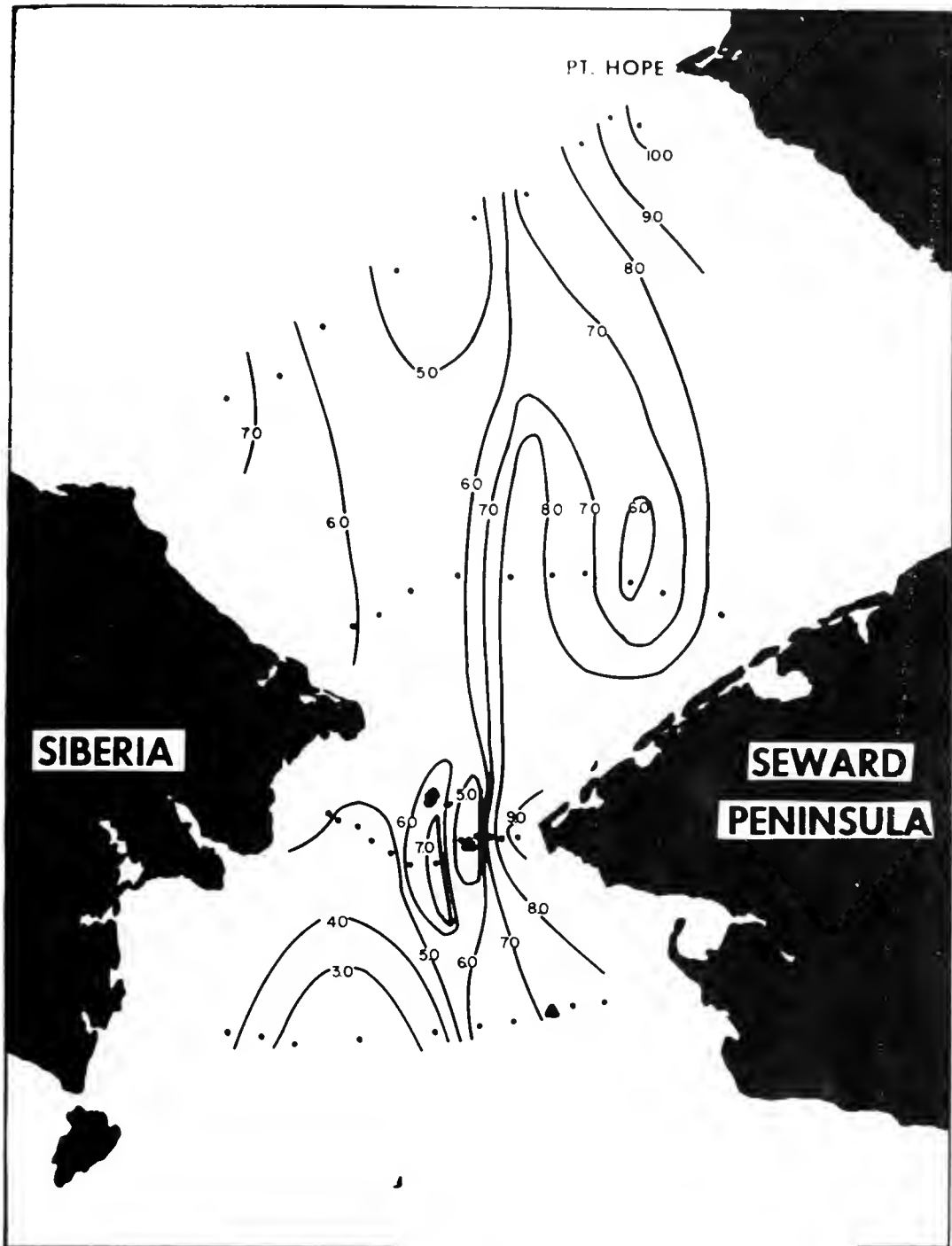


Figure 7. Horizontal distribution of surface water temperature ($^{\circ}\text{C}$) on second occupation of the four oceanographic sections, 18-23 July 1967.

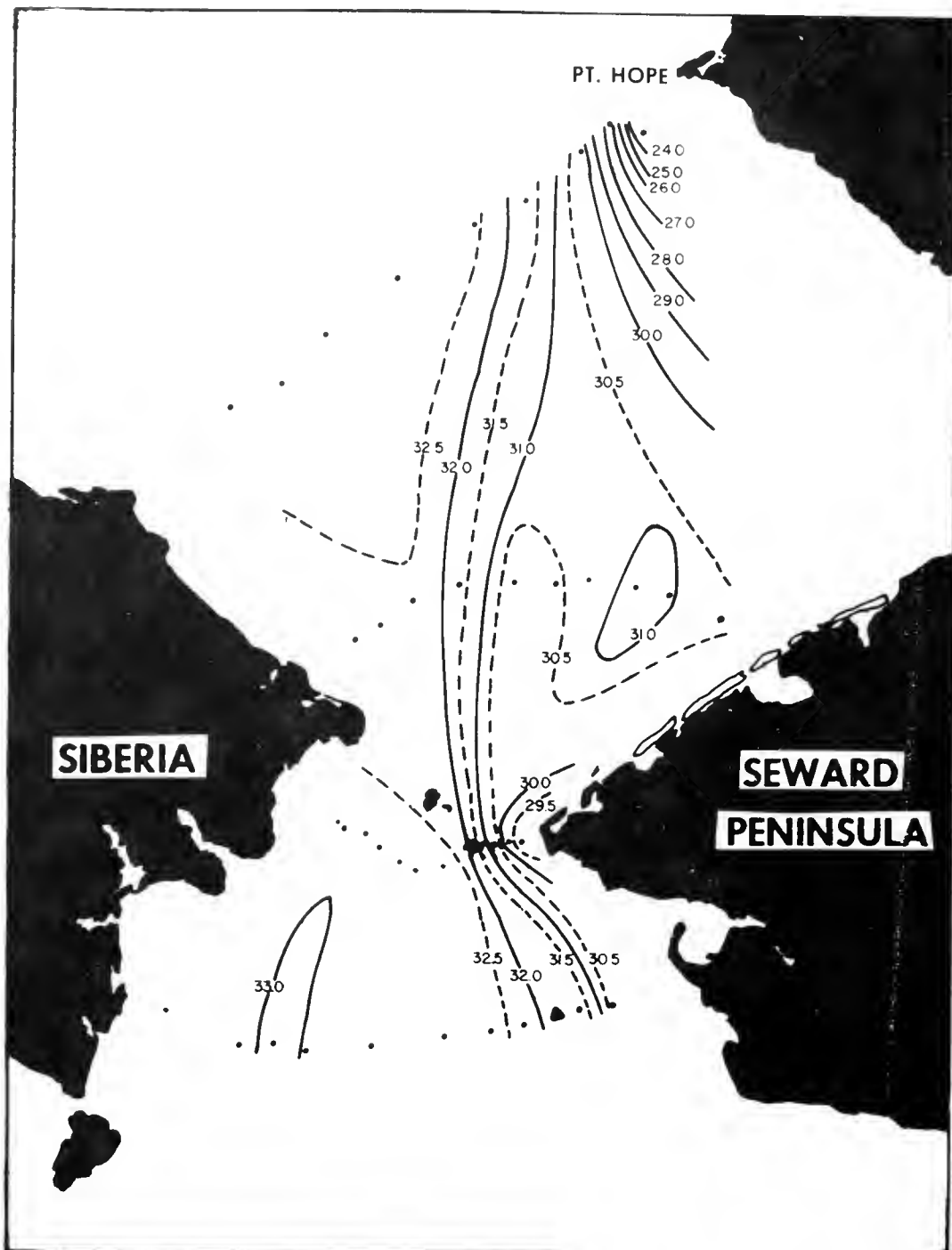


Figure 8. Horizontal distribution of surface salinity (‰) on second occupation of the four oceanographic sections, 18-23 July 1967.

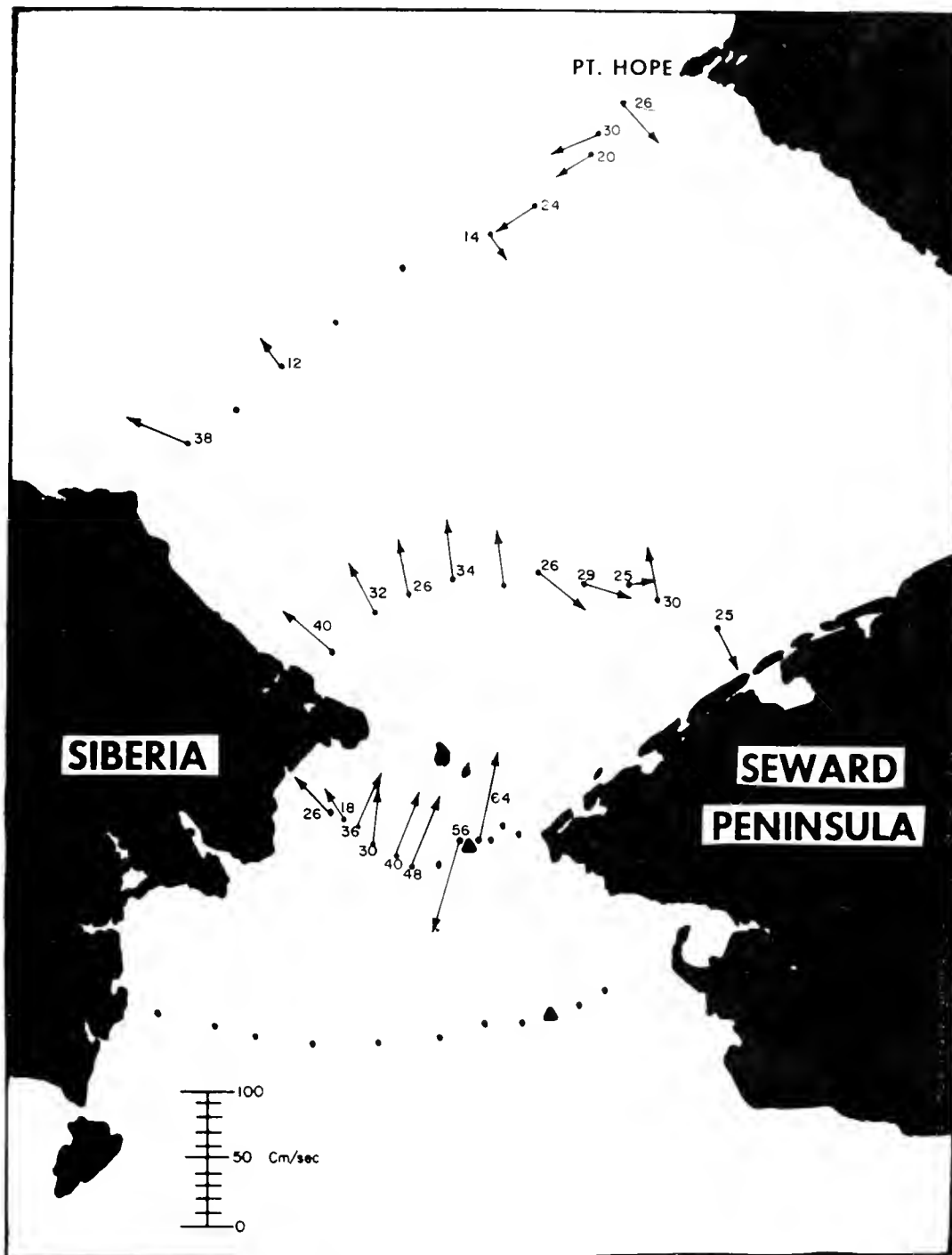


Figure 9. Mean current vectors, direction in degrees true and magnitude in centimeters per second, at depth of 5 meters, based on average of two readings taken on oceanographic stations occupied between 12-17 July 1967. Numerals indicate magnitude of current.

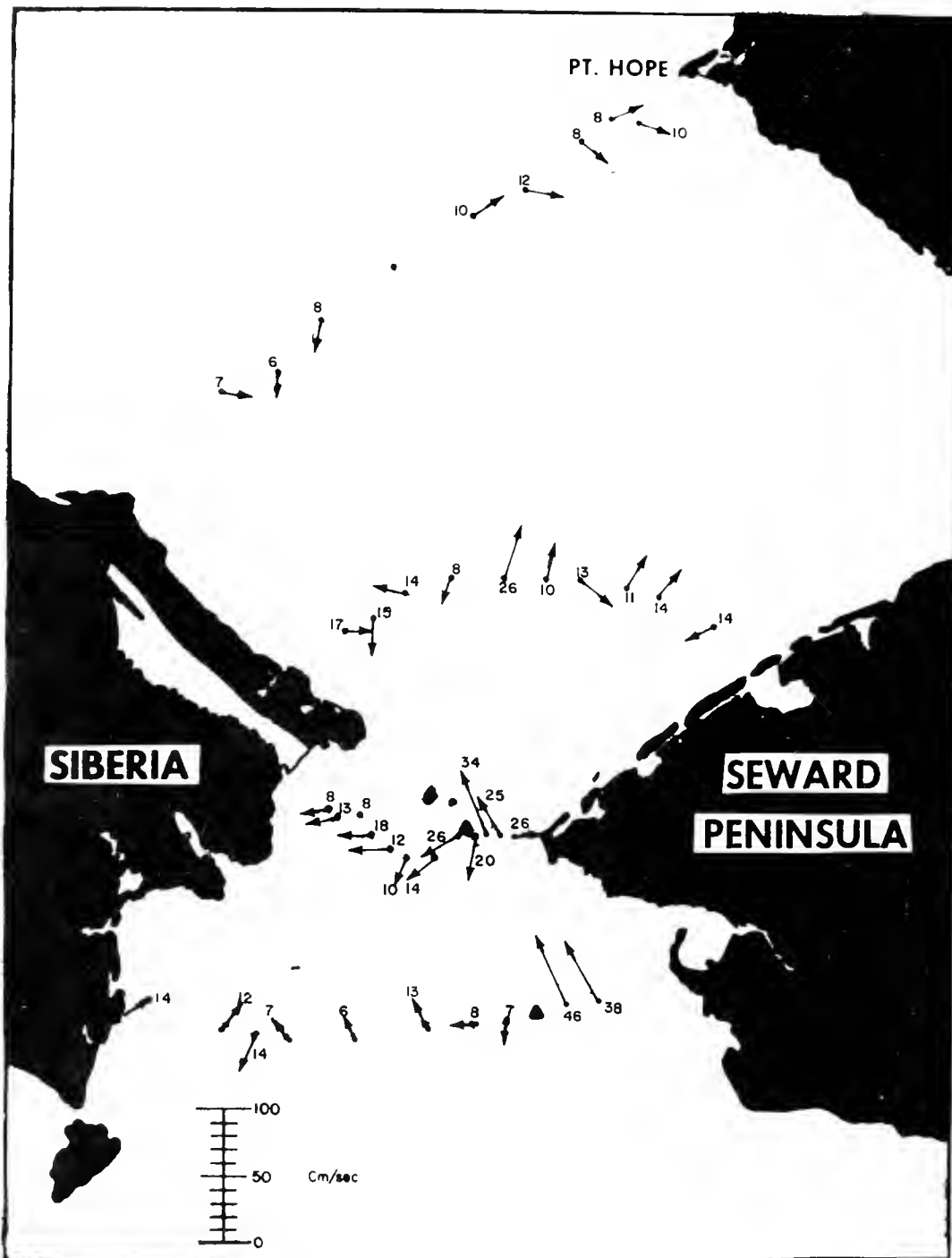


Figure 10. Mean current vectors, direction in degrees true and magnitude in centimeters per second, at depth of 5 meters; based on average of two readings taken on oceanographic stations occupied between 18-23 July 1967. Numerals indicate magnitude of current.

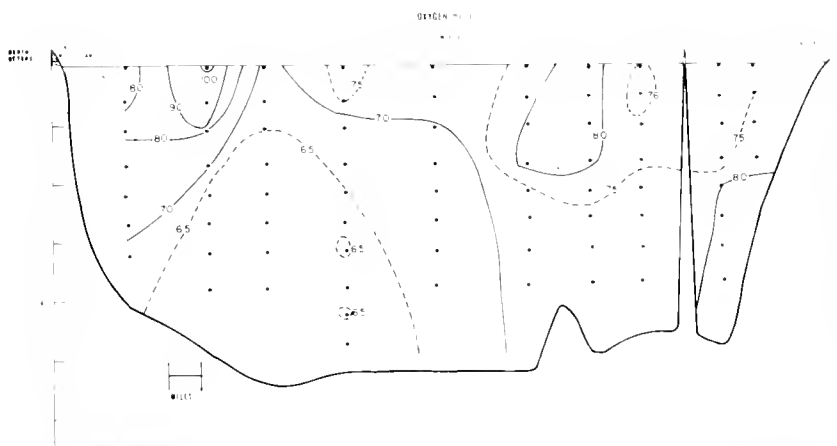
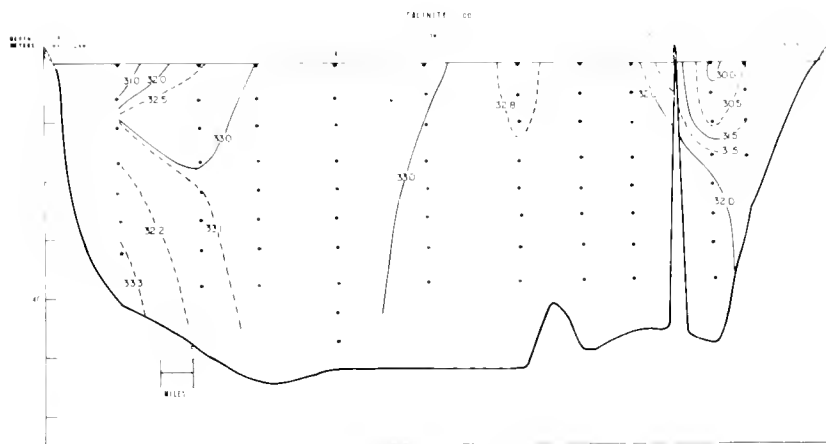
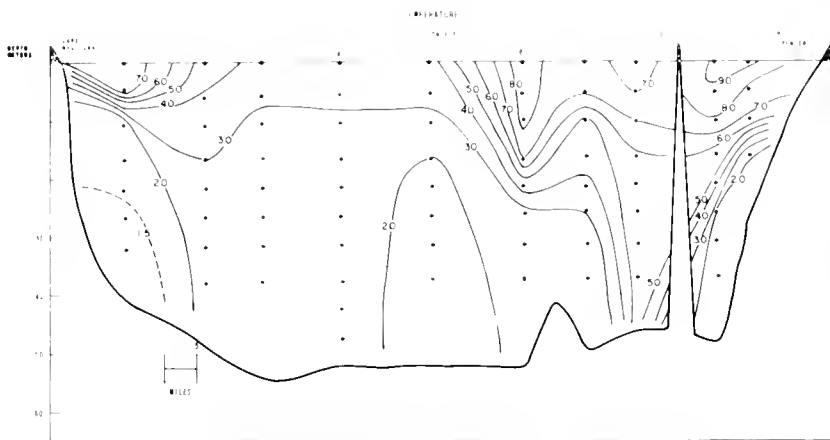


Figure 11. Cross-sections of (a) temperature (b) salinity and (c) oxygen on section E-E' from USCGC NORTHWIND data of 12-13 July 1967. Points indicate observed values. Distances between Cape Nygligan and station 1 and between station 10 and Point Spencer have been exaggerated.

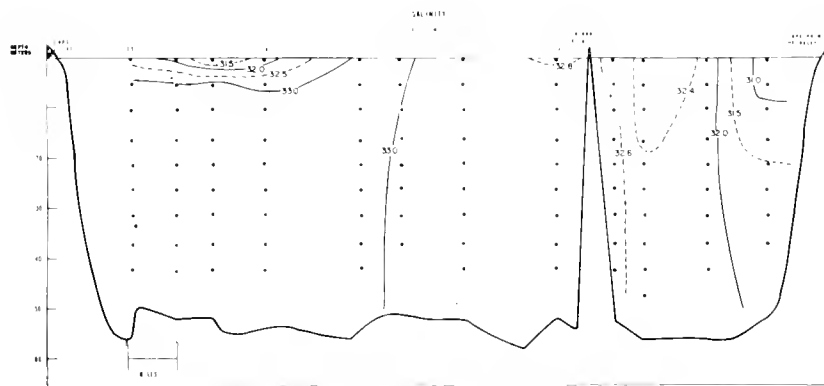
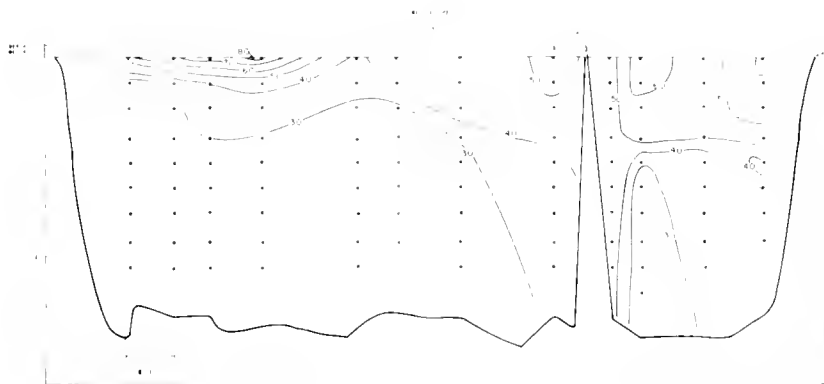


Figure 12 (a) (b). Cross-sections of temperature and salinity on section D-D' from USCGC NORTHWIND data of 13-14 July 1967. Points indicate observed values. Distances between Cape Litke and station 11 and between station 22 and Cape Prince of Wales have been exaggerated.

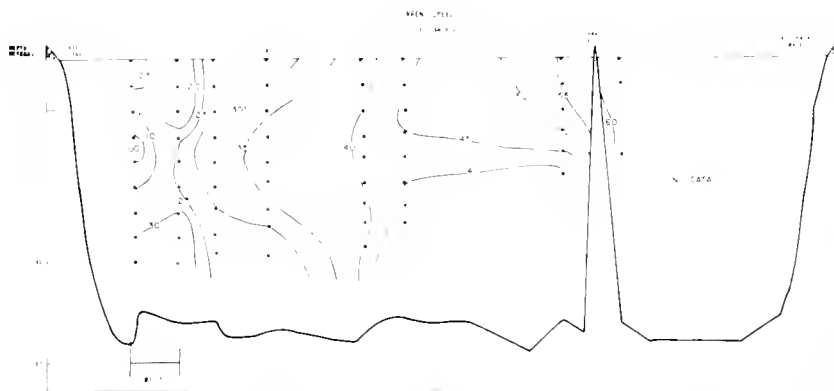
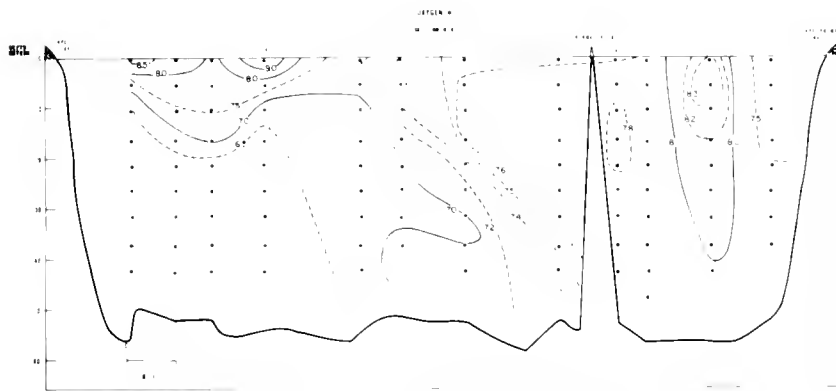


Figure 12 (c), (d). Cross-sections of oxygen and current speed on section D-D' from USCGC NORTHWIND data of 13-14 July 1967. Points indicate observed values. Distances between Cape Litke and station 11 and between station 22 and Cape Prince of Wales have been exaggerated.

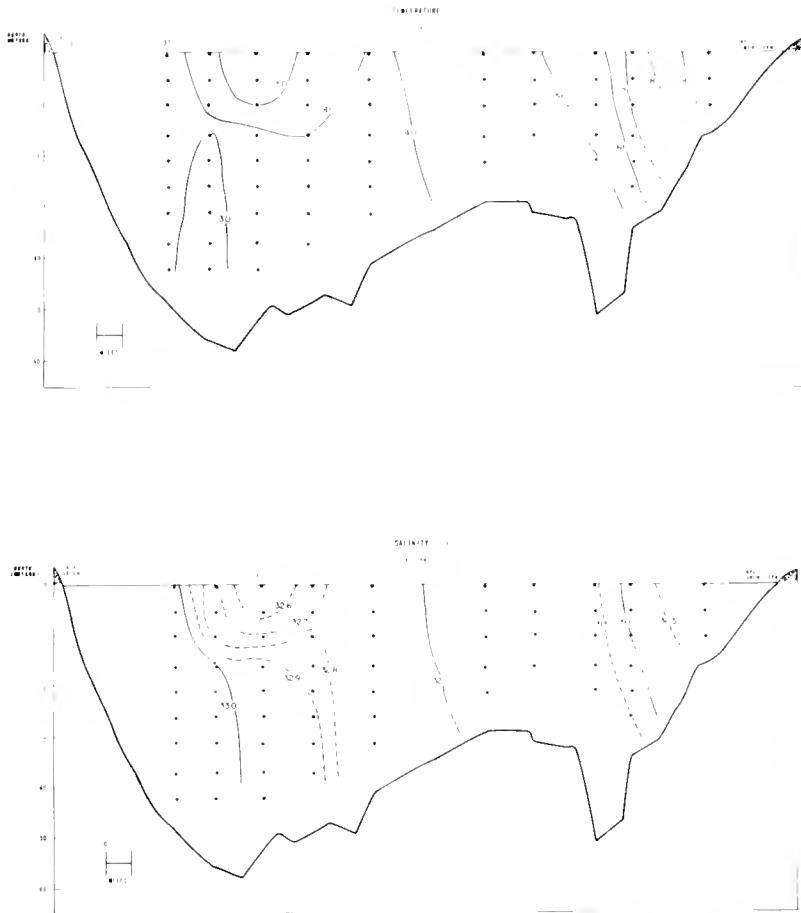


Figure 13 (a), (b). Cross-sections of temperature and salinity on section C-C' from USCGC NORTHWIND data of 15 July 1967. Points indicate observed values. Distances between Cape Uelen and station 32 and between station 23 and Cape Lowenstern have been exaggerated.

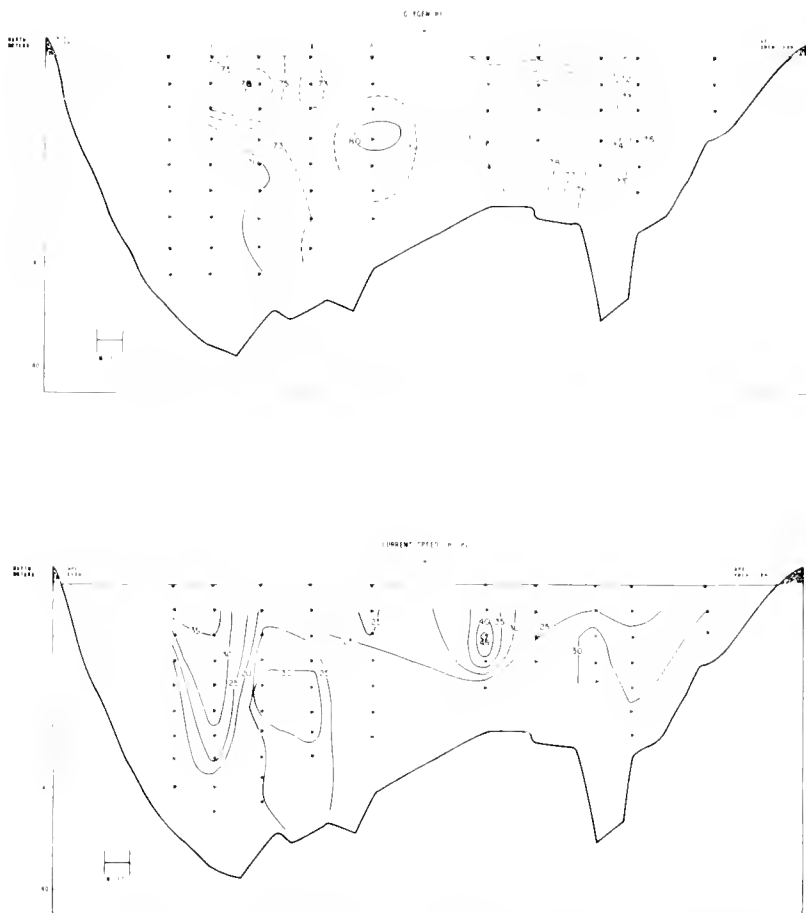


Figure 13 (c), (d). Cross-sections of oxygen and current speed on section C-C' from USCGC NORTHWIND data of 15 July 1967. Points indicate observed values. Distances between Cape Uelen and station 32 and between station 23 and Cape Lowenstern have been exaggerated.

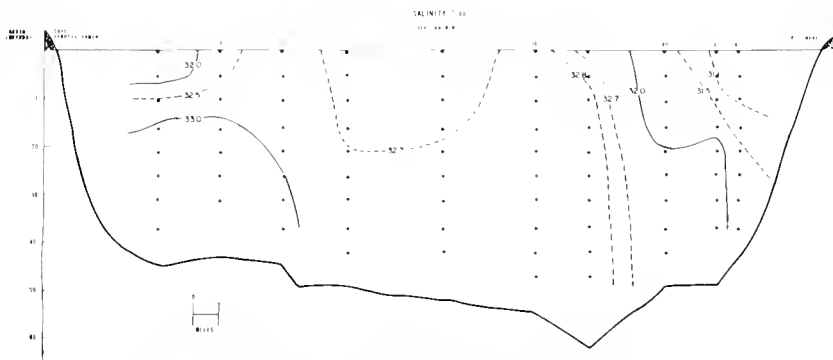
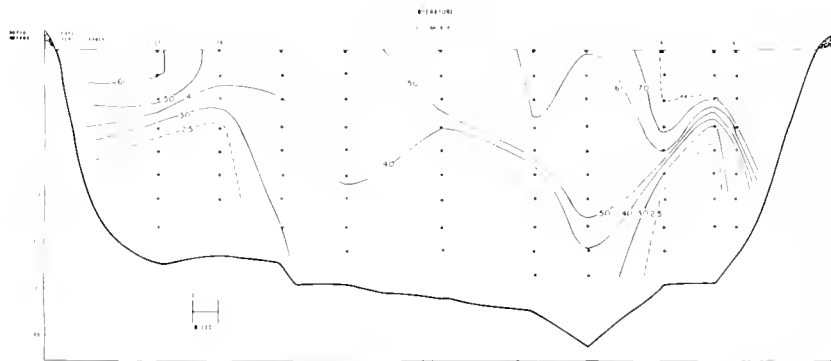


Figure 14 (a), (b). Cross-sections of temperature and salinity on section B-B' from USCGC NORTHWIND data of 16-17 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 33 and between station 42 and Point Hope have been exaggerated.

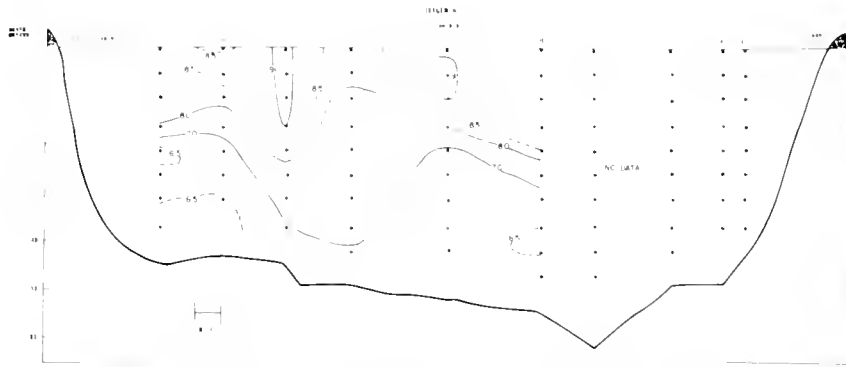


Figure 14 (c), (d). Cross-sections of oxygen and current speed on section B-B' from USCGC NORTHWIND data of 16-17 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 33 and between station 42 and Point Hope have been exaggerated.

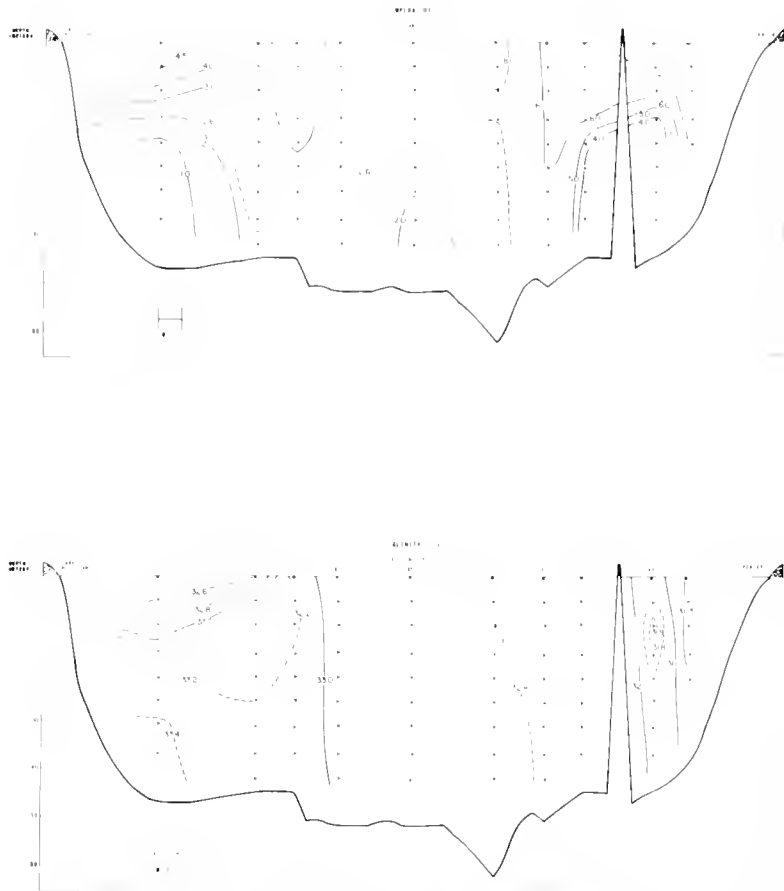


Figure 15 (a), (b). Cross-sections of temperature and salinity on section E-E' from USCGC NORTHWIND data of 18-19 July 1967. Points indicate observed values. Distances between Cape Nygligan and station 52 and between station 43 and Point Spencer have been exaggerated.

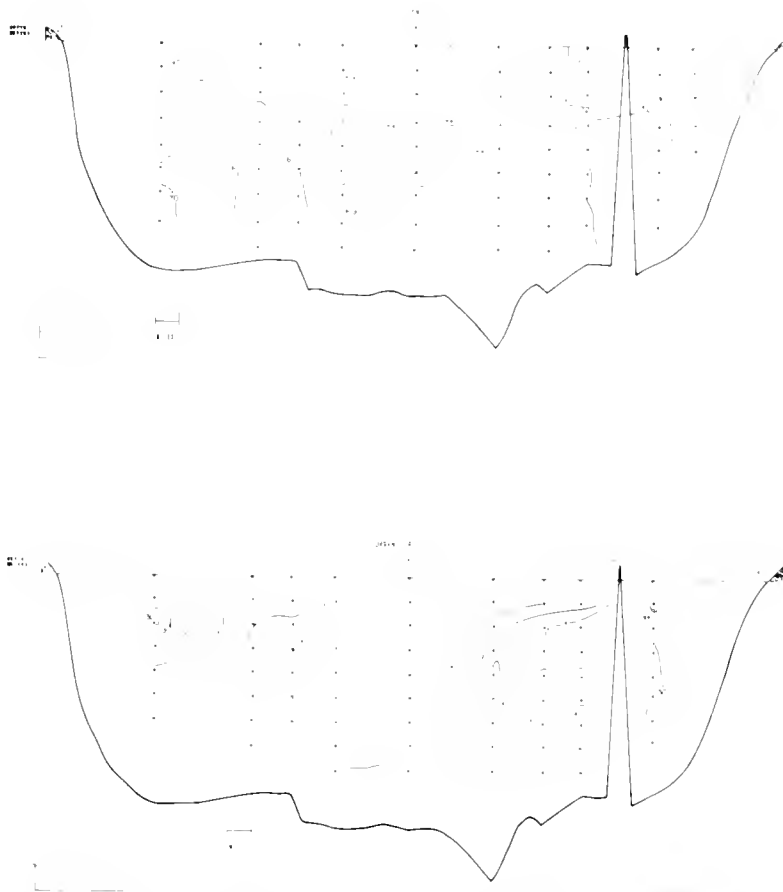


Figure 15 (c), (d). Cross-sections of oxygen and current speed on section E-E' from USCGC NORTHWIND data of 18-19 July 1967. Points indicate observed values. Distances between Cape Nygigan and station 52 and between station 43 and Point Spencer have been exaggerated.

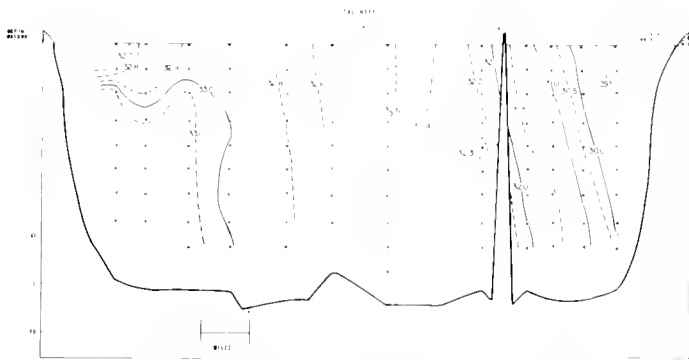
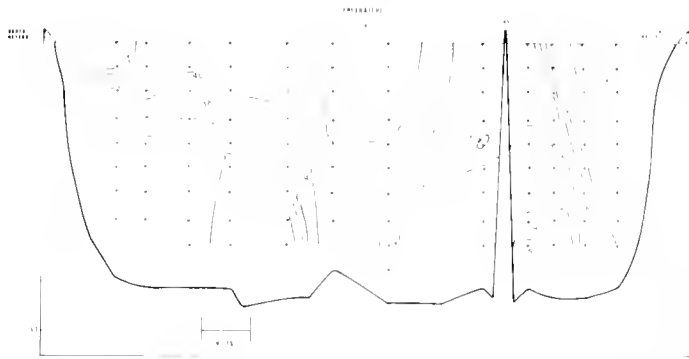


Figure 16 (a), (b). Cross-sections of temperature and salinity on section D-D' from USCGC NORTHWIND data of 19-20 July 1967. Points indicate observed values. Distances between Cape Litke and station 53 and between station 64 and Cape Prince of Wales have been exaggerated.

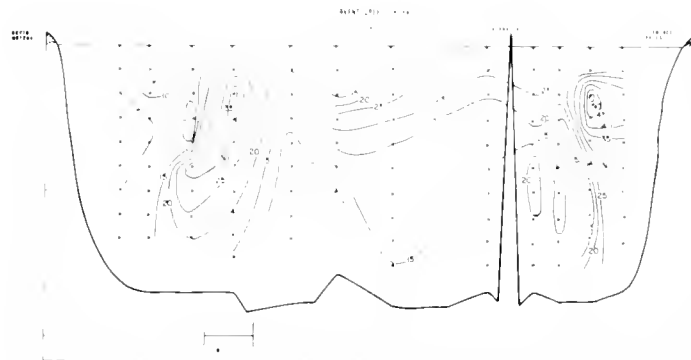
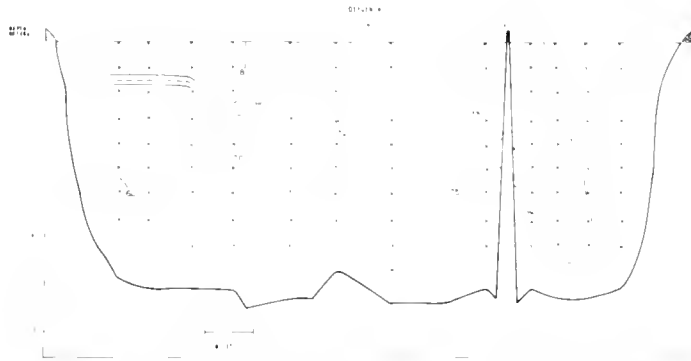


Figure 16 (c). (d). Cross-sections of oxygen and current speed on section D-D' from USCGC NORTHWIND data of 19-20 July 1967. Points indicate observed values. Distances between Cape Litke and station 53 and between station 64 and Cape Prince of Wales have been exaggerated.

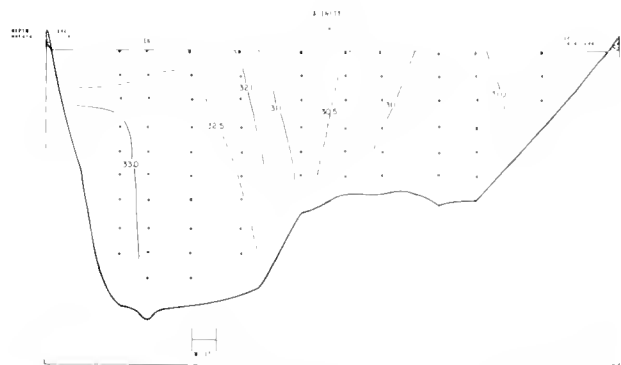


Figure 17 (a), (b). Cross-sections of temperature and salinity on section C-C' from USCGC NORTH-WIND data of 20-21 July 1967. Points indicate observed values. Distances between Cape Uelen and station 65 and between station 74 and Cape Lowenstern have been exaggerated.

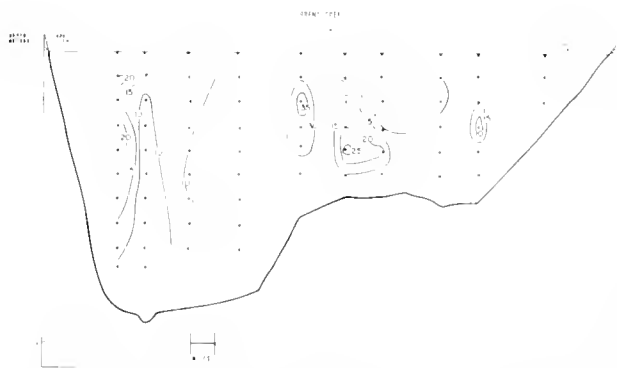
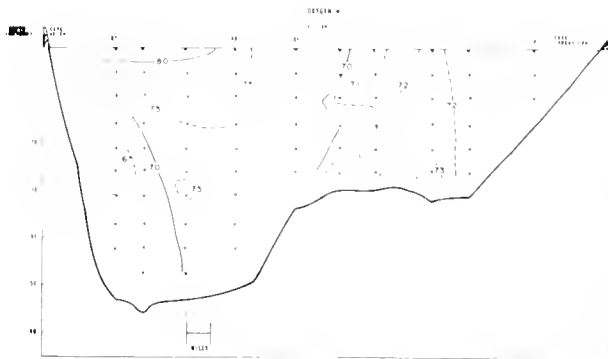


Figure 17 (c), (d). Cross-sections of oxygen and current speed on section C-C' from USGCG NORTH-WIND data of 20-21 July 1967. Points indicate observed values. Distances between Cape Uelen and station 65 and between station 74 and Cape Lowestern have been exaggerated.

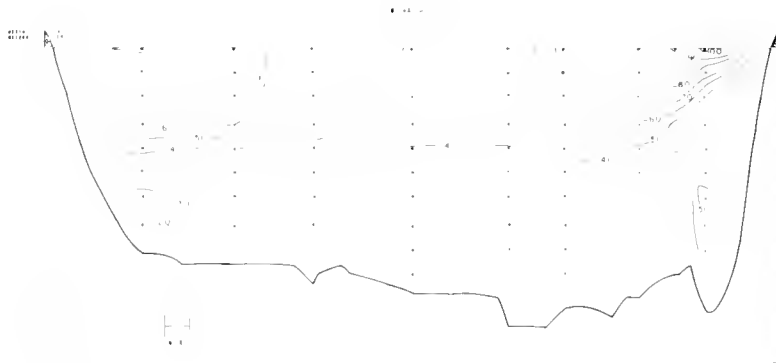


Figure 18 (a), (b). Cross-sections of temperature and salinity on section B-B' from USCGC NORTHWIND data of 22-23 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station S3 and between station 75 and Point Hope have been exaggerated.

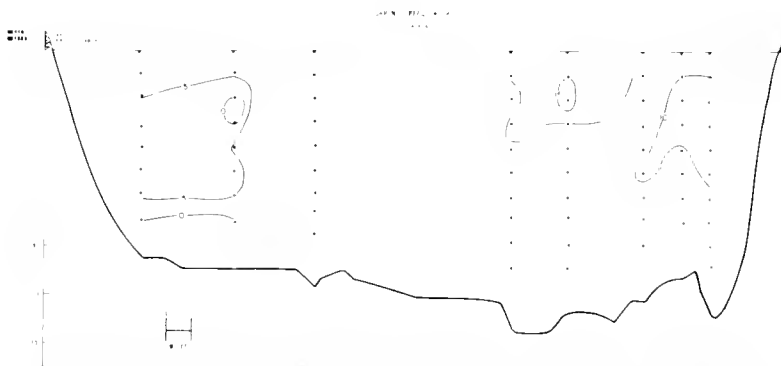


Figure 18 (c). (d). Cross-sections of oxygen and current speed on section B-B' from USCGC NORTHWIND data of 22-23 July 1967. Points indicate observed values. Distances between Cape Serdtse-Kamen and station 83 and between station 75 and Point Hope have been exaggerated.

Table I.—Weather observations given in percentage occurrence in Cape Prince of Wales to Point Barrow area.

Total obs: 147	%
Sky Coverage:	
Clear to few scattered	12
Cloudy	88
Visibility:	
¼ mile or less	16
½ mile or less	10
1 mile	0
2 miles	4
5 miles	21
10 miles	50
Weather:	
No weather or obstructions to vision	54
Fog	35
Rain or drizzle	11
Snow or snow showers	0
Wind Direction:	
N	20
NE	12
E	10
SE	5
S	28
SW	8
W	9
NW	8
Wind Speed:	
0-5 knots	14
6-10 knots	27
11-15 knots	22
16-20 knots	14
21-25 knots	13
26-30 knots	5
31-35 knots	5

Average Barometric Pressure 29.698 inches

All physical and chemical data are presented in Table II. This tabulation is accompanied with an explanation of codes used for the

environmental data. The direct current measurements made at each oceanographic station are tabulated in Table III.

Table II.—Observed and interpolated oceanographic data for stations taken by USCGC NORTH-WIND, 12-23 July 1967, prepared from NODC listing No. 31-1089 NW.

REFERENCE CRUISE CODE	SHIP ID NO. CODE	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	MARSSEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER																															
						10°	1'	M/D		DAY	HR:10			CRUISE NO.	STATION NUMBER	DIR				HGT	PER	SEA																												
311084	NA	0000	17104N	17104W	034	12	14	1967	001	001	000	00																																						
<table border="1"> <thead> <tr> <th colspan="3">WATER</th> <th colspan="3">WIND</th> <th rowspan="2">BARO- METER (mbst)</th> <th colspan="2">AIR TEMP °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (%)</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>18</td> <td>310</td> <td>194</td> <td>75</td> <td>77.2</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																			WATER			WIND			BARO- METER (mbst)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (%)	DIR	SPEED OR FORCE	DRY BULB	WET BULB	DRY BULB	WET BULB				18	310	194	75	77.2				
WATER			WIND			BARO- METER (mbst)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (%)	DIR	SPEED OR FORCE	DRY BULB	WET BULB		DRY BULB	WET BULB																																										
			18	310	194	75	77.2																																											
MESSNGR TIME HR 1:10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S.D. DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P ug-at-l	TOTAL-P ug-at-l	NO ₂ -N ug-at-l	NO ₃ -N ug-at-l	SiO ₂ -S ug-at-l	pH	ST.																																	
		STD	0000		3076					771																																								
174	089	0000	0781	3066	2372					771																																								
174	089	0005	0787	3065	2391				14767	768																																								
		STD	0010	0169	3316	2674	0015016		14545	626																																								
174	089	0010	0169	3315	2654				14545	626																																								
174	089	0010	0159	3317	2658				14542	762																																								
		STD	0020	0155	3321	2675	0014722		14541	738																																								
174	089	0021	0154	3324	2680				14541	735																																								
174	089	0026	0147	3327	2661				14539	714																																								
		STD	0030	0136	3327	2667	0013712		14536	700																																								
174	089	0031	0132	3320	2675				14535	690																																								
311085	NW	0000	17100W	17100W	034	14	14	1967	001	001	000	00																																						
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WATER			WIND			BARO- METER (mbst)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (%)	DIR	SPEED OR FORCE	DRY BULB	WET BULB		DRY BULB	WET BULB																																										
			18	306	194	75	77.2																																											
MESSNGR TIME HR 1:10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S.D. DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P ug-at-l	TOTAL-P ug-at-l	NO ₂ -N ug-at-l	NO ₃ -N ug-at-l	SiO ₂ -S ug-at-l	pH	ST.																																	
		STD	0000	0475	3246	2572	0022845	0031	14156																																									
147	089	0000	0475	3246	2572				14156	125																																								
197	089	0005	0347	3246	2572				Red																																									
		STD	0010	0325	3268	2616	0018476	0021	14507	750																																								
147	089	0010	0325	3268	2616				14507	750																																								
147	089	0016	0314	3297	2625				14507	731																																								
		STD	0020	0239	3314	2640	0015017	0038	14576	634																																								
147	089	0021	0225	3317	2651				14576	625																																								
147	089	0026	0226	3317	2651				14577	615																																								
		STD	0030	0207	3316	2651	0015017	0038	14577	615																																								
147	089	0031	0205	3317	2651				14577	615																																								
147	089	0037	0225	3317	2651				14576	614																																								
311087	NW	0454 IN	170120W	170120W	034	07	12	1967	001	003	000	00																																						
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WATER			WIND			BARO- METER (mbst)	AIR TEMP °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (%)	DIR	SPEED OR FORCE	DRY BULB	WET BULB		DRY BULB	WET BULB																																										
			18	310	190	66.7	69.0	7																																										
MESSNGR TIME HR 1:10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S.D. DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P ug-at-l	TOTAL-P ug-at-l	NO ₂ -N ug-at-l	NO ₃ -N ug-at-l	SiO ₂ -S ug-at-l	pH	ST.																																	
		STD	0010		3205					666																																								
215	089	0000	0327	3305	2633					666																																								
218	089	0005	0345	3304	2631				14619	622																																								
		STD	0011	0200	3317	2647	0016451		14587	674																																								
216	089	0010	0266	3308	2647				14587	637																																								
218	089	0010	0223	3317	2641				14572	500																																								
		STD	0020	0221	3308	2644	0016451		14576	630																																								
218	089	0021	0220	3304	2641				14576	630																																								
218	089	0026	0206	3317	2647				14574	771																																								
		STD	0030	0205	3316	2645	0016451		14572	671																																								
218	089	0031	0208	3305	2642				14572	671																																								
218	089	0037	0205	3317	2641				14561	671																																								

REFERENCE		SHIP CODE	LATITUDE * 1 10	LONGITUDE * 1 10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOOC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS- MITS	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
				16	517	187	009	008																																							
MESSAGE TIME OF HR 1 10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at.l}$	TOTAL-P $\mu\text{g-at.l}$	NO ₂ -N $\mu\text{g-at.l}$	NO ₃ -N $\mu\text{g-at.l}$	SiO ₄ -S $\mu\text{g-at.l}$	PH	S C																														
		STD	0000	0724	3286	2571	002041	0000	14774	837																																					
		OBS	0000	0724	32855	2571			14774	837																																					
		OBS	0005	0741	32854	2570			14779	831																																					
		STD	0010	0493	3281	2597	0020462	0022	14680	814																																					
		OBS	0010	0493	32807	2597			14680	814																																					
		OBS	0016	0425	32807	2604			14652	810																																					
		STD	0020	0402	3281	2607	0017562	0042	14643	789																																					
		OBS	0021	0390	32808	2608			14636	781																																					
		OBS	0026	0198	32834	2618			14600	730																																					
		STD	0030	0296	3282	2617	0018526	0061	14600	729																																					
		OBS	0031	0295	32818	2617			14599	724																																					
		OBS	0037	0293	32830	2618			14600	732																																					

REFERENCE		SHIP CODE	LATITUDE * 1 10	LONGITUDE * 1 10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOOC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311188	14	NW	0415N	10007W	13	40	07	13	1967	EE1	008	0037	00	14	1			X1	0 1	0008																											
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS- MITS	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
				19	510	188	009	078																																							
MESSAGE TIME OF HR 1 10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at.l}$	TOTAL-P $\mu\text{g-at.l}$	NO ₂ -N $\mu\text{g-at.l}$	NO ₃ -N $\mu\text{g-at.l}$	SiO ₄ -S $\mu\text{g-at.l}$	PH	S C																														
		STD	0000		3265					760																																					
		OBS	0000	0673	32647	2563				760																																					
		OBS	0005	0700	32642	2554			14760	771																																					
		STD	0010	0700	3265	2554	0024087		14761	764																																					
		OBS	0010	0700	32645	2554			14761	764																																					
		OBS	0015	0555	32652	2574			14716	760																																					
		STD	0020	0525	3265	2574	0022142		14692	737																																					
		OBS	0021	0517	32621	2580			14659	732																																					
		OBS	0026	0513	32617	2580			14650	716																																					
		STD	0030	0513	3262	2580	0022112		14689	714																																					
		OBS	0031	0514	32618	2590			14689	714																																					
		OBS	0037	0512	32615	2580			14689	714																																					

REFERENCE		SHIP CODE	LATITUDE * 1 10	LONGITUDE * 1 10	DEPTH METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOOC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311089	14	NW	05000N	16748W	13	57	07	13	1967	EE1	004	0040	00	07	12			X4	1 4	0009																											
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS- MITS</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td>23</td> <td>505</td> <td>196</td> <td>094</td> <td>083</td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS- MITS	DIR	SPEED OR FORCE	DRY BULB	WET BULB					23	505	196	094	083	
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS- MITS	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
				23	505	196	094	083																																							
MESSAGE TIME OF HR 1 10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ D DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at.l}$	TOTAL-P $\mu\text{g-at.l}$	NO ₂ -N $\mu\text{g-at.l}$	NO ₃ -N $\mu\text{g-at.l}$	SiO ₄ -S $\mu\text{g-at.l}$	PH	S C																														
		STD	0000	0936	2994	2313	0047483	0000	14815	703																																					
		OBS	0000	0936	29938	2313			14815	703																																					
		OBS	0005	0888	30029	2328			14799	703																																					
		STD	0010	0796	3027	2360	0043036	0045	14766	706																																					
		OBS	0010	0796	30274	2360			14768	706																																					
		OBS	0016	0544	31696	2564			14687	710																																					
		STD	0020	0504	3205	2534	0026326	0080	14678	792																																					
		OBS	0021	0473	32115	2544			14664	806																																					
		OBS	0026	0133	32250	2584			14519	827																																					
		STD	0030	0120	3225	2585	0021600	0104	14514	820																																					
		OBS	0031	0116	32244	2585			14514	831																																					
		OBS	0037	0117	32251	2585			14514	830																																					

REFERENCE		SHIP CODE	LATITUDE 1:10	LONGITUDE 1:10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10'	1'	MO		DAY	HR:1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT
311089	NA					65420N	16730W	233		57	07			13	1967	001		011	0025		00	19	1
WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS														
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB			086	081	0												
MESSNGR TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C						
		STD	0000	0920	3034	2347	0044251	0010	14815	7.4													
107		OBS	0000	0920	30341	2347			14815	7.04													
107		OBS	0005	0763	30940	2417			14763	7.08													
		STD	0010	0682	3098	2430	0036314	0040	14732	7.62													
107		OBS	0010	0682	30979	2430			14732	7.62													
107		OBS	0016	0185	31690	2536			14533														
		STD	0020	0161	3172	2540	0025882	0071	14524														
107		OBS	0021	0157	31723	2540			14522														
107		OBS	0026	0155	31720	2540			14522														

REFERENCE		SHIP CODE	LATITUDE 1:10	LONGITUDE 1:10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10'	1'	MO		DAY	HR:1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT
311089	NW					65420N	169540W	233		59	07			14	028	1967		001	011		0025	00	19
WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS														
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB			083	072	4												
MESSNGR TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C						
		STD	0000	0591	3230	2545	0025341	0000	14711														
		OBS	0000	0591	32295	2545			14711	87.04													
028		OBS	0005	0275	33095	2641			14590	7.30													
		STD	0010	0260	3315	2647	0015732	0021	14585	6.45													
028		OBS	0010	0260	33150	2647			14585	6.45													
028		OBS	0016	0259	33161	2648			14586	6.22													
		STD	0020	0259	3317	2648	0015615	0036	14587	6.16													
028		OBS	0021	0259	33166	2648			14587	6.15													
028		OBS	0026	0259	33173	2649			14588	6.16													
		STD	0030	0258	3317	2648	0015612	0052	14588	6.15													
028		OBS	0031	0258	33163	2648			14588	6.15													
028		OBS	0037	0258	33158	2647			14584	6.14													
028		OBS	0042	0256	33157	2648			14585	6.044													

REFERENCE		SHIP CODE	LATITUDE 1:10	LONGITUDE 1:10	MARS DEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER			
CTRY CODE	ID. NO.					10'	1'	MO		DAY	HR:1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT
311089	NW					65420N	169480W	233		59	07			14	041	1967		001	012		0025	00	20
WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS														
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB			084	083	3												
MESSNGR TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C						
		STD	0000	0735	3186	2493	0030362	0000	14763														
041		OBS	0000	0735	31863	2493			14763														
041		OBS	0005	0358	33005	2626			14625														
		STD	0010	0245	3316	2649	0015517	0023	14579														
041		OBS	0010	0245	33163	2649			14579														
041		OBS	0016	0236	33188	2652			14576														
		STD	0020	0211	3321	2656	0014890	0038	14566														
041		OBS	0021	0205	33220	2656			14565														
041		OBS	0026	0208	33219	2656			14566														
		STD	0030	0207	3322	2656	0014825	0053	14566														
041		OBS	0031	0207	33218	2656			14566														
041		OBS	0037	0208	33222	2657			14568														
041		OBS	0042	0207	33220	2656			14568														

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER		
						10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT PER				SEA	
311089	NW		65360N	169420W	233	59	07	14	053	1967	DD1	013	0055	00	21	0			X4	7	8	0015	
						WATER		WIND		AIR TEMP °C													
						COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE	BARO-METER (mbs)	DRY BULB	WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS								
									20	518	164	094	072	4									
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.						
		STD	0000	0760	3107	2427	0056578	0000	14765	791													
053	OBS	0000	0760	31074	2427				14765	791													
053	OBS	0005	0406	33134	2632				14647	1057													
		STD	0010	0318	3313	2640	0016536	0026	14610	754													
053	OBS	0010	0318	33133	2640				14610	754													
053	OBS	0016	0306	33157	2643				14606	714													
		STD	0020	0257	3319	2650	0015410	0042	14586	615													
053	OBS	0021	0250	33195	2651				14583	605													
053	OBS	0026	0251	33183	2650				14584	639													
		STD	0030	0249	3319	2651	0015354	0058	14584	611													
053	OBS	0031	0249	33280	26580					607													
053	OBS	0037	0248	33213	2653				14585	603													
053	OBS	0042	0246	33250	2654				14586	607													

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER	
						10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT PER				SEA
311089	NW		65360N	169360W	233	59	07	14	068	1967	DD1	014	0055	00	21	0			X4	X9	0014	
						WATER		WIND		AIR TEMP °C												
						COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE	BARO-METER (mbs)	DRY BULB	WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
									20	515	164	078	078	5								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.					
		STD	0000	0807	3173	2472	0052306	0000	14789													
068	OBS	0000	0807	31731	2472				14789	992												
068	OBS	0005	0452	32899	2609				14663	775												
		STD	0010	0331	3317	2642	0016169	0024	14616	663												
068	OBS	0010	0331	33170	2642				14616	663												
068	OBS	0016	0294	33164	2645				14601	638												
		STD	0020	0294	3316	2645	0015935	0040	14602	640												
068	OBS	0021	0294	33153	2644				14602	640												
068	OBS	0026	0293	33144	2643				14602	636												
		STD	0030	0291	3314	2643	0016047	0056	14602	633												
068	OBS	0031	0291	33143	2643				14602	632												
068	OBS	0037	0292	33156	2644				14604	641												
068	OBS	0042	0291	33165	2645				14604	632												

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER	
						10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT PER				SEA
311089	NW		65340N	169250W	233	59	07	14	087	1967	DD1	015	0055	00	17	0			X4	X9	0015	
						WATER		WIND		AIR TEMP °C												
						COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE	BARO-METER (mbs)	DRY BULB	WET BULB	VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
									17	510	158	056	056	1								
MESSAGE TIME HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.					
		STD	0000	0397	3306	2627	0017564	0000	14641	719												
087	OBS	0000	0397	33063	2627				14641	719												
087	OBS	0005	0394	33066	2628				14641	723												
		STD	0010	0270	3305	2638	0016583	0017	14588	660												
087	OBS	0010	0270	33048	2638				14588	680												
087	OBS	0016	0269	33047	2638				14589	669												
		STD	0020	0268	3305	2638	0016580	0034	14589	672												
087	OBS	0021	0268	33047	2638				14589	675												
087	OBS	0026	0270	33040	2637				14591	681												
		STD	0030	0269	3305	2638	0016600	0050	14591	680												
087	OBS	0031	0269	33048	2638				14591	684												
087	OBS	0037	0270	33050	2638				14593	685												
087	OBS	0042	0268	33050	2638				14593	686												

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																									
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																					
311083	NW	05525N	10416.W	233	59	07	14	102	1967	DD1	016	0054	00	10	1			X4	X7	0010																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>18</td> <td>520</td> <td>156</td> <td>061</td> <td>061</td> <td>2</td> <td></td> <td></td> </tr> </tbody> </table>																					WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			18	520	156	061	061	2		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																								
		18	520	156	061	061	2																																							
MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10°	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.																													
		STD	0000	0473	3303	2617	0018569	0000	14673	745																																				
	102	OBS	0003	0473	33030	2617			14673	745																																				
	102	OBS	0004	0469	33047	2618			14672	739																																				
		STD	0010	0288	3300	2632	0017121	0018	14595	741																																				
	102	OBS	0010	0288	32996	2632			14595	741																																				
	102	OBS	0016	0237	32954	2633			14574	702																																				
		STD	0020	0232	3295	2633	0017005	0035	14574	701																																				
	102	OBS	0021	0231	32954	2633			14572	700																																				
	102	OBS	0026	0228	32952	2633			14571	694																																				
		STD	0030	0226	3295	2633	0016996	0052	14571	690																																				
	102	OBS	0031	0226	32950	2633			14571	689																																				
	102	OBS	0037	0225	32948	2633			14572	713																																				

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																									
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																					
311084	NW	05542N	10401.W	233	59	07	14	116	1967	DD1	017	0055	00	10	1			X4	X9	0017																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>18</td> <td>515</td> <td>157</td> <td>061</td> <td>061</td> <td>2</td> <td></td> <td></td> </tr> </tbody> </table>																					WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			18	515	157	061	061	2		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																								
		18	515	157	061	061	2																																							
MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10°	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.																													
		STD	0000	0462	3293	2610	0019223	0000	14667																																					
	116	OBS	0000	0462	32428	2610			14667	7550																																				
	116	OBS	0005	0466	32936	2610			14664	7620																																				
		STD	0010	0467	3293	2609	0019275	0019	14670																																					
	116	OBS	0010	0467	32929	2609			14670	7620																																				
	116	OBS	0016	0314	32424	2624			14607	764																																				
		STD	0020	0268	3242	2628	0017504	0056	14587	744																																				
	116	OBS	0021	0258	32424	2624			14585	739																																				
	116	OBS	0026	0218	32431	2623			14567	712																																				
		STD	0030	0214	3293	2623	0017026	0055	14565	702																																				
	116	OBS	0031	0213	32935	2623			14567	700																																				
	116	OBS	0037	0214	32937	2623			14567	700																																				
	116	OBS	0042	0215	32935	2622			14568	707																																				

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																									
CRUISE CODE	ID. NO.					10°	1°	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																					
311085	NW	05580N	10450.W	233	58	07	14	133	1967	DD1	018	0055	00	10	1			X4	X9	0018																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>20</td> <td>516</td> <td>155</td> <td>061</td> <td>061</td> <td>2</td> <td></td> <td></td> </tr> </tbody> </table>																					WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			20	516	155	061	061	2		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																								
		20	516	155	061	061	2																																							
MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10°	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.																													
		STD	0000	0513	3280	2594	0020732	0000	14686																																					
	133	OBS	0000	0513	32798	2594			14686																																					
	133	OBS	0004	0507	32842	2598			14685																																					
		STD	0010	0495	3286	2601	0020092	0020	14681																																					
	133	OBS	0010	0495	32859	2601			14681																																					
	133	OBS	0016	0462	32859	2604			14668																																					
		STD	0020	0367	3289	2616	0018608	0040	14629																																					
	133	OBS	0021	0354	32894	2618			14624																																					
	133	OBS	0026	0349	32894	2618			14623																																					
		STD	0030	0345	3289	2619	0018417	0058	14622																																					
	133	OBS	0031	0344	32888	2618			14621																																					
	133	OBS	0037	0342	32878	2618			14621																																					
	133	OBS	0042	0340	32874	2618			14621																																					

REFERENCE		SHIP CODE	LATITUDE 1.10	LONGITUDE 1.10	DEPTH METER	MARSden SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311084	NW	65380N	168400W	235	58	17	14	155	1967	DD1	019	0053	00	1	2		X4	X9	0014	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		IMBSL		DRY BULB		WET BULB						
						17		013		15.9		07.8		06.1		3				

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C
		STD	0000	0480	3252	2575	0022475	0000	14669	757							
155		OBS	0000	0480	3252	2575			14669	757							
155		OBS	0005	0487	3255.5	2578			14673	773							
		STD	0010	0494	3260	2581	0022005	0022	14677	781							
155		OBS	0010	0494	3260.3	2581			14677	781							
155		OBS	0016	0491	3261.7	2582			14677	771							
		STD	0020	0486	3263	2583	0021757	0044	14676	781							
155		OBS	0021	0485	3262.8	2584			14676	782							
155		OBS	0026	0477	3263.1	2585			14673	777							
		STD	0030	0475	3264	2585	0021572	0066	14673								
155		OBS	0031	0474	3263.7	2586			14673	776							
155		OBS	0037	0475	3263.8	2586			14674	777							
155		OBS	0042	0475	3263.9	2586			14675	771							

REFERENCE		SHIP CODE	LATITUDE 1.10	LONGITUDE 1.10	DEPTH METER	MARSden SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311089	NW	65770N	168034W	235	58	07	14	180	1967	DD1	020	0057	00	15	2		X4	X9	0020	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		IMBSL		DRY BULB		WET BULB						
						16		51.6		160		07.8		06.7		7				

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C
		STD	0000	0625	3236	2546	0025319	0000	14726								
180		OBS	0000	0625	3235.5	2546			14726								
180		OBS	0005	0624	3235.8	2546			14726								
		STD	0010	0577	3242	2557	0024292	0025	14709								
180		OBS	0010	0577	3241.9	2557			14709								
180		OBS	0016	0567	3244.1	2560			14706								
		STD	0020	0346	3236	2576	0022420	0048	14613								
180		OBS	0021	0311	3234.8	2578			14598								
180		OBS	0026	0255	3231.6	2581			14574								
		STD	0030	0246	3231	2581	0021960	0070	14571								
180		OBS	0031	0245	3231.4	2581			14571								
180		OBS	0037	0243	3231.1	2581			14571								
180		OBS	0042	0241	3231.3	2581			14571								
180		OBS	0047	0242	3232.4	2582			14572								

REFERENCE		SHIP CODE	LATITUDE 1.10	LONGITUDE 1.10	DEPTH METER	MARSden SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER
CTRY CODE	ID. NO.					10"	1"	MO	DAY		HR.1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311089	NW	65360N	168240W	235	58	07	14	212	1967	DD1	021	0053	00	14	1		X2	78	0021	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS. CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS						
		COLOR CODE		TRANS. (m)		DIR.		SPEED OR FORCE		IMBSL		DRY BULB		WET BULB						
						21		51.8		166		08.3		07.2		7				

MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta \rho$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C C
		STD	0000	0576	3240	2555	0024421	0000	14707	830							
212		OBS	0000	0576	3239.9	2555			14707	830							
212		OBS	0005	0580	3239.6	2554			14709	829							
		STD	0010	0563	3239	2556	0024344	0024	14703	830							
212		OBS	0010	0563	3239.1	2556			14703	830							
212		OBS	0016	0505	3232.6	2558			14679	821							
		STD	0020	0346	3219	2563	0023704	0048	14611	809							
212		OBS	0021	0323	3217.5	2564			14601	807							
212		OBS	0026	0313	3216.5	2564			14598	807							
		STD	0030	0313	3218	2565	0023504	0072	14598	814							
212		OBS	0031	0313	3218.2	2565			14599	815							
212		OBS	0037	0313	3218.5	2565			14600	812							
212		OBS	0042	0312	3220.2	2567			14600	794							

REFERENCE		SHIP CODE	LATITUDE ° ' .10	LONGITUDE ° ' .10	DEPTH INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE
		NW	50° 57' N	166° 15' W		23	06	07	14	22	1967	DD1	022	0046	00	23	2		X1	3	6	0022		
WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
COLOR CODE		TRANS DIR		SPEED OR FORCE (mb/s)		DRY BULB WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
				23		515		178		078		061		7										
MESSNGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C C O D E							
		STD	0000	0707	3092	2423	0037038	0000	14740															
223		OBS	0000	0707	30922	2423			14740	7160														
223		OBS	0005	0647	30939	2425			14737	716														
223		STD	0010	0603	3102	2426	0035800	0036	14725	716														
223		OBS	0010	0603	31017	2426			14725	716														
223		OBS	0016	0548	31230	2466			14682	723														
223		STD	0020	0418	3148	2500	0029710	0069	14632	745														
223		OBS	0021	0394	31517	2505			14623	752														
223		OBS	0026	0410	31513	25030																		
223		STD	0030	0329	3159	2517	0028097	0098	14597															
223		OBS	0031	0326	31601	2518			14596															
223		OBS	0037	0322	31613	2519			14596															

REFERENCE		SHIP CODE	LATITUDE ° ' .10	LONGITUDE ° ' .10	DEPTH INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE
		NW	60° 24' N	166° 24' W		23	06	07	15	06	1967	CC1	023	0024	00	15	1		X1	0	6	0023		
WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
COLOR CODE		TRANS DIR		SPEED OR FORCE (mb/s)		DRY BULB WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
				24		521		168		111		100		8										
MESSNGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C C O D E							
		STD	0000	0950	3004	2319	0046461	0000	14822															
062		OBS	0000	0950	30036	2319			14822															
062		OBS	0005	0953	30032	2318			14824															
062		STD	0010	0923	3008	2326	0046243	0047	14814															
062		OBS	0010	0923	30081	2326			14814															

REFERENCE		SHIP CODE	LATITUDE ° ' .10	LONGITUDE ° ' .10	DEPTH INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER			
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE
		NW	60° 32' N	166° 58' W		23	06	07	15	06	1967	CC1	024	0038	00	22	2		X2	7	8	0024		
WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
COLOR CODE		TRANS DIR		SPEED OR FORCE (mb/s)		DRY BULB WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS												
				22		527		164		083		072		7										
MESSNGR TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at/l}$	TOTAL-P $\mu\text{g} \cdot \text{at/l}$	NO ₂ -N $\mu\text{g} \cdot \text{at/l}$	NO ₃ -N $\mu\text{g} \cdot \text{at/l}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at/l}$	pH	S C C O D E							
		STD	0000	0745	3096	2421	0037227	0000	14755	722														
086		OBS	0000	0745	30961	2421			14755	722														
086		OBS	0005	0746	30961	2421			14757	718														
086		STD	0010	0739	3099	2424	0036946	0037	14755	732														
086		OBS	0010	0739	30990	2424			14755	732														
086		OBS	0016	0659	31203	2451			14727	751														
086		STD	0020	0635	3123	2456	0033882	0073	14718	728														
086		OBS	0021	0626	31256	2459			14715	726														
086		OBS	0026	0566	31502	2486			14695	737														

REFERENCE CITY ID. NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOCD STATION NUMBER	
					10"	1"	MO	DAY	HR.		10"	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311087	NA	063717N	167559W	233	07	07	15	148	1967	001	027	0047	00	18	3		4	7	3	0027	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS IMI	DIR.	SPEED OR FORCE	BARO- METER (mbst)	DRY BULB	WET BULB											
							21	527	137	767	150	7									
MESSAGE TIME OF HR. 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\frac{\delta \sigma}{\delta T}$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot g^{-1}$	TOTAL-P $\mu g \cdot g^{-1}$	NO ₃ -N $\mu g \cdot g^{-1}$	NO ₂ -N $\mu g \cdot g^{-1}$	SIO ₄ -Si $\mu g \cdot g^{-1}$	PH	2 C 11				
		STD	0000	0551	3155	2471	0030506	0000	14685	751											
	148	OBS	0000	0551	31551	2471			14685	751											
	148	OBS	0010	0552	31534	2495			14686	760											
	148	STD	0010	0550	3154	2471	0030624	0031	14686	781											
	148	OBS	0010	0550	31535	2470			14686	781											
	148	OBS	0016	0547	31603	2496			14687	756											
	148	STD	0016	0544	3175	2512	0028526	0000	14672	751											
	148	OBS	0021	0488	31402	2518			14666	751											

REFERENCE CITY ID. NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOCD STATION NUMBER	
					10"	1"	MO	DAY	HR.		10"	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311088	NA	063717N	167559W	233	07	07	15	148	1967	001	028	0047	00	18	3		4	7	3	0028	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS IMI	DIR.	SPEED OR FORCE	BARO- METER (mbst)	DRY BULB	WET BULB											
							21	523	151	767	151	7									
MESSAGE TIME OF HR. 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\frac{\delta \sigma}{\delta T}$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot g^{-1}$	TOTAL-P $\mu g \cdot g^{-1}$	NO ₃ -N $\mu g \cdot g^{-1}$	NO ₂ -N $\mu g \cdot g^{-1}$	SIO ₄ -Si $\mu g \cdot g^{-1}$	PH	2 C 11				
	122	STD	0000	0441	3183	2519	0027814	0000	14664	755											
	122	OBS	0000	0491	31425	2519			14664	755											
	122	OBS	0005	0491	31418	2519			14665	751											
	122	STD	0010	0489	31442	2519	0027824	0028	14665	739											
	122	OBS	0010	0489	31422	2519			14665	739											
	122	OBS	0016	0488	31526	2520			14665	739											

REFERENCE CITY ID. NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH INDEX	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NOCD STATION NUMBER	
					10"	1"	MO	DAY	HR.		10"	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311089	NA	063627N	167559W	233	07	07	15	148	1967	001	027	0047	00	18	3		4	7	3	0027	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS IMI	DIR.	SPEED OR FORCE	BARO- METER (mbst)	DRY BULB	WET BULB											
							21	527	137	767	150	7									
MESSAGE TIME OF HR. 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\frac{\delta \sigma}{\delta T}$ DYN. M $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu g \cdot g^{-1}$	TOTAL-P $\mu g \cdot g^{-1}$	NO ₃ -N $\mu g \cdot g^{-1}$	NO ₂ -N $\mu g \cdot g^{-1}$	SIO ₄ -Si $\mu g \cdot g^{-1}$	PH	2 C 11				
	149	STD	0000	0519	3155	2495	0030147	0000	14672	757											
	149	OBS	0010	0519	31554	2495			14672	757											
	149	OBS	0005	0520	31542	249412			766												
	149	STD	0010	0519	3154	2494	0030117	0030	14674	764											
	149	OBS	0010	0519	31545	2494			14674	764											
	149	OBS	0016	0517	31549	2496			14674	782											
	149	STD	0020	0505	3165	2504	0024491	0000	14671	773											
	149	OBS	0021	0511	31642	2507			14670	764											

REFERENCE	SHIP	LATITUDE	LONGITUDE	DEPTH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TRF	AMT																								
311089	NW	16°49'N	166°49'W	0000	253	15	07	15	180	1967	CC1	024	004	00	15	2		X4	X	9	0028																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (ml)</th> <th>DIR</th> <th>SPEED OF FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>19</td> <td>21</td> <td>107</td> <td>26.7</td> <td>26.4</td> <td>2</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (ml)	DIR	SPEED OF FORCE	DRY BULB	WET BULB			19	21	107	26.7	26.4	2		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																									
		19	21	107	26.7	26.4	2																																								
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^2$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	DATE	TIME																													
		STD	0000	0343	32.35	2574	002258	0000	14630	745																																					
163		OBS	0000	0343	32.34	2574			14633	745																																					
163		OBS	0005	0343	32.35	2573			14631	785																																					
		STD	0010	0341	32.37	2573	002273	0023	14631	794																																					
163		OBS	0010	0341	32.374	2573			14631	794																																					
163		OBS	0016	0340	32.376	2573			14632	807																																					
		STD	0020	0338	32.38	2574	002268	0045	14631	792																																					
163		OBS	0021	0337	32.375	2574			14631	791																																					
163		OBS	0026	0347	32.384	2574			14632	798																																					
		STD	0030	0338	32.38	2574	002262	0058	14633	786																																					
163		OBS	0031	0338	32.384	2574			14633	781																																					

REFERENCE	SHIP	LATITUDE	LONGITUDE	DEPTH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TRF	AMT																								
311089	NW	16°49'N	166°49'W	0000	253	15	07	15	180	1967	CC1	024	004	00	15	2		X4	X	9	0029																										
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WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																									
		21	513	104	057	056	2																																								
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^2$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	DATE	TIME																													
		STD	0000	0470	32.65	2587	0021417	0000	14666	731																																					
180		OBS	0000	0470	32.647	2587			14666	731																																					
180		OBS	0005	0470	32.667	2589			14667	726																																					
		STD	0010	0420	32.64	2607	0019476	0020	14655	730																																					
180		OBS	0010	0420	32.640	2607			14650	730																																					
180		OBS	0016	0420	32.658	2611			14644	737																																					
		STD	0020	0385	32.83	2614	0018849	0040	14637	734																																					
180		OBS	0021	0384	32.81	2614			14637	733																																					
180		OBS	0026	0394	32.926	2617			14642	735																																					
		STD	0030	0392	32.91	2616	0018674	0058	14642	732																																					
180		OBS	0031	0391	32.910	2616			14642	729																																					
180		OBS	0037	0378	32.921	2618			14637	732																																					

REFERENCE	SHIP	LATITUDE	LONGITUDE	DEPTH	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TRF	AMT																								
311089	NW	16°49'N	166°49'W	0000	253	15	07	15	180	1967	CC1	020	005	00	16	1		X4	X	9	0030																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (ml)</th> <th>DIR</th> <th>SPEED OF FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>16</td> <td>515</td> <td>077</td> <td>078</td> <td>061</td> <td>6</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (ml)	DIR	SPEED OF FORCE	DRY BULB	WET BULB			16	515	077	078	061	6		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																									
		16	515	077	078	061	6																																								
MESSAGE TIME OF HR 1/10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M $\times 10^2$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	DATE	TIME																													
		STD	0000	0581	32.52	2564	0023571	0000	14710	778																																					
202		OBS	0000	0581	32.520	2564			14710	778																																					
202		OBS	0005	0574	32.547	2567			14709	782																																					
		STD	0010	0509	32.71	2588	0021330	0022	14685	786																																					
202		OBS	0010	0509	32.714	2588			14685	786																																					
202		OBS	0016	0369	32.939	2620			14630	714																																					
		STD	0020	0354	32.96	2623	0017963	0042	14625	699																																					
202		OBS	0021	0352	32.962	2624			14624	697																																					
202		OBS	0026	0349	32.976	2625			14624	695																																					
		STD	0030	0348	32.97	2625	0017834	0060	14624	719																																					
202		OBS	0031	0348	32.970	2625			14624	723																																					
202		OBS	0037	0346	32.983	2625			14625																																						
202		OBS	0042	0344	32.966	2625			14624	696																																					

REFERENCE		SHIP CODE	LATITUDE 1°10'	LONGITUDE 1°10'	NODC INDIC.	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1'	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DIR				HGT
311087	NW	6624N	16740W	233	64	07	15	219	1967	CC1	031	0058	00	10	1		X4	X	19	0031	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	DRY BULB	WET BULB	NO. OBS. DEPTHS										
						12	S20	043	067	061	5										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CODE				
		STD	0000	0474	3271	2591	0021000	0000	14669	748											
219		OBS	0030	0474	32708	2591			14669	748											
219		OBS	0075	0473	32720	2592			14669	758											
		STD	0010	0471	3275	2595	0020684	0021	14670	755											
219		OBS	0010	0471	32747	2595			14670	755											
219		OBS	0016	047	33025	2634			14596	664											
		STD	0020	0285	3303	2635	0016828	0040	14595	667											
219		OBS	0021	0282	33033	2635			14595	666											
219		OBS	0026	0281	33034	2636			14595	674											
		STD	0030	0280	3303	2635	0016809	0056	14596	688											
219		OBS	0031	0280	33028	2635			14596	690											
219		OBS	0037	0280	33026	2635			14597	666											
219		OBS	0041	0279	33037	2636			14597	662											

REFERENCE		SHIP CODE	LATITUDE 1°10'	LONGITUDE 1°10'	NODC INDIC.	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1'	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DIR				HGT
311088	NW	66240N	167420W	233	64	07	15	235	1967	CC1	032	0055	00	12	2		X4	X	19	0032	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	DRY BULB	WET BULB	NO. OBS. DEPTHS										
						10	S24	004	061	061	5										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CODE				
		STD	0000	0312	3304	2634	0016460	0000	14605												
235		OBS	0000	0312	33043	2634			14605												
235		OBS	0005	0312	33043	2634			14606												
		STD	0010	0304	3306	2635	0016842	0017	14605												
235		OBS	0010	0304	33056	2635			14605												
235		OBS	0016	0309	33087	2637			14607												
		STD	0020	0310	3307	2636	0016725	0034	14607												
235		OBS	0021	0310	33070	2636			14608												
235		OBS	0026	0309	33083	2637			14608												
		STD	0030	0308	3308	2637	0016641	0050	14609												
235		OBS	0031	0308	33083	2637			14609												
235		OBS	0037	0308	33086	2637			14610												
235		OBS	0042	0308	33089	2638			14610												

REFERENCE		SHIP CODE	LATITUDE 1°10'	LONGITUDE 1°10'	NODC INDIC.	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'PL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER	
CTRY CODE	ID. NO.					10'	1'	MO	DAY		HR	1/10			CRUISE NO.	STATION NUMBER	DIR				HGT
311089	NW	67150N	171110W	244	71	07	16	062	1967	BB1	033	0046	00	05	2		X4	X	19	0033	
				WATER		WIND		BARO- METER		AIR TEMP. °C		VIS. CODE		SPECIAL OBSERVATIONS							
				COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbs)	DRY BULB	WET BULB	NO. OBS. DEPTHS										
						35	S21	950	061	056	2										
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S CODE				
		STD	0000	0609	3173	2499	0029783	0000	14711												
062		OBS	0000	0604	31734	2499			14711	8540											
062		OBS	0005	0608	31736	2499			14712	8480											
		STD	0010	0559	3246	2562	0023620	0027	14702	8470											
062		OBS	0010	0559	32455	2562			14702	847											
062		OBS	0016	0261	33068	2640			14586	794											
		STD	0020	0250	3309	2643	0016112	0047	14586	646											
062		OBS	0021	0247	33095	2643			14581	628											
062		OBS	0026	0234	33113	2646			14576	654											
		STD	0030	0235	3311	2646	0015834	0053	14576	653											
062		OBS	0031	0232	33104	2645			14576	660											
062		OBS	0037	0222	33093	2645			14572	617											

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																										
CRUISE NO.	STATION NUMBER					10"	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT																							
311084	NW		17 45 N	17 45 W	0000	234	70	07	16	102	1967	BB1	035	0044	00	00	0	X4	X	X	0034																										
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WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		10	507	956	072	056	1																																								
MESSAGE TIME HR 1/10	CASID NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SIO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C																														
		STD	0000	0424	3241	2564	002313	0000	14651																																						
184	085	0000	0424	3241	2569	002313	0000	14651	8472																																						
185	085	0005	0424	3241	2569	002313	0000	14651	8670																																						
186	085	0010	0427	3264	2576	002082	0021	14651	796																																						
187	085	0015	0437	3266	2591	002098	0021	14654	796																																						
188	085	0020	0437	3266	2591	002098	0021	14654	796																																						
189	085	0025	0425	3266	2593	002060	0042	14652	794																																						
190	085	0030	0428	3270	2596	002060	0042	14652	794																																						
191	085	0035	0418	3272	2599	001948	0062	14650	795																																						
192	085	0040	0384	3273	2602	001948	0062	14636	777																																						
193	085	0045	0378	3272	2603	001948	0062	14634	774																																						
194	085	0050	0354	3275	2606	001948	0062	14630	774																																						
195	085	0055	0331	3313	2649	001948	0062	14571	644																																						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																										
CRUISE NO.	STATION NUMBER					10"	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT																							
311084	NW		17 45 N	17 45 W	0000	234	70	07	16	102	1967	BB1	035	0046	00	09	0	X4	X	X	0035																										
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WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		10	507	956	072	056	1																																								
MESSAGE TIME HR 1/10	CASID NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SIO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C																														
		STD	0000	0404	3294	2617	001858	0000	14643																																						
102	085	0000	0404	3293	2617	001858	0000	14643	912																																						
102	085	0005	0402	3297	2618	001858	0000	14643	930																																						
102	085	0010	0400	3296	2619	001858	0018	14643																																							
102	085	0015	0394	3294	2619	001858	0018	14647	927																																						
102	085	0020	0381	3298	2622	001858	0037	14639	905																																						
102	085	0025	0376	3294	2623	001858	0037	14635	842																																						
102	085	0030	0345	3299	2628	001858	0037	14618	768																																						
102	085	0035	0317	3333	2632	001711	0054	14612	744																																						
102	085	0040	0313	3303	2632	001711	0054	14612	737																																						
102	085	0045	0300	3300	2635	001711	0054	14616	692																																						

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH 1/10	MARSDEN SQUARE		STATION TIME (GMT)		YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																										
CRUISE NO.	STATION NUMBER					10"	1"	MO	DAY		HR.	1/10			CRUISE NO.	STATION NUMBER	DIR		HGT	PER		SEA	TYPE	AMT																							
311089	NW		16 30 N	16 45 W	0000	233	74	07	16	132	1967	BB1	036	0051	00	00	0	X4	X	X	0036																										
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WATER		WIND		BARO- METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		13	506	955	067	056	1																																								
MESSAGE TIME HR 1/10	CASID NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SIO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S C																														
		STD	0000	0442	3266	2591	002103	0000	14657	812																																					
132	085	0000	0442	3266	2591	002103	0000	14655	812																																						
132	085	0005	0446	3262	2590	002103	0000	14657	807																																						
132	085	0010	0437	3266	2591	002098	0021	14654	796																																						
132	085	0015	0437	3266	2591	002098	0021	14654	796																																						
132	085	0020	0425	3266	2593	002060	0042	14650	790																																						
132	085	0025	0427	3270	2595	002060	0042	14652	794																																						
132	085	0030	0428	3270	2596	002060	0042	14652	794																																						
132	085	0035	0418	3272	2599	001948	0062	14653	795																																						
132	085	0040	0384	3273	2602	001948	0062	14650	795																																						
132	085	0045	0378	3272	2603	001948	0062	14636	777																																						
132	085	0050	0354	3275	2606	001948	0062	14634	774																																						
132	085	0055	0325	3283	2616	001948	0062	14614	684																																						

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
						10'	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311084	NW	0742	N	16943	W	235	74	07	16	161	1967	B81	037	0053	00	04			X4	X19	0037	
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS				
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbal)	DRY BULB	WET BULB										
							04	509	454	072	067	1										

MESSNGR TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	PH	S.C.C.
		STD	0000	0575	3261	2572	0022805	0000	14709								
161		OBS	0020	0575	32612	2572			14709								
161		OBS	0035	0572	32546	2575			14709								
		STD	0010	0573	3267	2577	0022388	0023	14711								
161		OBS	0020	0573	32667	2577			14711								
161		OBS	0016	0411	32670	2595			14645								
		STD	0020	0326	3273	2607	0019471	0044	14611								
161		OBS	0021	0317	32743	2609			14606								
161		OBS	0036	0316	32745	2610			14607								
		STD	0030	0320	3275	2609	0019486	0063	14609								
161		OBS	0031	0324	32597	2605			14605								
161		OBS	0037	0314	32747	2610			14607								
161		OBS	0042	0310	32756	2611			14607								

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
						10'	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311084	NW	0745	N	16800	W	235	78	07	16	183	1967	B81	038	0053	00	01			X4	X19	0035	
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS				
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbal)	DRY BULB	WET BULB										
							01	518	048	085	093	3										

MESSNGR TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	PH	S.C.C.
		STD	0000	0604	3281	2584	0021716	0000	14725								
188		OBS	0000	0604	32811	2584			14725								
188		OBS	0005	0608	32804	2583			14726								
		STD	0010	0605	3281	2584	0021687	0022	14725								
188		OBS	0010	0605	32810	2584			14725								
188		OBS	0016	0598	32865	2549			14724								
		STD	0020	0584	3288	2592	0020734	0043	14720								
188		OBS	0021	0581	32885	2593			14719								
188		OBS	0026	0332	32897	2620			14616								
		STD	0030	0318	3290	2621	0018137	0063	14610								
188		OBS	0031	0316	32896	2622			14610								
188		OBS	0037	0314	32881	2621			14609								
188		OBS	0042	0312	32880	2621			14609								
188		OBS	0047	0309	32883	2621			14609								

REFERENCE CTRY CODE	ID. NO.	SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER	
						10'	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER
311084	NW	0754	N	16800	W	235	78	07	16	220	1967	B81	039	0062	00	03			X4	X19	0039	
						WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS				
						COLOR CODE	TRANS. (m)	DIR.	SPEED OF FORCE	(mbal)	DRY BULB	WET BULB										
							03	509	944	083	078	2										

MESSNGR TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -S $\mu\text{g} \cdot \text{dl}^{-1}$	PH	S.C.C.
		STD	0000	0605	3266	2572	0022622	0000	14722								
220		OBS	0000	0605	32657	2572			14722								
220		OBS	0005	0576	32786	2585			14713								
		STD	0010	0552	3284	2592	0020884	0022	14704								
220		OBS	0010	0552	32836	2592			14704								
		STD	0020	0546	3284	2594	0020780	0043	14703								
220		OBS	0026	0542	32846	2594			14703								
		STD	0030	0525	3286	2598	0020426	0063	14697								
220		OBS	0031	0521	32863	2598			14695								
220		OBS	0037	0492	32857	2601			14684								
220		OBS	0042	0388	32831	2610			14641								
220		OBS	0047	0356	32830	2615			14620								

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	TYPE	AMT																							
311084		NW	081000N	167300W		235	87	07	17	002	1967	BB1	040	0049	00	01	5		X4	X19	0040																										
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WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		04	522	998	083	078	2																																								
MESSAGE TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STD	0000	0755	3151	2462	0033258	0000	14766																																						
002		OBS	0000	0755	31510	2462			14766																																						
002		OBS	0005	0757	31509	2462			14768																																						
002		STD	0010	0754	3151	2463	0033244	0033	14767																																						
002		OBS	0010	0753	31510	2463			14767																																						
002		OBS	0016	0726	31636	2476			14759																																						
002		STD	0020	0676	3199	2511	0028691	0064	14745																																						
002		OBS	0021	0638	32053	2520			14731																																						
002		OBS	0026	0243	32178	2566			14589																																						
002		STD	0030	0235	3231	2582	0021909	0090	14566																																						
002		OBS	0031	0225	32332	2584			14562																																						
002		OBS	0037	0209	32376	2589			14557																																						
002		OBS	0042	0209	32360	2588			14557																																						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	TYPE	AMT																							
311084		NW	081000N	167180W		235	87	07	17	025	1967	BB1	041	0049	00	00	0		X4	416	0041																										
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WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		03	515	945	072	067	2																																								
MESSAGE TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STD	0000	0787	3102	2420	0037307	0000	14773																																						
025		OBS	0000	0787	31024	2420			14773																																						
025		OBS	0005	0784	31042	2421			14774																																						
025		STD	0010	0783	3116	2431	0036237	0037	14774																																						
025		OBS	0010	0783	31162	2431			14774																																						
025		OBS	0016	0279	31876	2544			14577																																						
025		STD	0020	0245	3210	2564	0023572	0067	14566																																						
025		OBS	0021	0241	32127	2567			14565																																						
025		OBS	0026	0242	32130	2567			14566																																						
025		STD	0030	0241	3213	2567	0023319	0090	14566																																						
025		OBS	0031	0241	32125	2566			14566																																						
025		OBS	0037	0242	32132	2567			14568																																						

REFERENCE		SHIP CODE	LATITUDE ° 1/10	LONGITUDE ° 1/10	DRIFT INDIC	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10"	1"	MO	DAY	HR./1/10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA	TYPE	AMT																							
311084		NW	081000N	167180W		235	87	07	17	044	1967	BB1	042	0053	00	32	3		X2	718	0042																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (ml)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>36</td> <td>520</td> <td>944</td> <td>778</td> <td>057</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (ml)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			36	520	944	778	057	7		
WATER		WIND		BARO-METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		36	520	944	778	057	7																																								
MESSAGE TIME OF HR. 1/10	CASST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STD	0000	0779	3106	2424	0036940	0000	14770	699																																					
044		OBS	0000	0779	31059	2424			14770	699																																					
044		OBS	0005	0780	31061	2424			14771	706																																					
044		STD	0010	0777	3107	2425	0036836	0037	14771	703																																					
044		OBS	0010	0777	31071	2425			14771	703																																					
044		OBS	0016	0721	31402	2458			14754	717																																					
044		STD	0020	0432	3152	2501	0029541	0070	14639	735																																					
044		OBS	0021	0342	31537	2507			14622	739																																					
044		OBS	0026	0382	31524	2507			14618	754																																					
044		STD	0030	0381	3153	2507	0029001	0099	14619	748																																					
044		OBS	0031	0381	31532	2507			14619	747																																					
044		OBS	0037	0381	31535	2508			14620	747																																					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER							
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SEA		TYPE	AMT								
311034	NW	6745 N	16710 W	233	07	18	043	1967	EE2	045	0031	00	17	1		X4	4	5			0045									
																						WATER	WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																									
		17	S18	944	106	049	2																							
MESSAGE TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S. COCS													
		STD	0000	0765	3044	2378	0041303	0000	14765	663																				
043		OBS	0000	0765	30485	2378			14765	663																				
043		OBS	0005	0765	30486	2378			14766	674																				
		STD	0010	0781	3049	2374	0041195	0041	14765	676																				
		OBS	0010	0781	30494	2374			14765	676																				
		OBS	0015	0782	30498	2379			14766	665																				
		STD	0020	0782	3051	2380	0041123	0084	14767	667																				
		OBS	0021	0782	30509	2380			14767	669																				

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER							
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SEA		TYPE	AMT								
311039	NW	6520 N	16745 W	233	07	18	059	1967	EE2	044	0045	00	12	1		X3	X	9			0044									
																						WATER	WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																									
		16	S13	938	094	083	6																							
MESSAGE TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S. COCS													
		STD	0000	0725	3166	2478	0031764	0000	14757	713																				
		OBS	0000	0725	31655	2478			14757	713																				
		OBS	0005	0712	31815	2492			14754	713																				
		STD	0010	0601	3194	2504	0028869	0030	14757	714																				
		OBS	0010	0601	31945	2509			14757	719																				
		OBS	0016	0387	31851	2532			14643	746																				
		STD	0020	0326	3180	2533	0026497	0058	14595	742																				
		OBS	0021	0320	31792	2533			14595	742																				
		OBS	0025	0321	31792	2533			14596	736																				
		STD	0030	0321	3180	2534	0026473	0084	14597	741																				
		OBS	0031	0321	31797	2534			14597	741																				
		OBS	0037	0325	31798	2534			14600	745																				

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARSDEN SQUARE			STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES		NODC STATION NUMBER							
CTRY CODE	ID. NO.					10"	1"	MO	DAY	HR./10	CRUISE NO.		STATION NUMBER	DIR			HGT	PER	SEA		TYPE	AMT								
311089	NW	6454 N	16818 W	233	08	07	18	083	1967	EE2	045	0051	00	18	2		X4	X	9		0045									
																						WATER	WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB																									
		18	S14	925	078	072	6																							
MESSAGE TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S. COCS													
		STD	0000	0646	3247	2547	0025189	0000	14752	725																				
		OBS	0000	0646	32472	2547			14752	725																				
		OBS	0005	0684	32476	2548			14752	721																				
		STD	0010	0680	3248	2548	0025084	0025	14751	724																				
		OBS	0010	0660	32477	2548			14751	724																				
		OBS	0016	0619	32422	2552			14727	719																				
		STD	0020	0485	3235	2562	0023821	0050	14672	759																				
		OBS	0021	0456	32333	2563			14660	707																				
		OBS	0026	0337	32307	2573			14610	696																				
		STD	0030	0334	3224	2572	0022850	0073	14609	700																				
		OBS	0031	0333	32282	2571			14609	701																				
		OBS	0037	0332	32276	2571			14609	695																				
		OBS	0042	0331	32277	2571			14609	692																				

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																											
						MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA																														
CRUISE CODE	ID. NO.	1 10	1 10		10'	1'	MO	DAY	HR:10	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	DIR	HGT	PER	SEA	TYPE	AMT																											
311034	144	0444 N	163 33 W	327	49	18	101	1967	EEZ	046	0033	00	23	2				X4	X	14	0046																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbs)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>19</td> <td>007</td> <td>115</td> <td>17.7</td> <td>17.2</td> <td>1</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			19	007	115	17.7	17.2	1		
WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		19	007	115	17.7	17.2	1																																								
MESSAGE TIME OF HR 1 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STU	0000	26.1	32.66	25.71	0022.635	000	14724	684																																					
141	087	0000	06.1	32.667	25.72				14724	589																																					
141	085	0005	06.4	32.667	25.72				14724	689																																					
141	STU	0010	06.4	32.67	25.73		0022.710	0023	14723	596																																					
141	085	0010	06.0	32.671	25.73				14723	696																																					
141	085	0015	06.1	32.660	25.73				14723	593																																					
141	STU	0020	06.1	32.67	25.73		0022.700	0045	14724	590																																					
141	085	0021	06.1	32.671	25.74				14724	589																																					
141	085	0026	06.0	32.683	25.75				14724	697																																					
141	STU	0030	05.99	32.68	25.75		0022.615	0068	14725	692																																					
141	085	0031	05.99	32.676	25.74				14725	591																																					
141	085	0037	05.96	32.678	25.74				14725	583																																					
141	085	0042	05.87	32.681	25.76				14722	688																																					

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																											
						MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA																														
CRUISE CODE	ID. NO.	1 10	1 10		10'	1'	MO	DAY	HR:10	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	DIR	HGT	PER	SEA	TYPE	AMT																											
311034	144	0454 N	165 09 W	333	49	18	122	1967	EEZ	047	0033	00	23	2				X4	X	19	0047																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbs)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>26</td> <td>576</td> <td>107</td> <td>17.8</td> <td>17.8</td> <td>1</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			26	576	107	17.8	17.8	1		
WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		26	576	107	17.8	17.8	1																																								
MESSAGE TIME OF HR 1 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STU	0000	26.2	32.78	26.13	0018429	0000	14599	744																																					
121	087	0000	03.28	32.78	26.12				14599	744																																					
121	085	0005	03.04	32.796	26.15				14599	755																																					
121	STU	0010	03.00	32.80	26.15		0018694	0019	14598	752																																					
121	085	0010	03.00	32.801	26.15				14598	752																																					
121	085	0016	02.89	32.814	26.12				14586	731																																					
121	STU	0020	02.84	32.81	26.11		0018144	0037	14578	723																																					
121	085	0021	02.85	32.824	26.22				14576	721																																					
121	085	0026	02.87	32.835	26.24				14569	714																																					
121	STU	0030	02.85	32.85	26.25		0017746	0055	14569	714																																					
121	085	0031	02.85	32.851	26.25				14569	714																																					
121	085	0037	02.85	32.845	26.25				14570	705																																					
121	085	0042	02.85	32.847	26.25				14571	711																																					

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	WAVE OBSERVATIONS				WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																											
						MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER	SEA																														
CRUISE CODE	ID. NO.	1 10	1 10		10'	1'	MO	DAY	HR:10	YEAR	CRUISE NO.	STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	DIR	HGT	PER	SEA	TYPE	AMT																											
311034	144	0448 N	164 36 W	333	49	18	147	1967	EEZ	048	0033	00	23	2				X4	X	19	0048																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbs)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>36</td> <td>510</td> <td>906</td> <td>13.9</td> <td>13.9</td> <td>1</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			36	510	906	13.9	13.9	1		
WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		36	510	906	13.9	13.9	1																																								
MESSAGE TIME OF HR 1 10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Delta \rho$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{dl}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{dl}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{dl}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{dl}^{-1}$	pH	S.C.C.																														
		STU	0000	02.58	32.84	26.22	0018090	0000	14578	721																																					
147	085	0000	02.58	32.846	26.22				14578	721																																					
147	085	0005	02.58	32.839	26.22				14579	721																																					
147	STU	0010	02.58	32.84	26.22		0018085	0018	14580	739																																					
147	085	0010	02.58	32.837	26.22				14580	739																																					
147	085	0016	02.54	32.840	26.22				14582	740																																					
147	STU	0020	02.60	32.84	26.22		0018165	0035	14583	732																																					
147	085	0021	02.60	32.845	26.22				14583	730																																					
147	085	0026	02.49	32.845	26.23				14579	751																																					
147	STU	0030	02.10	32.85	26.27		0017641	0054	14563	722																																					
147	085	0031	02.05	32.850	26.27				14560	717																																					
147	085	0037	01.40	32.854	26.28				14555	712																																					
147	085	0042	01.78	32.859	26.30				14551	705																																					

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	MAPSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF S'MPLS	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE	NODC STATION NUMBER
STATION CODE	ID. NO.					10'	30'	MO		DAY	HR			10'	CRUISE NO.	STATION NUMBER			
WATER		WIND		BARO-METER (mbars)	AIR TEMP °C		VIC CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS (mm)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB													
171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	MAPSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF S'MPLS	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE	NODC STATION NUMBER
STATION CODE	ID. NO.					10'	30'	MO		DAY	HR			10'	CRUISE NO.	STATION NUMBER			
WATER		WIND		BARO-METER (mbars)	AIR TEMP °C		VIC CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS (mm)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB													
197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	MAPSDEN SQUARE	STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF S'MPLS	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODE	NODC STATION NUMBER
STATION CODE	ID. NO.					10'	30'	MO		DAY	HR			10'	CRUISE NO.	STATION NUMBER			
WATER		WIND		BARO-METER (mbars)	AIR TEMP °C		VIC CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS										
COLOR CODE	TRANS (mm)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB													
211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	

REFERENCE CRUISE ID. NO.	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCL. IN METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA																									
311052	NW	6542.1N	16744.1W	0000	25	54	07	19	249	1967	DD	054	0000	00	34	1				0052																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR</th> <th>SPEED OF FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>45</td> <td>024</td> <td>142</td> <td>17.8</td> <td>17.2</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																					WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE	DRY BULB	WET BULB			45	024	142	17.8	17.2	7		
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																								
		45	024	142	17.8	17.2	7																																							
MESSNGR TIME OF HR 1/10	CASI NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -S μg-at/l	pH	S CODE																													
		STD	0000	0457	32.80	2584	0021662	0070	14650																																					
		OBS	0000	0457	32.597	2584			14660																																					
		OBS	0005	0456	32.600	2585			14661																																					
		STD	0010	0377	32.71	2601	0020164	0021	14631																																					
		OBS	0010	0379	32.710	2601			14631																																					
		OBS	0016	017.	33.220	2654			14548																																					
		STD	0020	0090	33.31	2672	0013550	0038	14514																																					
		OBS	0021	0078	33.326	2674			14509																																					
		OBS	0026	0067	33.456	2677			14505																																					
		STD	0030	0064	33.42	2681	0014435	0050	14508																																					
		OBS	0031	0070	33.426	2681			14508																																					
		OBS	0037	0051	33.458	2686			14501																																					

REFERENCE CRUISE ID. NO.	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCL. IN METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA																									
311054	NW	6542.1N	16744.1W	0000	25	54	07	19	249	1967	DD	054	0000	00	36	4				0053																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR</th> <th>SPEED OF FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>46</td> <td>530</td> <td>475</td> <td>057</td> <td>15.6</td> <td>6</td> <td></td> <td></td> </tr> </tbody> </table>																					WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE	DRY BULB	WET BULB			46	530	475	057	15.6	6		
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																								
		46	530	475	057	15.6	6																																							
MESSNGR TIME OF HR 1/10	CASI NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -S μg-at/l	pH	S CODE																													
		STD	0000	0530	32.64	2574	0022125	0000	14691																																					
		OBS	0000	0531	32.637	2574			14691																																					
		OBS	0005	0530	32.637	2574			14692																																					
		STD	0010	0229	33.11	2646	0015775	0019	14571																																					
		OBS	0010	0124	33.115	2646			14571																																					
		OBS	0016	0211	33.151	2651			14570																																					
		STD	0020	0222	33.17	2650	0015442	0035	14570																																					
		OBS	0021	0222	33.152	2650			14570																																					
		OBS	0026	0221	33.146	2649			14571																																					
		STD	0030	0221	33.15	2650	0015442	0051	14572																																					
		OBS	0031	0211	33.154	2651			14572																																					
		OBS	0037	0221	33.155	2650			14572																																					

REFERENCE CRUISE ID. NO.	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCL. IN METER	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES	NODC STATION NUMBER																										
					10'	1'	MO	DAY	HR:10		CRUISE NO.	STATION NUMBER			DIR	HGT	PER				SEA																									
311054	NW	6542.1N	16744.1W	0000	25	54	07	19	249	1967	DD	054	0000	00	35	2				0054																										
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																					
COLOR CODE	TRANS (m)	DIR	SPEED OF FORCE		DRY BULB	WET BULB																																								
		36	531	474	6.7	15.7	7																																							
MESSNGR TIME OF HR 1/10	CASI NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY-σ _t	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -S μg-at/l	pH	S CODE																													
		STD	0000	0463	32.63	2600	0020183	0000	14674																																					
		OBS	0000	0463	32.629	2600			14674																																					
		OBS	0005	0471	32.637	2672			14670																																					
		STD	0010	0455	32.88	2607	0019501	0020	14664																																					
		OBS	0010	0455	32.880	2607			14664																																					
		OBS	0016	0245	33.095	2637			14600																																					
		STD	0020	0245	33.13	2646	0015771	0037	14580																																					
		OBS	0021	0238	33.138	2647			14577																																					
		OBS	0026	0234	33.150	2649			14577																																					
		STD	0030	0231	33.16	2644	0015471	0055	14576																																					
		OBS	0031	0230	33.158	2651			14576																																					
		OBS	0037	0228	33.165	2651			14576																																					

REFERENCE Cruise Code	SHIP ID NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLER	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	MOOD STATION NUMBER																											
						10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																									
31108	NW		5° 40' N	16° 44' W	233	10'	1'	17	14	147	1967	DDC	057	0000	00	00	0	0	0	0	0	0057																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (mm)</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>36</td> <td>320</td> <td>1047</td> <td>154</td> <td>144</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																							WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (mm)	DIR	SPEED OR FORCE	DRY BULB	WET BULB			36	320	1047	154	144	7		
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (mm)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																										
		36	320	1047	154	144	7																																									
MESSAGE TIME OF HR 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	S Δ D DYN. SA X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -Si μg-at/l	PH																																
		STD	000	04.34	36.71	2611	0019780	0000	14650																																							
	127	OBS	001	04.34	36.71	2611			14650	92.1																																						
	127	OBS	002	04.34	36.71	2611			14650	92.1																																						
	127	STD	003	04.37	36.71	2611	0015740	0014	14651	89.8																																						
	127	OBS	004	04.37	36.71	2611			14651	89.8																																						
	127	STD	005	04.39	36.77	2611	0015420	0034	14677	61.0																																						
	127	OBS	006	04.39	36.77	2611			14677	61.0																																						
	127	STD	007	04.39	36.77	2611	0015200	0044	14677	61.7																																						
	127	OBS	008	04.39	36.77	2611			14677	61.7																																						
	127	OBS	009	04.39	36.77	2611			14678	61.4																																						
	127	OBS	010	04.39	36.74	2611			14679	61.5																																						

REFERENCE Cruise Code	SHIP ID NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLER	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	MOOD STATION NUMBER																											
						10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																									
31108	NW		5° 40' N	16° 44' W	233	10'	1'	17	14	147	1967	DDC	056	0000	00	00	0	0	0	0	0056																											
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTH</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (mm)</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>36</td> <td>320</td> <td>1047</td> <td>154</td> <td>144</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																							WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (mm)	DIR	SPEED OR FORCE	DRY BULB	WET BULB			36	320	1047	154	144	7		
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (mm)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																										
		36	320	1047	154	144	7																																									
MESSAGE TIME OF HR 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	S Δ D DYN. SA X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -Si μg-at/l	PH																																
		STD	000	04.11	36.92	2616	0015660	0000	14645																																							
	142	OBS	001	04.11	36.92	2616			14645	86.2																																						
	142	OBS	002	04.11	36.92	2616			14646	87.2																																						
	142	STD	003	04.13	36.92	2616	0015650	0014	14646																																							
	142	OBS	004	04.13	36.92	2616			14646	86.2																																						
	142	OBS	005	04.13	36.92	2616			14646	72.0																																						
	142	STD	006	04.13	36.91	2616	0016075	0006	14668	71.0																																						
	142	OBS	007	04.13	36.91	2616			14661	69.6																																						
	142	STD	008	04.13	36.92	2616	0016050	0053	14554	68.9																																						
	142	STD	009	04.13	36.91	2616			14550	67.2																																						
	142	OBS	010	04.13	36.92	2616			14550	67.2																																						
	142	OBS	011	04.13	36.90	2616			14556	68.6																																						
	142	OBS	012	04.13	36.91	2616			14558	67.8																																						

REFERENCE Cruise Code	SHIP ID NO.	SHIP CODE	LATITUDE ° 10'	LONGITUDE ° 10'	DEPTH METER	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLER	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	MOOD STATION NUMBER																											
						10'	1'	MO	DAY	HR		10'	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																									
31108	NW		5° 40' N	16° 44' W	233	10'	1'	17	14	158	1967	DDC	057	0000	00	00	0	0	0	0	0057																											
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTH	SPECIAL OBSERVATIONS																																							
COLOR CODE	TRANS (mm)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																										
		36	323	1034	156	150	7																																									
MESSAGE TIME OF HR 10'	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-t	SPECIFIC VOLUME ANOMALY- σ_t	S Δ D DYN. SA X 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₃ -N μg-at/l	NO ₂ -N μg-at/l	SiO ₄ -Si μg-at/l	PH																																
		STD	000	04.46	36.76	2598	0020326	0000	14658																																							
	158	OBS	001	04.46	36.76	2598			14658																																							
	158	OBS	002	04.42	36.75	2595			14657																																							
	158	STD	003	04.45	36.77	2601	0020044	0020	14651																																							
	158	OBS	004	04.45	36.77	2601			14651																																							
	158	OBS	005	04.45	36.81	2600			14633																																							
	158	STD	006	03.69	36.84	2613	0018947	0041	14628																																							
	158	OBS	007	03.62	36.84	2613			14627																																							
	158	OBS	008	03.51	36.52	2615			14623																																							
	158	STD	009	02.50	36.87	2624	0017851	0058	14585																																							
	158	OBS	010	02.42	36.76	2605			14577																																							
	158	OBS	011	02.81	36.84	2628			14551																																							
	158	OBS	012	01.75	36.86	2622			14549																																							

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSden SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
31176	176	NW	0537.4N	167420W	15.5	59	07	19	1866	1967	DD	059	0055	00	33	2		X2	6	8	0054																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbst)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS. CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (ml)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>35</td> <td>526</td> <td>004</td> <td>072</td> <td>050</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			35	526	004	072	050	7		
WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		35	526	004	072	050	7																																								
MESSNGR TIME (HR. 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30T	$\Sigma \Delta D$ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SIO ₄ -S	pH	S. C. C.																														
		STD	0000	0627	3256	2561	0023624	000	14727	714																																					
17		OBS	0005	0627	32558	2561			14729	714																																					
17		OBS	0010	0627	32558	2561			14730	715																																					
		STD	0010	0627	3256	2561	0023657	0024	14731	724																																					
17		OBS	0010	0627	32555	2561			14731	724																																					
17		OBS	0016	0627	32557	2562			14729	719																																					
		STD	0016	0627	3261	2569	0023161	0047	14723	703																																					
17		OBS	0021	0627	32618	2570			14722	702																																					
17		OBS	0026	0627	32659	2573			14723	717																																					
		STD	0026	0627	3270	2577	002346	0070	14721	724																																					
17		OBS	0031	0628	32702	2578			14720	725																																					
17		OBS	0037	0628	32691	2580			14719	717																																					

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSden SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
31176	176	NW	0537.4N	167420W	15.5	59	07	19	1866	1967	DD	059	0055	00	33	2		X2	6	8	0054																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbst)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS. CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (ml)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>35</td> <td>526</td> <td>004</td> <td>067</td> <td>056</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			35	526	004	067	056	7		
WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		35	526	004	067	056	7																																								
MESSNGR TIME (HR. 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30T	$\Sigma \Delta D$ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SIO ₄ -S	pH	S. C. C.																														
		STD	0000	0730	3264	2554	0024505	0000	14771																																						
186		OBS	0000	0730	32639	2554			14771																																						
186		OBS	0005	0730	32640	2554			14775																																						
		STD	0010	0726	3263	2554	0024540	0025	14771																																						
186		OBS	0010	0726	32628	2554			14771																																						
186		OBS	0016	0694	32614	2552			14758																																						
		STD	0020	0585	3252	2564	0023638	0049	14710																																						
186		OBS	0021	0571	3250	2564			14709																																						
186		OBS	0026	0575	32517	2565			14712																																						
		STD	0030	0571	3251	2565	0023562	0072	14711																																						
186		OBS	0031	0554	32493	2566			14704																																						
186		OBS	0037	0344	32447	2571			14595																																						
186		OBS	0042	0294	32255	2572			14595																																						
186		OBS	0047	0303																																											

REFERENCE		SHIP CODE	LATITUDE	LONGITUDE	DEPTH (m)	MARSden SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
31108	108	NW	0537UN	168490W	235	56	07	19	208	1967	DD	060	0053	00	35	2		X2	7	8	0060																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbst)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS. CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS. (ml)</th> <th>DIR.</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>35</td> <td>515</td> <td>013</td> <td>072</td> <td>056</td> <td>7</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE	DRY BULB	WET BULB			35	515	013	072	056	7		
WATER		WIND		BARO-METER (mbst)	AIR TEMP. °C		VIS. CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS. (ml)	DIR.	SPEED OR FORCE		DRY BULB	WET BULB																																									
		35	515	013	072	056	7																																								
MESSNGR TIME (HR. 1/10)	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-30T	$\Sigma \Delta D$ DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P	TOTAL-P	NO ₂ -N	NO ₃ -N	SIO ₄ -S	pH	S. C. C.																														
		STD	0000	0488	3211	2542	0025662	0000	14667	752																																					
208		OBS	0000	0488	32107	2542			14667	752																																					
208		OBS	0005	0485	32117	2543			14665	752																																					
		STD	0010	0468	3219	2551	0024650	0025	14661	756																																					
208		OBS	0010	0468	32189	2551			14661	756																																					
208		OBS	0016	0483	32252	2554			14669	755																																					
		STD	0020	0501	3233	2558	0024142	0050	14674	736																																					
208		OBS	0021	0506	32332	2558			14670	731																																					
208		OBS	0026	0342	32252	2563			14632	766																																					
		STD	0030	0367	3224	2563	0023676	0074	14631	761																																					
208		OBS	0031	0386	32241	2564			14631	760																																					
208		OBS	0037	0377	32241	2564			14628	761																																					
208		OBS	0042	0369	32237	2564			14625	759																																					

REFERENCE		SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA
31	1084	NW	65360N	166400W		233	58	7	19	243	1967	DD2	061	0051	00	35	5		X	7	R	0061	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE		TRANS. (M)		DIR.		SPEED OR FORCE		BARO-METER (mb)		DRY BULB		WET BULB									
				35		S10		016		061		050		7									
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	TEMP. °C						
		STD	0000	0463	3128	2479	0031629	0000	14645														
223		OBS	0000	0463	3128	2479			14645														
223		OBS	0005	0462	31280	2479			14646														
		STD	0010	0433	3131	2485	0031127	0031	14635														
223		OBS	0010	0433	31310	2485			14635														
223		OBS	0016	0414	31443	2497			14629														
		STD	0020	0351	3153	2508	0028959	0061	14604														
223		OBS	0021	0344	31543	2511			14602														
223		OBS	0026	0329	31654	2528			14614														
		STD	0030	0343	3195	2540	0025573	0089	14617														
223		OBS	0031	0339	31909	2541			14625														
223		OBS	0037	0431	32029	2542			14647														
223		OBS	0042	0501	32160	2545			14680														
223		OBS	0047	0450	32155	2550			14654														

REFERENCE		SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA
31	1084	NW	65380N	166340W		233	58	07	19	235	1967	DD2	062	0055	00	31	5		X	7	R	0062	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE		TRANS. (M)		DIR.		SPEED OR FORCE		BARO-METER (mb)		DRY BULB		WET BULB									
				35		S14		022		067		067		1									
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	TEMP. °C						
		STD	0000	0743	3153	2387	0040400	0000	14749	675													
235		OBS	0000	0743	30533	2387			14749	675													
235		OBS	0005	0744	30531	2387			14750	685													
		STD	0010	0502	3119	2468	0032581	0037	14662	715													
235		OBS	0010	0432	31194	2468			14662	715													
235		OBS	0016	0454	31250	2478			14644	724													
		STD	0020	0424	3122	2486	0030472	0058	14632	716													
235		OBS	0021	0415	31356	2488			14629	717													
235		OBS	0026	0363	31431	2501			14635	740													
		STD	0030	0350	3154	2511	0028652	0078	14616	745													
235		OBS	0031	0345	31555	2512			14634	747													
235		OBS	0037	0308	31612	2520			14593	754													
235		OBS	0042	0285	31716	2530			14582	771													

REFERENCE		SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	DEPTH METER	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER		
CTRY CODE	ID. NO.					10'	1"	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA
31	1084	NW	65380N	166260W		233	58	07	19	235	1967	DD2	063	0053	00	31	5		X	7	R	0063	
		WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS									
		COLOR CODE		TRANS. (M)		DIR.		SPEED OR FORCE		BARO-METER (mb)		DRY BULB		WET BULB									
				35		S17		024		078		044		7									
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY-10 ³	S Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	TEMP. °C						
		STD	0000	0876	2976	2308	0047985	0000	14740														
008		OBS	0000	0876	29755	2308			14790														
008		OBS	0005	0876	29767	2309			14792														
		STD	0010	0849	2987	2321	0046758	0047	14783														
008		OBS	0010	0849	29871	2321			14783														
008		OBS	0016	0777	30276	2362			14762														
		STD	0020	0753	3047	2381	0041021	0091	14755														
008		OBS	0021	0741	30526	2387			14752														
008		OBS	0026	0646	30816	2422			14718														
		STD	0030	0594	3097	2440	0035258	0129	14700														
008		OBS	0031	0584	30942	2443			14696														
008		OBS	0037	0550	31061	2452			14684														
008		OBS	0042	0520	31114	2454			14677														

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH INDIC.	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA	
311084	NW	65260N	168140W		233	67	07	20	1967	002	054		001	00	34	4		X1	7	18	0064		
				WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
				COLOR CODE		TRANS (ml)		DIR.		SPEED OF FORCE		BARO-METER (mbs)		DRY BULB		WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS	
						33		20		004		74		000		7							

MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.
		STD	0000	0431	2936	2667	0011661	0000	14306	653							
020	085	0000	0931	29364	2667				14306	653							
020	085	0005	0935	29364	2667				14807	654							
020	STD	0010	0931	2947	2682		0014674	0001	14748	667							
020	085	0010	0931	29463	2682				14748	667							
020	085	0016	0938	29568	2693				14745	676							
020	STD	0020	0944	2961	2695		0049.71	0401	14747	663							
020	085	0021	0949	29613	2695				14747	661							
020	085	0026	0950	29637	2697				14748	666							
020	STD	0030	0957	2965	2691		0049.65	0191	14744	654							
020	085	0031	0958	29702	2692				14744	659							
020	085	0037	0974	29771	2699				14748	661							
020	085	0042	0977	30014	2699				14747	684							

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH INDIC.	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA	
311084	NW	65250N	169450W		233	64	07	20	1967	002	055		003	00	34	4		X2	7	18	0065		
				WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
				COLOR CODE		TRANS (ml)		DIR.		SPEED OF FORCE		BARO-METER (mbs)		DRY BULB		WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS	
						05		507		037		056		044		7							

MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.
		STD	0000	0604	3201	2521	0027634	0000	14713	807							
191	085	0000	0604	32013	2521				14713	807							
191	085	0005	0649	32172	2546				14672	796							
	STD	0010	0677	3242	2607		0017637	0023	14869	702							
191	085	0010	0677	32915	2607				14889	702							
191	085	0016	0652	33072	2640				14886	669							
	STD	0020	0664	3309	2641		0016304	0040	14867	644							
191	085	0021	0664	33080	2641				14888	641							
191	085	0026	067	33080	2641				14888	635							
	STD	0030	0661	33089	2641		0016241	0056	14888	648							
191	085	0031	0661	33080	2641				14888	650							
191	085	0037	0661	33080	2641				14889	647							
191	085	0042	0656	33040	264				14888	635							

REFERENCE	SHIP CODE	LATITUDE	LONGITUDE	DEPTH INDIC.	MARDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER			
					10'	1"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIP	HGT				PER	SEA	
311084	NW	66270N	169320W		233	64	07	20	1967	002	066		003	00	31	3		X2	7	18	0066		
				WATER		WIND		BARO-METER		AIR TEMP. °C		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
				COLOR CODE		TRANS (ml)		DIR.		SPEED OF FORCE		BARO-METER (mbs)		DRY BULB		WET BULB		VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS	
						11		506		037		072		050		7							

MESSAGE TIME OF HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	Σ Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SiO ₄ -Si μg-at/l	pH	S.C.C.
		STD	0000	0574	3234	2551	0024788	0000	14704								
216	085	0000	0572	32344	2551				14704								
216	085	0005	0545	32430	2561				14695								
	STD	0010	0262	3243	2627		0017574	0021	14542								
216	085	0010	0262	32424	2627				14592								
216	085	0016	0277	32436	2628				14591								
	STD	0020	0277	3244	2628		0017467	0039	14591								
216	085	0021	0277	32940	2629				14592								
216	085	0026	0275	32943	2629				14592								
	STD	0030	0264	3244	2629		0017400	0056	14590								
216	085	0031	0268	32425	2629				14589								
216	085	0037	0268	32445	2629				14590								
216	085	0042	0266	32440	2629				14590								
216	085	0047	0266	32944	2630				14591								

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1-10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311084	NW	6630N	164120W	030	04	07	00	07	1967	000	0007	0003	00	00	0	1	1	0	0	0	0007																										
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WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
			2	500	019	17.8	16.7																																								
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S. Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	STATION NO.																														
		STD	0000	0544	3248	2565	0023433	0000	14695	821																																					
	237	OBS	0030	0544	3248	2565			14695	821																																					
	237	OBS	0000	0469	3252	2573			14674	768																																					
		STD	0010	0469	3252	2574	0022717	0023	14671	762																																					
	237	OBS	0010	0469	3252	2574			14671	762																																					
	237	OBS	0016	0469	3252	2574			14672	760																																					
		STD	0000	0466	3250	2577	0022347	0046	14676	748																																					
	237	OBS	0021	0484	3267	2578			14677	747																																					
	237	OBS	0006	0460	3266	2589			14654	744																																					
		STD	0030	0461	3274	2577	0021607	0067	14659	754																																					
	237	OBS	0031	0461	3275	2576			14654	757																																					
	237	OBS	0037	0417	3281	2577			14649	716																																					
	237	OBS	0042	0447	3283	261			14641	718																																					
	237	OBS	0047	0351	3269	2516			14647	752																																					

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1-10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311084	NW	6630N	164130W	030	05	07	01	05	1967	000	0008	0001	00	00	0	1	1	0	0	0	0008																										
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WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
			10	500	019	16.7	16.7																																								
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S. Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	STATION NO.																														
		STD	0000	0522	3186	2501	0027702	0000	14678	770																																					
	235	OBS	0000	0522	3186	2501			14678	770																																					
	235	OBS	0005	0463	3234	2562			14650	769																																					
		STD	0010	0463	3234	2572	0022713	0035	14650	755																																					
	235	OBS	0010	0422	3241	2577			14647	755																																					
	235	OBS	0016	0431	3242	2574			14651	750																																					
		STD	0020	0421	3244	2577	0021527	004	14646	744																																					
	235	OBS	0021	0417	3245	2577			14647	743																																					
	235	OBS	0026	0440	3249	2577			14652	745																																					
		STD	0030	0451	3253	2581	0022129	0070	14654	731																																					
	235	OBS	0031	0454	3252	2581			14653	727																																					
	235	OBS	0037	0468	3262	2581			14672	736																																					
	235	OBS	0042	0466	3277	2591			14672	695																																					

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	DEPTH INCHES	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1-10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311089	NW	66360N	165100W	030	06	07	01	07	1967	000	0009	0005	00	00	0	1	1	0	0	0	0009																										
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO-METER (mbs)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (ml)</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>19</td> <td>504</td> <td>019</td> <td>17.8</td> <td>16.7</td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE	DRY BULB	WET BULB				19	504	019	17.8	16.7		
WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
			19	504	019	17.8	16.7																																								
MESSAGE TIME OF HR 1-10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY x 10 ³	S. Δ D DYN. M. x 10 ³	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	STATION NO.																														
		STD	0000	0867	3012	2335	0045173	0000	14742	653																																					
	057	OBS	0000	0567	30129	2338			14742	652																																					
	057	OBS	0005	0868	30126	2334			14743	680																																					
		STD	0010	0839	3026	2352	0043755	0044	14764	667																																					
	057	OBS	0010	0839	3025	2351			14744	667																																					
	057	OBS	0016	0844	3034	2364			14775	667																																					
		STD	0000	0814	3037	2367	0042396	0087	14773	675																																					
	057	OBS	0021	0806	3034	2367			14773	676																																					
	057	OBS	0026	0800	3037	2367			14773	674																																					

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	CHART INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311087	NW	6610N	16700W	233	87	07	11	126	1467	1967	002	073	0043	00	31	1			1	5	5	0073																									
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WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB																																									
		31	003	016	089	078	7																																								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at-l}$	TOTAL-P $\mu\text{g-at-l}$	NO ₂ -N $\mu\text{g-at-l}$	NO ₃ -N $\mu\text{g-at-l}$	SIO ₄ -Si $\mu\text{g-at-l}$	pH	S.C.C.																														
		STD	0000	0644	3111	2445	0034551	0000	14716	713																																					
126		OBS	0000	0642	31105	2445			14716	713																																					
126		OBS	0005	0635	31128	2448			14715	718																																					
		STD	0010	0621	3115	2451	0034724	0035	14710	715																																					
126		OBS	0010	0621	31148	2451			14711	715																																					
126		OBS	0016	0600	31208	2458			14733	715																																					
		STD	0020	0582	312	2457	0032824	0068	14696	715																																					
126		OBS	0021	0579	31377	2469			14697	715																																					
126		OBS	0026	0577	31319	2470			14697	711																																					

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	CHART INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311089	NW	6634N	16624W	233	88	07	11	149	1967	1967	002	074	0020	00	3			1	6	5	0074																										
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WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB																																									
		01	505	014	074	078	7																																								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at-l}$	TOTAL-P $\mu\text{g-at-l}$	NO ₂ -N $\mu\text{g-at-l}$	NO ₃ -N $\mu\text{g-at-l}$	SIO ₄ -Si $\mu\text{g-at-l}$	pH	S.C.C.																														
		STD	0000	0846	3052	2372	0041565	0000	14793	682																																					
149		OBS	0000	0848	30524	2372			14793	682																																					
149		OBS	0005	0838	30519	2373			14787	682																																					
		STD	0010	0831	3052	2374	0041666	0042	14785	681																																					
149		OBS	0010	0831	30521	2374			14785	681																																					

REFERENCE		SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	CHART INDIC	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPLES	WAVE OBSERVATIONS			WEATHER CODE	CLOUD CODES	NODC STATION NUMBER																										
CRUISE CODE	ID. NO.					10'	1"	MO	DAY	HR.		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA	TYPE	AMT																						
311089	NW	66100N	167020W	233	87	07	22	041	1967	1967	005	075	0055	01	04	3			X2	7	9	0075																									
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WATER		WIND		BARO-METER (mbs)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (ml)	DIR.	SPEED OF FORCE		DRY BULB	WET BULB																																									
		00	514	096	075	037	7																																								
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta$ D DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g-at-l}$	TOTAL-P $\mu\text{g-at-l}$	NO ₂ -N $\mu\text{g-at-l}$	NO ₃ -N $\mu\text{g-at-l}$	SIO ₄ -Si $\mu\text{g-at-l}$	pH	S.C.C.																														
		STD	0000	1005	2371	1819	0094906	0000	14765	654																																					
038		OBS	0000	1005	23712	1819			14765	654																																					
038		OBS	0005	0757	30735	2401			14758	709																																					
		STD	0010	0476	3125	2475	0032012	0063	14652	712																																					
038		OBS	0010	0476	31248	2475			14652	712																																					
038		OBS	0016	0434	31228	2475			14635	718																																					
		STD	0020	0421	3127	2487	0031321	0045	14631	713																																					
038		OBS	0021	0420	31292	2485			14631	714																																					
038		OBS	0026	0428	31445	2496			14637	730																																					
		STD	0030	0547	3184	2514	0028319	0125	14692	725																																					
038		OBS	0031	0555	31895	2518			14696	724																																					
038		OBS	0037	0469	31870	2525			14662	734																																					
038		OBS	0042	0408	31831	2532			14637	729																																					
038		OBS	0047	0410	31874	2532			14638	727																																					
		STD	0050	0411	3188	2532	0026547	0180	14639	734																																					
038		OBS	0053	0413	31883	2532			14641	734																																					

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311	189	NW	6211N	16727W	233	67	07	22	058	1967	882	076	0058	00	06	4			7	3	0076
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	METER IMBS		DRY BULB	WET BULB	VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
					26	520	076	072	079	8											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{at}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{at}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{at}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at}^{-1}$	pH	S C				
		STD	0000	0916	2730	2111	0056675	0000	14774												
058		OBS	0000	0916	27297	2111			14774												
58		OBS	0005	0850	30240	2350			14768												
		STD	0010	0776	3163	2469	0052638	005	14777												
058		OBS	0010	0776	3163	2469			14777												
058		OBS	0016	0421	32278	2563			14645												
		STD	0020	0417	3231	2567	0023351	0078	14637												
058		OBS	0021	0402	32312	2567			14637												
058		OBS	0026	0387	32311	2570			14640												
		STD	0030	0382	3234	2571	0022902	0061	14630												
058		OBS	0031	0362	32344	2572			14630												
058		OBS	0037	0378	32366	2574			14630												
058		OBS	0042	0380	32433	2579			14630												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311	189	NW	6806N	16726W	233	67	07	22	075	1967	882	077	0057	00	04			8	16	0077	
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	METER IMBS		DRY BULB	WET BULB	VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
					29	528	106	067	011	8											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{at}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{at}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{at}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at}^{-1}$	pH	S C				
		STD	0000	0814						709											
		OBS	0000	0814						709											
075		OBS	0005	0781	31616	2467			14779	716											
		STD	0010	0758	3166	2474	0032191		14771	719											
075		OBS	0010	0756	31660	2474			14771	719											
075		OBS	0016	0583	32319	2548			14711	843											
		STD	0020	0501	3260	2580	0022110		14552												
075		OBS	0021	0479	32648	2586			14674	870											
075		OBS	0026	0355	32741	2606			14523	726											
		STD	0030	0331	3279	2612	0014049		14514	679											
075		OBS	0031	0325	32805	2614			14512	667											
075		OBS	0037	0468	32300	25600			829												
075		OBS	0042	0384	32643	25950			879												

REFERENCE		SHIP CODE	LATITUDE 1/10	LONGITUDE 1/10	DEPTH INCHES	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES TYPE AMT	NODC STATION NUMBER
CRUISE CODE	ID. NO.					10'	1'	MO	DAY	HR		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT			
311	189	NW	6754N	16800W	233	78	07	22	046	1967	882	078	0056	00	30	4		6	18	0078	
		WATER		WIND		BARO- METER		AIR TEMP. °C		VIS		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
		COLOR CODE	TRANS. IMI	DIR.	SPEED OR FORCE	METER IMBS		DRY BULB	WET BULB	VIS CODE		NO. OBS. DEPTHS		SPECIAL OBSERVATIONS							
					30	525	126	056	017	7											
MESSAGE TIME HR 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_{θ}	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{at}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{at}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{at}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{at}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{at}^{-1}$	pH	S C				
		STD	0000	0721	3182	2491	0030518	0000	14757	697											
096		OBS	0000	0721	31818	2491			14757	697											
096		OBS	0005	0723	31838	2492			14759	702											
		STD	0010	0565	3228	2544	0025463	0028	14710	753											
096		OBS	0010	0585	32275	2544			14710	867											
096		OBS	0016	0453	32595	2584			14661	863											
		STD	0020	0419	3262	2590	0021130	0051	14648	735											
096		OBS	0021	0411	32625	2591			14645	733											
096		OBS	0026	0377	32605	2593			14631	701											
		STD	0030	0389	3264	2594	0020702	0072	14637	685											
096		OBS	0031	0390	32641	2594			14638	681											
096		OBS	0037	0383	32638	2595			14626	662											
096		OBS	0042	0374	32628	2595			14633	653											
096		OBS	0047	0341	32608	2596			14619	615											

REFERENCE CITY CODE	ID. NO.	SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	ORIG. INDIC.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SWATHS	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	NODC STATION NUMBER																										
						10'	3"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
311088	NW	6747N	16430W	233	7c	07	11	1967	32	07	0000	0004	00	04	2	0	0	0	0000																												
<table border="1"> <thead> <tr> <th colspan="2">WATER</th> <th colspan="2">WIND</th> <th rowspan="2">BARO- METER (mb)</th> <th colspan="2">AIR TEMP. °C</th> <th rowspan="2">VIS CODE</th> <th rowspan="2">NO. OBS. DEPTHS</th> <th rowspan="2">SPECIAL OBSERVATIONS</th> </tr> <tr> <th>COLOR CODE</th> <th>TRANS (m)</th> <th>DIR</th> <th>SPEED OR FORCE</th> <th>DRY BULB</th> <th>WET BULB</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>29</td> <td>017</td> <td>103</td> <td>07</td> <td>07</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																						WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS	COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE	DRY BULB	WET BULB			29	017	103	07	07			
WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
		29	017	103	07	07																																									
MESSNGR TIME HR 1-10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10 ³)	SOUND VELOCITY M x 10 ³	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S CODE																															
		STD	0000	0484	3664	2600	001160	0000	14674																																						
118		OBS	0000	0484	3664	2600			14671																																						
119		OBS	0005	0484	3663	2597			14674																																						
		STD	0010	0477	3662	2594	001146	0000	14671																																						
118		OBS	0010	0477	3662	2594			14671																																						
118		OBS	0016	0469	3664	2607			14666																																						
		STD	0020	0477	3673	2607	001141	0043	14644																																						
118		OBS	0021	0397	3672	2607			14641																																						
118		OBS	0026	0364	3666	2618			14631																																						
		STD	0030	0366	3691	2618	001144	0062	14634																																						
118		OBS	0031	0366	3692	2619			14631																																						
118		OBS	0037	0335	3694	2631			14621																																						
118		OBS	0042	0320	3694	2644			14615																																						

REFERENCE CITY CODE	ID. NO.	SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	ORIG. INDIC.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SWATHS	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	NODC STATION NUMBER																										
						10'	3"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
311089	NW	6747N	16430W	233	7c	07	11	1967	32	07	0000	0004	00	04	2	0	0	0	0000																												
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
		29	017	103	07	07																																									
MESSNGR TIME HR 1-10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10 ³)	SOUND VELOCITY M x 10 ³	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S CODE																															
		STD	0000	0491	3671	2584	001160	0000	14675																																						
152		OBS	0000	0491	3670	2589			14675																																						
152		OBS	0005	0492	3677	2589			14677																																						
		STD	0010	0487	3671	2590	001127	0021	14676																																						
153		OBS	0010	0467	3671	2590			14676																																						
153		OBS	0016	0452	3671	2594			14662																																						
		STD	0020	0430	3673	2601	001121	0042	14641																																						
153		OBS	0021	0397	3674	2609			14633																																						
153		OBS	0026	0350	3694	2620			14620																																						
		STD	0030	0347	3696	2624	001124	0061	14624																																						
153		OBS	0031	0347	3697	2624			14624																																						
152		OBS	0037	0344	3694	2626			14624																																						
153		OBS	0042	0327	3696	2638			14618																																						
153		OBS	0047	0314	3699	2632			14613																																						

REFERENCE CITY CODE	ID. NO.	SHIP CODE	LATITUDE 1-10	LONGITUDE 1-10	ORIG. INDIC.	MARSDEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SWATHS	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODE	NODC STATION NUMBER																										
						10'	3"	MO	DAY	HR		10	CRUISE NO.			STATION NUMBER	DIR	HGT				PER	SEA																								
311089	NW	6747N	16450W	233	7c	07	12	1967	32	06	0000	0004	00	04	5	0	0	0	0001																												
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WATER		WIND		BARO- METER (mb)	AIR TEMP. °C		VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																						
COLOR CODE	TRANS (m)	DIR	SPEED OR FORCE		DRY BULB	WET BULB																																									
		29	020	184	07	06																																									
MESSNGR TIME HR 1-10	CARD NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY (10 ³)	SOUND VELOCITY M x 10 ³	O ₂ ml/l	PO ₄ -P μg-at/l	TOTAL-P μg-at/l	NO ₂ -N μg-at/l	NO ₃ -N μg-at/l	SIO ₄ -S μg-at/l	pH	S CODE																															
		STD	0000	0562	3266	2577	001230	0000	14714																																						
192		OBS	0000	0562	3266	2577			14704																																						
192		OBS	0005	0561	3264	2577			14705																																						
		STD	0010	0551	3267	2574	001224	0022	14701																																						
192		OBS	0010	0457	3267	2579			14701																																						
192		OBS	0016	0446	3275	2591			14698																																						
		STD	0020	0447	3267	2587	001242	0044	14681																																						
192		OBS	0021	0476	3267	2590			14673																																						
192		OBS	0026	0311	3267	2612			14634																																						
		STD	0030	0326	3277	2612	001246	0064	14603																																						
192		OBS	0031	0303	3271	2613			14603																																						
192		OBS	0037	0334	3294	2621			14601																																						

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	MARS DEN INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																														
						10"	1"	MO	DAY	HR.		1/10	CRUISE NO.			STATION NUMBER	DIR	HGT		PER	SEA		TYPE	AMT																												
311084	NW		67200N	170400W	234	70	27	23	1967	002	045	0046	00	30	1	1	1	1	1	1	1	1	0082																													
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WATER		WIND			BARO- METER (mbs)	AIR TEMP. °C			VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																									
COLOR CODE	TRANS. (m)	DIR	SPEED OR FORCE	DRY BULB		WET BULB	WET BULB																																													
		22	506	198	032	044	3																																													
MESSAGE TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S DICS																																			
		STD	0000	0633	3280	2550	0022092	000	14735	752																																										
	223	OBS	0000	0633	32799	2580			14735	750																																										
	223	OBS	0005	0633	32794	2580			14736	784																																										
		STD	0010	0630	3280	2550	0022175	0000	14735	784																																										
	223	OBS	0010	0630	32795	2580			14735	760																																										
	223	OBS	0016	0635	32796	2583			14726	744																																										
		STD	0020	0347	3284	2611	0022663	0043	14642	834																																										
	223	OBS	0021	0367	32854	2614			14649	844																																										
	223	OBS	0026	0345	32942	2623			14622	660																																										
		STD	0030	0340	3303	2630	0022753	0061	14622	574																																										
	223	OBS	0031	0344	33040	2631			14623	554																																										
	223	OBS	0037	0310	33038	2632			14612	584																																										

REFERENCE CITY CODE	SHIP ID. NO.	SHIP CODE	LATITUDE 1 10	LONGITUDE 1 10	MARS DEN INDEX	MARS DEN SQUARE		STATION TIME (GMT)			YEAR	ORIGINATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF SAMPL'S	WAVE OBSERVATIONS			WEA- THER CODE	CLOUD CODES		NODC STATION NUMBER																														
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311089	NW		67120N	170480W	234	70	27	23	1967	002	045	0055	00	31	1	1	1	1	1	1	1	0083																														
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WATER		WIND			BARO- METER (mbs)	AIR TEMP. °C			VIS CODE	NO. OBS. DEPTHS	SPECIAL OBSERVATIONS																																									
COLOR CODE	TRANS. (m)	DIR	SPEED OR FORCE	DRY BULB		WET BULB	WET BULB																																													
		36	506	212	084	055	8																																													
MESSAGE TIME OF HR. 1/10	CAST NO.	CARD TYPE	DEPTH (m)	T °C	S ‰	SIGMA-T	SPECIFIC VOLUME ANOMALY- σ_t	$\Sigma \Delta D$ DYN. M. $\times 10^3$	SOUND VELOCITY	O ₂ ml/l	PO ₄ -P $\mu\text{g} \cdot \text{ml}^{-1}$	TOTAL-P $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₂ -N $\mu\text{g} \cdot \text{ml}^{-1}$	NO ₃ -N $\mu\text{g} \cdot \text{ml}^{-1}$	SiO ₄ -Si $\mu\text{g} \cdot \text{ml}^{-1}$	pH	S DICS																																			
		STD	0000	0710	3279	2569	0023144	0000	14765	776																																										
	014	OBS	0000	0710	32785	2569			14765	776																																										
	014	OBS	0005	0655	32794	2576			14745	784																																										
		STD	0010	0634	3275	2578	0022268	0023	14739	784																																										
	014	OBS	0010	0639	32784	2578			14739	784																																										
	014	OBS	0016	0626	32810	2581			14735	816																																										
		STD	0020	0440	3292	2615	0018777	0043	14661	836																																										
	014	OBS	0021	0439	32932	2620			14649	844																																										
	014	OBS	0026	0343	33048	2631			14622	660																																										
		STD	0030	0291	3306	2637	0018771	0061	14621	556																																										
	014	OBS	0031	0274	33070	2639			14594	546																																										
	014	OBS	0037	0136	33038	2661			14626	614																																										

Table III.—Direct current measurements, USCGC NORTHWIND (WAGB 282), 14–23 July 1967, prepared by University of Washington, Department of Oceanography. Figure in parentheses represents corresponding station number in Table II. Time is given in Greenwich Mean Time, Depth in meters, Speed in centimeters/second, and Direction in degrees true.

Station 1 (11) Date: 14–vii–67				Station 3 (12) Date: 14–vii–67			
Lat: 65°42.0'N Long: 169°54.0'W				Lat: 65°42.0'N Long: 169°48.0'W			
Time	m Depth	Speed	cm/sec Direction	Time	m Depth	Speed	cm/sec Direction
0235	5	30	328	0359	5	—	—
	10	8	352		10	11	344
	15	0			15	23	004
	20	0			20	29	015
	25	9	040		25	26	024
	30	18	039		30	20	039
0243	35	20	040	0407	35	16	046
	39	17	045		40	11	045
	35	15	045		35	21	038
	30	14	060		30	27	031
	25	15	055		25	25	025
	20	15	057		20	21	025
0250	15	16	031	0415	15	17	007
	10	16	354		10	16	337
	5	22	317		5	18	331
Station 3 (13) Date: 14–vii–67				Station 4 (14) Date: 14–vii–67			
Lat: 65°36.0'N Long: 169°42.0'W				Lat: 65°38.0'N Long: 169°36.0'W			
Time	m Depth	Speed	cm/sec Direction	Time	m Depth	Speed	cm/sec Direction
0505	5	34	042	0642	5	28	028
	10	31	025		10	34	028
	15	28	010		15	38	019
	20	29	005		20	39	009
	25	29	001		24	38	001
	29	30	354		29	34	357
	34	27	353		33	30	354
	38	27	350		39	25	348
	34	31	352		34	26	351
	29	33	350		29	—	354
	24	34	354		24	36	005
	20	33	009		19	—	353
	15	33	023		15	35	021
	10	29	046		10	29	028
0535	5	39	077	0656	5	33	033

Station 5 (15)
Date: 14-vii-67

Lat: 65°34.0'N
Long: 169°25.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0830	5	39	048
	10	40	031
	15	43	017
	19	44	360
	24	42	351
	28	38	342
	32	38	215
	37	41	350
	32	39	354
	28	45	354
	23	46	001
	19	45	005
	14	47	021
	10	44	043
0841	5	42	075

Station 7 (18)
Date: 14-vii-67

Lat: 65°38.0'N
Long: 168°50.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1335	5	56	201
	10	52	210
	14	51	031
	18	46	047
	23	39	051

Station 9 (23)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 166°24.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0611	5	30	130
0615	9	22	146
	5	20	157

Station 6 (16)
Date: 14-vii-67

Lat: 65°32.3'N
Long: 169°16.2'W

Time	m Depth	cm/sec	
		Speed	Direction
1012	5	44	037
	10	46	024
	14	45	013
	19	43	007
	24	41	358
	28	36	354
	33	28	354
	28	40	339
	23	37	348
	19	44	358
	14	45	013
1024	10	—	026
	5	51	070

Station 8 (19)
Date: 14-vii-67

Lat: 65°38.0'N
Long: 168°40.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1525	5	64	009
	19	62	079

Station 10 (24)
Date: 15-vii-67

Lat: 66°32.0'N
Long: 166°58.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0843	5	21	019
	10	27	330
	15	22	340
	20	28	342
	25	31	342
	30	33	043
	25	25	—
	19	31	344
	15	25	298
	10	16	282
	0855	5	40

Station 11 (25)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 167°14.0'W	
Time	m Depth	Speed	cm/sec Direction
1003	5	25	094
	10	33	098
	15	33	098
	19	39	128
	15	39	104
	10	44	104
	5	28	—

Station 13 (27)		Lat: 66°36.2'N	
Date: 15-vii-67		Long: 167°56.0'W	
Time	m Depth	Speed	cm/sec Direction
1345	5	36	104
	10	46	106
	15	39	112
	20	21	120
	15	23	137
	10	27	127
	5	22	177
	2	24	—

Station 15 (29)		Lat: 66°36.0'N	
Date: 15-vii-67		Long: 168°49.0'W	
Time	m Depth	Speed	cm/sec Direction
1750	5	28	350
	10	23	084
	15	28	110
	20	33	114
	24	34	110
	29	33	109
	34	28	110
	30	29	096
	25	41	046
	19	47	037
	15	47	018
	10	45	306
	5	39	350
1802	2	21	215

Station 12 (26)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 167°38.2'W	
Time	m Depth	Speed	cm/sec Direction
1210	5	23	106
	10	26	109
	15	22	105
	10	27	—
	5	33	—

Station 14 (28)		Lat: 66°35.0'N	
Date: 15-vii-67		Long: 168°20.0'W	
Time	m Depth	Speed	cm/sec Direction
1555	5	24	341
	10	30	335
	15	18	059
	20	11	067
	25	13	063
	30	18	071
	25	19	044
	20	15	003
	15	16	313
	10	23	297
	5	27	349
	2	37	327

Station 16 (30)		Lat: 66°30.0'N	
Date: 15-vii-67		Long: 169°12.0'W	
Time	m Depth	Speed	cm/sec Direction
1900	5	20	321
	10	29	036
	15	28	073
	20	31	084
	25	31	102
	29	25	094
	34	27	098
	38	26	099
	43	23	099
	39	25	068
	34	26	088
	30	25	055
	25	24	047
	20	25	037
	15	25	031
	10	33	006
5	31	349	
2	35	—	

Station 17 (31)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 169°30.0'W

Time	m Depth	Speed	cm/sec Direction
2140	5	38	306
	10	35	354
	15	31	021
	20	34	036
	25	32	040
	30	29	046
	35	25	051
	40	14	064
	45	14	098
	40	21	066
	35	27	091
	30	31	068
	25	32	091
	20	34	066
	15	31	051
	10	23	013
	5	25	344

Station 19 (33)
Date: 16-vii-67

Lat: 67°05.0'N
Long: 171°11.0'W

Time	m Depth	Speed	cm/sec Direction
0645	5	33	275
	10	27	253
	15	43	240
	20	44	253
	25	43	271
	30	38	297
	35	31	327
	40	24	354
	35	18	025
	30	18	012
	25	23	003
	20	24	348
	15	20	349
	10	37	301
	5	43	287

Station 18 (32)
Date: 15-vii-67

Lat: 66°24.0'N
Long: 169°42.0'W

Time	m Depth	Speed	cm/sec Direction
2319	5	39	290
	10	29	309
	15	20	065
	20	14	048
	25	16	049
	30	16	095
	35	14	095
	40	16	119
	35	25	119
	30	21	109
	25	20	090
	20	21	065
	15	18	033
	10	31	301
	5	41	290

Station 20 (35)
Date: 16-vii-67

Lat: 67°21.0'N
Long: 170°21.0'W

Time	m Depth	Speed	cm/sec Direction
1045	5	<5	317
	10	8	307
	15	9	335
	20	<5	008
	25	<5	055
	30	9	055
	25	7	047
	20	8	041
	15	11	—
	10	10	—
	5	12	—
	2	9	338

Station 21 (36)		Lat: 67°30.6'N	
Date: 16-vii-67		Long: 169°54.0'W	
Time	m Depth	Speed	cm/sec Direction
1310	5	21	
	10	22	
	15	20	
	20	14	
	25	11	
	30	13	
	35	14	ships
	40	13	heading
	35	15	155°
	30	15	
	25	5	
	20	9	
	15	11	
	10	14	
	1325	5	16

Station 23 (39)		Lat: 67°54.0'N	
Date: 16-vii-67		Long: 168°06.0'W	
Time	m Depth	Speed	cm/sec Direction
2100	5	26	239
	10	27	049
	15	29	047
	20	29	049
	24	25	037
	29	26	045
	34	22	039
	39	22	039
	43	22	039
	39	31	035
	34	31	041
	29	30	037
	24	31	035
	20	29	035
	15	28	034
	10	22	017
5	21	207	

Station 22 (38)		Lat: 67°48.0'N	
Date: 16-vii-67		Long: 168°30.0'W	
Time	m Depth	Speed	cm/sec Direction
1945	5	10	164
	10	12	131
	15	18	054
	20	13	044
	25	12	036
	30	12	036
	35	11	036
	40	16	034
	35	16	034
	30	19	032
	25	15	036
	20	15	041
1959	15	21	051
	10	18	146
	5	18	146

Station 24 (40)		Lat: 68°30.0'N	
Date: 17-vii-67		Long: 167°36.0'W	
Time	m Depth	Speed	cm/sec Direction
0006	5	25	252
	10	27	072
	15	29	072
	20	37	072
	25	36	047
	29	42	047
	34	39	077
	39	37	067
	34	47	059
	29	48	050
	24	49	051
	20	39	055
	15	23	052
	10	25	052
	5	15	207

Station 25 (41)
Date: 17-vii-67

Lat: 68°06.0'N
Long: 167°18.0'W

Time	m Depth	cm/sec		
		Speed	Direction	
0222	5	32	242	
	10	23	221	
	15	30	111	
	20	36	041	
	24	37	037	
	29	32	043	
	34	27	043	
	29	30	037	
	24	45	041	
	20	39	030	
	15	25	132	
	10	23	217	
	0235	5	29	222

Station 26 (42)
Date: 17-vii-67

Lat: 68°12.0'N
Long: 167°18.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0400	5	26	147
	10	34	077

Station 27 (43)
Date: 18-vii-67

Lat: 65°5.00'N
Long: 167°31.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0410	5	36	335
	10	42	007
	14	43	013
	18	55	024
	14	57	011
	10	54	352
0416	5	41	332
	2	36	346

Station 28 (44)
Date: 18-vii-67

Lat: 65°00.0'N
Long: 167°48.0'W

Time	m Depth	cm/sec		
		Speed	Direction	
0600	5	45	336	
	10	33	340	
	15	29	014	
	20	28	029	
	24	30	041	
	29	31	041	
	34	23	056	
	29	32	049	
	24	38	048	
	19	39	036	
	15	32	028	
	10	34	350	
	0612	5	47	336

Station 29 (45)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 168°18.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0810	5	6	145
	10	19	241
	15	16	349
	20	22	351
	25	21	016
	30	16	028
	35	12	048
	40	8	077
	35	7	054
	30	10	359
	25	14	353
	20	13	345
	15	13	332
	10	10	275
0846	5	8	215

Station 30 (46)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 168°36.0'W

Time	m Depth	Speed	cm/sec Direction
1002	5	5	245
	10	15	240
	15	15	240
	20	8	285
	25	9	323
	30	9	005
	35	7	031
	40	12	037
	35	17	017
	30	22	009
	25	20	002
	20	18	355
	15	18	339
	10	9	325
	5	10	309

Station 31 (47)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 169°00.0'W

Time	m Depth	Speed	cm/sec Direction
1207	5	0	—
	10	8	328
	15	13	334
	20	17	324
	25	19	310
	30	17	314
	35	18	310
	40	16	310
	35	22	308
	30	20	308
	25	18	308
	20	16	316
	15	6	344
	10	9	347
1219	5	13	324

Station 32 (48)
Date: 18-vii-67

Lat: 64°48.0'N
Long: 169°36.0'W

Time	m Depth	Speed	cm/sec Direction
1425	5	7	344
	10	7	300
	15	8	354
	20	6	030
	25	<5	024
	30	<5	007
	35	5	007
	40	<5	009
	35	<5	029
	30	<5	029
	25	<5	039
	20	6	042
	15	5	044
	10	<5	044
1450	5	6	309

Station 33 (49)
Date: 18-vii-67

Lat: 64°48.0'N
Long: 170°12.0'W

Time	m Depth	Speed	cm/sec Direction
1701	5	<5	—
	10	<5	—
	15	<5	—
	20	<5	—
	25	<5	—
	30	<5	—
	35	<5	—
	40	8	018
	35	10	350
	30	11	336
	25	10	326
	20	9	324
	15	8	319
	10	7	319
1714	5	7	314

Station 34 (50)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 170°39.0'W

Time	m Depth	Speed	cm/sec
			Direction
1941	5	15	179
	10	8	017
	15	6	161
	20	<5	157
	25	5	154
	30	6	124
	25	10	244
	20	9	011
	15	7	011
	10	10	284
	1952	5	13

Station 35 (51)
Date: 18-vii-67

Lat: 64°54.0'N
Long: 171°20.0'W

Time	m Depth	Speed	cm/sec
			Direction
2215	5	12	039
	10	10	210
	15	9	256
	20	10	334
	25	11	360
	30	11	008
	35	10	011
	30	15	360
	25	15	356
	20	14	356
	15	10	345
2226	10	5	341
	5	8	—

Station 36 (52)
Date: 19-vii-67

Lat: 65°00.0'N
Long: 171°36.0'W

Time	m Depth	Speed	cm/sec	
			Direction	
-9010	5	21	232	
	10	31	232	
	15	21	201	
	20	13	131	
	25	11	121	
	30	13	123	
	35	14	117	
	30	16	106	
	25	16	121	
	20	10	121	
	15	15	151	
	10	6	217	
	0019	5	7	223

Station 37 (53)
Date: 19-vii-67

Lat: 65°42.0'N
Long: 169°54.0'W

Time	m Depth	Speed	cm/sec
			Direction
0955	5	7	280
	10	5	345
	15	9	331
	20	7	325
	25	6	295
	30	5	235
	35	6	235
	40	5	230
	35	14	190
	30	14	190
	25	10	198
	20	6	223
	15	7	230
	10	<5	275
1010	5	8	255

Station 38 (54)
Date: 19-vii-67

Lat: 65°42.0'N
Long: 169°48.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1116	5	19	240
	10	12	275
	15	5	330
	20	5	348
	25	7	348
	30	5	348
	35	0	269
	40	13	240
	35	8	219
	30	10	168
	25	15	205
	20	8	235
	15	6	263
	10	7	280
	5	7	265

Station 39 (55)
Date: 19-vii-67

Lat: 65°36.0'N
Long: 169°42.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1250	5	10	285
	10	13	345
	15	5	333
	20	7	025
	25	31	131
	30	29	149
	34	25	149
	40	20	151
	35	14	149
	30	12	141
	25	7	130
	20	6	130
	15	5	200
	10	0	225
1305	5	7	325

Station 40 (56)
Date: 19-vii-67

Lat: 65°36.0'N
Long: 169°36.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1417	5	27	232
	10	39	219
	15	39	178
	20	29	159
	25	25	155
	30	21	155
	34	20	153
	39	18	146
	44	14	146
	39	15	151
	35	9	151
	30	8	165
	25	9	200
	20	<5	251
	15	<5	335
	10	6	320
	1432	5	8

Station 41 (57)
Date: 19-vii-67

Lat: 65°30.0'N
Long: 169°24.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1550	5	15	223
	10	16	195
	15	13	158
	20	8	145
	25	5	133
	30	6	148
	35	0	195
	40	5	093
	35	5	238
	30	5	222
	25	6	222
	20	7	222
	15	7	255
	10	5	230
1603	5	8	350

Station 42 (58)
Date: 19-vii-67

Lat: 65°30.0'N
Long: 169°12.0'W

Time	m Depth	cm/sec		
		Speed	Direction	
1708	5	10	234	
	10	13	223	
	15	28	163	
	20	22	133	
	25	15	129	
	30	9	144	
	35	7	143	
	30	6	123	
	25	9	115	
	20	15	113	
	15	15	148	
	10	12	163	
	1722	5	10	197
		2	12	—

Station 43 (59)
Date: 19-vii-67

Lat: 65°32.0'N
Long: 169°02.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1932	5	23	256
	10	23	220
	15	25	192
	20	20	171
	25	18	159
	30	18	152
	35	17	152
	40	16	152
	45	15	152
	40	18	152
	35	20	153
	30	16	159
	25	8	173
	20	6	211
15	0	—	
10	0	288	
1948	5	6	240
	2	13	—

Station 44 (60)
Date: 19-vii-67

Lat: 65°37.0'N
Long: 168°49.0'W

Time	m Depth	cm/sec	
		Speed	Direction
2045	5	26	242
	10	21	238
	15	15	181
	20	18	163
	25	15	163
	30	12	159
	35	11	163
	40	8	163
	45	11	174
	40	7	174
	35	7	166
	30	6	166
	25	7	180
	20	0	223
	15	6	135
	10	7	135
	2100	5	6
2		28	—

Station 45 (61)
Date: 19-vii-67

Lat: 65°38.0'N
Long: 168°40.0'W

Time	m Depth	cm/sec	
		Speed	Direction
2211	5	29	261
	10	25	245
	15	22	137
	20	15	137
	25	24	144
	30	23	148
	35	20	159
	40	18	166
	45	17	166
	40	10	166
	35	7	155
	30	0	166
	25	0	152
	20	8	350
15	8	339	
10	13	170	
2226	5	11	174
	2	16	—

Station 46 (62)
Date: 19-vii-67

Lat: 65°38.0'N
Long: 168°34.0'W

Time	m Depth	Speed	cm/sec Direction
2330	5	26	336
	10	23	360
	15	15	358
	20	13	356
	25	8	100
	30	6	146
	35	7	146
	39	10	124
	45	13	146
	40	13	136
	35	13	131
	30	11	115
	25	9	077
	20	13	061
	15	15	033
	10	32	017
2345	5	42	339
	2	27	—

Station 48 (64)
Date: 20-vii-67

Lat: 65°38.0'N
Long: 168°18.0'W

Time	m Depth	Speed	cm/sec Direction
0155	5	26	110
	10	38	107
	15	42	096
	20	33	095
	25	38	088
	30	27	088
	35	28	099
	40	36	148
	35	30	104
	30	32	096
	25	36	088
	20	33	085
	15	39	077
	10	36	077
0210	5	25	065
	2	23	—

Station 47 (63)
Date: 20-vii-67

Lat: 65°38.0'N
Long: 168°26.0'W

Time	m Depth	Speed	cm/sec Direction
0130	5	24	306
	10	51	358
	14	47	017
	19	33	020
	24	23	028
	29	11	079
	34	8	134
	39	13	134
	44	21	168
	39	19	154
	34	11	153
	29	9	150
	25	14	074
	19	23	048
15	36	032	
10	44	045	
0145	5	26	321
	2	33	—

Station 49 (65)
Date: 20-vii-67

Lat: 66°25.0'N
Long: 169°45.0'W

Time	m Depth	Speed	cm/sec Direction
1910	5	26	117
	10	14	169
	15	21	189
	20	21	189
	25	18	199
	30	16	197
	35	15	201
	40	13	200
	45	8	211
	40	13	215
	35	14	201
	30	12	200
	25	14	199
	20	13	173
1919	15	18	173
	10	13	092
	5	8	052

Station 50 (66) Lat: 66°27.0'N
Date: 20-vii-67 Long: 169°32.0'W

Time	m Depth	cm/sec	
		Speed	Direction
2125	5	13	185
	10	9	211
	15	7	232
	20	5	155
	25	6	185
	30	7	195
	35	6	195
	40	6	215
	45	6	245
	40	9	205
	35	7	205
	30	8	195
	25	9	195
	20	6	165
	15	5	145
10	8	125	
2145	5	17	180
	2	13	—

Station 52 (68) Lat: 66°36.0'N
Date: 21-vii-67 Long: 168°48.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0325	5	6	151
	10	9	226
	15	7	208
	20	7	261
	25	9	286
	30	8	286
	35	9	306
	40	9	316
	35	10	306
	30	14	286
	25	16	286
	20	16	281
	15	13	266
	10	13	296
	0337	5	9
2		9	—

Station 51 (67) Lat: 66°33.0'N
Date: 20-vii-67 Long: 169°12.0'W

Time	m Depth	cm/sec	
		Speed	Direction
2345	5	14	286
	10	12	286
	15	13	286
	20	10	256
	25	13	271
	30	10	271
	35	12	271
	40	12	271
	35	13	271
	30	7	271
	25	14	271
	20	10	266
	15	7	276
	10	9	276
	2357	5	13
2		26	—

Station 53 (69) Lat: 66°36.0'N
Date: 21-vii-67 Long: 168°19.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0536	5	28	017
	10	39	007
	15	32	296
	19	32	367
	25	27	257
	20	27	267
	15	27	327
	10	25	022
	5	25	037

Station 54 (70)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 167°54.0'W

Time	m Depth	Speed	cm/sec Direction
0740	5	7	017
	10	18	015
	15	19	005
	20	27	312
	25	15	312
	20	18	317
	15	16	322
	10	14	337
0754	5	14	052

Station 56 (72)
Date: 21-vii-67

Lat: 66°30.0'N
Long: 167°12.0'W

Time	m Depth	Speed	cm/sec Direction
1100	5	10	068
	10	9	011
	15	11	317
	20	14	328
	25	14	294
	20	14	302
	15	13	298
	10	12	338
1110	5	12	013

Station 58 (74)
Date: 21-vii-67

Lat: 66°24.0'N
Long: 166°24.0'W

Time	m Depth	Speed	cm/sec Direction
1446	5	14	223
	10	10	182
	5	13	288

Station 55 (71)
Date: 21-vii-67

Lat: 66°36.0'N
Long: 167°36.0'W

Time	m Depth	Speed	cm/sec Direction
0910	5	7	140
	10	7	140
	15	8	027
	20	21	027
	25	12	027
	20	34	062
	15	30	075
	10	24	102
0920	5	19	102

Station 57 (73)
Date: 21-vii-67

Lat: 66°30.0'N
Long: 167°00.0'W

Time	m Depth	Speed	cm/sec Direction
1228	5	16	020
	10	16	003
	15	5	328
	20	20	303
	25	18	273
	20	18	308
	15	12	321
	10	10	344
1242	5	9	052

Station 59 (75)
Date: 22-vii-67

Lat: 68°10.0'N
Long: 167°02.0'W

Time	m Depth	Speed cm/sec	Direction
0345	5	10	093
	10	15	093
	15	14	288
	20	12	338
	25	12	318
	30	8	068
	35	<5	258
	40	6	218
	44	<5	228
	40	9	263
	35	10	278
	30	8	268
	25	11	278
	20	18	283
	15	15	283
	10	14	308
	5	9	094
	2	7	—

Station 60 (76)
Date: 22-vii-67

Lat: 68°11.0'N
Long: 167°27.0'W

Time	m Depth	Speed cm/sec	Direction
0530	5	10	057
	10	13	007
	15	14	305
	20	9	305
	25	9	282
	30	9	282
	35	8	282
	30	5	287
	25	0	—
	20	6	287
	15	0	—
	10	0	—
0546	5	7	087

Station 61 (77)
Date: 22-vii-67

Lat: 68°06.0'N
Long: 167°36.0'W

Time	m Depth	Speed cm/sec	Direction
0710	5	9	087
	10	6	087
	15	9	287
	20	9	297
	25	11	287
	30	8	287
	35	9	277
	40	7	275
	35	8	275
	30	10	277
	25	9	285
	20	12	287
	15	14	287
	10	10	102
0724	5	7	197

Station 62 (78)
Date: 22-vii-67

Lat: 67°54.0'N
Long: 168°00.0'W

Time	m Depth	Speed cm/sec	Direction
0927	5	14	107
	10	20	112
	15	9	167
	20	7	217
	25	7	214
	30	8	262
	35	9	287
	40	8	277
	45	8	277
	40	10	287
	35	9	282
	30	8	287
	25	9	287
	20	10	287
	15	13	282
	10	6	102
0940	5	10	102

Station 63 (79)
Date: 22-vii-67

Lat: 67°48.0'N
Long: 168°30.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1135	5	11	026
	10	5	086
	15	12	106
	20	9	076
	25	7	086
	30	8	066
	35	6	016
	40	9	286
	45	7	286
	40	17	286
	35	10	286
	30	6	076
	25	8	076
	20	8	106
	15	10	106
	10	8	106
	5	9	096

Station 65 (82)
Date: 22-vii-67

Lat: 67°20.0'N
Long: 170°20.0'W

Time	m Depth	cm/sec	
		Speed	Direction
2220	5	6	159
	10	0	
	15	0	
	20	6	145
	25	0	
	30	5	180
	35	0	
	30	0	
	25	0	
	20	5	065
	15	0	
	10	0	
2230	5	7	165
	2	8	—

Station 64 (81)
Date: 22-vii-67

Lat: 67°30.0'N
Long: 169°56.0'W

Time	m Depth	cm/sec	
		Speed	Direction
1920	5	9	185
	10	10	185
	15	9	165
	20	7	165
	25	8	105
	30	6	080
	35	6	080
	40	5	065
	35	6	015
	30	<5	320
	25	<5	330
	20	<5	005
	15	<5	205
1935	10	5	165
	5	6	165

Station 66 (83)
Date: 23-vii-67

Lat: 67°13.0'N
Long: 170°48.0'W

Time	m Depth	cm/sec	
		Speed	Direction
0120	5	8	195
	10	5	085
	15	6	065
	20	6	070
	25	8	095
	30	6	105
	35	0	
	30	0	
	25	0	
	20	0	
	15	0	
	10	5	039
	5	6	021
2	7	—	

