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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

Date: January 24, 1972

Reply to Attn of: C3332-5-GTO

Subject: STD data-Perobscot Bay

To: Mr. Anthony R. Picciolo
Chief, Search and Acquisition Branch
National Oceanographic Data Center

In response to your memo of December 9, 1971 and previous phone conversations, I am forwarding STD data obtained in the Penobscot Bay in 1970. As I mentioned, there were 943 casts made with the data being digitized onto cards. Enclosed are 3 program listings, program explanation, a copy of NOS Operational Data Report (NOS DR-13) which lists the data, and under separate cover, the magnetic tape you sent, 4 boxes of data, and program cards.

As I mentioned in a previous conversation, we do not now have people on time to record the data on your tape. However, if you find that this is a must, return the tape and we will make the transfer if and when we can get to it.

Charles R. Muirhead

Charles R. Muirhead
Acting Chief, Descriptive
Oceanographic Section
Oceanographic Surveys Branch
Oceanographic Division

Enclosures
Separate Cover:
Magnetic tape
Four boxes of data
Program cards

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TO: NODC

Three programs, each run on the CDC 6600 computer in Fortran IV, comprise PROGRAM SALINE: one for STD and, for In Situ, two programs due to differing depths of observations.

In addition to the identifying cast information (date, latitude, longitude, sounded or chart depth, etc.) for 943 locations, PROGRAM SALINE is designed to print:

1. For the STD, Temperature (^{o}C) and Salinity (parts per thousand) at meter depths. The meter depths are in one meter increments from the surface to 19 meters and in 5 meter increments for 20 meters to the bottom.

2. For the In Situ, depth (feet) and corresponding temperature (^{o}C), Salinity (PPT), and Electrical Conductivity (mmh/cm). The depths generally are 0, 10, 20, 30, 40, 60, and 80 feet, or 0 through 25 feet in 5 feet increments.

Any depths that differed from those above were eradicated and corrected after being printed. Using this program only one station per page is printed.

A copy of our publication, Operational Data Report NOS DR-13, is enclosed to facilitate your comprehension of the data.

The order of control cards and an example follow on the next page.

DRAFT OUTLINE

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6. Documentation of Processed STD Velocimeter Data

National Oceanographic Data Center

August 1969

Please use this form as a supplement to the NODC "Data Definition Form, General Information."

All items on this form are considered of importance to the archive processing and future use of STD-velocimeter data. In submitting computer processed data, it is especially important to complete the section titled "Reduction-Processing."

A. Instrument - Sensors

1. Instrument Package

a. Manufacturer Bisset-Berman

b. Model 9060

c. Serial

d. Sensors (The questions asked about each sensor listed may serve as a guide for information to be submitted about other sensors.

2. Salinity (Compensated Conductivity)

a. Model

b. Serial

c. Date of last calibration

3. Temperature

a. Model

b. Serial

c. Date of last calibration

4. Pressure

a. Model

b. Serial

c. Date of last calibration

d. If pressure is recorded as depth, what relationship was used to arrive at depth?

5. Sound Velocity

a. Model

b. Serial number

c. Date of last calibration

d. Is raw calibration data available? Yes ___ No ___

e. Person to be contacted for calibration information.

f. Reference equation used for sound velocity (i.e., Wilson Greenspan, etc., or variations thereon).

6. Conductivity (if used)

a. Model
b. Serial
c. Date of last calibration
d. Place of last calibration
e. Is raw calibration data available? Yes No

7. Other (Attach a list for other parameters such as ambient light, transmissivity, etc.)

B. Operational Methods

1. Mode of use

a. Platform is affected by pitch and roll which is not decoupled from the package.
b. Platform is stable or platform motion is decoupled from package.
c. Unit is freefalling
d. Other (describe)

2. Lowering rate (meters/min)

a. Enter lowering rate in regions of high parameter gradients
b. Enter lowering rate in regions of low parameter gradients

3. Time Response

a. Unit measures continuously
b. Unit measures _____ samples per _____
c. Samples are averages of measurements over time or depth.

4. Power Supply

a. Power supply is unstabilized _____ Maximum fluctuations ± _____ Volts about _____ volts nom
b. Power supply to the following portions of the system is stabilized

5. Field Checks (Indicate any operational "Deck" tests routinely made on the system (e.g., ice point tests on temperature sensors, electrical tests, etc.). Describe.

6. Thermal Environment

a. Instrument stored in water bath at °C to ___°C

C. Reduction-Processing

1. Primary Data Output

a. Strip chart (state scale setting(s))
b. Paper tape
c. Magnetic tape
(1) Digital
(2) Analog

2. Initial Reduction

a. Down trace only
✓b. Down trace and up trace processed
(1) Separate
✓(2) Averaged
c. Multiple lowerings _____ through depth interval _____
✓d. Values smoothed against depth. Describe (e.g., running average, etc.
e. Special routines to compensate for "spiking" (describe)
f. Compression applied to final data record (i.e., vertical spacing, rounding of depth, temperature, salinity, etc.)

3. Corrections

a. Were corrections applied to final data? No
b. Corrections based on (by parameter)
(1) Surface sample
(2) On-line samplers (give depth relation to probe)
(3) Separate lowerings (Nansen casts, other probes)
(4) Other
c. For corrected data, what is the estimated average accuracy of the final data? For uncorrected data, what is the average bias (if known)?
(1) Depth-pressure ± _____
(2) Temperature ± _____
(3) Salinity ± _____
(4) Sound Velocity ± _____

EXAMPLE FOR STD INCLUDING FORMAT AND EXPLANATIONS

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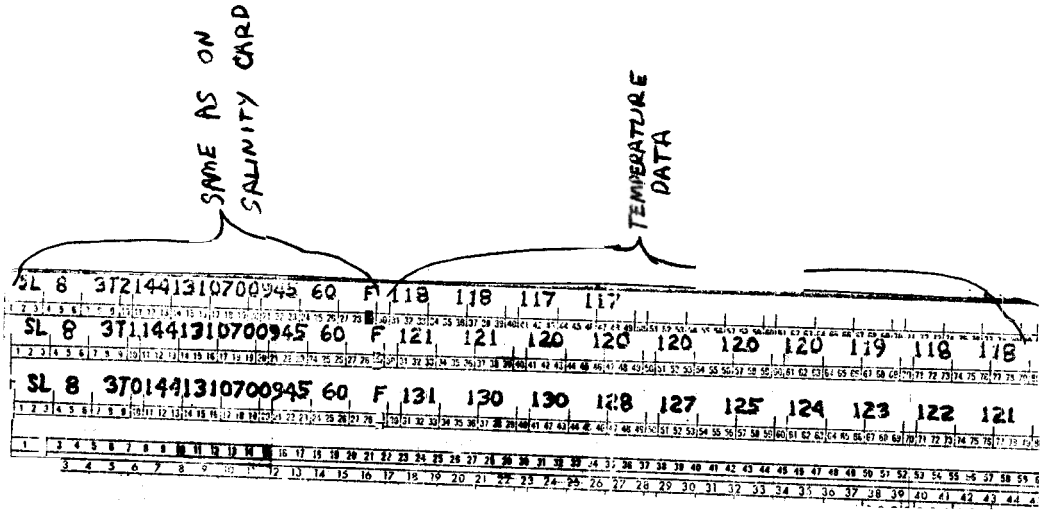


TEMPERATURE & SALINITY CARDS:

FORMAT:

(1X,A2,I2,1X,I2,A1,I1,I3,I4,I3,2X,2A1,10F5.3)

*SECTION TYPE:

S = STATIONARY TIME SERIES
SL = LONGITUDINAL SECTION
ST = TRANSVERSE SECTION

*PARAMETER CODE:

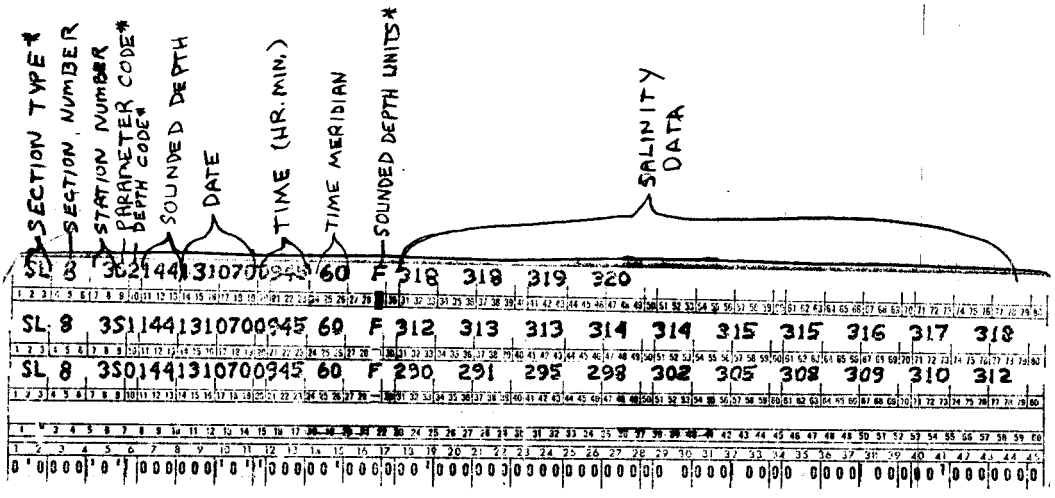
S = SALINITY
T = TEMPERATURE
E = CONDUCTIVITY

*DEPTH CODE:

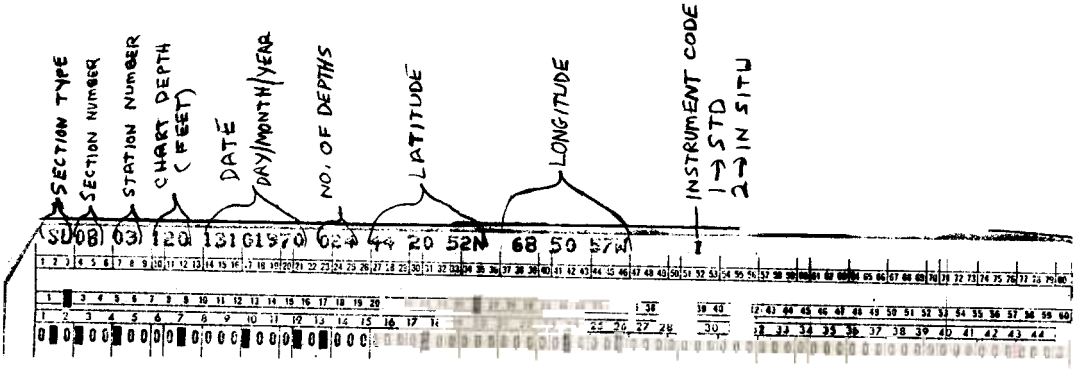
0 = RANGE ON CARD IS 0-9 meters IN 1 meter INCREMENTS.
1 = RANGE ON CARD IS 10-19 meters IN 1 meter INCREMENTS.
2 = RANGE ON CARD IS 20-65 meters IN 5 meter INCREMENTS
3 = RANGE ON CARD IS 70-115 METERS IN 5 meter INCREMENTS

*SOUNDED DEPTH UNITS:

F = FEET
M = METERS



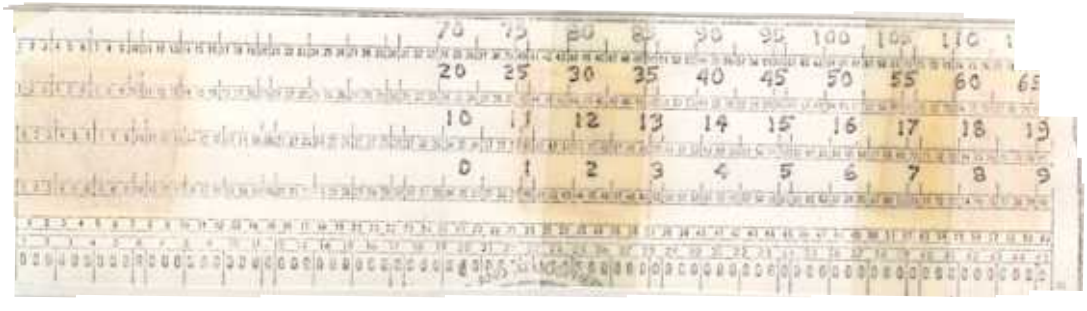
SALINITY CARDS



GEOGRAPHIC POSITION (GP) CARD:

FORMAT:

(1X,A2,I2,1X,I2,1X,I3,1X,2I2,I4,1X,I3,3(1X,I2),A1,1X,I3,2(1X,I2),A1,3(1X,I2),1X,I3)



4 DEPTH CARDS

FORMAT:

(30X,10I5)