NUMBER 76-0747

DDF-B:1:15 **DATA DOCUMENTATION FORM** TROLL

Cruise # 319023

NOAA FORM 24-13 (2-21)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

FORM APPROVED
O.M.B. No. 41-R2651

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED

Institute of Marine Science
University of Alaska
Fairbanks, AK 99701

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

OCSEAP

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

OP 343603
File ID 811TMS

4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)		7. DATES	
		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR
Silas Bent	Ship	U.S.	U.S.	9/1/75	9/26/75

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR___ MONTH___

9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)?
(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

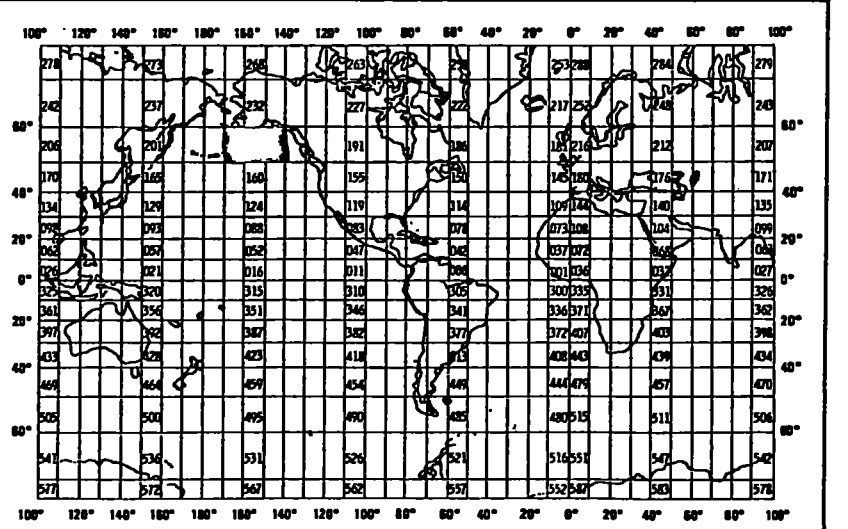
[X] NO [ ] YES [ ] PART *(SPECIFY BELOW)*

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER *(AND ADDRESS IF OTHER THAN IN ITEM-1)*

Final formatting and data process-
[illegible] at the above address (see
NODF Supplement for additional
address)

11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA



B. SCIEN[redacted] CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
Salinity	‰	Niskin - Rossette SVSTD Plessey Model 9040-4C	Beckman Inductive Salinometers N/A	N/A Values averaged over one meter intervals.
Temperature	°C	DSRT - Discrete samples SVSTD Plessey Model 9040-4C	N/A N/A	Average of two thermometer four readings. Values averaged over one meter intervals
Sigma-t	Sigma units	N/A	Polynomial from DSR Vol.17, No. 4, Page 686, Cox, McCartney and Culkin, Aug 1970	Computed from one meter averaged values of salinit and temperature
		(See attached supplement)		

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. ...T RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE AND METHOD OF IDENTIFYING EACH RECORD TYPE — NODC USER TAPE 76-0747

See Originator's

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

See Originator's

3. ...RIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER N/A
ADDRESS _____

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE: ☐ BCD ☐ BINARY ☐ ASCII ☒ EBCDIC ☐ _____

6. NUMBER OF TRACKS (CHANNELS): ☐ SEVEN ☒ NINE ☐ _____

7. PARITY: ☒ ODD ☐ EVEN

8. DENSITY: ☐ 200 BPI ☒ 1600 BPI ☐ 556 BPI ☐ 800 BPI ☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN): ☐ 3/4 INCH ☒ .56

10. END OF FILE MARK: ☐ OCTAL 17 ☒ EBCDIC

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

Two user tapes:
VOL_SER_2096,LABEL_(9,NL)
VOL_SER_2784,LABEL_(9,NL)

12. PHYSICAL BLOCK LENGTH IN BYTES: 3600 (120 x 30)

13. LENGTH OF BYTES IN BITS: 8

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. T RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
..IVE METHOD OF IDENTIFYING EACH RECORD TYPE

Four (4) record types, text record (1), master record (2), and detail record (3), ____differentiated by byte 10.

(See attached supplement)

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

TTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL ☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Rosemary Hobson 907-479-7074

ADDRESS Institute of Marine Science, Data Processing Dept. U. of Ak. 99701

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE
☐ BCD ☐ BINARY
☐ ASCII ☒ EBCDIC
☐ _____

6. NUMBER OF TRACKS (CHANNELS)
☐ SEVEN
☒ NINE
☐ _____

7. PARITY
☒ ODD
☐ EVEN

8. DENSITY
☐ 200 BPI ☐ 1600 BPI
☐ 556 BPI
☒ 800 BPI
☐ _____

9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☒ .5-.75

10. END OF FILE MARK
☐ OCTAL 17
☒ IBM 2400

11. PASTE-ON-PAPER LABEL DESCRIPTION *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)*

Institute of Marine Science U. of Ak
Silas Bent STD Data
NODC STD Format

Leading tape mark on tape

12. PHYSICAL BLOCK LENGTH IN BYTES
unblocked, 120 char/record

13. LENGTH OF BYTES IN BITS
8 (IBM)

RECORD NAME TEXT RECORD (OPTIONAL)

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
File Type	1	3	Bytes	A3	Always '022'
File Identification	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '1'
Cast Number	11	5	Bytes	A5	Analogous to NODC Station Number
Text	16	100	Bytes	100A1	Additional pertinent information
Sequence Number	116	5	Bytes	I5	Ascending numeric, used for sorting
MASTER RECORD (REQUIRED THRU BYTES 59)					
File Type	1	3	Bytes	A3	Always '022'
File Identification	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '2'
Cast Number	11	5	Bytes	A5	Analogous to NODC Station Number
Latitude					
Degrees	16	2	Bytes	I2	
Minutes	18	2	Bytes	I2	
Hundredths of Minutes	20	2	Bytes	I2	
Hemisphere	22	1	Bytes	A1	'N' or 'S'
Longitude					
Degrees	23	3	Bytes	I3	
Minutes	26	2	Bytes	I2	
Hundredths of Minutes	28	2	Bytes	I2	
Hemisphere	30	1	Bytes	A1	'E' or 'W'
Cruise Identification	31	10	Bytes	10A1	Originator Cruise Identification
Number of Scans	41	5	Bytes	I5	Number of scans in a 'station' (There are five scans per record type '3')
Year	46	2	Bytes	I2	Last two digits of year
Month	48	2	Bytes	I2	1-12
Day	50	2	Bytes	I2	1-31
Hour	52	2	Bytes	I2	0-23
Minutes	54	2	Bytes	I2	0-59
					} GMT
Depth Interval Indicator	56	1	Bytes	I1	'0' equals unequally spaced depths '1' equals equal spaced depths
Depth Interval	57	3	Bytes	I3	When above equals '1', the depth interval, to tenths of meters reported.
Barometric pressure	60	5	Bytes	I5	Millibars to tenths

RECORD FORMAT DESCRIPTION STD

2-20-76

RECORD NAME MASTER RECORD CONTINUED

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
Wet bulb temperature	65	4	Bytes	I4	Degrees C to tenths
Dry bulb temperature	69	4	Bytes	I4	Degrees C to tenths
Wind direction	73	2	Bytes	I2	Tens of degrees WMO Codes 0855 and 0877
Wind speed	75	2	Bytes	I2	Whole knots
Weather Code	77	1	Bytes	I1	WMO 4501
Sea State Code	78	1	Bytes	I1	WMO 3700
Visibility Code	79	1	Bytes	I1	WMO 4300
Cloud Type Code	80	1	Bytes	A1	WMO 0500
Cloud Amount Code	81	1	Bytes	I1	WMO 2700
Instrument Information	82	20	Bytes	20A1	Type and Serial Number
Location Name	102	6	Bytes	A6	OCSEP Internal Location Code
Depth to bottom	108	5	Bytes	I5	To whole meters
Maximum depth of cast	113	4	Bytes	I4	To whole meters
Blank	117	4	Bytes	4X	
	DETAIL RECORD (REQUIRED)				
File Type	1	3	Bytes	A3	Always '022'
File Identification	4	6	Bytes	A6	
Record Type	10	1	Bytes	I1	Always '3'
Cast Number	11	5	Bytes	A5	Analogous to NODC Station Number
Depth	16	5	Bytes	I5	Meters to tenths
Temperature	21	5	Bytes	I5	Degrees C to thousandths } SCAN
Salinity	26	5	Bytes	I5	P.P.T. to thousandths } DATA
Sigma-t	31	4	Bytes	I4	To hundredths
Scan Condition Code	35	1	Bytes	A1	Code describing how data arrived at
SCAN DATA	36	4(20)	Bytes	4(3I5,I4,A1)	Repetition of above
Sequence Number	116	5	Bytes	I5	Ascending numeric, used for sorting

Blanks are used when significance of field indicated exceeds what is measured.

B. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)
TICUS 1, Mark II		X		X				

DDF SUPPLEMENT FOR SILAS BENT

The SVSTD procedures for the SILAS BENT (Cruise 811) are well documented in the attached document:

"Standard procedures for collecting and processing SVSTD data" prepared by James W. Beller, et al., dated April 1975 from the U.S. Naval Oceanographic Office.

Instruments used were Plessey 9040 units.

Serial No. 5652 (9040-4C)	STA 1-65
Serial No. 5653 (9040-4C)	STA 65-128

Salinometers used were:

Serial No. 77223	(Beckman)	STA 1-28, 47-48
Serial No. 28379	(Beckman)	STA 29-46
Serial No. 2950	(Beckman)	STA 49-128

Requests for additional specifications on Instrumentation should be addressed to:

Russell Mooney, Oceanographer
USN Oceanographic Office
Code 34312
Washington, D.C. 20373

COMMENTS ON THE COLLECTION AND PROCESSING PROCEDURES

1. Since the 9040 SVSTD units have a 6000 m depth range, resolution is poor in high gradient regions. In general, an attempt was made to slow descent in these regions. Occasionally, "depths" were missed due to sampling and descent rate. (See comment 8).

2. Only downcasts were used to obtain SVSTD data.

3. Discrete water samples were collected only on the upcast.

4. SVSTD data is acquired on paper tape after each Rosette bottle was tripped. It is this data, independent of the mag tape, that was used to determine field corrections.

5. Field correction terms (Niskin-STD) were re-established after every 7-10 stations.

6. Final data submitted to NODC reflects this field correction.

7. All data collection and processing quality was controlled by SILAS BENT personnel under the able direction of Russell Mooney, of the U.S. Naval Oceanographic Office.

8. Subsequent "data reduction" by the Institute of Marine Science amounted to interpolating for missing depths (and associated parameters) due to digitizer problems and/or the expanded depth scale. It was also necessary to reformat the data to NODC specifications.

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	(✓)
Plessey 9040-4C Ser. 5652									
Plessey 9040-4C Ser. 5653									
Beckman Sal. Ser 77223									
Beckman Sal. 28379									
~~Beckman Sal.~~ Ser. 2950									

Contact: Russel Mooney or James Beller 433-3256
USN Oceanographic Office
Code 34312
Washington, DC 20373

Personal Communication with J. Beller - Each station corrected individually against Niskin water sample.

Checked against unprotected thermometer values - calibrated to 6000 meters and at the surface (zero meters)

Salinometer also standardized for each run - checked against substandard samples

Difficult, if not impossible, to recover calibration dates for these instruments (Beller)

JJA

CRUISE	VESSEL	LOCATION	BEGIN-END DATES	COUNT	PARAMETER
CP 343603	SILAS BENT	~~N50+ W010+~~			
		N50+ W140+			
		N50+ W140+			
		N50+ W140+			
		N50+ W140+			
		N50+ W150+			
		N50+ W150+			
		N50+ W160+			
		N50+ W160+			
		N60+ W140+			
			750913 750926	127	STATIONS
			750913 750926	127	TEMPERATURE
			750913 750926	127	SALINITY
			750913 750926	127	SIGMA T

76-0747
022 811IMS

Orig tape 1997

User tape 2096/9
2784/9

(has leading tape mark)

022-1

#2 001544 ANSI 013839

2995 2418 (c 4048)

120/4800, F022 #1 U020660

TR 53-60, 74-75, 96, (107-112), 115-117, 119-123, 125, 127-128, 134-135, 146-153

162,089

TR 107 accession no: 76-1224
108 accession no: 76-1225
107 " 76-1226
110 " 76-0747
111-112 " 76-1228

no check mm

7600747 ✓

NANSEN REF. # 319023

MULDARS TRACK # 0110

MONITOR: CONTACT CHUCK

LOCATION OF F022 SOURCE ARCHIVES

RECORD ALL ERRORS FOUND

CONSEC(S)	ERRORS FOUND
94	DELETE HOUR
Corrections (Mulders) 9/15/83 MARK Lewis	Changes made
94	Hour, minute deleted

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 7600747 F022 TR0110 0081 31C1 31SS    1975/09/01 OP343603     299023
 7600747 C022 319023 0081 31C1 31SS    1975/09/01 TR0110       299024

(2 rows affected)
```

```
Password:
 accNo    fleA refNo   ship staCnt      recCnt      startDate   endDate
 -------- ---- ------- ---- ---------- ---------- ----------- -----------
 7600747  F022 TR0110  31SS         127       18778 Sep  1 1975 Sep 26 1975
 7600747  C022 319023  31SS         127         190 Sep  1 1975 Sep 26 1975

(2 rows affected)
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