

B. SCIENTIFIC CONTENT

Include enough information concerning manner of observation, instrumentation, analysis, and data reduction routines to make them understandable to future users. Furnish the minimum documentation considered relevant to each data type. Documentation will be retained as a permanent part of the data and will be available to future users. Equivalent information already available may be substituted for this section of the form (i.e., publications, reports, and manuscripts describing observational and analytical methods). If you do not provide equivalent information by attachment, please complete the scientific content section in a manner similar to the one shown in the following example.

EXAMPLE (HYPOTHETICAL INFORMATION)

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	‰	Nansen bottles	Inductive salinometer (Hytech model S510)	N/A (Not applicable)
		STD Bissett-Berman Model 9006	N/A	Values averaged over 5-meter intervals
Water color	Forel scale	Visual comparison with Forel bottles	N/A	N/A
Sediment size	φ units and percent by weight	Ewing corer	Standard sieves. Carbonate fraction removed by acid treatment	Same as "Sedimentary Rock Manual," Folk '65

(SPACE IS PROVIDED ON THE FOLLOWING
TWO PAGES FOR THIS INFORMATION)

B. SCIENTIFIC COMMENT

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
Pressure	db	Neil Brown CTD Model Mark IIIB	See attached sheets	Values averaged over on db intervals
Temperature	°C	"	"	"
Salinity	‰	"	"	"

B. SCIENTIFIC 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

Following is a description of the format of the accompanying magnetic tapes. The format is OSU's version of the WHOI/NODC Exchange format as proposed by George Heimerdinger at WHOI (617-548-1400) and implemented by Rich Schramm at OSU (503-754-3708). We have tried to follow the proposed format with only the slight modifications as indicated below.

THE TAPE.

The tape is a 9-Track, 800 BPI, NRZ1 format tape. Data are encoded as eight bit ASCII characters with odd parity. The tape contains many casts, with one cast per tape file. Files are separated by a single EOF (End-of File) mark. The last file of the tape is followed by a double EOF.

A file contains many records, each 35 characters long. Records are blocked in groups of 100 to give a physical block length of 3500 characters. As the last block will most likely contain fewer than 100 records, the last block is padded to 3500 using the ASCII 'Null' character (decimal 0).

THE FILE FORMAT

The first seven records contain the basic station information as described in the attached 'RECORD FORMAT DESCRIPTION'. This information is followed by 'n' data records (variable length files).

EXCEPTIONS/MODIFICATIONS TO WHOI/NODC EXCHANGE FORMAT.

- The quality word is not used and is always 1.
- The cruise number is blank as OSU does not number cruises sequentially. The cruise designation can be obtained from the directory accompanying the tape.
- If dissolved oxygen is not present it is set to -9.99. Dissolved oxygen was not a measured parameter on the CODE cruises.
- To avoid odd or variable length blocks, the last block of a file containing fewer than 100 records is padded to 3500 characters using the ASCII 'Null' (decimal 0) character.

C. DATA FORMAT

This information is requested only for data transmitted on punched cards or magnetic tape. Have one of your data processing specialists furnish answers either on the form or by attaching equivalent readily available documentation. Identify the nature and meaning of all entries and explain any codes used.

1. List the record types contained in your file transmittal (e.g., tape label record, master, detail, standard depth, etc.).
2. Describe briefly how your file is organized.
- 3-13. Self-explanatory.
14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity).
15. Enter starting position of the field.
16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.
17. Enter attributes as expressed in the programming language specified in item 3 (e.g., "F 4.1," "BINARY FIXED (5.1)").
18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.

C. DATA FORMAT

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

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

The first seven (7) records contain the basic sampling information followed by "n" data records (variable length files). The record type is identified by its position/order in the file. The first 7 records are self documenting in that each field has a readable label. See sample file dump in "RECORD FORMAT DESCRIPTION" section.

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

This data set/tape contains the CTD casts from one cruise. The tape is multi-file with each station being a separate file. The first seven records of each file contains the basic sampling information for that station. The remaining records are data records. Each record is 35 char. long.

As the last physical block of each file may contain fewer than 100 records, the block is padded out to 3500 characters using the ASCII "Null" character (Decimal 0).

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Rich Schramm (503) 754-3708

ADDRESS College of Oceanography, Oregon State University
Corvallis, OR 97331

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE. ☐ BCD ☐ BINARY ☒ ASCII ☐ EBCDIC ☐ _____		9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH ☒ <u>NRZI</u>
6. NUMBER OF TRACKS (CHANNELS) ☐ SEVEN ☒ NINE ☐ _____		10. END OF FILE MARK ☐ OCTAL 17 ☐ _____
7. PARITY ☒ ODD ☐ EVEN		11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) Oregon State University School of Oceanography ASCII Even Parity W8209A 9 Track 800 BPI
8. DENSITY ☐ 200 BPI ☐ 1600 BPI ☐ 556 BPI ☒ 800 BPI ☐ _____		
		13. LENGTH OF BYTES IN BITS

RECORD FORMAT DESCRIPTION

WORD NAME

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
DESCRIPTION 1st	HEADER RECORD				(All fields right justified)
BLANK	1	1			BLANK
FIELD LABEL	2	5		5H	ALWAYS "SHIP" (ø = blank)
SHIP CODE	7	2		A2	2 CHAR. SHIP CODE AT= ATLANTIS II, KN = KNORR WC = WECOMA
FIELD LABEL	9	7		7H	ALWAYS "øCRUISø"
CRUISE NUMBER	16	3		I3	CRUISE NO.
FIELD LABEL	19	6		6H	ALWAYS "øSTAT:"
STATION NUMBER	25	4		I4	STATION NO.
BLANK	29	1			BLANK
FIELD LABEL	30	3		3H	ALWAYS "C#:"
CAST NUMBER	33	3		I3	CAST NO.
	TOTAL =	35			
DESCRIPTION 2nd	HEADER RECORD				(All fields right justified)
BLANK	1	1			BLANK
FIELD LABEL	2	5		H5	ALWAYS "DATE" (ø = blank)
DATE:YEAR	7	2		I2	YEAR LAST TWO DIGITS
	9	1		H1	ALWAYS "-" FIELD SEPARATER
MONTH	10	2		I2	MONTH (1-12)
	12	1		H1	ALWAYS "-" FIELD SEPARATER
DAY	13	2		I2	DAY (1-31)
BLANK	15	2			BLANK
FIELD LABEL	17	6		H6	ALWAYS "TIME:ø"
TIME	23	4		I4	TIME GMT 24 HR. CLOCK
TIME LABEL	27	2		H2	ALWAYS "øZ" SYMBOL FOR GMT OR ZULU TIME
BLANK	29	7			BLANK
	TOTAL =	35			

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
DESCRIPTION 3rd HEADER RECORD					(All fields right justified)
BLANK	1	1			BLANK
FIELD LABEL	2	4		4H	ALWAYS "LATØ" (Ø = blank)
LATITUDE: DEGREES	6	3		I3	DEGREES OF LATITUDE NEGATIVE FOR SOUTH
LATITUDE:MINUTES	9	6		F6.2	MINUTES OF LATITUDE TO HUNDREDTHS OF A MINUTE
FIELD LABEL	15	4		4H	ALWAYS "ØLGØ"
LONGITUDE:DEGREES	19	4		I4	DEGREES OF LONGITUDE NEGATIVE FOR WEST
LONGITUDE:MINUTES	23	6		F6.2	MINUTES OF LONGITUDE TO HUNDREDTHS OF A MINUTE
BLANK	29	7			BLANK
	TOTAL =	35			
DESCRIPTION 4th HEADER RECORD					(All fields right justified)
BLANK	1	1			BLANK
FIELD LABEL	2	9			ALWAYS "MAX.ØPRES=" (Ø=blank)
MAX.PRESSURE	11	6		F6.0	MAXIMUM PRESSURE REACHED BY THE CTD CAST, PRESSURE IN DECIBARS
FIELD LABEL	17	11		11H	ALWAYS "ØDBØØDEPTH="
DEPTH TO BOTTOM	28	6		F6.0	WATER DEPTH IN METERS
DEPTH LABEL	34	2		2H	ALWAYS "ØM" M =Meters
	TOTAL =	35			
DESCRIPTION 5th HEADER RECORD					(All fields right justified)
BLANK	1	1			BLANK
FIELD LABEL	2	5		5H	ALWAYS "AVERØ" (Ø = Blank)
AVERAGING INTERVAL	7	5		F5.1	ALL DATA REDUCED TO A COMMON REPORTING INTERVAL, IN DECIBARS
FIELD LABEL	12	6		6H	ALWAYS "ØINSTØ"
INSTRUMENT NO.	18	4		I4	CTD INSTRUMENT NO.
FIELD LABEL	22	6		6G	ALWAYS "ØRATEØ"
SAMPLING RATE	28	6		F6.2	SAMPLING RATE IN HERTZ (SAMPLES/SECOND), TO HUNDREDTHS
UNITS LABEL	34	2			ALWAYS "HZ"
	TOTAL =	35			

RECORD FORMAT DESCRIPTION

9

RD NAME _____

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>DESCRIPTION 6th HEADER RECORD</u>					
BLANK	1	1			BLANK
FIELD LABEL	2	4		H4	ALWAYS "OBS="
TOTAL DATA CYCLES	6	6		I6	TOTAL NUMBER OF DATA CYCLES THIS STATION
FIELD LABEL	12	4		H4	ALWAYS "ØFMT" MEANING FORMAT
FORTRAN FORMAT	16	20		H20	ALWAYS "(F7.1,2F8.4,F6.2,I6)"
	TOTAL =	35			
<u>DESCRIPTION 7th HEADER RECORD</u>					
IF TAPE IS DUMPED, THIS RECORD PROVIDES COLUMN HEADING ON LISTING, CONTAINS NO STATION INFORMATION- see sample listing, next page.					
<u>DESCRIPTION DATA RECORD</u>					
	1	7		F7.1	PRESSURE AS DECIBARS
TEMPERATURE	8	8		F8.4	TEMPERATURE AS DEGREES C
SALINITY	16	8		F8.4	SALINITY AS PARTS/THOUSAND
OXYGEN	24	6		F6.2	OXYGEN AS ML/L
QUALITY WORD	30	6		I6	QUALITY CONTROL CODE NOT USED - always 1.

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
SHIP WC CRUIS STAT: 44 C#: 1 DATE 82- 5-25 TIME: 2259 Z LAT 37 24.50 LG -122 28.20 MAX. PRS= 27. DB DEPTH= 32. M AVER 1.0 INST 2567 RATE 32.00HZ OBS= 27 FMT(F7.1,2F8.4,F6.2,I6) PRES TEMP SALT OXYG GLAL 1.0 11.6910 33.5060 -9.99 1 2.0 11.6880 33.5090 -9.99 1 3.0 11.6740 33.5100 -9.99 1 4.0 11.6670 33.5120 -9.99 1 5.0 11.6700 33.5130 -9.99 1 6.0 11.6750 33.5120 -9.99 1 7.0 11.6620 33.5140 -9.99 1 8.0 11.6370 33.5170 -9.99 1 9.0 11.5070 33.5530 -9.99 1 10.0 11.3190 33.6170 -9.99 1 11.0 11.2200 33.6290 -9.99 1 12.0 11.1110 33.6380 -9.99 1 13.0 11.0970 33.6380 -9.99 1 14.0 11.0810 33.6530 -9.99 1 15.0 11.0230 33.6670 -9.99 1 16.0 10.9920 33.6780 -9.99 1 17.0 10.9940 33.6760 -9.99 1 18.0 10.9590 33.6830 -9.99 1 19.0 10.9480 33.6880 -9.99 1 20.0 10.8730 33.7010 -9.99 1 21.0 10.9210 33.6890 -9.99 1 22.0 10.9740 33.6800 -9.99 1 23.0 10.9320 33.6930 -9.99 1 24.0 10.9000 33.6980 -9.99 1 25.0 10.8480 33.7100 -9.99 1 26.0 10.8570 33.7450 -9.99 1 27.0 10.7200 33.7260 -9.99 1					

1	SHIP WC CRUIS:W8209A	STAT:	1
2	SHIP WC CRUIS:W8209A	STAT:	2
3	SHIP WC CRUIS:W8209A	STAT:	3
4	SHIP WC CRUIS:W8209A	STAT:	4
5	SHIP WC CRUIS:W8209A	STAT:	5
6	SHIP WC CRUIS:W8209A	STAT:	6
7	SHIP WC CRUIS:W8209A	STAT:	7
8	SHIP WC CRUIS:W8209A	STAT:	8
9	SHIP WC CRUIS:W8209A	STAT:	9
10	SHIP WC CRUIS:W8209A	STAT:	10
11	SHIP WC CRUIS:W8209A	STAT:	11
12	SHIP WC CRUIS:W8209A	STAT:	12
13	SHIP WC CRUIS:W8209A	STAT:	13
14	SHIP WC CRUIS:W8209A	STAT:	14
15	SHIP WC CRUIS:W8209A	STAT:	15
16	SHIP WC CRUIS:W8209A	STAT:	16
17	SHIP WC CRUIS:W8209A	STAT:	17
18	SHIP WC CRUIS:W8209A	STAT:	18
19	SHIP WC CRUIS:W8209A	STAT:	19
20	SHIP WC CRUIS:W8209A	STAT:	20
21	SHIP WC CRUIS:W8209A	STAT:	21
22	SHIP WC CRUIS:W8209A	STAT:	22
23	SHIP WC CRUIS:W8209A	STAT:	23
24	SHIP WC CRUIS:W8209A	STAT:	24
25	SHIP WC CRUIS:W8209A	STAT:	25
26	SHIP WC CRUIS:W8209A	STAT:	26
27	SHIP WC CRUIS:W8209A	STAT:	27
28	SHIP WC CRUIS:W8209A	STAT:	28
29	SHIP WC CRUIS:W8209A	STAT:	29
30	SHIP WC CRUIS:W8209A	STAT:	30
31	SHIP WC CRUIS:W8209A	STAT:	31
32	SHIP WC CRUIS:W8209A	STAT:	32
33	SHIP WC CRUIS:W8209A	STAT:	33
34	SHIP WC CRUIS:W8209A	STAT:	34
35	SHIP WC CRUIS:W8209A	STAT:	35
36	SHIP WC CRUIS:W8209A	STAT:	36
37	SHIP WC CRUIS:W8209A	STAT:	37
38	SHIP WC CRUIS:W8209A	STAT:	38
39	SHIP WC CRUIS:W8209A	STAT:	39
40	SHIP WC CRUIS:W8209A	STAT:	40
41	SHIP WC CRUIS:W8209A	STAT:	41
42	SHIP WC CRUIS:W8209A	STAT:	42
43	SHIP WC CRUIS:W8209A	STAT:	43
44	SHIP WC CRUIS:W8209A	STAT:	44
45	SHIP WC CRUIS:W8209A	STAT:	45
46	SHIP WC CRUIS:W8209A	STAT:	46
47	SHIP WC CRUIS:W8209A	STAT:	47
48	SHIP WC CRUIS:W8209A	STAT:	48
49	SHIP WC CRUIS:W8209A	STAT:	49
50	SHIP WC CRUIS:W8209A	STAT:	50
51	SHIP WC CRUIS:W8209A	STAT:	51
52	SHIP WC CRUIS:W8209A	STAT:	52
53	SHIP WC CRUIS:W8209A	STAT:	53
54	SHIP WC CRUIS:W8209A	STAT:	54
55	SHIP WC CRUIS:W8209A	STAT:	55
56	SHIP WC CRUIS:W8209A	STAT:	56
57	SHIP WC CRUIS:W8209A	STAT:	57
58	SHIP WC CRUIS:W8209A	STAT:	58
59	SHIP WC CRUIS:W8209A	STAT:	59
60	SHIP WC CRUIS:W8209A	STAT:	60
61	SHIP WC CRUIS:W8209A	STAT:	61
62	SHIP WC CRUIS:W8209A	STAT:	62
63	SHIP WC CRUIS:W8209A	STAT:	63
64	SHIP WC CRUIS:W8209A	STAT:	64
65	SHIP WC CRUIS:W8209A	STAT:	65
66	SHIP WC CRUIS:W8209A	STAT:	66
67	SHIP WC CRUIS:W8209A	STAT:	67
68	SHIP WC CRUIS:W8209A	STAT:	68
69	SHIP WC CRUIS:W8209A	STAT:	69
70	SHIP WC CRUIS:W8209A	STAT:	70
71	SHIP WC CRUIS:W8209A	STAT:	71
72	SHIP WC CRUIS:W8209A	STAT:	72
73	SHIP WC CRUIS:W8209A	STAT:	73
74	SHIP WC CRUIS:W8209A	STAT:	74
75	SHIP WC CRUIS:W8209A	STAT:	75
76	SHIP WC CRUIS:W8209A	STAT:	76

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 CALI- BRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown CTD Model Mark IIb	Noy 1980						X		
	Temperature and conductivity calibrated from in situ cast data.								

B: 4:07 ERROR CORRECTION DOCUMENTATION FORM

DATE:

10:

FROM:

SUBJECT: Error Correction in Processing of Data Set - Accession # 8400048

1) File Type: C139 (WHOI CTD) format

2) Project Ident.: _____

3) Track Nos.: TT 1617

F022

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Körner

Correction Completed (check)

III. Processor Name:

DATA SET ROUTE SHEET

ACCESSION/TRACK # 8400048

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	March 19, 1984	lg	GRAPHY	76	3500	35	
QUAD/SCAN TAPE	March 19, 1984	lg	W05836	76	3500	35	
ASSIGNED FOR PROCESS.							
OF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA-SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 8400048

TRACK NO(s) : _____

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	GRAPHY	NL	35	3500	FB	76 files
Duplicate	W05836	NL	35	3500	FB	76 files
Reformatted						
First User						
Final User						

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
8400048	F022	BL2841	9999	3103	32WC	1982/03/17	W8209A	148491
8400048	F022	TT1617	9999	3103	32WC	1982/09/08	W8209A	148492
8400048	C022	329318	9999	3103	32WC	1982/09/08	TT1617	148493

(3 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
-----	-----	-----	-----	-----	-----	-----	-----
8400048	F022	BL2841	32WC	76	NULL	82/03/17	82/04/04
8400048	F022	TT1617	32WC	76	6501	82/09/08	82/09/23
8400048	C022	329318	32WC	76	121	82/09/08	82/09/23

(3 rows affected)