ACCESSION NUMBER 76-1469

DDF-B:1:10

DATA DOCUMENTATION FORM

F050 TR0685 TR0685
TR1349 - TR1351

NOAA FORM 24-13 (4-72)

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

U.S. DEP. of COMMERCE
NOAA, NMFS, MACFC
HIGHLANDS, N.J. 07732

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

NOAA/NMFS/MACFC/SHL
NOAA/ERL/MESA/N.Y.B.

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

07401 07502
07409 07512
07416

4. PLATFORM NAME(S)

OREGON II
DELAWARE II

5. PLATFORM TYPE(S) *(E.G., SHIP, BUOY, ETC.)*

SHIP

6. PLATFORM AND OPERATOR NATIONALITY(IES)

PLATFORM	OPERATOR
OREGON II	U.S.A.
DELAWARE II	U.S.A.

7. DATES

FROM: MO/DAY/YR	TO: MO/DAY/YR
03/22/74	08/23/75

8. ARE DATA PROPRIETARY?

☒ 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?)

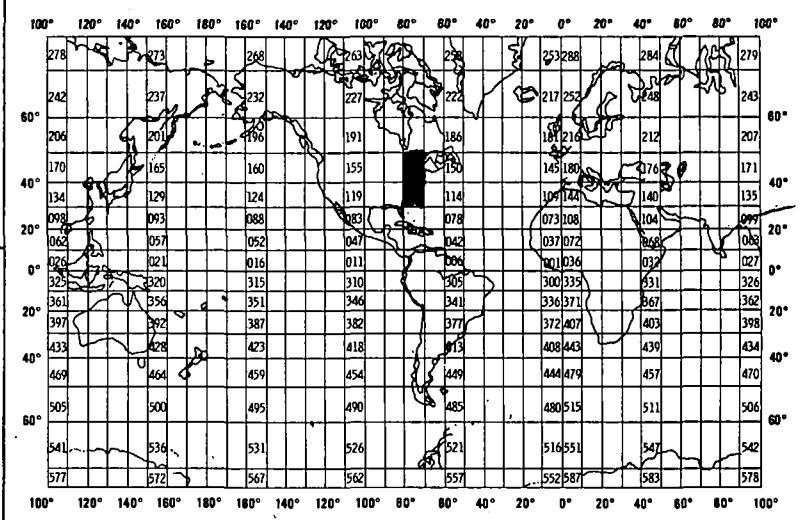
☐ NO ☒ YES ☐ PART *(SPECIFY BELOW)*

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

DR. JAMES P. THOMAS
201-872-0200

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

GENERAL AREA



NOAA FORM 24-13

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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 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
DISSOLVED OXYGEN	ML/L to hundredths	Niskin Bottle	Winkler titration (Azide modification) using PAO instead of thiosulfate. microburette	
OXYGEN SATURATION	PERCENT	Used Temp. + Salinity data. in situ	Weisse Equations. Deep-Sea Res. 17(4): 726.	
IN ISTU TEMPERATURE	CELSIUS	Reversing Thermometers	Walter H. Kessler Co, Inc. Westbury, N.Y. Calibration by above.	
WATER BATH TEMPERATURE	CELSIUS	As		
SALINITY	0/00	Niskin Bottle	RS ?B Salinometer Beckman	
DISSOLVED OXYGEN 100% SATURATION CONCENTRATION	ML/L	As above for oxygen saturation	As above for oxygen saturation	
AVERAGE SEABED OXYGEN CONSUMPTION	ML of O_2 / M^2 / HOUR	following the method of Pamatmat. Limnol. Oceanogr. 16(3): 536. (1971)	Procedures of Pamatmat Limnol. Oceanogr. 1971. 16(3): 536	See Spec. SYMP Vol. Limnol. Oceanogr. 1976. Seabed oxygen consumption- N.Y. Bight. Thomas, et al.
WEIGHT % ORGANIC MATTER	Weight % organic matter	Sediment samples from Pamatmat multiple corer	Leco Carbon Furnace Induction	

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

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

1 CRUISE HEADER CODE1
2 STATION HEADER CODE 2
3 DATA DETAIL RECORD CODE4

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

THE FILE IS GIVEN BY CRUISE AND DATE

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

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER John LeBarron 201-872-0200 Ext 12
ADDRESS N.M.F.S. Highlands N.J. 07732

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 ☐ _____

10. END OF FILE MARK ☐ OCTAL 17 ☒ IBM Standard Hex

11. PASTE-ON-PAPER LABEL DESCRIPTION (*INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER*)
Standard IBM Labels
BLKSIZE = 1700
LRECL = 85
RECFM = FB
DSNAME = FM.MBL.MS76
VOL-SER = 047740

12. PHYSICAL BLOCK LENGTH IN BYTES
1700

13. LENGTH OF BYTES IN BITS
8

RECORD FORMAT DESCRIPTION

RECORD NAME _____

FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
ATTACHED					

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		

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RECORD FORMAT DESCRIPTION

RECORD NAME _____

FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		

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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		

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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 (√)	(√)

RECORD FORMAT DESCRIPTION

File Name Seabed Oxygen Consumption (File Type"050")

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN bytes (e.g., bits, bytes)	16. LENGTH in bytes NUMBER	UNITS	17. ATTRIBUTES FORTRAN	18. USE AND MEANING
File Header Record					
FILE TYPE	1	3		A3	"050"(constant)
FILE DATE	4	6		3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1		A1	"1" (File Header Record)
VESSEL	11	11		11A1	(left aligned)
CRUISE	22	6		6A1	Originator's Cruise Identifiers
CRUISE DATES	28	17		5(I2,A1),I2	XX/XX/XX - XX/XX/XX beginning Month, Day, Year; ending Month, Day, Year
SENIOR SCIENTIST	45	19		19A1	(left aligned)
INVESTIGATOR	64	21		21A1	Responsible Institution (left aligned)
First Station Header Record					
FILE TYPE	1	3		A3	"050" (constant)
FILE DATE	4	6		3I2	Yr., Mo., Dy. of File generation
RECORD TYPE	10	1		A1	"2" (First Station Header Record)
SEQUENCE	11	3		I3	Sequence of this record type within Station (leading zeros or leading blanks)
STATION	14	5		5A1	Station Identifier
LATITUDE	19	6		3I2	Degrees, Minutes, Seconds
LATHEM	25	1		A1	Hemisphere "N" or "S"
LONGITUDE	26	7		I3, 2I2	Degrees, Minutes, Seconds
LONHEM	33	1		A1	Hemisphere "W" or "E"
DATE	34	6		I6	Station date; Yr., Mo., Dy.
TIME	40	3		I3	GMT in hours to tenths
BOTTOM	43	5		I5	Water depth, meters to tenths
NAVIGATION	48	2		I2	(see attached codes)
DISSOLVED OXYGEN	50	4		I4	ml/l to hundredths, bottom
OXYGEN SATURATION	54	3		I3	percent, in situ bottom
TEMPERATURE	57	4		I4	Degrees Celsius to hundredths at bottom
WATER BATH TEMPERATURE	61	4		I4	Degrees Celsius to hundredths
SALINITY	65	5		I5	Parts per thousand to thousandths
DISSOLVED OXYGEN 100% SATURATION CONCENTRATION	70	4		I4	ml/l to hundredths at water bath temperature and in situ salinity
AVERAGE SEABED OXYGEN CONSUMPTION	74	5		I5	(ml O_2/M^2)/hour to hundredths
# OF REPLICATES IN AVERAGE	79	2		I2	
BLANK	81	4		4X	blank

RECORD FORMAT DESCRIPTION

File Name— Seabed Oxygen Consumption (Fiel Type "050")

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN bytes (e.g., bits, bytes)	16. LENGTH in bytes NUMBER	UNITS	17. ATTRIBUTES FORTRAN	18. USE AND MEANING
Record Type "2" Terminator					Optional; for those who must re-read their file using FORTRAN
IDENT	1	10		A3, 3I2, A1	Ident=File Type, File Date Record Type
SEQUENCE	11	3		A3	"998" constant
BLANK	14	71		71X	blank
Second Station Header Record					
FILE TYPE	1	3		A3	"050" (constant)
FILE DATE	4	6		3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1		A1	"3" (Second Station Header Record)
SEQUENCE	11	3		I3	Sequence of this record type within Station (leading zeros or leading blanks)
STATION	14	5		5A1	Station Identifier
BAROMETER	19	3		I3	Pressure in millibars to tenths
DRY BULB	22	4		I4	Air Temperature; degrees Celsius to tenths
WET BULB	26	4		I4	Air Temperature; degrees Celsius to tenths
WIND DIRECTION	30	2		I2	WMO code 0877; tens of degrees
WIND SPEED	32	2		I2	Knots
SEA DIRECTION	34	2		I2	WMO code 0885; tens of degrees
SEA HEIGHT	36	1		A1	WMO code 1555
SWELL DIRECTION	37	2		I2	WMO code 0885
SWELL HEIGHT	39	1		A1	WMO code 1555
WEATHER	40	1		I1	WMO code 4501
CLOUD TYPE	41	1		A1	WMO code 0500
CLOUD COVER	42	1		I1	WMO code 2700
VISIBILITY	43	1		I1	WMO code 4300
SECCHI DISK DEPTH	44	4		I4	Meters to tenths
BLANK	48	37		37X	blank
Record Type "3" Terminator					Optional for those who must re-read their files in FORTRAN
IDENT	1	10		A3, 3I2, A1	Same as "Second Station Header Record)
SEQUENCE	11	3		A3	"998" (constant)
BLANK	14	71		71X	blank
Data Record					
FILE TYPE	1	3		A3	"050" constant
FILE DATE	4	6		3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1		A1	"4" (Data Record)
SEQUENCE	11	3		I3	Sequence of this record type within Station(leading zeros or

RECORD FORMAT DESCRIPTION

File Name · Seabed Oxygen Consumption (File Type "050")

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN bytes (e.g., bits, bytes)	16. LENGTH in bytes NUMBER	UNITS	17. ATTRIBUTES FORTRAN	18. USE AND MEANING
Data Record (con't)					
					leading blanks)
STATION	14	5		5A1	Station Identifier
REPLICATE NO.	19	2		I2	for following oxygen consumption experiment
EXPERIMENT ELAPSED TIME	21	4		I4	hours to hundredths
INITIAL DISSOLVED OXYGEN	25	4		I4	ml/l to hundredths
FINAL DISSOLVED OXYGEN	29	4		I4	ml/l to hundredths
✓ OXYGEN CONSUMPTION	33	5		I5	(ml O_2/M^2)/hour to hundredths
COMMENTS	38	10		10A1	Note regarding experiment if applicable
✓ WEIGHT % ORGANIC MATTER	48	4		I4	percent to hundredths for replicate
REPLICATE NO.	52	2		I2	for following oxygen consumption experiment
EXPERIMENT ELAPSED TIME	54	4		I4	hours to hundredths
INITIAL DISSOLVED OXYGEN	58	4		I4	ml/l to hundredths
FINAL DISSOLVED OXYGEN	62	4		I4	ml/l to hundredths
✓ OXYGEN CONSUMPTION	66	5		I5	(ml O_2/M^2)/hour to hundredths
COMMENTS	71	10		10A1	Note regarding experiment if applicable
✓ WEIGHT % ORGANIC MATTER	81	4		I4	percent to hundredths for replicate
Data Record Terminator					Optional: for those who must re-read their file using FORTRAN
IDENT	1	10		A3, 3I2, A1	Same as "Data Record"
SEQUENCE	11	3		A3	"998" = end Station, "999"=end file
BLANK	14	71		71X	blank
Navigation					
01 = Loran (mixed or unspecified)					
02 = Radar and/or fixes					
03 = Raydist without complications					
04 = Raydist with errors, drifting, etc.					
05 = Satellite					
06 = Omega					
07 = Loran A only					
08 = Loran C only					

76-1469

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Middle Atlantic Coastal Fisheries Center
Highlands, New Jersey 07732

August 4, 1976 F16

TO: Director, National Oceanographic Data Center
Environmental Data Service, Attn: Dr. James B. Ridlon, D781
Washington, D. C. 20235

FROM: Carl J. Sindermann
Director, Middle Atlantic Coastal Fisheries Center

SUBJECT: MESA Seabed Oxygen Consumption Data Tapes

Enclosed is the MESA seabed oxygen consumption data tape (Vol. Serial No. 047760) which we have assembled under an agreement with MESA. A completed data documentation form and a listing of the tape are enclosed.

Encl.

cc: Dr. McNulty
Mr. A. Pacheco
Mr. P. Eisen

no listing in package

RECORD FORMAT DESCRIPTION

RECORD NAME 76-1469 documentation

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH NUMBER	16. LENGTH UNITS	17. ATTRIBUTES	18. USE AND MEANING
1. cruise #	□7401			changed to	TR 0685
" #	D7409		"	"	TR 0684
" #	D7416		"	"	TR 1349
" #	D7502		"	"	TR 1350
" #	D7512		"	"	TR 1351

2. Terminator-type records stripped from data.

3. No other changes.

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 7601469 F050 TR0684 0065 31B4 316G    1974/08/26 D7409         300439
 7601469 F050 TR0685 0065 31B4 316O    1974/03/22 O7401         300440
 7601469 F050 TR1349 0065 31B4 316G    1974/12/06 D7416         300441
 7601469 F050 TR1350 0065 31B4 316G    1975/02/13 D7502         300442
 7601469 F050 TR1351 0065 31B4 316G    1975/08/13 D7512         300443

(5 rows affected)
```

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
 ------- ---- ------ ---- ------ ------ ---------- ----------
 7601469 F050 TR0684 316G 101    244    74/08/26   74/09/06
 7601469 F050 TR0685 316O 100    245    74/03/22   74/04/03
 7601469 F050 TR1349 316G 60     193    74/12/06   74/12/15
 7601469 F050 TR1350 316G 66     195    75/02/13   75/02/20
 7601469 F050 TR1351 316G 64     197    75/08/13   75/08/23

(5 rows affected)
```

```
CODE OUT OF RANGE IN COL  48
**************************************************************************************************
050TR06852  1   34402500N 734800W74 4 4 30      03 648 93 630 72033590 847 197412
                                                 ??
CODE OUT OF RANGE IN COL  48
**************************************************************************************************
050TR06852  1   43402200N 735200W74 4 3178      03 647 93 640 72032920 684 1156 4
                                                 ??
CODE OUT OF RANGE IN COL  48
**************************************************************************************************
050TR06854  2   43 81512 630 409 1316                121517 643 00  016NO FIN PAD
                                                                ????
ILLEGAL BLANKS IN END DIS 02 2 ML/L .0
**************************************************************************************************
050TR06852  1  109403230N 735200W74 4 3232      03 615    630 720     847 147012
                                                 ??
CODE OUT OF RANGE IN COL  48
THE FIELDS BELOW WERE CHECKED AS FOLLOWS(S=SIGN/B=BLANK/T=TAXONOMIC CODE/N=NUMERICS/M=MANDATORY NUMERIC

TYPE REC  POS  LENGTH NAME                          RANGE TESTED        ACTUAL RANGE
                                                    LOW      HIGH       LOWEST   HIGHEST    MEAN      S. DEV    COUNT
---- ---  ---  ------ ----                          ---------------     ------   -------    ----      ------    -----
 N    1    28     2   BEGIN MONTH                   NO RANGE CHECKING      3        3       3,00        00         1
 N    1    31     2   BEGIN DAY                     NO RANGE CHECKING     22       22      22,00        00         1
 N    1    34     2   BEGIN YEAR                    NO RANGE CHECKING     74       74      74,00        00         1
 N    1    37     2   END MONTH                     NO RANGE CHECKING      4        4       4,00        00         1
 N    1    40     2   END DAY                       NO RANGE CHECKING      3        3       3,00        00         1
 N    1    43     2   END YEAR                      NO RANGE CHECKING     74       74      74,00        00         1
 N    2    11     3   SEQUENCE NUMBER               NO RANGE CHECKING      1        1       1,00        00       108
 M    2    19     2   LAT DEG                       40         89          40       40      40,00        00       108
 M    2    21     2   LAT MIN                       00         59          10       34      21,61      7,72       108
 N    2    23     2   LAT SEC                       00         59           0       30         27      2,87       108
 C    2    25     1   LAT HEM                       N          N
 M    2    26     3   LON DEG                       060        179         73       73      73,00        00       108
 M    2    29     2   LON MIN                       00         59          36       59      46,66      6,79       108
 N    2    31     2   LON SEC                       00         59           0        0         00        00       108
 C    2    33     1   LON HEM                       W          W
 M    2    34     2   YEAR                          74         78          74       74      74,00        00       108
 M    2    36     2   MONTH                         01         12           3        4       3,14        42       108
 M    2    38     2   DAY                           01         31           1       31      22,43      8,98       108
 N    2    40     2   HOUR                          00         23           0       23      12,08      6,92        58
 N    2    42     1   TENTHS OF HOURS               NO RANGE CHECKING      0        9       4,12      2,87        58
 N    2    43     5   BOTTOM DEPTH M TO ,1          NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 C    2    48     2   NAVIGATION                    NO RANGE CHECKING     01       08
 N    2    50     4   BOT OXY ML/L TO ,01           NO RANGE CHECKING    451      734     672,72     40,15        58
 N    2    54     3   BOTTOM OXY SAT                NO RANGE CHECKING     65      106      95,97      5,87        47
 N    2    57     4   BOT TEM DEG C TO ,01          NO RANGE CHECKING    500      800     631,76     64,42        95
 N    2    61     4   WAT B TEM DEG C   ,0         NO RANGE CHECKING    500     1200     701,16     88,63        60
 N    2    65     4   BOT SAL PPT TO ,001           NO RANGE CHECKING  29290    33790   32676,95    956,01        46
 N    2    70     4   DIS O2 ML/L TO.01             NO RANGE CHECKING    614      896     718,80     66,41        62
 N    2    74     5   O2 CON ML/M2/HR  ,01          NO RANGE CHECKING    232     2045     938,49    461,70        57
 N    2    79     2   NO. OF REPL.                  00         99           1       12       4,07      1,74        57
 B    2    81     4                                                                                              0
 N    3    11     3   SEQUENCE NUMBER               NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 N    3    19     3   BAR PRESS MB TO ,1            NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 N    3    22     4   DRY B TEM DEG C TO ,          NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 N    3    26     4   WET B TEM DEG C TO ,          NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 N    3    30     2   WIND D WMO 877                00         99       NO VALUES FOUND FOR THIS PARAMETER
 N    3    32     2   WIND SPEED KTS                NO RANGE CHECKING   NO VALUES FOUND FOR THIS PARAMETER
 N    3    34     2   SEA D WMO 885                 00         99       NO VALUES FOUND FOR THIS PARAMETER
 C    3    36     1   SEA HEIGHT WMO 1555           NO RANGE CHECKING
```

delete

OK

INSERT RANGES

RUN AND CHANGE BACK TO 4

N	3	37	2	SWELL D WMO 885	00	99	NO VALUES FOUND FOR THIS PARAMETER				
C	3	39	1	SWELL HEIGHT WMO 155	NO RANGE CHECKING						
N	3	40	1	WEATHER WMO 4501	NO RANGE CHECKING		NO VALUES FOUND FOR THIS PARAMETER				
C	3	41	1	CLOUD TYPE WMO 0500	NO RANGE CHECKING						
N	3	42	1	CLOUD COVER WMO 2700	NO RANGE CHECKING		NO VALUES FOUND FOR THIS PARAMETER				
N	3	43	1	VISIBILITY WMO 4300	NO RANGE CHECKING		NO VALUES FOUND FOR THIS PARAMETER				
N	3	44	4	SECCHI DEPTH M TO .1	NO RANGE CHECKING		NO VALUES FOUND FOR THIS PARAMETER				
B	3	48	37								0
N	4	11	3	SEQUENCE NUMBER	NO RANGE CHECKING		1	6	1,77	96	136
N	4	19	2	REPL. NO. 1	NO RANGE CHECKING		0	43	14,77	10,72	136
N	4	21	4	EXP. ELAPTIME1 HR .0	NO RANGE CHECKING		1	2122	1225,45	247,64	136
N	4	25	4	BEG DIS O2 1 ML/L .0	NO RANGE CHECKING		449	753	670,59	41,46	132
N	4	29	4	END DI O2 1 ML/L .0	NO RANGE CHECKING		60	664	542,61	103,31	131
N	4	33	5	O2 CON 1 ML/M2/HR .0	NO RANGE CHECKING		-453	3457	943,83	636,30	132
N	4	48	4	WT-% ORG MAT 1 TO .0	NO RANGE CHECKING		-11	863	108,67	172,65	25
N	4	52	2	REPL. NO. 2	NO RANGE CHECKING		1	42	16,00	10,25	112
N	4	54	4	EXP. ELAPTIME2 HR .0	NO RANGE CHECKING		1	2125	1242,99	214,99	112
N	4	58	4	BEG DIS O2 2 ML/L .0	NO RANGE CHECKING		534	744	671,00	36,34	111
N	4	62	4	END DIS O2 2 ML/L .0	NO RANGE CHECKING		88	704	536,70	110,22	108
N	4	66	5	O2 CON 2 ML/M2/HR .0	NO RANGE CHECKING		-308	26951	1277,88	2554,89	111
N	4	81	4	WT-% ORG MAT 2 TO .0	NO RANGE CHECKING		7	314	62,43	64,84	23

RECORDS READ : 245