RECEIVED

# DATA DOCUMENTATION FORM

TR0526

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

NEGOA

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.

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## 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**

A. C. BROAD
DEPT. BIOLOGY
WESTERN WASHINGTON STATE COLLEGE
BELLINGHAM, WA 98225

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

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

PEEEYE
FILE ID 761229   FILE TYPE 030

| 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 |
| ~~Research~~ ~~AQUATRON~~ | ON FOOT | US | US | 7/17/75 | 9/11/75 |

**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)**

GREGG PETRIE
DEPT. GEOLOGY
WESTERN WASHINGTON
STATE COLLEGE
BELLINGHAM, WA 98225
(206) 676-8339

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

GENERAL AREA

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS. _2_

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

Seven distinct record types; (1) File Header, (2) Station Header, (3) Site

Header, (4)Composite Data, (5) Individual Sample Data, (6) Profile Data,

and (7) Comment Records, differentiated by byte 10

**2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION**

After the file header, records are grouped together by station number (in increas-ing order) with a station header record (type=2) being the first of a set of related records. (i.e., each record type 2 is followed by corresponding record types 3, 4, 6, and 7). No record type 5 format is used.

Note: Any unused fields are filled with spaces.

Note: This tape contains incidental data.

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

**4. RESPONSIBLE COMPUTER SPECIALIST:**
NAME AND PHONE NUMBER Gregg Petrie   (206) 676-8339
ADDRESS Dept. Geology, W.W.S.C., Bellingham, WA 98225

**COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE**

| 5. RECORDING MODE | | 9. LENGTH OF INTER-RECORD GAP (IF KNOWN) ☐ 3/4 INCH |
|---|---|---|
| ☐ BCD  ☐ BINARY | | ☒ IBM Standard |
| ☐ ASCII  ☒ EBCDIC | | **10. END OF FILE MARK** ☐ OCTAL 17 |
| ☐ _____ | | ☒ IBM Standard |
| **6. NUMBER OF TRACKS (CHANNELS)** ☐ SEVEN | | **11. PASTE-ON-PAPER LABEL DESCRIPTION** *(INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)* |
| ☒ NINE | | Originator:  A.C. Broad, Dept. Biology W.W.S.C., Bellingham, WA 98225 |
| ☐ _____ | | Data Type:  remarks, hydrographic, pro-file, environment, biological |
| **7. PARITY** ☐ ODD  ☒ EVEN | | Volume No:  000936(no_label on tape) |
| **8. DENSITY** | | **12. PHYSICAL BLOCK LENGTH IN BYTES** 1200 |
| ☐ 200 BPI  ☐ 1600 BPI  ☐ 556 BPI  ☒ 800 BPI  ☐ _____ | | **13. LENGTH OF BYTES IN BITS** 8 |

# RECORD FORMAT DESCRIPTION

RECORD NAME  Intertidal Data (File Header)

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (o.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '1' |
| Vessel Name | 11 | 11 | Bytes | A11 | |
| Cruise Number | 22 | 6 | Bytes | A6 | |
| Start Date, | | | | | |
| Year | 28 | 2 | Bytes | I2 | 00 to 99 |
| Month | 30 | 2 | Bytes | I2 | 01 to 12 |
| Day | 32 | 2 | Bytes | I2 | 01 to 31 |
| End Date, | | | | | |
| Year | 34 | 2 | Bytes | I2 | 00 to 99 |
| Month | 36 | 2 | Bytes | I2 | 01 to 12 |
| Day | 38 | 2 | Bytes | I2 | 01 to 31 |
| Senior Scientist | 40 | 19 | Bytes | A19 | Left justified |
| Investigator and/ or Institution | 59 | 62 | Bytes | A62 | Left justified |

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RECORD NAME __Intertidal Data (Station Header)__

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '2' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Latitude, | | | | | |
|   Degrees | 20 | 2 | Bytes | I2 | |
|   Minutes | 22 | 4 | Bytes | I4 | To hundredths |
|   Hemisphere | 26 | 1 | Bytes | A1 | 'N' or 'S' |
| Longitude, | | | | | |
|   Degrees | 27 | 3 | Bytes | I3 | |
|   Minutes | 30 | 4 | Bytes | I4 | To hundredths |
|   Hemisphere | 34 | 1 | Bytes | A1 | 'E' or 'W' |
| Year | 35 | 2 | Bytes | I2 | 00 to 99 |
| Month | 37 | 2 | Bytes | I2 | 01 to 12 |
| Day | 39 | 2 | Bytes | I2 | 01 to 31 } G.M.T. |
| Start Time | | | | | |
|   Hours | 41 | 2 | Bytes | I2 | 00–23 |
|   Minutes | 43 | 2 | Bytes | I2 | 00–59 } G.M.T. |
| Elapsed Time, | | | | | |
|   Hours | 45 | 2 | Bytes | I2 | |
|   Minutes | 47 | 2 | Bytes | I2 | |
| Time Zone | 49 | 3 | Bytes | A3 | -12 to +12 |
| Surface Salinity | 52 | 5 | Bytes | I5 | Parts per thousand to thousandths |
| Surface Temperature | 57 | 5 | Bytes | I5 | Deg. C. to hundredths |

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RECORD NAME __ Intertidal Data (Station Header 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 |
|---|---|---|---|---|---|
| Air Temperature | 62 | 4 | Bytes | I4 | Deg. C. to tenths |
| SECCHI Disc Depth | 66 | 3 | Bytes | I3 | Meters to tenths |
| Weather Code | 69 | 2 | Bytes | A2 | WMO Code 4677 |
| Cloud Type Code | 71 | 1 | Bytes | A1 | WMO Code 0500 |
| Cloud Amount Code | 72 · | 1 | Bytes | A1 | WMO Code 2700 |
| Wind Speed | 73 | 2 | Bytes | I2 | Whole knots |
| Wind Direction | 75 | 3 | Bytes | I3 | Whole degrees |
| Sea State Code | 78 | 1 | Bytes | A1 | WMO Code 3700 |
| Breaker Height Code | 79 | 1 | Bytes | A1 | WMO Code 3700 |
| Exposure Direction | 80 | 3 | Bytes | I3 | Whole degrees |
| Substrata Type Codes | | | | | Any combination of up to three Substrata Type Codes. Code from right to left (most predominant on the right). |
| Primary | 83 | 1 | Bytes | A1 | |
| Secondary | 84 | 1 | Bytes | A1 | |
| Tertiary | 85 | 1 | Bytes | A1 · | |
| Barometric Pressure | 86 | 4 | Bytes | I4 | Millibars to tenths |
| Habitat Codes | | | | | |
| Geomorphic | 90 | 1 | Bytes | A1 | Use Habitat Code |
| Composition | 91 | 1 | Bytes | A1 | Use File Type '030' Composition Code |
| Cover | 92 | 1 | Bytes | A1 | Use File Type '030' Cover Code |
| Slope | 93 | 1 | Bytes | A1 | Use File Type '030' Slope Code |
| Blank | 94 | 27 | Bytes | 27X | |

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED in Bytes (rcd, bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '3' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Catalog Number | 20 | 8 | Bytes | A8 | Originator's internal number |
| Photograph Number | 28 | 10 | Bytes | A10 | Originator's internal number |
| Gear Type Code | 38 | 1 | Bytes | A1 | Use File 030 Gear Type Code |
| Transect Number | 39 | 2 | Bytes | A2 | |
| Transect Direction | 41 | 3 | Bytes | I3 | Whole Degrees |
| Meter Number | 44 | 4 | Bytes | A4 | |
| Zone/Arrow/ No. of Sample | 48 | 3 | Bytes | A3 | |
| Quadrat Size | 51 | 5 | Bytes | I5 | Square meters to ~~ten~~ thousandths |
| Elevation | 56 | 4 | Bytes | I4 | Meters to hundredths |
| Substrata Type Codes | 60 | 3 | Bytes | 3A1 | Any combination of up to three Substrata Type Codes. Code from right to left (most predominant to right). |
| Surface Topography Codes | 63 | 3 | Bytes | 3A1 | Any combination of up to three File 030 Surface Topography Codes. Code from right to left (most predominant to right). |

RECORD FORMAT DESCRIPTION

RECORD NAME Intertidal Data (Site Header, Continued)

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| Collection Time Hours | 66 | 2 | Bytes | I2 | G.M.T. |
| Minutes | 68 | 2 | Bytes | I2 | G.M.T. |
| Sieve Size | 70 | 4 | Bytes | I4 | Millimeters to hundredths |
| Dilution Volume | 74 | 3 | Bytes | I3 | *Decimal Equivalents (.XXX) |
| Quadrat Slope | 77 | 2 | Bytes | I2 | Whole degrees |
| Direction of Quadrat Slope | 79 | 3 | Bytes | I3 | Whole degrees |
| Grab Number | 82 | 2 | Bytes | I2 | Sequential order of multiple digs |
| Sediment | 84 | 7 | Bytes | I7 | Liters to thousandths |
| Grain Size | 91 | 2 | Bytes | I2 | $\emptyset$ number (-$LOG_2$ MM.) with a range from -8 to +12. Minus $\emptyset$ must be explicitly reported with a minus sign in byte 91, plus $\emptyset$ should not incorporate '+' sign. |
| Patch Grid Size | 93 | 5 | Bytes | I5 | Square meters To Thousands |
| Medium Frame Multiple | 98 | 2 | Bytes | I2 | Number of Grids Occupied by all species within |
| Large Frame Multiple | 100 | 2 | Bytes | I2 | |
| Total Work Area | 102 | 5 | Bytes | I5 | Square meters To Thousands |
| Depth | 107 | 5 | Bytes | I5 | Meters to tenths |
| Distance of Net Tow | 112 | 3 | Bytes | I3 | Meters to tenths |
| Blank | 115 | 6 | Bytes | 6X | |

*The dilution volume is that portion of a sample which is analyzed after the sample has been diluted, as a means of statistically estimating the composition of the sample without having to examine the entire sample. Therefore, the dilution volume will be recorded in decimal equivalents. Example: a sample that is diluted so as to equal 16 times its original volume, with one sixteenth being the part studied, will have its dilution volume recorded as .063.

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RECORD NAME Intertidal Data (Composite Data)

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH NUMBER | UNITS | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '4' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Taxonomic Code | 20 | 10 | Bytes | 5A2 | |
| Sub Species Code | 30 | 2 | Bytes | A2 | |
| Sex Code | 32 | 1 | Bytes | A1 | |
| Condition Codes | 33 | 3 | Bytes | 3A1 | Use File Type '030' Condition Code. Any combination of up to three Condition Codes. Code from right to left. |
| Coverage | 36 | 3 | Bytes | I3 | The number of species too small to be counted, or too well attached to the substrate to be removed, will be estimated by the percentage of the quadrat which they cover. Range is greater than 0% and less than or equal to 100%. |
| Count | 39 | 5 | Bytes | I5 | Total number of individuals |
| Wet Weight | 44 | 7 | Bytes | I7 | Grams to thousandths |
| Dry Weight | 51 | 7 | Bytes | I7 | Grams to thousandths |
| Minimum Length | 58 | 6 | Bytes | I6 | Millimeters to hundredths |
| Maximum Length | 64 | 6 | Bytes | I6 | Millimeters to hundredths |
| Displacement Volume | 70 | 5 | Bytes | I5 | Milliliters to tenths |
| Mean Length | 75 | 6 | Bytes | I6 | Millimeters to hundredths |
| Minimum Width | 81 | 6 | Bytes | I6 | Millimeters to hundredths |
| Maximum Width | 87 | 6 | Bytes | I6 | Millimeters to hundredths |
| Mean Width | 93 | 6 | Bytes | I6 | Millimeters to hundredths |

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RECORD NAME  Intertidal Data (Composite Data) Continued

| 14. FIELD NAME | 15. POSITION FROM - : MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| Minimum Age | 99 | 2 | Bytes | I2 | Whole years |
| Maximum Age | 101 | 2 | Bytes | I2 | Whole years |
| Mean Age | 103 | 2 | Bytes | I2 | Whole years |
| Small Frame | 105 | 3 | Bytes | I3 | Number of grids occupied by species within |
| Medium Frame | 108 | 3 | Bytes | I3 | |
| Large Frame | 111 | 2 | Bytes | I2 | |
| Dilution Volume | 113 | 3 | Bytes | I3 | *Decimal equivalents (.XXX) |
| Plant Height | 116 | 2 | Bytes | I2 | Whole centimeters |
| Blank | 118 | 3 | Bytes | 3X | |

*The dilution volume is that portion of a sample which is analyzed after the sample
has been diluted, as a means of statistically estimating the composition of the
sample without having to examine the entire sample.  Therefore, the dilution volume
will be recorded in decimal equivalents.  Example:  a sample that is diluted so as
to equal 16 times its original volume, with one sixteenth being the part studied,
will have its dilution volume recorded as .063.

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '5' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Taxonomic Code | 20 | 10 | Bytes | 5A2 | |
| Subspecies Code | 30 | 2 | Bytes | A2 | |
| Sex Code | 32 | 1 | Bytes | A1 | |
| Condition Codes | 33 | 3 | Bytes | 3A1 | Use File Type '030' Condition Codes, most predominant to left. |
| Age | 36 | 2 | Bytes | I2 | Whole years |
| Wet Weight | 38 | 7 | Bytes | I7 | Grams to thousandths |
| Dry Weight | 45 | 7 | Bytes | I7 | Grams to thousandths |
| Length | 52 | 6 | Bytes | I6 | Millimeters to hundreds |
| Width | 58 | 6 | Bytes | I6 | Millimeters to hundreds |
| Displacement Volume | 64 | 5 | Bytes | I5 | Milliliters to tenths |
| Blank | 69 | 52 | Bytes | 52X | |

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '6' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Oxygen | 20 | 3 | Bytes | I3 | Milliliters per liter To Tenths |
| pH | 23 | 2 | Bytes | I2 | To tenths |
| pH Scale | 25 | 1 | Bytes | A1 | 1 = NBS pH scale 2 = Sorensen pH scale 3 = Hansson pH scale |
| Salinity | 26 | 3 | Bytes | I3 | Parts per thousand to tenths |
| Interstitial Salinity | 29 | 3 | Bytes | I3 | Parts per thousand to tenths |
| Permafrost Depth | 32 | 2 | Bytes | I2 | Meters to tenths |
| Water Temperature | 34 | 3 | Bytes | I3 | Degrees Celsius to tenths |
| Secchi Disk Depth | 37 | 4 | Bytes | I4 | Meters to hundredths (centimeters) |
| Grain Size in Phi Unit Levels | | | | | |
| Greater than -8 | 41 | 3 | Bytes | I3 | |
| -8 to -6 | 44 | 3 | Bytes | I3 | |
| -6 to -4 | 47 | 3 | Bytes | I3 | |
| -4 to -2 | 50 | 3 | Bytes | I3 | |
| -2 to -1 | 53 | 3 | Bytes | I3 | Percent by weight to tenths |
| -1 to 0 | 56 | 3 | Bytes | I3 | |
| 0 to 1 | 59 | 3 | Bytes | I3 | |
| 1 to 2 | 62 | 3 | Bytes | I3 | |
| 2 to 3 | 65 | 3 | Bytes | I3 | |

| 14. FIELD NAME | 15. POSITION FROM - 1 MEASURED IN Bytes *(e.g., bits, bytes)* | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| 3 to 4 | 68 | 3 | Bytes | I3 | Percent by weight to tenths |
| Less than 4 | 71 | 3 | Bytes | I3 | |
| Blank | 74 | 47 | Bytes | 47X | |

RECORD NAME  Intertidal Data (Comment)

| 14. FIELD NAME | 15. POSITION FROM-1 MEASURED IN Bytes (e.g., bits, bytes) | 16. LENGTH | | 17. ATTRIBUTES | 18. USE AND MEANING |
|---|---|---|---|---|---|
| | | NUMBER | UNITS | | |
| File Type | 1 | 3 | Bytes | A3 | Always '030' |
| File Identifier | 4 | 6 | Bytes | A6 | File creation date (YYMMDD) or unique cruise number |
| Record Type | 10 | 1 | Bytes | I1 | Always '7' |
| Station Number | 11 | 5 | Bytes | A5 | Right justified |
| Sequence Number | 16 | 4 | Bytes | I4 | Ascending order for sorting |
| Comments | 20 | 101 | Bytes | A101 | Any alphanumeric comment data |