NODC | LAMONT | NUMBER 7200583

B:3:02 DATA DOCUMENTATION FORM

BL2626 - BL2629
C106

NOAA FORM 24-13
16-771

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
WASHINGTON, DC 20235

FORM APPROVED
O.M.B. No. 41-R2651
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

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

Lamont-Doherty Geological Observatory of
Columbia University
Palisades, New York 10964

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

DOMES

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

**MOANA WAVE Cruise 74-2
*OCEANOGRAPHER Cr. RP-6-OC-75

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
MOANA WAVE ** OCEANOGRAPHER *	Ship	U.S.A.	U.S.A.	**5/11/74	*6/12/75 (?)

8. ARE DATA PROPRIETARY?

[X] NO [ ] YES

IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR ____ MONTH ____

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

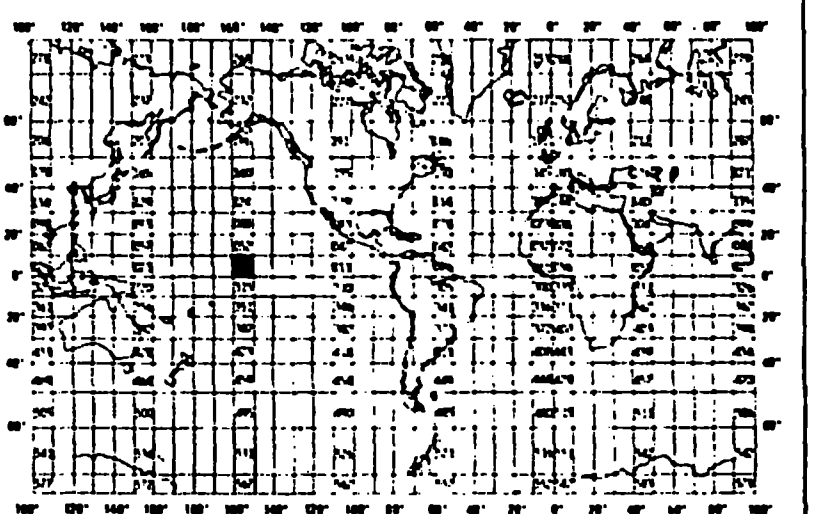
GENERAL AREA

{see attached DIWDB sheet}

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)

NOAA FORM 24-13

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

Please refer to enclosed documentation

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

1) U.S. DOC NOAA/ERL/PMEL
Seattle, Washington
2) Univ. of Hawaii
Honolulu, H.I.

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

4. RESPONSIBLE COMPUTER SPECIALIST:
NAME AND PHONE NUMBER _____
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 ☐ _____

10. END OF FILE MARK ☐ OCTAL 17 ☐ _____

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

12. PHYSICAL BLOCK LENGTH IN BYTES
4000

13. LENGTH OF BYTES IN BITS

770583,

HEADER CARD FORMAT, CARD #1

Col #	Data
2,3	2-character alphameric ship-name code
4-6	Cruise #
7-11	Station #
13	mode: 0 = hydrocast, 1 = STD downtrace, 2 = STD uptrace
15,16	day
17,18	month
19,20	year (-1900)
21,22	time, hours GMT
23,24	time, minutes
26	latitude (blank = north, minus sign = south)
27,28	latitude, degrees
29-31	latitude, 1/1000 degrees
33	longitude (blank = east, minus sign = west)
34-36	longitude, degrees
37-39	longitude, 1/1000 degrees
42-44	Marsden square (old style)
46-49	sonic depth, meters at closest approach
56-58	pinger depth (height of STD off bottom at closest approach) 999 = 999 m or greater or no measurement taken
60,61	wind direction, degrees/10
62,63	wind force, knots
64,65	sea direction, degrees/10
66	sea state, Beaufort

HEADER CARD FORMAT, CARD #1 (Continued)

Col #	Data
70-72	air temperature (dry bulb), degrees C x 10
75-77	air temperature (wet bulb), degrees C x 10
79,80	number of bottles in this station (# of cards to follow after header cards)

HEADER CARD FORMAT, CARD #2

Col #	Data
2-6	Barometer, mb x 10
8-12	salinity sensor serial number
14-18	temperature sensor serial number
20-24	depth sensor serial number
26-29	STD model number
31-36	output of depth sensor at surface, period in μsec
40	# of channels of STD data (e.g., 4 = salinity, temperature, depth, time)
42-44	maximum temperature, degrees c x 10
46-48	minimum temperature, degrees c x 10
50-52	maximum salinity, ppt x 10
54-56	minimum salinity, ppt x 10

DATA CARD FORMAT

Col #	Data
1-5	Depth (m)
6	Depth code: 0 or blank = thermometric depth, 1 = STD depth
	2 = L-Z depth
9-12	temperature millidegrees C
13	temp. code; 0 or blank = reversing thermometer temperature
	1 = STD temperature
16-20	salinity in ppt x 1000
21	salinity code; 0 or blank = sample salinity, 1 = STD salinity
24-27	oxygen in $ml \cdot l^{-1}$ x 100
36-39	silicate in $\mu g \cdot at \cdot l^{-1}$ x 10
43-45	phosphate in $\mu g \cdot at \cdot l^{-1}$ x 100
49-51	nitrate in $\mu g \cdot at \cdot l$ x 10
54-56	alkalinity in $meg \cdot l^{-1}$ x 100
58-60	nitrite in $\mu g \cdot at \cdot l^{-1}$ x 100
61-66	ammonia in $\mu g \cdot at \cdot l^{-1}$ x 100
70	mode: 0 = nansen bottle sample
	1 = sample collected on downtrace
	2 = sample collected on uptrace
71,72	turbidity in FTU x 100
75,76	STD station #
	or Nansen station #
79,80	bottle #

ADDITIONAL DATA

Particulate analysis, carbon & nitrogen

MOANA WAVE 2

Data arranged by combination station numbers. (See Table 1 for STD equivalents.) Each station has 2 header cards, identical to those described for the STD stations, followed by data cards.

Data Card Format

Col #	Data
2-5	depth, meters
6-11	particulate dry weight, $\mu g \cdot l^{-1}$
13-17	particulate nitrogen, $\mu g \cdot l^{-1}$
18-22	particulate carbon, $\mu g \cdot l^{-1}$
25-27	c/n ratio, rounded to nearest whole number
71,72	combination station #
73	S = shallow, I = intermediate, D = deep, R = reoccupation
75,76	STD station #

NOTE: Particulate dry weight values are high and suspect.

Primary productivity and chlorophyll a data are not on cards and will have to be digitized from the data presented in the two referenced reports: MW-2, pages 1066-1073

RP-6-OC-75, pages 207,208

Sedimentological data will have to be digitized from the MOANA WAVE report, pp 264-272 (We were not responsible for this data during RP-6-OC-75.).

. INFORMATION

Tape #	Data Recorded
1	Moana Wave Cruise 74-2, stations 2-24 (stations 1 & 7 data was not usable) Note: Stations 25→39 were hydrographic stations and are listed on cards to follow later
2	Oceanographer Cruise RP-6-OC-75, stations 2-43 (station 1 data was not usable)

TAPE FORMAT

7-track, 800 BPI, ODD parity
(tapes were recorded using an IBM 1130 computer)

ARRANGEMENT OF DATA ON TAPE

Record #	Number of Bytes	Description
1	96	Header, station #1
2 thru N(1)	256	Station #1 data (D,T,S,time)
N(1) + 1	96	Header, station #2
N(1) + 2 thru N(1) + 2 + N(2)	256	Station #2 data
etc.	etc.	etc.

where N(1) = # of records on Sta #1 (appears in header)

N(2) = # of records on Sta #2, etc.

HEADER INFORMATION

96 Bytes consisting of 32 one-word integers and 32 single-precision real words (2 wds. per Byte)
Format refers to original format used to read in the header card
* means that this information was computed by recording program

77022

HEADER DATA

Byte #	Identification	Format
1	Ship code - 2 alphameric characters (~~mn or oc~~) (MW or OC)	A2
2	Cruise #	I3
3	Station #	I5
4	Mode 1 = downtrace; 2 = uptrace	I2
5	Day	I3
6	Month	I2
7	Year (last two digits)	I2
8	Marsden Square (Old Style)	I5
9	Sonic depth (m)	I5
10	Height of pinger above bottom (m)	I4
11	# of channels per record	I4
12	Number of rosette samples taken on this station	I3
13	Source of data (1 - DDL Mag. tape, 2 = paper tape, 3 = digitized analog record)	*
14	Number of records on this sta. (excluding Header)	*
15	Wind direction (degrees)	I3
16	Wind force (knots)	I2
17	Sea direction (degrees)	I3
18	Sea state (Beaufort)	I1
19	Salinity sensor serial number	I6
20	Temperature sensor serial number	I6
21	Depth sensor serial number	I6
22	STD model #	I5
23-32	Not used	
33, 34	SEE NOTE (1) GMT (time for start of ~~program~~ stations) - See Note (2)	F4-1
35, 36	Latitude (degrees & decimal parts)	F7-3

* Data set by recording program

37, 38	Longitude (degrees & decimal parts)		F8.3
39, 40	Air temperature (dry) (^{o}C & 1/10's)		F5.1
41, 42	Web bulb (^{o}C & 1/10's)		F5.1
43, 44	Barometer (mb & 1/10's)		F6.1
45, 46	Minimum depth on this station (m)		*
47, 48	Maximum depth on this station (m)		*
49, 50	Minimum temperature on this station (^{o}C)	See Note 3	F4.1
51, 52	Maximum temperature on this station (^{o}C)		F4.1
53, 54	Minimum salinity on this station (o/oo)		F4.1
55, 56	Maximum salinity on this station (o/oo)		
57, 58	Time on bottom (See Note 4)		*
59, 60	Recording rate (See Note 5)		*
61, 62	Depth correction at surface (See Note 6)		F7.0
63, 64	CS3		E15.7
65, 66	CS2	Coefficient of polynominal equations	E15.7
67, 68	CS1	used to correct S, T & D data.	E15.7
69, 70	CS		E15.7
71, 72	CT3		E15.7
73, 74	CT2	$S_{(corr)} = S + CS3.D^3 + CS2.D^2 + CS1.D + CS$	E15.7
75, 76	CT1	where S = STD salinity; D = STD depth (See Note 7)	E15.7
77, 78	CT	$T_{(corr)} = CT3.T^3 + CT2.T^2 + CT1.T + CT$	E15.7
79, 80	CD3	where T = STD temperature	E15.7
81, 82	CD2	$D_{(corr)} = CD3.D^3 + CT2.D^2 + CD1.D + CD$	E15.7
83, 84	CD1	where D = STD depth	E15.7
85, 86	CD		E15.7
87-96	Not used		

NOTES

1. For the two-byte per word real data I believe the exponent appears in the first byte and the mantissa in the second.

2. Time (of station start) is one word, hours + minutes; i.e., 2034 = 20 hrs 34 mins Due to an error all times should be multipled by 10 (i.e., on tape above time is 203.4)

3. These are broad limits outside of which the program will reject data as being spurious.

4. Time GMT when STD was closest to bottom (may not be recorded on these tapes).

5. Recording rate in seconds (may not be on these tapes)

6. The period in μsec of the frequency output of the depth sensor at the surface

7. Salinity corrections are, except for a surface offset correction, a function of depth (i.e., there is a salinity/depth error)

STATION DATA

Use header word #14 (NRECS) to determine how many records for each station. Number of parameters should be four - depth, temperature, salinity and time, recorded in that order. There are 32 such scans per record. As we sometimes have additional parameters (but not on MOANA WAVE or OCEANOGRAPHER), to determine how many words per record, multiply header #11 by 32. All data are single-precision real words (2 bytes per word).

77-0583
Lamont

THE UNIVERSITY OF TEXAS
MARINE SCIENCE INSTITUTE
Port Aransas Marine Laboratory

Port Aransas, Texas 78373
Phone 512 749-6711

1 July 1977

Dr. James Ridlon
NOAA/EDS/NODC
2001 Wisconsin Avenue, NW
Page Building #1
Washington, D.C. 20235

Dear Dr. Ridlon:

I have made several efforts to get these data in a more usable form for you, but due to the changeover of computers at Lamont and my move to Texas, I have not succeeded. Rather than keep you waiting any longer, I am sending you two tapes and some cards containing all the Moana Wave and Oceanographer data that I will be able to supply.

These are the final output tapes from an IBM 1130 STD processing system that I devised and used at Lamont. They are the only tapes I have and I now have no easy way of copying them. I would appreciate it if you could copy them and return these originals to me when you have finished with them. The tapes contain all the STD data and the cards contain all the sample data (D, T, S, O_2, nutrients).

I have enclosed a description of tape format. The tapes are being sent immediately; the cards will follow in a few days.

I must apologize for the long delay in getting this data to you.

Yours sincerely,

A. F. Amos

Enclosure

Anthony F. Amos
Research Associate

AFA/sl

77-0583

TAPE INFORMATION

Tape #	Data Recorded
1	Moana Wave Cruise 74-2, stations 2-24 (stations 1 & 7 data was not usable) Note: Stations 25→39 were hydrographic stations and are listed on cards to follow later
2	Oceanographer Cruise RP-6-OC-75, stations 2-43 (station 1 data was not usable)

TAPE FORMAT

7-track, 800 BPI, ODD parity
(tapes were recorded using an IBM 1130 computer)

ARRANGEMENT OF DATA ON TAPE

Record #	Number of Bytes	Description
1	96	Header, station #1
2 thru N(1)	256	Station #1 data (D,T,S,time)
N(1) + 1	96	Header, station #2
N(1) + 2 thru N(1) + 2 + N(2)	256	Station #2 data
etc.	etc.	etc.

where N(1) = # of records on Sta #1 (appears in header)

N(2) = # of records on Sta #2, etc.

HEADER INFORMATION

96 Bytes consisting of 32 one-word integers and 32 single-precision real words (2 wds. per Byte)
Format refers to original format used to read in the header card
* means that this information was computed by recording program

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HEADER DATA

Moana Wave ← Oceanographer

Byte #	Identification	Format
1	Ship code - 2 alphameric characters (~~mw or oc~~) (MW or OC)	A2
2	Cruise #	I3
3	Station #	I5
4	Mode 1 = downtrace; 2 = uptrace	I2
5	Day	I3
6	Month	I2
7	Year (last two digits)	I2
8	Marsden Square (Old Style)	I5
9	Sonic depth (m)	I5
10	Height of pinger above bottom (m)	I4
11	# of channels per record	I4
12	Number of rosette samples taken on this station	I3
13	Source of data (1 - DDL Mag. tape,2 = paper tape, 3 = digitized analog record)	*
14	Number of records on this sta. (excluding Header)	*
15	Wind direction (degrees)	I3
16	Wind force (knots)	I2
17	Sea direction (degrees)	I3
18	Sea state (Beaufort)	I1
19	Salinity sensor serial number	I6
20	Temperature sensor serial number	I6
21	Depth sensor serial number	I6
22	STD model #	I5
23-32	Not used	
33, 34	SEE NOTE (1) GMT (time for start of ~~program~~ station) - See Note (2)	F4-1
35, 36	Latitude (degrees & decimal parts)	F7-3

* Data set by recording program

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37, 38	Longitude (degrees & decimal parts)		F8.3
39, 40	Air temperature (dry) (^{o}C & 1/10's)		F5.1
41, 42	Web bulb (^{o}C & 1/10's)		F5.1
43, 44	Barometer (mb & 1/10's)		F6.1
45, 46	Minimum depth on this station (m)		*
47, 48	Maximum depth on this station (m)	See Note 3	*
49, 50	Minimum temperature on this station (^{o}C)		F4.1
51, 52	Maximum temperature on this station (^{o}C)		F4.1
53, 54	Minimum salinity on this station (o/oo)		F4.1
55, 56	Maximum salinity on this station (o/oo)		
57, 58	Time on bottom (See Note 4)		*
59, 60	Recording rate (See Note 5)		*
61, 62	Depth correction at surface (See Note 6)		F7.0
63, 64	CS3		E15.7
65, 66	CS2	Coefficient of polynominal equations	E15.7
67, 68	CS1	used to correct S, T & D data.	E15.7
69, 70	CS		E15.7
71, 72	CT3		E15.7
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75, 76	CT1	where S = STD salinity; D = STD depth (See Note 7)	E15.7
77, 78	CT	$T_{(corr)} = CT3.T^3 + CT2.T^2 + CT1.T + CT$	E15.7
79, 80	CD3	where T = STD temperature	E15.7
81, 82	CD2	$D_{(corr)} = CD3.D^3 + CT2.D^2 + CD1.D + CD$	E15.7
83, 84	CD1	where D = STD depth	E15.7
85, 86	CD		E15.7
87-96	Not used		

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NOTES

1. For the two-byte per word real data I believe the exponent appears in the first byte and the mantissa in the second.

2. Time (of station start) is one word, hours + minutes; i.e., 2034 = 20 hrs 34 mins Due to an error all times should be multipled by 10 (i.e., on tape above time is 203.4)

3. These are broad limits outside of which the program will reject data as being spurious.

4. Time GMT when STD was closest to bottom (may not be recorded on these tapes).

5. Recording rate in seconds (may not be on these tapes)

6. The period in μsec of the frequency output of the depth sensor at the surface

7. Salinity corrections are, except for a surface offset correction, a function of depth (i.e., there is a salinity/depth error)

STATION DATA

Use header word #14 (NRECS) to determine how many records for each station. Number of parameters should be four - depth, temperature, salinity and time, recorded in that order. There are 32 such scans per record. As we sometimes have additional parameters (but not on MOANA WAVE or OCEANOGRAPHER), to determine how many words per record, multiply header #11 by 32. All data are single-precision real words (2 bytes per word).

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THE UNIVERSITY OF TEXAS
MARINE SCIENCE INSTITUTE
Port Aransas Marine Laboratory

Port Aransas, Texas 78373
Phone 512 749-6711

7 June 1977

NOTES ON DATA SUBMITTED TO NODC EQUATORIAL PACIFIC OCEAN MANGANESE NODULE STUDIES

by

A. F. Amos

MOANA WAVE and OCEANOGRAPHER data on cards.

The two cruises were designed to study the environmental conditions in areas of the Pacific Ocean where manganese nodule mining will take place in the next few years. At each ship's station the STD was lowered two or three times to cover the shallow, intermediate and deep provinces of the water column. On each lowering, 12 rosette samples were normally collected and analyzed for salinity, dissolved oxygen, nutrients, particulates and primary productivity and chlorophyll a in the shallow stations. Alternate bottles carried three reversing thermometers and both protected and unprotected thermometers were used.

Thus, each set of 12 samples is tabulated on cards preceded by the header cards for the accompanying STD station. By combining all rosette samples collected at each ship's station a complete suite of samples covering the entire water column can be put together. These are the so-called "combination stations" appearing in the cruise reports (refs. 1 & 2).

I have submitted the cards under the STD station number during which they were originally collected. Tables 1 & 2 show the corresponding combination station numbers.

During MOANA WAVE cruise 2 the STD was not used after station 24 because of a breakdown in the conducting cable. Stations 25-39 were alternately shallow and deep hydrographic stations made using nansen bottles.

The numbering of the combination stations for both cruises was done before the cruise started and therefore stations may not be chronologically numbered and will contain gaps in the numbering where time did not permit a station to be taken.

TABLE 1. Combination Stations - MOANA WAVE Cruise 2 (MW-2)

Combination Station #	STD or HYDRO Sta #'s	Shallow (S) Intermediate (I) Deep (D)	For time, position header data use STD Station #
1	36 37 38 39	D S I S	37
2(1)	6 7 8	D S D	7
2(2)	34 35	D S	35
3	10	D	10
4	13 14 15	S D D	13
6	25 26 27	D S D	26
8	31 32 33	D D S	33
10	22 23 24	D S S	23
11	16 17 18	S D D	16

TABLE 1. (Continued)

Combination Station #	STD or HYDRO Sta #'s	Shallow (S) Intermediate (I) Deep (D)	For time, position header data use STD Station #
	19	S	
13	20	D	19
	21	D	
	28	D	
16	29	S	29
	30	D	

NOTE: Number in parentheses after combination station # means that the station was reoccupied.

TABLE 2. OCEANOGRAPHIC Cruise RP-6-OC-75 Combination Stations

Combination Station #	STD Station #	Shallow (S) Intermediate (I) Deep (D)	For time, position, header data use STD Station #
11(1)	7	D	7
11(2)	40	S	40
	41	I	
	42	D	
12	8	S	8
	9	I	
	10	D	
13	11	D	13
14	21	S	21
	22	I	
	23	D	
15B	24	S	24
	25	I	
	26	D	
18	18	S	18
	19	I	
	20	D	
19	27	S	27
	28	I	
	29	D	
20(1)	4	S	4
	5	I	
	3	D	
20(2)	6	D	6

TABLE 2. (Continued)

Combination Station #	STD Station #	Shallow (S) Intermediate (I) Deep (D)	For time, position, header data use STD Station #
20B	39	D	39
23B	15	S	15
	16	I	
	17	D	
24B	12	S	12
	13	I	
	14	D	
25	30	S	30
	31	I	
	32	D	
26	33	S	33
	34	I	
	35	D	
27	36	S	36
	37	I	
	38	D	
28	43	D	43

NOTE: Number in parentheses after combination station # means that the station was reoccupied.

770583

HEADER CARD FORMAT, CARD #1

Col #	Data
2,3	2-character alphameric ship-name code
4-6	Cruise #
7-11	Station #
13	mode: 0 = hydrocast, 1 = STD downtrace, 2 = STD uptrace
15,16	day
17,18	month
19,20	year (-1900)
21,22	time, hours GMT
23,24	time, minutes
26	latitude (blank = north, minus sign = south)
27,28	latitude, degrees
29-31	latitude, 1/1000 degrees
33	longitude (blank = east, minus sign = west)
34-36	longitude, degrees
37-39	longitude, 1/1000 degrees
42-44	Marsden square (old style)
46-49	sonic depth, meters at closest approach
56-58	pinger depth (height of STD off bottom at closest approach)
	999 = 999 m or greater or no measurement taken
60,61	wind direction, degrees/10
62,63	wind force, knots
64,65	sea direction, degrees/10
66	sea state, Beaufort

HEADER CARD FORMAT, CARD #1 (Continued)

Col #	Data
70-72	air temperature (dry bulb), degrees C x 10
75-77	air temperature (wet bulb), degrees C x 10
79,80	number of bottles in this station (# of cards to follow after header cards)

HEADER CARD FORMAT, CARD #2

Col #	Data
2-6	Barometer, mb x 10
8-12	salinity sensor serial number
14-18	temperature sensor serial number
20-24	depth sensor serial number
26-29	STD model number
31-36	output of depth sensor at surface, period in μsec
40	# of channels of STD data (e.g., 4 = salinity, temperature, depth, time)
42-44	maximum temperature, degrees c x 10
46-48	minimum temperature, degrees c x 10
50-52	maximum salinity, ppt x 10
54-56	minimum salinity, ppt x 10

DATA CARD FORMAT

Col #	Data
1-5	Depth (m)
6	Depth code: 0 or blank = thermometric depth, 1 = STD depth
	2 = L-Z depth
9-12	temperature millidegrees C
13	temp. code; 0 or blank = reversing thermometer temperature
	1 = STD temperature
16-20	salinity in ppt x 1000
21	salinity code; 0 or blank = sample salinity, 1 = STD salinity
24-27	oxygen in $ml \cdot l^{-1}$ x 100
36-39	silicate in $\mu g \cdot at \cdot l^{-1}$ x 10
43-45	phosphate in $\mu g \cdot at \cdot l^{-1}$ x 100
49-51	nitrate in $\mu g \cdot at \cdot l$ x 10
54-56	alkalinity in $meg \cdot l^{-1}$ x 100
58-60	nitrite in $\mu g \cdot at \cdot l^{-1}$ x 100
61-66	ammonia in $\mu g \cdot at \cdot l^{-1}$ x 100
70	mode: 0 = nansen bottle sample
	1 = sample collected on downtrace
	2 = sample collected on uptrace
71,72	turbidity in FTU x 100
75,76	STD station #
	or Nansen station #
79,80	bottle #

NOTES As the majority of these samples were taken with a rosette sampler at the same time as an STD station was made, many samples have no L-Z type depths, no thermometric depths and no reversing thermometer data. Where this is the case, the data used is the corrected STD parameter value, identified by the appropriate codes, in columns 6, 13 or 21 of the data card. Silicate values show considerable scatter in both cruises and many are suspect (see refs.) Alkalinities and ammonia values are suspect.

REFERENCES

(1) Roels, O. A., A. F. Amos, C. Garside, T.C. Malone, A.Z. Paul and G.E. Rice, 1975. The environmental impact of deep-sea mining: cruise report on MOANA WAVE 74-2, Apr.-May '74. NOAA Data Rep. ERL MESA-2, U.S. Dept of Commerce, Environmental Research Laboratories, Boulder, Colo., 12 pp. (microfiche)

(2) Roels, O.A., A.F. Amos and A.Z. Paul, 1976. Final Data Report, OSS Oceanographer Cruise RP-6-OC-75, legs 1 & 2, 14 Apr to 6 June 1975 NOAA Data Rep. ERL MESA U.S. Dept of Commerce, Environmental Research Laboratories, Boulder, Colo., 3 pp (microfiche)

ADDITIONAL DATA

Particulate analysis, carbon & nitrogen

MOANA WAVE 2

Data arranged by combination station numbers. (See Table 1 for STD equivalents.) Each station has 2 header cards, identical to those described for the STD stations, followed by data cards.

Data Card Format

Col #	Data
2-5	depth, meters
6-11	particulate dry weight, $\mu g \cdot l^{-1}$
13-17	particulate nitrogen, $\mu g \cdot l^{-1}$
18-22	particulate carbon, $\mu g \cdot l^{-1}$
25-27	c/n ratio, rounded to nearest whole number
71,72	combination station #
73	S = shallow, I = intermediate, D = deep, R = reoccupation
75,76	STD station #

NOTE: Particulate dry weight values are high and suspect.

Primary productivity and chlorophyll a data are not on cards and will have to be digitized from the data presented in the two referenced reports: MW-2, pages 1066-1073

RP-6-OC-75, pages 207,208

Sedimentological data will have to be digitized from the MOANA WAVE report, pp 264-272 (We were not responsible for this data during RP-6-OC-75.).

Benthic data appears in both reports:

MW-2, pp 274-287, bottom photographs are reproduced on pp 289-841

RP-6-OC-75, pp 238-245 (incomplete data analysis). For final data contact Dr. A. Z. Paul, Lamont-Doherty Geological Observatory, Palisades, New York 10964; tel: 914-359-2900. NOAA has the bottom photographs for this cruise.

Table 1. CHLOROPHYLL A CONCENTRATIONS (µg Ch.a/l)

IN THE WATER COLUMN

	STATION											
ILLUMIN.	4	8	12	15	18	21	24	27	30	33	36	40
100	0.161	0.151	0.116	0.115	0.0749	0.170	0.0602	0.0812	0.0651	0.0735	0.0644	0.109
45	0.160	0.138	0.114	0101	0.0756	0.140	0.0385	0.103	0.0539	0.0609	0.0651	0.104
15	0.174	0.118	0.0903	0.0917	0.0679	0.148	0.0581	0.215	0.0504	0.0819	0.0574	0.0875
1	0.0273	0.127	0.125	0.118	0.127	0.0903	0.144	0.159	0.113	0.153	0.120	0.122
Top Thermo.	0.0280	0.101	0.163	0.0574	0.0791	0.103	0.0875	0.0952	0.135	0.132	0.130	0.0883
Bottom Thermo.	0.0287	0.125	0.0409	0.132	0.0581	0.0392	0.0154	0.0182	0.0161	0.0399	0.0259	0.0875

RP-6-OC-75

Table 2. ^{14}C PRODUCTIVITY VALUES (µg C/l/hr)

IN THE WATER COLUMN

	STATION											
ILLUMIN.	4	8	12	15	18	21	24	27	30	33	36	40
100	0.97	0.98	0.84	0.86	0.13	0.99	0.19	0.19	0.11	0.11	0.15	0.90
45	0.95	0.63	0.61	0.68	-	0.81	0.15	0.80	-	-	-	1.12
15	1.11	0.42	-	-	-	0.63	-	1.35	-	-	-	-
1	-	0.39	1.15	0.67	0.83	-	0.98	0.67	0.94	0.86	0.75	0.91
Top Thermo.	-	0.40	0.91	-	-	0.11	-	-	0.83	0.52	0.94	-
Bottom Thermo.	-	0.14	-	0.21	-	-	-	-	-	-	-	-

4.2.4.2 INCIDENT RADIATION

DATE	STA	I	K	CHL a 0-150	CHL a 0-1%	PROD 0-1%	P/B
1974							
24/4	02	279	0.07	16.80	14.6	98.4	6.7
26/4	02	387	0.07	21.41	14.0	100.5	7.2
28/4	04	439	0.08	34.56	16.0	116.2	7.3
29/4	11	351	0.08	18.41	10.7	68.4	6.4
1/5	13	427	0.07	19.22	14.1	87.3	6.2
3/5	10	255	0.06	23.71	17.4	88.9	5.1
5/5	06	178	0.06	22.60	17.7	80.6	4.6
6/5	16	527	0.06	25.90	21.4	154.8	7.2
8/5	08	559	0.07	27.79	17.4	136.2	7.8
11/5	01	466	0.07	19.93	14.4	110.0	7.6

Incident Radiation (I = g-cal cm^{-2} day^{-1}), Extinction Coefficient ( ), Water Column Chlorophyll a (O-150m, Om-1% light depth; mg m^{-2}), Primary Productivity (mg C m^{-2} day^{-1}) and the Productivity:Chlorophyll a Ratio (P/B).

DATE	STA	%	CHL a	PROD	P/B	RATIO CHL a	RATIO PROD
6/5	16	5	0.210	0.81	3.8	0.04	0.06
		12	0.215	2.02	9.4	0.05	0.07
		21	0.253	3.17	12.5	0.07	0.09
		35	0.345	2.47	7.2	0.08	0.05
		47	0.297	-	-	-	-
		84	0.204	0.84	4.1	0.02	0.04
		93	0.147	-	-	-	-
		102	0.077	-	-	-	-
		110	0.060	-	-	-	-
		125	0.035	-	-	-	-
		150	0.005	-	-	-	-
8/5	08	6	0.240	0.33	5.5	0.05	0.05
		14	0.229	2.12	9.2	0.05	0.07
		24	0.223	2.91	13.0	0.07	0.08
		39	0.240	2.13	8.9	0.07	0.04
		54	0.282	-	-	-	-
		74	0.277	1.19	4.3	0.02	0.03
		84	0.233	-	-	-	-
		94	0.217	-	-	-	-
		104	0.195	-	-	-	-
		129	0.080	-	-	-	-
		154	0.005	-	-	-	-
11/5	01	8	0.210	1.48	7.1	0.07	0.06
		18	0.201	2.13	10.6	0.06	0.07
		33	0.238	1.81	8.0	0.08	0.08
		53	0.180	1.34	7.4	0.07	0.05
		78	0.163	0.78	4.8	0.03	0.04
		88	0.146	-	-	-	-
		98	0.104	-	-	-	-
		148	0.019	-	-	-	-
		198	0.005	-	-	-	-

DATE	STA	%	CHL a	PROD	P/B	RATIO CHL a	RATIO PROD
29/4	11	2	0.175	0.76	4.3	0.09	0.27
		10	0.176	1.53	8.7	0.09	0.50
		16	0.193	1.93	10.0	0.08	0.15
		28	0.165	1.06	6.4	0.10	0.40
		42	0.182	-	-	0.02	-
		59	0.204	0.69	3.4	0.07	0.03
		91	0.145	-	-	0.00	-
		102	0.050	-	-	0.00	-
		149	0.005	-	-	-	-
1/5	13	4	0.160	0.75	4.7	0.03	0.09
		10	0.163	1.19	7.3	0.03	0.12
		18	0.173	1.76	10.2	0.06	0.11
		28	0.205	1.61	7.8	0.05	0.07
		50	0.230	-	-	0.04	-
		65	0.244	0.75	3.1	0.04	0.03
		81	0.193	-	-	0.00	-
		92	0.135	-	-	0.04	-
		103	0.015	-	-	0.00	-
		150	0.005	-	-	-	-
3/5	10	5	0.155	1.05	6.8	0.07	0.15
		11	0.148	1.29	8.7	0.06	0.09
		20	0.178	1.45	8.1	0.07	0.09
		35	0.210	1.15	5.5	0.04	0.05
		54	0.208	-	-	0.03	-
		82	0.277	0.66	2.4	0.01	0.02
		95	0.333	-	-	-	-
		96	0.159	-	-	-	-
		121	0.020	-	-	-	-
		144	0.005	-	-	-	-
5/5	06	4	0.155	1.88	12.1	0.09	0.13
		11	0.148	1.60	10.8	0.09	0.09
		21	0.163	1.06	6.5	0.08	0.06
		35	0.270	0.97	3.6	0.03	0.04
		58	0.223	-	-	0.03	-
		81	0.204	0.48	2.4	0.01	0.02
		92	0.163	-	-	-	-
		99	0.111	-	-	-	-
		118	0.040	-	-	-	-
		141	0.015	-	-	-	-

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DATE	STA	%	CHL a	PROD	P/B	RATIO CHL a	RATIO PROD
1974							
24/4	02	4	0.225	2.03	9.0	0.07	0.13
		4	0.220	1.93	8.8	0.05	0.07
		20	0.216	2.05	9.5	0.07	0.07
		50	0.185	0.83	4.5	0.03	0.07
		74	0.183	0.67	3.7	0.03	0.08
		99	0.088	0.67	-	0.06	-
		123	0.035	-	-	-	-
		147	0.019	-	-	-	-
		172	0.010	-	-	-	-
		197	0.005	-	-	-	-
26/4	02	1	0.155	0.63	10.5	0.07	0.08
		5	0.150	1.72	11.5	0.07	0.12
		17	0.200	1.89	9.4	0.08	0.06
		27	0.233	0.66	7.1	0.04	0.03
		29	0.200	-	-	0.02	-
		46	0.203	-	-	0.05	-
		70	0.151	0.53	3.5	0.07	0.02
		83	0.173	-	-	0.06	-
		95	0.198	-	-	0.05	-
		105	0.120	-	-	-	-
		125	0.035	-	-	-	-
		150	0.010	-	-	-	-
28/4	04	2	0.225	1.76	7.8	0.07	0.06
		6	0.196	2.12	10.8	0.05	0.08
		20	0.248	2.83	11.4	0.11	0.07
		32	0.270	2.16	8.0	0.06	0.05
		43	0.312	-	-	0.05	-
		58	0.350	1.12	3.2	0.04	0.05
		85	0.278	-	-	0.04	-
		100	0.328	-	-	0.03	-
		109	0.110	-	-	-	-
		150	0.010	-	-	-	-
		203	0.005	-	-	-	-

Primary Productivity (Prod = µg C liter^{-1} day^{-1}), Chlorophyll a (Chl a = µg liter^{-1}), Productivity Per Unit Chlorophyll a (P/B), and Netplankton-Nanoplankton Ratios

TABLE 3. FAUNAL COMPOSITION IN PERCENT OF WEIGHT OF TOTAL MACROFAUNA IN TEN 0.25 m^2 BOX CORES FROM SITE C-RP-6-OC-75

Porifera	7
Cnidaria	60
Polychaeta	15
Isopoda	1
Bivalvia	5
Gastropoda	2
Bryozoa	5

and anthozoans. The scyphozoan Stephanoscyphus was responsible for the large percentage. They are strobilating forms that need a firm substrate and the nodules provide that.

Table 3 shows the faunal composition in percent of weight of the total macrofaunal population. Here again the Cnidarian percentage is extremely high.

There were Cnidaria and polychaetes in all cores; isopods, tanaids and bivalves in all but one; and brachiopods, gastropods and porifera in at least half the cores.

Nematodes, ostracods and copepods--the meiofaunal metazoans were fairly abundant as were the inside-the-nodule-foraminifera. Nematodes were 19% and ostracods 10% of the total metazoan fauna ranking them third and fifth in numberical abundance.

By weight, the meiofaunal taxa are less than 1% of the total but numerically about 25%. Since we do not collect all of the meiofauna in the washing technique used for these samples, true determination of the meio/macrofaunal weight ratios awaits completion of our task. Thiel (1971) and Paul & Menzies (1974) have reported deep-sea ratios of 1:1 which leads me to believe our preliminary work is perhaps not indicative of the true picture.

Excluding Xenophyophoria the total weight of all organisms collected was 2.1806 g which means that the biomass was approximately 0.87 g/m^2. This is considerably larger than the figure of 0.01 g/m^2 from Filatova in Zenkevitch (1969), given for this area of the Pacific.

TABLE 2. FAUNAL COMPOSITION (IN PERCENT OF TOTAL MACROFAUNA) OF THE CENTRAL NORTH PACIFIC (HESSLER & JUMARS) COMPARED TO THAT FROM SITE C (DOMES RP-6-OC-75)

T A X A	CENTRAL NORTH PACIFIC	SITE C
Porifera	1.1	3
Cnidaria	1.4	23
Polychaeta	55.1	40
Tanaidacea	18.4	11
Isopoda	6	9
Bivalvia	7.1	6
Gastropoda	0.4	2
Ophiuroidea	0.7	1
Bryozoa	2	2
Brachiopoda	0.7	2

TABLE 1 (CONTINUED): FAUNAL COMPOSITION OF TEN CORES

TAXA	TOTAL IND.	TOTAL WT.
Xenophyophoria	2	1.7691
Foraminifera	192	0.0300
Hydrozoa	1	0.0022
Stephanoscyphus	122	0.0420
Actinaria	3	1.2479
Nematoda	145	0.0042
Bryozoa	10	0.1014
Brachiopoda	8	0.0092
Sipunculoidea	1	0.0052
Ophiuroidea	3	0.0319
Crinoidea	1	0.0232
Polyplacophora	1	0.0010
Gastropoda	9	0.0319
Pelecypoda	29	0.0992
Scaphopoda	1	0.0002
Polychaeta	209	0.3305
Pycnogonida	1	0.0003
Copepoda	12	0.0004
Ostracoda	78	0.0133
Cumacea	1	0.0001
Isopoda	49	0.0242
Tanaidacea	58	0.0052
Ascidacea	1	0.0178
Cirripedia	2	0.0051
Porifera	15	0.1515
Madreporaria	1	0.0004
Egg Case	1	0.0023

TABLE 1. FAUNAL COMPOSITION OF TEN 0.25 m^2 CORES FROM SITE C—PROJECT DOMES CRUISE RP-6-OC-75

TAXA	STATION 3-BC5 IND.	SPP.	WT.	3-BC9 IND.	SPP.	WT.	5-BC5 IND.	SPP.	WT.	6-BC2 IND.	SPP.	WT.	9-BC1 IND.	SPP.	WT.
Xenophyophoria	-	-	-	-	-	-	-	-	-	1	1	.1949	1	1	1.5942
Foraminifera	18	?	.0066	10	?	.0025	8	?	.0001	15	?	.0056	50	?	.0095
Hydrozoa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stephanoscyphus	16	1	.0100	17	1	.0058	14	1	.0028	2	1	.0015	12	1	.0036
Actinaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nematoda	18	8	.0012	12	~4	.0003	2	~2	.0001	56	~5	.0017	14	~4	.0003
Bryozoa	1	1	.0699	1	1	.0010	-	-	-	1	1	.0005	1	1	.0007
Brachiopoda	-	-	-	1	1	.0001	1	1	.0029	1	1	.0027	-	-	-
Sipunculoidea	-	-	-	-	-	-	-	-	-	1	1	.0050	-	-	-
Ophiuroidea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crinoidea	-	-	-	-	-	-	-	-	-	-	-	-	1	1	.0232
Polyplacophora	-	-	-	1	1	.0010	-	-	-	-	-	-	-	-	-
Gastropoda	1	1	.0003	1	1	.0033	1	1	.0214	3	3	.0024	1	1	.0039
Pelecypoda	1	1	.0655	3	3	.0009	1	1	.0001	4	2	.0022	-	-	-
Scaphopoda	1	1	.0002	-	-	-	-	-	-	-	-	-	-	-	-
Polychaeta	7	7	.0021	8	~3	.0012	10	~8	.1068	30	~12	.0804	37	~15	.0292
Pycnogonida	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copepoda	-	-	-	2	2	-	1	1	-	6	4	.0002	-	-	-
Ostracoda	11	5	.0014	2	2	.0003	-	-	-	2	2	.0009	5	4	.0020
Cumacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopoda	6	6	.0022	8	6	.0005	-	-	-	4	1	.0006	3	3	.0012
Tanaidacea	6	3	.0006	8	8	.0005	2	2	.0001	5	4	.0006	7	5	.0005
Ascidacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cirripedia	1	1	.0024	1	1	.0027	-	-	-	-	-	-	-	-	-
Porifera	-	-	-	-	-	-	-	-	-	-	-	-	4	2	.0093
Madreporaria	-	-	-	1	1	.0004	-	-	-	-	-	-	-	-	-
Egg Case	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Squid Beaks	27			62			27			6			68		
Shark Teeth	10			33			14			9			3		
TOTAL	86		0.1624	76		0.0205	40		0.1343	131		0.2992	136		1.6576
NODULES WT (g)			2875			1626			1675			725			2045

TABLE 1 (CONTINUED): FAUNAL COMPOSITION OF TEN CORES

	STATION														
	9-BC4			14-BC1			16B-BC3			18-BC2			18-BC4		
	IND.	SPP.	WT.	IND.	SPP.	WT.	IND.	SPP.	WT.	IND.	SPP.	WT.	IND.	SPP.	WT.
Xenophyophoria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Foraminifera	30	?	.0030	40	?	.0026	-	-	-	12	?	.0001	9	?	-
Hydrozoa	1	1	.0022	-	-	-	-	-	-	-	-	-	-	-	-
Stephanoscyphus	8	1	.0023	18	1	.0056	5	1	.0033	18	1	.0039	12	1	.0032
Actinaria	-	-	-	1	1	.0091	-	-	-	-	-	-	2	2	1.2388
Nematoda	2	2	-	5	2	.0001	8	3	.0001	7	3	.0001	21	5	.0003
Bryozoa	1	1	.0054	1	1	.0079	-	-	-	2	2	.0047	2	2	.0113
Brachiopoda	1	1	.0054	4	1	.0021	-	-	-	1	1	.0014	-	-	-
Sipunculoidea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ophiuroidea	-	-	-	1	1	.0023	2	2	.0296	-	-	-	-	-	-
Crinoidea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyplacophora	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gastropoda	-	-	-	-	-	-	-	-	-	-	-	-	2	2	.0006
Pelecypoda	1	1	.0001	3	1	.0008	2	1	.0003	9	3	.0252	5	4	.0041
Scaphopoda	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polychaeta	50	~10	.0220	10	~5	.0080	12	~6	.0045	20	~10	.0426	25	~5	.0337
Pycnogonida	1	1	.0003	-	-	-	-	-	-	-	-	-	-	-	-
Copepoda	-	-	-	-	-	-	1	1	-	-	-	-	2	2	.0002
Ostracoda	4	3	.0001	11	5	.0016	9	4	.0008	9	7	.0026	25	~8	.0036
Cumacea	-	-	-	-	-	-	1	1	.0001	-	-	-	-	-	-
Isopoda	2	2	.0011	4	4	.0014	7	7	.0041	9	7	.0037	6	6	.0094
Tanaidacea	-	-	-	6	3	.0006	10	7	.0007	5	3	.0007	9	6	.0009
Ascidacea	1	1	.0178	-	-	-	-	-	-	-	-	-	-	-	-
Cirripedia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Porifera	1	1	.0002	4	3	.0026	-	-	-	4	4	.1375	2	2	.0019
Madreporaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Egg Case	-	-	-	-	-	-	1	-	.0023	-	-	-	-	-	-
Squid Beaks	30			88			54			50			82		
Shark Teeth	15			22			13			125			26		
TOTAL	102		0.0545	114		0.0447	58		0.0458	96		0.2225	122		1.308
NODULES WT (g)		2034			2279			1438			815			1950	

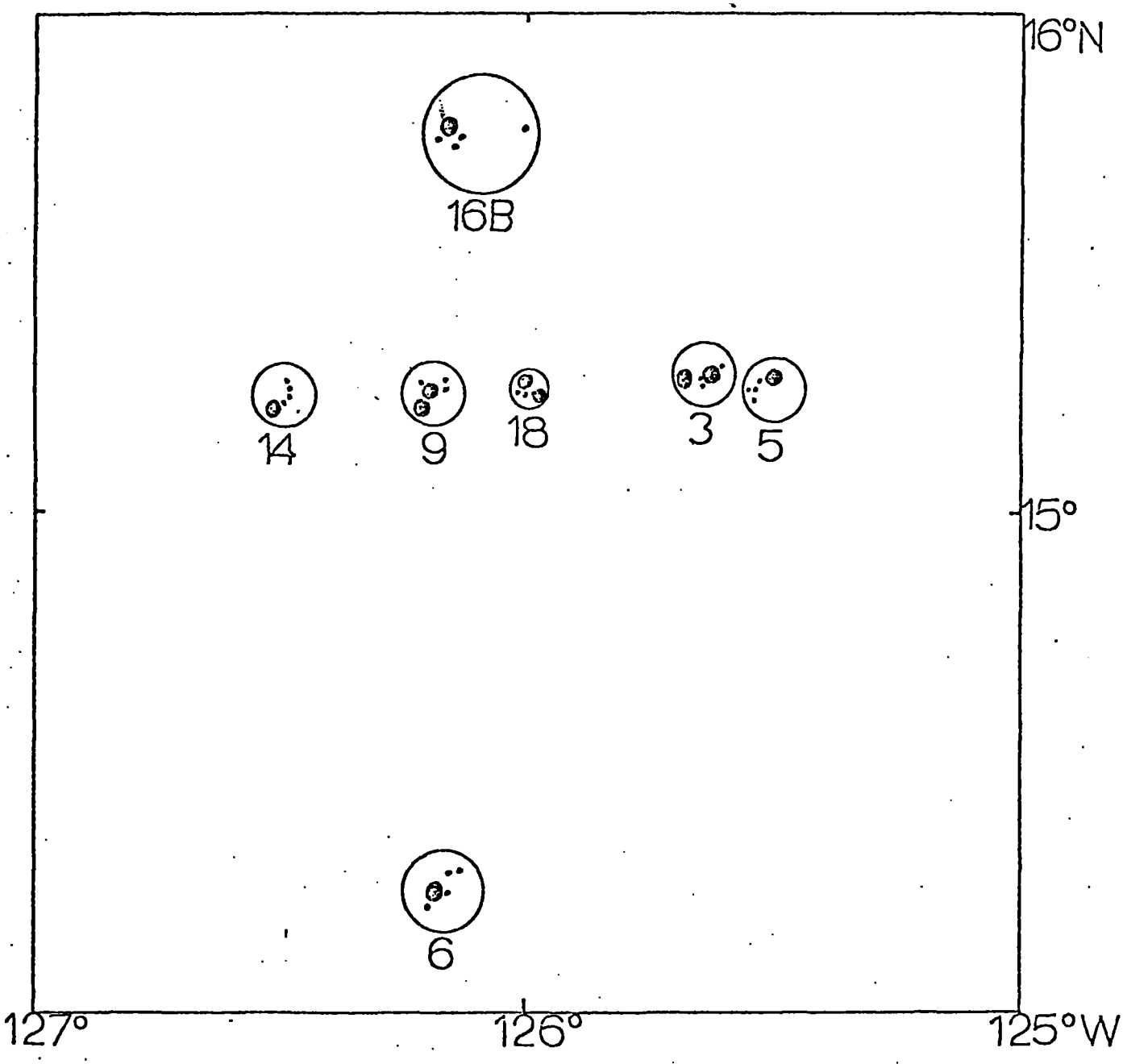
16°N
16B
14
9
18
3
5
15°
6
127°
126°
125°W

Figure 1. Site C benthic stations (RP-6-OC-75)
Key: solid circles indicate the location of each individual replicate box core; the large circles are those that have been analyzed to date and are reported herein. The numbers are ship's station numbers.

DEPTH IN CORE	WET DENSITY	DRY DENSITY	MOISTURE CONTENT	POROSITY	VOID RATIO
MW 2-17 (cont'd)					
10	1.21	2.76	297.38	0.89	8.31
15	1.23	3.00	274.29	0.89	8.34
20	1.23	3.15	285.53	0.90	9.12
25	1.21	2.59	268.16	0.87	7.05
30	1.23	2.57	239.13	0.86	6.22
31	1.22	2.48	256.41	0.86	6.45
34	1.24	2.85	254.31	0.88	7.34
40	1.24	2.48	227.09	0.85	5.70
45	1.23	3.08	276.96	0.89	8.64
50	1.22	3.12	300.92	0.90	9.52

DEPTH IN CORE	WET DENSITY	DRY DENSITY	MOISTURE CONTENT	POROSITY	VOID RATIO
MW 2-14 (cont'd)					
20	1.23	2.96	269.16	0.88	8.07
25	1.24	3.10	272.91	0.89	8.57
35	1.23	2.70	252.29	0.87	6.89
40	1.24	2.75	241.64	0.87	6.73
45	1.24	2.90	261.18	0.88	7.68
50	1.25	3.63	280.78	0.91	10.32
55	1.22	2.57	256.36	0.86	6.68
MW 2-15					
4	1.22	2.48	249.77	0.86	6.27
10	1.25	2.75	228.67	0.87	6.36
15	1.22	2.62	263.11	0.87	6.99
20	1.23	2.53	235.22	0.85	6.03
25	1.23	2.75	261.34	0.87	7.27
30	1.22	2.38	241.35	0.85	5.82
35	1.26	2.93	239.09	0.87	7.10
40	1.22	2.75	273.13	0.88	7.61
45	1.22	2.56	256.16	0.86	6.63
50	1.24	3.12	268.38	0.89	8.47
55	1.24	2.89	258.85	0.88	7.59
MW 2-17					
0	1.23	2.82	267.40	0.88	7.64
0	1.19	2.63	311.40	0.89	8.30
2	1.19	2.47	299.96	0.88	7.49
5	1.20	2.44	273.64	0.87	6.76

DEPTH IN CORE	WET DENSITY	DRY DENSITY	MOISTURE CONTENT	POROSITY	VOID RATIO
MW 2- 9 (cont'd)					
4	1.21	3.10	317.45	0.90	9.97
7	1.20	2.78	303.62	0.89	8.54
10	1.22	2.88	284.28	0.89	8.30
15	1.22	2.86	282.82	0.89	8.20
20	1.18	2.26	292.48	0.87	6.70
25	1.21	2.46	259.23	0.86	6.47
30	1.22	2.77	269.05	0.88	7.56
35	1.23	3.04	275.37	0.89	8.49
40	1.22	2.72	278.65	0.88	7.69
45	1.22	2.43	238.23	0.85	5.87
50	1.24	3.08	273.22	0.89	8.53
55	1.21	2.93	294.87	0.89	8.75
MW 2-11					
5	1.20	3.31	339.91	0.91	11.41
10	1.25	2.74	237.67	0.86	6.59
25	1.22	2.80	272.06	0.88	7.71
35	1.21	2.55	274.58	0.87	7.09
50	1.21	2.73	287.89	0.88	7.97
55	1.21	2.74	283.80	0.88	7.87
MW 2-14					
0	1.18	2.32	292.28	0.87	6.89
0	1.21	2.73	293.75	0.89	8.11
4	1.22	2.69	271.64	0.88	7.40
10	1.25	2.73	232.66	0.86	6.44
15	1.26	3.16	250.23	0.88	8.00

DEPTH IN CORE	WET DENSITY	DRY DENSITY	MOISTURE CONTENT	POROSITY	VOID RATIO
MW 2- 3 (cont'd)					
30	1.23	3.16	291.42	0.90	9.33
40	1.23	2.90	263.23	0.88	7.73
45	1.20	2.51	286.61	0.87	7.28
50	1.21	2.54	274.10	0.87	7.04
55	1.22	2.97	288.59	0.89	8.67
MW 2- 5					
15	1.11	2.23	530.76	0.92	12.02
27	1.12	2.52	519.99	0.92	13.28
30	1.24	2.49	219.25	0.84	5.54
32	1.33	2.90	174.08	0.83	5.11
35	1.31	2.93	190.17	0.84	5.65
MW 2- 7					
0	1.16	2.28	333.76	0.88	7.72
0	1.16	2.49	381.41	0.90	9.61
5	1.21	2.78	291.94	0.89	8.23
15	1.20	2.75	313.56	0.89	8.74
20	1.21	2.92	310.89	0.90	9.21
25	1.21	2.65	288.81	0.88	7.76
35	1.19	2.77	320.09	0.89	8.98
45	1.21	2.77	297.75	0.89	8.36
50	1.18	2.60	336.39	0.89	8.86
MW 2- 9					
0	1.19	2.92	344.49	0.91	10.20
0	1.19	2.92	344.49	0.91	10.20
0	1.18	2.88	361.68	0.91	10.55

4.1.3.3 PHYSICAL PROPERTIES OF DEEP-SEA SEDIMENTS

DEPTH IN CORE	WET DENSITY	DRY DENSITY	MOISTURE CONTENT	POROSITY	VOID RATIO
MW 2- 1					
0	1.15	2.53	413.01	0.91	10.61
0	1.14	2.26	391.49	0.89	8.96
0	1.16	2.48	385.75	0.90	9.70
3	1.16	2.18	337.41	0.88	7.44
5	1.18	2.26	289.76	0.86	6.65
10	1.14	1.63	252.21	0.80	4.16
15	1.20	2.70	293.57	0.88	8.03
20	1.20	2.10	237.09	0.83	5.04
25	1.18	2.07	264.86	0.84	5.55
30	1.22	2.67	271.86	0.88	7.36
35	1.19	1.94	230.89	0.81	4.55
40	1.20	2.21	254.09	0.85	5.69
45	1.18	1.91	239.24	0.82	4.64
50	1.22	2.49	248.26	0.86	6.27
MW 2- 3					
0	1.17	2.17	291.00	0.86	6.39
0	1.19	2.70	327.30	0.89	8.96
5	1.21	2.76	293.99	0.89	8.23
10	1.19	2.41	294.83	0.87	7.20
15	1.22	3.07	291.45	0.90	9.08
20	1.23	2.96	279.38	0.89	8.38
25	1.21	2.47	262.99	0.86	6.58

MW-74-2

4.1.3.2 VANE SHEAR MEASUREMENTS ON BOX CORES

BOX CORE NUMBER	DEPTH IN CORE (In.)	VANE SHEAR (Oz. In.)
BC 1	Surface or 0"	2.5
	2	8.2
	4	15.6
	6	18.4
BC 3	Surface or 0"	10.3
	2	2.75
	4	19.8
	6	24.0
	12	43.0
	18	44.0
BC 5	Surface or 0"	3.0
	2	20.4
	4	32.3
	6	39.0
	9	41.0
	12	100.0
BC 7	Surface or 0"	14.7
	2	31.0
	4	28.0
	6	28.0
	12	33.0
	18	28.0
BC 9	Surface or 0"	12.0
	2	9.2
	4	17.3
	6	27.8
	12	36.0
BC 11	Surface or 0"	9.0
	2	7.0
	4	19.6
	6	27.9
	12	36.0
	18	36.0
BC 14	Surface or 0"	12.5
	2	12.4
	4	14.4
	6	21.3
	12	33.6
	18	56.2
BC 15	Surface or 0"	17.0
	2	10.3
	4	19.8
	6	22.1
	12	45.2
	18	46.0
BC 17	Surface or 0"	11.7
	2	11.1
	4	18.0
	6	19.9
	12	33.3

4.1.4.2 PHOTOGRAPHIC DATA

TAXA	BOX CORE NUMBER						TOTAL	SBT NUMBER				TOTAL
	2	4	6	12	14	17		1	2	4	5	
Xenophyophoria		*1,1					1,1			4,2		4,2
Foraminifera		17,4					17,4					
Porifera								2,2			2,1	4,3
Stephanoscyphus		1,1		2,1			3,1	30,1		13,1	10,1	53,1
Anthozoa								1,1		3,1		4,1
Nematoda	1,1	1,1	4,2				6,4	3,3			1,1	4,4
Bryozoa		1,1					1,1	1,1				1,1
Brachiopoda								2,1				2,1
Polychaeta		2,2		2,1			4,3					
Sipunculoidea								1,1				1,1
Crinoidea								1,1				1,1
Ophiuroidea										1,1		1,1
Aplacophora								1,1				1,1
Bivalvia								2,2		2,2		4,4
Ascidacea								1,1		1,1		2,2
Actinaria										2,1		2,1
Squid beaks		11	3	12	6	7	39	67		10	7	84
Shark teeth		10	5	8			23	161	81	485	177	904

*1,1 = one individual of one species.

MW-74-2

4.1.4.2.1 SUMMARY OF ORGANISMS IDENTIFIED IN BOTTOM PHOTOGRAPHS

198 Holothurians	2 Ascidians
30 Ophiuroids	2 Antipatharians
26 Actinarians	2 Rat-tail fish
17 Sponges	1 Polychaete worm
11 Asteroids	1 Bivalve
11 Shrimp	1 Ctenophore
8 Echinoids	1 Crab
5 Pennatulaceans	1 Crinoid
2 Unidentified organisms	

4.1.4.2.2 DETAILED LISTING OF ORGANISMS IDENTIFIED IN BOTTOM PHOTOGRAPHS

FRAME #	ORGANISM	FRAME #	ORGANISM
	Camera Run #1	E 2	Holothurian
A 3	Actinarian	E 6	Ophiuroid
A 6	*Fryella* sp.	E 7	Ophiuroid
A17	Ophiuroid	E17	Porifera
A26	Actinarian	E20	Ophiuroid
A29	*Peniagone* sp.	E23	Ophiuroid
A39	Ophiuroid	E28	Porifera
A41	Actinarian	E33	Ophiuroid
B17	Porifera	E39	Ophiuroid
B30	Porifera	F 3	Actinarian
B49	Actinarian	F16	Ophiuroid
C 1	Actinarian	F20	*Nematocarcinus* sp.
C 2	Ophiuroid	F40	Unknown
C23	*Peniagone* sp.	F41	Holothurian
D 4	Actinarian	F45	Holothurian
D 8	Holothurian	G 8	Actinarian
D24	Holothurian	G19	Actinarian
D35	Actinarian	G31	Holothurian
D36	Actinarian	G47	Ophiuroid
D41	*Fryella* sp.	G50	Porifera, Ophiuroid
D43	Ophiuroid	H31	*Peniagone* sp.
D45	2 *Peniagone* sp.	H40	Ophiuroid

FRAME #	ORGANISM
	Camera Run #2
A 6	Actinarian
A 7	Holothurian
A20	Peniagone sp.
A25	Peniagone sp.
A27	Actinarian
A30	Psychropotes sp.
D 9	Holothurian
D11	Peniagone sp.
D14	Peniagone sp.
D16	Peniagone sp.
D18	Polychaete Worm
D22	Peniagone sp.
D31	Peniagone sp.
D33	2 Peniagone sp.
D37	Nematocarcinus sp.
D46	Peniagone sp., Holothurian
D48	Peniagone sp.
E22	Peniagone sp.
E23	Peniagone sp.
E43	Asteroid
E44	Psychropotes sp.
E46	Peniagone sp.
E48	Peniagone sp.
F 4	Peniagone sp.
F 7	Peniagone sp.
F24	Nematocarcinus sp.
F26	Holothurian
F35	Holothurian
F38	Peniagone sp.
F40	Hyalonema sp.
F43	Peniagone sp.
F44	Peniagone sp.
F50	Peniagone sp.
G 9	Pennatulacea
G21	Psychropotes sp.
G30	Peniagone sp.
G31	2 Peniagone sp.
G34	3 Peniagone sp.
G36	2 Peniagone sp.
G42	Peniagone sp.
	Camera Run #3
A 3	Actinarian
A12	Pennatulacea
A16	Nematocarcinus sp.
A18	Peniagone sp.
A41	Peniagone sp.

FRAME #	ORGANISM
B 2	Holothurian
C 6	Pennatulacea
C16	*Peniagone* sp.
C18	*Peniagone* sp.
C20	Ophiuroid
C35	Antipatharian
C36	*Nematocarcinus* sp.
C40	*Peniagone* sp.
C41	*Peniagone* sp.
D32	*Peniagone* sp.
D42	*Peniagone* sp.
	Camera Run #4
A25	Porifera
A33	*Peniagone* sp.
A36	Porifera
A39	Porifera
A40	Rat-Tail Fish
B 1	Porifera
B14	Porifera
B19	*Peniagone* sp.
B20	2 *Peniagone* sp.
B22	*Peniagone* sp.
B32	*Peniagone* sp.
B34	*Peniagone* sp.
B35	*Peniagone* sp.
B41	Porifera
C12	Porifera
C39	Holothurian
C41	Holothurian
D 6	*Peniagone* sp.
D15	*Peniagone* sp.
D19	*Peniagone* sp.
D27	Porifera
D43	*Peniagone* sp.
E 1	*Peniagone* sp.
E 5	Actinarian
E10	Bivalve
E13	Actinarian
E14	Actinarian
E22	*Peniagone* sp.
E26	*Peniagone* sp.
E34	Echinoid
E38	Porifera
F 8	*Peniagone* sp.
F21	*Peniagone* sp.
F23	Ophiuroid
F26	Actinarian
G 7	*Peniagone* sp.
G19	Asteroid

FRAME #	ORGANISM
G42	Holothurian
G43	Peniagone sp.
H 2	Rat-Tail Fish
H10	Crinoid
H22	Holothurian
H37	Actinarian
I17	2 Peniagone sp.
I21	Peniagone sp.
I30	Peniagone sp.
I33	Holothurian
J10	Ophiuroid
J12	Peniagone sp.
J18	Holothurian
J22	Peniagone sp.
	Camera Run #5
B 4	Echinoid
C31	Peniagone sp.
C34	Peniagone sp.
C37	Holothurian
D12	Echinoid
D23	Holothurian
D33	Echinoid
D38	Peniagone sp.
D39	Culeolus sp.
E 1	Paelopatides sp.
E 9	Holothurian
E31	Peniagone sp.
F 4	Holothurian
F 5	Ophiuroid
F19	Holothurian
F20	Peniagone sp., Actinarian
F34	Peniagone sp., Umbellula sp.
F38	Ophiuroid
F40	Echinoid
G 5	Nematocarcinus sp., Holothurian
G 6	Nematocarcinus sp.
G11	Actinarian
G29	Psychropotes sp.
G35	Fryella sp., Holothurian
G41	Echinoid
G42	Holothurian
H 3	Peniagone sp.
H 7	Ophiuroid
H 9	Peniagone sp.

FRAME #	ORGANISM
H12	Psychropotes sp.
H19	Peniagone sp.
H22	Nematocarcinus sp.
H36	Peniagone sp.
H39	Peniagone sp.
I29	Ophiuroid
J 2	Holothurian
J24	2 Peniagone sp.
J38	Peniagone sp.
J44	Peniagone sp.
K26	Peniagone sp.
K37	Ophiuroid
K39	Nematocarcinus sp., Pennatulacea
L14	Echinoid
L23	Nematocarcinus sp.
L25	Peniagone sp.
L32	Nematocarcinus sp.
M 8	Peniagone sp.
M 9	Antipatharia
M44	Psychropotes sp.
N 3	Peniagone sp.
N 9	Peniagone sp.
N25	Peniagone sp.
N30	Peniagone sp.
N40	Porifera
O14	Peniagone sp.
O44	Ophiuroid
P 2	Psychropotes sp.
P14	Ophiuroid
P18	Echinoid
P21	Fryella sp.

Camera Run #6

FRAME #	ORGANISM
B22	Actinaria
B31	Peniagone sp.
B36	Peniagone sp.
B37	Peniagone sp., Porifera, Tunicate
B42	Peniagone sp.
C 2	Peniagone sp.
C 4	Decapod
C 7	Peniagone sp., Ophiuroid
C10	Ophiuroid
C11	Ophiuroid
C28	Holothurian
C31	Porifera
C35	Peniagone sp.

FRAME #	ORGANISM	FRAME #	ORGANISM
C40	Holothurian	G37	Holothurian
C44	2 *Peniagone* sp.	G42	2 *Peniagone* sp.
D 2	*Peniagone* sp.	H 3	*Peniagone* sp.
D 6	*Peniagone* sp.	H25	*Peniagone* sp.
D 9	Holothurian	H27	Holothurian
D11	*Psychropotes* sp.	H28	2 *Peniagone* sp.
D21	*Peniagone* sp.	H30	Porifera
D23	2 *Peniagone* sp.	H33	*Peniagone* sp.
D33	Holothurian	H34	2 *Peniagone* sp.
D44	Holothurian	H40	*Peniagone* sp. Asteroid
F 1	*Peniagone* sp.	I 7	*Peniagone* sp.
F 2	Holothurian	I14	Actinaria
F 4	2 *Peniagone* sp.	I16	*Peniagone* sp.
F13	*Peniagone* sp.	I19	Holothurian
F14	2 *Peniagone* sp.	I22	*Peniagone* sp.
F20	*Peniagone* sp.	I29	*Peniagone* sp.
F22	*Peniagone* sp.	I38	*Peniagone* sp.
F23	*Peniagone* sp.	J 2	Ophiuroid *Peniagone* sp.
F43	*Peniagone* sp.	J 3	Ophiuroid
F44	*Peniagone* sp.	J 8	Actinaria
G11	*Peniagone* sp.	J11	*Peniagone* sp.
G15	*Peniagone* sp.	J21	*Peniagone* sp.
G20	*Peniagone* sp.	J30	*Peniagone* sp.
G23	*Peniagone* sp.		

FRAME #	ORGANISM
K 1	Peniagone sp.
K 6	Peniagone sp.
K 9	Actinaria
K13	Peniagone sp.
K15	Peniagone sp.
K30	Peniagone sp.
K36	Peniagone sp.
K39	2 Peniagone sp.
K40	Peniagone sp.
K43	Peniagone sp.
M 6	Peniagone sp.
M21	Peniagone sp.
M29	Asteroid
M32	2 Asteroids
	Camera Run #8
B 7	Holothurian
C49	Actinarian
F37	Unknown
	Camera Run #9
15	Holothurian
103	Ophiuroid
230	Peniagone sp.

RUN #	# OF FRAMES IN RUN	VISIBLE AREA IN RUN (m^2)	# OF ORGANISMS IDENTIFIED	DENSITY ORGANISMS PER m^2
1	395	6,657	47	0.007
2	257	1,421	45	0.032
3	101	1,467	16	0.011
4	276	2,808	48	0.017
5	421	4,668	66	0.014
6	314	5,825	90	0.015
7	8	100	0	0.0
8	106	111	3	0.027
9	323	3,743	3	0.0008

4.1.4.2.3 DENSITIES OF LARGE EPIBENTHIC ORGANISMS IDENTIFIED AT EACH CAMERA STATION

RUN #	# OF FRAMES IN RUN	VISIBLE AREA IN RUN (m^2)	# OF ORGANISMS IDENTIFIED	DENSITY ORGANISMS PER m^2
1	395	6,657	47	0.007
2	257	1,421	45	0.032
3	101	1,467	16	0.011
4	276	2,808	48	0.017
5	421	4,668	66	0.014
6	314	5,825	90	0.015
7	8	100	0	0.0
8	106	111	3	0.027
9	323	3,743	3	0.0008

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                        ACCESSION NUMBER  7700583
              DATE RECEIVED 080877

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REFERENCE =                CRUISE =         DATES 051675-053075   DUC =  3
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FILE-ALIAS = C101 OCEAN STATION DATA (ELECTRONIC)
PROJECT    = 0080 DOMES                              MEDIUM = 15 PUNCH CARDS NODC
PLATFORM   = OC OCEANOGRAPHER                              TYPE =  SHIP
      STATIONS-IN =     0  STATIONS-OUT =     0  RECORD COUNT =      0
  TUS:  RES       SU        SP     H-PRO    PROCESS   DIP     MASTER   RETCOR
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EFERENCE =                 CRUISE =         DATES 042474-051174   DUC =  3
OUNTRY     = 31  UNITED STATES
 R2-HI UNIV. OF HAWAII (HONOLULU)
FILE-ALIAS = C100 OCEAN STATION DATA (NANSEN)
PROJECT    = 0080 DOMES                               MEDIUM = 15 PUNCH CARDS NODC
PLATFORM   = MW MOANA WAVE                                 TYPE =  SHIP
      STATIONS-IN =     0  STATIONS-OUT =     0  RECORD COUNT =      0
STATUS:  RES       SU        SP     H-PRO    PROCESS   DIP     MASTER   RETCOR
                          110382

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DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700583

1) File Type: C100/C101

2) Project Ident.: 0080 (DOMES)

3) ~~Track~~ Ref Nos.: (none)

I. Error Corrections as reported to Principal Investigator:

Error	Correction Completed (Check)

II. Additional error corrections:

Error	Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # 7700583

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORD
ORIGINATOR TAPE	9/19/83	[illegible]	MITCH2	1	80	80	
QUADI/SCAN TAPE	9/19/83	[illegible]	W03263	1	80	80	
ASSIGNED FOR PROCESS.							
DDF 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.: 7700583 ~~TRACK~~ Ref NO(s).:

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	MITCH2	NL	80	80	9-tr 1600BPI ASCII	
Duplicate	WD3263	SL	80	80	9-tr 1600BPI ASCII	*
Reformatted						
First User						
Final User						
* Label = DNOD*83WODC590-01						

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 7700583 C100 BL2626 0080 313F 31OC    1975/05/16 NULL          304718
 7700583 C100 BL2627 0080 31R2 32MW    1974/04/24 NULL          304719

(2 rows affected)
```

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
 ------- ---- ------ ---- ------ ------ ---------- ----------
 7700583 C100 BL2626 31OC 0      0      75/05/16   75/05/30
 7700583 C100 BL2627 32MW 0      0      74/04/24   74/05/11

(2 rows affected)
```