8700271

TO: E/OC12 - C. Noe

E/OC11 - P. Hadsell

FROM: E/OC13 - A. Picciolo

DATE: November 18, 1987

SUBJECT: Data Transfer

The following listed data sets have been transferred as indicated:

DATA ARCHIVE AND INVENTORIES BRANCH (E/OC11)

C/STD (F022/C022)

Acc: 8700271 Ref: TT8191[illegible]-4 and 319718-9721
704 stations 197,217 records

US Naval Postgraduate School NORTHWIND

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cc: Division Director

INVENTORY Record found
Record 2543 on screen
170171 DATA ENTRY INFORMATION SYSTEM SJH
(DATASET INVENTORY)

DATE OF ENTRY: 11/13/87

REFERENCE NUMBER: TT8191 ACCESSION NUMBER: 8700092
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY
MEDIA-IN: 01 - Digital Magnetic Tape DINDB CODE 09
EXCHANGE (FORMAT): E018 - STD/CTD (F022)
PROCESSING (FORMAT): F022 - CTD/STD

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 31B7
PLATFORM (COUNTRY AND PLATFORM CODES): 31NW
PLATFORM TYPE: 9 - Ship DINDB CODE 09

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID:
CRUISE START DATE: 09/05/85 CRUISE END DATE: 09/26/85 Press PgDn
PROJECT CODE: DATA USE CODE (DUC): 3 to continue
F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

INVENTORY

VOLUME - NUMBER OF STATIONS: 150 NUMBER OF RECORDS: 68,557

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

AVERAGE REC SIZE: 120 MBYTES: 8.226840

OCEAN AREA
CODE 1: MEANING:
CODE 2: MEANING:
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: / /

F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

ACCESSION NO. 8700092 FILETYPE CTD TRACK NO. ______ PROJECT IDENTIFICATION ______

F022 TT8191

C022 319718

NAVY PG SCH

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. TAPE	3/24/87	lk	A00429	1	74	2960	34,849
DUPLICATE TAPE	3/27/87	lk	* W12849	1	74	2960	34,849
REFORMATTED TAPE							
REFORMATTED DISK		RS	DNODC*PAQOUT.	1	74	224	68,557
FIRST MULCHEK	11/19/87	CB					
FINAL MULCHEK							
MPD75 OR F022	11/20/87	CB	F022. TT8191/F022	1	120		68030
DATA SET FINALIZED							

* DNODC*8700092-01

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR:

[illegible]

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

Deleted station 0095, duplicate of 0096.

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

MITCH

SHIP=31NW DISKFILE=PAQOUT TT8191

START	END	# STA	# RECS
850905 ✓	850926 ✓	150	68557 ✓

SHIP=31NW DISKFILE=PAQ2OUT TT8192 ✓

840822 ✓	840916 ✓	331	72467

SHIP=31NW DISKFILE=PAQ3OUT TT8193 ✓

811017 ✓	811115 ✓	156	43376

SHIP=31PS DISKFILE=PAQ4OUT TT8194 ✓

800229	800402 ✓	67*	12146*

SHIP=31PS DISKFILE=PAQ5OUT TT8194*

—	—	34*	671*

12146
671
12817

*-NOTE - PAQ5OUT MUST BE ADDED TO PAQ4OUT AFTER Deleting Duplicates & sorted MARY WILL HAVE TO SUPPLY CORRECT figures for Records & Stations for PAQ4OUT

Mary: These Naval Postgraduate School data may contain problems! I spoke with Professor Paquette and he said that the data in PAQ5OUT were duplicates (in some instances) of data in PAQ4OUT. Other data in PAQ5OUT should be sorted into the PAQ4OUT file. (You'll notice that PAQ5OUT is not in chronological order). After updating the PAQ4OUT, please inform Mitchell of new numbers i.e. stations + records.

I had one station that was submitted "bottoms-up" and sorted this on originator's file and it is OK to process now. However, if you should find more, please let me know & I'll go back to originator's file & do my thing! You have program to eliminate duplicate depths (pressures, in this case) that must be employed. The PAQ4OUT & PAQ5OUT contained data to hundredths and after rounding results show many duplicates. I don't know about the other output files. I also noticed that a large number of stations contain negative pressures. If you want modification to your software to handle this problem, I'll be happy to oblige. (I don't think that would be a major modification)

Bob

#0720/03-09-87

DEPARTMENT OF THE NAVY
NAVAL POSTGRADUATE SCHOOL
MONTEREY, CA 93943-5100

IN REPLY REFER TO:
NC4(68Pa)/jb
3 Mar 87

Chief, Data Acquisition and Management Branch
National Oceanographic Data Center
NOAA
Washington, DC 20235

Dear Sirs:

We are sending to you under separate cover four magnetic tape reels containing oceanographic data from Arctic regions. NDC801 contains data from the ice-covered Bering Sea in March 1980. NDC811, NDC841 and NDC851 contain data from the region of East Greenland between 74 degrees N and 81 degrees N in 1981, 1984 and 1985 respectively. Enclosed are descriptions of the data and formats (Enclosures 1 and 2) and samples of the data (Enclosures 3, 4 and 5). We should appreciate acknowledgement of receipt of the tapes when they arrive.

Please direct general correspondence regarding the tapes to Professor R.H. Bourke, Code 68Bf at the above address or by telephone to 408-646-3270/2552. For technical problems, my phone number is 646-3255/2552 on Monday-Wednesday mornings.

Sincerely,

Robert G. Paquette

ROBERT G. PAQUETTE
Emeritus Professor
Department of Oceanography

Enclosures
(1) 2 data descriptions
(2) 3 data samples

Copy to:
Prof. R.H. Bourke, w/encls.
Each tape package,
with appropriate enclosures

Acc# 8700092

NDC801 - A00432
NDC811 - A00431
NDC841 - A00430
Tape # NDC851 - A00429

Cliff Hadley | 673-5659 | 8612003N0857 | SUBMITTED 03/24/87 | 0530 |

...NOT TO BE USED AND INSTRUCTION TO BE RETURNED

COPY to 'W' tape, scan 'W' tape

PUT MEDIUM
PAPER CARD DISK **(TAPE)**
ISKETTE OTHER(SPECIFY)

OUTPUT MEDIUM
CARD DISK **(PRINT)** **(TAPE)** PLOT
DISKETTE OTHER(SPECIFY)

PE/DISKETTE INFORMATION

1 file

	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	F
	A00429		9	1600		NL	F	74	2960	1
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII **(EBCDIC)** BCD SDF. OTHER(SPECIFY)				DATA SET NAME			P D
UT	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# F
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PL DA
	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY TYPE	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# FI
	W12849		9	1600	ODD	SL	FB	74	2960	1
UT	SECTOR SIZE	EXCHANGE TYPE	CODE: **(ASCII)** EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME DNODC*8700092-01			PU DA

IAL INSTRUCTIONS

Please send 'W' tape to Asheville, N.C.

ESTIMATED EXECUTION TIME

USE ONLY

	DATE JOB COMPLETED	START TIME	END TIME	PRIORITY	DEVICES USED, NUMBER OF TAPE MOUNTS, LINES PRIN... DISKETTES USED, CARDS PUNCHED, CARDS KEYVERIFI...
1 0323	03/26/87	08:38	09:52	C	COMPLETED BY ANDY

TI

Cliff Hartley	673-3636	EG12005N3B59	DATE SUBMITTED 03/19/87	DATE DUE ASAP	BIN 09

IPMENT TO BE USED AND FUNCTION TO BE PERFORMED

Bin 09

Tape can

INPUT MEDIUM	OUTPUT MEDIUM
PAPER CARD DISK (TAPE) DISKETTE OTHER(SPECIFY)	CARD DISK (PRINT) TAPE PLOT DISKETTE OTHER(SPECIFY)

E/DISKETTE INFORMATION

	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# FI
	A00429		9	1600		NL		74	2960	1
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII (EBCDIC) BCD SDF. OTHER(SPECIFY)				DATA SET NAME			PUR DAT
UT	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# C FIL
	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PUR DAT
	TAPE #/ DISKETTE	SLOT #	TRK	DENSITY	PARITY TYPE	LABEL TYPE	RECORD TYPE	RECORD LENGTH	MAX. BLOCK SIZE	# O FIL
UT	SECTOR SIZE	EXCHANGE TYPE	CODE: ASCII EBCDIC BCD SDF OTHER(SPECIFY)				DATA SET NAME			PUR DAT

IAL INSTRUCTIONS

Please return tape A00429 to Bin 09

ESTIMATED EXECUTION TIME

USE ONLY

#	DATE JOB COMPLETED	START TIME	END TIME	PRIORITY	DEVICES USED, NUMBER OF TAPE MOUNTS, LINES PRINT DISKETTES USED, CARDS PUNCHED, CARDS KEYVERIFI
87087	03/20/87	09:11	09:29	C	COMPLETED BY ANDY

Ø72C/Ø3-Ø9-87

DESCRIPTION OF NAVAL POSTGRADUATE SCHOOL MIZPAC OCEAN DATA TAPES OF 1980

MEASUREMENTS

The cruise area was essentially a circumnavigation of St. Lawrence I. in March, extending from deep water north of Unimak Pass, through the ice and returning to deep, ice-free water again several hundred kilometers to the west.

The data were taken with two instruments. The Neil Brown Instrument Systems (NBIS) CTD was used exclusively from the icebreaker POLAR SEA. Its data are in the first file in records 60 bytes long, blocked to a length of 2880 bytes. About one-fourth of the stations were taken from a hovering helicopter with the Applied Physics Laboratory, University of Washington (APL) CTD.* In a few cases the latter instrument was used simultaneously with the NBIS instrument from the ship for intercomparison. These data are in the second file.

The NBIS CTD was continually standardized by means of Nansen bottles tripped 6 m above the CTD at the bottom of its travel. Salinities from the bottles were run on a deck salinometer of the current-transformer type. Twenty-one comparisons showed the NBIS CTD to have an average temperature error of -0.0088degree.C with a standard deviation of 0.014degree.C. The salinity error was 0.0029 o/oo with a standard deviation of 0.018 o/oo. In view of the relatively large standard deviations and the fact that the instrument recently had been calibrated by the manufacturer, these corrections were not applied.

The APL CTD could not be standardized in the same way. It was calibrated before the cruise at the Northwest Regional Calibration Center and it was compared with the NBIS CTD 9 times by simultaneous lowerings made from different points on the ship. Only the near-bottom data were used for intercomparison as the near-surface data likely were contaminated by heat and effluent from the ship. These comparisons showed the APL CTD to read lower than the NBIS CTD by 0.008degree.C in temperature and higher by 0.012 o/oo in salinity. Salinity and temperature are reciprocally related

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* Becker,P.,Light Aircraft Deployable CTD System, Proc. Third S/T/D Conference and Workshop, Plessey Environmental Systems, San Diego, 1975.

Encl. 1

and the above result suggests that about 2/3 of the salinity error was due to the temperature error and only 1/3 to conductivity. The standard deviation of the differences was 0.011degree in temperature and 0.021 o/oo in salinity. For this reason again the corrections were not applied. In both CTD's, pressure corrections based on the zero-pressure observation were applied.

Most of the stations on the tape represent upward traverses of the CTD because the downward traverses sere found to have small temperature anomalies seemingly associated with stored warmth in the instrument body and occasionally to ice forming in the conductivity cell. Where two stations from the same instrument at the same time are presented, the first is a downward traverse and the second an upward traverse. Station 34, which was recovered from the source tape after all the others, is from the upward traverse and has not been reinverted.

The data were screened by computer for gross errors of any length and for moderate single-point spikes. Multiple-point anomalies, if not too large, were regarded as having a substantial likelihood of being real. Non-essential data,recorded when the CTD was stopped at the top or bottom of its travel were removed. Reversals in CTD direction of motion were removed by interpolating nearly constant values of pressure, temperature and conductivity between the last forward-going point and the next forward-going point. Because of the small temperature gradients, sensor response corrections were not required. No smoothing was applied.

After this editing, stations in which the water column was traversed from the bottom up were inverted. Salinity then was calculated, using the equations then in use at the Northwest Regional Calibration Center. Sound velocity was computed from Wilson's equation, and sigma-t from Knudsen's equations. Oxygen concentration and the oxygen membrane temperature are listed in the NBIS data but they are completely unreliable. Each record has a serial number, generated when the data were edited.

The data formats are attached.

DATA FORMATS

General

The data for other agencies are written in EBCDIC on 9-track unlabeled tapes at 1600 bpi in two files. The first

file, with NBIS data, has a 60-byte record length; the second, with the APL data, has a 48-byte record length. Both are blocked to 2880 bytes per block. Each station data set is headed by two header records, carrying station number, data record count and other ancillary observations made at the station. The coding is as follows. References to tables refer to NODC Publication M-2, August 1964.

Header Coding, First Record.

Columns	Explanation
1 - 2	Nation code per NODC Institute and Ship Codes, 1979.
3 - 4	Ship code from the same reference.
5 - 6	Latitude in degrees, always north.
7 - 8	Latitude, minutes.
9	Latitude, tenths of minutes.
10 - 12	Longitude, degrees, always west.
13 - 14	Longitude, minutes.
15	Longitude, tenths of minutes.
16 - 18	Marsden square.
19 - 20	Last two digits of year.
21 - 22	Month, numerical.
23 - 24	Day of the month, numerical.
25 - 26	Hour, GMT.
27	Tenths of the hour.
28 - 31	Cruise number, alphanumeric, lacking in 1980.
31 - 33	Station number, numeric.
34 - 37	Depth of water, meters.
38 - 39	Sampling depth in hundreds of meters.
40	An asterisk.

Second Header Record.

Columns	Explanation
1 - 4	Number of data records, not counting header.
5	Navigation code: 1=NAVSAT, Radar or piloting; 2=LORAN or OMEGA; 3=Dead reckoning (probably from a fairly close, better position).
6 - 7	Ice concentration in tenths. Negative number is exponent of 10 for very low concentrations.
8 - 9	Direction from which predominant wave/swell comes, in tens of degrees, true.
10	Wave height, Table 10.
11	Wave period, always blank in this cruise.
12 - 13	Direction from which wind comes, in tens of degrees, true.
14	Wind speed, Beaufort, from Table 17.
15 - 17	Barometric pressure in millibars, lacking. the first digit, if 1000 mb or greater.
18 - 20	Dry-bulb air temperature, with sign, in degrees C.
21	Dry-bulb temperature, tenths of degrees.
22 - 24	Wet-bulb air temperature, with sign, in degrees C.
25	Wet-bulb temperature, tenths of degrees.
26	Blank.
27	Present weather, from Table 21.
28	Cloud type, from Table 25.
29	Cloud amount, from Table 26.
30	Visibility, from Table 27.
31 - 32	A tag on the station number used for multiple lowerings at or near the same location (numerical) or designating a helicopter station (H) or a simultaneous observation by the APL CTD (W). The latter two usages are not always applied.
33 - 36	A check value of the station number.
37 - 42	Record serial number.

Data Coding

Columns	Explanation
1 - 6	Pressure in decibars and two decimals, form xxx.xx
7 - 12	Temperature, degrees C, form xx.xxx
13 - 18	Salinity, o/oo, form xx.xxx
19 - 25	Sound velocity, m/s, form xxxx.xx
26 - 32	Sigma-t, kg/m^3, form xx.xxxx
33 - 40	Serial number of record, form xxxxxxxx
42 - 48	Electrical conductivity ratio of UNESCO 1966, form 0.xxxxxx
49 - 60	Not present in APL data; useless in NBIS data.

Ø72C/Ø3-Ø9-87

DESCRIPTION OF NAVAL POSTGRADUATE SCHOOL MIZPAC/MIZLANT OCEAN DATA TAPES OF 1981 - 1985

MEASUREMENTS

These data generally are from the region of the East Greenland Polar Front and over the continental shelf of East Greenland between about 74degree.N and 82degree.N. The 1981 data were in the October-November time frame; the others are in the August-September time frame.

The data were taken with a Neil Brown Instrument Systems Mark III CTD. The instrument was standardized with a combination of:

a) Nansen bottles tripped just above the CTD at the bottom of its travel.
b) Laboratory calibrations before and after the cruise.
c) Comparisons of salinities at depths greater than 1000 m at two points close in space but 20-30 days distant in time.

None of these standardization systems was precise enough to challenge the apparent inherent accuracy of the CTD and no corrections were applied to conductivity or temperature. However, pressure received an additive correction based on the zero-pressure observation.

The data were screened by computer for gross errors of any length and for moderate single-point spikes. Multiple-point anomalies, if not too large, were regarded as having a substantial likelihood of being real. Non-essential data recorded when the CTD was stopped at the top or bottom of its travel were removed. Reversals in CTD direction of motion were removed by interpolating nearly constant values of pressure, temperature and conductivity between the last forward-going point and the next deeper forward-going point. Despiking is not satisfactory in such places; fortunately, there are few in these data.

The electrical conductivity was then de-spiked by correcting both the apparent temperature and apparent conductivity for sensor lag, using a first-order response equation. After this the conductivity and computed salinity were smoothed by a 5-point centered running mean. The temperature was not so smoothed.

After despiking, stations in which the water column was traversed from the bottom up were inverted. There are very few, if any, such stations in the data prepared for

Encl. 2

distribution.

Sound velocity, sigma-t, delta and dynamic depth were then derived. In 1985 theta and sigma-theta were added. For these calculations the equations of Fofonoff and Millard (Algorithms for Oceanographic Computation, WHOI Preprint, 1983) were used. Each record has a serial number, generated when the data were edited and despiked. Data prepared for other agencies will not have these numbers in sequence because the data have been rearranged and the upward traverses removed without altering the original serial numbers.

The data formats are attached.

DATA FORMATS

General

The data for other agencies are written in 74-byte records in EBCDIC, on 9-track unlabeled tapes at 1600 bpi in one file. They are blocked 2960 bytes to a block, or 40 records. Each station data set is headed by a header carrying station number, data record count and other ancillary observations made at the station. The coding is as follows. References to tables refer to NODC Publication M-2, August 1964.

Header Coding.

Columns	Explanation
1 - 2	Nation code per NODC Institute and Ship Codes, 1979.
3 - 4	Ship code from the same reference.
5	Hemisphere, always "N" here.
6 - 7	Latitude in degrees.
8 - 9	Latitude, minutes.
10	Latitude, tenths of minutes.
11	Hemisphere, "E" or"W".
12 - 14	Longitude, degrees.
15 - 16	Longitude, minutes.
17	Longitude, tenths of minutes.
18 - 20	Marsden square.
21 - 22	Last two digits of year.
23 - 24	Month, numerical.
25 - 26	Day of the month, numerical.
27 - 28	Hour, GMT.
29	Tenths of the hour.
30 - 34	Cruise number, alphanumeric.

35 - 37 Station number, numeric.
38 - 39 Tag for station number, used for multiple samplings near the same location.
40 Direction of instrument motion, D: down, U: up.

Columns	Explanation
41 - 44	Depth of water, meters.
45 - 46	Sampling depth in hundreds of meters, usually blank.
47 - 50	Number of data records, not counting header.
51	Navigation code: 1=NAVSAT, Radar or piloting; 2=LORAN or OMEGA; 3=Dead reckoning (probably from a fairly close, better position).
52 - 53	Ice concentration in tenths. Negative number is exponent of 10 for very low concentrations.
54 - 55	Direction from which predominant wave/swell comes, in tens of degrees, true.
56	Wave height, Table 10.
57 - 58	Direction from which wind comes, in tens of degrees, true.
59	Wind speed, Beaufort, from Table 17.
60 - 62	Barometric pressure in millibars, lacking. the first digit, if 1000 mb or greater.
63 - 65	Dry-bulb air temperature, with sign, in degrees C.
66	Dry-bulb temperature, tenths of degrees.
67 - 69	Wet-bulb air temperature, with sign, in degrees C.
70	Wet-bulb temperature, tenths of degrees.
71	Present weather, from Table 21.
72	Cloud type, from Table 25.
73	Cloud amount, from Table 26.
74	Visibility, from Table 27.

Data Coding

Columns	Explanation
1 - 6	Pressure in decibars and tenths, form xxxx.x
7 - 12	Temperature, degrees C, form xx.xxx
13 - 18	Salinity, o/oo, form xx.xxx
19 - 25	Sound velocity, m/s, form xxxx.xx
26 - 32	Sigma-t, kg/m^3, form xx.xxxx
33 - 40	Serial number of record, form xxxxxxxx
41 - 48	Electrical conductivity in millimhos/cm, form xx.xxxxx
49 - 54	Theta in degrees C., form xx.xxx *
55 - 60	Sigma-theta, kg/m^3, form xx.xxx *
61 - 68	Anomaly of the specific volume, delta, in units of 10^{-8} kg/m^3, form xxxx.xxx
69 - 74	Dynamic depth, dynamic meters, form xx.xxx

* Columns 49-60 are blank or meaningless in 1981-1984. They provided for an oxygen measurement never successfully accomplished.

Ø72C/Ø3-Ø9-87

FILE: PAQTDMP4 OUTPUT A

```
1//PAQTDMP4 JOB (2752,0811),CLASS=E
 //  EXEC FORTVCLG
 //FORT.SYSIN DD *
 /*
 //GO.FT02F001 DD UNIT=3400-6,VOL=SER=NDC851,DISP=OLD,LABEL=(1,NL,,IN),
 //   DCB=(DEN=3,RECFM=FB,LRECL=74,BLKSIZE=2960)
 //GO.SYSIN DD *
 /*
 //
```

28 JAN 87. DUMP 50 RECORDS OF NDC851. Similar to NDC811, NDC841

```
31NWN76242R0023962538509052 27AE3 5 004   D 3676  17341 00140016159 016 0001676
   8.8  4.06334.5111466.4527.3907          3 32.20200 4.06227.391  67.831 0.006
   8.9  4.06434.5111466.4627.3904          4 32.20267 4.06427.390  67.863 0.006
   9.2  4.06434.5101466.4627.3898          5 32.20279 4.06327.390  67.916 0.006
   9.6  4.06434.5101466.4627.3899          6 32.20406 4.06327.390  67.912 0.007
   9.9  4.06734.5101466.4827.3894          7 32.20505 4.06627.389  67.970 0.007
  10.4  4.06934.5101466.5027.3891          8 32.20627 4.06827.389  68.000 0.007
  10.9  4.07134.5101466.5127.3890          9 32.20767 4.07027.389  68.013 0.007
  11.5  4.07034.5111466.5227.3896         10 32.20908 4.06927.390  67.963 0.008
  12.0  4.07034.5101466.5327.3895         11 32.20941 4.06927.390  67.980 0.008
  12.6  4.07034.5111466.5427.3897         12 32.20981 4.06927.390  67.959 0.009
  13.0  4.07034.5101466.5527.3895         13 32.20978 4.06927.390  67.981 0.009
  13.3  4.07034.5101466.5527.3895         14 32.20914 4.06927.390  67.990 0.009
  13.4  4.07034.5101466.5527.3893         15 32.20854 4.06927.389  68.005 0.009
  13.5  4.06634.5101466.5427.3896         16 32.20793 4.06527.390  67.976 0.009
  13.5  4.06734.5101466.5427.3895         17 32.20734 4.06627.390  67.996 0.009
  13.6  4.06734.5101466.5427.3896         18 32.20695 4.06627.390  67.985 0.009
  13.6  4.06734.5101466.5427.3894         19 32.20699 4.06627.390  68.000 0.009
  13.7  4.06734.5101466.5427.3892         20 32.20656 4.06627.389  68.021 0.009
  13.7  4.06734.5091466.5427.3889         21 32.20615 4.06627.389  68.049 0.009
  14.0  4.06634.5091466.5427.3886         22 32.20639 4.06527.389  68.075 0.010
  14.5  4.06634.5091466.5527.3885         23 32.20659 4.06527.389  68.094 0.010
  15.0  4.07034.5081466.5827.3879         24 32.20680 4.06927.388  68.155 0.010
  15.7  4.06834.5091466.5827.3885         25 32.20764 4.06727.389  68.101 0.011
  16.1  4.06834.5091466.5927.3889         26 32.20865 4.06727.389  68.074 0.011
  16.6  4.06734.5101466.5927.3897         27 32.20923 4.06627.390  68.000 0.011
  17.0  4.06834.5101466.6027.3897         28 32.20982 4.06727.390  68.006 0.012
  17.1  4.06834.5111466.6127.3900         29 32.21049 4.06727.390  67.976 0.012
  17.1  4.06934.5111466.6127.3897         30 32.21101 4.06827.390  68.000 0.012
  17.1  4.07034.5111466.6127.3897         31 32.21140 4.06827.390  68.002 0.012
  17.2  4.07034.5101466.6127.3894         32 32.21164 4.06927.390  68.030 0.012
  17.2  4.07034.5101466.6227.3894         33 32.21198 4.06927.390  68.036 0.012
  17.2  4.07134.5101466.6227.3893         34 32.21230 4.07027.389  68.047 0.012
  17.3  4.07134.5101466.6227.3892         35 32.21262 4.07027.389  68.057 0.012
  17.3  4.07234.5101466.6227.3891         36 32.21294 4.07027.389  68.068 0.012
  17.3  4.07234.5101466.6227.3889         37 32.21326 4.07127.389  68.078 0.012
  17.4  4.07234.5101466.6327.3889         38 32.21358 4.07127.389  68.088 0.012
  17.4  4.07334.5101466.6327.3887         39 32.21390 4.07227.389  68.098 0.012
  17.4  4.07334.5101466.6327.3887         40 32.21425 4.07227.389  68.105 0.012
  17.5  4.07434.5091466.6327.3883         41 32.21324 4.07327.389  68.145 0.012
  17.5  4.07434.5101466.6427.3884         42 32.21205 4.07327.388  68.136 0.012
  18.0  4.06934.5101466.6227.3889         43 32.21187 4.06727.389  68.085 0.012
  18.6  4.06534.5111466.6227.3902         44 32.21135 4.06327.390  67.974 0.013
  19.2  4.07134.5111466.6527.3896         45 32.21095 4.07027.390  68.039 0.013
  19.9  4.06534.5111466.6427.3905         46 32.21205 4.06327.391  67.953 0.014
  20.5  4.07034.5111466.6727.3902         47 32.21347 4.06927.390  67.986 0.014
  21.0  4.07234.5121466.6927.3903         48 32.21402 4.07027.390  67.982 0.014
  21.5  4.07034.5111466.6827.3900         49 32.21483 4.06827.390  68.014 0.015
  22.0  4.07134.5121466.7027.3903         50 32.21585 4.07027.390  67.996 0.015
  22.2  4.07134.5121466.7027.3907         51 32.21663 4.06927.391  67.961 0.015
```

Encl. 5

8700271

NOAA FORM 24-5 (8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TRANSMITTAL AND RECEIPT RECORD

(Please sign and return carbon copy acknowledging receipt)

TO:	REFER TO
National Oceanographic Data Center 1825 Connecticut Ave., NW Washington, D.C. 20235	ATTENTION Dr. Tony Picciolo

THE ITEM(S) LISTED BELOW WERE FORWARDED TO YOU BY

☒ ORDINARY MAIL ☐ REGISTERED MAIL ☐ AIR MAIL ☐ CERTIFIED MAIL ☐ GOVERNMENT TRUCK ☐ BY HAND ☐ OTHER _____

The following CTD data sets have been forwarded to the NODC "VAX" via SPAN network:

*	Oceanus 149	March 17-19, 1984	18 stations
	Oceanus 159	November 15-20, 1984	41 stations

These data were received from Dr. Brad Butman, USGS Woods Hole, and are part of the MMS funded activities on the New England Shelf and Slope Program. These data have been formated to a modified version of the WHOI/NODC CTD exchange format. The record size has been expanded by 5 bytes to accommodate the paramenter of light transmission. Two additional files of documentation were transmitted with the data.

cc: P. Shoulimas

8700271

FORWARDED BY (Signature)	TITLE	DATE FORWARDED
George Heimerdinger	NODC Northeast Service Center Rep.	Aug. 10, 87
RECEIVED BY (Signature)	**TITLE**	**DATE RECEIVED**
F. Mitchell		8-11-87

NOAA FORM 24-5 (8-73)

TO: E/OC12 - C. Noe

E/OC11 - P. Hadsell

FROM: E/OC13 - A. Picciolo

DATE: November 13, 1987

SUBJECT: Data Transfer

The following listed data sets have been transferred as indicated:

DATA ARCHIVE AND INVENTORIES BRANCH (E/OC11)

C/STD (F022/C022)

Acc: 8700271 Ref: TT9891-2 and 329530-1 59 stations 1,824 records

USGS -Woods Hole MMS/New England Cont. Slope/Rise OCEANUS

[Data received from Geo. H.; VAX to Vax]

---

cc: Division Director

ACCESSION NO. 8700271 FILETYPE F022/C022 TRACK NO. TT9891 (REF 329530) PROJECT IDENTIFICATION MMS/0181 NEW ENGLAND SHELF & SLOPE

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. ~~TAPE~~ DISK	8-11-87	FJM	VAX [MITCHELL] OC149.DAT	1	40	4000	
DUPLICATE ~~TAPE~~ DISK	8-15-87	↓	DAMUS DNODC* OC149.OUT; 1	↓	40	4000	
REFORMATTED TAPE							
REFORMATTED DISK							
FIRST MULCHEK							
FINAL MULCHEK							
MPD75 OR F022							
DATA SET FINALIZED							

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR:

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

INVENTORY Record found
Record 4131 on screen
168115 DATA ENTRY INFORMATION SYSTEM FJM
(DATASET INVENTORY)

DATE OF ENTRY: 08/21/87

REFERENCE NUMBER: TT9891 ACCESSION NUMBER: 8700271
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY
MEDIA-IN: 13 - Telecommunications DINDB CODE 24
EXCHANGE (FORMAT): E071 - WHOI CTD Exchange
PROCESSING (FORMAT): F022 - CTD/STD

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 31W4
PLATFORM (COUNTRY AND PLATFORM CODES): 320C
PLATFORM TYPE: 9 - Ship DINDB CODE 09

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID: 149
CRUISE START DATE: 03/17/84 CRUISE END DATE: 03/19/84 Press PgDn
PROJECT CODE: 0181 DATA USE CODE (DUC): 3 to continue
F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

INVENTORY

VOLUME - NUMBER OF STATIONS: 18 NUMBER OF RECORDS: 0

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

AVERAGE REC SIZE: 120 MBYTES: 0.000000

OCEAN AREA
CODE 1: 23B MEANING: NW Atlantic (limit-40 W)
CODE 2: MEANING:
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: / /

F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

ORIG. VAX = [MITCHELL]OC149.DAT
COPY DISK DNODC*OC149.

8700271

TYPE OC149.DOC
OC149.DOC;1
DOCUMENTATION R/V OCEANUS 149 CTD DATA

SOURCE: DR. BRAD BUTMAN, U.S. GEOLOGICAL SURVEY
WOODS HOLE, MA.
FUNDING: MINERALS MANAGEMENT SERVICE
DEPT. OF INTERIOR
FORMAT: MODIFIED WHOI/NODC CTD EXCHANGE FORMAT. FORMAT
EXPANDED BY 5 BYTES TO ACCOMMODATE THE PARAMETER
OF MMISSION EXPRESSED AS BEAM ATTENUATION
COEFFICIENT
RECORDSIZE=40, BLOCKSIZE=4000

PARAMETERS REPORTED	UNITS
PRESSURE	DECIBARS
TEMPERATURE	C
SALINITY	PRACTICAL SALINITY UNITS
LIGHT TS.	EXPRESSED AS BEAM ATTENUATION COEFFICIENT

SHIP: R/V OCEANUS CR. 149, MAR. 17-19, 1984
COUNT: 18 STATIONS THIS DATA SET/FILES
FILES: THIS DATA SET CONSISTS OF 18 FILES, THE FILE
NAMES ARE AS FOLLOWS OC149.DAT,1 THRU OC149.DAT,18

SAM DUMP OF FIRST FILE

```
 SHIP OC CRUIS 149 STAT: 007 C#:
 DATE 84-03-17  TIME: 2050 Z
 LAT  39 54.1  LG  -68 28.8
 MAX. PRS=  506. DB  DEPTH=  2530 M
 AVER   2.0 INST 0038 RATE  31.25HZ
 OB(F7.1,2F8.4,F6.2,I6,F5.2)
  PRES    TEMP    SALT   OXYG  QUAL EXTC
    4.0 12.3810 35.0198              0 0.19
    6.0 12.3795 35.0342              0 0.19
    8.0 12.3798 35.0406              0 0.18
   10.0 12.3619 35      0 0.18
   12.0 12.3687 35.0470              0 0.18
   14.0 12.3729 35.0482              0 0.18
   16.0 12.3208 35.0477    0.17
   18.0 12.2380 35.0502          0 0.14
```

ACCESSION NO. 8700271 FILETYPE F022/C022 TRACK NO. REF 329531 (TT9892) PROJECT IDENTIFICATION MMS/Ø181 NEW ENGLAND SHELF & SLOPE

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. TAPE DISK	8-11-87	FJM	VAX [MITCHELL] OC149.	DAT 1	40	4000	
DUPLICATE TAPE DISK	8-15-87	↓	DAMUS DNODC* OC149.	↓	40	4000	
REFORMATTED TAPE							
REFORMATTED DISK							
FIRST MULCHEK							
FINAL MULCHEK							
MPD75 OR F022							
DATA SET FINALIZED							

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR:

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

INVENTORY Record found
Record 4134 on screen
168118 DATA ENTRY INFORMATION SYSTEM FJM
(DATASET INVENTORY)

DATE OF ENTRY: 08/21/87

REFERENCE NUMBER: 329531 ACCESSION NUMBER: 8700271
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY
MEDIA-IN: 13 - Telecommunications DINDB CODE 24
EXCHANGE (FORMAT): E001 - Low Resolution STD
PROCESSING (FORMAT): C022 - Low Resolution STD (SD2 Format)

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 31W4
PLATFORM (COUNTRY AND PLATFORM CODES): 320C
PLATFORM TYPE: 3 - Ship DINDB CODE 03

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID: TT9892
CRUISE START DATE: 11/15/84 CRUISE END DATE: 11/20/84 Press PgDn
PROJECT CODE: 0181 DATA USE CODE (DUC): 3 to continue
F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

INVENTORY

VOLUME - NUMBER OF STATIONS: 41 NUMBER OF RECORDS: 0

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

AVERAGE REC SIZE: 112 MBYTES: 0.000000

OCEAN AREA
CODE 1: 23B MEANING: NW Atlantic (limit-40 W)
CODE 2: MEANING:
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: / /

F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

8700271

```
$ TYPE OC159.DOC
OC159.DOC
DOCUMENTATION  R/V OCEANUS 159  CTD DATA

SOURCE:  DR. BRAD BUTMAN, U.S. GEOLOGICAL SURVEY
         WOODS HOLE, MA.
FUNDING: MINERALS MANAGEMENT SERVICE
     DEPT. OF INTERIOR
FORMAT:  MODIFIED WHOI/NODC CTD EXCHANGE FORMAT.  FORMAT
         EXPANDED BY 5 BYTES TO ACCOMMODATE THE PARAMETER
         OF LIGHT TRANSMISSION EXPRESSED AS BEAM ATTENUATION
         COEFFICIENT
         RECORDSIZE=40, BLOCKSIZE=4000

         PARAMETERS REPORTED       UNITS
            PRESSURE               DECIBARS
            TEMPERATURE            DEG. C
            SALINITY                PRACTICAL SALINITY UTS
            LIGHT TRANS.           EXPRESSED AS BEAM ATTENUATION
                                   COEFFICIENT

SHIP:    R/V OCEANUS CR. 159, NOV15-20, 1984
COUNT:   41 STATIONS THIS DATA SET/FILES
FILES:   ET CONSISTS OF 41 FILES, THE FILE
         NAMES ARE AS FOLLOWS OC159.DAT,1 THRU OC159.DAT,41

SAMPLE DUMP OF FIRST FILE

 SHIP OC CRUIS 159 STAT: 001 C#:
 DATE 84-11-16  TIME: 0209 Z
 LAT  39 53.8  LG  -70 03.7
 MAX. PRS=  548. DB  DEPTH=  0550 M
 AVER   2.0 INST 0038 RATE  31.25HZ
 OBS= 273 FMT(F7.1,2F8.4,F6.2,I6,F5.2)
  PRES  TEMP    SALT   OXYG  QUAL EXTC
  4.0 15.3110 33.9679            0 0.16
    6.0 15.3093 33.9779            0 0.16
    8.0 15.3097 33.9828            0 0.16
   10.0 15.3108 33.9882            0 0.16
   12.0 15.3127 33.9911            0 0.16
   14.0 15.3165 33.9915            0 0.16
   16.0 15.3148 33.9943            0 0.16
   18.0 15.3159 33.996             0 0.16
```

NOAA FORM 24-5
(8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TRANSMITTAL AND RECEIPT RECORD

(Please sign and return carbon copy acknowledging receipt)

TO:	REFER TO
National Oceanographic Data Center 1825 Connecticut Ave., NW Washington, D.C. 20235	ATTENTION Dr. Tony Picciolo

THE ITEM(S) LISTED BELOW WERE FORWARDED TO YOU BY

☒ ORDINARY MAIL ☐ REGISTERED MAIL ☐ AIR MAIL ☐ CERTIFIED MAIL ☐ GOVERNMENT TRUCK ☐ BY HAND ☐ OTHER _____

The following CTD data sets have been forwarded to the NODC "VAX" via SPAN network:

Oceanus 149	March 17-19, 1984	18 stations
Oceanus 159	November 15-20, 1984	41 stations

These data were received from Dr. Brad Butman, USGS Woods Hole, and are part of the MMS funded activities on the New England Shelf and Slope Program. These data have been formated to a modified version of the WHOI/NODC CTD exchange format. The record size has been expanded by 5 bytes to accommodate the paramenter of light transmission. Two additional files of documentation were transmitted with the data.

cc: P. Shoulimas

8700271

FORWARDED BY (Signature)	TITLE	DATE FORWARDED
George Heimerdinger	NODC Northeast Service Center Rep.	Aug. 10, 87
RECEIVED BY (Signature)	**TITLE**	**DATE RECEIVED**
F. Mitchell		8-11-87

NOAA FORM 24-5 (8-73)

NANSEN REF. #

~~498512~~

329531

MULDARS TRACK #

TT9892

MONITOR: CONTACT

SELKIRK

LOCATION OF F022 SOURCE

ARCHIVES

RECORD ALL ERRORS FOUND

CONSEC(S)

35

ERRORS FOUND

ERRONEOUS DEPTH TO BOTTOM

1/12/88

HANSEN REF. # 329530 — 8100271 — MULDARS TRACK # ~~T78[illegible]~~ 9891

[redacted]

MONITOR: CONTACT SELKIRK

LOCATION OF FO22 SOURCE ARCHIVES

RECORD ALL ERRORS FOUND

CONSEC(S) NO ERRORS. ~~CHANGES~~

ERRORS FOUND

ACCESSION NO. 8700271 FILETYPE F022/C022 TRACK NO. 329530 (For TT9891) PROJECT IDENTIFICATION MMS/Ø181 NEW ENGLAND SHELF & SLOPE

STEP	DATE	INIT.	TAPE OR DISK DSN	NO. FILES	LRECL	BLK SIZE	NO. RECORDS
ORIG. ~~TAPE~~ DISK	8-11-87	FJM	VAX [MITCHELL] OC149.	DAT 1	40	4000	
DUPLICATE ~~TAPE~~ DISK	8-15-87	↓	DAMUS DNODC* OC149.	↓	40	4000	
REFORMATTED TAPE							
REFORMATTED DISK							
FIRST MULCHEK							
FINAL MULCHEK							
MPD75 OR F022							
DATA SET FINALIZED							

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR:

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

COMMENTS (TRACKS DELETED, FIELDS DELETED, ETC.)

INVENTORY Record found
Record 4132 on screen
168116 DATA ENTRY INFORMATION SYSTEM FJM
(DATASET INVENTORY)

DATE OF ENTRY: 08/21/87

REFERENCE NUMBER: 329530 ACCESSION NUMBER: 8700271
FORMER REFERENCE NUMBER: FORMER ACCESSION NUMBER: (RESUB ONLY)

INVENTORY
MEDIA-IN: 13 - Telecommunications DINDB CODE 24
EXCHANGE (FORMAT): E001 - Low Resolution STD
PROCESSING (FORMAT): C022 - Low Resolution STD (SD2 Format)

* NOTE * If data is F022, create an additional record for C022.

INSTITUTE (COUNTRY AND INSTITUTE CODES): 31W4
PLATFORM (COUNTRY AND PLATFORM CODES): 320C
PLATFORM TYPE: 9 - Ship DINDB CODE 09

ORIGINATORS FILE ID: ORIGINATORS CRUISE ID: TT9891
CRUISE START DATE: 03/17/84 CRUISE END DATE: 03/19/84 Press PgDn
PROJECT CODE: 0181 DATA USE CODE (DUC): 3 to continue
F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

INVENTORY

VOLUME - NUMBER OF STATIONS: 18 NUMBER OF RECORDS: 0

If STA/REC counts are not appropriate then enter -

NUMBER: UNITS:

AVERAGE REC SIZE: 112 MBYTES: 0.000000

OCEAN AREA
CODE 1: 23B MEANING: NW Atlantic (limit-40 W)
CODE 2: MEANING:
CODE 3: MEANING:

DINDB TRACK TRANSACTION GENERATED: /

F2ENTER F3VIEW F4EXIT F5FORM CLR F6FLD CLR F7DELETE F8MODIFY F9REPORT F10MULTI

8700271

TYPE OC149.DOC
OC149.DOC;1
DOCUMENTATION R/V OCEANUS 149 CTD DATA

SOURCE: DR. BRAD BUTMAN, U.S. GEOLOGICAL SURVEY
WOODS HOLE, MA.
FUNDING: MINERALS MANAGEMENT SERVICE
DEPT. OF INTERIOR
FORMAT: MODIFIED WHOI/NODC CTD EXCHANGE FORMAT. FORMAT
EXPANDED BY 5 BYTES TO ACCOMMODATE THE PARAMETER
OF MMISSION EXPRESSED AS BEAM ATTENUATION
COEFFICIENT
RECORDSIZE=40, BLOCKSIZE=4000

PARAMETERS REPORTED	UNITS
PRESSURE	DECIBARS
TEMPERATURE	C
SALINITY	PRACTICAL SALINITY UNITS
LIGHT TS.	EXPRESSED AS BEAM ATTENUATION COEFFICIENT

SHIP: R/V OCEANUS CR. 149, MAR. 17-19, 1984
COUNT: 18 STATIONS THIS DATA SET/FILES
FILES: THIS DATA SET CONSISTS OF 18 FILES, THE FILE
NAMES ARE AS FOLLOWS OC149.DAT,1 THRU OC149.DAT,18

SAM DUMP OF FIRST FILE

```
 SHIP OC CRUIS 149 STAT: 007 C#:
 DATE 84-03-17  TIME: 2050 Z
 LAT  39 54.1  LG  -68 28.8
 MAX. PRS=  506. DB  DEPTH=  2530 M
 AVER   2.0 INST 0038 RATE  31.25HZ
 OB(F7.1,2F8.4,F6.2,I6,F5.2)
  PRES     TEMP     SALT    OXYG  QUAL EXTC
    4.0 12.3810 35.0138              0 0.19
    6.0 12.3795 35.0342              0 0.19
    8.0 12.3798 35.0406              0 0.18
   10.0 12.3613 35      0 0.18
   12.0 12.3687 35.0470              0 0.18
   14.0 12.3729 35.0482              0 0.18
   16.0 12.3208 35.0477     0.17
   18.0 12.2380 35.0502           0 0.14
```

NOAA FORM 24-5
(8-73)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

TRANSMITTAL AND RECEIPT RECORD

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cc: P. Shoulimas

8700271

FORWARDED BY (Signature)	TITLE	DATE FORWARDED
George Heimerdinger	NODC Northeast Service Center Rep.	Aug. 10, 87
RECEIVED BY (Signature)	**TITLE**	**DATE RECEIVED**
F. Mitchell		8-11-87

NOAA FORM 24-5 (8-73)

```
Password:
 accNo   fleA refNo  proj inst ship    startDate  cruise   catId
 ------- ---- ------ ---- ---- ------- ---------- -------- ----------
 8700271 C022 329530 0181 31W4 32OC    1984/03/17 TT9891       172652
 8700271 C022 329531 0181 31W4 32OC    1984/11/16 TT9892       172653
 8700271 F022 TT9891 0181 31W4 32OC    1984/03/17 149          172654
 8700271 F022 TT9892 0181 31W4 32OC    1984/11/16 159          172655

(4 rows affected)
```

```
Password:
 accNo   fleA refNo  ship staCnt recCnt startDate  endDate
 ------- ---- ------ ---- ------ ------ ---------- ----------
 8700271 C022 329530 32OC 18     23     84/03/17   84/03/19
 8700271 C022 329531 32OC 41     52     84/11/16   84/11/20
 8700271 F022 TT9891 32OC 18     495    84/03/17   84/03/19
 8700271 F022 TT9892 32OC 41     1329   84/11/16   84/11/20

(4 rows affected)
```