PO-Gug
29158

[redacted]

SCIENCE APPLICATIONS, INC.

REGISTEF

SUMMARY CRUISE REPORT
R/V CAPE FLORIDA
May 4-19, 1984

July 1984

Submitted to: Minerals Management Service
Code LE-4
Post Office Box 7944
Metairie, Louisiana 70010

Submitted by: Science Applications, Inc.
4900 Water's Edge Drive, Suite 255
Raleigh, North Carolina 27606

TABLE OF CONTENTS

Section	Page
TABLE OF CONTENTS	i
LIST OF FIGURES	ii
LIST OF TABLES	iii
Introduction	1
Oceanographic and Weather Conditions	1
Hydrography	1
Complimentary Data	2
Data Analysis	2
Appendix A, Station Summary	22
Appendix B, Cruise Summary	28
Appendix C, Bridge Log	33
Appendix D, WMO Codes	55
Appendix E, ROSCOP Forms	58

LIST OF FIGURES

Figure	Caption	Page
1	Sea-surface frontal map for 4 nay 1984 from Dr. Steven Baig, NOAA/NESS/Miami	3
2	Sea-surface frontal map for 7 May 1984 from Dr. Fred Vukovich (RTI) with the proposed R/V BELLOWS cruise tracks superimposed	4
3	Map of study area showing location of Stations 1X through 102X for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984)	5
4	Map of study area showing Stations 103X through 188X for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984)	6
5	Map of study area showing Stations 189C through 223C for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984)	7
6	Map of study area showing Stations 224C through 268X for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984)	8
7	Bar graph detailing time spent steaming and sampling during R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984)	12
8	Map of study area showing MMS-sponsored AXBT/ AXCP survey for the period from 11-14 May 1984 . .	19
9	Map of study area showing cruise tracks for ship-of-opportunity cruises and the revised R/V BELLOWS cruise tracks for May 1984	20

LIST OF TABLES

Tab 1e	Caption	Page
1	Actual at-sea schedule	9
2	Time series sections	13
3	Station summary	14
4	Sampling summary	16
5	Ametek Straza data	17
6	SAIL thermosalinograph data	18
7	Synoptic maps	21

Introduction

Between 4 and 19 May 1984, the third eastern Gulf of Mexico hydrographic cruise was conducted using the R/V CAPE FLORIDA. This report provides a summary and overview of activities and conditions which occurred in conjunction with that cruise.

Oceanographic and Weather Conditions

During the sampling period the main flow of the Loop Current penetrated as far as 27°30'N and 88°30'W. Warm filaments occasionally extended beyond these limits. Such filaments and their interaction with the west Florida shelf and a narrowing of the Loop Current neck near 23°15'N 85°00'W were the primary study objectives of this cruise. Both of these features appear in a NOAA/NESS sea surface frontal map for 4 May (Figure 1) and an oceanographic frontal analysis provided by Dr. Vukovich (RTI) for 7 May 1984 (Figure 2). Weather conditions were generally favorable throughout the cruise having no significant impact on sampling except along the last section (Section XX) where several CTD casts were replaced with XBT drops to save time and complete the section before returning to Miami.

Hydrography

No specific pre-cruise grid was established prior to departure, but a general plan included sampling east of, and into the Loop Current neck; and two primary XBT mappings of a filament, to be followed by a CTD/XBT time-series (repeated section) as the filament propagated past a section. The actual sampling was adjusted for the apparent disintegration of the filament prior to the second mapping, and the fact that the R/V BELLOWS was also collecting data in the area for Dr. Vukovich (Lines A-B, C-D, E-F, and G-H in Figure 2).

The stations occupied by the R/V CAPE FLORIDA are shown in Figures 3 through 6 and are listed in Appendix A. A summary of the actual at-sea schedule is presented in Table 1, and a bar graph depicting the time spent steaming and sampling is presented in Figure 7. A detailed description of cruise activities (including a list of crusie participants) is provided in Appendix B, and a copy of the Bridge Log, which includes the time stations were begun and ended, weather, etc., is provided in Appendix C. Appendix D contains the WMO weather and sea-state codes cited in the Bridge Log.

Along each line the station spacing varied but was generally five nautical miles. During the mapping phase, for synopticity, most of the stations were XBT drops with occasional CTD casts to help establish water-mass characteristics. During the time-series phase, two lines (Table 2) were repeated three times each, generally alternating XBT's and CTD's along the line. The mooring line was also sampled twice as Sections III (Stations 24X-40X) and XIII (Stations 150C-169C). At most CTD stations (except for quick CTD's) nutrient and dissolved oxygen samples were collected. Station and sample summaries are presented in Tables 3 and 4. Over the entirety of the cruise, AMETEK STRAZA current profiles (of ∿ 2.5 minute averaged data) and thermosalinograph data (at one minute intervals) were collected continuously. Tables 5 and 6 document these data sets.

Complimentary Data

A number of complimentary data sets were collected in May 1984 as well. These include an AXBT regional survey (with some AXCP's) flown between 11 and 14 May as part of this same MMS program (Figure 8) and several ship-of-opportunity XBT lines (Figure 9). Modified R/V BELLOWS cruise tracks are also included in this latter figure. Table 7 suggests three fairly comprehensive mappings of the eastern Gulf which could be generated from the combined data sets cited above.

Data Analysis

At present, data and samples taken during the R/V CAPE FLORIDA cruise are being processed and analyzed at Skidaway Institute of Oceanography. Sample results should be available shortly. Data analysis and associated graphics production will be done at that time and the results and any additionally requested analyses will be provided to the program participants. The cruise ROSCOP forms have been submitted to NODC and copies are included in Appendix E.

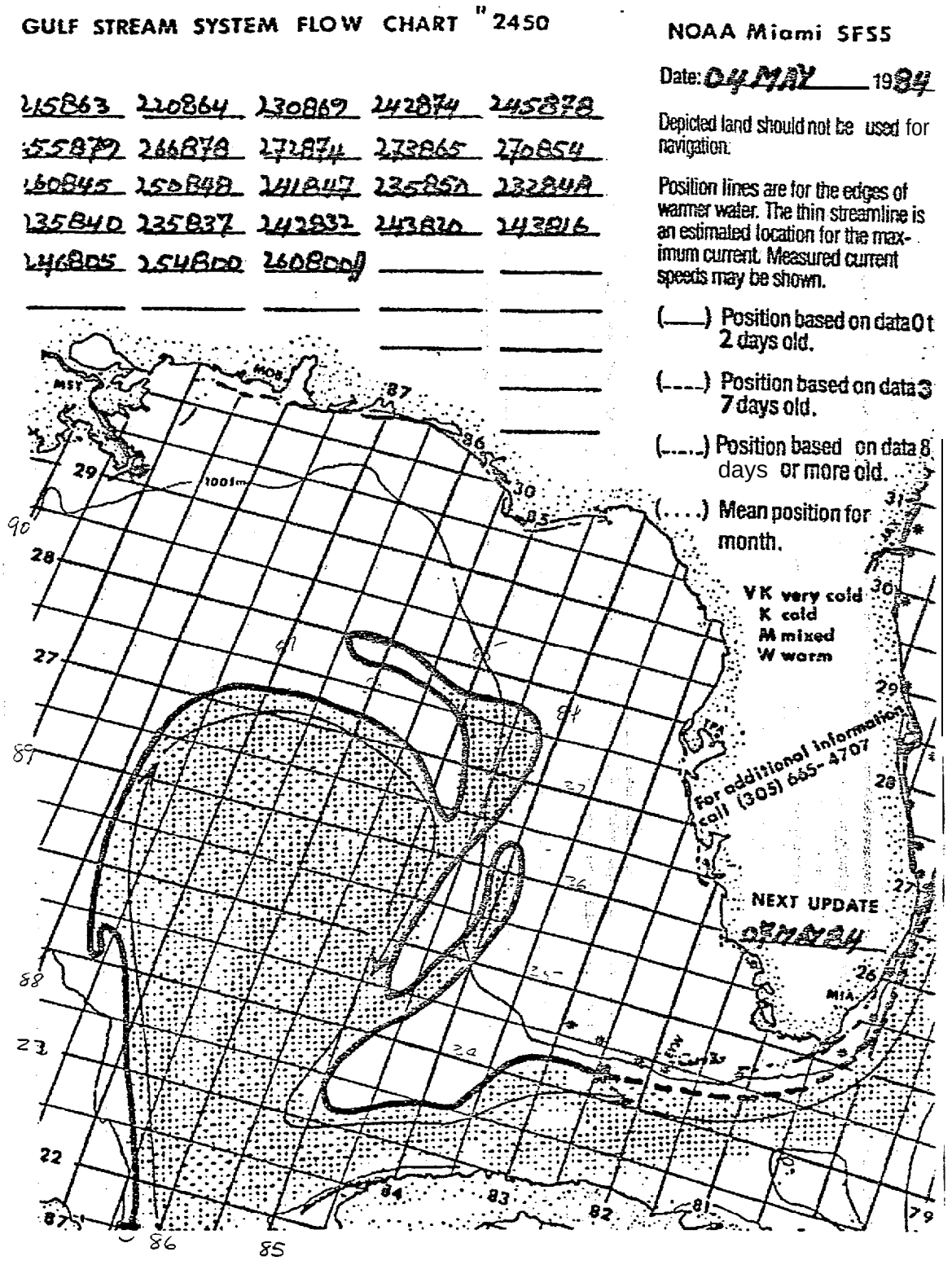

Figure 1. Sea-surface f rental map for 4 May 1984 from Dr. Steven Baig, NOAA/NESS /Miami.

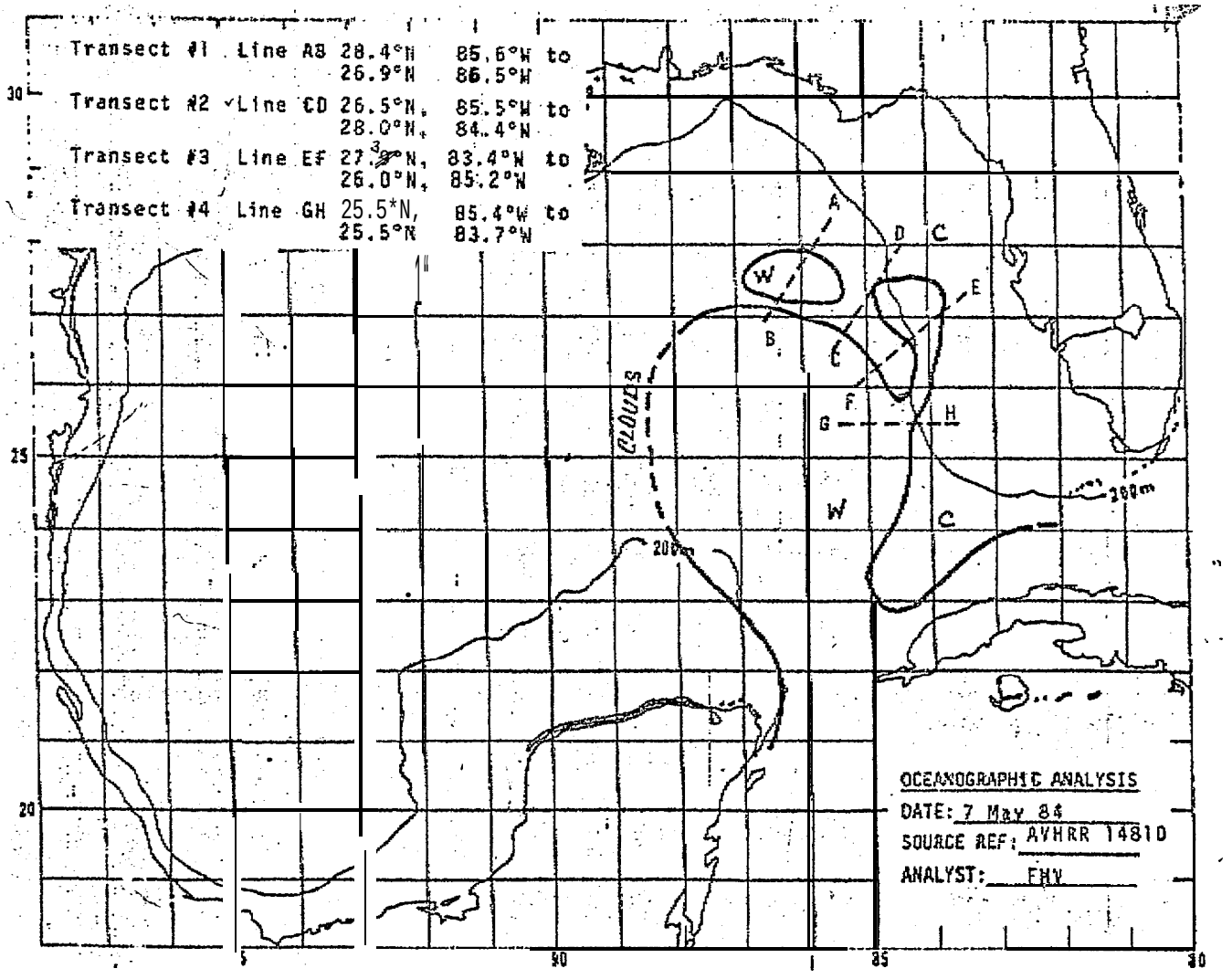

Figure 2. Sea-surface frontal map for 7 May 1984 from Dr. Fred Vukovich (RTI) with the proposed R/V BELLOWS cruise tracks superimposed.

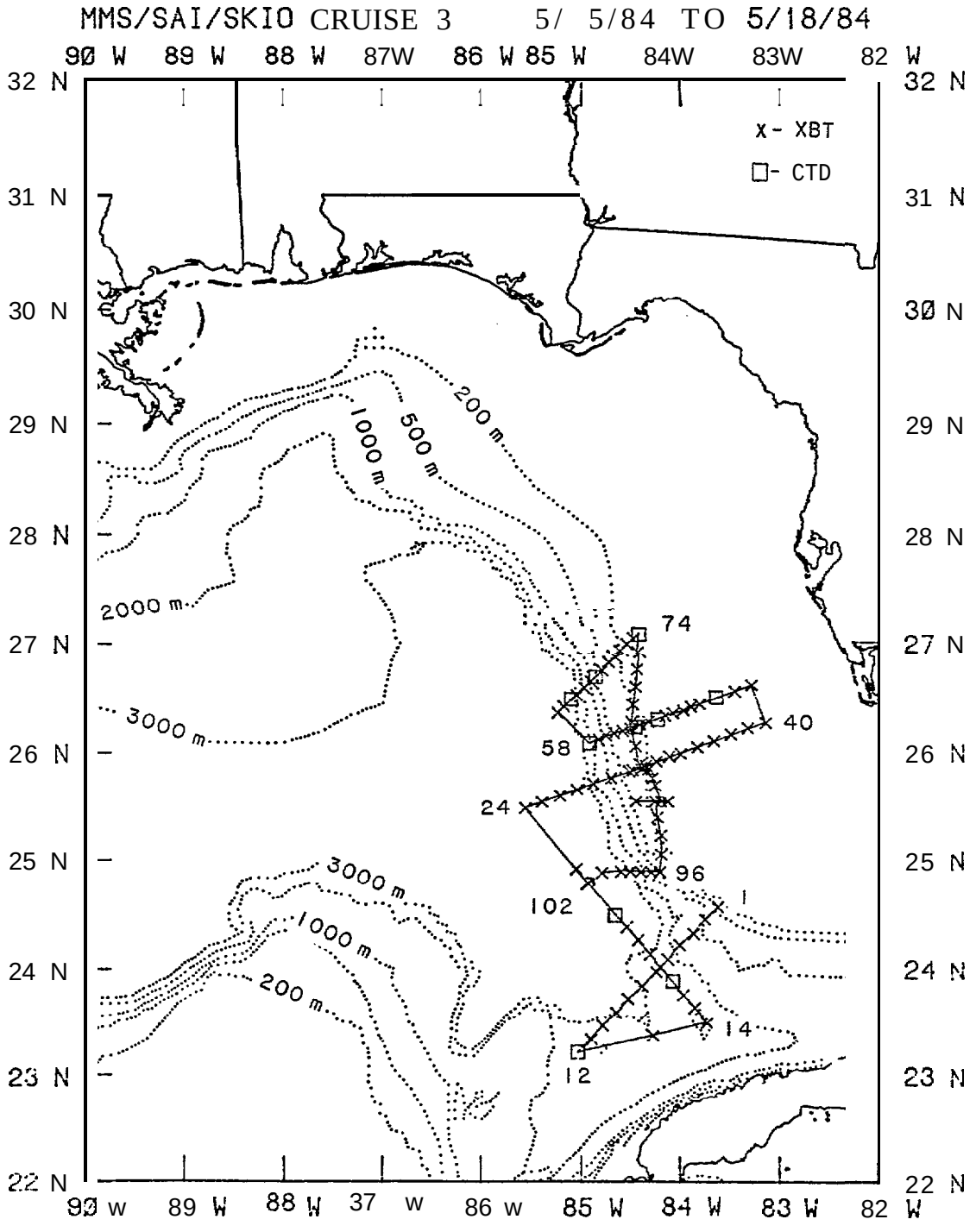

Figure 3. Map of study area showing location of Stations 1X through 102X for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984).

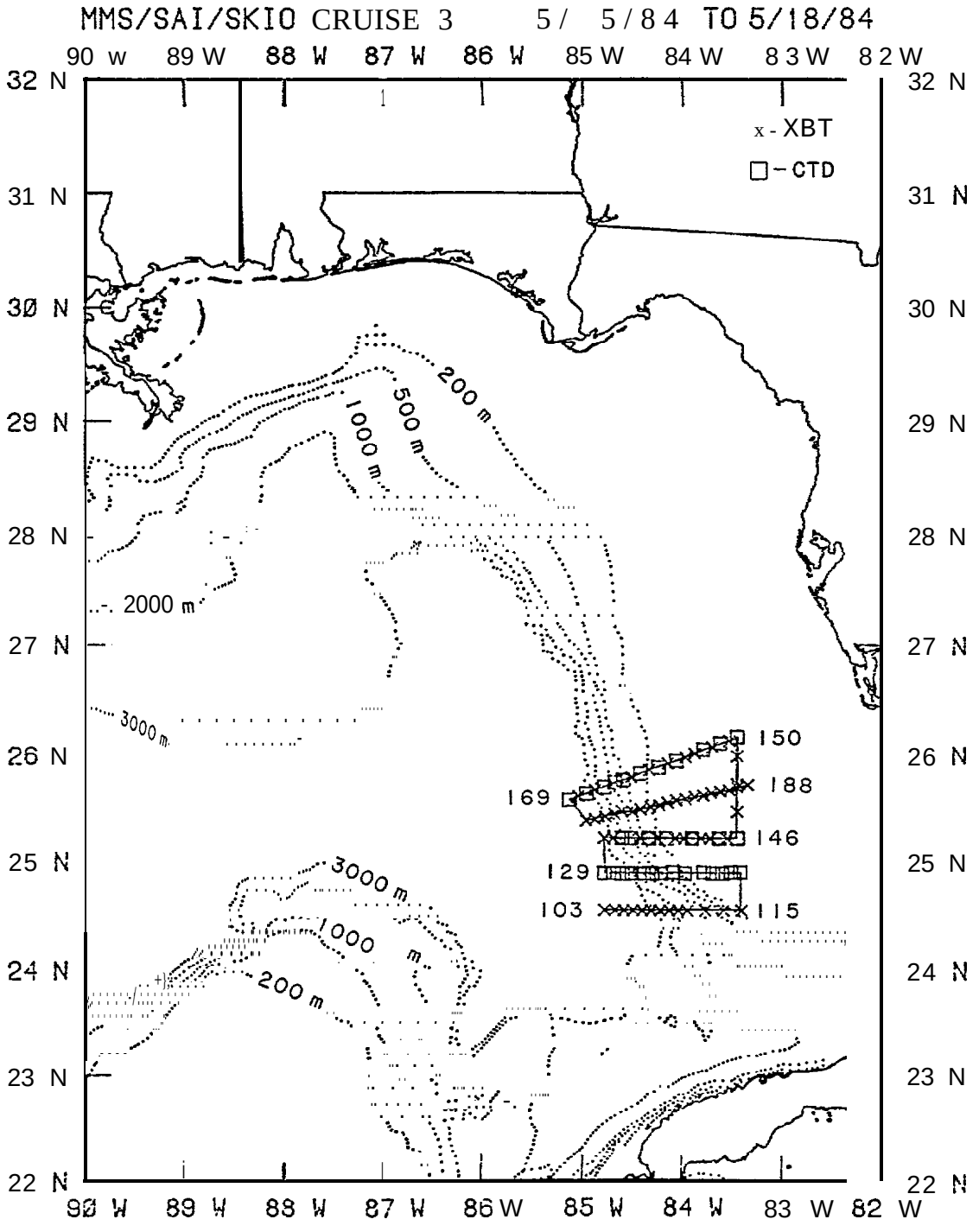

Figure 4. Map of study area showing Stations 103X through 188X for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984).

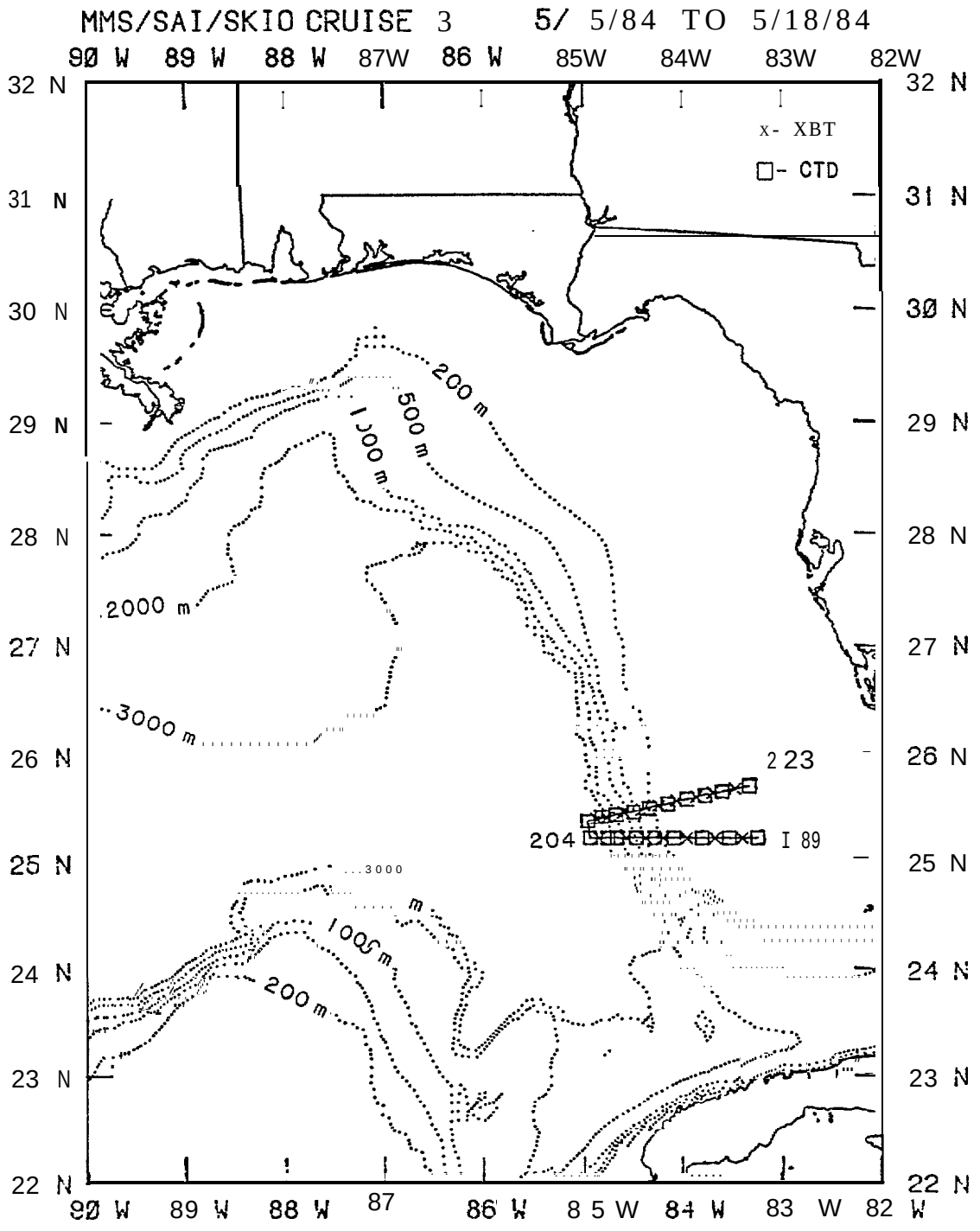

Figure 5. Map of study area showing Stations 189C through 223C for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984).

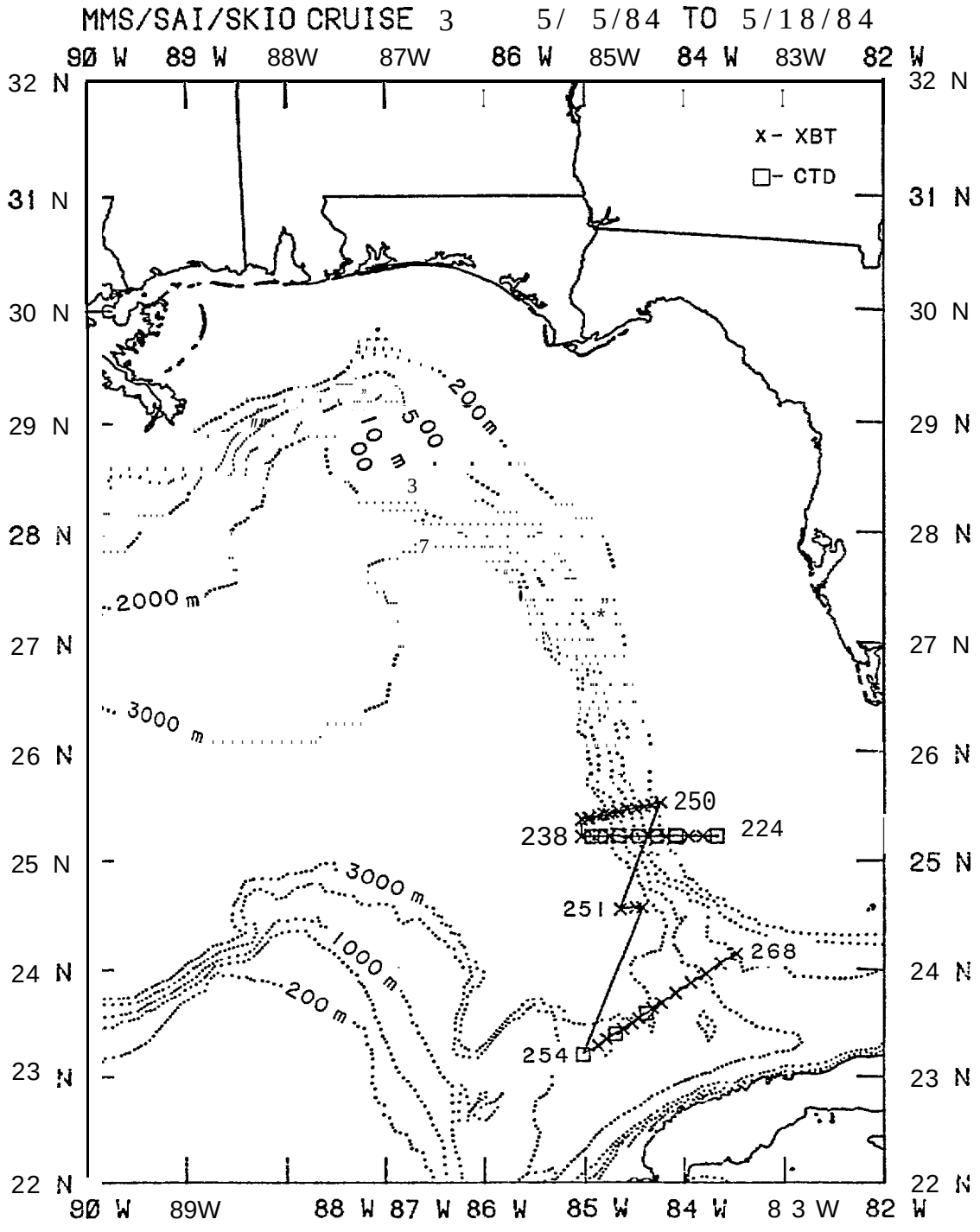

Figure 6. Map of study area showing Stations 224C through 268x for R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984).

TABLE 1

ACTUAL AT-SEA SCHEDULE
MMS/SAI/SKIO
MAY 1984
R/V CAPE FLORIDA CRUISE

	(EDT)	CTD/XBT Section Time	*Time Between CTD/XBT Sections
Leave Miami:	0930 Thursday 4 May		26-1/3 hrs.
Arrive Station 1X: (Section I)	1150 Saturday 5 May	15-2/3hrs.	
Leave Station 12C: (Section I)	0330 Sunday 6 May		7-1/4 hrs.
Arrive Station 14X: (Section II)	1040 Sunday 6 May	11-1/4 hrs.	
Leave Station 22C: (Section 11)	2150 Sunday 6 May		9-1/4 hrs.
Arrive Station 24X: (Section 111)	0700 Monday 7 May	15-1/2 hrs.	
Leave Station 40X: (Section III)	2225 Monday 7 May		2 hrs.
Arrive Station 41X: (Section IV)	0030 Tuesday 8 May	14-1/2 hrs.	
Leave Station 58C: (Section IV)	1455 Tuesday 8 May		4-1/2 hrs.
Arrive Station 59X (Section V)	1930 Tuesday 8 May	11 hrs.	
Leave Station 74C: (Section V & VI-A)	0625 Wednesday 9 May	5 hrs.	
Leave Station 80X: (Section VI-A & VI-B)	1130 Wednesday 9 May	2-2/3 hrs.	
Leave Station 84X: (Section VI-B)	1410 Wednesday 9 May		1/2 hr.
Arrive Station 85X: (Section VI-C)	1440 Wednesday 9 May	2-1/4 hrs.	
Leave Station 88X: (Section VI-C)	1655 Wednesday 9 May		1/2 hr.

TABLE 1 (Continued)

	(EDT)	CTD/XBT Section Time	*Time Between CTD/XBT Sections
Leave Station 88X: (Section VI-C)	1655 Wednesday 9 May		1/2 hr.
Arrive Station 89X: (Section VII)	1725 Wednesday 9 May	3-1/2 hrs.	
Leave Station 92X: (Section VII & VI-D)	2100 Wednesday 9 May	4-1/4 hrs.	
Leave Station 96X: (Section VI-D & VIII)	0115 Thursday 10 May	4 hrs.	
Leave Station 102X: (Section VIII)	0520 Thursday 10 May		1-1/2 hrs.
Arrive Station 103X: (Section IX)	0655 Thursday 10 May	9-2/3 hrs.	
Leave Station 115X: (Section IX)	1635 Thursday 10 May		2-1/4 hrs.
Arrive Station 116C: (Section X)	1845 Thursday 10 May	18-1/2 hrs.	
Leave Station 129C: (Section X)	1310 Friday 11 May		3-1/2 hrs.
Arrive Station 130X: (Section XI)	1635 Friday 11 May	13-3/4 hrs.	
Leave Station 146C: (Section XI & XII)	0625 Saturday 12 May	6-1/2 hrs.	
Leave Station 150C: (Section XII & XIII)	1250 Saturday 12 May	19-1/3 hrs.	
Leave Station 169C: (Section XIII)	0810 Sunday 13 May		1-1/4 hrs.
Arrive Station 170X: (Section XIV)	0920 Sunday 13 May	10 hrs.	
Leave Station 188X: (Section XIV)	1920 Sunday 13 May		3-1/3 hrs.
Arrive Station 189C: (Section XV)	2240 Sunday 13 May	16-2/3 hrs.	
Leave Station 204C: (Section XV)	1515 Monday 14 May		2-1/4 hrs.

TABLE 1 (Continued)

	(EDT)	CTD/XBT Section Time	*Time Between CTD /XBT Sections
Leave Station 204C: (Section XV)	1515 Monday 14 May		
			2-1/4 hrs.
Arrive Station 205C: (Section XVI)	1725 Monday 14 May		
		18 hrs.	
Leave Station 223C: (Section XVI)	1125 Tuesday 15 May		
			3-3/4 hrs.
Arrive Station 224C: (Section XVII)	1510 Tuesday 15 May		
		14-2/3 hrs.	
Leave Station 238X: (Section XVII)	0545 Wednesday 16 May		
			2-1/3 hrs.
Arrive Station 239X: (Section XVIII)	0805 Wednesday 16 May		
		5-3/4 hrs.	
Leave Station 250X: (Section XVIII)	1350 Wednesday 16 May		
			8-1/3 hrs.
Arrive Station 251X: (Section XIX)	2210 Wednesday 16 May		
		1-1/4 hrs.	
Leave Station 253X: (Section XIX)	2320 Wednesday 16 May		
			7-2/3 hrs.
Arrive Station 254C: (Section XX)	0655 Thursday 17 May		
		18 hrs.	
Leave Station 268X: (Section XX)	0050 Friday 18 May		
			31-1/2 hrs.
Arrive Miami:	0815 Saturday 19 May		
		241-2/3 hrs.	118 hrs.

TOTAL HOURS: 359-2/3 hours
TOTAL DAYS: 15.0 days

*Surface temperature and salinity data were collected continuously (at one minute intervals) over the course of the cruise and were recorded on a printout and on HP-85 cassettes.

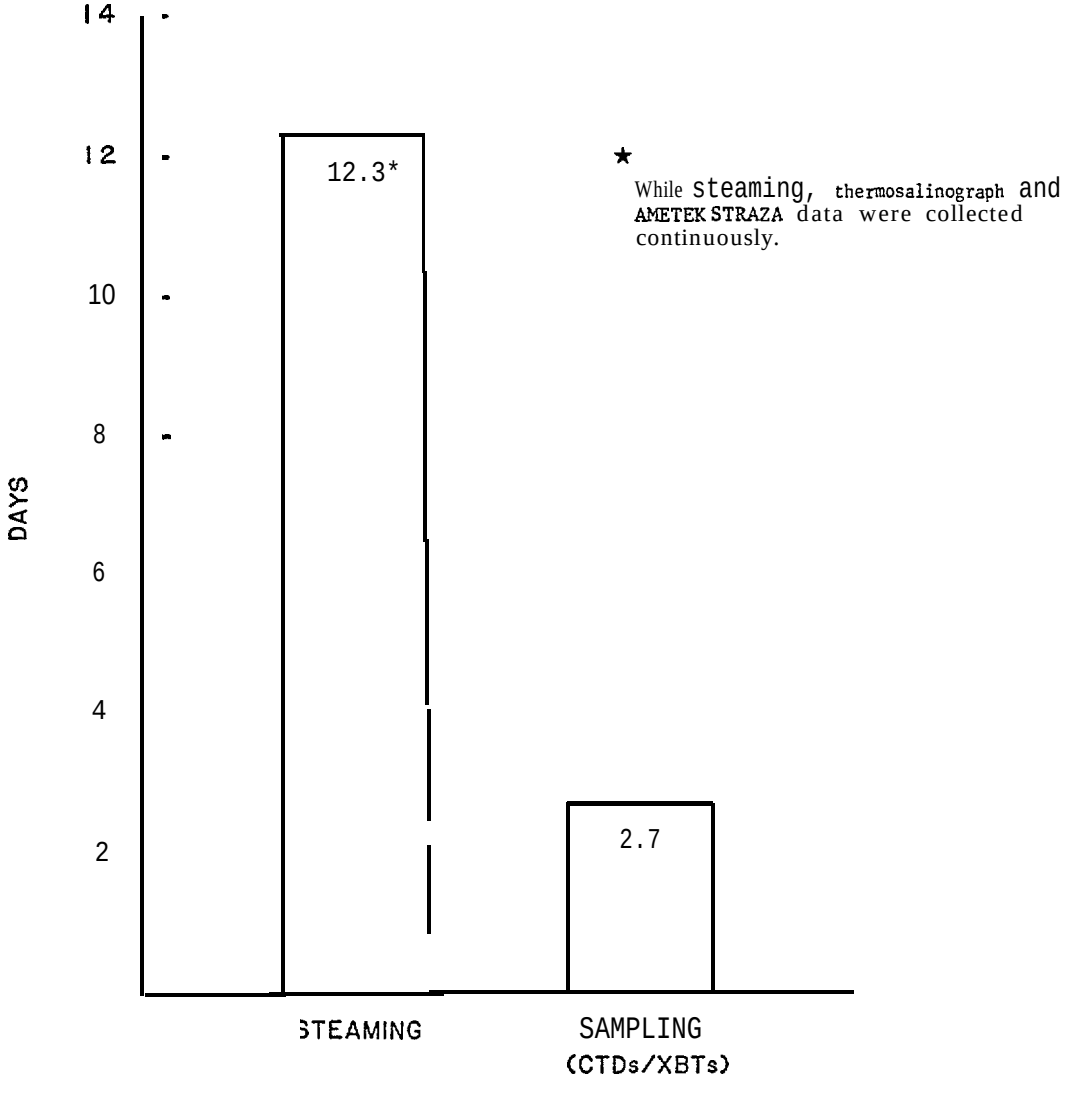

Figure 7. Bar graph detailing time spent steaming and sampling during R/V CAPE FLORIDA Cruise CF-84-05 (4-19 May 1984).

TABLE 2

TIME SERIES SECTIONS
R/V CAPE FLORIDA CRUISE
4-19 May 1984

SERIES I

SECTION XI
(Stations 130X-146C)
11-12 May

SECTION XV
(Stations 189C-204C)
14 May

SECTION XVII
(Stations 224C-238X)
15-16 May

SERIES 11

SECTION XIV
(Stations 170X-188X)
13 May

SECTION XVI
(Stations 205C-223C)
14-15 May

SECTION XVIII
(Stations 239X-250X)
16 May

TABLE 3

STATION SUMMARY
R/V CAPE FLORIDA CRUISE
4-19 May 1984

Section	Date (GMT)	Station Numbers
I	5-6 May	1X, 2X, 3X, 4X, 5X, 6X, 7X, 8x, 9X, 10X, 11X, 12C
11	6-7 May	*13X, 14X, 15X, 16X, 17C, 18X, 19X, 20X, 21X, 22C, **23X
111 (Mooring Line)	7-8 May	24X, 25X, 26X, 27X, 28X, 29X, 30X, 31X, 32X, 33X, 34X, 35X, 36X, 37X, 38X, 39X, 40X
Iv	8 May	41x, 42X, 43C, 44X, 45X, 46X, 47X, 48X, 49C, 50x, 51X, 52C, 53X, 54X, 55X, 56X, 57X, 58C
v	9 May	59X, 60x, 61C, 65X, 63X, 66X, 67C, 68X, 69X, 70X, 71X, 72X, 73X, 74C
VI-A	9 May	74C 75X, 76X, 77X, 78X, 79X, 80X
VI-B	9 May	80X, 81X, 83X, 84x
VI-C	9-10 May	85X, 86X, 87X, 88X
VII	10 May	89X, 88X, 92X, 91X
VI-D	10 May	92X, 93X, 94X, 95X, 96X
VIII	10 May	96X, 97X, 98X, 99X, lOOX, 102X
IX	10 May	103X, 104X, 105X, 106x, 107X, 108X, 109X, 110X, 111X, 112X, 113X, 114X, 115X
x	10-11 May	116C, 117C, 118C, 119C, 120C, 121C, 122C, 123C, 124C, 125C, 126c, 127C, 128C, 129C
XI	11-12 May	130X, 131X, 132C, 133C, 134X, ***135X, 136C, 137X, 138C, 139X, 140X, 141C, 142X, 143X, 144C, 145x, 146c
XII	12 May	146C, 147X, 148X, 149X, 150C
XIII (Mooring Line)	12-13 May	150C, 151X, 152C, 153X, 154C, 155X, 156X, 157C, 158X, 159C, 160x, 161C, 162X, 163C, 164c, 165C, 166x, 167C, 168X, 169C
XIV	13 May	170X, 171X, 172X, 173X, 174X, 175X, 176X, 177X, 178x, 179x, 180X, 181X, 182X, 183X, 184X, 185X, 186X, 187X, 188X

TABLE 3 (Continued)

Section	Date (GMT)	Station Numbers
XV	14 May	189C, 190X, 191C, 192X, 193C, 194X, 195C, 196X, 197C, 198X, 199C, 200X, 201C, 202C, 203X, 204C
XVI	14-15 May	205C, 206X, 207C, 208X, 209C, 210X, 211C, 212X, 213C, 214X, 215C, 216X, 217C, 218X, 219C, 220X, 221C, 222X, 223C
XVII	15-16 May	224C, 225X, 226X, 227C, 228x, 229C, 230X, 231C, 232X, 233C, 234X, 235C, 237X, 236C, 238X
XVIII	16 May	239X, 240X, 241X, 242X, 243X, 244X, 245X, 246X, 247X, 249X, 250X
XIX	17 May	251X, 252X, 253X
XX	17-18 May	254C, 255X, 256X, 257C, 258X, 259X, 260X, 261C, 262X, 263X, 264X, 265X, 266X, 267X, 268X

*Actually between Sections I and II.

**Actually between Sections II and III but along Line II.

***Stations 135X and 136C are at the same location.

TABLE 4

SAMPLING SUMMARY
R/V CAPE FLORIDA CRUISE
4-19 May 1984

Section	CTD	XBT	Nutrients	Oxygens	Salinity
I	1	11	13	13	o
II	2	*9	26	25	2
III	0	17	0	0	0
IV	4	14	35	36	4
v	3	11	29	29	3
VI-A	0	6	0	0	0
VI-B	0	3	0	0	0
VI-C	0	4	0	0	0
VII	0	3	0	0	0
VI-D	0	4	0	0	0
VIII	0	5	0	0	0
Ix	0	13	0	0	0
x	14	0	67	67	8
XI	7	10	56	55	8
XII	1	3	5	5	1
XIII	10	9	82	83	10
XIV	0	19	0	0	0
xv	9	7	66	66	9
XVI	10	9	81	81	10
XVII	7	8	70	70	8
XVIII	0	11	0	0	0
XIX	0	3	0	0	0
xx	3	12	38	39	3
TOTALS	71	191	568	569	66

TABLE 5

AMETEK STRAZA DATA
R/V CAPE FLORIDA CRUISE
4-19 May 1984

Disk Name	Stations
SAB 018	Miami - Keys
SAB 019	lx - 14X
SAB 020	15X - 28X
SAB 081	29X - 53X
SAB 082	54x - 77x
SAB 083	78X - 106X
SAB 084	107X - 127C
SAB 085	128C - 147X
SAB 086	148x - 169C
SAB 087	169C - 197C
SAB 088	197C - 218X
SAB 089	219C - 238X
SAB 090	239X - 253X
SAB 091	254C - 268X - Keys

TABLE 6

SAIL THERMOSALINOGRAPH DATA
R/V CAPE FLORIDA CRUISE
4-19 May 1984

Tape Name	Stations
F40501	Miami - Keys
F40502	Keys - 3X
F40503	4x - 12C
F40504	13X - 21X
F40505	22C - 25X
F40506	26X - 40X
F40507	4 lx - 56X
F40508	57x - 58C
F40509	58C - 59x
F40510	60X - 77x
F40511	78X - 94x
F40512	95x - 99x
F40513	100X - 110X (111X?)
F40514	112X - 123C
F40515	124C - 130x
F40516	131X - 146C
F40517	147X - 160x
F40518	161C - 173X
F40519	174X - 191C
F40520	192X - 204c
F40521	205C - 220X
F40522	221C - 228X
F40523	229C - 243x
F40524	243X - 250X - Steaming south
F40525	Steaming south - 256X
F40526	257C - 267X
F40527	268X - Keys

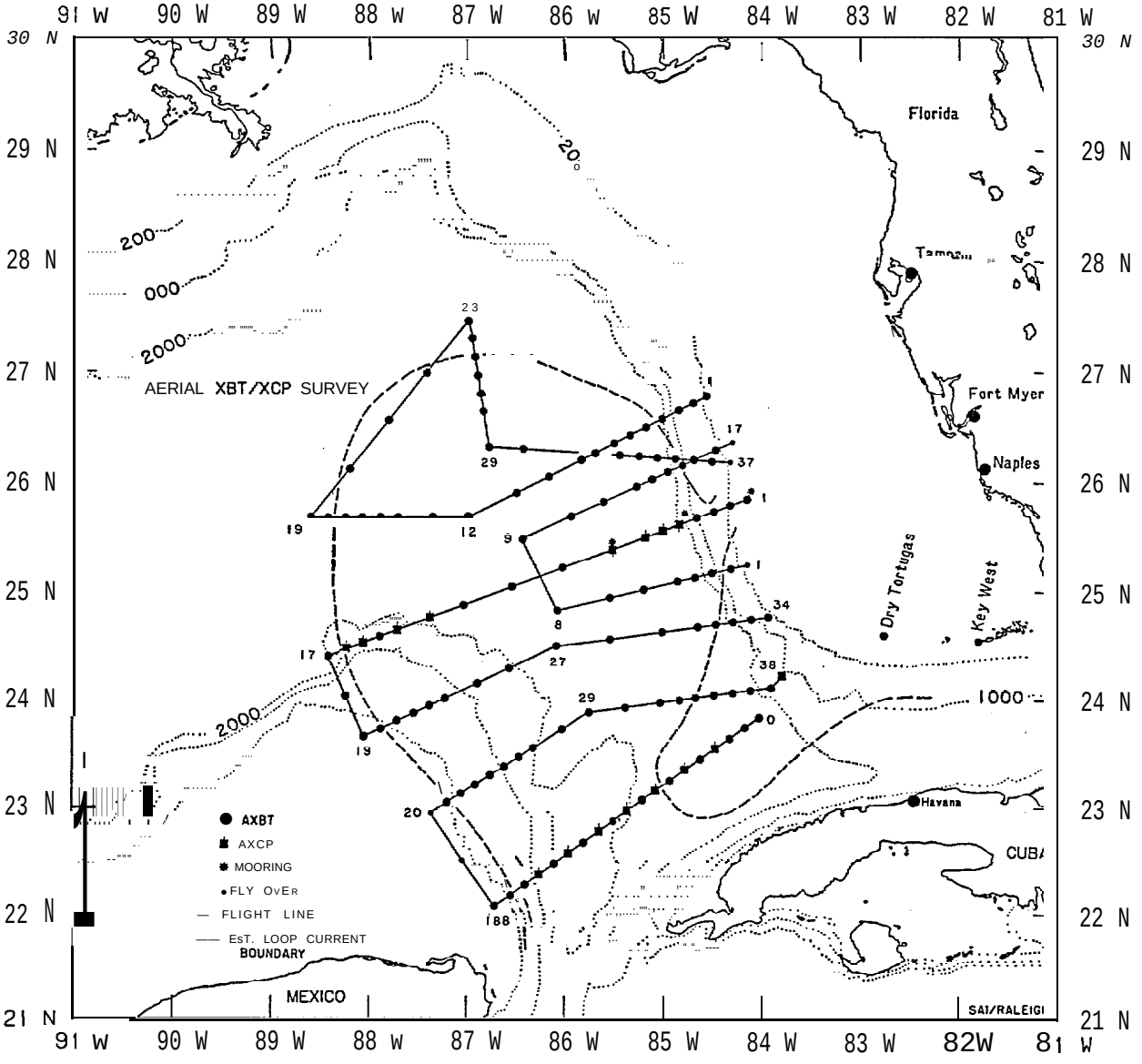

Figure 8. Map of study area showing MMS sponsored AXBT/AXCP survey for the period from 11 to 14 May 1984.

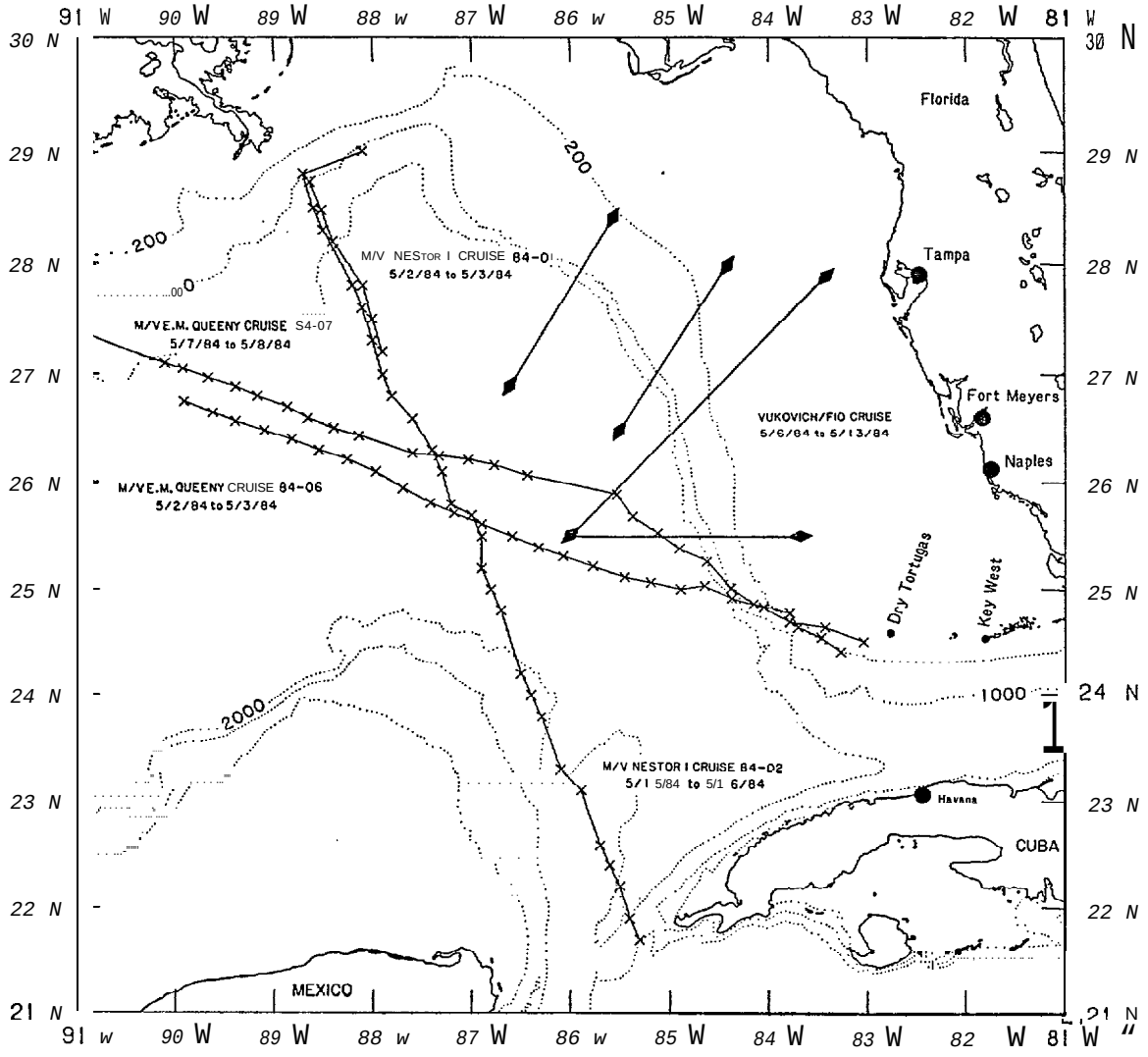

Figure 9. Map of study area showing cruise tacks for ship-of-opportunity cruises and the revised R/V BELLOWS cruise tracks in May 1984.

TABLE 7

SYNOPTIC MAPS
R/V CAPE FLORIDA CRUISE
4-19 May 1984

MAP I (1550 (GMT) 5 May - 1530 9 May 1984)

Stations 1X - 79X
+ R/V BELLOWS Lines A-B and C-D
+ M/V QUEENY CRUISE 84-07

MAP II (1055 10 May - 1210 13 May 1984)

Stations 103X - 169C
+ R/V BELLOWS Lines E-F and G-H
+ AXBT Lines 1, 2, and 3

MAP 111 (13 May - 17 May 1984)

Stations 224C - 268X
+ M/V NESTOR I CRUISE 84-02
+ AXBT Lines 3 and 4

APPENDIX A

STATION SUMMARY

STATION SUMMARY FOR CF-84-05

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
005	1X	24 34.0N	83 37.1W	84	05	05	15.8	227	1
005	2X	24 26.7N	83 45.3W	84	05	05	17.0	975	2
005	3X	24 19.4N	83 52.1W	84	05	05	18.1	1100	3
005	4X	24 12.8N	84 00.8W	84	05	05	20.3	1390	4
005	5X	24 05.1N	84 07.3W	84	05	05	22.3	2730	5
005	6X	23 57.8N	84 14.9W	84	05	05	23.3	2365	6
005	7X	23 49.9N	84 23.0W	84	05	06	0.3	2870	7
005	8X	23 42.9N	84 31.3W	84	05	06	1.3	3450	8
005	9X	23 35.5N	84 38.4W	84	05	06	2.3	3130	9
005	10X	23 27.9N	84 46.3W	84	05	06	3.3	2780	10
005	11X	23 20.5N	84 53.3W	84	05	06	4.3	2460	11
005	12C	23 13.1N	85 02.0W	84	05	06	5.5	2225	12
005	13X	23 22.8N	84 16.2W	84	05	06	12.1	3080	13
005	14X	23 30.0N	83 43.8W	84	05	06	14.6	2180	14
005	15X	23 37.9N	83 50.9W	84	05	06	15.9	2280	15
005	16X	23 45.5N	83 57.9W	84	05	06	16.9	2415	16
005	17C	23 53.2N	84 04.8W	84	05	06	17.9	2455	17
005	18X	24 00.6N	84 12.1W	84	05	06	20.1	2520	18
005	19X	24 08.0N	84 18.3W	84	05	06	21.1	2900	19
005	20X	24 15.4N	84 25.4W	84	05	06	22.2	3440	20
005	21X	24 22.5N	84 32.0W	84	05	06	23.2	3450	21
005	22C	24 29.4N	84 39.1W	84	05	07	0.6	3425	22
005	23X	24 55.0N	85 03.0W	84	05	07	6.2	3350	23
005	24X	25 29.0N	85 34.0W	84	05	07	10.9	3260	24
005	25X	25 32.5N	85 23.3W	84	05	07	12.1	3285	25
005	26X	25 36.0N	85 12.9W	84	05	07	13.3	3292	26
005	27X	25 39.5N	85 02.5W	84	05	07	14.5	3325	27
005	28X	25 43.0N	84 52.9W	84	05	07	15.6	1740	28
005	29X	25 46.2N	84 41.7W	84	05	07	17.0	905	29
005	30X	25 49.5N	84 31.2W	84	05	07	18.2	237	30
005	31X	25 50.3N	84 28.2W	84	05	07	18.5	210	31
005	32X	25 52.9N	84 20.5W	84	05	07	19.3	187	32
005	33X	25 55.1N	84 14.4W	84	05	07	19.9	162	33
005	34X	25 57.8N	84 06.5W	84	05	07	20.7	155	34
005	35X	25 59.8N	84 00.0W	84	05	07	21.4	135	35
005	36X	26 03.0N	83 50.0W	84	05	07	22.3	100	36
005	37X	26 06.4N	83 39.4W	84	05	07	23.3	64	37
005	38X	26 09.8N	83 29.3W	84	05	08	0.3	62	38
005	39X	26 13.1N	83 19.1W	84	05	08	1.3	53	39
005	40X	26 16.4N	83 08.9W	84	05	08	2.3	45	40
005	41X	26 37.1N	83 17.1W	84	05	08	4.5	45	41
005	42X	26 33.3N	83 27.6W	84	05	08	5.5	54	42
005	43C	26 30.1N	83 37.9W	84	05	08	6.6	64	43
005	44X	26 26.8N	83 48.3W	84	05	08	8.1	90	44
005	45X	26 25.0N	83 53.4W	84	05	08	8.6	108	45
005	46X	26 23.2N	83 58.1W	84	05	08	9.2	123	46
005	47X	26 21.8N	84 04.1W	84	05	08	9.7	139	47
005	48X	26 20.1N	84 09.2W	84	05	08	10.2	160	48
005	49C	26 18.3N	84 14.1W	84	05	08	10.7	170	49
005	50X	26 16.9N	84 19.1W	84	05	08	11.9	186	50
005	51X	26 15.5N	84 24.5W	84	05	08	12.5	199	51
005	52C	26 14.4N	84 27.3W	84	05	08	13.2	211	52
005	53X	26 13.6N	84 29.8W	84	05	08	14.1	213	53
005	54X	26 12.0N	84 34.8W	84	05	08	14.7	213	54
005	55X	26 10.5N	84 39.8W	84	05	08	15.2	310	55
005	56X	26 08.9N	84 45.1W	84	05	08	15.8	727	56
005	57X	26 07.1N	84 49.8W	84	05	08	16.5	1610	57
005	58C	26 05.2N	84 55.0W	84	05	08	17.2	2550	58
005	59X	26 22.0N	85 14.0W	84	05	08	23.5	3285	59
005	60X	26 25.1N	85 10.0W	84	05	09	0.2	3300	60
005	61C	26 29.1N	85 06.0W	84	05	09	0.8	3300	61
005	63X	26 35.5N	84 58.1W	84	05	09	2.9	1750	63
005	65X	26 31.5N	85 02.3W	84	05	09	3.8	3300	65

STATION SUMMARY (CONTINUED)

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
005	66X	26 39.0N	84 54.4W	84	05	09	5.0	1150	66
005	67C	26 42.0N	84 50.7W	84	05	09	5.5	460	67
005	68X	26 45.6N	84 46.8W	84	05	09	6.8	276	68
005	69X	26 49.8N	84 43.0W	84	05	09	7.3	245	69
005	70X	26 52.9N	84 39.1W	84	05	09	7.8	220	70
005	71X	26 56.0N	84 35.0W	84	05	09	8.4	198	71
005	72X	26 59.6N	84 31.2W	84	05	09	8.9	176	72
005	73X	27 03.0N	84 27.0W	84	05	09	9.5	158	73
005	74C	27 05.6N	84 23.9W	84	05	09	10.0	133	74
005	75X	26 55.4N	84 24.8W	84	05	09	11.4	158	75
005	76X	26 45.8N	84 25.9W	84	05	09	12.4	178	76
005	77X	26 36.2N	84 27.1W	84	05	09	13.4	193	77
005	78X	26 26.3N	84 28.2W	84	05	09	14.4	199	78
005	79X	26 16.7N	84 29.5W	84	05	09	15.4	215	79
005	80X	26 13.6N	84 29.8W	84	05	09	15.8	212	80
005	81X	26 04.0N	84 27.0W	84	05	09	16.8	212	81
005	83X	25 53.8N	84 24.9W	84	05	09	17.9	207	83
005	84X	25 51.0N	84 24.0W	84	05	09	18.2	207	84
005	85X	25 50.9N	84 19.4W	84	05	09	18.7	184	85
005	86X	25 46.4N	84 17.1W	84	05	09	19.4	163	86
005	87X	25 41.9N	84 15.4W	84	05	09	19.9	162	87
005	88X	25 33.1N	84 11.7W	84	05	09	20.9	162	88
005	89X	25 33.0N	84 07.7W	84	05	09	21.3	148	89
005	91X	25 32.8N	84 27.2W	84	05	09	23.7	290	91
005	92X	25 33.2N	84 15.1W	84	05	10	1.0	163	92
005	93X	25 23.9N	84 13.7W	84	05	10	2.0	158	93
005	94X	25 13.9N	84 11.8W	84	05	10	3.0	145	94
005	95X	25 03.9N	84 11.3W	84	05	10	4.1	175	95
005	96X	24 54.0N	84 12.2W	84	05	10	5.2	415	96
005	97X	24 54.0N	84 18.0W	84	05	10	5.8	725	97
005	98X	24 54.0N	84 24.0W	84	05	10	6.4	3000	98
005	99X	24 54.0N	84 30.0W	84	05	10	7.1	2000	99
005	100X	24 54.0N	84 35.2W	84	05	10	7.7	3400	100
005	102X	24 53.2N	84 46.8W	84	05	10	9.3	3450	102
005	103X	24 33.1N	84 46.1W	84	05	10	10.9	3480	103
005	104X	24 33.4N	84 40.5W	84	05	10	11.7	3480	104
005	105X	24 33.1N	84 34.8W	84	05	10	12.3	3430	105
005	106X	24 33.5N	84 29.5W	84	05	10	12.9	3430	106
005	107X	24 33.2N	84 23.9W	84	05	10	13.8	3415	107
005	108X	24 33.4N	84 18.4W	84	05	10	14.4	3425	108
005	109X	24 33.5N	84 12.8W	84	05	10	15.0	2200	109
005	110X	24 33.4N	84 07.4W	84	05	10	15.7	1840	110
005	111X	24 33.5N	84 02.0W	84	05	10	16.4	1450	111
005	112X	24 33.5N	83 56.8W	84	05	10	17.0	1600	112
005	113X	24 33.5N	83 46.0W	84	05	10	18.2	840	113
005	114X	24 33.5N	83 35.3W	84	05	10	19.3	208	114
005	115X	24 33.5N	83 24.5W	84	05	10	20.5	65	115
005	116C	24 54.1N	83 24.6W	84	05	10	22.7	63	116
005	117C	24 54.1N	83 30.3W	84	05	10	23.6	67	117
005	118C	24 54.0N	83 35.6W	84	05	11	0.3	67	118
005	119C	24 54.0N	83 41.3W	84	05	11	1.2	76	119
005	120C	24 54.1N	83 46.9W	84	05	11	2.1	81	120
005	121C	24 54.0N	83 58.1W	84	05	11	3.6	122	121
005	122C	24 54.1N	84 05.1W	84	05	11	4.7	209	122
005	123C	24 54.0N	84 12.3W	84	05	11	5.7	400	123
005	124C	24 53.9N	84 17.6W	84	05	11	6.8	630	124
005	125C	24 53.9N	84 23.1W	84	05	11	8.3	1620	125
005	126C	24 54.0N	84 30.0W	84	05	11	10.4	2500	126
005	127C	24 53.8N	84 35.3W	84	05	11	11.9	3400	127
005	128C	24 54.0N	84 40.7W	84	05	11	14.5	3400	128
005	129C	24 54.0N	84 46.2W	84	05	11	16.1	3384	129
005	130X	25 14.0N	84 46.5W	84	05	11	20.5	3360	130
005	131X	25 14.0N	84 41.1W	84	05	11	21.7	2080	131

STATION SUMMARY [CONTINUED]

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
005	132C	25 14.1N	84 35.6W	84	05	11	22.4	1580	132
005	133C	25 14.2N	84 30.2W	84	05	12	0.6	1188	133
005	134X	25 14.0N	84 24.9W	84	05	12	2.3	450	134
005	136C	25 14.3N	84 19.1W	84	05	12	3.0	277	136
005	137X	25 14.0N	84 14.5W	84	05	12	4.2	160	137
005	138C	25 14.1N	84 09.1W	84	05	12	4.8	145	138
005	139X	25 14.0N	84 04.0W	84	05	12	5.7	137	139
005	140X	25 14.0N	83 58.5W	84	05	12	6.3	125	140
005	141C	25 14.0N	83 53.3W	84	05	12	6.8	118	141
005	142X	25 14.0N	83 48.2W	84	05	12	7.6	104	142
005	143X	25 14.0N	83 42.9W	84	05	12	8.1	84	143
005	144C	25 14.0N	83 37.2W	84	05	12	8.7	72	144
005	145X	25 14.0N	83 32.4W	84	05	12	9.5	72	145
005	146C	25 14.0N	83 26.8W	84	05	12	10.0	67	146
005	147X	25 28.9N	83 26.7W	84	05	12	11.9	66	147
005	148X	25 44.0N	83 26.1W	84	05	12	13.5	65	148
005	149X	25 59.4N	83 26.2W	84	05	12	15.3	61	149
005	150C	26 09.6N	83 26.1W	84	05	12	16.5	57	150
005	151X	26 07.9N	83 31.3W	84	05	12	17.3	63	151
005	152C	26 06.3N	83 36.4W	84	05	12	17.8	67	152
005	153X	26 04.5N	83 41.4W	84	05	12	18.7	70	153
005	154C	26 02.8N	83 47.0W	84	05	12	19.2	92	154
005	155X	26 00.8N	83 52.2W	84	05	12	20.2	109	155
005	156X	25 58.9N	83 57.3W	84	05	12	20.8	132	156
005	157C	25 57.0N	84 02.8W	84	05	12	21.3	143	157
005	158X	25 55.2N	84 08.3W	84	05	12	22.4	159	158
005	159C	25 53.5N	84 13.8W	84	05	12	23.0	162	159
005	160X	25 51.7N	84 19.3W	84	05	13	0.5	182	160
005	161C	25 49.8N	84 24.4W	84	05	13	1.1	209	161
005	162X	25 47.9N	84 29.8W	84	05	13	2.2	232	162
005	163C	25 46.3N	84 34.9W	84	05	13	2.8	401	163
005	164C	25 44.5N	84 40.1W	84	05	13	4.1	820	164
005	165C	25 42.4N	84 46.3W	84	05	13	5.5	1230	165
005	166X	25 40.7N	84 51.4W	84	05	13	7.2	1580	166
005	167C	25 38.5N	84 57.0W	84	05	13	7.9	3325	167
005	168X	25 36.9N	85 02.1W	84	05	13	9.8	3320	168
005	169C	25 35.3N	85 07.2W	84	05	13	10.6	3300	169
005	170X	25 24.0N	84 57.0W	84	05	13	13.3	3360	170
005	171X	25 24.9N	84 51.5W	84	05	13	14.0	3336	171
005	172X	25 26.2N	84 45.8W	84	05	13	14.5	1920	172
005	173X	25 27.6N	84 40.3W	84	05	13	15.1	1400	173
005	174X	25 28.5N	84 35.1W	84	05	13	15.6	1060	174
005	175X	25 29.0N	84 29.4W	84	05	13	16.2	415	175
005	176X	25 30.3N	84 24.4W	84	05	13	16.7	220	176
005	177X	25 31.4N	84 18.7W	84	05	13	17.3	162	177
005	178X	25 32.5N	84 13.2W	84	05	13	17.9	158	178
005	179X	25 33.7N	84 08.0W	84	05	13	18.4	148	179
005	180X	25 34.9N	84 02.6W	84	05	13	19.0	142	180
005	181X	25 36.0N	83 57.5W	84	05	13	19.5	130	181
005	182X	25 37.0N	83 52.1W	84	05	13	20.0	117	182
005	183X	25 38.0N	83 46.9W	84	05	13	20.6	101	183
005	184X	25 39.0N	83 42.0W	84	05	13	21.1	87	184
005	185X	25 40.0N	83 36.4W	84	05	13	21.6	75	185
005	186X	25 41.0N	83 31.3W	84	05	13	22.1	68	186
005	187X	25 42.2N	83 26.1W	84	05	13	22.6	63	187
005	188X	25 43.1N	83 20.6W	84	05	13	23.3	59	188
005	189C	25 14.0N	83 15.0W	84	05	14	2.6	59	189
005	190X	25 14.0N	83 23.8W	84	05	14	3.8	63	190
005	191C	25 14.1N	83 32.1W	84	05	14	4.6	70	191
005	192X	25 14.0N	83 40.3W	84	05	14	5.6	77	192
005	193C	25 14.0N	83 48.5W	84	05	14	6.5	105	193
005	194X	25 14.0N	83 57.3W	84	05	14	7.6	124	194
005	195C	25 14.1N	84 05.5W	84	05	14	8.3	139	195

STATION SUMMARY [CONTINUED]

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
005	196X	25 14.2N	84 11.4W	84	05	14	9.4	151	196
005	197C	25 14.0N	84 16.7W	84	05	14	9.9	195	197
005	198X	25 14.1N	84 22.3W	84	05	14	11.0	370	198
005	199C	25 14.0N	84 27.7W	84	05	14	11.5	676	199
005	200X	25 14.1N	84 33.7W	84	05	14	12.9	1430	200
005	201C	25 14.0N	84 39.0W	84	05	14	13.6	2160	201
005	202C	25 14.0N	84 44.7W	84	05	14	15.6	3280	202
005	203X	25 14.0N	84 50.0W	84	05	14	17.4	3340	203
005	204C	25 13.8N	84 55.7W	84	05	14	18.1	3340	204
005	205C	25 24.0N	84 57.0W	84	05	14	21.4	3335	205
005	206X	25 25.0N	84 51.9W	84	05	14	23.4	3330	206
005	207C	25 25.8N	84 49.0W	84	05	15	0.1	3340	207
005	208X	25 26.2N	84 45.7W	84	05	15	1.5	1910	208
005	209C	25 27.6N	84 40.2W	84	05	15	2.1	1364	209
005	210X	25 28.5N	84 35.1W	84	05	15	3.8	980	210
005	211C	25 29.1N	84 29.3W	84	05	15	4.5	414	211
005	212X	25 30.3N	84 25.0W	84	05	15	5.6	248	212
005	213C	25 31.2N	84 20.0W	84	05	15	6.1	154	213
005	214X	25 32.5N	84 14.7W	84	05	15	7.1	161	214
005	215C	25 33.3N	84 08.9W	84	05	15	7.7	152	215
005	216X	25 34.9N	84 03.4W	84	05	15	8.7	142	216
005	217C	25 36.0N	83 57.1W	84	05	15	9.4	128	217
005	218X	25 37.0N	83 52.0W	84	05	15	10.6	116	218
005	219C	25 38.1N	83 46.9W	84	05	15	11.2	101	219
005	220X	25 39.0N	83 42.0W	84	05	15	12.1	87	220
005	221C	25 40.0N	83 36.4W	84	05	15	12.7	74	221
005	222X	25 41.5N	83 28.6W	84	05	15	13.9	66	222
005	223C	25 43.0N	83 20.4W	84	05	15	14.7	60	223
005	224C	25 14.0N	83 40.3W	84	05	15	19.1	76	224
005	225X	25 14.0N	83 48.6W	84	05	15	20.5	105	225
005	226X	25 14.0N	83 57.3W	84	05	15	21.3	124	226
005	227C	25 14.1N	84 05.5W	84	05	15	22.1	139	227
005	228X	25 14.1N	84 11.5W	84	05	15	23.0	150	228
005	229C	25 14.1N	84 16.7W	84	05	15	23.5	196	229
005	230X	25 14.0N	84 22.3W	84	05	16	0.6	375	230
005	231C	25 14.1N	84 27.7W	84	05	16	1.2	665	231
005	232X	25 14.0N	84 33.7W	84	05	16	2.7	1425	232
005	233C	25 14.1N	84 39.0W	84	05	16	3.3	2200	233
005	234X	25 14.0N	84 44.8W	84	05	16	4.9	3280	234
005	235C	25 14.0N	84 50.0W	84	05	16	5.5	3360	235
005	236C	25 14.0N	84 55.7W	84	05	16	7.1	3360	236
005	237X	25 13.6N	84 54.3W	84	05	16	8.7	3360	237
005	238X	25 14.0N	85 01.6W	84	05	16	9.7	3330	238
005	239X	25 23.0N	85 02.2W	84	05	16	12.0	3320	239
005	240X	25 24.1N	84 57.0W	84	05	16	12.7	3336	240
005	241X	25 23.9N	84 57.9W	84	05	16	13.0	3336	241
005	242X	25 25.0N	84 51.8W	84	05	16	13.8	3344	242
005	243X	25 25.9N	84 49.0W	84	05	16	14.1	3344	243
005	244X	25 26.2N	84 45.7W	84	05	16	14.4	1980	244
005	245X	25 27.6N	84 40.2W	84	05	16	15.0	1340	245
005	246X	25 28.5N	84 35.0W	84	05	16	15.6	1040	246
005	247X	25 29.1N	84 29.2W	84	05	16	16.2	405	247
005	248X	25 30.3N	84 25.0W	84	05	16	16.6	247	248
005	249X	25 31.2N	84 20.0W	84	05	16	17.1	155	249
005	250X	25 32.5N	84 14.6W	84	05	16	17.8	161	250
005	251X	24 34.2N	84 38.5W	84	05	17	2.1	3440	251
005	252X	24 34.8N	84 28.9W	84	05	17	3.0	3384	252
005	253X	24 34.9N	84 25.1W	84	05	17	3.3	3384	253
005	254C	23 13.4N	85 01.0W	84	05	17	10.8	2250	254
005	255X	23 18.2N	84 51.9W	84	05	17	13.6	2280	255
005	256X	23 21.9N	84 47.0W	84	05	17	14.4	2280	256
005	257C	23 24.0N	84 42.0W	84	05	17	15.1	2440	257
005	258X	23 27.8N	84 37.0W	84	05	17	17.0	2640	258

STATION SUMMARY (CONTINUED)

CRUISE	STATION	LATITUDE	LONGITUDE	YR	MN	DY	HOUR GMT	DEPTH M	CONSEC NUMBER
005	259X	23 30.7N	84 31.9W	84	05	17	17.7	2860	259
005	260X	23 33.5N	84 27.5W	84	05	17	18.5	3080	260
005	261C	23 36.0N	84 22.9W	84	05	17	19.3	3375	261
005	262X	23 39.0N	84 18.9W	84	05	17	21.3	2875	262
005	263X	23 41.7N	84 13.9W	84	05	17	22.2	2540	263
005	264X	23 47.3N	84 05.2W	84	05	17	23.6	2450	264
005	265X	23 50.1N	83 55.9W	84	05	18	1.0	2450	265
005	266X	23 58.3N	83 46.8W	84	05	18	2.4	1580	266
005	267X	24 04.0N	83 37.8W	84	05	18	3.6	1160	267
005	268X	24 09.3N	83 28.5W	84	05	18	4.9	940	268

APPENDIX B

CRUISE SUMMARY

CRUISE SUMMARY
R/V CAPE FLORIDA CRUISE
(CF-84-05)
4-19 May 1984

		(EDT)	
Thursday	3 May	2200	• All scientific party members present.
Friday	4 May	0800	• Departure delayed while barge being moved.
		0930	• Barge moved; ship underway with: • Jim Singer (SAI-Chief Scientist) • Bill Chandler (Skidaway) • Jerry Miller (Skidaway) • Kathy Bush (Skidaway) • Tom Vetter (Skidaway) • Sue Banahan (Independent) • Craig Boyd (Independent) • Robert Guest (Independent) • Martin Garvey (Independent) • Jene Roberts (Independent)
		1900	• ETA for region WSW of Florida Keys is 1045 on Saturday.
Saturday	5 May	1150	• Begin Section I off the Keys (NE to SW).
		1530	• Arrive Station 4C; hydraulics out to gallows; wait on repairs.
		1620	• Do XBT drop at Station 4 and proceed on to Station 5 while repairs are being made.
		1730	• Arrive Station 5; hydraulics thought to be fixed, but not so.
		1820	• Do XBT drop at Station 5 and proceed on alternating T-7 (760 m) and T-5 (1830 m) probes.
		2030	• Hydraulics repaired.
Sunday	6 May	0330	• Complete Section I at Station 12C with a CTD cast in the Loop Current; steam east to start of Section II.
		1045	• Complete Station 14X; change course to make SE to NW line (Section II).
		1400	• stop for CTD cast in center of doming region at Station 17C.
		1530	• Continue along line.
		2150	• Complete Section 11 with a CTD cast at Station 22C; steaming for Mooring G.

Monday	7 May	0700	• Begin XBT mapping run along mooring line (Section III) with Station 24X.
		1430	• Receive good image from Fred Vukovich detailing filament (eddy) and planned cruise tracks for the R/V BELLOWS; send telecopy of vertical temperature structure along Section 11 to Fred.
		1433	• Pass through cold nose of filament (eddy) along mooring line at Station 31X.
		2225	• Complete XBT run along mooring line with Station 40X. Steam NNW to begin next line (Section IV) through filament.
Tuesday	8 May	0030	• Begin Section IV with Station 41X steaming WSW parallel to Section 111.
		1455	• Complete Section IV at Station 58C; steam NNW to begin Section V.
		1820	• Make contact with R/V BELLOWS; they had just started Fred's C-D line and were steaming NE, at 26°36'N 85°25'W.
		1930	• Begin Section V at Station 59X steaming NE.
Wednesday	9 May	0625	• Complete Section V at Station 74C; steam SW to eddy center running Section VI.
		1130	• Complete Section VI-A and Map I at Station 80X; begin Section VI-B steaming south looking for nose of eddy to set up Time Series I.
		1412	• Complete Section VI-B at Station 84X as running into warmer water; steam east to begin Section VI-C.
		1442	• Begin Section VI-C at Station 85X; again steaming south.
		1655	• Complete Section VI-C at Station 88x; steam east to begin Section VII.
		1723	• Begin Section VII at Station 89X, steaming west back through station 88x .
		1800	• Contact R/V BELLOWS; they are near NE end of C-D line at 27°40'N 84°38'W.
		2102	• Complete Section VII at Station 92X; have found warmer 26°C water both east and west along this line; change course and begin Section VI-D steaming south again still looking for nose of eddy.

Thursday	10 May	0115	• Complete Section VI-D at Station 96X; change course and begin Section VIII steaming west.
		0518	• Complete Section VIII at Station 102X in Loop Current; plan for this to be the northern line for a time series box with two east-west lines 20 NM apart; steam south.
		0654	• Begin Section IX at Station 103X steaming east.
		1635	• Complete Section IX at Station 115X; steam north *to* repeat Section VIII with CTD casts farther onto shelf.
		1800	• Contact R/V BELLOWS; they are at 26°55'N 84°27'W on revised E-F line steaming SW.
		1844	• Begin Section X (a repeat of Section VIII) at Station 116C.
Friday	11 May	1310	• Complete Section X at Station 129C; unable to detect eddy nose; steam north to begin Section XI.
		1415	• Receive image from Fred Vukovich which suggests filament may have separated from eddy (eddy gone); therefore, plan to run Section XI as planned and then re-run the mooring line to the north as will have generated a second mapping.
		1635	• Begin Section XI at Station 130X.
		1800	• Contact R/V BELLOWS; they are at 25°30'N 85°40'W on revised G-H line, steaming east.
Saturday	12 May	0625	• Complete Section XI at Station 146C; steam north, dropping XBTS (Section XII.)
		0930	• Contact R/V Bellows; they are at 25°30'N 84°04'W steaming east on G-H line.
		1230	• Begin Section XIII at Station 150C. Steaming WSW along mooring line.
Sunday	13 May	0810	• Complete Section XIII at Station 169C (Complete MAP II); steam SSW to begin Section XIV.
		0920	• Begin Time Series on Section XIV at Station 170X; steam ENE.
		1921	• Complete Section XIV at Station 188X; steam south.
		2240	• Begin Section XV at Station 189C; steam west.

Monday	14 May	1517	• Complete Section XV at Station 204C; steam north.
		1727	• Begin Section XVI at Station 205C; steam ENE.
Tuesday	15 May	1125	• Complete Section XVI at Station 223C; steam Sw to begin next section.
		1445	• Receive telecopy of AXBT survey map from Van Waddell.
		1508	• Begin Section XVII at Station 224C; steam west.
		1535	• Swim call.
		1550	• End swim call; steam west along line.
Wednesday	16 May	0547	• Complete Section XVII at Station 238X; steam north.
		0804	• Begin Section XVIII at Station 239X; steam ENE on final Time Series run.
		1348	• Complete Section XVIII at Station 250X (complete Time Series); steam SW tracking edge of Loop Current down to region off the Florida Keys.
		2211	• Begin Section XIX at Station 251X; steam east.
		2322	• Complete Section XIX at Station 253X; steam Ssw to begin last section.
Thursday	17 May	0653	• Begin Section XX at Station 254C; steam NE.
		1621	• Weather deteriorating and losing time, plan to finish line with XBT'S. • Winds E @ 20 knots • Seas 4-8 ft.
Friday	18 May	0050	• Compete Section XX at Station 268X; steam for Miami. • Winds E @ 21 knots. • Seas 8-13 ft.
Saturday	19 May	0815	• Arrive Miami.
		1045	• Ship unloaded; scientific party departs.

APPENDIX C

BRIDGE LOG

D = Sh., Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 05 MAY 1984
E 06 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
								deg	code	deg				
B	X1	63080.2	13667.4	23 37.05 83 37.21	05	1152		145	3	145	13	1015.3	80	X 2
B	2X	63104.8	13633.6	24 26.9 83 45.05	05	1303		145	3	140	12	1015.0	80	X 2
B	3X	63125.3	13601.8	24-19.41 83-52.05	05	1406		140	3	135	12	1014.5	80	X 2
E	—							deg	code	deg				X
B	C-4	63148.2	13567.6	24-11.97 84-00.02	MAY 05	1522		140	3	135	10	1013.8	80	X 1
E	ABORTED: HYDRAULICS PROBLEM							deg	code	deg				X
	C4	63168.5	13536.0	24-00.00 84-07.32	05	1733		135	2	095	11	1012.9	80	X 1
	X5	—	—	24-05.04 84-07.70	"	1819		130	3	112	11	1013.5	81	X 2
B	X6	63188.6	13503.6	23-50.02 84-14.88	"	1919		130	3	112	13	1013.7	80	X
E	X7	63209.4	13468.9	23-50.0 84-22.9	"	2023	—	125	3	125	12	1014.0	80	X 1
B	X8	63230.5	13435.1	23-43.0 84-31.2	"	2123	—	125	3	125	12	1014.0	79	X 1
E	X9	63247.1	13404.6	23-35.6 84-38.3	"	2220	—	135	3	135	10	1015.0	79	X 1
B	X10	63265.0	13371.8	23-27.1 84-46.2	"	2319	—	135	3	135	10	1015.0	79	X 1
E	X11	63275.9	13342.4	23-20.5 84-52.34	MAY 06	0019	—	160	4	155	14	1015.6	80	X 1
B	12C	63297.5	13308.5	[illegible]	06	0140		160	4	155	16	1015.9	80	X 1
E		63297.1	13309.1	23-09.52 85-00.34	06	0332		150	5	140	15	1015.0	80	X 2
B	13X	63173.1	13452.3	23-22.6 84-16.9	06	0807		135	3	135	13	1016.0	80	X 1
E	14X	63072.0	13553.6	23-30.0 83-44.0	06	1038		090	4	090	15	1017.1	80	X 1

D = Sh., Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 06 MAY 1984
E 07 May 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	TJm-3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	15X	63098.7	13545.3	23-37.9 83-50.85	06	1157		deg 100	code 4	deg 100	16	1017.3	80	X 1
E	16X	63125.7	13536.0	23-45.36 83-57.86	06	1256		deg 100	code 4	deg 125	13	1017	80	X 1
B	17C	63153.1	13527.0	23-53.35 84-09.8	06	1401		deg 100	code 3	deg 090	13	1016.8	80	X 1
E	17C	63158.5	13523.6	23-54.09 84-06.76	06	1514		deg 100	code 3	deg 090	13	1016.8	80	X 1
B	18X	63181.6	13515.6	24-00.54 84-10.08	06	1608		deg 090	code 3	deg 090	13	1015.7	80	X 0
E	19X	63206.8	13507.5	24-08.00 84-18.32	06	1711		deg 090	code 3	deg 090	13	1015.9	80	X 0
	20X	63235.2	13496.3	24-15.34 84-25.38	06	1815		deg 105	code 3	deg 095	15	1015.7	80	X 0
	21X	63261.6	13485.6	24-22.45 84-31.97	06	1919		deg 105	code 3	deg 095	15	1015.7	80	X 0
B	22C	63290.3	13472.8	24-29.6 84-39.2	06	2038	–	deg 120	code 4	deg 120	14	1016.1	79	X 1
E	22C	63293.4	13463.7	24-27.0 84-40.8	06	2153	–	deg 125	code 5	deg 125	18	1017.1	79	X 1
B	23X	63389.1	13428.8	24-55.0 85-03.0	07	0216		deg 110	code 4	deg 110	20	1017.2	79	X 0
E	24X	63519.4	13362.4	25-29.03 85-34.01	07	0700		deg 125	code 4	deg 135	15	1016.6	79	X 1
B	25X	63491.4	13409.8	25-32.5 85-23.4	07	0811	–	deg 120	code 4	deg 120	17	1017.0	79	X 1
E	26X	63462.9	13455.6	25-35.9 85-13.0	07	0918	–	deg 135	code 4	deg 135	18	1017.5	80	X 1
B	27X	63433.1	13501.4	25 39.5 85-02.5	07	1030	–	deg 135	code 4	deg 135	20	1018.3	80	X 1
E	28X	63404.7	13543.1	25-42.9 84-52.9	07	1139		deg 135	code 4	deg 135	20	1019.2	80	X 1
B	29X	63369.3	13587.9	25-46.18 84-41.71	07	1301		deg 135	code 4	deg 145	18	1019.4	80	X 1
E	30X	63334.7	13633.4	25-49.50 84-31.24	07	1413		deg 120	code u	deg 130	16	1018.5	80	X 1

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B MAY 7 1984
E MAY 8 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	wave Dir,	-mo- 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	31X	63324.4	13645.4	25-50.31 84-28.22	07	1434		deg 120	code 4	deg 130	16	1018.6	80	X 1
E	32X	63298.0	13677.0	25-52.87 84-26.58	07	1522		deg 120	code 4	deg 113	16	1018.2	80	X 1
B	33X	63276.5	13702.1	25-55.08 84-14.39	07	1558		deg 120	code 4	deg 115	16	1017.7	78	X 1
E	34X	63248.3	13733.4	25-57.77 84-06.58	07	1644		deg 113	code 4	deg 132	11	1017.6	78	X 1
B	35X	63223.7	13758.8	25-59.80 84-00.01	07	1723		deg 115	code 3	deg 125	12	1017.7	79	X 1
E	36X	63185.0	13796.9	26-03.00 83-49.99	07	1823		deg 120	code 4	deg 130	12	1017.6	79	X 1
	37X	63142.6	13836.7	26-06.39 83-39.61	07	1924		deg 123	code 3	deg 125	11	1017.5	79	X 1
	38X	63101.2	13873.2	26-09.8 83-29.4	07	2022		deg 135	code 3	deg 135	10	1017.6	78	X 1
B	39X	63060.0	13908.1	26-13.1 83-19.2	07	2123		deg 135	code 3	deg 135	9	1017.6	78	X 1
E	40X	63012.2	13943.2	26-16.4 83-09.0	07	2221		deg 075	code 2-	deg 075	7	1017.8	78	X 1
B	41X	63059.8	13970.1	26-37.07 83-17.05	08	0029		deg 135	code 2	deg 135	10	1017.5	76	X 1
E	42X	63101.1	13931.7	26-33.27 83-27.56	08	0135		deg 135	code 2	deg 135	12	1017.5	78	X 1
B	43C	63157.4	13894.0	26-30.0 83-37.9	08	0241		deg 135	code 2	deg 150	14	1017.5	77	X 1
E	43C	63152.9	13894.6	26-30.59 83-37.77	08	0250		deg 135	code 2	deg 150	14	1017.5	77	X 1
B	44X	63196.5	13854.9	26-26.77 83-48.35	08	0407		deg	code 2	deg 160	14	1017.2	77	X 1
E	45X	63217.5	13834.4	26-24.78 83-53.58	08	0442		deg	code 2	deg 150	14	1017.2	77	X 1
B	46X	63238.5	13813.6	26-22.22 83-58.86	08	0514		deg	code 2	deg 131	15	1017.2	77	X 1
E	47X	63259.4	13793.4	26-21.82 84-04.10	08	0545		deg	code 2	deg 127	18	1017.4	77	X 1

D = Sl... Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 8 MAY 1984
E 08 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE N LONGITUDE W	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	48X	63279.0	13772.7	26-09.20 84-09.20	08	0616		—	code 2	deg 124	15	1017.7	77	X 1
B	49C	63296.5	13752.6	26-14.01 84-14.01	08	0645		deg 135	code 3	deg 131	13	1017.9	77	X 2
B	-	63294.4	13755.7	26-18.75 84-13.58	08	0717		deg 125	code 3	deg 122	12	1018.0	77	X 1
E	50X	63314.7	13730.7	26-16.91 84-19.0	08	0759		deg 180	code 3	deg 180	13	1018.0	77	X 1
B	51X	63335.5	13709.6	26-15.5 84-24.4	08	0830		deg 180	code 3	deg 180	13	1018.0	77	X 1
E								deg	code	deg				X
	52C	63344.6	13698.1	26-14.3 84-27.2	08	0918	—	deg 160	code 3	deg 160	12	1018.1	78	X 1
-	52C	63343.0	13698.4	26-13.9 84-24.9	08	0945	—	deg 160	code 3	deg 160	12	1011.0	78	X 1
B	53X	63352.9	13688.0	26-13.6 84-29.5	08	1009	—	deg 160	code 3	deg 160	13	1017.8	78	X 1
E	54X	63370.1	13666.9	26-12.1 84-34.5	08	1041	—	deg 160	code 3	deg 130	11	1017.8	78	X 1
B	55X	63387.7	13645.7	26-10.6 84-39.6	08	1114	—	deg 160	code 3	deg 130	11	1017.7	78	X 1
E	56X	63405.2	13621.5	26-08.83 84-45.03	08	1152		deg 150	code 3	deg 130	12	1017.7	80	X 1
B	57X	63420.4	13600.4	26-07.06 84-49.79	08	1231		deg 150	code 3	deg 130	12	1017.7	80	X 2
E	58C	63436.3	13577.0	26-05.14 84-54.96	08	1316		deg 150	code 3	deg 125	14	1016.9	80	X 2
B	58C	63423.6	13577.6	26-00.92 84-57.14	08	1452		deg 150	code 4	deg [illegible]	13	1016.2	80	X 2
E	59X	63522.0	13534.4	26-01.71 85-13.98	08	1934		deg 120	code 2	deg 246	04	1014.8	79	X 2
B	60X	63512.5	13556.9	26-25.0 85-10.0	08	2011		deg 135	code 4	deg 135	06	1014.2	78	X 1
E								deg	code	deg				

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 08 MAY 1984
E 09 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	61 C	63503.5	13582.5	26-29.1 85-[illegible]	08	2055	—	deg 135	code 4	deg [illegible]	[illegible]	1015.[illegible]	77	X 1
E	61 C	63598.8	13584.8	26-28.3 85-04.8	08	2147	—	deg —	code 1	deg LIGHT AIR		1015.1	77	X 1
B	62 X	63494.5	13603.6	26-32.0 85-02.3	08	2224	—	deg —	code 1	deg LIGHT AIR		1015.3	76	X 1
E	63 X	63484.4	13628.0	26-35.6 84-58.2	08	2259	—	deg —	code 1	deg LIGHT AIR		1015.5	76	X 1
B	64X (missed) 65X	63494.2	13604.1	26-32.2 85-02.0	08	2339		deg —	code 1	deg LIGHT AIR		1015.5	76	X 1
E	66 X	63475.1	13650.6	26-37.0 84-54.[illegible]	09	0103	—	deg —	code —	deg 335	6	1015.7	77	X 1
	67 C	63465.5	13671.9	26-42.04 [illegible]	09	0137		deg —	code —	deg 335	6	1015.7	77	X 1
	67 X	63465.9	13671.5	26-42.08 [illegible]	09	0213		deg —	code —	deg 335	6	1015.0	77	X
B	68 X	63415.1	13695.7	26-45.6 84-46.[illegible]	09	0248		deg E	code 2	deg 325	10	1015.0	77	X 1
E	69 X	63445.4	13720.5	26-49.81 84-42.98	09	0321		deg E	code 2	deg 320	10	1014.9	77	X 1
B	70 X	63433.8	13743.4	26-52.93 84-38.98	09	0352		deg E	code 2	deg 320	10	1014.8	77	X 1
E	71 X	63422.1	13766.0	26-56.03 84-35.04	09	0425		deg —	code 3	deg 344	19	1014.8	76	X 1
B	72 X	63411.0	13789.3	26-[illegible] 84-31.30	09	0459		deg —	code 3	deg 353	21	1014.8	76	X 1
E	73 X	63397.2	13813.8	27-03.00 84-26.98	09	0534		deg —	code 3	deg 358	18	1014.9	75	X 2
B	74 C	63387.0	13831.9	27-05.62 84-23.87	09	0602		deg —	code 3	deg 003	21	1015.1	75	X 2
E	"	63389.1	13830.1	27-05.61 84-24.35	09	0622		deg —	code 3	deg 011	20	1015.8	74	X 2
B	75 X	63379.4	13802.4	26-55.50 84-24.81	09	0728		deg 000	code 3	deg 006	25	1016.5	73	X 2
E	76 X	63373.2	13874.4	26-45.9 84-25.9	09	0825		deg 340	code 4	deg 240	18	1017.0	72	X 2

D = Sh., Drift
C = CID B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF- 8405 DATES: 09 MAY 1984

XBT/CTD/CURRENT PROFILE LOG

E 09 MAY 1984

Page 4. 21

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	77 X	63367.2	13747.6	26-36.3 84-27.1	09	0925	–	deg 020	4	deg 020	19	1017.0	73	X 1
E	78X	63361.1	13720.6	26-26.4 84-28.2	09	1029	–	deg 020	code 4	deg 020	20	1017.8	74	X 1
B	79 X	63355.7	13695.3	26-16.8 84-29.4	09	1129	–	deg 020	code 4	deg 020	20	1017.8	74	X 1
E	80 Y	63353.7	13687.2	26-13.52 84-29.8	09	1150	–	deg 020	code 4	deg 005	25	1017.9	75	X 2
B	81 X	63333.3	13677.0	26-03.98 84-27.00	09	1250		deg 010	code 4	deg 005	25	1017.6	7.5	X 2
E	82X (BAD)	63316.0	13664.3	25 54.18 84 27.7	09	1349		deg 350	code 4	deg 005	25	1017.5	75	X 2
B	83 X	63315.5	13667.9	25-53.88 84-24.7	09	1353		deg 350	code 4	deg 005	25	"	75	X 2
	84 X	63309.0	13661.3	25-51.00 84-24.00	09	1412		deg 000	code 4	deg 010	25	1017.6	75	X 2
B	85 X	63291.8	13676.8	25-50.9 84-19.39	09	1441		deg 000	code 4	deg 020	18	1017.0	74	X 2
E	86 X	63279.2	13675.5	25-46.50 84-17.11	09	1529		deg 335	code 4	deg 010	17	1016.9	74	X 2
B	87 X	63268.8	13672.5	25-41.96 84-15.41	09	1559		deg 335	code 4	deg 015	17	1016.5	74	X 2
E	88 X	63247.2	13667.8	25-33.16 84-11.66	09	1655		deg 350	code 4	deg 007	16	1016.2	76	X 2
B	89 X	63231.8	13680.7	25-33.06 84-07.66	09	1723		deg 350	code 4	deg 010	16	1016.0	76	X 1
E	90 X	63304.3	13616.3	25-33.08 84-27.12	09	1920		deg 000	code 4	deg 007	15	1016.7	73	X 2
B	91 X.	63304.3	13615.6	25-32.83 84-27.19	09	1943		deg 000	code 4	deg 007	15	1016.8	73	X 2
E	92 X	63259.6	13657.0	25-33.2 84-15.1	09	2103		deg 000	code 4	deg 000	15	1017.1	73	X 1
B	93 X	63247.0	13643.7	25-23.9 84-13.7	09	2202		deg 000	code 4	deg 000	15	1017.3	73	X 1
E	94 X	63232.3	13631.9	25-14.0 84-11.8	09	2304		deg 020	code 4	deg 020	15	1017.6	73	X 1

D; S... Drift
C CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 10 MAY 84
E 10 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	95X	63273.0	13616.1	25-04.09 84-11.31	10	0009		deg 015	code 4	deg 020	17	1017.9	73	X 1
E	96X	63218.4	13596.6	24-53.97 84-12.17	10	0115		deg 355	code 4	deg 025	16	1017.9	73	X 1
B	97X	63238.5	13578.2	24-54.00 84-18.07	10	0152		deg 350	code 4	deg 015	17	1017.1	73	X 1
E	98X	63259.6	13559.0	24-53.94 84-24.02	10	0278		deg 360	code 4	deg 015	13	1017.0	73	X 1
B	99X	63280.1	13539.5	24-53.97 84-30.04	10	0309X		deg 000	code 4	deg 030	16	1017.0	74	X 1
E	100X	63297.7	13522.3	24-53.96 84-35.26	10	0346		deg 000	code 4	deg 030	16	1016.9	77	X 1
	101X	63335.2	13484.2	24-53.88 84-46.33	10	0459		deg —	code —	deg 030	18	1016.4	73	X 1
	102X	63335.2	13482.5	24-53.22 84-46.81	10	0519		deg —	code —	deg 038	15	1016.3	73	X 1
B	103X	63315.4	13455.4	24-33.45 84-46.04	10	0659		deg 025	code 3	deg 043	17	1017.0	73	X 1
E	104X	63297.6	13477.1	24-33.43 84-40.50	10	0743		deg 035	code 3	deg 041	13	1017.2	74	X 1
B	105X	63279.7	13422.1	24-33.5 84-35.0	10	0819	—	deg 045	code 4	deg 045	17	1017.4	74	X 1
E	106X	63261.7	13509.8	24-33.5 84-29.5	10	0859	—	deg 045	code 4	deg 045	17	1017.3	75	X 1
B	107X	63243.8	13527.0	24-33.5 84-24.0	10	0946	—	deg 045	code 4	deg 045	17	1017.8	75	X 1
E	108X	63224.9	13544.5	24-33.5 84-18.5	10	1028	—	deg 045	code 4	deg 045	17	1018.0	75	X 1
B	109X	63206.2	13561.6	24-33.5 84-13.0	10	1104	—	deg 045	code 4	deg 045	17	1018.1	76	X 1
E	110X	63187.3	13578.3	24-33.5 84-07.5	10	1143	—	deg 045	code 4	deg 045	17	1018.1	76	X 1
B	111X	63168.6	13594.8	24-33.51 84-01.96	10	1224	—	deg 020	code 4	deg 050	15	1018.1	76	X 1
E	112X	63150.1	13610.3	24-33.5 83-56.76	10	1300		deg 030	code 4	deg 050	16	1017.9	76	X 1

D = Sh. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 87 05

XBT/CTD/CURRENT PROFILE LOG

DATES: B 10 MAY 84
E 11 May 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar, Pres.	Air Temp.	WMO 4501 Weather	
B	113X	63111.6	13641.6	24-33.51 83-45.98	10	1412	—	deg N	code 4	deg 040	18	1017.5	75	X	1
E	114X	63072.7	13671.8	24-33.49 83-35.28	10	1521	—	deg 020	code 4	deg 044	18	1017.2	75	X	1
B	115X	63033.0	13701.6	24-33.52 83-24.52	10	1636	—	deg 050	code 4	deg 042	15	1016.9	75	X	1
B	116C	63042.5	13736.7	24-54.13 83-24.59	10	1845	—	deg 016	code 4	deg 035	17	1017.0	74	X	1
E	"	63043.5	13737.1	24-54.54 83-24.75	10	1902	—	deg 016	code 4	deg 035	17	1016.9	74	X	1
B	117C	63064.3	13721.1	24-54.15 83-30.28	10	1939	—	deg 020	code 4	deg 038	13	1017.0	74	X	1
	"	63064.7	13721.2	24-54.35 83-30.37	"	1947	—	deg 020	code 4	deg 038	13	1017.0	74	X	1
								deg	code	deg					
B	118C	63084.7	13706.0	24-54.1 83-35.6	10	2024	—	deg 045	code 4	deg 045	12	1017.0	74		1
E	118C	63085.0	13706.7	24-54.5 83-35.6	10	2040	—	deg 045	code 4	deg 045	12	1017.0	74	X	1
B	119C	63106.1	13689.7	24-54.1 83-41.3	10	2120	—	deg 045	code 4	deg 045	12	1017.1	74	X	1
E	119C	63106.3	13690.2	24-54.4 83-41.3	10	2130	—	deg 045	code 4	deg 045	12	1017.1	74	X	1
B	120C	63127.1	13673.6	24-54.1 83-46.9	10	2211	—	deg 045	code 4	deg 045	12	1017.1	74	X	1
E	120C	63127.2	13674.5	24-54.4 83-46.9	10	2229	—	deg 045	code 4	deg 045	12	1017.1	74	X	1
B	121C	63147.9	13640.5	24-54.1 83-58.0	10	2340	—	deg 04[redacted]	code L	deg 045	11	1017.8	73	X	1
E	121C	[illegible]	13640.9	24-54.57 [illegible]	11	0001		deg [redacted]45	co e 4	deg 045	11	1017.7	73	X	1
B	122C	63193.2	13619.0	24-54.03 84-05.04	11	0047		deg [redacted]45	co e	deg 040	8	1017.5	73	X	1
E	122C	63193.1	13619.3	24-54.29 84-05.07	11	0103		deg 045[redacted]	co e 3	deg 035	13	1017.2	74	X	1

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 8405

XBT/CTD/CURRENT PROFILE LOG

DATES; B 11 MAY
E 11 MAY

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	123C	63218.6	13596.5	24-53.97 84-12.21	11	0147	—	deg 040	code 3	deg 035	12	1017.0	74	X 0
E	123C	63219.7	13596.3	24-54.32 84-12.48	11	0217	—	deg 040	code 3	deg 035	12	1017.0	74	X 0
B	124C	63237.4	13579.7	24-53.92 84-17.56	11	0252	—	deg 030	code 3	deg 035	9	1016.9	74	X 0
E	124C	63238.0	13579.2	24-54.04 84-17.77	11	0338	—	deg 030	code 2	deg 035	9	1016.9	74	X 0
B	125C	63256.4	13561.9	24°-53.90 84°-23.11	11	0415	—	deg —	code —	deg 051	9	1016.2	74	X 0
E	125C	63256.4	13560.7	24-53.34 84-23.18	11	0531	—	deg —	code —	deg 055	12	1016.2	74	X 0
	126C	63280.4	13539.4	24-53.99 84-30.08	11	0626	—	deg	code —	deg 062	11	1016.3	74	X 1
	"	63280.6	13537.1	24-53.17 84-30.37	11	0716	—	deg 070	code 2	deg 056	14	1016.5	74	X 0
B	127C	63297.9	13521.8	24-53.7 84-35.3	11	0802	—	deg 045	code 3	deg 100	8	1017.0	74	1
E	127C	63297.5	13517.9	24-52.0 84-35.6	11	0904	—	deg 045	code 3	deg 100	10	1017.2	74	1
B	128C	63316.1	13504.1	24-54.0 84-40.7	11	1037	—	deg 045	code 3	deg 075	10	1018.0	76	X 1
E	128C	63315.5	13501.1	24-52.4 84-40.8	11	1127	—	deg 045	code 3	deg 075	10	1018.0	76	X 1
B	129C	63324.2	13485.5	24-53.96 84-46.23	11	1209	—	deg 045	code 3	deg 070	9	1018.2	76	X 1
E	129C	63333.8	13481.6	24-52.17 84-46.60	11	1307	—	deg 045	code 3	deg 070	9	1018.3	76	X 1
B	130X	63353.6	13516.4	25-14.0 84-46.5	11	1636	—	deg 085	code 2	deg 076	8	1016.6	77	X 1
E	131X	63335.6	13535.1	25-14.0 84-41.0	11	1747	—	deg 090	code 2	deg 120	9	1016.3	77	X 1
B	132C	63316.6	13554.2	25-14.0 84-35.5	11	1829	—	deg 100	code 3	deg 110	17	1016.1	77	X 2
E	"	63314.3	13550.0	25-11.6 84-35.5	11	1935	—	deg 080	code 3	deg 100	14	1016.4	77	X 2

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF - 8405

XBT/CTD/CURRENT PROFILE LOG

DATES B 11 MAY 1984
E 12 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	133C	63298.1	13572.5	25-14.2 84-30.2	11	2043	—	deg 100	code 4	deg 100	17	1016.0	76	X 1
E	133C	63298.1	13570.8	25-13.5 84-30.3	11	2141	—	deg 120	code 4	deg 120	17	1016.3	76	X 1
B	134X	63279.3	13589.8	25-14.0 84-24.9	11	2219	—	deg 120	code 4	deg 120	17	1016.3	76	X 1
E	135X	63260.8	13607.2	25-14.1 84-19.7	11	2253	—	deg 120	code 4	deg 120	17	1017.3	76	X 1
B	136C	63259.3	13608.2	25-14.3 84-19.2	11	2309	—	deg 120	code 4	deg 120	17	1017.3	76	X 1
E	136C	63260.5	13609.3	25-14.8 84-19.4	11	2341	—	deg 120	code 4	deg 120	17	1017.3	76	X 1
43	137X	63242.1	13623.7	25-14.0 84-14.5	12	0015		deg 120	code 4	deg 110	12	1017.5	76	X 1
B	138C	63222.4	13641.1	25-14.0 84-09.1	12	0052		deg 100	code 4	deg 110	12	1017.6	76	X 1
~~E~~	138C	63223.1	13641.9	25-14.6 84-09.1	12	0114		deg 100	code 4	deg 090	12	1017.5	76	X 1
E	139Y	63203.4	13657.1	25-14.0 84-04.6	12	0147		deg 100	code 4	deg 090	10	1017.2	76	X 1
B	140Y	63183.2	13673.9	25-14.0 83-58.6	12	0218		deg 100	code 4	deg 090	10	1017.1	76	X 1
E								deg	code	deg				X
B	141C	63163.8	13689.4	25-14.0 83-53.4	12	0249		deg 100	code 4	deg 090	10	1017.0	76	X 1
E	141C	63163.8	13690.9	25-14.5 83-53.2	12	0311		deg 100	code 4	deg 090	10	1017.0	77	X 1
B	142X	63143.9	13705.2	25-14.0 83-48.2	12	0339		deg 100	code 4	deg 090	10	1017.0	77	X 1
E	143X	63123.9	13720.7	25-14.0 83-42.9	12	0411		deg —	code —	deg 055	12	1016.8	76	X 2
B	144C	63101.9	13737.2	25-14.0 83-37.4	12	0444		deg —	code —	deg 063	8	1016.8	76	X 2
E	"	63101.9	13738.2	25-14.4 83-37.2	2	0504		deg —	code —	deg 065	8	1016.9	76	X 2

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF- 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 12 MAY 1984
E 12 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 450: Weather
	1													
B	145X	63083.0	13751.0	25°-14.0' 83°-32.4'	12	0534	—	deg —	code —	deg 088	13	1016.9	76	X 2
E	—							deg	code	deg				X —
B	146C	63060.8	13766.6	25°-14.0' 83°-26.7'	12	0606	—	deg —	code —	deg 104	16	1016.9	76	X 1
E	"	63060.6	13767.8	25-14.4 83-26.7	12	0623	—	deg 090	code 3	deg 093	16	1017.1	76	X 1
B	147X	63067.6	13795.6	25-28.9 83-26.7	12	0755	—	deg 090	code 4	deg 115	15	1017.9	77	X 1
E	148X	63073.0	13827.3	25-44.0 83-26.1	12	0934	—	deg 090	code 4	deg 115	15	1018.1	78	X 1
	149X	63081.9	13858.5	25-59.0 83-26.3	12	1114	—	deg 090	code 4	deg 090	15	1020.1	76	X 1
								deg	code	deg				X —
B	150C	44475.6	13881.8	26-09.2 83-26.0	12	1233		deg 090	code 3	deg 090	10	1021.0	76	X 1
E	150C	13882.0	44478.1	26-09.9 83-26.2	12	1247		deg (+	code 3	deg 090	10	1021.0	76	X 1
B	151X	13863.4	44504.7	26-07.9 83-31.2	12	1320		deg 0	code 3	deg 090	10	1021.0	77	X 1
B	152C	13845.0	44532.9	26-06.3 83-36.3	12	1352		deg 090	code 3	deg 090	7	1020.9	77	X 1
	152C	13845.0	44536.1	26-06.6 83-37.0	12	1410		deg 090	code 3	deg 090	7	1020.8	77	X 1
E	153X	13826.2	44559.2	26-04.5 83-41.3	12	1442		deg 090	code 3	deg 090	7	1020.6	78	X 1
B	154C	13805.8	44589.6	26-02.8 83-46.9	12	1518		deg 090	code 3	deg 090	7	1020.1	79	1
E	154C	13805.0	44593.5	26-03.1 83-47.4	12	1539		deg 090	code 3	deg 090	7	1019.7	79	1
B	155X	13785.5	44615.5	26-00.8 83-52.1	12	1615		deg 100	code 3	deg CALM		1019.1	80	X 1
E	156X	13765.5	44640.7	25-58.9 83-57.2	12	1648		deg 100	code 2	deg CALM		1018.8	82	X 1

&

D = Sh.. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CF- 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 12 MAY 1984
E 13 MAY 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	157C	13743.8	44668.7	25-57.0 84-02.8	12	1725	—	deg 105	code 2	deg CALM		1018.9	82	X 1
E	"	13743.3	44670.8	25-57.2 84-03.1	12	1748	—	deg 105	code 2	deg 060	12	1018.5	78	X 1
B	158X	13722.6	44694.9	25-55.2 84-08.2	12	1829	—	deg 105	code 2	deg 060	10	1018.6	78	X 1
E								deg	code	deg				
B	159C	13700.6	44722.9	25-53.5 84-12.8	12	1905	—	deg 110	code 2	deg 081	8	1018.6	79	X 0
E	"	13700.0	44725.3	25-53.1 84-14.1	12	1927	—	deg 110	code 2	deg 055	10	1018.8	79	X 0
	160X	13678.6	44748.3	25-51.8 84-19.3	12	2035	—	deg 090	code 3	deg 100	9	1018.5	78	X 1
								deg	code	deg				X
B	161C	13657.5	44772.0	25-49.1 84-24.4	12	2114	—	deg 090	code 3	deg 100	9	1019.1	76	X 1
E	161C	13654.9	44773.2	25-49.9 84-24.6	12	2140	—	deg 090	code 3	deg 100	9	1019.1	76	X 1
B	162X	13635.1	44796.1	25-47.9 84-29.8	12	2215	—	deg 090	code 3	deg 100	9	1019.1	76	X 1
								deg	code	deg				
B	163C	13614.2	44818.6	25-46.2 84-34.9	12	2253	—	deg 090	code 3	deg LIGHT AIR		1019.8	75	X 1
E	163C	13614.4	44818.8	25-46.3 84-34.9	12	2331	—	deg 090	code 3	deg LIGHT AIR		1019.8	75	X 1
B	164C	13592.4	44841.6	25-44.5 84-40.12	13	0012	—	deg 100	code 3	deg 015	8	1019.9	76	X 1
E	164C	13591.9	44840.2	25-44.2 84-40.9	13	0048	—	deg 100	code 3	deg 015	8	1019.9	76	X 1
B	165C	13566.1	44867.0	25-42.9 84-46.3	13	0133	—	deg 100	code 3	deg 010	9	1019.9	76	X 1
E	165C	13564.2	44862.2	25-41.1 84-41.1	13	0234	—	deg 100	code 3	deg 010	9	1019.5	76	X 1

D = St. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 13 MAY 84
E 13 MAY 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	166X	13544.5	44889.4	25-[illegible] 84-[illegible]	13	0313	—	deg 100	3	deg 030	12	1019.2	76	X 1
E								deg	code	deg				X
B	167C	13520.3	44912.3	25-38.8 84-57.0	13	0356	—	deg 100	code 3	deg 030	12	1019.0	76	X 1
E	167C	13517.5	44902.5	25-36.6 84-56.8	13	0457	—	deg —	code —	deg 040	16	1018.2	76	X 1
B	168X	13498.1	44932.4	25-36.9 85-02.1	13	0553	—	deg —	code —	deg 055	14	1018.1	76	X 1
E								deg	code	deg				X
	169C	13476.4	44953.2	25-33.3 85-07.2	13	0638	—	deg 100	code 2	deg 070	12	1018.7	76	X 1
	169C	[illegible]	[illegible]	25-32.8 [illegible]	[illegible]	08[illegible]	—	deg 045	code 2	deg [illegible]	15	[illegible]	76	X 1
B	170X	13495.7	44852.2	25-24.0 84-57.0	13	0920	—	deg 060	code 3	deg 060	16	1019.6	76	X 1
E	171X	13516.9	44826.5	25-24.9 84-51.5	13	1000	—	deg 060	code 3	deg 060	16	1019.6	76	X 1
B	172X	13539.1	44800.3	25-26.2 84-45.9	13	1025	—	deg 060	code 3	deg 060	17	1019.6	76	X 1
E	173X	13560.9	44775.1	25-27.6 84-40.4	13	1108	—	deg 090	code 3	deg 090	18	1020.1	78	X 1
B	174X	13580.9	[illegible]	25-28.5 84-35.0	13	1140	—	deg 090	code 3	deg 090	18	1020.1	78	X 1
E	175X	13601.0	44718.2	25-29.0 84-29.5	13	1213	—	deg 090	code 3	deg 095	16	1020.1	78	X 1
B	176X	13620.2	[illegible]	25-30.3 [illegible]	13	1244	—	deg 090	code 4	deg 090	14	1020.1	77	X 1
E	177X	13640.9	44645.7	25-31.4 [illegible]	13	1320	—	deg 090	code 4	deg 090	12	1020.1	77	X
B	178X	13661.8	44635.8	25-32.5 84-13.2	13	1356	—	deg 090	code 4	deg 090	12	1020.0	77	X 1
E	179X	13680.9	44608.8	25-33.7 [illegible]	13	1428	—	deg 075	code 4	deg 075	11	1020.0	77	X 1

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 13 MAY 84
E 14 MAY 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	180X	13700.4	44500.0	[illegible]	13	1500	—	deg 075	code 4	deg 065	11	1019.8	77	X
E	181X	13718.3	44552.9	25-35.9 83-57.5	13	1531	—	deg 070	code 3	deg 058	11	1019.1	76	X 1
B	182X	13737.0	44523.2	25-37.0 83-52.1	13	1604	—	deg 070	code 3	deg 052	9	1019.0	76	X 1
E	183X	13754.5	44494.3	25-38.0 83-47.0	13	1636	—	deg 070	code 3	deg 045	11	1018.8	76	X 1
B	184X	13771.4	44466.1	25-39.0 83-42.0	13	1707	—	deg 070	code 3	deg 050	12	1018.7	76	X 1
E	185X	13789.8	44433.7	25-40.0 83-36.4	13	1740	—	deg 070	code 3	deg 045	12	1018.2	76	X 1
	186X	13806.5	44404.0	25-41.0 83-31.3	13	1811	—	deg 059	code 3	deg 034	14	1018.2	75	X 1
	187X	13823.7	44374.2	25-42.2 83-26.2	13	1841	—	deg 055	code 3	deg 034	13	1018.3	75	X 1
B	188X	13841.0	44340.4	25-43.1 83-20.6	13	1922	—	deg 060	code 3	deg 030	13	1018.2	75	X 1
E								deg	code	deg				
B	189C	13798.1	44220.1	25-14.1 83-15.1	13	2242	—	deg	code	deg 030	13	1019.1	75	X 1
E	189C	13798.7	44220.7	25-14.0 83-15.2	13	2257	—	deg	code	deg 030	13	1019.1	75	X 1
B	190X	13775.0	44274.5	25-14 83-23.8	13	2349	—	deg 030	code 3	deg 030	13	1019.5	75	X 1
E								deg	code	deg				X
B	191C	13752.4	44324.6	25-14.0 83-31.9	14	0037	—	deg 030	code 3	deg 030	13	1019.4	76	X 1
E	191C	13751.7	44327.2	25-14.2 83-32.3	14	0053	—	deg 030	code 3	deg 030	13	1019.2	76	X 1
B	192X	13728.4	44375.9	25-14.0 83-40.2	14	0141	—	deg 010	code 3	deg 035	12	1018.9	76	X 1
E								deg	code	deg				X

D = S. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE EF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 14 MAY 84
E 14 May 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	193C	13703.5	44426.6	25-14.0 83-48.5	14	0232	—	deg 000	3	deg 050	10	1018.2	76	X 1
E	193C	13703.5	44428.5	25-14.3 83-48.9	14	0248	—	deg 000	code 3	deg 050	10	1018.0	76	X 1
B	194X	13678	44476.9	25-14.0 83-57.1	14	0338	—	deg 000	code 3	deg 070	10	1017.9	76	X 1
E								deg	code	deg				X
B	195C	13652.6	44525.9	25-14.0 84-05.3	14	0422	—	deg —	code —	deg 080	10	1017.7	75	X 1
E	195C	13651.0	44529.6	25-14.1 84-05.9	14	0448	—	deg	code	deg 080	7	1017.8	75	X 1
	196X	13634.0	44561.3	25-14.2 84-11.4	14	0528	—	deg —	code —	deg 080	7	1017.7	75	X 1
								deg	code	deg				
B	197C	13616.9	44590.9	25-14.0 84-16.5	14	0558	—	deg —	code —	deg 070	11	1017.7	75	X 2
E	197C	13615.1	44593.3	25-13.9 84-17.1	14	0628	—	deg 050	code 2	deg 060	8	1017.7	75	X 2
B	198X	13598.5	44623.5	25-14.0 84-22.2	14	0703	—	deg 050	code 3	deg 057	9	1017.9	75	X 2
E								deg	code	deg				
B	199C	13580.0	44655.2	25-14.0 84-27.8	14	0738	—	deg 055	code 3	deg 054	9	1018.2	76	X 2
E	199C	13578.2	44655.0	25-13.5 84-28.2	14	0824	—	deg 050	code 3	deg 050	10	1018.3	76	X 1
B	200X	13560.6	44687.6	25-14.0 84-33.6	14	0859	—	deg 050	code 3	deg 050	10	1019.1	75	X 1
								deg	code	deg				
	201C	13542.1	44711.9	25-14.0 84-38.1	14	0941	—	deg 060	code 3	deg 060	6	1019.8	74	X 1
E	201C	13542.2	44712.0	25-13.4 84-38.4	14	1008	—	deg 060	code 3	deg 060	10	1019.0	76	X 1

D = Sl. drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 14 MAY 1984
E 15 MAY 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time		Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	202C	13522.5	44748.0	25-13.1 84-44.7	14	1143	–	060	3	060	10	1019.0	76	X 1
E	202C	13520.8	44741.3	25-12.3 84-44.4	14	1229	–	deg 060	code 3	deg 050	12	1019.5	76	X 1
B	203X	13504.0	44777.4	25-14.00 84-50.0	14	1325	–	deg 060	code 3	deg 050	12	1019.9	76	X 1
B	204C	13483.9	44807.7	25-15.94 84-55.78	14	1409	–	deg 070	code 3	deg 070	11	019.	77	X
E	204C	13479.2	44797.4	25-16.1 84-55.7	14	1510	–	deg 070	code 3	deg 070	11	1018.5	77	X 1
B	205C	13495.4	44852.5	25-24.0 84-57.0	14	1730	–	deg 070	code 3	deg 070	11	1017.4	77	X 1
	205C	13494.9	44838.3	25-21.6 84-56.0	14	1835	–	deg 070	code 3	deg 065	11	1017.2	77	X 1
	206X	13515.7	44829.1	25-25.0 84-51.9	14	1928	–	deg 080	code 3	deg 073	11	1017.0	77	X 1
B	207C	13527.6	44815.8	25-25.8 84-48.9	14	2012	–	deg 065	code 3	deg 065	10	1017.4	76	X 1
E	207C	13528.8	44809.8	25-25.2 84-48.3	14	2109	–	deg 065	code 3	deg 065	8	1017.2	76	X 1
B	208X	13539.7	44899.6	25-26.2 84-40.6	14	2121	–	deg 065	code 3	deg 065	8	1017.2	76	X 1
E								deg	code	deg				
B	209C	13561.6	44774.6	25-27.7 84-40.2	14	2211	–	deg 065	code 3	deg 065	8	1017.6	76	X 1
E	209C	13562.1	44778.3	25-28.4 84-40.4	14	2318	–	deg 070	code 3	deg 070	9	1017.9	76	X 1
B	210X	13580.9	44798.6	25-29.5 84-35.1	14	2353	–	deg 070	code 3	deg 070	9	1018.0	76	X 1
B	211C	13601.5	44718.5	25-29.0 84-29.1	15	0055	–	deg 070	code 3	deg 060	8	1018.0	76	X 1
B	211C	13601.7	44722.6	25-29.1 84-29.1	15	0106	–	deg 070	code 3	deg 060	10	1018.0	76	X 1
E	212X	13618.5	44697.3	25-30.3 84-25.0	15	0137	–	deg 070	code 3	deg 060	10	1018.0	76	X 1

D = S. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 15 MAY 84
E 15 MAY 1984

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MA. 1984 Day	EDT Time	Depth	Wave Dir.	3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	213C	13636.7	44667.0	25-31.1 84-20.0	5	0210	—	deg 080	code 3	deg 055	9	1018.2	76	X
E	213C	13636.8	44674.5	25-31.6 84-20.2	15	0228	—	deg 080	code 3	deg 055	9	1018.1	76	X 1
B	214X	13656.7	44644.9	25-32.5 84-14.7	15	0307	—	deg 080	code 3	deg 040	10	1017.8	76	X 1
B	215C	13677.0	44613.2	25-33.3 84-09.0	15	0343	—	deg 080	code 3	deg 040	9	1017.5	76	X 1
E	215C	13677.0	44615.9	25-35.7 84-09.1	15	0402	—	deg —	code —	deg 040	9	1017.5	76	X 1
E	216X	13697.7	44585.1	25-34.1 84-03.4	15	0446	—	deg —	code —	deg 046	10	1017.2	76	X 1
	217C	13718.2	44554.2	25-36.0 83-57.5	15	0534	—	deg —	code —	deg 060	11	1017.0	76	X 1
	217C	13718.4	44557.2	25-36.6 83-57.8	15	0555	—	deg 035	code 3	deg 060	11	1017.1	76	X 1
B	218X	13737.2	44522.8	25-37.0 83-52.1	15	0640	—	deg 055	code 3	deg 069	10	1017.2	76	X 1
M	—	—	—	—	—			deg —	code —	deg —		—		X
B	219C	13754.9	44494.2	25-38.0 83-46.9	15	0714	—	deg 055	code 3	deg 070	10	1017.3	76	X 1
E	219C	13755.0	44496.5	25-38.4 83-47.1	15	0735	—	deg 035	code 3	deg 085	9	1017.5	77	X 1
B	220X	13771.7	44465.5	25-39.0 83-42.0	15	0809	—	deg 060	code 3	deg 060	9	1017.7	77	X 1
B	221C	13789.8	44433.9	25-40.0 83-36.4	15	0847	—	deg 060	code 3	deg 060	6	1017.8	77	X 1
E	221C	13789.3	44434.5	25-39.9 83-36.5	15	0904	—	deg 060	code 3	deg 060	6	1017.8	77	X 1
E	222X	13815.2	44388.3	25-41.5 83-28.7	15	0955	—	deg 060	code 3	deg 060	6	1017.8	77	X 1
B	223C	13841.2	44339.3	25-43.0 83-20.4	15	1046	—	deg 060	code 3	deg LIGHT AIR		1018.0	78	X 1
E	223C	13841.0	44339.5	25-43.0 83-20.5	15	1102	—	deg 060	code 3	deg LIGHT AIR		1018.0	78	X 1

50

D = S.. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 15 MAY 1984
E 16 MAY '84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	224C	13728.3	44375.7	25-14.5 83-48.5	5	509	—	deg 060	code 3	deg 060	10	017.5	8	X
E	224C	13728.0	44379.1	25-14.7 83-46.7	15	1527	—	deg 050	code 3	deg 055	10	1017.0	80	X 1
B	225X	13704.0	44425.7	25-14.0 83-48.5	15	1633	—	deg 045	code 3	deg 040	8	1016.3	80	X 1
E	226X	13677.5	44478.0	25-14.0 83-57.3	15	1721	—	deg 045	code 3	deg 045	10	1016.0	80	X 1
B	227C	13652.1	44527.1	25-14.0 84-05.5	15	1810	—	deg 040	code 3	deg 048	12	1016.0	79	X 1
E	227C	13652.5	44529.2	25-14.5 84-05.7	15	1827	—	deg 040	code 3	deg 050	12	1016.0	79	X 1
	228X	13633.4	44561.5	25-14.0 84-11.4	15	1903	—	deg 040	code 3	deg 050	12	1016.1	80	X 1
								deg	code	deg				X
B	229C	13616.7	44591.7	25-14.0 84-16.7	15	1935	—	deg 045	code 3	deg 045	11	1016.2	80	X 1
E	229C	13617.1	44595.0	25-14.7 84-16.9	15	2001	—	deg 050	code 3	deg 050	12	1016.5	78	X 1
B	230X	13598.1	44623.8	25-14.0 84-22.3	15	2041	—	deg 050	code 3	deg 050	12	1016.5	79	X 1
B	231C	13581.7	44655.4	25-14.2 84-27.8	15	2120	—	deg 050	code 3	deg 050	12	1016.5	77	X 1
E	231C	13581.4	44660.5	25-15.3 84-28.1	15	2107	—	deg 050	code 3	deg 050	12	1016.5	77	X 1
E	232X	13560.3	44688.0	25-14.0 84-33.7	15	2247	—	deg 050	code 3	deg 050	12	1017.2	76	X 1
B	233C	13542.6	44717.8	25-14.1 84-39.0	15	2326	—	deg 050	code 3	deg 050	12	1017.2	76	X 1
E	233C	13543.2	44721.1	25-14.8 84-39.1	15	0018	—	deg 050	code 3	deg 045	10	1017.4	76	X 1
B	234X	13522.5	44748.6	25-14.0 84-43.7	15	0055	—	deg 050	code 3	deg 045	10	1017.5	76	X 1
E								deg	code	deg				X

D = S... Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 16 MAY 84
E 16 MAY 84

	Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	235C	13504.6	44777.3	25-17.0 84-50.0	16	0133	—	deg 035	3	deg 050	9	1017.4	75	X 1
E	235C	13504.7	44774.6	25-13.1 84-49.7	16	0225	—	deg 035	code 3	deg 045	11	1016.9	75	X 1
B	236C	13483.8	44807.8	25-14.0 84-55.7	16	0312	—	deg 035	code 3	deg 060	10	1016.	76	X 1
E	236C	13483.9	44797.3	25-12.3 84-54.9	16	0412	—	deg	code	deg 060	10	1016.3	76	X 1
B	237X	13488.0	44799.2	25-13.6 84-54.3	16	0443	—	deg —	code —	deg 057	11	1015.8	76	X 2
E	238X	13462.9	44838.9	25-14.0 85-01.5	16	0548	—	deg —	code —	deg 064	8	1015.9	76	X 2
	239X	13474.7	44876.9	25-23.0 85-02.2	16	0805	—	deg 065	code 3	deg 065	6	1016.3	76	X 2
	240X	13496.2	44851.8	25-24.0 84-57.0	16	0845	—	deg 065	code 3	deg 065	6	1016.3	76	X 2
B	241X	13491.6	44857.6	25-23.8 84-58.0	16	0901	—	deg 060	code 3	deg 060	9	1017.2	77	X 1
E	242X	13515.9	44828.5	25-25.0 84-51.0	16	0948	—	deg 060	code 3	deg 060	9	1017.2	77	X 1
B	243X	13527.7	44816.3	25-25.9 84-49.0	16	1008	—	deg 060	code 3	deg 060	9	1017.2	77	X 1
E	244X	13539.7	44799.3	25-26.2 84-45.7	16	1029	—	deg 060	code 3	deg 060	9	1017.2	77	X 1
B	245X	13561.5	44774.4	25-27.6 84-40.2	16	1103	—	deg 045	code 3	deg 045	10	1017.2	78	X 1
E	246X	13581.1	44748.4	25-28.5 84-35.0	16	1137	—	deg 045	code 3	deg 045	10	1017.2	78	X 1
B	247X	13601.9	44717.4	25-29.1 84-29.3	16	1212	—	deg 035	code 3	deg 064	10	1017.7	78	X 1
E	248X	13618.6	44697.0	25-30.3 84-25.0	16	1238	—	deg 035	code 3	deg 064	10	1017.8	78	X 1
B	249X	13637.0	44671.3	25-31.2 84-20.0	16	1309	—	deg 035	code 3	deg 055	10	1017.7	78	X 1
E	250X	13656.9	44644.7	25-32.5 84-14.7	16	1348	—	deg 035	code 3	deg 055	10	1017.7	78	X 1

D = Sh.. Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE C F 8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B 16 MAY 1984
"E 17 MAY 1984

	tation#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp,	WMO 4501 Weather
B	251X	13481.6	44586.2	24-34.2 84-38.5	16	2212	—	deg 090	code 3	deg 090	12	1016.8	78	X 2
E	252X	13513.7	44537.9	24-34.8 84-28.9	16	2302	—	deg 075	code 3	deg 075	9	1017.0	77	X 2
B	253X	13526.2	44517.9	24-34.9 84-25.0	16	2323	—	deg 075	code 3	deg 075	9	1017.0	77	X 2
E								deg	code	deg				X
B	254C	13311.1	44495.1	23-13.0 85-01.0	17	0659	—	deg 052	code 3	deg 058	14	1015.8	78	X 2
E	254C	13309.9	44496.9	23-13.2 85-01.3	17	0820	—	deg 050	code 3	deg 050	16	1016.1	78	X 2
n	255X	13343.9	44466.0	23-18.6 84-52.0	17	0936	—	deg 060	code 3	deg 060	18	1016.6	78	X 2
	256X	13363.0	44451.6	23-21.9 84-47.0	17	1025	—	deg 060	code 3	deg 060	18	1016.6	78	X 2
B	257C	13380.9	44435.2	23-24.7 84-42.1	17	1112	—	deg 060	code 3	deg 060	18	1017.6	79	X 2
E	257C	13378.1	44434.2	23-23.4 84-42.6	17	1205		deg 060	code 4	deg 070	17	1017.6	79	X 2
B	258X	13399.7	44418.1	23-27.8 84-37.0	17	1301	—	deg 060	code 4	deg 070	17	1017.7	79	X 2
E	259X	13418.1	44400.9	23-30.7 84-32.0	17	1343	—	deg 075	code 4	deg 070	14	1017.7	79	X 2
B	260X	13434.8	44385.7	23-33.5 84-27.5	17	1431	—	deg 075	code 4	deg 080	23	1017.7	79	X 2
E			44					deg	code	deg				X 2
n	261C	13451.3	44369.4	23-36.1 84-23.0	17	1519	—	deg 075	code 4	deg 090	20	1017.6	78	X 2
E	261C	13450.0	44365.8	23-36 84-22.8	17	1621	—	deg 065	code 4	deg 075	22	1017.4	77	X 2
B	262X	13467.0	44356.1	23-39.0 84-18.9	17	1723	—	deg 070	code 4	deg 078	24	1017.2	77	X 2
E	263X	13485.0	44337.4	23-41.6 84-14.0	17	1813	—	deg 070	code 4	deg 077	23	1017.2	77	X 2

D = Ship Drift
C = CTD B = Begin
X = XBT E = End
P = CURRENT PROFILE

CRUISE CF-8405

XBT/CTD/CURRENT PROFILE LOG

DATES: B MAY 17 1984
E MAY 18 '84

	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	MAY 1984 Day	EDT Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B	13517.5	44306.3	23-47.3 84-05.2	17	1940	-	deg 070	code 4	deg 083	23	1017.5	76	X 2
E	13552.3	44271.4	23-53.0 83-56.0	17	2104	-	deg 075	code 5	deg 075	23	1018.0	77	X 2
B	[illegible]	[illegible]	23-58.3 [illegible]	17	[illegible]	-	deg [illegible]	code 5	deg 075	[illegible]	[illegible]	77	X [illegible]
E	267X 13618.4	44199.6	24-04.0 83-37.8	17	2341	-	deg 075	code 5	deg 075	24	1018.0	77	X 2
B	260V 13652.1	44160.6	24-09.3 83-28.4	18	0058		deg 090	code 5	deg 085	21	1019.0	76	X 2
E							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X
							deg	code	deg				X

APPENDIX D

WMO Codes

Sea State

WMO Code 3700

Description	Height* Feet**	Code
Calm-glassy	0	0
Calm-rippled	0 - 1/3	1
Smooth-wavelet	1/3 - 1 2/3	2
Slight	12/3-4	3
Moderate	4 - 8	4
Rough	8 - 13	5.
Very rough	13 - 20	6
High	20 - 30	7
Very high	30 - 45	8
Phenomenal	> 45	"9

*The average wave height as obtained from the larger well-formed waves of the wave system being observed.

**The exact bounding height is to be assigned for the lower code figure, e.g. a height of 13 feet is coded as 5.

Present Weather

WMO Code 4501

Code	
0	Clear (no cloud at any level)
1	Partly cloudy (scattered or broken)
2	Continuous layer(s) of cloud(s)
3	Sandstorm, duststorm, or blowing snow
4	Fog, thick dust or haze
5	Drizzle
6	Rain
7	Snow, or rain and snow mixed
8	Shower(s)
9	Thunderstorm(s)

APPENDIX E

ROSCOP FORMS

FORM APPROVED: OMB NO. 41-R2765 - EXPIRES : 12-31-7

NOAA FORM 24-23 (1-76)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE
NATIONAL OCEANOGRAPHIC DATA CENTER

A00 DATA CENTER

A40 REFERENCE NUMBER

OCEANOGRAPHY – GENERAL CRUISE INVENTORY
(ROSCOP - II)

A01 EXPEDITION/PROJECT: MM S GOMPOS

A11 CRUISE NUMBER OR NAME: CF-84-05

A02 SHIP OR PLATFORM: R/V CAPE FLORIDA

A12 PLATFORM TYPE: RESEARCH VESSEL (01)

A03 COUNTRY: USA

A04 ORGANIZATION: MINERALS MANAGEMENT SERVICE

	YES	NO	PART	
A91 Declared national program?	X			
A81 Exchange restricted?		X		
A92 Co-operative program?		X		A72 NAME
A82 Co-ordinated internationally?		X		A62 BY WHOM?

A05 CHIEF SCIENTIST(SI: Jim Singer

A06 NAME AND ADDRESSES OF ORGANIZATIONS AND PERSONS WHOM TO QUERY

A1 Joe Karpen, Science Applications, Inc.
4900 Water's Edge Drive Suite 255
Raleigh, N.C. 27606.

D1 Bill Chandler, Skidaway Inst. of Oceanogr.
P.O. Box 13687, Savannah, Ga. 31406

FINAL DISPOSITION OF DATA

A2 SAME AS A1

D2 SAME AS D1

E2 NODC

DATE	DAY	MONTH	YEAR
A07 FROM	04	05	84
A17 TO	19	05	84

A08 GENERAL OCEAN AREAS: 26 (Gulf of Mexico)

A09 TYPE(SI OF MARINE ZONE(SI: 06, 07

GEOGRAPHIC AREA
If all data were collected at a fixed station, fill in the co-ordinates

A10 LATITUDE ° ' " N/S

A20 LONGITUDE ° ' " E/W

A15 FEDERAL SUPPORT: MMS

A25 REMARKS

This was the 3rd hydrographic cruise in the eastern Gulf (west Florida Shelf) as part of the MMS sponsored Gulf of Mexico Physical Oceanography Study. Seventy-one CTD stations and 191 XBT stations were occupied. Nutrient (nitrate, phosphate + silicate), dissolved oxygen, Continuous thermosalinograph, and Ametek Straza data were ~~also~~ collected, as well. In addition an AXBT survey and several SOOP cruises coincided with this sampling period.

DISCIPLINE AND TYPE OF MEASUREMENTS	Index 10° x 10° Qc	L	G	G	INDEX 1° x 1°
A H10, H13, D10 D90 M06, H01, H02 B	7	2	0	8	43, 44, 34,
A H10, H13, D10, D90, M06, H01, H02 B	7	2	0	8	53, 55, 54, 63,
A H10, H13, D10, D90, M06, H01, H02 B	7	2	0	8	64, 65, 74
A H13, D10, D90, M06, H01, H02	7	2	0	8	33, 45
A H10, D10, D90, M06, H01, H02	7	2	0	8	35
A B					
A " R					

DISCIPLINE AND TYPE OF MEASUREMENTS	Index 10° x 10° Qc	L	G	G	INDEX 1° x 1°
A H07, H08, H21, H22, H24, H26 B	7	2	0	8	35, 34, 44, 63
A H07, H08, H21, H22, H24, H26 B	7	2	0	8	64, 65, 74, 43,
A H07, H08, H21, H22, H24, H26 B	7	2	0	8	54, 53, 55,
A B					
A B					
A B					
A B					

G - GEOLOGY GEOPHYSICS

GL MEASUREMENTS MADE AT A SPECIFIC LOCATION	NUMBER	i	1	FORMAT
G01 Dredge				
G02 Grab				
G03 Core rock *(no. of cores)*				
G04 Core-soft bottom *(no. of cores)*				
G05 Sampling by divers				
G06 Sampling by submersible				
G07 Drilling				
G08 Bottom photography				
G09 Sea floor temperature *(≤ 1 m from bottom)*				
G10 Accoustical properties of the sea floor				
G11 Engineering properties of the sea floor				
G12 Magnetic properties of the sea floor				
G13 Gravimetric properties of the sea floor				
G14 Radioactivity measurements				
G70 Other measurements				
GU MEASUREMENTS UNDERWAY				
G21 Motion picture of sea floor *(No. of nautical miles)*				
G22 Barhymerry-wide beam *(no. of nautical miles)*				
G23 Bathymetry-narrow beam *(no. of nautical miles)*				
G24 Side scan sonor *(no. of nautical miles)*				
G25 Seismic reflection *(no. of nautical miles)*				
G26 Seismic refraction *(no. of nautical miles)*				
G27 Gravimetry				
G28 Magnetism				
G29 Other measurements				

G - GEOLOGY GEOPHYSICS *(Continued)* GS TYPES OF STUDIES	NUMBER	i	1	FORMAT
G31 Physical analysis of sediments				
G32 Chemical analysis of sediments				
G33 Paleothermy				
G34 Paleomagnetism and rock magnetism				
G35 Paleontology				
G36 Geothermy				
G37 Geochronology				
G38 Mineral and fossil resources				
G39 Litteral zone studies				
G90 Other measurements				

D – DYNAMICS

D01 Current meters *(no. of stat.)*				
D 02 Current meters *(Average duration of measurement days)*				
D03 Currents measured from ship drift				
Do4 GEK				
D05 Drifters *(number)*				
D06 Swallow floats (number)				
D07 Drift cards *(no. released)*				
D08 Bottom drifters *(no. released)*				
D09 Tidal observation *(duration)*				
D10 Sea and swell *(no. of observational*	268	A1 D1	A2 D2	01
Avgd AMETEK STRAZA current Profiles D90 Other measurements	1 per 2½ min.	A1 D1	A2 D2	07

M – METEOROLOGY

M01 Upper air observations				
M02 Incident radiation				
M03 Air-sea interface studies				
M04 Ice observations				
M05 Occasional standard measurements				
M06 Systematic standard measurements	268	A1 D1	A2 D2	01
M90 Orher measurements				

H-HYDROGRAPHY

HS SURFACE	NUMBER			FORMAT
H01 Continuous temperature recording	1 per minute	A1 D1	A2 D2	07
H02 Continuous salinity recording	1 per minute	A1 D1	A2 D2	07
H03 Discrete temperature measurements				
H04 Discrete salinity measurements				
NEAR SEA FLOOR (≤ 10 m)				
H05 Continuous temperature recording				
H06 Continuous salinity recording				
H07 Discrete temperature measurements	50	D1	D2	01
H08 Discrete salinity measurements	63	A1 D1	D2	09
HP PHYSICAL				
H09 Classical oceanographic stations				
H10 Vertical profiles (/CTD)	71	A1 D1	A2 D2 E2	07
H11 Sub-surface measurements underway				
H12 Mechanical bathythermograph (No. of drops)				
H13 Bathythermograph-expendable (No. of drops)	191	A1 D1	A2 D2	07
H14 Sound velocity stations				
H15 Acoustic stations				
H16 Transparency				
H17 Optics				
H18 Diffusion (Dynamic)				
H80 Other measurements				
HC CHEMICAL				
H21 Oxygen	64	A1 D1	A2 D2	09
H22 Phosphates	64	A1 D1	A2 D2 E2	09
H23 Total-P				
H24 Nitrates	64	A1 D1	A2 D2 E2	09
H25 Nitrites				

HC CHEMICAL	NUMBER			FORMAT
H26 Silicates	64	A1 D1	A2 D2 E2	09
H27 Alkalinity				
H28 pH				
H29 Chlorinity				
H30 Trace elements				
H31 Radioactivity				
H32 Isotopes				
H33 Dissolved gases				
H90 Other measurements				
P - POLLUTION				
P01 Suspended solids				
P02 Heavy metals				
P03 Petroleum residues				
P04 Chlorinated hydrocarbons				
P05 Other dissolved substances				
P06 Thermal pollution				
P07 Waste water: BOD				
P08 Waste water: Nitrates				
P09 Waste water: Microbiology				
P10 Waste water: Other				
P11 Discolored water				
P12 Bottom deposits				
P13 Contaminated organisms				
P90 Other measurements				

NOAA FORM 24-23 (I-76)