INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH AND MAGNETIC DATA

(ISSUED AUGUST 1981)

RAMA EXPEDITION

LEG 13

Agana, Guam (10 May 1981)
to
Adak, Alaska (3 June 1981)

R/V T. Washington

Chief Scientist - A. Ciesluk (WHOI)

Resident Marine Tech - J. Boaz

Post-Cruise Processing and Report Preparation
by S.I.O. Geological Data Center

Data Collection Funded by NSF
Grant Number OCE80-24472
Bathymetric Data Collection
and Processing Funded by
Defense Mapping Agency
Contract 800-81-C-0023
Data Processing Funded by SIA and DMA

NOTE
This is an index of underway geophysical data edited and processed shortly after the completion of the cruise leg and is intended primarily for informal use within the institution. This document is not to be reproduced or distributed outside Scripps without prior approval of the chief scientist or the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093.

GDC Cruise I.D.# - 181

INFORMAL REPORT AND INDEX OF NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA

Contents:

Index Chart - gives track of cruise leg and boundaries of depth compilation plots (see below).

Track Charts - annotated with dates (day/month) and hour ticks. The scale is .3 in/degree longitude.

Profiles - depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records have a solid black line along the bottom of the profile.

For information on the availability and reproduction costs of data in the following forms, contact S. M. Smith, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093. Phone (714) 452-2752.

1. Navigation listing of times and positions of course and speed changes, fixes and drift velocity.

2. Depth compilation plots - in fathoms (assumed sound velocity of 800 fm/sec) or meters (assumed sound velocity of 1500m/sec) at approximately 1 mile spacing, plotted at 4in/degree with standard U. S. Navy Oceanographic Office BC series boundaries (see index chart).

3. Plots of magnetic anomaly profiles along track - map scale = 1.2inch/degree, anomaly scale between 15N and 15 S latitude = 500 gamma/inch, anomaly scale north of 15N and south of 15S = 1000 gamma/inch, from values retrieved at approximately 1 mile spacing and regional field removed using the 1975 IGRF.

4. Card decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center).

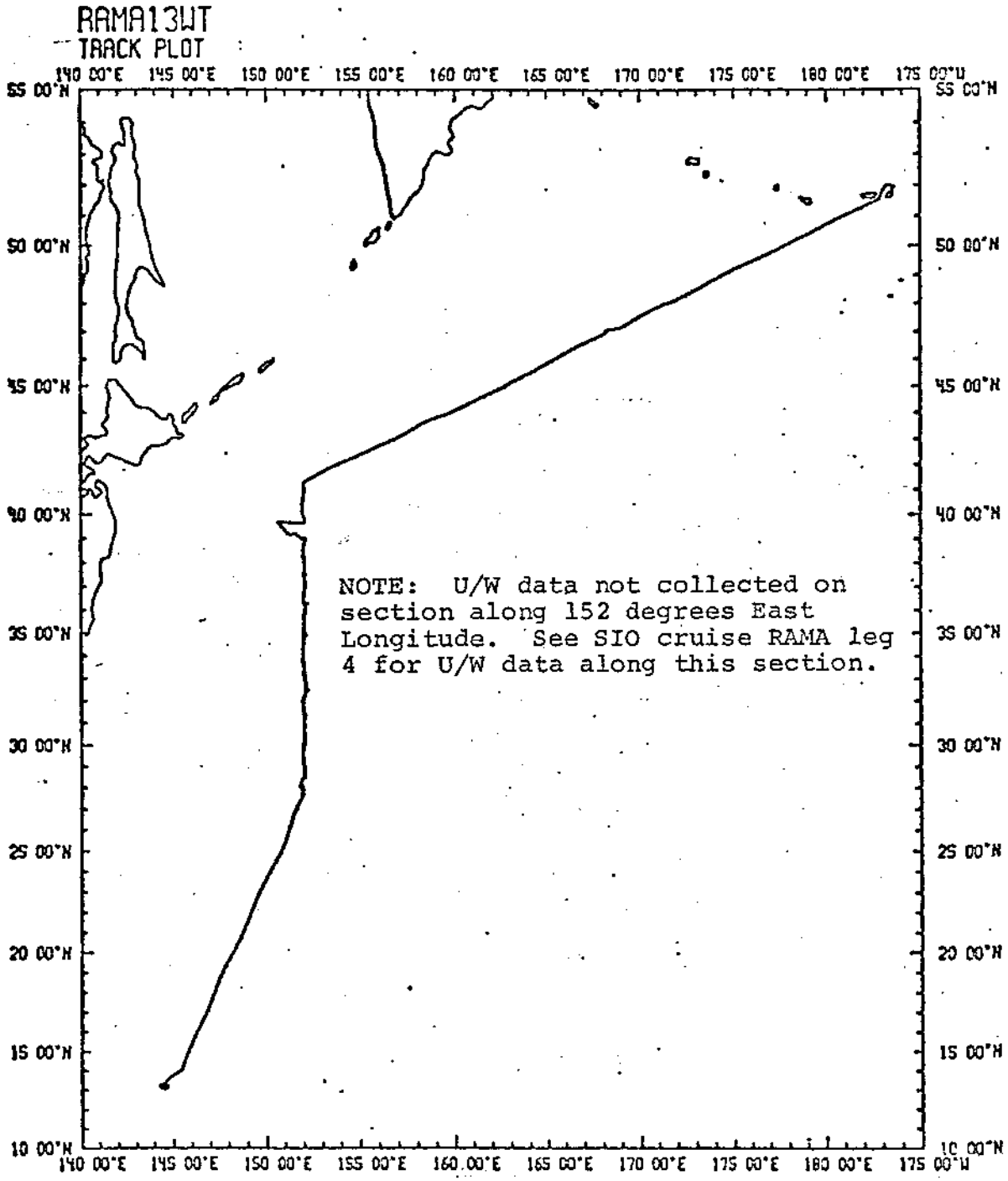
5. S.I.O. Sample Index - list of beginning and end times and positions of all underway records as well as all other samples (geology, biology, physical oceanography, etc.) collected on the cruise leg.

6. Microfilm or Xerox copies of:
   a. Echosounder records - 12 and 3.5 kHz frequency

   b. Subbottom profiler records (airgun)

   c. Magnetometer records

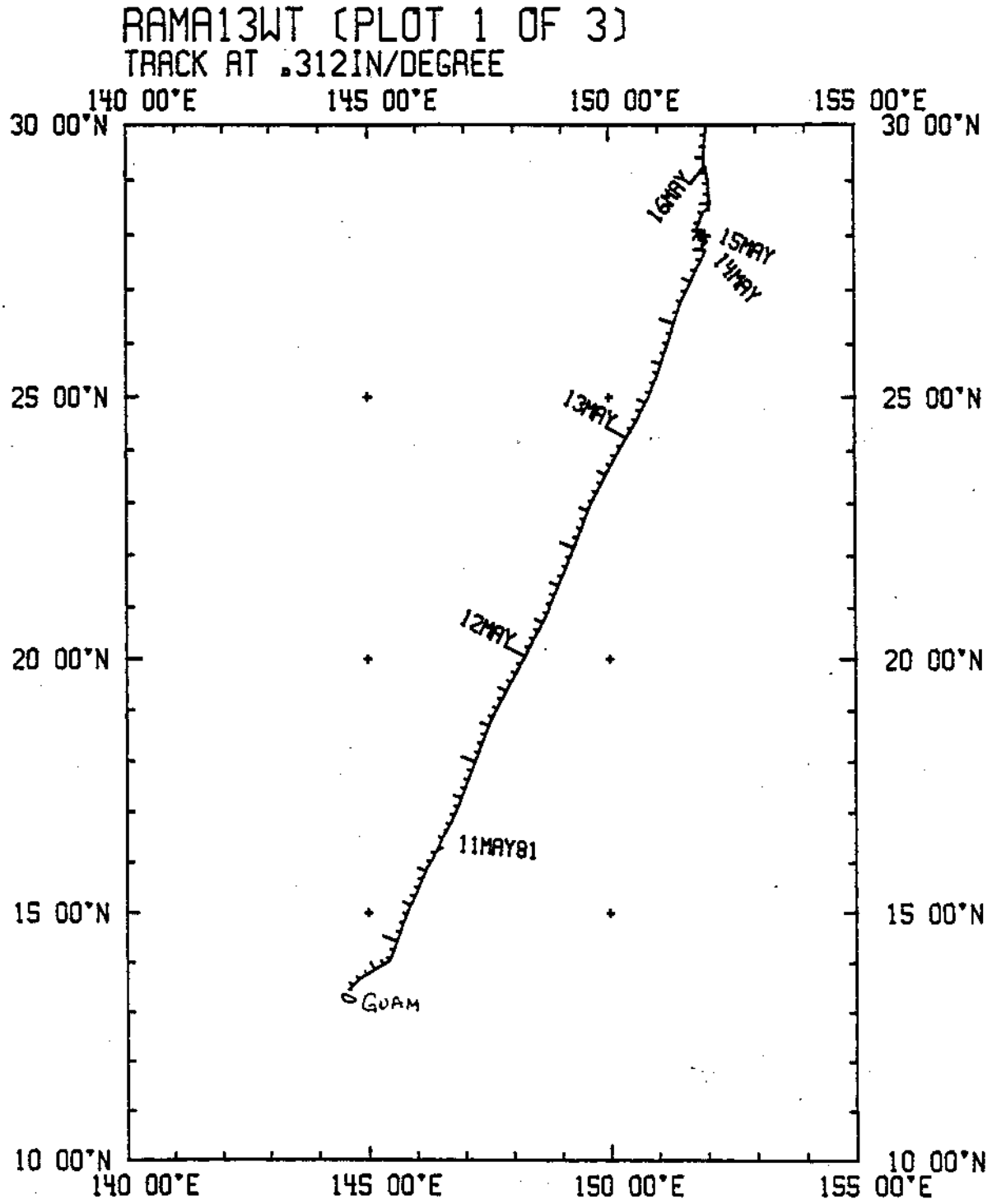
   d. Underway data log

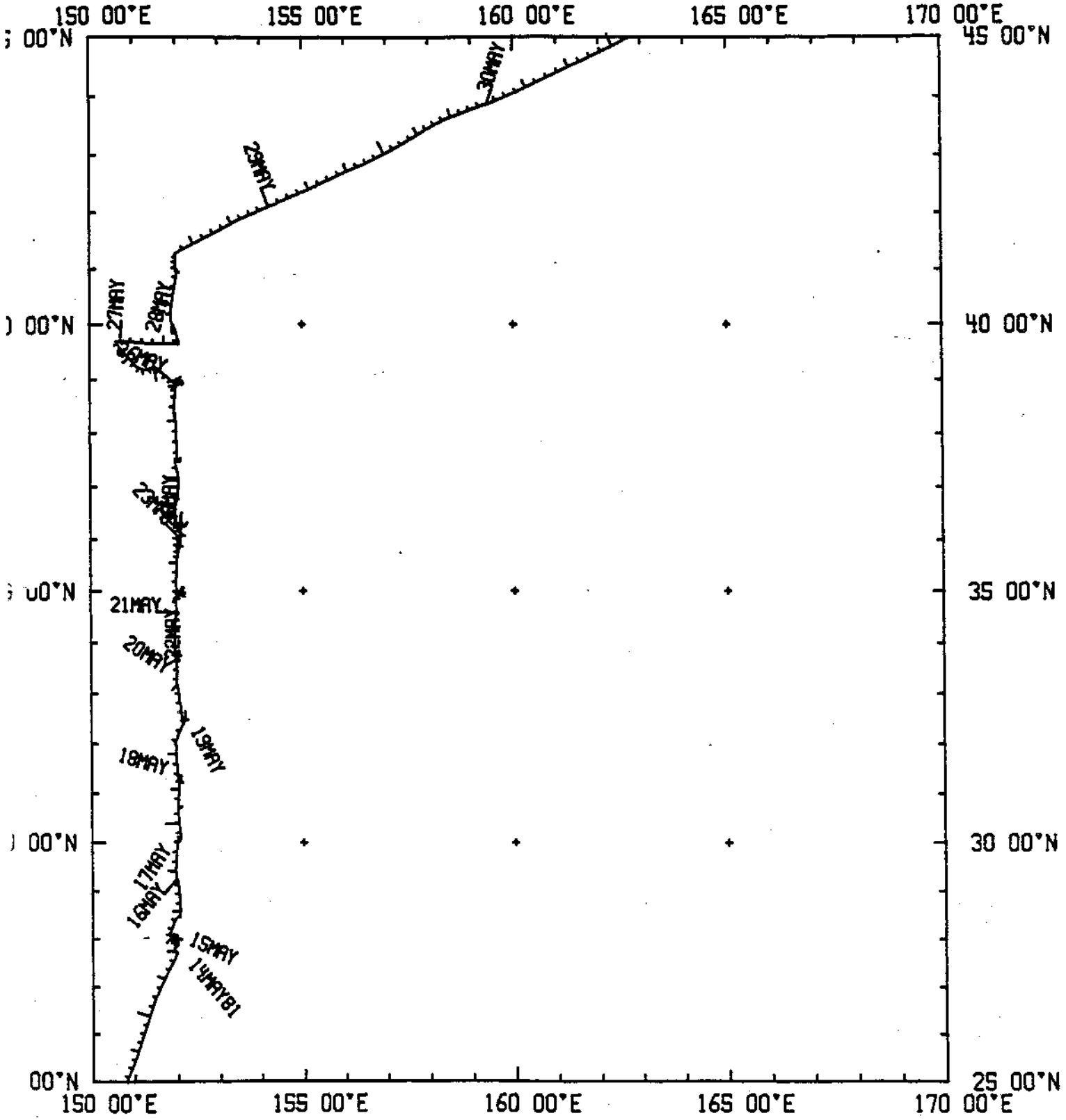


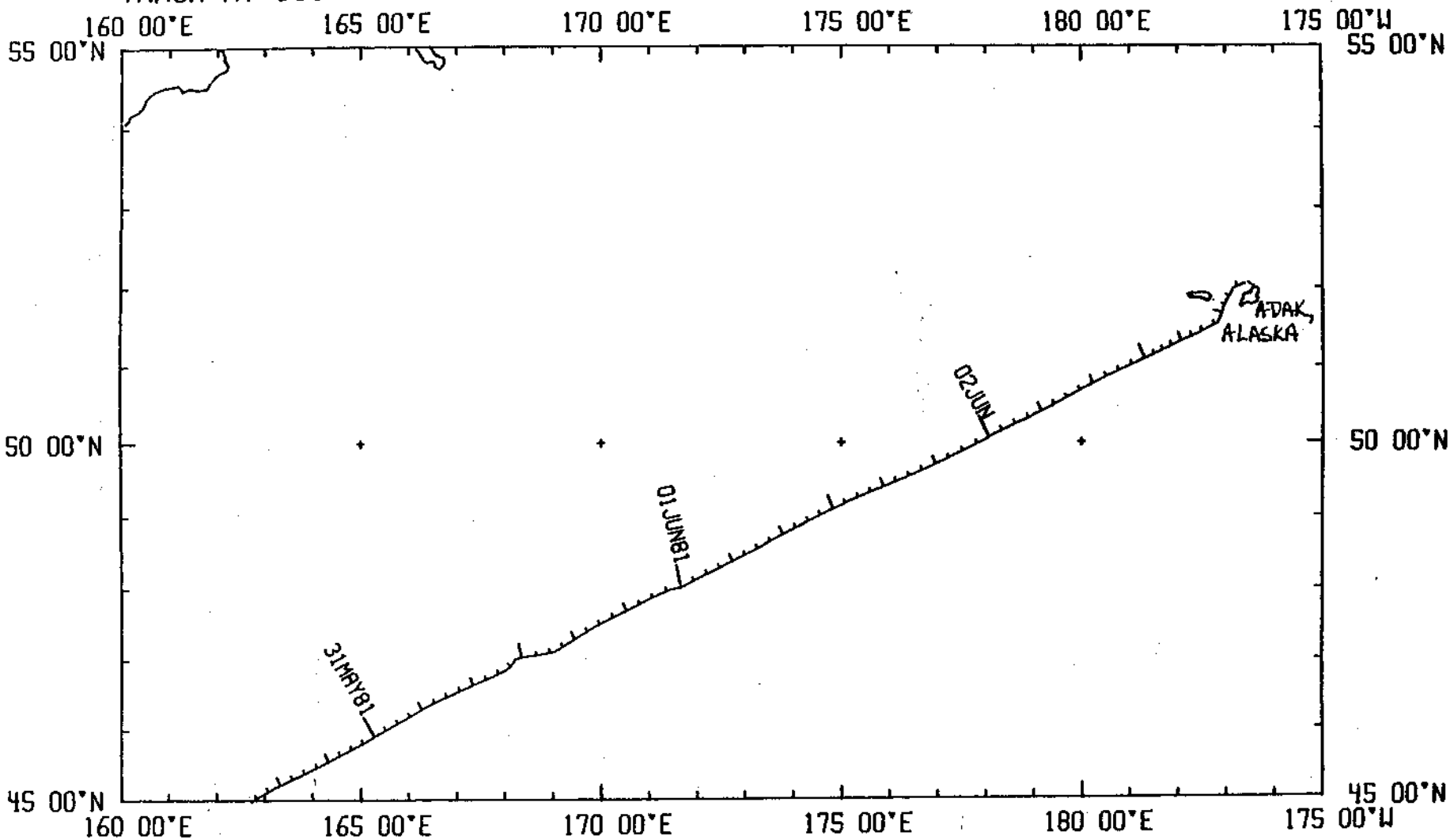
RAMA EXPEDITION
LEG 13

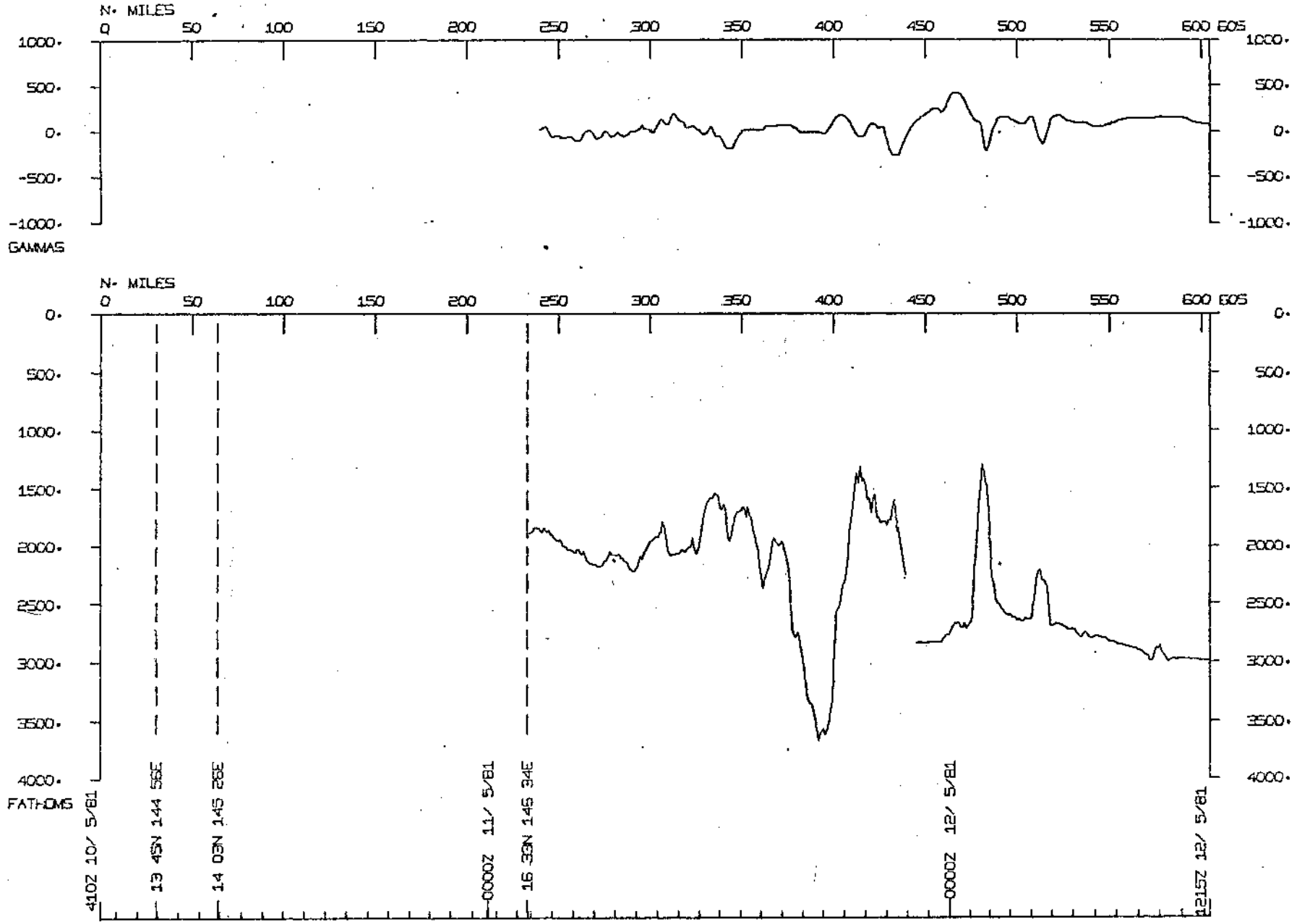
Chief Scientist: A. Ciesluk (WHO)
Ports: Agana, Guam - Adak, Alaska
Dates: 10 May -3 June 1981
Ship: R/V T. Washington

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED
1) Cruise - 3804 miles
2) Bathymetry - 2286 miles
3) Magnetics - 1856 miles
4) Seismic Reflection - none collected
5) Gravity - none collected

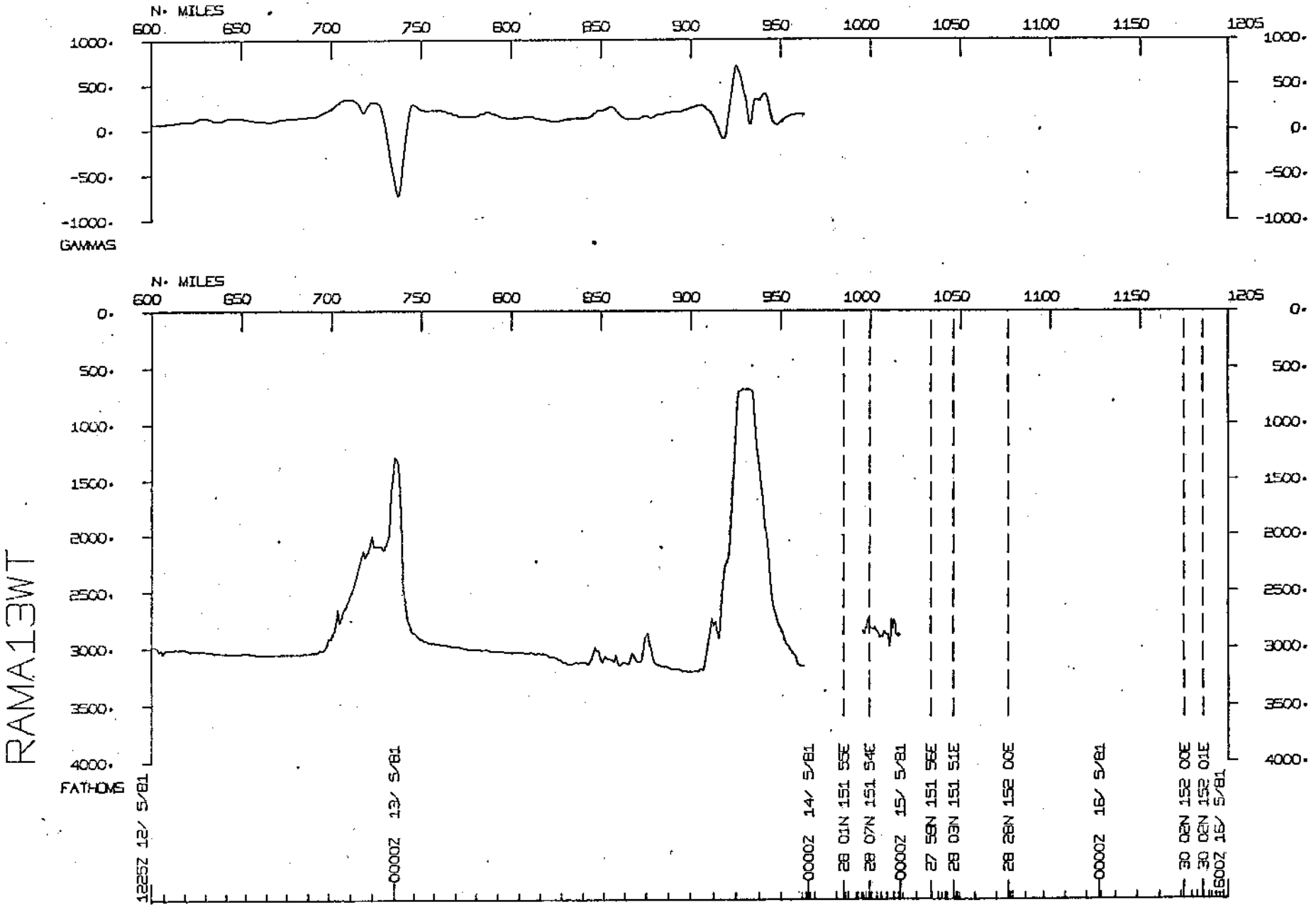

RAMA13WT (PLOT 1 OF 3)
TRACK AT .312IN/DEGREE
140 00°E
145 00°E
150 00°E
155 00°E
30 00°N
25 00°N
20 00°N
15 00°N
10 00°N
16MAY
15MAY
14MAY
13MAY
12MAY
11MAY81
GUAM


RAMA13WT (PLOT 2 OF 3)
TRACK AT .312IN/DEGREE
150 00°E
155 00°E
160 00°E
165 00°E
170 00°E
45 00°N
40 00°N
35 00°N
30 00°N
25 00°N
30MAY
25MAY
28MAY
27MAY
21MAY
20MAY
19MAY
18MAY
17MAY
16MAY
15MAY
14MAY


RAMA13WT (PLOT 3 OF 3)
TRACK AT .312IN/DEGREE
160 00°E
165 00°E
170 00°E
175 00°E
180 00°E
175 00°W
55 00°N
50 00°N
45 00°N
31MAY81
01JUN81
02JUN
ADAK, ALASKA


N. MILES
0 50 100 150 200 250 300 350 400 450 500 550 600 605
1000. 500. 0. -500. -1000.
GAMMAS
N. MILES
0 50 100 150 200 250 300 350 400 450 500 550 600 605
0. 500. 1000. 1500. 2000. 2500. 3000. 3500. 4000.
FATHOMS
410Z 10/ 5/81
13 45N 144 56E
14 03N 145 26E
0000Z 11/ 5/81
16 33N 145 34E
0000Z 12/ 5/81
1215Z 12/ 5/81

RAMA13WT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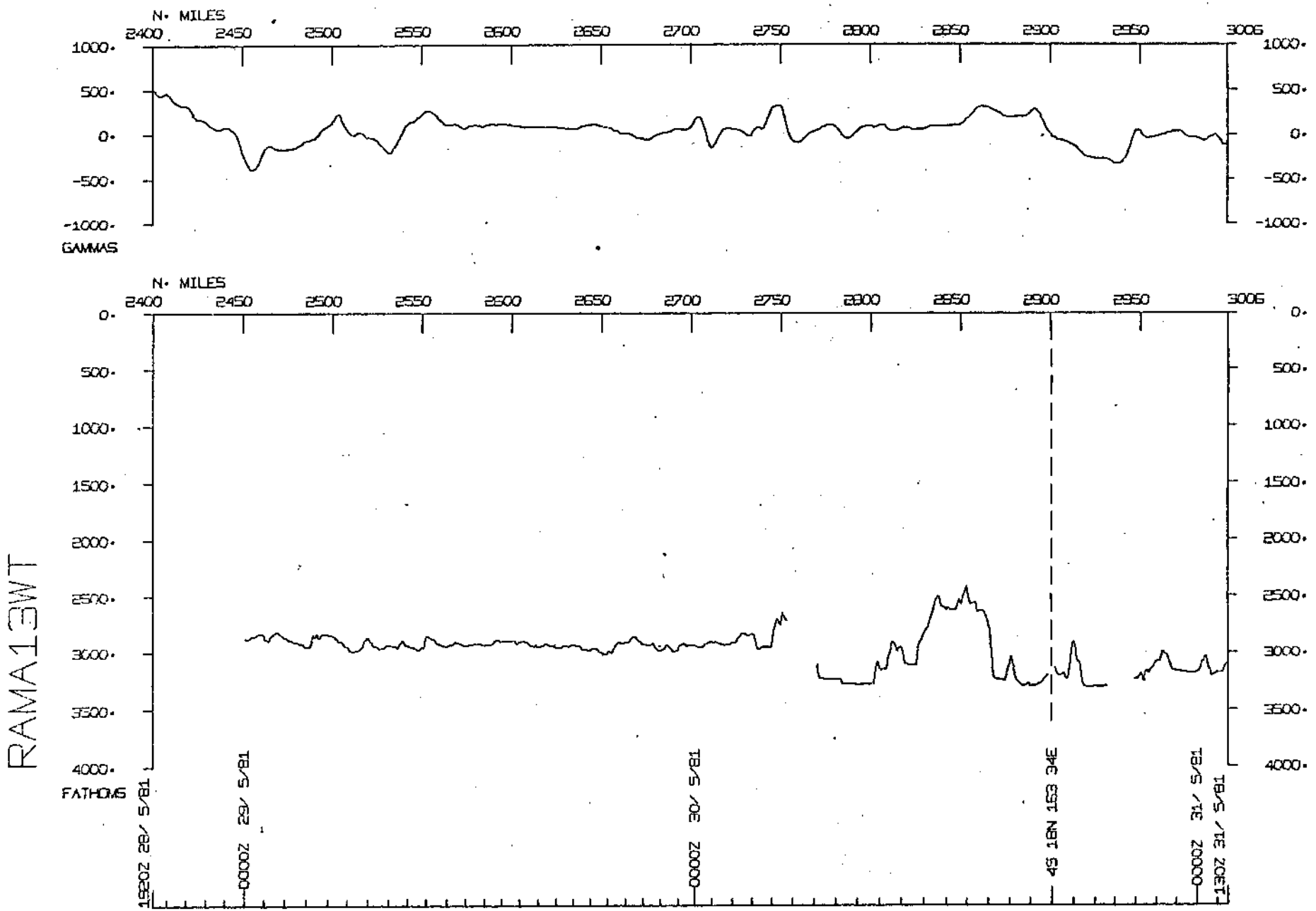
1000. 500. 0. -500. -1000.
GAMMAS
N. MILES
600 650 700 750 800 850 900 950 1000 1050 1100 1150 1205
0. 500. 1000. 1500. 2000. 2500. 3000. 3500. 4000.
FATHOMS
1225Z 12/ 5/81
0000Z 13/ 5/81
0000Z 14/ 5/81
28 01N 151 55E
28 07N 151 54E
0000Z 15/ 5/81
27 58N 151 58E
28 03N 151 51E
28 28N 152 00E
0000Z 16/ 5/81
30 02N 152 00E
30 02N 152 01E
1600Z 16/ 5/81

RAMA13WT

RAMA13WT
1806
1750
1700
1650
1600
1550
1500
1450
1400
1350
1300
1250
1200
N. MILES
1000.
500.
0.
-500.
-1000.
GAMMAS
0.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
FATHOMS
1610Z 16/ 5/81
30 02N 152 00E
30 42N 152 02E
1800Z 18/ 5/81
31 17N 152 05E
31 58N 152 00E
1900Z 19/ 5/81
32 28N 152 09E
2000Z 20/ 5/81
33 33N 151 58E
33 46N 152 01E
2100Z 21/ 5/81
34 57N 152 01E
34 58N 152 02E
2200Z 22/ 5/81
34 58N 152 01E
34 58N 152 03E
2300Z 23/ 5/81
35 45N 152 00E
0000Z 23/ 5/81
B30Z 23/ 5/81

RAMA13WT
1000
500
0
-500
-1000
GAMMAS
2406
2350
2300
2250
2200
2150
2100
2050
2000
1950
1900
1850
1800
N. MILES
0
500
1000
1500
2000
2500
3000
3500
4000
FATHOMS
1910Z 28/ 5/81
41 14N 152 01E
41 02N 152 01E
0000Z 28/ 5/81
40 01N 151 56E
39 39N 152 05E
0000Z 27/ 5/81
39 32N 150 46E
39 13N 151 32E
38 56N 152 06E
0000Z 26/ 5/81
38 59N 152 01E
38 18N 151 59E
0000Z 25/ 5/81
37 31N 151 59E
36 45N 151 59E
0000Z 24/ 5/81
36 15N 152 13E
36 18N 152 01E
0402 23/ 5/81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N. MILES
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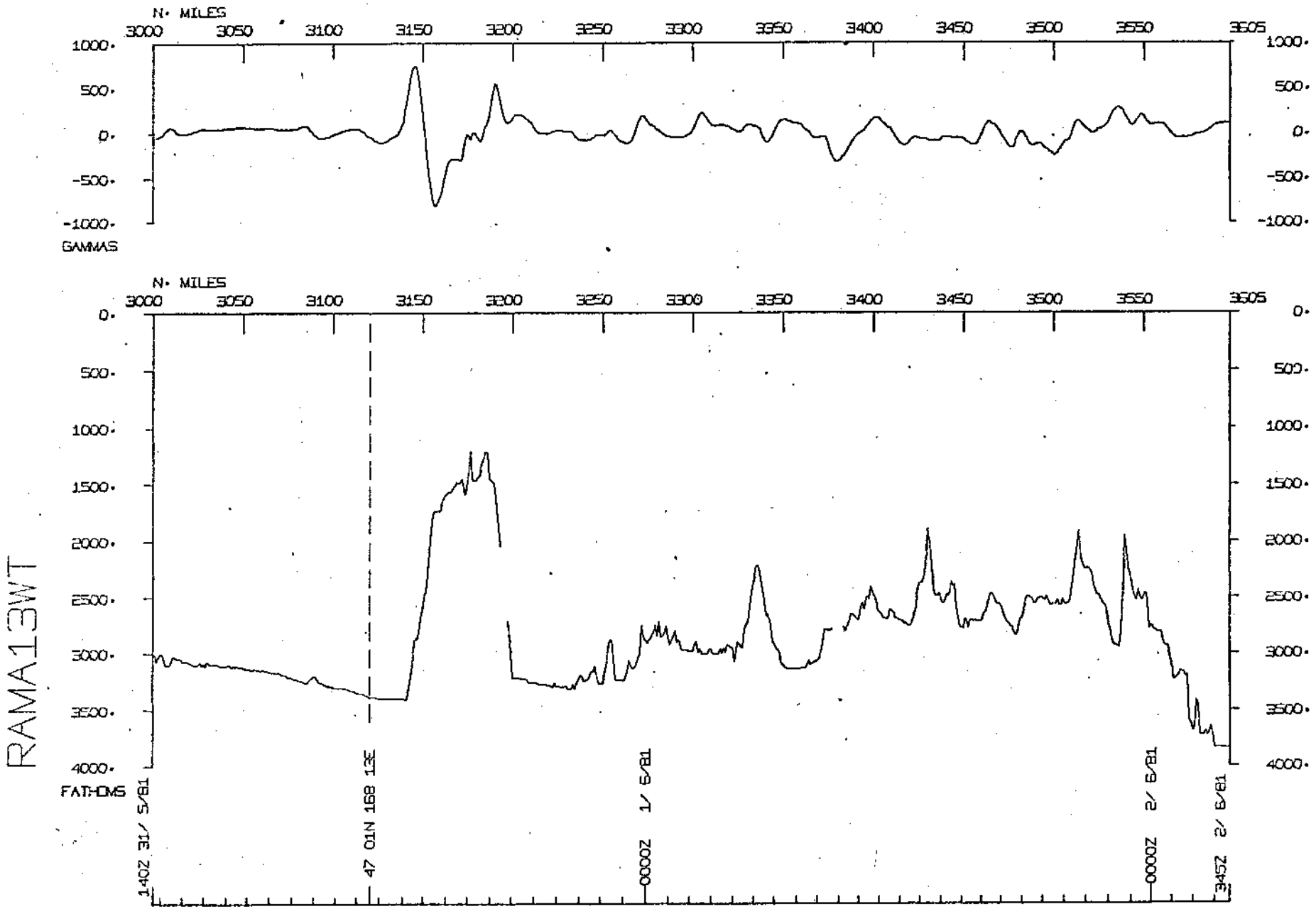
2450
2500
2550
2600
2650
2700
2750
2800
2850
2900
2950
3006
1000
500
0
-500
-1000
GAMMAS
N. MILES
0
500
1000
1500
2000
2500
3000
3500
4000
FATHOMS
1920Z 28/ 5/81
0000Z 29/ 5/81
0000Z 30/ 5/81
4S 18N 153 34E
0000Z 31/ 5/81
1302 31/ 5/81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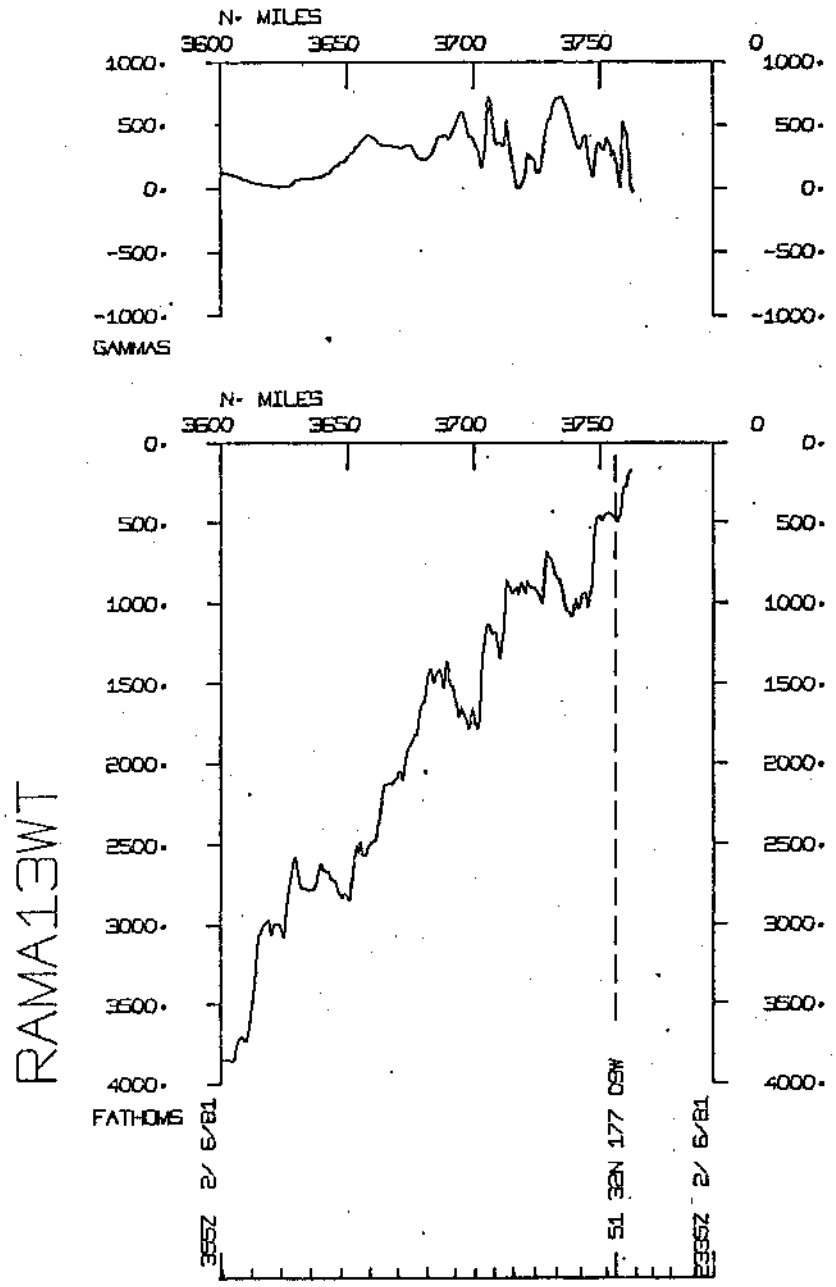
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500
3550
3605
1000.
500.
0.
-500.
-1000.
GAMMAS
N. MILES
3000
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500
3550
3605
0.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
FATHOMS
1402 31/ 5/81
47 01N 168 13E
0000Z 1/ 6/81
0000Z 2/ 6/81
3452 2/ 6/81
RAMA13WT


N. MILES
3600
3650
3700
3750
0
1000.
500.
0.
-500.
-1000.
GAMMAS
N. MILES
3600
3650
3700
3750
0
0.
500.
1000.
1500.
2000.
2500.
3000.
3500.
4000.
FATHOMS
355Z 2/ 6/81
51 32N 177 09W
2355Z 2/ 6/81
RAMA13WT

S.I.O. Sample Index

(Issued July 1981)

RAMA EXPEDITION

Leg 13

Agana, Guam (10 May 1981)
to
Adak, Alaska (3 June 1981)

R/V Thomas Washington

Chief Scientist - A. Ciesluk (WHOI)

Resident Technician - J. Boaz

Post-Cruise Processing and Report Preparation
by S.I.O. Geological Data Center

Index Encoding Funded by NSF
Grant Number OCE80-22996
Index Processing and Report Preparation
funded in part by SIA

The Sample Index is a first level interdisciplinary listing of time, position, sample identification and disposition of all samples, records and measurements collected on this cruise leg. The index data are encoded at sea by the resident technician and processed on shore by the S.I.O. Geological Data Center shortly after the completion of the cruise leg.

Positions are interpolated on the basis of sample time by comparison to a single, edited navigation file. Samples beginning at one time and position and ending at another are entered on two consecutive cards. Disposition and sample type are represented by three and four character codes to permit future computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

S.I.O. SAMPLE INDEX GENERATED 17JUL81

*** RAMA LEG 13 SAMPLE INDEX (RAMA13WT) ***

10MAY81 - AGANA, GUAM

TO

03JUN81 - ADAK, ALASKA

CHIEF SCIENTIST - CIESLUK,A. WHO

SHIP - R/V THOMAS WASHINGTON (SIO)

PRODUCED BY GEOLOGICAL DATA CENTER, SCRIPPS INSTITUTION
OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA 92093

NUMBER OF SAMPLES OF CLASS 'TYPE' GOING TO DESTINATION 'DISP'

DISP	TYPE						TOTAL
	CM	DP	LB	MG	PE	TD	
GDC		3	1	2			6
MTG					2		2
SIX					2		2
WHO	28				10	24	62
TOTAL	28	3	1	2	14	24	72

SAMPLE 'TYPE' CODES USED ABOVE

CM = CURRENT MEASUREMENT
DP = DEPTH
LB = LOG BOOKS
MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
PE = PERSONNEL IN SCIENTIFIC PARTY
TD = SALINITY/TEMPERATURE/DEPTH (STD)

SAMPLE 'DISP' CODES USED ABOVE

GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
MTG = MARINE TECHNOLOGY GROUP (EXT 4194)
SIX = SCRIPPS INSTITUTION NON-EMPLOYEE - CONTACT D. UTTER (EXT.3675)
WHO = WOODS HOLE OCEANOGRAPHIC INSTITUTION

GMT D /M /Y TIME DATE	LOC LOC TIME TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
/ /	000		RAMA LEG 13 SAMPLE INDEX	00	00.	00 00.	RAMA13WT

** PORTS ***

400 10/05/81		LGPT	B AGANA, GUAM	13	27. N	144 37. E	F RAMA13WT
130 03/06/81		LGPT	E ADAK, ALASKA	51	52. N	176 38. W	F RAMA13WT

PERSONNEL*

** NAME ***	*** TITLE ***	*** AFFILIATION ***
1 CIESLUK,A.	CHIEF SCIENTIST	WOODS HOLE OCEANOGRAPHIC INSTITUTION
2 BOAZ,J.	RESIDENT TECH	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
3 OTT,J.	COMPUTER TECH	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
4 DEAN,J.	ENGINEER	WOODS HOLE OCEANOGRAPHIC INSTITUTION
5 CLAY,P.	ENGINEER	WOODS HOLE OCEANOGRAPHIC INSTITUTION
6 POIRIER,M.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
7 LA ROCHELLE,R.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
8 HORN,W.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
9 SIMONEAU,R.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
0 REESE,J.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
1 STAICUP,M.	SPECIALIST	WOODS HOLE OCEANOGRAPHIC INSTITUTION
2 RAYMER,M.	TECHNICIAN	WOODS HOLE OCEANOGRAPHIC INSTITUTION
3 ENGLAND,H. (NUSC)	SCIENTIST	SCRIPPS INSTITUTION NON-EMPLOYEE - CONTACT D. UTTER (EXT.3675)
4 HALL,R. (YALE)	SCIENTIST	SCRIPPS INSTITUTION NON-EMPLOYEE - CONTACT D. UTTER (EXT.3675)

NOTES* AN 'X' IN THE (B)EGIN/(E)ND COLUMN FOLLOWING THE SAMPLE CODE INDICATES NO SAMPLE OR DATA RECOVERED .
A 'C' INDICATES CONTINUATION OF DATA COLLECTION FROM BEFORE THE BEGINNING OR AFTER THE END OF THIS LEG. (MOORED BOTTOM INSTRUMENTS, FOR EXAMPLE).
THE NUMBER APPEARING IN THE COLUMNS BETWEEN THE SAMPLE IDENTIFIER AND THE DISPOSITION CODE, FOR MANY SAMPLE ENTRIES, IS THE WATER DEPTH IN CORRECTED METERS.

GMT TIME	D /M /Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
**** UNDERWAY DATA CURATOR - STUART M. SMITH EXT. 2752 ***									
*** LOG BOOKS ***									
0405	11/05/81			LBUW B	UNDERWAY LOG	GDC	16 36.1N	146 36.2E S	RAMA13WT
1955	02/06/81			LBUW E	UNDERWAY LOG	GDC	48 52.1N	174 07.0E S	RAMA13WT
*** FATHOGRAMS ***									
0405	11/ 5/81			DPRT B	PDR 12 KHZ R-01	GDC	16 36.1N	146 36.2E S	RAMA13WT
1910	13/ 5/81			DPRT E	PDR 12 KHZ R-01	GDC	27 43.8N	151 59.3E S	RAMA13WT
1425	28/ 5/81			DPRT B	PDR 12 KHZ R-02	GDC	41 17.9N	152 02.9E S	RAMA13WT
0853	1/ 6/81			DPRT E	PDR 12 KHZ R-02	GDC	48 50.1N	174 01.3E S	RAMA13WT
0915	1/ 6/81			DPRT B	PDR 12 KHZ R-03	GDC	48 52.1N	174 07.0E S	RAMA13WT
2000	2/ 6/81			DPRT E	PDR 12 KHZ R-03	GDC	51 39.6N	177 05.2W S	RAMA13WT
*** MAGNETOMETER ***									
0430	11/ 5/81			MGRA B	MAGNETICS R-01	GDC	16 40.4N	146 38.2E S	RAMA13WT
1730	30/ 5/81			MGRA E	MAGNETICS R-01	GDC	45 20.8N	163 42.3E S	RAMA13WT
1750	30/ 5/81			MGRA B	MAGNETICS R-02	GDC	45 22.5N	163 47.4E S	RAMA13WT
2000	2/ 6/81			MGRA E	MAGNETICS R-02	GDC	51 39.6N	177 05.2W S	RAMA13WT
CURRENT MEASUREMENT									
0400	10/ 5/81			CMAB C	STA.704	WHO	13 27.5N	144 37.7E S	RAMA13WT
0956	14/ 5/81			CMAB E	RCVR STA.704	WHO	28 01.4N	151 56.2E S	RAMA13WT
0546	15/ 5/81			CMAB B	DROP STA.717	WHO	27 59.4N	151 53.4E S	RAMA13WT
0130	3/ 6/81			CMAB C	STA.717	WHO	52 02.3N	176 34.7W S	RAMA13WT
0400	10/ 5/81			CMAB C	STA.703	WHO	13 27.5N	144 37.7E S	RAMA13WT
2214	15/ 5/81			CMAB E	RCVD STA.703	WHO	29 00.2N	152 02.0E S	RAMA13WT
0819	16/ 5/81			CMAB B	DROP STA.718	WHO	30 01.5N	152 01.7E S	RAMA13WT
0130	3/ 6/81			CMAB C	STA.718	WHO	52 02.3N	176 34.7W S	RAMA13WT
0400	10/ 5/81			CMAB C	STA.702	WHO	13 27.5N	144 37.7E S	RAMA13WT
2200	17/ 5/81			CMAB E	RCVD STA.702	WHO	31 16.7N	152 03.6E S	RAMA13WT
1201	18/ 5/81			CMAB B	DROP STA.719	WHO	31 15.3N	152 03.0E S	RAMA13WT
0130	3/ 6/81			CMAB C	STA.719	WHO	52 02.3N	176 34.7W S	RAMA13WT
0400	10/ 5/81			CMAB C	STA.701	WHO	13 27.5N	144 37.7E S	RAMA13WT
0024	19/ 5/81			CMAB E	RCVD STA.701	WHO	32 27.9N	152 10.5E S	RAMA13WT

GMT TIME	D /M /Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
1455	19/ 5/81			CMAB B	DROP STA.720	WHO	32 28.1N	152 06.6E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.720	WHO	52 02.3N	176 34.7W	S RAMA13WT
0400	10/ 5/81			CMAB C	STA.700	WHO	13 27.5N	144 37.7E	S RAMA13WT
0352	2/ 5/81			CMAB E	RCVD STA.700	WHO	13 27.5N	144 37.7E	S RAMA13WT
1522	2/ 5/81			CMAB B	DROP STA.721	WHO	13 27.5N	144 37.7E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.721	WHO	52 02.3N	176 34.7W	S RAMA13WT
0400	10/ 5/81			CMAB C	STA.699	WHO	13 27.5N	144 37.7E	S RAMA13WT
0326	21/ 5/81			CMAB E	RCVD STA.699	WHO	34 57.0N	152 00.8E	S RAMA13WT
0119	22/ 5/81			CMAB B	DROP STA.722	WHO	34 58.2N	152 02.6E	S RAMA13WT
0607	22/ 5/81			CMAB X	RCVD STA.722	WHO	34 58.7N	152 04.2E	S RAMA13WT
1527	22/ 5/81			CMAB B	DROP STA.723	WHO	34 53.9N	152 00.4E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.723	WHO	52 02.3N	176 34.7W	S RAMA13WT
0400	10/ 5/81			CMAB C	STA.698	WHO	13 27.5N	144 37.7E	S RAMA13WT
1036	23/ 5/81			CMAB E	RCVD STA.698	WHO	36 16.9N	152 03.4E	S RAMA13WT
0136	24/ 5/81			CMAB B	DROP STA.724	WHO	36 14.6N	152 01.1E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.724	WHO	52 02.3N	176 34.7W	S RAMA13WT
0400	10/ 5/81			CMAB C	STA.697	WHO	13 27.5N	144 37.7E	S RAMA13WT
1447	24/ 5/81			CMAB E	RCVD STA.697	WHO	37 31.3N	152 02.2E	S RAMA13WT
2224	24/ 5/81			CMAB B	DROP STA.725	WHO	37 28.2N	152 06.3E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.725	WHO	52 02.3N	176 34.7W	S RAMA13WT
0400	10/ 5/81			CMAB C	STA.696	WHO	13 27.5N	144 37.7E	S RAMA13WT
1755	25/ 5/81			CMAB E	RCVD STA.696	WHO	38 57.8N	152 03.8E	S RAMA13WT
0532	26/ 5/81			CMAB B	DROP STA.726	WHO	38 57.0N	152 06.5E	S RAMA13WT
0130	3/ 6/81			CMAB C	STA.726	WHO	52 02.3N	176 34.7W	S RAMA13WT

CONDUCTIVITY, TEMPERATURE, DEPTH

2313	10/ 5/81			TDOT B	STA.01 3268M	R24	WHO	16 16.6N	146 26.2E	S RAMA13WT
0020	11/ 5/81			TDOT E	STA.01 3268M	R24	WHO	16 15.8N	146 26.2E	S RAMA13WT
0232	11/ 5/81			TDOT B	STA.02 3217M	R24	WHO	16 33.9N	146 34.5E	S RAMA13WT
0335	11/ 5/81			TDOT E	STA.02 3217M	R24	WHO	16 33.8N	146 35.0E	S RAMA13WT
1925	13/ 5/81			TDOT B	STA.03 5950M	R24	WHO	27 43.8N	151 59.0E	S RAMA13WT
0730	14/ 5/81			TDOT E	STA.03 5950M	R24	WHO	27 43.3N	151 55.9E	S RAMA13WT
0915	15/ 5/81			TDOT B	STA.04 6016M	R24	WHO	28 04.3N	151 49.9E	S RAMA13WT
1255	15/ 5/81			TDOT E	STA.04 6016M	R24	WHO	28 04.7N	151 47.7E	S RAMA13WT
1553	15/ 5/81			TDOT B	STA.05 5899M	R24	WHO	28 28.7N	152 01.8E	S RAMA13WT
1920	15/ 5/81			TDOT E	STA.05 5899M	R24	WHO	28 28.7N	152 03.6E	S RAMA13WT
2333	15/ 5/81			TDOT B	STA.06 5944M	R24	WHO	29 15.3N	151 59.0E	S RAMA13WT
0305	16/ 5/81			TDOT E	STA.06 5944M	R24	WHO	29 16.7N	151 57.5E	S RAMA13WT

GMT TIME	D /M /Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
1953	16/ 5/81			TDOT B	STA.07 5985M	R24	WHO 30 05.0N	152 04.3E	S RAMA13WT
2323	16/ 5/81			TDOT E	STA.07 5985M	R24	WHO 30 05.7N	152 03.9E	S RAMA13WT
1345	17/ 5/81			TDOT B	STA.08 5936M	R24	WHO 30 42.0N	152 02.1E	S RAMA13WT
1755	17/ 5/81			TDOT E	STA.08 5936M	R24	WHO 30 43.7N	152 01.4E	S RAMA13WT
0430	18/ 5/81			TDOT B	STA.09 5905M	R24	WHO 31 21.2N	152 06.5E	S RAMA13WT
0810	18/ 5/81			TDOT E	STA.09 5905M	R24	WHO 31 22.5N	152 05.2E	S RAMA13WT
1705	18/ 5/81			TDOT B	STA.10 6040M	R24	WHO 31 58.2N	151 59.8E	S RAMA13WT
2035	18/ 5/81			TDOT E	STA.10 6040M	R24	WHO 31 59.7N	151 57.4E	S RAMA13WT
0445	19/ 5/81			TDOT B	STA.11 5642M	R24	WHO 32 29.8N	152 13.2E	S RAMA13WT
0802	19/ 5/81			TDOT E	STA.11 5642M	R24	WHO 32 29.6N	152 15.0E	S RAMA13WT
2005	19/ 5/81			TDOT B	STA.12 5906M	R24	WHO 33 11.4N	152 00.7E	S RAMA13WT
0030	20/ 5/81			TDOT E	STA.12 5906M	R24	WHO 33 13.1N	152 00.8E	S RAMA13WT
0755	20/ 5/81			TDOT B	STA.13 5959M	R24	WHO 33 45.8N	151 58.9E	S RAMA13WT
1140	20/ 5/81			TDOT E	STA.13 5959M	R24	WHO 33 45.8N	151 57.5E	S RAMA13WT
2000	20/ 5/81			TDOT B	STA.14 6103M	R24	WHO 34 31.4N	151 59.7E	S RAMA13WT
2335	20/ 5/81			TDOT E	STA.14 6103M	R24	WHO 34 31.7N	152 00.9E	S RAMA13WT
0945	21/ 5/81			TDOT B	STA.15 6069M	R24	WHO 34 56.4N	152 08.3E	S RAMA13WT
1330	21/ 5/81			TDOT E	STA.15 6069M	R24	WHO 34 55.2N	152 09.6E	S RAMA13WT
0253	23/ 5/81			TDOT B	STA.16 5883M	R24	WHO 35 45.6N	152 00.6E	S RAMA13WT
0624	23/ 5/81			TDOT E	STA.16 5880M	R24	WHO 35 45.0N	152 03.3E	S RAMA13WT
1540	23/ 5/81			TDOT B	STA.17 5821M	R24	WHO 36 16.1N	152 09.5E	S RAMA13WT
1907	23/ 5/81			TDOT E	STA.17 5821M	R24	WHO 36 16.5N	152 11.5E	S RAMA13WT
0557	24/ 5/81			TDOT B	STA.18 5880M	R24	WHO 36 45.4N	151 59.6E	S RAMA13WT
0930	24/ 5/81			TDOT E	STA.18 5880M	R24	WHO 36 43.9N	152 02.0E	S RAMA13WT
2340	24/ 5/81			TDOT B	STA.19 5841M	R24	WHO 37 29.5N	152 04.2E	S RAMA13WT
0345	25/ 5/81			TDOT E	STA.19 5841M	R24	WHO 37 29.7N	152 02.6E	S RAMA13WT
0845	25/ 5/81			TDOT B	STA.20 5761M	R24	WHO 38 18.8N	151 59.4E	S RAMA13WT
1252	25/ 5/81			TDOT E	STA.20 5761M	R24	WHO 38 19.0N	151 58.2E	S RAMA13WT
2128	25/ 5/81			TDOT B	STA.21 5650M	R24	WHO 38 59.8N	152 03.2E	S RAMA13WT
0133	26/ 5/81			TDOT E	STA.21 5650M	R24	WHO 39 01.0N	152 03.1E	S RAMA13WT
0828	27/ 5/81			TDOT B	STA.22 5429M	R24	WHO 40 01.0N	151 56.1E	S RAMA13WT
1245	27/ 5/81			TDOT E	STA.22 5429M	R24	WHO 40 02.8N	151 54.3E	S RAMA13WT
0015	28/ 5/81			TDOT B	STA.23 5321M	R24	WHO 40 58.8N	152 02.5E	S RAMA13WT
0400	28/ 5/81			TDOT E	STA.23 5321M	R24	WHO 41 00.1N	152 02.6E	S RAMA13WT
0940	28/ 5/81			TDOT B	STA.24 5352M	R24	WHO 41 14.8N	152 01.5E	S RAMA13WT
1345	28/ 5/81			TDOT E	STA.24 5352M	R24	WHO 41 16.7N	152 00.6E	S RAMA13WT