INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued November 21, 1978)

MARIANA EXPEDITION

LEG 4

Apra, Guam (23 September 1978)
to
Apra, Guam (11 October 1978)

R/V T. Washington

Co-Chief Scientists - R. N. Anderson (Lamont-Doherty Geological Observatory)
and D. E. Karig (Cornell University)

Resident Marine Tech - J. L. Coatsworth

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

Data Collection Funded by NSF
Grant Number OCE78-16758
Data Processing Funded by SIA, NSF, ONR and IDOE SEATAR

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 Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093.

GDC Cruise I.D.# - 176

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"/deg. long.

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.) at approximately 1 mile spacing, plotted at 4"/degree with standard U. S. Navy Oceanographic Office BC series boundaries (see index chart).

3. Plots of magnetic anomaly profiles along track - map scale = 1.2"/degree; anomaly scale between 15°N and 15°S latitude = 500 gamm/inch; anomaly scale north of 15°N and south of 15°S = 1000 gamm/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

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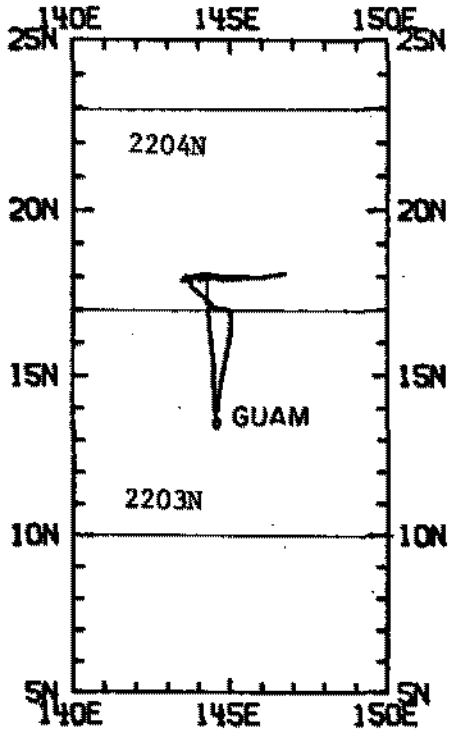
* NO SUBBOTTOM PROFILER DATA COLLECTED



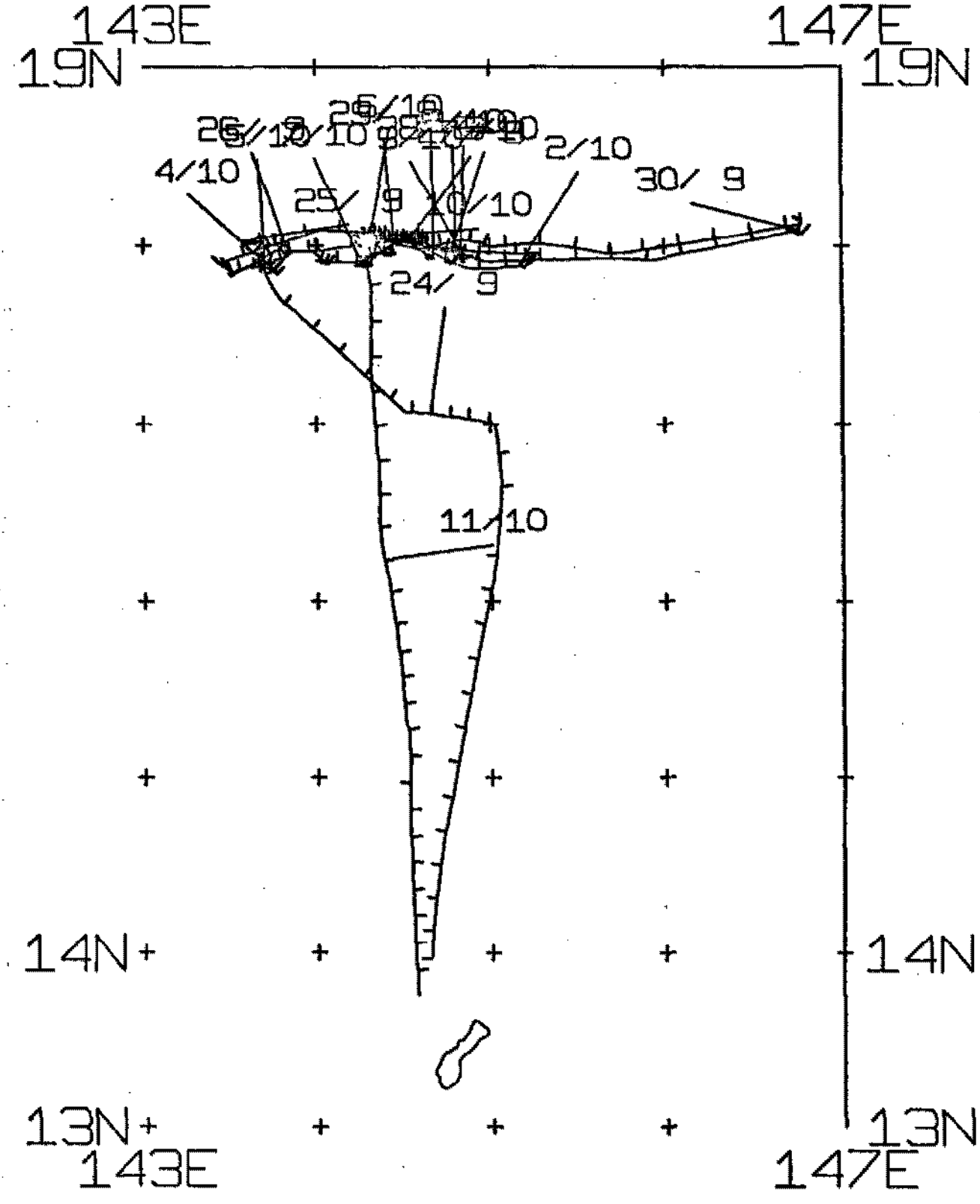
MARIANA EXPEDITION
LEG 4

Co-Chief Scientists - R. N. Anderson (Lamont-Doherty Geol. Obs.)
D. E. Karig (Cornell University)
Ports: Apra, Guam to Apra, Guam
Dates: 23 September to 11 October 1978
Ship: R/V T. Washington

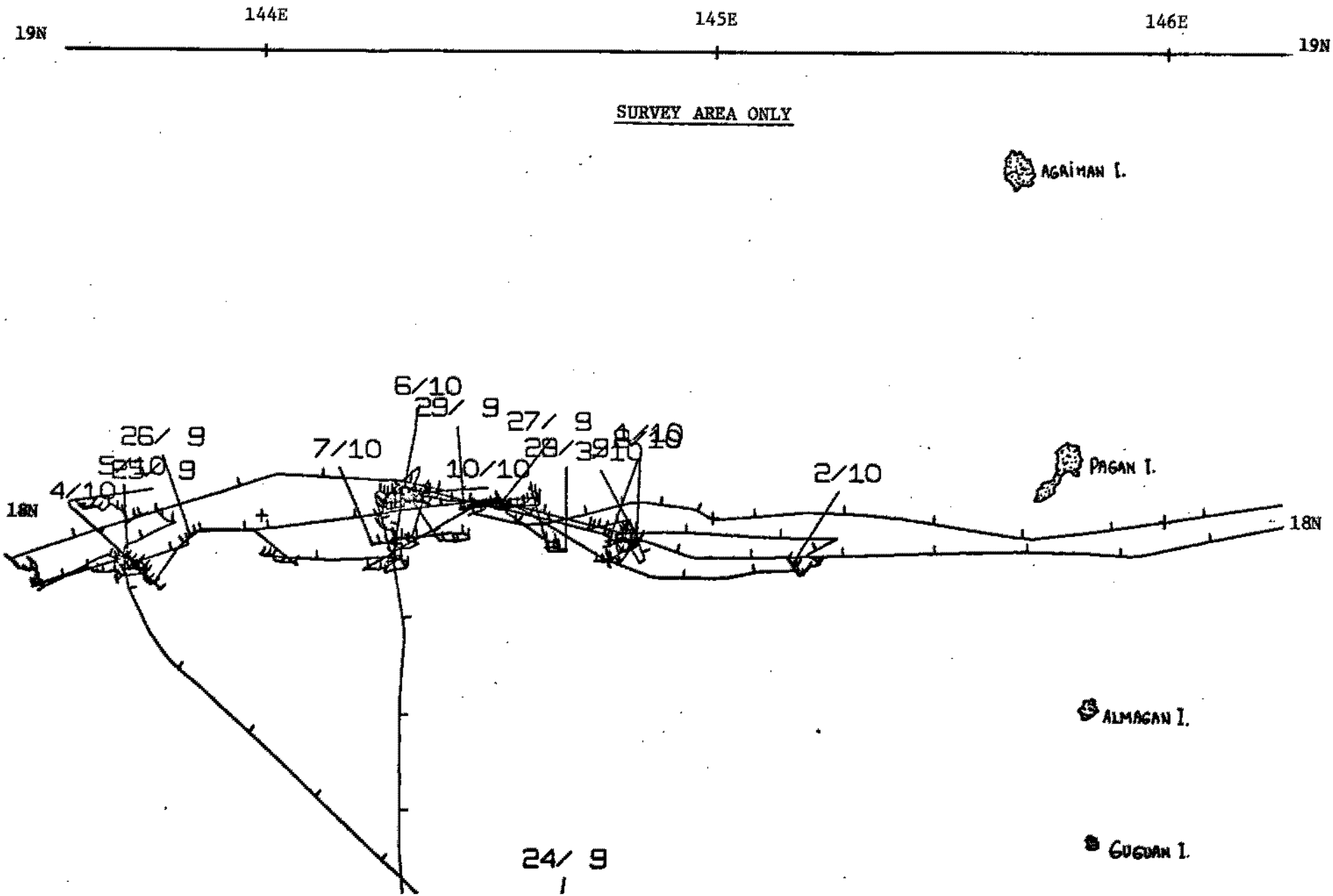
TOTAL MILEAGE

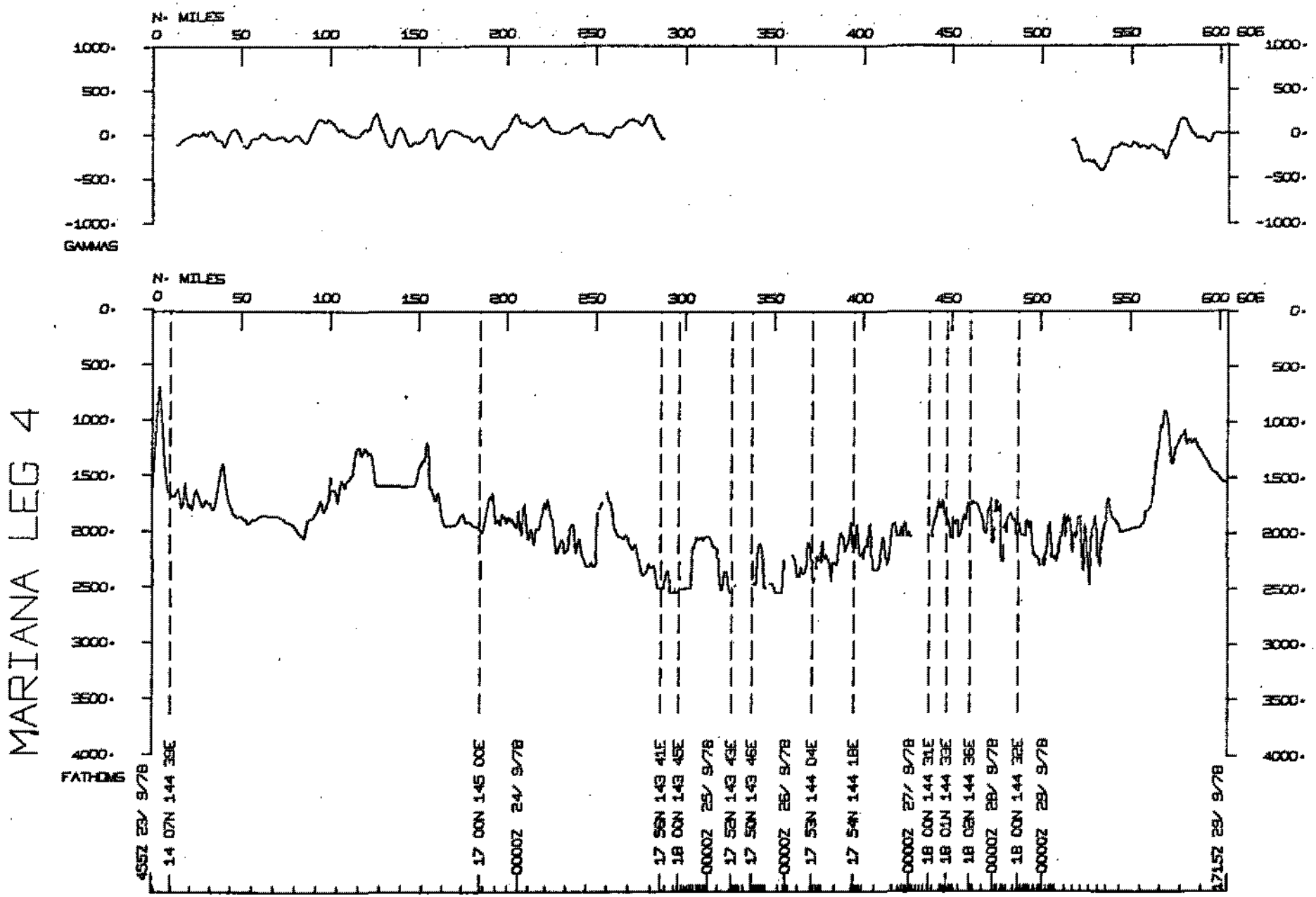
1) Cruise - 1584 miles
2) Bathymetry - 1534 miles
3) Magnetics - 0828 miles
4) Seismic Reflection - none collected
5) Gravity - none collected

MARA04WT TRACK PLOT
MERCATOR PROJECTION, SCALE=
1.200 IN/DEG LONGITUDE

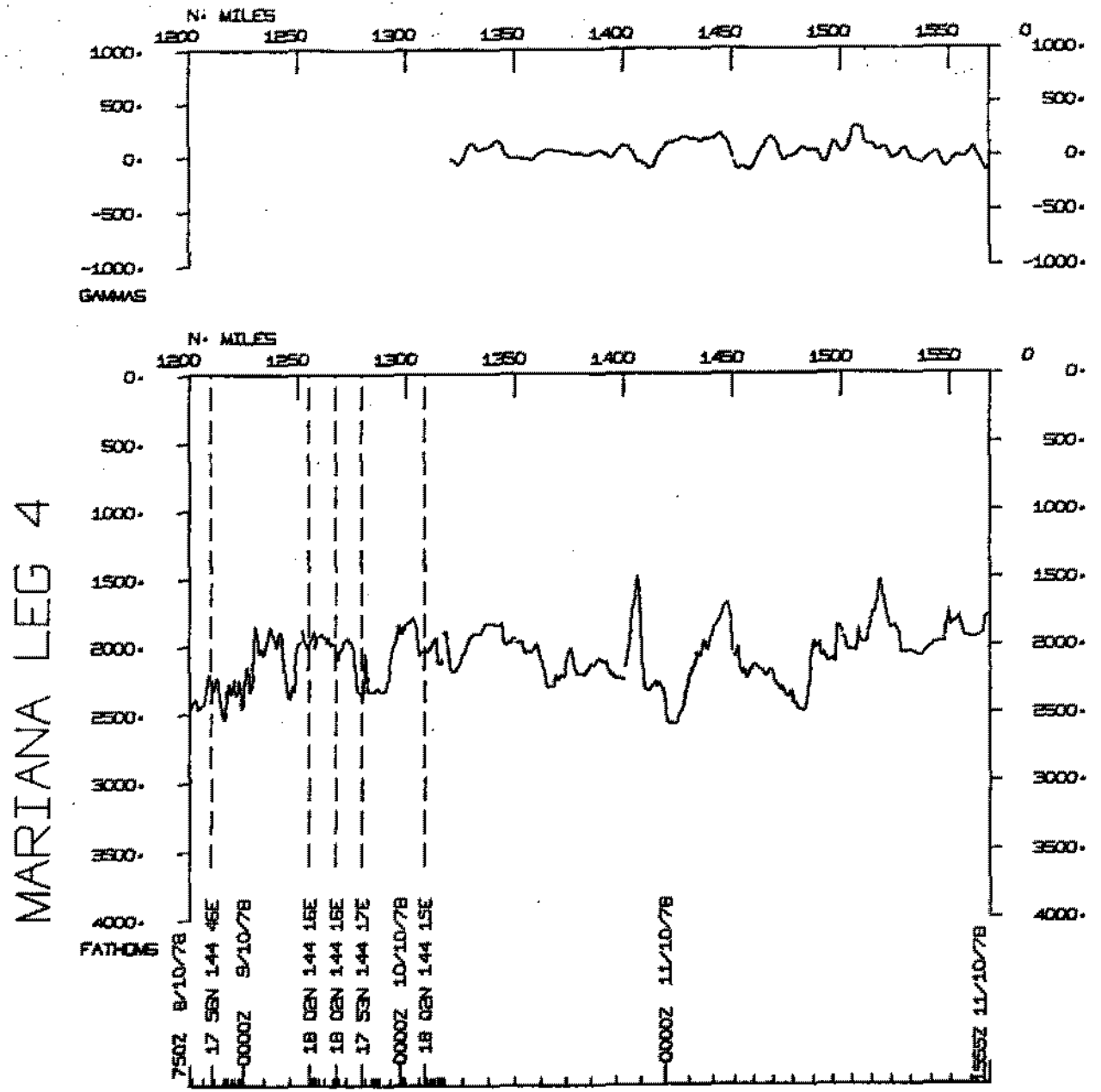


MARA04WT TRACK PLOT




MARIANA LEG 4
N. MILES
0 50 100 150 200 250 300 350 400 450 500 550 600 606
1000 500 0 -500 -1000
GAMMAS
N. MILES
0 50 100 150 200 250 300 350 400 450 500 550 600 606
0 500 1000 1500 2000 2500 3000 3500 4000
FATHOMS
4552 23/ 9/78
14 07N 144 38E
17 00N 145 00E
00002 24/ 9/78
17 58N 143 41E
18 00N 143 45E
00002 25/ 9/78
17 52N 143 43E
17 50N 143 46E
00002 26/ 9/78
17 53N 144 04E
17 54N 144 18E
00002 27/ 9/78
18 00N 144 31E
18 01N 144 33E
18 02N 144 36E
00002 28/ 9/78
18 00N 144 32E
00002 29/ 9/78
17152 29/ 9/78

MARIANA LEG 4


MARIANA LEG 4
N. MILES
1200
1250
1300
1350
1400
1450
1500
1550
0
1000
500
0
-500
-1000
GAMMAS
N. MILES
1200
1250
1300
1350
1400
1450
1500
1550
0
0
500
1000
1500
2000
2500
3000
3500
4000
FATHOMS
7502 8/10/78
17 58N 144 45E
00002 9/10/78
18 02N 144 16E
18 02N 144 18E
17 53N 144 17E
00002 10/10/78
18 02N 144 15E
00002 11/10/78
1552Z 11/10/78

S.I.O. SAMPLE INDEX

(Issued November 22, 1978)

MARIANA EXPEDITION

LEG 4

Apra, Guam (23 September 1978)
to
Apra, Guam (11 October 1978)

R/V T. Washington

Co-Chief Scientists - R. N. Anderson (Lamont-Doherty)
D. E. Karig (Cornell Univ.)

Resident Marine Tech - J. L. Coatsworth

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

Index Encoding Funded by NSF
Grant Number OCE76-80618
Index Processing and Report Preparation
Funded in part by SIA and IDOE SEATAR

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.)

NOTE: This document is intended primarily for informal use within the institution and is not to be reproduced or distributed outside Scripps without prior approval of the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093.

S.I.O. SAMPLE INDEX GENERATED 22NOV78

*** MARIANA LEG 4 SAMPLE INDEX (MARA04WT) ***

23SEP78 - APRA, GUAM, MAR.IS.
TO
11OCT78 - APRA, GUAM, MAR.IS.

CHIEF SCIENTISTS - ANDERSON, R.N. LDO
KARIG, D.E. CLU

SHIP - R/V THOMAS WASHINGTON (SIO)

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

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

DISP	TYPE										TOTAL
	BU	CO	DP	DR	EF	HF	LB	MG	MT	PE	
CLU	1									1	2
GCR		18		19							37
GDC			16				1	1			18
JHF					5				4		9
LDO						11				4	15
MTG										1	1
NSF										1	1
ORD										3	3
SCG										1	1
SIX										2	2
UTK										1	1
TOTAL	1	18	16	19	5	11	1	1	4	14	90

SAMPLE 'TYPE' CODES USED ABOVE

BU = BUOY (OCEANOGRAPHIC) REPLACED TYPE RB MAR. 74
CO = CORE (SEE ALSO TYPE DH**)
DP = DEPTH
DR = DREDGE
EF = ELECTRIC FIELD
HF = HEAT PROBE
LB = LOG BOOKS
MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
MT = MAGNETOTELLURIC
PE = PERSONNEL IN SCIENTIFIC PARTY

SAMPLE 'DISP' CODES USED ABOVE

CLU = CORNELL UNIVERSITY, ITHACA, N.Y.
GCR = GEOLOGICAL CURATING FACILITY -- W. RIEDEL, (EXT. 4386)
GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
JHF = J. H. FILLOUX, ORD (EXT. 2075)
LDO = LAMONT-DOHERTY GEOPHYSICAL OBSERVATORY, COLUMBIA UNIVERSITY
MTG = MARINE TECHNOLOGY GROUP (EXT 4194)
NSF = NATIONAL SCIENCE FOUNDATION
ORD = OCEAN RESEARCH DIVISION (EXT. 2857)
SCG = SHIPBOARD COMPUTER GROUP (EXT. 4195)
SIX = SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 2356)
UTK = UNIV OF TOKYO

*** PORTS ***

245 23 978	LGPT B APRA, GUAM, MAR.IS.	13 27 N 144 37 E F	MARA04WT
2000 111078	LGPT E APRA, GUAM, MAR.IS.	13 27 N 144 37 E F	MARA04WT

PERSONNEL

PECS	ANDERSON, R.N.	LDO	MARA04WT
PECS	KARIG, D.E.	CLU	MARA04WT
PERT	COATSWORTH, J.L.	MTG	MARA04WT
PECT	HENRY, A.J.	SCG	MARA04WT
PE	ABBOTT, D. H.	LDO	MARA04WT
PE	DAVIN, E. M.	NSF	MARA04WT
PE	FILLOUX, J.H.	ORD	MARA04WT
PE	GREEN, L.L.	ORD	MARA04WT
PE	HOBART, M.A.	LDO	MARA04WT
PE	MICHAEL, L.H.	SIX	MARA04WT
PE	MOFLLER, H. H.	ORD	MARA04WT
PE	THAYER, H. S.	SIX	MARA04WT
PEXN	UYEDA, S.	UTK	MARA04WT
PE	VAN STEVENINCK, W.	LDO	MARA04WT

*** NOTE *** TIME ZONES AND MINUTES OF LATITUDE AND LONGITUDE ARE LISTED IN TENTHS (E.G. 10.6 IS LISTED AS 106)

*** NOTE *** AN 'X' IN THE (B)EGIN/(E)ND COLUMN FOLLOWING THE SAMPLE CODE INDICATES NO SAMPLE OR DATA RECOVERED

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP

UNDERWAY DATA CURATOR - STUART M. SMITH (EXT.2752)

*** LOG BOOKS ***

500	23 978			LBUW	B UNDERWAY DATA LOG	GDC	13	580N	144	388E	S MARA04WT
1610	111078			LBUW	E UNDERWAY DATA LOG	GDC	13	449N	144	338E	S MARA04WT

*** PATHOGRAMS ***

245	23 978			DPR3	B UGR 3.5 KHZ R-01	GDC	13	564N	144	387E	S MARA04WT
430	24 978			DPR3	E UGR 3.5 KHZ R-01	GDC	17	283N	144	27E	S MARA04WT
459	24 978			DPR3	B UGR 3.5 KHZ R-02	GDC	17	321N	143	584E	S MARA04WT
200	25 978			DPR3	E UGR 3.5 KHZ R-02	GDC	17	529N	143	439E	S MARA04WT
335	26 978			DPR3	B GDR 3.5 KHZ R-02A	GDC	17	580N	143	544E	S MARA04WT
1007	26 978			DPR3	E GDR 3.5 KHZ R-02A	GDC	17	551N	143	595E	S MARA04WT
1010	26 978			DPR3	B UGR 3.5 KHZ R-03	GDC	17	551N	143	595E	S MARA04WT
925	28 978			DPR3	E UGR 3.5 KHZ R-03	GDC	17	573N	144	370E	S MARA04WT
930	28 978			DPR3	B UGR 3.5 KHZ R-04	GDC	17	573N	144	369E	S MARA04WT
617	30 978			DPR3	E UGR 3.5 KHZ R-04	GDC	18	52N	146	452E	S MARA04WT
631	30 978			DPR3	B UGR 3.5 KHZ R-05	GDC	18	55N	146	453E	S MARA04WT
1735	30 978			DPR3	E UGR 3.5 KHZ R-05	GDC	17	570N	144	456E	S MARA04WT
2156	30 978			DPR3	B UGR 3.5 KHZ R-06	GDC	17	568N	144	488E	S MARA04WT
735	11078			DPR3	E UGR 3.5 KHZ R-06	GDC	17	579N	144	479E	S MARA04WT
808	11078			DPR3	B UGR 3.5 KHZ R-07	GDC	17	580N	144	480E	S MARA04WT
617	31078			DPR3	E UGR 3.5 KHZ R-07	GDC	17	551N	144	457E	S MARA04WT
640	31078			DPR3	B UGR 3.5 KHZ R-08	GDC	17	550N	144	461E	S MARA04WT
2230	31078			DPR3	E UGR 3.5 KHZ R-08	GDC	17	530N	143	432E	S MARA04WT
2235	31078			DPR3	B GDR 3.5 KHZ R-09	GDC	17	530N	143	431E	S MARA04WT
505	51078			DPR3	E GDR 3.5 KHZ R-09	GDC	17	528N	143	374E	S MARA04WT
701	51078			DPR3	B GDR 3.5 KHZ R-09A	GDC	17	515N	143	303E	S MARA04WT
1456	61078			DPR3	E GDR 3.5 KHZ R-09A	GDC	18	26N	144	203E	S MARA04WT
1000	41078			DPR3	B UGR 3.5 KHZ R-10	GDC	17	533N	143	433E	S MARA04WT
640	51078			DPR3	E UGR 3.5 KHZ R-10	GDC	17	512N	143	305E	S MARA04WT

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.		DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
1500	61078			DPR3 B	GDR 3.5 KHZ R-11		GDC	18 26N	144 204E	S MARA04WT
1040	81078			DPR3 E	GDR 3.5 KHZ R-11		GDC	17 558N	144 486E	S MARA04WT
1050	81078			DPR3 B	GDR 3.5 KHZ R-11A		GDC	17 564N	144 490E	S MARA04WT
1152	91078			DPR3 E	GDR 3.5 KHZ R-11A		GDC	18 29N	144 163E	S MARA04WT
1155	91078			DPR3 B	GDR 3.5 KHZ R-12		GDC	18 29N	144 162E	S MARA04WT
2152	101078			DPR3 E	GDR 3.5 KHZ R-12		GDC	16 380N	144 209E	S MARA04WT
2155	101078			DPR3 B	GDR 3.5 KHZ R-13		GDC	16 374N	144 209E	S MARA04WT
1610	111078			DPR3 E	GDR 3.5 KHZ R-13		GDC	13 449N	144 338E	S MARA04WT
*** MAGNETOMETER ***										
628	23 978			MGR B	MAGNETICS R-01		GDC	14 125N	144 396E	S MARA04WT
1600	111078			MGR E	MAGNETICS R-01		GDC	13 449N	144 338E	S MARA04WT
SEISMIC RECEIVING BUOY										
1945	30 978			BUR	REFERENCE BUOY		CLU	17 571N	144 463E	S MARA04WT
ROCK DREDGE CURATOR W. RIEDEL (EXT. 4386)										
2332	25 978			DRR B	MARA01R	4132	GCR	17 572N	143 500E	S MARA04WT
150	26 978			DRR E	MARA01R	4132	GCR	17 578N	143 511E	S MARA04WT
725	26 978			DRR B	MARA02R	4295	GCR	17 543N	144 16E	S MARA04WT
841	26 978			DRR E	MARA02R	4295	GCR	17 550N	144 6E	S MARA04WT
1350	26 978			DRR B	MARA03R	4324	GCR	17 544N	144 176E	S MARA04WT
1600	26 978			DRR E	MARA03R	4324	GCR	17 534N	144 155E	S MARA04WT
55	28 978			DRR B	MARA04R	4276	GCR	17 558N	144 401E	S MARA04WT
308	28 978			DRR E	MARA04R	4276	GCR	17 561N	144 384E	S MARA04WT
725	28 978			DRR B	MARA05R	3637	GCR	17 568N	144 381E	S MARA04WT
816	28 978			DRR E	MARA05R	3637	GCR	17 570N	144 374E	S MARA04WT
2230	30 978			DRR B	MARA06R	4813	GCR	17 569N	144 491E	S MARA04WT
41	11078			DRR E	MARA06R	4813	GCR	17 581N	144 494E	S MARA04WT
451	11078			DRR B	MARA07R	4813	GCR	17 586N	144 483E	S MARA04WT
600	11078			DRR E	MARA07R	4813	GCR	17 585N	144 478E	S MARA04WT
945	11078			DRR B	MARA08R	4368	GCR	17 572N	144 478E	S MARA04WT
1129	11078			DRR E	MARA08R	4368	GCR	17 572N	144 467E	S MARA04WT

TIME GMT	DATE D.M.Y.	TIME TZ LOC	SAMP CODE		SAMPLE IDENT.		DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
145	31078		DRR	B	MARA09R	4833	GCR	17 56.7N	144 48.3E	S MARA04WT
302	31078		DRR	E	MARA09R	4833	GCR	17 57.1N	144 48.5E	S MARA04WT
726	31078		DRR	B	MARA10R	4218	GCR	17 54.7N	144 46.4E	S MARA04WT
926	31078		DRR	E	MARA10R	4218	GCR	17 54.0N	144 45.7E	S MARA04WT
1430	41078		DRR	B	MARA11R	4775	GCR	17 50.8N	143 30.3E	S MARA04WT
1553	41078		DRR	E	MARA11R	4775	GCR	17 50.9N	143 29.8E	S MARA04WT
856	51078		DRR	B	MARA12R	4698	GCR	17 53.7N	143 29.5E	S MARA04WT
1131	51078		DRR	E	MARA12R	4698	GCR	17 53.2N	143 27.3E	S MARA04WT
2005	51078		DRR	B	MARA13R	4382	GCR	18 2.6N	144 22.9E	S MARA04WT
2200	51078		DRR	E	MARA13R	4382	GCR	18 2.7N	144 20.5E	S MARA04WT
2028	61078		DRR	B	MARA14R	4353	GCR	17 56.0N	144 17.8E	S MARA04WT
2234	61078		DRR	E	MARA14R	4353	GCR	17 56.7N	144 15.8E	S MARA04WT
350	71078		DRR	B	MARA15R	3730	GCR	17 56.9N	144 26.0E	S MARA04WT
600	71078		DRR	E	MARA15R	3730	GCR	17 56.9N	144 24.8E	S MARA04WT
217	81078		DRR	B	MARA16R	4013	GCR	17 58.7N	144 45.1E	S MARA04WT
426	81078		DRR	E	MARA16R	4013	GCR	17 58.6N	144 43.2E	S MARA04WT
1353	81078		DRR	B	MARA17R	4430	GCR	17 56.9N	144 47.3E	S MARA04WT
1556	81078		DRR	E	MARA17R	4430	GCR	17 56.8N	144 47.1E	S MARA04WT
2020	81078		DRR	B	MARA18R	4392	GCR	17 56.9N	144 45.8E	S MARA04WT
2226	81078		DRR	E	MARA18R	4392	GCR	17 57.6N	144 47.5E	S MARA04WT
1920	91078		DRR	B	MARA19R	4176	GCR	17 54.4N	144 18.4E	S MARA04WT
2043	91078		DRR	E	MARA19R	4176	GCR	17 54.5N	144 17.8E	S MARA04WT

*** CORES ***

2242	24 978		COP		MARA01P	3816	GCR	18 1.6N	143 34.9E	S MARA04WT
2242	24 978		COPG		MARA01PG	3816	GCR	18 1.6N	143 34.9E	S MARA04WT
416	25 978		COP		MARA02P	4679	GCR	17 53.5N	143 44.1E	S MARA04WT
416	25 978		COPG		MARA02PG	4679	GCR	17 53.5N	143 44.1E	S MARA04WT
2048	27 978		COP		MARA03P	3254	GCR	18 3.4N	144 35.5E	S MARA04WT
2048	27 978		COPG		MARA03PG	3254	GCR	18 3.4N	144 35.5E	S MARA04WT
332	29 978		COP		MARA04P	4141	GCR	18 0.7N	144 28.3E	S MARA04WT
332	29 978		COPG		MARA04PG	4141	GCR	18 0.7N	144 28.3E	S MARA04WT
740	21078		COP		MARA05P	3877	GCR	17 54.5N	144 44.4E	S MARA04WT
740	21078		COPG		MARA05PG	3877	GCR	17 54.5N	144 44.4E	S MARA04WT
1255	21078		COP		MARA06P	4430	GCR	17 55.7N	144 48.1E	S MARA04WT
1255	21078		COPG		MARA06PG	4430	GCR	17 55.7N	144 48.1E	S MARA04WT
1754	21078		COP		MARA07P	4738	GCR	17 56.7N	144 49.4E	S MARA04WT
1754	21078		COPG		MARA07PG	4738	GCR	17 56.7N	144 49.4E	S MARA04WT
805	41078		COP		MARA08P	4193	GCR	17 52.9N	143 44.0E	S MARA04WT

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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125	91078			CUP	MARA09P 3476	GCR	18 17N	144 320E	S MARA04WT
125	91078			CUPG	MARA09PG 3476	GCR	18 17N	144 320E	S MARA04WT
					MAGNETOTELLURIC CURATOR J. FILLOUX (EXT. 2075)				
2340	26 978			MTVF	MAG.TELLUR. FR.VCL.	JHF	18 11N	144 314E	S MARA04WT
2350	26 978			MTVF	MAG.TELLUR. FR.VCL.	JHF	18 12N	144 313E	S MARA04WT
2356	29 978			MTVF	MAG.TELLUR. FR.VCL.	JHF	18 54N	146 451E	S MARA04WT
10	30 978			MTVF	MAG.TELLUR. FR.VCL.	JHF	18 54N	146 451E	S MARA04WT
					ELECTRIC FIELD CURATOR J. FILLOUX (EXT.2075)				
530	27 978			EFVF	ELEC. FLD. FREE VCL.	JHF	18 11N	144 321E	S MARA04WT
703	27 978			EFVF	ELEC. FLD. FREE VCL.	JHF	18 13N	144 319E	S MARA04WT
434	30 978			EFVF	ELEC. FLD. FREE VCL.	JHF	18 44N	146 451E	S MARA04WT
625	30 978			EFVF	ELEC. FLD. FREE VCL.	JHF	18 54N	146 452E	S MARA04WT
1300	31078			EFVA	ELEC.FLD. VERT. AR.	JHF	18 24N	144 311E	S MARA04WT
					HEAT FLOW				
900	24 978			HFME B	POGO-MULT. ENTRY 01	LDO	17 591N	143 478E	S MARA04WT
1816	24 978			HFME E	POGO-MULT. ENTRY 01	LDO	18 9N	143 376E	S MARA04WT
836	25 978			HFME B	POGO-MULT. ENTRY 02	LDO	17 505N	143 465E	S MARA04WT
1755	25 978			HFME E	POGO-MULT. ENTRY 02	LDO	17 531N	143 427E	S MARA04WT
810	27 978			HFME B	POGO-MULT. ENTRY 03	LDO	18 17N	144 366E	S MARA04WT
1730	27 978			HFME E	POGO-MULT. ENTRY 03	LDO	18 15N	144 291E	S MARA04WT
1130	28 978			HFME B	POGO-MULT. ENTRY 04	LDO	18 16N	144 321E	S MARA04WT
40	29 978			HFME E	POGO-MULT. ENTRY 04	LDO	18 9N	144 260E	S MARA04WT
1607	11078			HFME B	POGO-MULT. ENTRY 05	LDO	17 554N	145 121E	S MARA04WT
225	21078			HFME E	POGO-MULT. ENTRY 05	LDO	17 582N	144 489E	S MARA04WT
1815	31078			HFME B	POGO-MULT. ENTRY 06	LDO	17 515N	143 447E	S MARA04WT
620	41078			HFME E	POGO-MULT. ENTRY 06	LDO	17 522N	143 413E	S MARA04WT
1910	41078			HFME B	POGO-MULT. ENTRY 07	LDO	17 544N	143 405E	S MARA04WT
600	51078			HFME E	POGO-MULT. ENTRY 07	LDO	17 531N	143 365E	S MARA04WT
310	61078			HFME B	POGO-MULT. ENTRY 08	LDO	18 33N	144 213E	S MARA04WT
1455	61078			HFME E	POGO-MULT. ENTRY 08	LDO	18 26N	144 203E	S MARA04WT

TIME GMT	DATE D.M.Y.	TIME LOC	TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
915	71078			HFME B	POGO-MULT. ENTRY 09	LDO 18	17N	144 156E	S MARA04WT
2030	71078			HFME E	POGO-MULT. ENTRY 09	LDO 18	30N	144 224E	S MARA04WT
305	81078			HFME B	POGO-MULT. ENTRY 10	LDO 17	588N	144 442E	S MARA04WT
1425	91078			HFME E	POGO-MULT. ENTRY 10	LDO 18	31N	144 147E	S MARA04WT
430	101078			HFME B	POGO-MULT. ENTRY 11	LDO 18	24N	144 160E	S MARA04WT
1500	101078			HFME E	POGO-MULT. ENTRY 11	LDO 17	554N	144 169E	S MARA04WT
9900					END SAMPLE INDEX				MARA04WT