

**Report and Index of
Underway Marine Geophysical Data**

Cook Expedition

Leg 12

(COOK12MV)

R/V Melville

(Issued February 2002)

Ports:

Lae, Papua, New Guinea (20 August 2001)

to

Lae, Papua, New Guinea (22 September 2001)

Chief Scientist: Eli Silver

University of California Santa Cruz

Computer Tech - John Chatwood

Resident Marine Tech - Robert Wilson

Post-Cruise processing and report preparation by

Shipboard Technical Support Group,

Scripps Institution of Oceanography

La Jolla, CA 92093-0223

NOTE: This is an index of underway geophysical data edited and processed 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 Shipboard Technical Support Group, Scripps Institution of Oceanography, La Jolla, California 92093-0223.

**Report and Index of Navigation
and Underway Geophysical Data**

Processed by the Shipboard Technical Support Group
Scripps Institution of Oceanography

Contents:

Index Chart – gives track of cruise leg, dates, ports, and mileage of each type of data collected.

Track Charts– annotated with dates and hour ticks

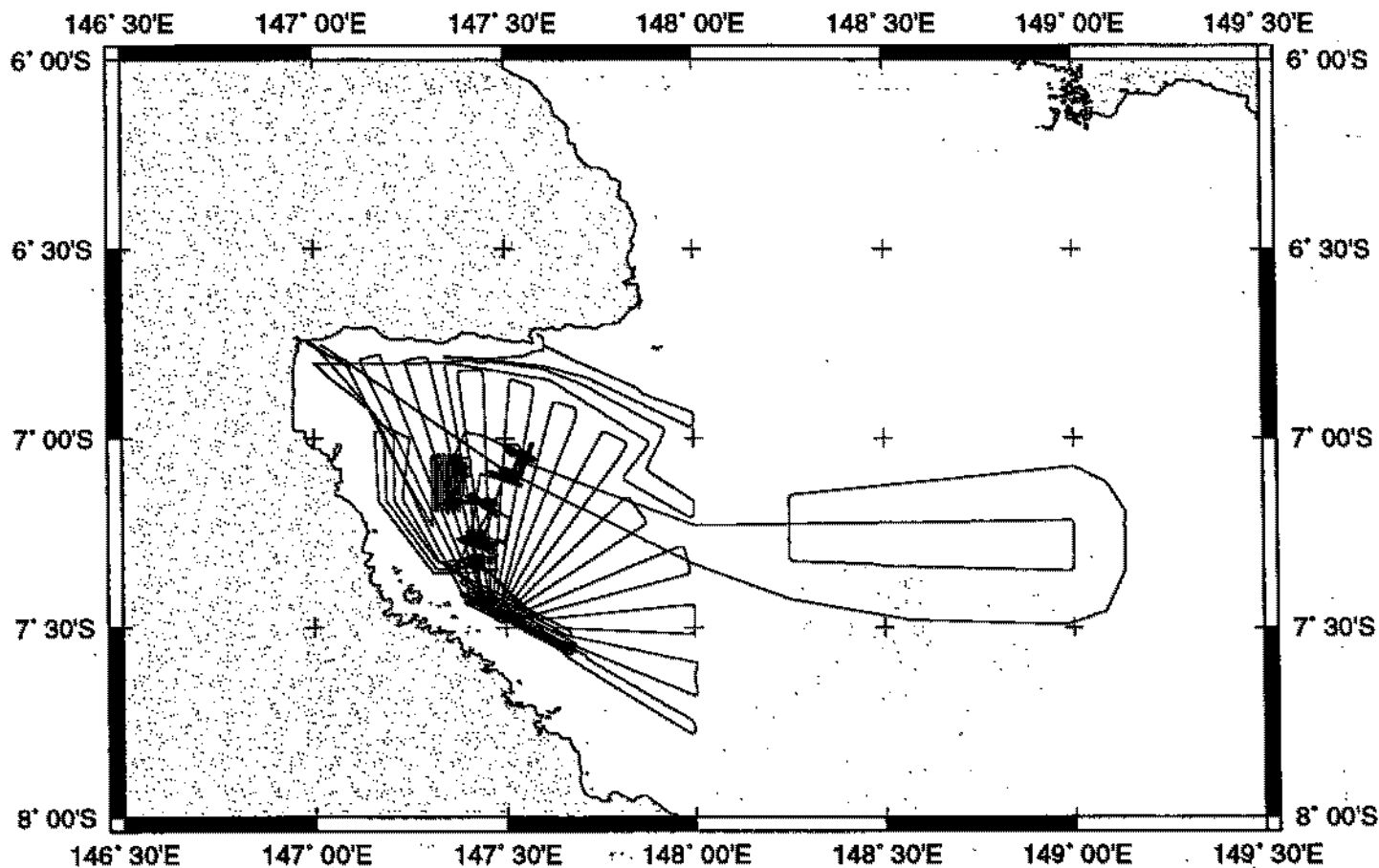
Profiles – depth, magnetic and gravity free air anomaly vs. distance. (Sections of track with seismic reflection data have a wide black line along the bottom of the profile.)

Sample Index – list of begin/end times and positions of all underway records as well as samples and measurements from other disciplines collected on the leg.

NOTE:

For information on the availability of this current digital data as well as archived digital data contact Stephen P. Miller, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093-0220 Phone: (858)534-1898, internet email: spmiller@ucsd.edu; or his Website: <http://SIOExplorer@ucsd.edu>

Rev 6/2001



COOK EXPEDITION LEG 12 (COOK12MV)

CHIEF SCIENTIST: Eli Silver, Univ. of Calif. Santa Cruz

PORTS: Lae - Lae, New Guinea

DATES: 20 August - 22 September 2001

SHIP: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise-2396 miles

Magnetics-none collected

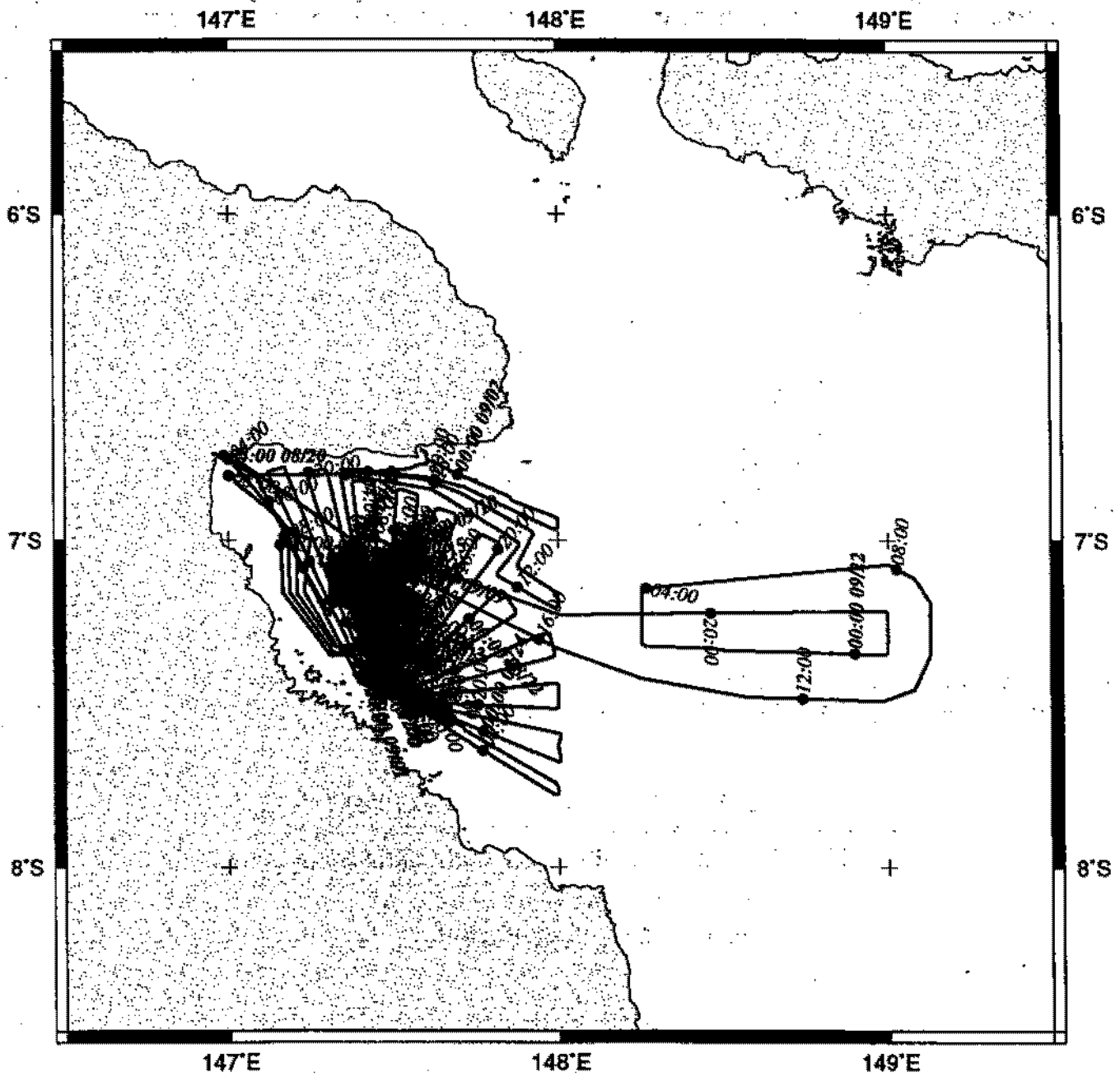
Bathymetry-1666 miles

Seismic Reflection-none collected

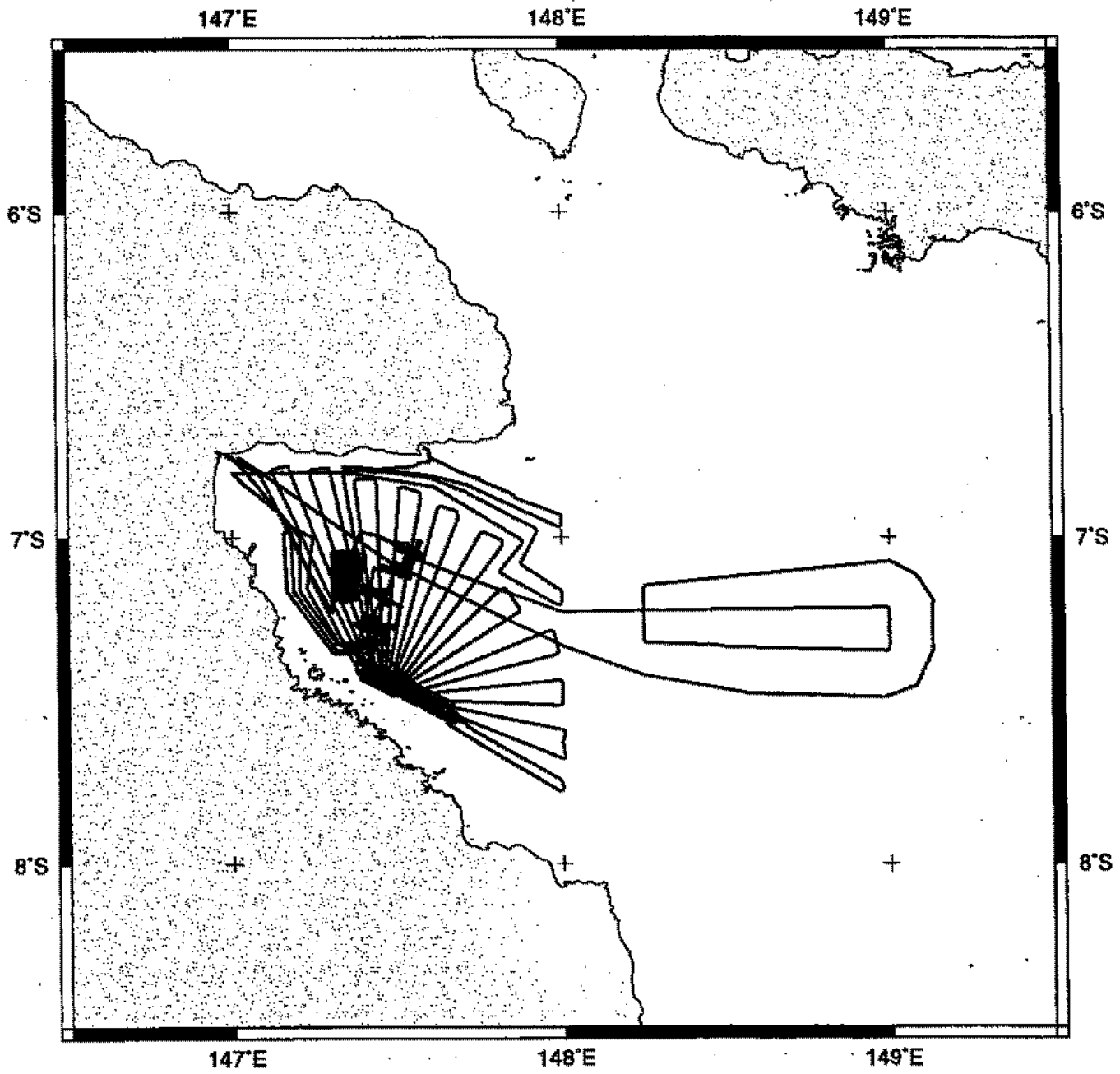
Sea Beam-1666 miles

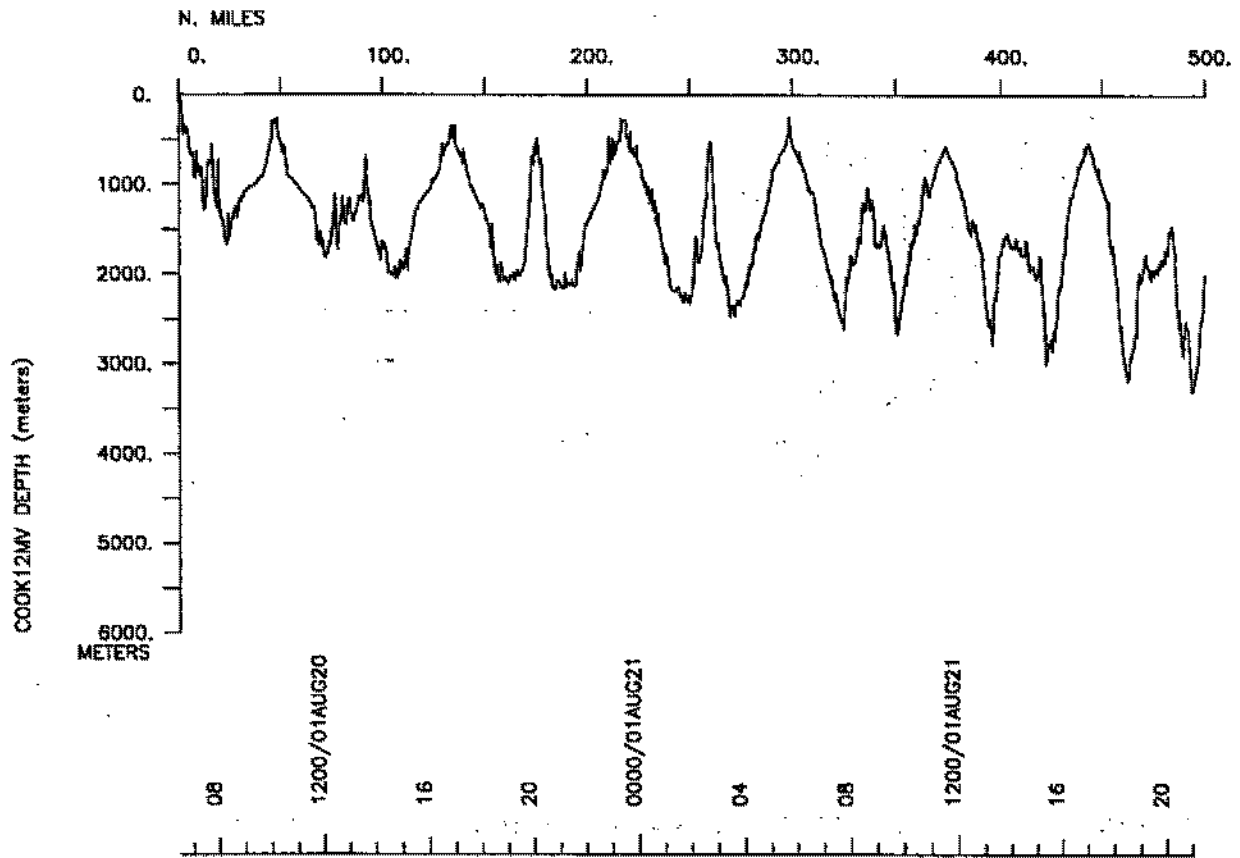
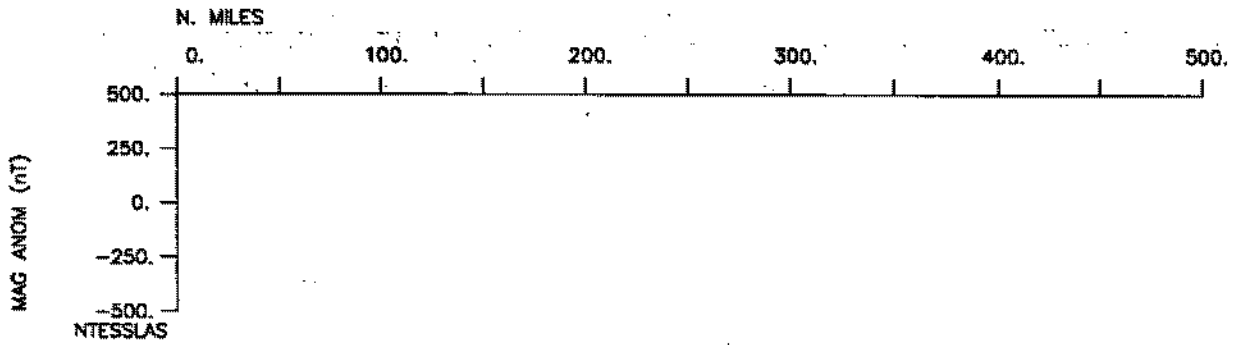
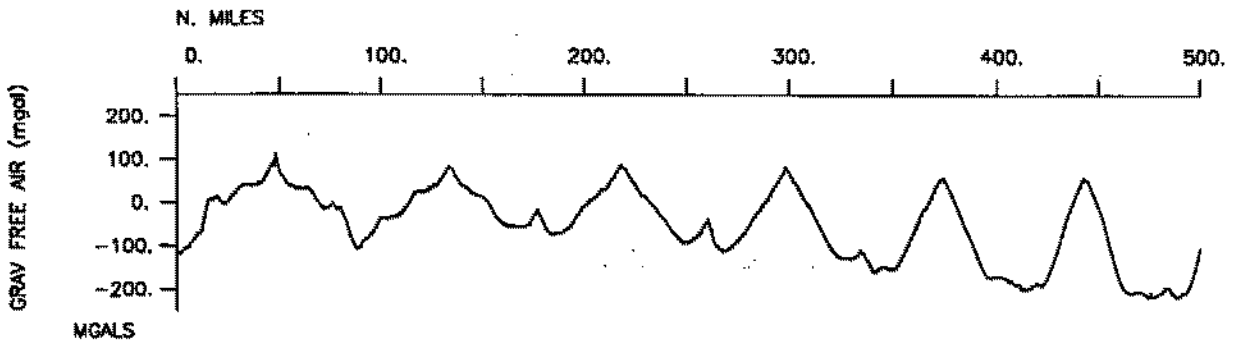
Gravity-2111 miles

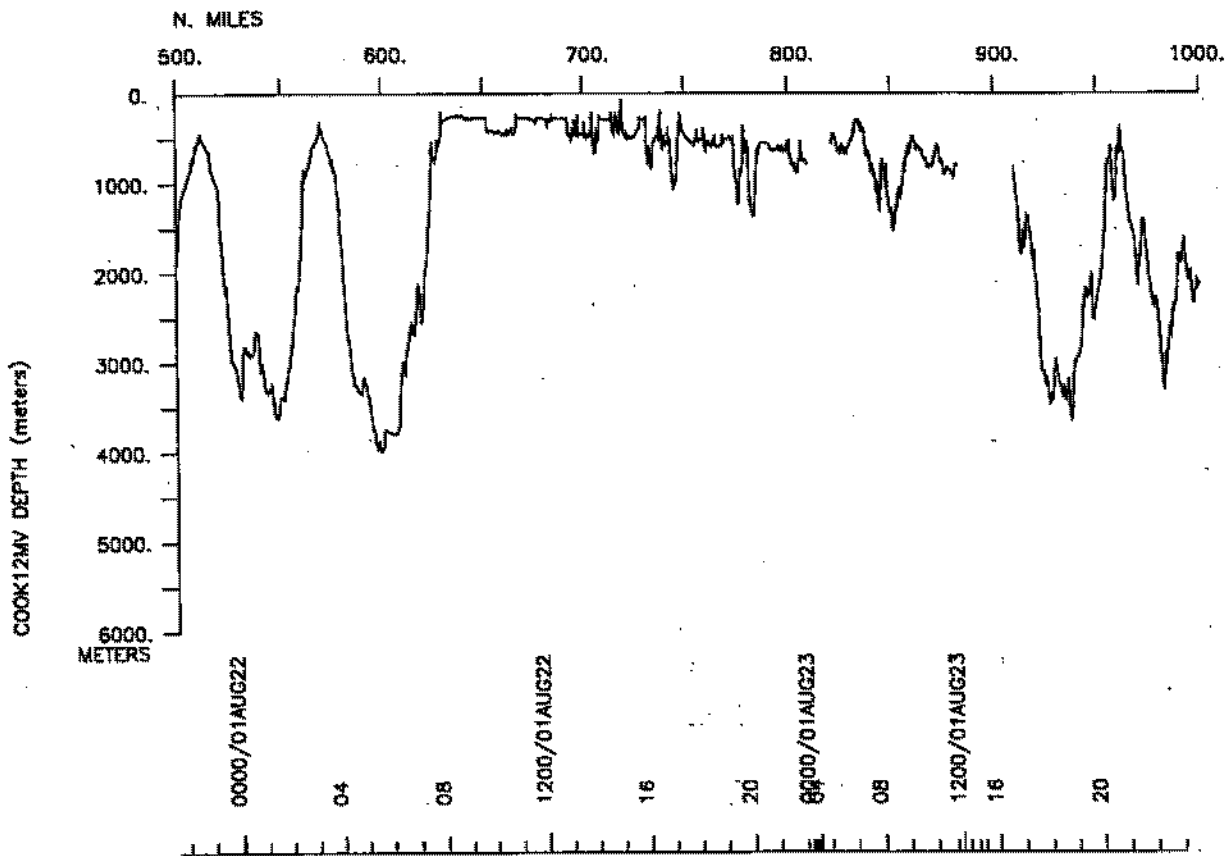
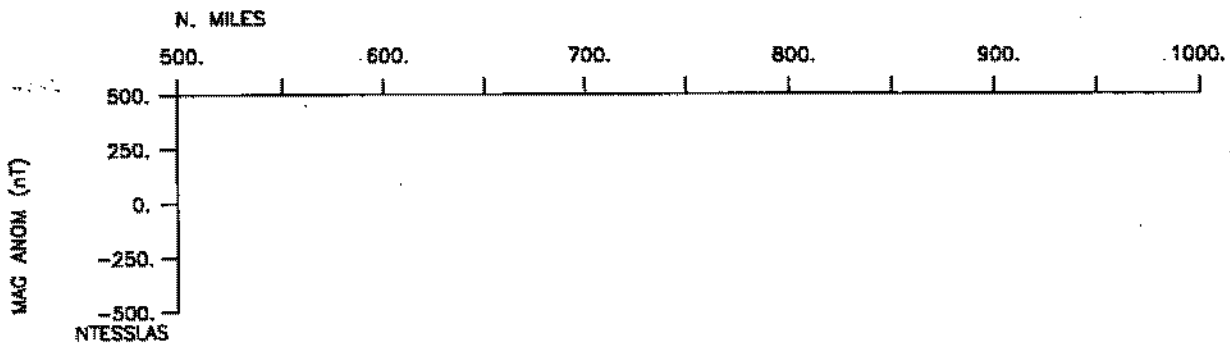
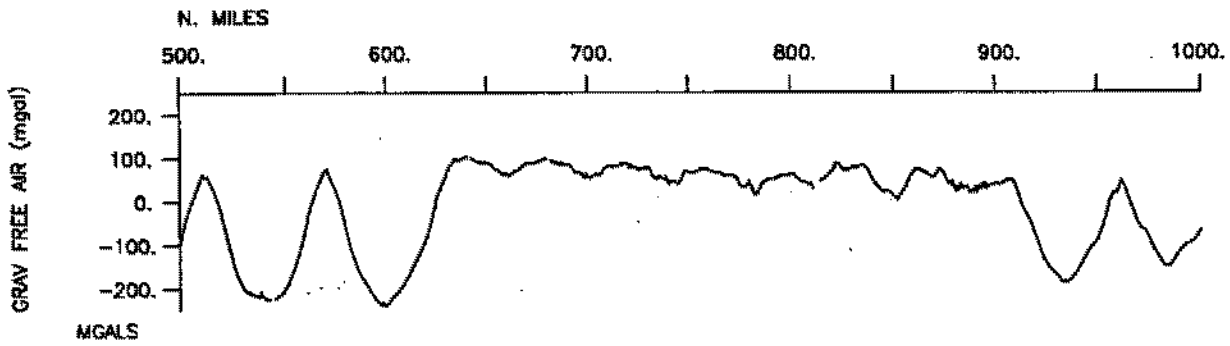
COOK12MV

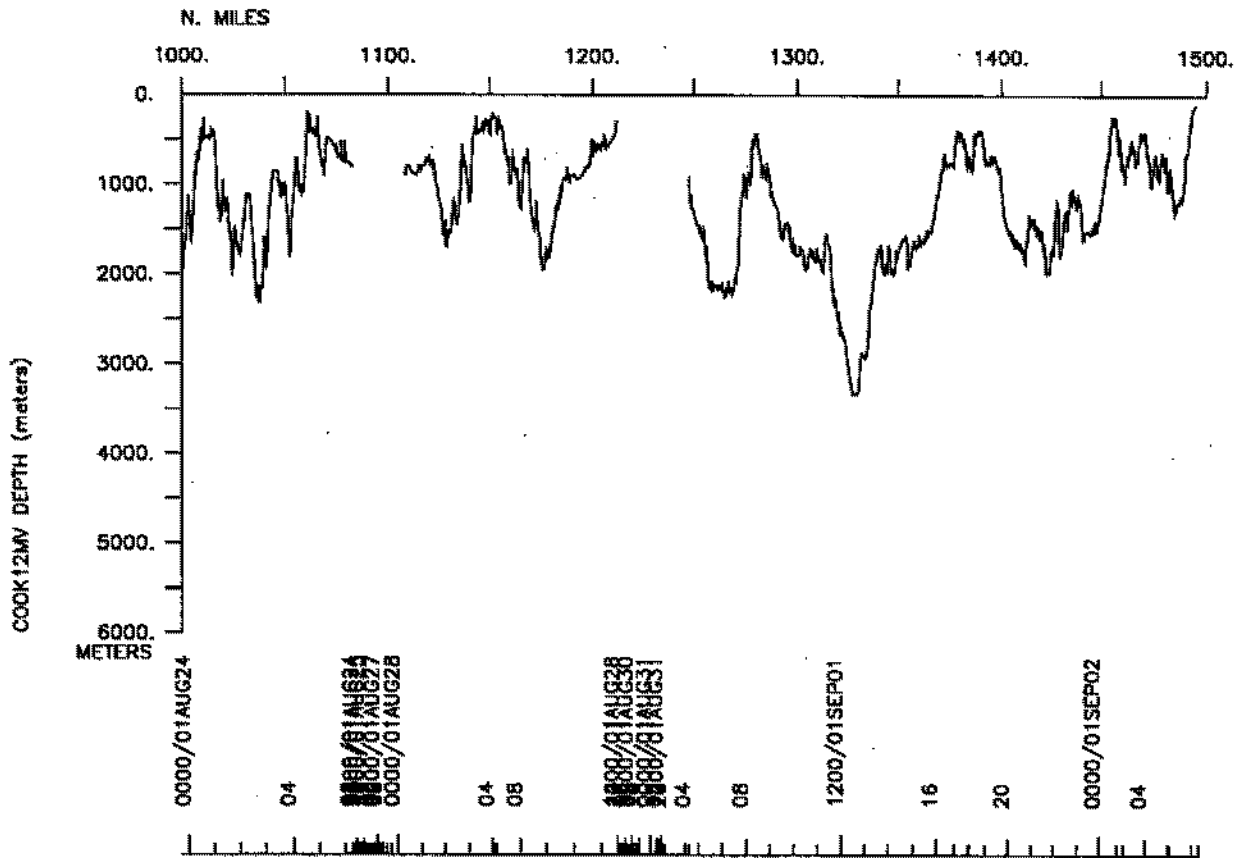
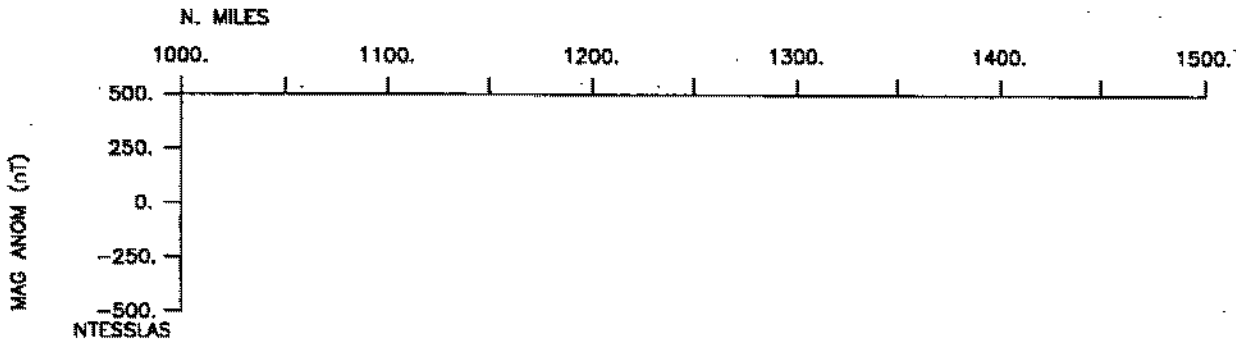
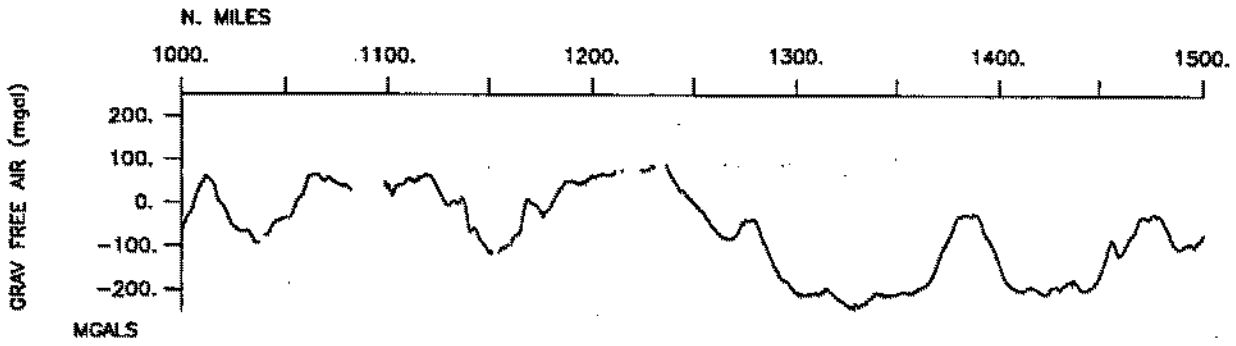


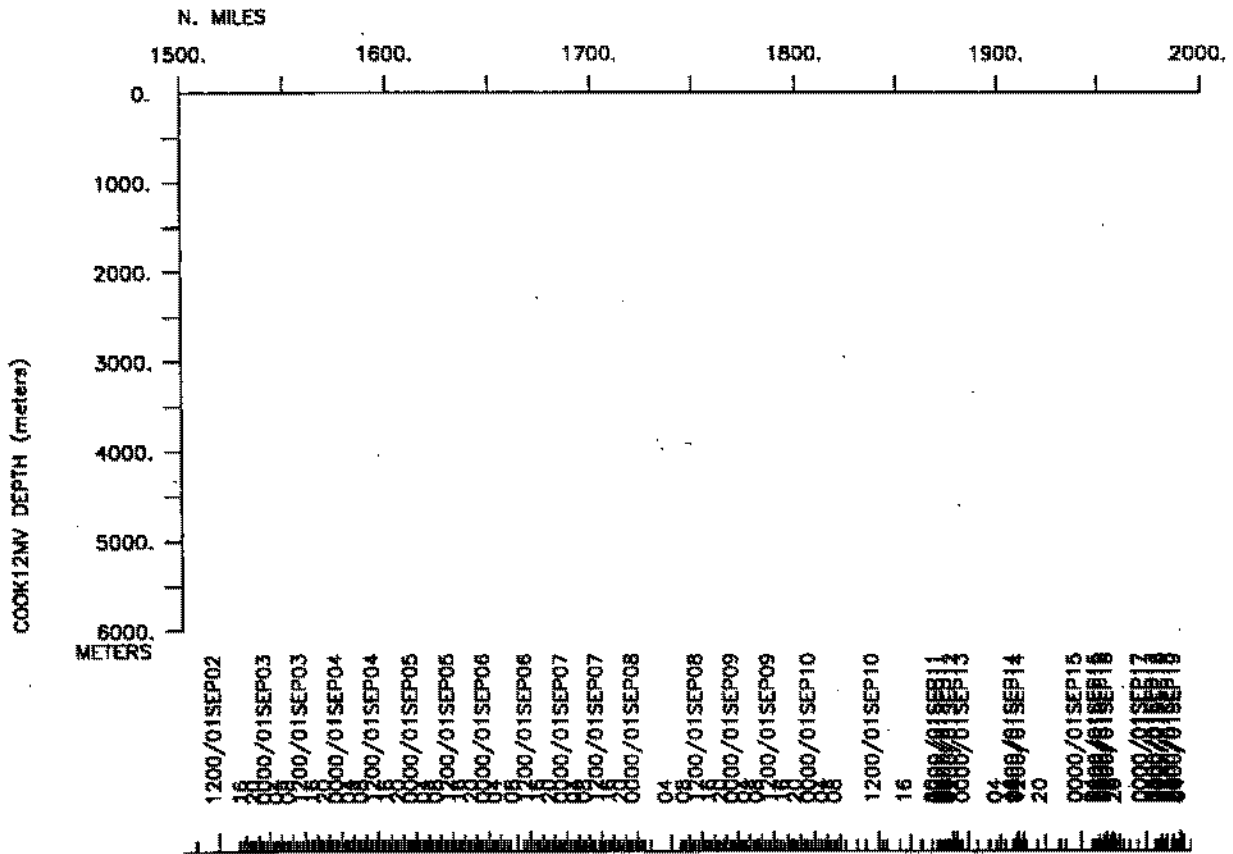
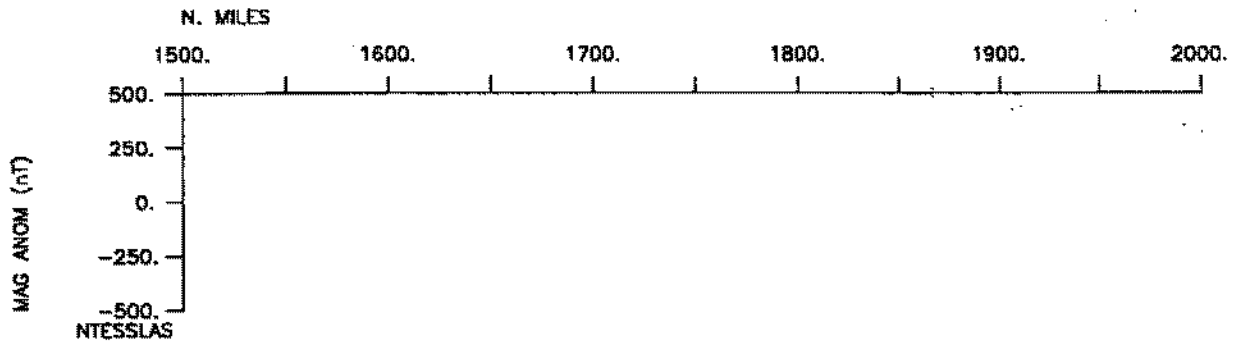
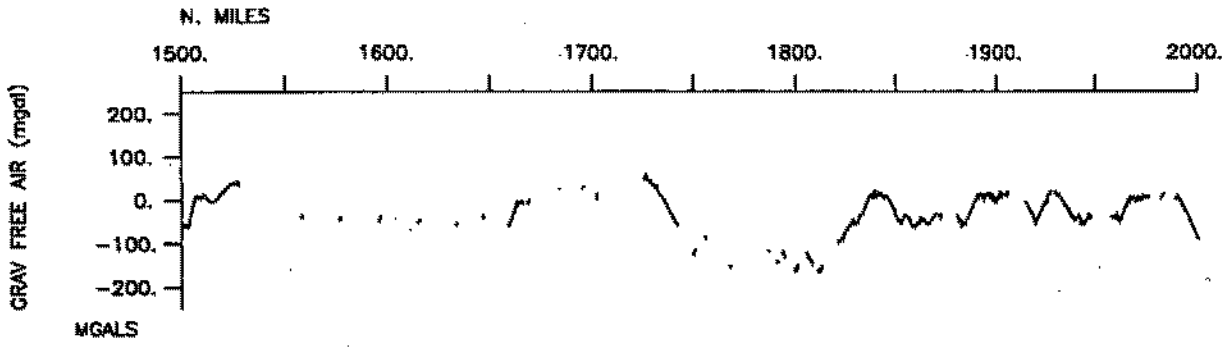
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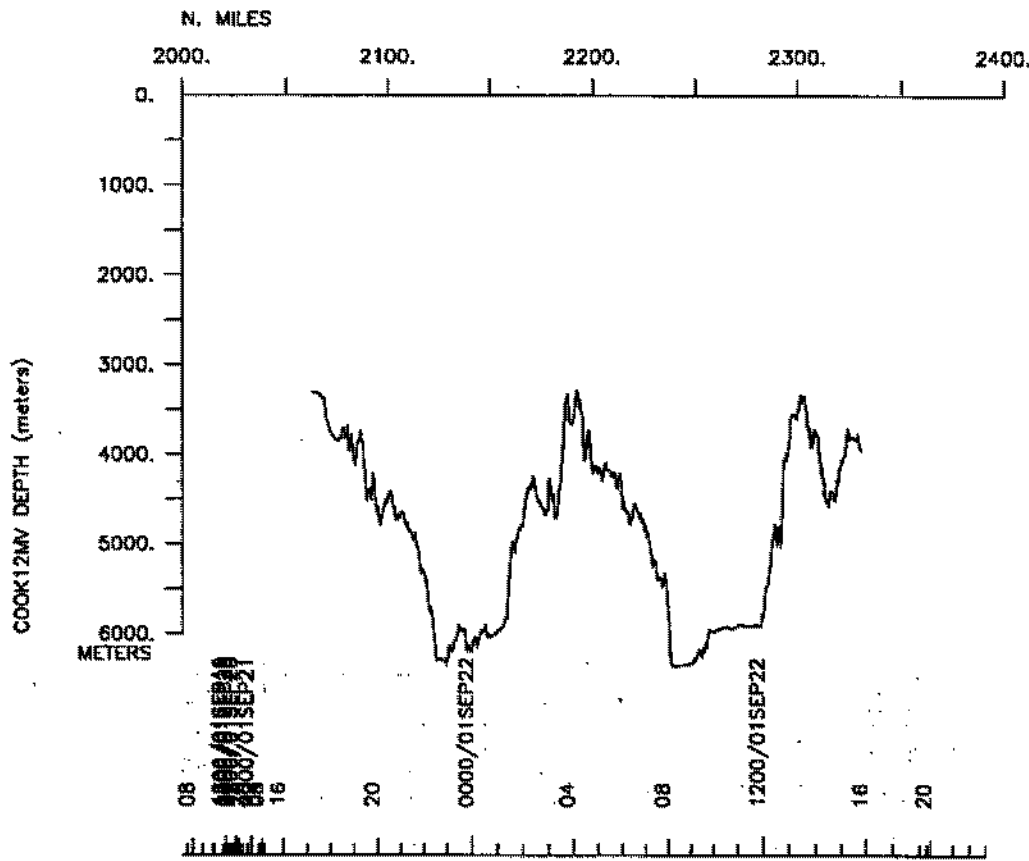
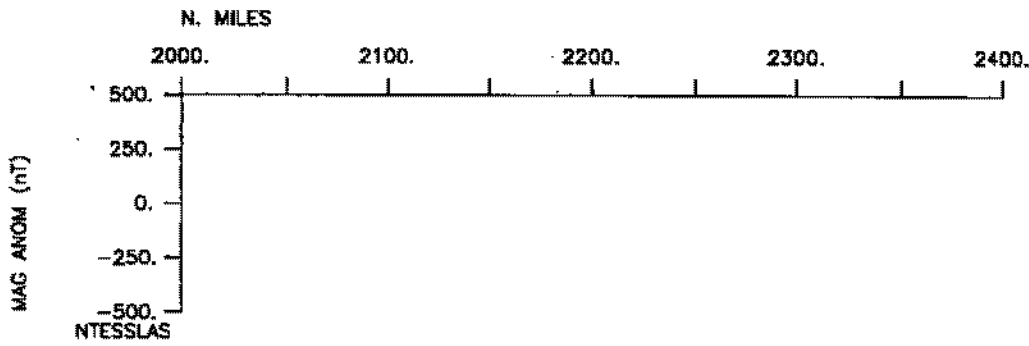
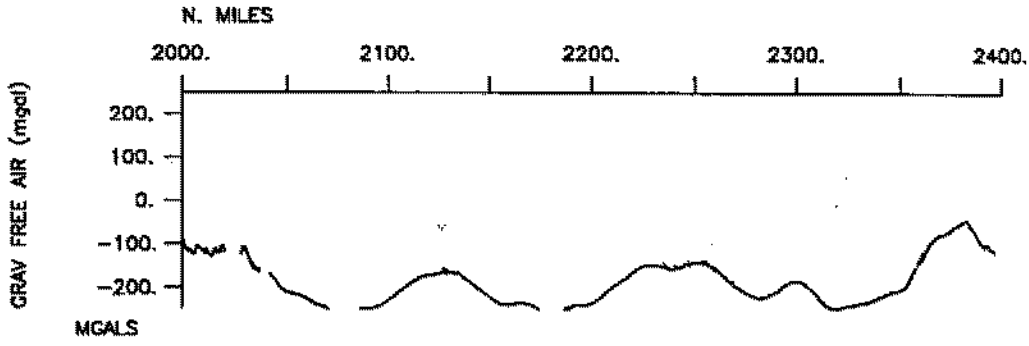












S.I.O. Sample Index

COOK Expedition

Leg 12

(COOK12MV)

R/V Melville

(Issued February 2002)

PORTS:

Lae, Papua, New Guinea (20 August 2001)

to

Lae, Papua, New Guinea (22 September 2001)

Chief Scientist : Eli Silver

University of California Santa Cruz

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 marine technician and processed on shore by the S.I.O. Shipboard Technical Support Group 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 lines. 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 Shipboard Technical Support Group.)

GDC Cruise ID# 295

**** Ports ****

```
0600 200801 0 LGPT B LAE, PAPUA NEW GUINEA 6-40.00S 147-52.00E g COOK12MV
0000 230901 0 LGPT E LAE, PAPUA NEW GUINEA 6-40.00S 147-52.00E g COOK12MV
```

**** Personnel ****

```
# *****NAME***** *****TITLE***** *****AFFILIATION***** **CRID**
#-----#-----#-----#-----#-----#-----#-----#-----#-----#-----#
PECS UHI Applegate, B. Chief Scientist Univ. of Hawaii COOK12MV
PESP SIO Autin, G. Engineer Scripps Institution COOK12MV
PECT SCG Chatwood, J. Computer tech Scripps Institution COOK12MV
PESP WHOI Crook, T. Navigator Woods Hole COOK12MV
PESP WHOI Elder, C. Engineer Woods Hole COOK12MV
PESP WHOI Heintz, M. Rov pilot Woods Hole COOK12MV
PESP UHI Rognstad, M. Engineer Univ. of Hawaii COOK12MV
PESP WHOI Sellers, W. Rov pilot Woods Hole COOK12MV
PESP WHOI Varnum, J. Rov pilot Woods Hole COOK12MV
PESP WHOI Waters, R. Engineer Woods Hole COOK12MV
PERT STS Wilson, R. Resident tech Scripps Institution COOK12MV
PESP SIX Davies, J. Scientist Univ. Australia COOK12MV
PEST SIX Gorgan, K. Student U. of Ca Santa Cruz COOK12MV
PESP UMN Gallup, C. Professor U. Minnesota COOK12MV
PEST UMN Hattenberger, S. Student U. Minnesota COOK12MV
PEST UCSD Jupiter, S. Student U. of Ca San Diego COOK12MV
PESP SIX Mosusu, N. Geologist Geo.Surv.New Guinea COOK12MV
PESP SIX Potts, D. Professor U. of Ca Santa Cruz COOK12MV
PEST UMN Riker-Coleman, K. Student U Minnesota COOK12MV
PEST UCSC Stamski, R. Student U. of Ca Santa Cruz COOK12MV
PEST UCSC Wallace, L. Student U. of Ca Santa Cruz COOK12MV
PESP SIX Webster, J. Lecturer U. Papua, New Guinea COOK12MV
PEST SIX Simeon, O. Student U. Papua, New Guinea COOK12MV
```

**** 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 a particular 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 DDMYY SAMP B SAMPLE DISP CRUISE
#TIME DATE TZ CODE E IDENTIFIER CODE LATITUDE LONGITUDE c LEG-SHIP
#-----#-----#-----#-----#-----#-----#-----#-----#-----#-----#
```

```
**** Underway Data Curator - Shipboard Technical Support Group ext.41899 ****
**** Digital Data Curator - Geological Data Center, S.P. Miller, ext.41898 ****
```

**** Log Books ****

```
1826 200801 0 LBUW B Underway Log GDC 7-06.62S 147-20.22E g COOK12MV
1548 220901 0 LBUW E Underway Log GDC 7-19.36S 147-58.71E g COOK12MV
```

**** MultiBeam Data (vertical beam and side scan) ****

```
0631 200801 0 MBSR B Seabeam r-01 GDC 6-45.42S 147-00.09E g COOK12MV
0610 230801 0 MBSR E Seabeam r-01 GDC 7-21.35S 147-19.10E g COOK12MV

0613 230801 0 MBSR B Seabeam r-02 GDC 7-21.25S 147-18.50E g COOK12MV
0615 270801 0 MBSR E Seabeam r-02 GDC 7-20.46S 147-24.92E g COOK12MV

0038 280801 0 MBSR B Seabeam r-03 GDC 7-17.85S 147-18.03E g COOK12MV
1530 220901 0 MBSR E Seabeam r-03 GDC 7-20.76S 148-02.06E g COOK12MV
```

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP
*** Echo Sounder Records ***										
0812	200801	0	DPR3	B 3.5khz r-01	GDC	7-01.63S	147-11.65E	g		COOK12MV
2251	210801	0	DPR3	E 3.5khz r-01	GDC	7-24.67S	147-33.15E	g		COOK12MV
0620	230801	0	DPR3	B 3.5khz r-02	GDC	7-20.04S	147-17.61E	g		COOK12MV
1349	020901	0	DPR3	E 3.5khz r-02	GDC	7-13.62S	147-18.50E	g		COOK12MV
*** Digital Gravity ***										
0600	200801	0	GVDD	B Digital Gravity	GDC	6-44.55S	146-59.21E	g		COOK12MV
2356	220901	0	GVDD	E Digital Gravity	GDC	6-45.24S	147-01.16E	g		COOK12MV
*** Integrated Meteorological Acquisition System ***										
0600	200801	0	IMET	B Weather measurements	GDC	6-44.55S	146-59.21E	g		COOK12MV
2356	220901	0	IMET	E Weather measurements	GDC	6-45.24S	147-01.16E	g		COOK12MV
*** Acoustic Doppler Current Profiler ***										
0600	200801	0	ADCP	B Current data	GDC	6-44.55S	146-59.21E	g		COOK12MV
2356	220901	0	ADCP	E Current data	GDC	6-45.24S	147-01.16E	g		COOK12MV
*** Deep Submersible ***										
0031	230801	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-20.97S	147-28.46E	g		COOK12MV
0429	230801	0	DSWV	E DSL 120 SONAR OPS	WHOI	7-21.17S	147-25.79E	g		COOK12MV
0838	240801	0	DSWV	B ROV JASON OPS	UCSC	7-19.35S	147-25.51E	g		COOK12MV
2130	270801	0	DSWV	E SAMPLES AND DATA	UCSC	7-20.20S	147-24.85E	g		COOK12MV
0401	250801	0	DSWV	B ELEVATOR	UCSC	7-19.40S	147-25.60E	g		COOK12MV
0330	260801	0	DSWV	E JASON SAMPLES	UCSC	7-19.47S	147-25.77E	g		COOK12MV
0619	260801	0	DSWV	B ELEVATOR	UCSC	7-19.85S	147-24.65E	g		COOK12MV
0151	270801	0	DSWV	E JASON SAMPLES	UCSC	7-19.91S	147-24.73E	g		COOK12MV
0334	270801	0	DSWV	B ELEVATOR	UCSC	7-20.05S	147-24.60E	g		COOK12MV
2047	270801	0	DSWV	E JASON SAMPLES	UCSC	7-20.19S	147-24.70E	g		COOK12MV
1222	280801	0	DSWV	B ROV JASON OPS	UCSC	7-28.35S	147-32.02E	g		COOK12MV
0249	290801	0	DSWV	E SAMPLES AND DATA	UCSC	7-28.77S	147-32.45E	g		COOK12MV
1155	280801	0	DSWV	B ELEVATOR	UCSC	7-28.35S	147-32.00E	g		COOK12MV
0219	290801	0	DSWV	E JASON SAMPLES	UCSC	7-28.45S	147-32.08E	g		COOK12MV
0510	290801	0	DSWV	B ROV JASON OPS	UCSC	7-28.45S	147-32.25E	g		COOK12MV
1245	300801	0	DSWV	E SAMPLES AND DATA	UCSC	7-28.15S	147-32.73E	g		COOK12MV
0535	290801	0	DSWV	B ELEVATOR	UCSC	7-28.52S	147-32.30E	g		COOK12MV
2228	290801	0	DSWV	E JASON SAMPLES	UCSC	7-28.53S	147-32.36E	g		COOK12MV
1335	300801	0	DSWV	B ROV JASON OPS	UCSC	7-28.10S	147-32.66E	g		COOK12MV
2304	300801	0	DSWV	E SAMPLES AND DATA	UCSC	7-28.57S	147-32.81E	g		COOK12MV
0036	300801	0	DSWV	B ELEVATOR	UCSC	7-28.55S	147-32.80E	g		COOK12MV
2225	300801	0	DSWV	E JASON SAMPLES	UCSC	7-28.60S	147-32.86E	g		COOK12MV
0113	310801	0	DSWV	B ROV JASON OPS	UCSC	7-26.15S	147-25.49E	g		COOK12MV
1738	310801	0	DSWV	E SAMPLES AND DATA	UCSC	7-26.05S	147-25.32E	g		COOK12MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP			p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE	c	LEG-SHIP
#									
0055	310801	0	DSWV	B ELEVATOR	UCSC	7-26.15S	147-25.49E	g	COOK12MV
2230	310801	0	DSWV	E JASON SAMPLES	UCSC	7-26.16S	147-25.50E	g	COOK12MV
1331	020901	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-13.90S	147-18.50E	g	COOK12MV
0644	060901	0	DSWV	E DSL 120 SONAR OPS	WHOI	7-12.53S	147-30.49E	g	COOK12MV
0953	060901	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-16.82S	147-29.99E	g	COOK12MV
1035	060901	0	DSWV	E DSL 120 SONAR OPS	WHOI	7-16.51S	147-29.26E	g	COOK12MV
1052	060901	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-16.40S	147-29.04E	g	COOK12MV
0532	070901	0	DSWV	E DSL 120 SONAR OPS	WHOI	7-15.75S	147-22.25E	g	COOK12MV
0630	070901	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-15.79S	147-22.37E	g	COOK12MV
0220	080901	0	DSWV	E DSL 120 SONAR OPS	WHOI	7-20.59S	147-22.75E	g	COOK12MV
0436	080901	0	DSWV	B DSL 120 SONAR OPS	WHOI	7-05.67S	147-26.20E	g	COOK12MV
0758	100901	0	DSWV	E DSL 120 SONAR OPS	WHOI	6-59.65S	147-26.52E	g	COOK12MV
0255	110901	0	DSWV	B ROV JASON OPS	UCSC	7-04.88S	147-22.36E	g	COOK12MV
2228	120901	0	DSWV	E SAMPLES AND DATA	UCSC	7-05.45S	147-22.79E	g	COOK12MV
1050	110901	0	DSWV	B ELEVATOR	UCSC	7-04.90S	147-22.71E	g	COOK12MV
2336	110901	0	DSWV	E JASON SAMPLES	UCSC	7-04.92S	147-22.65E	g	COOK12MV
0850	130901	0	DSWV	B ROV JASON OPS	UCSC	7-10.56S	147-21.16E	g	COOK12MV
1830	140901	0	DSWV	E SAMPLES AND DATA	UCSC	7-10.09S	147-22.00E	g	COOK12MV
0554	130901	0	DSWV	B ELEVATOR	UCSC	7-10.60S	147-21.38E	g	COOK12MV
2324	130901	0	DSWV	E SAMPLES AND DATA	UCSC	7-10.57S	147-21.42E	g	COOK12MV
0241	140901	0	DSWV	B ELEVATOR	UCSC	7-10.41S	147-21.17E	g	COOK12MV
2121	140901	0	DSWV	E SAMPLES AND DATA	UCSC	7-10.37S	147-21.21E	g	COOK12MV
0129	150901	0	DSWV	B ELEVATOR	UCSC	7-10.56S	147-27.23E	g	COOK12MV
2359	150901	0	DSWV	E SAMPLES AND DATA	UCSC	7-10.43S	147-27.35E	g	COOK12MV
0208	160901	0	DSWV	B ROV JASON OPS	UCSC	7-11.20S	147-27.90E	g	COOK12MV
1904	160901	0	DSWV	E SAMPLES AND DATA	UCSC	7-12.05S	147-28.50E	g	COOK12MV
0237	160901	0	DSWV	B ELEVATOR	UCSC	7-11.20S	147-27.66E	g	COOK12MV
2030	160901	0	DSWV	E SAMPLES AND DATA	UCSC	7-11.17S	147-27.97E	g	COOK12MV
0122	170901	0	DSWV	B ROV JASON OPS	UCSC	7-15.26S	147-25.86E	g	COOK12M
0333	180901	0	DSWV	E SAMPLES AND DATA	UCSC	7-15.25S	147-26.61E	g	COOK12MV
0020	180901	0	DSWV	B ELEVATOR	UCSC	7-15.00S	147-25.70E	g	COOK12MV
0430	180901	0	DSWV	E SAMPLES AND DATA	UCSD	7-15.21S	147-25.61E	g	COOK12MV
0500	180901	0	DSWV	B ROV JASON OPS	UCSC	7-15.15S	147-24.58E	g	COOK12MV
0335	190901	0	DSWV	E SAMPLES AND DATA	UCSC	7-14.52S	147-25.62E	g	COOK12MV
1110	190901	0	DSWV	B ELEVATOR	UCSC	7-06.25S	147-30.71E	g	COOK12MV
0050	200901	0	DSWV	E SAMPLES AND DATA	UCSC	7-06.14S	147-30.75E	g	COOK12MV
1138	190901	0	DSWV	B ROV JASON OPS	UCSC	7-05.62S	147-31.07E	g	COOK12MV
1652	200901	0	DSWV	E SAMPLES AND DATA	UCSC	7-05.66S	147-31.15E	g	COOK12MV
0325	200901	0	DSWV	B ELEVATOR	UCSC	7-06.20S	147-30.20E	g	COOK12MV
2213	200901	0	DSWV	E SAMPLES AND DATA	UCSC	7-06.14S	147-30.16E	g	COOK12MV
0317	210901	0	DSWV	B ROV JASON OPS	UCSC	7-02.57S	147-34.06E	g	COOK12MV
1458	210901	0	DSWV	E SAMPLES AND DATA	UCSC	7-04.00S	147-33.49E	g	COOK12MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP			p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE	c	LEG-SHIP
*** Navigation Transponders for Jason ***									
1047	230801	0	NVXX	B NAV TRANSPONDER A	WHOI	7-18.65S	147-25.04E	g	COOK12MV
2200	270801	0	NVXX	E NAV TRANSPONDER A	WHOI	7-19.48S	147-24.94E	g	COOK12MV
1103	230801	0	NVXX	B NAV TRANSPONDER B	WHOI	7-18.65S	147-26.07E	g	COOK12MV
2222	270801	0	NVXX	E NAV TRANSPONDER B	WHOI	7-19.55S	147-25.02E	g	COOK12MV
1120	230801	0	NVXX	B NAV TRANSPONDER C	WHOI	7-19.55S	147-26.00E	g	COOK12MV
2245	270801	0	NVXX	E NAV TRANSPONDER C	WHOI	7-19.57S	147-26.03E	g	COOK12MV
1139	230801	0	NVXX	B NAV TRANSPONDER D	WHOI	7-19.48S	147-24.94E	g	COOK12MV
2313	270801	0	NVXX	E NAV TRANSPONDER D	WHOI	7-18.68S	147-26.02E	g	COOK12MV
0948	100901	0	NVXX	B NAV TRANSPONDER E	WHOI	7-03.55S	147-22.34E	g	COOK12MV
0022	130901	0	NVXX	E NAV TRANSPONDER E	WHOI	7-03.54S	147-22.24E	g	COOK12MV
1014	100901	0	NVXX	B NAV TRANSPONDER F	WHOI	7-03.92S	147-23.82E	g	COOK12MV
2347	120901	0	NVXX	E NAV TRANSPONDER F	WHOI	7-03.85S	147-23.78E	g	COOK12MV
1047	100901	0	NVXX	B NAV TRANSPONDER G	WHOI	7-05.41S	147-23.83E	g	COOK12MV
2316	120901	0	NVXX	E NAV TRANSPONDER G	WHOI	7-05.37S	147-23.79E	g	COOK12MV
1135	100901	0	NVXX	B NAV TRANSPONDER H	WHOI	7-09.49S	147-21.33E	g	COOK12MV
2246	140901	0	NVXX	E NAV TRANSPONDER H	WHOI	7-09.46S	147-21.37E	g	COOK12MV
1158	100901	0	NVXX	B NAV TRANSPONDER I	WHOI	7-10.52S	147-22.07E	g	COOK12MV
0346	130901	0	NVXX	E NAV TRANSPONDER I	WHOI	7-09.48S	147-22.90E	g	COOK12MV
0432	130901	0	NVXX	B NAV TRANSPONDER I	WHOI	7-10.52S	147-21.94E	g	COOK12MV
2210	140901	0	NVXX	E NAV TRANSPONDER I	WHOI	7-10.48S	147-22.02E	g	COOK12MV
1915	140901	0	NVXX	B NAV TRANSPONDER J	WHOI	7-10.03S	147-27.26E	g	COOK12MV
2109	160901	0	NVXX	E NAV TRANSPONDER J	WHOI	7-09.98S	147-27.22E	g	COOK12MV
1939	140901	0	NVXX	B NAV TRANSPONDER K	WHOI	7-10.22S	147-28.21E	g	COOK12MV
2126	160901	0	NVXX	E NAV TRANSPONDER K	WHOI	7-10.13S	147-28.18E	g	COOK12MV
2246	160901	0	NVXX	B NAV TRANSPONDER L	WHOI	7-14.76S	147-25.84E	g	COOK12MV
0440	190901	0	NVXX	E NAV TRANSPONDER L	WHOI	7-15.01S	147-25.75E	g	COOK12MV
2300	160901	0	NVXX	B NAV TRANSPONDER M	WHOI	7-15.19S	147-26.42E	g	COOK12MV
0511	190901	0	NVXX	E NAV TRANSPONDER M	WHOI	7-14.65S	147-26.01E	g	COOK12MV
0655	190901	0	NVXX	B NAV TRANSPONDER N	WHOI	7-05.19S	147-29.83E	g	COOK12MV
1833	220901	0	NVXX	E NAV TRANSPONDER N	WHOI	7-05.78S	147-31.40E	g	COOK12MV
0736	190901	0	NVXX	B NAV TRANSPONDER O	WHOI	7-05.50S	147-30.36E	g	COOK12MV
1909	220901	0	NVXX	E NAV TRANSPONDER O	WHOI	7-05.48S	147-30.49E	g	COOK12MV
0805	190901	0	NVXX	B NAV TRANSPONDER P	WHOI	7-05.82S	147-31.36E	g	COOK12MV
1938	220901	0	NVXX	E NAV TRANSPONDER P	WHOI	7-05.22S	147-29.93E	g	COOK12MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP

**** Expendable Bathythermographs ****

0652	200801	0	BTXP	tf_00002	XBT	GDC	6-47.48S	147-03.48E	g	COOK12MV
2213	200801	0	BTXP	tf_00003	XBT	GDC	7-11.75S	147-23.48E	g	COOK12MV
0656	210801	0	BTXP	tf_00004	XBT	GDC	7-12.12S	147-29.01E	g	COOK12MV
0203	220801	0	BTXP	tf_00005	XBT	GDC	7-20.52S	147-41.72E	g	COOK12MV
0504	240801	0	BTXP	tf_00007	XBT	GDC	7-30.43S	147-35.73E	g	COOK12MV
0736	240801	0	BTXP	tf_00010	XBT	GDC	7-19.30S	147-25.40E	g	COOK12MV
0802	240801	0	BTXP	tf_00006	XBT	GDC	7-19.20S	147-25.22E	g	COOK12MV
2347	270801	0	BTXP	tf_00011	XBT	GDC	7-18.73S	147-24.99E	g	COOK12MV
0500	010901	0	BTXP	tf_00016	XBT	GDC	7-14.95S	147-25.08E	g	COOK12MV
1642	210901	0	BTXP	tf_00017	XBT	GDC	7-09.92S	147-49.51E	g	COOK12MV

End Sample Index COOK12MV