# REPORT AND INDEX OF

# UNDERWAY MARINE GEOPHYSICAL DATA

### **GLORIA EXPEDITION**

LEG 8

R/V Melville

(Issued August 1993)

Easter Island (31 May 1993) to Acapulco, Mexico (1 July 1993)

Chief Scientist:

John Sinton (University of Hawaii)

Resident Marine Technician - John Boaz

Computer Technician - Ron Moe

No Sea Beam/Underway Processor on board

Post-Cruise Processing and Report Preparation by the Geological Data Center, Scripps Institution of Oceanography La Jolla, California 92093

Data Collection and Processing Funded by: NSF Grant Number OCE91-00522

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

GDC Cruise I.D.# 261

# INFORMAL REPORT AND INDEX OF NAVIGATION AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center 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 anomaly and gravity free air anomaly vs. distance. (Sections of track with seismic refilection 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 if collected on the cruise leg.

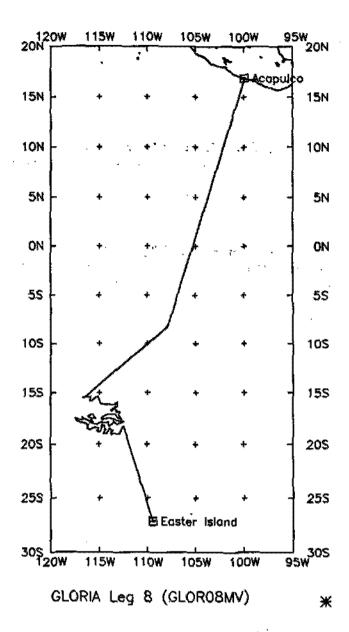
NOTE: One or more of the underway data types may not be collected on a given cruise leg.

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, CA 92093-0223. Phone (619)534-2752. Fax (619)534-5306. Internet Email:ssmith@ucsd.edu

- 1. Files on Exabyte, DAT or 1/2 inch magnetic tape:
  - a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
  - b) These same data in a merged ASCII file in the MGD77 Exchange format.
  - c) SeaBeam depth data (binary, Sun byte order) in SIO Swath Bathymetry format (not available on 1/2" tape).
  - d) SeaBeam Sidescan data (not available on 1/2" tape).
- 2. Microfilm (35mm flowfilm) or Xerox copies of:
  - a) Underway Watch log book.
  - b) SeaBeam vertical beam profile/Sidescan records.
  - c) Echosounder records 3.5 kHz frequency.
  - d) Magnetometer records.
  - e) Seismic reflection profiler records.
- Navigation listing with times and positions of fixes and course and speed changes.
- 4. Plots:
  - a) Copies of archived 1.2"/degree scale trackplots.
  - b) Copies of archived 8"/degree scale SeaBeam depth plots.
  - c) Custom plots in Mercator projection:
    - 1) Track plots.
    - 2) SeaBeam depth contour plots.
    - 3) Depth, magnetic or gravity values printed or profiled along track.

# SeaBeam 2000 Data Collected in Ancillary Mode

SeaBeam data were collected in "ancillary mode" on this leg. In this mode of operation, no Hardware Technician or SB/Underway Processor were on board and the types of realtime records and post-processed data products are reduced from those available under the fully funded mode.



# GLORIA EXPEDITION LEG 8

CHIEF SCIENTIST: John Sinton, University of Hawaii

PORTS: Easter Island, Chile - Acapulco, Mexico

DATES: 31 May - 1 July 1993

SHIP: R/V Melville

# TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 5136 miles

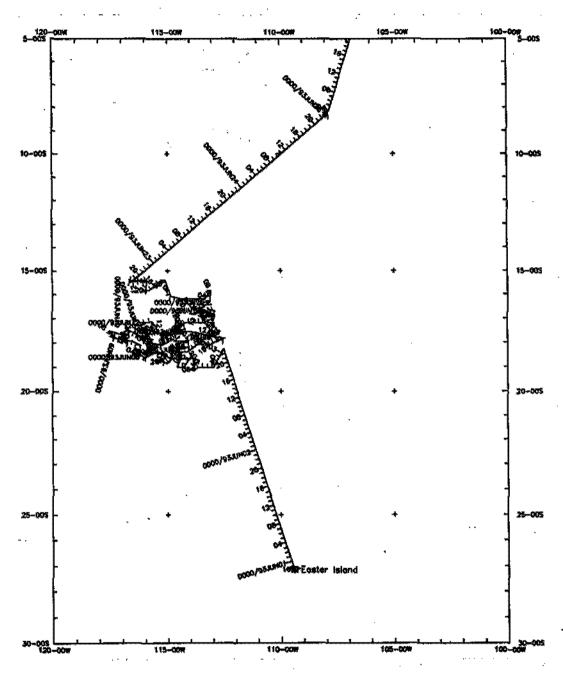
Magnetics -1760 miles

Bathymetry - 4976 miles

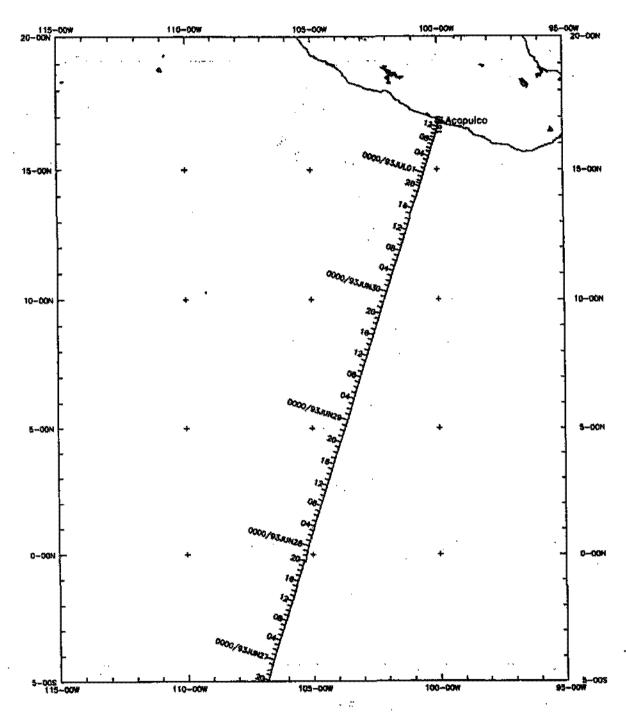
Seismic Reflection - none collected

Sea Beam - 4976 miles

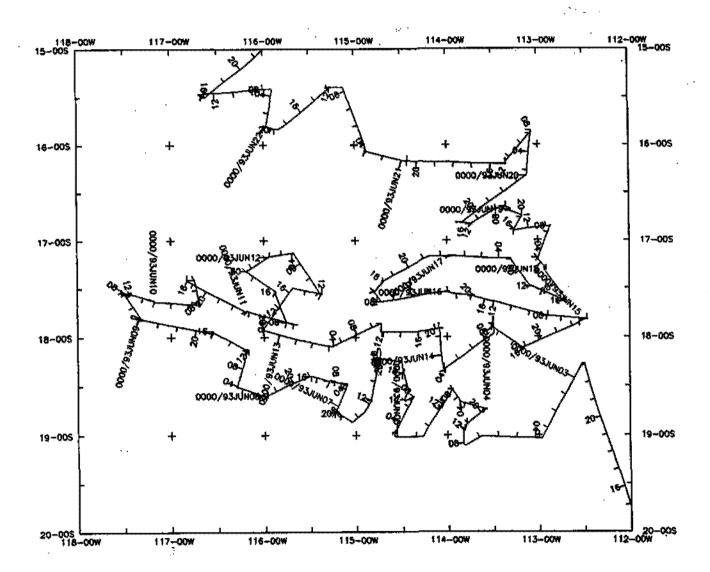
Gravity - collected but not processed



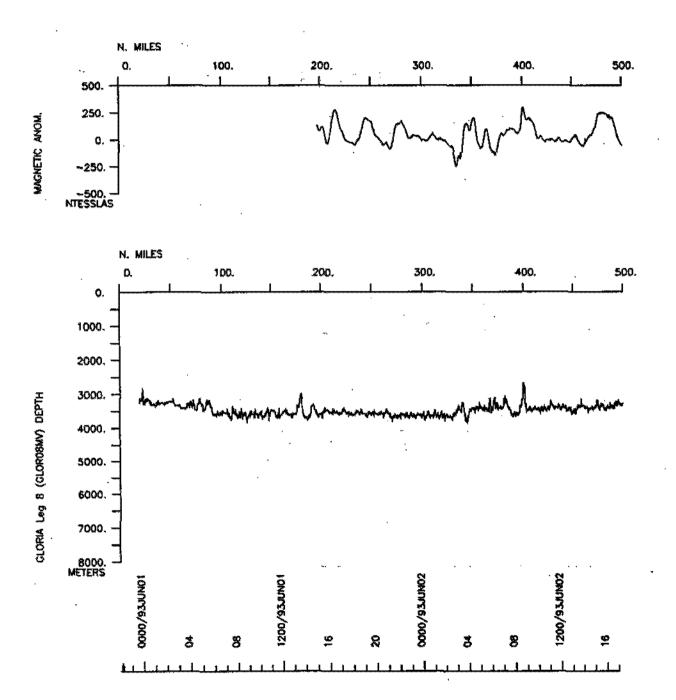
GLORIA LEG 8 (GLOROSMV) Plot 1 of 2

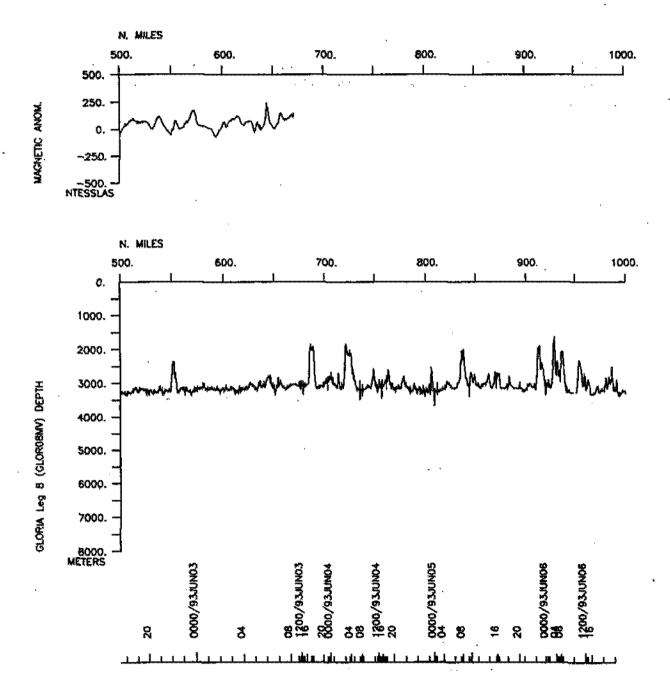


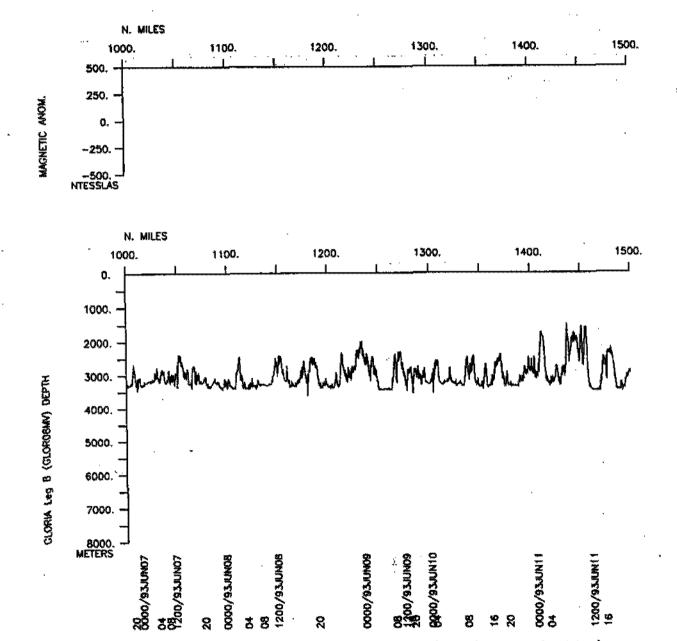
GLORIA LEG 8 (GLORO8MV) Plot 2 of 2

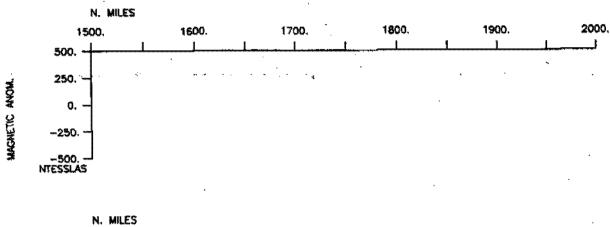


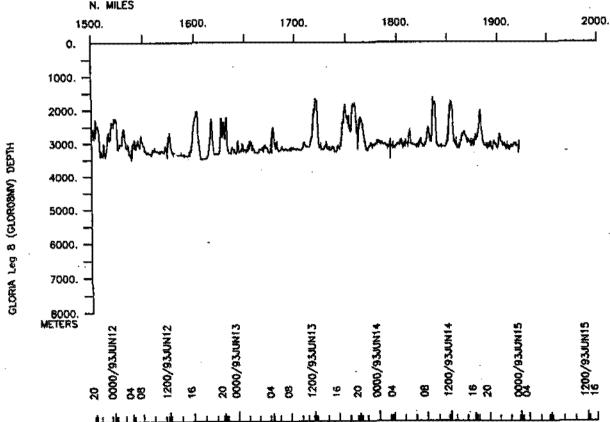
GLORIA LEG 8 Survey Area

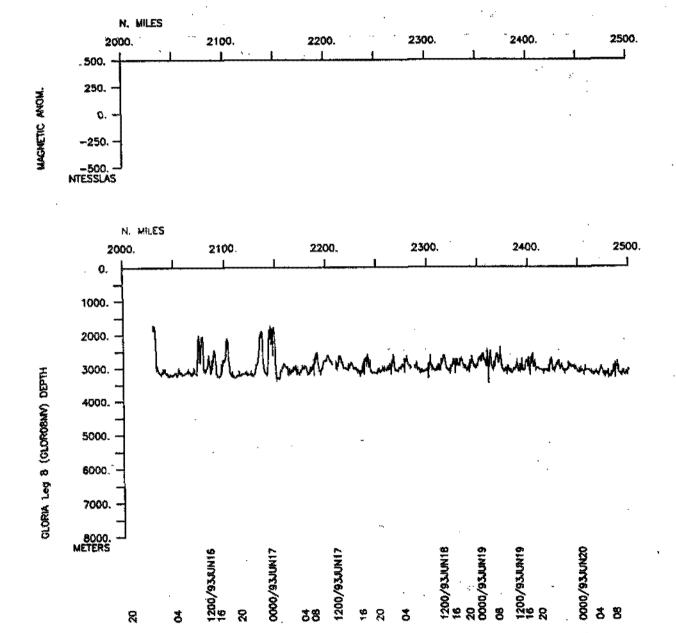


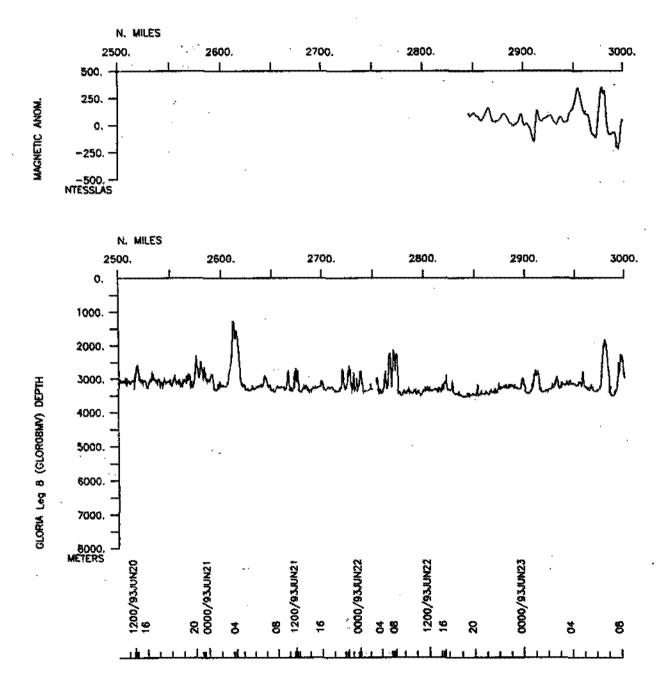


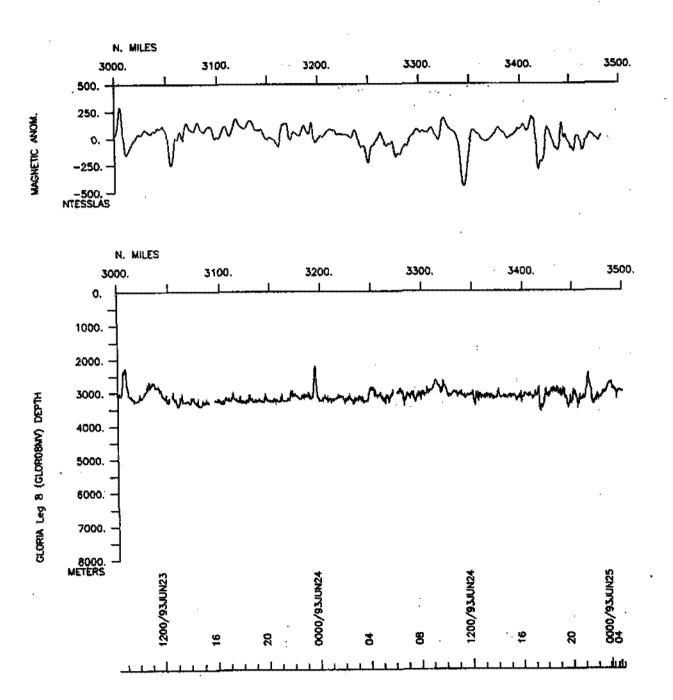


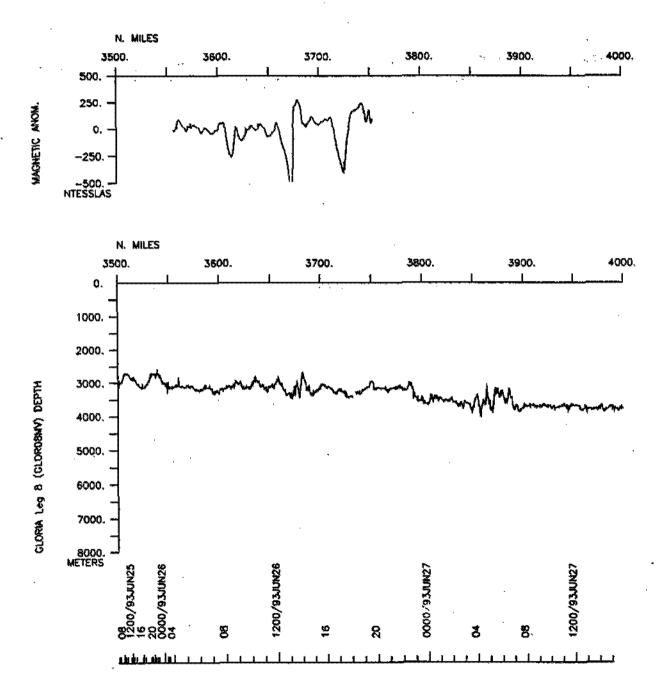


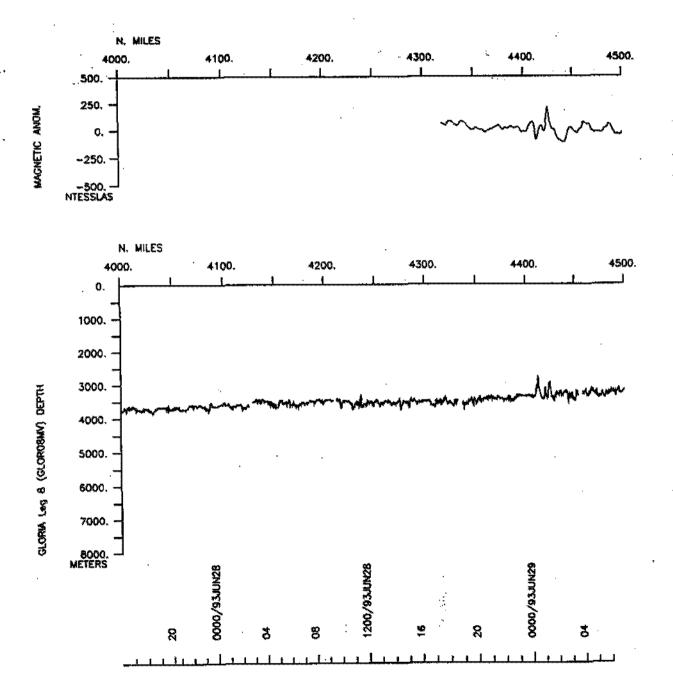


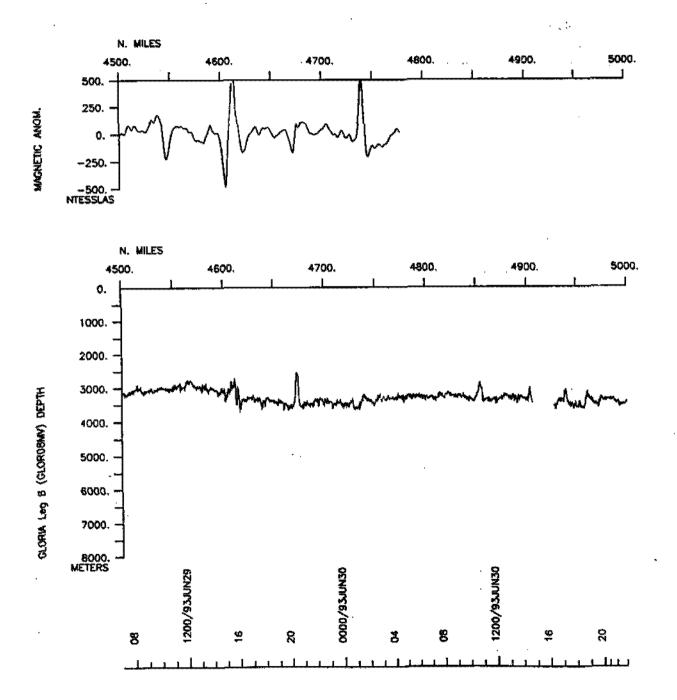


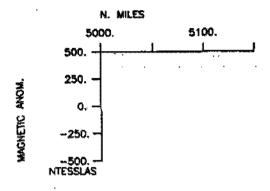


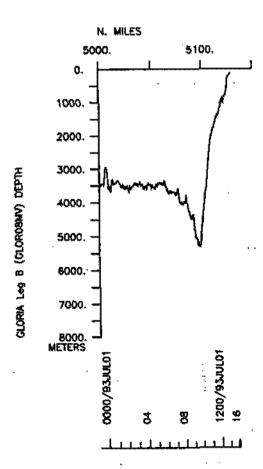












#### S.I.O. SAMPLE INDEX

(Issued August 1993)

### GLORIA EXPEDITION

Leg 8

R/V Melville

Easter Island, Chile (31 May 1993) to Acapulco, Mexico (1 July 1993)

Chief Scientist:

John Sinton (University of Hawaii)

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. 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 lines. Disposition and sample type are represented by three and four character codes to permit further computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 261

```
#*** Ports ***
 2200 310593 O LGPT B Easter Island, Chile
                                                                                             27-09.00S 109-27.00W f GLORO8MV
 1400 010793 O LGPT E Acapulco, Mexico
                                                                                                  16-51.00N 99-56.00W f GLORO8MV
 #*** Personnel ***
          *******NAME******* *****TITLE***** ****AFFILIATION*** **CRID**
                                                           Chief Scientist Univ. of Hawaii GLOROSMV Professor Univ. of Hawaii GLOROSMV Res Tech Scripps Institution GLOROSMV Research Assist. Univ. of Hawaii GLOROSMV Faculty Univ. of Hawaii GLOROSMV Geologist Univ. of Hawaii GLOROSMV Student Univ. of Hawaii GLOROSMV GLOROSMV Univ. of Hawaii GLOROSMV GEOLOGIST Univ. of Hawaii GLOROSMV GLOROSMV
PECS UHI Sinton, J.
                                                                                                                                                   GLORO8MV
PESP UHI Batiza,R.
PERT SIO Boaz,J.
PESP UHI Baily,J.
                                                                                                                                                   GLOROSMV .
PESP UHI Cheng, A.
PESP UHI Foss, D.
PESP UHI Hall, L.
PESP UHI Hulsebosch, T.
PESP UHI Johnson, K.
PEST UHI Johnson, P.
PEST UHI Johnson, P. Student
PEST UHI Jurado-chichay, Z. Student
PESP SIX Liu, L. Geologist
PECT SIO Moe, R. Computer Eng
PESP UHI Nelson, R. Volunteer
PESP UHI Pietruszka, A. Student
PESP UHI Rubin, K
                                                                                                        Univ. of Hawaii
                                                                                                                                                   GLOR08MV
                                                                                                        Univ. of Hawaii
                                                                                                                                                   GLOR08MV
                                                                                                       Clayton Environ. GLOROSMY
Scripps Institution GLOROSMV
Univ. of Hawaii GLOROSMV
                                                                                                        Univ. of Hawaii
                                                                                                                                                    GLOR08MV
                                                              Research Assist.
                                                                                                        Univ. of Hawaii
                                                                                                                                                    GLOR08MV
                                                              Technician Univ. of Hawaii
Research Assist. Univ. of Hawaii
Research Assist. Univ. of Hawaii
 PESP UHI Sinton, J.
                                                                                                                                                    GLORO8MV
 PESP UHI Woycke, J.
                                                                                                                                                    GLOR08MV
 PESP UHI Yamada
                                                                                                                                                    GLOR08MV
```

### #\*\*\* 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. Positions are in tenths #of minutes.

```
#GMT DDMMYY . SAMP B SAMPLE
                                           DISP
                                                                       p CRUISE
#TIME DATE TZ CODE E IDENTIFIER CODE LATITUDE LONGITUDE C LEG-SHIP
#*** Underway data curator - S. M. Smith ext. 42752
#*** Log books***
2300 310593 O LBUW B Underway watch log GDC 27-00.78S 109-29.23W g GLORO8MV 0600 300693 O LBUW E Underway watch log GDC 11-27.91N 101-37.79W g GLORO8MV
                                          UHI 18-57.12S 113-49.47W g GLORO8MV
UHI 16-50.89N 99-54.30W g GLORO8MV
1000 030693 0 LBSC B rock description
1500 010793 O LBSC E rock description
#*** Sea Beam Records (vertical beam and side scan) ***
2300 310593 0 MBMR B v.beam&sidescan r-01 GDC 27-00.78S 109-29.23W g GLORO8MV
0700 180693 0 MBMR E v.beam&sidescan r-01 GDC 16-55.31S 112-53.66W g GLORO8MV
0700 180693 0 MBMR B v.beam&sidescan r-02 GDC 16-55.31S 112-53.66W g GLORO8MV
1400 010793 0 MBMR E v.beam&sidescan r-02 GDC 16-50.76N 99-54.13W g GLORO8MV
#*** Echo Sounder Records - pinger only; not microfilmed ***
                                          GDC 22-36.11S 111-01.87W g GLOR08MV
3300 010693 0 DPRT B 12khz r-01
                                            GDC
                                                  18-10.41S 114-46.02W q GLOROSMV
:100 050693 0 DPRT E 12khz r-01
                                          GDC
GDC
2100 050693 O DPRT B 12khz r-02
                                                  18-10.41S 114-46.02W g GLORO8MV
1615 080693 0 DPRT E 12khz r-02
                                                  17-56.06S 116-33.26W q GLORO8MV
                                          GDC
GDC
1100 110693 0 DPRT E 12khz r-03
1619 080693 0 DPRT B 12khz r-03
                                                  17-56.16S 116-33.23W g GLORO8MV
                                            GDC
                                                  17-50,95S 115-45.76W g GLORO8MV
                                            GDC
1100 110693 O DPRT B 12khz r-04
                                                  17-50.958 115-45.76W g GLORO8MV
1010 140693 O DPRT E 12khz r-04
                                            GDC
                                                 17-53.50S 113-30.94W g GLORO8MV
                                                  17-53.50S 113-30.94W g GLORO8MV
1010 140693 O DPRT B 12khz r-05
                                            GDC
1530 160693 O DPRT E 12khz r-05
                                            GDC
                                                  17-26,30S 114-42.44W g GLORO8MV
1535 160693 O DPRT B 12khz r-06
                                            GDC
                                                  17-26.33S 114-42.40W g GLORO8MV
0700 190693 0 DPRT E 12khz r-06
                                                  16-40.54S 113-27.80W g GLORO8MV
                                            GDC
                                          GDC
GDC
0700 190693 0 DPRT B 12khz r-07
1600 220693 0 DPRT E 12khz r-07
                                                  16-40.54S 113-27.80W q GLORO8MV
                                                  15-30.10S 116-37.53W 9 GLOROSMV
                                     GDC
GDC
                                                  15-30.10S 116-37.53W g GLORO8MV
1600 220693 O DPRT B 12khz r-08
                                                 8-11.22S 107-50.97W g GLORO8MV
0300 260693 O DPRT E 12khz r-08
```

	#TIM	DDMMYY DATE	TZ			SAMPI IDEN	E CIPIER		Thus, ann annsana ann	DISP CODE	LATITUDE	LONGITUDE		CRUISE LEG-SHIP	***
	#***	Magneti	.cs	(Ear	th	Total	L Field;	Re	ecords	***			.,		
		010693 300693							,	GDC		110-30.71W 101-37.79W			
	***	Camera	**1	k	.1							•			
	1539	040693	0	CATB	٠.	Came:	ra sled	35ı	nm	UHI	18-43.445	114-03.97W	9	GLOROBMV	
	***	Dredges	ş *:	k *							•			•	,
		030693 030693					dredge dredge					113-49.47W 113-49.12W			
		030693 030693					dredge dredge					113-49.48W 113-48.72W			
		030693 030693					dredge dredge					113-47.27W 113-47.14W			
		030693 030693	0	DRRO DRRO	B	rock rock	dredge dredge	65 65	2955m 2955m	UHI UHI		113-35.53W 113-34.51W			
		040693 040693					dredge dredge					113-51.88W 113-51.79W			
		040693 040693					dredge dredge					113-56.65W 113-56.52W			
		040693 040693					dredge dredge					114-04.07W 114-03.68W			
-		040693 050693					dredge dredge				18-58.34S 18-57.31S	114-33.50W 114-34.44W	g	GLORO8MV GLORO8MV	r
		050693 050693					dredge dredge					114-22.82W 114-22.84W			
		050693 050693					dredge dredge					114-27.96W 114-28.46W			

	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPI IDEN	E CIFIER	a+ 12m 4m m	<b>"</b>	DISP CODE		LONGITUDE	p c	CRUISE LEG-SHIP
*													
	050693 050693					dredge dredge					114-30.00W 114-29.20W		
	060693 060693					dredge dredge					114-44.04W 114-43.97W		
	060693 060693	0	DRRO DRRO	B E	rock rock	dredge dredge	74 74	2736m 2736m	UHI		114-47.98W 114-47.71W		
	060693 060693					dredge dredge					114-46.38W 114-45.16W		
	060693 060693					dredge dredge					114-50.14W 114-49.90W		
	060693 060693					dredge dredge					115-12.85W 115-13.84W		
	070693 070693					dredge dredge					115-05.89W 115-06.47W		
	070693 070693	0	DRRO DRRO	B	rock rock	dredge dredge	79 79	3061m 3061m	UHI UHI		115-13.27W 115-13.53W		
	070693 070693					dredge dredge					115-17.08W 115-17.85W		
	070693 070693					dredge dredge					115-29.01W 115-29.84W		
	0 <b>6</b> 0693 0 <b>6</b> 0693					dredge dredge					115-58.20W 11 <del>4-43.</del> 95W 5-58/		
0440	080693 080693					dredge dredge				18-30.28S	116-17.68W 116-17.88W	g	GLOROSMV GLOROSMV
	080693 080693					dredge dredge					116-11.10W 116-10.41W		

#GMT DDMMYY #TIME DATE #	TZ			SAMPI IDEN	LE CIFIER		······································	DISP CODE		LONGITUDE	-	CRUISE LEG-SHIP	
1624 080693 1757 080693					dredge dredge					116-33.24W 116-33.15W			
0115 090693 0312 090693					dredge dredge					117-18.67W 117-18.54W			
0709 090693 0853 090693					dredge dredge					117-31.73W 117-32.09W			
1138 090693	0	DRRO	X	rock	dredge	88	3249m	UHI	17-33.71s	117-26.22W	g	GLOR08MV	
1717 090693 2003 090693					dredge dredge					117-26.22W 117-25.92W			
0004 100693 0302 100693					dredge dredge					117-11.17W 117-10.51W			
0808 100693 1115 100693					dredge dredge					116-42.95W 116-42.29W			
1528 100693 1733 100693					dredge dredge					116-49.98W 116-49.42W			,
2355 100693 0212 110693					dredge dredge					116-11.92W 116-11.11W			`
0816 110693 1031 110693					dredge dredge					115-46.91W 115-45.77W			
1407 110693 1544 110693					dredge dredge					115-53.11W 115-52.38W			
1927 110693 2040 110693					dredge dredge					116-12.10W 116-11.60W			
0009 120693 0127 120693					dredge dredge					115-57.28W 115-57.25W			

#GMT D	DATE	TZ				E CIFIER		a ann ann ann ann	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
0447 1 0610 1						dredge (					115-41.56W 115-40.90W		
1119 1 1306 1						dredge s					115-22.95W 115-22.25W		
1926 1 2216 1						dredgel(					116-01.27W 116-00.82W		
0414 1 0536 1		0	DRRO DRRO	B	rock rock	dredge10	01 01	2877m 2877m	UHI		115-14.88W 115-14.64W		
0746 1 1308 1						dredgel(					115-01.71W 114-42.79W		
1949 1 2145 1						dredgel(					114-05.77W 114-05.21W		
0207 1 0402 1						dredge1(					114-02.51W 114-01.72W		
1101 1 .250 1		0	DRRO DRRO	B	rock rock	dredgel	05 05	2844m 2844m	UHI UHI		113-30.89W 113-30.38W		
1643 1 1755 1						dredgel(					113-10.22W 113-09.79W		
2353 1 0156 1						dredgel					112-29.01W 112-28.06W		
0647 1 0758 1		0	DRRO DRRO	B	rock rock	dredgel dredgel	80 80	2926m 2926m	UHI UHI		112-53.62W 112-53.22W		
1302 1 1431 1	50693 50693	0	DRRO DRRO	B	rock rock	dredgel	09 09	2929m 2929m	UHI		113-30.00W 113-29.42W		
1739 1 2115 1						dredgel:					113-43.77W 113-41.99W		
0016 1 0113 1						dredgel:					113-58.54W 113-58.79W		
0645 1 0807 1	60693 60693	0	DRRO DRRO	B	rock rock	dredgel:	12 12	2634m 2634m	UHI UHI	17-38.45S 17-38.33S	114-44.45W 114-43.76W	â â	GLORO8MV GLORO8MV

#TIMI	DDMMYY E DATE	TZ	CODE	E	SAMPI IDENI	CIFIER			LATITUDE	LONGITUDE		CRUISE LEG-SHIP	,, ,,
	160693 160693					dredgell3 dredgell3				114-48.04W 114-47.46W			
	160693 160693					dredge114 dredge114			17-26.28S 17-25.39S	114-42.37W 114-42.15W			
	160693 170693									113-59.13W 113-58.86W			
	170693 170693					dredge116 dredge116				113-18.31W 113-18.14W			
	170693 170693	0	DRRO DRRO	B	rock rock	dredge117 dredge117	2942m 2942m	UHI UHI		113-05.14W 113-04.42W			
	170693 170693					dredgel18 dredgel18				112-41.93W 112-41.50W			
	170693 170693					dredgel19 dredgel19				112-55.90W 112-54.64W			
	180693 180693					dredge120 dredge120				113-00.96W 112-59.95W			
	180693 180693					dredge121 dredge121				112-52.03W 112-51.58W			
	180693 180693					dredge122 dredge122				113-16.39W 113-15.58W			
	180693 180693					dredge123 dredge123				113-11.11W 113-10.71W			
2240 0019	180693 190693	- 0 0	DRRO DRRO	B	rock rock	dredge124 dredge124	2822m 2822m	UHI	16-41.80S 16-41.00S	113-18.76W 113-17.89W	g	GLORO8MV GLORO8MV	. •
	190693 190693	0	DRRO DRRO	B	rock rock	dredgel25 dredgel25	2925m 2925m	UHI	16-39.00S 16-38.99S	113-21.70W 113-21.02W	g	GLORO8MV GLORO8MV	. :
	190693 190693	0	DRRO DRRO	B	rock	dredge126 dredge126	2823m 2823m	UHI	16-40.69S	113-28.19W 113-27.70W	g	GLOR08MV GLOR08MV	,

#TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPI IDENT	E TIFIER	if tam gan sagg agus mu	DISP CODE		LONGITUDE		CRUISE LEG-SHIP
	190693 190693	0	DRRO DRRO	B E	rock rock	dredge127 dredge127	3041m 3041m	UHI UHI		113-44.30W 113-43.60W		
	190693 190693					dredge128 dredge128				113-50.73W 113-50.33W		
	200693 200693					dredge129 dredge129			16-19.76S 16-19.56S	113-07.31W 113-07.29W	g	GLOROSMV GLOROSMV
	200693 200693					dredge130 dredge130				113-04.32W 113-04.24W		
	200693 200693					dredge131 dredge131				113-21.45W 113-20.71W		
	200693 200693					dredge132 dredge132				114-26.06W 114-26.08W		
	210693 210693					dredge133 dredge133				114-52.47W 114-52.50W		
	210693 210693					dredgel34 dredgel34				115-15.54W 115-15.31W		
	210693 210693					dredge135 dredge135				115-53.02W 115-52.61W		
	210693 220693	0	DRRO DRRO	B E	rock rock	dredge136 dredge136	3147m 3147m	UHI UHI		115-59.43W 115-58.57W		
	220693 220693	0	DRRO DRRO	B E	rock rock	dredge137 dredge137	2350m 2350m	UHI	15-24.93S 15-24.92S	115-58.85W 115-58.65W	g	GLORO8MV GLORO8MV
	220693 220693	0	DRRO DRRO	B	rock rock	dredge138 dredge138	3324m 3324m	UHI	15-29.32S 15-30.12S	116-38.33W 116-37.50W	g	GLORO8MV GLORO8MV
	250693 250693		DRRO DRRO	B E	rock rock	dredge139 dredge139	2762m 2762m	UHI		107-59.19W 107-59.25W		
0259 0340	250693 250693	0	DRRO DRRO	B E	rock rock	dredge140 dredge140	3035m 3035m	UHI		107-54.87W 107-55.14W		

	DDMMYY DATE I	Z	SAMP CODE	B E	SAMPLIDENT	E : IFIER		m mir mir 7-17	DISP CODE		LONGITUDE	-	CRUISE LEG-SHIP	1
						dredge14] dredge14]					107-53.24W 107-53.32W			
						dredge14: dredge14:					107-56.61W 107-56.25W			
	250693 250693					dredgel4: dredgel4:					107-55.92W 107-55.96W			
	250693 250693					dredgel4 dredgel4					107-52.45W 107-54.88W			
	250693 250693	0	DRRO DRRO	B E	rock o	dredge14: dredge14:	5 27 5 27	711m 711m	UHI UHI		107-57.97W 107-57.55W			
	260693 260693					dredgel40 dredgel40					107-50.74W 107-50.93W			
***	Rock Gla	ıs:	s Core	e :	***	:			• •					
1846	250693	0	CORG		glass	core 3	27	730m	UHI	8-17.71S	107-58.49W	g	GLOR08MV	
2013	250693	0	CORG	,	glass	core 4	. 27	730m	UHI	8-15.90S	107-57.85W	g	GLORO8MV	•
#***	Continuo	ou:	s Rec	or	ded Gr	avity **	*	,	•	•	• •			
	310593 010793					al gravi			GDC GDC		109-26.33W 99-54.13W			
#***				E	nd sam	ple inde	x		•	•			GLORO8MV	