

**REPORT AND INDEX OF
UNDERWAY MARINE GEOPHYSICAL DATA**

GLORIA EXPEDITION

LEG 7
=====

R/V Melville

(Issued June 1993)

Valparaiso, Chile (9 May 1993)
to
Easter Island (28 May 1993)

Chief Scientist:

David Naar (University of South Florida)

Resident Marine Technician - Bob Wilson

Computer Technician - Ron Moe

Sea Beam/Underway Processor - Uta Albright

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 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 all other samples and measurements (geology, biology, physical oceanography, etc.) 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 Swata 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.

3. Navigation listing with times and positions of fixes and course and speed changes.

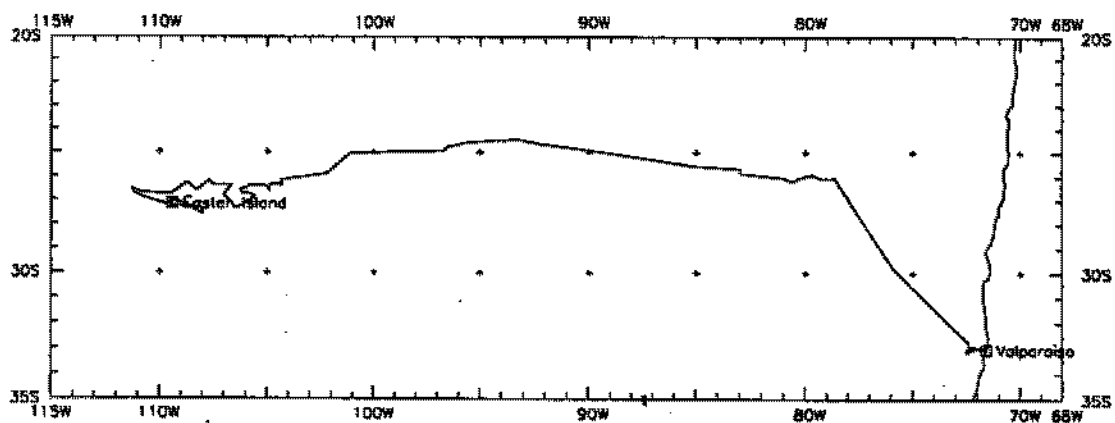
4. Plots:
 - a) Copies of archived 1.2"/degree scale trackplots.
 - b) Copies of archived 8"/degree scale SeaBeam depth plots.
 - c) Custom plots in Mercator projection:
 - 1) Track plots.
 - 2) SeaBeam depth contour plots.
 - 3) Depth, magnetic or gravity values printed or profiled along track.

SIO SeaBeam 2000 Data Information

The following forms are available, subject to approval of the cruise leg chief scientist:

- 1) Hardcopy of realtime contour swath records and records with vertical beam and sidescan grayscale display are available for inspection at the data center.
- 2) Microfilm (35mm flowfilm) of vertical beam/sidescan records.
- 3) Sea Beam merged tapes - Sea Beam data merged with GPS-based navigation. (Navigation is edited to the extent that DR courses and speeds are edited and poor fixes are removed after inspection of speeds and drift vectors between fix pairs. No editing is done on the basis of adjusting to overlapping Sea Beam swaths.)
- 4) Archive contour plots - 8"/degree chart scale, with contour interval nominally 50m, are generated for all transit lines. Some survey areas are plotted at appropriate scales as well. Available for inspection at data center; additional copies may be generated from plot files stored on tape.
- 5) Custom generated plots of Sea Beam swaths on Mercator projection in four colors at variable plot scales and contour intervals. There are provisions to adjust positions of individual track lines and to edit out beams (bad data or overlapping data on inside of turns).

Revised February 1993



GLORIA LEG 7 (GLOR07MV)

GLORIA EXPEDITION LEG 7

CHIEF SCIENTIST: David Naar, Univ. of South Florida

PORTS: Valparaiso - Easter Island, Chile

DATES: 9 - 28 May 1993

SHIP: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 3204 miles

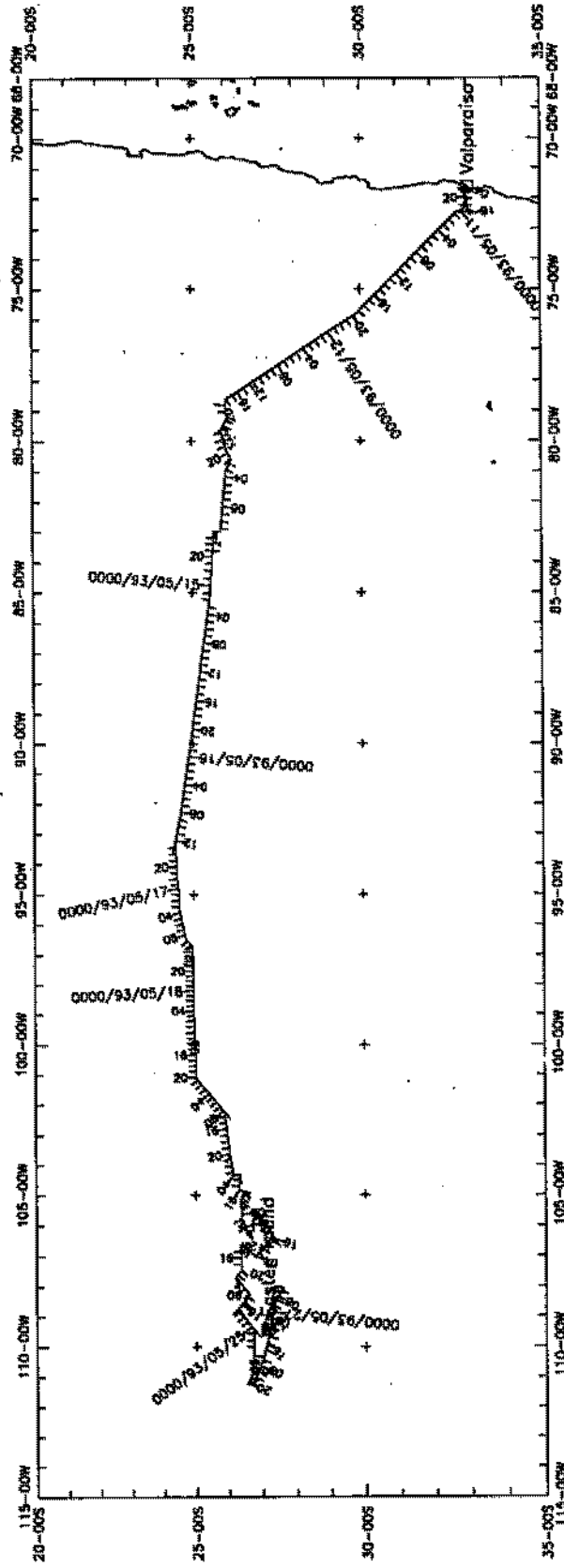
Magnetics - 500 miles

Bathymetry - 3189 miles

Seismic Reflection - none collected

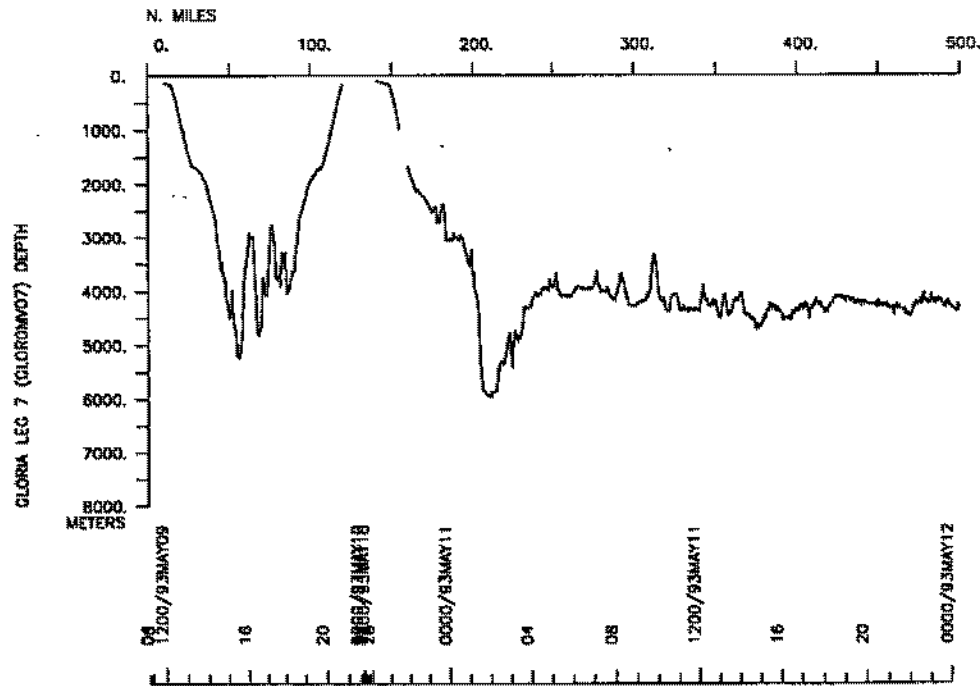
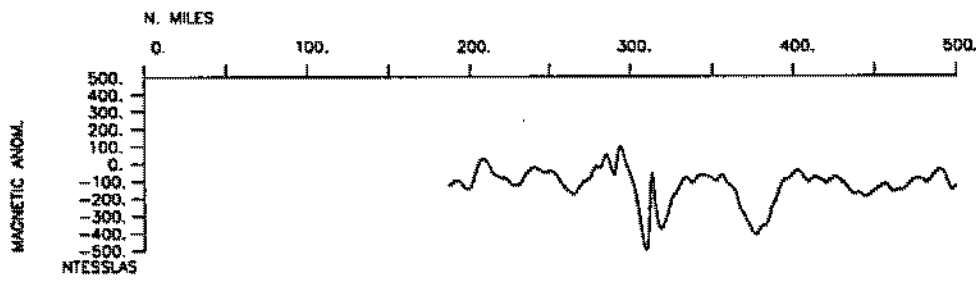
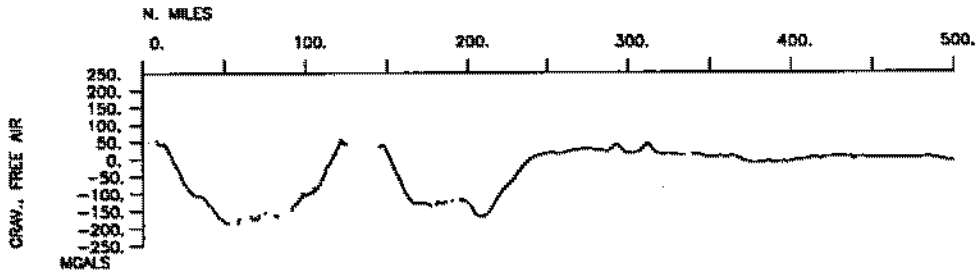
Sea Beam - 3189 miles

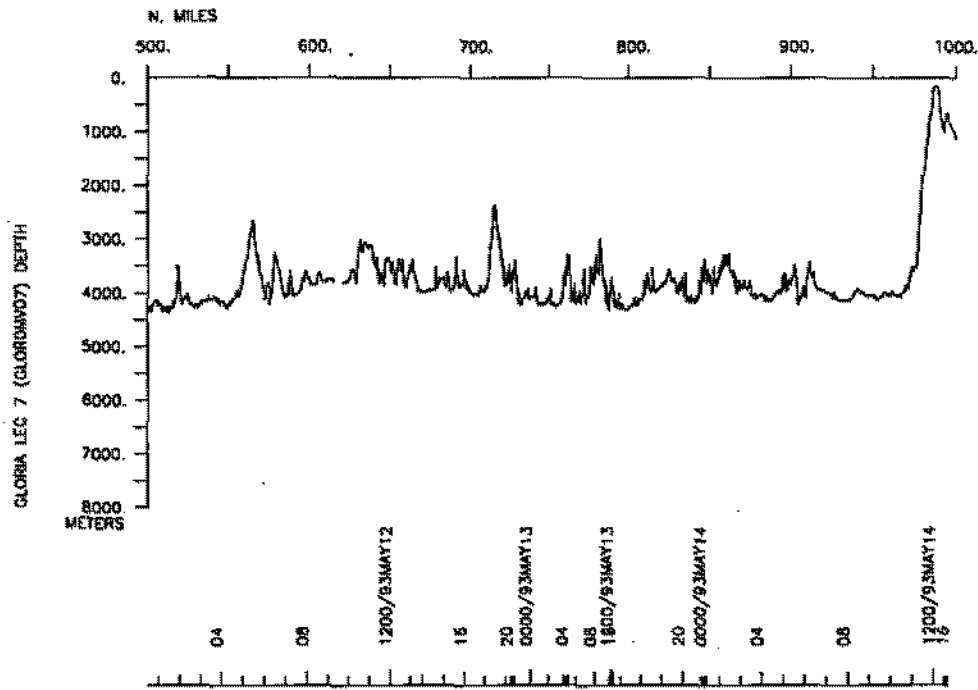
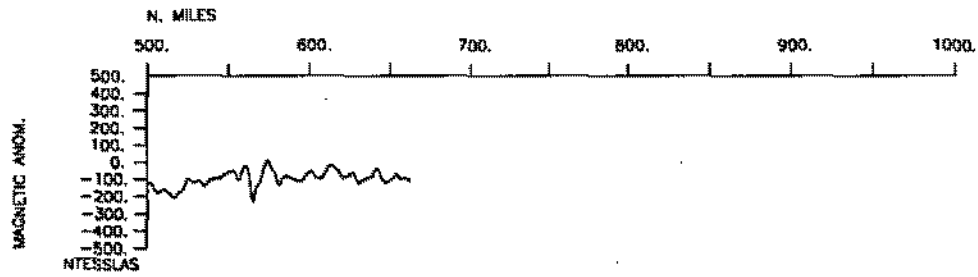
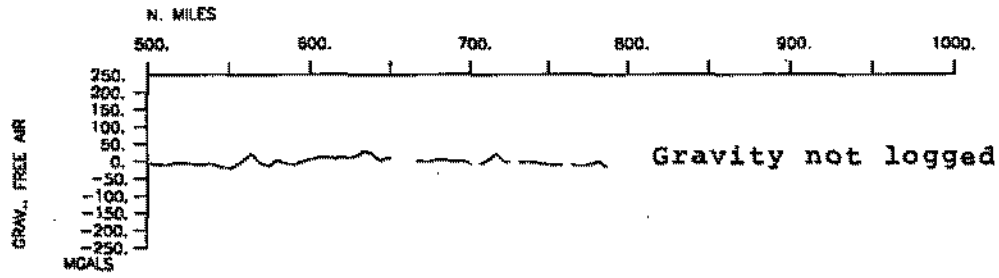
Gravity - 2119 miles

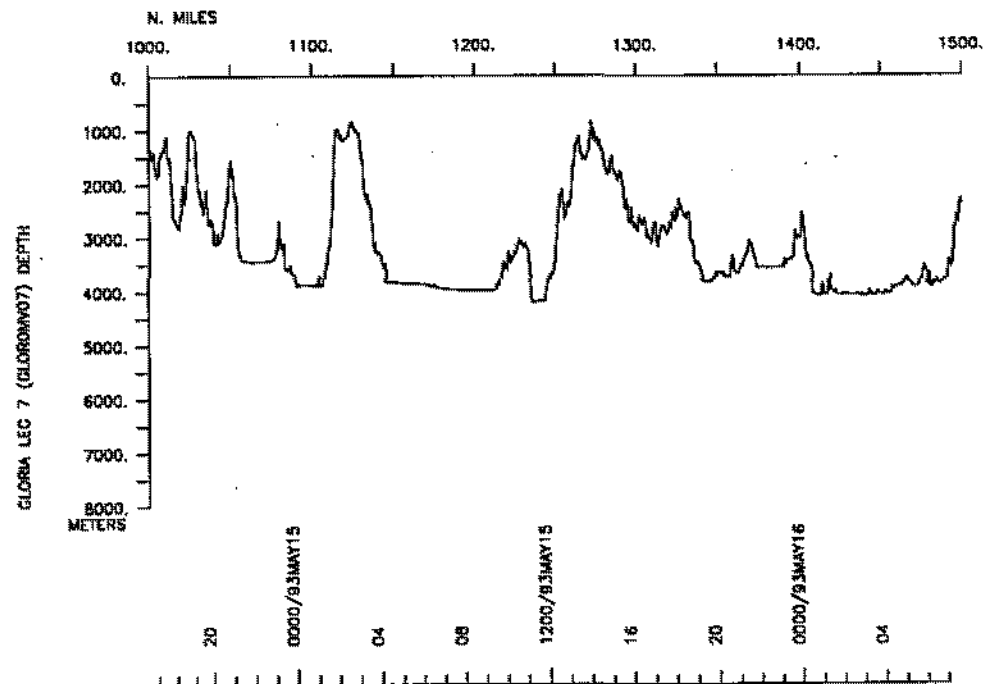
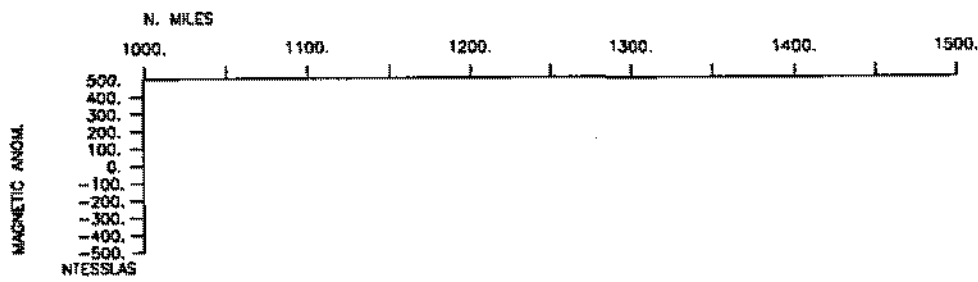
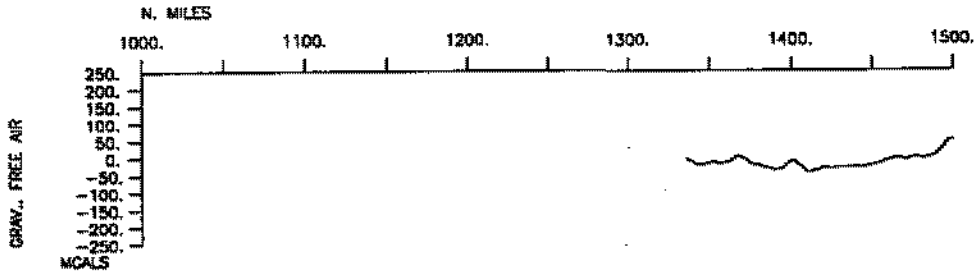


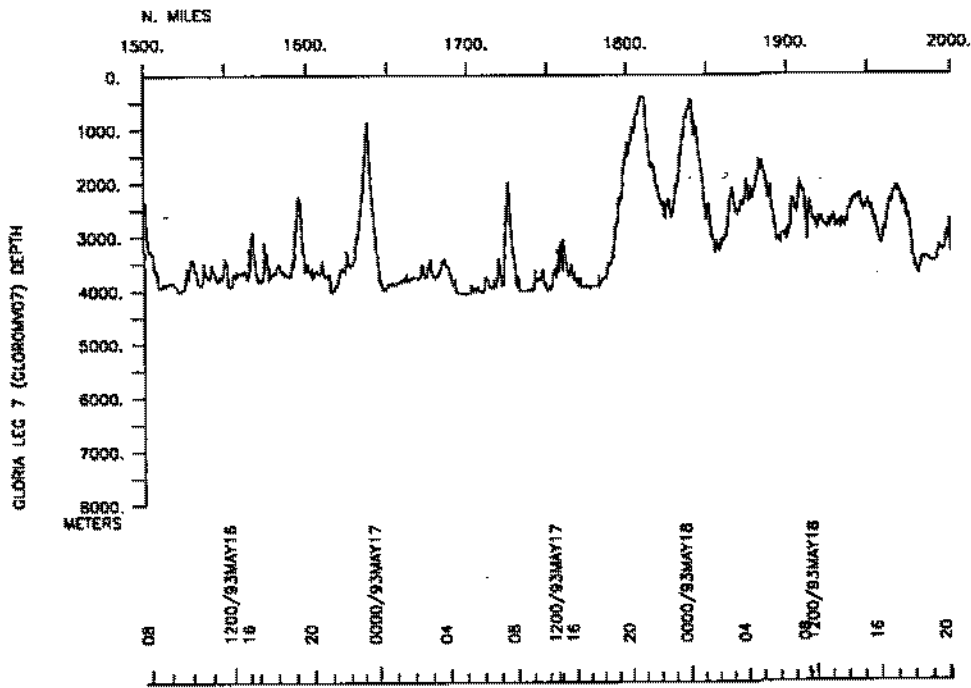
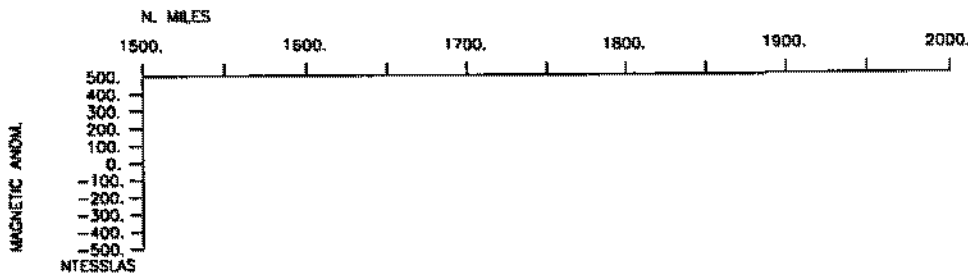
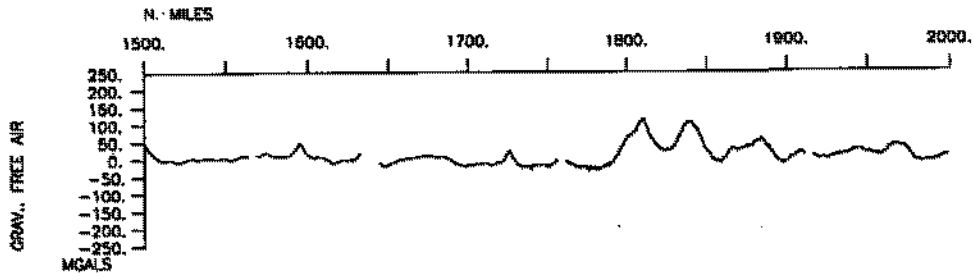
GLORIA Leg 7 (GLOR07MV)

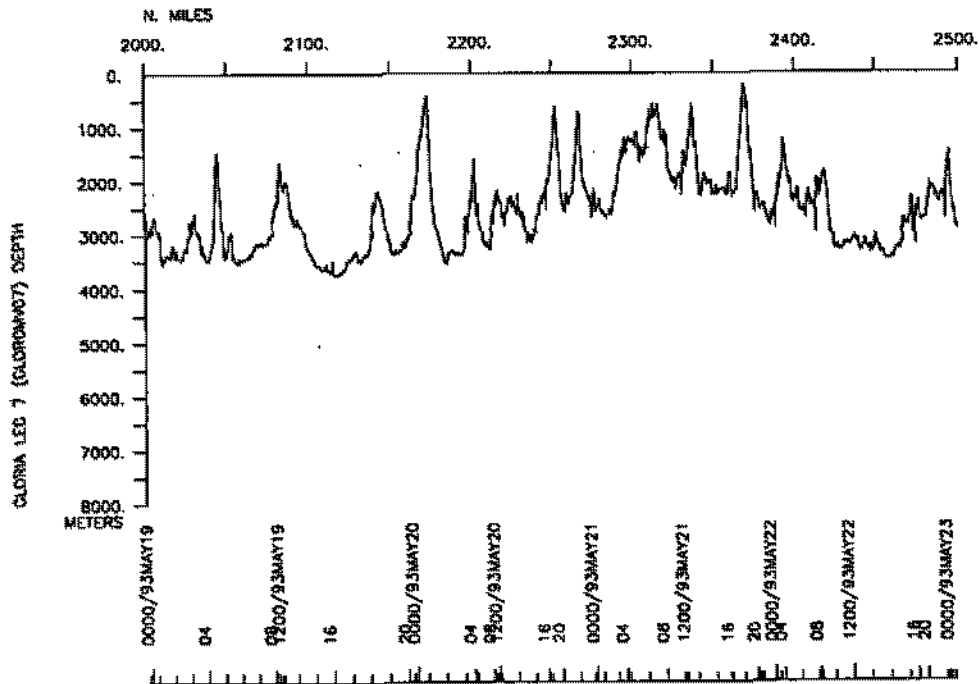
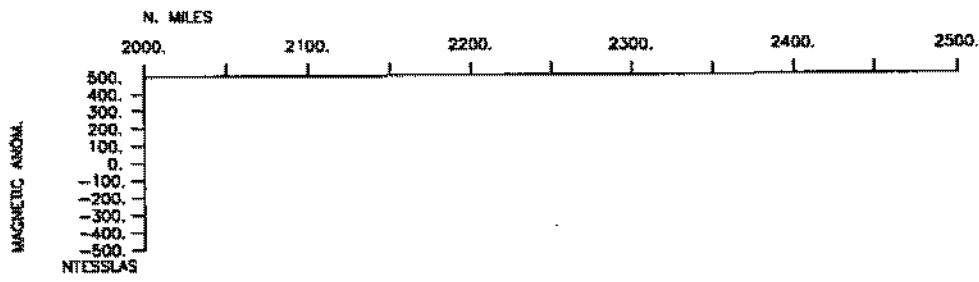
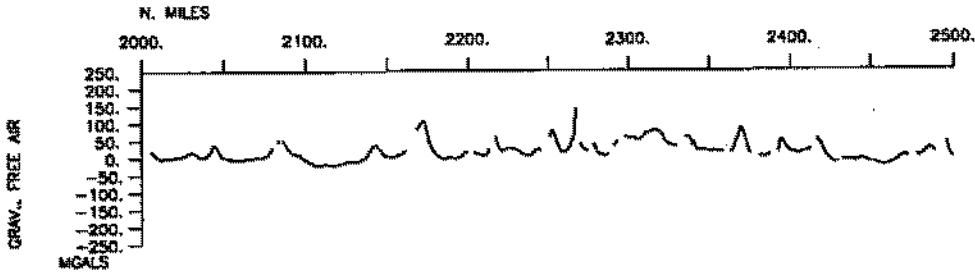
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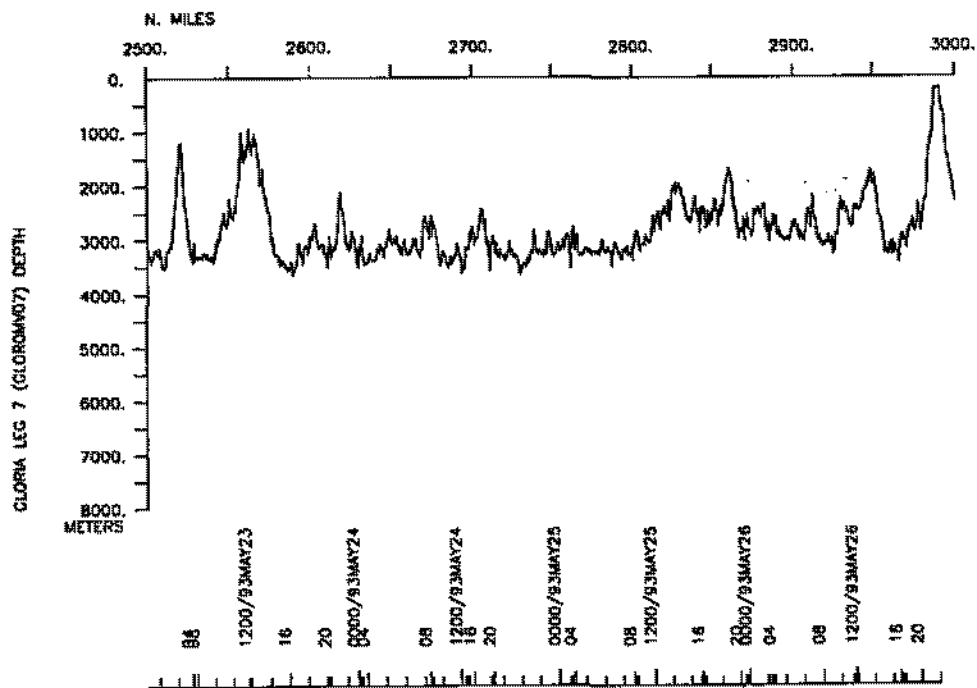
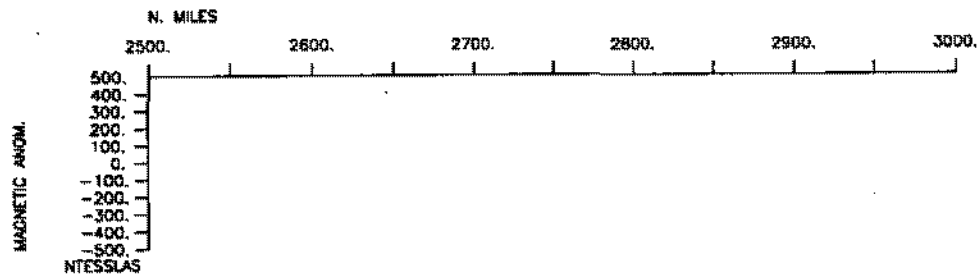


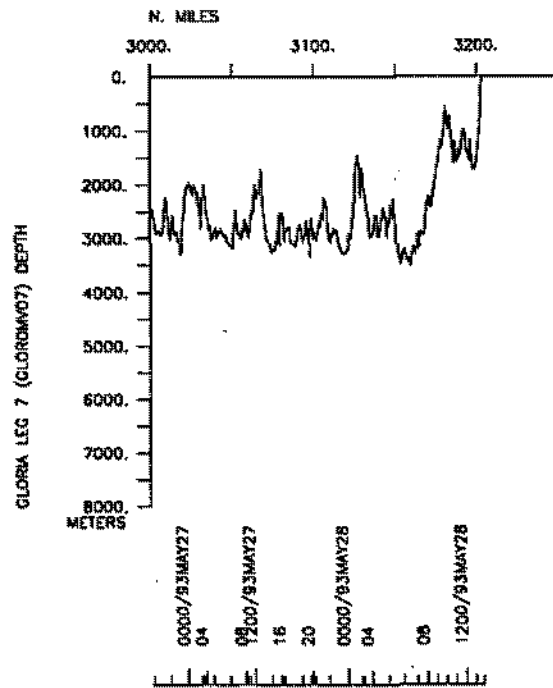
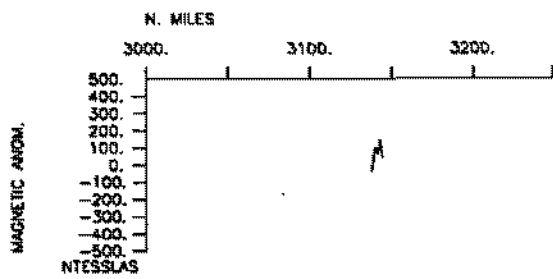
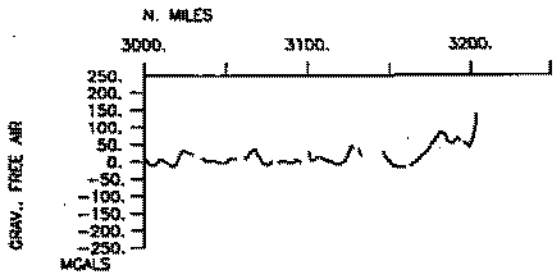












S.I.O. SAMPLE INDEX

(Issued June 1993)

GLORIA EXPEDITION

Leg 7

R/V Melville

Valparaiso, Chile (9 May 1993)
to
Easter Island, Chile (28 May 1993)

Chief Scientist:

David Naar (Univ. of South Florida)

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 ***

2000	100593	0	LGPT B Valparaiso, Chile	33-01.57S	71-36.87W	g	GLOR07MV
1354	280593	0	LGPT E Easter Island, Chile	27-08.60S	109-26.38W	g	GLOR07MV

**** Personnel ***

#	*****NAME*****	*****TITLE*****	*****AFFILIATION*****	**CRID**
PECS SIX	Naar, D.	Chief Scientist	Univ. of So. Florida	GLOR07MV
PEBO GDC	Albright, U.	SB processor	Scripps Institution	GLOR07MV
PESP UHI	Batiza, R.	Professor	Univ. of Hawaii	GLOR07MV
PEXN SIX	Fontignie, D.	Researcher	Univ. of Geneva	GLOR07MV
PEXN CHL	Guarda, R.	Observer	Univ. of Chile	GLOR07MV
PEST SIX	Joseph, L.	Student	Univ. of Rochester	GLOR07MV
PESP URI	Kincaid, C.	Professor	Univ. of Rhode Is.	GLOR07MV
PECT SCG	Moe, R.	Computer tech	Scripps Institution	GLOR07MV
PESP UHI	Nelson, R.	Volunteer	Univ. of Hawaii	GLOR07MV
PESP SIX	Plake, T.	Instructor	Washington Univ.	GLOR07MV
PESP SIX	Poreda, R.	Professor	Univ. of Rochester	GLOR07MV
PESP URI	Schilling J.	Professor	Univ. of Rhode Is.	GLOR07MV
PEXN JPN	Sema, Nobukazu	Researcher	Japan	GLOR07MV
PECT SCG	Skinner, J.	Engineer	Scripps Institution	GLOR07MV
PEST SIX	Stefani, R.	Student	Evergreen State	GLOR07MV
PEXN CHL	Hernan, V.	Observer	Univ. of Chile	GLOR07MV
PERT STS	Wilson, R.	Resident tech	Scripps Institution	GLOR07MV
PEXN URI	Gang, Xu	Student	Univ. of Rhode Is.	GLOR07MV
PESP SIX	Macdonald, R.	Sea Beam Rep	Sea Beam Instruments	GLOR07MV

**** 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 #TIME	DDMMYY DATE	SAMP TZ	B CODE	SAMPLE E IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
#*** Underway data curator - S. M. Smith ext. 42752									
#*** Log books***									
2000	100593	0	LBUW	B Underway log book	GDC	33-01.57S	71-36.87W	g	GLOR07MV
1354	280593	0	LBUW	E Underway log book	GDC	27-08.60S	109-26.38W	g	GLOR07MV
2000	100593	0	LBSC	B Chief sci notebook	SIX	33-01.57S	71-36.87W	g	GLOR07MV
1354	280593	0	LBSC	E Chief sci notebook	SIX	27-08.60S	109-26.38W	g	GLOR07MV
2005	120593	0	LBSC	B rock descrip.log	UHI	26-03.29S	78-39.30W	g	GLOR07MV
1354	280593	0	LBSC	E rock descrip.log	UHI	27-08.60S	109-26.38W	g	GLOR07MV
2005	120593	0	LBSC	B rock invent. log	URI	26-03.29S	78-39.30W	g	GLOR07MV
1354	280593	0	LBSC	E rock invent. log	URI	27-08.60S	109-26.38W	g	GLOR07MV
#*** Sea Beam Records (vertical beam and side scan) ***									
2000	100593	0	MBMR	B v.beam&sidescan r-01	GDC	33-01.57S	71-36.87W	g	GLOR07MV
1820	200593	0	MBMR	E v.beam&sidescan r-01	GDC	26-20.60S	104-50.32W	g	GLOR07MV
1830	200593	0	MBMR	B v.beam&sidescan r-02	GDC	26-20.62S	104-50.34W	g	GLOR07MV
1354	280593	0	MBMR	E v.beam&sidescan r-02	GDC	27-08.60S	109-26.38W	g	GLOR07MV
#*** Echo Sounder Records (12 or 3.5 kHz) ***									
1858	120593	0	DPRT	B epc 12khz r-01	GDC	26-03.28S	78-39.33W	g	GLOR07MV
0904	180593	0	DPRT	E epc 12khz r-01	GDC	25-00.01S	99-32.98W	g	GLOR07MV
0910	180593	0	DPRT	B epc 12khz r-02	GDC	25-00.01S	99-32.98W	g	GLOR07MV
0050	210593	0	DPRT	E epc 12khz r-02	GDC	26-30.96S	104-55.07W	g	GLOR07MV
0354	210593	0	DPRT	B epc 12khz r-03	GDC	26-22.19S	105-11.52W	g	GLOR07MV
0647	230593	0	DPRT	E epc 12khz r-03	GDC	26-47.98S	107-01.23W	g	GLOR07MV
0659	230593	0	DPRT	B epc 12khz r-04	GDC	26-47.99S	107-01.16W	g	GLOR07MV
2110	250593	0	DPRT	E epc 12khz r-04	GDC	26-33.69S	111-16.08W	g	GLOR07MV
2133	250593	0	DPRT	B epc 12khz r-05	GDC	26-33.71S	111-16.08W	g	GLOR07MV
0235	280593	0	DPRT	E epc 12khz r-05	GDC	27-15.86S	108-29.71W	g	GLOR07MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP
*** Magnetics (Earth Total Field) Records ***										
2220	100593	0	MGRA	B magnetics r-01	GDC	32-58.11S	72-05.51W	g		GLOR07MV
0454	280593	0	MGRA	E magnetics r-01	GDC	27-16.23S	108-32.93W	g		GLOR07MV
2050	100593	0	MGXX	B 3component Mag.	JPN	32-59.45S	71-44.63W	g		GLOR07MV
1354	280593	0	MGXX	E 3component Mag.	JPN	27-08.60S	109-26.38W	g		GLOR07MV
*** Dredges ***										
2005	120593	0	DRRO	B rock dredge 20 3730M	GCR	26-03.29S	78-39.30W	g		GLOR07MV
2131	120593	0	DRRO	E rock dredge 20 3730M	GCR	26-03.71S	78-39.27W	g		GLOR07MV
0348	130593	0	DRRO	B rock dredge 21 3606M	GCR	26-05.24S	79-13.67W	g		GLOR07MV
0457	130593	0	DRRO	E rock dredge 21 3606M	GCR	26-05.76S	79-13.82W	g		GLOR07MV
1047	130593	0	DRRO	B rock dredge 22 4100M	GCR	25-55.74S	79-38.88W	g		GLOR07MV
1445	130593	0	DRRO	E rock dredge 22 4100M	GCR	25-55.40S	79-39.98W	g		GLOR07MV
2245	130593	0	DRRO	B rock dredge 23 3571M	GCR	26-12.69S	80-35.92W	g		GLOR07MV
0011	140593	0	DRRO	E rock dredge 23 3571M	GCR	26-13.10S	80-36.42W	g		GLOR07MV
1315	140593	0	DRRO	B rock dredge 24 977M	GCR	25-40.00S	82-59.99W	g		GLOR07MV
1536	140593	0	DRRO	E rock dredge 24 977M	GCR	25-41.21S	83-00.03W	g		GLOR07MV
1400	150593	0	DRRO	B rock dredge 25 3490M	GCR	25-10.38S	88-05.82W	g		GLOR07MV
1514	150593	0	DRRO	E rock dredge 25 3490M	GCR	25-08.11S	88-23.53W	g		GLOR07MV
1201	160593	0	DRRO	B rock dredge 26 3465M	GCR	24-27.41S	93-13.47W	g		GLOR07MV
1332	160593	0	DRRO	E rock dredge 26 3465M	GCR	24-25.50S	93-23.20W	g		GLOR07MV
0915	180593	0	DRRO	B rock dredge 27 2724M	GCR	25-00.04S	99-33.02W	g		GLOR07MV
1029	180593	0	DRRO	E rock dredge 27 2724M	GCR	25-00.67S	99-32.99W	g		GLOR07MV
2122	180593	0	DRRO	B rock dredge 28 2977M	GCR	25-02.84S	101-06.53W	g		GLOR07MV
2311	180593	0	DRRO	E rock dredge 28 2977M	GCR	25-03.02S	101-06.85W	g		GLOR07MV
0956	190593	0	DRRO	B rock dredge 29 2409M	GCR	25-53.53S	102-14.07W	g		GLOR07MV
1216	190593	0	DRRO	E rock dredge 29 2409M	GCR	25-54.24S	102-14.26W	g		GLOR07MV
2127	190593	0	DRRO	B rock dredge 30 2802M	GCR	26-04.01S	103-41.39W	g		GLOR07MV
2326	190593	0	DRRO	E rock dredge 30 2802M	GCR	26-04.18S	103-42.47W	g		GLOR07MV

GMT #TIME #	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER			DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
0436	200593	0	DRRO	B	rock dredge 31	2308M	GCR	26-09.43S	104-21.15W	g	GLOR07MV	
0608	200593	0	DRRO	E	rock dredge 31	2308M	GCR	26-09.89S	104-21.07W	g	GLOR07MV	
0927	200593	0	DRRO	B	rock dredge 32	2656M	GCR	26-21.15S	104-18.21W	g	GLOR07MV	
1204	200593	0	DRRO	E	rock dredge 32	2656M	GCR	26-22.30S	104-18.07W	g	GLOR07MV	
1658	200593	0	DRRO	B	rock dredge 33	2230M	GCR	26-20.07S	104-50.32W	g	GLOR07MV	
1828	200593	0	DRRO	E	rock dredge 33	2230M	GCR	26-20.62S	104-50.33W	g	GLOR07MV	
2247	200593	0	DRRO	B	rock dredge 34	2595M	GCR	26-30.78S	104-55.70W	g	GLOR07MV	
0050	210593	0	DRRO	E	rock dredge 34	2595M	GCR	26-30.96S	104-55.07W	g	GLOR07MV	
0414	210593	0	DRRO	B	rock dredge 35	1534M	GCR	26-22.20S	105-11.52W	g	GLOR07MV	
0517	210593	0	DRRO	E	rock dredge 35	1534M	GCR	26-22.47S	105-11.47W	g	GLOR07MV	
0954	210593	0	DRRO	B	rock dredge 36	2133M	GCR	26-22.60S	105-49.60W	g	GLOR07MV	
1138	210593	0	DRRO	E	rock dredge 36	2133M	GCR	26-23.40S	105-49.28W	g	GLOR07MV	
1545	210593	0	DRRO	B	rock dredge 37	2184M	GCR	26-32.80S	106-15.32W	g	GLOR07MV	
1727	210593	0	DRRO	E	rock dredge 37	2184M	GCR	26-32.42S	106-15.32W	g	GLOR07MV	
2045	210593	0	DRRO	B	rock dredge 38	2467M	GCR	26-45.71S	106-09.02W	g	GLOR07MV	
2224	210593	0	DRRO	E	rock dredge 38	2467M	GCR	26-44.98S	106-08.92W	g	GLOR07MV	
0107	220593	0	DRRO	B	rock dredge 39	3212M	GCR	26-42.26S	105-57.42W	g	GLOR07MV	
0255	220593	0	DRRO	E	rock dredge 39	3212M	GCR	26-42.52S	105-57.39W	g	GLOR07MV	
0657	220593	0	DRRO	B	rock dredge 40	2563M	GCR	26-51.36S	105-34.64W	g	GLOR07MV	
0925	220593	0	DRRO	E	rock dredge 40	2563M	GCR	26-51.58S	105-34.55W	g	GLOR07MV	
1633	220593	0	DRRO	B	rock dredge 41	2925M	GCR	27-22.90S	106-27.01W	g	GLOR07MV	
1834	220593	0	DRRO	E	rock dredge 41	2925M	GCR	27-22.59S	106-26.52W	g	GLOR07MV	
2203	220593	0	DRRO	B	rock dredge 42	2260M	GCR	27-11.10S	106-36.77W	g	GLOR07MV	
0014	230593	0	DRRO	E	rock dredge 42	2260M	GCR	27-10.84S	106-35.73W	g	GLOR07MV	
0501	230593	0	DRRO	B	rock dredge 43	3293M	GCR	26-47.48S	107-01.09W	g	GLOR07MV	
0648	230593	0	DRRO	E	rock dredge 43	3293M	GCR	26-47.98S	107-01.22W	g	GLOR07MV	

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP
#										
1132	230593	0	DRRO	B rock dredge 44	1293M GCR	26-22.64S	106-38.30W	g		GLOR07MV
1321	230593	0	DRRO	E rock dredge 44	1293M GCR	26-22.71S	106-38.26W	g		GLOR07MV
1922	230593	0	DRRO	B rock dredge 45	3350M GCR	26-23.51S	107-29.40W	g		GLOR07MV
2101	230593	0	DRRO	E rock dredge 45	3350M GCR	26-23.78S	107-29.42W	g		GLOR07MV
0040	240593	0	DRRO	B rock dredge 46	3367M GCR	26-12.38S	107-42.60W	g		GLOR07MV
0239	240593	0	DRRO	E rock dredge 46	3367M GCR	26-12.22S	107-42.26W	g		GLOR07MV
0819	240593	0	DRRO	B rock dredge 47	2692M GCR	26-37.70S	108-17.19W	g		GLOR07MV
0935	240593	0	DRRO	E rock dredge 47	2692M GCR	26-37.31S	108-17.07W	g		GLOR07MV
1326	240593	0	DRRO	B rock dredge 48	3271M GCR	26-25.52S	108-33.57W	g		GLOR07MV
1435	240593	0	DRRO	E rock dredge 48	3271M GCR	26-25.26S	108-33.86W	g		GLOR07MV
1803	240593	0	DRRO	B rock dredge 49	2340M GCR	26-16.50S	108-44.87W	g		GLOR07MV
1927	240593	0	DRRO	E rock dredge 49	2340M GCR	26-17.07S	108-44.77W	g		GLOR07MV
0149	250593	0	DRRO	B rock dredge 50	3273M GCR	26-45.13S	109-27.21W	g		GLOR07MV
0318	250593	0	DRRO	E rock dredge 50	3273M GCR	26-45.14S	109-26.80W	g		GLOR07MV
0850	250593	0	DRRO	B rock dredge 51	3145M GCR	26-44.30S	110-07.09W	g		GLOR07MV
1000	250593	0	DRRO	E rock dredge 51	3145M GCR	26-44.86S	110-06.96W	g		GLOR07MV
1529	250593	0	DRRO	B rock dredge 52	2757M GCR	26-42.09S	110-50.40W	g		GLOR07MV
1707	250593	0	DRRO	E rock dredge 52	2757M GCR	26-41.92S	110-50.96W	g		GLOR07MV
2153	250593	0	DRRO	B rock dredge 53	2751M GCR	26-33.70S	111-16.09W	g		GLOR07MV
2304	250593	0	DRRO	E rock dredge 53	2751M GCR	26-33.48S	111-15.62W	g		GLOR07MV
0223	260593	0	DRRO	B rock dredge 54	2830M GCR	26-45.29S	111-10.44W	g		GLOR07MV
0428	260593	0	DRRO	E rock dredge 54	2830M GCR	26-45.07S	111-09.80W	g		GLOR07MV
1044	260593	0	DRRO	B rock dredge 55	2655M GCR	27-02.34S	110-19.05W	g		GLOR07MV
1202	260593	0	DRRO	E rock dredge 55	2655M GCR	27-02.07S	110-18.73W	g		GLOR07MV
1625	260593	0	DRRO	B rock dredge 56	3174M GCR	27-09.31S	109-50.69W	g		GLOR07MV
1806	260593	0	DRRO	E rock dredge 56	3174M GCR	27-08.91S	109-50.58W	g		GLOR07MV

GMT #TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
0146	270593	0	DRRO	B	rock dredge 57	2463M GCR	27-18.89S	108-41.62W	g	GLOR07MV
0337	270593	0	DRRO	E	rock dredge 57	2463M GCR	27-18.07S	108-41.92W	g	GLOR07MV
0751	270593	0	DRRO	B	rock dredge 58	2841M GCR	27-27.35S	108-18.34W	g	GLOR07MV
1033	270593	0	DRRO	E	rock dredge 58	2841M GCR	27-27.31S	108-18.30W	g	GLOR07MV
1434	270593	0	DRRO	B	rock dredge 59	2891M GCR	27-37.19S	108-01.81W	g	GLOR07MV
1607	270593	0	DRRO	E	rock dredge 59	2891M GCR	27-37.57S	108-01.81W	g	GLOR07MV
* 0136	280593	0	DRRO	B	rock dredge 60	1969M GCR	27-15.92S	108-29.78W	g	GLOR07MV
0234	280593	0	DRRO	E	rock dredge 60	1969M GCR	27-15.86S	108-29.70W	g	GLOR07MV

*** Continuous Recorded Gravity ***

1830	200593	0	GVCR	B	digital rec.gravity	GDC	26-20.62S	104-50.34W	g	GLOR07MV
1354	280593	0	GVCR	E	digital rec.gravity	GDC	27-08.60S	109-26.38W	g	GLOR07MV

End Sample Index GLOR07MV

* 1937 270593 #60 2945M 27-22.94S 107-15.45W
 2116 270593 27-23.13S 108-00.05W