

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

**GLORIA EXPEDITION**

**LEG 6**  
=====

R/V Melville

(Issued June 1993)

Easter Island (22 March 1993)  
to  
Valparaiso, Chile (26 April 1993)

Chief Scientist:

David Naar (University of South Florida)

Resident Marine Technician - Bob Wilson

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

GDC Cruise I.D.# 281

**INFORMAL REPORT AND INDEX OF NAVIGATION  
AND UNDERWAY GEOPHYSICAL DATA**

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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](mailto: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.
  
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.

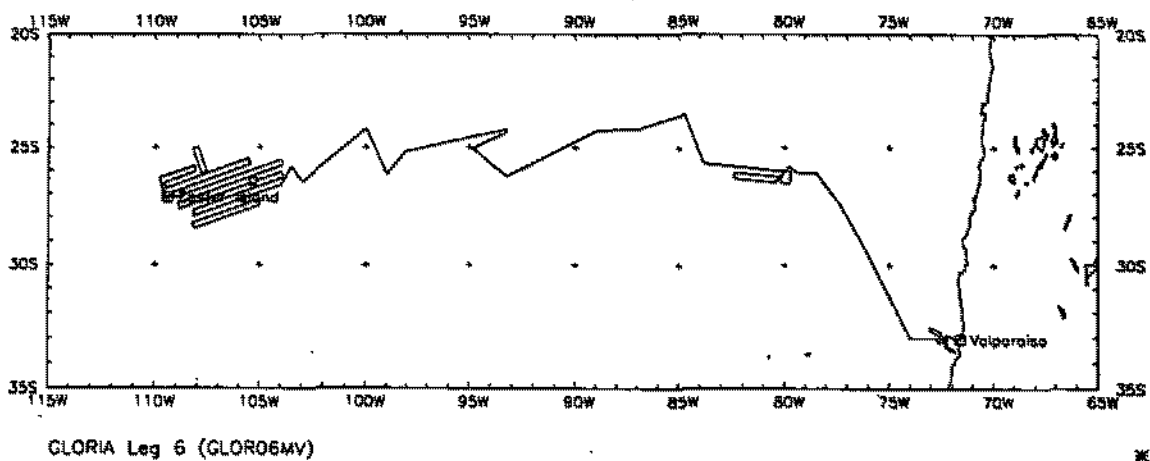
### SeaBeam 2000 Data Collected in Ancillary Mode

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In the absence of funding for SeaBeam operations on this leg, SeaBeam data were collected in "ancillary mode". 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.

The SeaBeam data remain proprietary to the SIO Shipboard Technical Support Group, not the chief scientist.

May 1993



**GLORIA EXPEDITION LEG 6**

**CHIEF SCIENTIST:** David Naar, Univ. of South Florida

**PORTS:** Easter Island - Valparaiso, Chile

**DATES:** 22 March - 26 April 1993

**SHIP:** R/V Melville

**TOTAL MILEAGE OF UNDERWAY DATA COLLECTED**

**Cruise - 6003 miles**

**Magnetics - 5890 miles**

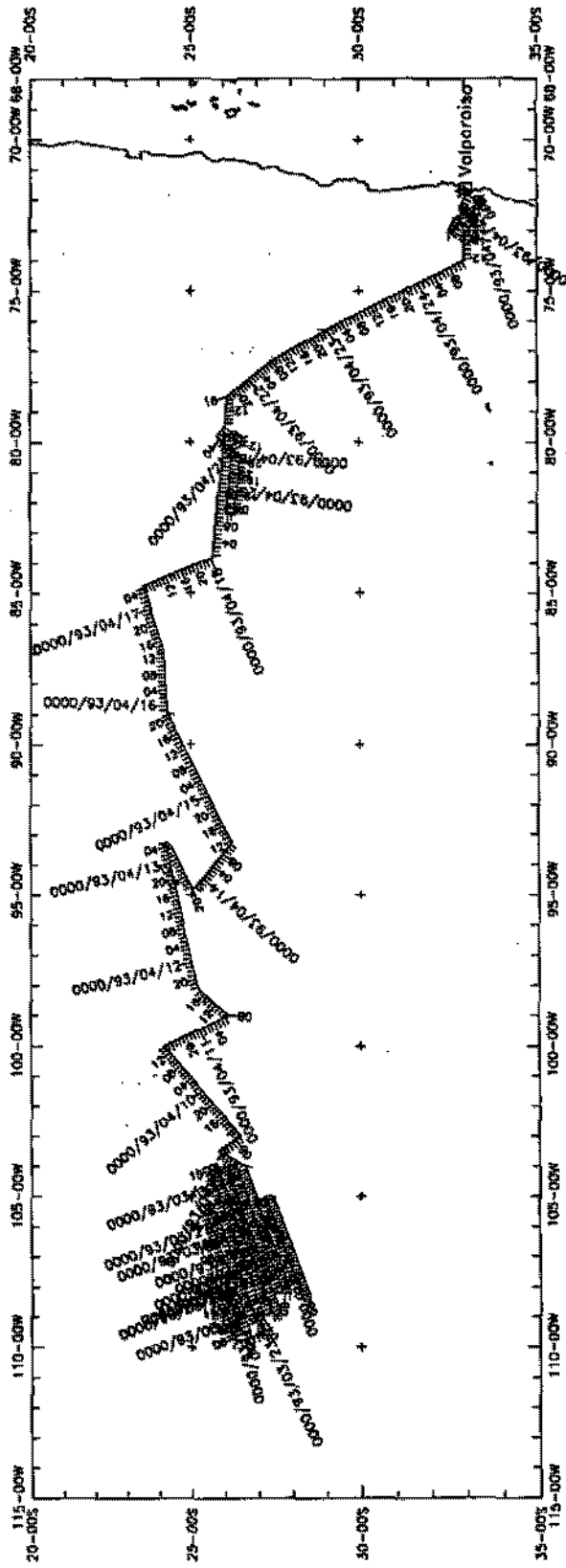
**Bathymetry - 5993 miles**

**Seismic Reflection - none collected**

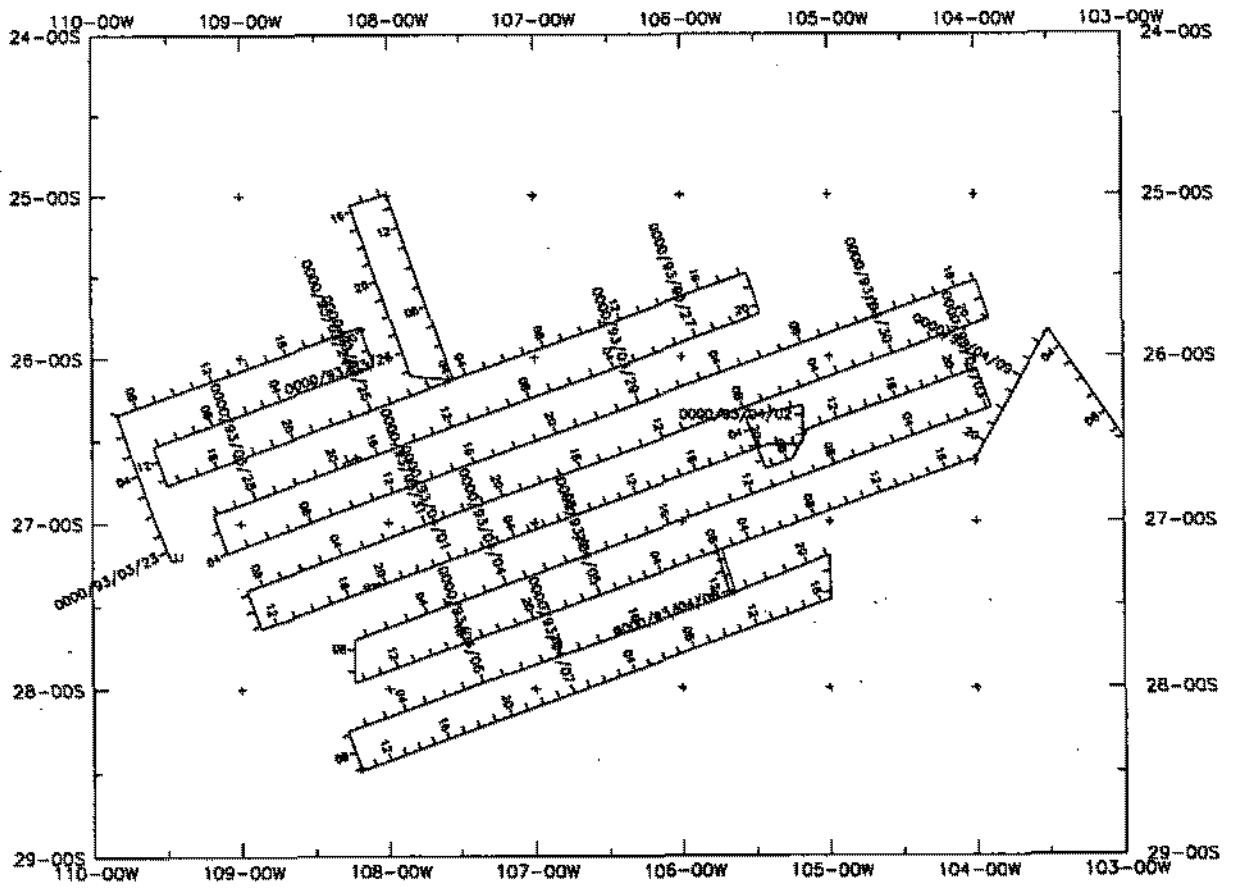
**Sea Beam - 5993 miles\***

**Gravity - 6003 miles**

\*collected in ancillary mode

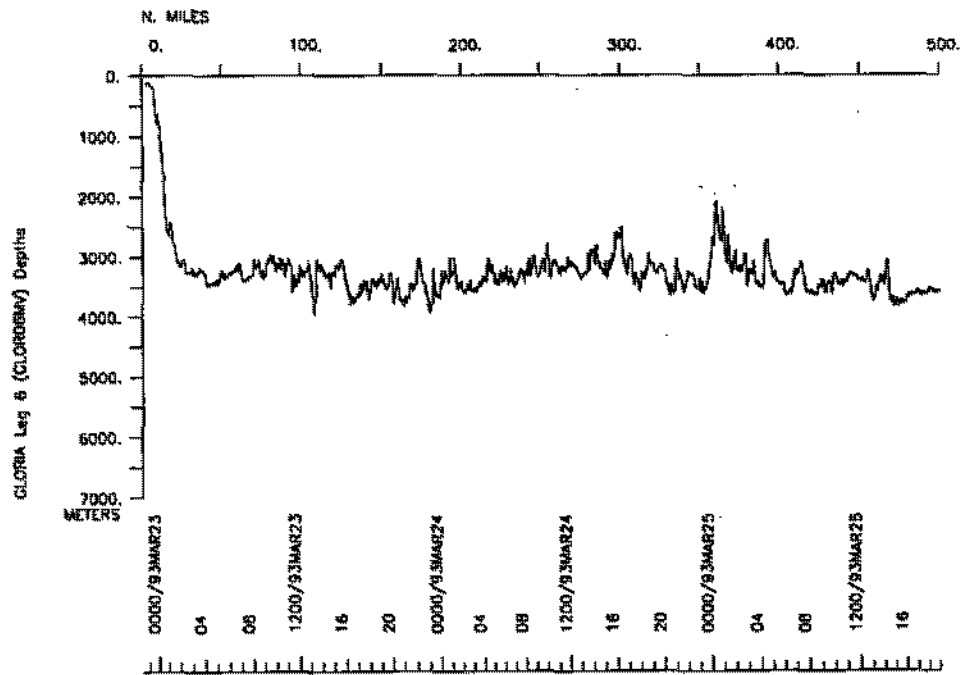
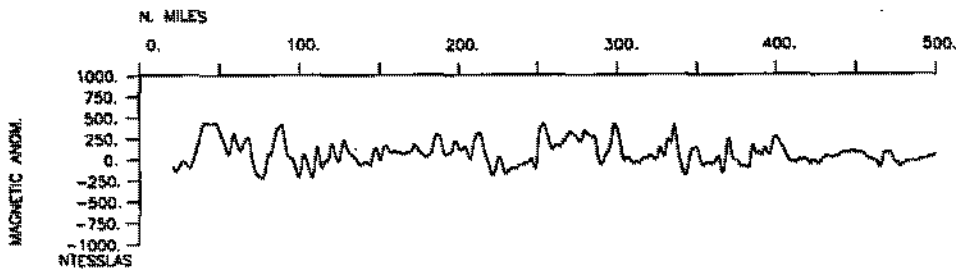
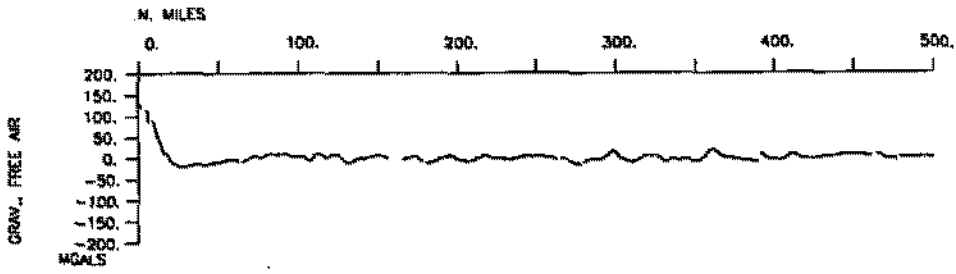


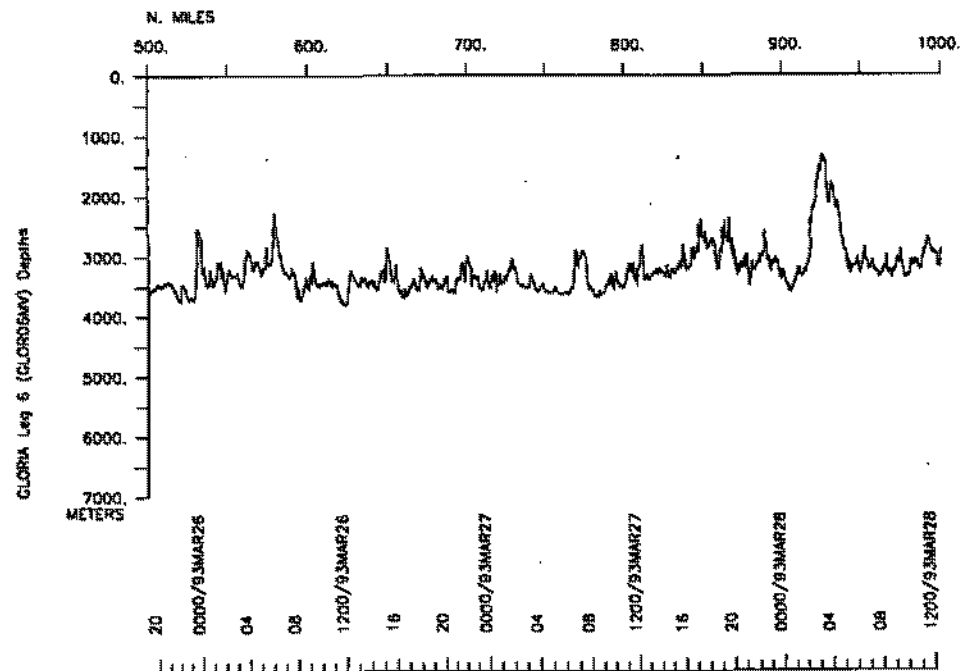
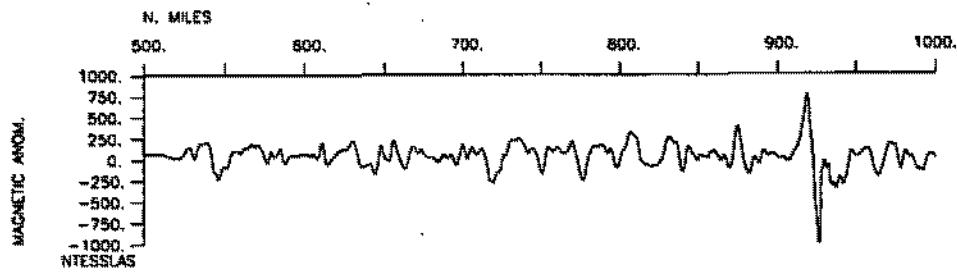
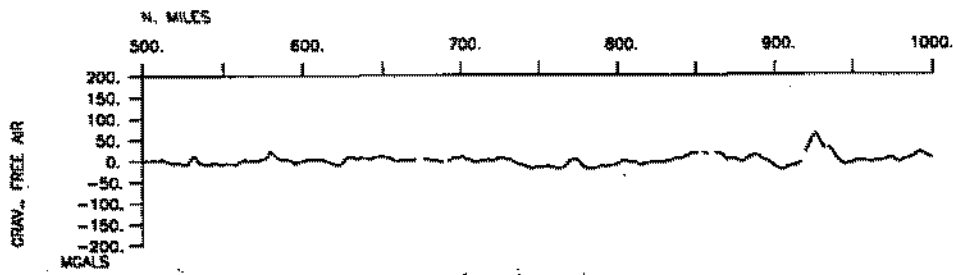
GLORIA Leg 6 (GLOR06MV)



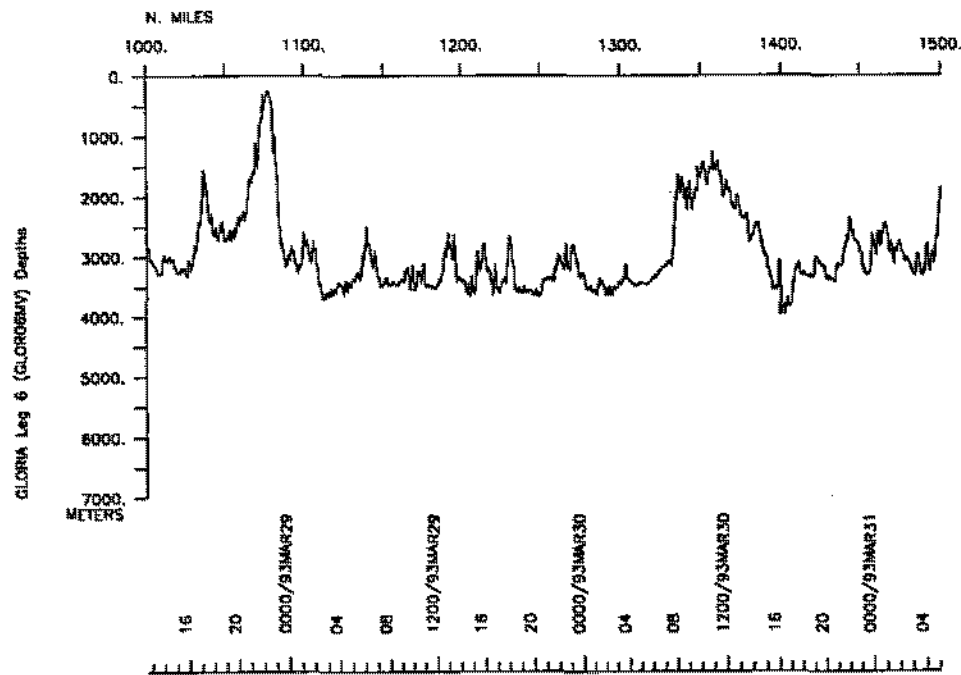
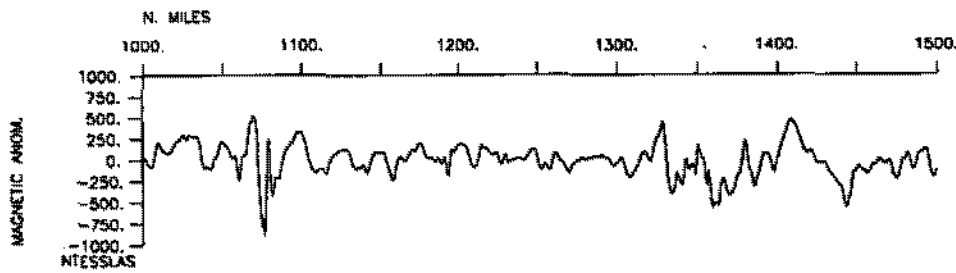
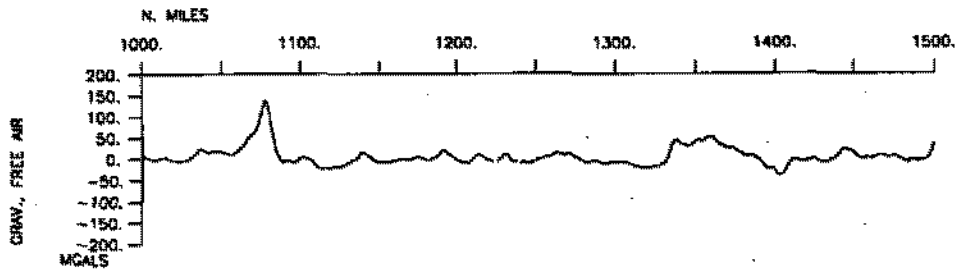
GLORIA Leg 6 (GLOR06MV) survey

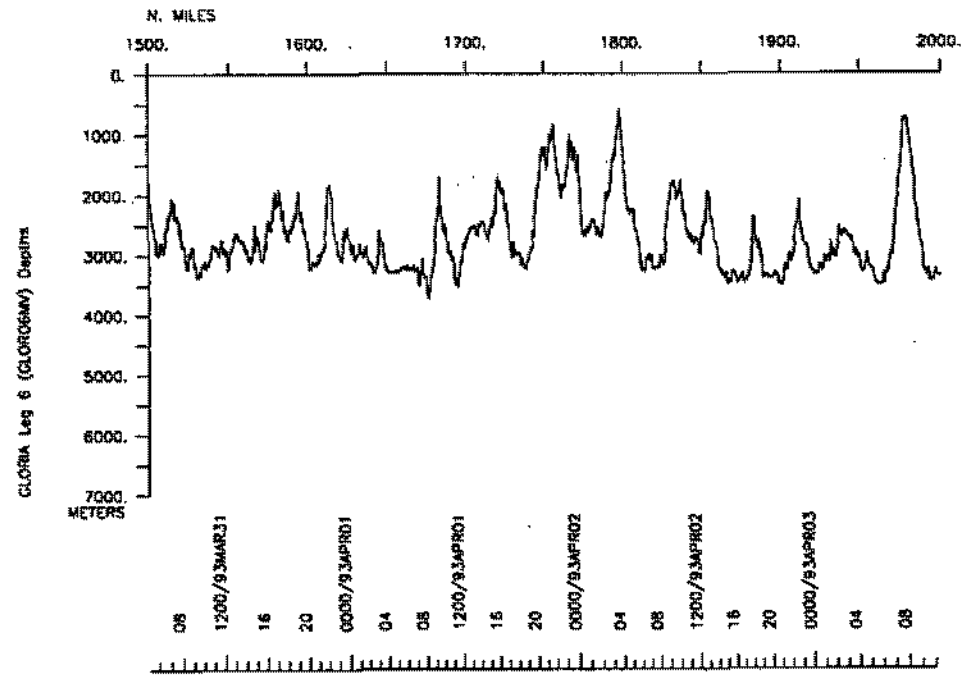
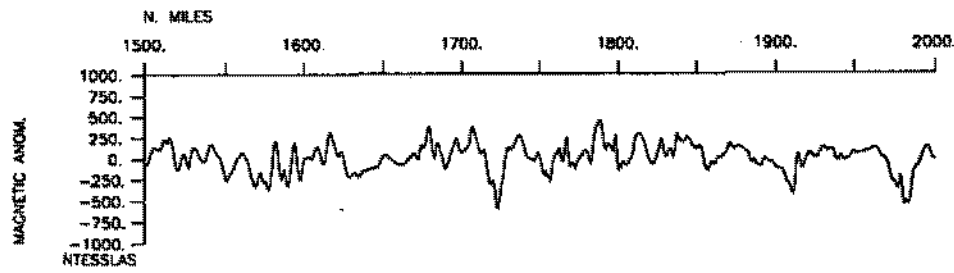
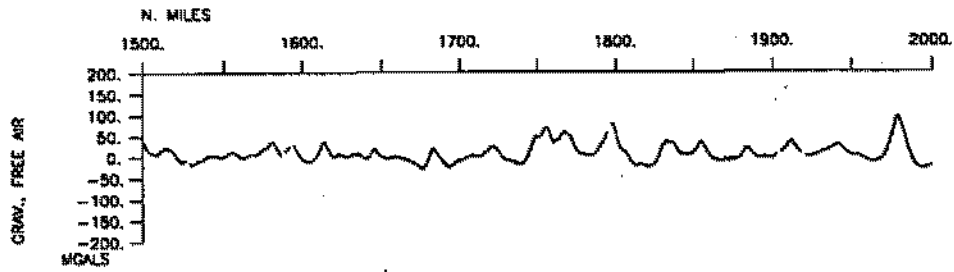
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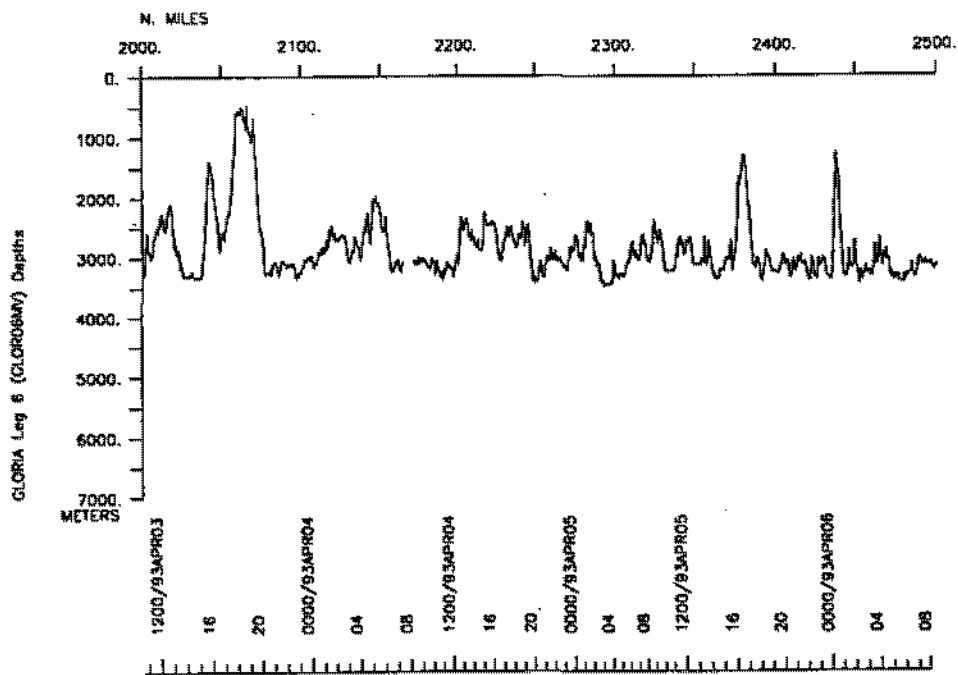
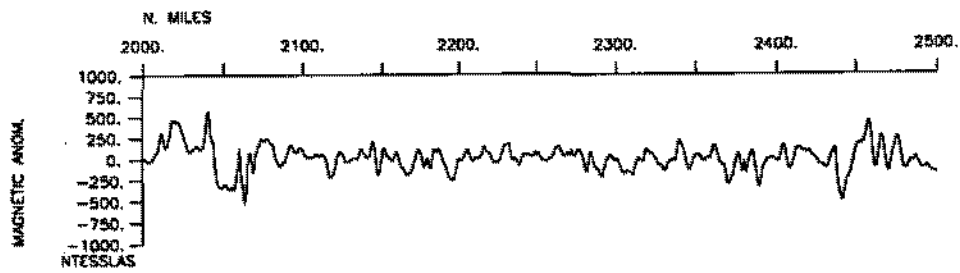
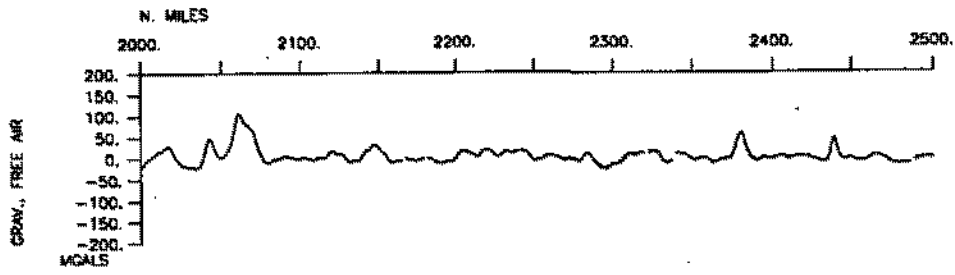


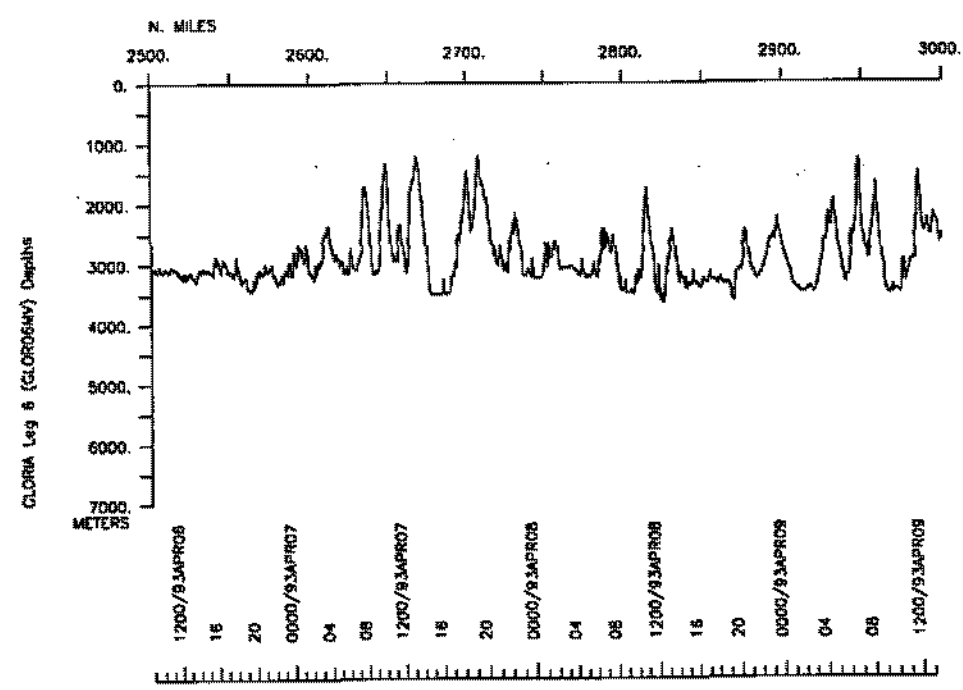
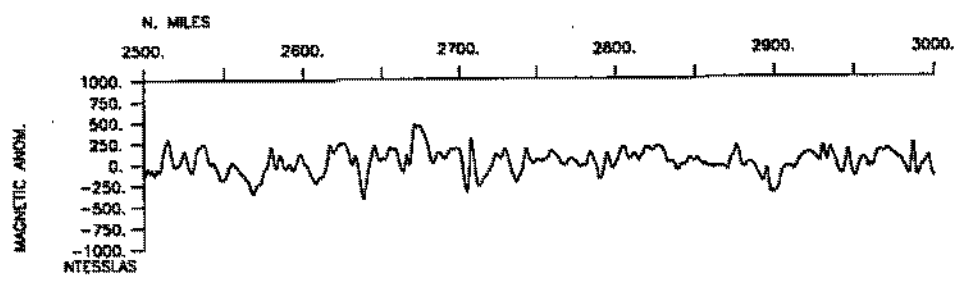
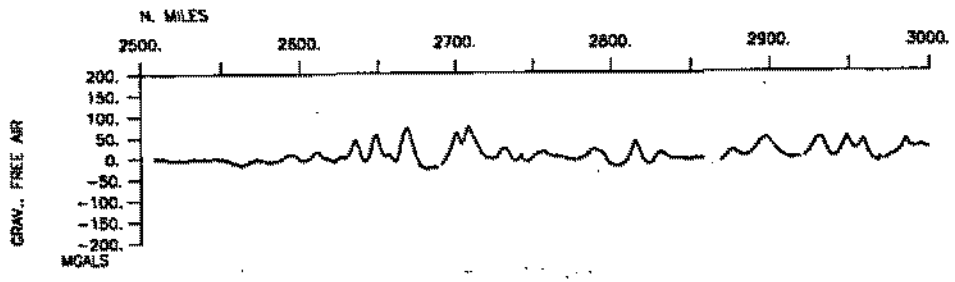


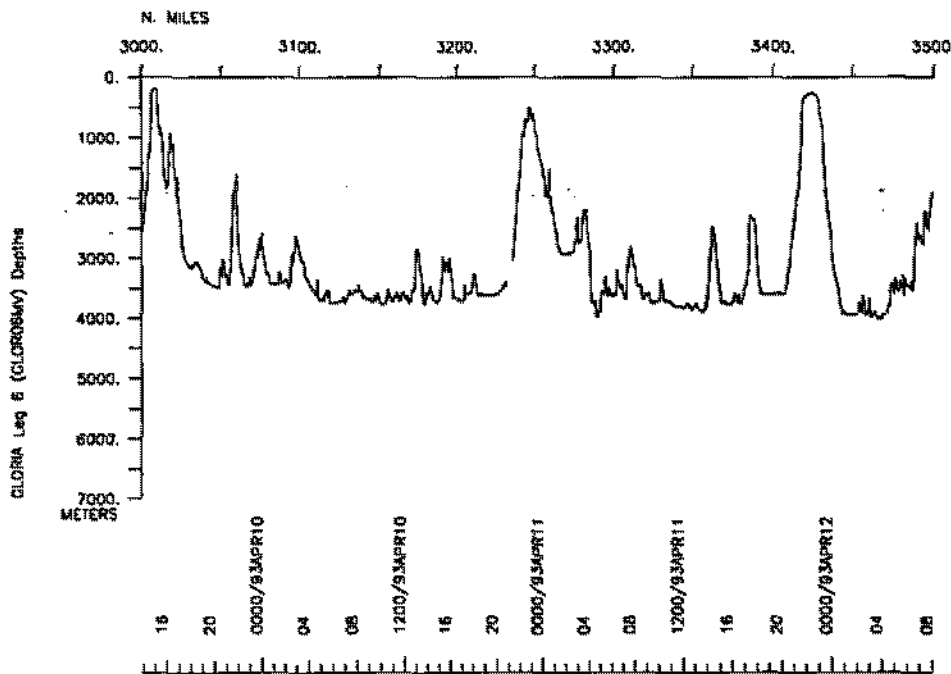
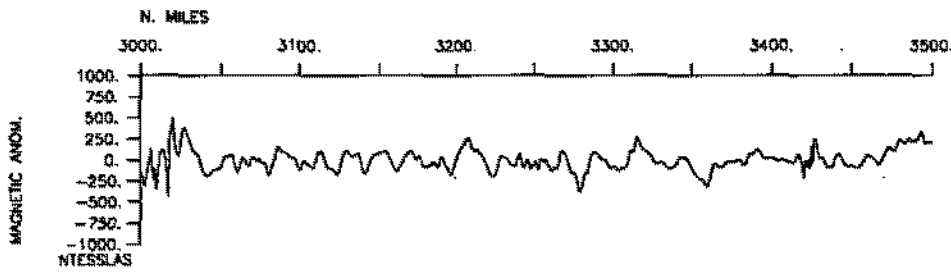
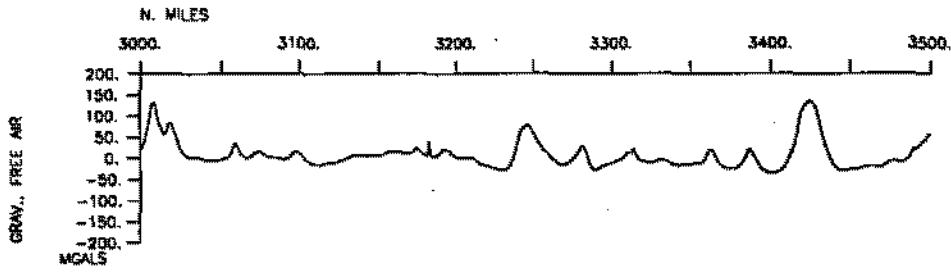


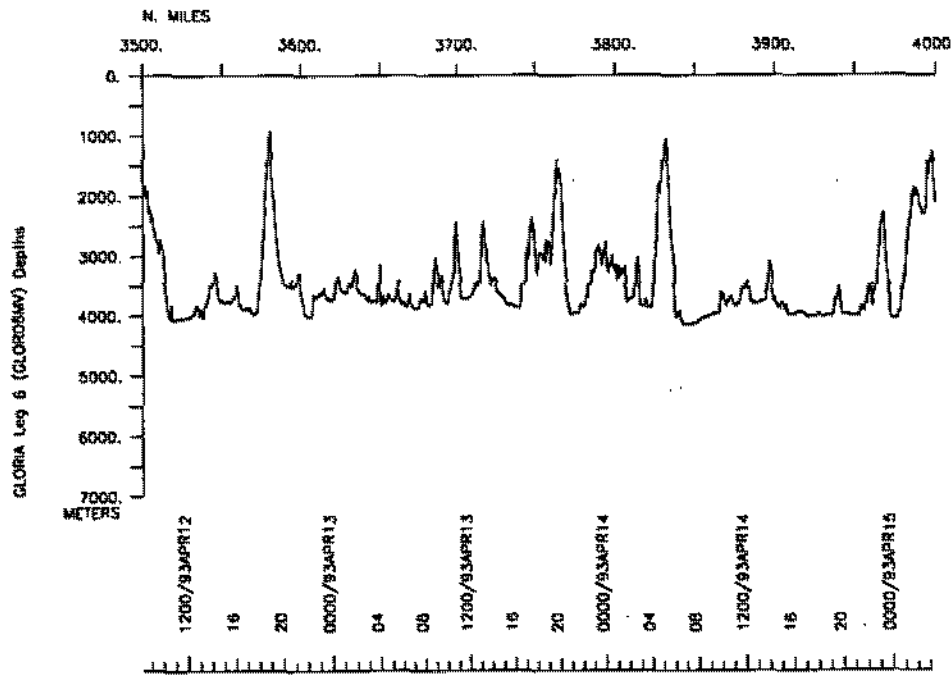
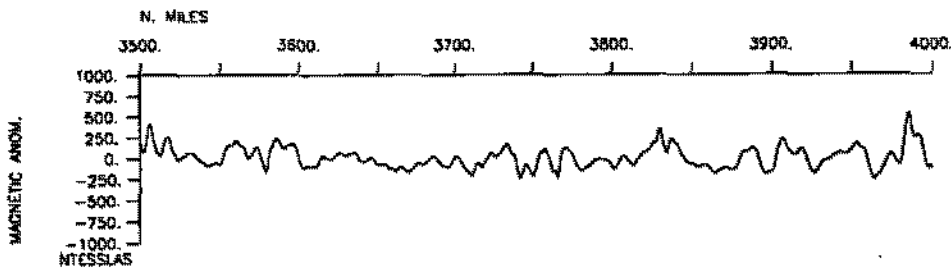
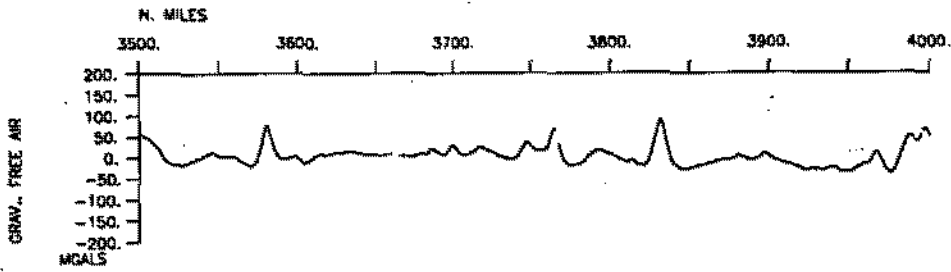


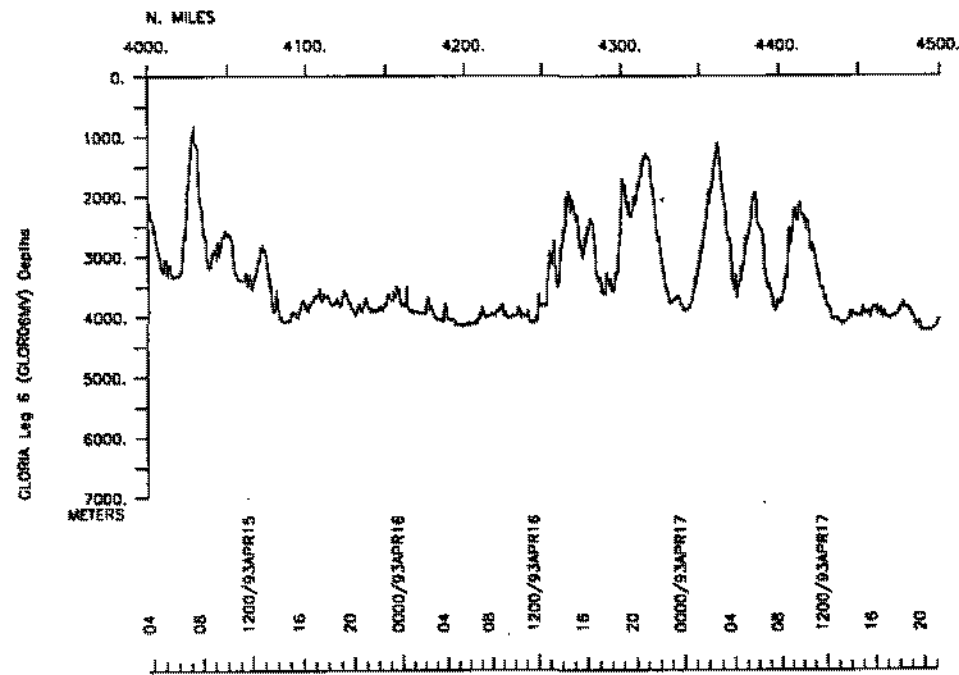
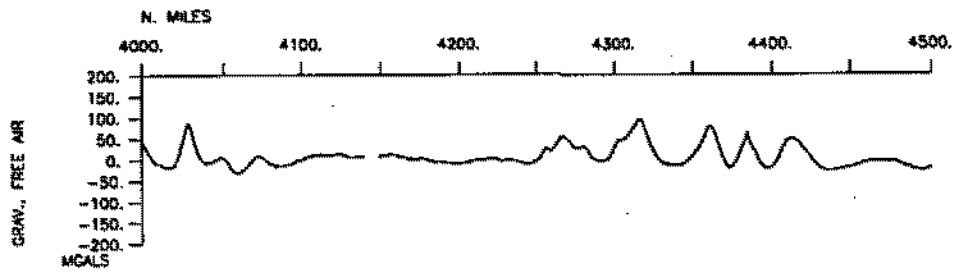


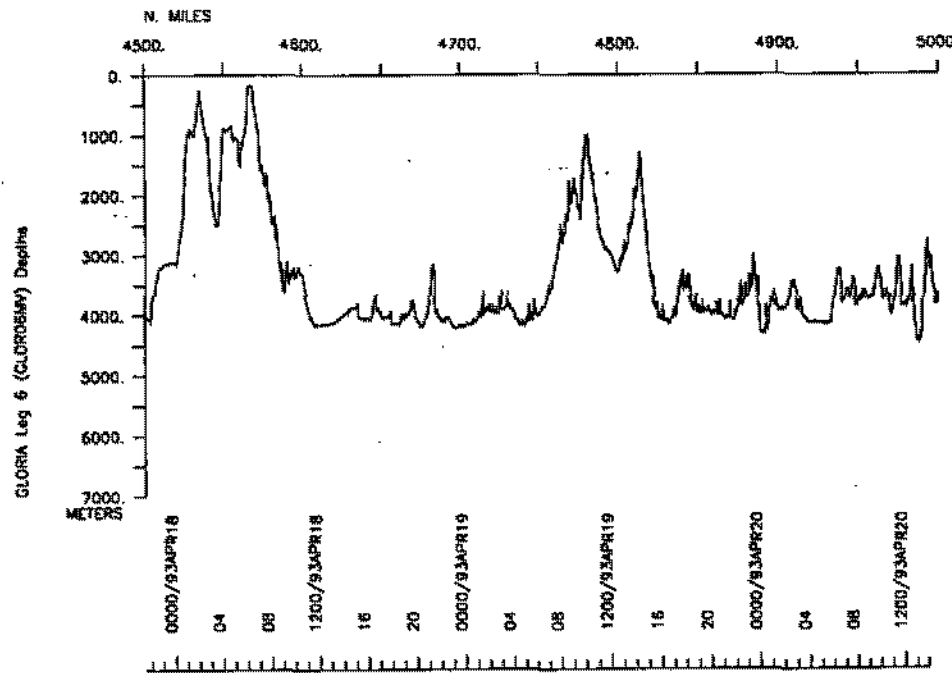
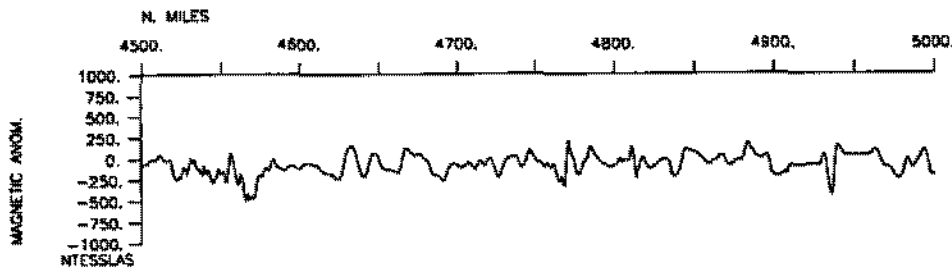
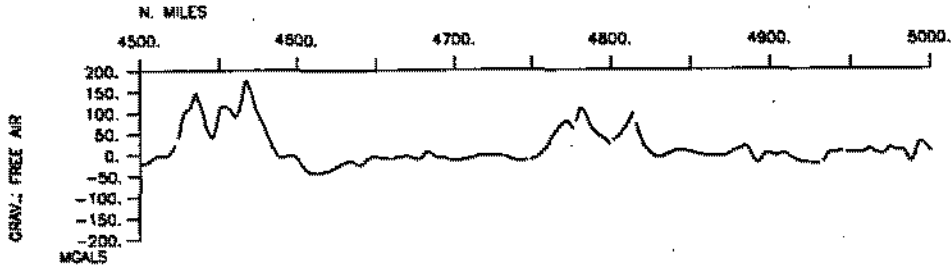




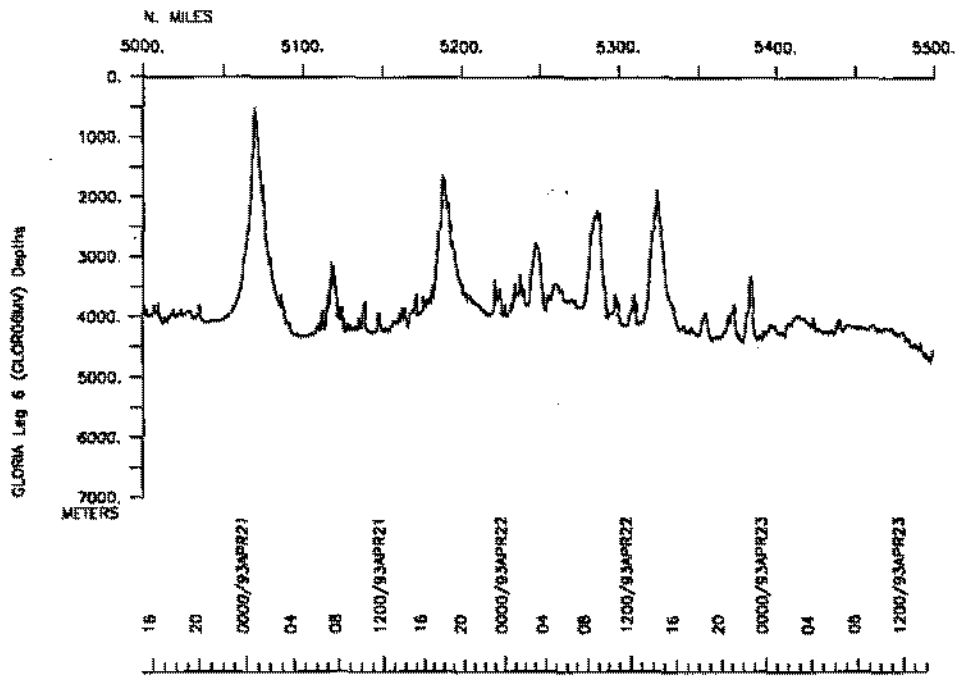
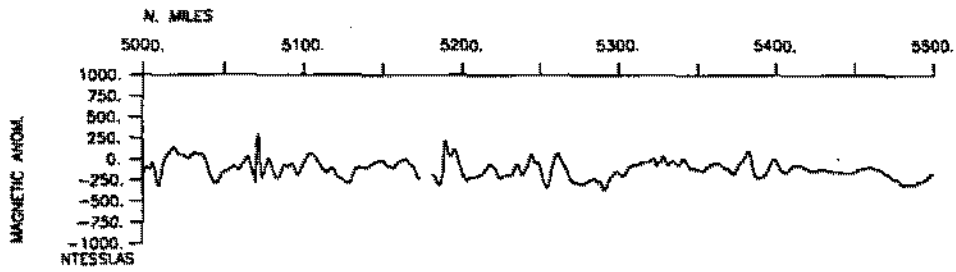
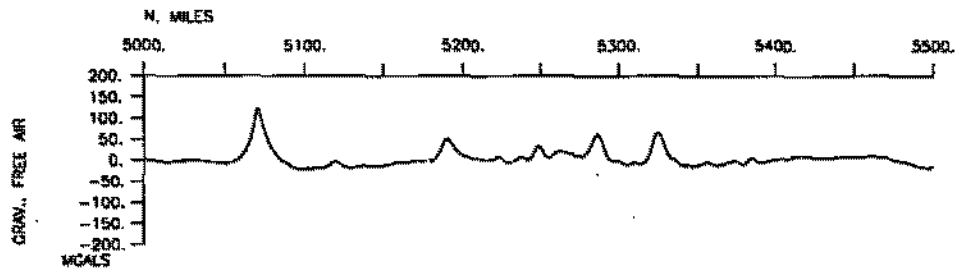


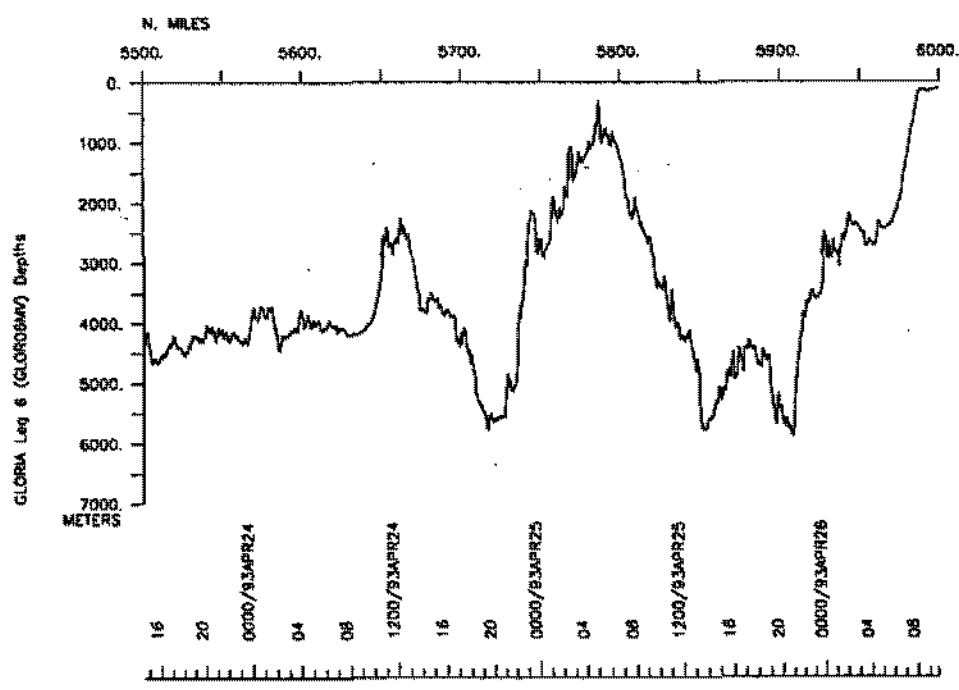
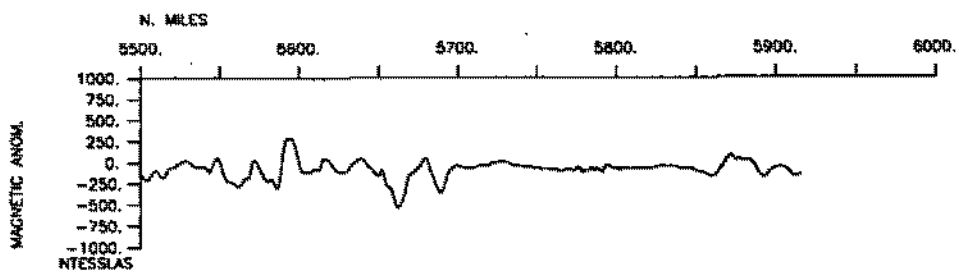
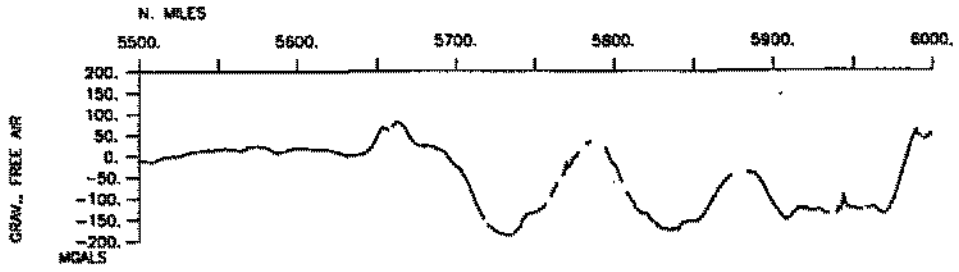


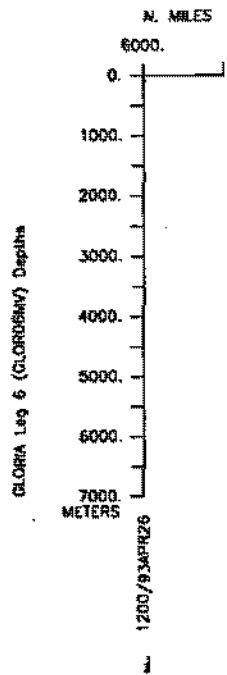
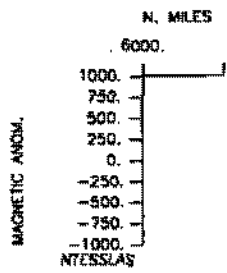
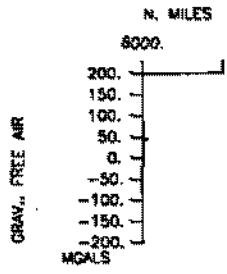












**S.I.O. SAMPLE INDEX**

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(Issued June 1993)

**GLORIA EXPEDITION**

**Leg 0**

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R/V Melville

Easter Island (22 March 1993)  
to  
Valparaiso, Chile (26 April 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 \*\*\*

2218 220393 0 LGPT B Easter Island, Chile 27-09.00S 109-27.00W f GLOR06MV  
 1200 260493 0 LGPT E Valparaiso, Chile 33-02.00S 71-37.00W f GLOR06MV

\*\*\*\* Personnel \*\*\*

#	*****NAME*****	*****TITLE*****	*****AFFILIATION*****	**CRID**
PECS SIX	Naar, D.	Chief scientist	Univ. of So. Florida	GLOR06MV
PESP GBN	Beale, R.	GLORIA technician	Inst. of Oceanog. Sci.	GLOR06MV
PESP GBN	Bishop, D.	GLORIA technician	Inst. of Oceanog. Sci.	GLOR06MV
PECS SCG	Charters, J.	Computer tech	Scripps Institution	GLOR06MV
PESP UHI	Hagen, R.	Scientist	Univ. of Hawaii	GLOR06MV
PESP GBN	Harris, A.	GLORIA technician	Inst. of Oceanog. Sci.	GLOR06MV
PESP GBN	Jacobs, C.	GLORIA technician	Inst. of Oceanog. Sci.	GLOR06MV
PESP JPN	Korenaga, J.	Observer	Univ. of Tokyo	GLOR06MV
PESP SIX	Liu, Z.	Grad. student	Univ. of So. Florida	GLOR06MV
PEST UHI	Nelson, R.	Grad. student	Univ. of Hawaii	GLOR06MV
PESP CAN	Rappaport, Y.	Grad. student	Univ. of Toronto	GLOR06MV
PESP GBN	Rusby, R.	Scientist	Inst. of Oceanog. Sci.	GLOR06MV
PESP CHL	Vergara, H.	Observer	Chile	GLOR06MV
PERT STS	Wilson, R.	Resident tech	Scripps Institution	GLOR06MV
PEST SIX	Woods, A.	Student	Univ. of So. Florida	GLOR06MV

\*\*\*\* 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	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 ***										
0040	230393	0	LBUW	B Underway watch log	GDC	27-06.41S	109-31.64W	g		GLOR06MV
1200	260493	0	LBUW	E Underway watch log	GDC	33-02.17S	71-37.55W	g		GLOR06MV
0040	230393	0	LBSC	B Gloria ops log-IOS	GBN	27-06.41S	109-31.64W	g		GLOR06MV
1545	230493	0	LBSC	E Gloria ops log-IOS	GBN	30-47.29S	75-17.82W	g		GLOR06MV
2218	220393	0	LBSC	B 3component Mag.log	JPN	27-10.89S	109-23.83W	g		GLOR06MV
1200	260493	0	LBSC	E 3component Mag.log	JPN	33-02.17S	71-37.55W	g		GLOR06MV
#*** Echo Sounder Records ***										
2219	220393	0	DPR3	B 3.5khz r-01	GDC	27-10.96S	109-23.84W	g		GLOR06MV
2230	230393	0	DPR3	E 3.5khz r-01	GDC	26-00.77S	108-06.66W	g		GLOR06MV
2242	230393	0	DPR3	B 3.5khz r-02	GDC	26-02.32S	108-05.97W	g		GLOR06MV
0221	250393	0	DPR3	E 3.5khz r-02	GDC	26-12.98S	107-47.97W	g		GLOR06MV
0231	250393	0	DPR3	B 3.5khz r-03	GDC	26-12.51S	107-46.62W	g		GLOR06MV
0325	260393	0	DPR3	E 3.5khz r-03	GDC	26-07.57S	107-32.40W	g		GLOR06MV
0935	260393	0	DPR3	B 3.5khz r-04	GDC	26-07.14S	107-31.07W	g		GLOR06MV
0203	270393	0	DPR3	E 3.5khz r-04	GDC	25-58.42S	106-11.26W	g		GLOR06MV
0211	270393	0	DPR3	B 3.5khz r-05	GDC	25-58.78S	106-12.40W	g		GLOR06MV
0103	280393	0	DPR3	E 3.5khz r-05	GDC	26-53.91S	109-02.37W	g		GLOR06MV
0110	280393	0	DPR3	B 3.5khz r-06	GDC	26-54.20S	109-03.27W	g		GLOR06MV
0001	290393	0	DPR3	E 3.5khz r-06	GDC	26-16.64S	106-17.64W	g		GLOR06MV
0009	290393	0	DPR3	B 3.5khz r-07	GDC	26-16.26S	106-16.53W	g		GLOR06MV
2208	290393	0	DPR3	E 3.5khz r-07	GDC	25-54.14S	104-19.56W	g		GLOR06MV
2216	290393	0	DPR3	B 3.5khz r-08	GDC	25-54.50S	104-20.61W	g		GLOR06MV
2011	300393	0	DPR3	E 3.5khz r-08	GDC	26-50.83S	107-14.46W	g		GLOR06MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		c	LEG-SHIP
#										
2018	300393	0	DPR3	B 3.5khz r-09	GDC	26-51.12S	107-15.36W	g		GLOR06MV
1846	310393	0	DPR3	E 3.5khz r-09	GDC	27-23.47S	108-08.66W	g		GLOR06MV
1851	310393	0	DPR3	B 3.5khz r-10	GDC	27-23.94S	108-08.53W	g		GLOR06MV
1801	010493	0	DPR3	E 3.5khz r-10	GDC	26-37.28S	105-41.42W	g		GLOR06MV
1808	010493	0	DPR3	B 3.5khz r-11	GDC	26-37.02S	105-40.64W	g		GLOR06MV
1707	020493	0	DPR3	E 3.5khz r-11	GDC	26-12.97S	104-26.72W	g		GLOR06MV
1714	020493	0	DPR3	B 3.5khz r-12	GDC	26-12.76S	104-26.10W	g		GLOR06MV
1608	030493	0	DPR3	E 3.5khz r-12	GDC	27-01.36S	106-06.77W	g		GLOR06MV
1618	030493	0	DPR3	B 3.5khz r-13	GDC	27-01.84S	106-08.17W	g		GLOR06MV
1450	040493	0	DPR3	E 3.5khz r-13	GDC	27-45.87S	107-36.43W	g		GLOR06MV
1455	040493	0	DPR3	B 3.5khz r-14	GDC	27-45.70S	107-35.85W	g		GLOR06MV
1312	050493	0	DPR3	E 3.5khz r-14	GDC	27-30.96S	105-54.97W	g		GLOR06MV
1321	050493	0	DPR3	B 3.5khz r-15	GDC	27-31.35S	105-56.16W	g		GLOR06MV
1300	060493	0	DPR3	E 3.5khz r-15	GDC	28-23.60S	107-53.42W	g		GLOR06MV
1309	060493	0	DPR3	B 3.5khz r-16	GDC	28-23.32S	107-52.53W	g		GLOR06MV
1219	070493	0	DPR3	E 3.5khz r-16	GDC	27-36.93S	105-27.79W	g		GLOR06MV
1227	070493	0	DPR3	B 3.5khz r-17	GDC	27-36.68S	105-26.92W	g		GLOR06MV
1134	080493	0	DPR3	E 3.5khz r-17	GDC	26-50.47S	104-42.28W	g		GLOR06MV
1139	080493	0	DPR3	B 3.5khz r-18	GDC	26-50.28S	104-41.70W	g		GLOR06MV
1118	090493	0	DPR3	E 3.5khz r-18	GDC	26-21.38S	102-48.78W	g		GLOR06MV
1128	090493	0	DPR3	B 3.5khz r-19	GDC	26-20.57S	102-47.73W	g		GLOR06MV
1049	100493	0	DPR3	E 3.5khz r-19	GDC	24-26.63S	100-21.26W	g		GLOR06MV
1055	100493	0	DPR3	B 3.5khz r-20	GDC	24-26.13S	100-20.62W	g		GLOR06MV
0956	110493	0	DPR3	E 3.5khz r-20	GDC	25-58.40S	98-49.14W	g		GLOR06MV
1003	110493	0	DPR3	B 3.5khz r-21	GDC	25-57.71S	98-48.51W	g		GLOR06MV
0838	120493	0	DPR3	E 3.5khz r-21	GDC	24-46.91S	96-03.00W	g		GLOR06MV
0847	120493	0	DPR3	B 3.5khz r-22	GDC	24-46.66S	96-01.74W	g		GLOR06MV
0752	130493	0	DPR3	E 3.5khz r-22	GDC	24-25.02S	93-25.06W	g		GLOR06MV

#	GMT #TIME	DDMMYY DATE	SAMP TZ	B CODE	SAMPLE E IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
0801	130493	0	DPR3	B	3.5khz r-23	GDC	24-25.50S	93-26.07W	g	GLOR06MV
0709	140493	0	DPR3	E	3.5khz r-23	GDC	25-54.22S	93-43.13W	g	GLOR06MV
0752	140493	0	DPR3	B	3.5khz r-24	GDC	25-57.59S	93-38.64W	g	GLOR06MV
0631	150493	0	DPR3	E	3.5khz r-24	GDC	25-09.44S	90-52.70W	g	GLOR06MV
0640	150493	0	DPR3	B	3.5khz r-25	GDC	25-08.90S	90-51.54W	g	GLOR06MV
0553	160493	0	DPR3	E	3.5khz r-25	GDC	24-12.83S	87-57.64W	g	GLOR06MV
0645	160493	0	DPR3	B	3.5khz r-26	GDC	24-12.87S	87-58.70W	g	GLOR06MV
0515	170493	0	DPR3	E	3.5khz r-26	GDC	23-32.83S	84-48.00W	g	GLOR06MV
0528	170493	0	DPR3	B	3.5khz r-27	GDC	23-32.32S	84-46.21W	g	GLOR06MV
0410	180493	0	DPR3	E	3.5khz r-27	GDC	25-43.31S	83-18.22W	g	GLOR06MV
0426	180493	0	DPR3	B	3.5khz r-28	GDC	25-43.50S	83-15.97W	g	GLOR06MV
0017	190493	0	DPR3	E	3.5khz r-28	GDC	25-58.83S	80-27.44W	g	GLOR06MV
0038	190493	0	DPR3	B	3.5khz r-29	GDC	25-59.11S	80-24.40W	g	GLOR06MV
2307	190493	0	DPR3	E	3.5khz r-29	GDC	26-09.46S	81-28.62W	g	GLOR06MV
2314	190493	0	DPR3	B	3.5khz r-30	GDC	26-09.40S	81-29.58W	g	GLOR06MV
2128	200493	0	DPR3	E	3.5khz r-30	GDC	26-30.17S	80-29.66W	g	GLOR06MV
2138	200493	0	DPR3	B	3.5khz r-31	GDC	26-30.24S	80-28.27W	g	GLOR06MV
2119	210493	0	DPR3	E	3.5khz r-31	GDC	26-31.09S	78-07.93W	g	GLOR06MV
2128	210493	0	DPR3	B	3.5khz r-32	GDC	26-31.80S	78-07.24W	g	GLOR06MV
2017	220493	0	DPR3	E	3.5khz r-32	GDC	28-42.31S	76-32.53W	g	GLOR06MV
2023	220493	0	DPR3	B	3.5khz r-33	GDC	28-42.92S	76-32.14W	g	GLOR06MV
1900	230493	0	DPR3	E	3.5khz r-33	GDC	31-08.36S	75-05.37W	g	GLOR06MV
1906	230493	0	DPR3	B	3.5khz r-34	GDC	31-09.01S	75-05.02W	g	GLOR06MV
1748	240493	0	DPR3	E	3.5khz r-34	GDC	32-59.98S	73-03.52W	g	GLOR06MV
1756	240493	0	DPR3	B	3.5khz r-35	GDC	32-59.96S	73-02.26W	g	GLOR06MV
1725	250493	0	DPR3	E	3.5khz r-35	GDC	32-39.21S	73-05.27W	g	GLOR06MV
1743	250493	0	DPR3	B	3.5khz r-36	GDC	32-36.72S	73-05.04W	g	GLOR06MV
0420	260493	0	DPR3	E	3.5khz r-36	GDC	32-51.98S	72-18.59W	g	GLOR06MV



#GMT	DDMMYY	TZ	SAMP	B	SAMPLE	DISP	LATITUDE	LONGITUDE	p	CRUISE
#TIME	DATE		CODE	E	IDENTIFIER	CODE			c	LEG-SHIP
*** Sea Beam Records (vertical beam and side scan) ***										
2236	220393	0	MBMR	B	v.beam&sidescan	r-01 GDC	26-11.10S	103-56.80W	g	GLOR06MV
1608	030493	0	MBMR	E	v.beam&sidescan	r-01 GDC	27-01.36S	106-06.77W	g	GLOR06MV
1614	030493	0	MBMR	B	v.beam&sidescan	r-02 GDC	26-11.10S	103-56.80W	g	GLOR06MV
1050	260493	0	MBMR	E	v.beam&sidescan	r-02 GDC	27-01.36S	106-06.77W	g	GLOR06MV
*** Gloria Data ***										
0040	230393	0	MBGL	B	GLORIA sidescan	IOS GBN	27-06.41S	109-31.64W	g	GLOR06MV
1545	210493	0	MBGL	E	GLORIA sidescan	IOS GBN	26-04.58S	78-31.74W	g	GLOR06MV
0040	230393	0	MBGL	B	GLORIA data tapes	GBN	27-06.41S	109-31.64W	g	GLOR06MV
1520	210493	0	MBGL	E	GLORIA data tapes	GBN	26-04.93S	78-34.22W	g	GLOR06MV
*** Magnetism (Earth Total Field) Records ***										
0132	230393	0	MGRA	B	magnetics	r-01 GDC	27-00.44S	109-34.53W	g	GLOR06MV
0342	260393	0	MGRA	E	magnetics	r-01 GDC	26-06.86S	107-30.14W	g	GLOR06MV
0352	260393	0	MGRA	B	magnetics	r-02 GDC	26-06.45S	107-28.81W	g	GLOR06MV
2331	060493	0	MGRA	E	magnetics	r-02 GDC	28-02.47S	106-47.53W	g	GLOR06MV
2337	060493	0	MGRA	B	magnetics	r-03 GDC	28-02.27S	106-46.88W	g	GLOR06MV
1338	180493	0	MGRA	E	magnetics	r-03 GDC	25-50.54S	81-58.32W	g	GLOR06MV
1350	180493	0	MGRA	B	magnetics	r-04 GDC	25-50.73S	81-56.62W	g	GLOR06MV
2206	250493	0	MGRA	E	magnetics	r-04 GDC	32-45.26S	72-34.54W	g	GLOR06MV
2218	220393	0	MGXX	B	3component Mag	JPN	27-10.89S	109-23.83W	g	GLOR06MV
<del>2206</del>	<del>220393</del>	0	MGXX	E	3component Mag	JPN	<del>32-45.26S</del>	<del>72-34.54W</del>	g	GLOR06MV
1200	26						33-02.17S	71-37.55W		
*** Continuous Recorded Gravity ***										
0040	230393	0	GYCR	B	digital rec.gravity	GDC	27-06.41S	109-31.64W	g	GLOR06MV
1200	260493	0	GYCR	E	digital rec.gravity	GDC	33-02.17S	71-37.55W	g	GLOR06MV
*** Expendable Bathythermographs ***										
2218	220393	0	BTXP		15 xbts	GDC	27-10.89S	109-23.83W	g	GLOR06MV
***										GLOR06MV
End Sample Index										