## INFORMAL REPORT AND INDEX OF

NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA

(Issued March 1988)

#### TORTUGA EXPEDITION

LEG 2

Puerto Quetzal, Guatemala (9 November 1987) to Academy Bay, Galapagos (1 December 1987)

R/V Washington

Chief Scientist - J. Phipps-Morgan
(Massachusetts Institute of Technology)

Resident Marine Technician - E. Pillard

Post-Cruise Processing and Report Preparation by Geological Data Center, Scripps Institution of Oceanography

Data Collection and Processing Funded by NSF Grant Number OCE87-02835

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.# 232

# INFORMAL REPORT AND INDEX OF NAVIGATION AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center Scripps Institution of Oceanography

## Contents:

Track Charts - annotated with dates and hour ticks.

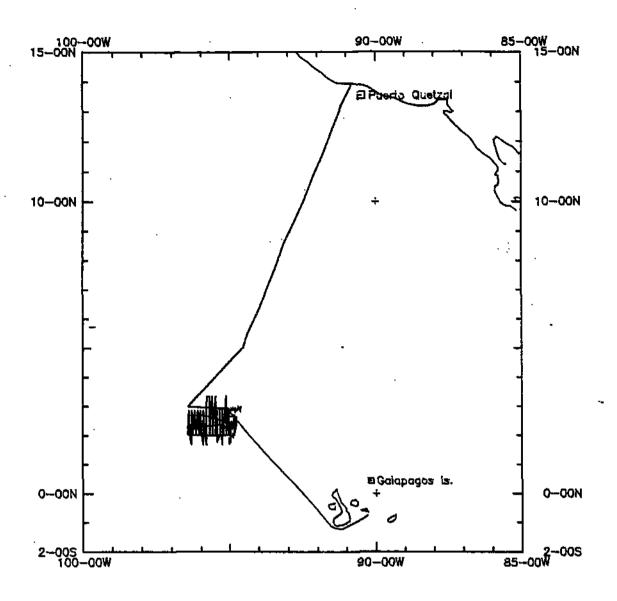
Profiles - depth, magnetic anomaly and gravity free air anomaly vs. distance. Sections of track having subbottom profiles (airgun or watergun) records have a wide black line along the bottom of the profile. Sections having Sea Beam are indicated by a narrow black line:

Sample Index - list of beginning and 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. Phone (619)534-2752.

- 1. Navigation listing with times and positions of course and speed changes, fixes and drift velocity.
- 2. Depth compilation plots compilation plots at the traditional scale of 4in/degree longitude (1:1,000,000) are no longer produced for Sea Beam cruises. Custom plots may be requested of vertical beam (2&2/3 degree beam width) depths retrieved at one minute intervals of ship time.
- Plots of depths, magnetics or gravity profiles along track custom plots at various map and profile scales on Mercator projection may be requested.
- 4. Separate time series files of navigation, depth, gravity and magnetics as well as these data merged in the MGD77 Exchange format on magnetic tape.
- Microfilm or Xerox copies of:
  - a. Echosounder records 12 and 3.5 kHz frequency
  - b. Subbottom profiler records
  - c. Magnetometer records
  - d. Gravity records
  - e. Underway data log book



TORTUGA LEG 2 (TUGAO2WT) Track at .312in/deg

## TORTUGA EXPEDITION LEG 2

CHIEF SCIENTIST: J. Phipps-Morgan (MIT)

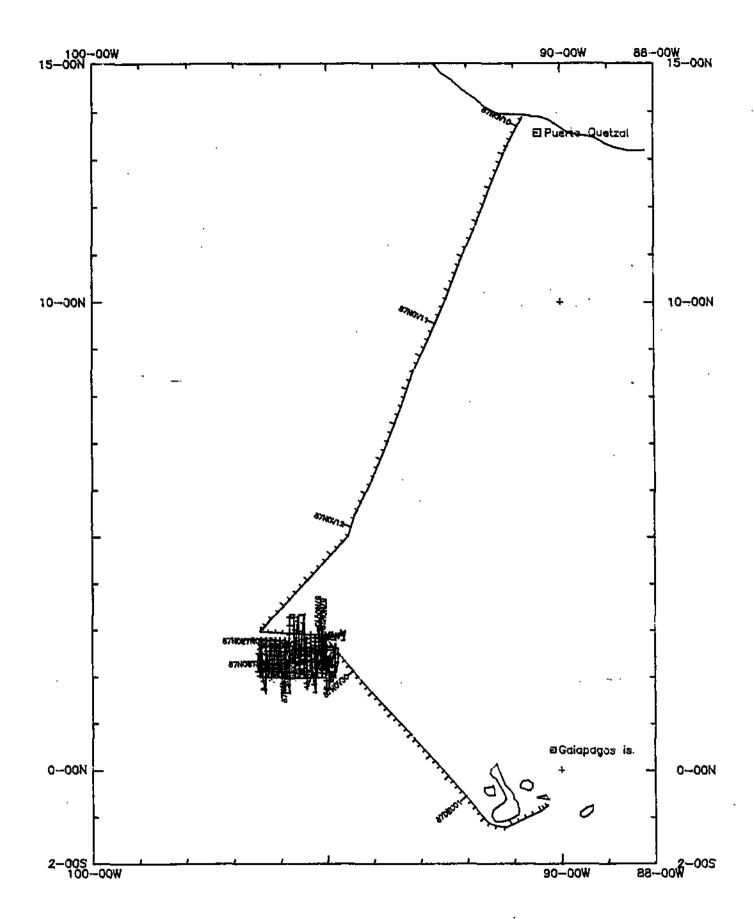
PORTS: Puerto Quetzal, Guatemala - Academy Bay, Galapagos

DATES: 9 November - 1 December 1987

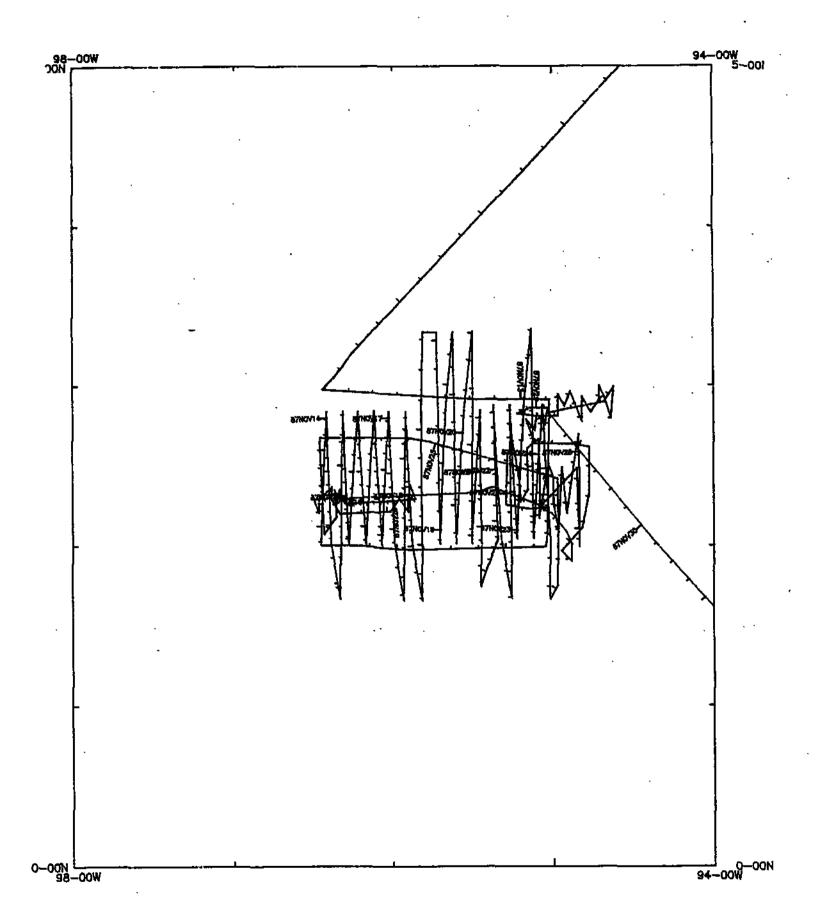
SHIP: R/V T. Washington

## TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

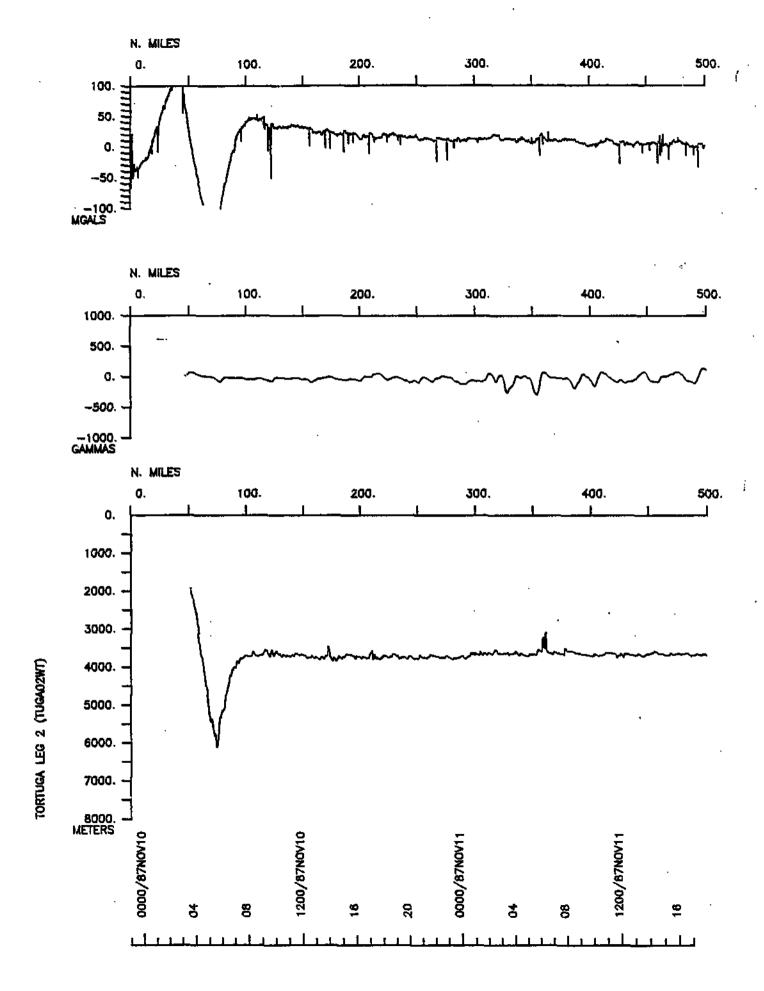
- 1) Cruise 5632 miles
- 2) Bathymetry 5570 miles
- 3) Magnetics 5522 miles
- 4) Seismic Reflection none collected
- 5) Gravity 5632 miles 6) Sea Beam 5570 miles

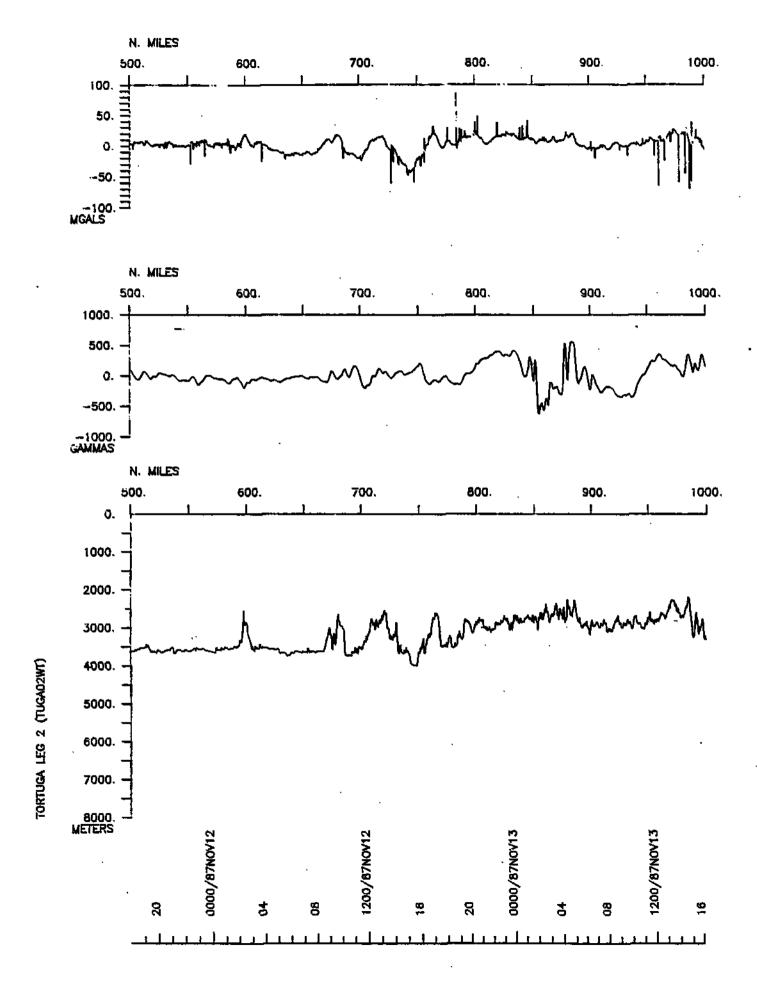


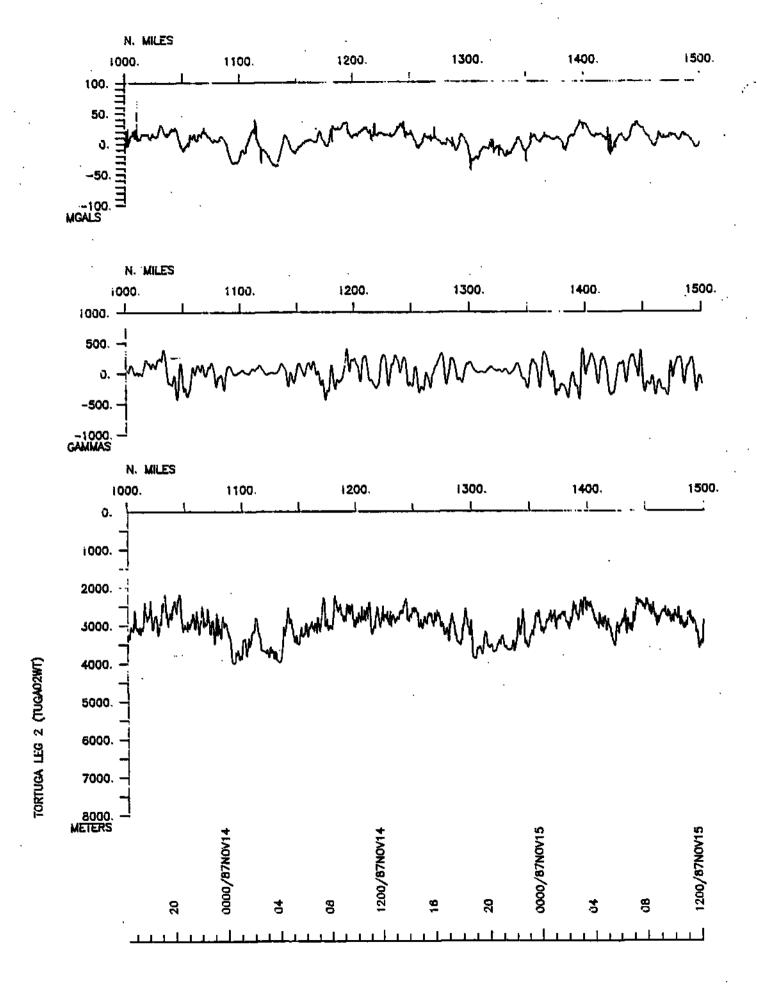
TORTUGA LEG 2 (TUGAO2WT)
Track at .312in/deg

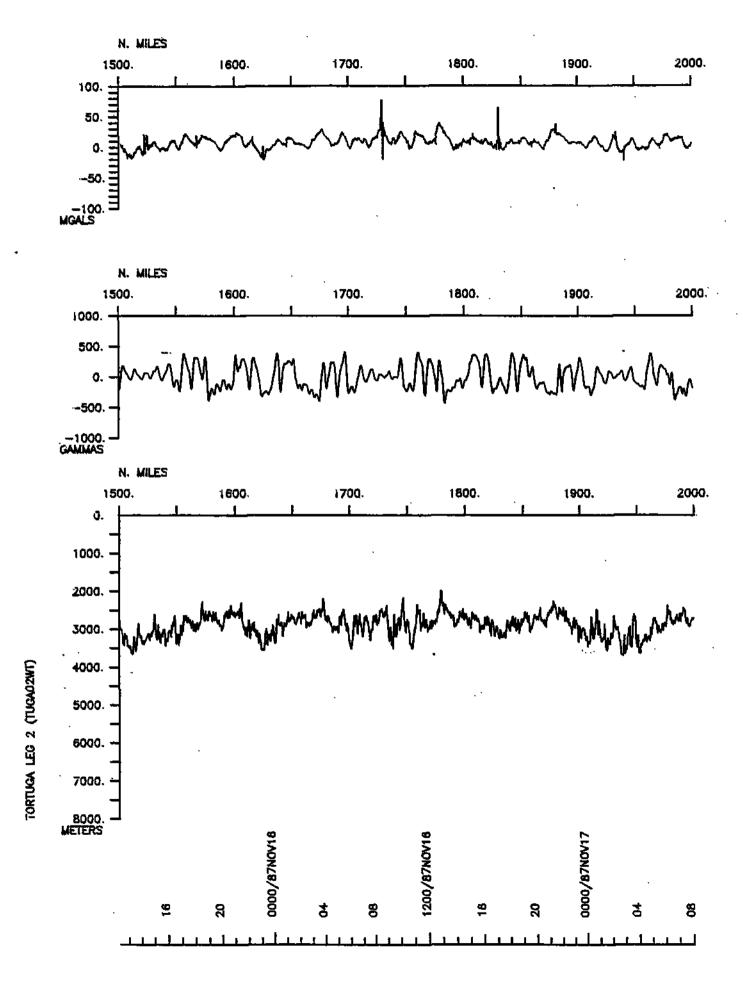


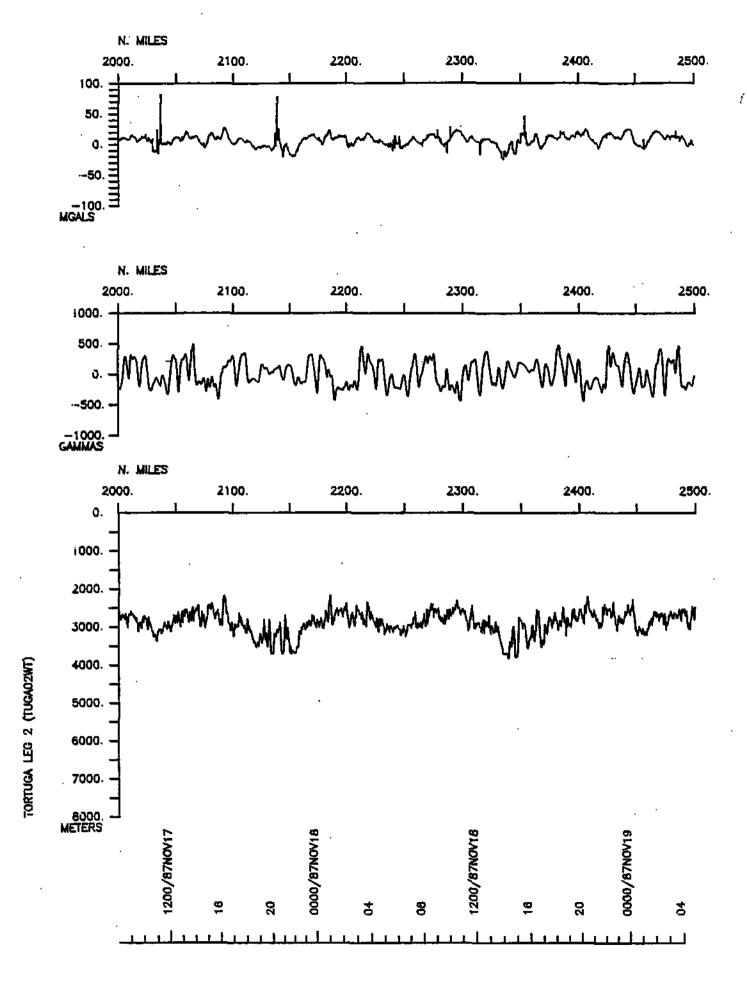
TORTUGA LEG 2 (TUGAO2WT) SURVEY AREA

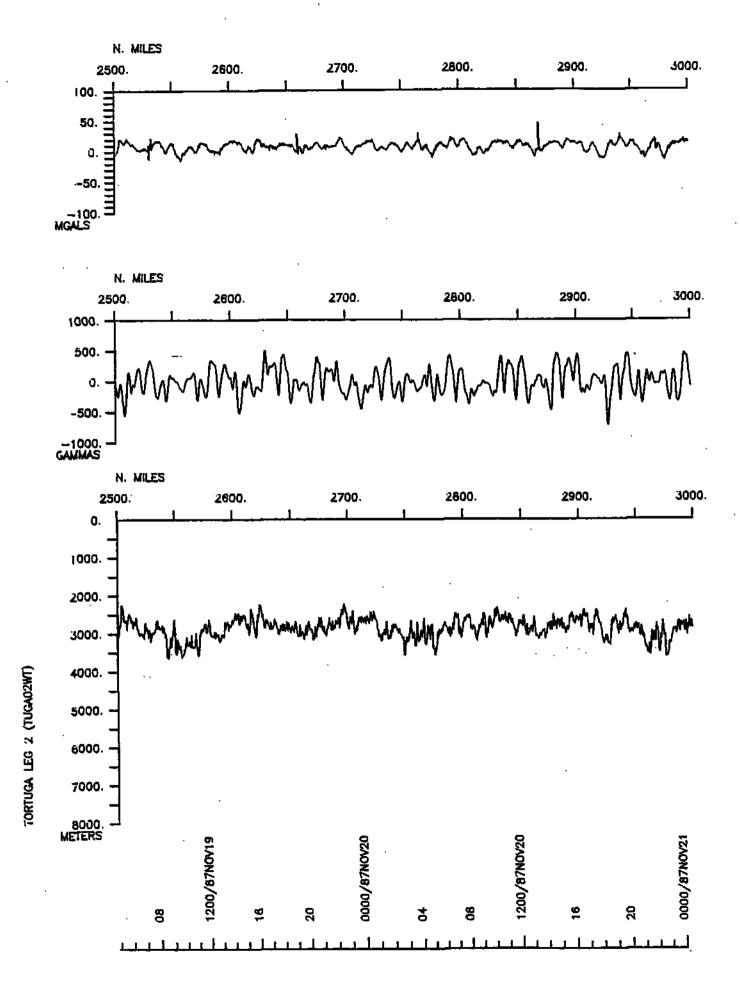


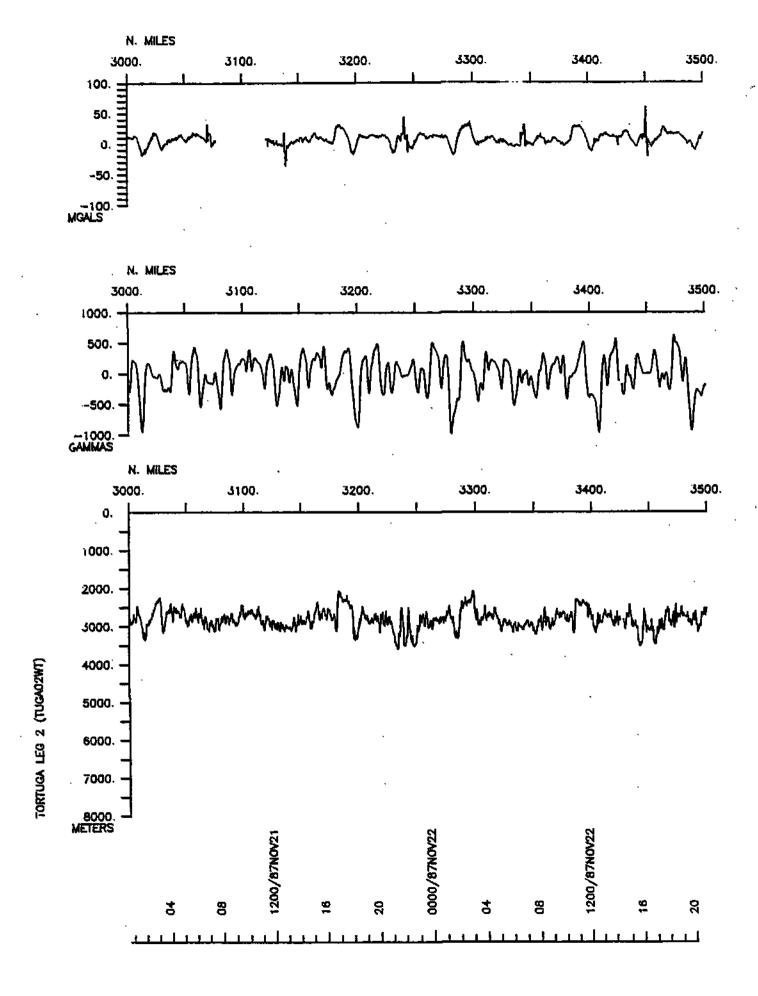


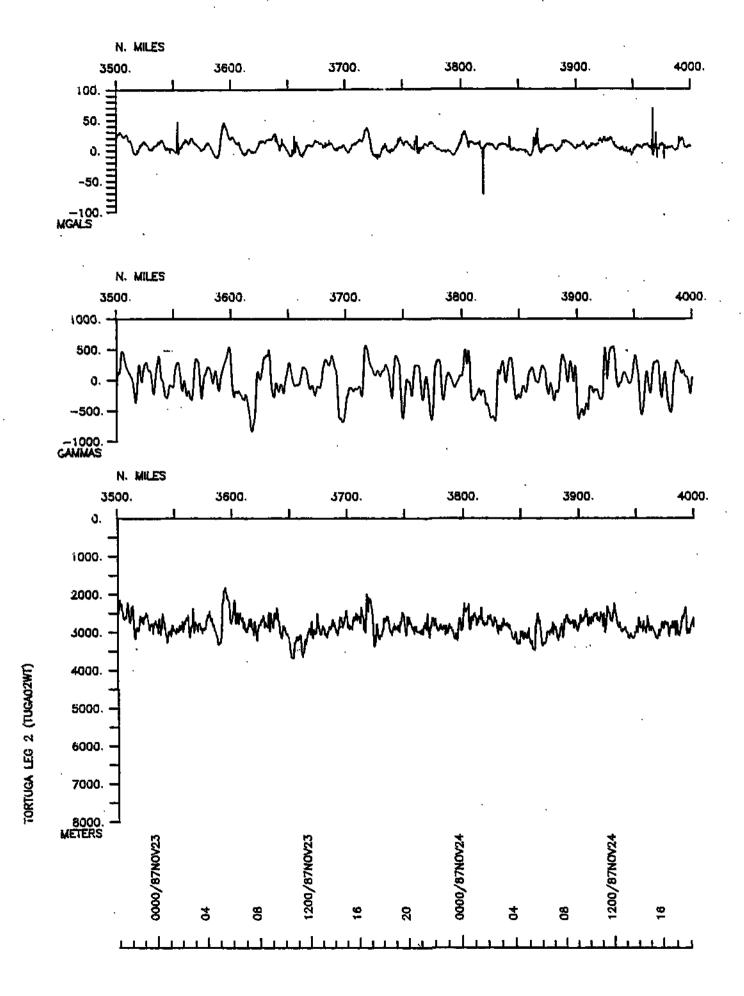


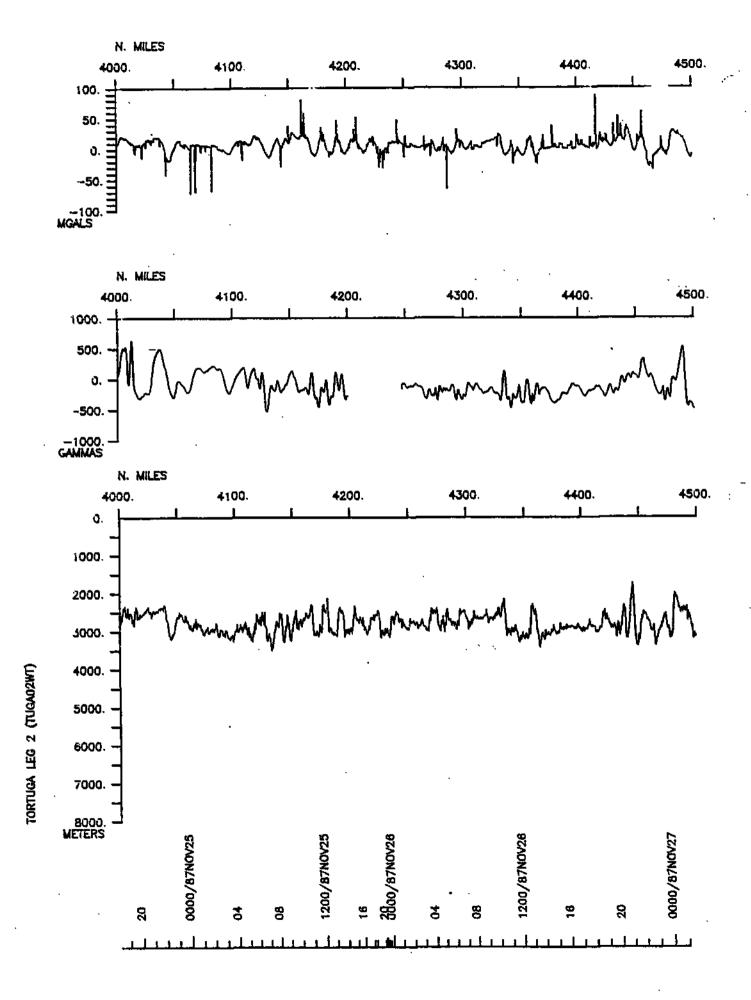


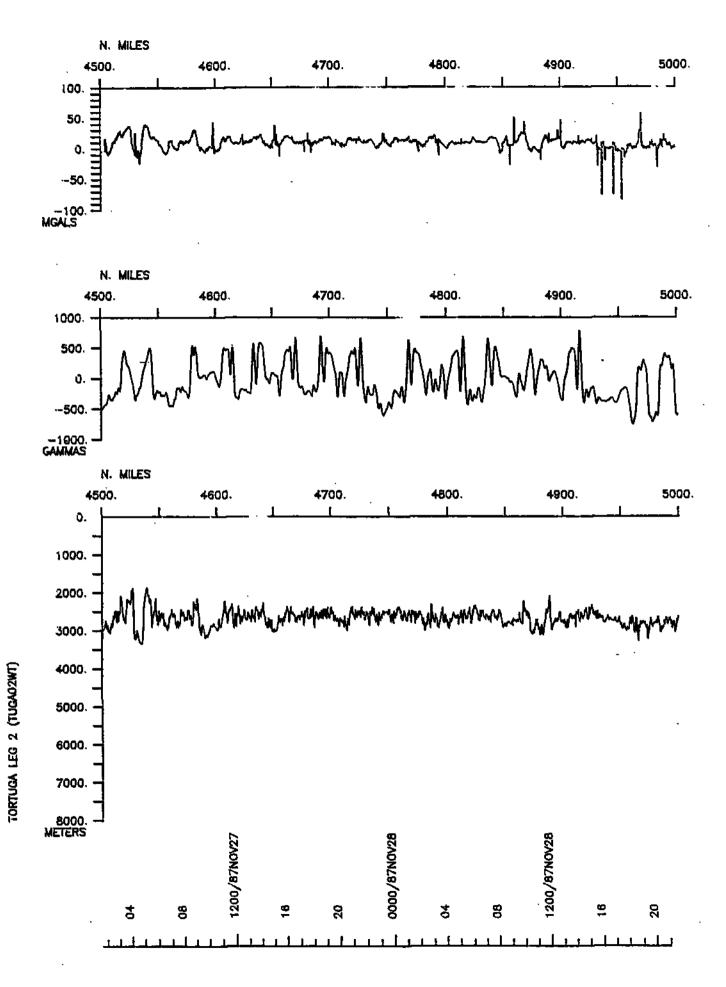


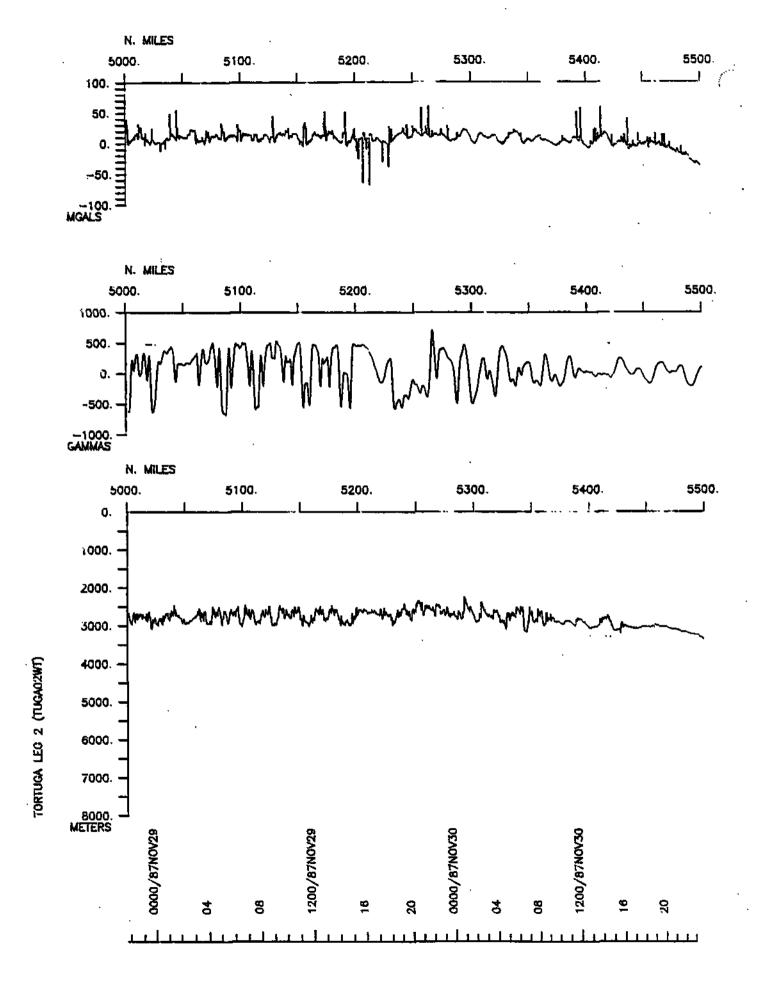


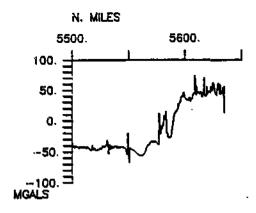


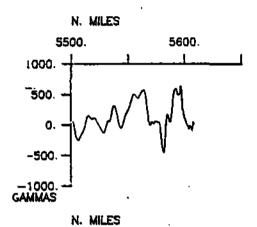


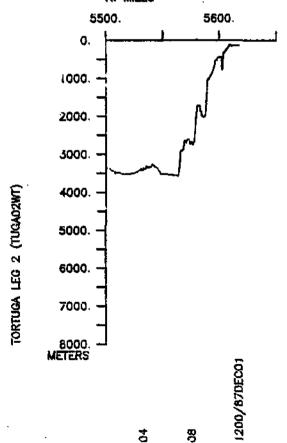












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S.I.O. SAMPLE INDEX

(Issued April 1987)

#### TORTUGA EXPEDITION

Leg 2

Puerto Quetzal, Guatemala (9 November 1987) to Academy Bay, Galapagos (1 December 1987)

R/V T. Washington

Chief Scientist - J. Phipps-Morgan (MIT)

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.# 232

## 1eb 25 11:00 1988 TORTUGA LEG 2 SAMPLE INDEX Page 1

#### #\*\*\*PORTS\*\*\*

1650 091187 LGPT B PUERTO QUETZAL, GUATEMALA 13-555N 90-472W sTUGAO2WT 1400 011287 LGPT E ACADEMY BAY, GALAPAGOS 0-450S 90-181W sTUGAO2WT

#### #\*\*\*PERSONNEL\*\*\*

	***NAME***	***TITLE***	***AFFILIATION***	**CRID**
PECS MI	F PHIPPS-MORGAN, J.	CHIEF SCIENTIST	MASS.INST. TECHNOLOGY	TUGAO2WT
PEVL SI	X BRUNO, A.E.	VOLUNTEER	NON-SCRIPPS EMPLOYEE	TUGAO2WT
PEST GR	D CARESS,D.	GRAD STUDENT	SCRIPPS INSTITUTION	TUGAO2WT
PEST UC	S CARESS,M.	GRAD STUDENT	UNIV.CAL.SANTA BARBARA	TUGAO2WT
PEST IG	P GENRICK, J.	GRAD STUDENT	SCRIPPS INSTITUTION	TUGAO2WT
PESP IG	P HOLLINSHEAD, C.	ELECT. TECH.	SCRIPPS INSTITUTION	TUGAO2WT
PESP IG	P MINISTER, B.	VISITING PROF.	SCRIPPS INSTITUTION	TUGAO2WT
PECT ST	S MOORE,M.	COMPUTER TECH.	SCRIPPS INSTITUTION	TUGAO2WT
PESP BR	N PARMENTIER, M.	ASSOC. PROFESSOR	BROWN UNIV., RHODE IS.	TUGA02WT
PEBE ST	S PHILLIPS, J.	SEABEAM ENGINEER	SCRIPPS INSTITUTION	TUGAO2WT
PERT ST	S PILLARD, E.	RESIDENT TECH.	SCRIPPS INSTITUTION	TUGAO2WT
PEBO ST	S SMITH,S.	SEABEAM OPERATOR	SCRIPPS INSTITUTION	TUGAO2WT

#### #\*\*\*NOTES\*\*\*

N '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.

## May 3 13:37 1988 TORTUGA LEG 2 SAMPLE INDEX Page 2

#GMT DDMMYY LOC T #TIME DATE TIME Z #	SAMP SAMPLE CODE IDENTIE	3 Fier 	DISP CODE LAT.	LONG.	CRUISE LEG-SHIP
#***UNDERWAY DATA C					•
#***LOG BOOKS***			•		
0045 101187 1147 011287	LBUW B UNDERWA	AY WATCH LOG AY WATCH LOG	GDC 13-371N GDC 0-535S	90-544W 90-290W	sTUGAO2WT sTUGAO2WT
#*** ECHOSOUNDER RE	CORDS * 12 KHZ	SEABEAM MONIT	OK ***	•	·
0045 101187 0023 121187	MBRM B SEABEAN MBRM E SEABEAN	MONITOR R-01 MONITOR R-01	GDC 13-371N GDC 5-091N		sTUGAO2WT sTUGAO2WT
0027 121187 1903 151187	MBRM B SEABEAN	M MONITOR R-02 M MONITOR R-02	GDC 5-083N GDC 2-267N		sTUGAO2WT sTUGAO2WT
1907 151187 1808 191187	MBRM B SEABEAN	M MONITOR R-03 M MONITOR R-03	GDC 2-259N GDC 1-528N		sTUGAO2WT sTUGAO2W1
1812 191187 1218 231187	MBRM B SEABEAI MBRM E SEABEAI	M MONITOR R-04 M MONITOR R-04	GDC 1-520N GDC 3-089N		sTUGAO2WT sTUGAO2WT
1223 231187 0427 271187	MBRM B SEABEAN				sTUGAO2WT sTUGAO2WT
0432 271187 1831 301187	MBRM B SEABEAN	M MONITOR R-06 M MONITOR R-06	GDC 2-142N GDC 0-024N		sTUGAO2WT sTUGAO2WT
1836 301187 1147 011287	MBRM B SEABEAI MBRM E SEABEAI	M MONITOR R-07 M MONITOR R-07	GDC 0-019N GDC 0-535S		sTUGAO2WT sTUGAO2WT
#*** SEABEAM TRANS	IT LINES ***		٠		
0224 101187 1617 121187	MBTL B SEABEA MBTL E SEABEA	M TRANSIT L-0: M TRANSIT L-0:	GDC 13-216N GDC 2-553N		sTUGAO2WT sTUGAO2WT
2106 291187 1147 011287	MBTL B SEABEA MBTL E SEABEA	M TRANSIT L-0: M TRANSIT L-0:	2 GDC 2-279N 2 GDC 0-535S		sTUGAO2WT sTUGAO2WT

## TORTUGA LEG 2 SAMPLE INDEX Page 3

	SAMP CODE		SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP		CRUISE LEG-SHIP
-					,				
Y	***						•		
	MRCV	R	SEABEAM SURVEY 01	GDC	2-553N	96-299W	sTUGAO2WT	-243W	sTUGAO2WT
	MBSV	Ē	SEABEAM SURVEY 01	GDC	2-279N	94-451W	sTUGA02WT		sTUGAO2WT sTUGAO2WT
								7.4	sTUGAO2WT
		_							sTUGAO2WT
r!	A TOT A	L	FIELD) RECORDS ***			•			sTUGAO2WT
	MCDA	D	MACNETTCS P_OI	GDC	13_150N	01_082W	sTHCAO2WT	009W	sTUGA02WT
	MCRA	E	MAGNETICS R-01 MAGNETICS R-01	GDC	2-423N	95-220W	sTUGAO2WT	286W	sTUGA02WT
								<b>29</b> 077	sTUGAO2WT sTUGAO2WT
	MGRA	В	MAGNETICS R-02 MAGNETICS R-02	GDC	2-435N	95-220W	sTUGA02WT	104W	sTUGAO2WT
	MGRA	E	MAGNETICS R-02	GDC	0-5838	90-368W	sTUGA02WT	002W	sTUGAO2WT
									sTUGA02WT
	20000	<b></b>	6 <b>4</b>						sTUGA02WT
	BOOKS								sTUGA02WT
	ирсв	R	SEABEAM ARCHIVE	GDC	13-163N	91-072W	sTUGAO2WT		sTUGAO2WT
	MBSB	ř	SWATH BOOK -01	GDC	5-563N	94~105W	sTUGAO2WT		sTUGAO2WT sTUGAO2WT
									sTUGAO2WT
	MBSB	В	SEABEAM ARCHIVE	GDC	5-563N	94-105W	sTUGAO2WT		sTUGAO2WT
	MBSB	E	SWATH BOOK -02	GDC	1-575N	96-249W	sTUGAO2WT		sTUGAO2WT
		_		ana	1 5757	06 9400	- TITO LOQUE		sTUGA02WT
			SEABEAM ARCHIVE	GDC			sTUGAO2WT sTUGAO2WT		sTUGAO2WT
	WR2R	Ľ	SWATH BOOK -03	GDC	3-07611	30-150#	810040541		sTUGA02WT
,	MRSR	R	SEABEAM ARCHIVE	GDC	3-087N	96-126W	sTUGA02WT		sTUGAO2WT
				GDC			sTUGA02WT		sTUGAO2WT sTUGAO2WT
								ፈንን <b>₩</b>	sTUGAO2WT
	MBSB	В	SEABEAM ARCHIVE	GDC	1-559N	95-546W	sTUGA02WT		sTUGAO2WT
	MBSB	E	SWATH BOOK -05	GDC	3-093N	95-361W	sTUGAO2WT		sTUGA02WT
		_		ana	0 00017	05 06111		365W	sTUGA02WT
	MBSB	В	SEABEAM ARCHIVE	GDC	3-093N 2-287N	32~30TM	sTUGAO2WT sTUGAO2WT		sTUGA02WT
	WR2B	B	SWATH BOOK -06	GDC	2-20/N	93-230W	2100V05#1		sTUGA02WT
	MRCR	ц	SEABEAM ARCHIVE	GDC	2-287N	95-250W	sTUGAO2WT		sTUGAO2WT
			SWATH BOOK -07	GDC			sTUGA02WT	3024	sTUGAO2WT sTUGAO2WT
		_					_		sTUGAO2WT
							,		sTUGAO2WT
									sTUGAO2WT

Feb 25 11:00 1988 TORTUGA LEG 2 SAMPLE INDEX Page 4

#GMT #TIME	DDMMYY LOC T DATE TIME Z	SAMP CODE	SAMPLE IDENTIFIER	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
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2251 2033	221187 241187	MBSB B MBSB E	SEABEAM ARCHIVE SWATH BOOK -08	GDC GDC	2-090N 2-279N		sTUGAO2WT sTUGAO2WT
	241187 271187	MBSB B MBSB E	SEABEAM ARCHIVE SWATH BOOK -09	GDC GDC	2-279N 2-217N		sTUGAO2WT sTUGAO2WT
	271187 281187 —		SEABEAM ARCHIVE SWATH BOOK -10	GDC GDC	2-221N 2-431N		sTUGAO2WT sTUGAO2WT
1958 2034	281187 301287	MBSB B MBSB E	SEABEAM ARCHIVE SWATH BOOK -11	GDC GDC	2-431N 0-450S		aTUGAO2WT sTUGAO2WT
2034 1147	301187 011287	MBSB B MBSB E	SEABEAM ARCHIVE SWATH BOOK -12	GDC GDC	0-116S 0-535S		sTUGAO2WT sTUGAO2WT
***	THERMOGRAPH RE	CORDING	S ***				, 1,
1650 1400	091187 011287	TCRC B	THERMOGRAPHS 1-12 THERMOGRAPHS 1-12	GDC GDC	13-555N 0-450S	90-472W 90-181W	sTUGAO2WT sTUGAO2WT
	GRAVIMETER ***						
1650 1400	091187 011287	GVCS B	GRAVITY DATA COMPUTER STORED	GDC GDC	13-555N 0-450S	90-472W 90-181W	sTUGAO2WT sTUGAO2WT
#***	ROCK DREDGE **	**					
1925 2223	251187 251187	DRRO E	ROCK DREDGE -01 25 LBS HAUL 2928M	MIT MIT	2-184N 2-168N	96-208W 96-197W	sTUGAO2WT sTUGAO2WT

#GMT	DDMMYY LOC	T	SAMP	SAM	(PLE			DISP			CRUISE
	DATE TIME		CODE	IDEN	TIFIE	≧R		CODE	LAT.	LONG.	LEG-SHIP
#											
						•					, ,
***	EXPENDABLE	BAT	HYTHERM(	OGRAF	HS **	**	•				
											mus . coum
	101187		BTXP			PROBE			12-474N		sTUGAO2WT
	101187		BTXP			PROBE			11-422N		sTUGAO2WT
	101187		BTXP			PROBE			10-371N		sTUGAO2WT
	101187		BTXP	-		PROBE		GDC.	9-353N		sTUGAO2WT
	111187		BTXP			PROBE		GDC	8-313N		sTUGAO2WT
,	111187		BTXP			PROBE		GDC	7-263N		sTUGAO2WT
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	111187		BTXP			PROBE		GDC	5-144N		sTUGAO2WT
	121187		BTXP			PROBE			4-230N		sTUGAO2WT
	121187		BTXP			PROBE		GDC	3-319N		aTUGAO2WT
	121187		BTXP			PROBE		GDC	2-549N		sTUGAO2WT
	131187		BTXP			PROBE		GDC	2-475N		sTUGA02WT
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	141187		BTXP			PROBE		GDC	2-236N		sTUGAO2WT
	151187		BTXP			PROBE		GDÇ	2-205N		sTUGA02WT
	151187		BTXP			PROBE		GDC	3-189N		sTUGAO2WT
	161187		BTXP			PROBE		GDC	2-075N		sTUGA02WT
	161187		BTXP			PROBE		GDC	2-155N	-	sTUGAO2WT
2355	161187		BTXP			PROBE		GDC	2-541N		sTUGAO2WT
0600	171187		BTXP	XBT	0021	PROBE	T-4	GDC	2-379N	95-587W	sTUGAO2WT
1209	171187		BTXP	XBT	0022	PROBE	T-4	GDC	1-494N	95-550W	sTUGA02WT
1217	171187		BTXP	XBT	0023	PROBE	T-4	GDC	1-509N	95-549W	sTUGA02WT
1757	171187		BTXP	XBT	0024	PROBE	T-4	GDC	2-542N		sTUGA02WT
2354	171187		BTXP	XBT	0025	PROBE	T-4	GDC	2-477N	95-518W	sTUGA02WT
0555	181187		BTXP	XBT	0026	PROBE	T-4	GDC	1-394N	95~507W	sTUGA02WT
	181187 .		BTXP	XBT	0027	PROBE	T-4	GDC	2-443N	95-461W	sTUGAO2WT
	181187		BTXP	XBT	0028	PROBE	T-4	GDC	2-558N	95-422W	sTUGAO2WT
	191187		BTXP	XBT	0029	PROBE	T-4	GDC	1-511N	95-421W	sTUGAO2WT
	191187		BTXP			PROBE		GDC	2-368N		sTUGA02WT
	191187		BTXP			PROBE	_	GDC	2-563N		sTUGA02WT
	191187		BTXP			PROBE		GDC	1-538N		sTUGA02WT
	201187		BTXP			PROBE		GDC	2-339N		sTUGA02WT
	201187		BTXP			PROBE		GDC	3-007N		sTUGA02WT
	201187		BTXP			PROBE		GDC	1-511N	95-302W	
	201187		BTXP			PROBE		GDC	1-489N		sTUGA02WT
	201187		BTXP			PROBE		GDC	2-334N		sTUGAO2WT
	211187		BTXP			PROBE		GDC	2-584N		sTUGAO2WT
	211187		BTXP			PROBE		GDC	1-521N		sTUGAO2WT
0001	<b>71110</b> 1		DIAL	YDI		TVOOR	1-4	300	1-2514	33-400N	2100V05#1
					•						

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#GMT DDMMYY LOC T	CODE	SAMPLE	DISP	CRUISE
#TIME DATE TIME Z		IDENTIFIER	CODE LAT.	LONG, LEG-SHIP
1200 211187	BTXP	XBT 0040 PROBE T-4	GDC 1-498N	95-200W sTUGA02WT
1801 211187	BTXP	XBT 0041 PROBE T-4	GDC 2-361N	95-220W sTUGA02WT
2354 211187	BTXP	XBT 0042 PROBE T-4	GDC 2-590N	95-188W sTUGA02WT
0558 221187	BTXP	XBT 0043 PROBE T-4	GDC 1-494N	95-185W sTUGA02WT
1159 221187	BTXP	XBT 0044 PROBE T-4	GDC 2-345N	95-159W sTUGA02WT
1805 221187	BTXP	XBT 0045 PROBE T-4 XBT 0046 PROBE T-4 XBT 0047 PROBE T-4 XBT 0048 PROBE T-4 XBT 0049 PROBE T-4 XBT 0050 PROBE T-4	GDC 3-014N	95-131W sTUGA02WT
0601 231187	BTXP		GDC 2-263N	95-102W sTUGA02WT
1200 231187	BTXP		GDC 3-121N	95-070W sTUGA02WT
1804 231187	BTXP		GDC 2-081N	95-071W sTUGA02WT
2358 231187	BTXP		GDC 2-149N	95-041W sTUGA02WT
0558 241187	BTXP		GDC 3-196N	95-012W sTUGA02WT
1201 241187	BTXP	XBT 0051 PROBE T-4 XBT 0052 PROBE T-4 XBT 0053 PROBE T-4 XBT 0054 PROBE T-4 XBT 0055 PROBE T-4 XBT 0056 PROBE T-4	GDC 2-160N	95-012W sTUGA02WT
1803 241187	BTXP		GDC 2-075N	94-580W sTUGA02WT
0153 251187	BTXP		GDC 2-404N	96-032W sTUGA02WT
0603 251187	BTXP		GDC 2-273N	96-303W sTUGA02WT
1207 251187	BTXP		GDC 2-247N	96-206W sTUGA02WT
0006 261187	BTXP		GDC 2-138N	96-199W sTUGA02WT
0633 261187	BTXP	XBT 0057 PROBE T-4 XBT 0058 PROBE T-4 XBT 0059 PROBE T-4 XBT 0060 PROBE T-4 XBT 0061 PROBE T-4 XBT 0062 PROBE T-4	GDC 2-221N	95-585W sTUGAO2WT
1803 261187	BTXP		GDC 2-176N	95-412W sTUGAO2WT
0031 271187	BTXP		GDC 2-259N	95-168W sTUGAO2WT
0601 271187	BTXP		GDC 2-304N	95-093W sTUGAO2WT
1202 271187	BTXP		GDC 2-256N	95-021W sTUGAO2WT
1842 271187	BTXP		GDC 2-209N	94-545W sTUGAO2WT
0054 281187	BTXP	XBT 0063 PROBE T-4 XBT 0064 PROBE T-4 XBT 0065 PROBE T-4 XBT 0066 PROBE T-4 XBT 0067 PROBE T-4 XBT 0068 PROBE T-4	GDC 2-251N	94-496W STUGAO2WT
0104 281187	BTXP		GDC 2-233N	94-495W STUGAO2WT
0125 281187	BTXP		GDC 2-194N	94-493W STUGAO2WT
0601 281187	BTXP		GDC 2-304N	94-481W STUGAO2WT
1159 281187	BTXP		GDC 2-039N	94-566W STUGAO2WT
1759 281187	BTXP		GDC 2-387N	95-104W STUGAO2WT
0007 291187	BTXP	XBT 0069 PROBE T-4	GDC 2-478N	95-015W sTUGAO2WT
0603 291187	BTXP	XBT 0070 PROBE T-4	GDC 2-532N	94-535W sTUGAO2WT
1302 291187	BTXP	XBT 0071 PROBE T-4	GDC 2-474N	94-382W sTUGAO2WT
1312 291187	BTXP	XBT 0072 PROBE T-4	GDC 2-482N	94-370W sTUGAO2WT
1848 291187	BTXP	XBT 0073 PROBE T-4	GDC 2-435N	94-590W sTUGAO2WT
0151 301187 0202 301187 0558 301187 1157 301187 1803 301187 2349 301187 0556 011287	BTXP BTXP BTXP BTXP BTXP BTXP BTXP	XBT 0074 PROBE T-4 XBT 0075 PROBE T-4 XBT 0076 PROBE T-4 XBT 0077 PROBE T-4 XBT 0078 PROBE T-4 XBT 0079 PROBE T-4 XBT 0080 PROBE T-4	GDC 1-551N GDC 1-539N GDC 1-269N GDC 0-471N GDC 0-054N GDC 0-317S GDC 1-115S	94-159W STUGA02WT 94-148W STUGA02WT 93-514W STUGA02WT 93-146W STUGA02WT 92-361W STUGA02WT 92-033W STUGA02WT 91-252W STUGA02WT

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END SAMPLE INDEX