

INFORMAL REPORT AND INDEX OF  
NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued February 1982)

PLUTO EXPEDITION

LEG 2

Balboa, Panama (30 September 1981)  
to  
Puntarenas, Costa Rica (5 October 1981)

R/V Melville

Chief Scientist - K. L. Smith (SIO)

Resident Marine Tech - R. Wilson

Post-Cruise Processing and Report Preparation  
by S.I.O. Geological Data Center

Data Collection Funded by NSF  
Grant Number OCE80-24472  
Data Processing Funded by SIA, NSF and ONR

NOTE

This is an index of underway geophysical data edited and processed shortly 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.

INFORMAL REPORT AND INDEX OF NAVIGATION, DEPTH, MAGNETIC \*  
AND SUBBOTTOM PROFILER DATA

Contents:

- Index Chart - gives track of cruise leg and boundaries of depth compilation plots (see below).
- Track Charts - annotated with dates (day/month) and hour ticks. The scale is .3 in/degree longitude.
- Profiles - depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records have a solid black line along the bottom of the profile.

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, California 92093. Phone (714) 452-2752.

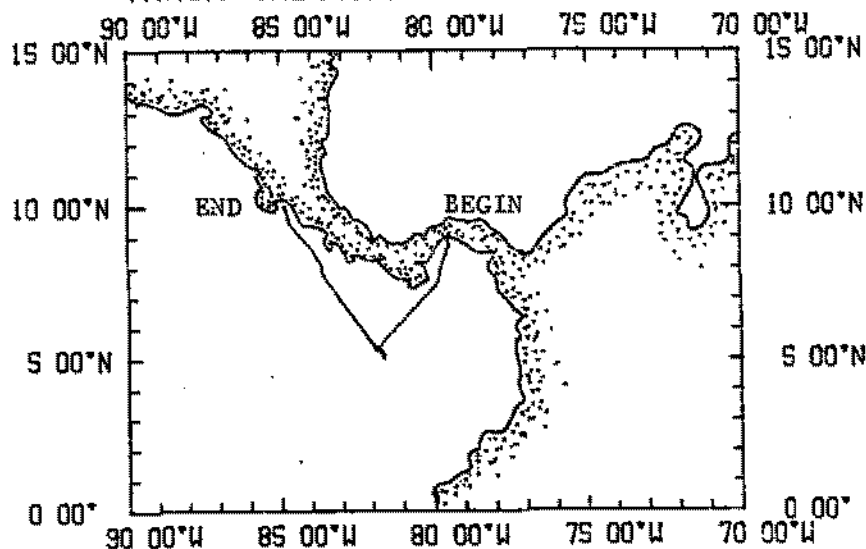
1. Navigation listing of times and positions of course and speed changes, fixes and drift velocity.
2. Depth compilation plots - in fathoms (assumed sound velocity of 800 fm/sec) or meters (assumed sound velocity of 1500m/sec) at approximately 1 mile spacing, plotted at 4in/degree with standard U. S. Navy Oceanographic Office BC series boundaries (see index chart).
3. Plots of magnetic anomaly profiles along track - map scale = 1.2inch/degree, anomaly scale between 15N and 15 S latitude = 500 gamma/inch, anomaly scale north of 15N and south of 15S = 1000 gamma/inch, from values retrieved at approximately 1 mile spacing and regional field removed using the 1975 IGRF.
4. Card decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center).
5. S.I.O. Sample Index - list of beginning and end times and positions of all underway records as well as all other samples (geology, biology, physical oceanography, etc.) collected on the cruise leg.
6. Microfilm or Xerox copies of:
  - a. Echosounder records - 12 and 3.5 kHz frequency
  - b. Subbottom profiler records (airgun)
  - c. Magnetometer records
  - d. Underway data log

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\* No underway data collected on this leg. Navigation processed to provide track charts and positions for Sample Index.

PLT002MV

TRACK (ABSTRACT FILE) AT .1632IN/DEGRE



PLUTO EXPEDITION  
LEG 2

Chief Scientist: K. L. Smith (SIO)  
Ports: Balboa, Panama - Puntarenas, Costa Rica  
Dates: 20 September - 5 October, 1981  
Ship: R/V Melville

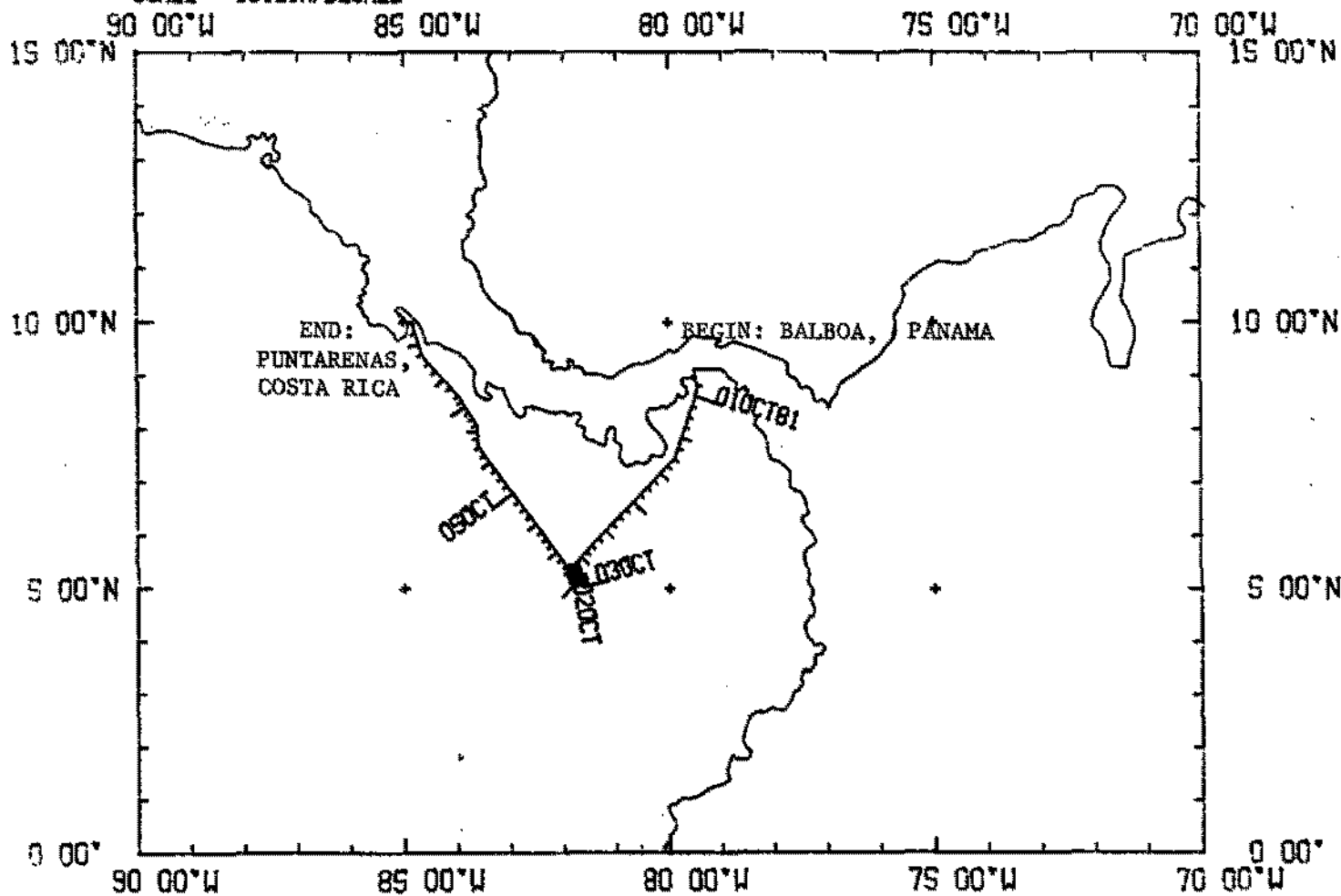
## TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

- 1) Cruise - 796 miles
- 2) Bathymetry - none collected
- 3) Magnetics - none collected
- 4) Seismic Reflection - none collected
- 5) Gravity - none collected

PLT002MV

SCALE = .312IN/DEGREE

WARNING - ABSTRACT DATA PRESENT ON THIS PLOT



S.I.O. Sample Index  
(Issued February 1982)

PLUTO EXPEDITION

Leg 2

Balboa, Panama (30 September 1981)  
to  
Puntarenas, Costa Rica (5 October 1981)

R/V Melville

Chief Scientist - K. L. Smith (SIO)

Post-Cruise Processing and Report Preparation  
by S.I.O. Geological Data Center

Index Encoding Funded by NSF  
Grant Number OCE80-22996  
Index Processing and Report Preparation  
funded in part by SIA

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 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 cards. 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 Geological Data Center.)

GENERATED 04MAR82

(PLT002MV) \*\*\*

30SEP81 - BALBOA, PANAMA  
TO  
05OCT81 - PUNTARENAS, COS. RICA

CHIEF SCIENTIST - SMITH, K. MBD

SHIP - R/V MELVILLE (SID)

PRODUCED BY GEOLOGICAL DATA CENTER, SCRIPPS INSTITUTION  
OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA 92093

NUMBER OF SAMPLES OF CLASS 'TYPE' GOING TO DESTINATION 'DISP'

DISP	TYPE								TOTAL
	BL	DP	HL	LB	PE	TB	TR		
GDC	1		1	1				1	2
MBD	1	1		1	7	2	4	1	15
MTG	1				2			1	2
TOTAL	1	1	1	1	9	2	4	1	19

SAMPLE 'TYPE' CODES USED ABOVE

BL = BIOLOGICAL SAMPLES  
 DP = DEPTH  
 HL = HOOK AND LINE  
 LB = LOG BOOKS  
 PE = PERSONNEL IN SCIENTIFIC PARTY  
 TB = TOWED BOTTOM GEAR  
 TR = TRAP

SAMPLE 'DISP' CODES USED ABOVE

GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)  
 MBD = MARINE BIOLOGY RESEARCH DIVISION (EXT. 4245)  
 MTG = MARINE TECHNOLOGY GROUP (EXT 4194)

GMT D /M /Y	LOC LOC	CODE	SAMPLE IDENT.	CODE	LAT.	LONG.	LEG-SHIP
TIME DATE	TIME TZ	SAMP		DISP			CRUISE

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

2148 30/ 9/81		LGPT B	BALBOA, PANAMA	08 57. N	79 34. W	F	PLT002MV
2200 5/10/81		LGPT E	PUNTARENAS, COS, RICA	09 59. N	84 50. W	F	PLT002MV

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

*** NAME ***	*** TITLE ***	*** AFFILIATION ***
1 SMITH, K.	CHIEF SCIENTIST	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
2 WILSON, R.	RESIDENT TECH	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
3 MOORE, M.	COMPUTER TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
4 LAVER, M.	RESEARCH ASST.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
5 BROWN, N.	RESEARCH ASST.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
6 WILSON, R. R.	STUDENT	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
7 MULLINEAUX, L.	STUDENT	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
8 BALDWIN, R.	RESEARCH ASST.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
9 KLEMENT, P.	ELECTRONICS TECH.	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093

\*\*\*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 THIS 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.



04MAR82 PAGE 2

GMT D /M /Y	LOC LOC	CODE	SAMPLE IDENT.	CODE	LAT.	LONG.	LEG-SHIP
TIME DATE	TIME TZ	SAMP		DISP			CRUISE

\*\*\* UNDERWAY DATA CURATOR - STUART M. SMITH EXT. 2752 \*\*\*  
 \*\*\* LOG BOOKS \*\*\*

1430	01/10/81		LBW B UNDERWAY LOG	GDC 06	18.3N	81 02.3W	S PLT002MV
2137	03/10/81		LBW E UNDERWAY LOG	GDC 05	06.4N	81 37.3W	S PLT002MV

\*\*\* FATHOGRAMS \*\*\*

1430	1/10/81		DPR3 B EDO 3.5KHZ R-01	GDC 06	18.0N	81 02.3W	S PLT002MV
2137	3/10/81		DPR3 E EDO 3.5KHZ R-01	GDC 05	06.4N	81 37.3W	S PLT002MV

\*\*\*TRAP\*\*\*

0449	2/10/81		TRFV B 5400FT TRAP +.HOOK	MBD 05	19.5N	81 56.4W	S PLT002MV
0710	4/10/81		TRFV E CH. D KLS6 3900	MBD 05	20.9N	81 54.0W	S PLT002MV
0552	2/10/81		TRFV B 3000FT TRAPANDHOOK	MBD 05	20.4N	81 56.9W	S PLT002MV
0600	4/10/81		TRFV E CH. E KLS7 3900	MBD 05	20.4N	81 53.6W	S PLT002MV
1737	2/10/81		TRFV B 900FT TRAPANDHOOK	MBD 05	21.7N	81 54.6W	S PLT002MV
0344	4/10/81		TRFV E CH. D KLS8 3900	MBD 05	20.9N	81 53.5W	S PLT002MV
1853	2/10/81		TRFV B 900FT TRAPANDHOOK	MBD 05	23.3N	81 55.2W	S PLT002MV
0250	4/10/81		TRFV E CH. D KLS9 3900	MBD 05	22.5N	81 52.8W	S PLT002MV

\*\*\* TOWED BOTTOM GEAR \*\*\*

0018	3/10/81		TB04 B OTTER TRAWL NR. 1	MBD 05	00.9N	81 37.1W	S PLT002MV
1006	3/10/81		TB04 E OTTER TRAWL NR. 1	MBD 05	18.2N	81 54.0W	S PLT002MV
1534	3/10/81		TB04 B OTTER TRAWL NR. 2	MBD 05	14.8N	81 50.7W	S PLT002MV
2300	3/10/81		TB04 E OTTER TRAWL NR. 2	MBD 05	09.8N	81 39.5W	S PLT002MV

\*\*\* HOOK AND LINE \*\*\*

1200	2/10/81		HLIV SHARK	MBD 05	21.3N	81 47.7W	S PLT002MV
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\*\*\* SPECIAL BIOLOGICAL SAMPLE \*\*\*

1000	3/10/81		BLXX B SLURP GUN	MBD 05	18.0N	81 53.8W	S PLT002MV
1316	4/10/81		BLXX E SLURP GUN	MBD 05	21.3N	81 53.4W	S PLT002MV

9900			END SAMPLE INDEX				PLT002MV
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