

INFORMAL REPORT AND INDEX OF
NAVIGATION, DEPTH AND MAGNETIC DATA

(ISSUED JUNE 1981)

VULCAN EXPEDITION

LEG 9

Nuku Hiva, Marquesas (15 May 1981)
to
San Diego, California (26 May 1981)

R/V Melville

Chief Scientist - F. Dixon

Resident Marine Tech - R. Comer

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

Data Collection Funded by NSF
Grant Number OCE88-24472
Data Processing Funded by SIA and NSF

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).

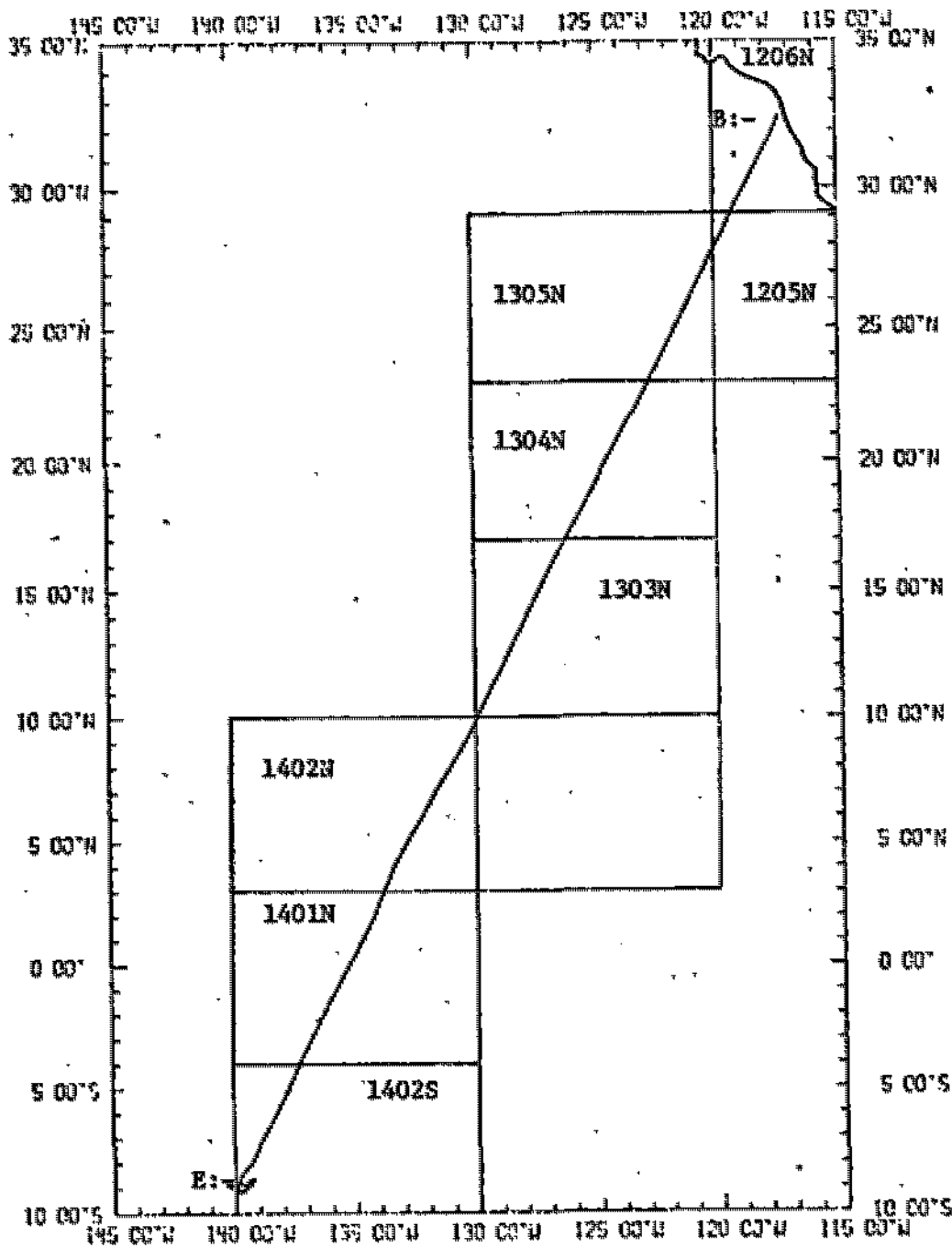
Track Charts - annotated with dates (day/month) and hour ticks. The scale is .3 in/degree longitude.

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

VLCN09M



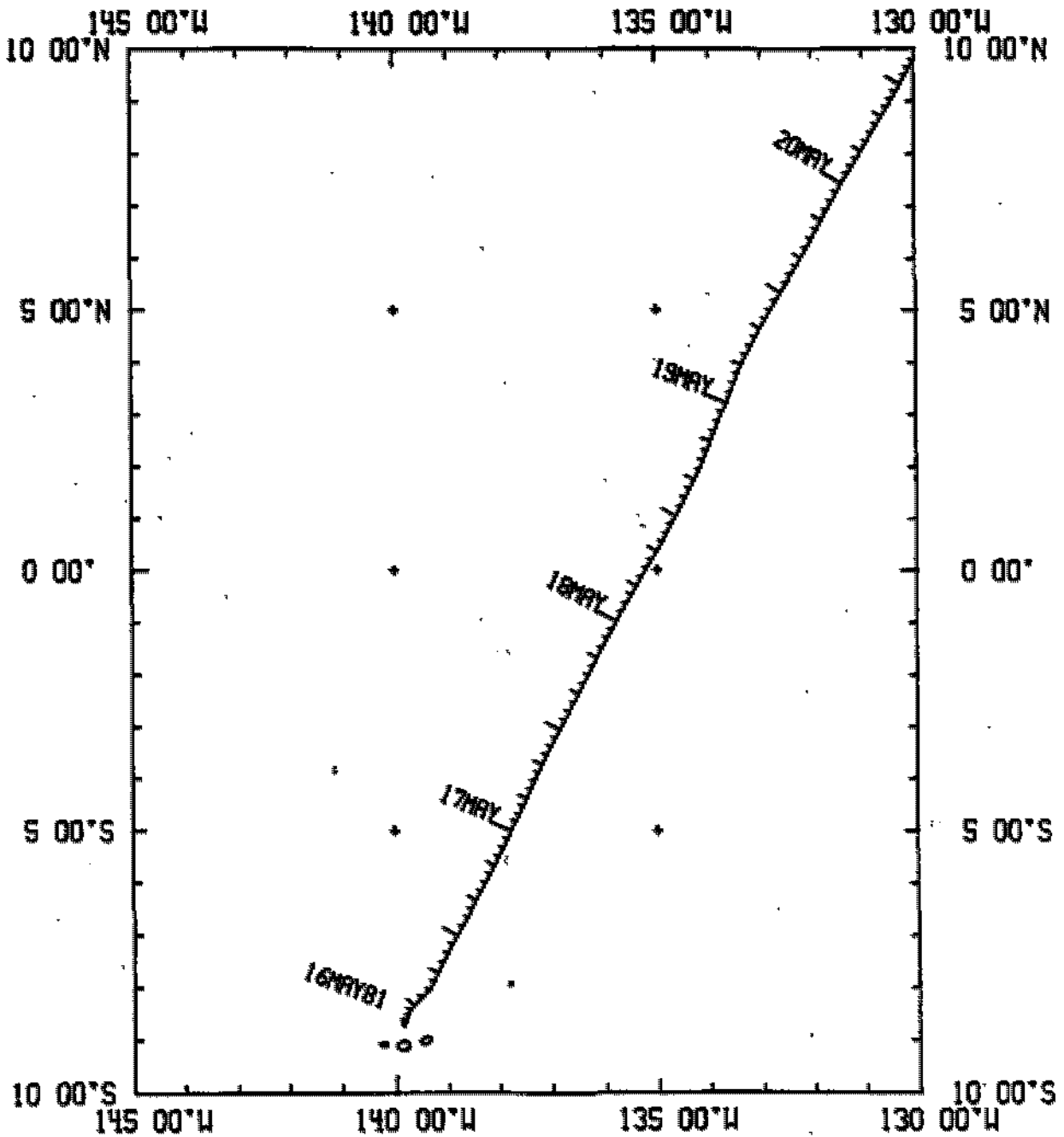
**VULCAN EXPEDITION
LEG 69**

Chief Scientist: F. Dixon (SIX)
Ports: Nuku'Hiva, Marquesas Is. - San Diego, Calif.
Dates: 15 - 26 May 1981
Ship: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED
1) Cruise - 2797 miles
2) Bathymetry - 2295 miles
3) Magnetics - 2400 miles
4) Seismic Reflection - none collected
5) Gravity - none collected

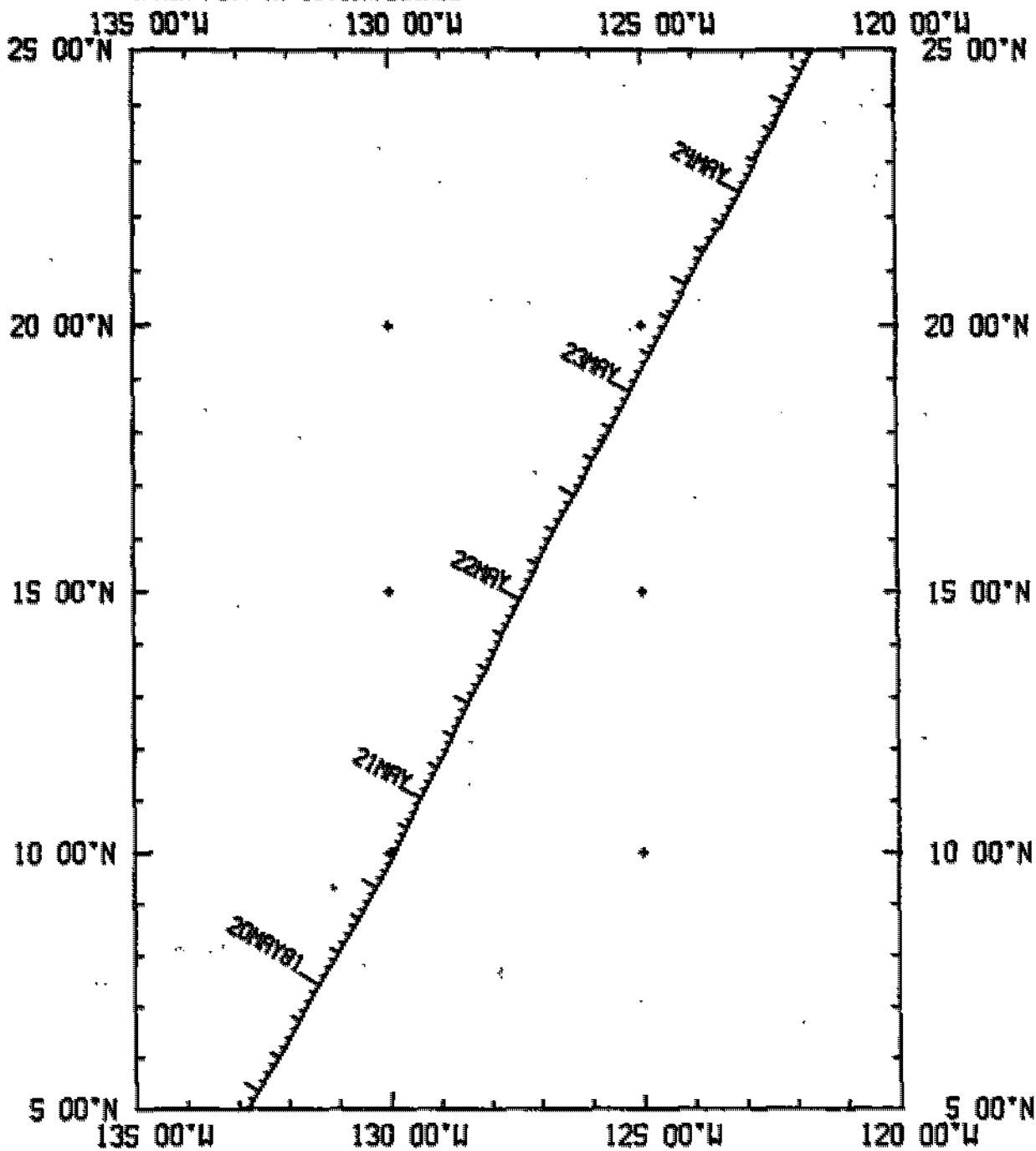
VLCN09MV (PLOT 1 OF 3)

TRACK PLOT AT .312IN/DEGREE



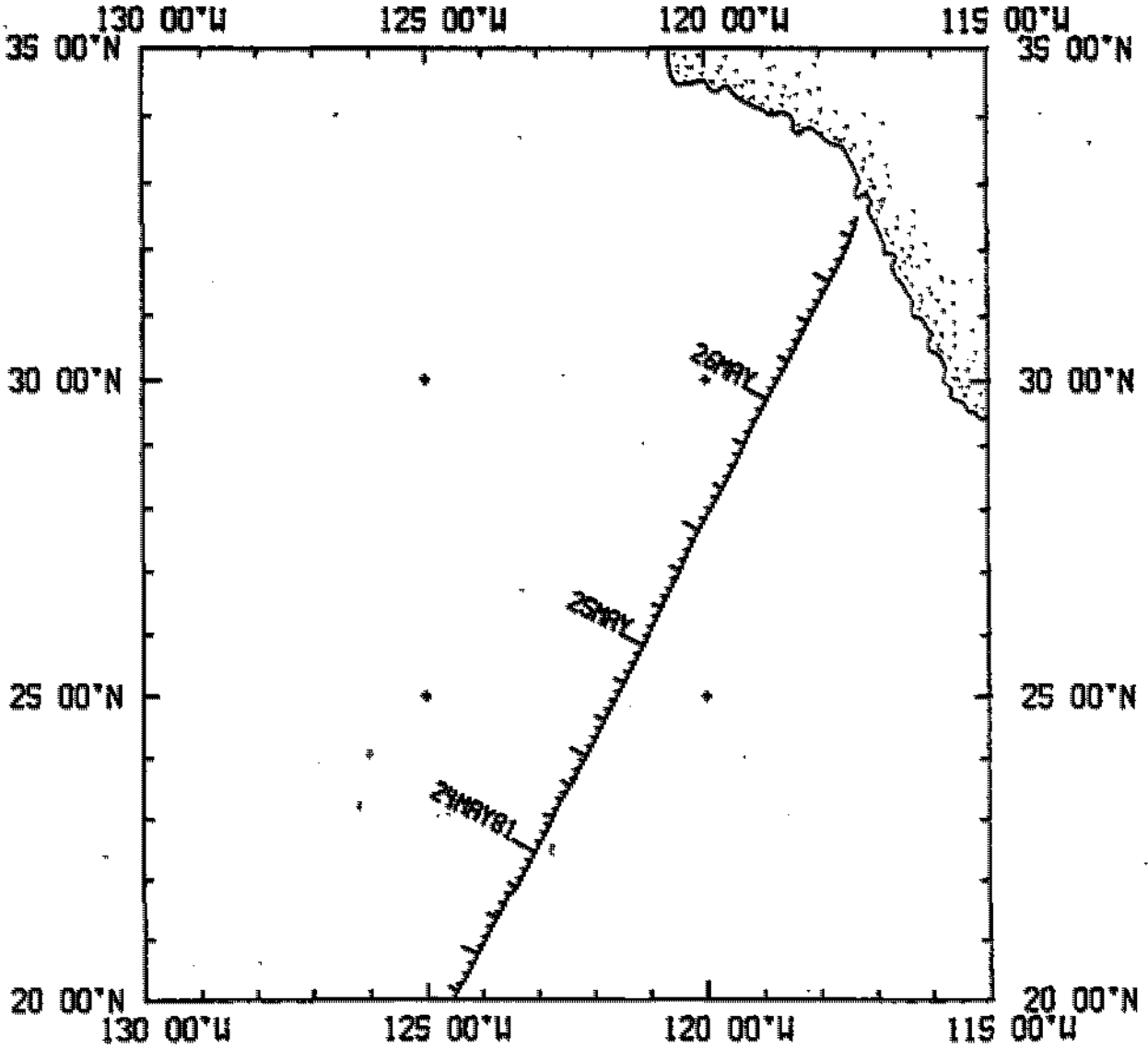
VLCN09MV (PLOT 2 OF 3)

TRACK PLOT AT .312IN/DEGREE

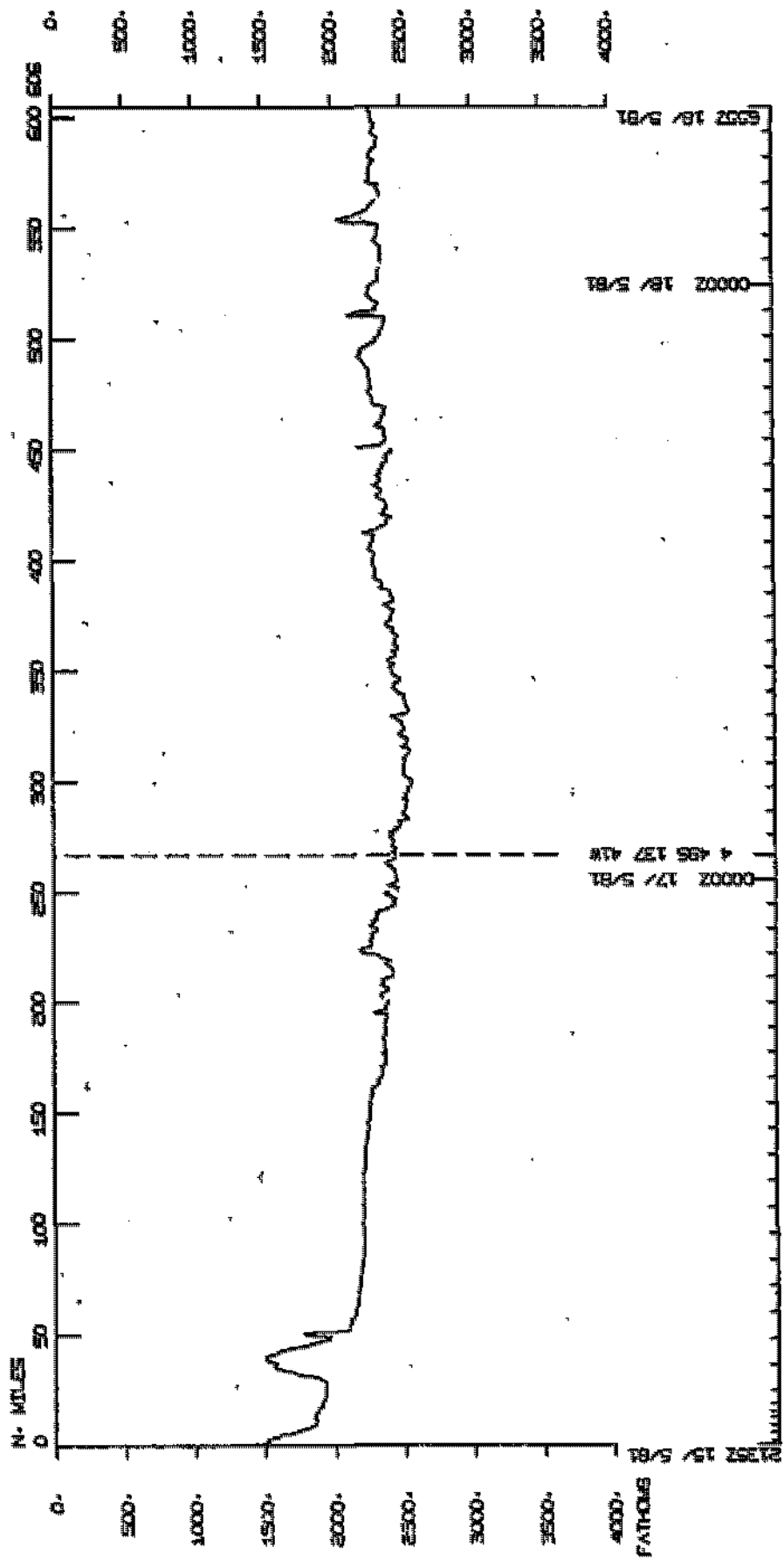
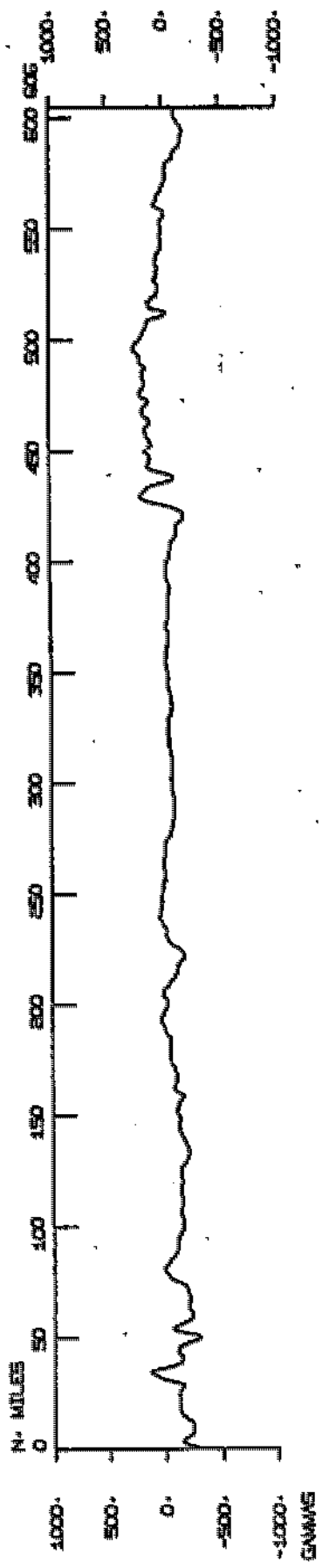


VLCN09MV (PLOT 3 OF 3)

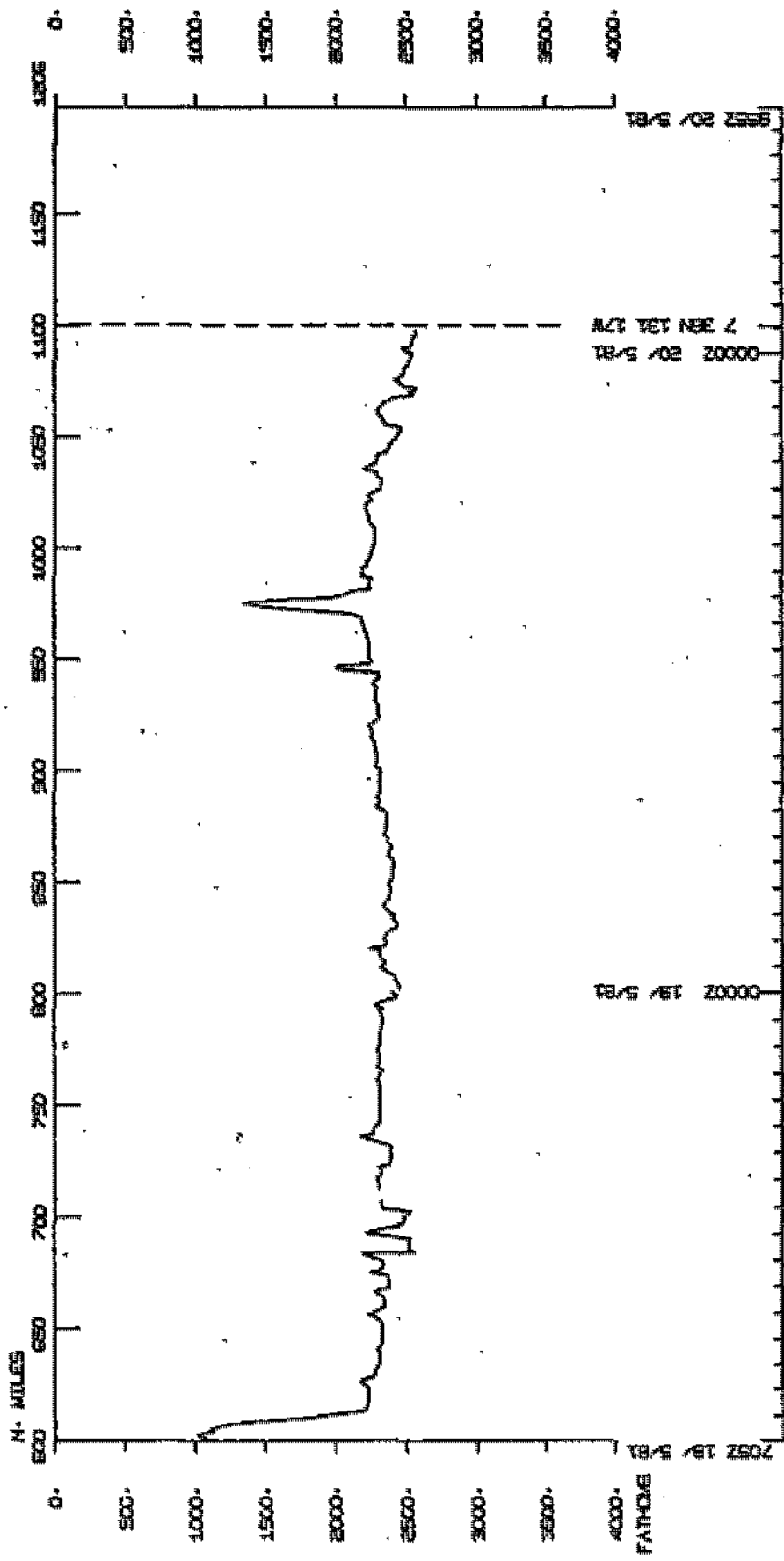
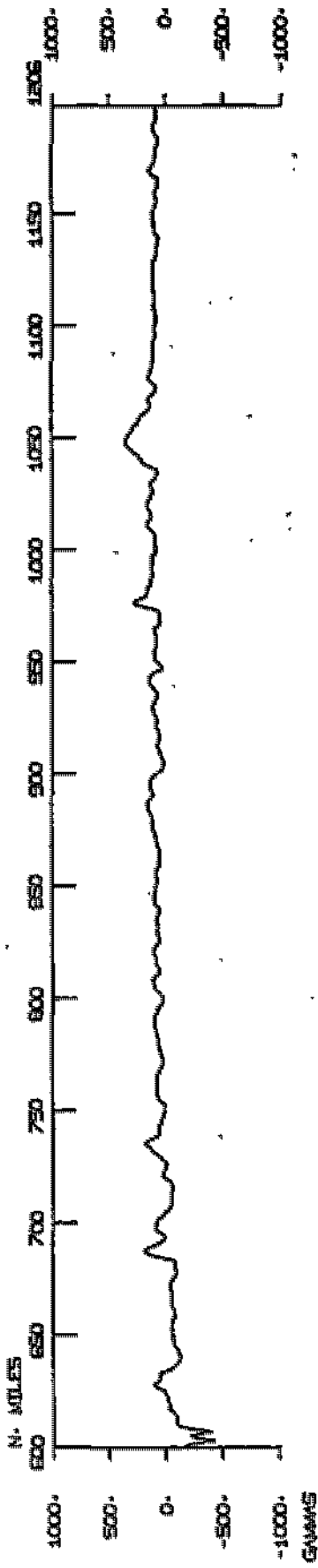
TRACK PLOT AT .312IN/DEGREE



VLCNO9MV



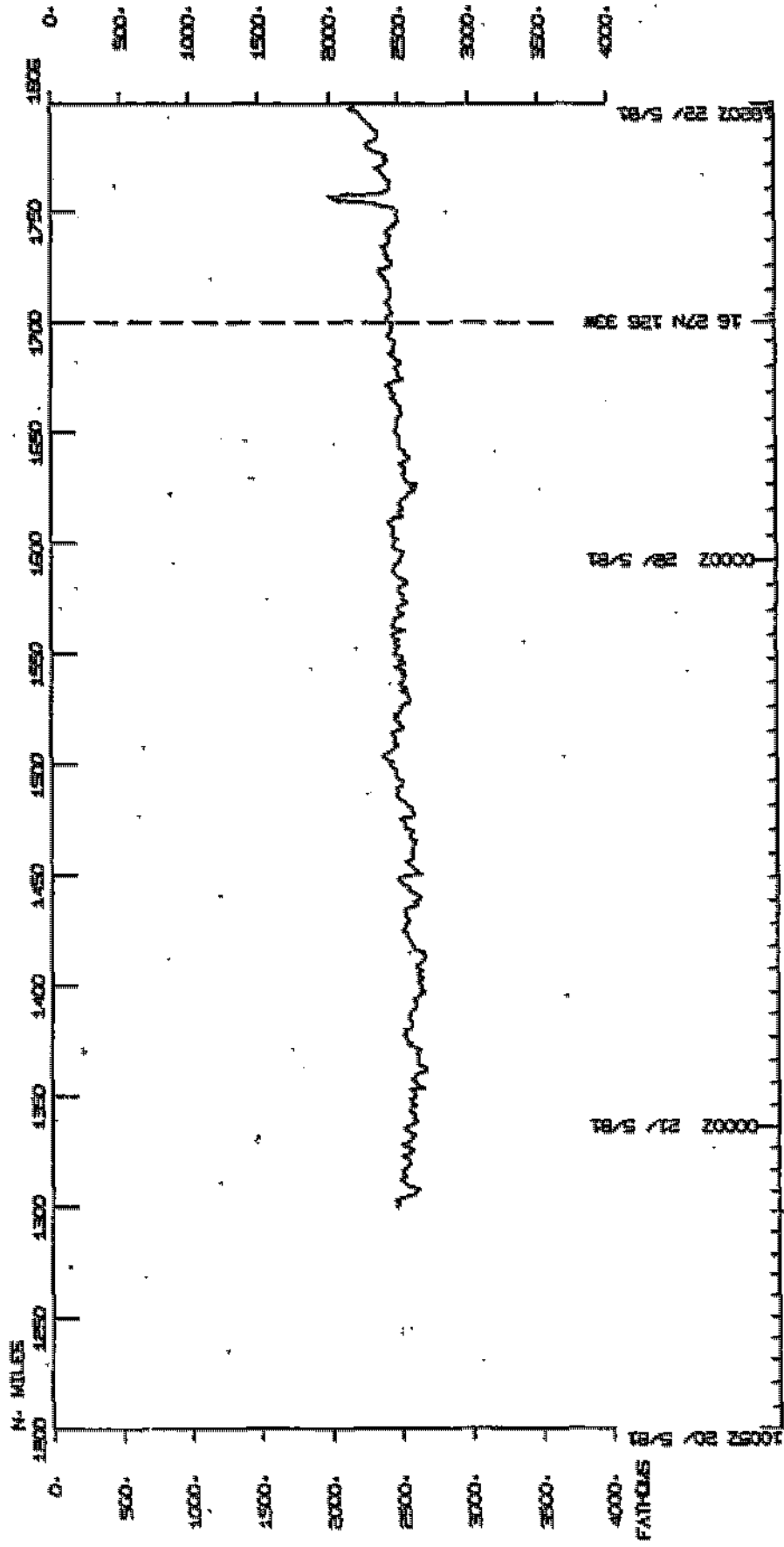
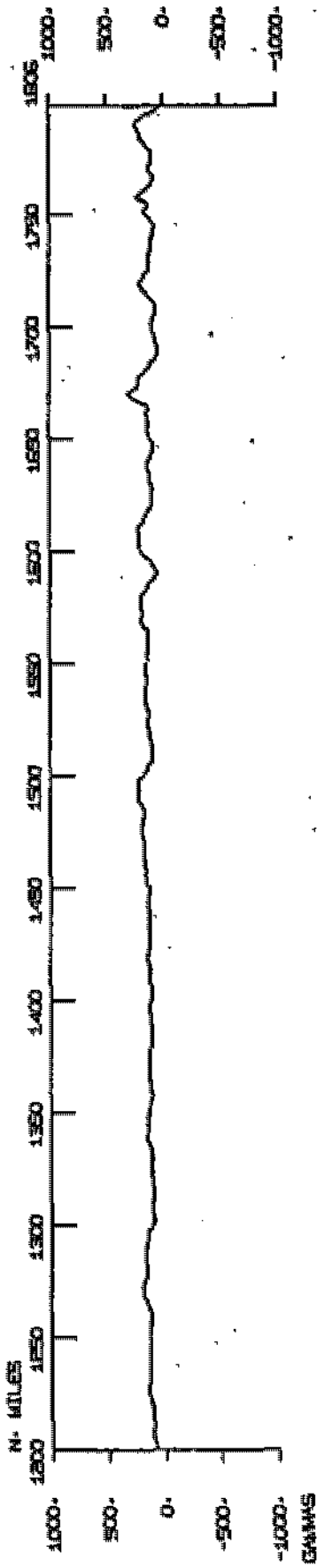
VILNONGMV



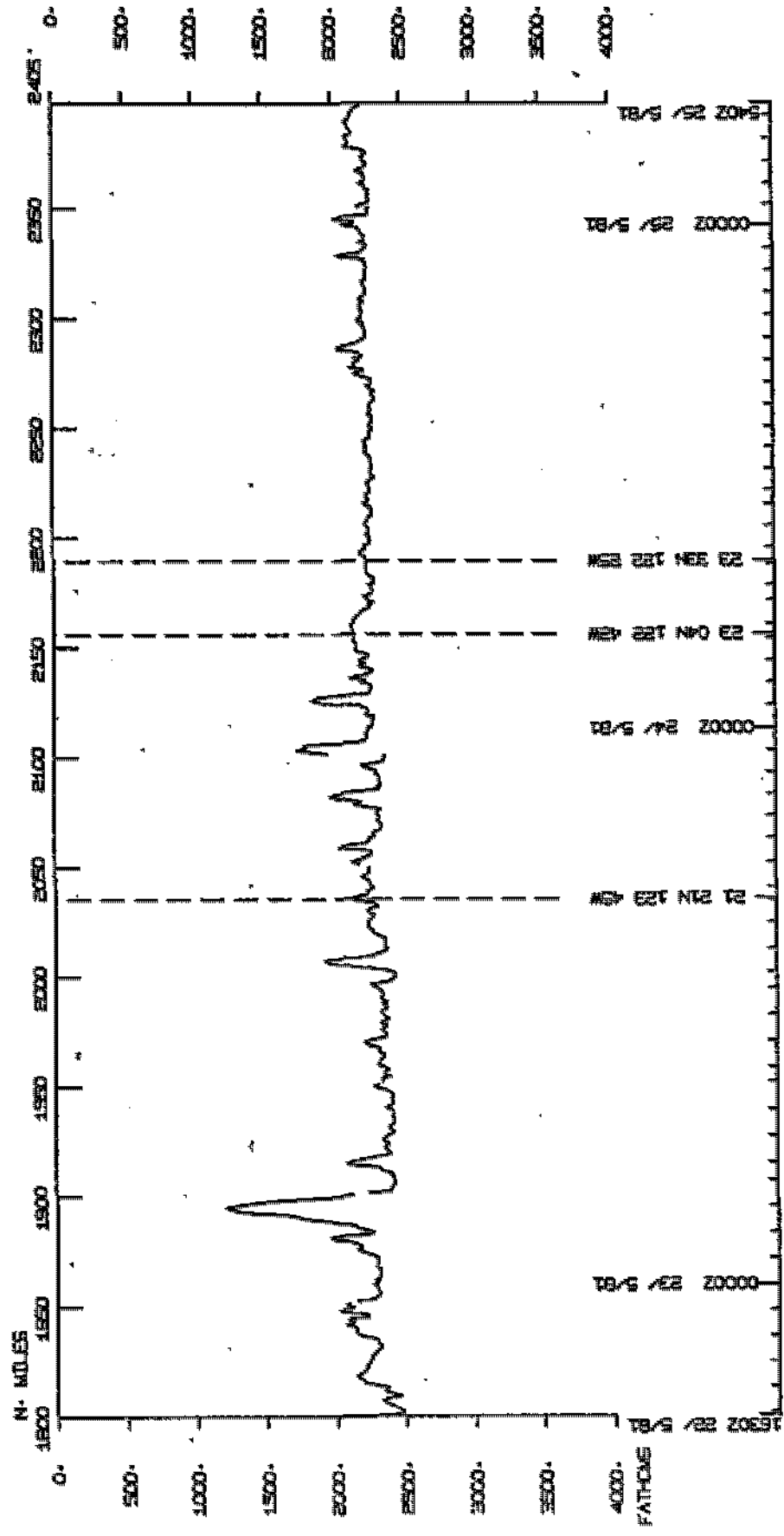
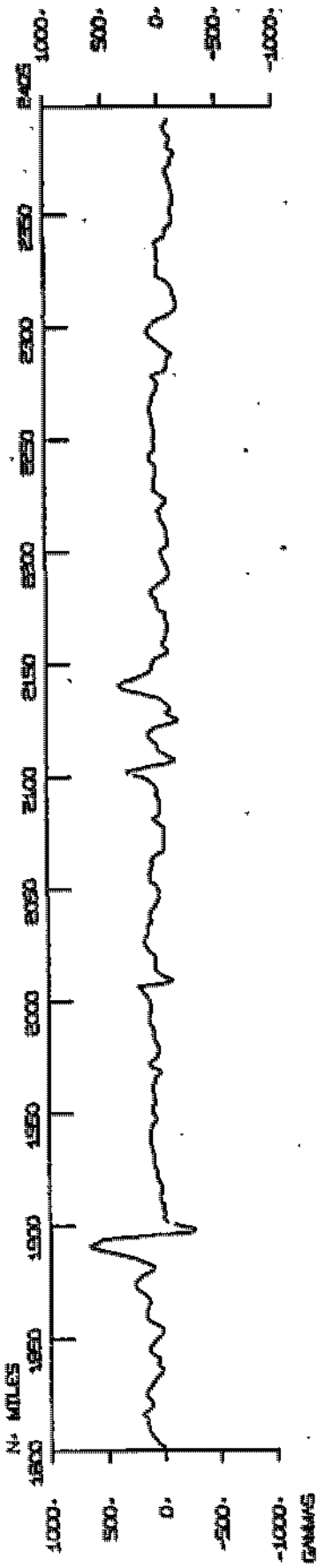
00002 20/ S/BI
7 36N 134 12W

00002 18/ S/BI

7052 18/ S/BI

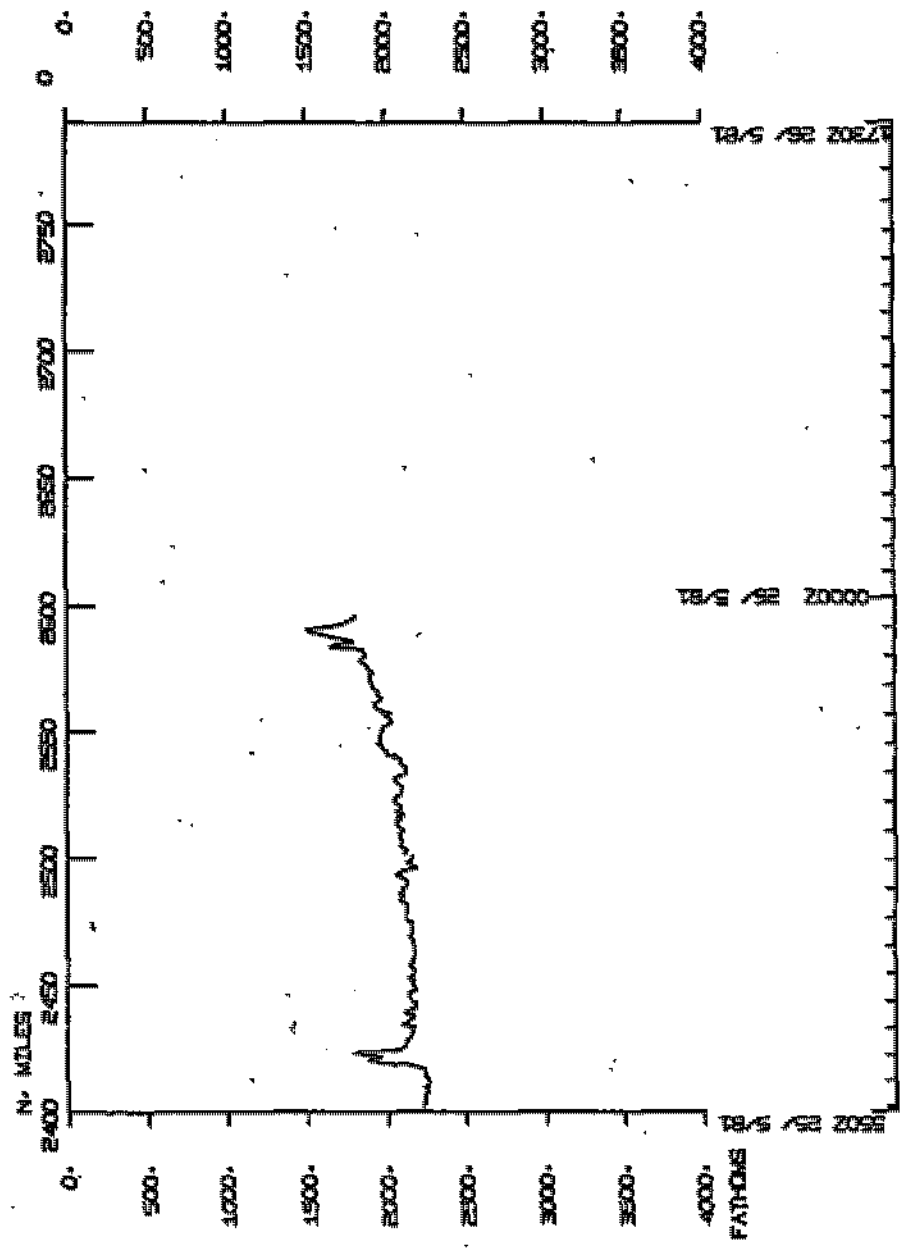
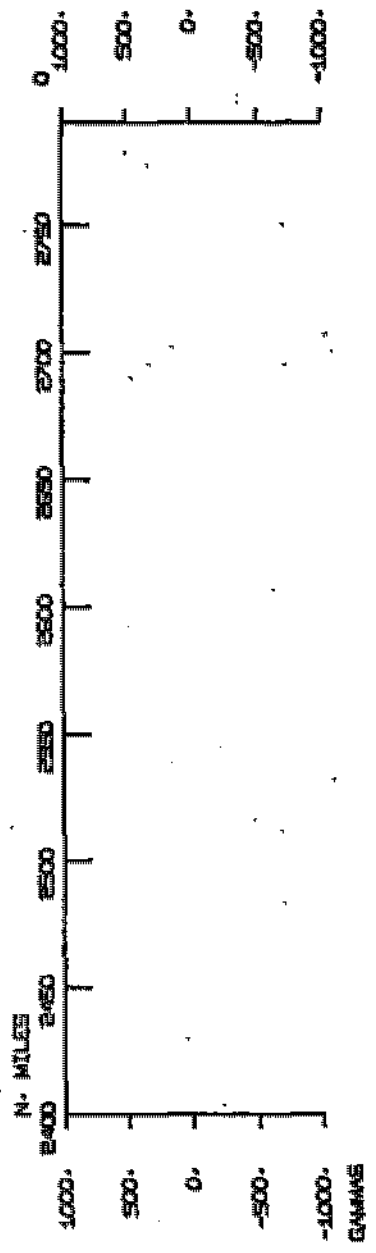


VLONQMV



VLON9MV

VLCN09MV



S.I.O. Sample Index

(Issued June 1981)

VULCAN EXPEDITION

LEG 9

Nuku Hiva, Marquesas Is. (15 May 1981)
to
San Diego, California (26 May 1981)

R/V Melville

Chief Scientist - F. Dixon (SIX)

Resident Marine Tech - R. Comer
Post-Cruise Processing and Report Preparation
by S.I.O. Geological Data Center

Index Encoding Funded by NSF
Grant Number OCE88-22996
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.)

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

DISP	TYPE								TOTAL	
	AS	CS	DP	HC	LB	MG	PE	SN		
GDC	1		2		1	1			1	4
GRD	1	3	1	1					1	5
MTG	1						1		1	1
NMF	1							10	1	10
SCG	1						1		1	1
SIU	1						1		1	1
SIX	1						1		1	1
TOTAL	1	3	1	2	1	1	4	10	1	23

SAMPLE 'TYPE' CODES USED ABOVE

- AS = AIR SAMPLE
- CS = CONTINUOUS SURFACE WATER SAMPLE
- DP = DEPTH
- HC = HYDROGRAPHIC CAST
- LB = LUG BOOKS
- MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
- PE = PERSONNEL IN SCIENTIFIC PARTY
- SN = SURFACE NET

SAMPLE 'DISP' CODES USED ABOVE

- GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
- GRD = GEOLOGICAL RESEARCH DIVISION (EXT. 3360)
- MTG = MARINE TECHNOLOGY GROUP (EXT. 4194)
- NMF = NATIONAL MARINE FISHERIES SERVICE, LA JOLLA, CALIF. (453-2820)
- SCG = SHIPBOARD COMPUTER GROUP (EXT. 4195)
- SIU = SCRIPPS INSTITUTION (OF OCEANOGRAPHY, LA JOLLA, CAL. 92093)
- SIX = SCRIPPS INSTITUTION NON-EMPLOYEE - CONTACT D. UTTER (EXT. 3675)

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

26 JUN 81 PAGE 1

VULCANO99MV SAMPLE INDEX

VLCN09MV

*** PURTS ***

1830 15/ 5/81			LGPT B	NIKU NIYA, HAWAII ISL		08 56. S	140 05. W	F VLCN09MV
2000 26/ 5/81			LGPT E	SAN DIEGO, CAL.		32 43. N	117 11. W	F VLCN09MV

PERSONNEL

*** NAME ***	*** TITLE ***	*** AFFILIATION ***
1 DIXON, F.S.	CHIEF SCIENTIST	SCRIPPS INSTITUTION NON-EMPLOYEE - CONTACT D. UTTER (EXT. 3675)
2 COMER, R.L.	RESIDENT TECH	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
3 STUBER, D.V.	COMPUTER TECH	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093
4 KIM, K.	STUDENT	SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA CAL. 92093

NOTES AN 'X' IN THE (BEGIN/END) 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. (DROPPED 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 D /M /Y TIME DATE	LUC LOC TIME TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
--------------------------	--------------------	--------------	---------------	--------------	------	-------	--------------------

**** UNDERWAY DATA CURATOR - STUART N. SMITH EXT. 2752 ****

*** LOG BOOKS ***

1835 15/ 5/81		LBSC B	UNDERWAY LOG BOOK	GDC 08	42.35	139 51.8W	S VLCN09MV
2330 25/ 5/81		LBSC E	UNDERWAY LOG BOOK	GDC 29	36.8N	118 58.7W	S VLCN09MV

*** FATHIGRAMS ***

1835 15/ 5/81		DPR3 B	FDD 3.5KHZ R-01	GDC 08	42.35	139 51.8W	S VLCN09MV
0107 18/ 5/81		DPR3 E	FDD 3.5KHZ R-01	GDC 00	48.1S	135 40.7W	S VLCN09MV

0118 18/ 5/81		DPR3 B	FDD 3.5KHZ R-02	GDC 00	56.1S	138 38.9W	S VLCN09MV
2330 25/ 5/81		DPR3 E	FDD 3.5KHZ R-02	GDC 29	36.8N	118 58.7W	S VLCN09MV

*** MAGNETOMETER ***

1931 15/ 5/81		MGRA B	MAGNETICS ROLL-01	GDC 08	42.35	139 51.8W	S VLCN09MV
1700 21/ 5/81		MGRA E	MAGNETICS ROLL-01	GDC 13	41.7N	127 60.0W	S VLCN09MV

HYDROGRAPHIC CAST

0100 17/ 5/81		HCN1 B	1 BOTTLE, METHANE SM	GRD 04	50.3S	137 42.1W	S VLCN09MV
0107 17/ 5/81		HCN1 E	HC 1	GRD 04	49.9S	137 41.3W	S VLCN09MV

CONTINUOUS SURFACE WATER SAMPLE

1000 16/ 5/81		CSXY B	METHANE SAMPLES 1-42	GRD 07	21.5S	139 01.5W	S VLCN09MV
0200 25/ 5/81		CSXX E	METHANE SAMPLES 1-42	GRD 26	06.9N	120 58.4W	S VLCN09MV

**** AIR SAMPLE ****

2000 17/ 5/81		ASCS B	N20 ISOTOPE STUDY-01	GRD 01	40.0S	136 08.5W	S VLCN09MV
1230 18/ 5/81		ASCS E	N20 ISOTOPE STUDY-01	GRD 01	07.1N	134 35.4W	S VLCN09MV

1750 18/ 5/81		ASCS B	N20 ISOTOPE STUDY-02	GRD 02	04.6N	134 08.0W	S VLCN09MV
0920 19/ 5/81		ASCS E	N20 ISOTOPE STUDY-02	GRD 04	52.4N	132 53.1W	S VLCN09MV

1600 19/ 5/81		ASCS B	N20 ISOTOPE STUDY-03	GRD 04	00.1N	132 11.6W	S VLCN09MV
0410 20/ 5/81		ASCS E	N20 ISOTOPE STUDY-03	GRD 08	04.4N	130 59.9W	S VLCN09MV

GMT D / M / Y TIME DATE	LOC LOC TIME T2	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
----------------------------	--------------------	--------------	---------------	--------------	------	-------	--------------------

*** SURFACE NET ***

0413	22/05/81		SNNI B MANTA SURFACE NET-01	NMF 15	32.5N	127 02.5W	F VLCN09MV
0429	22/05/81		SNNI X NET LOST	01	NMF 15	32.5N 127 02.5W	F VLCN09MV
1814	22/05/81		SNNI B SURFACE NET	02	NMF 17-49.8N	125-44.4W	F VLCN09MV
1834	22/05/81		SNNI E 3FT BY 1FT	02	NMF 17-49.7N	125-44.4W	F VLCN09MV
0404	22/05/81		SNNI B SURFACE NET	03	NMF 19-29.1N	124-48.4W	F VLCN09MV
0424	22/05/81		SNNI E 3FT BY 1FT	03	NMF 19-29.4N	124-48.2W	F VLCN09MV
0806	23/05/81		SNNI B SURFACE NET	04	NMF 20-08.6N	124-27.0W	F VLCN09MV
0826	23/05/81		SNNI E 3FT BY 1FT	04	NMF 20-08.6N	124-27.0W	F VLCN09MV
1204	23/05/81		SNNI B SURFACE NET	05	NMF 20-46.1N	124-05.5W	F VLCN09MV
1224	23/05/81		SNNI E 3FT BY 1FT	05	NMF 20-46.3N	124-05.3W	F VLCN09MV
1604	23/05/81		SNNI B SURFACE NET	06	NMF 21-23.1N	123-46.3W	F VLCN09MV
1624	23/05/81		SNNI E 3FT BY 1FT	06	NMF 21-23.3N	123-46.3W	F VLCN09MV
0404	24/05/81		SNNI B SURFACE NET	07	NMF 23-03.6N	122-42.1W	F VLCN09MV
0404	24/05/81		SNNI E 3FT BY 1FT	07	NMF 23-03.6N	122-42.9W	F VLCN09MV
0803	24/05/81		SNNI B SURFACE NET	08	NMF 23-12.5N	122-32.3W	F VLCN09MV
0823	24/05/81		SNNI E 3FT BY 1FT	08	NMF 23-12.5N	122-32.3W	F VLCN09MV
0802	24/05/81		SNNI B SURFACE NET	09	NMF 23-32.9N	122-27.0W	F VLCN09MV
0822	24/05/81		SNNI E 3FT BY 1FT	09	NMF 23-32.9N	122-26.9W	F VLCN09MV
1103	24/05/81		SNNI B SURFACE NET	10	NMF 23-57.2N	122-11.4W	F VLCN09MV
1123	24/05/81		SNNI E 3FT BY 1FT	10	NMF 23-57.3N	122-11.2W	F VLCN09MV
9900			FND SAMPLE INDEX				VLCN09MV