INFORMAL REPORT AND INDEX OF

NAVIGATION AND DEPTH DATA

(ISSUED APRIL 1981)

VULCAN EXPEDITION

LEG 2
Callao, Peru (4 October 1980)
to
Antofagasta, Chile (23 October 1980)
Chief Scientist - K. F. Scheidegger (OSU)
Resident Marine Tech - W. E. Keith

R/V Melville

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

Data Collection Funded by NSF
Grant Number OCE77-23258
Data Processing Funded by SIA

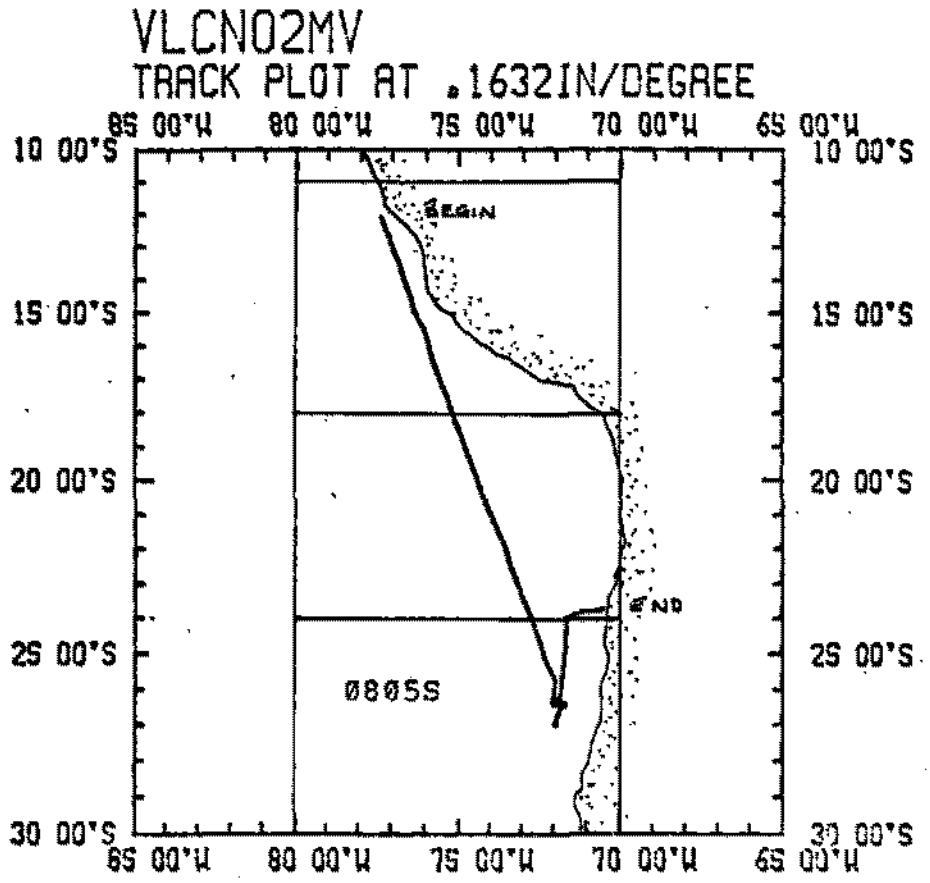
PROCESSING NOTES

VULCAN legs 2, 3 and 4 were carried out by scientists from Oregon State University. This report contains only small scale track plots and profiles of the digitized depth and magnetic data collected on the tracks to and from port and the OSU survey areas. The navigation, depth and magnetic data included here were digitized on board ship and returned directly to SIO. These data have been edited to remove obvious digitizing errors but have not been checked against the original records which are being archived at the: School of Oceanography, Oregon State University, Corvallis, Oregon 97331. (Copies of preliminary cruise reports authored by the OSU scientists covering their survey areas are on file at the Geological Data Center.)

Leg 2 was 19 days long. Digitized underway bathymetry received by SIO covered parts of days 9, 10, 20 and 21 October.

Leg 3 was 6 days long. Digitized underway bathymetry for all 6 days were received by SIO.

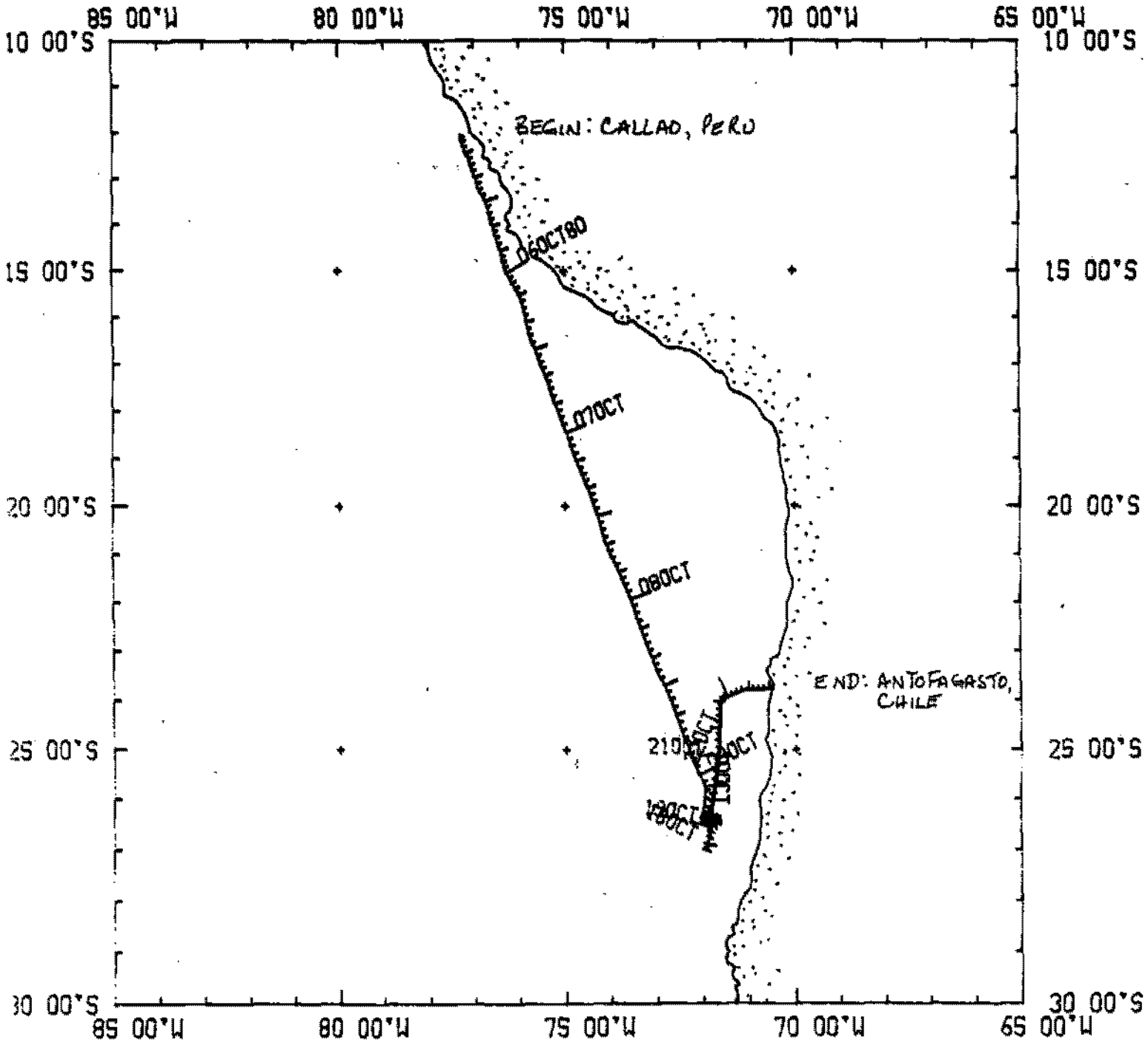
Leg 4 was 18 days long. Twelve days of partial underway bathymetry was received by SIO covering days 10 through 17 and 20 through 27 November. Underway surface magnetics for days 10 through 17 and 24 through 27 November were also received.



VULCAN EXPEDITION
LEG 2

Chief Scientist: K. F. Scheidegger (OSU)
Ports: Callao, Peru to Antofagasta, Chile
Dates: 4-23 October 1980
Ship: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED
1) Cruise - 1743 miles
2) Bathymetry - 833 miles collected (260 processed by GDC,SIO)
3) Magnetics - none collected
4) Seismic Reflection - none collected
5) Gravity - none collected


VLCN02MV
TRACK PLOT AT .312IN/DEGREE
85 00°W
80 00°W
75 00°W
70 00°W
65 00°W
10 00°S
15 00°S
20 00°S
25 00°S
30 00°S
BEGIN: CALLAO, PERU
060CT80
070CT
080CT
END: ANTOFAGASTO, CHILE
210CT
220CT

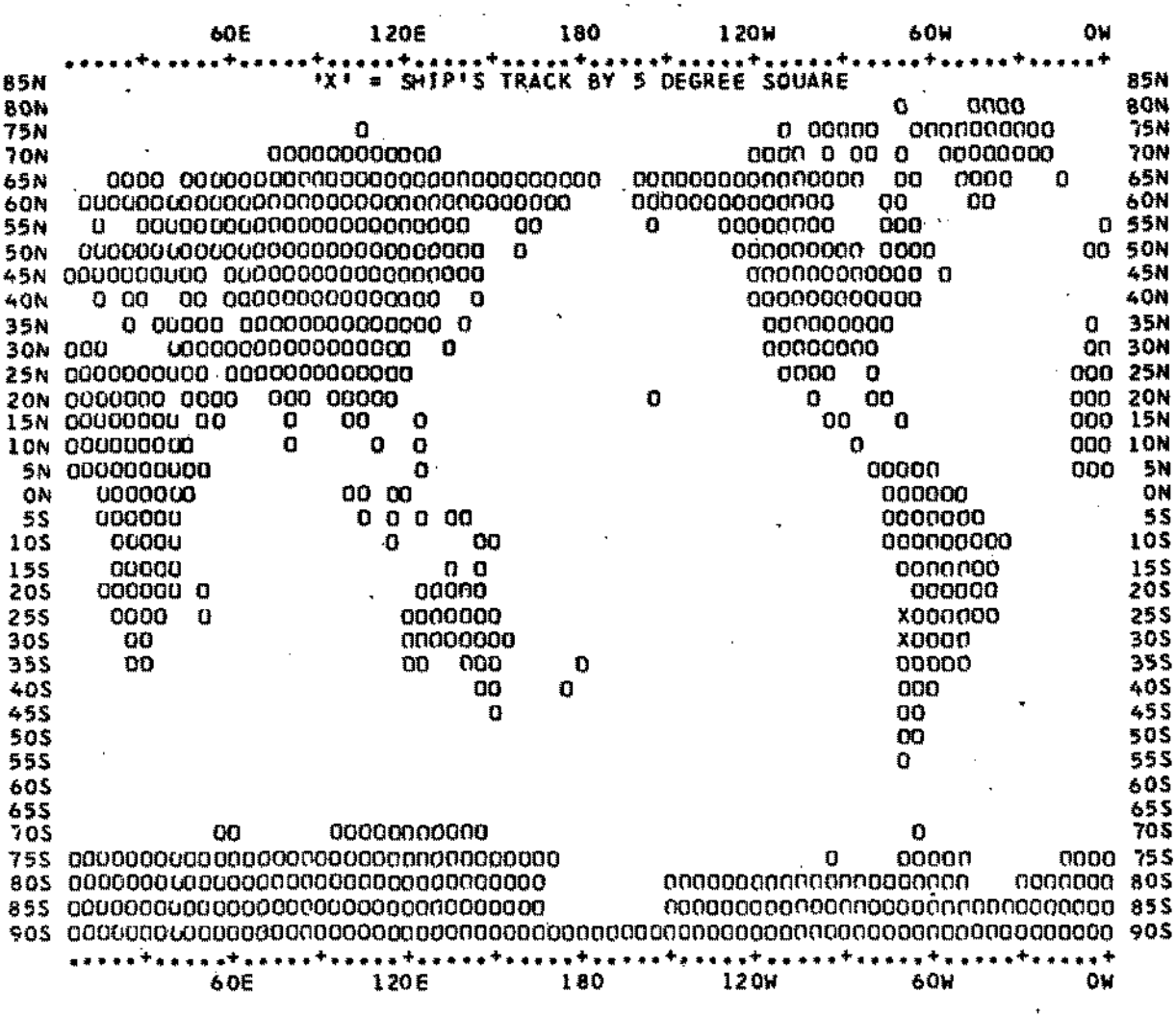
N. MILES
FATHOMS
NO UNDERWAY DATA DIGITIZED BEFORE THIS TIME.
OSU SURVEY
00002 8/10/80
26 295 72 02W
26 285 71 41W
26 275 71 53W
26 275 71 37W
00002 10/10/80
26 245 71 44W
26 285 71 54W
26 285 71 40W
26 285 71 40W
00002 11/10/80
26 245 71 46W
26 285 71 47W
26 285 71 45W
26 285 71 45W
00002 12/10/80
26 255 71 45W
26 295 71 45W
00002 13/10/80
26 245 71 33W
26 245 71 45W
00002 15/10/80
00002 7/10/80

UNDERWAY BETWEEN
DREDGE SITES
N. MILES
FATHOMS
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
0345Z 13/10/80
26 24S 71 41W
26 29S 71 47W
15/10/80 0000Z
26 29S 71 49W
16/10/80 0000Z
26 19S 71 49W
17/10/80 0000Z
27 00S 71 55W
18/10/80 0000Z
26 59S 71 55W
19/10/80 0000Z
26 22S 71 53W
20/10/80 0000Z
26 25S 71 48W
21/10/80 0000Z
23 59S 71 37W
23 59S 71 37W
22/10/80 0000Z
23 58S 71 35W
23/10/80 0000Z
23/10/80 0900Z

VLCN02MV

S.I.O. SAMPLE INDEX GENERATED 04MAR81

*** VULCAN LEG 02 SAMPLE INDEX (VLCN02MV) ***



04OCT80 - CALLAO,PERU

.TO

23OCT80 - ANTOFAGASTA,CHILE

CHIEF SCIENTIST - SCHEIDEGGER,K.F. OSU

SHIP - R/V MELVILLE (SIO)

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 DP	DR	PE	TOTAL
MTG			2	2
OSU		24	11	35
SIO	1			1
TOTAL	1	24	13	38

SAMPLE 'TYPE' CODES USED ABOVE

DP = DEPTH
DR = DREDGE
PE = PERSONNEL IN SCIENTIFIC PARTY

SAMPLE 'DISP' CODES USED ABOVE

MTG = MARINE TECHNOLOGY GROUP (EXT 4194)
OSU = OREGON STATE UNIVERSITY
SIO = SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA, CAL. 92093

SMT D /M /Y IME DATE	LOC LOC TIME TZ	CODE SAMP	SAMPLE IDENT.	CODE DISP	LAT.	LONG.	LEG-SHIP CRUISE
			VULCAN LEG 02 SAMPLE INDEX				VLCN02MV
*** PORTS ***							
330 4/10/80		LGPT B	CALLAO,PERU		12 03. S	77 10. W	F VLCN02MV
000 23/10/80		LGPT E	ANTOFAGASTA,CHILE		23 38. S	70 25. W	F VLCN02MV

PERSONNEL*

** NAME ***	*** TITLE ***	*** AFFILIATION ***
1 SCHEIDEGGER,K.F.	ASSO.PROFESSOR	OREGON STATE UNIVERSITY
2 KEITH,W.E.	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 CLAUSON,M.L.	RESEARCH ASST.	OREGON STATE UNIVERSITY
5 FLEISCHBEIN,J.H.	OCEAN TECH.	OREGON STATE UNIVERSITY
6 HOFFMAN,S.E.	STUDENT	OREGON STATE UNIVERSITY
7 HOWER,M.E.	OCEAN TECH.	OREGON STATE UNIVERSITY
8 JOHNSTON,S.A.	OCEAN TECH.	OREGON STATE UNIVERSITY
9 KALK,P.A.	RESEARCH ASST.	OREGON STATE UNIVERSITY
0 KRISSEK,L.A.	STUDENT	OREGON STATE UNIVERSITY
1 MOORE,B.A.	RESEARCH ASST.	OREGON STATE UNIVERSITY
2 MOSBY,D.E.	RESEARCH ASST.	OREGON STATE UNIVERSITY
3 SKORDAL,J.B.	OCEAN TECH.	OREGON STATE UNIVERSITY

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.

GMT TIME	D /M /Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.		CODE DISP	LAT.	LONG.		LEG-SHIP CRUISE
*** FATHOGRAMS ***											
1430	20/10/80			OPR3 B	PDR 3.5KHZ R-01		SIO	26 25.2S	71 49.8W	F	VLCNO2MV
0810	21/10/80			OPR3 E	PDR 3.5KHZ R-01		SIO	24 04. S	71 37.0W	F	VLCNO2MV
*** DREDGES ***											
1652	10/10/80			DRRO B	M8010-01DR	6150M	OSU	26 25.2S	71 47.5W	S	VLCNO2MV
0045	11/10/80			DRRO E	M8010-01DR	4890M	OSU	26 23.5S	71 49.2W	S	VLCNO2MV
1320	12/10/80			DRRO B	M8010-02DR	6100M	OSU	26 24.8S	71 46.5W	S	VLCNO2MV
1955	12/10/80			DRRO E	M8010-02DR	5900M	OSU	26 21.6S	71 44.1W	S	VLCNO2MV
2330	12/10/80			DRRO B	M8010-03DR	6080M	OSU	26 24.8S	71 47.1W	S	VLCNO2MV
0334	13/10/80			DRRO E	M8010-03DR	5400M	OSU	26 23.8S	71 47.3W	S	VLCNO2MV
1520	13/10/80			DRRO B	M8010-04DR	6750M	OSU	26 25.2S	71 41.2W	S	VLCNO2MV
2245	13/10/80			DRRO E	M8010-04DR		OSU	26 25.9S	71 42.4W	S	VLCNO2MV
0030	14/10/80			DRRO B	M8010-05DR	6750M	OSU	26 26.2S	71 40.6W	S	VLCNO2MV
0700	14/10/80			DRRO E	M8010-05DR		OSU	26 24.5S	71 44.7W	S	VLCNO2MV
0840	14/10/80			DRRO B	M8010-06DR	6760M	OSU	26 25.0S	71 41.2W	S	VLCNO2MV
1400	14/10/80			DRRO E	M8010-06DR		OSU	26 25.9S	71 42.8W	S	VLCNO2MV
0200	15/10/80			DRRO B	M8010-07DR	6130M	OSU	26 26.0S	71 48.2W	S	VLCNO2MV
1100	15/10/80			DRRO E	M8010-07DR	5175M	OSU	26 25.3S	71 49.1W	S	VLCNO2MV
1300	15/10/80			DRRO B	M8010-08DR	5500M	OSU	26 26.3S	71 48.0W	S	VLCNO2MV
1645	15/10/80			DRRO E	M8010-08DR		OSU	26 26.1S	71 49.8W	S	VLCNO2MV
2000	15/10/80			DRRO B	M8010-09DR	5640M	OSU	26 25.9S	71 48.5W	S	VLCNO2MV
0100	16/10/80			DRRO E	M8010-09DR	5400M	OSU	26 25.3S	71 48.8W	S	VLCNO2MV
0430	16/10/80			DRRO B	M8010-10DR	5776M	OSU	26 25.5S	71 48.8W	S	VLCNO2MV
1030	16/10/80			DRRO E	M8010-10DR	5290M	OSU	26 25.0S	71 49.0W	S	VLCNO2MV
0600	17/10/80			DRRO B	M8010-11DR	5850M	OSU	27 00.6S	71 55.5W	S	VLCNO2MV
1050	17/10/80			DRRO E	M8010-11DR		OSU	26 59.5S	71 56.1W	S	VLCNO2MV
1600	17/10/80			DRRO B	M8010-12DR	6100M	OSU	26 59.2S	71 56.4W	S	VLCNO2MV
2210	17/10/80			DRRO E	M8010-12DR		OSU	26 58.5S	71 58.8W	S	VLCNO2MV
2315	17/10/80			DRRO B	M8010-13DR	6130M	OSU	26 59.3S	71 56.7W	S	VLCNO2MV
0420	18/10/80			DRRO E	M8010-13DR	5550M	OSU	26 59.1S	71 58.2W	S	VLCNO2MV
0550	18/10/80			DRRO B	M8010-14DR	5470M	OSU	26 59.0S	71 57.5W	S	VLCNO2MV
1200	18/10/80			DRRO E	M8010-14DR	5140M	OSU	26 57.9S	71 57.6W	S	VLCNO2MV

GMT TIME	D /M /Y DATE	LOC TIME	LOC TZ	CODE SAMP	SAMPLE IDENT.		CODE DISP	LAT.	LONG.		LEG-SHIP CRUISE
1407	18/10/80			DRRO B	M8010-15DR	5275M	OSU	26 57.8S	71 57.3W	S	VLCNO2MV
1734	18/10/80			DRRO E	M8010-15DR		OSU	26 56.9S	71 58.0W	S	VLCNO2MV
0135	19/10/80			DRRO B	M8010-16DR	5490M	OSU	26 26.4S	71 47.8W	S	VLCNO2MV
0935	19/10/80			DRRO E	M8010-16DR	5000M	OSU	26 20.9S	71 51.2W	S	VLCNO2MV
1110	19/10/80			DRRO B	M8010-17DR		OSU	26 20.3S	71 52.3W	S	VLCNO2MV
1740	19/10/80			DRRO E	M8010-17DR		OSU	26 18.9S	71 50.7W	S	VLCNO2MV
2000	19/10/80			DRRO B	M8010-18DR		OSU	26 18.0S	71 55.8W	S	VLCNO2MV
0130	20/10/80			DRRO E	M8010-18DR		OSU	26 16.5S	71 58.5W	S	VLCNO2MV
0232	20/10/80			DRRO B	M8010-19DR	5020M	OSU	26 15.6S	71 56.6W	S	VLCNO2MV
0630	20/10/80			DRRO E	M8010-19DR		OSU	26 14.5S	71 57.5W	S	VLCNO2MV
1140	21/10/80			DRRO B	M8010-20DR	6500M	OSU	23 59.0S	71 33.1W	S	VLCNO2MV
1730	21/10/80			DRRO E	M8010-20DR		OSU	23 56.3S	71 38.0W	S	VLCNO2MV
2030	21/10/80			DRRO B	M8010-21DR	6750M	OSU	24 00.6S	71 32.1W	S	VLCNO2MV
2314	21/10/80			DRRO E	M8010-21DR		OSU	24 00.2S	71 33.1W	S	VLCNO2MV
0330	22/10/80			DRRO B	M8010-22DR	6800M	OSU	24 00.3S	71 32.3W	S	VLCNO2MV
0805	22/10/80			DRRO E	M8010-22DR		OSU	23 59.7S	71 34.4W	S	VLCNO2MV
1255	22/10/80			DRRO B	M8010-23DR	6050M	OSU	23 59.8S	71 33.0W	S	VLCNO2MV
1900	22/10/80			DRRO E	M8010-23DR		OSU	24 00.0S	71 33.5W	S	VLCNO2MV
1900	22/10/80			DRRO B	M8010-24DR	6140M	OSU	24 00.0S	71 33.5W	S	VLCNO2MV
0020	23/10/80			DRRO E	M8010-24DR		OSU	23 55.7S	71 26.7W	S	VLCNO2MV
9900				END SAMPLE INDEX							VLCNO2MV