

MGG15020060

INFORMAL REPORT AND INDEX OF  
NAVIGATION, DEPTH AND MAGNETIC DATA

(Issued October 21, 1977)

F. DRAKE 77 EXPEDITION

LEG 4B

(CUEA Leg 2)

Callao, Peru (12 March 1977)  
to  
Callao, Peru (30 March 1977)

R/V MELVILLE

Co-Chief Scientists - A. Huyer (Oregon State Univ.)  
and R. Smith (Oregon State Univ.)

Resident Marine Tech - W. Keith

Post-Cruise Processing and Report Preparation  
by S.I.O. Geological Data Center - S. M. Smith,  
U. Albright, G. Psaropulos, G. Papadopoulos

Data Collection Funded by NSF  
Grant Number OCE76-00131  
Data Processing Funded by SIA 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 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.

**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 form 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.) at approximately 1 mile spacing, plotted at 4" degree with standard U.S. Navy Oceanographic Office BC series boundaries (see index chart).

3. Plots of magnetic anomaly profiles along track-map scale = 1.2"/degree; anomaly scale between 15°N and 15°S latitude = 500 gamma/inch; anomaly scale north of 15°N and south of 15°S = 1000 gamma/inch from values retrieved at approximately 1 mile spacing and regional field removed using the 1965 IGRF.

4. Card Decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center). Phone: (714) 452-2752

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

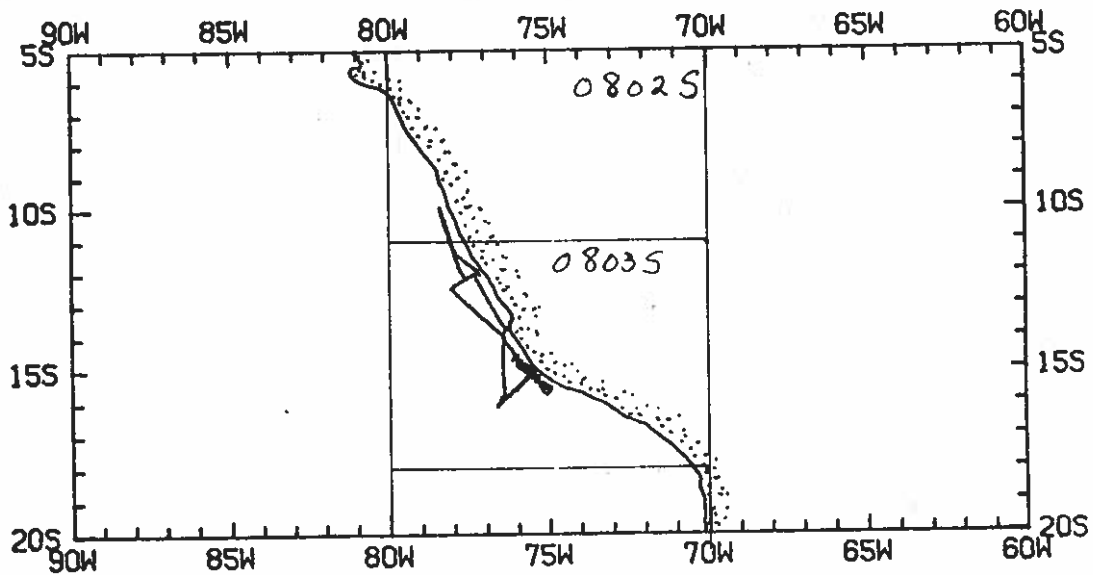
b. Subbottom profiler records (airgun)

c. Magnetometer records

d. Underway Data Log

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\* No subbottom profiler data collected



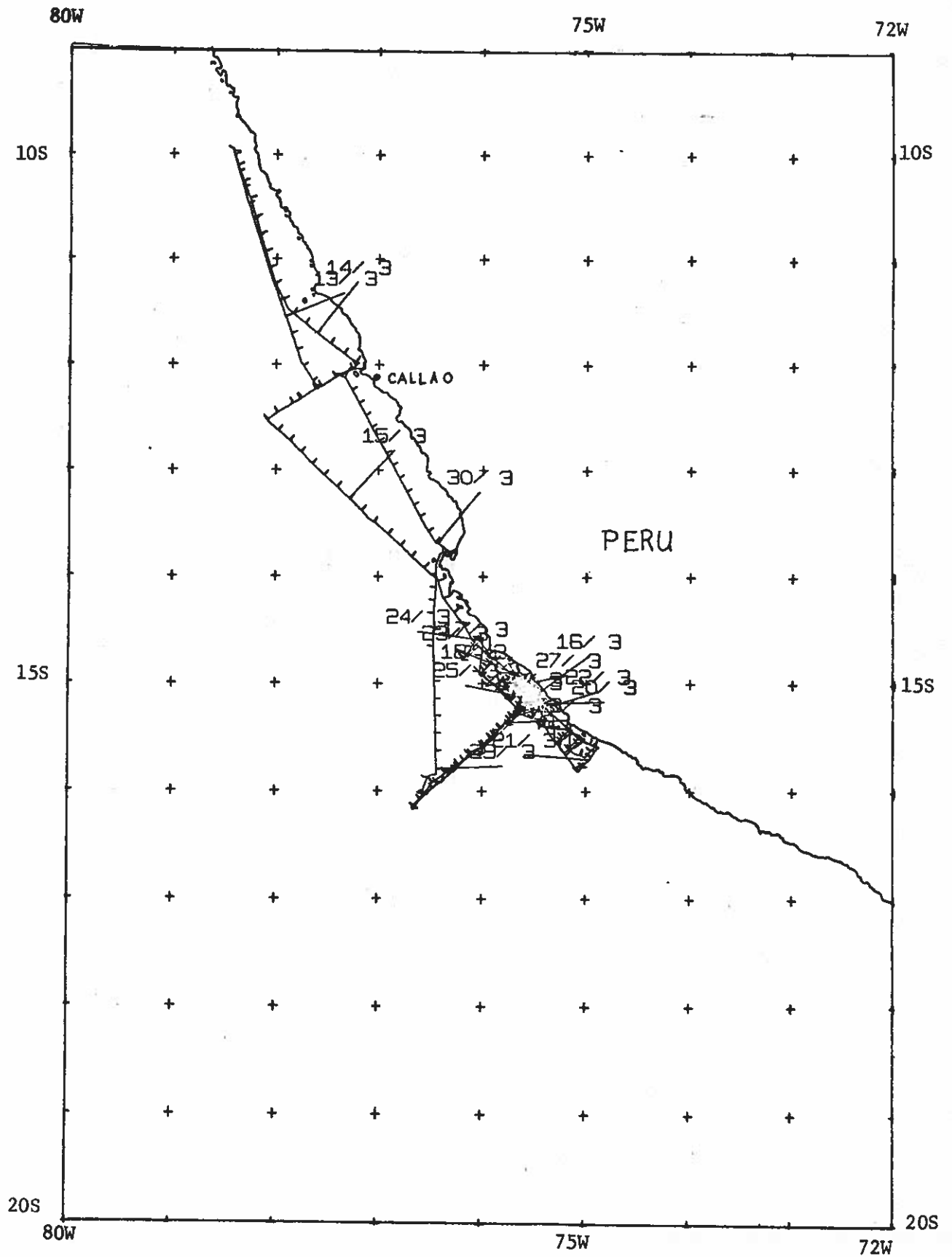
FDRAKE 77 EXPEDITION  
 LEG 4B  
 R/V MELVILLE

Chief Scientists - Huyer, A. and Smith, R. (OSU)  
 Ports - Callao, Peru - Callao, Peru  
 Dates - 12 March to 30 March 1977

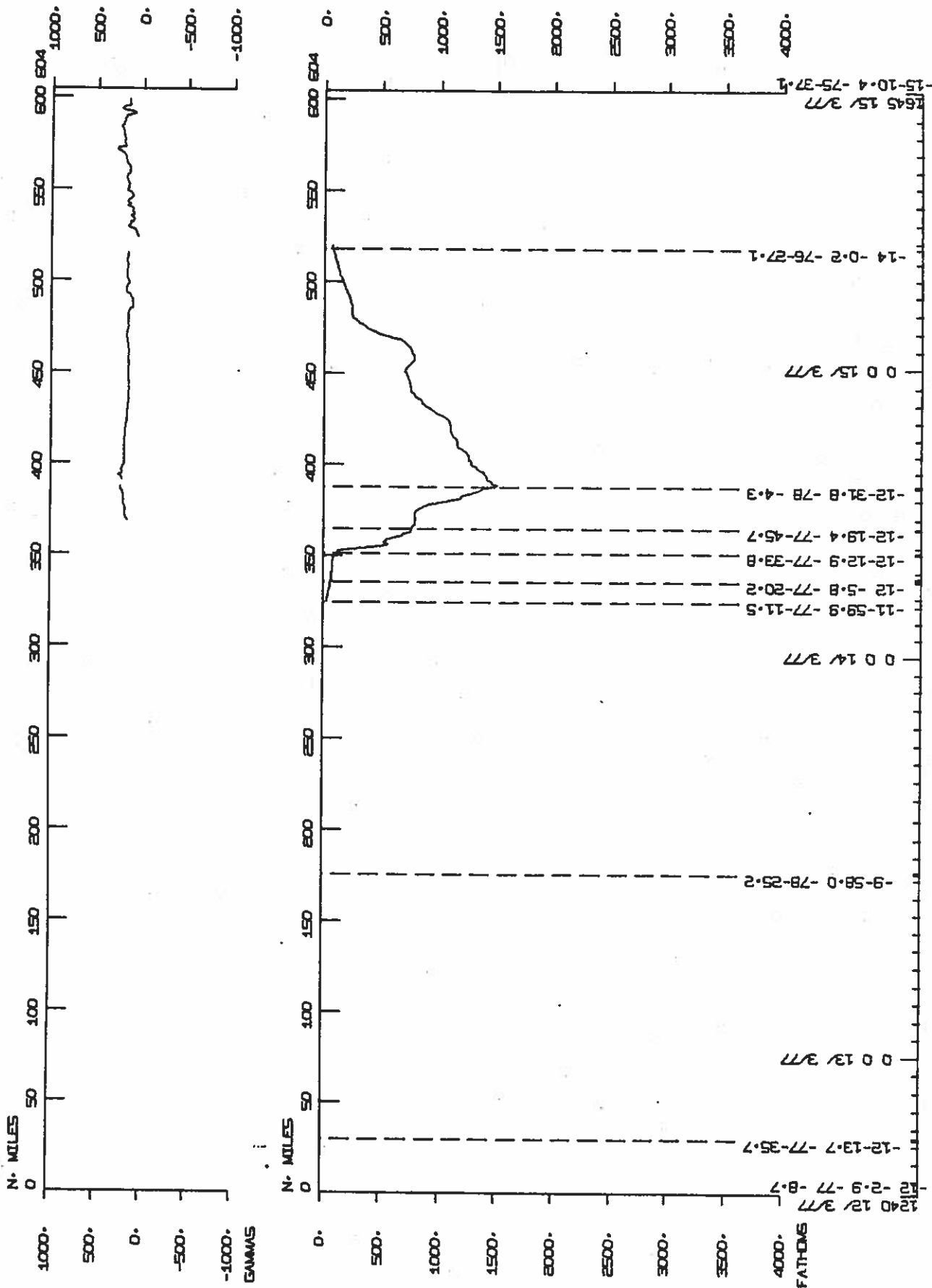
TOTAL MILEAGE

- 1) Cruise - 2209 miles
- 2) Bathymetry - 751 miles
- 3) Magnetics - 578 miles
- 4) Seismic Reflection - none collected

FD774BMV TRACK PLOT (1 of 1)



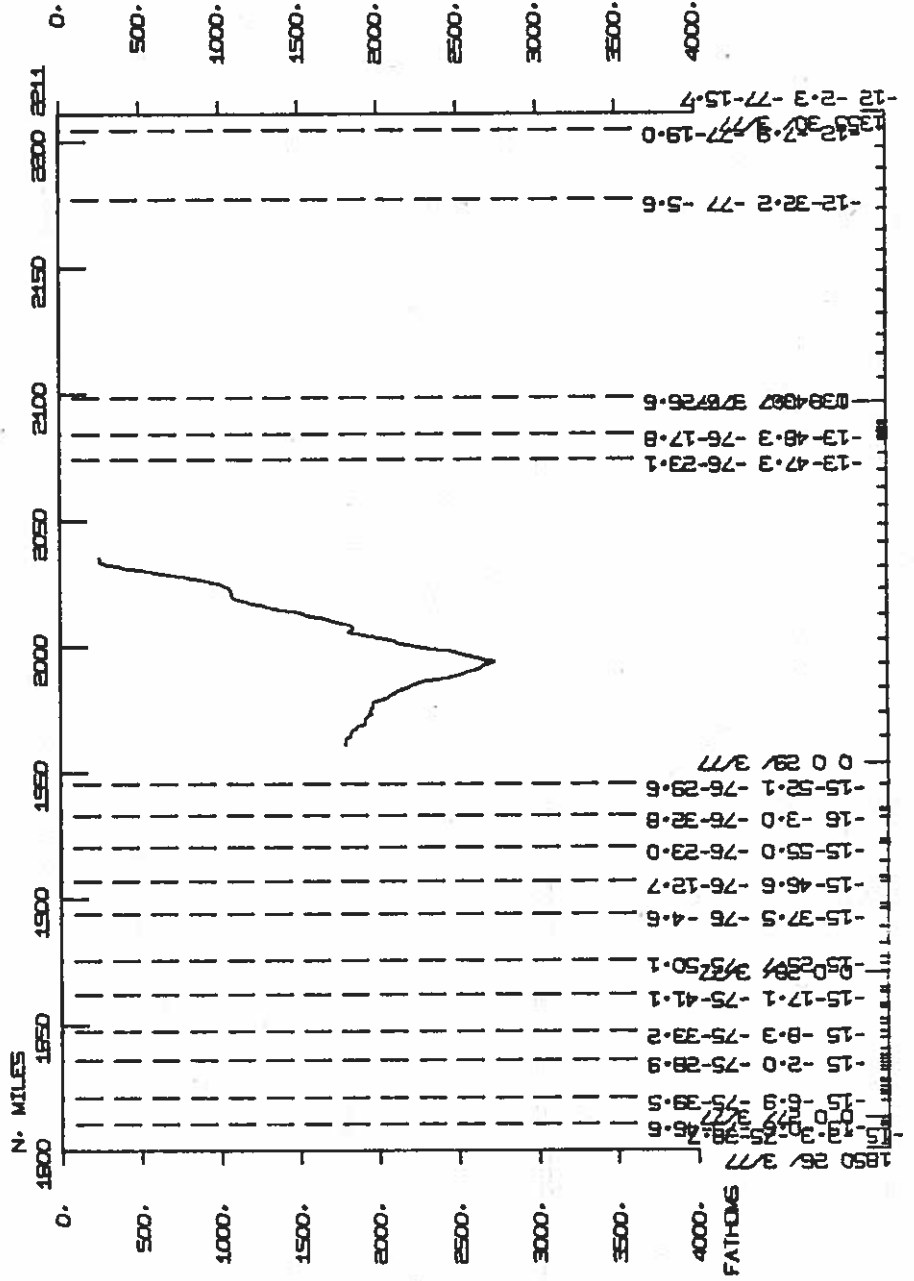
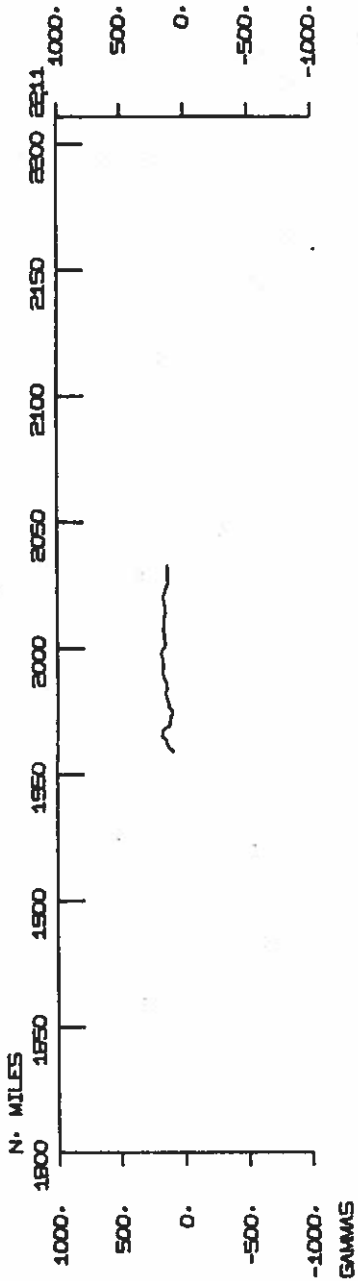
# F. DRAKE77 LEG 4B







# T. DRAKE 77 LEG 4B



1850 26 377  
 1840 25 377  
 1830 24 377  
 1820 23 377  
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S.I.O. SAMPLE INDEX

(Issued October 21, 1977)

F. DRAKE 77 EXPEDITION

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Callao, Peru (12 March 1977)

to

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Post-Cruise Processing and Report Preparation  
by S.I.O. Geological Data Center - S. M. Smith,  
G. Psaropulos, U. Albright, G. Papadopoulos

Index Encoding Funded by NSF  
Grant Number OCE76-80618

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 onshore 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.)

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

| DISP  | TYPE |    |    |    |    |    |        | TOTAL |
|-------|------|----|----|----|----|----|--------|-------|
|       | CM   | DP | HC | LB | MG | PE | TD     |       |
| GDC   | I    |    | 5  | 1  | 4  |    |        | I 10  |
| OSU   | I    | 7  |    | 52 |    |    | 13 141 | I 213 |
| PRU   | I    |    |    |    |    |    | 1      | I 1   |
| SIO   | I    |    |    |    |    |    | 2      | I 2   |
| SIX   | I    |    |    |    |    |    | 7      | I 7   |
| UWA   | I    |    |    |    |    |    | 4      | I 4   |
| TOTAL | I    | 7  | 5  | 52 | 1  | 4  | 27 141 | I 237 |

SAMPLE 'TYPE' CODES USED ABOVE

- CM = CURRENT MEASUREMENT
- DP = DEPTH
- HC = HYDROGRAPHIC CAST
- LB = LOG BOOKS
- MG = MAGNETICS (TOWED VEHICLE, SURFACE, TOTAL FIELD)
- PE = PERSONNEL IN SCIENTIFIC PARTY
- TD = SALINITY/TEMPERATURE/DEPTH (STD)

SAMPLE 'DISP' CODES USED ABOVE

- GDC = GEOLOGICAL DATA CENTER -- S. SMITH (EXT. 2752)
- OSU = OREGON STATE UNIVERSITY
- PRU = PERU
- SIO = SCRIPPS INSTITUTION OF OCEANOGRAPHY, LA JOLLA, CAL. 92093
- SIX = SCRIPPS INSTITUTION NON-EMPLOYEE -(CONTACT DORCAS UTTER EXT. 2356)
- UWA = UNIV. OF WASHINGTON, SEATTLE

FDRAKE 77 EXPEDITION LEG 48 SAMPLE INDEX

FD7748MV

\*\*\* PORTS \*\*\*

|             |                     |                  |          |
|-------------|---------------------|------------------|----------|
| 1400 12 377 | LGPT B CALLAO, PERU | 12 03S 76 10 W F | FD7748MV |
| 1445 30 377 | LGPT E CALLAO, PERU | 12 03S 76 10 W F | FD7748MV |

\*\*\*PERSONNEL\*\*\*

|      |               |     |          |
|------|---------------|-----|----------|
| PECS | HUYER, A.     | OSU | FD7748MV |
| PECS | SMITH R.      | OSU | FD7748MV |
| PERT | KEITH W.      | SIO | FD7748MV |
| PECT | OTT J.        | SIO | FD7748MV |
| PE   | BARSTOW D.    | OSU | FD7748MV |
| PEXN | BUSTAMENTE A. | PRU | FD7748MV |
| PE   | EMOND R.      | SIX | FD7748MV |
| PEXN | FRIEDERICH G. | UWA | FD7748MV |
| PE   | HEALY M.      | UWA | FD7748MV |
| PE   | LEWIS L.      | OSU | FD7748MV |
| PE   | LINSE M.      | OSU | FD7748MV |
| PE   | MC CARTHY M.  | UWA | FD7748MV |
| PE   | MC CAREY K.   | OSU | FD7748MV |
| PE   | MOORE B.      | OSU | FD7748MV |
| PE   | OBRIEN J.     | SIX | FD7748MV |
| PE   | PAUL J.       | SIX | FD7748MV |
| PE   | PEDERSEN W.   | SIX | FD7748MV |
| PE   | PEFFLEY M.    | SIX | FD7748MV |
| PE   | PITTOCK H.    | OSU | FD7748MV |
| PE   | ROOT D.       | OSU | FD7748MV |
| PE   | RIX J.        | SIX | FD7748MV |
| PE   | SEIFERT E.    | OSU | FD7748MV |
| PE   | SEIFERT J.    | OSU | FD7748MV |
| PE   | SIMPKINS J.   | OSU | FD7748MV |
| PE   | STILL R.      | OSU | FD7748MV |
| PE   | WHALING P.    | SIX | FD7748MV |
| PE   | WISEGARVER D. | UWA | FD7748MV |

\*\*\* NOTE \*\*\* TIME ZONES AND MINUTES OF LATITUDE AND LONGITUDE ARE LISTED IN TENTHS (E.G. 10.6 IS LISTED AS 106)

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

## UNDERWAY DATA CURATOR - STUART SMITH (EXT.2752)

## \*\*\* LOG BOOKS \*\*\*

|     |    |     |  |        |                    |        |      |         |   |          |
|-----|----|-----|--|--------|--------------------|--------|------|---------|---|----------|
| 345 | 14 | 377 |  | LBUW B | UNDERWAY WATCH LOG | GDC 11 | 594S | 77 117W | S | FD774BMV |
| 845 | 6  | 477 |  | LBUW E | UNDERWAY WATCH LOG | GDC 12 | 23S  | 77 154W | S | FD774BMV |

## \*\*\* FATHOGRAMS \*\*\*

|      |    |     |  |        |                 |        |      |         |   |          |
|------|----|-----|--|--------|-----------------|--------|------|---------|---|----------|
| 130  | 14 | 377 |  | DPRT B | GDR 12KHZ R-01  | GDC 11 | 509S | 77 240W | S | FD774BMV |
| 1730 | 14 | 377 |  | DPRT E | GDR 12KHZ R-01  | GDC 12 | 347S | 78 20W  | S | FD774BMV |
| 1730 | 14 | 377 |  | DPRT B | GDR 12KHZ R-02  | GDC 12 | 347S | 78 20W  | S | FD774BMV |
| 745  | 15 | 377 |  | DPRT E | GDR 12KHZ R-02  | GDC 14 | 10S  | 76 255W | S | FD774BMV |
| 2315 | 17 | 377 |  | DPR3 B | GDR 3.5KHZ R-01 | GDC 15 | 106S | 75 329W | S | FD774BMV |
| 630  | 18 | 377 |  | DPR3 E | GDR 3.5KHZ R-01 | GDC 15 | 528S | 76 242W | S | FD774BMV |
| 41   | 29 | 377 |  | DPR3 B | GDR 3.5KHZ R-02 | GDC 15 | 406S | 76 256W | S | FD774BMV |
| 505  | 29 | 377 |  | DPR3 E | GDR 3.5KHZ R-02 | GDC 14 | 578S | 76 270W | S | FD774BMV |
| 508  | 29 | 377 |  | DPR3 B | GDR 3.5KHZ R-03 | GDC 14 | 573S | 76 270W | S | FD774BMV |
| 830  | 29 | 377 |  | DPR3 E | GDR 3.5KHZ R-03 | GDC 14 | 247S | 76 270W | S | FD774BMV |

## \*\*\* MAGNETOMETER \*\*\*

|      |    |     |  |       |                |        |      |         |   |          |
|------|----|-----|--|-------|----------------|--------|------|---------|---|----------|
| 1354 | 14 | 377 |  | MGR B | MAGNETICS R-01 | GDC 12 | 216S | 77 495W | S | FD774BMV |
| 1557 | 15 | 377 |  | MGR E | MAGNETICS R-01 | GDC 15 | 47S  | 75 417W | S | FD774BMV |
| 2335 | 17 | 377 |  | MGR B | MAGNETICS R-01 | GDC 15 | 128S | 75 347W | S | FD774BMV |
| 630  | 18 | 377 |  | MGR E | MAGNETICS R-01 | GDC 15 | 528S | 76 242W | S | FD774BMV |
| 2235 | 23 | 377 |  | MGR B | MAGNETICS R-01 | GDC 14 | 419S | 76 64W  | S | FD774BMV |
| 2027 | 25 | 377 |  | MGR E | MAGNETICS R-01 | GDC 15 | 354S | 74 548W | S | FD774BMV |

| TIME<br>GMT | DATE<br>D.M.Y. | TIME<br>LOC | TZ<br>LOC | SAMP<br>CODE | SAMPLE IDENT.  | DISP<br>CODE | LAT. | LONG.   | 03OCT77 | PAGE<br>CRUISE | 2<br>LEG-SHIP |
|-------------|----------------|-------------|-----------|--------------|----------------|--------------|------|---------|---------|----------------|---------------|
| 31          | 29             | 377         |           | MGR B        | MAGNETICS R-01 | GDC 15       | 423S | 76 255W | S       | FD774BMV       |               |
| 820         | 29             | 377         |           | MGR E        | MAGNETICS R-01 | GDC 14       | 263S | 76 269W | S       | FD774BMV       |               |

\*\*\*CONDUCTIVITY, TEMPERATURE, DEPTH\*\*\*

|      |    |     |  |        |    |          |        |      |         |   |          |
|------|----|-----|--|--------|----|----------|--------|------|---------|---|----------|
| 1835 | 12 | 377 |  | TDCT   | 38 | 509M S01 | OSU 12 | 143S | 77 357W | S | FD774BMV |
| 1029 | 13 | 377 |  | TDCT   | 39 | 103M S01 | OSU 9  | 578S | 78 250W | S | FD774BMV |
| 325  | 14 | 377 |  | TDCT   | 40 | 48M S07  | OSU 11 | 596S | 77 115W | S | FD774BMV |
| 700  | 14 | 377 |  | TDCT X | 41 | ABORT    | OSU 12 | 60S  | 77 220W | S | FD774BMV |
| 703  | 14 | 377 |  | TDCT   | 42 | 105M S09 | OSU 12 | 60S  | 77 221W | S | FD774BMV |
| 907  | 14 | 377 |  | TDCT   | 43 | 210M S12 | OSU 12 | 130S | 77 339W | S | FD774BMV |
| 1210 | 14 | 377 |  | TDCT   | 44 | 816M S14 | OSU 12 | 194S | 77 458W | S | FD774BMV |
| 1552 | 14 | 377 |  | TDCT   | 45 | 823M S14 | OSU 12 | 318S | 78 43W  | S | FD774BMV |
| 728  | 15 | 377 |  | TDCT   | 46 | 100M S01 | OSU 14 | 8S   | 76 256W | S | FD774BMV |
| 2045 | 15 | 377 |  | TDCT   | 47 | 117M S01 | OSU 15 | 72S  | 75 302W | S | FD774BMV |
| 2233 | 15 | 377 |  | TDCT   | 48 | 47M S07  | OSU 15 | 28S  | 75 268W | S | FD774BMV |
| 2329 | 15 | 377 |  | TDCT   | 49 | 94M S01  | OSU 15 | 54S  | 75 289W | S | FD774BMV |
| 41   | 16 | 377 |  | TDCT   | 50 | 105M S08 | OSU 15 | 86S  | 75 312W | S | FD774BMV |
| 142  | 16 | 377 |  | TDCT   | 51 | 173M S01 | OSU 15 | 102S | 75 322W | S | FD774BMV |
| 241  | 16 | 377 |  | TDCT   | 52 | 505M S06 | OSU 15 | 119S | 75 340W | S | FD774BMV |
| 353  | 16 | 377 |  | TDCT   | 53 | 707M S01 | OSU 15 | 141S | 75 357W | S | FD774BMV |
| 514  | 16 | 377 |  | TDCT   | 54 | 803M S14 | OSU 15 | 165S | 75 384W | S | FD774BMV |
| 705  | 16 | 377 |  | TDCT   | 55 | 811M S01 | OSU 15 | 191S | 75 413W | S | FD774BMV |
| 834  | 16 | 377 |  | TDCT   | 56 | 353M S10 | OSU 15 | 232S | 75 455W | S | FD774BMV |
| 1655 | 16 | 377 |  | TDCT   | 57 | 54M S02  | OSU 15 | 116S | 75 350W | S | FD774BMV |
| 1821 | 16 | 377 |  | TDCT   | 58 | 54M S02  | OSU 15 | 89S  | 75 329W | S | FD774BMV |
| 1916 | 16 | 377 |  | TDCT   | 59 | 54M S02  | OSU 15 | 75S  | 75 317W | S | FD774BMV |
| 2017 | 16 | 377 |  | TDCT   | 60 | 55M S02  | OSU 15 | 58S  | 75 294W | S | FD774BMV |
| 2116 | 16 | 377 |  | TDCT   | 61 | 52M S02  | OSU 15 | 33S  | 75 272W | S | FD774BMV |
| 2255 | 16 | 377 |  | TDCT   | 62 | 54M S02  | OSU 14 | 582S | 75 328W | S | FD774BMV |
| 2340 | 16 | 377 |  | TDCT   | 63 | 55M S02  | OSU 15 | 7S   | 75 348W | S | FD774BMV |
| 33   | 17 | 377 |  | TDCT   | 64 | 53M S02  | OSU 15 | 25S  | 75 375W | S | FD774BMV |
| 121  | 17 | 377 |  | TDCT   | 65 | 54M S02  | OSU 15 | 46S  | 75 394W | S | FD774BMV |
| 210  | 17 | 377 |  | TDCT   | 66 | 52M S02  | OSU 15 | 67S  | 75 418W | S | FD774BMV |
| 307  | 17 | 377 |  | TDCT   | 67 | 53M S02  | OSU 15 | 91S  | 75 433W | S | FD774BMV |
| 507  | 17 | 377 |  | TDCT   | 68 | 55M S02  | OSU 15 | 42S  | 75 490W | S | FD774BMV |
| 628  | 17 | 377 |  | TDCT   | 69 | 52M S02  | OSU 15 | 28S  | 75 467W | S | FD774BMV |
| 737  | 17 | 377 |  | TDCT   | 70 | 53M S02  | OSU 15 | 1S   | 75 442W | S | FD774BMV |
| 845  | 17 | 377 |  | TDCT   | 71 | 53M S02  | OSU 14 | 574S | 75 420W | S | FD774BMV |
| 957  | 17 | 377 |  | TDCT   | 72 | 54M S02  | OSU 14 | 540S | 75 389W | S | FD774BMV |
| 1100 | 17 | 377 |  | TDCT   | 73 | 54M S02  | OSU 14 | 526S | 75 385W | S | FD774BMV |
| 1448 | 17 | 377 |  | TDCT   | 74 | 109M S02 | OSU 14 | 559S | 75 392W | S | FD774BMV |
| 1755 | 17 | 377 |  | TDCT   | 75 | 99M S01  | OSU 15 | 61S  | 75 303W | S | FD774BMV |
| 1928 | 17 | 377 |  | TDCT   | 76 | 521M S01 | OSU 15 | 113S | 75 349W | S | FD774BMV |
| 919  | 18 | 377 |  | TDCT   | 77 | 805M S14 | OSU 16 | 105S | 76 390W | S | FD774BMV |
| 1344 | 18 | 377 |  | TDCT   | 78 | 805M S14 | OSU 15 | 551S | 76 223W | S | FD774BMV |
| 1722 | 18 | 377 |  | TDCT   | 79 | 805M S14 | OSU 15 | 495S | 76 155W | S | FD774BMV |
| 2057 | 18 | 377 |  | TDCT   | 80 | 805M S14 | OSU 15 | 397S | 76 30W  | S | FD774BMV |
| 2308 | 18 | 377 |  | TDCT   | 81 | 805M S14 | OSU 15 | 338S | 75 585W | S | FD774BMV |
| 112  | 19 | 377 |  | TDCT   | 82 | 805M S14 | OSU 15 | 299S | 75 546W | S | FD774BMV |

| TIME<br>GMT | DATE<br>D.M.Y. | TIME<br>LOC | TZ<br>LOC | SAMP<br>CODE | SAMPLE IDENT. | DISP<br>CODE | LAT. | LONG.   | CRUISE<br>LEG-SHIP |
|-------------|----------------|-------------|-----------|--------------|---------------|--------------|------|---------|--------------------|
| 206         | 19             | 377         |           | TDCT         | 83 = 82 CONT  | OSU 15       | 299S | 75 543W | S FD774BMV         |
| 329         | 19             | 377         |           | TDCT         | 84 805M S14   | OSU 15       | 257S | 75 504W | S FD774BMV         |
| 559         | 19             | 377         |           | TDCT         | 85 805M S14   | OSU 15       | 222S | 75 463W | S FD774BMV         |
| 840         | 19             | 377         |           | TDCT         | 86 805M S14   | OSU 15       | 178S | 75 412W | S FD774BMV         |
| 1053        | 19             | 377         |           | TDCT         | 87 805M S14   | OSU 15       | 142S | 75 380W | S FD774BMV         |
| 1258        | 19             | 377         |           | TDCT         | 88 705M S14   | OSU 15       | 140S | 75 371W | S FD774BMV         |
| 1440        | 19             | 377         |           | TDCT         | 89 405M S13   | OSU 15       | 115S | 75 354W | S FD774BMV         |
| 1650        | 19             | 377         |           | TDCT         | 90 155M S10   | OSU 15       | 92S  | 75 338W | S FD774BMV         |
| 1832        | 19             | 377         |           | TDCT         | 91 105M S08   | OSU 15       | 62S  | 75 312W | S FD774BMV         |
| 2000        | 19             | 377         |           | TDCT         | 92 85M S08    | OSU 15       | 43S  | 75 294W | S FD774BMV         |
| 2119        | 19             | 377         |           | TDCT         | 93 45M S06    | OSU 15       | 23S  | 75 272W | S FD774BMV         |
| 1722        | 20             | 377         |           | TDCT         | 94 99M S01    | OSU 15       | 315S | 75 11W  | S FD774BMV         |
| 1930        | 20             | 377         |           | TDCT         | 95 91M S01    | OSU 15       | 354S | 74 526W | S FD774BMV         |
| 2030        | 20             | 377         |           | TDCT         | 96 455M S08   | OSU 15       | 371S | 74 544W | S FD774BMV         |
| 2142        | 20             | 377         |           | TDCT         | 97 505M S09   | OSU 15       | 402S | 74 568W | S FD774BMV         |
| 2328        | 20             | 377         |           | TDCT         | 98 103M S01   | OSU 15       | 423S | 74 579W | S FD774BMV         |
| 104         | 21             | 377         |           | TDCT         | 99 555M S13   | OSU 15       | 443S | 75 6W   | S FD774BMV         |
| 246         | 21             | 377         |           | TDCT         | 100 106M S01  | OSU 15       | 463S | 75 26W  | S FD774BMV         |
| 410         | 21             | 377         |           | TDCT         | 101 805M S14  | OSU 15       | 486S | 75 43W  | S FD774BMV         |
| 748         | 21             | 377         |           | TDCT         | 102 101M S01  | OSU 15       | 351S | 75 151W | S FD774BMV         |
| 939         | 21             | 377         |           | TDCT         | 103 102M S01  | OSU 15       | 308S | 75 131W | S FD774BMV         |
| 1158        | 21             | 377         |           | TDCT         | 104 102M S01  | OSU 15       | 293S | 75 107W | S FD774BMV         |
| 1224        | 21             | 377         |           | TDCT         | 105 102M S01  | OSU 15       | 277S | 75 91W  | S FD774BMV         |
| 1325        | 21             | 377         |           | TDCT         | 106 47M S01   | OSU 15       | 260S | 75 74W  | S FD774BMV         |
| 1538        | 21             | 377         |           | TDCT         | 107 104M S01  | OSU 15       | 239S | 75 266W | S FD774BMV         |
| 1658        | 21             | 377         |           | TDCT         | 108 102M S01  | OSU 15       | 222S | 75 243W | S FD774BMV         |
| 1800        | 21             | 377         |           | TDCT         | 109 102M S01  | OSU 15       | 196S | 75 224W | S FD774BMV         |
| 1856        | 21             | 377         |           | TDCT         | 110 102M S01  | OSU 15       | 167S | 75 198W | S FD774BMV         |
| 1938        | 21             | 377         |           | TDCT         | 111 90M S01   | OSU 15       | 148S | 75 180W | S FD774BMV         |
| 2020        | 21             | 377         |           | TDCT         | 112 43M S01   | OSU 15       | 129S | 75 161W | S FD774BMV         |
| 2146        | 21             | 377         |           | TDCT         | 113 93M S01   | OSU 15       | 102S | 75 232W | S FD774BMV         |
| 2233        | 21             | 377         |           | TDCT         | 114 103M S01  | OSU 15       | 123S | 75 256W | S FD774BMV         |
| 2323        | 21             | 377         |           | TDCT         | 115 103M S01  | OSU 15       | 153S | 75 279W | S FD774BMV         |
| 19          | 22             | 377         |           | TDCT         | 116 102M S01  | OSU 15       | 165S | 75 293W | S FD774BMV         |
| 133         | 22             | 377         |           | TDCT         | 117 102M S01  | OSU 15       | 192S | 75 311W | S FD774BMV         |
| 339         | 22             | 377         |           | TDCT X       | 118 ABORT     | OSU 15       | 164S | 75 391W | S FD774BMV         |
| 340         | 22             | 377         |           | TDCT         | 119 805M S14  | OSU 15       | 164S | 75 391W | S FD774BMV         |
| 553         | 22             | 377         |           | TDCT         | 120 102M S01  | OSU 15       | 136S | 75 366W | S FD774BMV         |
| 807         | 22             | 377         |           | TDCT         | 121 405M S12  | OSU 15       | 109S | 75 355W | S FD774BMV         |
| 1003        | 22             | 377         |           | TDCT         | 122 102M S01  | OSU 15       | 88S  | 75 334W | S FD774BMV         |
| 1052        | 22             | 377         |           | TDCT         | 123 105M S05  | OSU 15       | 67S  | 75 315W | S FD774BMV         |
| 1148        | 22             | 377         |           | TDCT         | 124 55M S04   | OSU 15       | 41S  | 75 294W | S FD774BMV         |
| 1242        | 22             | 377         |           | TDCT         | 125 49M S01   | OSU 15       | 25S  | 75 271W | S FD774BMV         |
| 1348        | 22             | 377         |           | TDCT         | 126 69M S01   | OSU 15       | 11S  | 75 313W | S FD774BMV         |
| 1440        | 22             | 377         |           | TDCT         | 127 59M S01   | OSU 14       | 586S | 75 334W | S FD774BMV         |
| 1534        | 22             | 377         |           | TDCT         | 128 89M S01   | OSU 15       | 12S  | 75 361W | S FD774BMV         |
| 1621        | 22             | 377         |           | TDCT         | 129 102M S01  | OSU 15       | 26S  | 75 375W | S FD774BMV         |
| 1717        | 22             | 377         |           | TDCT         | 130 102M S01  | OSU 15       | 43S  | 75 386W | S FD774BMV         |
| 1824        | 22             | 377         |           | TDCT         | 131 2M S01    | OSU 15       | 62S  | 75 404W | S FD774BMV         |
| 1905        | 22             | 377         |           | TDCT         | 132 2M S01    | OSU 15       | 54S  | 75 399W | S FD774BMV         |
| 2005        | 22             | 377         |           | TDCT         | 133 102M S01  | OSU 15       | 83S  | 75 426W | S FD774BMV         |
| 2301        | 22             | 377         |           | TDCT         | 134 51M S01   | OSU 14       | 530S | 75 387W | S FD774BMV         |

| TIME<br>GMT | DATE<br>D.M.Y. | TIME<br>LOC | TZ<br>LOC | SAMP<br>CODE | SAMPLE IDENT. | DISP<br>CODE | LAT. | LONG.   | CRUISE<br>LEG-SHIP |
|-------------|----------------|-------------|-----------|--------------|---------------|--------------|------|---------|--------------------|
| 2340        | 22             | 377         |           | TDCT X       | 135 ABORT     | OSU 14       | 548S | 75 408W | S FD774BMV         |
| 2346        | 22             | 377         |           | TDCT         | 136 101M S01  | OSU 14       | 549S | 75 409W | S FD774BMV         |
| 38          | 23             | 377         |           | TDCT         | 137 101M S01  | OSU 14       | 566S | 75 436W | S FD774BMV         |
| 126         | 23             | 377         |           | TDCT         | 138 102M S01  | OSU 14       | 592S | 75 454W | S FD774BMV         |
| 209         | 23             | 377         |           | TDCT         | 139 102M S01  | OSU 15       | 12S  | 75 471W | S FD774BMV         |
| 300         | 23             | 377         |           | TDCT         | 140 102M S01  | OSU 15       | 33S  | 75 490W | S FD774BMV         |
| 522         | 23             | 377         |           | TDCT         | 141 101M S01  | OSU 14       | 559S | 76 2W   | S FD774BMV         |
| 646         | 23             | 377         |           | TDCT         | 142 102M S01  | OSU 14       | 528S | 75 587W | S FD774BMV         |
| 801         | 23             | 377         |           | TDCT         | 143 98M S01   | OSU 14       | 505S | 75 570W | S FD774BMV         |
| 904         | 23             | 377         |           | TDCT         | 144 103M S01  | OSU 14       | 482S | 75 552W | S FD774BMV         |
| 1007        | 23             | 377         |           | TDCT         | 145 102M S01  | OSU 14       | 463S | 75 538W | S FD774BMV         |
| 1104        | 23             | 377         |           | TDCT         | 146 68M S01   | OSU 14       | 446S | 75 521W | S FD774BMV         |
| 1319        | 23             | 377         |           | TDCT         | 147 91M S01   | OSU 14       | 330S | 76 3W   | S FD774BMV         |
| 1404        | 23             | 377         |           | TDCT         | 148 105M S06  | OSU 14       | 345S | 76 17W  | S FD774BMV         |
| 1509        | 23             | 377         |           | TDCT         | 149 105M S06  | OSU 14       | 370S | 76 39W  | S FD774BMV         |
| 1601        | 23             | 377         |           | TDCT         | 150 102M S01  | OSU 14       | 393S | 76 55W  | S FD774BMV         |
| 1733        | 23             | 377         |           | TDCT         | 151 205M S09  | OSU 14       | 438S | 76 76W  | S FD774BMV         |
| 1900        | 23             | 377         |           | TDCT         | 152 102M S01  | OSU 14       | 452S | 76 95W  | S FD774BMV         |
| 2007        | 23             | 377         |           | TDCT         | 153 605M S14  | OSU 14       | 470S | 76 113W | S FD774BMV         |
| 2218        | 24             | 377         |           | TDCT         | 154 52M S02   | OSU 15       | 30S  | 75 274W | S FD774BMV         |
| 2257        | 24             | 377         |           | TDCT         | 155 89M S02   | OSU 15       | 52S  | 75 296W | S FD774BMV         |
| 2340        | 24             | 377         |           | TDCT         | 156 102M S02  | OSU 15       | 77S  | 75 318W | S FD774BMV         |
| 25          | 25             | 377         |           | TDCT         | 157 102M S02  | OSU 15       | 97S  | 75 337W | S FD774BMV         |
| 123         | 25             | 377         |           | TDCT         | 158 101M S02  | OSU 15       | 111S | 75 356W | S FD774BMV         |
| 320         | 25             | 377         |           | TDCT         | 159 99M S02   | OSU 15       | 126S | 75 366W | S FD774BMV         |
| 352         | 25             | 377         |           | TDCT         | 160 100M S01  | OSU 15       | 135S | 75 374W | S FD774BMV         |
| 2135        | 26             | 377         |           | TDCT         | 161 181M S01  | OSU 15       | 8S   | 75 465W | S FD774BMV         |
| 1232        | 27             | 377         |           | TDCT         | 162 50M S04   | OSU 15       | 24S  | 75 268W | S FD774BMV         |
| 1319        | 27             | 377         |           | TDCT         | 163 90M S06   | OSU 15       | 42S  | 75 294W | S FD774BMV         |
| 1414        | 27             | 377         |           | TDCT         | 164 125M S07  | OSU 15       | 68S  | 75 322W | S FD774BMV         |
| 1509        | 27             | 377         |           | TDCT         | 165 155M S08  | OSU 15       | 77S  | 75 328W | S FD774BMV         |
| 1609        | 27             | 377         |           | TDCT         | 166 405M S14  | OSU 15       | 101S | 75 353W | S FD774BMV         |
| 1827        | 27             | 377         |           | TDCT         | 167 405M S14  | OSU 15       | 143S | 75 381W | S FD774BMV         |
| 2119        | 27             | 377         |           | TDCT         | 168 405M S13  | OSU 15       | 175S | 75 410W | S FD774BMV         |
| 2345        | 27             | 377         |           | TDCT         | 169 405M S13  | OSU 15       | 217S | 75 468W | S FD774BMV         |
| 217         | 28             | 377         |           | TDCT         | 170 405M S13  | OSU 15       | 257S | 75 501W | S FD774BMV         |
| 311         | 28             | 377         |           | TDCT         | 171 1204M S00 | OSU 15       | 258S | 75 501W | S FD774BMV         |
| 505         | 28             | 377         |           | TDCT         | 172 405M S13  | OSU 15       | 301S | 75 540W | S FD774BMV         |
| 615         | 28             | 377         |           | TDCT         | 173 1204M S00 | OSU 15       | 302S | 75 541W | S FD774BMV         |
| 846         | 28             | 377         |           | TDCT         | 174 405M S13  | OSU 15       | 379S | 76 48W  | S FD774BMV         |
| 940         | 28             | 377         |           | TDCT         | 175 1205M S00 | OSU 15       | 379S | 76 53W  | S FD774BMV         |
| 1207        | 28             | 377         |           | TDCT         | 176 405M S13  | OSU 15       | 466S | 76 127W | S FD774BMV         |
| 1308        | 28             | 377         |           | TDCT         | 177 1225M S01 | OSU 15       | 463S | 76 129W | S FD774BMV         |
| 1550        | 28             | 377         |           | TDCT         | 178 405M S13  | OSU 15       | 552S | 76 230W | S FD774BMV         |
| 1645        | 28             | 377         |           | TDCT         | 179 1246M S01 | OSU 15       | 550S | 76 237W | S FD774BMV         |
| 1916        | 28             | 377         |           | TDCT         | 180 405M S13  | OSU 16       | 31S  | 76 327W | S FD774BMV         |
| 2009        | 28             | 377         |           | TDCT         | 181 1204M S01 | OSU 16       | 29S  | 76 334W | S FD774BMV         |



03OCT77 PAGE 5  
 CRUISE  
 LEG-SHIP

| TIME<br>GMT | DATE<br>D.M.Y. | TIME<br>LOC | TZ<br>LOC | SAMP<br>CODE | SAMPLE IDENT. | DISP<br>CODE | LAT. | LONG. | LEG-SHIP |
|-------------|----------------|-------------|-----------|--------------|---------------|--------------|------|-------|----------|
|-------------|----------------|-------------|-----------|--------------|---------------|--------------|------|-------|----------|

\*\*\*HYDROGRAPHIC CAST\*\*\*

|      |    |     |  |      |      |     |             |         |            |
|------|----|-----|--|------|------|-----|-------------|---------|------------|
| 336  | 14 | 377 |  | HCNI | TSO  | 40  | OSU 11 593S | 77 116W | S FD774BMV |
| 730  | 14 | 377 |  | HCNI | TSO  | 42  | OSU 12 61S  | 77 224W | S FD774BMV |
| 1013 | 14 | 377 |  | HCNI | TSO  | 43  | OSU 12 127S | 77 345W | S FD774BMV |
| 1305 | 14 | 377 |  | HCNI | TSO  | 44  | OSU 12 196S | 77 461W | S FD774BMV |
| 1640 | 14 | 377 |  | HCNI | TSO  | 45  | OSU 12 325S | 78 42W  | S FD774BMV |
| 2249 | 15 | 377 |  | HCNI | TS N | 48  | OSU 15 27S  | 75 267W | S FD774BMV |
| 101  | 16 | 377 |  | HCNI | TS N | 50  | OSU 15 87S  | 75 313W | S FD774BMV |
| 307  | 16 | 377 |  | HCNI | TS N | 52  | OSU 15 121S | 75 338W | S FD774BMV |
| 600  | 16 | 377 |  | HCNI | TS N | 54  | OSU 15 167S | 75 388W | S FD774BMV |
| 909  | 16 | 377 |  | HCNI | TS N | 56  | OSU 15 232S | 75 454W | S FD774BMV |
| 1022 | 18 | 377 |  | HCNI | TSO  | 77  | OSU 16 98S  | 76 398W | S FD774BMV |
| 1442 | 18 | 377 |  | HCNI | TSO  | 78  | OSU 15 550S | 76 223W | S FD774BMV |
| 1815 | 18 | 377 |  | HCNI | TSO  | 79  | OSU 15 491S | 76 155W | S FD774BMV |
| 2138 | 18 | 377 |  | HCNI | TSO  | 80  | OSU 15 399S | 76 18W  | S FD774BMV |
| 2352 | 18 | 377 |  | HCNI | TSO  | 81  | OSU 15 336S | 75 587W | S FD774BMV |
| 206  | 19 | 377 |  | HCNI | TSO  | 82  | OSU 15 299S | 75 543W | S FD774BMV |
| 411  | 19 | 377 |  | HCNI | TSO  | 84  | OSU 15 256S | 75 504W | S FD774BMV |
| 650  | 19 | 377 |  | HCNI | TSO  | 85  | OSU 15 223S | 75 461W | S FD774BMV |
| 927  | 19 | 377 |  | HCNI | TSO  | 86  | OSU 15 180S | 75 411W | S FD774BMV |
| 1140 | 19 | 377 |  | HCNI | TSO  | 87  | OSU 15 145S | 75 376W | S FD774BMV |
| 1339 | 19 | 377 |  | HCNI | TSO  | 88  | OSU 15 142S | 75 365W | S FD774BMV |
| 1527 | 19 | 377 |  | HCNI | TSO  | 89  | OSU 15 108S | 75 353W | S FD774BMV |
| 1710 | 19 | 377 |  | HCNI | TSO  | 90  | OSU 15 100S | 75 327W | S FD774BMV |
| 1854 | 19 | 377 |  | HCNI | TSO  | 91  | OSU 15 61S  | 75 313W | S FD774BMV |
| 2025 | 19 | 377 |  | HCNI | TSO  | 92  | OSU 15 44S  | 75 294W | S FD774BMV |
| 2136 | 19 | 377 |  | HCNI | TSO  | 93  | OSU 15 26S  | 75 272W | S FD774BMV |
| 2053 | 20 | 377 |  | HCNI | TSO  | 96  | OSU 15 372S | 74 546W | S FD774BMV |
| 2237 | 20 | 377 |  | HCNI | TSO  | 97  | OSU 15 405S | 74 570W | S FD774BMV |
| 149  | 21 | 377 |  | HCNI | TSO  | 99  | OSU 15 444S | 75 7W   | S FD774BMV |
| 502  | 21 | 377 |  | HCNI | TSO  | 101 | OSU 15 487S | 75 42W  | S FD774BMV |
| 420  | 22 | 377 |  | HCNI | TSO  | 119 | OSU 15 164S | 75 390W | S FD774BMV |
| 842  | 22 | 377 |  | HCNI | TSO  | 121 | OSU 15 107S | 75 357W | S FD774BMV |
| 1108 | 22 | 377 |  | HCNI | TSO  | 123 | OSU 15 65S  | 75 314W | S FD774BMV |
| 1201 | 22 | 377 |  | HCNI | TSO  | 124 | OSU 15 40S  | 75 293W | S FD774BMV |
| 1426 | 23 | 377 |  | HCNI | TSO  | 148 | OSU 14 344S | 76 19W  | S FD774BMV |
| 1529 | 23 | 377 |  | HCNI | TSO  | 149 | OSU 14 370S | 76 40W  | S FD774BMV |
| 1804 | 23 | 377 |  | HCNI | TSO  | 151 | OSU 14 438S | 76 79W  | S FD774BMV |
| 2045 | 23 | 377 |  | HCNI | TSO  | 153 | OSU 14 470S | 76 114W | S FD774BMV |
| 1245 | 27 | 377 |  | HCNI | TSO  | 162 | OSU 15 22S  | 75 268W | S FD774BMV |
| 1333 | 27 | 377 |  | HCNI | TSO  | 163 | OSU 15 44S  | 75 298W | S FD774BMV |
| 1430 | 27 | 377 |  | HCNI | TSO  | 164 | OSU 15 71S  | 75 324W | S FD774BMV |
| 1527 | 27 | 377 |  | HCNI | TSO  | 165 | OSU 15 80S  | 75 330W | S FD774BMV |
| 1651 | 27 | 377 |  | HCNI | TSO  | 166 | OSU 15 107S | 75 358W | S FD774BMV |
| 1931 | 27 | 377 |  | HCNI | TSO  | 167 | OSU 15 143S | 75 374W | S FD774BMV |
| 2223 | 27 | 377 |  | HCNI | TSO  | 168 | OSU 15 177S | 75 412W | S FD774BMV |
| 115  | 28 | 377 |  | HCNI | TSO  | 169 | OSU 15 219S | 75 468W | S FD774BMV |
| 250  | 28 | 377 |  | HCNI | TSO  | 170 | OSU 15 258S | 75 501W | S FD774BMV |
| 539  | 28 | 377 |  | HCNI | TSO  | 172 | OSU 15 302S | 75 540W | S FD774BMV |
| 920  | 28 | 377 |  | HCNI | TSO  | 174 | OSU 15 380S | 76 52W  | S FD774BMV |

| TIME<br>GMT | DATE<br>D.M.Y. | TIME<br>LOC | TZ<br>LOC | SAMP<br>CODE | SAMPLE IDENT. | DISP<br>CODE | LAT.        | LONG.   | LEG-SHIP   |
|-------------|----------------|-------------|-----------|--------------|---------------|--------------|-------------|---------|------------|
| 1243        | 28             | 377         |           | HCNI         | TSON          | 176          | OSU 15 464S | 76 128W | S FD774BMV |
| 1619        | 28             | 377         |           | HCNI         | TSON          | 178          | OSU 15 551S | 76 234W | S FD774BMV |
| 1948        | 28             | 377         |           | HCNI         | TSON          | 180          | OSU 16 30S  | 76 331W | S FD774BMV |

\*\*\*CURRENT MEASUREMENT\*\*\*

|      |    |     |  |      |                  |        |      |         |            |
|------|----|-----|--|------|------------------|--------|------|---------|------------|
| 1819 | 12 | 377 |  | CMAB | DROP OPUNTIA     | OSU 12 | 143S | 77 359W | S FD774BMV |
| 1124 | 13 | 377 |  | CMAB | DROP PEYOTE      | OSU 9  | 575S | 78 247W | S FD774BMV |
| 1746 | 15 | 377 |  | CMAB | DROP LAGARTA     | OSU 15 | 111S | 75 364W | S FD774BMV |
| 1946 | 15 | 377 |  | CMAB | DROP LOBIVIA     | OSU 15 | 123S | 75 351W | S FD774BMV |
| 1523 | 16 | 377 |  | CMAB | DROP IRONWOOD    | OSU 15 | 98S  | 75 333W | S FD774BMV |
| 1411 | 17 | 377 |  | CMAB | DROP PARODIA     | OSU 14 | 556S | 75 396W | S FD774BMV |
| 1321 | 20 | 377 |  | CMAB | DROP EUPHORBIA   | OSU 15 | 311S | 75 10W  | S FD774BMV |
| 9900 |    |     |  |      | END SAMPLE INDEX |        |      |         | F0774BMV   |